

BIENESTAR ESTATES 10

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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 THE 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 YUMA COUNTY, AS ADOPTED BY THE CITY, 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
963 E. "B" STREET
PO BOX 7170
SAN LUIS, AZ., 85349

BENCHMARK:

TOP OF 1/2" REBAR W/ LS 22767
LOCATED AT THE INTERSECTION
OF AVENUE "F" AND COUNTY 24TH
STREET

ELEVATION: 158.95 FEET

ENGINEER:

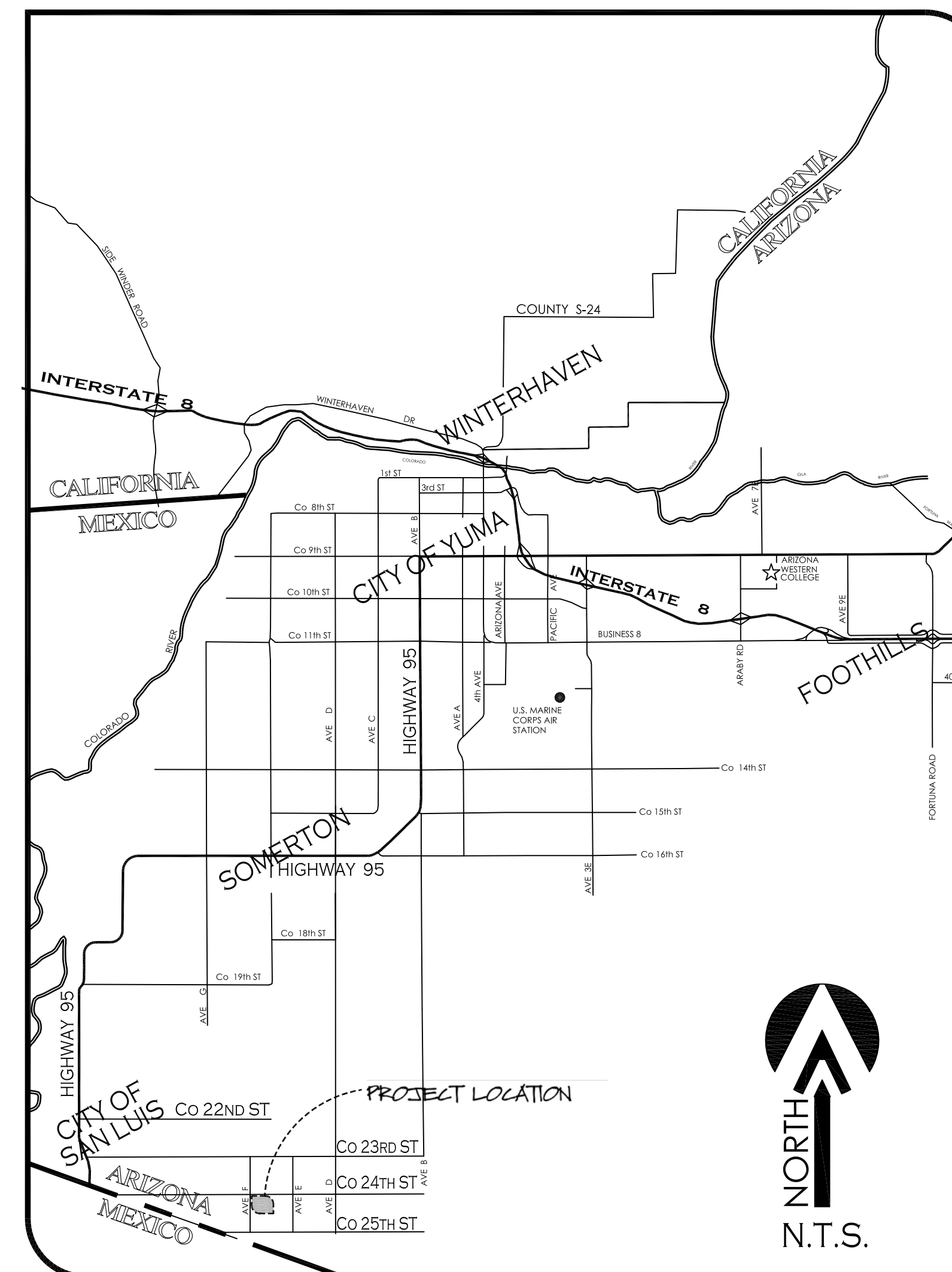
VEGA & VEGA
ENGINEERING, PLLC
1846 S. 8th Avenue 928-329-0000 Tel
Yuma, Az. 85364 928-247-6232 Fax
www.vegaivega.com

BASIS OF BEARING:

THE NORTH SECTION LINE OF SECTION 15, T11S, R24W,
G&SR.B.&M., YUMA COUNTY, ARIZONA (BEGING 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

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 EX. GAS LINE
	INDICATES NEW ASPHALT PAVEMENT
	INDICATES NEW CONCRETE
	INDICATES NEW CMU WALL
	INDICATES EX. CONTOURS ELEVATION
	NEW PVC S
	NEW SEWER STUB
	NEW SEWER MANHOLE
	NEW 4" PVC SEWER SERVICE
	NEW PVC W
	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 No. 4-040 SUBD. 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 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



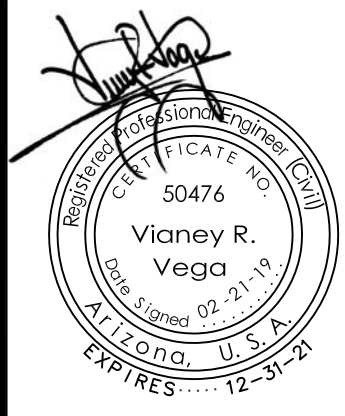
VICINITY MAP
N.T.S.

1846 S. 8th AVENUE 928-329-0000 TEL
YUMA, AZ. 85364 928-247-6232 FAX
VhV@vegaivega.com

VEGA & VEGA
ENGINEERING, PLLC

Cover Sheet

BIENESTAR ESTATES 10



Notes:

Scale: N.T.S. | Date: FEB. 2019
Drawn: Staff | Job #: vrv18-400
Checked: vrv

Sheet 0
of 12

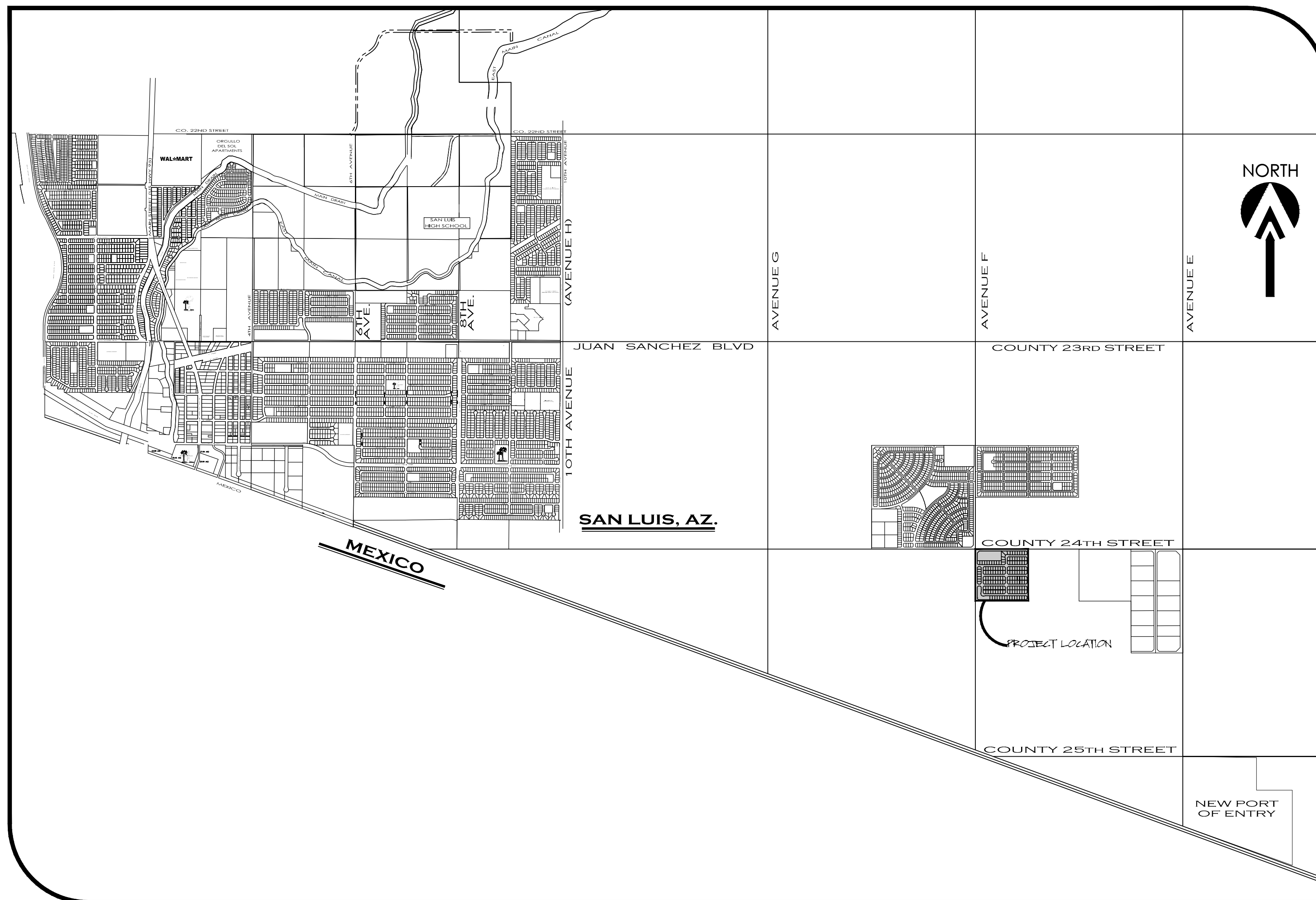


BIENESTAR ESTATES 10

A SUBDIVISION OF THE NW¹/₄ OF THE NW¹/₄ OF SECTION 15, T11S, R24W,
G.&S.R.B.&M., YUMA COUNTY, ARIZONA.

FEBRUARY OF 2019 ACREAGE: 40.91 AC (GROSS)

FINAL PLAT



VICINITY MAP
SCALE: 1"=2000'

DEDICATION:

KNOW ALL MEN BY THESE PRESENTS:
THAT COMITE DE BIENESTAR, INC. AN ARIZONA CORPORATION, AS OWNER HAS CAUSED THE FOLLOWING DESCRIBED PROPERTY, A SUBDIVISION OF THE NW¹/₄ OF THE NW¹/₄ OF SECTION 15, TOWNSHIP 11 SOUTH, RANGE 24 WEST, G.&S.R.B.&M., YUMA COUNTY, AZ, AS PLATTED HEREON, TO BE SUBDIVIDED INTO LOTS, TRACT & STREETS UNDER THE NAME OF "BIENESTAR ESTATES 10 SUBDIVISION" AND HEREBY DECLARES THAT THE ACCOMPANYING PLAT SETS FORTH THE LOCATION AND GIVES THE DIMENSIONS OF LOTS, TRACT AND STREETS CONSTITUTING SAID "BIENESTAR ESTATES 10 SUBDIVISION", THAT EACH LOT SHALL BE KNOWN BY THE NUMBER, TRACT BY THE LETTER AND THE STREETS BY THE NAME GIVEN EACH RESPECTIVELY ON SAID PLAT; AND THAT COMITE DE BIENESTAR, INC. AN ARIZONA CORPORATION, HEREBY DEDICATES THE STREETS SHOWN HEREON TO THE PUBLIC FOR ITS USE AND BENEFIT, TRACT "A" IS DEDICATED TO THE PUBLIC FOR USE AS A STORMWATER RETENTION BASIN AND COMPATIBLE USES, TRACT "B" IS RESERVE FOR FUTURE DEVELOPMENT AS COMMUNITY COMMERCIAL (C2). THE EASEMENTS ARE DEDICATED FOR THE USES SHOWN AND DEFINED ON SAID PLAT AND AS SET FORTH IN THE DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS RECORDED CONCURRENTLY HEREWITH.

IN WITNESS WHEREOF: COMITE DE BIENESTAR, INC. AN ARIZONA CORPORATION, HAS CAUSED ITS CORPORATE NAME TO BE SIGNED AND ITS CORPORATE SEAL TO BE AFFIXED AS ATTESTED BY THE SIGNATURE OF GEORGE GUERRERO, AS PRESIDENT OF COMITE DE BIENESTAR, INC. AN ARIZONA CORPORATION, THEREUNTO DULY AUTHORIZED ON THIS _____ DAY OF _____ 20____.

GEORGE GUERRERO
PRESIDENT OF COMITE DE BIENESTAR, INC. AN ARIZONA CORPORATION.

ACKNOWLEDGMENT

STATE OF ARIZONA)
)SS
COUNTY OF YUMA)

ON THIS THE _____ DAY OF _____, 20____ BEFORE ME, THE UNDERSIGNED NOTARY, PERSONALLY APPEARED: GEORGE GUERRERO, AS PRESIDENT OF COMITE DE BIENESTAR, INC. AN ARIZONA CORPORATION,

IN WITNESS WHEREOF, I HAVE SET MY HAND AND OFFICIAL SEAL.

BY: _____ MY COMMISSION EXPIRES: _____
NOTARY PUBLIC

APPROVED

STATE OF ARIZONA)
)SS
COUNTY OF YUMA)

THIS SUBDIVISION AS PLATTED HEREON HAS BEEN APPROVED BY THE MAYOR AND THE CITY COUNCIL OF THE CITY OF SAN LUIS, ARIZONA

MAYOR

CITY MANAGER

DIRECTOR OF DEVELOPMENT SERVICES

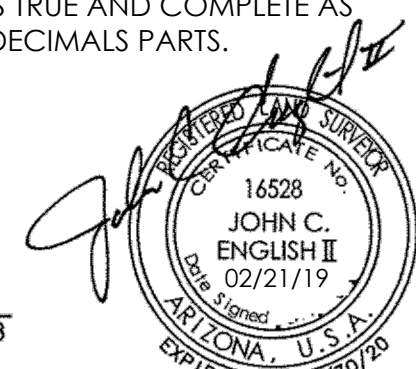
CITY ENGINEER

CITY PUBLIC WORKS DIRECTOR

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 R.L.S. No. 16528



ELABORATED BY: _____

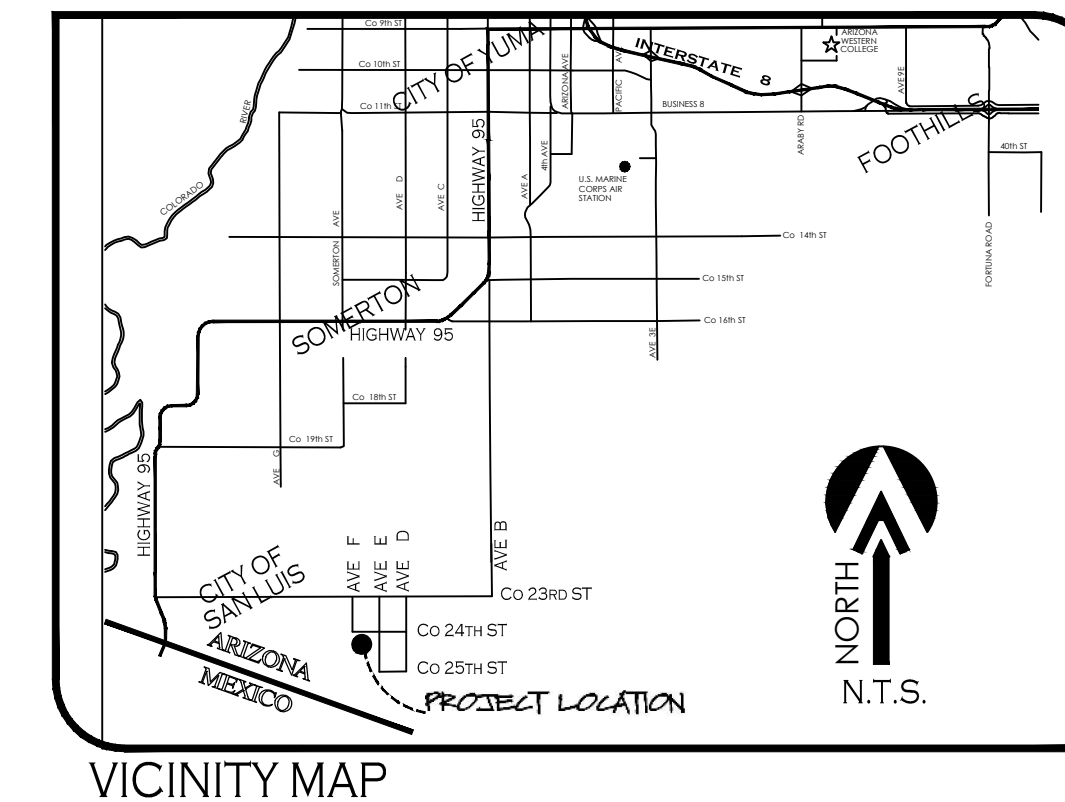
VEGA & VEGA
ENGINEERING, PLLC
1846 S. 8th Avenue 928-329-0000 Tel
Yuma, Az. 85364 928-247-6232 Fax
www.vega\vega.com

BIENESTAR ESTATES 10

A SUBDIVISION OF THE NW 1/4 OF THE NW 1/4 OF SECTION 15, T11S, R24W,
G.&S.R.B.&M., YUMA COUNTY, ARIZONA.

FEBRUARY OF 2019 ACREAGE: 40.91 AC (GROSS)

FINAL PLAT



SCALE: 1"=100'

OWNER OF RECORD:

COMITE DE BIENESTAR INC. AZ CORP.
943 E. 5TH 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 (BING 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

KEYNOTES

- ① NEW 8' UTILITY EASEMENT
- ② NEW 1' NON-ACCESS EASEMENT
- ③ NEW 25' DRAINAGE EASEMENT

PROPERTY CORNERS TO BE MARKED BY 1/2" DIAMETER REBAR
TAGGED WITH CAP I.S. 16528

ELABORATED BY:

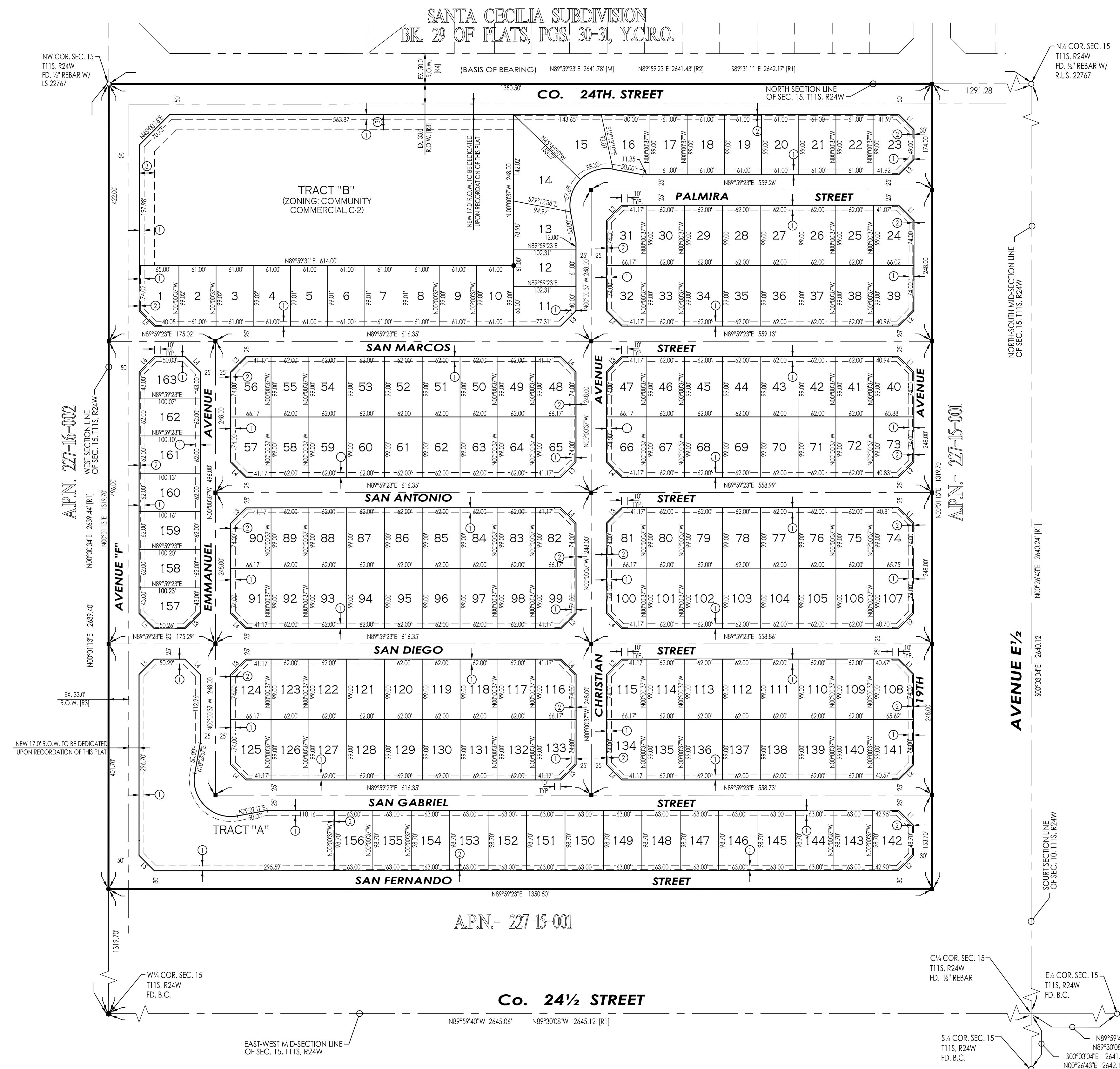
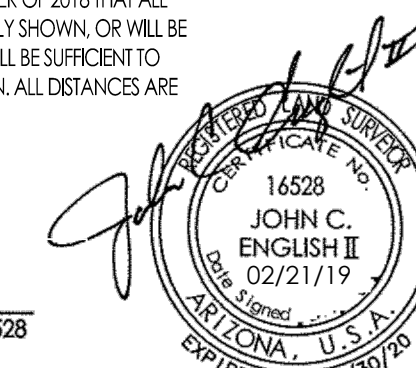
VNV18-400

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BY: *John C. English*
JOHN C. ENGLISH R.L.S. No. 16528



LINE DATA

LINE NUMBER	BEARING	LENGTH (FEET)
L1	N44°59'42"W	35.33'
L2	N45°00'18"E	35.33'
L3	N44°59'23"E	35.33'
L4	N45°00'37"W	35.33'
L5	N44°59'44"W	35.33'
L6	N45°00'16"E	35.33'

LOT AREAS TABLE:

LOT #	AREA (SF)	LOT #	AREA (SF)	LOT #	AREA (SF)	LOT #	AREA (SF)	LOT #	AREA (SF)	LOT #	AREA (SF)	LOT #	AREA (SF)
1	6126.52	21	6039.00	41	6138.00	61	6138.00	81	6238.80	101	6138.00	121	6138.00
2	6040.23	22	6039.00	42	6138.00	62	6138.00	82	6238.80	102	6138.00	122	6138.00
3	6040.09	23	6002.74	43	6138.00	63	6138.00	83	6138.00	103	6138.00	123	6138.00
4	6039.94	24	6225.72	44	6138.00	64	6138.00	84	6138.00	104	6138.00	124	6238.80
5	6039.80	25	6138.00	45	6138.00	65	6238.80	85	6138.00	105	6138.00	125	6238.80
6	6039.65	26	6138.00	46	6138.00	66	6238.80	86	6138.00	106	6138.00	126	6138.00
7	6039.51	27	6138.00	47	6238.80	67	6138.00	87	6138.00	107	6194.42	127	6138.00
8	6039.36	28	6138.00	48	6238.80	68	6138.00	88	6138.00	108	6386.58	128	6138.00
9	6039.22	29	6138.00	49	6138.00	69	6138.00	89	6138.00	109	6138.00	129	6138.00
10	6039.07	30	6138.00	50	6138.00	70	6138.00	90	6238.80	110	6138.00	130	6138.00
11	6337.33	31	6238.80	51	6138.00	71	6138.00	91	6238.80	111	6138.00	131	6138.00
12	6240.61	32	6238.80	52	6138.00	72	6138.00	92	6138.00	112	6138.00	132	6138.00
13	6867.39	33	6138.00	53	6138.00	73	6207.46	93	6138.00	113	6138.00	133	6238.80
14	10150.51	34	6138.00	54	6138.00	74	6199.63	94	6138.00	114	6138.00	134	6238.80
15	9978.19	35	6138.00	55	6138.00	75	6138.00	95	6138.00	115	6238.80	135	6138.00
16	6646.73	36	6138.00	56	6238.80	76	6138.00	96	6138.00	116	6238.80	136	6138.00
17	6039.00	37	6138.00	57	6238.80	77	6138.00	97	6138.00	117	6138.00	137	6138.00
18	6039.00	38	6138.00	58	6138.00	78	6138.00	98	6138.00	118	6138.00	138	6138.00
19	6039.00	39	6220.51	59	6138.00	79	6138.00	99	6238.80	119	6138.00	139	6138.00
20	6039.00	40	6212.67	60	6138.00	80	6138.00	100	6238.80	120	6138.00	140	6209.20

KEYNOTES:

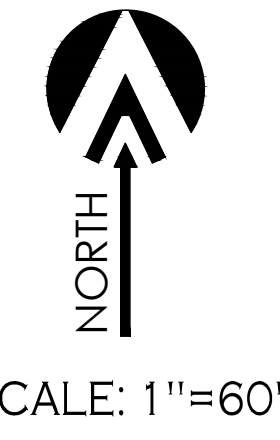
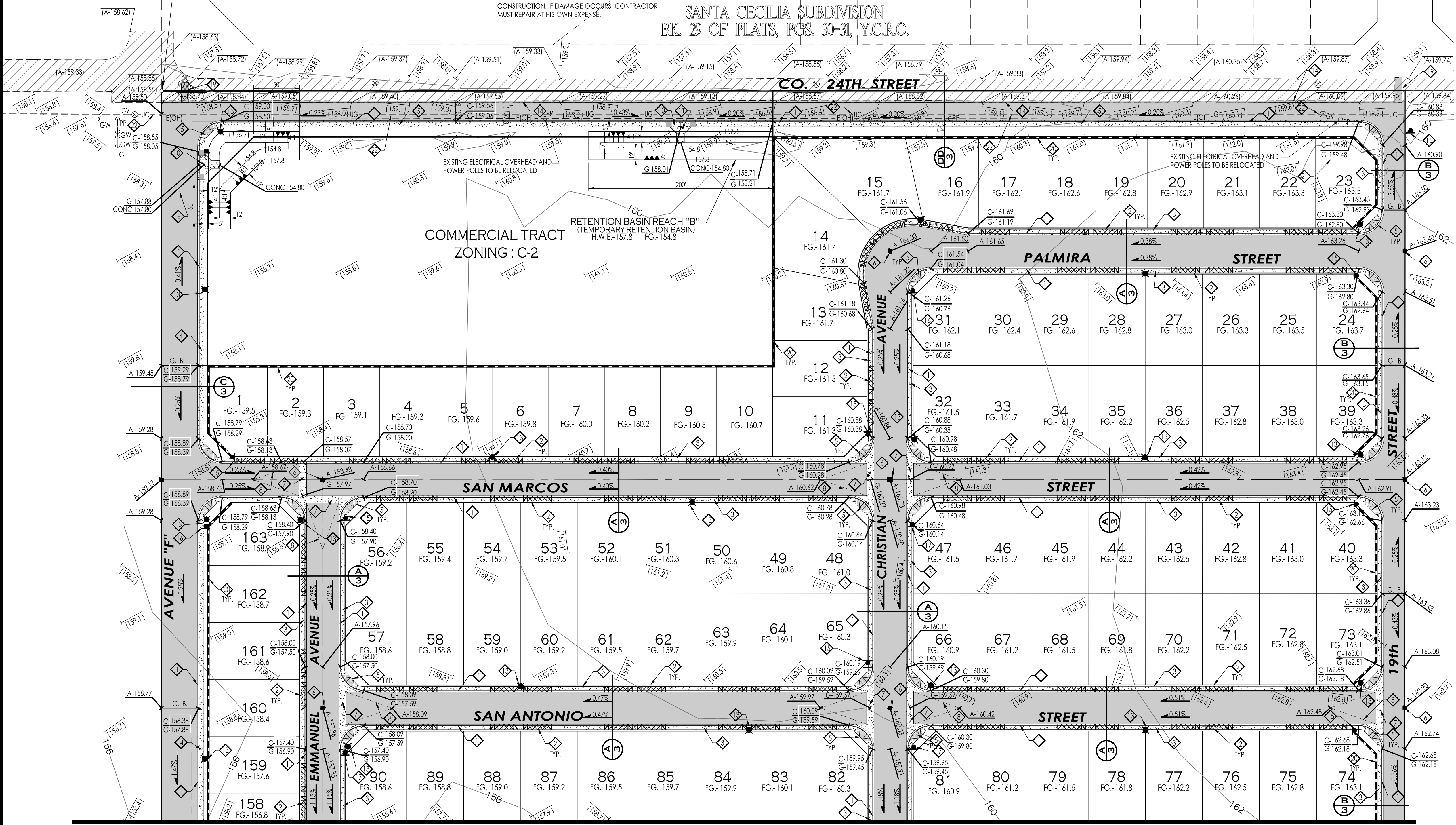
- ◆ NEW VERTICAL CURB & GUTTER - SEE DETAIL (D 3)
- ◆ NEW 21' WIDE DRIVEWAY - SEE DETAIL (E 3)
- ◆ NEW 4' CONCRETE SIDEWALK - SEE DETAIL (H 3)
- ◆ NEW 5' CONCRETE SIDEWALK - SEE DETAIL (H 3)
- ◆ NEW CONCRETE SIDEWALK RAMP (25' RADIUS MEASURED TO FACE OF CURB) - SEE DETAIL (I 3)
- ◆ NEW STREET MONUMENT - SEE DETAIL (F 3)
- ◆ NEW 8' CROSS VALLEY GUTTER - SEE DETAIL (D 2)
- ◆ NEW 50' CROWN TRANSITION
- ◆ NEW SUB'D BOUNDARY MONUMENT - SEE DETAIL (G 3)
- ◆ NEW DEPRESSED SIDEWALK - SEE DETAIL (O 4)
- ◆ NEW 8' CONCRETE SPILLWAY - SEE DETAIL (P 4)
- ◆ NEW 10' CROSS GUTTER - SEE DETAIL (R 4)
- ◆ NEW STREET LIGHT - SEE DETAIL (M 4)
- ◆ SAWCUT 1' OF EXISTING PAVEMENT, REMOVE AND REPLACE WITH NEW PAVEMENT - SEE DETAIL (L 3)
- ◆ NEW DOUBLE FACED STREET SIGN-STOP SIGN - SEE DETAIL (4)
- ◆ NEW DOUBLE FACED STREET SIGN - SEE DETAIL (4)
- ◆ NEW STOP SIGN
- ◆ NEW TYPE III BARRICADE - SEE DETAIL (N 4)
- ◆ SAWCUT AND REMOVE EXISTING PAVEMENT AS NEEDED FOR CONNECTION OF NEW WATER MAIN. REFER TO WATER & SEWER PLANS FOR MORE INFORMATION
- ◆ NEW 6' HIGH CMU WALL - SEE DETAIL (J 3)
- ◆ EXISTING WATER WELL TO BE ABANDONED AND ALL EQUIPMENT AND FENCE TO BE REMOVED. CONTRACTOR TO ACQUIRE ALL PERMITS AND CLOSURE DOCUMENTS.
- ◆ CONTRACTOR TO PROTECT EXISTING UNDERGROUND GAS LINE AND EXISTING GAS VALVES DURING CONSTRUCTION. IF DAMAGE OCCURS, CONTRACTOR MUST REPAIR AT HIS OWN EXPENSE.

DRAINAGE REPORT

SEE SHEET 2 FOR DRAINAGE REPORT

BENCHMARK
TOP OF 1/2" REBAR W/ L5 22767 LOCATED AT THE INTERSECTION OF AVENUE "F" AND COUNTY 24TH STREET
ELEVATION: 158.95 FEET

SANTA CECILIA SUBDIVISION
BK. 29 OF PLATS, PGS. 30-31, Y.C.R.O.



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
- EX. GAS = 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)
- B.C. INDICATES BRASS CAP
- Y.C.R. INDICATES YUMA COUNTY RECORDERS
- PP INDICATES EXISTING POWER POLE
- [C] INDICATES CALCULATED DATA
- [M] INDICATES MEASURED DATA
- [E] 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
- C INDICATES EX. CURB ELEVATION
- S INDICATES EX. SIDEWALK ELEVATION
- A INDICATES EX. ASPHALT ELEVATION
- N INDICATES EX. NATURAL SOIL ELEVATION
- A INDICATES NEW ASPHALT ELEVATION
- C INDICATES NEW CURB ELEVATION
- G INDICATES NEW GUTTER ELEVATION
- 57 INDICATES LOT NUMBERS

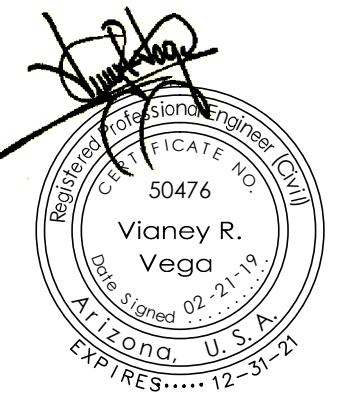
BENCHMARK

TOP OF 1/2" REBAR W/ L5 22767
LOCATED AT THE INTERSECTION OF AVENUE "F" AND COUNTY 24TH STREET
ELEVATION: 158.95 FEET

MATCH LINE SEE SHEET 2 OF 12

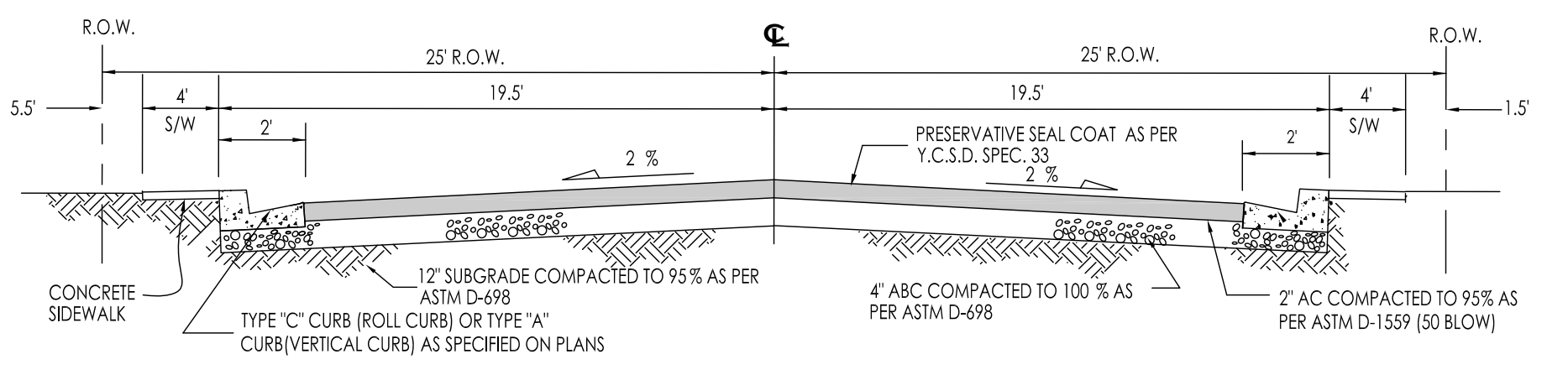
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YUMA, AZ 85364 928-247-6232 FAX
V@vega.com
VEGA & VEGA
ENGINEERING, PLLC

Paving & Grading Plan
BIENESTAR ESTATES 10



Notes:
Scale: N.T.S. [Date: FEB. 2019]
Drawn: Staff [Job #: VV18-400]
Checked: Vno

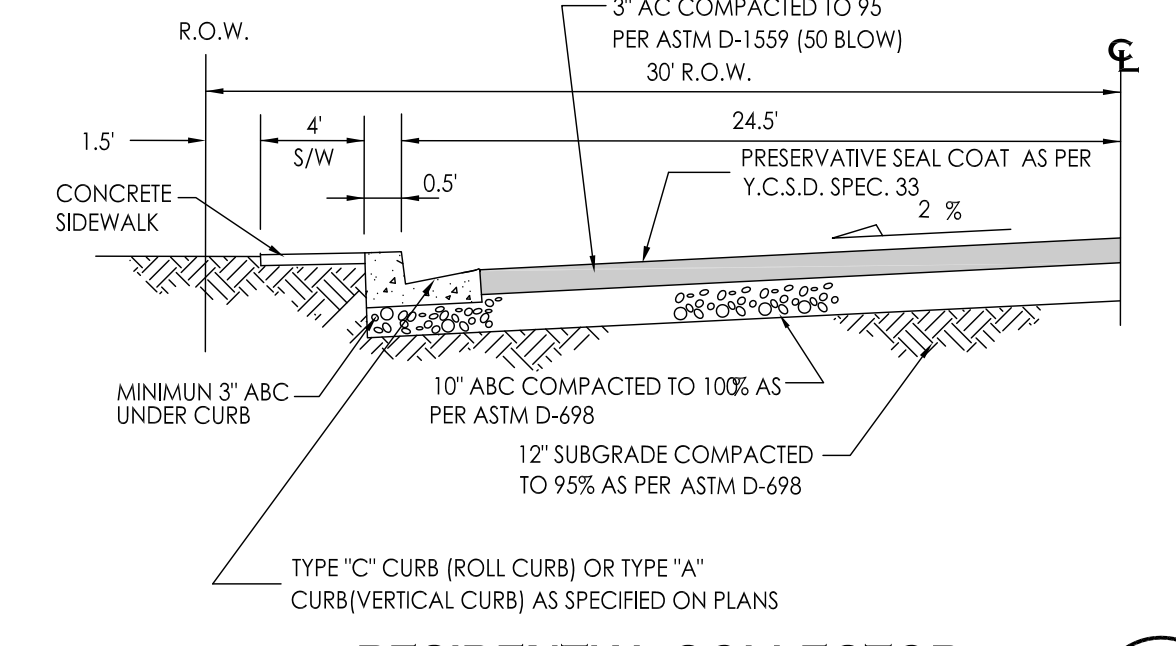
CALL TWO WORKING DAYS BEFORE YOU DIG
1-800-STAKE-IT



LOCAL RESIDENTIAL STREETS

(YUMA COUNTY STD-2-050)

