

BE 10 TOWNHOMES

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LEGEND

	INDICATES EX. ASPHALT PAVEMENT
	INDICATES EX. CONCRETE
	INDICATES BOUNDARY LINE
	INDICATES CENTERLINE
	INDICATES RIGHT-OF-WAY LINE
	INDICATES EX. CMU WALL
	INDICATES EX. WATER LINE
	INDICATES EX. SEWER LINE
	INDICATES NEW ASPHALT PAVEMENT
	INDICATES NEW CONCRETE
	INDICATES NEW CMU WALL
	INDICATES EX. CONTOURS ELEVATION
	INDICATES NEW SANITARY SEWER LINE
	NEW SEWER STUB
	NEW SEWER MANHOLE
	NEW 4" PVC SEWER SERVICE
	INDICATES NEW WATER LINE
	NEW SINGLE WATER SERVICE
	FIRE LINE W/ END PLUG AND THRUST BLOCK
	NEW WATER VALVE
	NEW FIRE HYDRANT
	NEW TEMPORARY BLOWOFF VALVE
	INDICATES LOT NUMBERS
	NEW YUMA COUNTY STD. DETAIL
	NEW YUMA COUNTY STD. DETAIL
	EXISTING MONUMENT (TYPE AS SHOWN)
	INDICATES BRASS CAP
	INDICATES YUMA COUNTY RECORDERS
	INDICATES EXISTING POWER POLE
	INDICATES CALCULATED DATA
	INDICATES MEASURED DATA
	INDICATES EXISTING ELECTRICAL BOX
	INDICATES EXISTING GAS PADDLE
	INDICATES EXISTING MANHOLE
	INDICATES EXISTING FIRE HYDRANT
	INDICATES EXISTING WATER METER
	INDICATES EXISTING WATER VALVE
	INDICATES EX. CURB ELEVATION
	INDICATES EX. SIDEWALK ELEVATION
	INDICATES EX. ASPHALT ELEVATION
	INDICATES EX. NATURAL SOIL ELEVATION
	INDICATES NEW ASPHALT ELEVATION
	INDICATES NEW CURB ELEVATION
	INDICATES NEW GUTTER ELEVATION

GENERAL CONSTRUCTION NOTES:

- THE LOCATION OF UTILITIES IS APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. UTILITIES SHOWN HERE ARE FOR THE PURPOSE OF ASSISTING THE CONTRACTOR IN LOCATING SAID UTILITIES. THE CONTRACTOR IN ACCORDANCE WITH ARIZONA STATUTES SHALL CONTACT THE ARIZONA BLUE STAKE CENTER (1-800-782-5348) AT LEAST 48 HOURS MIN. PRIOR TO THE BEGINNING OF CONSTRUCTION AND OBTAIN ON-SITE UTILITIES LOCATIONS. CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DAMAGED TO A UTILITY SHALL BE REPAIRED AT THE CONTRACTOR EXPENSE.
- ALL CITY REQUIRED COMPACTION AND LABORATORY TESTS SHALL BE FURNISHED BY THE CONTRACTOR TO THE CITY PRIOR TO ACCEPTANCE OF THE PROJECT.
- THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR TWO YEARS AFTER THE FINAL ACCEPTANCE. ANY DEFECTIVE MATERIAL OR WORKMANSHIP SHALL BE REPLACED AND/OR REPAIRED PRIOR TO FINAL ACCEPTANCE.
- ALL ROAD SURFACES, EASEMENTS OR RIGHT OF WAYS DISTURBED BY CONSTRUCTION OF ANY PART OF THIS IMPROVEMENTS ARE TO BE RESTORED COMPLETELY BY THE CONTRACTOR TO THE BEFORE CONSTRUCTION CONDITION OR BETTER.
- DURING CONSTRUCTION, THE DEVELOPER/OWNER IS SOLELY RESPONSIBLE FOR INSURING THE PROPER FUNCTIONING OF THE EROSION AND SEDIMENT CONTROL MEASURES. THE DEVELOPER/OWNER SHALL TAKE WHATEVER MEASURES ARE REQUIRED TO INSURE THAT NO SEDIMENT LEAVES THE SITE.
- REFER TO SHEETS 2 OF 2 OF FINAL PLAT FOR ALL CORRECT DIMENSIONS.
- SEE SUBDIVISION PLAT FOR ALL BOUNDARY INFORMATION AND DIMENSIONS; DO NOT SCALE.
- ALL MATERIALS AND CONSTRUCTION HEREON SHALL CONFORM TO CITY OF SAN LUIS STANDARDS (CITY OF YUMA STANDARD DETAILS, MAG SPECIFICATIONS, CITY OF SAN LUIS SUPPLEMENT), AS ADOPTED BY THE CITY OF SAN LUIS. STANDARD SPECIFICATIONS AND CONSTRUCTION STANDARDS UNLESS OTHERWISE SHOWN ON THESE PLANS.
- THE ENGINEER MAKES NO REPRESENTATION OR GUARANTEE REGARDING EARTHWORK QUANTITIES OR THAT THE EARTHWORK FOR THIS PROJECT WILL BALANCE DUE TO VARIOUS FIELD CONDITIONS, CHANGING SOIL TYPES, ALLOWABLE CONSTRUCTION TOLERANCES AND CONSTRUCTION METHODS THAT ARE BEYOND THE CONTROL OF THE ENGINEER.
- NO STREET, WATER, SEWER AND IMPROVEMENTS TO BE ACCEPTED BY THE CITY OF SAN LUIS, FOR MAINTENANCE UNTIL "AS-BUILT", CERTIFIED, REPRODUCIBLE PLANS ARE FILED WITH AND ACCEPTED BY THE CITY OF SAN LUIS PUBLIC WORKS DEPARTMENT.
- CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH LOCAL, LOCAL, STATE, AND FEDERAL SWPPP REQUIREMENTS AND BMPs.

OWNER:

COMITE DE BIENESTAR INC. AZ CORP.
963 E. 18TH STREET
PO BOX 7170
SAN LUIS, AZ. 85349

BENCHMARK:

TOP OF B.C. IN CONCRETE LOCATED
AT THE INTERSECTION OF 19TH
AVENUE AND COUNTY 24TH STREET
ELEVATION: 160.52 FEET

BASIS OF BEARING

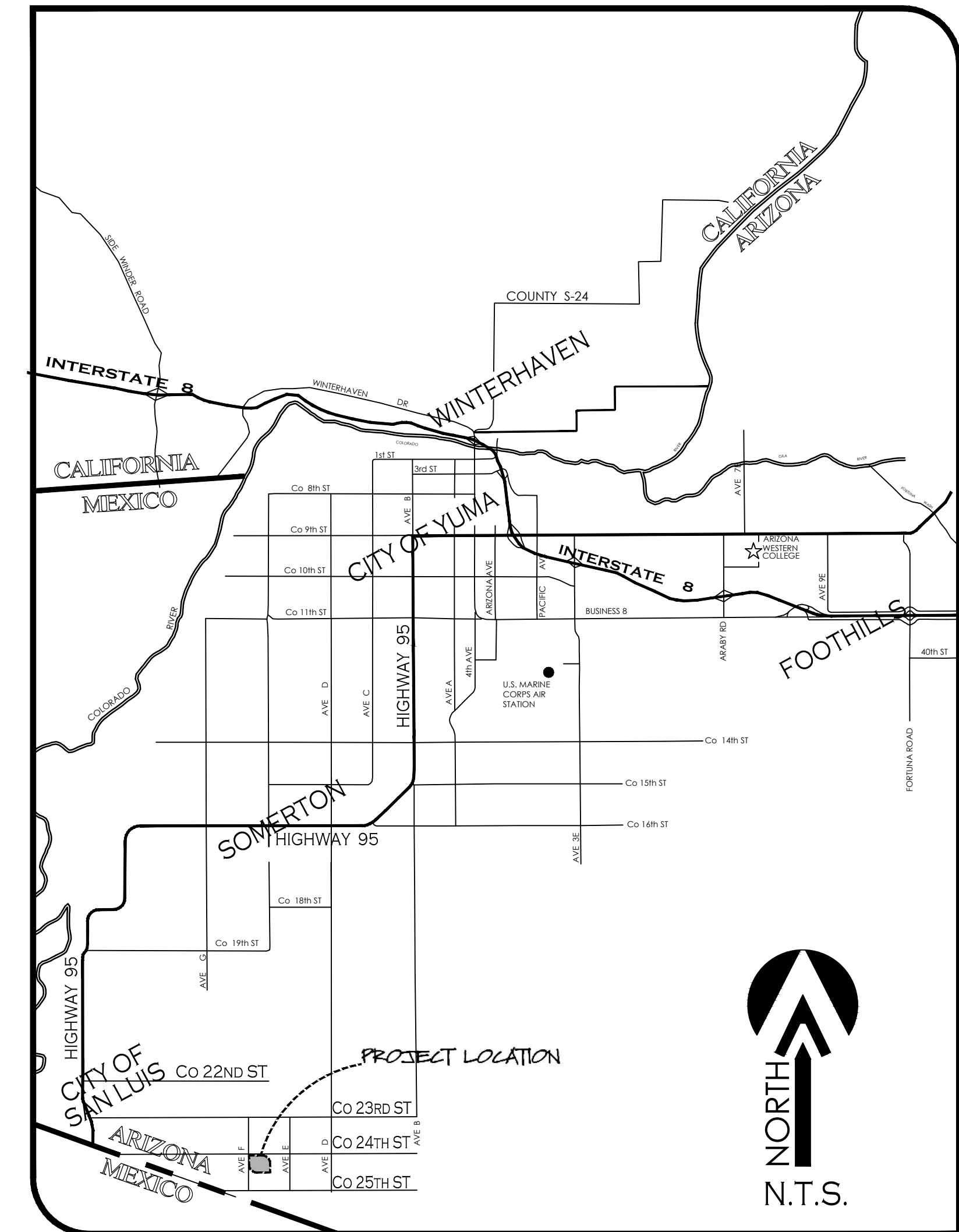
THE NORTH SECTION LINE OF SECTION 15, T11S, R24W,
G3S388344, YUMA COUNTY, ARIZONA BEING THE LINE
THE CENTERLINE OF Co. 24TH STREET, AS SHOWN ON
BORDER RANCHES SUBDIVISION, AS RECORDED IN
BOOK 27 OF PLATS, PAGES 9 & 10, YUMA COUNTY
RECORDERS OFFICE, YUMA COUNTY ARIZONA.

BEARING S89°59'23"W

ENGINEER:

Viv24-100

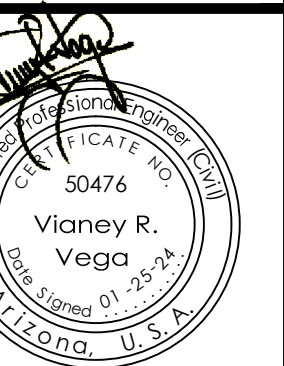
2619 S. AVE. 2 1/2 E, STE#3 928-329-0000 Tel
Yuma, Az. 85364 928-247-6232 Fax
www.vegaNvega.com



VICINITY MAP

N.T.S.

Cover Sheet
BE 10 TOWNHOMES



Notes:

