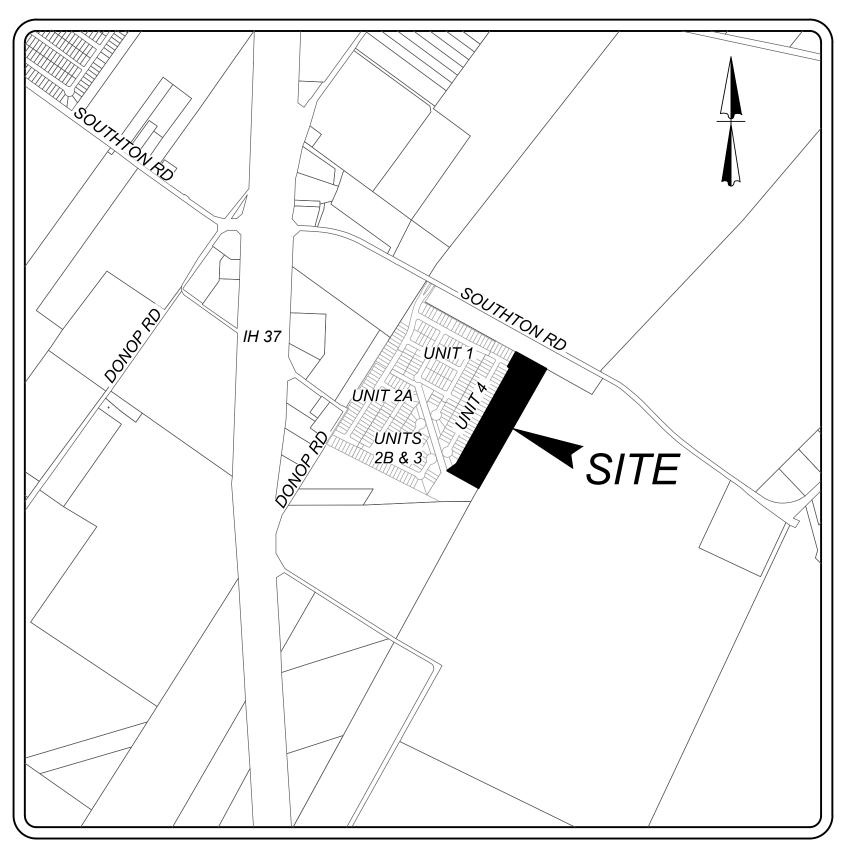
# SOUTHTON COVE, UNIT 5

SAN ANTONIO, TX

STREET, DRAINAGE, WATER, SANITARY SEWER, AND UTILITY IMPROVEMENTS



LOCATION MAP NOT-TO-SCALE

OWNER INFORMATION: KB HOME LONESTAR, LLC. 4800 FREDERICKSBURG RD. SAN ANTONIO, TX 78229 PHONE: (210) 301 - 5485

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**INDEX** 

SHEET TITLE

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STORM WATER POLLUTION PREVENTION PLAN

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WATER DISTRIBUTION PLAN

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OVERALL SANITARY SEWER PLAN

LINE "A" PLAN & PROFILE (SHT 1 OF 2)

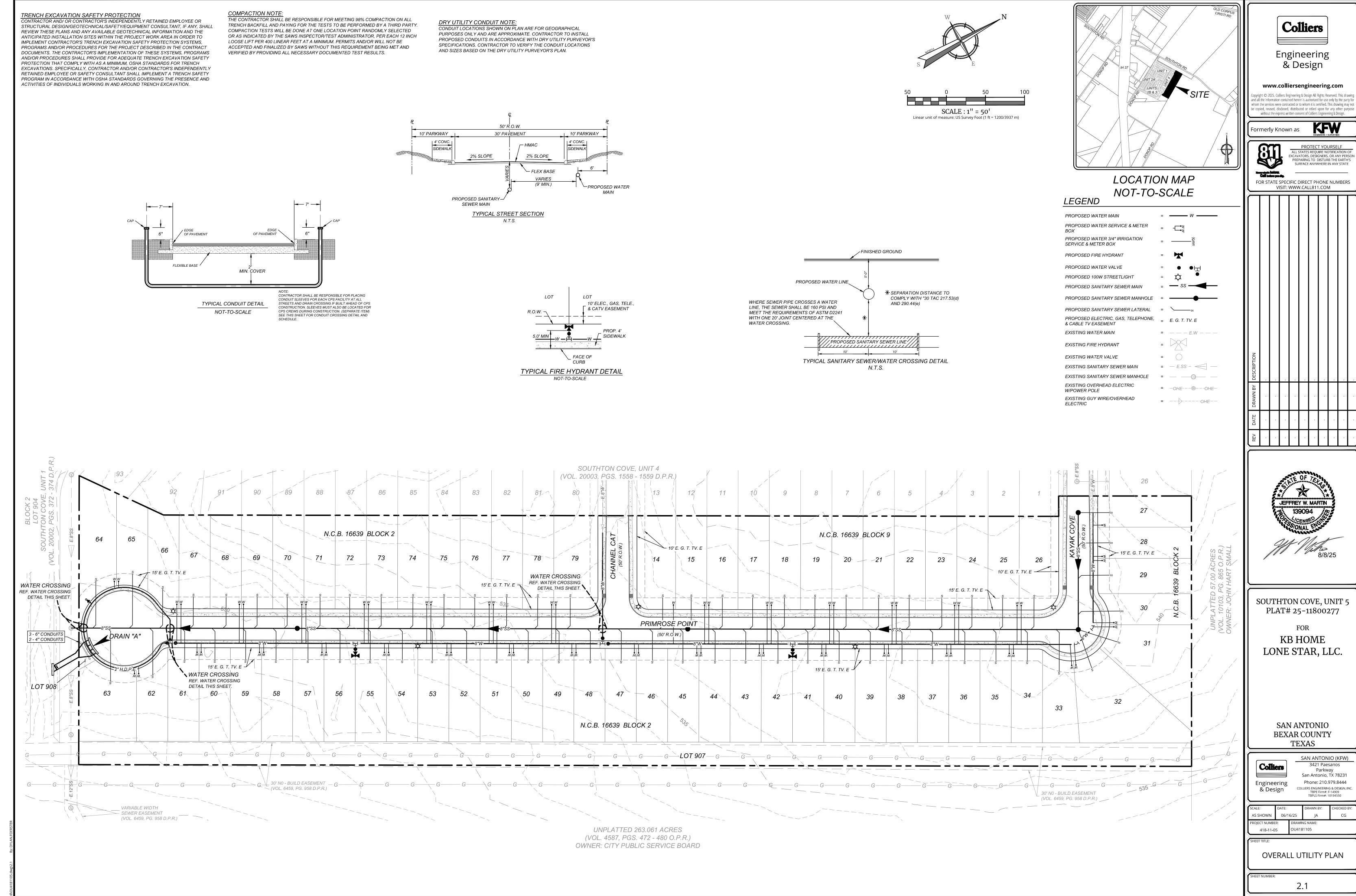
LINE "A" PLAN & PROFILE (SHT 2 OF 2)

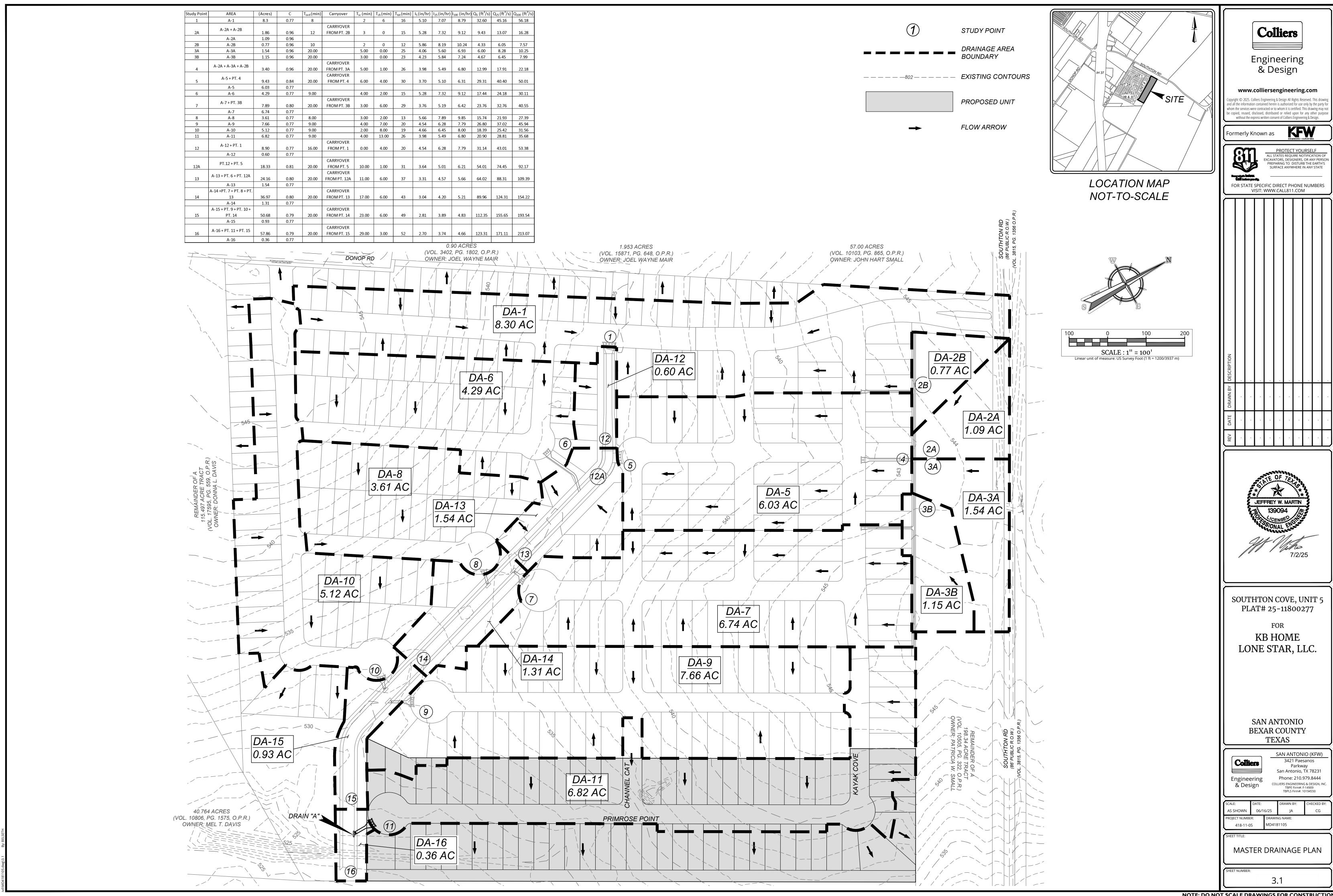
WATER DISTRIBUTION COVER SHEET

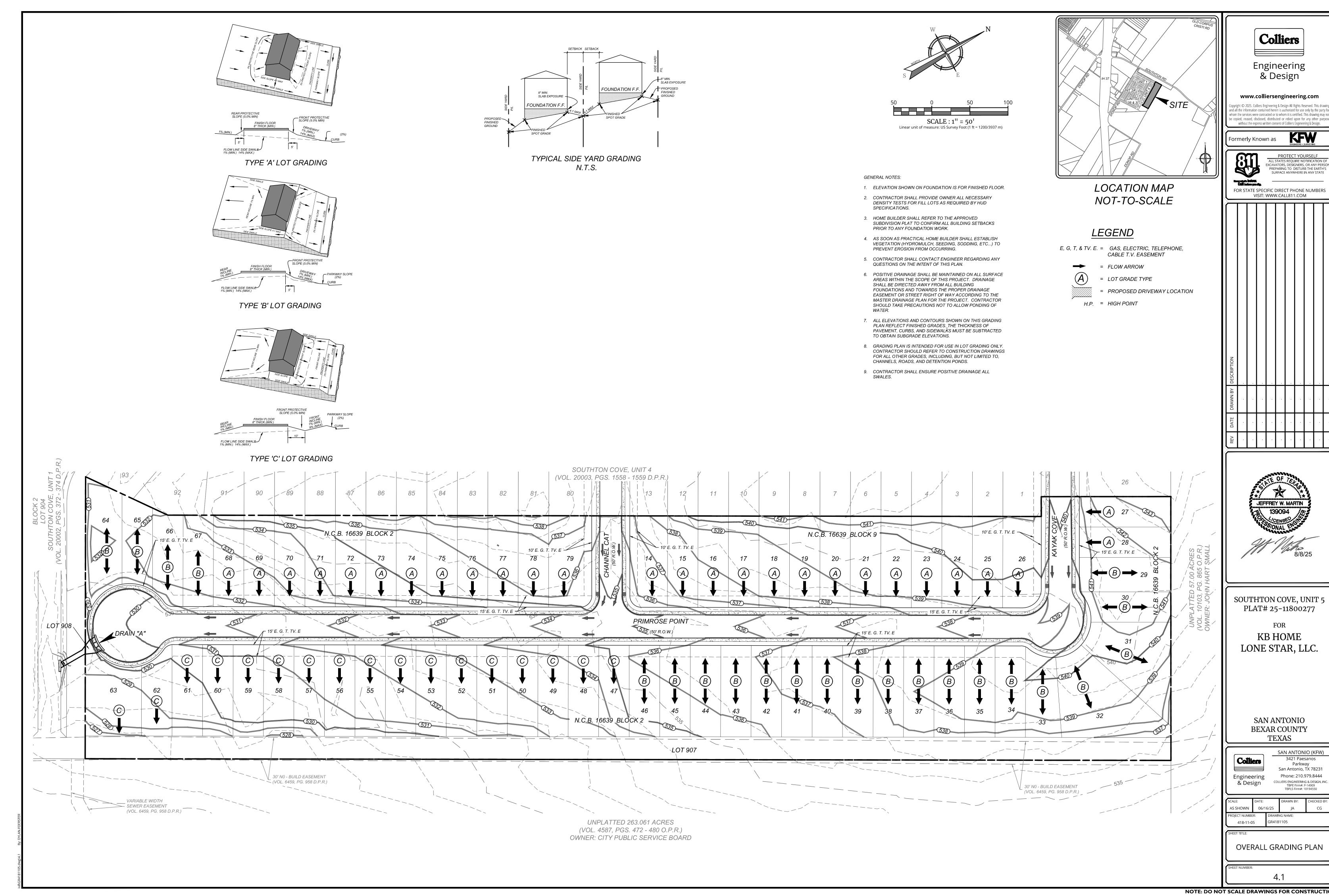
N COVE, UNIT 5 25-11800277 **HOME** STAR, LLC. ANTONIO R COUNTY SAN ANTONIO (KFW) Phone: 210.979.8444