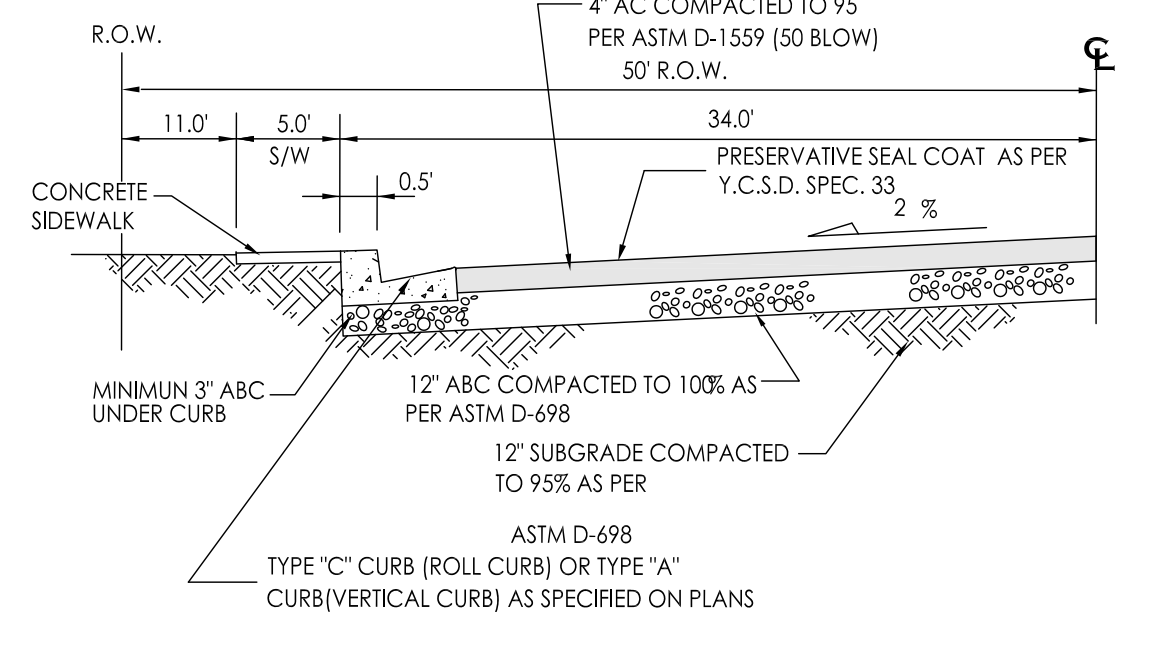
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3



RESIDENTIAL COLLECTOR

(YUMA COUNTY STD-2-050)

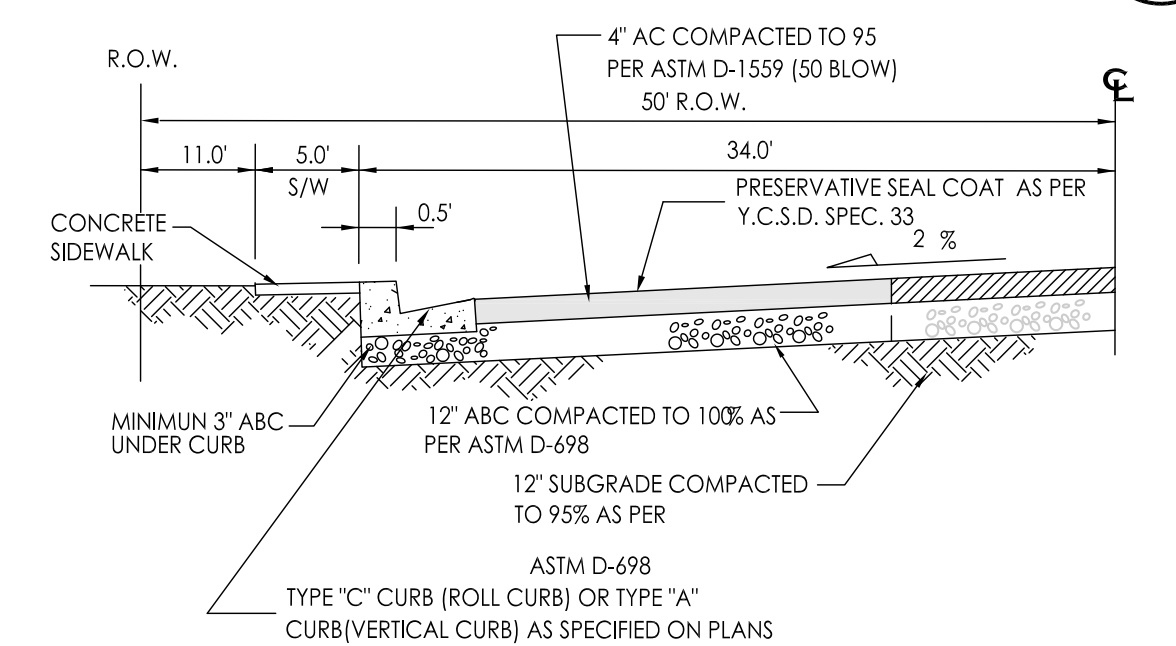
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AVENUE "F"

(YUMA COUNTY STD-2-050)

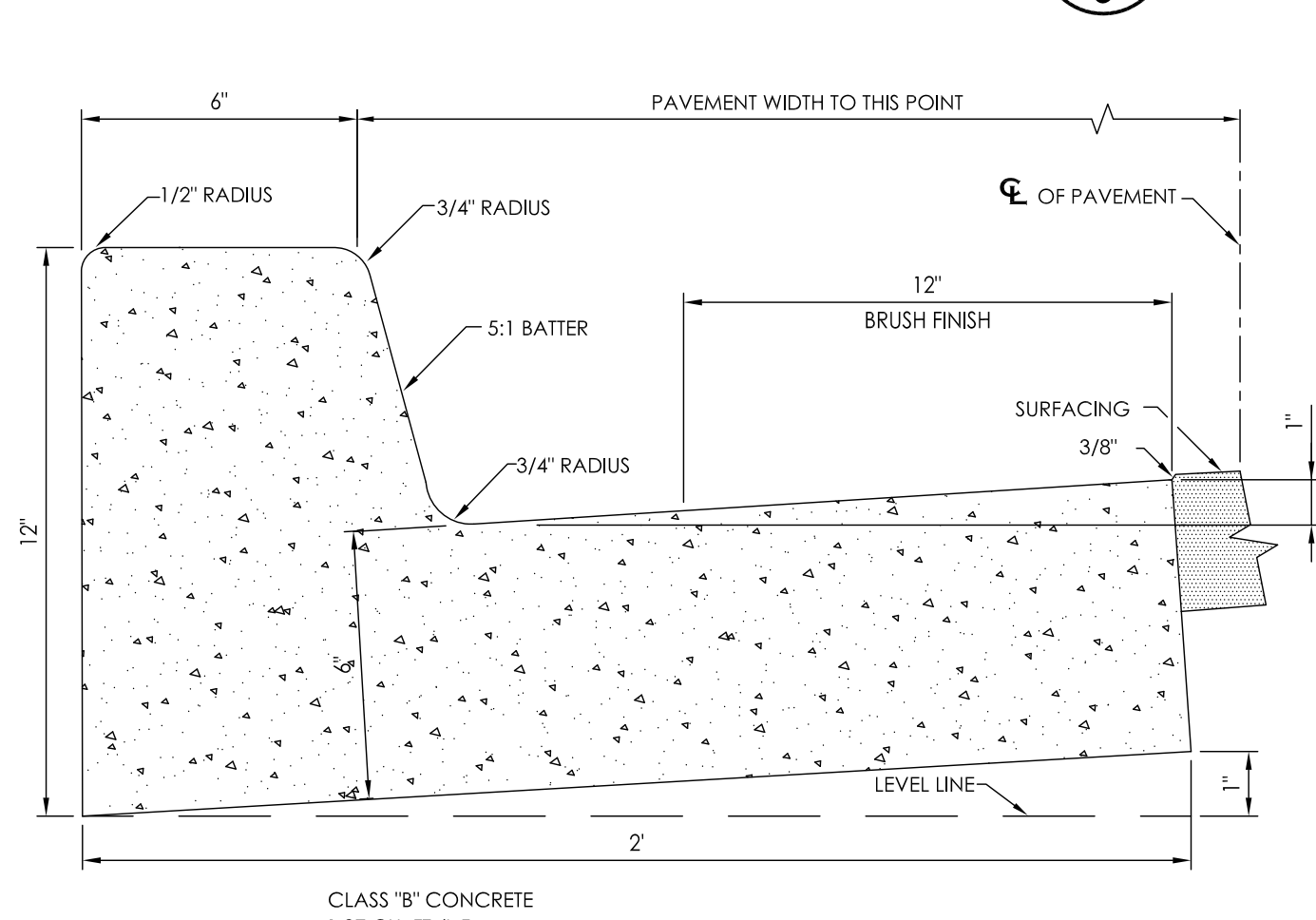
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3



CO. 24TH STREET

(YUMA COUNTY STD-2-050)

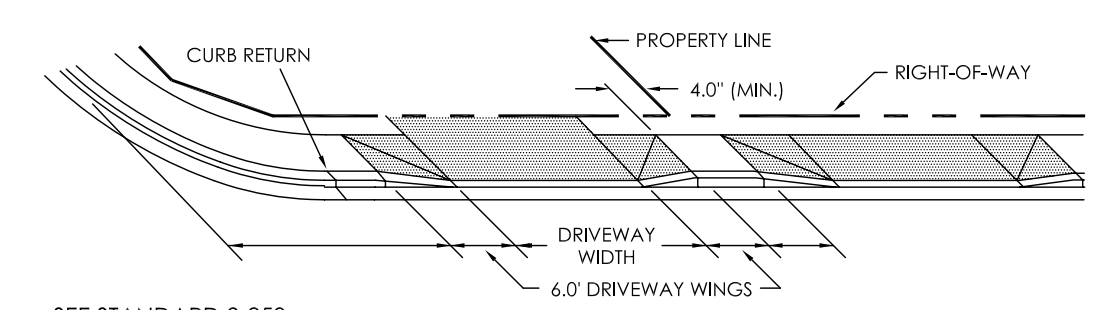
CC
3



TYPE "A" CURB

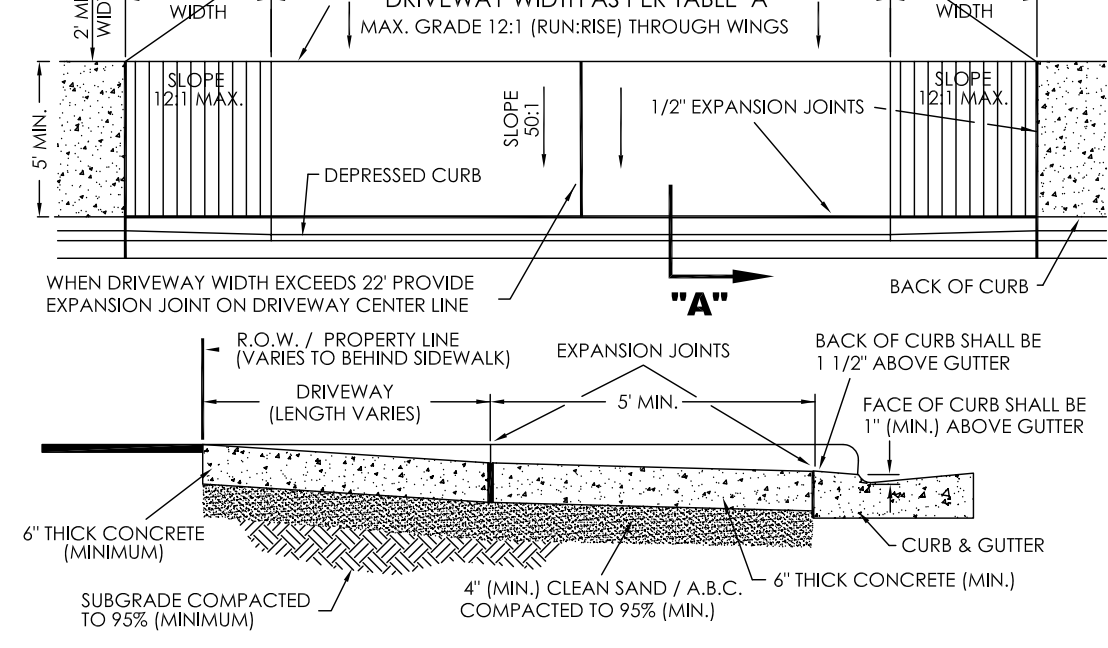
(YUMA COUNTY STD-3-120)

D
3



SECTION "A-A"

SEE STANDARD 3-250



SECTION "A-A"

CLASS "B" CONCRETE CONSTRUCTION

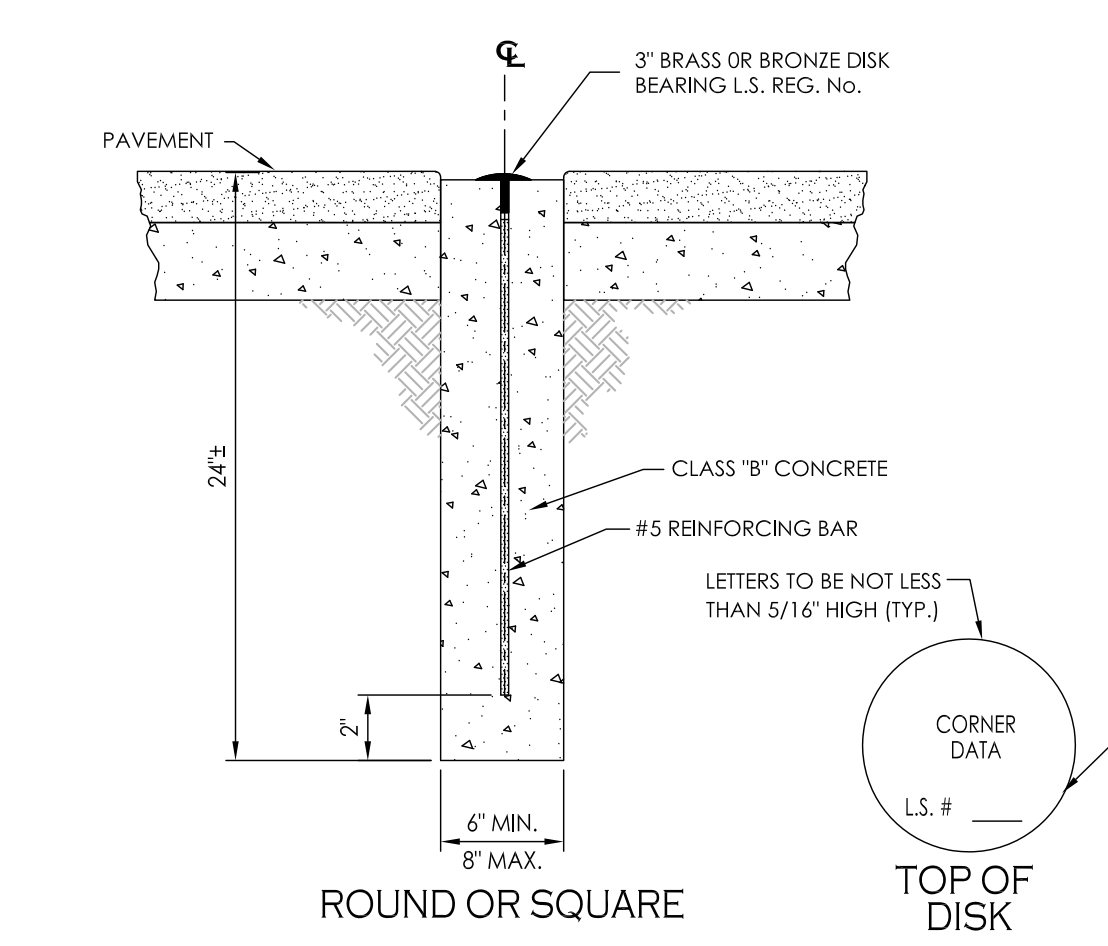
NOTES

- Expansion joints shall be located at tangent points in curb returns, at structures and placed at 20' intervals (maximum). The one-half inch (1/2") joint filler shall be the bituminous type meeting A.S.T.M. D-1751, D-1752 or ASTM D-1751 specifications and shall extend the full depth of the concrete.
- Approved driveway locations can be found in Standard Detail 3-250.

DRIVEWAY ENTRANCE WITH SIDEWALK ADJACENT TO CURB

CITY OF YUMA STD. 3-210

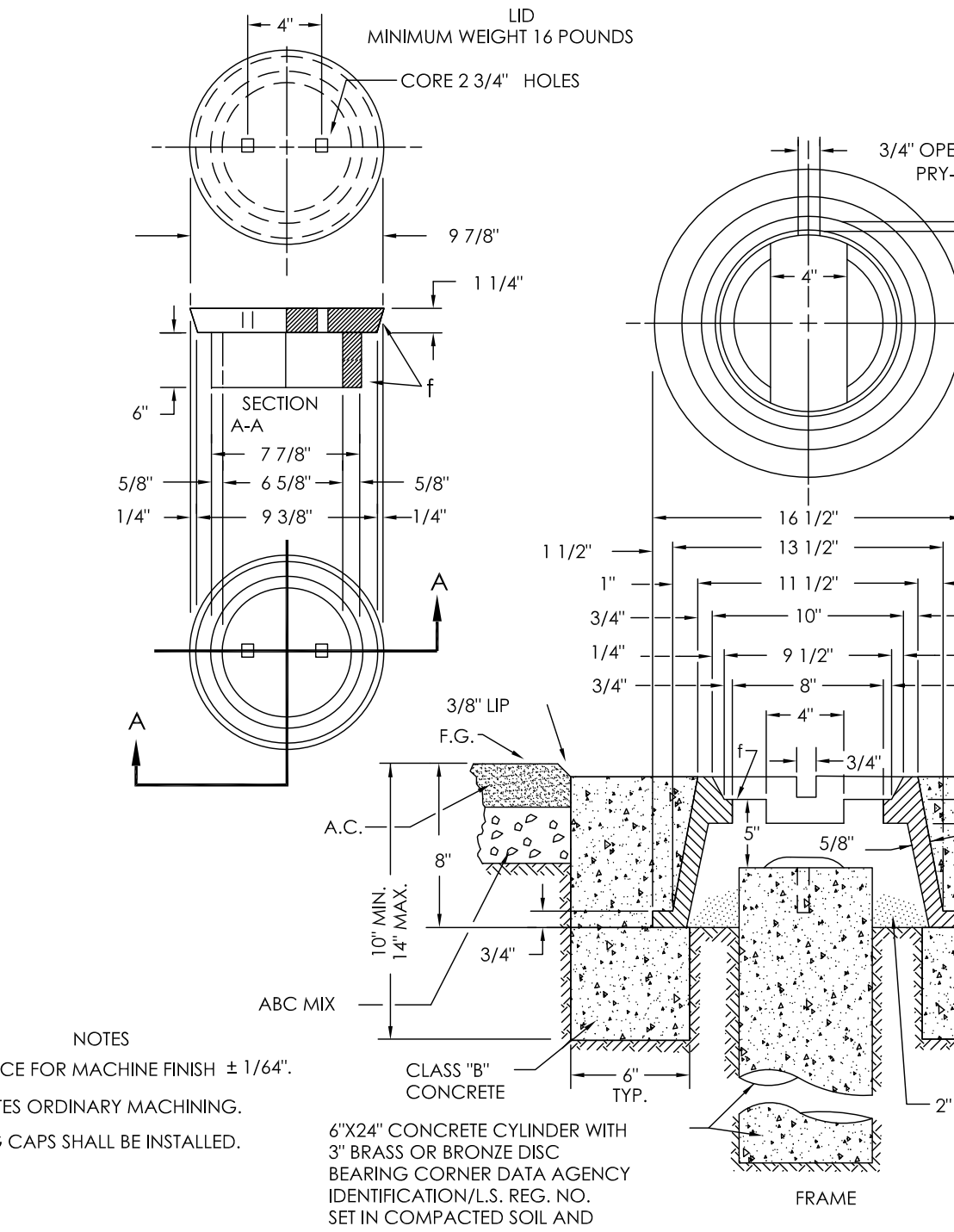
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ROUND OR SQUARE STREET MONUMENT

(YUMA COUNTY STD-4-080)

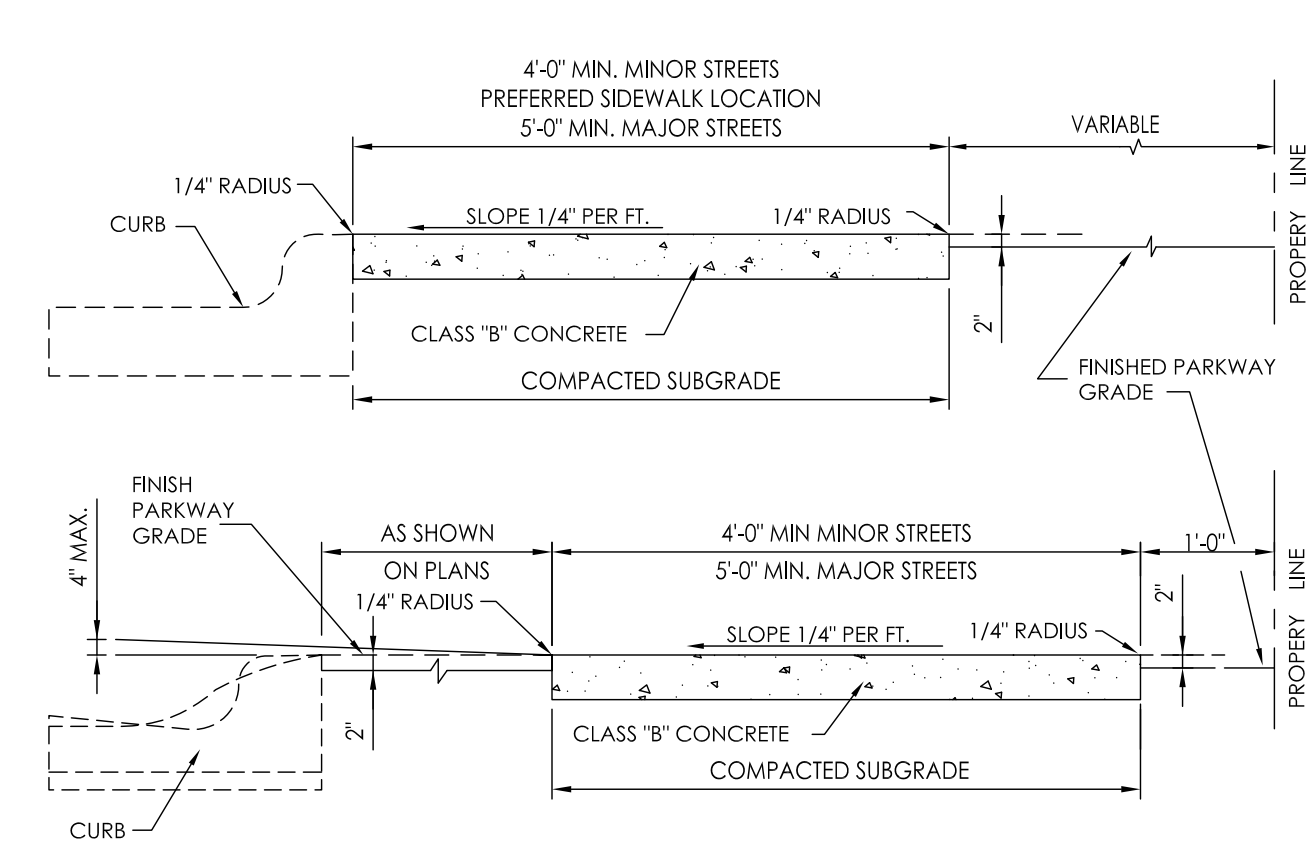
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BOUNDARY MONUMENT

(YUMA COUNTY STD-4-040)

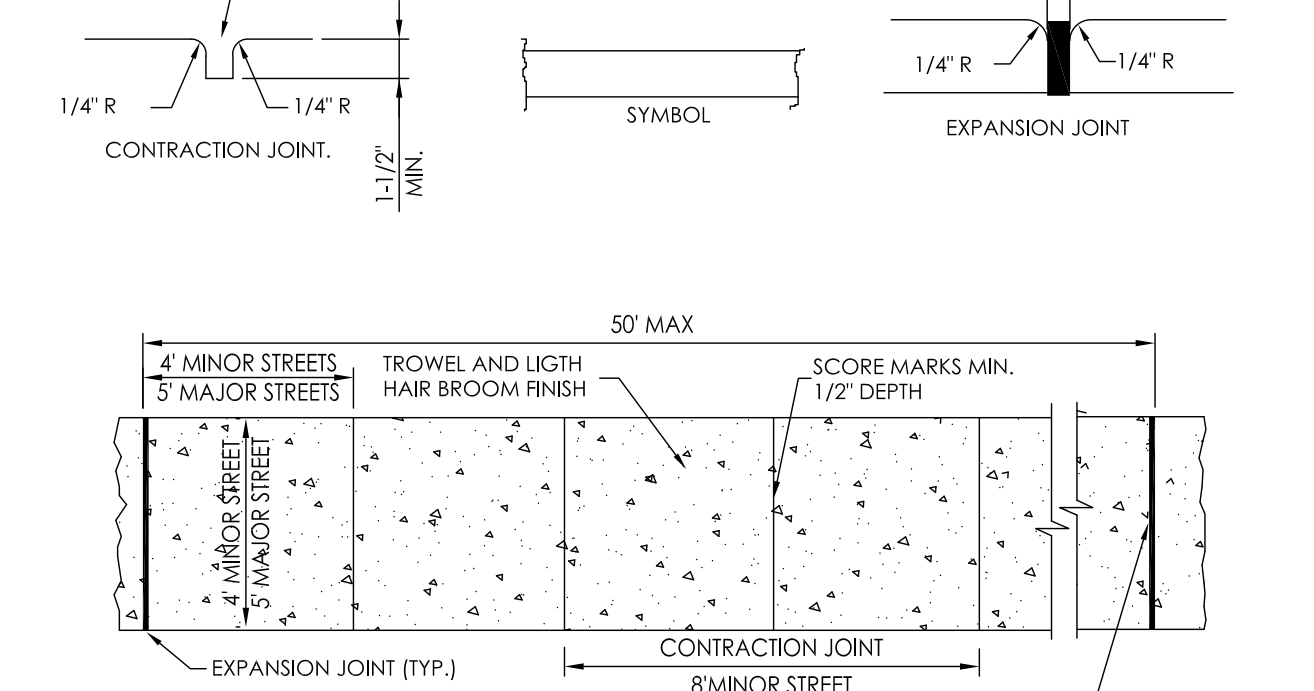
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SIDEWALK

(YUMA COUNTY STD-3-270)

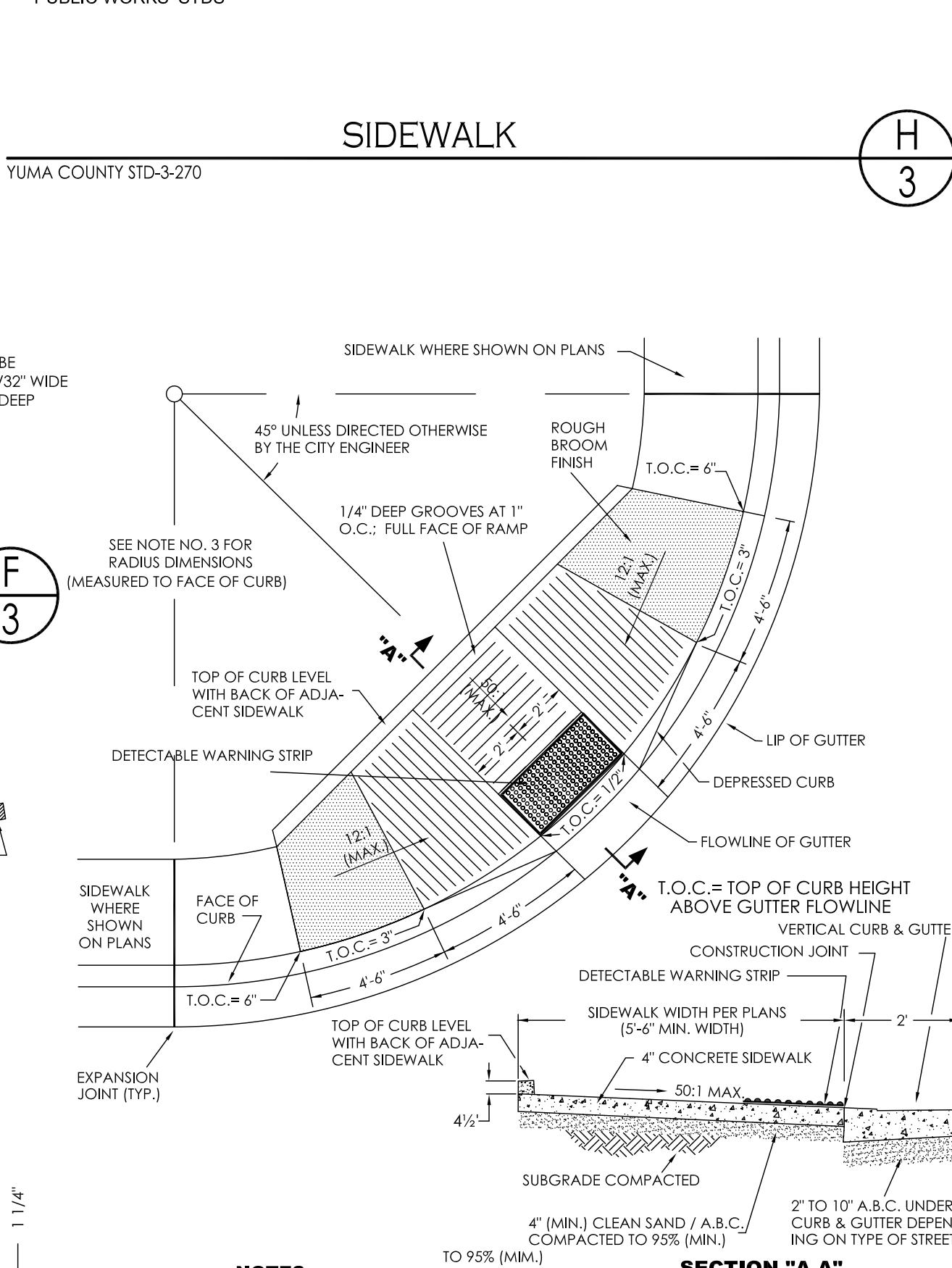
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SIDEWALK RAMP

(YUMA COUNTY STD-3-280)

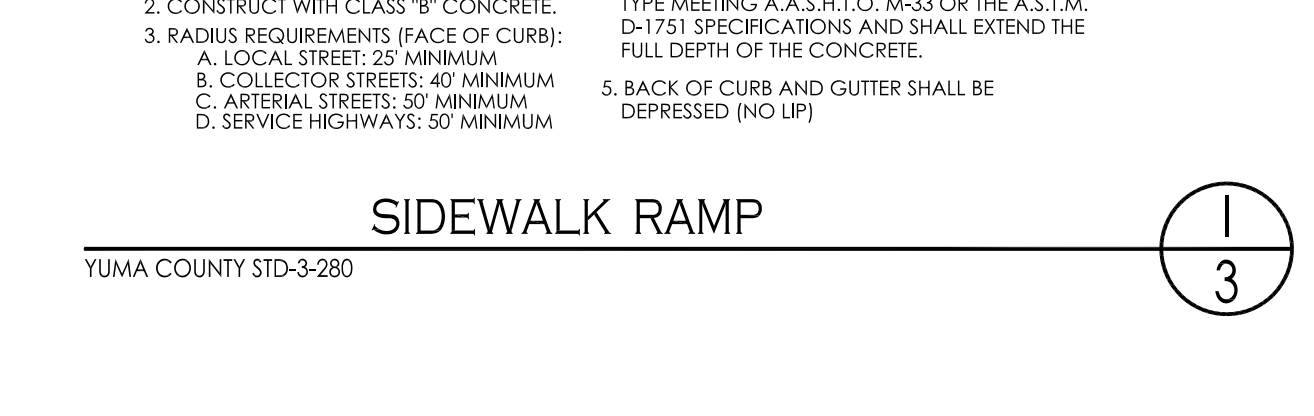
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CURB & GUTTER TRANSITION

(YUMA COUNTY STD-3-190 & 3-200)

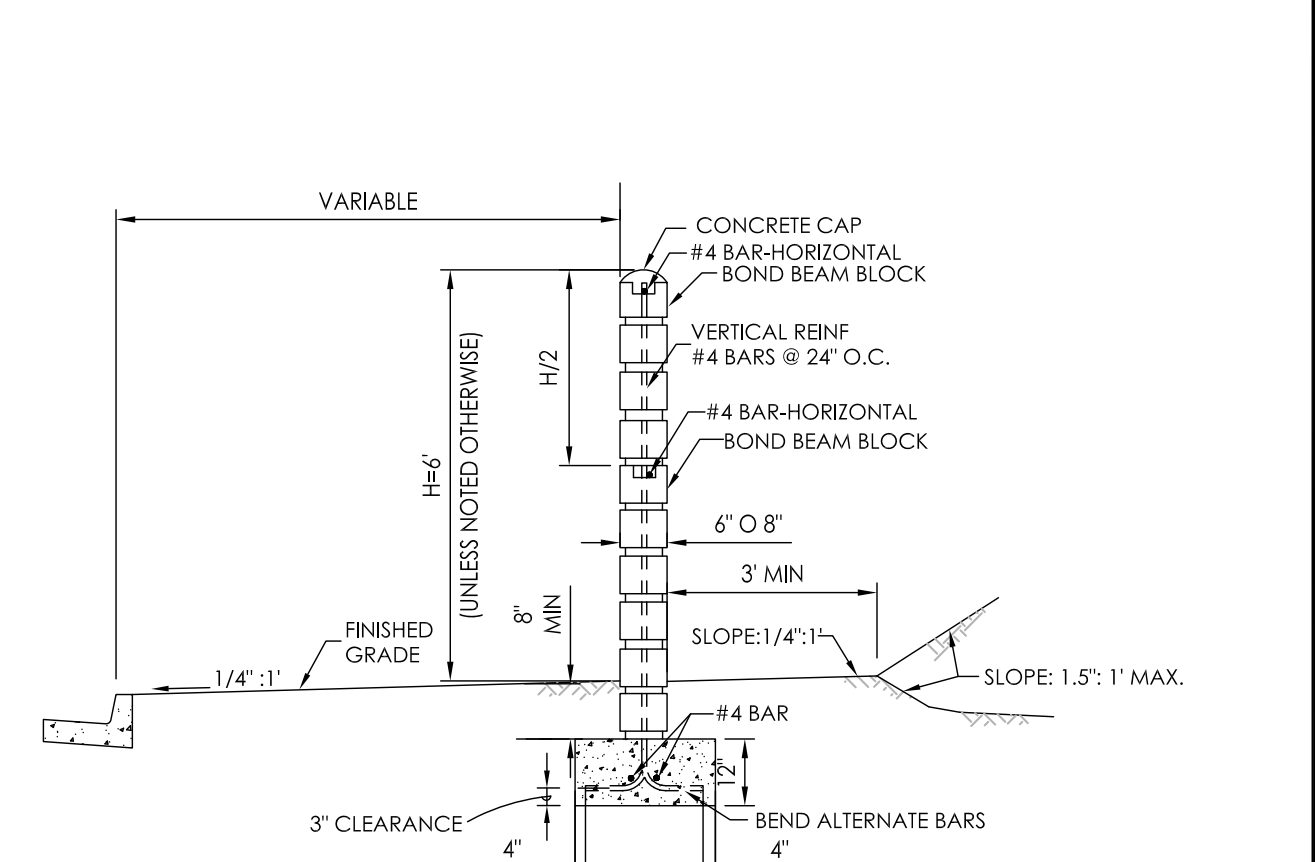
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SAWCUT DETAIL

(YUMA COUNTY STD-3-120)

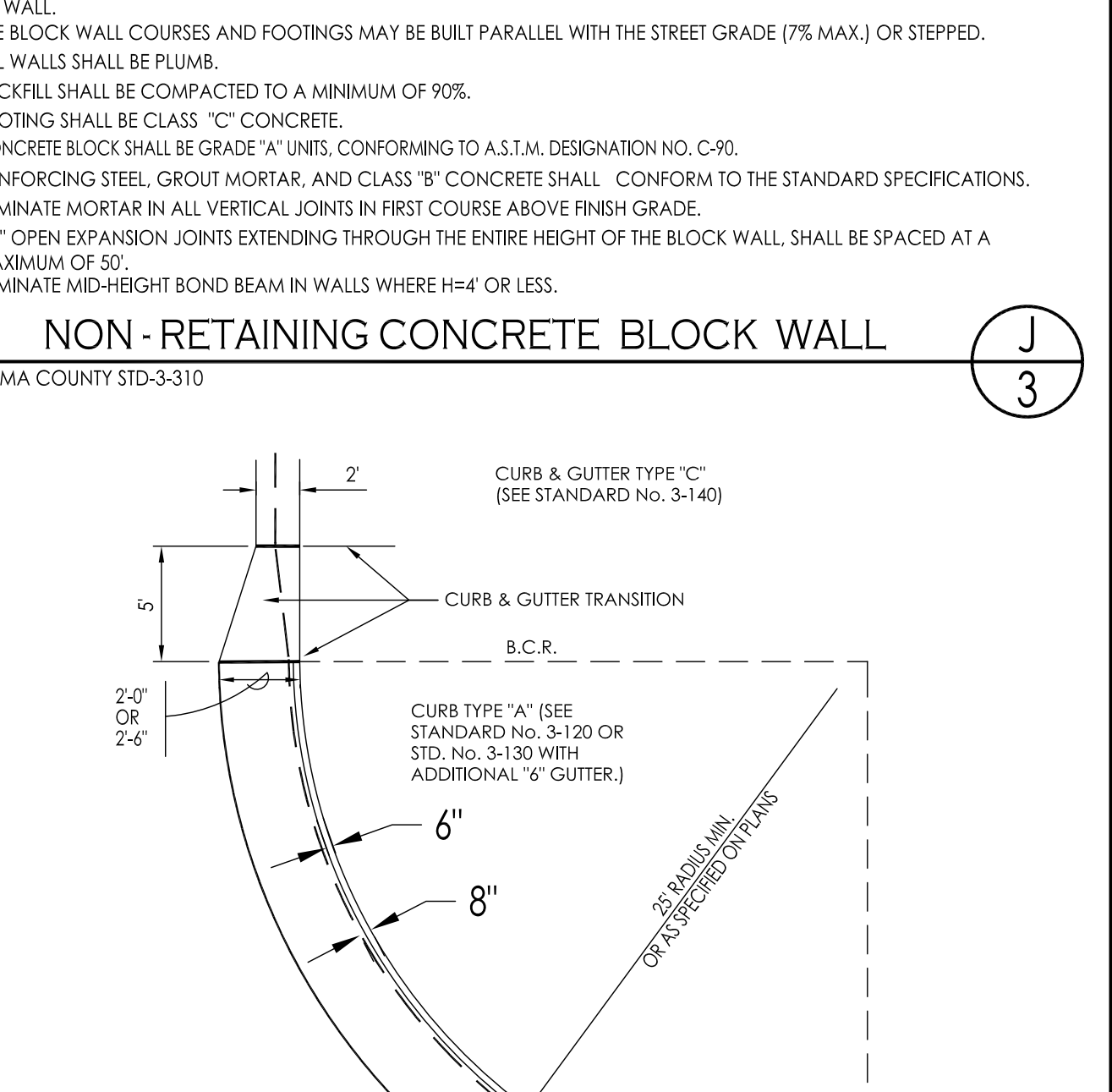
L
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NON-RETAINING CONCRETE BLOCK WALL

