



HIDALGO COUNTY PLANNING DEPARTMENT

T.J. Arredondo, CFM
Director of Planning

2818 S. BUSINESS HWY 281
EDINBURG TEXAS 78539
Tel. 956-318-2840 Fax. 956-318-2844

HIDALGO COUNTY COMMISSIONERS COURT MEETING

DATE: 8-18-2022

PROPOSED BENAVIDES SUBDIVISION, PRECINCT No. 3.

ENGINEER: SOUTH TEXAS INFRASTRUCTURE GROUP, DEVELOPER: BULMARO BENAVIDES

PRELIMINARY APPROVAL FINAL APPROVAL FINAL APPROVAL WITH FINANCIAL GUARANTEE WITH VARIANCE

NUMBER OF LOTS: *SINGLE FAMILY *MULTI-FAMILY 4 COMMERCIAL INSTITUTIONAL

ESTIMATED NUMBER OF STREETLIGHTS: N/A

FILLING STATIONS: 1

LOCATION DESCRIPTION: NORTH ON LOS EBANOS ROAD APPROXIMATELY ¼ MILE EAST OF INSPIRATION ROAD.

SUBDIVISION LIES WITHIN THE: ETJ OF MISSION

DRAINAGE REPORT WAS APPROVED BY HCDD#1: ON 9-7-2021 PROPERTY LIES WITHIN FLOOD ZONE: "C" AS PER FEMA.

DRAINAGE DESIGN: DRAINAGE WILL BE PROVIDED BY ONSITE DETENTION AT BUILDING PERMIT STAGE.

ROAD R.O.W. DEDICATION: 10.00 FT ONTO BRUSHLINE ROAD.

H.C.R.O.W. PRELIMINARY APPROVAL DATE: 5-13-2022 BY, VICTOR GALLARDO, PCT. 3 R.O.W. AGENT

H.C.H.D. PRELIMINARY APPROVAL DATE: 6-13-2022 BY, ENVIRONMENTAL HEALTH DIVISION MANAGER

SEWER SYSTEM: OSSF'S

WATER SERVICE PROVIDER: SWSC LINE SIZE: 8" LOCATION: LOS EBANOS ROAD.

H.C.E.O.C. PRELIMINARY APPROVAL DATE: 4-26-22 : BY MARTIN RAMIREZ ENVIRONMENTAL COMPLIANCE COORDINATOR

SMALL CONSTRUCTION

The applicant has submitted the required small construction site notice as per Part II, Section E Of the TPDES General Permit for Construction Activities (TXR150000) along with a copy of the Erosion Control Plan for the proposed project.

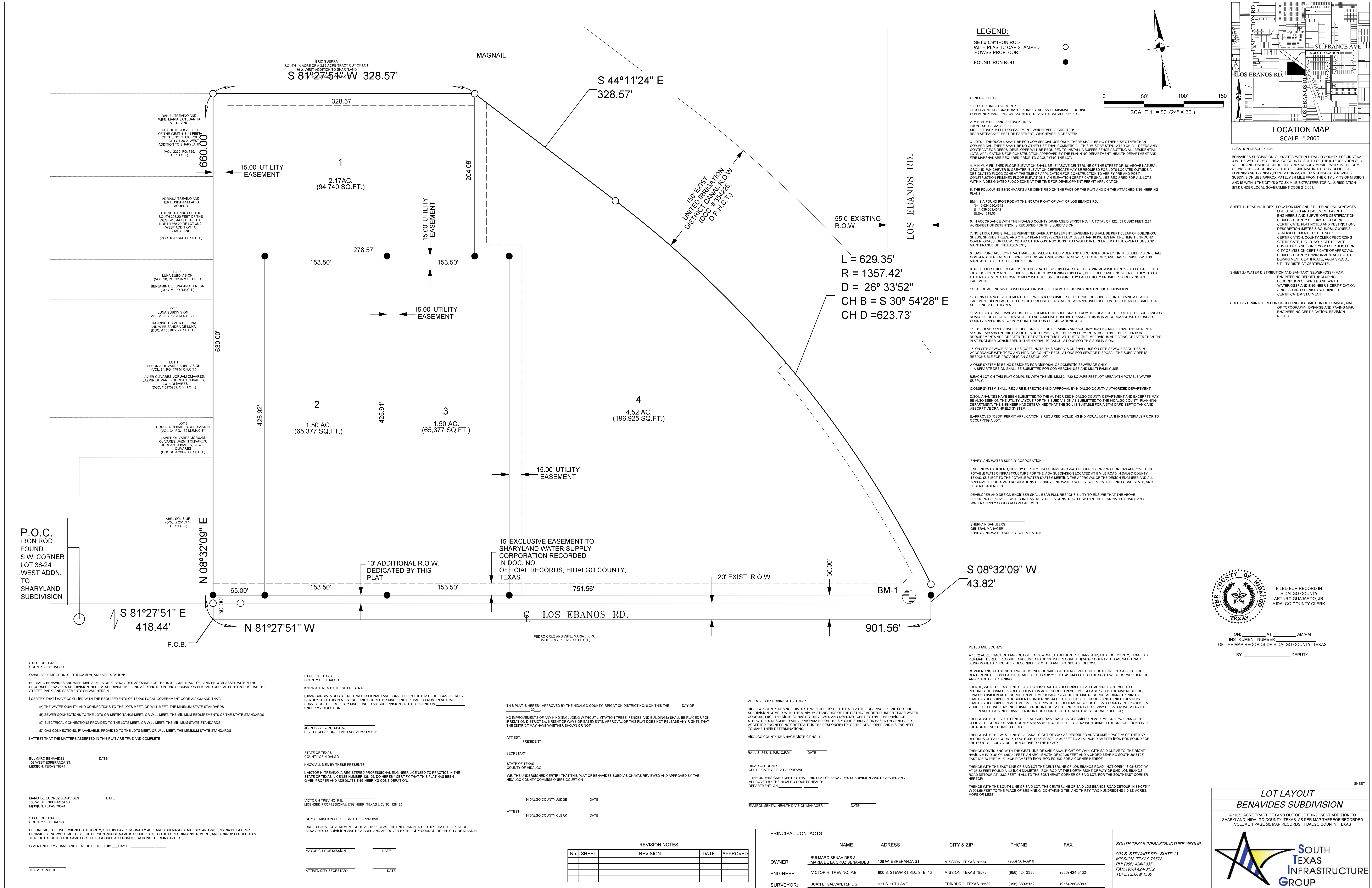
PRELIMINARY APPROVAL FROM THE
HIDALGO COUNTY COMMISSIONERS COURT ON:

STAFF RECOMMENDS: **Preliminary Approval** *subject to comments and future recommendations by planning, other departments and the approval of the City of MISSION.*

Final Approval *subject to recommendations other departments*

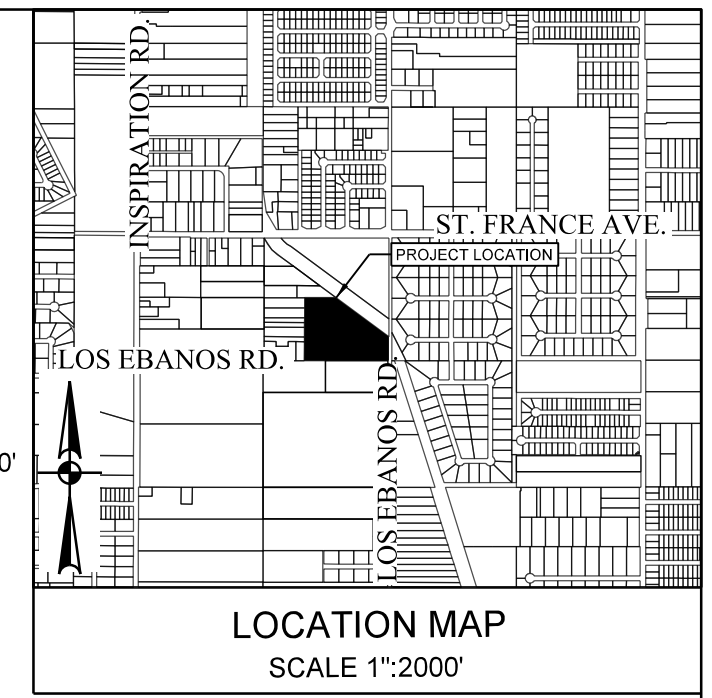
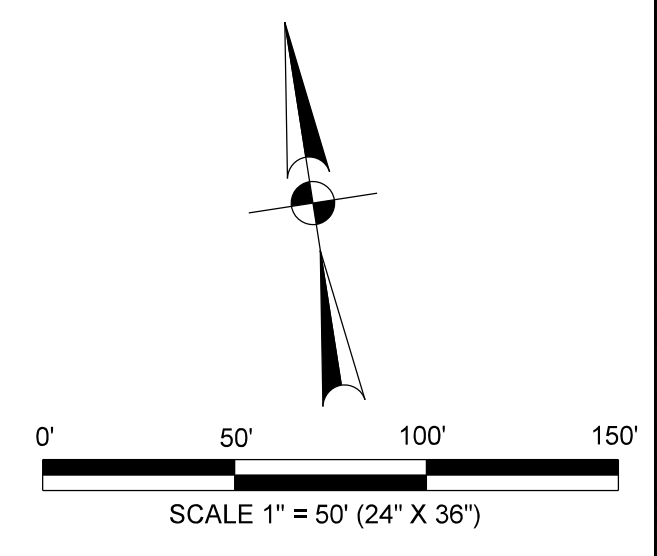
This subdivision plat has been reviewed and complies with the Hidalgo County Subdivision Rules,

* *Texas Water Development Board Model Subdivision Rules and The Texas Local Government Code.*



LEGEND:

- SET # 5/8" IRON ROD WITH PLASTIC CAP STAMPED "ROWSS PROP. COR."
- FOUND IRON ROD



- GENERAL NOTES:**
1. FLOOD ZONE STATEMENT: FLOOD ZONE DESIGNATION "1" ZONE "1" AREAS OF MINIMAL FLOODING. COMMUNITY PANEL NO. 480334 0400 C. REVISED NOVEMBER 16, 1992.
 2. MINIMUM BUILDING SETBACK LINES: FRONT SETBACK 30 FEET; REAR SETBACK 30 FEET OR EASEMENT, WHICHEVER IS GREATER.
 3. LOTS 1 THROUGH 4 SHALL BE FOR COMMERCIAL USE ONLY. THERE SHALL BE NO OTHER USE OTHER THAN COMMERCIAL. THERE SHALL BE NO OTHER USE THAN COMMERCIAL. THIS MUST BE STIPULATED ON ALL DEEDS AND CONTRACTS FOR DEEDS. DEVELOPER SHALL BE REQUIRED TO INSTALL A BUFFER FENCE ABUTTING ALL RESIDENTIAL LOTS. APPLICATIONS FOR CONSTRUCTION APPROVED BY THE PLANNING DEPARTMENT, HEALTH DEPARTMENT AND FIRE MARSHAL ARE REQUIRED PRIOR TO OCCUPANCY OF THE LOT.
 4. MINIMUM FINISHED FLOOR ELEVATION SHALL BE 18" ABOVE CENTERLINE OF THE STREET OR 18" ABOVE NATURAL GRADE, WHICHEVER IS GREATER. ELEVATION CERTIFICATE MAY BE REQUIRED FOR LOTS LOCATED OUTSIDE A DESIGNATED FLOOD ZONE AT THE TIME OF APPLICATION FOR CONSTRUCTION TO VERIFY PRE AND POST CONSTRUCTION FINISHED FLOOR ELEVATIONS. AN ELEVATION CERTIFICATE SHALL BE REQUIRED FOR ALL LOTS WITHIN A DESIGNATED FLOOD ZONE AT THE TIME FOR DEVELOPMENT PERMIT APPLICATION.
 5. THE FOLLOWING BENCHMARKS ARE IDENTIFIED ON THE FACE OF THE PLAT AND ON THE ATTACHED ENGINEERING PLANS:
 - BM-1 IS A FOUND IRON ROD AT THE NORTH RIGHT-OF-WAY OF LOS EBANOS RD.
 - N= 1062030012
 - E= 039 061 4612
 - ELEV = 212.03
 6. IN ACCORDANCE WITH THE HIDALGO COUNTY DRAINAGE DISTRICT NO. 1 A TOTAL OF 122,451 CUBIC FEET, 2.81 ACRE-FEET OF DETENTION IS REQUIRED FOR THIS SUBDIVISION.
 7. NO STRUCTURE SHALL BE PERMITTED OVER ANY EASEMENT. EASEMENTS SHALL BE KEPT CLEAR OF BUILDINGS, SHEDS, SHRUBS, TREES, AND OTHER PLANTINGS (EXCEPT LOW LESS THAN 10 INCHES MATURE HEIGHT, GRASS, COVER, GRASS, OR FLOWERS) AND OTHER OBSTRUCTIONS THAT WOULD INTERFERE WITH THE OPERATIONS AND MAINTENANCE OF THE EASEMENT.
 8. EACH PURCHASE CONTRACT MADE BETWEEN A SUBDIVIDER AND PURCHASER OF A LOT IN THIS SUBDIVISION SHALL CONTAIN A STATEMENT DESCRIBING HOW AND WHEN WATER, SEWER, ELECTRICITY, AND GAS SERVICES WILL BE MADE AVAILABLE TO THE SUBDIVISION.
 9. ALL PUBLIC UTILITIES EASEMENTS DEDICATED BY THIS PLAT SHALL BE A MINIMUM WIDTH OF 15.00 FEET AS PER THE HIDALGO COUNTY MODEL SUBDIVISION RULES, BY SIGNING THIS PLAT, DEVELOPER AND ENGINEER CERTIFY THAT ALL OTHER EASEMENTS SHOWN COMPLY WITH THE SIZE REQUIRED BY EACH UTILITY PROVIDER OCCUPYING AN EASEMENT.
 11. THERE ARE NO WATER WELLS WITHIN 150 FEET FROM THE BOUNDARIES ON THIS SUBDIVISION.
 12. FEMA OMPA DEVELOPMENT, THE OWNER & SUBDIVIDER OF EL CUCURTO SUBDIVISION, RETAINS A BLANKET EASEMENT UPON EACH LOT FOR THE PURPOSE OF INSTALLING AN APPROVED OSSF ON THE LOT AS DESCRIBED ON SHEET NO. 3 OF THIS PLAT.
 13. ALL LOTS SHALL HAVE A POST DEVELOPMENT FINISHED GRADE FROM THE REAR OF THE LOT TO THE CURB AND/OR ROADSIDE SLOPE AT A 2:25 SLOPE TO ACCOMPLISH POSITIVE DRAINAGE. THIS IS IN ACCORDANCE WITH HIDALGO COUNTY APPENDIX 5: COUNTY CONSTRUCTION SPECIFICATIONS 3.1.4.
 15. THE DEVELOPER SHALL BE RESPONSIBLE FOR DETAINING AND ACCOMMODATING MORE THAN THE DETAINED VOLUME SHOWN ON THIS PLAT IF IT IS DETERMINED, AT THE DEVELOPMENT STAGE, THAT THE DETENTION REQUIREMENTS ARE GREATER THAN STATED ON THE PLAT, DUE TO THE IMPERVIOUS ARE BEING GREATER THAN THE PLAT ENGINEER CONSIDERED IN THE HYDROLOGIC CALCULATIONS FOR THIS SUBDIVISION.
 16. ON-SITE SEWAGE FACILITIES (OSSF) NOTE: THIS SUBDIVISION SHALL USE ON-SITE SEWAGE FACILITIES IN ACCORDANCE WITH TCEQ AND HIDALGO COUNTY REGULATIONS FOR SEWAGE DISPOSAL. THE SUBDIVIDER IS RESPONSIBLE FOR PROVIDING AN OSSF ON LOT.
 - A OSSF SYSTEM IS BEING DESIGNED FOR DISPOSAL OF DOMESTIC SEWAGE ONLY.
 - A SEPARATE DESIGN SHALL BE SUBMITTED FOR COMMERCIAL USE AND MULTIFAMILY USE.
 - B EACH LOT ON THIS PLAT COMPLES WITH THE MINIMUM 21,780 SQUARE FEET LOT AREA WITH POTABLE WATER SUPPLY.
 - C OSSF SYSTEM SHALL REQUIRE INSPECTION AND APPROVAL BY HIDALGO COUNTY AUTHORIZED DEPARTMENT.
 - D SOIL ANALYSIS HAS BEEN SUBMITTED TO THE AUTHORIZED HIDALGO COUNTY DEPARTMENT AND EXCERPTS MAY BE ALSO SEEN ON THE UTILITY LAYOUT FOR THIS SUBDIVISION AS SUBMITTED TO THE HIDALGO COUNTY PLANNING DEPARTMENT. THE ENGINEER HAS DETERMINED THAT THE SOIL IS SUITABLE FOR A STANDARD SEPTIC TANK AND ABSORPTIVE DRAINFIELD SYSTEM.
 - E APPROVED "OSSF" PERMIT APPLICATION IS REQUIRED INCLUDING INDIVIDUAL LOT PLANNING MATERIALS PRIOR TO OCCUPANCY A LOT.

14. ALL LOTS SHALL HAVE A POST DEVELOPMENT FINISHED GRADE FROM THE REAR OF THE LOT TO THE CURB AND/OR ROADSIDE SLOPE AT A 2:25 SLOPE TO ACCOMPLISH POSITIVE DRAINAGE. THIS IS IN ACCORDANCE WITH HIDALGO COUNTY APPENDIX 5: COUNTY CONSTRUCTION SPECIFICATIONS 3.1.4.
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- E APPROVED "OSSF" PERMIT APPLICATION IS REQUIRED INCLUDING INDIVIDUAL LOT PLANNING MATERIALS PRIOR TO OCCUPANCY A LOT.

SHARYLAND WATER SUPPLY CORPORATION

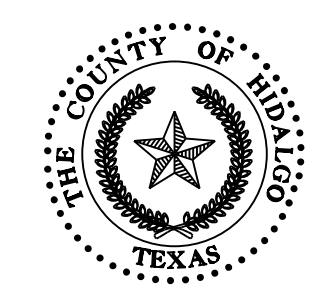
I, SHERILYN DAHLBERG, HEREBY CERTIFY THAT SHARYLAND WATER SUPPLY CORPORATION HAS APPROVED THE POTABLE WATER INFRASTRUCTURE FOR THE VIDEA SUBDIVISION LOCATED AT 5 MILE ROAD, HIDALGO COUNTY, TEXAS, SUBJECT TO THE POTABLE WATER SYSTEM MEETING THE APPROVAL OF THE DESIGN ENGINEER AND ALL APPLICABLE RULES AND REGULATIONS OF SHARYLAND WATER SUPPLY CORPORATION AND LOCAL, STATE, AND FEDERAL AGENCIES.

DEVELOPER AND DESIGN ENGINEER SHALL BEAR FULL RESPONSIBILITY TO ENSURE THAT THE ABOVE REFERENCED POTABLE WATER INFRASTRUCTURE IS CONSTRUCTED WITHIN THE DESIGNATED SHARYLAND WATER SUPPLY CORPORATION EASEMENT.

