

AMENDMENT OF SOLICITATION



1. AMENDMENT  <b>A007</b>	2. EFFECTIVE DATE  <b>May 5, 2016</b>	3. REQUISITION NO./ P.O. NO. N/A	Page 1 of 38
---------------------------------	---	-------------------------------------	--------------

4. ISSUED BY Purchasing & Strategic Sourcing Division  
City of El Paso  
City 1  
300 N. Campbell, 1<sup>st</sup> Floor  
El Paso, Texas 79901-1153

5A. AMENDMENT OF SOLICITATION NO. <b>2016-753</b>  TITLED: Robinson Street and Drainage Improvements	5B. BID DUE DATE:  <b>May 11, 2016</b>
--	--

6. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in item 7. The hour and date specified for receipt of offers  is EXTENDED or  NOT EXTENDED

**All amendments must be acknowledged on the "SOLICITATION OF OFFERS". Failure to do so may be cause for rejection of offer.**

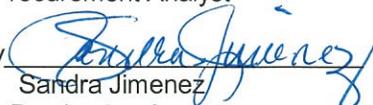
7. DESCRIPTION OF AMENDMENT

- Delete Drawing C7, C43 and C 44 and replace with revised sheets
- Delete Utilities Water Line Improvement sheets 1-4 and replace with revised sheets
- Delete Utilities Sewer Line Improvement sheets 1-6 and replace with revised sheets
- Revised Base Bid II and III Scope of work
- Revised Section I-C

EXCEPT AS PROVIDED HEREIN, ALL TERMS AND CONDITIONS OF THE DOCUMENTS, AS HERETOFORE CHANGED, REMAIN UNCHANGED AND IN FULL FORCE AND EFFECT.

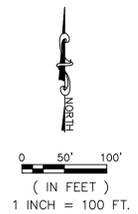
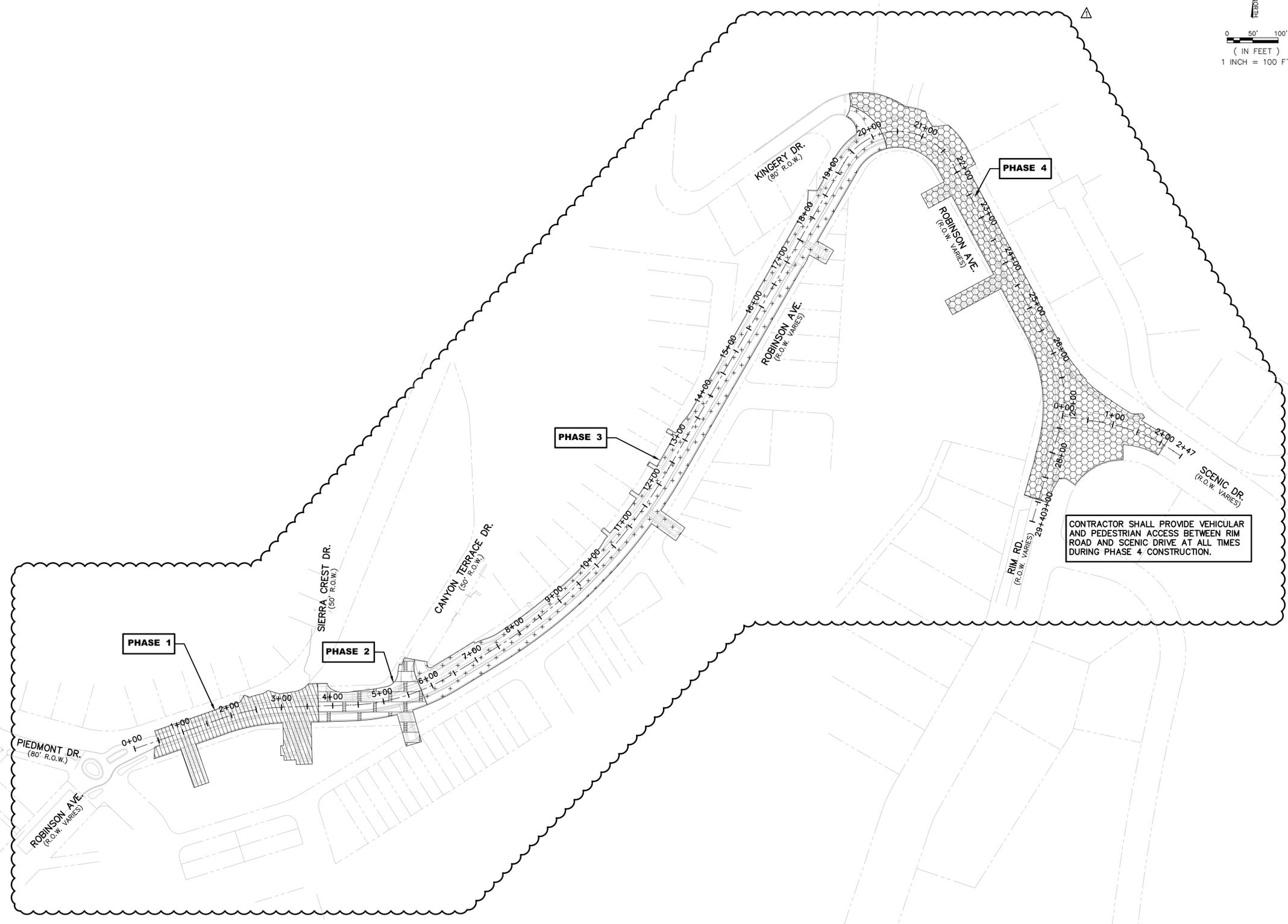
**CITY OF EL PASO  
BRUCE D. COLLINS, CPPO  
PURCHASING DIRECTOR**

BY   
\_\_\_\_\_  
Claudia Garcia  
Procurement Analyst

Approved by   
Sandra Jimenez  
Purchasing Agent



F:\14120\DWG\14120 - (07) Construction Sequence Plan.dwg Time:Apr21,2016 - 10:16am Log:ingorardo Dim:scale:30 L1Scale:0.5 Images:



PROPOSED SEQUENCE OF WORK	
	<b>PHASE 1</b> CONSISTS OF FULL ROADWAY CLOSURE WORK FROM STA 0+50 TO THE CENTER OF THE SIERRA CREST DRIVE INTERSECTION.
	<b>PHASE 2</b> CONSISTS OF FULL ROADWAY CLOSURE WORK FROM THE CENTER OF THE SIERRA CREST DRIVE INTERSECTION TO THE CENTER OF THE CANYON TERRACE DRIVE INTERSECTION.
	<b>PHASE 3</b> CONSISTS OF FULL ROADWAY CLOSURE WORK FROM THE CENTER OF THE CANYON TERRACE DRIVE INTERSECTION TO THE CENTER OF THE KINGERY DRIVE INTERSECTION.
	<b>PHASE 4</b> CONSISTS OF FULL ROADWAY CLOSURE WORK FROM THE CENTER OF THE KINGERY DRIVE INTERSECTION TO THE RIM ROAD / SCENIC DRIVE INTERSECTION.

- NOTES**
- CONTRACTOR SHALL NOT BE ALLOWED TO WORK ON MORE THAN ONE PHASE AT A TIME AND SHALL REQUIRE WRITTEN APPROVAL FROM THE CITY OF EL PASO PRIOR COMMENCEMENT OF WORK ON NEXT PHASE.
  - SEQUENCE MAY BE CHANGED WITH WRITTEN APPROVAL FROM CITY OF EL PASO. CHANGES TO THE SEQUENCE MAY IMPACT DETOURS, AND OTHER CONSTRUCTION ACTIVITIES.
  - CONTRACTOR SHALL RE-OPEN ROADWAY CROSSINGS AS SOON AS POSSIBLE TO RETURN TRAFFIC FLOW TO ITS NORMAL OPERATION.
  - CONTRACTOR SHALL MAINTAIN ACCESS TO THRU TRAFFIC AT ALL TIMES. CONTRACTOR SHALL LIMIT LANE CLOSURES.
  - CONTRACTOR SHALL PROVIDE ACCESS TO THE PALISADES CANYON DURING CONSTRUCTION ACTIVITIES AND SHALL COORDINATE WITH THE CITY'S INSPECTOR FOR A DESIGNATED PARKING AREA.

NO.	DATE	REVISION	REMARKS	BY
1	4/20/16		REVISED PHASING	M.M.

**McI Cardenas Inc.**  
*Leaders in Project Delivery & Performance*  
 3500 E. Mineral Ave. El Paso, TX 79903 915.503.3091  
 Texas Board of Professional Engineers Registration No. F-200554



**ENGINEER'S NOTE**  
 "THE SEAL APPEARING ON THIS DOCUMENT IS THE SEAL OF MARCOS MEDINA, P.E. No. 88830 ON APRIL 21, 2016. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"

SCALE
Horiz. 1"=100'
Vert. N/A
Date: APRIL 2016
Design by: G.G.
Drawn by: A.R.
Chkd. by: M.M.
Appd. by: R.M.
JOB No. 14-120

**P R O J E C T N A M E**  
**ROBINSON AVENUE STREET AND DRAINAGE IMPROVEMENTS**

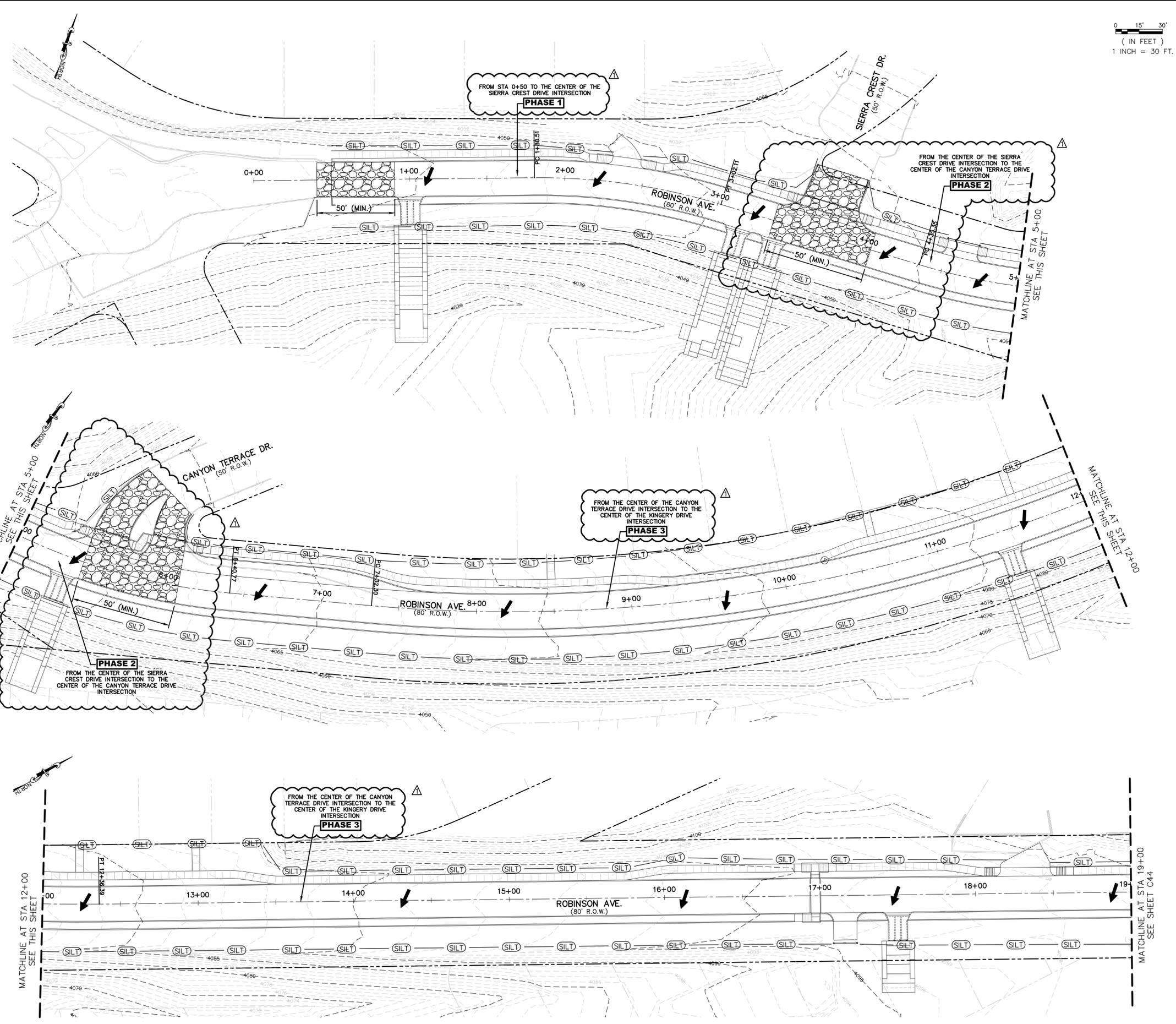
City of El Paso  
**ENGINEERING**  
 and Construction Management  
 218 N. CAMPBELL ST. PH. (915) 212-0065

**SHEET TITLE**  
 ROBINSON AVENUE CONSTRUCTION SEQUENCE PLAN

**SHEET**  
 C7  
 1 OF 1

**FILE No. 238488**

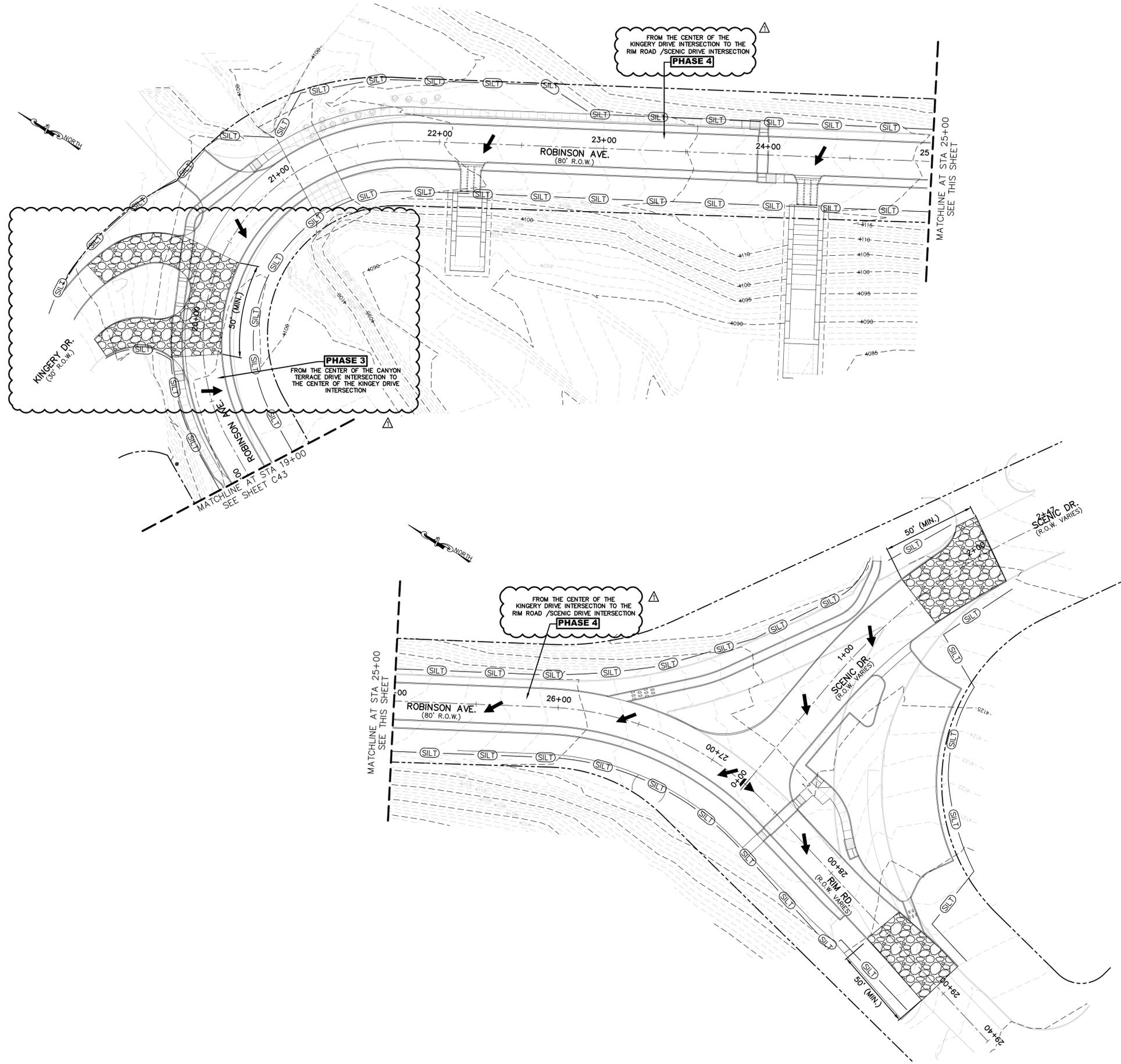
F:\14120\DWG\14120 - (C43) SW3P Site Plan 1.dwg Time: Apr 21, 2016 - 11:33:59m LogIn: ggarardo Dim: scale: 1 LIT: scale: 0.5 Images:



0 15' 30'  
( IN FEET )  
1 INCH = 30 FT.

<p><b>FLOOD ZONE "A2"</b> AREAS OF 100-YEAR FLOOD; BASE FLOOD ELEVATIONS AND FLOOD HAZARD FACTORS DETERMINED.</p> <p>FIRM - FLOOD INSURANCE RATE MAP CITY OF EL PASO, EL PASO COUNTY, TX. PANEL 33 OF 52 COMMUNITY - PANEL NUMBER 480214 0033 B MAP REVISED: OCTOBER 15, 1982</p>		<p>NO. DATE REVISION REMARKS BY</p> <p>4/21/16</p>
<p><b>LEGEND</b></p> <p> STABILIZED CONSTRUCTION ENTRANCE/EXIT COORDINATE LOCATION WITH CITY INSPECTOR (SEE SHEET C46)</p> <p> SILT FENCE (SEE SHEET C46)</p> <p> FLOW DIRECTION</p> <p> NEW LOW POINT</p> <p> NEW HIGH POINT</p>		<p><b>ENGINEER'S SEAL</b></p>
<p><b>STAGING AREA</b> CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AN AREA TO BE USED FOR STAGING.</p>		<p><b>ENGINEER'S NOTE</b></p> <p>"THE SEAL APPEARING ON THIS DOCUMENT IS THE SEAL OF MARCOS MEDINA, P.E. NO. 88850 ON APRIL 21, 2016. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"</p>
<p><b>NOTES</b></p> <ol style="list-style-type: none"> <li>1. STABILIZED CONSTRUCTION EXITS TO BE PLACED AT ACCESS POINTS COORDINATED WITH AND APPROVED BY THE CITY INSPECTOR.</li> <li>2. SW3P LOCATED WITHIN ON-SITE OFFICE.</li> <li>3. CONTRACTOR TO POST T.C.E.Q. CONSTRUCTION SITE NOTICE ON THE JOB SITE.</li> </ol>		<p><b>SCALE</b></p> <p>Horiz. 1"=30'</p> <p>Vert. N/A</p> <p>Date: APRIL 2016</p> <p>Design by: G.G.</p> <p>Drawn by: A.R.</p> <p>Chkd. by: M.M.</p> <p>Appd. by: R.M.</p> <p>JOB No. 14-120</p>
<p><b>PROJECT NAME</b></p> <p><b>ROBINSON AVENUE STREET AND DRAINAGE IMPROVEMENTS</b></p>		
<p><b>ENGINEERING</b> and Construction Management</p> <p>City of El Paso</p> <p>218 N. CAMPBELL ST. PH. (915) 212-0065</p>		
<p><b>SHEET TITLE</b></p> <p>STORMWATER POLLUTION PREVENTION PLAN SITE PLAN</p>		
<p>SHEET</p> <p><b>C43</b></p>		<p>FILE No. 238488</p> <p>1 OF 2</p>