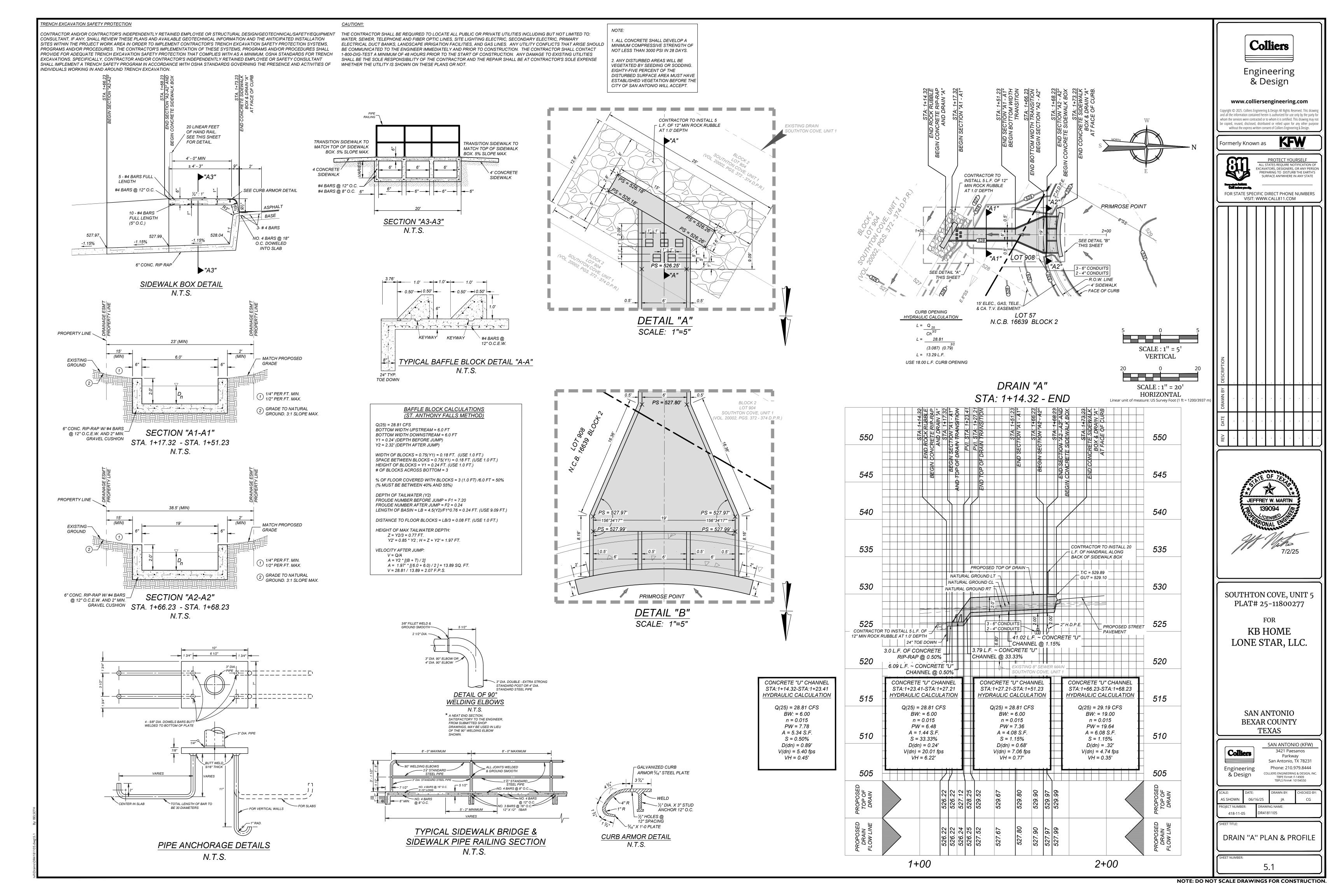
**Colliers** 

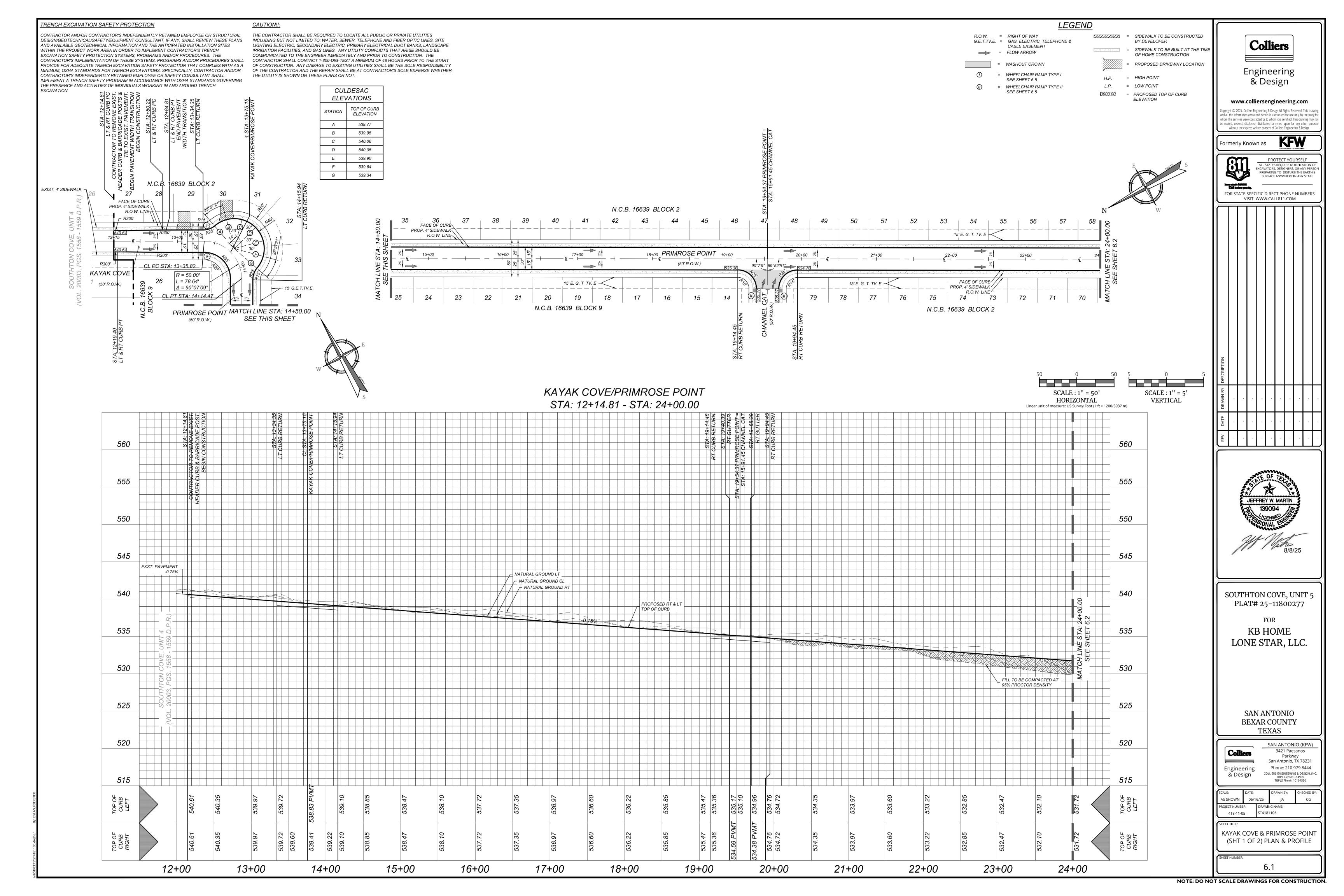
**COVER SHEET** 

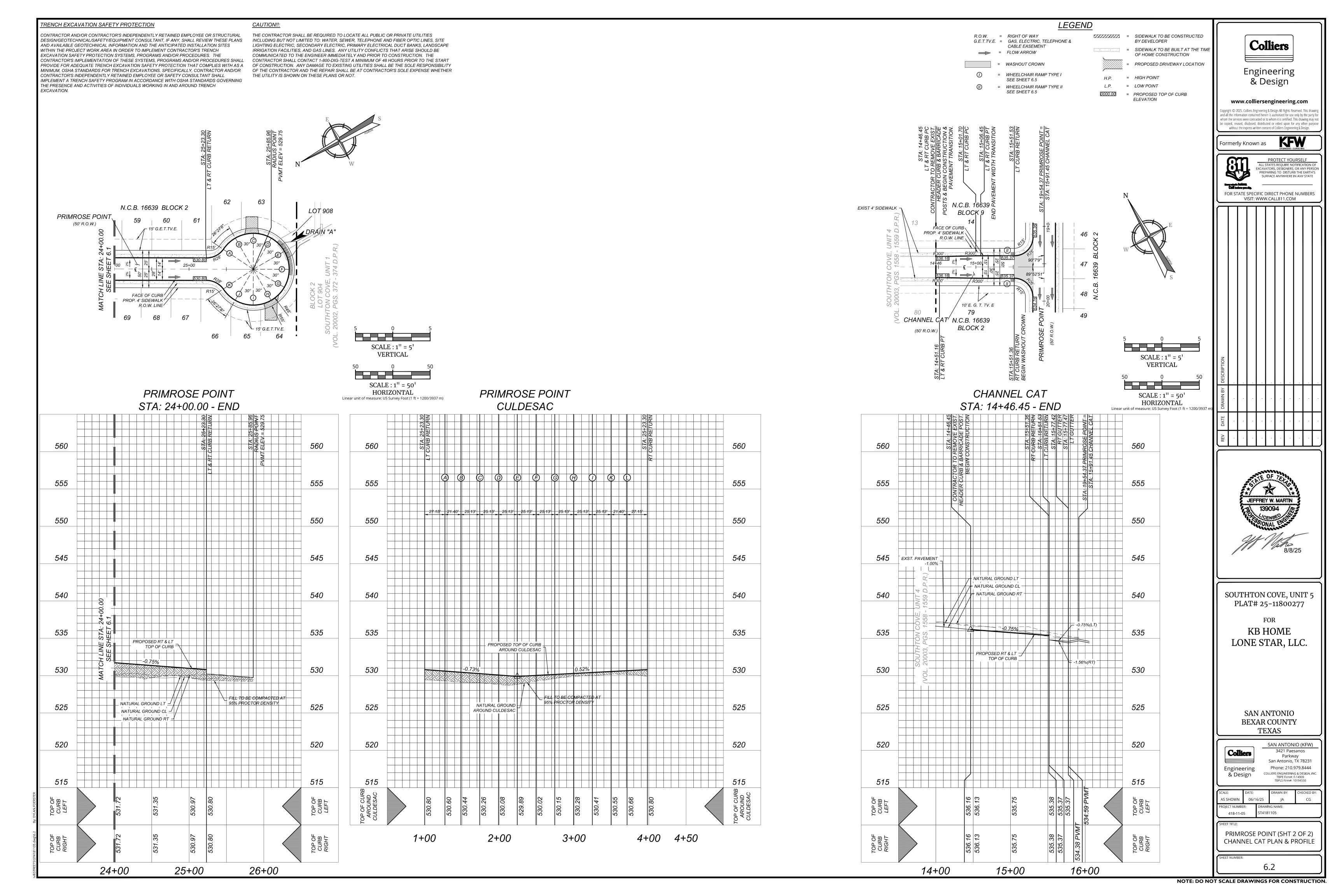


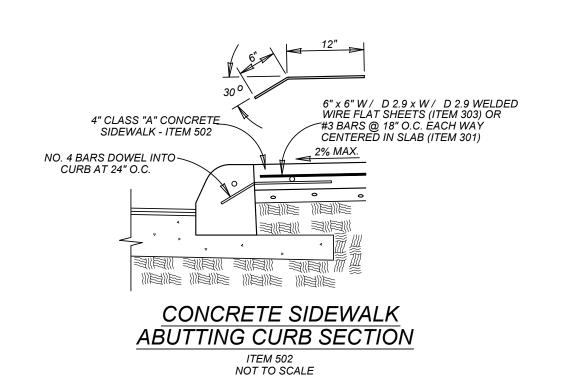






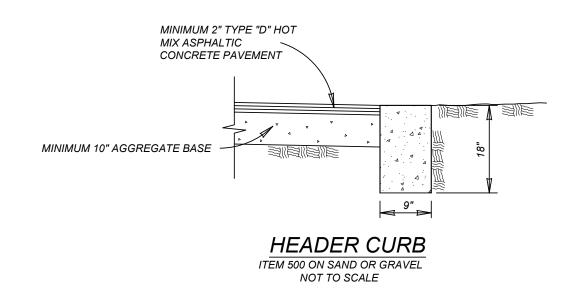


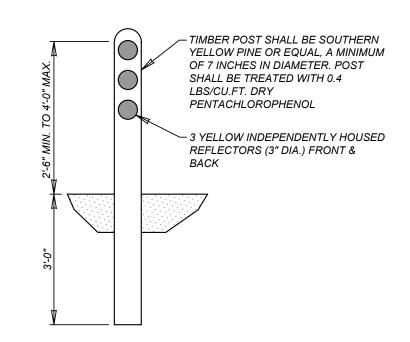




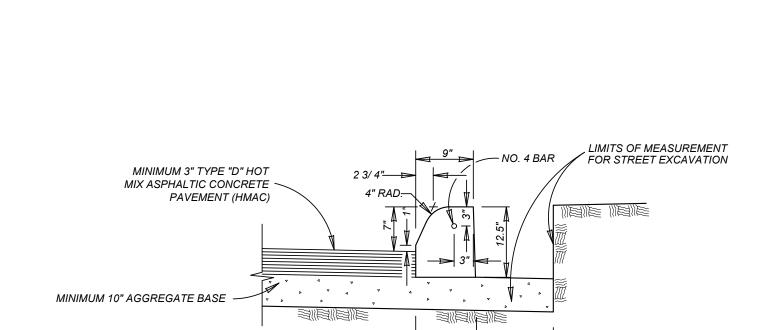
4" CLASS "A" CONCRETE

2" MINIMUM GRAVEL, CRUSHED ROCK-OR FLEXIBLE BASE MATERIAL





TIMBER GUARD POST DETAIL NOT-TO-SCALE



CONCRETE SIDEWALK SECTION

NOT TO SCALE

6" x 6" W / D 2.9 x W / D 2.9 WELDED WIRE FLAT SHEETS (ITEM 303) OR

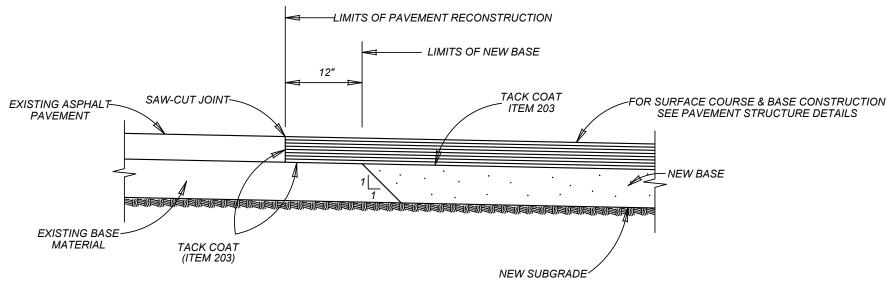
CONCRETE CURB ITEM 500 ON ASPHALT TREATED BASE OR ASPHALTIC CONCRETE BASE NOT TO SCALE

PAY LIMITS FOR LIME TREATMENT FOR

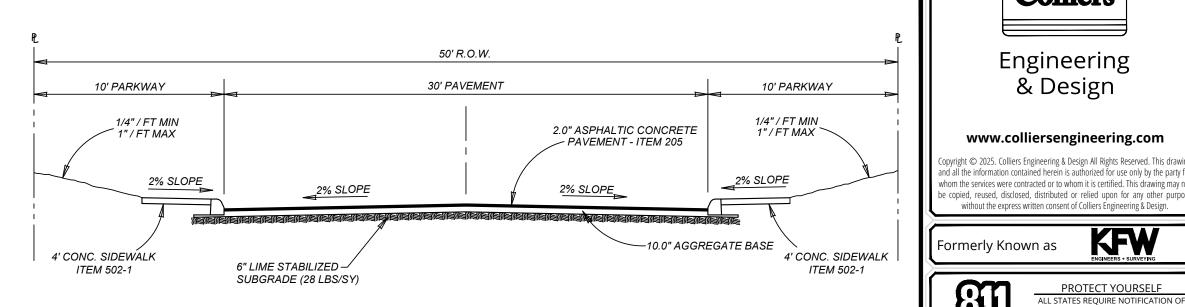
SUBGRADE, FLEXIBLE BASE, ASPHALT TREATED

BASE AND PRIME COAT

PAY LIMITS FOR STREET EXCAVATION



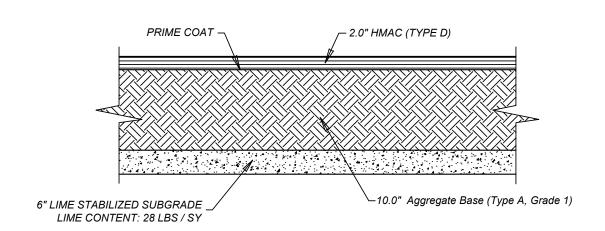
PAVEMENT JUNCTION DETAILS NOT TO SCALE



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

USE LOCAL "A" STREET SECTION FOR ALL STREETS IN THIS PROJECT.

Pavement Section 2.0" HMAC Type "D" 10.0" Aggregate Base (Type A, Grade 1) 6.0" Lime Stablized Subgrade(28 LBS/SY) Total: 18.0" Structural No: 2.76 CBR: 2.5



### ASPHALT PAVEMENT DETAIL NOT-TO-SCALE DETAIL FOR ALL LOCAL TYPE A

1. PAVEMENT DESIGN THICKNESS BASED ON GEOTECHNICAL REPORT BY INTEC, L.P., PROJECT NO.

2. REFERENCE PROJECT GEOTECHNICAL REPORT AND PROJECT SPECIFICATION FOR ADDITIONAL REQUIREMENTS AND ALTERNATE PAVEMENT SECTIONS.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING MATERIAL TESTING. TESTING TO BE

4. CONTRACTOR MAY LEAVE VERTICAL CUT BANKS AT R.O.W. LINE AND MEDIANS PROVIDED PROJECT GEOTECHNICAL ENGINEER DETERMINES ROCK IS COMPETENT TO STAND ON ITS OWN.

### GENERAL NOTES:

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

 THE APPLICATION RATE OF LIME SHALL BE DETERMINED BASED ON LABORATORY TESTING AND SHALL BE THE LOWEST PERCENTAGE OF LIME THAT PROVIDES AN UNCONFINED COMPRESSIVE STRENGTH (UCS) AT 7-DAYS OF AT LEAST 160 PSI IN ACCORDANCE WITH ASTM D5102 STANDARD TEST METHODS FOR UNCONFINED COMPRESSIVE STRENGTH OF COMPACTED SOIL-LIME MIXTURES (PROCEDURE B) (IN ADDITION, CURING SHOULD OCCUR FOR 7 DAYS AT 40° AND SPECIMENS SHOULD BE SUBJECT TO 24-HR CAPILLARY SOAK PRIOR TO TESTING.

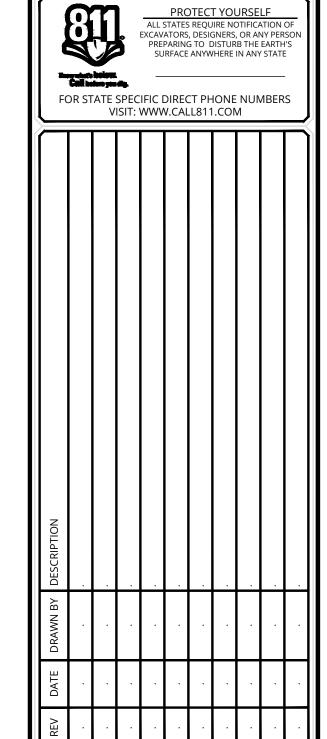
FOR CONSTRUCTION VERIFICATION THE FOLLOWING SHALL BE CONDUCTED IN THE

- 1. AFTER INITIAL MIXING THE SOIL-LIME MIXTURE SHALL MELLOW FOR A PERIOD OF TWO TO THREE (2 - 3) DAYS. MAINTAIN MOISTURE DURING MELLOWING;
- 2. AFTER MELLOWING AND FINAL MIXING, THE PULVERIZATION SHALL BE CHECKED USING THE FOLLOWING CRITERIA (REMOVE NON-SLAKING AGGREGATES RETAINED ON THE 3/4 INCH SIEVE FROM THE SAMPLE): MINIMUM PASSING 1 ¾" SIEVE MINIMUM PASSING ¾" SIEVE MINIMUM PASSING NO. 4 SIEVE
- 3. 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 ACCORDANCE WITH PROCEDURE OUTLINED ABOVE FOR MIXTURE DESIGN.
- 4. COMPACT AND CHECK FIELD DENSITY (MINIMUM OF 95% OF MDD REQUIRED)
- 5. CURE FOR AN ADDITIONAL 2 TO 5 DAYS (TOTAL MELLOWING AND CURING TIME SHOULD TOTAL AT LEAST 5 DAYS).
- 6. VERIFY DEPTH OF LIME STABILIZED LAYER TO DEPTH AS NOTED ON PLAN TO WITHIN ± 1.0 INCH.

### NOTES:

ANY FILL USED TO RAISE THE SUBGRADE:

- SHOUD NOT CONTAIN ANY DELETERIOUS MATERIAL. SHOULD HAVE A CBR VALUE OF 2.5 OR GREATER SHOULD NOT HAVE GRAVELS LARGER THAN 3 INCH IN SIZE
- SHOULD HAVE THE "LIME PERCENTAGE/APPLICATION RATE" RE-RUN
- PRIOR TO INSTALLATION MAX. P.I. OF 42

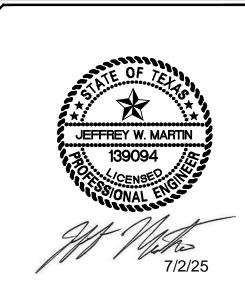


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SOUTHTON COVE, UNIT 5 PLAT# 25-11800277

LONE STAR, LLC.