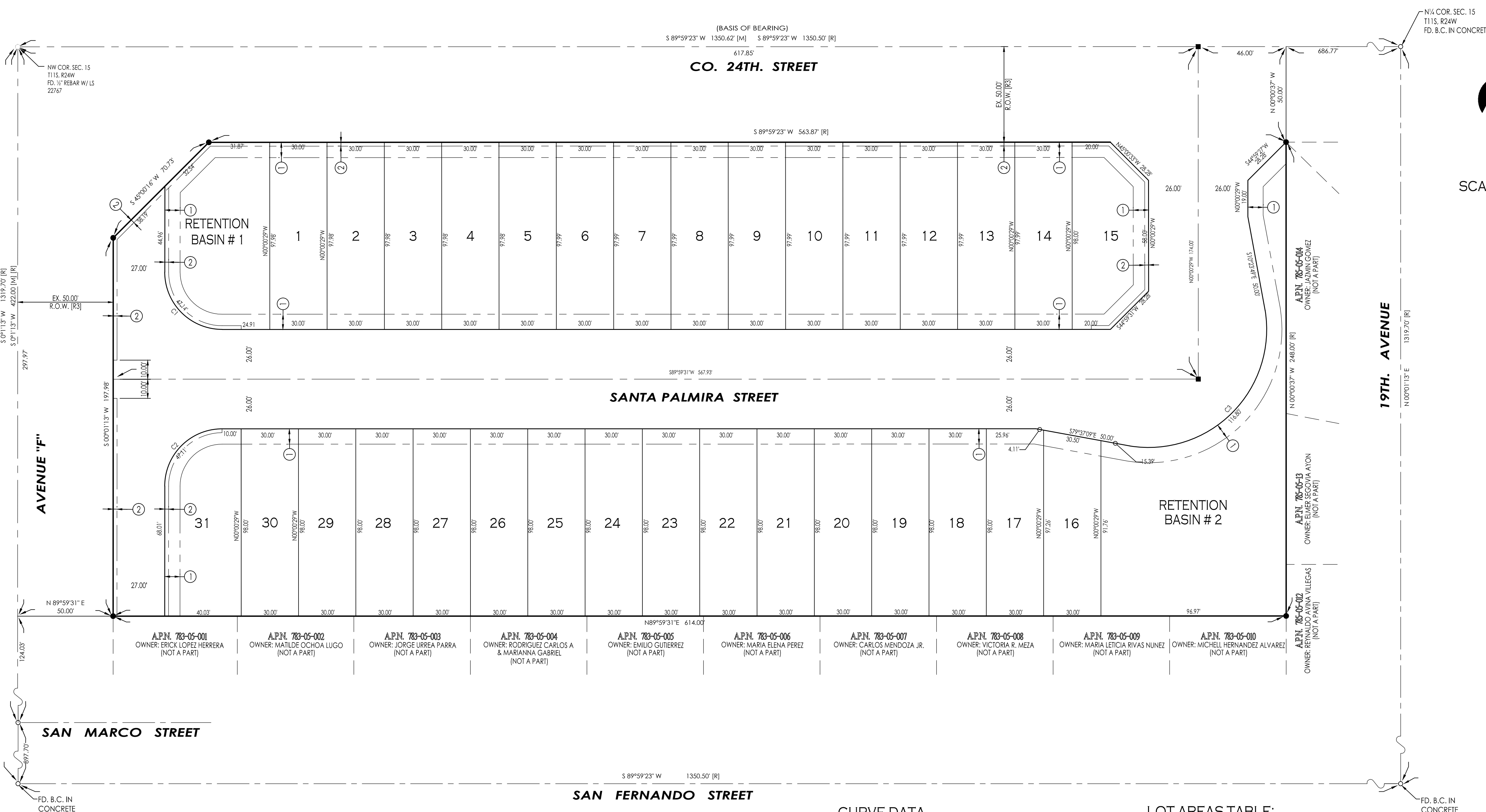
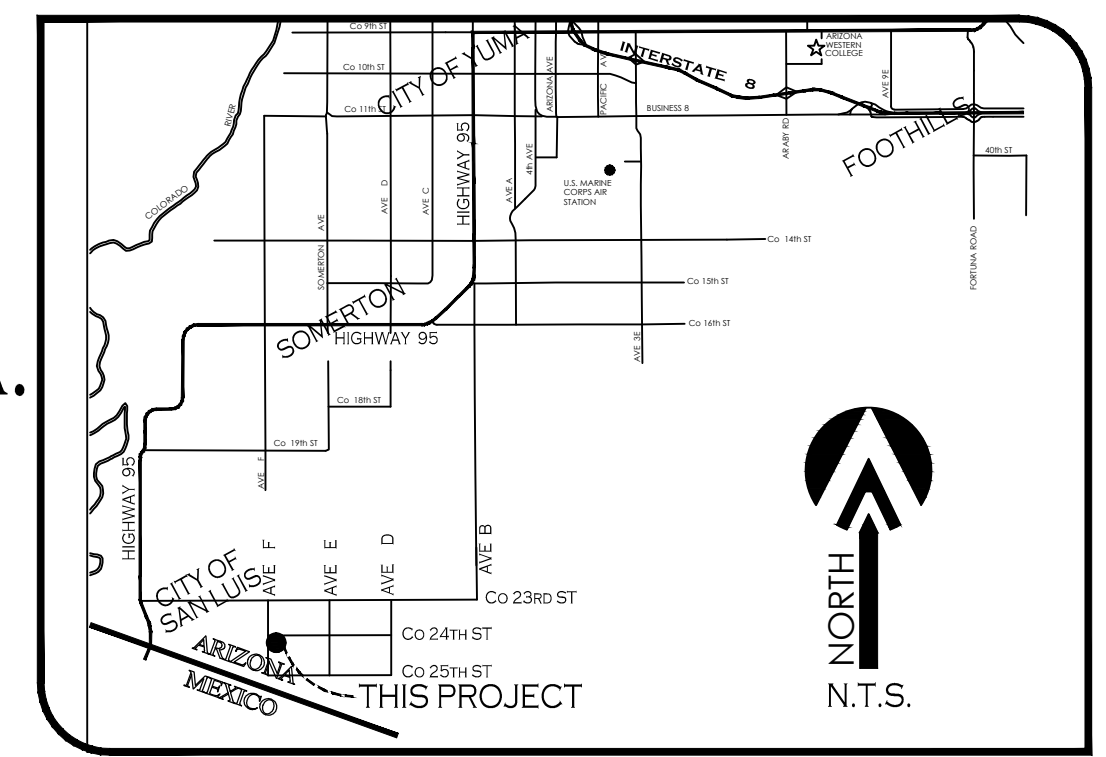
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Drawn: staff | Job #: viv24-100
Checked: vno

CALL TWO WORKING DAYS
BEFORE YOU DIG
1-800-STAKE-IT

BE 10 TOWNHOME SUBDIVISION

A SUBDIVISION OF OF TRACT "B" OF BIENESTAR ESTATES 10 SUBDIVISION, AS RECORDED IN BK. 31, OF PLATS, PG. 22 - 23, YUMA COUNTY RECORDERS OFFICE, YUMA COUNTY, AZ., ALSO BEING A PORTION OF THE NW¹/₄ OF NW¹/₄ OF THE NW¹/₄ OF SECTION 15, T11S, R24W, G.&S.R.B.&M., YUMA COUNTY, ARIZONA. JANUARY OF 2023 ACREAGE: 3.47 AC (NET)

FINAL PLAT



LEGEND

- INDICATES BOUNDARY LINE
- - - INDICATES CENTERLINE
- - - INDICATES RIGHT-OF-WAY LINE
- - - INDICATES EASEMENT LINE
- SET PROPERTY CORNER: TO BE MARKED BY 1/2" DIA. REBAR WITH CAP L.S. 16528 (UNLESS OTHERWISE NOTED)
- NEW YUMA COUNTY STD. DETAIL No. 4-080 STREET MONUMENT
- EXISTING MONUMENT (TYPE AS SHOWN)
- B.C. INDICATES BRASS CAP
- Y.C.R. INDICATES YUMA COUNTY RECORDERS
- A.P.N. INDICATES ASSESSOR'S PARCEL NUMBER
- (M) INDICATES MEASURED DATA
- (R1) DATA REFERS TO BIENESTAR ESTATES 10 SUBDIVISION, AS RECORDED IN BOOK 31 OF PLATS, PAGES 22 & 23, YUMA COUNTY RECORDERS OFFICE, YUMA COUNTY ARIZONA

OWNER OF RECORD:

COMITE DE BIENESTAR INC. AZ CORP.
963 E. 'B' STREET
PO BOX 7170
SAN LUIS, AZ. 85349

BASIS OF BEARING

THE NORTH SECTION LINE OF SECTION 15, T11S, R24W, G.&S.R.B.&M., YUMA COUNTY, ARIZONA (BEING THIS LINE THE CENTERLINE OF Co. 24th STREET), AS SHOWN ON BORDER RANCHES SUBDIVISION, AS RECORDED IN BOOK 27 OF PLATS, PAGES 9 & 10, YUMA COUNTY RECORDERS OFFICE, YUMA COUNTY ARIZONA.
BEARING S89°59'23"W

NOTES:

* THIS PROJECT IS LOCATED IN FLOOD ZONE 'X' AS DETERMINED BY THE FIRM MAPS
* ZONING: R-2

PREPARED BY:

VnV23-100
VEGA & VEGA
ENGINEERING, P.L.L.C.
2619 S. Ave. 2-1/2 E 928-329-0000 Tel
Yuma, Az. 85365 928-247-6232 Fax
www.veganvega.com

KEYNOTES

- ① NEW 8' UTILITY EASEMENT
- ② NEW 1' NON-ACCESS EASEMENT

LAND SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT I AM A LAND SURVEYOR LISTED ON THE ROSTER OF ACTIVE REGISTRANTS BY THE STATE BOARD OF TECHNICAL REGISTRATION OF ARIZONA AND THAT THIS MAP, CONSISTING OF TWO (2) SHEETS CORRECTLY REPRESENTS A SURVEY MADE UNDER MY SUPERVISION DURING DECEMBER OF 2018 THAT ALL MONUMENTS SHOWN HEREON ACTUALLY EXIST AND THEIR POSITIONS ARE CORRECTLY SHOWN, OR WILL BE IN PLACE WITHIN ONE YEAR FROM RECORDATION OF THIS MAP. THE MONUMENTS WILL BE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. THE SURVEY IS TRUE AND COMPLETE AS SHOWN. ALL DISTANCES ARE SHOWN IN FEET AND DECIMALS PARTS.

BY: *John C. English II*
JOHN C. ENGLISH II
16528
01/25/24
R.L.S. No. 16528

CURVE DATA

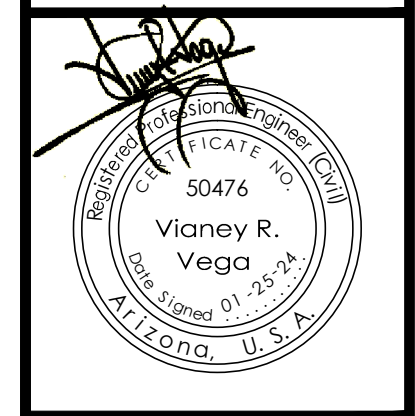
NUMBER	DELTA ANGLE	CHORD DIRECTION	CHORD LENGTH	TANGENT	RADIUS	ARC LENGTH
C1	90°01'42"	S 44°59'38" E	42.44'	30.01'	30.00'	47.14'
C2	89°58'18"	N 45°02'22" E	42.42'	29.99'	30.00'	47.11'
C3	108°17'6"	S 44°59'31" W	100.18'	85.51'	61.80'	116.80'

LOT AREAS TABLE:

LOT #	AREA (SF)	LOT #	AREA (SF)	LOT #	AREA (SF)
1	2939.40 SF.	13	2939.83 SF.	25	2940.00 SF.
2	2939.44 SF.	14	2939.87 SF.	26	2940.00 SF.
3	2939.47 SF.	15	3519.87 SF.	27	2940.00 SF.
4	2939.44 SF.	16	2835.28 SF.	28	2940.00 SF.
5	2939.54 SF.	17	2938.50 SF.	29	2940.00 SF.
6	2939.58 SF.	18	2940.00 SF.	30	2940.00 SF.
7	2939.62 SF.	19	2940.00 SF.	31	3728.00 SF.
8	2939.65 SF.	20	2940.00 SF.	RET #1	4920.75 SF.
9	2939.69 SF.	21	2940.00 SF.	RET #2	11482.99 SF.
10	2939.73 SF.	22	2940.00 SF.		
11	2939.76 SF.	23	2940.00 SF.		
12	2939.80 SF.	24	2940.00 SF.		

Paving & Grading Plan

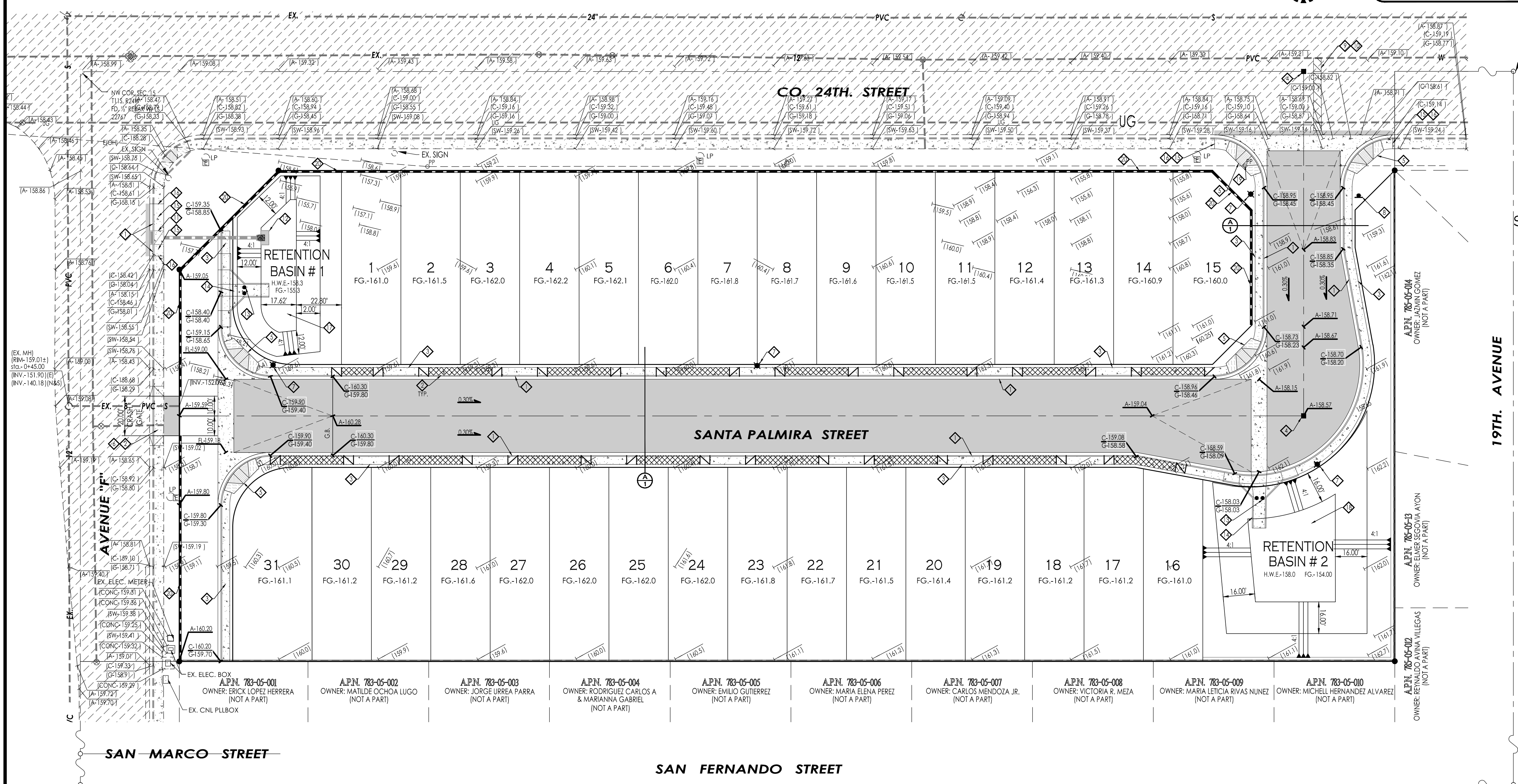
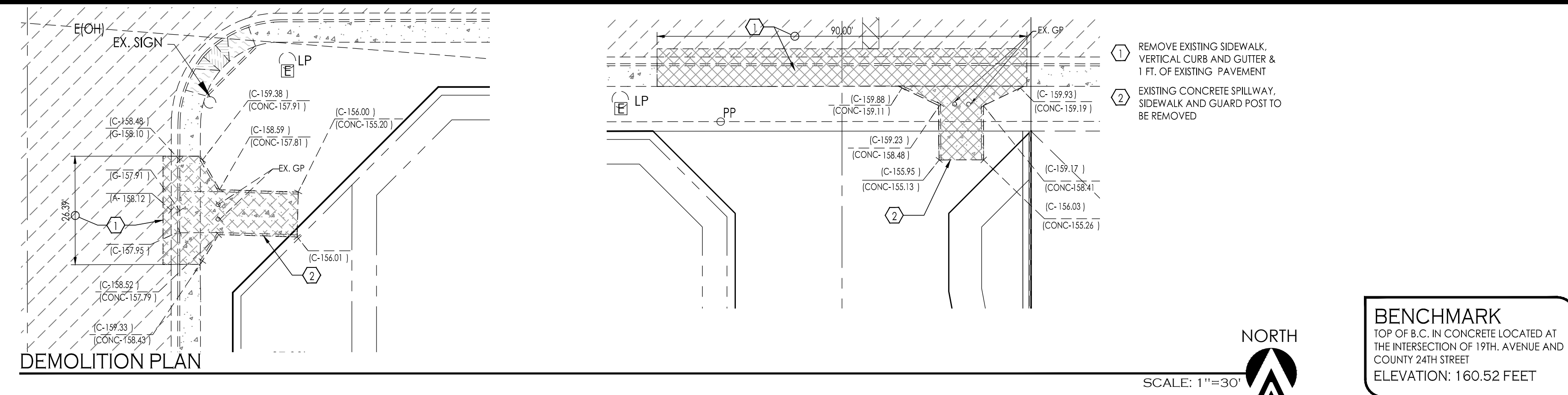
BE 10 TOWNHOMES



