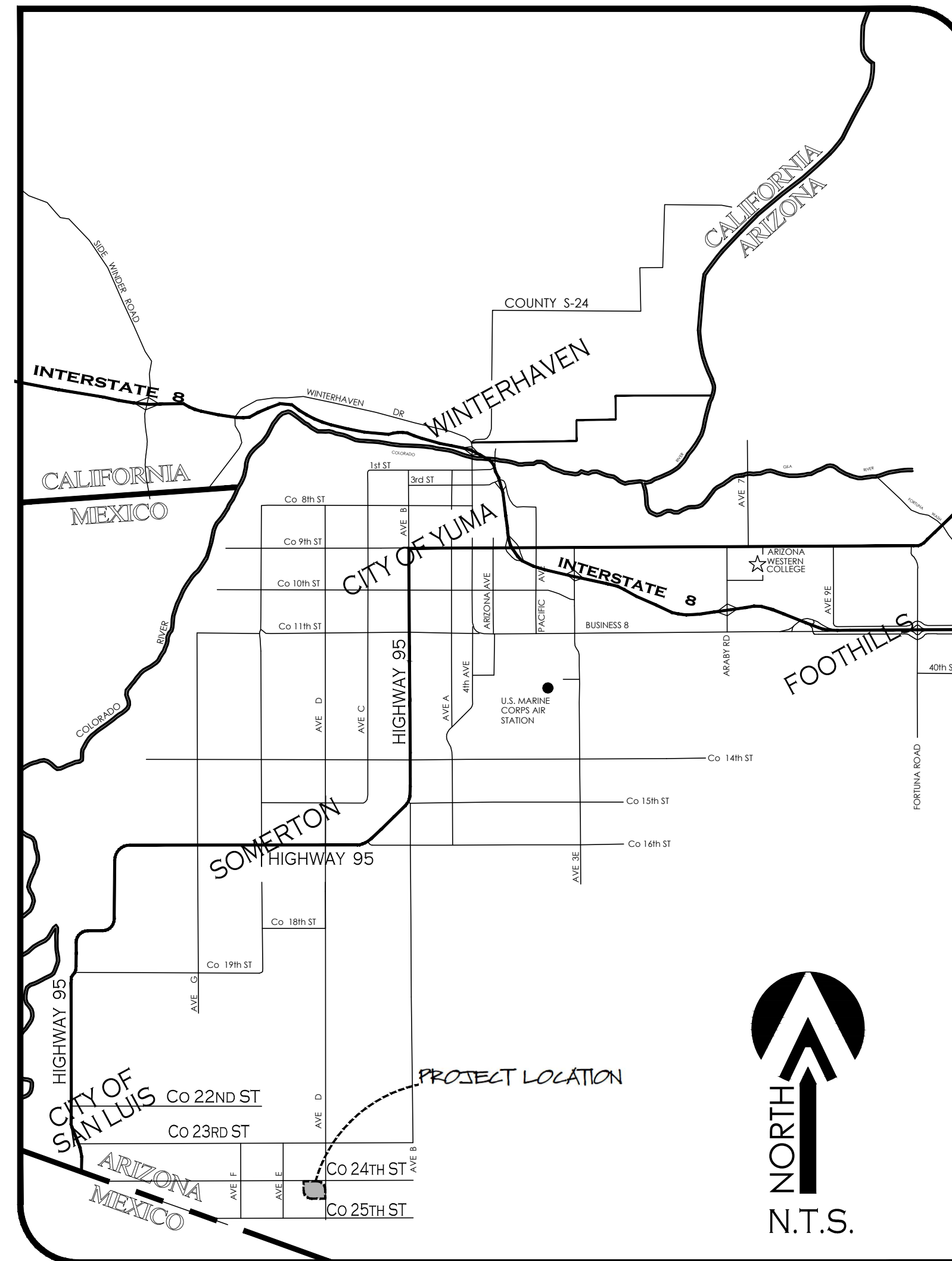


# ORCHIDEA PARK TOWNHOMES PHASE 1

## SUBDIVISION

### LEGEND

	INDICATES EX. ASPHALT PAVEMENT
	INDICATES EX. CONCRETE
	INDICATES BOUNDARY LINE
	INDICATES CENTERLINE
	INDICATES RIGHT-OF-WAY LINE
	INDICATES EX. CMU WALL
	INDICATES EX. WATER LINE
	INDICATES EX. SEWER LINE
	INDICATES NEW ASPHALT PAVEMENT
	INDICATES NEW CONCRETE
	INDICATES NEW CMU WALL
	INDICATES EX. CONTOURS ELEVATION
	INDICATES NEW SANITARY SEWER LINE
	NEW SEWER STUB
	NEW SEWER MANHOLE
	NEW 4" PVC SEWER SERVICE
	INDICATES NEW WATER LINE
	NEW SINGLE WATER SERVICE
	FIRE LINE W/ END PLUG AND THRUST BLOCK
	NEW WATER VALVE
	NEW FIRE HYDRANT
	NEW TEMPORARY BLOWOFF VALVE
	INDICATES LOT NUMBERS
	NEW YUMA COUNTY STD. DETAIL
	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



VICINITY MAP

N.T.S.

### GENERAL CONSTRUCTION NOTES:

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

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### OWNER:

VON VERDE PARTNERS LLC  
10602 S CAMINO DEL SOL  
YUMA, AZ. 85367

### BASIS OF BEARING

THE NORTH SECTION LINE OF THE NE 1/4 OF SECTION 14, T11S, R24W, G4S, R8&A, YUMA COUNTY, ARIZONA, BEING THE CENTERLINE OF COUNTY 24TH, AS SHOWN ON LOS MEZQUITES TOWNHOMES AS RECORDED IN BOOK 35 OF PLATS, PAGE 54, YUMA COUNTY RECORDERS OFFICE, YUMA COUNTY, ARIZONA.  
BEARING S 89°32'26" E

### BENCHMARK:

FOUND BRASS CAP IN HAND HOLE  
LOCATED AT THE W/4 COR. SEC. 14 T11S, R24W,  
ALSO BEING THE INTERSECTION OF  
AVE 'E' AND CO. 24-1/2 STREET

ELEVATION: 159.81 FEET

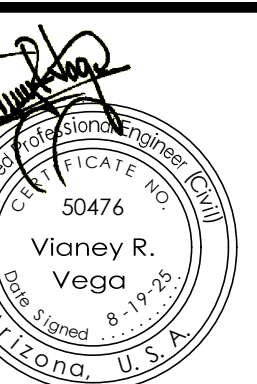
### ENGINEER:

VV23-600  
  
2619 S. AVE. 2 1/4 E, STE#3 928-329-0000 Tel  
Yuma, Az. 85364 928-247-6232 Fax  
www.vega-vega.com

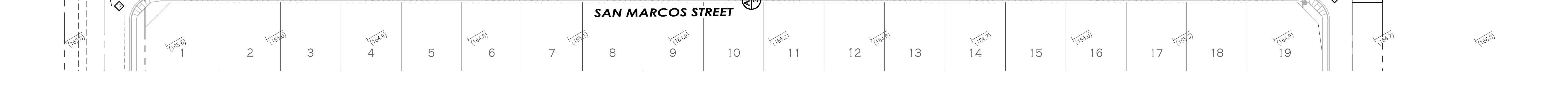
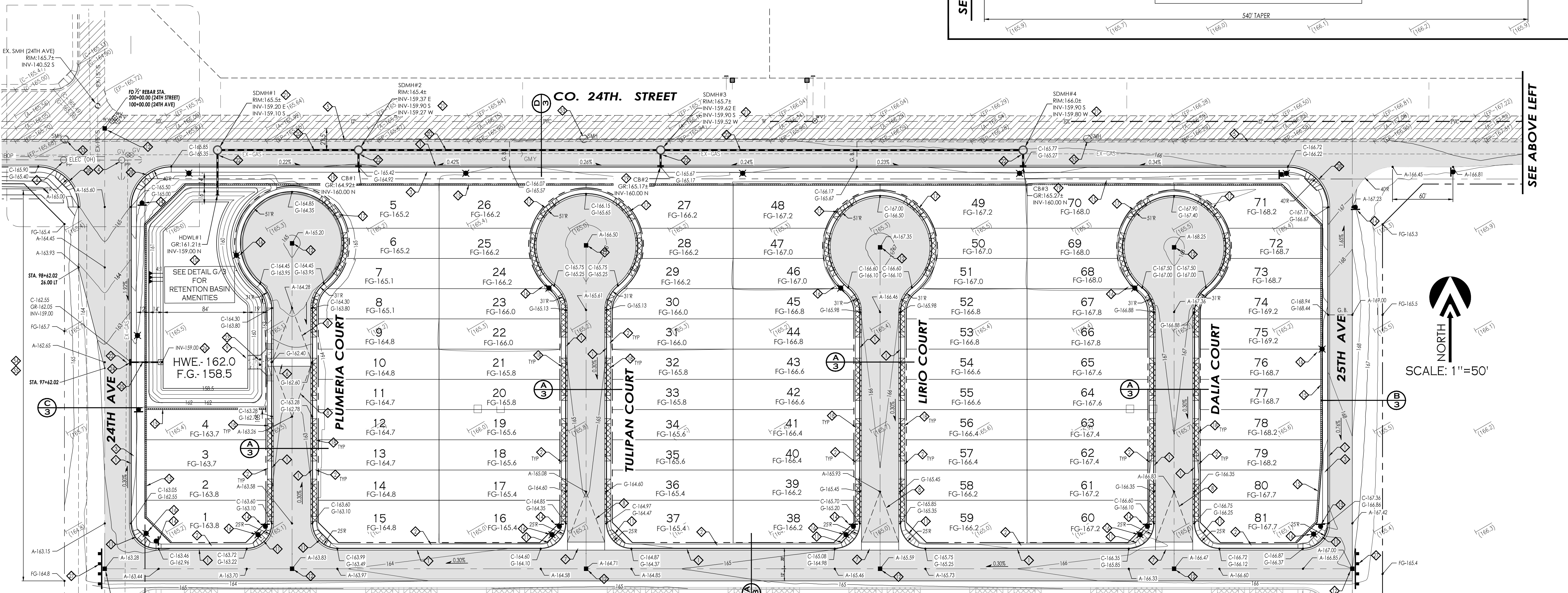
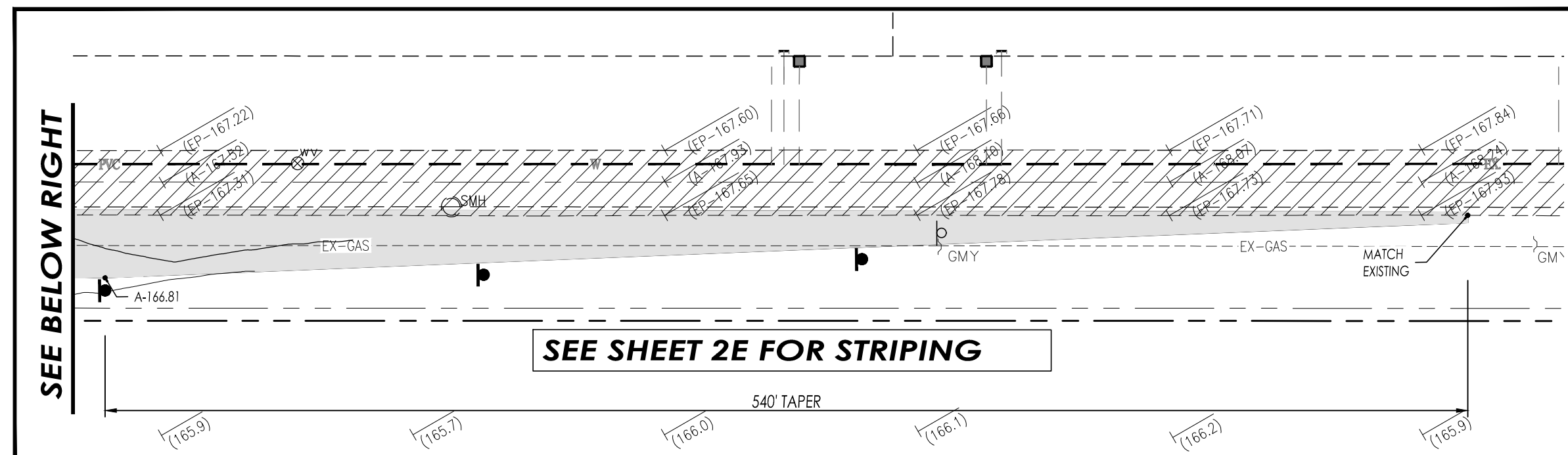
### UTILITIES WARNING

UTILITIES IN THE AREA OF CONSTRUCTION ARE APPROXIMATE ONLY. THEY HAVE BEEN LOCATED FROM FIELD INVESTIGATION AND THE BEST AVAILABLE UTILITY RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION, PROTECTION AND REPAIR OF ALL UTILITIES ENCOUNTERED DURING CONSTRUCTION WHETHER SHOWN ON THESE PLANS OR NOT. THE CONTRACTOR SHALL CONTACT ALL RESPECTIVE UTILITIES AND HAVE ALL UTILITIES FIELD-LOCATED PRIOR TO CONSTRUCTION. IF ANY UNKNOWN SUBSURFACE STRUCTURES ARE ENCOUNTERED DURING CONSTRUCTION, IT SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF ENGINEER OF RECORD PRIOR TO PROCEEDING.

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



SEE SHEET 2A-IMPROVEMENTS  
SEE SHEET 2E & 2F-STRIPING



**LEGEND**

- |  |   |  |                                      |
|--|---|--|--------------------------------------|
|  | INDICATES EX. ASPHALT PAVEMENT                                |  | INDICATES EXISTING STREET SIGN       |
|  | INDICATES EX. CONCRETE  |  | INDICATES EXISTING MANHOLE           |
|  | INDICATES BOUNDARY LINE                                       |  | INDICATES EXISTING FIRE HYDRANT      |
|  | INDICATES CENTERLINE  |  | INDICATES EXISTING WATER METER       |
|  | INDICATES RIGHT-OF-WAY LINE                                   |  | INDICATES EXISTING WATER VALVE       |
|  | INDICATES EX. FENCE   |  | INDICATES NEW STREET LIGHT           |
|  | INDICATES EX. ELECTRICAL OVERHEAD LINE                        |  | INDICATES EX. CURB ELEVATION         |
|  | INDICATES EX. WATER LINE                                      |  | INDICATES EX. SIDEWALK ELEVATION     |
|  | INDICATES EX. SEWER LINE                                      |  | INDICATES EX. ASPHALT ELEVATION      |
|  | INDICATES EX. GAS LINE  |  | INDICATES EX. NATURAL SOIL ELEVATION |
|  | NEW YUMA COUNTY STD. DETAIL No. 4-030 SUB'D BOUNDARY MONUMENT |  | INDICATES NEW ASPHALT ELEVATION      |
|  | NEW YUMA COUNTY STD. DETAIL No. 4-080 STREET MONUMENT         |  | INDICATES NEW ASPHALT PAVEMENT       |
|  | EXISTING MONUMENT (TYPE AS SHOWN)                             |  | INDICATES NEW CONCRETE               |
|  | INDICATES BRASS CAP   |  | INDICATES NEW CMU WALL               |
|  | INDICATES YUMA COUNTY RECORDERS                               |  | INDICATES EXISTING CMU WALL          |

**KEYNOTES:**

- NEW VERTICAL CURB & GUTTER - AS PER C.O.Y. STD. 3-060
- NEW 4' CONCRETE SIDEWALK - AS PER C.O.Y. STD. 3-135
- NEW 5' CONCRETE SIDEWALK - AS PER C.O.Y. STD. 3-135
- EXISTING POWER POLE TO BE RELOCATED BY APS
- SAWCUT 1' OF EXISTING PAVEMENT, REMOVE AND REPLACE WITH NEW PAVEMENT - SEE DETAIL
- NEW 8' VALLEY GUTTER - AS PER C.O.Y. STD. 3-090
- NEW 8' VALLEY GUTTER LAYOUT - AS PER C.O.Y. STD. 3-085
- NEW 50' CROWN TRANSITION
- NEW 8' CONCRETE SPILLWAY - SEE DETAIL
- NEW STORMDRAIN OUTLET STRUCTURE - SEE DETAIL
- NEW CONCRETE SIDEWALK RAMP (25' RADIUS MEASURED TO FACE OF CURB) - AS PER C.O.Y. STD. 3-145
- NEW STREET MONUMENT - AS PER C.O.Y. STD. 4-030
- NEW DOUBLE FACED STREET SIGN-STOP SIGN - AS PER C.O.Y. STD. 8-020
- NEW DOUBLE FACED STREET SIGN-STOP SIGN - AS PER C.O.Y. STD. 8-020
- NEW 6' HIGH CMU WALL (6FT HEIGHT REQUIREMENT IS ON THE SIDE OF THE HIGHEST ELEVATION [AS PER C.O.Y. STD. 1-015 [CMU WALL LOCATED WITHIN THE FRONT OR SIDE SETBACK OF LOTS MUST BE 3' HIGH MAXIMUM].
- NEW STREET LIGHT - TYPE A (4700 LUMENS) AS PER C.O.Y. STD. 7-010 AND C.O.Y. STD. 7-015 (IN RETENTION BASIN PROVIDE DUAL MAST ARM.)
- NEW 16' WIDE DRIVEWAY - AS PER C.O.Y. STD. 3-105
- NEW 32' WIDE DRIVEWAY - AS PER C.O.Y. STD. 3-105
- NEW TYPE 'E' DOUBLE CATCH BASIN - AS PER C.O.Y. STD. 11-025
- NEW 18" STORMDRAIN - AS PER C.O.Y. STD. 5-010
- NEW 5' DIA STORMDRAIN MANHOLE
- ADJUST EXISTING GAS LINE AS NECESSARY FOR NEW STORMDRAIN
- INSTALL 2 GUARD POSTS, 5FT APART CENTERED ON SPILLWAY
- NEW TYPE 'B' DOUBLE CATCH BASIN - AS PER C.O.Y. STD. 11-010
- NEW 31 LF - 8" PVR SDC-35 DRAINAGE PIPE
- NEW END OF PIPE CONCRETE COLLAR - SEE DETAIL
- NEW TYPE III BARRICADE - AS PER C.O.Y. STD. 1-045
- NEW CONCRETE SIDEWALK RAMP (40' RADIUS MEASURED TO FACE OF CURB) - AS PER C.O.Y. STD. 3-145
- PROTECT EXISTING MANHOLE COLLAR DURING ROADWAY CONSTRUCTION
- REMOVE EXISTING CONCRETE LINED IRRIGATION DITCH
- ADJUST EXISTING GAS LINE AS NECESSARY - BY OTHERS

**DRAINAGE REPORT**

1. DRAINAGE REPORT  
DRAINAGE AREA # 1  
USING THE RATIONAL METHOD  
Q= CIA = PEAK RUNOFF (VOL.)  
(C) PEAK RATE RUNOFF = 0.43  
(I) INTENSITY OF RAINFALL = 1.22 IN / HR  
(A) DRAINAGE AREA = 541,395.41 SF. = 12.43 SF  
Q= (0.43)(1.22)(12.43) = 6.5208 CF  
TOTAL RUNOFF = 7,200 (6.5208) = 46,949.76 CF

STORAGE VOLUME PROVIDED AREA # 1  
RETENTION BASIN  
TOP AREA = 20,734 SF  
BOTTOM AREA = 12,680 SF  
DEPTH = 3.5 FT  
VOL. PROVIDED = (20,734 + 12,680) (3.5) = 58,475 CF  
TOTAL VOL. PROVIDED = 58,475 CF  
FACTOR OF SAFETY =  $\frac{58,475 \text{ CF}}{46,949 \text{ CF}} = 1.25 > 1.25$  THEREFORE OK.

**OPEN SPACE CALCULATIONS**

PROJECT AREA : 459,993.60 SF. = 10.56 AC  
5% OPEN SPACE REQUIRED = 459,993.60 SF. X 5% = 22,999.68 SF.  
OPEN SPACE PROVIDED : AREA RETENTION BASIN = 20,734.00 SF.  
24TH AVENUE LANDSCAPING AREA = 2,921.82 SF.  
CO. 24TH STREET LANDSCAPING AREA = 11,328.14 SF.  
39,028.84 SF.  
TOTAL AREA OPEN SPACE PROVIDED : = 34,983.96 SF.  
34,983.96 SF. > 22,999.68 SF THEREFORE OK

**UTILITIES WARNING**

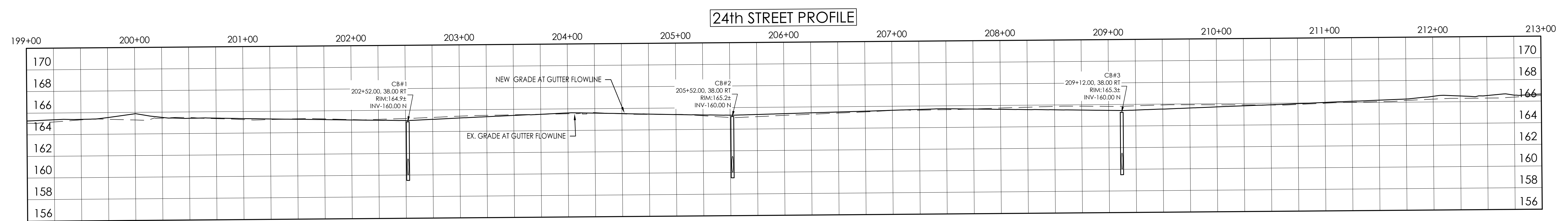
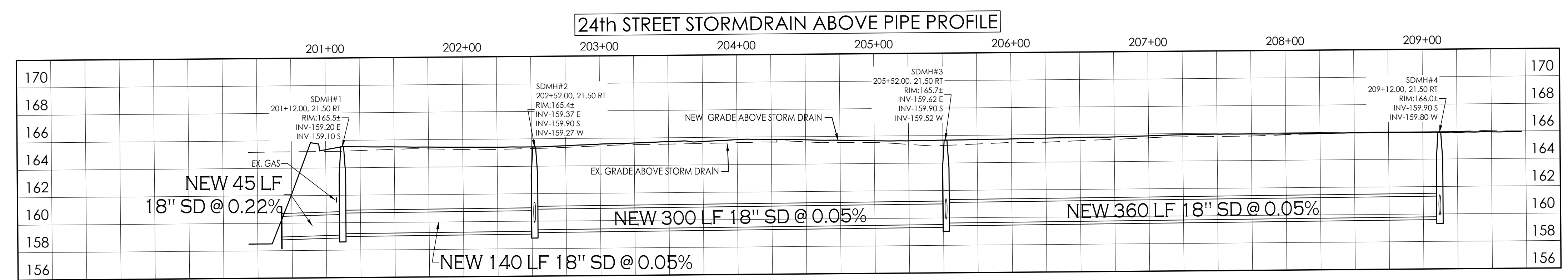
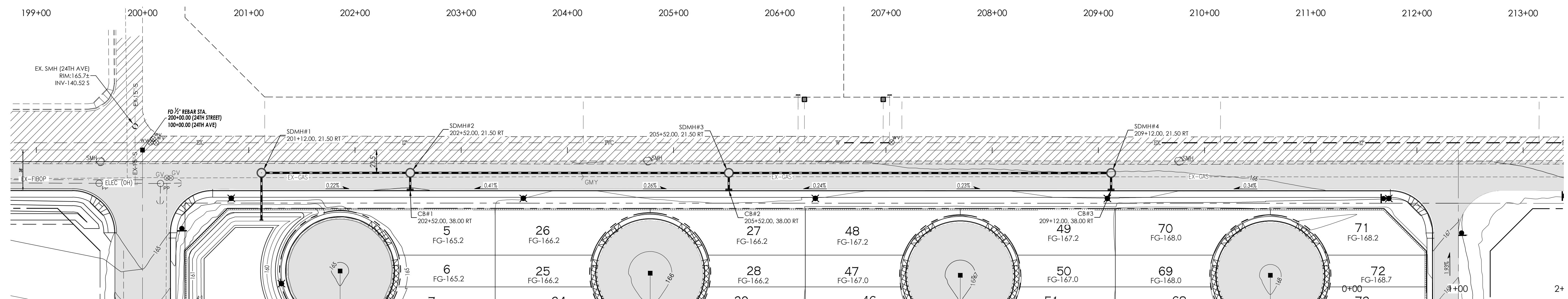
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CALL TWO WORKING DAYS BEFORE YOU DIG  
1-800-STAKE-IT

PAVING & GRADING  
ORCHIDEA PARK TOWNHOMES PHASE I  
SUBDIVISION



Notes:  
Scale: N.T.S. Date: AUG 2025  
Drawn: staff Job #: vvv23-600  
Checked: vna



**STORMDRAIN PLAN & PROFILE**  
**ORCHIDEA PARK TOWNHOMES PHASE I**  
**SUBDIVISION**

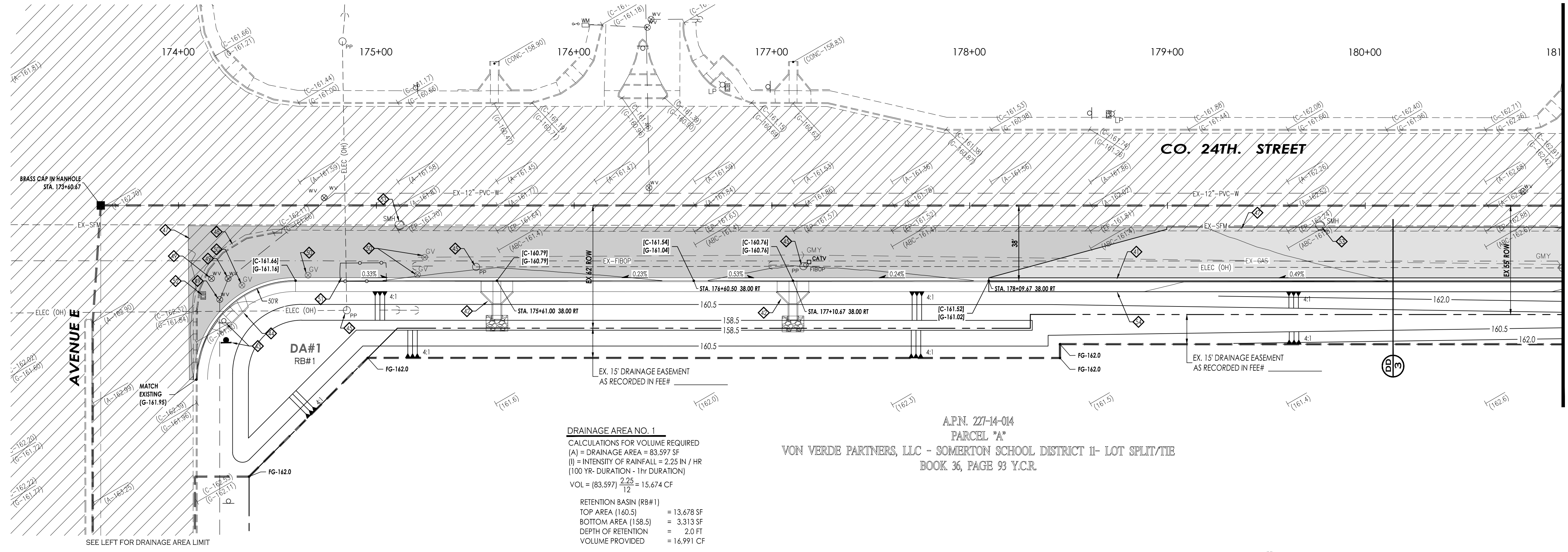
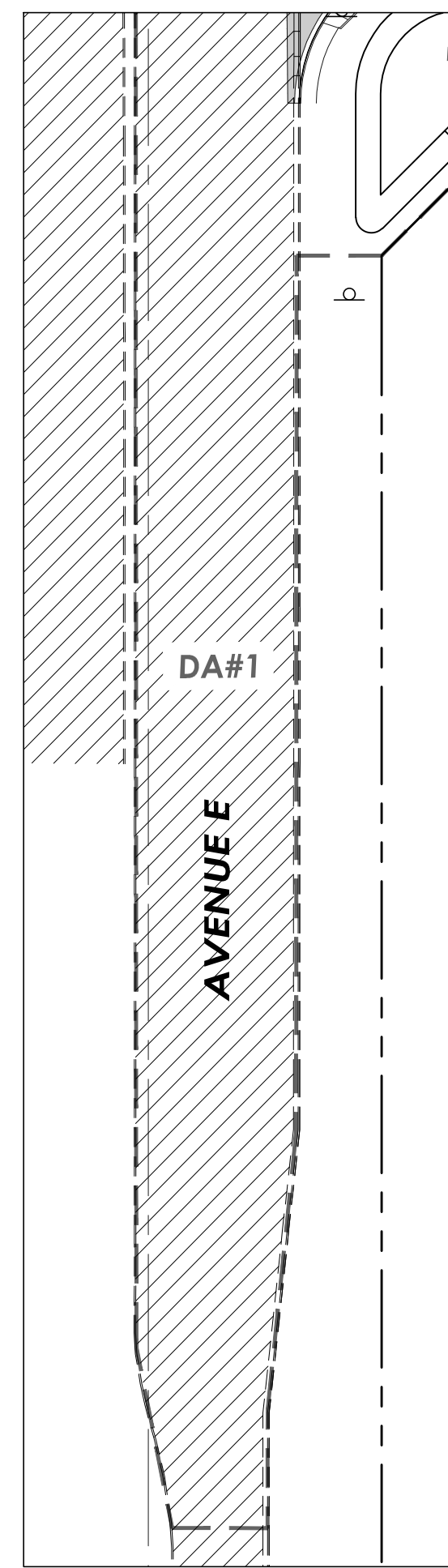


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 Checked: vna

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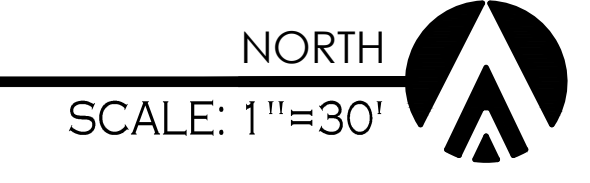




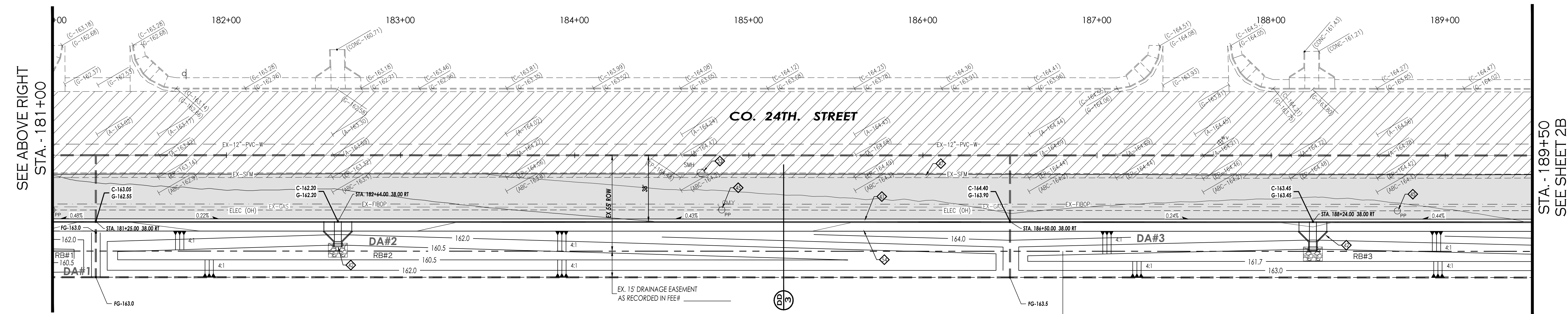
CO. 24TH STREET - WIDENING PLAN

**DRAINAGE AREA NO. 1**  
 CALCULATIONS FOR VOLUME REQUIRED  
 (A) = DRAINAGE AREA = 83.597 SF  
 (I) = INTENSITY OF RAINFALL = 2.25 IN / HR  
 (100 YR. DURATION - 1hr DURATION)  
 $VOL = (83.597) \frac{2.25}{12} = 15.674 CF$   
 RETENTION BASIN (RB#1)  
 TOP AREA (160.5) = 13,678 SF  
 BOTTOM AREA (158.5) = 3,313 SF  
 DEPTH OF RETENTION = 2.0 FT  
 VOLUME PROVIDED = 16,991 CF  
 TOTAL VOL. PROVIDED = 16,991 CF > 15,674 CF. OK

APN. 277-14-014  
 PARCEL "A"  
 VON VERDE PARTNERS, LLC - SOMERTON SCHOOL DISTRICT II- LOT SPLIT/TIE  
 BOOK 36, PAGE 93 Y.C.R.



STA. - 181+00  
 SEE BELOW LEFT

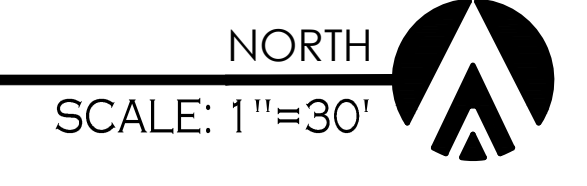


CO. 24TH STREET - WIDENING PLAN

**DRAINAGE AREA NO. 2**  
 CALCULATIONS FOR VOLUME REQUIRED  
 (A) = DRAINAGE AREA = 36.750 SF  
 (I) = INTENSITY OF RAINFALL = 2.25 IN / HR  
 (100 YR. DURATION - 1hr DURATION)  
 $VOL = (36.750) \frac{2.25}{12} = 6.891 CF$   
 RETENTION BASIN (RB#2)  
 TOP AREA (162.0) = 8,127 SF  
 BOTTOM AREA (160.5) = 2,077 SF  
 DEPTH OF RETENTION = 1.5 FT  
 VOLUME PROVIDED = 7,653 CF  
 TOTAL VOL. PROVIDED= 7,653 CF > 6.891 CF. OK

APN. 277-14-014  
 PARCEL "A"  
 VON VERDE PARTNERS, LLC - SOMERTON SCHOOL DISTRICT II- LOT SPLIT/TIE  
 BOOK 36, PAGE 93 Y.C.R.

APN. 277-14-015  
 PARCEL "B"  
 VON VERDE PARTNERS, LLC - SOMERTON SCHOOL DISTRICT II- LOT SPLIT/TIE  
 BOOK 36, PAGE 93 Y.C.R.



