

# CIVIL CONSTRUCTION PLANS PAVING, GRADING & UTILITIES

FOR

# HENDRICK FARM

# CITY OF LUCAS, COLLIN COUNTY, TEXAS

APPROVED  
CITY OF LUCAS  
CITY ENGINEER DATE  
*[Signature]* 3-10-22

### SHEET INDEX

Sheet Number	Sheet Title
C-01	COVER SHEET
-	PRELIMINARY PLAT (1 OF 2)
-	PRELIMINARY PLAT (2 OF 2)
C-02	GENERAL NOTES
C-03	DEMOLITION PLAN (1 OF 3)
C-04	DEMOLITION PLAN (2 OF 3)
C-05	DEMOLITION PLAN (3 OF 3)
C-06	GRADING AND DRAINAGE PLAN (1 OF 6)
C-07	GRADING AND DRAINAGE PLAN (2 OF 6)
C-08	GRADING AND DRAINAGE PLAN (3 OF 6)
C-09	GRADING AND DRAINAGE PLAN (4 OF 6)
C-10	GRADING AND DRAINAGE PLAN (5 OF 6)
C-11	GRADING AND DRAINAGE PLAN (6 OF 6)
C-12	CHANNEL CROSS SECTIONS
C-13	PAVING PLAN & PROFILE - HENDRICK CIRCLE
C-14	PAVING PLAN & PROFILE - HENDRICK CIRCLE (CONT)
C-15	PAVING PLAN & PROFILE - WAYNE TRAIL
C-16	PAVING PLAN & PROFILE - WAYNE TRAIL (CONT)
C-17	PAVING PLAN & PROFILE BLONDY JHUNE ROAD
C-18	PAVING PLAN & PROFILE BLONDY JHUNE ROAD (CONT)
C-19	SIGNAGE PLAN
C-20	EXISTING DRAINAGE AREA MAP
C-21	DRAINAGE AREA MAP (1 OF 2)
C-22	DRAINAGE AREA MAP (2 OF 2)
C-23	DRAINAGE CALCULATIONS
C-24	STORM PROFILES (1 OF 2)
C-25	STORM PROFILES (2 OF 2)
C-26	DETENTION POND PLAN - POND 1
C-27	DETENTION POND PLAN - POND 2
C-28	DETENTION POND PLAN - POND 3
C-29	DETENTION POND PLAN - POND 4
C-30	DETENTION POND PLAN - POND 5
C-31	WATER PLAN (1 OF 2)
C-32	WATER PLAN (2 OF 2)
C-33	WATER PROFILES (1 OF 4)
C-34	WATER PROFILES (2 OF 4)
C-35	WATER PROFILES (3 OF 4)
C-36	WATER PROFILES (4 OF 4)
C-37	DRY UTILITY PLAN
C-38	EROSION CONTROL PLAN (1 OF 2)
C-39	EROSION CONTROL PLAN (2 OF 2)
C-40	EROSION CONTROL PLAN DETAILS
C-41	TRAFFIC CONTROL PLAN (1 OF 3)
C-42	TRAFFIC CONTROL PLAN (2 OF 3)
C-43	TRAFFIC CONTROL PLAN (3 OF 3)
C-44	TXDOT CONSTRUCTION DETAILS (1 OF 2)
C-45	TXDOT CONSTRUCTION DETAILS (2 OF 2)
C-46	CONSTRUCTION DETAILS (1 OF 3)
C-47	CONSTRUCTION DETAILS (2 OF 3)
C-48	CONSTRUCTION DETAILS (3 OF 3)

### PLAN SUBMITTAL/REVIEW LOG

1ST SUBMITTAL TO CITY	03/02/2018
2ND SUBMITTAL TO CITY	04/30/2018
3RD SUBMITTAL TO CITY	05/14/2018
4TH SUBMITTAL TO CITY	09/08/2021
5TH SUBMITTAL TO CITY	10/08/2021
6TH SUBMITTAL TO CITY	12/10/2021
7TH SUBMITTAL TO CITY	01/31/2022

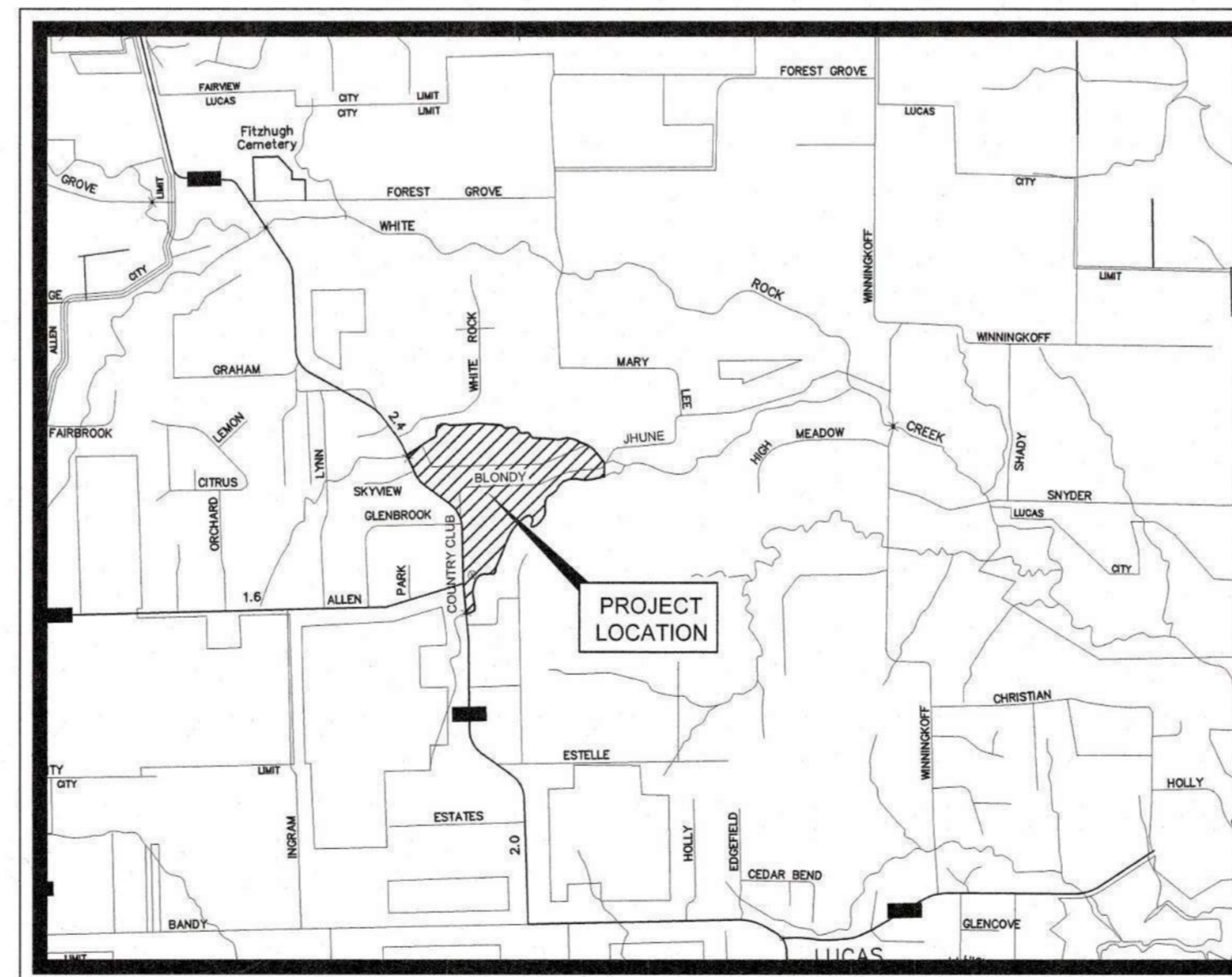
### ENGINEER

**Kimley»Horn**

13455 NOEL ROAD SUITE 700 DALLAS, TEXAS 75204  
STATE OF TEXAS REGISTRATION NO. F-928  
TEL: (972) 770-1300  
CONTACT: SARAH E. SCOTT, P.E.

### OWNER/DEVELOPER

HENDRICK FARM, LLC  
800 CENTRAL PARKWAY EAST, SUITE 100  
PLANO, TEXAS 75074  
TEL: (972) 422-4515  
CONTACT: RUTLEDGE HAGGARD



VICINITY MAP

N.T.S.

# JANUARY 2022



Know what's below.  
Call before you dig.



*[Signature]*  
01/31/2022

### RECORD DRAWING

THIS DRAWING HAS BEEN REVISED TO SHOW THOSE CHANGES DURING THE CONSTRUCTION PROCESS REPORTED BY THE CONTRACTOR TO KIMLEY-HORN AND ASSOCIATES, INC. AND CONSIDERED TO BE SIGNIFICANT. THIS DRAWING IS NOT GUARANTEED TO BE "AS BUILT" BUT IS BASED ON THE INFORMATION MADE AVAILABLE.

DATE: 05/19/2023 BY: SARAH SCOTT

THIS DOCUMENT, TOGETHER WITH THE CONCEPT AND DESIGN PRESENTED HERETO, IS AN INSTRUMENT OF SERVICE, AS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND SCOPE FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.







GLENBROOK CIRCLE  
(60-FOOT WIDE RIGHT-OF-WAY)

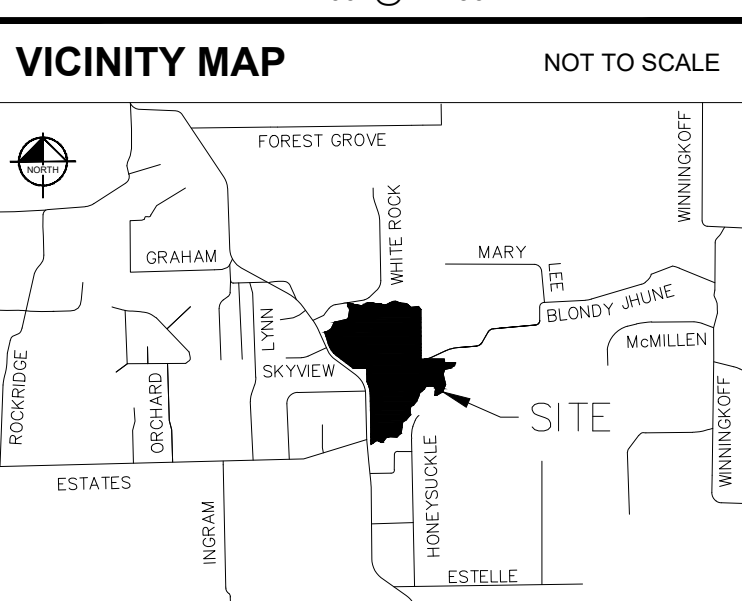
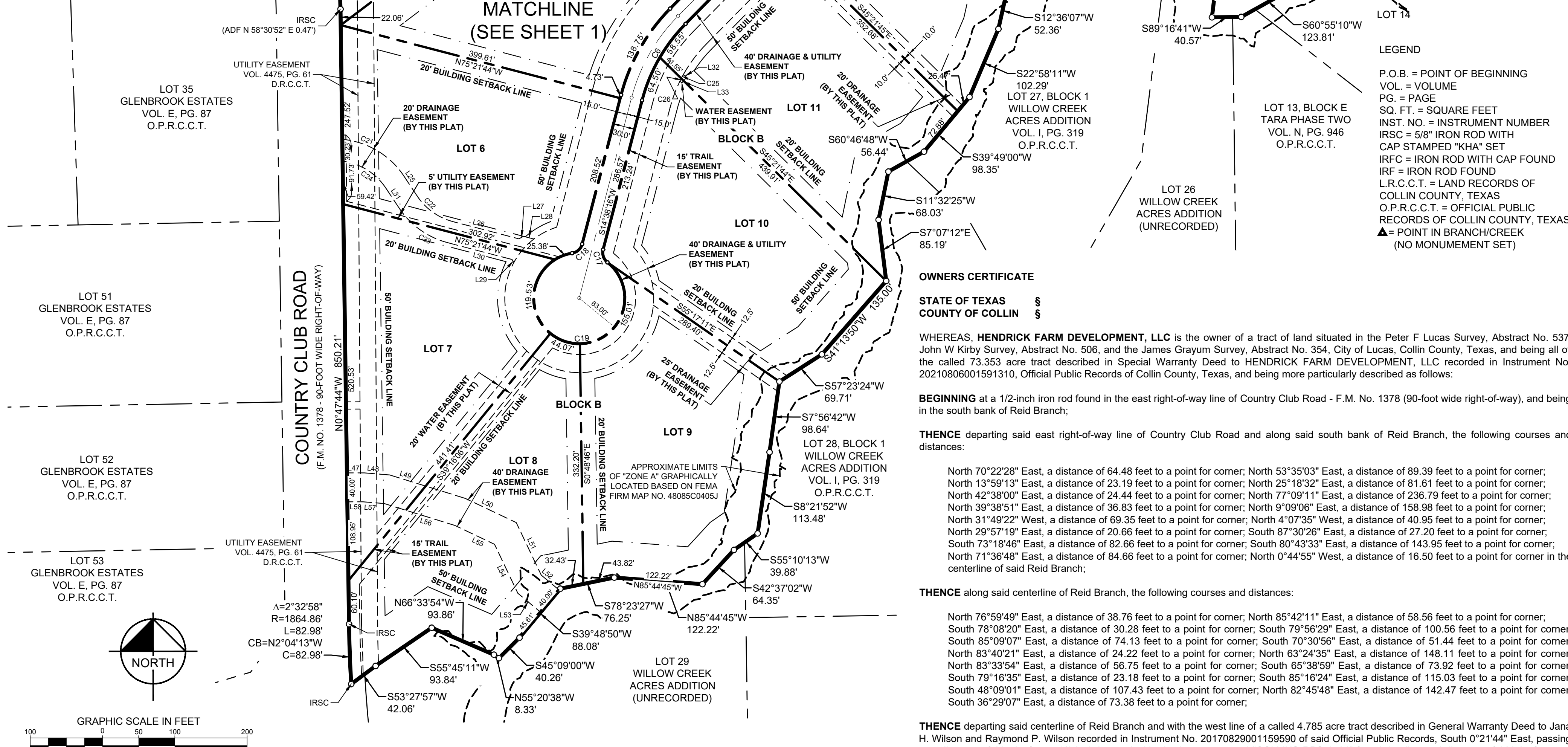


Table with columns: BLOCK A, BLOCK B, LOT NO., ACRES, SQ. FT.