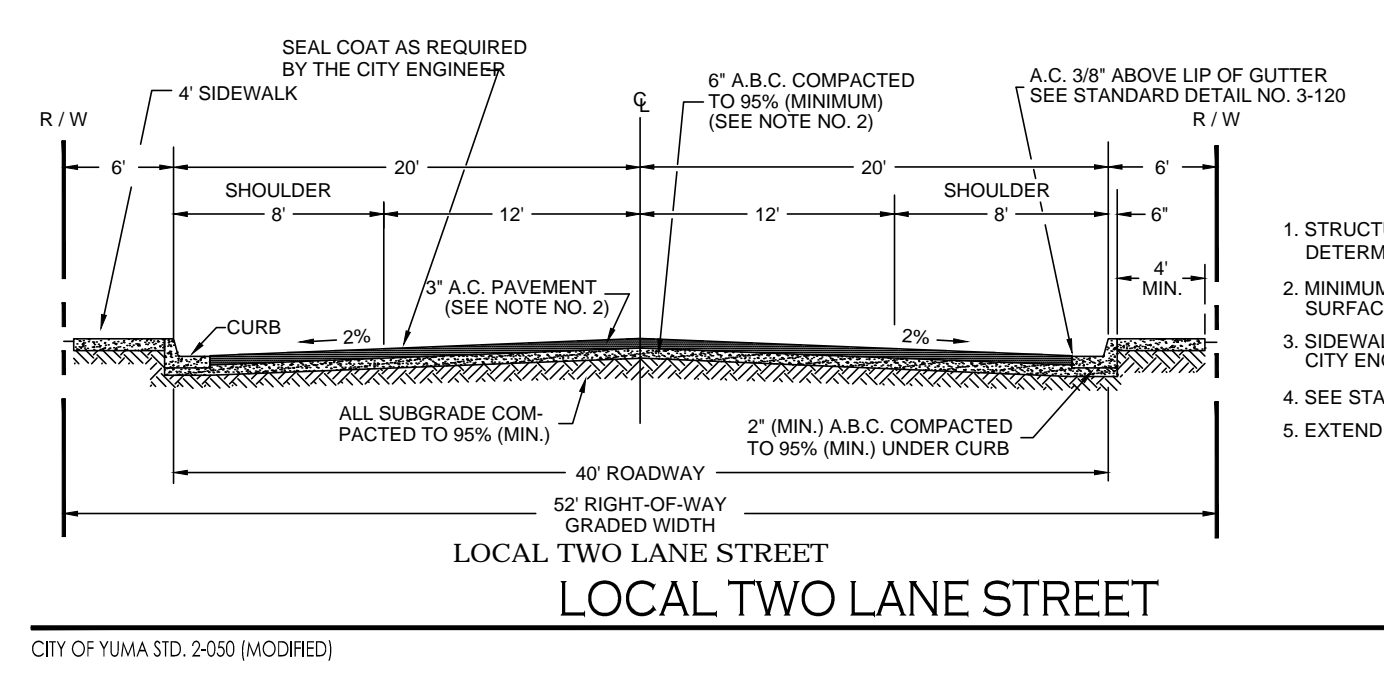
Notes:
Scale: N.T.S. [Date: JAN. 2024]
Drawn: staff [Job #: vvv24-100]
Checked: vno

- ### KEYNOTES:
- ◆ NEW VERTICAL CURB & GUTTER - AS PER C.O.Y. STD. 3-100
 - ◆ NEW 21" WIDE DRIVEWAY -- AS PER C.O.Y. STD. 3-105
 - ◆ NEW 4" CONCRETE SIDEWALK - AS PER C.O.Y. STD. 3-135
 - ◆ NEW STREET MONUMENT- AS PER C.O.Y. STD. 4-030
 - ◆ NEW CONCRETE SIDEWALK RAMP (25' RADIUS MEASURED TO FACE OF CURB) - AS PER C.O.Y. STD. 3-145
 - ◆ REMOVED EXISTING SIDEWALK, VERTICAL CURB AND GUTTER AS NEEDED FOR CONSTRUCTION OF NEW DRIVEWAY, CONSTRUCT TO MATCH
 - ◆ NEW STREET LIGHT - TYPE A (4700 LUMENS) AS PER C.O.Y. STD. 7-010 AND C.O.Y. STD. 7-015
 - ◆ NEW DOUBLE FACED STREET SIGN-STOP SIGN - AS PER C.O.Y. STD. 8-020 (USE BLUE AND WHITE COLORS ON A 6" WIDE SHEET FOR STREET NAMES)
 - ◆ SAWCUT AND REMOVE EXISTING PAVEMENT AS NEEDED FOR CONNECTION OF NEW WATER MAIN, AND PAVEMENT REPLACEMENT AS PER C.O.Y. STD. 5-016 TO MATCH EXISTING PAVEMENT. REFER TO WATER & SEWER PLANS FOR MORE INFORMATION
 - ◆ CONTRACTOR TO VERIFY LOCATION OF EX. WATER LINE, IF CONDITIONS ARE DIFFERENT THAT WHAT IS SHOWN ON PLANS, CONTRACTOR MUST NOTIFY THE PROJECT ENGINEER BEFORE ANY INTERPRETATION OR DECISION IS MADE
 - ◆ NEW TYPE "E" DOUBLE CATCH BASIN - AS PER C.O.Y. STD. 11-025
 - ◆ STORM DRAIN OUTLET STRUCTURE - SEE DETAIL (A)
 - ◆ NEW GUARD POST - SEE DETAIL (C)
 - ◆ NEW 6" CONCRETE SPILLWAY - SEE DETAIL (B)
 - ◆ NEW 5" CONCRETE SIDEWALK - AS PER C.O.Y. STD. 3-135
 - ◆ MATCH NEW CONCRETE SIDE WALK TO EXISTING
 - ◆ RETENTION BASIN # 1 AMENITIES - SEE DETAIL (D)
 - ◆ RETENTION BASIN # 2 AMENITIES - SEE DETAIL (E)
 - ◆ COORDINATE WITH APS FOR EXISTING POWER POLE RELOCATION
 - ◆ NEW 6" HIGH (ON THE LOT SIDE) CMU WALL AS PER C.O.Y. STD. 1-015 [CMU WALL LOCATED WITHIN THE FRONT OR SIDE SETBACK OF LOTS MUST BE 3'-6" HIGH MAXIMUM]

- ### LEGEND
- INDICATES EX. ASPHALT PAVEMENT
 - INDICATES EX. CONCRETE
 - INDICATES BOUNDARY LINE
 - INDICATES CENTERLINE
 - INDICATES RIGHT-OF-WAY LINE
 - EX-6"=PVC=W INDICATES EX. WATER LINE
 - EX-8"=PVC=S INDICATES EX. SEWER LINE
 - GAS= INDICATES EX. GAS LINE
 - INDICATES NEW ASPHALT PAVEMENT
 - INDICATES NEW CONCRETE
 - INDICATES NEW CMU WALL
 - NEW YUMA COUNTY STD. DETAIL No. 4-030 SUB'D BOUNDARY MONUMENT
 - NEW YUMA COUNTY STD. DETAIL No. 4-080 STREET MONUMENT
 - EXISTING MONUMENT (TYPE AS SHOWN)
 - INDICATES BRASS CAP
 - INDICATES YUMA COUNTY RECORDERS
 - INDICATES EXISTING POWER POLE
 - INDICATES CALCULATED DATA
 - INDICATES MEASURED DATA
 - INDICATES EXISTING ELECTRICAL BOX
 - INDICATES EXISTING GAS PADDLE
 - INDICATES EXISTING MANHOLE
 - INDICATES EXISTING FIRE HYDRANT
 - INDICATES EXISTING WATER METER
 - INDICATES EXISTING WATER VALVE
 - INDICATES EXISTING STREET LIGHT POLE
 - INDICATES EX. CURB ELEVATION
 - INDICATES EX. SIDEWALK ELEVATION
 - INDICATES EX. ASPHALT ELEVATION
 - INDICATES EX. NATURAL SOIL ELEVATION
 - INDICATES NEW ASPHALT ELEVATION
 - INDICATES NEW CURB ELEVATION
 - INDICATES NEW GUTTER ELEVATION
 - INDICATES LOT NUMBERS
 - NEW STREET LIGHT



BENCHMARK
TOP OF B.C. IN CONCRETE LOCATED AT THE INTERSECTION OF 19TH AVENUE AND COUNTY 24TH STREET
ELEVATION: 160.52 FEET



- ### NOTES
- STRUCTURAL DESIGN OF COMBINED THICKNESS OF BASE AND SURFACE TO BE DETERMINED BY SOILS TEST.
 - MINIMUM PAVING THICKNESS SHALL BE 3" FOR PLANT HOT MIXED ASPHALT SURFACING OVER 6" OF A.B.C. COMPACTED TO 90% (MINIMUM).
 - SIDEWALK LOCATION ADJACENT TO CURB OR AS APPROVED BY THE CITY ENGINEER.
 - SEE STANDARD DETAIL 3-080 FOR GRADING BEHIND SIDEWALK.
 - EXTEND AGGREGATE BASE COURSE BENEATH CURB & GUTTER

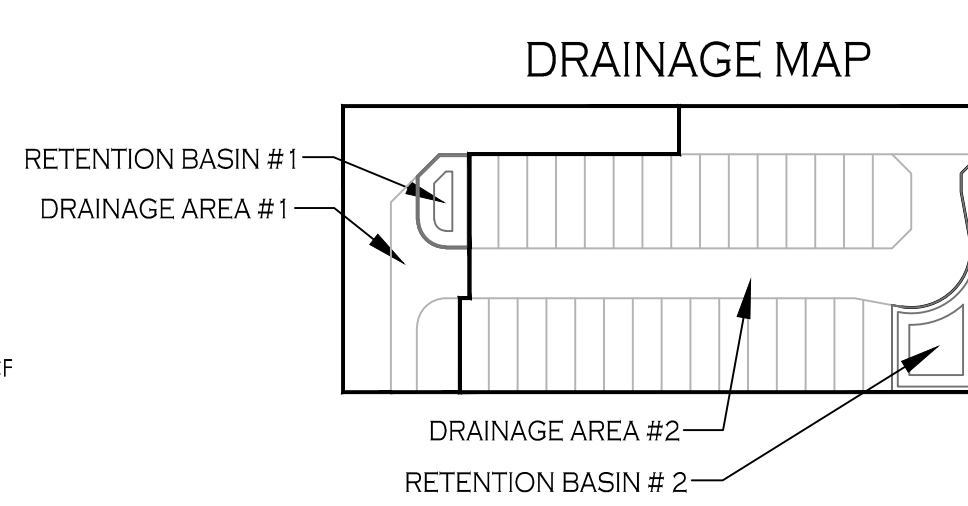
DRAINAGE REPORT

1. DRAINAGE REPORT
DRAINAGE AREA # 1
USING THE RATIONAL METHOD
Q= CIA = PEAK RUNOFF [VOL.]
(C) PEAK RATE RUNOFF = 0.43
(I) INTENSITY OF RAINFALL = 1.22 IN / HR
(A) DRAINAGE AREA = 48,928.28 SF = 1.123 AC.
Q= (0.43)(1.22)(1.123) = 0.59 CF
TOTAL RUNOFF = 7,200 (0.59) = 4,248 CF
STORAGE VOLUME PROVIDED AREA # 1
RETENTION BASIN
TOP AREA = 3,430 SF
BOTTOM AREA = 1,055 SF
DEPTH = 3 FT
VOL. PROVIDED = (3,430 + 1,055) (3.0) = 6,827 CF
TOTAL VOL. PROVIDED = 6,827 CF
FACTOR OF SAFETY = $\frac{6,827}{4,248} = 1.58$