STA. - 189+50  
 SEE SHEET 2B

**KEYNOTES:**

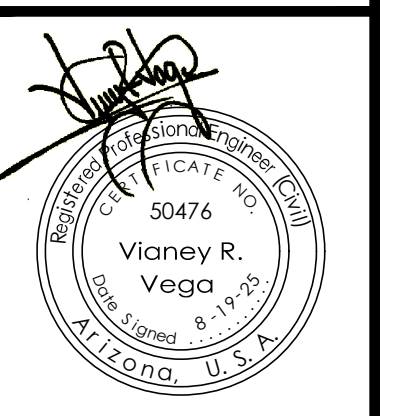
- ◆ NEW VERTICAL CURB & GUTTER - AS PER C.O.Y. STD. 3-060
- ◆ NEW 4" CONCRETE SPILLWAY (USE 5' SIDEWALK, 6" CURB TRANSITION AND OMIT CMU BLOCK)
- ◆ RELOCATE EXISTING SIGN
- ◆ NEW CONCRETE SIDEWALK RAMP (50' RADIUS MEASURED TO FACE OF CURB) - AS PER C.O.Y. STD. 3-145
- ◆ EXISTING POWER POLE TO BE RELOCATED BY APS
- ◆ EXISTING CATV TO BE RELOCATED BY OTHERS
- ◆ SAWCUT 1' OF EXISTING PAVEMENT, REMOVE AND REPLACE WITH NEW PAVEMENT - SEE DETAIL
- ◆ REMOVE EXISTING VERTICAL CURB & GUTTER
- ◆ ADJUST WATER VALVE TO GRADE
- ◆ ADJUST GAS VALVE TO GRADE
- ◆ RELOCATE EXISTING GAS STRUCTURES - BY OTHERS
- ◆ RELOCATE EXISTING PULL BOX - BY OTHERS
- ◆ PROTECT EXISTING MANHOLE COLLAR DURING ROADWAY CONSTRUCTION
- ◆ NEW 5' CONCRETE SIDEWALK - AS PER C.O.Y. STD. 3-135

**UTILITIES WARNING**

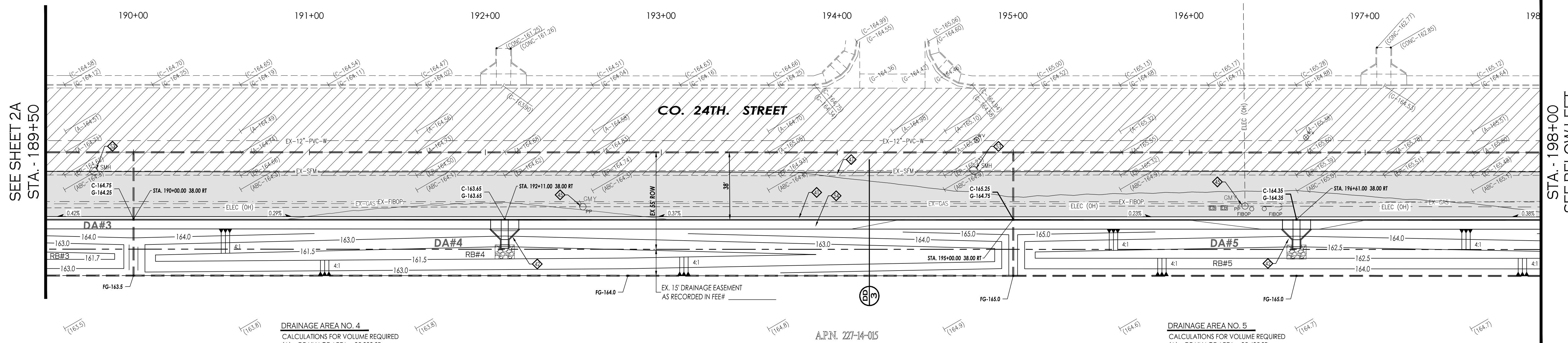
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**DRAINAGE AREA NO. 3**  
 CALCULATIONS FOR VOLUME REQUIRED  
 (A) = DRAINAGE AREA = 24.500 SF  
 (I) = INTENSITY OF RAINFALL = 2.25 IN / HR  
 (100 YR. DURATION - 1hr DURATION)  
 $VOL = (24.500) \frac{2.25}{12} = 4.594 CF$   
 RETENTION BASIN (RB#3)  
 TOP AREA (163.0) = 5,665 SF  
 BOTTOM AREA (161.7) = 1,701 SF  
 DEPTH OF RETENTION = 1.3 FT  
 VOLUME PROVIDED = 4,788 CF  
 TOTAL VOL. PROVIDED= 4,788 CF > 4.594 CF. OK

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



Notes:  
 Scale: N.T.S. [Date: AUG 2025]  
 Drawn: staff [Job #: vrv23-600]  
 Checked: vna



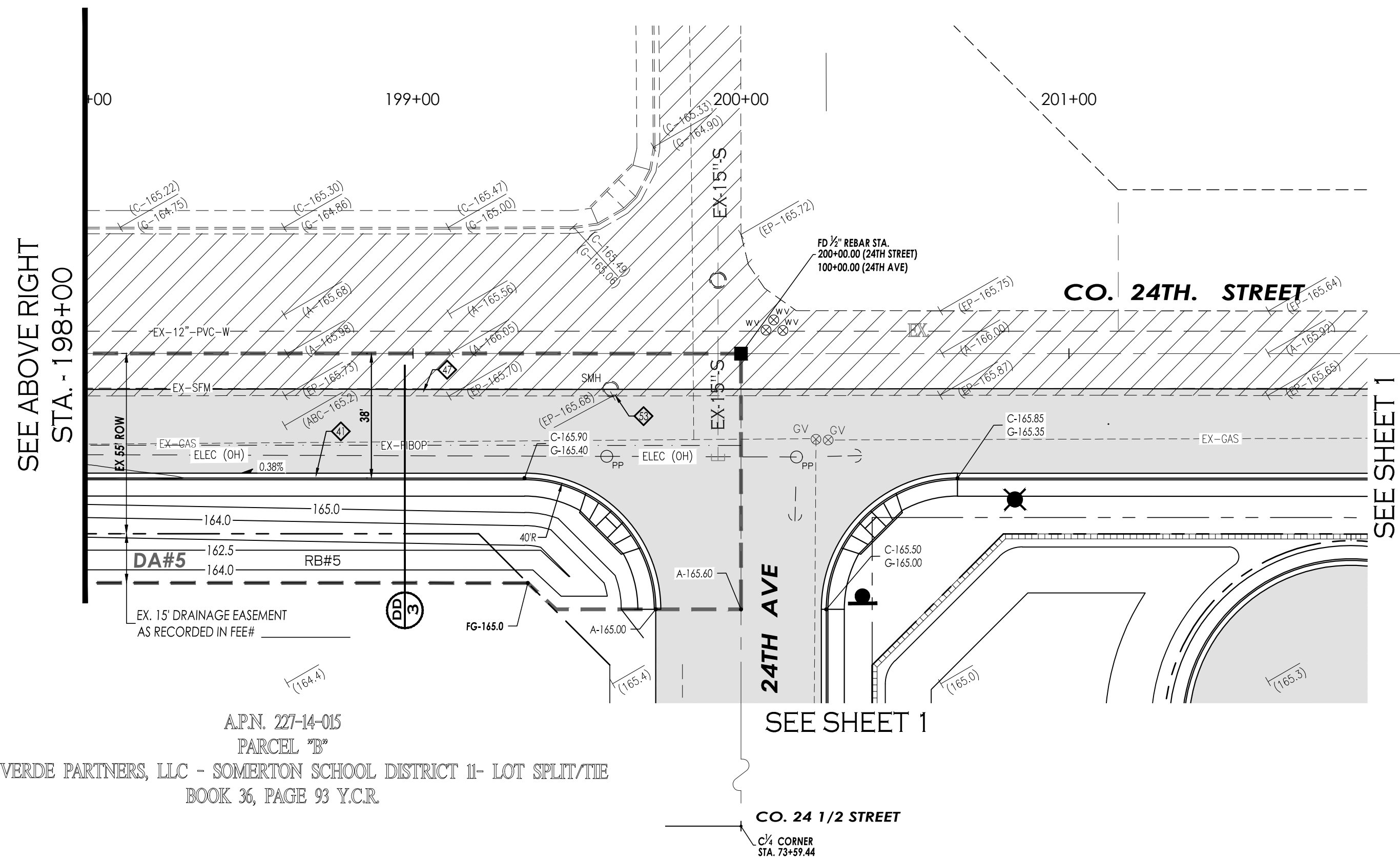
**DRAINAGE AREA NO. 4**  
 CALCULATIONS FOR VOLUME REQUIRED  
 (A) = DRAINAGE AREA = 35,000 SF  
 (I) = INTENSITY OF RAINFALL = 2.25 IN / HR  
 (100 YR. DURATION - 1hr DURATION)  
 $VOL = (35,000) \frac{2.25}{12} = 6,562 CF$   
 RETENTION BASIN (RB#4)  
 TOP AREA (163.0) = 7,314 SF  
 BOTTOM AREA (161.5) = 1,724 SF  
 DEPTH OF RETENTION = 1.5 FT  
 VOLUME PROVIDED = 6,779 CF  
 TOTAL VOL. PROVIDED = 6,779 CF > 6,562 CF. OK

**DRAINAGE AREA NO. 5**  
 CALCULATIONS FOR VOLUME REQUIRED  
 (A) = DRAINAGE AREA = 35,485 SF  
 (I) = INTENSITY OF RAINFALL = 2.25 IN / HR  
 (100 YR. DURATION - 1hr DURATION)  
 $VOL = (35,485) \frac{2.25}{12} = 6,653 CF$   
 RETENTION BASIN (RB#5)  
 TOP AREA (164.0) = 7,300 SF  
 BOTTOM AREA (162.5) = 1,847 SF  
 DEPTH OF RETENTION = 1.5 FT  
 VOLUME PROVIDED = 6,860 CF  
 TOTAL VOL. PROVIDED = 6,860 CF > 6,653 CF. OK

A.P.N. 227-14-015  
 PARCEL "B"  
 VON VERDE PARTNERS, LLC - SOMERTON SCHOOL DISTRICT II- LOT SPLIT/TIE  
 BOOK 36, PAGE 93 Y.C.R.

CO. 24TH STREET - WIDENING PLAN

NORTH  
 SCALE: 1"=30'



A.P.N. 227-14-015  
 PARCEL "B"  
 VON VERDE PARTNERS, LLC - SOMERTON SCHOOL DISTRICT II- LOT SPLIT/TIE  
 BOOK 36, PAGE 93 Y.C.R.

CO. 24TH STREET - WIDENING PLAN

NORTH  
 SCALE: 1"=30'

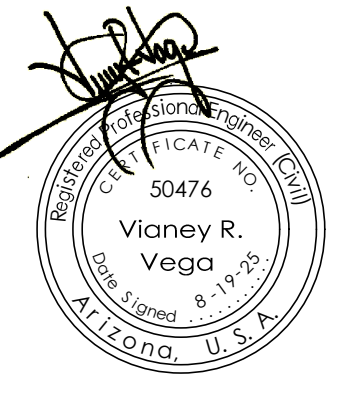
KEYNOTES:

- 1. NEW VERTICAL CURB & GUTTER - AS PER C.O.Y. STD. 3-060
- 2. NEW 4' CONCRETE SPILLWAY (USE 6' SIDEWALK, 6' CURB TRANSITION AND OMIT CMU BLOCK)
- 3. RELOCATE EXISTING SIGN
- 4. NEW CONCRETE SIDEWALK RAMP (50' RADIUS MEASURED TO FACE OF CURB) - AS PER C.O.Y. STD. 3-145
- 5. EXISTING POWER POLE TO BE RELOCATED BY APS
- 6. EXISTING CATV TO BE RELOCATED BY OTHERS
- 7. SAWCUT 1' OF EXISTING PAVEMENT, REMOVE AND REPLACE WITH NEW PAVEMENT - SEE DETAIL
- 8. REMOVE EXISTING VERTICAL CURB & GUTTER
- 9. ADJUST WATER VALVE TO GRADE
- 10. ADJUST GAS VALVE TO GRADE
- 11. RELOCATE EXISTING GAS STRUCTURES - BY OTHERS
- 12. RELOCATE EXISTING PULL BOX - BY OTHERS
- 13. PROTECT EXISTING MANHOLE COLLAR DURING ROADWAY CONSTRUCTION
- 14. NEW 5' CONCRETE SIDEWALK - AS PER C.O.Y. STD. 3-135

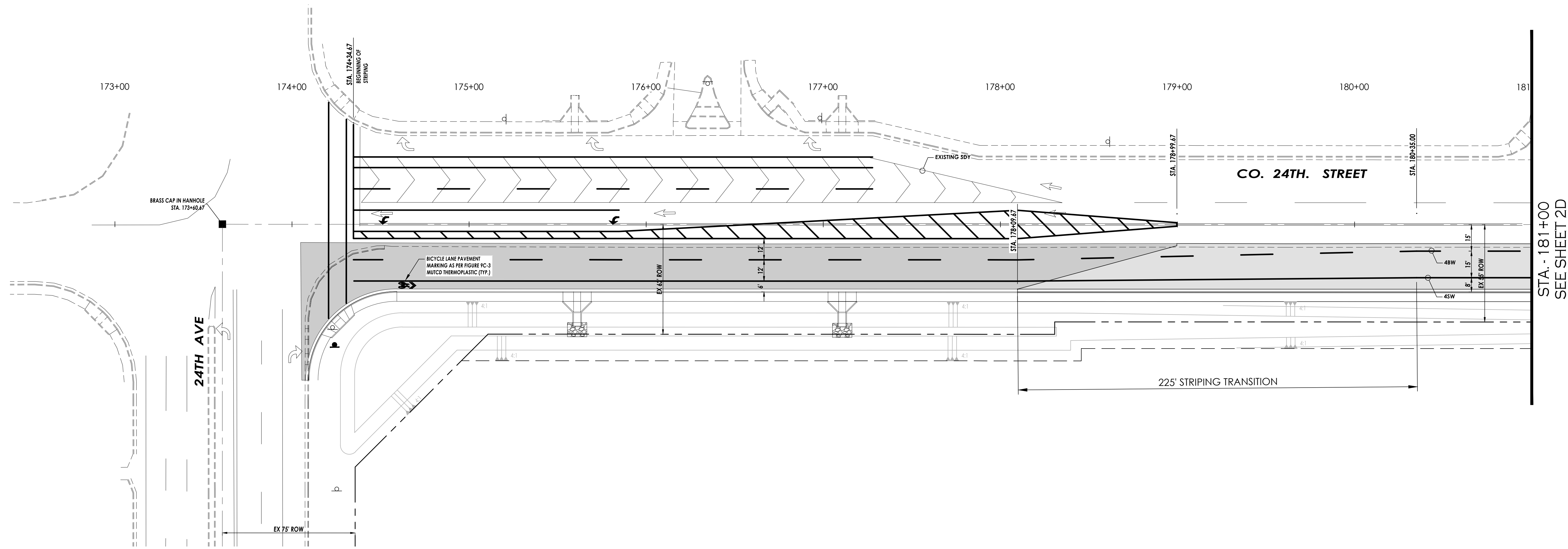
UTILITIES WARNING

UTILITIES IN THE AREA OF CONSTRUCTION ARE APPROXIMATE ONLY. THEY HAVE BEEN LOCATED FROM FIELD INVESTIGATION AND THE BEST AVAILABLE UTILITY RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION, PROTECTION AND REPAIR OF ALL UTILITIES ENCOUNTERED DURING CONSTRUCTION WHETHER SHOWN ON THESE PLANS OR NOT. THE CONTRACTOR SHALL CONTACT ALL RESPECTIVE UTILITIES AND HAVE ALL UTILITIES FIELD-LOCATED PRIOR TO CONSTRUCTION. IF ANY UNKNOWN SUBSURFACE STRUCTURES ARE ENCOUNTERED DURING CONSTRUCTION, IT SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF ENGINEER OF RECORD PRIOR TO PROCEEDING.

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



Notes:  
 Scale: N.T.S. Date: AUG 2025  
 Drawn: staff Job #: vrv23-600  
 Checked: vna  
 Sheet



CO. 24TH STREET - STRIPING PLAN

NORTH  
SCALE: 1"=30'

NOTES:

- 4BW 10' 30' 4' Broken White
- 4SW 4' Solid White
- 4SDY 4' Solid Double Yellow
- 8SW 8' Solid White
- 12SW 12' Solid White

NOTES:

- \* PAVEMENT MARKING AND REGULATORY SIGNS AS PER MUTCD CURRENT EDITION
- \* ALL STRIPING MUST BE THERMOPLASTIC OR APPROVED EQUAL (UNLESS NOTED OTHERWISE)

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CO. 24TH STREET - STRIPING PLAN  
ORCHIDEA PARK TOWNHOMES PHASE I  
SUBDIVISION

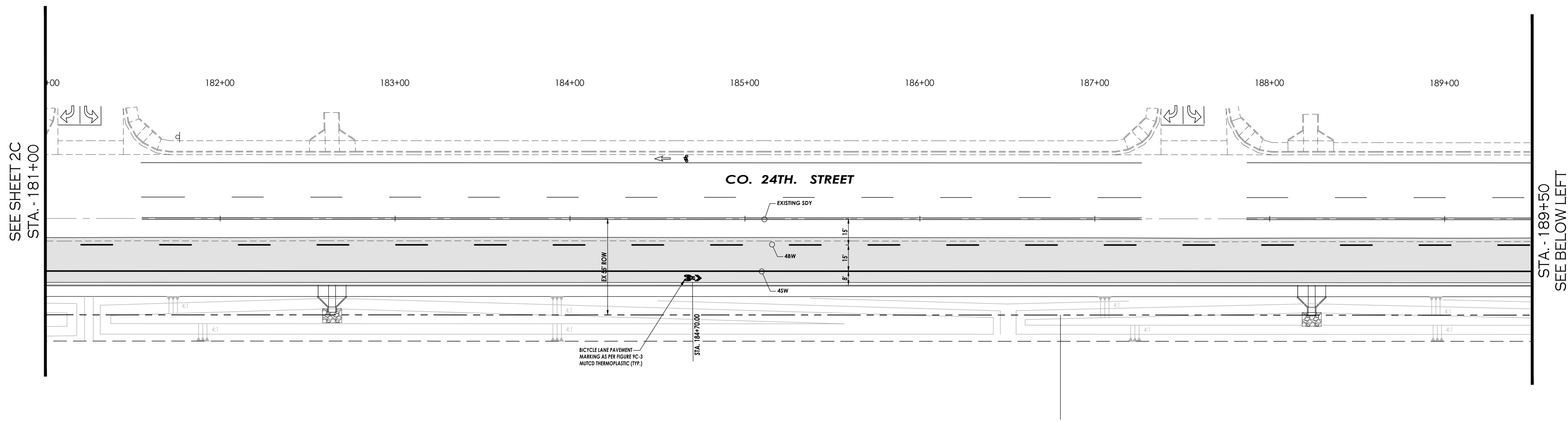


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CO. 24TH STREET - STRIPING PLAN  
ORCHIDEA PARK TOWNHOMES PHASE I  
SUBDIVISION

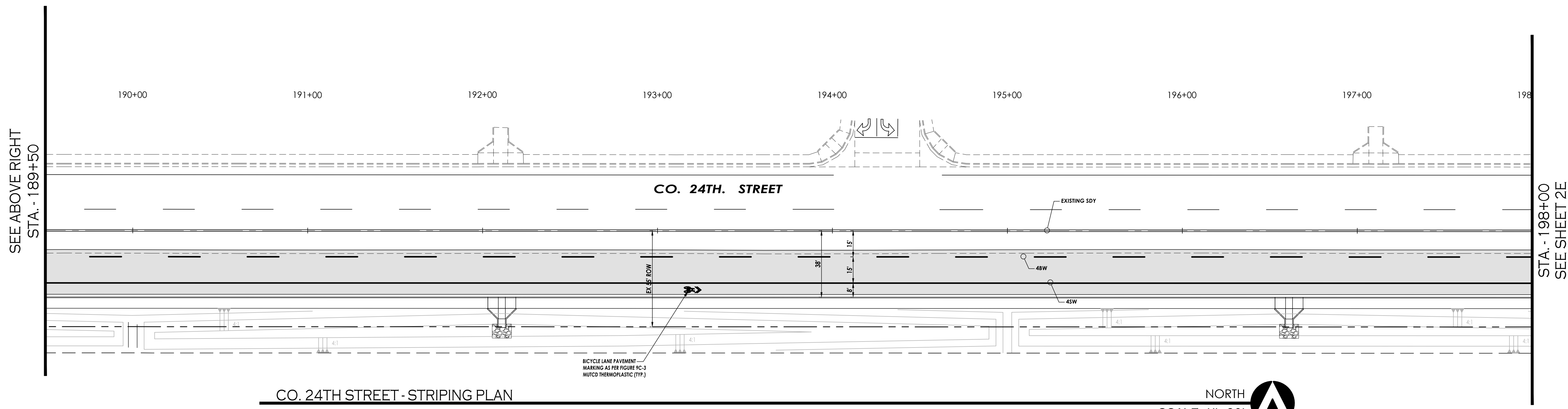


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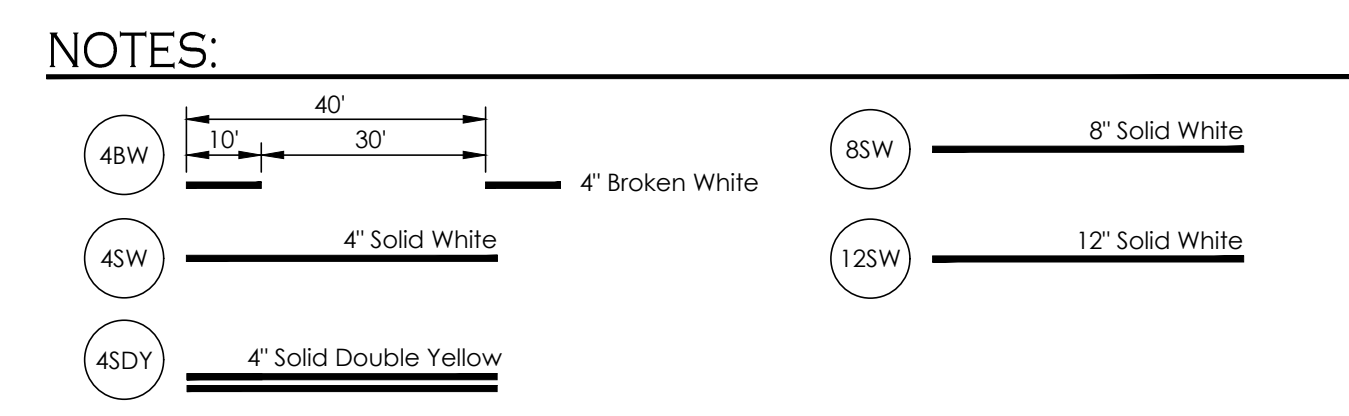
CO. 24TH STREET - STRIPING PLAN

NORTH  
SCALE: 1"=30'



CO. 24TH STREET - STRIPING PLAN

NORTH  
SCALE: 1"=30'



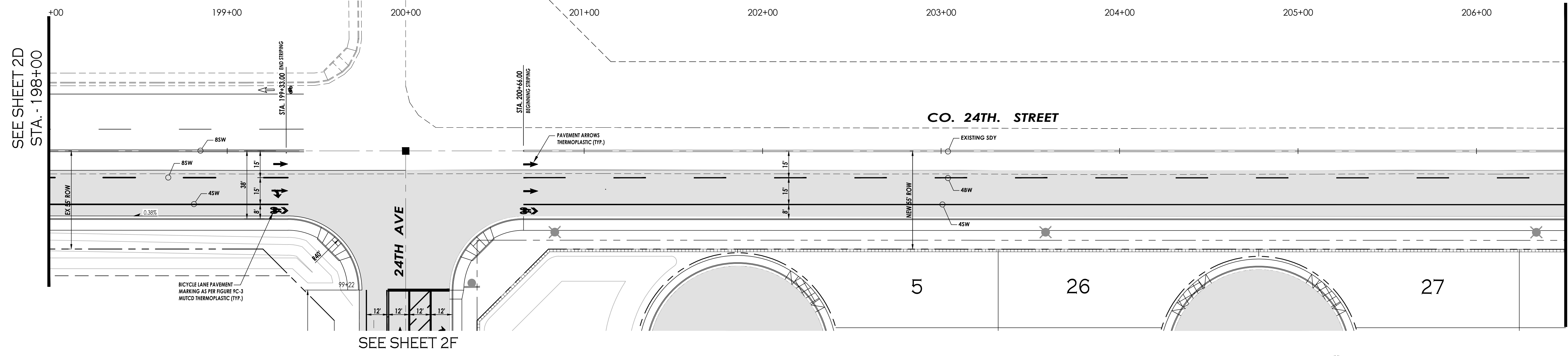
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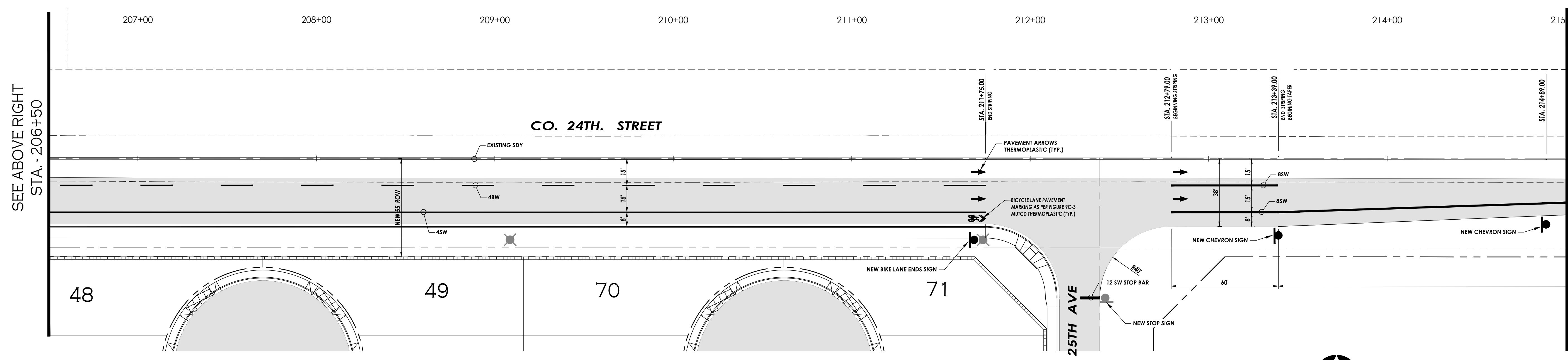


WWW.VEGAENGINEERS.COM PROJECT: VV23-600 ORCHIDEA PARK TOWNHOMES PHASE I SUBDIVISION



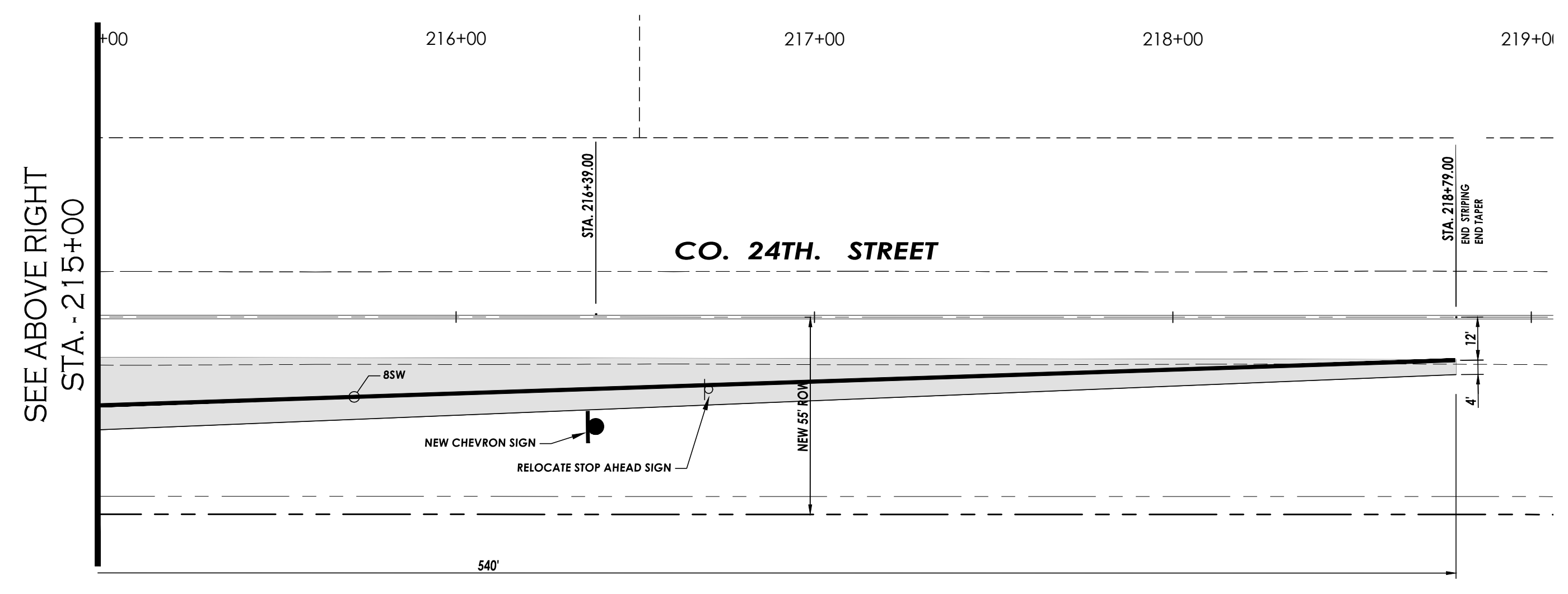
CO. 24TH STREET - STRIPING PLAN

NORTH  
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CO. 24TH STREET - STRIPING PLAN

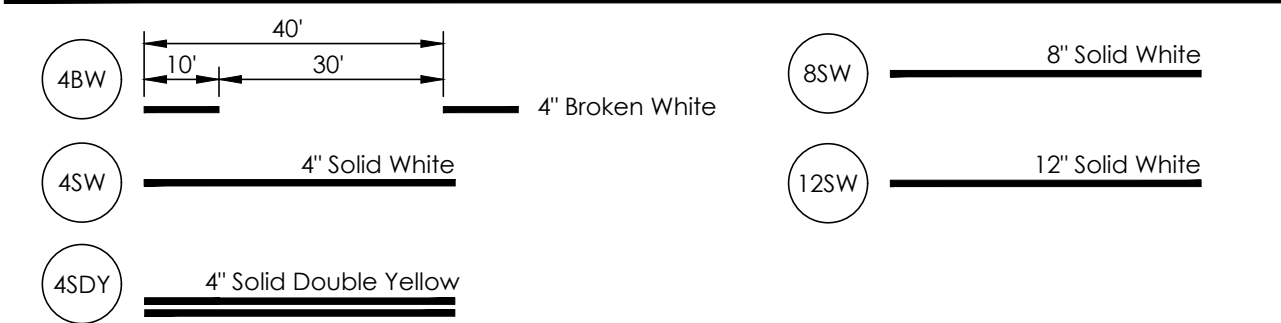
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SCALE: 1"=30'



CO. 24TH STREET - STRIPING PLAN

NORTH  
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NOTES:



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SEE SHEET 2D  
STA. - 198+00

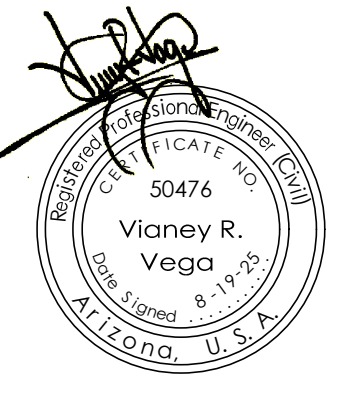
SEE SHEET 2F

SEE ABOVE RIGHT  
STA. - 206+50

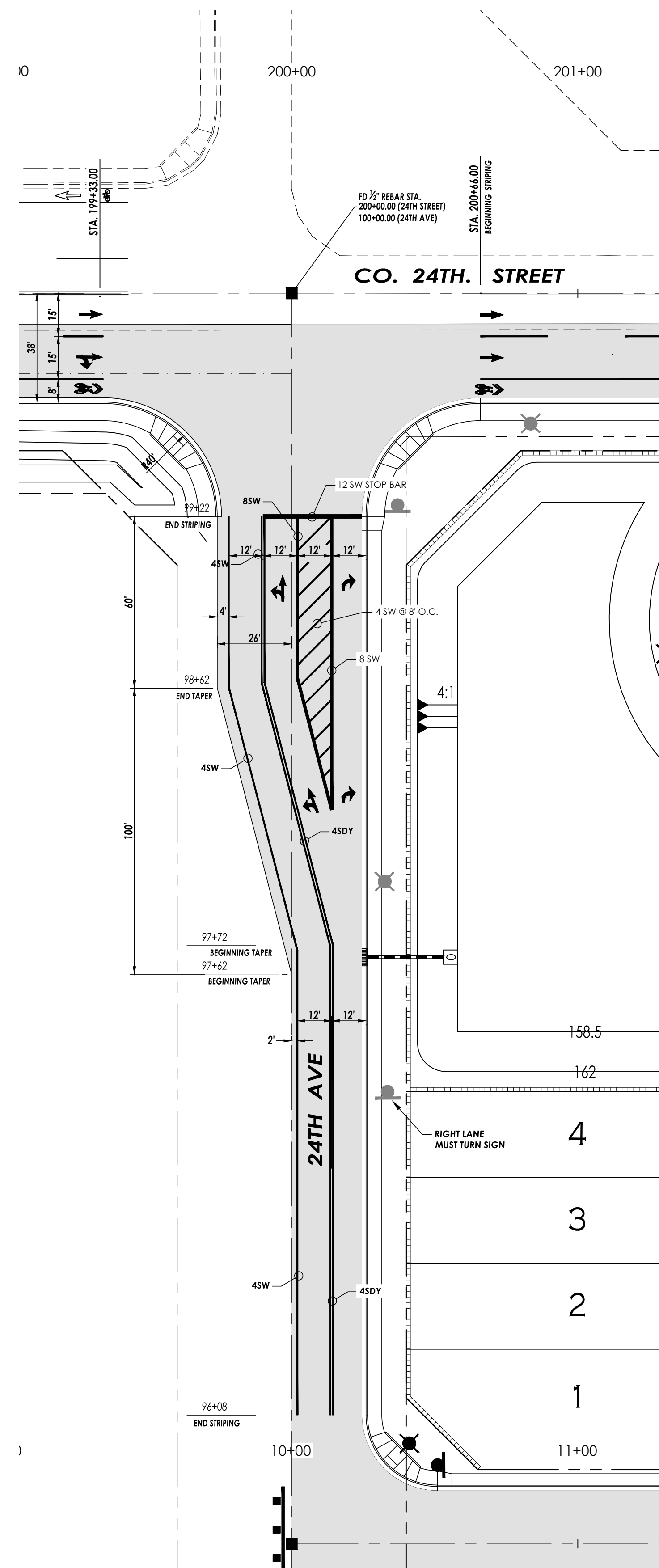
STA. - 206+50  
SEE BELOW LEFT

STA. - 215+00  
SEE BELOW LEFT

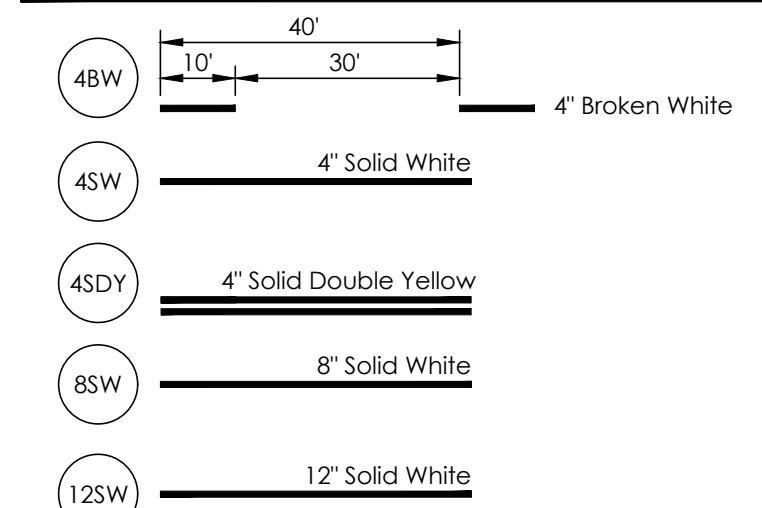
SEE ABOVE RIGHT  
STA. - 215+00



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NOTES:



NOTES:

- \* PAVEMENT MARKING AND REGULATORY SIGNS AS PER MUTCD CURRENT EDITION
- \* ALL STRIPING MUST BE THERMOPLASTIC OR APPROVED EQUAL (UNLESS NOTED OTHERWISE)

CO. 24TH STREET & 24TH AVE - STRIPING PLAN

NORTH  
SCALE: 1"=30'

