

# CONSTRUCTION PLANS FLAT CREEK SUBDIVISION UNIT 2

### OWNER/DEVELOPER:

KF FLAT CREEK, L.P. 2722 W. BITTERS, RD. SUITE 106 SAN ANTONIO, TEXAS 78259 (210) 662-0066



### PREPARED BY:

KCI TECHNOLOGIES, INC. 2806 W. BITTERS, RD. SUITE 218 SAN ANTONIO, TEXAS 78248 PHONE: (210) 641-9999 FAX: (210) 641-6440 REGISTRATION #F-10573 / #101943-65

Sheet List Table

SANITARY SEWER LINE K PLAN AND PROFILE SANITARY SEWER LINE L PLAN AND PROFILE SANITARY SEWER LINE M PLAN AND PROFILE

SANITARY SEWER DETAILS SANITARY SEWER DETAILS

STREETS & DRAINAGE COVER OVERALL GRADING PLAN

MUD CREEK PLAN & PROFILE

NAILS CREEK PLAN & PROFILE KEECHI CREEK PLAN & PROFILE KEECHI CREEK PLAN & PROFILE

DRAIN A PLAN & PROFILE DRAIN B PLAN & PROFILE DRAIN C PLAN & PROFILE DRAIN D PLAN & PROFILE DRAIN E PLAN & PROFILE

**DETENTION POND** OUTFALL STRUCTURE

STREET DETAILS STREET DETAILS

OVERALL SIGN PLAN

SIGN DETAILS

INTERCEPTOR DRAIN F PLAN & PROFILE INTERCEPTOR DRAIN G PLAN & PROFILE INTERCEPTOR DRAIN H PLAN & PROFILE

SEDIMENTATION & EROSION CONTROL COVER

SEDIMENTATION & EROSION CONTROL DETAILS

SEDIMENTATION & EROSION CONTROL NARRATIVE

SEDIMENTATION & EROSION CONTROL PLAN

PALO PINTO CREEK PLAN & PROFILE PALO PINTO CREEK PLAN & PROFILE

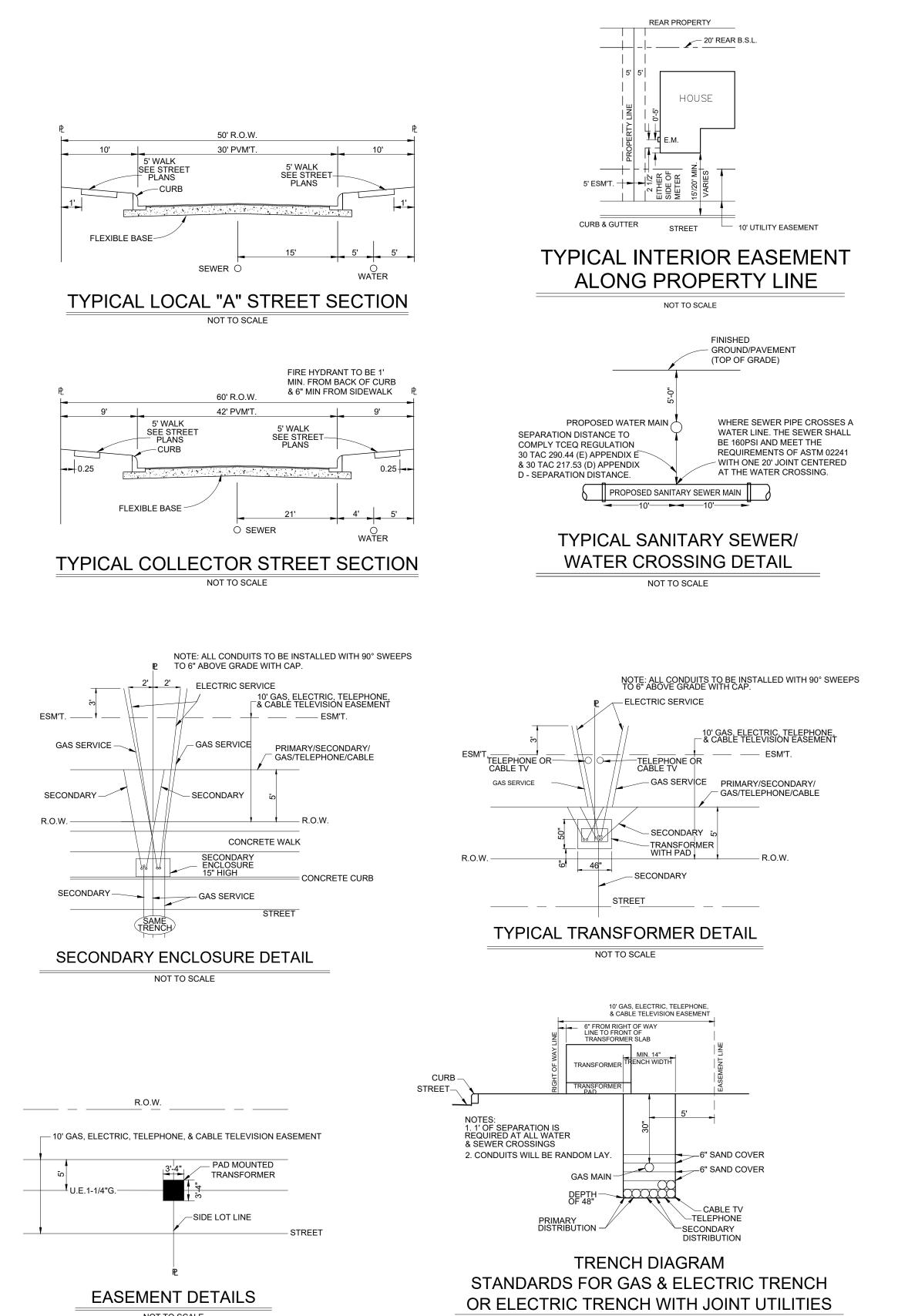
HOME CREEK, BRAZOS CREEK, & BRADY CREEK PLAN & PROFILE

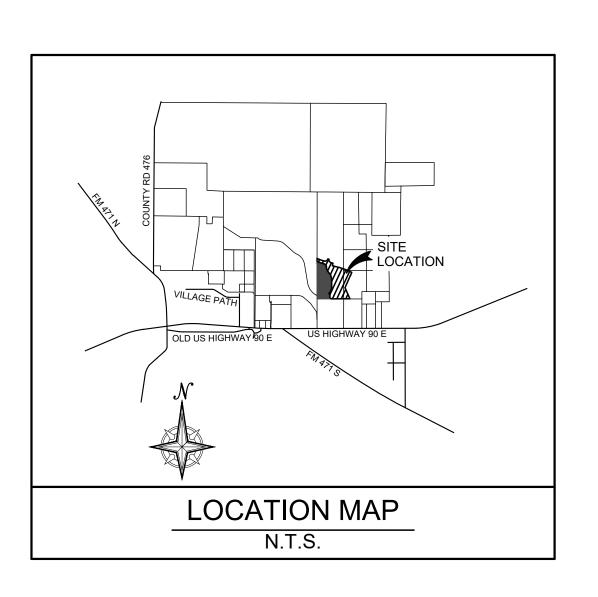
WATER DETAILS WATER DETAILS



DESIGN: C.P. CHECK: SUBMITTAL PHASE:

# OVERALL UTILITY PLANS FLAT CREEK SUBDIVISION UNIT 2





### Sheet List Table

Sheet Number Sheet Title UTILITY COVER & DETAILS OVERALL UTILITY PLAN

### **LEGEND**

EXISTING EDGE OF PAVEMENT ————————————————————————————————————	///////
EXISTING SANITARY SEWER MAIN	<b>E8</b> "PVC
PROPOSED SANITARY SEWER MAIN —————	<b>──</b> P8"SS <b>──</b>
DIRECTION OF FLOW	<b>&gt;</b>
EXISTING WATER MAIN ————————————————————————————————————	— — —E8"РVС — — —
PROPOSED WATER MAIN ————————————————————————————————————	———P8"PVC———
PROPOSED LIGHT POLE (100 WATT LED)	<b>★</b> L.P.
PVC CONDUIT —	=======

- 1. P.V.C. WILL BE REQUIRED FOR CITY OF CASTROVILLE UTILITY CROSSINGS WHEN DRAIN OR STREET CONSTRUCTION PRECEDES UTILITY CONSTRUCTION. CONTACT ENGINEER PRIOR TO CONSTRUCTION FOR APPROVAL
- 2. 4" P.V.C. SCHEDULE 40 WILL BE REQUIRED FOR UNDERGROUND
- 3. CITY OF CASTROVILLE TO HAVE A 5' WIDE ELECTRIC EASEMENT ON ALL ROAD CROSSINGS IN WHICH ELECTRIC LINES ARE PLACED.
- 4. ALL UTILITY EASEMENTS ARE FOR CONSTRUCTION, MAINTENANCE (INCLUDING BUT NOT LIMITED TO REMOVAL OF TREES AND OTHER OBSTRUCTIONS), READING OF METERS AND REPAIR OF ALL OVER- HEAD AND UNDERGROUND UTILITIES.
- 5. ALL CITY OF CASTROVILLE UTILITY CROSSINGS SHALL BE A MINIMUM OF 7' CLEAR FROM ALL OTHER CONDUITS/TRENCHES AT THE SAME

### OWNER/DEVELOPER:

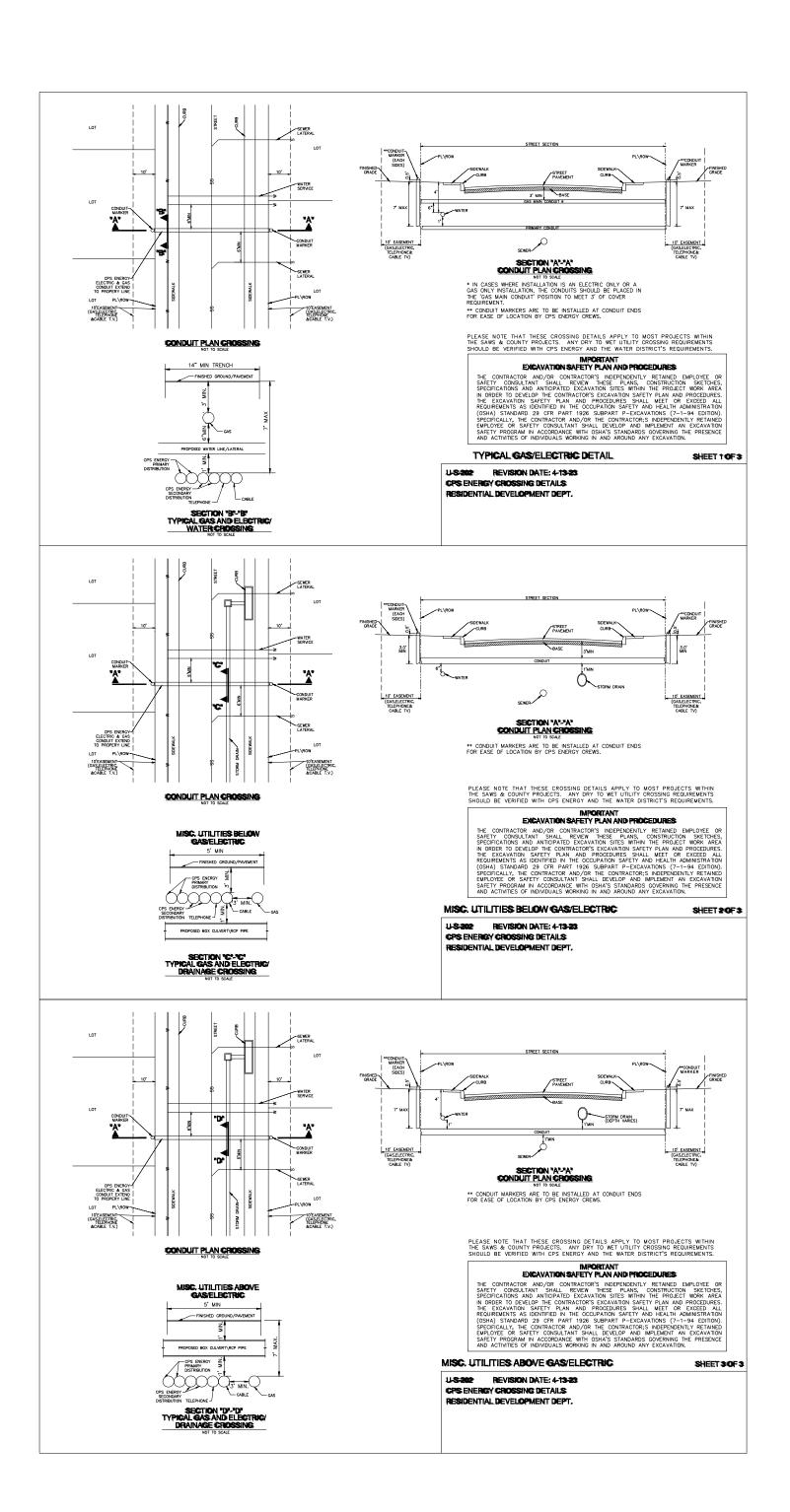
KF FLAT CREEK, L.P. 2722 W. BITTERS, RD. SUITE 106 SAN ANTONIO, TEXAS 78259 (210) 882-6800



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PHONE: (210) 641-9999 FAX: (210) 641-6440 REGISTRATION #F-10573 / #101943-65



TRENCH EXCAVATION SAFETY PROTECTION CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL 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. 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 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.

RAFTING: K.P. CHECK: ESIGN: C.P. CHECK: 762308223

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## SANITARY SEWER CONSTRUCTION FLAT CREEK SUBDIVISION UNIT 2

### CITY OF CASTROVILLE SANITARY SEWER SYSTEM GENERAL NOTES

1. All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:

A. Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1 Chapter 290. B. Current TXDOT "Standard Specifications for Construction of Highways, Streets and Drainage

C. Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction" D. Current City of San Antonio "Standard Specifications for Construction E. Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).

2. The Contractor shall obtain the SAWS Standard Details from the SAWS website http://www.saws.org/business\_center/specs. Unless otherwise noted within the design plans

3. The Contractor is to notify and make arrangements with the SAWS Construction Inspection Division at 210-233-3500 (during regular SAWS working hours) and provide notification procedures the Contractor will use to notifiy affected home residents and/or property owners two (2) weeks prior to excavation. Outside of regular SAWS working hours the SAWS EOC should be contacted at 210-704-7297

4. If necessary, Contractor will coordinate use of SAWS premises at no additional cost to SAWS. Such efforts include, but are not limited to, obtaining security identification badges required for access to SAWS facilities.

5. Location and depth of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to SAWS.

6. The Contractor shall verify the exact location of underground utilities and drainage structures prior to construction whether shown on plans or not. As-Builts for SAWS infrastructure can be obtained at website below. Contractor shall coordinate physical locates for SAWS infrastructure thru the SAWS Inspector. Please allow up to 7 business days for locates requesting pipe location markers on SAWS facilities. The following contact information are

 Request as-builts: https://www.saws.org/service/locates-service/ - COSA Drainage (210) 206-8433

- COSA Traffic Signal Operations (210) 207-7720 Texas State Wide One Call Locator 1-800-545-6005 or 811

7. The Contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping and structures to its original or better condition if damages are made as a result of the project's construction.

8. Contractor shall not make use of dumpsters or waste bins that are intended to serve residents and/or businesses.

9. All work in Texas Department of Transportation (TxDOT) and/or Bexar County right-of-way shall be done in accordance with respective construction

10. The Contractor shall comply with City of San Antonio or other governing municipality's tree ordinances when excavating near trees. 11. All work within the 100-year Floodplain shall be done in accordance with Floodplain Development Permi

12. Any work completed without prior written authorization which is not included in these plans and specifications will not be compensated by the San Antonio Water System.

13. Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays

Weekend Work: Contractors are required to submit request to the SAWS Inspection Construction department by 12:00pm on the Wednesday prior to the weekend being requested. Request should be sent to constworkreq@saws.org

Any and all SAWS utility work installed without weekend approval will be subject to be uncovered for proper inspection at no cost to SAWS. Inspections. A pre-site video will provide accurate documentation of the existing conditions (NSPI)

15. POWER POLE BRACING: Contractors should be advised that there are existing overhead utility poles along the project corridor. Contractors should further be advised that if the distance from the outside face of a utility trench to the face of a utility pole is less than 5 feet, said utility pole is subject to bracing, based on a determination made by utility pole owner. It is advisable for the contractor to review the construction documents and visit the

16. CONSTRUCTION SEQUENCING: It is the Contractors's sole responsibility to schedule sequencing for removal and installation of existing and proposed SAWS utilities in conjunction with general project construction. Sequence of construction activities shall be considered in order to minimize the

17. Contractor shall comply with applicable regulations including, but not limited to, those overseen by the U.S. Occupational Safety and Health Administration (OSHA), OSHA information and related materials may be obtained at https://www.osha.gov/ or at the OSHA San Antonio Office located at Fountainhead Tower, Suite 605 8200 W. Interstate 10 San Antonio, TX 78230 which is also reachable by phone at (210) 472-5040.

18. 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 areas in order to implement 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 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 worknig in and around trench excavation.

19. The Contractor is responsible for ensuring that no sanitary sewer overflow (SSO) occurs as a result of their work. All contractor personnel responsible

- A. Identify the source of the SSO and notify SAWS Emergency Operations Center (EOC) immediately at 210-704-SAWS (210-704-7297). Provide the address of
- the spill and an estimated volume or flow. B. Attempt to eliminate the source of the SSO
- C. Contain sewage from the SSO to the extent of preventing a possible contamination of waterways. D. Clean up spill site (return contained sewage to the collection system if possible)
- and properly dispose of contaminated soil/materials. E. Clean the affected sewer mains and remove any debris. F. Meet all post-SSO requirements as per the EPA Consent Decree, including line
- cleaning and televising the affected sewer mains (at SAWS direction) within 24

Sewer Bypass Pumping in accordance with SAWS Standard Specifications 865 and 864.

- Should the Contractor fail to address an SSO immediately and to SAWS satisfaction, they will be responsible for all costs incurred by SAWS, including any fines from EPA.
- No separate measurement or payment shall be made for this work. All work shall be done according to guidelines set by the TCEQ and SAWS.

20. The Contractor shall provide bypass pumping of sewage around each segment of pipe to be replaced, in accordance with SAWS Standard Specification Item No. 865, "Bypass Pumping Small Diameter Sanitary Sewer Mains" and Standard Specification Item No. 864, "Bypass Pumping Large Diameter Sanitary Sewer Mains" as applicable. Payment for such work will be made under the appropriate bid item associated with Sanitary

21. Prior to tie-ins, any shutdowns of existing force mains of any size must be coordinated with the SAWS Construction Inspection Division at 210-233-3500 and/or SAWS Production groups at least two weeks or more in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to sequence the work

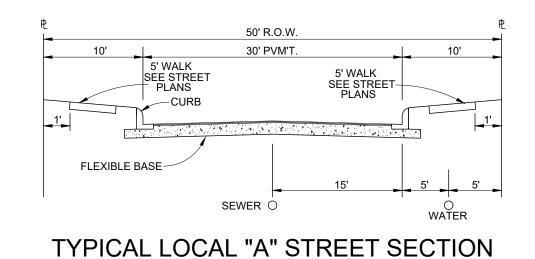
22. ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY: It shall be the responsibility of the Contractor to make allowances and adjustments for top of manholes to match the finished grade of the project's improvements (NSPI).

23. MANHOLE REMOVAL: Where existing manholes are to be replaced by the contractor, the existing manholes shall be removed. (NSPI) 24. SMART MANHOLE COVERS: The Contractor shall notify SAWS EOC at 210-704-SAWS (210-233-7297) and either America Espinoza at

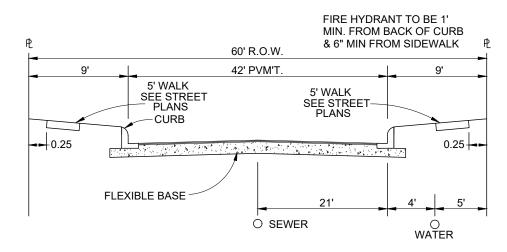
25. FLOW METERS IN MANHOLES: The Contractor shall notify Bobby Johnson at 210-233-3493 or Abel Borunda at 210-233-3704 a minimum of 72 hours, not counting weekends or SAWS holidays, before working on the pipe or manhole, in order to have SAWS remove the Flow Meter in the manhole. Any damage done to the Flow Meter will be charged to the Contractor through a change order.

210-233-2934 or Jose A. Martinez at 210-233-3071 a minimum of 72 hours, not counting weekends or SAWS holidays, before working on the pipe or

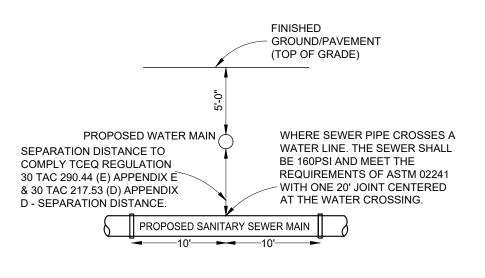
manhole, in order to have SAWS remove the Smart Cover. Any damage done to the Smart Cover will be charged to the Contractor through a change



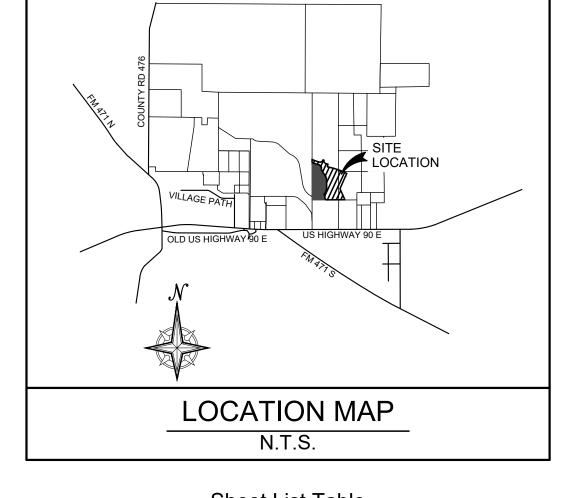
NOT TO SCALE



TYPICAL COLLECTOR STREET SECTION



TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL NOT TO SCALE



Sheet List Table			
Sheet Number	Sheet Title		
300	SANITARY SEWER COVER		
301	SANITARY SEWER OVERALL		
302	SANITARY SEWER LINE B PLAN AND PROFILE		
303	SANITARY SEWER LINE G PLAN AND PROFILE		
304	SANITARY SEWER LINE H PLAN AND PROFILE		
305	SANITARY SEWER LINE I AND J PLAN AND PROFILE		
306	SANITARY SEWER LINE K PLAN AND PROFILE		
307	SANITARY SEWER LINE L PLAN AND PROFILE		
308	SANITARY SEWER LINE M PLAN AND PROFILE		
309	SANITARY SEWER DETAILS		

SANITARY SEWER DETAILS

LEGEND			
XISTING EDGE OF PAVEMENT ——————			
XISTING SANITARY SEWER MAIN —————	= E8"SS		
ROPOSED SANITARY SEWER MAIN —————	<b>──</b> P8"SS <b>──</b>		
DIRECTION OF FLOW ————————————————————————————————————	<b>&gt;</b>		
XISTING WATER MAIN			
PROPOSED WATER MAIN ————————————————————————————————————	P8"PVC		
PROPOSED LIGHT POLE (100 WATT LED)	🙀 L.P.		

- 1. ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND 35 FEET IN LENGTH UNLESS NOTED OTHERWISE.
- 2. ALL RESIDENTIAL SEWER SERVICE LATERALS SHALL BE CAPPED AND SEALED.
- 3. LATERALS TO LOTS THAT SLOPE AWAY FROM STREET SHALL BE SLOPED FROM THE TEE OR STACK AT 2% THROUGH G.E.T.TV.E.
- 4. ALL SEWER PIPE TO BE SDR-26 UNLESS OTHERWISE NOTED.
- 5. CONTRACTOR TO ENSURE LATERALS AT PROPOSED DRY UITLITY CROSSINGS ARE LOCATED AT A DEPTH TO AVOID ANY CONFLICT WITH DRY UTILITY INSTALLATION.

### OWNER/DEVELOPER:

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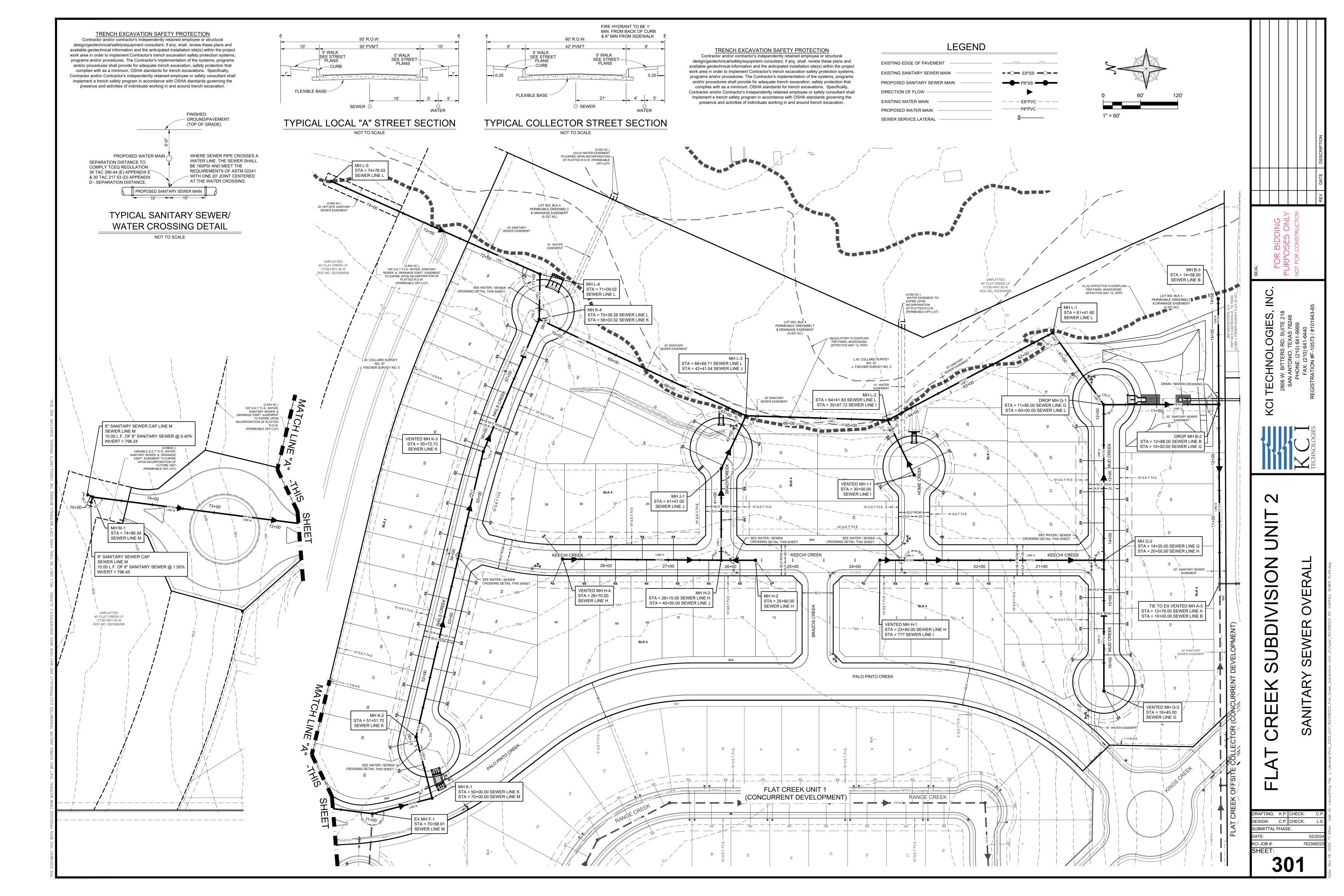
TRENCH EXCAVATION SAFETY PROTECTION

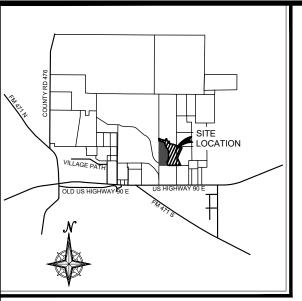
CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH

SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF

INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

AFTING: K.P. CHECK: CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL C.P. CHECK: 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 UBMITTAL PHASE: ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION, SAFETY PROTECTION THAT COMPLIES WITH CI JOB #: 762308223 AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR





LOCATION MAP

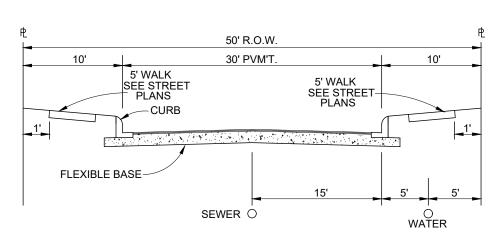
TRENCH EXCAVATION SAFETY PROTECTION

Contractor and/or contractor's independently retained employee or structural

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. 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 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.

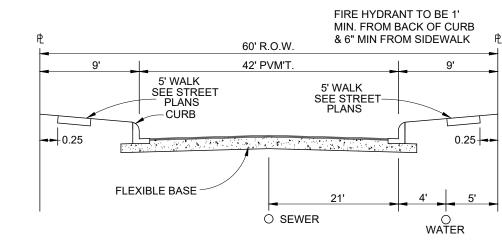
### IOTES

- ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND 35 FEET IN LENGTH UNLESS NOTED OTHERWISE.
- 2. ALL RESIDENTIAL SEWER SERVICE LATERALS SHALL BE CAPPED AND SEALED.
- 3. LATERALS TO LOTS THAT SLOPE AWAY FROM STREET SHALL BE SLOPED FROM THE TEE OR STACK AT 2% THROUGH G.E.T.TV.E.
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- 5. CONTRACTOR TO ENSURE LATERALS AT PROPOSED DRY UITLITY CROSSINGS ARE LOCATED AT A DEPTH TO AVOID ANY CONFLICT WITH DRY UTILITY INSTALLATION.



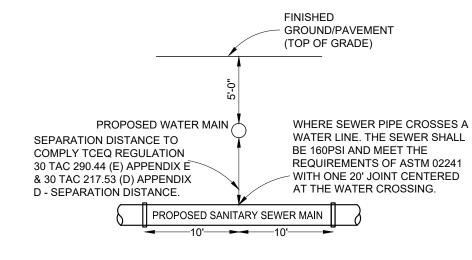
TYPICAL LOCAL "A" STREET SECTION

NOT TO SCALE

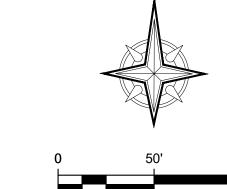


TYPICAL COLLECTOR STREET SECTION

NOT TO SCALE



TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL



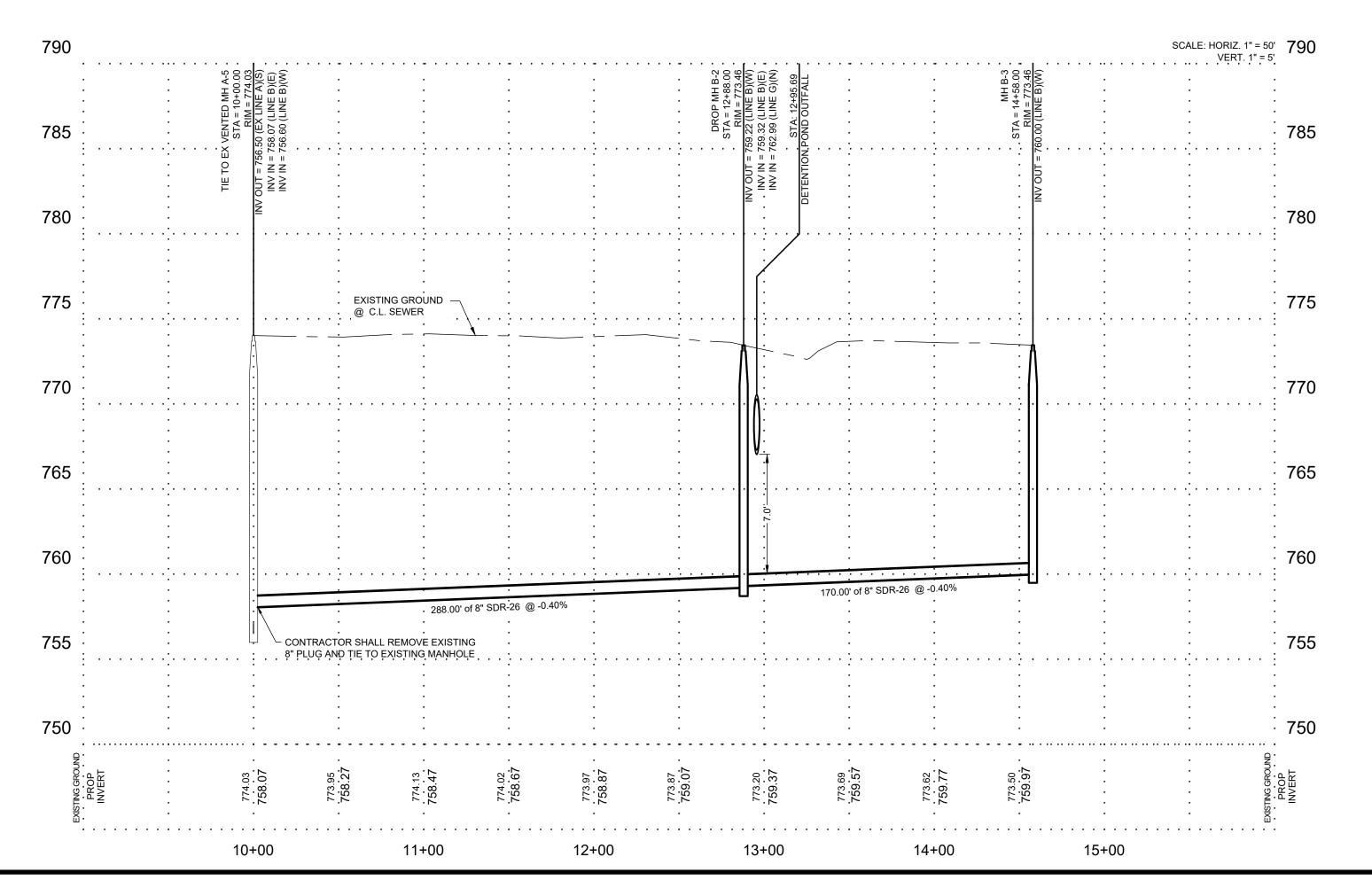
### LEGEND

EXISTING EDGE OF PAVEMENT ——————	////////
EXISTING SANITARY SEWER MAIN —————	■ ■ E8"SS ■ O
PROPOSED SANITARY SEWER MAIN —————	P8"SS —
DIRECTION OF FLOW ————————————————————————————————————	<b>&gt;</b>
EXISTING WATER MAIN	——— E8"PVC———
PROPOSED WATER MAIN ———————	P8"PVC
SEWER SERVICE LATERAL ——————	<u> </u>

(EFFECTIVE MAY 15, 2020) MH B-3 TIE TO EX VENTED MH A-5 STA = 14+58.00 STA = 10+00.00 SEWER LINE B SEWER LINE B STA = 12+76.00 SEWER LINE A DROP MH B-2 STA = 12+88.00 SEWER LINE B STA = 10+00.00 EX SEWER LINE G JBS ASSOCIATES, LLC FLAT CREEK OFFSITE COLLECTOR — 1% AC ULTIMATE FLOODPLAIN — (CONCURRENT DEVELOPMENT) PER FLOOD STUDY PREPARED A1269 J. FISHER SURVEY 5 (21.32 AC)

### SANITARY SEWER LINE "B"

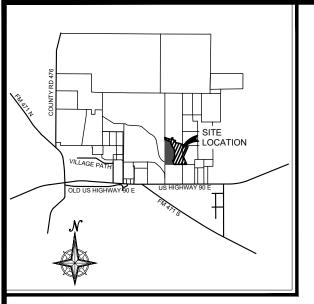
STA. 10+00.00 TO STA. 14+58.00



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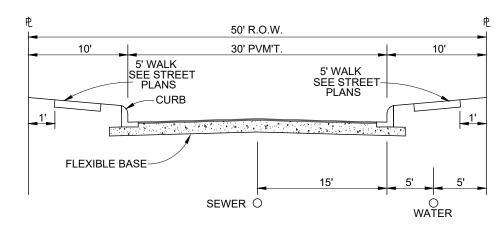


LOCATION MAP

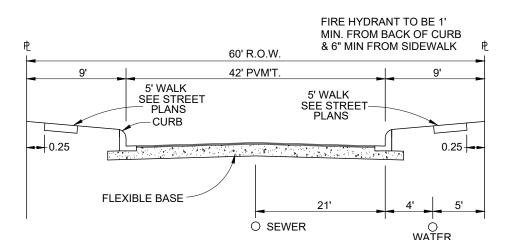
TRENCH EXCAVATION SAFETY PROTECTION Contractor and/or contractor's independently retained employee or structural design/geotechnical/safety/equipment consultant, if any, shall. review these plans and available geotechnical information and the anticipated installation site(s) within the project work area in order to implement Contractor's trench excavation safety protection systems,

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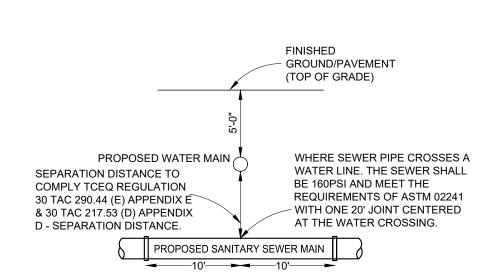
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- FROM THE TEE OR STACK AT 2% THROUGH G.E.T.TV.E. 4. ALL SEWER PIPE TO BE SDR-26 UNLESS OTHERWISE NOTED.
- 5. CONTRACTOR TO ENSURE LATERALS AT PROPOSED DRY UITLITY CROSSINGS ARE LOCATED AT A DEPTH TO AVOID ANY CONFLICT WITH DRY UTILITY INSTALLATION.