SHERILYN DAHLBERG
GENERAL MANAGER
SHARYLAND WATER SUPPLY CORPORATION

ON _____ AT _____ AM/PM
INSTRUMENT NUMBER _____
OF THE MAP RECORDS OF HIDALGO COUNTY, TEXAS

BY: _____ DEPUTY



FILED FOR RECORD IN
HIDALGO COUNTY
ARTURO GUAJARDO, JR.
HIDALGO COUNTY CLERK

STATE OF TEXAS
COUNTY OF HIDALGO

OWNERS DEDICATION, CERTIFICATION AND ATTESTATION:

BULMARO BENAVIDES AND WIFE, MARIA DE LA CRUZ BENAVIDES AS OWNER OF THE 10.00 ACRE TRACT OF LAND ENCOMPASSED WITHIN THE PROPOSED BENAVIDES SUBDIVISION, HEREBY SUBDUCE THE LAND AS DEPICTED IN THIS SUBDIVISION PLAT AND DEDICATED TO PUBLIC USE THE STREET, PARK AND EASEMENTS SHOWN HEREIN.

I CERTIFY THAT I HAVE COMPLIED WITH THE REQUIREMENTS OF TEXAS LOCAL GOVERNMENT CODE 232.032 AND THAT:

- (A) THE WATER QUALITY AND CONNECTIONS TO THE LOTS MEET, OR WILL MEET, THE MINIMUM STATE STANDARDS.
- (B) SEWER CONNECTIONS TO THE LOTS OR SEPTIC TANKS MEET, OR WILL MEET, THE MINIMUM REQUIREMENTS OF THE STATE STANDARDS.
- (C) ELECTRICAL CONNECTIONS PROVIDED TO THE LOTS MEET, OR WILL MEET, THE MINIMUM STATE STANDARDS.
- (D) GAS CONNECTIONS, IF AVAILABLE, PROVIDED TO THE LOTS MEET, OR WILL MEET, THE MINIMUM STATE STANDARDS.

I ATTEST THAT THE MATTERS ASSERTED IN THIS PLAT ARE TRUE AND COMPLETE.

STATE OF TEXAS
COUNTY OF HIDALGO

BULMARO BENAVIDES
108 WEST ESPERANZA ST.
MISSION, TEXAS 78574

DATE _____

MARIA DE LA CRUZ BENAVIDES
108 WEST ESPERANZA ST.
MISSION, TEXAS 78574

DATE _____

STATE OF TEXAS
COUNTY OF HIDALGO

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED BULMARO BENAVIDES AND WIFE, MARIA DE LA CRUZ BENAVIDES KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN STATED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS ____ DAY OF _____

NOTARY PUBLIC _____

STATE OF TEXAS
COUNTY OF HIDALGO

KNOW ALL MEN BY THESE PRESENTS:

I, VIAN GARCIA, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE AND PREPARED FROM AN ACTUAL SURVEY OF THE PROPERTY MADE UNDER MY SUPERVISION ON THE GROUND ON _____ UNDER MY DIRECTION.

JUAN E. GALVAN, R.P.L.S.
REG. PROFESSIONAL LAND SURVEYOR # 011

STATE OF TEXAS
COUNTY OF HIDALGO

KNOW ALL MEN BY THESE PRESENTS:

I, VICTOR H. TREVINO, A REGISTERED PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF TEXAS, LICENSE NUMBER 128196, DO HEREBY CERTIFY THAT THIS PLAT HAS BEEN GIVEN PROPER AND ADEQUATE ENGINEERING CONSIDERATION.

VICTOR H. TREVINO, P.E.
LICENSED PROFESSIONAL ENGINEER, TEXAS LIC. NO. 128196

CITY OF MISSION CERTIFICATE OF APPROVAL

UNDER LOCAL GOVERNMENT CODE 212.0115(B) I, THE UNDERSIGNED CERTIFY THAT THIS PLAT OF BENAVIDES SUBDIVISION WAS REVIEWED AND APPROVED BY THE CITY CLERK OF THE CITY OF MISSION.

MAYOR CITY OF MISSION _____ DATE _____

ATTEST: CITY SECRETARY _____ DATE _____

THIS PLAT IS HEREBY APPROVED BY THE HIDALGO COUNTY IRRIGATION DISTRICT NO. 6 ON THIS THE ____ DAY OF _____ 20____.

NO IMPROVEMENTS OF ANY KIND (INCLUDING WITHOUT LIMITATION TREES, FENCES AND BUILDINGS) SHALL BE PLACED UPON IRRIGATION DISTRICT NO. 6 RIGHT OF WAY OR EASEMENTS. APPROVAL OF THIS PLAT DOES NOT RELEASE ANY RIGHTS THAT THE DISTRICT MAY HAVE WHETHER SHOWN OR NOT.

HIDALGO COUNTY JUDGE _____ DATE _____

ATTEST: HIDALGO COUNTY CLERK _____ DATE _____

APPROVED BY DRAINAGE DISTRICT:

HIDALGO COUNTY DRAINAGE DISTRICT NO. 1

RAUL E. SEBEN, P.E., C.F.M. DATE _____

HIDALGO COUNTY CERTIFICATE OF PLAT APPROVAL

I, THE UNDERSIGNED CERTIFY THAT THIS PLAT OF BENAVIDES SUBDIVISION WAS REVIEWED AND APPROVED BY THE HIDALGO COUNTY HEALTH DEPARTMENT ON _____

ENVIRONMENTAL HEALTH DIVISION MANAGER _____ DATE _____

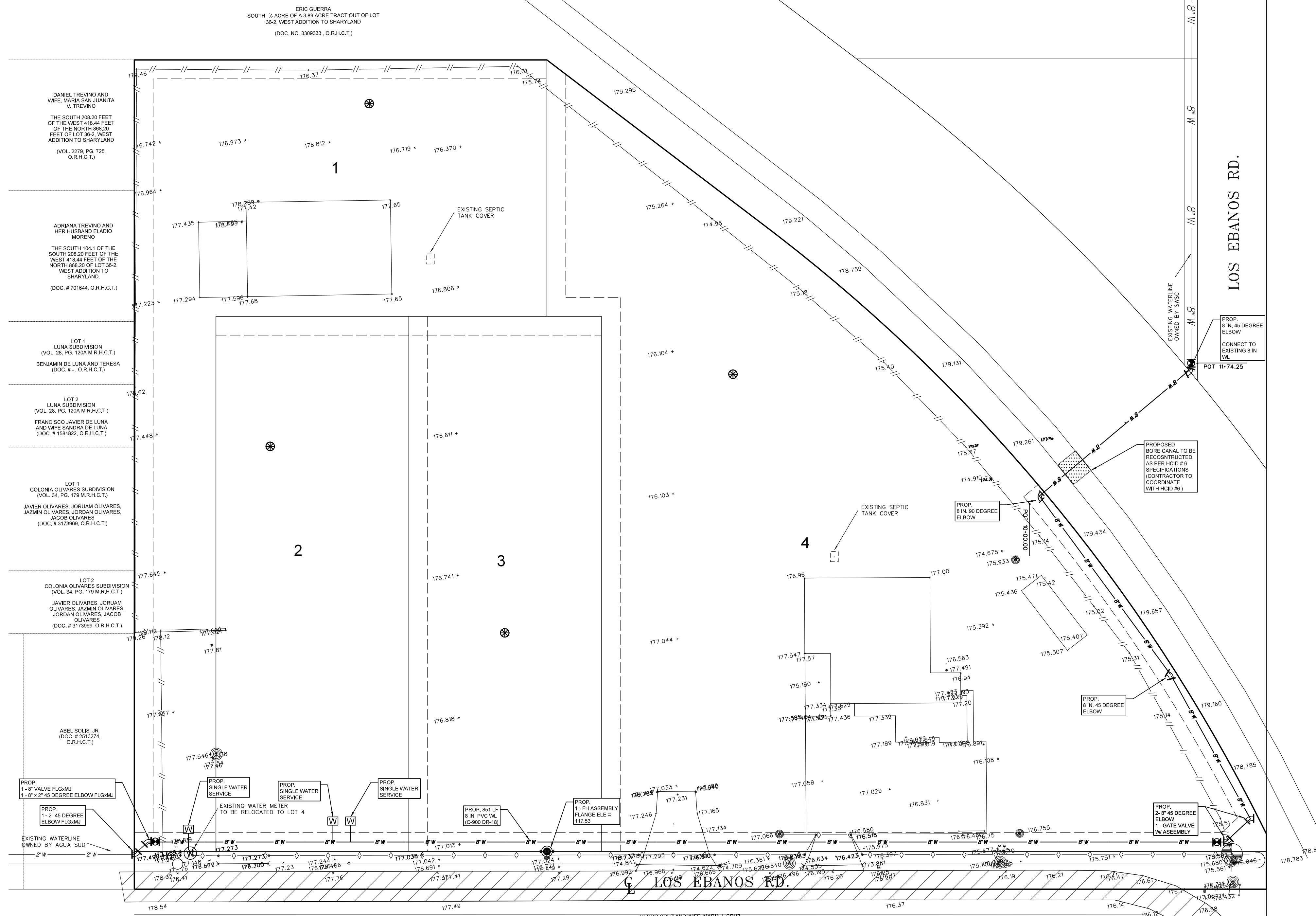
| REVISION NOTES | | | | |
|----------------|-------|----------|------|----------|
| NO. | SHEET | REVISION | DATE | APPROVED |
| | | | | |
| | | | | |
| | | | | |

| PRINCIPAL CONTACTS | | | | | |
|--------------------|--|-----------------------------|-----------------------|----------------|----------------|
| | NAME | ADDRESS | CITY & ZIP | PHONE | FAX |
| OWNER: | BULMARO BENAVIDES & MARIA DE LA CRUZ BENAVIDES | 108 W. ESPERANZA ST | MISSION, TEXAS 78574 | (956) 581-3918 | |
| ENGINEER: | VICTOR H. TREVINO, P.E. | 800 S. STEWART RD., STE. 13 | MISSION, TEXAS 78572 | (956) 424-3335 | (956) 424-3132 |
| SURVEYOR: | JUAN E. GALVAN, R.P.L.S. | 921 S. 10TH AVE. | EDINBURG, TEXAS 78539 | (956) 380-6152 | (956) 380-6083 |

SOUTH TEXAS INFRASTRUCTURE GROUP
800 S. STEWART RD., SUITE 13
MISSION, TEXAS 78572
PH: (956) 424-3335
FAX: (956) 424-3132
TBPB REG # 1500

LOT LAYOUT
BENAVIDES SUBDIVISION

A 10.32 ACRE TRACT OF LAND OUT OF LOT 36-2, WEST ADDITION TO SHARYLAND, HIDALGO COUNTY, TEXAS, AS PER MAP THEREOF RECORDED VOLUME 1, PAGE 58, MAP RECORDS, HIDALGO COUNTY, TEXAS.



WATER AND SEWER ENGINEERING REPORT

WATER SUPPLY (DESCRIPTION, COST, AND OPERABILITY DATE):
 BENAVIDES SUBDIVISION WILL BE PROVIDED WITH POTABLE WATER BY SHARYLAND WATER SUPPLY CORPORATION (SWSC). THE SUBDIVIDER AND SWSC HAVE ENTERED INTO A CONTRACT IN WHICH SWSC HAS PROMISED TO PROVIDE SUFFICIENT WATER TO THE SUBDIVISION FOR AT LEAST 30 YEARS AND SWSC HAS PROVIDED DOCUMENTATION TO SUFFICIENTLY ESTABLISH THE LONG TERM QUANTITY AND QUALITY OF THE AVAILABLE WATER SUPPLIES TO SERVE THE FULL DEVELOPMENT OF THIS SUBDIVISION.

SWSC HAS A 2" EXISTING WATERLINE A RUNNING THRU THE NORTH RIGHT-OF-WAY OF LOS EBANOS RD.

BENAVIDES SUBDIVISION HAS 4 LOTS. WATER DISTRIBUTION FOR BENAVIDES SUBDIVISION WILL CONSIST OF CONNECTING TO THE EXISTING 2" WATERLINE ON LOS EBANOS RD WITH AN 8" x 2" REDUCER AND AN 8" 45 DEGREE ELBOW IN ORDER TO INSTALL AN 8" PVC WATERLINE. THEN CONTINUING ON THE 25' EXCLUSIVE EASEMENT DEDICATED TO SWSC. THEN IT WILL CHANGE DIRECTION WITH TWO (2) 45 DEGREE ELBOWS TOWARDS THE EAST SIDE OF THE PROPERTY. CONTINUING ALONG THE EAST SIDE OF THE PROPERTY UP TO A POINT WHERE THE LINE WILL CHANGE DIRECTION WITH A 90 DEGREE ELBOW IN ORDER TO CROSS THE H.C.I.D. NO. 6 CANAL WITH A BORE, AND CONTINUING TO A POINT WHERE IT WILL BE CONNECTING TO AN EXISTING 8 INCH WATERLINE OWNED BY SWSC.

BENAVIDES SUBDIVISION WILL HAVE THREE (3) 1 1/2" DIAMETER SINGLE SERVICE SHORT LINES THAT RUN INTO THE LOTS. 8" IN THE 1" SINGLE SERVICE LINES AND THE METER BOXES HAVE ALREADY BEEN INSTALLED. AT A TOTAL COST OF \$ _____ OR \$ _____ PER LOT. IN ADDITION THE SUBDIVIDER HAS PAID AGUA SUD THE SUM OF \$ _____ WHICH COVERS THE \$ _____ COST PER LOT AS STATED IN THE 30 YEAR WATER SERVICE AGREEMENT WHICH SUM REPRESENTS THE TOTAL COST OF WATER METER, RIGHTS ACQUISITION FEE, AND ALL MEMBERSHIP OR OTHER FEES ASSOCIATED WITH CONNECTING THE INDIVIDUAL LOTS WITH THE SUBDIVISION TO AGUA SUD UPON REQUEST BY THE LOT OWNER. SWSC WILL PROMPTLY INSTALL AT NO CHARGE THE WATER METER FOR THAT LOT. THE ENTIRE WATER FACILITIES HAVE BEEN APPROVED AND ACCEPTED BY SWSC AND SAID DISTRIBUTION SYSTEM OPERABLE AS OF THE DATE OF THE RECORDING OF THIS PLAN.

SEWAGE FACILITIES: DESCRIPTION, COSTS, AND OPERABILITY DATE

SEWAGE FROM:
 BENAVIDES SUBDIVISION WILL BE TREATED BY INDIVIDUAL ON-SITE SEWAGE FACILITIES ("OSS") CONSISTING OF A STANDARD DESIGN DUAL COMPARTMENT SEPTIC TANK AND DRAIN FIELD ON LOT 1. THE UNDERSIGNED PROFESSIONAL ENGINEER HAS EVALUATED THE SUITABILITY OF THE SUBDIVISION SITE FOR OSS AND SUBMITTED A REPORT CONCLUDING THE SITE IS SUITABLE FOR OSS. THE REPORT WAS REVIEWED AND APPROVED BY THE HIDALGO COUNTY HEALTH DEPARTMENT. EACH LOT HAS ADEQUATE AREA FOR A REPLACEMENT DRAIN FIELD.

SOIL EVALUATION REPORT:
 EACH LOT IN THE PROPOSED SUBDIVISION IS AT LEAST 1/2 ACRE IN SIZE. THE NATURAL RESOURCE CONSERVATION SERVICE SOIL SURVEY BOOK INDICATED A SANDY LOAM SOIL FOR THE AREA. AT LEAST TWO SOIL EXCAVATIONS WERE PERFORMED ON THE LOT AT OPPOSITE AREAS OF THE SUBDIVISION. A TOTAL OF 30 SOIL BORING EXCAVATION WERE PERFORMED. ADDITIONAL BORINGS WERE UNNECESSARY BECAUSE THE SOILS ARE VERY UNIFORM WITHIN THIS LIMIT AREA. THE SOIL IS A UNIFORM SANDY LOAM EXTENDING UP TO 30" BELOW THE BOTTOM OF ANY PROPOSED EXCAVATIONS. THERE IS NO INDICATION OF GROUNDWATER OR A RESTRICTIVE LAYER WITHIN 24" OF BOTTOM OF THE PROPOSED EXCAVATIONS. THE SUBDIVISION DRAINS WELL.

THE COST TO INSTALL A SEPTIC SYSTEM ON AN INDIVIDUAL LOT IS \$ _____ INCLUDING THE COST FOR THE REQUIRED PERMIT AND LICENSE. ALL OSS HAVE BEEN INSTALLED AS OF THE TIME OF APPLICATION FOR FINAL PLAN APPROVAL. AT A TOTAL COST OF \$ _____ THE HIDALGO COUNTY HEALTH DEPARTMENT HAS INSPECTED AND APPROVED THE INSTALLATION OF ONE OSS ON _____.

ENGINEER CERTIFICATION:
 BY MY SIGNATURE BELOW, I CERTIFY THAT THE WATER AND SEWAGE SERVICE FACILITIES DESCRIBED ABOVE ARE IN COMPLIANCE WITH THE MODEL RULES ADOPTED UNDER SECTION 56.043, WATER CODE. I CERTIFY THAT THE COSTS TO INSTALL THE WATER AND SEWER CONNECTIONS TO THE LOTS OR SEPTIC TANKS MEET OR WILL MEET SUCH STANDARDS AND WILL BE CONSTRUCTED IN ACCORDANCE WITH STATE AND COUNTY REGULATIONS.

SUBDIVIDER CERTIFICATION:
 1. BY COMPLETING THE IMPROVEMENTS DESCRIBED ON THE PLAN, SUBDIVIDER WILL COMPLY WITH MINIMUM STATE STANDARDS AND THAT (a) WATER QUALITY AND CONNECTIONS INCLUDING WATER METERS TO THE LOTS MEET SUCH STANDARDS AND (b) SEWER CONNECTIONS TO THE LOTS OR SEPTIC TANKS MEET OR WILL MEET SUCH STANDARDS AND WILL BE CONSTRUCTED IN ACCORDANCE WITH STATE AND COUNTY REGULATIONS.

SUBDIVIDER STATEMENT:
 I, WE, BULMARO BENAVIDES AND WIFE, MARIA DE LA CRUZ BENAVIDES SUBDIVIDER FOR BENAVIDES SUBDIVISION HEREBY CERTIFY SEWER PERMITS, AS APPLICABLE, HAVE BEEN PAID AND COPIES OF RECEIPTS ARE ON FILE WITH THE HIDALGO COUNTY HEALTH DEPARTMENT AND THAT AN ADEQUATE DRINKING WATER SOURCE IS IMMEDIATELY AVAILABLE TO EACH LOT OF THE TYPE, QUALITY AND QUANTITY TO ENABLE EACH PERSON PURCHASING A LOT HAVE ADEQUATE WATER TO COMPLY WITH THE REGULATIONS AND THE LAWS OF THE STATE AS REQUIRED BY STATE AND COUNTY REGULATIONS.

 BULMARO BENAVIDES DATE _____

 MARIA DE LA CRUZ BENAVIDES DATE _____

STATE OF TEXAS
 COUNTY OF HIDALGO

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED BULMARO BENAVIDES AND WIFE, MARIA DE LA CRUZ BENAVIDES KNOWN TO ME TO BE THE PERSONS WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN STATED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS ____ DAY OF _____

 NOTARY PUBLIC

LEGEND:

- CHAIN LINK FENCE
- SET # 5/8" IRON ROD WITH PLASTIC CAP STAMPED RWSSV PROP. COR.
- FOUND IRON ROD
- WOOD FENCE
- PROPOSED PAVEMENT
- PROPOSED WATER METER
- OVERHEAD ELECTRIC
- PROPOSED CASING
- FOR 8" WATERLINE= 16" STEEL CASING
- FOR 2" WATER LINE= 3" PVC CASING
- FOR 1" WATER LINE= 2" PVC CASING
- PROPOSED STREET LIGHT
- SOIL BORING LOCATION
- EXISTING POWER POLE

LOCATION MAP
SCALE 1"=200'

ERIC GUERRA
 SOUTH 3/4 ACRE OF A 3.89 ACRE TRACT OUT OF LOT 36-2, WEST ADDITION TO SHARYLAND (DOC. NO. 336933, O.R.H.C.T.)