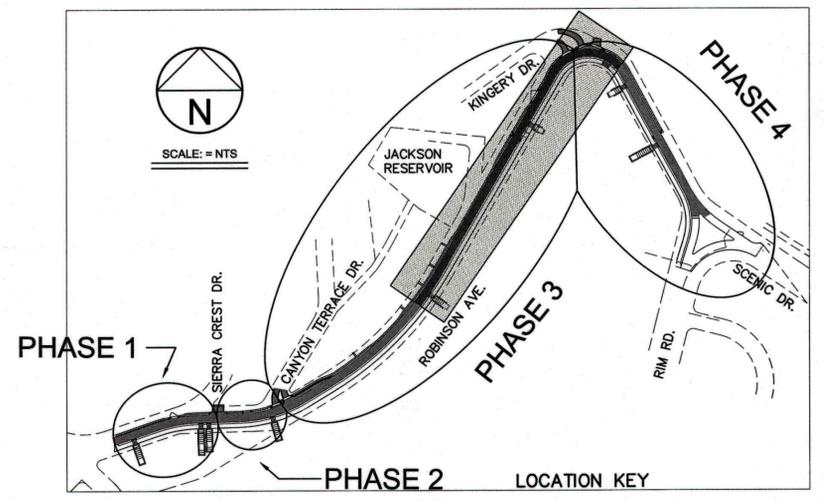
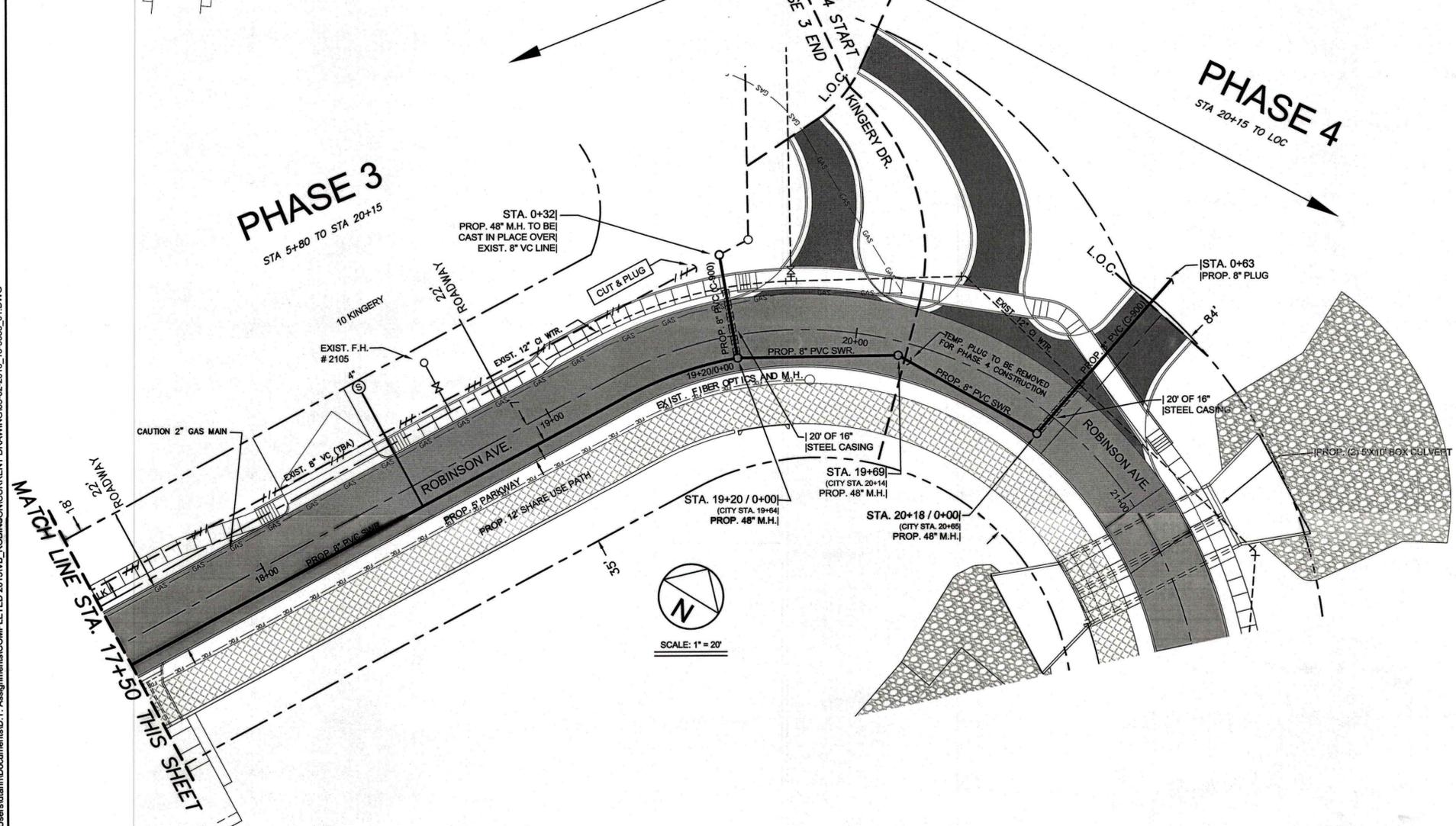
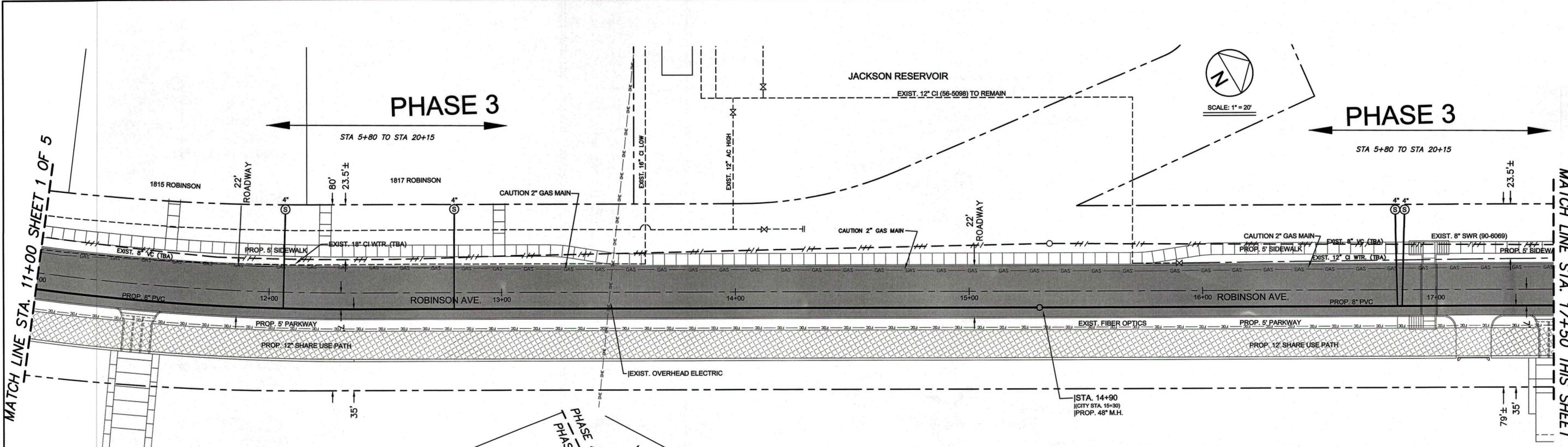
F:\14120\DWG\14120 - (044) SW3P Site Plan 2.dwg Time: Apr 21, 2016 - 11:39am. Loging: garardo Dim: scale: 30 L1: scale: 0.5 Images:



0 15' 30'  
( IN FEET )  
1 INCH = 30 FT.

<p><b>FLOOD ZONE "A2"</b> AREAS OF 100-YEAR FLOOD; BASE FLOOD ELEVATIONS AND FLOOD HAZARD FACTORS DETERMINED.</p> <p>FIRM - FLOOD INSURANCE RATE MAP CITY OF EL PASO, EL PASO COUNTY, TX. PANEL 33 OF 52 COMMUNITY - PANEL NUMBER 480214 0033 B MAP REVISED: OCTOBER 15, 1982</p>		<p>NO. DATE REVISION REMARKS BY</p> <p>4/21/16</p>
<p><b>LEGEND</b></p> <p> STABILIZED CONSTRUCTION ENTRANCE/EXIT COORDINATE LOCATION WITH CITY INSPECTOR (SEE SHEET C46)</p> <p> SILT FENCE (SEE SHEET C46)</p> <p> FLOW DIRECTION</p> <p> NEW LOW POINT</p> <p> NEW HIGH POINT</p>		<p><b>ENGINEER'S SEAL</b></p> <p></p>
<p><b>STAGING AREA</b> CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AN AREA TO BE USED FOR STAGING.</p>		<p><b>ENGINEER'S NOTE</b></p> <p>"THE SEAL APPEARING ON THIS DOCUMENT IS THE SEAL OF MARCOS MEDINA, P.E. NO. 88850 ON APRIL 21, 2016. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"</p>
<p><b>NOTES</b></p> <ol style="list-style-type: none"> <li>1. STABILIZED CONSTRUCTION EXITS TO BE PLACED AT ACCESS POINTS COORDINATED WITH AND APPROVED BY THE CITY INSPECTOR.</li> <li>2. SW3P LOCATED WITHIN ON-SITE OFFICE.</li> <li>3. CONTRACTOR TO POST T.C.E.Q. CONSTRUCTION SITE NOTICE ON THE JOB SITE.</li> </ol>		<p><b>SCALE</b></p> <p>Horiz. 1"=30' Vert. N/A</p> <p>Date: APRIL 2016 Design by: G.G. Drawn by: A.R. Chkd. by: M.M. Appd. by: R.M. JOB No. 14-120</p>
<p><b>PROJECT NAME</b></p> <p><b>ROBINSON AVENUE STREET AND DRAINAGE IMPROVEMENTS</b></p>		<p><b>ENGINEERING</b> and Construction Management</p> <p>City of El Paso</p> <p>218 N. CAMPBELL ST. PH. (915) 212-0065</p>
<p><b>SHEET TITLE</b></p> <p>STORMWATER POLLUTION PREVENTION PLAN SITE PLAN</p>		<p><b>SHEET</b></p> <p>C44</p>
<p><b>FILE No. 238488</b></p>		<p>2 OF 2</p>





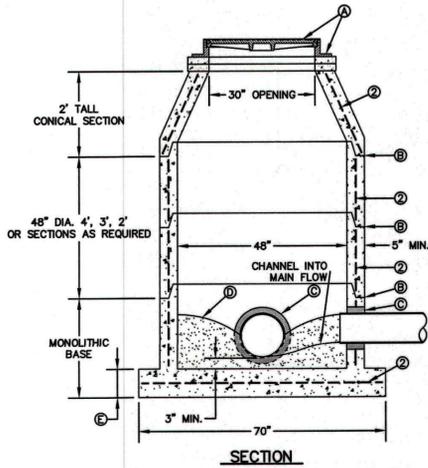
BENCHMARK: EXISTING CITY MONUMENT LOCATED ON THE POINT OF TANGENCY ROBINSON AVENUE OPPOSITE TO LOT 1 BLOCK 6.  
 ELEVATION = 4149.08 (CITY OF EL PASO DATUM)  
 FOR REFERENCE ONLY = 4160.24 (NAVD 88)

FINAL PRINT 06/24/2015

	ENGINEER'S SEAL	REVISIONS	DATE	REVISED BY	<b>EL PASO WATER UTILITIES</b> PUBLIC SERVICE BOARD  <b>ROBINSON AVE.</b> <b>FROM PIEDMONT DR. TO RIM RD.</b> <b>SANITARY SEWER IMPROVEMENTS</b>
		CONSTRUCTION DIVIDED INTO PHASES	04/27/16	D.T.	
					DRAWN BY D.T.
					JOB NO. 14-9035
					DATE 11/19/2014
					CHECKED BY A.C.
					DESIGNED BY SHT 2 OF 4

May 04, 2016 - 3:24pm dlarin  
 C:\Users\dlarin\Documents\U.T. Assignments\COMPLETED 2016\VB ROBINSON\CURRENT DRAWING\05-02-2016\_15-9035\_01.DWG

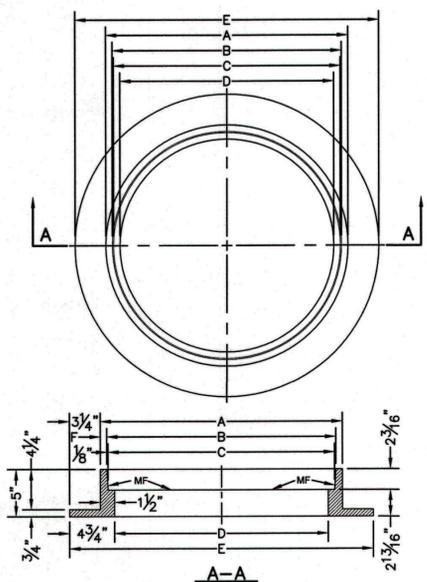




MANHOLE TYPE "A"

- GENERAL NOTES:**
1. MANHOLE TYPE "A" SHALL BE USED FOR LINES 21" AND SMALLER.
  2. PRE-CAST MANHOLE SECTIONS SHALL BE OF REINFORCED CONCRETE CONFORMING TO ASTM C-478 AND SHALL MEET HS-20 LOADING. PROVIDE REINFORCEMENT WITHIN 3" OF OPENINGS OR KNOCKOUTS, OPENINGS (UP TO 8") MADE IN FIELD SHALL BE CORE DRILLED.
  3. CEMENT SHALL BE TYPE I-II, PER ASTM C-150, AND MUST CONTAIN A MINIMUM OF 4% FLY ASH OF THE TOTAL MANHOLE WEIGHT.
  4. THE BASE & RISER SHALL BE INTEGRALLY CAST. CONCRETE SHALL BE MIN. 28 DAY COMPRESSIVE STRENGTH 4000psi.
  5. MANUFACTURER TO PROVIDE LIFTERS OF ADEQUATE SIZE AS NEEDED.
  6. THE SUBGRADE UNDER THE BASE SHALL BE COMPACTED TO 95% DENSITY IN ACCORDANCE WITH ASTM D-1557.
  7. MANHOLES BELOW GROUNDWATER TO BE EXTERNALLY AND INTERNALLY COATED WITH BITUMINOUS COATING.

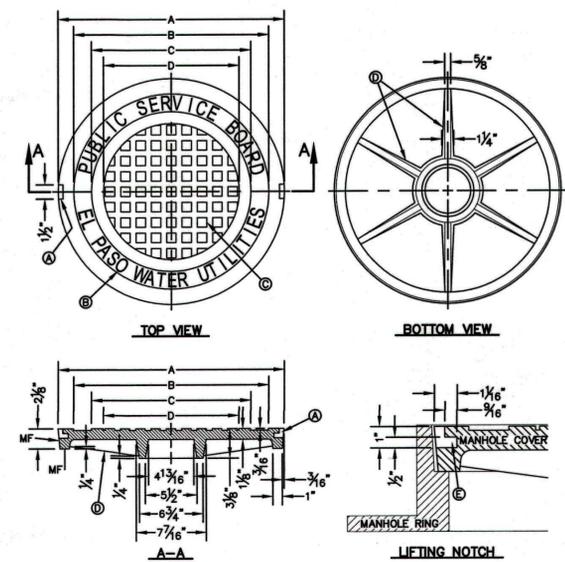
- CONSTRUCTION KEY NOTES:**
- A. MANHOLE RING AND COVER (SEE DETAILS 377 & 378). SET FRAME AND COVER FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE (SEE DETAIL 185).
  - B. ALL JOINTS TO BE TONGUE, GROOVE AND SEALED WITH RAM-NEX OR APPROVED EQUAL.
  - C. PIPE OPENINGS/KNOCKOUTS AS REQUIRED TO FIT PIPE SIZE AND SHALL HAVE FLEXIBLE PIPE TO MANHOLE CONNECTORS (COMPRESSION TYPE ASTM-923), "KOR-N-SEAL" OR APPROVED EQUAL. D. GROUT AS REQUIRED.
  - E. CONCRETE BASE SHALL BE 8" FOR MH'S UP TO 12" DEEP AND 12" FOR DEPTHS GREATER THAN 12".



- GENERAL NOTES:**
1. MATCHING SURFACES MARKED "MF" TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
  2. CASTING TO BE SMOOTH & VOID OF AIR HOLES.
  3. CASTING MUST MEET REQUIREMENTS OF AASHTO M306-07.
  4. AS-CAST DIMENSIONS MAY VARY 1/8" ± / PER FOOT (AASHTO M306-07).
  5. WEIGHT MAY VARY 5% ± (AASHTO M306-07).

MANHOLE RING	MANHOLE - ALL TYPES	*MANHOLE TYPE A, A1, A2 & C
A	33"	25 1/2"
B	31 1/4"	24 1/8"
C	31 1/2"	23 3/8"
D	30"	22 1/2"
E	30 1/2"	32"
F	5 1/2"	1 1/2"
WEIGHT	220 lbs.	170 lbs.

\*OBSOLETE - DO NOT USE (FOR REFERENCE ONLY)



SEWER MANHOLE COVER

- GENERAL NOTES:**
1. MATCHING SURFACES MARKED "MF" TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
  2. CASTING TO BE SMOOTH & VOID OF AIR HOLES.
  3. CASTING MUST MEET REQUIREMENTS OF AASHTO M306-07.
  4. AS-CAST DIMENSIONS MAY VARY 1/8" ± / PER FOOT (AASHTO M306-07).
  5. WEIGHT MAY VARY 5% ± (AASHTO M306-07).

- CONSTRUCTION KEY NOTES:**
- A. LIFTING NOTCH.
  - B. 3/8" RAISED LETTERING.
  - C. 1" SQUARES (3/8" TALL) WITH 1/2" SPACE BETWEEN.
  - D. REINFORCING RIBS.
  - E. SLOT.

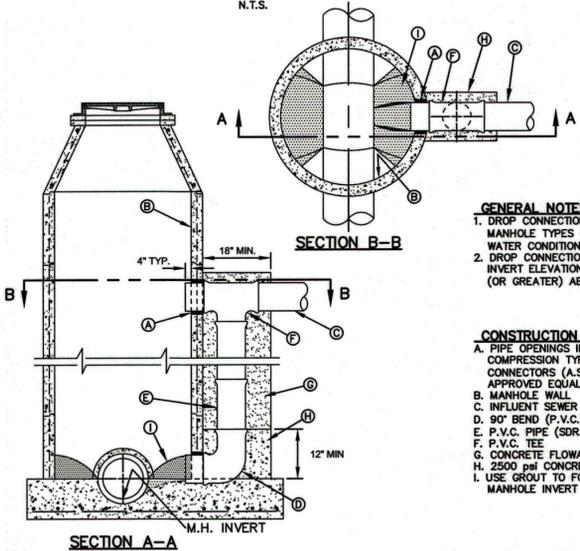
MANHOLE COVER	MANHOLE - ALL TYPES	*MANHOLE TYPE A, A1, A2 & C
A	31 3/4"	23 3/8"
B	28 1/2"	20 1/2"
C	24 3/4"	16 1/2"
D	21 1/4"	14 3/8"
WEIGHT	265 lbs.	165 lbs.

\*OBSOLETE - DO NOT USE (FOR REFERENCE ONLY)

**SANITARY SEWER SYSTEM SUMMARY**

STREET NAME	LENGTH, SIZE & TYPE OF PIPE
ROBINSON AVE.	2,018 FT. OF 8" PVC 28 FT. OF 8" PVC
SIERRA CREST DR.	56 FT. OF 8" PVC C-900 235 20 FT. OF 16" STEEL CASING
CANYON TERRACE DR.	45 FT. OF 8" PVC C-900 235 20 FT. OF 16" STEEL CASING
KINGERY DR.	95 FT. OF 8" PVC C-900 235 40 FT. OF 16" STEEL CASING

SEWER MANHOLE RING



DROP CONNECTION - EXTERNAL MANHOLE INSTALLATION

- GENERAL NOTES:**
1. DROP CONNECTION SHOWN MAY BE USED ON ALL MANHOLE TYPES (NOT RECOMMENDED IN GROUND WATER CONDITIONS).
  2. DROP CONNECTION TO BE CONSTRUCTED WHEN INVERT ELEVATION OF INFLUENT PIPE IS 3 FEET (OR GREATER) ABOVE THE MANHOLE INVERT.

