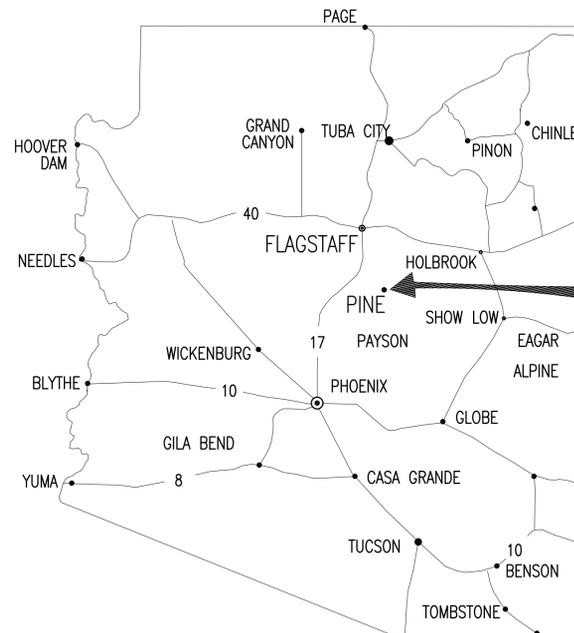


SV3 IMPROVEMENTS

PINE-STRAWBERRY WATER IMPROVEMENT DISTRICT

PORTIONS OF SECTIONS 22, 27 AND 28 TOWNSHIP 12 NORTH,
RANGE 8 EAST OF THE GILA AND SALT RIVER MERIDIAN,
GILA COUNTY, ARIZONA



LOCATION MAP

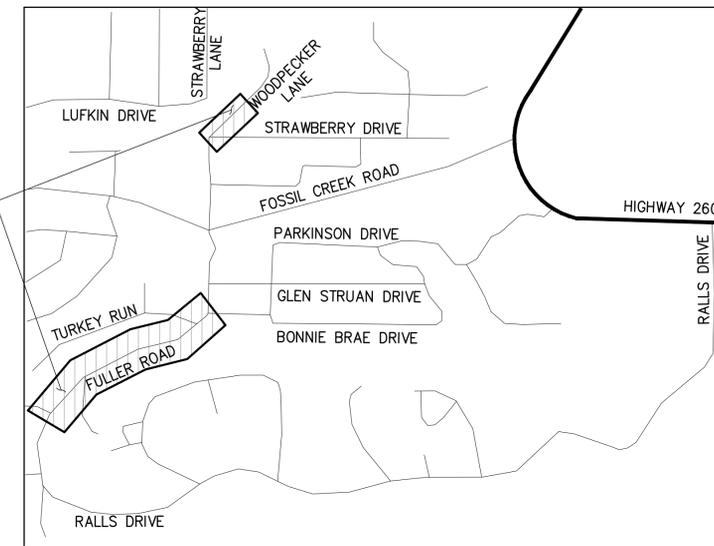
SITE LOCATION



SHEET INDEX

SHEET #	DESCRIPTION	TITLE
1	COVER SHEET	COV
2	GENERAL NOTES & LEGEND	GN
3	KEY MAP, HORIZONTAL CONTROL & ABBREVIATIONS	KM
4-6	WATER PLANS	W1-W3
7-12	DETAILS	DT1-DT6

PROJECT LOCATIONS



VICINITY MAP

NOT TO SCALE

BENCHMARK

NCS BENCHMARK DESIGNATED: D 495 1982 NATIONAL GEODETIC SURVEY BRASS CAP FLUSH.
NAVD88 ELEVATION OF 5906.942 FEET.

BASIS OF BEARING

BEING A LINE FROM A REBAR MARKING THE NORTHWEST CORNER OF LOT 21 PLAT 318 TO A REBAR MARKING THE SOUTHEAST CORNER OF LOT 27 PLAT 318, GILA COUNTY RECORDS, ARIZONA, NORTH 74°46'51" EAST 398.11 FEET.

GROUND SCALE FACTOR: 1.0002016327

ENGINEER

SUNRISE ENGINEERING
2045 SOUTH VINEYARD, SUITE 101
MESA, ARIZONA 85210
CONTACT: RICKY HOLSTON, PE
PHONE: (480) 768-8600
EMAIL: rholston@sunrise-eng.com

OWNER

PINE-STRAWBERRY WATER
IMPROVEMENT DISTRICT (PSWID)
P.O. 134
6306 HARDCRABBLE MESA ROAD
PINE, ARIZONA 85544
CONTACT: PAUL HENDRICKS, EUSI
PHONE: (623) 204-4901

SURVEYOR

SUNRISE ENGINEERING
2045 SOUTH VINEYARD, SUITE 101
MESA, ARIZONA 85210
CONTACT: NICK JOHNSON
PHONE: (480) 768-8600
EMAIL: njohnson@sunrise-eng.com

APPROVALS

THE AUTHORIZED REPRESENTATIVES OF THE FOLLOWING AGENCIES HEREBY ACKNOWLEDGE OR HAVE ACKNOWLEDGED THAT THEY HAVE REVIEWED AND APPROVED THE DESIGN SHOWN BY THESE DRAWINGS. CONSTRUCTION MAY BEGIN AFTER ALL APPROPRIATE PERMITS HAVE BEEN OBTAINED.

PINE-STRAWBERRY WATER
IMPROVEMENT DISTRICT

DATE

ADEQ

DATE

RECORD DRAWING CERTIFICATION

I HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THIS PROJECT HAS BEEN COMPLETED IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED PLANS, SPECIFICATIONS AND REFERENCED STANDARDS, EXCEPT AS SHOWN HEREON; THAT THESE RECORD DRAWINGS REFLECT THE POSITION OF CONSTRUCTED IMPROVEMENTS BASED ON FIELD MEASUREMENTS; AND THAT THE MATERIALS USED IN CONSTRUCTION ARE AS SHOWN BASED ON FIELD OBSERVATION AND TEST RESULTS.

THIS CERTIFICATION DOES NOT WARRANT MATERIALS, WORKMANSHIP, METHODS OF CONSTRUCTION, OR OTHER ITEMS AFFECTING THE WARRANTY OF THIS PROJECT, TO THE TOWN OF PINE-STRAWBERRY. USERS OF THIS INFORMATION ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ACTUAL CONDITIONS.

REGISTERED PROFESSIONAL ENGINEER (CIVIL)

DATE

REGISTRATION NUMBER

QUANTITIES		
DESCRIPTION	QTY	UNITS
S/M SAWCUT & MATCH EXISTING ROADWAY, PER DETAIL B, SHEET 7		
REMOVALS		
1 SAWCUT AND REMOVE EXISTING PAVEMENT	807	SY
5 ABANDON EXISTING WATER SERVICE LINE PER DETAIL J, ON SHEET 9	2	EA
HARDSCAPE		
1 ASPHALT PAVEMNT 8" AC ON 6", MATCH EXISTING PAVEMENT, PER DETAIL B, ON SHEET 7	807	SY
WATER		
1 6" PVC C900, DR 14 WATERLINE, TRENCH DETAIL PER DETAIL B, ON SHEET 7	1618	LF
2 4" PVC C900, DR 14 WATERLINE, TRENCH DETAIL PER DETAIL B, ON SHEET 7	91	LF
3 3" PVC C900, DR 14 WATERLINE, TRENCH DETAIL PER DETAIL B, ON SHEET 7	11	LF
4 2" PVC C900, DR 14 WATERLINE, TRENCH DETAIL PER DETAIL B, ON SHEET 7	10	LF
6 1" CROSSLINKED POLYETHYLENE, PEX, SERVICE PER PSWID STD DETAIL 403 PER DETAIL A, ON SHEET 7	2	EA
9 6" 22.5" DIP BEND	3	EA
10 6" 45" DIP BEND	3	EA

QUANTITIES		
DESCRIPTION	QTY	UNITS
WATER		
11 4" 22.5" DIP BEND	2	EA
12 4" 90" DIP BEND	4	EA
15 2" 45" DIP BEND	1	EA
16 6" X 4" DIP TEE	2	EA
17 6" X 3" DIP REDUCER	3	EA
18 4" X 3" DIP REDUCER	2	EA
19 4" X 2" DIP REDUCER	1	EA
20 6" GATE VALVE PER DETAIL D, ON SHEET 8	4	EA
21 4" GATE VALVE PER DETAIL D, ON SHEET 8	4	EA
22 6" 11.25" DIP BEND	7	EA
23 6" X 6" DIP TEE	1	EA
32 PRESSURE REDUCING VALVE PER DETAIL L ON SHEET 9	1	EA
33 4" 45" DIP BEND	2	EA
34 6" X 6" DIP CUT IN TEE	1	EA



REV. NO.	COMMENT	DATE
2045 SOUTH VINEYARD, SUITE 101 MESA, ARIZONA 85210 TEL 480.768.8600 www.sunrise-eng.com		
PINE-STRAWBERRY WATER IMPROVEMENT DISTRICT SV3 IMPROVEMENTS COVER SHEET		
SET NO. 16599	DESIGNED DPL	DRAWN RD/JIB
CHECKED DPL	COV 1 of 12	

PSWID WATER NOTES

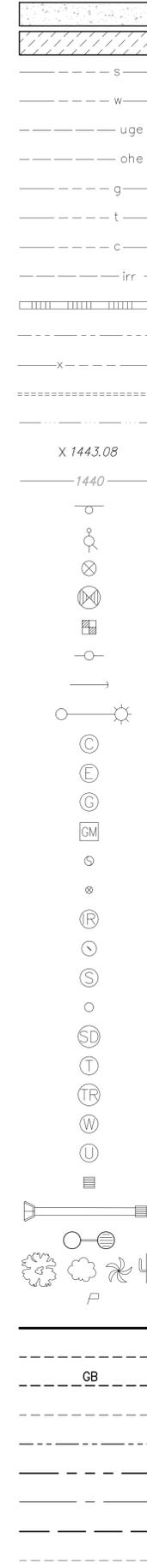
- WATER DISTRICT INSPECTION STAFF SHALL BE NOTIFIED 48 HOURS BEFORE ANY CONSTRUCTION BEGINS. TELEPHONE (928) 476-4222.
- ALL CONSTRUCTION TO CONFORM TO M.A.G. SPECIFICATIONS AND DETAILS UNLESS MODIFIED ON THE PLANS.
- COMPACTION SHALL COMPLY WITH M.A.G. SECTION CONTRACT SPECS 601.
- PIPE DEFLECTION SHALL NOT EXCEED ONE-HALF (1/2) THE MANUFACTURERS RECOMMENDATIONS.
- THE CONTRACTOR IS TO NOTIFY THE PUBLIC THAT WILL BE AFFECTED BY ANY SHUTDOWNS A MINIMUM OF 48 HOURS IN ADVANCE.
- ALL WORK MUST COMPLY WITH REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- A SIX (6) FOOT MINIMUM HORIZONTAL SEPARATION FROM ANY UNDERGROUND SEWER AND OTHER UTILITY SHALL BE PROVIDED FOR WATER MAINS. THE MINIMUM HORIZONTAL SEPARATION IS MEASURED FROM OUTSIDE OF WATER MAIN TO OUTSIDE OF SEWER MAIN OR OTHER UTILITY MAIN.
- A ONE (1) FOOT MINIMUM VERTICAL SEPARATION FROM ANY DRY UNDERGROUND UTILITY CROSSING SHALL BE PROVIDED FOR WATER MAINS AND WATER SERVICES. THE MINIMUM VERTICAL SEPARATION IS MEASURED FROM OUTSIDE OF WATER MAIN OR WATER SERVICE TO OUTSIDE OF DRY UNDERGROUND UTILITY.
- A TWO (2) FOOT MINIMUM VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN ANY SEWER MAIN AND OTHER UTILITY CROSSING A WATER MAIN. THE MINIMUM VERTICAL SEPARATION IS MEASURED FROM OUTSIDE OF WATER MAIN TO OUTSIDE OF SEWER MAIN OR UTILITY LINE.
- EXCEPTIONS OR DEVIATIONS FROM THE ABOVE MINIMUM CLEARANCES MUST BE APPROVED AND SHOWN ON THE APPROVED WATER. WHEN UTILITY CONFLICTS ARE FOUND DURING CONSTRUCTION, ALL CHANGES AND REVISIONS MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
- ANY AND ALL MORE STRINGENT REQUIREMENTS OF FEDERAL, STATE, COUNTY, OR LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
- CONCRETE OR ASPHALT DAMAGED DURING THE COURSE OF CONSTRUCTION SHALL BE REMOVED AND REPLACED IN KIND PRIOR TO FINAL INSPECTION.
- THE LOCATION OF ALL WATER VALVES, FIRE HYDRANTS, AND MANHOLES MUST AT ALL TIMES DURING CONSTRUCTION BE REFERENCED BY THE CONTRACTOR AND MADE AVAILABLE TO THE WATER DISTRICT.
- THE EXACT LOCATIONS OF UTILITIES SHOWN ARE UNKNOWN. THE LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES AND BURIED CABLES PRIOR TO CONSTRUCTION BY CALLING "ARIZONA 811" AT 1-800-782-5348, AT LEAST 48 HOURS BEFORE DIGGING. THE CONTRACTOR SHALL COOPERATE WITH THE UTILITY OWNERS IN PROTECTING ALL EXISTING UNDERGROUND STRUCTURES, UTILITIES, AND SERVICES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE STREETS AND FOR PARTIALLY COMPLETED PORTIONS OF THE WORK, UNTIL FINAL ACCEPTANCE OF THE WORK.
- THE CONTRACTOR SHALL COOPERATE WITH ALL OTHER CONTRACTORS OR DISTRICT FORCES WORKING AT THE SITE.
- ALL NEW WATER LINES SIZE SHALL BE AS SHOWN ON THE PLANS. 6" PVC PIPE LINES SHALL BE C900 DR-18, IN ACCORDANCE WITH MAG STANDARD SPECIFICATION SECTION 610.
- ALL SERVICE LINES SHALL BE 3/4" POLYETHYLENE PIPING PER MAG STANDARD SPECIFICATION SECTION 755. ALL FITTINGS SHALL BE BRASS COMPRESSION TYPE FITTINGS PER AWWA C800 AND SHALL MEET THE LATEST NSF 61-8.
- ALL MATERIALS USED IN THE WATER SYSTEM SHALL CONFORM TO NSF STANDARD 61.
- CONSTRUCTION MATERIALS USED IN THE WATER SYSTEM SHALL BE LEAD-FREE AS DEFINED IN AAC R18-5-504 AND R18-1-101.
- WATER / SEWER SEPARATION SHALL MEET THE REQUIREMENTS OF THE LATEST REVISION OF AAC R18-5-502.
- NON-METALIC WARNING TAPE SHALL BE REQUIRED WITHIN THE WATER MAIN AND SERVICE LINE TRENCHES, IN ACCORDANCE WITH WATER DISTRICT STANDARDS.
- DISINFECTION OF WATER LINES AND TANKS SHALL BE IN ACCORDANCE WITH M.A.G. STANDARD SPECIFICATION SECTION 611.
- ALL WATER PIPE MATERIALS AND FITTINGS SHALL HAVE THE NSF-PW SEAL OF APPROVAL.
- PRESSURE AND LEAKAGE TESTING SHALL BE PERFORMED IN ACCORDANCE WITH M.A.G. STANDARD SPECIFICATION SECTION 610 AND 611.
- TRENCHING AND BACKFILL SHALL MEET THE REQUIREMENTS OF M.A.G. STANDARD SPECIFICATION SECTION 601 OR PER MANUFACTURE'S RECOMMENDATIONS. WHERE THERE IS A CONFLICT BETWEEN STANDARDS, THE MOST STRINGENT STANDARD SHALL GOVERN.
- THRUST BLOCKS IN ACCORDANCE WITH M.A.G. STANDARD DETAIL 380 OR JOINT RESTRAINTS IN ACCORDANCE WITH M.A.G. DETAILS 303-1 AND 303-2 SHALL BE INSTALLED AT ALL WATER LINE FITTINGS.
- CLEARING AND GRUBBING SHALL BE IN ACCORDANCE WITH M.A.G. STANDARD SPECIFICATION SECTION 201. STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH M.A.G. STANDARD SPECIFICATION SECTION 206. FILL CONSTRUCTION SHALL BE IN ACCORDANCE WITH M.A.G. STANDARD SPECIFICATION SECTION 211.
- WATER SUPPLY SHALL BE IN ACCORDANCE WITH M.A.G. STANDARD SPECIFICATION SECTION 104.1.3.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND FOR OBTAINING AN AZPDES CONSTRUCTION GENERAL PERMIT FROM THE ARIZONA DEPARTMENT OF ENVIRONMENT QUALITY.

