

SITE DATA

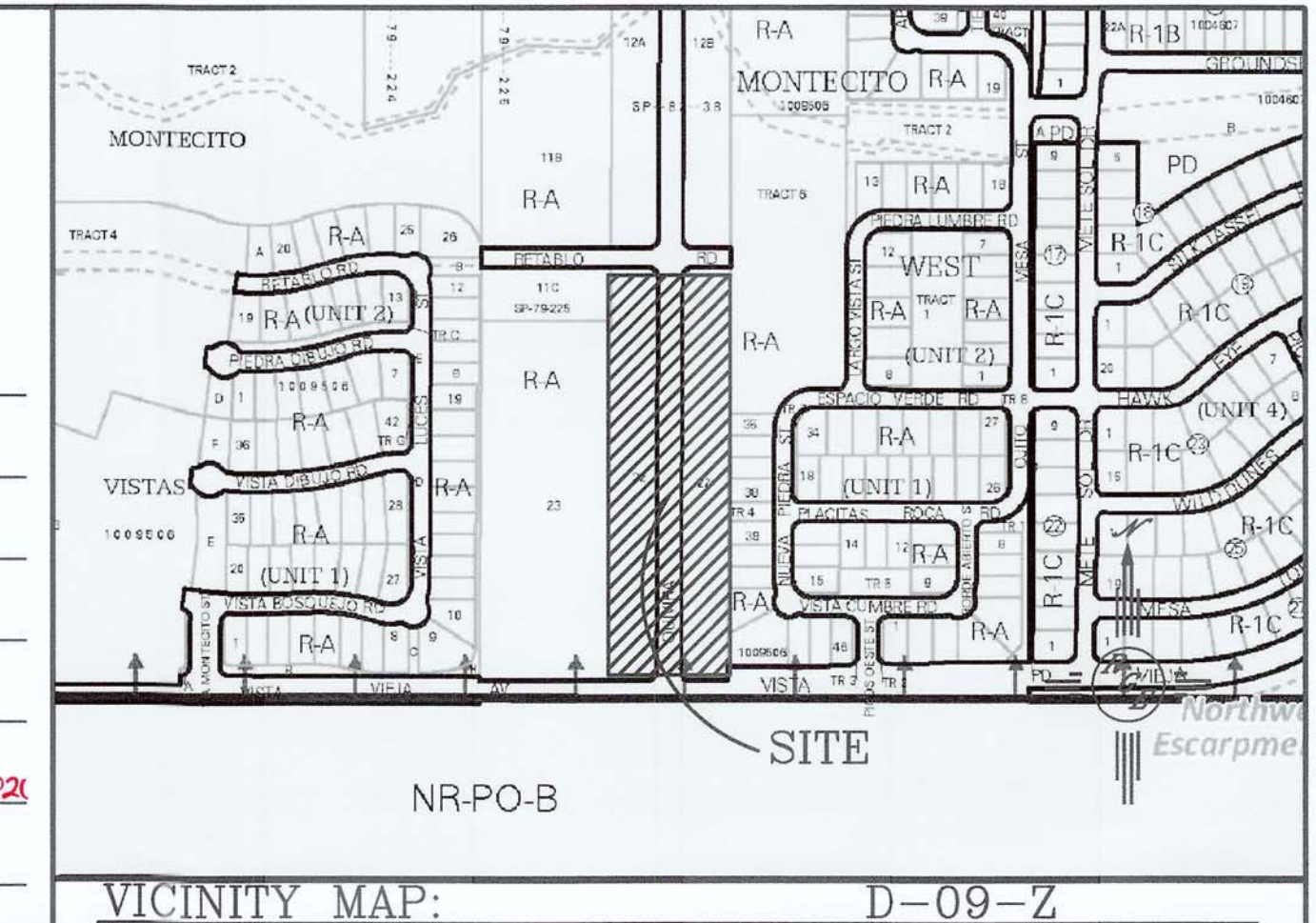
TOTAL ACREAGE: 7.1256 AC±
 DENSITY UNITS: 3.23 DU'S (AT MAXIMUM BUILD OUT)
 EXISTING ZONING: RA
 PROPOSED ZONING: RA
 PROPOSED USE: INDIVIDUAL RESIDENTIAL
 PARKING CALCULATIONS: DWELLING, SINGLE-FAMILY DETACHED
 REQUIRED-2 SPACES /DU
 PROVIDED-2 SPACES EXTERIOR, 2 SPACES IN GARAGE 4 TOTAL

PROJECT NUMBER: _____
 APPLICATION NUMBER: _____

Is an Infrastructure List required? () Yes () No If Yes, then a set of approved DRG plans with a work order is required for any construction within Public Right-of-Way or for construction of public improvements.

DRB SITE DEVELOPMENT PLAN APPROVAL:

| | |
|---|------------|
| Traffic Engineer, Transportation Division | Date |
| Utilities Development | Date |
| Parks & Recreation Department | Date |
| City Engineer | Date |
| * Environmental Health Department (conditional) | Date |
| Solid Waste Management | 09-13-2021 |
| DRB Chairperson, Planning Department | Date |



LEGAL DESCRIPTION:
 LOTS 1-23, AND TRACT A, QUIVIRA ESTATES

SHEET INDEX

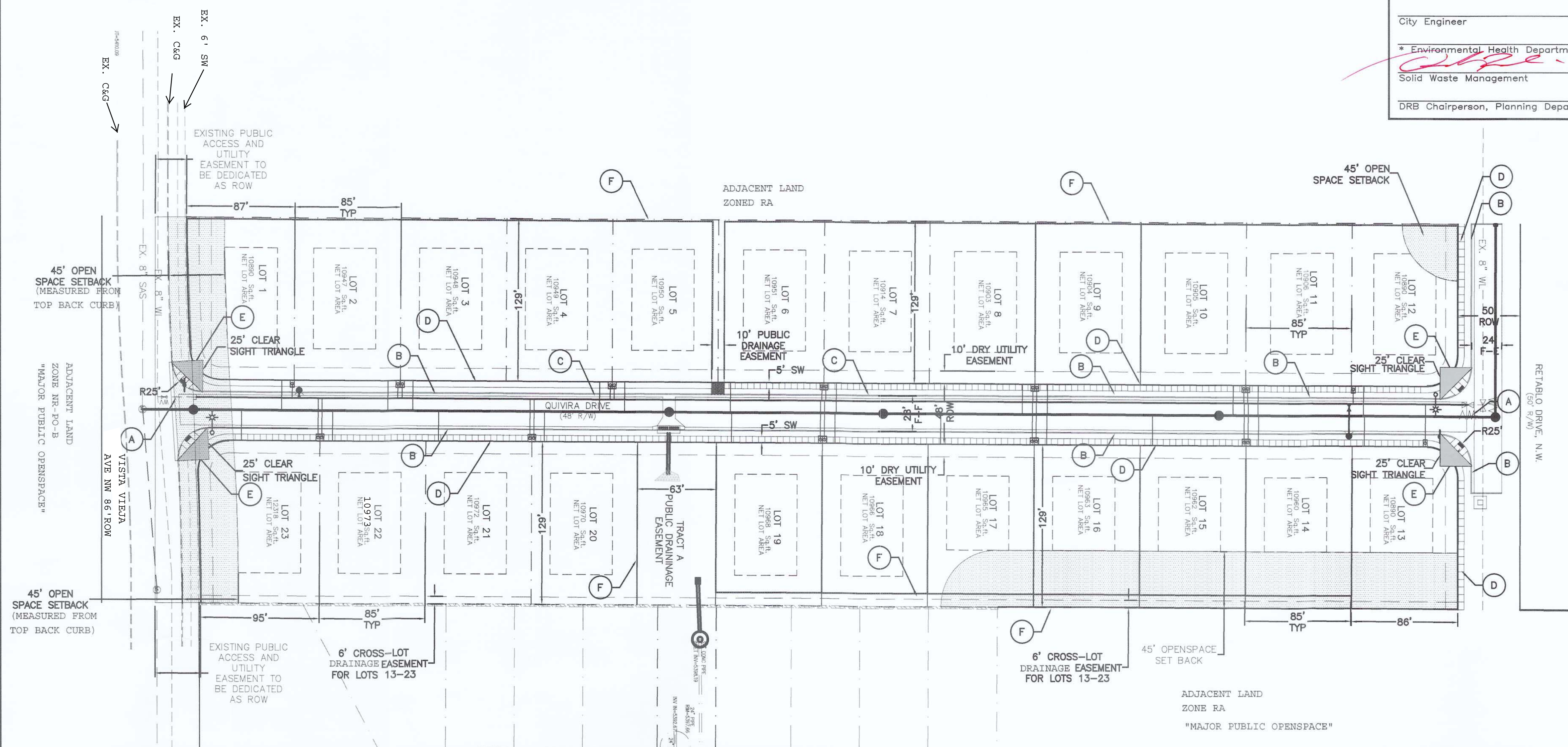
1. SITE PLAN FOR BUILDING PERMIT
2. LANDSCAPE PLAN
3. GRADING AND DRAINAGE PLAN
- 3A. GRADING AND DRAINAGE DETAILS
4. MASTER UTILITY PLAN

GENERAL NOTES:

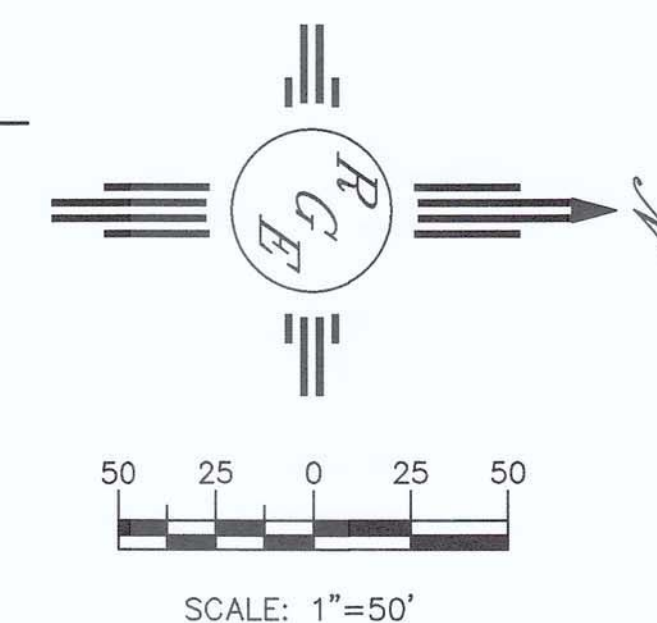
1. APPROVAL OF THIS PLAN DOES NOT CONSTITUTE OR IMPLY EXEMPTION FROM WATER WASTE PROVISIONS OF THE WATER CONSERVATION LANDSCAPING AND WATER WASTE ORDINANCE WATER WASTE MANAGEMENT IS THE SOLE RESPONSIBILITY OF THE PROPERTY OWNER.
2. LANDSCAPE MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE OWNERS.
3. INDIVIDUAL LOT SET BACKS 25' FRONT, 15' SIDE YARD, 15' REAR
4. ALL MECHANICAL EQUIPMENT SHALL BE SCREENED FROM STREET
5. ALL FUTURE DEVELOPMENT GOVERNED BY 2019 IDO REGULATIONS
6. NO SIGNAGE ALLOWED
7. NO LUMINARIES EXCEEDING 16' ANY BUILDING LIGHTING SHALL COMPLY WITH IDO 14-16-5-2(J)(2)(B)
8. ALL WALLS ADJACENT TO MAJOR PUBLIC OPEN SPACE SHALL COMPLY WITH IDO 14-16-5-7(E)(4)
9. MAXIMUM BUILDING HEIGHT SHALL BE 18' EXCEPT 50% OF FOOT PRINT MAY BE 26'
10. ALL FUTURE DEVELOPMENT SHALL ADHERE TO CPO-13 VOLCANO MESA CHARACTER PROTECTION OVERLAY PURSUANT TO IDO SUBSECTION 14-16-3-4 (M)
11. ALL FUTURE DEVELOPMENT SHALL ADHERE TO VPO-2 NORTHWEST MESA ESCARPMENT PURSUANT TO IDO SUBSECTION 14-16-3-6 (E)
12. ALL FUTURE DEVELOPMENT SHALL ADHERE TO IDO SUBSECTION 5-2 (J) MAJOR PUBLIC OPEN SPACE EDGES.
13. ALL DRIVEWAY ACCESSED FROM FRONT OR SIDE STREET SHALL BE 20 FOOT LAND AND CONFORM TO IDO 5-3 (C) (3) (B)
14. EACH LOT SHALL HAVE MINIMUM OF 50' OF CURB SPACE FOR SOLID WASTE BIN PLACEMENT FOR PICKUP