- CONSTRUCTION KEY NOTES:**
- A. PIPE OPENINGS IN MANHOLE RISERS SHALL HAVE COMPRESSION TYPE FLEXIBLE PIPE TO MANHOLE CONNECTORS (A.S.T.M.- 6923) "KOR-N-SEAL" OR APPROVED EQUAL.
  - B. MANHOLE WALL.
  - C. INFLUENT SEWER PIPE.
  - D. 90° BEND (P.V.C.)
  - E. P.V.C. PIPE (SDR. 35)
  - F. P.V.C. TEE
  - G. CONCRETE FLOWABLE FILL
  - H. 2500 PSI CONCRETE
  - I. USE GROUT TO FORM A SMOOTH CHANNEL TO MANHOLE INVERT

**PROJECT OVERVIEW AND SEQUENCE OF WORK (AT NO ADDITIONAL COST TO THE OWNER)**

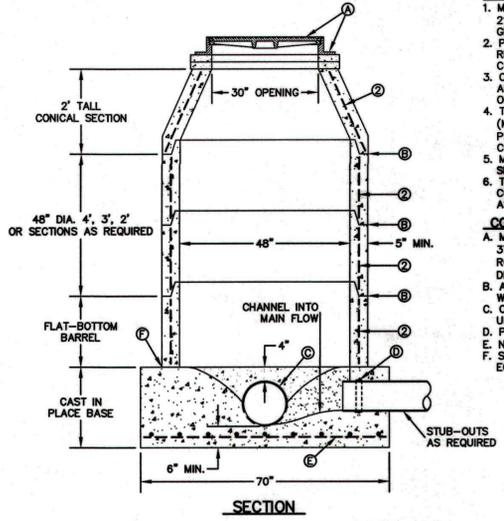
1. THIS WORK TO BE DONE IN CONJUNCTION WITH THE CITY OF EL PASO "ROBINSON AVE., STREET IMPROVEMENTS" PROJECT.
2. CONTRACTOR SHALL COORDINATE WATER AND SANITARY SEWER SYSTEM CONSTRUCTION AND SEQUENCE OF WORK WITH CITY TRAFFIC CONTROL PLANS. ANY ADJUSTMENTS AND/OR MODIFICATIONS TO THE EXISTING TRAFFIC CONTROL PLANS THAT ARE REQUIRED FOR THE WATER AND SANITARY SEWER SYSTEM CONSTRUCTION WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS INCLUDING NIGHTTIME AND WEEKEND WORK AS NEEDED.
3. THE CONTRACTOR MAY NEED TO WORK DURING OFF-HOURS, NIGHTS AND/OR WEEKENDS TO INSTALL THE WATER AND SANITARY SEWER MAINS AND TO EXTEND SERVICES ACROSS THE STREET TO ASSURE ADEQUATE CONSTRUCTION ABILITY AND OPERATION OF THESE TWO SYSTEMS.
4. WATER AND SANITARY SEWER MAIN AND ASSOCIATED SERVICE LINE INSTALLATION MAY REQUIRE THAT CERTAIN PORTIONS OF THIS WORK BE PERFORMED OUTSIDE THE RESPECTIVE WORK AREA LIMITS SHOWN ON THE PLANS FOR CONSTRUCTION. THEREFORE, THE WORK ZONE AREA LIMITS SHALL BE INCREASED, EXTENDED AND/OR MODIFIED AS NEEDED TO ACCOMMODATE THIS WORK.

**GENERAL NOTES:**

1. CONTACT UTILITY COMPANIES FOR EXACT LOCATION OF UNDERGROUND UTILITIES IN THIS AREA BEFORE EXCAVATION.
2. THIS WORK TO BE DONE IN CONJUNCTION WITH THE CITY OF EL PASO "ROBINSON AVE., STREET IMPROVEMENTS" PROJECT.
3. CONTRACTOR SHALL PAY CLOSE ATTENTION TO THE UTILITY SHEETS; COORDINATE SEQUENCE OF WORK, AND SHALL COORDINATE FIELD LOCATIONS OF ALL UTILITIES WITH THE APPROPRIATE UTILITY COMPANIES IN ORDER TO MINIMIZE CONFLICTS DURING WATER AND SANITARY SEWER CONSTRUCTION AND TO PREVENT DAMAGE TO ANY UTILITIES.
4. INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF 5- FEET AS PER O.S.H.A. STANDARDS.
5. CITY PAVING CUT PERMIT REQUIRED BEFORE EXCAVATING WITHIN CITY STREETS.
6. WHEN EXISTING PAVEMENT AND BASE ARE TO BE CUT & RESTORED, CONTRACTOR SHALL PLACE 12-INCHES OF CEMENT STABILIZED BACKFILL (2-SACK) AND 2-INCHES OF ASPHALT. TYPE OF REPLACEMENT MATERIALS MUST BE APPROVED BY ENGINEER.
7. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING AND PAYING ALL PERMITS ASSOCIATED WITH WATER AND SANITARY SEWER CONSTRUCTION.
8. ALL EXISTING FACILITIES CURRENTLY IN SERVICE MUST REMAIN IN SERVICE THROUGHOUT CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING WATER AND SANITARY SEWER LINES (INCLUDING SERVICES) FROM DAMAGE AS A RESULT OF CONSTRUCTION ACTIVITIES.
9. RECONNECTION OF EXISTING FACILITIES SHOWN ON THIS PLAN MUST BE MADE SUCH THAT MINIMAL INTERRUPTION OF WATER AND SANITARY SEWER SERVICE TO CUSTOMER IS MADE.
10. CONTRACTOR SHALL PROVIDE TEMPORARY SERVICE TO CUSTOMERS IF SERVICE WILL BE INTERRUPTED FOR MORE THAN 4 HOURS IN A 24-HOUR PERIOD AND SHALL ISSUE A 48-HOUR ADVANCE NOTICE TO THE CUSTOMERS WHOSE SERVICES WILL BE INTERRUPTED.
11. ALL WORK REQUIRED TO SAW-CUT THE EXISTING PAVEMENT, EXISTING CONCRETE SIDEWALKS, EXISTING DRIVEWAYS, ETC., AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS.
12. USE CAUTION WHEN DIGGING IN THE AREA OF EXISTING ELECTRIC & GAS MAINS.
13. BENCHMARK: EXISTING CITY MONUMENT LOCATED ON THE POINT OF TANGENCY ROBINSON AVENUE OPPOSITE TO LOT 1 BLOCK 6. ELEVATION = 4149.08 (CITY OF EL PASO DATUM) FOR REFERENCE ONLY = 4160.24 (NAVD 88)
14. ALL CITY STATIONS SHOWN IN THESE SHEETS ARE REFERENCES OFF CITY'S ALIGNMENT.
15. TRAFFIC CONTROL WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO PRIVATE PROPERTY CAUSED BY THE CONSTRUCTION PROJECT. THE CONTRACTOR UPON RECEIPT OF A COMPLAINT OF DAMAGE, SHALL WITHIN 10 DAYS, RESPOND IN WRITING WITH A PROPOSAL TO REPAIR SAID DAMAGE.
17. EMERGENCY RESPONSE NOTE: THE CONTRACTOR SHALL IMMEDIATELY CALL AND NOTIFY THE EL PASO WATER UTILITIES DISPATCHER AT 594-5775 OR 594-5778 WHEN A WATER OR SANITARY SEWER MAIN IS BROKEN DURING CONSTRUCTION EXCAVATION AND THE EXTEND OF THE BREAK FOR IMPLEMENTATION OF UTILITIES EMERGENCY RESPONSE ACTION PLAN. THE CONTRACTOR SHALL ALSO IMMEDIATELY NOTIFY THE EL PASO WATER UTILITIES FIELD INSPECTOR AND PROJECT ENGINEER ASSIGNED TO THE PROJECT.

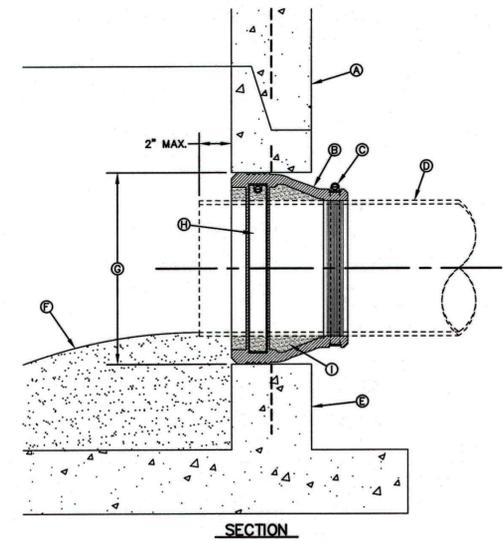
**SANITARY SEWER NOTES:**

1. PROVIDE MANHOLE ADAPTER WHERE PVC PIPE CONNECTS TO MANHOLE.
2. ALL PVC AND DI PIPE ON THIS PLAN SHALL BE ENCASED WITH SELECT BEDDING MATERIAL.
3. LOCATIONS OF EXISTING SANITARY SEWER SERVICES AT THE EXISTING MAINS WERE OBTAINED BY TELEVISION THE SANITARY SEWER MAINS, WHERE POSSIBLE. HOWEVER, THE SERVICE LOCATION AND DEPTH AT THE EXISTING OR NEW RIGHTS-OF-WAY ARE NOT AVAILABLE. CONTRACTOR SHALL VERIFY EXACT LOCATION OF SERVICES, AT AND WITH RESPECT TO THE NEW RIGHT-OF-WAY, PRIOR TO CONSTRUCTION.
4. CONTRACTOR TO RECONNECT ALL EXISTING SEWER SERVICES TO NEW MAIN AND ADJUST LOCATION AND ELEVATION OF SERVICE AS NEEDED TO MAKE PROPER CONNECTION. SANITARY SEWER SERVICE INSTALLATION SHALL BE AS PER CITY'S PLUMBING CODES.
5. CONTRACTOR TO EXTEND ANY NEW SANITARY SEWER SERVICE STUB-OUTS TO PROPOSED PROPERTY (RIGHT-OF-WAY) LINE.
6. CONTRACTOR SHALL SET NEW TOP OF MANHOLE RIMS TO MATCH TEMPORARY TRAFFIC LANES AND FINISHED STREET GRADES.
7. ALL NEW SANITARY SEWER LINES ARE TO BE COMPLETED, ACCEPTED FOR USE AND OPERATIONAL BEFORE THE EXISTING SANITARY SEWER LINES AND MANHOLES ARE ABANDONED.
8. EXISTING SEWER LINES TO BE ABANDONED WILL BE CHECKED FOR FLOW BY INSERTING A PLUG IN THE DOWNSTREAM MANHOLE AND CHECKING DAILY FOR ACCUMULATION OF SEWAGE FOR A PERIOD OF ONE WEEK.
9. SEWER LINES TO BE ABANDONED IN PLACE SHALL BE COMPLETELY DEWATERED BEFORE THEY ARE PLUGGED. THE LINES TO BE ABANDONED SHALL BE CUT AND PLUGGED AT ALL OPENINGS.
10. AFTER IT HAS BEEN DETERMINED THAT THE LINE TO THE MANHOLE IS DEAD, THE ABANDONMENT OF THE MANHOLE WILL PROCEED.
11. ABANDONMENT OF EXISTING MANHOLES WILL CONSIST OF CUTTING AND PLUGGING AT THE OUTSIDE OF THE MANHOLE ALL CONNECTING MAINS; REMOVAL OF CONE SECTION OR SUFFICIENT AMOUNT TO BE BELOW SUBGRADE, AND FILL WITH CEMENT STABILIZED BACKFILL (2 SACKS OF CEMENT PER CUBIC YARD OF SAND) TO BOTTOM OF PROPOSED SUBGRADE. WHERE INDICATED ON THE PLANS, IN CONFLICT WITH PROPOSED LINES, OR DIRECTED BY THE ENGINEER, MANHOLE IS TO BE REMOVED AT NO ADDITIONAL COST TO THE OWNER. CSB UTILIZED FOR ABANDONMENT OF MANHOLES WILL NOT BE MEASURED SEPARATELY FOR PAYMENT, BUT SHALL BE CONSIDERED SUBSIDIARY TO THIS ITEM.
12. BY-PASSING TO MAINTAIN SEWER MAINS AND SERVICES SHALL BE PROVIDED BY THE CONTRACTOR. ALL REQUIRED PLUGGING AND BYPASSING SHALL BE CONSIDERED SUBSIDIARY TO THE PARTICULAR SEWER WORK BEING DONE. AN EXISTING SEWER SYSTEM MAP OF THE PROJECT AREA CAN BE OBTAINED FROM EL PASO WATER UTILITIES AND IS AVAILABLE FOR REVIEW AT THEIR OFFICE, 1154 HAWKINS BLVD., EL PASO TX. 79925, DURING REGULAR BUSINESS HOURS.
13. CONTRACTOR SHALL COORDINATE INSTALLATION OF NEW MANHOLES WITH FINISHED ROAD ELEVATIONS AND SHALL ADJUST NEW MANHOLES TO TEMPORARY AND FINISHED GRADES AS REQUIRED FOR CONSTRUCTION. PER SPECIFICATION, ALL ADJUSTMENT COSTS FOR NEW MANHOLES SHALL BE CONSIDERED SUBSIDIARY TO THE MANHOLE UNIT.
14. CONTRACTOR TO INSTALL TEMPORARY SIPHON ON EXIST. SEWER MAINS AT CROSSINGS WITH PROPOSED SEWER MAINS AND SERVICES SHALL BE PROVIDED BY THE CONTRACTOR. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR THIS WORK.
15. CONTRACTOR TO CONFIRM INVERT ELEVATIONS OF ALL PROP. MANHOLES CONNECTING TO EXISTING SANITARY SEWER MAINS PRIOR TO INSTALLATION.
16. INSTALLATION OF PROPOSED SANITARY SEWER MAINS, MANHOLES AND SERVICE RECONNECTION SHALL ALSO INCLUDE REMOVAL OF EXISTING SEWER FACILITIES SCHEDULED FOR ABANDONMENT, INCLUDING BUT NOT LIMITED TO MANHOLES, MAINS AND SERVICES AS NECESSARY FOR PROPER INSTALLATION OF PROPOSED SANITARY SEWER IMPROVEMENTS. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR THIS WORK.



MANHOLE TYPE "A1"

- GENERAL NOTES:**
1. MANHOLE TYPE "A1" SHALL BE USED FOR LINES 21" AND SMALLER. NOT TO BE USED IN GROUNDWATER CONDITIONS.
  2. PRE-CAST MANHOLE SECTIONS SHALL BE OF REINFORCED CONCRETE CONFORMING TO ASTM C-478 AND SHALL MEET HS-20 LOADING.
  3. CEMENT SHALL BE TYPE I-II, PER ASTM C-150, AND MUST CONTAIN A MINIMUM OF 4% FLY ASH OF THE TOTAL MANHOLE WEIGHT.
  4. THE BASE SHALL BE CAST IN PLACE CONCRETE (MINIMUM 28 DAY COMPRESSIVE STRENGTH 4000 PSI.) POURED ON UNDISTURBED OR THOROUGHLY COMPACTED SUB-BASE.
  5. MANUFACTURER TO PROVIDE LIFTERS OF ADEQUATE SIZE AS NEEDED.
  6. THE SUBGRADE UNDER THE BASE SHALL BE COMPACTED TO 95% DENSITY IN ACCORDANCE WITH ASTM D-1557.
- CONSTRUCTION KEY NOTES:**
- A. MANHOLE RING AND COVER (SEE DETAILS 377 & 378). SET FRAME AND COVER FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE (SEE DETAIL 185).
  - B. ALL JOINTS TO BE TONGUE, GROOVE AND SEALED WITH RAM-NEX OR APPROVED EQUAL.
  - C. ON MANHOLE, PIPE IS TO BE LAID THRU AND UPPER HALF CUT OUT.
  - D. PIPE GASKET.
  - E. NO. 4 REBARS 8" ON CENTER, BOTH WAYS.
  - F. SEAL ALL AROUND WITH RAM-NEX OR APPROVED EQUAL.



PIPE CONNECTION TO MANHOLE

- GENERAL NOTES:**
1. MANHOLE CONNECTOR SHALL BE KOR-N-SEAL OR EQUAL MEETING THE REQUIREMENTS OF ASTM C-923. CONNECTOR SHALL BE FURNISHED BY CONTRACTOR.

- CONSTRUCTION KEY NOTES:**
- A. PRECAST MANHOLE BARREL.
  - B. FLEXIBLE CONNECTOR.
  - C. PIPE CLAMP SS 316.
  - D. APPROVED PIPE.
  - E. PRECAST MANHOLE BASE.
  - F. GROUT AS REQUIRED TO FORM SMOOTH CHANNEL TO MANHOLE INVERT.
  - G. PIPE OPENINGS/KNOCKOUTS AS REQUIRED TO FIT PIPE SIZE.
  - H. EXPANSION BAND SS 316.
  - I. FILL SPACE WITH GROUT.

BENCHMARK: EXISTING CITY MONUMENT LOCATED ON THE POINT OF TANGENCY ROBINSON AVENUE OPPOSITE TO LOT 1 BLOCK 6.  
ELEVATION = 4149.08 (CITY OF EL PASO DATUM)  
FOR REFERENCE ONLY = 4160.24 (NAVD 88)

FINAL PRINT 06/24/2015

ENGINEER'S SEAL	REVISIONS	DATE	REVISED BY
	SEWER SUMMARY TABLE REVISED	05/04/16	D.T.

**EL PASO WATER UTILITIES**  
PUBLIC SERVICE BOARD

**ROBINSON AVE.**  
FROM PIEDMONT DR. TO RIM RD.  
SANITARY SEWER IMPROVEMENTS

SCALE	DRAWN BY	JOB NO.	DATE
HOR. 1" = 50'	D.T.	14-9035	11/19/2014
VERT. 1" = XX'	CHECKED BY	DESIGNED BY	SHT 4 OF 4
	A.C.		

NOTE: PROVIDE ELECTRICALLY ISOLATED FLANGE WHEN CONNECTING TO EXISTING PIPELINE. SEE DETAIL SHEET 5 OF 6.