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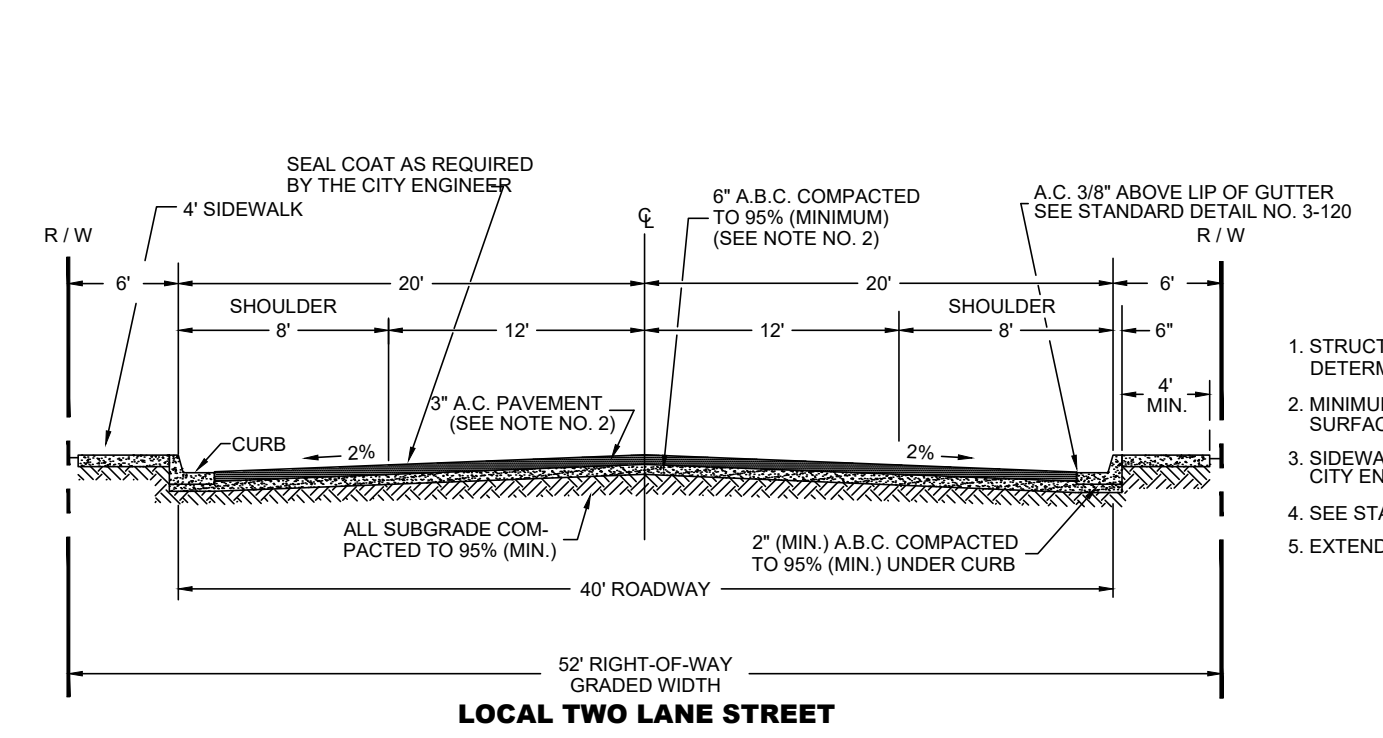
24TH AVENUE - STRIPING PLAN  
ORCHIDEA PARK TOWNHOMES PHASE I  
SUBDIVISION



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Checked: vna

Sheet

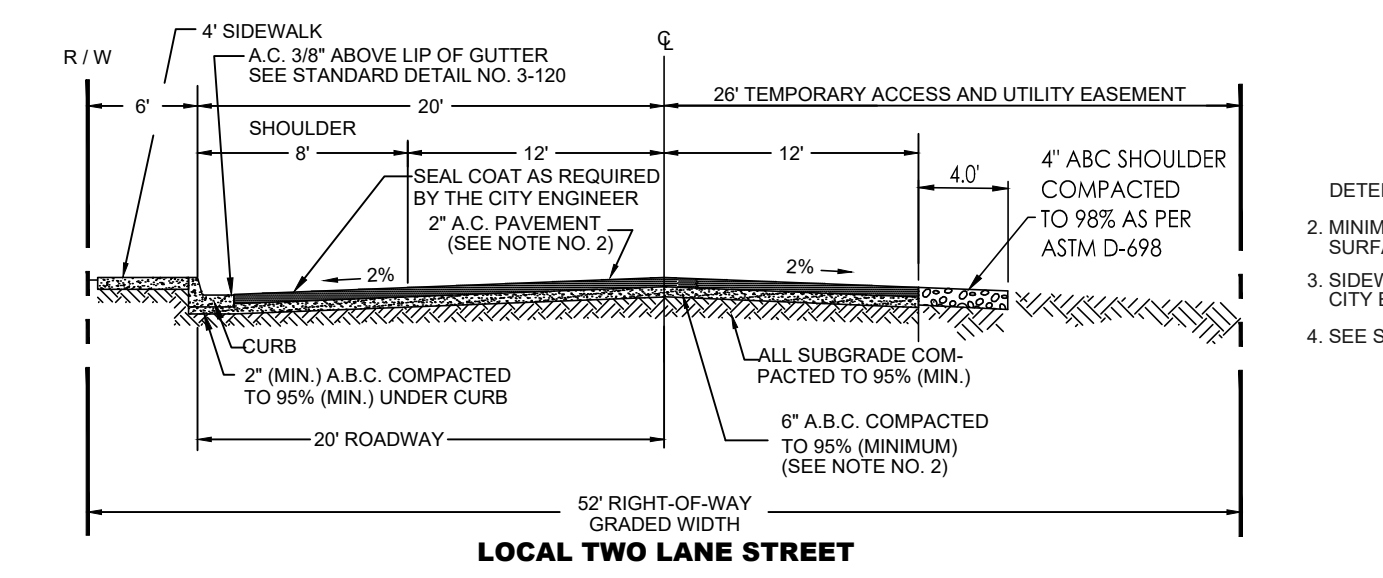
2F



LOCAL TWO LANE STREET  
CITY OF YUMA STD. 2-030 (MODIFIED)

A  
3

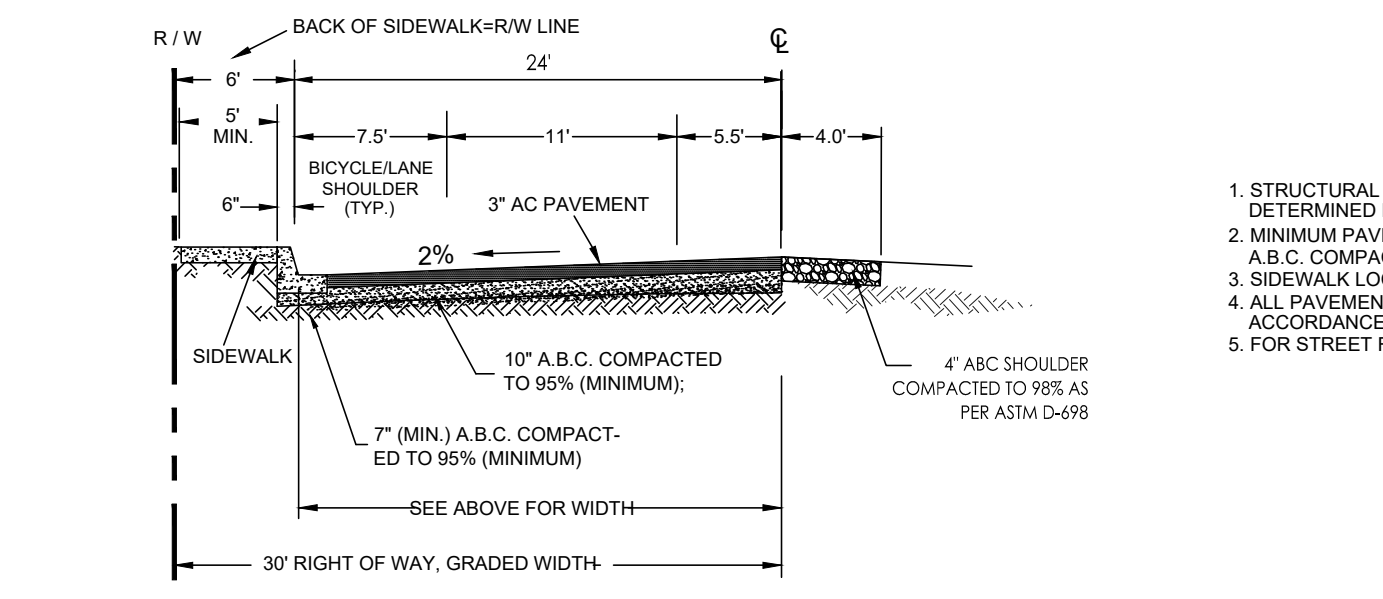
- NOTES**
1. STRUCTURAL DESIGN OF COMBINED THICKNESS OF BASE AND SURFACE TO BE DETERMINED BY SOILS TEST.
  2. MINIMUM PAVING THICKNESS SHALL BE 3" FOR PLANT HOT MIXED ASPHALT SURFACING OVER 6" OF A.B.C. COMPACTED TO 95% (MINIMUM).
  3. SIDEWALK LOCATION ADJACENT TO CURB OR AS APPROVED BY THE CITY ENGINEER.
  4. SEE STANDARD DETAIL 3-060 FOR GRADING BEHIND SIDEWALK.
  5. EXTEND AGGREGATE BASE COURSE BENEATH CURB & GUTTER



LOCAL TWO LANE STREET  
[YUMA COUNTY STD-2-050]

AA  
3

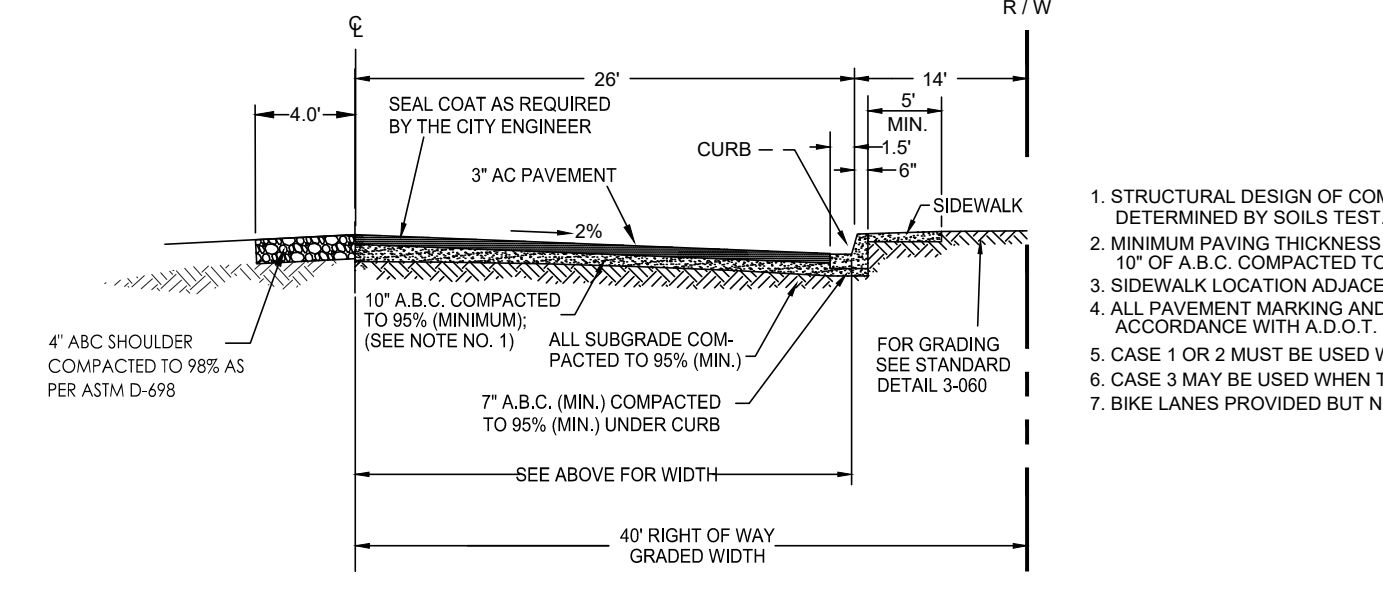
- NOTES**
1. DETERMINED BY SOILS TEST.
  2. MINIMUM PAVING THICKNESS SHALL BE 2" FOR PLANT HOT MIXED ASPHALT SURFACING OVER 6" OF A.B.C. COMPACTED TO 95% (MINIMUM).
  3. SIDEWALK LOCATION ADJACENT TO CURB OR AS APPROVED BY THE CITY ENGINEER.
  4. SEE STANDARD DETAIL 3-060 FOR GRADING BEHIND SIDEWALK.



25TH AVENUE  
CITY OF YUMA STD. 2-025 (MODIFIED)

B  
3

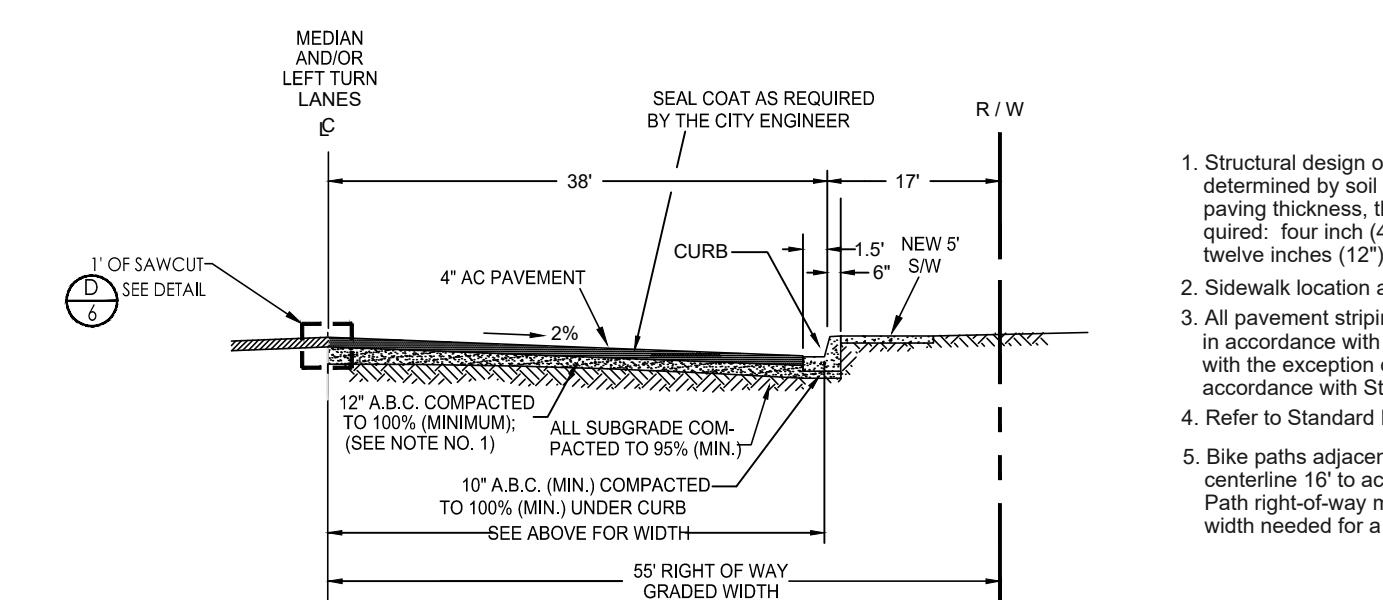
- NOTES**
1. STRUCTURAL DESIGN OF COMBINED THICKNESS OF BASE AND SURFACE TO BE DETERMINED BY SOILS TEST.
  2. MINIMUM PAVING THICKNESS - 3" FOR PLANT HOT MIX ASPHALT SURFACING OVER 10" OF A.B.C. COMPACTED TO 95% (MINIMUM).
  3. SIDEWALK LOCATION ADJACENT TO CURB OR AS APPROVED BY THE CITY ENGINEER.
  4. ALL PAVEMENT MARKING AND RAISED PAVEMENT MARKER MATERIAL MUST BE IN ACCORDANCE WITH A.D.O.T. MANUAL FOR SIGNING AND MARKING, LATEST EDITION.
  5. FOR STREET RECONSTRUCTION PROJECTS ONLY WHEN DESIGNATED BY THE CITY ENGINEER.



24TH AVENUE  
CITY OF YUMA STD. 2-020 (MODIFIED)

C  
3

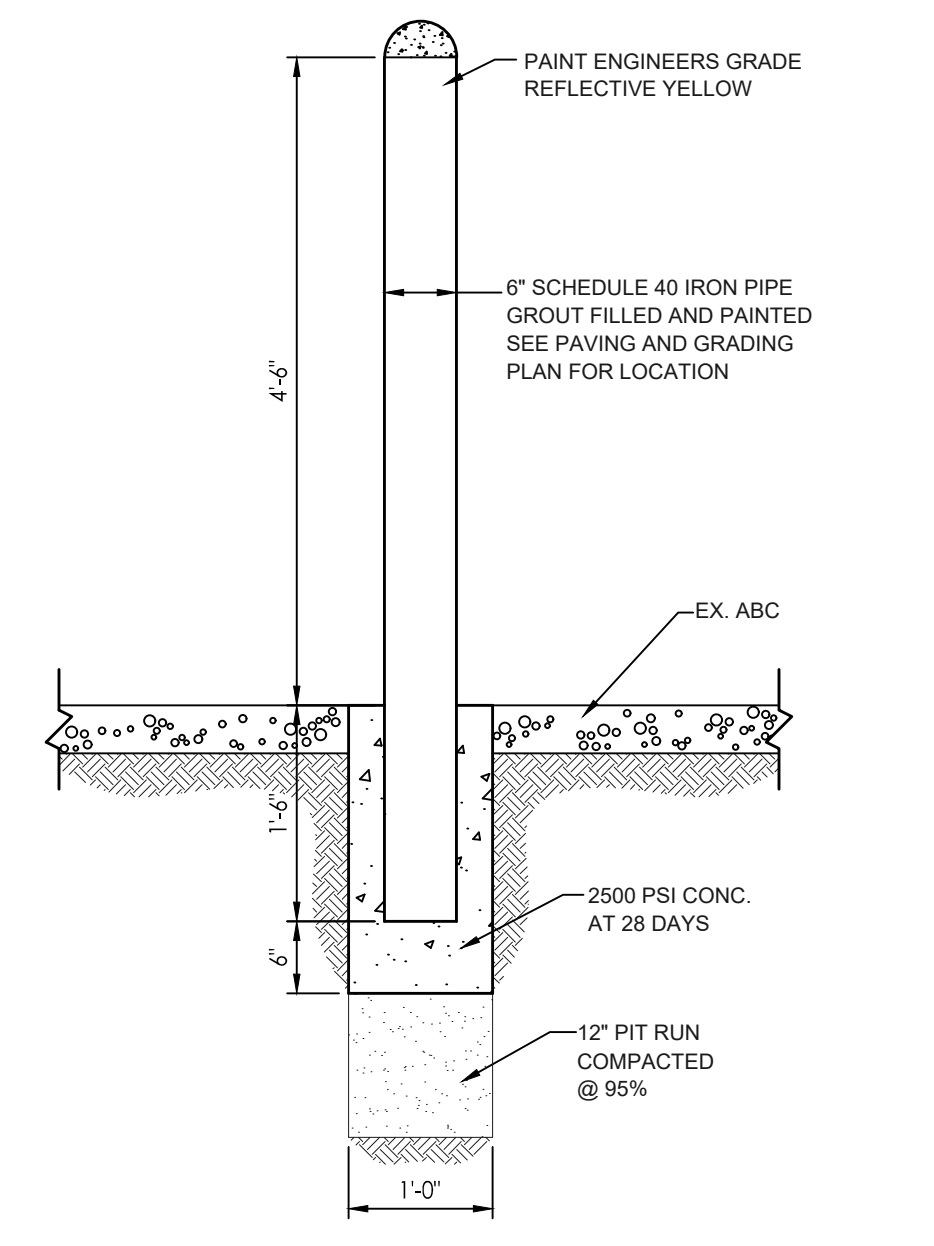
- NOTES**
1. STRUCTURAL DESIGN OF COMBINED THICKNESS OF BASE AND SURFACE TO BE DETERMINED BY SOILS TEST.
  2. MINIMUM PAVING THICKNESS - 3" FOR PLANT HOT MIX ASPHALT SURFACING OVER 10" OF A.B.C. COMPACTED TO 95% (MINIMUM).
  3. SIDEWALK LOCATION ADJACENT TO CURB OR AS APPROVED BY THE CITY ENGINEER.
  4. ALL PAVEMENT MARKING AND RAISED PAVEMENT MARKER MATERIAL MUST BE IN ACCORDANCE WITH A.D.O.T. MANUAL FOR SIGNING AND MARKING, LATEST EDITION.
  5. CASE 1 OR 2 MUST BE USED WHEN THERE ARE DRIVEWAYS ALONG COLLECTOR.
  6. CASE 3 MAY BE USED WHEN THERE ARE NO DRIVEWAYS ALONG COLLECTOR.
  7. BIKE LANES PROVIDED BUT NOT STRIPED.



Co. 24TH STREET  
CITY OF YUMA STD. 2-015 (MODIFIED)

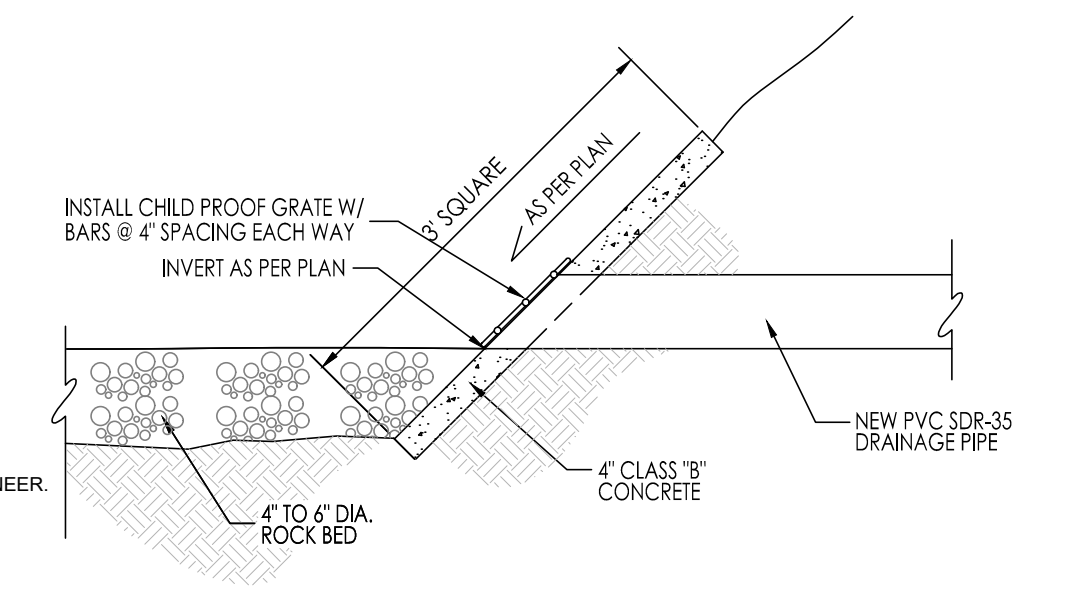
D  
3

- NOTES**
1. Structural design of combined thickness of base and surface to be determined by soil tests. While the soil test may require a greater paving thickness, the following minimum paving thickness is required: four inch (4") for plant hot mix asphalt surfacing over twelve inches (12") of A.B.C. compacted to 100% (minimum).
  2. Sidewalk location adjacent to curb or as approved by the City Engineer.
  3. All pavement striping/markings and/or raised pavement markers shall be in accordance with A.D.O.T. manual for signing and marking, latest edition, with the exception of bikeways which shall be marked and signed in accordance with Standard Detail 2-085.
  4. Refer to Standard Detail 2-010 for bike path information.
  5. Bike paths adjacent to Minor Arterial streets may require shifting of street centerline 15' to accommodate 10' minimum width for two-way bike path. Path right-of-way may overlap utility corridor. This may increase right-of-way width needed for a Minor Arterial plus bike path beyond the 98' shown.



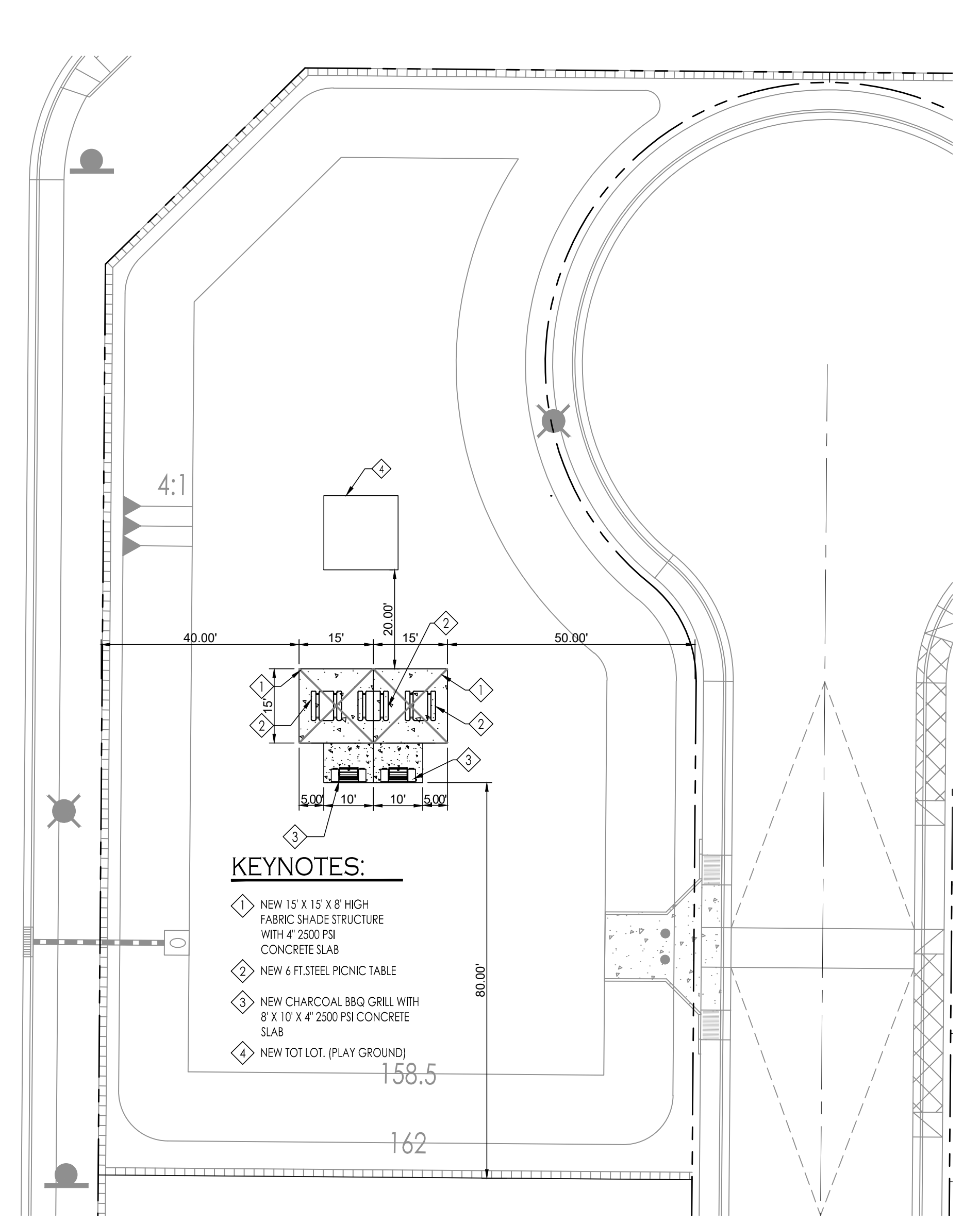
GUARD POST DETAIL

E  
3



END OF PIPE CONCRETE COLLAR

F  
3



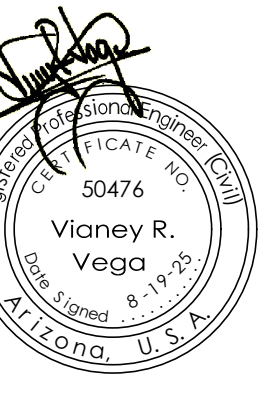
RETENTION BASIN AMENITIES

G  
3

**KEYNOTES:**

1. NEW 15' X 15' X 8' HIGH FABRIC SHADE STRUCTURE WITH 4" 2500 PSI CONCRETE SLAB
2. NEW 6 FT STEEL PICNIC TABLE
3. NEW CHARCOAL BBQ GRILL WITH 8' X 10' X 4" 2500 PSI CONCRETE SLAB
4. NEW TOT LOT (PLAY GROUND)

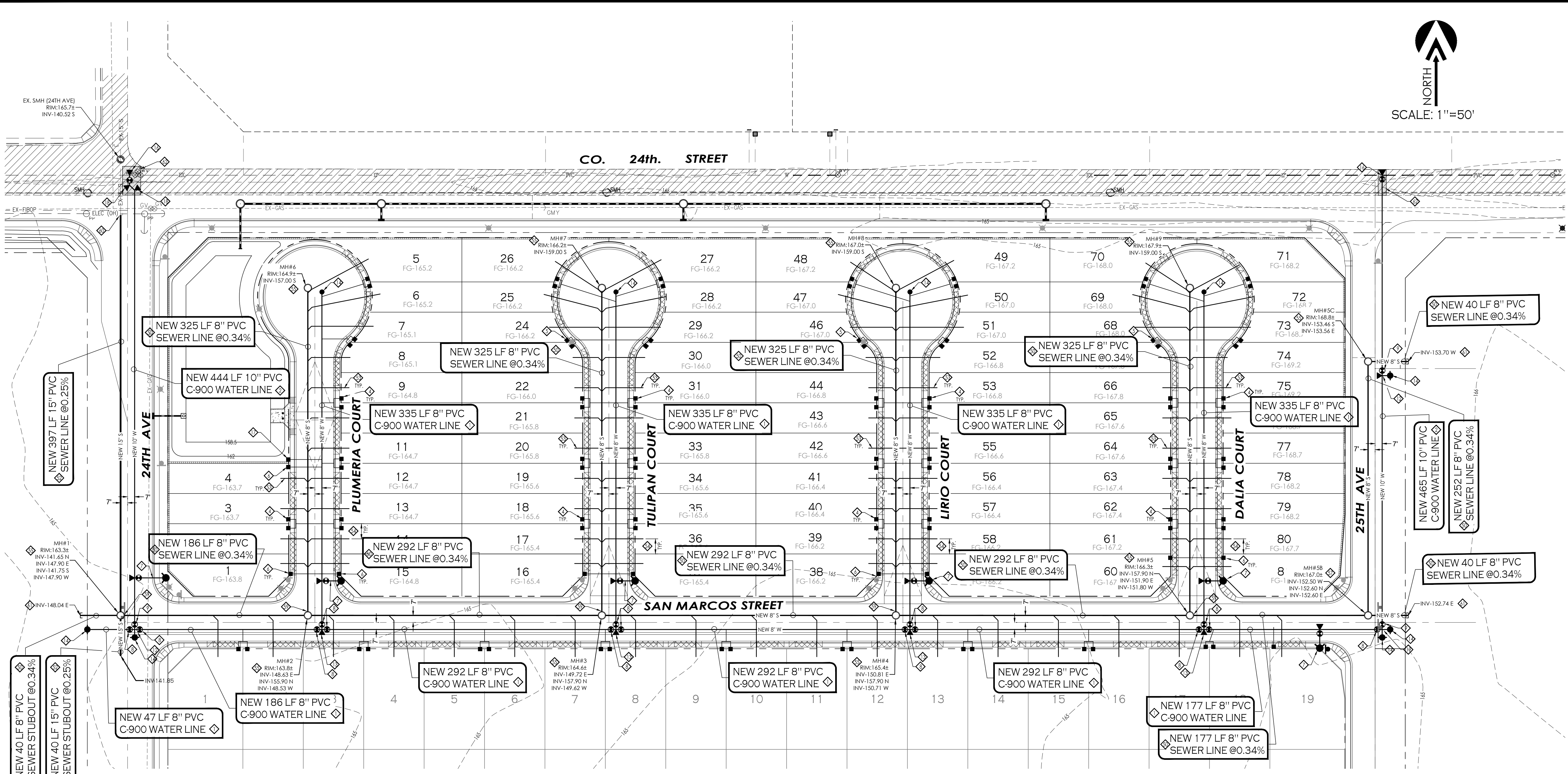
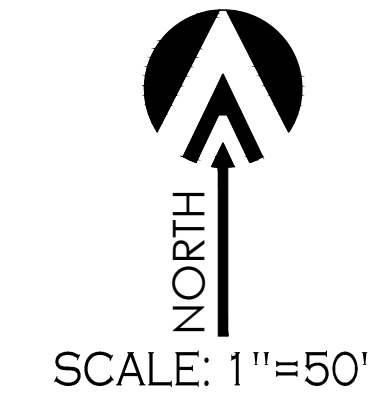
Typical Street Sections  
ORCHIDEA PARK TOWNHOMES PHASE I  
SUBDIVISION



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**LEGEND**

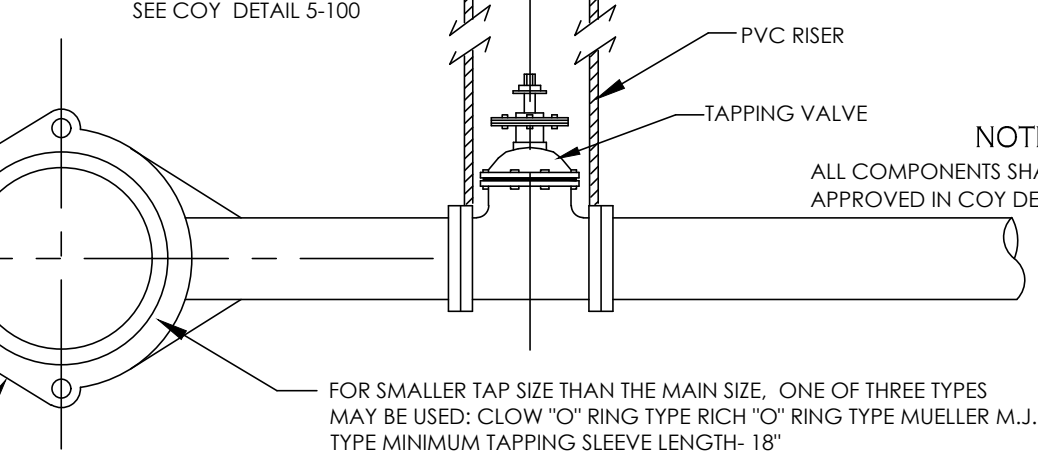
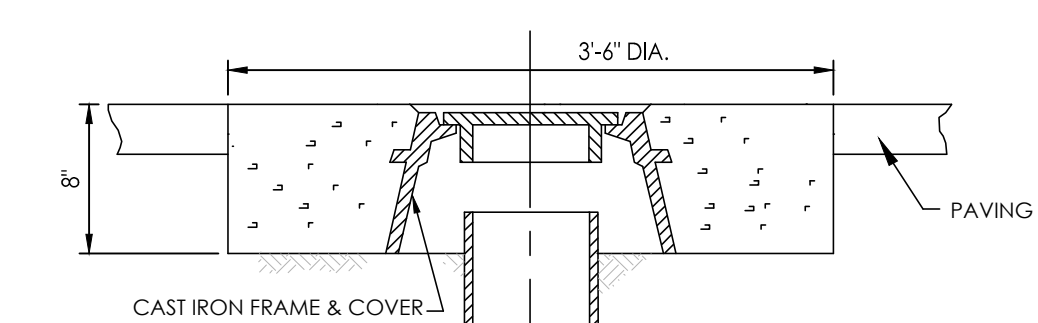
- 163 INDICATES EX. CONTOURS ELEVATION
- ==EX. 6" PVC == W== INDICATES EX. WATER LINE
- ==EX. 8" PVC == S== INDICATES EX. SEWER LINE
- MH INDICATES EXISTING MANHOLE
- FD INDICATES EXISTING FIRE HYDRANT
- WM INDICATES EXISTING WATER METER
- WV INDICATES EXISTING WATER VALVE
- 50 INDICATES LOT NUMBERS
- NEW PVC S INDICATES NEW SANITARY SEWER LINE
- NEW S NEW SEWER STUB
- NEW S NEW SEWER MANHOLE
- NEW S NEW SEWER CLEANOUT
- NEW S NEW 4" PVC SEWER SERVICE
- NEW W PVC W INDICATES NEW WATER LINE
- NEW S NEW SINGLE WATER SERVICE
- NEW W FIRE LINE W/ END PLUG AND THRUST BLOCK
- NEW W NEW WATER VALVE
- NEW W NEW FIRE HYDRANT
- NEW W NEW TEMPORARY BLOWOFF VALVE