LEGEND

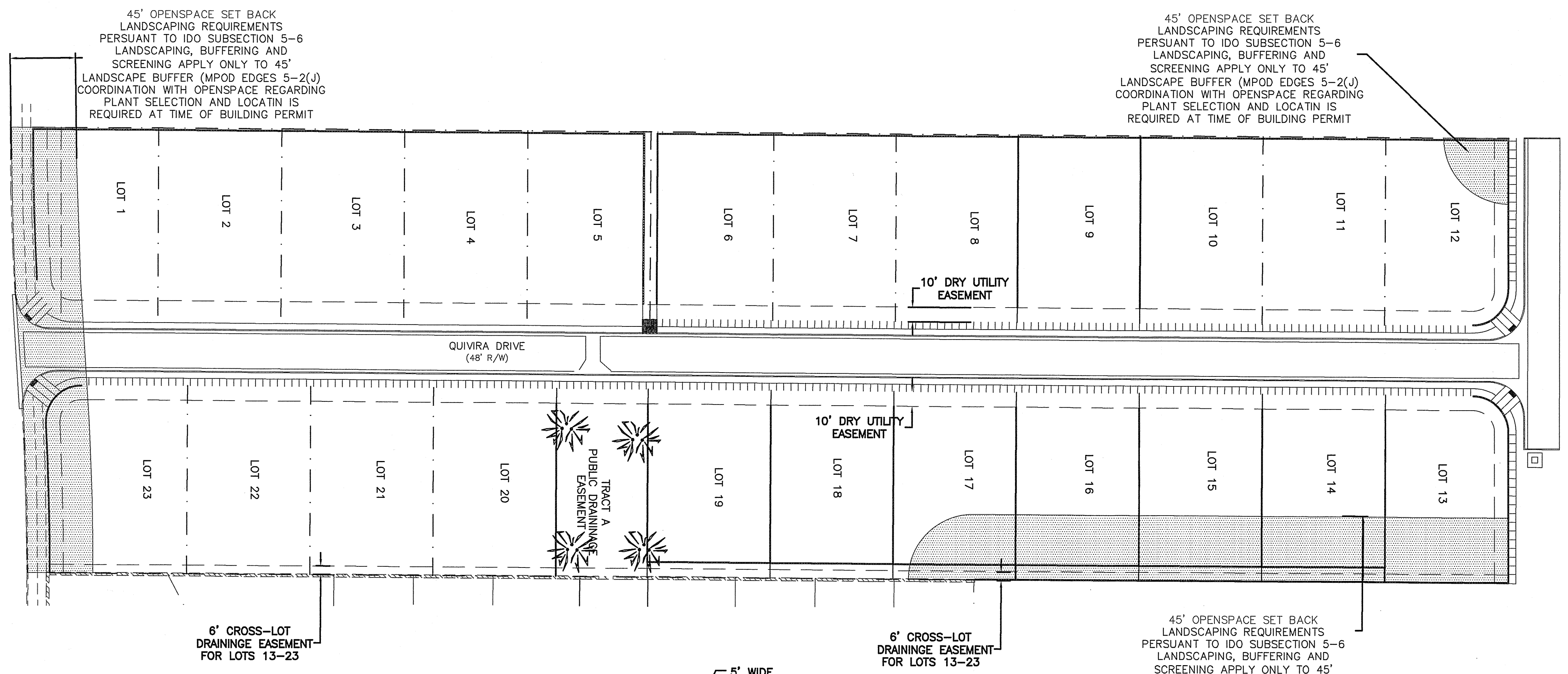
| | |
|-------|-------------------------|
| ===== | EXISTING CURB & GUTTER |
| ----- | PROPOSED CURB |
| ----- | BOUNDARY LINE |
| ----- | EXISTING BOUNDARY LINE |
| ===== | PROPOSED 5' SIDEWALK |
| ===== | EXISTING SIDEWALK |
| ----- | CENTERLINE |
| ----- | RIGHT-OF-WAY |
| ----- | PROPOSED LOT LINE |
| ----- | EXISTING BUILDING |
| ----- | EXISTING RETAINING WALL |
| ----- | PROPOSED RETAINING WALL |
| ----- | 45' OPEN SPACE SETBACK |
| ----- | PROPOSED STREET LIGHT |



- KEYED NOTE:**
- (A) 6" VALLEY GUTTER PER C.O.A. STD DWG #2420 MODIFY CROSS SLOPE @ SEC A-A TO PROVIDE 2.00% CROSS SLOPE MAX
 - (B) STANDARD C&G PER COA STD DWG #2415A
 - (C) STANDARD DEPRESSED C&G PER COA STD DWG #2415A
 - (D) 5' SIDEWALK TO BE BUILT W/THIS PROJECT PER COA STD DWG #2430
 - (E) HANDICAP RAMP SEE DETAIL
 - (F) PROPOSED WALL



| | | |
|---|--|---|
| ENGINEER'S SEAL DAVID SOULE P.E. #14522 | QUIVIRA ESTATES SITE PLAN FOR BUILDING PERMIT | DRAWN BY WCWJ DATE 8-21-21 2102059-LAYOUT-9-06-20 |
| | Rio Grande Engineering 1606 CENTRAL AVENUE SE SUITE 201 ALBUQUERQUE, NM 87106 (505) 872-0999 | SHEET # 1 JOB # 2102059 |



LANDSCAPE NOTES

LANDSCAPE MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER.

IT IS THE INTENT OF THIS PLAN TO COMPLY WITH THE CITY OF ALBUQUERQUE WATER CONSERVATION LANDSCAPING AND WATER WASTE ORDINANCE PLANTING RESTRICTION APPROACH.

APPROVAL OF THIS PLAN DOES NOT CONSTITUTE OR IMPLY EXEMPTION OF FROM WATER WASTE ORDINANCE. WATER MANAGEMENT IS THE SOLE RESPONSIBILITY OF THE PROPERTY OWNER.

ALL LANDSCAPING WILL BE IN CONFORMANCE WITH THE CITY OF ALBUQUERQUE ZONING CODE, STREET TREE ORDINANCE, POLLEN ORDINANCE, AND WATER CONSERVATION LANDSCAPING AND WATER WASTE ORDINANCE. IN GENERAL, WATER CONSERVATIVE, ENVIRONMENTALLY SOUND LANDSCAPE PRINCIPLES WILL BE FOLLOWED IN DESIGN AND INSTALLATION.

PLANT BEDS SHALL ACHIEVE 75% LIVE GROUND COVER AT MATURITY.

ALL ROCK MULCH SHALL HAVE A MIN. DEPTH OF 3".

PURSUANT TO IDO SUBSECTION 14-16-5-2(J)(2)(A), A LANDSCAPE BUFFER WITH A MINIMUM WIDTH OF 45 FEET WILL BE PROVIDED ALONG ALL EDGES OF THE SUBJECT SITE THAT ARE ADJACENT TO OPEN SPACE BOUNDARIES

ALL LANDSCAPING IN THE 45-FOOT OPEN SPACE BUFFER SHALL BE APPROVED BY THE OPEN SPACE SUPERINTENDENT, PURSUANT TO IDO SUBSECTION 14-16-5-2(J)(2)(A)

IRRIGATION NOTES

IRRIGATION SHALL BE A COMPLETE UNDERGROUND SYSTEM WITH TREES TO RECEIVE (5) 1.0 GPH DRIP EMITTERS AND SHRUBS TO RECEIVE 2 (1.0) GPH DRIP EMITTERS. DRIP AND BUBBLER SYSTEMS TO BE TIED TO 1/2" POLYPIPE WITH FLUSH CAPS AT EACH END.

RUN TIME PER EACH DRIP VALVE WILL BE APPROXIMATELY 15 MINUTES PER DAY, TO BE ADJUSTED ACCORDING TO THE SEASON.

POINT OF CONNECTION FOR IRRIGATION SYSTEM IS IN THE NORTHWEST CORNER OF THE SIGHT AS INDICATED ON THE IRRIGATION PLAN.

IRRIGATION WILL BE OPERATED BY AUTOMATIC CONTROLLER. LOCATION OF CONTROLLER TO BE IN THE MECHANICAL ROOM OF OF THE NORTH BUILDING AS INDICATED ON THE IRRIGATION PLAN.

IRRIGATION MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER.

DRIP IRRIGATION MUST COMPLY WITH CROSS CONNECTION PREVENTION AND CONTROL ORDINANCE.