SE GENERAL NOTES

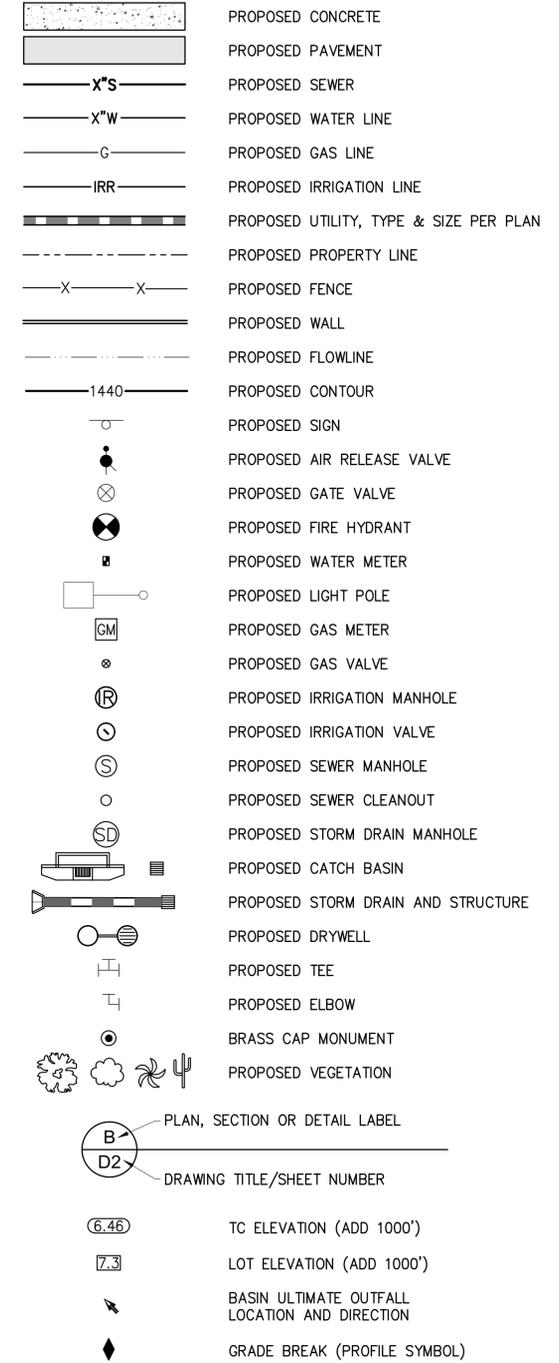
- ALL SITE WORK SHALL CONFORM TO THE CURRENT EDITION OF THE MARICOPA ASSOCIATION OF GOVERNMENTS UNIFORM STANDARD SPECIFICATIONS AND DETAILS (MAG SPECIFICATIONS AND DETAILS) AND ANY SUPPLEMENTS TO THE MAG SPECIFICATIONS AND DETAILS BY THE JHA (JURISDICTION HAVING AUTHORITY) UNLESS SPECIFICALLY STATED OTHERWISE IN THESE PLANS.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING PERMITS, RENEWAL OF LAPSED PERMITS, AND OBTAINING ANY NEW PERMITS, INCLUDING, BUT NOT LIMITED TO A DUST CONTROL PERMIT, AND TRAFFIC CONTROL PERMITS AS REQUIRED BY THE JHA.
- THE CONTRACTOR IS RESPONSIBLE FOR MAKING ARRANGEMENTS FOR INSPECTION AND TESTING.
- THE CONTRACTOR SHALL NOTIFY THE JHA'S INSPECTION DEPARTMENT 48 HOURS PRIOR TO CONSTRUCTION. CONSTRUCTION CONCEALED WITHOUT THE REQUIRED INSPECTION SHALL BE SUBJECT TO EXPOSURE AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. CALL ARIZONA 811 AT (800) 782-5348 AT LEAST 48 HOURS BEFORE ANY CONSTRUCTION BEGINS.
- THE CONTRACTOR SHALL FOLLOW GUIDELINES AND REGULATIONS SET FORTH BY O.S.H.A. SUNRISE ENGINEERING WILL NOT BE RESPONSIBLE FOR JOB-SITE SAFETY PROCEDURES OR CONDITIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR HIS OWN TAKEOFF QUANTITIES. QUANTITIES IF SHOWN HEREON ARE ESTIMATES ONLY AND AS SUCH ARE NOT TO BE USED FOR BID PURPOSES.
- THE CONTRACTOR IS RESPONSIBLE FOR THE NOTIFICATION OF THE PROPER AUTHORITY(S) IF THERE ARE OBSTRUCTIONS TO PROPOSED IMPROVEMENTS AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY EXISTING ITEM REMOVED TO FACILITATE CONSTRUCTION SHALL BE REPLACED IN THE SAME OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES FOR LOCATION OF SERVICE AND/OR RELOCATION OF UTILITIES IN CONFLICT WITH PROPOSED CONSTRUCTION. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR COORDINATING THE RELOCATION OF UTILITIES, POWER POLES, ETC.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE AND SAFELY DISPOSE OF ALL REMOVAL MATERIAL AND DEBRIS DEEMED UNSALVAGEABLE BY THE ENGINEER PER THE PROVISIONS SET FORTH IN MAG SPECIFICATION 350.
- THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL ON AND AROUND THE CONSTRUCTION SITE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
- THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS FOR CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING PUBLIC STREETS, AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS, AND TAKE WHATEVER MEASURES ARE NECESSARY TO INSURE THAT ALL ROADS ARE MAINTAINED IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES. NO WORK WILL BE CONSIDERED COMPLETE UNTIL ALL PAVEMENTS HAVE BEEN SWEEP CLEAN OF DIRT AND DEBRIS.
- PRIOR TO MOVING OR DESTROYING PROTECTED NATIVE PLANT SPECIES, THE CONTRACTOR SHALL FILE A FORMAL NOTICE OF INTENT WITH THE ARIZONA DEPARTMENT OF AGRICULTURE NATIVE PLANTS (602) 542-3292.
- A THOROUGH ATTEMPT HAS BEEN MADE TO SHOW THE LOCATIONS OF ALL UNDERGROUND OBSTRUCTIONS AND UTILITY LINES IN THE WORK AREA. HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO OBSTRUCTIONS AND UTILITY LINES ENCOUNTERED DURING CONSTRUCTION AND SHALL DETERMINE THE EXACT LOCATION OF UTILITIES IN ADVANCE OF TRENCHING. THE ENGINEER WILL NOT GUARANTEE ANY ELEVATIONS AT LOCATIONS OF THE EXISTING UNDERGROUND UTILITIES SHOWN ON THESE PLANS.
- THE CONTRACTOR SHALL PROVIDE A LICENSED SURVEYOR FOR THE SURVEYING/CONSTRUCTION STAKING OF ALIGNMENT AND GRADE FOR EACH MAIN AND/OR FACILITY AS SHOWN ON THE PLANS.
- EXACT POINT OF MATCHING, TERMINATION AND OVERLAY, IF NECESSARY, MAY BE DETERMINED IN THE FIELD BY THE ENGINEER OF RECORD OR THE RESIDENT ENGINEER OVERSEEING THE PROJECT CONSTRUCTION.
- ANY AMBIGUITIES OR DEFICIENCIES DISCOVERED ON THESE PLANS ARE TO BE RESOLVED BY SUNRISE ENGINEERING OR ITS APPOINTED REPRESENTATIVE. ANY MODIFICATIONS TO THESE PLANS MADE BY ANYONE OTHER THAN SUNRISE ENGINEERING OR ITS APPOINTED REPRESENTATIVE IS SOLELY RESPONSIBLE FOR THOSE MODIFICATIONS.
- THE CONTRACTOR SHALL RE-GRADE ALL EARTHEN DRIVEWAYS DISTURBED WITHIN THE RIGHT-OF-WAY DURING THE CONSTRUCTION AND RE-COMPACT THE TOP 1- FEET OF SURFACE MATERIAL TO A MINIMUM COMPACTION OF 90% MAXIMUM DRY DENSITY. THE RE-GRADED DRIVEWAYS SHALL BE OVERLAID WITH A 0.5" LAYER OF HALF-INCH MINUS ROADWAY GRAVEL AND RAKED SMOOTH.
- THE CONTRACTOR SHALL PROVIDE ALL TRAFFIC CONTROL AND BARRICADES FOR WORK IN THE RIGHT-OF-WAY PER THE STANDARDS SET FORTH BY THE JHA.
- PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY INVERT ELEVATION, LOCATION, SIZE AND MATERIAL OF EXISTING WATER, SEWER, STORM DRAIN OR ANY OTHER UTILITIES AS SHOWN ON THE PLANS. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE PLANS AND EXISTING CONDITIONS. CONNECTIONS TO EXISTING UTILITIES SHALL NOT BE MADE UNTIL DISCREPANCIES ARE RESOLVED WITH THE ENGINEER.
- PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY EXISTING CONCRETE AND PAVEMENT ELEVATIONS AT TIE-INS/SAWCUT LINES AND VERIFY CROSS SLOPES WITH THE PROPOSED PLANS. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE PLANS AND EXISTING CONDITIONS. CONCRETE AND PAVEMENT ITEMS SHALL NOT BE CONSTRUCTED UNTIL DISCREPANCIES ARE RESOLVED WITH THE ENGINEER.
- ALL ASPHALT REMOVAL AND REPLACEMENT WIDTHS FOR NEW UTILITY INSTALLATION HAS BEEN DETERMINED BY MINIMUM WIDTHS AS DEFINED BY ASPHALT REMOVAL/REPLACEMENT DETAILS OF THE JURISDICTION HAVING AUTHORITY (JHA) AND/OR AS DIRECTED BY THE JHA. ANY ASPHALT REMOVAL AND REPLACEMENT WIDTHS GREATER THAN WHAT IS DEPICTED IN THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS PREVIOUSLY APPROVED BY THE JHA.