DANIEL TREVIÑO AND WIFE, MARIA SAN JUANITA V. TREVIÑO
 THE SOUTH 208.20 FEET OF THE WEST 418.44 FEET FEET OF LOT 36-2, WEST ADDITION TO SHARYLAND (VOL. 2276, PG. 725, O.R.H.C.T.)

ADRIANA TREVIÑO AND HER HUSBAND ELADIO MORENO
 THE SOUTH 104.1 OF THE SOUTH 208.20 FEET OF THE NORTH 888.20 OF LOT 38-2, WEST ADDITION TO SHARYLAND. (DOC. # 701544, O.R.H.C.T.)

LOT 1 LUNA SUBDIVISION (VOL. 28, PG. 100A M.R.H.C.T.)
 FRANCISCO JAVIER DE LUNA AND WIFE, SANDRA DE LUNA (DOC. # 181822, O.R.H.C.T.)

LOT 2 LUNA SUBDIVISION (VOL. 28, PG. 100A M.R.H.C.T.)
 FRANCISCO JAVIER DE LUNA AND WIFE, SANDRA DE LUNA (DOC. # 181822, O.R.H.C.T.)

LOT 1 COLONIA OLIVARES SUBDIVISION (VOL. 34, PG. 179 M.R.H.C.T.)
 JAVIER OLIVARES, JORJAM OLIVARES, JAZMIN OLIVARES, JORDAN OLIVARES, JACOB OLIVARES (DOC. # 317369, O.R.H.C.T.)

LOT 2 COLONIA OLIVARES SUBDIVISION (VOL. 34, PG. 179 M.R.H.C.T.)
 JAVIER OLIVARES, JORJAM OLIVARES, JAZMIN OLIVARES, JORDAN OLIVARES, JACOB OLIVARES (DOC. # 317369, O.R.H.C.T.)

ABEL SOLIS, JR. (DOC. # 2012174, O.R.H.C.T.)

PEDRO CRUZ AND WIFE, MARIA L. CRUZ (VOL. 2996, PG. 612, O.R.H.C.T.)

PRINCIPAL CONTACTS

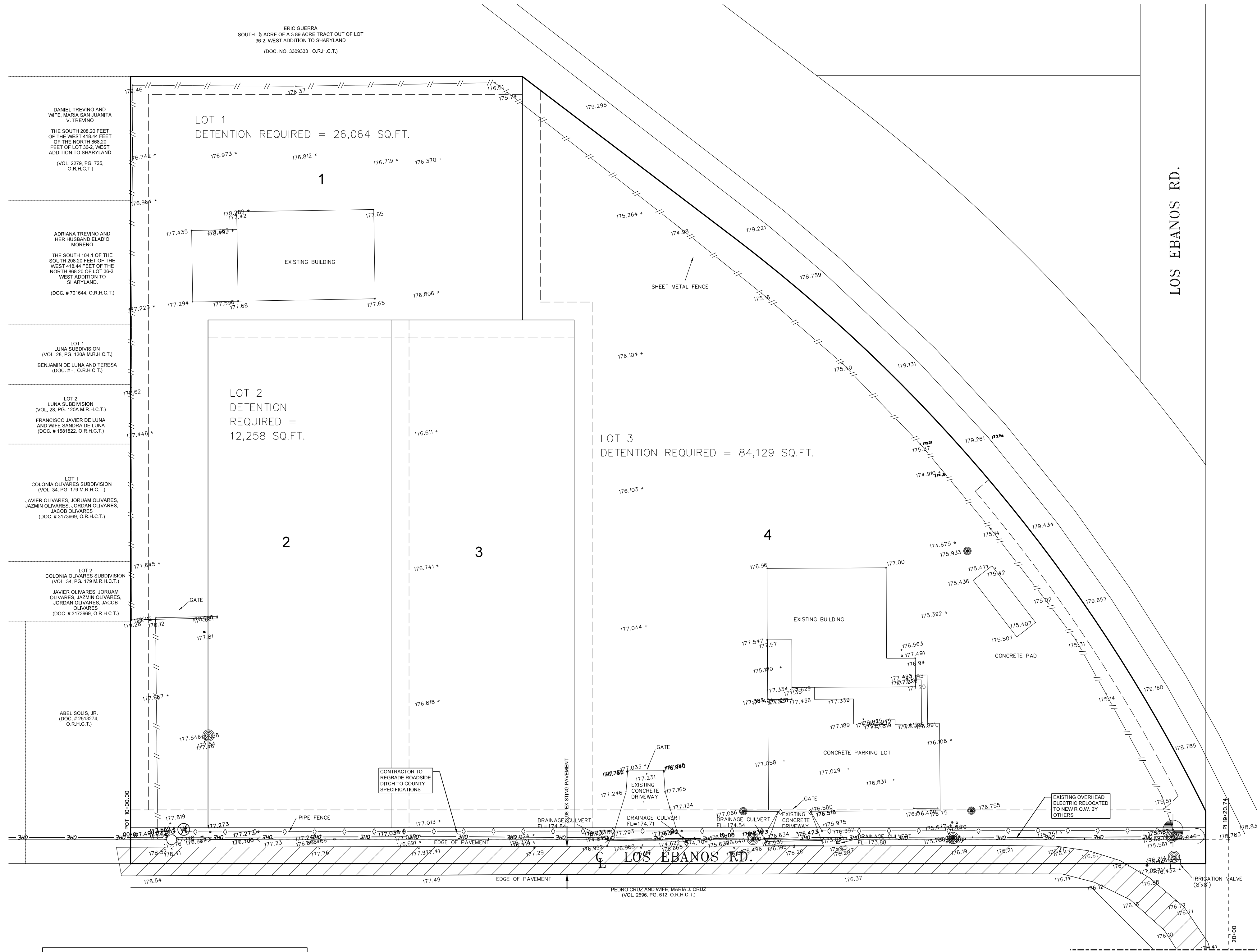
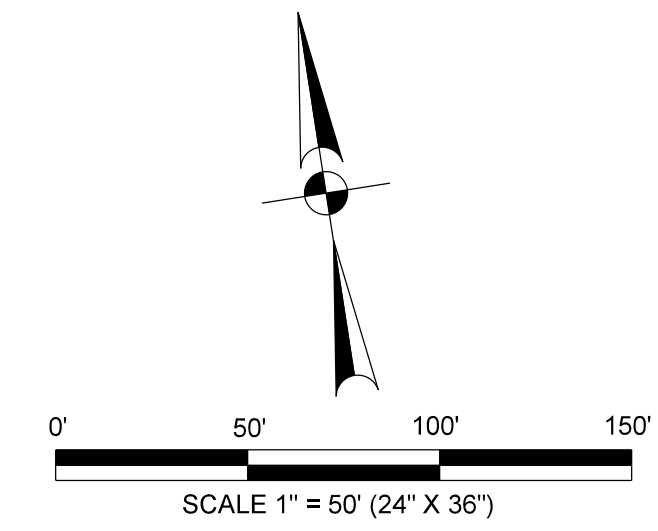
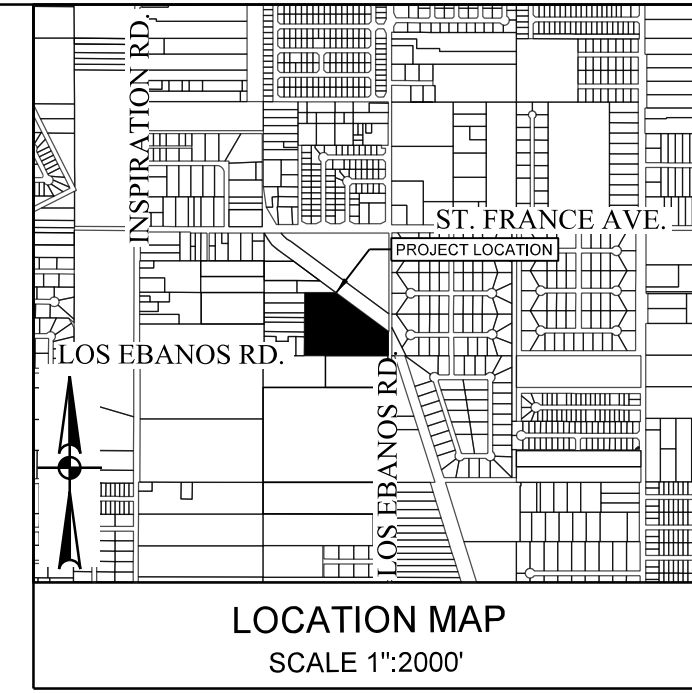
| | NAME | ADDRESS | CITY & ZIP | PHONE | FAX |
|-----------|--|-----------------------------|-----------------------|----------------|----------------|
| OWNER: | BULMARO BENAVIDES & MARIA DE LA CRUZ BENAVIDES | 108 W. ESPERANZA ST | MISSION, TEXAS 78574 | (956) 581-3918 | |
| ENGINEER: | VICTOR H. TREVIÑO, P.E. | 900 S. STEWART RD., STE. 13 | MISSION, TEXAS 78572 | (956) 424-3335 | (956) 424-3132 |
| SURVEYOR: | JUAN E. GALVAN, R.P.L.S. | 921 S. 10TH AVE. | EDINBURG, TEXAS 78539 | (956) 380-6152 | (956) 380-6083 |

SOUTH TEXAS INFRASTRUCTURE GROUP
 900 S. STEWART RD., SUITE 13
 MISSION, TEXAS 78572
 PH: (956) 424-3335
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 TBPE REG # 1500

UTILITY LAYOUT
BENAVIDES SUBDIVISION
 BEING ALL OF LOT 1, BLOCK 10, TEXAN GARDENS SUBDIVISION, RECORDED IN VOLUME 8, PAGES 57-68, MAP RECORDS OF HIDALGO COUNTY, TEXAS.

LEGEND:

- CHAIN LINK FENCE
- SET # 5/8" IRON ROD WITH PLASTIC CAP STAMPED TROSS PROP. COR.
- FOUND IRON ROD
- WOOD FENCE
- PROPOSED PAVEMENT
- PROPOSED WATER METER
- OVERHEAD ELECTRIC
- PROPOSED CASING
- FOR 8" WATERLINE= 16" STEEL CASING
- FOR 2" WATER LINE= 3" PVC CASING
- FOR 1" WATER LINE= 2" PVC CASING
- PROPOSED STREET LIGHT
- SOIL BORING LOCATION



DRAINAGE REPORT

PROJECT LOCATION
 BENAVIDES SUBDIVISION IS A PROPOSED 3 LOT COMMERCIAL SUBDIVISION LOCATED WITHIN THE CITY OF MISSION ETJ, BEING A 10.00 ACRE TRACT OF LAND OUT LOT 36-2, WEST ADDITION TO SHARYLAND SUBDIVISION, HIDALGO COUNTY, TEXAS, ACCORDING TO THE MAP RECORDED IN VOLUME 1, PAGE 56, MAP RECORDS, HIDALGO COUNTY, TEXAS.

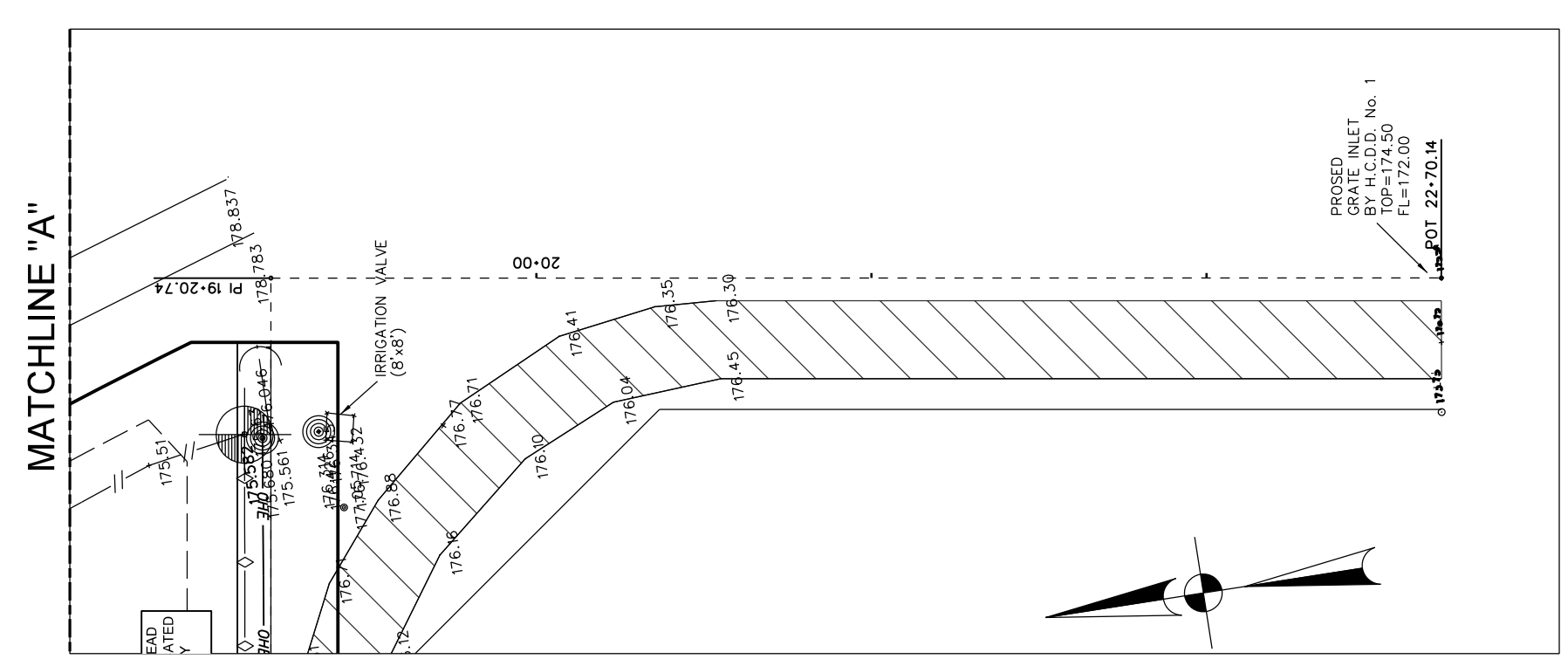
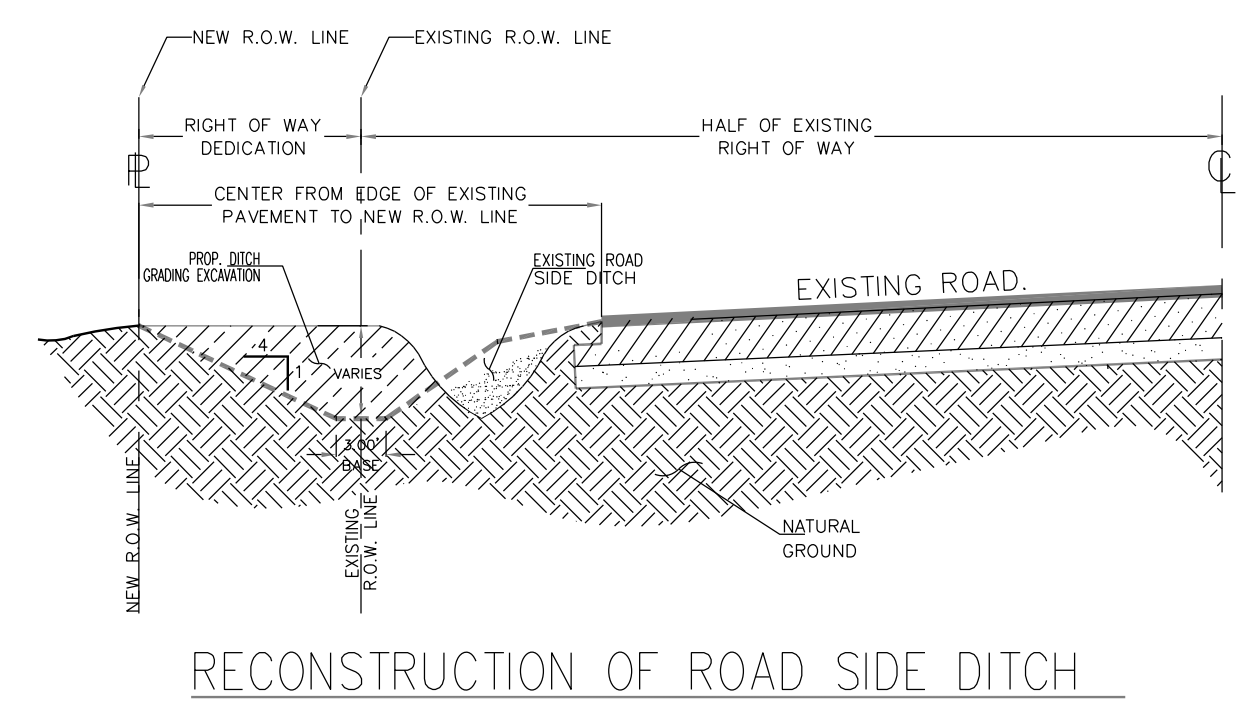
FLOOD PLAN
 THE PROPERTY IS IN ZONE "C"; ZONE "C" ARE AREAS OF MINIMAL FLOODING, COMMUNITY PANEL NO. 480334 0400 C, REVISED NOVEMBER 16, 1982.

SOIL CONDITIONS
 ACCORDING TO THE SOIL SURVEY REPORT PREPARED FOR HIDALGO COUNTY BY THE U.S.D.A. SOIL CONSERVATION SERVICE, THE SITE CONSISTS OF 96.4 % OF HIDALGO SANDY CLAY LOAM (28), WITH 0 TO 1 PERCENT SLOPE, AND 3.6 % OF HIDALGO FINE SANDY LOAM (25), WITH 0 TO 1 PERCENT SLOPES. THESE SOILS ARE WELL DRAINED, SURFACE RUNOFF IS NEGLIGIBLE, PERMEABILITY IS MODERATELY HIGH TO HIGH, AND THE WATER CAPACITY IS HIGH. THIS SOILS ARE LISTED IN HYDROLOGIC GROUP B.

