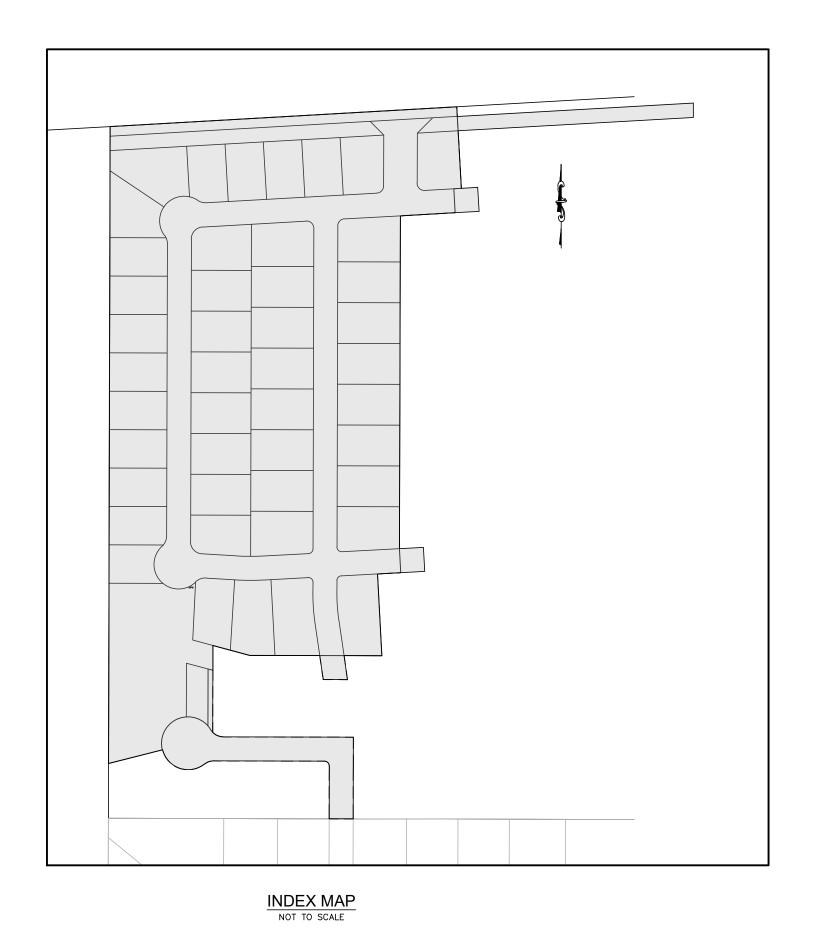
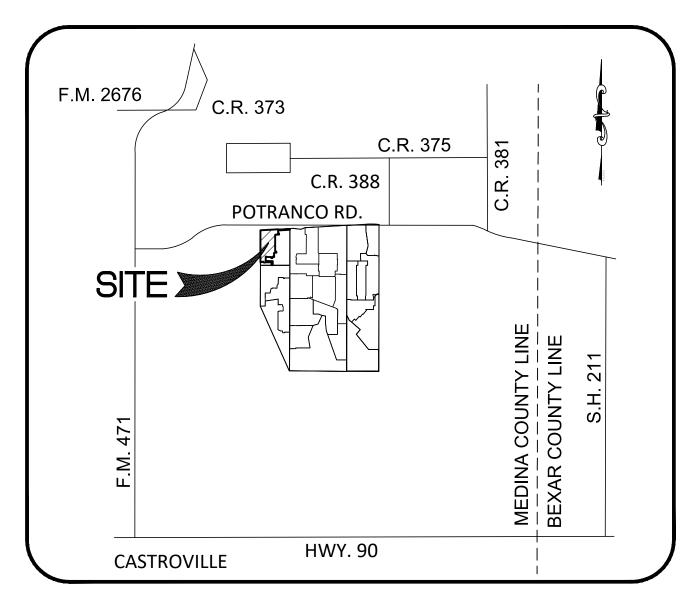


POTRANCO WEST II, UNIT 1





VICINITY MAP

SUBMITTAL DATE: SEPTEMBER 2021

LEGAL DESCRIPTION:

A 18.052 ACRES (786,355.80 SQUARE FEET) OUT OF THE 41.198 ACRES (1,794,602.20 SQUARE FEET) TRACT OF LAND SITUATED IN THE JOHN GARNER SURVEY NO. 97, ABSTRACT NO. 1452, AND THE WILLIAM B. RHODE SURVEY NO. 96, ABSTRACT NO. 1327, MEDINA COUNTY, TEXAS, BEING A PORTION OF A REMAINDER OF A 619.4125 ACRE TRACT AS CONVEYED TO JEANENE STEINLE WILLIAMS BY LAST WILL AND TESTAMENT AS RECORDED IN VOLUME 63, PAGES 378-385 OF THE OFFICIAL PROBATE RECORDS OF MEDINA COUNTY, TEXAS.





SAN ANTONIO, TEXAS 78249 TEL: (210) 698-5051 FAX: (210) 698-5085

OWNER/DEVELOPER

LGI HOMES-TEXAS, LLC. KENNON MASTERS, 1450 LAKE ROBBINS DRIVE, SUITE 430 THE WOODLANDS, TEXAS 77380 PH# (281) 362-8998

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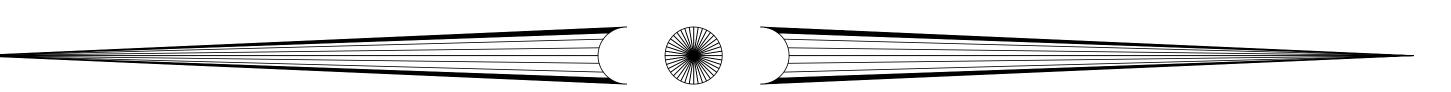
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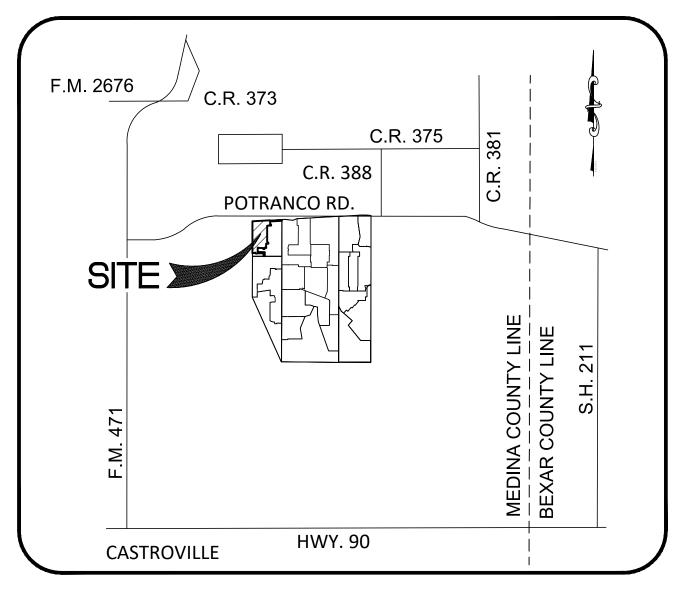


TBPELS: ENGINEERING F-5297/SURVEYING: F-10131500 12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051 SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085

CONSTRUCTION PLANS FOR



POTRANCO WEST II, UNIT 1 UTILITY IMPROVEMENTS



VICINITY MAP

SUBMITTAL DATE: SEPTEMBER 2021

LEGAL DESCRIPTION:

A 18.052 ACRES (786,355.80 SQUARE FEET) OUT OF THE 41.198 ACRES (1,794,602.20 SQUARE FEET) TRACT OF LAND SITUATED IN THE JOHN GARNER SURVEY NO. 97, ABSTRACT NO. 1452, AND THE WILLIAM B. RHODE SURVEY NO. 96, ABSTRACT NO. 1327, MEDINA COUNTY, TEXAS, BEING A PORTION OF A REMAINDER OF A 619.4125 ACRE TRACT AS CONVEYED TO JEANENE STEINLE WILLIAMS BY LAST WILL AND TESTAMENT AS RECORDED IN VOLUME 63, PAGES 378–385 OF THE OFFICIAL PROBATE RECORDS OF MEDINA COUNTY, TEXAS.

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OVERALL UTILITY IMPROVEMENTS OVERALL

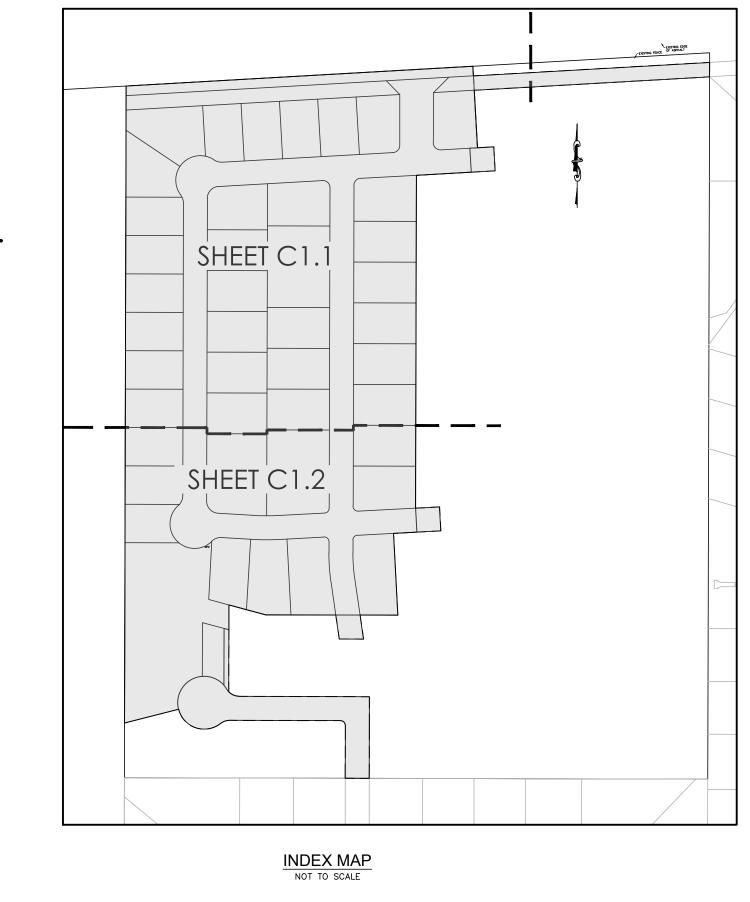
12770 CIMARRON PATH, SUITE 100 SAN ANTONIO, TEXAS 78249 TEL: (210) 698-5051

SUBMITTED BY:

OWNER/DEVELOPER

LGI HOMES-TEXAS, LLC. KENNON MASTERS, 1450 LAKE ROBBINS DRIVE, SUITE 430 THE WOODLANDS, TEXAS 77380 PH# (281) 362-8998





CAUTION: EXISTING UNDERGROUND UTILITIES, CONTRACTOR TO VERIFY PRIOR TO START OF ANY CONSTRUCTION.

BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT, THE BIDDER WARRANTS

THAT THE BIDDER, AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS HE INTENDS TO USE HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND ALL OTHER CONTRACT

DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM ANY AMBIGUITIES AND SUFFICIENT

FOR THE PURPOSE INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HIS

THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON

RECORD INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AND/OR DEPTHS AS CONSTRUCTED.

THE CONTRACTOR SHALL CONTACT EACH INDIVIDUAL UTILITY, FOR ASSISTANCE IN DETERMINING

TRENCH EXCAVATION SAFETY PROTECTION

Contractor and/or Contractor's independently retained employee or structural design/geotechnical/safety/equipment consultant, if any, shall review these plans and available geotechnical information and the anticipated installation site(s) within the project work area in order to implement Contractor's trench excavation safety protection systems, programs and/or procedures for the project described in the contract documents. The Contractor's implementation of these systems, programs and/or procedures shall provide for adequate trench excavation safety protection that comply with as a minimum, OSHA standards for trench excavations. Specifically, Contractor and/or Contractor's independently retained employee or safety consultant shall implement a trench safety program in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavation.

EXISTING UTILITY LOCATIONS AND DEPTHS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR

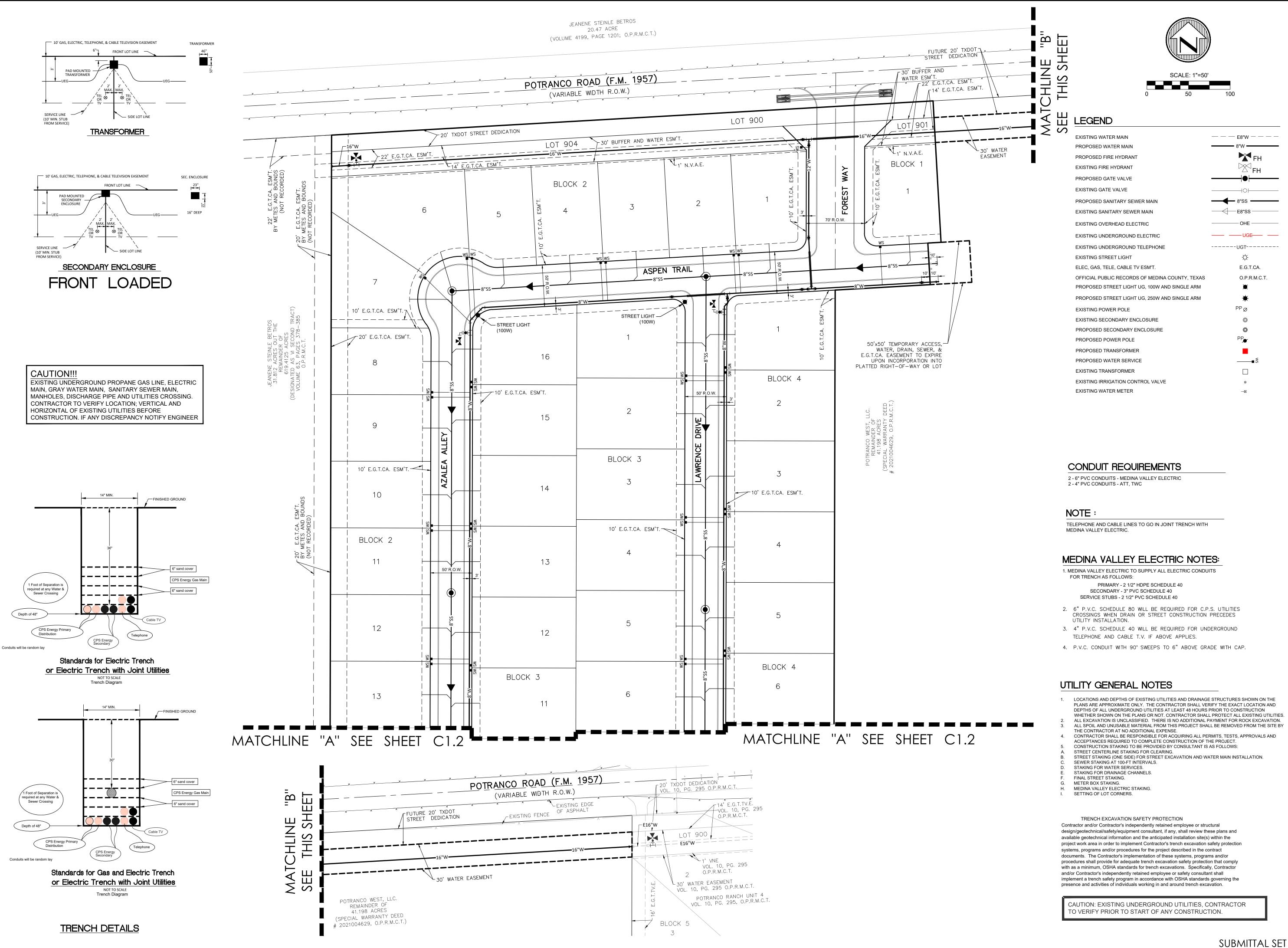
SHALL FIELD VERIFY LOCATIONS OF ALL UTILITY CROSSINGS PRIOR TO BEGINNING ANY CONSTRUCTION.

SUBCONTRACTORS' AND MATERIAL SUPPLIERS' KNOWLEDGE, ALL MATERIALS AND PRODUCTS SPECIFIED OR INDICATED HEREIN ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.

NOTE TO CONTRACTOR:



TBPELS: ENGINEERING F-5297/SURVEYING: F-10131500 12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051 SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085



C1.1

SHEET

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PAUL LANDA, J

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CONDUIT REQUIREMENTS

2 - 6" PVC CONDUITS - MEDINA VALLEY ELECTRIC 2 - 4" PVC CONDUITS - ATT, TWC

NOTE:

TELEPHONE AND CABLE LINES TO GO IN JOINT TRENCH WITH MEDINA VALLEY ELECTRIC.

MEDINA VALLEY ELECTRIC NOTES:

- 1. MEDINA VALLEY ELECTRIC TO SUPPLY ALL ELECTRIC CONDUITS FOR TRENCH AS FOLLOWS:
 - PRIMARY 2 1/2" HDPE SCHEDULE 40 SECONDARY - 3" PVC SCHEDULE 40 SERVICE STUBS - 2 1/2" PVC SCHEDULE 40
- 2. 6" P.V.C. SCHEDULE 80 WILL BE REQUIRED FOR C.P.S. UTILITIES CROSSINGS WHEN DRAIN OR STREET CONSTRUCTION PRECEDES UTILITY INSTALLATION.
- 3. 4" P.V.C. SCHEDULE 40 WILL BE REQUIRED FOR UNDERGROUND TELEPHONE AND CABLE T.V. IF ABOVE APPLIES.

4. P.V.C. CONDUIT WITH 90° SWEEPS TO 6" ABOVE GRADE WITH CAP.

UTILITY GENERAL NOTES

- 1. LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF ALL UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON THE PLANS OR NOT. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES.
- ALL EXCAVATION IS UNCLASSIFIED. THERE IS NO ADDITIONAL PAYMENT FOR ROCK EXCAVATION.
 ALL SPOIL AND UNUSABLE MATERIAL FROM THIS PROJECT SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE.
 CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS. TESTS. APPROVALS AND
- 4. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THE PROJECT.
- CONSTRUCTION STAKING TO BE PROVIDED BY CONSULTANT IS AS FOLLOWS:
 STREET CENTERLINE STAKING FOR CLEARING.
- 3. STREET STAKING (ONE SIDE) FOR STREET EXCAVATION AND WATER MAIN INSTALLATION.

 SEWER STAKING AT 100-FT INTERVALS.
- STAKING FOR WATER SERVICES. STAKING FOR DRAINAGE CHANNELS.
- F. FINAL STREET STAKING
 G. METER BOX STAKING.
- CPS STAKING. SETTING OF LOT CORNERS.

TRENCH EXCAVATION SAFETY PROTECTION

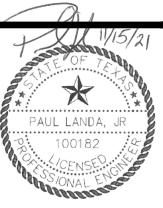
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presence and activities of individuals working in and around trench excavation.

CAUTION: EXISTING UNDERGROUND UTILITIES, CONTRACTOR TO VERIFY PRIOR TO START OF ANY CONSTRUCTION.

NO. DATE DES DES PROJ. # DGN

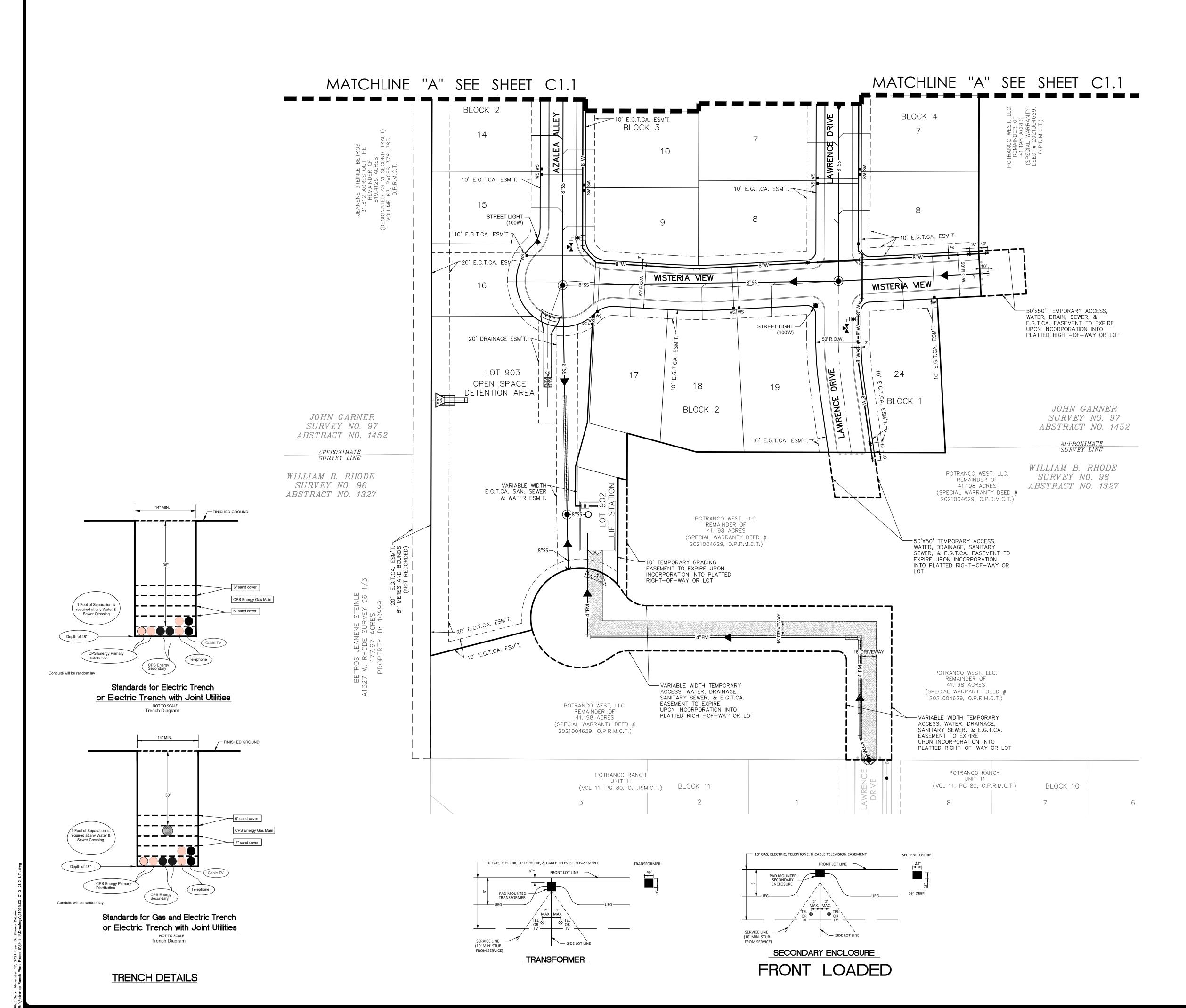
Moy Tarin Ramire
TBPELS: ENGINEERING F-529
12770 CIMARRON PATH, SUITE
SAN ANTONIO, TEXAS 78249



SALL UTILITY IMPROVEMENTS PLAI

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POTRANCO WEST II, UNIT 1 SANITARY SEWER IMPROVEMENTS

F.M. 2676 C.R. 373 C.R. 375 C.R. 388 POTRANCO RD. \geq \mid \square HWY. 90 **CASTROVILLE**

SUBMITTED BY:

MOY TARIN RAMIREZ ENGINEERS, LLO 12770 CIMARRON PATH, SUITE 100 SAN ANTONIO, TEXAS 78249 TEL: (210) 698-5051 FAX: (210) 698-5085

OWNER/DEVELOPER

LGI HOMES-TEXAS, LLC. KENNON MASTERS, 1450 LAKE ROBBINS DRIVE, SUITE 430 THE WOODLANDS, TEXAS 77380

VICINITY MAP CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS

SUBMITTAL DATE: I. WHERE A SEWER MAIN CROSSES OVER A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN NINE (9) FEET. ALL PORTIONS OF THE SEWER MAIN WITHIN SEPTEMBER 2021 NINE (9) FEET OF THE WATER LINE SHALL BE CONSTRUCTED USING 150 PSI PRESSURE RATED DUCTILE IRON, CAST IRON OR PVC PIPE AND JOINED WITH EQUALLY PRESSURE RATED PRESSURE RING GASKET CONNECTIONS OR CORROSION PROTECTED MECHANICAL COUPLING DEVICES OF A CAST IRON OR DUCTILE IRON

II. WHERE A SEMI-RIGID OR RIGID SEWER MAIN CROSSES UNDER A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN NINE FEET BUT GREATER THAN TWO FEET, THE INITIAL BACKFILL SHALL BE CEMENT STABILIZED SAND (TWO OR MORE BAGS OR CEMENT PER CUBIC YARD OF SAND) FOR ALL SECTIONS OF THE SEWER

CONNECTION REQUIREMENTS. (NO SEPARATE PAY ITEM)

WITHIN NINE FEET OF THE WATER MAIN.

MATERIAL. A SECTION OF 150 PSI PRESSURE RATED PIPE AT LEAST EIGHTEEN (18)

FEET IN LENGTH MAY BE CENTERED ON THE WATER MAIN IN LIEU OF PIPE

III. WHERE A SEWER MAIN CROSSES UNDER A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN TWO FEET, THE SEWER MAIN SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI WITHIN NINE FEET OF THE WATER MAIN, SHALL BE PLACED NO CLOSER THAN SIX INCHES BETWEEN OUTER DIAMETERS, AND SHALL BE JOINED WITH PRESSURE RING GASKET CONNECTIONS OR CORROSION PROTECTED MECHANICAL COUPLING DEVICES OR A CAST IRON OR DUCTILE IRON MATERIAL. A SECTION OF 150 PSI PRESSURE RATED PIPE OF A LENGTH GREATER THAN EIGHTEEN (18) FEET MAY BE CENTERED ON THE WATER MAIN IN LIEU OF PIPE CONNECTION REQUIREMENTS.

IV. WHERE A SEWER MAIN PARALLELS A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN NINE FEET, THE SEWER MAIN SHALL BE BELOW THE WATER MAIN, SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI FOR BOTH PIPE AND JOINTS FOR A DISTANCE OF NINE FEET BEYOND THE POINT OF CONFLICT, SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE BETWEEN OUTER DIAMETERS OF TWO FEET VERTICALLY AND FOUR FEET HORIZONTALLY AND SHALL BE JOINED WITH PRESSURE RING GASKET CONNECTIONS OR CORROSION PROTECTED MECHANICAL COUPLING DEVICES OF A CAST IRON OR DUCTILE IRON MATERIALS.

V. SANITARY SEWER MANHOLES SHALL NOT BE INSTALLED ANY CLOSER THAN NINE FEET

A 18.052 ACRES (786,355.80 SQUARE FEET) OUT OF THE 41.198 ACRES (1,794,602.20 SQUARE FEET) TRACT OF LAND SITUATED IN THE JOHN GARNER SURVEY NO. 97, ABSTRACT NO. 1452, AND THE WILLIAM B. RHODE SURVEY NO. 96, ABSTRACT NO. 1327, MEDINA COUNTY, TEXAS, BEING A PORTION OF A REMAINDER OF A 619.4125 ACRE TRACT AS CONVEYED TO JEANENE STEINLE WILLIAMS BY LAST WILL AND TESTAMENT AS RECORDED IN VOLUME 63, PAGES 378-385 OF THE OFFICIAL PROBATE RECORDS OF MEDINA COUNTY, TEXAS.

ESTIMATED SEWER QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITY
1	Tie into Lift Station	EA.	1
2	Trench Excavation Protection	L.F.	2,862
3	8 " Sanitary Sewer, SDR 26, (0'-6')	L.F.	129
4	8 " Sanitary Sewer, SDR 26, (6'-10')	L.F.	1,753
5	8 " Sanitary Sewer, SDR 26, (10'-14')	L.F.	587
6	8 " Sanitary Sewer, SDR 26, (14'-18')	L.F.	320
7	8 " Sanitary Sewer, SDR 26, (18'-22')	L.F.	73
8	Standard Sanitary Sewer Manhole	EA.	7
9	Drop Sanitary Sewer Manhole	EA.	1
10	Extra Depth Manhole	V.F.	31.8
11	6" Sanitary Sewer Laterals	L.F.	1,640
12	Vertical Stacks	V.F.	66.7
13	Wyes, (8"X6")	EA.	1
14	Sewer Main Television Inspection	L.F.`	2,862
15	Concrete Encasement	L.F.`	117
16	8" Plug/Cleanout	EA.	3

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SHEET C2.2

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OVERALL SANITARY SEWER PLAN

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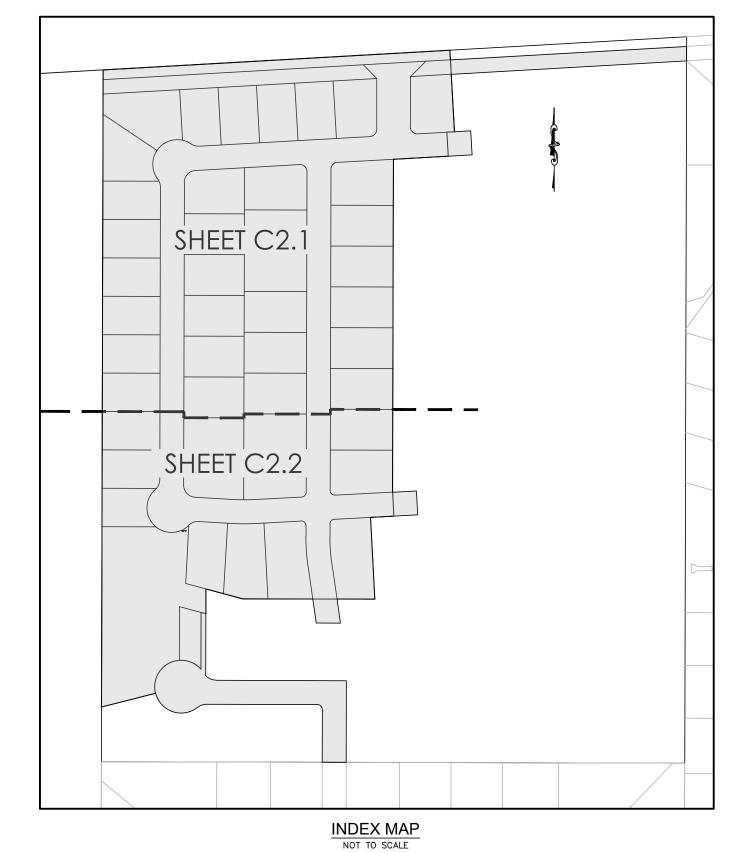
SANITARY SEWER PLAN AND PROFILE - LINE A

SANITARY SEWER PLAN AND PROFILE - LINE B

SANITARY SEWER PLAN AND PROFILE - LINE C

SANITARY SEWER PLAN AND PROFILE - LINE D

SANITARY SEWER PLAN AND PROFILE - LINE G



CAUTION: EXISTING UNDERGROUND UTILITIES, CONTRACTOR TO VERIFY PRIOR TO START OF ANY CONSTRUCTION.

presence and activities of individuals working in and around trench excavation.

TRENCH EXCAVATION SAFETY PROTECTION Contractor and/or Contractor's independently retained employee or structural design/geotechnical/safety/equipment consultant, if any, shall review these plans and available geotechnical information and the anticipated installation site(s) within the project work area in order to implement Contractor's trench excavation safety protection systems, programs and/or procedures for the project described in the contract documents. The Contractor's implementation of these systems, programs and/or procedures shall provide for adequate trench excavation safety protection that comply with as a minimum, OSHA standards for trench excavations. Specifically, Contractor and/or Contractor's independently retained employee or safety consultant shall implement a trench safety program in accordance with OSHA standards governing the

TEXAS C2.0

LEGAL DESCRIPTION:

Moy Tarin Ramirez Engineers, LLC

TBPELS: ENGINEERING F-5297/SURVEYING: F-10131500 12770 CIMARRON PATH, SUITE 100

Engineers Surveyors Planners

TEL: (210) 698-5051 SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085

MEDINA COUNTY

. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY CONTRACTOR PRIOR TO THE

CONSTRUCTION AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION

2. IT IS ESSENTIAL THAT 48 HOURS PRIOR TO CONSTRUCTION ALL UTILITY COMPANIES BE NOTIFIED TO LOCATE AND TAG THEIR UNDERGROUND FACILITIES PRIOR TO EXCAVATION.

UNDERGROUND UTILITIES. ALSO, THE CONTRACTOR MUST ALLOW FOR CHANGES DUE TO UTILITIES BEING IN LOCATIONS DIFFERENT FROM THOSE SHOWN ON THE UTILITY

NON-EDWARD'S AQUIFER RECHARGE ZONE

RECORD DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND EXPOSING

3. THE CONTRACTOR NEEDS TO ALLOW FOR THE POSSIBILITY OF UNDETECTED

OF SAME DURING CONSTRUCTION.

CONFLICTS PRIOR TO CONSTRUCTION.

following as applicable, unless otherwise specified on the plans:

protect the same during construction. Yancey Water Supply Corporation

COSA Traffic Signal Operations Texas State Wide One Call Locator

TXDOT (Hondo)

South Western Bell

Time Warner Cable

Valero Energy Co

capped and sealed.

No blasting is allowed.

WATER LINE CROSSING

EXCAVATION

1. All materials and construction procedures within the scope of this project shall comply with the

C. Current TxDOT "Standard Specification for Construction of Highways, Streets and Drainage".

2. The Contractor shall not proceed with any pipe installation work until they obtain a copy of the approval letter from T.C.E.Q.. Contractor is responsible for coordinating construction inspections

3. The locations and depths of existing utilities, including service laterals, and drainage structures

shown on the plans are approximate only. The Contractor shall verify the exact location and depths

of underground utilities at least 48 hours prior to construction whether shown on plans or not, and to

4. The Contractor shall be responsible for restoring to its original or better condition from damage done

5. The Contractor shall avoid cutting roots larger than one inch in diameter when excavating near

6. The Contractor shall maintain service to existing sanitary sewers at all times during construction

7. Due to Federal Regulations Title 49, Part 192.181, City Public Service must maintain access to gas valves at all times. The Contractor must protect and work around gas valves that are in the project

8. All residential sewer service laterals shall be extended past the property line to the easement line and

10. After construction, testing will be done by TV camera by the contractor and observed by Inspector, and

personnel, as the camera is run through the lines. Any abnormalities, such as broken pipe or misaligned joints, must be replaced by the Contractor at his expense. Contractor to provide TV tapes to Construction inspection for review prior to final inspection of the project.

to existing fences, curbs, streets, driveways, landscaping and structures.

existing trees. Excavation in vicinity of trees shall proceed with caution.

11. Contractor and/or Contractor's independently retained employee or structural

obtaining an approved Flood Plain Development Permit.

EROSION AND SEDIMENTATION CONTROL

design/geotechnical/safety/equipment consultant, if any, shall review these plans and available geotechnical information and the anticipated installation site(s) within the project work area in order

The Contractor's implementation of the systems, programs and/or procedures shall provide for adequate trench excavation safety protection that complies with as a minimum, OSHA Standards for

safety consultant shall implement a trench safety program in accordance with OSHA Standards

Contractor shall not permanently place any waste materials in the 100-year flood plain without first

13. Where the minimum 9 foot separation distance between sewer lines and water lines/mains cannot be

maintained, the installation of sewer lines shall be in strict accordance with the T.C.E.Q.'s Rules (30

14. The Texas Commission on Environmental Quality and Environmental Protection Agency (EPA)

15. All temporary erosion and sedimentation controls shall be removed by the Contractor at final

16. No extra-payment shall be allowed for work called for on the plans but not included on the bid schedule. This incidental work will be required and shall be included under the pay item to which it

17. All PVC Sewer Pipe with over 14 feet of cover shall be extra strength pipe, Minimum Stiffness of

18. The Contractor shall be responsible for meeting 98% compaction on all trench backfill and paying for the test results performed by a third party. Compaction tests will be done at one location point

randomly selected or as indicated by the inspector/Test Administrator, per each 12 inch loose lift per

19. The Contractor shall provide copies of all test results to the inspector, Consultant and Owner.

acceptance of the project by the County and Owner/Owner Representatives.

require erosion and sedimentation control for construction of sewer collection systems. Developer

or authorized representative shall provide erosion and sedimentation control as notes on the project's

governing the presence and activities of individuals working in and around trench excavation.

12. Contractor is responsible for removal of all waste materials upon project completion. The

to implement Contractor's trench excavation safety protection systems, programs and/or procedures.

trench excavations. Specifically, Contractor and/or Contractor's independently retained employee or

(830) 741-5264

1-800-545-6005

(830) 741-8024

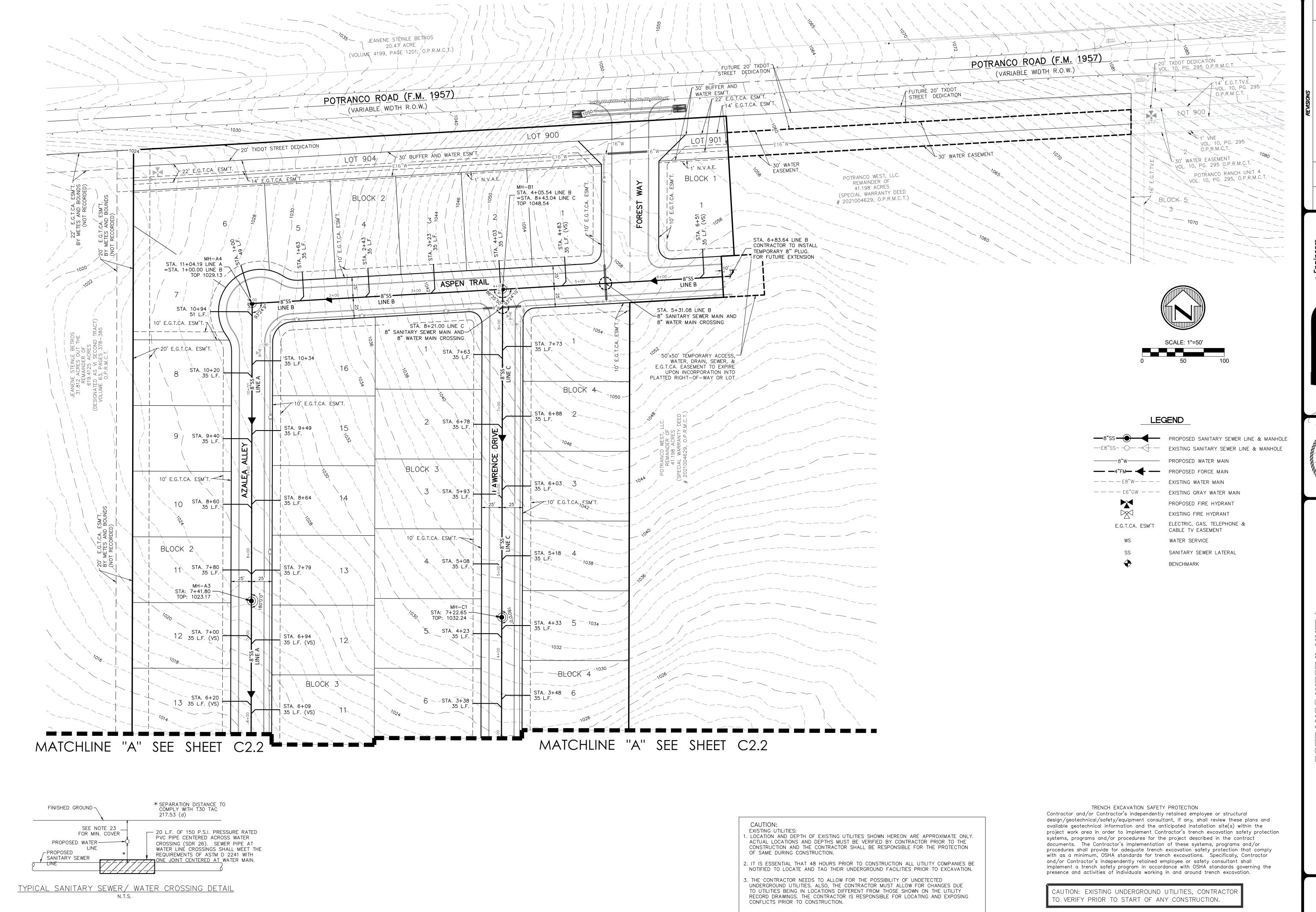
B. Current "San Antonio Water System Standard Specifications for Construction".

A. Current Texas Commission on Environmental Quality's (T.C.E.Q.) Design Criteria for Sewerage Systems

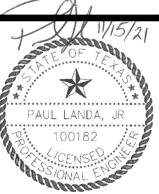
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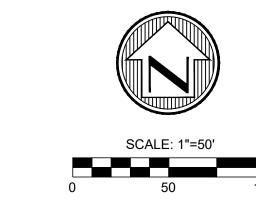
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SHEET

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__LEGEND

-8"SS - PROPOSED SANITARY SEWER LINE & MANHOLE

EXISTING SANITARY SEWER LINE & MANHOLE

PROPOSED FORCE MAIN

----E8"W---
EXISTING WATER MAIN

EXISTING GRAY WATER MAIN

PROPOSED FIRE HYDRANT

PROPOSED FIRE HYDRANT

EXISTING FIRE HYDRANT

ELECTRIC, GAS, TELEPHONE & CABLE TV EASEMENT

WS WATER SERVICE

SS SANITARY SEWER LATERAL

DENICHMARK

BENCHMARK

PROPOSED WATER MAIN
PROPOSED FORCE MAIN

EngineersSurveyorsPlanners

• Plani irez Engineers, -5297/SURVEYING: F-10

Moy Tarin Ramirez E
BPELS: ENGINEERING F-5297/St
12770 CIMARRON PATH, SUITE 100
SAN ANTONIO, TEXAS 78249

PAUL LANDA, JR

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ALL SANITARY SEWER PLAN

TRENCH EXCAVATION SAFETY PROTECTION

Contractor and/or Contractor's independently retained employee or structural design/geotechnical/safety/equipment consultant, if any, shall review these plans and available geotechnical information and the anticipated installation site(s) within the project work area in order to implement Contractor's trench excavation safety protection systems, programs and/or procedures for the project described in the contract documents. The Contractor's implementation of these systems, programs and/or procedures shall provide for adequate trench excavation safety protection that comply with as a minimum, OSHA standards for trench excavations. Specifically, Contractor and/or Contractor's independently retained employee or safety consultant shall implement a trench safety program in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavation.

CAUTION: EXISTING UNDERGROUND UTILITIES, CONTRACTOR TO VERIFY PRIOR TO START OF ANY CONSTRUCTION.

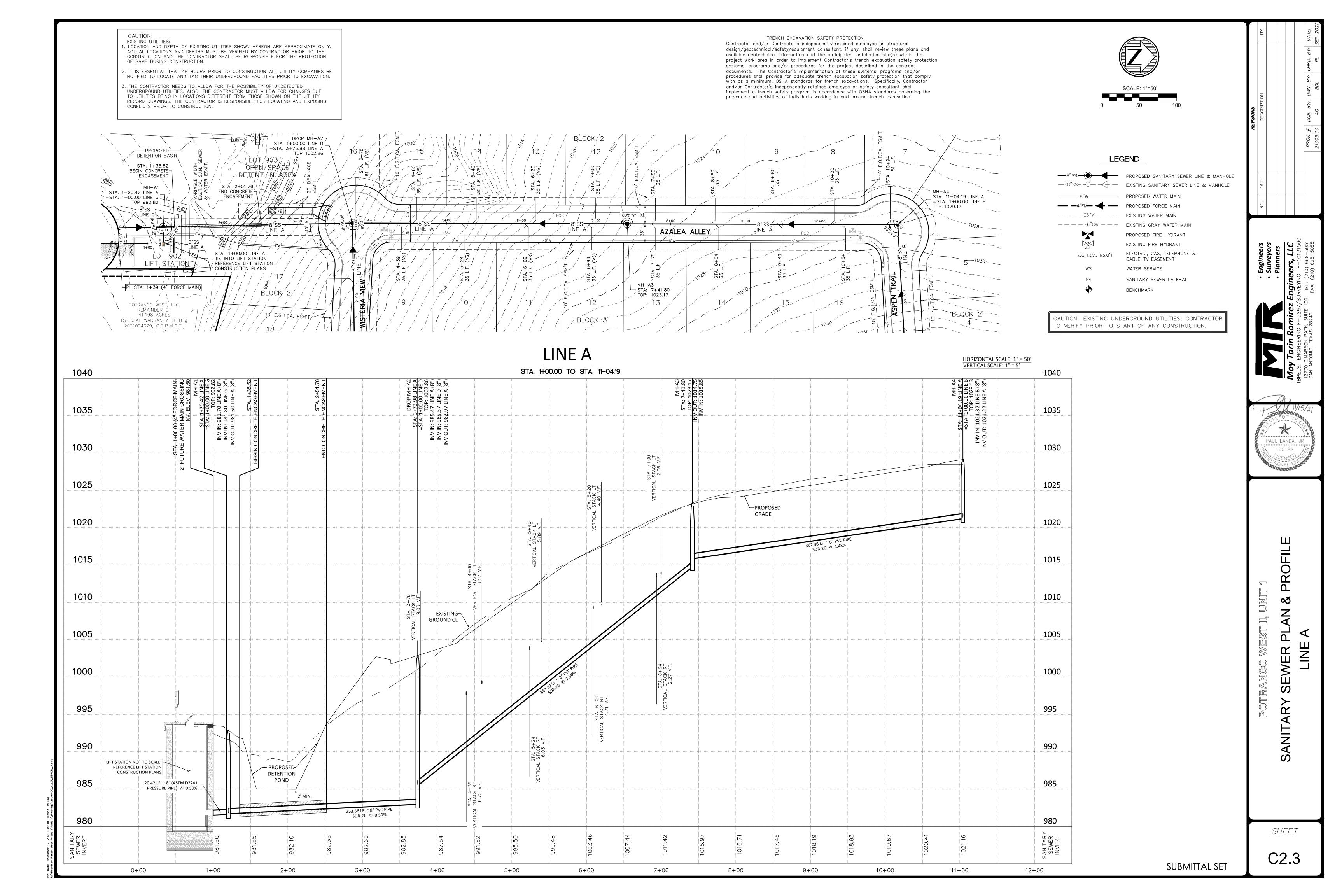
CONFLICTS PRIOR TO CONSTRUCTION.

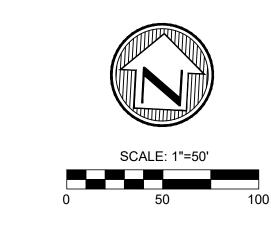
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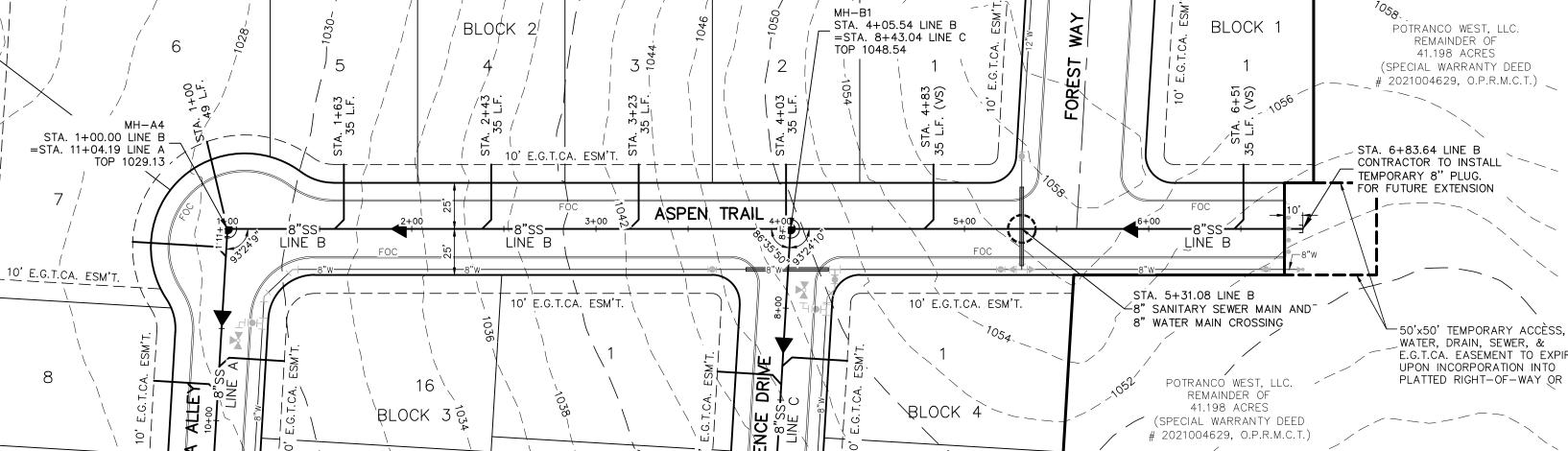
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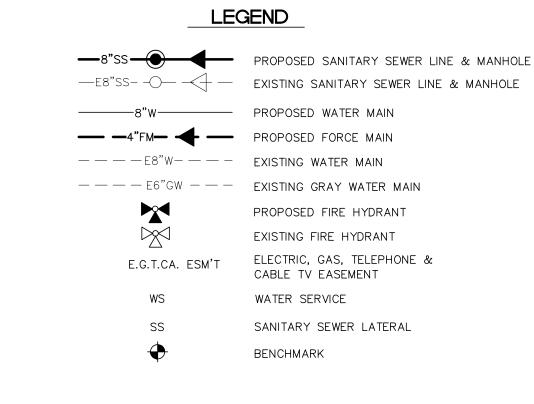
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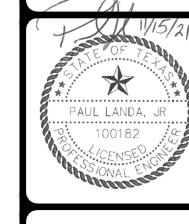
SUBMITTAL SET











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ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY CONTRACTOR PRIOR TO THE CONSTRUCTION AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION

2. IT IS ESSENTIAL THAT 48 HOURS PRIOR TO CONSTRUCTION ALL UTILITY COMPANIES BE NOTIFIED TO LOCATE AND TAG THEIR UNDERGROUND FACILITIES PRIOR TO EXCAVATION.

3. THE CONTRACTOR NEEDS TO ALLOW FOR THE POSSIBILITY OF UNDETECTED UNDERGROUND UTILITIES. ALSO, THE CONTRACTOR MUST ALLOW FOR CHANGES DUE

TO UTILITIES BEING IN LOCATIONS DIFFERENT FROM THOSE SHOWN ON THE UTILITY RECORD DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND EXPOSING

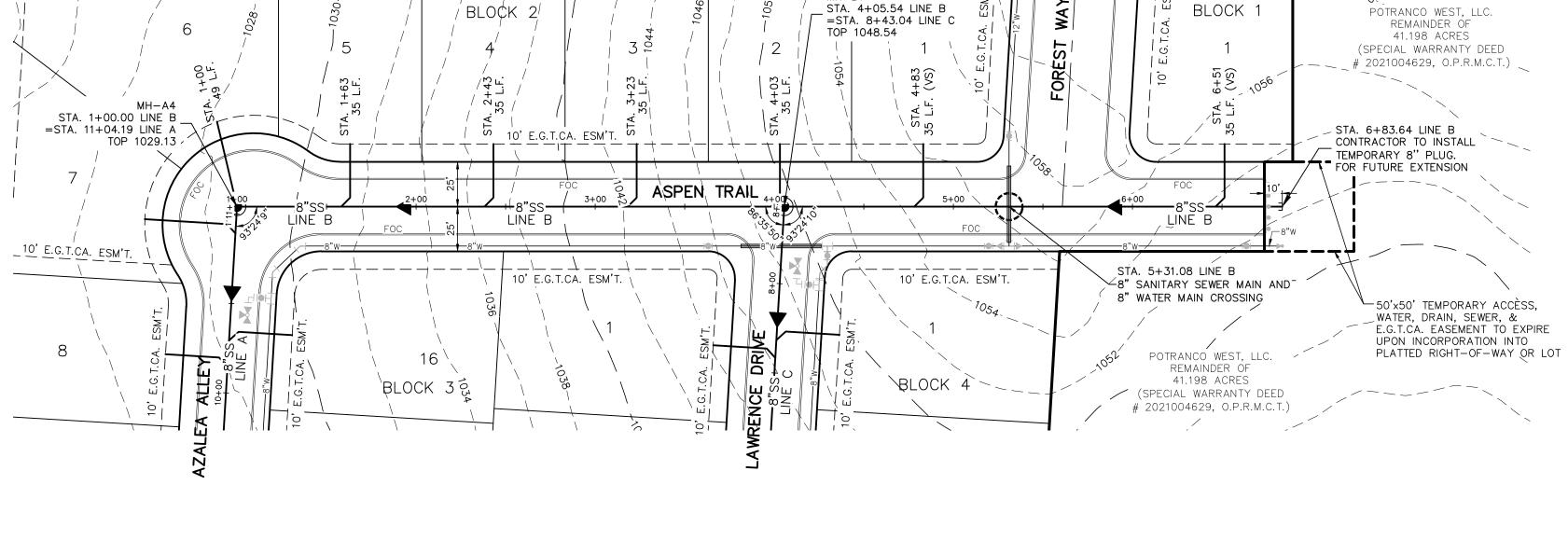
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EXISTING UTILITIES:

OF SAME DURING CONSTRUCTION.

CONFLICTS PRIOR TO CONSTRUCTION.