SE WATER NOTES

- ALL WORK, TESTING AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE WATER COMPANY AND MAG SPECIFICATIONS & STANDARD DETAILS. ALL WORK AND MATERIALS NOT IN CONFORMANCE WITH THESE SPECIFICATIONS AND STANDARD DETAILS ARE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
 - THIS SET OF PLANS HAS BEEN REVIEWED FOR COMPLIANCE WITH THE JHA (JURISDICTION HAVING AUTHORITY) REQUIREMENTS PRIOR TO ISSUANCE OF CONSTRUCTION PERMITS. HOWEVER, SUCH REVIEW SHALL NOT PREVENT THE WATER COMPANY FROM REQUIRING CORRECTION OF ERRORS IN PLANS FOUND TO BE IN VIOLATION OF ANY LAW OR ORDINANCE.
 - AN APPROVED SET OF WATER PLANS SHALL BE AVAILABLE ON THE JOB SITE AT ALL TIMES.
 - DEVELOPER IS RESPONSIBLE FOR OBTAINING ALL PERMANENT AND TEMPORARY EASEMENTS PRIOR TO BEGINNING CONSTRUCTION.
 - PRIVATE ONSITE WATER LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST REVISION OF THE UNIFORM PLUMBING CODE AND THE LATEST REVISION OF THE UNIFORM FIRE CODE.
 - A THOROUGH ATTEMPT HAS BEEN MADE TO SHOW THE LOCATIONS OF ALL UNDERGROUND OBSTRUCTIONS AND UTILITY LINES IN THE WORK AREA. HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO OBSTRUCTIONS AND UTILITY LINES ENCOUNTERED DURING CONSTRUCTION AND SHALL DETERMINE THE EXACT LOCATION OF UTILITIES IN ADVANCE OF TRENCHING. THE ENGINEER WILL NOT GUARANTEE ANY ELEVATIONS AT LOCATIONS OF THE EXISTING UNDERGROUND UTILITIES SHOWN ON THESE PLANS.
 - THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE RELOCATION OF ALL UTILITIES, POWER POLES, IRRIGATION DRY-UPS, REMOVALS BY OTHERS, ETC.
 - ALL FRAMES, COVERS, VALVE BOXES, MANHOLES, ETC. SHALL BE INSTALLED TO FINISH GRADE OR SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO PLACING OF ASPHALT SURFACE COURSE BY THE CONTRACTOR AS PER MAG STANDARD DETAIL 270 AND 422.
 - CONTRACTOR WILL EXPOSE ALL TIE-IN POINTS TO VERIFY LOCATION PRIOR TO BEGINNING SUBSTANTIAL CONSTRUCTION ACTIVITIES.
 - THE JHA IS NOT LIABLE FOR DELAYS NOR DAMAGES TO UTILITIES RELATED TO THIS CONSTRUCTION; NEITHER WILL THE JHA PARTICIPATE IN THE COST OF UTILITY RECONSTRUCTION OR RELOCATION.
 - THE CONTRACTOR IS RESPONSIBLE FOR MAKING ARRANGEMENTS FOR INSPECTION AND TESTING. INSPECTIONS SHOULD BE COORDINATED WITH THE WATER COMPANY. CONSTRUCTION CONCEALED WITHOUT THE REQUIRED INSPECTION SHALL BE SUBJECT TO EXPOSURE AT THE CONTRACTOR'S EXPENSE.
 - THE CONTRACTOR WILL FOLLOW GUIDELINES AND REGULATIONS SET FORTH BY O.S.H.A. SUNRISE ENGINEERING WILL NOT BE RESPONSIBLE FOR JOB-SITE SAFETY PROCEDURES OR CONDITIONS.
 - THE CONTRACTOR IS RESPONSIBLE FOR HIS OWN TAKEOFF QUANTITIES. QUANTITIES SHOWN HEREON ARE ESTIMATES ONLY AND AS SUCH ARE NOT TO BE USED FOR BID PURPOSES.
 - ALL WATERLINES SHALL HAVE 36" TO 48" MINIMUM COVER AS SPECIFIED BY THE JHA DESIGN STANDARDS AND CONSTRUCTION MANUAL.
 - CONTRACTOR MUST MAINTAIN SLOPE OF WATER LINES TO HIGH POINTS AT COMBINATION AIR VALVES OR LOW POINTS AT BLOW OFFS OR FIRE HYDRANTS.
 - IN ACCORDANCE WITH AAC R18-4-213B, ALL MATERIALS ADDED AFTER JANUARY 1, 1993 WHICH MAY COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NATIONAL SANITATION FOUNDATION STANDARDS 60 AND 61.
 - DUCTILE IRON PIPE WHEN REQUIRED SHALL BE THICKNESS CLASS 52.
 - SERVICE CONNECTION BACK-FLOW PREVENTORS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
 - FIRE HYDRANTS SHALL RECEIVE 2 FIELD COATS OF CHROME YELLOW PAINT PRIOR TO ACCEPTANCE OF WORK BY THE JHA.
 - DEVELOPER IS TO INSTALL ALL TAPS AND METER BOXES. REFER TO DETAILS INCLUDED IN THESE PLANS AS WELL AS DETAILS AND SPECIFICATIONS BY THE JHA FOR METER BOX LOCATION AND REQUIRED MATERIAL.
 - PAVEMENT REPLACEMENT AND TRENCH REPAIR SHALL BE DONE TO MAG STANDARD SPECIFICATIONS AND DETAILS.
 - ALL WATER SERVICE CONNECTIONS SHALL BE EXTENDED TO THE PROPOSED METER LOCATIONS AS INDICATED ON THE PLANS SUCH THAT ADDITIONAL EXTENSION WILL NOT BE REQUIRED.
 - IMPROVEMENTS SHALL NOT BE ACCEPTED UNTIL "AS-BUILT" PLANS HAVE BEEN SUBMITTED, REVIEWED AND APPROVED BY THE JHA.
 - WATER SYSTEM SHALL BE DISINFECTED PER ADEQ ENGINEERING BULLETIN NO. 8.
 - PRESSURE AND LEAKAGE TESTING SHALL BE PERFORMED IN ACCORDANCE WITH MAG STANDARD SPECIFICATION SECTION 610 AND 611.
- SEWER - 2'
IRRIGATION - 2'
CULVERTS & STORM DRAIN - 1'
WATER - 0.5'
GAS - 1'
- THE CONTRACTOR SHALL LOCATE EXISTING WATERLINES AT THE PROPOSED WATERLINE CONNECTION POINTS A MINIMUM OF ONE WEEK PRIOR TO SCHEDULED WORK TO ALLOW FOR CUSTOMER NOTIFICATION OF SCHEDULED SHUT DOWNS.
 - ALL ABOVE GROUND DUCTILE IRON PIPE SHALL HAVE AN EXTERIOR COATING CONSISTING OF:
 - SP-6 BLAST CLEANING
 - PRIMER COAT TO BE TNEC 20-1255 (OR EQUAL) WITH 3.0 TO 5.0 MILS DRY FILM THICKNESS (DFT)
 - FINISH COAT TO BE TNEC SERIES 73 ENDURA-SHIELD WITH 2.0 TO 3.0 DFT
 - TOTAL DFT 5.0 TO 8.0
 - COLOR TO BE SELECTED BY OWNER (SHOP DRAWINGS REQUIRED)
 - ALL DUCTILE IRON PIPE AND FITTINGS SHALL HAVE INTERNAL CEMENT MORTAR LINING WITH SEAL COAT PER AWWA C104 AND EXTERIOR ASPHALTIC COATING PER AWWA C115 OR C151. ALL UNDERGROUND DUCTILE IRON PIPE AND FITTINGS SHALL BE POLYETHYLENE WRAPPED PER AWWA C105 AND MAG SPEC 610.6.



LEGEND



811 Know what's below. Call before you dig. 1-800-782-5348

REV. NO.	COMMENT	DATE
<p>SUNRISE ENGINEERING 2045 SOUTH VINEYARD, SUITE 101 MESA, ARIZONA 85210 TEL 480.768.8600 www.sunrise-eng.com</p>		
<p>PINE-STRAWBERRY WATER IMPROVEMENT DISTRICT</p> <p>SV3 IMPROVEMENTS</p> <p>GENERAL NOTES & LEGEND</p>		
SEI NO. 16599	DESIGNED DPL	DRAWN RD/JIB
CHECKED DPL	<p>GN 2 of 12</p>	

FINAL SUBMITTAL

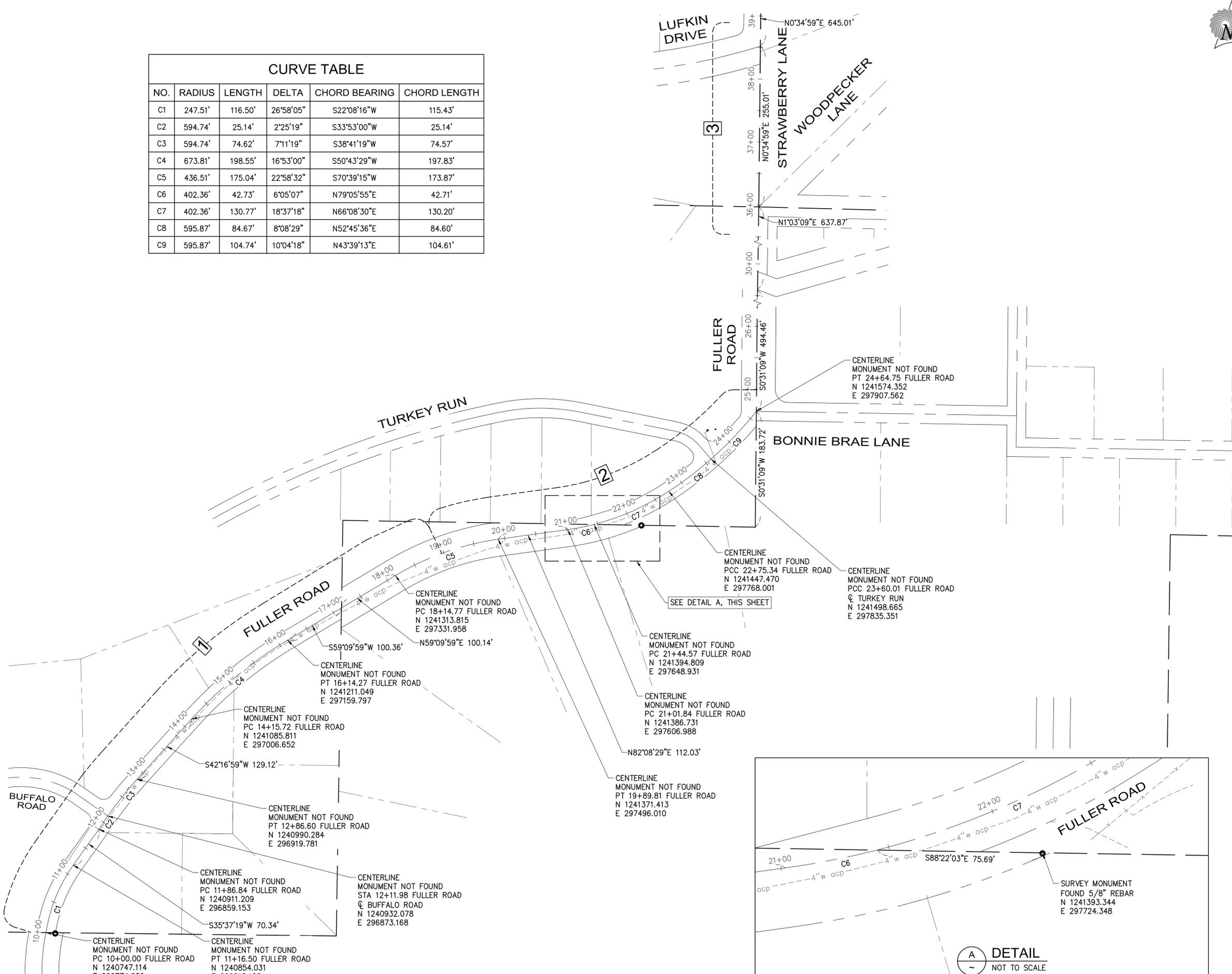
P:\Pine-Strawberry WID\16599 SV3 Improvements\DWG\Plan Sets\SV3-GN.dwg Feb. 06, 2026 1:31pm Diangminth



