

# CONSTRUCTION PLANS FOR GLENDALE ESTATES PHASE II

## PAVING AND UTILITY IMPROVEMENTS

THE CITY OF ALBUQUERQUE & ABCWUA  
NEW MEXICO  
JANUARY 2016

RGE

I DAVID SOULE, NMPE 14522, OF THE FIRM RIO GRANDE ENGINEERING, HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE INFRASTRUCTURE INSTALLED AS A PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS APPROVED BY THE CITY, COUNTY AND ABCWUA ENGINEER AND THAT THE ORIGINAL DESIGN INTENT HAS BEEN MET, EXCEPT AS NOTED BY ME OR PERSONNEL UNDER MY DIRECTION AND SURVEY INFORMATION PROVIDED BY DAVID ACOSTA NMPS 21082.

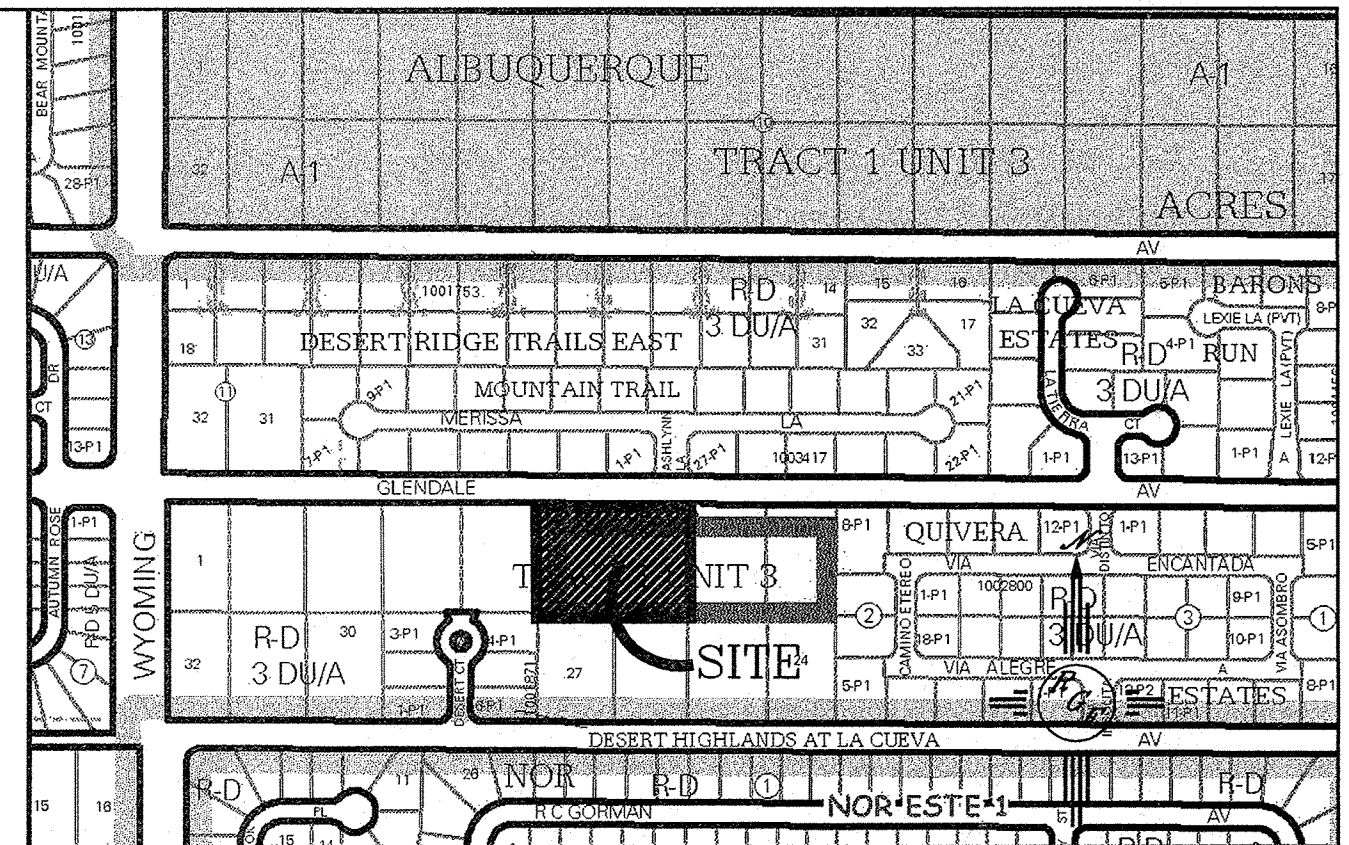
APPROVED AS RECORD DRAWINGS  
DESIGN REVIEW SECTIONS  
CITY CONSTRUCTION ENGINEER  
DATE: 1/24/2017

### INDEX TO DRAWINGS

1. TITLE SHEET
2. PLAT
3. GRADING AND DRAINAGE PLAN (FOR REFERENCE ONLY)
4. MASTER PAVING PLAN
5. NORTH STAR LANE PAVING IMPROVEMENTS PLAN AND PROFILE
6. MASTER UTILITY PLAN
7. NORTH STAR LANE UTILITY IMPROVEMENTS PLAN AND PROFILE
8. NORTH STAR LANE STORM DRAIN IMPROVEMENTS PLAN AND PROFILE
9. EROSION CONTROL PLAN

DAVID R ACOSTA  
NEW MEXICO  
14522  
REGISTERED PROFESSIONAL SURVEYOR  
12-29-16

Record Drawing



and more details visit: <http://www.cabq.gov/nis>  
VICINITY MAP: B-19-Z

- #### NOTICE TO CONTRACTORS
1. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION (UPDATE #9).
  2. ALL ROAD IMPROVEMENTS AND RELATED WORK DETAILED ON THESE PLANS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION (UPDATE #9).
  3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM (260-1990) FOR LOCATION OF EXISTING UTILITIES.
  4. ANY WORK AFFECTING AN ARTERIAL ROADWAY MAY REQUIRE 24-HOUR CONSTRUCTION.
  5. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR SURVEYOR IMMEDIATELY SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
  6. SEVEN (7) WORKING DAYS PRIOR TO BEGINNING OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO CONSTRUCTION COORDINATION DIVISION A DETAILED CONSTRUCTION SCHEDULE. TWO(2) WORKING DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN A BARRICADE PERMIT FROM THE COA CONSTRUCTION COORDINATION DIVISION. CONTRACTOR SHALL NOTIFY BARRICADE ENGINEER (924-3400) PRIOR TO OCCUPYING AN INTERSECTION. REFER TO STANDARD SPECIFICATIONS.
  7. CONTRACTOR SHALL NOTIFY THE ENGINEER NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK IN ORDER THAT THE CITY SURVEYOR MAY TAKE NECESSARY MEASURES TO INSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE CITY SURVEYOR AND SHALL NOTIFY THE CITY SURVEYOR AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE CITY SURVEYOR. WHEN A CHANGE IS MADE IN THE FINISHED ELEVATIONS OF THE PAVEMENT OF ANY ROADWAY IN WHICH A PERMANENT SURVEY MONUMENT IS LOCATED, CONTRACTOR SHALL, AT HIS OWN EXPENSE, ADJUST THE MONUMENT COVER TO THE NEW GRADE UNLESS OTHERWISE SPECIFIED. REFER TO SECTION 4.4 OF THE GENERAL CONDITIONS OF THE STANDARD SPECIFICATIONS. ANY PERMANENT SURVEY MONUMENT LOCATED WITHIN 50' OF THIS PROJECT THAT IS NOT SHOWN ON THE PLAN AND IS DESTROYED DURING CONSTRUCTION WILL BE REPLACED AT THE CONTRACTORS EXPENSE.
  8. DEVELOPER SHALL PROVIDE STOP SIGNS, AND ANY NECESSARY STRIPING FOR PRIVATE STREETS.
  9. CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF ALL DEBRIS, INCLUDING, NOT LIMITED TO HAZARDOUS WASTE AT DISPOSAL SITES APPROVED BY GOVERNMENTAL AGENCIES REGULATING THE DISPOSAL OF SUCH MATERIAL.
  10. CONTRACTOR SHALL REPLACE ALL PERMANENT PAVING STRIPING AND MARKINGS (INCLUDING IMPACTED EX. MARKINGS) THE ROAD SHALL NOT BE OPENED TO THE TRAFFIC UNTIL IT IS STRIPED. ALL STRIPING, PAVEMENT MARKINGS, INCLUDING CROSSWALKS, ARROWS AND LINE MARKINGS ARE TO BE CONSTRUCTED OF HOT PLASTIC OR COLD PLASTIC IN ACCORDANCE WITH THE MUTCD.
  11. CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORK SITE. CONTRACTOR SHALL PROMPTLY REMOVE ANY AND ALL GRAFFITI FROM EQUIPMENT, WHETHER PERMANENT OR TEMPORARY.
  12. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL CONSTRUCTION SIGNING UNTIL PROJECT HAS BEEN ACCEPTED BY THE COA.
  13. WHEN ABUTTING NEW PAVEMENT TO THE EXISTING INTERSECTING STREETS THE EXISTING PAVEMENT SHALL BE SAW CUT TO A STRAIGHT LINE. RIGHT ANGLES AND ANY BROKEN OR CRACKED PAVEMENT SHALL BE REMOVED. SAW CUTTING SHALL BE CONSIDERED INCIDENTAL TO PAVING, THEREFORE, NO DIRECT PAYMENT WILL BE MADE FOR SAW CUTTING.
  14. GROUND WATER MAY BE PRESENT WITHIN THE WORK AREA. CONTRACTOR SHALL BE AWARE THAT DEWATERING OF WORK ZONE MAY BE REQUIRED.
  15. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ANY DAMAGE TO EXISTING CURB AND GUTTER, PAVEMENT, SIDEWALK, STRIPING, AND SIGNAGE.

DRB# 1008656

Rio Grande  
Engineering  
1806 CENTRAL AVE SE  
SUITE 201  
ALBUQUERQUE, NM 87104  
(505) 872-0999