(YUMA COUNTY STD-3-310)

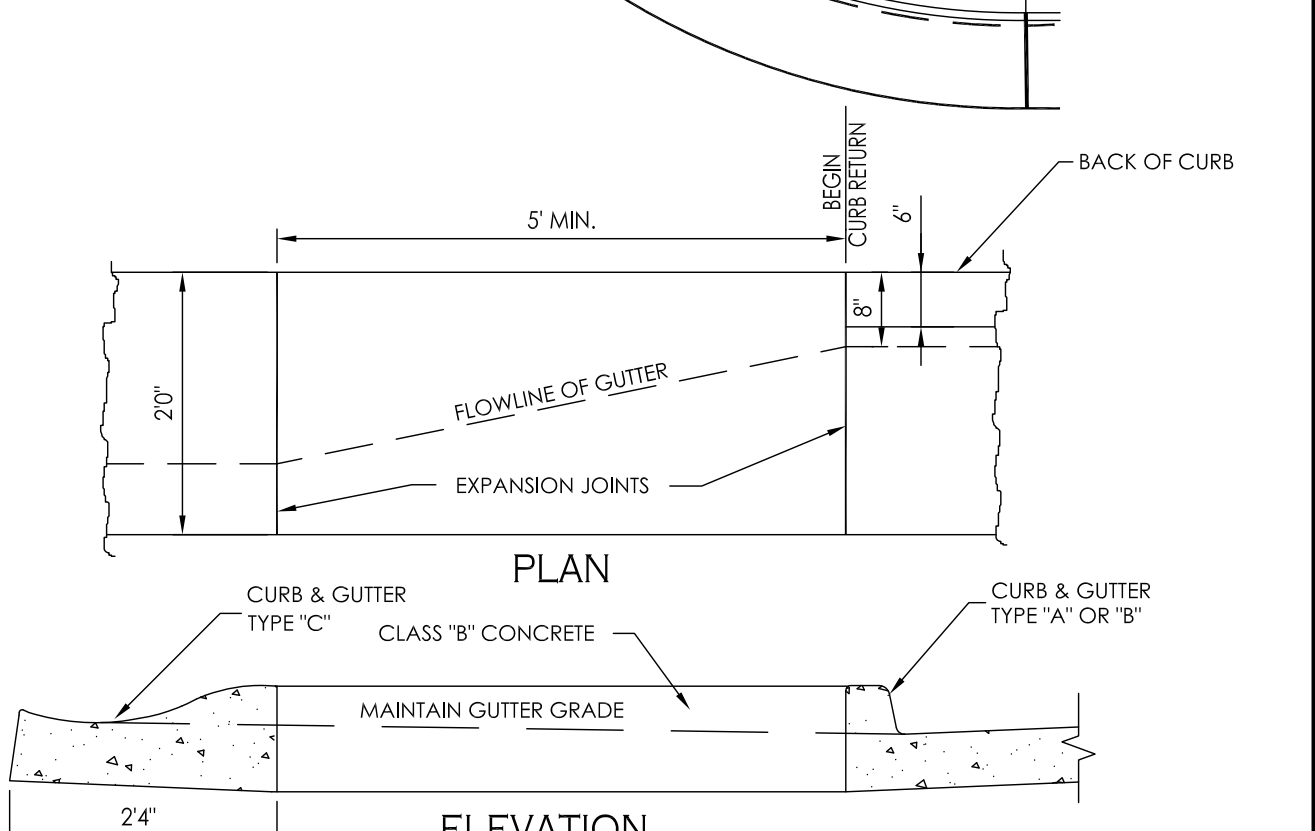
J
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CURB & GUTTER TRANSITION

(YUMA COUNTY STD-3-190 & 3-200)

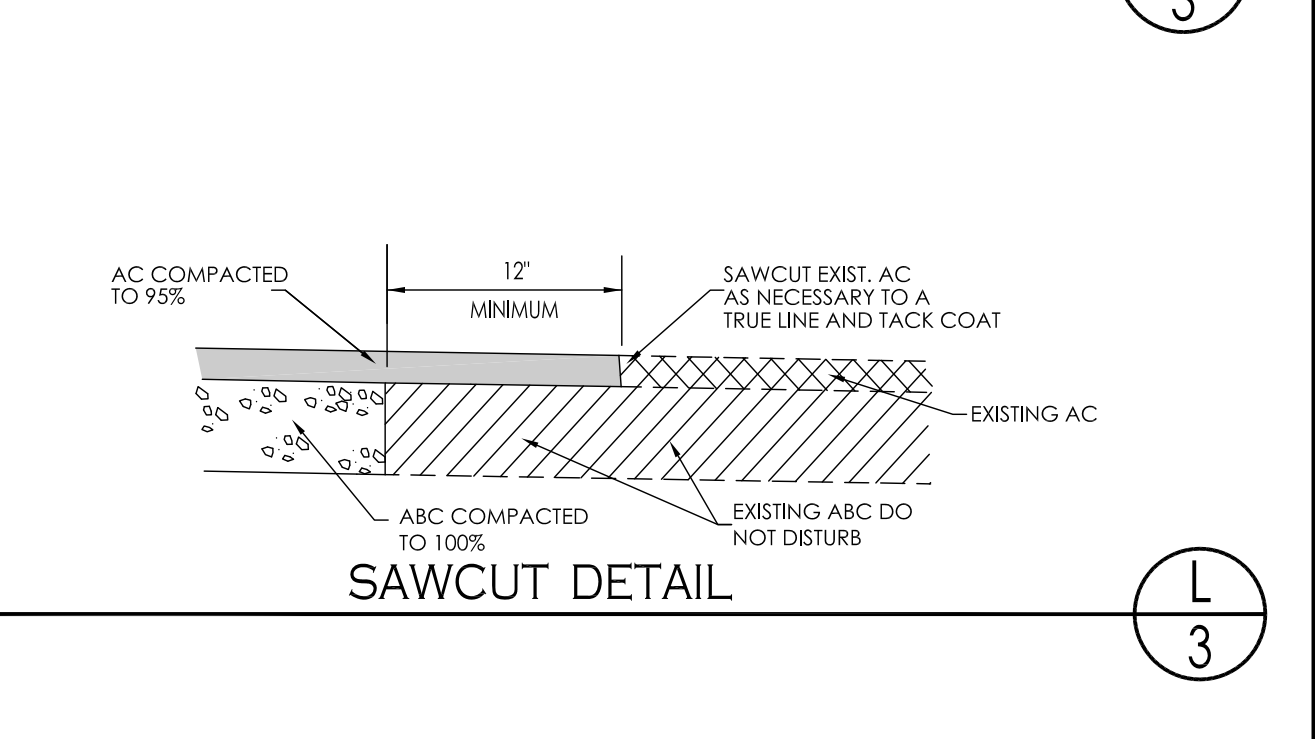
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CURB & GUTTER TRANSITION

(YUMA COUNTY STD-3-190 & 3-200)

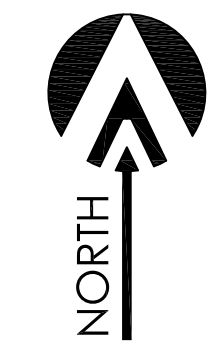
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SAWCUT DETAIL

(YUMA COUNTY STD-3-120)

L
3



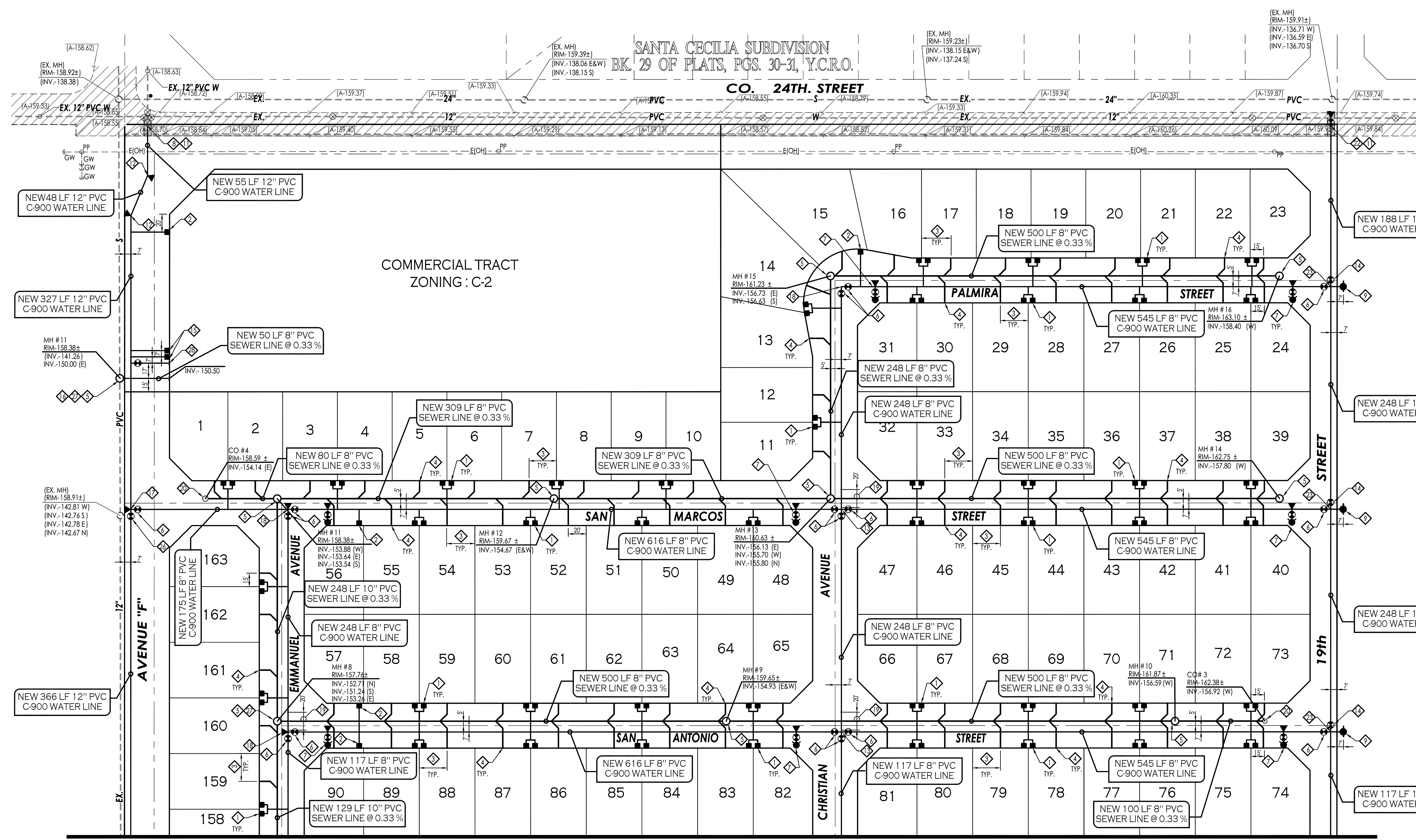
SCALE: 1"=60'

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
- [E] 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
- NEW SEWER MANHOLE
- NEW--PVC--W-- INDICATES NEW WATER LINE
- NEW 4" PVC SEWER SERVICE
- NEW SINGLE WATER SERVICE
- NEW DUAL WATER SERVICE
- NEW WATER VALVE
- NEW FIRE HYDRANT
- NEW TEMPORARY BLOWOFF VALVE
- 57 INDICATES LOT NUMBERS

KEYNOTES:

- ◇ INSTALL 1" DUAL WATER SERVICE (TYP.) - SEE DETAILS (U, V, W, X, Y, Z)
- ◇ INSTALL 1" SINGLE WATER SERVICE (TYP.) - SEE DETAILS (U, V, W, X, Y, Z)
- ◇ NEW 8" WATER VALVE - SEE DETAILS (F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◇ NEW 4" PVC SEWER SERVICE - SEE DETAIL (M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◇ NEW SANITARY SEWER MANHOLE - SEE DETAILS (N, Y, Q, R, S, T, U, V, W, X, Y, Z)
- ◇ CONSTRUCT ALL SEWER SERVICES TO CENTER OF THE LOT, UNLESS NOTED OTHERWISE.
- ◇ NEW COMPLETE FIRE HYDRANT - SEE DETAIL (L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◇ CONNECT NEW 12" 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 - SEE DETAIL (S, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ)
- ◇ NEW TEMPORARY BLOWOFF VALVE - SEE DETAIL (E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◇ INSTALL NEW BACKFLOW PREVENTOR W/ CAGE - SEE DETAILS (X, Y, Z)
- ◇ CONTRACTOR TO PROTECT EX. UTILITIES DURING CONSTRUCTION. IF DAMAGE OCCURS, CONTRACTOR MUST REPAIR AT HIS OWN EXPENSE.
- ◇ NEW 12" PVC 22.5" ELL W/THRUST BLOCK - SEE DETAILS (J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◇ NEW 8" PVC CROSS W/THRUST BLOCK - SEE DETAILS (J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◇ NEW 10" WATER VALVE - SEE DETAILS (F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◇ INSTALL 2" WATER SERVICE (TYP.) - SEE DETAILS (B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◇ CONSTRUCT NEW SANITARY MANHOLE ON EXISTING SANITARY SEWER MAIN. CONTRACTOR TO FIELD VERIFY LOCATION AND DEPTH OF EXISTING SEWER MANHOLE. IF CONDITIONS ARE DIFFERENT THAN WHAT IS SHOWN ON PLANS CONTRACTOR TO NOTIFY ENGINEER BEFORE MAKING ANY DETERMINATION - SEE DETAILS (S, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ)
- ◇ NEW 12"x8" PVC TEE W/THRUST BLOCK - SEE DETAILS (J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◇ NEW 8" PVC ELL W/THRUST BLOCK - SEE DETAILS (J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◇ LOWER NEW WATER MAIN - SEE DETAIL (Z)
- ◇ NEW SANITARY SEWER CLEANOUT - SEE DETAIL (L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◇ ADJUST EXISTING MANHOLE TO NEW GRADE - SEE DETAIL (R, S, T, U, V, W, X, Y, Z)
- ◇ NEW 10" TAPPING SLEEVE, CONNECT NEW 10" 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 - SEE DETAILS (S, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ)
- ◇ NEW 10"x8" PVC CROSS W/THRUST BLOCK - SEE DETAILS (J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◇ NEW 10"x10" PVC CROSS W/THRUST BLOCK - SEE DETAILS (J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◇ NEW 12"x10" PVC TEE W/THRUST BLOCK - SEE DETAILS (J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◇ NEW 12" WATER VALVE - SEE DETAILS (F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◇ TYPE "A" DROP SEWER CONNECTION - SEE DETAIL (P, Q, R, S, T, U, V, W, X, Y, Z)
- ◇ NEW 8" WATER LINE W/ WATER TIGHT END PLUG AND THRUST BLOCK - SEE DETAILS (J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)



MATCH LINE SEE SHEET 6 OF 12

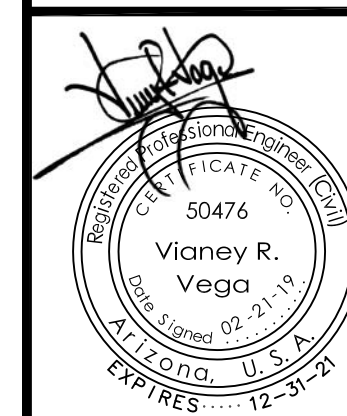
CALL TWO WORKING DAYS BEFORE YOU DIG
1-800-STAKE-IT

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YUMA, AZ 85364 928-247-6232 FAX
Vn Y@veganvega.com

VEGA & VEGA
ENGINEERS & ARCHITECTS

Water & Sewer Plan

BIENESTAR ESTATES 10



Notes:

Scale: N.T.S. Date: FEB. 2019
Drawn: staff Job #: vnv18-400
Checked: vna

Sheet **5**
of **12**

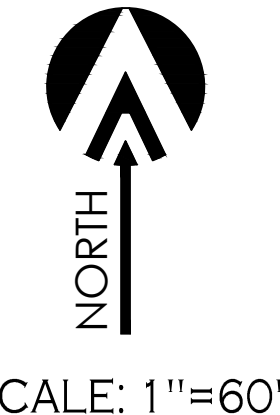
KEYNOTES:

- ◆ INSTALL 1" DUAL WATER SERVICE (TYP.) - SEE DETAILS (U, V, W, X, Y, Z)
- ◆ INSTALL 1" SINGLE WATER SERVICE (TYP.) - SEE DETAILS (U, V, W, X, Y, Z)
- ◆ NEW 8" WATER VALVE - SEE DETAILS (F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◆ NEW 4" PVC SEWER SERVICE - SEE DETAIL (M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◆ NEW SANITARY SEWER MANHOLE - SEE DETAILS (N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◆ CONSTRUCT ALL SEWER SERVICES TO CENTER OF THE LOT, UNLESS NOTED OTHERWISE.
- ◆ NEW COMPLETE FIRE HYDRANT - SEE DETAIL (J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◆ CONNECT NEW 12" 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 - SEE DETAIL (S, T, U, V, W, X, Y, Z)
- ◆ NEW TEMPORARY BLOWOFF VALVE - SEE DETAIL (E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◆ INSTALL NEW BACKFLOW PREVENTOR W/ CAGE - SEE DETAILS (K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◆ CONTRACTOR TO PROTECT EX. UTILITIES DURING CONSTRUCTION. IF DAMAGE OCCURS, CONTRACTOR MUST REPAIR AT HIS OWN EXPENSE.
- ◆ NEW 12" PVC 22.5" ELL W/THRUST BLOCK - SEE DETAILS (J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◆ NEW 8" PVC CROSS W/THRUST BLOCK - SEE DETAILS (J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◆ NEW 10" WATER VALVE - SEE DETAILS (F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◆ INSTALL 2" WATER SERVICE (TYP.) - SEE DETAILS (U, V, W, X, Y, Z)
- ◆ CONNECT NEW SANITARY SEWER SYSTEM TO EXISTING SANITARY SEWER MANHOLE. CONTRACTOR TO FIELD VERIFY LOCATION AND DEPTH OF EXISTING SEWER MANHOLE. IF CONDITIONS ARE DIFFERENT THAN WHAT IS SHOWN ON PLANS CONTRACTOR TO NOTIFY ENGINEER BEFORE MAKING ANY DETERMINATION

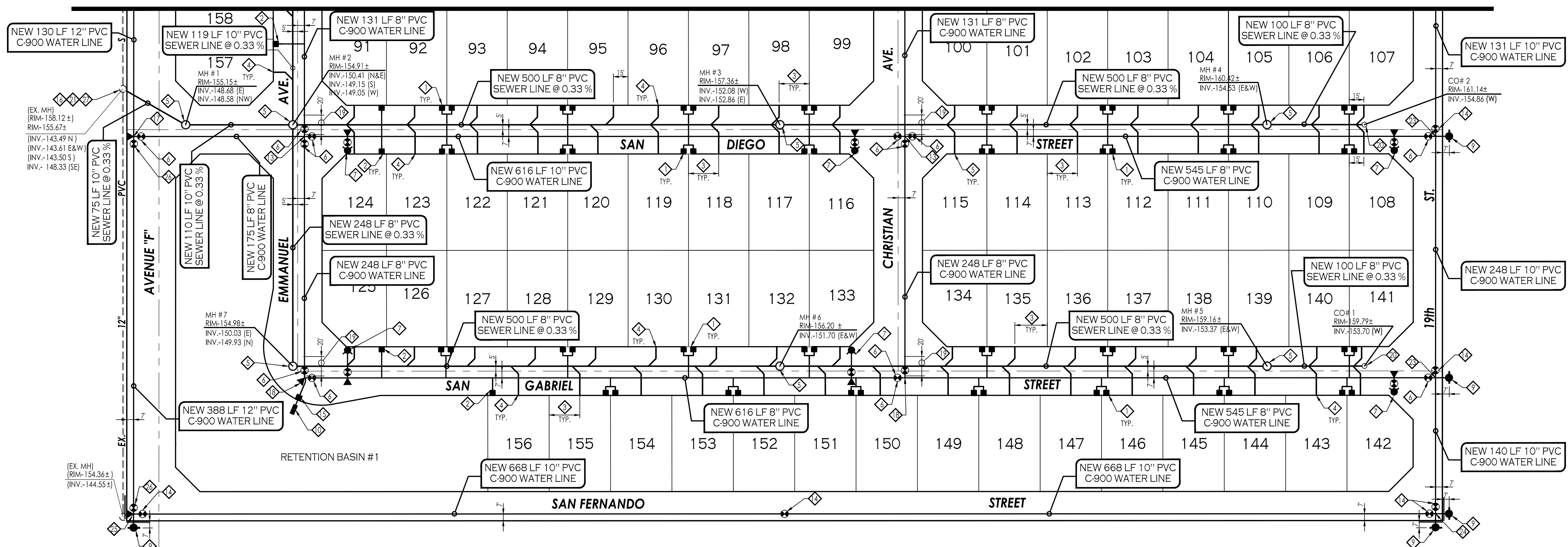
- ◆ NEW 12"x8" PVC TEE W/THRUST BLOCK - SEE DETAILS (J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◆ NEW 8" PVC ELL W/THRUST BLOCK - SEE DETAILS (J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◆ LOWER NEW WATER MAIN - SEE DETAIL (Z, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ)
- ◆ NEW SANITARY SEWER CLEANOUT - SEE DETAIL (T, U, V, W, X, Y, Z)
- ◆ ADJUST EXISTING MANHOLE TO NEW GRADE - SEE DETAIL (R, S, T, U, V, W, X, Y, Z)
- ◆ NEW 10" TAPPING SLEEVE, CONNECT NEW 10" 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 - SEE DETAILS (S, T, U, V, W, X, Y, Z)
- ◆ NEW 10"x8" PVC CROSS W/THRUST BLOCK - SEE DETAILS (J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◆ NEW 10"x10" PVC CROSS W/THRUST BLOCK - SEE DETAILS (J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◆ NEW 12"x10" PVC TEE W/THRUST BLOCK - SEE DETAILS (J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◆ NEW 12" WATER VALVE - SEE DETAILS (F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)
- ◆ TYPE "A" DROP SEWER CONNECTION - SEE DETAIL (P, Q, R, S, T, U, V, W, X, Y, Z)

LEGEND

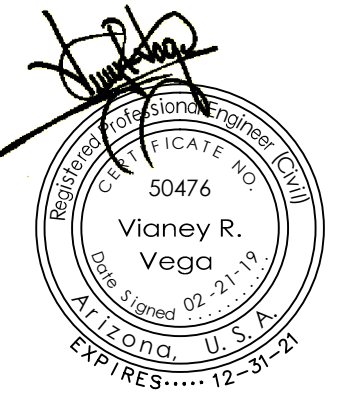
- 163 INDICATES EX. CONTOURS ELEVATION
- EX--12" PVC--W-- INDICATES EX. WATER LINE
- EX--12" PVC--S-- INDICATES EX. SEWER LINE
- GAS--- INDICATES EX. GAS LINE
- [E] INDICATES EXISTING ELECTRICAL BOX
- [GP] INDICATES EXISTING GAS PADDLE
- [MH] INDICATES EXISTING MANHOLE
- [FH] INDICATES EXISTING FIRE HYDRANT
- [WM] INDICATES EXISTING WATER METER
- [WV] INDICATES EXISTING WATER VALVE
- NEW---PVC---S--- INDICATES NEW SANITARY SEWER LINE
- 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
- ◆ INDICATES LOT NUMBERS



MATCH LINE SEE SHEET 5 OF 12



Water & Sewer Plan
BIENESTAR ESTATES 10



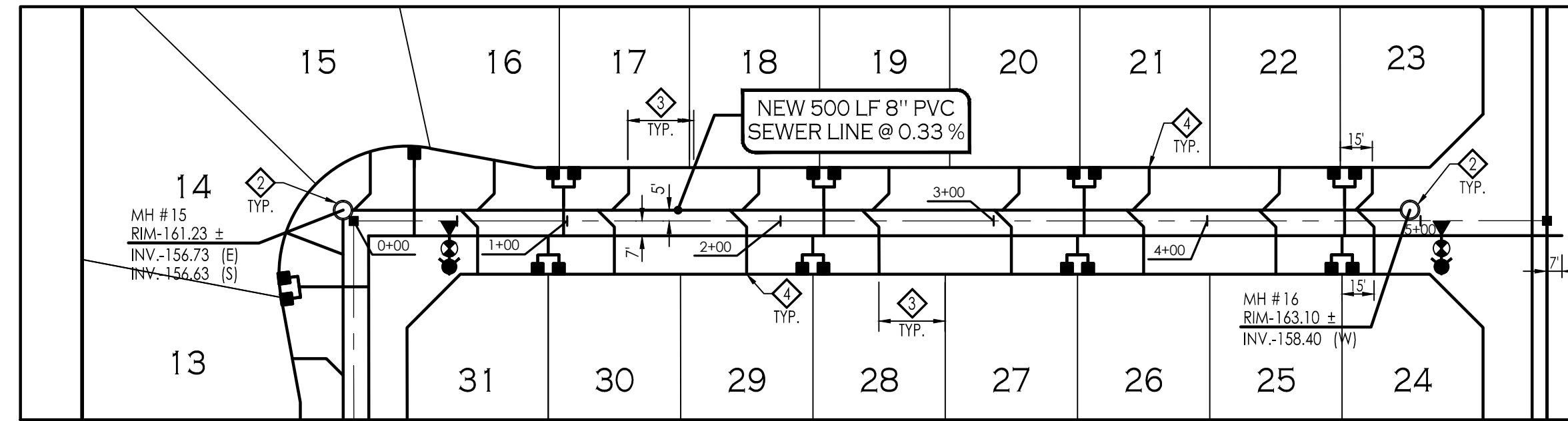
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Scale: N.T.S. Date: FEB. 2019
 Drawn: staff Job #: vrv18-400
 Checked: vna

Sheet **6**
of **12**



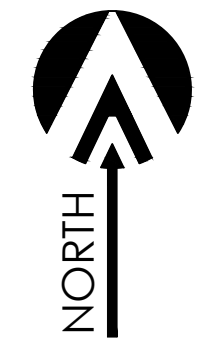
1846 S. 8th AVENUE 928-329-0000 TEL
 YUMA, AZ 85364 928-247-6232 FAX
 V@veganvega.com
VEGA & VEGA
 ENGINEERS & PLANNERS



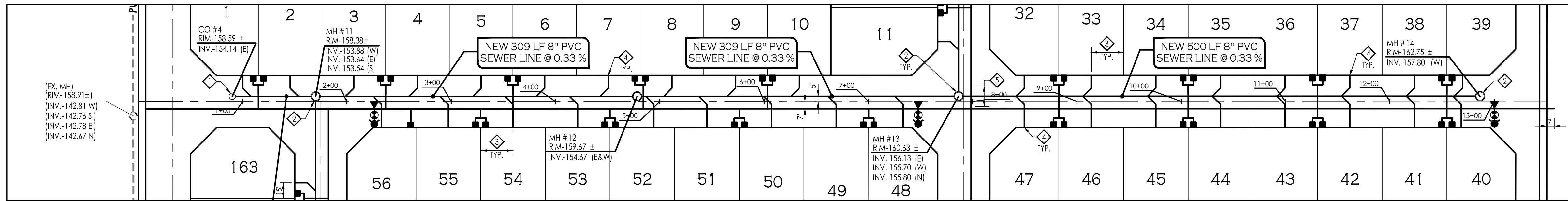
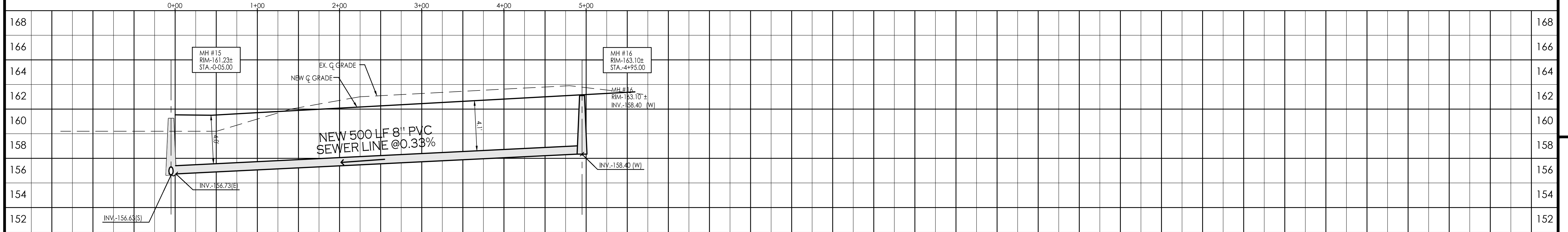
PALMIRA STREET

KEYNOTES:

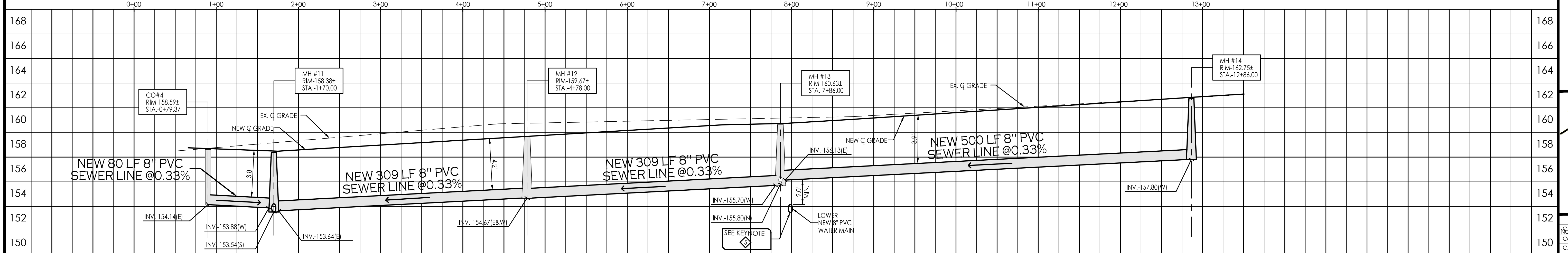
- ◆ NEW SANITARY SEWER CLEANOUT - SEE DETAILS
- ◆ NEW SANITARY SEWER MANHOLE - SEE DETAILS
- ◆ CONSTRUCT ALL SEWER SERVICES TO CENTER OF THE LOT, UNLESS NOTED OTHERWISE.
- ◆ NEW 4" PVC SEWER SERVICE - SEE DETAIL
- ◆ LOWER NEW WATER MAIN - SEE DETAIL



SCALE: 1"=60'
HORIZONTAL
SCALE: 1"=4'
VERTICAL



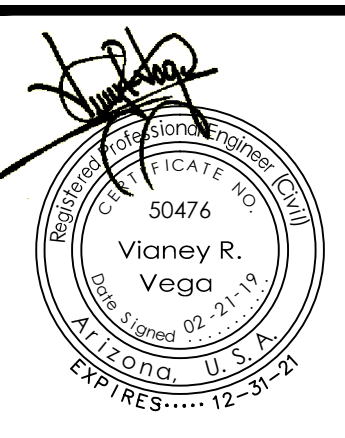
SAN MARCOS STREET



LEGEND

- | | | | | | |
|----------------|-----------------------------------|-------------|-----------------------------------|-------------|-----------------------------|
| 163 | INDICATES EX. CONTOURS ELEVATION | EH | INDICATES EXISTING FIRE HYDRANT | —NEW—PVC—W— | INDICATES NEW WATER LINE |
| —EX.—6"—PVC—W— | INDICATES EX. WATER LINE | EW | INDICATES EXISTING WATER METER | — | NEW SINGLE WATER SERVICE |
| —EX.—8"—PVC—S— | INDICATES EX. SEWER LINE | EWV | INDICATES EXISTING WATER VALVE | — | NEW WATER VALVE |
| —GAS— | INDICATES EX. GAS LINE | —NEW—PVC—S— | INDICATES NEW SANITARY SEWER LINE | — | NEW FIRE HYDRANT |
| ⓔ | INDICATES EXISTING ELECTRICAL BOX | — | NEW SEWER STUB | — | NEW TEMPORARY BLOWOFF VALVE |
| ⓖp | INDICATES EXISTING GAS PADDLE | ○ | NEW SEWER MANHOLE | 57 | INDICATES LOT NUMBERS |
| ⓓ | INDICATES EXISTING MANHOLE | — | NEW 4" PVC SEWER SERVICE | | |

Water & Sewer Plan and Profile
BIENESTAR ESTATES 10



Scale: 1"=40'
Comments: 11-18-2016
C.O.S.L. Comments: 12-01-2016

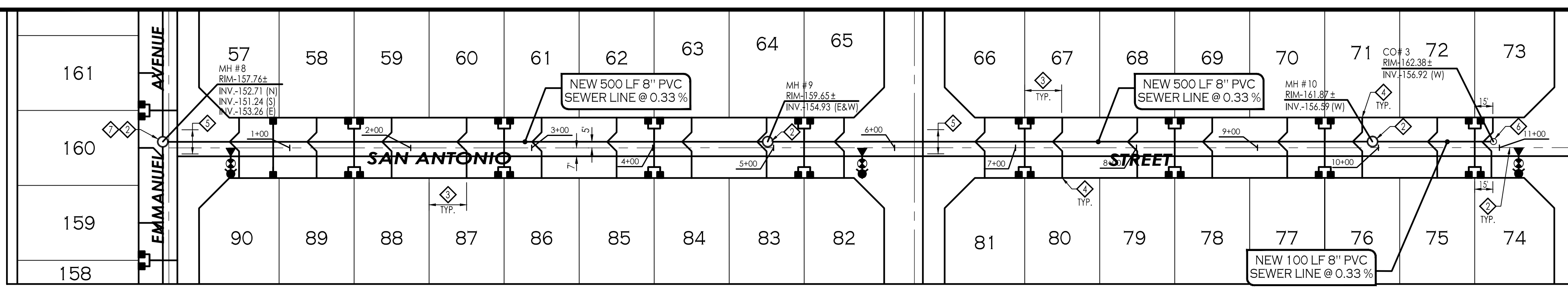
N.T.S. [Date: FEB. 2019]
Drawn: Staff Job #: vrv18-400
Checked: Vna

Sheet **7**
of **12**

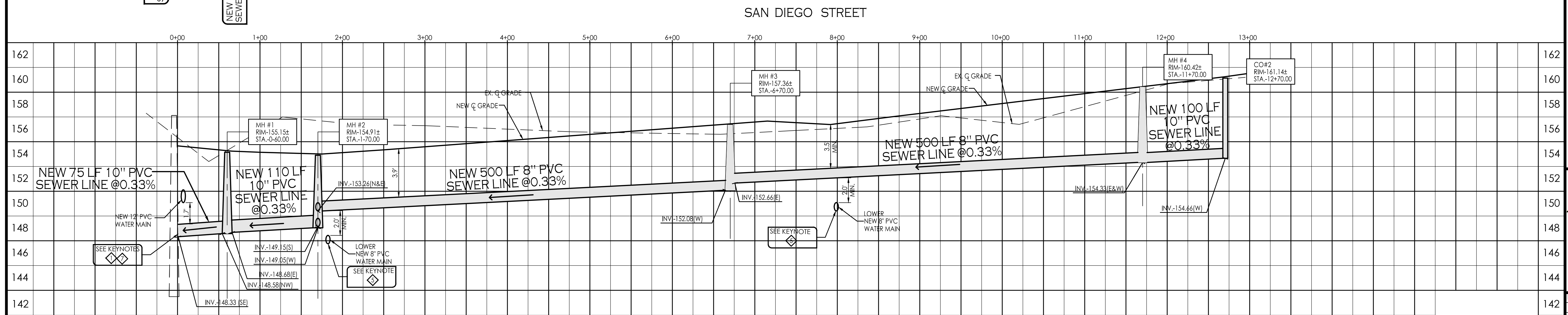
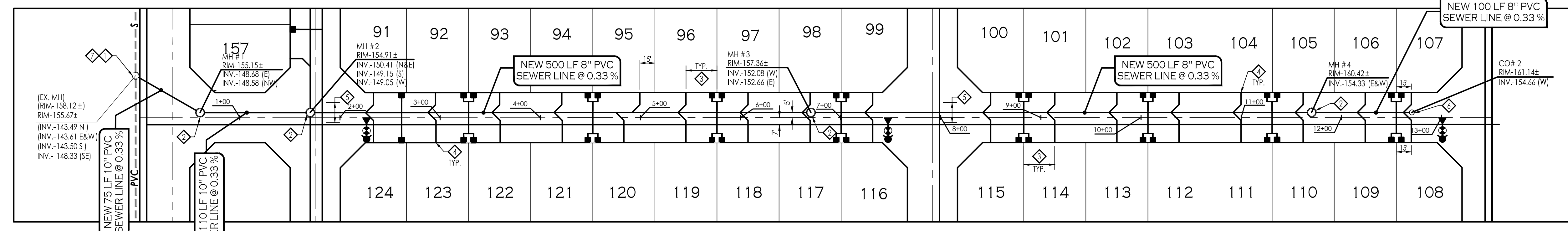
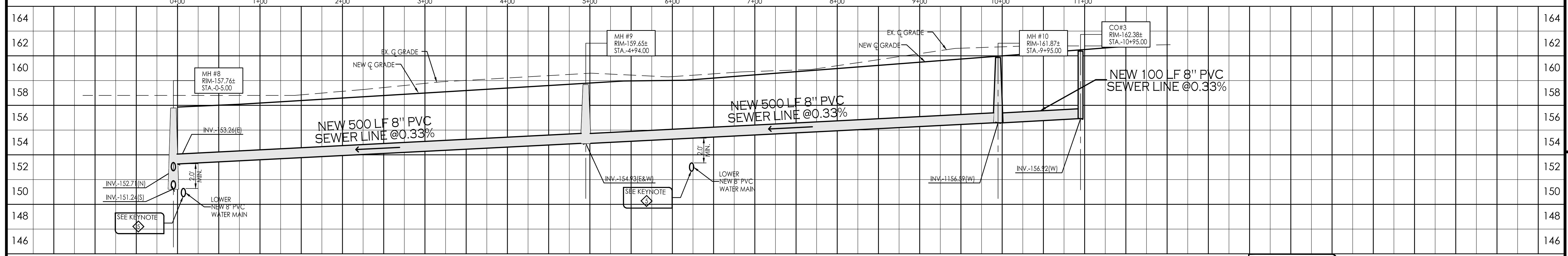
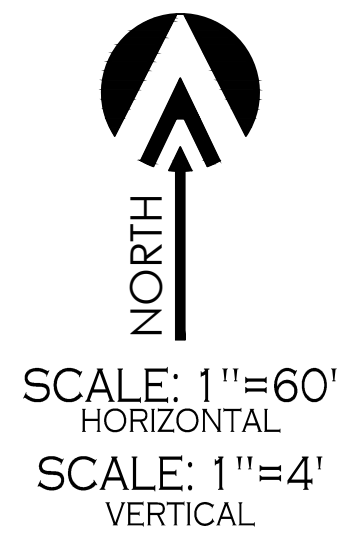