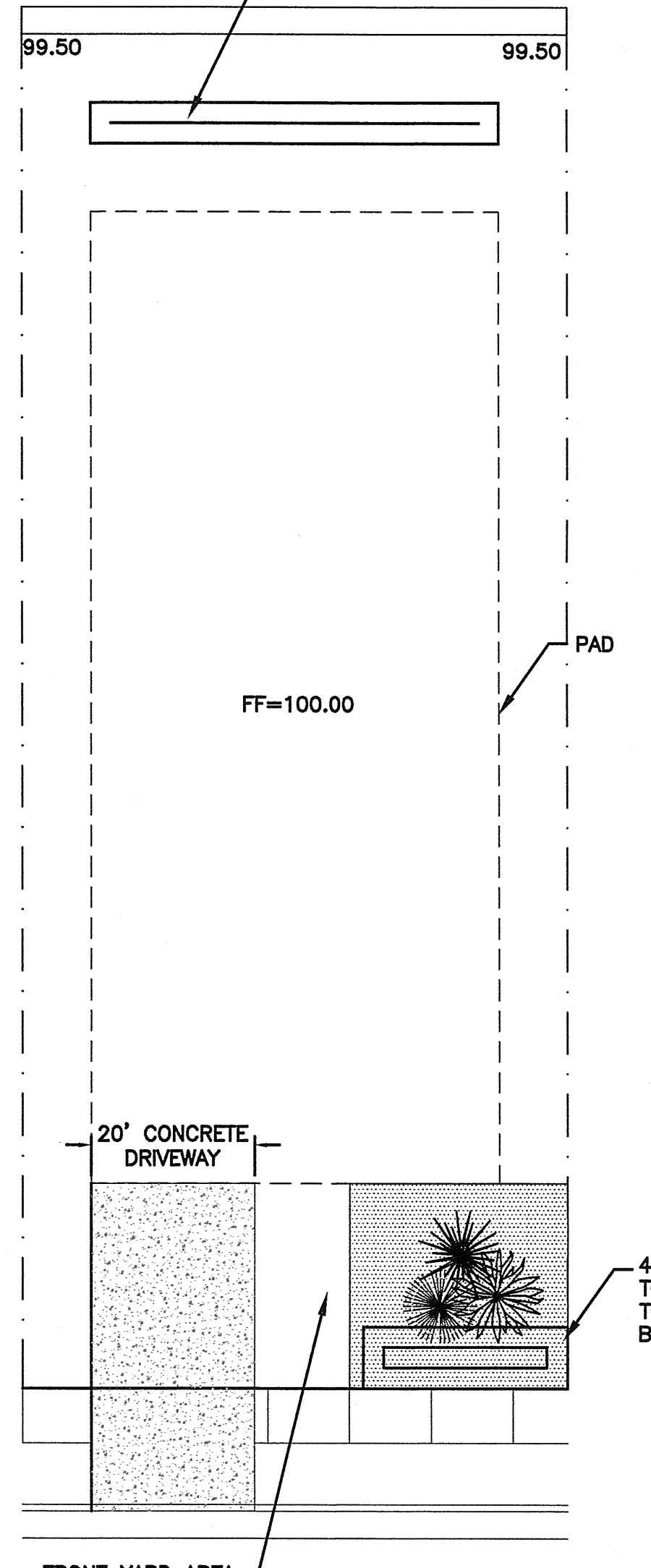
STREET TREES SHALL BE CONNECTED TO SITE IRRIGATION SYSTEM AND MAINTAINED BY THE PROPERTY OWNER.

6' CROSS-LOT DRAINAGE EASEMENT FOR LOTS 13-23

6' CROSS-LOT DRAINAGE EASEMENT FOR LOTS 13-23

45' OPENSACE SET BACK LANDSCAPING REQUIREMENTS PURSUANT TO IDO SUBSECTION 5-6 LANDSCAPING, BUFFERING AND SCREENING APPLY ONLY TO 45' LANDSCAPE BUFFER (MPOD EDGES 5-2(J) COORDINATION WITH OPENSACE REGARDING PLANT SELECTION AND LOCATIN IS REQUIRED AT TIME OF BUILDING PERMIT

5' WIDE WATER HARVESTING AREA TO RUN THE LENGTH OF PAD TOP=99.00 BOTTOM=98.50



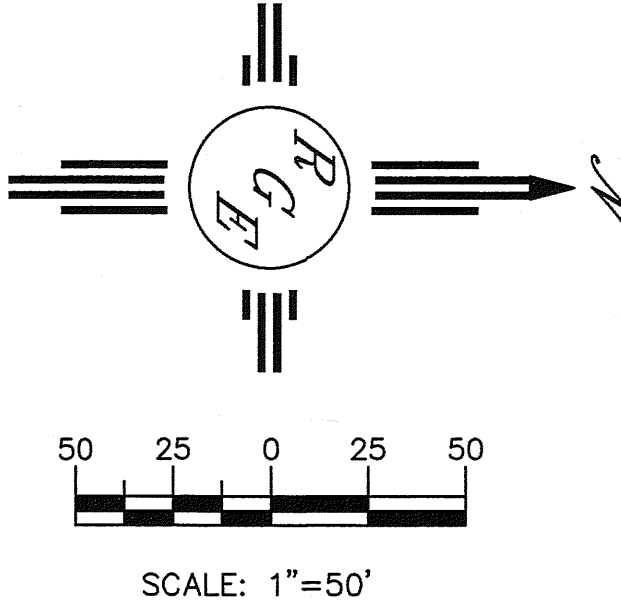
TYPICAL LOT LANDSCAPING PLAN
NTS

LANDSCAPE CALCULATIONS

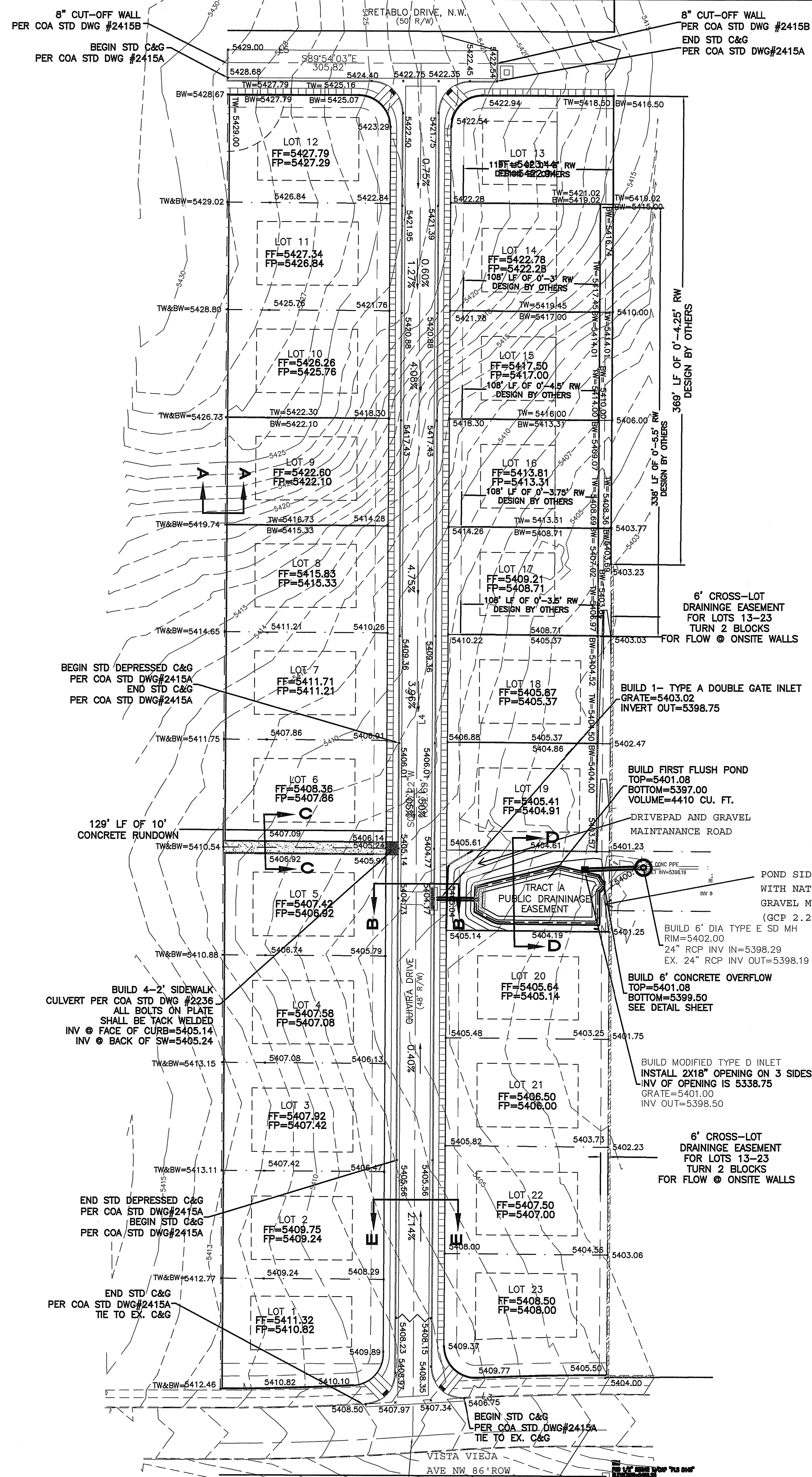
| | |
|--------------------------|------------|
| TOTAL ACREAGE: | 7.1256 AC± |
| # OF LOTS | 23 LOTS |
| IMPERMEABLE SURFACE AREA | 3.4321 AC± |
| PERMEABLE SURFACE AREA | 3.6935 AC± |
| PONDING AREA | 6595 SF |

PLANT LEGEND

- MODESTO ASH
- BLUE SAGE
- DESERT WILLOW
- NATURAL GRASS
- TEXAS RED YUCCA
- CONCRETE
-

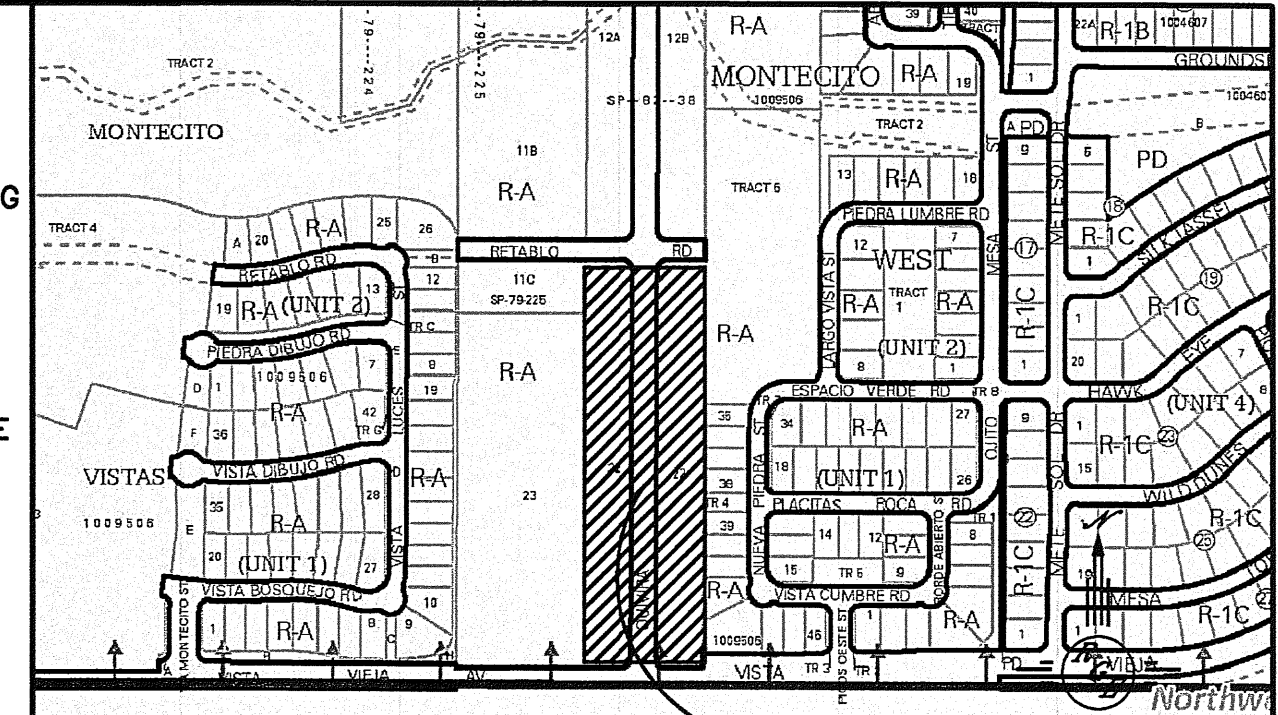


| | | |
|-------------------------|---|------------------------|
| | QUIVIRA ESTATES | DRAWN BY WCWJ |
| | LANDSCAPE PLAN | DATE 8-21-21 |
| 8/24/21 | | 2102059-LAYOUT-8-08-20 |
| DAVID SOULE P.E. #14522 | | SHEET # 2 |
| | 1606 CENTRAL AVENUE SE SUITE 201 ALBUQUERQUE, NM 87106 (805) 872-0999 | JOB # 2102059 |