ABBREVIATIONS

ABC	AGGREGATE BASE COURSE
AC	ASPHALT CONCRETE
BCF	BRASS CAP FLUSH
BCHH	BRASS CAP IN HAND HOLE
BM	BENCHMARK
C/L	CENTERLINE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CONST	CONSTRUCTION
CY	CUBIC YARD
D/W	DRIVEWAY
DWG	DRAWING
DTL	DETAIL
E	EAST
ELEV	ELEVATION
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
EX, EXIST	EXISTING
FH	FIRE HYDRANT
FL	FLANGE
FO	FIBER OPTIC
FPS	FEET PER SECOND
FT	FOOT, FEET
G	GAS, GUTTER, GRADE
GB	GRADE BREAK
GPM	GALLONS PER MINUTE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HP	HIGH POINT
HW	HIGHWATER
IN.	INCH, INCHES
INV	INVERT
IRRI	IRRIGATION
JHA	JURISDICTION HAVING AUTHORITY
L	LENGTH
LF	LINEAR FEET
LT	LEFT
MAG	MARICOPA ASSOCIATION OF GOVERNMENTS
MJ	MECHANICAL JOINT
N	NORTH
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO.	NUMBER
OHE	OVERHEAD ELECTRIC
P/L	PROPERTY LINE
PAE	PUBLIC ACCESS EASEMENT
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PCC	PORTLAND CEMENT CONCRETE
PRC	POINT OF REVERSE CURVE
PRV	PRESSURE RELEASE VALVE
PSWID	PINE STRAWBERRY WATER IMPROVEMENT DISTRICT
PT	POINT OF TANGENCY
PUE	PUBLIC UTILITY EASEMENT
R	RADIUS
R/W	RIGHT-OF-WAY
RJ	RESTRAINED JOINT
RT	RIGHT
S	SEWER, SLOPE, SOUTH
S/M	SAWCUT AND MATCH
SF	SQUARE FEET
SMH	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
SY	SQUARE YARD
T, TEL	TELEPHONE
TYP	TYPICAL
UGE	UNDERGROUND ELECTRIC
W	WATER, WEST, WITH
XFMR	TRANSFORMER

CURVE TABLE					
NO.	RADIUS	LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C1	247.51'	116.50'	26°58'05"	S22°08'16"W	115.43'
C2	594.74'	25.14'	2°25'19"	S33°53'00"W	25.14'
C3	594.74'	74.62'	7°11'19"	S38°41'19"W	74.57'
C4	673.81'	198.55'	16°53'00"	S50°43'29"W	197.83'
C5	436.51'	175.04'	22°58'32"	S70°39'15"W	173.87'
C6	402.36'	42.73'	6°05'07"	N79°05'55"E	42.71'
C7	402.36'	130.77'	18°37'18"	N66°08'30"E	130.20'
C8	595.87'	84.67'	8°08'29"	N52°45'36"E	84.60'
C9	595.87'	104.74'	10°04'18"	N43°39'13"E	104.61'



KEY MAP LEGEND



REV. NO.	COMMENT	DATE
2045 SOUTH VINEYARD, SUITE 101 MESA, ARIZONA 85210 TEL 480.768.8600 www.sunrise-eng.com		
PINE-STRAWBERRY WATER IMPROVEMENT DISTRICT SV3 IMPROVEMENTS		
KEY MAP, HORIZONTAL CONTROL & ABBREVIATIONS		
SET NO. 16599	DESIGNED DPL	DRAWN RD/JIB
CHECKED DPL	DATE HC	SHEET 3 of 12

A DETAIL
NOT TO SCALE

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CONSTRUCTION NOTES

S/M	SAWCUT & MATCH EXISTING ROADWAY, PER DETAIL B, SHEET 7	
REMOVALS		
1	SAWCUT AND REMOVE EXISTING PAVEMENT	459 SY
5	ABANDON EXISTING WATER SERVICE LINE PER DETAIL J, ON SHEET 9	2 EA
HARDSCAPE		
1	ASPHALT PAVEMNT 8" AC ON 6", MATCH EXISTING PAVEMENT, PER DETAIL B, ON SHEET 7	459 SY
WATER		
1	6" PVC C900, DR 14 WATERLINE, TRENCH DETAIL PER DETAIL B, ON SHEET 7	719 LF
2	4" PVC C900, DR 14 WATERLINE, TRENCH DETAIL PER DETAIL B, ON SHEET 7	16 LF
4	2" PVC C900, DR 14 WATERLINE, TRENCH DETAIL PER DETAIL B, ON SHEET 7	10 LF
6	1" CROSSLINKED POLYETHYLENE, PEX, SERVICE PER PSWID STD DETAIL 403 PER DETAIL A, ON SHEET 7	2 EA
15	2" 45° DIP BEND	1 EA
16	6" X 4" DIP TEE	2 EA
19	4" X 2" DIP REDUCER	1 EA
20	6" GATE VALVE PER DETAIL D, ON SHEET 8	1 EA
21	4" GATE VALVE PER DETAIL D, ON SHEET 8	2 EA
22	6" 11.25° DIP BEND	1 EA
33	4" 45° DIP BEND	2 EA

GENERAL NOTES

1. WATER LENGTHS NOTED ARE MATCHLINE TO MATCHLINE.
2. ALL FITTINGS SHALL BE RESTRAINED JOINT MEGA LUG OR APPROVED EQUAL. NO THRUST BLOCKS UNLESS NOTED OTHERWISE.



REV. NO.	COMMENT	DATE

SUNRISE ENGINEERING

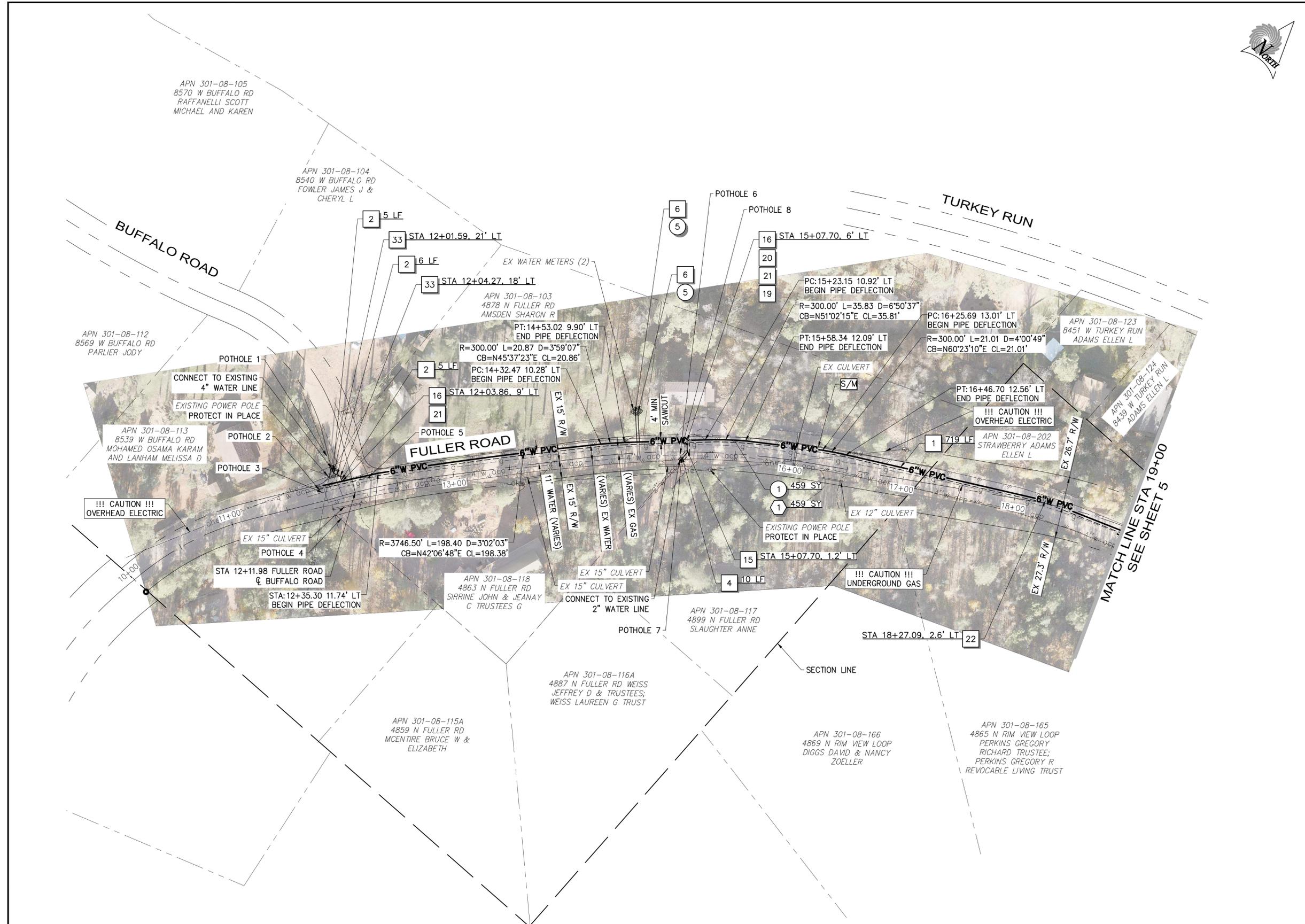
2045 SOUTH VINEYARD, SUITE 101
 MESA, ARIZONA 85210
 TEL 480.768.8600
 www.sunrise-eng.com

PINE-STRAWBERRY WATER IMPROVEMENT DISTRICT

SV3 IMPROVEMENTS

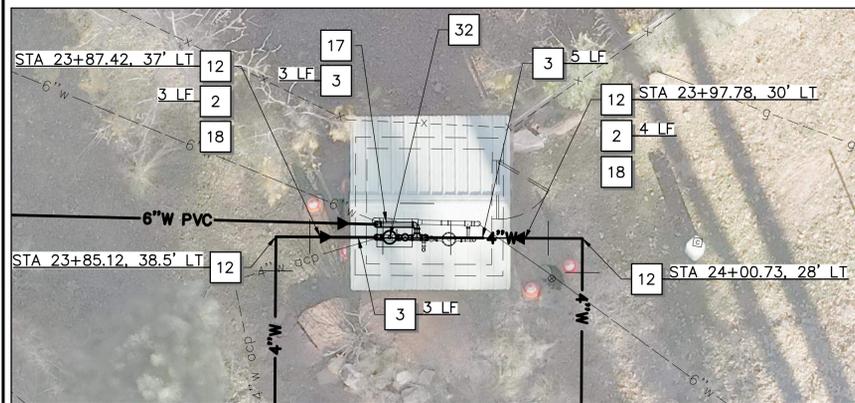
WATER PLANS

SEI NO.	DESIGNED	DRAWN	CHECKED	W1	4 of 12
16599	DPL	RD/JIB	DPL		



FINAL SUBMITTAL

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DETAIL - A
NOT TO SCALE

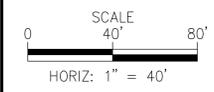


CONSTRUCTION NOTES

S/M	SAWCUT & MATCH EXISTING ROADWAY, PER DETAIL B, SHEET 7	
REMOVALS		
1	SAWCUT AND REMOVE EXISTING PAVEMENT	348 SY
HARDSCAPE		
1	ASPHALT PAVEMENT 8" AC ON 6", MATCH EXISTING PAVEMENT, PER DETAIL B, ON SHEET 7	348 SY
WATER		
1	6" PVC C900, DR 14 WATERLINE, TRENCH DETAIL PER DETAIL B, ON SHEET 7	632 LF
2	4" PVC C900, DR 14 WATERLINE, TRENCH DETAIL PER DETAIL B, ON SHEET 7	75 LF
3	3" PVC C900, DR 14 WATERLINE, TRENCH DETAIL PER DETAIL B, ON SHEET 7	11 LF
9	6" 22.5" DIP BEND	3 EA
10	6" 45" DIP BEND	1 EA
11	4" 22.5" DIP BEND	2 EA
12	4" 90" DIP BEND	4 EA
17	6" X 3" DIP REDUCER	3 EA
18	4" X 3" DIP REDUCER	2 EA
20	6" GATE VALVE PER DETAIL D, ON SHEET 8	1 EA
21	4" GATE VALVE PER DETAIL D, ON SHEET 8	2 EA
22	6" 11.25" DIP BEND	6 EA
32	PRESSURE REDUCING VALVE PER DETAIL L ON SHEET 9	1 EA

GENERAL NOTES

1. WATER LENGTHS NOTED ARE MATCHLINE TO MATCHLINE.
2. ALL FITTINGS SHALL BE RESTRAINED JOINT MEGA LUG OR APPROVED EQUAL. NO THRUST BLOCKS UNLESS NOTED OTHERWISE.