DAVID SOULE  
NEW MEXICO  
14522  
REGISTERED PROFESSIONAL ENGINEER  
4/11/16  
411516

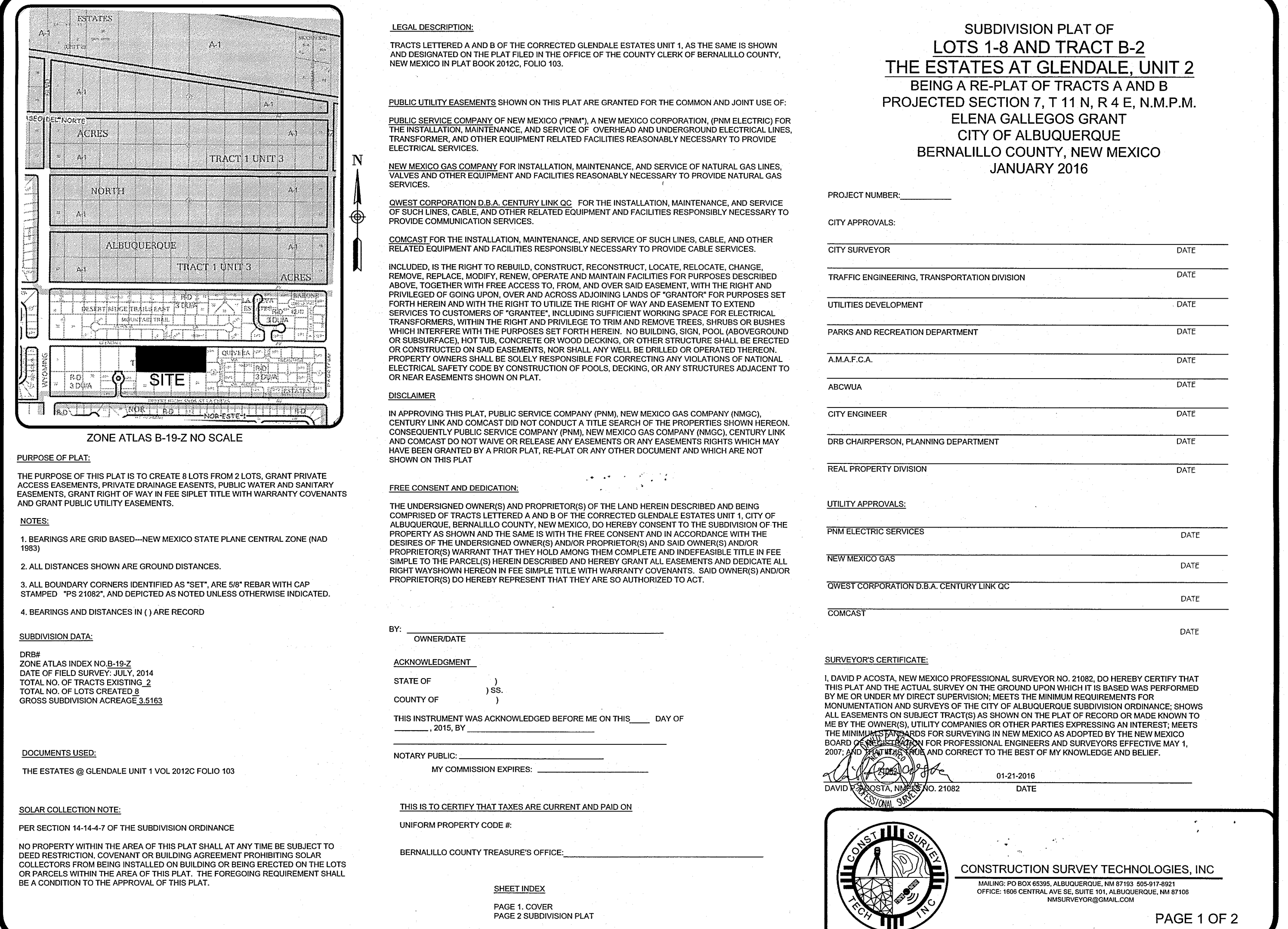
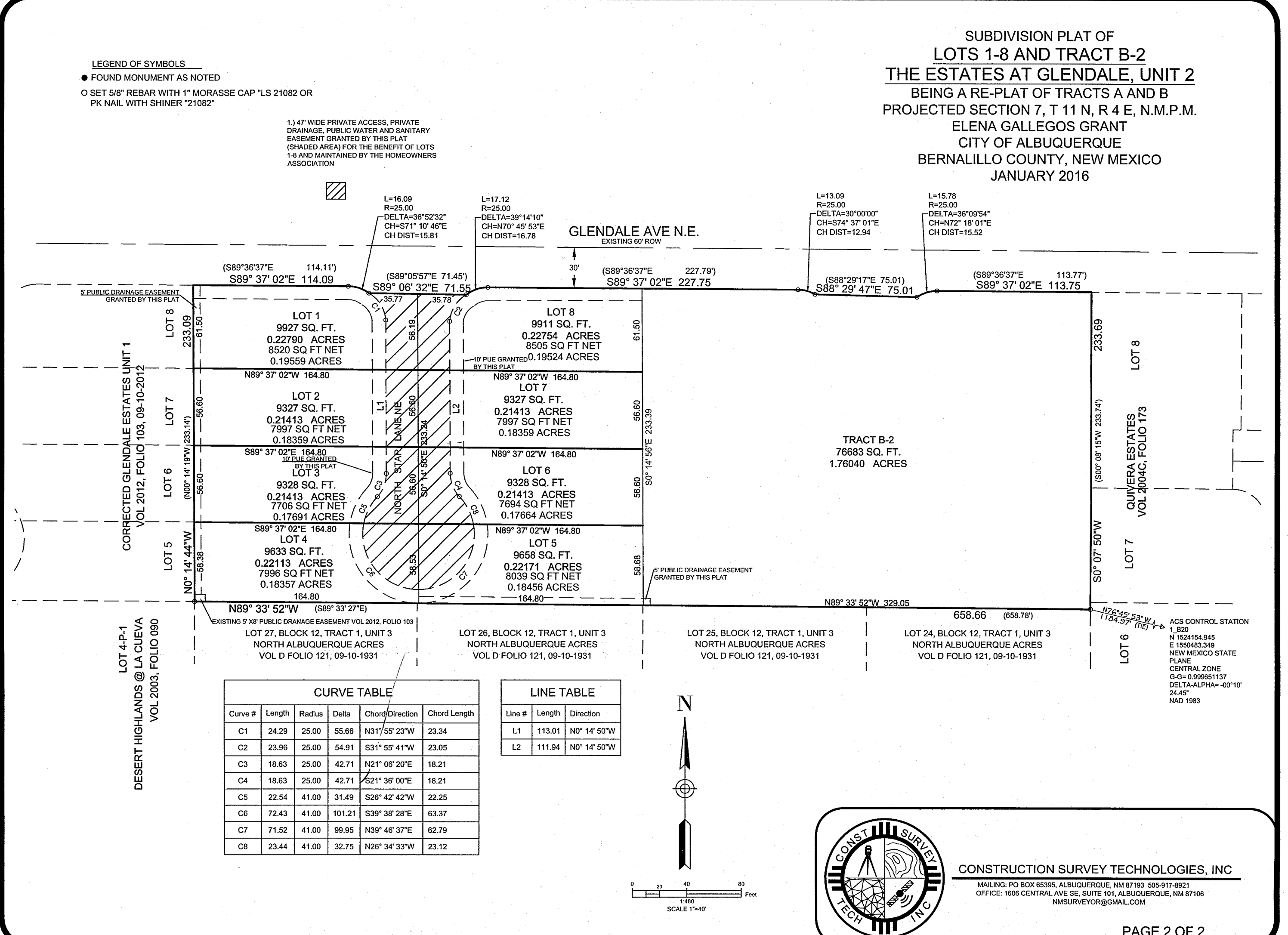
REV	SHEETS	CITY ENGINEER	DATE	USER	DEPT.	DATE	USER	DEPT.	DATE
ENGINEERS STAMP & SIGNATURE		APPROVALS	ENGINEER	DATE	*****				
		DRC Chairman	Sam Ylun	5-25-16	APPROVED FOR CONSTRUCTION				
		Transportation	R. B. Smith	4-20-16					
		Hydrology	R. L. H.	5-11-16					
		ABCWUA	Tim Grova	4-11-16					
		Constr. Mngmt.							
		Constr. Coord.							
		Water/Wastewater							
CITY PROJECT NO.				702784	SHEET 1 OF 9				

- THE FOLLOWING NOTES ALSO APPLY WHEN CHECKED
- ☒ ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
  - ☒ BACKFILL COMPACTION SHALL BE ACCORDING TO SPECIFIED STREET USE.
  - ☒ SIDEWALKS AND WHEELCHAIR RAMPS WITHIN THE CURB RETURNS SHALL BE CONSTRUCTED WHEREVER A NEW CURB RETURN IS CONSTRUCTED.
  - ☒ ALL STORM DRAINAGE FACILITIES SHALL BE COMPLETED PRIOR TO FINAL ACCEPTANCE.

6/22/16  
City Engineer Date

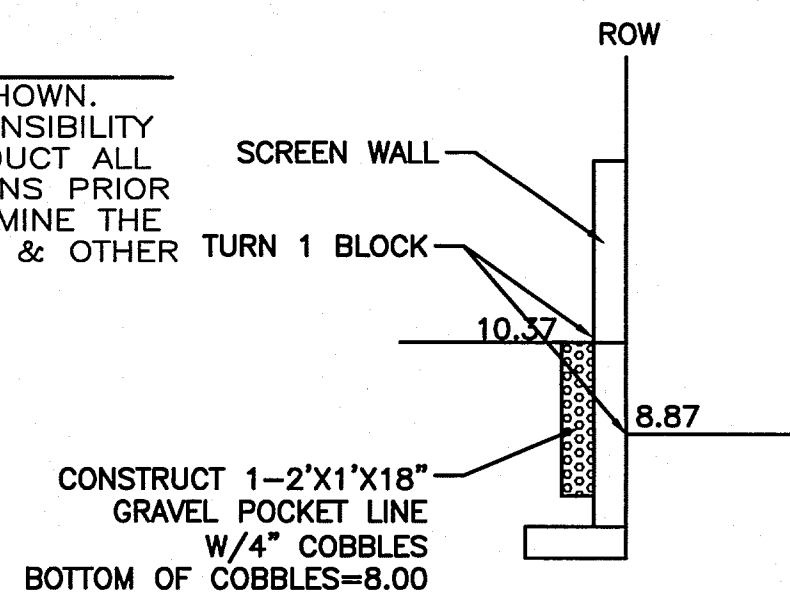


For Reference only





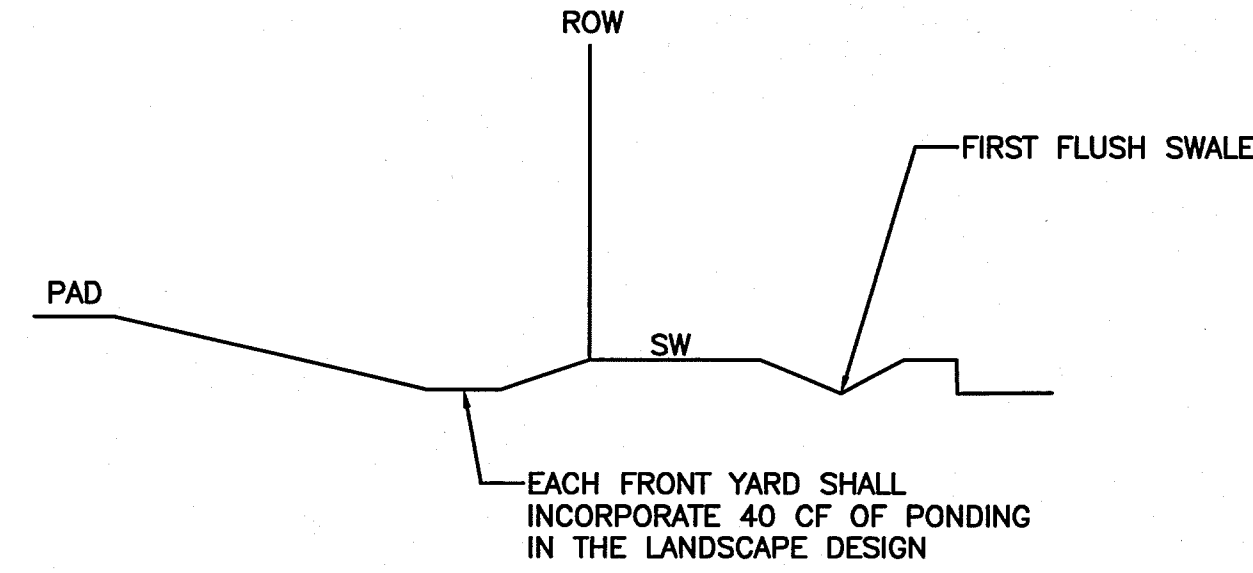
EXISTING UTILITIES ARE NOT SHOWN.  
IT SHALL BE THE SOLE RESPONSIBILITY  
OF THE CONTRACTOR TO CONDUCT ALL  
NECESSARY FIELD INVESTIGATIONS PRIOR  
TO ANY EXCAVATION TO DETERMINE THE  
ACTUAL LOCATION OF UTILITIES & OTHER  
IMPROVEMENTS.