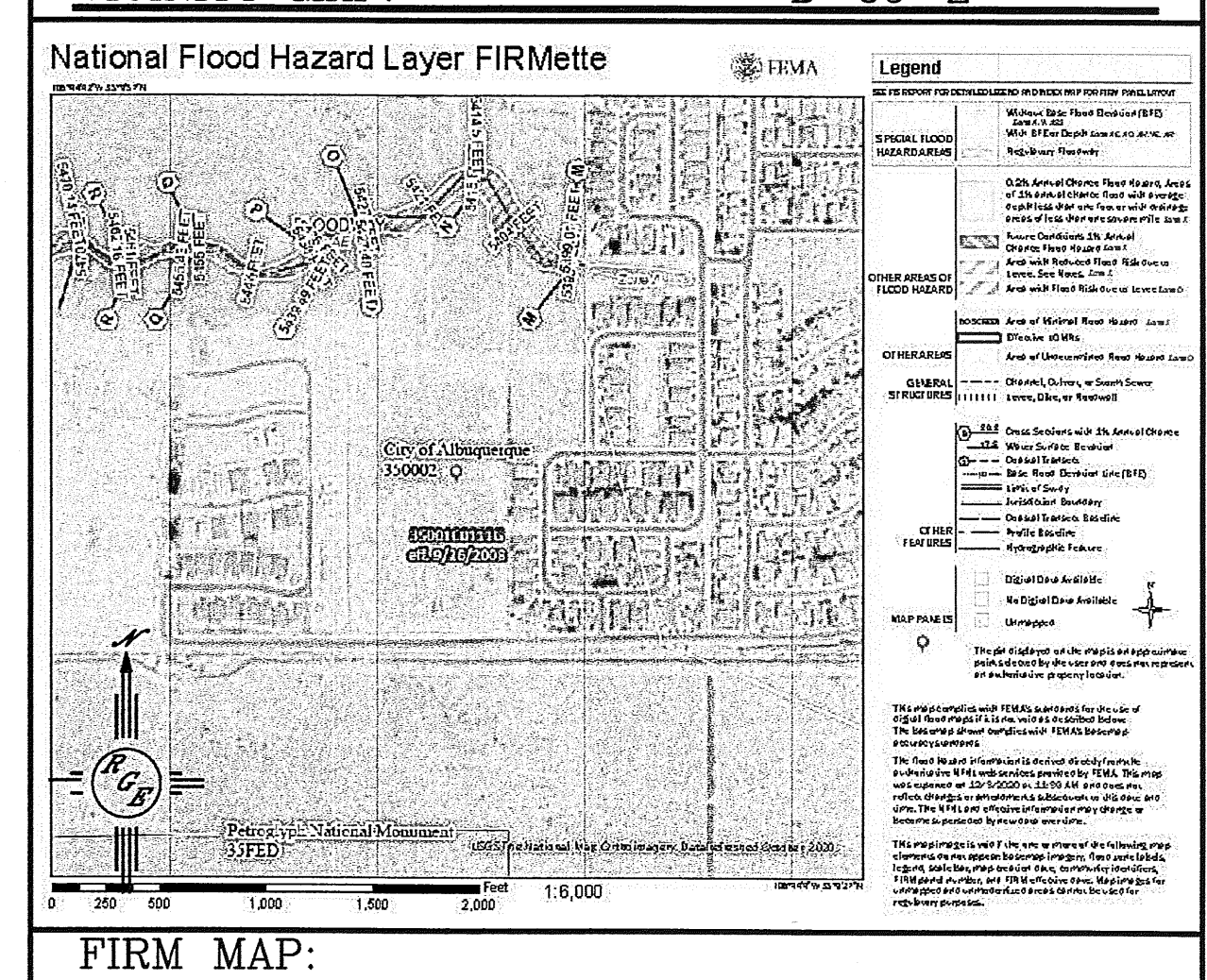


EROSION CONTROL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR. NO DISTURBANCE IS PERMITTED TO THE ADJACENT MPOS AND THE CONTRACTOR MUST PREVENT SEDIMENT, EROSION, DEBRIS, AND ANY OTHER DAMAGE FROM OCCURRING
5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.



VICINITY MAP: D-09-Z



FIRM MAP:

DRANAGE NARRATIVE

AS SHOWN ON FIRM MAP 95013C0111G, THE ENTIRE SITE IS LOCATED WITHIN FLOOD ZONE X. THE SITE IS DIRECTLY WEST AND ADJACENT TO MONTECITO SUBDIVISION UNIT 2 AND EAST OF MONTECITO WEST SUBDIVISION (D009-D005). THE REGIONAL STORM DRAIN SYSTEM HAS BEEN DESIGNED TO ACCEPT 28.6 CFS FROM THIS LOT. THE PROPOSED DEVELOPMENT WILL DISCHARGE 28.01 CFS WHICH IS LESS THAN ALLOWED. THE DEVELOPMENT WILL MANAGE THE REQUIRED FIRST FLUSH AND DRAIN TO THE REQUIRED OUTFALL. THIS DRAINAGE PLAN AND REPORT CONFORMS TO THE GOVERNING DRAINAGE REGULATIONS OF THE CITY AS WELL AS THE OVERALL DRAINAGE CONCEPT APPROVED WITH THE MONTECITO AND MONTECITO WEST SUBDIVISIONS

LEGAL DESCRIPTION:

LOTS 1-23, AND TRACT A, QUIVIRA ESTATES

NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
2. ALL CURB AND GUTTER TO 6" HEADER UNLESS OTHERWISE NOTED.
3. ALL RETAINING WALL DESIGN SHALL BE BY OTHERS.
4. ALL NEW PAVING SHALL BE 6" PCC OVER 8" SUBGRADE PREPARATION IN CONFORMANCE TO ACI 330R-08. UNLESS OTHERWISE NOTED.
5. ANY CURBS OR PAVEMENT NEGATIVELY IMPACTED BY CONSTRUCTION ACTIVITY SHALL BE REPLACED TO MATCH EXISTING CONDITIONS.
6. ALL SITE WORK SHALL CONFORM TO CITY OF ALBUQUERQUE STANDARDS FOR PUBLIC WORKS CONSTRUCTION EDITION 9

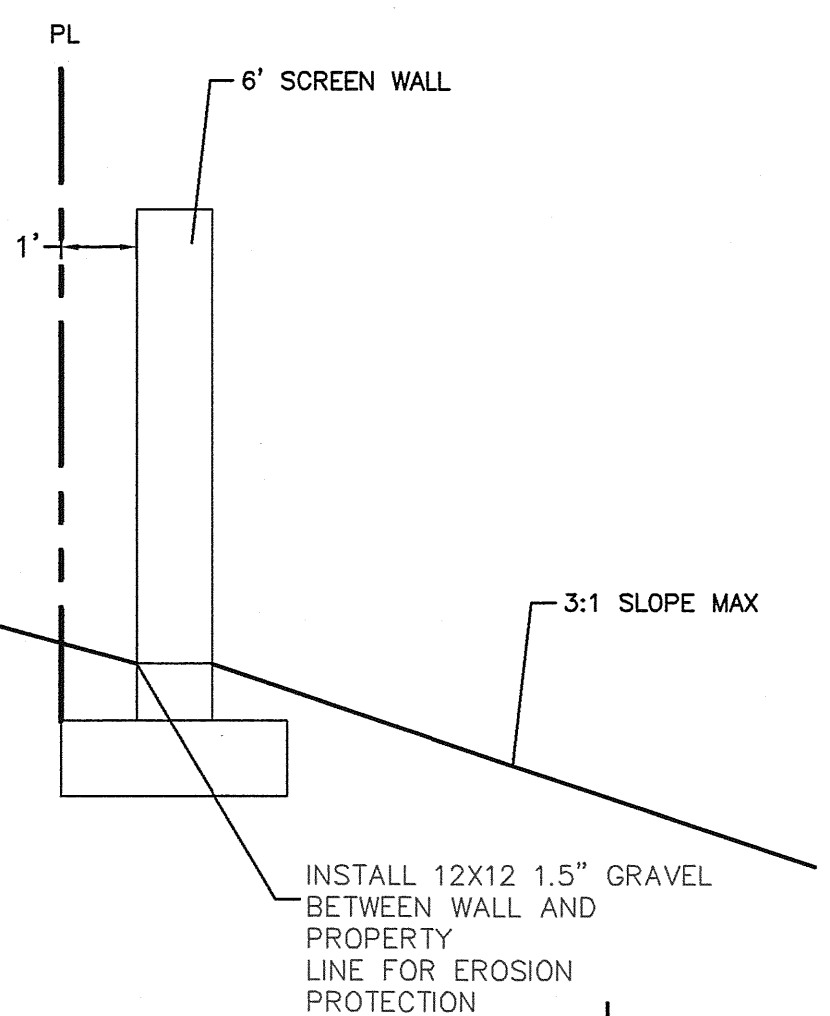
LEGEND

- 5414 --- EXISTING CONTOUR
- 5415 --- EXISTING INDEX CONTOUR
- 5414 --- PROPOSED CONTOUR
- 5415 --- PROPOSED INDEX CONTOUR
- ▲ SLOPE TIE
- × 4048.25 EXISTING SPOT ELEVATION
- × 4048.25 PROPOSED SPOT ELEVATION
- BOUNDARY
- CENTERLINE
- RIGHT-OF-WAY
- PROPOSED CURB
- EXISTING CURB AND GUTTER
- PROPOSED SIDEWALK
- EXISTING SIDEWALK
- 3' ADA PATH-2% MAX SLOPE