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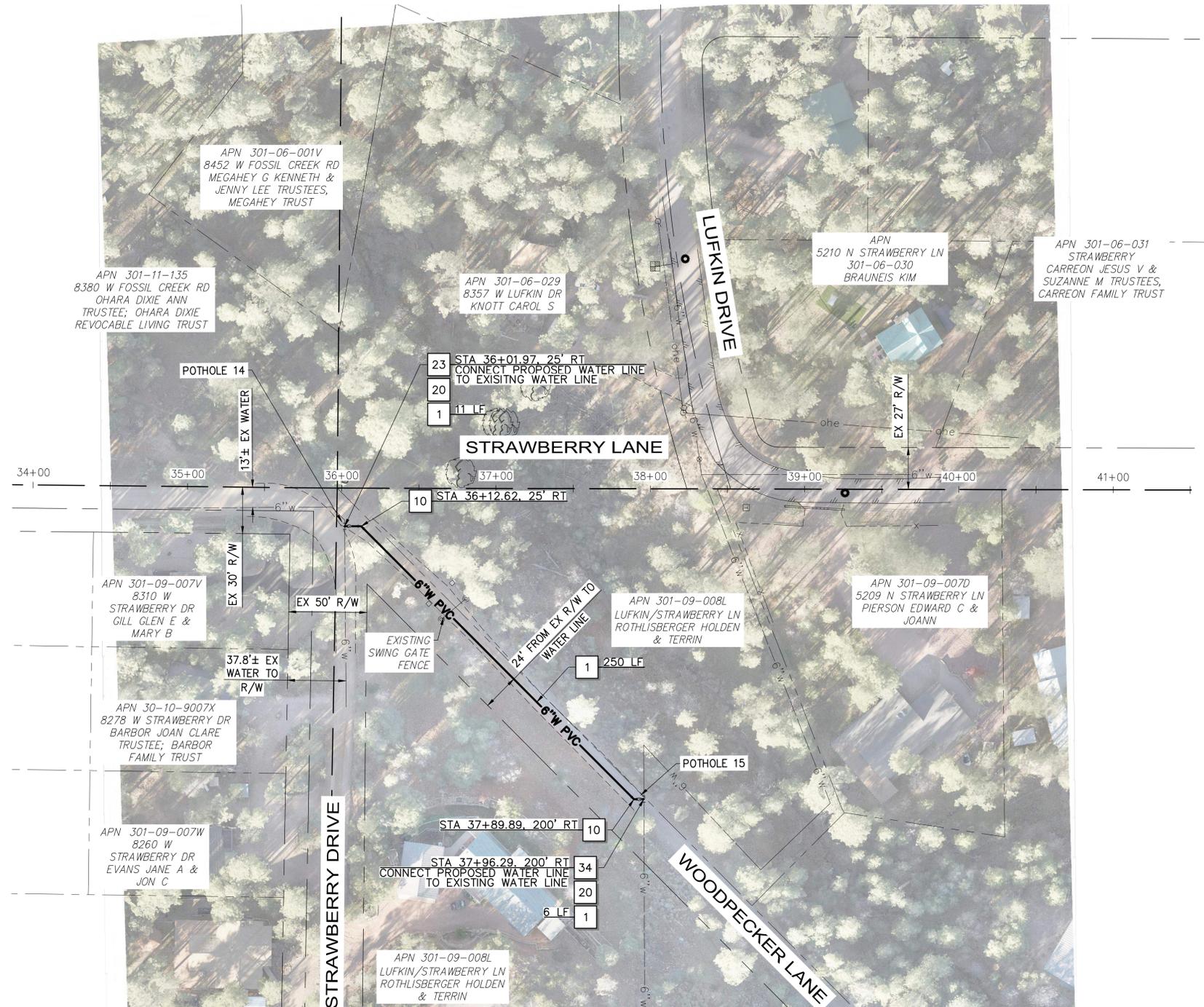
SV3 IMPROVEMENTS

WATER PLANS

SET NO.	DESIGNED	DRAWN	CHECKED	W2	5 of 12
16599	DPL	RD/JIB	DPL		

FINAL SUBMITTAL

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CONSTRUCTION NOTES

WATER		
1	6" PVC C900, DR 14 WATERLINE, TRENCH DETAIL PER DETAIL B, ON SHEET 7	267 LF
10	6" 45° DIP BEND	2 EA
20	6" GATE VALVE PER DETAIL D, ON SHEET 8	2 EA
23	6" X 6" DIP TEE	1 EA
34	6" X 6" DIP CUT IN TEE	1 EA

GENERAL NOTES

1. WATER LENGTHS NOTED ARE MATCHLINE TO MATCHLINE.
2. ALL FITTINGS SHALL BE RESTRAINED JOINT MEGA LUG OR APPROVED EQUAL. NO THRUST BLOCKS UNLESS NOTED OTHERWISE.



REV. NO.	COMMENT	DATE

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PINE-STRAWBERRY WATER IMPROVEMENT DISTRICT

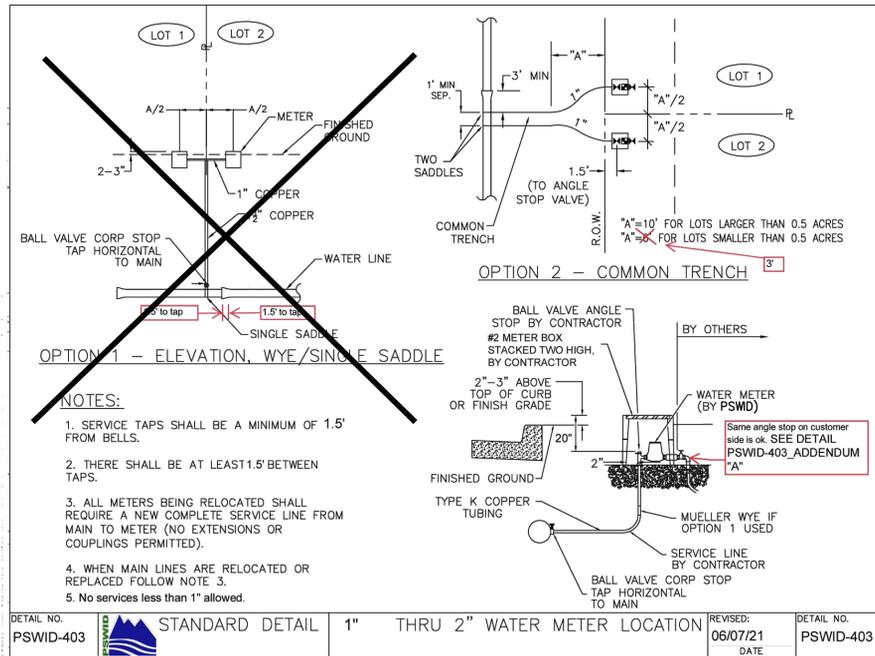
SV3 IMPROVEMENTS

WATER PLANS

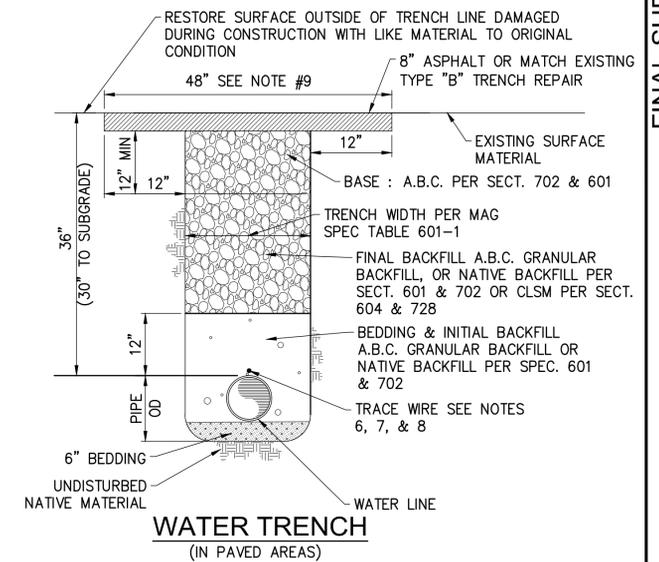
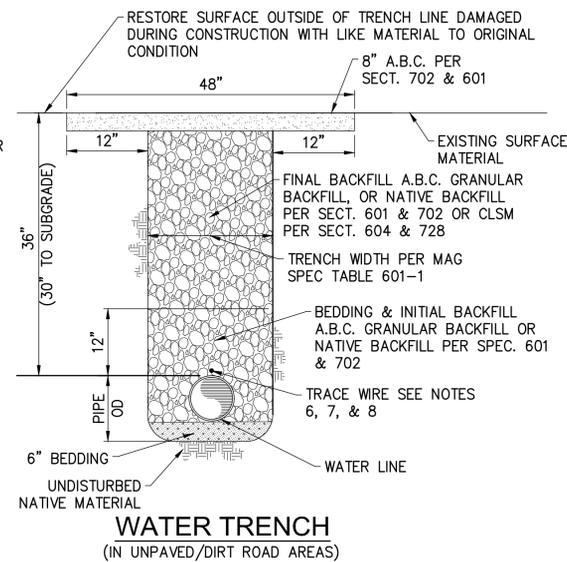
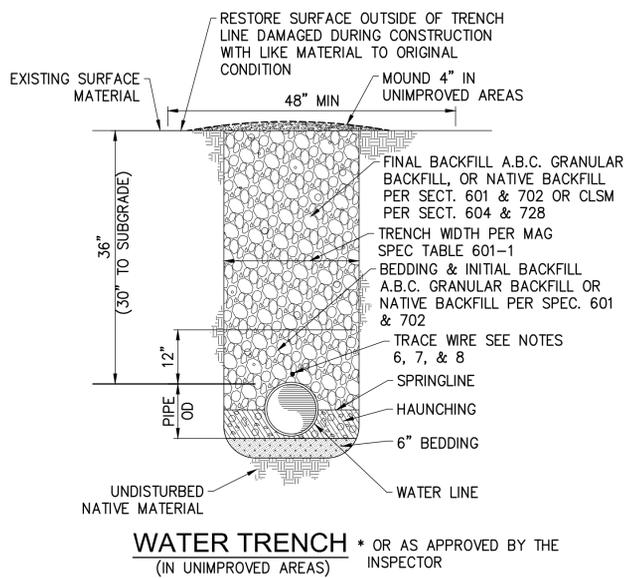
SET NO.	DESIGNED	DRAWN	CHECKED	DATE
16599	DPL	RD/JIB	DPL	W3 6 of 12

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A DETAIL - WATER METER - PER PSWID-403
~ NOT TO SCALE

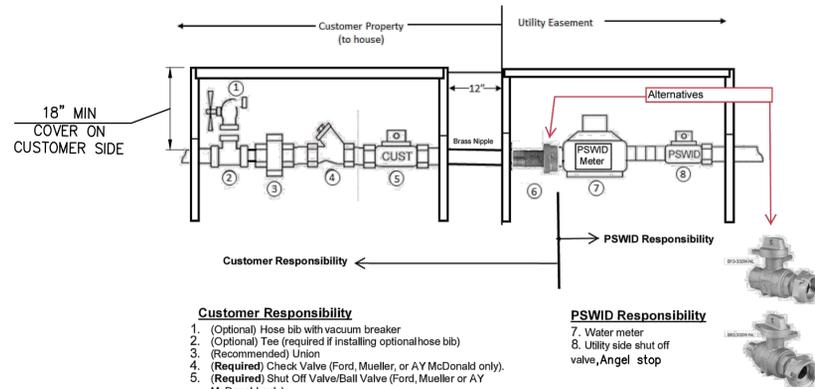


- NOTES:**
- WHENEVER ROCK OR UNSUITABLE BEDDING MATERIAL IS ENCOUNTERED IN TRENCH BOTTOM, OVER EXCAVATION SHALL BE REQUIRED TO A MIN OF 6" DEPTH BELOW PIPE AND REPLACED WITH NATIVE MATERIAL.
 - MINIMUM COVER SHALL BE MEASURED FROM THE EXISTING OR PROPOSED GRADE, OR FROM NATURAL GROUND, WHICHEVER IS DEEPER.
 - CONTRACTOR SHALL CONFORM TO ALL OSHA STANDARDS AND REGULATIONS FOR TRENCH EXCAVATION AND PIPE INSTALLATION.
 - PVC PIPE BEDDING TYPE SHALL BE 1" MINUS GRANULAR MATERIAL.
 - DUCTILE IRON PIPE BEDDING SHALL BE 2" MINUS GRANULAR MATERIAL.
 - TRACER WIRE SHALL BE REQUIRED AT "OFF-SITE" INSTALLATIONS, IN UNDEVELOPED AND/OR CHANGING AREAS OR AS SPECIFICALLY REQUIRED BY THE WATER DIVISION.
 - SPLICES FOR COPPER WIRE SHALL BE MADE USING SIZE 10 & 12 BUTT CONNECTORS TO SPLICE NUMBER 12 BLUE LOCATOR WIRE.
 - BLUE INSULATED COPPER WIRE (NUMBER 12 AWG) REQUIRED DIRECTLY ON TOP OF MAIN WATER LINE & TAPED EVERY JOINT WITH DUCT TAPE.
 - GILA COUNTY RIGHT-OF-WAY ORDINANCE # 2--.01.F.1.6, IN EXISTING PAVEMENT, ALL EXCAVATION WITHIN 36" OF THE EDGE OF ASPHALT SHALL REQUIRE REMOVAL AND REPLACEMENT FROM THE EDGE OF ASPHALT TO THE EXCAVATION EDGE
 - COMPACTION TESTING IS NOT REQUIRED FOR CLSM BACKFILL

B DETAIL - TYPICAL WATER LINE TRENCH
~ NOT TO SCALE



DIAGRAM FOR REQUIRED CUSTOMER SIDE CONNECTION TO METER



- Customer Responsibility**
- (Optional) Hose bib with vacuum breaker
 - (Optional) Tee (required if installing optional hose bib)
 - (Recommended) Union
 - (Required) Check Valve (Ford, Mueller, or AY McDonald only).
 - (Required) Shut Off Valve/Ball Valve (Ford, Mueller or AY McDonald only).
 - (Required) Meter coupling or coupling with ball valve (Ford, Mueller or AY McDonald only). Note: 5/8" & 3/4" meters require a 1" FIP swivel-nut & 3/4" gasket on meter side - 1" meters require 1 1/4" FIP swivel-nut & 1" gasket on meter side.