DRAINAGE AREA # 2
USING THE RATIONAL METHOD
Q= CIA = PEAK RUNOFF [VOL.]
(C) PEAK RATE RUNOFF = 0.43
(I) INTENSITY OF RAINFALL = 1.22 IN / HR
(A) DRAINAGE AREA = 148,887.56 SF = 3.418 AC.
Q= (0.43)(1.22)(3.418) = 1.793 CF
TOTAL RUNOFF = 7,200 (1.793) = 12,910 CF
STORAGE VOLUME PROVIDED AREA # 2
RETENTION BASIN
TOP AREA = 6,175 CF
BOTTOM AREA = 1,968 SF
DEPTH = 4 FT
VOL. PROVIDED = (6,175 + 1,968) (4.0) = 16,286 CF
TOTAL VOL. PROVIDED = 16,286 CF
FACTOR OF SAFETY = $\frac{16,286}{12,910} = 1.26$

2. NO OFFSITE STORMWATER WILL ENTER THE PROJECT SITE STORMWATER WILL BE RETAINED ON SITE.

3. THIS PROJECT SITE IS LOCATED IN FLOOD ZONE "X" AS SHOWN ON FEMA FLOOD MAPS



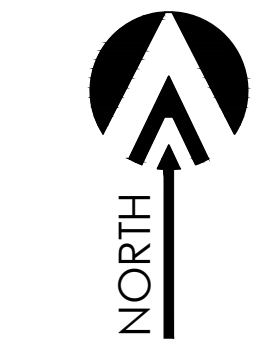
OPEN SPACE CALCULATIONS

PROJECT AREA = 1,511,153.20 SF. = 3.47 SF
5% OPEN SPACE REQUIRED = 151,115.32 SF. X 5% = 7,557.66 SF.
OPEN SPACE PROVIDED : AREA RETENTION BASIN # 1 = 4,920.73 SF.
AREA RETENTION BASIN # 2 = 11,482.99 SF.
TOTAL AREA OPEN SPACE PROVIDED : = 16,403.72 SF.
16,403.72 SF. > 7,557.66 SF. THEREFORE OK

BENCHMARK

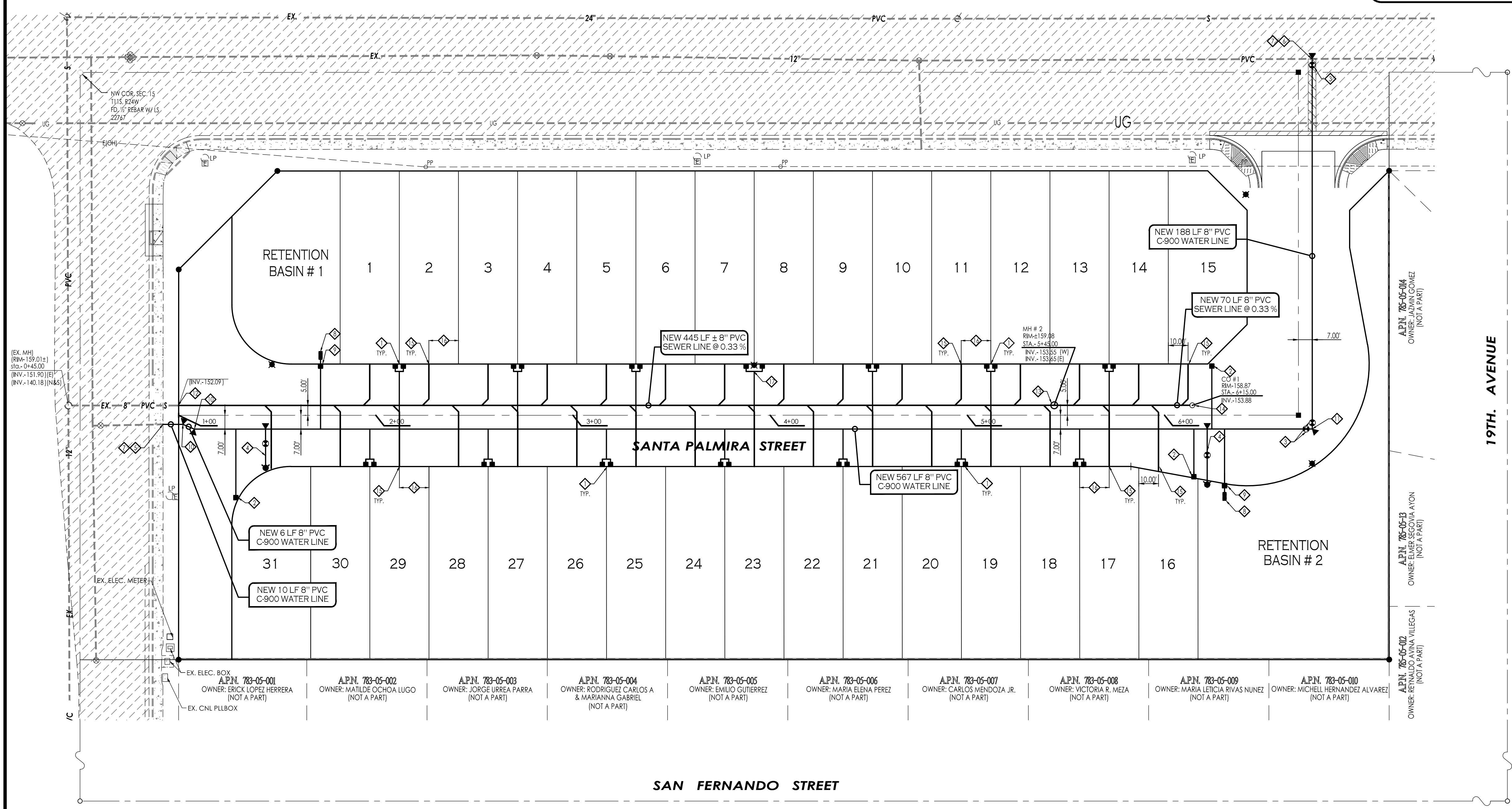
TOP OF B.C. IN CONCRETE LOCATED AT THE INTERSECTION OF 19TH AVENUE AND COUNTY 24TH STREET
ELEVATION: 160.52 FEET

CALL TWO WORKING DAYS BEFORE YOU DIG
1-800-STAKE-IT



SCALE: 1"=30'

BENCHMARK
TOP OF B.C. IN CONCRETE LOCATED AT THE INTERSECTION OF 19TH AVENUE AND COUNTY 24TH STREET
ELEVATION: 160.52 FEET



LEGEND

163	INDICATES EX. CONTOURS ELEVATION
-EX-12\"/>	INDICATES EX. WATER LINE
-EX-12\"/>	INDICATES EX. SEWER LINE
-GAS-	INDICATES EX. GAS LINE
⊠	INDICATES EXISTING ELECTRICAL BOX
⊗	INDICATES EXISTING GAS PADDLE
⊙	INDICATES EXISTING MANHOLE
⊕	INDICATES EXISTING FIRE HYDRANT
⊕	INDICATES EXISTING WATER METER
⊕	INDICATES EXISTING WATER VALVE
-NEW-PVC-S-	INDICATES NEW SANITARY SEWER LINE
○	NEW SEWER MANHOLE
-NEW-PVC-W-	INDICATES NEW WATER LINE
⊕	NEW SINGLE WATER SERVICE
⊕	NEW DUAL WATER SERVICE
⊕	NEW WATER VALVE
⊕	NEW FIRE HYDRANT
⊕	NEW TEMPORARY BLOWOFF VALVE
1	INDICATES LOT NUMBERS
⊕	NEW STREET LIGHT

- KEYNOTES:**
- ◆ INSTALL 1" DUAL WATER SERVICE (TYP.) - AS PER C.O.Y. STD. 5-045 & 5-055.
 - ◆ INSTALL 1" SINGLE WATER SERVICE (TYP.) - AS PER C.O.Y. STD. 5-035 & 5-055.
 - ◆ NEW 8" WATER VALVE - AS PER C.O.Y. STD. 5-065, 5-075 & 5-080.
 - ◆ NEW COMPLETE FIRE HYDRANT - AS PER C.O.Y. STD. 5-155.
 - ◆ REMOVE EXISTING END PLUG AND CONNECT NEW 8" WATER LINE TO EX. 8" WATER SUB-OUT. CONTRACTOR TO FIELD VERIFY LOCATION AND DEPTH OF EXISTING 12" WATER SUB-OUT. IF CONDITIONS ARE DIFFERENT THAN WHAT IS SHOWN ON PLANS CONTRACTOR TO NOTIFY ENGINEER BEFORE MAKING ANY DETERMINATION.
 - ◆ NEW 8" TAPPING SLEEVE. CONNECT NEW 8" WATER LINE TO EX. 12" WATER MAIN. SAWCUT EXISTING PAVEMENT AS NEEDED FOR CONNECTION AND REPLACE WITH NEW PAVEMENT. CONTRACTOR TO FIELD VERIFY LOCATION AND DEPTH OF EXISTING 12" WATER MAIN. IF CONDITIONS ARE DIFFERENT THAN WHAT IS SHOWN ON PLANS CONTRACTOR TO NOTIFY ENGINEER BEFORE MAKING ANY DETERMINATION.
 - ◆ CONTRACTOR TO PROTECT EX. UTILITIES DURING CONSTRUCTION. IF DAMAGE OCCURS, CONTRACTOR MUST REPAIR AT HIS OWN EXPENSE.
 - ◆ INSTALL NEW BACKFLOW PREVENTOR W/ CAGE AS PER C.O.Y. STD. 5-130 & 5-145.
 - ◆ INSTALL 2" WATER SERVICE (TYP.) - AS PER C.O.Y. STD. 5-040 & 5-060.
 - ◆ NEW 8"x8" PVC 22.5" ELL W/THRUST BLOCK - AS PER C.O.Y. STD. 5-020 & 5-025
 - ◆ NEW 8" PVC ELL W/THRUST BLOCK - AS PER C.O.Y. STD. 5-020 & 5-025
 - ◆ CONNECT NEW SEWER LINE TO EXISTING 8" SEWER LINE. CONTRACTOR TO FIELD VERIFY LOCATION AND DEPTH OF EXISTING SEWER LINE. IF CONDITIONS ARE DIFFERENT THAN WHAT IS SHOWN ON PLANS CONTRACTOR TO NOTIFY ENGINEER BEFORE MAKING ANY DETERMINATION.
 - ◆ NEW SANITARY SEWER POLYMER MANHOLE - AS PER C.O.Y. STD. 6-080, 6-090
 - ◆ NEW SANITARY SEWER CLEANOUT - AS PER C.O.Y. STD. 6-005
 - ◆ NEW 4" PVC SEWER SERVICE - AS PER C.O.Y. STD. 6-015
 - ◆ CONSTRUCT ALL SEWER SERVICES TO CENTER OF THE LOT, UNLESS NOTED OTHERWISE.
 - ◆ SEPARATE WATER METERS AT THIS LOCATION TO ALLOW FOR STREET LIGHT PLACEMENT