CURVE TABLE with columns: NO., DELTA, RADIUS, LENGTH, CHORD BEARING, CHORD

LINE TABLE with columns: NO., BEARING, LENGTH, NO., BEARING, LENGTH

MATCHLINE  
(SEE SHEET 1)

OWNER'S DEDICATION

STATE OF TEXAS §  
COUNTY OF COLLIN §

NOW THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

That WE, HENDRICK FARM DEVELOPMENT, LLC, Owners, do hereby bind themselves and their heirs, assignees and successors of title this plat designating the hereinabove described property as HENDRICK FARMS ADDITION...

Furthermore, as the owner of the property described herein, and in consideration of establishing the subdivision described herein, we agree to the following:

- Every owner of fee simple title to every individual lot within the subdivision shall be a member of the homeowners' association;
The homeowners' association shall have the authority to collect membership fees;
As applicable as it pertains to conditions shown herein, the homeowners' association shall be responsible for the maintenance of all common areas...

This plat approved subject to all platting ordinances, rules, regulations and resolutions of the City of Lucas, Texas.

HENDRICK FARM DEVELOPMENT, LLC,
a Texas limited liability company

By:
R. Neil Crouch, II, President

STATE OF TEXAS §
COUNTY OF COLLIN §

BEFORE ME, the undersigned, a Notary Public in and for the said County and State, on this day personally appeared Rutledge Haggard, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purpose therein expressed and under oath stated that the statements in the foregoing certificate are true.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this \_\_\_ day of \_\_\_, 20\_\_.

Notary Public in and for the State of Texas

SURVEYORS CERTIFICATE

THAT I, J. Andy Dobbs, do hereby certify, that I prepared this plat from an actual on the ground survey of the land as described and that the corner monuments shown thereon were properly placed under my personal supervision in accordance with the Platting Rules and Regulations of the City of Lucas Planning and Zoning Commission.

Dated the \_\_\_ day of \_\_\_, 20\_\_.

PRELIMINARY PLAT
FOR INSPECTION PURPOSES ONLY

J. Andy Dobbs
Registered Professional Land Surveyor No. 6196
13455 Noel Road, Two Galleria Office Tower, Suite 700 Dallas, Texas 75240 Ph. 972-770-1300 andy.dobbs@kimley-horn.com

STATE OF TEXAS
COUNTY OF DALLAS

BEFORE ME, the undersigned, a Notary Public in and for the said County and State, on this day personally appeared Andy Dobbs known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purpose therein expressed and under oath stated that the statements in the foregoing certificate are true.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this \_\_\_ day of \_\_\_, 20\_\_.

Notary Public in and for the State of Texas

CERTIFICATE OF APPROVAL

This plat is hereby approved by the Planning and Zoning Commission of the City of Lucas.

Chairman, Planning and Zoning Commission Date
Dusty Kuykendall

ATTEST:

Signature Date

Print Name & Title

The Director of Public Works of the City of Lucas, Texas hereby certifies that the best of his/her knowledge or belief, this subdivision plat conforms to all requirements of the Lucas Development Code and with engineering construction standards and processes approved by the City of Lucas, Texas as to which his approval is required.

Director of Public Works Date
Scott Holden

The Director of Planning and Community Development hereby certifies that the best of his/her knowledge or belief, this subdivision plat conforms to all requirements of the Code of Ordinances, or as may have been amended or modified, as allowed, by the Planning and Zoning Commission as to which his/her approval is required.

Director of Planning and Community Development Date
Joseph Hilbourn

OWNER/APPLICANT:
HENDRICK FARM DEVELOPMENT, LLC
800 EAST CENTRAL PARKWAY, SUITE 100 PLANO, TEXAS 75074 CONTACT: RUTLEDGE HAGGARD PHONE:

ENGINEER:
KIMLEY-HORN AND ASSOC., INC.
13455 NOEL ROAD, TWO GALLERIA OFFICE TOWER, SUITE 700, DALLAS, TEXAS 75240 CONTACT: SARAH SCOTT, P.E. PHONE: 972-770-1300

FINAL PLAT
HENDRICK FARM ADDITION
LOTS 1-19, BLOCK A, AND LOTS 1-15, BLOCK B
ZONING R2
BEING 73.4268 ACRES OUT OF PETER F LUCAS SURVEY, ABSTRACT NO. 537 JOHN W KIRBY SURVEY, ABSTRACT NO. 506 JAMES GRAYUM SURVEY, ABSTRACT NO. 354 CITY OF LUCAS, COLLIN COUNTY, TEXAS

Kimley Horn logo and contact information: 13455 Noel Road, Two Galleria Office Tower, Suite 700, Dallas, Texas 75240. FIRM # 10115500. Tel. No. (972) 770-1300. Fax No. (972) 239-3620.

Table with columns: Scale, Drawn by, Checked by, Date, Project No., Sheet No.

VERTICAL TEXT: DATE PLOTTED BY: JEFFREY PERIN 01/17/2023 3:07 PM L:\ASSTED\9762023\3.52.PDF



**KH GENERAL NOTES**

**OVERALL:**

- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE PLANS, CITY (OR TOWN) STANDARD DETAILS AND SPECIFICATIONS, THE FINAL GEOTECHNICAL REPORT AND ALL ISSUED ADDENDA, AND COMMONLY ACCEPTED CONSTRUCTION STANDARDS. THE CITY SPECIFICATIONS SHALL GOVERN WHERE OTHER SPECIFICATIONS DO NOT EXIST. IN CASE OF CONFLICTING SPECIFICATIONS OR DETAILS, THE MORE RESTRICTIVE SPECIFICATION AND DETAIL SHALL BE FOLLOWED.
- THE CONTRACTOR SHALL COMPLY WITH CITY (OR TOWN) "GENERAL NOTES" FOR CONSTRUCTION, IF EXISTING AND REQUIRED BY THE CITY. FOR INSTANCES WHERE THEY CONFLICT WITH THESE KH GENERAL NOTES, THEN THE MORE RESTRICTIVE SHALL APPLY.
- THE CONTRACTOR SHALL FURNISH ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE AUTHORITIES' SPECIFICATIONS AND REQUIREMENTS.
- THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO DETERMINE EXISTING CONDITIONS.
- THE EXISTING CONDITIONS SHOWN ON THESE PLANS WERE PROVIDED BY THE TOPOGRAPHIC SURVEY PREPARED BY THE PROJECT SURVEYOR, AND ARE BASED ON THE BENCHMARKS SHOWN. THE CONTRACTOR SHALL REFERENCE THE SAME BENCHMARKS.
- THE CONTRACTOR SHALL REVIEW AND VERIFY THE EXISTING TOPOGRAPHIC SURVEY SHOWN ON THE PLANS REPRESENTS EXISTING FIELD CONDITIONS PRIOR TO CONSTRUCTION, AND SHALL REPORT ANY DISCREPANCIES FOUND TO THE OWNER AND ENGINEER IMMEDIATELY.
- IF THE CONTRACTOR DOES NOT ACCEPT THE EXISTING TOPOGRAPHIC SURVEY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY AT THEIR OWN EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED PROFESSIONAL LAND SURVEYOR TO THE OWNER AND ENGINEER FOR REVIEW.
- CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION SURVEYING AND STAKING.
- CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL CONTROL, INCLUDING BENCHMARKS PRIOR TO COMMENCING CONSTRUCTION OR STAKING OF IMPROVEMENTS. PROPERTY LINES AND CORNERS SHALL BE HELD AS THE HORIZONTAL CONTROL.
- THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS, ELEVATIONS, AND FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE ARCHITECT, ENGINEER, AND IF APPLICABLE THE CITY AND OWNER. NO CONSIDERATION WILL BE GIVEN TO CHANGE ORDERS FOR WHICH THE CITY, ENGINEER, AND OWNER WERE NOT CONTACTED PRIOR TO CONSTRUCTION OF THE AFFECTED ITEM.
- CONTRACTOR SHALL THOROUGHLY CHECK COORDINATION OF CIVIL, LANDSCAPE, MEP, ARCHITECTURAL, AND OTHER PLANS PRIOR TO COMMENCING CONSTRUCTION. OVERLAP/CONFLICTS SHALL BE NOTIFIED OF ANY DISCREPANCY PRIOR TO COMMENCING WITH CONSTRUCTION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK TO HAVE THEM LOCATE THEIR EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE AN ADEQUATE MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL CALL TEXAS 811 AN ADEQUATE AMOUNT OF TIME PRIOR TO COMMENCING CONSTRUCTION OR ANY EXCAVATION.
- CONTRACTOR SHALL USE EXTREME CAUTION AS THE SITE CONTAINS VARIOUS KNOWN AND UNKNOWN PUBLIC AND PRIVATE UTILITIES.
- THE LOCATIONS, ELEVATIONS, DEPTH, AND DIMENSIONS OF EXISTING UTILITIES SHOWN ON THE PLANS WERE OBTAINED FROM AVAILABLE UTILITY COMPANY MAPS AND PLANS, AND ARE CONSIDERED APPROXIMATE AND INCOMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE PRESENCE, LOCATION, ELEVATION, DEPTH, AND DIMENSION OF EXISTING UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION SO THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCES. THE ENGINEER SHALL BE NOTIFIED WHEN A PROPOSED IMPROVEMENT CONFLICTS WITH AN EXISTING UTILITY.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ANY ADJUSTMENTS AND RELOCATIONS OF EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO: ADJUSTING EXISTING MANHOLES TO MATCH PROPOSED GRADE, RELOCATING EXISTING POLES AND GUY WIRES THAT ARE LOCATED IN PROPOSED DRIVEWAYS, ADJUSTING THE HORIZONTAL OR VERTICAL ALIGNMENT OF EXISTING UNDERGROUND UTILITIES TO ACCOMMODATE PROPOSED GRADE OR CROSSING WITH A PROPOSED UTILITY, AND ANY OTHERS THAT MAY BE ENCOUNTERED THAT ARE UNKNOWN AT THIS TIME AND NOT SHOWN ON THESE PLANS.
- CONTRACTOR SHALL ARRANGE FOR OR PROVIDE, AT ITS EXPENSE, ALL GAS, TELECOMMUNICATIONS, CABLE, OVERHEAD AND UNDERGROUND POWER LINE, AND UTILITY POLE ADJUSTMENTS NEEDED.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF FRANCHISE UTILITIES THAT ARE NECESSARY FOR ON-SITE AND OFF-SITE CONSTRUCTION, AND SERVICE TO THE PROPOSED DEVELOPMENT.
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL DAMAGES DUE TO THE CONTRACTORS' FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE EXISTING UTILITIES OR STRUCTURES, THE CONTRACTOR SHALL BE CONTACTED BY THE CONTRACTOR AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.
- BRACING OF UTILITY POLES MAY BE REQUIRED BY THE UTILITY COMPANIES WHEN TRENCHING OR EXCAVATING IN CLOSE PROXIMITY TO THE POLES. THE COST OF BRACING POLES WILL BE BORNE BY THE CONTRACTOR, WITH NO SEPARATE PAY ITEM FOR THIS WORK. THE COST IS INCIDENTAL TO THE PAY ITEM.
- CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND POWER LINES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, FEDERAL AND UTILITY OWNER REGULATIONS PERTAINING TO WORK SETBACKS FROM POWER LINES.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL REQUIRED CONSTRUCTION PERMITS, APPROVALS, AND BONDS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES A COPY OF THE CONTRACT DOCUMENTS INCLUDING PLANS, GEOTECHNICAL REPORT AND ADDENDA, PROJECT AND CITY SPECIFICATIONS, AND SPECIAL CONDITIONS, COPIES OF ANY REQUIRED CONSTRUCTION PERMITS, EROSION CONTROL PLANS, SWPPP AND INSPECTION REPORTS.
- ALL SHOP DRAWINGS AND OTHER DOCUMENTS THAT REQUIRE ENGINEER REVIEW SHALL BE SUBMITTED BY THE CONTRACTOR SUFFICIENTLY IN ADVANCE OF THE START OF THAT ITEM, SO THAT NO LESS THAN 10 BUSINESS DAYS FOR REVIEW AND RESPONSE IS AVAILABLE.
- ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES, JURISDICTIONAL AGENCIES, AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO USE OF THE FACILITY AND THE FINAL CONNECTION OF SERVICES.
- CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.
- CONTRACTOR'S BID PRICE SHALL INCLUDE ALL INSPECTION FEES.
- ALL SYMBOLS SHOWN ON THESE PLANS (E.G. FIRE HYDRANT, METERS, VALVES, INLETS, ETC. ) ARE FOR PRESENTATION PURPOSES ONLY AND ARE NOT TO SCALE. CONTRACTOR SHALL COORDINATE FINAL SIZES AND LOCATIONS WITH APPROPRIATE CITY INSPECTOR.
- THE SCOPE OF WORK FOR THE CIVIL IMPROVEMENTS SHOWN ON THESE PLANS TERMINATES 5- FEET FROM THE BUILDING. REFERENCE THE BUILDING PLANS (E.G. ARCHITECTURAL, STRUCTURAL, MEP) FOR AREAS WITHIN 5- FEET OF THE BUILDING AND WITHIN THE BUILDING FOOTPRINT.
- REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR ALL FINAL BUILDING DIMENSIONS.
- THE PROPOSED BUILDING FOOTPRINT(S) SHOWN IN THESE PLANS WAS PROVIDED TO KIMLEY-HORN AND ASSOCIATES, INC. (KH) BY THE PROJECT ARCHITECT AT THE TIME THESE PLANS WERE PREPARED. IT MAY NOT BE THE FINAL CORRECT VERSION BECAUSE THE BUILDING DESIGN WAS ONGOING. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFIRMING THE FINAL CORRECT VERSION OF THE BUILDING FOOTPRINT WITH THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO LAYOUT. DIMENSIONS AND/OR COORDINATES SHOWN ON THESE PLANS WERE BASED ON THE ABOVE STATED ARCHITECTURAL FOOTPRINT, AND ARE THEREFORE A PRELIMINARY LOCATION OF THE BUILDING. THE CONTRACTOR IS SOLELY RESPONSIBLE TO VERIFY THE BUILDING ARCHITECT'S FOOTPRINT. THE CONTRACTOR REPRESENTS (E.G. SLAB, OUTSIDE WALL, MASONRY LEDGE, ETC. ) AND TO CONFIRM ITS FINAL POSITION ON THE SITE BASED ON THE FINAL ARCHITECTURAL FOOTPRINT, CIVIL DIMENSION CONTROL PLAN, SURVEY BOUNDARY AND/OR PLAT. ANY DIFFERENCES FOUND SHALL BE REPORTED TO KH IMMEDIATELY.
- ALL CONSTRUCTION SHALL COMPLY WITH THE PROJECT'S FINAL GEOTECHNICAL REPORT (OR LATEST EDITION), INCLUDING SUBSEQUENT ADDENDA ONLY IF GEOTECH REPORT EXCEEDS CITY STANDARDS.
- CONTRACTOR IS RESPONSIBLE FOR ALL MATERIALS TESTING AND CERTIFICATION, UNLESS SPECIFIED OTHERWISE BY OWNER. ALL MATERIALS TESTING SHALL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR AND COMPLY WITH CITY STANDARD SPECIFICATIONS AND GEOTECHNICAL REPORT. TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY FOR TESTING MATERIALS. OWNER SHALL APPROVE THE AGENCY NOMINATED BY THE CONTRACTOR FOR MATERIALS TESTING.
- ALL COPIES OF MATERIALS TEST RESULTS SHALL BE SENT TO THE OWNER, ENGINEER AND ARCHITECT DIRECTLY FROM THE TESTING AGENCY.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE MATERIALS, THAT THE WORK CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND CITY SPECIFICATIONS.
- DUE TO THE POTENTIAL FOR DIFFERENTIAL SOIL MOVEMENT ADJACENT TO THE BUILDING, THE CONTRACTOR SHALL ADHERE TO GEOTECHNICAL REPORT'S RECOMMENDATION FOR SUBGRADE PREPARATION SPECIFIC TO FLATWORK ADJACENT TO THE PROPOSED BUILDING. THE OWNER AND CONTRACTOR ARE ADVISED TO OBTAIN A GEOTECHNICAL REPORT AND RECOMMENDATION SPECIFIC TO FLATWORK ADJACENT TO THE BUILDING, IF NONE IS CURRENTLY EXISTING.
- ALL CONTRACTORS MUST CONFINE THEIR ACTIVITIES TO THE WORK AREA. NO ENCROACHMENTS OUTSIDE OF THE WORK AREA WILL BE ALLOWED. ANY DAMAGE RESULTING THEREFROM SHALL BE CONTRACTORS' SOLE RESPONSIBILITY TO REPAIR.
- THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, UTILITIES, MANHOLES, POLES, GUY