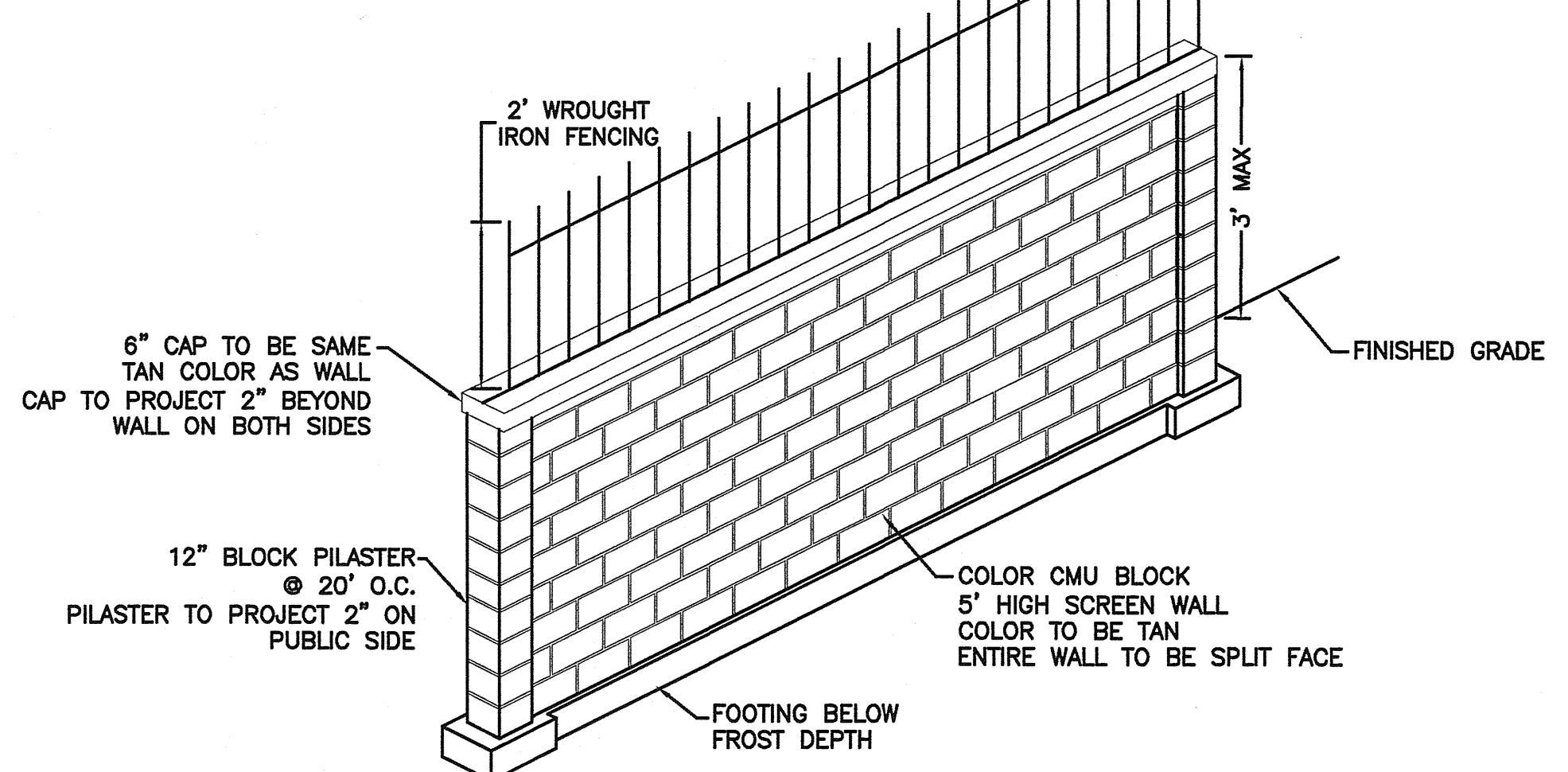


CAUTION:
EXISTING UTILITIES ARE NOT SHOWN. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION TO DETERMINE THE ACTUAL LOCATION OF UTILITIES & OTHER IMPROVEMENTS.

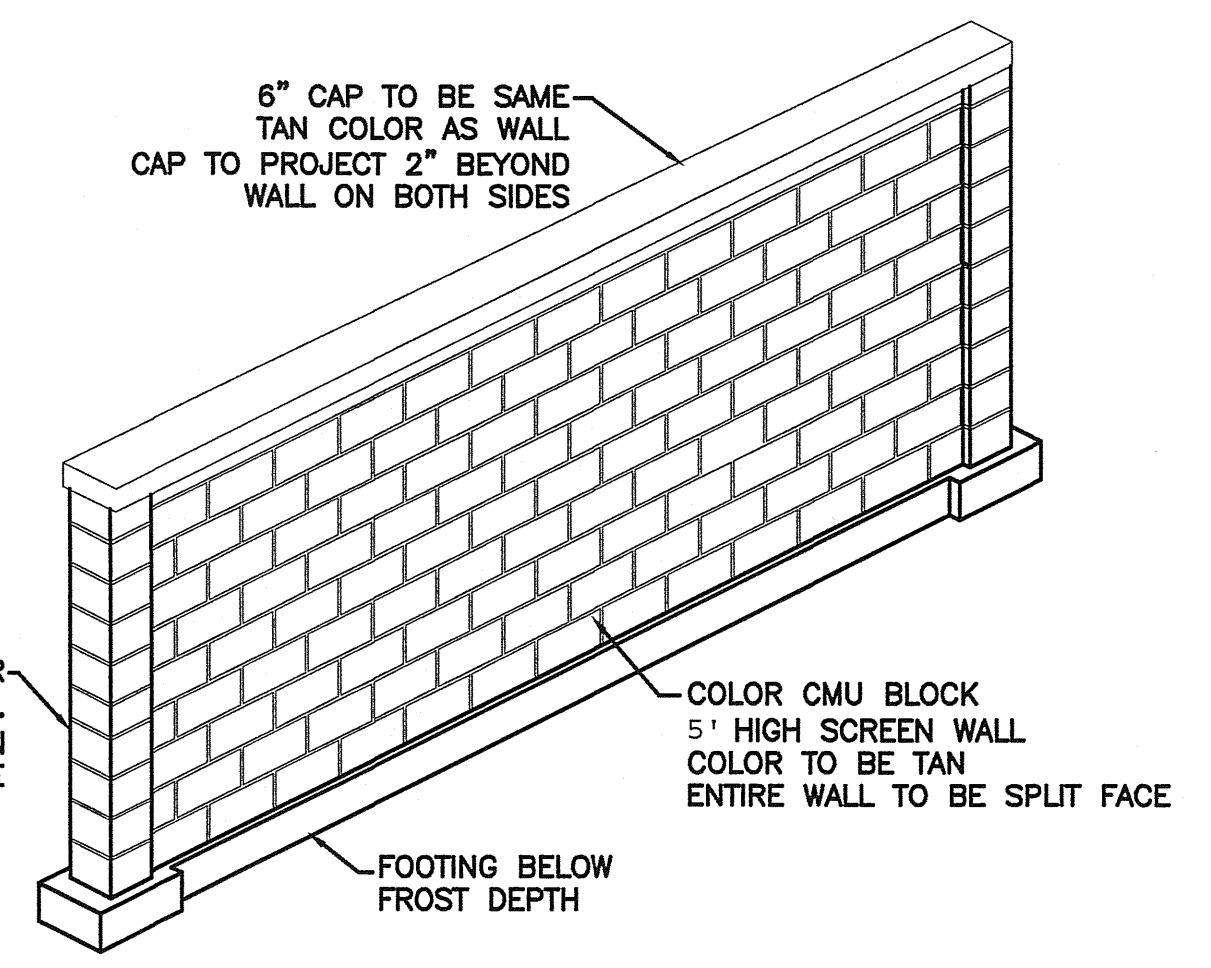
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|---|--|---|
| ENGINEER'S SEAL DAVID SOULE P.E. #14522 | QUIVIRA ESTATES GRADING AND DRAINAGE PLAN | DRAWN BY WCIW DATE 12-02-20 210209-LAYOUT-8-08-20 |
| | Rio Grande Engineering 1606 CENTRAL AVENUE SE SUITE 201 ALBUQUERQUE, NM 87106 (505) 872-0999 | SHEET # 3 JOB # 210209 |



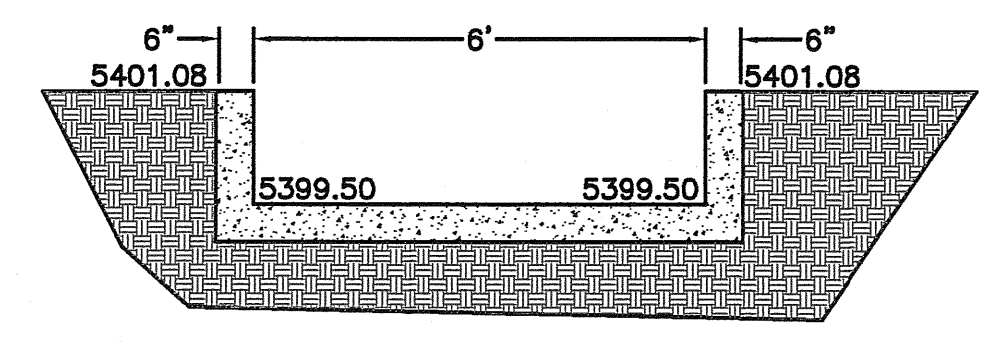
SECTION A-A
NTS



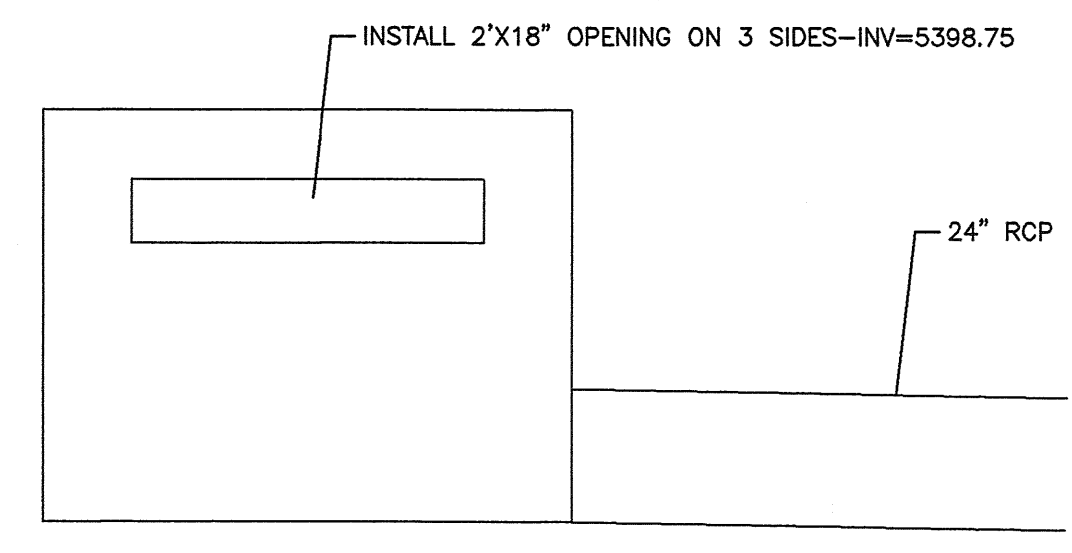
PERIMETER SCREEN WALL DETAIL WHICH ABUTS MAJOR PUBLIC OPEN SPACE
NTS—Walls shall comply with 3-4(N)(5)(b) Building Design and Standards