### TYPICAL LOCAL "A" STREET SECTION NOT TO SCALE

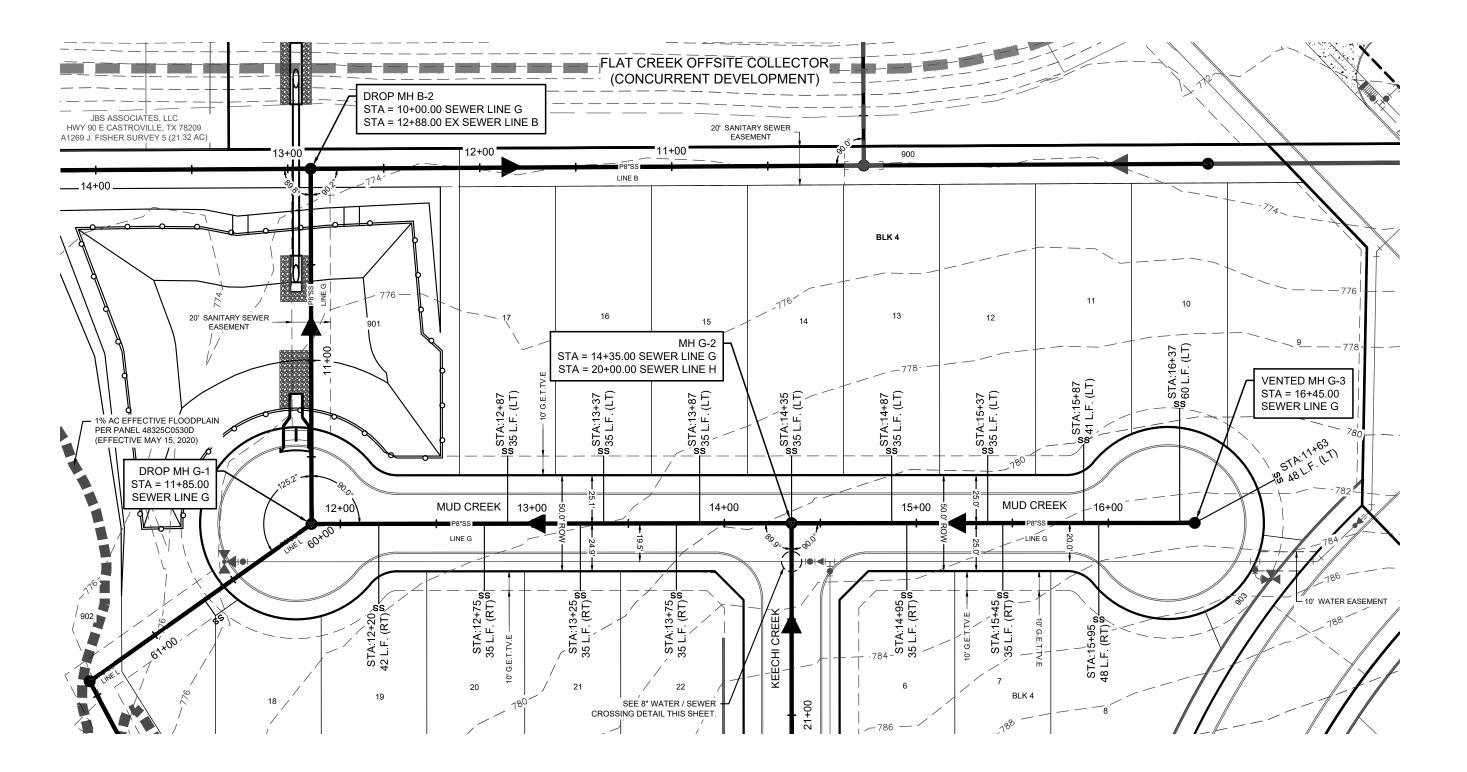


### TYPICAL COLLECTOR STREET SECTION

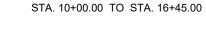


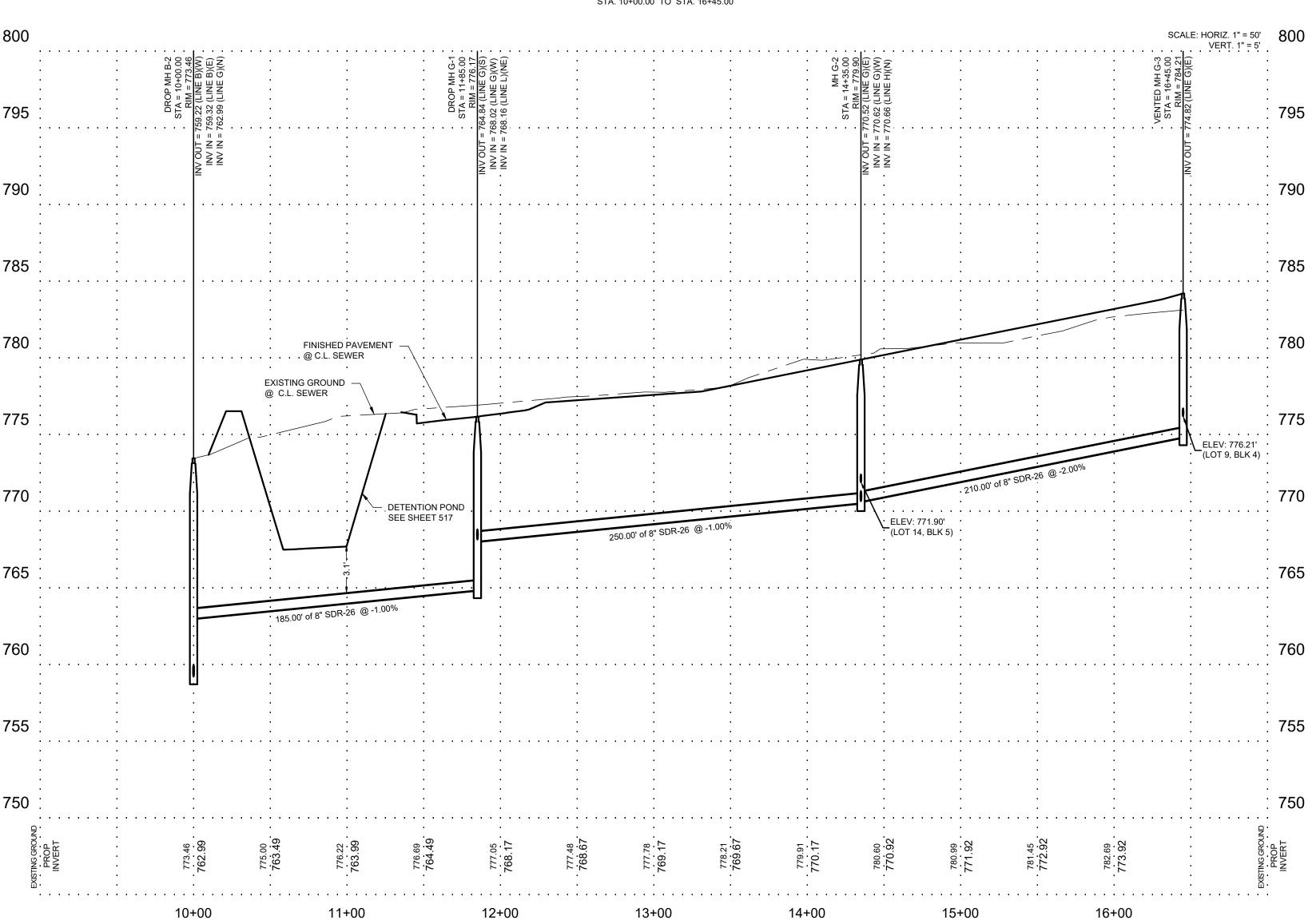
### TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

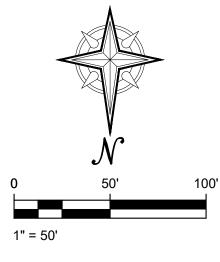
NOT TO SCALE



### SANITARY SEWER LINE



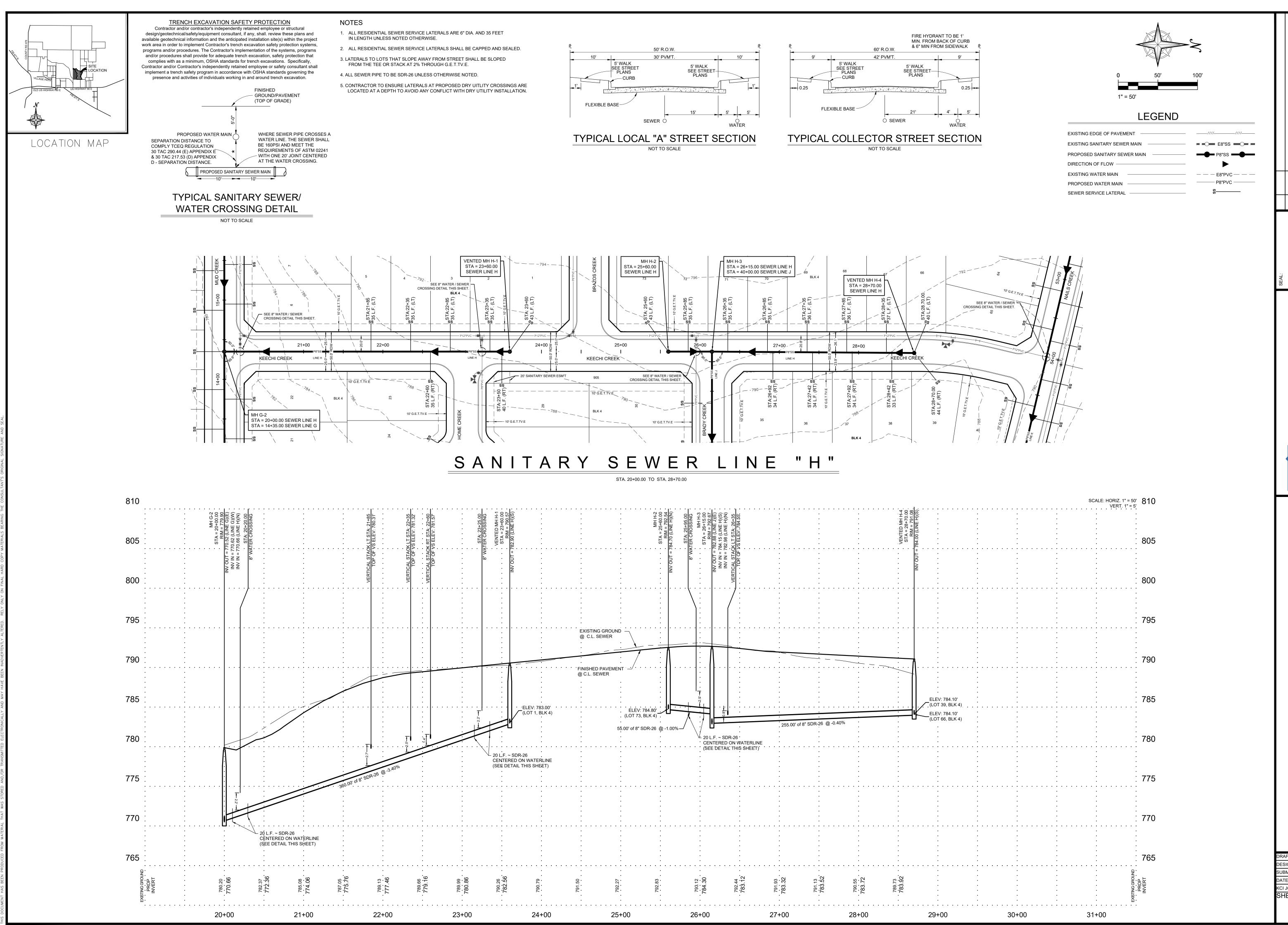


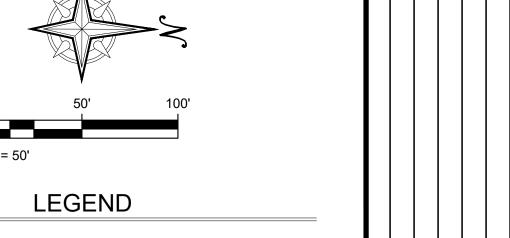


### LEGEND

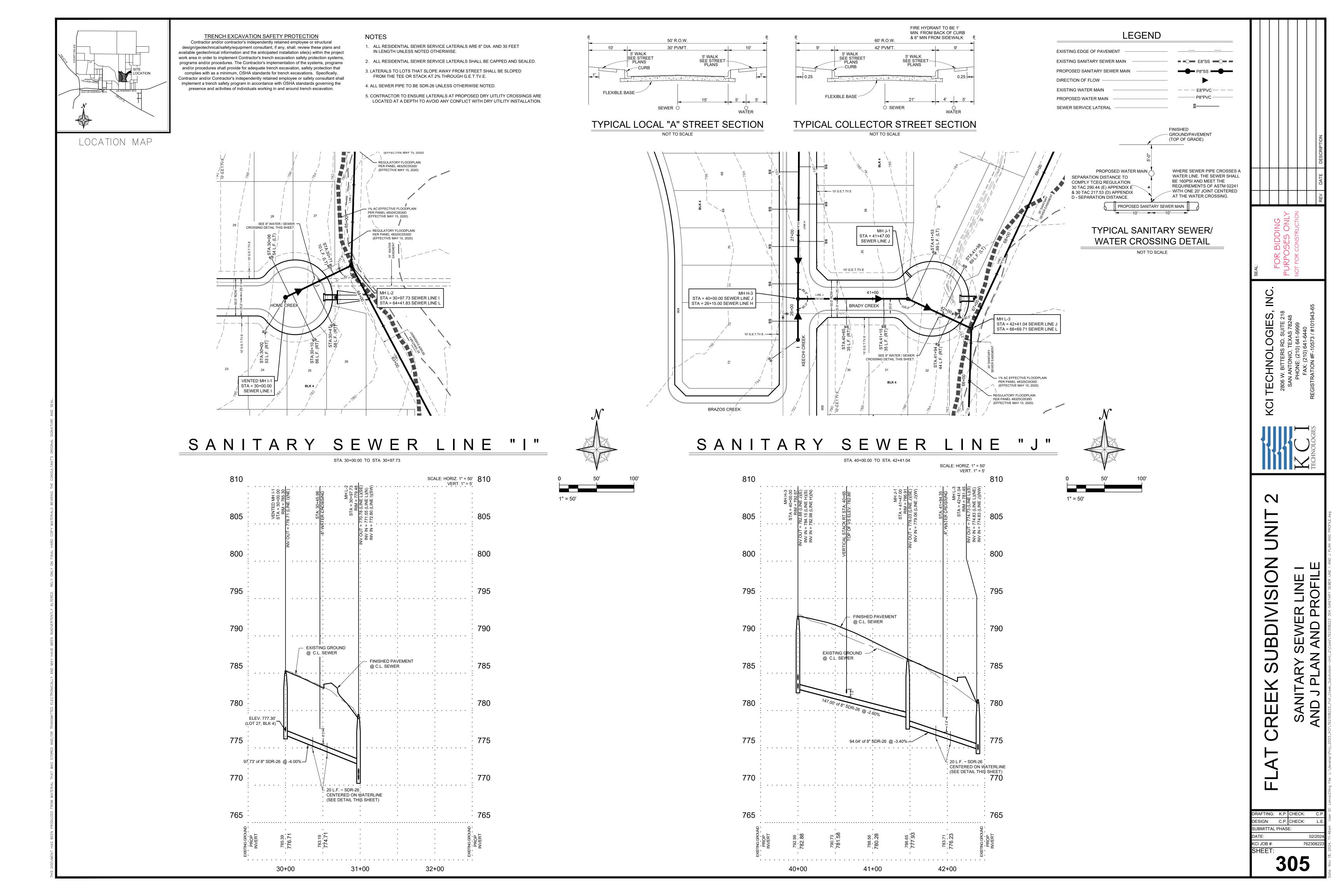
EXISTING EDGE OF PAVEMENT	///////
EXISTING SANITARY SEWER MAIN —————	■ ■ E8"SS ■ ■ ■
PROPOSED SANITARY SEWER MAIN	P8"SS —
DIRECTION OF FLOW ————————————————————————————————————	<b>&gt;</b>
EXISTING WATER MAIN	— — — E8"PVC — — —
PROPOSED WATER MAIN ————————————————————————————————————	P8"PVC
SEWER SERVICE LATERAL	<u> </u>

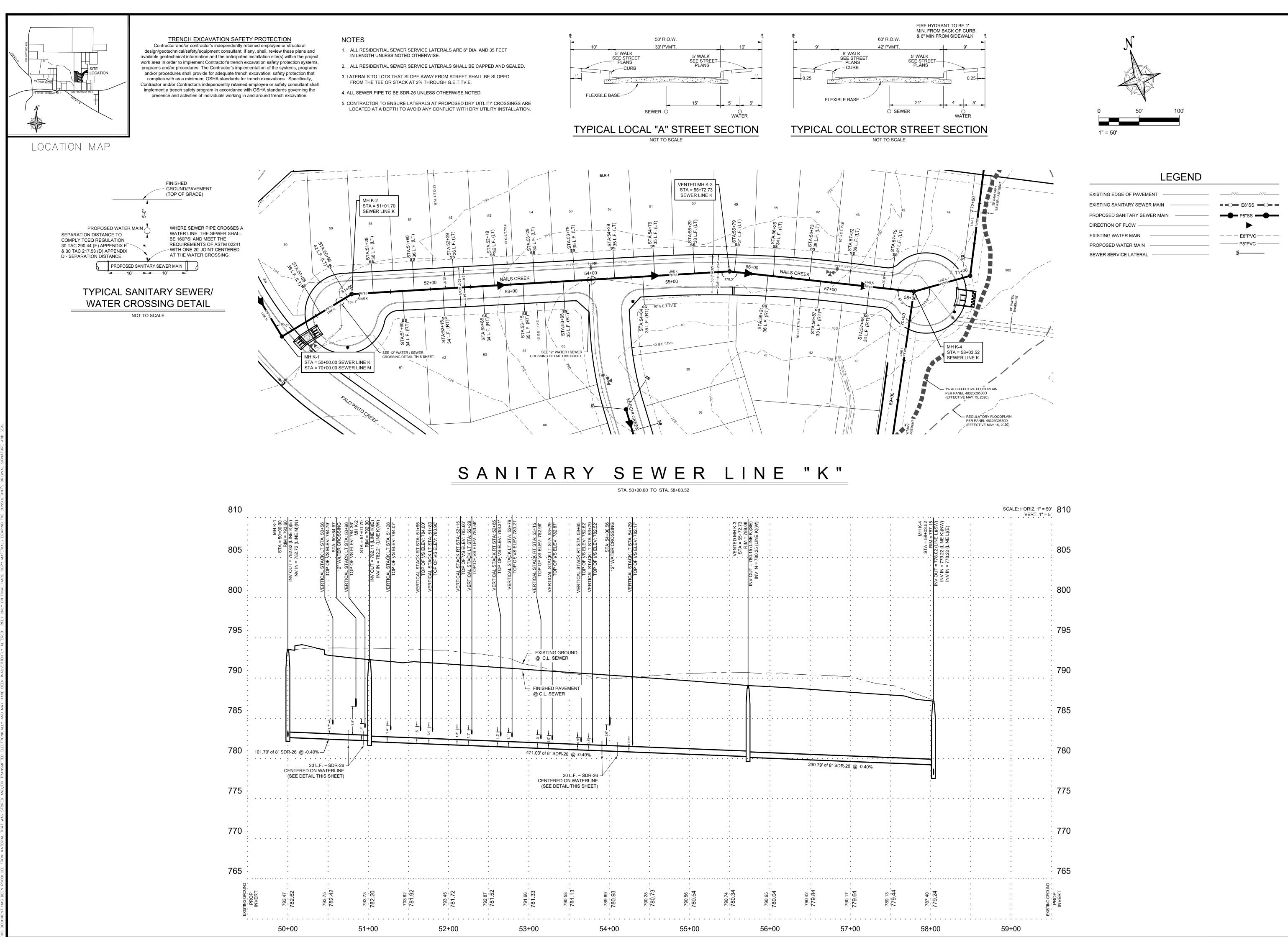
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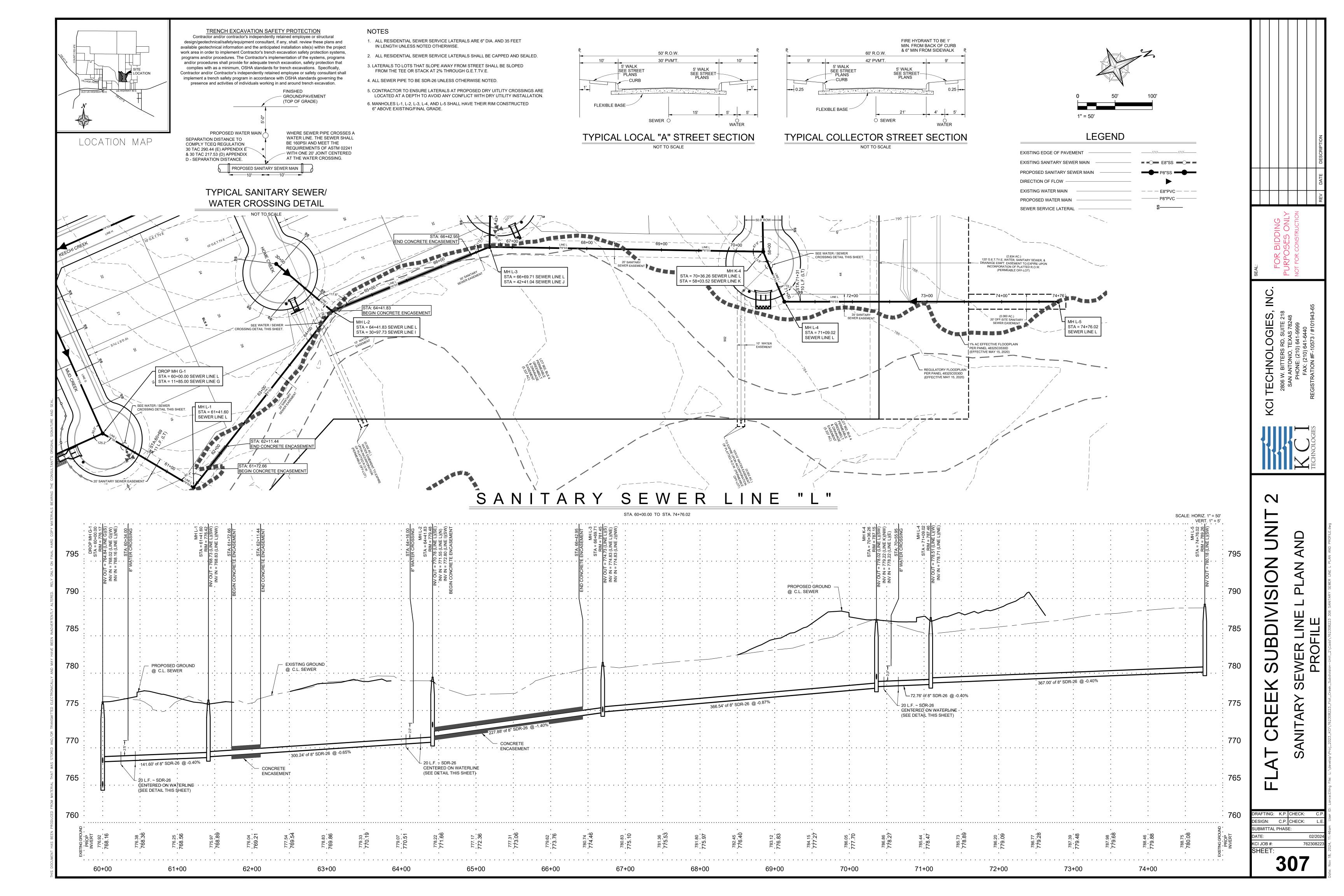


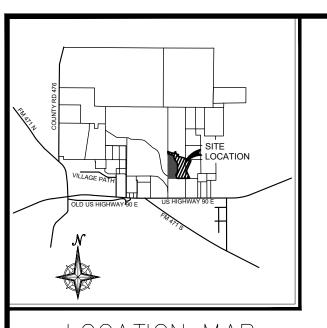


UBMITTAL PHASE: (CI JOB #:









LOCATION MAP

### TRENCH EXCAVATION SAFETY PROTECTION

**FINISHED** 

- GROUND/PAVEMENT (TOP OF GRADE)

WHERE SEWER PIPE CROSSES A WATER LINE. THE SEWER SHALL

REQUIREMENTS OF ASTM 02241

WITH ONE 20' JOINT CENTERED

BE 160PSI AND MEET THE

AT THE WATER CROSSING.

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. 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 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.

PROPOSED SANITARY SEWER MAIN 10' - 10'

TYPICAL SANITARY SEWER/

WATER CROSSING DETAIL

NOT TO SCALE

PROPOSED WATER MAIN

SEPARATION DISTANCE TO

COMPLY TCEQ REGULATION

& 30 TAC 217.53 (D) APPENDIX

D - SEPARATION DISTANCE.

30 TAC 290.44 (E) APPENDIX E

FROM THE TEE OR STACK AT 2% THROUGH G.E.T.TV.E.

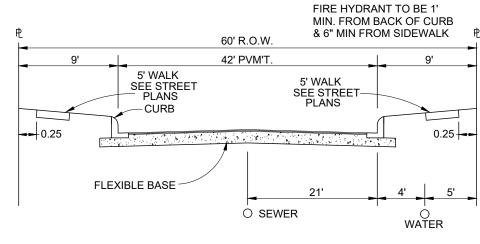
4. ALL SEWER PIPE TO BE SDR-26 UNLESS OTHERWISE NOTED. 5. CONTRACTOR TO ENSURE LATERALS AT PROPOSED DRY UITLITY CROSSINGS ARE LOCATED AT A DEPTH TO AVOID ANY CONFLICT WITH DRY UTILITY INSTALLATION.

IN LENGTH UNLESS NOTED OTHERWISE.

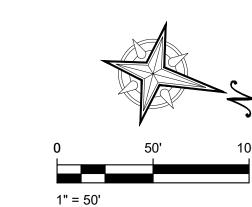
### 50' R.O.W. 1. ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND 35 FEET 5' WALK SEE STREET-PLANS 2. ALL RESIDENTIAL SEWER SERVICE LATERALS SHALL BE CAPPED AND SEALED. 3. LATERALS TO LOTS THAT SLOPE AWAY FROM STREET SHALL BE SLOPED FLEXIBLE BASE-

TYPICAL LOCAL "A" STREET SECTION NOT TO SCALE

SEWER O



TYPICAL COLLECTOR STREET SECTION NOT TO SCALE

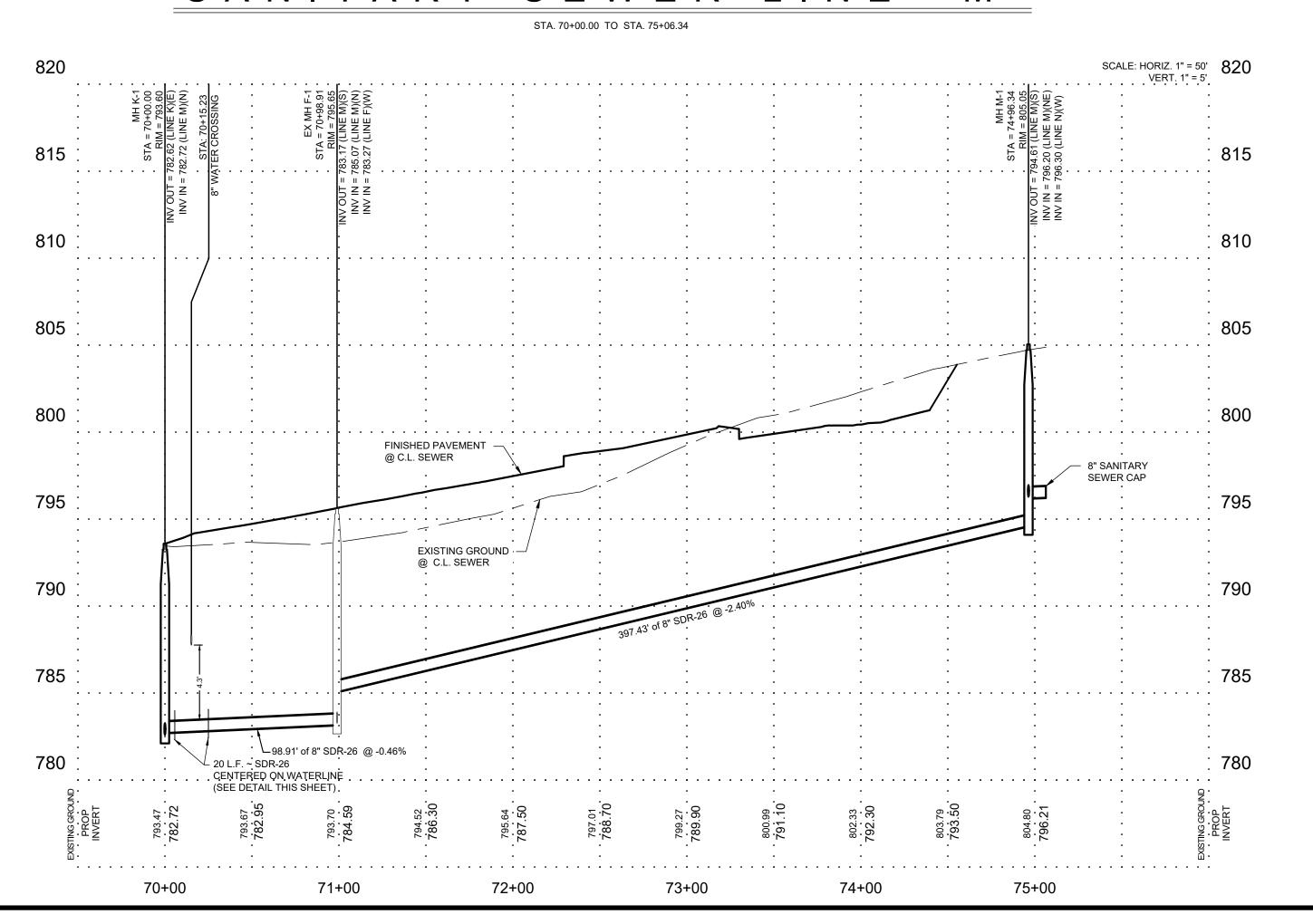


### LEGEND

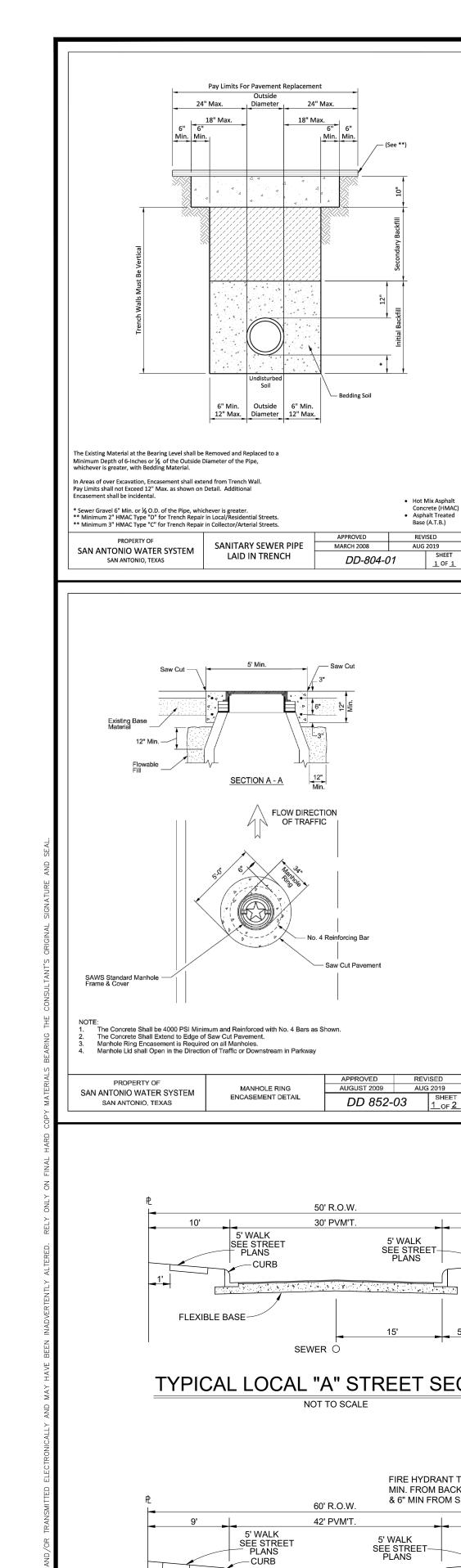
EXISTING EDGE OF PAVEMENT	////////
EXISTING SANITARY SEWER MAIN	■ ■○ ■ E8"SS ■○ ■
PROPOSED SANITARY SEWER MAIN	P8"SS —
DIRECTION OF FLOW —	<b>&gt;</b>
EXISTING WATER MAIN ————————————————————————————————————	— — — E8"PVC — — —
PROPOSED WATER MAIN ————————————————————————————————————	P8"PVC
SEWER SERVICE LATERAL —————	<u> </u>

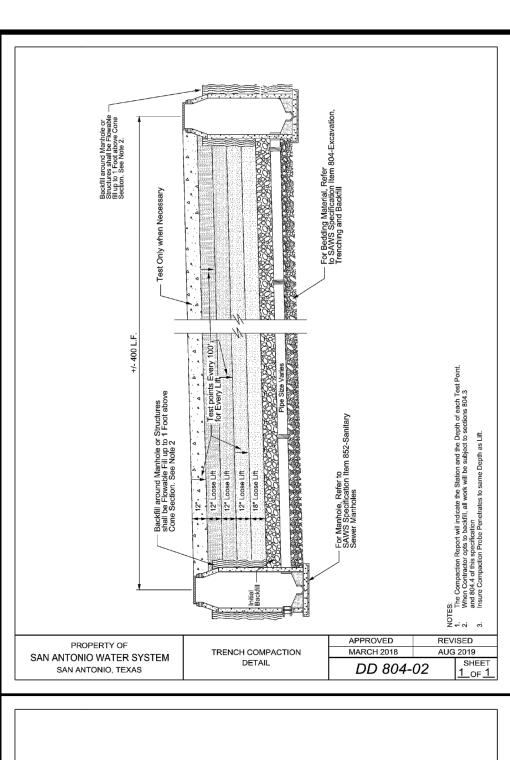
### FLAT CREEK UNIT 1 (CONCURRENT DEVELOPMENT) STA = 70+00.00 SEWER LINE M STA = 50+00.00 SEWER LINE K EX MH F-1 STA = 70+98.91 SEWER LINE M STA = 62+83.18 SEWER LINE F UNPLATTED KF FLAT CREEK LP 17758 HWY 90 W DOC NO. 2023008356 SEE WATER / SEWER 1 CROSSING DETAIL THIS SHEET. 8" SANITARY SEWER CAP SEWER LINE N 10.00 LF OF 8" SANITARY SEWER @ 1.50% STA = 74+96.34 INV. 796.45 SEWER LINE M 8" SANITARY SEWER CAP LINE M (0.899AC.) VARIABLE G.E.T.TV.E, WATER, SANITARY SEWER, & DRAINAGE ESM'T. EASEMENT TO EXPIRE UPON INCORPORATION OF FUTURE UNIT (PERMEABLE OFF-LOT) STA = 75+06.34 SEWER LINE M 10.00 LF OF 8" SANITARY SEWER @ 0.40% INV. 796.24 (2.834 AC.) / 20' G.E.T.TV.E, WATER, SANITARY / SEWER, & DRAINAGE ESM'T. EASEMENT TO EXPIRE UPON INCORPORATION OF PLATTED R.O.W. (PERMEABLE OFF-LOT)

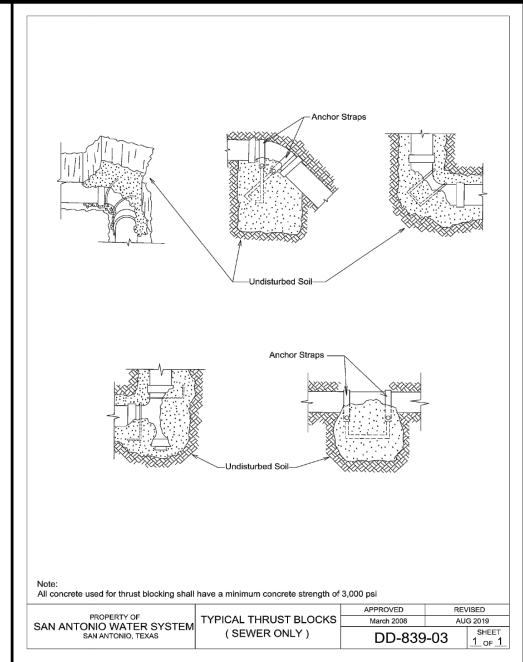
### SANITARY SEWER LINE "M"