- WIRES, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, COMMUNICATION BOXES/PEDESTALS, AND OTHER FACILITIES TO REMAIN AND SHALL REPAIR ANY DAMAGES AT NO COST TO THE OWNER.
- THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY PHYSICAL DAMAGE TO PRIVATE PROPERTY OR PUBLIC IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO: FENCES, WALLS, SIGNS, PAVEMENT, CURBS, UTILITIES, SIDEWALKS, GRASS, TREES, LANDSCAPING, AND IRRIGATION SYSTEMS, ETC., TO ORIGINAL CONDITION OR BETTER AT NO COST TO THE OWNER.
- ALL AREAS IN EXISTING RIGHT-OF-WAY DISTURBED BY SITE CONSTRUCTION SHALL BE REPAIRED TO ORIGINAL CONDITION OR BETTER, INCLUDING AS NECESSARY GRADING, LANDSCAPING, CULVERTS, AND PAVEMENT.
- THE CONTRACTOR SHALL SALVAGE ALL EXISTING POWER POLES, SIGNS, WATER VALVES, FIRE HYDRANTS, METERS, ETC., THAT ARE TO BE RELOCATED DURING CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION, INCLUDING MAINTAINING EXISTING DITCHES OR CULVERTS FREE OF OBSTRUCTIONS AT ALL TIMES.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SUBMITTING A TRENCH SAFETY PLAN, PREPARED BY A PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, TO THE CITY PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRENCH SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY, STATE, AND FEDERAL REQUIREMENTS, INCLUDING OSHA FOR ALL TRENCHES. NO OPEN TRENCHES SHALL BE ALLOWED OVERNIGHT WITHOUT PRIOR WRITTEN APPROVAL OF THE CITY.
- THE CONTRACTOR SHALL KEEP TRENCHES FREE FROM WATER.
- SITE SAFETY IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
- THESE PLANS DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE ENGINEER'S SEAL HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF ALL REQUIRED SAFETY PROCEDURES AND PROGRAMS.
- SIGNS RELATED TO SITE OPERATION OR SAFETY ARE NOT INCLUDED IN THESE PLANS.
- CONTRACTOR OFFICE AND STAGING AREA SHALL BE AGREED ON BY THE OWNER AND CONTRACTOR PRIOR TO BEGINNING OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR AT PERMITTING REQUIREMENTS FOR THE CONSTRUCTION OFFICE, TRAILER, STORAGE, AND STAGING OPERATIONS AND LOCATIONS.
- LIGHT POLES, SIGNS, AND OTHER OBSTRUCTIONS SHALL NOT BE PLACED IN ACCESSIBLE ROUTES.
- ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
- TOP RIM ELEVATIONS OF ALL EXISTING AND PROPOSED MANHOLES SHALL BE COORDINATED WITH TOP OF PAVEMENT OR FINISHED GRADE AND SHALL BE ADJUSTED TO BE FLUSH WITH THE ACTUAL FINISHED GRADE AT THE TIME OF PAVING.
- CONTRACTOR SHALL ADJUST ALL EXISTING AND PROPOSED VALVES, FIRE HYDRANTS, AND OTHER UTILITY APPURTENANCES TO MATCH ACTUAL FINISHED GRADES AT THE TIME OF PAVING.
- THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION SEQUENCING AND PHASING, AND SHALL CONTACT THE APPROPRIATE CITY OFFICIALS, INCLUDING BUILDING OFFICIAL, ENGINEERING INSPECTOR, AND FIRE MARSHAL TO LEARN OF ANY REQUIREMENTS.
- CONTRACTOR IS RESPONSIBLE FOR PREPARATION, SUBMITTAL, AND APPROVAL BY THE CITY OF A TRAFFIC CONTROL PLAN PRIOR TO THE START OF CONSTRUCTION, AND THEN THE IMPLEMENTATION OF THE PLAN.
- CONTRACTOR SHALL KEEP A NEAT AND ACCURATE RECORD OF CONSTRUCTION, INCLUDING ANY DEVIATIONS OR VARIANCES FROM THE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT PLANS TO THE ENGINEER AND CITY IDENTIFYING ALL DEVIATIONS AND VARIATIONS FROM THESE PLANS MADE DURING CONSTRUCTION.

**EROSION CONTROL:**

- THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL EROSION CONTROL AND WATER QUALITY REQUIREMENTS, LAWS, AND ORDINANCES THAT APPLY TO THE CONSTRUCTION SITE LAND DISTURBANCE.
- CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE "TCEQ GENERAL PERMIT TO DISCHARGE UNDER THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM TXR 150000".
- EROSION CONTROL DEVICES SHOWN ON THE EROSION CONTROL PLAN FOR THE PROJECT SHALL BE INSTALLED PRIOR TO THE START OF LAND DISTURBANCE.
- ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR THE PROJECT.
- CONTRACTOR IS SOLELY RESPONSIBLE FOR INSTALLATION, IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL EROSION CONTROL DEVICES, BEST MANAGEMENT PRACTICES (BMPs), AND FOR UPDATING THE EROSION CONTROL PLAN DURING CONSTRUCTION AS FIELD CONDITIONS CHANGE.
- CONTRACTOR SHALL DOCUMENT THE DATES OF INSTALLATION, MAINTENANCE OR MODIFICATION, AND REMOVAL FOR EACH BMP EMPLOYED IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IF APPLICABLE.
- AS STORM SEWER INLETS ARE INSTALLED ON-SITE, TEMPORARY EROSION CONTROL DEVICES SHALL BE INSTALLED AT EACH INLET PER APPROVED DETAILS.
- THE EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL THE AREA IT PROTECTS HAS BEEN PERMANENTLY STABILIZED.
- CONTRACTOR SHALL PROVIDE ADEQUATE EROSION CONTROL DEVICES NEEDED DUE TO PROJECT PHASING.
- CONTRACTOR SHALL OBSERVE THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES AND MAKE FIELD ADJUSTMENTS AND MODIFICATIONS AS NEEDED TO PREVENT SEDIMENT FROM LEAVING THE SITE. IF THE EROSION CONTROL DEVICES DO NOT EFFECTIVELY CONTROL EROSION AND PREVENT SEDIMENTATION FROM WASHING OFF THE SITE, THEN THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
- OFF-SITE SOIL BORROW, SPILL, AND STORAGE AREAS (IF APPLICABLE) ARE CONSIDERED AS PART OF THE PROJECT SITE AND MUST ALSO COMPLY WITH THE EROSION CONTROL REQUIREMENTS FOR THIS PROJECT. THIS INCLUDES THE INSTALLATION OF BMPs TO CONTROL EROSION AND SEDIMENTATION AND THE ESTABLISHMENT OF PERMANENT GROUND COVER ON DISTURBED AREAS PRIOR TO FINAL APPROVAL OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR MODIFYING THE SWPPP AND EROSION CONTROL PLAN TO INCLUDE THE BMPs FOR ANY OFF-SITE THAT ARE NOT ANTICIPATED OR SHOWN ON THE EROSION CONTROL PLAN.
- ALL STAGING, STOCKPILES, SPILL, AND STORAGE SHALL BE LOCATED SUCH THAT THEY WILL NOT ADVERSELY AFFECT STORM WATER QUALITY. PROTECTIVE MEASURES SHALL BE PROVIDED IF NEEDED TO ACCOMPLISH THIS REQUIREMENT, SUCH AS COVERING OR ENCIRCLING THE AREA WITH AN APPROPRIATE BARRIER.
- CONTRACTORS SHALL INSPECT ALL EROSION CONTROL DEVICES, BMPs, DISTURBED AREAS, AND VEHICLE ENTRY AND EXIT AREAS WEEKLY AND WITHIN 24 HOURS OF ALL RAINFALL EVENTS OF 0.5 INCHES OR GREATER, AND KEEP A RECORD OF THIS INSPECTION IN THE SWPPP BOOKLET. IF APPLICABLE, TO VERIFY THAT THE DEVICES AND EROSION CONTROL PLAN ARE FUNCTIONING PROPERLY.
- CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT ALL PRIMARY POINTS OF ACCESS IN ACCORDANCE WITH CITY SPECIFICATIONS. CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION TRAFFIC USES THE STABILIZED ENTRANCE AT ALL TIMES FOR ALL INGRESS/EGRESS.
- SITE ENTRY AND EXITS SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT THE TRACKING AND FLOWING OF SEDIMENT AND DIRT ONTO OFF-SITE ROADWAYS. ALL SEDIMENT AND DIRT FROM THE SITE THAT IS DEPOSITED ONTO AN OFF-SITE ROADWAY SHALL BE REMOVED IMMEDIATELY.
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL SILT AND DEBRIS FROM THE AFFECTED OFF-SITE ROADWAYS THAT ARE A RESULT OF THE CONSTRUCTION, AS REQUESTED BY OWNER AND CITY. AT A MINIMUM, THIS SHOULD OCCUR ONCE PER DAY FOR THE OFF-SITE ROADWAYS.
- WHEN WASHING OF VEHICLES IS REQUIRED TO REMOVE SEDIMENT PRIOR TO EXITING THE SITE, IT SHALL NOT BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP BMP.
- CONTRACTOR SHALL INSTALL A TEMPORARY SEDIMENT BASIN FOR ANY ON-SITE DRAINAGE AREAS THAT ARE GREATER THAN 10 ACRES, PER TCEQ AND CITY STANDARDS. IF NO ENGINEERING DESIGN HAS BEEN PROVIDED FOR THE BUILDING SEDIMENTATION BASIN ON THESE PLANS, THEN THE CONTRACTOR SHALL ARRANGE FOR AN APPROPRIATE DESIGN TO BE PROVIDED.
- ALL FINES IMPOSED FOR SEDIMENT OR DIRT DISCHARGED FROM THE SITE SHALL BE PAID BY THE RESPONSIBLE CONTRACTOR.
- WHEN SEDIMENT OR DIRT HAS CLOGGED THE CONSTRUCTION ENTRANCE VOID SPACES BETWEEN STONES OR DIRT IS BEING TRACKED ONTO A ROADWAY, THE AGGREGATE PAD MUST BE WASHED DOWN OR REPLACED. RUNOFF FROM THE WASH-DOWN OPERATION SHALL NOT BE ALLOWED TO DRAIN DIRECTLY OFF SITE WITHOUT FIRST FLOWING THROUGH ANOTHER BMP TO CONTROL SEDIMENTATION. PERIODIC RE-GRADING OR NEW STONES MAY BE REQUIRED TO MAINTAIN THE EFFECTIVENESS OF THE CONSTRUCTION ENTRANCE.
- TEMPORARY SEEDING OR OTHER APPROVED STABILIZATION SHALL BE INITIATED WITHIN 14 DAYS OF THE LAST REMOVAL OF ANY AREA ACHIEVED WHEN THE AREA IS EXPECTED WITHIN 21 DAYS OF THE LAST DISTURBANCE.
- CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING CONSTRUCTION, ALWAYS CLEANING UP DIRT, LOOSE MATERIAL, AND TRASH AS CONSTRUCTION PROGRESSES.
- UPON COMPLETION OF FINE GRADING, ALL SURFACES OF DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED. STABILIZATION SHALL BE ACHIEVED WHEN THE AREA IS EITHER COVERED BY PERMANENT IMPERVIOUS STRUCTURES, SUCH AS BUILDINGS, SIDEWALK, PAVEMENT, OR A UNIFORM PERENNIAL VEGETATIVE COVER.
- AT THE CONCLUSION OF THE PROJECT, ALL INLETS, DRAIN PIPE, CHANNELS, DRAINAGEWAYS AND BORROW DITCHES AFFECTED BY THE CONSTRUCTION SHALL BE DREGDED, AND THE SEDIMENT GENERATED BY THE PROJECT SHALL BE REMOVED AND DISPOSED IN ACCORDANCE WITH APPLICABLE REGULATIONS.