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Vna V@veganvega.com





- KEYNOTES:**
- ◇ CONNECT NEW SANITARY SEWER SYSTEM TO EXISTING SANITARY SEWER MANHOLE. CONTRACTOR TO FIELD VERIFY LOCATION AND DEPTH OF EXISTING SEWER MANHOLE. IF CONDITIONS ARE DIFFERENT THAN WHAT IS SHOWN ON PLANS CONTRACTOR TO NOTIFY ENGINEER BEFORE MAKING ANY DETERMINATION.
 - ◇ NEW SANITARY SEWER MANHOLE - SEE DETAILS (N 11), (Q 11)
 - ◇ CONSTRUCT ALL SEWER SERVICES TO CENTER OF THE LOT, UNLESS NOTED OTHERWISE.
 - ◇ NEW 4" PVC SEWER SERVICE - SEE DETAIL (M 11)
 - ◇ LOWER NEW WATER MAIN - SEE DETAIL (P 12)
 - ◇ NEW SANITARY SEWER CLEANOUT - SEE DETAIL (T 10)
 - ◇ TYPE "A" DROP SEWER CONNECTION - SEE DETAIL (P 11)



LEGEND

163	INDICATES EX. CONTOURS ELEVATION	CH	INDICATES EXISTING FIRE HYDRANT	NEW-PVC-W	INDICATES NEW WATER LINE
-EX.-6"-PVC-W-	INDICATES EX. WATER LINE	WM	INDICATES EXISTING WATER METER	NEW SINGLE WATER SERVICE	
-EX.-8"-PVC-S-	INDICATES EX. SEWER LINE	WV	INDICATES EXISTING WATER VALVE	NEW WATER VALVE	
-GAS--	INDICATES EX. GAS LINE			NEW FIRE HYDRANT	
[E]	INDICATES EXISTING ELECTRICAL BOX	NEW-PVC-S	INDICATES NEW SANITARY SEWER LINE	NEW SEWER STUB	
OGP	INDICATES EXISTING GAS PADDLE		NEW SEWER MANHOLE	NEW SEWER MANHOLE	
OH	INDICATES EXISTING MANHOLE		NEW 4" PVC SEWER SERVICE	NEW 4" PVC SEWER SERVICE	

1846 S. 8th AVENUE TEL 928-329-0000
 YUMA, AZ 85364 928-247-6032 FAX
 Y.V. @veganvega.com



Water & Sewer Plan and Profile
BIENESTAR ESTATES 10



Notes:
 C.O.S.L. & YUMA COUNTY
 Comments: 11-18-2016
 C.O.S.L. Comments: 12-01-2016

Scale: N.T.S. Date: FEB. 2019
 Drawn: Staff Job #: W118-400
 Checked: Vna

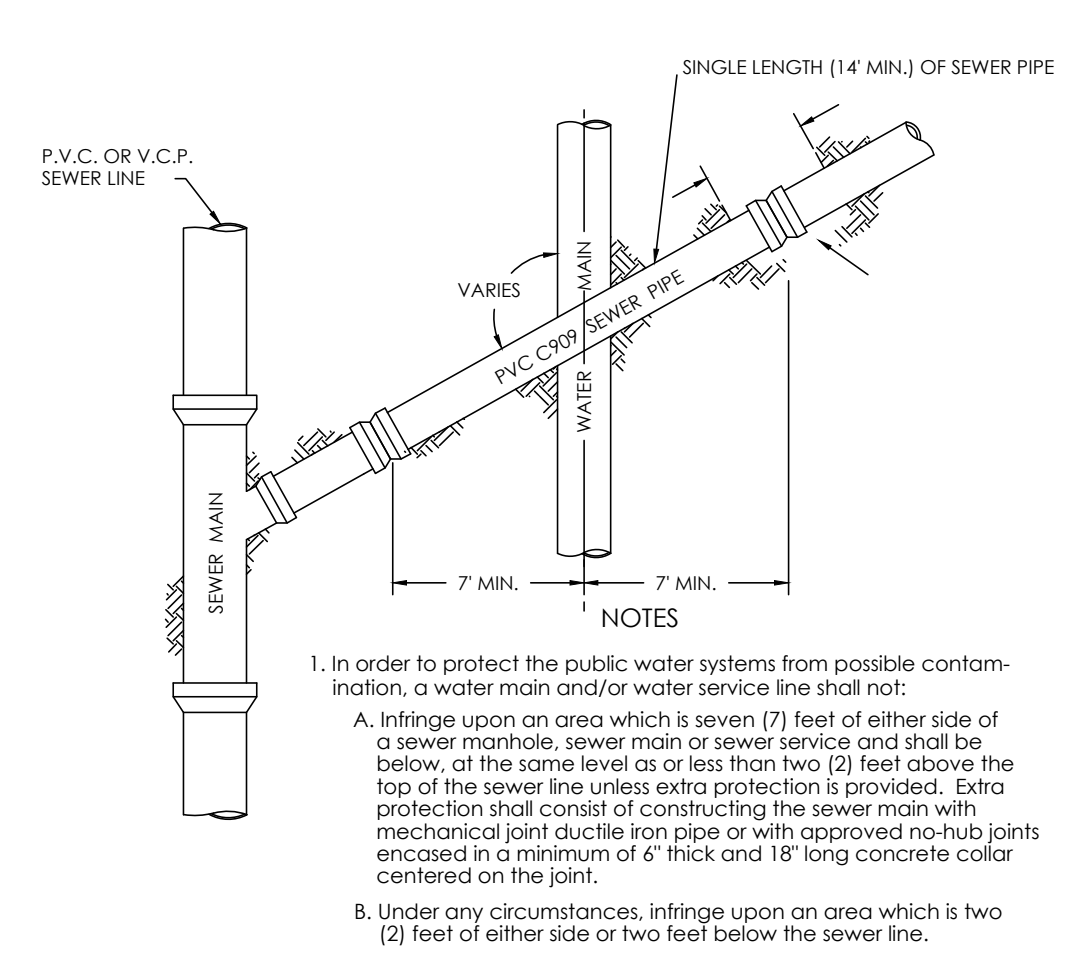


Sheet **8**
 of **12**

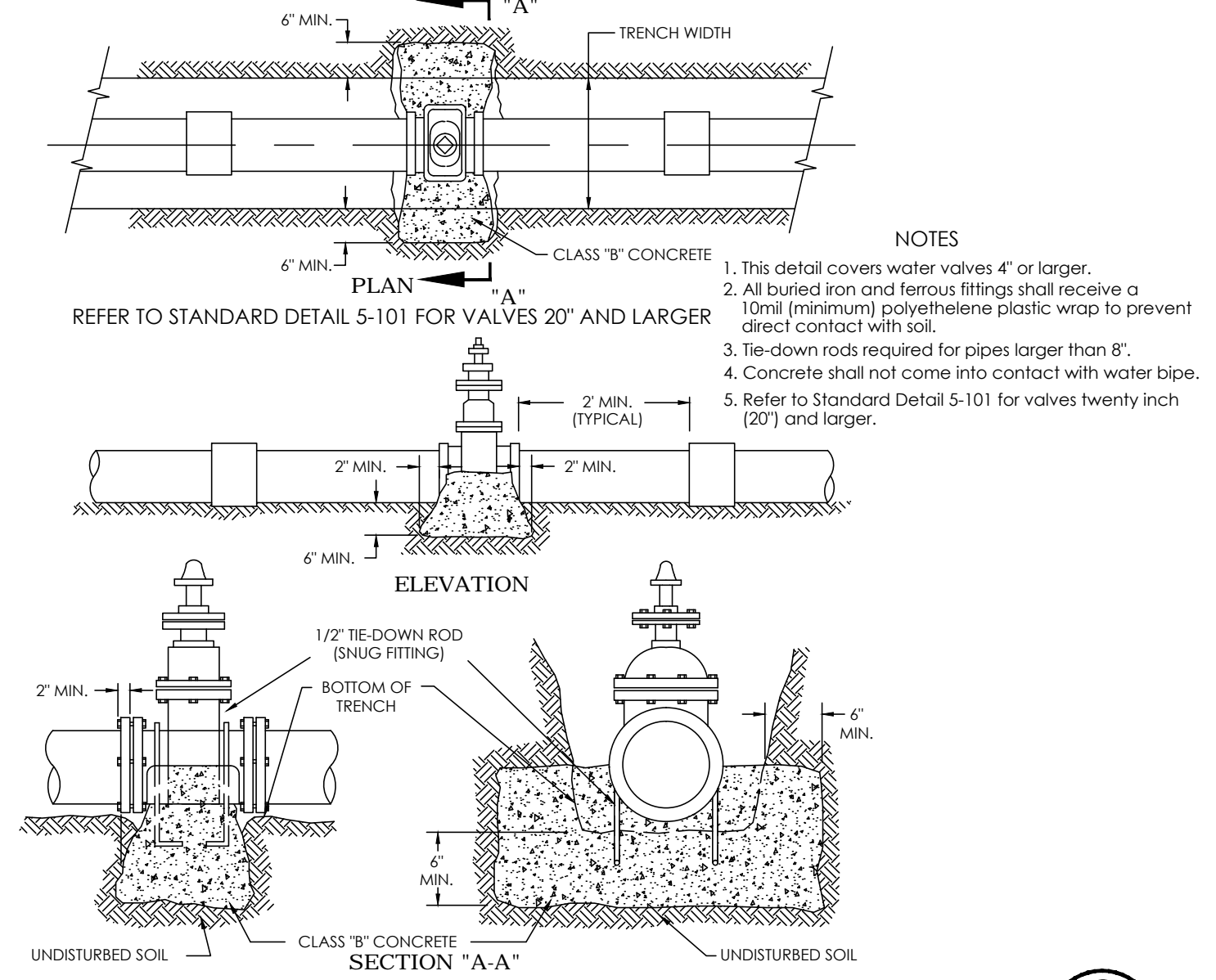
APPROVED WATER SERVICE COMPONENTS

CORPORATION STOPS	PVC / plastic services: AYM 3404 AYM 4704-33
ANGLE STOPS	AYM 4202 AYM 4602-33-1" ONLY
CURB STOP	AYM 182 3/4" and 1"
SERVICE SADDLES	AYM 979 (replacement only- A.C. or cast iron pipe) AYM 969 (for AWWA C-900 PVC pipe only) W/ 5/16" MAIN VALVES AS REQUIRED BY NIFA, AYM 3825 AND 3826
FIRE HYDRANTS	AMERICAN AVK, CLOW MEDALLION WATEROUS PACER WB-67 EAST JORDAN IRONWORKS- WATER MASTER
METER	BADGER METER, Inc brand. Must be outfitted with automatic meter reading (AMR) capability; an integral data profile transmitter, and register that records in cubic feet. Dual register compound meters must include a separate transmitter for each register. Meters 3" to 8" must also include test port on body, and strainer or integral strainer.
METER COUPLINGS	AYM 3/4" / 1": 4622 / 1 1/2" / 2": 610F
METER BUSHINGS	AYM 1" x 1 1/4" 10534
REPAIR CLAMPS	SMITH-BLAIR (minimum length: 15") with stainless steel bolts 304
TAPPING SLEEVES	SMITH-BLAIR MODEL 662-663 stainless steel (6" and smaller; 15" long min.; larger or equal to 8": 20" long min.) CASCADE CST-SL
VALVES (2")	Mueller
VALVES (4" through 30")	AMERICAN DARLING, AMERICAN FLOW CONTROL, CLOW WATEROUS, AMERICAN AVK EAST JORDAN IRONWORKS FLOW MASTER VALVES (only resilient wedge gate valves shall be used)
TRANSITION COUPLINGS	SMITH-BLAIR (20" long for water mains 12" and larger / 15" long for water mains 10" and smaller). Any device used to connect A.C. pipe to ductile iron or P.V.C. pipe shall require prior approval by the City Engineer. Hymax longbody couplings.
AIR RELEASE VALVES	A.R.I. MODEL D-020 (for use in waste water applications where air release and vacuum breaks need to occur in sanitary forced mains). A.R.I. MODEL D-040 and D-060-C HRNS for potable water.

- NOTES**
- The approved equipment shown is not necessarily exclusive. If approval of a similar device believed to be comparable and equal is desired, a request supported by appropriate information on data may be submitted to the City Engineer for review.
 - All buried components will require Type 304 stainless steel (min.) components (nuts, bolts, washers, etc.) Unless otherwise noted.
 - All new water service requests 2" and smaller off of an existing water main will be installed by City of San Luis utilities personnel.



TYPICAL WATER & SEWER MAIN CROSSING
CITY OF YUMA STANDARD # 5-060



VALVE ANCHORS
CITY OF YUMA STD # 5-110

THRUST AT FITTINGS IN POUNDS
AT 150 POUNDS PER SQUARE INCH OF WATER PRESSURE

Size	ALL PIPE & FITTINGS SHALL BE CLASS 150 (MINIMUM)			
	90° Bend	45° Bend	22 1/2° Bend	Per Degree of Deflection
2"	1,740	2,460	1,335	675
4"	2,715	3,840	2,085	1,065
6"	5,625	7,950	4,320	2,190
8"	9,780	13,800	7,500	3,795
10"	16,050	22,650	12,300	6,225
12"	22,800	32,250	17,550	8,850
14"	31,050	42,300	23,850	12,075
16"	40,200	57,000	30,750	15,600

Safe Bearing Load
Pounds Per Square Inch

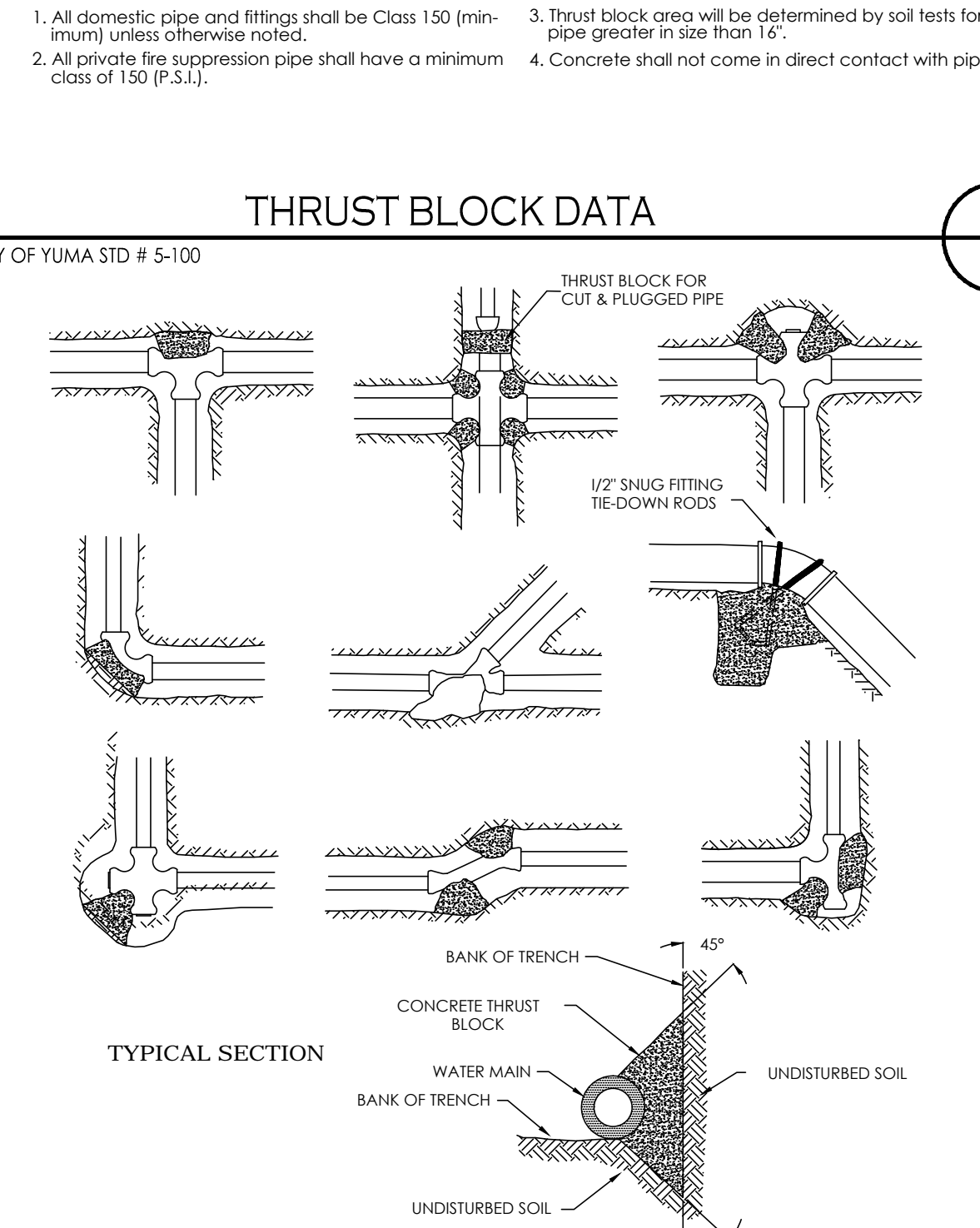
MUCK, PEAT, ETC.	0
SOFT CLAY	1000
SAND	2000
SAND & GRAVEL	3000
SAND & GRAVEL CEMENTED WITH CLAY	4000

TO CALCULATE THE NEEDED AREA OF A THRUST BLOCK
Divide thrust by safe bearing load. Note: Thrust block area for 6" and larger pipe shall not be less than three (3) square feet in size.

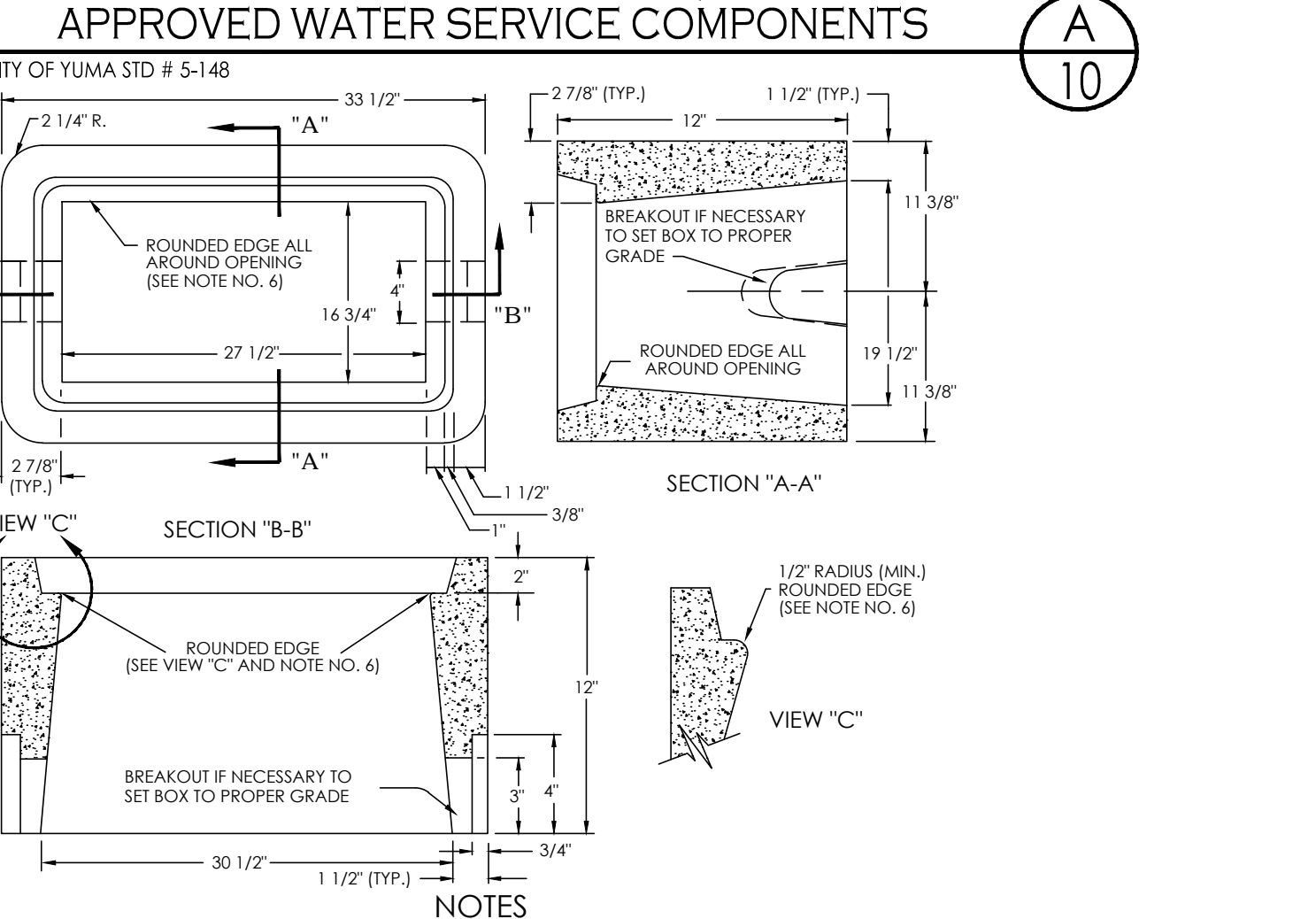
NOTES

- All domestic pipe and fittings shall be Class 150 (minimum) unless otherwise noted.
- All private fire suppression pipe shall have a minimum class of 150 (P.S.I.).
- Thrust block area will be determined by soil tests for pipe greater in size than 16".
- Concrete shall not come in direct contact with pipe.

THRUST BLOCK DATA
CITY OF YUMA STD # 5-100

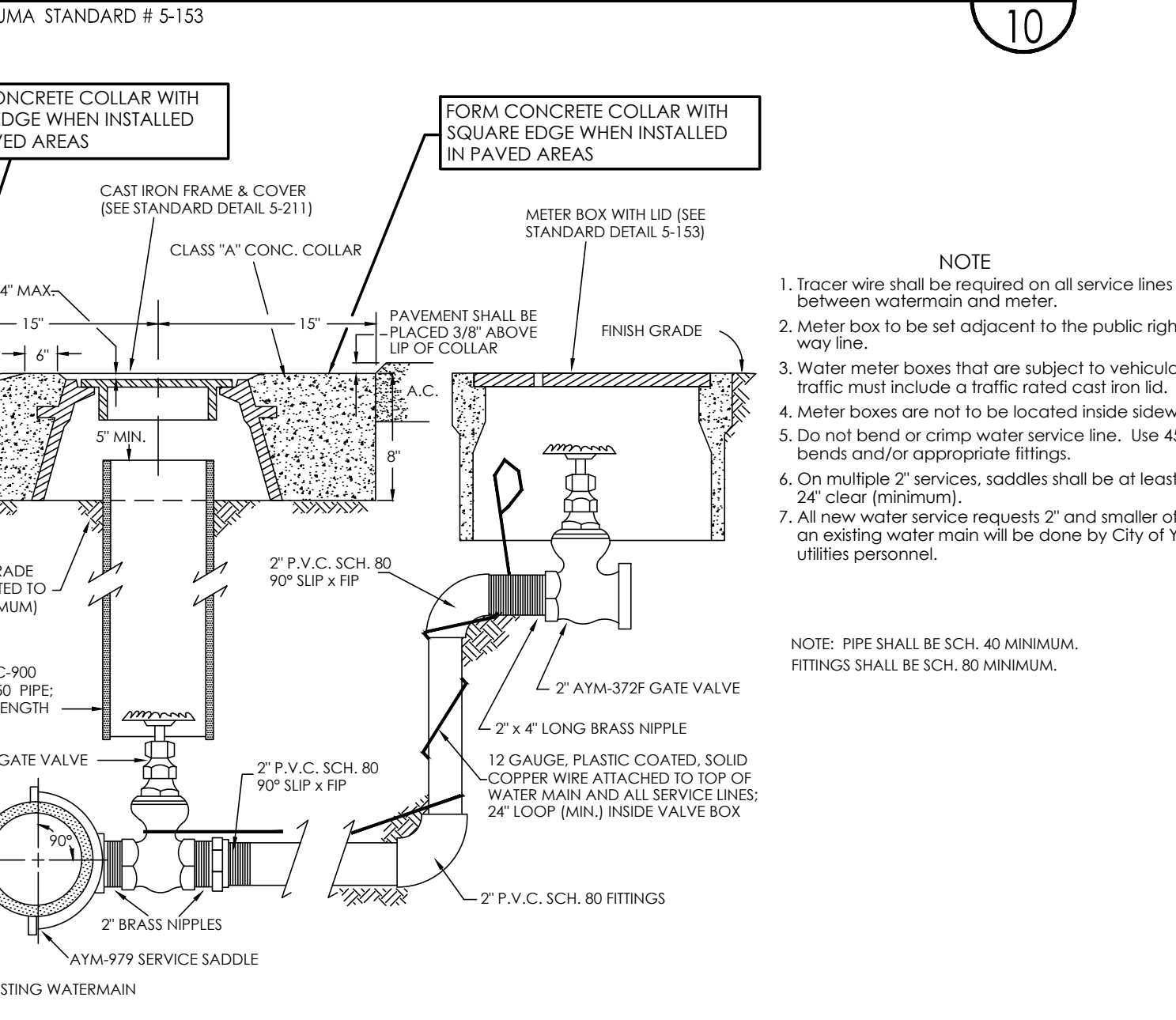


TYPICAL THRUST BLOCK INSTALLATION
CITY OF YUMA STD # 5-090

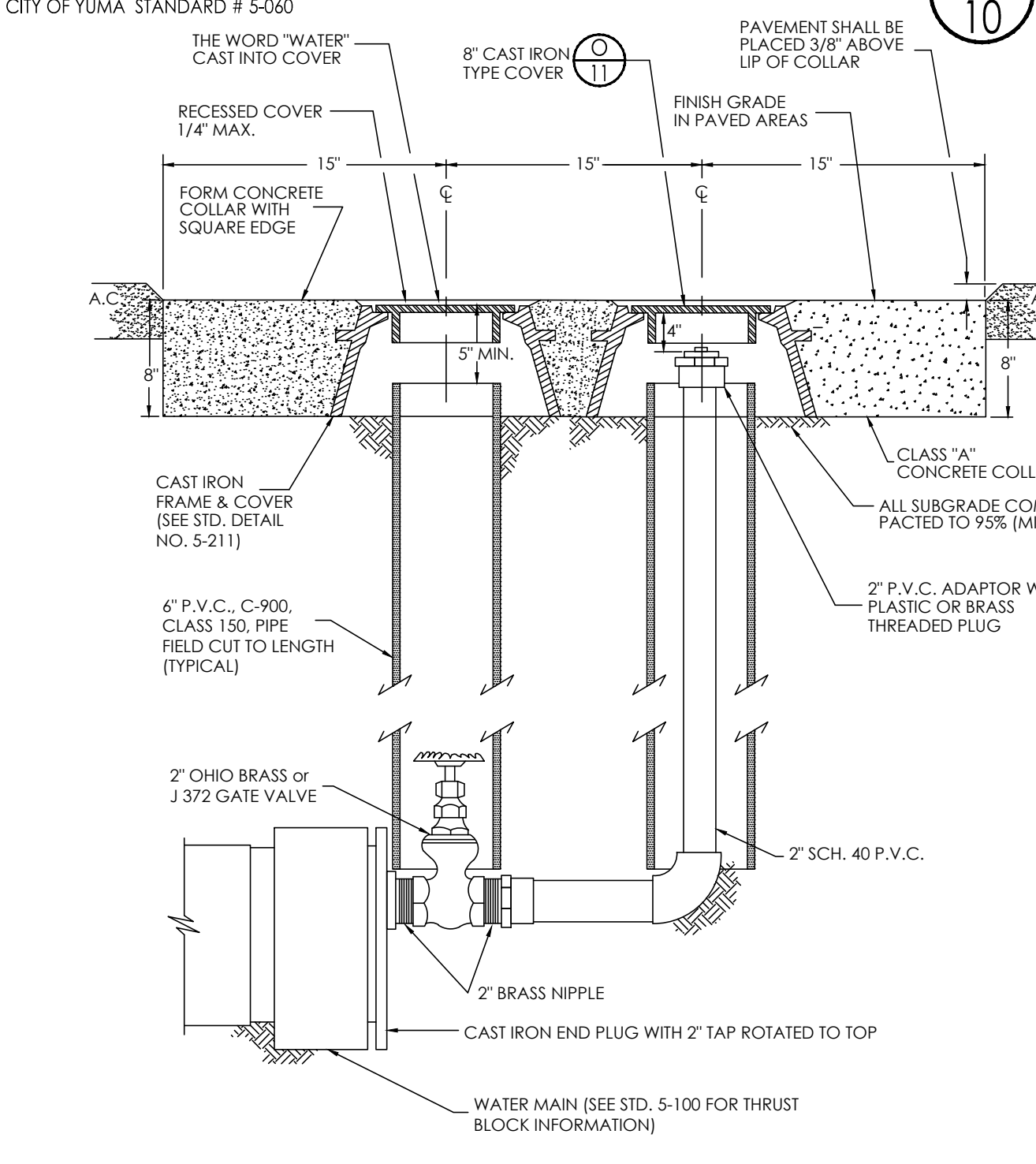


- NOTES**
- The meter boxes shall conform to the dimensions of the above drawing and shall be made of Portland cement concrete poured and tamped (or vibrated) in true form.
 - The Portland cement concrete shall be batched in the proper proportions by weight, water, cement, fine aggregate (A.S.T.M. C-33), and coarse aggregate (3/8" max). This mix shall be designed to obtain a minimum of 4,000psi at 28 days when tested in accordance with A.S.T.M. C-39. This mix shall be poured at a slump not in excess of six inches (6").
 - Upon the removal of the forms, the meter boxes shall be water cured for seven (7) days or sprayed with a membrane curing compound such as "Hunts Process" or approved equal.
 - The method of sampling and testing of these boxes shall conform to A.S.T.M. C-129 and C-140, except that the minimum required strength shall be 4,000psi at 28 days.
 - Meter box lids shall be cast iron and fit flush with top of box and have adequate bearing on seat. When water meter boxes are used in paved areas, subject to vehicular traffic, a traffic rated lid will be used.
 - The San Diego Precast Concrete, Inc. model P 4 1/2 water meter box with cast iron lid or equal is an approved model.
 - Apply 1/2" radius (minimum) to edges of box opening in order to prevent worker injury when handling and installing boxes.
 - Use composite meter boxes in residential subdivisions/ mobile home parks. The lids are to be placed with a 1.75" to 2.0" diameter hole to install automatic meter reading device.

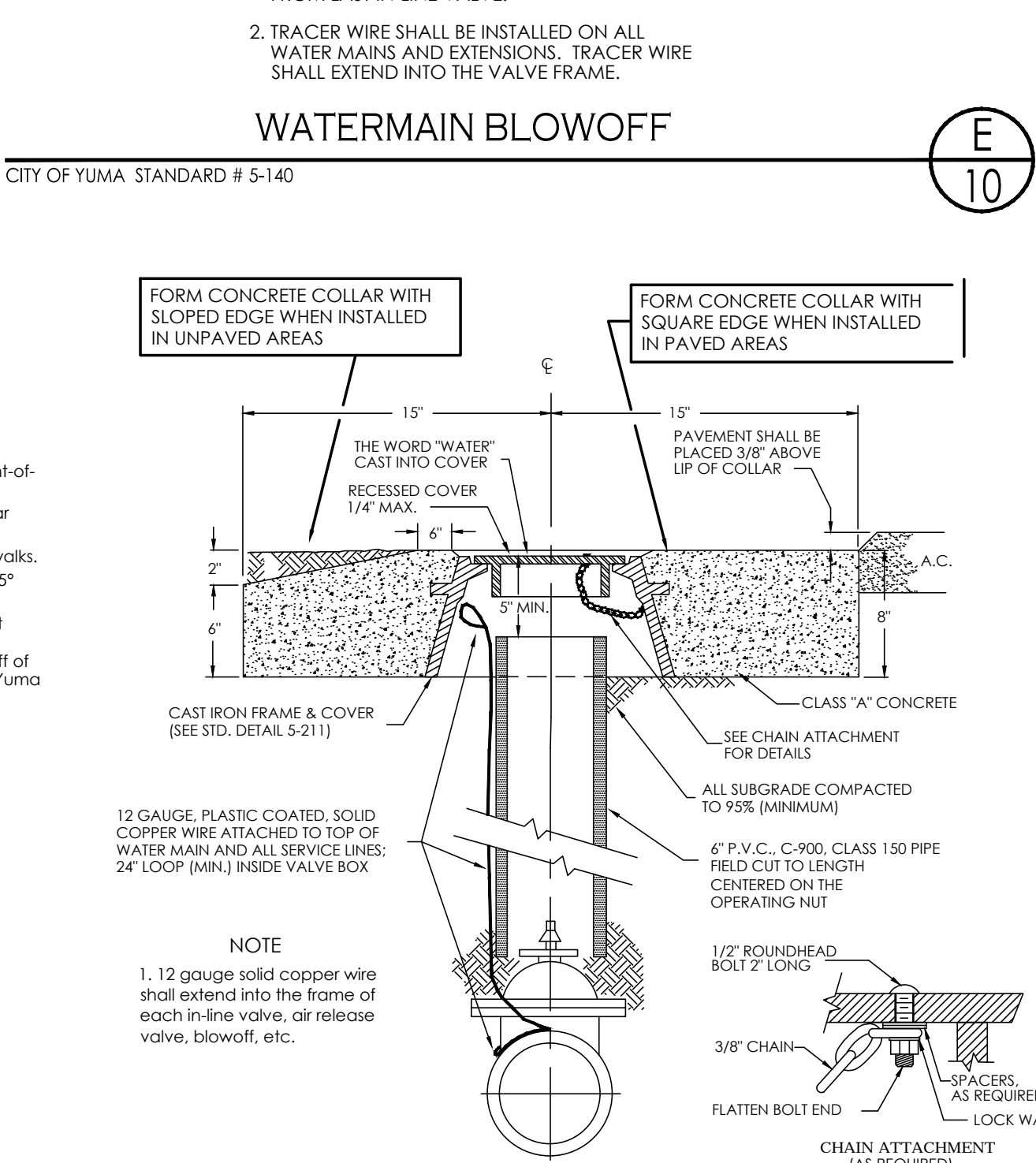
CONCRETE WATER METER BOX FOR 1/2" AND 2" METERS
CITY OF YUMA STANDARD # 5-153



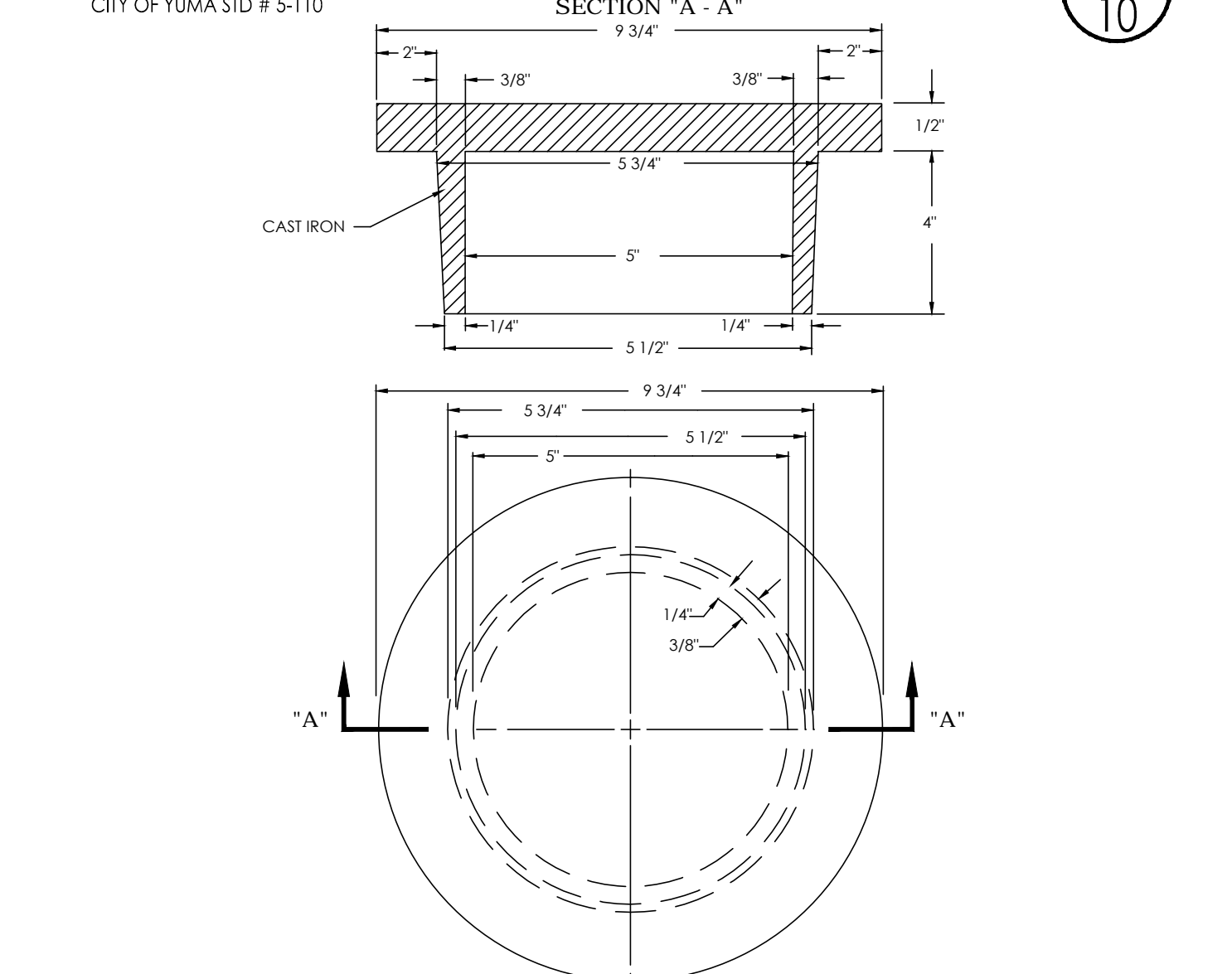
2" WATER SERVICE
CITY OF YUMA STANDARD # 5-150