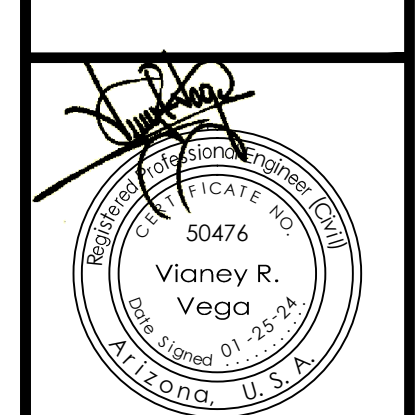
WATER AND SEWER NOTES

1. WATER MAINS AND VALVES SHALL BE FLUSHED AND DISINFECTED BY THE "GENERAL METHOD" DESCRIBED IN THE 1978 ARIZONA DEPARTMENT OF HEALTH SERVICES ENGINEERING BULLETIN NO. 8.
2. ENGINEERING PERSONNEL SHALL BE PRESENT WHEN WATER MAINS ARE BOTH FLUSHED AND PRESSURE TESTED.
3. ALL TEES, 90 DEGREE BENDS, HYDRANTS AND DEAD END PLUGS SHALL BE THRUST BLOCKED WITH CAST-IN-PLACE CONCRETE.
4. WATER LINES 4" OR LARGER SHALL BE PVC C900 DR 18 CLASS 255.
5. ALL WATER LINE INSTALLATION MUST MEET OR EXCEED STANDARDS ESTABLISHED IN ADHS BULLETIN NO. 10.
6. ALL PVC WATER DISTRIBUTION PIPES MUST BE APPROVED BY AND SHALL BEAR THE NSF SEAL FOR POTABLE WATER USE.
7. TYPES OF TAPPING SLEEVE REQUIRED:
 - A. FOR SIZE ON SIZE TAP: MUELLER TYPE M.J. ENDS REQUIRED.
 - B. FOR SMALLER TAP SIZE THAN THE MAIN SIZE, ONE OF THREE TYPES MAY BE USED:
 - A. CLOW "O" RING TYPE.
 - B. RICH "O" RING TYPE.
 - C. MUELLER M.J. TYPE.
 - C. MINIMUM TAPPING SLEEVE LENGTH - 18".
8. ACCEPTABLE VALVE LIST:
 - ALL VALVES 12" AND UNDER ARE TO BE RESILIENT WEDGE GATE VALVES. THE FOLLOWING VALVES WILL BE ACCEPTED:
 - WATEROUS SERIES 500 RESILIENT CLOW RESILIENT WEDGE
 - AMERICAN DARLING 80 CSR RESILIENT WEDGE.
9. ALL PIPES, FITTINGS, VALVES, COATINGS, ETC. SHALL CONFORM TO NSF STANDARD 61, 17, IF DEAD ENDS ON
10. IF DEAD ENDS ON WATER MAINS CANNOT BE AVOIDED, THEY MUST HAVE BLOW-OFF VALVES (MIN. DIA. 2")
11. DISINFECTION OF WATER LINES IN ACCORDANCE WITH A.D.E.Q. BULLETIN NO. 8 OR AWWA C-651-92 OR LATEST VERSION.
12. WATER CONSTRUCTION STAKING SHALL BE DONE UNDER THE SUPERVISION OF A REGISTERED ENGINEER OR SURVEYOR.
13. ALL MATERIALS THAT COME INTO CONTACT WITH WATER SHALL CONFORM TO ANS/NSF STANDARD 60 AND 61, PER R18-4-213.A AND B
14. CONSTRUCTION MATERIALS USED IN THE WATER SYSTEM SHALL BE LEAD FREE AS DEFINED IN A.A.C. R18-4-504 AND R18-1-101.
15. WATER LINES SHALL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE W/ AWWA C605-94 FOR PVC PIPE, PER ENGINEERING BULLETIN NO. 10, CHAPTER 7.
16. PRIOR TO PLACING THE INSTALLED WATER LINE IN SERVICE, THE NEW PIPE AND EXPOSED SECTIONS AND APPURTENANCES OF EXISTING PIPELINES SHALL BE CLEANED AND DISINFECTED IN ACCORDANCE WITH ANS/AWWA C651. UNLESS OTHERWISE SPECIFIED, PIPELINES SHALL BE FLUSHED FOLLOWING COMPLETION OF DISINFECTION PROCEDURES. DISPOSAL OR NEUTRALIZATION OF DISINFECTION WATER SHALL COMPLY WITH APPLICABLE REGULATIONS. (REFER TO APPENDIX B OF ANS/AWWA C651.)
17. WATER AND SEWER LINES AND WATER AND SEWER SERVICE LINES, SEPARATION IN ACCORDANCE WITH A.A.C. R18-5-502.C. AND CITY OF YUMA STD. DETAIL 5-005. CONSTRUCT NEW WATER AND SEWER LINES AS PER CITY OF YUMA STD. DETAIL 5-010.
18. VERTICALLY AND 6 FEET HORIZONTALLY UNDER ALL CONDITIONS, WHERE A SEWER FORCE MAIN CROSSES ABOVE OR LESS THAN 4 FEET BELOW A WATER LINE, THE SEWER MAIN SHALL BE ENCASED IN AT LEAST 6 INCHES OF CONCRETE OR CONSTRUCTED USING MECHANICAL JOINT DUCTILE IRON PIPE FOR 10 FEET ON EITHER SIDE OF THE WATER MAIN, AS PER AAC-R18-5-502-C.3
19. WATER CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A COPY OF THE BACTERIOLOGICAL TEST RESULTS TAKEN ON THE SYSTEM.
20. ALL WATER LINES (MAINS AND SERVICES) SHALL INCLUDE THE INSTALLATION OF TRACER WIRE IN ACCORDANCE WITH AS PER CITY OF YUMA STD. DETAIL 5-030
21. TYPES OF TAPPING SLEEVE REQUIRED: SMITH-BLAIR MODEL 662-663 STAINLESS STEEL (6" AND SMALLER: 15" LONG MIN.; LARGER THAN 8"20" LONG MIN.)
22. THE OWNER SHALL CONTACT A PROFESSIONAL ENGINEER TO PROVIDE DETAILED CONSTRUCTION INSPECTION SERVICES FOR THE PROPOSED PROJECT. UPON COMPLETION OF THE PROJECT, THE OWNER'S ENGINEER SHALL COMPLETE THE ADEQ ENGINEERS CERTIFICATE OF COMPLETION DOCUMENTATION AND FORWARD SAME TO THE APPROPRIATE ODWOM REGIONAL OFFICE.
23. A MINIMUM OF 7 SHALL BE MAINTAINED BETWEEN PARALLEL WATER AND SEWER LINES AND WATER AND SEWER MAINS.
24. FLANGE BOLTS SHALL BE PROTECTED BY 10 MIL POLYETHYLENE WRAP.
25. SEWER MAINS AND SERVICES SHALL BE CLASS 50 CEMENT OR EPOXY LINED DUCTILE IRON PIPE FOR A DISTANCE OF 7' IN BOTH DIRECTIONS FROM A WATER MAIN OR SERVICE WHEN:
 - A. SEWER MAIN OR SERVICE CROSSES LESS THAN 2' BELOW A WATERMAIN OR SERVICE;
 - B. WATER MAIN OR SERVICE CROSSES BELOW A SEWER MAIN OR SERVICE. (A MINIMUM OF 24" SEPARATION SHALL BE MAINTAINED VERTICALLY BETWEEN WATER AND SEWER MAINS AND SERVICES).
26. SEWER CONSTRUCTION STAKING SHALL BE DONE UNDER THE SUPERVISION OF A REGISTERED ENGINEER OR SURVEYOR.
27. SEWER PIPE SHALL BE PVC SDR 35 HAVE N.S.F. SEAL OF APPROVAL, AND MEET ASTM D-3034.
28. SEWER MAINS SHALL BE PRESSURE AND LEAKAGE TESTED WITH 4 FEET OF HEAD UPSTREAM. ALLOWABLE LEAKAGE NOT TO EXCEED 180 GAL./IN. DIA./MILE OF PIPE/DAY, PER AAC R18-9-E301.D.2.]
29. EXFILTRATION FROM MANHOLES SHALL BE LIMITED TO 0.1 GALS./HR./VERTICAL FOOT.
30. DEFLECTION TEST OF AT LEAST 100% OF PLASTIC SEWER PIPE SHALL BE PERFORMED. SHORT TERM DEFLECTION IN EXCESS OF 5% SHALL BE CONSIDERED UNSERVICEABLE AND SHALL BE REPAIRED AND RETESTED, PER AAC R18-9-E301.D.2.]
31. IN AREAS WHERE THE GROUNDWATER IS AT PIPE SPRING LINE OR ABOVE INFILTRATION TESTS SHALL BE PERFORMED. ALLOWABLE INFILTRATION FOR SEWER MAINS NOT TO EXCEED 180 GAL./IN DIA/MILE OF PIPE/DAY. ALLOWABLE INFILTRATION FOR MANHOLES SHALL BE LIMITED TO 0.1 GALS./HR./VERTICAL FOOT.
32. GRAVITY SEWER LINES MUST BE TESTED FOR LEAKAGE AS PER R18-9-E301.D.2.]
33. MANHOLES TESTING IS REQUIRED FOR 100% OF MANHOLES ACCORDING TO R18-9-E301 D.3.c.e.&f.
34. FOR CONSTRUCTION AND TESTING OF SEWER LINES REFER TO A.A.C.R18-9-E301-(D)]2].
35. FOR CONSTRUCTION AND TESTING OF SEWER FORCE MAIN REFER TO A.A.C.R18-9-E301-4.
36. MANHOLE TESTING & CONSTRUCTION IS REQUIRED ACCORDING TO A.A.C.R18-9-E301-3.
37. THE PRESSURE TESTING OF WATERLINES SHALL BE UNDERTAKEN AS FOLLOWS AND IN DESCENDING ORDER OF PRECEDENCE:
 - a) ALL VISIBLE LEAKS SHALL BE REPAIRED, REGARDLESS OF THE AMOUNT OF LEAKAGE AND REGARDLESS OF WHETHER THE LEAK DEVELOPS UNDER TEST PRESSURE OR LINE PRESSURE.
 - b) INITIAL PRESSURE FOR THE PRESSURE TEST SHALL BE A MINIMUM OF 150 PSI. PRESSURE LOSS DURING TESTING SHALL NOT EXCEED 5 PSI.
 - c) A PRESSURE TEST WILL BE DEEMED AS SUCCESSFUL IF IT PASSES THE CRITERIA SET FORTH BY AWWA C-600, SECTION 4 (CURRENT EDITION) AND THAT CRITERIA NOTED ABOVE, EXCEPT NO LEAKAGE TEST WILL BE ALLOWED.
38. MATERIALS SHALL BE IN ACCORDANCE WITH THE APPROVED WATER SERVICE COMPONENTS LIST.
39. ALL MANHOLES SHALL BE CONSTRUCTED OF POLYMER CONCRETE

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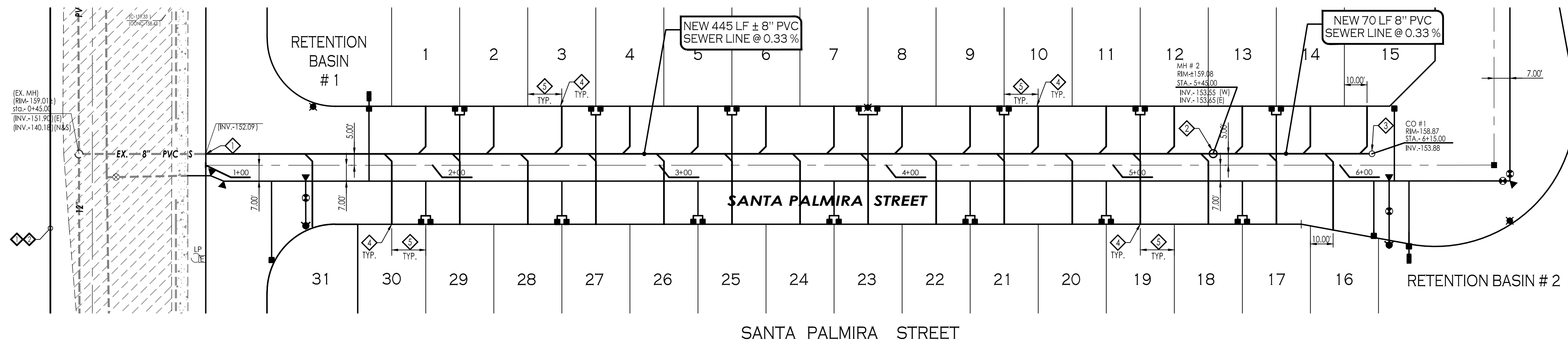
VEGA & VEGA
ENGINEERS ARCHITECTS
2619 S. AVE. 2 1/2 E. STE#3
YUMA, AZ. 85364
928-329-0000 TEL
928-247-6232 FAX
V@vvegavnreg@a.com

Water & Sewer Plan
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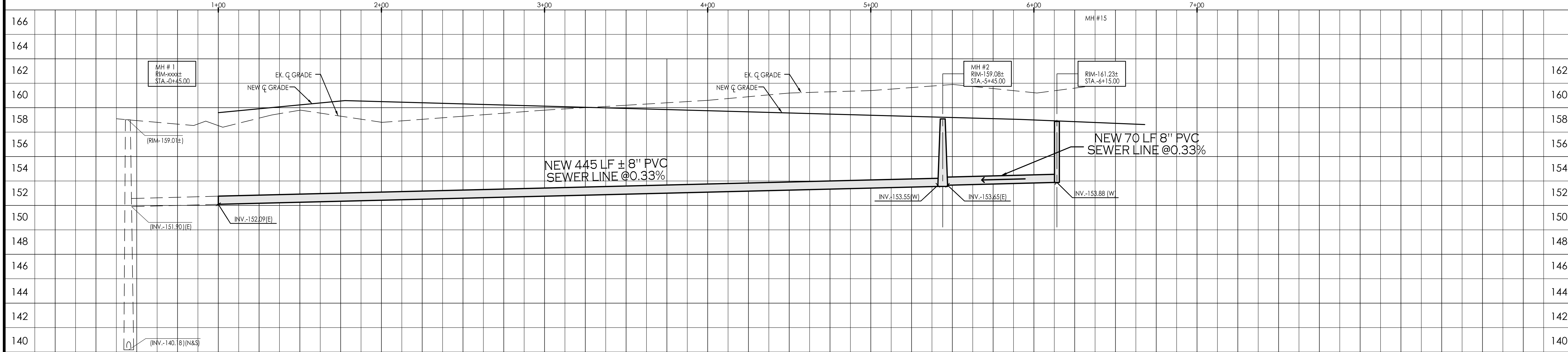


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NORTH
 SCALE: 1"=30'
 HORIZONTAL
 SCALE: 1"=4'
 VERTICAL



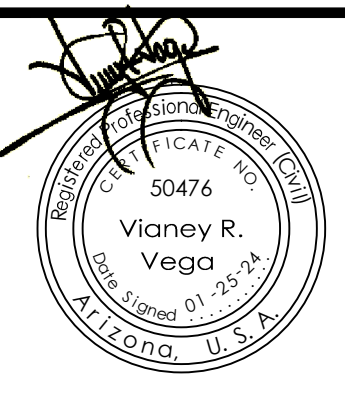
KEYNOTES:

- ◇ CONNECT NEW SEWER LINE TO EXISTING 8" PVC LINE. CONTRACTOR TO FIELD VERIFY LOCATION AND DEPTH OF EXISTING SEWER LINE. IF CONDITIONS ARE DIFFERENT THAN WHAT IS SHOWN ON PLANS CONTRACTOR TO NOTIFY ENGINEER BEFORE MAKING ANY DETERMINATION
- ◇ NEW SANITARY SEWER POLYMER MANHOLE - AS PER C.O.Y. STD. 6-080, 6-090
- ◇ NEW SANITARY SEWER CLEANOUT - AS PER C.O.Y. STD. 6-005
- ◇ NEW 4" PVC SEWER SERVICE - AS PER C.O.Y. STD. 6-015
- ◇ CONSTRUCT ALL SEWER SERVICES TO CENTER OF THE LOT. UNLESS NOTED OTHERWISE.