**STORM WATER DISCHARGE AUTHORIZATION:**

- CONTRACTOR SHALL COMPLY WITH ALL TCEQ AND EPA STORM WATER POLLUTION PREVENTION

REQUIREMENTS.

- CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE TCEQ GENERAL PERMIT TO DISCHARGE UNDER THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM TXR 150000.
- THE CONTRACTOR SHALL ENSURE THAT ALL PRIMARY OPERATORS SUBMIT A NOI TO TCEQ AT LEAST SEVEN DAYS PRIOR TO COMMENCING CONSTRUCTION (IF APPLICABLE), OR IF UTILIZING ELECTRONIC SUBMITTAL, PRIOR TO COMMENCING CONSTRUCTION. ALL PRIMARY OPERATORS SHALL PROVIDE A COPY OF THE SIGNED NOI TO THE OPERATOR OF ANY MSA (TYPICALLY THE CITY) RECEIVING DISCHARGE FROM THE SITE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IF APPLICABLE, INCLUDING POSTING SITE NOTICE, INSPECTIONS, DOCUMENTATION, AND SUBMISSION OF ANY INFORMATION REQUIRED BY THE TCEQ AND EPA (E.G. NOI).
- ALL CONTRACTORS AND SUBCONTRACTORS PROVIDING SERVICES RELATED TO THE SWPPP SHALL SIGN THE REQUIRED CONTRACTOR CERTIFICATION STATEMENT ACKNOWLEDGING THEIR RESPONSIBILITIES AS SPECIFIED IN THE SWPPP.
- A COPY OF THE SWPPP, INCLUDING NOI, SITE NOTICE, CONTRACTOR CERTIFICATIONS, AND ANY REVISIONS, SHALL BE SUBMITTED TO THE CITY BY THE CONTRACTOR AND SHALL BE RETAINED ON-SITE DURING CONSTRUCTION.
- A NOTICE OF TERMINATION (NOT) SHALL BE SUBMITTED TO TCEQ BY ANY PRIMARY OPERATOR WITHIN 30 DAYS AFTER ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND A UNIFORM VEGETATIVE COVER HAS BEEN ESTABLISHED ON ALL UNPAVED AREAS AND AREAS NOT COVERED BY STRUCTURES. A TRANSFER OF OPERATIONAL CONTROL HAS OCCURRED, OR THE OPERATOR HAS OBTAINED ALTERNATIVE AUTHORIZATION UNDER A DIFFERENT PERMIT. A COPY OF THE NOT SHALL BE PROVIDED TO THE OPERATOR OF ANY MSA RECEIVING DISCHARGE FROM THE SITE.

**DEMOLITION:**

- KH IS NOT RESPONSIBLE FOR THE MEANS AND METHODS EMPLOYED BY THE CONTRACTOR TO IMPLEMENT THE DEMOLITION PLAN. PRELIMINARY DEMOLITION PLAN SIMPLY INDICATES THE KNOWN OBJECTS ON THE SUBJECT TRACT THAT ARE TO BE DEMOLISHED AND REMOVED FROM THE SITE.
- KH DOES NOT WARRANT OR REPRESENT THAT THE PLAN, WHICH WAS PREPARED BASED ON SURVEY AND UTILITY INFORMATION PROVIDED BY OTHERS, SHOWS ALL IMPROVEMENTS AND UTILITIES, THAT THE IMPROVEMENTS AND UTILITIES ARE SHOWN ACCURATELY, OR THAT THE UTILITIES SHOWN CAN BE REMOVED. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ITS OWN SITE RECONNAISSANCE TO SCOPE ITS WORK AND TO CONFIRM WITH THE OWNERS OF IMPROVEMENTS AND UTILITIES THE ABILITY AND PROCESS FOR THE REMOVAL OF THEIR FACILITIES.
- THIS PLAN IS INTENDED TO GIVE A GENERAL GUIDE TO THE CONTRACTOR, NOTHING MORE. THE GOAL OF THE DEMOLITION IS TO LEAVE THE SITE IN A STATE SUITABLE FOR THE CONSTRUCTION OF THE PROPOSED DEVELOPMENT, REMOVAL OR PRESERVATION OF IMPROVEMENTS, UTILITIES, ETC. TO ACCOMPLISH THIS GOAL ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR IS STRONGLY CAUTIONED TO REVIEW THE FOLLOWING REPORTS DESCRIBING SITE CONDITIONS PRIOR TO BIDDING AND IMPLEMENTING THE DEMOLITION PLAN:
  - ENVIRONMENTAL SITE ASSESSMENT PROVIDED BY THE OWNER.
  - ASBESTOS BUILDING INSPECTION REPORT(S) PROVIDED BY THE OWNER.
  - GEOTECHNICAL REPORT PROVIDED BY THE OWNER.
  - OTHER REPORTS THAT ARE APPLICABLE AND AVAILABLE.
- CONTRACTOR SHALL CONTACT THE OWNER TO VERIFY WHETHER ADDITIONAL REPORTS OR AMENDMENTS TO THE ABOVE CITY REPORTS HAVE BEEN PREPARED AND TO OBTAIN REVIEWING TO COMPLY WITH THE RECOMMENDATION OF SUCH STUDIES PRIOR TO STARTING ANY WORK ON THE SITE.
- CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS REGARDING THE DEMOLITION OF OBJECTS ON THE SITE AND THE DISPOSAL OF THE DEMOLISHED REMAINS ON-SITE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO REVIEW THE SITE, DETERMINE THE APPLICABLE REGULATIONS, RECEIVE THE REQUIRED PERMITS AND AUTHORIZATIONS, AND COMPLY.
- KH DOES NOT REPRESENT THAT THE REPORTS AND SURVEYS REFERENCED ABOVE ARE ACCURATE, COMPLETE, OR COMPREHENSIVE SHOWING ALL ITEMS THAT WILL NEED TO BE DEMOLISHED AND REMOVED.
- SURFACE PAVEMENT INDICATED MAY OVERLAY OTHER HIDDEN STRUCTURES, SUCH AS ADDITIONAL LAYERS OF PAVEMENT, FOUNDATIONS OR WALLS, THAT ARE ALSO TO BE REMOVED.