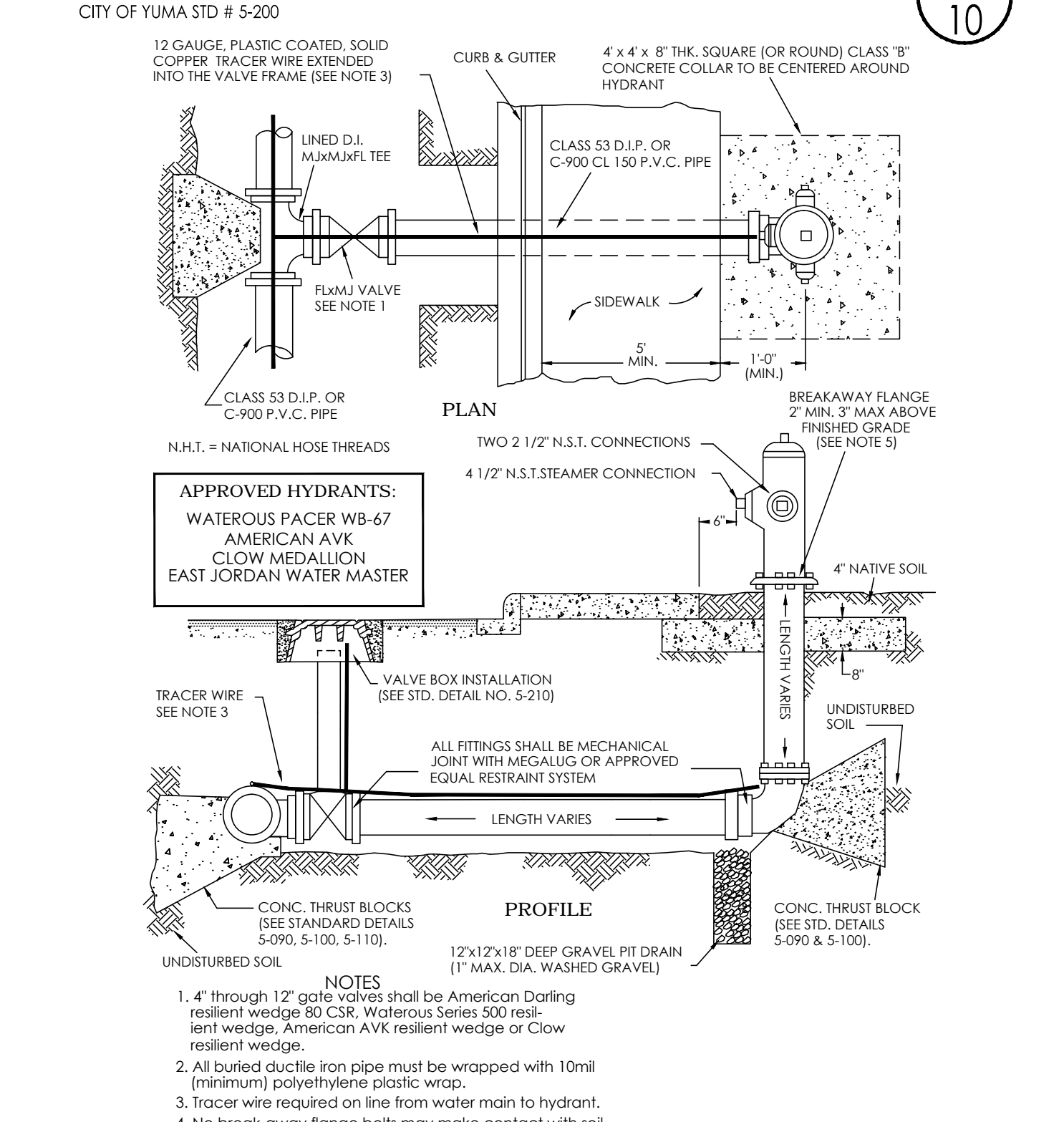
WATERMAIN BLOWOFF
CITY OF YUMA STANDARD # 5-140



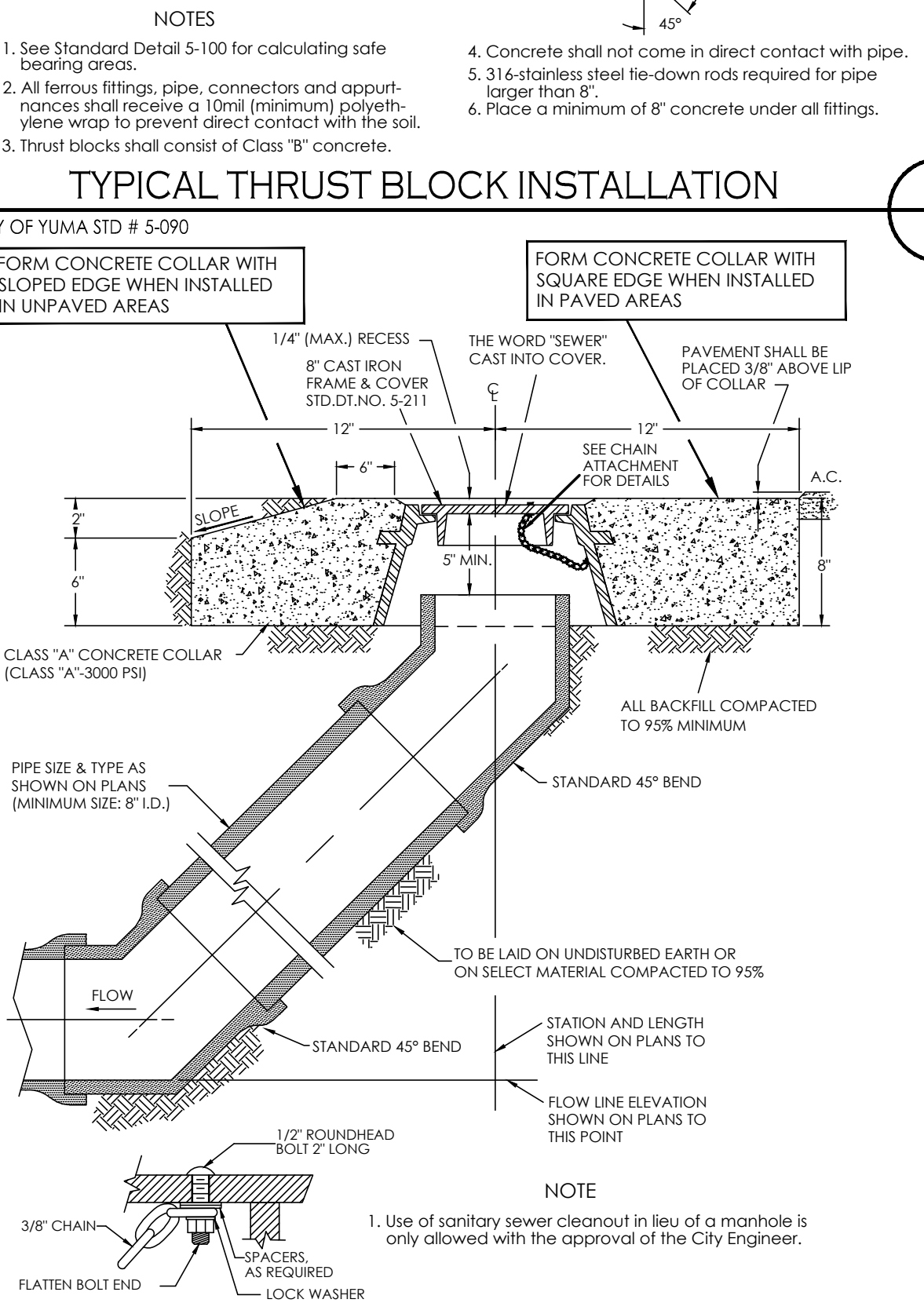
VALVE BOX INSTALLATION
CITY OF YUMA STANDARD # 5-210



VALVE BOX COVER, DROP IN
CITY OF YUMA STD # 5-200



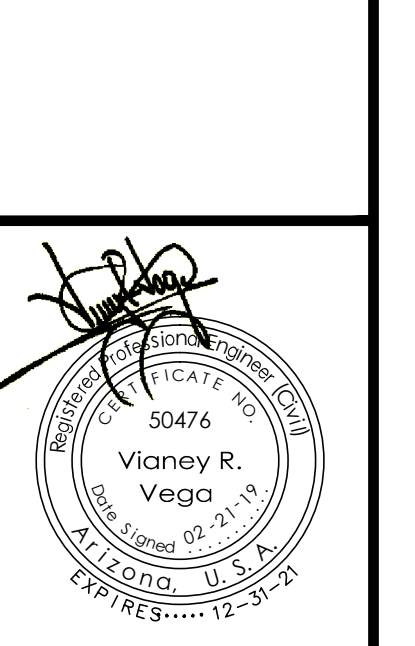
FIRE HYDRANT ON WATER MAINS
CITY OF YUMA STANDARD # 5-210



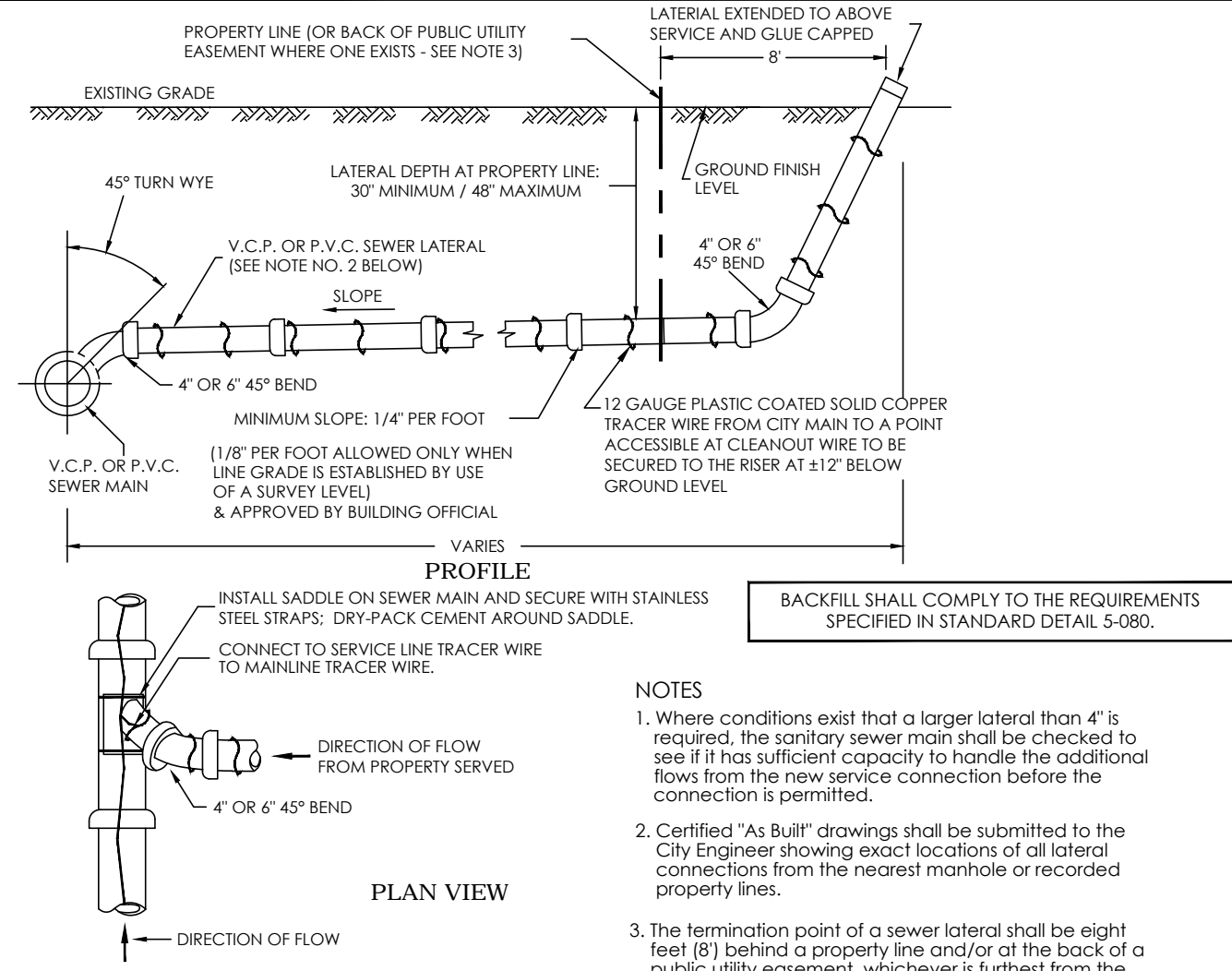
SANITARY SEWER CLEANOUT
CITY OF YUMA STD # 5-010

1846 S. 8th AVENUE TEL 928-329-0000
YUMA, AZ 85364 FAX 928-247-6332
V@veganvega.com
VEGA & VEGA ENGINEERING & PLUMBING

Water & Sewer Details
BIENESTAR ESTATES 10

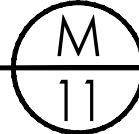


Scale: N.T.S. Date: FEB. 2019
Drawn: Staff Job #: VV18-400
Checked: Vno



SANITARY SEWER SERVICE

CITY OF YUMA STANDARD # 5-020



CHANNELS SHALL BE THE SAME SIZE AS THE PIPE I.D., ROUND BOTTOM AND FINISH SMOOTH

12 GAUGE PLASTIC COATED SOLID COPPER TRACER WIRE

SEE NOTE NO. 6

90° ROUNDED SWEEP

SECTION "A-A"

MANHOLE RING & COVER

GRADE RINGS

CONE

RING AND COVER

AS REQ'D

AS REQ'D

POLYMER GRADE RING OR PRO-RING

RISER SECTION

2" SCH. 40 CONDUIT & CAP WITH TRACER WIRE INSIDE PIPE

STEEL TROWEL FINISH TOP OF BENCH 1/16" SLOPE (SEE NOTE 6)

PIPE CONNECTIONS AS REQ'D

FACTORY CAST FLOW CHANNEL

OPTIONAL EXTENDED 5/8"

MINIMIZE NUMBER OF SECTIONS TO REDUCE NUMBER OF JOINTS

48" POLYMER MANHOLE SPECIFICATIONS

WALL THICKNESS	AVAILABLE BASE HEIGHTS	AVAILABLE RISER HEIGHTS	WALL WEIGHT/FT	APPROX. WEIGHT 3' BASE
2"	3', 4'	1', 2', 3', 4', 5', 6'	300 LBS/FT	3,655 LBS

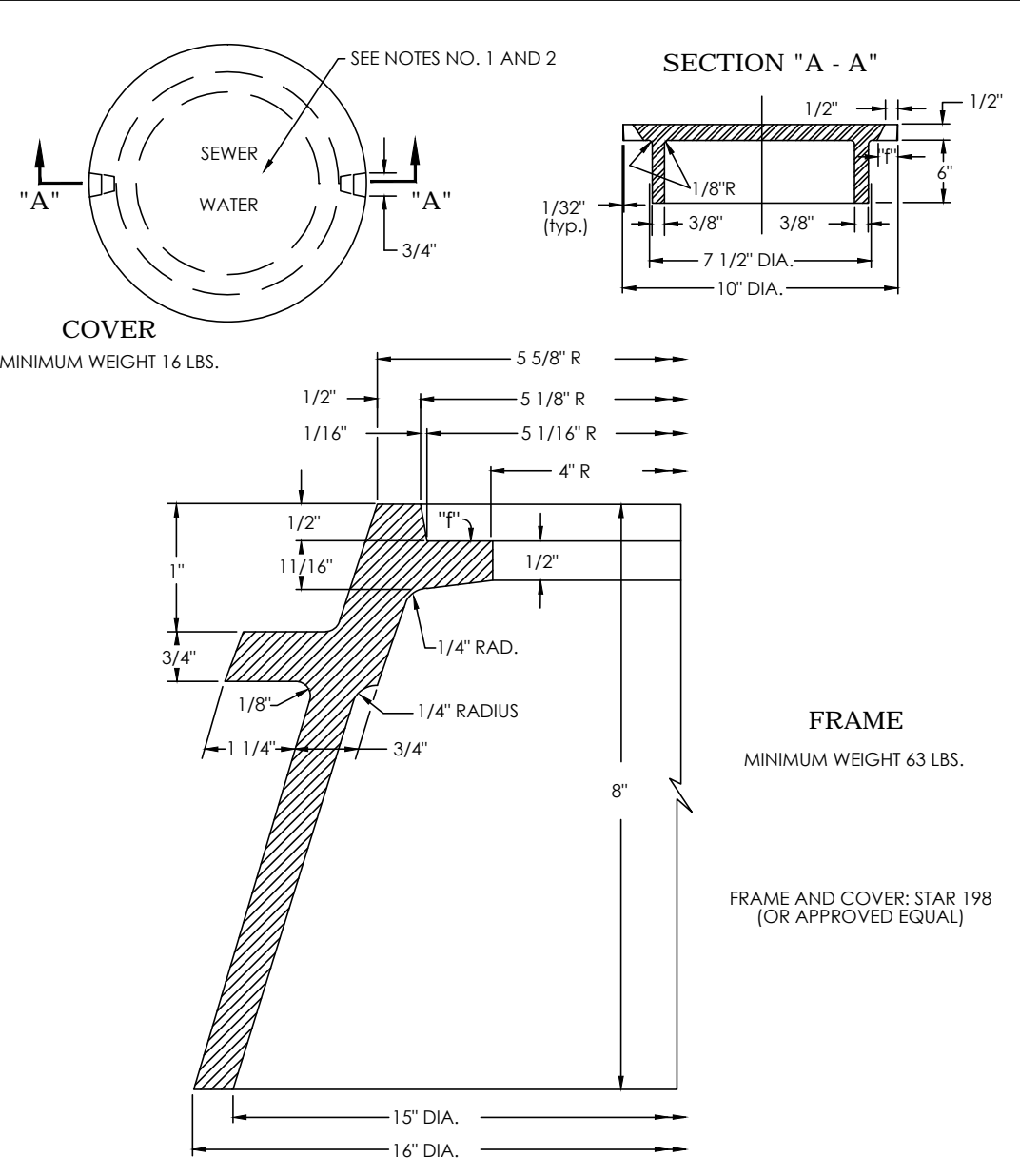
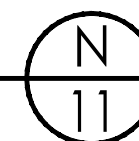
NOTES

- Concentric manholes shall be constructed only upon the approval of the City Engineer.
- Precast concrete cones and sections shall meet A.S.T.M. C-478 specifications (latest revision) except where shown. Concrete shall be type III with flyash additive. Inside diameter of manhole and elevations as shown on plans.
- Asphalt caulking shall be used to seal all joints.
- An ogival waterproofing seal shall be applied to the exterior surfaces of the manhole that will be exposed to ground water.
- Net Used
- Apply "Plaste" surface sealant (or approved equal) on adjustment rings, bench or on any other concrete surface.
- Base constructed of Class "A" concrete.
- Base reinforcing steel should be ASTM A615, grade 60.
- See standard R/10 for adjusting manhole frame and cover to final grade.
- Precast concrete manholes shall have a PVC T-Lock liner, sealed gas tight, as manufactured by Ameron (or approved equal). Liner and interior surfaces shall be spark tested; (apples only to sanitary sewer manholes see Arizona Administrative Code R18-9-301 D.3.e Manholes General Permit: Sewage Collection Systems pertaining to holiday testing).
- Backfill used to fill manhole excavation shall be a one sack cement per cubic yard of sand slurry mixture, unless otherwise approved.
- Grout seal around pipe. Match and apply same protective coating on grout as used on the other exposed concrete surfaces (see Note 6).
- Special details shall be required for Manholes greater than 48" in depth of collection manholes; for multiple pipe penetrations with at least one pipe greater than 4" or sewer main is larger than 48" in diameter. Calculations shall be signed/sealed by a registered professional engineer (P.E. license) and submitted to the City Engineer for review & acceptance.
- The PVC pipe needs to be installed inside the manhole. The top 1/2" portion of the pipe must be cut off a minimum length of 30" to allow CCTV camera access, and to accept flow from lateral piping.

POLYMER MANHOLE SPECIFICATIONS

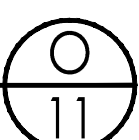
I.D.	O.D.	WALL THICKNESS	WEIGHT PER FOOT
48"	52"	2"	300 lb

PRE-CAST CONCRETE MANHOLE



8" CAST IRON FRAME AND COVER

CITY OF YUMA STANDARD # 5-211

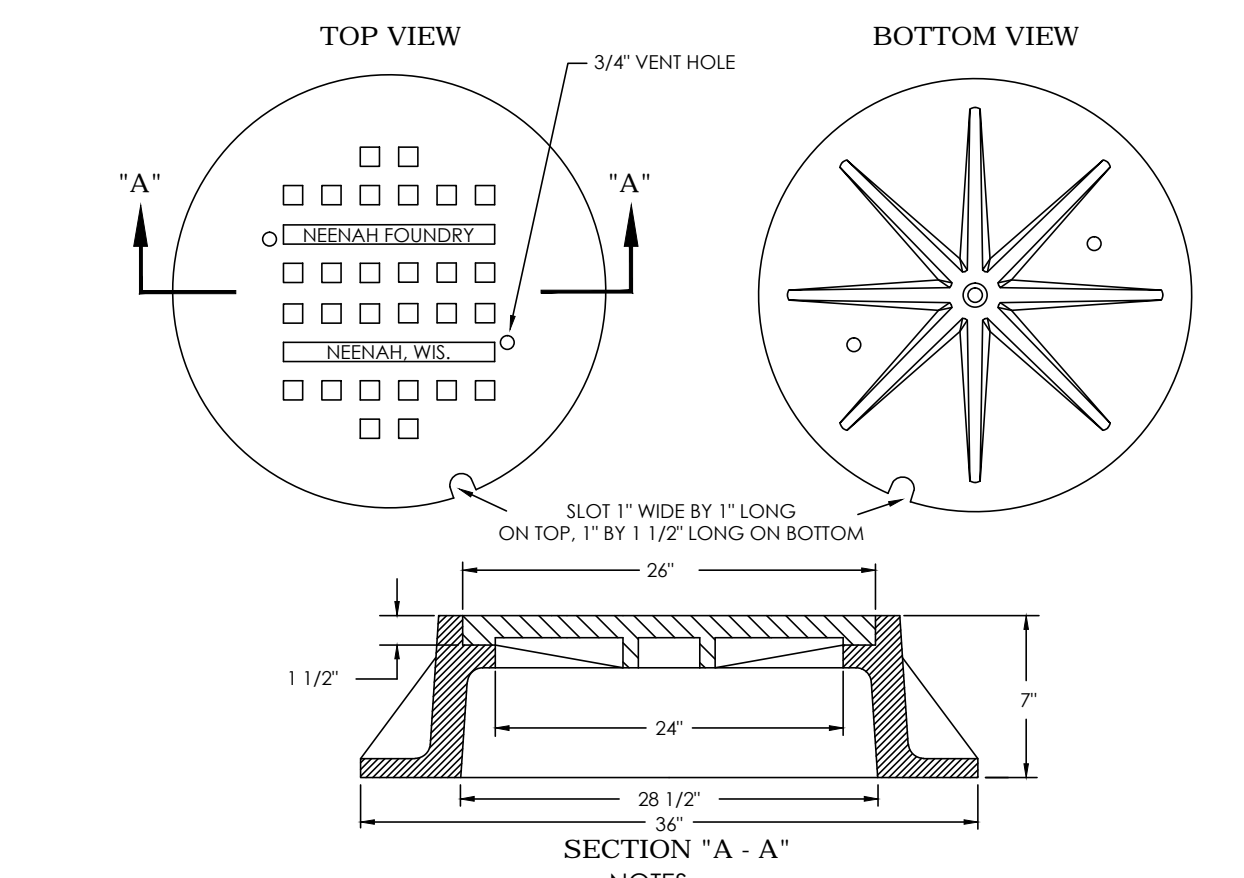
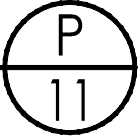


- The word "water" or "sewer" shall be cast on the cover. Letter size: 5/8" x 3/4" raised 1/16" above level of cover.
- Type of letters are to be submitted for approval.

"T" INDICATES ORDINARY MACHINING TOLERANCE FOR MACHINE FINISH: ± 1/64"

TYPE "A" DROP SEWER CONNECTION

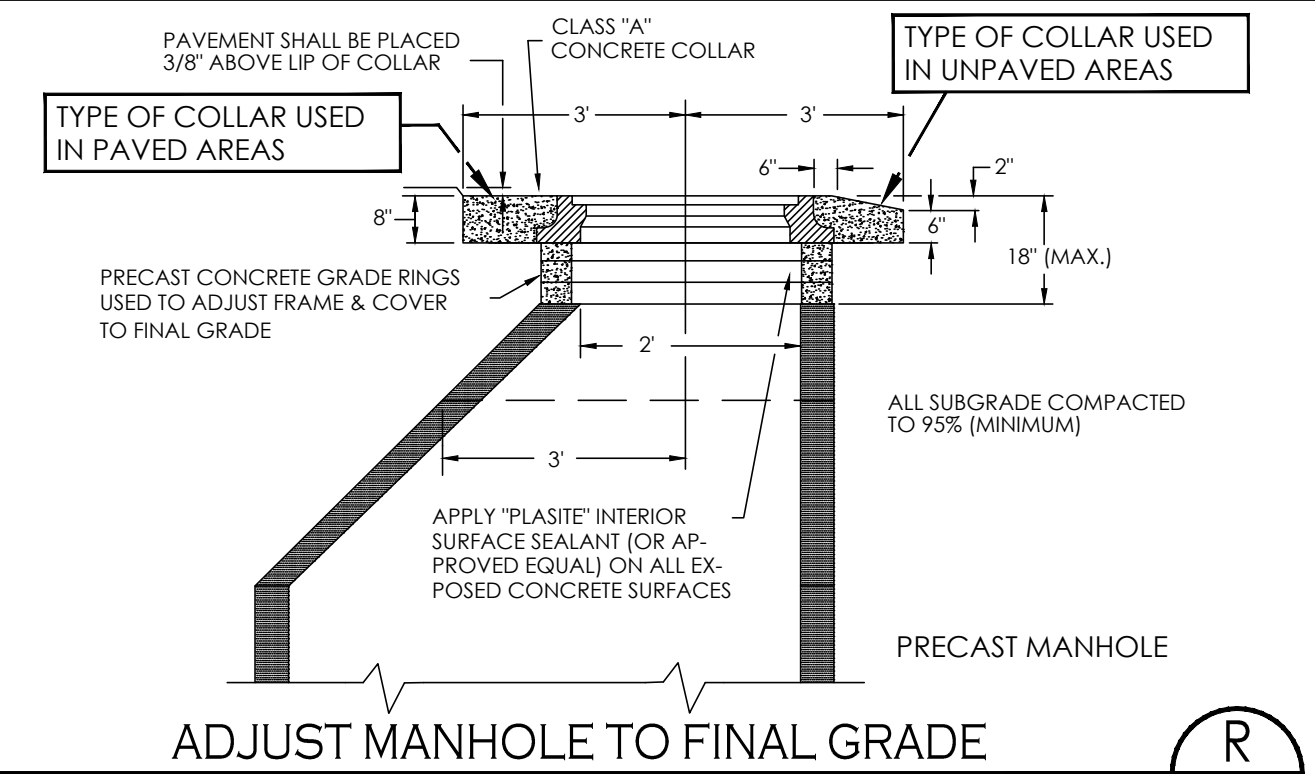
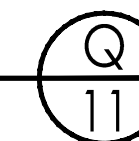
CITY OF YUMA STANDARD # 5-041



- The top of the cover and frame shall be flush and there shall be 1/8" horizontal clearance all around the frame and cover.
- All covers shall have the letter "3" cast into it. The letter shall be raised 5/16" and be no less than 2 1/2" high.
- Covers shall have a minimum of two 3/4" vent holes. Should a manhole be located within 600 feet of an interceptor sewer the vent holes are to be eliminated.
- Standard manhole covers are the Heenan R-1595, R-1642 or approved equal.

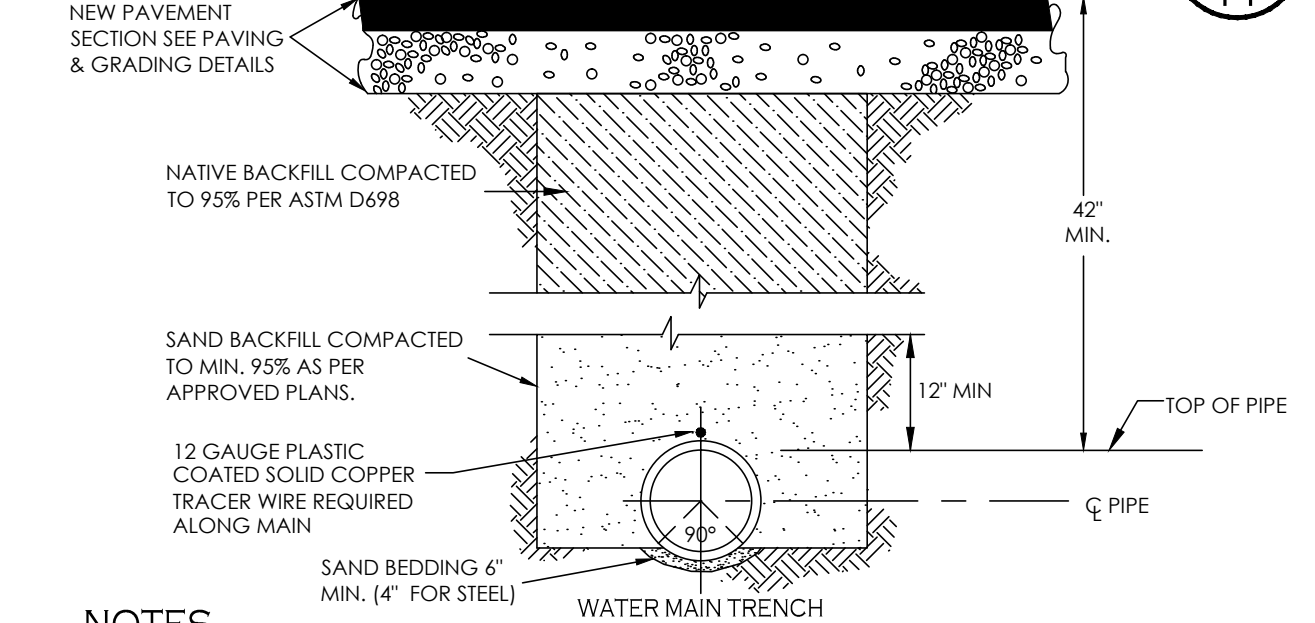
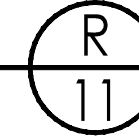
STANDARD MANHOLE COVER

CITY OF YUMA STANDARD # 5-040



ADJUST MANHOLE TO FINAL GRADE

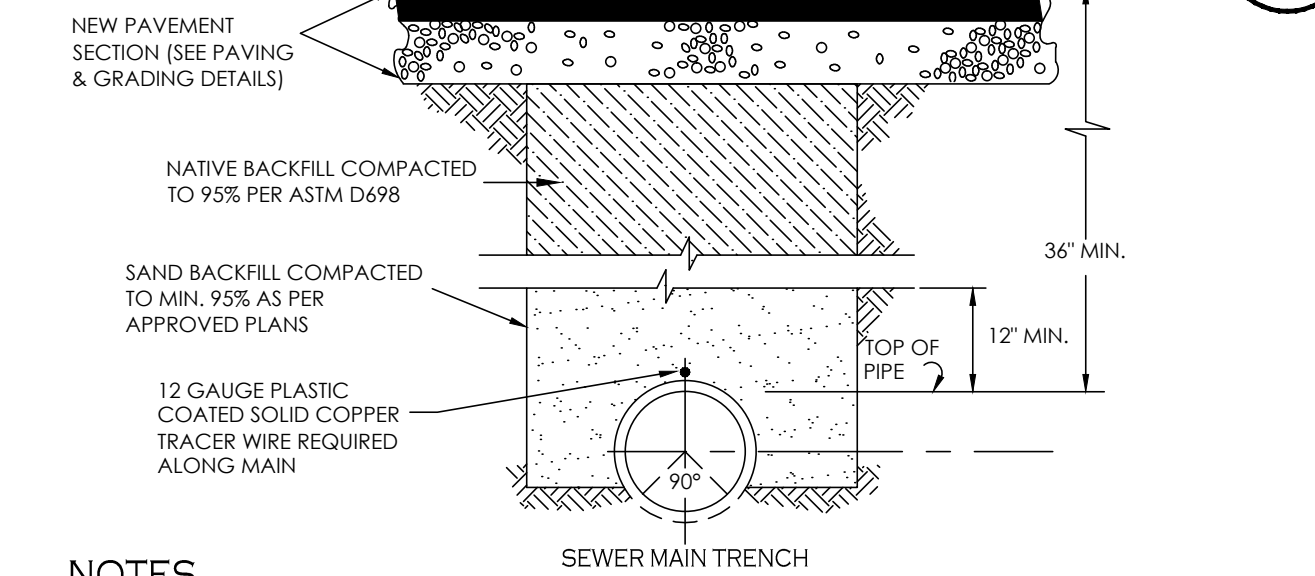
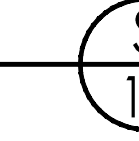
CITY OF YUMA STANDARD # 5-044



- NATIVE SOIL MAY BE USED FOR BACKFILL WITH THE ENGINEER'S APPROVAL.
- ONE SACK SAND SLURRY (A) MAY BE USED IN LIEU OF SAND BACKFILL AND (B) MAY BE REQUIRED BY THE ENGINEER AT CERTAIN SITES.
- BEDDING SHOWN IS A MINIMUM STANDARD FOR SHALLOW TRENCHES AND ACCEPTABLE NATIVE BASE. EXACT TYPE OF BEDDING SHALL BE APPROVED BY THE ENGINEER.
- DITCH SIDES SHALL BE SLOPED OR SHORED AS REQUIRED PER O.S.H.A. STANDARDS.

TYP. WATER MAIN TRENCH DETAIL

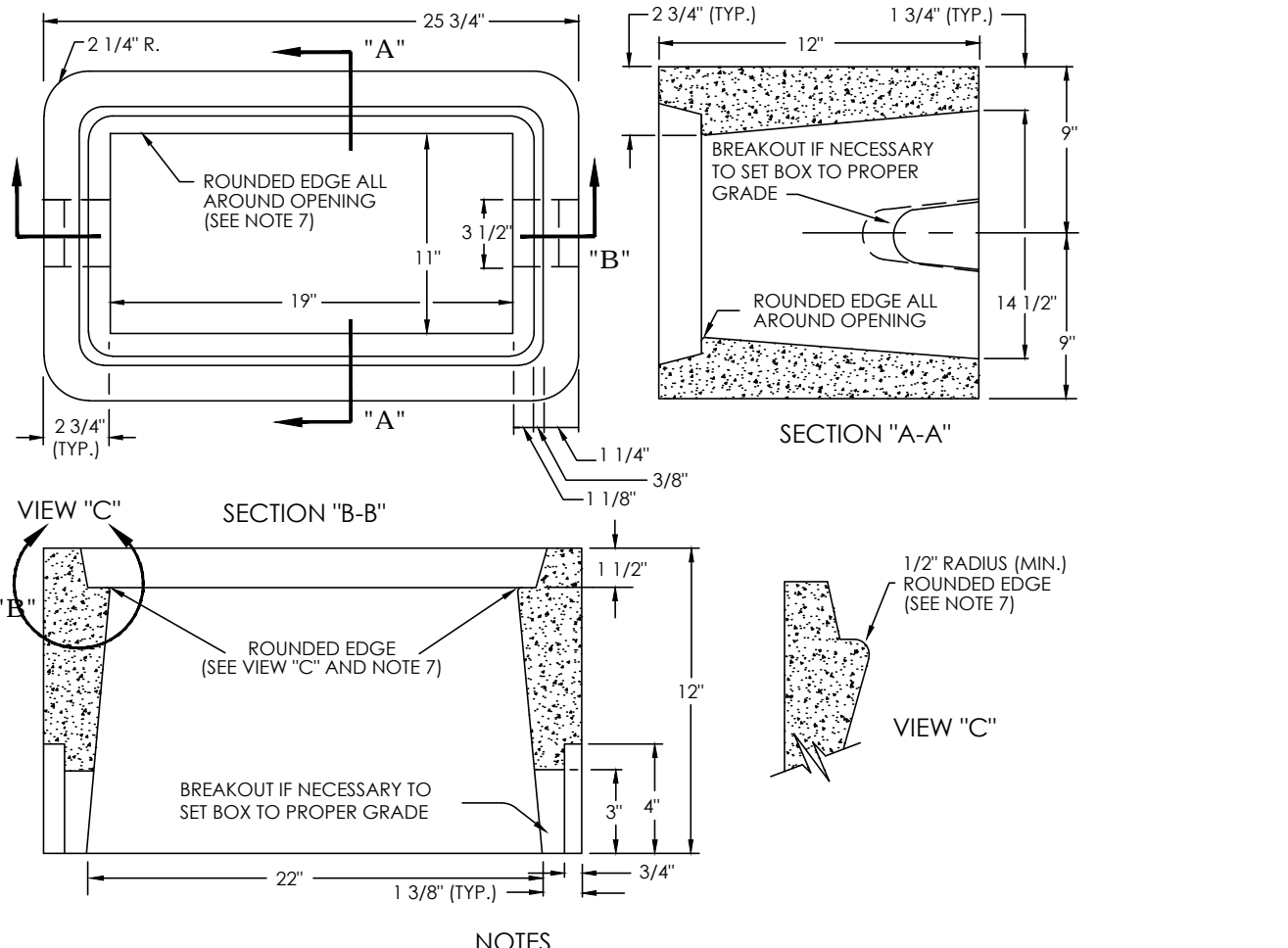
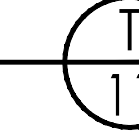
CITY OF YUMA STANDARD # 5-080



- NATIVE SOIL MAY BE USED FOR BACKFILL WITH THE CITY ENGINEER'S APPROVAL.
- ONE SACK SAND SLURRY (A) MAY BE USED IN LIEU OF SAND BACKFILL AND (B) MAY BE REQUIRED BY THE ENGINEER AT CERTAIN SITES.
- BEDDING SHOWN IS A MINIMUM STANDARD FOR SHALLOW TRENCHES AND ACCEPTABLE NATIVE BASE. EXACT TYPE OF BEDDING SHALL BE APPROVED BY CITY ENGINEER.
- DITCH SIDES SHALL BE SLOPED OR SHORED AS REQUIRED PER O.S.H.A. STANDARDS.