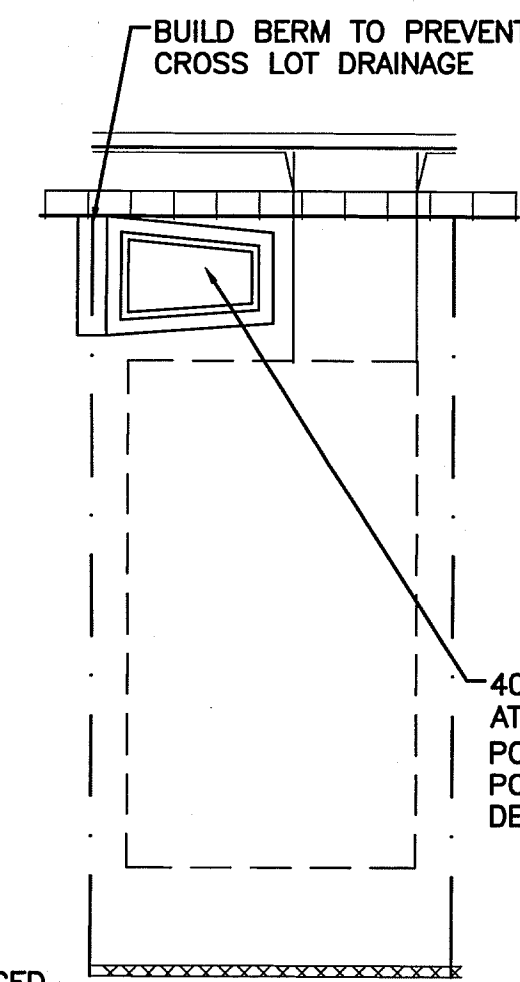
SECTION C-C

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NTS

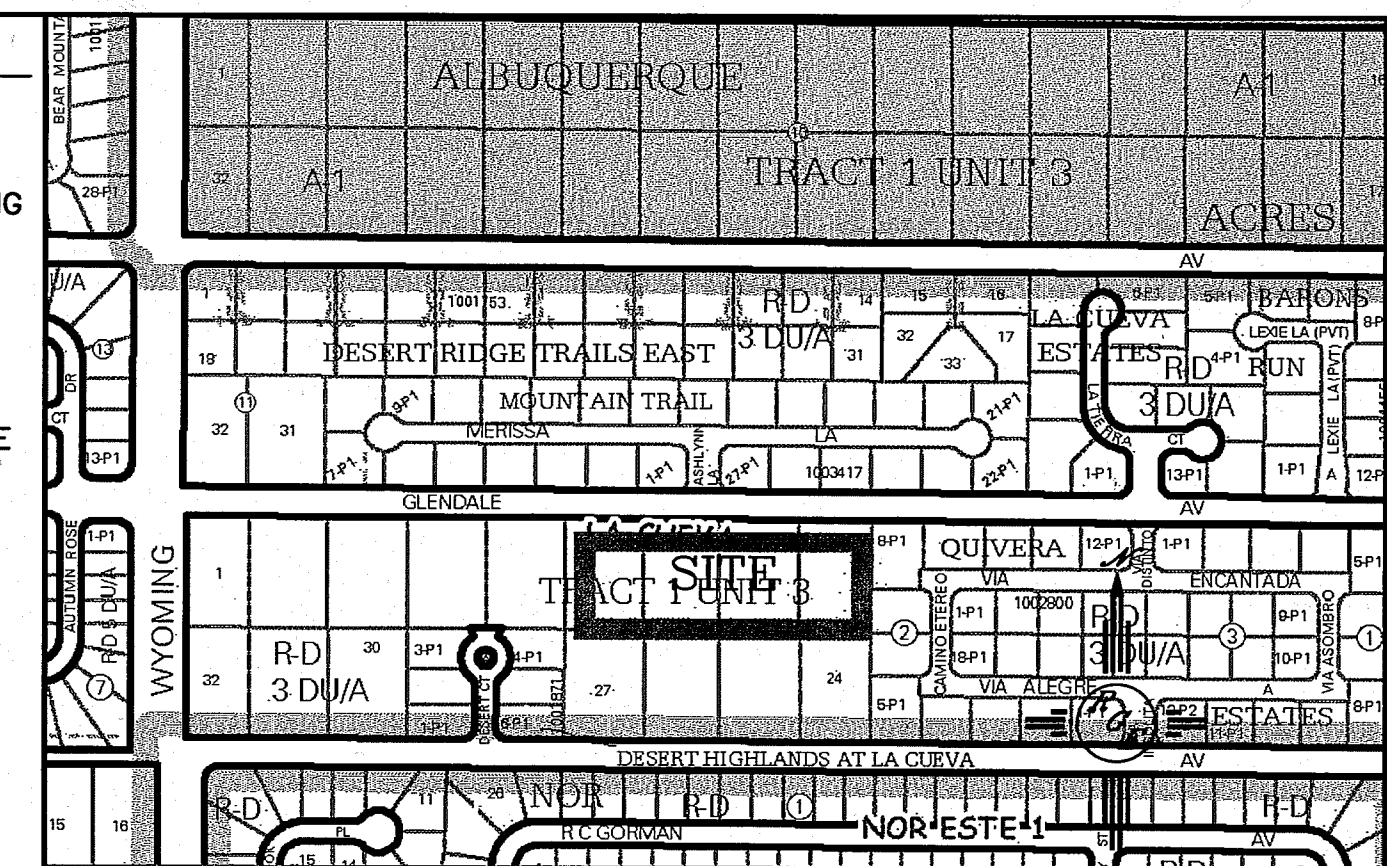


SECTION B-B  
NTS



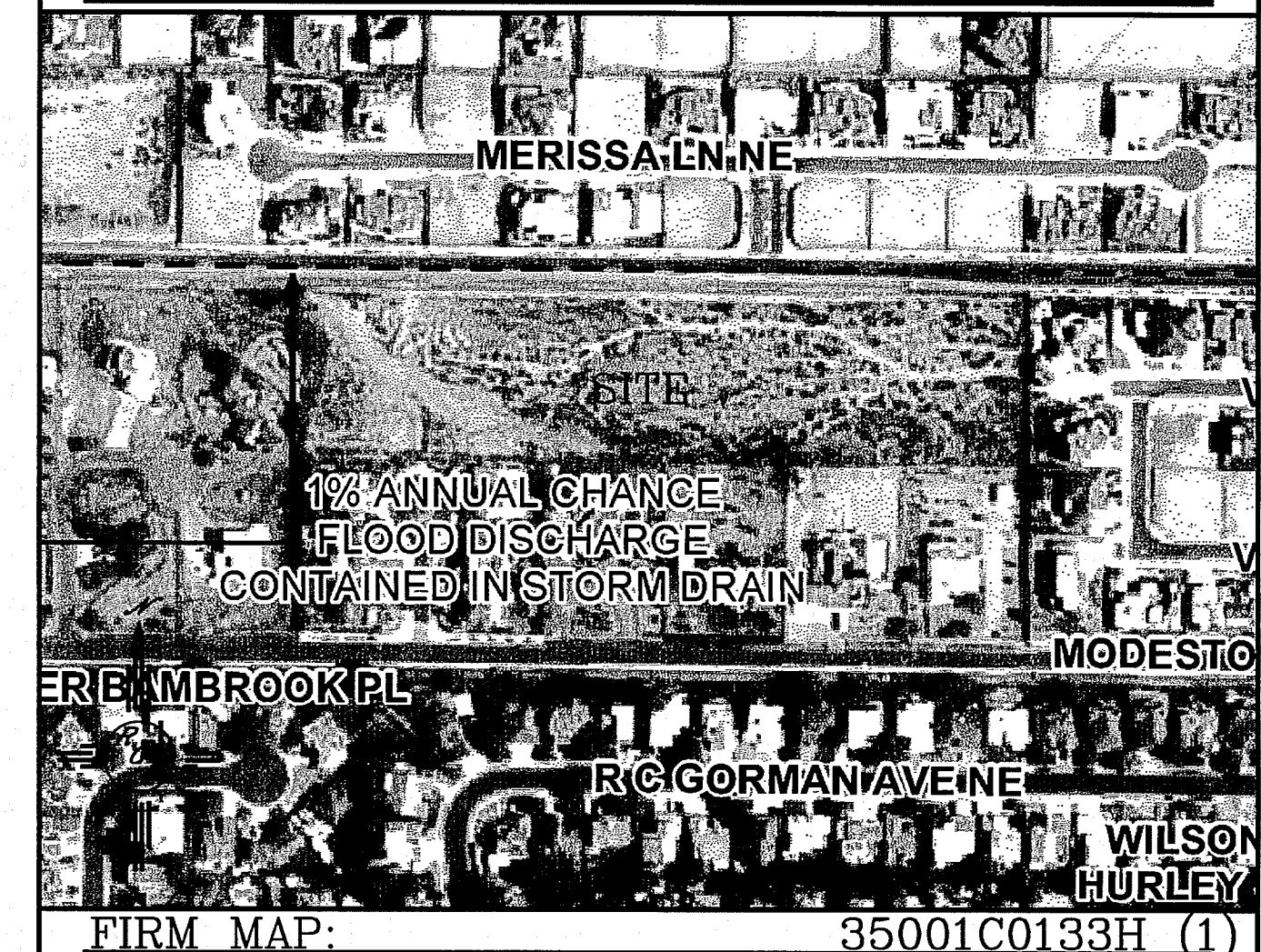
40 CF POND, TO BE CONSTRUCTED  
AT FINAL LANDSCAPE,  
POND BOTTOM SHALL BE 4' WIDE, 20' LONG , 6" DEEP.  
POND SHALL BE CREATED BY BERM AND OR  
DEPRESSION, DEPENDING ON LANDSCAPE DESIGN

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.



and more details visit: <http://www.caba.gov/aic>

VICINITY MAP: B-19-Z


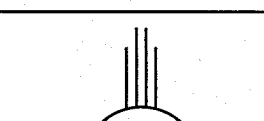


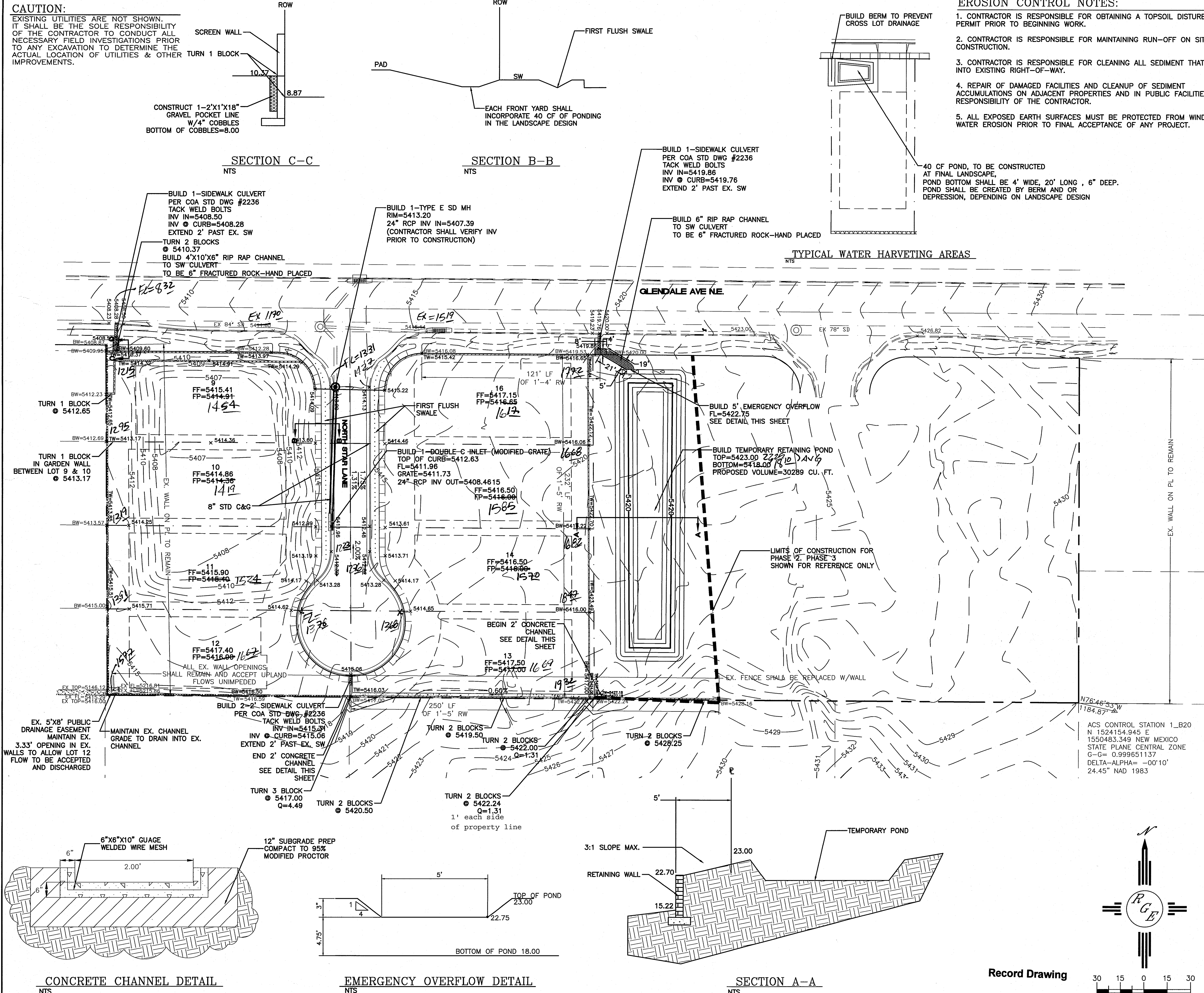
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TR. A AND B, THE ESTATES AT GLENDALE

1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
2. ALL RETAINING WALL DESIGN SHALL BE BY OTHERS.
3. ALL CURB AND GUTTER SHALL BE 8" STANDARD UNLESS OTHERWISE NOTED.
4. THE REAR HALF OF LOT 12, SHALL DRAIN TO CHANNEL IN SW CORNER OF SAID LOT.
5. THE CONTRACTOR SHALL COORDINATE WITH THE LOT OWNERS TO THE SOUTH PRIOR TO OFFSITE GRADING ACTIVITY.

---	-5414	---	EXISTING CONTOUR
---	-5415	---	EXISTING INDEX CONTOUR
---	-5414	---	PROPOSED CONTOUR
---	<b>-5415</b>	---	PROPOSED INDEX CONTOUR
	▲		SLOPE TIE
	×	4048.25	EXISTING SPOT ELEVATION
	↑		
	×	4048.25	PROPOSED SPOT ELEVATION
---		---	BOUNDARY
---		---	CENTERLINE
---		---	RIGHT-OF-WAY
---		---	PROPOSED DRAINAGE EASEMENT
=====		=====	PROPOSED STANDARD CURB AND GUTTER
=====		=====	EXISTING CURB AND GUTTER
=====		=====	PROPOSED SCREEN WALL (18" MAX RETAINAGE)
=====		=====	PROPOSED RETAINING WALL (HEIGHT VARIES-DESIGN BY OTHERS)
=====		=====	EXISTING SCREEN WALL

<p>ENGINEER'S SEAL</p>	<p>ESTATES AT GLENDALE UNIT 2 AND UNIT 3</p>		<p>DRAWN BY WCVJ</p>
	<p>GRADING AND DRAINAGE PLAN</p>		<p>DATE 3-31-16</p>
<p>4/29/16</p>	 <p><i>Rio Grande Engineering</i> 1606 CENTRAL AVENUE SE SUITE 201 ALBUQUERQUE, NM 87106 (505) 872-0999</p>		<p>SHEET # —</p>
<p>DAVID SOULE P.E. #14522</p>			<p>JOB # 21425</p>