### PHASE 1

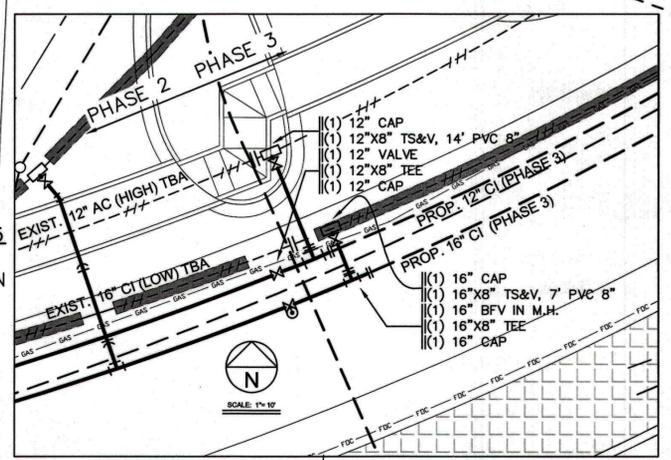
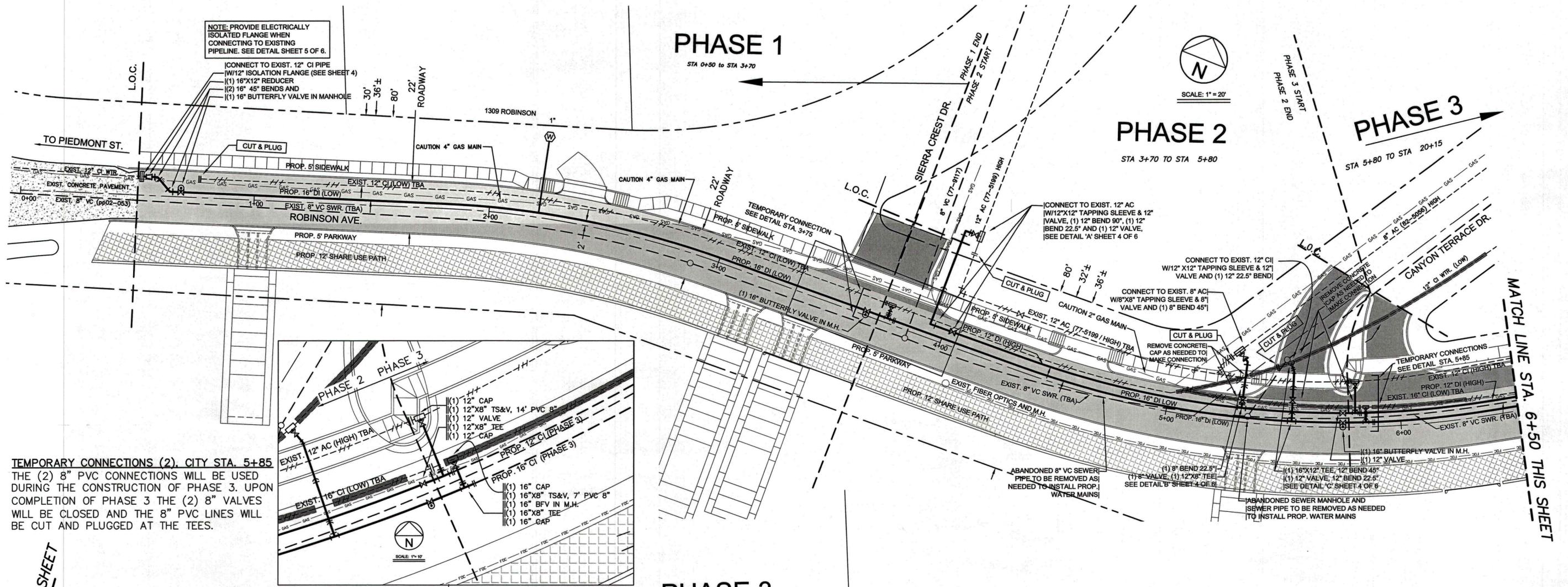
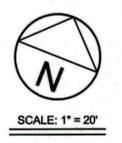
STA 0+50 TO STA 3+70

### PHASE 2

STA 3+70 TO STA 5+80

### PHASE 3

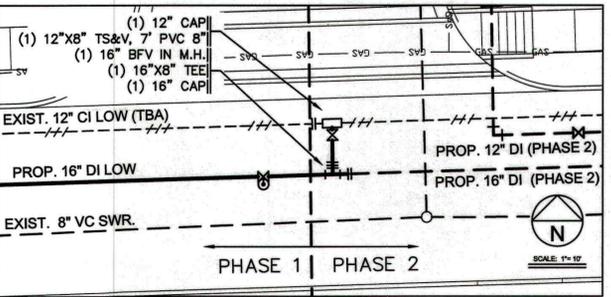
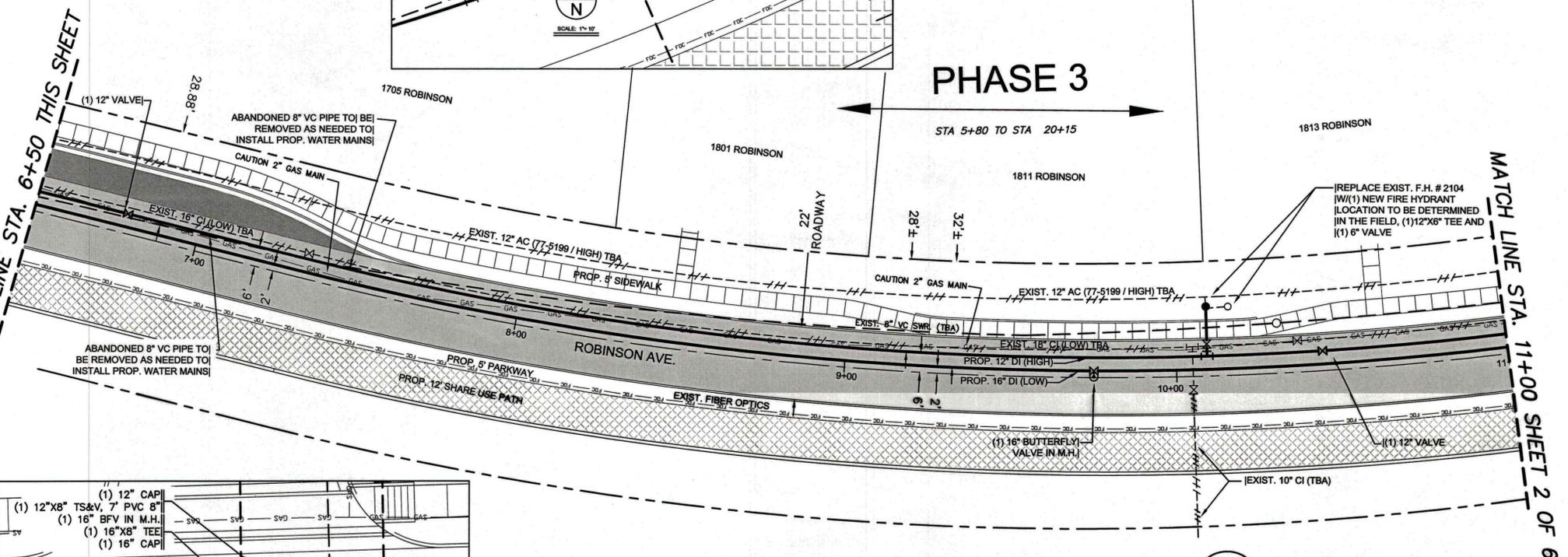
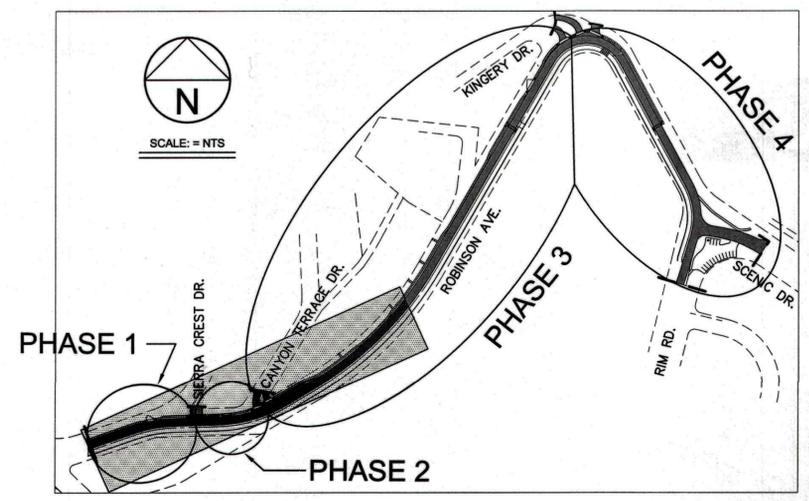
STA 5+80 TO STA 20+15



**TEMPORARY CONNECTIONS (2), CITY STA. 5+85**  
 THE (2) 8" PVC CONNECTIONS WILL BE USED DURING THE CONSTRUCTION OF PHASE 3. UPON COMPLETION OF PHASE 3 THE (2) 8" VALVES WILL BE CLOSED AND THE 8" PVC LINES WILL BE CUT AND PLUGGED AT THE TEES.

### PHASE 3

STA 5+80 TO STA 20+15



**TEMPORARY CONNECTION, STA. CITY 3+75**  
 THE 8" PVC CONNECTION WILL BE USED DURING THE CONSTRUCTION OF PHASE 2. UPON COMPLETION OF PHASE 2 THE 8" VALVE WILL BE CLOSED AND THE 8" PVC LINE WILL BE CUT AND PLUGGED AT THE TEE.

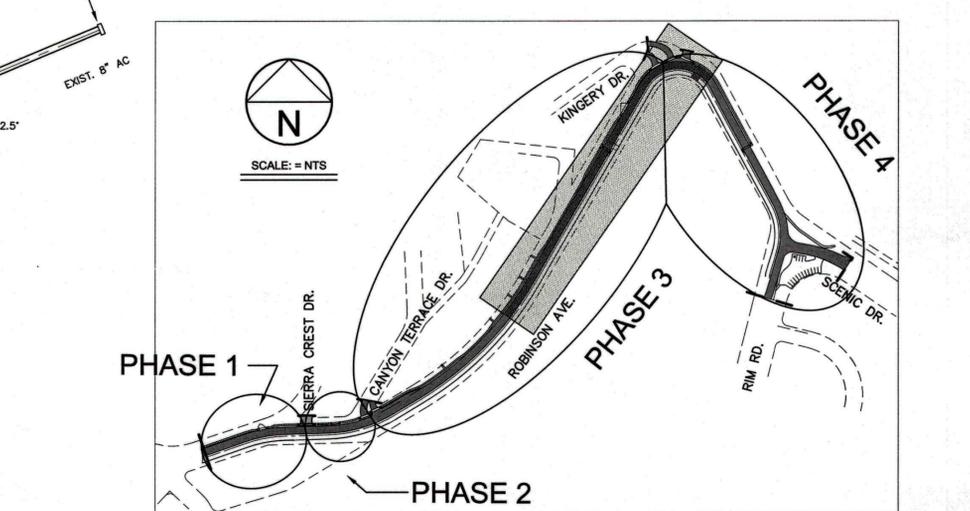
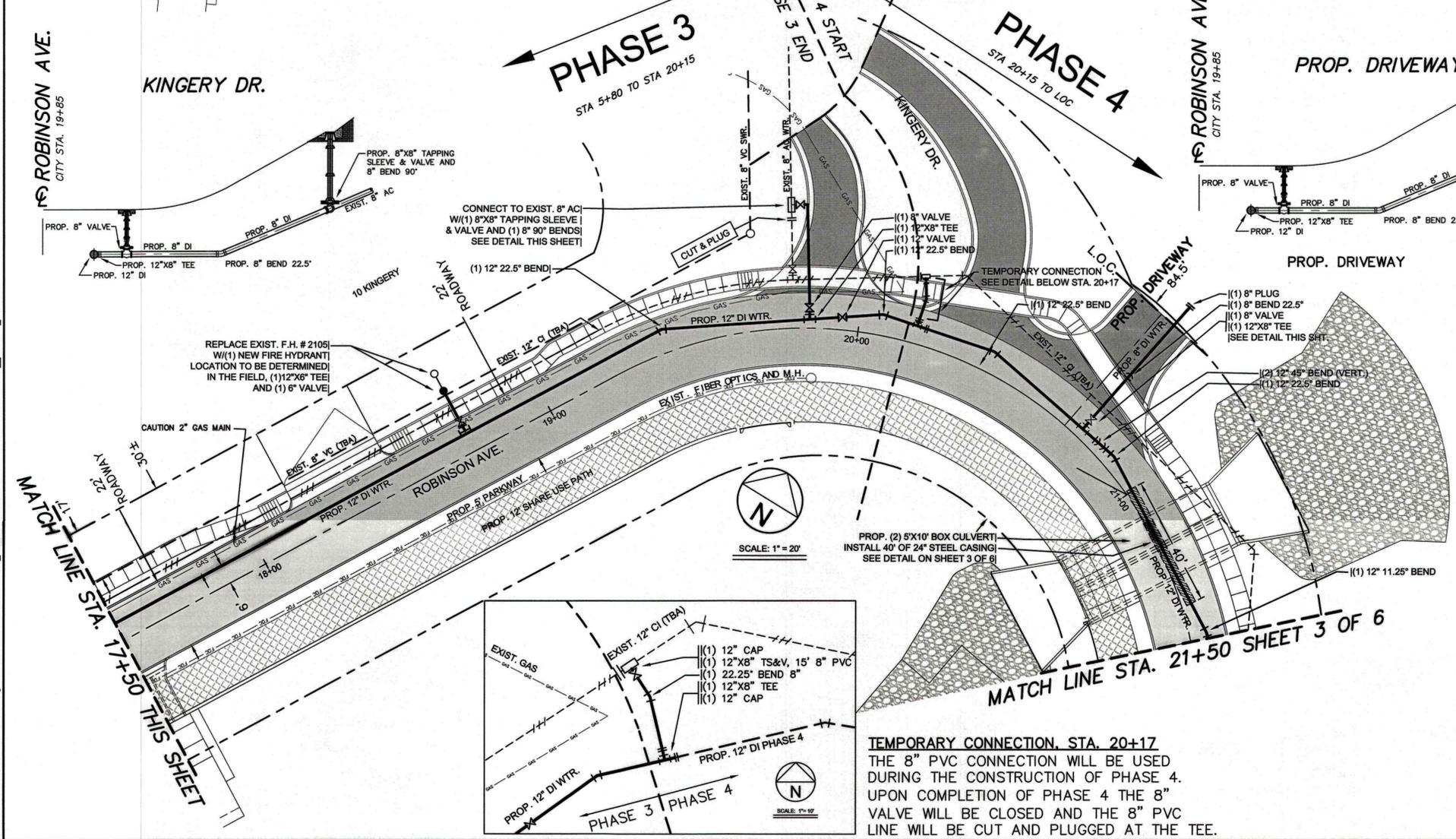
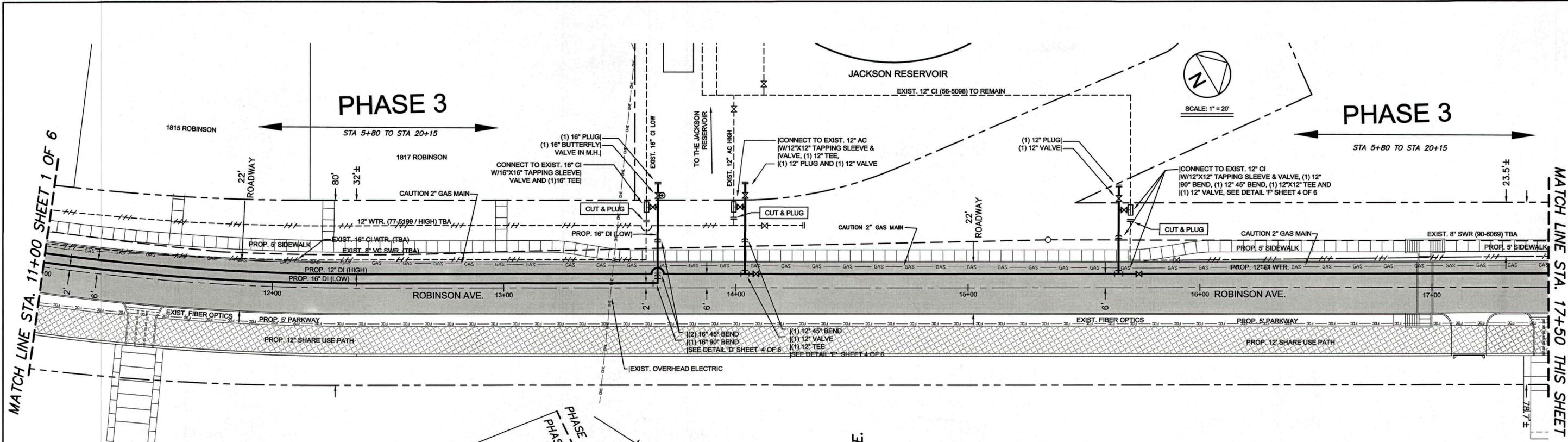
REVISIONS	DATE	REVISED BY
MATCH LINE TEXT REVISED	01/06/16	D.T.
CONSTRUCTION DIVIDED INTO PHASES	04/27/16	D.T.

<b>EL PASO WATER UTILITIES</b> PUBLIC SERVICE BOARD			
<b>ROBINSON AVE.</b> <b>FROM PIEDMONT DR. TO RIM RD.</b> <b>WATER DISTRIBUTION IMPROVEMENTS</b>			
SCALE	DRAWN BY	JOB NO.	DATE
HOR. 1" = 50'	D.T.	15-5063	11/19/2014
CHECKED BY	DESIGNED BY		SHT 1 OF 6
A.C.			

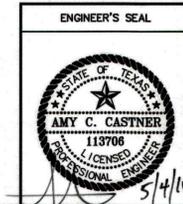
May 05, 2016 - 8:26am  
 C:\Users\dmr\Documents\2015\VB\_Robinson\CURRENT DRAWING\05-05-2016\_15-5063\_01.DWG  
 dmair  
 C:\Users\dmr\Documents\2015\VB\_Robinson\CURRENT DRAWING\05-05-2016\_15-5063\_01.DWG

FINAL PRINT 06/24/2015



May 04, 2016 - 3:18pm dclain  
 C:\Users\dclain\Documents\15-5063\15-5063\_01.DWG

FINAL PRINT 06/24/2015



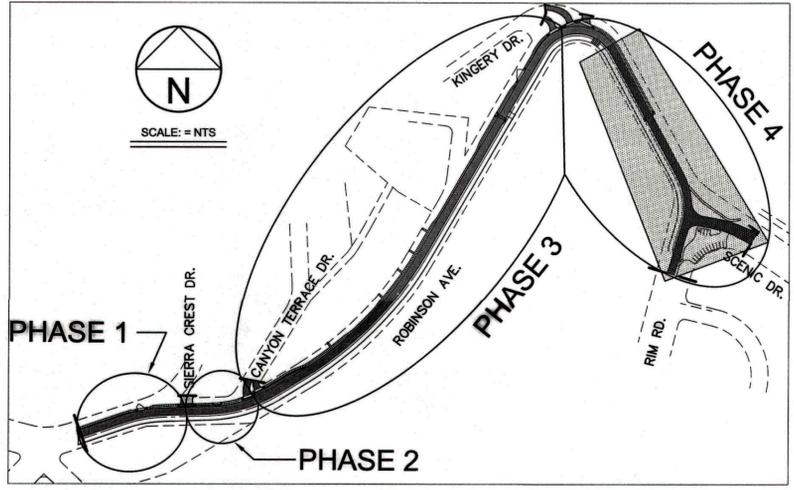
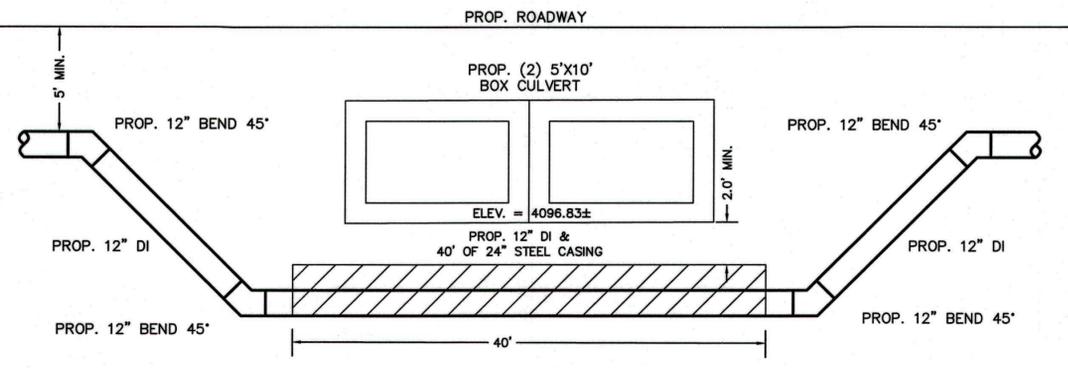
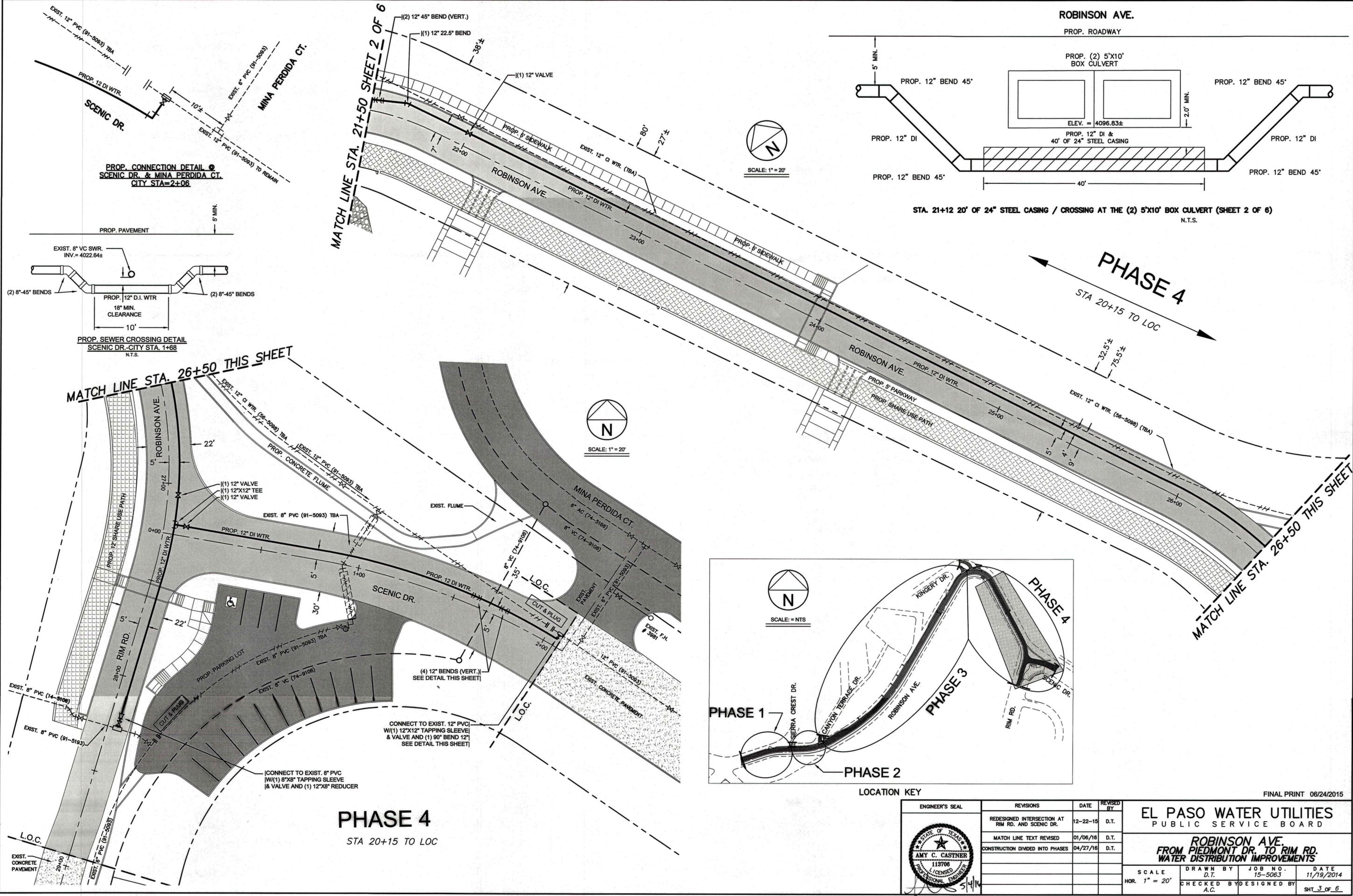
REVISIONS	DATE	REVISOR
MATCH LINE TEXT REVISED	01/06/16	D.T.
CONSTRUCTION DIVIDED INTO PHASES	04/27/16	D.T.