**GRADING:**

- THE CONTRACTOR AND GRADING SUBCONTRACTOR SHALL VERIFY THE SUITABILITY OF EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE START OF CONSTRUCTION. THE CIVIL ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
- CONTRACTOR SHALL OBTAIN ANY REQUIRED GRADING PERMITS FROM THE CITY.
- UNLESS OTHERWISE NOTED, PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN IN PAVED AREA REFLECT TOP OF PAVEMENT SURFACE. IN LOCATIONS ALONG A CURB LINE, ADD 6-INCHES (OR THE HEIGHT OF THE CURB) TO THE PAVING GRADE FOR TOP OF CURB ELEVATION.
- PROPOSED SPOT ELEVATIONS AND CONTOURS OUTSIDE THE PAVEMENT ARE TO TOP OF FINISHED GRADE.
- PROPOSED CONTOURS ARE APPROXIMATE. PROPOSED SPOT ELEVATIONS AND DESIGNATED GRADIENT ARE TO BE USED IN CASE OF DISCREPANCY.
- ALL FINISHED GRADES SHALL TRANSITION UNIFORMLY BETWEEN THE FINISHED ELEVATIONS SHOWN.
- CONTOURS AND SPOT GRADES SHOWN ARE ELEVATIONS OF TOP OF THE FINISHED SURFACE. WHEN PERFORMING THE GRADING OPERATIONS, THE CONTRACTOR SHALL PROVIDE AN APPROPRIATE ELEVATION HOLDING ALLOWANCE FOR THE THICKNESS OF ASPHALT, TOPSOIL, MULCH, STONE, LANDSCAPING, RIP-RAP AND ALL OTHER SURFACE MATERIALS THAT WILL CONTRIBUTE TO THE TOP OF FINISHED GRADE. FOR EXAMPLE, THE LIMITS OF EARTHWORK IN PAVED AREAS IS THE BOTTOM OF THE PAVEMENT SECTION.
- NO REPRESENTATIONS OF EARTHWORK QUANTITIES OR SITE BALANCE ARE MADE BY THESE PLANS. THE CONTRACTOR SHALL PROVIDE THEIR OWN EARTHWORK CALCULATION TO DETERMINE THEIR CONTRACT QUANTITIES AND COST. ANY SIGNIFICANT VARIANCE FROM A BALANCED SITE SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CIVIL ENGINEER.
- ALL GRADING AND EARTHWORK SHALL COMPLY WITH THE PROJECT'S FINAL GEOTECHNICAL REPORT (OR LATEST EDITION), INCLUDING SUBSEQUENT ADDENDA.
- ALL EXCAVATION IS UNCLASSIFIED AND SHALL INCLUDE ALL MATERIALS ENCOUNTERED, UNUSABLE EXCAVATED MATERIAL, AND ALL WASTE RESULTING FROM EXCAVATION AND GRUBBING SHALL BE REMOVED FROM THE SITE AND APPROPRIATELY DISPOSED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE.
- EROSION CONTROL DEVICES SHOWN ON THE EROSION CONTROL PLAN FOR THE PROJECT SHALL BE INSTALLED PRIOR TO THE START OF GRADING. REFERENCE EROSION CONTROL PLAN, DETAILS, GENERAL NOTES, AND SWPPP FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- BEFORE ANY EARTHWORK IS PERFORMED, THE CONTRACTOR SHALL STAKE OUT AND MARK THE LIMITS OF THE PROJECT'S PROPERTY LINE AND SITE IMPROVEMENTS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY ENGINEERING AND SURVEYING FOR LINE AND GRADE CONTROL POINTS RELATED TO EARTHWORK.
- CONTRACTOR TO DISPOSE OF ALL EXCESS EXCAVATION MATERIALS IN A MANNER THAT ADHERES TO LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS. THE CONTRACTOR SHALL KEEP A RECORD OF WHERE EXCESS EXCAVATION WAS DISPOSED, ALONG WITH THE RECEIVING LANDOWNER'S APPROVAL TO DO SO.
- CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF TOPSOIL AT THE COMPLETION OF FINE GRADING. CONTRACTOR SHALL REFER TO LANDSCAPE ARCHITECTURE PLANS FOR SPECIFICATIONS AND REQUIREMENTS FOR TOPSOIL.
- CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION, INCLUDING MAINTAINING EXISTING DITCHES OR CULVERTS FREE OF OBSTRUCTIONS AT ALL TIMES.
- NO EARTHWORK FILL SHALL BE PLACED IN ANY EXISTING DRAINAGE WAY, SWALE, CHANNEL, DITCH, CREEK, OR FLOODPLAIN FOR ANY REASON OR ANY LENGTH OF TIME, UNLESS THESE PLANS SPECIFICALLY INDICATE THIS IS REQUIRED.
- TEMPORARY CULVERTS MAY BE REQUIRED IN SOME LOCATIONS TO CONVEY RUN-OFF.
- REFER TO DIMENSION CONTROL PLAN, AND PLAT FOR HORIZONTAL DIMENSIONS.
- THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND CONDITION FILL PER THE PROJECT GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
- CONTRACTOR IS RESPONSIBLE FOR ALL SOILS TESTING AND CERTIFICATION, UNLESS SPECIFIED OTHERWISE BY OWNER. THE AGGREGATE PAD MUST BE WASHED DOWN AND TESTED BY THE CITY INSPECTOR AND SHALL COMPLY WITH CITY STANDARD SPECIFICATIONS AND THE GEOTECHNICAL REPORT. SOILS TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY FOR TESTING SOILS. THE OWNER SHALL APPROVE THE AGENCY NOMINATED BY THE CONTRACTOR FOR SOILS TESTING.
- ALL COPIES OF SOILS TEST RESULTS SHALL BE SENT TO THE OWNER, ENGINEER AND ARCHITECT DIRECTLY FROM THE TESTING AGENCY.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE SOILS, THAT THE WORK CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND CITY SPECIFICATIONS.
- THE SCOPE OF WORK FOR CIVIL IMPROVEMENT SHOWN ON THESE PLANS TERMINATES 5- FEET FROM THE BUILDING. CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT AND STRUCTURAL PLANS AND SPECIFICATIONS FILL, CONDITIONING, AND PREPARATION IN THE BUILDING PAD.
- DUE TO THE POTENTIAL FOR DIFFERENTIAL SOIL MOVEMENT ADJACENT TO THE BUILDING, THE CONTRACTOR SHALL ADHERE TO GEOTECHNICAL REPORT'S RECOMMENDATION FOR SUBGRADE PREPARATION SPECIFIC TO FLATWORK ADJACENT TO THE PROPOSED BUILDING. THE OWNER AND CONTRACTOR ARE ADVISED TO OBTAIN A GEOTECHNICAL ENGINEER RECOMMENDATION SPECIFIC TO FLATWORK ADJACENT TO THE BUILDING, IF NONE IS CURRENTLY EXISTING.
- CONTRACTOR SHALL ENSURE THAT SUFFICIENT POSITIVE SLOPE AWAY FROM THE BUILDING PAD IS ACHIEVED FOR ENTIRE PERIMETER OF THE PROPOSED BUILDING(S) DURING GRADING OPERATIONS AND IN THE FINAL CONDITION. IF THE CONTRACTOR OBSERVES THAT THIS WILL NOT BE ACHIEVED, THE

CONTRACTOR SHALL CONTACT THE ENGINEER TO REVIEW THE LOCATION.

- THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST. CONTRACTOR SHALL CONTROL DUST BY SPRINKLING WATER, OR BY OTHER MEANS APPROVED BY THE CITY, AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES FOR ANY REQUIRED UTILITY ADJUSTMENTS AND/OR RELOCATIONS NEEDED FOR GRADING OPERATIONS AND TO ACCOMMODATE PROPOSED GRADE, INCLUDING THE UNKNOWN UTILITIES NOT SHOWN ON THESE PLANS. CONTRACTOR SHALL REFER TO THE GENERAL NOTES "OVERALL" SECTION THESE PLANS FOR ADDITIONAL INFORMATION.
- EXISTING TREE LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE. CONTRACTOR SHALL REPORT ANY DISCREPANCIES FOUND IN THE FIELD THAT AFFECT THE GRADING PLAN TO THE CIVIL ENGINEER.
- CONTRACTOR SHALL FIELD VERIFY ALL PROTECTED TREE LOCATIONS, INDIVIDUAL PROTECTED TREE CRITICAL ROOT ZONES, AND PROPOSED SITE GRADING, AND NOTIFY THE CIVIL ENGINEER AND LANDSCAPE ARCHITECT OF ANY CONFLICTS WITH THE TREE PRESERVATION PLAN BY THE LANDSCAPE ARCHITECT PRIOR TO COMMENCING THE WORK.
- TREE PROTECTION MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY STANDARD TREE PROTECTION DETAILS AND THE APPROVED TREE PRESERVATION PLANS BY THE LANDSCAPE ARCHITECT.
- CONTRACTOR SHALL REFER TO THE LANDSCAPING AND TREE PRESERVATIONS PLANS FOR ALL INFORMATION AND DETAILS REGARDING EXISTING TREES TO BE REMOVED AND PRESERVED.
- NO TREE SHALL BE REMOVED UNLESS A TREE REMOVAL PERMIT HAS BEEN ISSUED BY THE CITY, OR CITY HAS OTHERWISE CONFIRMED IN WRITING THAT ONE IS NOT NEEDED FOR THE TREE(S).
- NO TREE SHALL BE REMOVED OR DAMAGED WITHOUT PRIOR AUTHORIZATION OF THE OWNER OR OWNERS REPRESENTATIVE. EXISTING TREES SHALL BE PRESERVED WHENEVER POSSIBLE AND GRADING IMPACT TO THEM HELD TO A MINIMUM.
- AFTER PLACEMENT OF SUBGRADE AND PRIOR TO PLACEMENT OF PAVEMENT, CONTRACTOR SHALL TEST AND OBSERVE PAVEMENT AREAS FOR EVIDENCE OF PONDING AND INADEQUATE SLOPE FOR DRAINAGE. ALL AREAS SHALL ADEQUATELY DRAIN TOWARDS THE INTENDED STRUCTURE TO CONVEY STORMWATER RUNOFF. CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER AND ENGINEER IF ANY AREAS OF POOR DRAINAGE ARE DISCOVERED.
- CONTRACTOR FIELD ADJUSTMENT OF PROPOSED SPOT GRADES IS ALLOWED, IF THE APPROVAL OF THE CIVIL ENGINEER IS OBTAINED.

**PAVING:**

- ALL PAVING MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE PLANS, THE CITY STANDARD DETAILS AND SPECIFICATIONS, THE FINAL GEOTECHNICAL REPORT AND ALL ISSUED ADDENDA, AND COMMONLY ACCEPTED CONSTRUCTION STANDARDS. THE CITY SPECIFICATIONS SHALL GOVERN EXCEPT WHERE MORE RESTRICTIVE MEASURES ARE OUTLINED.
- ALL PAVING AND PAVING SUBGRADE SHALL COMPLY WITH CITY STANDARDS AND DETAILS. IF THESE ARE DIFFERENT THAN THOSE IN THE GEOTECHNICAL REPORT, THEN THE MORE RESTRICTIVE SHALL BE FOLLOWED.
- ALL PUBLIC PAVING AND PAVING SUBGRADE SHALL COMPLY WITH CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS.
- CONTRACTOR IS RESPONSIBLE FOR ALL PAVING AND PAVING SUBGRADE TESTING AND CERTIFICATION, UNLESS SPECIFIED OTHERWISE BY OWNER. ALL PAVING AND PAVING SUBGRADE TESTING SHALL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR. TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY FOR TESTING PAVING AND SUBGRADE. OWNER SHALL APPROVE THE AGENCY NOMINATED BY THE CONTRACTOR FOR PAVING AND PAVING SUBGRADE TESTING.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE PAVING AND PAVING SUBGRADE, THAT THE WORK CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND CITY SPECIFICATIONS.
- DUE TO THE POTENTIAL FOR DIFFERENTIAL SOIL MOVEMENT ADJACENT TO THE BUILDING, THE CONTRACTOR SHALL ADHERE TO GEOTECHNICAL REPORT'S RECOMMENDATION FOR SUBGRADE PREPARATION SPECIFIC TO FLATWORK ADJACENT TO THE PROPOSED BUILDING. THE OWNER AND CONTRACTOR ARE ADVISED TO OBTAIN A GEOTECHNICAL ENGINEER RECOMMENDATION SPECIFIC TO FLATWORK ADJACENT TO THE BUILDING, IF NONE IS CURRENTLY EXISTING.
- ALL RAMPS ALONG PUBLIC STREETS AND IN THE PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED BASED ON THE CITY STANDARD CONSTRUCTION DETAIL AND SPECIFICATIONS.
- ALL ACCESSIBLE RAMPS, CURB RAMPS, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA AND TAS STANDARDS, LATEST EDITION.
- CONTRACTOR SHALL CONSTRUCT PROPOSED PAVEMENT TO MATCH EXISTING PAVEMENT WITH A SMOOTH, FLUSH, CONNECTION.
- CONTRACTOR SHALL FURNISH AND INSTALL ALL PAVEMENT MARKINGS FOR FIRE LINES, PARKING STALLS, HANDICAPPED PARKING SPACES, AND MISCELLANEOUS STRIPING WITHIN PARKING LOT AND AROUND BUILDINGS AS SHOWN ON THE PLANS. ALL PAINT AND PAVEMENT MARKINGS SHALL ADHERE TO CITY AND OWNER STANDARDS.
- ALL JOINTS SHALL EXTEND THROUGH THE CURB.
- THE MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS SHALL BE 2 FEET.
- CONTRACTOR SHALL SUBMIT A JOINTING PLAN TO THE ENGINEER AND OWNER PRIOR TO BEGINNING ANY OF THE PAVING WORK.
- ALL SAWCUTS SHALL BE FULL DEPTH FOR PAVEMENT REMOVAL AND CONNECTION TO EXISTING PAVEMENT.
- FIRE LANES SHALL BE MARKED AND LABELED AS A FIRELANE PER CITY STANDARDS.
- UNLESS THE PLANS SPECIFICALLY DICTATE TO THE CONTRARY, ON-SITE AND OTHER DIRECTIONAL SIGNS SHALL BE ORIENTED SO THEY ARE READILY VISIBLE TO THE ONCOMING TRAFFIC FOR WHICH THEY ARE INTENDED.
- CONTRACTOR IS RESPONSIBLE FOR INSTALLING NECESSARY CONDUIT FOR LIGHTING, IRRIGATION, ETC. PRIOR TO PLACEMENT OF PAVEMENT. ALL CONSTRUCTION DOCUMENTS (CIVIL, MEP, LANDSCAPE, IRRIGATION AND ARCHITECT) SHALL BE CONSULTED.
- BEFORE PLACING PAVEMENT, CONTRACTOR SHALL VERIFY THAT SUITABLE ACCESSIBLE PEDESTRIAN EXCAVATED MATERIAL, AND ALL WASTE RESULTING FROM EXCAVATION AND GRUBBING SHALL BE REMOVED FROM THE SITE AND APPROPRIATELY DISPOSED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE. ACCESSIBLE PARKING SPACES, ACCESS AISLES, AND ACCESSIBLE ROUTES. IN NO CASE SHALL AN ACCESSIBLE RAMP SLOPE EXCEED 1 VERTICAL TO 12 HORIZONTAL, IN NO CASE SHALL SIDEWALK CROSS SLOPE EXCEED 2.0 PERCENT AND SHALL BE LIMITED TO 10 FEET. SIDEWALK CROSS SLOPE SHALL NOT EXCEED 5.0 PERCENT. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 2.0 PERCENT SLOPE IN ANY DIRECTION.
- CONTRACTOR SHALL TAKE FIELD SLOPE MEASUREMENTS ON FINISHED SUBGRADE AND FORM BOARDS PRIOR TO FINISHING PAVEMENT TO VERIFY THAT ADAPTS SLOPE REQUIREMENTS ARE PROVIDED. CONTRACTOR SHALL CONTACT ENGINEER PRIOR TO PAVING IF ANY EXCESSIVE SLOPES ARE ENCOUNTERED. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR ADA AND TAS SLOPE COMPLIANCE ISSUES.