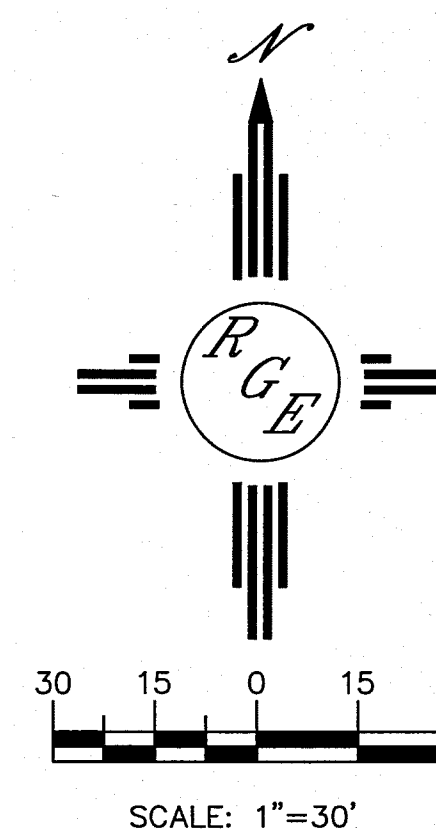


CONCRETE CHANNEL DETAIL

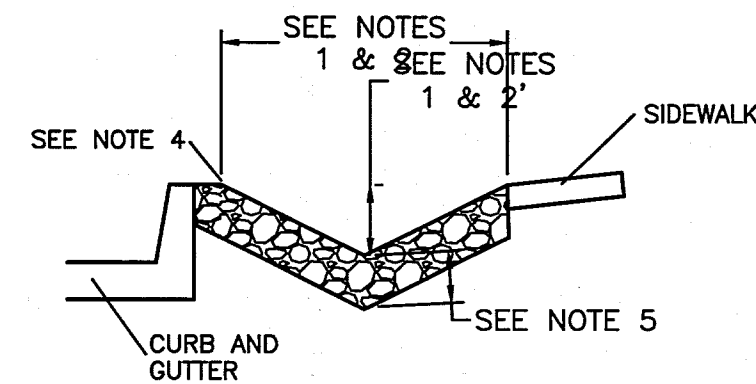
EMERGENCY OVERFLOW DETAIL  
NTS

SECTION A-A

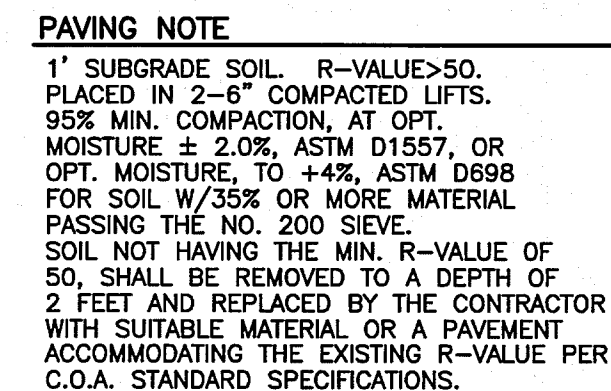
### Record Drawing







1. SWALE TO BE 6" DEEP WHEN THE DISTANCE BETWEEN BACK OF CURB AND THE SIDEWALK IS 5 FEET.
2. SWALE TO BE 1" DEEPER THAN THE DISTANCE IN FEET BETWEEN THE BACK OF CURB AND THE SIDEWALK FOR LANDSCAPE BUFFERS DIFFERENT THAN 5 FEET WIDE.
3. FOR WIDE LANDSCAPE BUFFERS, GREATER THAN 10 FEET, THE MAXIMUM DEPTH IS 10 INCHES.
4. GRADE OF SWALE TO BE 2 TO 2 INCHES BELOW TOP OF CURB AND TOP OF SIDEWALK GRADE.
5. SURFACE BETWEEN BACK OF CURB AND SIDEWALK TO BE COVERED WITH GRAVEL MULCH (MINIMUM %), COBBLES OR RIP-RAP. DO NOT FILL ENTIRE SWALE.
6. A CHECK DAM WILL BE REQUIRED FOR SWALES ON STEEPER LONGITUDINAL SLOPES AND LONGER SECTIONS. THE ENGINEER WILL DETERMINE THE LOCATION.
7. LANDSCAPE FABRIC IS RECOMMENDED, BUT NOT REQUIRED, BETWEEN THE DIE BACK OF CURB AND LANDSCAPE FABRIC IS TO BE USED IT IS TO BE PERMEABLE.
8. DETAIL IS TO BE BUILT FOR ALL NEW CONSTRUCTION. IN THE CASE WHERE THE SIDEWALK IS EXISTING AND THE LANDSCAPE BUFFER IS IMPROVED WITH LANDSCAPING AND/OR SOME FORM OF EROSION PROTECTION, THIS REQUIREMENT DOES NOT APPLY.



**KEYED NOTE:**

- (A) STANDARD C&G PER COA STD DWG #2415A *WITH TRANSISTOR to mountable*
- (B) 4' SIDEWALK TO BE BUILT W/THIS PROJECT  
PER COA STD DWG #2430
- (C) 4' SIDEWALK TO BE DEFERRED  
PER COA STD DWG #2430

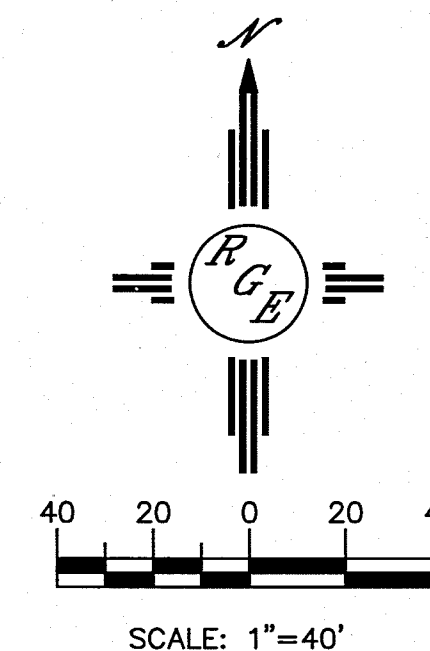
GENERAL NOTES:


1. ALL WALL FOUNDATIONS/TOE MUST BE OUTSIDE COA ROW.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ALL ROADWAY SIGNS UNTIL FINAL ACCEPTANCE.

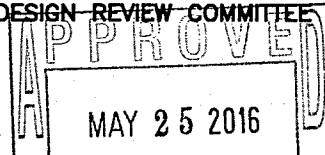
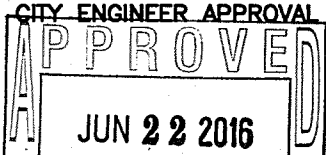
I DAVID SOULE, NMPE 14522, OF THE FIRM RIO GRANDE ENGINEERING, HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE INFRASTRUCTURE INSTALLED AS A PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS APPROVED BY THE CITY, COUNTY AND ABCWA ENGINEER AND THAT THE ORIGINAL DESIGN INTENT HAS BEEN MET, EXCEPT AS NOTED BY ME OR PERSONNEL UNDER MY DIRECTION AND SURVEY INFORMATION PROVIDED BY DAVID ACOSTA NMPS 21082

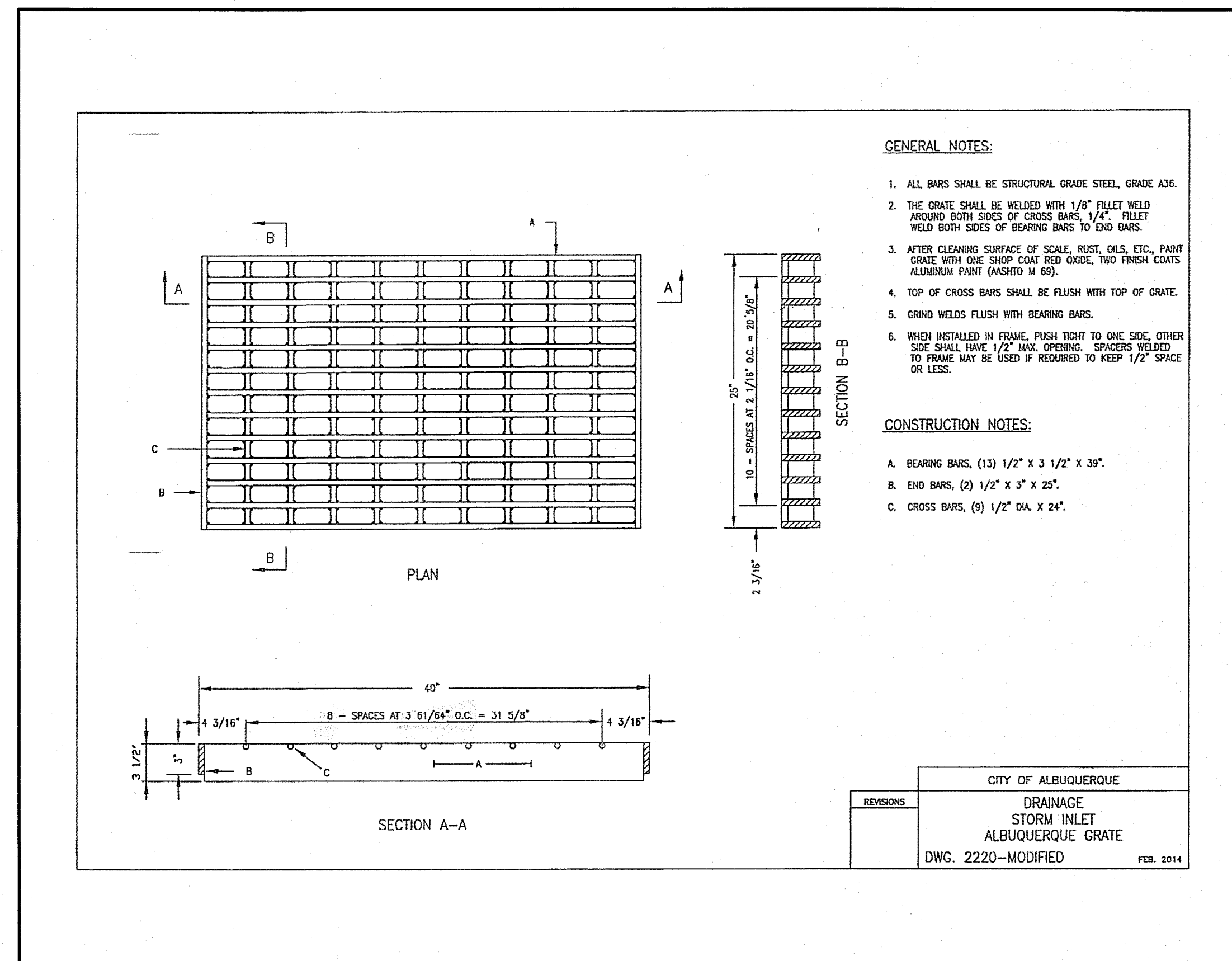


## Record Drawing



ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION			
<div></div>		FIELD NOTES		ACS CONTROL STATION N 15204154.945 E 1550483.349 NEW MEXICO STATE PLANE CENTRAL ZONE G-G= 0.999651137 DELTA-ALPHA= -00°10' 24.45" NAD 1983					
		NO.	BY						
			DATE						
DESIGNED BY: WCMJ DRAWN BY: WCMJ DRAWN NAME: 21425-LAYOUT-6-23-15 CHECKED BY: DS		REMARKS REVISIONS DESIGN							
								NO.	DATE
5/11/16									

CITY OF ALBUQUERQUE PUBLIC WORKS DIVISION ENGINEERING GROUP				
TITLE: <b><i>GLENDAL ESTATES PHASE II</i></b> <b><i>MASTER PAVING PLAN</i></b>				
DESIGN REVIEW COMMITTEE 	CITY ENGINEER APPROVAL 	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.
CITY PROJECT NO. <b><i>702784</i></b>		ZONE MAP NO. <b><i>B-19-Z</i></b>	SHEET <b><i>4</i></b> OF <b><i>9</i></b>	



FLOWLINE PAVING CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	CHORD DIRECTION
C1	22.49	25.00	51°32'43"	S25°56'39"W
C2	177.77	36.00	282°56'10"	N89°45'04"E
C3	22.42	25.00	51°23'24"	N25°31'27"E

#	ELEV.
7	5412.55
8	5412.80
9	5413.05

1. ALL BARS SHALL BE STRUCTURAL GRADE STEEL, GRADE A36.
2. THE GRADE SHALL BE WELDED WITH 1/8" FILLET WELD AROUND BOTH SIDES OF CROSS BARS, 1/4". FILLET WELD BOTH SIDES OF BEARING BARS TO END BARS.
3. AFTER CLEANING SURFACE OF SCALE, RUST, OILS, ETC., PAINT GRATE WITH ONE SHOT RED OXIDE, TWO FINISH COATS ALUMINUM PAINT (ASHITO M 69).
4. TOP OF CROSS BARS SHALL BE FLUSH WITH TOP OF GRADE.
5. GRIND WELDS FLUSH WITH BEARING BARS.
6. WHEN INSTALLED IN FRAME, PUSH TIGHT TO ONE SIDE, OTHER SIDE SHALL HAVE 1/2" MAX. OPENING. SPACERS WELDED TO FRAME MAY BE USED IF REQUIRED TO KEEP 1/2" SPAC. OR LESS.

A. BEARING BARS, (13)  $1/2"$  X  $3\ 1/2"$  X  $39"$   
B. END BARS, (2)  $1/2"$  X  $3"$  X  $25"$ .  
C. CROSS BARS, (9)  $1/2"$  DIA. X  $24"$ .