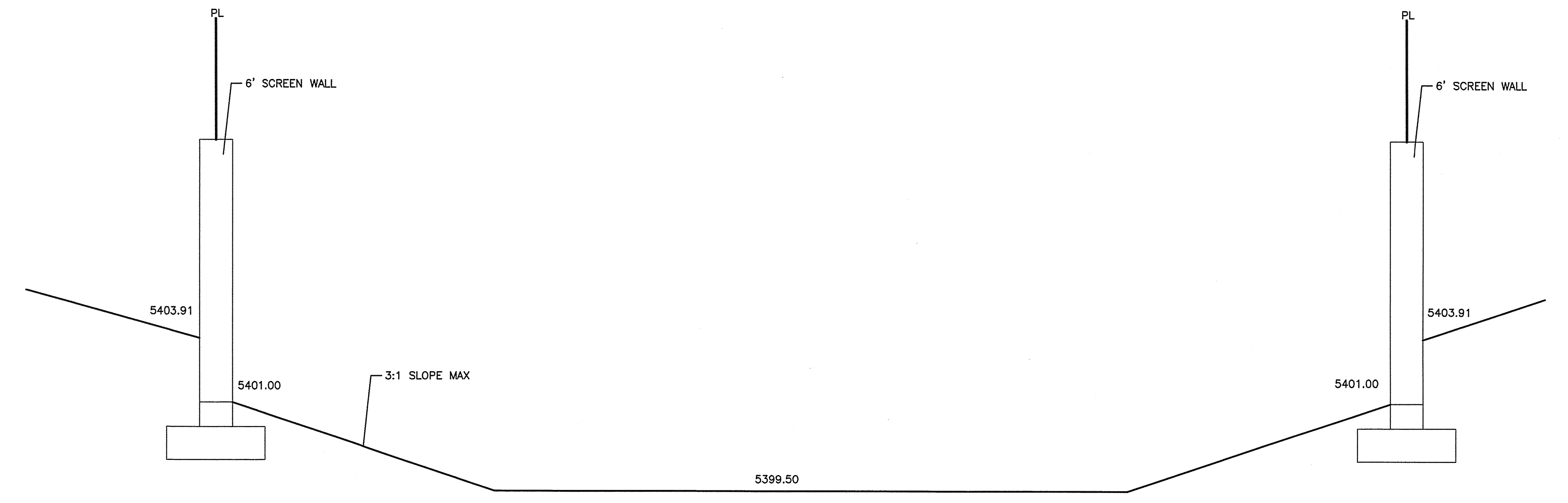
5' PERIMETER SCREEN WALL DETAIL
NTS—Walls shall comply with 3-4(N)(5)(b) Building Design and Standards