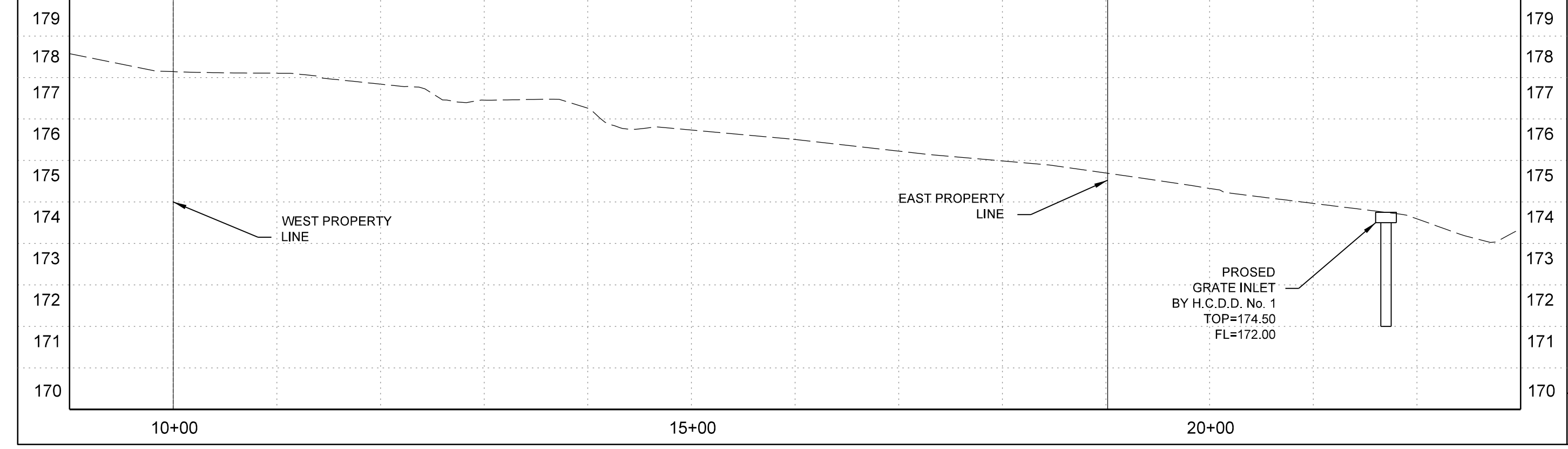
EXISTING CONDITIONS
 THE SUBJECT PROPERTY IS CURRENTLY UNDEVELOPED. TOPOGRAPHIC ELEVATIONS OBTAINED FROM THE SITE INDICATE THAT THE EXISTING TERRAIN HAS A SLIGHT GRADE TOWARDS THE NORTH OF THE PROPERTY. IN ACCORDANCE WITH THE DRAINAGE POLICIES OF THE CITY OF MISSION AND COUNTY OF HIDALGO, THE RATIONALE METHOD, 10-YEAR FREQUENCY STORM EVENT WAS UTILIZED TO DETERMINE THE EXISTING STORM WATER RUNOFF FOR THIS SITE. THE TOTAL CONTRIBUTING 10-YEAR EXISTING STORM WATER RUNOFF FROM THIS SITE IS APPROXIMATELY 0.94 CFS.

PROPOSED CONDITIONS
 IN ACCORDANCE WITH THE CITY OF MISSION AND COUNTY OF HIDALGO DRAINAGE POLICY, THE PEAK RATE FOR RUNOFF FOR THIS DEVELOPMENT WILL BE MITIGATED TO THE PROPOSED 50-YEAR STORM WATER RUNOFF. AS PER ATTACHED CALCULATIONS, THE PEAK RATE WILL BE 73.76 CFS, WHICH WILL GIVE US A NET INCREASE OF 63.82 CFS. FOR PROPOSED BENAVIDES SUBDIVISION, WE HAVE CALCULATED THAT APPROXIMATELY A TOTAL OF 122.451 CFT OR 2.81 ACRE-FT. CURRENT RUNOFF WILL BE DETAINEED WITHIN IN SWALES OF THE LOTS THAT DISCHARGE IN A SOUTHERLY DIRECTION TOWARDS THE EXISTING ROADSIDE DITCH ALONG THE FRONTAGE OF THE PROPERTY. CONTINUING IN A SOUTHERLY DIRECTION ON THE EAST RIGHT-OF-WAY OF LOS EBANOS RD TOWARDS A PROPOSED GRATE INLET BY H.C.D.D. NO. 1. THIS INLET WILL EVENTUALLY DISCHARGE IN THE LINDA VISTA DRAIN.

VICTOR H. TREVINO, P.E.
 LICENSED PROFESSIONAL ENGINEER, TEXAS LIC. NO. 128195



ROAD SIDE DITCH PROFILE



SCALE:
 HOR: = 1" = 100'
 VER: = 1" = 40'

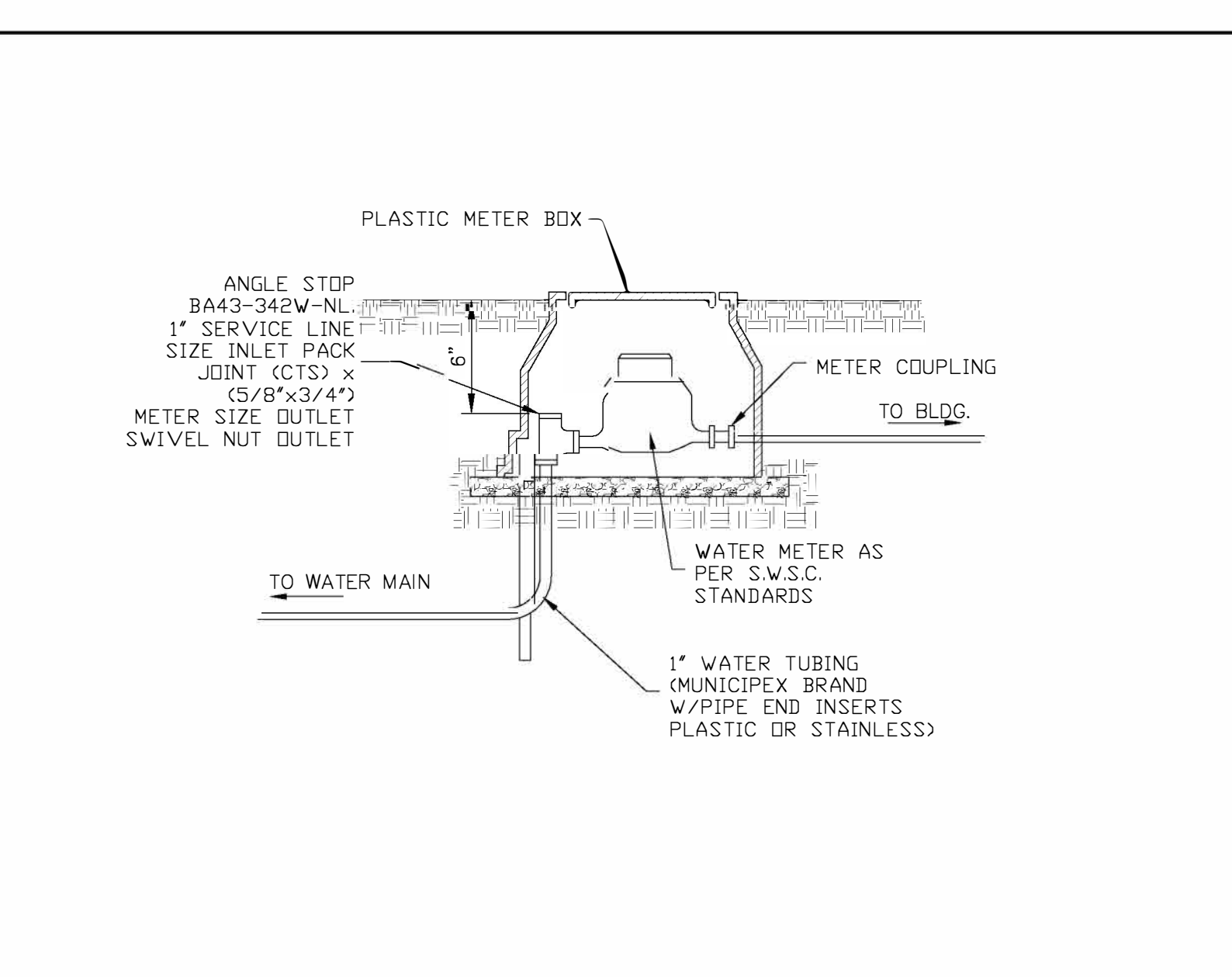
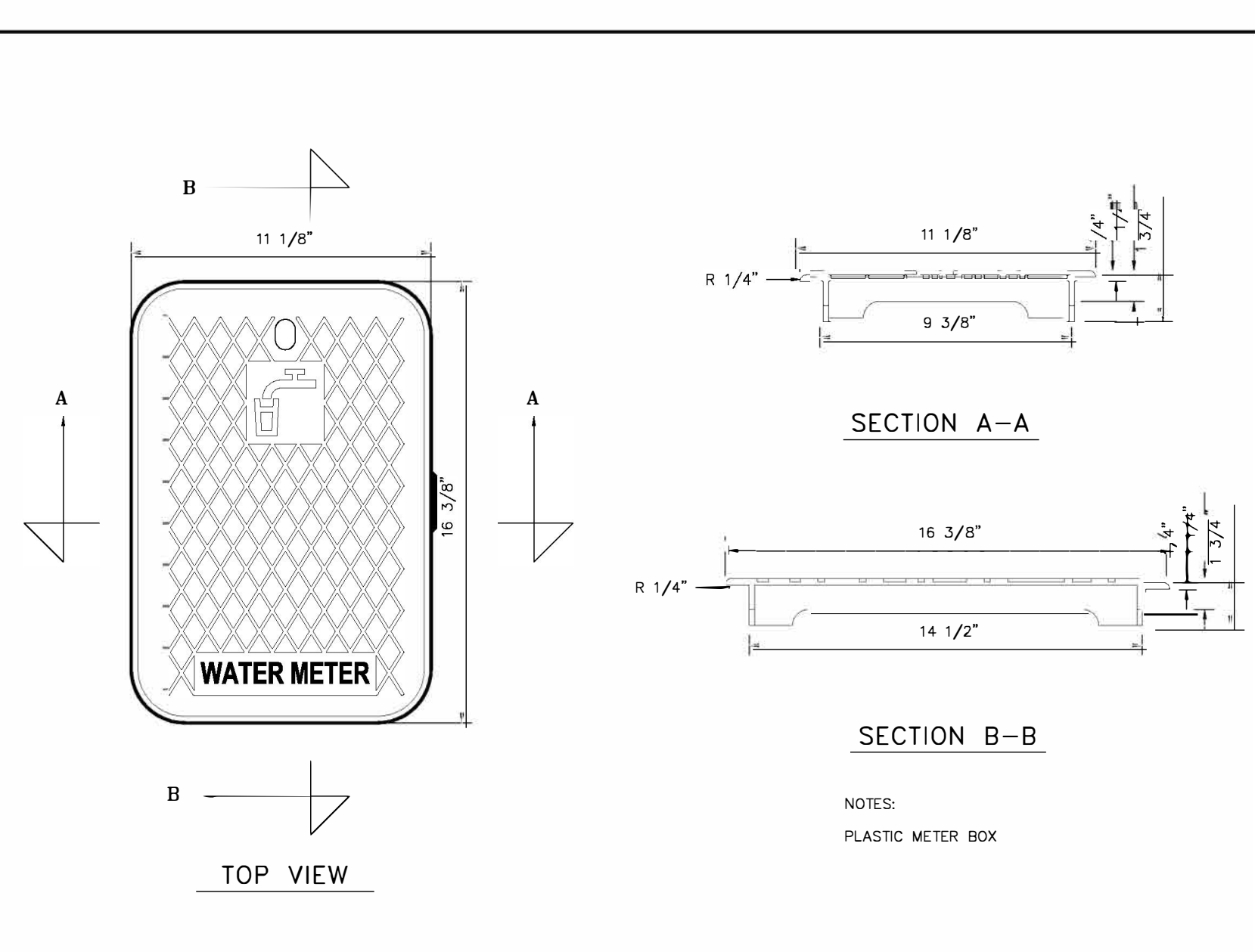
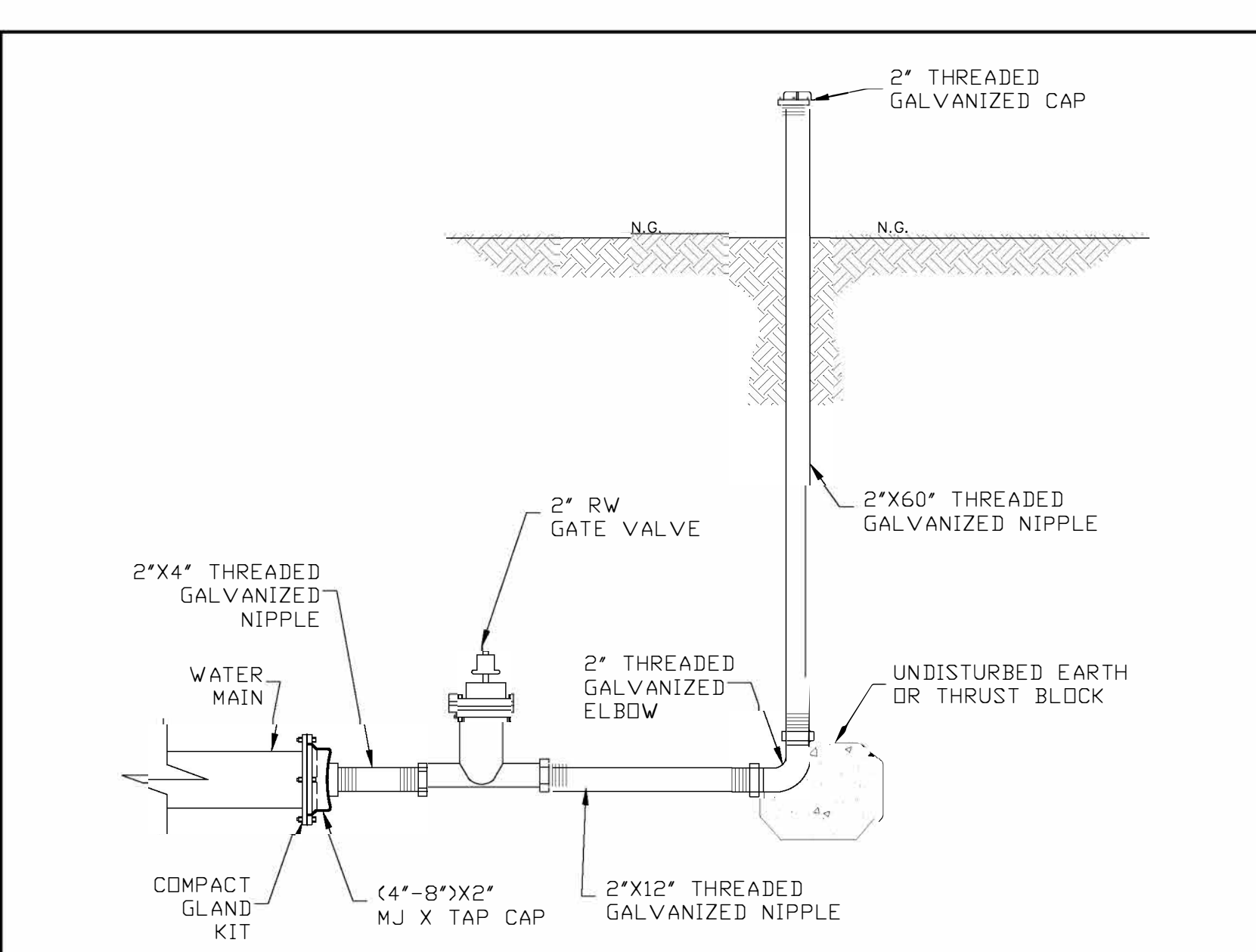
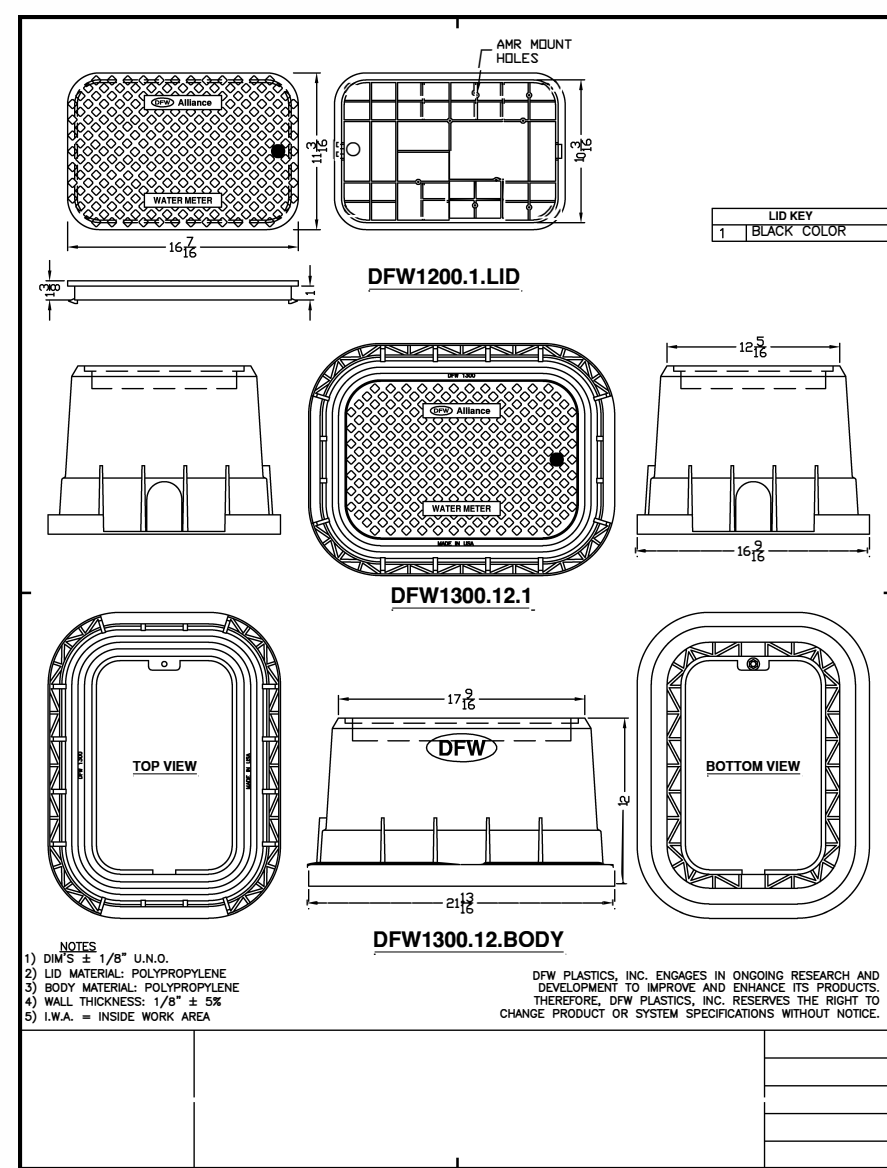
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DRAINAGE LAYOUT
BENAVIDES SUBDIVISION

BEING ALL OF LOT 1, BLOCK 10, TEXAN GARDENS SUBDIVISION, RECORDED IN VOLUME 8, PAGES 57-58, MAP RECORDS OF HIDALGO COUNTY, TEXAS.