	CITY OF ALBUQUERQUE
S	DRAINAGE STORM INLET ALBUQUERQUE GRATE
	DWG. 2220-MODIFIED
	FEB. 201

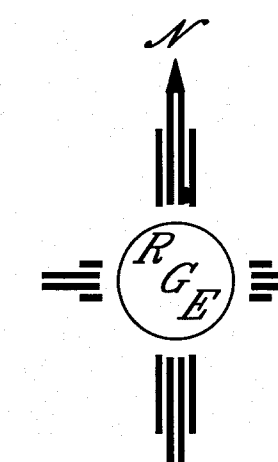
I DAVID SOULE, NMPE 14522 , OF THE FIRM RIO GRANDE ENGINEERING, HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE INFRASTRUCTURE INSTALLED AS A PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS APPROVED BY THE CITY, COUNTY AND ABCWA ENGINEER AND THAT THE ORIGINAL DESIGN INTENT HAS BEEN MET, EXCEPT AS NOTED BY ME OR PERSONNEL UNDER MY DIRECTION AND SURVEY INFORMATION PROVIDED BY DAVID ACOSTA NMPS 21082



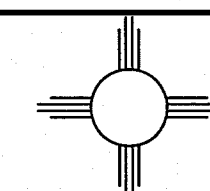
(A) STANDARD C&G PER COA STD DWG #2415A

(B) 4' SIDEWALK TO BE BUILT W/THIS PROJECT  
PER COA STD DWG #2430

(C) 4' SIDEWALK TO BE DEFERRED  
PER COA STD DWG #2430



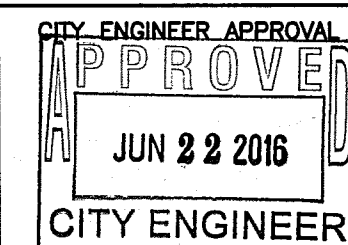
SCALE: HORIZ. 1"=50  
VERT. 1"= 5



*Rio Grande Engineering*  
1606 CENTRAL AVENUE SE  
SUITE 201  
ALBUQUERQUE, NM 87106  
(505) 872-0899

CITY OF ALBUQUERQUE  
PUBLIC WORKS DIVISION  
ENGINEERING GROUP

TITLE: **GLENDALE ESTATES PHASE II**  
NORTH STAR LANE PAVING IMPROVEMENTS PLAN AND PROFILE



## LATEST DESIGN UPDATE

CITY PROJECT NO.

ZONE MAP NO

SHEET	OF
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## Record Drawing



NOTICE TO CONTRACTORS

1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN BERNALILLO COUNTY ROW. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH BERNALILLO COUNTY INTERIM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986, INCLUDING UPDATE 9.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 280-1990, FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL PERTINENT EXISTING UTILITIES, AND/OR OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO ARTERIAL STREET USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.
8. CONTRACTOR SHALL DETERMINE LOCATION OF ANY UNDERGROUND FACILITY IN OR NEAR WORK AREAS, INCLUDING REQUESTS TO OWNERS/OPERATORS OF SAID FACILITIES PER SECTION 62-14-5 NMSA 1978.
9. CONTRACTOR SHALL PLAN ALL EXCAVATION TO MINIMIZE INTERFERENCE OR DAMAGE OF UNDERGROUND FACILITIES.
10. CONTRACTOR SHALL PROVIDE ADVANCE TELEPHONE NOTICE OF COMMENCEMENT, EXTENT AND DURATION OF ALL EXCAVATION WORK TO THE ONE-CALL NOTIFICATION SYSTEM, OR TO OWNERS/OPERATORS OF ANY EXISTING UNDERGROUND FACILITY IN OR NEAR THE EXCAVATION AREA THAT ARE NOT MEMBERS OF THE ONE-CALL NOTIFICATION CENTER; IN ORDER THAT OWNERS/OPERATORS MAY LOCATE AND MARK UNDERGROUND FACILITY PER SECTION 62-14-5 NMSA 1978 PRIOR TO ANY COMMENCEMENT OF WORK. CONTRACTOR SHALL REQUEST REAFFIRMATION OF LOCATION EVERY TEN (10) WORKING DAYS AFTER INITIAL REQUEST.
11. CONTRACTOR SHALL MAINTAIN EIGHTEEN (18) INCHES BETWEEN EXISTING UNDERGROUND FACILITIES THAT HAVE BEEN PREVIOUSLY IDENTIFIED AND MARKED BY THE OWNERS/OPERATORS OF SAID FACILITIES. CUTTING EDGE OR POINT OF ANY MECHANICAL EXCAVATING EQUIPMENT UTILIZED IN EXCAVATION AREA WILL BE USED IN A MANNER NECESSARY TO PREVENT DAMAGE TO EXISTING UNDERGROUND FACILITIES.
12. CONTRACTOR SHALL PROVIDE SUPPORT FOR EXISTING UNDERGROUND FACILITIES IN OR NEAR EXCAVATION AREA AS NECESSARY TO PREVENT DAMAGE TO SAID FACILITIES.
13. CONTRACTOR SHALL BACKFILL ALL EXCAVATIONS IN A MANNER AND WITH MATERIALS AS MAY BE NECESSARY TO PREVENT DAMAGE TO AND PROVIDE RELIABLE SUPPORT DURING AND FOLLOWING BACK FILLING ACTIVITIES FOR PREEXISTING UNDERGROUND FACILITIES IN OR NEAR EXCAVATION AREA.
14. CONTRACTOR SHALL IMMEDIATELY NOTIFY BY TELEPHONE THE OWNER/OPERATOR OF ANY UNDERGROUND FACILITY WHICH MAY HAVE BEEN DAMAGED OR DISLODGED DURING EXCAVATION WORK.
15. CONTRACTOR SHALL NOT MOVE OR OBLITERATE MARKINGS MADE PURSUANT TO CHAPTER 62, ARTICLE 14 NMSA 1978, OR FABRICATE MARKINGS IN A UNMARKED LOCATION FOR THE PURPOSE OF CONCEALING OR AVOIDING LIABILITY FOR VIOLATION OF OR NONCOMPLIANCE WITH THE PROVISIONS OF CHAPTER 62, ARTICLE 11 NMSA 1978.
16. ELECTRONIC MARKER SPHERES (EMS) SHALL BE INSTALLED ON WATER LINE AND SANITARY SEWER LINE FACILITIES PER SECTION 170 OF THE BERNALILLO COUNTY STANDARD SPECIFICATIONS 1986 EDITION AS REVISED THROUGH UPDATE #9.
17. THE CONTRACTOR SHALL COORDINATE WITH THE WATER UTILITY AUTHORITY SEVEN (7) DAYS IN ADVANCE OF PERFORMING WORK THAT WILL AFFECT THE PUBLIC WATER OR SANITARY SEWER INFRASTRUCTURE. WORK REQUIRING SHUTOFF OF FACILITIES DESIGNATED AS MASTER PLAN FACILITIES MUST BE COORDINATED WITH THE WATER UTILITY 14 DAYS IN ADVANCE OF PERFORMING SUCH WORK. ONLY WATER UTILITY CREWS ARE AUTHORIZED TO OPERATE PUBLIC VALVES. SHUTOFF REQUESTS MUST BE MADE ONLINE AT [http://abcwua.org/water\\_shut\\_off\\_and\\_turn\\_on\\_procedures](http://abcwua.org/water_shut_off_and_turn_on_procedures)
18. ALL EXCAVATION, TRENCHING, AND SHORING ACTIVITIES MUST BE CARRIED-OUT IN ACCORDANCE WITH OSHA 29 CFR 1926.6150 SUBPART P.
19. ALL IMPACTED STRIPING SHALL BE REPLACED BY CONTRACTOR.
20. MANHOLE STEPS SHALL NOT BE INSTALLED IN SANITARY SEWER MANHOLES.
21. ALL WATER METER COVERS AND LIDS SHALL BE PER COA STD DWG #2368, 2366.
22. ALL MANHOLES AND VALVES SHALL HAVE GPS INFORMATION RECORDED AS PART OF AS BUILT PLAN SET.
23. CONTRACTOR IS RESPONSIBLE AT ITS OWN COST FOR ANY DAMAGE TO EXISTING UTILITIES.

THE FOLLOWING TABLES WERE CREATED USING EBAA IRON INC. SOFTWARE FOR RESTRAINING JOINTS WITH THESE CRITERIA:

DEPTH OF BURY: 3.0' MINIMUM  
SAFETY FACTOR: 1.5 TO 1  
PIPE MATERIAL: PVC  
SOIL TYPE: GM/SM-SILTY GRAVEL/SILTY SAND, GRAVEL-SAND MIXTURES  
TEST PRESSURE: 150 PSI  
TRENCH TYPE 4: PIPE BEDDED IN SAND, GRAVEL OR CRUSHED STONE TO 1/8 PIPE DIAMETER, 4" MINIMUM; BACKFILL COMPACTED TO TOP OF PIPE.

THESE LENGTHS WILL BE AFFECTED IF THE TYPE OF MATERIAL, GREATER DEPTH OF BURY, ETC. CHANGES. THESE MUST BE RECALCULATED BY THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.

RESTRAINED JOINT LENGTHS FOR TEES*					
SIZE	LENGTH ALONG RUN**				
	5'	4'	3'	2'	1'
12x12x12	75	80	86	91	97
12x12x10	54	61	67	74	80
12x12x8	32	40	48	56	64
12x12x6	2	12	23	34	45
12x12x4	1	1	1	8	24
10x10x10	60	65	74	76	81
10x10x8	39	45	52	59	66
10x10x6	11	20	29	38	46
10x10x4	1	1	1	14	26
8x8x8	46	51	57	62	67
8x8x6	21	28	34	41	48
8x8x4	1	1	9	19	29
6x6x6	29	34	40	45	50
8x8x4	1	9	16	24	32

\*RESTRAINTS ONLY PLACED ON THE BRANCH  
\*\*LENGTH ALONG RUN REFERS TO THE LENGTH OF PIPE ON EITHER SIDE OF THE TEE BEFORE THE NEXT JOINT.

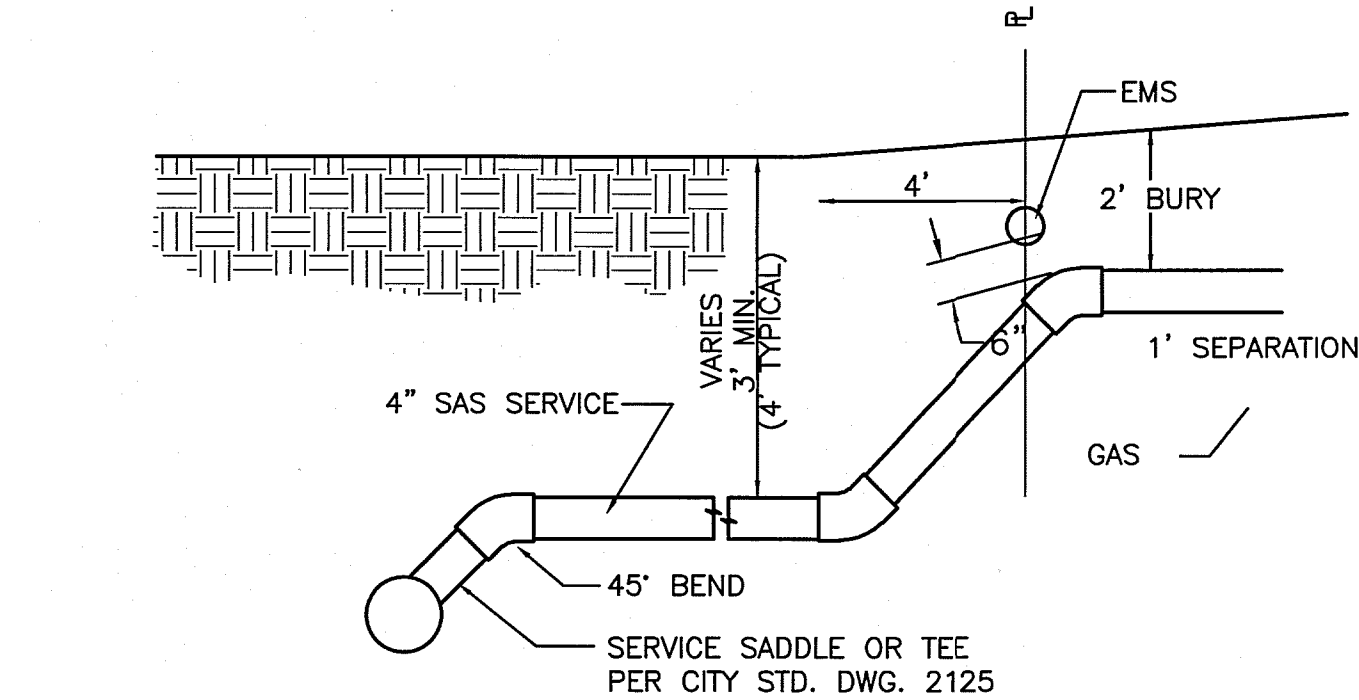
RESTRAINED JOINT LENGTHS FOR HORIZONTAL BENDS, VALVES, AND DEAD ENDS (EACH SIDE)					
SIZE	HORIZONTAL BENDS				VALVES DEAD END
	90°	45°	22-1/2°	11-1/4°	
12	37	15	8	4	102
10	31	13	7	4	87
8	27	11	6	3	72
6	20	9	4	2	55
4	15	6	3	2	39

THE FOLLOWING TABLES WERE CREATED USING EBAA IRON INC. SOFTWARE FOR RESTRAINING JOINTS WITH THESE CRITERIA:

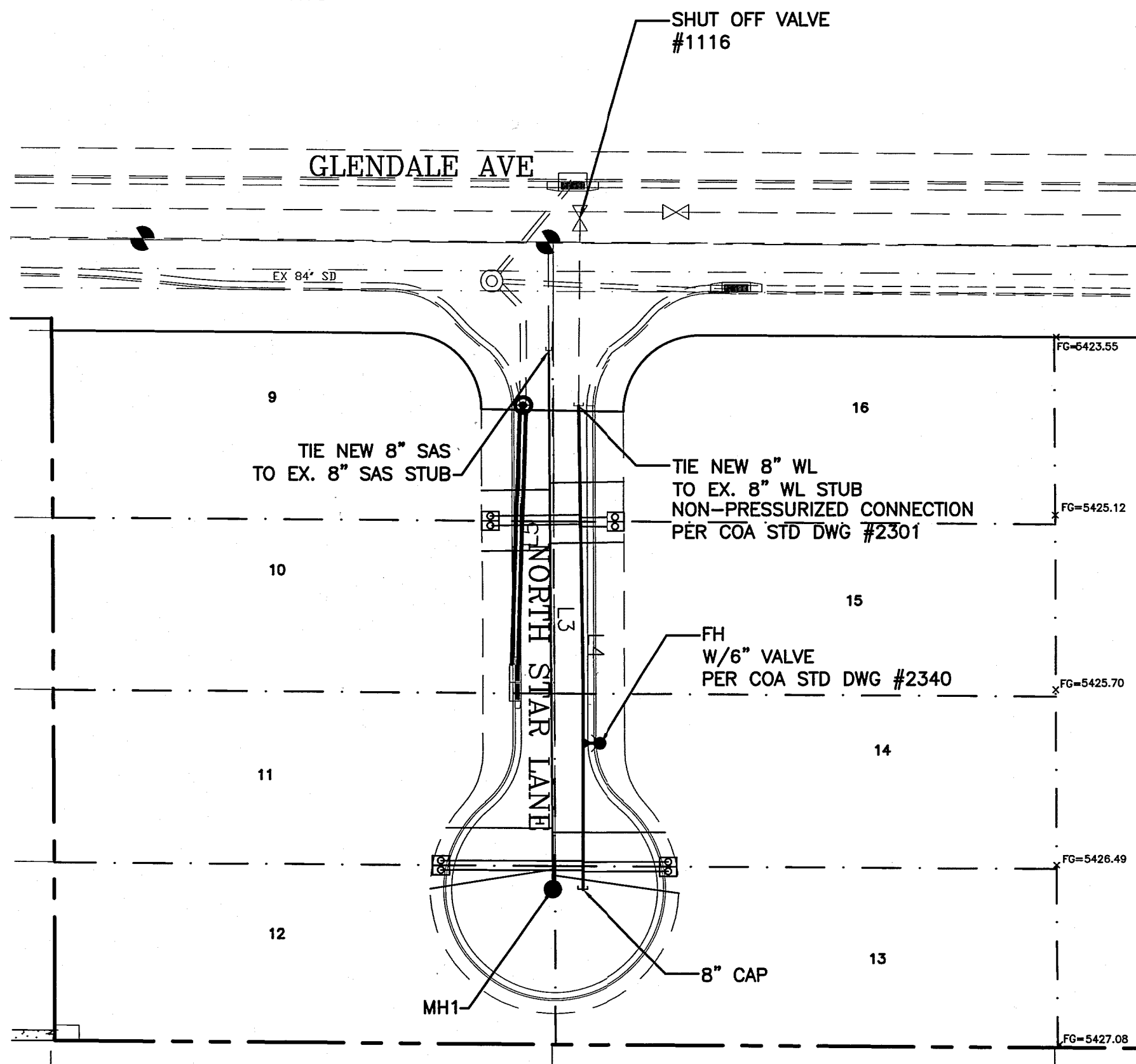
DEPTH OF BURY: 3.0' MINIMUM  
SAFETY FACTOR: 1.5 TO 1  
PIPE MATERIAL: PVC  
SOIL TYPE: GM/SM-SILTY GRAVEL/SILTY SAND, GRAVEL-SAND MIXTURES  
TEST PRESSURE: 150 PSI  
TRENCH TYPE 4: PIPE BEDDED IN SAND, GRAVEL OR CRUSHED STONE TO 1/8 PIPE DIAMETER, 4" MINIMUM; BACKFILL COMPACTED TO TOP OF PIPE.

THESE LENGTHS WILL BE AFFECTED IF THE TYPE OF MATERIAL, GREATER DEPTH OF BURY, ETC. CHANGES. THESE MUST BE RECALCULATED BY THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.

RESTRAINED JOINT LENGTHS FOR VERTICAL OFFSETS/BENDS (EACH SIDE)					
SIZE	HORIZONTAL BENDS				
	90°	45°	22-1/2°	11-1/4°	
12 UPPER	DON'T USE	42	21	11	
12 LOWER	DON'T USE	10	5	3	
10 UPPER	DON'T USE	36	14	9	
10 LOWER	DON'T USE	9	8	2	
8 UPPER	DON'T USE	30	15	8	
8 LOWER	DON'T USE	7	4	2	
6 UPPER	DON'T USE	23	11	6	
6 LOWER	DON'T USE	6	3	2	
4 UPPER	DON'T USE	17	8	4	
4 LOWER	DON'T USE	4	2	1	



TYP. SANITARY SYSTEM SERVICE CONNECTION

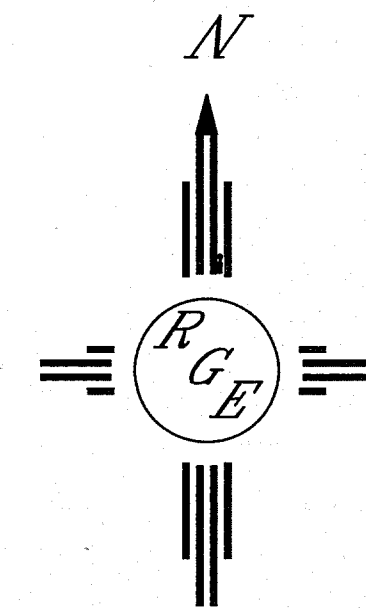


LEGEND

- EX. 12" SD — EXISTING STORM SEWER LINE
- EXISTING SAS MANHOLE
- EX. 8" SAS — EXISTING SAS
- ⊗ EXISTING VALVE W/BOX
- EX. 6" WL — EXISTING WATER LINE
- PROPOSED SD
- PROPOSED METER
- PROPOSED FIRE HYDRANT
- EXISTING EDGE OF PAVEMENT
- PROPOSED CURB & GUTTER
- BOUNDARY LINE
- CENTERLINE
- RIGHT-OF-WAY
- LOT LINES
- EASEMENT
- ☼ STREET LIGHTS

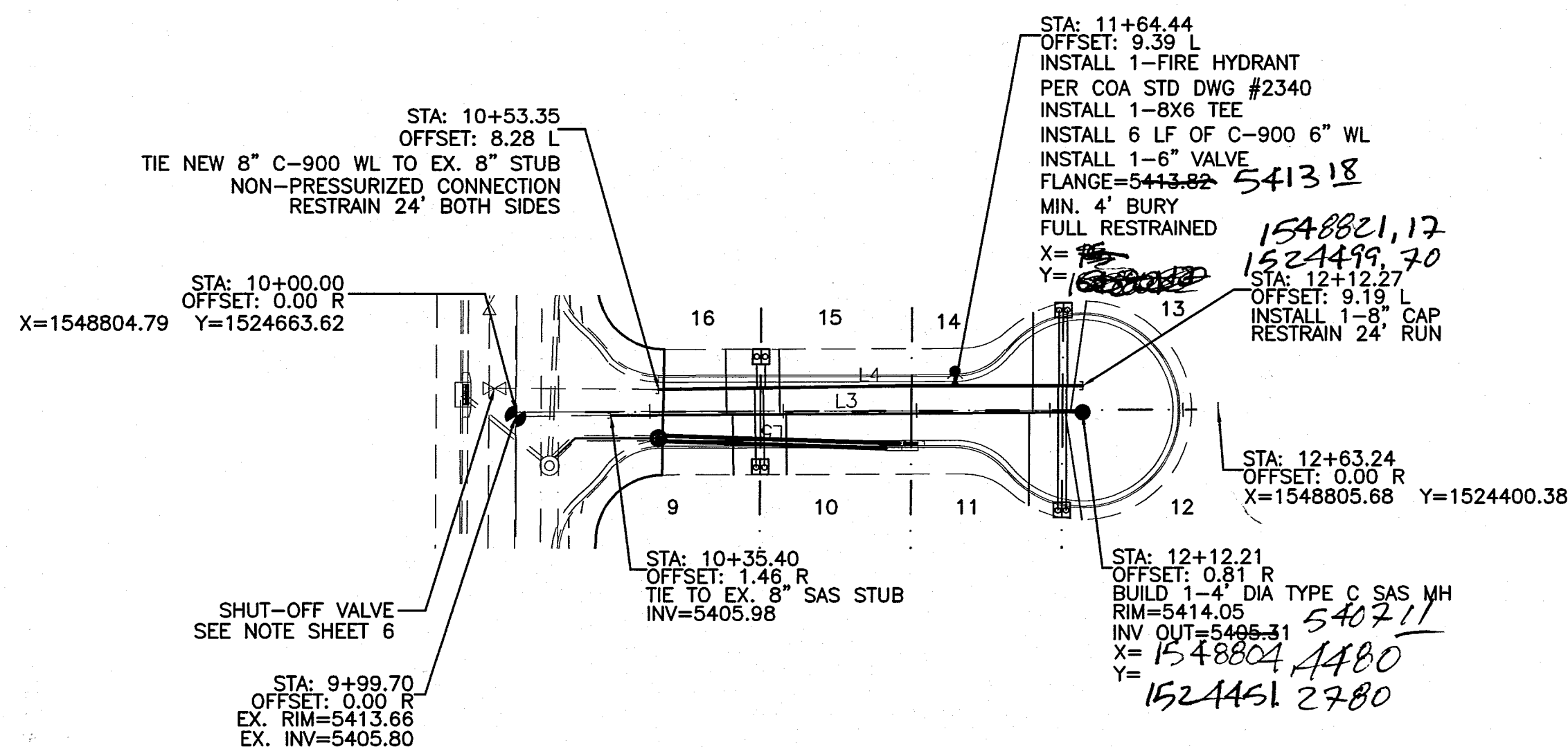
CONTRACTOR SHALL REMOVE AND REPLACE PAVING PER COA STD DWG #2465 (COLLECTOR). CONTRACTOR SHALL REMOVE AND REPLACE STD C&G PER COA STD DWG 2415A. CONTRACTOR SHALL REMOVE AND REPLACE SW PER COA STD DWG 2430.—REMOVE TO NEAREST JOINT, MATCH FL ELEVATIONS

I DAVID SOULE, NMPE 14522, OF THE FIRM RIO GRANDE ENGINEERING, HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE INFRASTRUCTURE INSTALLED AS A PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS APPROVED BY THE CITY, COUNTY AND ABCWUA ENGINEER AND THAT THE ORIGINAL DESIGN INTENT HAS BEEN MET, EXCEPT AS NOTED BY ME OR PERSONNEL UNDER MY DIRECTION AND SURVEY INFORMATION PROVIDED BY DAVID ACOSTA NMPS 21082.