**EL PASO WATER UTILITIES**  
PUBLIC SERVICE BOARD

**ROBINSON AVE.  
FROM PIEDMONT DR. TO RIM RD.  
WATER DISTRIBUTION IMPROVEMENTS**

SCALE HOR. 1" = 50'	DRAWN BY D.T.	JOB NO. 15-5063	DATE 11/19/2014
CHECKED BY A.C.	DESIGNED BY A.C.	SHT. 2 OF 6	

May 04, 2016 - 3:18pm cldair  
 C:\Users\cldair\Documents\2015\15-5063\COMPLETED 2015\15-5063\ROBINSON\CURRENT DRAWINGS\05-03-2016\_15-5063\_01.DWG



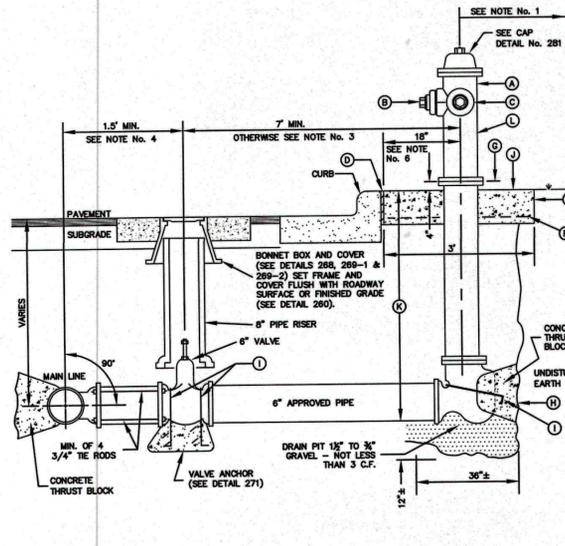
ENGINEER'S SEAL	REVISIONS	DATE	REVISED BY
	REDESIGNED INTERSECTION AT RIM RD. AND SCENIC DR.	12-22-15	D.T.
	MATCH LINE TEXT REVISED	01/06/16	D.T.
	CONSTRUCTION DIVIDED INTO PHASES	04/27/16	D.T.

<b>EL PASO WATER UTILITIES</b> PUBLIC SERVICE BOARD			
<b>ROBINSON AVE.</b> FROM PIEDMONT DR. TO RIM RD. WATER DISTRIBUTION IMPROVEMENTS			
SCALE HOR. 1" = 20'	DRAWN BY D.T.	JOB NO. 15-5063	DATE 11/19/2014
CHECKED BY A.C.	DESIGNED BY	SHT. 3 OF 6	

FINAL PRINT 06/24/2015



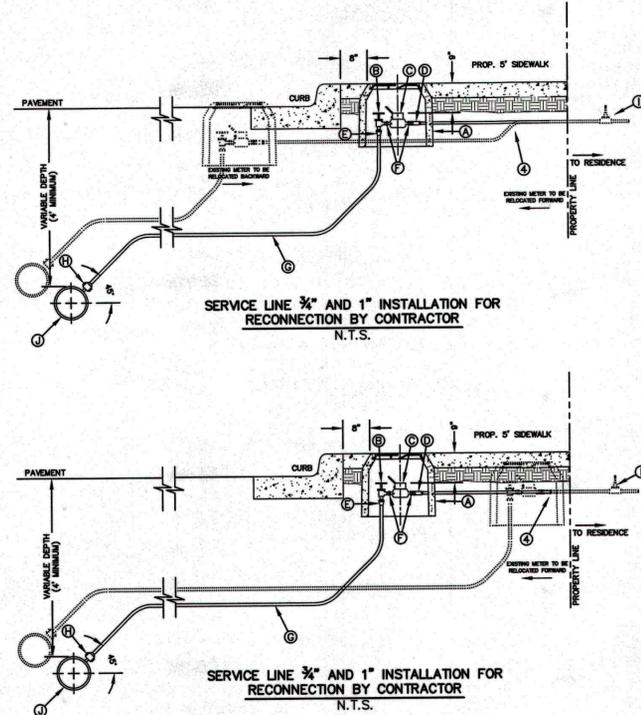




FIRE HYDRANT INSTALLATION

- GENERAL NOTES:**
- NO OBSTRUCTIONS WILL BE PERMITTED WITHIN 5 FT. IN ALL DIRECTIONS OF FIRE HYDRANT (PER EL PASO MUNICIPAL CODE, TITLE 12). FIRE HYDRANT SHALL NOT BE PLACED IN WHEEL CHAIR RAMP OR DRIVEWAY.
  - FIRE HYDRANT SHALL BE LOCATED AT THE BEGINNING OF CURB RETURN OR AT THE PROPERTY LINE COMMON TO ADJOINING LOTS, UNLESS OTHERWISE SHOWN ON PLANS. REFER TO DETAIL No. 282 FOR SPECIAL CASES.
  - WHERE DISTANCE IS LESS THAN 7', HYDRANT SHALL BE INSTALLED IN ACCORDANCE WITH DETAIL No. 282.
  - VALVE MAY BE CONNECTED TO TEE AT MAIN LINE. USE FLANGED MECHANICAL JOINT ENDS. WHERE SPOOL IS REQUIRED BETWEEN TEE AND VALVE, USE FLANGED MECHANICAL ENDS WITH 3/4" DIAMETER TIE RODS.
  - COMPLY WITH REQUIREMENTS OF AWWA C-502, DRY BARREL FIRE HYDRANTS AND AWWA C-550, PROTECTIVE EPOXY INTERIOR COATINGS FOR VALVES AND HYDRANTS.
  - WHEN INSTALLATION IS WITHIN 10'00" RIGHT OF WAY, HYDRANT SHALL NOT BE PLACED IN SIDEWALK AREA OR ANY CLOSER THAN 5' FROM BACK OF CURB.
- CONSTRUCTION KEY NOTES:**
- FIRE HYDRANT PER SPEC'S.
  - PUMPER NOZZLE 4 1/2" TO BE FACING THE TRAVELED WAY, UNLESS OTHERWISE NOTED IN THE PLANS.
  - HOSE NOZZLE 2 1/2".
  - 1/2" PREMOLDED EXPANSION JOINT WITH 1" TOP FILLER.
  - 3"x3"x8" CONC. SQ. PAD, TO BE CONSTRUCTED AROUND FIRE HYDRANT'S CENTER LINE WHEN NOT LOCATED WITHIN SIDEWALK OR CONC. AREA.
  - #10, 6/8 W/F.
  - CONTROLLED ELEVATION LINE, LEVEL IN ALL DIRECTIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING TOP FLANGE OF THE HYDRANT TO CONTROLLED ELEVATION.
  - CONC. THRUST BLOCK, APPROX. 2'x2'x3' TO BE POURED AGAINST UNDISTURBED EARTH, F.H. WEEP HOLE MUST BE UNOBSTRUCTED.
  - 2"x1/4" STEEL ANCHOR PINS.
  - TOP OF SLAB SHALL BE AT CURB LEVEL 4" BELOW THE BREAK LINE OF THE HYDRANT. UNDER SPECIAL CONDITIONS THE ENGINEER MAY ALLOW VARIATIONS TO THIS CONSTRUCTION.
  - MAXIMUM OF ONE (1) SPOOL EXTENSION ALLOWED TO MAINTAIN THE CONTROLLED ELEVATION LINE TO TOP OF SLAB. ADDITIONAL ADJUSTMENT MUST BE MADE WITH OFFSETS & FITTINGS AS NEEDED.
  - REQUIRED - DAVIDSON AND TERRORISM CORROSION RESISTANT VALVE KIT (DATV).

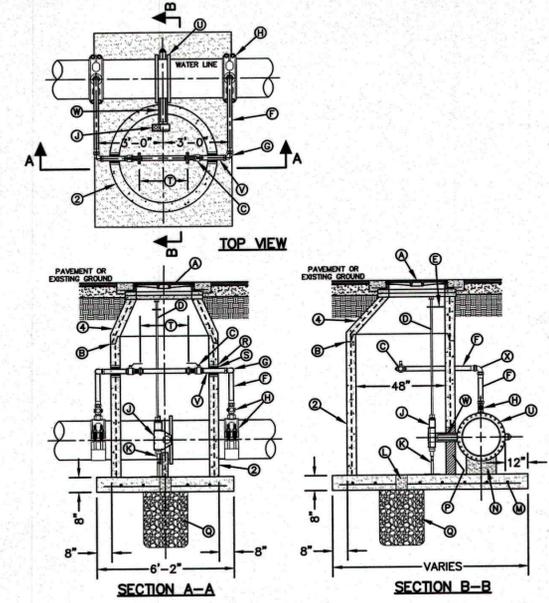
N.T.S.



SERVICE LINE 3/4" AND 1" INSTALLATION FOR RECONNECTION BY CONTRACTOR N.T.S.

SERVICE LINE 3/4" AND 1" INSTALLATION FOR RECONNECTION BY CONTRACTOR N.T.S.

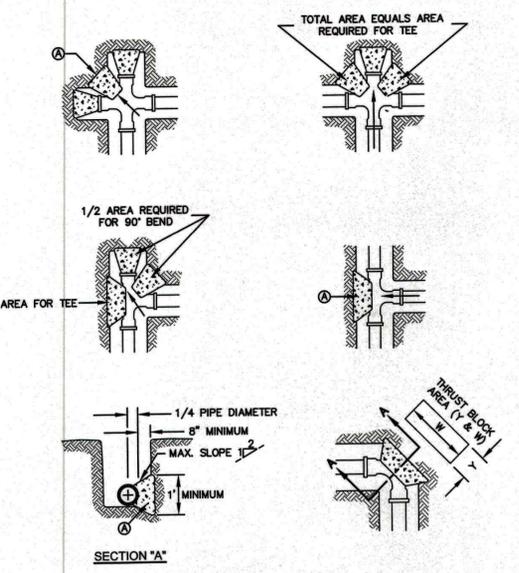
- GENERAL NOTES:**
- DETAIL SHOWN FOR A 3/4" SERVICE, 1" SERVICE INSTALLATION IS SIMILAR EXCEPT FOR SIZES OF PIPE, FITTING, METER AND BOX (TYPE "B").
  - ABANDON EXISTING SERVICE LINES IN PLACE.
  - NO SPLINGING SHALL BE ALLOWED. FULL LENGTH OF PIPING SERVICE SHALL BE INSTALLED.
  - CONTRACTOR SHALL MAKE VERTICAL AND HORIZONTAL ADJUSTMENTS AND FURNISH ALL FITTINGS, PIPING AND VALVES AS NECESSARY ON THE DISCHARGE SIDE OF THE METER AS PER CITY PLUMBING CODES.
- CONSTRUCTION KEY NOTES:**
- METER BOX TYPE "A" (SEE DETAILS 300 & 301) SHALL BE SET SLIGHTLY HIGHER THAN SURROUNDING GROUND OR AT CURB LEVEL.
  - 3/4" ANGLE SERVICE VALVE.
  - WATER METER (CENTER INSIDE METER BOX).
  - WHEN REQUIRED BY EPWU, A DUAL CHECK BACKFLOW PREVENTER SHALL BE INSTALLED ON THE OUTLET SIDE OF THE METER.
  - END FLARE OF SERVICE LINE.
  - INLET AND OUTLET COUPLING.
  - 3/4" COPPER SERVICE LINE (SEE NOTE 3).
  - 5/8" x 3/4" CORPORATION STOP.
  - PRESSURE REGULATOR SOMETIMES LOCATED NEAR THE RESIDENCE.
  - WATER MAIN.



BUTTERFLY VALVE IN MANHOLE INSTALLATION FOR 16" AND 20" WATER LINES N.T.S.

- GENERAL NOTES:**
- INSTALLATION APPLICABLE TO P.V.C. & DUCTILE IRON WATER MAINS ONLY. INSTALLATION FOR OTHER PIPE MATERIALS REQUIRE E.P.W.U. APPROVAL.
  - PRE-CAST MANHOLE SECTIONS SHALL BE OF REINFORCED CONCRETE CONFORMING TO ASTM C-478 AND SHALL MEET HS-20 LOADING. PROVIDE REINFORCEMENT WITHIN 3" OPENINGS OR KNOCKOUTS. OPENINGS (UP TO 8") MADE IN FIELD SHALL BE CORE DRILLED.
  - MANUFACTURER TO PROVIDE LIFTERS OF ADEQUATE SIZE AS NEEDED.
  - ECCENTRIC CONE SECTION REINFORCEMENT IN ACCORDANCE WITH ASTM C-478.

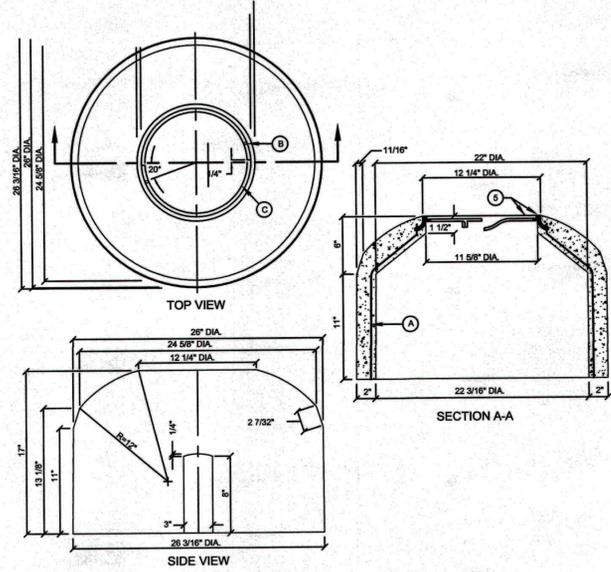
- CONSTRUCTION KEY NOTES:**
- MANHOLE RING AND COVER (SEE DETAILS 377 & 378). SET FRAME AND COVER FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE (SEE DETAIL 185).
  - ALL JOINTS TO BE TONGUE, GROOVE AND SEALED WITH RAM-NEK OR APPROVED EQUAL.
  - 2" BALL VALVE (NORMALLY CLOSED).
  - 1/2" DIAMETER SOLID STEEL EXTENSION STEM WITH SQUARE SOCKET ON BOTTOM TO FIT 2" SQUARE VALVE NUT AND 2" SQUARE OPERATOR NUT ON TOP.
  - ADJUSTABLE EXTENSION STEM GUIDE (AS PER DETAIL 281-3) @ 8" MAX. INTERVALS.
  - 2" COPPER PIPE (TYPE-K).
  - THREADED END TO FLARED END 90° ELBOW (TYP.).
  - 20"x2" OR 16"x2" SADDLE TAP WITH 2" CORPORATION STOP.
  - BUTTERFLY VALVE OPERATOR.
  - ADJUSTABLE SUPPORT OR APPROVED EQUAL.
  - 6" DIAMETER DRAIN HOLE FILLED WITH GRAVEL.
  - #5 @ 12" O.C.E.W.
  - CONCRETE SUPPORT.
  - NOTCH MANHOLE SECTION FOR VALVE OPERATOR. FILL WITH BRICK AND MORTAR AFTER VALVE INSTALLATION.
  - 24" DIAMETER BY 2'-6" DEEP GRAVEL SUMP.
  - 1" PREMOLDED ASPHALT EXPANSION JOINT.
  - INSTALL A 2" DIA. BRASS SPOOL PIECE WITH FLANGED ENDS. ONE SPOOL PIECE TO BE PROVIDED FOR EACH BUTTERFLY VALVE LOCATION. PROVIDE A 1" THREADED OUTLET WITH PLUG ON SPOOL PIECE. ALL SPOOL PIECES TO BE PROVIDED WITH FULL FACE GASKETS.
  - BUTTERFLY VALVE.
  - 2" BRASS NIPPLE PIECE (TYP.).
  - VALVE OPERATOR EXTENSION - 12" LONG.
  - FLARED END TO FLARED END 90° ELBOW (TYP.).



CONCRETE THRUST BLOCKING N.T.S.

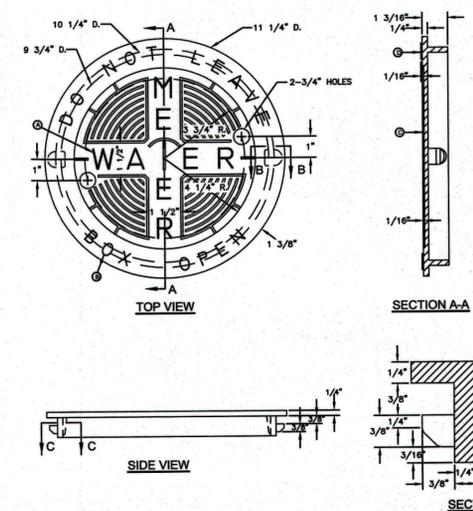
- GENERAL NOTES:**
- TABLE IS BASED ON 2000#/SQ. FT. SOIL. IF CONDITIONS ARE FOUND TO INDICATE SOIL BEARING IS LESS, THE AREAS SHALL BE INCREASED ACCORDINGLY. 2. AREAS FOR PIPE LARGER THAN 18" SHALL BE CALCULATED.
  - CONCRETE SHALL HAVE A MINIMUM COMPRESSION STRENGTH OF 2500 PSI.
  - THRUST BLOCK IS TO EXTEND TO UNDISTURBED SOIL.
  - SIZE MAY BE DECREASED FOR LESSER DEGREE OF BENDS AS DETERMINED BY ENGINEER.
  - KEEP CONCRETE CLEAR OF M.J. OR BELL AND SPIGOT JOINTS.
  - BLOCK IN A SIMILAR MANNER AT TEES, HYDRANTS, PLUG OR OTHER LOCATIONS AS REQUIRED.
  - WHEN NECESSARY ADDITIONAL THRUST RESTRAINT METHODS MAY BE USED, SUCH AS MECHANICAL JOINT RESTRAINTS, TIE-RODS (INSTALLED PER MANUFACTURERS' RECOMMENDATIONS) OR OTHER APPROVED METHODS.
- CONSTRUCTION KEY NOTES:**
- LENGTH "Y" & "W" AS REQUIRED TO OBTAIN BEARING AREA AGAINST UNDISTURBED SOIL.
  - ADDITIONAL EXCAVATION IF NECESSARY TO OBTAIN REQUIRED BEARING AREA.
  - MINIMUM THRUST BLOCK AREA REQUIREMENTS FOR (Y & W) AS FOLLOWS:

PIPE SIZE	WATER PIPE	
	TEE, DEAD END	45° AND 90° BENDS
4" & LESS	3 SQ. FEET	3 SQ. FEET
6"	4 SQ. FEET	3 SQ. FEET
8"	6 SQ. FEET	3 SQ. FEET
10"	9 SQ. FEET	5 SQ. FEET
12"	13 SQ. FEET	7 SQ. FEET
16"	23 SQ. FEET	12 SQ. FEET
18"	29 SQ. FEET	15 SQ. FEET



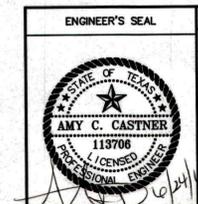
METER BOX TYPE "B" FOR 1" SERVICE INSTALLATION N.T.S.