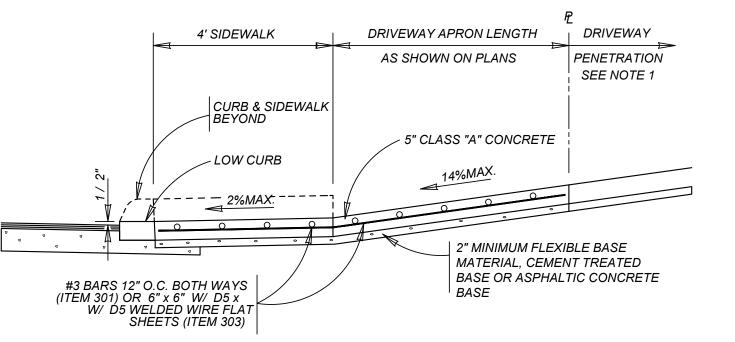
SAN ANTONIO **BEXAR COUNTY TEXAS** 

	SAN ANTONIO (KFW)
Colliers	3421 Paesanos
Comera	Parkway
	San Antonio, TX 78231
Engineering	Phone: 210.979.8444
& Design	COLLIERS ENGINEERING & DESIGN, IN TBPE Firm#: F-14909

San Antonio, TX 78231 Phone: 210.979.8444 IERS ENGINEERING & DESIGN, INC TBPE Firm#: F-14909 TBPLS Firm#: 10194550

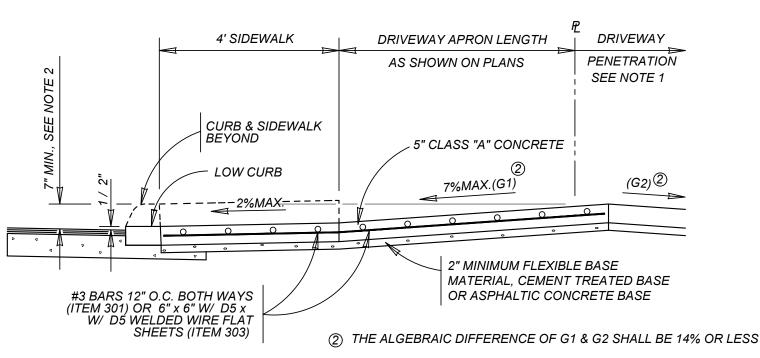
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TYPICAL STREET DETAILS



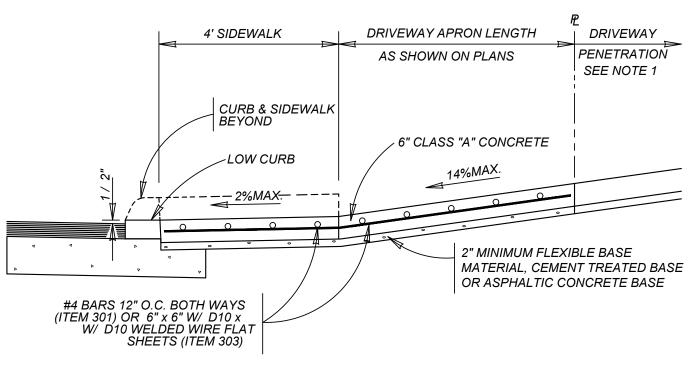
### TYPICAL RESIDENTIAL DRIVEWAY SECTION

WITH SIDEWALK ABUTTING CURB ITEM 503.1



### TYPICAL RESIDENTIAL DRIVEWAY SECTION

WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS ABUTTING CURB ITEM 503.1



### TYPICAL COMMERCIAL DRIVEWAY SECTION

WITH SIDEWALK ABUTTING CURB

ITEM 503.2

### CONCRETE DRIVEWAY NOTES

1. DRIVEWAY PENETRATION REFERS TO A PORTION OF THE DRIVEWAY THAT MAY BE NECESSARY TO RECONSTRUCT WITHIN PRIVATE PROPERTY TO COMPLY WITH A MAXIMUM DRIVEWAY SLOPE. THIS PORTION OF THE DRIVEWAY SHALL BE PAID FOR UNDER THE FOLLOWING ITEMS AS MAY APPLY:

A.) CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO. 503.1 OR 503.2. B.) ASPHALTIC CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO. 503.4 AND SHALL INCLUDE A MINIMUM OF 1" ASPHALT TYPE 'D' & 6" FLEXIBLE BASE

C.) GRAVEL DRIVEWAY PAID FOR UNDER ITEM NO. 503.5 AND SHALL INCLUDE A MINIMUM OF 6" FLEXIBLE BASE

2. 7" MINIMUM HEIGHT WILL NOT NECESSARILY OCCUR AT THE PROPERTY LINE. IT MAY OCCUR WITHIN THE RIGHT OF WAY OR WITHIN THE DRIVEWAY PENETRATION ON PRIVATE PROPERTY.

3. THE PROPOSED DRIVEWAY SHOULD MATCH THE EXISTING WIDTH AT THE PROPERTY LINE BUT UNLESS AUTHORIZED BY THE CITY TRAFFIC ENGINEER, THE WIDTH SHALL BE WITHIN THE FOLLOWING VALUES:

TYPE	MINIMUM	MAXIMUI
RESIDENTIAL	10'	20'
OMMERCIAL - ONE WAY	12'	20'

COMMERCIAL - TWO WAY 24'

4. FOR LOCAL TYPE "A" STREETS, SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 3' FROM THE BACK OF CURB.

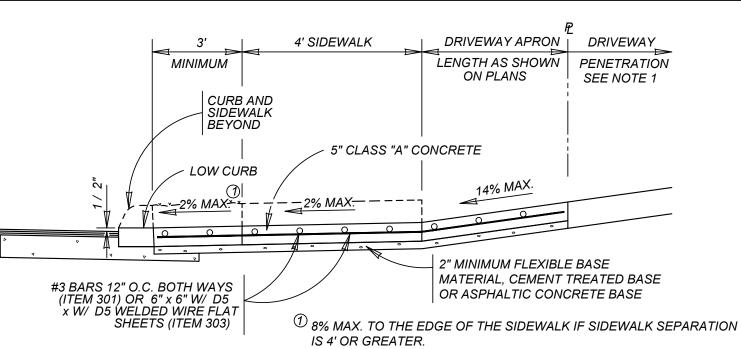
5. FOR OTHER THAN LOCAL TYPE "A" STREETS, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND SEPARATED A MINIMUM OF 3' FROM THE BACK OF CURB OR, AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.

6. DUMMY JOINTS PARALLEL TO THE CURB SHALL BE PLACED WHERE THE SIDEWALK MEETS THE DRIVEWAY. DUMMY JOINTS PERPENDICULAR TO THE CURB, AND WITHIN THE BOUNDARIES OF THE PARALLEL DUMMY JOINTS, SHALL BE PLACED AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK.

7. A MINIMUM OF TWO ROUND AND SMOOTH DOWEL BARS 3/8" IN DIAMETER AND 18" IN LENGTH SHALL BE SPACED 18" APART AT EACH EXPANSION JOINT.

8. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE. WHERE SIDEWALKS CROSS DRIVEWAYS, SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

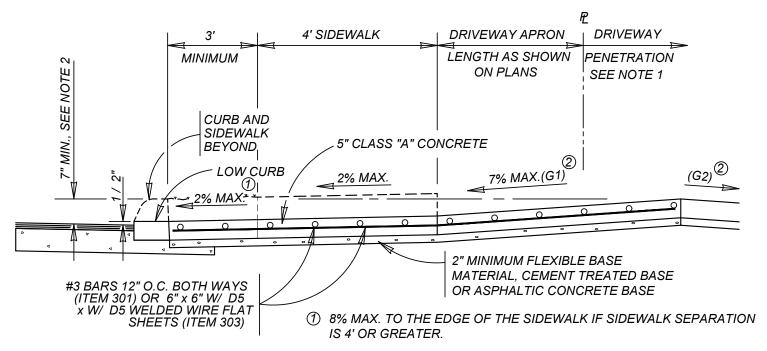
9. SIDEWALK RAMP SURFACE SHALL BE BRUSH FINISHED.



### TYPICAL RESIDENTIAL DRIVEWAY SECTION

WITH SIDEWALK SEPARATED FROM CURB

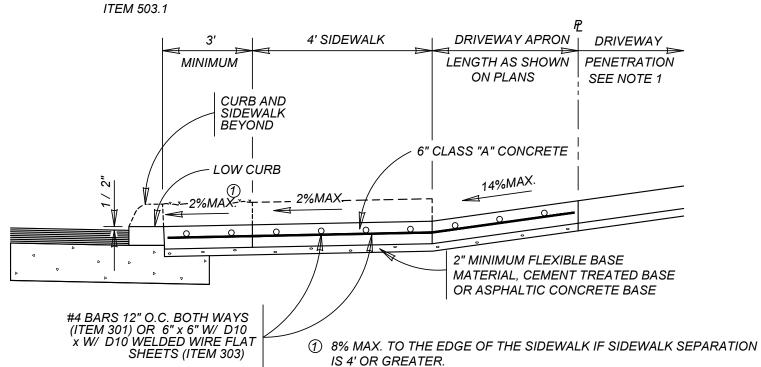
ITEM 503.1



② THE ALGEBRAIC DIFFERENCE OF G1 & G2 SHALL BE 14% OR LESS

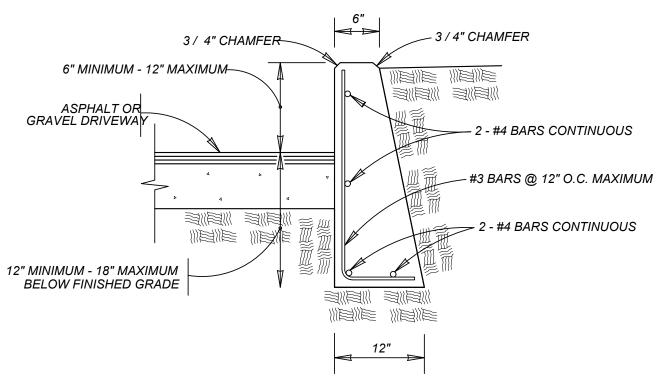
### TYPICAL RESIDENTIAL DRIVEWAY SECTION

WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS SEPARATED FROM CURB



## TYPICAL COMMERCIAL DRIVEWAY SECTION

WITH SIDEWALK SEPARATED FROM CURB ITEM 503.2

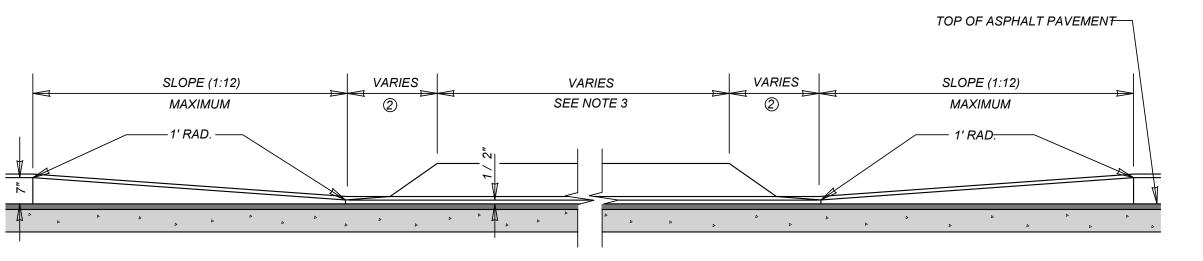


1. COST OF REINFORCEMENT TO BE INCLUDED IN UNIT COST OF ITEM 307.1

2. CONCRETE RETAINING WALL COMBINATION TYPE SHALL BE USED FOR CONCRETE DRIVEWAYS.

### DRIVEWAY - CONCRETE RETAINING WALL

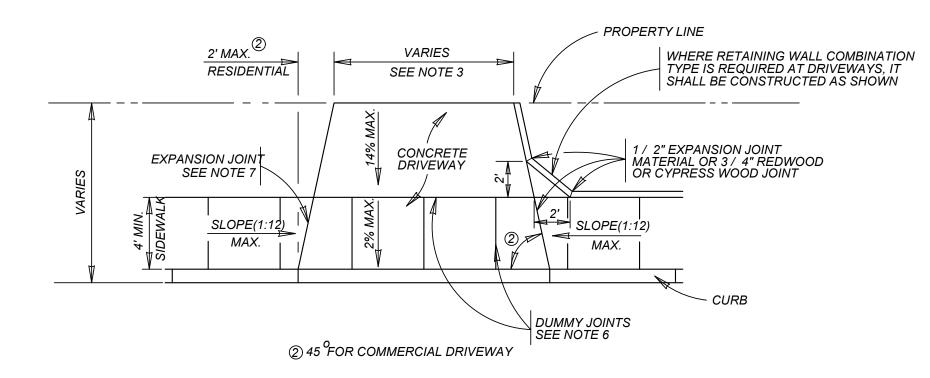
ON COMPACTED SUBGRADE ITEM 307.1



### ② RESIDENTIAL : 2' MAXIMUM; COMMERCIAL: SEE PLAN VIEW

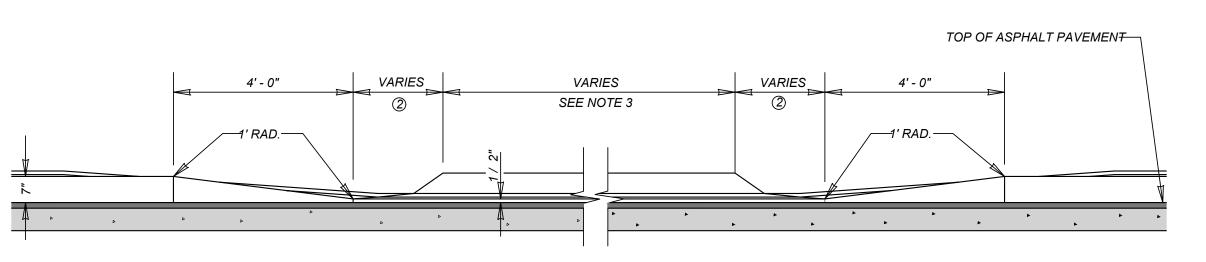
### CURB PROFILE AT DRIVEWAY

WITH SIDEWALK ABUTTING CURB



### TYPICAL DRIVEWAY PLAN VIEW

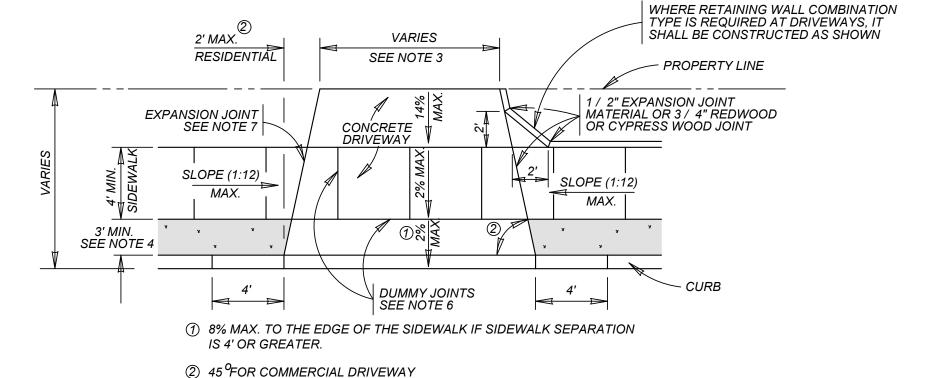
WITH SIDEWALK ABUTTING CURB



② RESIDENTIAL : 2' MAXIMUM; COMMERCIAL: SEE PLAN VIEW

### CURB PROFILE AT DRIVEWAY

WITH SIDEWALK SEPARATED FROM CURB



TYPICAL DRIVEWAY PLAN VIEW

WITH SIDEWALK SEPARATED FROM CURB

### MAY 2009

CITY OF SAN ANTONIO

CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

CONCRETE DRIVEWAY STANDARDS

% SUBMITTAL	PROJECT NO.:		DATE:	
DRWN. BY: V. VASQUEZ	DSGN. BY:	CHKD. BY: R.S. HOSSEINI, P.E.	SHEET NO.:	OF

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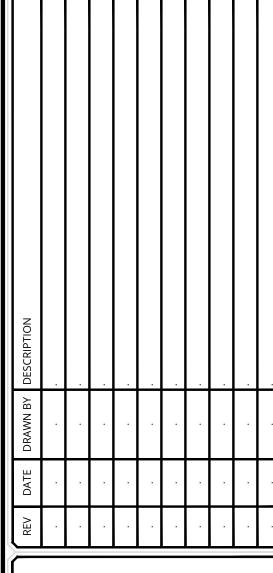
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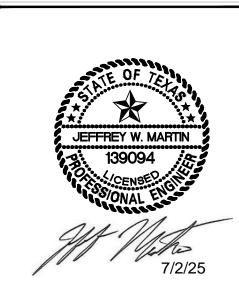
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> > TEXAS

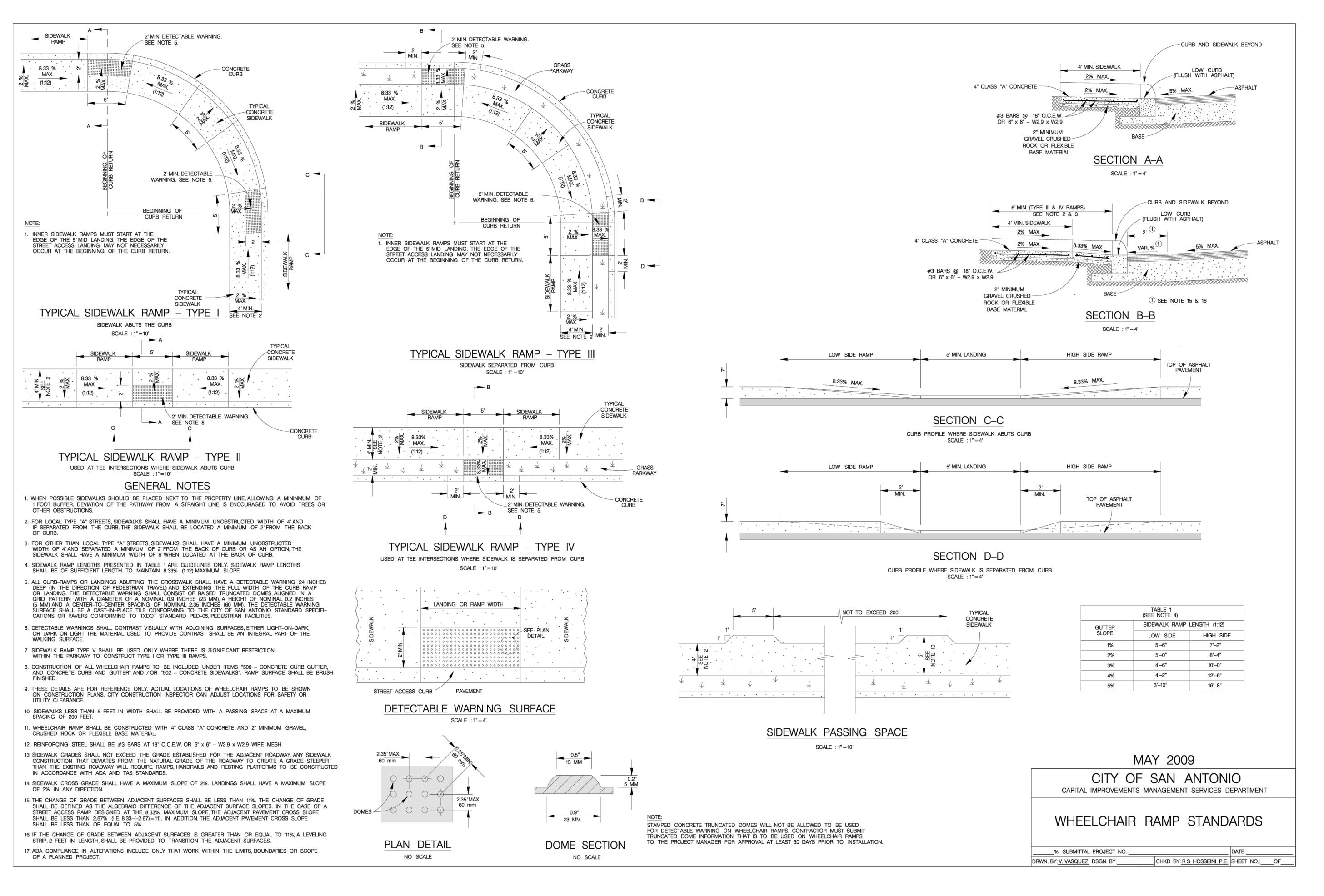
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CONCRETE DRIVEWAY DETAILS



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SOUTHTON COVE, UNIT 5 PLAT# 25-11800277

FOR
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LONE STAR, LLC.