- PSWID Responsibility**
- Water meter
 - Utility side shut off valve, Angel stop

Note: All fittings must be brass or copper. No galvanized, PVC or soft materials. Follow all federal, state and local plumbing codes.

New Customers:
It is the customers responsibility to insure his or her water meter connection complies with the "customer responsibility" segment of the above shown diagram. Each water meter is subject to inspection by Pine-Strawberry Water District personnel **prior to provision of service**. Water service cannot be provided until customer connections are inspected and approved.

DO NOT CONCRETE, PAVE OR BUILD ANY STRUCTURES WITHIN A 12" AREA ON ANY SIDE OF THE METER BOX. PSWID WILL NOT REPLACE IF ANY OF THE ABOVE HAS TO BE REMOVED AND IS NOT RESPONSIBLE FOR DAMAGES.

Existing Customers:
Completion of the above requirements can be verified in the following ways:
1.) Supply the PSWID office a copy of the receipt after completion, noting the work done and date.
(or)
2.) Request an inspection by contacting our administrative office at 928-476-4222

DETAIL PSWID-403_ADDENDUM "A"

C DETAIL - CUSTOMER SIDE CONNECTION METER
~ NOT TO SCALE

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REV. NO.	COMMENT	DATE

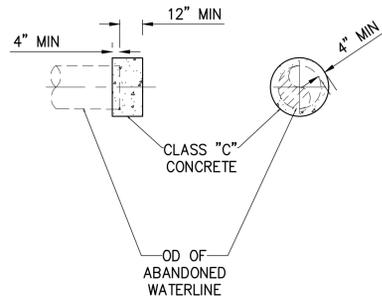
SUNRISE ENGINEERING
43301 Ricky M. Holston
2045 SOUTH VINEYARD, SUITE 101
MESA, ARIZONA 85210
TEL 480.768.8600
www.sunrise-eng.com

PINE-STRAWBERRY WATER IMPROVEMENT DISTRICT
SV3 IMPROVEMENTS

DETAILS

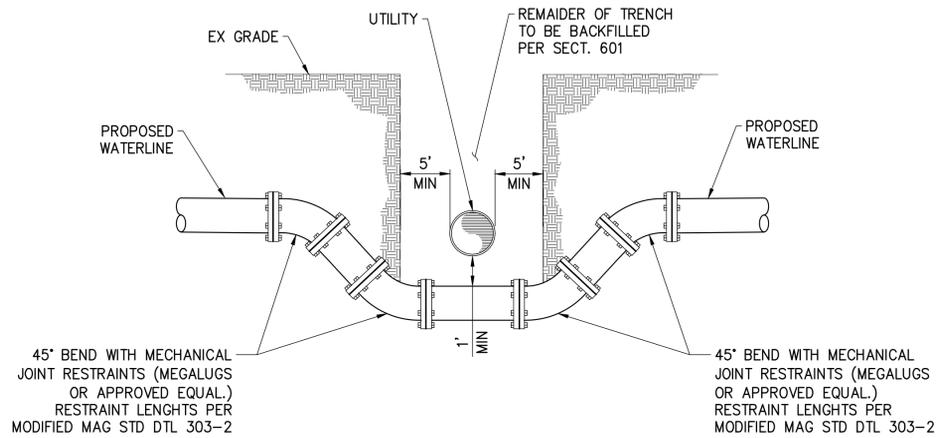
REV. NO.	DESIGNED	DRAWN	CHECKED	DT1	7 of 12
16599	DPL	RD/JIB	DPL		

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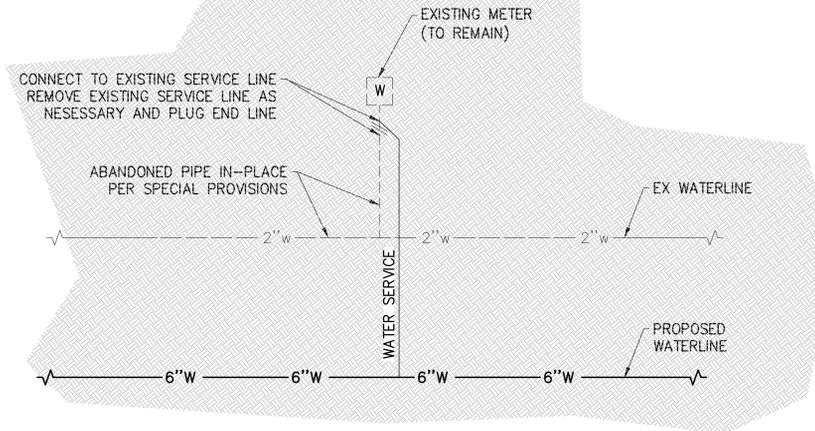


NOTES:
 1. FOR EXISTING DIP PIPE, BLIND FLANGES MAY BE USED IN LIEU OF CLASS "C" CONCRETE PLUG.

G **DETAIL - CUT AND CAP**
 NOT TO SCALE

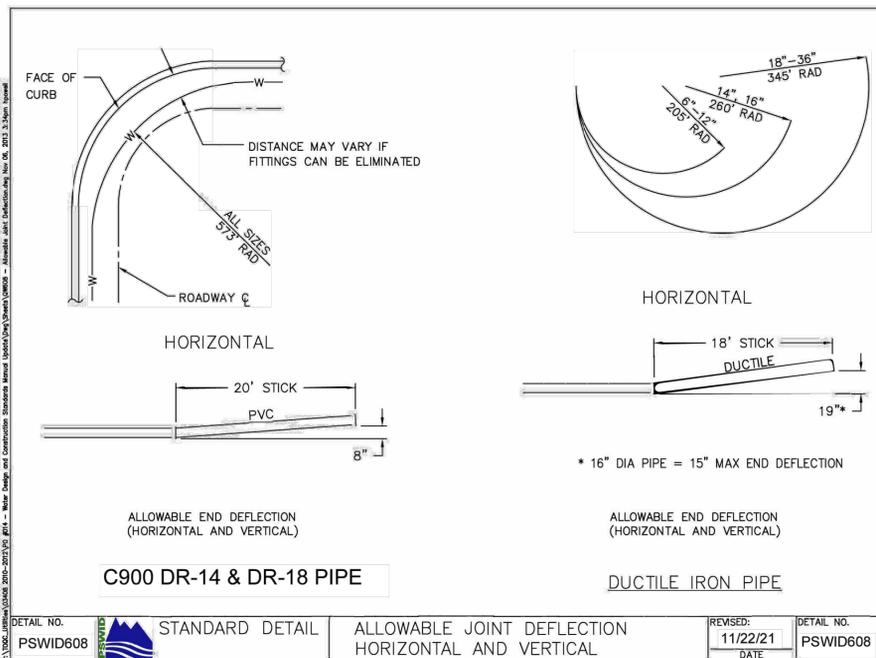


H **DETAIL - WATER LINE DIP**
 NOT TO SCALE

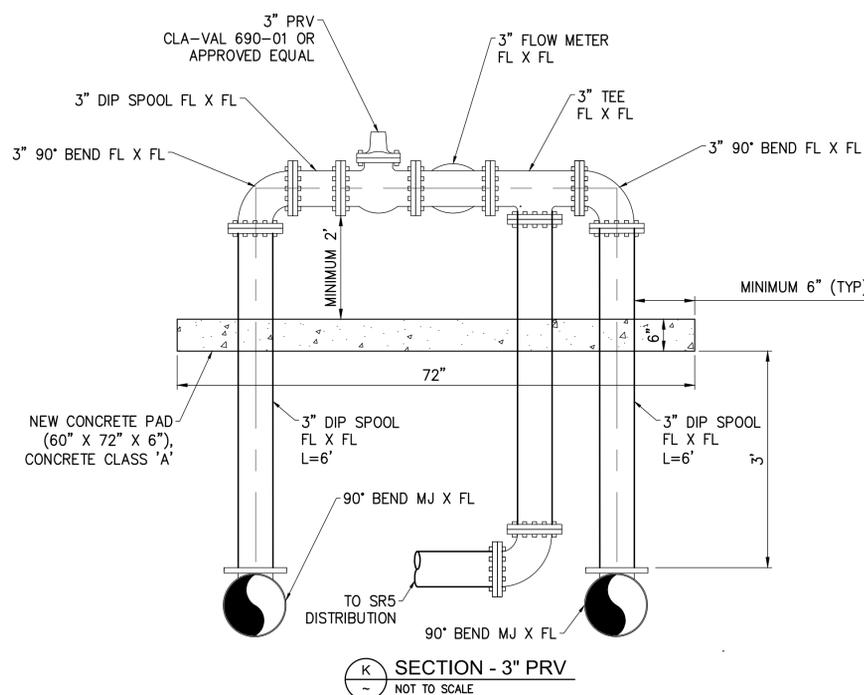


NOTES:
 1. LOCATION OF EXISTING WATER LINE IS UNKNOWN. LOCATION SHOWN ON THIS DETAIL IS AN APPROXIMATION. TRUE LOCATION OF EXISTING WATER LINE MEANDER AND CROSS OVER THE NEW 6" WATER LINE. MAINTAIN A 2' HORIZONTAL SEPARATION

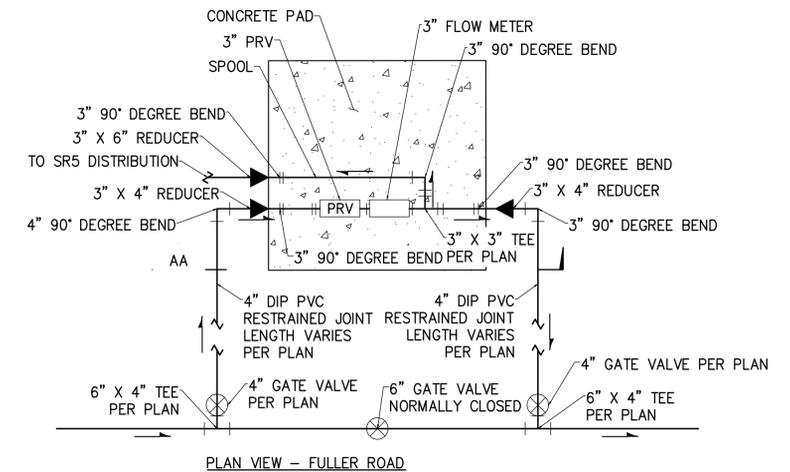
I **DETAIL - METER CONNECTION SCHEMATIC**
 NOT TO SCALE