**STORM DRAINAGE:**

- ALL STORM SEWER MATERIALS AND CONSTRUCTION SHALL COMPLY WITH CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS.
- THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE STORM SEWER.
- THE CONTRACTOR SHALL FIELD VERIFY THE SIZE, CONDITION, HORIZONTAL, AND VERTICAL LOCATIONS OF ALL EXISTING STORM SEWER FACILITIES THAT ARE TO BE CONNECTED TO, PRIOR TO START OF CONSTRUCTION OF ANY STORM SEWER, AND SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS DISCOVERED.
- THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF CURB INLETS AND GRADE INLETS AND ALL UTILITIES CROSSING THE STORM SEWER.
- FLOW LINE, TOP-OF-CURB, RIM, THROAT, AND GRATE ELEVATIONS OF PROPOSED INLETS SHALL BE VERIFIED WITH THE GRADING PLAN AND FIELD CONDITIONS PRIOR TO THEIR INSTALLATION.
- ALL PUBLIC STORM SEWER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO CITY PUBLIC WORKS STANDARD DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.
- ALL PRIVATE STORM SEWER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO THE APPLICABLE PLUMBING CODE. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.
- ALL PVC TO RCP CONNECTIONS AND ALL STORM PIPE CONNECTIONS ENTERING STRUCTURES OR OTHER STORM PIPES SHALL HAVE A CONCRETE COLLAR AND BE GROUTED TO ASSURE THE CONNECTION IS WATERTIGHT.
- ALL PUBLIC STORM SEWER LINES SHALL BE MINIMUM CLASS III RCP. PRIVATE STORM SEWER LINES 18-INCHES AND GREATER SHALL BE CLASS III RCP OR OTHER APPROVED MATERIAL.
- WHERE COVER EXCEEDS 20- FEET OR IS LESS THAN 2- FEET, CLASS IV RCP SHALL BE USED.
- IF CONTRACTOR PROPOSES TO USE HDPE OR PVC IN LIEU OF RCP FOR PRIVATE STORM SEWER, CONTRACTOR SHALL SUBMIT ALL TECHNICAL DATA TO THE OWNER FOR REVIEW AND APPROVAL BY THE ENGINEER/INSPECTOR FOR APPROVAL PRIOR TO ORDERING THE MATERIAL. ANY PROPOSED HDPE AND PVC SHALL BE WATERTIGHT.
- THE CONTRACTOR SHALL PROVIDE CONSTRUCTION SURVEYING FOR ALL STORM SEWER LINES.
- EMBEDMENT FOR ALL STORM SEWER LINES, PUBLIC OR PRIVATE, SHALL BE PER CITY STANDARD DETAILS.
- ALL WYE CONNECTIONS AND PIPE BENDS ARE TO BE PREFABRICATED AND INSTALLED PER MANUFACTURERS SPECIFICATIONS.
- USE 4 FOOT JOINTS WITH BEVELED ENDS IF RADIUS OF STORM SEWER IS LESS THAN 100 FEET.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SUBMITTING A TRENCH SAFETY PLAN, PREPARED BY A PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, TO THE CITY PRIOR TO CONSTRUCTION.

CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRENCH SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY, STATE, AND FEDERAL REQUIREMENTS, INCLUDING OSHA FOR ALL TRENCHES. NO OPEN TRENCHES SHALL BE ALLOWED OVERNIGHT WITHOUT PRIOR WRITTEN APPROVAL OF THE CITY.

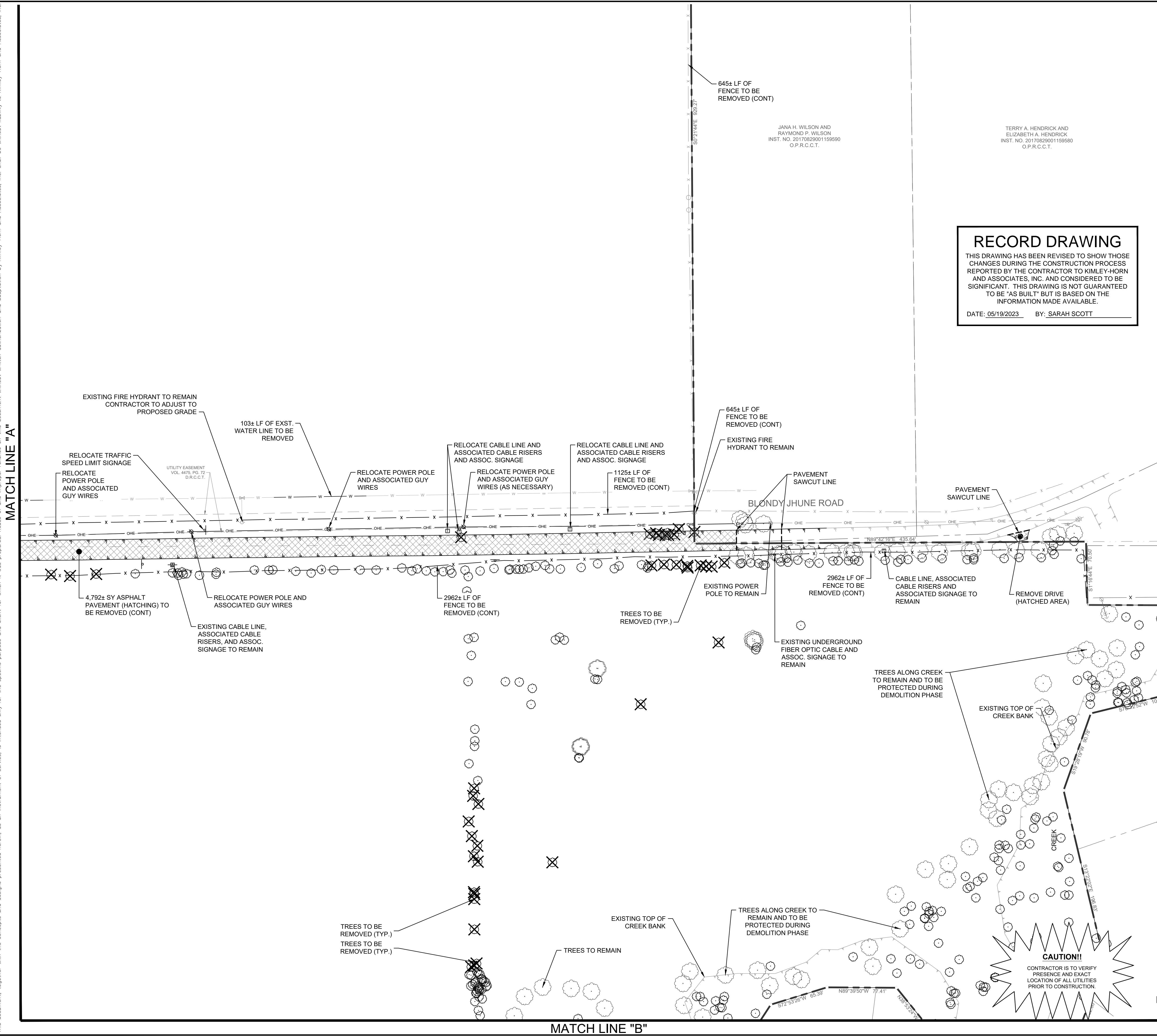
17. THE CONTRACTOR SHALL KEEP TRENCHES FREE FROM WATER.

**WATER AND WASTEWATER:**

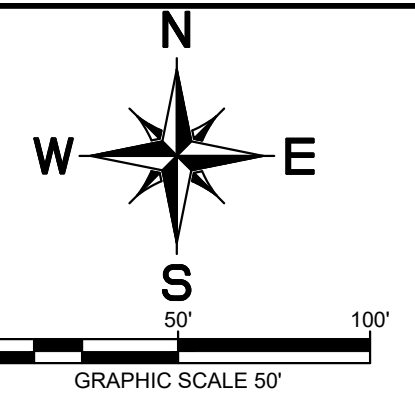
- ALL WATER AND WASTEWATER MATERIALS AND CONSTRUCTION SHALL COMPLY WITH CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS.
- CONTRACTOR SHALL FIELD VERIFY THE SIZE, CONDITION, HORIZONTAL, AND VERTICAL LOCATIONS OF ALL EXISTING WATER FACILITIES THAT ARE TO BE CONNECTED TO, PRIOR TO START OF CONSTRUCTION OF ANY WATER OR WASTEWATER CONSTRUCTION, AND SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS DISCOVERED.
- CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITY SERVICES ENTERING THE BUILDING.
- THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATION OF ALL UTILITY CROSSINGS PRIOR TO THE INSTALLATION OF ANY PIPE.
- THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE WATER AND WASTEWATER IMPROVEMENTS.
- ALL PUBLIC WATER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO CITY PUBLIC WORKS STANDARD DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.
- ALL PRIVATE WATER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO THE APPLICABLE PLUMBING CODE. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.
- FIRE SPRINKLER LINES SHALL BE DESIGNED AND INSTALLED BY A LICENSED FIRE SPRINKLER CONTRACTOR, AND COMPLY TO THE APPLICABLE CODES AND INSPECTIONS REQUIRED. THESE PLANS WERE PREPARED WITHOUT THE BENEFIT OF THE FIRE SPRINKLER DESIGN. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES.
- EMBEDMENT FOR ALL WATER LINES, PUBLIC OR PRIVATE, SHALL BE PER CITY STANDARD DETAILS.
- CONTRACTOR SHALL TAKE REQUIRED SANITARY PRECAUTIONS, FOLLOWING ANY CITY, TCEQ, AND AWWA STANDARDS, TO KEEP WATER PIPE AND FITTINGS CLEAN AND CAPPED AT TIMES WHEN INSTALLATION IS NOT IN PROGRESS.
- CONTRACTOR SHALL PROVIDE CONSTRUCTION SURVEYING FOR ALL WATER LINES.
- WATER SERVICES SHALL TERMINATE 5- FEET OUTSIDE THE BUILDING, UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL COMPLY WITH CITY REQUIREMENTS FOR WATER SERVICE DISRUPTIONS AND THE AMOUNT OF PRIOR NOTICE THAT IS REQUIRED, AND SHALL COORDINATE DIRECTLY WITH THE APPROPRIATE CITY DEPARTMENT.
- CONTRACTOR SHALL SEQUENCE WATER CONSTRUCTION TO AVOID INTERRUPTION OF SERVICE TO SURROUNDING PROPERTIES.
- CONTRACTOR SHALL MAINTAIN WATER SERVICE TO ALL CUSTOMERS THROUGHOUT CONSTRUCTION (IF NECESSARY, BY USE OF TEMPORARY METHODS APPROVED BY THE CITY AND OWNER). THIS WORK SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
- THE CONTRACTOR IS RESPONSIBLE TO PROTECT ALL WATER LINES CROSSING THE PROJECT. THE CONTRACTOR SHALL REPAIR ALL DAMAGED LINES IMMEDIATELY. ALL REPAIRS OF EXISTING WATER MAINS, WATER SERVICES, SEWER MAINS, AND SANITARY SEWER SERVICES ARE SUBSIDIARY TO THE WORK, AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
- VALVE ADJUSTMENTS SHALL BE CONSTRUCTED SUCH THAT THE COVERS ARE AT FINISHED SURFACE GRADE OF THE PROPOSED PAVEMENT.
- THE ENDS OF ALL EXISTING WATER MAINS THAT ARE CUT, BUT NOT REMOVED, SHALL BE PLUGGED AND ABANDONED IN PLACE. THIS WORK SHALL BE CONSIDERED AS A SUBSIDIARY COST TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
- IF FIRE HYDRANTS, VALVES, TEES, BENDS, WYES, REDUCERS, FITTINGS, AND ENDS SHALL BE MECHANICALLY RESTRAINED AND/OR THRUST BLOCKED TO CITY STANDARDS.
- ALL WATER SHALL BE TESTED IN ACCORDANCE WITH THE CITY, AWWA, AND TCEQ STANDARDS AND SPECIFICATIONS. AT A MINIMUM, THIS SHALL CONSIST OF THE FOLLOWING:
  - ALL WATER LINES SHALL BE HYDROSTATICALLY TESTED AND CHLORINATED BEFORE BEING PLACED INTO SERVICE. CONTRACTOR SHALL COORDINATE WITH THE CITY FOR THEIR REQUIRED PROCEDURES AND SHALL ALSO COMPLY WITH TCEQ REGULATIONS.
- CONTRACTOR SHALL INSTALL DETECTABLE WIRING OR MARKING TAPE A MINIMUM OF 12" ABOVE WATER LINES. MARKER DECALS SHALL BE LABELLED "CAUTION - WATER LINE". DETECTABLE WIRING AND MARKING TAPE SHALL COMPLY WITH CITY STANDARDS, AND SHALL BE INCLUDED IN THE COST OF THE WATER PIPE.
- DUCTILE IRON PIPE SHALL BE PROTECTED FROM CORROSION BY A LOW-DENSITY POLYETHYLENE LINER WRAP THAT IS AT LEAST A SINGLE LAYER OF 8-MIL. ALL DUCTILE IRON JOINTS SHALL BE BONDED.
- WATER LINES SHALL BE INSTALLED AT NO LESS THAN THE MINIMUM COVER REQUIRED BY THE CITY.
- CONTRACTOR SHALL PROVIDE CLEAN-OUTS FOR PRIVATE SANITARY SEWER LINES AT ALL CHANGES IN DIRECTION AND 100-FOOT INTERVALS, OR AS REQUIRED BY THE APPLICABLE PLUMBING CODE. CLEAN-OUTS REQUIRED IN PAVEMENT OR SIDEWALKS SHALL HAVE CAST IRON COVERS FLUSH WITH FINISHED GRADE.
- CONTRACTOR SHALL PROVIDE BACKWATER VALVES FOR PLUMBING FIXTURES AS REQUIRED BY THE APPLICABLE PLUMBING CODE (E.G. FLOOR ELEVATION OF FIXTURE UNIT IS BELOW THE ELEVATION OF THE MANHOLE COVER OF THE NEXT UPSTREAM MANHOLE IN THE PUBLIC SE