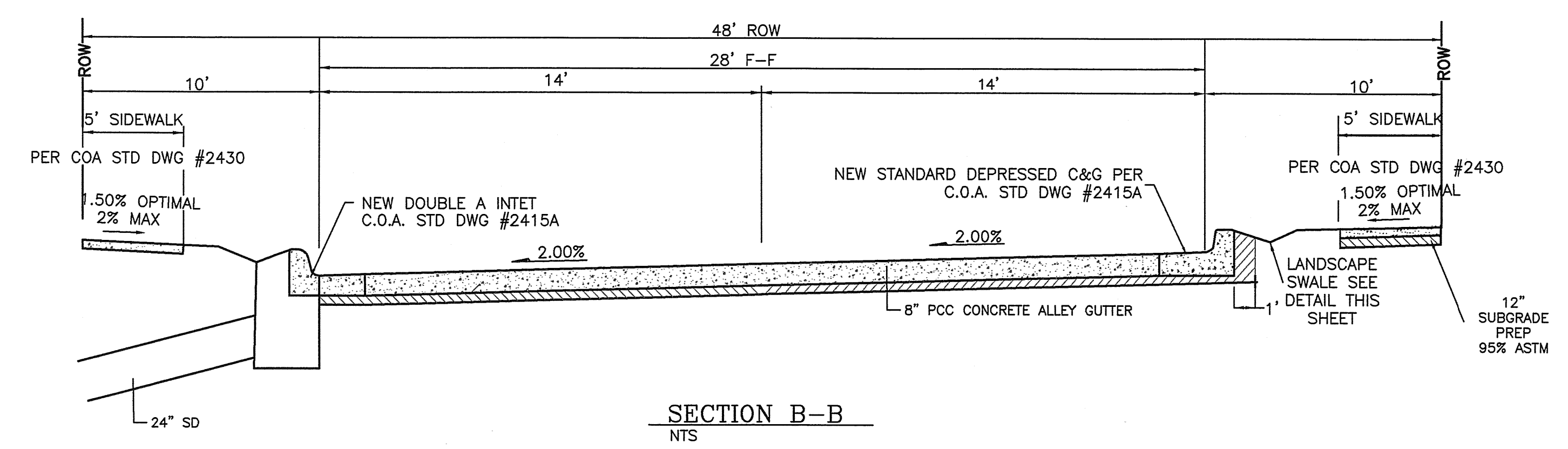
CONCRETE OVERFLOW DETAIL
NTS



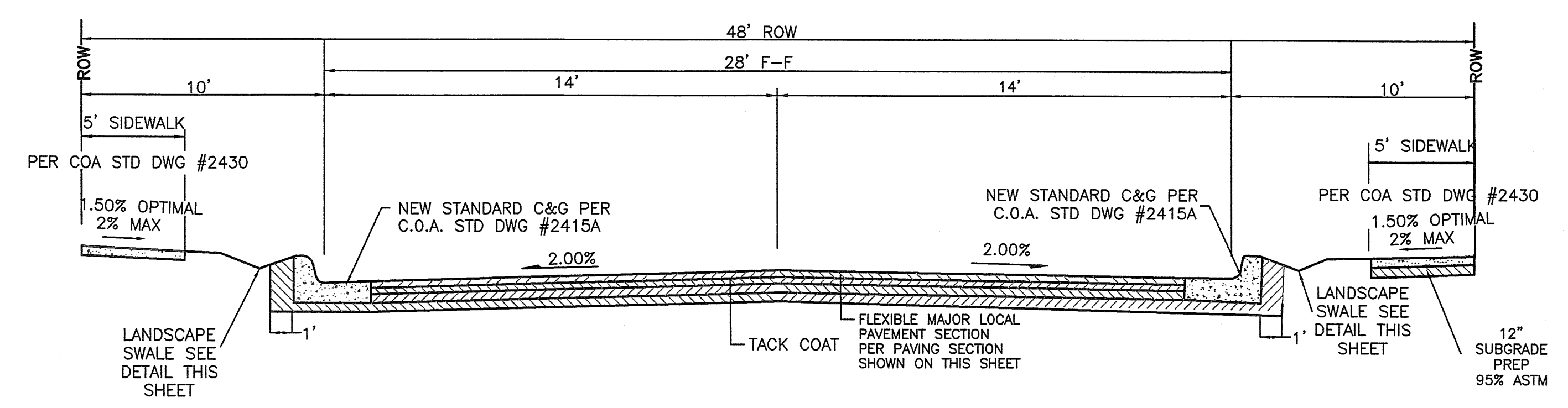
MODIFIED D INLET DETAIL
NTS



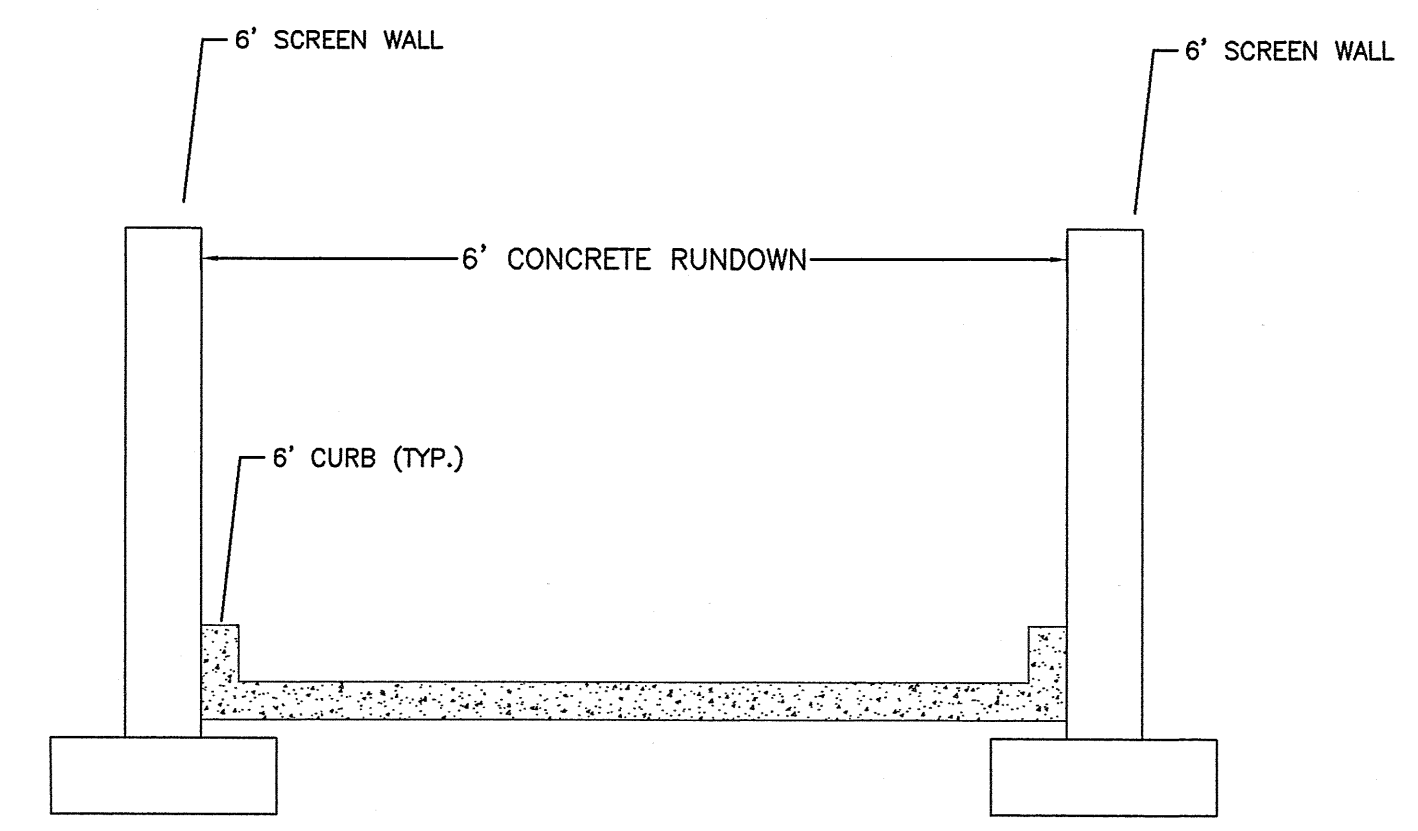
SECTION D-D
NTS




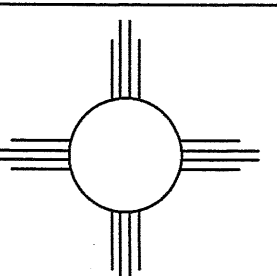
SECTION B-B
NTS



SECTION E-E
NTS



SECTION C-C
NTS

| | | |
|--|--|--|
| ENGINEER'S SEAL  DAVID SOULE P.E. #14522 | QUVIRA ESTATES | DRAWN BY WCWJ DATE 12-02-20 2102059-LAYOUT-8-08-20 |
| | GRADING AND DRAINAGE PLAN | SHEET # 3A JOB # 2102059 |
| 8/24/21 |  Rio Grande Engineering 1608 CENTRAL AVENUE SE SUITE 201 ALBUQUERQUE, NM 87106 (505) 872-0999 | |

WATER & SEWER

13. ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING. EXISTING VALVES AND MANHOLES SHALL NOT BE BURIED OR PAVED OVER BUT RIMS SHALL BE ADJUSTED TO MATCH NEW GRADE PER COA STANDARD DRAWINGS 2460 AND 2461.
14. MANHOLE RIMS, FIRE HYDRANT ELEVATIONS, AND FLANGE ELEVATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY AND ADJUST TO FINAL PAVEMENT OR SURFACE GRADES.
15. THE CONTRACTOR SHALL COORDINATE WITH THE WATER AUTHORITY SEVEN (7) DAYS IN ADVANCE OF PERFORMING WORK THAT WILL AFFECT THE PUBLIC WATER OR SANITARY SEWER INFRASTRUCTURE. WORK REQUIRING SHUTOFF OF FACILITIES DESIGNATED AS MASTER PLAN FACILITIES MUST BE COORDINATED WITH THE WATER AUTHORITY 14 DAYS IN ADVANCE OF PERFORMING SUCH WORK. ONLY WATER AUTHORITY CREWS ARE AUTHORIZED TO OPERATE PUBLIC VALVES. SHUTOFF REQUESTS MUST BE MADE ONLINE AT [HTTP://ABCWUA.ORG/WATER_SHUT_OFF_AND_TURN_ON_PROCEDURES.ASPX](http://abcwua.org/water_shut_off_and_turn_on_procedures.aspx)
16. PROPOSED WATERLINE MATERIALS SHALL BE PVC PIPE MEETING AWWA C-900: DR18 REQUIREMENTS (8" - 12") OR DUCTILE IRON PIPE MEETING AWWA C-150 REQUIREMENTS (8" - 48").
17. ALL WATERLINE FITTINGS, VALVES, BENDS, TEES, CROSSES AND APPURTENANCES SHALL HAVE RESTRAINED JOINTS UNLESS OTHERWISE NOTED ON THE PLANS. THE JOINT RESTRAINT REQUIREMENTS SHOULD BE DELINEATED WITHIN A JOINT RESTRAINT TABLE.
18. ALL SANITARY SEWER LINE STATIONING REFERS TO SANITARY SEWER CENTERLINE STATIONING. EXCEPT WHEN PROFILED WITHIN A PROPOSED OR EXISTING STREET, WHERE STREET STATIONING SHALL GOVERN.
18. ALL FINAL BACKFILL FOR TRENCHES SHALL BE COMPACTED TO A MINIMUM OF 95% MAXIMUM DENSITY PER ASTM D-1557 AND AS DIRECTED BY STANDARD SPECIFICATIONS SECTION 701.14.2 AND STANDARD DRAWING NUMBER 2465.
20. ELECTRONIC MARKER SPHERES (EMS) WILL BE PLACED ACCORDING TO THE CITY OF ALBUQUERQUE SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1998 EDITION AS REVISED THROUGH UPDATE #9. THE CONTRACTOR SHALL INSTALL A 4" X 4" X 6" POST AND EMS AT THE END OF EACH SANITARY SEWER SERVICE.
21. TRACER WIRE SHALL BE INCLUDED FOR ALL PUBLIC WATER AND SEWER MAINS AND FOR WATER SERVICES IN ACCORDANCE WITH WATER AUTHORITY DETAILS.
22. CONTRACTOR SHALL PROVIDE THE PROPOSED HYDRO TESTING PLANS TO THE WUA INSPECTORS FOR APPROVAL PRIOR TO BEGINNING TESTING OPERATIONS.
23. AT UTILITY CROSSINGS, WHERE LESS THAN 18" OF VERTICAL SEPARATION FROM STORM DRAIN PIPING OR STRUCTURES IS PROPOSED, LEAN FILL CONSTRUCTION (PER SECTION 207 OF THE STANDARD SPECIFICATIONS) SHALL BE USED TO PROTECT THE WATER OR SEWER LINE. LEAN FILL SHALL EXTEND A PERPENDICULAR DISTANCE OF 5 FEET ON EACH SIDE OF THE STORM PIPE OR STRUCTURE.
24. ALL DESIGNS AND CONSTRUCTION OF ANY UNDERGROUND UTILITIES SHALL COMPLY WITH ADMINISTRATIVE INSTRUCTION NO. 9 FOR WORK NEARBY OR AFFECTING SAN JUAN CHAMA TRANSMISSION LINES AND APPURTENANCES. INFORMATION SHALL BE PROVIDED TO THE WATER AUTHORITY ONE (1) MONTH IN ADVANCE OF THE CONSTRUCTION START DATE. INFORMATION CAN BE FOUND AT [HTTP://WWW.ABCWUA.ORG/WATER_SHUT_OFF_AND_TURN_ON_PROCEDURES.ASPX](http://www.abcwua.org/water_shut_off_and_turn_on_procedures.aspx)

NOTE
 AT ALL PAVEMENT REMOVAL AND REPLACEMENTS, SAW CUT EDGES SHALL BE STRAIGHT AND CLEAN AND LONGITUDINAL JOINTS SHALL NOT BE PLACED WITHIN WHEEL PATHS. PATCHES SHALL BE REGULAR AND SQUARE OR RECTANGULAR WITH FOUR STRAIGHT SIDES. FINISHED PAVEMENT SURFACE SHALL BE FLUSH WITH EXISTING PAVEMENT SURFACE, WITH NO SPILLOVER OFF ASPHALT OR TACK COAT. CARE MUST BE TAKEN TO AVOID DAMAGING THE INTEGRITY OR APPEARANCE OF SURROUNDING PAVEMENTS. IF DAMAGED, THE ENTIRE SURFACE PATCH MUST BE EXPANDED TO COVER DAMAGES

FOR INFORMATION ONLY:
 FIRE LINE BACK FLOW PREVENTOR SHALL BE LOCATED INTERIOR TO BUILDING AT FIRE RISER

THE FOLLOWING TABLES WERE CREATED USING EBAA IRON INC. SOFTWARE FOR RESTRAINING JOINTS WITH THESE CRITERIA:
 DEPTH OF BURY: 3.0' MINIMUM
 SAFETY FACTOR: 1.5 TO 1
 PIPE MATERIAL: PVC
 SOIL TYPE: GM/SM-SILTY GRAVEL/SILTY SAND, GRAVEL-SAND MIXTURES
 TEST PRESSURE: 150 PSI
 TRENCH TYPE 4: PIPE BEDDED IN SAND, GRAVEL OR CRUSHED STONE TO 1/8 PIPE DIAMETER, 4" MINIMUM; BACKFILL COMPACTED TO TOP OF PIPE.

RESTRAINED JOINT LENGTHS FOR TEES*

| SIZE | LENGTH ALONG RUN** | | | | | | |
|----------|--------------------|----|----|----|----|-----|--|
| | 5' | 4' | 3' | 2' | 1' | 0' | |
| 12x12x12 | 75 | 80 | 86 | 91 | 97 | 102 | |
| 12x12x10 | 54 | 61 | 67 | 74 | 80 | 87 | |
| 12x12x8 | 32 | 40 | 48 | 56 | 64 | 72 | |
| 12x12x6 | 2 | 12 | 23 | 34 | 45 | 55 | |
| 12x12x4 | 1 | 1 | 1 | 8 | 24 | 39 | |
| 10x10x10 | 60 | 65 | 74 | 76 | 81 | 87 | |
| 10x10x8 | 39 | 45 | 52 | 59 | 66 | 72 | |
| 10x10x6 | 11 | 20 | 29 | 38 | 46 | 55 | |
| 10x10x4 | 1 | 1 | 1 | 14 | 26 | 39 | |
| 8x8x8 | 46 | 51 | 57 | 62 | 67 | 72 | |
| 8x8x6 | 21 | 28 | 34 | 41 | 48 | 55 | |
| 8x8x4 | 1 | 1 | 9 | 19 | 29 | 39 | |
| 6x6x6 | 29 | 34 | 40 | 45 | 50 | 55 | |
| 6x6x4 | 1 | 9 | 16 | 24 | 32 | 39 | |

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

RESTRAINED JOINT LENGTHS FOR HORIZONTAL BENDS, VALVES, AND DEAD ENDS (EACH SIDE)