**WATER KEYNOTES:**

- INSTALL 8" WATER MAIN - AS PER C.O.Y. STD. 5-010
- INSTALL 10" WATER MAIN - AS PER C.O.Y. STD. 5-010
- INSTALL 12" WATER MAIN - AS PER C.O.Y. STD. 5-010
- INSTALL 1" DUAL WATER SERVICE (TYP.) - AS PER C.O.Y. STD. 5-045 & 5-055 AND SEE DETAIL
- SEPARATE WATER METERS AT THESE LOCATIONS TO ALLOW FOR STREET LIGHT PLACEMENT
- INSTALL 1" SINGLE WATER SERVICE (TYP.) - AS PER C.O.Y. STD. 5-035 & 5-055.
- NEW COMPLETE FIRE HYDRANT AND FIRE HYDRANT STREET MARKERS AS PER C.O.Y. STD. 5-155 & 5-160
- NEW 8" WATER VALVE - AS PER C.O.Y. STD. 5-065, 5-075 & 5-080.
- NEW 10" WATER VALVE - AS PER C.O.Y. STD. 5-065, 5-075 & 5-080.
- NEW 12" WATER VALVE - AS PER C.O.Y. STD. 5-065, 5-075 & 5-080.
- NEW 12"x8" PVC TEE W/THRUST BLOCK - AS PER C.O.Y. STD. 5-020 & 5-025
- NEW 10"x8" PVC TEE W/THRUST BLOCK - AS PER C.O.Y. STD. 5-020 & 5-025
- NEW 8"x8" PVC TEE W/THRUST BLOCK - AS PER C.O.Y. STD. 5-020 & 5-025
- NEW WATERMAIN BLOWOFF VALVE - AS PER C.O.Y. STD. 5-085.
- REMOVE EXISTING CAP AND CONNECT NEW WATER LINE TO EX. WATER SYSTEM. CONTRACTOR TO FIELD VERIFY LOCATION AND DEPTH OF EXISTING WATER MAIN. IF CONDITIONS ARE DIFFERENT THAN WHAT IS SHOWN ON PLANS CONTRACTOR TO NOTIFY ENGINEER BEFORE MAKING ANY DETERMINATION.
- 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
- INSTALL 2" WATER SERVICE (TYP.) - AS PER C.O.Y. STD. 5-040 & 5-060.
- NEW 12" 45° PVC BEND W/THRUST BLOCK - AS PER C.O.Y. STD. 5-020 & 5-025
- NEW 10"x10"x8"x8" CROSS W/THRUST BLOCK - AS PER C.O.Y. STD. 5-020 & 5-025

**SEWER KEYNOTES:**

- INSTALL 8" SEWER MAIN - AS PER C.O.Y. STD. 5-010
- INSTALL 10" SEWER MAIN - AS PER C.O.Y. STD. 5-010
- INSTALL 15" SEWER MAIN - AS PER C.O.Y. STD. 5-010
- NEW 4" PVC SEWER SERVICE - AS PER C.O.Y. STD. 6-015.
- CONSTRUCT ALL SEWER SERVICES TO CENTER OF THE LOT, UNLESS NOTED OTHERWISE.
- NEW POLYMER SANITARY SEWER MANHOLE - AS PER DETAILS
- NEW SHALLOW SEWER MANHOLE - AS PER MAG STD. 420 & 422
- NEW SANITARY SEWER CLEANOUT - AS PER C.O.Y. STD. 6-005
- NEW TYPE 'A' DROP SEWER CONNECTION - AS PER C.O.Y. STD. 6-055
- NEW TYPE 'B' DROP SEWER CONNECTION - AS PER C.O.Y. STD. 6-040
- CONNECT NEW SEWER LINE TO EXISTING SANITARY SEWER. CONTRACTOR TO FIELD VERIFY LOCATION AND DEPTH OF EXISTING SEWER. IF CONDITIONS ARE DIFFERENT THAN WHAT IS SHOWN ON PLANS CONTRACTOR TO NOTIFY ENGINEER BEFORE MAKING ANY DETERMINATION
- NEW WATER TIGHT PLUG
- NEW TYPE 'B' PAVEMENT REPLACEMENT - AS PER C.O.Y. STD 5-016

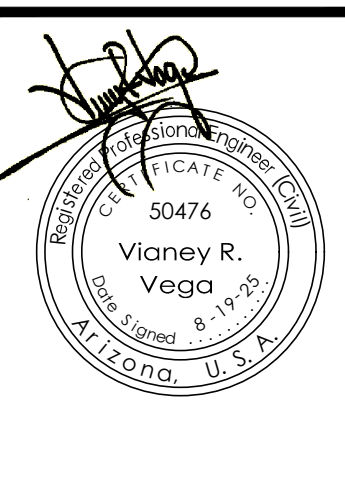


**TAPPING SLEEVE DETAIL**

NOTES  
ALL COMPONENTS SHALL BE PER THOSE APPROVED IN COY DETAILS

FOR SMALLER TAP SIZE THAN THE MAIN SIZE, ONE OF THREE TYPES MAY BE USED: CLOW "O" RING TYPE RICH "O" RING TYPE MUELLER M.J. TYPE MINIMUM TAPPING SLEEVE LENGTH- 18"

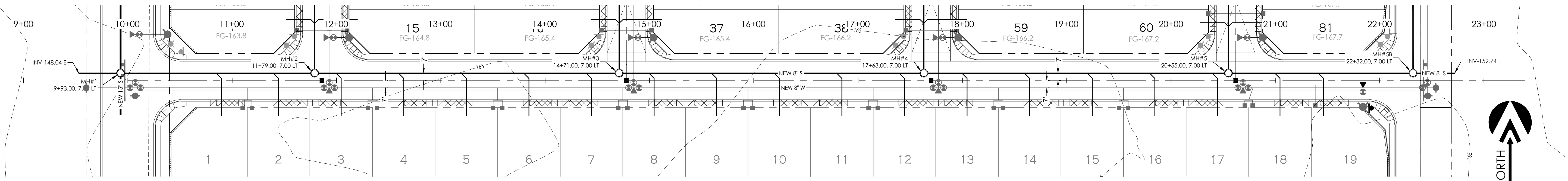
**WATER & SEWER PLAN**  
**ORCHIDEA PARK TOWNHOMES PHASE I**  
**SUBDIVISION**



Notes:

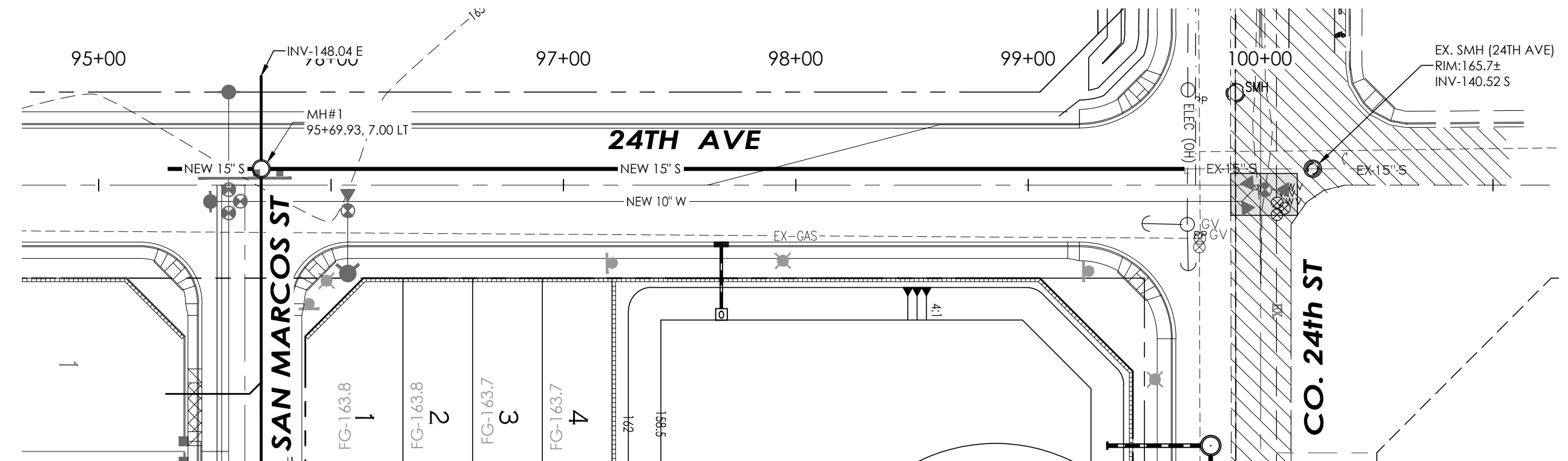
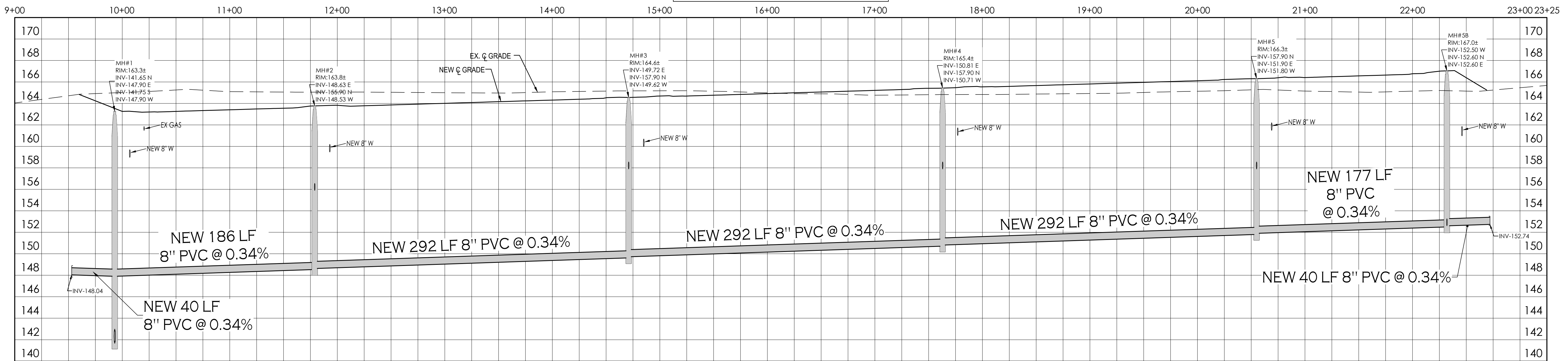
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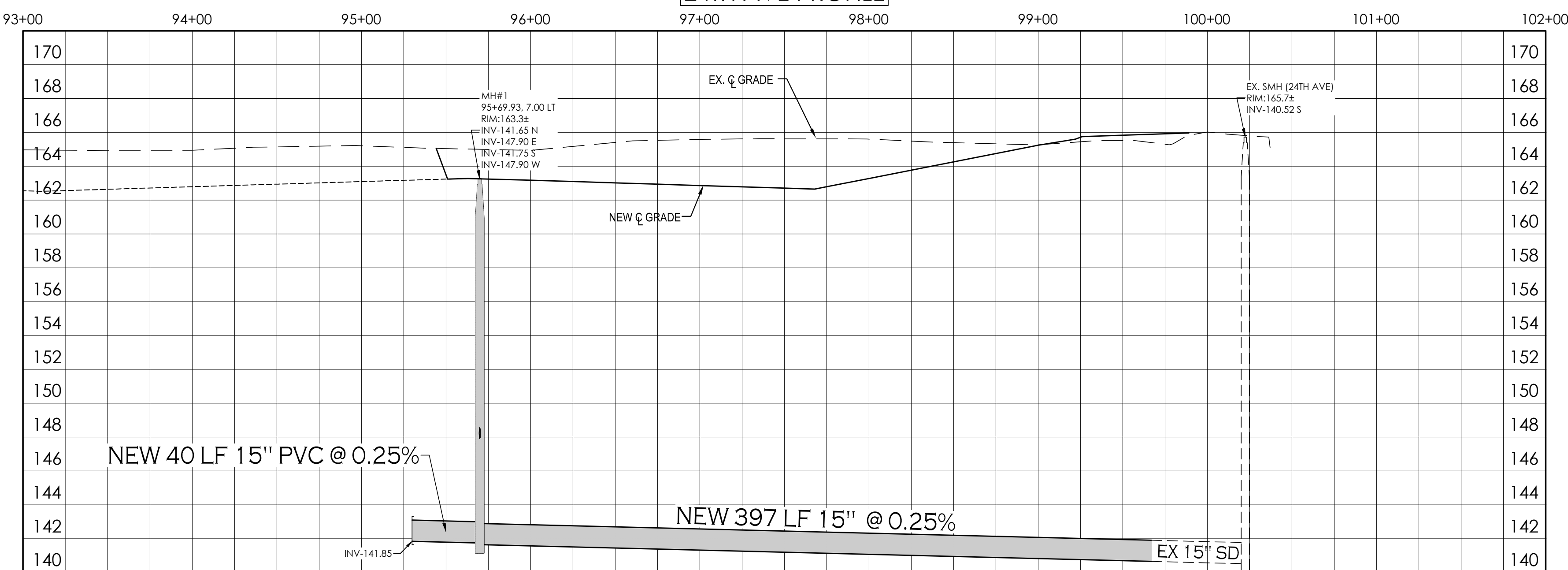
SAN MARCOS STREET PROFILE

NORTH  
SCALE: 1"=50'



24TH AVE PROFILE

NORTH  
SCALE: 1"=50'



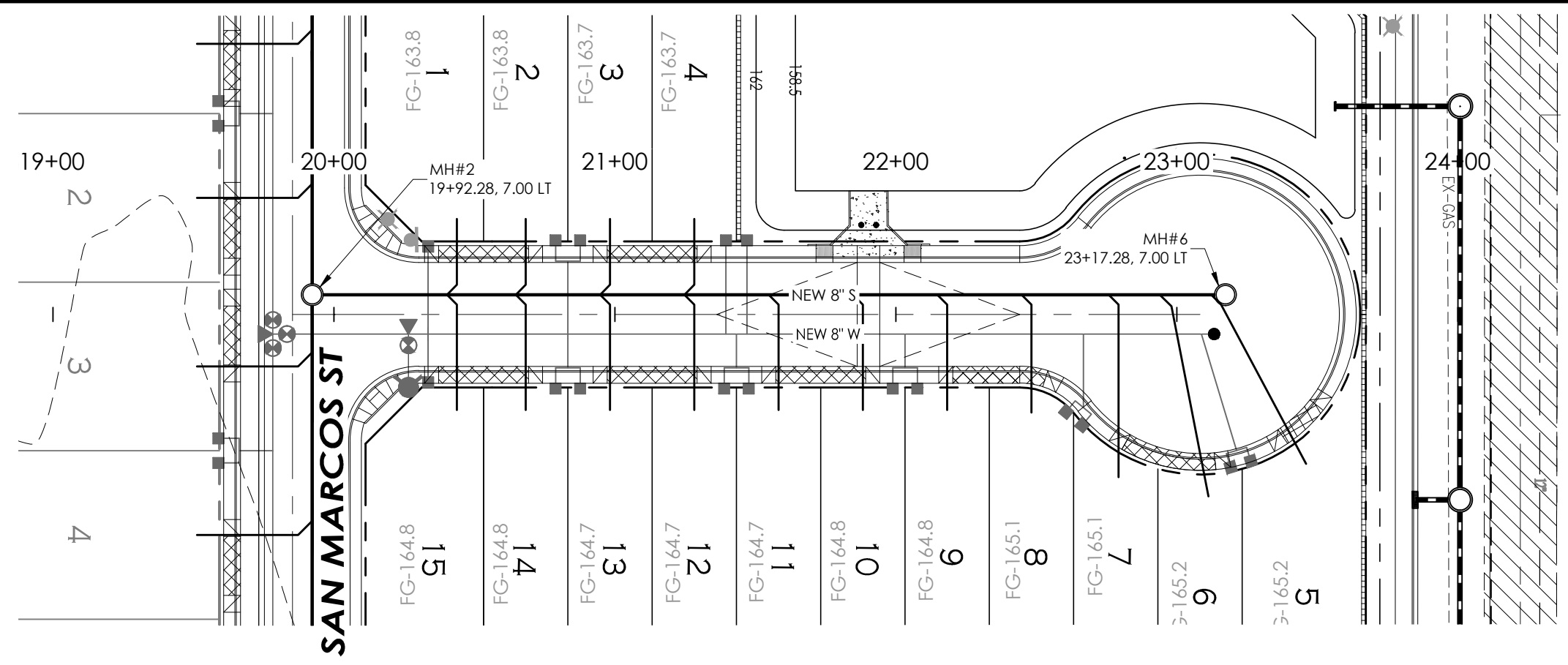
**UTILITIES WARNING**  
UTILITIES IN THE AREA OF CONSTRUCTION ARE APPROXIMATE ONLY. THEY HAVE BEEN LOCATED FROM FIELD INVESTIGATION AND THE BEST AVAILABLE UTILITY RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION, PROTECTION AND REPAIR OF ALL UTILITIES ENCOUNTERED DURING CONSTRUCTION. WHETHER SHOWN ON THESE PLANS OR NOT, THE CONTRACTOR SHALL CONTACT ALL RESPECTIVE UTILITIES AND HAVE ALL UTILITIES FIELD-LOCATED PRIOR TO CONSTRUCTION. IF ANY UNKNOWN SUBSURFACE STRUCTURES ARE ENCOUNTERED DURING CONSTRUCTION, IT SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF ENGINEER OF RECORD PRIOR TO PROCEEDING.

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



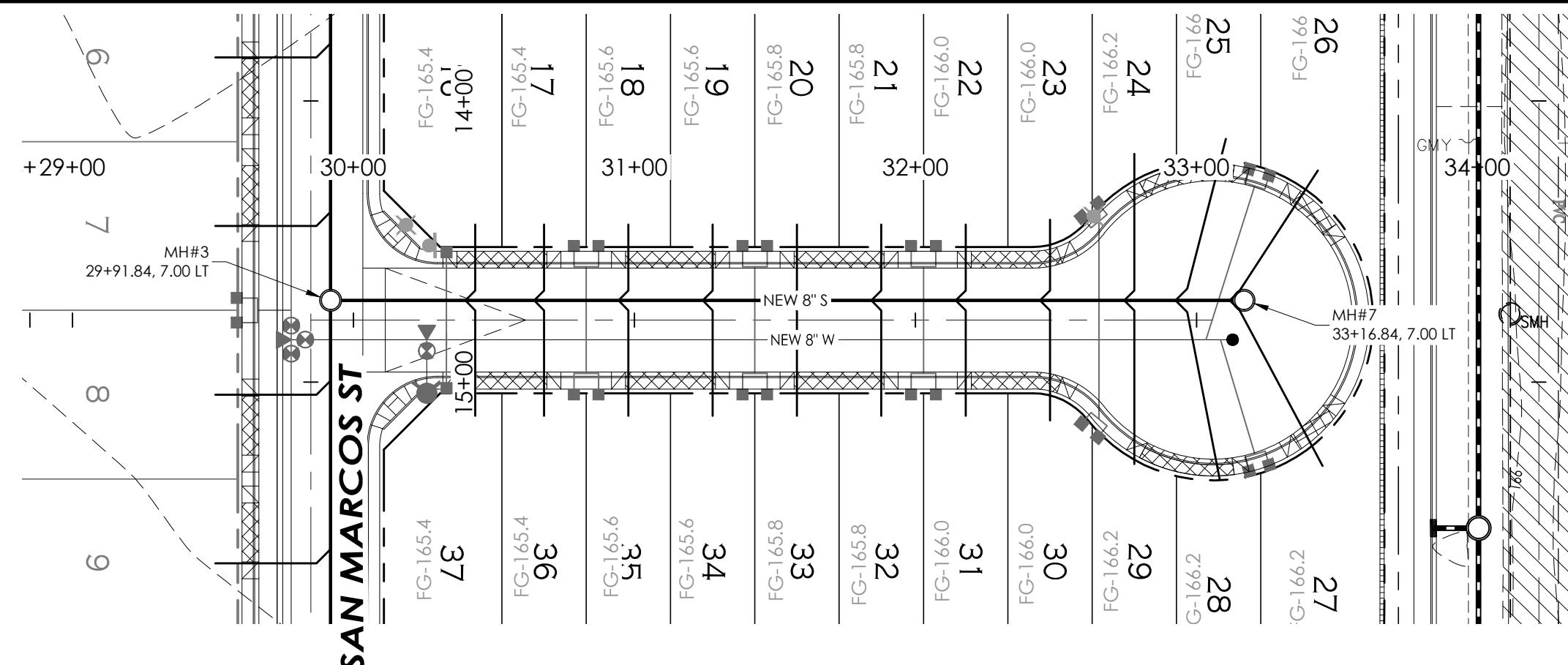
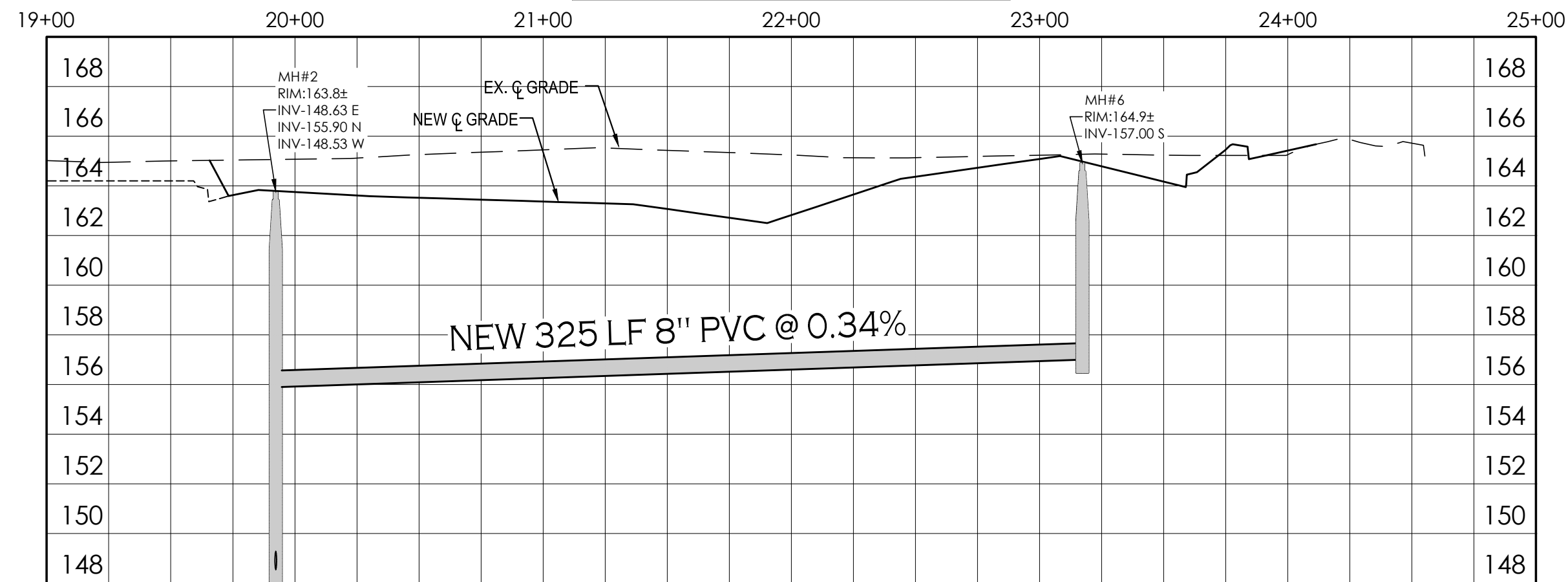
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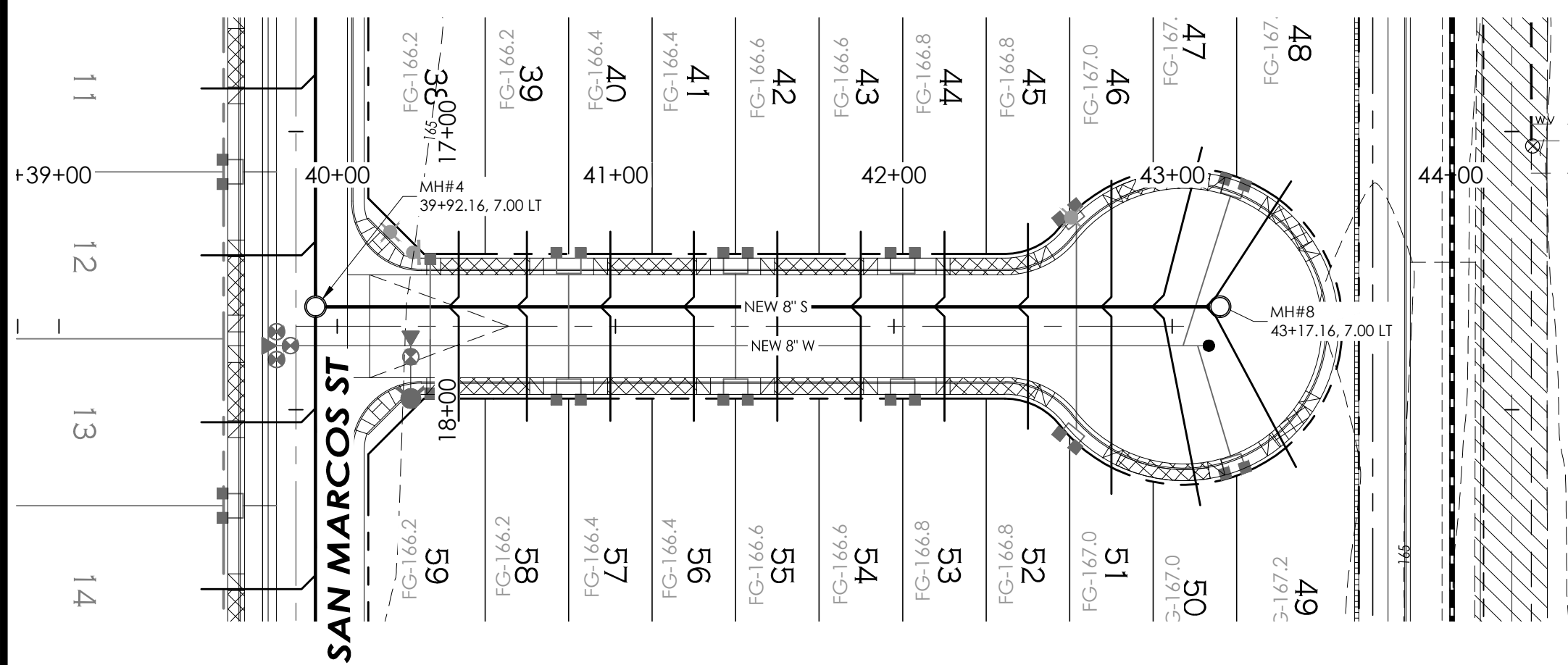
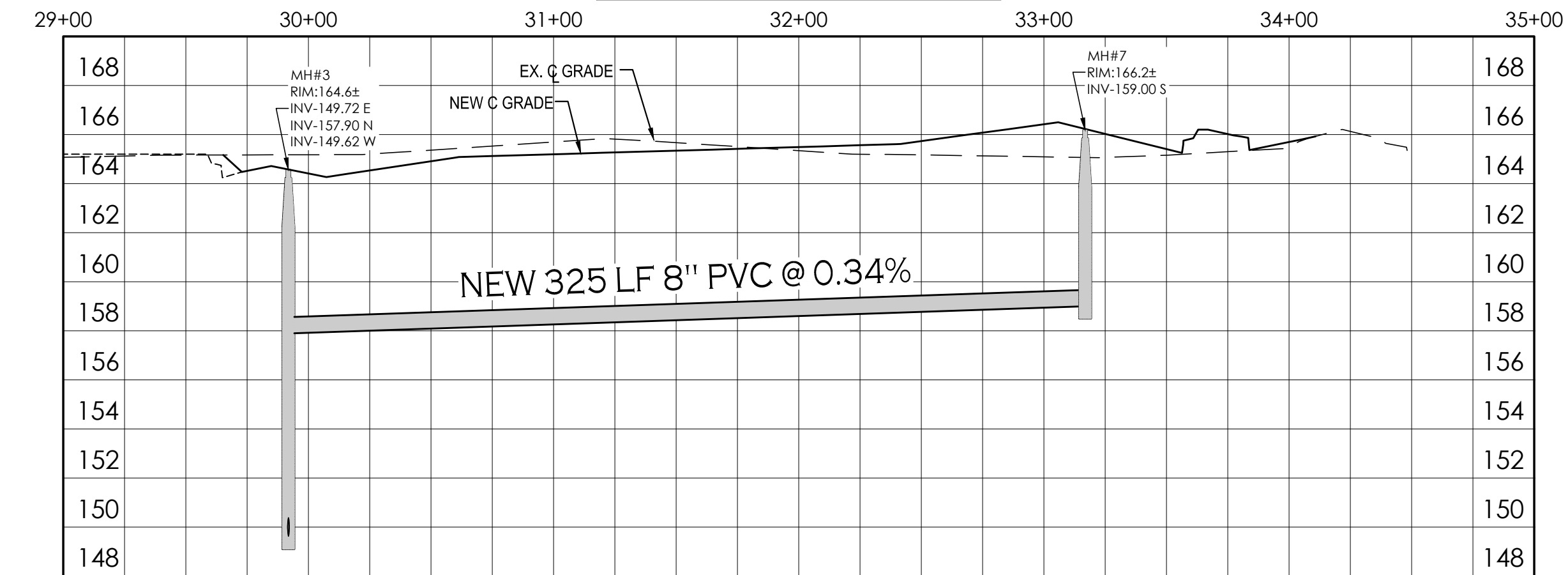
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PLUMERIA COURT PROFILE



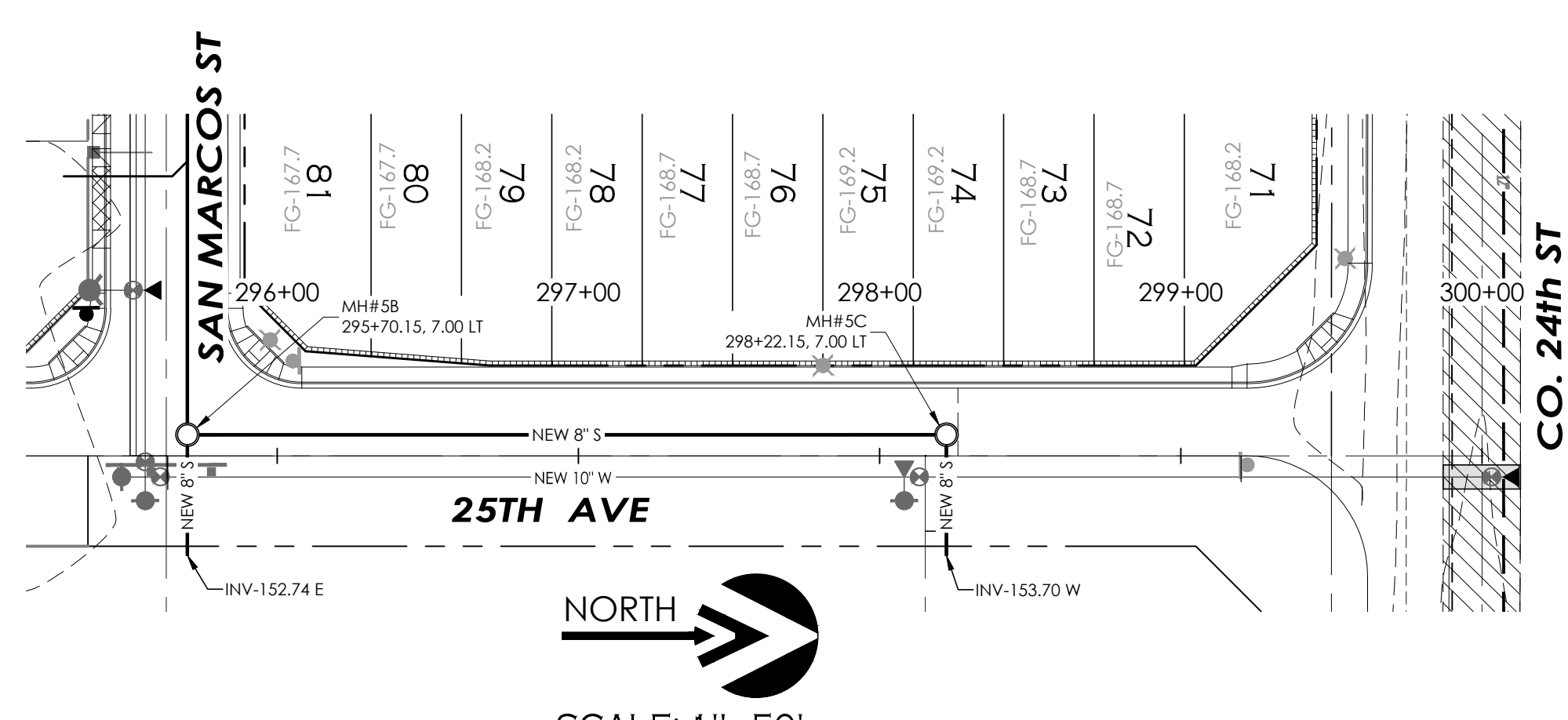
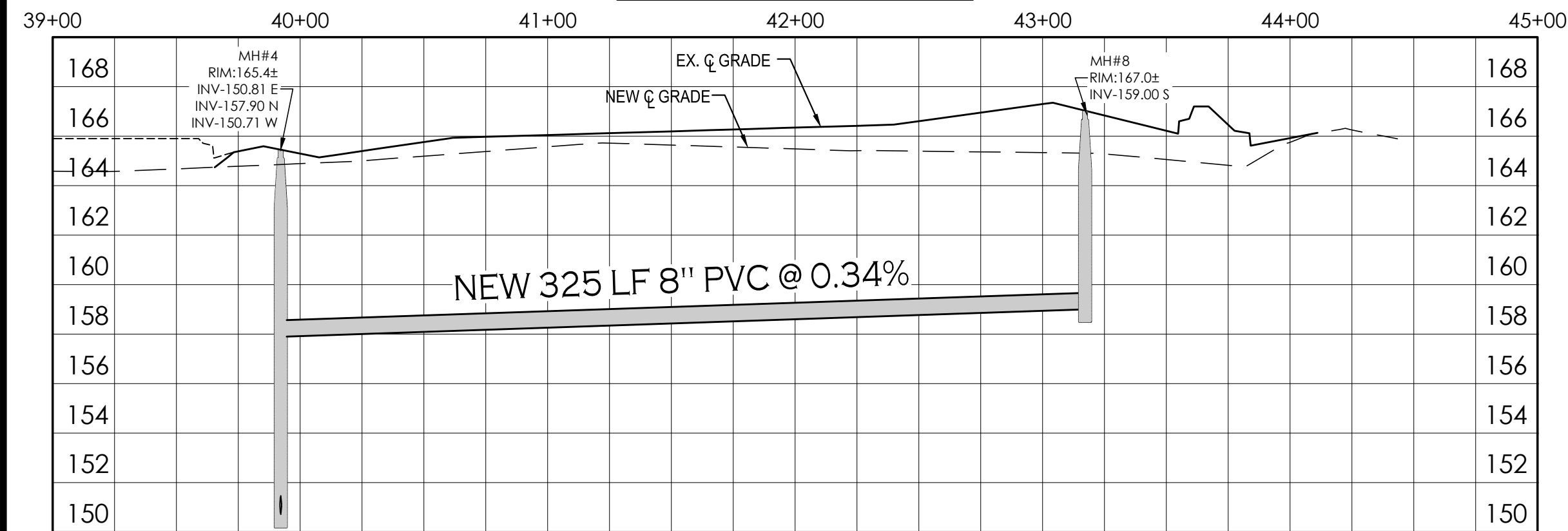
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TULIPAN COURT PROFILE