TYPICAL SEWER MAIN TRENCH BACKFILL

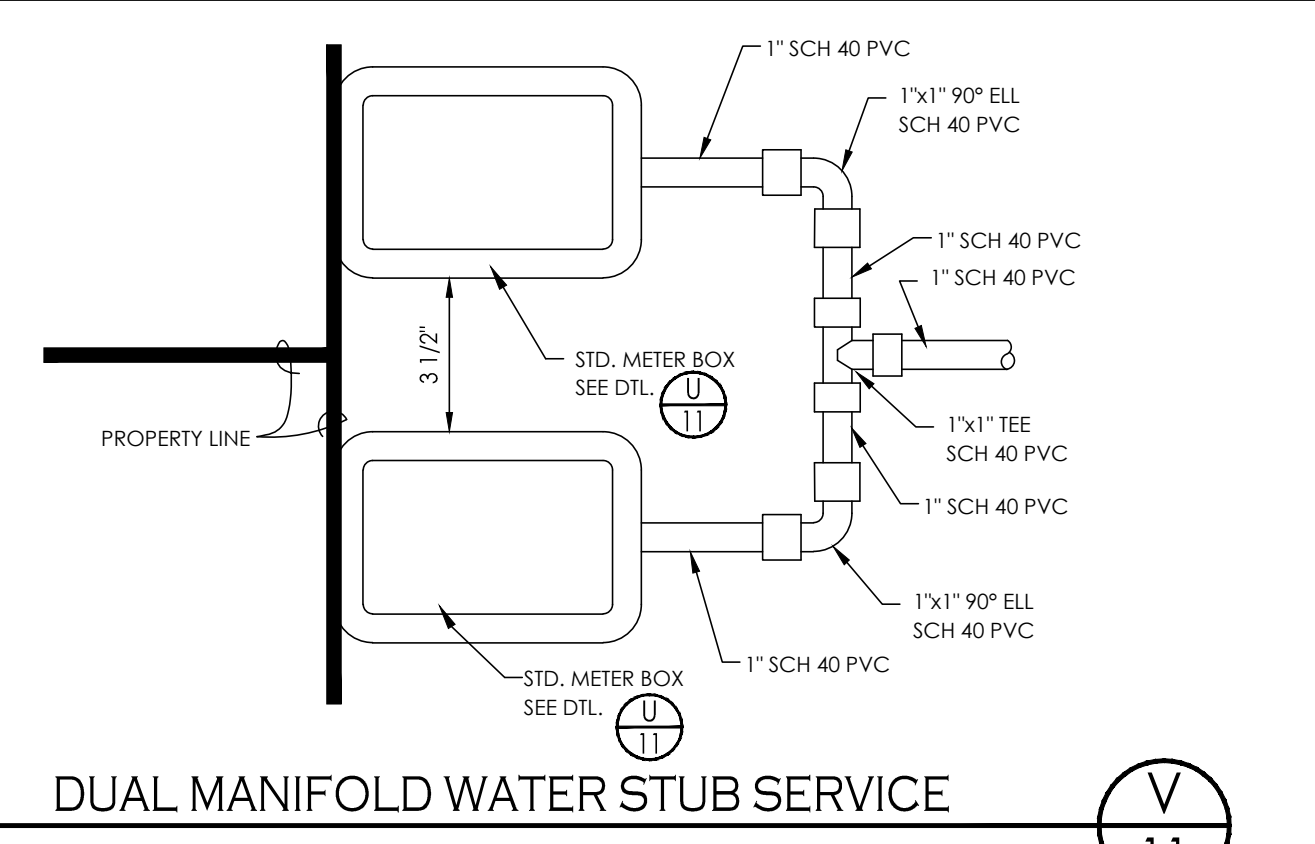
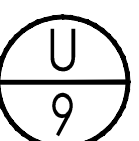
CITY OF YUMA STANDARD # 5-080



- The meter boxes shall conform to the dimensions of the above drawing and shall be made of Portland cement concrete poured and tamped (or vibrated) in true form.
- The Portland cement concrete shall be batched in the proper proportions by weight, water, cement, fine aggregate (A.S.T.M. C-33), and coarse aggregate (3/4" max). This mix shall be designed to obtain a minimum of 4,000 psi of 28 days when tested in accordance with A.S.T.M. C-39. This mix shall be poured at a slump not in excess of six inches (6").
- Upon the removal of the forms, the meter boxes shall be water cured for seven (7) days or sprayed with a membrane curing compound such as "Hunts Process" or approved equal.
- The method of sampling and testing of these boxes shall conform to A.S.T.M. C-129 and C-140, except that the minimum required strength shall be 4,000 psi of 28 days.
- Meter box lids shall be cast iron and fit flush with top of box and have adequate bearing on seat. When meter boxes are used in paved areas, subject to vehicular traffic, a traffic rated lid will be used. The lids are to be pre-cut with 1.75" to 2" diameter holes to install automatic meter reading devices.
- The San Diego Precast Concrete, Inc. model P 4 1/2" water meter box with cast iron lid or equal is an approved model.
- Apply 1/2" radius (minimum) to edges of box opening in order to prevent worker injury when handling and installing boxes.
- Use composite water meter vaults in residential subdivisions/mobile home parks. The lids are to be pre-cut with 1.75" to 2" diameter holes to install automatic meter reading devices.
- Meter boxes should not be installed in sidewalk unless directed by City Engineer.

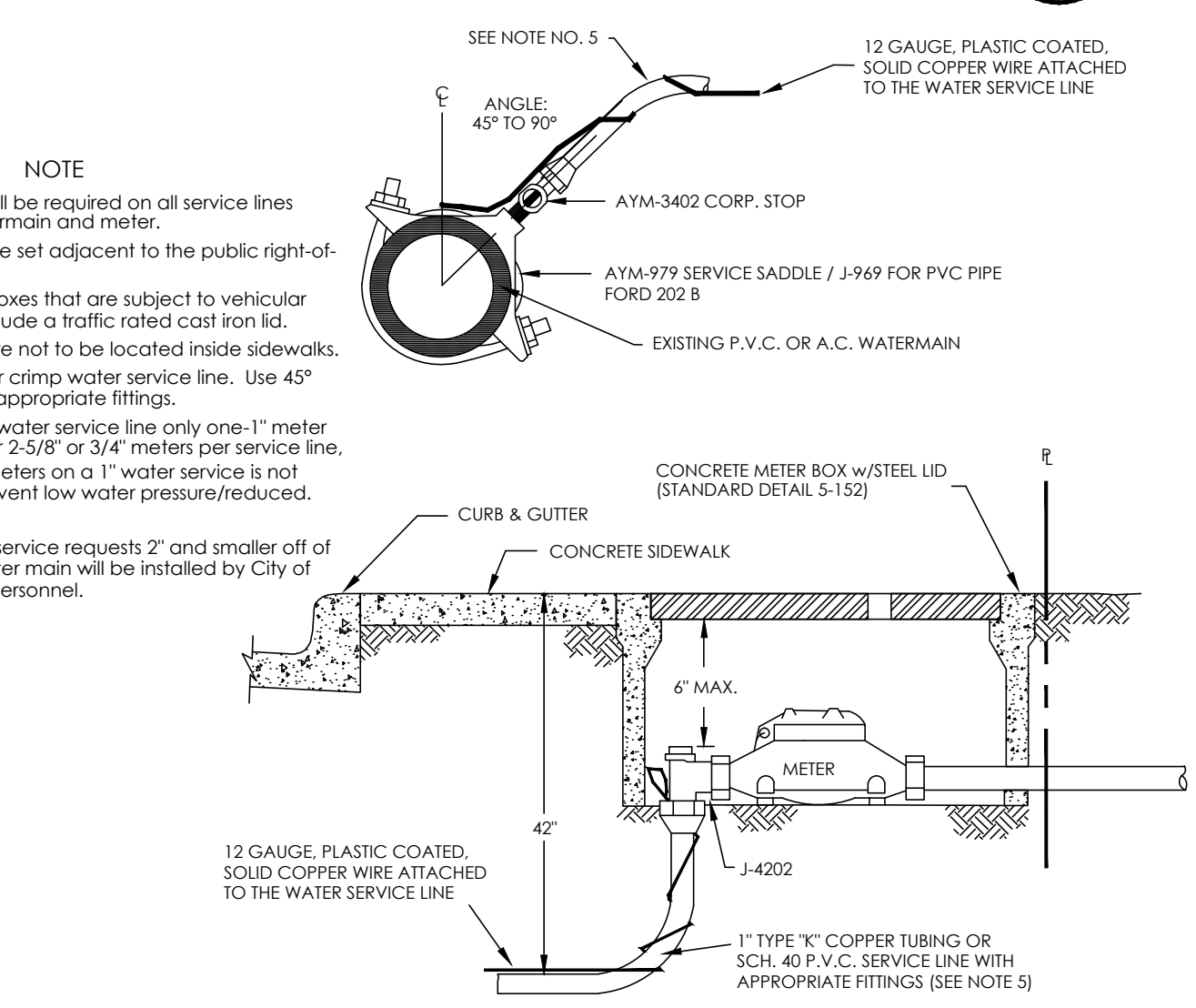
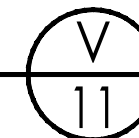
CONCRETE WATER METER BOX FOR 1" METERS

CITY OF YUMA STANDARD # 5-152



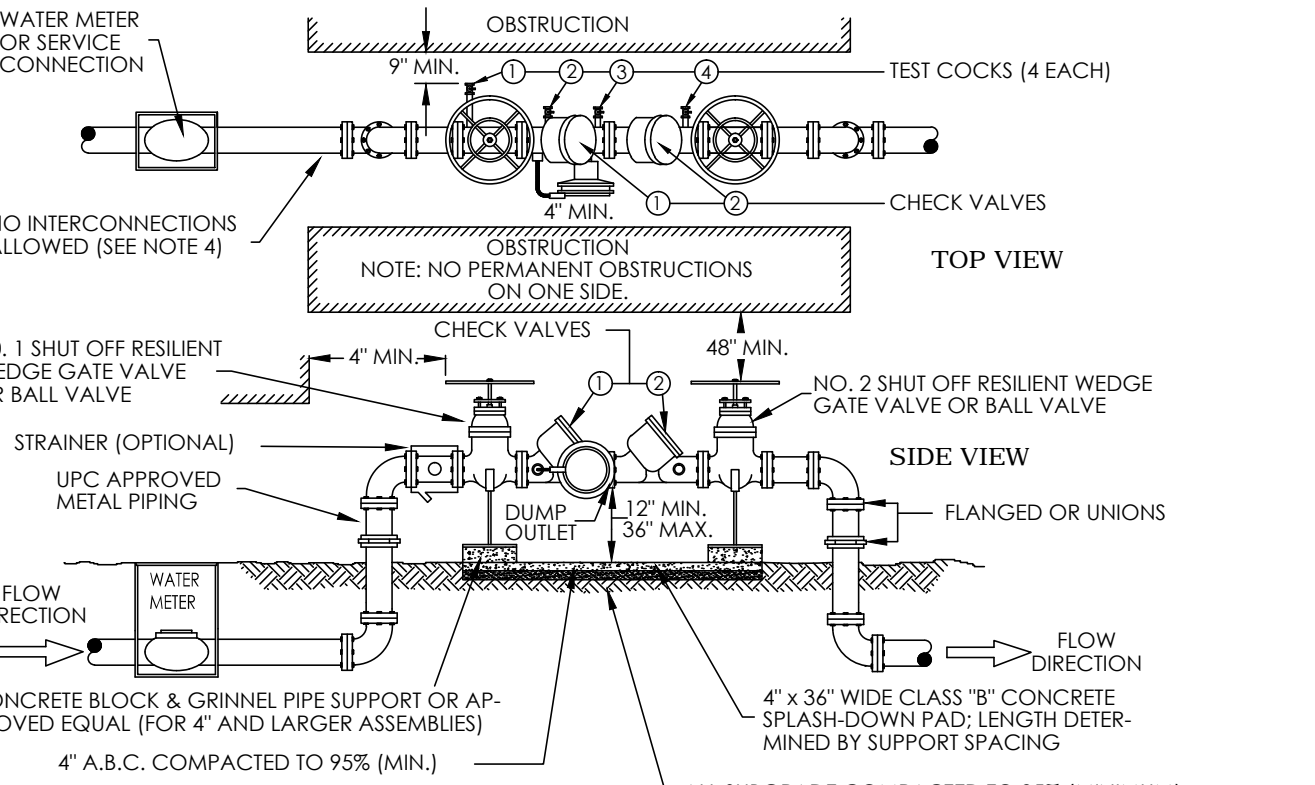
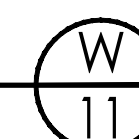
DUAL MANIFOLD WATER STUB SERVICE

CITY OF YUMA STANDARD # 5-149



SERVICE CONNECTION (WATER) 1" & SMALLER

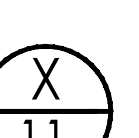
CITY OF YUMA STANDARD # 5-149



- A PERMIT IS REQUIRED BEFORE INSTALLING OR REPLACING A BACKFLOW ASSEMBLY. PERMITS ARE OBTAINED AT DEPARTMENT OF COMMUNITY DEVELOPMENT, 3 WEST 3RD STREET.
- A LIST OF APPROVED BACKFLOW ASSEMBLIES ARE AVAILABLE FROM THE CITY OF SAN LUIS, DEPARTMENT OF PUBLIC WORKS, PRETREATMENT SECTION, LOCATED AT 155 WEST 14TH STREET.
- THE R.P.A. SHALL BE INSTALLED OUTSIDE ABOVE GROUND, AS CLOSE TO THE WATER METER AS POSSIBLE AND ON PRIVATE PROPERTY UNLESS OTHERWISE AUTHORIZED.
- THERE SHALL BE NO OTHER PIPING CONNECTED TO THE PIPING BETWEEN THE METER AND THE BACKFLOW ASSEMBLY EXCEPT FOR PARALLEL INSTALLATIONS.
- INSTALLATIONS SHALL MEET CURRENT UNIFORM PLUMBING CODES IN ADDITION TO CITY OF SAN LUIS BUILDING CODES.
- INSTALLATIONS SHALL BE LEFT EXPOSED UNTIL INSPECTED AND APPROVED BY THE CITY OF SAN LUIS.
- IF THIS UNIT IS INSTALLED TO SERVICE A RETENTION BASIN, THIS UNIT SHALL BE PLACED A MINIMUM 12" (36" MAXIMUM) ABOVE THE FLOOD RIM OF THE RETENTION BASIN.
- PROTECTIVE CAGES ARE OPTIONAL AND WILL MEET CLEARANCE, ACCESS AND DRAINAGE REQUIREMENTS.
- IT IS RECOMMENDED THAT BACKFLOW ASSEMBLIES BE PROTECTED FROM THE ELEMENTS. CARE SHALL BE TAKEN TO ENSURE THAT THE PROTECTION DOES NOT HINDER THE ASSEMBLY'S OPERATION.
- APPROVAL FROM THE CITY OF SAN LUIS FIRE MARSHAL IS REQUIRED BEFORE ANY BACKFLOW ASSEMBLY IS CONNECTED TO ANY FIRE SYSTEM. R.P.A. SHALL BE PAINTED RED WHEN USED WITH A FIRE SYSTEM.
- ALL BACKFLOW UNITS ARE TO BE TESTED BY A CERTIFIED PROFESSIONAL PRIOR TO FINAL APPROVAL. BACKFLOW UNITS SHALL BE PROFESSIONALLY TESTED ON AN ANNUAL BASIS.
- THE INSTALLATION OF A BACKFLOW ASSEMBLY MAY CREATE A FLOODED SYSTEM. CONSULT WITH THE CITY OF SAN LUIS BUILDING OFFICIAL FOR PRESSURE RELIEF VALVES, THERMAL EXPANSION, OR OTHER NEEDED REQUIREMENTS.

REDUCED PRESSURE ASSEMBLY (R.P.A.) FOR 3" AND SMALLER WATER LINE

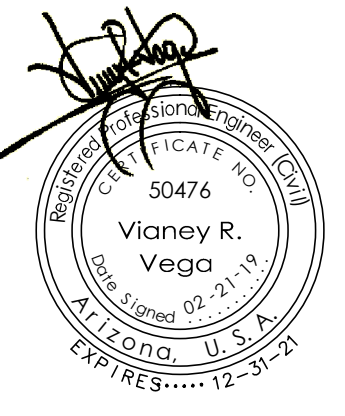
CITY OF YUMA STANDARD # 5-116



1846 S. 8th AVENUE TEL 928-329-0000
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V@vega.com



Water & Sewer Details
BIENESTAR ESTATES 10

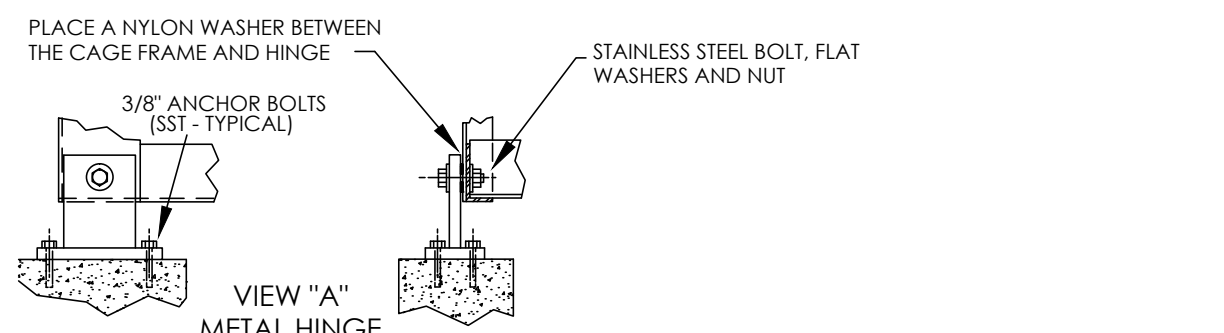
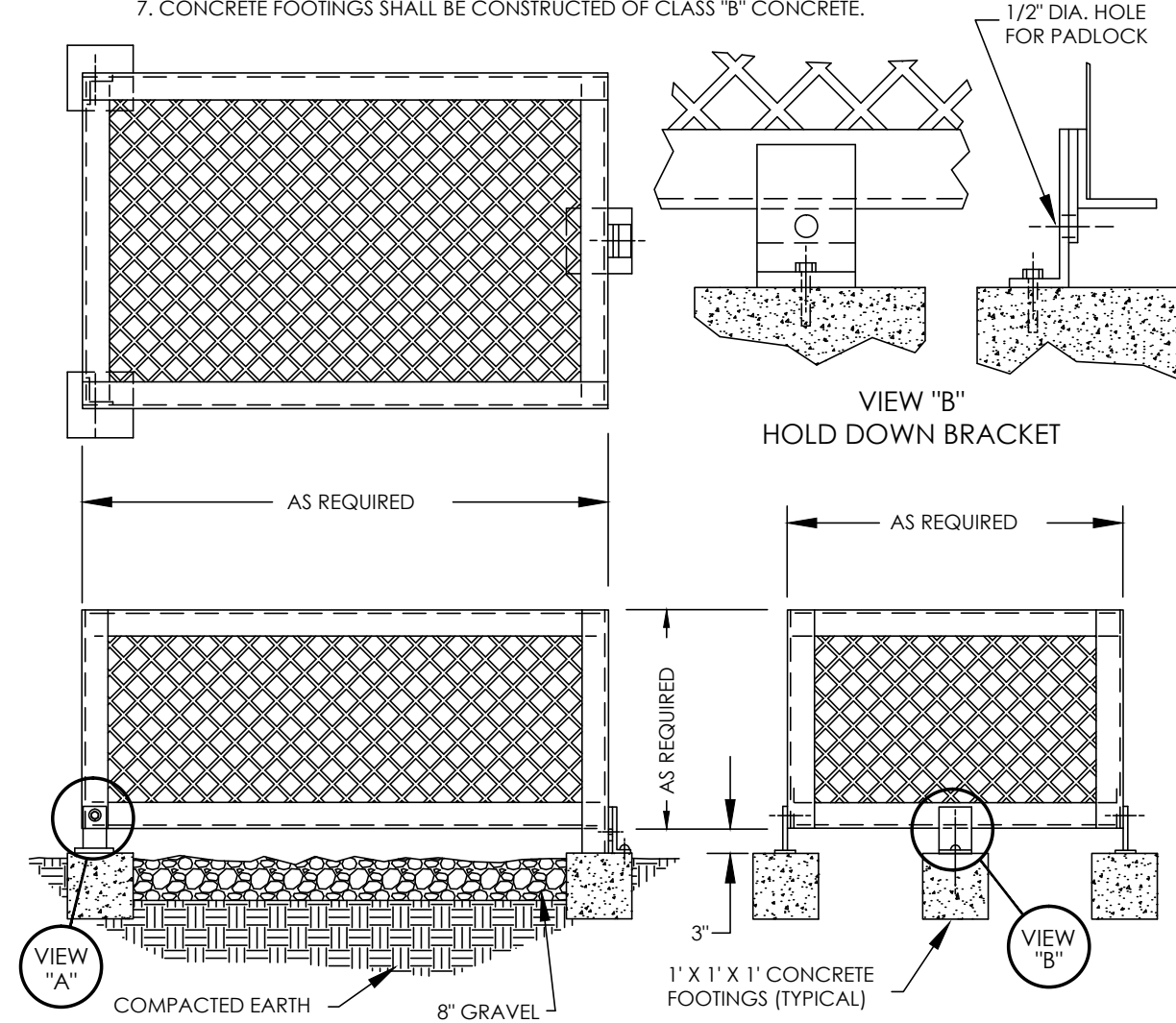


Scale: N.T.S. Date: FEB. 2019
Drawn: Staff Job #: WVI18-400
Checked: Vno

Sheet 11 of 12

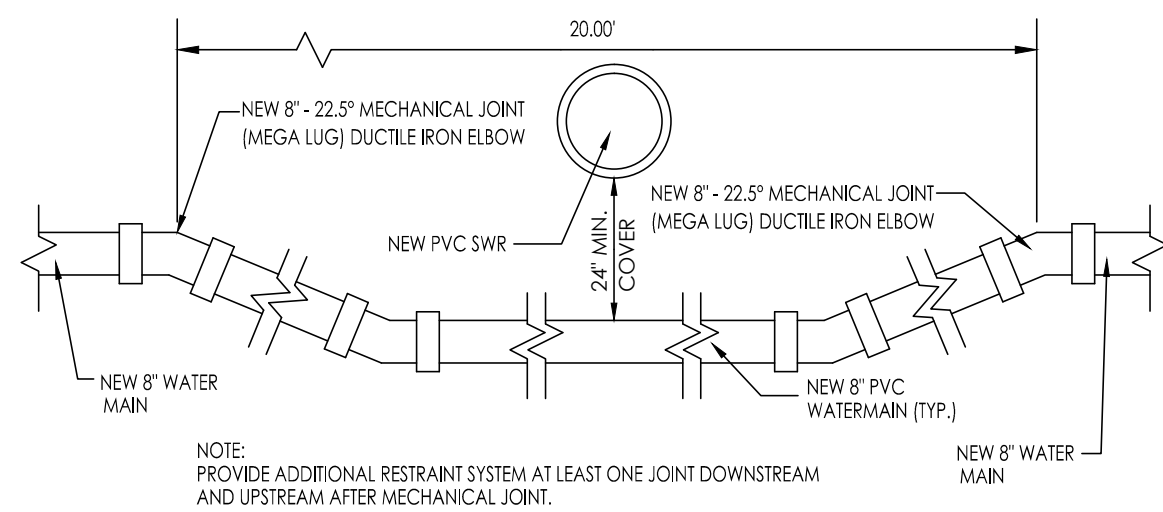
NOTES

1. CONSTRUCT FRAME FROM 1 1/2" X 1 1/2" X 1/4" ANGLE IRON (WELDED ASSEMBLY)
2. CONSTRUCT HINGES / HOLD DOWN BRACKET FROM 1/4" STEEL
3. 1/4" X 1/4" STEEL MESH TACK WELDED TO ANGLE IRON FRAME.
4. DE-BURR AND ROUND ALL WELDS AND SHARP EDGES.
5. OVERALL DIMENSIONS (HEIGHT/LENGTH & WIDTH) TO BE DETERMINED BY APPLICATION.
6. ASSEMBLY SHALL RECEIVE ONE COAT OF METAL PRIMER AND TWO FINISH COATS OF INDUSTRIAL "SAHARA SAND" RUST RESISTANT PAINT (OR APPROVED EQUAL).
7. CONCRETE FOOTINGS SHALL BE CONSTRUCTED OF CLASS "B" CONCRETE.



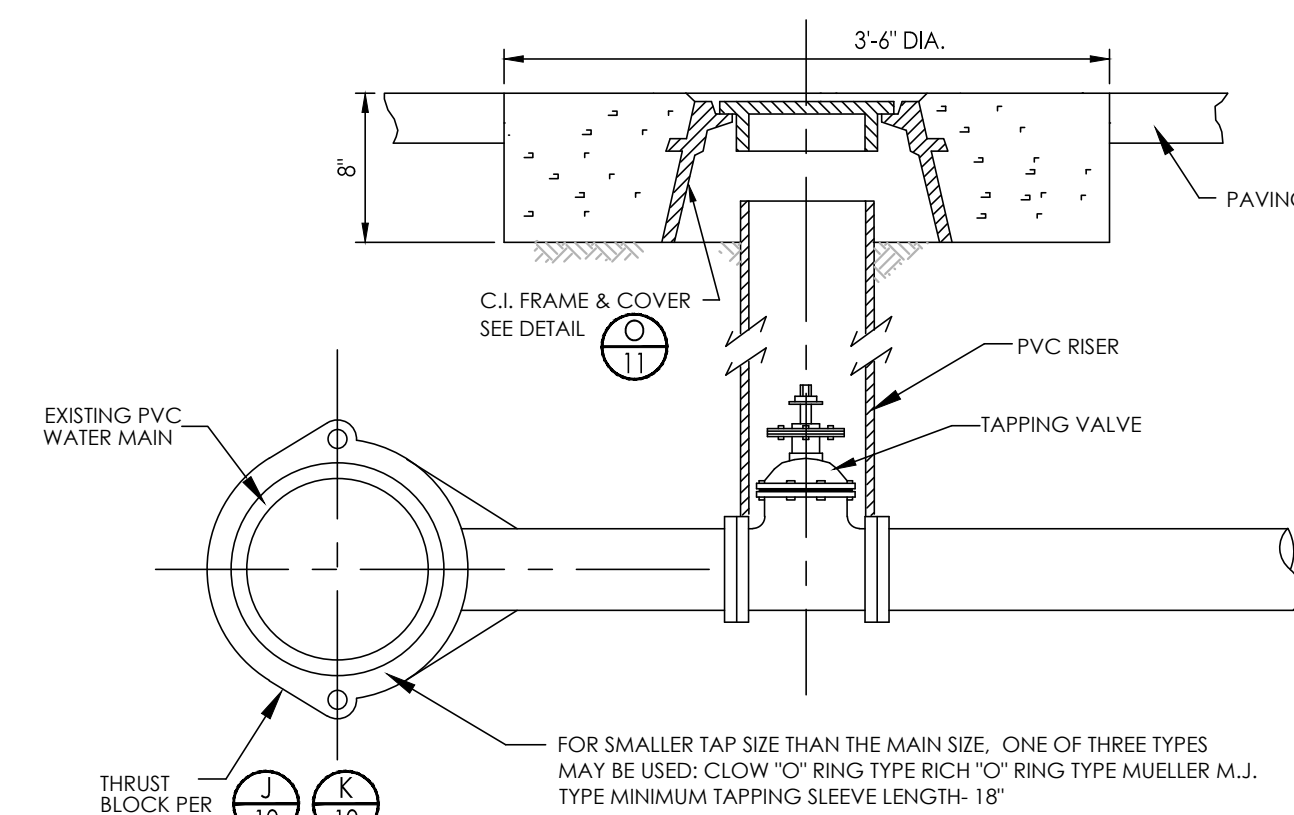
CAGE FOR BACKFLOW PREVENTER DETAIL
CITY OF YUMA STANDARD # 5-114

Y
12



LOWERING DETAIL OF NEW WATER LINE

Z
12



TAPPING SLEEVE DETAIL

AA
12

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 SAN LUIS 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 HEREON REVISED, ALL CONSTRUCTION MATERIALS AND WORKMANSHIP WILL BE IN ACCORDANCE WITH YUMA COUNTY 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 SAN LUIS, FOR MAINTENANCE UNTIL "AS-BUILT", CERTIFIED, REPRODUCIBLE PLANS ARE FILED WITH AND ACCEPTED BY THE CITY OF SAN LUIS PUBLIC WORKS DIRECTOR.
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.

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 ELBS, 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 235.
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 SEE 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:

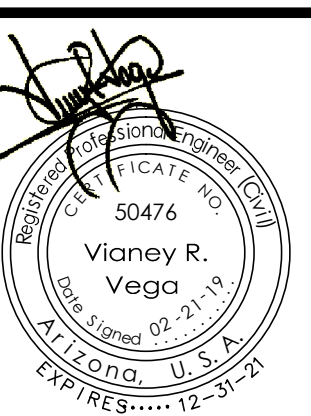
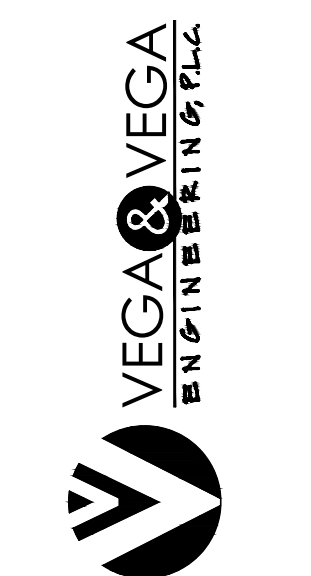
ALL VALVES 12" AND UNDER ARE TO BE RESILIENT WEDGE GATE VALVES. THE FOLLOWING VALVES WILL BE ACCEPTED:

 - WATEROUS SERIES 500 RESILIENT CLOW RESILIENT WEDGE
 - AMERICAN DARING 80 CSR RESILIENT WEDGE.
9. ALL PIPES, FITTINGS, VALVES, COCKINGS, 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. DESINFECTATION 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 AND PRODUCTS USED IN THE DRINKING WATER SYSTEM SHALL CONFORM TO NSF STANDARD 61.
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 WITH AWWA C609-94 FOR PVC PIPE.
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 ANSI/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 ANSI/AWWA C651.)
17. WATER AND SEWER LINES AND WATER AND SEWER SERVICE LINES, SEPARATION IN ACCORDANCE WITH A.A.C. R18-4-502.C
18. VERTICALLY AND 6 FEET HORIZONTALLY UNDER ALL CONDITIONS, WHERE A SEWER FORCE MAIN CROSSES ABOVE OR LESS THAN 6 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 STANDARD DETAIL No. 101.
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 ENGINEER'S CERTIFICATE OF COMPLETION DOCUMENTATION AND FORWARD SAME TO THE APPROPRIATE OOWM 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.
29. INFILTRATION 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.
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 A. A. C. TIRE 8, CH 9, D.2.)
33. MANHOLES TESTING IS REQUIRED FOR 100% OF MANHOLES ACCORDING TO R18-9-E301.D.3.f. & R18-9-E301.D.3.g.
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.

ALL EQUIPMENT AND PRODUCTS THAT COME INTO CONTACT WITH THE PUBLIC WATER SUPPLY SHALL BE CERTIFIED TO MEET THE NATIONAL SANITATION FOUNDATION STANDARD 61 PER A.A.C. SEC. R18-4-213(B)

Water & Sewer Details
BIENESTAR ESTATES 10

1846 S. 8th AVENUE
YUMA, AZ 85364
928-329-0000 TEL
928-247-6232 FAX
V@vegaengineers.com



Notes:

Scale: N.T.S. Date: FEB. 2019
Drawn: staff Job #: vnv18-400
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Sheet 12
of 12

AVENUE "F"

SAN DIEGO STREET

EMMANUEL AVE.

124

123

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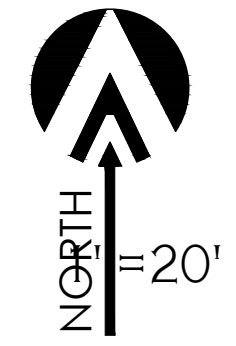
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SAN GABRIEL STREET

SAN FERNANDO STREET



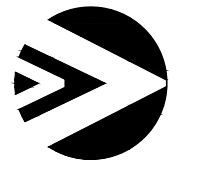
PLANT LEGEND

TREES	COMMON NAME	BOTANICAL NAME	SIZE
	Willow Acacia	Acacia Salicina	24" Box
	Sisoo	Dalbergii Sisoo	15 Gal.
	Coolabah	Eucalyptus Microtheca	24" Box
	Southern Live Oak	Quereus Virginiana	24" Box
SHRUBS	COMMON NAME	BOTANICAL NAME	SIZE
	Arizona Yellow Bells	Techoma Stans	5 Gal.
	Bird of paradise	Caesalpinia Gilliesii	5 Gal.
	Texas Sage	Leucophyllum Frutescens	5 Gal.
	Petite pink Oleander	Nerium oleander	5 Gal.

GROUND COVER/HARDSCAPES

- White Rose
- Seeded Majestic Turf

6" X 6" Curb



1846 S. 8th AVENUE 928-329-0000 TEL
YUMA, AZ 85364 928-247-4232 FAX
Vn@vega.vega.com

VEGA & VEGA
LANDSCAPE ARCHITECTURE, INC.

Landscaping Plan
BIENESTAR ESTATES 10



SOUTHWEST CREANITORS LANDSCAPE ARCHITECTURE, INC.
PO BOX 29444
YUMA, AZ 85367
928-398-0205
JPL-PRR@GOL.COM

Scale: N.T.S. Date: 4/18/19

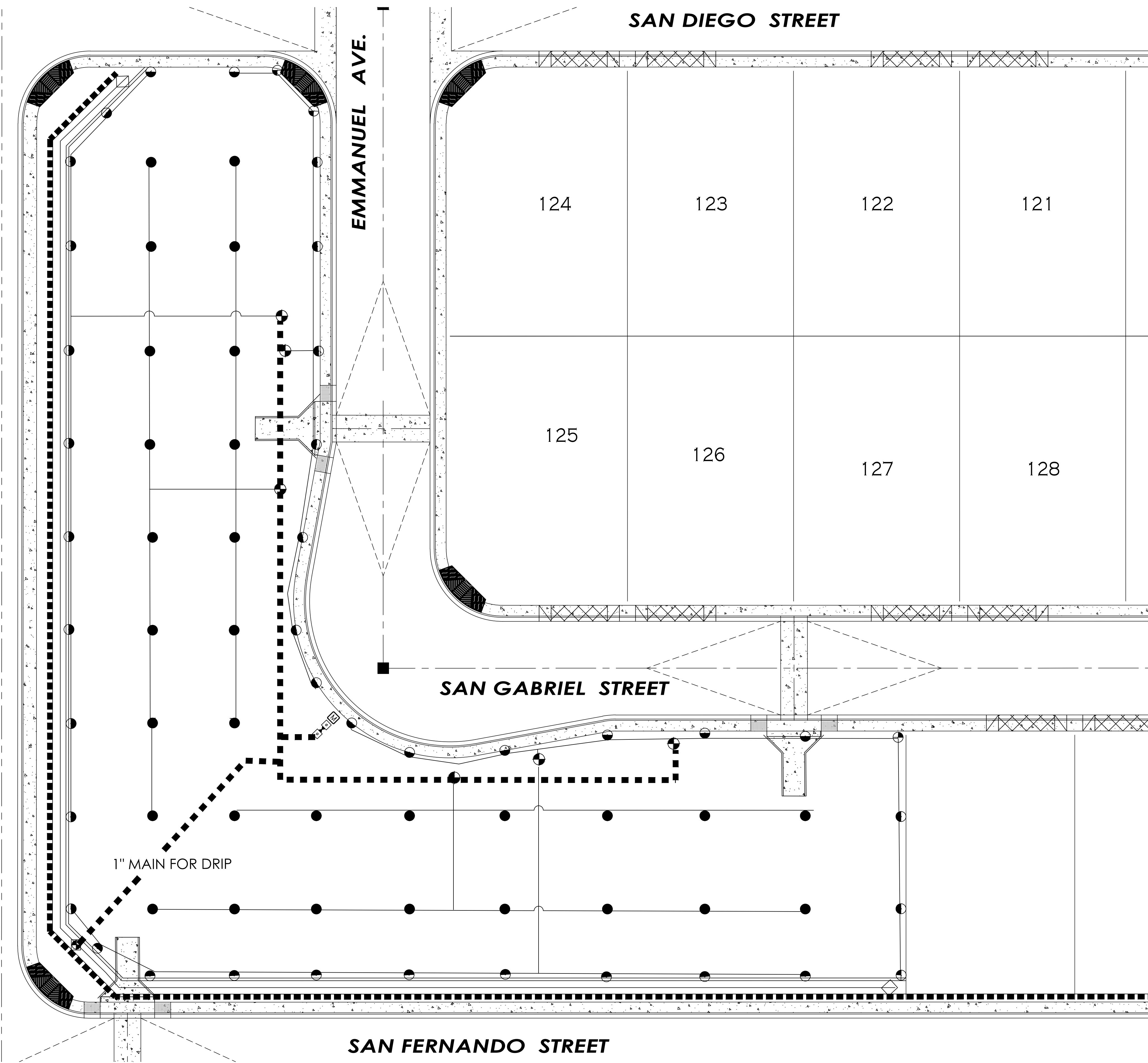
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AVENUE "F"



SAN DIEGO STREET

EMMANUEL AVE.