SHEET



LINE B

HORIZONTAL SCALE: 1" = 50'

VERTICAL SCALE: 1" = 5' STA. 1+00.00 TO STA. 6+83.64 1065 1065 MH-B1 LINE B 1 LINE C 048.54 E B (8") E C (8") 1060 1060 AI VNI FUO VNI FUO VNI 1055 1055 -PROPOSED GRADE 1050 1045 1045 278.10 LF. ~ 8" PVC PIPE SDR-26 @ 0.92% 1040 1040 EXISTING-CENTER 20' L.F. WHITE COLOR -**GROUND CL** ASTM D2241 SRD26 PIPE AT WATER LINE CROSSING 1035 1035 1030 1025 1020 1020 1010

4+00

5+00

6+00

7+00

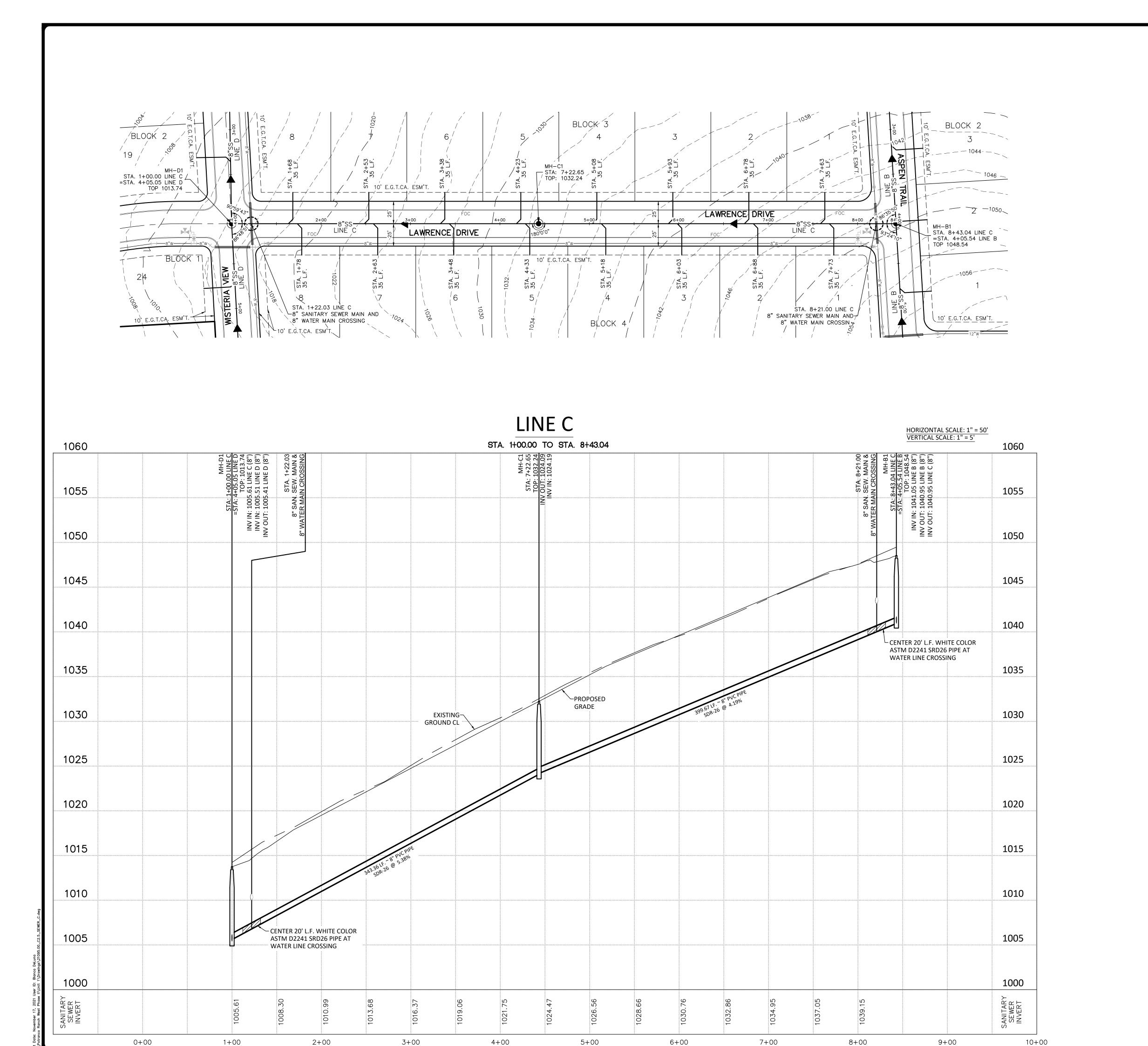
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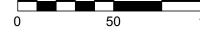
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LEGEND

PROPOSED FORCE MAIN

----E8"W---
EXISTING WATER MAIN

EXISTING GRAY WATER MAIN

PROPOSED FIRE HYDRANT

EXISTING FIRE HYDRANT

E.G.T.CA. ESM'T

ELECTRIC, GAS, TELEPHONE & CABLE TV EASEMENT

WS

WATER SERVICE

SS SANITARY SEWER LATERAL

BENCHMARK

CAUTION:

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SHEET

Engineers, SURVEYING: F-10

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PAUL LANDA, JR

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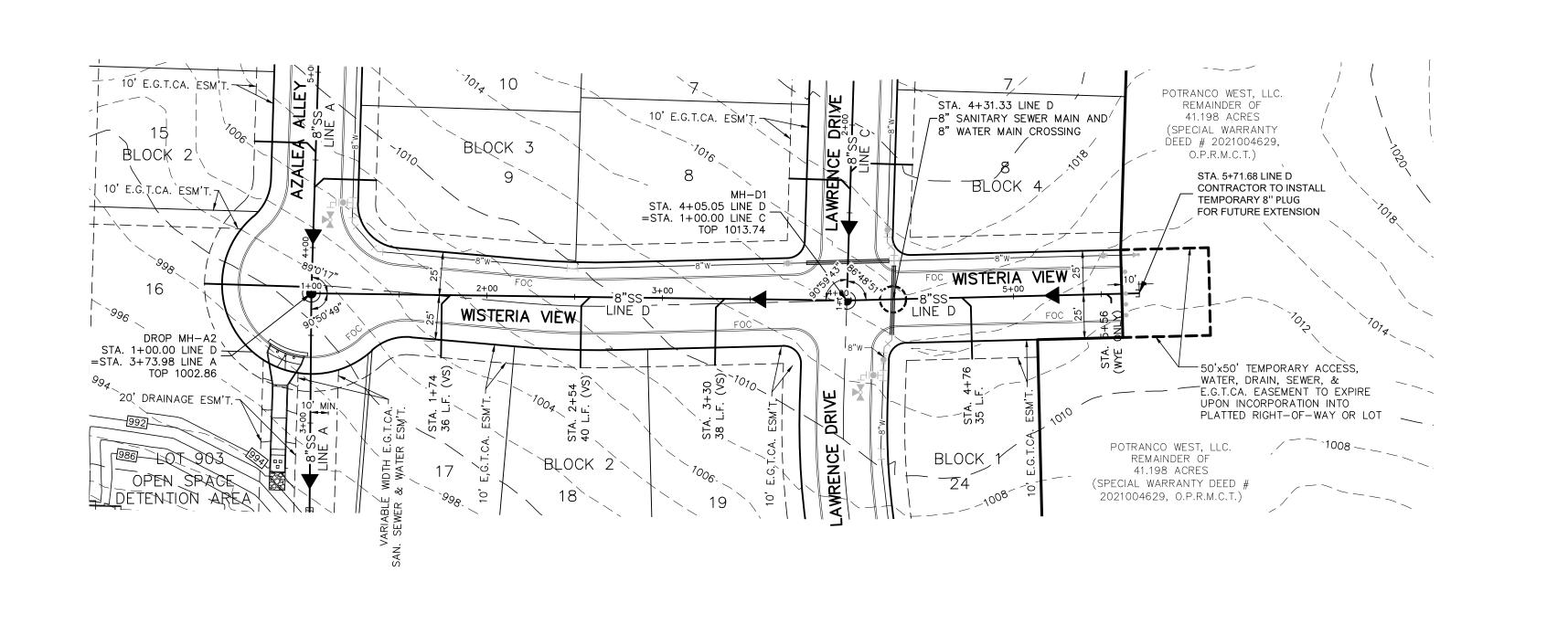
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SUBMITTAL SET



LINE D

STA. 1+00.00 TO STA. 5+71.68

MH-D1 4+05:05:LINE:D 1+00.00 LINE C TOP: 1013.74 5.61 LINE C (8") 5.51 LINE D (8")

1035

1030

1020

1015

1005

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990

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LINE D LINE D O02.86 E A (8") E D (8")

HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 5'

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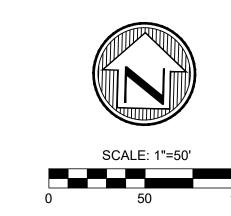
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LEGEND

-8"SS - PROPOSED SANITARY SEWER LINE & MANHOLE -E8"SS--O- EXISTING SANITARY SEWER LINE & MANHOLE

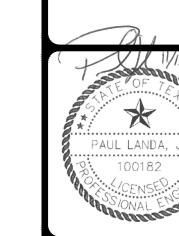
PROPOSED WATER MAIN

── —4"FM── ← ── PROPOSED FORCE MAIN ---E8"W---EXISTING WATER MAIN --- E6"GW --- EXISTING GRAY WATER MAIN PROPOSED FIRE HYDRANT EXISTING FIRE HYDRANT

> ELECTRIC, GAS, TELEPHONE & E.G.T.CA. ESM'T CABLE TV EASEMENT WATER SERVICE

SANITARY SEWER LATERAL

BENCHMARK



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Engineers, SURVEYING: F-10

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SUBMITTAL SET

SHEET

-PROPOSED EXISTING-GRADE GROUND CL 166.63 LF. ~ 8" PVC PIPE SDR-26 @ 0.84% - CENTER 20' L.F. WHITE COLOR ASTM D2241 SRD26 PIPE AT WATER LINE CROSSING

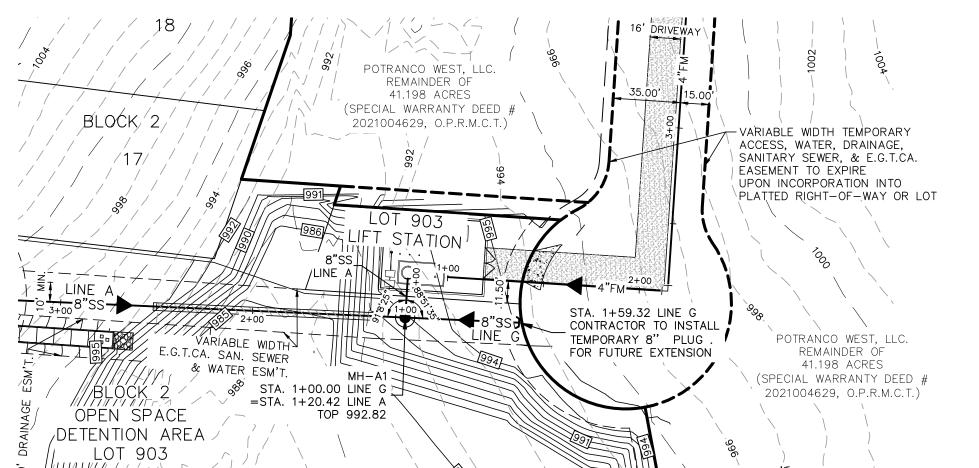
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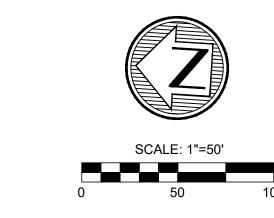
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LEGEND

-8"SS - PROPOSED SANITARY SEWER LINE & MANHOLE -E8"SS--O- EXISTING SANITARY SEWER LINE & MANHOLE

→ ←4"FM→ ← → → PROPOSED FORCE MAIN ---E8"W---EXISTING WATER MAIN --- E6"GW --- EXISTING GRAY WATER MAIN PROPOSED FIRE HYDRANT

EXISTING FIRE HYDRANT ELECTRIC, GAS, TELEPHONE & E.G.T.CA. ESM'T CABLE TV EASEMENT

SANITARY SEWER LATERAL

WATER SERVICE

BENCHMARK

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LINE

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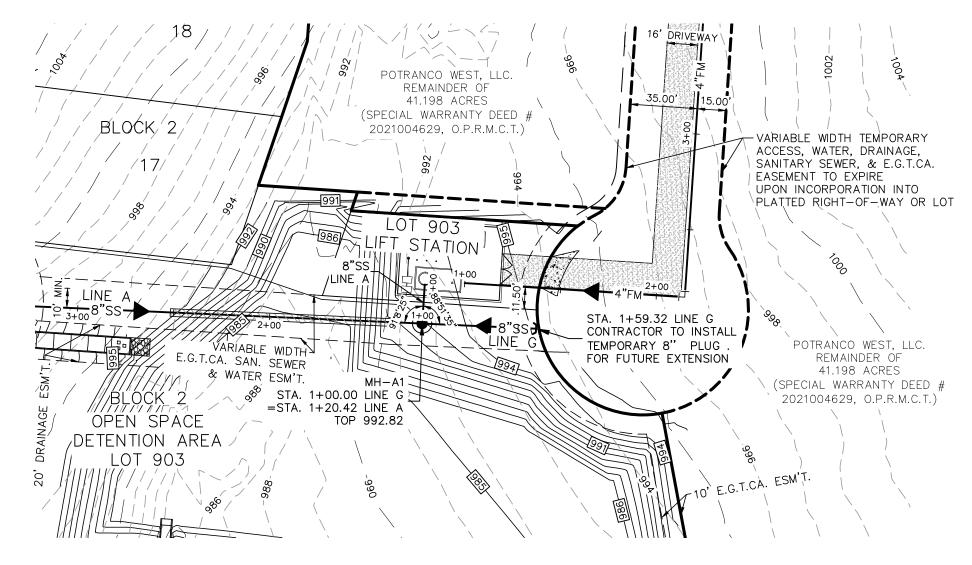
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SUBMITTAL SET

SHEET



LINE G HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 5' 1020 STA. 1+00.00 TO STA. 1+59.32 1020 1015 1010 1010 1005 1005 1000 1000 995 EXISTING-**GROUND CL** `−PROPOSED GRADE 990 985 59.32 LF. ~ 8" PVC PIPE SDR-26 @ 3.98% 980 975 975 970 965

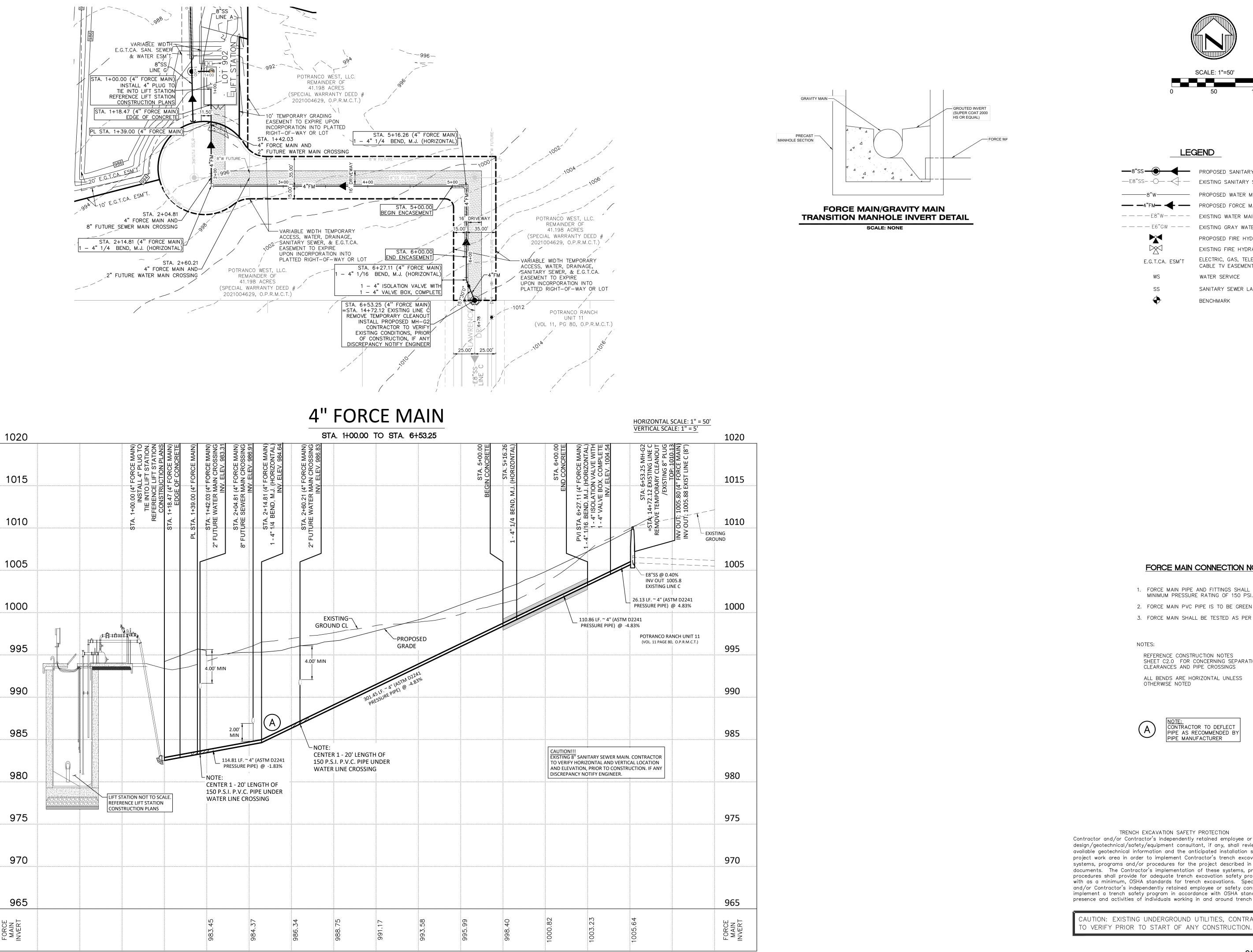
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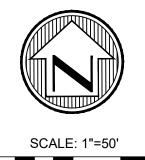
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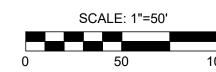
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LEGEND

-8"SS - PROPOSED SANITARY SEWER LINE & MANHOLE —E8"SS- — EXISTING SANITARY SEWER LINE & MANHOLE

---- PROPOSED WATER MAIN ── —4"FM── ← ── PROPOSED FORCE MAIN

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> ELECTRIC, GAS, TELEPHONE & CABLE TV EASEMENT WATER SERVICE

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FORCE MAIN CONNECTION NOTES:

- 1. FORCE MAIN PIPE AND FITTINGS SHALL HAVE A MINIMUM PRESSURE RATING OF 150 PSI.
- 2. FORCE MAIN PVC PIPE IS TO BE GREEN IN COLOR.
- 3. FORCE MAIN SHALL BE TESTED AS PER SHEET C9.0

REFERENCE CONSTRUCTION NOTES
SHEET C2.0 FOR CONCERNING SEPARATION CLEARANCES AND PIPE CROSSINGS

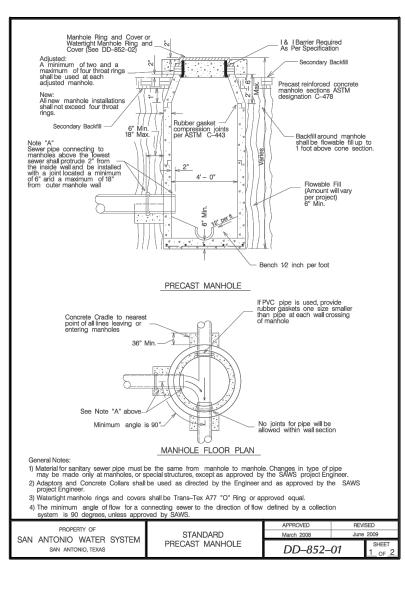
> CONTRACTOR TO DEFLECT PIPE AS RECOMMENDED BY PIPE MANUFACTURER

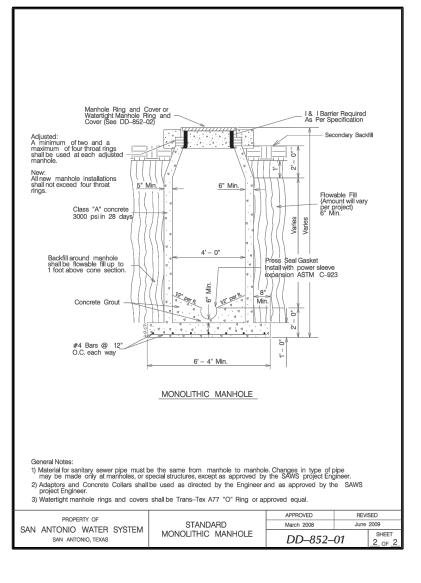
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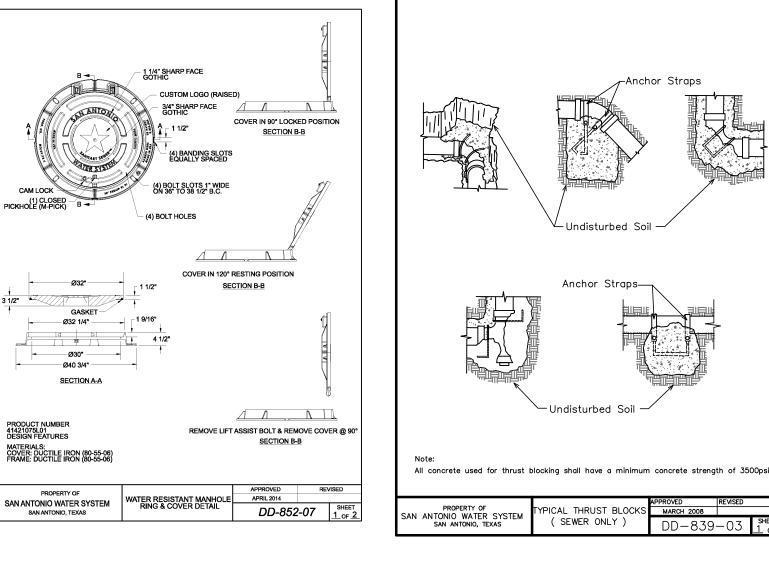
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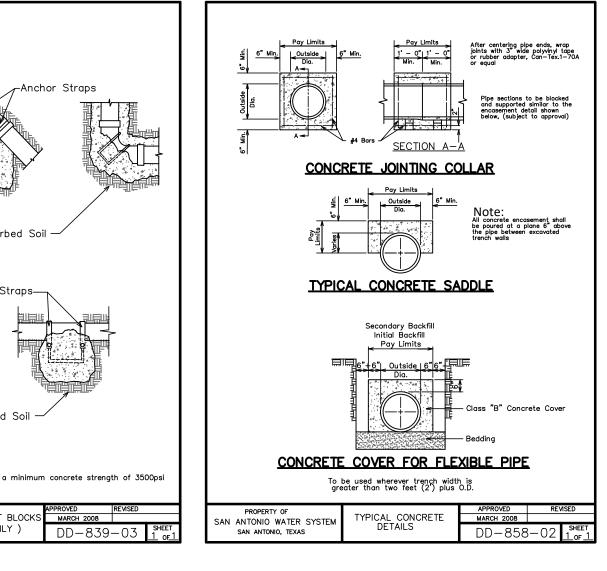
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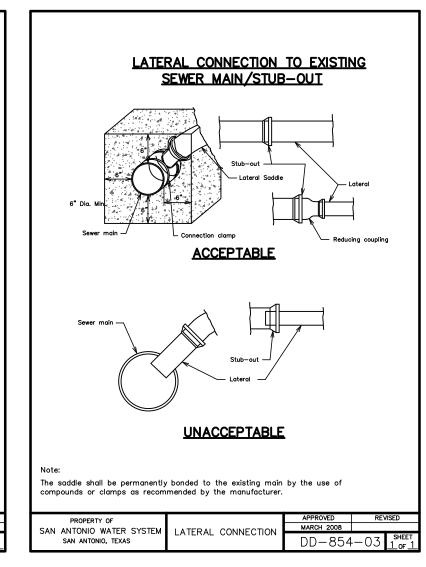
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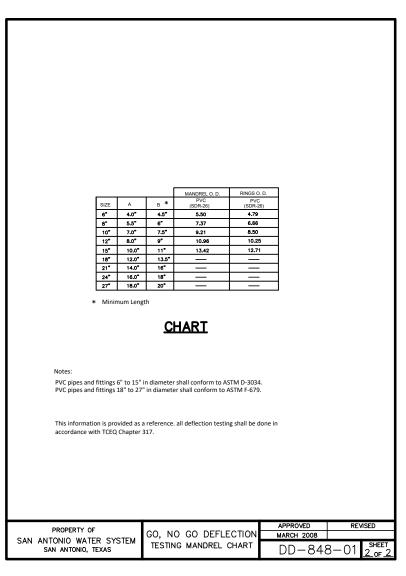


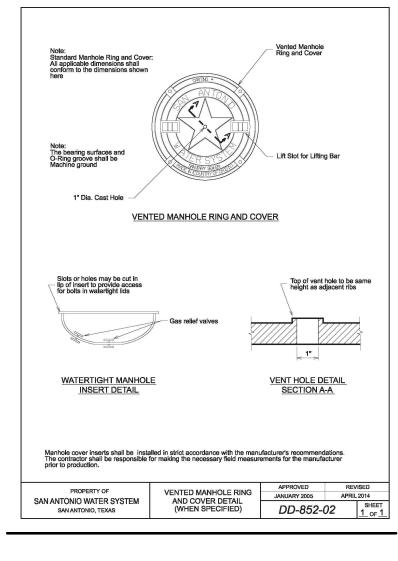


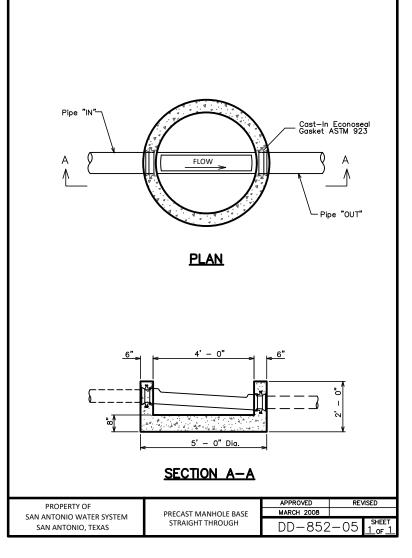


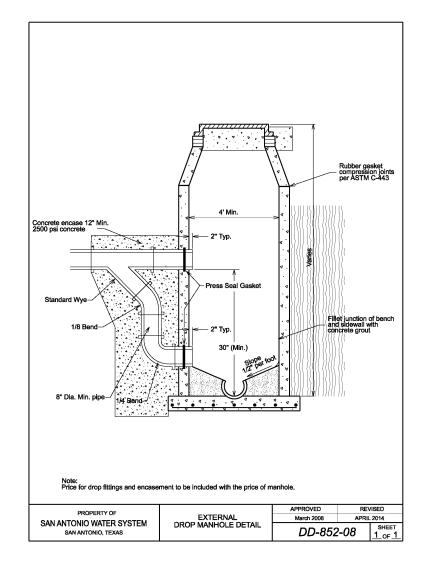


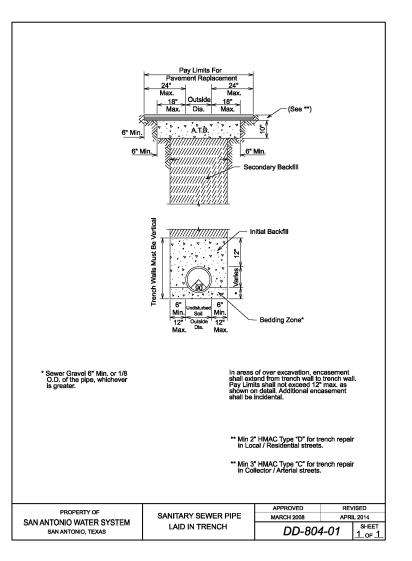


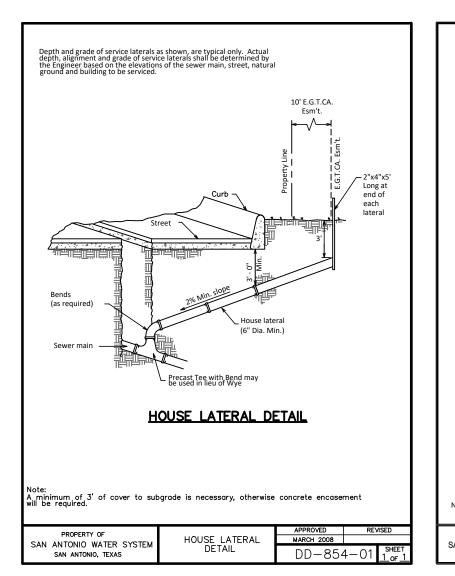


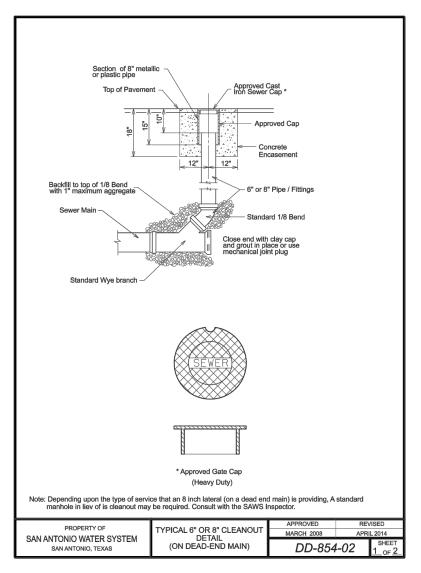


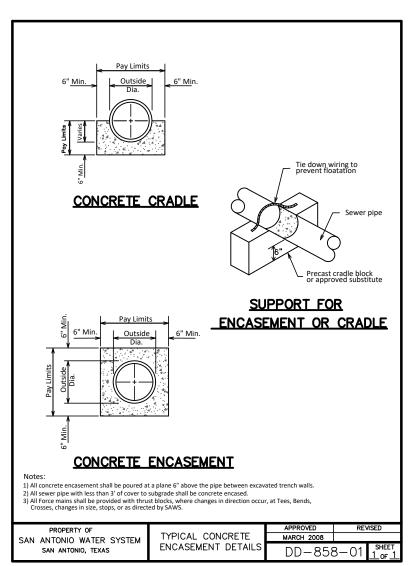


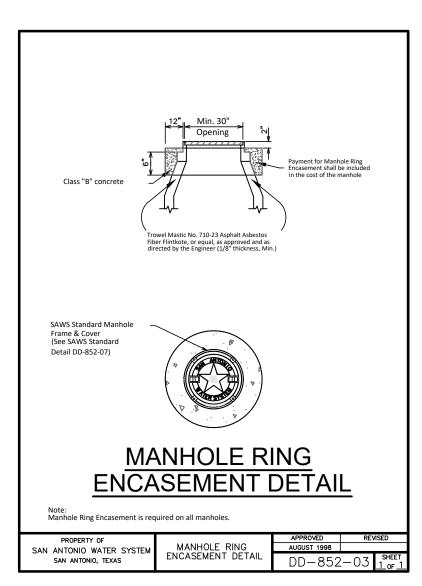


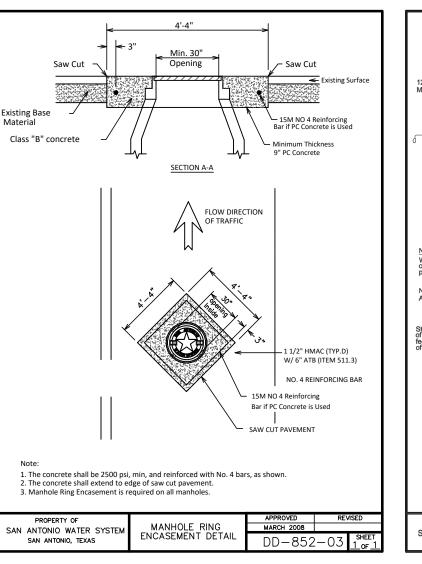


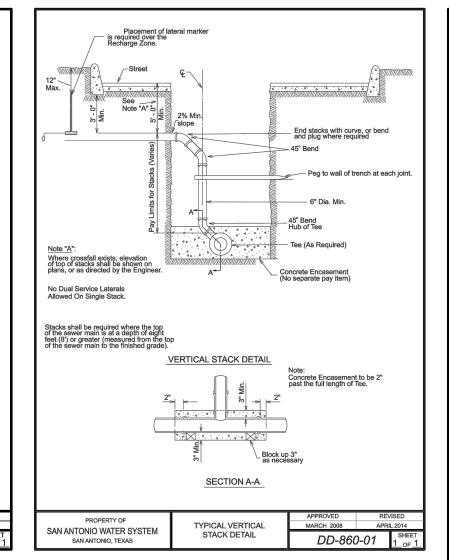


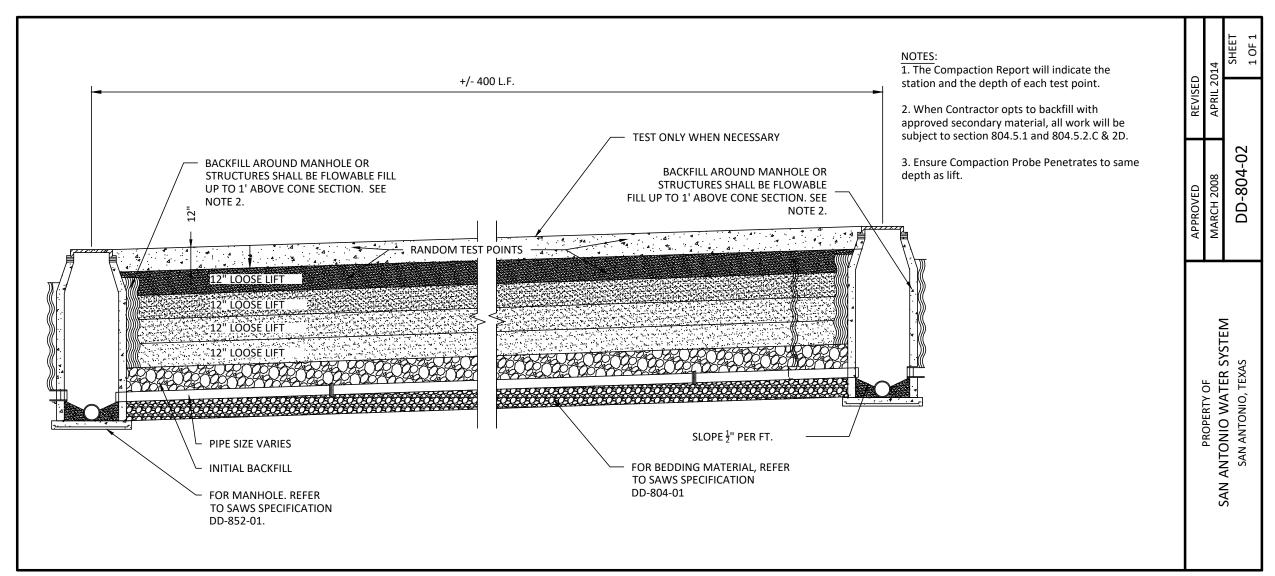








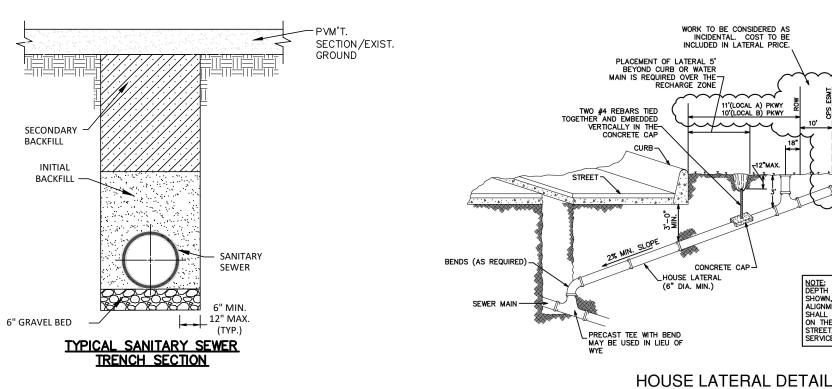




GENERAL NOTES:

- 1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN STRICT CONFORMANCE WITH APPLICABLE PROVISION OF "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION".
- MANHOLE RINGS AND COVERS SHALL BE TRANS—TEX A77, OR EQUAL. WHEN WATERTIGHT MANHOLE RINGS AND COVERS ARE SPECIFIED, THEY SHALL BE TRANS—TEX A77 "O" RING OR APPROVED EQUAL.
- 3. a. MATERIAL FOR SANITARY SEWER PIPE MUST BE THE SAME FROM MANHOLE TO

 MANHOLE. CHANGES IN TYPE OF PIPE MAY BE MADE ONLY AT MANHOLES OR SPECIAL STRUCTURES.
- b. ADAPTERS AND CONCRETE COLLARS SHALL BE USED AS DIRECTED BY
 THE ENGINEER
 AND THE SAWS PROJECT ENGINEER.
- 4. ALL CONCRETE USED FOR THRUST BLOCKING SHALL HAVE A MINIMUM CONCRETE STRENGTH OF 3500 PSI.
- 5. MANHOLE COVERS SHALL NOT BE STAMPED WITH "SAN ANTONIO WATER



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WATER IMPROVEMENTS COVER SHEET SHEET C3.1 WATER IMPROVEMENT PLAN WATER IMPROVEMENT PLAN 16" WATERLINE PLAN & PROFILE SHEET C3.3 WATER STANDARD DETAILS

POTRANCO WEST II, UNIT 1 WATER IMPROVEMENTS

F.M. 2676 C.R. 373 C.R. 375 POTRANCO RD. \geq \mid \square HWY. 90 **CASTROVILLE**

SUBMITTED BY: MOY TARIN RAMIREZ ENGINEERS, LLC. 12770 CIMARRON PATH, SUITE 100 SAN ANTONIO, TEXAS 78249 TEL: (210) 698-5051 FAX: (210) 698-5085

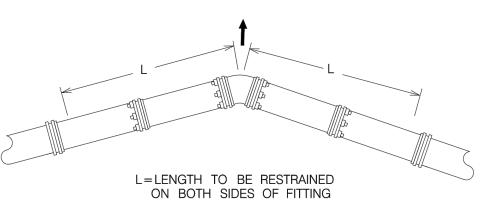
OWNER/DEVELOPER

LGI HOMES-TEXAS, LLC. KENNON MASTERS, 1450 LAKE ROBBINS DRIVE, SUITE 430 THE WOODLANDS, TEXAS 77380 PH# (281) 362-8998



UPPER BEND

RESTRAINED LENGTH FOR VERTICAL OFFSETS (SEE PLANS FOR LENGTHS)



RESTRAINT LENGTH DESIGN

30. Foster Adapters are required between all fittings.

meter services, terminating inside the meter box.

1. All fittings 4" and larger must be installed with Mega-Lug.

to make all arrangements for water.

concrete being poured.

be AWWA C900 DR 18.

loss during pressure test.

each way, where possible.

boxes installed at or below grade will not be accepted.

15. All required water samples must be taken by the Contractor.

23. Minimum and Maximum cover over water lines is 4.0 feet.

25. Fire hydrants shall be Mueller Company Centurion 250, A-423.

extension nut shall be installed within 2' of finished grade.

33. All water service line shall be Municipex (PEXa) by Rehau.

11. All water distribution and transmission main fittings must be ductile iron.

2. The valve on a hot tap must be anchored to the hot tap saddle

3. All ductile iron fittings, valves, etc. must have a stable foundation of concrete blocking.

5. Typically, no valves may be installed under roadways, driveways or concrete.

4. The YWSC Construction Inspector is to inspect all construction material prior to installation. The Contractor should coordinate with Inspector on construction material shipments.

6. Prior to construction the Contractor shall coordinate a Pre-Construction Conference with the

7. Typically, no ductile iron fittings or valves shall be installed under a public roadway or concrete.

12. All bolts on Mechanical Joint fittings and/or Mega-Lugs must be wrapped in plastic prior to

gap at the entry point on the truck or backflow preventor at the bottom of tanker.

19. All inline valves over 12" nominal size shall be butterfly valves rather than gate valves.

22. All encasement material for water distribution or transmission mains shall be steel.

Any exceptions to this requirement must be granted by YWSC Management.

26. Contractor to pressure test water lines at 200 psi for first 15 minutes and 150 psi for the remaining 3 hours and 45 minutes. Yancey uses 10% of AWWA water

27. Test Station shall be "Copperhead Snakepit" (Lite Duty Adjustable Box Type) .

28. Each fitting requires a minimum of two (2) joint bell joint harness restraints

29. All fittings require Mechanical Joint Restraints and Concrete Thrust Blocking.

32. Contractor shall install tracer wire (#14 AWG) in all trenches, including all

31. Valve stem risers (valve extensions) are required on all valves and the

8. The YWSC Construction Inspector must be present prior to and during disinfection and pressure testing.

13. Adequate chlorine residuals must be recorded 24 hours before bacteriological samples may be taken

18. Water and Wastewater services must maintain a minimum of 12" vertical separation, preferably 24".

with YWSC specifications will result in rejection of the work & delay of service until compliance is met.

9. The Owner will provide water for pressure testing and disinfection testing at currently established rates. Water for other construction purposes may or may not be available. The Contractor shall coordinate with the YWSC Construction Inspector

10. All valve housings and meter boxes must be installed 3"-5" above finished grade for approval. Any valve housings or meter

14. Any contractor taking Yancey water for construction purposes prior to the water mains being disinfected must have an air

16. After final acceptance, by Yancey, of the water system improvements Yancey will be provided a one-year warranty by the

20. Yancey W.S.C. Construction Inspector has full responsibility of reviewing contractor's work, materials, etc. Failure to comply

21. All water lines 2" and smaller shall be ASTM D2241, SDR 21 unless otherwise approved. All water lines 4" and larger shall

24. 2"-12" gate valves shall be Mueller Company A-2360 Series Resilient Wedge MJ ends. 16" and larger butterfly valves shall

GENERAL CONSTRUCTION NOTES

YANCEY W.S.C.

MEDINA COUNTY.

REV. DATE: 04/19

17. Upon final acceptance, by Yancey, of the water system improvements, the improvements will become sole property of

RESTRAINT LENGTHS WERE CALCULATED USING EBAA RESTRAINT DESIGN CALCULATION SOFTWARE VERSION 7.1.3 THE FOLLOWING PARAMETERS WERE USED:

SOIL TYPE .. CH GRAN FILL TRENCH TYPE .. SAFETY FACTOR 1.5 TO 1 DEPTH OF BURY 4 TEST PRESSURE 200 PSI

VICINITY MAP

SUBMITTAL DATE: AUGUST, 2021

LEGAL DESCRIPTION:

A 18.052 ACRES (786,355.80 SQUARE FEET) OUT OF THE 41.198 ACRES (1,794,602.20 SQUARE FEET) TRACT OF LAND SITUATED IN THE JOHN GARNER SURVEY NO. 97. ABSTRACT NO. 1452, AND THE WILLIAM B. RHODE SURVEY NO. 96, ABSTRACT NO. 1327, MEDINA COUNTY, TEXAS, BEING A PORTION OF A REMAINDER OF A 619.4125 ACRE TRACT AS CONVEYED TO JEANENE STEINLE WILLIAMS BY LAST WILL AND TESTAMENT AS RECORDED IN VOLUME 63, PAGES 378-385 OF THE OFFICIAL PROBATE RECORDS OF MEDINA COUNTY, TEXAS.

Engineers Surveyors

Moy Tarin Ramirez Engineers, LLC

TBPELS: ENGINEERING F-5297/SURVEYING: F-10131500 12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051 SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085

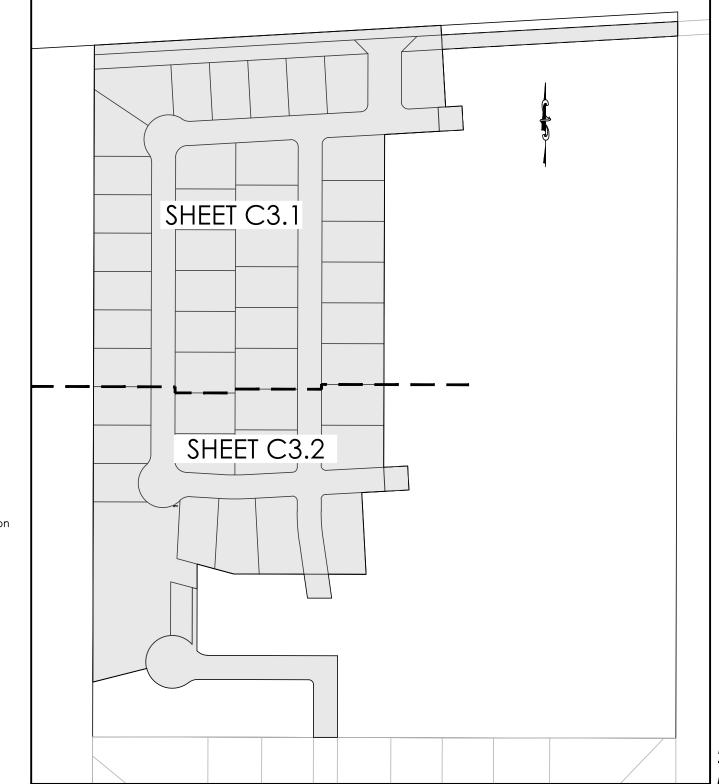
NOTE TO CONTRACTOR:

BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT. THE BIDDER WARRANTS THAT THE BIDDER, AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS HE INTENDS TO USE HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM ANY AMBIGUITIES AND SUFFICIENT FOR THE PURPOSE INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HIS SUBCONTRACTORS' AND MATERIAL SUPPLIERS' KNOWLEDGE, ALL MATERIALS AND PRODUCTS SPECIFIED OR INDICATED HEREIN ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.

THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AND/OR DEPTHS AS CONSTRUCTED. THE CONTRACTOR SHALL CONTACT EACH INDIVIDUAL UTILITY, FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS AND DEPTHS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL UTILITY CROSSINGS PRIOR TO BEGINNING ANY CONSTRUCTION.

TRENCH EXCAVATION SAFETY PROTECTION Contractor and/or Contractor's independently retained employee or structural design/geotechnical/safety/equipment consultant, if any, shall review these plans and available geotechnical information and the anticipated installation site(s) within the project work area in order to implement Contractor's trench excavation safety protection systems, programs and/or procedures for the project described in the contract documents. The Contractor's implementation of these systems, programs and/or procedures shall provide for adequate trench excavation safety protection that comply with as a minimum, OSHA standards for trench excavations. Specifically, Contractor and/or Contractor's independently retained employee or safety consultant shall implement a trench safety program in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavation.

CAUTION: EXISTING UNDERGROUND UTILITIES, CONTRACTOR TO VERIFY PRIOR TO START OF ANY CONSTRUCTION.