LEGEND

- 163** INDICATES EX. CONTOURS ELEVATION
- EX-12"-PVC-W- INDICATES EX. WATER LINE
 - EX-12"-PVC-S- INDICATES EX. SEWER LINE
 - GAS- INDICATES EX. GAS LINE
 - Ⓛ INDICATES EXISTING ELECTRICAL BOX
 - Ⓞ_{GP} INDICATES EXISTING GAS PADDLE
 - Ⓞ_{MH} INDICATES EXISTING MANHOLE
 - Ⓞ_{FH} INDICATES EXISTING FIRE HYDRANT
 - Ⓞ_{WM} INDICATES EXISTING WATER METER
 - Ⓞ_{WV} INDICATES EXISTING WATER VALVE
 - NEW-PVC-S- INDICATES NEW SANITARY SEWER LINE
 - INDICATES NEW SEWER MANHOLE
 - NEW-PVC-W- INDICATES NEW WATER LINE
 - Ⓞ INDICATES NEW SINGLE WATER SERVICE
 - Ⓞ INDICATES NEW DUAL WATER SERVICE
 - Ⓞ INDICATES NEW WATER VALVE
 - Ⓞ INDICATES NEW FIRE HYDRANT
 - Ⓞ INDICATES NEW TEMPORARY BLOWOFF VALVE
 - 1 INDICATES LOT NUMBERS

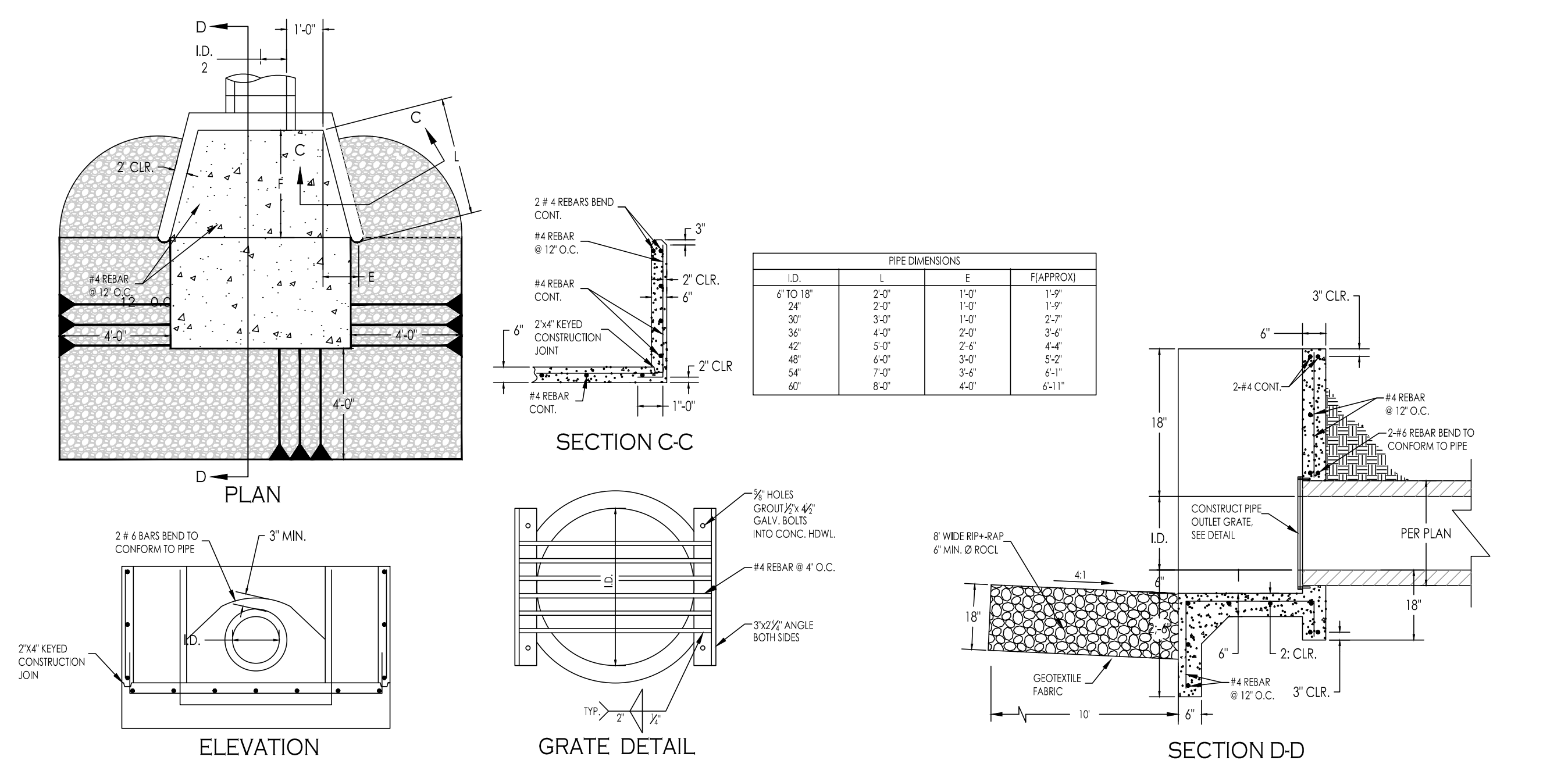
Sewer Plan and Profile
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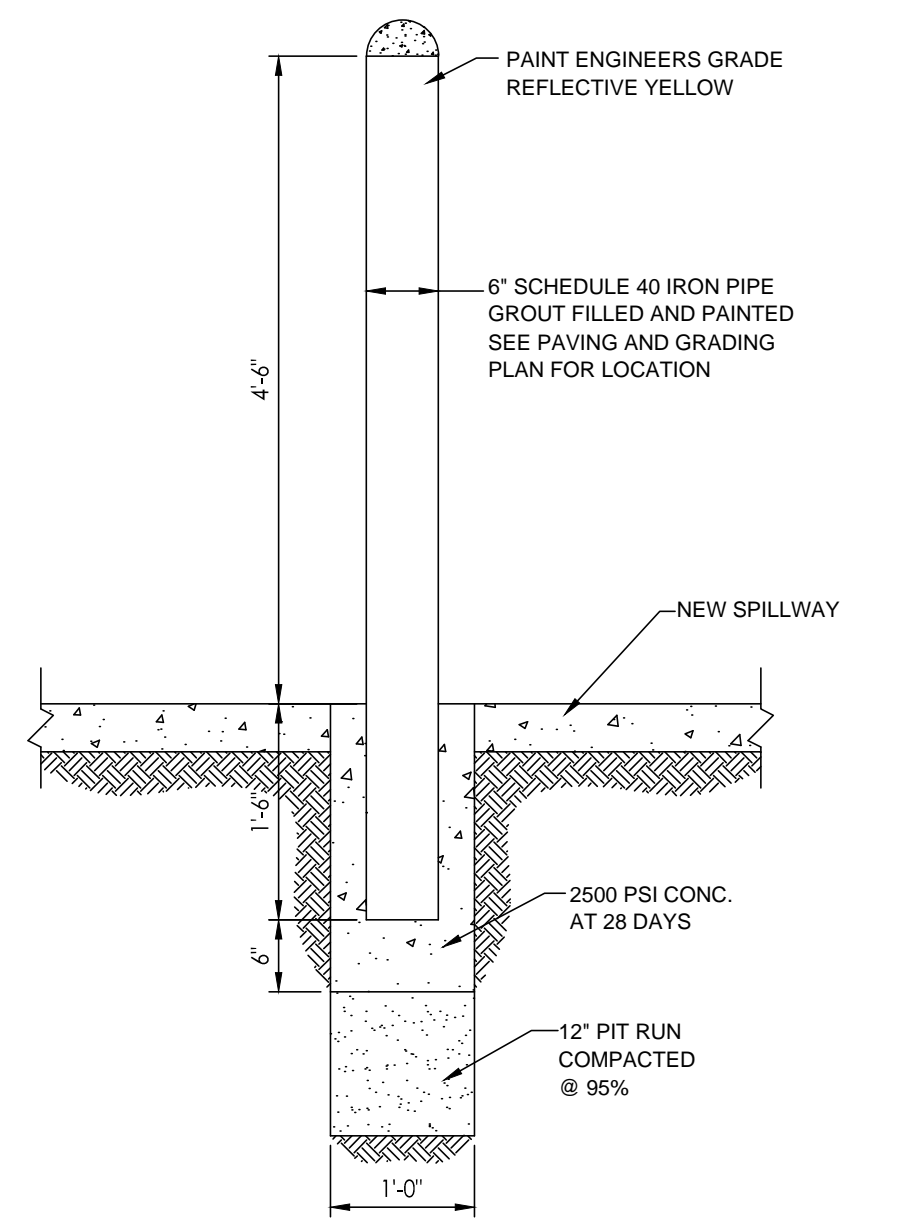
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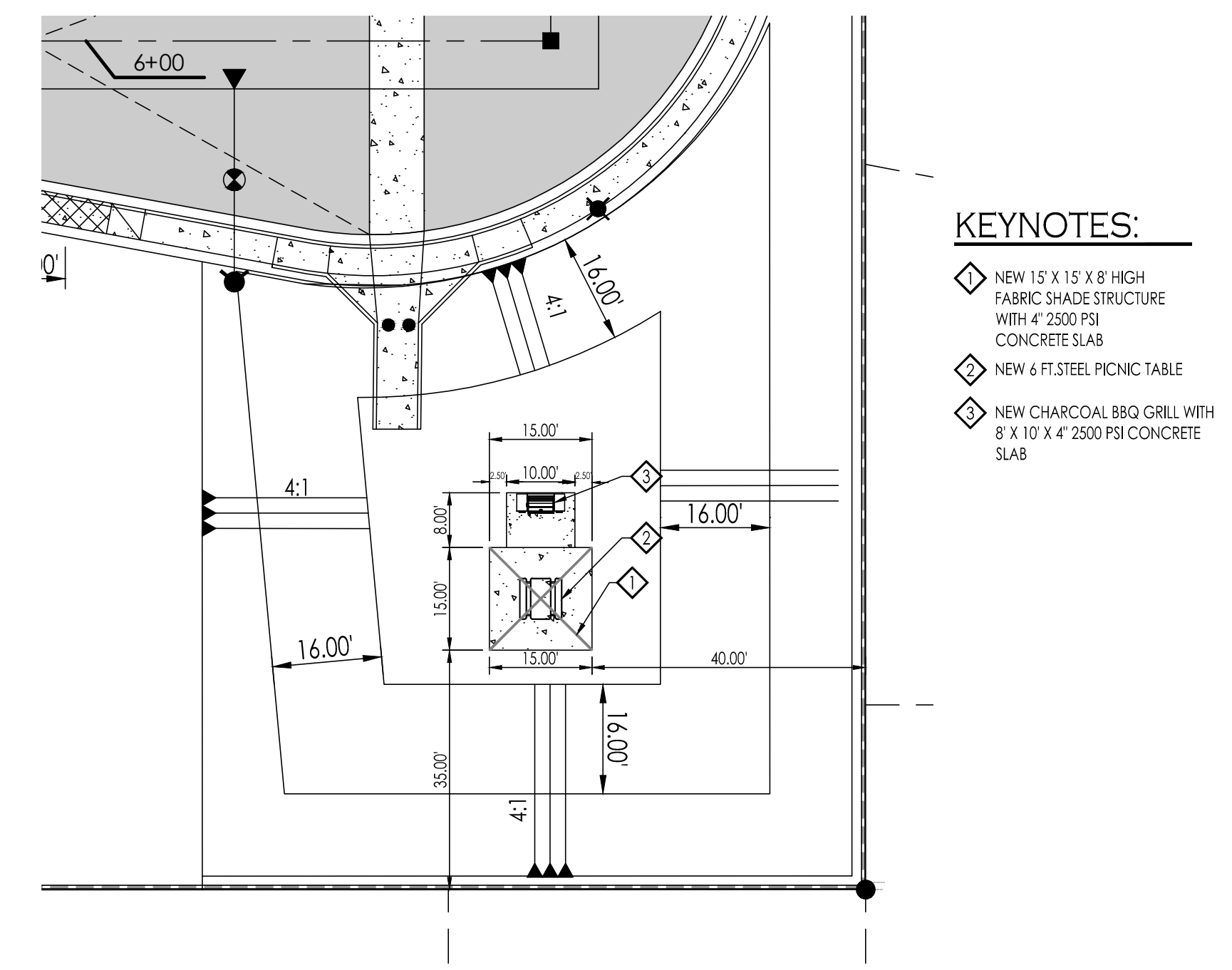
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STORM DRAIN OUTLET STRUCTURE