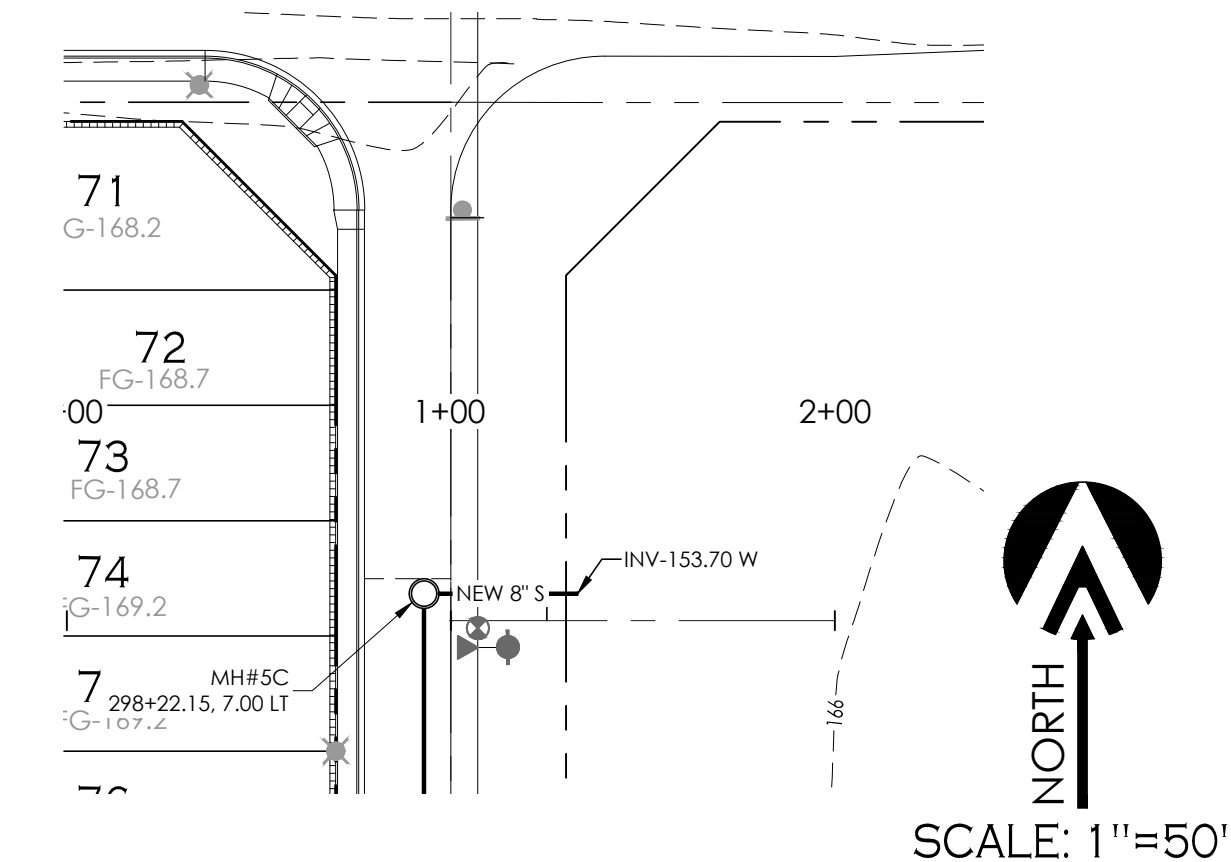
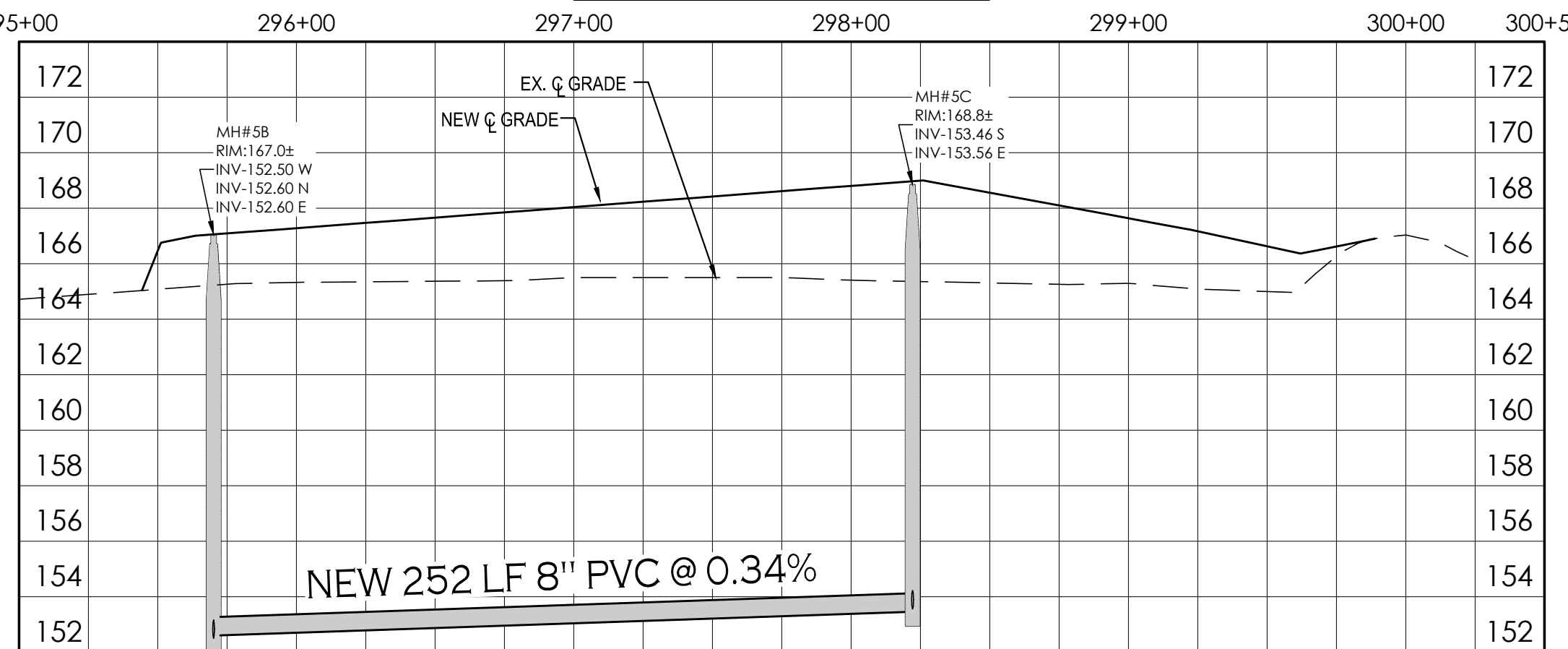
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LIRIO COURT PROFILE



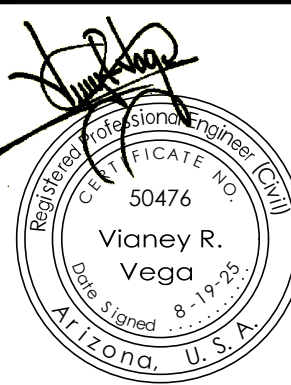
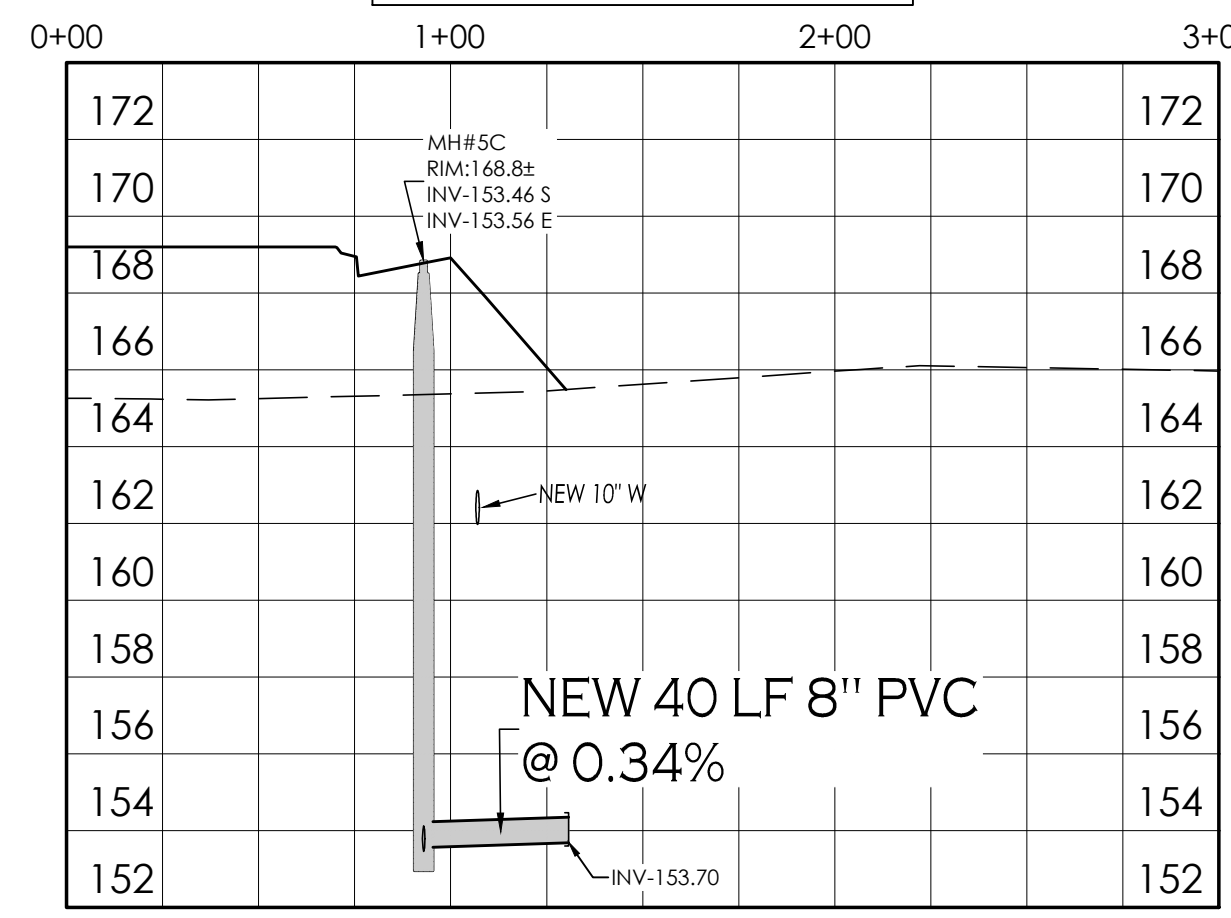
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25TH AVENUE PROFILE



NORTH  
SCALE: 1"=50'

UDALL LANE PROFILE



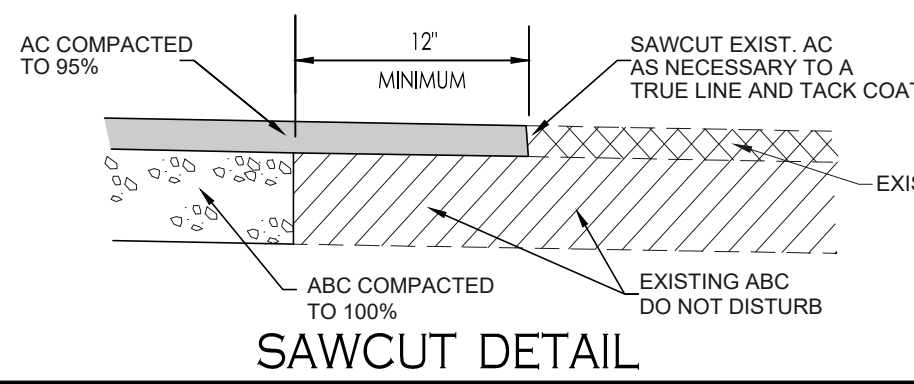
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CALL TWO WORKING DAYS  
BEFORE YOU DIG  
1-800-STAKE-IT

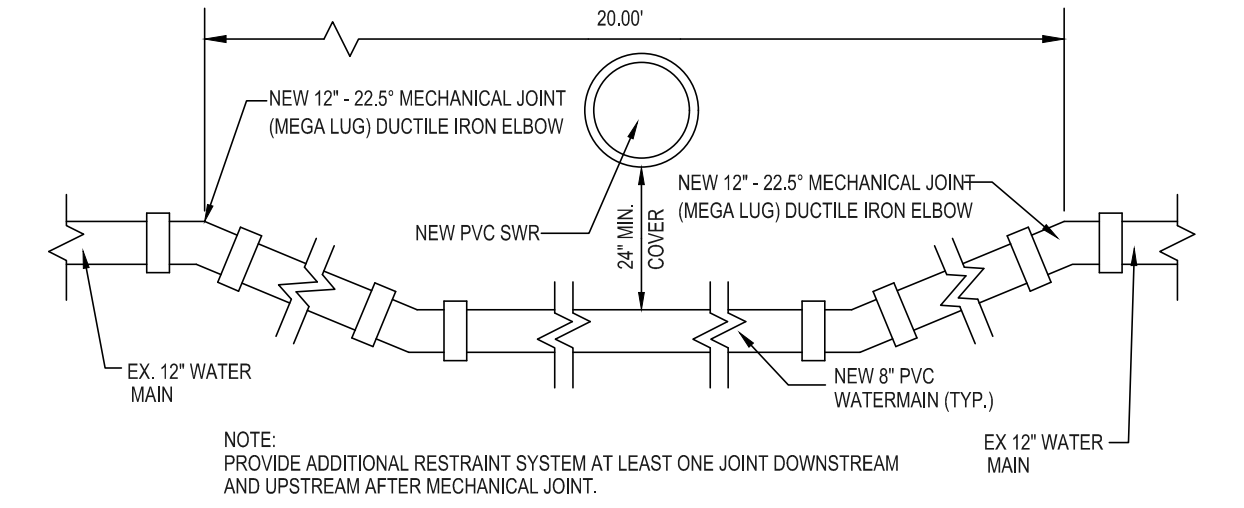
WWW.VEGA-VEGA.COM PROJECT: VV23-600 ORCHIDEA SUBDIVISION PHASE I SEWER PLAN & PROFILE

**UTILITIES WARNING**

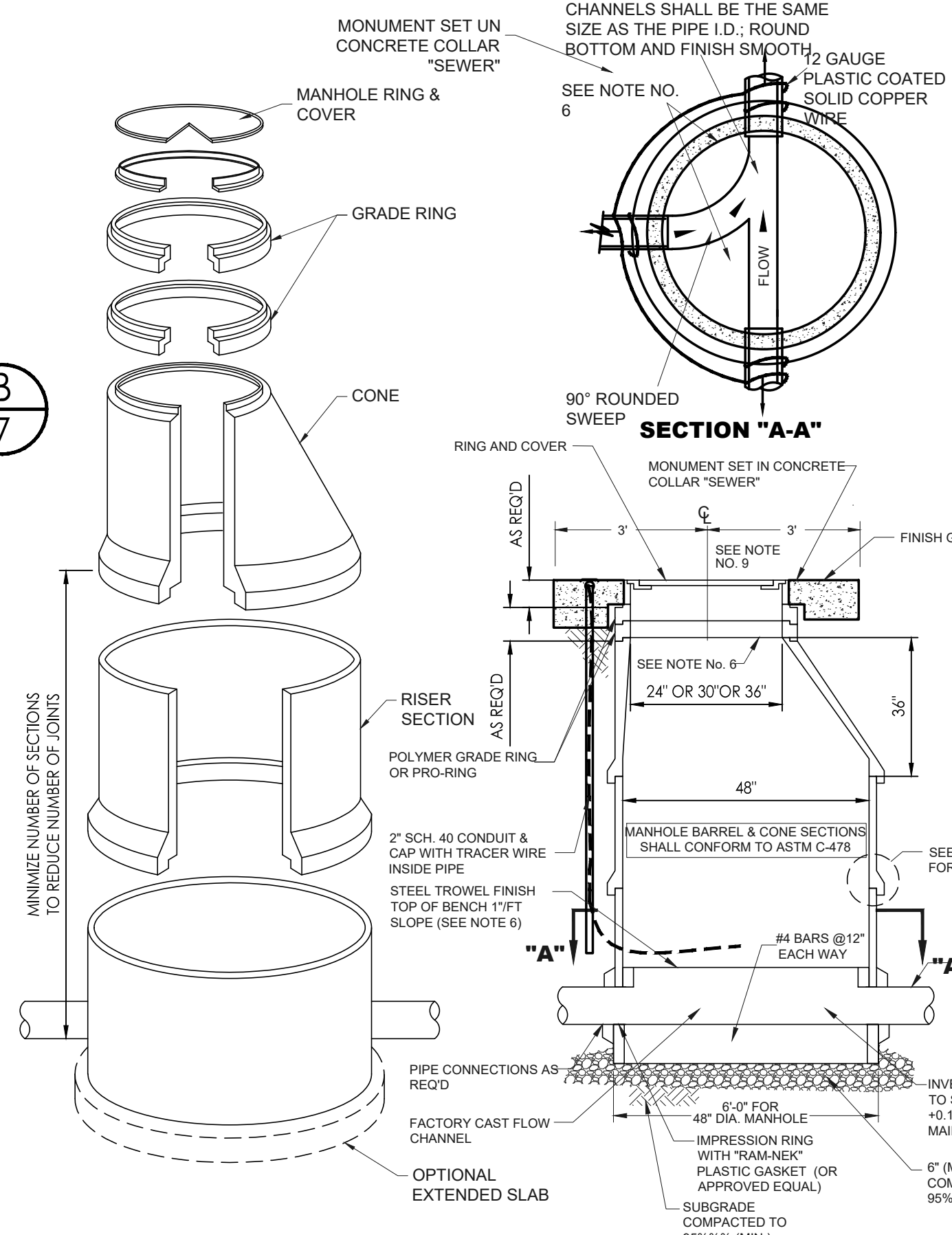
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A  
7



B  
7

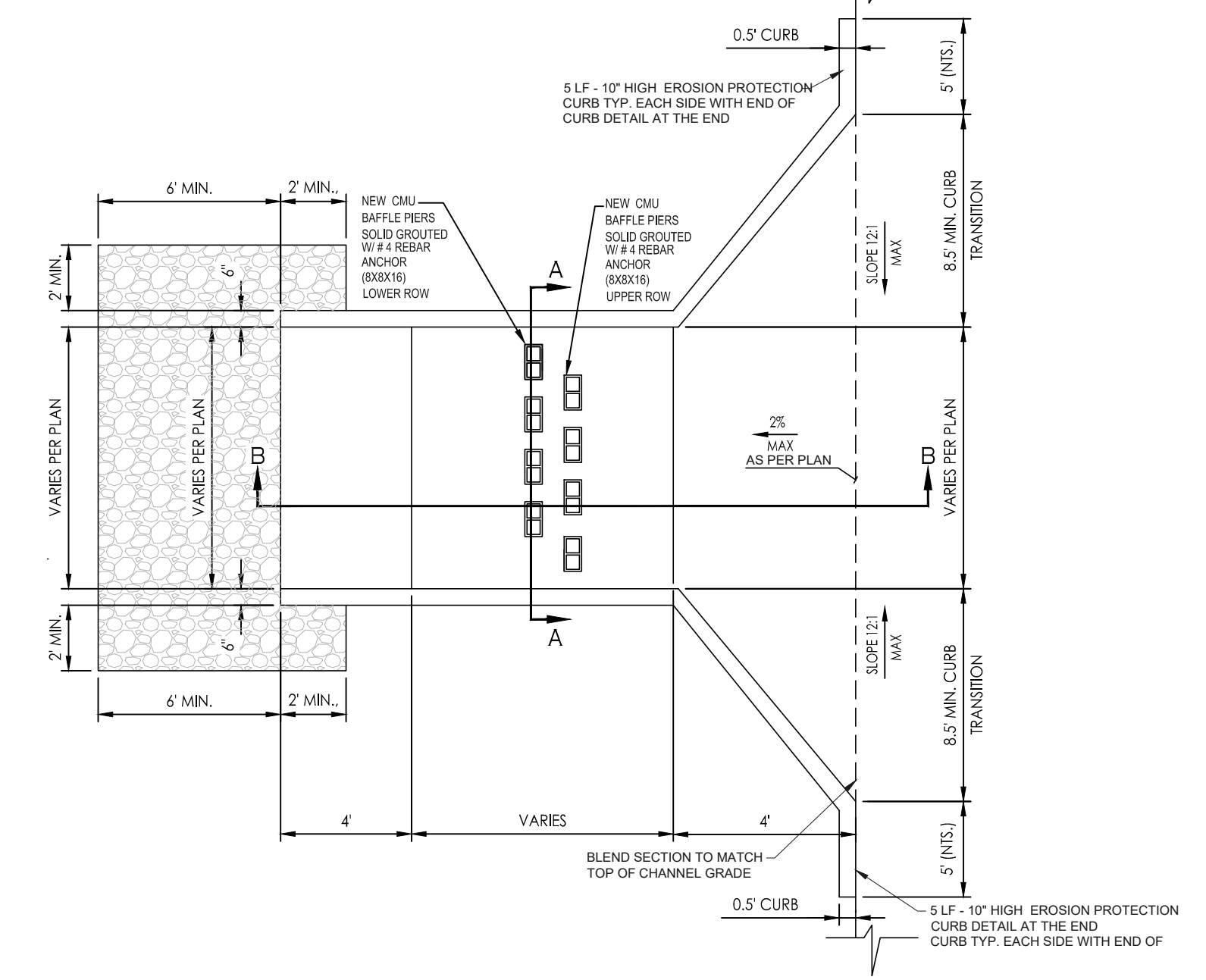


GENERAL NOTES:

- CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF SITE AND SOIL CONDITION AND SHALL NOTIFY ALL UTILITY AGENCIES PRIOR TO EXCAVATION.
- CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY CONDITIONS REQUIRING CHANGE TO THE PLANS.
- CONTRACTOR SHALL NOTIFY THE CITY OF SAN LUIS PRIOR TO START OF CONSTRUCTION.
- STANDARD SPECIFICATIONS AND ARIZONA STATE HEALTH DEPARTMENT BUL. NO. 11 SHALL APPLY TO THIS PROJECT.
- ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR TWO YEARS AFTER THE FINAL ACCEPTANCE.
- UNLESS HEREON REVISED, ALL CONSTRUCTION MATERIALS AND WORKMANSHIP WILL BE IN ACCORDANCE WITH CITY OF YUMA SPECIFICATIONS AND RECOMMENDED DETAILS AND SHALL, WHERE APPLICABLE, BE IN ACCORDANCE WITH ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY REGULATIONS.
- 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 WILL PROVIDE THE ENGINEER WITH ALL COUNTY REQUIRED COMPACTION AND CONCRETE TESTS.
- FLANGE BOLTS SHALL BE PROTECTED BY 10 MIL POLYETHYLENE WRAP.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION AND FURNISHING TO THE ENGINEER OF "AS-BUILT" RECORD DRAWINGS, TO INCLUDE COST BREAKDOWN FOR WORK. THE CONTRACTOR SHALL OBTAIN THE CONTRACTOR'S 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.
- 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.
- 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.
- 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.
- INSTALL TRACER WIRE AS PER CITY OF YUMA STANDARDS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT CONSTRUCTION MATERIAL SUBMITTALS TO CITY OF SAN LUIS FOR REVIEW AND APPROVAL.

WATER AND SEWER NOTES

- 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.
- ENGINEERING PERSONNEL SHALL BE PRESENT WHEN WATER MAINS ARE BOTH FLUSHED AND PRESSURE TESTED.
- ALL TEES, 90 DEGREE ELLS, BENDS, HYDRANTS AND DEAD END PLUGS SHALL BE THRUST BLOCKED WITH CAST-IN-PLACE CONCRETE.
- WATER LINES 4" OR LARGER SHALL BE PVC C900 DR 18 CLASS 235.
- ALL WATER LINE INSTALLATION MUST MEET OR EXCEED STANDARDS ESTABLISHED IN ADHS BULLETIN NO. 10.
- ALL PVC WATER DISTRIBUTION PIPES MUST BE APPROVED BY AND SHALL BEAR THE NSF SEAL FOR POTABLE WATER USE.
- TYPES OF TAPPING SLEEVE REQUIRED:
  - FOR SIZE ON SIZE TAP MUELLER TYPE M.J. ENDS REQUIRED.
  - FOR SMALLER TAP SIZE THAN THE MAIN SIZE, ONE OF THREE TYPES MAY BE USED:
    - CLOW "O" RING TYPE
    - RUELL "O" RING TYPE
    - MUELLER M.J. TYPE
  - MINIMUM TAPPING SLEEVE LENGTH - 18".
- ACCEPTABLE VALVE LIST:
  - ALL VALVES 12" AND UNDER ARE TO BE RESILIENT WEDGE GATE VALVES. THE FOLLOWING VALVES WILL BE ACCEPTED:
    - WATEROUS SERIES 500 RESILIENT CLOW RESILIENT WEDGE
    - AMERICAN DARLING 80 CSR RESILIENT WEDGE
  - ALL PIPES, FITTINGS, VALVES, COATINGS, ETC. SHALL CONFORM TO NSF STANDARD 61.17. IF DEAD ENDS ON 10" IF DEAD ENDS ON WATER MAINS CANNOT BE AVOIDED, THEY MUST HAVE BLOW-OFF VALVES (MIN. DIA. 2")
  - DESIGN/SECTION OF WATER LINES IN ACCORDANCE WITH A.D.E.C. BULLETIN No. 8 OR AWMA C651-92 OR LATEST VERSION.
  - WATER CONSTRUCTION STAKING SHALL BE DONE UNDER THE SUPERVISION OF A REGISTERED ENGINEER OR SURVEYOR.
  - ALL MATERIALS THAT COME INTO CONTACT WITH WATER SHALL CONFORM TO ANSINFSF STANDARD 90 AND 61. PER R18-4-213A AND B
  - CONSTRUCTION MATERIALS USED IN THE WATER SYSTEM SHALL BE LEAD FREE AS DEFINED IN A.A.C. R18-4-504 AND R18-1-101.
  - WATER LINES SHALL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH AWMA C605-94 FOR PVC PIPE. PER ENGINEERING BULLETIN NO. 10, CHAPTER 7.
  - 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 ANSIAWWA 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 ANSIAWWA C651.)
  - WATER AND SEWER LINES AND WATER AND SEWER SERVICE LINES. SEPARATION IN ACCORDANCE WITH A.A.C. R18-5-502.C. AND CITY OF YUMA STD. DETAIL 5-005. CONSTRUCT NEW WATER AND SEWER LINES AS PER CITY OF YUMA STD. DETAIL 5-010
  - VERTICALLY AND 8 FEET HORIZONTALLY UNDER ALL CONDITIONS, WHERE A SEWER FORCE MAIN CROSSES ABOVE OR LESS THAN 8 FEET FROM 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
  - WATER CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A COPY OF THE BACTERIOLOGICAL TEST RESULTS TAKEN ON THE SYSTEM.
  - ALL WATER LINES (MAINS AND SERVICES) SHALL INCLUDE THE INSTALLATION OF TRACER WIRE IN ACCORDANCE WITH AS PER CITY OF YUMA STD. DETAIL 5-030
  - TYPES OF TAPPING SLEEVE REQUIRED: SMITH-BLAIR MODEL 662-863 STAINLESS STEEL (6" AND SMALLER: 15" LONG MIN.; LARGER THAN 8" 20" LONG MIN.)
  - 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 OWMW REGIONAL OFFICE.
  - A MINIMUM OF 7" SHALL BE MAINTAINED BETWEEN PARALLEL WATER AND SEWER LINES AND WATER AND SEWER MAINS.
  - FLANGE BOLTS SHALL BE PROTECTED BY 10 MIL POLYETHYLENE WRAP.
  - 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:
    - SEWER MAIN OR SERVICE CROSSES LESS THAN 2' BELOW A WATERMAIN OR SERVICE;
    - 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.)
  - SEWER CONSTRUCTION STAKING SHALL BE DONE UNDER THE SUPERVISION OF A REGISTERED ENGINEER OR SURVEYOR.
  - SEWER PIPE SHALL BE PVC SDR 35 HAVE N.S.F. SEAL OF APPROVAL, AND MEET ASTM D-3034.
  - SEWER MAINS SHALL BE PRESSURE AND LEAKAGE TESTED WITH 4 FEET OF HEAD UPSTREAM. ALLOWABLE LEAKAGE NOT TO EXCEED 180 GAL./IN. DIA./MILE OF PIPE/DAY, PER AAC R18-9-301.D.2.)
  - EXFILTRATION FROM MANHOLES SHALL BE LIMITED TO 0.1 GALS./HR./VERTICAL FOOT.
  - DEFLECTION TEST OF AT LEAST 100% OF PLASTIC SEWER PIPE SHALL BE PERFORMED. SHORT TERM DEFLECTION IN EXCESS OF 5% SHALL BE CONSIDERED UNSERVICEABLE AND SHALL BE REPAIRED AND RETESTED, PER AAC R18-9-301.D.2.)
  - 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.
  - GRAVITY SEWER LINES MUST BE TESTED FOR LEAKAGE AS PER R18-9-E301.D.2.)
  - MANHOLES TESTING IS REQUIRED FOR 100% OF MANHOLES ACCORDING TO R18-9-E301.D.3.c.e.f.1
  - FOR CONSTRUCTION AND TESTING OF SEWER LINES REFER TO A.A.C. R18-9-E301-D(2).
  - FOR CONSTRUCTION AND TESTING OF SEWER FORCE MAIN REFER TO A.A.C. R18-9-E301-4.
  - MANHOLE CONSTRUCTION IS REQUIRED ACCORDING TO A.A.C. R18-9-E301-3.
  - THE PRESSURE TESTING OF WATERLINES SHALL BE UNDERTAKEN AS FOLLOWS AND IN DESCENDING ORDER OF PRECEDENCE:
    - 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.
    - INITIAL PRESSURE FOR THE PRESSURE TEST SHALL BE A MINIMUM OF 150 PSI. PRESSURE LOSS DURING TESTING SHALL NOT EXCEED 5 PSI.
    - A PRESSURE TEST WILL BE DEEMED AS SUCCESSFUL IF IT PASSES THE CRITERIA SET FORTH BY AWMA 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)
  - MATERIALS SHALL BE IN ACCORDANCE WITH THE APPROVED WATER SERVICE COMPONENTS LIST.
  - ALL MANHOLES SHALL BE CONSTRUCTED OF POLYMER CONCRETE



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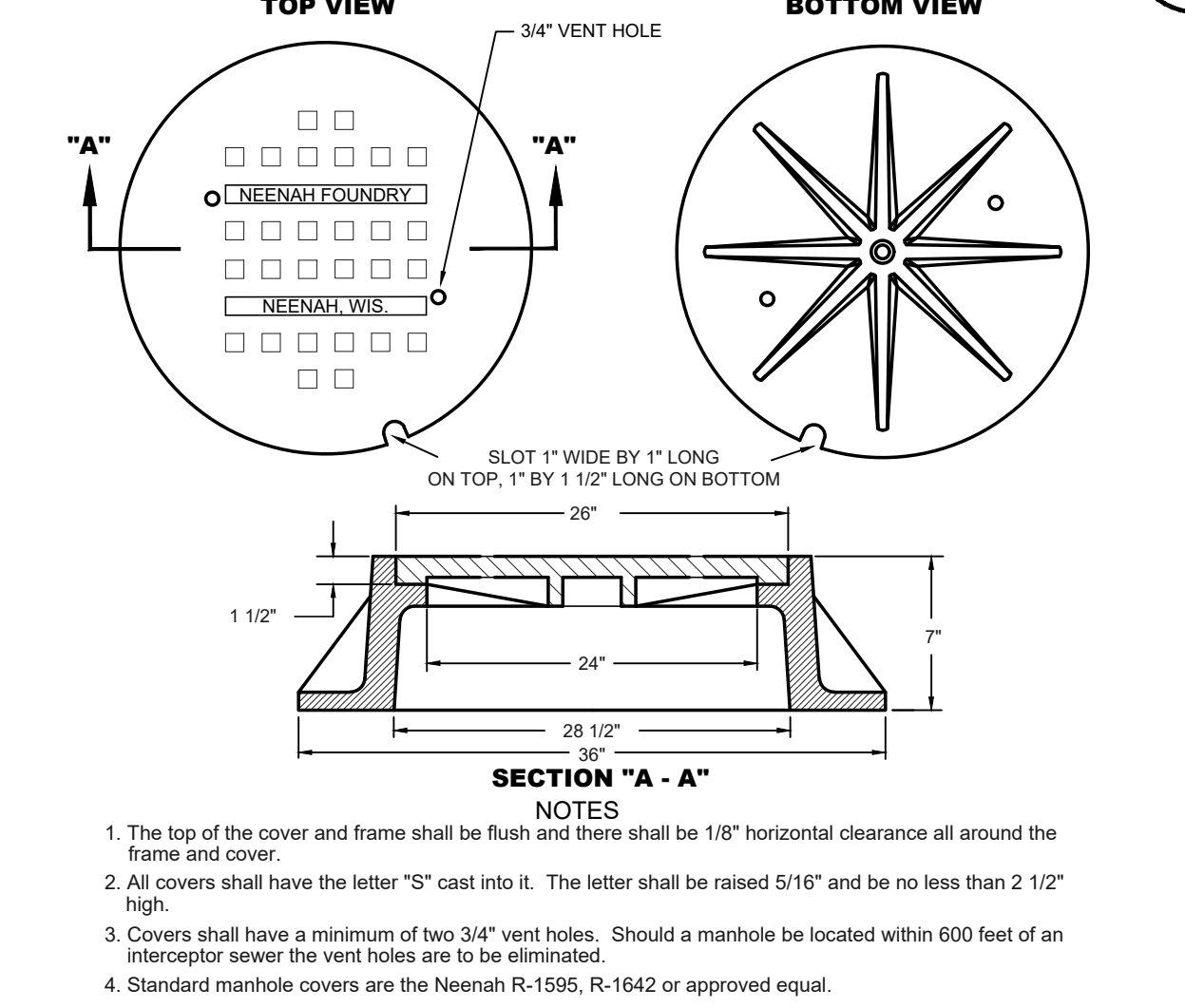
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48" POLYMER MANHOLE SPECIFICATIONS

WALL THICKNESS	AVAILABLE BASE HEIGHTS	AVAILABLE RISER HEIGHTS	WALL WEIGHT/FT	APPROX. WEIGHT 3BASE
2"	3'-4"	1', 2', 3', 4', 5', 6"	300 LBS/FT	3655 LBS

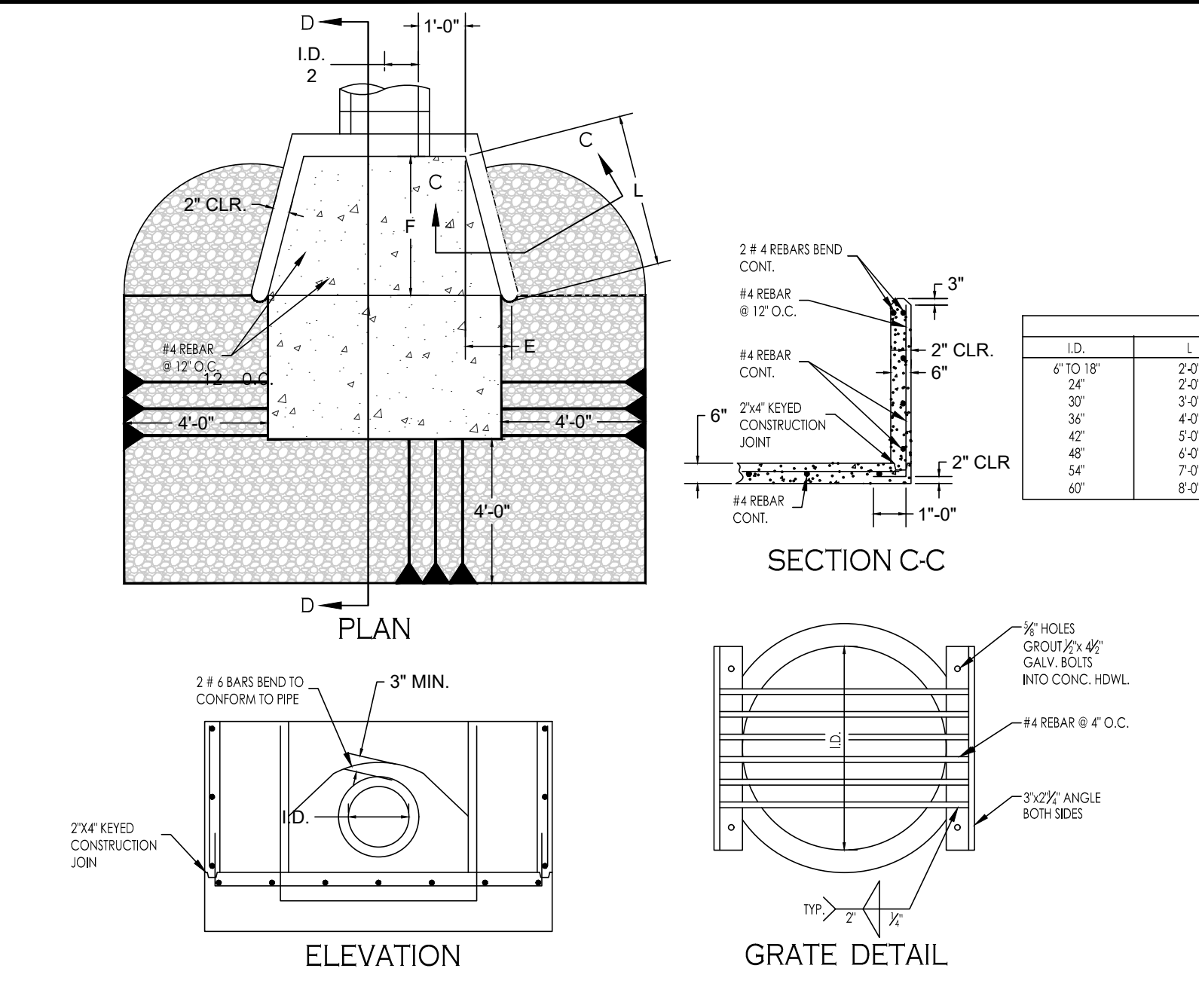
- NOTES
- Concentric manholes shall be constructed only upon the approval of the City Engineer.
  - Precast concrete cones and sections shall meet A.S.T.M. C-478 specifications (latest revision) except where shown. Concrete shall be Type III with flyash additive. Inside diameter of manhole and elevations as shown on plans.
  - Asphalt caulking shall be used to seal all joints.
  - An asphalt waterproofing seal shall be applied to the exterior surfaces of the manhole that will be exposed to ground water.
  - Not 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; (applies only to sanitary sewer manholes see Arizona Administrative Code R18-9-E 301 D.3 a Manholes General Permits: 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 40" in depth at deflection manholes; for multiple pipe penetrations with at least one pipe greater than 24"; or if sewer main is larger than 48" in diameter. Calculations shall be signed/sealed by a registered professional engineer (AZ license) and submitted to the City Engineer for review & acceptance.
  - The PVC pipe needs to be installed inside the manhole. The top 1/3-1/2 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.