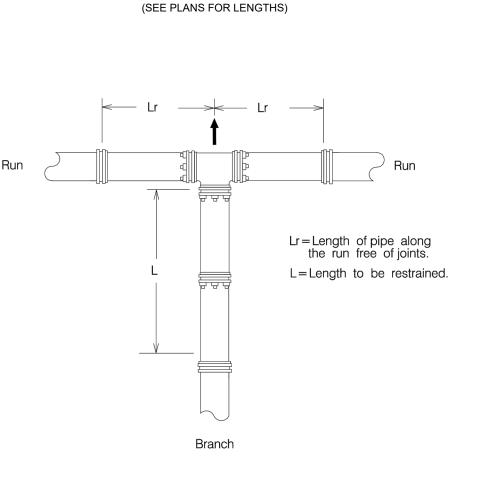


INDEX MAP

NOT TO SCALE

ESTIMATED WATER QUANTITIES

ITEM	DESCRIPTION	UNIT	EST/QTY
	Phase I		
1	16" PVC Pipe, C-900, Class 150, DR 18	L.F.	1,217
2	8" PVC Pipe, C-900, Class 150, DR 18	L.F.	2,565
3	12" PVC, C-900, Class 150, DR 18		179
4	1" PVC Pipe, C-900, Class 150, DR 19	L.F.	237
5	16" Butterfly Valve, M.J. w/ Box (Complete With Restraints)	EA.	2
6	12" Gate Valve, M.J. w/ Box (Complete With Restraints)	EA.	2
7	8" Gate Valve, M.J. w/ Box (Complete With Restraints)	EA.	9
8	Standard Fire Hydrant*	EA.	5
9	2" Temporary Blowoff (Complete With Restraints)	EA.	1
10	2" Permanent Blowoff (Complete With Restraints)	EA.	4
11	1" Single Service, Long	EA.	4
12	1" Single Service, Long (Shared Trench)	EA.	26
13	3/4" Single Service, Short (Shared Trench)	EA.	16
14	3/4" Irrigation Service	EA.	1
15	30" Steel Casing (Includes Spacers W/Pipe Ends)	L.F.	54
16	24" Steel Casing (Includes Spacers W/Pipe Ends)	L.F.	43
17	18" Steel Casing (Includes Spacers W/Pipe Ends)	L.F.	135
18	Test Stations	EA.	4
19	16" Water Main Tie-in	EA.	1
20	Ductile Iron Fittings (Restrained)	TON	2.00
21	Trench Protection	L.F.	3,961
22	4" SCH 40 PVC	L.F.	111
23	Hydrostatic Pressure Test	EA.	1
24	Chlorination of Water Lines & Bacteriological Tests	L.S.	1
25	Inspection By Yancey W.S.C. (\$ 500/ Day)	L.S.	1
	Phase II		
1	Plastic Meter Box & Lid	EA	47
	*(Complete With Tee, Valve, Bends & Restraints)		



RESTRAINED LENGTH FOR TEES

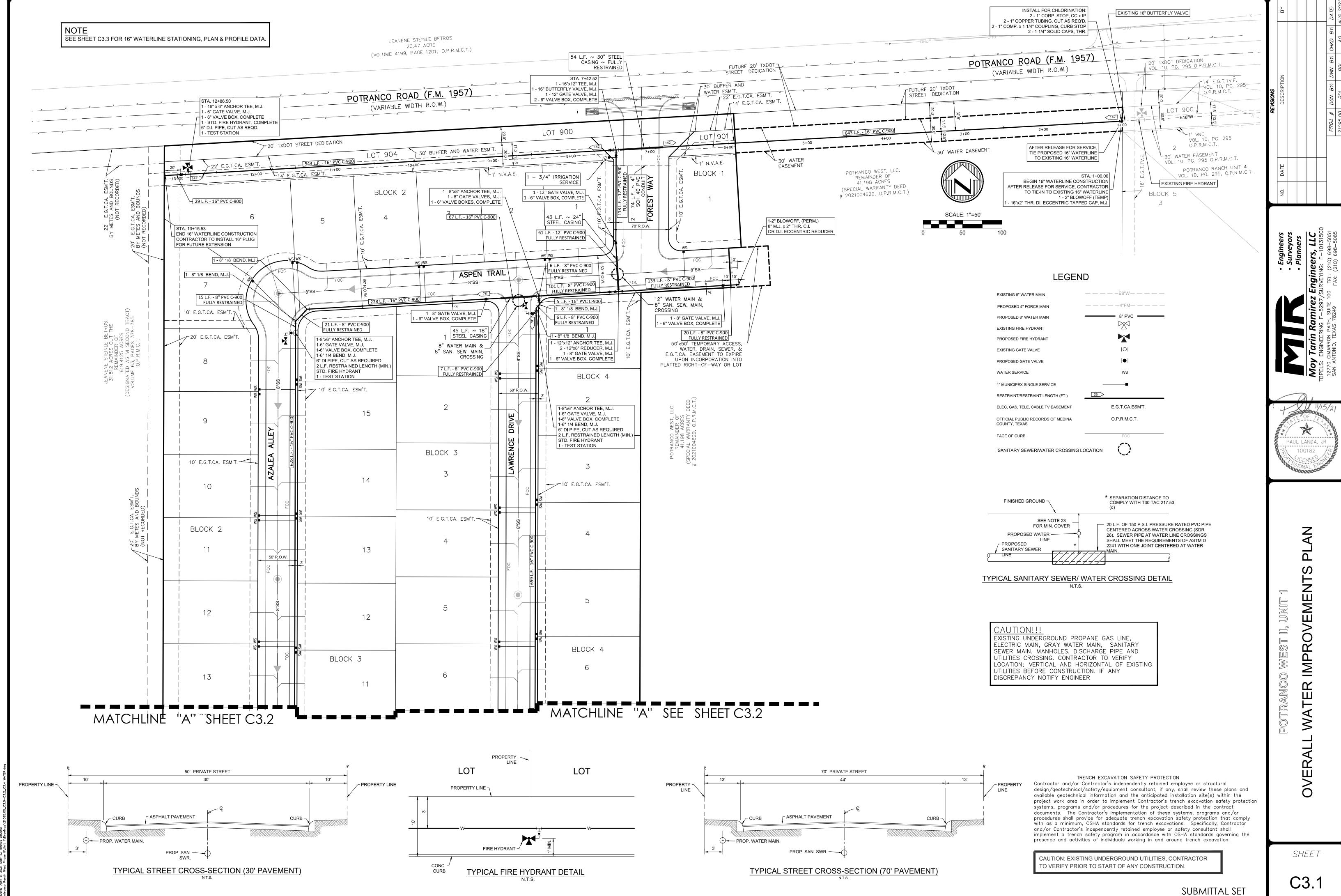
(SEE PLANS FOR LENGTHS)

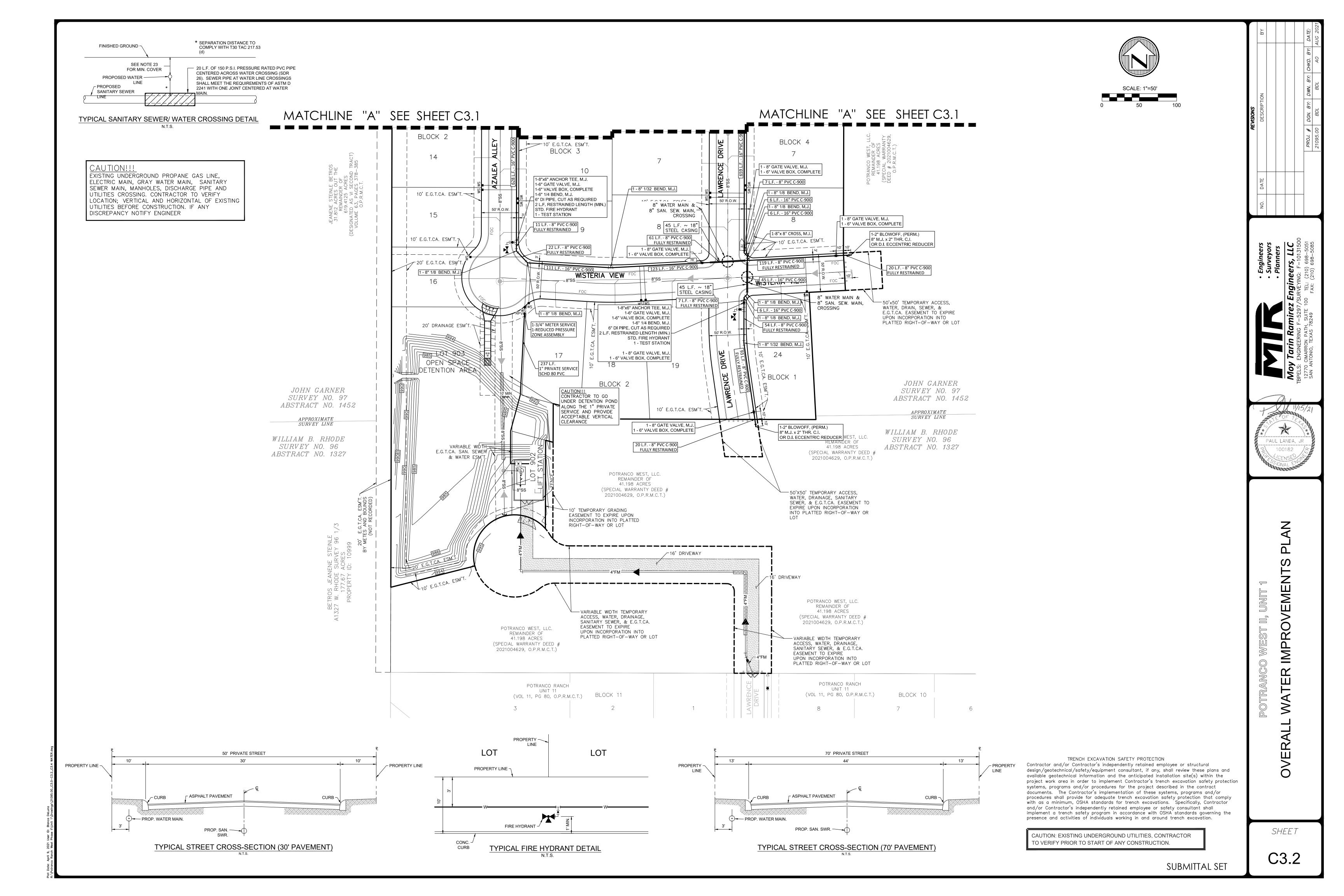
TEXAS C3.0

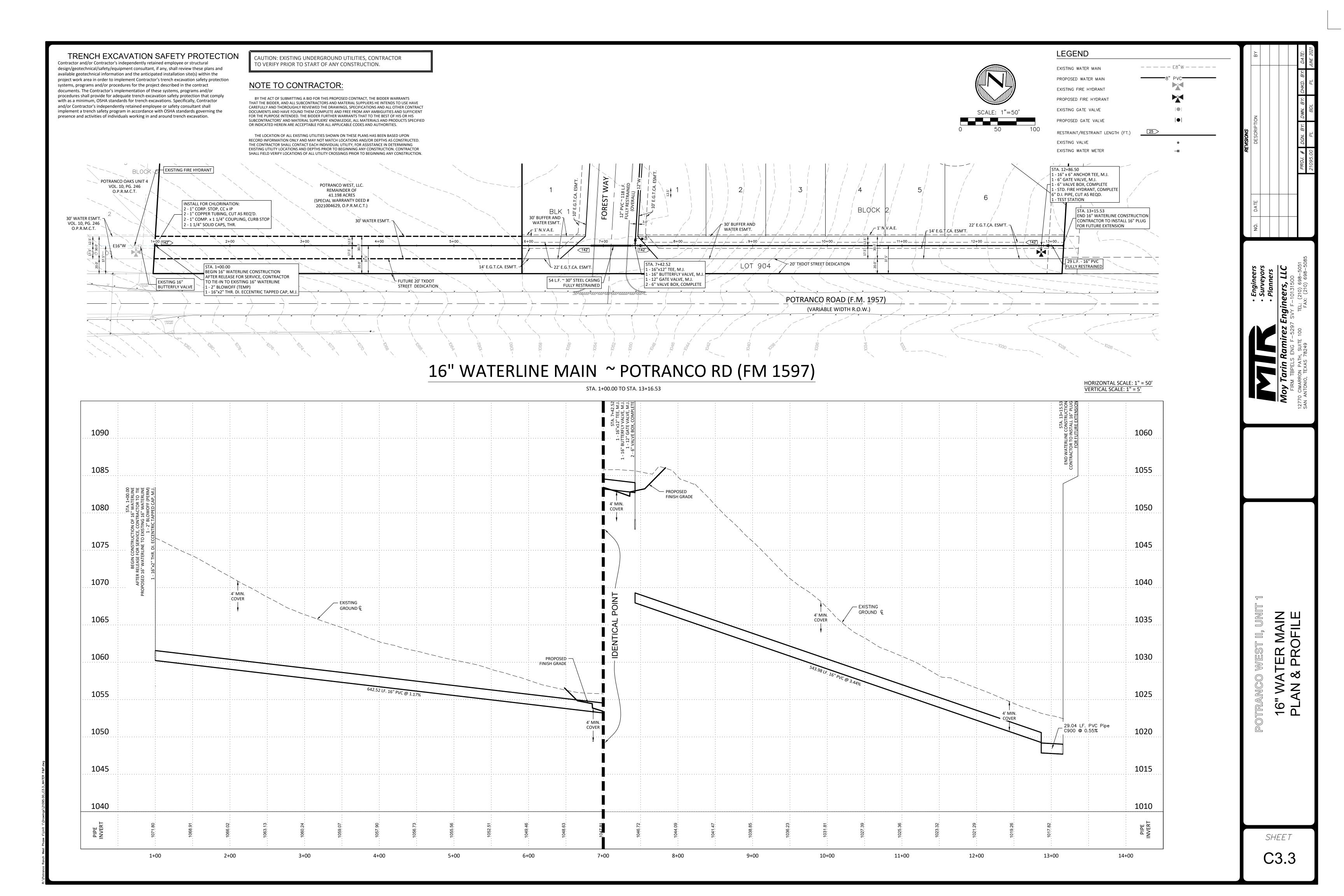
MEDINA COUNTY

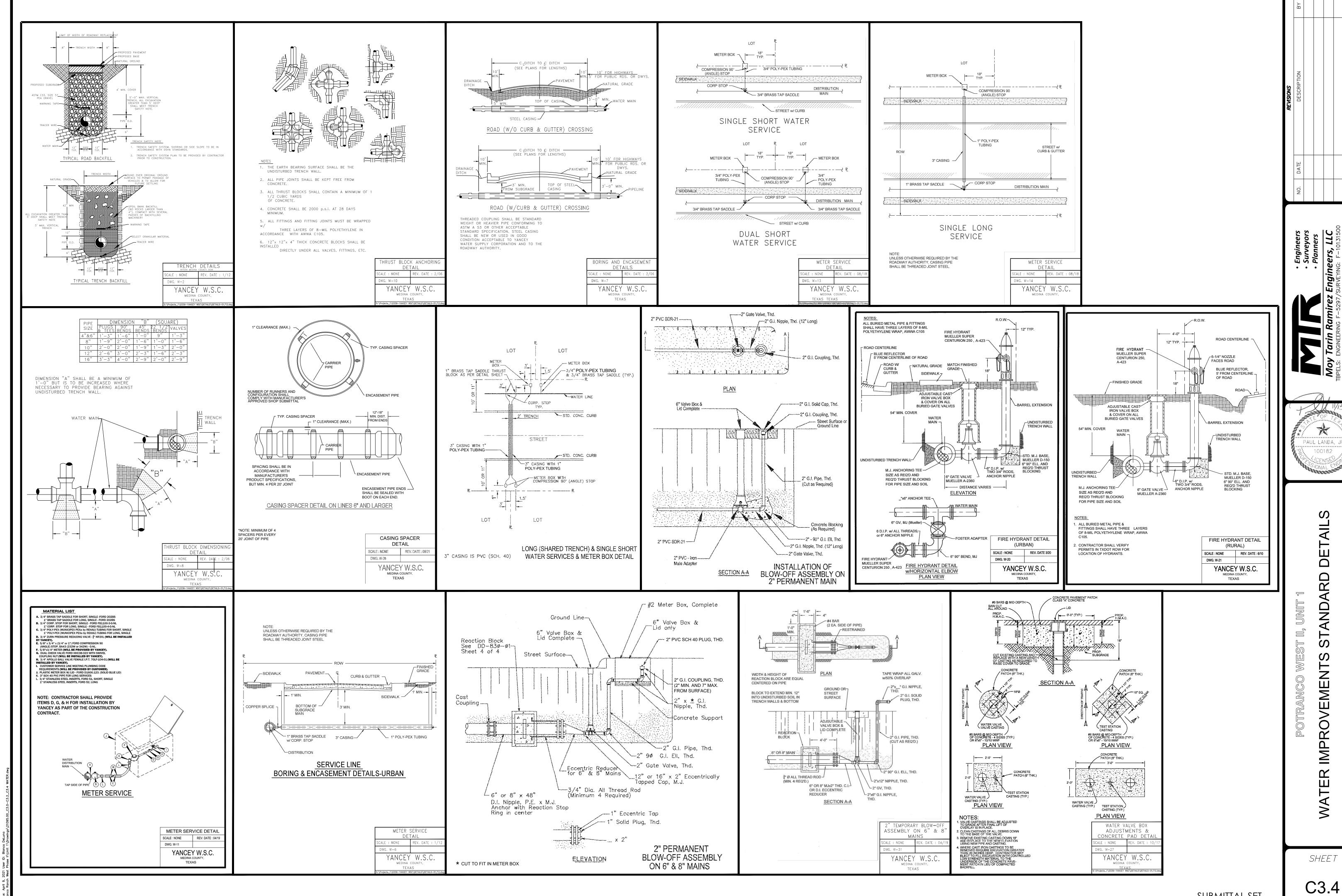
L=LENGTH TO BE RESTRAINED

RESTRAINED LENGTH FOR DEAD ENDS AND VALVES



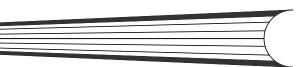






SUBMITTAL SET

WATER







UNIT 1

STREET & DRAIN IMPROVEMENTS

TRAFFIC NOTES AND SPECIAL CONDITIONS:

- THE CONTRACTOR SHALL SEE THAT ALL TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED WITHIN THE PROJECT IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS, AND ACCEPTED INDUSTRY STANDARDS. THE CONTRACTOR SHALL OBTAIN AND MAINTAIN TEMPORARY STOP SIGNS AND ALL OTHER TRAFFIC CONTROL DEVICES AS NECESSARY FOR THE PROTECTION OF THE GENERAL PUBLIC. ANY PERMANENT SIGNS OR DEVICES THAT ARE MISSING OR DAMAGED UPON COMPLETION OF CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S
- MINOR STREET CLOSURE.
- TEMPORARY TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTRO
- TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED AND MODIFIED AS NECESSARY DURING THE COURSE OF CONSTRUCTION AT NO ADDITIONAL COST. CONTRACTOR SHALL PROVIDE NECESSARY ACCESS ACCOMMODATION FOR PEDESTRIANS, SCHOOL TRAFFIC AND MAI
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY STREET REPAIRS OUTSIDE THE PROJECT LIMITS WHICH WERE CAUSED BY CONSTRUCTION ACTIVITIES. ANY REPAIR WORK MUST BE APPROVED BY THE COUNTY AND AT NO ADDITIONAL
- CONTRACTOR SHALL PROVIDE THE COUNTY AN EMERGENCY TELEPHONE NUMBER WHERE HE CAN BE REACHED FOR EVENINGS, WEEKENDS, AND HOLIDAYS BY THE FIRST WORKING DAY OF THE PROJECT, CONTRACTOR MUST BE ABLE TO REPLY WITHIN TWO HOURS OF THE INITIAL CONTACT.

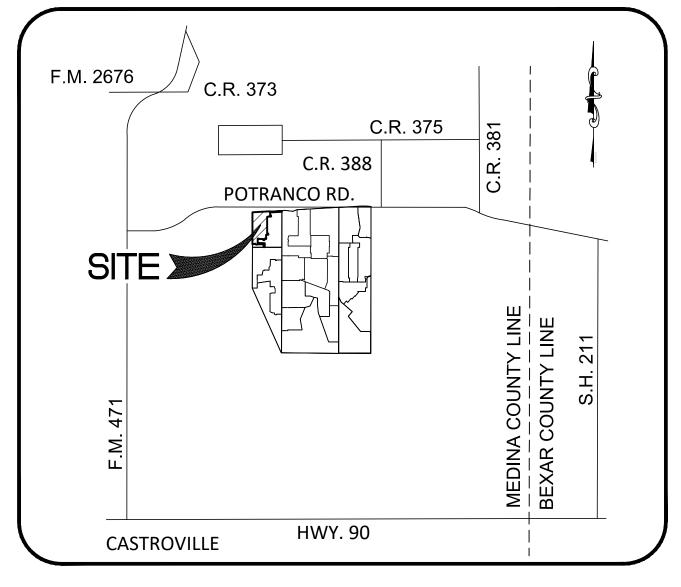
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE TO THE CITY OF SAN ANTONIO SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- 2. ALL CONSTRUCTION IS SUBJECT TO INSPECTION AND APPROVAL BY
- 3. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING UTILITIES DURING CONSTRUCTION. THE LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION:

YANCEY WATER SUPPLY CORPORATION 830-741-5264 830-741-8024 TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6005 CITY PUBLIC SERVICE SOUTHWESTERN BELL TIME WARNER CABLE VALERO ENERGY CO.

- MEDINA VALLEY ELECTRIC CO. 1-866-632-3532 4. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT
- AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA. 5. THE CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT

THE TELEPHONE COMPANY DURING CONSTRUCTION.

- 6. THE CONTRACTOR HAS THE RESPONSIBILITY OF RESTORING TO ITS ORIGINAL OR BETTER CONDITION, ANY DAMAGE DONE TO THE EXISTING PAVEMENT, STRUCTURES OR FENCES (NO SEPARATE PAY ITEM).
- 7. MATERIAL SPECIFICATIONS:
 - CONCRETE/CONCRETE RIPRAP: CLASS A 3000 PSI IN 28 DAYS UNLESS OTHERWISE NOTED ON PLANS REINFORCING STEEL: CONFORM TO A.S.T.M. A-615, GRADE 60 (2" COVER UNLESS OTHERWISE NOTED ON PLANS) PIPE RAILING: CONFORM TO A.S.T.M. A-53, GRADE B, OR A-501 STRUCTURAL STEEL: CONFORM TO A.S.T.M. A-36
- 8. CONTRACTOR TO COORDINATE CONCRETE CURB DEPRESSIONS WITH THE DEVELOPER (NO SEPARATE PAY ITEM).
- 9. TRANSITION TO/FROM WASHOUT CROWNS IN TWENTY-FIVE FEET (25'), UNLESS NOTED.



VICINITY MAP

SUBMITTAL DATE: SEPTEMBER, 2021

LEGAL DESCRIPTION:

A 18.052 ACRES (786,355.80 SQUARE FEET) OUT OF THE 41.198 ACRES (1,794,602.20 SQUARE FEET) TRACT OF LAND SITUATED IN THE JOHN GARNER SURVEY NO. 97, ABSTRACT NO. 1452, AND THE WILLIAM B. RHODE SURVEY NO. 96, ABSTRACT NO. 1327, MEDINA COUNTY, TEXAS, BEING A PORTION OF A REMAINDER OF A 619.4125 ACRE TRACT AS CONVEYED TO JEANENE STEINLE WILLIAMS BY LAST WILL AND TESTAMENT AS RECORDED IN VOLUME 63, PAGES 378-385 OF THE OFFICIAL PROBATE RECORDS OF MEDINA COUNTY, TEXAS.

SUBMITTED BY:

MOY TARIN RAMIREZ ENGINEERS, LLC. 12770 CIMARRON PATH, SUITE 100 SAN ANTONIO, TEXAS 78249 TEL: (210) 698-5051 FAX: (210) 698-5085

OWNER/DEVELOPER

LGI HOMES-TEXAS, LLC. KENNON MASTERS, 1450 LAKE ROBBINS DRIVE, SUITE 430 THE WOODLANDS, TEXAS 77380 PH# (281) 362-8998



STREET & DRAIN PLANS

SHEET C4.0 STREET AND DRAIN IMPROVEMENTS COVER SHEET SHEET C4.1 STREET PLAN AND PROFILE - FOREST WAY SHEET C4.2 STREET PLAN AND PROFILE - ASPEN TRAIL SHEET C4.3 STREET PLAN AND PROFILE - AZALEA WAY SHEET C4.4 STREET PLAN AND PROFILE - WISTERIA VIEW SHEET C4.5 STREET PLAN AND PROFILE - LAWRENCE DRIVE SHEET C4.6 STANDARD STREET DETAILS SHEET C4.7 DETENTION BASIN SHEET C4.8 DETENTION BASIN STANDARD DETAILS SHEET C4.9 DETENTION BASIN STANDARD DETAILS SHEET C4.10 DRAIN A PLAN AND PROFILE SHEET C4.11 DRAIN A STANDARD DETAILS

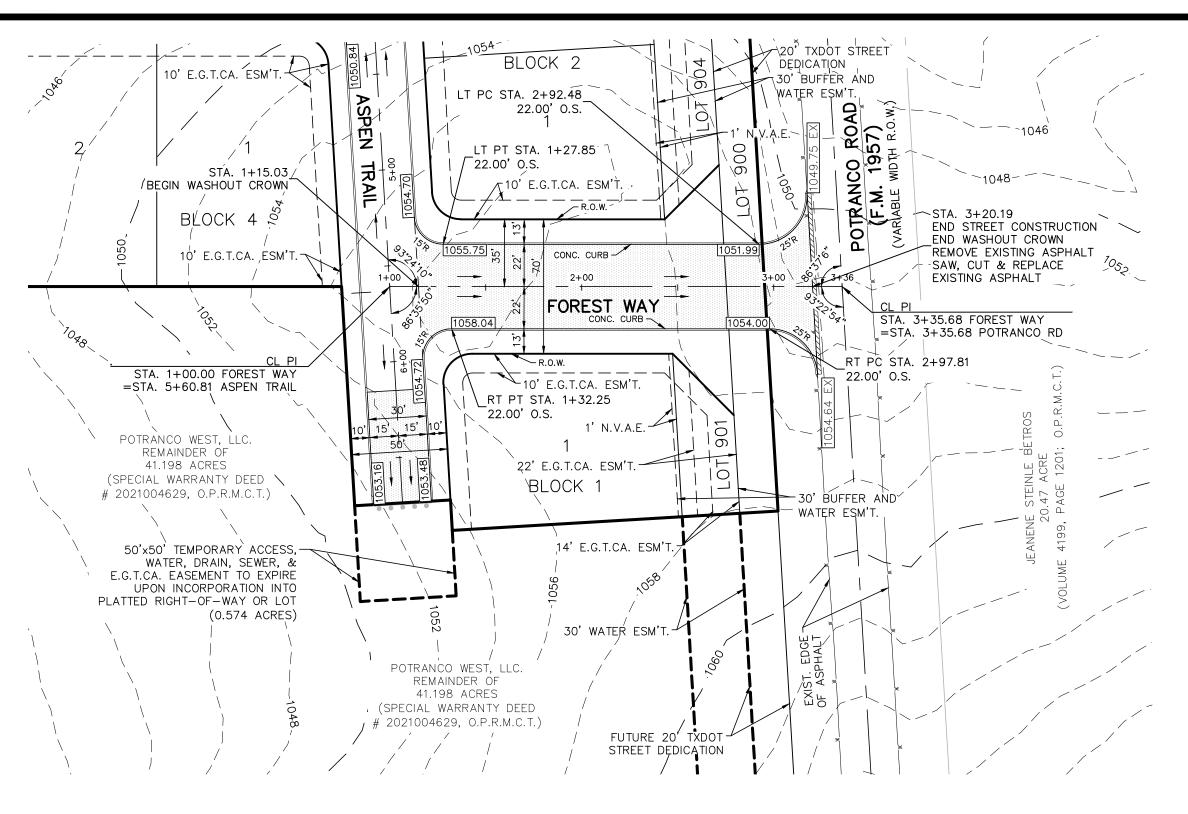
GENERAL NOTES

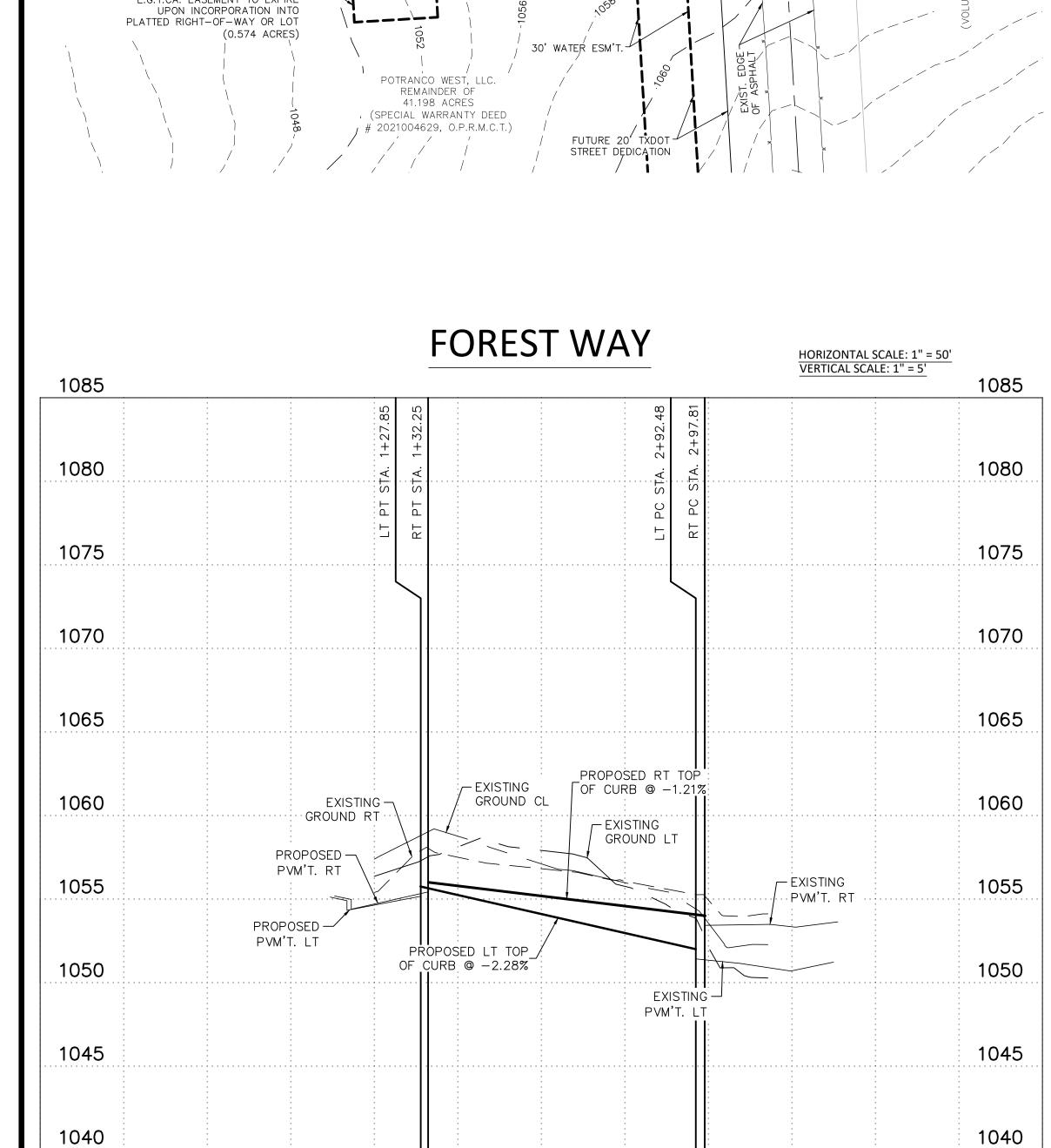
- 1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS PROJECT SHALL BE APPROVED BY MEDINA COUNTY/TXDOT.
- 2. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.
- 3. THE CONTRACTOR SHALL NOTIFY THE COUNTY PRIOR TO THE START OF EACH PHASE OF STREET CONSTRUCTION AND CALL FOR INSPECTIONS WITH A MINIMUM OF 24 HOURS
- 4. TESTING WILL BE PAID FOR BY DEVELOPERS, COORDINATED BY CONTRACTOR AND WITNESSED BY THE COUNTY.
- MINIMUM TESTING SCHEDULE: DENSITIES - SUBGRADE 1 PER 500 FOOT MINIMUM DENSITIES - BASE 1 PER 500 FOOT MINIMUM PROCTORS - SUBGRADE 1 PER MATERIAL PER SUBDIVISION PROCTORS - BASE 1 PER 5,000 C.Y. LIME SERIES - SUBGRADE 1 PER MATERIAL PER SUBDIVISION
- 6. TRANSITION WASHOUT CROWNS TO NORMAL CROWN IN 25' UNLESS NOTED.
- 7. MATERIAL SPECIFICATIONS: STRUCTURAL STEEL - ASTM A36 REINFORCEMENT STEEL - SHALL CONFORM TO ASTM A-615 GRADE 60 & 2 COVER UNLESS NOTED. CONCRETE - SHALL ACHIEVE A MINIMUM OF 3000 PSI 28 DAY STRENGTH
- 8. DESIGN SPEED IS 25 MPH FOR PRIVATE STREETS.



FAX: (210) 698-5085

SAN ANTONIO, TEXAS 78249





1035

TOP OF CURB LT

TOP OF CURB RT

0+00

1+00

2+00

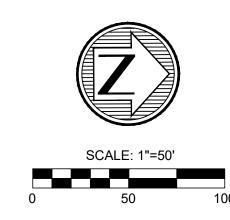
1035

TOP OF CURB RT

5+00

4+00

3+00

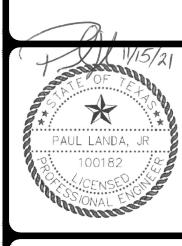


NO. DATE DESCRIPTION

PROJ. # DGN. BY: CHKD. BY:

21095.00 BDL BDL AO A

Enginee
Surveyo
Surveyo
Planner
Tarin Ramirez Engineers, Ll
ENGINEERING F-5297/SURVEYING: F-1013
IMARRON PATH, SUITE 100 TEL: (210) 698-5

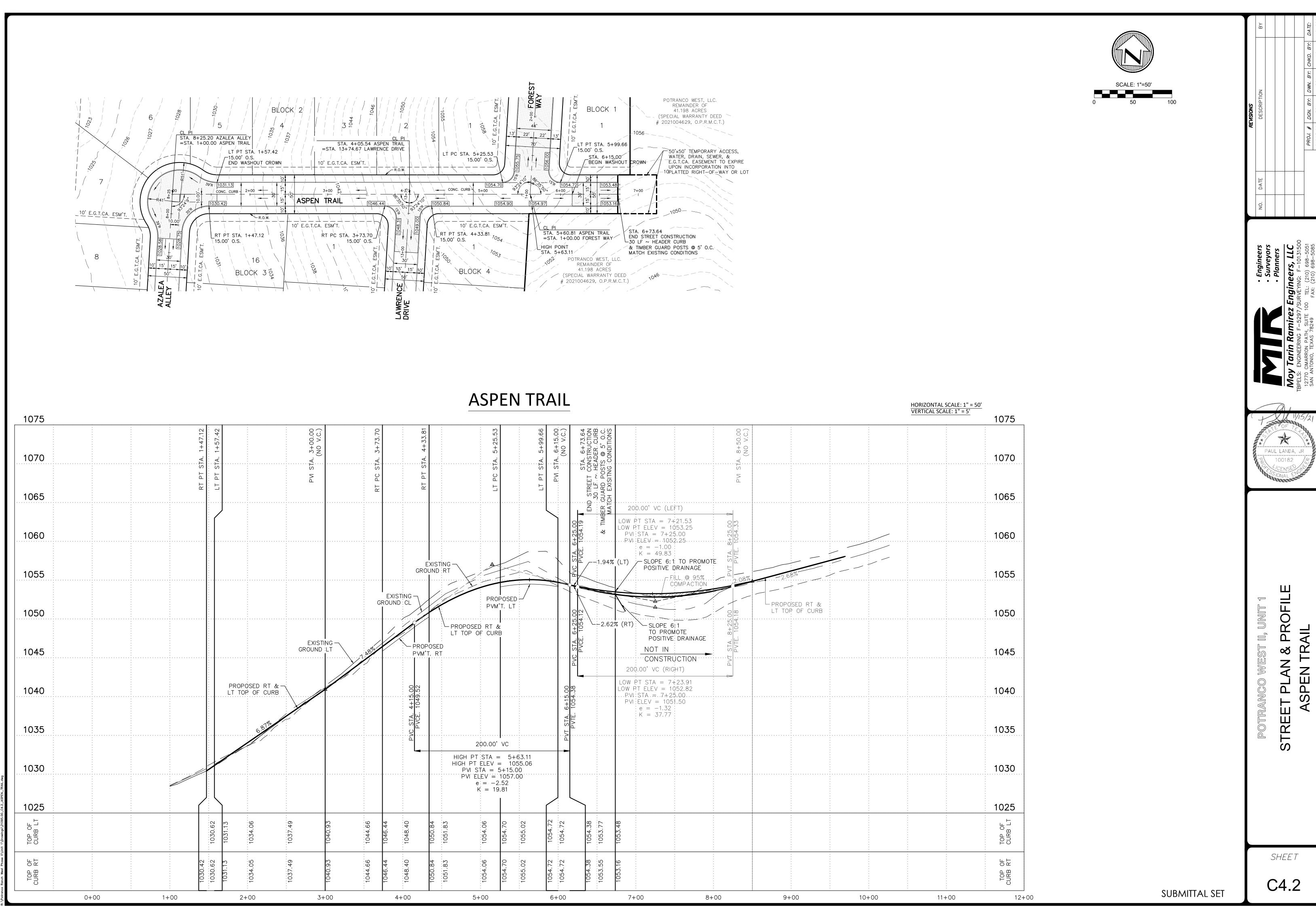


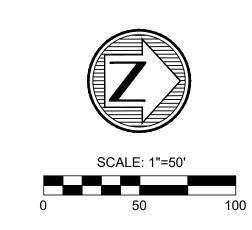
STREET PLAN & PROFILE FOREST WAY

SHEET

C4.1

SUBMITTAL SET







STA. 8+25.20 AZALEA ALLEY =STA. 1+00.00 ASPEN TRAIL

10' E.G.T.CA. ESM'T.

LT PC STA. 7+67.78 15.00' O.S. BEGIN WASHOUT CROWN

RT PC STA. 7+78.09 15.00' O.S.

6+00

10' E.G.T.CA. ESM'T.

/AZALEA ÁLLEY

KAYLA LANE KNUCKLE SAC TABLE									
POINT	TOP OF CURB	GUTTER							
LT. PC STA. 7+67.78	1028.58	1028.00							
А	1028.90	1028.32							
В	1029.41	1028.83							
С	1029.93	1029.35							
D	1030.44	1029.86							
Е	1030.73	1030.15							
LT. PT STA. 1+57.42	1031.13	1030.55							





STREET PLAN & PROFILE

SHEET

C4.3

SUBMITTAL SET

1045								<u> </u>	ZALE	AAL	LEY									HORIZO VERTICA	NTAL SCALE: 1" = 50' AL SCALE: 1" = 5'	1045
1040				T STA. 1+59.03		/I STA. 3+00.00		STA.: 4+00.00 VCE. 1020.93		STA. 5+00.00 PVTE. 1024.30					// STA. 7+67.78	C SIA. 7+78.09			T STA 1+57 42			1040
1035			 R T :			<u></u>		· · · · 	0.00' VC STA = 5+00						LT PC & P\		B (© ((- : - : 1 : : . : : : : : : : : : : : : : : : : :		1035
1030								HIGH PT E PVI STA PVI ELE e: K	STA = 5+00 LEV = 1024 A = 4+50.00 EV = 1023.50 = -0.44 = 28.28		PROPOSED OF CURB EXISTING — GROUND CL	· · · · · · · · · · · · · · · · · · ·		EXISTING GROUND LT		25.08' 32.20	1.59	32.20' %	18.13' 25.10 PR	=		1030
1025																EXISTING COUND C	G 🗸	FILL	@ 95% PACTION			1025
1020							\A%					· ·	_PROPOSED OF CURB @	1.60%								1020
1015				PROPOSED RT LT TOP OF CUR	. /																	1015
1010				7.11%		EXISTING GROUND RT																1010
1005																						1005
1000																						1000
995																						995
TOP OF CURB LT				1005.78	1012.24	1015.80	1018.36	1020.93	1023.06	1024.30	1025.10	1025.90	1026.70	1027.50	1028.30	1028.90	1029.41	1029.93	1030.44	1031.13		TOP OF CURB LT
TOP OF CURB RT			1005.00	1005.78	1012.24	1015.80	1018.36	1020.93	1023.06	1024.30	1025.10	1025.90	1026.70	1027.50	1028.30	1028.75	- 1	1	I			TOP OF CURB RT
:	0+00	1+00		2+00	:	3+00	:	4+00	<u> </u>	5+00	; 6·	+00	:	7+00		8+00	:		9+00	<u> </u>	10+00	<u>;</u> 1

OPEN/SPACE DETENTION/AREA

VARIABLE WIDTH

E.G.T.CA. SAN. SEWER

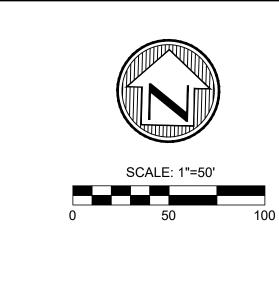
& WATER ESM'T.

////BLØCK 2/

STA. 1+00.00 AZALEA ALLEY =STA. 10+00.00 WISTERIA VIEW STA. 2+60.38 DRAIN A

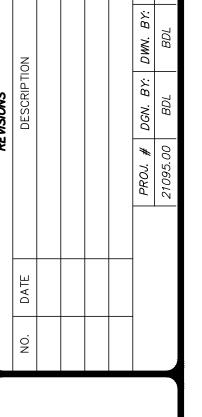
LT PT STA. 1+59.03
715.00' O.S.
END WASHOUT CROWN

_RT PT STA. 1+47.24 / __15.00' O.S.



KAYLA LANE KNUCKLE SAC TABLE								
POINT	TOP OF CURB	GUTTER						
LT. PT STA. 1+59.03	1005.77	1005.19						
А	1004.48	1003.90						
В	1003.13	1002.55						
С	1001.98	1001.40						
D	1002.28	1001.70						
E	1003.77	1003.19						
RT. PT STA. 10+59.03	1005.29	1004.71						

KAYLA LANE KNUCKLE SAC TABLE								
POINT	TOP OF CURB	GUTTER						
LT. PT STA. 1+59.03	1005.77	1005.19						
А	1004.48	1003.90						
В	1003.13	1002.55						
С	1001.98	1001.40						
D	1002.28	1001.70						
E	1003.77	1003.19						
RT. PT STA. 10+59.03	1005.29	1004.71						





& PROFILE WISTERIA AN STREET PL

SHEET

C4.4

SUBMITTAL SET

21+00

20+00

WISTERIA VIEW HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 5' 1040 1040 50.00' VC LOW PT STA = 9+72.99 LOW PT ELEV = 1001.88PVI STA = 9+75.001035 1035 PVI ELEV = 1001.34e = -0.54K = 5.75D STREE 30 LF C GUARD F 1030 1030 END SER G MATC 1025 1025 150.00' VC 200.0:0' VC HIGH PT STA = 13+81.17 HIGH PT ELEV = 1015.20 PVI STA = 13+50.00 PVI ELEV = 1016.00 e = -0.96 LOW PT STA: = 15+05.81: LOW PT ELEV = 1014.08: PVI STA =: 15+50.00 : PVI ELEV = 1013.00 : 1020 1020 e = -1.34· · · K· · = · :37.:21 · · 33.51' 32.20' 32.20' 32.36' ... K = 29.22SLOPE 6:1 TO PROMOTE POSITIVE DRAINAGE EXISTING GROUND CL 1015 1015 EXISTING — GROUND LT PROPOSED RT & LT -TOP OF CURB @ -1.50% PROPOSED RT & -LT TOP OF CURB 1010 1010 NOT IN PROPOSED — TOP OF CURB CONSTRUCTION 1005 1005 GROUND RT -4:00% (RT) 150.00' VC FILL @ 95% —/ COMPACTION HIGH PT STA = 13+81.14 HIGH PT ELEV = 1015.20 PVI STA = 13+50.00 PVI ELEV = 1016.00 e = -0.96 K = 29.24 1000 1000 150.00' V.C (RIGHT) LOW PT STA = 15+16.86 LOW PT ELEV = 1013.81 PVI STA = 15+50.00 PVI ELEV = 1013.00 e = -1.01 K = 27.91 EXISTING -GROUND CL 995 995 990 990 1010.55 TOP OF CURB LT

1015.20

14+00

15+00

16+00

17+00

18+00

19+00

LT PT STA. 13+37.14

__ R.O.W. __

BEGIN WASHOUT CROWN

REMAINDER OF

-50'x50' TEMPORARY ACCESS, WATER, DRAIN, SEWER, & E.G.T.CA. EASEMENT TO EXPIRE

UPON INCORPORATION INTO

END STREET CONSTRUCTION 30 LF HEADER CURB
& TIMBER GUARD POSTS MATCH EXISTING CONDITIONS

PLATTED RIGHT-OF-WAY OR LOT

41.198 ACRES (SPECIAL WARRANTY DEED # 2021004629, 0.P.R.M.C.T.)

RT PT STA. 13+33.80

⁻15.00' O.S.

BLOCK,

~____

_LT PT STA. 10+47.24

STA. 11+00.00 END WASHOUT CROWN

LT PT STA. 12+77.05

[™] √15.00′ 0.S.

E.G.T.CA. SAN. SEWER

CURVE TABLE CURVE RADIUS DELTA TANGENT LENGTH CHORD CHORD BEARING C1 500.00' 6'26'35" 28.14' 56.23' 56.20' S89'48'57"E

STA. 1+00.00 AZALEA ALLEY =STA. 10+00.00 WISTERIA VIEW

20' DRAINAGE T

[—] 992 — — -

TOP OF CURB RT

8+00

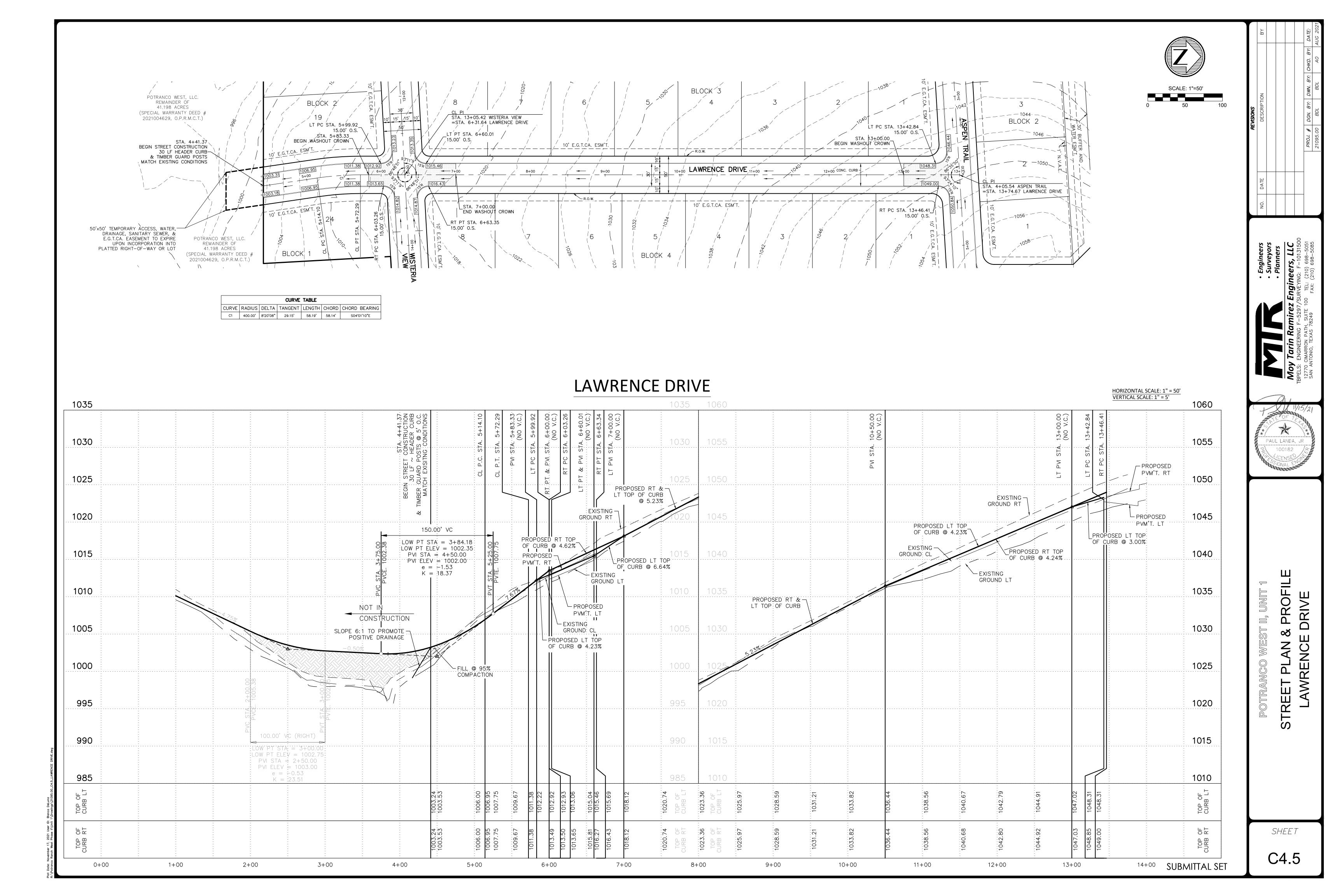
9+00

10+00

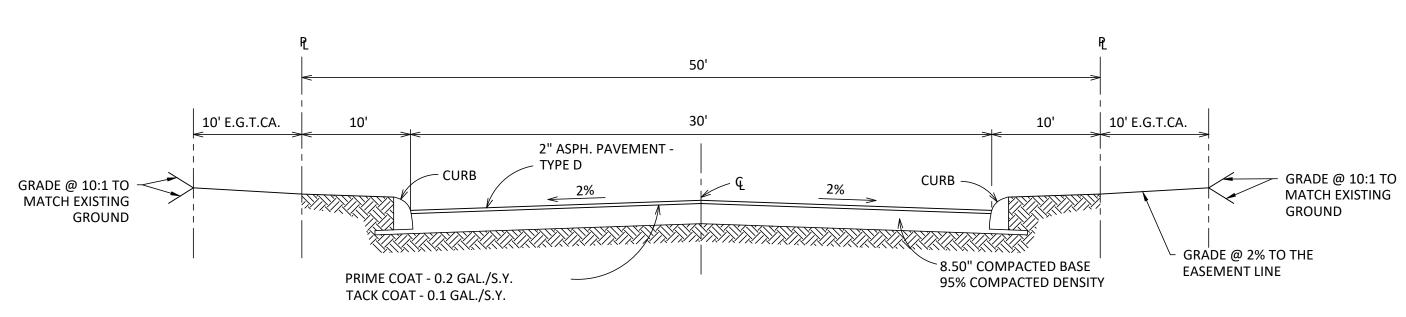
11+00

12+00

13+00

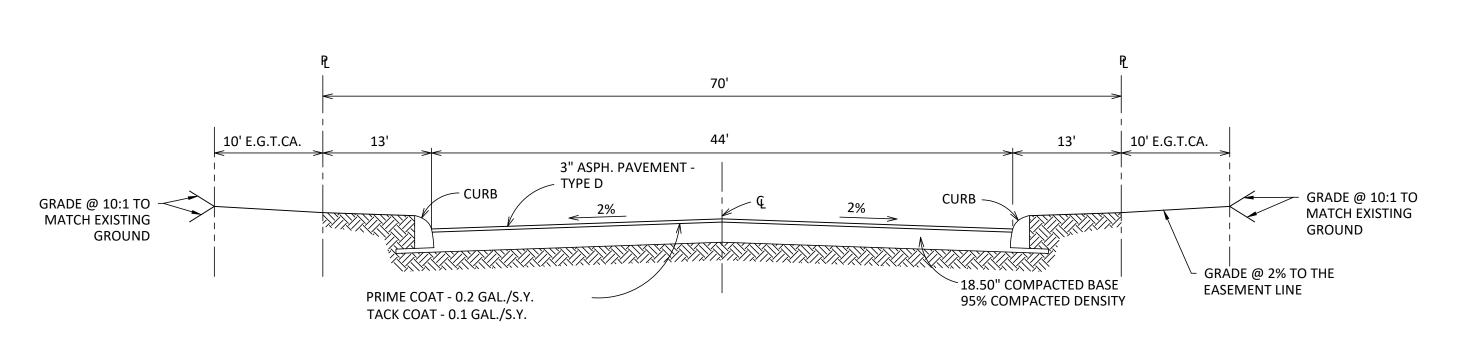


C4.6

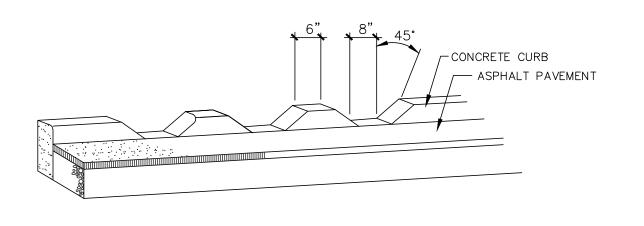


LOCAL "A" TYPICAL STREET CROSS-SECTION (30' PAVEMENT)

N.T.S.



COLLECTOR STREET CROSS-SECTION (44' PAVEMENT)



STANDARD CURB DETAIL

N.T.S.

SAW-CUT JOINT-

TACK COAT

(ITEM 203)

EXCAVATION AND BASE

MATERIAL TO BE
INCLUDED IN UNIT BID
PRICE OF CURB

MIN. 6" UNDER CURB OR PER TYPICAL

STREET SECTION

WHICHEVER IS GREATER

EXISTING ASPHALT -

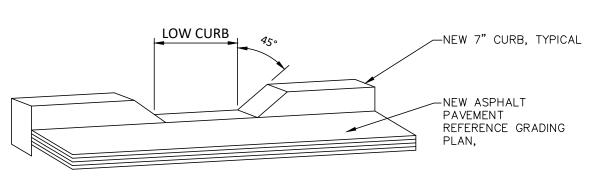
PAVEMENT

EXISTING BASE-MATERIAL

MATERIAL-

CLASS "A" — 3000 P.S.I.

TYPICAL SAWTOOTH CURB DETAIL



LOW CURB DETAIL

APPLICABLE SPECIFICATIONS FROM "CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION"-200 - FLEXIBLE BASE

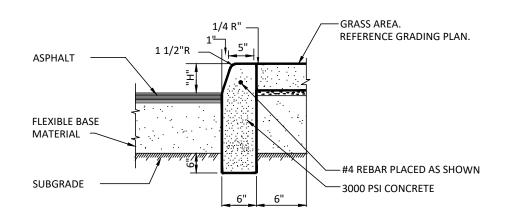
202 - PRIME COAT 203 - TACK COAT

205 - HOT MIX ASPHALT CONCRETE PAVEMENT

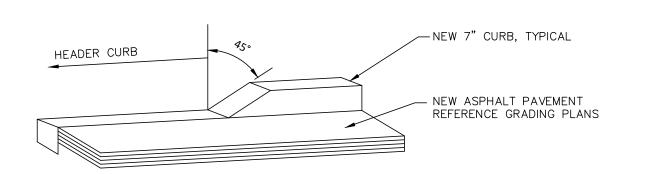
REFER TO INTEL GEOTECHNICAL REPORTS FOR ADDITIONAL PAVEMENT CONSTRUCTION INFORMATION A. "SUBSURFACE EXPLORATION & PAVEMENT ANALYSIS FOR PROPOSED NEW PAVEMENT AT POTRANCO WEST, PHASE II SUBDIVISION PROPERTY, MEDINA COUNTY, TEXAS, DATED JUNE 25, 2021

3. CONTRACTOR TO COORDINATE ALL MATERIAL TESTING

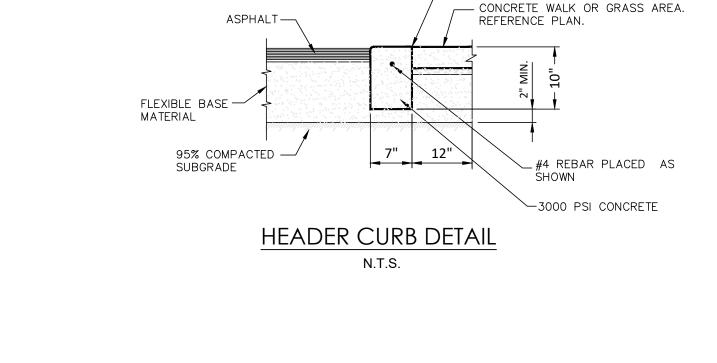
4. CONTRACTOR SHALL FILL ANY GAPS BETWEEN THE EXISTING LIMESTONE SUBGRADE AND THE BOTTOM OF THE FLEXIBLE BASE WITH EITHER SELECT FILL (ITEM 410.2) GRAVEL, OR WITH LIMESTONE MILLINGS



"H" — TYPICAL HEIGHT EQUALS 6"; BUT CURB HEIGHT MAY VARY. SEE GRADING PLAN FOR ELEVATIONS. IF NO ELEVATION INDICATED, HEIGHT EQUALS 6" CONCRETE CURB ISLAND DETAIL IN CUL-DE-SAC



CURB TRANSITION DETAIL



FOR SURFACE COURSE & BASE CONSTRUCTION SEE PAVEMENT STRUCTURE DETAILS

- NEW BASE

---1/2" EXPANSION JOINT

CONCRETE CURB

/ ASPHALT PAVEMENT

<u>Summary Table A – Minimum Flexible Pavement Recommendations – CBR = 5.0 **</u>

CURB BREAK OPENING VARIES,

SEE LAYOUT PLAN.

	Asphaltic	Concrete				Structural Number	
Classification	Type D, inches	Type B, inches	Aggregate Base, inches	Geogrid	Subgrade, inches		
Local Type A (no bus traffic)	2.00	-	8.50	No	*	2.07	
Local Type A	2.00	-	15.00	No	*	2.98	
(with bus traffic)	2.00	-	12.50	Yes	*	3.00	
		-	17.00	No	*	3.70	
Local Type B	3.00	-	14.00	Yes	*	3.70	
		7.00	-	No	*	3.70	
		-	18.50	No	*	3.91	
Collector	3.00	-	15.50	Yes	*	3.95	
		8.00	-	No	*	4.04	

Subgrade Notes (*):

LIMITS OF PAVEMENT RECONSTRUCTION

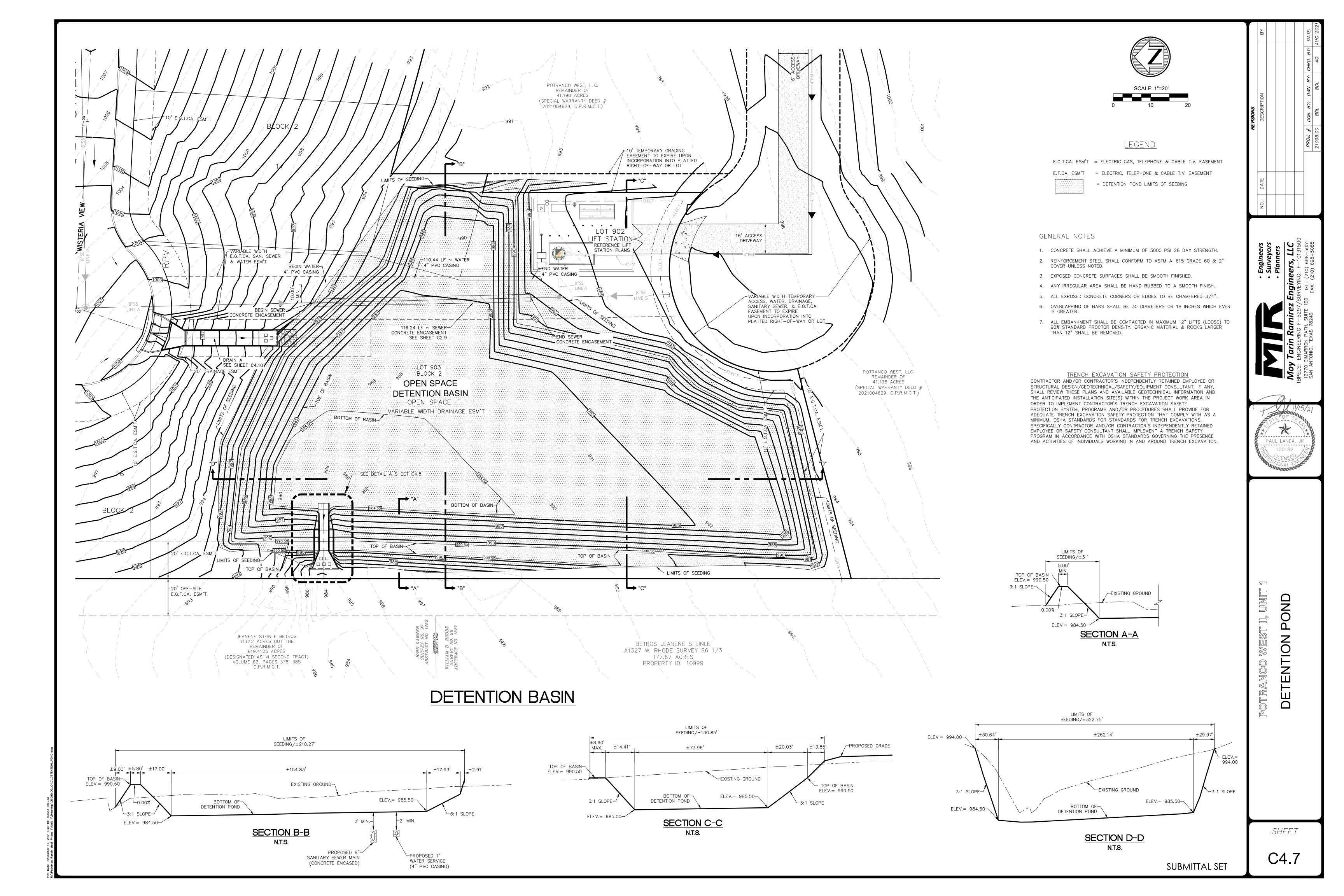
PAVEMENT JUNCTION DETAILS

-TACK COAT (ITEM 203)

NEW SUBGRADE-

LIMITS OF NEW BASE

- Cut and fill data are not available at this time.
- Based on the thickness of the clays encountered in the borings, we anticipate the final pavement subgrade Plasticity Index values to be primarily less than 20. Subgrade stabilization is not needed.
- However, if the final pavement subgrade Plasticity Index values are greater than 20, then one of the two following options may be used:
- The clays may be removed to expose Stratum II soils at the pavement subgrade elevation) and
- replaced with on site milled material fill (Plasticity Index values are 20 or less).
- The subgrade may be <u>treated</u> to a depth of 6 inches using 6 percent lime or cement.
 - The subgrade soils should be tested for soil sulfate content prior to treatment. If the soil sulfate content is over 3000 ppm, an alternate procedure will be needed.
- Application rate of 27 lbs per sq yard for 6-inch depth of treatment is recommended.
- If fill is used to raise the grade, approved fill material should be free of deleterious material with a minimum CBR value of 5.0 and Plasticity Index values of 20 or less. Any stratum I clays (any clays with Plasticity Index values greater than 20) should be removed prior to fill placement. The gravel size should not exceed 3 inches in diameter. The material should be placed as per applicable city or county guidelines.