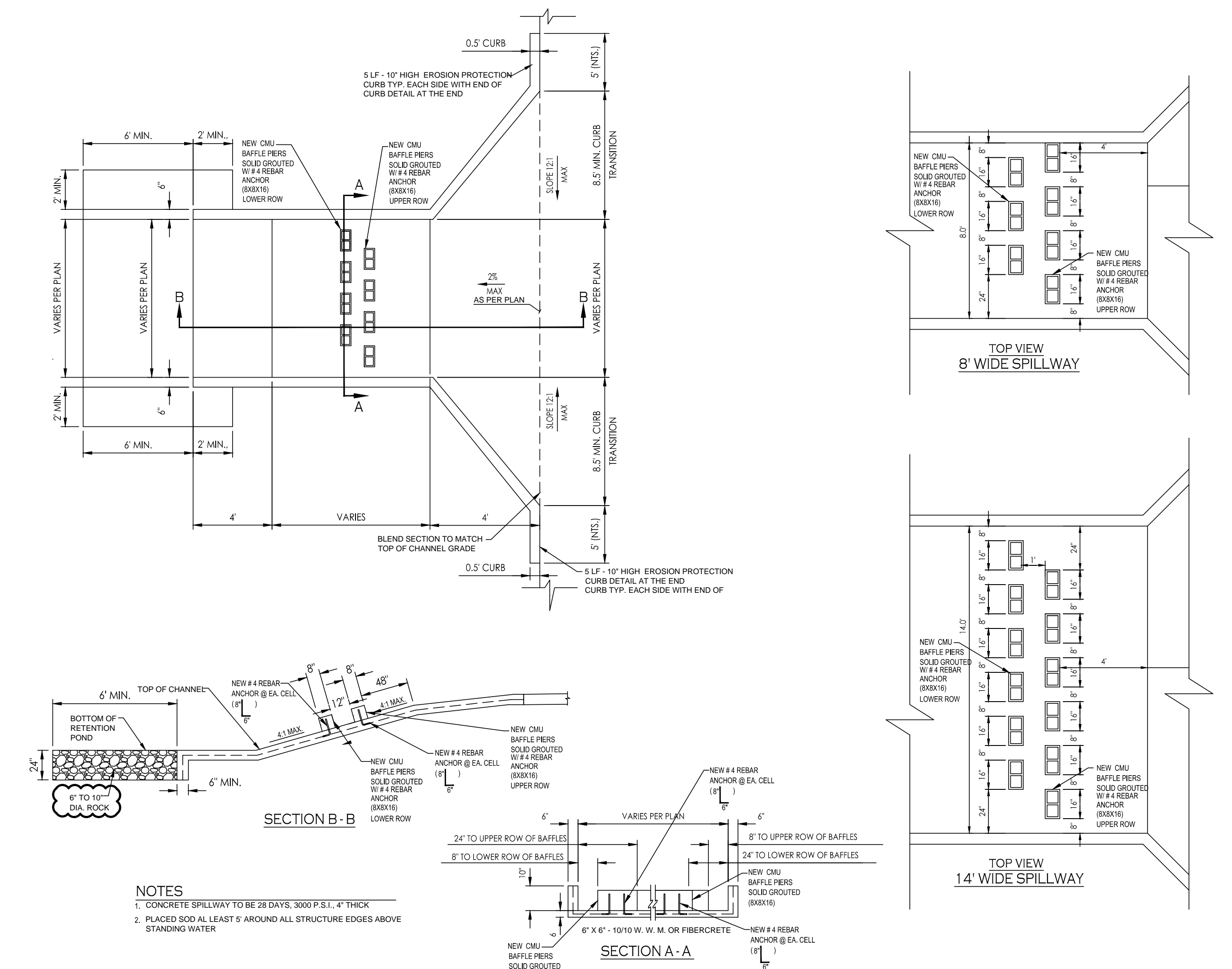


GUARD POST DETAIL

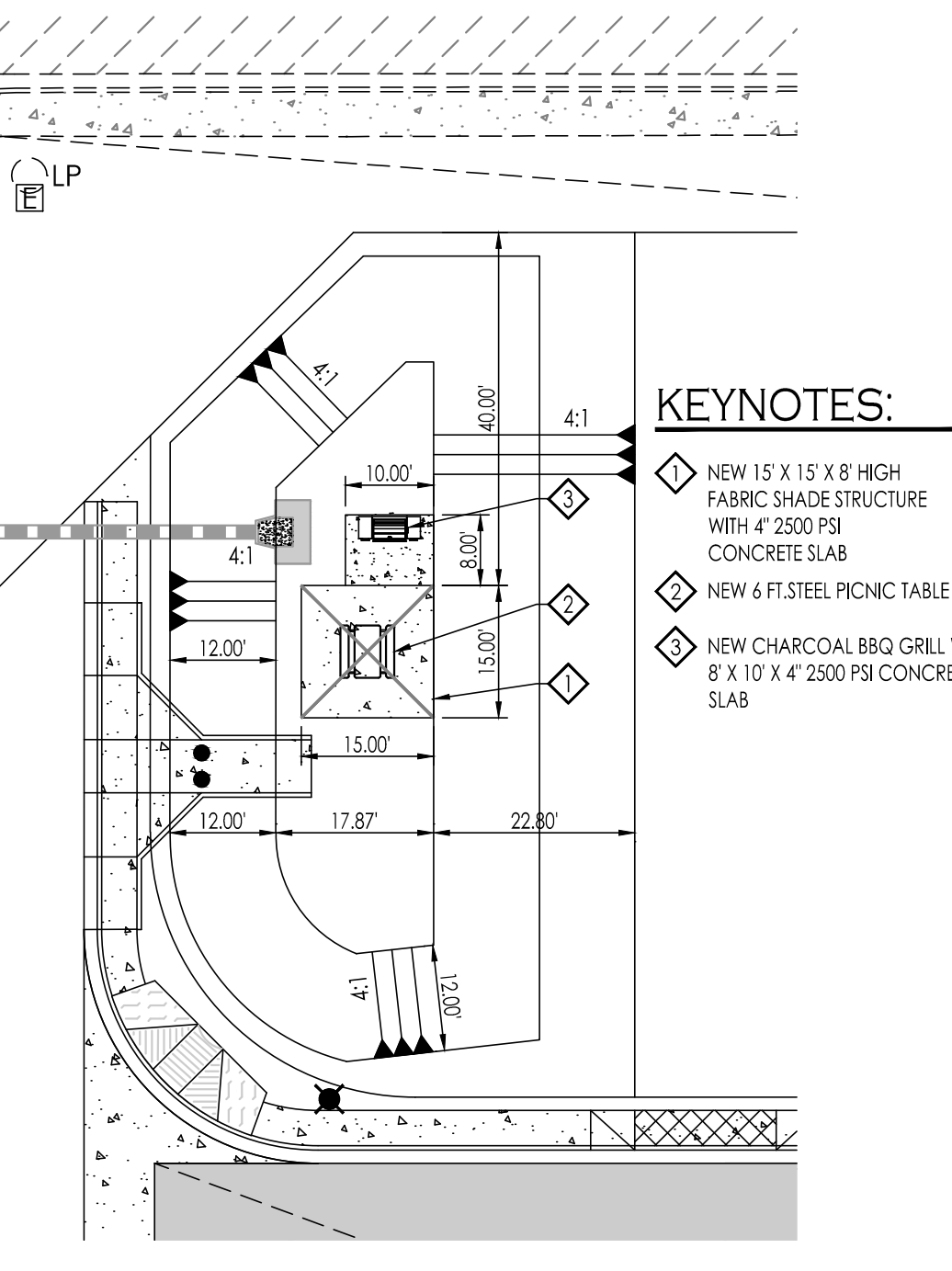


RETENTION BASIN # 2 AMENITIES

- KEYNOTES:**
- ◇ NEW 15' X 15' X 8' HIGH FABRIC SHADE STRUCTURE WITH 4" 2500 PSI CONCRETE SLAB
 - ◇ NEW 6 FT STEEL PICNIC TABLE
 - ◇ NEW CHARCOAL BBQ GRILL WITH 8' X 10' X 4" 2500 PSI CONCRETE SLAB



CONCRETE SPILLWAY



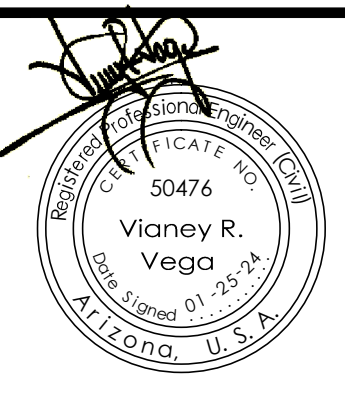
RETENTION BASIN # 1 AMENITIES

- KEYNOTES:**
- ◇ NEW 15' X 15' X 8' HIGH FABRIC SHADE STRUCTURE WITH 4" 2500 PSI CONCRETE SLAB
 - ◇ NEW 6 FT STEEL PICNIC TABLE
 - ◇ NEW CHARCOAL BBQ GRILL WITH 8' X 10' X 4" 2500 PSI CONCRETE SLAB

GENERAL NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF SITE AND SOIL CONDITION AND SHALL NOTIFY ALL UTILITY AGENCIES PRIOR TO EXCAVATION.
2. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY CONDITIONS REQUIRING CHANGE TO THE PLANS.
3. CONTRACTOR SHALL NOTIFY THE CITY OF YUMA PRIOR TO START OF CONSTRUCTION.
4. STANDARD SPECIFICATIONS AND ARIZONA STATE HEALTH DEPARTMENT BUL. NO. 11 SHALL APPLY TO THIS PROJECT.
5. ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR TWO YEARS AFTER THE FINAL ACCEPTANCE.
6. UNLESS HERON REVISED, ALL CONSTRUCTION MATERIALS AND WORKMANSHIP WILL BE IN ACCORDANCE WITH CITY OF YUMA SPECIFICATIONS AND RECOMMENDED DETAILS AND SHALL, WHERE APPLICABLE, BE IN ACCORDANCE WITH ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY REGULATIONS.
7. NO STREET, WATER, SEWER AND IMPROVEMENTS TO BE ACCEPTED BY THE CITY OF YUMA, FOR MAINTENANCE UNTIL "AS-BUILT", CERTIFIED. REPRODUCIBLE PLANS ARE FILED WITH AND ACCEPTED BY THE CITY OF YUMA PUBLIC WORKS DEPARTMENT.
8. CONTRACTOR WILL PROVIDE THE ENGINEER WITH ALL COUNTY REQUIRED COMPACTION AND CONCRETE TESTS.
9. FLANGE BOLTS SHALL BE PROTECTED BY 10 MIL POLYETHYLENE WRAP.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION AND FURNISHING TO THE ENGINEER OF "AS-BUILT" RECORD DRAWINGS. TO INCLUDE COST BREAKDOWN FOR WATER. THE CONTRACTOR SHALL OBTAIN ONE SET OF PLANS FROM THE ENGINEER AND SHALL RECORD IN RED COLORED PENCIL ALL CASES WHERE ACTUAL FIELD CONSTRUCTION DIFFERS FROM WORK SHOWN ON THE PLANS, TO INCLUDE SERVICE LOCATIONS.
11. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE BLUE STAKE CENTER TO LOCATE ALL UNDERGROUND EQUIPMENT WITHIN THE CONSTRUCTION AREA TWO WORKING DAYS PRIOR TO THE START OF ANY EXCAVATION.
12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES. OMISSION FROM, OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF, OR A DEFINITE LOCATION OF, EXISTING UNDERGROUND UTILITIES.
13. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE DUE TO HIS OPERATIONS. ANY DAMAGE TO THE UTILITIES SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.
14. INSTALL TRACER WIRE AS PER CITY OF YUMA STANDARDS
15. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT CONSTRUCTION MATERIAL SUBMITTALS TO CITY OF SAN LUIS FOR REVIEW AND APPROVAL.