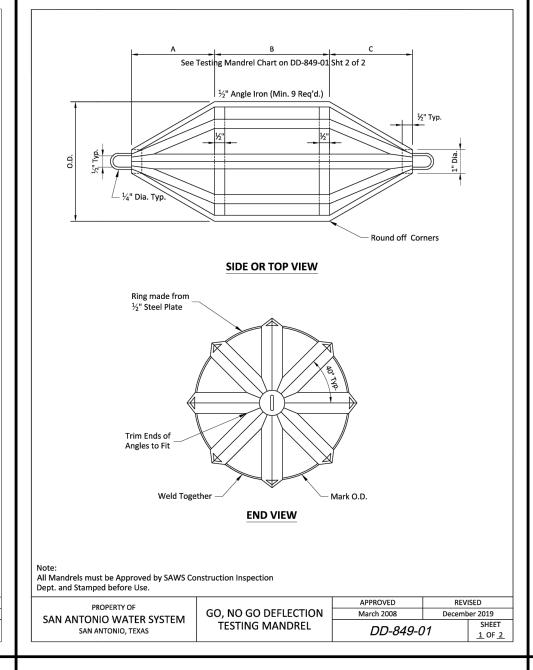


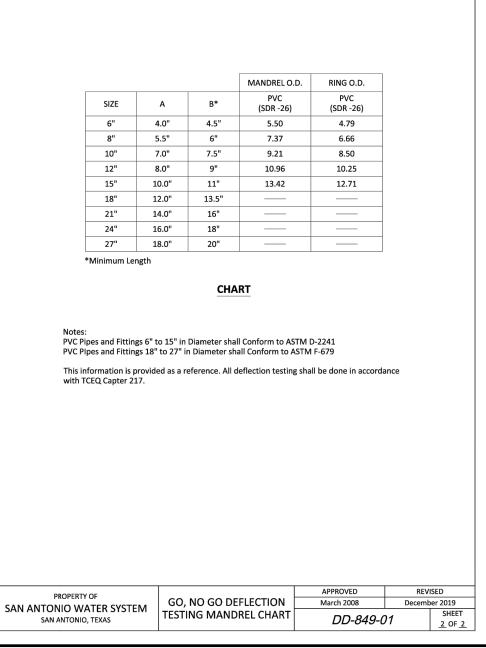


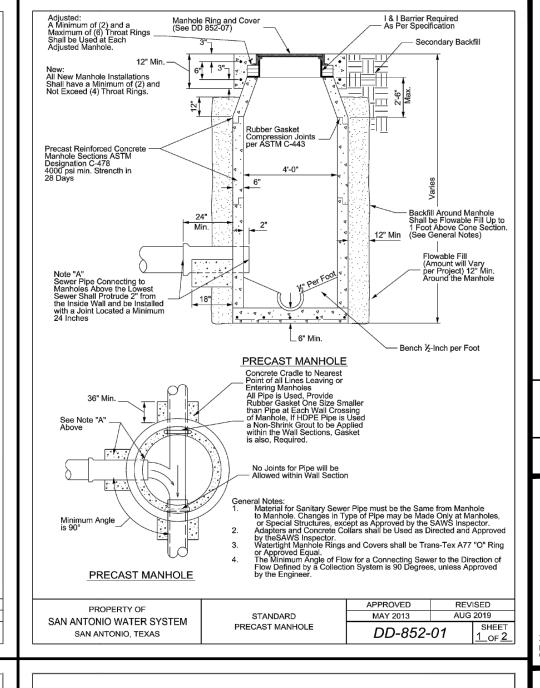


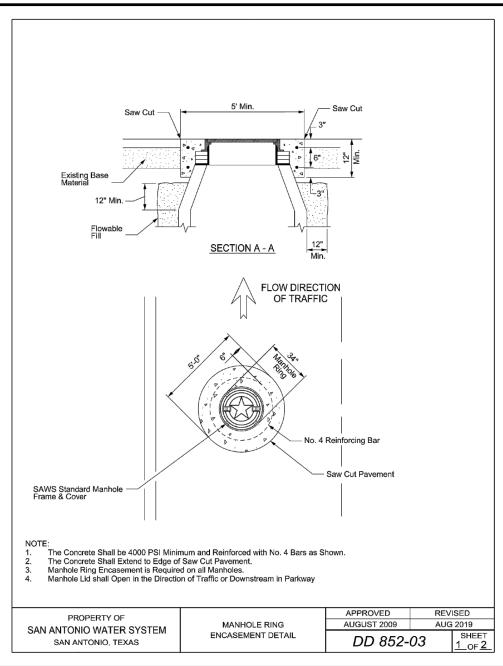


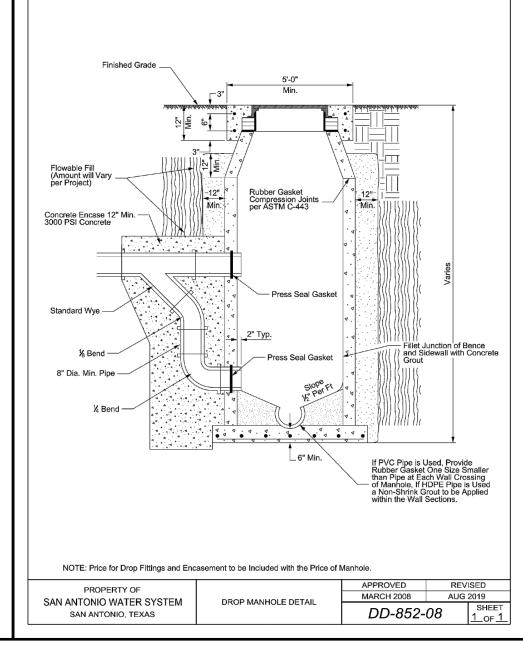


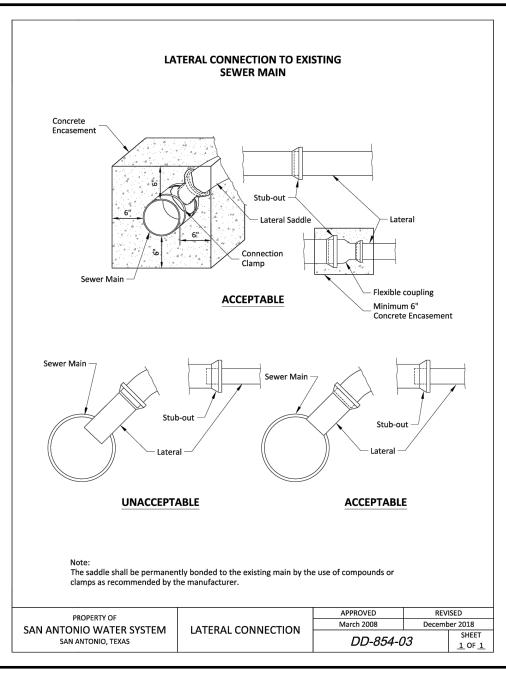


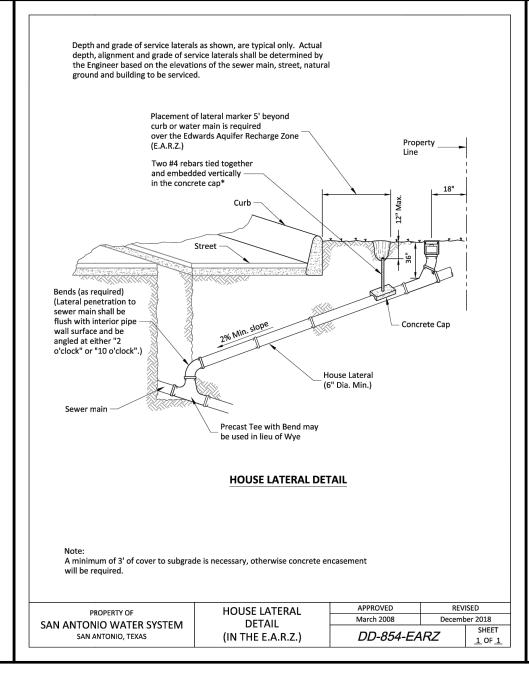


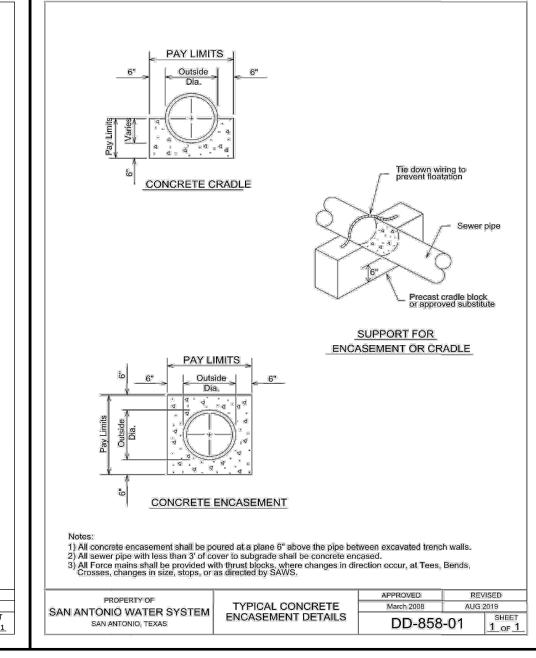


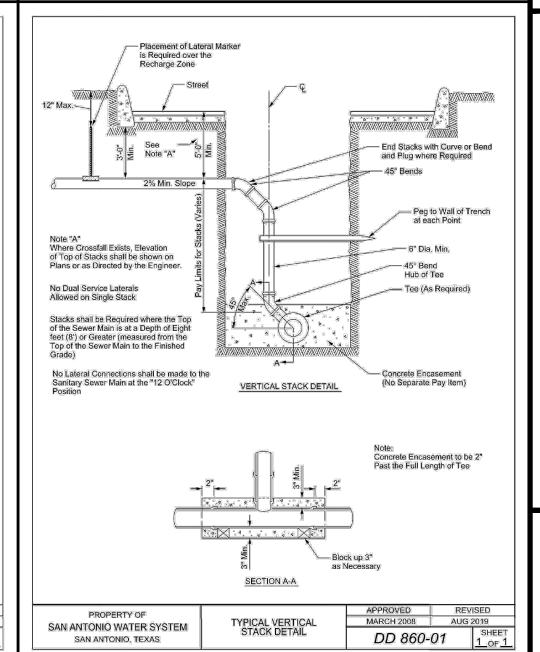


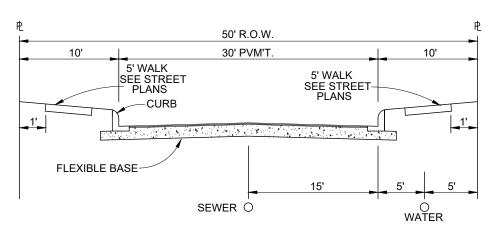




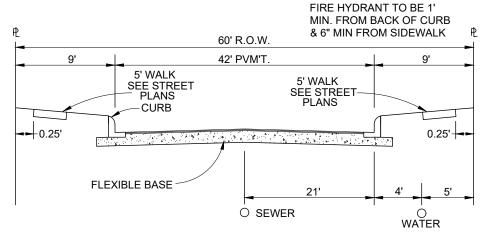




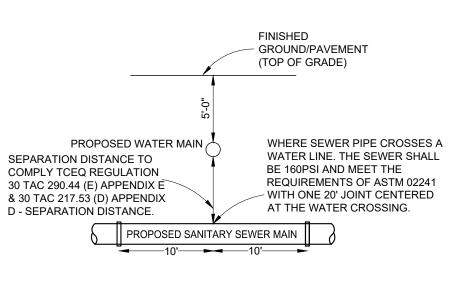




TYPICAL LOCAL "A" STREET SECTION



TYPICAL COLLECTOR STREET SECTION NOT TO SCALE



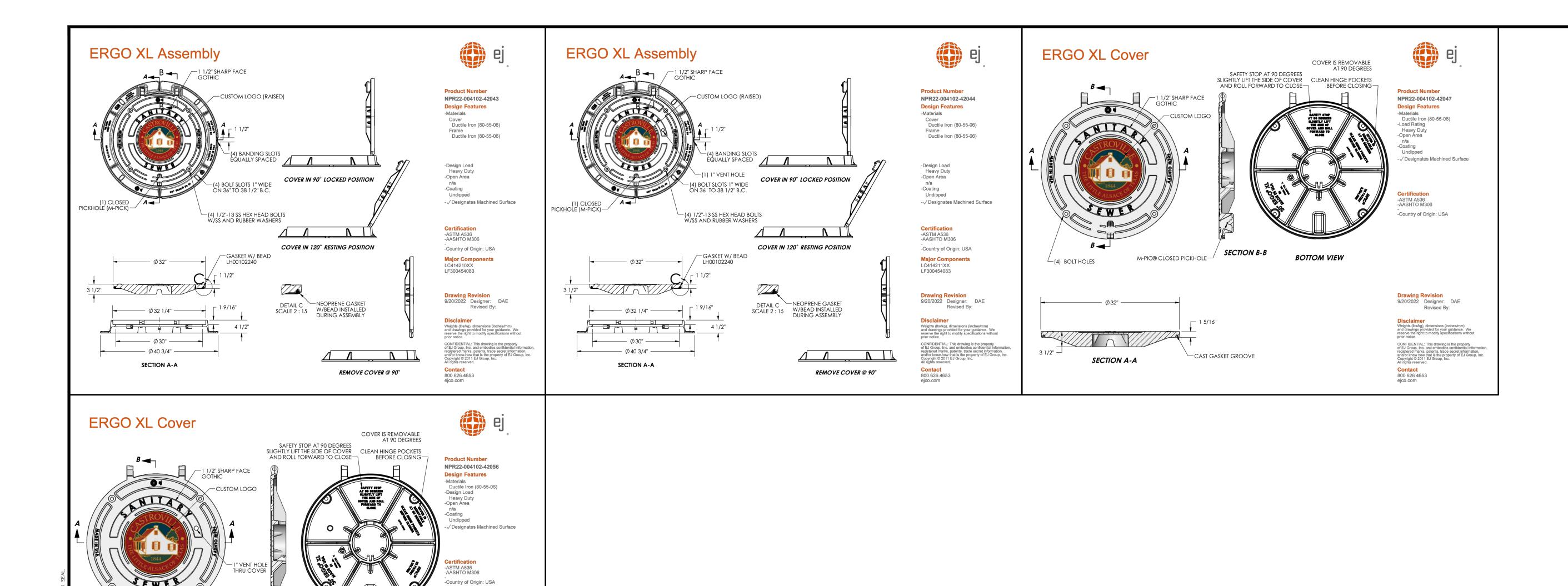
TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL NOT TO SCALE

> DRAFTING: K.P. CHECK: DESIGN: C.P. CHECK: SUBMITTAL PHASE: (CI JOB #:

S

 $\Box$ 

Y



**BOTTOM VIEW** 

NOTE: THIS IS A DRILLED COVER

Contact 800 626 4653 ejco.com

SECTION B-B

CAST GASKET GROOVE

M-PIC® CLOSED PICKHOLE—

∠(4) BOLT HOLES

SECTION A-A

FLAT CREEK SUBDIVISION UNIT 2

| TECHNOLOGIES, | 2806 W. BITTERS RD, SUITE 218 SAN ANTONIO, TEXAS 78248 PHONE: (210) 641-9999 FAX: (210) 641-6440

DRAFTING: K.P. CHECK:

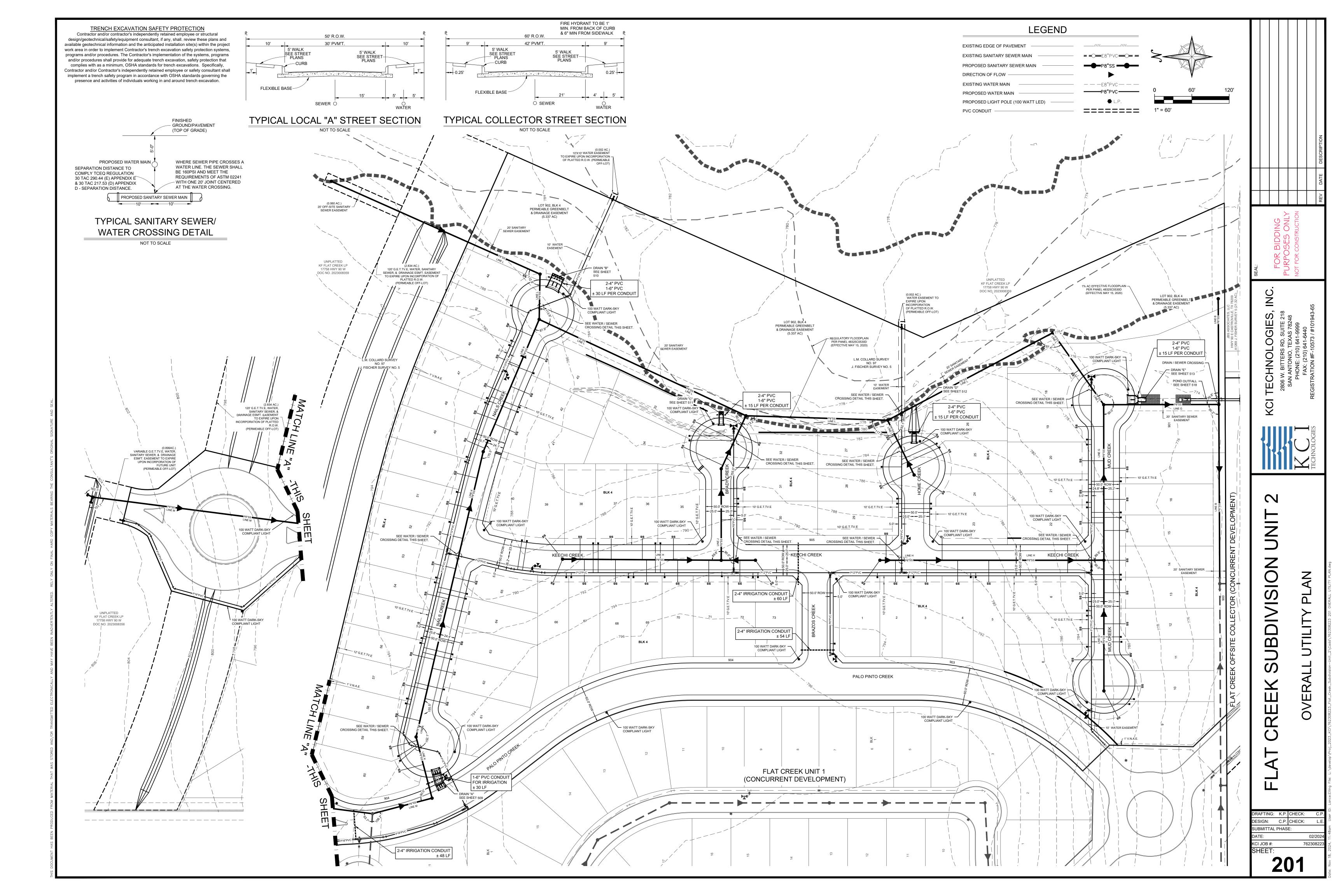
DESIGN: C.P. CHECK:

SUBMITTAL PHASE:

DATE: 02/

KCI JOB #: 76230

SHEET:



# WATERLINE CONSTRUCTION PLANS for FLAT CREEK SUBDIVISION UNIT 2

### CITY OF CASTROVILLE WATER SYSTEM GENERAL NOTES

### General Section Notes

1. All materials and construction procedures within the scope of this contract shall be approved by the Castroville Utility System and comply with the Plans, Specifications, General Conditions and with the following as applicable:

A. Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1 Chapter 290.

B. Current TXDOT "Standard Specifications for Construction of Highways, Streets and Drainage".

C. Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction".

D. Current City of San Antonio "Standard Specifications for Construction".

E. Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).

2. The Contractor shall obtain the SAWS Standard Details from the SAWS website,

http://www.saws.org/business\_center/specs. Unless otherwise noted within the design plans.

3. The Contractor is to notify and make arrangements with the Castroville Utility System Inspection Division at 830-931-4070 (during regular working hours) and provide notification procedures the Contractor will use to notify affected home residents and/or property owners two (2) weeks prior to

4. Location and depth of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction at no cost to Castroville Utility System.

5. The Contractor shall verify the exact location of underground utilities and drainage structures prior to construction whether shown on plans or not. As-Builts for Castroville Utility System infrastructure can be obtained at website below. Contractor shall coordinate physical locates for Castroville Utility System infrastructure thru the Castroville Utility System Inspector. Please allow up to 7 business days for locates requesting pipe location markers on Castroville Utility System facilities. The following contact information are supplied for verification purposes:

- Request as-builts: - City of Castroville Drainage (830) 931-4070

- City of Castroville Traffic Signal Operations - Texas State Wide One Call Locator 1-800-545-6005 or 811

7. The Contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping and structures to its original or better condition if damages are made as a result of the project's construction

8. Contractor shall not make use of dumpsters or waste bins that are intended to serve residents and/or businesses.

9. All work in Texas Department of Transportation (TxDOT) and/or Medina County right-of-way shall be done in accordance with respective construction specifications and permit.

10. The Contractor shall comply with City of Castroville or other governing municipality's tree ordinances when excavating near trees.11. All work within the 100-year Floodplain shall be done in accordance with Floodplain Development Permit.

12. Any work completed without prior written authorization which is not included in these plans and specifications will not be compensated by the

Castroville Utility System.

13. Holiday Work: Contractors will not be allowed to perform Castroville Utility System work on Castroville Utility System recognized holidays.

Weekend Work: Contractors are required to submit request to the Castroville Utility System Inspection Construction department by 12:00pm on the Wednesday prior to the weekend being requested. Request should be sent to \_\_\_\_\_\_.

Any and all Castroville Utility System utility work installed without weekend approval will be subject to be uncovered for proper inspection at no cost to Castroville Utility System.

14. PRE-CON SITE VIDEO: Before the start of any construction. The site must be video recorded by the contractor with one copy submitted to Castroville Utility System Inspections. A pre-site video will provide accurate documentation of the existing conditions (NSPI).

15. POWER POLE BRACING: Contractors should be advised that there are existing overhead utility poles along the project corridor. Contractors should further be advised that if the distance from the outside face of a utility trench to the face of a utility pole is less than 5 feet, said utility pole is subject to bracing, based on a determination made by utility pole owner. It is advisable for the contractor to review the construction documents and visit the construction site to determine potential impacts.

16. CONSTRUCTION SEQUENCING: It is the Contractors's sole responsibility to schedule sequencing for removal and installation of existing and proposed Castroville Utility System utilities in conjunction with general project construction. Sequence of construction activities shall be considered in order to minimize the extent and duration of disturbances.

17. Contractor shall comply with applicable regulations including, but not limited to, those overseen by the U.S. Occupational Safety and Health Administration (OSHA). OSHA information and related materials may be obtained at https://www.osha.gov/ or at the OSHA San Antonio Office located at Fountainhead Tower, Suite 605 8200 W. Interstate 10 San Antonio, TX 78230 which is also reachable by phone at (210) 472-5040.

18. 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 areas in order to implement 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 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 worknig in and around trench excavation.

### Water Notes

19. Prior to tie-ins, any shutdowns of existing mains of any size must be coordinated with the Castroville Utility System Inspection and/or Castroville Utility System Production groups at least twenty-five (25) Calendar Days in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to sequence the work accordingly. SAWS Production Control Center 210-233-2016

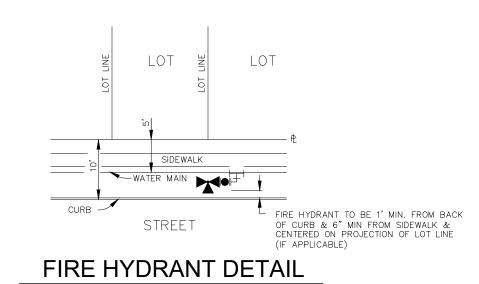
20. Asbestos Cement (AC) pipe, also known as transite pipe which is known to contain asbestos-containing material (ACM), maybe located within the project limits. Special waste management procedures and health and safety requirements will be applicable when removal and/or disturbance of this pipe occurs, Payment for such work is to be made under Item No. 3000, "Handling Asbestos Cement Pipe". AC pipe removed on construction projects for tie-in(s) should be in length of 26 linear feet (LF). Lengths of 13 LF should be removed where AC pipe is being removed and crossing pipes, conduits, or hoves

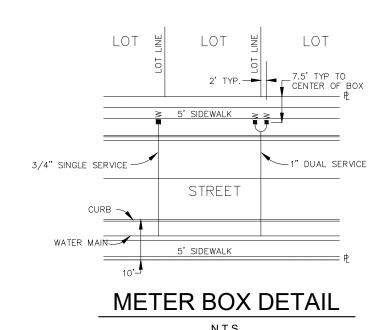
21. VALVE REMOVAL: Where the contractor is to abandon a water main, the control valve located on the abandoning branch will be removed and replaced with a cap/plug. (NSPI)

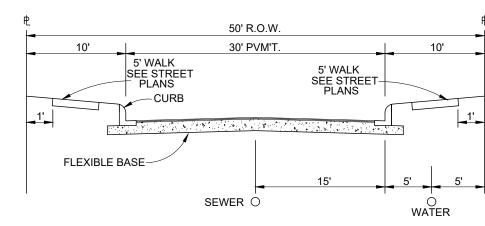
22. DIVISION VALVES: Division Valves shown on plans or not shown on plans but found in the field shall only be operated by Castroville Utility System Distribution and Collection staff and only with prior written approval of the Castroville Utility System Director of Production and Operations and proper coordination with all Castroville Utility System departments. Contractor shall provide written notification to the inspector a minimum of twenty-five (25) Calendar Days in advance to start the coordination process and will be informed by the Inspector when the division valve will be operated by the Castroville Utility System Distribution and Collection staff. The Division Valve can only be operated by Castroville Utility System Distribution and Collection staff member not the inspector or the contractor. Operation of a Division Valve without the express prior written approval of the Castroville Utility System Distribution and Collection staff will constitute a material breach of any written Castroville Utility System contract or permit in addition to subjecting the Contractor to liability for any and all fines, fees, or other damages, direct or consequential, that may arise from or be caused by the operation of the valve without prior written permission. Please be informed that the approval of the operation or opening or closing of a division valve can take several weeks for approval. Division Valves will also have a valve lid labeled Division Valve and a locking mechanism installed with a key. The lock and key mechanism will be paid for by the contractor but will be installed by Castroville Utility System Distribution and Collection staff.

23. WATER VALVES & HYDRANTS: All Water Valves and Hydrants shall be open Left.

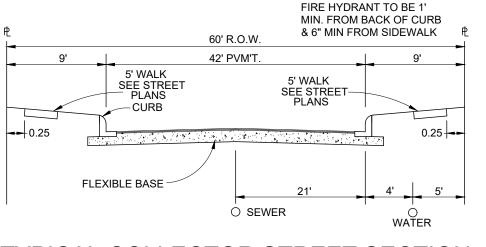
24. VALVES IN PAVEMENT: Valves in pavement will receive concrete encasement per the standard details.





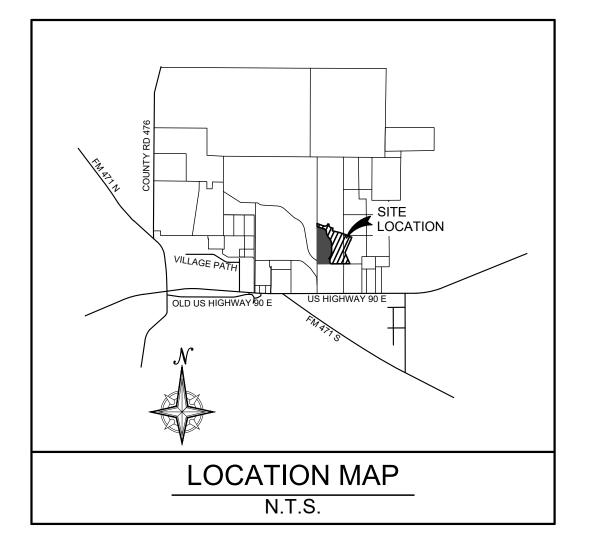


### TYPICAL LOCAL "A" STREET SECTION



TYPICAL COLLECTOR STREET SECTION

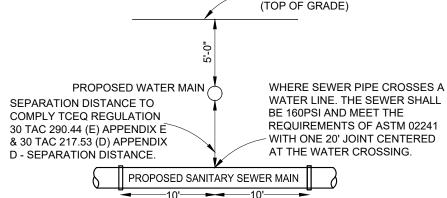
NOT TO SCALE



### Sheet List Table Sheet Number Sheet Title

Sheet Number	Sheet Title
400	WATER COVER
401	WATER OVERALL
402	WATER DETAILS
403	WATER DETAILS

### FINISHED GROUND/PAVEMENT (TOP OF GRADE)



TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

### NOT TO SCALE

### OWNER/DEVELOPER:

KF FLAT CREEK, L.P. 2722 W. BITTERS, RD. SUITE 106 SAN ANTONIO, TEXAS 78259 (210) 882-6800



### PREPARED BY:

### KCI TECHNOLOGIES, INC.

2806 W. BITTERS, RD. SUITE 218 SAN ANTONIO, TEXAS 78248 PHONE: (210) 641-9999 FAX: (210) 641-6440 REGISTRATION #F-10573 / #101943-65

### LEGEND

XISTING EDGE OF PAVEMENT ————————————————————————————————————	
XISTING SANITARY SEWER MAIN ——————	= E8"PVC — =
ROPOSED SANITARY SEWER MAIN	
DIRECTION OF FLOW	
XISTING WATER MAIN	——— E8"PVC———
ROPOSED WATER MAIN ————————————————————————————————————	——— P8"PVC ———
PROPOSED LIGHT POLE (100 WATT LED) ————	🙀 L.P.
ROPOSED WATER SERVICE / METER	<b>■</b>
ROPOSED FIRE HYDRANT	<b>₹</b>

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. 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 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.

FOR BIDDING
PURPOSES ONLY
NOT FOR CONSTRUCTION
REV DATE DESCRIPTION

2806 W. BITTERS RD, SUITE 218 SAN ANTONIO, TEXAS 78248 PHONE: (210) 641-9999 FAX: (210) 641-6440 REGISTRATION #F-10573 / #101943-

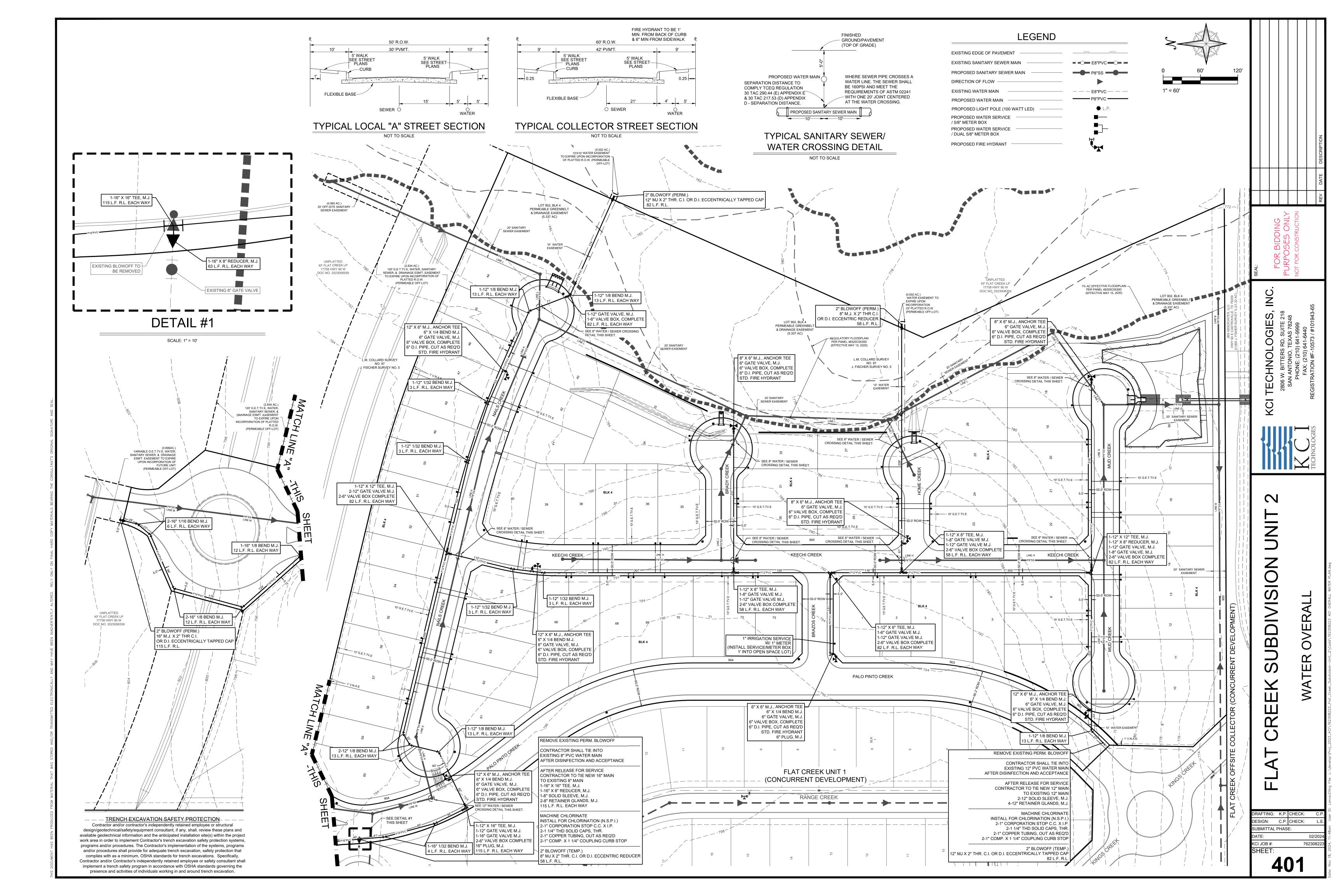


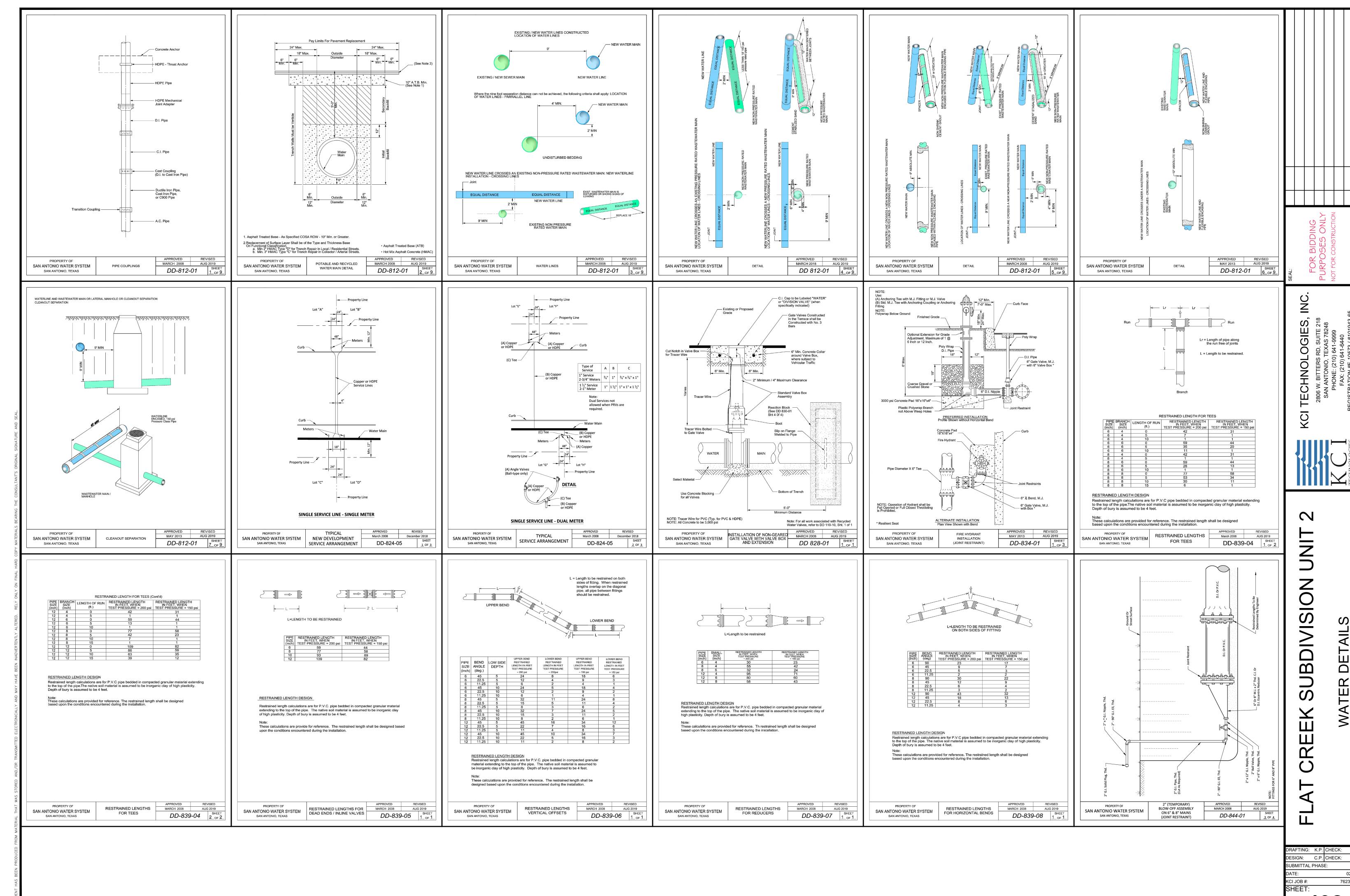
SION UNIT 2

VATER COVE

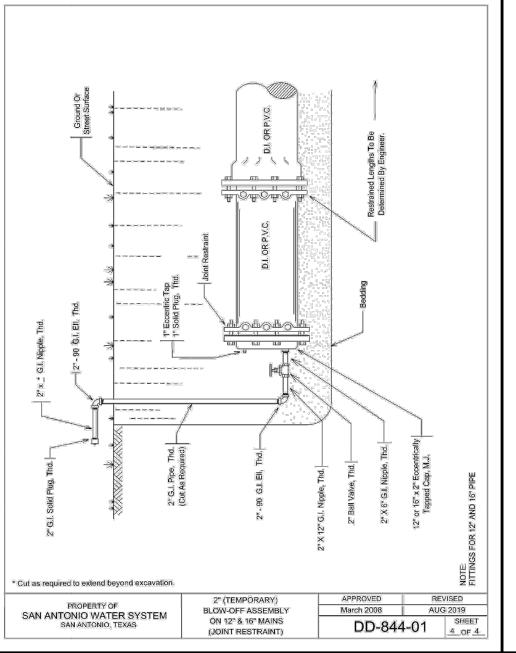
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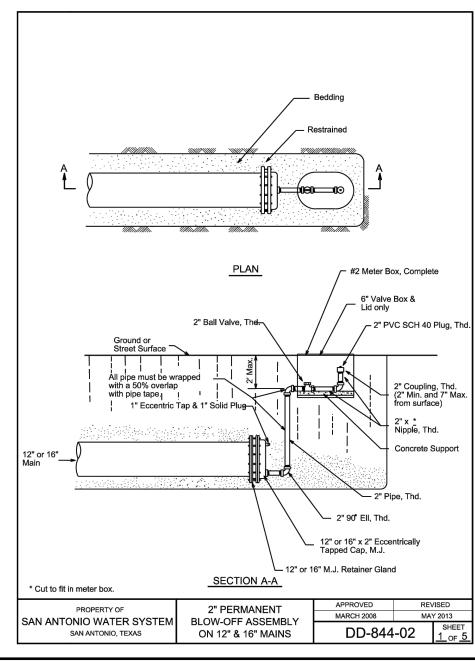
CI JOB #: 762308223 SHEET: 400

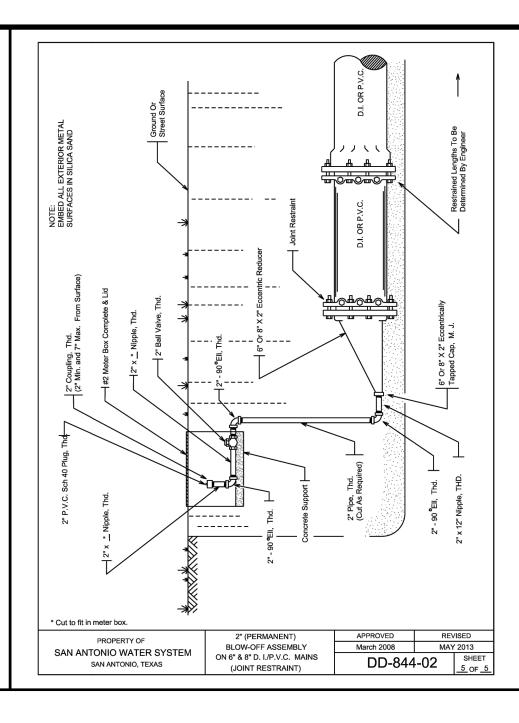


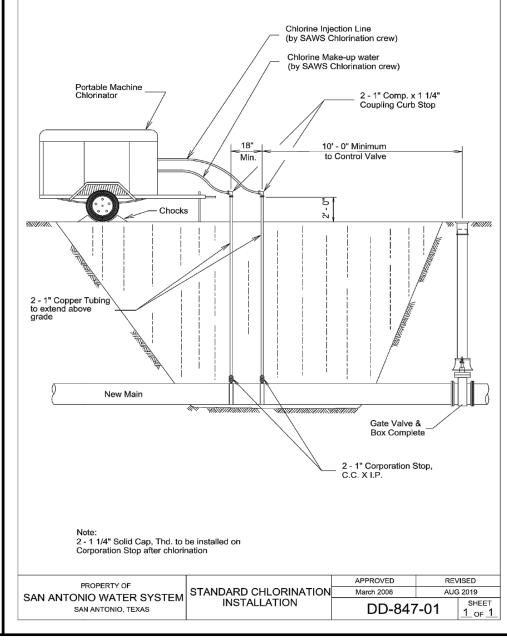


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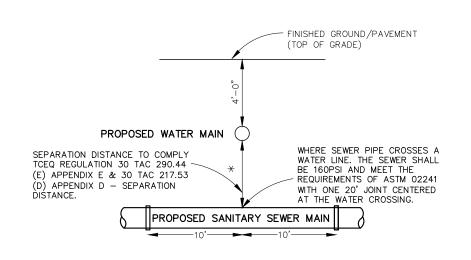






### NOTE

- 1) SAWS REQUIRES GCPs AND COUNTER PERMITS TO USE LEAD FREE (<0.25% LEAD) FIRE HYDRANTS.
- 2) ANCHORAGE/THRUST BLOCKING AND JOINT RESTRAINTS SHALL BE DONE IN ACCORDANCE WITH SAWS STANDARD SPECIFICATIONS FOR CONSTRUCTION. (ITEM NO. 839)
- 3) ALL VALVES SHALL READ "OPEN RIGHT".



TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

\*SEPARATION DISTANCE AND PROTECTION REQUIREMENTS TO COMPLY WITH 30 TAC 290.44 (e) AND 30 TAC 217.53 (d) (FORMERLY 30 TAC 317.13 APPENDIX E)

TECHNOLOGIES, INC 2806 W. BITTERS RD, SUITE 218 SAN ANTONIO, TEXAS 78248 PHONE: (210) 641-6440 FAX: (210) 441-6440

AT CREEK SUBDIVISION

DRAFTING: K.P. CHECK: C
DESIGN: C.P. CHECK: L
SUBMITTAL PHASE:

DATE: 02/20

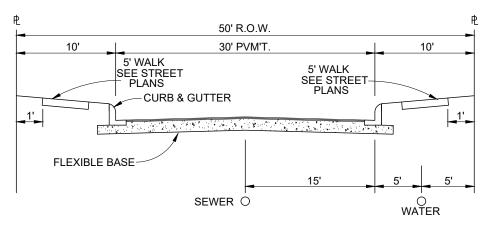
## STREET & DRAIN PLANS FLAT CREEK SUBDIVISION UNIT 2

### **GENERAL NOTES**

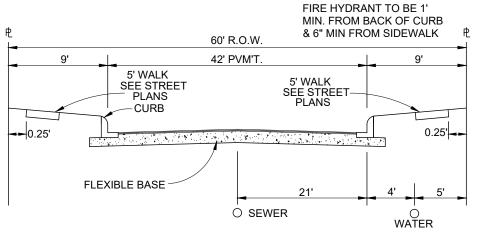
- SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OF NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY THE CITY PRIOR TO THE START OF EACH PHASE OF STREET CONSTRUCTION AND CALL FOR INSPECTIONS WITH A MINIMUM OF 48 HOURS NOTICE.
- 4. TESTING WILL BE PAID FOR BY DEVELOPER, COORDINATED BY CONTRACTOR, AND WITNESSED BY CITY.
- TESTING SCHEDULE:
  - DENSITIES SUBGRADE 1 PER 500 FOOT MINIMUM
  - PROCTORS SUBGRADE
  - 1 PER 5,000 C.Y. LIME SERIES - SUBGRADE 1 PER MATERIAL PER SUBDIVISION
- CONCRETE STRUCTURES 1 SET (3) PER 50 C.Y. 6. TRANSITION WASHOUT CROWN TO NORMAL CROWN IN 25'.

- 9. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.171 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.
- 10. CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR TWENTY FOUR (24) HOURS PRIOR TO BACKFILL OF ANY UTILITY TRENCHES TO SCHEDULE FOR DENSITY TEST AS REQUIRED.
- 11. ALL WASTE MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE PROJECT. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING ARTIFICIAL OR NATURAL DRAINAGE.
- 12. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.
- 13. THE CONTRACTOR SHALL MAINTAIN ALL ADJOINING STREETS AND TRAVELED ROUTES FREE FROM SPILLED AND/OR TRACKED CONSTRUCTION MATERIALS AND/OR DEBRIS.
- 14. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL SIGNS AND BARRICADES ARE PROPERLY INSTALLED AND MAINTAINED. ALL LOCATIONS AND DISTANCES WILL BE DECIDED UPON IN THE FIELD BY THE CONTRACTOR, USING THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". THE CITY'S CONSTRUCTION INSPECTOR WILL ONLY BE RESPONSIBLE TO INSPECT BARRICADES AND SIGNS. IF. IN THE OPINION OF THE CONSTRUCTION INSPECTOR. THE BARRICADES AND SIGNS DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE INSPECTOR SHALL HAVE THE OPTION TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED.

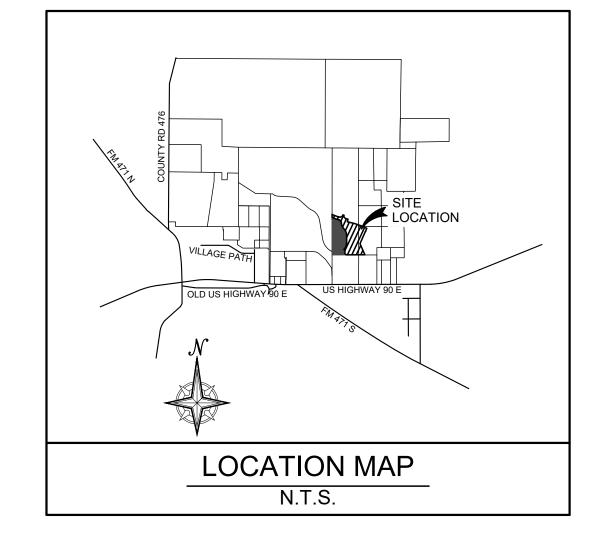
### TRENCH EXCAVATION SAFETY PROTECTION CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL. REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. 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 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.



TYPICAL LOCAL "A" STREET SECTION



TYPICAL COLLECTOR STREET SECTION NOT TO SCALE



### **Sheet List Table** Sheet Number STREETS & DRAINAGE COVER OVERALL GRADING PLAN PALO PINTO CREEK PLAN & PROFILE PALO PINTO CREEK PLAN & PROFILE MUD CREEK PLAN & PROFILE HOME CREEK, BRAZOS CREEK, & BRADY CREEK PLAN & PROFILE NAILS CREEK PLAN & PROFILE KEECHI CREEK PLAN & PROFILE KEECHI CREEK PLAN & PROFILE DRAIN A PLAN & PROFILE DRAIN B PLAN & PROFILE DRAIN C PLAN & PROFILE DRAIN D PLAN & PROFILE INTERCEPTOR DRAIN F PLAN & PROFILE INTERCEPTOR DRAIN G PLAN & PROFILE INTERCEPTOR DRAIN H PLAN & PROFILE DETENTION POND OUTFALL STRUCTURE STREET DETAILS STREET DETAILS DRAIN DETAILS

OVERALL SIGN PLAN

SIGN DETAILS

SIGN DETAILS

### OWNER/DEVELOPER:

KF FLAT CREEK, L.P. 2722 W. BITTERS, RD. SUITE 106 SAN ANTONIO, TEXAS 78259 (210) 882-6800

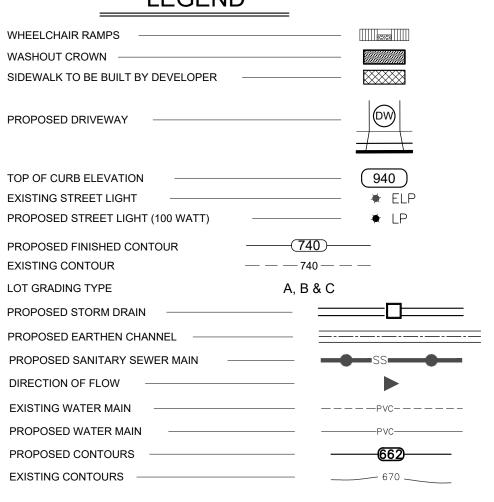


### PREPARED BY:

### KCI TECHNOLOGIES, INC.

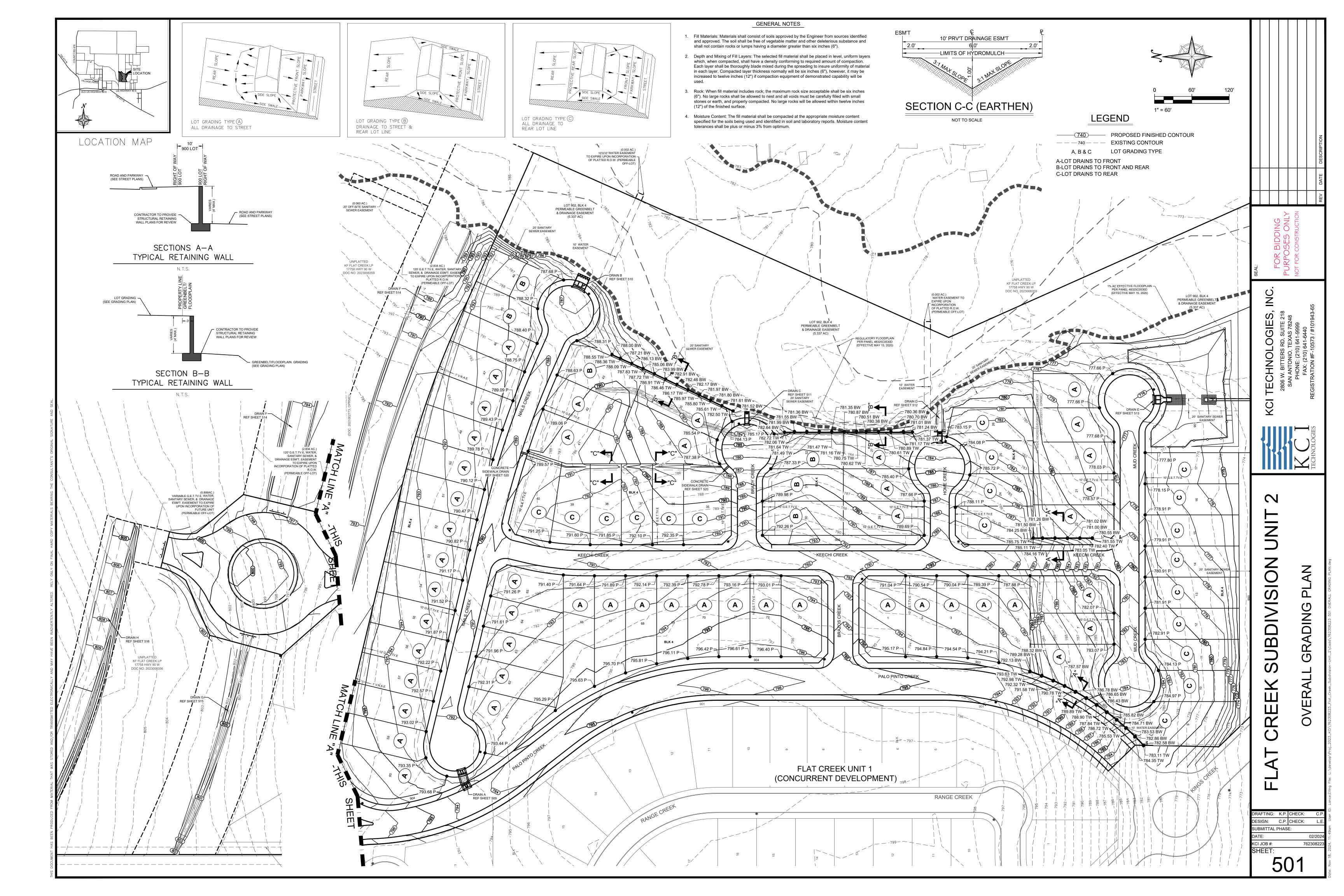
2806 W. BITTERS, RD. SUITE 218 SAN ANTONIO, TEXAS 78248 PHONE: (210) 641-9999 FAX: (210) 641-6440 REGISTRATION #F-10573 / #101943-65

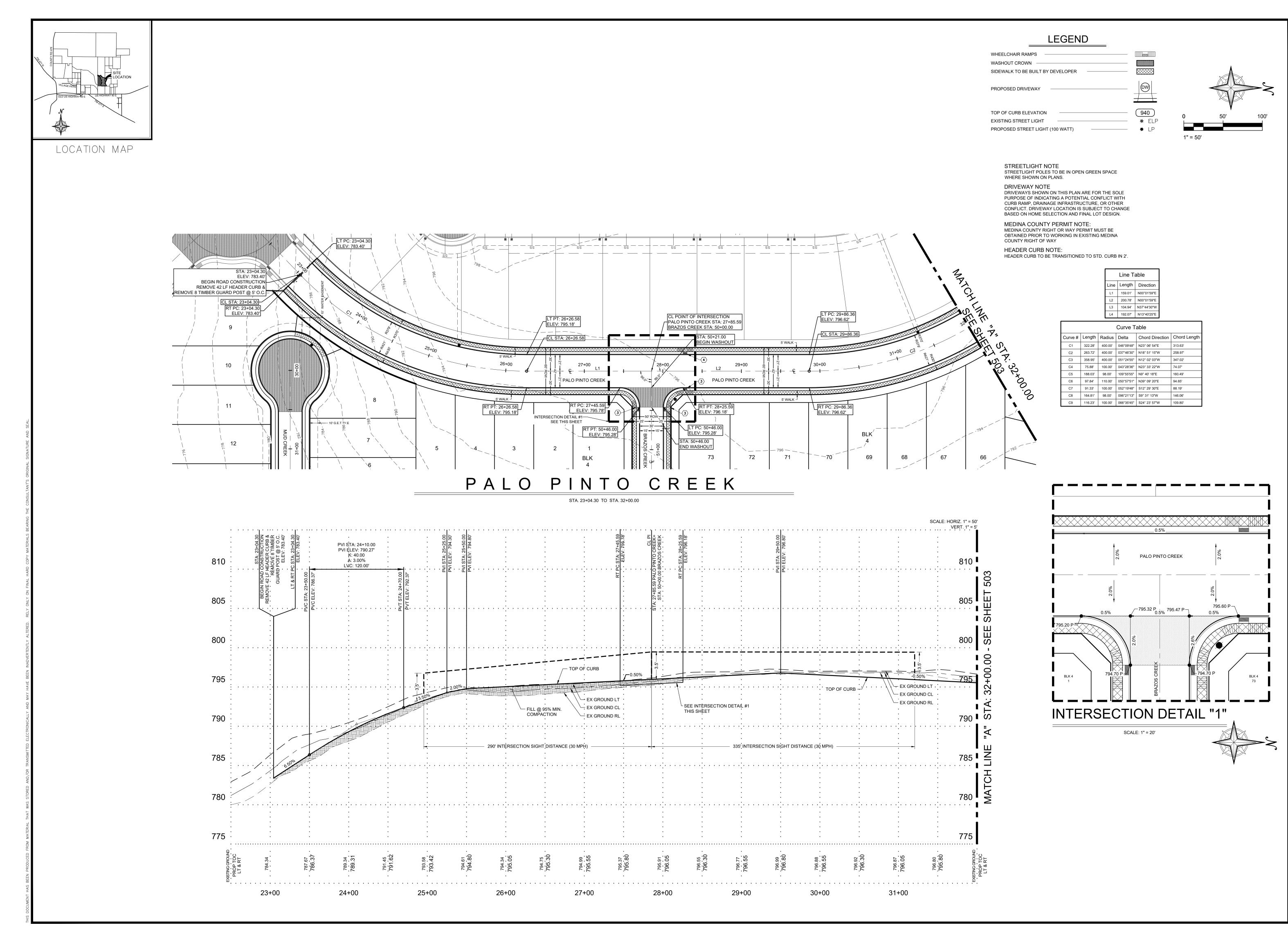
### LEGEND





RAFTING: K.P. CHECK: ESIGN: C.P. CHECK: SUBMITTAL PHASE: CI JOB #: 762308223





FLAT CREEK SUBDIVISION UNIT 2

TECHNOLOGIE

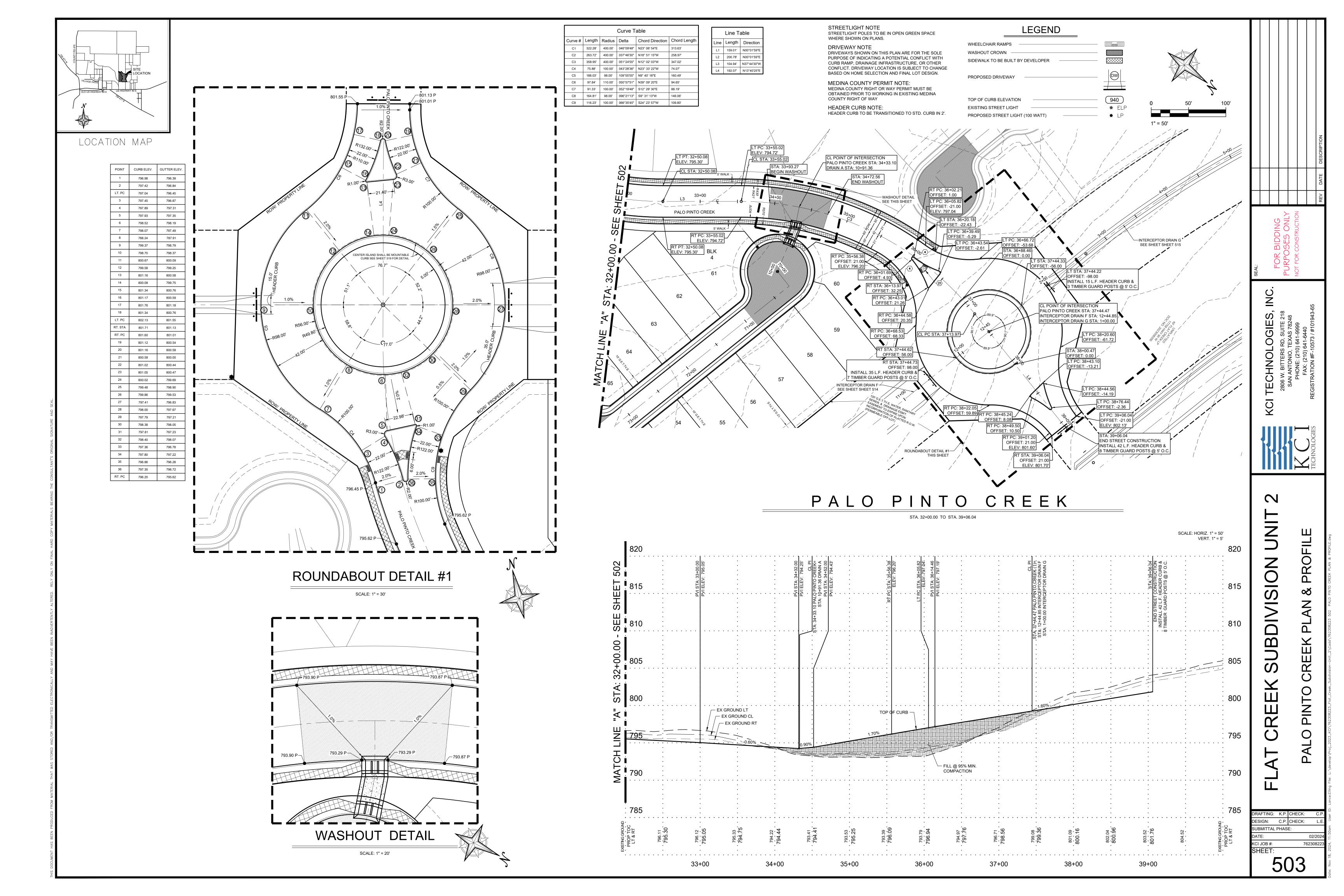
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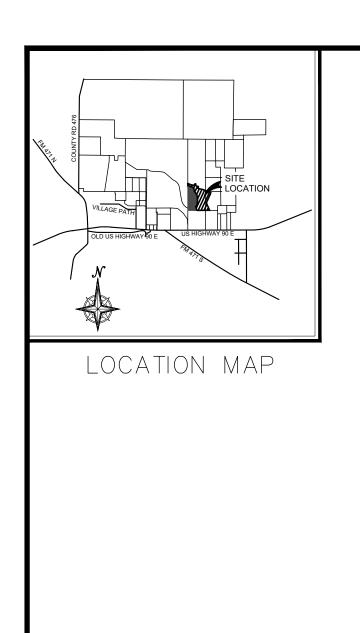
DESIGN: C.P. CHECK:

SUBMITTAL PHASE:

DATE: 0.

KCI JOB #: 7623





POINT OF CURVATURE

SAC DETAIL #1

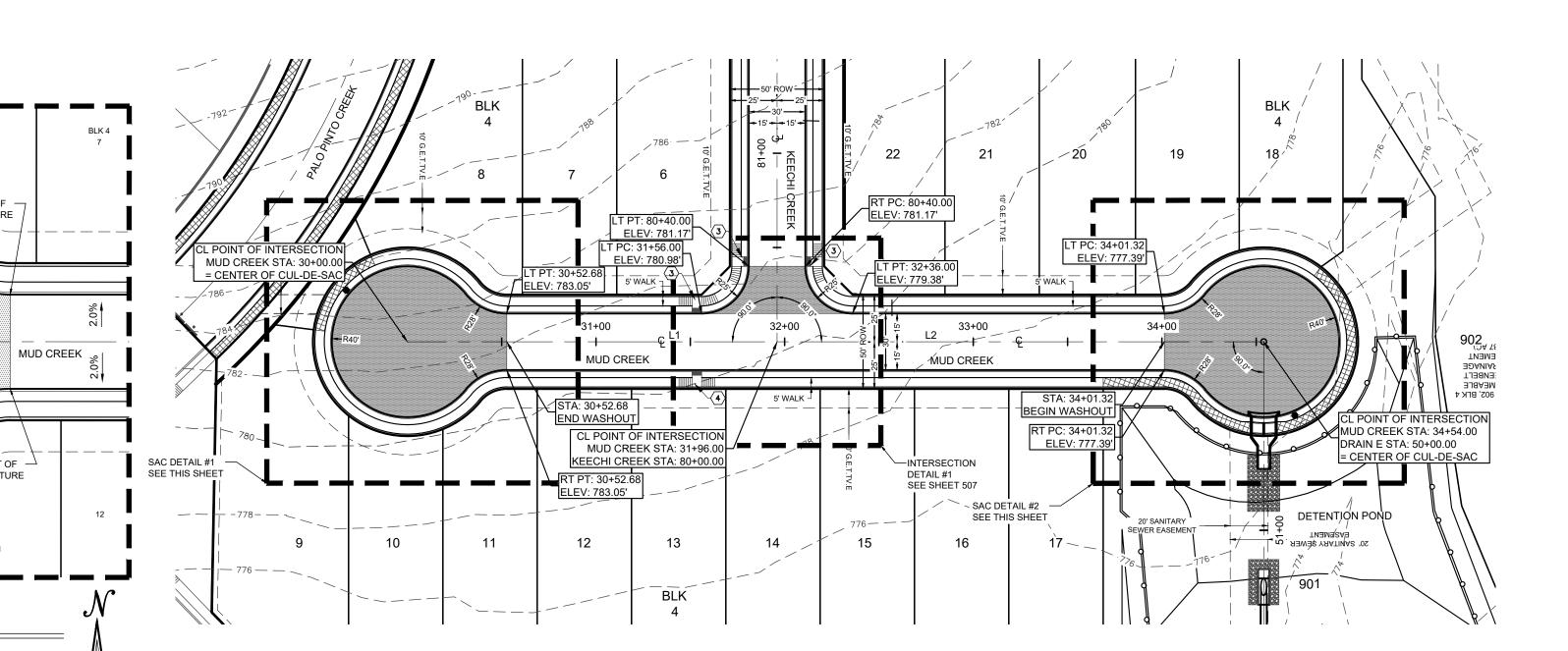
SCALE: 1" = 30'

CURB ELEV. 783.05

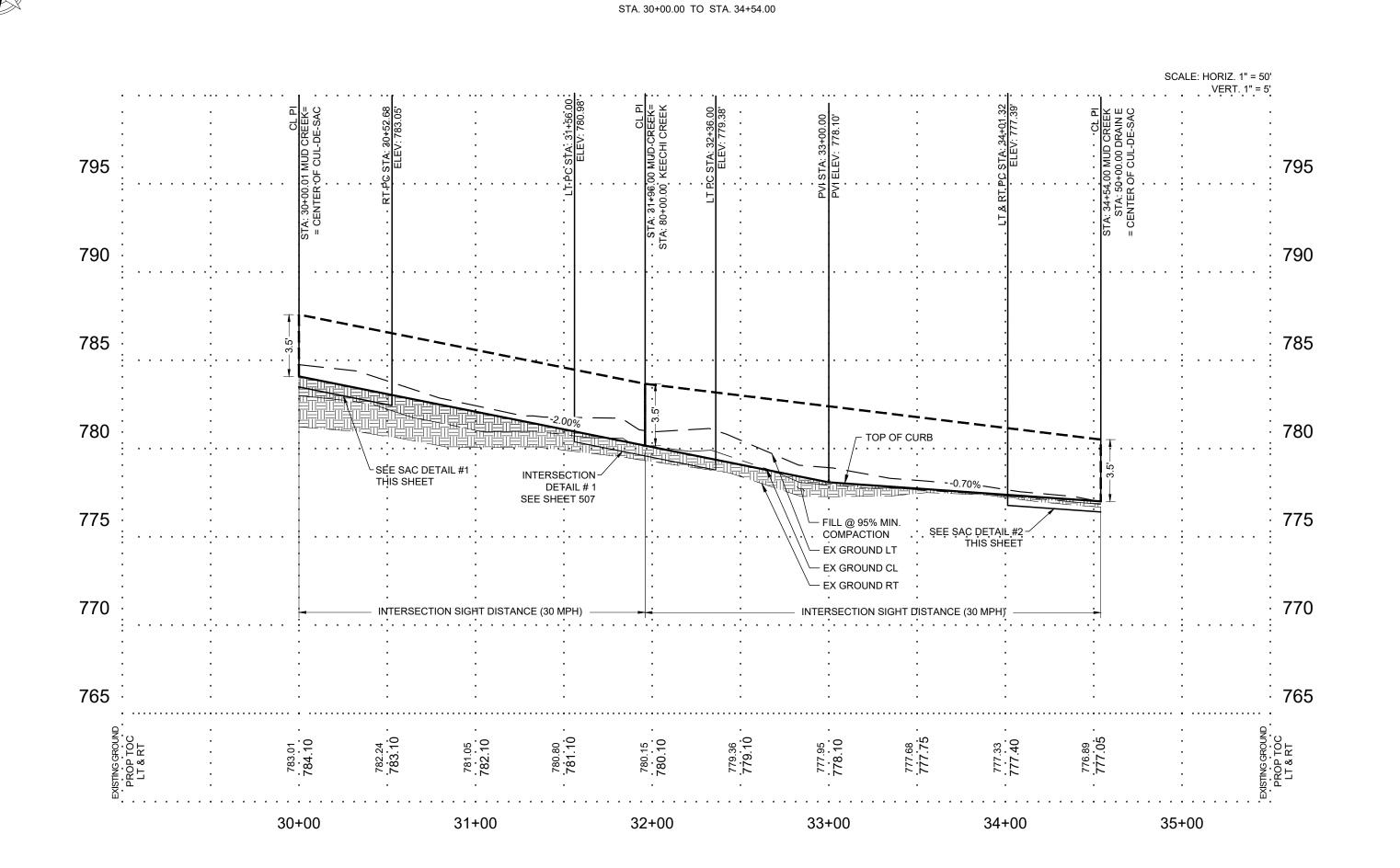
> 784.88 785.51

> 784.88

RT. PT 783.05

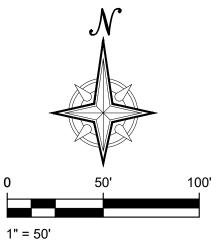


MUD CREEK





WHEELCHAIR RAMPS WASHOUT CROWN SIDEWALK TO BE BUILT BY DEVELOPER PROPOSED DRIVEWAY 940 TOP OF CURB ELEVATION



STREETLIGHT NOTE STREETLIGHT POLES TO BE IN OPEN GREEN SPACE WHERE SHOWN ON PLANS.

EXISTING STREET LIGHT

PROPOSED STREET LIGHT (100 WATT)

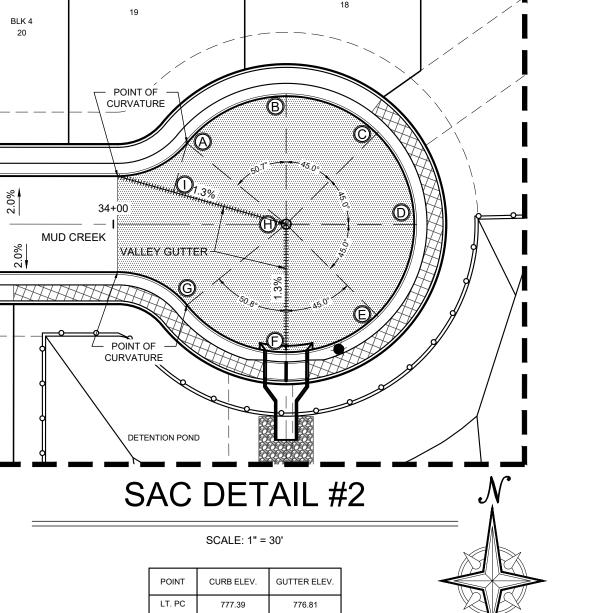
DRIVEWAY NOTE DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.

MEDINA COUNTY PERMIT NOTE: MEDINA COUNTY RIGHT OR WAY PERMIT MUST BE OBTAINED PRIOR TO WORKING IN EXISTING MEDINA COUNTY RIGHT OF WAY

HEADER CURB NOTE: HEADER CURB TO BE TRANSITIONED TO STD. CURB IN 2'.

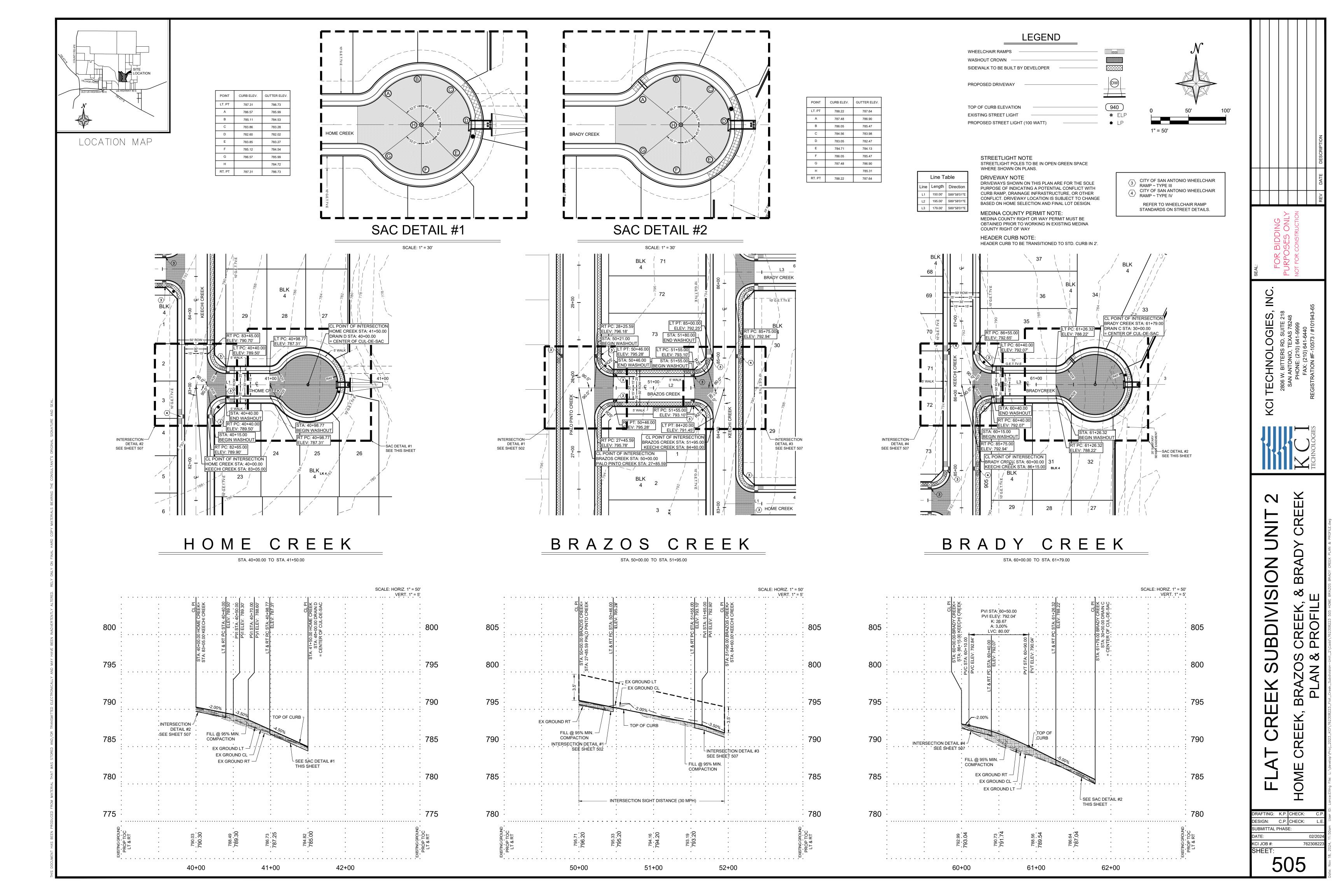
CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE III CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE IV REFER TO WHEELCHAIR RAMP STANDARDS ON STREET DETAILS.