2.50′

#4 BARS @ 12" O.C.—

#4 BARS @ 12" O.C.E.W.—

BARS A-

2" CLEAR → TYP.

#5 BARS @ 6" O.C.—

-988.50

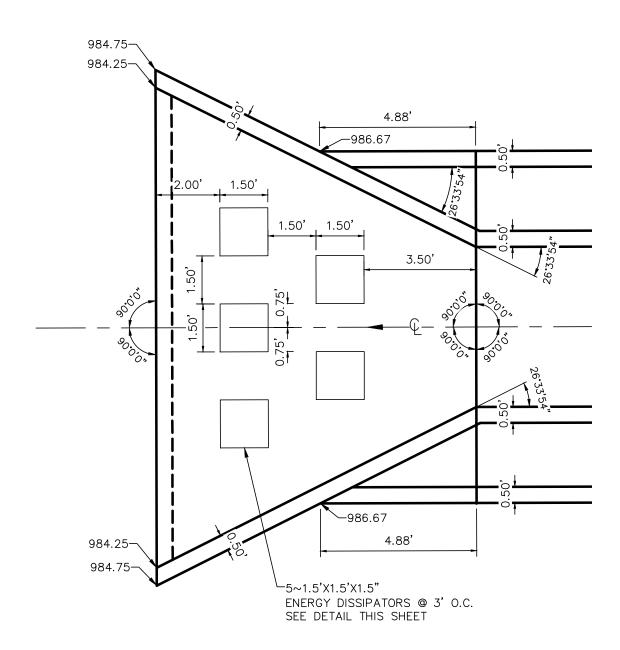
م م

#4 BARS @ 12" O.C.

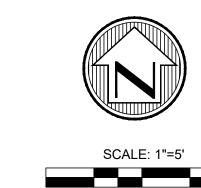
─#4 BARS @ 12" O.C.

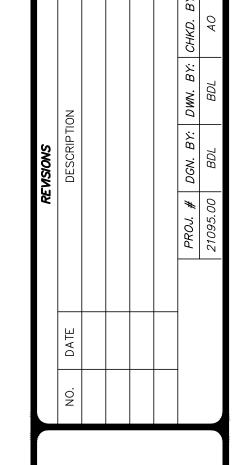
—#4 BARS @ 12" O.C.

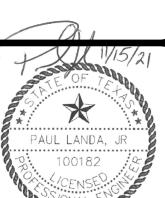
_#4 BARS @ 12" O.C.



DETAIL 2







OND

ENTION

Ш

SHEET

90% STANDARD PROCTOR DENSITY. ORGANIC MATERIAL & ROCKS LARGER THAN 12" SHALL BE REMOVED.

6. OVERLAPPING OF BARS SHALL BE 30 DIAMETERS OR 18 INCHES WHICH EVER

8. COVER FOR REINFORCING STEEL IS 2" UNLESS OTHERWISE NOTED.

9. MINIMUM BAR DEVELOPMENT LENGTH FOR SPLICE AND BENDS AT WALL AND

10. ALL CONCRETE SHALL RESIST A MINIMUM 3000 PSI 28 DAY BREAK, UNLESS

11. MATERIAL SPECIFICATIONS:

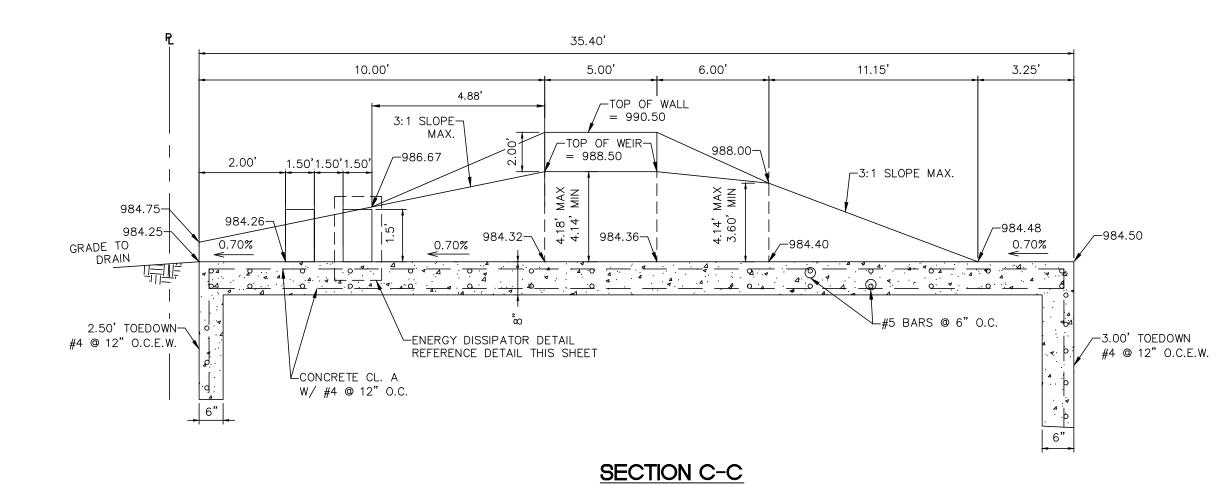
REINFORCING STEEL: CONFORM TO A.S.T.M. A-615, GRADE 60

15. IMPROVED EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE CHANNEL SUBGRADE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL

TRENCH EXCAVATION SAFETY PROTECTION CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEM, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

GENERAL NOTES

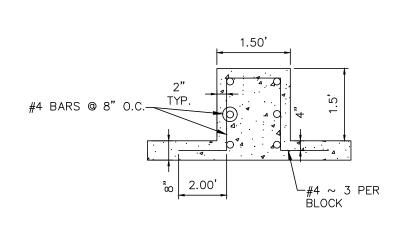
- 1. CONCRETE SHALL ACHIEVE A MINIMUM OF 3000 PSI 28 DAY STRENGTH.
- 2. REINFORCEMENT STEEL SHALL CONFORM TO ASTM A-615 GRADE 60 & 2" COVER UNLESS NOTED.
- 3. EXPOSED CONCRETE SURFACES SHALL BE SMOOTH FINISHED.
- 4. ANY IRREGULAR AREA SHALL BE HAND RUBBED TO A SMOOTH FINISH.
- 5. ALL EXPOSED CONCRETE CORNERS OR EDGES TO BE CHAMFERED 3/4".
- 7. ALL EMBANKMENT SHALL BE COMPACTED IN MAXIMUM 12" LIFTS (LOOSE) TO
- FLOOR CONNECTIONS SHALL BE 24 INCHES.
- OTHERWISE NOTED.
- CONCRETE/CONCRETE RIPRAP: CLASS A 3000 PSI IN 28 DAYS UNLESS PIPE RAILING: CONFORM TO A.S.T.M. A-53, GRADE B, OR A-501
- 12. ALL EARTHEN CHANNELS SHALL HAVE HIGH PERFORMANCE TURF REINFORCEMENT MATS OR APPROVED EQUAL.
- 13. GEO-SOLUTIONS HIGH PERFORMANCE TURF REINFORCEMENT MAT (HPTRM), PYRAMAT, INSTALLED PER MANUFACTOR SPECIFICATIONS (GEO-SOLUTIONS TELE. NO:. 210-710-6398) OR EQUAL APPROVED BY ENGINEER.
- 14. HIGH PERFORMANCE TURF REINFORCEMENT MAT AREA TO BE SODDED. NO EXTRA PAY ITEM. COORDINATE WITH OWNER FOR GRASS TYPE.
- ACCEPT THE CHANNEL FOR MAINTENANCE. NO EXTRA PAY ITEM.



N.T.S.

-CONCRETE CL. A

SECTION A-A



#4 BARS @ 12" O.C. BARS A #4 BARS @ 12" O.C.

—#4 BARS @ 12" O.C.

2" CLEAR

-CONCRETE CL. A

SECTION B-B

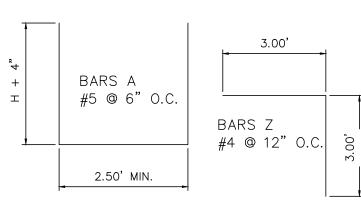
988.00 MAX.

BARS A-

2" CLEAR

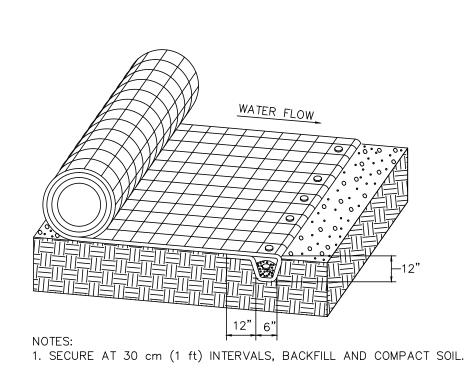
#5 BARS @ 6" O.C.—

#4 BARS @ 12" O.C.E.W.—

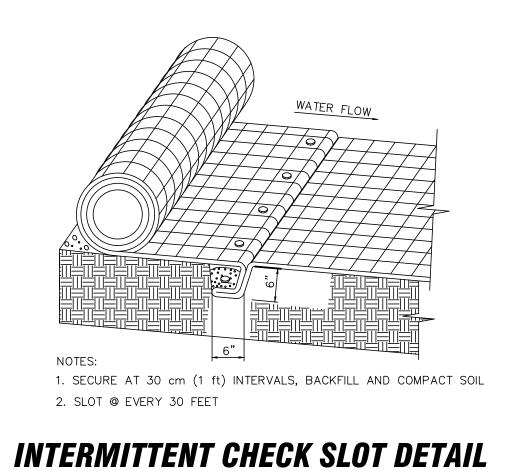


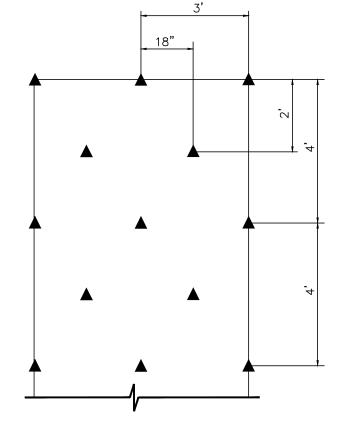
DETAIL ENERGY DISSIPATOR DETAIL N.T.S.

SUBMITTAL SET



INITIAL ANCHOR TRENCH DETAIL



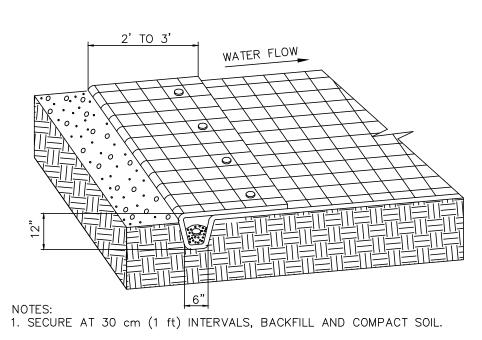


NOTES:

1. ANCHOR PATTERN 2.5 ANCHORS / m²(2 ANCHORS / Yd²)

2. U — SHAPED WIRE STAPLES, METAL GEOTEXTILE PINS, TRIANGULAR WOODEN OR PLASTIC STAKES CAN BE USED TO ANCHOR TRMs TO THE GROUND SURFACE

ANCHOR PATTERN DETAIL



TERMINAL CHANNEL ANCHOR
TRENCH DETAIL

TURF REINFORCEMENT MAT NOTES:

SITE PREPARATION — TRMs and HPTRM

- A. Grade and compact areas to be treated with TRM / HPTRM and compact. The top 8" of subgrade must be free of rock, debris and consist of a cohesive live top soil. If the existing subgrade does not meet these standards the contractor is responsible for the
- B. Remove large rocks, soil clods, vegetation, and other sharp objects (larger than 2" in diameter) that could keep the TRM / HPTRM from intimate contact with subgrade.
- C. Prepare the 8" compacted seedbed by loosening the top ½" of soil above final
- D. Construct, as a minimum, 12 in x 12 in anchor trenches at upstream and downstream ends of the installation to inhibit undermining from stray surface water. (Anchor trenches should be excavated to a depth that matches design scour depth.) Excavate 6 in x 6 in check slots at 25 to 30 feet intervals along length of channel. Cut longitudinal anchor slots 6 in x 6 in at top of each side slope. The aforementioned dimensions are minimums and the dimensions detailed on the drawings will control.

INSTALLATION — TRMs and HPTRM

A mandatory pre—construction conference with an Engineer representing the TRM / HPTRM manufacturer, contractor, and inspector must be completed. The conference is to be scheduled by the contractor with at least one week's notice to all parties involved. Representatives may be required to be on site for installation assistance.

A. Install the TRM / HPTRM at elevation and alignment indicated.

- B. <u>Seeding</u>
 Seeding is required by broadcasting or hydro mulching prior to the placement of the TRM / HPTRM. In addition the seeding is also required over the top of the TRM / HPTRM, soiled filled with ½" of top soil and protected by a biodegradable erosion Mat, such as LandLok S1 or by spraying Flexterra.
- Sodding
 The TRM / HPTRM, is to be soiled filled with ½" of top soil. Place sod directly on top and secure sod with 8" staples.
- C. Beginning at downstream end in center of channel, place initial end of first roll of TRM / HPTRM in anchor trench and secure with ground anchor devices at 12 in intervals.
- D. Position adjacent rolls in anchor trench in same manner, overlapping proceeding roll minimum 3 in.
- E. Secure the TRM / HPTRM at 12 in intervals along the trench, backfill and compact with specified soil or as directed by City of San Antonio.
- F. Unroll center strip of TRM / HPTRM upstream over compacted trench. Stop at next check slot or terminal anchor trench. Unroll adjacent rolls of TRM / HPTRM upstream in similar fashion, maintaining 3 in overlap.
- G. Fold and secure the TRM / HPTRM snugly into transverse check slots. Lay material in bottom of slot, and then fold it back against itself as indicated. Anchor through both layers of TRM / HPTRM at 12 in intervals. Backfill with soil and compact. Continue unrolling the TRM / HPTRM widths upstream over compacted slot to next check slot or terminal anchor trench.
- H. Secure TRM / HPTRM to channel bottom with ground anchoring devices at a frequency of 2 ½ anchors per square yard. Anchors should be a minimum of 8 gauge and 8 in in length or so that they have sufficient ground penetration to resist pullout in a saturated condition. Increased anchoring frequency may be required if site conditions are such that the Engineer determines it necessary.
- At the Engineers discretion a manufacturer's designated representative shall be on site for installation assistance.
- J. Any installation of angular placement, overlapping around curves, or modified placement methods must be detailed on the construction drawings.
 K. City of San Antonio and/or Bexar County must approve alternate installation methods prior to execution.

IRRIGATION, MOWING & PROJECT ACCEPTANCE A. All areas that erode prior to project acceptance shall be repaired at the expense of the

throughout the duration of the project.

contractor including necessary reseeding, watering, and repair of the RECP.

B. Seeded/Sodded areas shall not be mowed prior to establishment of 70% vegetative density and a minimum grass growth of 3 inches. Mower height shall not be set lower than 3 inches. Throughout the duration of the project, the contractor shall be responsible for mowing to facilitate growth and shall not let the vegetation in the seeded areas exceed 18". In addition, the Contractor shall water all grassed areas as often as necessary to establish satisfactory growth and to maintain its growth

** Planner.

** Planner.

** In Ramirez Engineers, LL

** IEERING F-5297/SURVEYING: F-10131

** SUITE 100 TEL: (210) 698-50

** TEXAS 78249 FAX: (210) 698-50

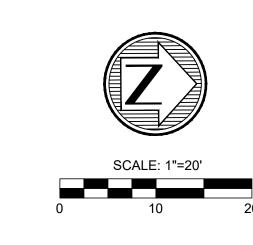
PAUL LANDA, JR

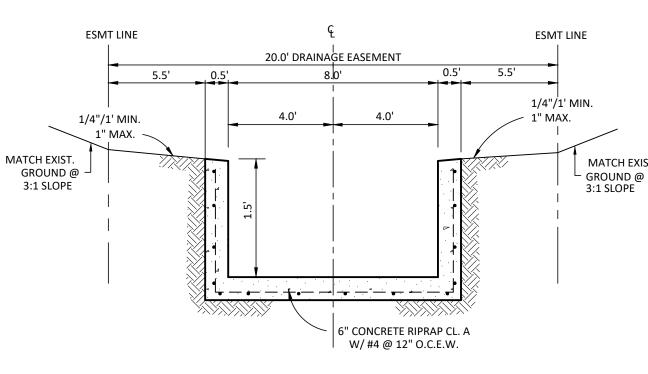
100182

DETENTION POND

SHEET

C4.9





MATCH EXIST. GROUND @ -MATCH EXIST GROUND @ 3:1 SLOPE SECTION "C-C"

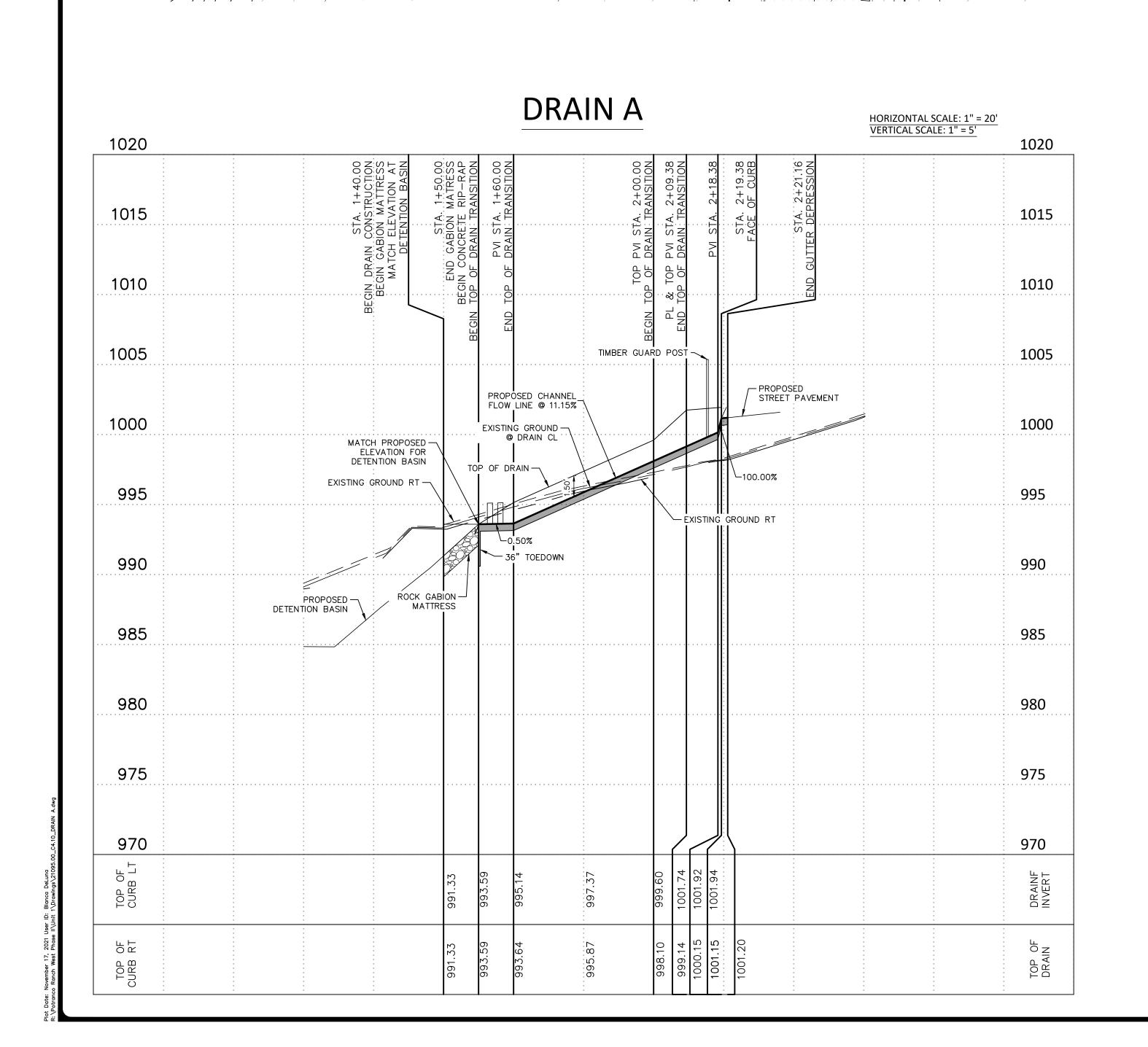
(N.T.S.)

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0 **D ∞**ŏ 2 AN DR

SHEET

C4.10



BLOCK / 2

1005.78

10' E.G.T.CA. ESM'T.

AZALEA ALLEY +

STA. 2+21.38 END GUTTER DEPRESSION

STA. 2+19.38 FACE OF CURB

PVI STA. 2+18.38

DETAIL "2"

SEE SHEET C4.11

STA. 2+60.38 DRAIN A =STA. 1+00.00 AZALEA ALLEY =STA. 10+00.00 WISTERIA VIEW

/ PL & TOP PVI STA. 2+09.38 /END TOP OF DRAIN TRANSITION

PVI STA. 1+60.00 END TOP OF DRAIN TRANSITION

END GABION MATTRESS

BEGIN CONCRETE RIP-RAP

BEGIN TOP OF DRAIN TRANSITION

TOP PVI STA. 2+00.00 BEGIN TOP OF DRAIN TRANSITION

-STA. 1+50.00

LOT 903 OPEN SPACE

DETENTION AREA

20' DRAINAGE ESM'T.

VARIABLE WIDTH E.G.T.CA.
SAN. SEWER & WATER ESM'T.

STA. 1+40.00

SEE SHEET C4.11

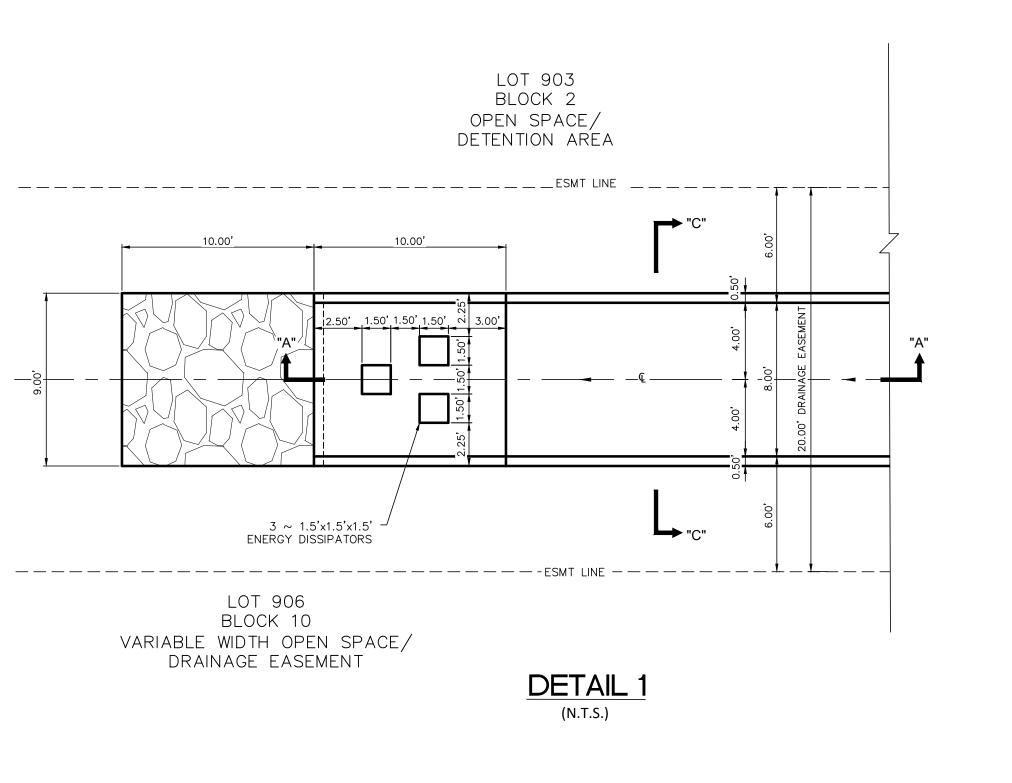
DETENTION BASIN

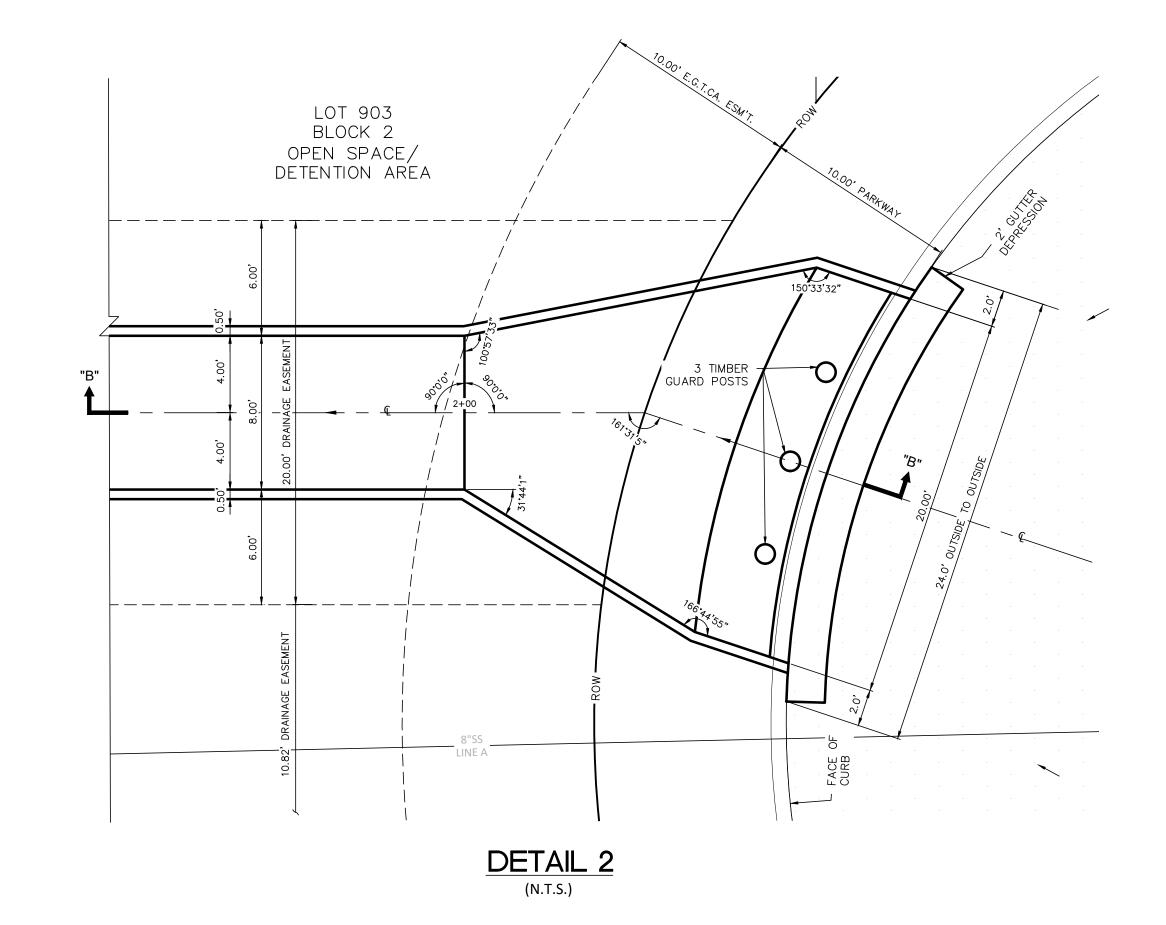
BEGIN DRAIN CONSTRUCTION
BEGIN GABION MATTRESS—
MATCH ELEVATION AT

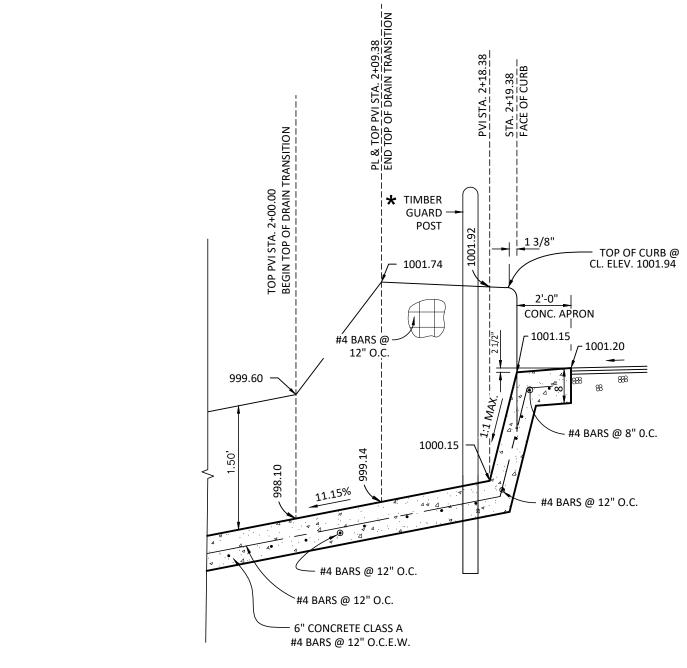
NOTES:

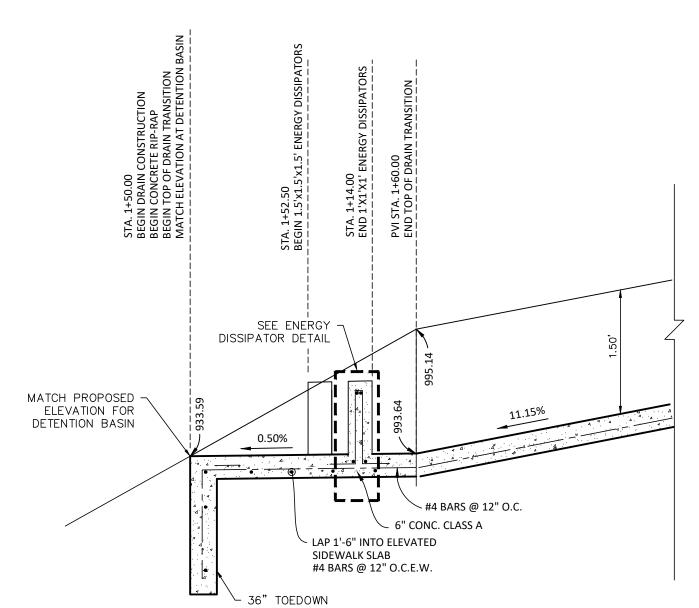
- 1. COVER FOR REINFORCING STEEL IS 2" UNLESS OTHERWISE NOTED.
- 2. SEE GENERAL NOTES ON SHEET C4.0 FOR MATERIAL SPECIFICATIONS.
- 3. MINIMUM BAR DEVELOPMENT LENGTH FOR SPLICE AND BENDS AT WALL AND FLOOR CONNECTIONS SHALL BE 30 INCHES.
- 4. ALL CONCRETE SHALL RESIST A MINIMUM 3000 PSI 28 DAY BREAK, UNLESS OTHERWISE NOTED.
- 5. PROVIDE CONCRETE APRONS ON ALL INLETS, REFERENCE DETAILS FOR CONSTRUCTION REQUIREMENTS.
- 6. 3/4" CHAMFER ON ALL EXPOSED CONCRETE EDGES.
- 7. ALL STORM PIPE MATERIAL IS CONCRETE REINFORCEMENT PIPE, UNLESS NOTED OTHERWISE.
- 8. IMPROVED EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY—FIVE PERCENT OF THE CHANNEL SUBGRADE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE CHANNEL IS ACCEPTED FOR MAINTENANCE. REFER TO 35-504 OF THE CITY OF SAN ANTONIO UDC. NO EXTRA PAY ITEM.

TRENCH EXCAVATION SAFETY PROTECTION Contractor and/or Contractor's independently retained employee or structural design/geotechnical/safety/equipment consultant, if any, shall review these plans and available geotechnical information and the anticipated installation site(s) within the project work area in order to implement Contractor's trench excavation safety protection systems, programs and/or procedures for the project described in the contract documents. The Contractor's implementation of these systems, programs and/or procedures shall provide for adequate trench excavation safety protection that comply with as a minimum, OSHA standards for trench excavations. Specifically, Contractor and/or Contractor's independently retained employee or safety consultant shall implement a trench safety program in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavation.

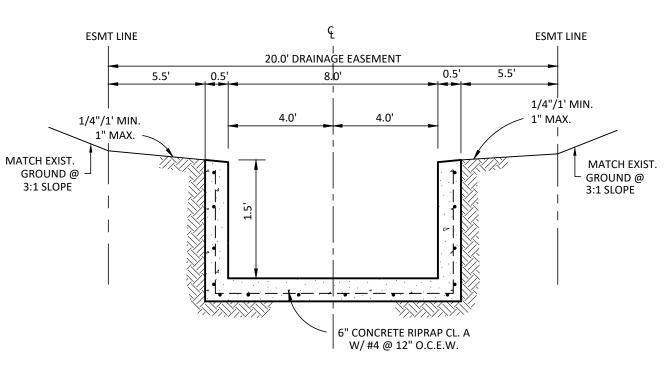








SECTION "A-A"



SECTION "B-B" (N.T.S.)

<u>NOTES:</u>

- 1. COVER FOR REINFORCING STEEL IS 2" UNLESS OTHERWISE NOTED.
- 2. SEE GENERAL NOTES ON SHEET C4.0 FOR MATERIAL SPECIFICATIONS.
- 3. MINIMUM BAR DEVELOPMENT LENGTH FOR SPLICE AND BENDS AT WALL AND FLOOR CONNECTIONS SHALL BE 30 INCHES.
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TRENCH EXCAVATION SAFETY PROTECTION

Contractor and/or Contractor's independently retained employee or structural design/geotechnical/safety/equipment consultant, if any, shall review these plans and available geotechnical information and the anticipated installation site(s) within the project work area in order to implement Contractor's trench excavation safety protection systems, programs and/or procedures for the project described in the contract documents. The Contractor's implementation of these systems, programs and/or procedures shall provide for adequate trench excavation safety protection that comply with as a minimum, OSHA standards for trench excavations. Specifically, Contractor and/or Contractor's independently retained employee or safety consultant shall implement a trench safety program in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavation.

SUBMITTAL SET

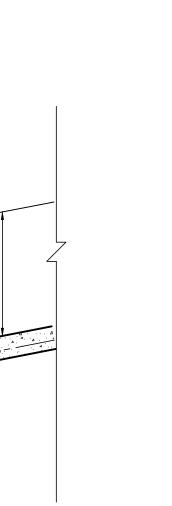
SHEET

PAUL LANDA, JR

(D

DRAINA

DRAIN



2-#4 TOP BARS -

ENERGY DISSIPATOR DETAIL (N.T.S.)

CONSTRUCTION PLANS FOR



POTRANCO WEST II, UNIT 1 SIGNAGE IMPROVEMENTS

POTRANCO RANCH WEST II, UNIT 1 SIGN AND PAVEMENT MARKING QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITY
1	INSTALL SIGN POLE WITH STREET NAMES, BLOCK NUMBERS, STOP SIGN	EA.	2
2	INSTALL SIGN POLE WITH STREET NAMES, BLOCK NUMBERS, STOP SIGN AND DEAD END SIGN	EA.	1
3	INSTALL SIGN POLE WITH STREET NAMES, BLOCK NUMBERS	EA.	2
4	ADD END OF ROAD MARKERS	EA.	9

NOTE:

"FOR PUBLIC STREETS OUTSIDE THE CITY OF SAN ANTONIO CITY LIMITS, ALL SIGNS ARE TO BE PROVIDED BY THE CONTRACTOR DURING CONSTRUCTION. ALL PERMANENT REGULATORY AND WARNING SIGNS ARE TO BE PROVIDED AND INSTALLED BY BEXAR COUNTY. ALL STREET NAME SIGNS ARE TO BE PROVIDED AND INSTALLED BY THE DEVELOPER TO CITY SPECIFICATIONS."

GENERAL NOTES:

- 1. ALL TRAFFIC SIGNS SHALL BE MANUFACTURED AND INSTALLED ACCORDING TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICE (T.M.U.T.C.D.).
- 2. INSTALL SIGNS SUCH THAT THEIR VIEW IS NOT BLOCKED BY LOW HANGING VEGETATION, UTILITY POLES, OTHER TRAFFIC SIGNS, ETC... REFER TO CITY OF SAN ANTONIO TRAFFIC SIGNAL DETAILS.
- 3. ALL PAVEMENT MARKINGS SHALL COMPLY WITH THE T.M.U.T.C.D. REFER TO CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- 4. "DEAD END" & ARROW SHALL BE PAINTED ON BOTH SIDES OF SIGN WHICH IS MOUNTED ABOVE STREET NAMES.
- 5. CUSTOM STREET SIGNS WILL BE PROVIDED AND INSTALLED BY OTHERS.

SITE C.R. 375 C.R. 375 C.R. 388 POTRANCO RD. SH. 211 CASTROVILLE HWY. 90

VICINITY MAP

SUBMITTAL DATE: SEPTEMBER 2021

LEGAL DESCRIPTION:

A 18.052 ACRES (786,355.80 SQUARE FEET) OUT OF THE 41.198 ACRES (1,794,602.20 SQUARE FEET) TRACT OF LAND SITUATED IN THE JOHN GARNER SURVEY NO. 97, ABSTRACT NO. 1452, AND THE WILLIAM B. RHODE SURVEY NO. 96, ABSTRACT NO. 1327, MEDINA COUNTY, TEXAS, BEING A PORTION OF A REMAINDER OF A 619.4125 ACRE TRACT AS CONVEYED TO JEANENE STEINLE WILLIAMS BY LAST WILL AND TESTAMENT AS RECORDED IN VOLUME 63, PAGES 378-385 OF THE OFFICIAL PROBATE RECORDS OF MEDINA COUNTY, TEXAS.

SUBMITTED BY:

MOY TARIN RAMIREZ ENGINEERS, LI 12770 CIMARRON PATH, SUITE 100 SAN ANTONIO, TEXAS 78249 TEL: (210) 698-5051

OWNER/DEVELOPER

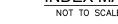
LGI HOMES-TEXAS, LLC. KENNON MASTERS, 1450 LAKE ROBBINS DRIVE, SUITE 430 THE WOODLANDS, TEXAS 77380 PH# (281) 362-8998

TABLE OF CONTENTS

SHEET C5.0 OVERALL SIGNAGE IMPROVEMENTS COVER SHEET

SHEET C5.1 OVERALL SIGNAGE PLAN
SHEET C5.2 OVERALL SIGNAGE PLAN
SHEET C5.3 STANDARD SIGNAGE DETAILS







CAUTION: EXISTING UNDERGROUND UTILITIES, CONTRACTOR
TO VERIFY PRIOR TO START OF ANY CONSTRUCTION.



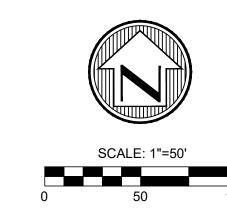
TBPELS: ENGINEERING F-5297/SURVEYING: F-10131500 12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051 SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085

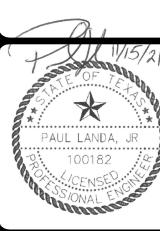
BLOCK 3

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13

MATCHLINE "A" SEE SHEET C5.2





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GENERAL NOTES:

- 1. ALL TRAFFIC SIGNS SHALL BE MANUFACTURED AND INSTALLED ACCORDING TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICE (T.M.U.T.C.D.).
- 2. INSTALL SIGNS SUCH THAT THEIR VIEW IS NOT BLOCKED BY LOW HANGING VEGETATION, UTILITY POLES, OTHER TRAFFIC SIGNS, ETC... REFER TO CITY OF SAN ANTONIO TRAFFIC SIGNAL DETAILS.
- 3. ALL PAVEMENT MARKINGS SHALL COMPLY WITH THE T.M.U.T.C.D. REFER TO CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- 4. "DEAD END" & ARROW SHALL BE PAINTED ON BOTH SIDES OF SIGN WHICH IS MOUNTED ABOVE STREET NAMES.
- 5. CUSTOM STREET SIGNS WILL BE PROVIDED AND INSTALLED BY OTHERS.

"FOR PUBLIC STREETS OUTSIDE THE CITY OF SAN ANTONIO CITY LIMITS, ALL SIGNS ARE TO BE PROVIDED BY THE CONTRACTOR DURING CONSTRUCTION. ALL PERMANENT REGULATORY AND WARNING SIGNS ARE TO BE PROVIDED AND INSTALLED BY BEXAR COUNTY. ALL STREET NAME SIGNS ARE TO BE PROVIDED AND INSTALLED BY THE DEVELOPER TO CITY

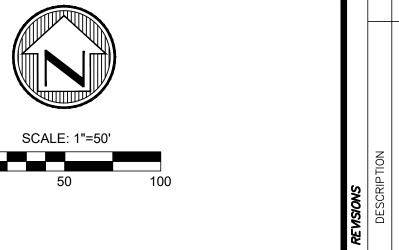
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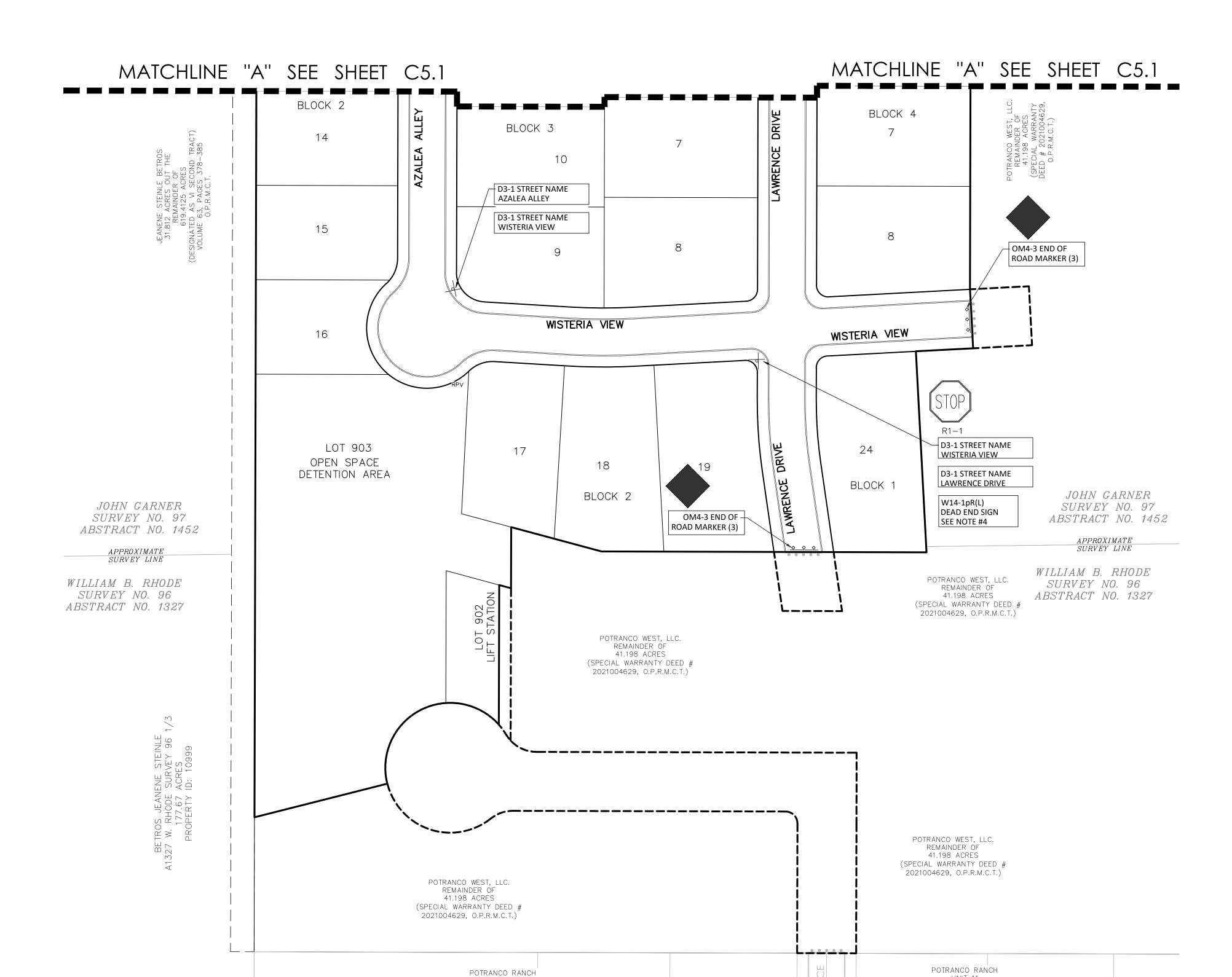
BLOCK 4

SPECIFICATIONS."

SUBMITTAL SET

SHEET





(VOL 11, PG 80, O.P.R.M.C.T.) BLOCK 11

GENERAL NOTES:

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- 2. INSTALL SIGNS SUCH THAT THEIR VIEW IS NOT BLOCKED BY LOW HANGING VEGETATION, UTILITY POLES, OTHER TRAFFIC SIGNS, ETC... REFER TO CITY OF SAN ANTONIO TRAFFIC
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PAUL LANDA, JR

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SIGN/

LEGEND

EDEN MILL

R1-1 STOP SIGN (30" X 30")

PROPOSED SIGN LOCATION

PROPOSED OM4-3 END OF ROAD MARKER

EXISTING OM4-3 END OF ROAD MARKER TO BE REMOVED

D-3 STREET NAME

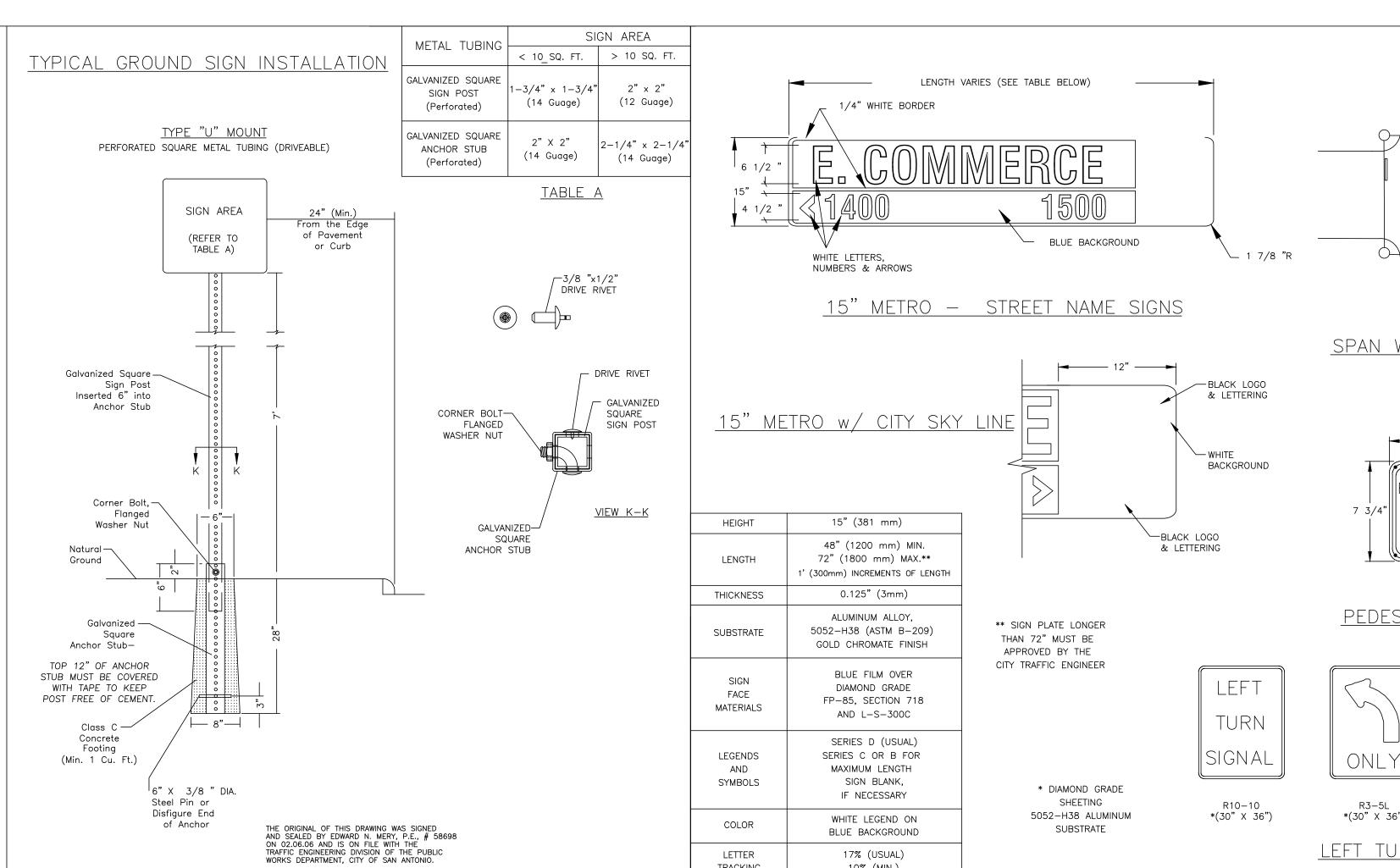
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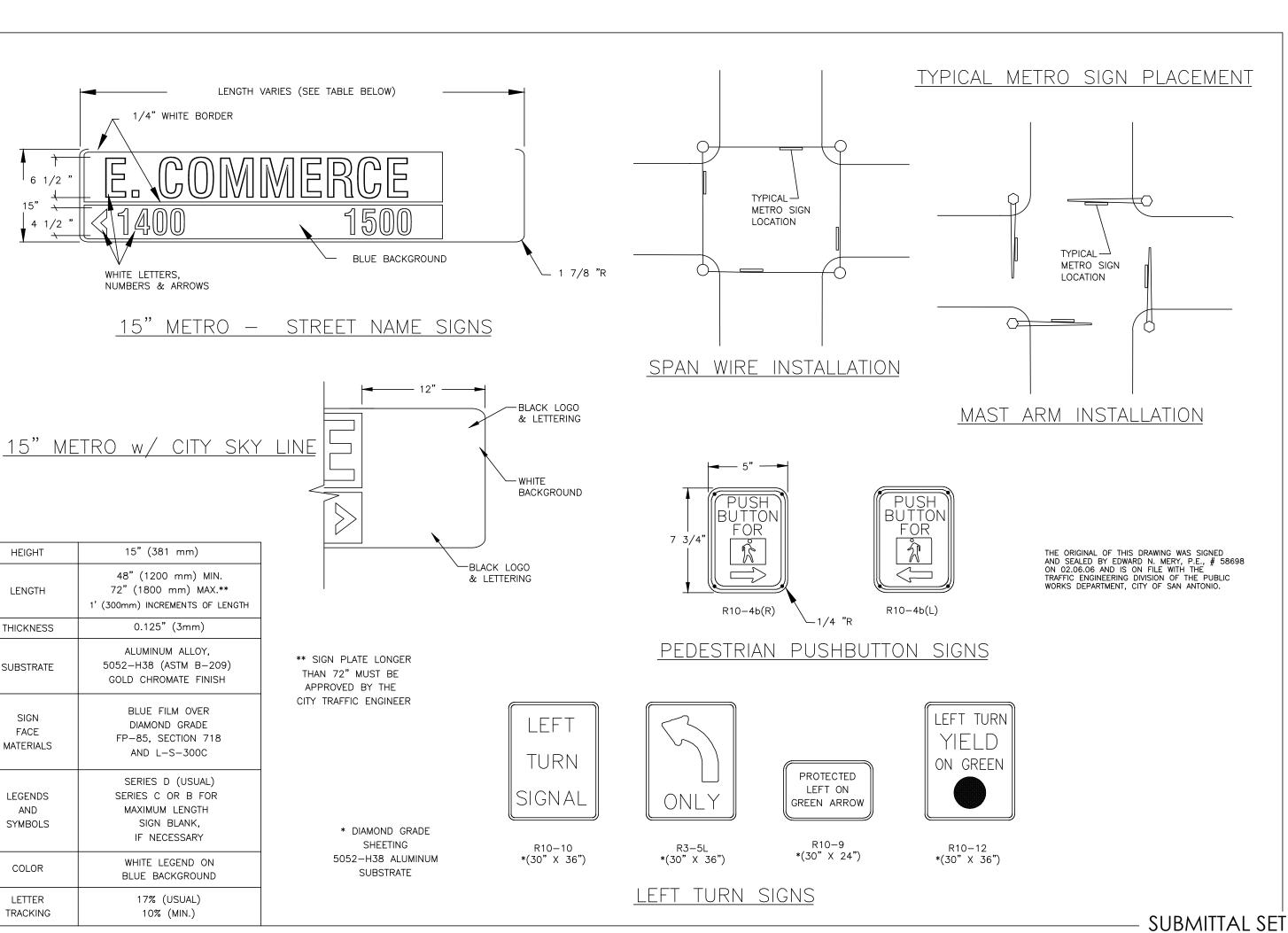
SPECIFICATIONS."