W-9

W-10

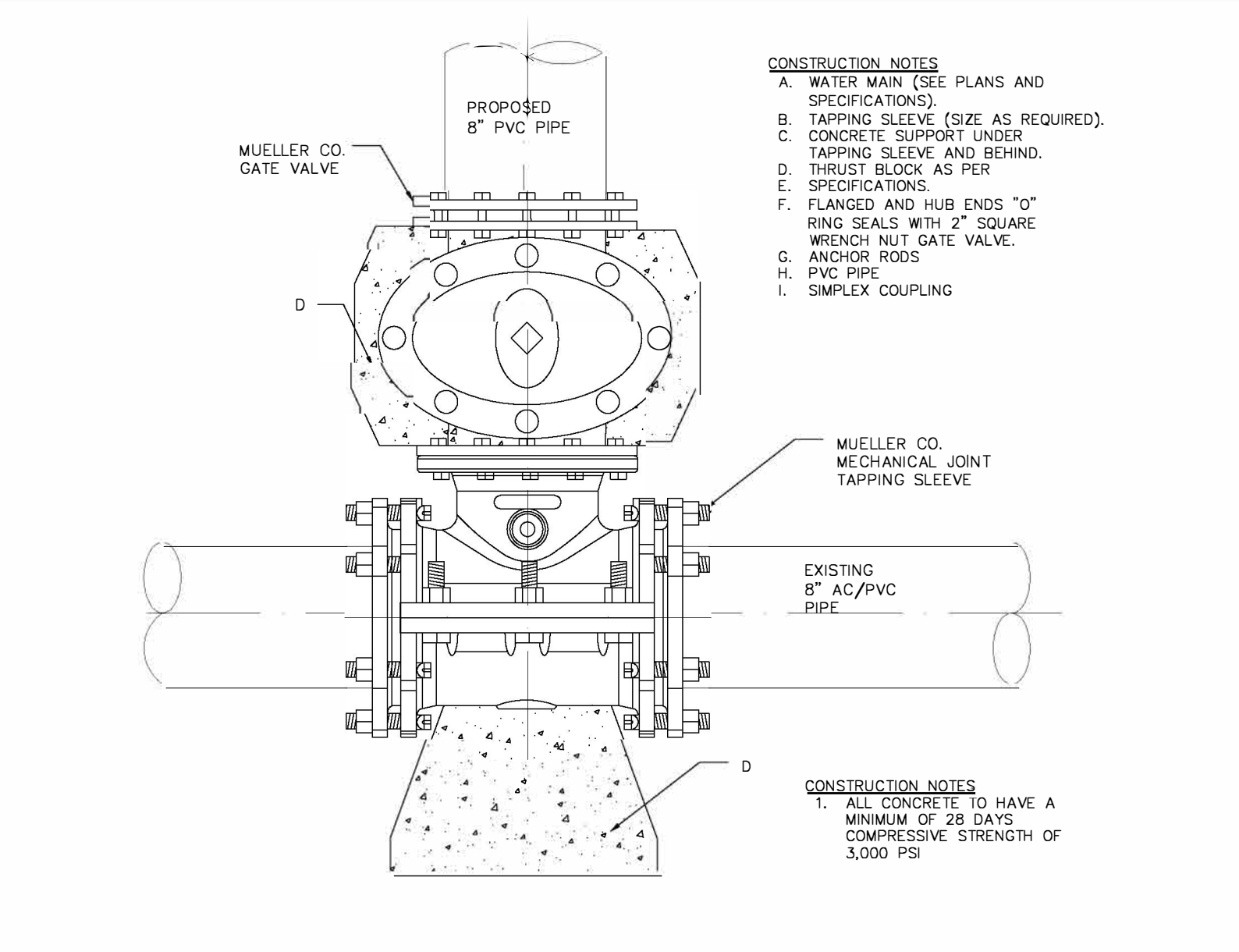
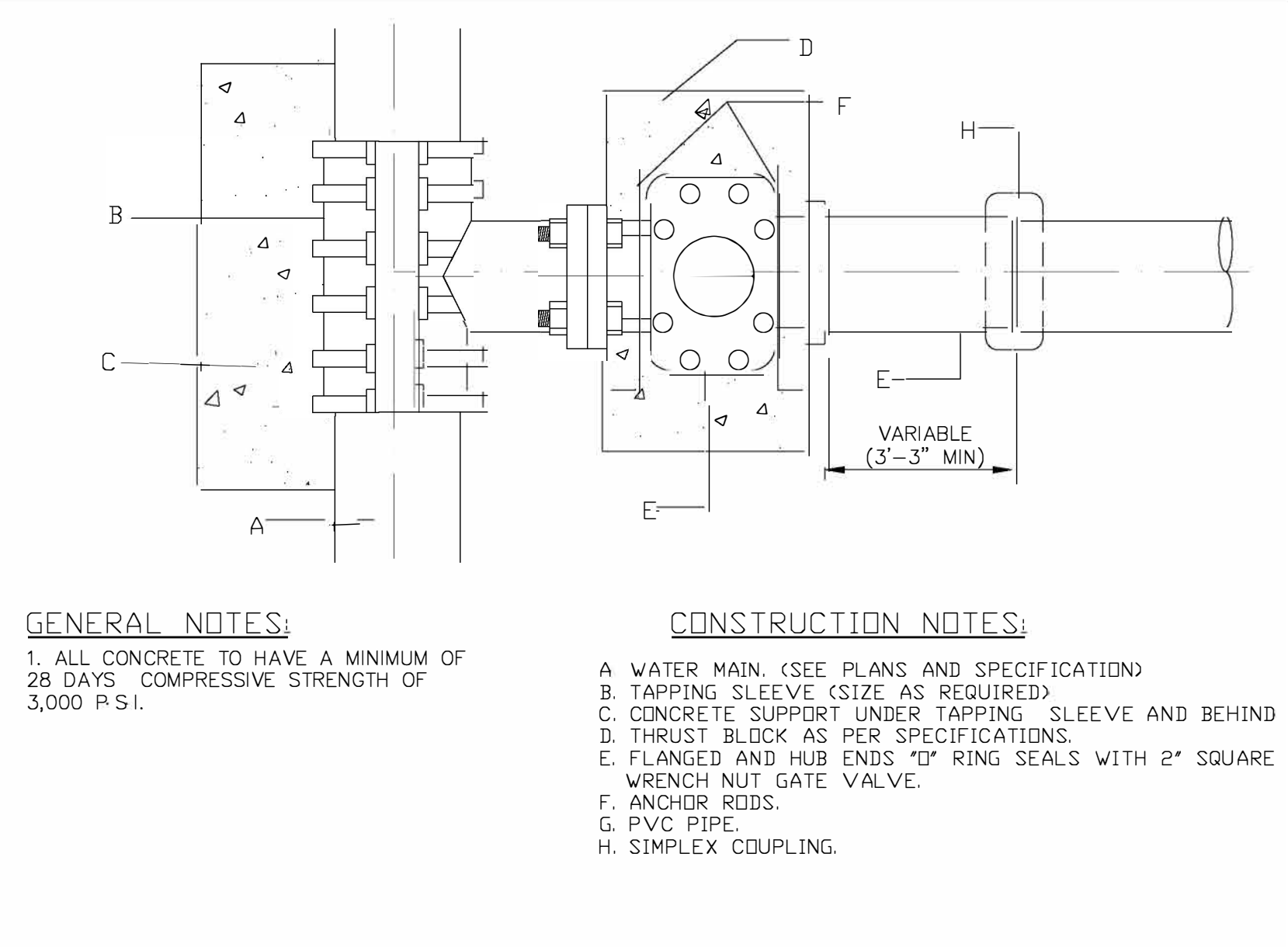
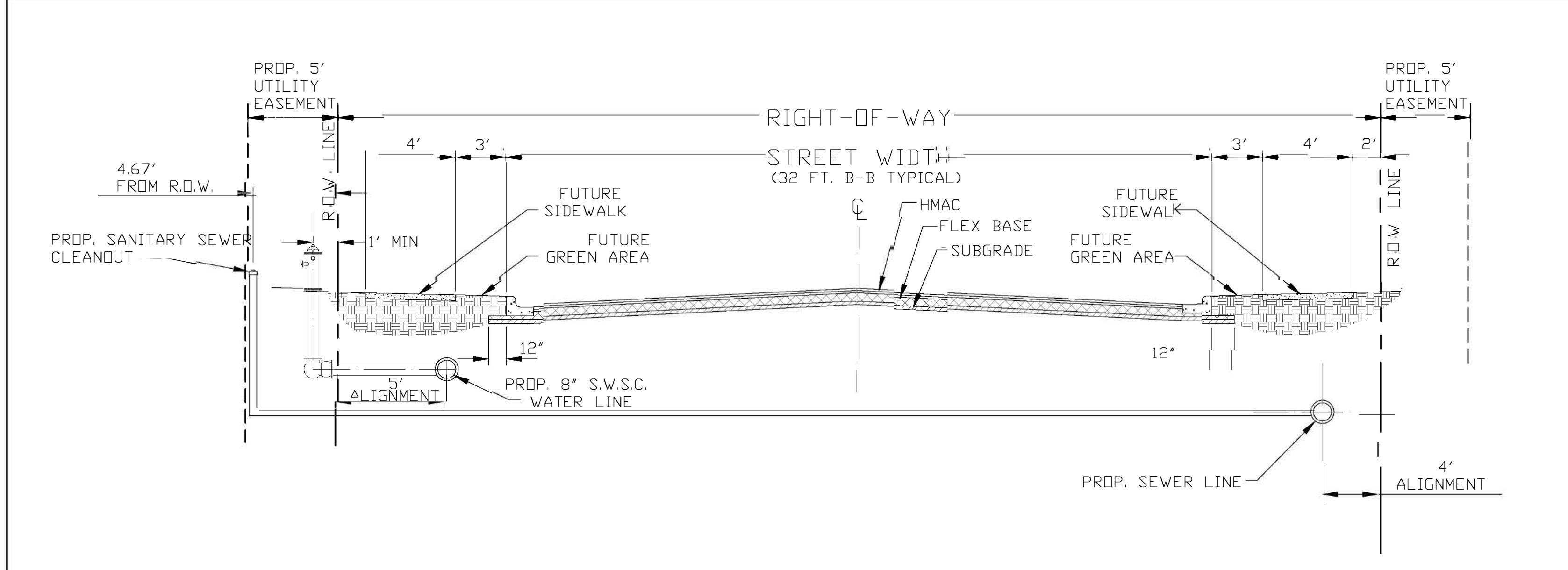
FLUSH VALVE DETAIL

W-11

METER COVER DETAIL

W-12

TYPICAL WATER METER INSTALLATION



W-13

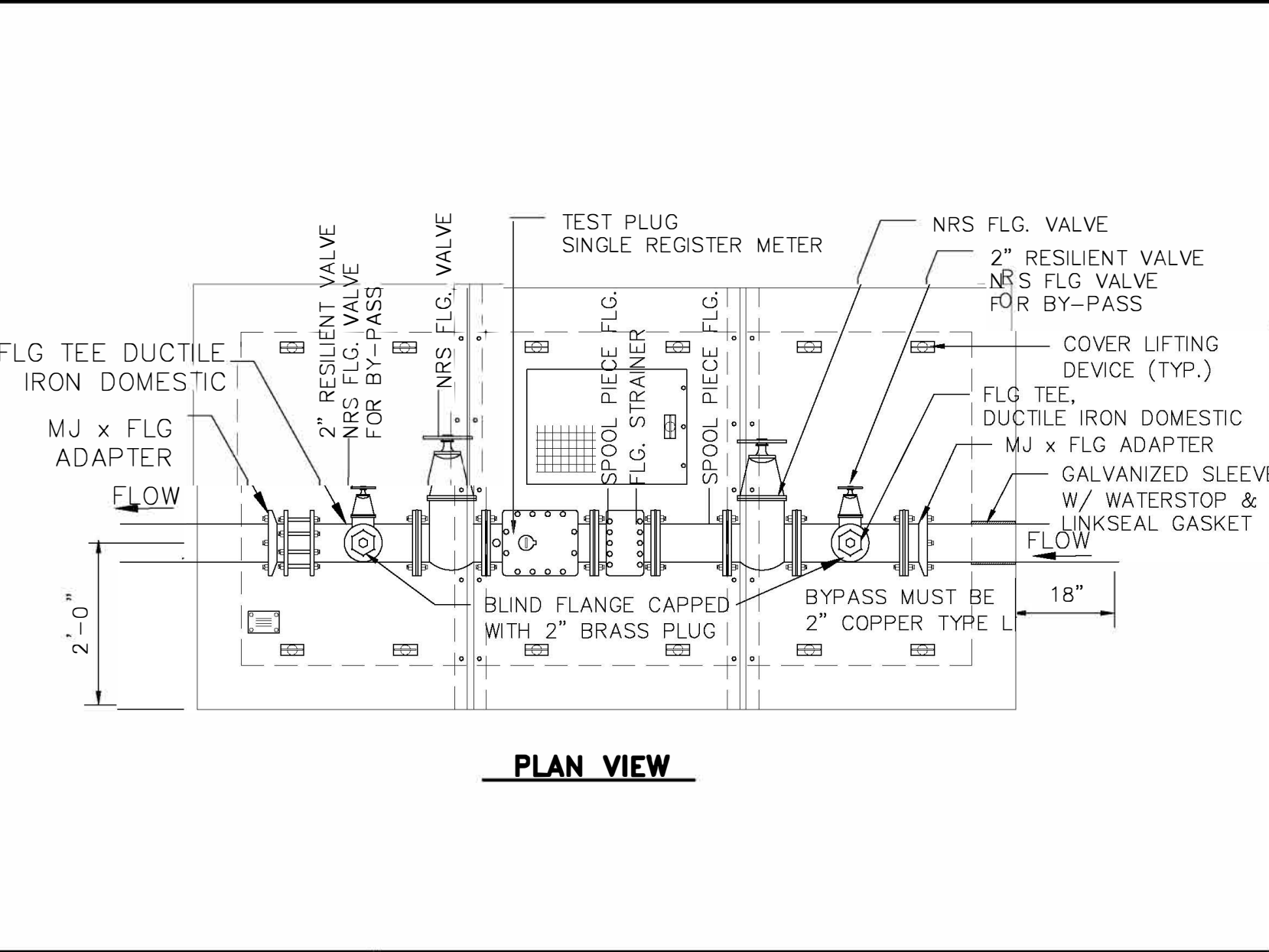
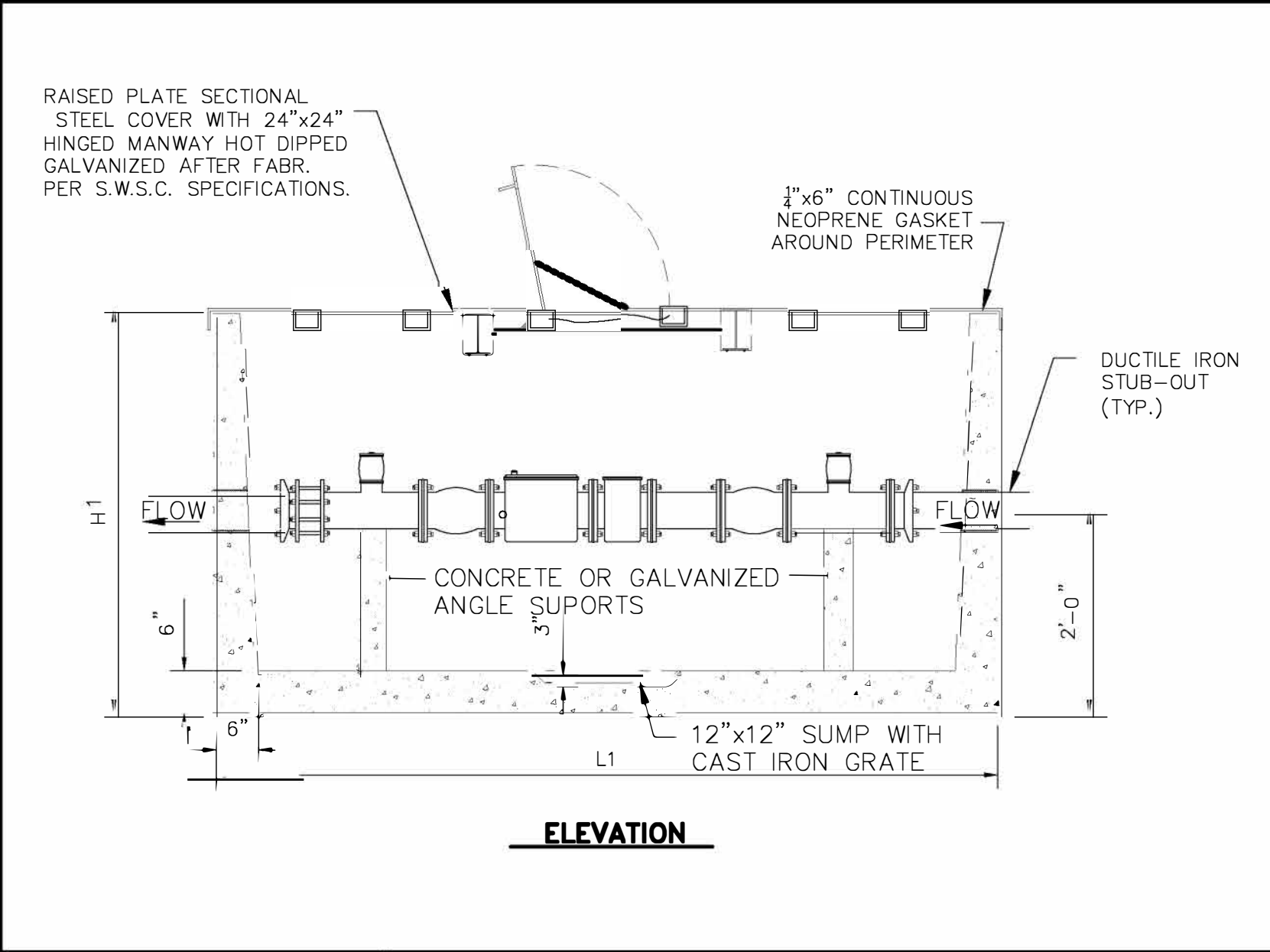
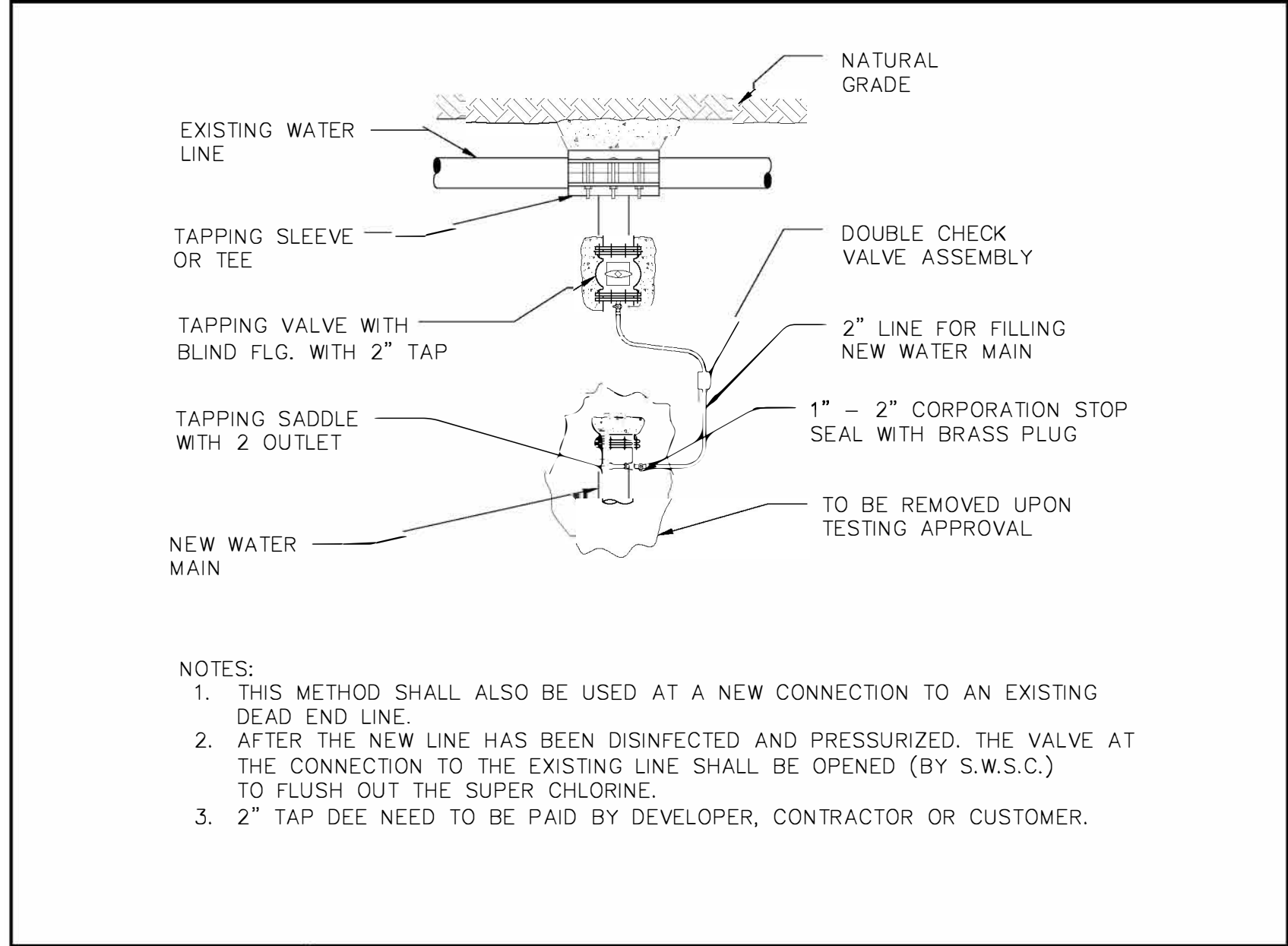
TYPICAL LOCAL STREET SECTION