SAN ANTONIO BEXAR COUNTY TEXAS

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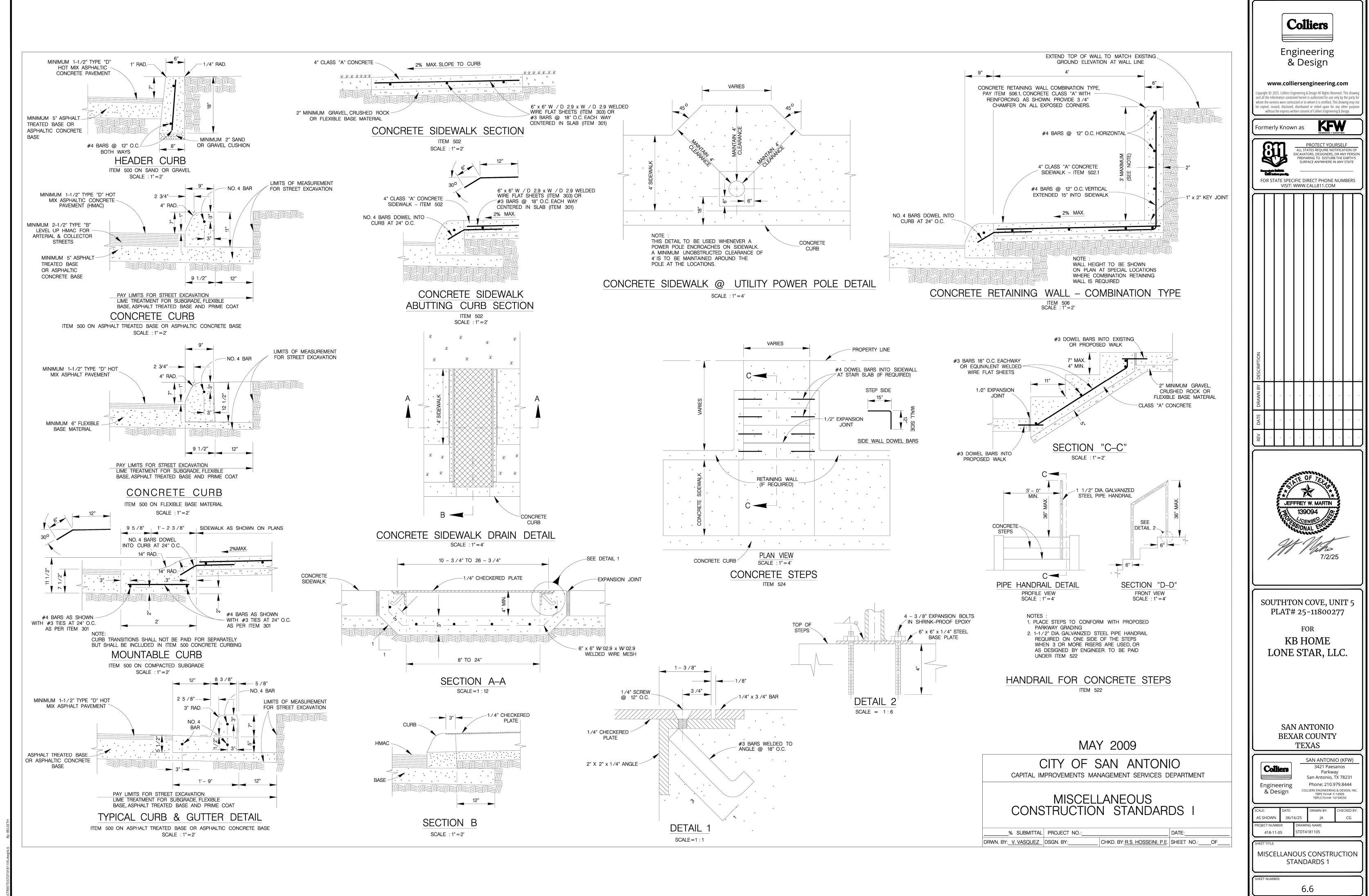
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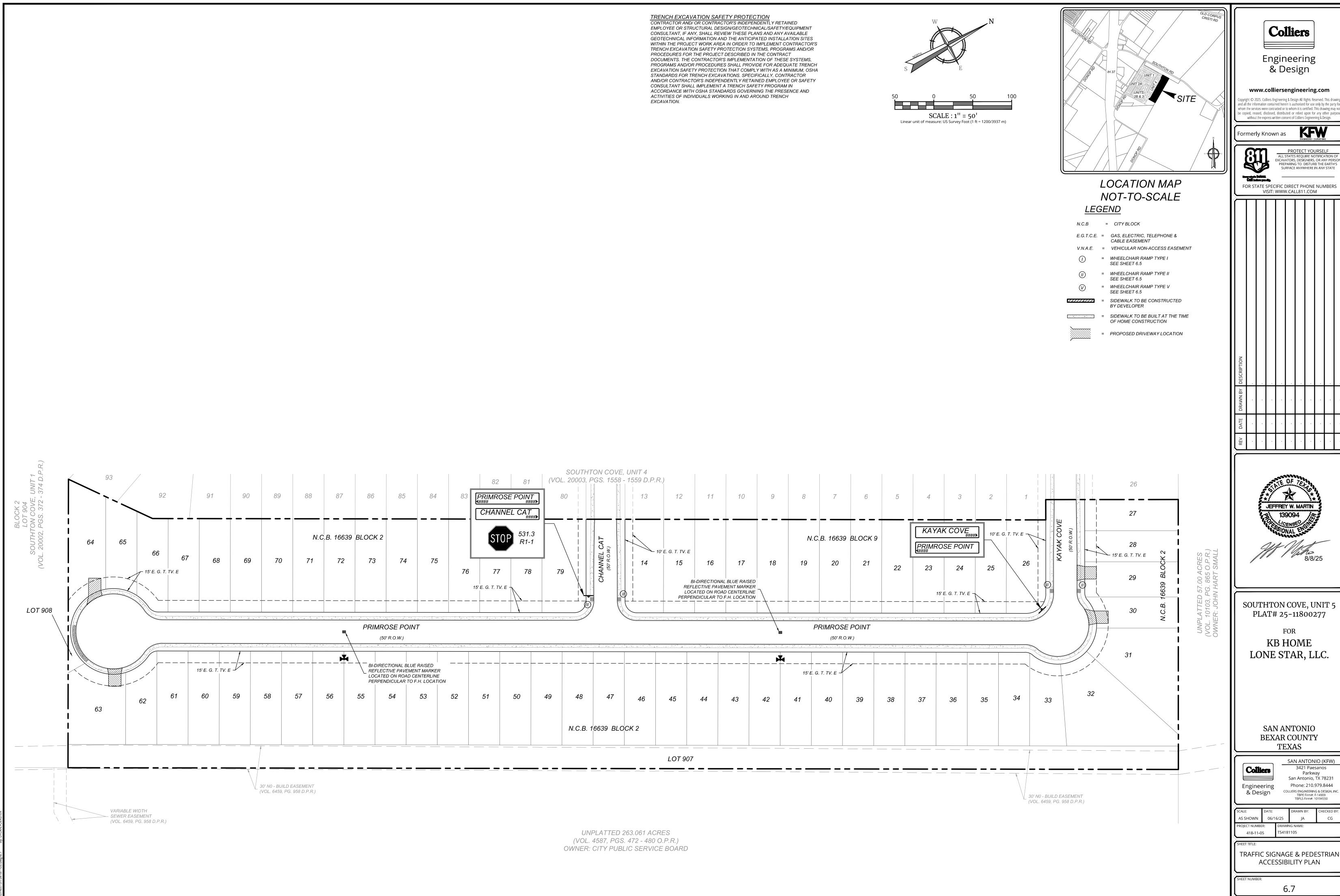
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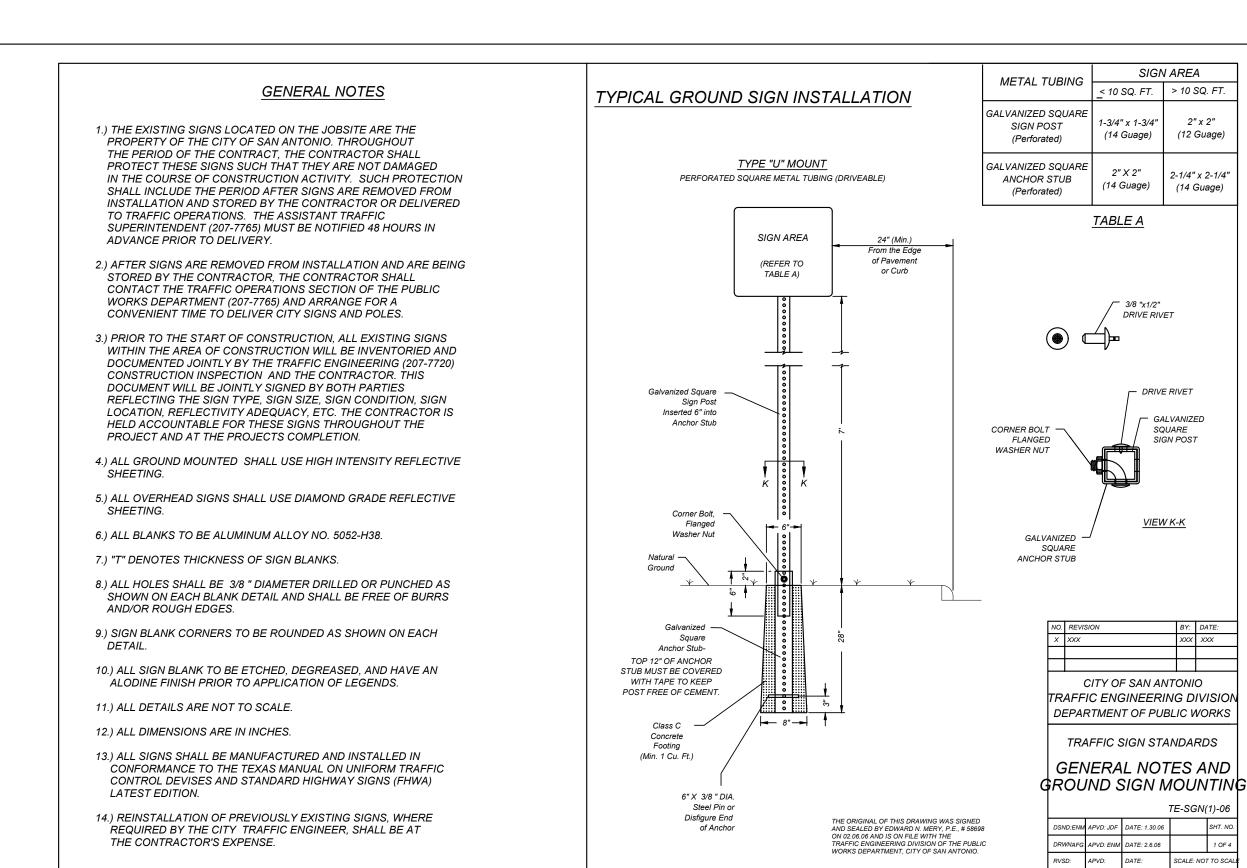
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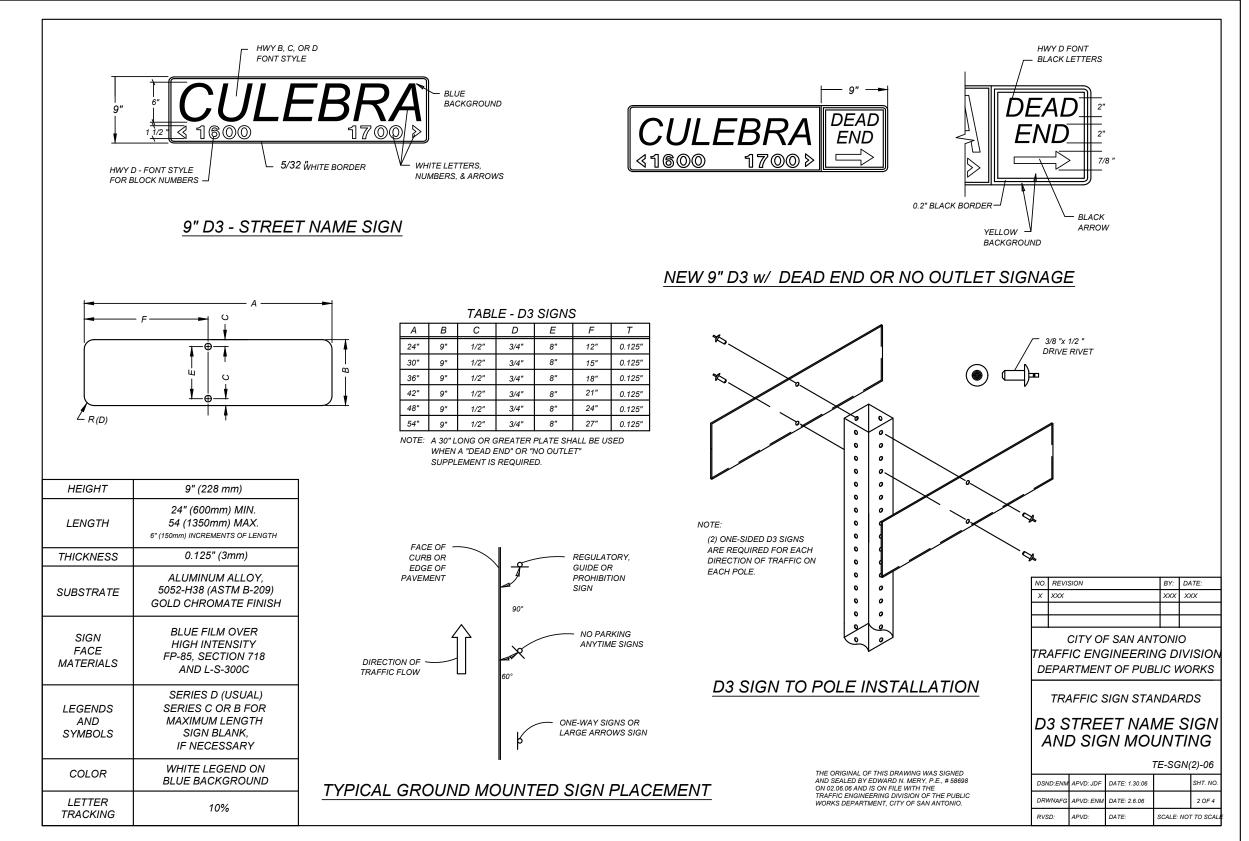
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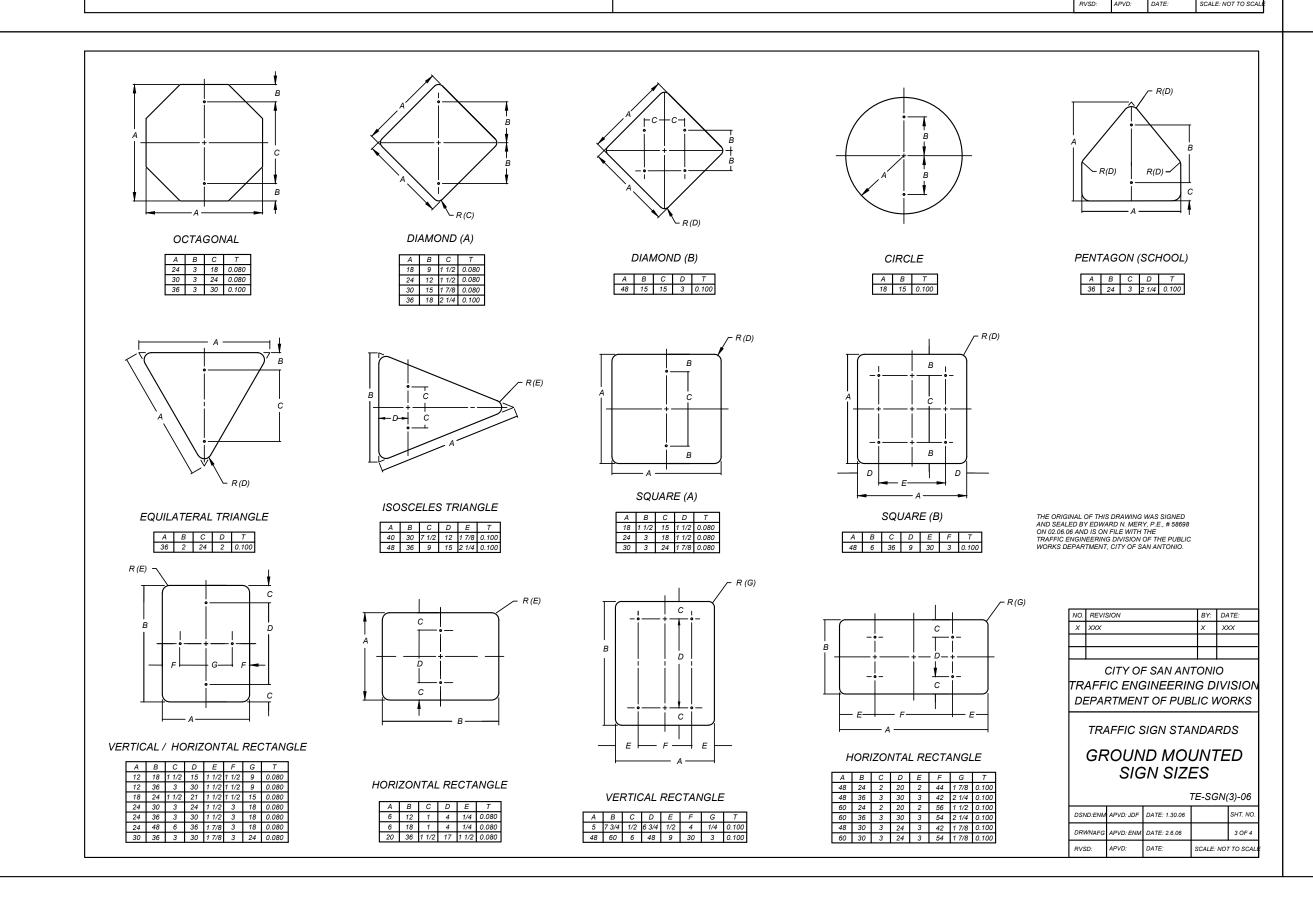
WHEELCHAIR RAMP DETAILS

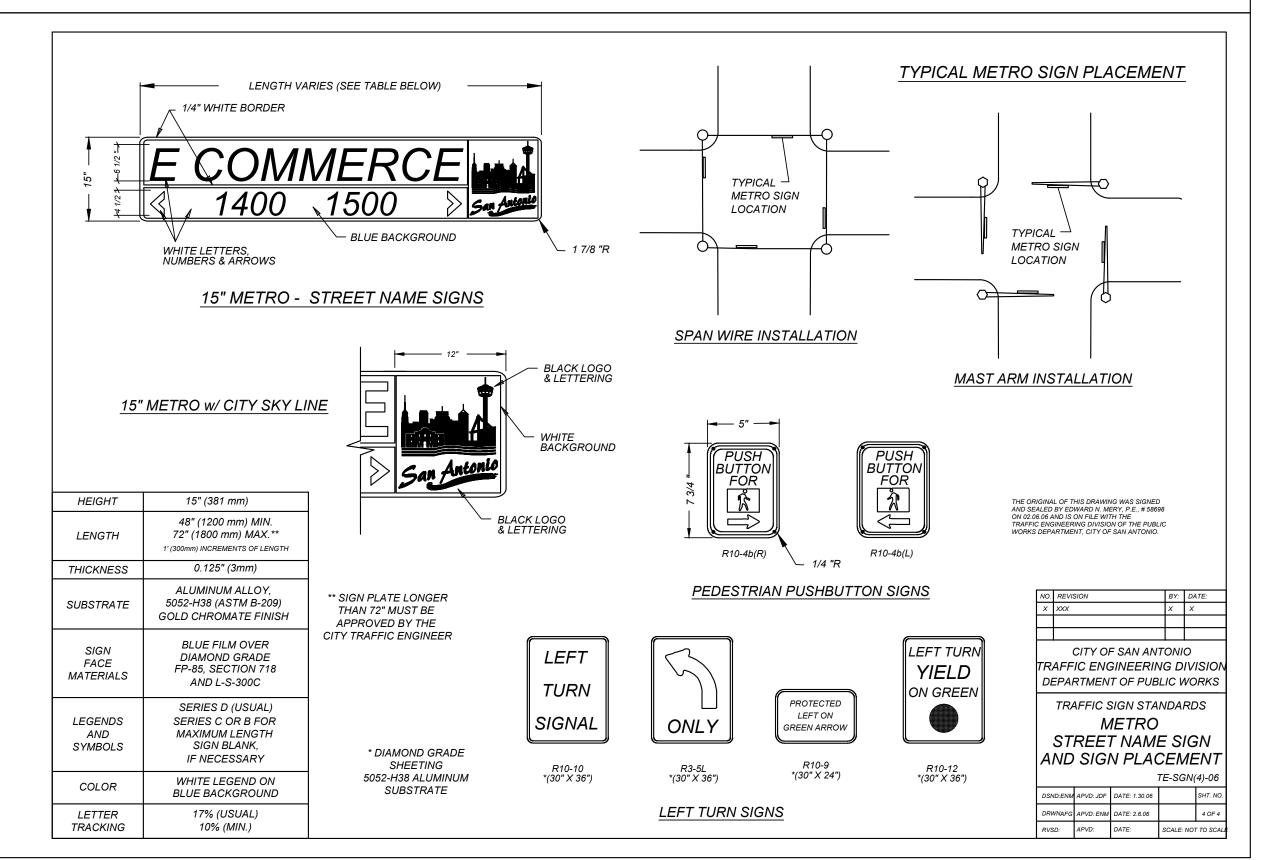














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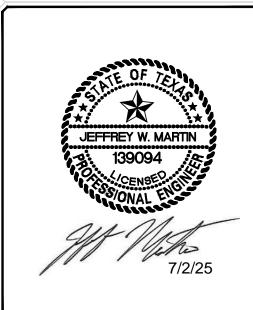
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SOUTHTON COVE, UNIT 5 PLAT# 25-11800277

KB HOME LONE STAR, LLC.