J **DETAIL - HORIZONTAL AND VERTICAL DEFLECTION**
 NOT TO SCALE



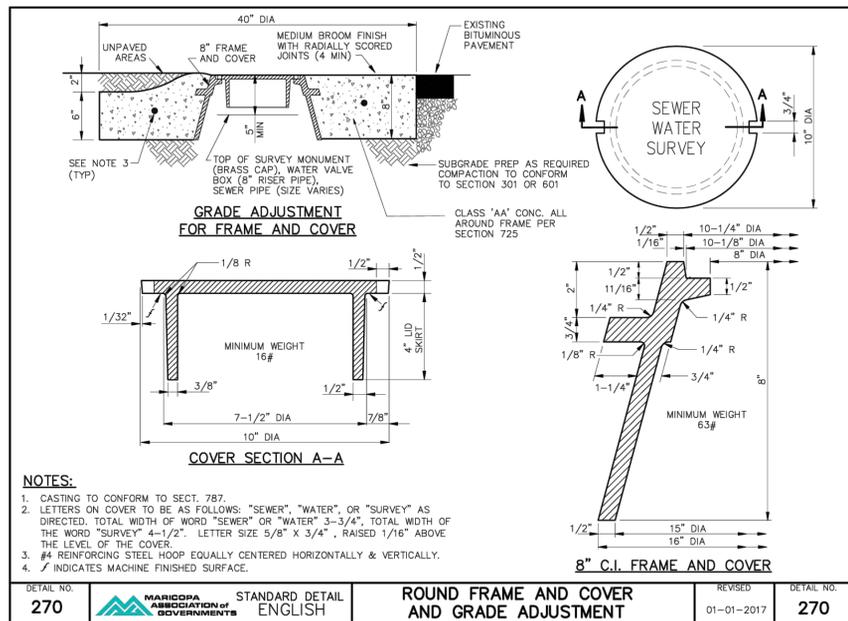
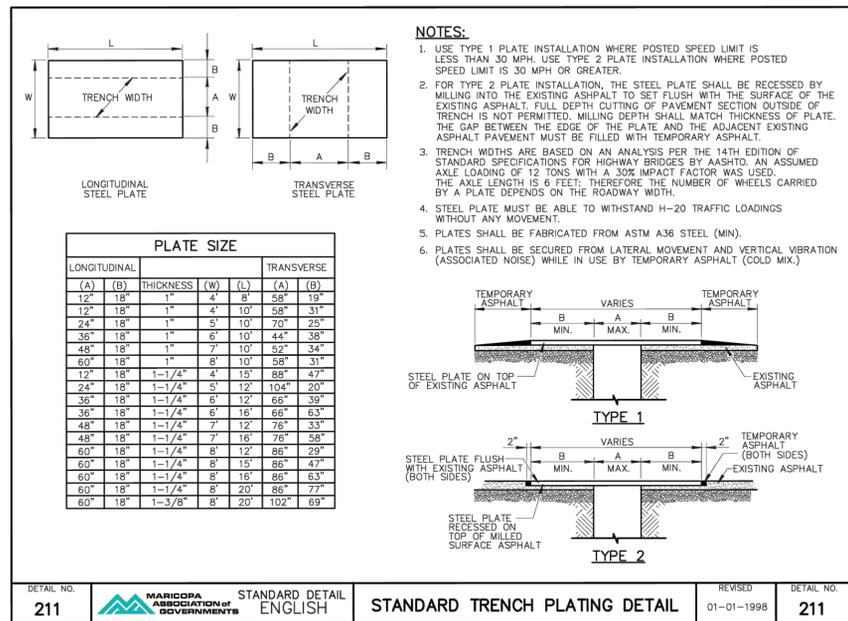
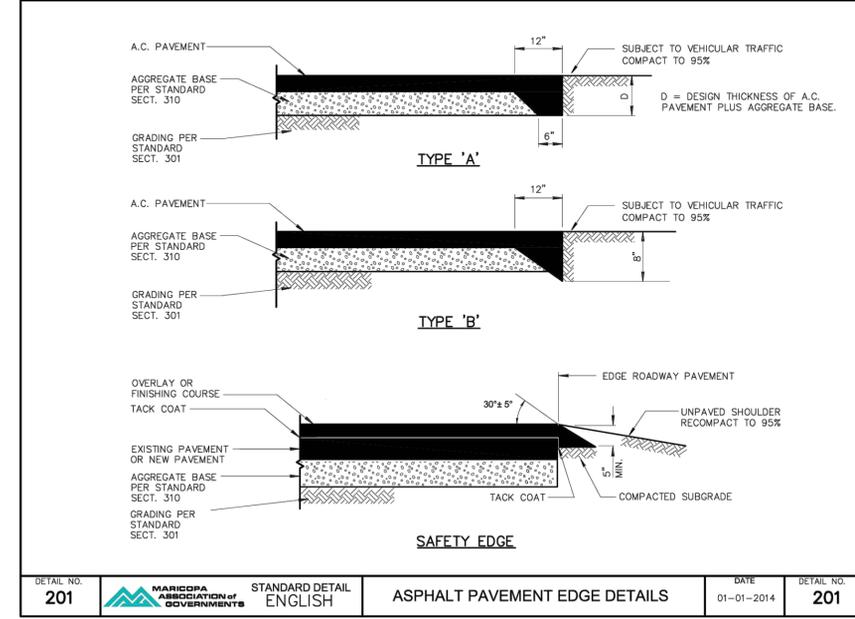
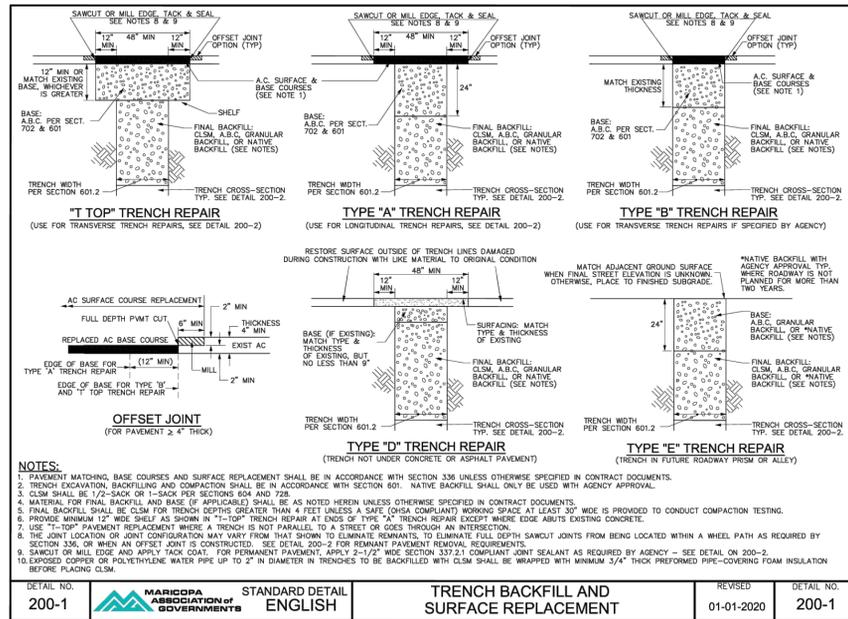
K **SECTION - 3" PRV**
 NOT TO SCALE



L **DETAIL - PRESSURE REDUCING STATION**
 NOT TO SCALE

DETAIL NO. PSWID608	STANDARD DETAIL	ALLOWABLE JOINT DEFLECTION HORIZONTAL AND VERTICAL	REVISIONS: 11/22/21 DATE	DETAIL NO. PSWID608
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REV. NO.	COMMENT	DATE
<p>SUNRISE ENGINEERING 2045 SOUTH VINEYARD, SUITE 101 MESA, ARIZONA 85210 TEL 480.768.8600 www.sunrise-eng.com</p>		
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DETAILS		
SET NO. 16599	DESIGNED DPL	DRAWN RD/JIB
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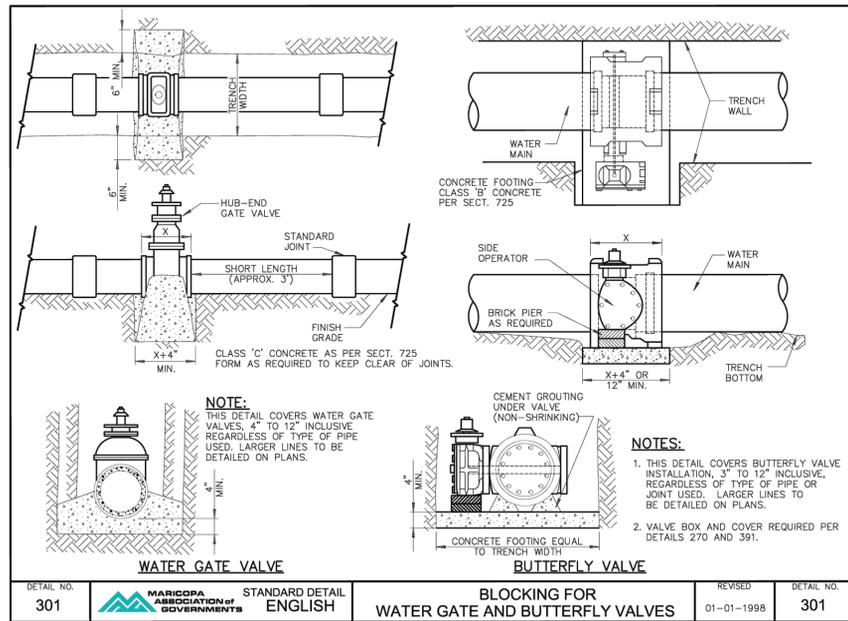
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SV3 IMPROVEMENTS

DETAILS

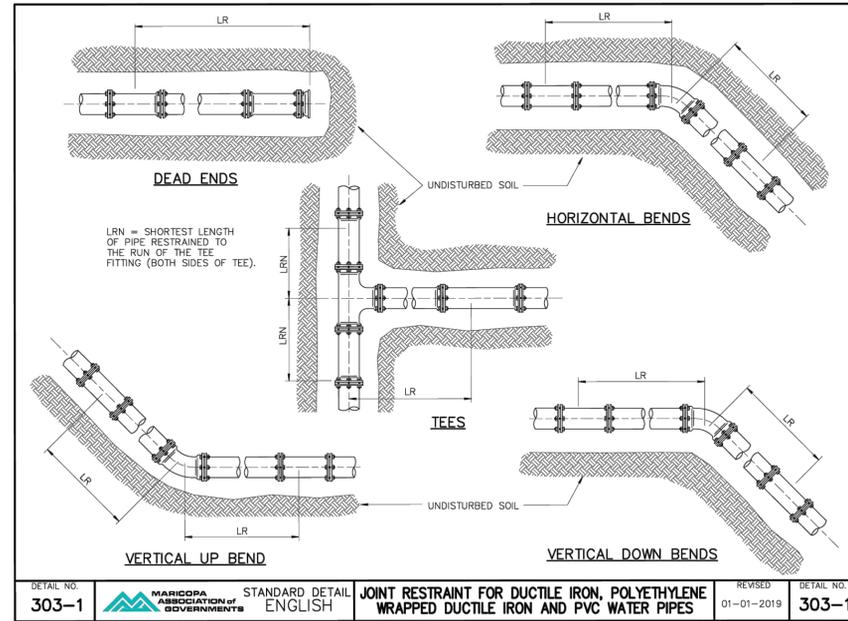
REV. NO. COMMENT DATE

43301
Ricky M. Holston
Arizona, U.S.A.

SEI NO. 16599 DESIGNED DPL DRAWN RD/JIB CHECKED DPL DT4 10 of 12



DETAIL NO. 301 **MARICOPA ASSOCIATION OF GOVERNMENTS** STANDARD DETAIL ENGLISH **BLOCKING FOR WATER GATE AND BUTTERFLY VALVES** REVISED 01-01-1998 DETAIL NO. 301



DETAIL NO. 303-1 **MARICOPA ASSOCIATION OF GOVERNMENTS** STANDARD DETAIL ENGLISH **JOINT RESTRAINT FOR DUCTILE IRON, POLYETHYLENE WRAPPED DUCTILE IRON AND PVC WATER PIPES** REVISED 01-01-2019 DETAIL NO. 303-1

RESTRAINED LENGTHS, LR, FOR DUCTILE IRON PIPE

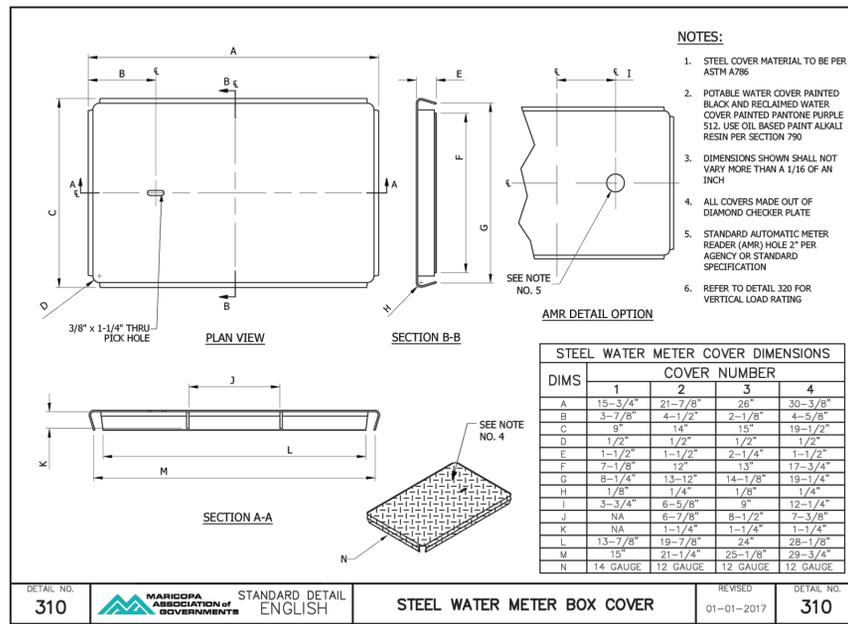
NOMINAL PIPE SIZE INCHES	HORIZONTAL BENDS					TEES		VERTICAL OFFSETS				DEAD ENDS
	90°	45°	22-1/2°	LRN=10'		90° BEND FITTINGS	45° BEND FITTINGS		22-1/2° BEND FITTINGS			
				DOWN BEND	UP BEND		DOWN BEND	UP BEND	DOWN BEND	UP BEND		
4	18	7	4	30	8	31	13	7	6	3	31	
6	25	10	5	43	20	44	25	18	10	9	44	
8	32	13	6	56	34	58	32	24	13	11	58	
10	38	16	8	68	45	69	38	29	16	14	69	
12	45	19	9	80	57	81	45	34	19	16	81	
14	51	21	10	91	68	92	51	38	21	18	92	
16	57	24	11	103	79	104	57	43	24	21	104	
18	62	26	12	113	90	115	62	48	26	23	115	
20	68	28	14	125	100	126	68	52	28	25	126	
24	79	33	16	145	121	147	79	61	33	29	147	