Details And Water And Sewer Notes
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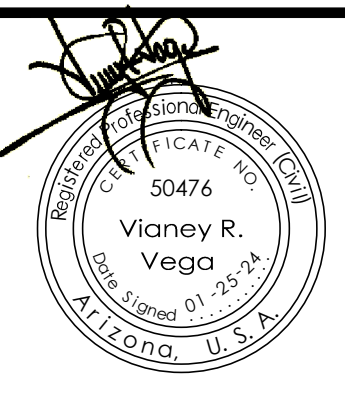
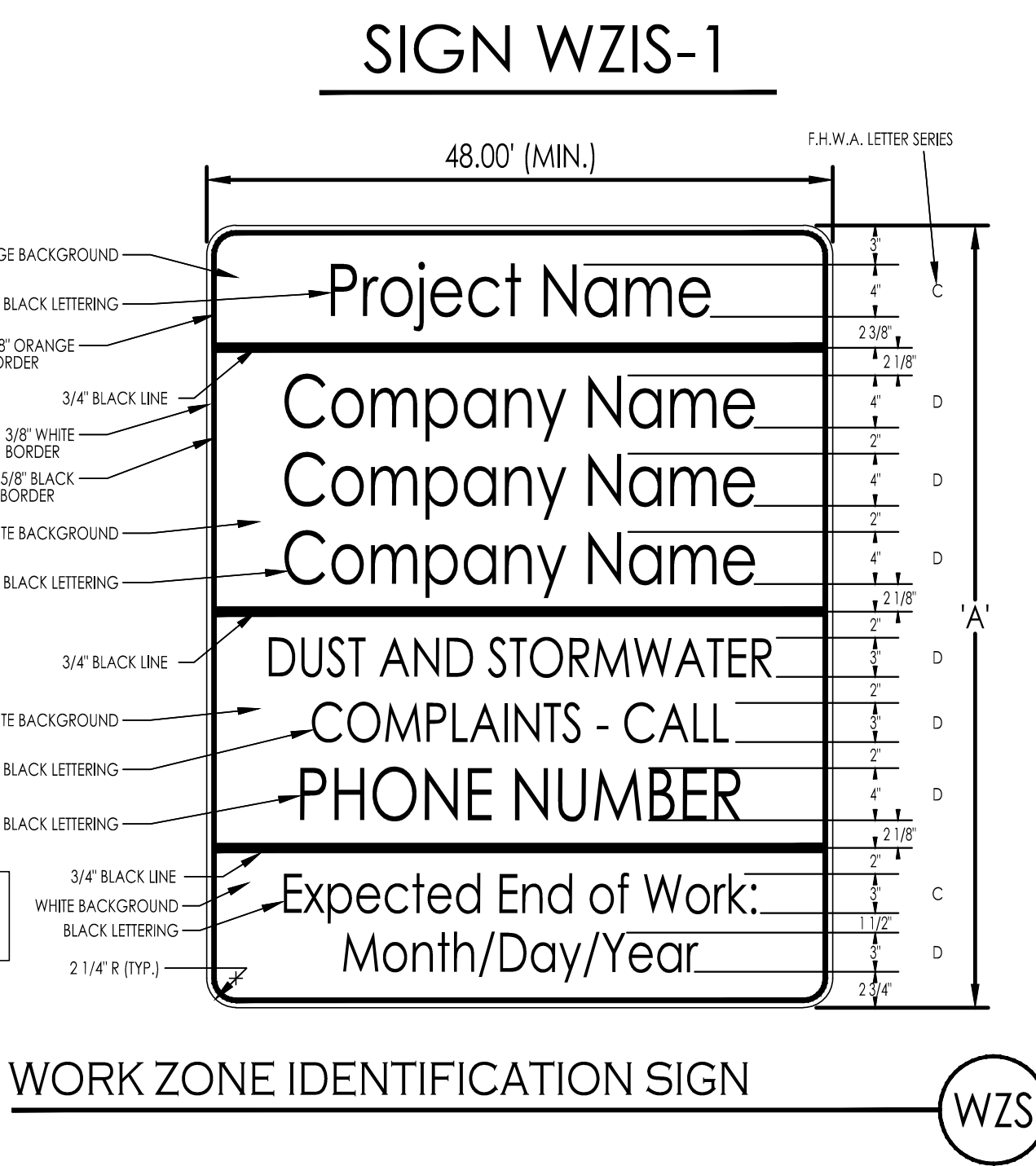
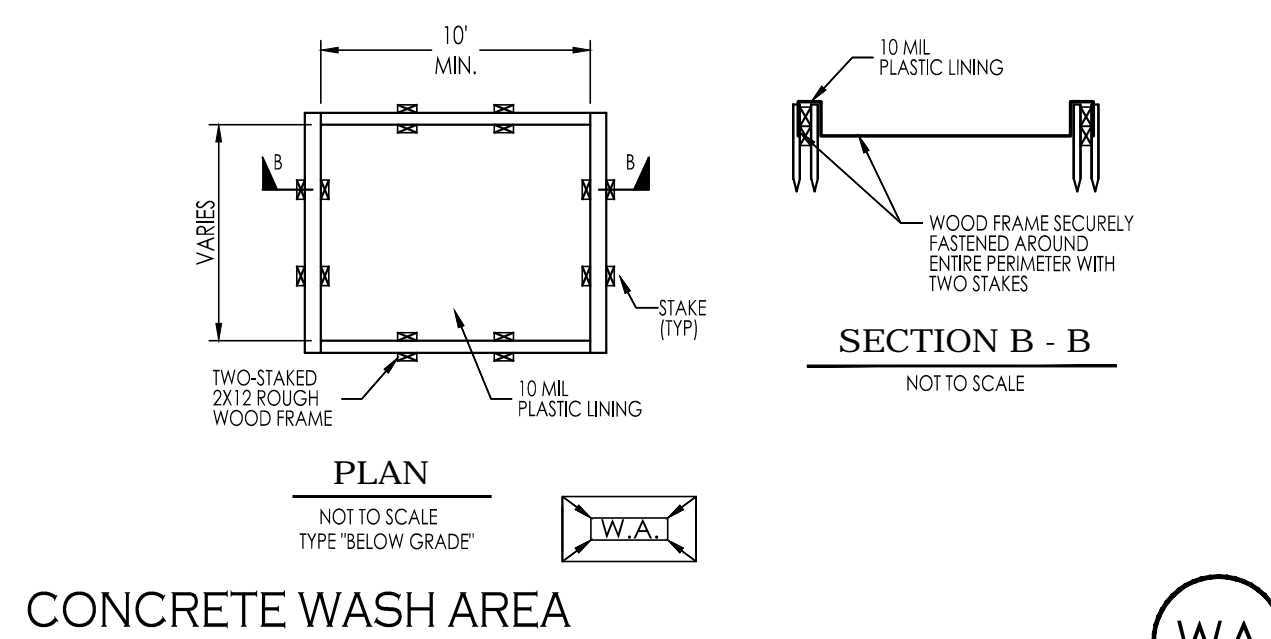
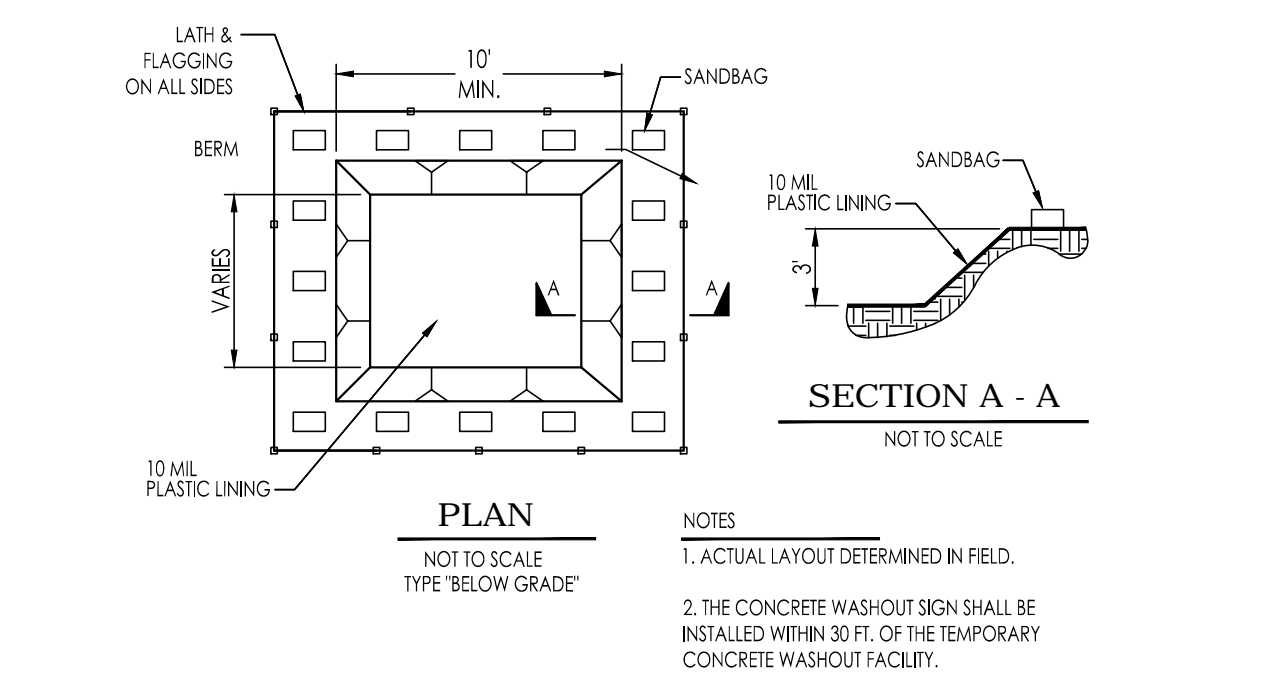
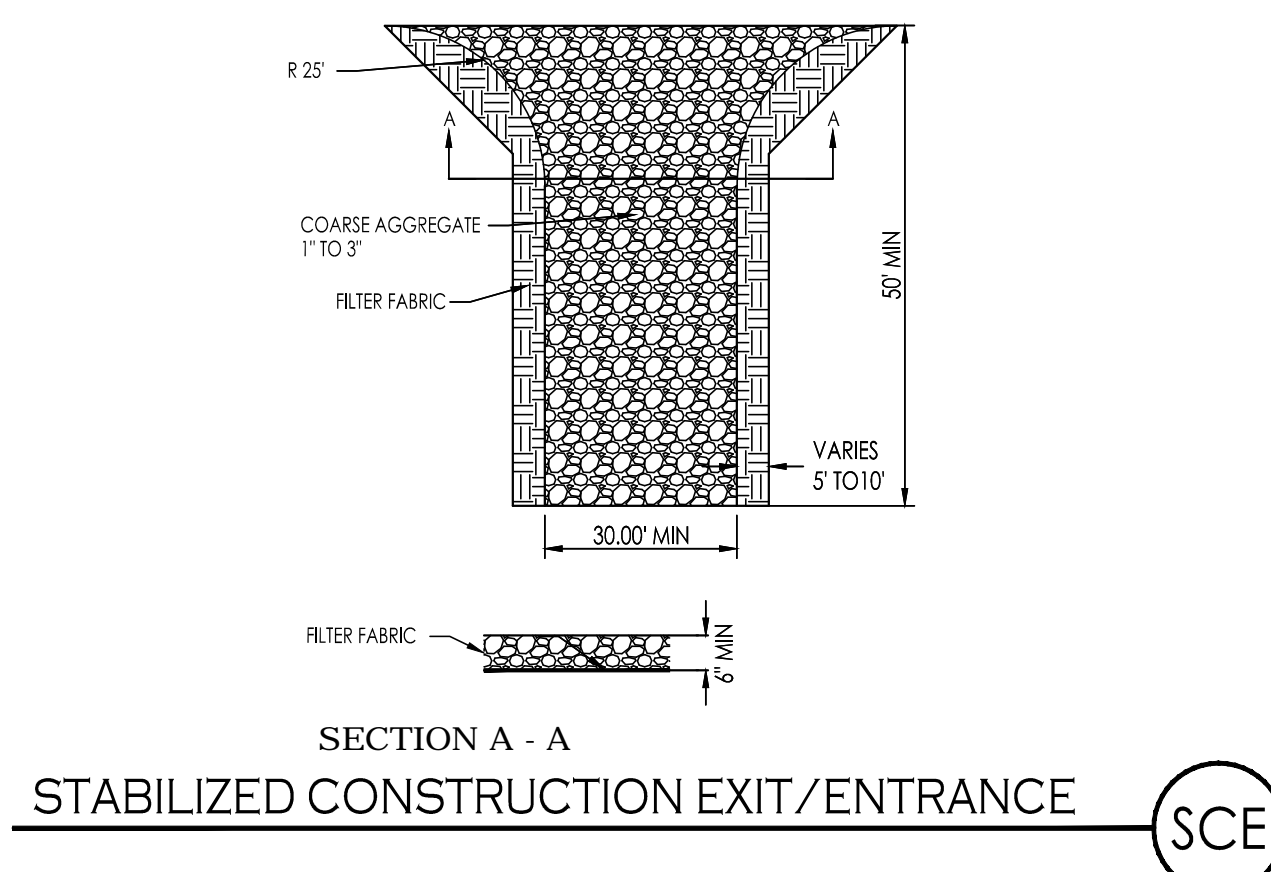
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CONSTRUCTION NOTES

1. AFTER PERMITS HAVE BEEN OBTAINED & EROSION CONTROL MEASURES INSTALLED, THE CONTRACTOR SHALL ROUGH GRADE SITE.
2. CONTRACTOR SHALL PREVENT ANY SILTATION FROM ENTERING ANY STORM SEWER SYSTEM. ALL INLETS & INLET OPENINGS SHALL BE FULLY ENCLOSED WITH SILT FENCE DURING AND AFTER CONSTRUCTION OF INLET.
3. NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
4. MAINTAIN EROSION CONTROL MEASURES AT ALL TIMES ESPECIALLY BEFORE ANY PREDICTABLE RAIN.
5. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE; AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE. THIS PLAN IS INTENDED TO BE UPDATED BY A QUALIFIED PERSON AS CONSTRUCTION ACTIVITIES PROCEED. METHODS OF EROSION CONTROL SHALL BE TAKEN FROM "DRAINAGE DESIGN FOR YUMA COUNTY, ARIZONA, VOLUME III EROSION CONTROL".
6. CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
7. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION.
8. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES.
9. IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
10. ALL EXISTING STRUCTURES, FENCING, TREES, AND ETC., WITHIN CONSTRUCTION AREA SHALL BE REMOVED AND DISPOSED OF OFF SITE. ANY BURNING ON SITE SHALL BE SUBJECT TO LOCAL ORDINANCES.
11. CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
12. CONTRACTOR TO IDENTIFY ON PLAN AREAS THAT HAVE REACHED FINAL STABILIZATION.



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