> SAN ANTONIO BEXAR COUNTY TEXAS

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& Design

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Parkway
San Antonio, TX 78231
Phone: 210.979.8444

COLLIERS ENGINEERING & DESIGN, INC
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TBPLS Firm#: 10194550

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PROJECT NUMBER: DRAWING NAME:
418-11-05 TSDT4181105

T TITLE:

TRAFFIC SIGNAGE DETAILS

6.8

# SOUTHTON COVE, UNIT 5

# SAN ANTONIO, TX SANITARY SEWER IMPROVEMENTS

### January 20

### SAWS CONSTRUCTION NOTES COUNTER PERMIT AND GENERAL CONSTRUCTION PERMIT

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

- 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
- 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 "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Co.

  D. Current City of San Antonio "Standard Specifications for Public Works Construction".
- D. Current City of San Antonio "Standard Specifications for Public Works Construction".E. Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).
- 2. The contractor shall not proceed with any pipe installation work until they obtain a copy of the approved Counter Permit or General Construction Permit (GCP) from the consultant and has been notified by SAWS Construction Inspection Division to proceed with the work and has arranged a meeting with the inspector and consultant for the work requirements. Work completed by the contractor without an approved Counter Permit and/or a GCP will be subject to removal and replacement at the expense of the contractors and/or the developer.
- 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.
- 4. The Contractor is to make arrangements with the SAWS Construction Inspection Division at 210-233-2973, on notification procedures that will be used to notify affected home residents and/or property owners 48 hours prior to beginning any work.
- 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 at least 1 week 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 at least 1-2 weeks prior to construction whether shown on plans or not. Please allow up to 7 business days for locates requesting pipe location markers on SAWS facilities. The following contact information are supplied for verification purposes:
- SAWS Utility Locates: http://www.saws.org/Service/Locates
- COSA Drainage (210) 207-0724 or (210) 207-6026
  COSA Traffic Signal Operations (210) 206-8480

should be sent to constworkreq@saws.org.

- COSA Traffic Signal Damages (210) 207-3951
  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. All work in Texas Department of Transportation (TxDOT) and/or Bexar County right-of-way shall be done in accordance with respective construction specifications and permit requirements.
- 9. The Contractor shall comply with City of San Antonio or other governing municipality's tree ordinances when
- 10. The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an
- Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request
- Weekend Work: Contractors are required to notify the SAWS Inspection Construction Department 48 hours in advance to request weekend work. Request should be sent to constworkreq@saws.org.

  Any and all SAWS utility work installed without holiday/weekend approval will be subject to be uncovered for
- 12. Compaction note (Item 804): The contractor shall be responsible for meeting the compaction requirements on all trench backfill and for paying for the tests performed by a third party. Compaction tests will be done at one location point randomly selected, or as indicated by the SAWS Inspector and/or the test administrator, per each 12-inch loose lift per 400 linear feet at a minimum. This project will not be accepted and finalized by SAWS without this requirement being met and verified by providing all necessary documented test results.
- 13. A copy of all testing reports shall be forwarded to SAWS Construction Inspection Division.

### Water Section

1. Prior to tie-ins, any shutdowns of existing mains of any size must be coordinated with the SAWS Construction Inspection Division at least one week 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.

• For water mains 12" or higher: SAWS Emergency Operations Center (210) 233-2014

2. Asbestos Cement (AC) pipe, also known as transite pipe which is known to contain asbestos-containing material (ACM), may be 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. Such work is to be made under Special Specification Item No. 3000, "Special Specification for Handling Asbestos Cement Pipe".

- branch will be removed and replaced with a cap/plug. (NSPI)
- 4. Suitable anchorage/thrust blocking or joint restraint shall be provided at all of the following main locations: dead ends, plugs, caps, tees, crosses, valves, and bends, in accordance with the Standard Drawings DD-839 Series and Item No. 839, in the SAWS Standard Specifications for Construction.

3. Valve removal: Where the contractor is to abandon a water main, the control valve located on the abandoning

- 5. All valves shall read "open right".
- 6. PRVs Required: Contractor to verify that no portion of the tract is below ground elevation of <u>565</u> feet where the static pressure will normally exceed 80 PSI. At all such locations where the ground level is below feet, the Developer or Builder shall install at each lot, on the customer's side of the meter, an approved type pressure regulator in conformance with the Plumbing Code of the City of San Antonio. No dual services allowed for any lot(s) if \*PRV is/are required for such lot(s), only single service connections shall be allowed. \*Note: A pressure regulator is also known as a pressure reducing valve (PRV).
- 7. Pipe Disinfection with Dry HTH for Projects less than 800 linear feet. (Item No. 847.3): Mains shall be disinfected with dry HTH where shown in the contract documents or as directed by the Inspector, and shall not exceed a total length of 800 feet. This method of disinfection will also be followed for main repairs. The Contractor shall utilize all appropriate safety measure to protect his personnel during disinfection operations.
- 8. Backflow Prevention Devices: All irrigation services within residential areas are required to have backflow prevention devices.
   All commercial backflow prevention devices must be approved by SAWS prior to installation.
- 9. Final connection to the existing water main shall not be made until the water main has been pressure tested,

10. Division Valves: Division Valves shown on plans or not shown on plans but found in the field shall only be operated by SAWS Distribution and Collection staff and only with prior written approval of the SAWS Director of Production and Operations and proper coordination with all SAWS departments. Contractor shall provide written notification to the inspector a minimum of two weeks in advance to start the coordination process and will be informed by the Inspector when the division valve will be operated by the SAWS Distribution and Collection staff. The Division Valve can only be operated by SAWS Distribution and Collection staff member not the inspector or the contractor. Operation of a Division Valve without the express prior written approval of the SAWS Distribution and Collection staff will constitute a material breach of any written SAWS 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 SAWS Distribution and Collection staff.

### Sewer Notes

- The Contractor is responsible for ensuring that no Sanitary Sewer Overflow (SSO) occurs as a result of their work. All contractor personnel responsible for SSO prevention and control shall be trained on proper response. Should an SSO occur, the contractor shall:
- A. Identify the source of the SSO and notify SAWS Emergency Operations Center (EOC) immediately at (210) 233-2014. 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.
- 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.

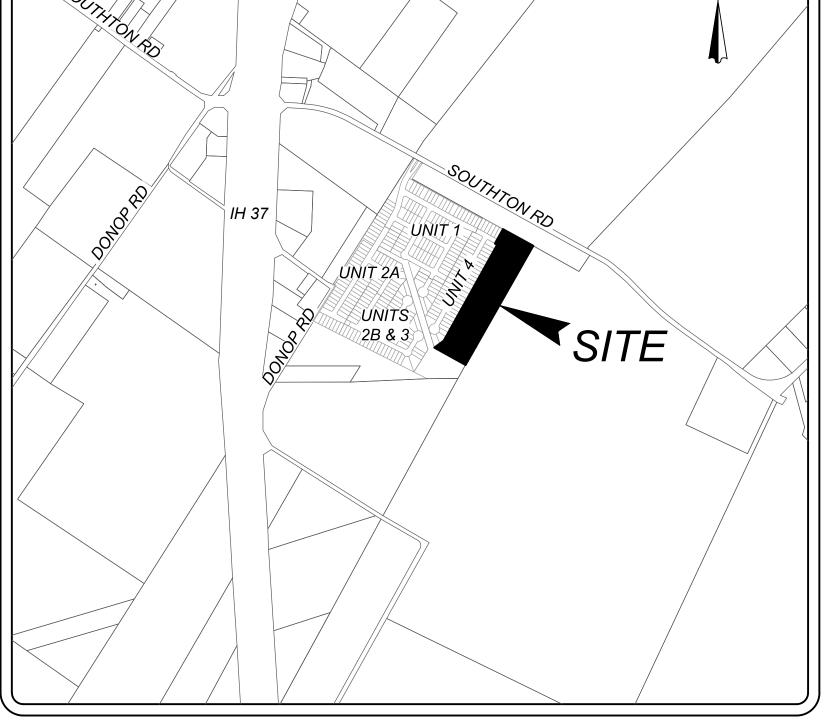
F. Meet all post-SSO requirements as per the EPA Consent Decree, including line cleaning and televising the affected sewer mains (at SAWS direction) within 24 hours.
 Should the Contractor fail to address an SSO immediately and to SAWS satisfaction, they will be responsible for all

costs incurred by SAWS, including any fines from EPA, TCEQ and/or any other Federal, State or Local Agencies.

No separate measurement or payment shall be made for this work. All work shall be done according to guidelines set

- 2. If bypass pumping is required, the Contractor shall perform such work in accordance with SAWS Standard Specification for Water and Sanitary Sewer Construction, Item No. 864, "Bypass Pumping".
- 3. Prior to tie-ins, any shutdowns of existing force mains of any size must be coordinated with the SAWS Construction Inspection Division at (210) 233-2973 at least one week 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.
- 4. Sewer pipe where water line crosses shall be 160 psi and meet the requirements of ASTM D2241, TAC 217.53 and TCEQ 290.44(e)(4)(B). Contractor shall center a 20' joint of 160 psi pressure rated PVC at the proposed water
- 5. 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)
- 6. Spills, Overflows, or Discharges of Wastewater: All spills, overflows, or discharges of wastewater, recycled water, petroleum products, or chemicals must be reported immediately to the SAWS Inspector assigned to the Counter Permit or General Construction Permit (GCP). This requirement applies to every spill, overflow, or discharge regardless
- 7. Manhole and all pipe testing (including the TV inspection) must be performed and passed prior to Final Field Acceptance by SAWS Construction Inspection Division, as per the SAWS Specifications For Water and Sanitary Sewer Construction.

8. All PVC pipe over 14 feet of cover shall be extra strength with minimum pipe stiffness of 115 psi.



LOCATION MAP NOT-TO-SCALE

OWNER INFORMATION: KB HOME LONESTAR, LLC. 4800 FREDERICKSBURG RD. SAN ANTONIO, TX 78229 PHONE: (210) 301 - 5485

### INDEX

	SHEET TITLE	SHEET NUMBER
	SANITARY SEWER COVER SHEET	7.1
1	OVERALL SANITARY SEWER PLAN	7.2
	LINE "A" PLAN & PROFILE (SHT 1 OF 2)	7.3
	LINE "A" PLAN & PROFILE (SHT 2 OF 2)	7.4

DEVELOPER'S NAME: KB HOME LONESTAR, LLC.

CITY: SAN ANTONIO

PHONE#: (210) 307-5485

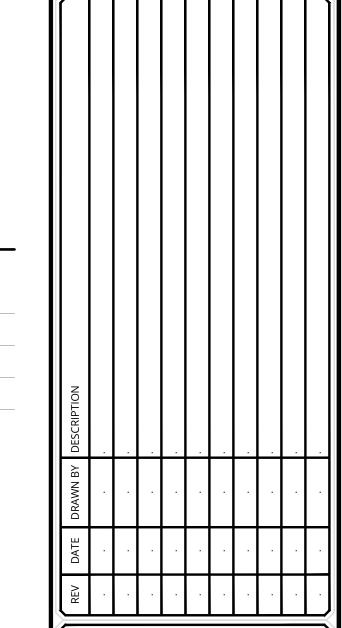
NUMBER OF LOTS: 66

SAWS BLOCK MAP#: 194524

DEVELOPER'S ADDRESS: 4800 FREDERICKSBURG ROAD

TOTAL LINEAR FOOTAGE OF PIPE: 1,439.51 L.F. ~ SDR 26

SAWS JOB#.



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FOR STATE SPECIFIC DIRECT PHONE NUMBERS

ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE



SOUTHTON COVE, UNIT 5 PLAT# 25-11800277

FOR KB HOME LONE STAR, LLC.

> SAN ANTONIO BEXAR COUNTY TEXAS

Colliers

Engineering
& Design

ZIP: 78229

TOTAL ACREAGE: 63.528 AC.

TOTAL EDU'S: 66

3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, IN
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

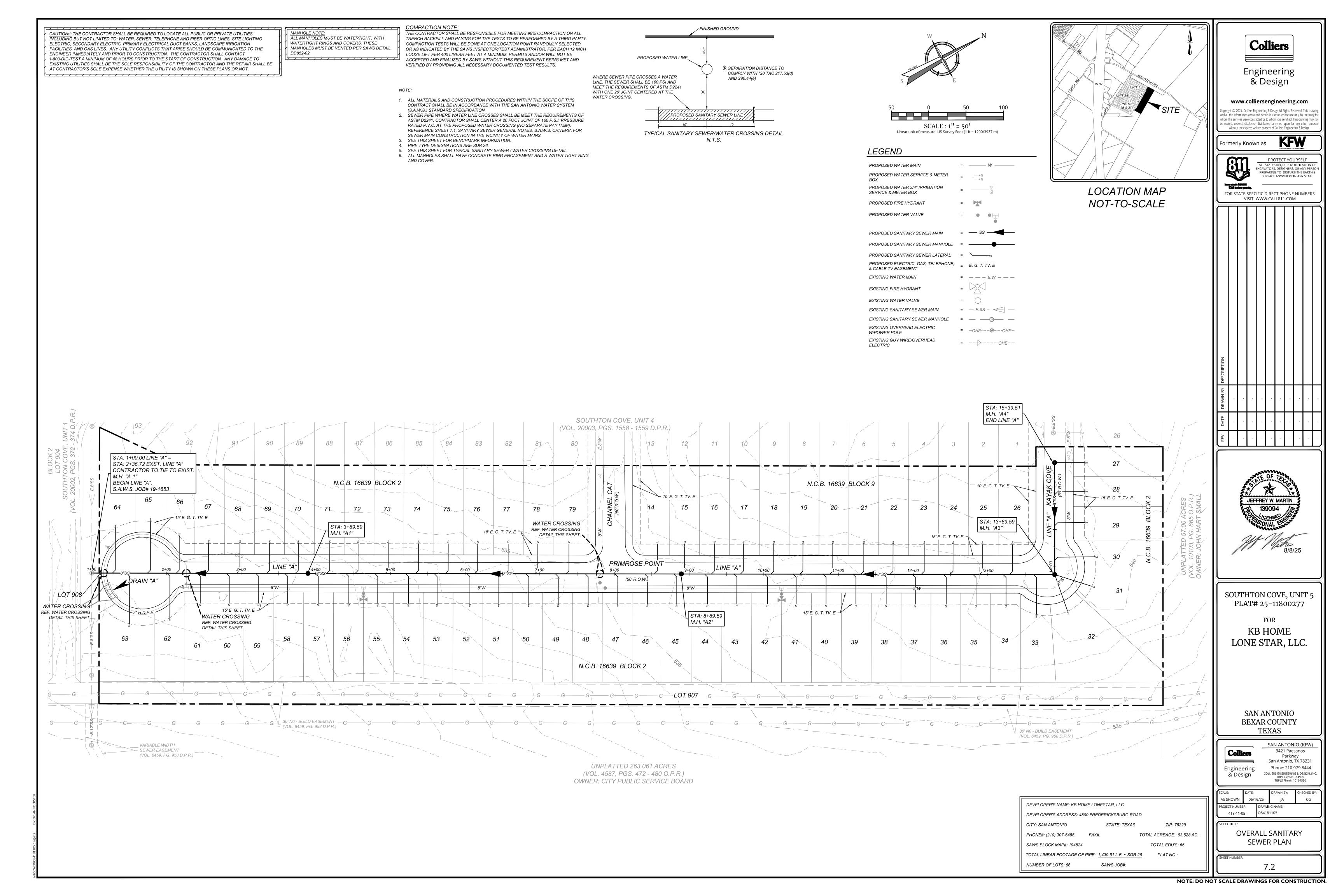
SAN ANTONIO (KFW)