- GENERAL NOTES:**
- INSTALL TO GRADE MATCHING TOP OF CURB.
  - ANGLE VALVE SHALL BE IN LINE WITH THE INLET/OUTLET PORTS OF THE METER BOX.
  - METER BOXES SHALL NOT BE INSTALLED UNDER SIDEWALKS, DRIVEWAYS, OR PROPOSED ABOVE GROUND STRUCTURES.
  - WHERE NO CURBING EXISTS, INSTALL BOXES IN ACCESSIBLE LOCATIONS BEYOND LIMITS OF STREET SURFACING, WALKS AND DRIVEWAYS.
  - METER BOX RING AND COVER PER EPWU DETAILS 300 AND 301.
  - WHERE IT IS NECESSARY TO INSTALL A TYPE "B" BOX FOR 1" METER UNDER ROADWAYS OF TRAFFIC BEARING SURFACES, BOX SHALL BE ENCASED IN 12" CONCRETE, 3000 PSI. MINIMUM.
  - METER BOX SHALL BE SINGLE UNIT. CONSTRUCTION: CONCRETE TO HAVE A MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF 4000 PSI.
- CONSTRUCTION KEY NOTES:**
- 3/16" - 9 GAUGE BLACK ANNEALED WIRE
  - LUG-STOP
  - CAST IRON RING



METER BOX COVER FOR TYPE "A" & "B" METER BOXES N.T.S.

- GENERAL NOTES:**
- MATCHING SURFACES TO BE ROUGH GROUND OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
  - CASTING TO BE SMOOTH AND VOID OF AIR
  - METER BOX COVER WEIGHT= 1 1/4 lbs.
- CONSTRUCTION KEY NOTES:**
- LETTERS TO BE 1" HIGH, 3/4" WIDE, 1/8" THICK
  - LETTERS TO BE 3/8" HIGH, 1/2" WIDE, 1/8" THICK
  - INSIDE LETTERS & RIBS 1/2" TALL
  - OUTSIDE LETTERS 3/8" TALL
  - REINFORCE BACK OF LUG
  - REINFORCEMENT



REVISIONS	DATE	REVISED BY

FINAL PRINT 06/24/2015

**EL PASO WATER UTILITIES**  
PUBLIC SERVICE BOARD

**ROBINSON AVE.**  
FROM PIEDMONT DR. TO RIM RD.  
WATER DISTRIBUTION IMPROVEMENTS

SCALE	DRAWN BY	JOB NO.	DATE
HOR. N.T.S.	D.T.	15-5063	11/19/2014
CHECKED BY	DESIGNED BY		
A.C.			SHT 6 OF 6

## SPECIAL CONDITIONS

### 1. SCOPE OF WORK

The Contractor may begin work immediately after receipt of the City of El Paso's written Notice to Proceed. The work of the Contractor shall be fully coordinated with that of El Paso Water Utilities (EPWU) personnel.

The work shall include the following:

#### Base Bid II:

The **Water** work for ROBINSON AVENUE STREET IMPROVEMENTS consists of the installation of approximately 1400 LF of 16-Inch Ductile Iron Pipe; 2805 LF of 12-Inch Ductile Iron Pipe; 125 LF of 8-Inch Ductile Iron Pipe; 43 LF of 8-Inch C900 PVC Pipe; Butterfly Valves; fittings; and all necessary appurtenances for the completed main or structure, including approximately 4373 LF of Trench Safety System.

#### Base Bid III:

The **Sanitary Sewer** work for ROBINSON AVENUE STREET IMPROVEMENTS consists of the installation of approximately 2062 LF of 8-Inch PVC SDR35, 196 LF of 8-Inch PVC C900 (Green), Temporary By-Pass, Standard Manholes, Standard Manholes - Extra Depth, Sanitary Sewer Services, and all necessary appurtenances for the completed main structure, including approximately 2258 LF of Trench Safety System.

The Contractor shall satisfy himself before commencing work as to the meaning or correctness of all horizontal control points and benchmarks, and no claim of inaccuracy will be considered, unless the Contractor notified the Engineer thereof in writing before commencing the work. The Contractor will be held responsible for preservation of all control points and benchmarks in their positions. In case any of them are lost or destroyed, all expense incurred by the Owner in replacing them shall be charged against the Contractor and paid for by him before the completion and final acceptance of the work.

### 2. CONTRACTOR'S RESPONSIBILITY FOR INSTALLATION OF THE WATER AND SANITARY SEWER SYSTEM

It is the intent of these specifications that the installation of the water and sewer mains be a complete workable system, functioning in accordance with the specified purpose. Therefore, it is the direct responsibility of the Contractor to furnish, install, and construct a complete system required by the plans for the prices stated in the Contract, and to take account of all subsidiary requirements of the materials and other items furnished to the end that the water and sewer mains function in accordance with the specified requirements.

### 3. DRAWINGS

The work is shown on a set of drawings entitled "ROBINSON AVENUE FROM PIEDMONT DRIVE TO RIM ROAD STREET IMPROVEMENTS" and such detail drawings as may be included in the bound specifications.

The Contractor shall check all dimensions and quantities on the drawing furnished by the Owner or by himself and shall notify the Engineer of all errors or omissions, which he may discover by examining and checking the same. He will not be allowed to take advantage of any error or omission in the drawings, as full instructions will be furnished by the Engineer, should such error or omission be discovered, and the Contractor shall carry out such instructions as if originally specified.

### 4. TEMPORARY PAVING

Temporary patch paving required as result of water and sanitary sewer line installation shall be as per City Engineering specifications. Cost associated with temporary patch paving will be at the Contractor's expense.

5. COORDINATION OF EXISTING FACILITY OPERATIONS

Personnel from the EPWU will assist in working out the coordination between the construction operations and the operation of the existing facilities, but it is the Contractor's responsibility to clear all his operations which might interfere with such existing operations with the Project Manager.

6. WATER AND SANITARY SEWER BYPASSING AND DEWATERING

A. DESCRIPTION:

1. **SCOPE OF WORK:** This section specifies the requirements for temporary bypassing, dewatering, flushing, and abandonment of water and sanitary sewer lines. The Contractor shall keep excavations reasonably free from water during construction. The static water level shall be drawn down a minimum of 2-feet below the bottom of excavations to maintain the undisturbed state of natural soils and allow the placement of any fill to the specified density. Disposal of water shall not damage property or create a public nuisance. The Contractor shall have on hand pumping equipment and machinery in good working condition for emergencies and shall have workmen available for its operation. Dewatering systems shall operate continuously until backfill has been completed to 1-foot above the normal static groundwater level.

Groundwater shall be controlled to prevent softening of the bottom of excavations or formation of "quick" conditions. Dewatering systems shall not remove natural soils. The Contractor shall control surface run-off to prevent entry or collection of water in excavations.

Release of groundwater to its static level shall be controlled to prevent disturbance of the natural foundation soils or compacted fill and to prevent flotation or movement of structures or pipelines.

2. **REQUIREMENTS:** Contractor shall provide labor, materials, and supervision to temporarily bypass flow around the Contractor's work during water and sanitary sewer facility construction where necessary. Contractor shall also provide temporary dewatering of low-lying portions of existing sanitary sewers as necessary. Contractor shall flush all sanitary sewers and manholes to be abandoned with a minimum of twice the sanitary sewer's volumes of water. Contractor shall dewater all sanitary sewers and water lines to be abandoned. Sanitary sewer lines to be abandoned shall be cut and plugged at all open ends. Water lines shall be isolated, valves closed and depressurized prior to abandonment. All work to be closely coordinated with the Engineer.
3. **SUBMITTALS:** Within 14 calendar days of notice to proceed, the Contractor shall submit to the Engineer, for review and approval, drawings and complete design data showing methods and equipment he proposes to utilize in water and sanitary sewer bypassing and dewatering. The submittal shall include the following information:
  - a) Drawings indicating the location of temporary water and sanitary sewer plugs and bypass discharge lines
  - b) Capacities of pumps, prime movers, and standby equipment
  - c) Design calculations proving adequacy of the system and selected equipment

4. **JOB CONDITIONS:**

- a) Available Data: Flow data are available for review at the Owner's office. Use of this information in no way relieves the Contractor from his responsibility for design, construction, and operation of an adequate and properly functioning bypass and dewatering system. Any additional testing or gathering of flow data is the responsibility of the Contractor.
- b) Protection: Where bypassing or dewatering is required, the Contractor shall ensure that service for connecting sanitary sewer laterals and water services is not disrupted. All flow shall be discharged into the nearest downstream manhole. Bypassing and dewatering shall not surcharge sanitary sewers or interfere with normal operation of related sanitary sewer facilities. No discharging to the ground surface, receiving streams, storm drains, or discharging which results in groundwater contamination or potential health hazards shall be permitted. In the event accidental discharging is caused by the Contractor's operations, the Owner shall immediately be entitled to employ others to stop the discharging without giving written notice to the Contractor. All water bypassing shall conform to AWWA procedures for prevention of contamination for water lines, backflow provisions, and provisions for conduit protection and support.
- c) Scheduling: The bypassing and dewatering systems shall not be shut down between shifts, on holidays or weekends, or during work stoppages without written permission from the Construction Manager.

The Contractor shall submit a detailed outage plan and time schedule for operations that will make it necessary to remove a tank, pipeline, channel, electrical circuit, equipment, or structure from service. The schedule shall be coordinated with the Construction Manager and shall meet the restrictions and conditions specified in this section. The detailed plan shall describe the Contractor's method for preventing accidental discharges, the length of time required to complete said operation, the necessary plan, and equipment which the Contractor shall provide in order to prevent accidental discharges.

The Contractor shall observe the following restrictions:

Systems or individual equipment items shall be isolated, de-watered, de-commissioned, de-energized, or de-pressurized in accordance with the detailed outage plan and schedule. The Construction Manager shall be notified in writing at least one week in advance of the planned operation.

B. **EXECUTION:**

- 1. **WATER AND SANITARY SEWER DEWATERING:** Contractor shall dewater all sagged submerged portions of the sanitary sewer during television inspection and grouting. Sanitary sewer flow shall be reduced so that no portion of the television camera's lens is submerged during inspection. The Contractor may temporarily force the flow away from the area under inspection by water jetting or piping the line. Where these methods cannot adequately reduce the flow, the Contractor shall either pump the flow from within the sanitary sewer or water line or excavate the low portion of the line and pump the groundwater from below the pipeline. Sanitary sewers to be abandoned shall be flushed with two pipeline volumes of water prior to dewatering and abandoning.

2. WATER AND SANITARY SEWER BYPASSING:

General: Water and sanitary sewer bypassing shall be accomplished by pumping or diverting the upstream flow around the Contractor's work or as directed by the Construction Manager.

The Contractor shall provide temporary pumps, conduits, and other equipment to bypass the water or sanitary sewer flow. Contractor shall furnish the necessary labor and supervision to set up and operate the pumping and by-pass system. Engines shall be equipped with mufflers and/or enclosed to keep the noise level within local ordinance requirements. Pumps and by-pass lines shall be of adequate capacity and size to handle the flows. All by-passed flow shall be discharged to the nearest downstream manhole.

Unless otherwise specified, the Contractor shall by-pass flow around his work whenever the depth of flow, as measured at the inlet pipe to the upstream manhole adjacent to the Contractor's work, exceeds the crown elevation of the pipe; or whenever the Contractor's equipment operating in the sanitary sewer provides an obstruction that restricts flow and causes the depth of flow to exceed the crown elevation.

3. STAND-BY EQUIPMENT: The Contractor shall maintain on site sufficient equipment and materials to ensure continuous and successful operation of the bypass and dewatering systems. Stand-by pumps shall be fueled and operational at all times. The Contractor shall maintain on site a sufficient number of valves, tees, elbows, connections, tools, sanitary sewer plugs, piping and other parts or system hardware to ensure immediate repair or modification of any part of the system as necessary.
4. DAMAGES: The Contractor shall repair without cost to the Owner any damage that may result from his negligence, inadequate or improper installation, maintenance and operation of bypassing and a dewatering system including mechanical or electrical failures.
5. MEASUREMENT AND PAYMENT: Payment for the work in this section will be subsidiary to the unit prices for installing pipe, manholes, valves, or fittings, complete in place.

7. PERMITS

Before commencing operations, the Contractor will secure and pay all permits required in the prosecution of this Contract.

8. INSPECTION OF INSTALLATION AND CONSTRUCTION

The Contractor shall at all times maintain proper facilities and provide safe access to all parts of the work for purposes of inspection by the Engineer. Should any work be covered up before approval or consent of the Engineer, it must, if required by the Engineer, be uncovered for examination at the Contractor's expense.

The Contractor shall accord the same notification and access to repair work as to the work originally constructed, and the same conditions regarding acceptance shall apply.

It shall be the Contractor's responsibility to schedule, coordinate, and request any inspection required upon completion of work.

All testing and inspection of installation and construction of water and sanitary sewer systems shall be performed in accordance to the "Standard Specifications for the Installation of Water Mains, Sanitary Sewer Mains, and Related Appurtenances" included in these Specifications.

The Utility will televise the new sanitary sewer system **only twice** during Project construction - once after new street base course is complete and once after paving of the street is completed. The cost for the first

televising will be paid by the EPWU. The City of El Paso will coordinate with the Contractor to halt street work after base course is complete to allow for first televising. Any defects discovered during televising will be repaired at Contractor's expense prior to paving. All follow-up televising prior to paving will be done at Contractor's expense. The cost for the second televising after the street is paved will be paid for by the Contractor. Again, any defects discovered during televising will be repaired at Contractor's expense. All follow-up televising will also be at the Contractor's expense.

The Utility will televise the quantities of sanitary sewer main line that are submitted on the final inspection report submitted by the Utility Inspector to the Engineering Developer Services Section of the Utility. Once the indicated amount of main line is televised, any additional main line televised will be billed at a rate of \$0.92 per foot. In addition, a minimum mobilization charge of \$250.00 will be billed to the Contractor should EPWU's crews have to re-televising a portion of main on a later date. Contractor shall actively participate in minimizing the debris found within the newly installed pipe. Prior to calling for a televising crew, the Contractor shall coordinate with the Utility Inspector for a Debris Inspection. Once the inspection has been made and the Utility Inspector is satisfied with the condition of the mains, the Utility Inspector will schedule televising of the main line at least 48 hours in advance. Televising will be done within five (5) working days of the 48-hour notice. During the televising of the sanitary sewer main, the Developer or the Utility Contractor/Sub-contractor must be present to ensure that portions of the main lines are cleared when the Utility crews are on-site and avoid a second call to the site, thus eliminating the Mobilization Fee of \$250.00. Costs for re-televising and mobilization fees must be paid to the EPWU's Accounting Department prior to final release.

9. REMOVED MATERIALS

Salvageable equipment, metal piping, appurtenances, and other components removed during the course of the work, including fire hydrants, bonnet boxes, meter valves, and boxes shall be free of chemicals, oils, liquids, concrete, and plastic and shall be returned and delivered by the Contractor to the EPWU's Warehouse, 221 N. Lee Street. However, if the Contractor removes any section of pipe that is scheduled to be abandoned, then it will become the responsibility of the Contractor to properly dispose of all piping at his expense.

10. WATER FOR CONSTRUCTION

Water for all construction purposes will be provided at the Contractor's expense for trenching, water and sanitary sewer installation, filling, testing, disinfecting and flushing existing and proposed installations, and all storm drain, landscape, roadway construction, dust control, compaction, and clean-up. At no time will un-metered water consumption be allowed, nor will the Contractor be allowed to operate a fire hydrant. Construction water can be provided upon approval and meter deposits and fees to the Utility have been paid on an existing fire hydrant. The fire hydrant meter fee is \$2,125.00, which includes a meter and backflow preventor fee of \$2,000.00 and a set-up and removal fee of \$125.00 for the installation and removal of the meter. The fire hydrant meter will not be removed from the assigned fire hydrant by anyone other than Utility Personnel. An outlet valve will be provided with the fire hydrant meter for Contractor's use. A water loss fee of \$500.00 will be assessed to the Contractor for each occurrence that violates the above. Charges due will be deducted from the deposited amount. Charges in excess of the deposit amount must be paid before the project will be accepted into the Utilities' system. Any excess deposit will be refunded promptly.

Construction water drawn through fire hydrant meters will be charged to the Contractor at a usage rate of \$3.68 per hundred cubic feet. Fire hydrant meters will be installed and removed by EPWU's personnel only. Fire hydrant meters have a locking device and a built-in backflow preventor. The Contractor is no longer responsible for providing his own backflow preventor for fire hydrant meters. Water used to fill, pressure test, and disinfect water main lines will be billed at the standard construction water rate of \$3.68 per hundred cubic feet and will be calculated at one and a half times the volume of the installed pipe.

The Contractor may, with the approval of the Engineer, make other arrangements and secure water for construction purposes from a source of his own choosing, including but not limited to Reclaimed Water from the Wastewater Treatment Plants, which is available at a reasonable cost. The Contractor shall obtain information, terms and conditions of service, application process, and other requirements from the EPWU's

Developer Services Section. Issuance of a construction meter or stand-pipe requires a deposit. Standard forms are available at the EPWU's Developer Services Section. The Contractor shall provide such facilities as may be required for transporting and utilizing this water at his own cost.

Upon completion of the project, the Contractor must call the Engineering Developer Services Section at 594-5530 or 594-5546 to have the meter removed. Upon meter removal, the Contractor will be assessed for the water consumed plus any damages to the fire hydrant and/or fire hydrant meter assembly.

11. NOTIFICATION OF PROPERTY OWNER

The Contractor shall be responsible for the notification of property owners, businesses, and residents along the pipeline route to explain the construction to them. The Contractor shall be responsible for providing access to the businesses and residences for all property owners, customers, and residents.

Notification of all businesses, residents, and property owners shall be by printed handout approved by the Owner. The Contractor shall furnish proof to the Owner that each resident along the route has been notified.

Any resident unable to park their vehicle at their residence due to the construction shall be provided with a place to park, as near to the residence as possible. The Contractor shall provide security for such vehicle.

12. EXISTING UTILITIES AND FACILITIES

The Contractor shall be fully responsible for all underground facilities which are shown on the drawings or which can be located by the Contractor with reasonable effort, or which are brought to the attention of the Contractor in any manner. The Contractor shall be responsible for notifying the Engineer if any unknown facilities are uncovered and for protecting those facilities after they are uncovered.

The drawings only indicate the approximate location of existing utilities that could be located or approximated during design. Therefore, the Contractor shall be responsible for determining the exact location of all buried utilities along the pipeline routes prior to starting any excavation activities. The Contractor shall be responsible for locating and protecting all utilities and service connections along the route of construction. Prior to submittal of shop drawings and the ordering of pipeline materials, the Contractor will be required to pot-hole to located (vertical and horizontal) all existing utilities within the right-of-way and to determine adjustments to the proposed pipeline alignment of the water and sewer facilities. Adjustments to the proposed water and sewer alignments shall be as approved by the Engineer and Owner.