(VOL 11, PG 80, O.P.R.M.C.T.) BLOCK 10



- 1.) THE EXISTING SIGNS LOCATED ON THE JOBSITE ARE THE PROPERTY OF THE CITY OF SAN ANTONIO. THROUGHOUT THE PERIOD OF THE CONTRACT, THE CONTRACTOR SHALL PROTECT THESE SIGNS SUCH THAT THEY ARE NOT DAMAGED IN THE COURSE OF CONSTRUCTION ACTIVITY. SUCH PROTECTION SHALL INCLUDE THE PERIOD AFTER SIGNS ARE REMOVED FROM INSTALLATION AND STORED BY THE CONTRACTOR OR DELIVERED TO TRAFFIC OPERATIONS. THE ASSISTANT TRAFFIC SUPERINTENDENT (207-7765) MUST BE NOTIFIED 48 HOURS IN ADVANCE PRIOR TO DELIVERY.
- 2.) AFTER SIGNS ARE REMOVED FROM INSTALLATION AND ARE BEING STORED BY THE CONTRACTOR, THE CONTRACTOR SHALL CONTACT THE TRAFFIC OPERATIONS SECTION OF THE PUBLIC WORKS DEPARTMENT (207-7765) AND ARRANGE FOR A CONVENIENT TIME TO DELIVER CITY SIGNS AND POLES.
- 3.) PRIOR TO THE START OF CONSTRUCTION, ALL EXISTING SIGNS WITHIN THE AREA OF CONSTRUCTION WILL BE INVENTORIED AND DOCUMENTED JOINTLY BY THE TRAFFIC ENGINEERING (207-7720) CONSTRUCTION INSPECTION AND THE CONTRACTOR. THIS DOCUMENT WILL BE JOINTLY SIGNED BY BOTH PARTIES REFLECTING THE SIGN TYPE, SIGN SIZE, SIGN CONDITION, SIGN LOCATION, REFLECTIVITY ADEQUACY, ETC. THE CONTRACTOR IS HELD ACCOUNTABLE FOR THESE SIGNS THROUGHOUT THE PROJECT AND AT THE PROJECTS COMPLETION.
- 4.) ALL GROUND MOUNTED SHALL USE HIGH INTENSITY REFLECTIVE SHEETING.
- 5.) ALL OVERHEAD SIGNS SHALL USE DIAMOND GRADE REFLECTIVE SHEETING.
- 6.) ALL BLANKS TO BE ALUMINUM ALLOY NO. 5052-H38.
- 7.) "T" DENOTES THICKNESS OF SIGN BLANKS.
- 8.) ALL HOLES SHALL BE 3/8 "DIAMETER DRILLED OR PUNCHED AS SHOWN ON EACH BLANK DETAIL AND SHALL BE FREE OF BURRS AND/OR ROUGH EDGES.
- 9.) SIGN BLANK CORNERS TO BE ROUNDED AS SHOWN ON EACH
- 10.) ALL SIGN BLANK TO BE ETCHED, DEGREASED, AND HAVE AN ALODINE FINISH PRIOR TO APPLICATION OF LEGENDS.
- 11.) ALL DETAILS ARE NOT TO SCALE.
- 12.) ALL DIMENSIONS ARE IN INCHES.
- 13.) ALL SIGNS SHALL BE MANUFACTURED AND INSTALLED IN CONFORMANCE TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVISES AND STANDARD HIGHWAY SIGNS (FHWA) LATEST EDITION.
- 14.) REINSTALLATION OF PREVIOUSLY EXISTING SIGNS, WHERE REQUIRED BY THE CITY TRAFFIC ENGINEER, SHALL BE AT THE CONTRACTOR'S EXPENSE.





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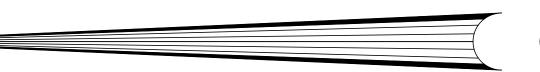
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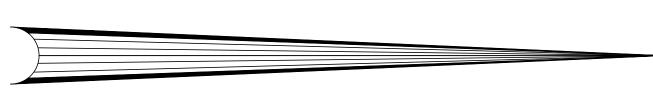
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POTRANCO WEST II, UNIT 1 SWPPP IMPROVEMENTS

POTRANCO RANCH WEST II, UNIT 1 STORM WATER POLLUTION PREVENTION QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITY
1	STABILIZED CONSTRUCTION ENTRANCE/EXIT	EA.	1
2	CONCRETE WASHOUT PIT	EA.	1
3	CONSTRUCTION STAGING AREA	LS.	1
4	SILT FENCE	L.F.	2037
5	ROCK FILTER DAM	L.F.	0
6	GRAVEL FILTER BAGS	L.F.	520

GENERAL NOTES:

WASHING — WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED STRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE USING APPROVED METHODS.

MAINTENANCE — THE ENTRANCE/EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. THIS MAY REQUIRE PERIODIC DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.

DRAINAGE — ENTRANCE/EXIT MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

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ALL CITY PUBLIC SERVICE WORK IS INCLUDED AS PART OF THE CONSTRUCTION OF THE SUBDIVISION AND HAS BEEN CONSIDERED IN THIS STORM WATER POLLUTION PREVENTION PLAN (SWPPP).

CONTRACTOR TO INSTALL AND MAINTAIN THE EROSION AND SEDIMENTATION CONTROLS AS DESIGNED AND SHALL INSPECT THE CONTROLS BI-WEEKLY (14 DAYS) AND AFTER EVERY SIGNIFICANT RAINFALL (0.5 INCHES OR GREATER) TO ENSURE SIGNIFICANT DISTURBANCE HAS NOT OCCURRED. SEDIMENT DEPOSITED AFTER A SIGNIFICANT RAINFALL SHALL BE REMOVED AND PLACED IN A DESIGNATED SOIL DISPOSAL AREA. CONTRACTOR TO ENGAGE A THIRD PARTY FIRM TO PROVIDE A DETAILED STORM WATER POLLUTION PREVENTION PLAN (SWPPP) WHICH INCLUDES INSPECTION AND REPORTING PROCEDURES.

GENERAL NOTES:

- 1. CONTRACTOR WILL INSPECT BMP'S AT LEAST TWICE A WEEK (EVERY 14 DAYS) AS WELL AS AFTER EVERY HALF INCH OR MORE OF RAINFALL. CONTROLS WILL BE REPAIRED, REPLACED, AND/OR REVISED AS NECESSARY.
- 2. CONTRACTOR TO PLACE TRENCH EXCAVATION MATERIAL ON THE UPGRADIENT (HIGH) SIDE OF THE TRENCH.
- 3. ALL SOIL, SAND, GRAVEL, AND EXCAVATED MATERIALS STOCKPILED ON—SITE WILL HAVE APPROPRIATELY SIZED SILT FENCE PLACED UPGRADIENT AND DOWN GRADIENT.

C.R. 375 C.R. 388 POTRANCO RD. WEDINA COUNTY LINE BEXAR COUNTY LINE S.H. 211 CASTROVILLE HMA. 600

VICINITY MAP

SUBMITTAL DATE: SEPTEMBER 2021

LEGAL DESCRIPTION:

A 18.052 ACRES (786,355.80 SQUARE FEET) OUT OF THE 41.198 ACRES (1,794,602.20 SQUARE FEET) TRACT OF LAND SITUATED IN THE JOHN GARNER SURVEY NO. 97, ABSTRACT NO. 1452, AND THE WILLIAM B. RHODE SURVEY NO. 96, ABSTRACT NO. 1327, MEDINA COUNTY, TEXAS, BEING A PORTION OF A REMAINDER OF A 619.4125 ACRE TRACT AS CONVEYED TO JEANENE STEINLE WILLIAMS BY LAST WILL AND TESTAMENT AS RECORDED IN VOLUME 63, PAGES 378–385 OF THE OFFICIAL PROBATE RECORDS OF MEDINA COUNTY, TEXAS.

SUBMITTED BY:

MOY TARIN RAMIREZ ENGINEERS, L 12770 CIMARRON PATH, SUITE 100 SAN ANTONIO, TEXAS 78249 TEL: (210) 698-5051 FAX: (210) 698-5085

OWNER/DEVELOPER

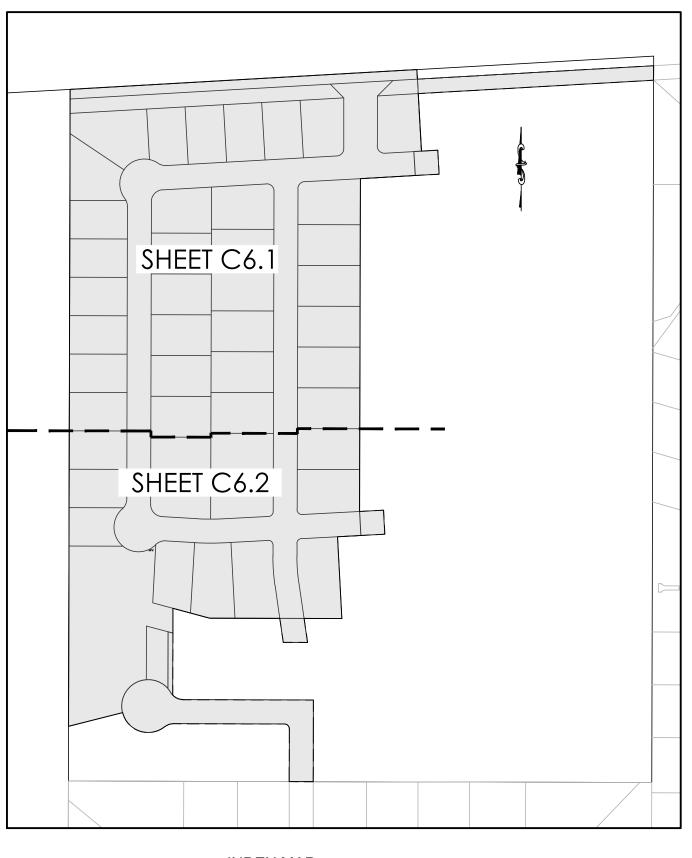
LGI HOMES-TEXAS, LLC. KENNON MASTERS, 1450 LAKE ROBBINS DRIVE, SUITE 430 THE WOODLANDS, TEXAS 77380 PH# (281) 362-8998

TABLE OF CONTENTS

STORMWATER POLLUTION PREVENTION PLANS

SHEET C6.0 STORMWATER POLLUTION PREVENTION PLAN COVER SHEET SHEET C6.1 STORMWATER POLLUTION PREVENTION PLAN SHEET C6.2 STORMWATER POLLUTION PREVENTION PLAN

SHEET C6.3 STORMWATER POLLUTION PREVENTION PLAN DETAILS

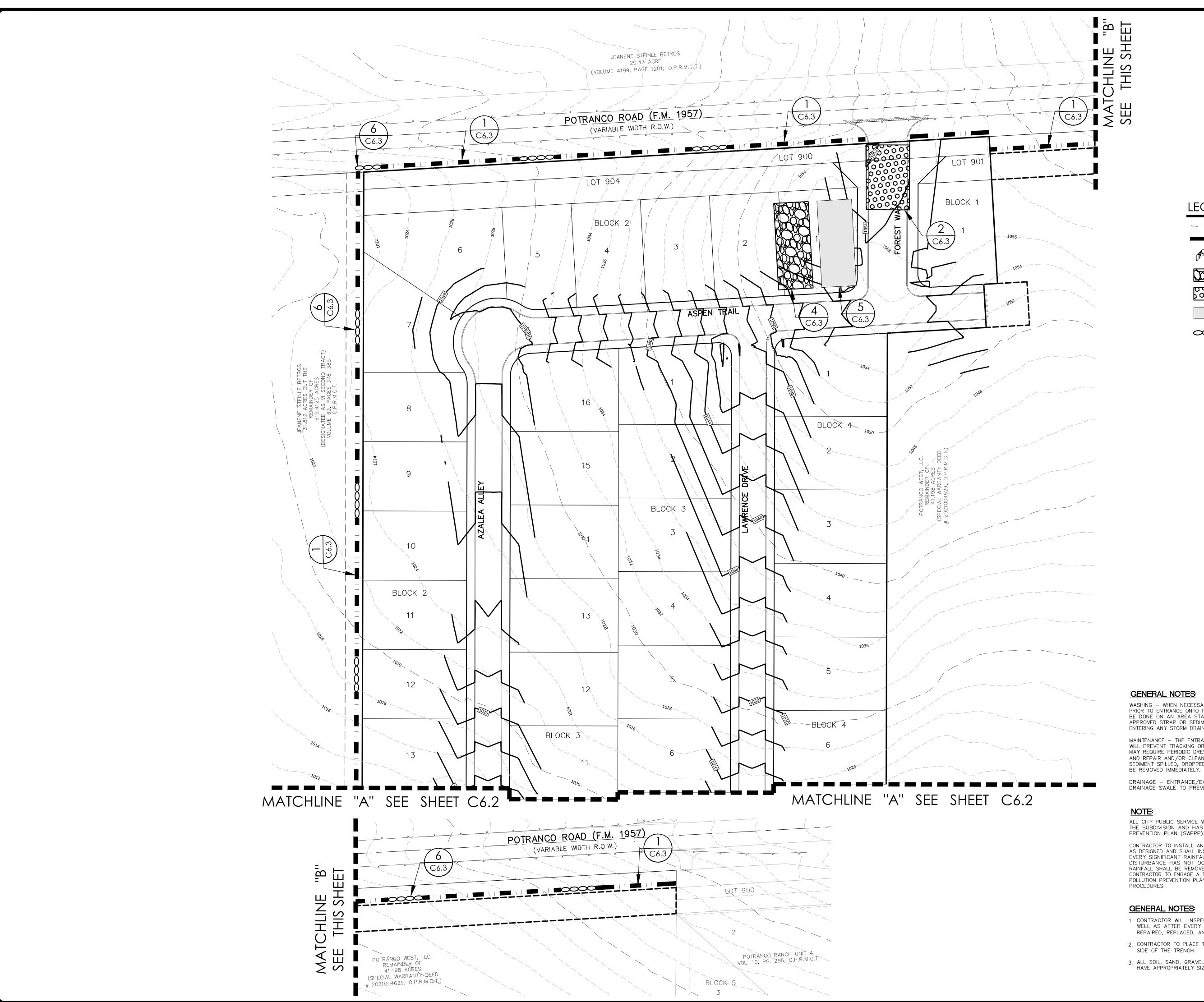


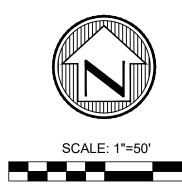
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TBPELS: ENGINEERING F-5297/SURVEYING: F-10131500 12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051 SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085







LEGEND

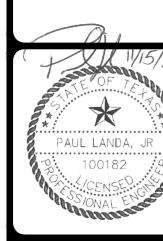
CONSTRUCTION STAGING AREA

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BAGGED GRAVEL INLET FILTER

STABILIZED CONSTRUCTION ENTRANCE/EXIT

CONCRETE WASHOUT PIT



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SWPPP

OVERALL

WASHING - WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED STRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE USING APPROVED METHODS.

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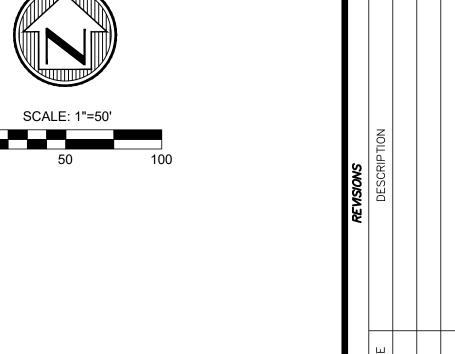
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SUBMITTAL SET

SHEET

C6.1



LEGEND

MATCHLINE "A" SEE SHEET C6.1

_____ EXISTING CONTOUR SILT FENCE ROCK BERM

CONSTRUCTION STAGING AREA

STABILIZED CONSTRUCTION ENTRANCE/EXIT

CONCRETE WASHOUT PIT

BAGGED GRAVEL INLET FILTER



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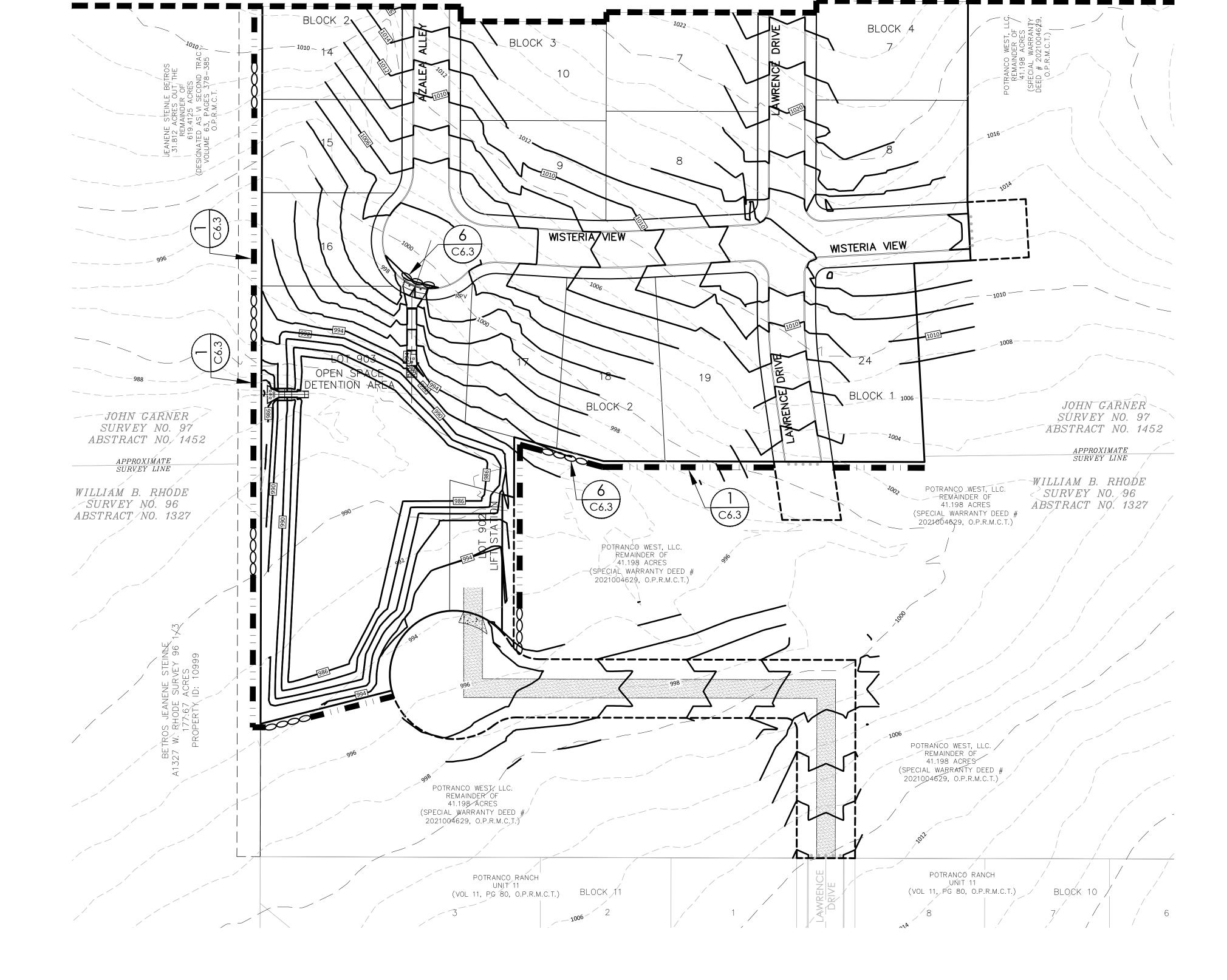
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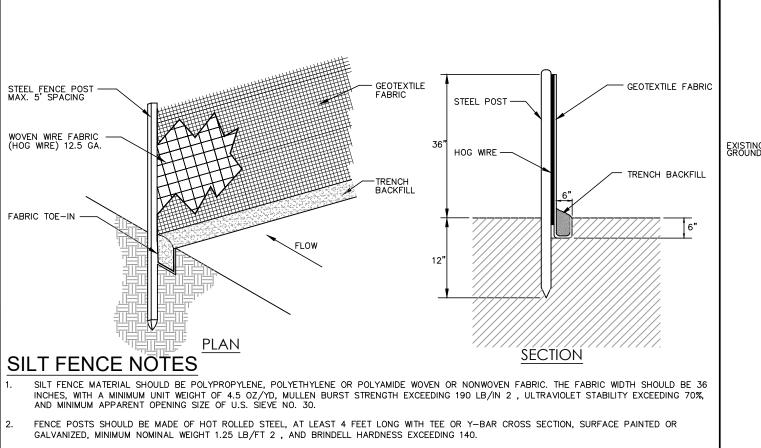
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SHEET



MATCHLINE "A" SEE SHEET C6.1

SUBMITTAL SET

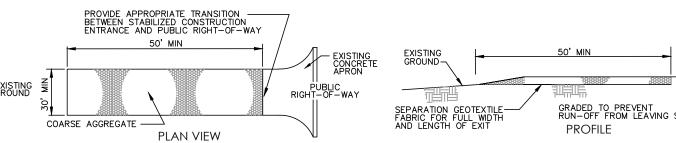


- 3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12.5 GAUGE MINIMUM.
- 4. STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 1 FOOT DEEP AND SPACED NOT MORE THAN 5 FEET ON CENTER.

 5. LAY OUT FENCING DOWN—SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT
- THE MAXIMUM DRAINAGE AREA IS 1/4 ACRE/100 FEET OF FENCE.
- THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
- 7. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
- 8. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
- 9. SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

 10. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES, OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE OLD FENCE.
- 11. REPLACE ANY TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.

 12. REPLACE OR REPAIR ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY. IF A SECTION OF FENCE IS OBSTRUCTING VEHICULAR ACCESS, CONSIDER RELOCATING IT TO A SPOT WHERE IT WILL PROVIDE EQUAL PROTECTION, BUT WILL NOT OBSTRUCT VEHICLES. A TRIANGULAR FILTER DIKE MAY BE PREFERABLE TO A SILT FENCE AT COMMON VEHICLE ACCESS POINTS.



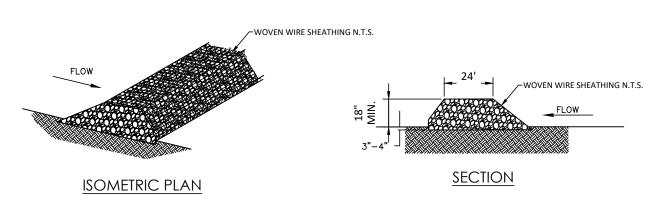
TEMPORARY CONSTRUCTION ENTRANCE/EXIT NOTES

- THE AGGREGATE SHOULD CONSIST OF 4 TO 8 INCH WASHED STONE OVER A STABLE FOUNDATION.
- 2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8 INCHES.
- 3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD 2, A MULLEN BURST RATING OF 140 LB/IN 2, AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.
- 4. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
- 5. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
- 6. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
- 7. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.

 8. PLACE STONE TO DIMENSIONS AND GRADE SHOWN. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
- 9. THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- 10. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ON TO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.11. WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.

STABILIZED CONSTRUCTION ENTRANCE / EXIT

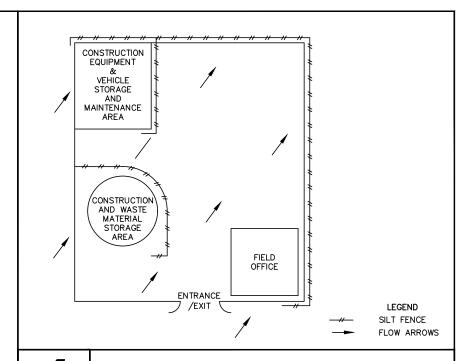
- 12. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
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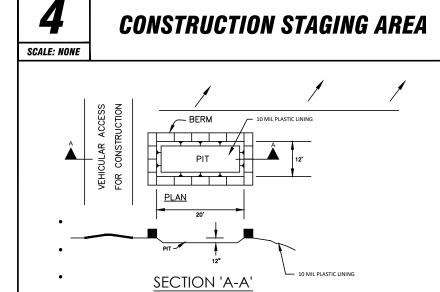


ROCK BERM NOTES

- THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOAT RINGS.
- 2. CLEAN, OPEN GRADED 3-TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5-TO 8-INCH DIAMETER ROCKS MAY BE USED.
- ARE EXPECTED, WHERE 5-TO 8-INCH DIAMETER ROCKS MAY BE USED.

 3. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE.
- 4. BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.
- 5. PLACE THE ROCK ALONG THE SHEATHING TO A HEIGHT NOT LESS THAN 18".
- 6. WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH TIE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES, AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.
- 7. BERM SHOULD BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE.
- 8. THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.
- 9. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
- 10. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT OF IN AN APPROVED MANNER AND REPAIR ANY LOOSE WIRE SHEATHING.
- THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
 THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.





GENERAL NOTES:

DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.

WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.

WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF.

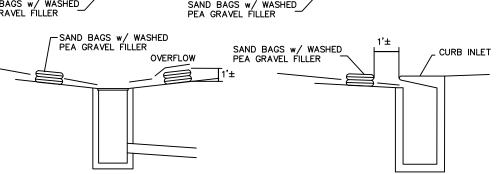
1

ROCK BERM

CONCRETE TRUCK WASHOUT PIT



ND BAGS W/ WASHED SAND BAGS W/ WASHED



SCALE: NONE

BAGGED GRAVEL INLET FILTER



WATER POLLUTION PREVENTION PLAN STANDARD DETAILS

SHEET







POTRANCO WEST II, UNIT 1 GRADING IMPROVEMENTS

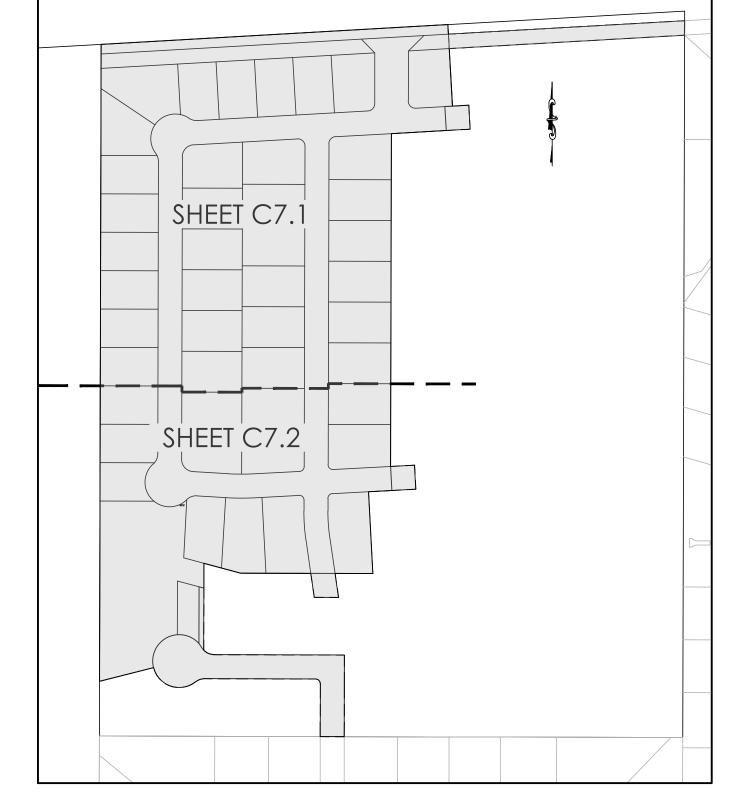
F.M. 2676 C.R. 375 POTRANCO RD. \geq \mid \square HWY. 90 **CASTROVILLE**

SUBMITTED BY:

MOY TARIN RAMIREZ ENGINEERS, LLC 12770 CIMARRON PATH, SUITE 100 SAN ANTONIO, TEXAS 78249 TEL: (210) 698-5051 FAX: (210) 698-5085

OWNER/DEVELOPER

LGI HOMES-TEXAS, LLC. 1450 LAKE ROBBINS DRIVE, SUITE 430 THE WOODLANDS, TEXAS 77380 PH# (281) 362-8998



INDEX MAP

KENNON MASTERS,

CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS

- I. WHERE A SEWER MAIN CROSSES OVER A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN NINE (9) FEET. ALL PORTIONS OF THE SEWER MAIN WITHIN NINE (9) FEET OF THE WATER LINE SHALL BE CONSTRUCTED USING 150 PSI PRESSURE RATED DUCTILE IRON, CAST IRON OR PVC PIPE AND JOINED WITH EQUALLY PRESSURE RATED PRESSURE RING GASKET CONNECTIONS OR CORROSION PROTECTED MECHANICAL COUPLING DEVICES OF A CAST IRON OR DUCTILE IRON MATERIAL. A SECTION OF 150 PSI PRESSURE RATED PIPE AT LEAST EIGHTEEN (18) FEET IN LENGTH MAY BE CENTERED ON THE WATER MAIN IN LIEU OF PIPE CONNECTION REQUIREMENTS. (NO SEPARATE PAY ITEM)
- II. WHERE A SEMI-RIGID OR RIGID SEWER MAIN CROSSES UNDER A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN NINE FEET BUT GREATER THAN TWO FEET, THE INITIAL BACKFILL SHALL BE CEMENT STABILIZED SAND (TWO OR MORE BAGS OR CEMENT PER CUBIC YARD OF SAND) FOR ALL SECTIONS OF THE SEWER WITHIN NINE FEET OF THE WATER MAIN.
- III. WHERE A SEWER MAIN CROSSES UNDER A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN TWO FEET, THE SEWER MAIN SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI WITHIN NINE FEET OF THE WATER MAIN, SHALL BE PLACED NO CLOSER THAN SIX INCHES BETWEEN OUTER DIAMETERS, AND SHALL BE JOINED WITH PRESSURE RING GASKET CONNECTIONS OR CORROSION PROTECTED MECHANICAL COUPLING DEVICES OR A CAST IRON OR DUCTILE IRON MATERIAL. A SECTION OF 150 PSI PRESSURE RATED PIPE OF A LENGTH GREATER THAN EIGHTEEN (18) FEET MAY BE CENTERED ON THE WATER MAIN IN LIEU OF PIPE CONNECTION REQUIREMENTS.
- IV. WHERE A SEWER MAIN PARALLELS A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN NINE FEET, THE SEWER MAIN SHALL BE BELOW THE WATER MAIN, SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI FOR BOTH PIPE AND JOINTS FOR A DISTANCE OF NINE FEET BEYOND THE POINT OF CONFLICT, SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE BETWEEN OUTER DIAMETERS OF TWO FEET VERTICALLY AND FOUR FEET HORIZONTALLY AND SHALL BE JOINED WITH PRESSURE RING GASKET CONNECTIONS OR CORROSION PROTECTED MECHANICAL COUPLING DEVICES OF A CAST IRON OR DUCTILE IRON MATERIALS.
- V. SANITARY SEWER MANHOLES SHALL NOT BE INSTALLED ANY CLOSER THAN NINE FEET

SUBMITTAL DATE:

SEPTEMBER 2021

VICINITY MAP

LEGAL DESCRIPTION:

A 18.052 ACRES (786,355.80 SQUARE FEET) OUT OF THE 41.198 ACRES (1,794,602.20 SQUARE FEET) TRACT OF LAND SITUATED IN THE JOHN GARNER SURVEY NO. 97, ABSTRACT NO. 1452, AND THE WILLIAM B. RHODE SURVEY NO. 96, ABSTRACT NO. 1327, MEDINA COUNTY, TEXAS, BEING A PORTION OF A REMAINDER OF A 619.4125 ACRE TRACT AS CONVEYED TO JEANENE STEINLE WILLIAMS BY LAST WILL AND TESTAMENT AS RECORDED IN VOLUME 63, PAGES 378-385 OF THE OFFICIAL PROBATE RECORDS OF MEDINA COUNTY, TEXAS.



TRENCH EXCAVATION SAFETY PROTECTION Contractor and/or Contractor's independently retained employee or structural design/geotechnical/safety/equipment consultant, if any, shall review these plans and available geotechnical information and the anticipated installation site(s) within the project work area in order to implement Contractor's trench excavation safety protection systems, programs and/or procedures for the project described in the contract documents. The Contractor's implementation of these systems, programs and/or procedures shall provide for adequate trench excavation safety protection that comply with as a minimum, OSHA standards for trench excavations. Specifically, Contractor and/or Contractor's independently retained employee or safety consultant shall

implement a trench safety program in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavation.

CAUTION: EXISTING UNDERGROUND UTILITIES, CONTRACTOR

TO VERIFY PRIOR TO START OF ANY CONSTRUCTION.

TEXAS c7.0

 Engineers Surveyors Planners Moy Tarin Ramirez Engineers, LLC

TBPELS: ENGINEERING F-5297/SURVEYING: F-10131500 12770 CIMARRON PATH, SUITE 100 SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085

MEDINA COUNTY

. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY CONTRACTOR PRIOR TO THE

CONSTRUCTION AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION

2. IT IS ESSENTIAL THAT 48 HOURS PRIOR TO CONSTRUCTION ALL UTILITY COMPANIES BE NOTIFIED TO LOCATE AND TAG THEIR UNDERGROUND FACILITIES PRIOR TO EXCAVATION.

UNDERGROUND UTILITIES. ALSO, THE CONTRACTOR MUST ALLOW FOR CHANGES DUE TO UTILITIES BEING IN LOCATIONS DIFFERENT FROM THOSE SHOWN ON THE UTILITY RECORD DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND EXPOSING

NON-EDWARD'S AQUIFER RECHARGE ZONE

3. THE CONTRACTOR NEEDS TO ALLOW FOR THE POSSIBILITY OF UNDETECTED

OF SAME DURING CONSTRUCTION.

CONFLICTS PRIOR TO CONSTRUCTION.

following as applicable, unless otherwise specified on the plans:

protect the same during construction. Yancey Water Supply Corporation

COSA Traffic Signal Operations Texas State Wide One Call Locator

TXDOT (Hondo)

South Western Bell

Time Warner Cable

Valero Energy Co

capped and sealed.

No blasting is allowed.

WATER LINE CROSSING

EXCAVATION

1. All materials and construction procedures within the scope of this project shall comply with the

C. Current TxDOT "Standard Specification for Construction of Highways, Streets and Drainage".

2. The Contractor shall not proceed with any pipe installation work until they obtain a copy of the approval letter from T.C.E.Q.. Contractor is responsible for coordinating construction inspections

3. The locations and depths of existing utilities, including service laterals, and drainage structures shown on the plans are approximate only. The Contractor shall verify the exact location and depths

of underground utilities at least 48 hours prior to construction whether shown on plans or not, and to

4. The Contractor shall be responsible for restoring to its original or better condition from damage done

5. The Contractor shall avoid cutting roots larger than one inch in diameter when excavating near

6. The Contractor shall maintain service to existing sanitary sewers at all times during construction

7. Due to Federal Regulations Title 49, Part 192.181, City Public Service must maintain access to gas

valves at all times. The Contractor must protect and work around gas valves that are in the project

8. All residential sewer service laterals shall be extended past the property line to the easement line and

10. After construction, testing will be done by TV camera by the contractor and observed by Inspector, and

personnel, as the camera is run through the lines. Any abnormalities, such as broken pipe or misaligned joints, must be replaced by the Contractor at his expense. Contractor to provide TV tapes to Construction inspection for review prior to final inspection of the project.

to existing fences, curbs, streets, driveways, landscaping and structures.

existing trees. Excavation in vicinity of trees shall proceed with caution.

11. Contractor and/or Contractor's independently retained employee or structural

obtaining an approved Flood Plain Development Permit.

EROSION AND SEDIMENTATION CONTROL

design/geotechnical/safety/equipment consultant, if any, shall review these plans and available geotechnical information and the anticipated installation site(s) within the project work area in order

The Contractor's implementation of the systems, programs and/or procedures shall provide for

safety consultant shall implement a trench safety program in accordance with OSHA Standards governing the presence and activities of individuals working in and around trench excavation.

Contractor shall not permanently place any waste materials in the 100-year flood plain without first

13. Where the minimum 9 foot separation distance between sewer lines and water lines/mains cannot be

maintained, the installation of sewer lines shall be in strict accordance with the T.C.E.Q.'s Rules (30

14. The Texas Commission on Environmental Quality and Environmental Protection Agency (EPA)

15. All temporary erosion and sedimentation controls shall be removed by the Contractor at final

16. No extra-payment shall be allowed for work called for on the plans but not included on the bid schedule. This incidental work will be required and shall be included under the pay item to which it

17. All PVC Sewer Pipe with over 14 feet of cover shall be extra strength pipe, Minimum Stiffness of

the test results performed by a third party. Compaction tests will be done at one location point

19. The Contractor shall provide copies of all test results to the inspector, Consultant and Owner.

18. The Contractor shall be responsible for meeting 98% compaction on all trench backfill and paying for

randomly selected or as indicated by the inspector/Test Administrator, per each 12 inch loose lift per

acceptance of the project by the County and Owner/Owner Representatives.

require erosion and sedimentation control for construction of sewer collection systems. Developer

or authorized representative shall provide erosion and sedimentation control as notes on the project's

12. Contractor is responsible for removal of all waste materials upon project completion. The

to implement Contractor's trench excavation safety protection systems, programs and/or procedures.

adequate trench excavation safety protection that complies with as a minimum, OSHA Standards for

trench excavations. Specifically, Contractor and/or Contractor's independently retained employee or

(830) 741-5264

1-800-545-6005

(830) 741-8024

B. Current "San Antonio Water System Standard Specifications for Construction".

A. Current Texas Commission on Environmental Quality's (T.C.E.Q.) Design Criteria for Sewerage Systems

2. CLEARING THE AREA TO BE FILLED ALL TIMBER, LOGS, TREES, BRUSH AND RUBBISH SHALL BE REMOVED FROM

3. SCARIFYING THE AREA TO BE FILLED

ALL ORGANIC MATTER SHALL BE REMOVED FROM THE SURFACE UPON WHICH THE FILL IS TO BE PLACED, AND THE SURFACE SHALL THEN BE DISKED OR SCARIFIED TO A MINIMUM DEPTH OF SIX INCHES (6"), ALL SURFACE RUTS OR OTHER UNEVEN FEATURES WILL BE LEVELED PRIOR TO FIELD DENSITY TESTING. WHERE FILLS ARE MADE ON HILLSIDES OR SLOPES, THE SLOPE OF THE ORIGINAL GROUND UPON WHICH THE FILL IS TO BE PLACED SHALL BE DISKED OR SCARIFIED. WHERE THE SLOPE RATIO OF THE ORIGINAL GROUND IS STEEPER THAN 5 HORIZONTAL TO 1 VERTICAL, THE BANK SHALL BE STEPPED OR BENCHED. GROUND SLOPES WHICH ARE FLATTER THAN 5 TO 1 SHALL BE BENCHED WHEN CONSIDERED NECESSARY BY THE GEOTECHNICAL

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FOLLOWING THE CLEARING AND DISKING OR SCARIFYING OF THE FILL AREA, IT SHALL BE BLADED UNTIL IT IS UNIFORM AND FREE FROM LARGE CLODS. THE AREA SHALL BE BROUGHT TO THE ADEQUATE MOISTURE CONTENT AND COMPACTED (TYPICALLY) TO NOT LESS THAN NINETY PERCENT (90%) OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CURRENT ASTM D 1557 COMPACTION PROCEDURE, OR 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CURRENT THD--TEX--113--E COMPACTION PROCEDURE.

5. FILL MATERIALS

THE MATERIALS USED SHALL BE FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES, SUCH AS TREES, BRUSH AND RUBBISH, AND SHALL NOT CONTAIN ROCKS OR LUMPS HAVING A DIAMETER OF MORE THAN SIX INCHES (6").

6. DEPTH AND MIXING OF FILL LAYERS

THE SELECTED FILL MATERIAL SHALL BE PLACED IN LEVEL, UNIFORM LAYERS WHICH, WHEN COMPACTED, SHALL HAVE A DENSITY CONFORMING TO THAT STIPULATED ABOVE. EACH LAYER SHALL BE THOROUGHLY MIXED DURING THE SPREADING TO ENSURE UNIFORMITY OF MATERIAL IN EACH LAYER. COMPACTED LAYER THICKNESS MAY VARY DEPENDING ON THE COMPACTION EQUIPMENT OF DEMONSTRATED CAPABILITY. THE MAXIMUM LOOSE DEPTH FOR ANY MATERIAL SHALL NOT EXCEED TWELVE INCHES (12"). FOR TESTING REQUIREMENTS OF FILL MATERIAL, SEE DENSITY TESTING.

WHEN FILL MATERIAL INCLUDES ROCK, THE MAXIMUM ROCK SIZE SHALL BE AS APPROVED BY THE GEOTECHNICAL ENGINEER. NO LARGE ROCKS SHALL BE ALLOWED TO NEST AND ALL VOIDS MUST BE FILLED WITH SMALL STONES OR SOIL AND ADEQUATELY COMPACTED. NO LARGE ROCKS WILL BE PERMITTED WITHIN EIGHTEEN INCHES (18") OF THE FINISHED GRADE.

8. COMPACTION OF FILL LAYER

COMPACTION EQUIPMENT SHALL BE CAPABLE OF COMPACTING THE FILL TO THE SPECIFIED DENSITY. COMPACTION SHALL BE ACCOMPLISHED WHILE THE FILL MATERIAL IS AT OR NEAR THE APPROPRIATE MOISTURE CONTENT. COMPACTION OF EACH LAYER SHALL BE CONTINUOUS OVER THE ENTIRE STRUCTURAL AREA (BENEATH PROPOSED STRUCTURES).

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THE FACES OF FILL SLOPES SHALL BE COMPACTED. COMPACTING OPERATIONS SHALL BE CONTINUED UNTIL THE SLOPE FACES ARE STABLE BUT NOT TOO DENSE FOR PLANTING ON THE SLOPES. COMPACTION OF THE SLOPE FACES MAY BE DONE PROGRESSIVELY IN INCREMENTS OF THREE TO FIVE FEET (3' TO 5') IN FILL HEIGHT AS THIS FILL PROGRESSES OR AFTER THE FILL HAS BEEN BROUGHT TO ITS TOTAL HEIGHT.

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11. DENSITY TESTS

FIELD DENSITY TESTS SHALL BE PERFORMED ON LAYERS OF FILL WHEN THE FILL IS BEING PLACED AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE MAXIMUM FILL HEIGHT BETWEEN DENSITY TESTING SHALL BE TWELVE INCHES (12") AND AS SPECIFIED BY GEOTECHNICAL ENGINEER. ALL TESTING SHALL BE REQUESTED BY THE CONTRACTOR TO MEET THE CONTRACTOR'S CONSTRUCTION SCHEDULE. NOTIFICATION BY THE CONTRACTOR FOR GEOTECHNICAL ENGINEER TO CONDUCT TESTS SHALL BE AT LEAST THE DAY BEFORE. THIS NOTIFICATION SHALL INCLUDE THE FILL AREA LOCATION (LOT AND BLOCK), THE LIFT OR HEIGHT OF FILL AND APPROXIMATE DESIRED TIME OF TESTING. WHEN THESE TESTS INDICATE THAT THE DENSITY OF ANY LAYER OF FILL OR PORTION THEREOF IS BELOW THE REQUIRED DENSITY, THE PARTICULAR LAYER OR PORTION SHALL BE REWORKED AND RETESTED AT THE EXPENSE OF THE CONTRACTOR UNLESS THE CONTRACTOR CAN SHOW EVIDENCE THAT CIRCUMSTANCES BEYOND HIS CONTROL REQUIRED THE RETESTING. GENERALLY, THE SPECIFIC TESTING WILL BE AS FOLLOWS AND CONDUCTED BY GEOTECHNICAL ENGINEER.

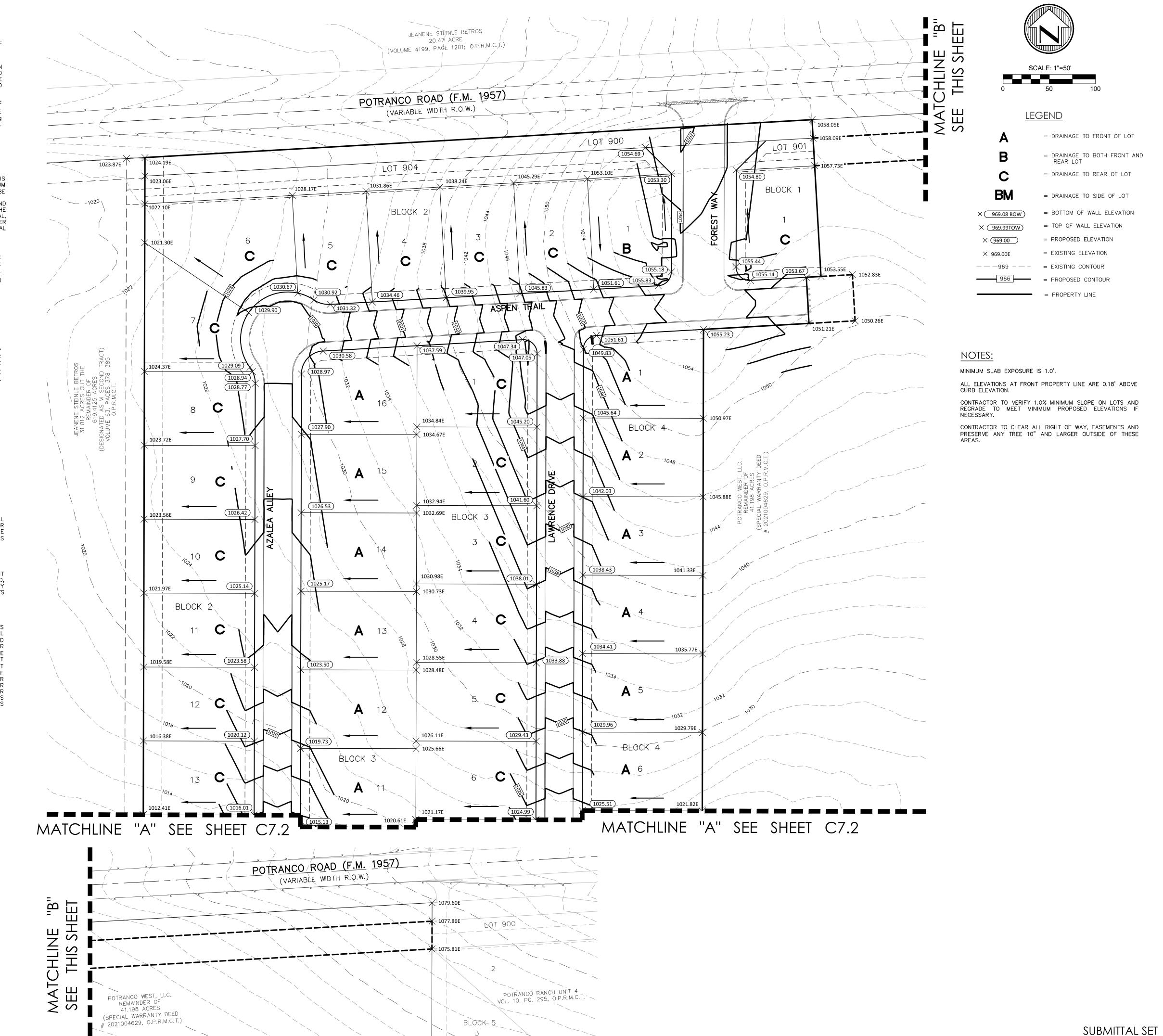
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12. CUT/FILL LOTS

CONTRACTOR OF ALL TEST RESULTS.

AREAS INVOLVING CUT ON ONE PORTION AND FILL ON ANOTHER PORTION OF A SPECIFIC LOT SHALL BE PREPARED TO A MINIMUM DEPTH OF 6-IN. AND WILL BE THE SAME MATERIAL CLASSIFICATION AT THE SAME COMPACTION AND MOISTURE CONTENT. A MINIMUM OF TWO (2) FIELD DENSITY TESTS SHALL BE REQUIRED ON EACH CUT/FILL LOT FOR THE PURPOSE OF DETERMINING UNIFORMITY OF THE AREA SUPPORTING THE PROPOSED STRUCTURES.



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PAUL LANDA, JF

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1. GENERAL DESCRIPTION

THIS ITEM SHALL CONSIST OF ALL CLEARING AND GRUBBING, DEMOLITION, PREPARATION OF LAND TO BE FILLED, FILLING OF THE LAND, SPREADING, COMPACTION TESTING AND INSPECTION OF THE FILL, AND ALL SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING OF THE CUT AND FILL AREAS TO CONFORM WITH THE LINES, GRADES AND SLOPES AS SHOWN ON THE APPROVED PLANS.

ALL LOT GRADING MUST MEET REQUIREMENTS OF FHA/HUD HANDBOOK 4140.3, SPECIFICATIONS FOR LAND DEVELOPMENTS ON CONTROLLED EARTHWORK, DATASHEET 79g. HUD 79g REQUIREMENTS FOR FILL MATERIAL OF 6 INCHES AND MORE WILL BE CONDUCTED. ALL CUT AREAS WILL ALSO MEET THE REQUIREMENTS FOR HUD 79g COMPACTION TESTING. IN ADDITION, ENGINEERS MUST PROVIDED VERIFICATION OF ALL AREAS WHICH DO NOT REQUIRE HUD 79g.

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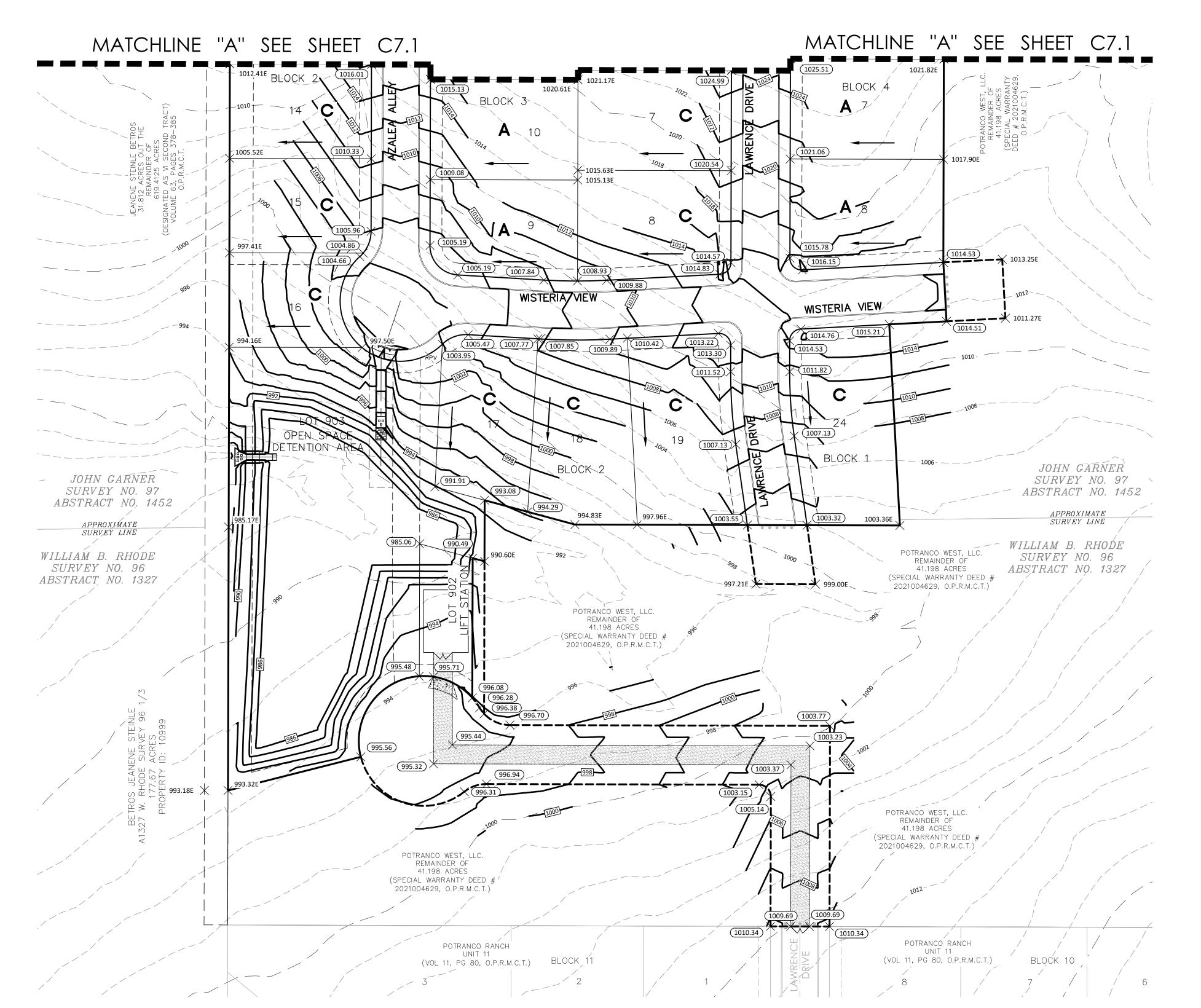
4. TEST RESULTS WILL BE PROVIDED BY THE FIELD TECHNICIAN TO THE CONTRACTOR WHEN POSSIBLE; HOWEVER, ALL TEST RESULTS ARE TO BE REVIEWED

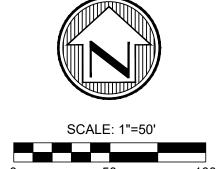
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50

<u>LEGEND</u>

= DRAINAGE TO FRONT OF LOT

= DRAINAGE TO BOTH FRONT AND

C

= DRAINAGE TO SIDE OF LOT

× 969.08 BOW

× 969.99TOW

× 969.00

= BOTTOM OF WALL ELEVATION = TOP OF WALL ELEVATION

= DRAINAGE TO REAR OF LOT

= PROPOSED CONTOUR

= PROPOSED ELEVATION

= PROPERTY LINE

<u>NOTES:</u>

MINIMUM SLAB EXPOSURE IS 1.0'.