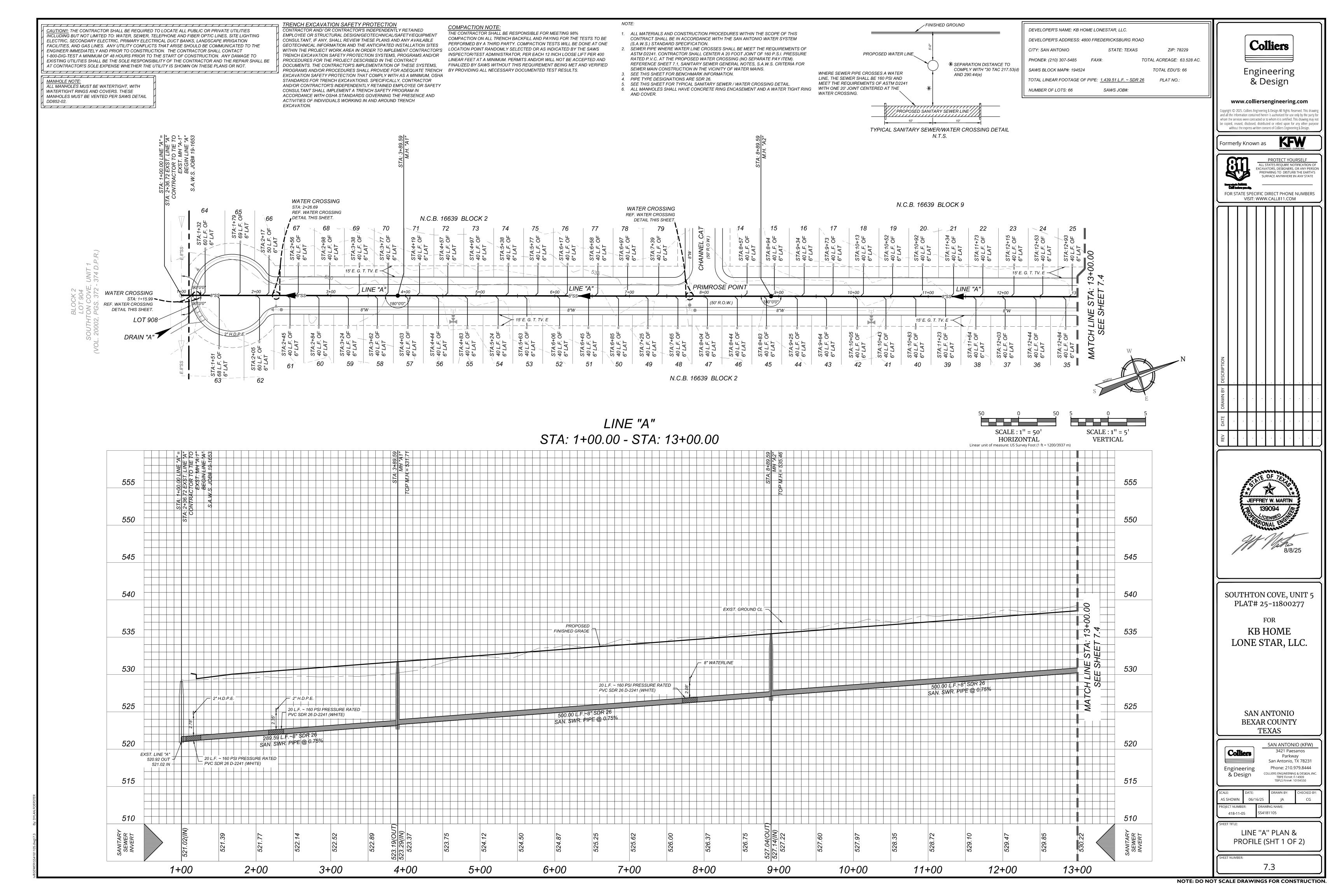
418-11-05 CVSS4181105

CVSS4181105

SANITARY SEWER COVER

SHE





TRENCH EXCAVATION SAFETY PROTECTION <u>CAUTION!!:</u> THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TEST A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT. MANHOLE NOTE:
ALL MANHOLES MUST BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS. THESE MANHOLES MUST BE VENTED PER SAWS DETAIL 

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES

PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S

TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR

DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS,

STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR

ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND

EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA

AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY

PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT

CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN

ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH

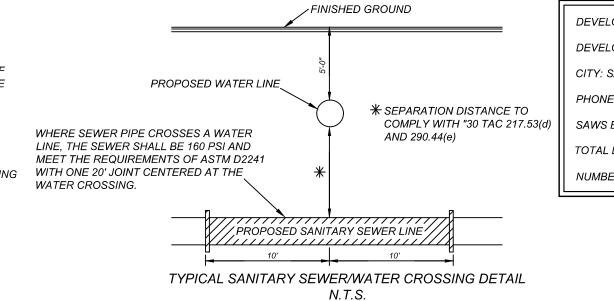
EXCAVATION.

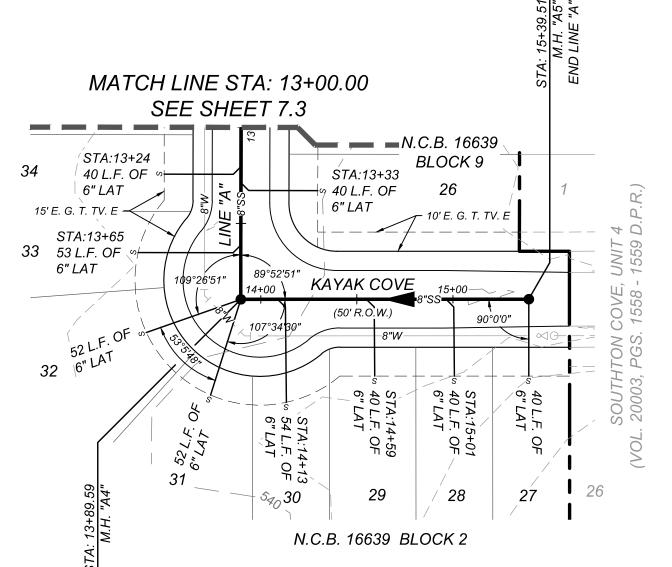
PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE (S.A.W.S.) STANDARD SPECIFICATION. LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12 INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. PERMITS AND/OR WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED

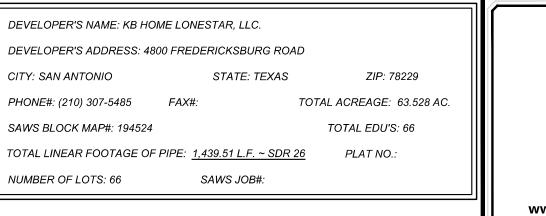
1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SAN ANTONIO WATER SYSTEM 2. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE MEET THE REQUIREMENTS OF ASTM D2241. CONTRACTOR SHALL CENTER A 20 FOOT JOINT OF 160 P.S.I. PRESSURE RATED P.V.C. AT THE PROPOSED WATER CROSSING (NO SEPARATE PAY ITEM).

REFERENCE SHEET 7.1, SANITARY SEWER GENERAL NOTES, S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS. 3. SEE THIS SHEET FOR BENCHMARK INFORMATION. . PIPE TYPE DESIGNATIONS ARE SDR 26.

5. SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL. 6. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING WITH ONE 20' JOINT CENTERED AT THE









Engineering & Design

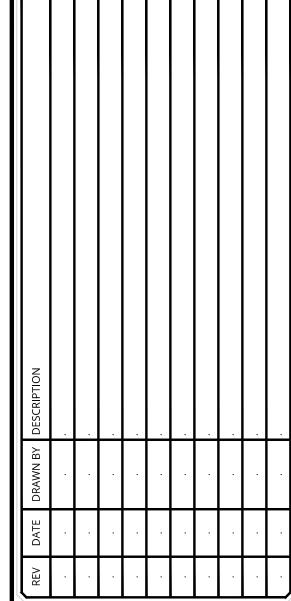
www.colliersengineering.com

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Formerly Known as



VISIT: WWW.CALL811.COM





SOUTHTON COVE, UNIT 5 PLAT# 25-11800277

KB HOME LONE STAR, LLC.

> SAN ANTONIO **BEXAR COUNTY** TEXAS

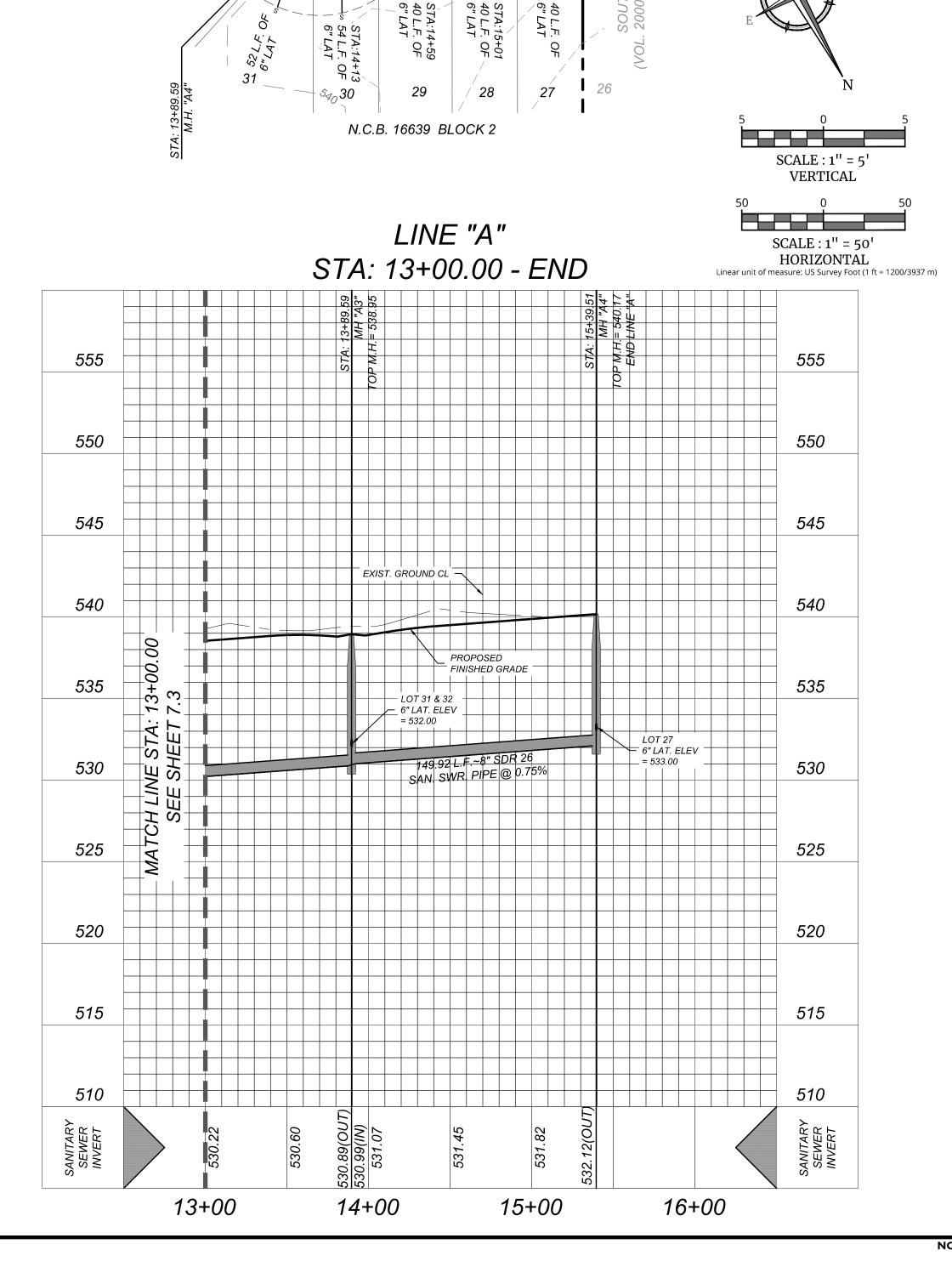
Colliers Engineering & Design

San Antonio, TX 78231 Phone: 210.979.8444 COLLIERS ENGINEERING & DESIGN, INC. TBPE Firm#: F-14909 TBPLS Firm#: 10194550 AS SHOWN 06/16/25

SAN ANTONIO (KFW) 3421 Paesanos

418-11-05 SS4181105 LINE "A" PLAN &

PROFILE (SHT 2 OF 2)



# SOUTHTON COVE, UNIT 5

# SAN ANTONIO, TX WATER IMPROVEMENTS

January 2022

### SAWS CONSTRUCTION NOTES COUNTER PERMIT AND GENERAL CONSTRUCTION PERMIT

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 Public Works Construction".
- E. Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).
   The contractor shall not proceed with any pipe installation work until they obtain a copy of the approved Counter Permit or General Construction Permit (GCP) from the consultant and has been notified by SAWS Construction

Inspection Division to proceed with the work and has arranged a meeting with the inspector and consultant for the work

requirements. Work completed by the contractor without an approved Counter Permit and/or a GCP will be subject to

3. 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.

removal and replacement at the expense of the contractors and/or the developer.

- 4. The Contractor is to make arrangements with the SAWS Construction Inspection Division at 210-233-2973, on notification procedures that will be used to notify affected home residents and/or property owners 48 hours prior to beginning any work.
- 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 at least 1 week 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 at least 1-2 weeks prior to construction whether shown on plans or not. Please allow up to 7 business days for locates requesting pipe location markers on SAWS facilities. The following contact information are supplied for verification purposes:
- SAWS Utility Locates: http://www.saws.org/Service/Locates
- COSA Drainage (210) 207-0724 or (210) 207-6026
   COSA Traffic Signal Operations (210) 206-8480
- COSA Traffic Signal Damages (210) 207-3951
  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. All work in Texas Department of Transportation (TxDOT) and/or Bexar County right-of-way shall be done in accordance with respective construction specifications and permit requirements.
- 9. The Contractor shall comply with City of San Antonio or other governing municipality's tree ordinances when excavating near trees.
- 10. The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an
- 11. Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request
  - Weekend Work: Contractors are required to notify the SAWS Inspection Construction Department 48 hours in advance to request weekend work. Request should be sent to constworkreq@saws.org.

    Any and all SAWS utility work installed without holiday/weekend approval will be subject to be uncovered for
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- 13. A copy of all testing reports shall be forwarded to SAWS Construction Inspection Division.

### Water Section

should be sent to constworkreq@saws.org.

General Section

1. Prior to tie-ins, any shutdowns of existing mains of any size must be coordinated with the SAWS Construction Inspection Division at least one week 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.

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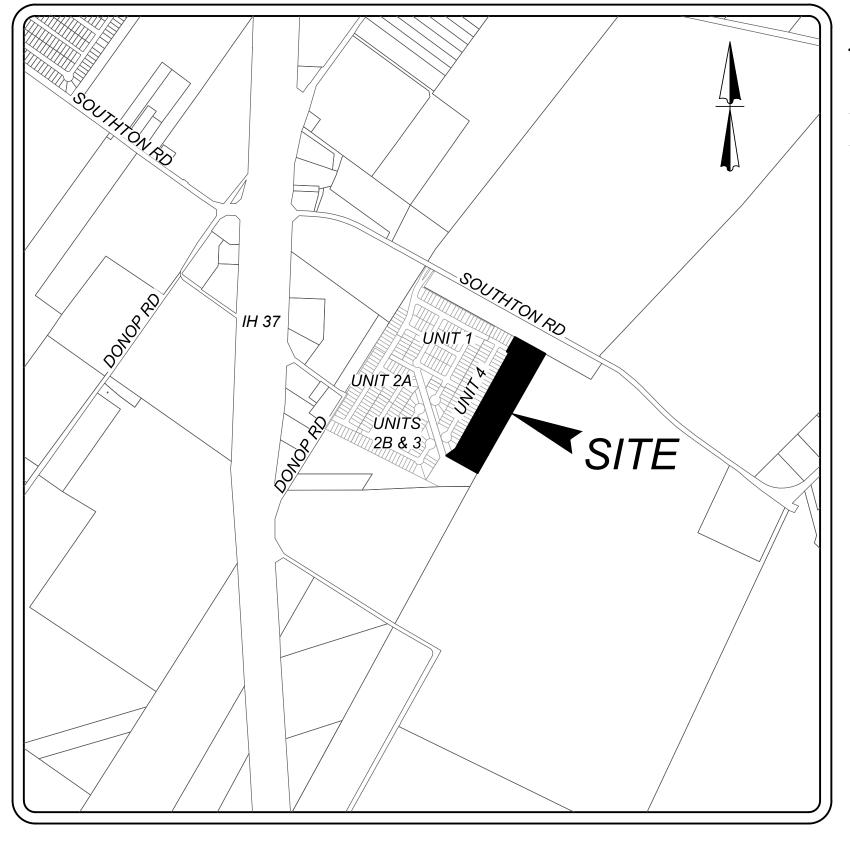
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LOCATION MAP NOT-TO-SCALE

OWNER INFORMATION: KB HOME LONESTAR, LLC. 4800 FREDERICKSBURG RD. SAN ANTONIO, TX 78229 PHONE: (210) 301 - 5485

### INDEX

SHEET TITLE	SHEET NUMBER
WATER DISTRIBUTION COVER SHEET	8.1
WATER DISTRIBUTION PLAN	8.2

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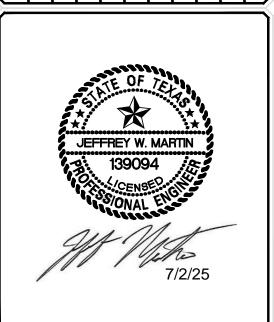
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FOR STATE SPECIFIC DIRECT PHONE NUMBERS

VISIT: WWW CALL811 COM

PROTECT YOURSELF

ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE



SOUTHTON COVE, UNIT 5 PLAT# 25-11800277

FOR

KB HOME

LONE STAR, LLC.

SAN ANTONIO BEXAR COUNTY TEXAS

**Colliers**Engineering & Design

SAWS PRESSURE ZONE: 720 (PZ)

TOTAL ACREAGE: 63.528 AC.

TOTAL EDU'S: 66

DEVELOPER'S NAME: KB HOME LONESTAR, LLC.

CITY: SAN ANTONIO

PHONE#: (210) 307-5485

SAWS BLOCK MAP#: 19252

NUMBER OF LOTS: 66

DEVELOPER'S ADDRESS: 4800 FREDERICKSBURG ROAD

TOTAL LINEAR FOOTAGE OF PIPE: 1,494 L.F. 8"C-900 PVC

340 L.F. 2" H.D.P.E. PIPE

SAWS JOB#:

ring Phone: 210.979.8444
gn COLLIERS ENGINEERING & DESIGN, II
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SAN ANTONIO (KFW)

3421 Paesanos

San Antonio, TX 78231

AS SHOWN 06/16/25 JA

ROJECT NUMBER: DRAWING NAME:
418-11-05 CVOW4181105

HEET TITLE:

STORM WATER POLLUTIOIN PREVENTION DETAILS

9.2

CAUTION!!: THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TEST A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

### FIRE FLOW NOTE:

LOT 908

3 - 6" CONDUITS

2 - 4" CONDUITS

IN AN EFFORT TO MEET THE CITY OF SAN ANTONIO'S FIRE FLOW REQUIREMENTS FOR THE PROPOSED RESIDENTIAL DEVELOPMENT, THE PUBLIC WATER MAIN SYSTEM HAS BEEN DESIGNED FOR A MINIMUM FIRE FLOW DEMAND OF 1 500 GPM AT 25 PSI RESIDUAL PRESSURE. THE FIRE FLOW REQUIREMENTS FOR INDIVIDUAL STRUCTURES WILL BE REVIEWED DURING THE BUILDING PERMIT PROCESS IN ACCORDANCE WITH THE PROCEDURES SET FORTH BY THE CITY OF SAN ANTONIO DIRECTOR OF DEVELOPMENT SERVICES DEPARTMENT AND THE SAN ANTONIO FIRE DEPARTMENT FIRE MARSHAL.