13. DAMAGE TO PRIVATE PROPERTY

The Contractor shall be responsible for any damage to private property caused by the construction project. The Contractor upon receipt of a complaint of damage shall respond within 10 days in writing with a proposal to repair said damage or a letter stating reason why the damage was not caused by the construction.

Except for extenuating circumstances beyond the control of the Contractor the damage shall be repaired completely within 10 days of the complaint.

The Contractor shall not enter or occupy private land outside of acquired rights-of-way or construction easements, except by written permission of the Owner of the private property. Copies of such written permission shall be provided to the Project Manager.

14. WATER AND SANITARY SEWER CONTRACTOR'S MINIMUM QUALIFICATIONS CRITERIA

A. The Bidder, or at least three Key Personnel employed by the Bidder, must demonstrate Successful Completion of two projects similar in nature and scope to this project within the past five (5) years and two projects with a value of at least 50% of the value bid for the water and sanitary sewer portion of this project.

B. Project requires the installation of water and sanitary sewer systems including 16-inch Ductile Iron

Pipe; 12-Inch Ductile Iron Pipe; 8-Inch Ductile Iron; and miscellaneous appurtenances and fittings. Bidder to demonstrate successful projects with similar requirements. This requirement may be satisfied by employing the services of a qualified subcontractor. Provide name of subcontractor and list of similar pipe size project.

15. MEASUREMENT AND PAYMENT

- A. BID FORM - The Bid Form is a part of these Contract Documents and lists each item of work for which payment will be made. No payment will be made for items other than those listed in the Bid Form.

Required items of work and incidentals necessary for the satisfactory completion of the Project which are not specifically listed in the Bid Form, and which are not specified in this Section to be measured or to be included in one of the items listed in the Bid shall be considered as incidental to the work required under this Contract, and all costs thereof, including Contractor's overhead costs and profit, shall be considered as included in the prices bid for the various Bid Items. The Contractor shall prepare his bid accordingly.

Work includes furnishing all plant, labor, equipment, tools, and materials, and performing all operations required to complete the work satisfactorily, in place, as specified and as indicated on the Drawings.

- B. MEASUREMENT AND PAYMENT - Measurement of an item of work will be by the unit indicated in the Bid Form.

Measurement will include all necessary and incidental related work not specified to be included in any other item of work listed in the Bid Form.

Unless otherwise stated in individual sections of the specifications or in the Bid Form no separate payment will be made for any item of work, materials, parts, equipment, supplies, or related items required to perform and complete the requirements of any section. The costs for all such items required shall be included in the Contract price bid for item of which it is a part.

Payment will be made at the Contract price per unit indicated in the Bid Form with total prices of the Contract being equal to the Total Bid, as specified and as modified, by extending unit prices multiplied by quantities, as appropriate to reflect actual work included in the Project. Such price and payment shall constitute full compensation to the Contractor for furnishing all plant, labor, equipment, tools, and materials, and for performing all operations required to furnish to the Owner the entire Project, complete in place, as specified and as indicated on the Drawings.

Measurement for payment does not signify acceptance of Work.

Quantities shown in the Bid Form are approximate quantities only. Payment will be made only for measured quantities actually installed and accepted by Owner.

Measurements, such as linear feet, will be to the nearest whole unit.

The Unit Prices for Base Bid II and III **will** be considered in determining the low responsive/responsible bid and for changing quantities of work items indicated by the Contract Drawings upon written instructions from EPWU through the City of El Paso Engineering Department.

C. BID ITEMS

1. 8-Inch C900 PVC and 8-Inch, 12-Inch and 16-Inch Diameter Ductile Iron Water Lines: Work under this item shall consist of all costs associated with furnishing and installing 8-Inch, 12-Inch, and 16-Inch diameter Ductile Iron water pipe and fittings by open-cut, and includes all costs associated with the construction staking and site preparation; cutting, draining, and capping of existing water lines; connection of new water line to existing water lines, to include flange insulating connections; abandonment of existing valves; coordination; excavation, to include rock removal and additional excavation and labor for vertical and/or horizontal adjustment of the main to clear existing utility lines and/or other structures; potholing existing water lines; temporary by-passing; temporary valves and fittings; gate valves with bonnet boxes; concrete thrust blocks and mechanical restraint devices; tapping sleeves; cement stabilized backfill; backfilling and embedment; compaction and compaction testing for utilities; removal and disposal of existing utility lines when in conflict with new water mains (including AC, CI, and VC pipe removal and disposal work); cutting and plugging of existing lines when not in conflict; removal of concrete cap and manhole and VC pipe; all pipe and accessories; fittings; transitional fittings; tapping sleeves; mechanical thrust restraints; bell protection system at each joint for over-insertion; disinfection; testing; dewatering and disposal of water where required; and all appurtenances defined herein to include, but not limited to the following items: marking tape, traffic control systems, dewatering, temporary cold patch over proposed water mains where required by City, polyethylene wrap, cathodic protection, and all other items of the project not indicated as being covered under the other specific bid items shown on the proposal. When in conflict with new line alignment, existing water and sewer line shall be removed. Such payment shall be complete compensation for the complete performance of the work in accordance with the drawings and the provisions of these specifications.

This item will be measured for payment by the linear foot.

2. 16-Inch Butterfly Valves with Manhole Assembly: Work under this item shall include all costs associated with furnishing and installing 16-Inch butterfly valves complete in place in accordance with the drawings and specifications. This shall include, but is not limited to the following items: trenching, shoring, butterfly valves, valve connections, valve operator, gate valves, fittings appurtenances, labor, and material for the proper operation of the butterfly valve.

This item will be measured for payment per each.

3. Replace Existing Fire Hydrant with NEW Fire Hydrant: Work under this item shall include all costs associated with furnishing labor, materials, equipment, and incidentals to replace and install NEW fire hydrants as indicated on the drawings in accordance with EPWU's requirements and according to typical fire hydrant installation, including Davidson Anti-Terrorism Corrosion Resistant Valve Kit (DATV), but not limited to, any spool extensions, as needed.

This item will be measured for payment per each.

4. Additional Fittings: Additional fittings will be paid for at a unit price per pound (lb). The work performed and the materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Additional Fittings." This price shall be full compensation for furnishing all required materials, including all costs associated with coordination; excavation; backfill, compaction, compaction testing for utilities; disposal of excess material; equipment and materials required for cutting and removal of water mains, furnishing and installing additional valves, bends, tees, crosses, couplings, reducers, adaptors, flexible fittings, not originally shown on the Contract Drawings or drawing details, as deemed necessary by the Engineer

and approved by the Owner, complete in place, including but not limited to: thrust blocking, mechanical joint restrainers, concrete anchoring, polyethylene wrapping, and provisions for corrosion protection. Additional fittings are based on the cost of material only. Mechanical joint restrainers in lieu of or in conjunction with concrete thrust blocking shall not be considered for individual payment through the "Additional Fittings" provisions. The actual amount of additional fittings may be less than, but shall not exceed the total quantities allocated on the bid proposal without approval by OWNER or ENGINEER.

This item will be measured for payment by the pound.

5. Trench Safety System for Water Line Installation: Payment of all work prescribed under this item shall be full compensation for the trench safety system including any design, testing, monitoring, inspection, or additional excavation and backfill required, for furnishing, placing, maintaining and removing all shoring, sheeting, or bracing; for required compaction; and for all labor, materials, tools, equipment, and any incidentals necessary to complete the "Trench Safety System" work.

This item will be measured for payment by the linear foot.

6. 8-Inch Diameter (Green) SDR-35 Sanitary Sewer Line: Work under this item shall include all costs associated with coordination; excavation; disposal of excess material, to include rock removal and additional excavation; backfilling and embedment; compaction and compaction testing for utilities; furnishing and laying the pipe joint assembly and accessories; testing; pot-holing for existing utilities; removal and disposal of existing utility lines and manholes when in conflict; cutting and plugging of existing lines when not in conflict; removal of concrete cap; temporary by-pass; and all appurtenances defined herein to include, but not limited to the following items: locating, protecting, supporting, relocating, if required, and repairing damage to any utilities or structures encountered in the process of the work; dewatering and disposal of water, where required; temporary by-pass, where required; leakage testing of the sewer line; temporary cold patch over proposed sewer mains where required by City; traffic control; and all other items of the project not indicated as being covered under the other specific bid items shown on the Proposal. Connecting (coring) into existing manhole shall be paid under this item. Any drop connections shown on the Plans shall be paid under this item. When in conflict with new sewer line alignment, existing water and sewer line shall be removed. When not in conflict, existing utilities to be cut and plugged and abandoned in place, including manhole and cover. Such payment shall be complete compensation for the complete performance of the work in accordance with the drawings and the provisions of these specifications.

This item will be measured for payment by the linear foot.

7. 8-Inch Diameter (Green) C900 PVC Sanitary Sewer Line: Work under this item shall include all costs associated with coordination; excavation; disposal of excess material, to include rock removal and additional excavation; backfilling and embedment; compaction and compaction testing for utilities; furnishing and laying the pipe joint assembly and accessories; testing; pot-holing for existing utilities; removal and disposal of existing utility lines and manholes when in conflict; cutting and plugging of existing lines when not in conflict; removal of concrete cap; temporary by-pass; and all appurtenances defined herein to include, but not limited to the following items: locating, protecting, supporting, relocating, if required, and repairing damage to any utilities or structures encountered in the process of the work; dewatering and disposal of water, where required; temporary by-pass, where required; leakage testing of the sewer line; temporary cold patch over proposed sewer mains where required by City; traffic control; and all other items of the project not indicated as being covered under the other specific bid items shown on the Proposal. Connecting (coring) into existing manhole shall be paid under this item. Any drop connections shown on the Plans shall be paid under this item. When in conflict with new

sewer line alignment, existing water and sewer line shall be removed. When not in conflict, existing utilities to be cut and plugged and abandoned in place, including manhole and cover. Such payment shall be complete compensation for the complete performance of the work in accordance with the drawings and the provisions of these specifications.

This item will be measured for payment by the linear foot.

8. Sanitary Sewer Manholes, 48-Inch Standard (30-Inch Cover): Work under this item includes furnishing all labor, new materials and equipment and performing all operations necessary to construct the sanitary sewer manholes 6-feet or less in depth. Depth is defined as the distance from the top of the cast iron frame to the invert of the sewer. This includes any extra excavation, backfill, concrete base, concrete, conical section, frame and cover, providing an external protective bituminous coating such as coal tar epoxy, drop connection, and any other facility or work necessary for the complete manhole. Any stub-outs shown on the plans shall be paid under this item. The removal and salvage of existing manhole rim and cover.

This item will be measured for payment by each.

9. Sanitary Sewer Manholes, 48-Inch Cast in Place: Work under this item includes furnishing all labor, new materials and equipment and performing all operations necessary to construct the sanitary sewer manholes 6-feet or less in depth. Depth is defined as the distance from the top of the cast iron frame to the invert of the sewer. This includes any extra excavation, backfill, concrete base, concrete, conical section, frame and cover, providing an external protective bituminous coating such as coal tar epoxy, drop connection, and any other facility or work necessary for the complete manhole. Any stub-outs shown on the plans shall be paid under this item. The removal and salvage of existing manhole rim and cover.

This item will be measured for payment by each.

10. Sanitary Sewer Manholes, Standard, EXTRA DEPTH: Work under this item includes furnishing all labor, new materials and equipment and performing all operations necessary to construct the depth of sanitary sewer manhole in excess of 6-feet; including but not limited to providing an external protective bituminous coating, such as coal tar epoxy. This measurement shall be the distance from the top of the frame to the invert of the manhole less 6-feet.

This item will be measured for payment by vertical foot.

11. 4-Inch Sanitary Sewer Laterals: Work under this item shall include all costs associated with coordination, excavation, vertical and horizontal adjustments; sanitary sewer service into new main, to include, but not limited to, the following: service tees, required piping, fittings, plug, drop connections and all appurtenances.

This item will be measured for payment per each.

12. Trench Safety System for Sanitary Sewer Line Installation: Payment of all work prescribed under this item shall be full compensation for the trench safety system including any design, testing, inspection, or additional excavation and backfill required, for furnishing, placing, maintaining and removing all shoring, sheeting, or bracing; for required compaction; and for all labor, materials, tools, equipment, and any incidentals necessary to complete the "Trench Safety System" work.

This item will be measured for payment by the linear foot.

13. Pavement Cut and Restoration: Work under this item shall include all costs associated with coordination, materials, compaction, and labor required to saw-cut existing pavement and provide pavement patch where indicated on water and/or sanitary sewer plans, unless otherwise directed by the Engineer. Pavement shall be as per TxDOT or City of El Paso specifications.

This item will be measured for payment by the square foot.

14. Cement Stabilized Backfill (2-Sack): Work under this item shall include all costs associated with coordination, materials, equipment, and labor required to place 2-sack cement stabilized under all pavement patches outside the limits of construction and to fill abandoned pipe per TxDOT Specifications.

This item will be measured for payment by the cubic yard.

15. 16-Inch and 24-Inch Steel Casing by Open-Cut Method: Work under this item shall include all costs associated with furnishing labor, new materials, equipment, and incidentals to furnish and install 16-inch and 24-inch diameter steel casing including spacers and end-rubber seals, as indicated on the Drawings in accordance with EPWU requirements and according to typical steel casing installation.

This item will be measured for payment by the linear foot.

END OF SECTION

**SPECIAL CONDITIONS**

PAGE NO.

1.	<u>SCOPE OF WORK</u> .....	1
2.	<u>CONTRACTOR'S RESPONSIBILITY FOR INSTALLATION OF THE WATER AND SANITARY SEWER SYSTEM</u> .....	1
3.	<u>DRAWINGS</u> .....	1
4.	<u>TEMPORARY PAVING</u> .....	1
5.	<u>COORDINATION OF EXISTING FACILITY OPERATIONS</u> .....	2
6.	<u>WATER AND SANITARY SEWER BYPASSING AND DEWATERING</u> .....	2
7.	<u>PERMITS</u> .....	4
8.	<u>INSPECTION OF INSTALLATION AND CONSTRUCTION</u> .....	4
9.	<u>REMOVED MATERIALS</u> .....	5
10.	<u>WATER FOR CONSTRUCTION</u> .....	5
11.	<u>NOTIFICATION OF PROPERTY OWNER</u> .....	6
12.	<u>EXISTING UTILITIES AND FACILITIES</u> .....	6
13.	<u>DAMAGE TO PRIVATE PROPERTY</u> .....	6
14.	<u>WATER AND SANITARY SEWER CONTRACTOR'S MINIMUM QUALIFICATIONS CRITERIA</u> .....	6
15.	<u>MEASUREMENT AND PAYMENT</u> .....	7

# BID

TO THE HONORABLE MAYOR AND CITY COUNCIL  
CITY OF EL PASO  
EL PASO, TEXAS

The undersigned having familiarized themselves with the local conditions affecting the cost of work and with the contract documents consisting of Invitation to Bid, Instructions to Bidders, General Conditions, the contractor's Bid, special bid conditions, applicable Wage Rates, the Contract, plans, specifications, drawings and addenda on file in the Purchasing & Strategic Sourcing Department of the City of El Paso. Bidder agrees to perform everything required and to provide, furnish and install, including all the labor, materials, necessary tools, expendable equipment, all utility and transportation services and to complete in a workmanlike manner all the work necessary for

## Robinson Street and Drainage Improvements

Solicitation No. 2016-753

within the specified limits and in accordance with the plans, including Addenda numbers

<u>AMENDMENT</u>	<u>DATED</u>	<u>AMENDMENT</u>	<u>DATED</u>	<u>AMENDMENT</u>	<u>DATED</u>	<u>AMENDMENT</u>	<u>DATED</u>
A001	_____	A002	_____	A003	_____	A004	_____
A005	_____	A006	_____	A007	_____	A008	_____

within the specified limits and in accordance with the plans, including **Addenda numbers** \_\_\_\_\_, AT THE FOLLOWING UNIT PRICES:

**ONLY ONE BIDDER MAY BE AWARDED THIS CONTRACT PURSUANT TO THIS BID.**

**The lowest responsible bid will be determined based on the sum total of Base Bid I, Base Bid II, Base Bid III and Base Bid IV.**

**NOTE:** The quantities shown in the unit price schedule are ESTIMATES ONLY. They are shown here only for the purpose of comparing bids as an expected total expenditure. The City, at its sole discretion, will direct exactly how many actual units will be placed, and will pay for only those units that are ordered and accepted. No payments will be made regarding the estimated quantities, they are estimates only.

Estimates are minimums, but not guaranteed minimums, and the contract cost can increase so long as the unit costs remain the same and the increased funds are appropriated in the budget. Line item entries shall prevail over sum total entries. When discrepancies exist between unit prices and corresponding extended prices, unit prices shall prevail.

**EACH BID MUST BE SUBMITTED ON THE PRESCRIBED FORM AND all blank spaces on the bid form for bid prices must be filled in, in ink or typewritten. FAILURE TO FILL IN ALL BLANK SPACES SHALL CAUSE THE BID TO BE DEEMED NOT RESPONSIVE AND BID WILL NOT BE CONSIDERED IN DETERMINING THE LOWEST RESPONSIBLE BIDDER.**

COMPANY NAME: \_\_\_\_\_

BIDDER'S SIGNATURE: \_\_\_\_\_ PRINT NAME: \_\_\_\_\_

**BASE BID I- UNIT PRICE SCHEDULE: CIVIL WORK**

Item No.	Estimated Quantity	Unit	Brief Description of Item	Unit Price	Total Amount (Quantity x Unit Price)
1	9	MO	BARRICADES, SIGNS, AND TRAFFIC CONTROL	\$ _____	\$ _____
2	13,460	SY	SITE CLEARING & GRUBBING	\$ _____	\$ _____
3	7,400	SY	REMOVAL AND PROPER DISPOSAL OF EXISTING CONCRETE PAVEMENT (THICKNESS VARIES)	\$ _____	\$ _____
4	2,400	SY	REMOVAL AND PROPER DISPOSAL OF EXISTING ASPHALT PAVEMENT(THICKNESS VARIES)	\$ _____	\$ _____
5	1,820	CY	EXCAVATION AND PROPER DISPOSAL OF UNCLASSIFIED MATERIALS (CUT TO WASTE) FOR ROADWAY AND DRAINAGE IMPROVEMENTS	\$ _____	\$ _____
6	2,700	CY	EXCAVATION AND PROPER DISPOSAL OF UNCLASSIFIED MATERIALS (CUT TO FILL) FOR ROADWAY AND DRAINAGE IMPROVEMENTS	\$ _____	\$ _____
7	1,710	LF	REMOVAL AND PROPER DISPOSAL OF EXISTING CONCRETE CURB AND/OR GUTTER	\$ _____	\$ _____
8	125	SY	REMOVAL AND PROPER DISPOSAL OF EXISTING CONCRETE DRIVEWAY	\$ _____	\$ _____
9	650	SY	REMOVAL AND PROPER DISPOSAL OF EXISTING MORTARED ROCK HARDSCAPE	\$ _____	\$ _____
10	25	SY	REMOVAL AND PROPER DISPOSAL OF EXISTING CONCRETE FLUME	\$ _____	\$ _____
11	325	LF	REMOVAL AND PROPER DISPOSAL OF EXISTING METAL GUARDRAIL	\$ _____	\$ _____
12	16	EA	RELOCATION OF EXISTING ROCK BOULDERS	\$ _____	\$ _____
13	14	EA	REMOVE AND SALVAGE EXISTING STREET SIGNS	\$ _____	\$ _____
14	8,170	SY	FURINSH AND INSTALL 7-INCH CONTINUOUSLY REINFORCED CONCRETE PAVEMENT	\$ _____	\$ _____
15	1,790	SY	FURINSH AND INSTALL 7-INCH REINFORCED JOINTED CONCRETE PAVEMENT	\$ _____	\$ _____