ALL ELEVATIONS AT FRONT PROPERTY LINE ARE 0.18' ABOVE CURB ELEVATION.

CONTRACTOR TO VERIFY 1.0% MINIMUM SLOPE ON LOTS AND REGRADE TO MEET MINIMUM PROPOSED ELEVATIONS IF

CONTRACTOR TO CLEAR ALL RIGHT OF WAY, EASEMENTS AND PRESERVE ANY TREE 10" AND LARGER OUTSIDE OF THESE AREAS.

O DATE DESCRIPTION

PROJ. # DGN. BY: CHK

Moy Tarin Ramirez Engil TBPELS: ENGINEERING F-5297/SURVEY 12770 CIMARRON PATH, SUITE 100 TEL: SAN ANTONIO, TEXAS 78249

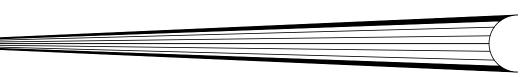


POTRANCO WEST II, UNIT 1
LL GRADING IMPROVEMENTS PLAN

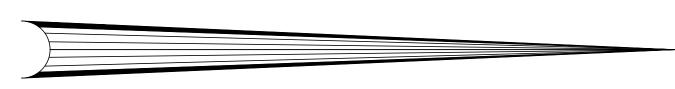
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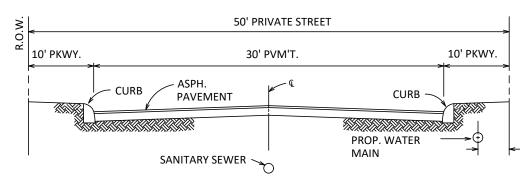
POTRANCO WEST II, UNIT 1 CLEARANCE IMPROVEMENTS

CLEARING NOTES

1. LOCATIONS OF CLEARING ESTIMATED BASED ON LOCATIONS OF ALL UTILITIES AND EXTENT OF GRADING. CONTRACTOR RESPONSIBLE TO CLEAR AREAS AS REQUIRED FOR INSTALLATION OF ALL IMPROVEMENTS. NO ADDITIONAL PAYMENT WARRANTED FOR CLEARING BEYOND AREAS IDENTIFIED ON PLAN DUE TO MEANS AND METHODS

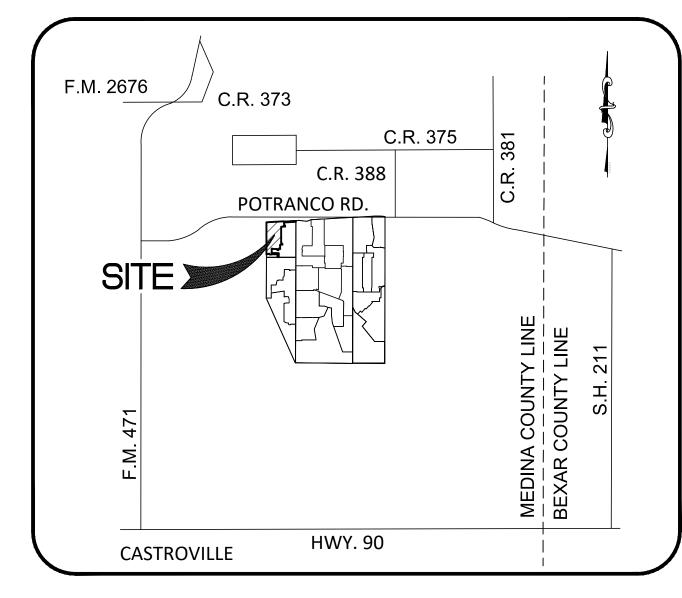
UTILITY GENERAL NOTES

- LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF ALL UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR T CONSTRUCTION WHETHER SHOWN ON THE PLANS OR NOT. CONTRACTOR SHALL PROTECT
- ALL SPOIL AND UNUSABLE MATERIAL FROM THIS PROJECT SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS
- AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THE PROJECT. CONSTRUCTION STAKING TO BE PROVIDED BY CONSULTANT IS AS FOLLOWS:
- STREET CENTERLINE STAKING FOR CLEARING. STREET STAKING (ONE SIDE) FOR STREET EXCAVATION AND WATER MAIN INSTALLATION.
- SEWER STAKING AT 100-FT INTERVALS. STAKING FOR WATER SERVICES. STAKING FOR DRAINAGE CHANNELS.
- FINAL STREET STAKING. METER BOX STAKING.
- CPS STAKING.



TYPICAL STREET SECTION

AREA TO BE CLEARED - 12.113 AC.

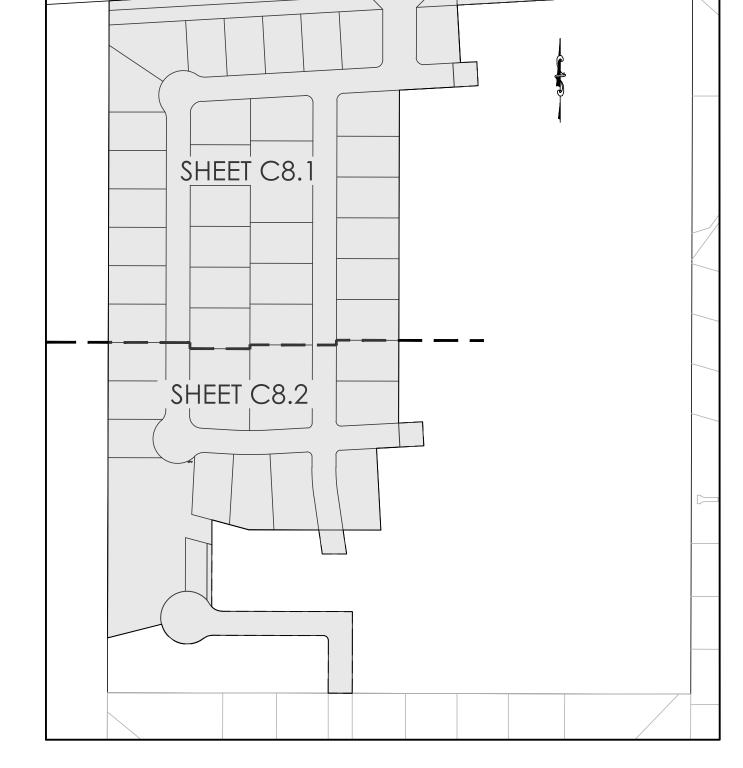


VICINITY MAP

SUBMITTAL DATE: SEPTEMBER 2021

LEGAL DESCRIPTION:

A 18.052 ACRES (786,355.80 SQUARE FEET) OUT OF THE 41.198 ACRES (1,794,602.20 SQUARE FEET) TRACT OF LAND SITUATED IN THE JOHN GARNER SURVEY NO. 97, ABSTRACT NO. 1452, AND THE WILLIAM B. RHODE SURVEY NO. 96, ABSTRACT NO. 1327, MEDINA COUNTY, TEXAS, BEING A PORTION OF A REMAINDER OF A 619.4125 ACRE TRACT AS CONVEYED TO JEANENE STEINLE WILLIAMS BY LAST WILL AND TESTAMENT AS RECORDED IN VOLUME 63, PAGES 378-385 OF THE OFFICIAL PROBATE RECORDS OF MEDINA COUNTY, TEXAS.



INDEX MAP NOT TO SCALE

PAUL LANDA, JR 100182

SUBMITTED BY:

MOY TARIN RAMIREZ ENGINEERS, LLC. 12770 CIMARRON PATH, SUITE 100 SAN ANTONIO, TEXAS 78249 TEL: (210) 698-5051 FAX: (210) 698-5085

OWNER/DEVELOPER

LGI HOMES-TEXAS, LLC. KENNON MASTERS, 1450 LAKE ROBBINS DRIVE, SUITE 430 THE WOODLANDS, TEXAS 77380 PH# (281) 362-8998



TBPELS: ENGINEERING F-5297/SURVEYING: F-10131500 12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051 SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085

TYPICAL STREET SECTION



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SUBMITTAL SET

— PROPOSED SANITARY SEWER MAIN PROPOSED WATER MAIN STREET LIGHT AREA TO BE CLEARED

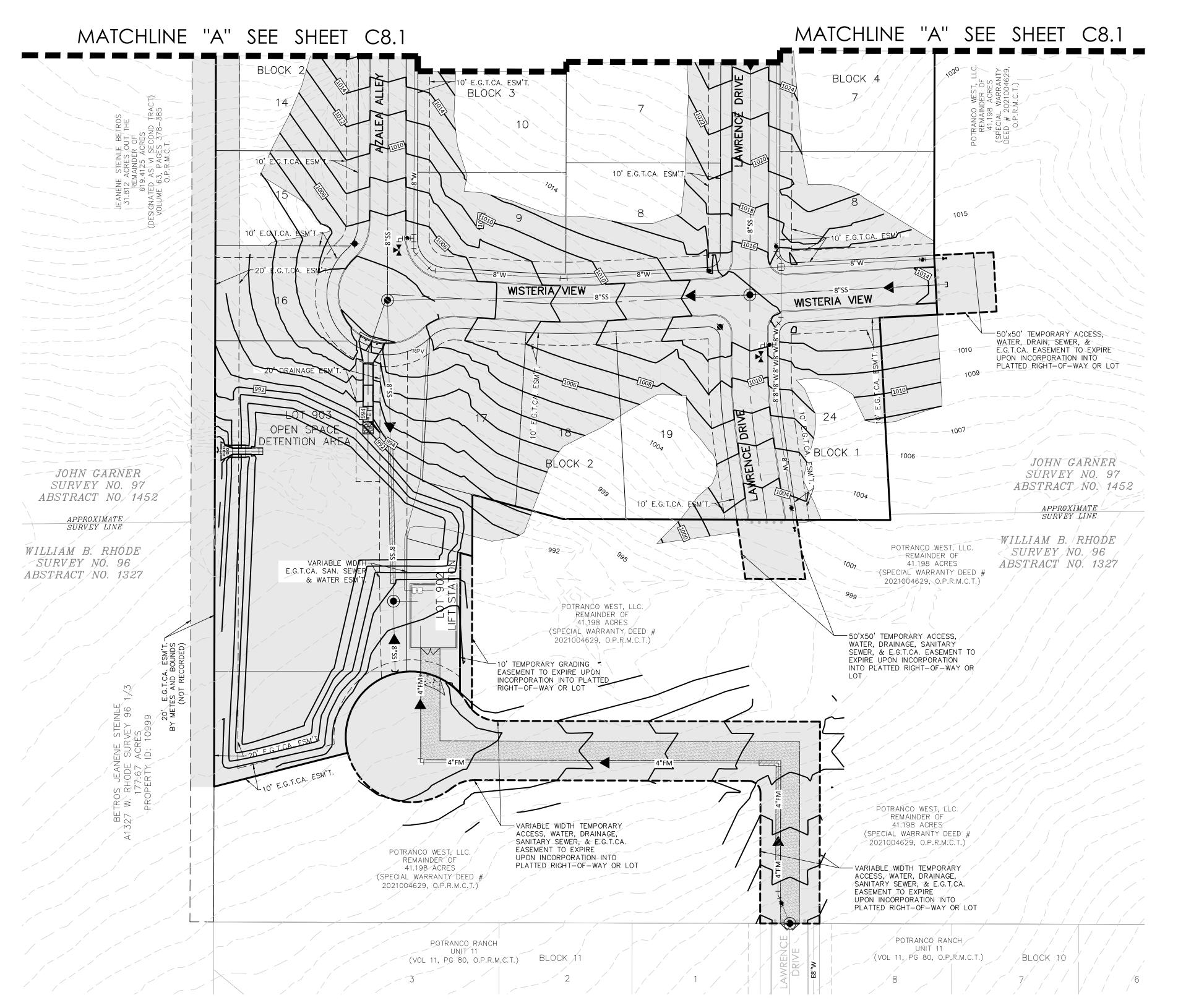
CLEARING NOTES

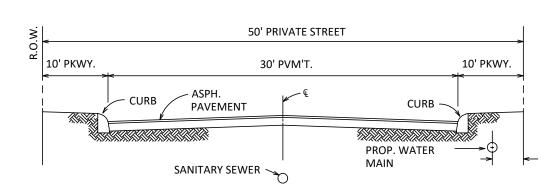
LOCATIONS OF CLEARING ESTIMATED BASED ON LOCATIONS OF ALL UTILITIES AND EXTENT OF GRADING. CONTRACTOR RESPONSIBLE TO CLEAR AREAS AS REQUIRED FOR INSTALLATION OF ALL IMPROVEMENTS. NO ADDITIONAL PAYMENT WARRANTED FOR CLEARING BEYOND AREAS IDENTIFIED ON PLAN DUE TO MEANS AND METHODS EMPLOYED BY CONTRACTOR.

UTILITY GENERAL NOTES

- 1. LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF ALL UNDERGROUND UNDERGOOD TO CONSTRUCT ON THE PLANT OF THE PROPERTY OF THE PROPERT CONSTRUCTION WHETHER SHOWN ON THE PLANS OR NOT. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES. 2. ALL EXCAVATION IS UNCLASSIFIED. THERE IS NO ADDITIONAL PAYMENT FOR ROCK
- EXCAVATION. 3. ALL SPOIL AND UNUSABLE MATERIAL FROM THIS PROJECT SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE.

 4. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS
- AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THE PROJECT.
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 STAKING FOR WATER SERVICES.
 STAKING FOR DRAINAGE CHANNELS.
 FINAL STREET STAKING.
- METER BOX STAKING.
- CPS STAKING. SETTING OF LOT CORNERS.





TYPICAL STREET SECTION

AREA TO BE CLEARED - 12.113 AC.

SUBMITTAL SET

SHEET

水

PAUL LANDA, JR

100182

IMPROVEMENTS

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OVER/

C8.2

- 1. A LIFT STATION PUMP MUST OPERATE AUTOMATICALLY, BASED ON THE WATER LEVEL IN A
- 2. THE LOCATION OF A WET WELL LEVEL MECHANISM MUST ENSURE THAT THE MECHANISM IS UNAFFECTED BY CURRENTS, RAGS, GREASE, OR OTHER FLOATING
- 3. A LEVEL MECHANISM MUST BE ACCESSIBLE WITHOUT ENTERING THE WET WELL. 4. WET WELL CONTROLS WITH A BUBBLER SYSTEM REQUIRE DUAL AIR SUPPLY AND DUAL
- 5. MOTOR CONTROL CENTERS MUST BE MOUNTED AT LEAST 4.0 INCHES ABOVE GRADE TO PREVENT WATER INTRUSION AND CORROSION FROM STANDING WATER IN THE
- 6. ELECTRICAL EQUIPMENT AND ELECTRICAL CONNECTIONS IN A WET WELL OR A DRY WELL MUST MEET NATIONAL FIRE PREVENTION ASSOCIATION 70 NATIONAL ELECTRIC CODE EXPLOSION PREVENTION REQUIREMENTS, UNLESS CONTINUOUS VENTILATION
- 7. HOUSING FOR ON-SITE MECHANICAL EQUIPMENT AND ANY ASSOCIATED CONTROL
- MECHANISMS MUST BE: LOCKABLE OR TAMPER-RESISTANT;
- CONSTRUCTED OF CORROSION RESISTANT MATERIAL; AND DESIGNED TO LAST AT LEAST 50 YEARS.

- 1. A WET WELL MUST BE ENCLOSED BY WATERTIGHT AND GAS TIGHT WALLS.
- 2. A PENETRATION THROUGH A WALL OF A WET WELL MUST BE GAS TIGHT.
- 3. A WET WELL MUST NOT CONTAIN EQUIPMENT REQUIRING REGULAR OR ROUTINE INSPECTION OR MAINTENANCE, UNLESS INSPECTION AND MAINTENANCE CAN BE DONE WITHOUT STAFF ENTERING THE WET WELL.
- 4. A GRAVITY PIPE DISCHARGING TO A WET WELL MUST BE LOCATED SO THAT THE INVERT ELEVATION IS ABOVE THE LIQUID. LEVEL OF A PUMP'S "ON" SETTING.
- 5. GATE VALVES AND CHECK VALVES ARE PROHIBITED IN A WET WELL. 6. GATE VALVES AND CHECK VALVES MAY BE LOCATED IN A VALVE VAULT NEXT TO A WET
- 7. ALL MECHANICAL AND ELECTRICAL EQUIPMENT IN A WET WELL WITH PASSIVE VENTILATION MUST BE CONSTRUCTED IN COMPLIANCE WITH EXPLOSION REQUIREMENTS
- IN THE NATIONAL FIRE PROTECTION ASSOCIATION 70 NATIONAL ELECTRIC CODE. 8. THE MINIMUM ACCEPTABLE DIAMETER FOR AN AIR VENT IS 4.0 INCHES.
- 9. A VENT OUTLET MUST BE AT LEAST 1.0 FOOT ABOVE A 100-YEAR FLOOD PLAIN ELEVATION 10. A WET WELL FLOOR MUST HAVE A SMOOTH FINISH AND MINIMUM SLOPE OF 10% TO A
- 11. A WET WELL DESIGN MUST PREVENT DEPOSITION OF SOLIDS UNDER NORMAL OPERATING CONDITIONS
- A LIFT STATION MUST HAVE PERMANENT HOISTING EQUIPMENT OR BE ACCESSIBLE TO PORTABLE HOISTING EQUIPMENT FOR REMOVAL OF PUMPS, MOTORS, VALVES, PIPES, AND OTHER SIMILAR EQUIPMENT.
- SUBMERSIBLE PUMP RAILS AND LIFTING CHAINS MUST BE CONSTRUCTED OF A MATERIAL THAT PERFORMS TO AT LEAST THE STANDARD OF SERIES 300 STAINLESS STEEL. 13. A NON-SUBMERSIBLE PUMP MUST HAVE INSPECTION AND CLEANOUT PLATES ON BOTH THE .SUCTION AND DISCHARGE SIDES OF EACH PUMPING UNIT THAT FACILITATE LOCATING AND REMOVING BLOCKAGE-CAUSING MATERIALS, UNLESS THE PUMP DESIGN

- 1. EACH PUMP MUST HAVE A SEPARATE SUCTION PIPE THAT USES AN ECCENTRIC REDUCER. 2. PIPES IN A WET WELL MUST HAVE A TURNDOWN TYPE FLARED INTAKE.
- VALVES. THE DISCHARGE SIDE OF EACH PUMP FOLLOWED BY A FULL-CLOSING ISOLATION VALVE MUST ALSO HAVE A CHECK VALVE. A CHECK VALVE MUST BE A SWING TYPE VALVE WITH AN EXTERNAL LEVER.
- A VALVE MUST INCLUDE A POSITION INDICATOR TO SHOW ITS OPEN AND CLOSED POSITIONS, UNLESS A FULL-CLOSING VALVE IS A RISING-STEM GATE VALVE. A BUTTERFLY VALVE, TILTING-DISC CHECK VALVE, OR ANY OTHER VALVE USING A TILTING-DISC IN A FLOW PIPE IS
- PROHIBITED. (A) A LIFT STATION PIPE MUST HAVE FLANGED OR FLEXIBLE CONNECTIONS TO ALLOW FOR
- WITHOUT INTERRUPTION OF THE LIFT STATION OPERATIONS. (B) WALL PENETRATIONS MUST ALLOW FOR PIPE FLEXURE WHILE

ACCOMMODATES EASY REMOVAL OF THE ROTATION ELEMENTS.

EMERGENCY PROVISIONS FOR LIFT STATIONS

EXCLUDING EXFILTRATION OR INFILTRATION.

REMOVAL OF PUMPS AND VALES

1. A COLLECTION SYSTEM LIFT STATION MUST BE EQUIPPED WITH A TESTED QUICK-CONNECT MECHANISM OR A TRANSFER SWITCH PROPERLY SIZED TO CONNECT TO A PORTABLE GENERATOR, IF NOT EQUIPPED WITH AN ONSITE GENERATOR.

FORCE MAIN DESIGN

OF A FORCE MAIN PIPE. 2 CONNECTION TO GRAVITY MAIN

AND PRODUCE NON-TURBULENT FLOW.

RELEASE VALVE AND THE FORCE MAIN.

PRESSURE OF A FORCE MAIN.

1. WATER HAMMER. A FORCE MAIN DESIGN MUST INCLUDE SURGE CONTROL MEASURES TO

ESTABLISHED IN \$217.53(D) OF THIS TITLE (RELATING TO PIPE DESIGN).

THE PIPE MATCHING THE WATER LEVEL IN THE MANHOLE AT DESIGN FLOW.

MANAGE PRESSURE DUE TO WATER HAMMER THAT MAY EXCEED THE WORKING STRENGTH

A MANHOLE ON THE WASTEWATER COLLECTION SYSTEM OR AT A WASTEWATER

THE DISCHARGE END OF A FORCE MAIN INSIDE A MANHOLE MUST REMAIN STEADY

PIPE SEPARATION. A SEPARATION DISTANCE BETWEEN A FORCE MAIN AND ANY WATER SUPPLY WATER PIPE MUST MEET THE MINIMUM SEPARATION REQUIREMENTS

A FORCE MAIN MUST TERMINATE BELOW A MANHOLE INVERT WITH THE TOP OF

(A) ANY HIGH POINT ALONG THE VERTICAL FORCE MAIN ALIGNMENT MUST INCLUDE AN

(C) AN AIR RELEASE VALVE MUST BE INSIDE OF A VAULT THAT IS AT LEAST 48 INCHES IN

AIR RELEASE VALVE OR A COMBINATION OF AIR RELEASE AND AIR VACUUM VALVES.

DIAMETER AND HAS A VENTED ACCESS OPENING AT LEAST 30 INCHES IN DIAMETER.

2. A PRESSURE TEST MUST USE 50 POUNDS PER SQUARE INCH ABOVE THE NORMAL OPERATING

3. A TEMPORARY VALVE FOR PRESSURE TESTING MAY BE INSTALLED NEAR THE DISCHARGE

POINT OF A FORCE MAIN AND REMOVED AFTER A TEST IS SUCCESSFULLY COMPLETED.

6. A PIPE MUST HOLD THE DESIGNATED TEST PRESSURE FOR A MINIMUM OF 4.0 HOURS.

7. THE LEAKAGE RATE MUST NOT EXCEED 10.0 GALLONS PER INCH DIAMETER PER MILE OF

4. A FORCE MAIN MUST HAVE VALVES SPACED AT NO MORE THAN 2,000 FOOT INTERVALS TO

FACILITATE INITIAL TESTING AND SUBSEQUENT MAINTENANCE AND REPAIRS.

1. THE FINAL PLANS AND SPECIFICATIONS MUST INCLUDE THE PRESSURE TESTING

4. A PUMP ISOLATION VALVE MAY BE USED AS AN OPPOSITE TERMINATION POINT.

1. A CHECK VALVE MUST ALLOW AN UNENCUMBERED FLOW WHEN FULLY OPEN.

FLOOR ELEVATION OF THE STRUCTURE BEING SERVED BY THE EQUIPMENT.

POSITION INDICATOR TO SHOW ITS OPEN AND CLOSED POSITION.

WATERTIGHT IF IMMERSION WOULD CAUSE FAILURE:

6. A CONTROL PANEL OR OTHER ELECTRICAL ENCLOSURE MUST:

(A) BE CONSTRUCTED OF. CORROSION RESISTANT MATERIALS;

2. A VALVE MUST BE MADE OF CORROSION RESISTANT MATERIAL AND MUST HAVE A

3. CONTROL PANELS FOR ALL PUMPS MUST BE AT LEAST 2.0 FEET ABOVE THE GROUND

5. A HOUSING THAT CONTAINS MECHANICAL EQUIPMENT OR CONTROLS MUST BE

4. ALL PIPES AND APPURTENANCES WITHIN A WET WELL MUST BE CORROSION RESISTANT.

5. A TEST MUST INVOLVE FILLING A FORCE MAIN WITH WATER.

(B) AN AIR RELEASE VALVE MUST HAVE AN ISOLATION VALVE BETWEEN THE AIR

- 2. LIFT STATIONS MUST INCLUDE AN AUDIOVISUAL ALARM SYSTEM AND THE SYSTEM MUST TRANSMIT ALL ALARM CONDITIONS THROUGH USE OF AN AUTO-DIALER SYSTEM, SUPERVISORY CONTROL AND DATA ACQUISITION SYSTEM, OR TELEMETERING SYSTEM
- CONNECTED TO A CONTINUOUSLY MONITORED LOCATION. 3. AN ALARM SYSTEM MUST SELF-ACTIVATE FOR A POWER OUTAGE, PUMP FAILURE, OR A HIGH WET WELL WATER LEVEL. A WET WELL MUST INCLUDE A VISUAL AND AUDIO ALARM.
- 4. A SPILL CONTAINMENT STRUCTURE MUST HAVE A LOCKED GATE AND BE SURROUNDED AN INTRUDER RESISTANT FENCE THAT IS 6.0 FEET HIGH CHAIN LINK, MASONRY, OR BOARD FENCE WITH AT LEAST THREE STRANDS OF BARBED WIRE OR 8.0 FEET HIGH CHAIN LINK, MASONRY, OR BOARD FENCE WITH AT LEAST ONE STRAND OF BARBED WIRE.
- 5. A LIFT STATION MUST BE FULLY ACCESSIBLE DURING A 25-YEAR 24-HOUR RAINFALL EVENT.
- 6. LIFT STATION SYSTEM CONTROLS MUST PREVENT OVER-PUMPING UPON RESUMPTION OF NORMAL POWER AFTER A POWER FAILURE. BACKUP OR STANDBY UNITS MUST BE ELECTRICALLY INTERLOCKED TO PREVENT OPERATION AT THE SAME TIME THAT OTHER LIFT STATIONS PUMPS ARE OPERATING ONLY ON THE RESUMPTION OF NORMAL POWER AFTER A

MATERIALS FOR FORCE MAIN PIPES

- 1. FORCE MAIN PIPE MATERIAL MUST WITHSTAND THE PRESSURE GENERATED BY INSTANTANEOUS PUMP STOPPAGE DUE TO POWER FAILURE UNDER MAXIMUM PUMPING
- 2. THE USE OF PIPE OR FITTINGS RATED AT A WORKING PRESSURE OF LESS THAN 150 POUNDS PER SQUARE INCH IS PROHIBITED.
- 3. PIPE MUST BE IDENTIFIED IN THE TECHNICAL SPECIFICATIONS WITH THE APPROPRIATE SPECIFICATION NUMBER FOR BOTH QUALITY CONTROL AND INSTALLATION FROM THE AMERICAN SOCIETY FOR TESTING AND MATERIALS, AMERICAN NATIONAL STANDARDS INSTITUTE, OR AMERICAN WATER WORKS ASSOCIATION.
- 4. PIPE MATERIAL SPECIFIED FOR A FORCE MAIN MUST HAVE AN EXPECTED LIFE EQUAL TO OR LONGER THAN THAT OF THE LIFT STATION AND MUST BE SUITABLE FOR THE MATERIAL BEING PUMPED.

FORCE MAIN PIPE JOINTS

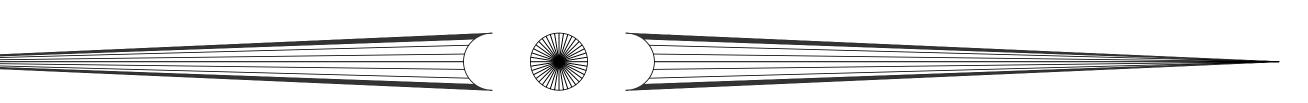
- 1. AN UNDERGROUND FORCE MAIN PIPE JOINT MUST INCLUDE EITHER PUSH-ON RUBBER GASKETS OR. MECHANICAL JOINTS WITH A PRESSURE RATING EQUAL OR GREATER THAN THE FORCE MAIN PIPE MATERIAL.
- 2. EXPOSED FORCE MAIN PIPE JOINTS MUST BE FLANGED OR FLEXIBLE AND ADEQUATELY SECURED TO PREVENT MOVEMENT DUE TO SURGES.
- 3. AMERICAN SOCIETY FOR TESTING AND MATERIALS, AMERICAN WATER WORKS ASSOCIATION, OR OTHER WIDELY ACCEPTED NATIONAL REFERENCE STANDARD FOR THE JOINTS MUST BE INCLUDED IN THE PROJECT SPECIFICATIONS.

IDENTIFICATION OF FORCE MAIN PIPES

CONTINUOUSLY REPEATED IN AT LEAST 1:5 INCH LETTERS.

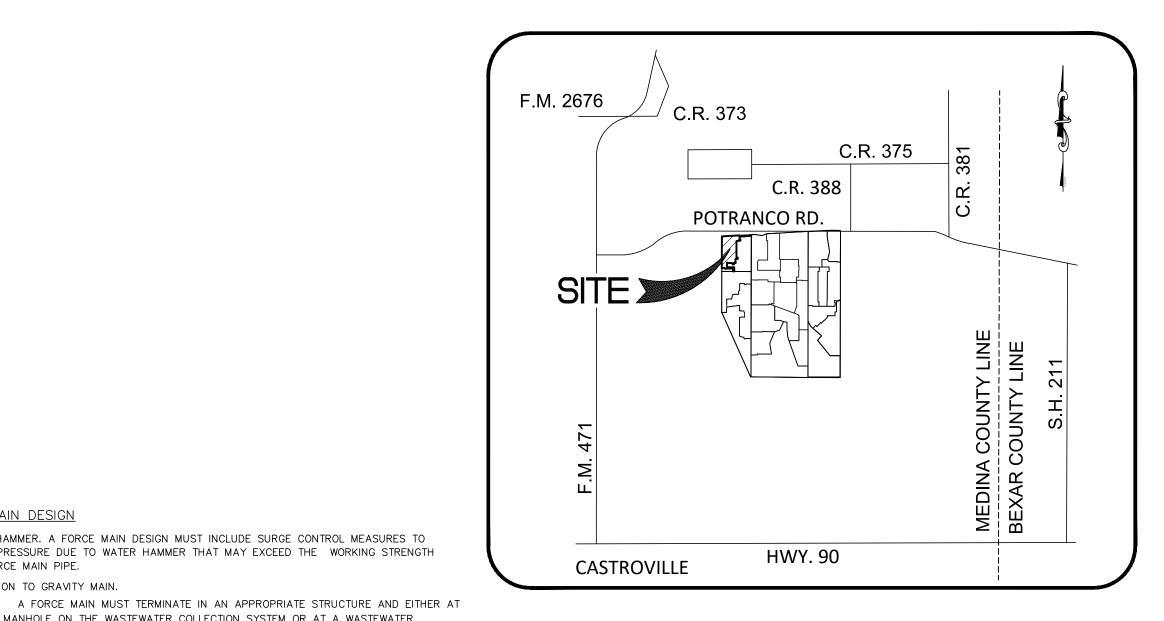
1. A DETECTOR TAPE MUST BE LAID IN THE SAME TRENCH AS A FORCE MAIN PIPE. THE DETECTOR TAPE MUST BE LOCATED ABOVE AND PARALLEL TO THE FORCE MAIN. 2. THE DETECTOR TAPE MUST BEAR THE LABESSURIZED WASTEWATER

CONSTRUCTION PLANS FOR



POTRANCO WEST II UNIT 1

LIFT STATION IMPROVEMENTS



VICINITY MAP

SUBMITTAL DATE: SEPTEMBER, 2021

LEGAL DESCRIPTION:

A 18.052 ACRES (786,355.80 SQUARE FEET) OUT OF THE 41.198 ACRES (1,794,602.20 SQUARE FEET) TRACT OF LAND SITUATED IN THE JOHN GARNER SURVEY NO. 97, ABSTRACT NO. 1452, AND THE WILLIAM B. RHODE SURVEY NO. 96, ABSTRACT NO. 1327, MEDINA COUNTY, TEXAS, BEING A PORTION OF A REMAINDER OF A 619.4125 ACRE TRACT AS CONVEYED TO JEANENE STEINLE WILLIAMS BY LAST WILL AND TESTAMENT AS RECORDED IN VOLUME 63, PAGES 378-385 OF THE OFFICIAL PROBATE RECORDS OF MEDINA COUNTY, TEXAS.



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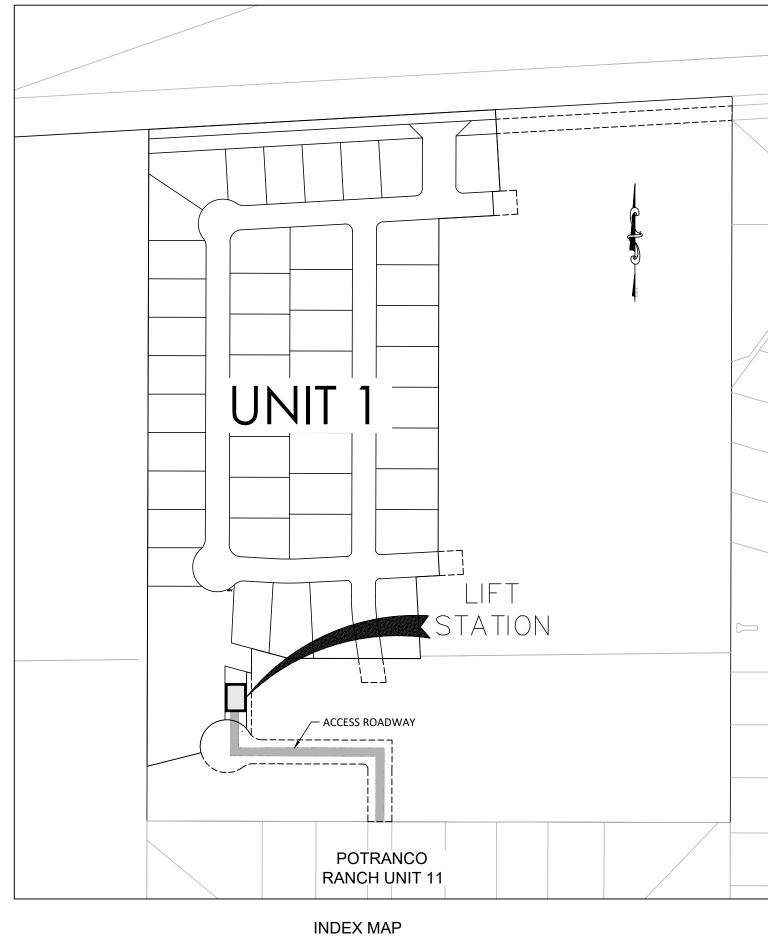
ELECTRICAL PLANS

ELECTRICAL LEGEND ELECTRICAL SERVICE RACK LAYOUT

ELECTRICAL SITE PLAN CONTROL DETAILS

AUTO DIALER, AREA LIGHT AND CONTROL PANEL LAYOUT

DUCTBANK AND GROUNDING DETAILS POWER PANEL SCHEDULE MISCELLANEOUS DETAILS



SUBMITTED BY:

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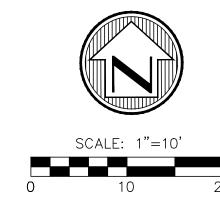
MEDINA COUNTY

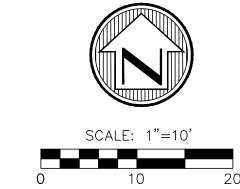


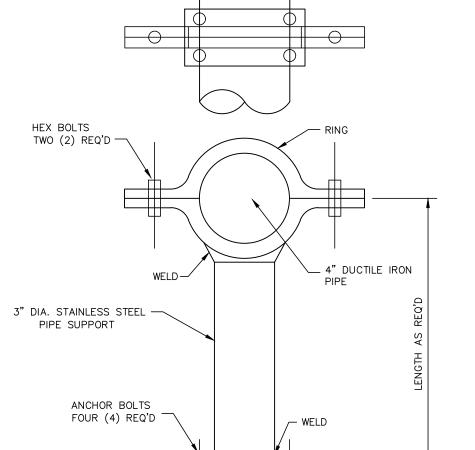
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085

Moy Tarin Ramirez Engineers, LLC TBPELS ENGINEERING: F-5297, SURVEYING: NO. 10131500 12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051

TEXAS C9.0







PIPE SUPPORT DETAIL

- 1. CONTRACTOR TO CONFIRM SIZE AND LOCATION OF THE WET WELL HATCHES PER SELECTED HATCH AND PUMP MANUFACTURES' REQUIREMENTS (36"x48" MIN.)
- INSTALL RESILIENT WEDGE, FLANGED JOINT GATE VALVE.
- INSTALL SWING TYPE CHECK VALVE WITH EXTERNAL LEVER.
- SLEEVED OR CORED DISCHARGE PIPE OPENINGS SEALED WITH LINK-SEAL (OR APPROVED EQUAL) MAY BE SUBSTITUTED FOR POURED IN PLACE WALL PIPES TO ACCOMMODATE CONSTRUCTION METHOD.
- ALL PUMP DISCHARGE PIPE AND FITTINGS WITHIN WETWELL, EXCEPT SS 316 AND PVC, SHALL RECEIVE AFTER INSTALLATION A 100% SOLIDS COAL TAR EPOXY COATING SYSTEM IN ACCORDANCE WITH MANUFACTURES INSTRUCTIONS. COLOR SHALL BE GREY PANTONE #431-U.
- 6. PUMP AND MOTOR CONFIGURATION BE BELT DRIVE (MINIMUM OF 2 BELTS) WITH DRIVE END OF MOTOR (ROTATING COUNTER CLOCK-WISE), AND MOTOR LOCATED ABOVE PUMP ON ADJUSTABLE HINGED MOUNTING BASE ALLOWING EASY ACCESS TO PUMP.
- MOTOR BASE SHALL BE HINGED BOLT ADJUSTABLE AND MANUFACTURED AS A SINGLE PRIMED FRAME. MOTOR BASE SIZE SHALL ACCOMMODATE NEMA MOUNTING DIMENSIONS..
- 8. ALL PUMP DISCHARGE PIPE AND FITTINGS OUTSIDE THE WETWALL, EXCEPT SS 316 AND PVC, SHALL RECEIVE AFTER INSTALLATION A 100% SOLIDS COAL TAR EPOXY COATING SYSTEM IN ACCORDANCE WITH MANUFACTURES INSTRUCTIONS. COLOR SHALL BE GREY PANTONE #431-U.

LIFT STATION GENERAL NOTES:

- 1. ALL LIFT STATION PIPING SHALL BE DUCTILE IRON PIPE (CLASS 150) WITH THRUST BLOCKS ON ALL UNDERGROUND BENDS OR APPROVED EQUAL.
- 2. ALL LIFT STATION PIPING SHALL BE PROVIDED WITH PIPE SUPPORTS AT LOCATIONS SHOWN ON PLANS.
- 3. THE CONTRACTOR SHALL FURNISH AND INSTALL TWO (2) PUMPS. ALL PIPING, CONTROLS, ALARM SYSTEMS. AND RELATED APPURTENANCES FOR ALL PUMPS. THE CONTRACTOR SHALL DO SO ACCORDING TO THE MANUFACTURER'S AND PROJECT SPECIFICATIONS.
- 4. THE CONTRACTOR SHALL INSTALL TWO (2) PLUG OUTLETS (115 VOLT WEATHERPROOF) AT CONTROL PANEL. 5. POWER SERVICE TO CONTROL PANEL SHALL BE UNDERGROUND AND IN CONDUITS TO ACCOMMODATE THREE PHASE ELECTRICAL POWER.
- 6. AN AUDIO-VISUAL ALARM SYSTEM (RED FLASHING LIGHT AND HORN) SHALL BE PROVIDED FOR ALL LIFT STATIONS. THESE ALARM SYSTEMS SHOULD BE TELEMETERED TO A FACILITY WHERE 24 HOUR ATTENDANCE IS AVAILABLE. THE ALARM SYSTEM SHALL BE ACTIVATED IN CASE OF POWER
- 7. ALL WORK REQUIRED FOR THE LIFT STATION SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS. ALL MATERIALS, PUMPS. PIPING. CONTROLS ETC. SHALL BE APPROVED BY THE ENGINEER.
- 8. THE CONTRACTOR SHALL INSTALL TELEPHONE FOR AUTO DIALER. 9. ALL HARDWARE, CHAINS, CABLES, GUIDE BANS, FASTENERS, BRACKETS, BOLTS, NUTS, WASHERS, ANCHOR

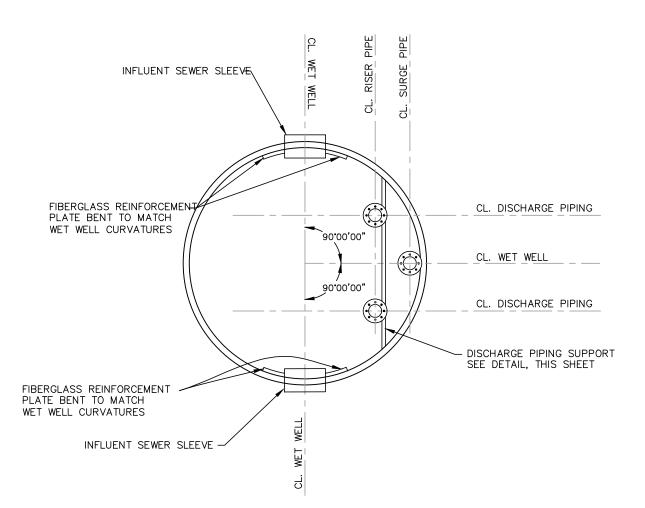
OUTAGE. PUMP FAILURE OR SPECIFIED HIGH WATER LEVEL

- BOLTS AND OTHER APPURTENANCES SHALL BE 316 STAINLESS STEEL.
- 10. THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 3' OF COVER FOR ALL FORCE MAIN.
- 12. 26' ALL WEATHER ACCESS SHALL BE PROVIDED TO THE LIFT STATION. DRIVE SHALL BE 8" FLEXIBLE BASE COMPACTED TO 95% MAXIMUM PROCTOR DENSITY.

11. FENCING SHALL BE 6 FEET, HOT-DIPPED GALVANIZED CHAIN LINK, NO. 9 GAUGE. WOVEN IN 2" DIAMOND

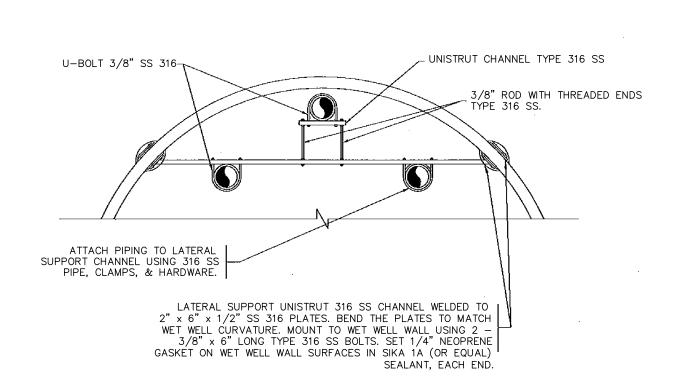
13. PUMPS SHALL BE EQUIPPED WITH A HEATER TO PREVENT FREEZING.

MESH, TOPPED WITH THREE STRANDS OF 12 -1/2' GAUGE BARBED WIRE.



ELECTRICAL NOTES:

- 1. CONDUCTORS FOR POWER SHALL BE STRANDED COPPER, RATED FOR 75 °C, WITH INSULATION SUITABLE FOR DRY AND WET LOCATIONS. SIZING SHALL BE DONE ACCORDING TO NEC REQUIREMENTS. POWER CONDUCTORS SHALL BE CONTINUOUS. FIELD SPLICES ARE NOT ALLOWED.
- 2. WIRE SIZE FOR CONTROLS SHALL BE #14 AWG COPPER STRANDED RATED FOR 90 °C.
- 3. ALL MOUNTING HARDWARE SHALL BE TYPE 304 STAINLESS STEEL AND INSTALL SEAL-OFFS IN CONDUIT LEADING INTO THE PUMP CONTROL PANEL AND JUNCTION BOXES. ALL ENCLOSURES SHALL BE TYPE 304 STAINLESS STEEL. AND DISCONNECTS SHALL BE FRP-NEMA 4X. ALL ENCLOSURES AND DISCONNECTS SHALL BE LOCKABLE WITH A
- 4. MAIN ELECTRICAL DISCONNECT SHALL BE HOUSED IN EITHER A SEPARATE NEMA 4X, STAINLESS STEEL ENCLOSURE AND SHALL BE EQUAL TO SQUARE D, CLASS 3110, 600-VOLT CLASS, HEAVY DUTY, SERVICE RATED SAFETY SWITCH, NEMA 4X, WITH ALL COPPER CURRENT CARRYING PARTS, MODEL H36_DS. PROVIDE WITH FUSING CLASS SIZE BASED ON THE CHARACTERISTICS OF THE MOTOR LOADS SERVED AND THE AVAILABLE FAULT CURRENT. MAIN ELECTRICAL DISCONNECT SHALL BE TIME DELAY FUSE OR TIME DELAY CIRCUIT BREAKER. PROVIDE A SURGE ARRESTOR IN A SEPARATE NEMA 4X, SS304 ENCLOSURE MOUNTED IN THE SERVICE POLE MOUNTING RACK.
- 5. ELECTRICAL EQUIPMENT SHALL COMPLY WITH THE LATEST VERSION OF THE NFPA NATIONAL ELECTRICAL CODE (NEC) REQUIREMENTS FOR CLASS 1, GROUP C AND D, DIVISION 1 LOCATIONS. ADDITIONALLY, EQUIPMENT LOCATED IN WET WELLS SHALL BE SUITABLE FOR USE UNDER CORROSIVE ENVIRONMENTS. EACH FLEXIBLE CABLE SHALL BE PROVIDED WITH A WATERTIGHT SEAL AND SEPARATE STRAIN RELIEF.
- 6. FREE-STANDING ELECTRICAL SERVICE AND TRANSFER SWITCH SHALL BE HOUSED IN HEAVY-DUTY ELECTRICAL WEATHERPROOF, NEMA 4X, STAINLESS STEEL 304 ENCLOSURES SECURELY MOUNTED ONTO THE RACK A MINIMUM OF 24" ABOVE THE GROUND. PROVIDE 120-VOLT, 20-AMP DUPLEX, GFI, RECEPTACLE IN AN "IN-USE" WEATHERPROOF BOX WITH CLEAR COVER. LIGHT SWITCHES SHALL ALSO BE INSTALLED IN A WEATHERPROOF BOX WITH AN "IN-USE" CLEAR WEATHERPROOF COVER.
- 7. ALL ELECTRICAL EQUIPMENT SHALL BE PROTECTED FROM THE 100-YEAR FLOOD EVENT AND BE PROTECTED FROM POTENTIAL FLOODING FROM THE WET WELL. IF THE ELECTRICAL EQUIPMENT IS RAISED SIGNIFICANTLY TO BE ABOVE THE 100-YEAR FLOOD EVENT, THEN A PLATFORM SHALL BE CONSTRUCTED WITH RAILS AND ADEQUATE WORKING CLEARANCE IN FRONT OF THE ELECTRICAL EQUIPMENT, WITH PERMANENT LADDER OR STEPS FOR ACCESS. AS A MINIMUM, MOTOR CONTROL CENTERS SHALL BE MOUNTED ON A 4-INCH TALL CONCRETE HOUSEKEEPING PAD. ALL ELECTRICAL EQUIPMENT AND CONNECTIONS IN WET WELLS AND DRY WELLS SHALL BE RATED FOR CLASS 1 DIVISION 1 EXPLOSION PROOF.
- 8. THE GENERATOR TRANSFER SWITCH SHALL BE OF THE AUTOMATIC TYPE AND SHALL BE DIESEL-FUELED. DIESEL FUEL TANKS SHALL BE BASE TANKS INTEGRATED INTO GENERATOR UNIT BY OEM, SHALL INCLUDE DOUBLE WALL CONTAINMENT, AND SHALL BE SIZED TO RUN THE GENERATOR FOR AT LEAST 10 HRS CONTINUOUSLY AT 100% LOAD. THE GENERATOR SHALL HAVE A 4-FOOT CLEARANCE ALL AROUND, AND IT SHALL BE PROVIDED WITH NOISE CONTROL PACKAGE. NOISE CONTROL PACKAGE SPECIFICATION FOR GENERATOR SHALL BE RESIDENTIAL RATED. SOUND ATTENUATION INCLUDES ENCLOSURE AND EXHAUST MUFFLER PACKAGE. SOUND ATTENUATION SYSTEM PERFORMANCE SHALL RESULT IN MEASURED SOUND LEVELS NOT TO EXCEED 78 DB @ 7 METERS (23 FEET)
- 60 HZ. CONSTRUCTION SUBMITTAL SHALL PROVIDE A LOAD ANALYSIS WITH THE SEQUENCE OF MOTOR STARTING IN ORDER TO KNOW THE MOTOR STARTING LOADS AND THE MOTOR RUNNING LOADS. SUCH ELECTRIC LOAD CALCULATIONS MUST BE DONE IN KVA UNITS TO ACCOUNT ADDITIONAL LOADS DUE TO LOW POWER FACTOR. THE GENERATOR SHALL HAVE A MOTOR STARTING KVA CAPACITY TO LIMIT THE VOLTAGE DIP TO NO MORE THAN 15% FOR ANY MOTOR STARTING CONDITIONS. SUCH GENERATOR LOAD ANALYSIS MUST BE INCLUDED IN THE ENGINEERING REPORT. APPROVED MANUFACTURERS ARE KOHLER, ONAN, CATERPILLAR AND GENERAC, OR SAWS-APPROVED EQUAL.
- 9. ALL UNDERGROUND ELECTRICAL CONDUITS SHALL BE GREY, RIGID NONMETALLIC CONDUIT (RNC). FIELD MANUFACTURED BENDS ARE NOT PERMITTED. ONLY FACTORY FABRICATED CONDUIT BENDS ARE ALLOWED. BURIED CONDUIT SHALL HAVE A COVER DEPTH OF 18 TO 24 INCHES BENEATH THE FINISHED SURFACE. CONDUIT SHALL COMPLY WITH MINIMUM NEC BEND RADIUS AND NOT BURNED OR KINKED.
- 10. ALL EXPOSED CONDUIT SHALL BE RIGID ALUMINUM. TO AVOID TRIPPING HAZARDS, CONDUITS MUST BE BURIED AND/OR EMBEDDED IN CONCRETE SLABS.
- 11. PROVIDE GENERAL ILLUMINATION OF 1.0 FOOT-CANDLE (AVERAGE) ON THE LIFT STATION EQUIPMENT AREAS. USE METAL HALIDE FIXTURES FOR GENERAL ILLUMINATION.
- 12.PROVIDE ABILITY TO OPERATE STATION WITH ONE PUMP REMOVED FOR MAINTENANCE, BY UTILIZING A HAND-OFF-AUTO SWITCH AND CONTROL LOGIC THAT KEEPS ALTERNATING ALL THE REMAINING PUMPS IN SERVICE AND NO PARALLEL SWITCHING IN ORDER TO ALLOW FOR PROPER LOCKOUT PROCEDURES. FOR SELF PRIMING PUMPS, PROVIDE LOCAL NON-FUSED DISCONNECT WITH AUXILIARY CONTACTS AT MOTOR PER NEC.
- 13. THE PUMP CONTROLLER SHALL BE PROVIDED WITH ALTERNATING LEAD-LAG CONTROLS WITHIN A NEMA 4X ENCLOSURE. THE PUMP CONTROL ENCLOSURE SHALL HAVE TWO DOORS (480V EQUIPMENT INSTALLED ON THE RIGHT SIDE, 120V EQUIPMENT INSTALLED ON THE LEFT SIDE), AND SHALL ALSO CONTAIN THE MOTOR DISCONNECT CIRCUIT BREAKERS, MOTOR STARTERS, LEVEL CONTROLLER, AND SOFT STARTERS (WHEN REQUIRED).