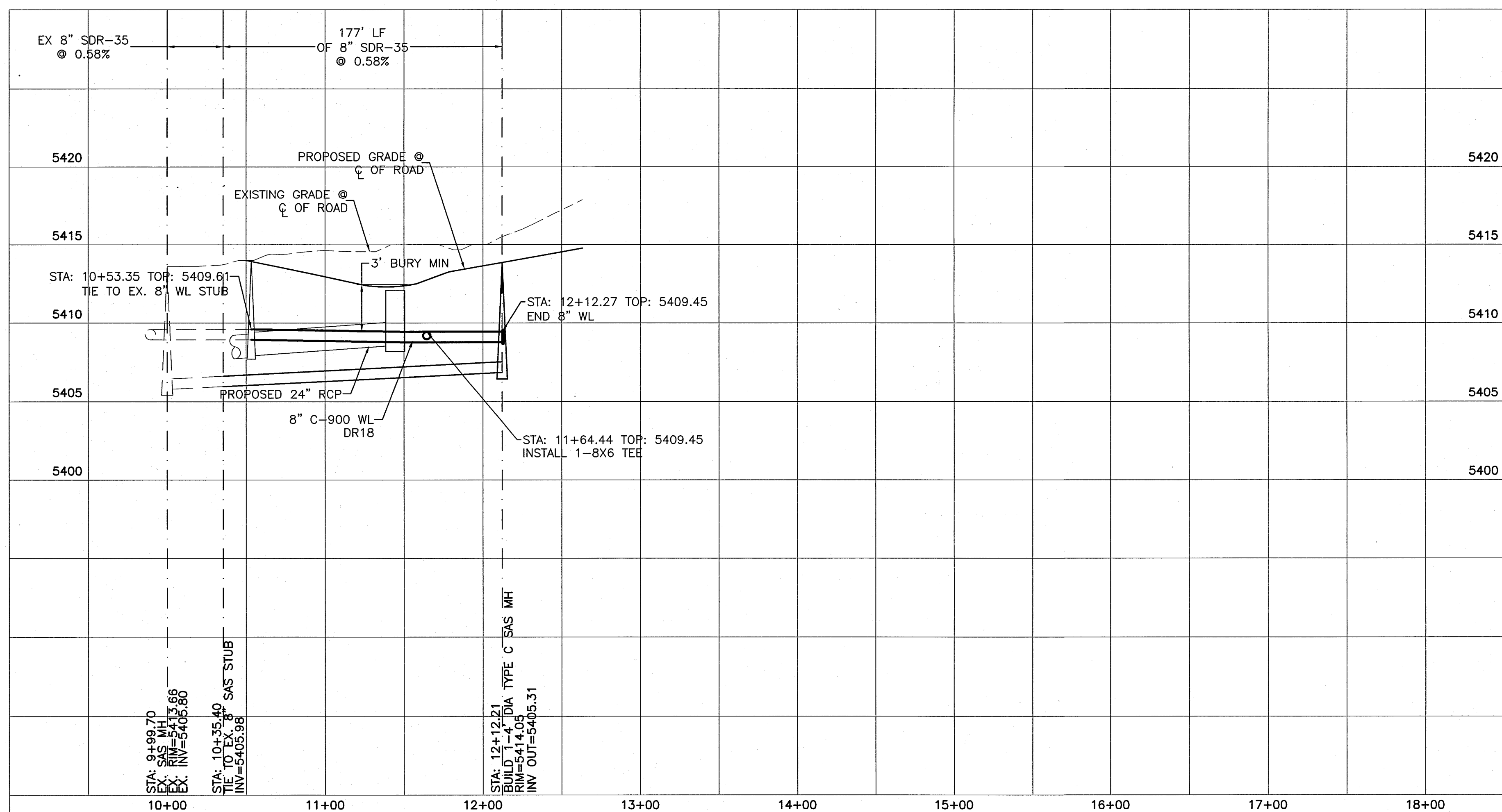


ABCWUA PUBLIC WORKS DEPARTMENT ENGINEERING GROUP	
TITLE: <b>GLENDALE ESTATES PHASE II MASTER UTILITY PLAN</b>	
DESIGN REVIEW COMMITTEE <b>APPROVED</b> MAY 25 2016 DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL <b>APPROVED</b> JUN 22 2016 CITY ENGINEER
DESIGNED BY: WCNJ DRAWN BY: WCNJ DRAWN NAME: 21425-LAYOUT-6-23-15 CHECKED BY: JS	DATE: 3-31-16 DATE: 3-31-16 JOB NO.: 21425 DATE: 3-31-16
CITY PROJECT NO. <b>702784</b>	ZONE MAP NO. <b>B-19-Z</b>
SHEET <b>6</b> OF <b>9</b>	

**CAUTION:**  
EXISTING UTILITIES ARE SHOWN FOR REFERENCE ONLY.  
IT SHALL BE THE SOLE RESPONSIBILITY  
OF THE CONTRACTOR TO CONDUCT ALL  
NECESSARY FIELD INVESTIGATIONS PRIOR  
TO ANY EXCAVATION TO DETERMINE THE  
ACTUAL LOCATION OF UTILITIES & OTHER  
IMPROVEMENTS.



**NORTH STAR LANE**  
**STA: 10+00.00 TO 12+63.24**  
**\*-ALL STATIONING BASED UPON PROPOSED CENTERLINE**



**WL TABLE**

LOT #	STATION	SERVICE
9&10	10+91.27	DOUBLE
11&12	12+04.31	DOUBLE
13&14	12+05.11	DOUBLE
15&16	10+91.74	DOUBLE

**\* @ END OF 8" MAIN LINE**

**SAS TABLE**

LOT #	STATION	LF	INV.*	ELEV. @ PL
9	10+81.07	23	5406.21	5407.31
10	11+01.07	23	5406.32	5407.42
11	11+92.15	35	5406.77	5408.14
12	12+05.82	41	5406.83	5408.32
13	12+07.68	43	5406.84	5408.37
14	11+93.57	35	5406.77	5408.14
15	10+98.77	23	5406.30	5407.43
16	10+78.77	23	5406.20	5407.33

**SAS LINE TABLE**

LINE	LENGTH	BEARING
L3	176.81	S00°24'25"E

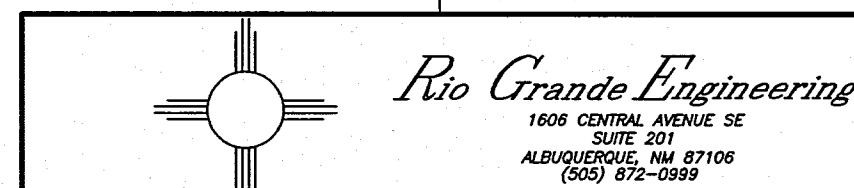
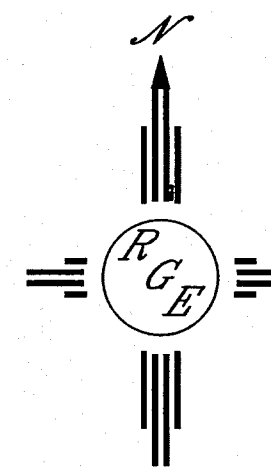
**WL LINE TABLE**

LINE	LENGTH	BEARING
L4	158.93	S00°31'28"E

I, DAVID SOULE, NMPE 14522, OF THE FIRM RIO GRANDE ENGINEERING, HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE INFRASTRUCTURE INSTALLED AS A PART OF THIS PROJECT HAS BEEN INSPECTED BY ME OR A QUALIFIED PERSON UNDER MY DIRECT SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS APPROVED BY THE CITY, COUNTY AND ABCWUA ENGINEER AND THAT THE ORIGINAL DESIGN INTENT HAS BEEN MET, EXCEPT AS NOTED BY ME OR PERSONNEL UNDER MY DIRECTION AND SURVEY INFORMATION PROVIDED BY DAVID ACOSTA NMPS 21082



- NOTE:**
1. SEE MASTER UTILITY PLAN FOR SANITARY SEWER SERVICE CONNECTION DETAILS.
  2. ALL FIRE HYDRANTS ARE TO BE BUILT PER C.O.A. STD DWG #2340 FULLY RESTRAINED
  3. ALL EXISTING UTILITY CONNECTION LOCATIONS AND INVERTS MUST BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
  4. WATER VALVES SHALL BE PER COA STD DWG #2326, 2328, 2461.
  5. ALL VALVE BOXES SHALL BE POLYMER COATED 12" CMP.
  6. ALL WATER SERVICES SHALL BE PER COA STD DWG #2361, 2362, 2366, 2368.
  7. ALL JOINTS BETWEEN VERTICAL BENDS SHALL BE RESTRAINED.

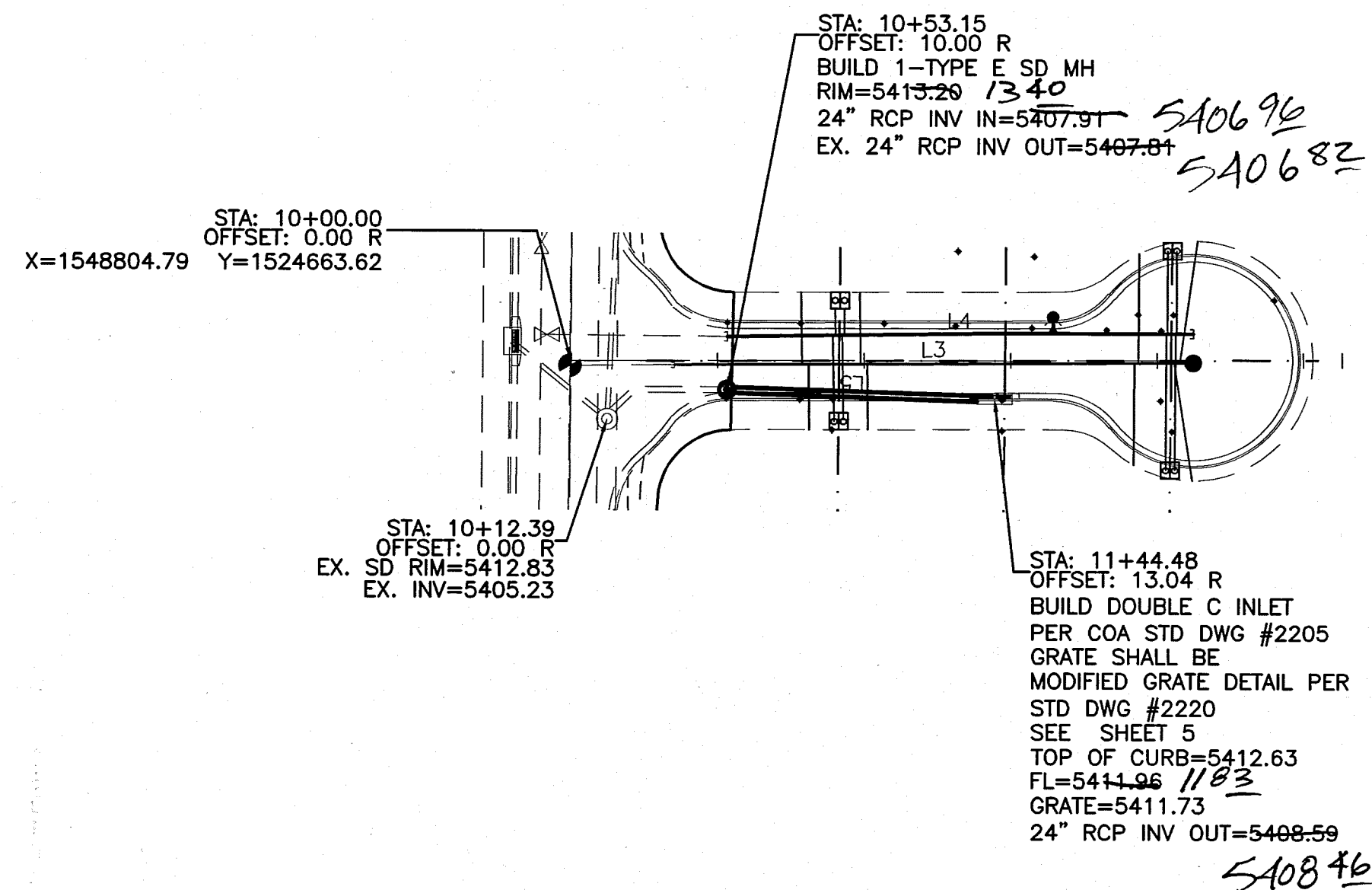


ABCWUA PUBLIC WORKS DIVISION ENGINEERING GROUP	
TITLE: <b>GLENDAL ESTATES PHASE II</b> <b>NORTH STAR LANE UTILITY IMPROVEMENTS PLAN AND PROFILE</b>	
DESIGN REVIEW COMMITTEE <b>APPROVED</b> MAY 25 2016 DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL <b>APPROVED</b> JUN 22 2016 CITY ENGINEER
CITY PROJECT NO. 702784	ZONE MAP NO. B-19-Z
SHEET 7	OF 9

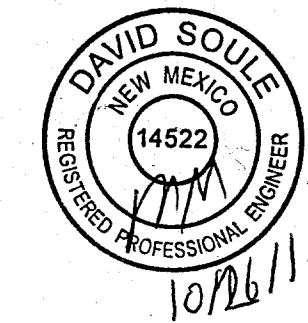


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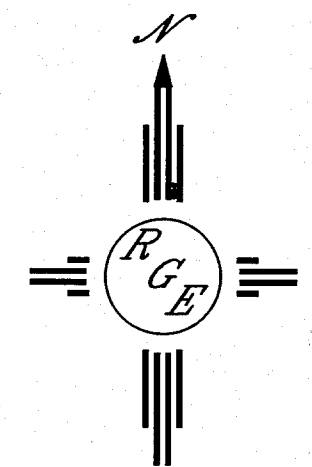
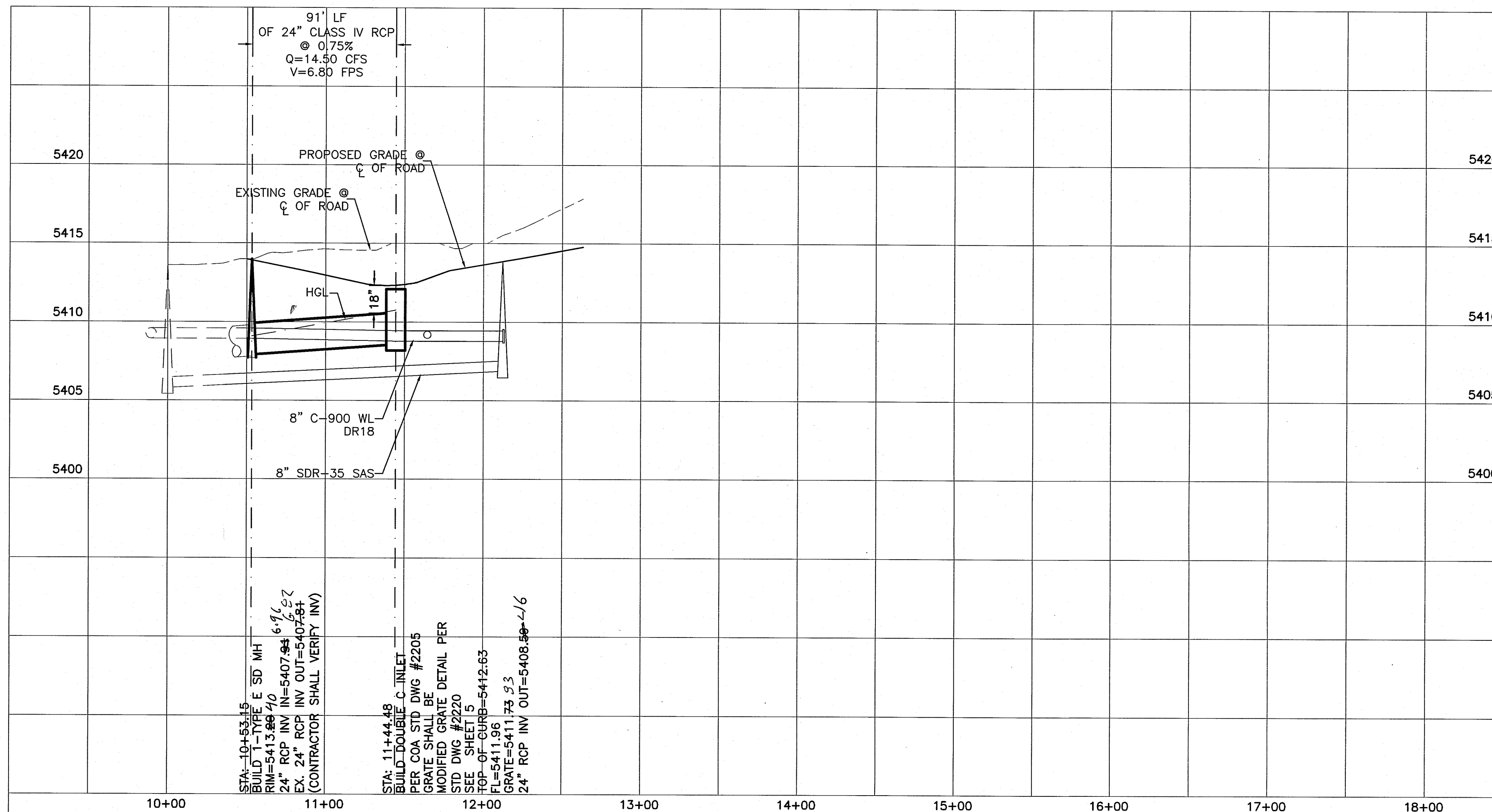
\* ALL EX. AND PROPOSED SD LATERALS TO MAIN LINE IN GLENDALE  
SHALL BE PRIVATE