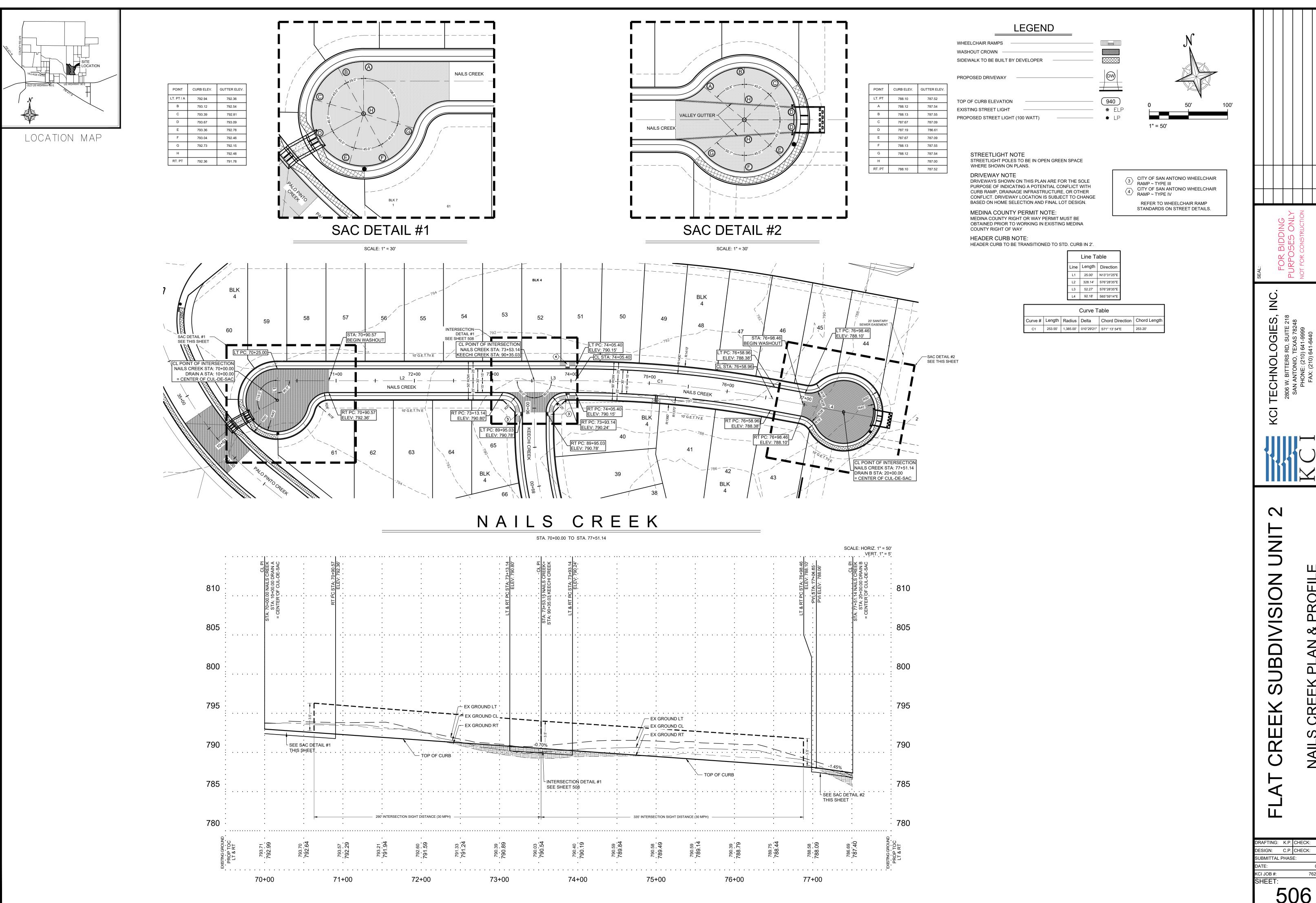
> Line Table ine Length Direction 1 196.00' S89°58'01"E L2 258.00' S89°58'01"E

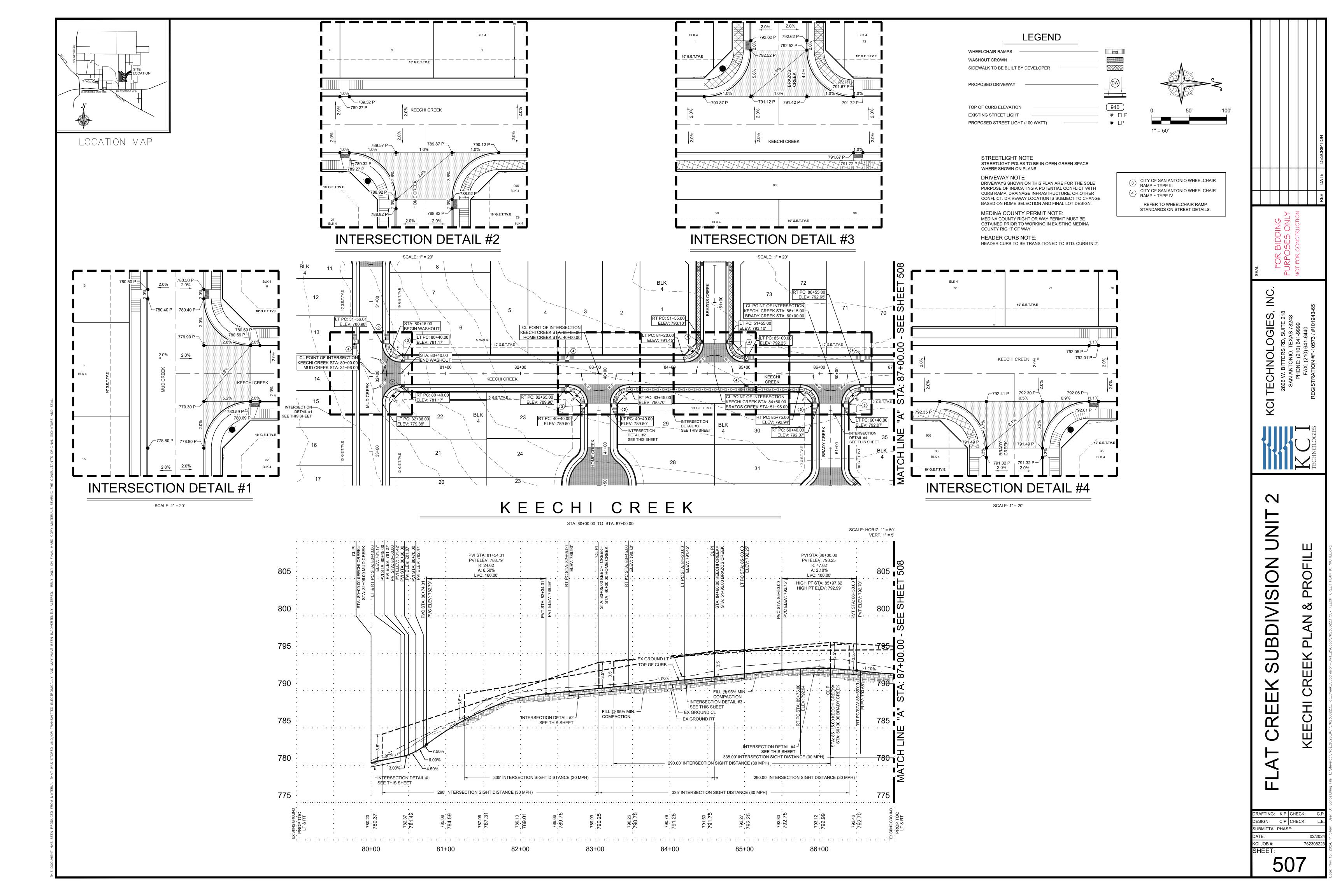


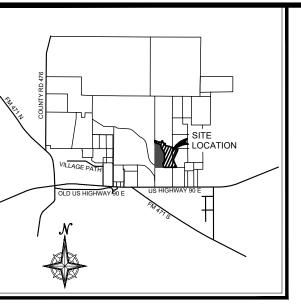
776.57

TECHNOLOGIE



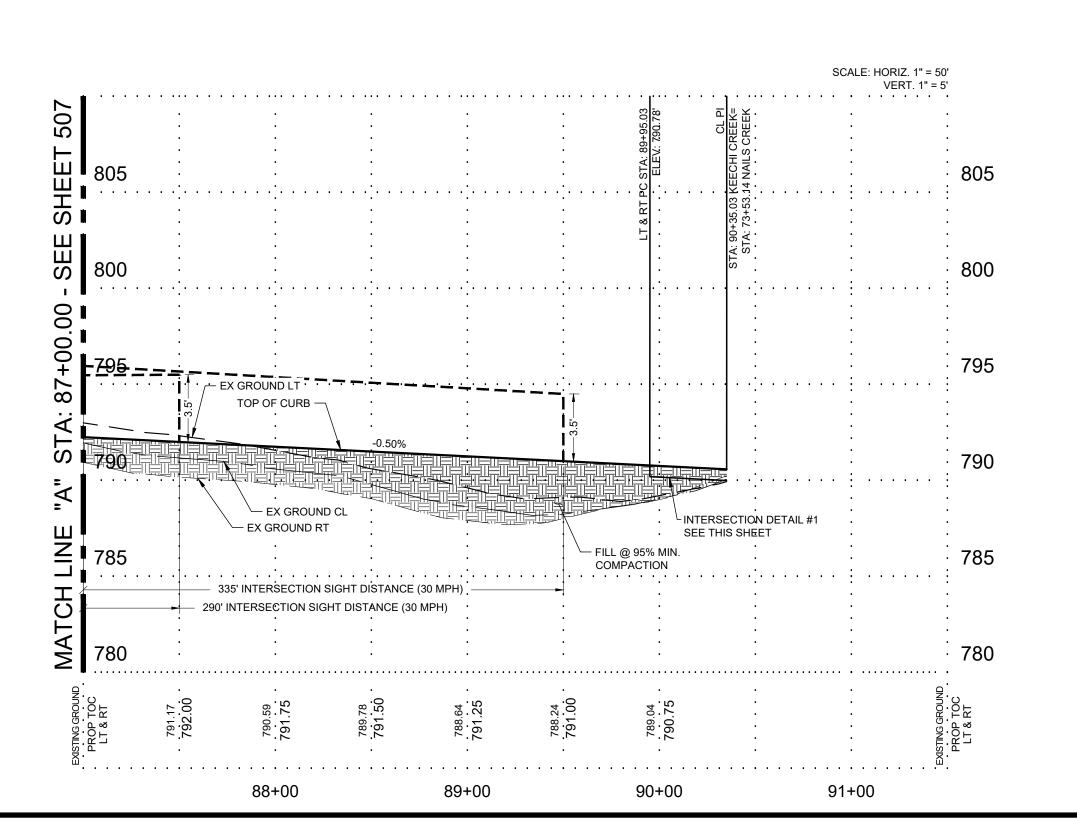






LOCATION MAP

# BIX 4 BIX 4 BIX 4 BIX 4 BIX 6 BIX 6 BIX 6 BIX 70 0000 TO STA 590-30.03 BIX 70 000 TO STA 590-30.03 BIX 8 BIX 8



### LEGEND

WHEELCHAIR RAMPS

WASHOUT CROWN

SIDEWALK TO BE BUILT BY DEVELOPER

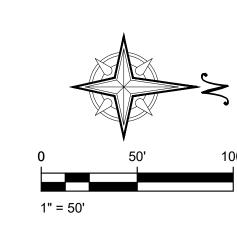
PROPOSED DRIVEWAY

TOP OF CURB ELEVATION

EXISTING STREET LIGHT

PROPOSED STREET LIGHT (100 WATT)

LP



STREETLIGHT NOTE STREETLIGHT POLES TO BE IN OPEN GREEN SPACE WHERE SHOWN ON PLANS.

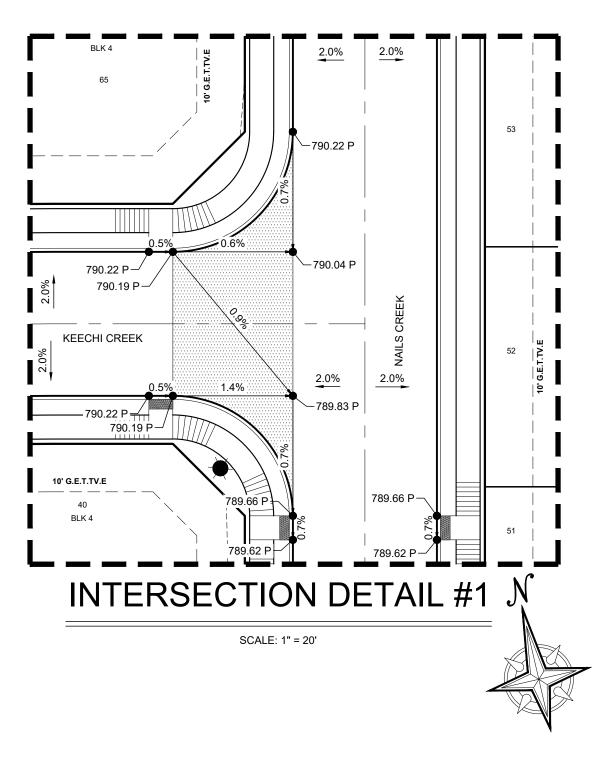
DRIVEWAY NOTE
DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE
PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH
CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER
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COUNTY RIGHT OF WAY

HEADER CURB NOTE: HEADER CURB TO BE TRANSITIONED TO STD. CURB IN 2'.

CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE III
CITY OF SAN ANTONIO WHEELCHAIR RAMP ~ TYPE IV

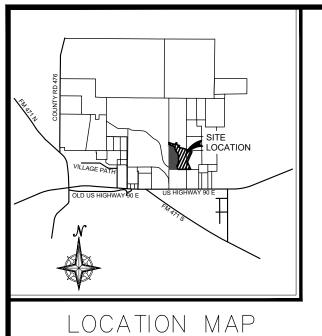
REFER TO WHEELCHAIR RAMP STANDARDS ON STREET DETAILS.

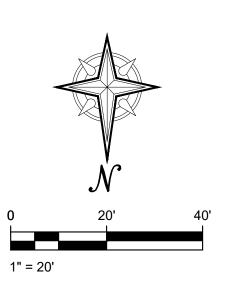


LAT CREEK SUBDIVISION UNIT 2

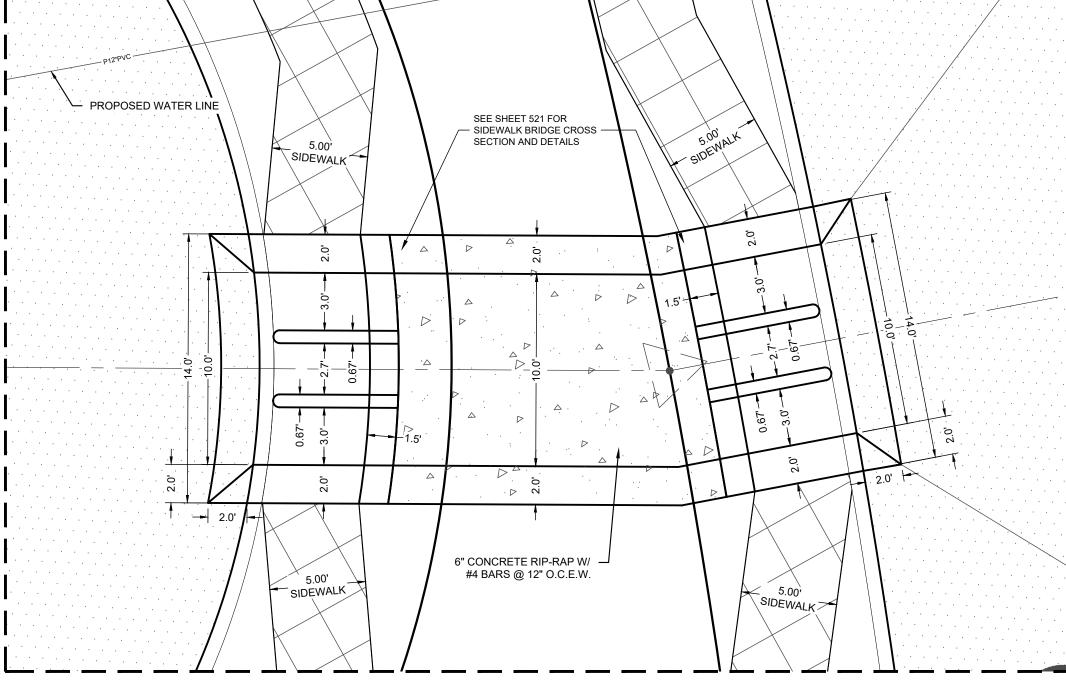
TECHNOLOGIE

DRAFTING: K.P. CHECK: CONTROL CONTROL



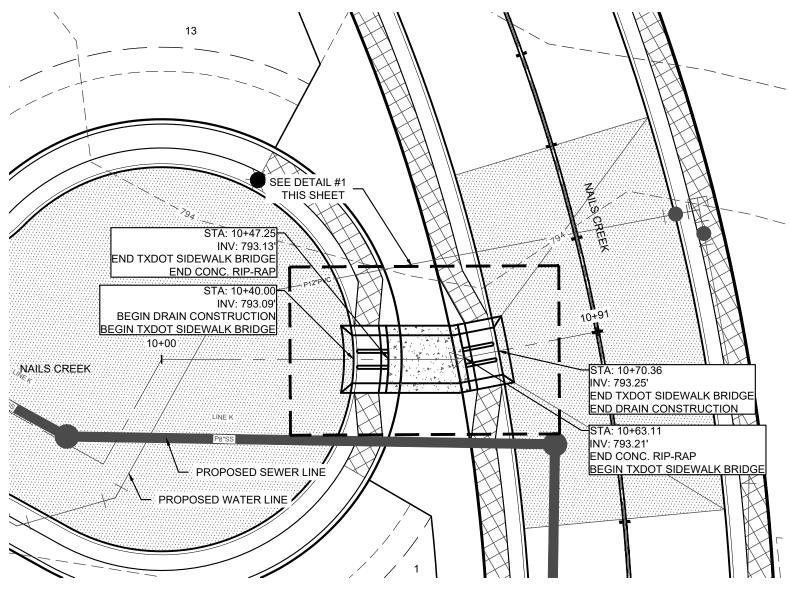


LEGEND



DETAIL #1

SCALE: 1" = 5'



STA. 10+40.00 TO STA. 10+70.36

SCALE: HORIZ. 1" = 20' TOP OF RIP-RAP -TOP OF CURB \_ TOP OF CURB ELEV:793.84 ELEV:793.67 EXISTING GROUND CENTER . -792 7.25 LF ~ TXDOT BRIDGE @ 0.53% 7.25 LF ~ TXDOT BRIDGE @ 0.53% 15.86 LF ~ CONC. CHANNEL @ 0.53%

10+40

10+80

10+00

### **INLET NOTES:**

- MUD SLAB AND INLET BOLTIN WILL BE REQUIRED. CONTRACTOR TO USE FLOWABLE FILL (COSA ITEM 413.2) FOR MUD SLAB. FLOWABLE FILL SHOULD BE 2" TO 6" THICK AND SHOULD EXTEND BENEATH TOTAL LENGTH OF PROPLSED INLETS. 2. CONTRACTOR TO GROUT INLET
  - BOTTOM TO ENSURE DRAINAGE TO OUTLET PIPE.
- 3. COVER FOR REINFORCING STEEL IS 2" UNLESS NOTED.
- 4. ALL CONCRETE SHALL BE CLASS "C" 3600 PSI. @ 28 DAY WITH COURSE AGGREGATE GRADE 2-5. 5. MINIMUM BAR DEVELOPMENT LENGTH FOR SPLICE AND BENDS
- SHALL BE 24 INCHES. NO SEPERATE PAY ITEM ON ITEMS LISTED ABOVE

WORKING IN AND AROUND TRENCH EXCAVATION.

### NOTE:

CONTRACTOR TO ENSURE POSITIVE DRAINAGE AT UPSTREAM & DOWNSTREAM ENDS OF DRAINS AND THAT NO PONDING WILL OCCUR.

### **CONCRETE NOTES:**

- 1. COVER FOR REINFORCING STEEL IS 2" UNLESS NOTED.
- ALL CONCRETE SHALL BE CLASS "C" 3600 PSI @ 28 DAY WITH COURSE AGGREGATE GRADE 2-5.
- MINIMUM BAR DEVELOPMENT LENGTH FOR SPLICE AND BENDS SHALL BE 24 INCHES.

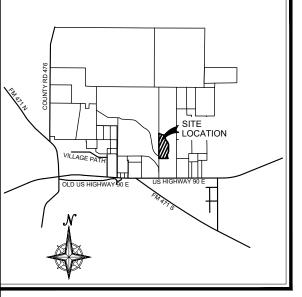
### PRIOR TO CONSTRUCTION NOTE:

CONTRACTOR TO COORDINATE WITH HOME OWNERS AND GIVE TWO WEEK NOTICE FOR WORK WITHIN SINGLE FAMILY LOTS. WORK WILL REQUIRE THE USE OF SMALL MACHINERY TO LIMIT AREA OF DISTURBANCE. PROTECTION OF EXISTING HOME AND PROPERTY SHALL FOLLOW RECOMMENDATIONS OF THE STRUCTURAL ENGINEER. WORK AND DISTURBANCE WILL BE LIMITED TO EASEMENT AREAS ONLY. FENCES, UTILITY BUILDINGS, AND GRASS AREA SHALL BE REMOVED AND REPLACED TO A BETTER THAN EXISTING CONDITION (NOT MEASURED AND TO BE INCLUDED IN COST OF STRUCTURE). TEMPORARY FENCING TO PROTECT PROPERTY, PEOPLE, AND PETS SHALL BE UTILIZED (NOT MEASURED AND TO BE INCLUDED IN COST OF STRUCTURE). CONTRACTOR SHALL PRESENT A SCHEDULE OF CONSTRUCTION OPERATION TO MINIMIZE DISTURBANCE TO HOMEOWNERS BUT IN NO WAY EXTEND MORE THAN 14 CALENDAR DAYS. BACKFILL AROUND STRUCTURE SHALL BE WITH 413 HIGH STRENGTH FLOWABLE FILL (500 PSI) TO ONE FOOT BELOW EXISTING GRADE ALLOWING FOR TOPSOIL AND GRASS REPLACEMENT (NOT MEASURED AND TO BE INCLUDED IN COST OF STRUCTURE).

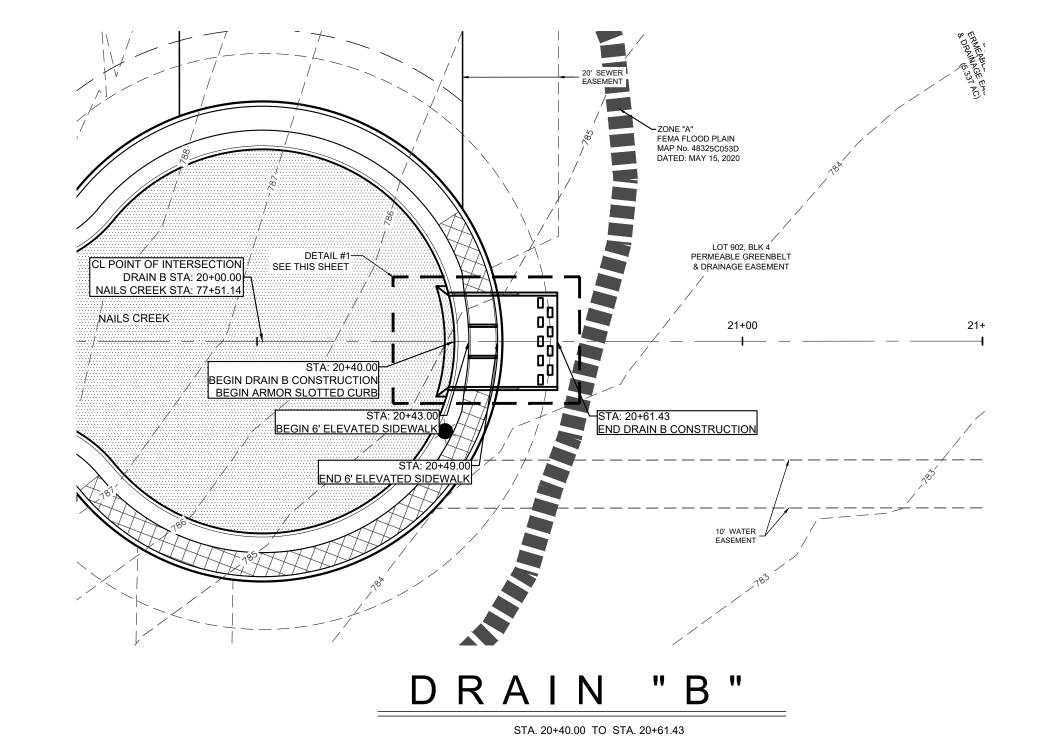
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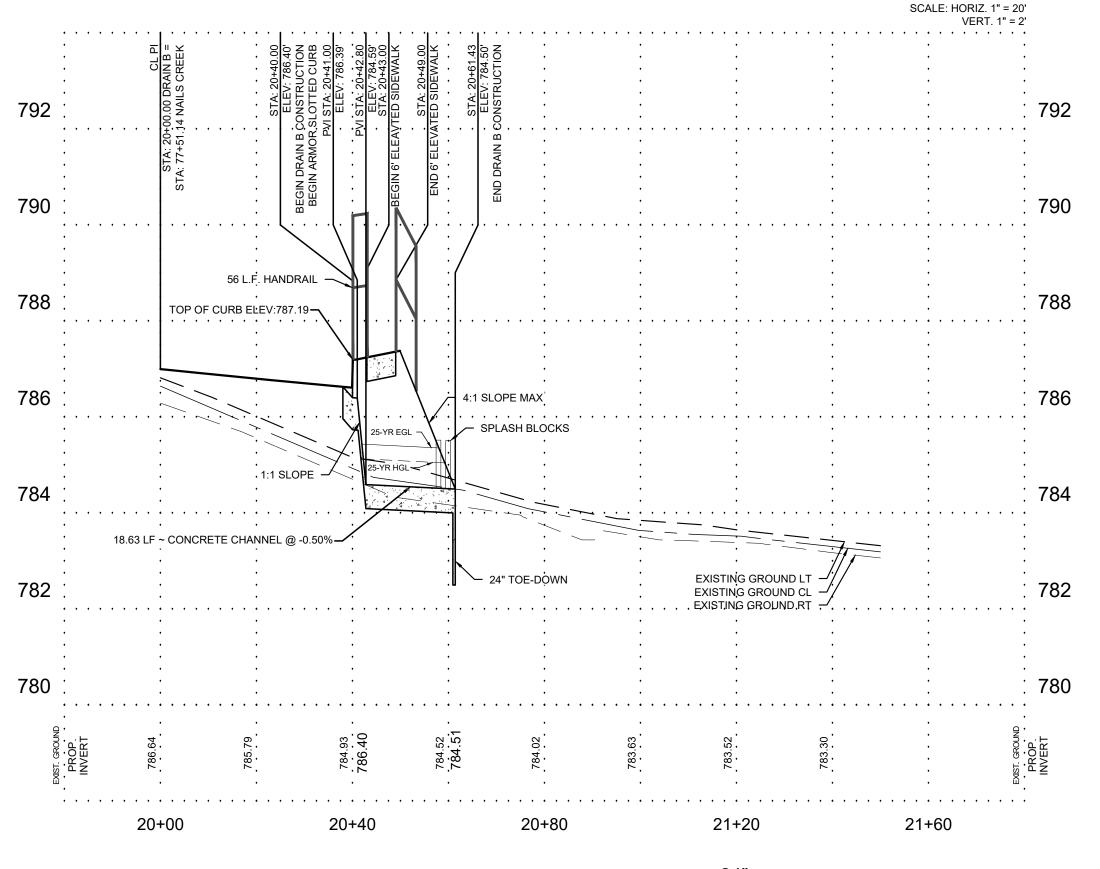
RAFTING: K.P. CHECK: ESIGN: C.P. CHECK: SUBMITTAL PHASE: 762308223 (CI JOB #:

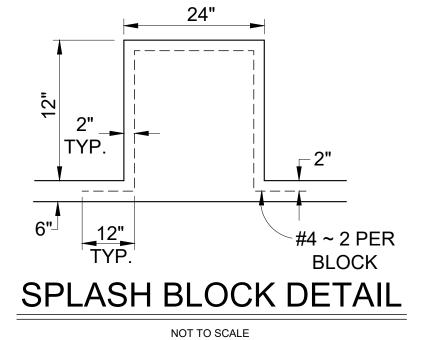
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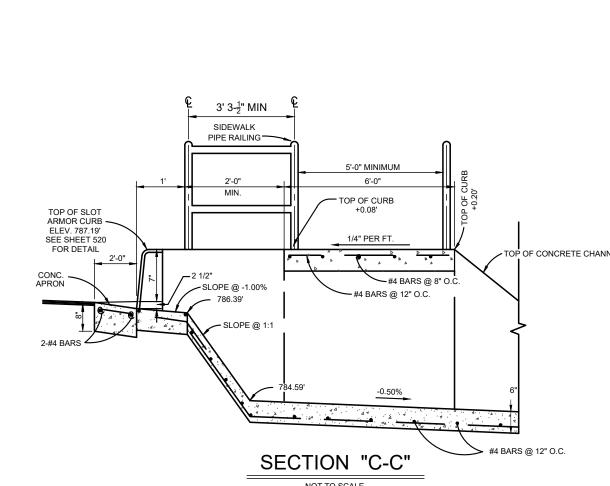


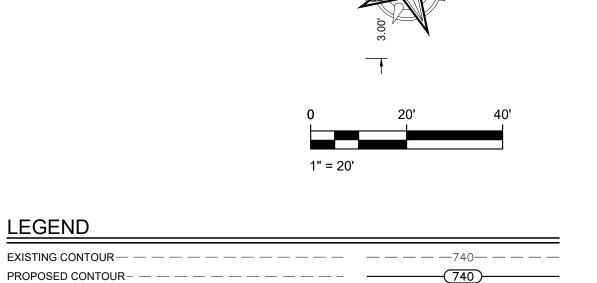


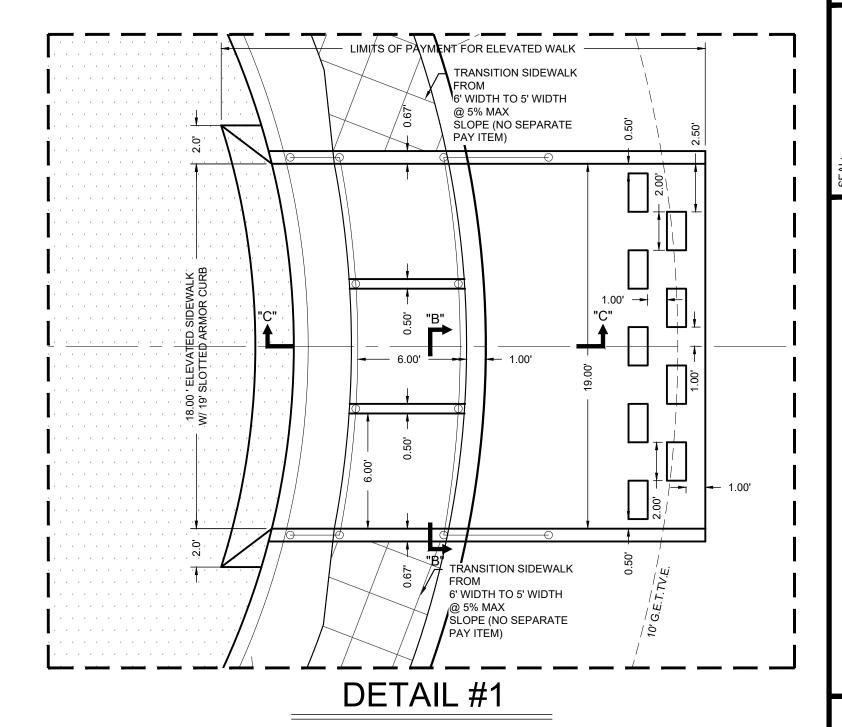
NOTES: 1. Cover for reinforceing steel is 2" unless noted.

2. All concrete shall be class "C" 3600 psi. @ 28 day with Course Aggregate Grade 2-5. 3. Minimum bar development length for splice and bends shall be 24 inches. 4. Transition from standard curb to elevated walk.

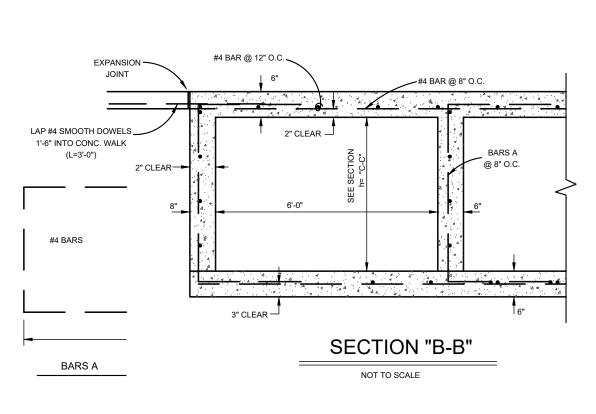
No separate pay item. NOTE: SEE SHEET 519 FOR HANDRAIL DETAILS

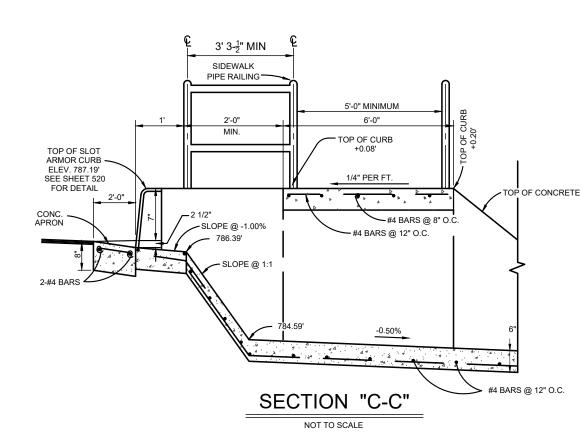






LEGEND





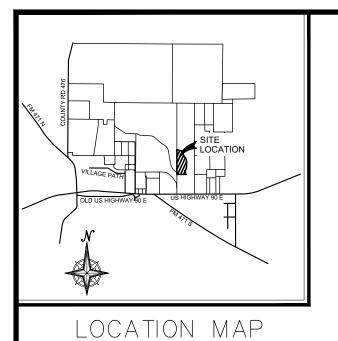
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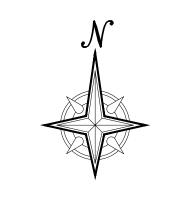
DRAFTING: K.P./P.R. CHECK: DESIGN: C.P. CHECK: SUBMITTAL PHASE: (CI JOB #: 762308222

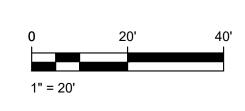
**510** 

 $\Box$ 

\_\_\_







LEGEND

IMITS OF PAYMENT FOR ELEVATED WALK

DETAIL #1

SCALE: 1" = 5'

#4 BAR @ 8" O.C

5'-0" MINIMUM

TOP OF CURB

SECTION "C-C"

2" CLEAR —

TRANSITION SIDEWALK FROM 6' WIDTH TO 5' WIDTH @ 5% MAX SLOPE (NO SEPARATE PAY ITEM)

TRANSITION SIDEWALK FROM 6' WIDTH TO 5' WIDTH @ 5% MAX SLOPE (NO SEPARATE PAY ITEM)

LAP #4 SMOOTH DOWELS \_\_\_

1'-6" INTO CONC. WALK

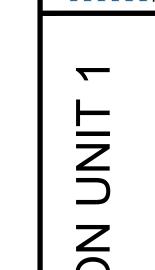
(L=3'-0")

#4 BARS

BARS A

TOP OF SLOT ARMOR CURB ELEV. 783.05'

\_\_\_



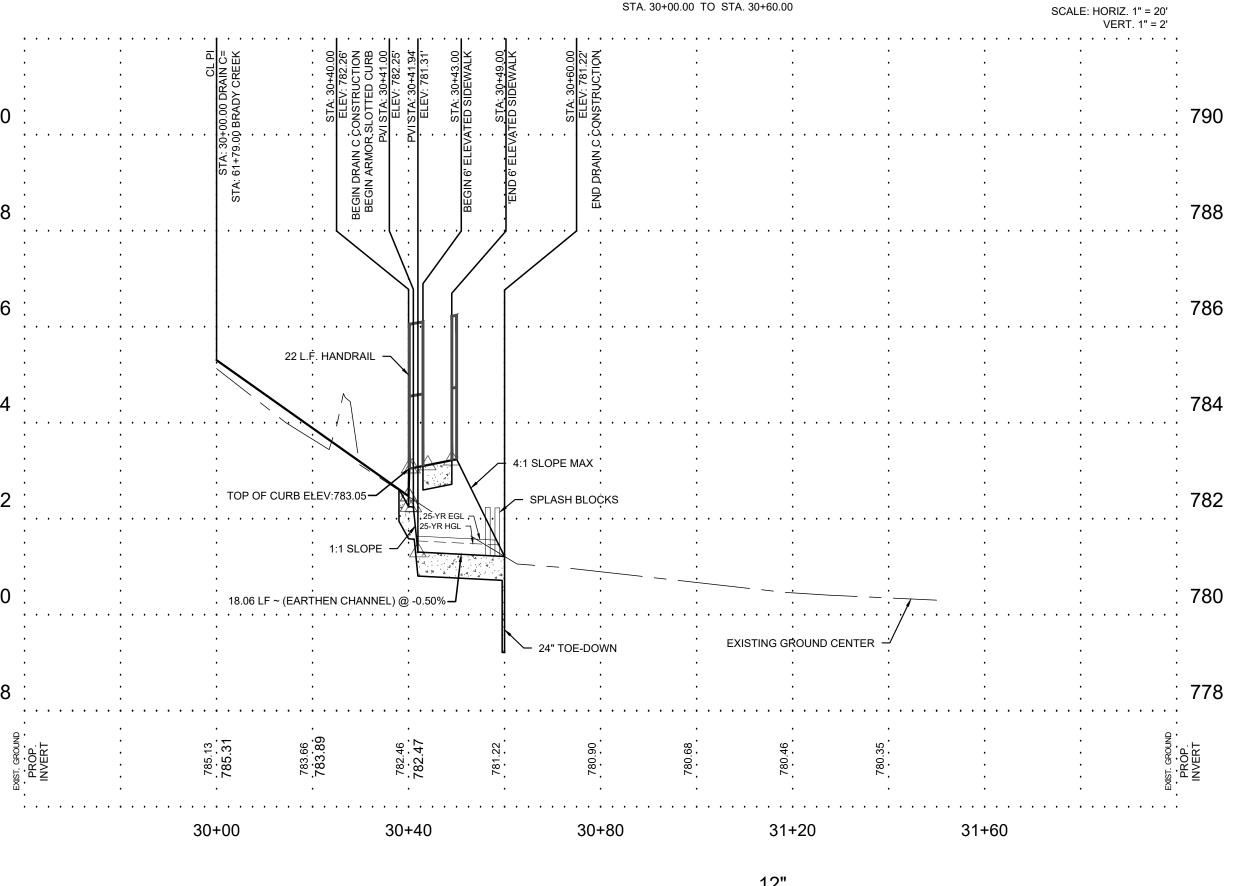
1'-6" INTO CONC. WALK

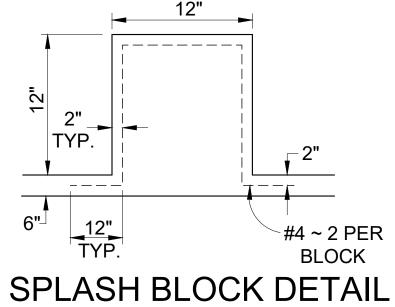
TOP OF CONCRETE CHANNEL

DRAFTING: K.P./P.R. CHECK: DESIGN: C.P. CHECK: SUBMITTAL PHASE: 762308222

(CI JOB #: 511

BEGIN 6' ELEVATED SIDEWALK LOT 902, BLK 4 PERMEABLE GREENBELT & DRAINAGE EASEMENT CL POINT OF INTERSECTION DRAIN C STA: 30+00.00 STA: 30+60.00 END DRAIN C CONSTRUCTION BRADY CREEK STA: 61+79.00 STA: 30+40.00 BEGIN DRAIN C CONSTRUCTION BEGIN ARMOR SLOTTED CURB





is 2" unless noted. 2. All concrete shall be

class "C" 3600 psi. @ 28 day with Course Aggregate Grade 2-5. 3. Minimum bar development length for splice and bends shall be 24 inches. 4. Transition from standard

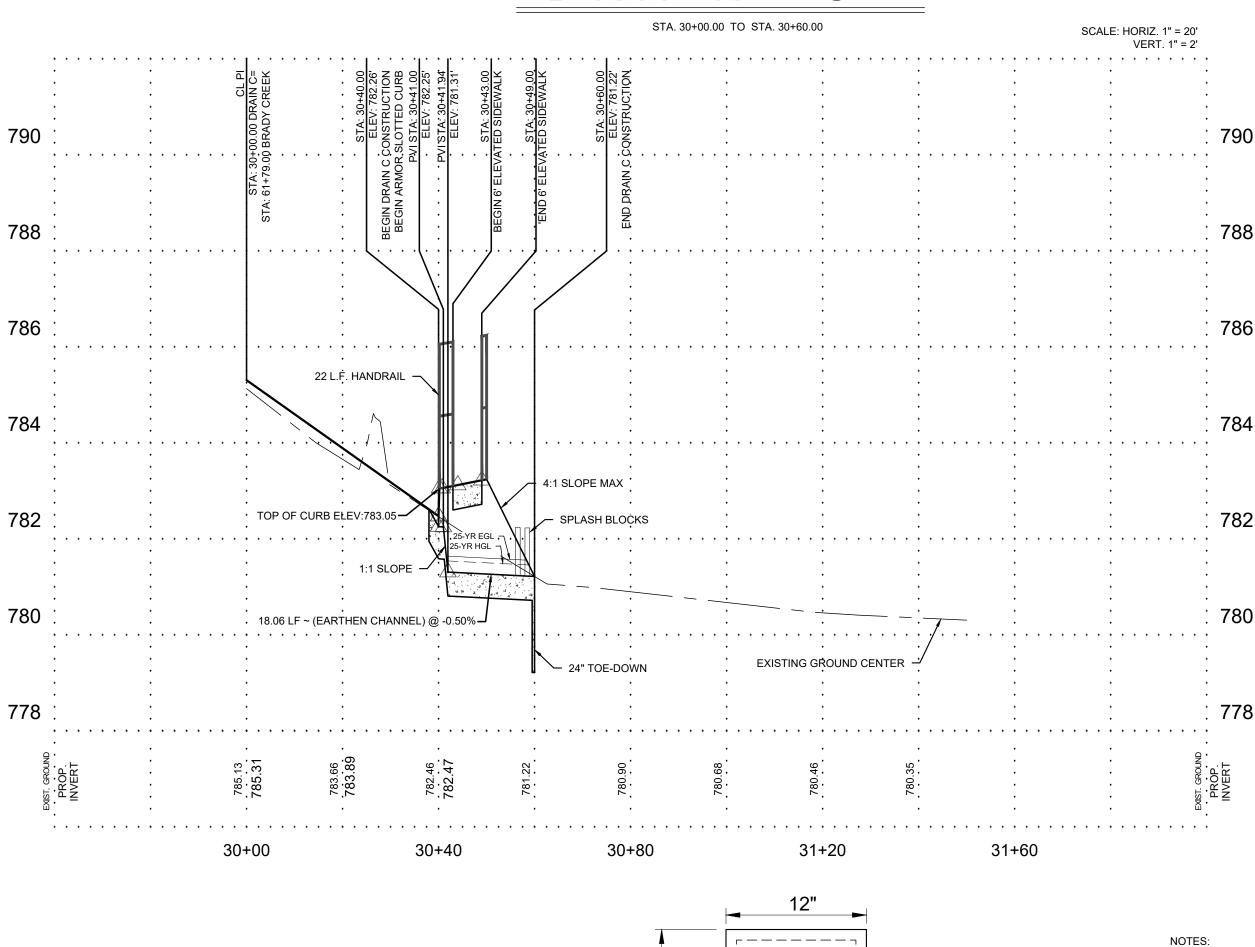
curb to elevated walk. No separate pay item. NOTE: SEE SHEET 519 FOR HANDRAIL DETAILS

1. Cover for reinforceing steel

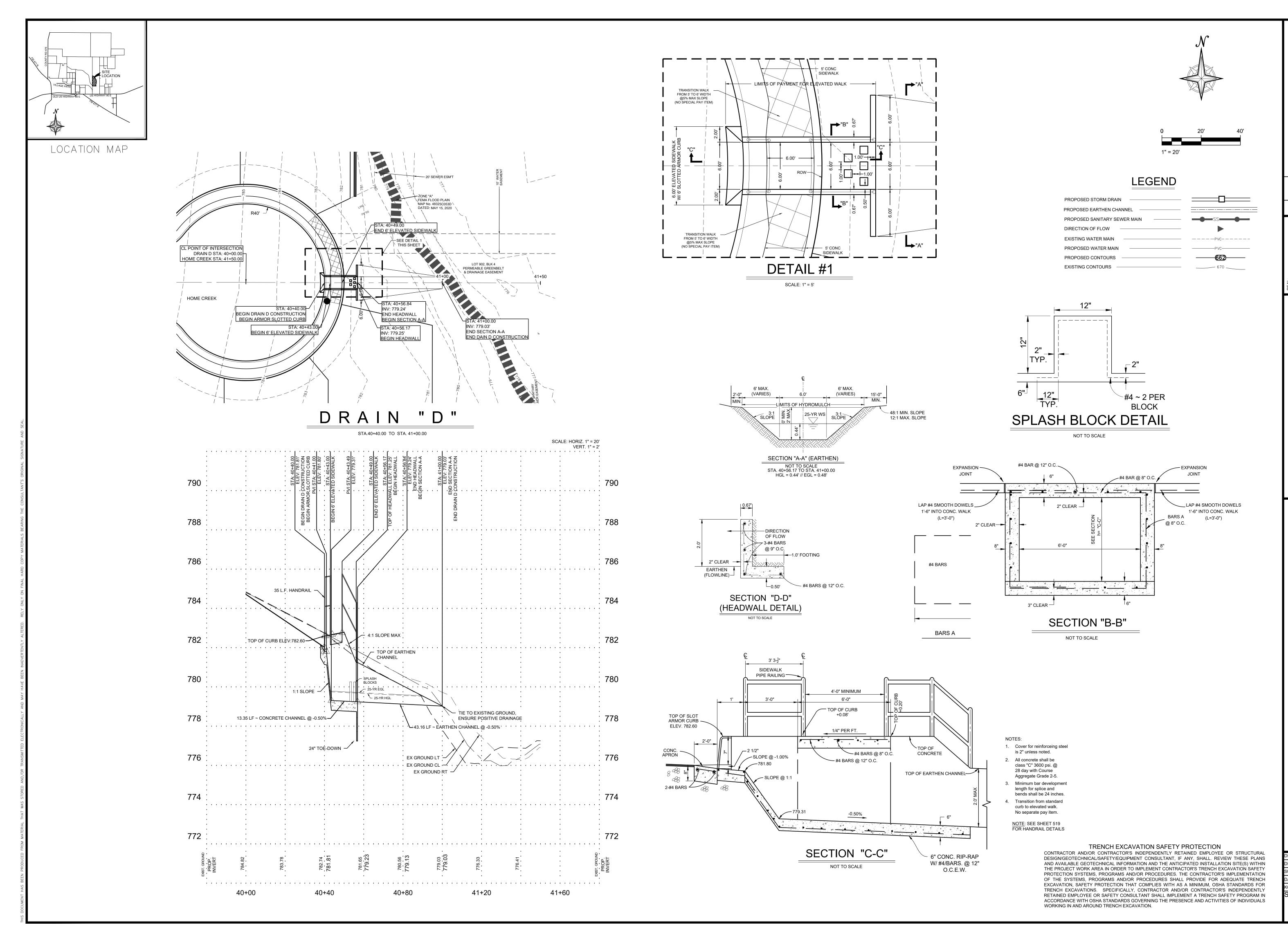
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WORKING IN AND AROUND TRENCH EXCAVATION.