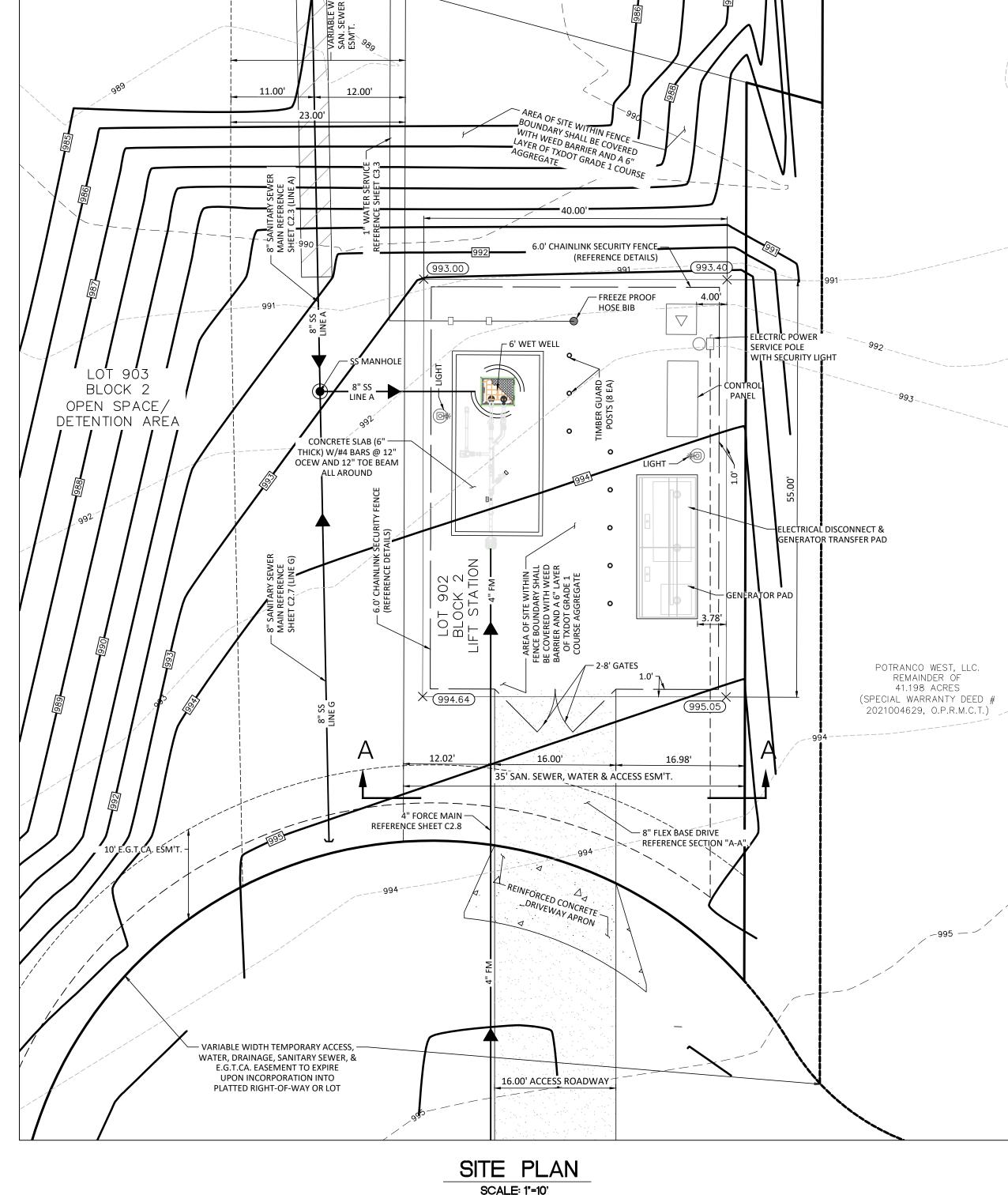


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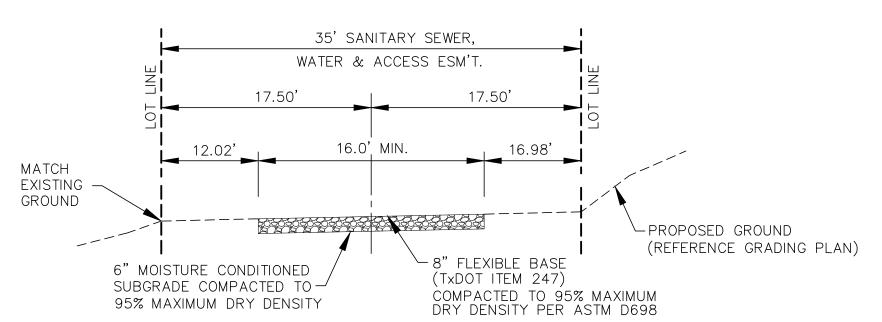
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SCALE: 1"=10" REFERENCE SHEET C9.2-C9-6 FOR DETAILS



C9.2

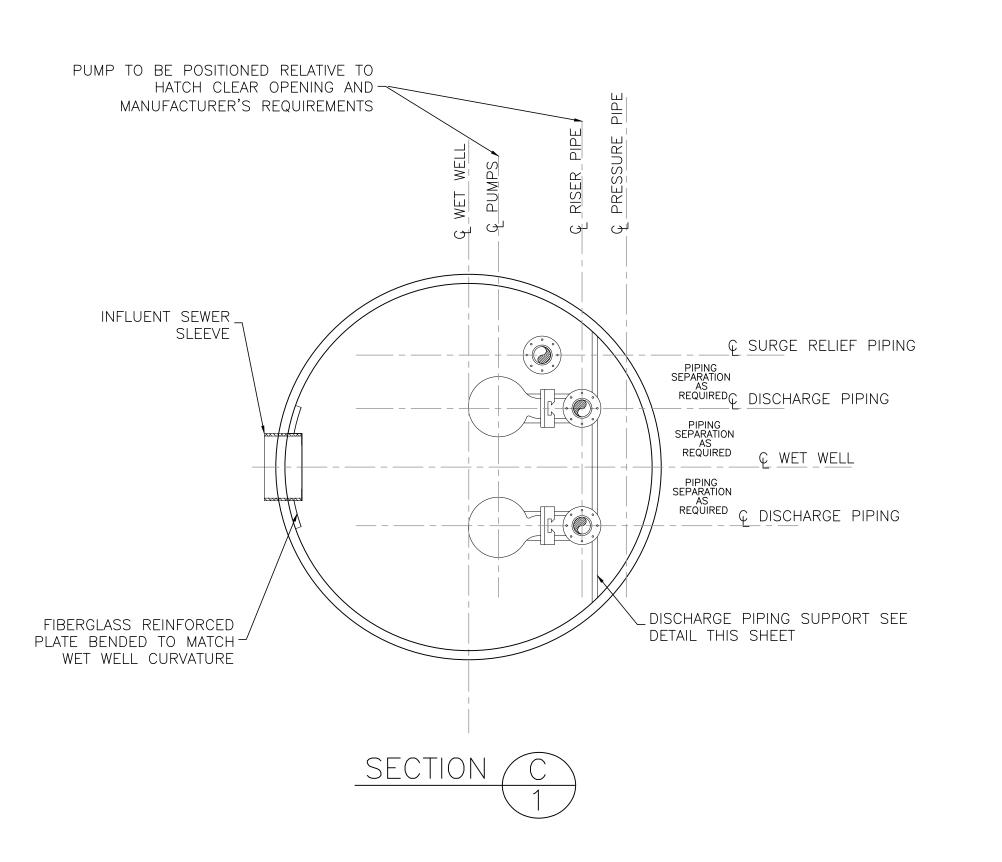
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4" WET WELL VENT_

WITH SS316 SCREEN

PRESSURE _ RELIEF PIPE

CAUTION:
EXISTING UTILITIES:

1. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY.
ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY CONTRACTOR PRIOR TO THE
CONSTRUCTION AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION
OF SAME DURING CONSTRUCTION.

2. IT IS ESSENTIAL THAT 48 HOURS PRIOR TO CONSTRUCTION ALL UTILITY COMPANIES BE
NOTIFIED TO LOCATE AND TAG THEIR UNDERGROUND FACILITIES PRIOR TO EXCAVATION.

3. THE CONTRACTOR NEEDS TO ALLOW FOR THE POSSIBILITY OF UNDETECTED
UNDERGROUND UTILITIES. ALSO, THE CONTRACTOR MUST ALLOW FOR CHANGES DUE

TO UTILITIES BEING IN LOCATIONS DIFFERENT FROM THOSE SHOWN ON THE UTILITY

RECORD DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND EXPOSING CONFLICTS PRIOR TO CONSTRUCTION.

WET WELL GENERAL NOTES:

<u>Plan view @ grade</u>

CONTRACTOR TO CONFIRM SIZE AND LOCATION OF WET WELL HATCHES PER SAN ANTONIO RIVER AUTHORITY REQUIREMENTS (36"x48")
 THE INTERIOR OF THE PRECAST CONCRETE WET WELL SHALL BE RENDERED WATERTIGHT, CHEMICALLY RESISTANT, AND ABRASION RESISTANT.
 APPLY A COMBINATION OF BOTH PRODUCTS (SEE A AND B BELOW), WITH THE CEMENTIOUS COATING FIRST, FOLLOWED BY THE EPOXY
 COATING. KERNEOS SEWPERCOAT 2000 HS AND PG, APPLIED AT THE REQUIRED ONE INCH THICK APPLICATION, IS THE ONLY PRODUCT
 APPROVED THAT DOES NOT REQUIRE A SUBSEQUENT EPOXY COATING. OTHER APPROVED MATERIALS ARE AS FOLLOWS

A. CEMENTIOUS COATING: WITH REQUIRED ONE INCH THICK APPLICATION

1. PERMAFORM CR-5000;

2. STRONG-SEAL MS-20:

2. STRONG—SEAL MS—2C;3. STANDARD CEMENT MATERIAL INC. RELINER;

4. QUADEX ALUMINALINER;
5. CONSHIELD BIOTECH ARMOR.

B. EPOXY COATING: WITH SPECIFIED THICKNESS APPLICATION:
1. CARBOLINE "PLASITE 4500 "SYSTEM: MINIMUM REQUIRED THICKNESS — 125 MILS;

2. CARBOLINE REACTAMINE ET: MINIMUM REQUIRED THICKNESS — 125 MILS.
3. ALL WORK REQUIRED FOR THE WET WELL SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS. ALL MATERIALS, PIPING AND OTHER

APPURTENANCES SHALL BE APPROVED BY THE ENGINEER.

4. 16' ALL WEATHER ROAD TO BE PROVIDED TO WET WELL. SEE SECTION A—A THIS SHEET.

	<u>Water</u>	
Oldcastle Precast [®]	72"	Dia. Wet We Model: 72-W
72" Dia. Transition Slab Weight: 3,350 lbs. Item #: 1105440	Ring & Cove *Note: Var 35" x 3" Gra	ies Per Customer Specs
72" Dia. Grooved Slab Top	Weight: 1	45 Lbs.
Access Item # Weight 24" Concentric 1105400 2,875 Lbs. 24" Eccentric 1105410 2,875 Lbs. 30" Concentric 1105430 2,700 Lbs.		05 Lbs.
30" Eccentric 1105420 2,700 Lbs.		for model 48-MH.
72" Dia. Flat Slab Top Access Item # Weight 24" Concentric 1105500 3,725 Lbs. 24" Eccentric 1105510 3,725 Lbs. 30" Concentric 1105520 3,550 Lbs. 30" Eccentric 1105530 3,550 Lbs.	Concentric	
72" Dia. Risers		
Height Item # Weight		
1'-0" 1105000 1,800 Lbs. 2'-0" 1105010 3,600 Lbs.		
3'-0" 1105020 5,400 Lbs.		
4'-0" 1105030 7,200 Lbs.		•
5'-0" 1105040 9,000 Lbs. 6'-0" 1105050 10,800 Lbs.	See Joint Option on Chart	5
	Options	
72" Dia. Base	TxG TxF	Options
Height Item # Weight 4'-0" 1105200 12,480 Lbs.	* · · · · · · · · · · · · · · · · · · ·	Tongue Flat
5'-0" 1105220 14,290 Lbs.	FxF FxG	
6'-0" 1105240 16,100 Lbs.		
72" Dia. Base w/ Invert		
Height Item # Weight 4'-0" 1105210 12,500 Lbs.	See Joint Options on Chart	
4'-0" 1105210 12,500 Lbs. 5'-0" 1105230 14,250 Lbs.		
6'-0" 1105250 16,100 Lbs.		
GENERAL NOTES:		
1. Wet Well Walls, Transition Slabs, Cones, Tops and Base Sections Meet or Exceed ASTM C-478.		. 4
2. Joint Connections to be Gaskets Conforming to		
ASTM C-443 Requirements. 3. Resilient Connectors to be Boots Conforming to		
ASTM C-923 Requirements. 4. Following Coatings available upon request:		
(Thane-Coat, Bitumastic, Tnemec)	Base w/	nsert 🔨
For more information		Oldcastle
		965-3227)
	WW-3	

NO. DATE

DESCRIPTION

BESCRIPTION

BROJ. # DGN. BY: CHKD. BY: DATE

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• Surveyo
• Surveyo
• Planner
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C9

Submersible Sewage Pumps Type ABS XFP



Main Applications

Submersible sewage pump type ABS XFP is designed for municipal and industrial wastewater equipped with premium efficiency (IE3 level) motor for: Hazardous locations

- Approval for ATEX (Ex II 2G k Ex d IIB T4), FM and CSA as standard for PE1 to PE3 - Approval for ATEX (Ex II 2G k Ex d IIB T4), FM and CSA available as an option for PE4 to PE6
- Clean water and wastewater
- Sewage with sludge and high concentration of rags Sewage containing solids and fibrous material
- Municipal combined sewage and storm water systems

Premium Efficiency

The XFP pumps benefit from significant efficiency in both the motor

- and hydraulics, resulting in substantial savings:
- Lower energy consumption Reduced operating costs
- Fewer maintenance costs
- Less downtime caused by breakdowns and blockages

Great savings means a healthier environment, reducing your carbon footprint and the risk of harmful overflows. XFP pumps make your operation more competitive while contributing to a greener future.

The Right Installation to Fit Any Needs

The submersible XFP pumps can be installed in the following installations

- to fulfill virtually any customer requirements: Wet well installation with pedestal
- Wet well transportable installation
- Dry well vertical installation Dry well horizontal installation

Features and Benefits of the Hydraulics

Versatile range of Contrablock Plus impellers This technology has been specially engineered to handle tough requirements, such as reduced water consumption

- and higher rag and solid content • Highly reliable and efficient impeller design with single and multi-vane models to ensure exceptional blockage resistance, solid passage min. 75 mm / 3 inches and greater Optimum balance of impeller vane numbers and solids handling, based on extensive Computational Fluid
- Dynamics (CFD) research and testing Market leading efficiency, without compromising on solid size and rag handling
- 2 Adjustable bottom plate with intercepted slotting
 - Significant energy savings throughout lifetime Blockage free operation Adjustment of the bottom plate restores pump efficiency
- Maintains efficient rag handling throughout its lifetime
- 3 Double volute casing from DN 400 / 16 inches Reduces radial forces and shaft deflection Maximizes the life of bearings and shaft seals, thereby
- reducing lifecycle costs 4 Double mechanical seals
- Silicon carbide/silicon carbide (SiC/SiC) provides maximum resistance from abrasives
- Seal blockage prevention reduces operational costs SiC/SiC is chemically resistant in wastewater and most
- other industrial applications
- 6 Heavy-duty stainless steel shaft Minimizes deflection at mechanical seal to
- <0.05 mm / 0.002 inches Increased safety against fatigue fractures
- 6 Heavy-duty bearings Minimum life 50,000 h for motors up to
- 9 kW / 12 hp and minimum 100,000 h for motors larger than 11 kW / 17 hp
- Premium efficiency IE3 motor in accordance with IEC

60034-30

Premium Efficiency Submersible Motors (IE3)

Sulzer was the first company in the world to offer consumption. Using premium-efficiency IE3 motors and Contrablock Plus impellers, the submersible sewage pump type ABS XFP is the most efficient

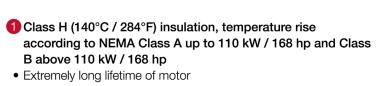
wastewater pump on the market.

Main design features, in accordance with IEC 60034premium-efficiency IE3 submersible motors, in order 30, for low lifecycle costs by energy saving, significant to achieve the perfect balance of reliability and energy carbon footprint reduction and increased lifetime by low winding temperature rise. Designed for Variable Frequency Drive (VFD) operation. ATEX, FM and CSA certified motors.

Motor Power and Speed Overview, PE1 - PE6

No of				Power	P2 (kW)		
poles		PE1	PE2	PE3	PE4	PE5	PE6
2	50 Hz	3 - 4	5.5 - 11	15 - 25	-	-	-
2	60 Hz	4.5	8 - 12.5	18.5 - 30	-	-	
4	50 Hz	1.5 - 2.9	4 - 9	11 - 22	22 - 45	55 - 110	132 - 350
4	60 Hz	1.8 - 3.5	4.5 - 10.5	13 - 25	25 - 52	63 - 125	150 - 400
0	50 Hz	1.3	3	9 - 14	18.5 - 37	45 - 90	110 - 225
6	60 Hz	2	3.5	9 - 20	21 - 43	52 - 104	125 - 250
0	50 Hz			-	15 - 30	37 - 75	90 - 250
8	60 Hz			12	17 - 35	43 - 86	104 - 200
10	50 Hz					30 - 55	75 - 200
10	60 Hz					35 - 63	86 - 200
10	50 Hz						75 - 132
12	60 Hz						86 - 150

Features and Benefits of Motors (IE3)



2 Service factor 1.3

 Allows short-time operation at lower voltage, higher frequency (generator sets) and temporary higher medium temperature

3 Versatile cable types

• European, FM or CSA approved country-specific cables for use in wastewater 4 Optional shielded cable (EMC)

Operation for frequency controlled AC drives

Early moisture ingress indication

 Installation according to EMC directives 6 Moisture DI probe in seal chamber as standard

Early mechanical seal failure indication

• PE4 to PE6: Additional moisture DI probes in the cable connection chamber and motor compartment as an option; standard for the PE6

6 Thermal protection switch in stator as standard Power supply failure motor protection (low voltage, single

• PE4 to PE6: Additional separate thermal protection switch in upper and lower bearing as an option and standard for

the PE6. Sensor options: Bimetallic Switch, PTC or PT100 Early warning at the beginning of bearing

PE1 and 2: Oil cooled motors as an option in 60Hz, standard in 50Hz

malfunction

Continuous operation in dry installation PE3 to PE6: Closed loop water cooling

option; standard for the PE6 • Continuous operation in wet well installation with un-submerged

system with integrated heat exchanger as an

PE5 to PE6: Optional vibration sensor

Early indication of vibration

Submersible Sewage Pumps Type ABS XFP















Operating data

	50 Hz		60 Hz	
	80 to 600 mm	Pump sizes	80 to 600 mm 3 to 24 in	
	up to 2,000 l/s	Capacities	up to 1,400 l/s up to 22,220 USgpm	
	up to 78 m	Heads	up to 110 m up to 360 ft	
	1.3 to 350 kW	Motor powers	2 to 400 kW 2.7 to 536 hp	

Performance curves 100 300 500 700 900 1,100 1,300 1,500 1,700 1,900 Capacity Q (l/s)

Materials

*available for PE4-6 and PE1-3 on request

Pump part	Material
Volute	EN-GJL-250, 1.4470* or 1.4469*
Impeller / bottom plate	EN-GJL-250, EN-GJL-250 flame hardened, 1.4470 or 1.4469*
Motor shaft	1.4021 or 1.4462
Motor housing / connection chamber	EN-GJL-250
Cooling jacket	1.0036 , 1.4571* or 1.4462*
Pedestal	EN-GJL-250, 1.4470* or 1.4469*

We Do What We Say

Customer partnership • We are reliable partners • We provide a high level of service • We make our customers more competitive	
Committed people • We drive accountability • We are open and transparent • We are team players	

Operational excellence • We focus on results • We take **initiative** and work within established processes We act safely

Winterthur, Switzerland



A Global Specialist at Your Doorstep

Sulzer serves clients worldwide through a network of over 150 production and service sites and has a strong footprint in emerging markets.



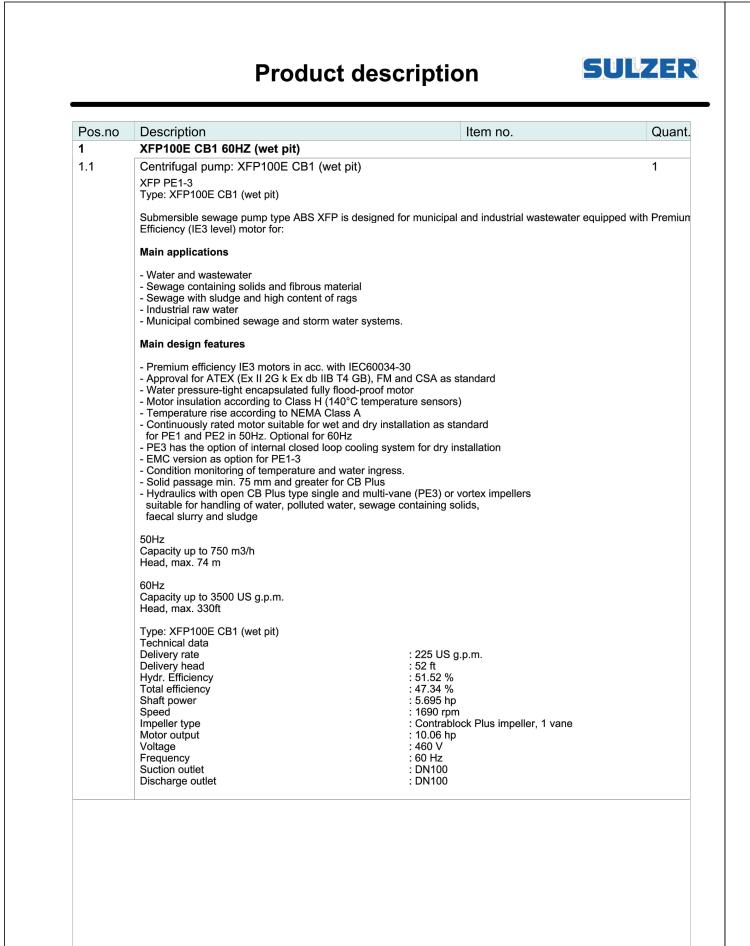


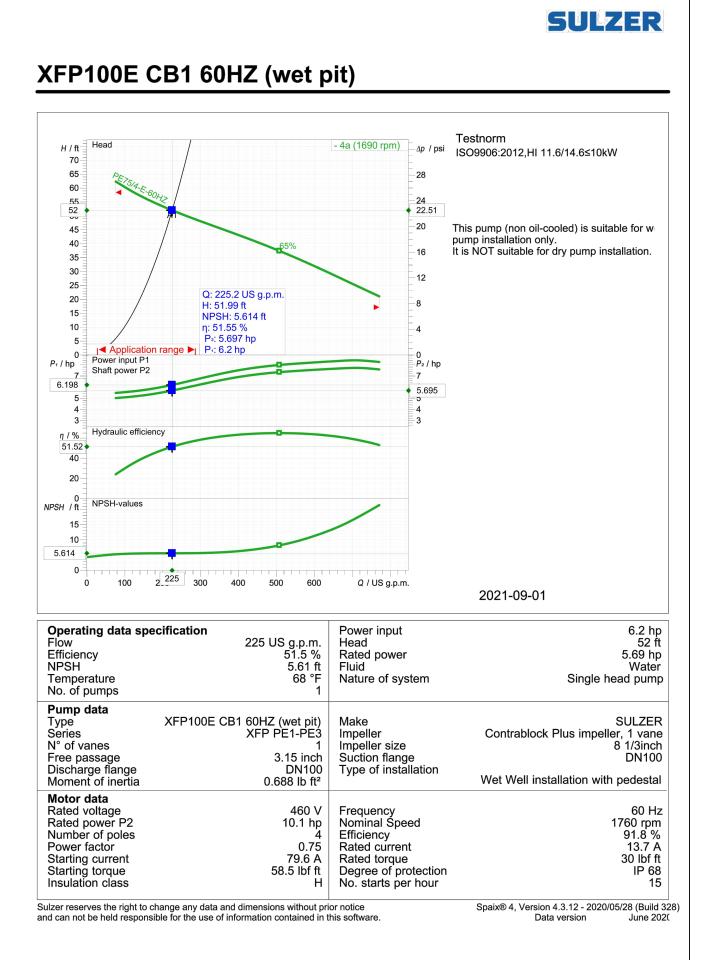
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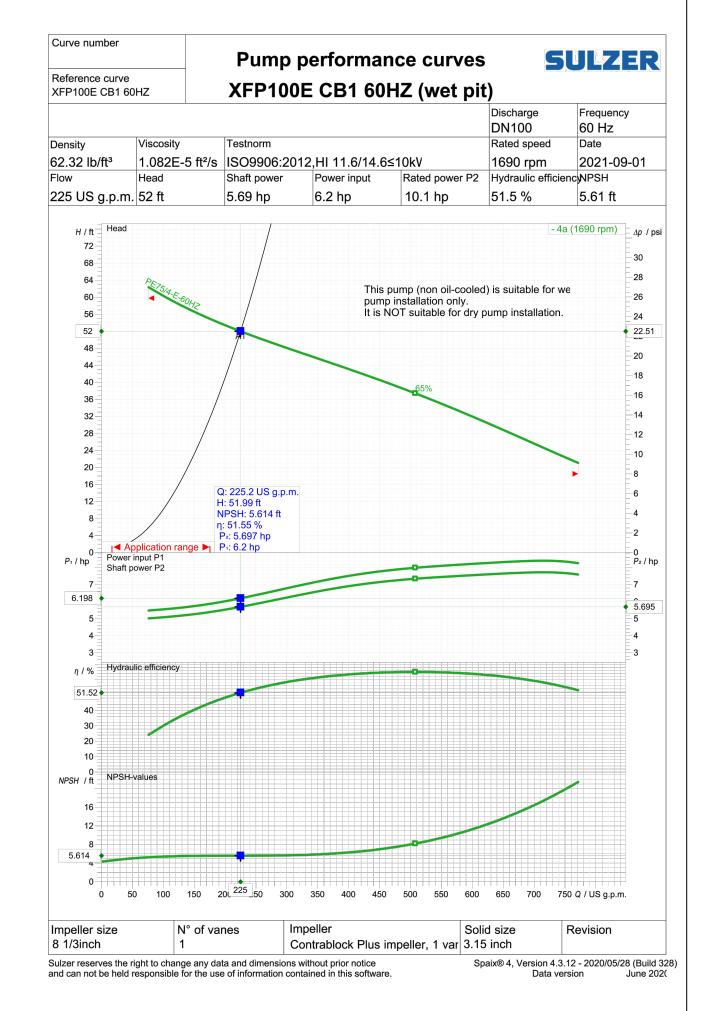
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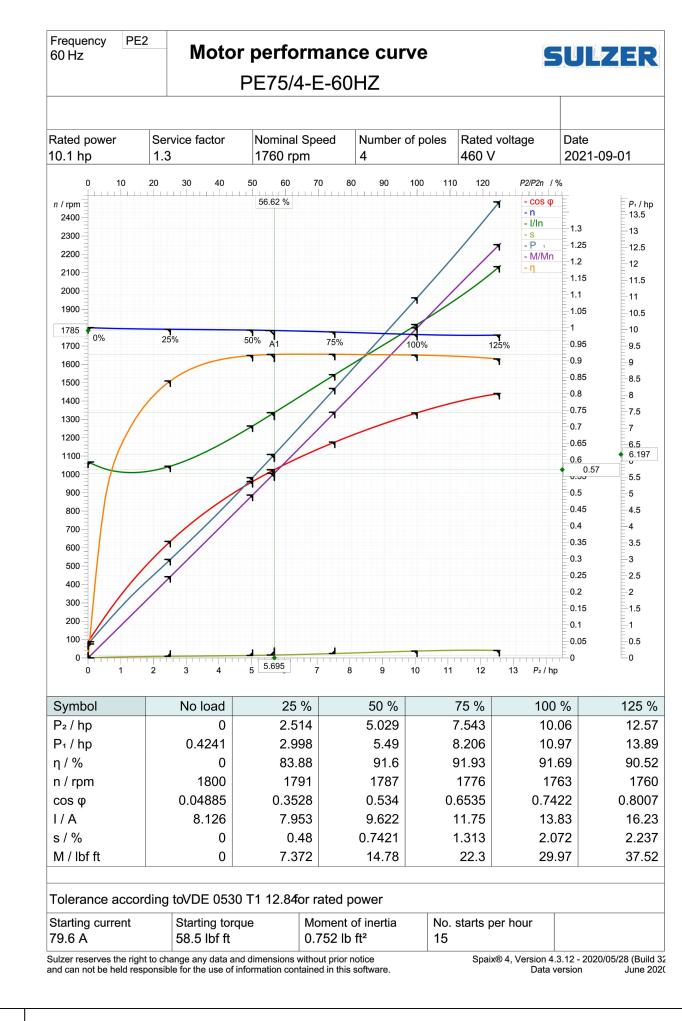
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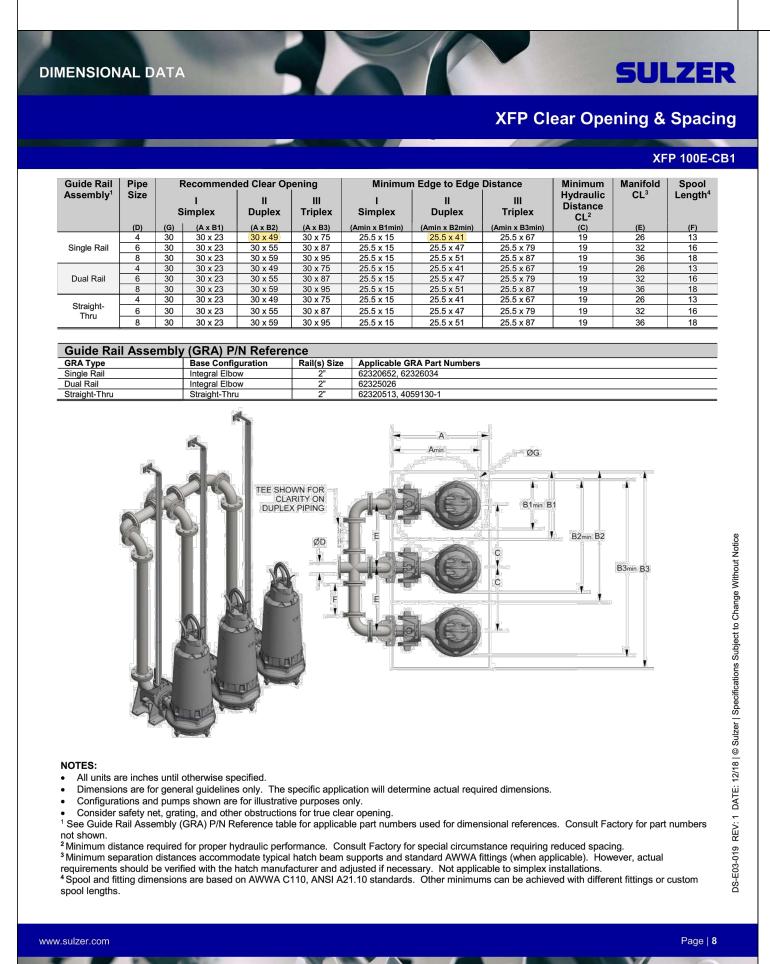
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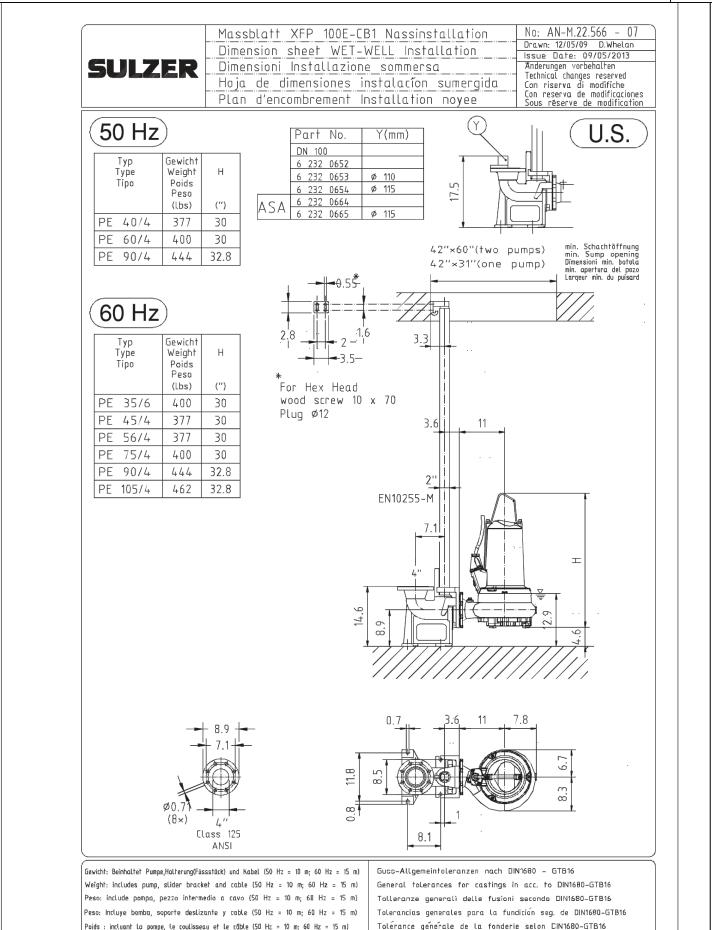


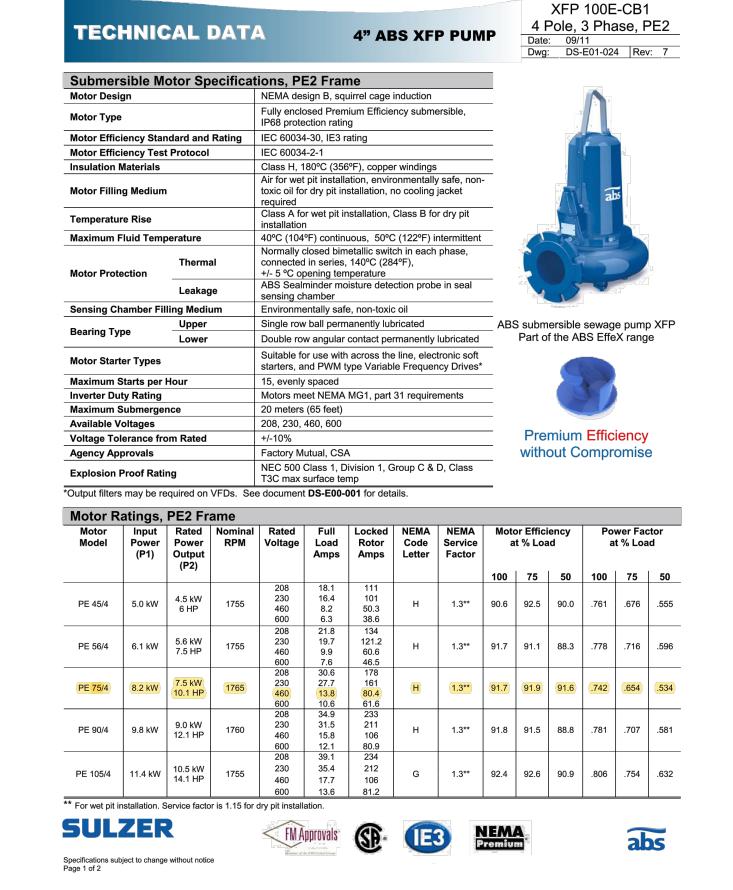


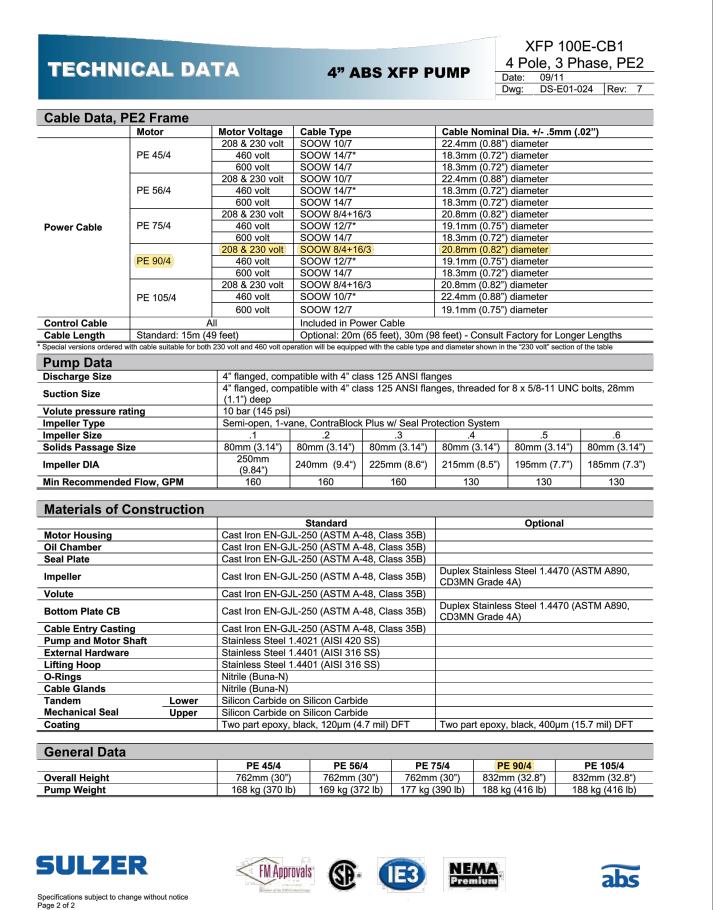


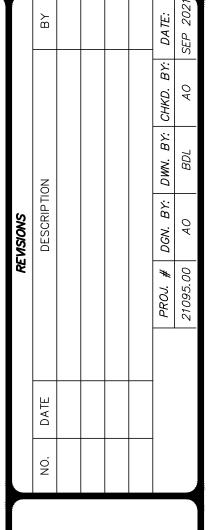












SE ENGINEERING F-5297/SURVEYING: F-1
O CIMARRON PATH, SUITE 100 TEL: (210) 69



POTRANCO WEST II, UNIT LIFT STATION DETAIL!

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considered equal. No portion of the pump shall bear directly on the floor of the sump. The guide rail system shall be

Base Assembly (dry-pit installation): In a dry-pit installation, the pump shall be secured to a steel support stand of suitable strength to support the weight of the pump and resist any expected torsion, bending, or vibration forces. The pump shall be suitable for either vertical or horizontal dry-pit installation without requiring any internal modifications.

FM Approvals SP (E3) NEMA

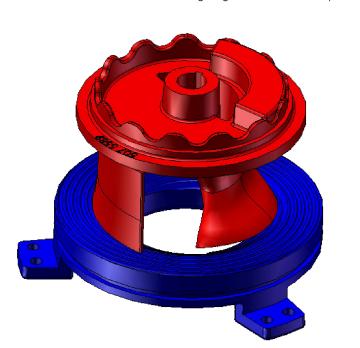
available in an optional non-sparking version, approved by Factory Mutual for use in NEC Class 1, Division 1, Group

C&D hazardous locations.

The ABS ContraBlock Plus is not dependent on speed or clearance to maintain rag handling. The ABS **ContraBlock Plus** system consists of a bottom plate which has a serrated entrance and an outwardly spiraling groove on the face and an impeller designed with a sloping edge and a large overlapping single

The ABS ContraBlock Plus prevents materials from roping and clogging the impeller eye by shredding the material as it is pulled into and spun against the serrated edges of the bottom plate entrance. The sloping leading edge of the impeller pulls the shredded material up onto the impeller blade so that it does not become bound between the bottom of the impeller and bottom plate. Should material be caught between the impeller and bottom plate, the outward spiraling groove on the face of the bottom plate will track the material outward and into the volute to be safely pumped through the pump discharge.

The binding forces of textiles, plastics and other stringy matter are quickly reduced by the ABS ContraBlock Plus where the power reserves of the motor are always adequate to clear the pump of material as it is bent, broken or torn between the shearing edges of the bottom plate and impeller.



Specifications subject to change without notice

Page | **5**

100% Parts / 100% Labor 75% Parts / 75% Labor 50% Parts / 50% Labor

When used in temporary/portable applications, the warranty period shall expire on the earliest of the below dates

one (1) year from date of installation of the Products; or eighteen (18) months from date of shipment of the Products from Manufacturer.

Products or parts thereof that are replaced or repaired under warranty during the original warranty period, shall be covered under this warranty until the expiration of the original warranty period or ninety (90) days from the date of such replacement or repair, whichever is later. In any event, such extended

warranty period shall not exceed ninety (90) days after the expiration of the original warranty period. The warranties stated above are contingent upon start-up of the equipment on site by an authorized Manufacturer's representative, as verified by receipt of start-up reports completed and signed by an authorized Manufacturer's representative. If during the warranty period, any Products fail to meet the requirements set out in this warranty, the purchaser or end user shall give written notification

to Manufacturer stating the reasons therefor. Upon receipt of prior written authorization from Manufacturer, Products shall be transported to Manufacturer's authorized service center, prepaid, at purchaser or end-user's cost. Manufacturer's sole obligation shall be to repair, modify or replace Products or parts

thereof, at Manufacturer's sole option. Products repaired under this warranty will be returned with freight prepaid. Products must be repaired by an authorized Manufacturer repair center for warranty coverage to be considered. All protection features (such as moisture sensors, bearing monitors, and thermal overloads) incorporated in the Products must be connected and operable for warranty coverage. This warranty is valid only if Manufacturer supplied or authorized alarm monitoring components, cables and control

This warranty shall not apply to any Products or parts thereof which have been (i) subjected to misuse, misapplication, accident, alteration, neglect, failure to act in a timely manner to address alarms/warnings, or physical damage; (ii) installed, operated, and/or maintained in a manner which is contrary to Manufacturer's written instructions as it pertains to installation, operation and maintenance of the Products, including but without limitation to being operated without being connected to monitoring devices supplied with specific products for protection; (iii) used in an application or for pumping liquids other than the use for which it is intended as specified in Manufacturer's product literature; (iv) damaged due to a defective power supply, improper electrical protection, faulty repair, ordinary wear and tear, corrosion, erosion or chemical attack, an act of God, an act of war or by an act of terrorism; (v) damaged resulting from the use of accessory equipment not sold by Manufacturer or not approved by Manufacturer for use in connection with Manufacturer's products; or (vi) repaired or altered without Manufacturer's written consent.

This warranty does not cover costs for standard and/or scheduled maintenance that is performed, nor does it cover Manufacturer's parts that, by virtue of their operation, require replacement through normal wear (aka: Wear Parts), unless a defect in material or workmanship is determined by Manufacturer. Wear Parts are defined as cutters, cutting plates, seals, bearings, impellers/propellers, diffusers, wear rings (stationary or rotating), volutes (when used in an abrasive environment), oil, grease, cooling fluids and/or any items deemed necessary to perform and meet the requirements of normal maintenance on all Manufacturer's equipment.

Manufacturer shall not be liable for any special, indirect, consequential, or punitive damages, or profit loss of any kind. Major components not manufactured by the Manufacturer are covered by the original manufacturer's warranty in lieu of this warranty. In addition to any other special, indirect or consequential damages referenced above, Manufacturer shall not be responsible for travel expenses, rented (replacement) equipment, pump removal fees, installation fees, outside contractors fees, or unauthorized repair shop expenses.

This warranty shall extend only to the initial end user

All other warranties, conditions and representation, expressed or implied by statue, common law or otherwise, in relation to the supply of the products including but not limited to the implied warranties or merchantability and fitness for a particular purpose are excluded to the extent

*This warranty is applicable to Products supplied by Sulzer Pumps Solutions Inc. or Sulzer Pumps (Canada) Inc. for installation in the U.S.A. or Canada, unless specifically indicated otherwise in writing by Manufacturer

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	ELECTRICAL LEGEND		
	ELECTRICAL SYMBOLS	SI	WITCHGEAR / MCC SYMBOLS
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
Ф	CONVENIENCE RECEPTACLE-DUPLEX UNLESS SPECIFIED OTHERWISE CR = CORROSION RESISTANT WP = WEATHERPROOF GFI = GROUND FAULT INTERRUPTER	SSOLR	SOLID STATE OVERLOAD RELAY MOTOR OVERLOAD, PHASE LOSS, AND CURRENT UNBALANCE PROTECTION
11	CONTACT - NORMALLY OPEN		
И	CONTACT - NORMALLY CLOSED		ELECTRICAL ABBREVIATIONS
	THERMAL OVERLOAD HEATER - AMBIENT COMPENSATED	AUTO	AUTOMATIC
	CIRCUIT BREAKER - THERMAL MAGNETIC 3 POLE UNLESS INDICATED OTHERWISE CONTINUOUS AMP TRIP SETTING INDICATED	AUX BC CC	AUXILIARY BYPASS CONTACTOR CONTROL CABLE
0 0	MOMENTARY PUSHBUTTON NORMALLY OPEN	CNCT CPT	CONNECTION CONTROL POWER TRANSFORMER CONTROL RELAY
ه ا ه	MOMENTARY PUSHBUTTON NORMALLY CLOSED	CR CS CT EI	CONTROL RELAT CONTROL SWITCH CURRENT TRANSFORMER ELECTRICAL INTERRUPT
	FUSED SWITCH - SWITCH AND FUSE CURRENT RATING INDICATED. 3 POLE UNLESS INDICATED OTHERWISE.	ETM FLA FU	ELAPSED TIME METER FULL LOAD AMPERE FUSE
100A	SWITCH - CURRENT RATING INDICATED. 3 POLE UNLESS INDICATED OTHERWISE	FVNR HOA IC	FULL VOLTAGE NON-REVERSING HAND OFF AUTOMATIC SWITCH ISOLATION CONTACTOR
	FUSED TERMINAL BLOCK	J,JB KVA KW	ISOLATION SWITCH JUNCTION BOX KILOVOLT-AMPERE KILOWATT
	ALARM HORN AND BEACON	LS,LMS G M	LIMIT SWITCH GREEN INDICATING LIGHT MAGNETIC CONTACTOR COIL
H A POLE 1 XOO POLE 2 OOX	SELECTOR SWITCH-MAINTAINED CONTACT. CHART DEFINES OPERATION: POSITION POLE HAND OFF AUTO 1 X 0 0 2 0 O X CROUND	M M MIN MTS N OC PH RC RVSS	ELECTRIC MOTOR MAIN CONTACTOR AUXILIARY MINUTES MANUAL TRANSFER SWITCH NEUTRAL GROUNDED CONDUCTOR OVERCURRENT PHASE RUN CONTACTOR REDUCED VOLTAGE SOFT STARTER
± ~~~~	GROUND TRANSFORMER	SEC SPD TR V	SECONDS SURGE PROTECTIVE DEVICE TIMER VOLT
M	MOTOR, SQUIRREL CAGE INDUCTION-HORSEPOWER INDICATED ON ONE LINE.	WP XFMR	WEATHER PROOF TRANSFORMER
\bigcirc	LUMINAIRE, TYPE AS NOTED		
A	INDICATING LIGHT-PUSH TO TEST (PTT) LETTER INDICATES COLOR. A = AMBER Y = YELLOW G = GREEN B = BLUE R = RED W = WHITE		
-ML-	MOTOR OR STARTER ENCLOSURE SPACE HEATER		
*	BASIC RELAY SYMBOL-SOME RELAY FUNCTIONS: ALT = ALTERNATOR CR = CONTROL RELAY TR = TIMING RELAY M = MOTOR CONTACTOR		
050	THERMOSTAT		
	LEVEL FLOAT		
•	GROUNDING CONNECTION EXOTHERMIC OR COMPRESSION		
•••	GATE FLEXIBLE GROUNDING STRAP.		
	GROUND ROD CONNECTION 5/8" X 10' LONG.		
	TEST WELL WITH GROUND ROD CONNECTION 5/8" X 10' LONG.		
©	ABOVE GRADE TAIL FOR EQUIPMENT CONNECTION. TO BE LOCATED FOR PROPER EQUIPMENT ENTRANCE. PENETRATION THRU CONCRETE TO HAVE SCHEDULE 80 PVC PIPE SEGMENT.		

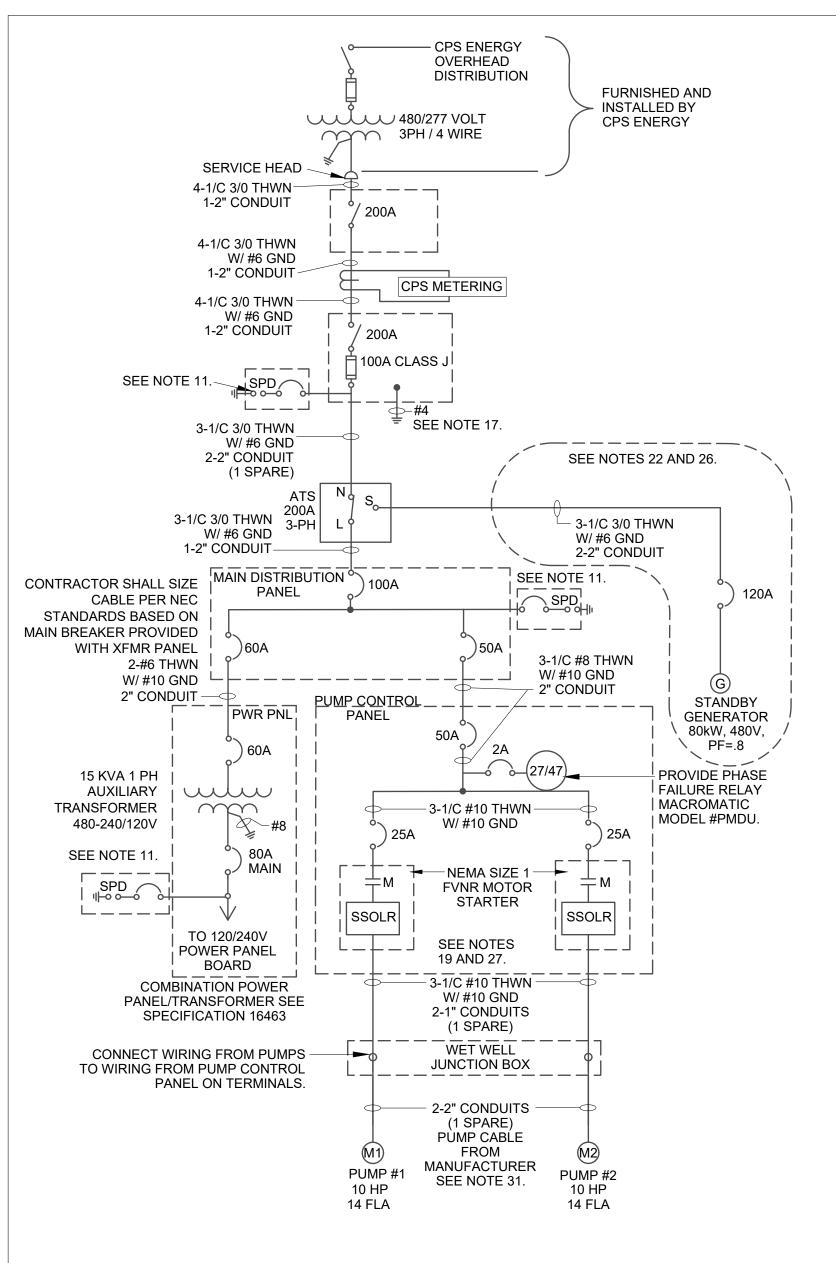
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FEBRUARY 11, 2022
AMJAD ADHAMI
P.E. NO. 137150
GRUBB ENGINEERING INC.
TBPF FIRM No. 3904

INFORMATION		RE	REVISIONS			
	Š.	Description	Drn.	Drn. Approved	Date	TE
GRUBB ENGINEERING INC.						BPE
ELECTRICAL POWER SYSTEMS						FIRM
DESIGN AND TESTING						ЛNc
						. 390
TBPE FIRM REGISTRATION NO. 3904)4
						J.

DTRANCO WEST II UNIT 1 LIFT STATION
ELECTRICAL LEGEND





LOAD SCH	HEDULE	
DESCRIPTION	CONNECTED LOAD	ESTIMATED DEMAND
10 HP PUMP 1 10 HP PUMP 2	10 KVA } 10 KVA }	20 KVA TOTAL
POWER PANEL	15 KVA 35 KVA	8.5 KVA 28.5 KVA

SERVICE CONTACT POLE TO BE INSTALLED

BY CONTRACTOR 25' CLASS 5 OR BETTER.

LOWEST CONDUCTOR MUST BE 12

SEE NOTE 35.

200A FUSED

- DICONNECT SWITCH

-2-2" (1-SPARE)

SEE NOTE 11.

PHONE COMPANY

COMMUNICATION BOX

-see note 24.

-SEE NOTE 33.

-SEE NOTE 20.

TO SERVICE

(RACK

FEET ABOVE FINISH GRADE.

SERVICE HEAD

- SEE NOTE 34.

2" RGS CONDUIT

SEE NOTE 13.-

REFER TO

SHEET E-6

CONDUIT SEAL-

SEE NOTE 10.

GROUND TO -

BE BONDED

TO CONDUIT.

DETATIL A.

CPS ENERGY

OVERHEAD

SERVICE -

- 1. ALL ELECTRIC CONDUIT SHALL BE CONCRETE
- ENCASED 24 INCHES BELOW GRADE. ABOVE GROUND CONDUIT SHALL BE RIGID ALUMINUM. PVC COATED ALUMINUM CONDUIT SHALL BE PROVIDED ON AREAS WHERE CONCRETE COMES IN CONTACT WITH ALUMINUM CONDUIT.
- UNDER GROUND CONDUIT SHALL BE PVC SCHEDULE 40 CONDUIT. SEE DETAILS E AND F ON SHEET E-6.
- ALL ENCLOSURES AND DISCONNECTS MUST BE PAD-LOCKABLE. PUMP CONTROL PANEL CAN BE FREESTANDING TYPE. PUMP CONTROL PANEL SHALL HAVE 120V EQUIPMENT LOCATED IN THE LEFT SIDE AND 480V IN THE RIGHT SIDE.
- ALL MOUNTING HARDWARE, FITTINGS AND STRUT CHANNEL SHALL BE 316 STAINLESS STEEL. ALL ENCLOSURES SHALL BE NEMA 4X, 316 STAINLESS STEEL.
- ALL DISCONNECTS SHALL BE NEMA 4X, 316 STAINLESS STEEL.
- SERVICE RACK STRUTS NEED TO BE 1-1/2" MINIMUM 316 STAINLESS STEEL AND SHALL BE MOUNTED ON 4" DIAMETER, 1/2" THICK STRUCTURAL HOT DIP GALVANIZED STEEL TUBE. STRUT CHANNEL ENDS SHALL BE PROTECTED WITH END CAPS.
- BETWEEN EQUIPMENT MOUNTED ON THE RACK. ALLOW 2 FEET CLEARANCE FOR SERVICE OF PANEL A/C UNIT.