124

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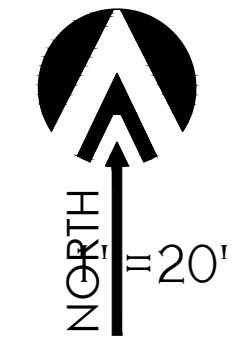
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128

SAN GABRIEL STREET

1" MAIN FOR DRIP

SAN FERNANDO STREET



IRRIGATION LEGEND

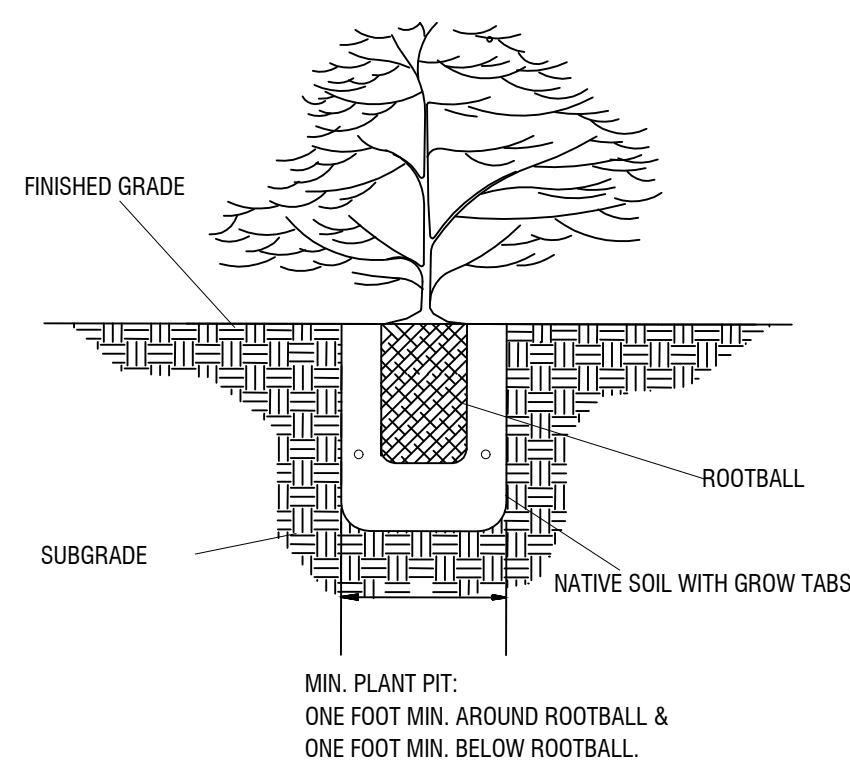
SYMB	SYMB	DESCRIPTION	MANUFACTURER	MODEL
[M]		METER 2" BY OTHERS(FIELD VERIFY LOCATION)		
[B-C]		2" PVB FEBCO CONTROLLER	BACKFLOW PREVENTOR LIET SOLAR	WITH SLAB AND CAGE 18 STA
[D]		DRIP ELECTRIC CONTROL VALVE	HUNTER	ICV
[N]		NEW 2" CONTROL VALVE	HUNTER	ICV
[P]		2" PVC MAINLINE	CRESLINE OR EQUAL	SCHEDULE 40
[S]		SPRINKLER LATERALS	CRESLINE OR EQUAL	CL 200
[D]		DRIPLATERAL PVC	CRESLINE OR EQUAL	CL 200

- HUNTER PGP FULL SPRINKLER HEAD BLUE # 3 NOZ 38' @ 3 GPM WITH .4 PRECIP
- HUNTER PGP ADJ(180-HALF) SPRINKLER HEAD BLUE # 3 NOZ 38' @ 3 GPM WITH .4 PRECIP
- HUNTER PGP ADJ(90-QUARTER) SPRINKLER HEAD BLUE # 1.5 NOZ 38' @ 1.5 GPM WITH .25 PRECIP
- ⊗ 2 GPH BOWSMITH OR RAINBIRD EMITTER
- ◇ RAINBIRD DRIP FLUSH

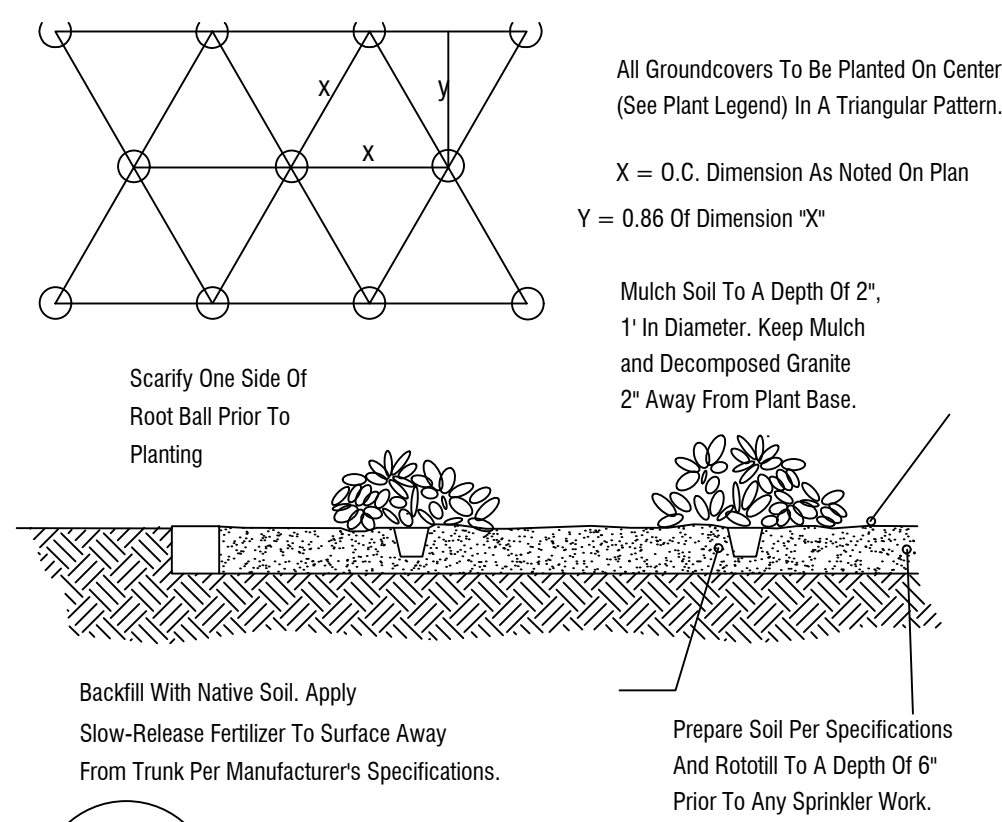
IRRIGATION NOTES

IRRIGATION NOTES

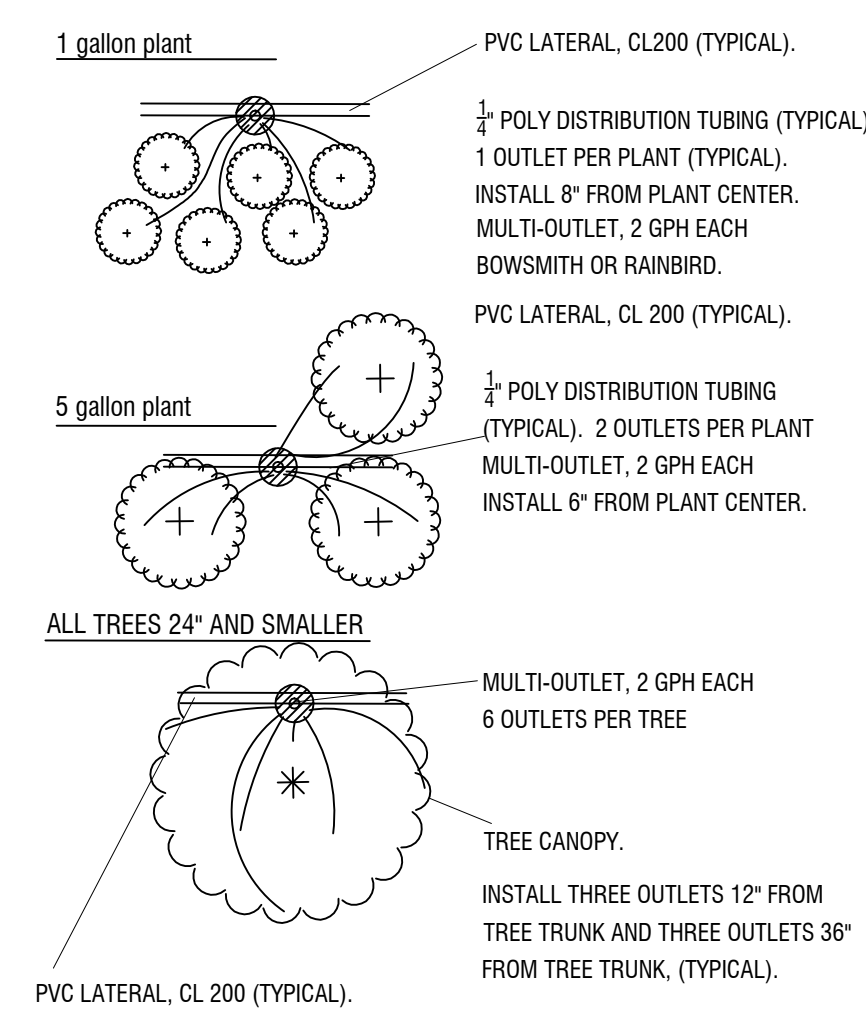
1. CONTRACTOR RESPONSIBLE FOR FULL AND EFFICIENT COVERAGE
2. VERIFY PRESSURE BEFORE LAY OUT
3. MINIMUM PRESSURE 60 PSI AT MAIN LINE
4. VALVE LOCATIONS ARE ONLY APPROXIMATE
5. DRIP VALVES NOT TO EXCEED 5 GPM
LAWN VALVES NOT TO EXCEED 60 GPM
6. DRAWN FOR CLARITY ALL IRRIGATION TO BE INSTALLED IN LANDSCAPE AREA
7. ALL SLEEVES ARE SCH 40
8. ALL SLEEVES TO HAVE 18" COVER MINIMUM
9. IF BACKFILL MATERIAL HAS DEBRIS LARGER THAN 1" SHADE WITH MORTAR SAND 4" ABOVE 4" BELOW PIPE
SEE PIPE AND SLEEVING DETAILS D-10
10. IF PROPER PRESSURE IS NOT AVAILABLE NOTIFY OWNERS REPRESENTATIVE BEFORE ANY WORK IS STARTED
11. HEAD AND VALVE PLACEMENT ARE ONLY DIAGRMATIC
FIELD VERIFY ALL LOCATIONS ON PLANS



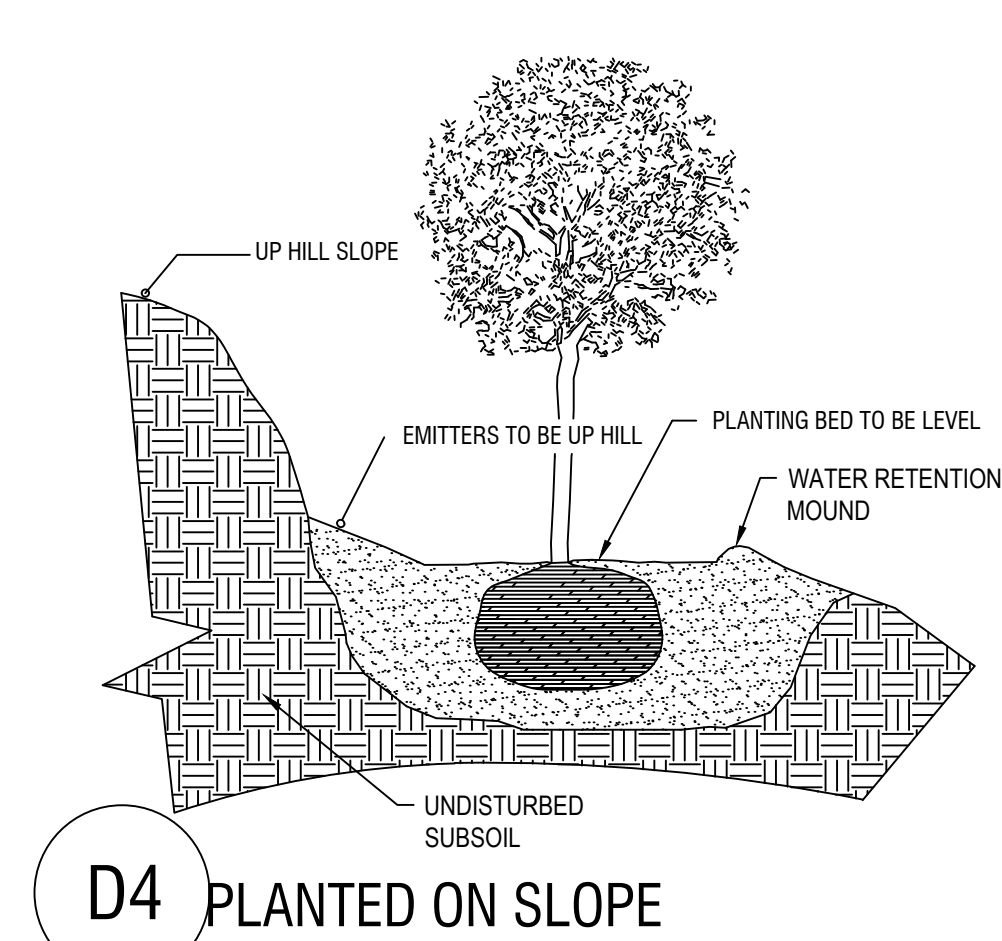
D1 SHRUB PLANTING



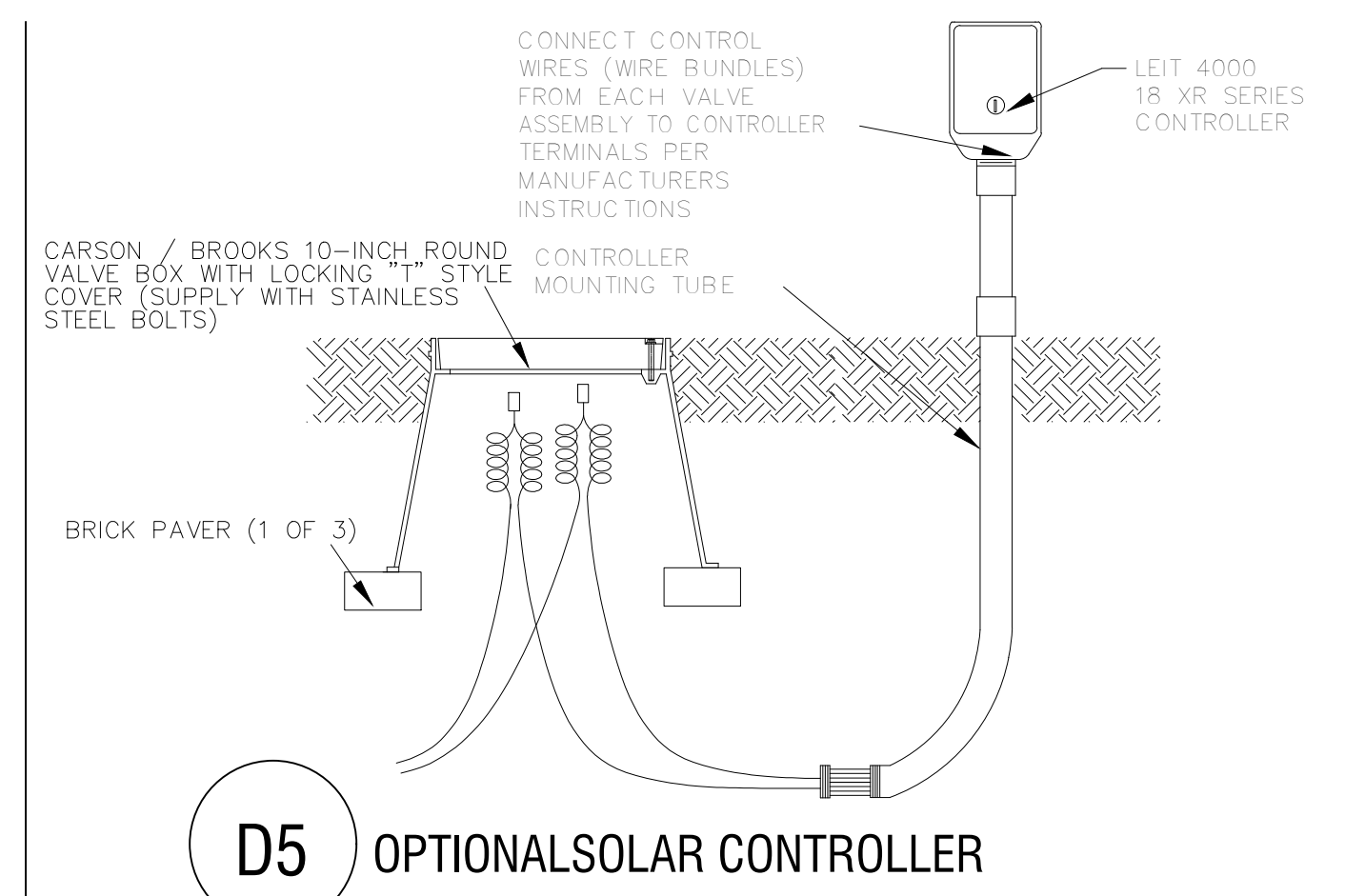
D2 GROUND COVER



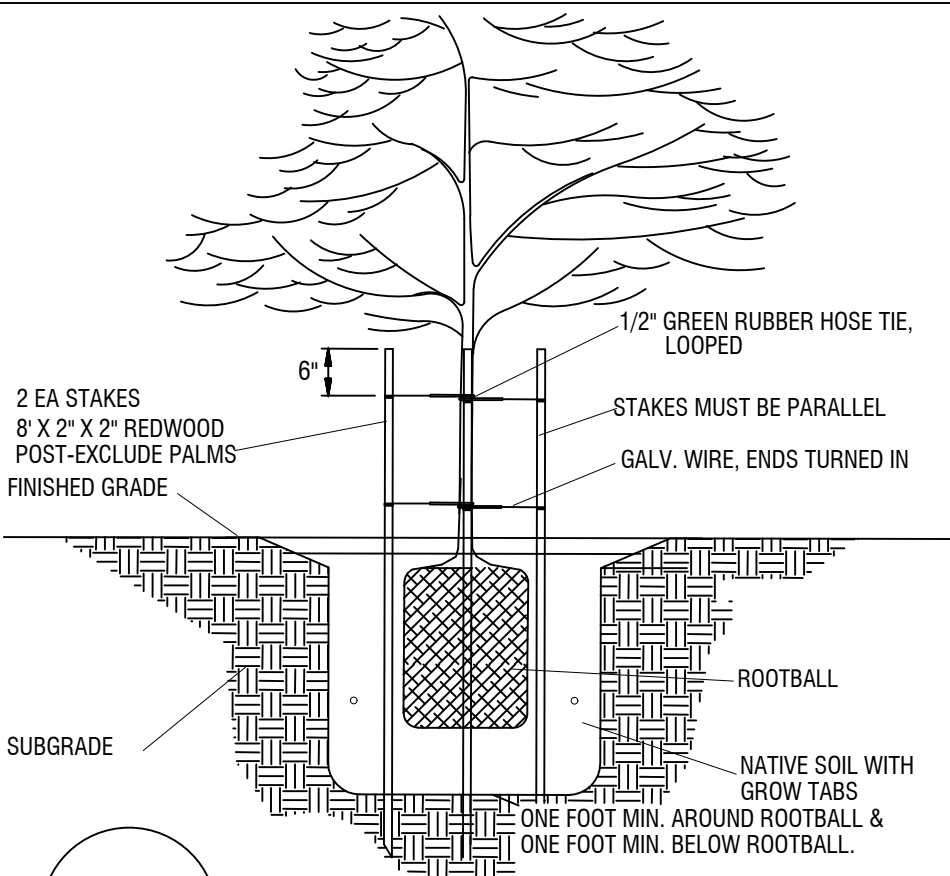
D3 EMITTER PLACEMENT



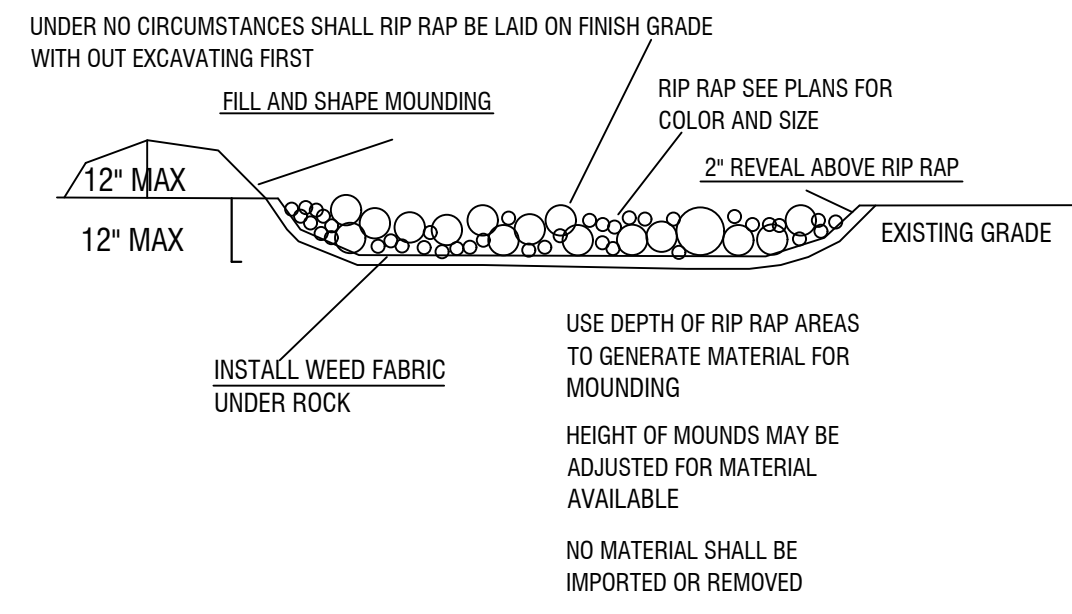
D4 PLANTED ON SLOPE



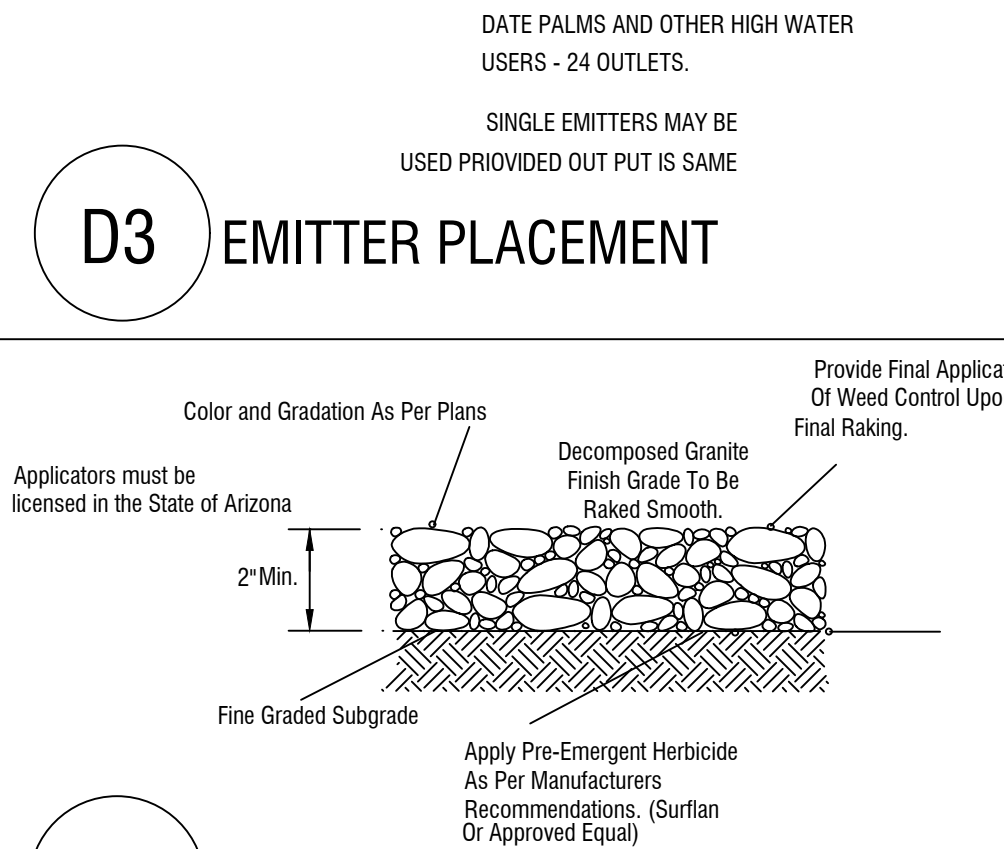
D5 OPTIONALSOLAR CONTROLLER



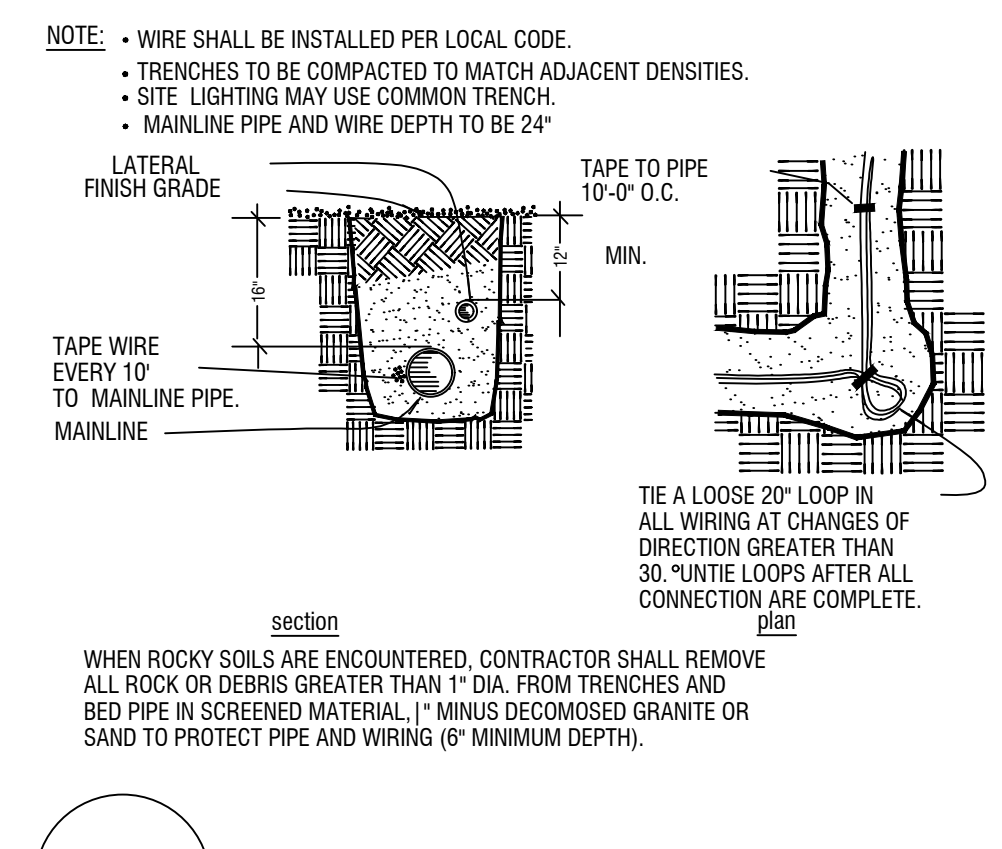
D6 TREE PLANTING



D7 RIP RAP AND MOUNDING



D8 DECOMPOSED GRANITE

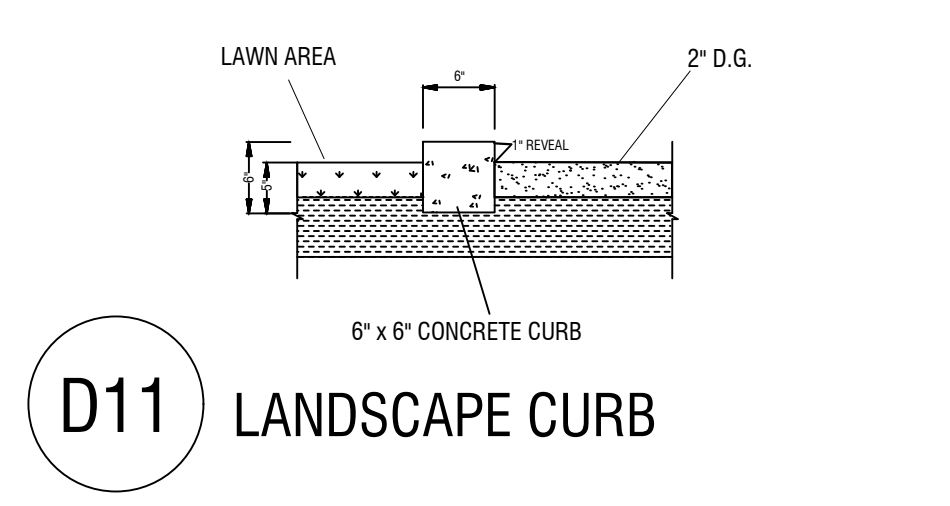


D9 PIPE AND WIRE TRENCHING

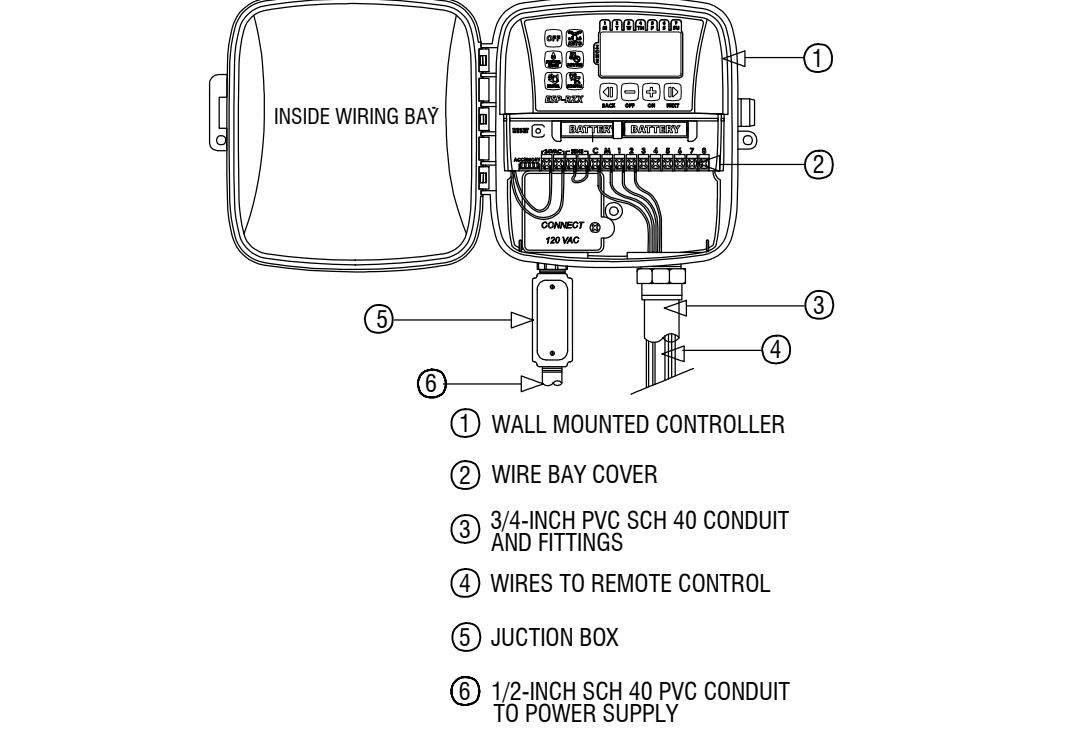
size (pipe)	class	gpm	sleeve size
1/2"	SCH 40	0-5	2"
3/4"	SCH 40	6-10	2"
1"	SCH 40	11-15	2"
1-1/4"	SCH 40	16-25	3"
1-1/2"	SCH 40	26-35	3"
2"	SCH 40	36-50	4"
2-1/2"	CL160	51-75	6"
3"	CL160	76-100	6"
4"	CL160	101-190	10"
WIRING			
	SCH 40	1-26 WIRES	2" MIN.

ALL MAINLINE FITTINGS 3" AND LARGER SHALL BE DUCTILE IRON, ALL OTHER MAINLINE FITTINGS SHALL BE SCH. 40. ALL MAINLINE INTERSECTIONS (45, 90, ECT) SHALL HAVE THRUST BLOCKS PER MANUFACTURERS RECOMMENDATIONS. USE MECHANICAL FITTINGS ON TEES, FOR 3" AND LARGER MAINLINE. SLEEVE SIZE IS FOR SINGLE PIPE RUNS. SLEEVE ALL WIRE SEPERATE FROM WATER LINES, UNDER PAVING. ALL SOLVENT WELD MAINLINE FITTINGS SHALL BE SCHEDULE 40.