### PRESSURE REDUCING VALVE (PRV) NOTE.

CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 565 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH OCATIONS WHERE THE GROUND LEVEL IS BELOW 565 FEET, THE DEVELOPER OR BUILDER SHALL INSTALL AT EACH LOT, ON THE CUSTOMER'S SIDE OF THE METER, AN APPROVED TYPE PRESSURE REGULATOR IN CONFORMANCE WITH THE PLUMBING CODE OF THE CITY OF SAN ANTONIO. NO DUAL SERVICES ALLOWED FOR ANY LOT(S) IF \*PRV IS / ARE REQUIRED FOR SUCH LOT(S), ONLY SINGLE SERVICE CONNECTIONS SHALL BE ALLOWED. WATER SERVICES WHERE PRV'S REQUIRED ARE DESIGNATED BY AN ASTERISK (  $^st$  ).

\*NOTE: A PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE(PRV)

- 2" BLOWOFF (PERM.)

DRAIN "A"

SEWER EASEMENT

(VOL. 6459, PG. 958 D.P.R.)

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 ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS. PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR

AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY

ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND

CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND

PROVIDE JOINT RESTRAINING HARNESS OR FIELD LOCK GASKETS AT ALL

JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL INSURE THAT

ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT OF PIPE WITH NO

JOINTS ON EACH SIDE OF THE FITTING. JOINT RESTRAINTS AND RETAINER

GLANDS SHALL BE CALCULATED BY SAWS APPROVED PROGRAMS. THERE

JOINT RESTRAINING HARNESS AND GASKETS, BUT SHALL BE SUBSIDIARY

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL

TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY.

OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12 INCH

COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED

ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND

LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. PERMITS AND/OR WILL NOT BE

VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

WILL BE NO SEPARATE PAY ITEM FOR RETAINER GLANDS AND OTHER

TO THE UNIT COST PER LINEAL FOOT OF PIPE INSTALLED.

CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN

ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH

JOINT RESTRAINT NOTE.

EXCAVATION.

3. WATER METER BY LOCATIONS BY LOCATIONS ARE SHOWN SYMBOLICALLY TO SERVICE THE LOTS BUT SHALL BE LOCATED IN ACCORDANCE WITH THE STANDARD S.A.W.S. WATER DETAILS & SPECIFICATIONS.

1. ALL PVC PIPE 8" TO BE A MINIMUM OF C-900 DR 18 CLASS 235.

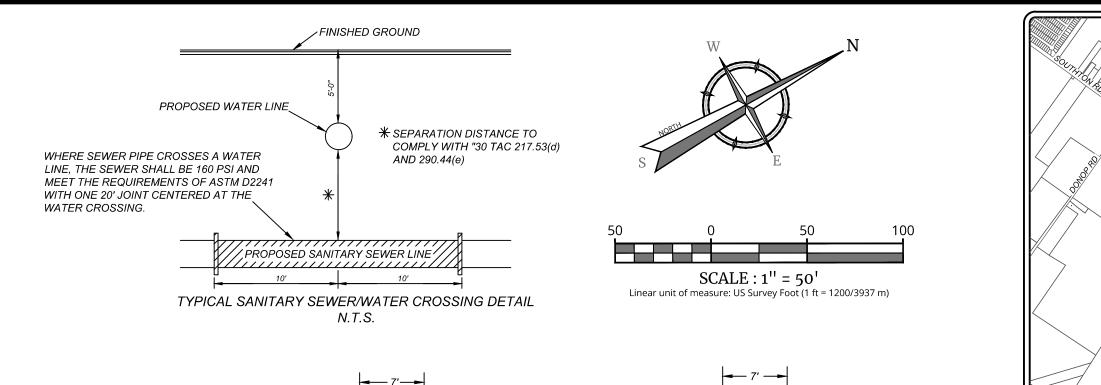
2. FOR TYPICAL STREET SECTIONS SEE DETAIL THIS SHEET.

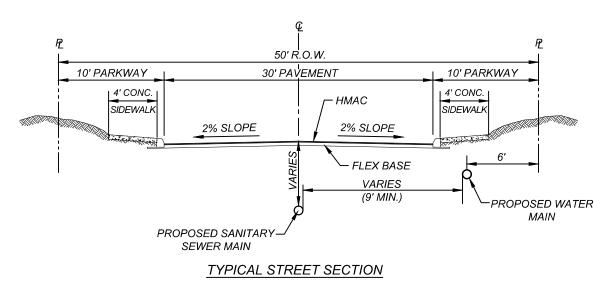
4. WHERE WATER SERVICES AND LIGHT POLE FOUNDATIONS ARE PROPOSED TO BE AT THE SAME LOT CORNERS, SERVICE TAPS AND LEADS SHOULD BE AT LEAST 3 FEET FROM THE LIGHT POLE

5. ALL VALVES SHALL READ "OPEN RIGHT"

WATER PLAN NOTES:

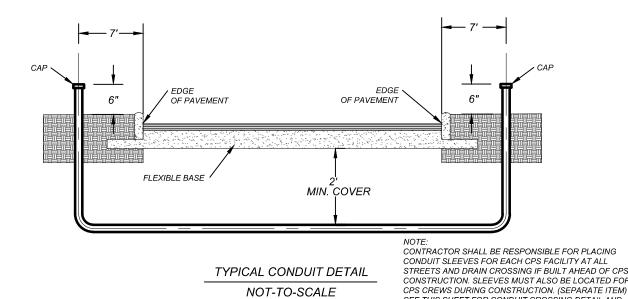
- 6. ALL PVC PIPE TO BE C-900 CLASS 150 (DR 18.)
- 7. FOR PRV DETAIL SEE S.A.W.S. STANDARD DETAIL DD-833-03.





UNPLATTED 263.061 ACRES (VOL. 4587, PGS. 472 - 480 O.P.R.)

OWNER: CITY PUBLIC SERVICE BOARD



LEGEND PROPOSED WATER MAIN = — W — PROPOSED WATER SERVICE & METER PROPOSED WATER 3/4" IRRIGATION SERVICE & METER BOX PROPOSED FIRE HYDRANT PROPOSED WATER VALVE PROPOSED SANITARY SEWER MAIN PROPOSED ELECTRIC, GAS, TELE., & CABLE TV EASEMENT EXISTING WATER MAIN EXISTING FIRE HYDRANT

(VOL. 6459, PG. 958 D.P.R.)

CITY: SAN ANTONIO

PHONE#: (210) 307-5485

SAWS BLOCK MAP#: 19252

NUMBER OF LOTS: 66

DEVELOPER'S NAME: KB HOME LONESTAR, LLC.

DEVELOPER'S ADDRESS: 4800 FREDERICKSBURG ROAD

TOTAL LINEAR FOOTAGE OF PIPE: 1,494 L.F. 8"C-900 PVC

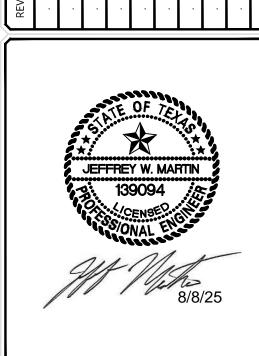
STATE: TEXAS

368 L.F. 2" H.D.P.E. PIPE

SAWS JOB#:

**LOCATION MAP** 

NOT-TO-SCALE



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PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE

ormerly Known as

SOUTHTON COVE, UNIT 5 PLAT# 25-11800277

FOR **KB HOME** LONE STAR, LLC.

> SAN ANTONIO **BEXAR COUNTY** TEXAS

Colliers Engineering & Design

SAWS PRESSURE ZONE: 720 (PZ)

ZIP: 78229 TOTAL ACREAGE: 10.63 AC

TOTAL EDU'S: 66

PLAT NO.: 25-1180027

San Antonio, TX 78231 Phone: 210.979.8444 COLLIERS ENGINEERING & DESIGN, INC TBPE Firm#: F-14909 TBPLS Firm#: 10194550

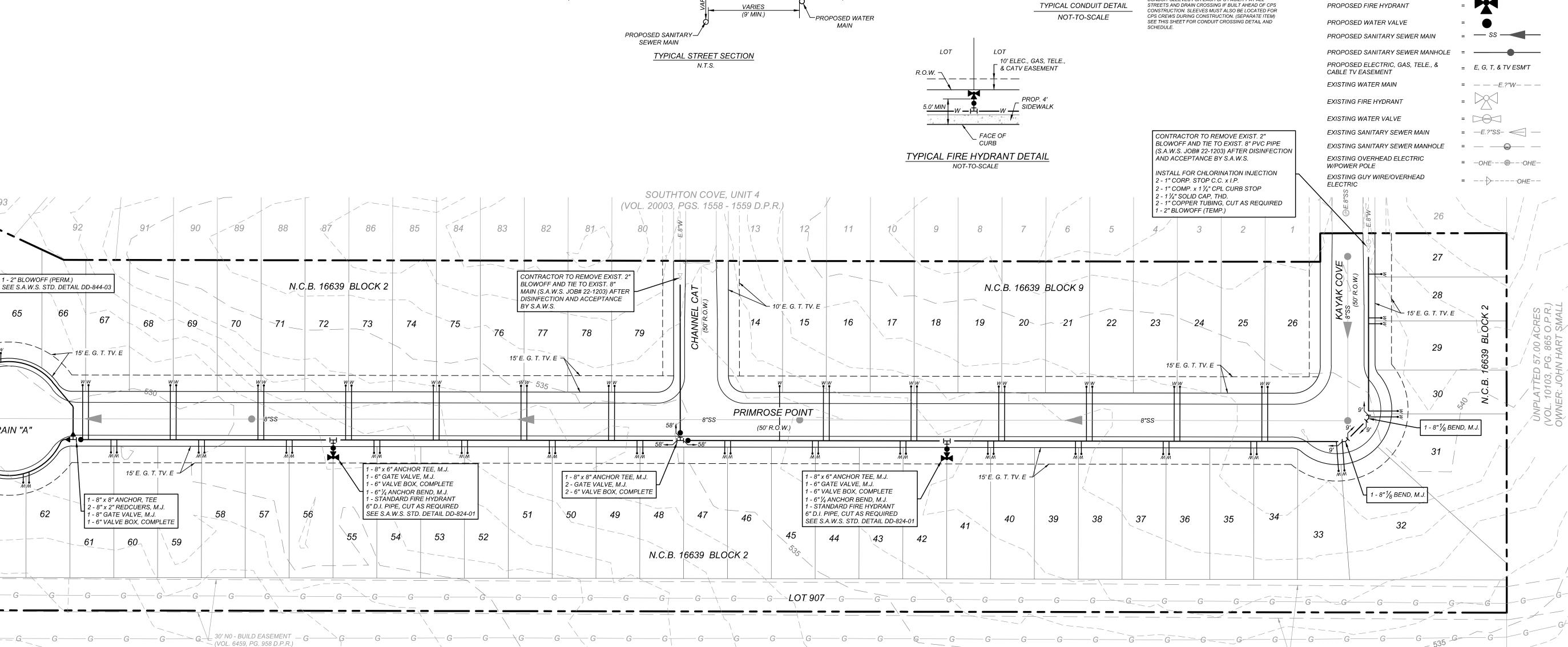
SAN ANTONIO (KFW)

3421 Paesanos

Parkway

W4181105 418-11-05

WATER DISTRIBUTION PLAN



### INSTALLATION:

- 1. ALL OPERATORS SHALL SUBMIT A NOTICE OF INTENT (NOI) AT LEAST 48 HOURS IN ADVANCE AND ALL BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE IN PLACE PRIOR TO STARTING CONSTRUCTION ACTIVITIES.
- 2. CONTRACTOR TO ENSURE THAT STRUCTURAL BMP'S ARE INSTALLED WITHIN THE LIMITS OF THE SITE BOUNDARY.
- 3. CONTRACTOR MAY INSTALL THE BEST MANAGEMENT PRACTICES IN PHASES THAT COINCIDE WITH THE DISTURBANCE OF UP GRADIENT AREAS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
- 4. CONTRACTOR TO VERIFY SUFFICIENT VEGETATION IN AREAS DENOTED AS VEGETATED FILTER STRIP. IF INSUFFICIENT VEGETATION EXISTS, CONTRACTOR SHALL IMPLEMENT A DIFFERENT BEST MANAGEMENT PRACTICE AND WILL SHOW IT ON THIS PLAN WITH NOTATION IN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.

### **MAINTENANCE AND INSPECTION:**

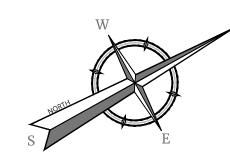
- 1. CONTRACTOR SHOULD LIMIT CONSTRUCTION ACTIVITIES TO ONLY THOSE AREAS SHOWN TO BE DISTURBED ON THIS PLAN. IF ADDITIONAL VEGETATED AREAS ARE DISTURBED, THEY SHOULD BE PROTECTED WITH APPROPRIATE BEST MANAGEMENT PRACTICES UNTIL THE AREAS HAVE BEEN STABILIZED AS PER THE SPECIFICATIONS OF THE SWPPP. THE AREAS OF THIS ADDITIONAL SOIL DISTURBANCE AND THE MEASURES USED SHOULD BE SHOWN ON THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
- 2. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION OF BMP'S AS PER THE SPECIFICATIONS OF THE SWPPP. THE CONTRACTOR MAY MODIFY THE CONTROLS AS NECESSARY TO PREVENT SEDIMENT RUNOFF. THESE MODIFICATIONS SHOULD BE SHOWN AND THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
- 3. LOCATION OF CONSTRUCTION ENTRANCE/EXIT. CONCRETE WASHOUT PIT. AND EQUIPMENT AND STORAGE ARE TO BE FIELD DETERMINED. LOCATIONS SHALL BE

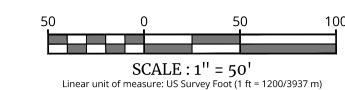
### PROJECT COMPLETION:

- 1. ALL DISTURBED AREAS ARES NOT COVERED BY IMPERVIOUS COVER ARE TO BE STABILIZED PER THE SWPPP AND PROJECT SPECIFICATIONS PRIOR TO REMOVAL OF ANY BMP'S AND/OR PRIOR TO FILING A NOTICE OF TERMINATION (NOT).
- 2. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN PHASES IF ALL UPGRADIENT AREAS HAVE BEEN STABILIZED PER SWPPP AND PROJECT SPECIFICATIONS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
- 3. CONTRACTOR TO ENSURE THEY HAVE MET ALL REQUIREMENTS OF THE SWPPP BEFORE FILING A NOTICE OF TERMINATION (NOT).

### **GENERAL**:

- 1. THIS EXHIBIT IS TO BE USED FOR THE PURPOSES OF STORMWATER POLLUTION PREVENTION ONLY. ALL OTHER CIVIL ENGINEERING INFORMATION SHOULD BE OBTAINED FROM THE APPROPRIATE CONSTRUCTION DOCUMENTS.
- 2. THE PURPOSE OF THE SIGNATURE AND SEAL OF THE ENGINEER ON THIS DOCUMENT IS TO DEMONSTRATE COMPLIANCE WITH THE TPDES STORMWATER POLLUTION PREVENTION PLAN REGULATIONS ONLY.
- 3. ALL OWNERS/OPERATORS ARE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH THE STORMWATER POLLUTION PREVENTION PLAN AND COMPLYING WITH THE REGULATIONS CONTAINED WITHIN IT.





## LEGEND LIMITS OF CONSTRUCTION — — 570 — — EXISTING CONTOURS PROPOSED CONTOURS FLOW ARROW STABILIZED CONSTRUCTION ENTRANCE/EXIT CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA. CONCRETE TRUCK WASHOUT PIT DISTURBED AREA

ROCK BERM

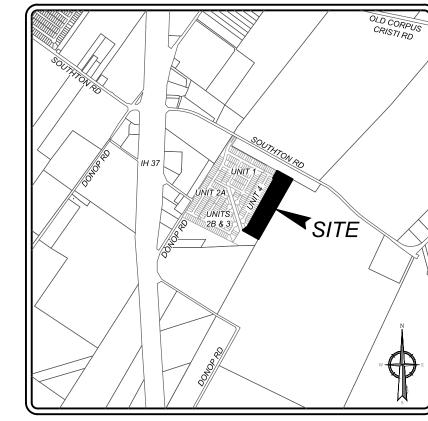
SILT FENCE PHASE 1

(SILT FENCE PHASE 2 ALONG THE FRONT OF

LOTS TO BE INSTALLED AFTER PAVING)

NATURAL VEGETATIVE BUFFER

INLET WITH PROTECTION (GRAVEL FILTERS BAGS)





### **COORDINATION NOTE:**

- 1. CONTACT TIME WARNER TO COORDINATE CABLE TV SERVICE. (210) 244-0500
- 2. CONDUIT FOR ELECTRICAL SERVICE. CONFIRM REQUIREMENTS AND COORDINATE WITH CPS FOR INSPECTION. (210) 353-2246.
- 3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.
- 4. CONTRACTOR TO COORDINATE WITH CPS PRIOR
- TO CONSTRUCTION TO PLAN ELECTRIC SERVICE. 5. CONTRACTOR TO COORDINATE WITH SAWS TO
- PLAN WATER AND SANITARY SEWER SERVICES

6. CONTRACTOR SHALL CONTACT 1-800-DIG-TEST A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

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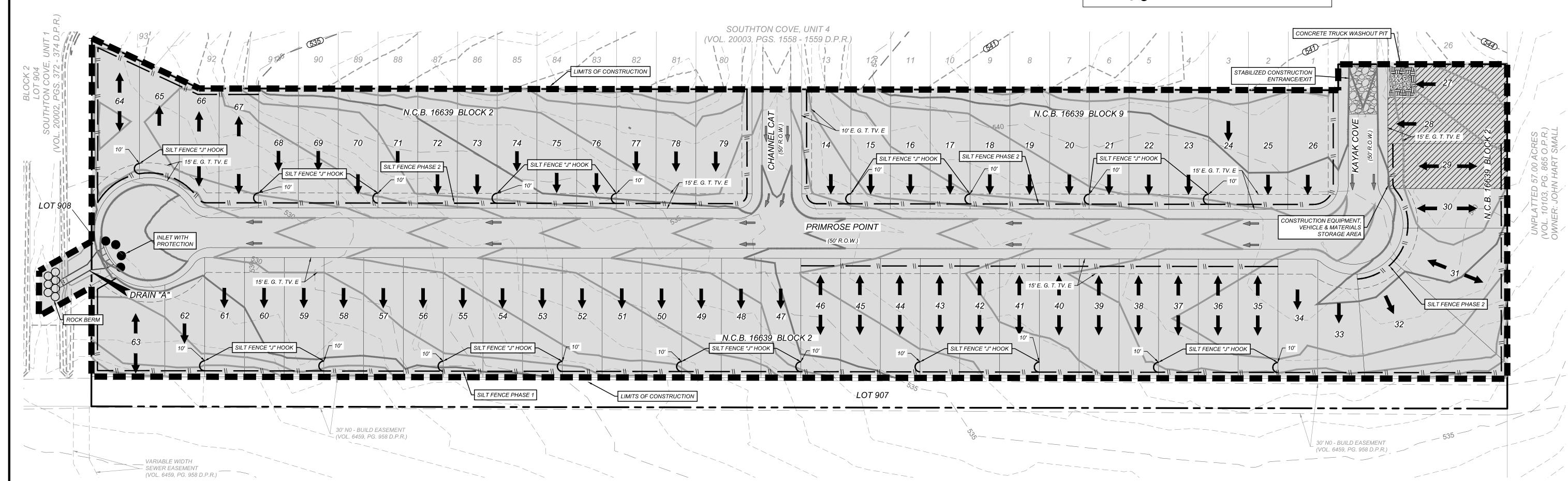
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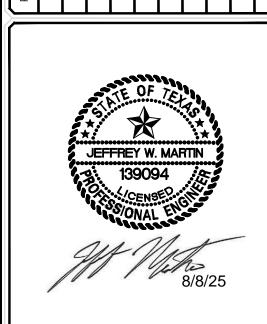
Formerly Known as