THERE SHALL BE 6" MINIMUM SPACING

- 9. ELECTRICAL RACK SHALL HAVE SUPPORT COLUMNS EVERY 5 FEET.
- 10. PROVIDE SEALING FITTINGS FOR ALL CONDUIT LEAVING THE RACK. SEALS MUST BE LOCATED WITHING 18" OF ENCLOSURE PER NEC.
- 11. PROVIDE A SURGE PROTECTIVE DEVICE IN A SEPARATE ENCLOSURE ATTACHED ADJACENT TO DISCONNECT SWITCH, MDP, SAFETY SWITCH AND COMBO TRANSFORMER/POWER PANEL. DEVICE MUST ADHERE TO UL1449 4TH EDITION STANDARDS. REFER TO SURGE PROTECTIVE DEVICE AS RECOMMENDED BY MANUFACTURER.

- 12. NOT ALL SPARE CONDUITS ARE SHOWN ON THIS SHEET. SEE SITE PLAN FOR ADDITIONAL SPARE CONDUITS.
- 13. #6 COPPER GROUNDING CONDUCTOR FURNISHED AND INSTALLED BY CONTRACTOR IN 3/4" ALUMINUM CONDUIT.
- COPPER GROUND CONDUCTOR FURNISHED AND INSTALLED BY CONTRACTOR (TYPICAL).
- 15. SEE SHEET E-5 FOR AUTODIALER PANEL INFORMATION.
- 16. GROUND RESISTANCE SHALL NOT EXCEED 5 OHMS AT ANY POINT.
- 17. BOND NEUTRAL TO GROUNDING ELECTRODE CONDUCTOR.
- NEMA RATED. 19. IF PROVIDED PUMPS ARE NOT SIZED PER PROJECT PLANS, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ENGINEERING

18. ALL ELECTRICAL COMPONENTS SHALL BE

20. 6" DUCTILE IRON COVER. PVC PIPE PROVIDED WITH THREADED CAP

REQUIRED FOR RESIZING ALL EQUIPMENT AT

21. CONTRACTOR SHALL FOLLOW CPS ENERGY STANDARDS FOR RACK INSTALLATION.

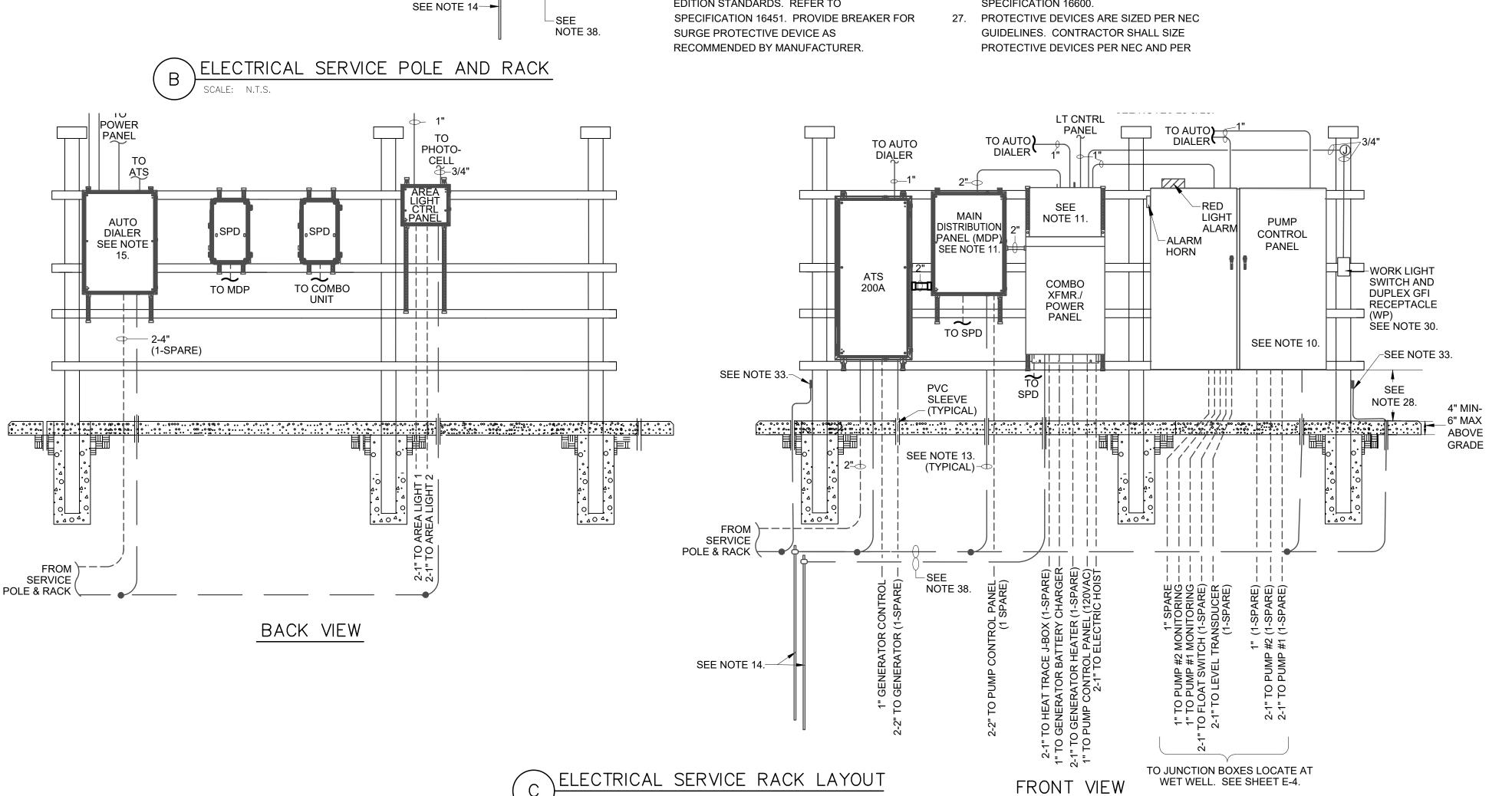
NO CHARGE TO OWNER.

- 22. GENERATOR SHALL BE PROVIDED WITH 3 PHASE/NEUTRAL AND GROUND (5 WIRE SYSTEM). GENERATOR SHALL BE PROVIDED WITH OVER CURRENT PROTECTION BREAKER AS RECOMMENDED BY MANUFACTURER.
- 23. RACK SHOWN IS FOR DIAGRAMMATIC PURPOSE ONLY. PLEASE SEE STRUCTURAL DRAWINGS RACK CONSTRUCTION AND FOUNDATION DETAILS.
- 24. CONTRACTOR TO TERMINATE THE SPARE CONDUITS ON TYPE "C" CONDUIT BODIES AND CAP FOR FUTURE.
- ALLOWED. CONDUIT DRAWN FOR DIAGRAMMATIC PURPOSE ONLY. 26. GENERATOR SIZE TO BE VERIFIED BY

25. TOP PENETRATIONS ON PANELS ARE NOT

- GENERATOR MANUFACTURER BASED ON PERFORMANCE TEST REQUIREMENTS IN SPECIFICATION 16600.

- RESULT OF POWER SYSTEM STUDY. 28. THERE MUST BE 24" MINIMUM TO BOTTOM OF ENCLOSURES.
- 29. DIELECTRIC COUPLINGS SHALL BE INSTALLED BETWEEN DISSIMILAR METALS IN ALL CASES.
- 30. PROVIDE LABELS FOR LIGHT SWITCH AND RECEPTACLE.
- 31. MOTOR BRANCH CIRCUIT CONDUITS FROM WET WELL HATCH TO WET WELL JUNCTION BOX, WHERE THE MOTOR POWER CABLES WILL BE RUN. CONDUIT SHALL BE TWO (2) INCHES. SEE SHEET E-3.
- 32. CONTRACTOR TO MOUNT HORIZONTAL FRAMING TO SUPPORT COLUMNS USING U-BOLTS. DO NOT DRILL IN SUPPORT COLUMN
- 33. GROUNDING CONNECTION TO SERVICE RACK. REFER TO SHEET E-6 DETAIL C.
- 34. CONTRACTOR MUST PROVIDE 24" OF WIRE ENDS EXTENDING OUT OF SERVICE HEAD FOR CPS ENERGY TO MAKE CONNECTIONS AND FOR FORMING A DRIP LOOP CONDUCTOR 4-3/0 CU..
- 35. POWER METER AND CODE 6 TRANSOCKETS FURNISHED BY CPS ENERGY AND INSTALLED BY CONTRACTOR.
- 36. INCOMING MAIN 200 AMP NON-FUSED DISCONNECT SWITCH. TOP OF ENCLOSURE MUST BE 5 FEET ABOVE GRADE.
- 37. CONTRACTOR SHALL FOLLOW CPS ENERGY STANDARDS FOR RACK INSTALLATION.
- 38. #2/0 COPPER GROUND CONDUCTOR FURNISHED AND INSTALLED BY CONTRACTOR (TYPICAL)



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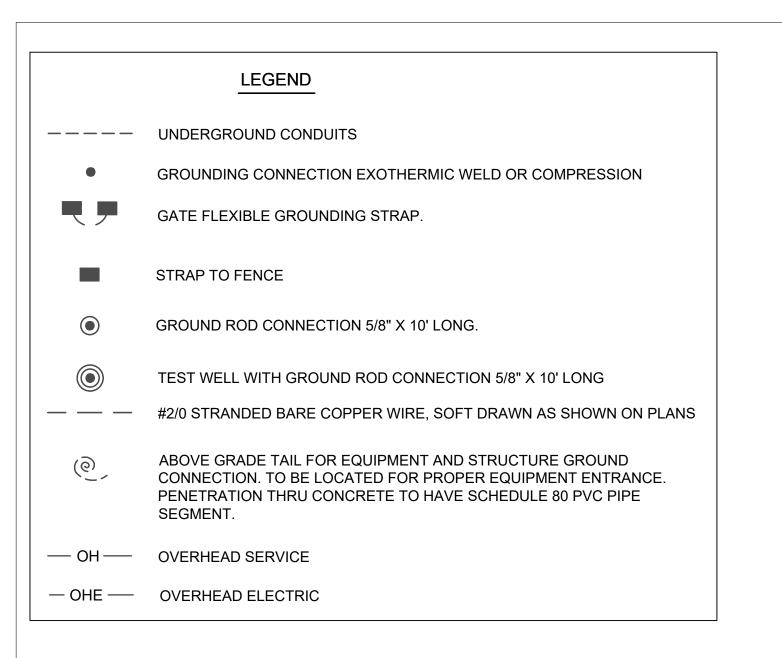
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GRUBB ENGINEERING INC.

TBPE FIRM No. 3904

ELECTRICAL SERVICE LAYOUT

RACK



KEYED NOTES:

(1) 2-1" C TO PUMP #1 (1 SPARE) REFER TO SHEET E-2 FOR CABLE SIZES. 1-1" C TO PUMP #1 MONITORING PER CONTROLS 2-1" C TO PUMP #2 (1 SPARE) REFER TO SHEET E-2 FOR CABLE SIZES. 1-1" C TO PUMP #2 MONITORING PER CONTROLS

(2) 2-2" C TO PUMP #1 (1 SPARE) 1-1" C TO PUMP #1 MONITORING 2-2" C TO PUMP #2 (1 SPARE) 1-1" C TO PUMP #2 MONITORING

 $\langle 3 \rangle$ 2-1" C TO AREA LIGHT (1 SPARE) TYPICAL 1"C, 2-#10 W/ 1-#12GND

4 2-2" C TO GENERATOR (1 SPARE) REFER TO SHEET E-2 FOR CABLE SIZES. 1-1" C TO GENERATOR CONTROL 4 -1/C #12, W/ 2- #12 GND 1-1" C TO GENERATOR BATTERY CHARGER REFER TO SHEET E-2 DETAIL B FOR CABLE SIZES. 2-1" C TO GENERATOR HEATER (1 SPARE)

REFER TO SHEET E-2 DETAIL B FOR CABLE SIZES.

(5) 2-2" C TO ELECTRICAL SERVICE POLE AND RACK (1 SPARE) REFER TO SHEET E-2 FOR CABLE SIZES. 2-4" C CONDUITS (1 SPARE) FOR TELEPHONE LINE

 $\langle 6 \rangle$ 2-1" C TO HIGH LEVEL FLOAT SWITCH (1 SPARE) CABLE PER MANUFACTURER

 $\langle 7 \rangle$ 2-1" C TO ELECTIC HOIST MOTOR (1 SPARE) SEE SHEET E-7, DETAIL A FOR CABLE DETAILS

(8) 2-1" C (1 SPARE) TO DISCHARGE PRESSURE TRANSMITTER. SEE CIVIL DRAWINGS FOR LOCATION. 2X(#16 TW/SH/PR)

(9) 2-1" C TO TRANSDUCER (1 SPARE) CABLE PER MANUFACTURER

(10) 2-1" C (1 SPARE) TO JUNCTION BOX FOR PRESSURE TRANSMITTER HEAT TRACE POWER. SEE SHEET E-7 DETAIL D.

NOTES:

1. FENCE SHALL BE GROUNDED AT EACH CORNER WITH 5/8" X 10' GROUND ROD. RODS SHOULD BE LOCATED INSIDE THE FENCE. 2. GATE SHALL BE EQUIPPED WITH GROUNDING STRAPS. SEE

3. THERE SHALL BE A 20' SEPARATION BETWEEN GROUND RODS.

SOLID COMMON GROUNDING LOOP. 5. ALL ABOVE GROUND CONDUIT SHALL BE INSTALLED AS TO NOT CREATE A TRIPPING HAZARD.

6. SEE SHEET E-6 FOR GROUNDING DETAILS FOR ELECTRICAL

7. PROVIDE BARRIER PER NEC IN JUNCTION BOX TO SEPARATE POWER AND SIGNAL CABLES.

8. ALL GROUND GRID CONDUCTORS SHALL BE CONTINUOUS

EXCEPT WHERE SPLICING IS UNAVOIDABLE. 9. CONTRACTOR SHALL OBSERVE NEC WORKING SPACE REQUIREMENTS WHEN LOCATING EQUIPMENT.

10. JUNCTION BOX OPENING SHALL BE AWAY FROM WET WELL.

11. ALL WEATHER CORROSION PROTECTIVE TAPE SHALL BE PROVIDED IN AREAS WHERE CONCRETE COMES INTO CONTACT WITH ALUMINUM CONDUITS.

12. CONTRACTOR SHALL COORDINATE WITH CPS ENERGY REGARDING SERVICE DROP INSTALLATION.

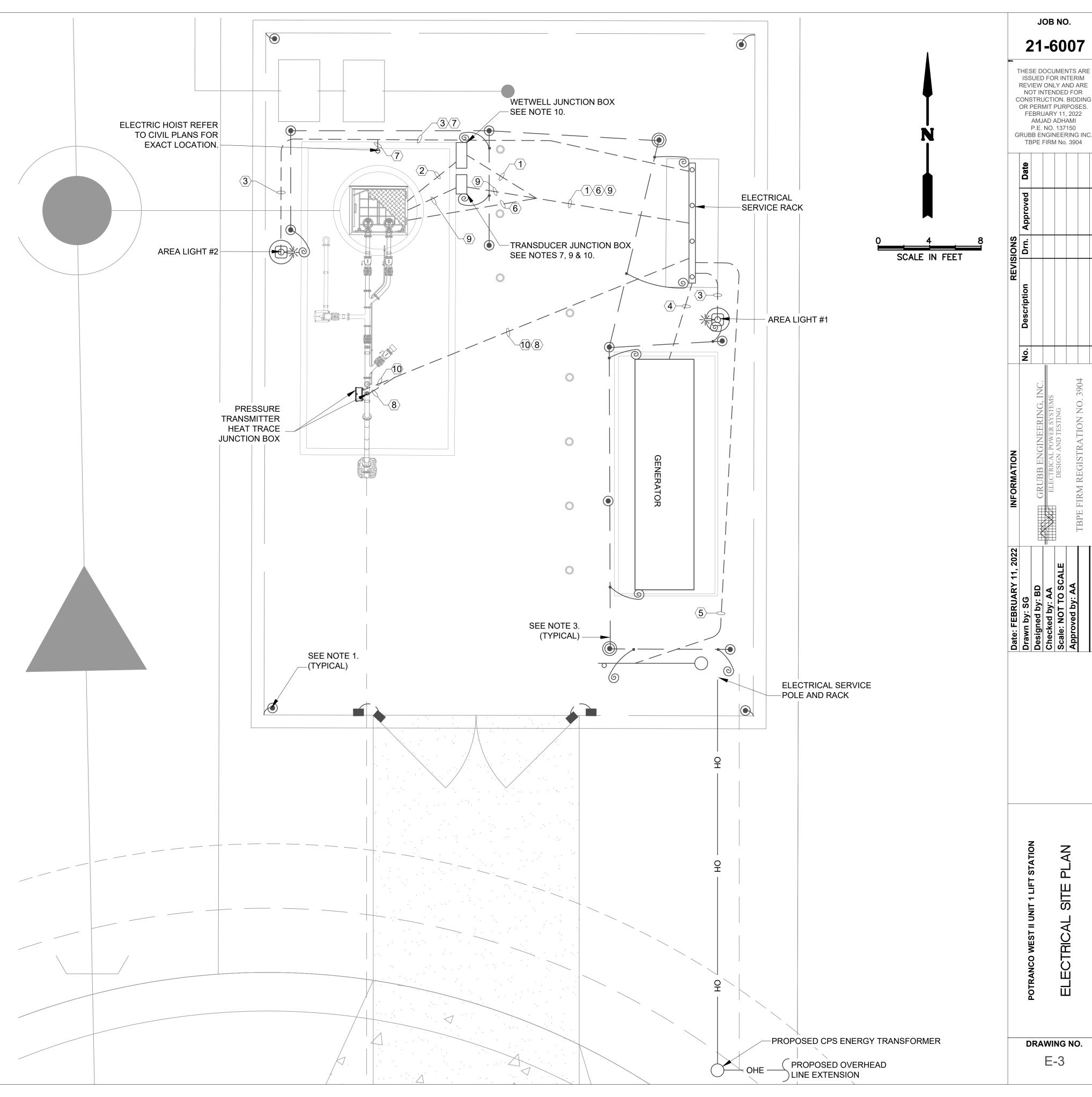
13. A LINE EXTENSION WILL BE NEEDED FOR 3-PHASE SERVICE. 4. GROUND GRID MUST USE ALL EXOTHERMIC WELD TO MAKE A 14. IF LOCATION OF ELECTRIC SERVICE POLE CHANGES DURING CONSTRUCTION PHASE, CONTRACTOR TO ENSURE CPS ENERGY STANDARDS AND NEC STANDARDS APPLY.

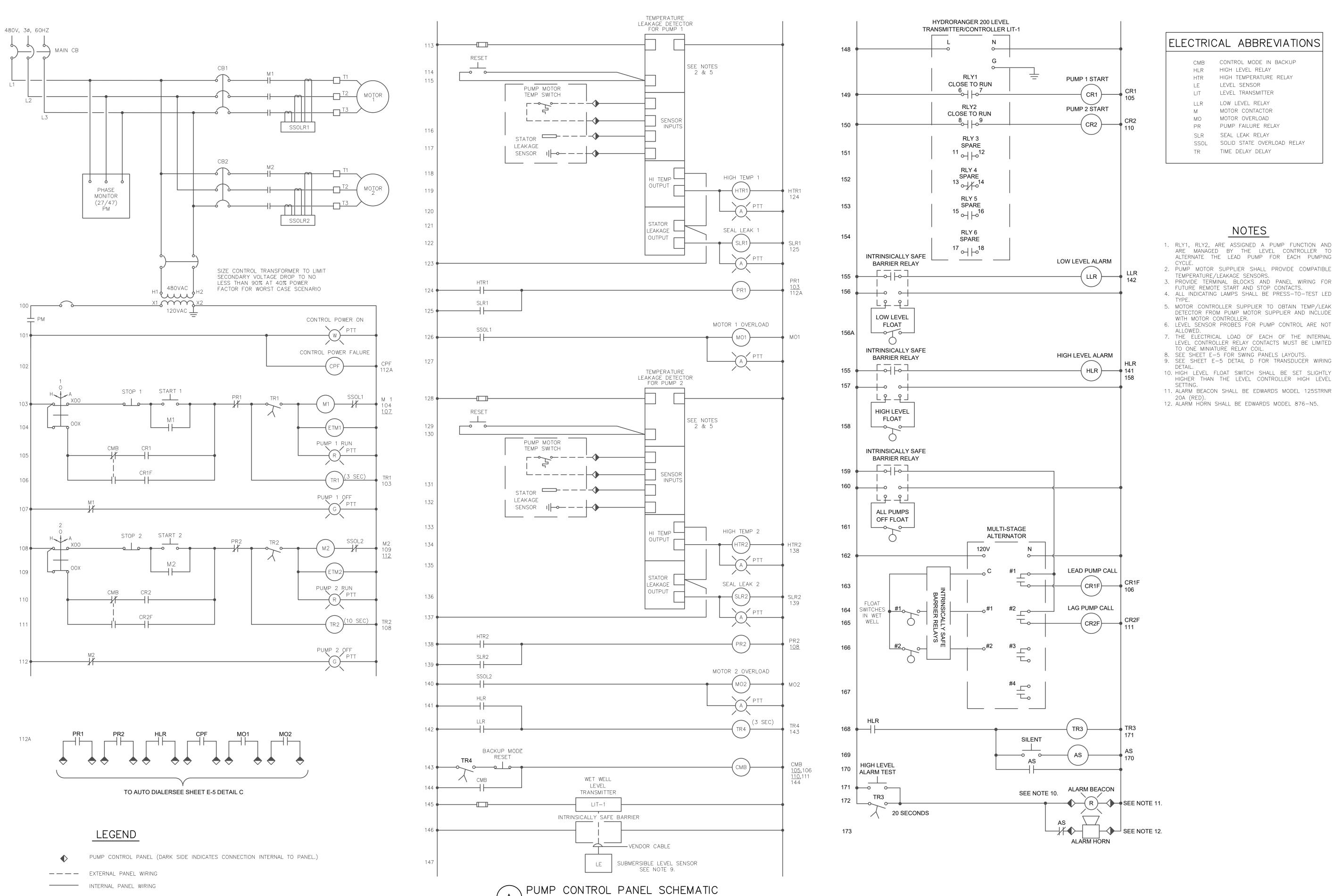
> 15. ENSURE OVERHEAD CONDUCTORS HAVE A HORIZONTAL CLEARANCE WITHOUT WIND OF 10 FEET FOR VOLTAGES UP TO

> 16. GROUND RESISTANCE MEASURE 5 OHMS OR LESS. CONTRACTOR TO ADD SUPPLEMENTAL GROUND RODS WHERE NECESSARY TO ACHIEVE THE GROUND REQUIRED. 17. UTILITIES NOT SHOWN FOR CLARITY. PLEASE SEE CIVIL

DRAWINGS FOR UTILITIES.

18. CONTRACTOR TO COORDINATE AND PAY FEES FOR PHONE UTILITY LINE EXTENSION





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21-6007

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TBPE FIRM No. 3904

NOTES

LEVEL SENSOR

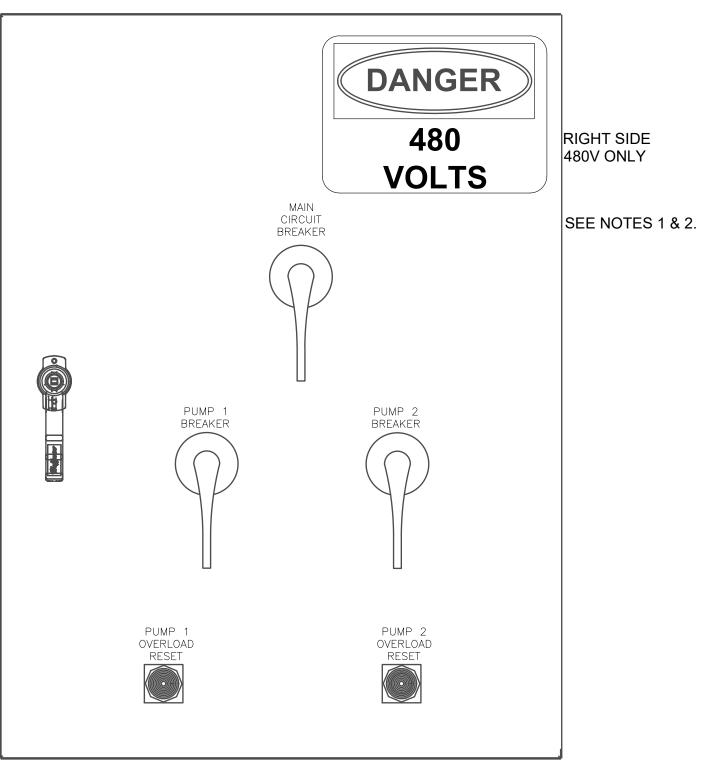
LEVEL TRANSMITTER

LOW LEVEL RELAY

MOTOR CONTACTOR

MOTOR OVERLOAD

- 1. RLY1, RLY2, ARE ASSIGNED A PUMP FUNCTION AND ARE MANAGED BY THE LEVEL CONTROLLER TO ALTERNATE THE LEAD PUMP FOR EACH PUMPING 2. PUMP MOTOR SUPPLIER SHALL PROVIDE COMPATIBLE
- TEMPERATURE/LEAKAGE SENSORS. 3. PROVIDE TERMINAL BLOCKS AND PANEL WIRING FOR
- FUTURE REMOTE START AND STOP CONTACTS. 4. ALL INDICATING LAMPS SHALL BE PRESS-TO-TEST LED
- 5. MOTOR CONTROLLER SUPPLIER TO OBTAIN TEMP/LEAK DETECTOR FROM PUMP MOTOR SUPPLIER AND INCLUDE WITH MOTOR CONTROLLER.
- 6. LEVEL SENSOR PROBES FOR PUMP CONTROL ARE NOT
- 7. THE ELECTRICAL LOAD OF EACH OF THE INTERNAL LEVEL CONTROLLER RELAY CONTACTS MUST BE LIMITED TO ONE MINIATURE RELAY COIL.
- 8. SEE SHEET E-5 FOR SWING PANELS LAYOUTS. 9. SEE SHEET E-5 DETAIL D FOR TRANSDUCER WIRING
- 10. HIGH LEVEL FLOAT SWITCH SHALL BE SET SLIGHTLY HIGHER THAN THE LEVEL CONTROLLER HIGH LEVEL
- 12. ALARM HÓRN SHALL BE EDWARDS MODEL 876-N5.

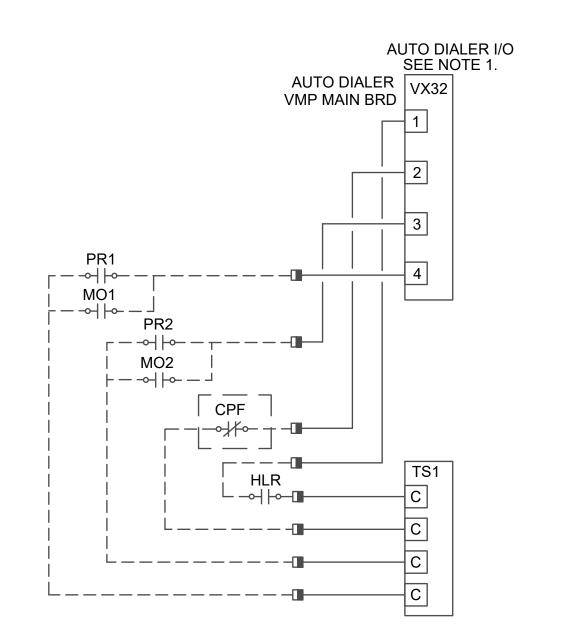


NOTES:

OFF HAND AUTO

- 1. DISTANCE BETWEEN INTERIOR PANEL AND ANY COMPONENT SHALL BE AT LEAST 5".
- 2. DISTANCE BETWEEN EXTERIOR PANEL AND INTERIOR PANEL SHALL BE AT LEAST 2".
- 3. FLASHING ALARM LIGHT WITH HORN TO BE LOCATED ON EXTERIOR OF PUMP CONTROL PANEL

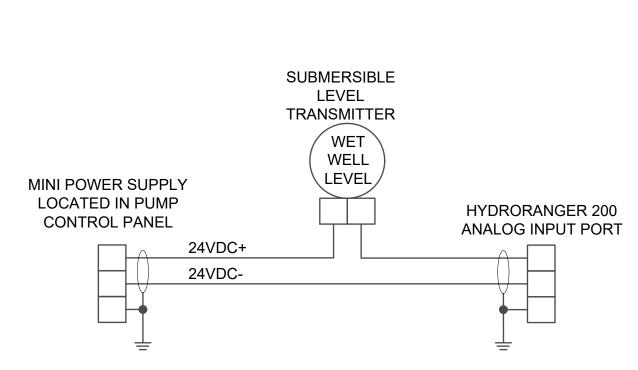
A INTERIOR SWING PANELS FOR PUMP CONTROL PANEL



NOTES:

- 1. PROVIDE RACO 8 CHANNEL VERBATIM AUTO DIALER. LOCATED
- INSIDE THE AUTODIALER PANEL
- 2. CONTRACTOR SHALL COORDINATE LAND LINE TELEPHONE SERVICE TO SITE FROM TELEPHONE UTILITY.







AUTO O HAND LC1 LC1 ON-OFF ON-OFF N AREA AREA LIGHT #1 LIGHT #2

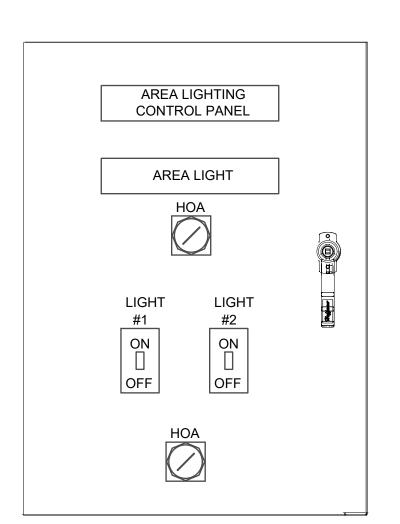
PC -PHOTO CELL CONTACTOR LC - LIGHT CONTACTOR

NOTE: MOUNT PHOTOCELL ON NORTH SIDE OF CANOPY.

TERMINAL POINT IN HEAT TRACE JUNCTION BOX. DARK SIDE INDICATES CONNECTIONS INTERNAL TO JUNCTION BOX.

AREA LIGHT CONTROL PANEL DIAGRAM

SCALE: N.T.S.

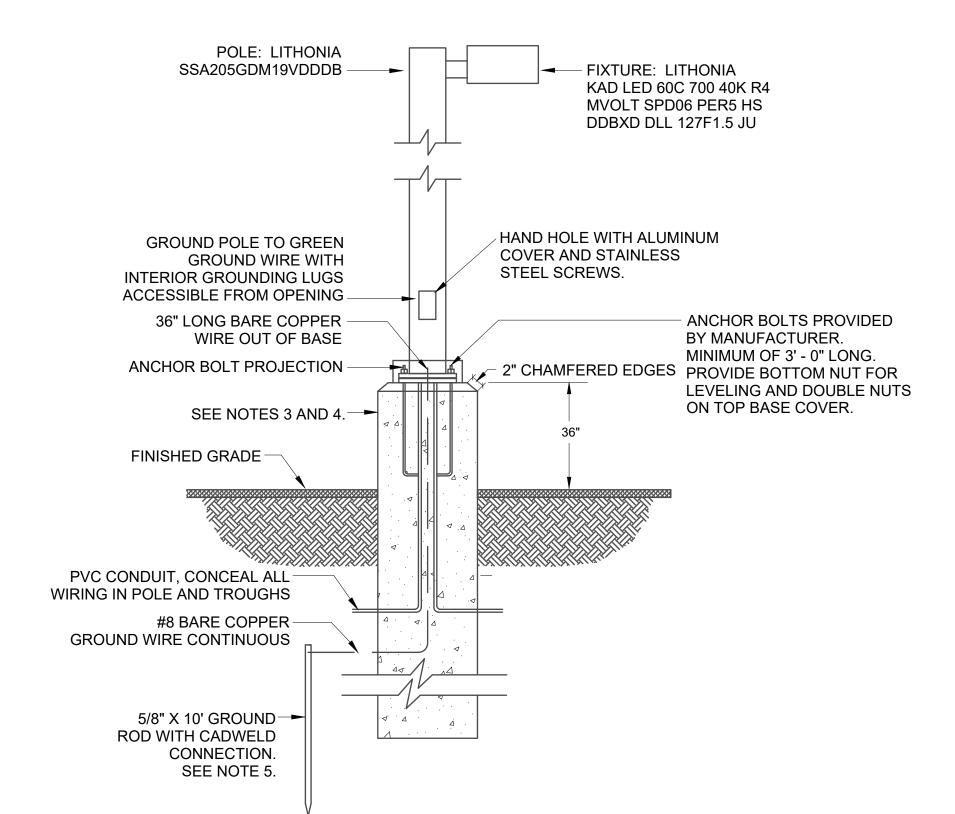


NOTES

- NOTES:

 1. REFER TO DETAIL E OF THIS SHEET.
- INSTALL TAG LABELED "LIGHTING CONTACTOR PANEL" ON FRONT EXTERIOR OF PANEL.
 CONTRACTOR SHALL PROVIDE ADEQUATE SPACE FOR COMPONENTS FROM ENCLOSURE EDGES.
- 4. ENCLOSURE SHALL BE NEMA 4X 316SS.

F INTERIOR SWING PANEL FOR AREA LIGHTING CONTROL PANEL SCALE: N.T.S.



NOTES:

- 1. REFER TO SPECIFICATION 16050 FOR SWITCH AND NAMEPLATE REQUIREMENTS.
- 2. SEE STRUCTURAL PLAN DRAWINGS FOR FOUNDATION.
- SEE STRUCTURAL PLAN DRAWINGS FOR FOUNDATION.
 TO REMOVE IRREGULARITIES AND TO PROVIDE SMOOTH FINISH, PAINT EXPOSED AREA SAFETY YELLOW.
- 4. GROUND ROD SHALL BE BONDED TO SITE GROUNDING SYSTEM.

B LIGHT POLE FOUNDATION (TYP. OF 2)

Date: FEBRUARY 11, 2022

Drawn by: SG

Designed by: AA

Checked by: AA

Scale: NOT TO SCALE

Approved by: AA

Approved by: AA

JOB NO.

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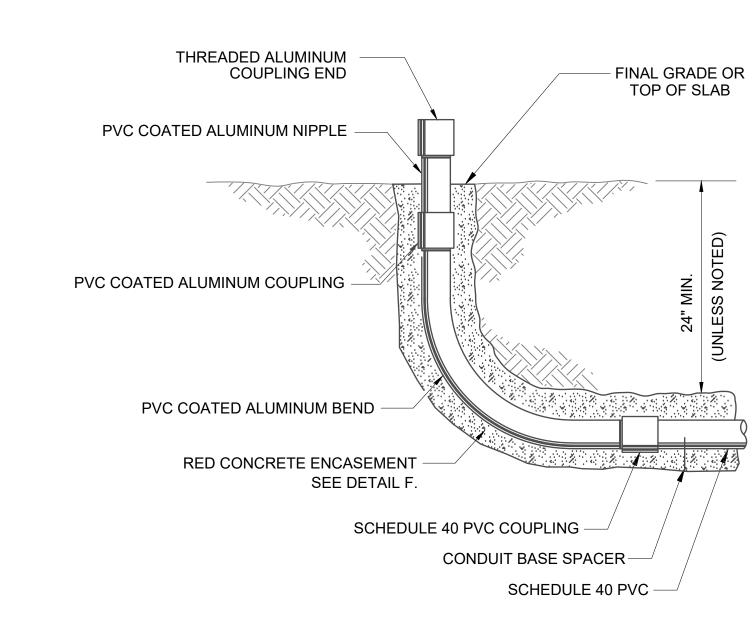
AMJAD ADHAMI P.E. NO. 137150

GRUBB ENGINEERING INC.

TBPE FIRM No. 3904

POTRANCO WEST II UNIT 1 LIFT STATION
ITO DIALER, AREA LIGHT AND
CONTROL PANFL LAYOUT

SCALE: N.T.S.



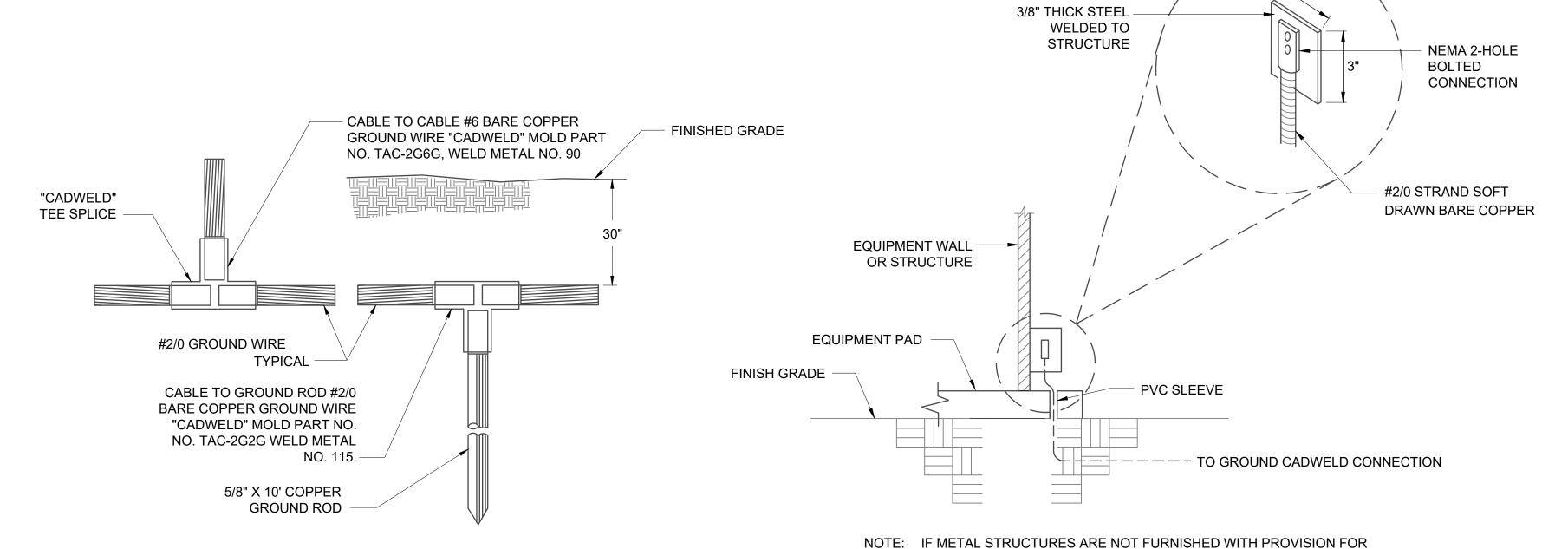


NOTE: THIS DETAIL DOES NOT EXCLUDE CONTRACTOR

SCALE: N.T.S.

FROM USING OTHER APPROVED PRODUCTS.

TYPICAL GROUND DETAIL

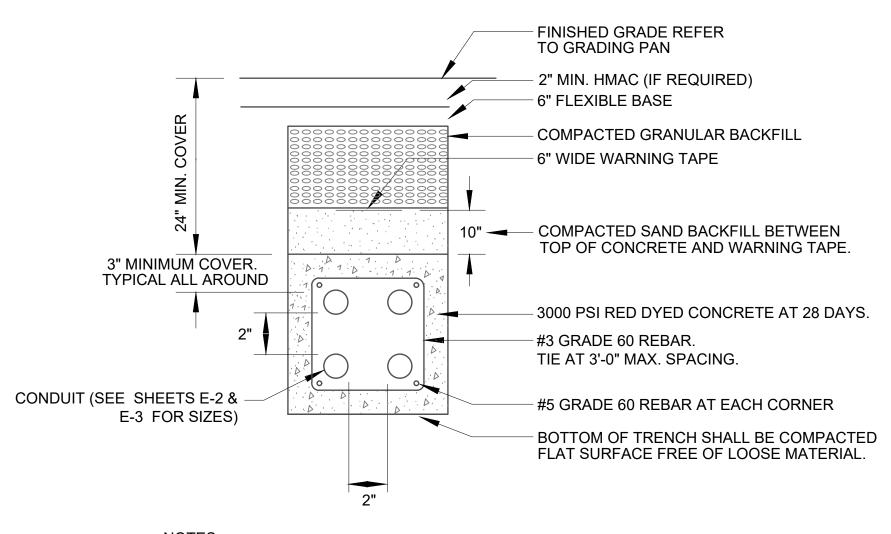


C TYPICAL STRUCTURE GROUND DETAIL

SCALE: N.T.S.

BOLTED CONNECTION TO GROUNDING SYSTEM, CONTRACTOR

SHALL PROVIDE WELDED PAD FOR GROUND CONNECTION.



NOTES:
1. PROVIDE 100% CONCRETE ENCASEMENT BOTH HORIZONTALLY AND VERTICALLY.
2. CONTRACTOR SHALL COORDINATE LOCATION WITH UNDERGROUND WATER PIPE, AND



OTHER UTILITIES.

 REUARY 11, 2022
 INFORMATION
 No.
 Description
 Drn.
 Approved
 Day: AA

 by: AA
 TBPE FIRM REGISTRATION NO. 3904
 TBPE FIRM REGISTRATION NO. 3904
 Approved
 Description
 Description
 Drn.
 Approved
 Day: AB

JOB NO.

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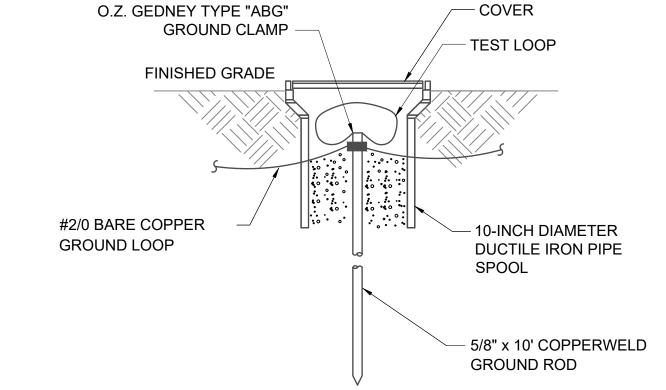
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POTRANCO WEST II UNIT 1 LIFT STATION

DUCTBANK AND

GROUNDING DETAILS



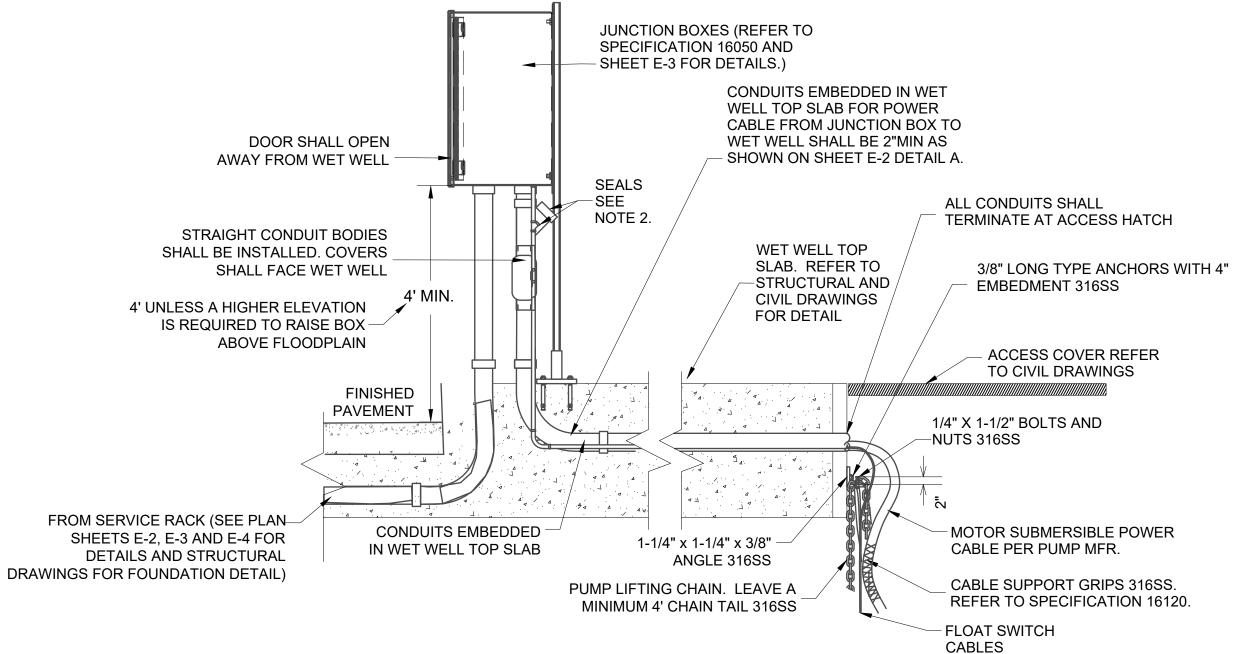


TYPE: 100A COPPER BUS 80A MAIN BREAKER				PO	NEF	R PA	NEI	_			SERVICE ENTRANCE RATED WITH ISOLATED NEUTRAL BUS WITH ISOLATED GROUND BUS
240 / 120V 1-PHASE, 3-WIRE		MIRE		(25)	IE/				RSIL		MIRE
LABEL	comput	LOND	BRE	AKER SI	\$ CX	. /sk	. 80	4 / 42	the Silk	comput	LABEL
GENERATOR BLOCK HEATER	1"C, 2#10				1	2	1	20	1.0 kW	1"C, 2-#12 1-#12GND	GENERATOR BATTERY CHARGER
CENTERVIORESCONIE	1#12GND	1.0 kW	20	2	3	4	1	20	0.6 kW	1"C, 2-#12 1-#12GND	HEAT TRACE CONTROL PANEL
LIGHT CONTROL PANEL	1"C, 2#10 1#12GND	1.0 kW	20	1	5	6	1	20	0.7 kW	1"C, 2#10 1#12GND	ELECTRICAL RACK RECEPTACLE
PUMP CONTROL PANEL HEATER & RECEPTACLE	1"C, 2#10 1#12GND	1.9 kW	20	1	7	8	1	20	1.0 kW	1"C, 2#10 1#12GND	CANOPY LIGHTS
AUTO DIALER PANEL	1"C, 2#10 1#10GND	.35 kW	20	1	9	10	1	20	1.9 kW	1"C, 2#12 1#12GND	AUTO DIALER RECEPTACLE
ELECTRIC HOIST	1"C, 2#10 1#12GND	1.9 kW	20	1	11	12	1	20	0.2	1"C, 2#10 1#12GND	SPD FOR ENCLOSED CB
SPARE		-	20	1	13	14	1	20	-		SPARE
SPARE		-	20	1	15	16	1	20	-		SPARE
SPARE		-	20	1	17	18	1	20	-		SPARE
SPARE		-	20	1	19	20	1	20	-		SPARE
		6,150 WATTS		TO	ΓAL: 11	,550 W	ATTS		5,400 WATTS		

NOTES:

- 1. CONTRACTOR TO COORDINATE BREAKER AND CABLE RATING WITH GENERATOR REQUIREMENTS.
- 2. EACH CIRCUIT SHALL HAVE SEPARATE HOT, NEUTRAL, GROUND WIRES. DO NOT SHARE NEUTRAL GROUND WIRE FROM OTHER CIRCUITS.

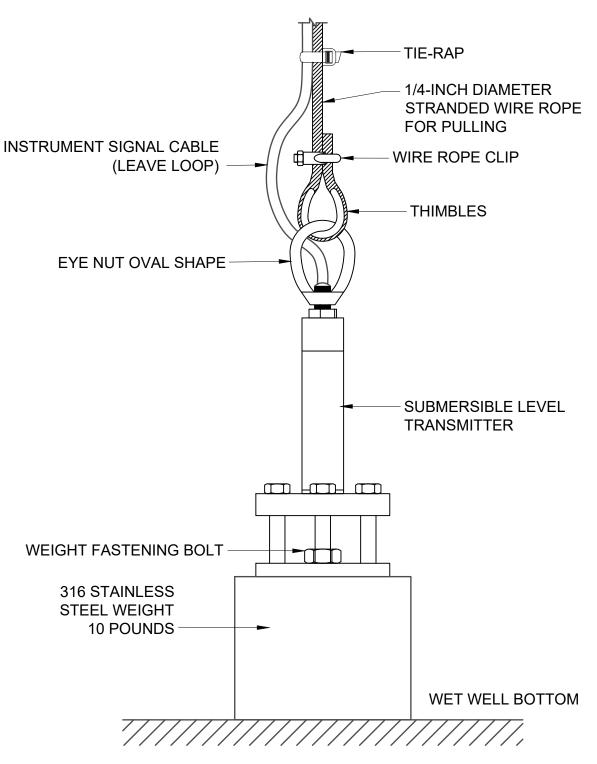




NOTES:

- 1. SUBMERSIBLE TRANSDUCER CABLE SHALL BE ROUTED THROUGH CONDUIT EMBEDDED IN WET WELL TOP SLAB DIRECTLY TO PUMP CONTROL PANEL.
- 2. SEAL ALL CONDUITS ENTERING WET WELL SHALL BE INSTALLED ABOVE STRAIGHT CONDUIT BODIES. SEALS MUST BE LOCATED WITHIN 18" OF THE ENCLOSURE PER NEC. SEAL CONDUITS PROPERLY TO PREVENT GASES FROM ENTERING ELECTRICAL BOXES.
- 3. REFER TO STRUCTURAL PLANS FOR CONCRETE SLAB DIMENSIONS.



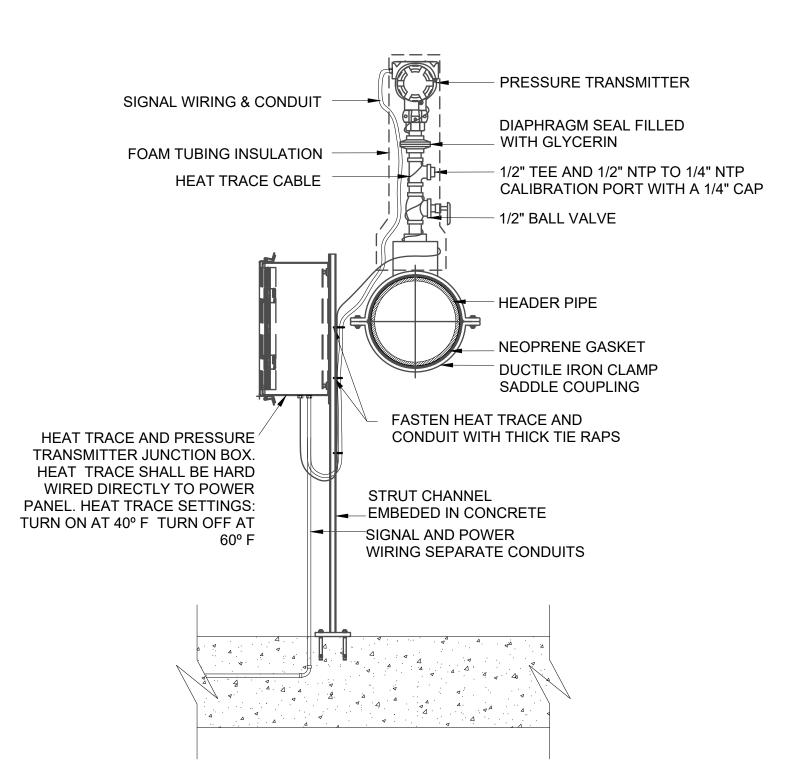


INSTRUMENT_DETAIL

NOTES:

- 1. INSTRUMENT, WIRE ROPE AND ALL FASTENERS SHALL BE OF STAINLESS STEEL 316 TYPE.
- 2. WEIGHT SHALL BE DRILLED AND TAPPED AT THE CENTER TO ALLOW A BOLT TO SOLIDLY FASTEN
- INSTRUMENT TO WEIGHT.
- INSTRUMENT SIGNAL CABLE SHALL BE FASTENED TO WIRE ROPE WITH THICK PLASTIC TIE-RAPS.
 EYE NUT THREADED TO INSTRUMENT AND OVAL SIZE SHALL BE LARGE ENOUGH TO ALLOW SIGNAL CABLE TO FREELY BEND AND PASS THROUGH.
- 5. REFER TO CIVIL DRAWINGS FOR PRESSURE TRANSMITTER MOUNTING DETAIL.
- 6. INSTRUMENT SIGNAL CABLE SHALL NOT BE SPLICED AND SHALL BE CONTINUOUS FROM THE TRANSDUCER TO THE PUMP CONTROL PANEL.







JOB NO.

21-6007

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RMATION		RE	REVISIONS			
	Š.	Description	Drn.	Drn. Approved Date	Date	
UBB ENGINEERING, INC.						
LECTRICAL POWER SYSTEMS						
DESIGN AND TESTING						
REGISTRATION NO. 3904						

Drawn by: SG
Designed by: BD
Checked by: AA
Scale: NOT TO SCALE
Approved by: AA

POTRANCO WEST II UNIT 1 LIFT STATION
POWER PANEL SCHEDULE
MISCELLANEOUS DETAILS