W-14

WATER TAPPING SLEEVE & VALVE INSTALLATION

W-15

SAME SIZE WATER TAPPING SLEEVE AND VALVE INSTALLATION



SPECIFICATIONS:
CONCRETE: CLASS 1 CONCRETE WITH DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED DEPTH.
REINFORCEMENT: GRADE 60 REINFORCED. STEEL REBAR CONFORMING TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.
STEEL COVER: ALL STEEL FABRICATION SHALL BE IN ACCORDANCE TO AWA D1.1. STEEL SHALL BE ASTM A36 CARBON STEEL, AND HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE TO ASTM A 123. STANDARD COVER IS RATED FOR 50 PSF.
ENGINEERING DATA: THE METER ASSEMBLY SHALL BE FACTORY ASSEMBLED IN VAULT & HYDROSTATICALLY TESTED PRIOR TO DELIVERY. FIELD EXCAVATION & PREPARATION SHALL BE COMPLETE PRIOR TO DELIVERY. PIPE, VALVES AND FITTINGS OF THE ASSEMBLY SHALL BE APPROVED BY ONE OR MORE OF THE FOLLOWING ASSOCIATIONS: AMERICAN WATER WORKS ASSOCIATION, UNDERWRITERS LABORATORIES, UNIFORM PLUMBING CODE, AMERICAN SOCIETY OF SANITARY ENGINEERING.

| MODEL | SIZE | BY PASS | L1 | W1 | H1 | WEIGHT LBS |
|--------|------|---------|--------|-------|-------|------------|
| DMCCH3 | 3" | 2" | 11'-6" | 6'-0" | 4'-3" | 14,500 |
| DMCCH4 | 4" | 2" | 11'-6" | 6'-0" | 4'-3" | 15,000 |
| DMCCH6 | 6" | 4" | 13'-6" | 6'-0" | 4'-3" | 15,500 |

Sharyland
WATER SUPPLY CORPORATION

W-16

METHOD FOR FILLING NEW WATER LINES PRIOR TO CHLORINATION AND TESTING

W-17A

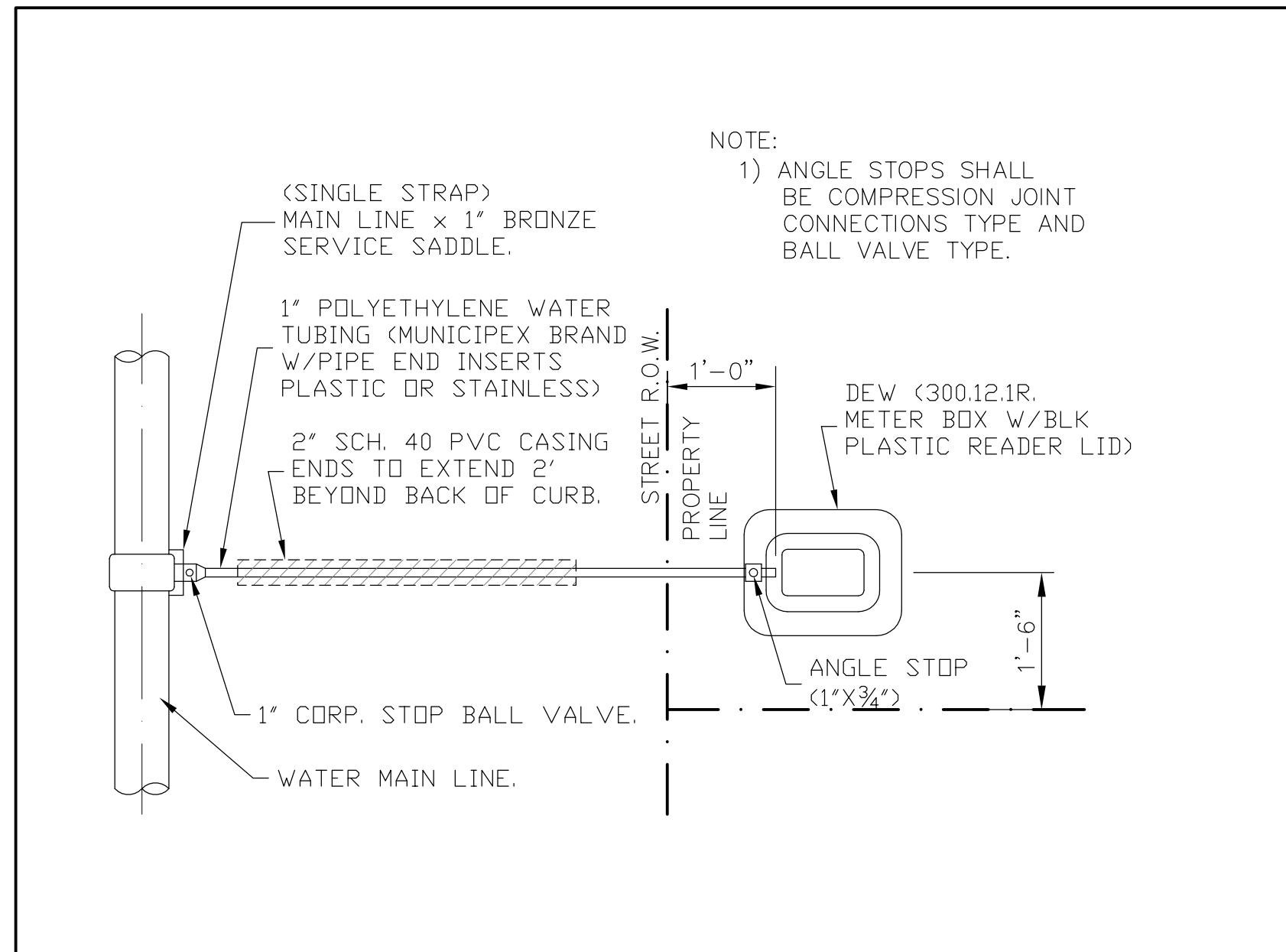
METER VAULT DETAILS

W-17B

METER VAULT DETAILS

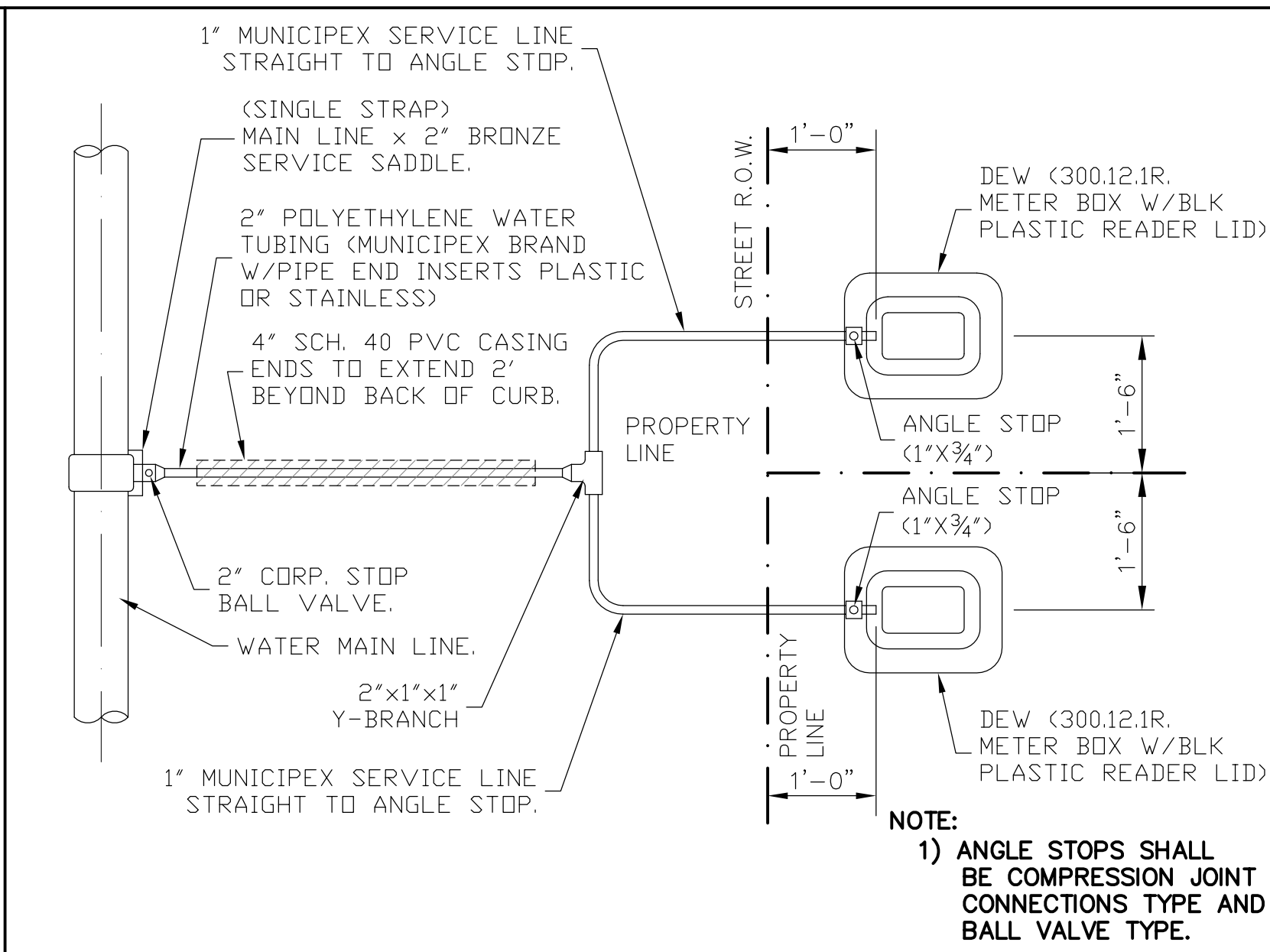
W-17C

METER VAULT GENERAL NOTES



W-1 RESIDENTIAL SINGLE WATER SERVICE CONNECTION

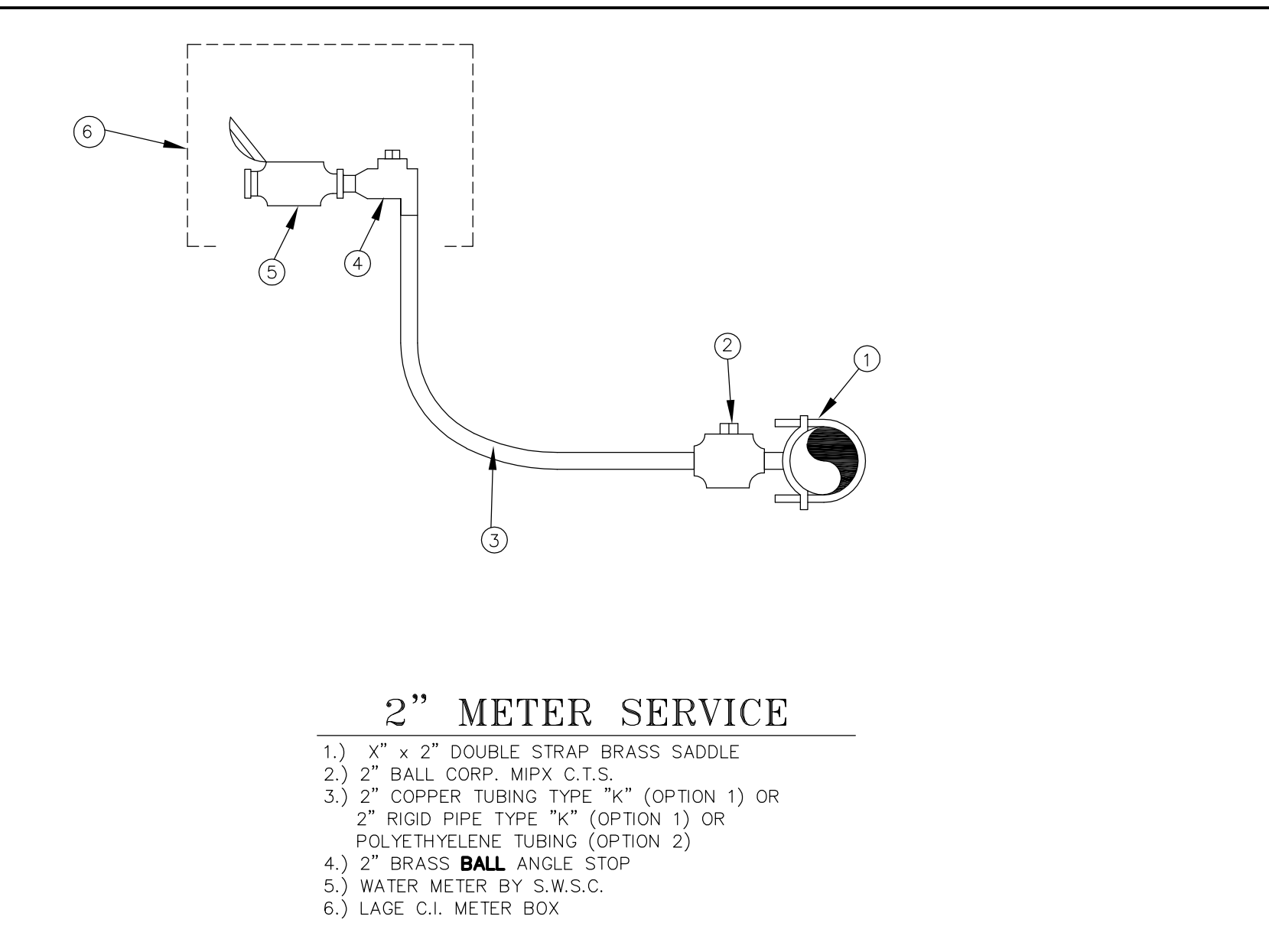
NOTES:
 A. SAND BEDDING PLACED, HAND LEVELED, AND COMPACTED BEFORE PIPE IS LAID, UP TO BOTTOM OF PIPE (MIN. THICKNESS = 6").
 B. SAND BACKFILL PLACED AND COMPACTED AFTER PIPE IS LAID, FROM BOTTOM OF PIPE TO 6" ABOVE THE TOP OF PIPE. WORK IN UNDER PIPE HAUNCHES AND COMPACT BY HAND TO SPRING LINE. USE VIBRATORY-TYPE COMPACTORS FOR LIFTS ABOVE THE SPRING LINE. MAXIMUM 6" LIFTS.
 C-1. (CITY STREETS, PARKING AREA, AND DRIVEWAYS) SELECT EXCAVATED BACKFILL MECHANICALLY COMPACTED TO 95% STANDARD PROCTOR DENSITY IN 8" MAX. LIFTS.
 C-2. (STATE MAINTAINED ROADWAY) SAND/CEMENT STABILIZED BACKFILL WITH 7% PORTLAND CEMENT COMPACTED TO 95% STANDARD PROCTOR DENSITY.
 D. EXCAVATED EARTH BACKFILL MECHANICALLY COMPACTED IN 12" MAX. LIFTS. MINIMUM STANDARD PROCTOR DENSITY: 90% OUTSIDE RIGHT OF WAY, 95% INSIDE RIGHT OF WAY.
 EMBEDMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM D 2321. EMBEDMENT MATERIAL SHALL BE CLASS II OR III WITH < 50% PASSING A No. 200 SIEVE AND PLASTICITY INDEX < 7.
 WHERE THIS STANDARD CONFLICTS WITH THE REQUIREMENTS OF ANY GEOTECHNICAL REPORT, OBTAIN WRITTEN CLARIFICATION FROM THE UTILITY ENGINEER PRIOR TO CONSTRUCTION.
 FOUNDATION PREPARATION USING COBBLES, GRAVEL, CEMENT STABILIZATION, OR OTHER METHODS AS DIRECTED BY THE ENGINEER SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE.
 BACKFILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, AND COMPACTED TO 95% STANDARD PROCTOR DENSITY IN 6" MAXIMUM LIFTS. STRUCTURE BACKFILL MATERIAL SHALL BE SAND.
 GENERAL NOTES:
 1.) THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING WITH ALL APPROPRIATE UTILITY COMPANIES FOR THE LOCATION OF ALL UTILITIES WITHIN CONSTRUCTION AREA.
 2.) ALL EXIST. UTILITIES ARE AT APPROXIMATE LOCATIONS.
 3.) THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE BASED ON OBSERVATION OF ABOVEGROUND STRUCTURES, LINES SPOTTED BY THE OWNER, AND UTILITY SPOTTING. ACTUAL LOCATION OF THESE UTILITIES MAY VARY, AND ADDITIONAL BURIED UTILITIES MAY BE ENCOUNTERED UPON EXCAVATION.
 4.) BEFORE BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL CALL FOR UTILITY SPOTTING BY THE APPROPRIATE AGENCY AND VERIFY THE LOCATION OF THESE UTILITIES TO HIS SATISFACTION.
 5.) ANY DAMAGE CAUSED TO EXISTING STRUCTURES AND/OR UTILITIES BY THE CONTRACTOR SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CORRECT AT HIS EXPENSE.
 6.) ANY DAMAGE TO PROPERTY, OUTSIDE THE CONSTRUCTION ZONE, CAUSED BY THE CONTRACTOR, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CORRECT AT HIS EXPENSE.