PRE-CAST CONCRETE MANHOLE

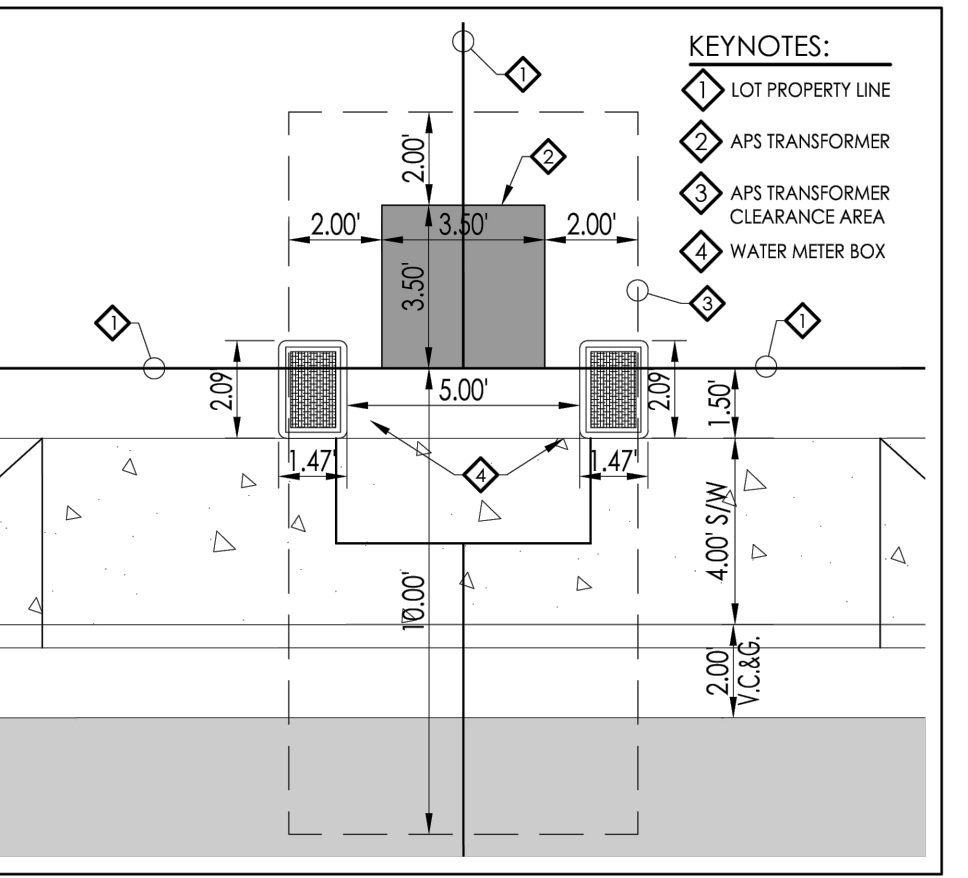


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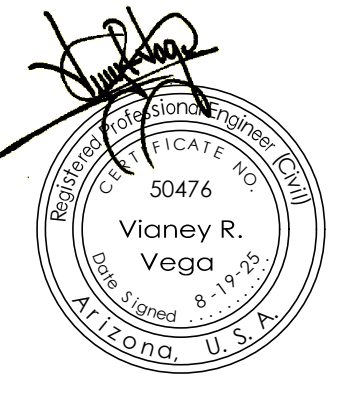


CITY OF YUMA STANDARD # 5-040

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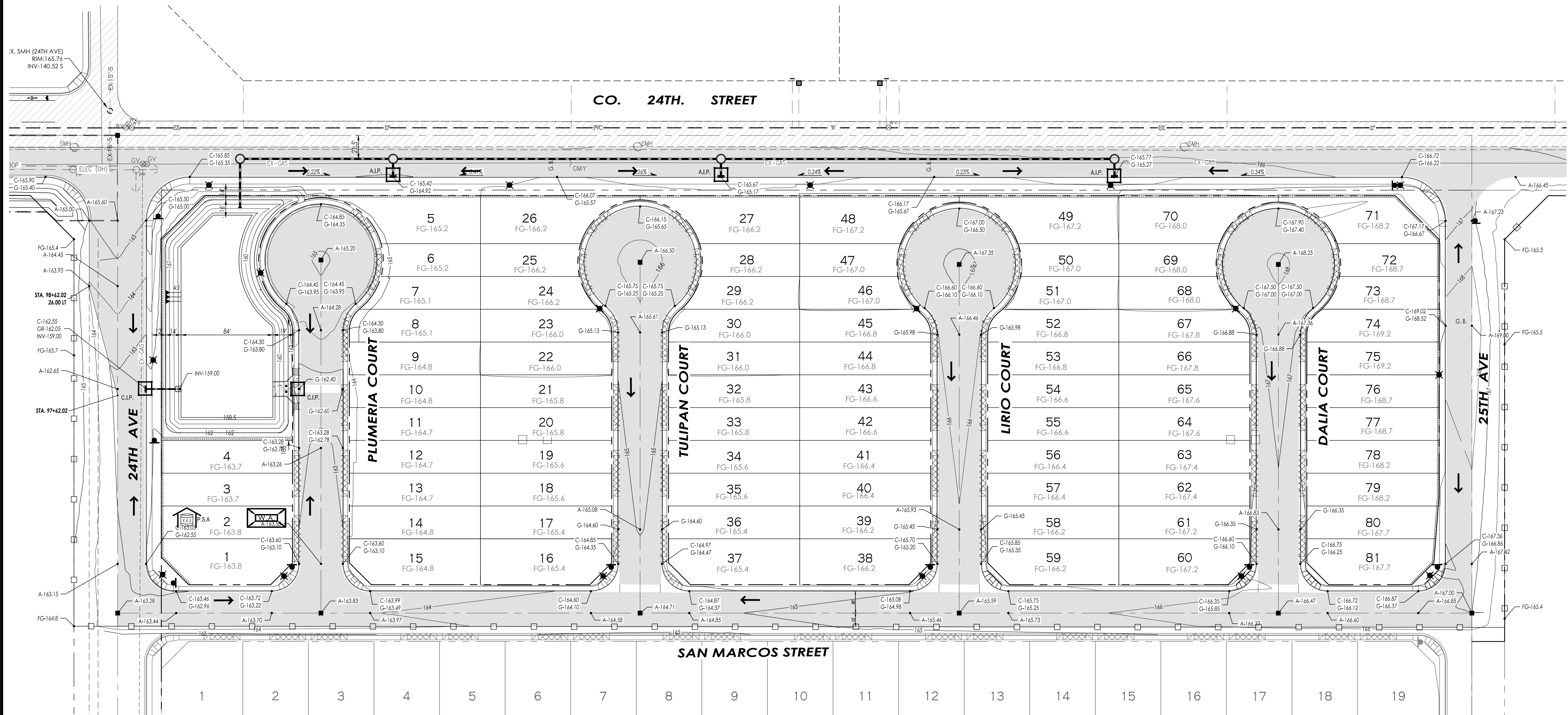
928-329-0000 TEL  
928-247-6232 FAX  
Vega & Vega  
ENGINEERS & ARCHITECTS  
2619 S. AVE. 21/2 E. STE#3  
YUMA, AZ 85364  
V@vega.com

Details And Water and Sewer Notes  
ORCHIDEA PARK TOWNHOMES PHASE 1  
SUBDIVISION



Scale: N.T.S. Date: AUG 2025  
Drawn: staff Job #: vrv23-600  
Checked: vna  
Sheet

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NORTH  
SCALE: 1"=50'

**LEGEND**

	DESIGNATED WASHOUT AREA - (COY STD. 11-120)
	DUST CONTROL
	STABILIZED CONSTRUCTION ENTRANCE - (COY STD. 11-075)
	PROTECTED STORAGE AREA (ADJUST LOCATION AS REQUIRED)
	SILT FENCE - (COY STD. 11-080)
	CURB INLET PROTECTION - (COY STD. 11-115) (GRAVEL BAG, FILTER BAG, ROCK SOCK)
	AREA INLET DRAIN PROTECTION - (COY STD. 11-115) (GRAVEL BAG, FILTER BAG, ROCK SOCK)
	SEDIMENT WATTLE - (COY STD. 11-085)
	WORK ZONE IDENTIFICATION SIGN - (COY STD. 8-045)
	DRAINAGE FLOW ARROWS

**KEYNOTES:**

- ◆ CONSTRUCT NEW WALL PRIOR TO ANY OTHER CONSTRUCTION. NEW WALL WILL PREVENT STORM WATER TO ENTER OR EXIT SITE.
- ◆ IN LIEU OF CONSTRUCTING NEW WALL PRIOR TO ANY OTHER CONSTRUCTION, THE CONTRACTOR HAS THE OPTION TO CONSTRUCT A NEW BERM.

**AREA**  
DISTURBED AREA = 11.00 ACRES

**DRAINAGE NOTE**  
DRAINAGE STORM WATER RUNOFF WILL BE STORED ON NEW RETENTION BASIN LOCATED ON THE WESTERN PART OF THE SITE, AS SHOWN IN THE DRAINAGE REPORT.

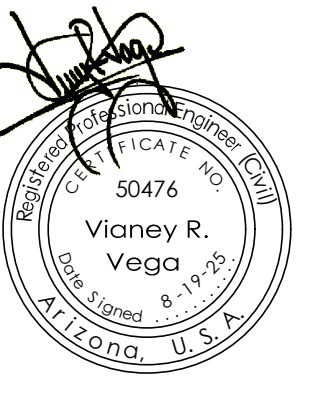
**FLOOD ZONE DESIGNATION**  
THE SUBJECT PROPERTY IS LOCATED WITHIN AN AREA HAVING A ZONE A DESIGNATION (AREAS OF 0.2% ANNUAL CHANCE FLOOD, AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE) AND AREA PROTECTED BY LEVEES FROM ITS ANNUAL CHANCE FLOOD. COMMENTARY PANEL NUMBER 04027C1548 DATED AUGUST 28, 2008, WHICH IS THE FLOOD INSURANCE RATE MAP (FIRM) (NOT PRINTED) FOR THE COMMUNITY IN WHICH THIS PROJECT IS SITUATED.

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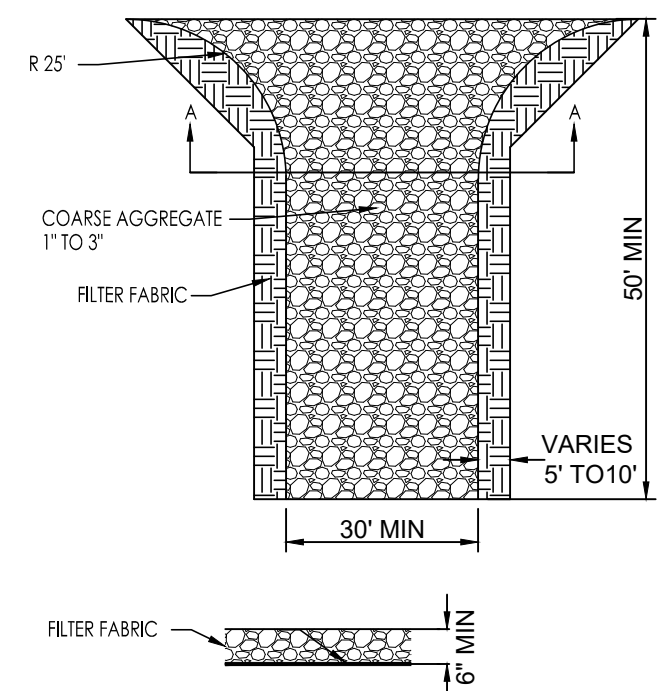
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**VEGA & VEGA ENGINEERS, PLLC**  
2619 S. AVE. 2 1/2 E. STE#3  
YUMA, AZ. 85364  
TEL: 928-329-0000  
FAX: 928-247-6232  
V@Y@vegaengineers.com

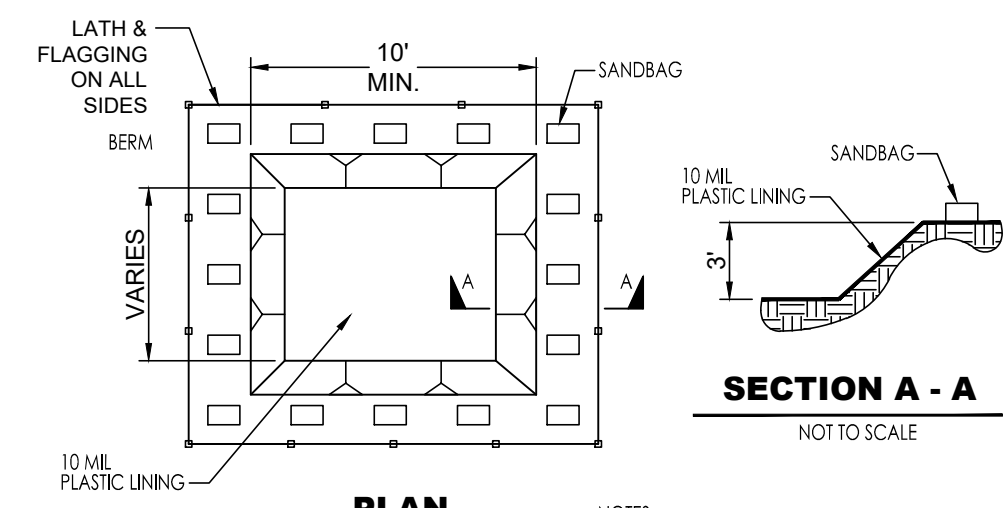
**SWPPP PLAN**  
**ORCHIDEA PARK TOWNHOMES PHASE I**  
**SUBDIVISION**



Notes:  
Scale: N.T.S. Date: AUG 2025  
Drawn: staff Job #: vrv23-600  
Checked: vna

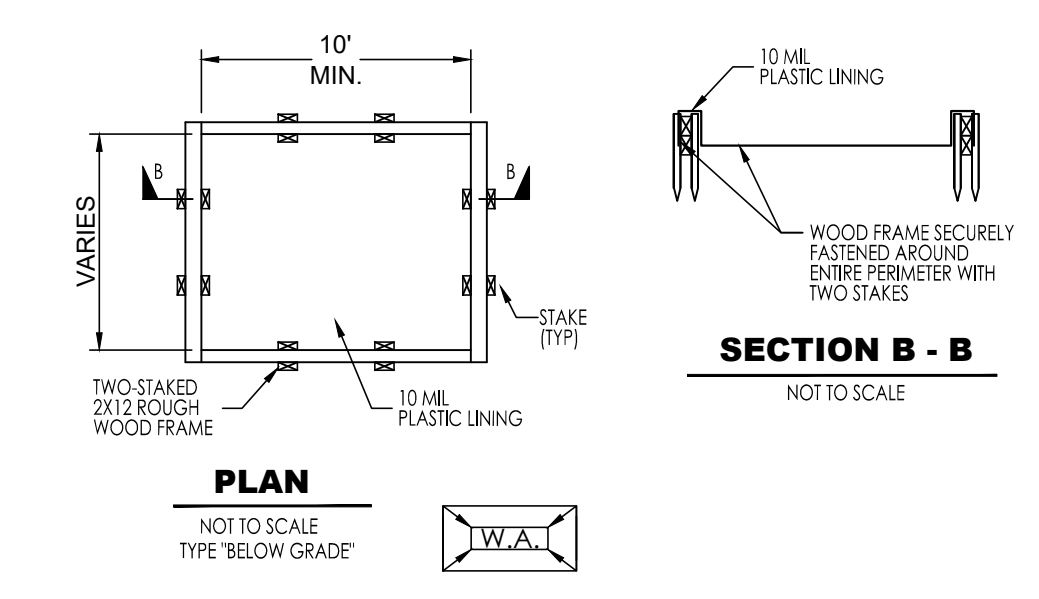


**SECTION A - A**  
STABILIZED CONSTRUCTION EXIT/ENTRANCE (SCE)



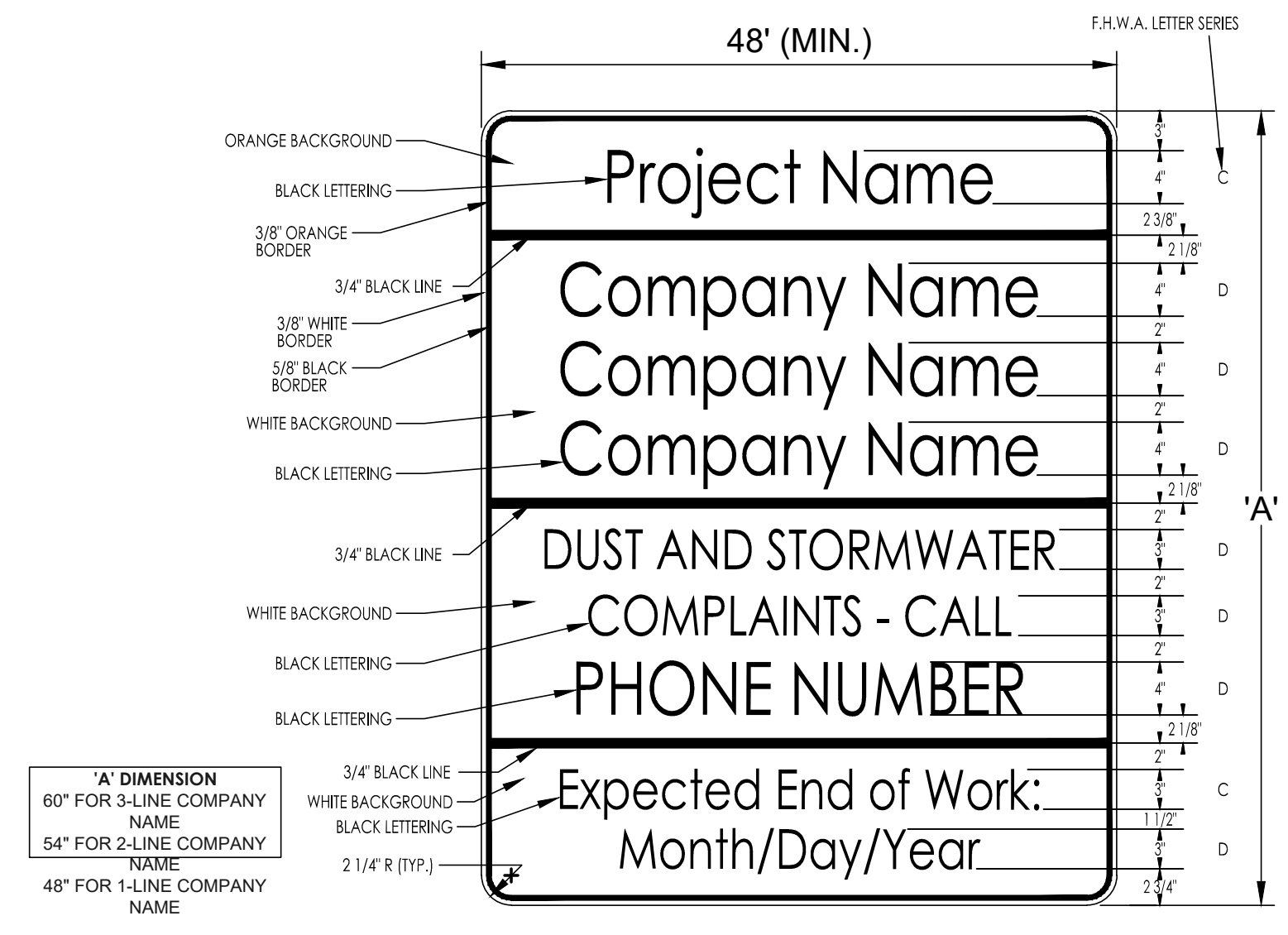
**PLAN**  
NOT TO SCALE  
TYPE 'BELOW GRADE'

**NOTES**  
1. ACTUAL LAYOUT DETERMINED IN FIELD.  
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.



**CONCRETE WASH AREA** (WA)

**SIGN WZIS-1**



**'A' DIMENSION**  
60" FOR 3-LINE COMPANY NAME  
54" FOR 2-LINE COMPANY NAME  
48" FOR 1-LINE COMPANY NAME

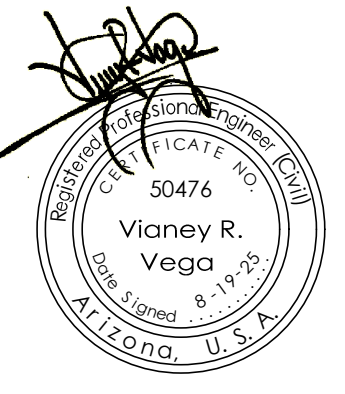
**WORK ZONE IDENTIFICATION SIGN** (WZS)

**CONSTRUCTION NOTES**

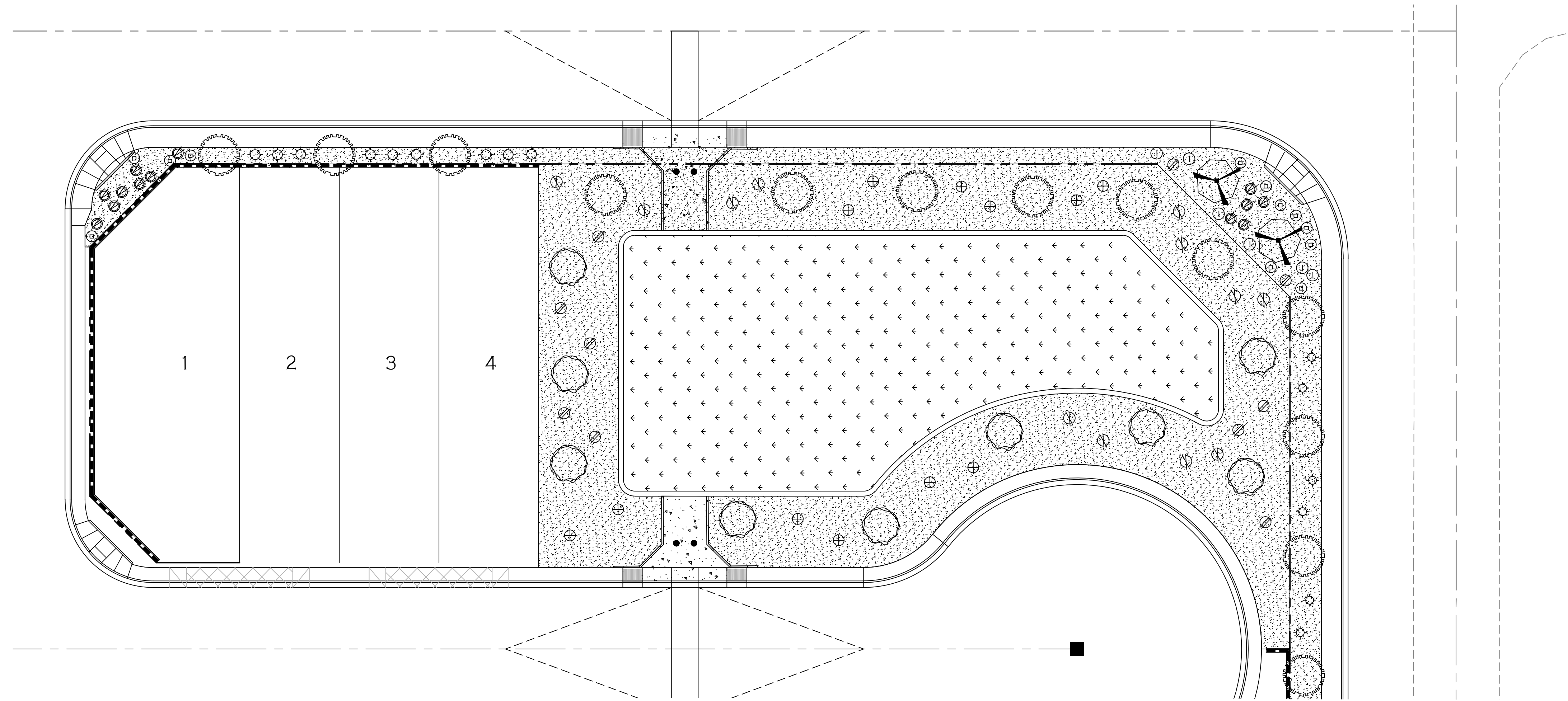
- AFTER PERMITS HAVE BEEN OBTAINED & EROSION CONTROL MEASURES INSTALLED, THE CONTRACTOR SHALL ROUGH GRADE SITE.
- CONTRACTOR SHALL PREVENT ANY SILTATION FROM ENTERING ANY STORM SEWER SYSTEM. ALL INLETS & INLET OPENINGS SHALL BE FULLY ENCIRCLED WITH SILT FENCE DURING AND AFTER CONSTRUCTION OF INLET.
-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

**UTILITIES WARNING**

UTILITIES IN THE AREA OF CONSTRUCTION ARE APPROXIMATE ONLY. THEY HAVE BEEN LOCATED FROM FIELD INVESTIGATION AND THE BEST AVAILABLE UTILITY RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION, PROTECTION AND REPAIR OF ALL UTILITIES ENCOUNTERED DURING CONSTRUCTION WHETHER SHOWN ON THESE PLANS OR NOT. THE CONTRACTOR SHALL CONTACT ALL RESPECTIVE UTILITIES AND HAVE ALL UTILITIES FIELD-LOCATED PRIOR TO CONSTRUCTION. IF ANY UNKNOWN SUBSURFACE STRUCTURES ARE ENCOUNTERED DURING CONSTRUCTION, IT SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF ENGINEER OF RECORD PRIOR TO PROCEEDING.



Notes:  
Scale: N.T.S. Date: AUG 2025  
Drawn: staff Job #: vrv23-600  
Checked: vna



NORTH  
SCALE: 1"=30'

### PLANT LEGEND

TREES				SHRUBS			GROUND COVER/HARDSCAPES		
SYMBOL	COMMON NAME	BOTANICAL NAME	SIZE	SYMBOL	COMMON NAME	BOTANICAL NAME		SIZE	
	Red Pistach	Pistacia Chnensis	24" box		Arizona Yellow Bells	Techoma Stans	5 gallon		3/4" Yuma White d.g.
	Elm	Ulmus Parviflora	24" box		Bird of paradise	Caesalpinia Gilliesii	5 gallon		
	Live Oak	Cuercus Virginiana	24" box		Red yucca	Hesperaloe Parviflora	5 gallon		Seeded Turf
	Mulga	Acacia Aneura	24" box		Lagmans Sage	Leucophyllum Lagmaniae	5 gallon		
	Shoestring Acacia	Acacia Syenophyllia	24" box		Yellow Mound Lantana	Lantana Camara	5 gallon		6" X 6" Concrete Curb
					Choral Fountain	Russelia Equiseiformis	5 gallon		
					Rosemary	Rosmarinus Tuscon Blue	5 gallon		

4th. Ave. & Retention Basin  
**ORCHIDEA PARK**  
TOWNHOME SUBDIVISION

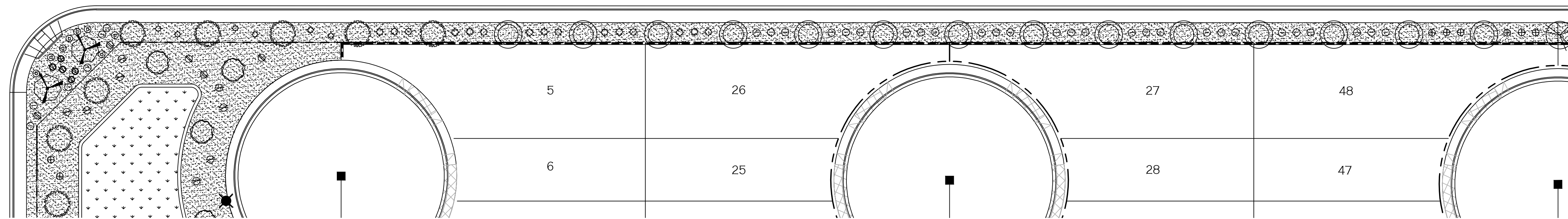
**VEGA & VEGA**  
ENVIRONMENTAL ENGINEERS, P.L.L.C.  
2619 S. AVE. 2 1/2 E. STE#3  
YUMA, AZ. 85364  
TEL: 928-329-0000  
FAX: 928-247-6232  
VnV@vegaivvega.com

Landscaping

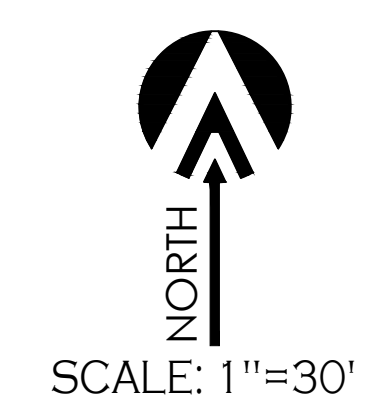
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Drawn: staff | Job #: vnv23-600  
Checked: vna

Sheet  
**L1.1**

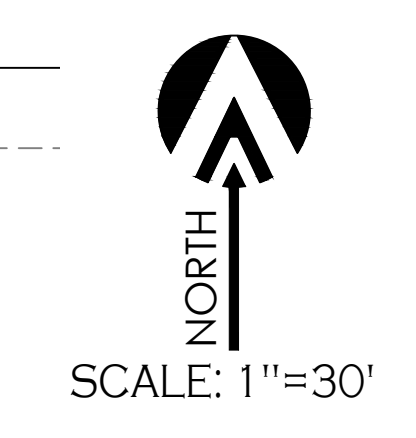
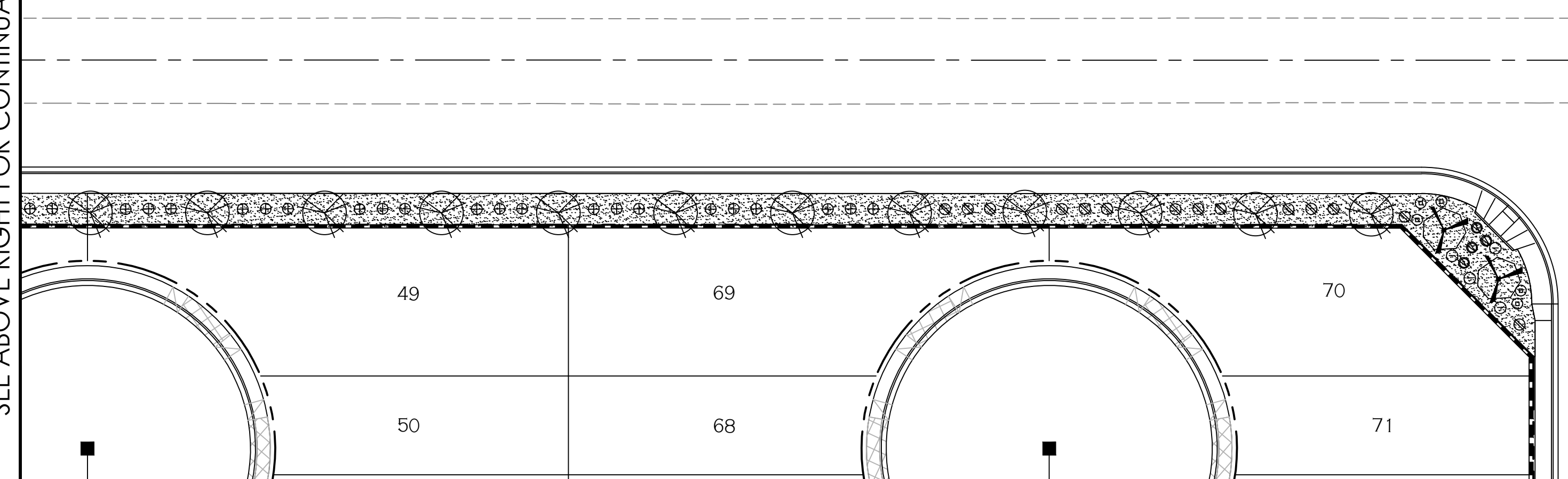