UNPLATTED 263.061 ACRES (VOL. 4587, PGS. 472 - 480 O.P.R.) OWNER: CITY PUBLIC SERVICE BOARD

### SW3P MODIFICATIONS

DATE	SIGNATURE	DESCRIPTION



SOUTHTON COVE, UNIT 5 PLAT# 25-11800277

**KB HOME** LONE STAR, LLC.

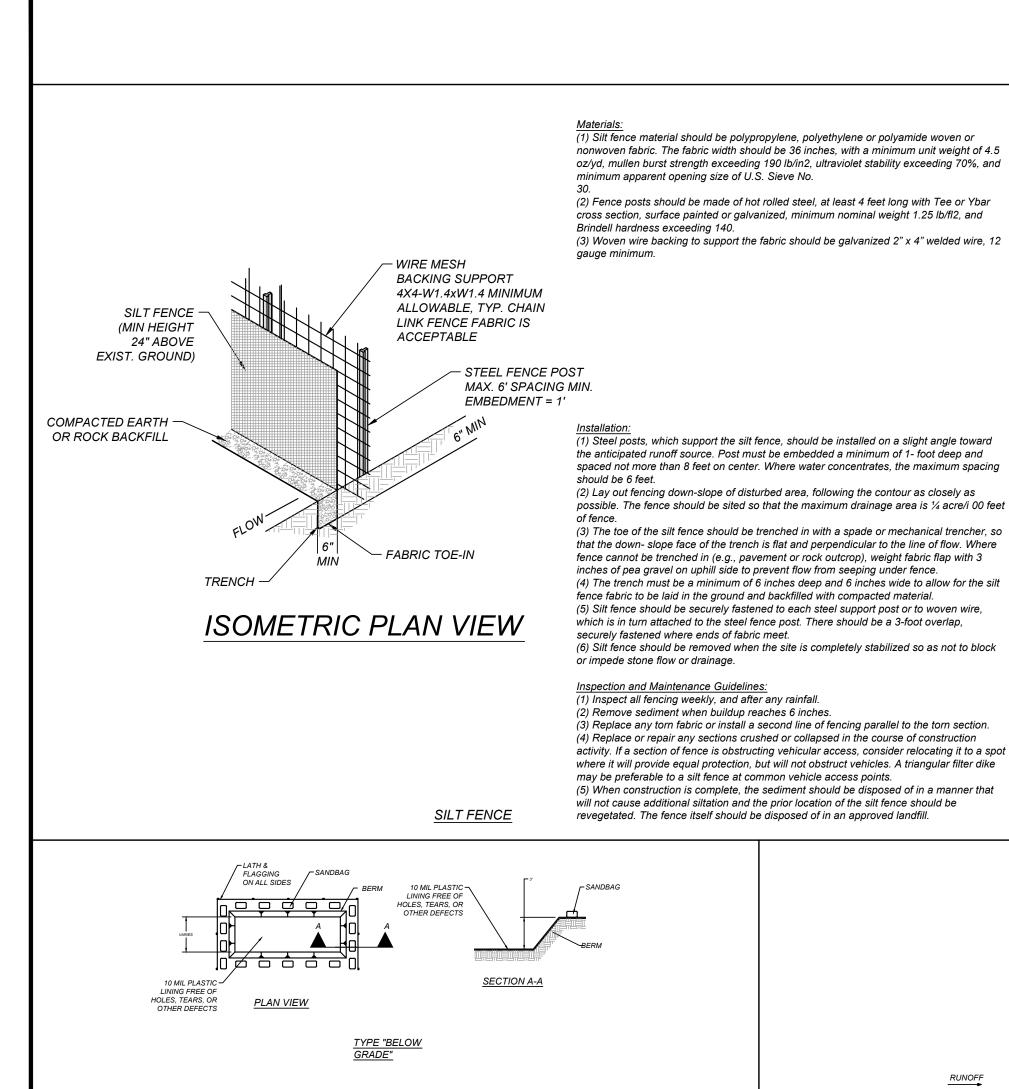
SAN ANTONIO **BEXAR COUNTY** TEXAS



SAN ANTONIO (KFW) 3421 Paesanos San Antonio, TX 78231 Phone: 210.979.8444 COLLIERS ENGINEERING & DESIGN, INC. TBPE Firm#: F-14909 TBPLS Firm#: 10194550

SW3P4181105 418-11-05

STORM WATER POLLUTION PREVENTION PLAN



**GENERAL NOTES:** 

GENERAL NOTES:

SECTION B-B

SECTION A-A

DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN

WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO

FROM STORM WATER RUNOFF AND AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.

CONCRETE TRUCK WASHOUT PIT

THE FILTER BAG MATERIAL SHALL BE MADE OF POLYPROPYLENE.

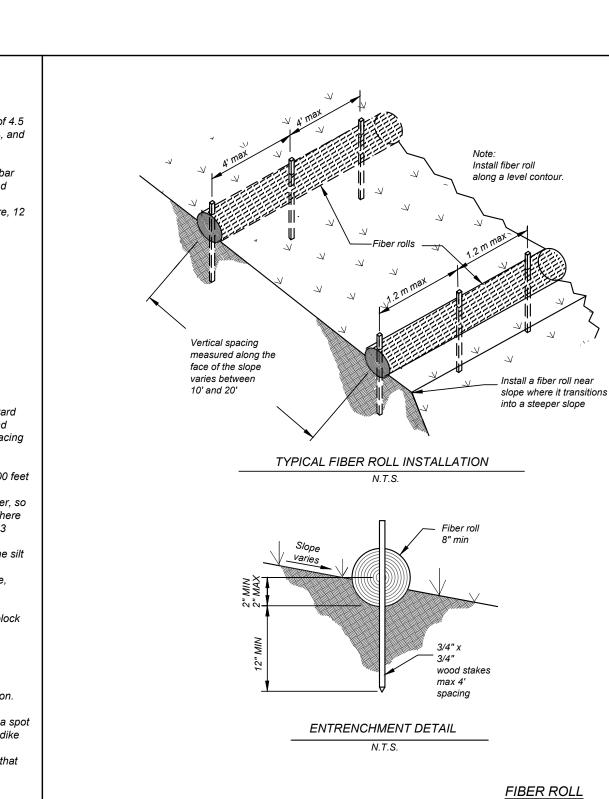
GRAVEL FILTER BAG DETAIL

POLYETHYLENE OR POLYAMIDE WOVEN FABRIC, MIN UNIT WEIGHT OF 4 OUNCES/SY, MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET

THE FILTER BAG SHALL BE FILLED WITH CLEAN, MEDIUM TO COARSE GRAVEL (0.31

WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION

SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.



THE MATERIAL, INSTALLATION, INSPECTION, AND MAINTENANCE OF FIBER ROLLS WILL BE PER THE MANUFACTURE'S SPECIFICATIONS AND SHALL ALSO COMPLY WITH THE TEXAS COMMISSION OF ENVIRONMENTAL QUALITY CURRENT "TECHNICAL GUIDANCE ON BEST MANAGEMENT PRACTICES" AS NOTED BELOW.

(1) Core material: Core material should be biodegradable or recyclable. Material may be compost, mulch, aspen wood fibers, chipped site vegetation, agricultural rice or wheat straw, coconut fiber, 100% recyclable fibers, or similar materials.

(2) Containment Mesh: Containment mesh should be 100% biodegradable, photodegradable or recyclable such as burlap, twine, UV photodegradable plastic, polyester, or similar material. When the fiber role will remain in place as part of a vegetative system use biodegradable or photodegradable mesh. For temporary installation recyclable mesh is recommended.

(1) Locate fiber rolls on level contours spaced as follows: Slope inclination of 4:1 (H:V) or flatter: Fiber rolls should be placed at a maximum interval of 20 ft.

the fiber roll.

maximum interval of 15 ft. (a closer spacing is more effective). Slope inclination 2:1 (H:V) or greater: Fiber Rolls should be placed at a maximum interval of 10 ft. (a closer spacing is more effective). (2) Turn the ends of the fiber roll up slope to prevent runoff from going around the

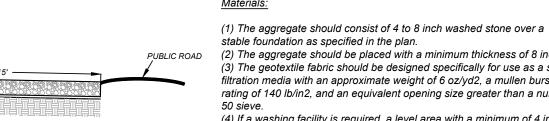
(3) Stake fiber rolls into a 2 to 4 in. deep trench with a width equal to the diameter of

Slope inclination between 4:1 and 2:1 (H:V): Fiber Rolls should be placed at a

(4) Drive stakes at the end of each fiber roll and spaced 4 ft maximum on center. (5) Use wood stakes with a nominal classification of 0.75 by 0.75 in. and minimum (6) If more than one fiber roll is placed in a row, the rolls should be overlapped, not

Inspection and Maintenance Guidelines: (1) Inspect prior to forecast rain, daily during extended rain events, after rain events,

and weekly. (2) Repair or replace split, torn, unraveling, or slumping fiber rolls. (3) If the fiber roll is used as a sediment capture device, or as an erosion control device to maintain sheet flows, sediment that accumulates behind the role must be periodically removed in order to maintain its effectiveness. Sediment should be removed when the accumulation reaches one-half the designated sediment storage depth, usually one-half the distance between the top of the fiber roll and the adjacent ground surface. Sediment removed during maintenance may be incorporated into earthwork on the site or disposed of at an appropriate location.



### Materials:

stable foundation as specified in the plan. (2) The aggregate should be placed with a minimum thickness of 8 inches (3) The geotextile fabric should be designed specifically for use as a soil filtration media with an approximate weight of 6 oz/yd2, a mullen burst rating of 140 lb/in2, and an equivalent opening size greater than a number (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.

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. (4) If the slope toward the road exceeds 2%, construct a ridge, 6 to 8 inches 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 where wet conditions are anticipated.

(1) Avoid curves on public roads and steep slopes. Remove vegetation and other objectionable material from the foundation

Installation: (North Carolina, 1993)

<sup>FABRIC</sup> CROSS-SECTION OF A CONSTRUCTION ENTRANCE/EXIT

AGGREGATE

*TEMPORARY* 

CONSTRUCTION ENTRANCE/EXIT

GEOTEXTILE FABRIC / TO STABILIZE FOUNDATION

The entrance should be maintained in a condition, which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair andlor cleanout of any measures used to trap sediment. (2) All sediment spilled, dropped, washed or tracked onto public rights-of-way should be removed immediately by contractor. (3) When necessary, wheels should be cleaned to remove sediment prior to entrance onto public right-of-way. (4) When washing is required, it should be done on an area stabilized with crushed stone that drains into an approved sediment

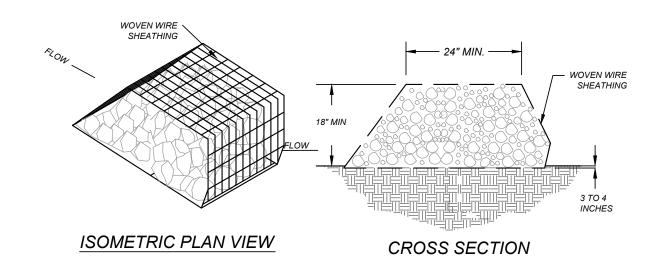
(5) All sediment should be prevented from entering any storm drain, ditch or water course by using approved methods.

(6) Place stone to dimensions and grade shown on plans. Leave surface smooth and slope for drainage.

(7) Divert all surface runoff and drainage from the stone pad to a sediment trap or basin.

(8) Install pipe under pad as needed to maintain proper public road drainage.

### STABILIZED CONSTRUCTION ENTRANCE / EXIT



(1) The berm structure should be. secured with a woven wire sheathing having maximum opening of 1 inch and a minimum wire diameter of 20 gauge galvanized and should be secured with shoat rings. (2) Clean, open graded 3- to 5-inch diameter rock should be used, except in areas where high velocities

or large volumes of flow are expected, where 5- to 8-inch diameter rocks may be used.

(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. (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 (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, airl the berm retains its shape when walked upon. (5) Berm should be built along the contour at zero percent grade or as near as possible. (6) The ends of the berm should be tied into existing upslope grade and the berm should be buried in a

Inspection and Maintenance Guidelines:

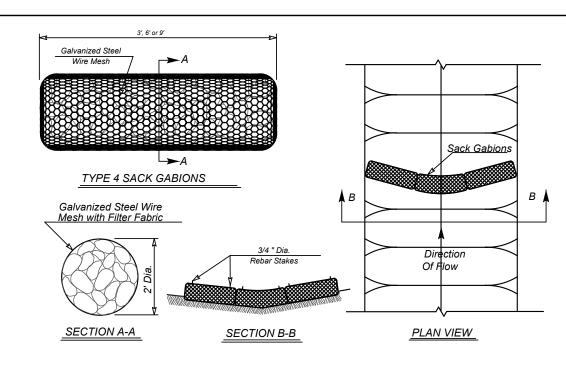
(1) Inspection should be made weekly and after each rainfall by the responsible party. For installations in streambeds, additional daily inspections should be made. (2) Remove sediment and other debris when buildup reaches 6 inches and dispose of the accumulated silt in an approved manner that will not cause any additional siltation. (3) Repair any loose wire sheathing.

(4) The berm should be reshaped as needed during inspection. (5) The berm should be replaced when the structure ceases to function as intended due to silt

trench approximately 3 to 4 inches deep to prevent failure of the control.

accumulation among the rocks, washout, construction traffic damage, etc. (6) The rock berm should be left in place until all upstream areas are stabilized and accumulated silt

### **ROCK BERM**



TYPE 4 SACK GABIONS

### **GENERAL NOTES:**

THE TOP OF THE SACK GABIONS SHOULD BE LEVEL AND ORIENTED PERPENDICULAR TO THE DIRECTION OF FLOW. FILTER FABRIC MATERIAL SHALL BE FASTENED TO WOVEN WIRE

FILTER FABRIC MATERIAL SHOULD MEET THE FOLLOWING SPECIFICATIONS: RESISTANT TO ULTRAVIOLET LIGHT, FABRIC
SHOULD BE NON-WOVEN GEOTEXTILE WITH MINIMUM WEIGHT OF 3.5 OUNCES PER SQUARE YARD, MINIMUM MULLEN BURST STRENGTH O 200 POUNDS PER SQUARE INCH AND A FLOW THRU RATE OF 120  ${\it GALLONS\ PER\ MINUTE\ PER\ SQUARE\ FOOT\ OF\ FRONTAL\ AREA.}$ STONE SIZE: ±4"-8" OPEN GRADED CRUSHED LIMESTONE. INSPECT WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR

WHEN SILT REACHES A DEPTH OF 6 INCHES OR MORE ABOVE NATURAL GROUND, SILT SHALL BE REMOVED AND DISPOSED IN AN APPROVED MANNER THAT WILL NOT CONTRIBUTE TO RESILTATION. CONTAMINATED SEDIMENT MUST BE REMOVED AND DISPOSED OF OFF-SITE IN ACCORDANCE WITH APPLICABLE REGULATIONS.

& Design AS SHOWN

SW3PDT4181105 418-11-05

PREVENTION DETAILS

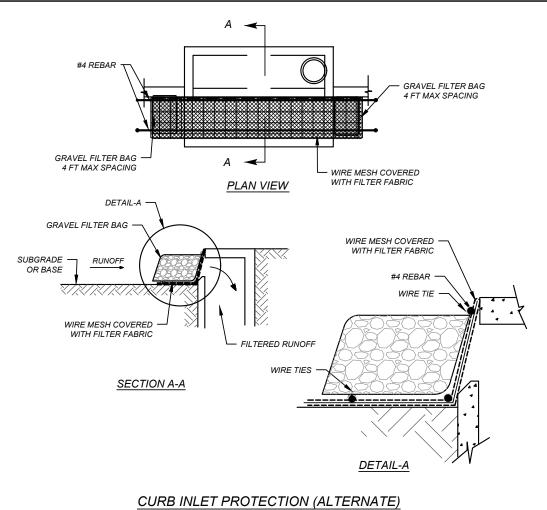
## └ FILTERED RUNOFF SECTION A-A

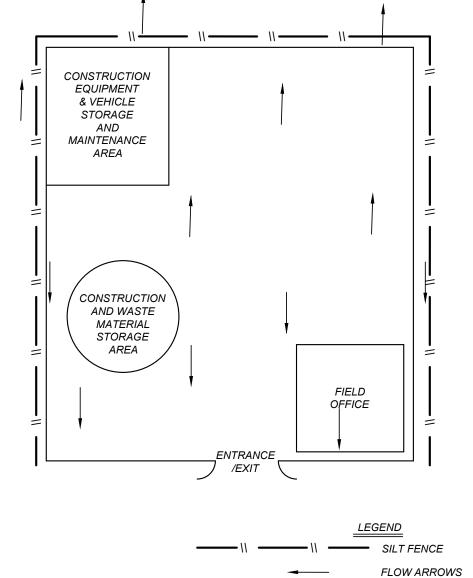
**GENERAL NOTES:** ALL STORM DRAINAGE SYSTEMS INLETS SHOULD FILTER RUNOFF BEFORE THE WATER IS DISCHARGED INTO STREAMS OR ONTO ADJACENT PROPERTIES, UNLESS TREATMENT IS PROVIDED ELSEWHERE.

IF NO ADDITIONAL DOWNSTREAM TREATMENT EXISTS, THE MAXIMUM DRAINAGE AREA TRIBUTARY TO AN AREA DRAIN INSTALLED WITH A GRAVEL FILTER SHOULD BE ONE ACRE.

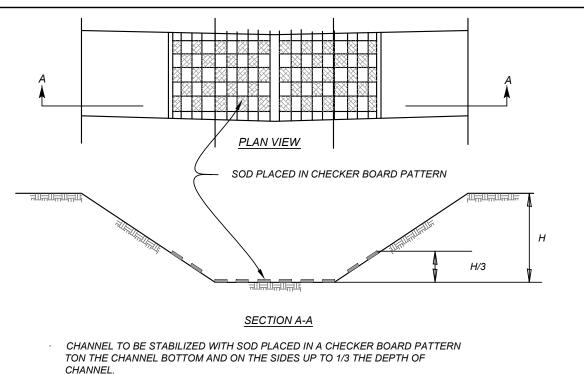
ALL CURB INLET GRAVEL FILTERS SHOULD BE INSPECTED AND REPAIRED AFTER EACH RUNOFF EVENT. SEDIMENT SHOULD BE REMOVED WHEN MATERIAL IS WITHIN THREE INCHES OF THE TOP OF THE CONCRETE BLOCKS. PERIODICALLY, THE GRAVEL SHOULD BE RAKED TO INCREASE INFILTRATION AND FILTERING OF RUNOFF WATERS.

CURB INLET PROTECTION GRAVEL FILTER BAGS





### TYPICAL CONSTRUCTION STAGING AREA



CHANNEL LINING

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