W-2 RESIDENTIAL DUAL WATER SERVICE CONNECTION

| THRUST BLOCK SIZE | | | |
|----------------------------|----------------------|---------------------|--------------------------------|
| HORIZONTAL BENDS | | | |
| DIAMETER OF PIPE IN INCHES | SURFACE AREA SQ. FT. | THICKNESS IN INCHES | WEIGHT AT VERTICAL BENDS- LBS. |
| 22-1/2" BENDS | | | |
| 6 OR LESS | 2 | 8 | 1,700 |
| 8 | 3 | 12 | 3,000 |
| 10 | 3.5 | 12 | 4,500 |
| 12 | 4 | 14 | 6,600 |
| 14 | 5 | 18 | 9,000 |
| 16 | 6 | 18 | 11,800 |
| 45° BEND | | | |
| 6 OR LESS | 4 | 12 | 3,200 |
| 8 | 5 | 14 | 5,800 |
| 10 | 6 | 18 | 9,000 |
| 12 | 7 | 18 | 13,000 |
| 14 | 8 | 24 | 17,000 |
| 16 | 11.5 | 24 | 23,200 |
| 90° BEND | | | |
| 6 OR LESS | 6 | 12 | 6,000 |
| 8 | 8 | 15 | 10,700 |
| 10 | 10 | 18 | 16,700 |
| 12 | 12 | 18 | 24,000 |
| 14 | 18 | 24 | 32,600 |
| 16 | 21 | 24 | 42,700 |
| TEES & DEAD ENDS | | | |
| 6 OR LESS | 3 | 12 | --- |
| 8 | 4 | 15 | --- |
| 10 | 6 | 18 | --- |
| 12 | 8.5 | 18 | --- |
| 14 | 11.5 | 24 | --- |
| 16 | 15 | 24 | --- |

THRUST BLOCKS DETAILS
 NOTE: ALL VALUES SHOWN ARE MIN. FOR A HYDROSTATIC PRESSURE OF 150 P.S.I. AND A SOIL RESISTANCE OF 2,000 LBS. PER SQ. FT. WITH PIPELINE HAVING A MIN. OF 3" OF COVER WITH CURB & GUTTER AND A 5 FT. MIN. WITHOUT CURB & GUTTER.
 NOTE: SEE THRUST BLOCK SIZE CHART FOR PROPER THICKNESS AND SURFACE AREAS.

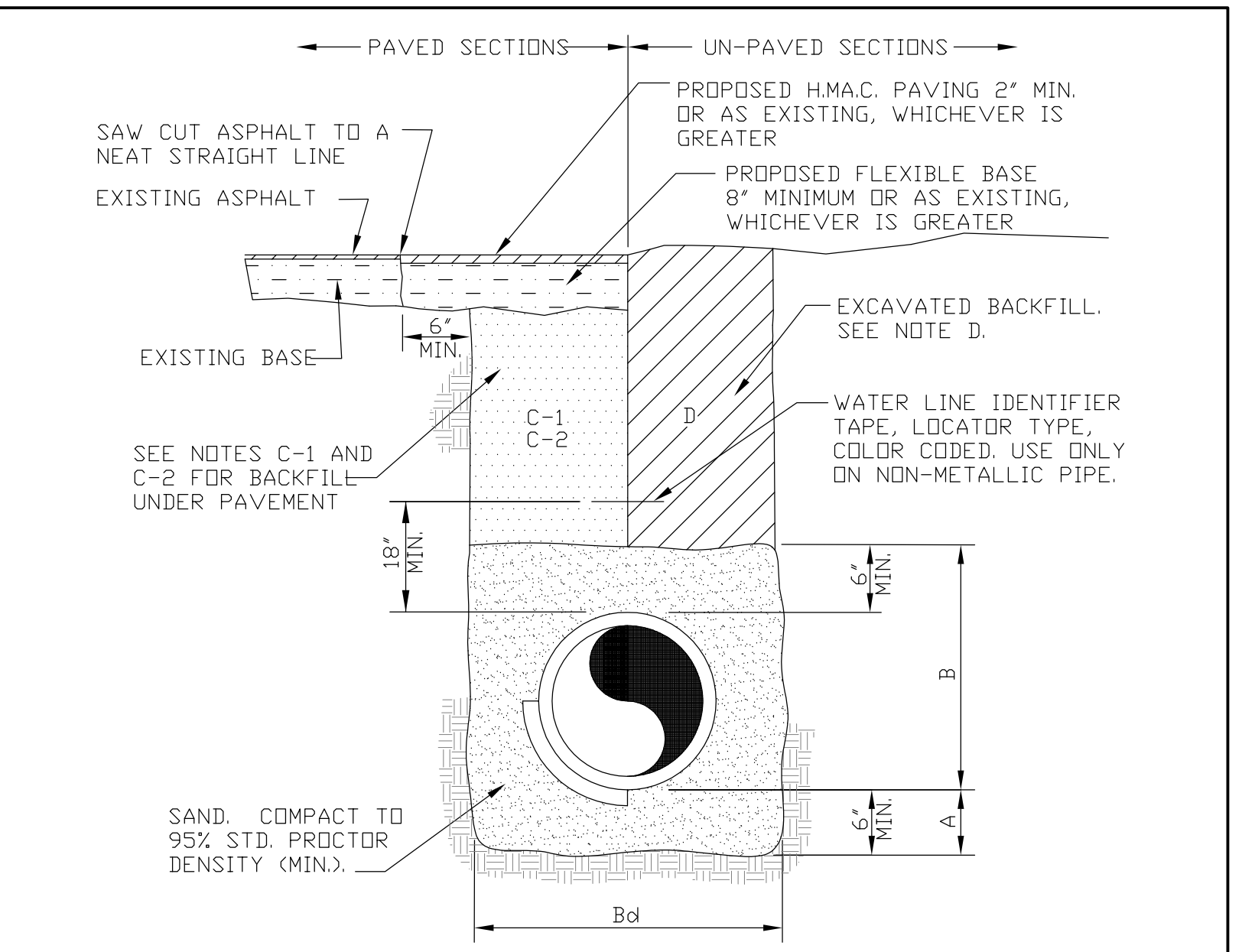


W-3 2" METER SERVICE

WATERLINE CROSSING OVER SEWER LINE
 WATERLINE CROSSING UNDER SEWER LINE

PLAN
 PROFILE

WATERLINE CROSSING OVER SEWER LINE
 WATERLINE CROSSING UNDER SEWER LINE



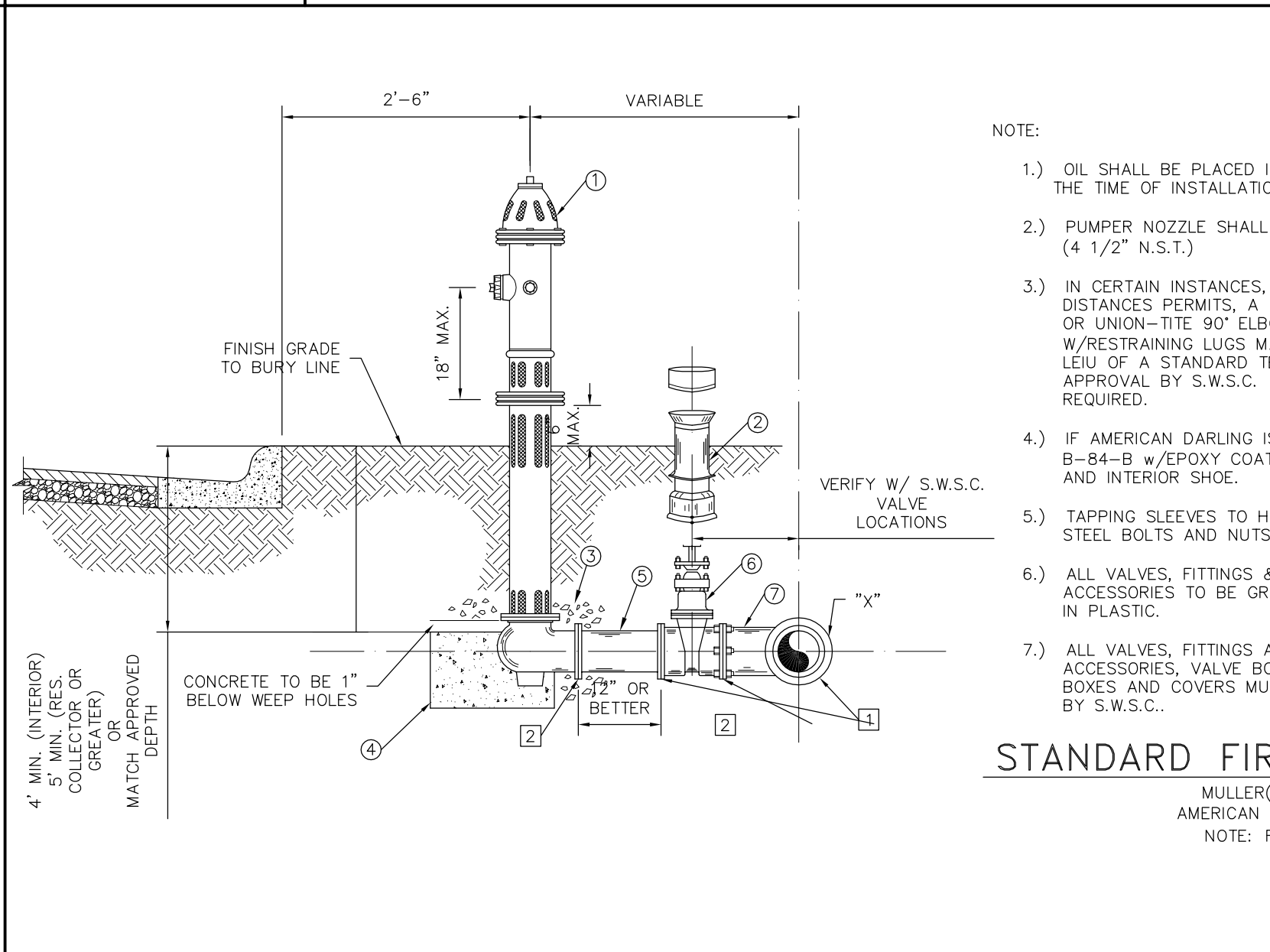
W-4A TYPICAL WATER LINE AND SEWER FORCEMAIN BEDDING DETAIL

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY PAGE 3 CHAPTER 217- DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS
 (1) COLLECTION SYSTEM PIPES MUST BE INSTALLED IN TRENCHES SEPARATE FROM WATER SUPPLY TRENCHES.
 (2) WHEREVER POSSIBLE, A COLLECTION SYSTEM PIPE MUST BE LOCATED BELOW A WATER SUPPLY PIPE. IF A COLLECTION SYSTEM PIPE CANNOT BE LOCATED BELOW A WATER SUPPLY PIPE, THE OWNER MUST JUSTIFY IN THE ENGINEERING REPORT WHY IT IS NOT POSSIBLE TO LOCATE THE COLLECTION SYSTEM PIPE BELOW THE PUBLIC WATER SUPPLY PIPE.
 (3) WHEREVER POSSIBLE, COLLECTION SYSTEM PIPES AND MANHOLES MUST BE LOCATED AT LEAST NINE FEET FROM ALL WATER SUPPLY PIPES. IF A COLLECTION SYSTEM PIPE OR MANHOLE CANNOT BE LOCATED AT LEAST NINE FEET AWAY FROM A WATER SUPPLY PIPE, THE OWNER MUST JUSTIFY IN THE ENGINEERING REPORT WHY IT IS NOT POSSIBLE TO PROVIDE AT LEAST NINE FEET OF SEPARATION. TABLE C.L.I. IN FIGURE: 30 TAC §217.53(D)(3) PROVIDES A REFERENCE TO PARAGRAPHS IN THIS SUBSECTION THAT APPLY IF A COLLECTION SYSTEM PIPE OR MANHOLE CANNOT BE LOCATED AT LEAST NINE FEET AWAY FROM A WATER SUPPLY PIPE TO THE WATER SUPPLY PIPE. EACH PORTION OF THE COLLECTION SYSTEM PIPE WITHIN NINE FEET OF THE WATER SUPPLY PIPE MUST BE ENCASED. THE CASING PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PER SQUARE INCH (PSI) PRESSURE CLASS PIPE THAT:
 (A) ENCASES THE ENTIRE LENGTH OF COLLECTION SYSTEM PIPE THAT IS WITHIN NINE FEET OF THE WATER SUPPLY PIPE;
 (B) IS SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL;
 (C) IS AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND
 (D) IS SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASED PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS.
 (5) IF A COLLECTION SYSTEM PIPE CROSSES ABOVE A WATER SUPPLY PIPE, EACH PORTION OF THE COLLECTION SYSTEM PIPE WITHIN NINE FEET OF THE WATER SUPPLY PIPE MUST EITHER BE ENCASED IN A CASING PIPE ACCORDING TO SUBPARAGRAPH (A) OF THIS PARAGRAPH, OR MUST BE CONSTRUCTED USING AT LEAST 150 PSI PRESSURE CLASS PIPE ACCORDING TO SUBPARAGRAPH (B) OF THIS PARAGRAPH. (A) A CASING PIPE FOR A COLLECTION SYSTEM PIPE THAT CROSSES ABOVE A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS PIPE THAT IS: (I) SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL; TEXAS COMMISSION ON ENVIRONMENTAL QUALITY PAGE 5 CHAPTER 217-DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS (II) AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND (III) SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASED PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS.
 (6) A COLLECTION SYSTEM PIPE THAT CROSSES ABOVE A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS, CORROSION-RESISTANT, NON-BRITTLE PIPE AND MUST USE MANUFACTURER-APPROVED ADAPTERS, GASKETED JOINTS, COMPRESSION JOINTS, AND OTHER NON-BONDED JOINTS MUST BE DESIGNED TO SEAL AT ATMOSPHERIC PRESSURE.
 (6) IF A COLLECTION SYSTEM PIPE IS LOCATED BELOW A WATER SUPPLY PIPE AND RUNS PARALLEL TO THE WATER SUPPLY PIPE, EACH PORTION OF THE COLLECTION SYSTEM PIPE WITHIN NINE FEET OF THE WATER SUPPLY PIPE MUST EITHER BE CONSTRUCTED USING AT LEAST 150 PSI PRESSURE CLASS PIPE ACCORDING TO SUBPARAGRAPH (A) OF THIS PARAGRAPH, OR MUST BE ENCASED IN A CASING PIPE ACCORDING TO SUBPARAGRAPH (B) OF THIS PARAGRAPH.

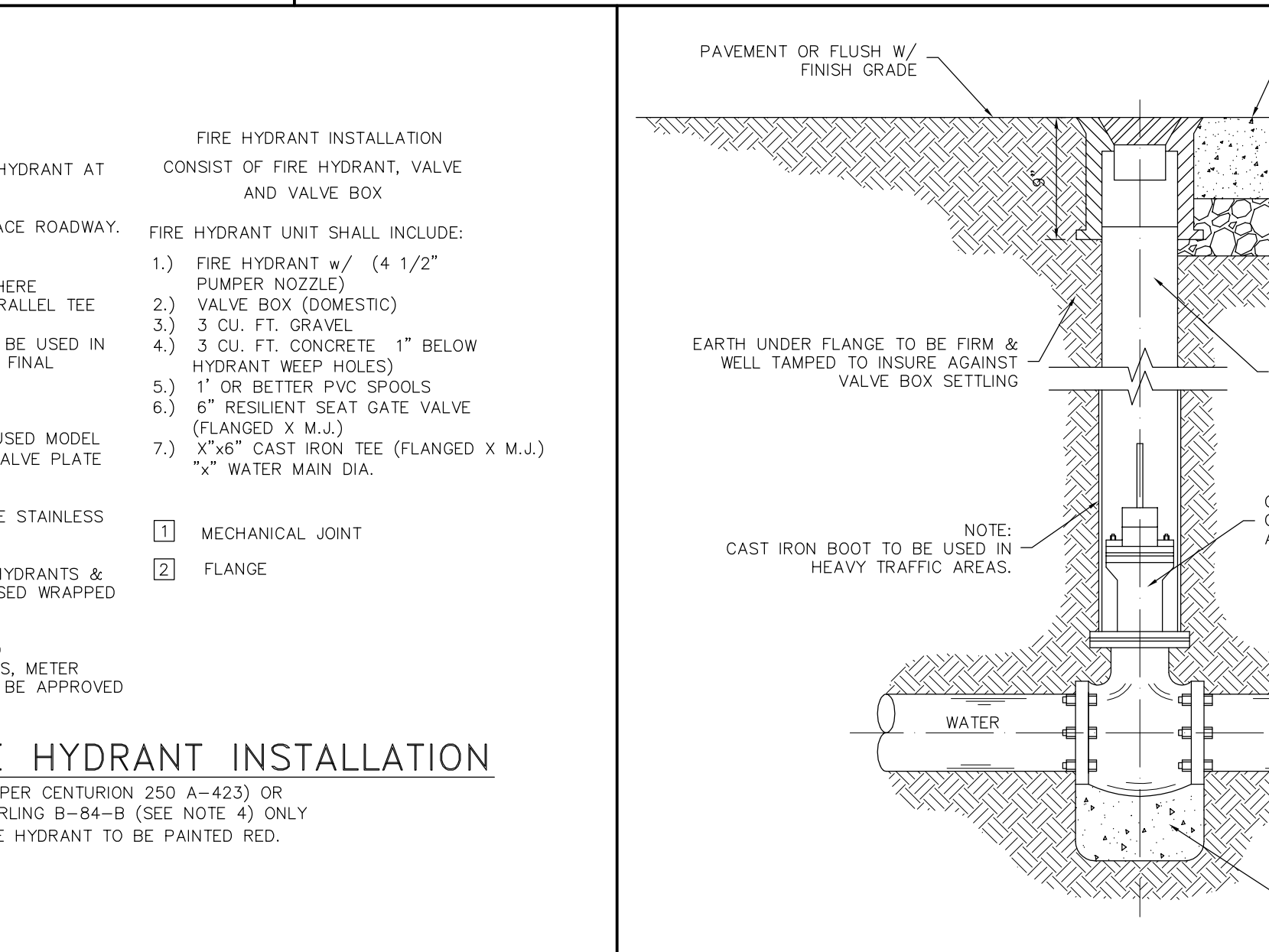
W-4B STANDARD WATER PIPE BEDDING DETAILS

(A) A COLLECTION SYSTEM PIPE THAT RUNS PARALLEL TO AND BELOW A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS, CORROSION-RESISTANT, NON-BRITTLE PIPE THAT:
 (I) IS LOCATED AT LEAST TWO VERTICAL FEET BELOW THE WATER SUPPLY PIPE;
 (II) IS LOCATED AT LEAST FOUR HORIZONTAL FEET AWAY FROM THE WATER SUPPLY PIPE; AND
 (III) INCLUDES JOINTS THAT ARE DESIGNED TO SEAL AT ATMOSPHERIC PRESSURE.
 (B) A CASING PIPE FOR A COLLECTION SYSTEM PIPE THAT RUNS PARALLEL BELOW A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS PIPE THAT IS:
 (I) SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL;
 (II) IS AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND
 (III) IS SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASED PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS.
 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY PAGE 6 CHAPTER 217- DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS
 (7) IF A COLLECTION SYSTEM PIPE CROSSES BELOW A WATER SUPPLY PIPE, EACH PORTION OF THE COLLECTION SYSTEM PIPE WITHIN NINE FEET OF THE WATER SUPPLY PIPE MUST EITHER BE ENCASED IN AT LEAST 150 PSI PRESSURE CLASS PIPE ACCORDING TO SUBPARAGRAPH (A) OF THIS PARAGRAPH, OR MUST BE ENCASED IN CEMENT-STABILIZED SAND ACCORDING TO SUBPARAGRAPH (B) OF THIS PARAGRAPH, OR MUST BE ENCASED IN A CASING PIPE ACCORDING TO SUBPARAGRAPH (C) OF THIS PARAGRAPH. (A) A COLLECTION SYSTEM PIPE THAT CROSSES BELOW A WATER SUPPLY PIPE AND IS CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS, CORROSION-RESISTANT, NON-BRITTLE PIPE MUST:
 (I) HAVE AT LEAST SIX INCHES OF SEPARATION BETWEEN THE OUTSIDES OF THE PIPES;
 (II) BE CENTERED ON THE CROSSING; (III) BE AT LEAST 18 FEET LONG; AND
 (IV) TERMINATE AT JOINTS THAT ARE DESIGNED TO SEAL AT ATMOSPHERIC PRESSURE.
 (B) A COLLECTION SYSTEM PIPE THAT CROSSES BELOW A WATER SUPPLY PIPE AND IS CONSTRUCTED OF ANY MATERIAL OTHER THAN AT LEAST 150 PSI PRESSURE CLASS, CORROSION-RESISTANT, NON-BRITTLE PIPE MUST:
 (I) HAVE AT LEAST TWO FEET OF SEPARATION BETWEEN THE OUTSIDES OF THE PIPES; AND
 (II) BE ENCASED IN CEMENT-STABILIZED SAND BACKFILL THAT MEETS THE REQUIREMENTS OF SUBPARAGRAPH (D) OF THIS PARAGRAPH.
 (C) A CASING PIPE FOR A COLLECTION SYSTEM PIPE THAT CROSSES BELOW A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS PIPE THAT IS:
 (I) SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL;
 (II) AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND
 (III) SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASED PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS.
 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY PAGE 7 CHAPTER 217-DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS
 (D) CEMENT-STABILIZED SAND FOR ENCASED COLLECTION SYSTEM PIPES MUST:
 (I) INCLUDE AT LEAST 160 POUNDS OF CEMENT FOR EVERY CUBIC YARD OF SAND;
 (II) BE INSTALLED BEGINNING ONE-QUARTER PIPE DIAMETER BELOW THE CENTERLINE OF THE COLLECTION SYSTEM PIPE;
 (III) BE INSTALLED ENDING ONE FULL PIPE DIAMETER ABOVE THE TOP OF THE COLLECTION SYSTEM PIPE, OR 12 INCHES ABOVE THE TOP OF THE COLLECTION SYSTEM PIPE, WHICHEVER IS GREATER.