Plotted By: Matthews, James Date: March 09, 2022 01:47:24pm File Path: K:\DAL\Civil\064041015-Hendrick Farm\GAD\Plan Sheets\C-Demo\Plan.dwg  
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 DATE: 05/19/2023 BY: SARAH SCOTT



**EXISTING SITE FEATURES**

○ SIGN	▽ MONITORING WELL
● FLAG POLE	□ FIBER OPTIC BOX
⊕ GREASE TRAP	⊕ GAS STORAGE TANK
⊕ ELEVATION BENCHMARK	● TRAFFIC BOLLARD
⊕ FUEL TANK	⊕ FIRE HYDRANT
⊕ GUY ANCHOR	⊕ WATER METER
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⊕ SANITARY SEWER MANHOLE	⊕ GAS METER
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⊕ EXISTING TREE TO BE REMOVED	

**LINE TYPE LEGEND**

---	BOUNDARY LINE
---	EASEMENT LINE
---	BUILDING LINE
---	WATER LINE
---	SANITARY SEWER LINE
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---	UNDERGROUND GAS LINE
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**DEMOLITION LEGEND**

⊗	EXISTING PAVEMENT TO BE REMOVED
⊗	EXISTING CURB TO BE REMOVED
---	PROPOSED FULL DEPTH SAWCUT

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3. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY PERMITS AND PAY ANY FEES REQUIRED FOR DEMOLITION AND HAUL-OFF FROM THE APPROPRIATE AUTHORITIES.
4. THE DEMOLITION PLAN IS INTENDED TO DEPICT GENERAL DEMOLITION AND UTILITY WORK. IT IS NOT INTENDED TO IDENTIFY EACH ELEMENT OF DEMOLITION OR RELOCATION. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND APPROPRIATE UTILITY COMPANY PRIOR TO WORK.
5. REMOVE AND DISPOSE OF ANY SIDEWALK, FENCES, STAIRS, WALLS, FOUNDATIONS, CONCRETS, LIGHT POLE BASES, DEBRIS AND RUBBISH REQUIRING REMOVAL FROM THE WORK AREA IN AN APPROVED LANDFILL.
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**BENCHMARKS**

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 ELEV= 589.81



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**HENDRICK FARM**  
 CITY OF LUCAS  
 COLLIN COUNTY, TEXAS

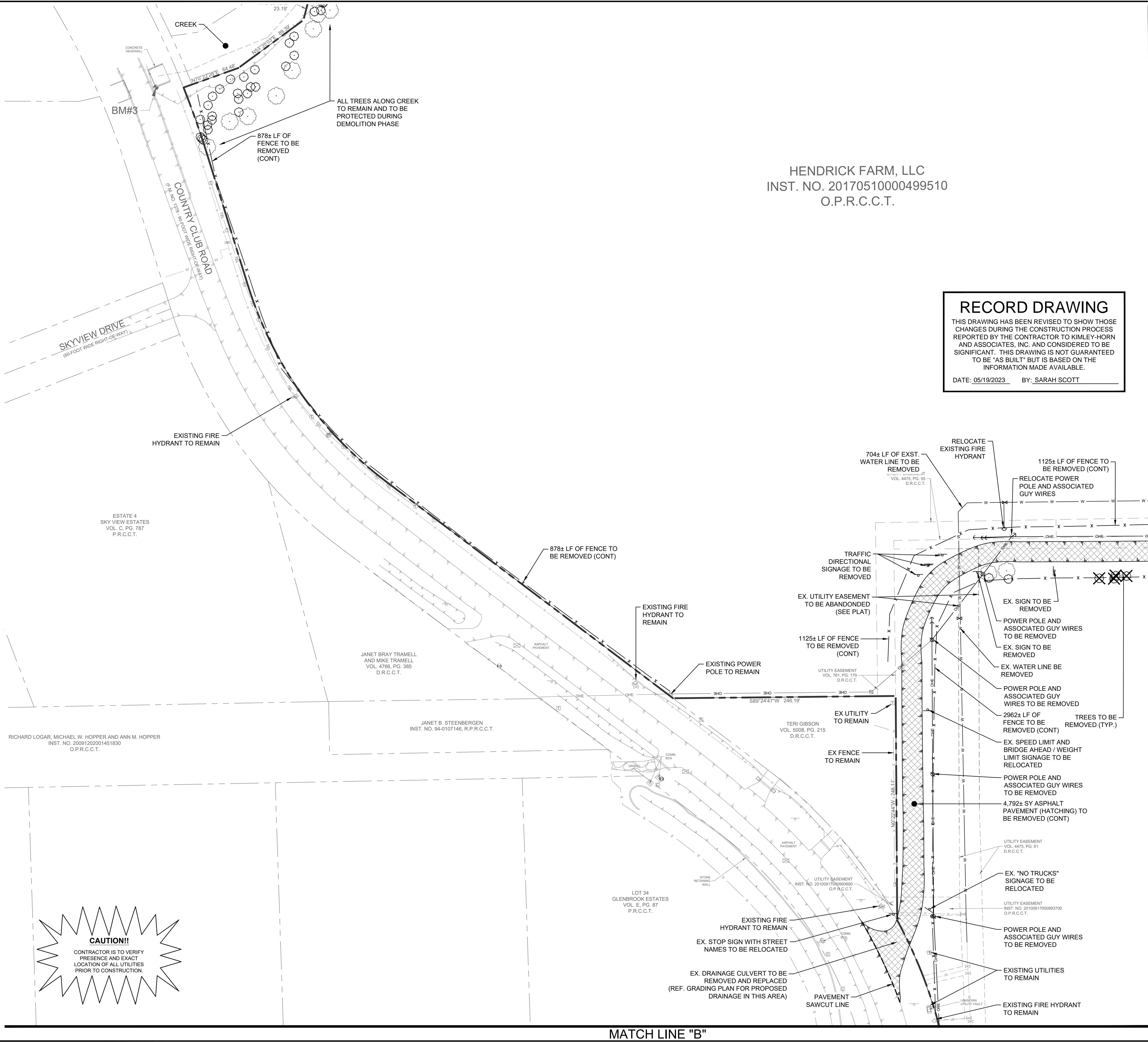
**DEMOLITION PLAN (1 OF 3)**

SHEET NUMBER **C-03**

NO.	REVISIONS	DATE	BY

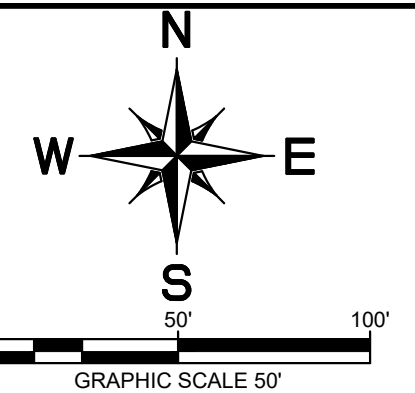


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HENDRICK FARM, LLC  
 INST. NO. 20170510000499510  
 O.P.R.C.C.T.

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 TEXAS REGISTERED ENGINEERING FIRM F-998

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KHA PROJECT	064041015	DATE	JANUARY 2022	SCALE	AS SHOWN
DESIGNED BY:	CRA	DRAWN BY:	MSM	CHECKED BY:	SES

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**DEMOLITION PLAN**  
 (2 OF 3)

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**HENDRICK FARM**  
 CITY OF LUCAS  
 COLLIN COUNTY, TEXAS

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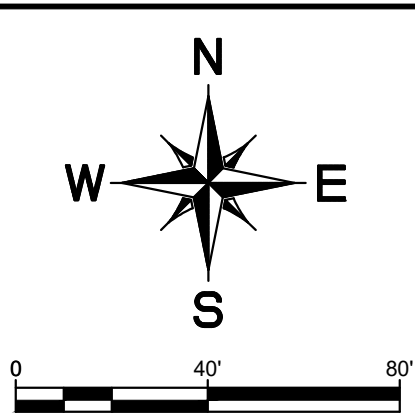
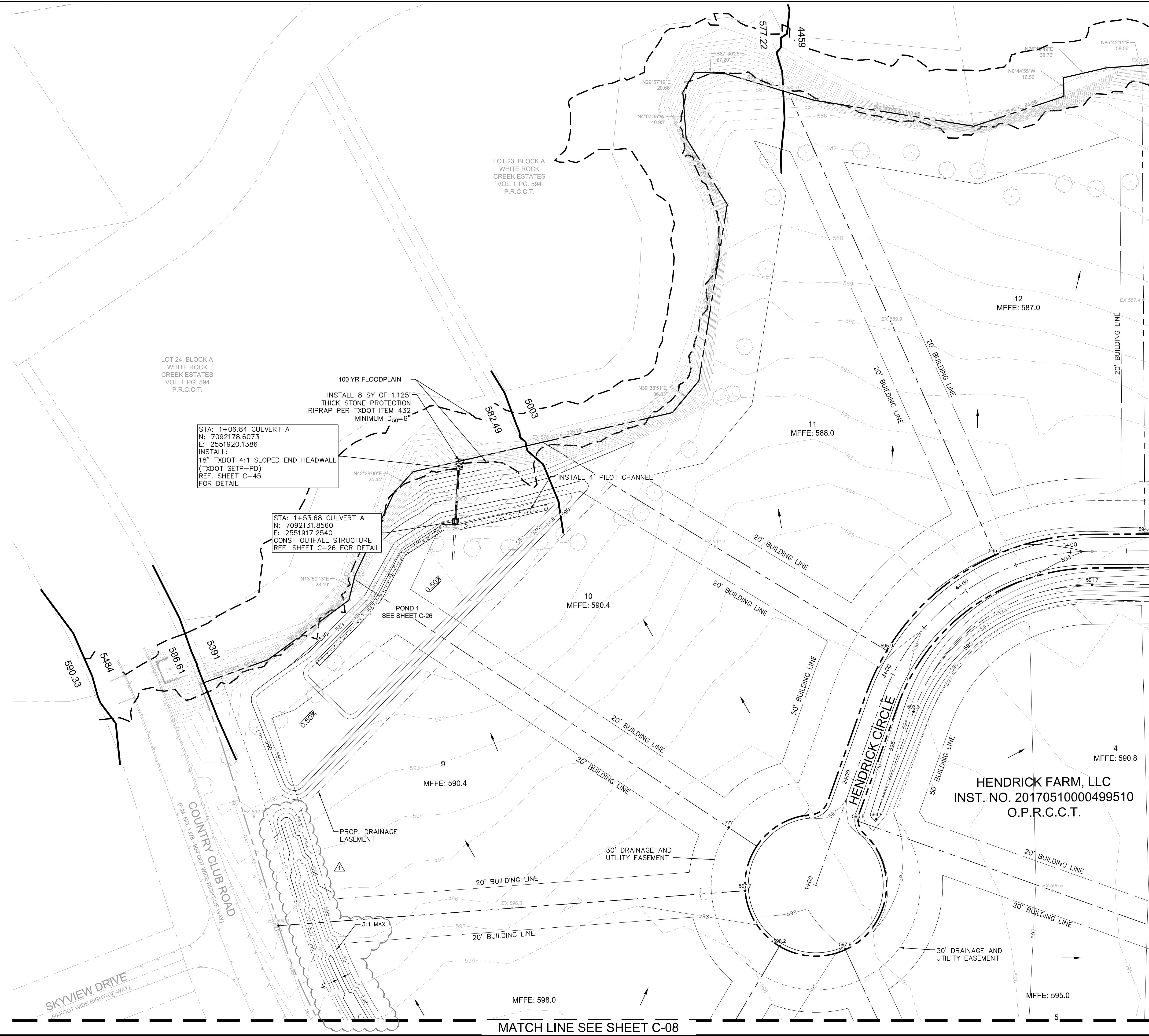
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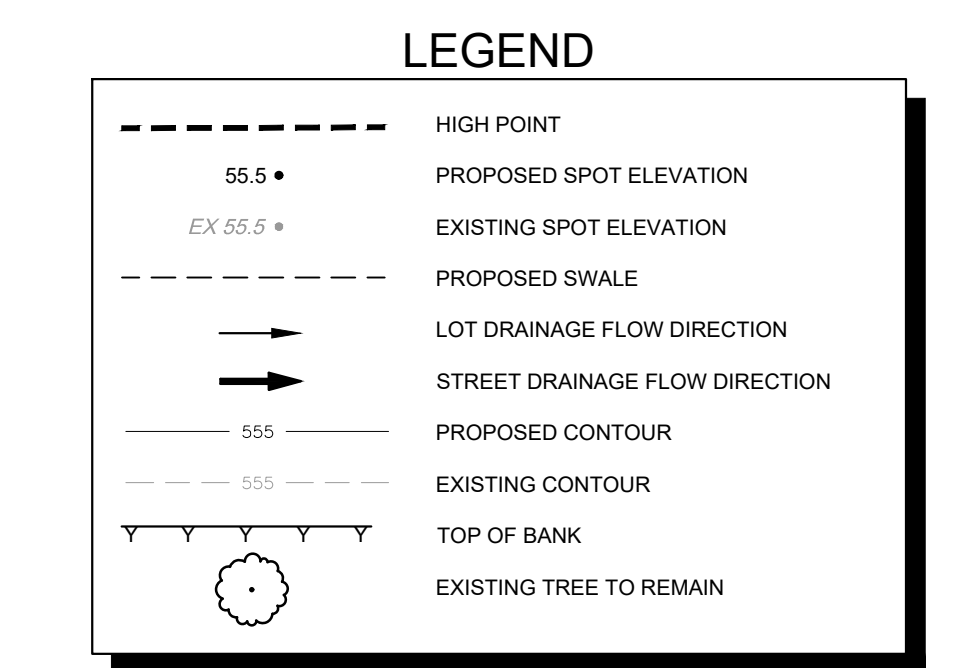