I DAVID SOULE, NMPE 14522, OF THE FIRM RIO GRANDE ENGINEERING, HEREBY CERTIFY THAT  
TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE INFRASTRUCTURE INSTALLED AS A PART OF  
THIS PROJECT HAS BEEN INSPECTED BY ME OR A QUALIFIED PERSON UNDER MY DIRECT  
SUPERVISION AND HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND  
SPECIFICATIONS APPROVED BY THE CITY, COUNTY AND ABCWUA ENGINEER AND THAT THE  
ORIGINAL DESIGN INTENT HAS BEEN MET, EXCEPT AS NOTED BY ME OR PERSONNEL UNDER MY  
DIRECTION AND SURVEY INFORMATION PROVIDED BY DAVID ACOSTA, NMPS 21082.



STA: 10+00.00 TO 12+63.24  
\*-ALL STATIONING BASED UPON PROPOSED CENTERLINE



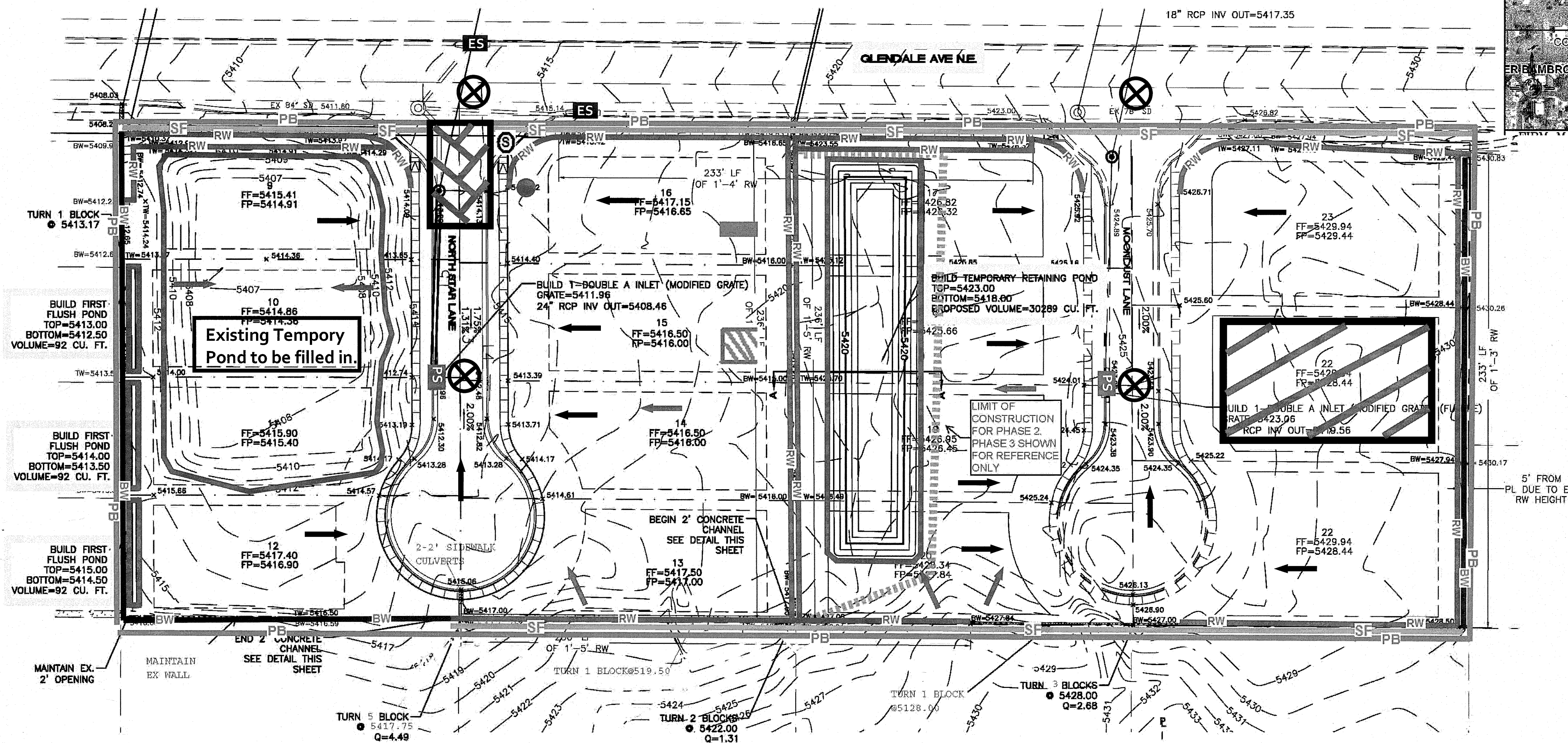
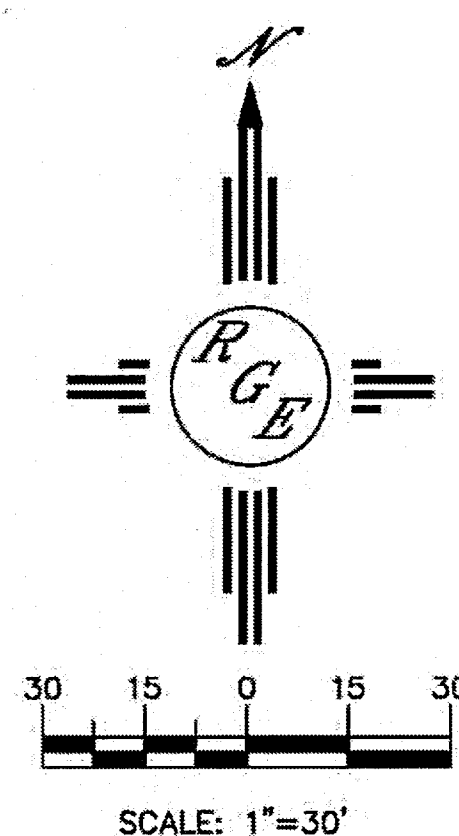
SCALE: HORIZ. 1"=50'  
VERT. 1"= 5'

Record Drawing

CITY OF ALBUQUERQUE PUBLIC WORKS DIVISION ENGINEERING GROUP	
TITLE: <b>GLENDALE ESTATES PHASE II</b> NORTH STAR LANE STORM DRAIN IMPROVEMENTS PLAN AND PROFILE	
DESIGN REVIEW COMMITTEE APPROVED MAY 25 2016	CITY ENGINEER APPROVAL APPROVED JUN 22 2016 CITY ENGINEER
CITY PROJECT NO. 702784	ZONE MAP NO. B-19-Z
SHEET 8 OF 9	



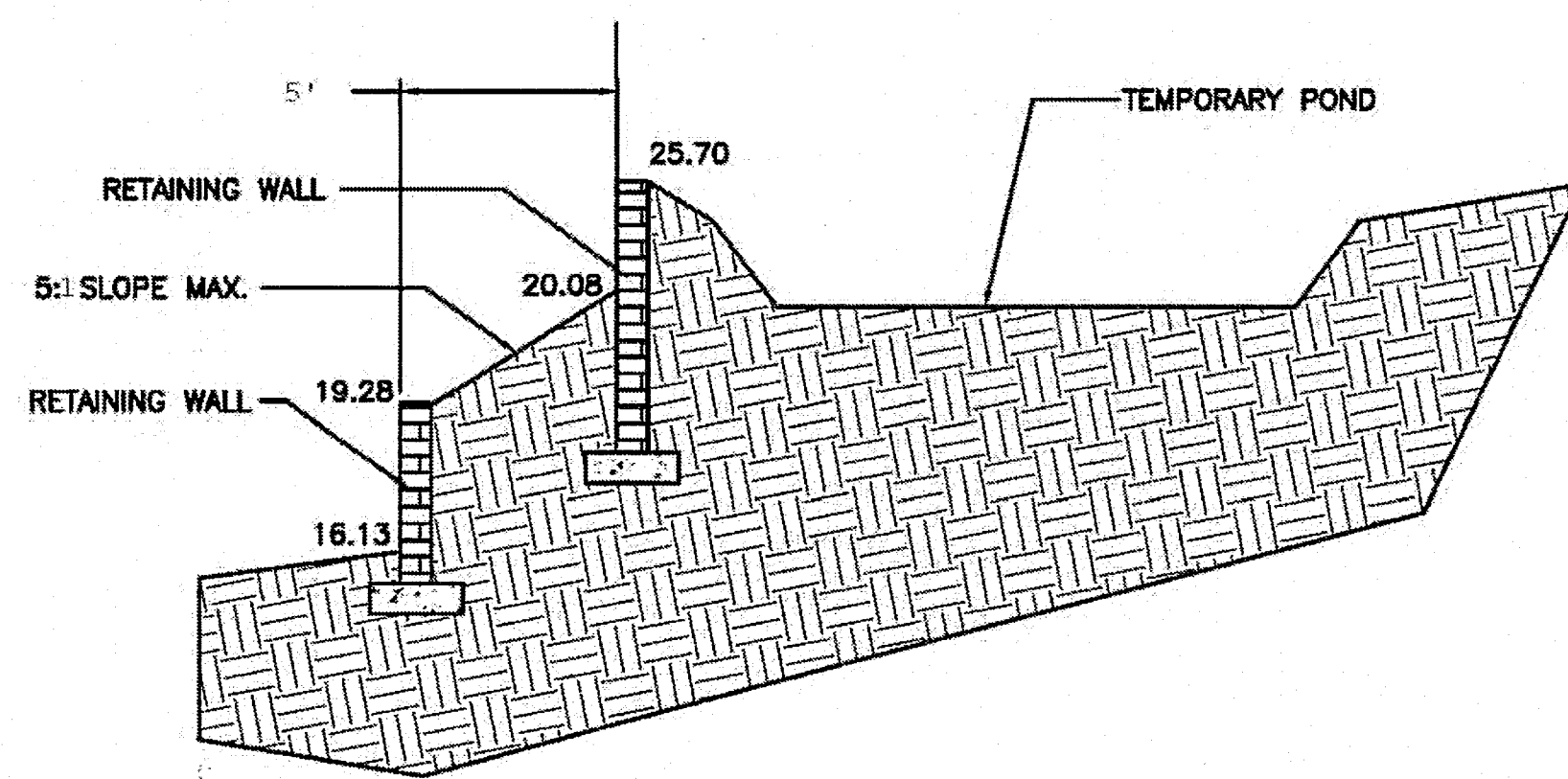
# Engineer Stamp



## Legend

### Erosion Sediment Control Plan

- PB — Project Perimeter & Disturbed Area
- SF — Silt Fence
- BW — Block Wall
- RW — Retaining Wall
- Pre Flow
- Flow
- Retention Pond
- X Outfall
- Posting Sign
- Staging Area
- Stabilized Construction Entrance
- Trash Receptacle
- Chemical Toilet
- Concrete Washout
- PS — Proposed Storm Inlet Protection
- ES — Existing Storm Inlet Protection



**Note:**

- When connecting to the drop inlet on Glendale Ave NE. have inlet protection in place.
- When doing work in the City ROW (sidewalk, storm drain, drive pads) avoid dirt from getting into the street. If dirt is present in the street, the street should be swept every few days or the same day if rain is imminent.

Record Drawing

## Estates at Glendale Unit 2

Receiving Waters and Critical Habitat: Rio Grande is located 5.3 miles to the West.

Impairments: E. coli, Dissolved Oxygen, PCBs in Fish Tissue, Water Temperature

Grade: Before and After 1.31% to 2%