SEE BELOW LEFT FOR CONTINUATION



SEE ABOVE RIGHT FOR CONTINUATION



### PLANT LEGEND

TREES				SHRUBS				GROUND COVER/HARDSCAPES	
SYMBOL	COMMON NAME	BOTANICAL NAME	SIZE	SYMBOL	COMMON NAME	BOTANICAL NAME	SIZE		
	Red Pistach	Pistacia Chnensis	24" box		Arizona Yellow Bells	Techoma Stans	5 gallon		3/4" Yuma White d.g.
	Elm	Ulmus Parviflora	24" box		Bird of paradise	Caesalpinia Gilliesii	5 gallon		
	Live Oak	Cuercus Virginiana	24" box		Red yucca	Hesperaloe Parviflora	5 gallon		Seeded Turf
	Mulga	Acacia Aneura	24" box		Lagmans Sage	Leucophyllum Lagmaniae	5 gallon		
	Shoestring Acacia	Acacia Syenophyllia	24" box		Yellow Mound Lantana	Lantana Camara	5 gallon		
					Choral Fountain	Russelia Equiseiformis	5 gallon		6" X 6" Concrete Curb
					Rosemary	Rosmarinus Tuscon Blue	5 gallon		

4th. Ave. & Retention Basin  
**ORCHIDEA PARK**  
 TOWNHOME SUBDIVISION

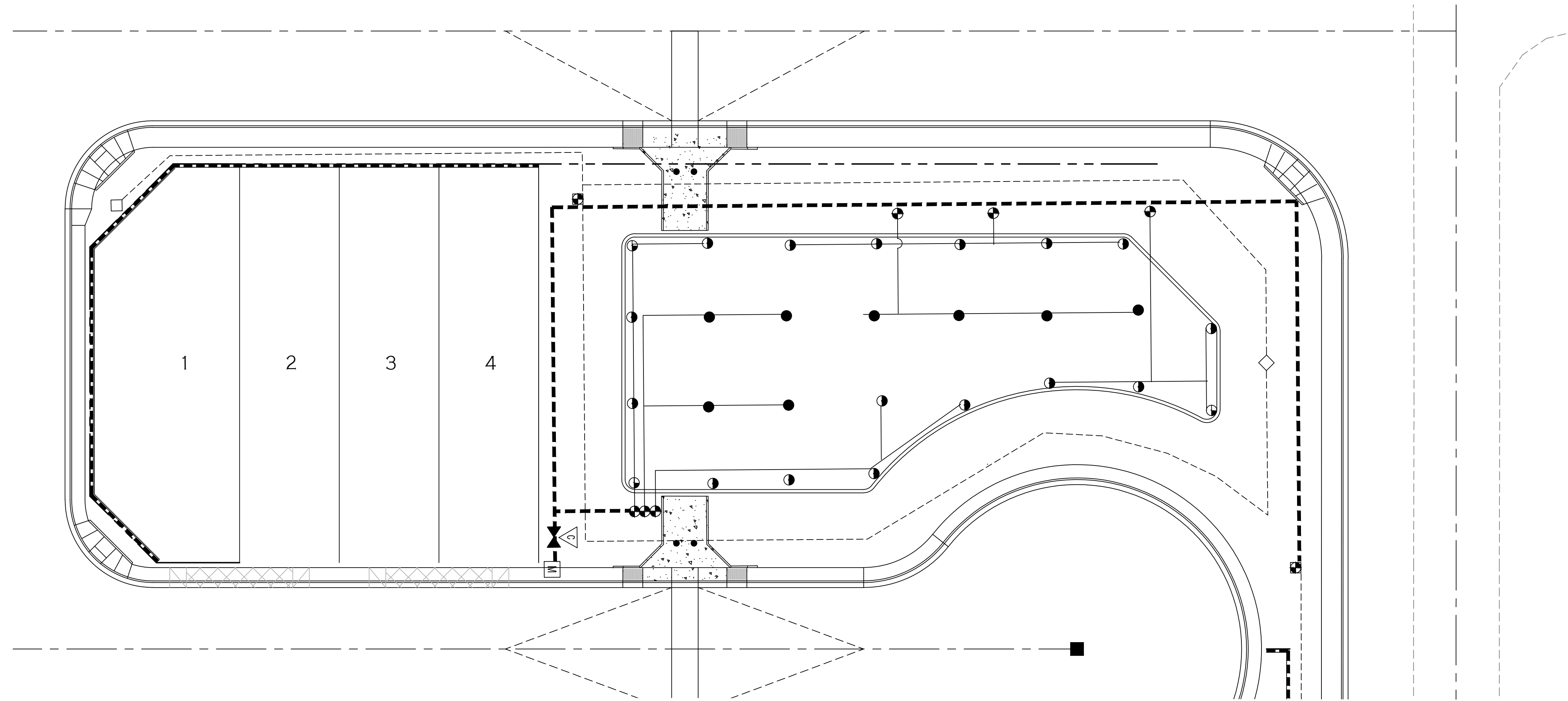
Landscaping

Notes:  
 Scale: N.J.S. | Date: APR 2024  
 Drawn: staff | Job #: vni23-600  
 Checked: vna

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**L1.2**



**VEGA & VEGA**  
 ENVIRONMENTAL DESIGN  
 2619 S. AVE. 2 1/2 E. STE#3  
 YUMA, AZ. 85364  
 928-329-0000 TEL  
 928-247-6232 FAX  
 VnV@vegaivvega.com



NORTH  
SCALE: 1"=30'

### IRRIGATION

DESCRIPTION	MANUFACTURER	MODEL
WATER METER (FIELD VERIFY LOCATION)	BY OTHERS	1 1/2" (SEE CIVIL)
BACK FLOW PREVENTER WITH ENCLOSURE CONTROLLER	FEBCO	PV811/2"
ELECTRIC CONTROL VALVE	HUNTER (solar)	XC HIBRID 18 STA
DRIP VALVE ASSEMBLY	HUNTER	1" ICV
PVC BALL VALVE	HUNTER	1" SCH 40
ELECTRIC VALVE	SPEARS	ICV-1"
VALVE BOX	HUNTER	TAN STANDARD
FILTER	CARSON	1" PRB100-200
REGULATOR	RAINBIRD	1" 30 PSI
FLUSH VALVE END OF 3/4" LATERAL	RAINBIRD	MHT-3/4"
1 1/2" PVC MAINLINE	SCH 40	
1" PVC DRIP LATERAL	1" PVC	
PVC SPRINKLER LATERAL	SEE DETAILS FOR PIPE SIZING	
HUNTER 120 SPRINKLER HEAD RED FULL NOZ 25' @ 4 GPM WITH .5 PRECIP AT 45 PSI		
HUNTER 120 SPRINKLER HEAD RED FULL NOZ 25' @ 4 GPM WITH .5 PRECIP AT 45 PSI		
HUNTER 120 SPRINKLER HEAD RED HALF NOZ 25' @ 3 GPM WITH .5 PRECIP AT 45 PSI		

### IRRIGATION NOTES

- CONTRACTOR RESPONSIBLE FOR FULL AND EFFICIENT COVERAGE
- VERIFY PRESSURE BEFORE LAY OUT
- MINIMUM PRESSURE 60 PSI AT MAIN LINE
- VALVE LOCATIONS ARE ONLY APPROXIMATE
- DRIP VALVES NOT TO EXCEED 5 GPM  
LAWN VALVES NOT TO EXCEED 45 GPM
- DRAWN FOR CLARITY ALL IRRIGATION TO BE INSTALLED IN LANDSCAPE AREA
- ALL SLEEVES ARE SCH 40
- ALL SLEEVES TO HAVE 18" COVER MINIMUM
- IF BACKFILL MATERIAL HAS DEBRIS LARGER THAN 1" SHADE WITH MORTAR SAND 6" ABOVE 6" BELOW PIPE  
SEE PIPE AND SLEEVING DETAILS D-10
- IF PROPER PRESSURE IS NOT AVAILABLE NOTIFY OWNERS REPRESENTATIVE BEFORE ANY WORK IS STARTED
- HEAD AND VALVE PLACEMENT ARE ONLY DIAGRMATIC  
FIELD VERIFY ALL LOCATIONS ON PLANS

4th. Ave. & Retention Basin  
**ORCHIDEA PARK**  
TOWNHOME SUBDIVISION

**VEGA & VEGA**  
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YUMA, AZ. 85364  
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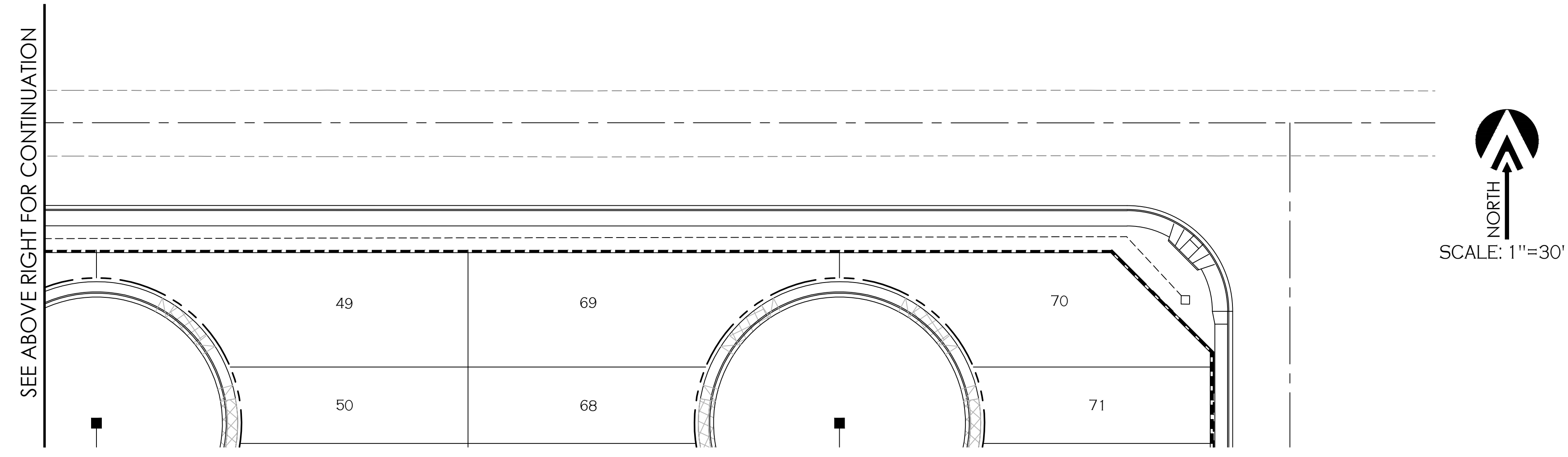
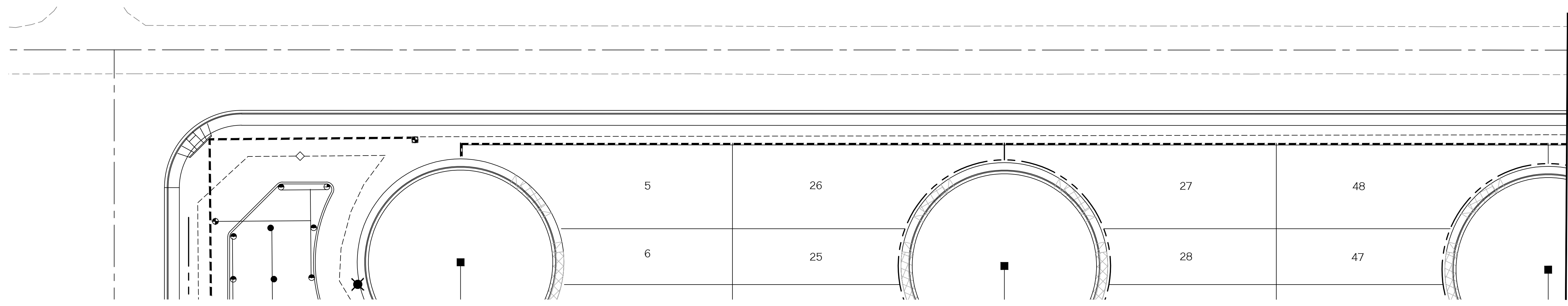
Irrigation

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Scale: N.J.S. | Date: APR 2024  
Drawn: staff | Job #: vnv23-600  
Checked: vna

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### IRRIGATION

DESCRIPTION	MANUFACTURER	MODEL
WATER METER(FIELD VERIFY LOCATION)	BY OTHERS	1 1/2"(SEE CIVIL)
BACK FLOW PREVENTER	FEBCO	PV/B1 1/2"
WITH ENCLOSURE	GUARDSHACK	WITH SLAB
CONTROLLER	HUNTER (solar)	XC HIBRID 18 STA
ELECTRIC CONTROL VALVE	HUNTER	1" ICV
DRIP VALVE ASSEMBLY	HUNTER	1"
PVC BALL VALVE	SPEARS	1" SCH 40
ELECTRIC VALVE	HUNTER	ICV-1"
VALVE BOX	CARSON	TAN STANDARD
FILTER	RAINBIRD	1" PRB100-200
REGULATOR	RAINBIRD	1" 30 PSI
FLUSH VALVE END OF 3/4" LATERAL	SPEARS OR EQUAL	MHT-3/4"
1 1/2" PVC MAINLINE	SCH 40	
1" PVC DRIP LATERAL	1" PVC	
PVC SPRINKLER LATERAL	SEE DETAILS FOR PIPE SIZING	
HUNTER 1 20 SPRINKLER HEAD RED FULL NOZ		
25' @ 4 GPM WITH .5 PRECIP AT 45 PSI		
HUNTER 1 20 SPRINKLER HEAD RED FULL NOZ		
25' @ 4 GPM WITH .5 PRECIP AT 45 PSI		
HUNTER 1 20 SPRINKLER HEAD RED HALF NOZ		
25' @ 3 GPM WITH .5 PRECIP AT 45 PSI		

### IRRIGATION NOTES

- CONTRACTOR RESPONSIBLE FOR FULL AND EFFICIENT COVERAGE
- VERIFY PRESSURE BEFORE LAY OUT
- MINIMUM PRESSURE 60 PSI AT MAIN LINE
- VALVE LOCATIONS ARE ONLY APPROXIMATE
- DRIP VALVES NOT TO EXCEED 5 GPM  
LAWN VALVES NOT TO EXCEED 45 GPM
- DRAWN FOR CLARITY ALL IRRIGATION TO BE INSTALLED IN LANDSCAPE AREA
- ALL SLEEVES ARE SCH 40
- ALL SLEEVES TO HAVE 18" COVER MINIMUM
- IF BACKFILL MATERIAL HAS DEBRIS LARGER THAN 1" SHADE WITH MORTAR SAND 6" ABOVE  
6" BELOW PIPE  
SEE PIPE AND SLEEVING DETAILS D-10
- IF PROPER PRESSURE IS NOT AVAILABLE NOTIFY OWNERS REPRESENTATIVE BEFORE ANY WORK IS STARTED
- HEAD AND VALVE PLACEMENT ARE ONLY DIAGRMATIC  
FIELD VERIFY ALL LOCATIONS ON PLANS

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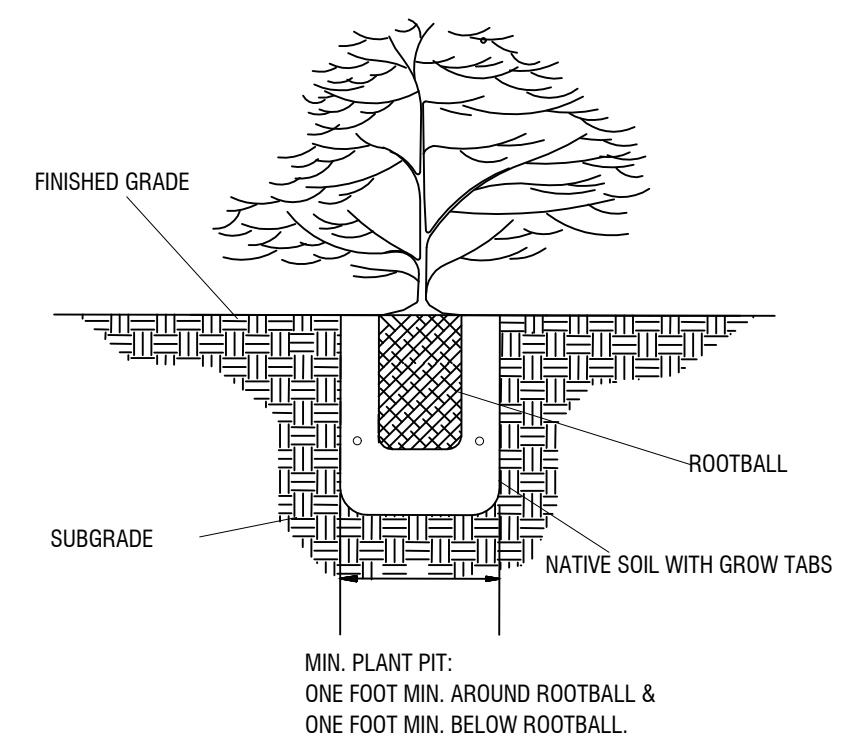
Irrigation

Notes:

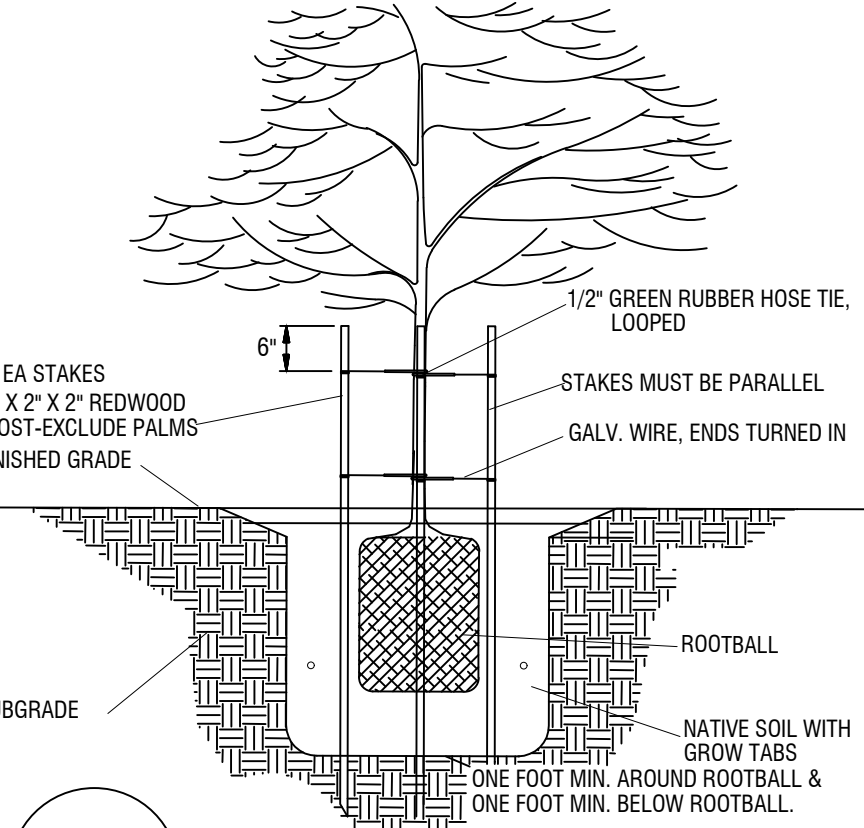

Scale: N.J.S. | Date: APR 2024  
 Drawn: staff | Job #: vrv23-600  
 Checked: vna

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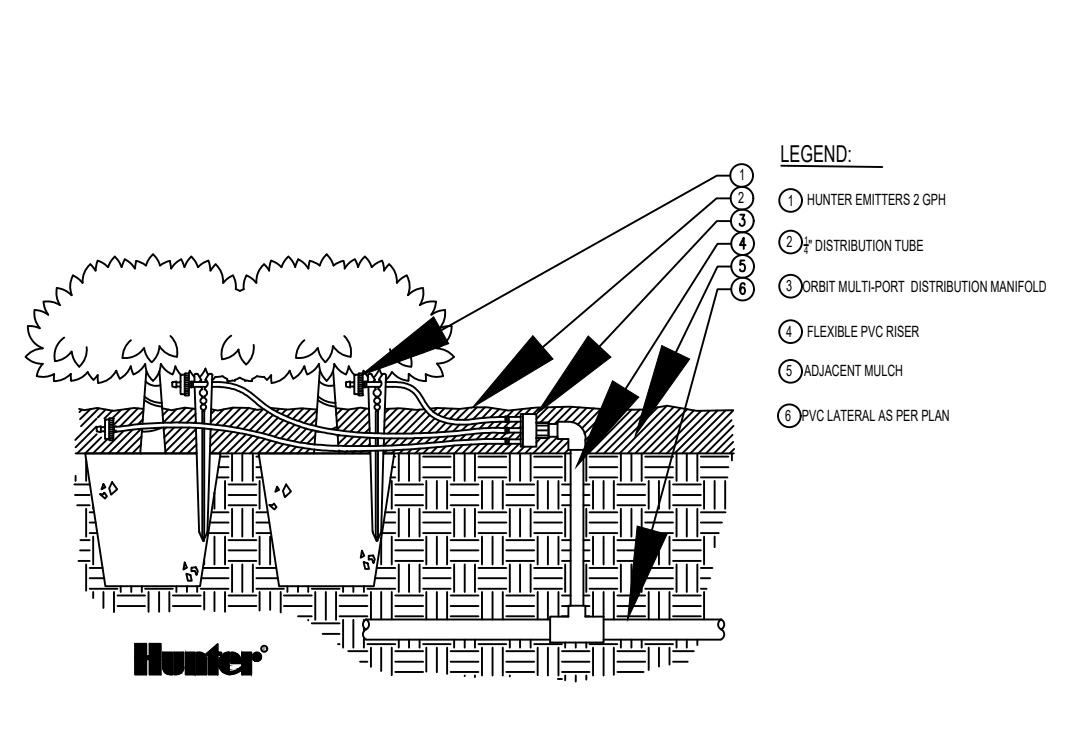