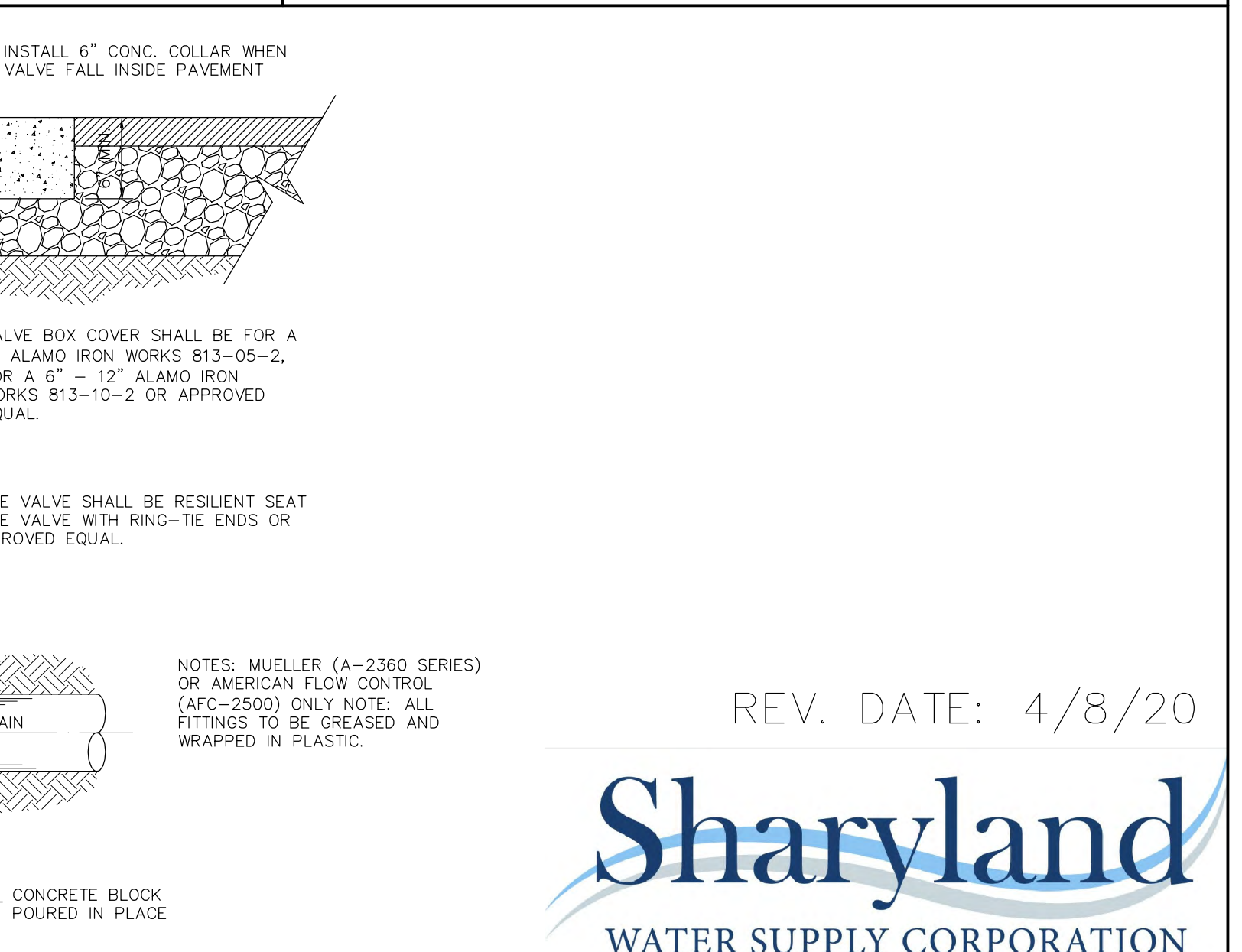
W-5 THRUST BLOCKS DETAILS



W-6A WATER / SANITARY SEWER CROSSING DETAILS



W-6B WATER / SANITARY SEWER CROSSING DETAILS



W-6C WATER / SANITARY SEWER CROSSING DETAILS

(I) IS LOCATED AT LEAST TWO VERTICAL FEET BELOW THE WATER SUPPLY PIPE;
 (II) IS LOCATED AT LEAST FOUR HORIZONTAL FEET AWAY FROM THE WATER SUPPLY PIPE; AND
 (III) INCLUDES JOINTS THAT ARE DESIGNED TO SEAL AT ATMOSPHERIC PRESSURE.
 (B) A CASING PIPE FOR A COLLECTION SYSTEM PIPE THAT RUNS PARALLEL BELOW A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS PIPE THAT IS:
 (I) SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL;
 (II) IS AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND
 (III) IS SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASED PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS.
 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY PAGE 6 CHAPTER 217- DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS
 (7) IF A COLLECTION SYSTEM PIPE CROSSES BELOW A WATER SUPPLY PIPE, EACH PORTION OF THE COLLECTION SYSTEM PIPE WITHIN NINE FEET OF THE WATER SUPPLY PIPE MUST EITHER BE ENCASED IN AT LEAST 150 PSI PRESSURE CLASS PIPE ACCORDING TO SUBPARAGRAPH (A) OF THIS PARAGRAPH, OR MUST BE ENCASED IN CEMENT-STABILIZED SAND ACCORDING TO SUBPARAGRAPH (B) OF THIS PARAGRAPH, OR MUST BE ENCASED IN A CASING PIPE ACCORDING TO SUBPARAGRAPH (C) OF THIS PARAGRAPH. (A) A COLLECTION SYSTEM PIPE THAT CROSSES BELOW A WATER SUPPLY PIPE AND IS CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS, CORROSION-RESISTANT, NON-BRITTLE PIPE MUST:
 (I) HAVE AT LEAST SIX INCHES OF SEPARATION BETWEEN THE OUTSIDES OF THE PIPES;
 (II) BE CENTERED ON THE CROSSING; (III) BE AT LEAST 18 FEET LONG; AND
 (IV) TERMINATE AT JOINTS THAT ARE DESIGNED TO SEAL AT ATMOSPHERIC PRESSURE.
 (B) A COLLECTION SYSTEM PIPE THAT CROSSES BELOW A WATER SUPPLY PIPE AND IS CONSTRUCTED OF ANY MATERIAL OTHER THAN AT LEAST 150 PSI PRESSURE CLASS, CORROSION-RESISTANT, NON-BRITTLE PIPE MUST:
 (I) HAVE AT LEAST TWO FEET OF SEPARATION BETWEEN THE OUTSIDES OF THE PIPES; AND
 (II) BE ENCASED IN CEMENT-STABILIZED SAND BACKFILL THAT MEETS THE REQUIREMENTS OF SUBPARAGRAPH (D) OF THIS PARAGRAPH.
 (C) A CASING PIPE FOR A COLLECTION SYSTEM PIPE THAT CROSSES BELOW A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS PIPE THAT IS:
 (I) SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL;
 (II) AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND
 (III) SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASED PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS.
 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY PAGE 7 CHAPTER 217-DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS
 (D) CEMENT-STABILIZED SAND FOR ENCASED COLLECTION SYSTEM PIPES MUST:
 (I) INCLUDE AT LEAST 160 POUNDS OF CEMENT FOR EVERY CUBIC YARD OF SAND;
 (II) BE INSTALLED BEGINNING ONE-QUARTER PIPE DIAMETER BELOW THE CENTERLINE OF THE COLLECTION SYSTEM PIPE;
 (III) BE INSTALLED ENDING ONE FULL PIPE DIAMETER ABOVE THE TOP OF THE COLLECTION SYSTEM PIPE, OR 12 INCHES ABOVE THE TOP OF THE COLLECTION SYSTEM PIPE, WHICHEVER IS GREATER.

W-7 STANDARD WATER PIPE BEDDING DETAILS

(I) IS LOCATED AT LEAST TWO VERTICAL FEET BELOW THE WATER SUPPLY PIPE;
 (II) IS LOCATED AT LEAST FOUR HORIZONTAL FEET AWAY FROM THE WATER SUPPLY PIPE; AND
 (III) INCLUDES JOINTS THAT ARE DESIGNED TO SEAL AT ATMOSPHERIC PRESSURE.
 (B) A CASING PIPE FOR A COLLECTION SYSTEM PIPE THAT RUNS PARALLEL BELOW A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS PIPE THAT IS:
 (I) SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL;
 (II) IS AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND
 (III) IS SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASED PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS.
 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY PAGE 6 CHAPTER 217- DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS
 (7) IF A COLLECTION SYSTEM PIPE CROSSES BELOW A WATER SUPPLY PIPE, EACH PORTION OF THE COLLECTION SYSTEM PIPE WITHIN NINE FEET OF THE WATER SUPPLY PIPE MUST EITHER BE ENCASED IN AT LEAST 150 PSI PRESSURE CLASS PIPE ACCORDING TO SUBPARAGRAPH (A) OF THIS PARAGRAPH, OR MUST BE ENCASED IN CEMENT-STABILIZED SAND ACCORDING TO SUBPARAGRAPH (B) OF THIS PARAGRAPH, OR MUST BE ENCASED IN A CASING PIPE ACCORDING TO SUBPARAGRAPH (C) OF THIS PARAGRAPH. (A) A COLLECTION SYSTEM PIPE THAT CROSSES BELOW A WATER SUPPLY PIPE AND IS CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS, CORROSION-RESISTANT, NON-BRITTLE PIPE MUST:
 (I) HAVE AT LEAST SIX INCHES OF SEPARATION BETWEEN THE OUTSIDES OF THE PIPES;
 (II) BE CENTERED ON THE CROSSING; (III) BE AT LEAST 18 FEET LONG; AND
 (IV) TERMINATE AT JOINTS THAT ARE DESIGNED TO SEAL AT ATMOSPHERIC PRESSURE.
 (B) A COLLECTION SYSTEM PIPE THAT CROSSES BELOW A WATER SUPPLY PIPE AND IS CONSTRUCTED OF ANY MATERIAL OTHER THAN AT LEAST 150 PSI PRESSURE CLASS, CORROSION-RESISTANT, NON-BRITTLE PIPE MUST:
 (I) HAVE AT LEAST TWO FEET OF SEPARATION BETWEEN THE OUTSIDES OF THE PIPES; AND
 (II) BE ENCASED IN CEMENT-STABILIZED SAND BACKFILL THAT MEETS THE REQUIREMENTS OF SUBPARAGRAPH (D) OF THIS PARAGRAPH.
 (C) A CASING PIPE FOR A COLLECTION SYSTEM PIPE THAT CROSSES BELOW A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS PIPE THAT IS:
 (I) SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL;
 (II) AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND
 (III) SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASED PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS.
 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY PAGE 7 CHAPTER 217-DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS
 (D) CEMENT-STABILIZED SAND FOR ENCASED COLLECTION SYSTEM PIPES MUST:
 (I) INCLUDE AT LEAST 160 POUNDS OF CEMENT FOR EVERY CUBIC YARD OF SAND;
 (II) BE INSTALLED BEGINNING ONE-QUARTER PIPE DIAMETER BELOW THE CENTERLINE OF THE COLLECTION SYSTEM PIPE;
 (III) BE INSTALLED ENDING ONE FULL PIPE DIAMETER ABOVE THE TOP OF THE COLLECTION SYSTEM PIPE, OR 12 INCHES ABOVE THE TOP OF THE COLLECTION SYSTEM PIPE, WHICHEVER IS GREATER.

W-8 TYPICAL VALVE AND VALVE BOX INSTALLATION ON MAIN LINE

(I) IS LOCATED AT LEAST TWO VERTICAL FEET BELOW THE WATER SUPPLY PIPE;
 (II) IS LOCATED AT LEAST FOUR HORIZONTAL FEET AWAY FROM THE WATER SUPPLY PIPE; AND
 (III) INCLUDES JOINTS THAT ARE DESIGNED TO SEAL AT ATMOSPHERIC PRESSURE.
 (B) A CASING PIPE FOR A COLLECTION SYSTEM PIPE THAT RUNS PARALLEL BELOW A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS PIPE THAT IS:
 (I) SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL;
 (II) IS AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND
 (III) IS SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASED PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS.
 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY PAGE 6 CHAPTER 217- DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS
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 (I) HAVE AT LEAST SIX INCHES OF SEPARATION BETWEEN THE OUTSIDES OF THE PIPES;
 (II) BE CENTERED ON THE CROSSING; (III) BE AT LEAST 18 FEET LONG; AND
 (IV) TERMINATE AT JOINTS THAT ARE DESIGNED TO SEAL AT ATMOSPHERIC PRESSURE.
 (B) A COLLECTION SYSTEM PIPE THAT CROSSES BELOW A WATER SUPPLY PIPE AND IS CONSTRUCTED OF ANY MATERIAL OTHER THAN AT LEAST 150 PSI PRESSURE CLASS, CORROSION-RESISTANT, NON-BRITTLE PIPE MUST:
 (I) HAVE AT LEAST TWO FEET OF SEPARATION BETWEEN THE OUTSIDES OF THE PIPES; AND
 (II) BE ENCASED IN CEMENT-STABILIZED SAND BACKFILL THAT MEETS THE REQUIREMENTS OF SUBPARAGRAPH (D) OF THIS PARAGRAPH.
 (C) A CASING PIPE FOR A COLLECTION SYSTEM PIPE THAT CROSSES BELOW A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS PIPE THAT IS:
 (I) SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL;
 (II) AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND
 (III) SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASED PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS.
 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY PAGE 7 CHAPTER 217-DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS
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 (II) BE INSTALLED BEGINNING ONE-QUARTER PIPE DIAMETER BELOW THE CENTERLINE OF THE COLLECTION SYSTEM PIPE;
 (III) BE INSTALLED ENDING ONE FULL PIPE DIAMETER ABOVE THE TOP OF THE COLLECTION SYSTEM PIPE, OR 12 INCHES ABOVE THE TOP OF THE COLLECTION SYSTEM PIPE, WHICHEVER IS GREATER.

W-8 TYPICAL VALVE AND VALVE BOX INSTALLATION ON MAIN LINE

(I) IS LOCATED AT LEAST TWO VERTICAL FEET BELOW THE WATER SUPPLY PIPE;
 (II) IS LOCATED AT LEAST FOUR HORIZONTAL FEET AWAY FROM THE WATER SUPPLY PIPE; AND
 (III) INCLUDES JOINTS THAT ARE DESIGNED TO SEAL AT ATMOSPHERIC PRESSURE.
 (B) A CASING PIPE FOR A COLLECTION SYSTEM PIPE THAT RUNS PARALLEL BELOW A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS PIPE THAT IS:
 (I) SEALED AT BOTH ENDS WITH CEMENT GROUT OR A MANUFACTURED SEAL;
 (II) IS AT LEAST TWO NOMINAL SIZES LARGER THAN THE WASTEWATER COLLECTION PIPE; AND
 (III) IS SUPPORTED BY SPACERS BETWEEN THE COLLECTION SYSTEM PIPE AND THE ENCASED PIPE AT A MAXIMUM OF FIVE-FOOT INTERVALS.
 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY PAGE 6 CHAPTER 217- DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS
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 (I) HAVE AT LEAST SIX INCHES OF SEPARATION BETWEEN THE OUTSIDES OF THE PIPES;
 (II) BE CENTERED ON THE CROSSING; (III) BE AT LEAST 18 FEET LONG; AND
 (IV) TERMINATE AT JOINTS THAT ARE DESIGNED TO SEAL AT ATMOSPHERIC PRESSURE.
 (B) A COLLECTION SYSTEM PIPE THAT CROSSES BELOW A WATER SUPPLY PIPE AND IS CONSTRUCTED OF ANY MATERIAL OTHER THAN AT LEAST 150 PSI PRESSURE CLASS, CORROSION-RESISTANT, NON-BRITTLE PIPE MUST:
 (I) HAVE AT LEAST TWO FEET OF SEPARATION BETWEEN THE OUTSIDES OF THE PIPES; AND
 (II) BE ENCASED IN CEMENT-STABILIZED SAND BACKFILL THAT MEETS THE REQUIREMENTS OF SUBPARAGRAPH (D) OF THIS PARAGRAPH.
 (C) A CASING PIPE FOR A COLLECTION SYSTEM PIPE THAT CROSSES BELOW A WATER SUPPLY PIPE MUST BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE CLASS PIPE THAT IS:
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 (III) BE INSTALLED ENDING ONE FULL PIPE DIAMETER ABOVE THE TOP OF THE COLLECTION SYSTEM PIPE, OR 12 INCHES ABOVE THE TOP OF THE COLLECTION SYSTEM PIPE, WHICHEVER IS GREATER.