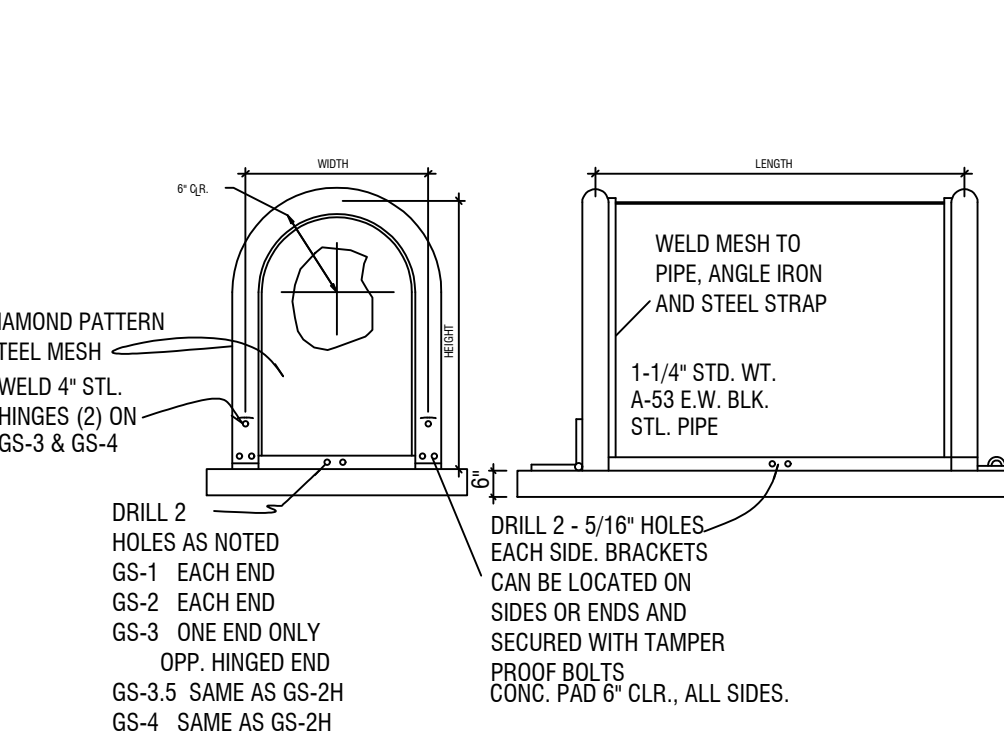
D10 PIPE AND SLEEVE SIZING



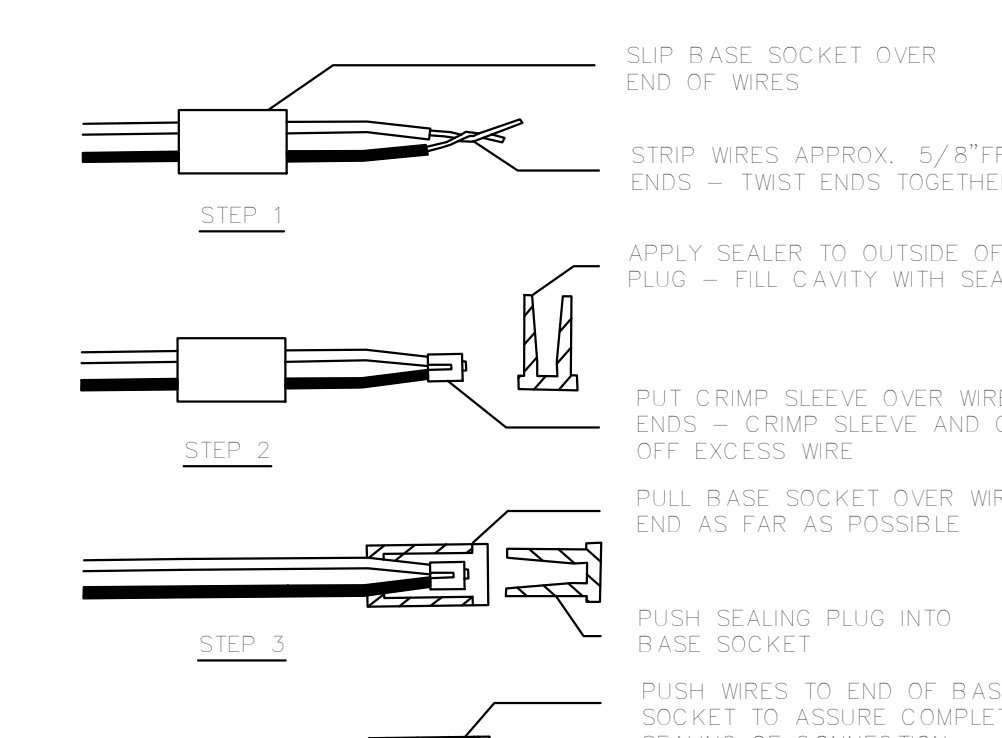
D11 LANDSCAPE CURB



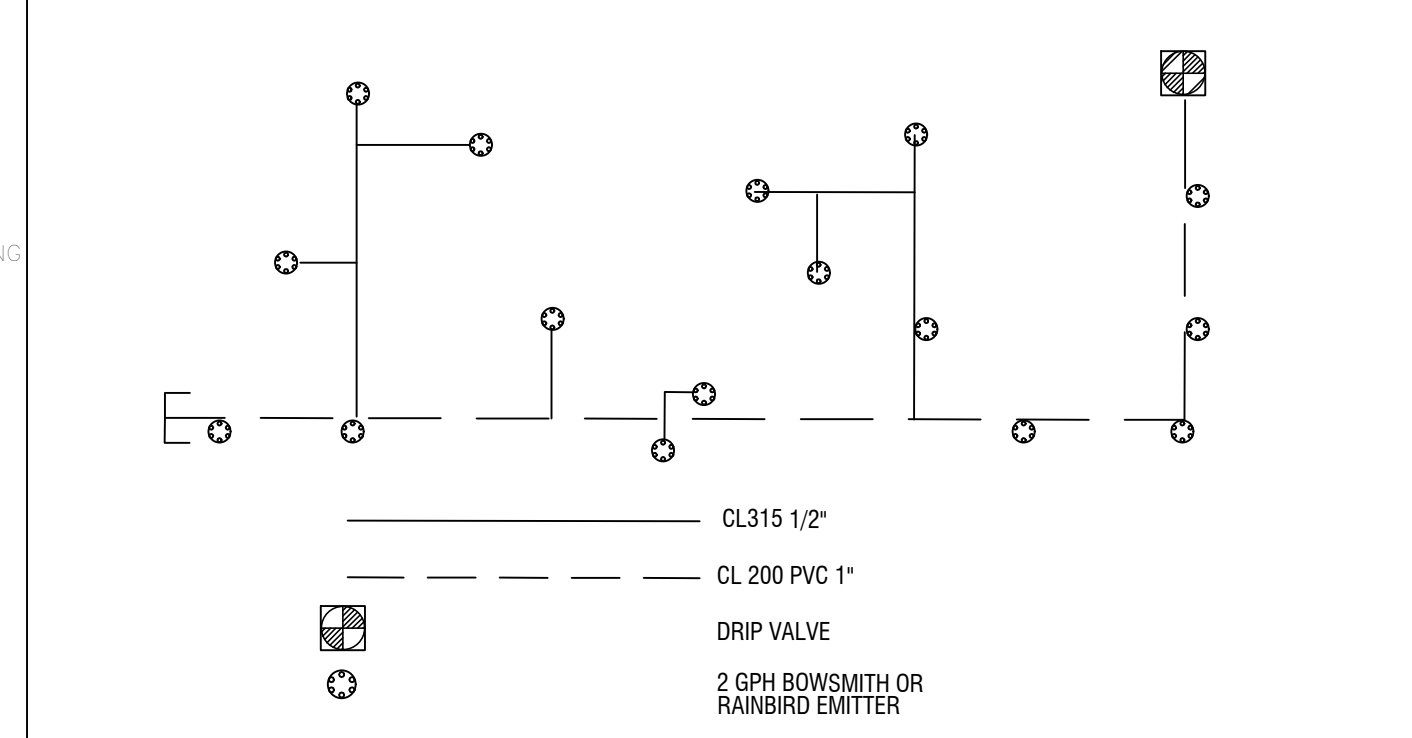
D13 TYPICAL CONTROLLER



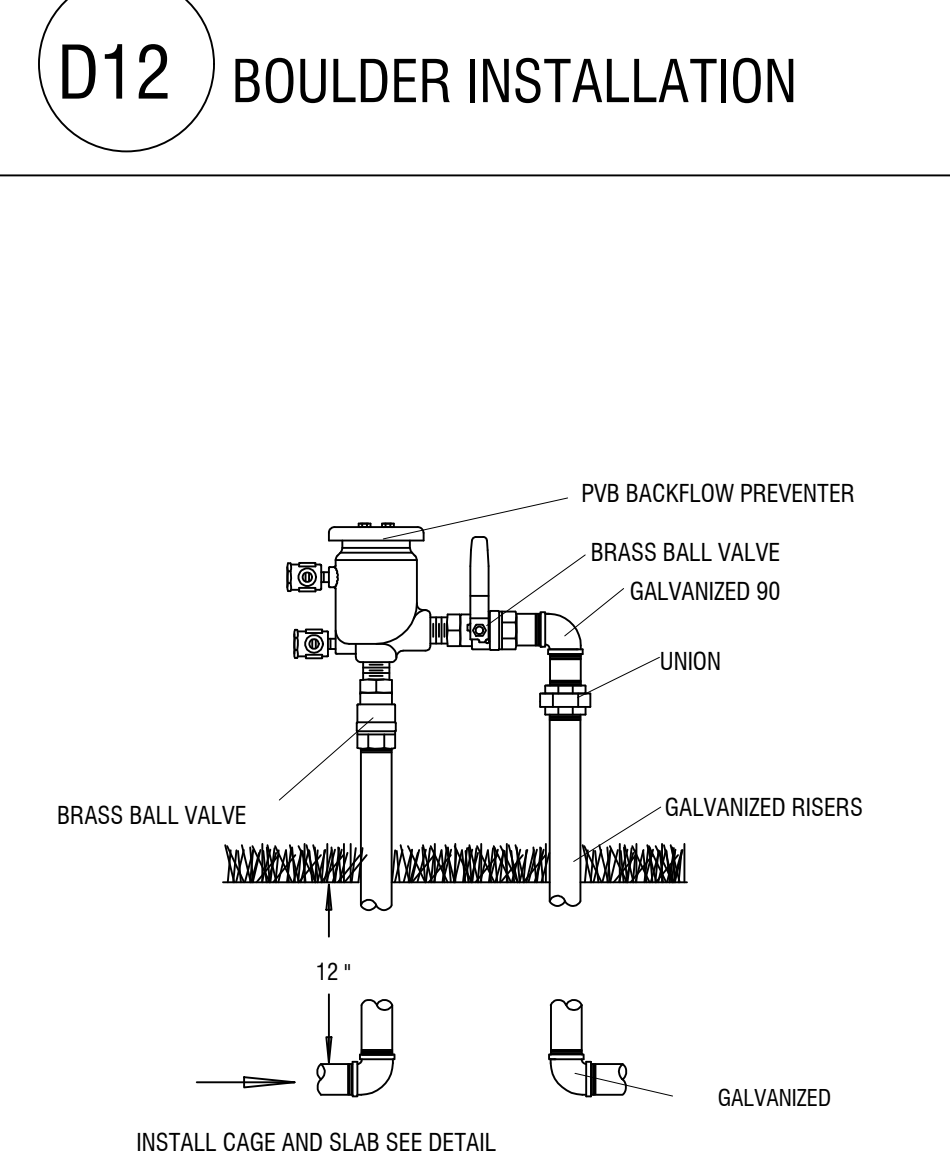
D14 GARDSHACK ENCLOSURE



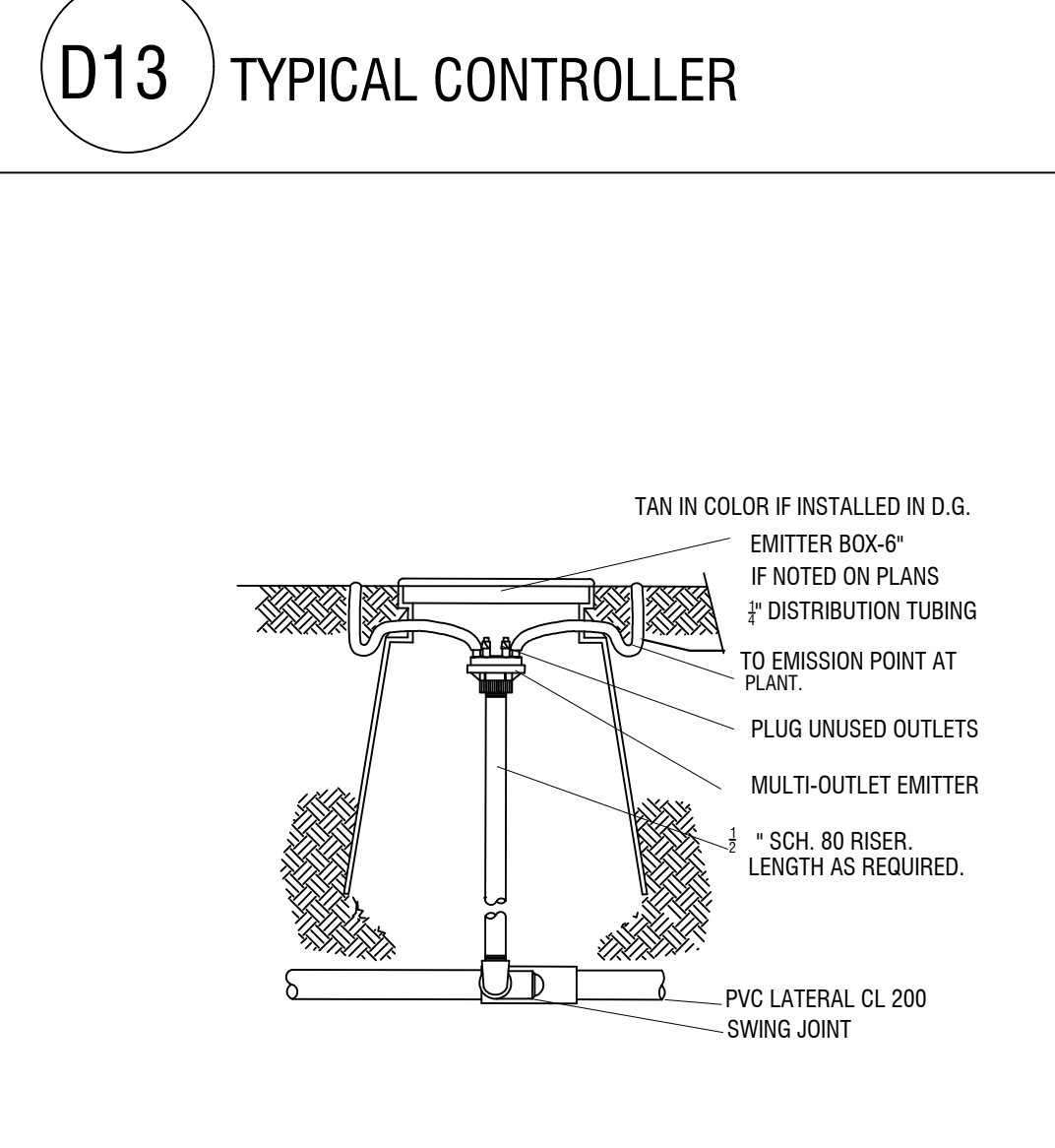
D15 IRRIGATION WIRE CONNECTIONS



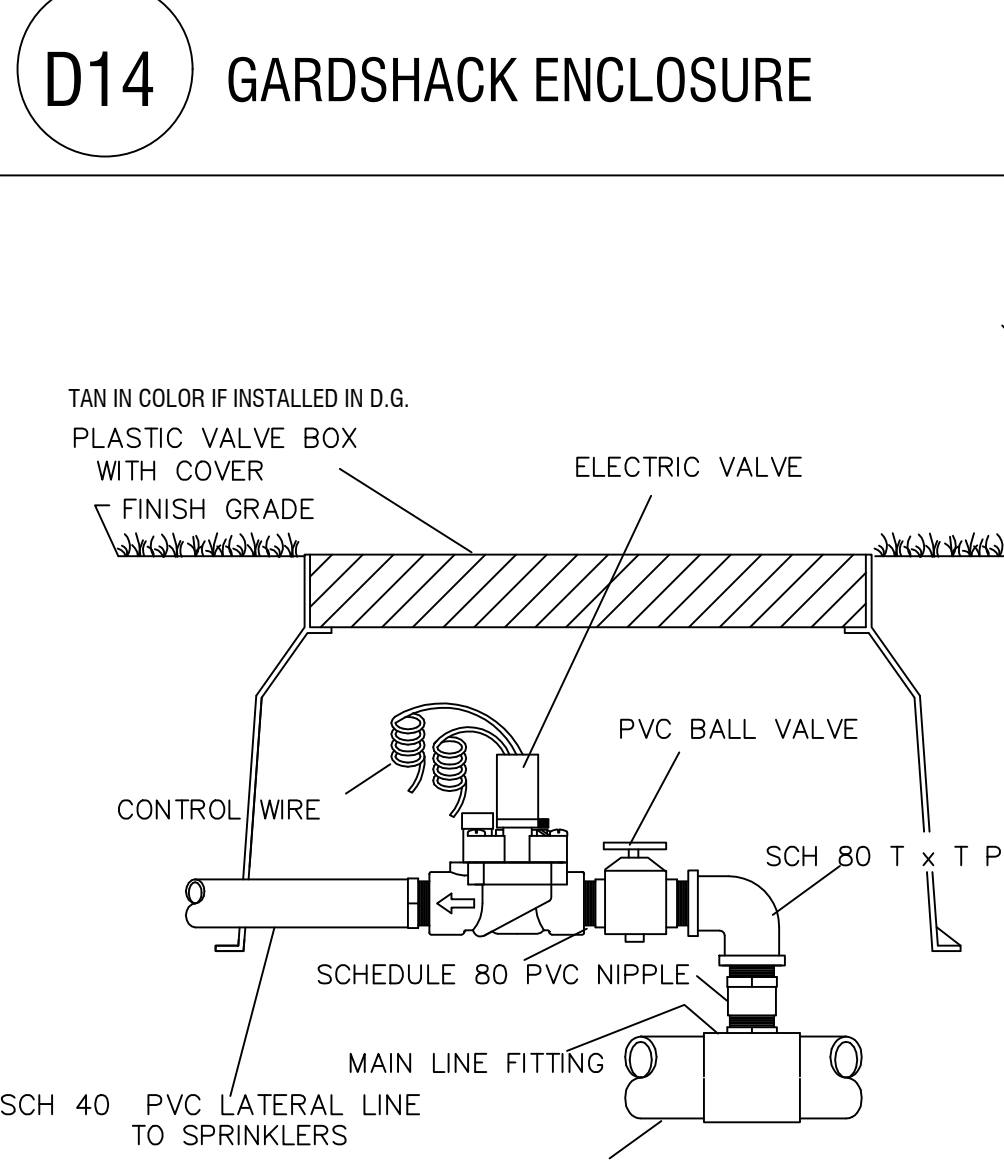
D16 EMITTER PVC PIPE LAY OUT



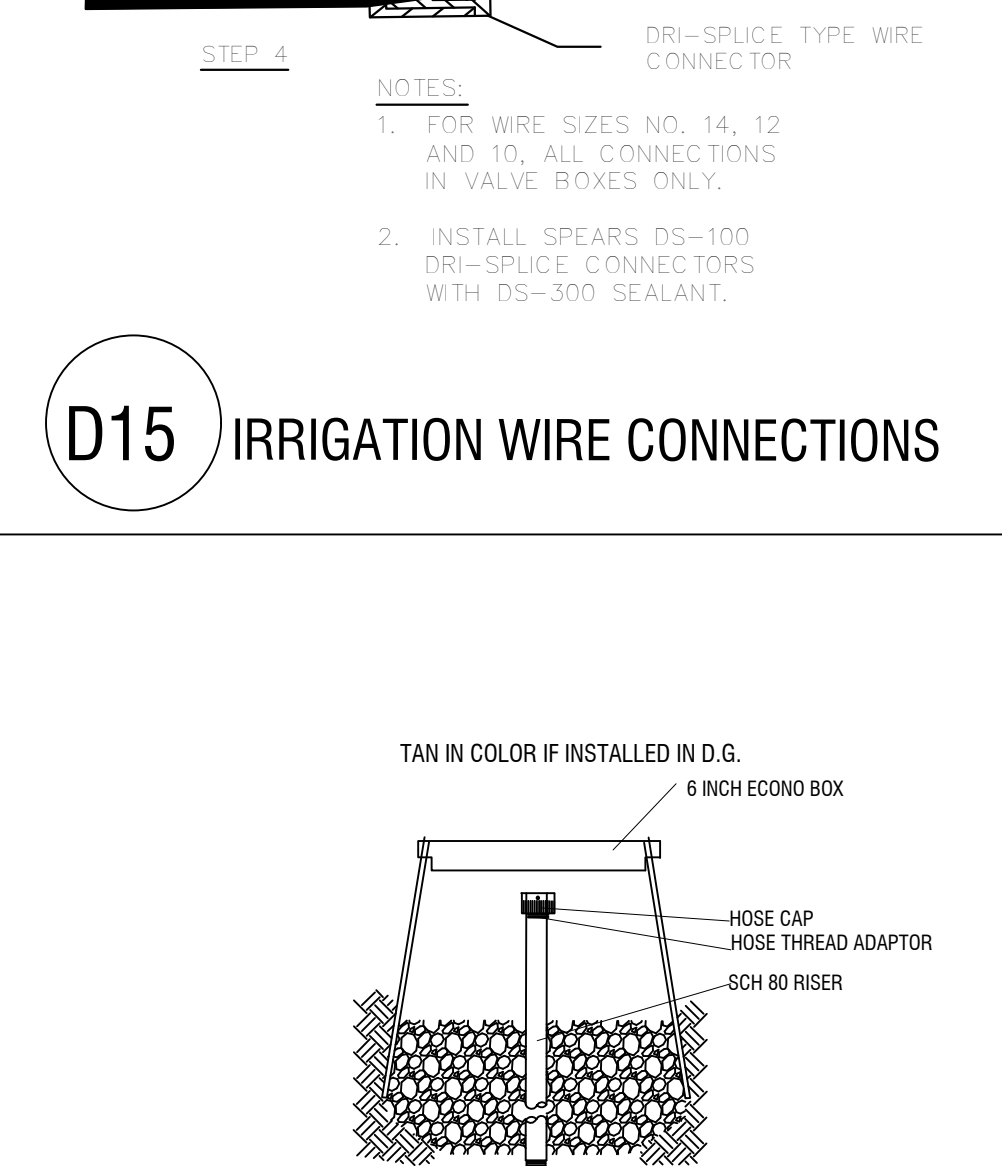
D17 PRESSURE VACUME BREAKER



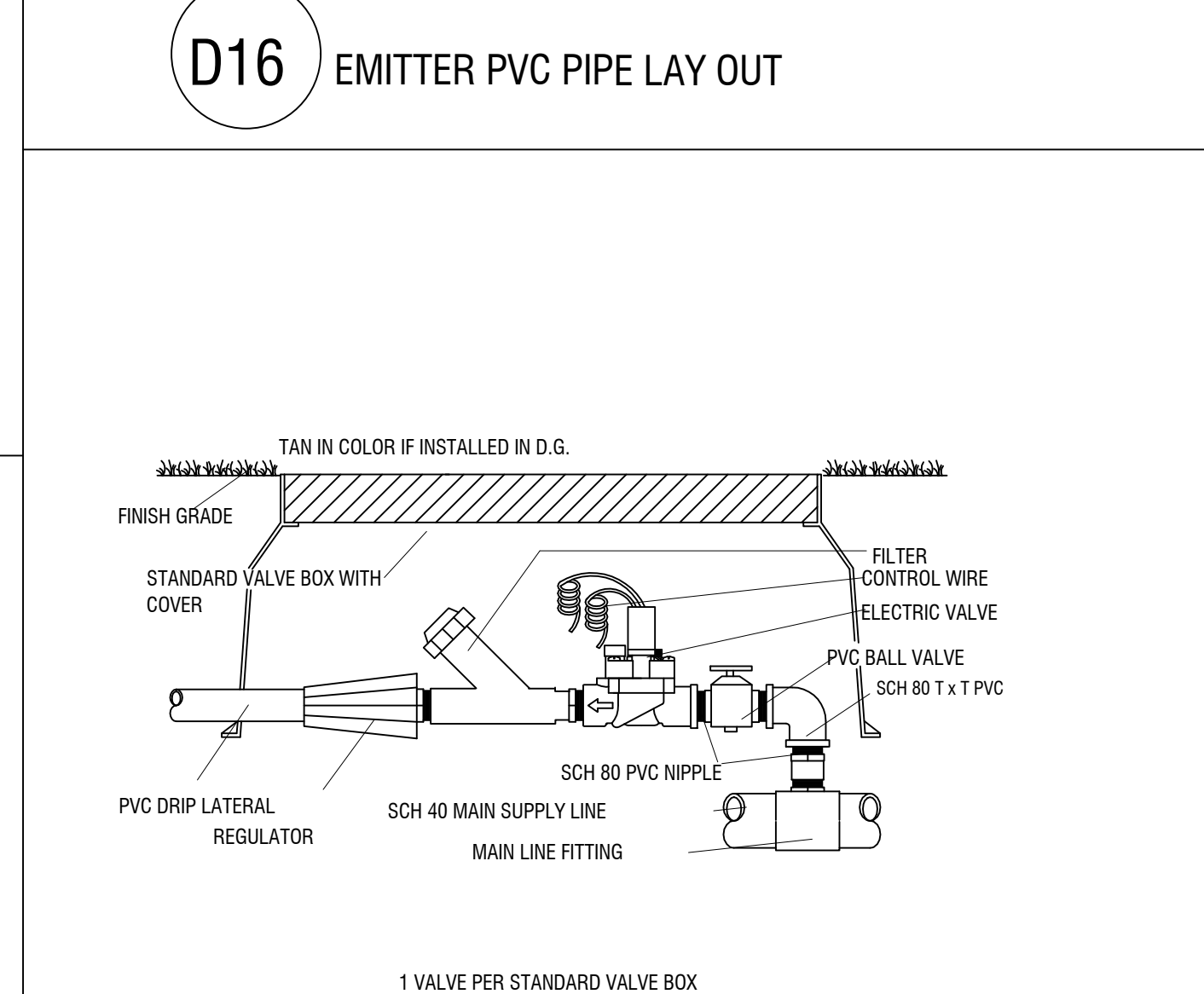
D18 MULTI EMITTER



D19 TURF VALVE



D20 FLUSH OUT



D21 DRIP VALVE

GENERAL CONSTRUCTION NOTES

- NOTES ARE TO BE USED FOR GENERAL REFERENCE IN CONJUNCTION WITH ALL WORK ELEMENTS SHOWN ON THE ENCLOSED PLANS.
- VERIFY CRITICAL DIMENSIONS, REFERENCE POINT LOCATIONS, CONSTRUCTION CONDITIONS OR SCALE ON PLANS PRIOR TO INITIATING WORK. NOTIFY OWNER'S SHOULD CONFLICTS ARISE.
- ANY SIDEWALKS OR HARDSCAPE LAYOUT SHOWN ON THESE PLANS IS FOR REFERENCE ONLY. REFER TO CIVIL ENGINEERING FOR HORIZONTAL AND VERTICAL CONTROL, DETAILS AND METHODS OF CONSTRUCTION. SOUTHWEST DREAMWORKS ASSUMES NO RESPONSIBILITY FOR UNFORESEEN CONFLICTS, ENGINEERING, OR INSTALLATION THAT IS BEYOND OUR CONTROL.
- WALLS AND SITE FEATURES SHOWN ON THESE PLANS ARE SCHEMATIC. FIELD VERIFY TO ACTUAL PROPERTY LINES, GRADING, UNDERGROUND CONFLICTS OR EXISTING CONDITIONS THAT MAY REQUIRE ADJUSTMENT OR INTERPRETATION TO PLAN AND DETAILS PROVIDED. SOUTHWEST DREAMWORKS ASSUMES NO RESPONSIBILITY. FOR CONFLICTS THAT ARE NOT ADDRESSED IN ADVANCE OR BEYOND OUR CONTRACTUAL AGREEMENT FOR FIELD INSPECTION.
- REFER TO ENGINEERING PLANS FOR CONSTRUCTION AND GRADING CONSIDERATIONS OF THE SITE. CROSS REFERENCE WORK THAT MAY IMPACT IMPROVEMENTS SHOWN ON THESE DOCUMENTS.
- ALL CONSTRUCTION MUST CONFORM TO 2007 UNIFORM BUILDING CODE (UBC), FOR CITY OF YUMA STANDARDS
- PROVIDE SOIL TEST OF JOB SITE PRIOR TO BEGINNING WORK TO ANALYZE COMPACTION POSSIBLE CONTAMINANTS, STABILITY OF SOILS AND COMPOSITION.
- LANDSCAPE CONTRACTOR TO ACCEPT THE SITE AND ALL GRADING AT +/- 0-10'.
- CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS BEFORE CONSTRUCTION.
- CONTRACTOR SHALL ADHERE TO ALL LOCAL, STATE, AND/OR FEDERAL LAWS PERTAINING TO THE PROJECT'S WORK.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL CONSTRUCTION ELEMENTS WITH OTHER TRADES PRIOR TO INSTALLATION AND BECOME FAMILIAR WITH THE LOCATIONS OF UNDERGROUND SERVICES AND IMPROVEMENTS.
- THE CONTRACTOR SHALL EXAMINE THE SITE AND FULLY DETERMINE THE CONDITIONS UNDER THIS CONTRACT. NO ALLOWANCE WILL BE MADE FOR FAILURE OF BIDDERS TO ASCERTAIN ALL ASPECTS OF THE PROJECT.
- PRIOR TO DIGGING, EXCAVATION, OR UNDERGROUND WORK, CONTRACTOR SHALL LOCATE AND PROTECT EXISTING UTILITIES AND SUBSURFACE SYSTEMS. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR REPAIR AND EXPENSES INCURRED TO UTILITIES THAT BECOME DAMAGED AS A RESULT OF HIS WORK.
- CONTRACTOR SHALL INSPECT WITH OWNER'S REPRESENTATIVE ALL PAVEMENT, SIDEWALK AND CURB DEFECTS PRIOR TO BEGINNING WORK. ALL HARDSCAPE TO BE RE-INSPECTED DURING FINAL WALK THRU. ANY DAMAGED AREAS TO BE REPAIRED AT CONTRACTOR'S EXPENSE.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE QUANTITIES AND MATERIALS REQUIRED TO COMPLETE THE WORK IN ACCORDANCE WITH SYMBOLS SHOWN ON PLANS. QUANTITIES INDICATED ARE FOR REFERENCE ONLY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING GRADES AS ESTABLISHED BY THE PROJECT ENGINEER. RUNOFF AND DRAINAGE FLOWS SHALL NOT BE ALTERED OR IMPEDED.
- THE CONTRACTOR WILL FURNISH ALL LABOR, TOOLS, EQUIPMENT, MATERIALS, EMPLOYEE, AND SUBCONTRACTOR SUPERVISION FOR ITS PORTION OF THE PROJECT TO IMPLEMENT PLANS AND SPECIFICATIONS.
- THE CONTRACTOR ASSUMES ALL RISKS IN THE PERFORMANCE OF THE WORK AND RE-RESPONSIBILITY FOR LOSS AND EXPENSE RESULTING FROM ON-SITE INJURY.
- THE CONTRACTOR IS RESPONSIBLE FOR SUPERVISION, SAFETY, ADMINISTRATION SCHEDULING, COORDINATION AND MANAGEMENT OF SUBCONTRACTORS.
- THE CONTRACTOR SHALL PROTECT ALL PERSONS NEAR OR ON THE PREMISES FROM UNREASONABLE RISK OF INJURY. PROVIDE WARNING SIGNS, LIGHTS, BARRICADES, RAILINGS, FLAG MEN OR OTHER NECESSARY SAFEGUARD.
- SOUTHWEST DREAMWORKS INSPECTIONS SHALL NOT BE DEEMED SUPERVISION OR CONTROL OF CONSTRUCTION BY CONTRACTOR OR SUBCONTRACTORS.
- ALL CONTRACTS SHALL BE WRITTEN DIRECTLY BETWEEN CONTRACTOR AND OWNER'S REPRESENTATIVE. SPECIFIC TERMS OF WORK SHALL BE NEGOTIATED DIRECTLY BETWEEN PARTIES. SOUTHWEST DREAMWORKS SHALL NOT BE RESPONSIBLE FOR DISCREPANCIES
- ALL SUBMITTALS MUST BE APPROVED BE FOR CONSTRUCTION BEGINS

IRRIGATION NOTES

- CONTRACTOR TO FIELD VERIFY DRAWINGS PRIOR TO ANY INSTALLATION OR ORDERING OF MATERIALS AND NOTIFY SOUTHWEST DREAMWORKS OF ANY DISCREPANCIES BETWEEN DRAWINGS AND SITE. IF CONTRACTOR FAILS TO NOTIFY SOUTHWEST DREAMWORKS, HE ASSUMES FULL RESPONSIBILITY FOR ANY NECESSARY ALTERATIONS TO THE SYSTEM.
- ALL MATERIALS USED SHALL BE INSTALLED AS PER PLAN AND AS PER MANUFACTURE'S SPECIFICATIONS. ALL DEVIATIONS FROM DRAWINGS OR MATERIALS USED SHALL BE APPROVED BY OWNER'S REPRESENTATIVE OR LANDSCAPE DESIGNER.
- IRRIGATION SYSTEM HAS BEEN DESIGNED FOR A STATIC WATER PRESSURE OF 70 PSI.
- CONTRACTOR TO FIELD VERIFY PRESSURE PRIOR TO ORDERING MATERIALS OR STARTING ANY IRRIGATION INSTALLATION AND NOTIFY CONSULT SOUTHWEST DREAMWORKS OF ANY DIFFERENCE FROM STATED PRESSURE. IF CONTRACTOR FAILS TO NOTIFY CONSULTANT HE ASSUMES FULL RESPONSIBILITY FOR ANY SYSTEM ALTERATIONS.
- CONTRACTOM WILL NOTIFY SOUTHWEST DREAMWORKS IF BOOSTER PUMP IS NEEDED
- 120 VOLT SERVICE BY ELECTRICAL CONTRACTOR. IRRIGATION CONTRACTOR RESPONSIBLE FOR POWER CONNECTION TO CONTROLLER.
- ALL CONTROL WIRES TO BE RED, ALL COMMON WIRES TO BE WHITE UNLESS NOTED ON PLANS. ONE SET OF CONTROLLER KEYS TO BE GIVEN TO OWNER.
- ALL 24 VOLT WIRE SHALL BE #14 UFL, DIRECT BURIAL, SOLID COPPER.
- IRRIGATION CONTRACTOR RESPONSIBLE FOR ALL LANDSCAPE SLEEVEING. CONTRACTOR TO COORDINATE SLEEVEING INSTALLATION OF CONCRETE FLATWORK AND PAVING. ALL SLEEVES TO BE EXTENDED AT LEAST 1' BEYOND CONCRETE STRUCTURES.
- ALL HARDSCAPE 5'-0" OR WIDER TO BE SLEEVED.
- CONTRACTOR SHALL INSTALL ALL PIPING AND WIRING UNDER PAVED AREAS IN SLEEVES AS SHOWN ON PLANS. ALL WIRE SHALL BE SLEEVED SEPARATELY FROM PIPING.
- IRRIGATION CONTRACTOR TO VERIFY EXISTING SLEEVES (SHOWN ON IRRIGATION PLAN) INSTALLED BY OTHER CONTRACTORS. COORDINATE INSTALLATION OF ADDITIONAL SLEEVES WITH GENERAL CONTRACTOR.
- ALL IRRIGATION EQUIPMENT TO BE LOCATED IN LANDSCAPED AREAS (SOME LINES AND EQUIPMENT ARE SCHEMATIC ONLY).
- LOCATE VALVE BOXES IN DECOMPOSED GRANITE NOT IN TURF, ADJACENT TO WALKWAYS AND CURBS WHENEVER POSSIBLE.
- ALL PLANTS REQUIRING MORE THAN ONE DRIP EMITTER SHALL HAVE EMITTERS DISTRIBUTED EVENLY AROUND EDGE OF ROOTBALL, WITHIN PLANT BASIN. UNLESS NOTED ON PLANS
- EMITTERS TO BE PLACED ON UP HILL SIDE OF PLANTS ON SLOPED PLANTING AREAS.
- PRIOR TO OWNER APPROVAL, CONTRACTOR SHALL COMPLETE THE FOLLOWING: ALL IRRIGATION HEADS TO BE ADJUSTED TO THE PROPER HEIGHT. ALL SPRAY HEADS TO BE FLUSHED OF DEBRIS AND FLOW CONTROLS ADJUSTED TO ACHIEVE PROPER COVERAGE. AVOID SPRAY ON ALL HARDSCAPE AND STRUCTURES.
- IRRIGATION CONTRACTOR SHALL PROVIDE 100% HEAD TO HEAD COVERAGE IN ALL TURF AREAS AT NO ADDITIONAL COST TO THE OWNER. FIELD ADJUST HEAD LOCATIONS AS REQUIRED. ACTUAL SITE CONDITIONS MAY VARY FROM DRAWINGS AND NECESSITATE ADJUSTMENT OF HEAD LAYOUT, AREA, NOZZLE OR QUANTITIES OF HEADS.
- CONTRACTOR SHALL ADJUST THE PERFORMANCE OF THE IRRIGATION SYSTEM FOR OPTIMUM PLANT GROWTH BASED ON ACTUAL SITE CONDITIONS, INCLUDING SOIL TYPES, SLOPE OR OTHER VARIABLES THAT MAY DEVIATE FROM PROJECT PLANS. CONTACT SOUTHWEST DREAMWORKS OF ANY DISCREPANCIES BETWEEN PROJECT PLANS AND ACTUAL SITE CONDITION PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING THE INSTALLATION OF THE FULLY AUTOMATED IRRIGATION SYSTEM PRIOR TO STARTING PLANTING. IF THE IRRIGATION SYSTEM IS INTERRUPTED FOR ANY REASON THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTINUE MANUAL WATERING OF ALL PLANT MATERIAL UNTIL THE IRRIGATION SYSTEM IS FULLY OPERATIVE.
- THE CONTRACTOR SHALL PROVIDE, INSTALL AND HAVE TESTED ALL CONNECTIONS 20. DOWN STREAM OF THE WATER METER AND BACKFLOW PREVENTER.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL PIPING NECESSARY TO PROVIDE A COMPLETE AND FULLY OPERATIONAL IRRIGATION SYSTEM INCLUDING ALL SUB-LATERAL PIPING TO EACH PLANT EMITTER AS SPECIFIED AND DETAILED WHETHER OR NOT PIPING IS SHOWN ON PLANS.
- REFER TO GENERAL CONSTRUCTION NOTES ON COVER SHEET FOR ADDITIONAL CONSIDERATIONS THAT RELATE TO SCOPE OF WORK WITHIN THIS SECTION. POSSIBLE ALL ELECTRIC CONTROL VALVES TO BE LOCATED IN SERIES ALONG THE MAIN WATERLINE. ALL VALVES WILL BE IN HEAVY DUTY PLASTIC VALVE BOXES W/LIDS RAISED TO FINISH GRADE. ALL ELECTRIC VALVES SHALL BE BELOW THE SURFACE MIN. 6".
- ALL SUBMITTALS MUST BE APPROVED BE FOR CONSTRUCTION BEGINS

LANDSCAPE NOTES

- LANDSCAPE AREAS ARE DEFINED AS ALL NON-PAVED AREAS DISTURBED BY THIS PHASE OF CONSTRUCTION. SLIGHT VARIATIONS MAY EXIST BETWEEN ON-SITE CONDITIONS AND DRAWINGS. CONTRACTOR SHALL ADJUST PLANTING LAYOUT ONLY AS REQUIRED TO MAINTAIN PLANT QUANTITIES AND DESIGN INTENT.
- THE OWNER'S REPRESENTATIVE IS TO APPROVE ANY AND ALL SUBSTITUTIONS.
- LOCATE PLANTS AWAY FROM OBSTACLES SUCH AS FIRE HYDRANTS, TRANSFORMERS, AND LIGHT FIXTURES.
- ALL PLANT MATERIAL SHALL MEET A.N.A. SPECIFICATIONS. THE LANDSCAPE DESIGNER OR HIS REPRESENTATIVE RESERVES THE RIGHT TO REFUSE ANY PLANT MATERIALS DEEMED UNACCEPTABLE.
- DOUBLE STAKE ALL SUPPLEMENTAL BOX TREES OUTSIDE ROOTBALL, SEE TREE STAKING DETAIL.
- TREES SHALL BE A MINIMUM OF 4' FROM CURB, SHRUBS SHALL BE 3' OR MORE AWAY FROM CURBS OR WALKS. REFER TO PLANS AND MAINTAIN SHRUB MASSINGS AS SHOWN AWAY FROM HARDSCAPE.
- PLANT LOCATIONS SHALL BE FLAGGED OR STAKED FOR REVIEW PRIOR TO STARTING IRRIGATION OR PLANTING EXCAVATION. MINOR RELOCATION'S SHALL BE MADE AT THIS TIME TO AVOID UNSUITABLE CONDITIONS.
- NATIVE GRANULAR SOILS SHALL BE FINE GRADED AS TOPDRESSING AND RAKED UNIFORMLY ALONG CURBS, WALKS AND WALLS.
- CONTRACTOR SHALL APPLY PRE-EMERGENT HERBICIDE (TREFLANS OR APPROVED EQUAL) IN ALL AREAS NOT CONTAINING BERMUDA GRASS, PER MANUFACTURERS RECOMMENDATION. CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO APPLICATION OF HERBICIDE.
- ALL PLANTING SHALL CONFORM TO THE HEIGHT REQUIREMENTS SPECIFIED FOR SIGHT VISIBILITY TRIANGLES. REFER TO C.O./STANDARDS FOR SPECIFIED REQUIREMENTS. WHERE MULTIPLE JURISDICTION EXIST, THE MOST RESTRICTIVE SHALL APPLY.
- GRADE NOTED ON LANDSCAPE PLAN TO BE FIELD VERIFIED/APPROVED BY OWNER'S REPRESENTATIVE BEFORE LANDSCAPE BEGINS CONSTRUCTION.
- FEATHER AND BLEND GRADE BETWEEN CONSTRUCTION AND NATIVE AREAS FOR SMOOTH TRANSITION.
- REVIEW SALVAGE NATIVE PLANT MATERIAL INVENTORY PRIOR TO BEGINNING WORK TO VERIFY RESPONSIBILITY OF RELOCATION AND WARRANTY.
- SAGUARO SHALL BE PLANTED TO THEIR ORIGINAL SOLAR ORIENTATION WITH (2) DRIP EMITTERS (SEE DETAIL). SAGUARO SHALL BE PLANTED STRAIGHT AND DEEP ENOUGH TO REQUIRE NO BRACING. RETURN TAGS TO OWNER.
- NATIVE SALVAGED SAGUAROS SHALL BE PROTECTED FROM INJURY DURING TRANSPLANT AND SHALL BE WARRANTED FOR 6 MONTHS FROM FINAL ACCEPTANCE.
- REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS NOT SHOWN ON DRAWINGS
- REFER TO GENERAL CONSTRUCTION NOTES BELOW FOR ADDITIONAL CONSIDERATIONS THAT RELATE TO SCOPE OF WORK WITHIN THIS SECTION.
- HYDROSEED GRASS FOR NORMAL APPLICATION WITH TACKIFIER AND PAPER MULCH. A BRYLION TYPE SEEDER MAY BE USED. SEED 3LBS/ 1,000 SQ. FT. OF HYBRID BERMUDA. IF PLANTING OCCURS BETWEEN OCTOBER 1, AND MAY 1, USE 15 POUNDS OF WINTER RYE SEED/ 1,000 SQ. FT. FOR SMALLER AREAS HAND RAKE AND COVER WITH 1/2" MULCH USE A GOOD PRE PLANT FERTILIZER, (16-20-20)
- LANDSCAPE CONTRACTOR SHALL SUBMIT PHOTOS OF ALL TREES FOR APPROVAL BY LANDSCAPE DESIGNER PRIOR TO DELIVERY.

MAINTENANCE AND GUARANTEE

- LANDSCAPE CONTRACTOR SHALL NOTIFY LANDSCAPE DESIGNER OR OWNER'S REPRESENTATIVE FOUR (4) DAYS PRIOR TO COMPLETING IMPROVEMENTS IN ACCORDANCE WITH PLANS AND SPECIFICATIONS TO REQUEST AN INSPECTION FOR SUBSTANTIAL COMPLETION. LANDSCAPE DESIGNER OR OWNER'S REP. SHALL PREPARE PUNCHLIST OF ALL WORK REQUIRING CORRECTION. MAINTENANCE PERIOD TO BEGIN WHEN ALL PUNCHLIST ITEMS ARE CORRECTED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING LANDSCAPE AREA FOR 60 CALENDAR DAYS OR AS SPECIFIED BY CONTRACT. MAINTENANCE INCLUDES ADJUSTING WATER SCHEDULES, WEEDING, REMOVING DEBRIS FROM LANDSCAPE, RAKING, SPRAYING, FERTILIZING, TRIMMING, OR OTHER OPERATIONS ESSENTIAL FOR CARE, UPKEEP AND PROJECT APPEARANCE.
- CONTRACTOR SHALL NOTIFY OWNER A MINIMUM OF ONE (1) WEEK PRIOR TO MAINTENANCE PERIOD END TO RESOLVE ANY OUTSTANDING ISSUES. A FINAL INSPECTION SHALL OCCUR TO REVIEW THE PROJECT AND ISSUE A FINAL ACCEPTANCE. (PROVIDE 7 DAYS NOTICE).
- PLANTS NOT IN HEALTHY CONDITION THROUGHOUT THE WARRANTY PERIOD SHALL BE REMOVED AND REPLACED AT NO COST TO THE OWNER.
- PROVIDE ONE YEAR(FROM ACCEPTANCE DATE) WARRANTY FOR THE IRRIGATION SYSTEM.