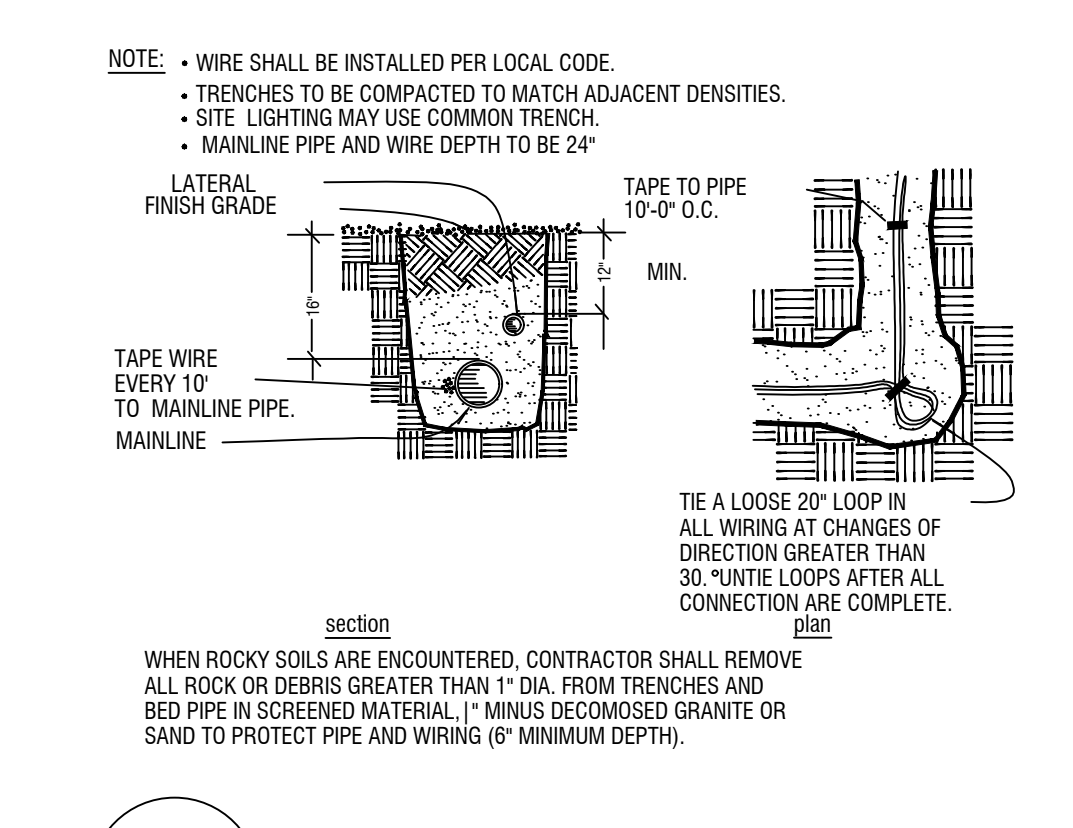
**D1 SHRUB PLANTING**



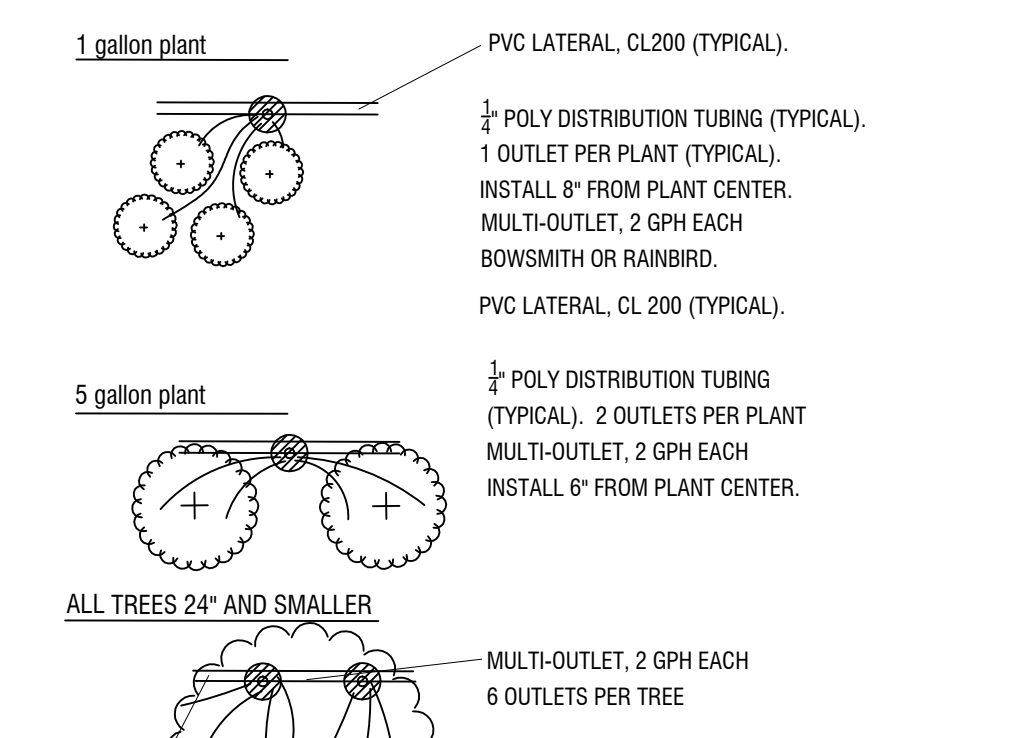
**D6 TREE PLANTING**



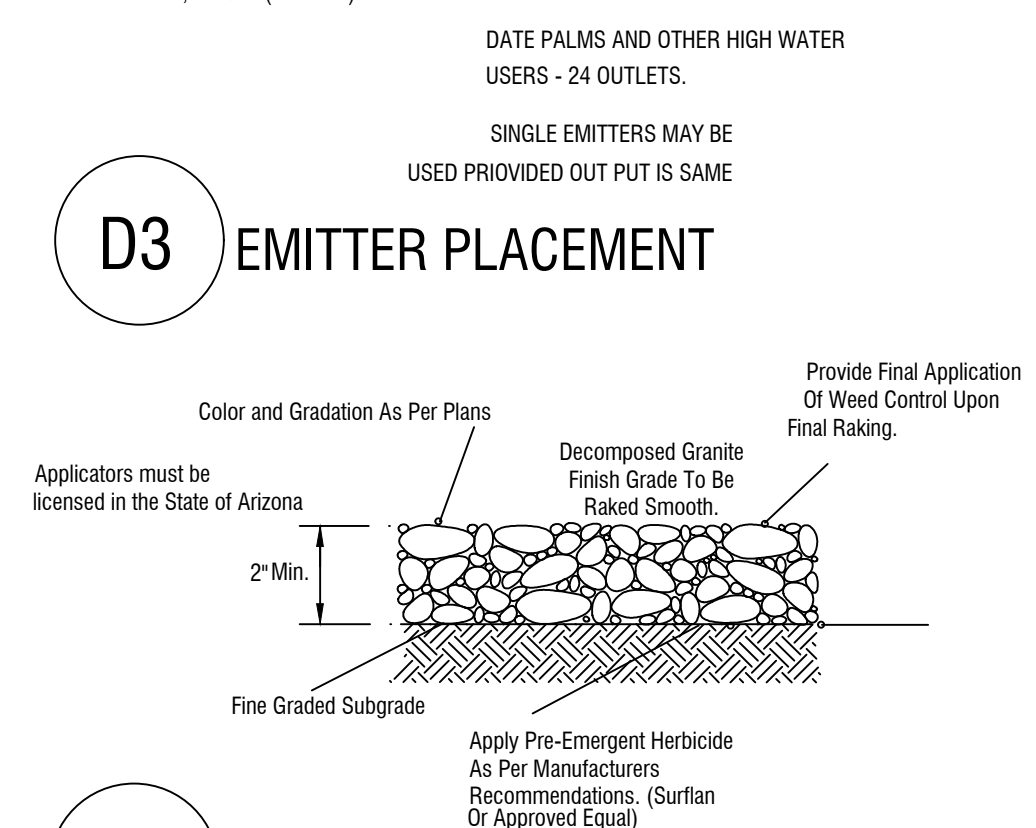
**D2 MULTIPORT MANIFOLD**



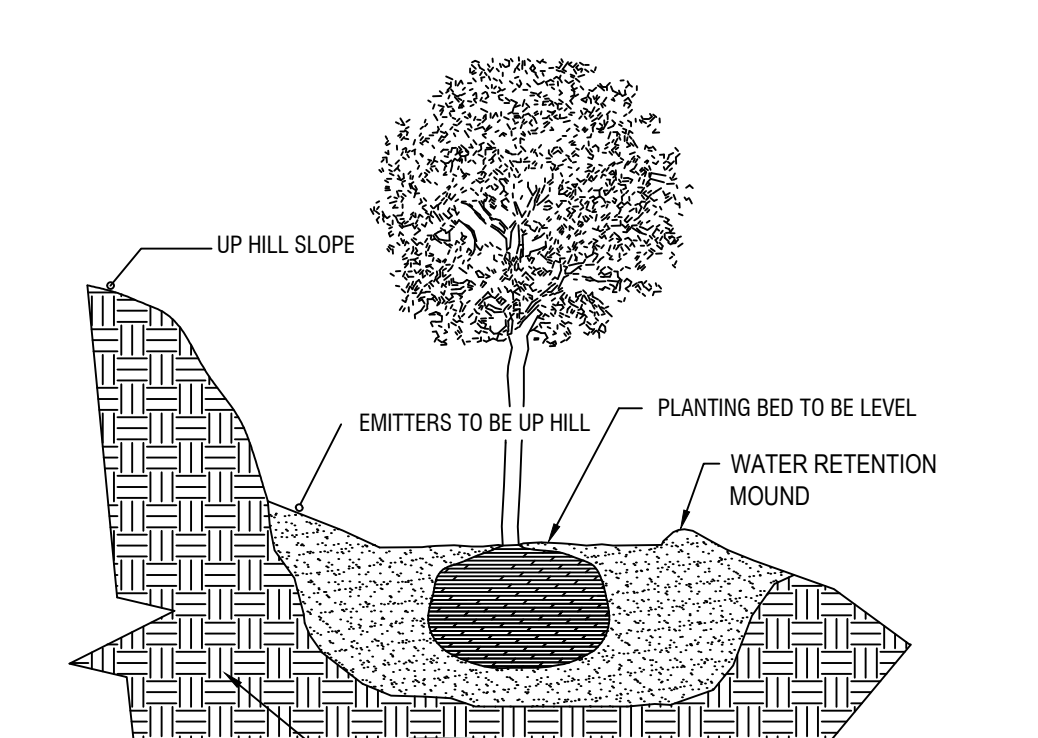
**D7 PIPE AND WIRE TRENCHING**



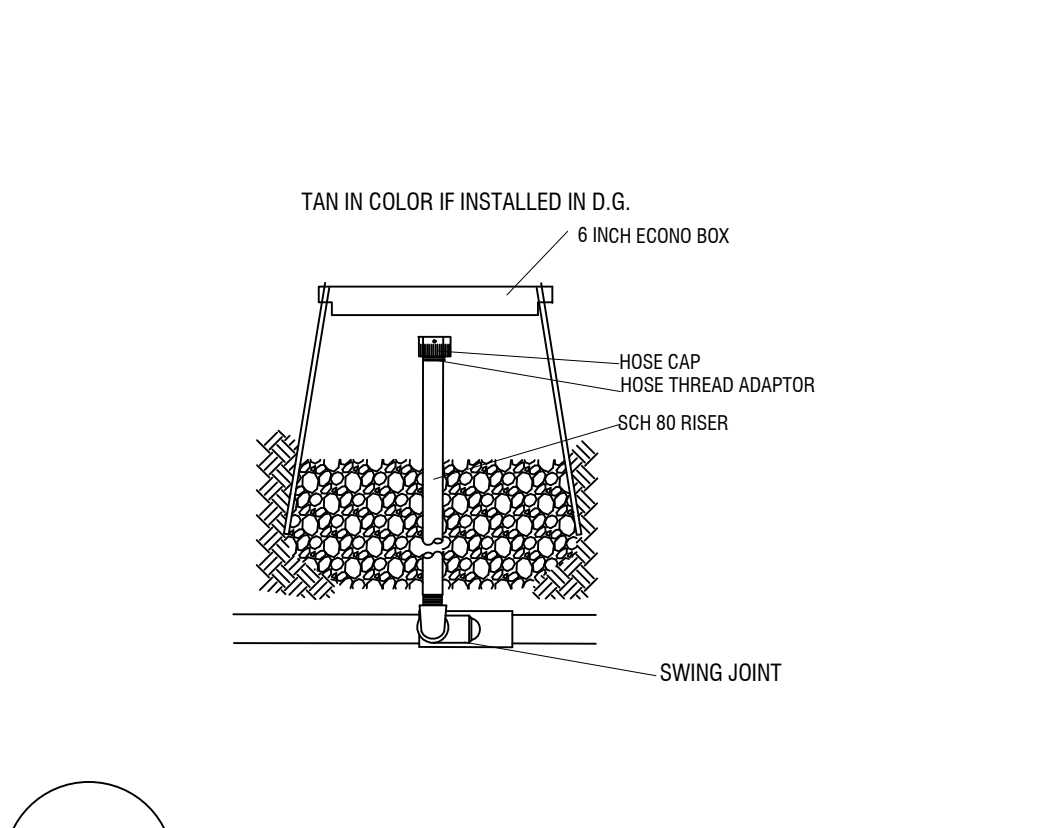
**D3 EMITTER PLACEMENT**



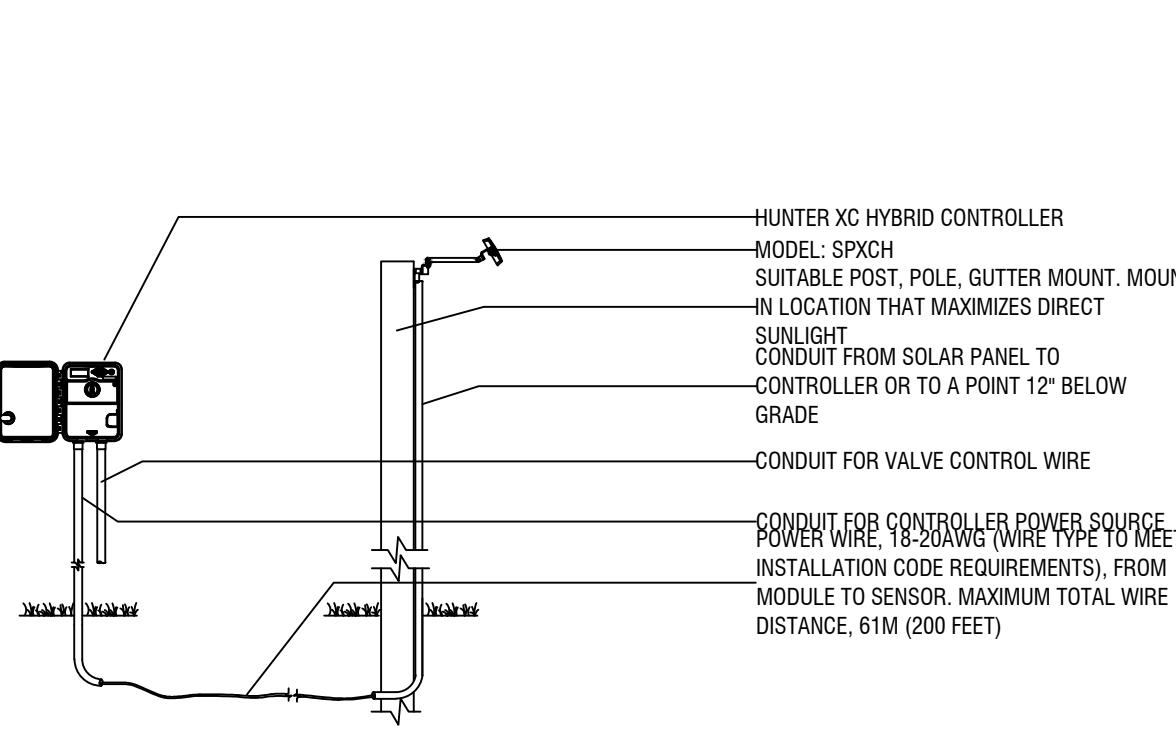
**D8 DECOMPOSED GRANITE**



**D4 PLANTED ON SLOPE**



**D9 FLUSH OUT**

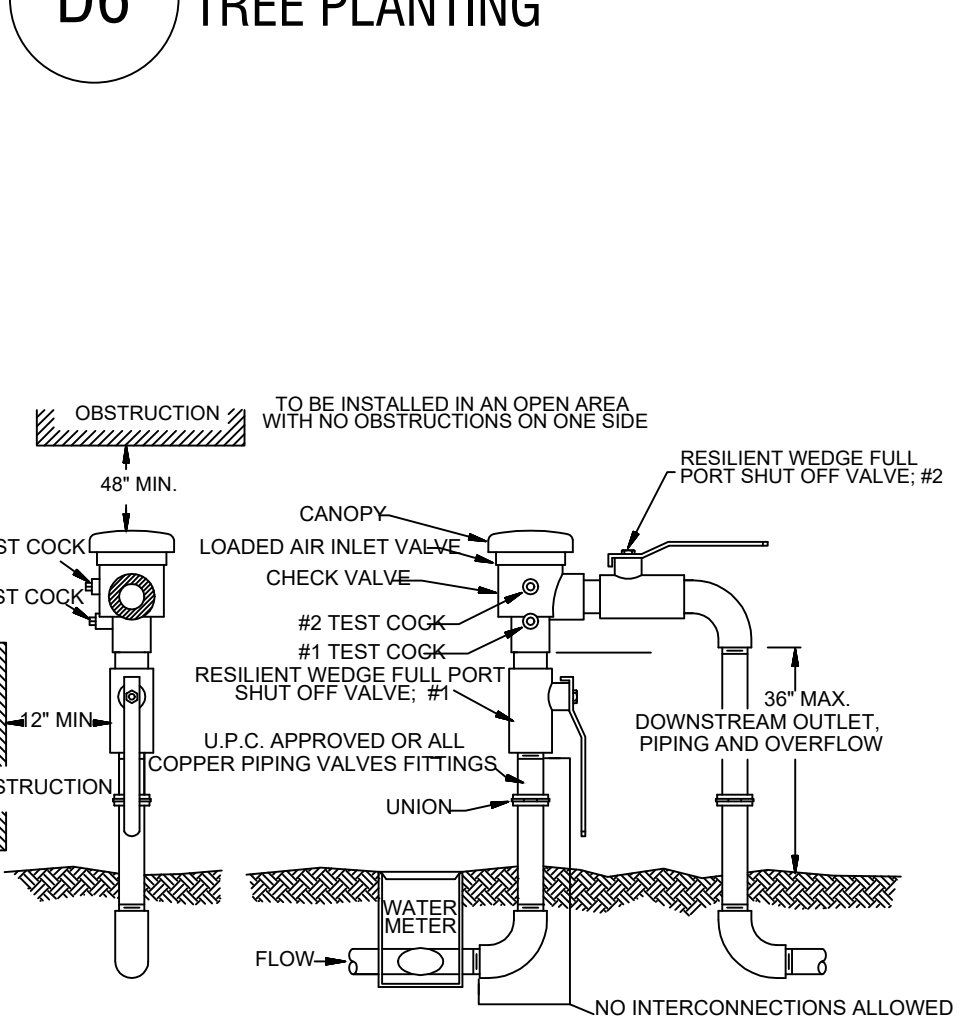


**D5 SOLAR PANEL FOR XC HYBRID**

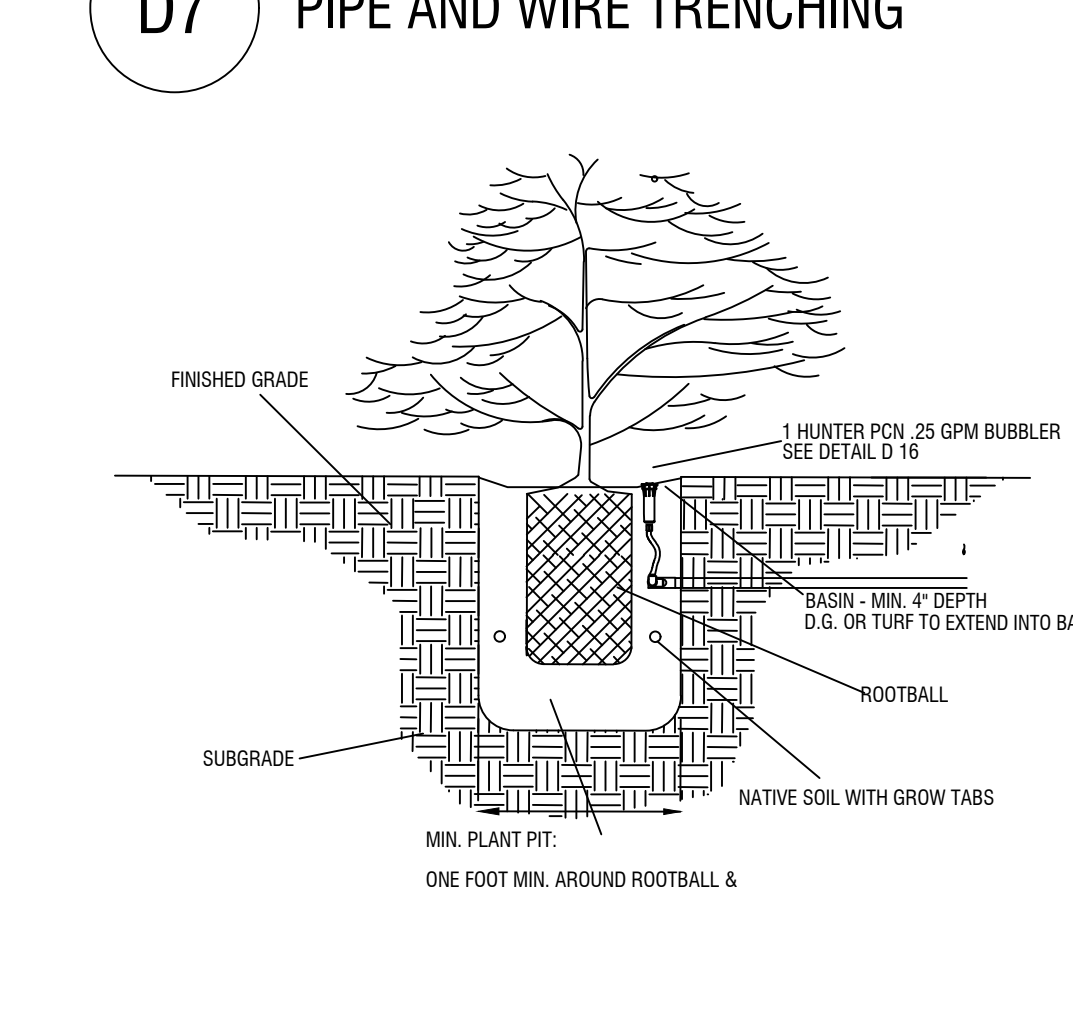
size (pipe)	class	gpm	sleeve size
1/2"	SCH 40	0-5	2"
3/4"	SCH 40	6-10	2"
1"	SCH 40	11-15	2"
1-1/4"	SCH 40	16-25	3"
1-1/2"	SCH 40	26-35	3"
2"	SCH 40	36-50	4"
2-1/2"	CL 160	51-75	6"
3"	CL 160	76-100	6"
4"	CL 160	101-190	10"
WIRING	SCH 40	1-26 WIRES	2" MIN.

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 MANUFACTURER'S RECOMMENDATIONS. USE MECHANICAL FITTINGS ON TEES, FOR 3" AND LARGER MAINLINE.  
SLEEVE SIZE IS FOR SINGLE PIPE RUNS.  
SLEEVE ALL WIRE SEPARATE FROM WATER LINES, UNDER PAVING.  
ALL SOLVENT WELD MAINLINE FITTINGS SHALL BE SCHEDULE 40.

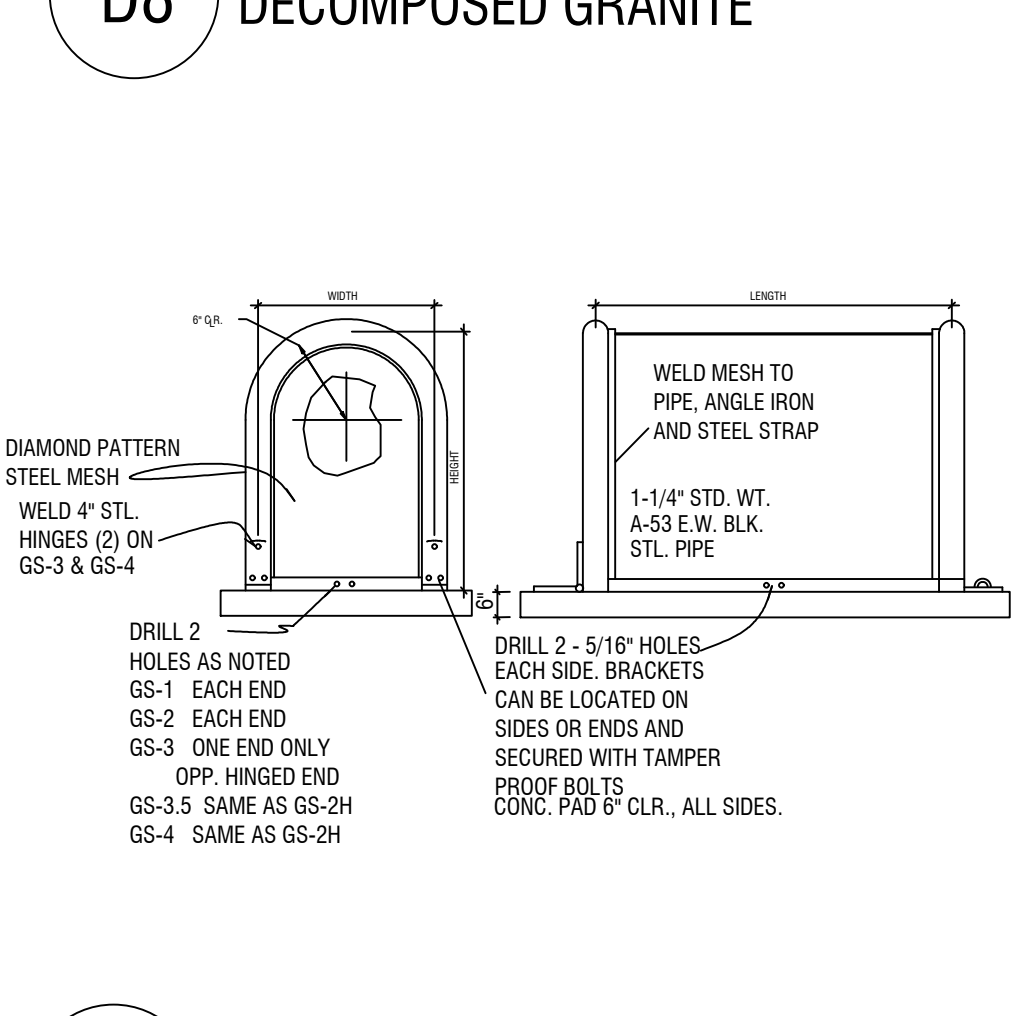
**D10 PIPE AND SLEEVE SIZING**



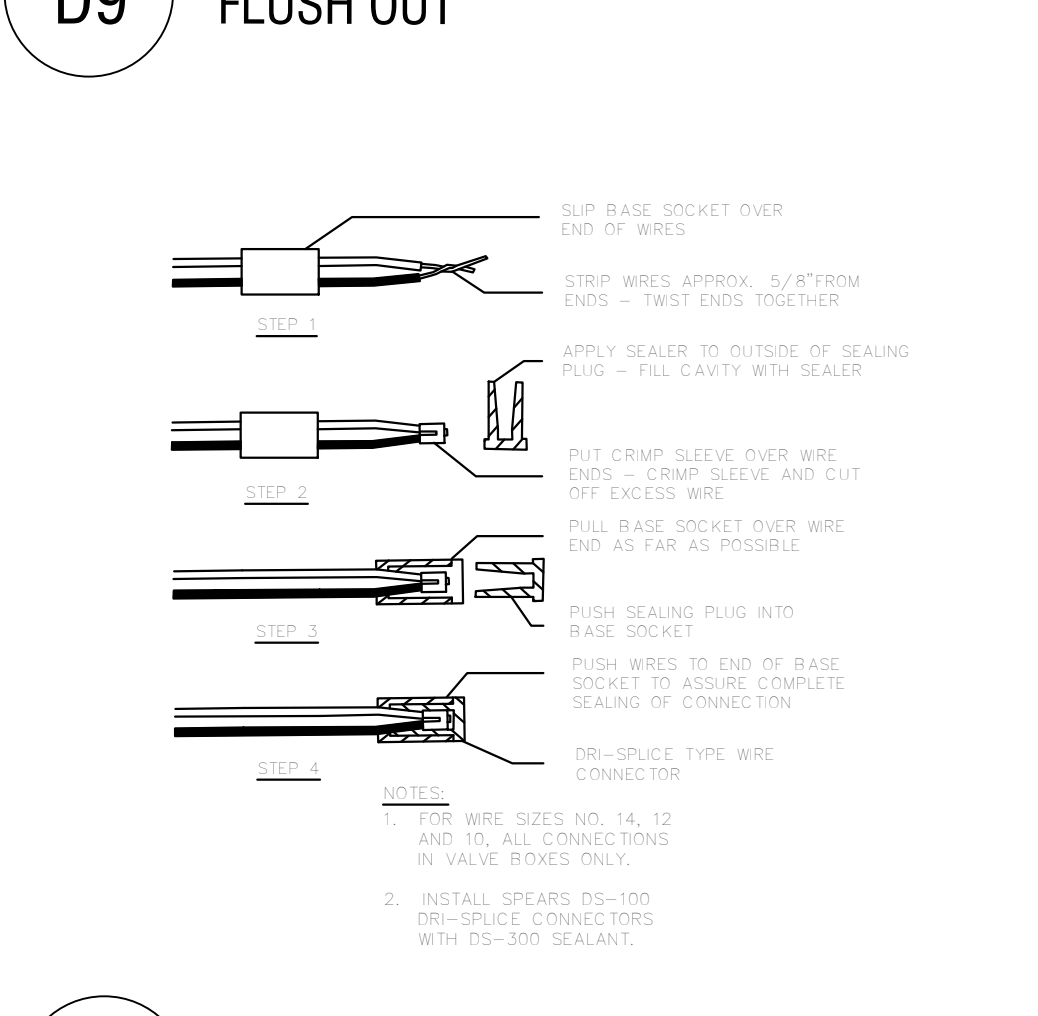
**D15 PRESSURE VACUUM BREAKER**



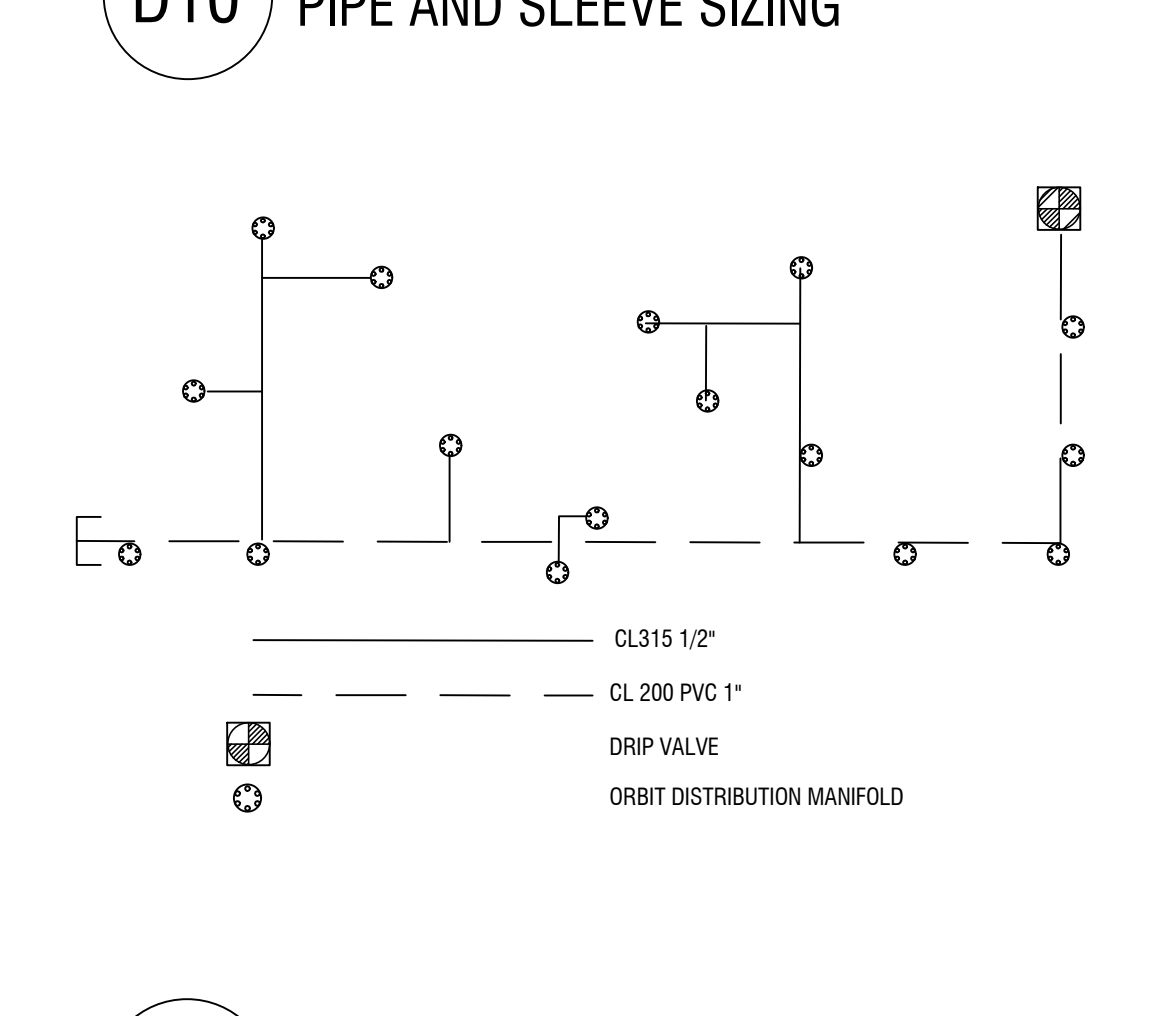
**D11 TREE IRRIGATION DETAIL**



**D12 GARDSHACK ENCLOSURE**

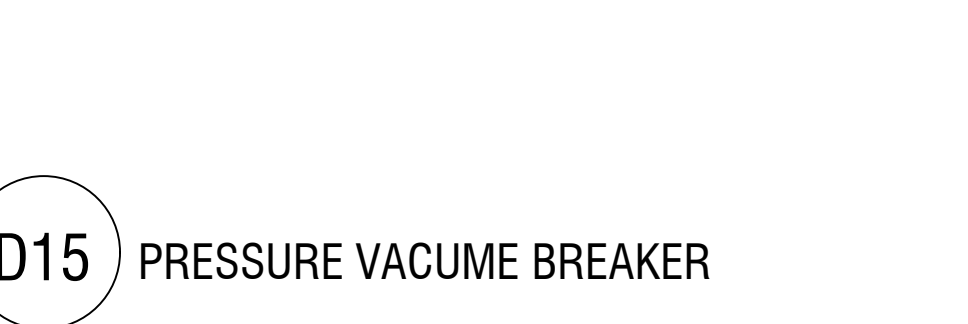


**D13 IRRIGATION WIRE CONNECTIONS**

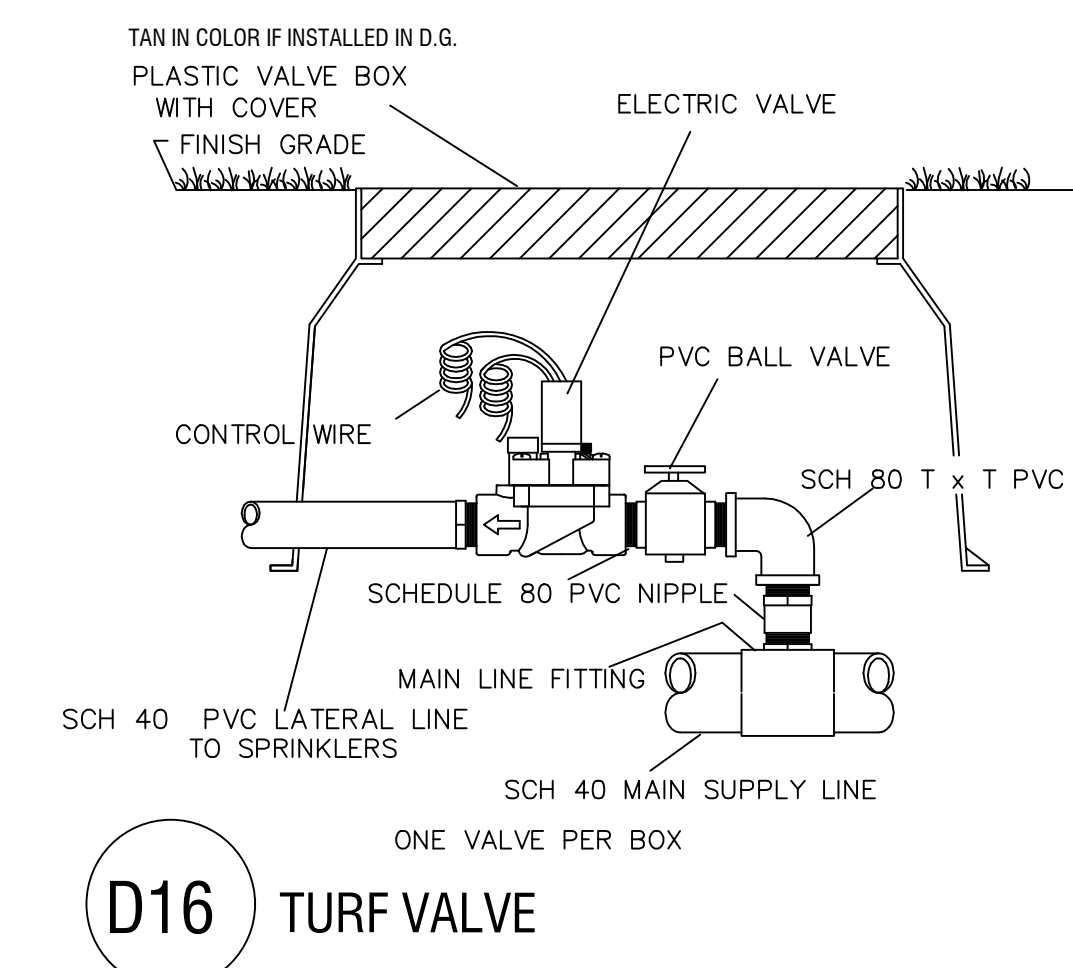


**D14 EMITTER PVC PIPE LAY OUT**

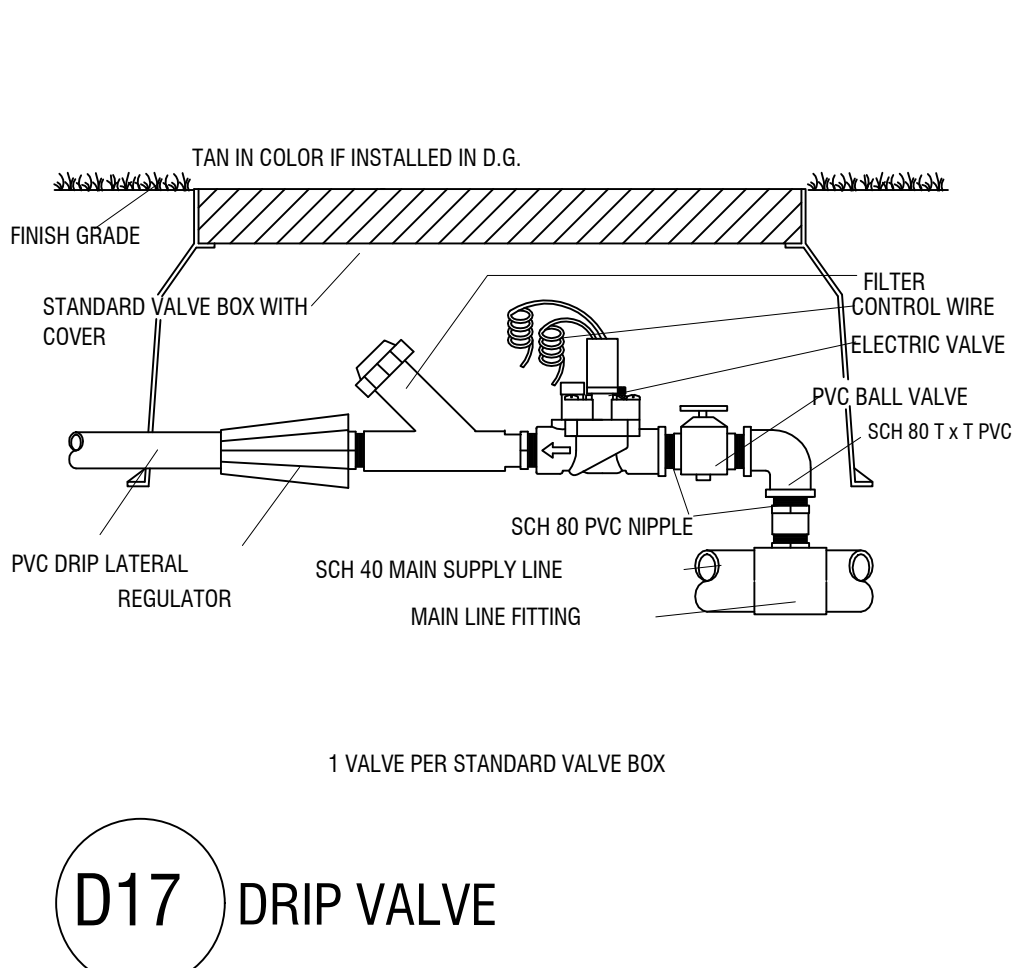
- NOTES**
1. A permit is required before installing or replacing a backflow assembly. Permits are obtained at the Department of Community Development.
  2. A list of approved backflow assemblies are available from the Utilities Department Pretreatment
  3. The P.V.B. shall be installed outside, above ground, as close to the water meter as possible. The P.V.B. shall be located on private property unless otherwise authorized.
  4. There shall be no other piping connected to the piping between the water meter and the backflow assembly except for parallel assembly installations.
  5. Installations shall meet all current uniform plumbing codes in addition to the City building codes.
  6. Installations shall be left exposed until inspected and approved by the City.
  7. If this unit is installed to serve a retention basin, this unit shall be placed a minimum of 12" (36" maximum) above the flood rim of the retention basin.
  8. Protective cages are optional and will meet clearance, access and drainage requirements.
  9. 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.
  10. All backflow units are to be tested by a certified professional prior to final approval. Backflow units shall be tested on an annual basis.
  11. The installation of a pressure vacuum breaker assembly can cause a closed system. Consult with the City Building Official for pressure relief valves, thermal expansion or other needed requirements.
  12. P.V.B.'s may be maintained under constant pressure and have shutoff valves downstream but there shall be no means of imposing back pressure on the P.V.B. from any other source.
  13. P.V.B.'s shall only be approved for irrigation system service protection unless otherwise authorized.



**D15 PRESSURE VACUUM BREAKER**



**D16 TURF VALVE**



**D17 DRIP VALVE**

**IRRIGATION NOTES**

1. 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.
2. 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.
3. IRRIGATION SYSTEM HAS BEEN DESIGNED FOR A STATIC WATER PRESSURE OF 70 PSI.
4. 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.
5. CONTRACTOR WILL NOTIFY SOUTHWEST DREAMWORKS IF BOOSTER PUMP IS NEEDED
6. 120 VOLT SERVICE BY ELECTRICAL CONTRACTOR. IRRIGATION CONTRACTOR RESPONSIBLE FOR POWER CONNECTION TO CONTROLLER.
7. 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.
8. ALL 24 VOLT WIRE SHALL BE #14 UFL, DIRECT BURIAL, SOLID COPPER.
9. IRRIGATION CONTRACTOR RESPONSIBLE FOR ALL LANDSCAPE SLEEVING. CONTRACTOR TO COORDINATE SLEEVING INSTALLATION OF CONCRETE FLATWORK AND PAVING. ALL SLEEVES TO BE EXTENDED AT LEAST 1' BEYOND CONCRETE STRUCTURES.
10. ALL HARDSCAPE 5'-0" OR WIDER TO BE SLEEVED.
11. CONTRACTOR SHALL INSTALL ALL PIPING AND WIRING UNDER PAVED AREAS IN SLEEVES AS SHOWN ON PLANS. ALL WIRE SHALL BE SLEEVED SEPARATELY FROM PIPING.
12. IRRIGATION CONTRACTOR TO VERIFY EXISTING SLEEVES (SHOWN ON IRRIGATION PLAN) INSTALLED BY OTHER CONTRACTORS. COORDINATE INSTALLATION OF ADDITIONAL SLEEVES WITH GENERAL CONTRACTOR.
13. ALL IRRIGATION EQUIPMENT TO BE LOCATED IN LANDSCAPED AREAS (SOME LINES AND EQUIPMENT ARE SCHEMATIC ONLY).
14. LOCATE VALVE BOXES IN DECOMPOSED GRANITE NOT IN TURF, ADJACENT TO WALKWAYS AND CURBS WHENEVER POSSIBLE.
15. ALL PLANTS REQUIRING MORE THAN ONE DRIP EMITTER SHALL HAVE EMITTERS DISTRIBUTED EVENLY AROUND EDGE OF ROOTBALL, WITHIN PLANT BASIN. UNLESS NOTED ON PLANS
16. EMITTERS TO BE PLACED ON UP HILL SIDE OF PLANTS ON SLOPED PLANTING AREAS.
17. 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.
18. 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.
19. 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.

20. 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.
21. THE CONTRACTOR SHALL PROVIDE, INSTALL AND HAVE TESTED ALL CONNECTIONS DOWN STREAM OF THE WATER METER AND BACKFLOW PREVENTER.
22. 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.
23. 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".
24. ALL SUBMITTALS MUST BE APPROVED BEFORE CONSTRUCTION BEGINS

**LANDSCAPE NOTES**

1. 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.
2. THE OWNER'S REPRESENTATIVE IS TO APPROVE ANY AND ALL SUBSTITUTIONS.
3. LOCATE PLANTS AWAY FROM OBSTACLES SUCH AS FIRE HYDRANTS, TRANSFORMERS, AND LIGHT FIXTURES.
4. 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.
5. DOUBLE STAKE ALL SUPPLEMENTAL BOX TREES OUTSIDE ROOTBALL, SEE TREE STAKING DETAIL.
6. 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.
7. 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.
8. NATIVE GRANULAR SOILS SHALL BE FINE GRADED AS TOPDRESSING AND RAKED UNIFORMLY ALONG CURBS, WALKS AND WALLS.
9. CONTRACTOR SHALL APPLY PRE-EMERGENT HERBICIDE (TRIFLANS OR APPROVED EQUAL) IN ALL AREAS NOT CONTAINING BERMUDA GRASS, PER MANUFACTURERS RECOMMENDATION.

CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO APPLICATION OF HERBICIDE.

10. 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.

11. GRADE NOTED ON LANDSCAPE PLAN TO BE FIELD VERIFIED/APPROVED BY OWNER'S REPRESENTATIVE BEFORE LANDSCAPE BEGINS CONSTRUCTION.
12. FEATHER AND BLEND GRADE BETWEEN CONSTRUCTION AND NATIVE AREAS FOR SMOOTH TRANSITION.
13. REVIEW SALVAGE NATIVE PLANT MATERIAL INVENTORY PRIOR TO BEGINNING WORK TO VERIFY RESPONSIBILITY OF RELOCATION AND WARRANTY.
14. 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.
15. NATIVE SALVAGED SAGUAROS SHALL BE PROTECTED FROM INJURY DURING TRANSPLANT AND SHALL BE WARRANTED FOR 6 MONTHS FROM FINAL ACCEPTANCE.
16. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS NOT SHOWN ON DRAWINGS
17. REFER TO GENERAL CONSTRUCTION NOTES BELOW FOR ADDITIONAL CONSIDERATIONS THAT RELATE TO SCOPE OF WORK WITHIN THIS SECTION.
18. 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)
19. LANDSCAPE CONTRACTOR SHALL SUBMIT PHOTOS OF ALL TREES FOR APPROVAL BY LANDSCAPE DESIGNER PRIOR TO DELIVERY.

**MAINTENANCE AND GUARANTEE**

1. 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.
2. 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.
3. 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).
4. PLANTS NOT IN HEALTHY CONDITION THROUGHOUT THE WARRANTY PERIOD SHALL BE REMOVED AND REPLACED AT NO COST TO THE OWNER.
5. PROVIDE ONE YEAR(FROM ACCEPTANCE DATE) WARRANTY FOR THE IRRIGATION SYSTEM.



4th. Ave. & Retention Basin  
ORCHIDEA PARK  
TOWNHOME SUBDIVISION

INSTRUCTIONS  
& NOTES

Notes:


Scale: N.T.S. | Date: APR 2024  
 Drawn: staff | Job #: vnv23-600  
 Checked: vna

Sheet

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