STA. 30+00.00 TO STA. 30+60.00



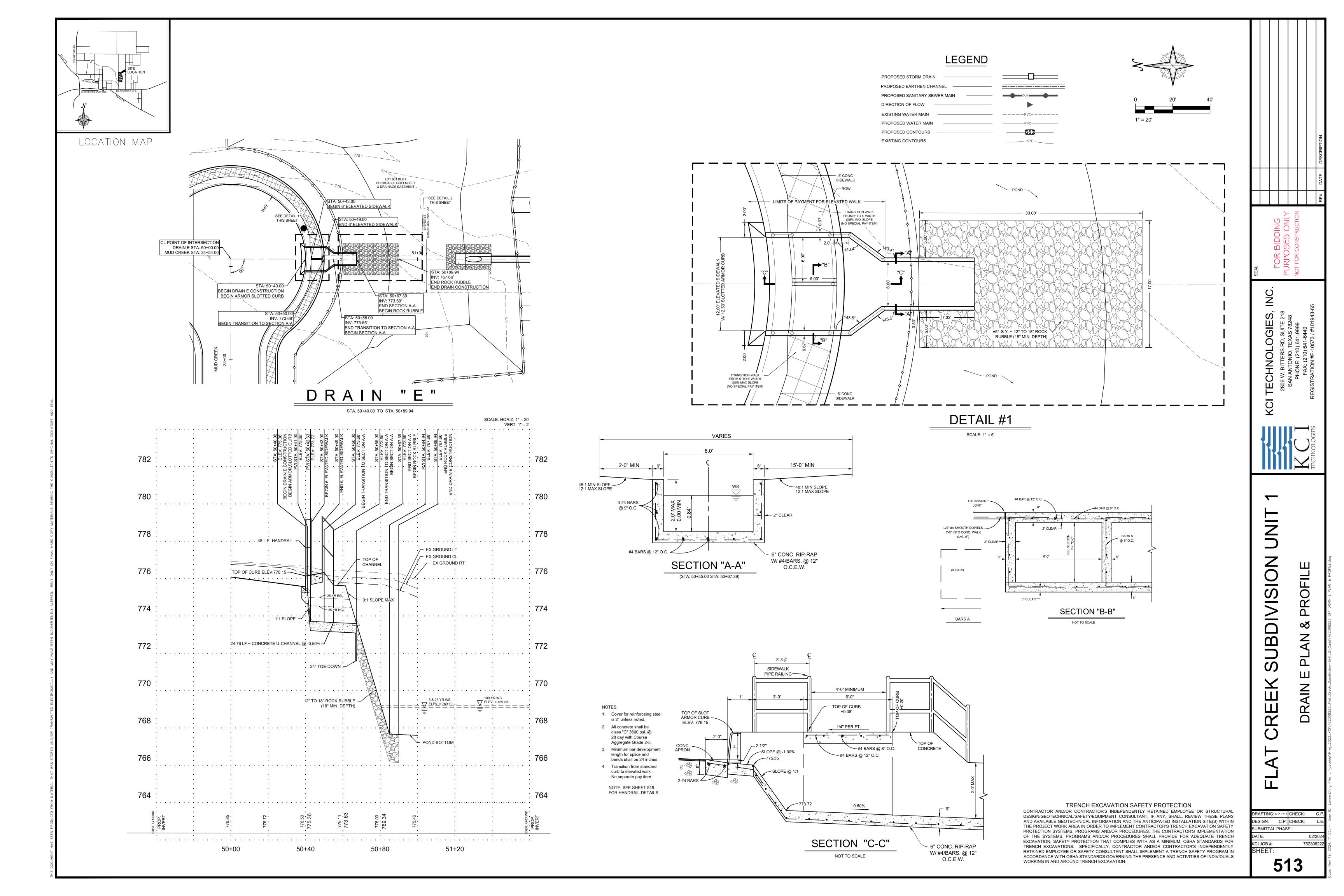
NOT TO SCALE

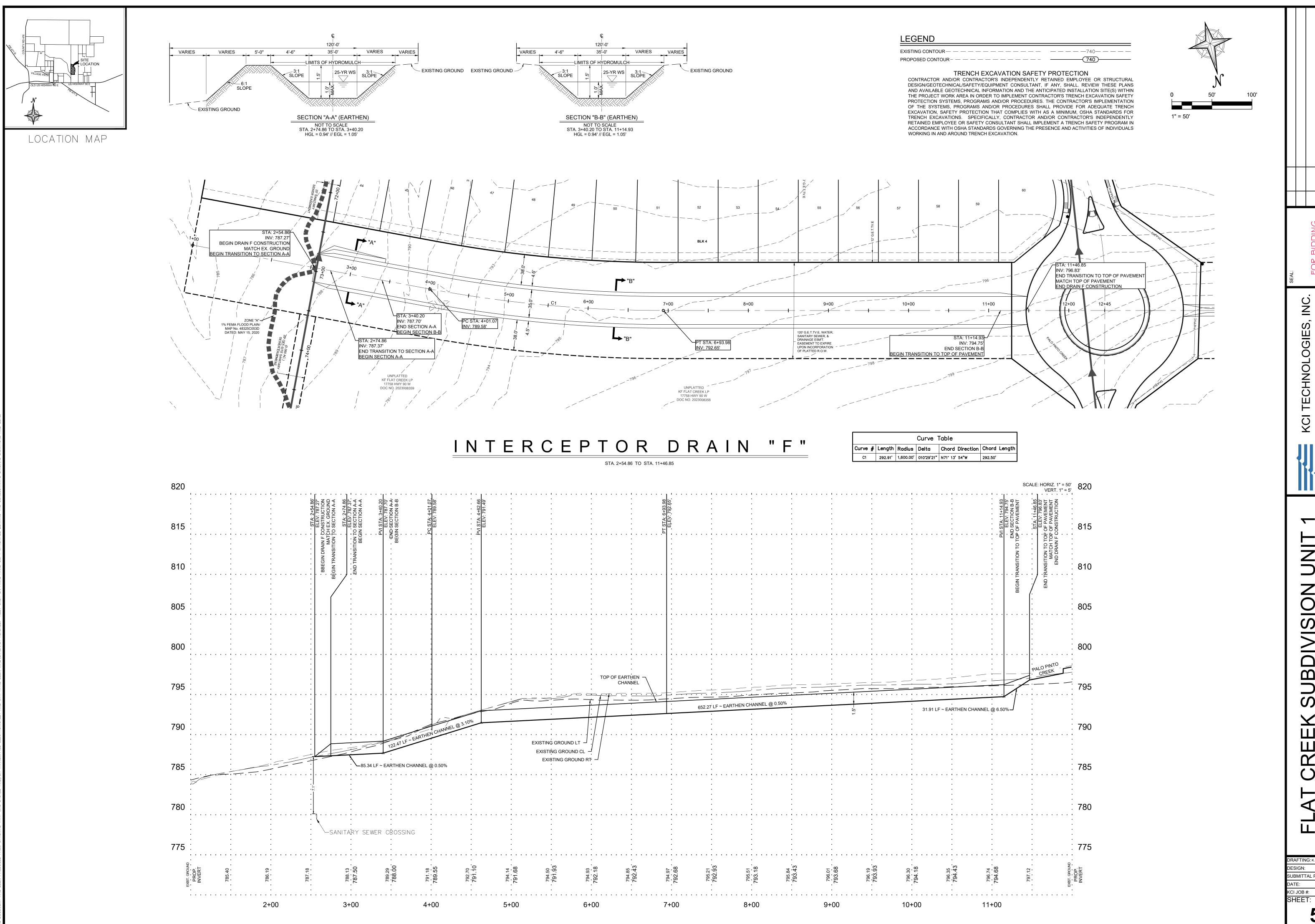


RAIN D PLAN & PROFILE

| KC |

DRAFTING: K.P./P.R. CHECK: C.P.
DESIGN: C.P. CHECK: L.E.
SUBMITTAL PHASE:
DATE: 02/2024
KCI JOB #: 762308222





TRENCH EXCAVATION SAFETY PROTECTION CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL LEGEND DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL. REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. 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 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. ELEV: 798.79' LOCATION MAP BEGIN DRAIN G CONSTRUCTION MATCH TOP OF PAVEMENT BEGIN TRANSITION TO SECTION A-A 120' G.E.T.TV.E, WATER, SANITARY SEWER, & DRAINAGE ESM'T. EASEMENT TO EXPIRE UPON INCORPORATION OF PLATTED R.O.W. \_ELEV: 799.03' END TRANSITION TO SECTION A-A BEGIN SECTION A-A ELEV: 801.53' END SECTION A-A BEGIN TRANSITION TO EX. GROUND LIMITS OF HYDROMULCH-EX. GROUND 48:1 MIN. SLOPE 48:1 MIN. SLOPE 12:1 MAX. SLOPE Curve # Length Radius Delta Chord Direction Chord Length SECTION "A-A" (EARTHEN) C1 308.42' 1,400.00' 012°37'20" S70° 09' 55"E 307.80' INTERCEPTOR DRAIN "G" NOT TO SCALE STA. 2+27.98 TO STA. 5+40.62 HGL = 0.67' // EGL = 0.76' STA. 1+98.00 TO STA. 5+74.95 EXISTING GROUND CL -TOP OF EARTHEN .

2+80

3+20

2+00

2+40

ELEV: 803.24'

MATCH EX. GROUND

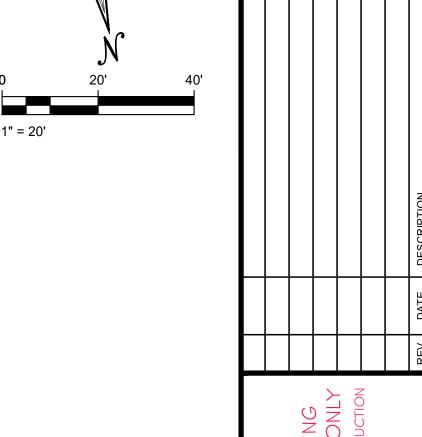
Curve Table

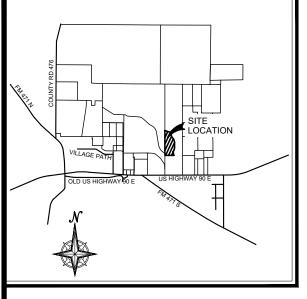
5+20

5+60

SCALE: HORIZ. 1" = 20' VERT. 1" = 2' **810** 

ND TRANSITION TO EX. GROUND

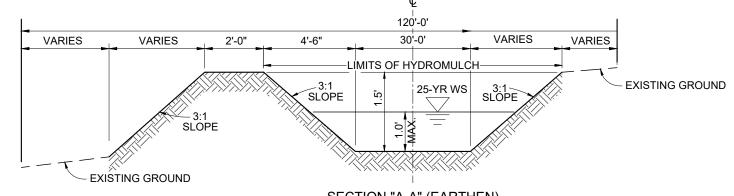




LOCATION MAP

### TRENCH EXCAVATION SAFETY PROTECTION

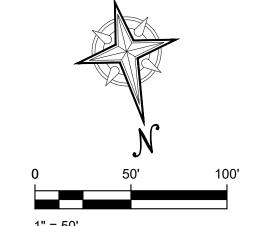
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL. REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. 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 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" (EARTHEN)

NOT TO SCALE
STA. 1+60.00 TO STA. 6+78.67
HGL = 0.50' // EGL = 0.56'

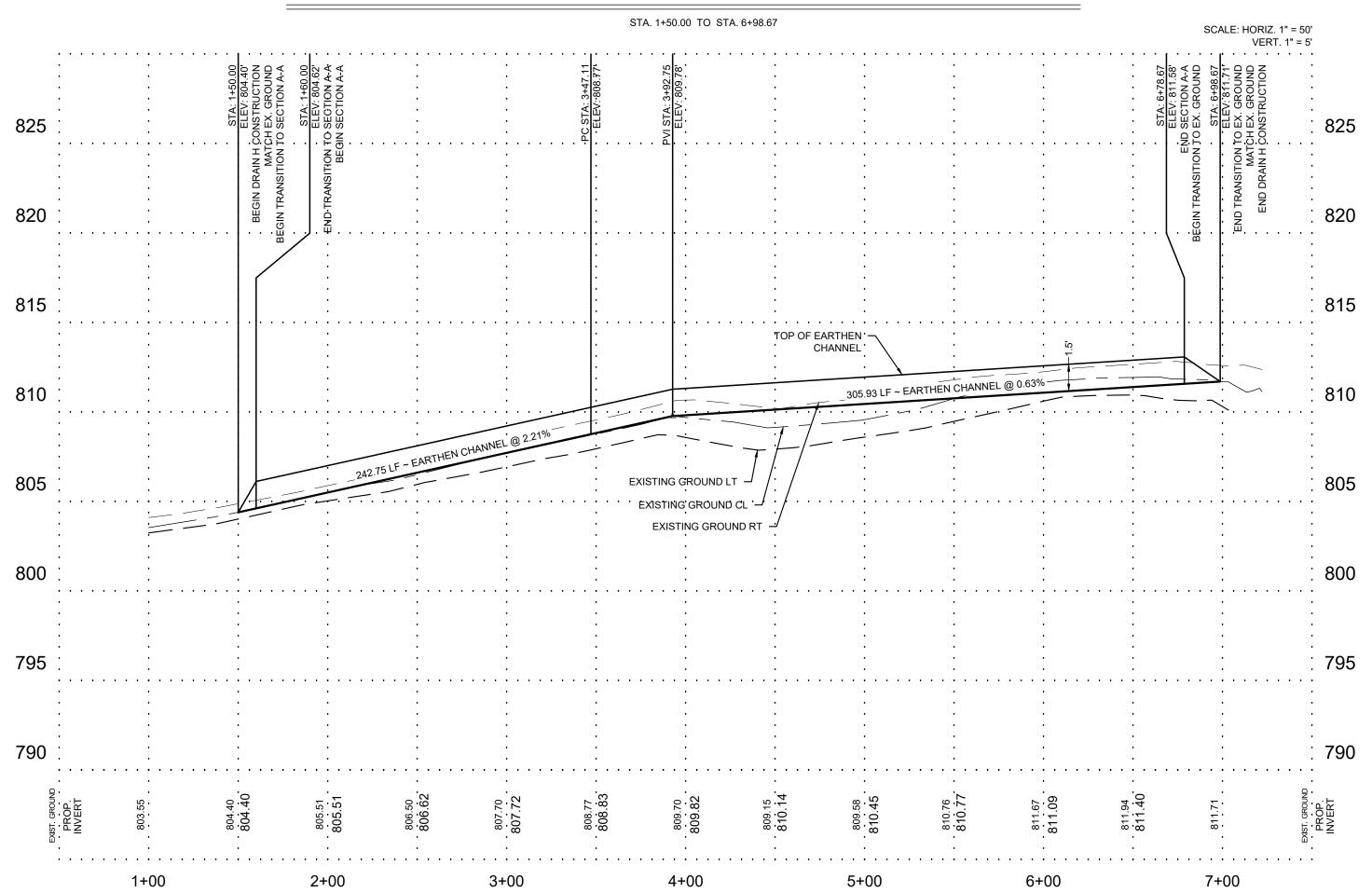




UNPLATTED KF FLAT CREEK LP 17758 HWY 90 W DOC NO. 2023008356 INV: 804.62' PC STA: 3+47.11 INV: 808.77' END TRANSITION TO SECTION A-A BEGIN SECTION A-A INV: 804.40' BEGIN DRAIN H CONSTRUCTION MATCH EX. GROUND BEGIN TRANSITION TO SECTION A-A VARIABLE G.E.T.TV.E., WATER, SANITARY SEWER, & DRAINAGE ESM'T. EASEMENT TO EXPIRE UPON INCORPORATION OF FUTURE UNIT STA: 6+78.67 INV: 811.58' END SECTION A-A BEGIN TRANSITION TO EX. GROUND STA: 6+98.67 INV: 811.71' END TRANSITION TO EX. GROUND MATCH EX. GROUND END DRAIN H CONSTRUCTION

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	374.99'	1,165.00	018*26'32"	N67° 15' 19"W	373.37'

### INTERCEPTOR DRAIN "H"



FLAT CREEK SUBDIVISION UNIT 1

TECHNOLOGIE

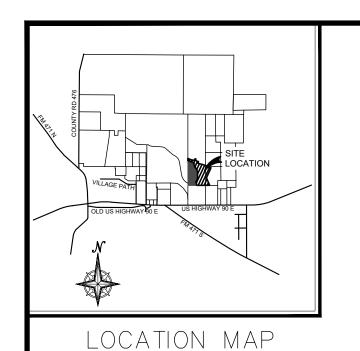
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DESIGN: C.P. CHECK:
SUBMITTAL PHASE:
DATE: 0
KCI JOB #: 7623

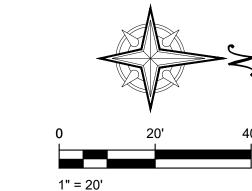
FOR CONSTRUCTION

2806 W. BITTERS RD, SUITE 218 SAN ANTONIO, TEXAS 78248 PHONE: (210) 641-9999 FAX: (210) 641-6440 SISTRATION #F-10573 / #101943-65

DRAFTING: K.P. CHECK:
DESIGN: C.P. CHECK:
SUBMITTAL PHASE:

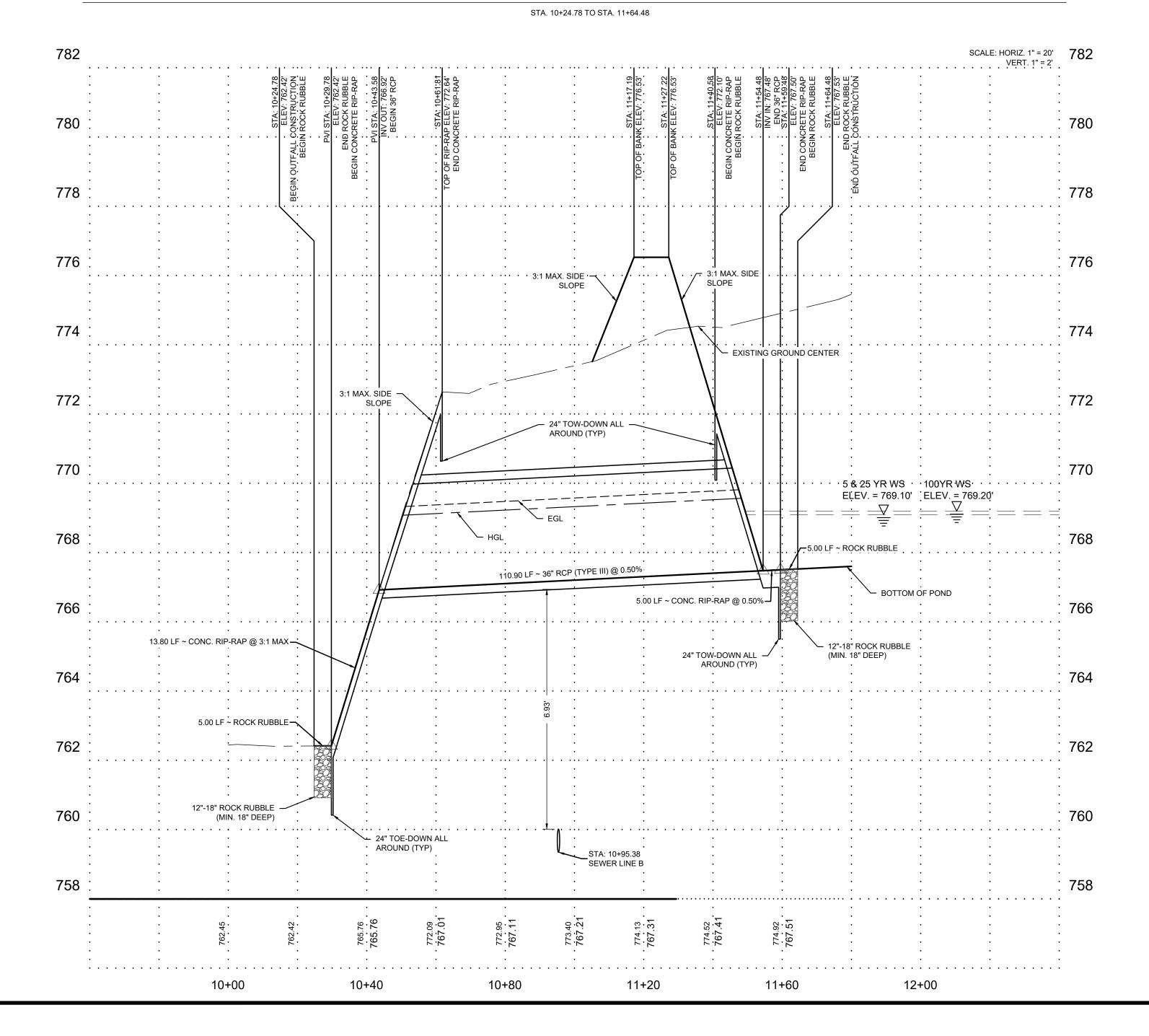
ATE: 02/2024 CI JOB #: 762308223 SHEET:

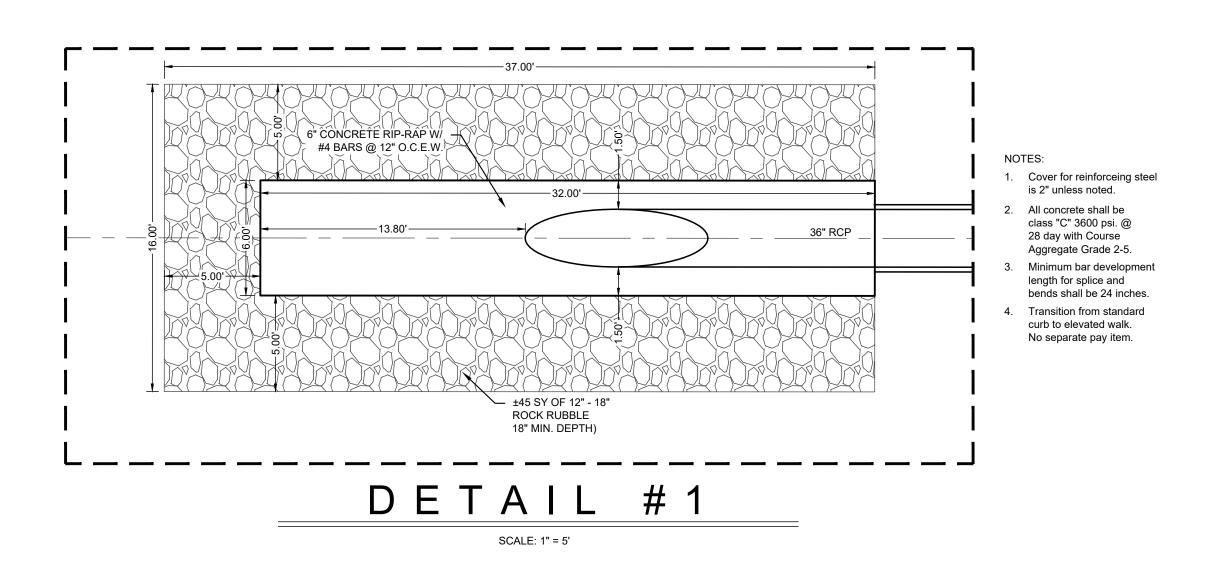


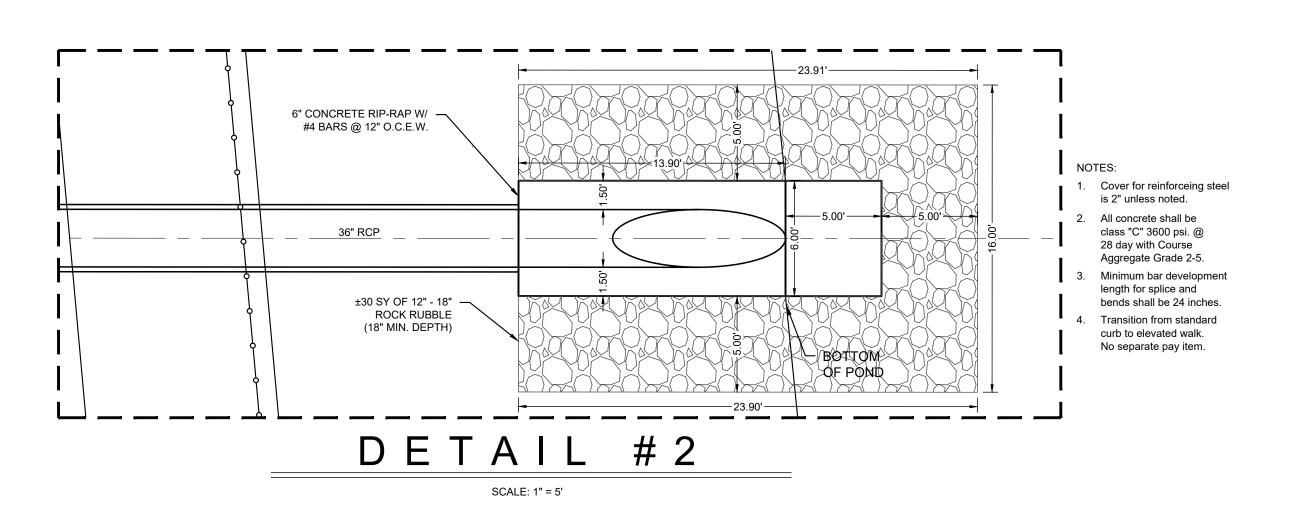


ELEV: 767.53'
END ROCK RUBBLE INV OUT: 766.92' BEGIN 36" RCP THIS SHEET END OUTFALL CONSTRUCTION ELEV: 762.42' END ROCK RUBBLE BEGIN CONCRETE RIP-RAP STA: 10+24.78 ELEV: 762.42' BEGIN OUTFALL CONSTRUCTION END CONCRETE RIP-RAP ELEV: 767.50' END CONCRETE RIP-RAP BEGIN ROCK RUBBLE INV IN: 767.48' BEGIN CONCRETE RIP-RAP END 36" RCP

## DETENTION POND OUTFALL STRUCTURE







NOTE:

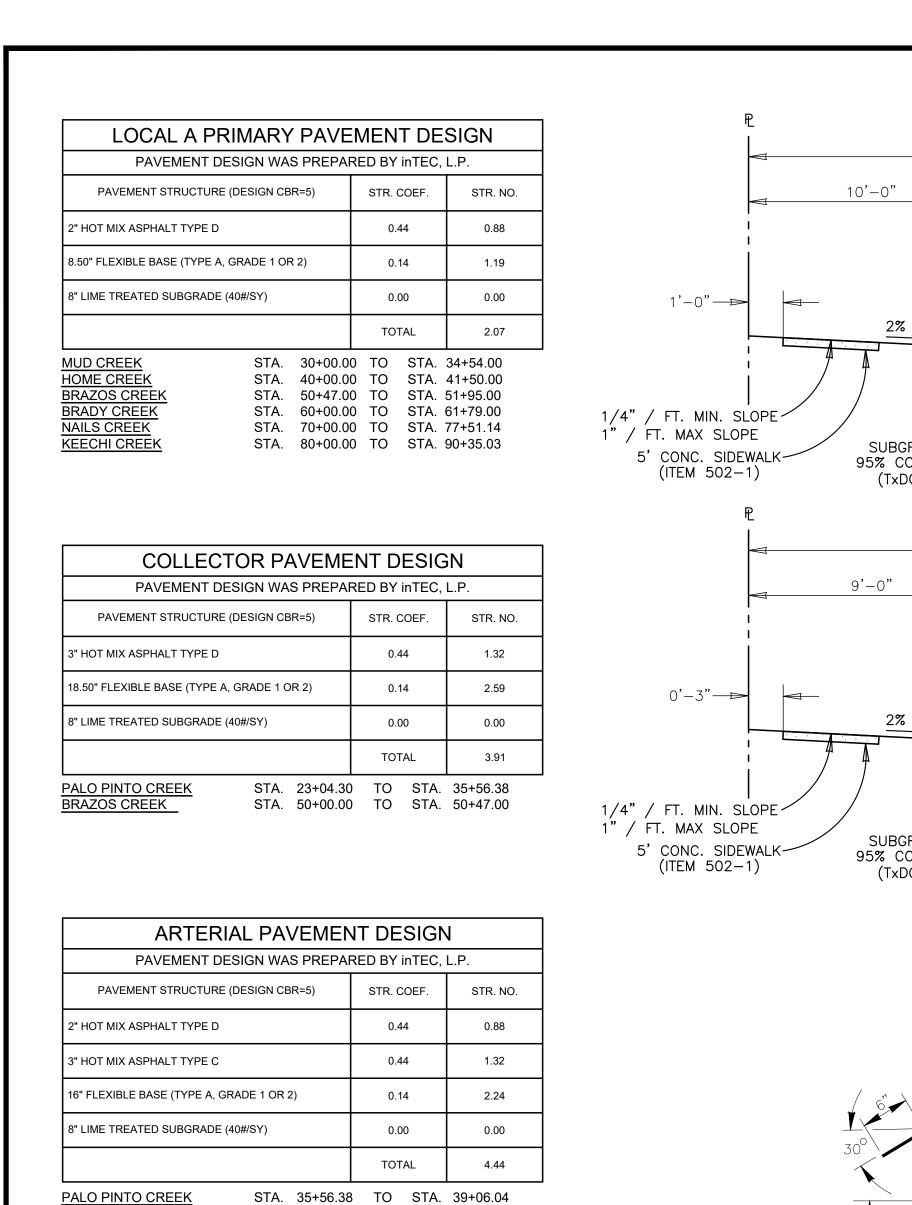
CONTRACTOR TO ENSURE POSITIVE DRAINAGE AT UPSTREAM & DOWNSTREAM ENDS OF DRAINS AND THAT NO PONDING WILL OCCUR.

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. 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 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.

LAT CREEK SUBDIVISION UNIT

DRAFTING: K.P. CHECK: C.P.
DESIGN: C.P. CHECK: L.E.
SUBMITTAL PHASE:
DATE: 02/2024
KCI JOB #: 762308223



PRIME COAT - 0.2 GAL/SY - ITEM 202

SAW-CUT

JOINT-

EXISTING ASPHALT PAVEMENT

EXISTING BASE — MATERIAL

TACK COAT - 0.1 GAL/SY - ITEM 203

HOT MIX ~ ASPHALT PAVEMENT

LIMITS OF PAVEMENT

RECONSTRUCTION

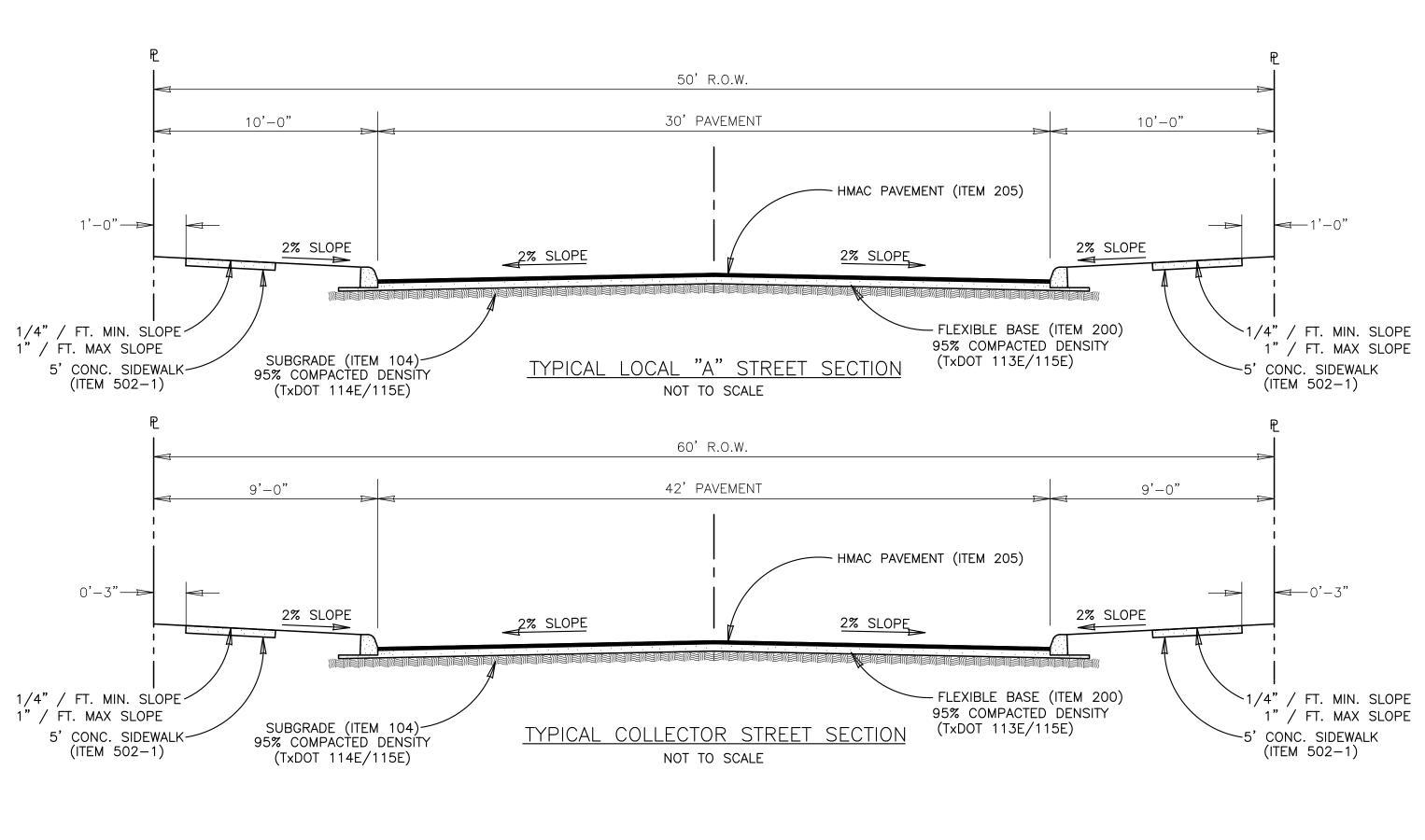
NEW BASE

NOT TO SCALE

PAVEMENT JUNCTION DETAILS

LIMITS OF NEW BASE

NEW SUBGRADE-



9 5/8", 1'-2 3/8", TRUCK APRON AS SHOWN ON PLANS

<u> 2%MA</u>X.