RESTRAINED LENGTHS, LR, FOR DUCTILE IRON WITH POLYETHYLENE WRAP AND PVC PIPE

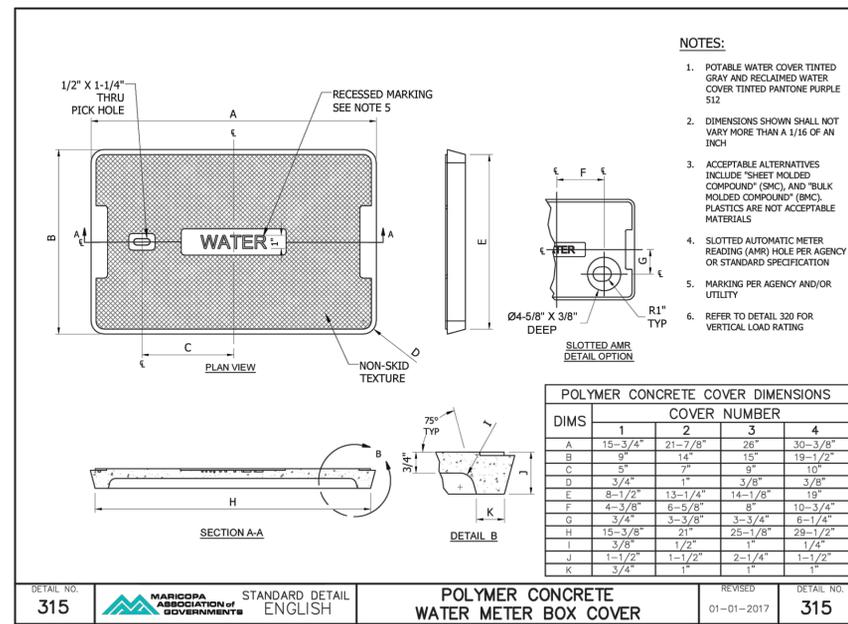
NOMINAL PIPE SIZE INCHES	HORIZONTAL BENDS					TEES		VERTICAL OFFSETS				DEAD ENDS
	90°	45°	22-1/2°	LRN=10'		90° BEND FITTINGS	45° BEND FITTINGS		22-1/2° BEND FITTINGS			
				DOWN BEND	UP BEND		DOWN BEND	UP BEND	DOWN BEND	UP BEND		
4	26	11	5	69	18	72	26	30	11	14	72	
6	36	15	7	99	47	102	36	42	15	20	102	
8	47	19	9	130	78	133	47	55	19	26	133	
10	56	23	11	157	103	159	56	66	23	32	159	
12	65	27	13	185	131	187	65	77	27	37	187	
14	74	31	15	211	156	214	74	89	31	42	214	
16	82	34	16	239	183	241	82	100	34	48	241	
18	90	37	18	263	207	266	90	110	38	53	266	
20	98	41	20	289	233	292	98	121	41	58	292	
24	113	47	22	337	280	340	113	141	47	68	340	

NOTES:
 1. ALL JOINTS WITHIN THE SPECIFIED LENGTH LR MUST BE RESTRAINED. ALL LENGTHS ARE GIVEN IN FEET.
 2. THE MAXIMUM TEST PRESSURE SHALL NOT EXCEED 200 PSI.
 3. THE MINIMUM DEPTH OF BURY SHALL BE 3' TO TOP OF PIPE.
 4. RESTRAINED LENGTHS MAY BE REDUCED WHEN SUPPORTED BY ENGINEERING CALCULATIONS.

DETAIL NO. 303-2 **MARICOPA ASSOCIATION OF GOVERNMENTS** STANDARD DETAIL ENGLISH **JOINT RESTRAINT FOR DUCTILE IRON, POLYETHYLENE WRAPPED DUCTILE IRON AND PVC WATER PIPES** REVISED 01-01-2019 DETAIL NO. 303-2



DETAIL NO. 310 **MARICOPA ASSOCIATION OF GOVERNMENTS** STANDARD DETAIL ENGLISH **STEEL WATER METER BOX COVER** REVISED 01-01-2017 DETAIL NO. 310



DETAIL NO. 315 **MARICOPA ASSOCIATION OF GOVERNMENTS** STANDARD DETAIL ENGLISH **POLYMER CONCRETE WATER METER BOX COVER** REVISED 01-01-2017 DETAIL NO. 315

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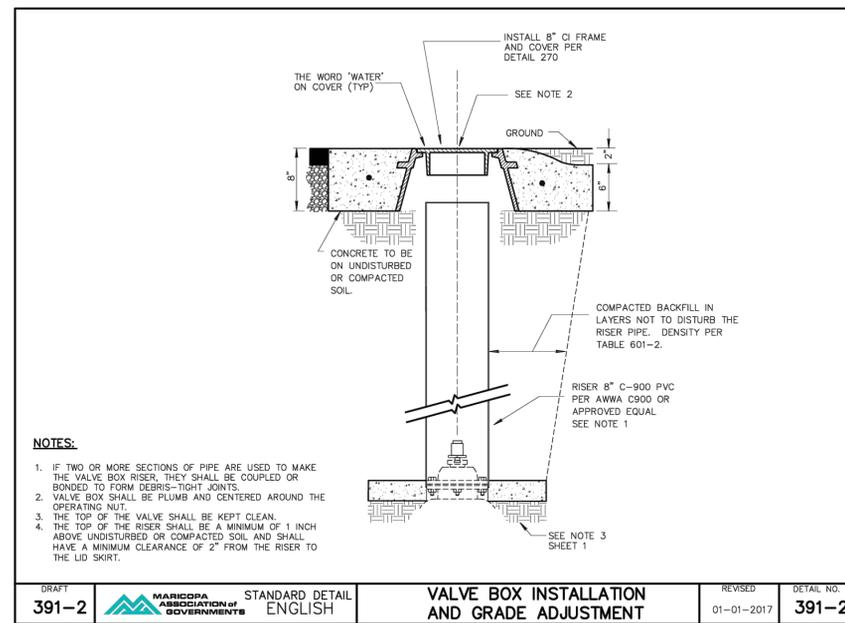
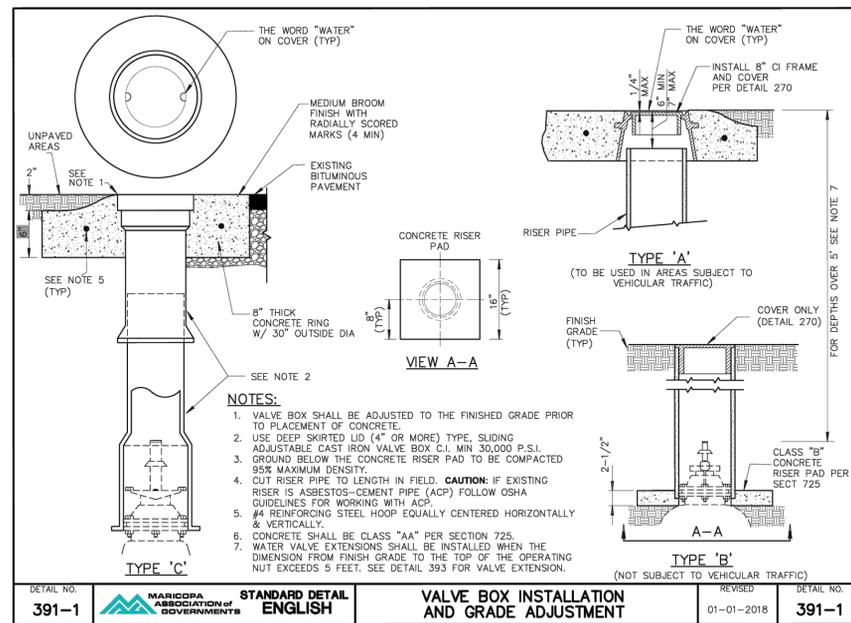
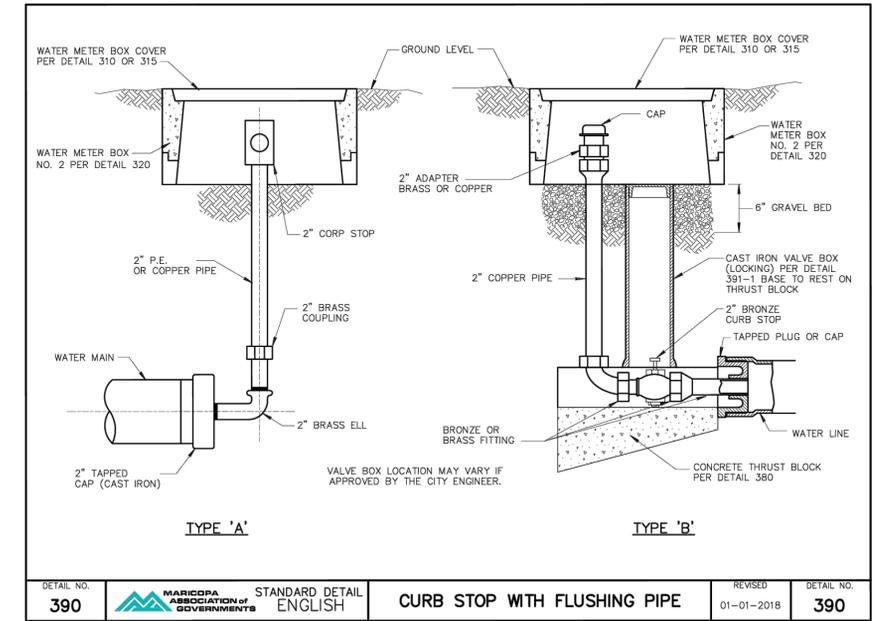
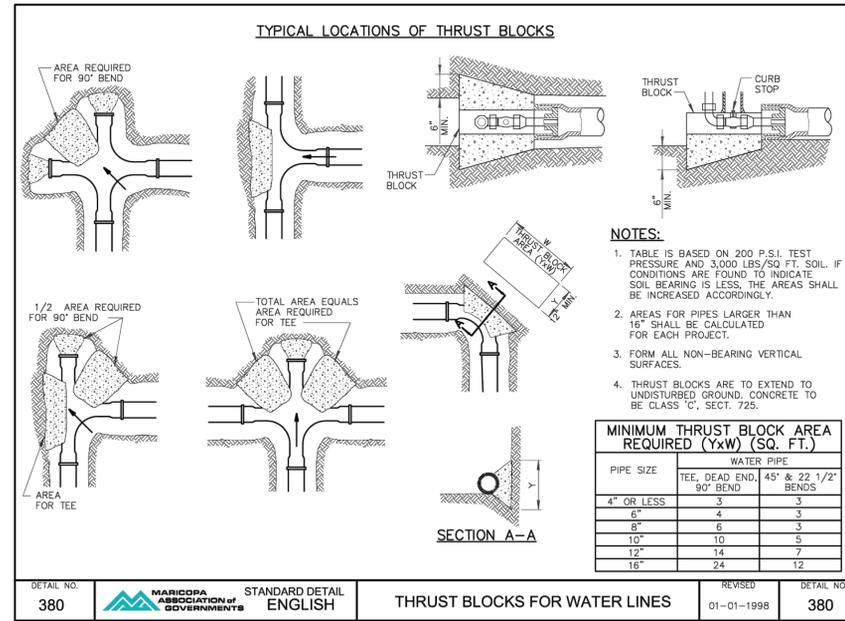
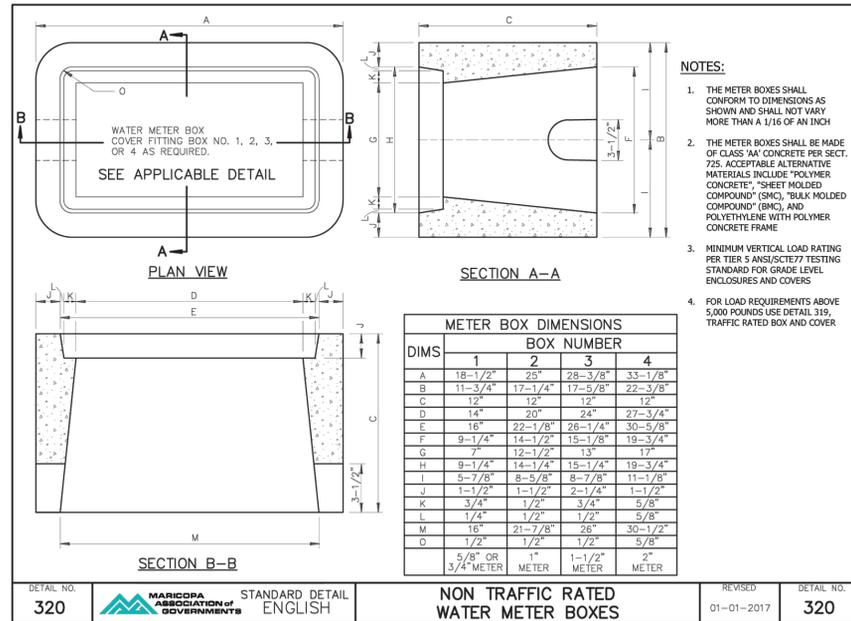
PINE-STRAWBERRY WATER IMPROVEMENT DISTRICT
 SV3 IMPROVEMENTS

DETAILS

SET NO. 16599 DESIGNED DPL DRAWN RD/JIB CHECKED DPL DT5 11 of 12

FINAL SUBMITTAL

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PINE-STRAWBERRY WATER IMPROVEMENT DISTRICT
 SV3 IMPROVEMENTS
 DETAILS

REV. NO.	COMMENT	DATE

43301 Ricky M. Holston
 P.E. (AZ) 10000
 ARIZONA, U.S.A.

SET NO.	DESIGNED	DRAWN	CHECKED	DT6	12 of 12
16599	DPL	RD/JIB	DPL		