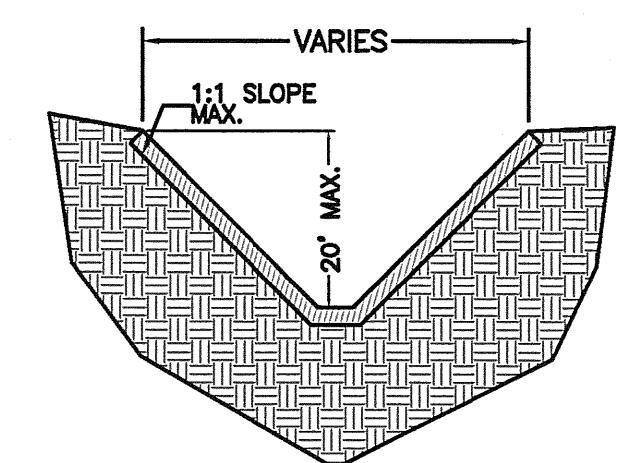
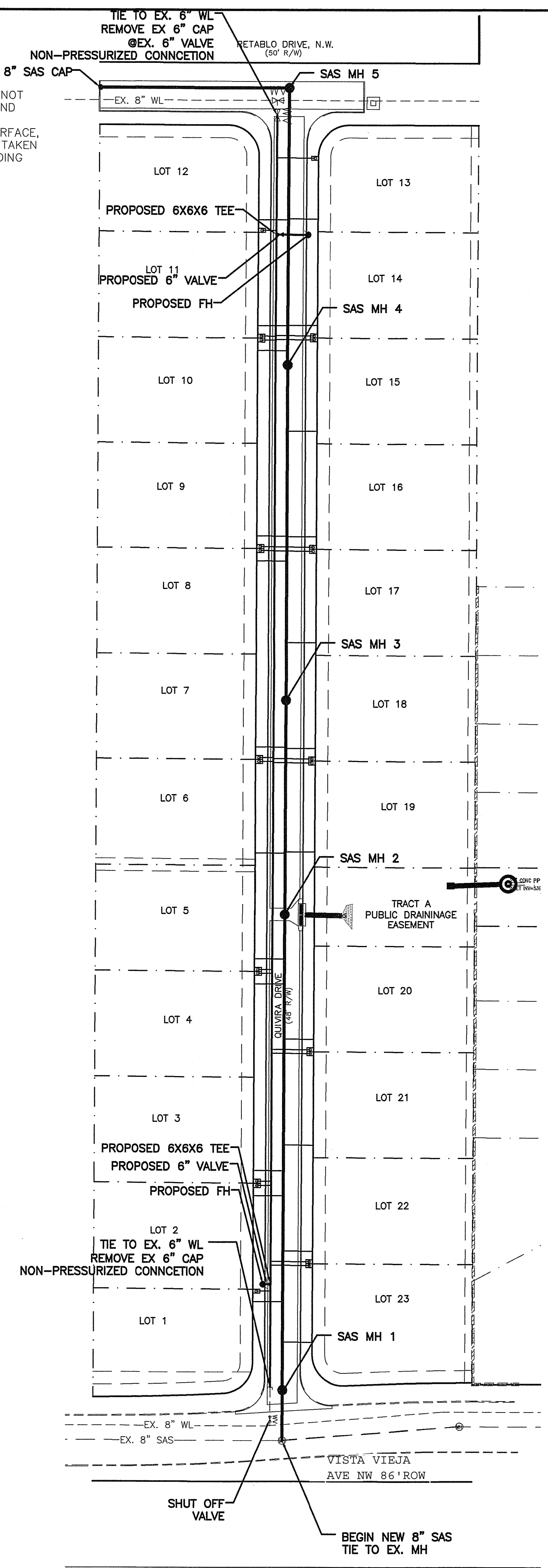
| SIZE | HORIZONTAL BENDS | | | | VALVES DEAD END |
|------|------------------|-----|---------|---------|--------------------|
| | 90° | 45° | 22-1/2° | 11-1/4° | |
| 12 | 37 | 15 | 8 | 4 | 102 |
| 10 | 31 | 13 | 7 | 4 | 87 |
| 8 | 27 | 11 | 6 | 3 | 72 |
| 6 | 20 | 9 | 4 | 2 | 55 |
| 4 | 15 | 6 | 3 | 2 | 39 |

THE FOLLOWING TABLES WERE CREATED USING EBAA IRON INC. SOFTWARE FOR RESTRAINING JOINTS WITH THESE CRITERIA:
 DEPTH OF BURY: 3.0' MINIMUM
 SAFETY FACTOR: 1.5 TO 1
 PIPE MATERIAL: PVC
 SOIL TYPE: GM/SM-SILTY GRAVEL/SILTY SAND, GRAVEL-SAND MIXTURES
 TEST PRESSURE: 150 PSI
 TRENCH TYPE 4: PIPE BEDDED IN SAND, GRAVEL OR CRUSHED STONE TO 1/8 PIPE DIAMETER, 4" MINIMUM; BACKFILL COMPACTED TO TOP OF PIPE.

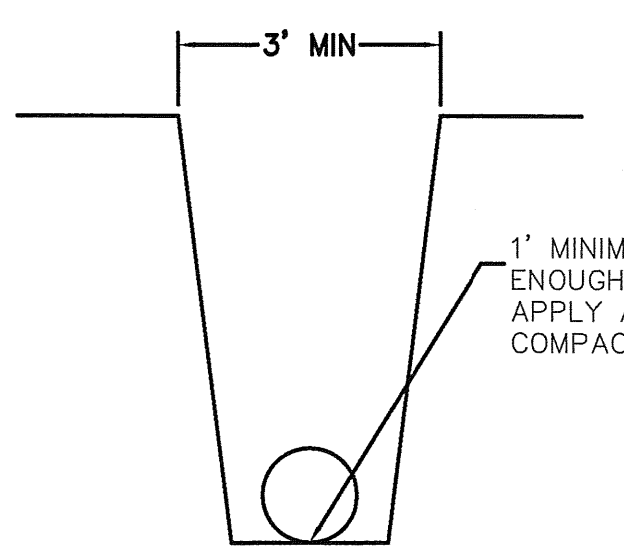
THESE LENGTHS WILL BE AFFECTED IF THE TYPE OF MATERIAL, GREATER DEPTH OF BURY, ETC. CHANGES. THESE MUST BE RECALCULATED BY THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.

RESTRAINED JOINT LENGTHS FOR VERTICAL OFFSETS/BENDS (EACH SIDE)

| SIZE | HORIZONTAL BENDS | | | |
|----------|------------------|-----|---------|---------|
| | 90° | 45° | 22-1/2° | 11-1/4° |
| 12 UPPER | DON'T USE | 42 | 21 | 11 |
| 12 LOWER | DON'T USE | 10 | 5 | 3 |
| 10 UPPER | DON'T USE | 36 | 14 | 9 |
| 10 LOWER | DON'T USE | 9 | 8 | 2 |
| 8 UPPER | DON'T USE | 30 | 15 | 8 |
| 8 LOWER | DON'T USE | 7 | 4 | 2 |
| 6 UPPER | DON'T USE | 23 | 11 | 6 |
| 6 LOWER | DON'T USE | 6 | 3 | 2 |
| 4 UPPER | DON'T USE | 17 | 8 | 4 |
| 4 LOWER | DON'T USE | 4 | 2 | 1 |



SUPPLEMENTAL TRENCH DETAIL
 NTS-PER FIGURE V-2-13 OSHA STANDARD SPECIFICATIONS
 NOTE: ENTIRE TRENCH PRISM SHALL BE COMPACTED AT 95% ASTM D1557 INCLUDING ALL UTILITY MAIN LINES, WATER METER BOXES AND SERVICES, SAS SERVICES.

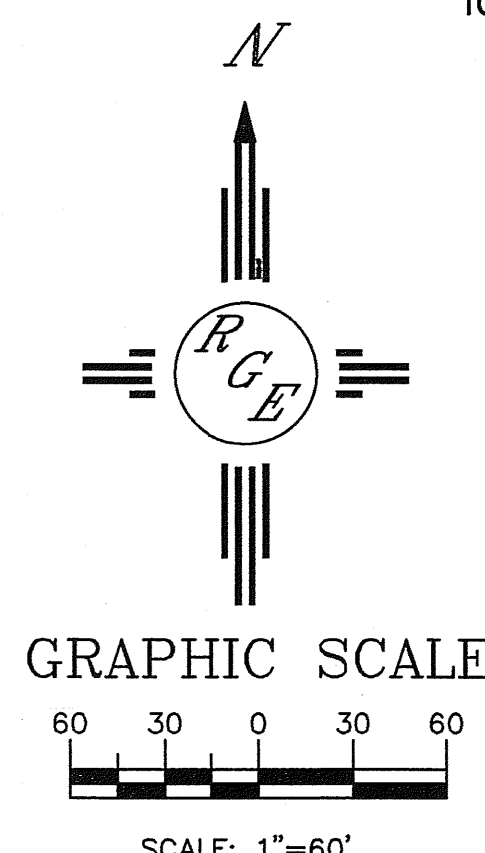


WATER AND SEWER TRENCH DETAIL
 NTS

LEGEND

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

CONTRACTOR SHALL REMOVE AND REPLACE PAVING PER COA STD DWG 2465 (LOCAL). CONTRACTOR SHALL REMOVE AND REPLACE STD C&G PER COA STD 2415A. CONTRACTOR SHALL REMOVE AND REPLACE SW PER COA STD SWG 2430. REMOVE TO THE NEAREST JOINT



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 (505) 872-0959

ABCWUA
 PUBLIC WORKS DEPARTMENT
 ENGINEERING GROUP
QUMIRA ESTATES
 MASTER UTILITY PLAN

| | | | |
|-------------------------|------------------------|-------------|-------------|
| DESIGN REVIEW COMMITTEE | CITY ENGINEER APPROVAL | MO./DAY/YR. | MO./DAY/YR. |
| | | | |
| CITY PROJECT NO. | ZONE MAP NO. | SHEET | OF |
| | | 7 | 10 |

WATER SHUTOFF NOTES—SHUT OFF VALVE

WATER SHUTOFF NOTES:
 1. THE CONTRACTOR SHALL COORDINATE WITH THE WATER UTILITY AUTHORITY SEVEN (7) DAYS IN ADVANCE OF PERFORMING WORK THAT WILL AFFECT THE PUBLIC WATER OR SANITARY SEWER INFRASTRUCTURE. WORK REQUIRING SHUTOFF OF FACILITIES DESIGNATED AS MASTER PLAN FACILITIES MUST BE COORDINATED WITH THE WATER AUTHORITY 14 DAYS IN ADVANCE OF PERFORMING SUCH WORK. ONLY WATER AUTHORITY CREWS ARE AUTHORIZED TO OPERATE PUBLIC VALVES. SHUT OFF REQUEST MUST BE MADE ONLINE AT [HTTP://ABCWUA.ORG/WATER_SHUT_OFF_AND_TURN_ON_PROCEDURES.ASPX](http://abcwua.org/water_shut_off_and_turn_on_procedures.aspx)
 2. VALVES SHALL BE OPERATED BY ABCWUA EMPLOYEES ONLY.

| | | | |
|-----------------------------|------|---|------------------|
| AS BUILT INFORMATION | | ENGINEER'S SEAL | |
| CONTRACTOR | DATE | | 8 / 24 / 21 |
| INSPECTOR'S | DATE | | |
| FIELD CHARGE BY | DATE | CHANGE TO SERVICE DETAIL NO. DATE BY 1 4/21/11 WJ | |
| REVISIONS | DATE | | |
| DESIGNED BY | DATE | | |
| DRAWN BY | DATE | | |
| CHECKED BY | DATE | DESIGNED BY: WCUJ | DATE: 8-06-20 |
| RECORDED BY | DATE | DRAWN BY: WCUJ | DATE: 8-06-20 |
| NO. | DATE | DRAWN NAME: 2102059-LAYOUT-8-06-20.DWG | JOB NO.: 2102059 |
| | | CHECKED BY: DS | DATE: 8-06-20 |