#4 BARS AS SHOWN WITH

#3 TIES AT 24" O.C. AS

-2" GRAVEL, CRUSHED ROCK OR FLEXIBLE BASE MATERIAL

4 - 5 / 8" DIA. DOWEL BARS BUTT WELDED TO BOTTOM OF PLATE

~#4 BARS 12" O.C. BOTH WAYS

- FOR VERTICAL WALLS

— PAINT ALL PIPING PER ITEM 522

— ANCHORAGE DETAILS

OR 6"X6" W/D10 X W/D10

WELDED WIRE FLAT SHEETS

NO. 4 BARS DOWEL INTO CURB AT 24", O.C

CURB TRANSITIONS SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN ITEM 500 CONCRETE CURBING

CENTER IN SLAB

SIDEWALK PIPE RAILING

NOT TO SCALE ITEM 522.1

PIPE ANCHORAGE DETAILS

NOT TO SCALE.

6'-0" MAX

2 1/2"ø STANDARD BLAC<u>k</u> /

ALL JOINT WELDED AND

GROUND SMOOTH

MOUNTABLE CURB

ITEM 501 ON FLEXIBLE BASE MATERIAL

14" RÅD.¬

#4 BARS AS SHOWN -WITH #3 TIES AT 24" O.C.

LIMITS OF MEASUREMENT

VARIES BASED ON PAVEMENT SECTION

PRIME COAT - 0.2 GAL/SY - ITEM 202

TACK COAT - 0.1 GAL/SY - ITEM 203

FOR SURFACE COURSE & BASE CONSTRUCTION SEE PAVEMENT STRUCTURE DETAILS

MACHINE LAID CURB

ITEM 501 ON FLEXIBLE BASE MATERIAL

FOR STREET EXCAVATION

AS PER ITEM 301

3/8" FILLET WELD\_ & GROUND SMOOTH

3" DIA. DOUBLE — EXTRA STRONG — POST OR 4" DIA. STANDARD PIPE

DETAIL OF 90°

WELDING ELBOWS

~90° WELDING

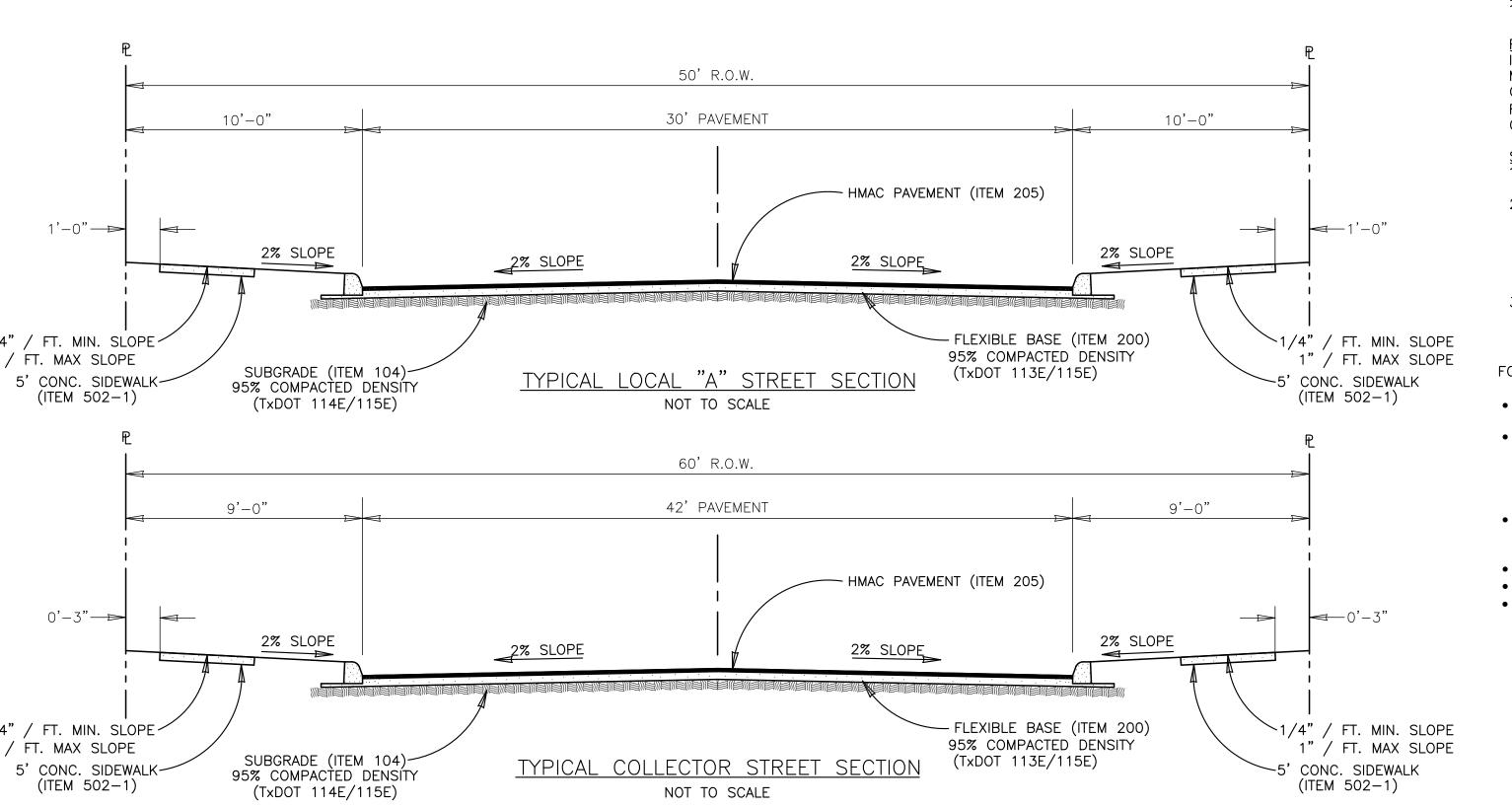
\* A NEAT END SECTION, SATISFACTORY TO THE ENGINEER, FROM SUBMITTED SHOP DRAWINGS, MAY BE USED IN LIEU OF THE 90° WELDING ELBOW SHOWN. NOT TO SCALE

6'-0" MAX

1/2"ø STANDARD BLACK\_/

DOUBLE-EXTRA STRONG POST

OR 4"Ø STANDARD PIPE



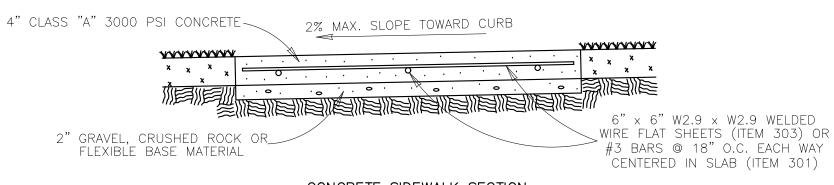
NOTES:

1. THE SUBGRADE SOILS SHOULD BE TESTED FOR SOLUBLE SULPHATE CONTENT PRIOR TO INSTALLATION OF LIME OR CEMENT. FILL MATERIAL NOTE

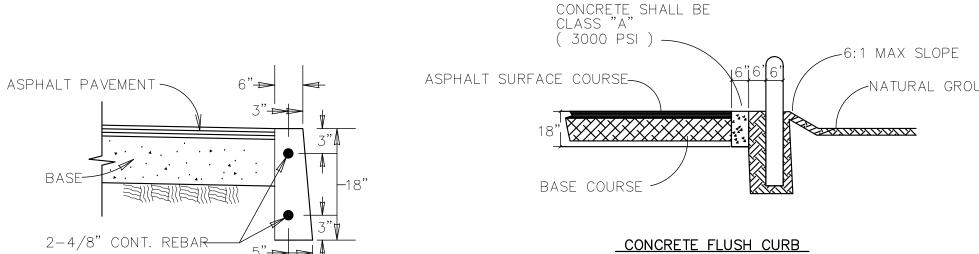
IF FILL IS USED TO RAISE THE GRADE, APPROVED FILL MATERIAL UNDERNEATH THE PAVEMENT SHOULD BE ON-SITE MATERIAL, FREE OF DELETERIOUS MATERIAL WITH MAXIMUM PLASTICITY INDEX VALUE OF 20 AND A MINIMUM CBR VALUE OF 5.0. THE GRAVEL SIZE SHOULD NOT EXCEED 3 INCHES IN DIAMETER. LIME OR CEMENT APPLICATION RATES SHOULD BE RE-EVALUATED FOR THE FILL MATERIAL. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY AND/OR COUNTY GUIDELINES.

#### SUBGRADE MATERIAL NOTE:

- 1. SUBGRADE SOIL PLASTICITY INDEX SHOULD BE LESS THAN OR EQUAL TO 20 FOR PRIMARY PAVEMENT DESIGN.
- 2. IF THE SUBGRADE SOIL PLASTICITY INDEX VALUE IS GREATER THAN 20, THEN ONE OF THE FOLLOWING OPTIONS SHOULD BE FOLLOWED:
  - 2.a. THE SUBGRADE SHOULD BE STABILIZED TO A DEPTH OF 6 INCHES (SEE ALTERNATE PAVEMENT DESIGN). 2.b. THE EXPANSIVE CLAYS SHOULD BE REMOVED AND REPLACED WITH SOILS WITH A PLASTICITY INDEX VALUE OF 20 OR LESS.
  - 3. GEOTECHNICAL ENGINEER SHALL BE ON SITE TO MAKE SUBGRADE DETERMINATION AND PROVIDE/SUBMIT LETTER INDICATING STATION TO STATION FOR PLACEMENT OF EACH PVM'T. DESIGN SECTION TO BE APPROVED BY ENGINEER PRIOR TO PLACEMENT OF BASE.
- FOR CONSTRUCTION VERIFICATION THE FOLLOWING SHALL BE CONDUCTED IN THE FIELD:
- AFTER INITIAL MIXING THE SOIL—LIME MIXTURE SHALL MELLOW FOR A PERIOD OF TWO TO THREE (2 3) DAYS. MAINTAIN MOISTURE DURING MELLOWING.
- AFTER MELLOWING AND FINAL MIXING, THE PULVERIZATION SHALL BE CHECKED USING THE FOLLOWING CRITERIA (REMOVE NON-SLAKING AGGREGATES RETAINED ON THE % INCH SIEVE FROM THE SAMPLE): -MINIMUM PASSING 1 34" SIEVE 100
- -MINIMUM PASSING 3/4" SIEVE -MINIMUM PASSING NO. 4 SIEVE SAMPLE SOIL-LIME MIXTURE FOR DETERMINATION OF MAXIMUM DRY DENSITY (MDD). IN THE LABORATORY, MOLD
- SPECIMENS TO 95% OF MDD AT OPTIMUM MOISTURE CONTENT AND VERIFY UCS TO BE AT LEAST 160 PSI IN WITH PROCEDURE OUTLINED ABOVE FOR MIXTURE DESIGN.
- COMPACT AND CHECK FIELD DENSITY (MINIMUM OF 95% OF MDD REQUIRED); • CURE FOR AN ADDITIONAL 2 TO 5 DAYS (TOTAL MELLOWING AND CURING TIME SHOULD TOTAL AT LEAST 5 DAYS).
- VERIFY DEPTH OF LIME STABILIZED LAYER TO DEPTH AS NOTED ON PLAN TO WITHIN +/- 1.0 INCH.



CONCRETE SIDEWALK SECTION ITEM 502.1

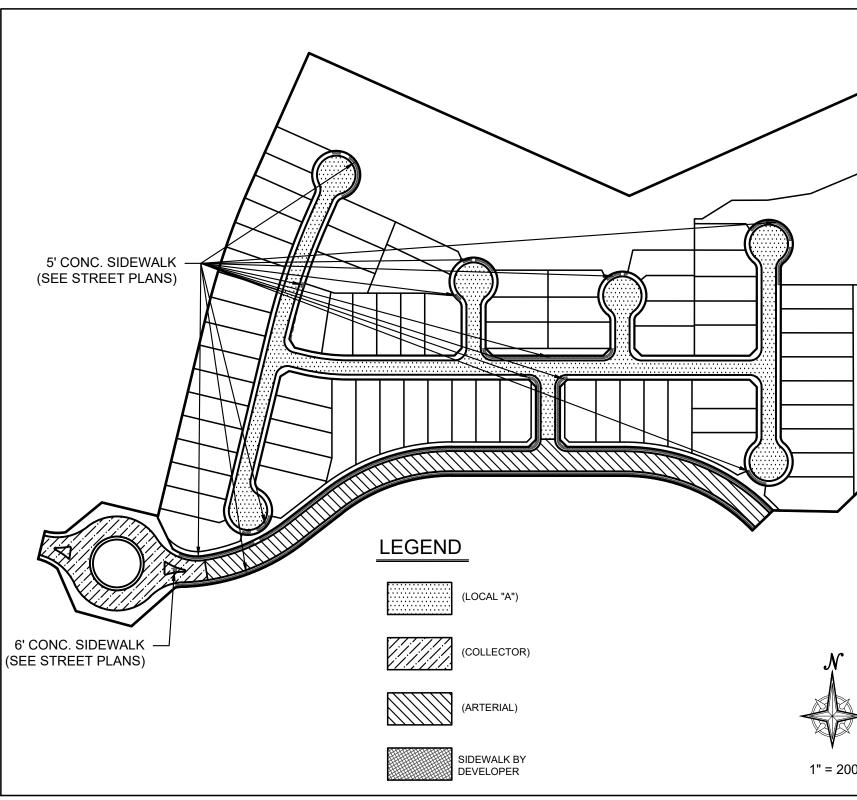


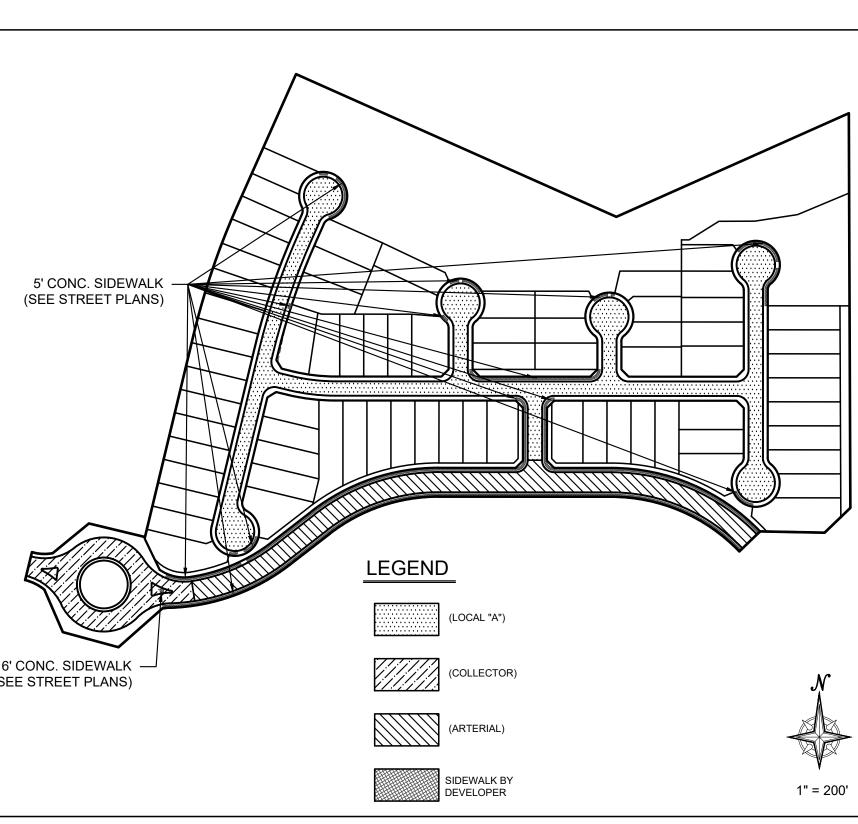
HEADER CURB DETAIL W/ REBAR

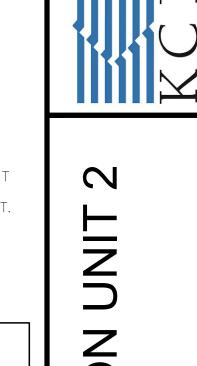
N.T.S.

1. ALLOW FOR REFLECTION BUTTONS ON BARRICADE POST USE ONE 3" BUTTON PER POST. 2. POST SHALL RECEIVE TWO COATS OF ALUMINUM PAINT. 3. 6" X 5'-6" BARRICADE POST PLACED 6" BACK OF CURB WITH 2'-4" ABOVE GROUND & 3'-2" BELOW GROUND. (5'-0" o.c. TYP.)

<u>& BARRICADE POST</u>

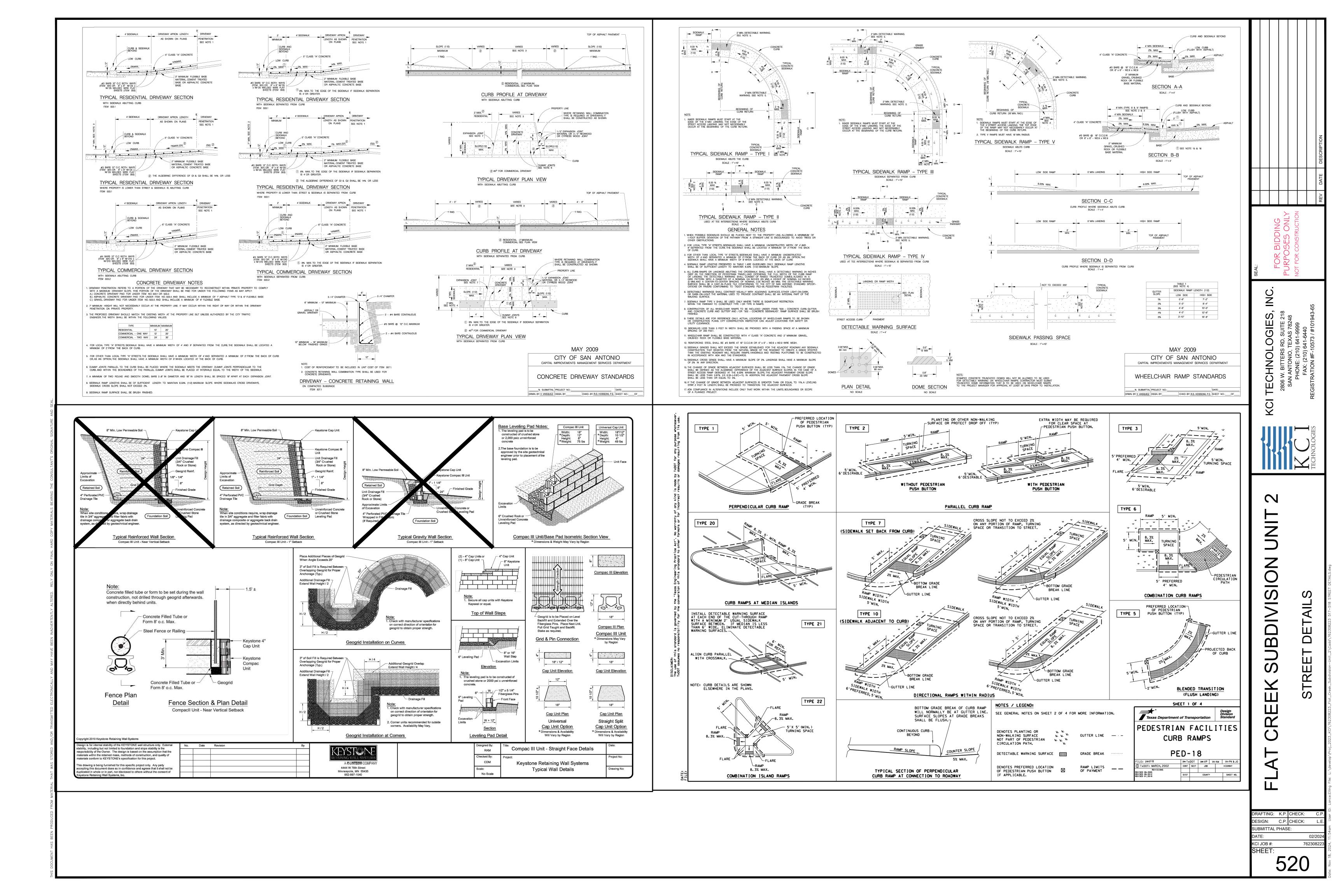


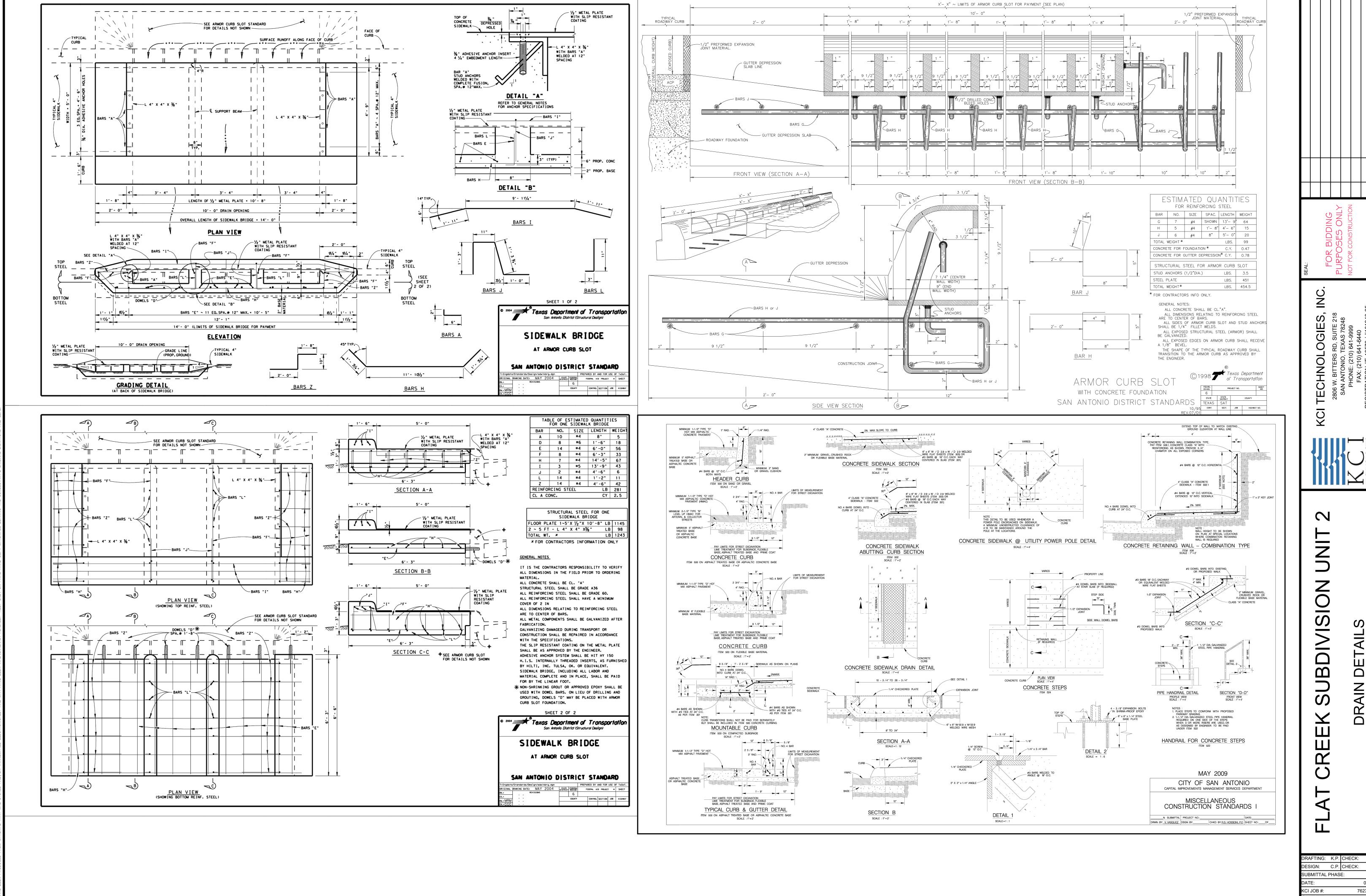




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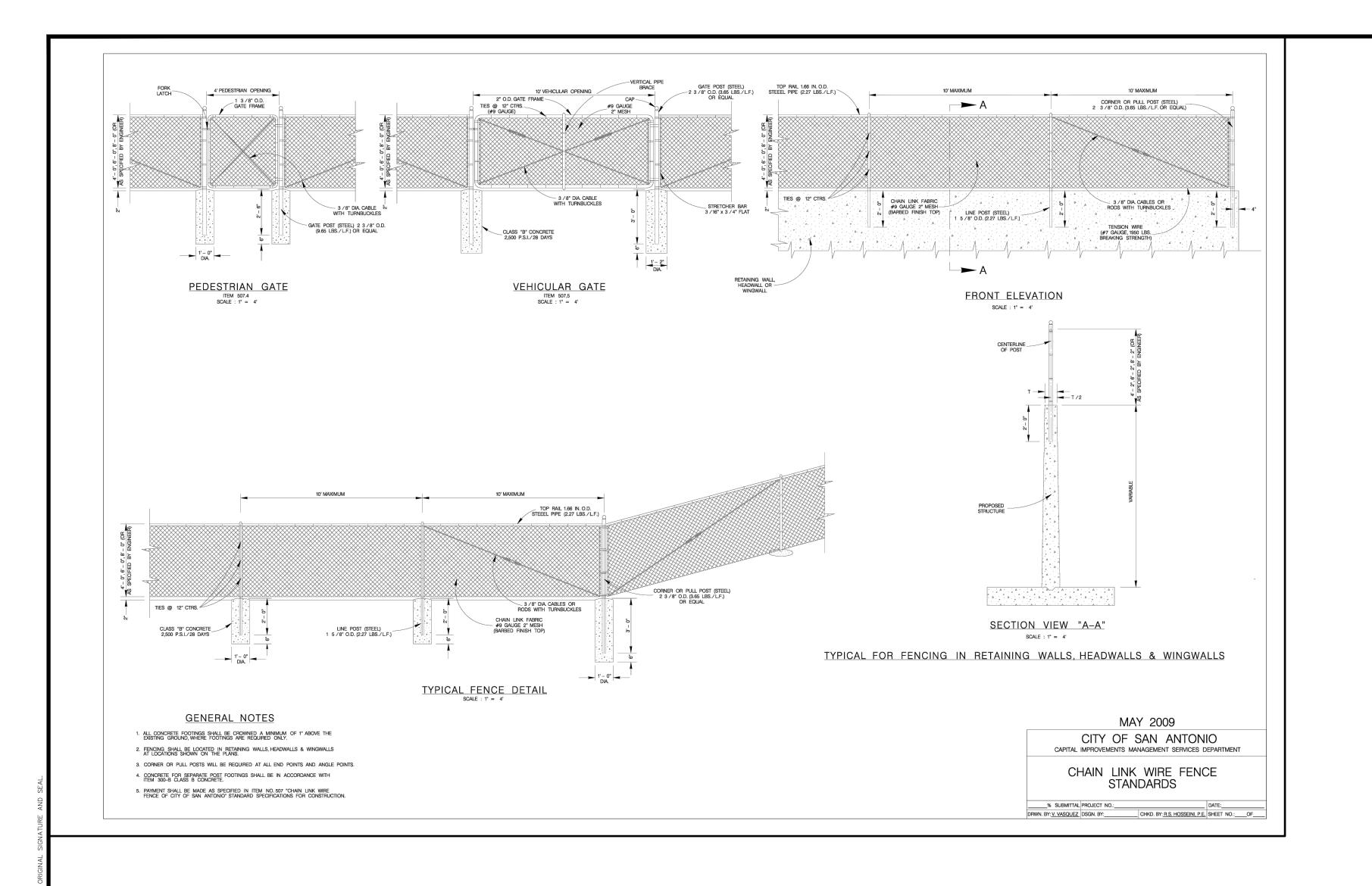




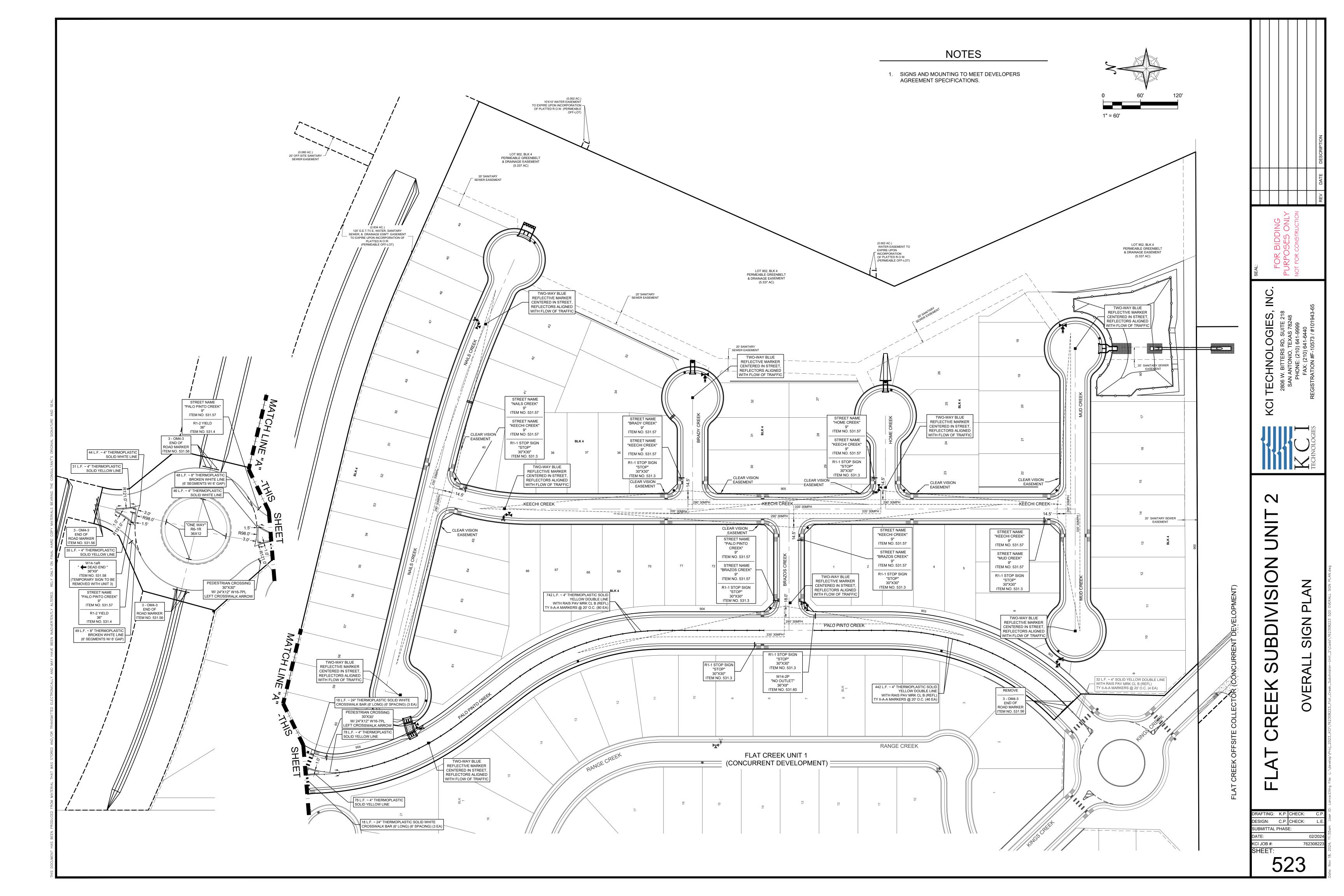
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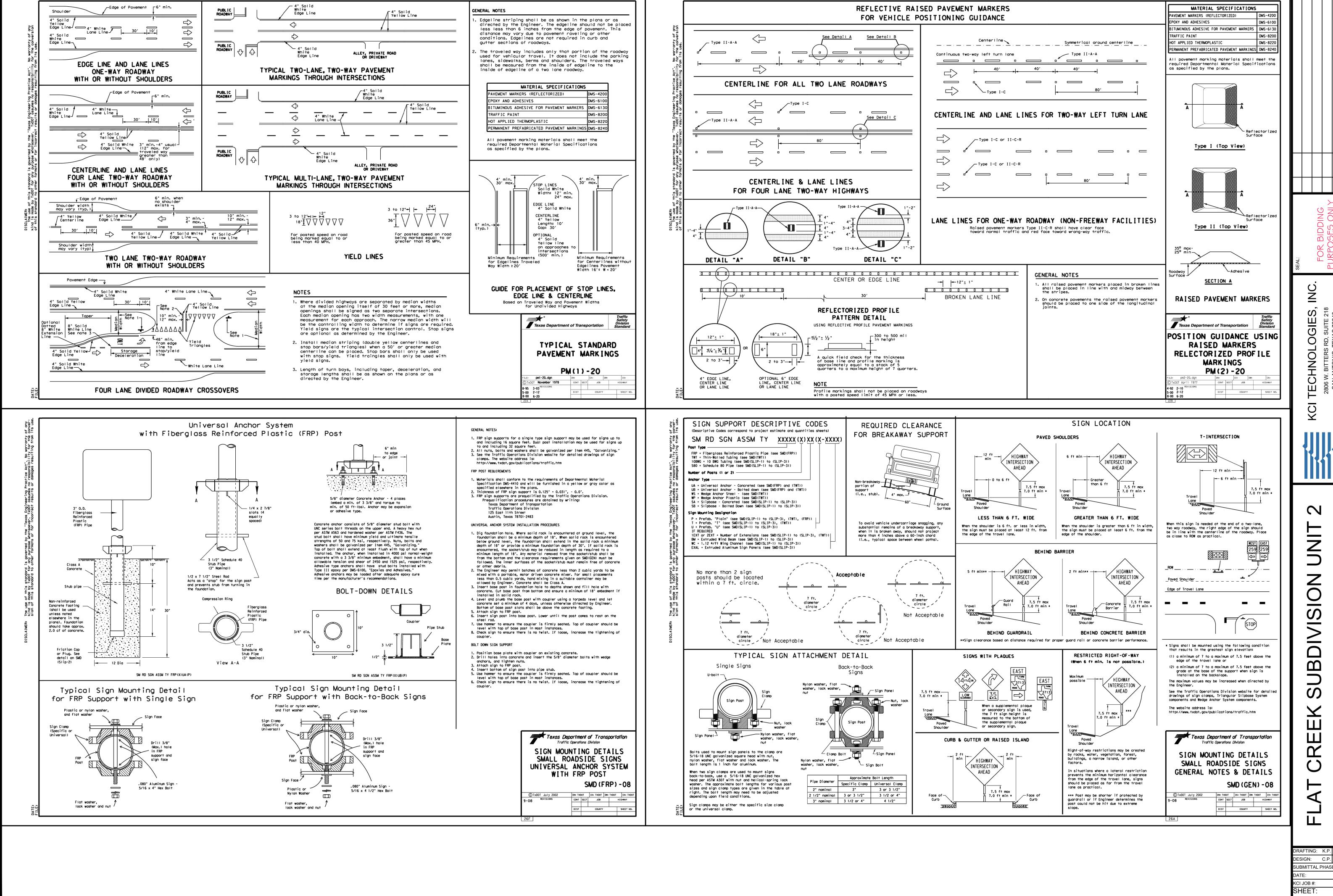
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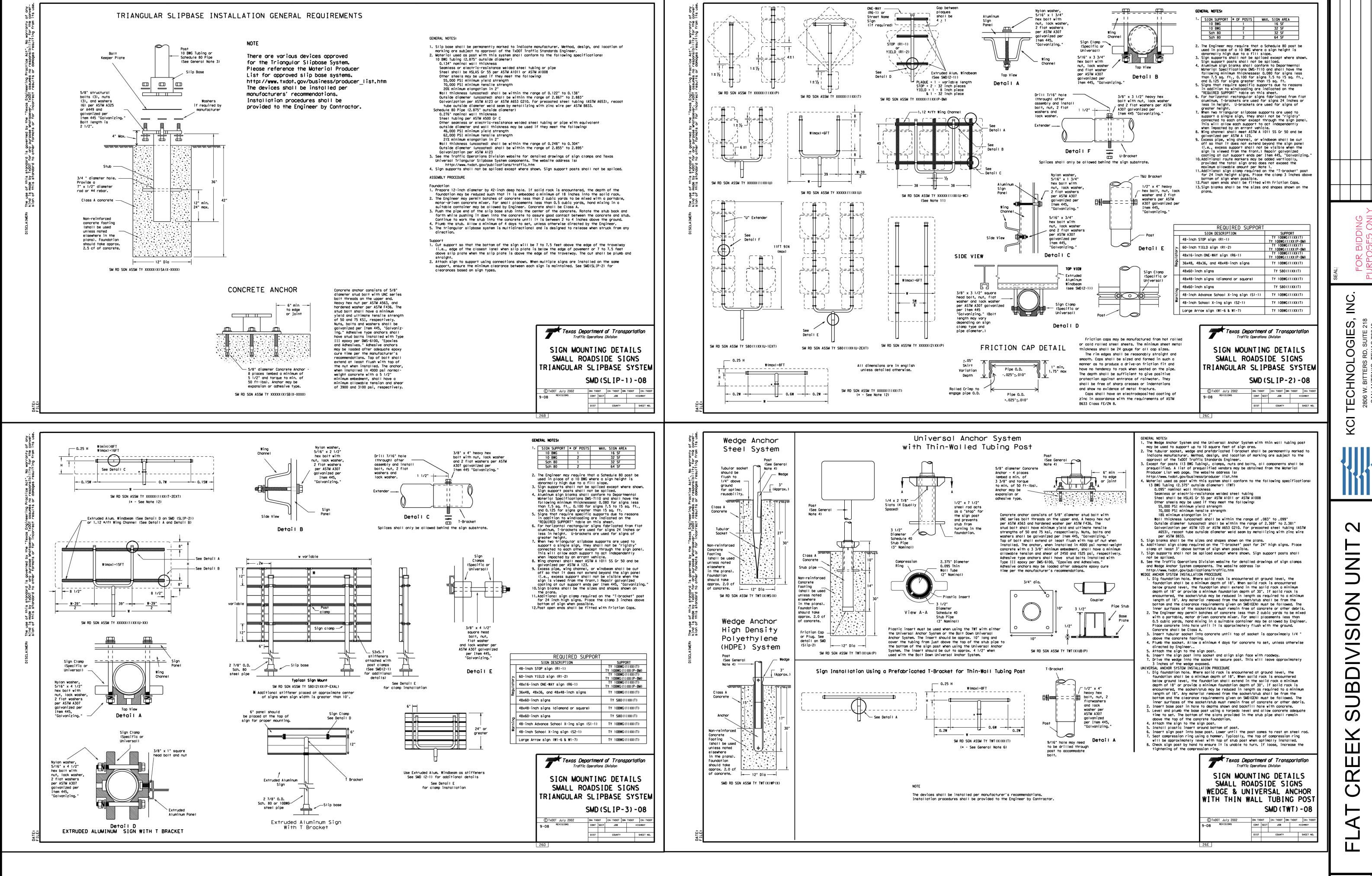




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SIGN

RAFTING: K.P. CHECK: ESIGN: C.P. CHECK: SUBMITTAL PHASE: 762308223



DRAFTING: K.P. CHECK: C.P.
DESIGN: C.P. CHECK: L.E.
SUBMITTAL PHASE:

DATE: 02/2024

KCI JOB #: 762308223

SHEET:

SIGN

#### **GENERAL NOTES**

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF CASTROVILLE DESIGN AND CONSTRUCTION MANUAL AND THE UNIFIED DEVELOPMENT CODE, HERE AFTER REFERRED TO THE UDC.