COMPANY NAME: \_\_\_\_\_

BIDDER'S SIGNATURE: \_\_\_\_\_ PRINT NAME: \_\_\_\_\_

Item No.	Estimated Quantity	Unit	Brief Description of Item	Unit Price	Total Amount (Quantity x Unit Price)
16	9,960	SY	FURNISH AND INSTALL 12-INCH SCARIFIED AND RECOMPACTED SUITABLE EXISTING SUBGRADE	\$ _____	\$ _____
17	6,680	LF	FURNISH AND INSTALL STANDARD MONOLITHIC CONCRETE CURB	\$ _____	\$ _____
18	2,640	LF	FURNISH AND INSTALL CONCRETE HEADER CURB	\$ _____	\$ _____
19	6	EA	FURNISH AND INSTALL CITY MONUMENT	\$ _____	\$ _____
20	14	EA	FURNISH AND INSTALL NEW STREET SIGNS (SLIP BASE AND FOUNDATION ONLY)	\$ _____	\$ _____
21	10	EA	FURNISH AND INSTALL EXISTING STREET SIGNS (RELOCATED)	\$ _____	\$ _____
22	3,040	LF	FURNISH AND INSTALL 4-INCH THERMOPLASTIC PAVEMENT MARKINGS (YELLOW) (DOUBLE) (100 MILS)	\$ _____	\$ _____
23	2,920	LF	FURNISH AND INSTALL 4-INCH THERMOPLASTIC PAVEMENT MARKINGS (WHITE) (BROKEN) (100 MILS)	\$ _____	\$ _____
24	340	LF	FURNISH AND INSTALL 4-INCH THERMOPLASTIC PAVEMENT MARKINGS (WHITE) (SOLID) (100 MILS)	\$ _____	\$ _____
25	110	LF	FURNISH AND INSTALL 24-INCH THERMOPLASTIC PAVEMENT MARKINGS (WHITE) (SOLID) (100 MILS)	\$ _____	\$ _____
26	24	EA	FURNISH AND THERMOPLASTIC PAVEMENT MARKINGS (YIELD TRIANGLE) (WHITE) (100 MILS)	\$ _____	\$ _____
27	11	EA	FURNISH AND THERMOPLASTIC PAVEMENT MARKINGS (BIKE SYMBOL) (WHITE) (100 MILS)	\$ _____	\$ _____
28	22	EA	FURNISH AND THERMOPLASTIC PAVEMENT MARKINGS (BIKE ARROWS) (WHITE) (100 MILS)	\$ _____	\$ _____
29	1	EA	FURNISH AND THERMOPLASTIC PAVEMENT MARKINGS (HANDICAP SYMBOL) (WHITE) (100 MILS)	\$ _____	\$ _____
30	20	EA	FURNISH AND INSTALL REINFORCED PEDESTRIAN RAMPS	\$ _____	\$ _____
31	1,200	SY	FURNISH AND INSTALL CONCRETE SIDEWALKS	\$ _____	\$ _____

COMPANY NAME: \_\_\_\_\_

BIDDER'S SIGNATURE: \_\_\_\_\_ PRINT NAME: \_\_\_\_\_

Item No.	Estimated Quantity	Unit	Brief Description of Item	Unit Price	Total Amount (Quantity x Unit Price)
32	3,560	SY	FURNISH AND INSTALL 2-INCH ASPHALT SHARED USE PATH	\$ _____	\$ _____
33	3,560	SY	FURNISH AND INSTALL 4-INCH FLEXIBLE BASE COURSE (8-INCH SCARIFIED EXISTING SUBGRADE)	\$ _____	\$ _____
34	140	SY	FURNISH AND INSTALL CONCRETE DRIVEWAYS	\$ _____	\$ _____
35	180	SY	FURNISH AND INSTALL STAMPED COLORED CONCRETE CROSSWALKS	\$ _____	\$ _____
36	2,690	LF	FURNISH AND INSTALL 3-FOOT ROCK WALL	\$ _____	\$ _____
37	2	EA	FURNISH AND INSTALL SWING GATE	\$ _____	\$ _____
38	1	LS	IMPLEMENT STORM WATER POLLUTION PREVENTION BEST MANAGEMENT PRACTICES INCLUDING: FURNISH AND INSTALL SILT FENCE, CONSTRUCTION ENTRANCE/EXITS AND REMOVAL AND PROPER DISPOSAL OF SILT FENCE AND CONSTRUCTION ENTRANCES/EXITS AFTER COMPLETION OF WORK.	\$ _____	\$ _____
39	128	CY	FURNISH AND INSTALL REINFORCED CONCRETE DRAINAGE FLUMES	\$ _____	\$ _____
40	70	CY	FURNISH AND INSTALL REINFORCED CONCRETE FLUME (No. 1 and No. 2)	\$ _____	\$ _____
41	380	CY	FURNISH AND INSTALL GABION BASKETS (6' x 3' x 3')	\$ _____	\$ _____
42	630	CY	FURNISH AND INSTALL GABION BASKETS (9' x 3' x 3')	\$ _____	\$ _____
43	330	CY	FURNISH AND INSTALL GABION BASKETS (6' x 3' x 1.5')	\$ _____	\$ _____
44	60	CY	FURNISH AND INSTALL GABION BASKETS (9' x 3' x 1.5')	\$ _____	\$ _____
45	280	CY	FURNISH AND INSTALL GABION BASKETS (12' x 3' x 1.5')	\$ _____	\$ _____
46	8	EA	3-FOOT TALL DECORATIVE FENCE @ ROCK WALL OPENINGS	\$ _____	\$ _____

COMPANY NAME: \_\_\_\_\_

BIDDER'S SIGNATURE: \_\_\_\_\_ PRINT NAME: \_\_\_\_\_

Item No.	Estimated Quantity	Unit	Brief Description of Item	Unit Price	Total Amount (Quantity x Unit Price)
47	172	EA	TREES - 10' TALL / 4" CALIPER	\$ _____	\$ _____
48	731	EA	SHRUB - 3 GAL.	\$ _____	\$ _____
49	799	EA	SHRUB - 5 GAL.	\$ _____	\$ _____
50	4,163	SY	DECOMPOSED GRANITE SURFACING (3" MINUS MATERIAL)	\$ _____	\$ _____
51	201	SQ F	PRECAST CONCRETE PAVING UNITS	\$ _____	\$ _____
52	2	EA	PRECAST CONCRETE BENCH	\$ _____	\$ _____
53	81	EA	ROCK CHECK DAM (0.2 CY EA)	\$ _____	\$ _____
54	1	EA	LANDSCAPE BOULDER - FLAT TOP SURFACE (SIZE: 3' x 2.5' x 2')	\$ _____	\$ _____
55	2	EA	LANDSCAPE BOULDER (SIZE: 2' x 2' x 1')	\$ _____	\$ _____
56	4,900	SY	HYDROSEEDING	\$ _____	\$ _____
57	1	EA	NEW 1" WATER METER	\$ _____	\$ _____
58	1	EA	NEW 3/4" WATER METER	\$ _____	\$ _____
59	1	EA	NEW 1" BACKFLOW PREVENTER	\$ _____	\$ _____
60	1	EA	NEW 3/4" BACKFLOW PREVENTER	\$ _____	\$ _____
61	1	EA	BATTERY OPERATED CONTROL SYSTEM / HAND HELD REMOTE	\$ _____	\$ _____
62	2,000	LF	MAINLINE - 2"	\$ _____	\$ _____

COMPANY NAME: \_\_\_\_\_

BIDDER'S SIGNATURE: \_\_\_\_\_ PRINT NAME: \_\_\_\_\_

Item No.	Estimated Quantity	Unit	Brief Description of Item	Unit Price	Total Amount (Quantity x Unit Price)
63	300	LF	MAINLINE - 1"	\$ _____	\$ _____
64	8	EA	GATE VALVE ASSEMBLY - 2"	\$ _____	\$ _____
65	7	EA	GATE VALVE ASSEMBLY - 1"	\$ _____	\$ _____
66	2	EA	AIR AND VACUUM RELEASE VALVE - 1"	\$ _____	\$ _____
67	17	EA	AIR RELIEF ASSEMBLY - 1/2"	\$ _____	\$ _____
68	12	EA	REMOTE CONTROL VALVE ASSEMBLY 1"	\$ _____	\$ _____
69	1,000	LF	LATERAL LINE - 1"	\$ _____	\$ _____
70	2,000	LF	LATERAL LINE - 3/4"	\$ _____	\$ _____
71	9,000	LF	LATERAL LINE - 1/2"	\$ _____	\$ _____
72	820	LF	SLEEVE - 4"	\$ _____	\$ _____
73	474	EA	DRIP EMITTER ASSEMBLY	\$ _____	\$ _____
74	39	EA	FLUSH CAP ASSEMBLY	\$ _____	\$ _____
75	1	LS	PRESSURE AND OPERATIONAL TESTING	\$ _____	\$ _____
76	1	LS	CONTROLLER PROGRAMMING AND TESTING	\$ _____	\$ _____
77	12	M O	INITIAL LANDSCAPE / IRRIGATION MAINTENANCE	\$ _____	\$ _____
78	12	EA	TYPE "A" LIGHT STANDARD ASSEMBLY	\$ _____	\$ _____

COMPANY NAME: \_\_\_\_\_

BIDDER'S SIGNATURE: \_\_\_\_\_ PRINT NAME: \_\_\_\_\_

Item No.	Estimated Quantity	Unit	Brief Description of Item	Unit Price	Total Amount (Quantity x Unit Price)
79	4	EA	TYPE "B" LIGHT STANDARD ASSEMBLY	\$ _____	\$ _____
80	2,785	LF	2" PVC SCHEDULE 40 CONDUIT	\$ _____	\$ _____
81	9,050	LF	#6 TYPE XHHW COPPER CONDUCTORS	\$ _____	\$ _____
82	2,500	LF	TRENCH AND BACKFILL	\$ _____	\$ _____
83	2	EA	ELECTRICAL SERVICE	\$ _____	\$ _____
<b>SUM TOTAL BASE BID I (ITEMS 1 THROUGH 83)</b>				\$ _____	
<b>MOBILIZATION AND DEMOBILIZATION (NOT TO EXCEED 5% OF SUM TOTAL BASE BID I)</b>				\$ _____	
<b>SUM TOTAL (BASE BID I AND MOBILIZATION)</b>				\$ _____	

**BASE BID II- UNIT PRICE SCHEDULE: ON-SITE WATER MAIN ADJUSTMENTS FOR ROBINSON AVENUE STREET IMPROVEMENTS**

Item No.	Estimated Quantity	Unit	Brief Description of Item	Unit Price	Total Amount (Quantity x Unit Price)
1	Left Blank Intentionally				
2	1,400	LF	Furnish and Install 16-Inch Ductile Iron (DI) Water Pipe Installed with Fittings, Valves, and Accessories; Complete in Place	\$ _____	\$ _____
3	2,805	LF	Furnish and Install 12-Inch Ductile Iron (DI) Water Pipe Installed with Fittings, Valves, and Accessories; Complete in Place	\$ _____	\$ _____
4	125	LF	Furnish and Install 8-Inch Ductile Iron (DI) Water Pipe Installed with Fittings, Valves, and Accessories; Complete in Place	\$ _____	\$ _____

COMPANY NAME: \_\_\_\_\_

BIDDER'S SIGNATURE: \_\_\_\_\_ PRINT NAME: \_\_\_\_\_

Item No.	Estimated Quantity	Unit	Brief Description of Item	Unit Price	Total Amount (Quantity x Unit Price)
5	43	LF	Furnish and Install 8-Inch C900 PVC Water Pipe Installed with Fittings, Valves, and Accessories; Complete in Place	\$ _____	\$ _____
6	5	EA	Furnish and Install 16-Inch Butterfly Valve with Manhole, Including Related Appurtenances; Complete in Place	\$ _____	\$ _____
7	40	LF	Furnish and Install 24-Inch Steel Casing by Open-Cut Methods; Complete in Place	\$ _____	\$ _____
8	1	EA	Replace and Re-Connect 1-Inch Water Service Line with Fittings, Valves, Meter Box and Accessories; Complete in Place	\$ _____	\$ _____
9	2	EA	Replace Existing Fire Hydrant Assembly with NEW Fire Hydrant Assembly; Complete with Fittings, Valves and Accessories	\$ _____	\$ _____
10	3,000	LB	Additional Fittings	\$ _____	\$ _____
11	4,373	LF	Trench Safety System (Trench Box, Shoring or Bracing Methods), Complete in Place	\$ _____	\$ _____
<p style="text-align: center;">BASE BID II SUMTOTAL: ON-SITE WATER MAIN ADJUSTMENTS FOR ROBINSON AVENUE STREET IMPROVEMENTS TOTAL (1-10)</p>				\$ _____	
<p style="text-align: center;">Mobilization Allowance Not to Exceed 5% of Sum Total for Base Bid II, Bid Item No. 1 through 10</p>				\$ _____	
<p style="text-align: center;"><b>SUMTOTAL BASE BID II PLUS MOBILIZATION</b></p>				\$ _____	

COMPANY NAME: \_\_\_\_\_

BIDDER'S SIGNATURE: \_\_\_\_\_ PRINT NAME: \_\_\_\_\_

**BASE BID III- UNIT PRICE SCHEDULE: ON-SITE SANITARY SEWER MAIN ADJUSTMENTS FOR ROBINSON AVENUE STREET IMPROVEMENTS**

Item No.	Estimated Quantity	Unit	Brief Description of Item	Unit Price	Total Amount (Quantity x Unit Price)
1			Left Blank Intentionally		
2	2,062	LF	Furnish and Install 8-Inch SDR 35 Polyvinyl Chloride (PVC) Sewer Pipe Complete, Installed; Including, But Not Limited to, Dewatering and Temporary By-Pass	\$ _____	\$ _____
3	196	LF	Furnish and Install 8-Inch C900 Polyvinyl Chloride (PVC) Sewer Pipe Complete, Installed; Including, But Not Limited to, Dewatering and Temporary By-Pass	\$ _____	\$ _____
4	80	LF	Furnish and Install 16-Inch Steel Casing by Open-Cut Methods; Complete in Place	\$ _____	\$ _____
5	10	EA	Standard Manholes; 48-Inch Complete in Place	\$ _____	\$ _____
6	4	EA	Standard Manholes; 48-Inch Cast in Place	\$ _____	\$ _____
7	9	VF	Standard Manholes, EXTRA DEPTH for Manholes Exceeding 6-Feet of Depth; as per Specifications	\$ _____	\$ _____
8	10	EA	New 4-Inch Service Laterals to New Sewer Main with Fittings; Complete in Place	\$ _____	\$ _____
9	2,258	LF	Trench Safety System (Trench Box, Shoring or Bracing Methods), Complete in Place	\$ _____	\$ _____
10	230	SF	Patch Pavement Cut and Restoration With 2-Inch HMAc, as per City of El Paso Specifications; Complete in Place	\$ _____	\$ _____

COMPANY NAME: \_\_\_\_\_

BIDDER'S SIGNATURE: \_\_\_\_\_ PRINT NAME: \_\_\_\_\_

Item No.	Estimated Quantity	Unit	Brief Description of Item	Unit Price	Total Amount (Quantity x Unit Price)
11	10	CY	Cement Stabilized Backfill (2-Sack); Under Patch Pavement; as per City of El Paso Specifications; Complete in Place	\$ _____	\$ _____
SUMTOTAL BASE BID III: ON-SITE SANITARY SEWER MAIN ADJUSTMENTS FOR ROBINSON AVENUE STREET IMPROVEMENTS TOTAL (1-11)				\$ _____	
Mobilization Allowance Not to Exceed 5% of Sum Total for Base Bid III, Bid Item No. 1 through 11				\$ _____	
<b>SUMTOTAL BASE BID III PLUS MOBILIZATION</b>				\$ _____	

**BASE BID IV- UNIT PRICE SCHEDULE:**

Item No.	TxDOT Item No.	Description Code	Estimated Quantity	Unit	Brief Description of Item	Unit Price	Total Amount (Quantity X Unit Price)
1					Left Blank Intentionally		
2	432	2023	34	CY	24" MORTARED ROCK RIPRAP	\$ _____	\$ _____
3	432	2021	62	CY	18" MORTARED ROCK RIPRAP	\$ _____	\$ _____
4	432	2021	84	CY	18" ROCK RIPRAP	\$ _____	\$ _____
5	462	2029	104	LF	CONC BOX CULV (10 FT X 5 FT)	\$ _____	\$ _____
6	466	2021	2	EA	WINGWALL (FW-0) (HW = 6 FT)	\$ _____	\$ _____
7	110	6003	512	CY	HARDROCK EXCAVATION (SPECIAL)	\$ _____	\$ _____

COMPANY NAME: \_\_\_\_\_

BIDDER'S SIGNATURE: \_\_\_\_\_ PRINT NAME: \_\_\_\_\_

Item No.	TxDOT Item No.	Description Code	Estimated Quantity	Unit	Brief Description of Item	Unit Price	Total Amount (Quantity X Unit Price)
8	450	2073	52	LF	RAIL (HANDRAIL) (TY B)	\$ _____	\$ _____
9	169	2002	341	SY	SOIL RETENTION BLANKET	\$ _____	\$ _____
<b>SUMTOTAL BASE BID IV (ITEMS 1-9):</b>						\$ _____	
10	500	2001	1	LS	MOBILIZATION/DEMOLITION, INSURANCE AND BONDS; NOT TO EXCEED 5% OF THE TOTAL OF BID ITEMS 1 - 9	\$ _____	\$ _____
<b>SUMTOTAL BASE BID IV PLUS MOBILIZATION</b>						\$ _____	

Note: Unit prices from TxDOT El Paso District 12 month avg. bid.

**Sum Total Base Bid I, Base Bid II, Base Bid III and Base Bid IV**

\$ \_\_\_\_\_

COMPANY NAME: \_\_\_\_\_

BIDDER'S SIGNATURE: \_\_\_\_\_ PRINT NAME: \_\_\_\_\_

**CONTRACT TIME AND LIQUIDATED DAMAGES**

Bidder agrees to commence work on a date to be specified in a written "Notice to Proceed" issued by the Owner. The Contract Time shall begin on the date to commence work specified in the "Notice to Proceed" and shall run for three hundred (300) additional CONSECUTIVE CALENDAR DAYS thereafter. Bidder shall Substantially Complete the project within two hundred seventy (270) CONSECUTIVE CALENDAR DAYS after the date to commence work in the "Notice to Proceed." –Bidder agrees to pay, as liquidated damages, the sum of one thousand one hundred thirty seven dollars and fifty cents (\$1,137.50) for each consecutive calendar day after the date of Substantial Completion, as hereinafter provided in the General Conditions. Bidder further agrees to pay as liquidated damages the sum of eight hundred two dollars and fifty cents (\$802.50) for each consecutive calendar day after the expiration of the Contract Time for Remaining Work, as provided in Paragraph 6.8.3.1 of the General Conditions. The unit price quantities of this contract are estimated.

**BID**

Enclosed with this is a bid bond for five percent (5%) of the TOTAL bid price including base bid(s), alternate(s) and option(s) which is agreed shall be collected and retained by the owner(s) as liquidated damages in the event this bid is accepted by the Owner within ninety (90) consecutive calendar days after the date advised for the reception of bids and the undersigned fails to execute the contract and the required performance and payment bonds with the Owner within fourteen (14) consecutive calendar days after the date said bid is accepted; otherwise, the said bid security shall be returned to the undersigned upon demand.

THE UNDERSIGNED BIDDER REPRESENTS TO THE CITY AND TO THE OTHER BIDDERS THAT HIS/HER BID, AND THE ESTIMATES ON WHICH IT IS BASED, HAS BEEN CAREFULLY CHECKED AND CONTAINS NO ERRORS, AND NOTHING HAS BEEN OMITTED OR OVERLOOKED IN DETERMINING THE AMOUNTS BID.

BIDDER'S NAME: \_\_\_\_\_  
(AS IT APPEARS ON ORGANIZATION CERTIFICATE ISSUED BY STATE IN WHICH COMPANY WAS ORGANIZED)

BY: \_\_\_\_\_  
Signature Date

\_\_\_\_\_ Print Signer's name & title Telephone Fax

\_\_\_\_\_ Address City, State, Zip Code

\_\_\_\_\_ eMail address Physical Address of Business City, State, Zip Code  
(if different from above)

**IF THE BIDDER BE A CORPORATION, THE FOLLOWING CERTIFICATE SHOULD BE EXECUTED:**

I, \_\_\_\_\_, certify that I am the \_\_\_\_\_ Secretary of the corporation named as Bidder hereinabove; that \_\_\_\_\_, who signed the foregoing contract on behalf of the Bidder, was then \_\_\_\_\_ of said corporation; that said bid was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

\_\_\_\_\_  
CORPORATE SECRETARY SIGNATURE AND CORPORATE SEAL