2. APPROVAL OF THESE CONSTRUCTION PLANS BY THE CITY OF CASTROVILLE DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA. INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT, THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF HIS/HER SUBMITTAL WHETHER OR NOT THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE BY THE

3. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS, THE CITY OF CASTROVILLE MUST RELY ON THE ADEQUACY

4. DESIGN PROCEDURES ARE IN COMPLETE COMPLIANCE WITH THE CITY OF CASTROVILLE DESIGN AND CONSTRUCTION MANUAL. IT IS THE RESPONSIBILITY OF THE ENGINEER TO REQUEST A WAIVER FROM ANY ASPECT OF THESE PLANS THAT DO NOT COMPLY WITH THE UDC.

5. PRIOR TO BEGINNING CONSTRUCTION, THE OWNER OR HIS AUTHORIZED REPRESENTATIVE SHALL CONVENE A PRE-CONSTRUCTION CONFERENCE BETWEEN THE CITY OF CASTROVILLE. CONSULTING ENGINEER, CONTRACTOR, AND ANY OTHER AFFECTED PARTIES. NOTIFY THE CITY OF CASTROVILLE AT LEAST 48 HOURS PRIOR TO THE TIME OF THE CONFERENCE AND 48 HOURS PRIOR TO THE BEGINNING OF

6. THE CONTRACTOR SHALL GIVE THE CITY A MINIMUM OF 48 HOURS NOTICE BEFORE BEGINNING EACH

7. BARRICADES. BUILT TO CITY OF CASTROVILLE SPECIFICATIONS, SHALL BE CONSTRUCTED ON ALL DEAD-END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB SAFETY.

8. ANY EXISTING PAVEMENT, CURBS, AND/OR SIDEWALKS DAMAGED OR REMOVED WILL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE BEFORE ACCEPTANCE OF THE SUBDIVISION. 9. THE LOCATION OF ANY WATER AND/OR WASTEWATER LINES SHOWN ON THE PLANS MUST BE VERIFIED

10. USE ONE CALL UTILITY SYSTEM: DIAL 1-800-344-8377, 48 HOURS BEFORE YOU DIG. 11. ALL STORM SEWER PIPES TO BE CLASS III RCP UNLESS NOTED OTHERWISE.

12. THE SUBGRADE MATERIAL WAS TEST BY INTEGRATED TESTING AND ENGINEERING COMPANY OF SAN ANTONIO, L.P. IN JULY 2013 AND THE STREET SECTION DESIGNED ACCORDING TO CITY OF CASTROVILLE DESIGN AND CONSTRUCTION MANUAL

13. RELEASE OF THIS APPLICATION DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF HIS/HER SUBMITTAL, WHETHER OR NOT THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE BY THE CITY ENGINEER.

14. THESE PLANS ARE NOT INTENDED FOR THE PURPOSE OF GATE DESIGN OR BUILD. SEPARATE PERMIT AND PLAN REVIEW REQUIRED. PLAN REVIEW REQUIRED FOR DETAILED GATE DESIGN AND INSTALLATION.

#### CONSTRUCTION SEQUENCING

1.) CALL THE COMMUNITY DEVELOPMENT SERVICES DEPARTMENT 48 HOURS PRIOR TO BEGINNING ANY WORK AND SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE CITY AND ALL AFFECTED UTILITY PROVIDERS, THE GENERAL CONTRACTOR, THE DEVELOPER AND THE DEVELOPER'S ENGINEER.

2.) OBTAIN A SITE DEVELOPMENT PERMIT FROM THE COMMUNITY DEVELOPMENT SERVICES DEPARTMENT. 3.) PROVIDE THE COMMUNITY DEVELOPMENT SERVICES DEPARTMENT WITH EVIDENCE ALL TCEQ LICENSES

4.) INSTALL TEMPORARY EROSION CONTROLS AND TREE PROTECTION FENCING PRIOR TO ANY CLEARING AND GRUBBING. NOTIFY THE CITY WHEN INSTALLED.

5.) ROUGH-CUT ALL REQUIRED OR NECESSARY PONDS. EITHER THE PERMANENT OUTLET STRUCTURE OR A TEMPORARY OUTLET MUST BE CONSTRUCTED PRIOR TO DEVELOPMENT OF ANY EMBANKMENT OR EXCAVATION THAT LEADS TO PONDING CONDITIONS. THE OUTLET SYSTEM MUST CONSIST OF A LOW-LEVEL OUTLET AND AN EMERGENCY OVERELOW MEETING THE REQUIREMENTS OF THE UDC. THE OUTLET SYSTEM SHALL BE PROTECTED FROM EROSION AND SHALL BE MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION UNTIL FINAL RESTORATION IS ACHIEVED.

6.) DELIVER APPROVED ROUGH CUT SHEETS TO THE CITY ENGINEER PRIOR TO CLEARING AND GRUBBING.

7.) ROUGH GRADE STREETS. NO DEVELOPMENT OF EMBANKMENT WILL BE PERMITTED AT THIS TIME.

8.) INSTALL ALL UTILITIES TO BE LOCATED UNDER THE PROPOSED PAVEMENT OR WITHIN THE ROAD

9.) DELIVER STORM SEWER CUT SHEETS TO THE CITY ENGINEER.

10.) BEGIN INSTALLATION OF STORM SEWER LINES. UPON COMPLETION, RESTORE AS MUCH DISTURBED AREA AS POSSIBLE, PARTICULARLY CHANNELS AND LARGE OPEN AREAS.

11.) DELIVER FINAL FINAL GRADE CUT SHEETS TO THE CITY ENGINEER.

12.) RE-GRADE STREETS TO SUB-GRADE.

13.) ENSURE THAT UNDERGROUND UTILITY CROSSINGS ARE COMPLETED. LAY 1ST COURSE BASE MATERIAL

14.) INSTALL CURB AND GUTTER.

15.) LAY FINAL BASE COURSE ON ALL STREETS.

16.) LAY ASPHALT.

17.) COMPLETE FINAL GRADING AND RESTORATION OF DETENTION, SEDIMENTATION/FILTRATION PONDS.

18.) COMPLETE PERMANENT EROSION CONTROL AND RESTORATION OF SITE VEGETATION.

19.) REMOVE AND DISPOSE OF TEMPORARY EROSION CONTROLS.

20.) COMPLETE ANY NECESSARY FINAL DRESS UP OF AREAS DISTURBED

#### COMMENCE OF CONSTRUCTION

TEMPORARY SWP3 BEST MANAGEMENT PRACTICES (BMP) DESIGNED BY THE ENGINEER. THESE BMPS MAY INCLUDE, BUT ARE NOT LIMITED TO: STABILIZED CONSTRUCTION EXIT(S), SILT FENCE, DISCHARGE POINT ROCK BERMS/CHECK DAMS, TRASH CONTAINMENT, TEMPORARY SEDIMENT BASINS (IF APPLICABLE). DEMARCATION OF PROTECTED SITE FEATURES FOR EXAMPLE: WETLANDS, ENVIRONMENTAL BUFFERS. CAVES OR SOLUTION FEATURES, AND HABITATS,

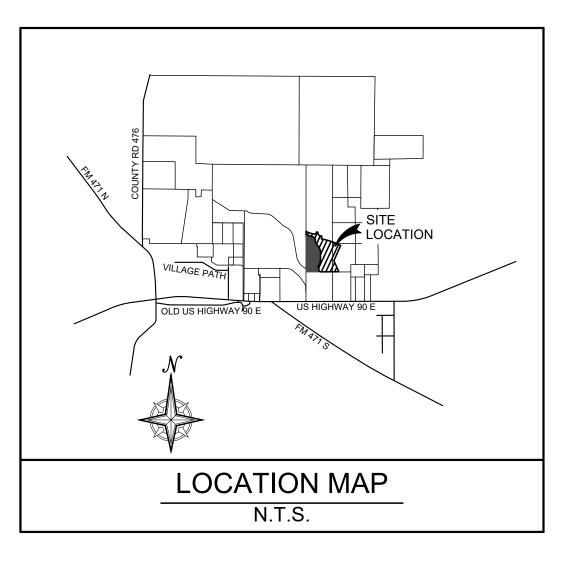
PRIOR TO COMMENCEMENT OF ADDITIONAL CLEARING OR EARTH DISTURBING ACTIVITIES, THE PROPOSED BMPS WILL NEED TO BE INSTALLED BY THE CONTRACTOR AND INSPECTED BY A DEVELOPER REPRESENTATIVE CONTRACTOR MUST PROVIDE AT MINIMUM 48-HOURS OF NOTICE TO DEVELOPER WHEN THE BMPS ARE SCHEDULED TO BE INSTALLED AND COMPLETED. THE DEVELOPER REPRESENTATIVE

PROPOSED BASIN LOCATION AND ANY MATERIAL BORROW AREAS TO CONSTRUCT THE TEMPORARY FOLLOWING: CONSTRUCTION OF THE DEWATERING STRUCTURE (RISER PIPE OR FAIR CLOTH SKIMMER AND PUMP), CONSTRUCTION OF THE EMERGENCY OVERFLOW STRUCTURE, INSTALLATION OF A SEDIMENT DEPTH MARKER. NOTE-ONCE ACCESSIBLE TO APPROPRIATE EQUIPMENT, THE ONLY THE TEMPORARY

GENERAL CONTRACTOR SHALL PROVIDE DOCUMENTATION TO THE ASSIGNED LAND DEVELOPMENT PROJECT MANAGER TO INCLUDE: A. ACTIONS TAKEN IN RESPONSE TO THE BMP INSPECTION REPORT AND DATE(S) THE ACTIONS WERE COMPLETED OR, B. STATEMENT OF EXTENUATING CIRCUMSTANCE AS TO WHY

5. CONTRACTOR TO MAINTAIN SPILL RESPONSE SUPPLIES/KIT AT THE PROJECT LOCATION WHILE

6. WHEN DEWATERING ACTIVITIES DISCHARGE INTO ONSITE CREEKS OR RIVERS, OR DISCHARGE OUTSIDE THE LIMITS OF CONSTRUCTION. DAILY DEWATERING INSPECTIONS MUST BE DOCUMENTED IN ACCORDANCE WITH THE 03.05.2023 TCEQ CONSTRUCTION GENERAL PERMIT. DAILY REPORT MUST BE SENT TO DEVELOPER WITHIN 24-HOURS.



#### Sheet List Table

SEDIMENTATION & EROSION CONTROL COVER

SEDIMENTATION & EROSION CONTROL PLAN SEDIMENTATION & EROSION CONTROL NARRATIVE

SEDIMENTATION & EROSION CONTROL DETAILS

#### LEGEND



**TEMPORARY SEDIMENT** CONTROL FENCE

CONSTRUCTION EXIT

 $\infty$ 

CONCRETE **WASHOUT PIT** 

GRAVEL FILTER BAGS LIMITS OF CONSTRUCTION

GRADING SLOPE ARROW

#### OWNER/DEVELOPER:

KF FLAT CREEK. L.P. 2722 W. BITTERS, RD. SUITE 106 SAN ANTONIO, TEXAS 78259 (210) 882-6800



#### PREPARED BY:

## KCI TECHNOLOGIES, INC.

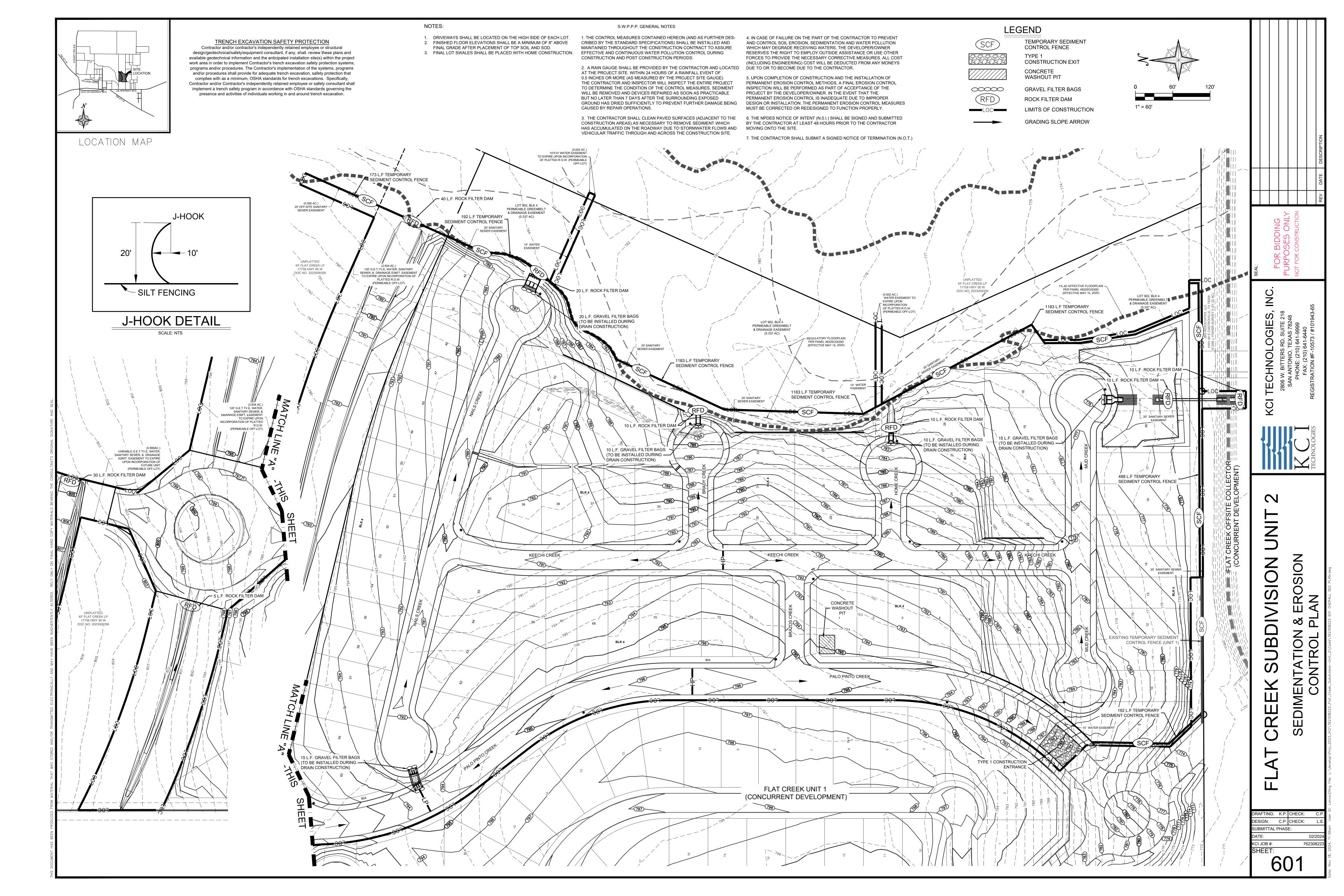
2806 W. BITTERS, RD. SUITE 218 SAN ANTONIO, TEXAS 78248 PHONE: (210) 641-9999 FAX: (210) 641-6440 REGISTRATION #F-10573 / #101943-65 TRENCH EXCAVATION SAFETY PROTECTION

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. 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 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.



RAFTING: K.P. CHECK: ESIGN: C.P. CHECK: SUBMITTAL PHASE:

CI JOB #: 762308223



#### SITE DESCRIPTION

PROJECT LIMITS: 30.452 acre phase is loc	cated northwest of the intersection of Highway 90 W and Private Road 4749.
LATITUDE 29°21'37"N LONGITUDE 98°50'57"\	N
PROJECT DESCRIPTION: Construction of	of subdivision improvements including: streets, water lines, sanitary sewer lines and drainage improvements.
MAJOR SOIL DISTURBING ACTIVITIE embankment for the street, excavation for water,	Soil disturbing activities will include preparing right-of-way clearing, and grubbing, grading, excavation and sanitary sewer, storm sewer, and structures. Erosion and sediment controls.
TOTAL PROJECT AREA: 30.452 AC	
TOTAL AREA TO BE DISTURBED:	26.1 Acres (86%)
WEIGHTED RUNOFF COEFFICIENT	
(PRE-CONSTRUCTION):	0.72
WEIGHTED RUNOFF COEFFICIENT (POST-CONSTRUCTION):	_ 0.80
EXISTING CONDITION OF SOIL & VE COVER AND % OF EXISTING VEGET	
NAME OF BEGEN WIG The	e storm water will flow into the Flat Creek Watershed.
NAME OF RECEIVING WATERS: The	Storm water will now into the right Oreek vyalershed.

#### EROSION AND SEDIMENT CONTROLS

	TEMPORARY SEEDING
$\leftarrow$	PERMANENT PLANTING, SODDING, OR SEEDING
	MULCHING
	SOIL RETENTION BLANKET
	PRESERVATION OF NATURAL RESOURCES
HER	Disturbed areas on which construction activity has ceased (temporarily or permanently) shall be stabilized within 14 days unless activities are scheduled to resum
	within 21 days.
RUC <sup>-</sup>	TURAL PRACTICES:
/	
_	SILT FENCES
7	HAY BALES ROCK BERMS
	DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
	DIVERSION, INTERCEPTOR, OR PERIMETER BIKES  DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
	DIVERSION DIKE AND SWALE COMBINATIONS
	PIPE SLOPE DRAINS
_	PAVED FLUMES
	ROCK BEDDING AT CONSTRUCTION EXIT
	TIMBER MATTING AT CONSTRUCTION EXIT
	CHANNEL LINERS
	SEDIMENT TRAPS
	SEDIMENT BASINS
	STORM INLET SEDIMENT TRAP
_	STONE OUTLET STRUCTURES
	CURBS AND GUTTERS
	STORM SEWERS VELOCITY CONTROL DEVICES
	VELOCITY CONTROL DEVICES
RRA	TIVE - SEQUENCE OF CONSTRUCTION (STORM WATER MANAGEMENT) ACTIVITIES:
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Install Const Cons	der of activities will be as follows:  It temporary control, establish limits of construction, install silt fence,  It temporary control, establish limits of construction, install silt fence,  It temporary control, establish limits of construction, install silt fence,  It temporary control, establish limits of construction, install silt fence,  It temporary control, establish limits of construction, install silt fence,  It temporary control, establish limits of construction, install silt fence,  It temporary control, establish limits of construction, install silt fence,  It temporary control, establish limits of construction, install silt fence,  It temporary sewer.  It temporary sewer.  It temporary sewer.  It temporary sewer.  It temporary estewer.  It temporary establish limits of construction, install silt fence,  It temporary establish limits of construction, install silt fence,  It temporary establish limits of construction, install silt fence,  It temporary establish limits of construction, install silt fence,  It temporary establish limits of construction, install silt fence,  It temporary establish limits of construction, install silt fence,  It temporary establish limits of construction, install silt fence,  It temporary establish limits of construction, install silt fence,  It temporary establish limits of construction, install silt fence,  It temporary establish limits of construction, install silt fence,  It temporary establish limits of construction, install silt fence,  It temporary establish limits of construction, install silt fence,  It temporary establish limits of construction, install silt fence,  It temporary establish limits of construction, install silt fence,  It temporary establish limits of construction, install silt fence,  It temporary establish limits of construction, install silt fence,  It temporary establish limits of construction, install silt fence,  It temporary establish limits of construction, install silt fence,  It temporary establish limits of construction, install silt
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Const	der of activities will be as follows:  Itemporary control, establish limits of construction, install silt fence, establish limits of construction, establish limits established establis

	endar days after the surrounding exposed ground has dried sufficiently to prevent further damage from heavy equipment. The areas adjacent to creeks and shall have priority followed by devices protecting storm sewer inlets.
<u>g-</u>	
	An inspection will be performed by a designated inspector every week as well as after every half inch or more of rain (as recorded on a non-freezing rain atted at the Project Site). An inspection and Maintenance Report will be made per each Inspection. Based on the inspection results, the controls shall be
located at the P	Project Site). An inspection and Maintenance Report will be made per each
revised per the	inspection report.
	ERIALS: All waste materials will be collected and stored in a secured metal dumpster. The dumpster will meet all state and local city solid waste egulations. All trash and construction debris from the site will be deposited in the dumpster. The dumpster will be emptied as necessary or as required by local city solid waste.
regulations and	d the trash will be hauled to a local dump. No construction waste material will be buried on site.
	WASTE (INCLUDING SPILL REPORTING):  At a minimum, any products in the following categories are considered to be hazardous:  r cleaning masonry surfaces, cleaning solvents, asphalt products, chemical additives for soil stabilization or concrete curing compounds and additives. In the
	rdous material spill, the spill coordinator shall be contacted immediately.
	ASTE: All sanitary waste will be collected from portable units as necessary, or as required by local regulations by a Licensed Sanitary Waste
SANITARY W Management C	
Management C	ontractor.
Management C	
Management C  OFFSITE VEH	HICLE TRACKING:
OFFSITE VEH	HICLE TRACKING:  JL ROADS DAMPENED FOR DUST CONTROL  JDED HAUL TRUCKS TO BE COVERED WITH TARPAULIN
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Management C  OFFSITE VEH  LOA  LOA  STA  PERMITS:  waters. Dispose Contractor in a	Office of the finished work.  It ROADS DAMPENED FOR DUST CONTROL DED HAUL TRUCKS TO BE COVERED WITH TARPAULIN ESS DIRT ON ROAD REMOVED DAILY BILIZED CONSTRUCTION ENTRANCE  Disposal areas, stockpiles, and haul roads shall be constructed in a manner that will minimize and control the amount of sediment that may enter receiving sal areas shall not be located in any wetland, waterbody or streambed. Construction staging areas and vehicle maintenance areas shall be constructed by the manner to minimize the runoff of pollutants. All waterways shall be cleared as soon as practicable of temporary embankment, temporary bridges, matting, g, debris or other obstructions placed during construction operations that are not a part of the finished work.  OWNERS CERTIFICATION  I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified presonnel property gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information, the information, the information, the may are was the rare as significant persons like for and the possibility of fine

#### CONTRACTOR'S CERTIFICATION

I certify under penalty of law that I understand the terms and conditions of the general Texas Pollutant Discharge Elimination System (TPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification plan.

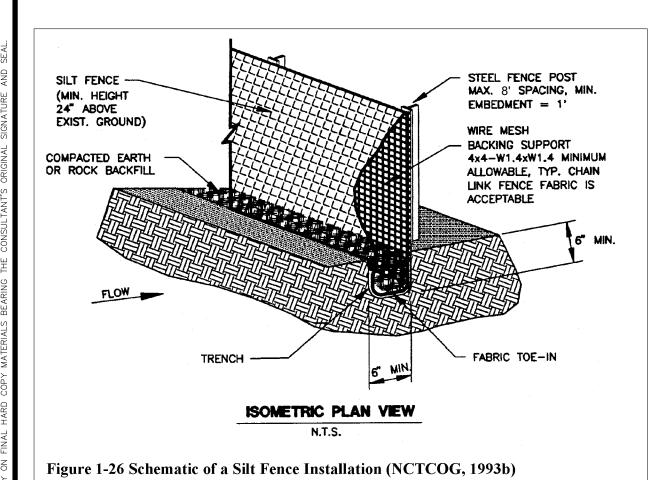
SIGNATURE (CONTRACTOR)

FLAT CREEK SUBDIVISI

DRAFTING: K.P. CHECK: C.P.
DESIGN: C.P. CHECK: L.E.
SUBMITTAL PHASE:

DATE: 02/2024
KCI JOB #: 762308223

## CONCRETE TRUCK WASHOUT PIT



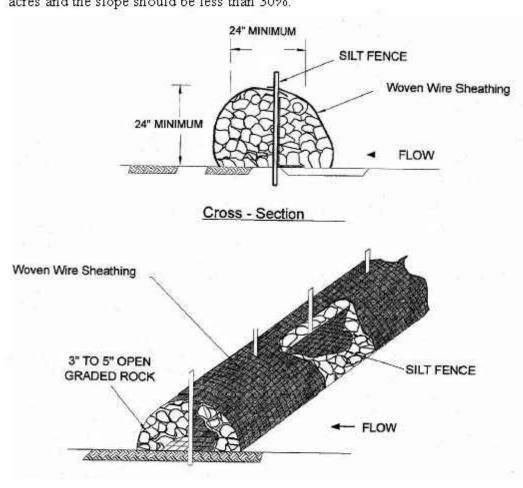
#### **GENERAL NOTES:**

- 1. Silt fence material should be polypropylene, polyethylene or polyamide woven or nonwoven fabric. The fabric width should be 36 inches, with a minimum unit weight of 4.5 oz/yd, mullen burst strength exceeding 190 lb/in2, ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No. 30.
- Fence posts should be made of hot rolled steel, at least 4 feet long with Tee or Ybar cross section, surface painted or galvanized, minimum nominal weight 1.25 lb/ft2, and Brindell hardness exceeding
- 3. Woven wire backing to support the fabric should be galvanized 2"x 4" welded wire, 12 gauge minimum. Installation:
- 1. 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 8 feet on center. Where water concentrates, the maximum spacing
- 2. 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 ¼ 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.
- 4. 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.
- 5. 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
- Silt fence should be removed when the site is completely stabilized so as not to block or impede storm flow or drainage.

#### SILT FENCE

#### 1.4.6 High Service Rock Berms

A high service rock berm should be designated in areas of important environmental significance such as in steep canyons or above permanent springs, pools, recharge features, or other environmentally sensitive areas that may require a higher level of protection. This type of sediment barrier combines the characteristics of a silt fence and a rock berm to provide a substantial level of sediment reduction and a sturdy enough barrier to withstand higher flows. The drainage area to this device should not exceed 5 acres and the slope should be less than 30%.



#### Figure 1-29 Schematic Diagram of High Service Rock Berm (LCRA, 1998)

#### **GENERAL NOTES:**

- 1. Silt fence material should be polypropylene, polyethylene or polyamide woven or nonwoven fabric. The fabric width should be 36 inches, with a minimum unit weight of 4.5 oz/yd, mullen burst strength exceeding 190 lb/in2, ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No. 30.
- 2. Fence posts should be made of hot rolled steel, at least 4 feet long with Tee or Ybar cross section, surface painted or galvanized, minimum nominal weight 1.25 lb/ft2, and Brindell hardness exceeding
- 140. Rebar (either #5 or #6) may also be used to anchor the berm. Woven wire backing to support the fabric should be galvanized 2"x 4"
- welded wire, 12 gauge minimum. 4. 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. 5. 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.
- 1. Lay out the woven wire sheathing perpendicular to the flow line. The sheathing should be 20 gauge woven wire mesh with 1— inch openings
- Install the silt fence along the center of the proposed berm placement, as with a normal silt fence described in Section 2.4.3. Place the rock along the sheathing on both sides of the silt fence as shown in the diagram (Figure 1-29), to a height not less than 24inches. Clean, open graded 3 - 5" diameter rock should be used, except in areas where high velocities or large volumes of flow are expected, where 5— to 8— inch diameter rock may be used.
- 4. 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.
- 5. The high service rock berm should be removed when the site is revegetated or otherwise stabilized or it may remain in place as a permanent BMP if drainage is adequate.

### HIGH SERVICE ROCK BERM

- 1. The aggregate should consist of 4 to 8 inch washed stone over a stable foundation as specified in the plan.
- 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/yd2, a mullen burst rating of 140 lb/in2, and an equivalent opening size greater than a number 50 sieve.
- 4. If a washing facility is required, a level area with a minimum of 4 inch diameter washed stone or commercial rack should be included in the plans. Divert wastewater to a sediment trap or basin.
- 1. Avoid curves on public roads and steep slopes. Remove vegetation and other objectionable material from the foundation area. Grade crown foundation for positive drainage.
- 2. The minimum width of the entrance/exit should be 12 feet or the full width of exit roadway, whichever is greater. 3. The construction entrance should be at least 50 feet long.
- high with 3:1 (H:V) side slopes, across the foundation approximately 15 feet from the entrance to divert runoff away from the public road. 5. Place geotextile fabric and grade foundation to improve stability, especially

4. If the slope toward the road exceeds 2%, construct a ridge, 6 to 8 inches

- where wet conditions are anticipated. 6. Place stone to dimensions and grade shown on plans. Leave surface
- smooth and slope for drainage.
- Divert all surface runoff and drainage from the stone pad to a sediment 8. Install pipe under pad as needed to maintain proper public road drainage.
- 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 basin. all sediment shall be prevented from entering any storm drain, ditch, or watercourse using approved methods. Maintenance: The entrance shall be maintained in a condition which will prevent
- tracking or flowing of sediment onto public roadways. This may require periodic top 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.

CONSTRUCTION EXIT

# 3 TO 4 INCHES CROSS SECTION

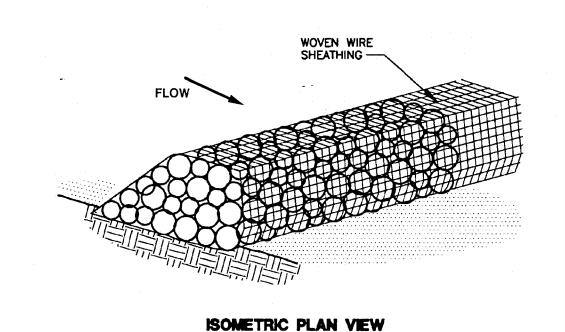


Figure 1-28 Schematic Diagram of a Rock Berm (NCTCOG, 1993)

- 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
- 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
- Installation: 1. Lay out the woven wire sheathing perpendicular to the flow line. The sheathing should be 20 gauge woven wire mesh with 1 inch
- 2. Berm should have a top width of 2 feet minimum with side
- slopes being 2:1 (H:V) or flatter. 3. Place the rock along the sheathing as shown in the diagram
- (Figure 1-28), to a height not less than 18". 4. 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. Berm should be built along the contour at zero percent grade or as near as possible.
- 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.

#### ROCK BERM

FOR EROSION AND SEDIMENT CONTROL OVER THE EDWARDS AQUIFER CONTRIBUTING ZONE, THE RESPECTIVE BMP DETAILS HAVE BEEN SHOWN ON THIS SHEET AND SW1. THE DETAILS ARE EXCERPTS FROM THE EDWARDS AQUIFER TECHNICAL GUIDANCE MANUAL: RG-348, JULY 2005.

REFER TO THE EROSION CONTROL PLAN (SW1), FOR USE LOCATIONS / PARAMETERS OF THE DETAILS SHOWN IN THE PLAN SET.

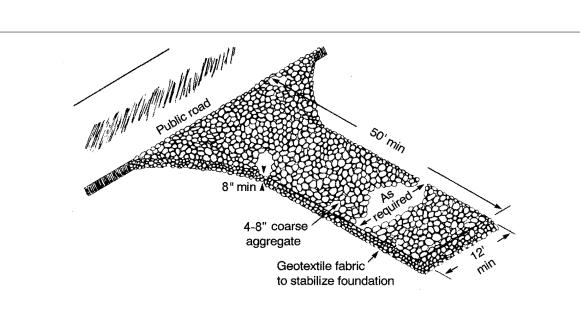


Figure 1-24 Schematic of Temporary Construction Entrance/Exit (after NC, 1993)

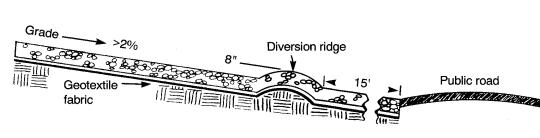
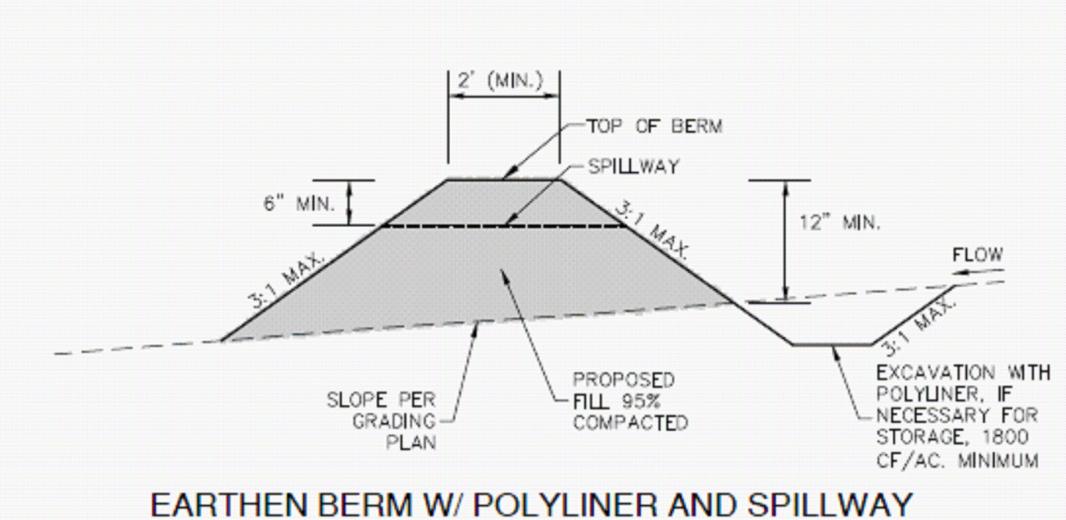


Figure 1-25 Cross-section of a Construction Entrance/Exit (NC, 1993)



NOT TO SCALE

NOTE: EARTHEN BERMS ARE TO SPAN ACROSS PROPOSED STREET SECTION (APPROX. 30-FEET WIDE) FROM CURB TO CURB

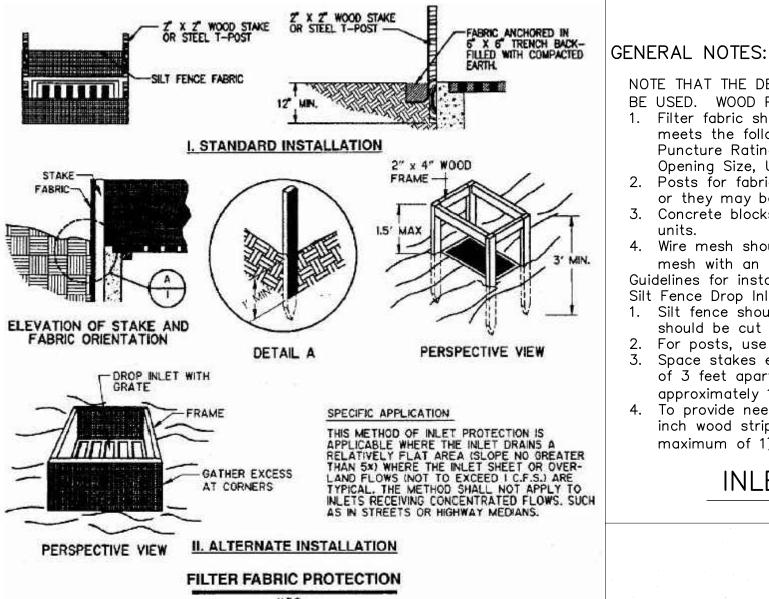


Figure 1-33 Filter Fabric Inlet Protection (NCTCOG, 1993)

CURB INLET

CURB!

I-SAND BAGG W/

#### Wire mesh should be standard hardware cloth or comparable wire mesh with an opening size not to exceed 1/2 inch.

Opening Size, U.S. Sieve No. 70.

or they may be standard fence "T" posts.

Guidelines for installation: Silt Fence Drop Inlet Protection Silt fence should conform to the specifications listed above and

NOTE THAT THE DETAIL ABOVE, ONLY METAL POSTS / STAKES SHOULD

1. Filter fabric should be a nylon reinforced polypropylene fabric which

meets the following minimum criteria: Tensile Strength, 90 lbs.;

Puncture Rating, 60 lbs.; Mullen Burst Rating, 280 psi; Apparent

Posts for fabric should be galvanized steel, tubular in cross—section

Concrete blocks should be standard 8"x 8"x 16" concrete masonry

BE USED. WOOD POSTS / STAKES ARE NOT ALLOWED

- should be cut from a continuous roll to avoid joints. 2. For posts, use metal ones with a minimum length of 3 feet. 3. Space stakes evenly around the perimeter of the inlet a maximum
- of 3 feet apart, and securely drive them into the ground, approximately 18 inches deep (Figure 1-33). 4. To provide needed stability to the installation, a frame with 2 x 4inch wood strips around the crest of the overflow area at a maximum of 1½ feet above the drop inlet crest should be provided.

## INLET PROTECTION (FABRIC)

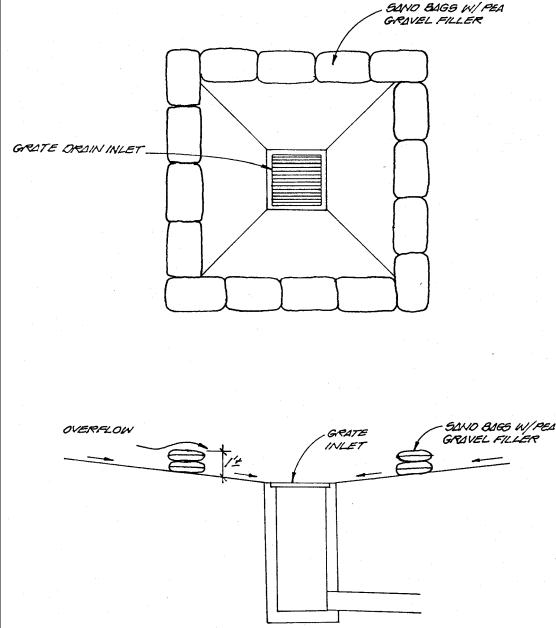


Figure 1-39 Diagram of Bagged Gravel Curb Inlet Protection (Pape-Dawson).

STREET

Figure 1-38 Diagram of Bagged Gravel Grate Inlet Protection (Pape-Dawson)

#### GENERAL NOTES:

- CURB INLET

- 1. Inspection should be made weekly and after each rainfall. Repair or
- replacement should be made promptly as needed by the contractor. 2. Remove sediment when buildup reaches a depth of 3 inches Removed sediment should be deposited in a suitable area and in such a manner that it will not erode.

SANOBAGS W/WASHED PEA GRAVEL FILLER

- 3. Check placement of device to prevent gaps between device and
- 4. Inspect filter fabric and patch or replace if torn or missing. 5. Structures should be removed and the area stabilized only after the remaining drainage area has been properly stabilized.

INLET PROTECTION (GRAVEL FILTER BAGS)

Ш RAFTING: K.P. CHECK: ESIGN: C.P. CHECK: UBMITTAL PHASE: 762308223 CI JOB #:

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