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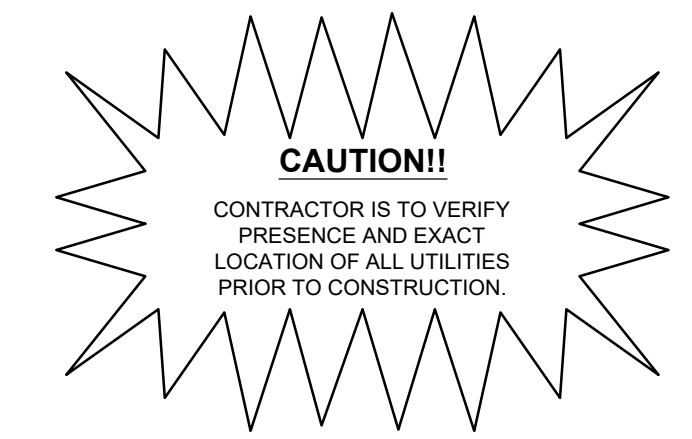
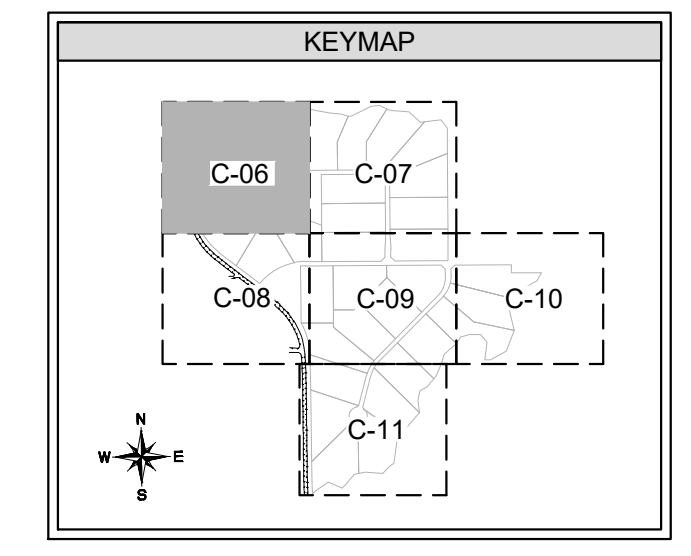
- ### GRADING GENERAL NOTES
- CONTRACTOR SHALL CUT 5' BEHIND BACK OF CURB TO SUBGRADE ELEVATION.
  - ALL SLOPES TO NATURAL GROUND ARE TO BE 4:1 MAX, UNLESS OTHERWISE NOTED.
  - PROPOSED CONTOURS SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR TO USE SPOT ELEVATIONS FOR GRADING CONSTRUCTION.
  - PUBLIC IMPROVEMENTS WITHIN THE R.O.W. SHALL ADHERE TO THE CITY GENERAL NOTES WHEN IN CONTRADICTION TO PRIVATE NOTES THROUGHOUT THE PLAN SET.
  - SEE SHEET C-24 FOR CULVERT PLAN AND PROFILES.
  - SEE SHEET C-23 FOR DETENTION POND CALCULATIONS.
  - HOME BUILDER SHALL INSTALL DRIVEWAY CULVERTS AT TIME OF CONSTRUCTION. THE HOME BUILDER TO INSTALL 24" RCP @ 1.00% OR 2-18" RCP @ 0.50%.



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SARAH E. SCOTT  
 113285  
 LICENSED PROFESSIONAL ENGINEER  
 5/3/2022

KHA PROJECT: 064041015  
 DATE: JANUARY 2022  
 SCALE: AS SHOWN  
 DESIGNED BY: CRA  
 DRAWN BY: MSM  
 CHECKED BY: SES

### GRADING AND DRAINAGE PLAN (1 OF 6)

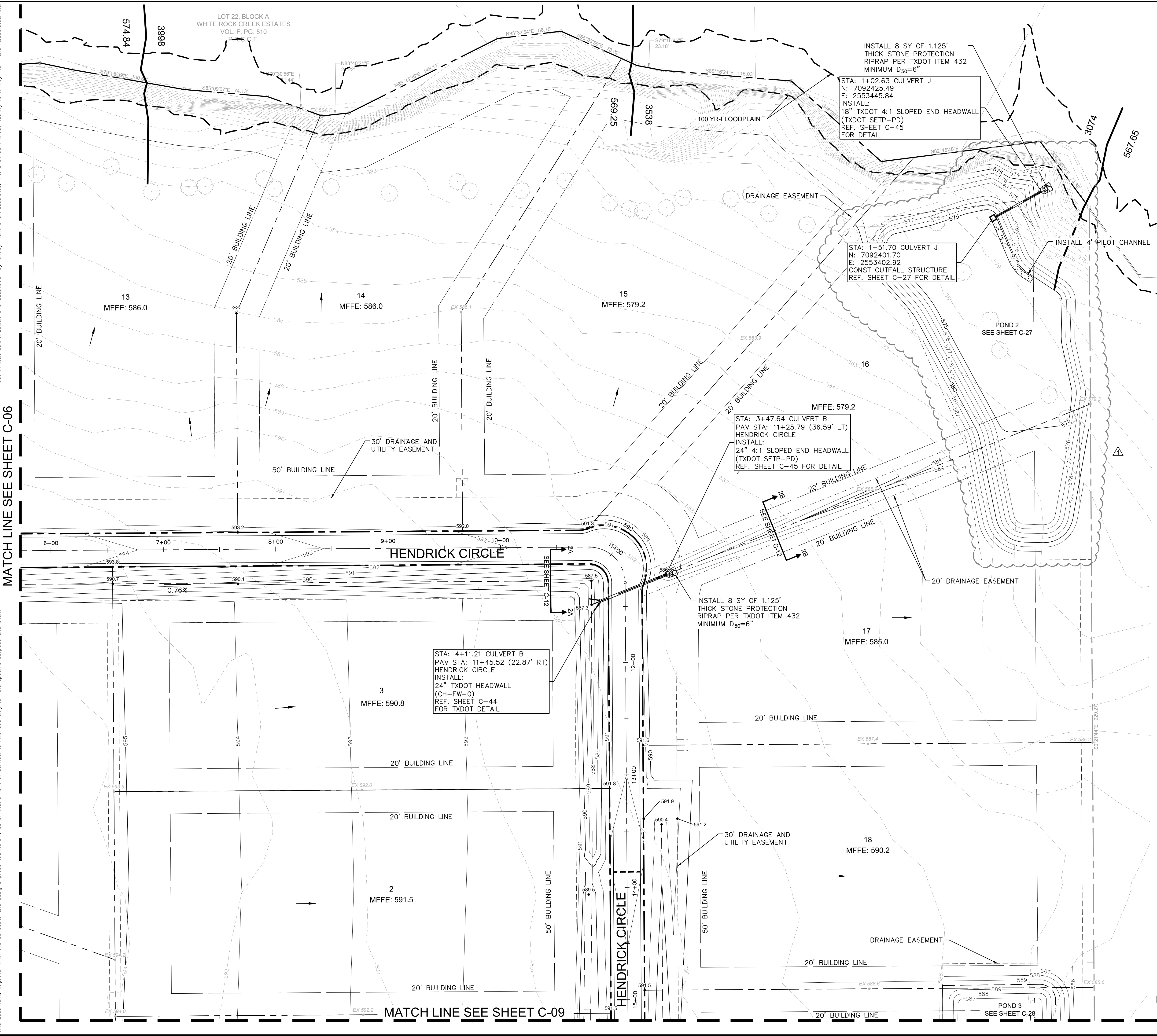
### HENDRICK FARM

CITY OF LUCAS  
 COLLIN COUNTY, TEXAS

SHEET NUMBER  
**C-06**



Plotted By: hitch, C.J. Date: May 03, 2022 07:56:20pm File Path: K:\DAL\Civil\064041015-Hendrick Farm\CAD\Plan Sheets\C-Grading\Plan.dwg  
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**GRADING GENERAL NOTES**

- CONTRACTOR SHALL CUT 5' BEHIND BACK OF CURB TO SUBGRADE ELEVATION.
- ALL SLOPES TO NATURAL GROUND ARE TO BE 4:1 MAX, UNLESS OTHERWISE NOTED.
- PROPOSED CONTOURS SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR TO USE SPOT ELEVATIONS FOR GRADING CONSTRUCTION.
- PUBLIC IMPROVEMENTS WITHIN THE R.O.W. SHALL ADHERE TO THE CITY GENERAL NOTES WHEN IN CONTRADICTION TO PRIVATE NOTES THROUGHOUT THE PLAN SET.
- SEE SHEET C-24 FOR CULVERT PLAN AND PROFILES.
- SEE SHEET C-23 FOR DETENTION POND CALCULATIONS.
- HOME BUILDER SHALL INSTALL DRIVEWAY CULVERTS AT TIME OF CONSTRUCTION. THE HOME BUILDER TO INSTALL 24" RCP @ 1.00% OR 2'-18" RCP @ 0.50%.

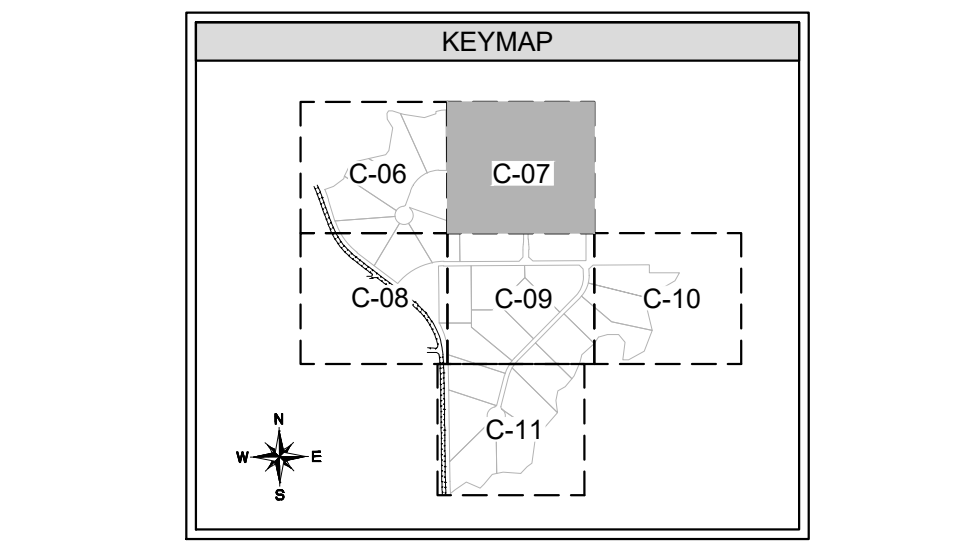
**LEGEND**

	HIGH POINT
	PROPOSED SPOT ELEVATION
	EXISTING SPOT ELEVATION
	PROPOSED SWALE
	LOT DRAINAGE FLOW DIRECTION
	STREET DRAINAGE FLOW DIRECTION
	PROPOSED CONTOUR
	EXISTING CONTOUR
	TOP OF BANK
	EXISTING TREE TO REMAIN

**RECORD DRAWING**

THIS DRAWING HAS BEEN REVISED TO SHOW THOSE CHANGES DURING THE CONSTRUCTION PROCESS REPORTED BY THE CONTRACTOR TO KIMLEY-HORN AND ASSOCIATES, INC. AND CONSIDERED TO BE SIGNIFICANT. THIS DRAWING IS NOT GUARANTEED TO BE "AS BUILT" BUT IS BASED ON THE INFORMATION MADE AVAILABLE.

DATE: 05/19/2023 BY: SARAH SCOTT



**CAUTION!!**

CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

**BENCHMARKS**

ELEVATIONS BASED ON CITY OF ALLEN GPS CONTROL.

BM#1 (CITY OF ALLEN MONUMENT NO. 2) 3-1/2-INCH ALUMINUM DISC FOUND IN CONCRETE, LOCATED 3350 FEET EAST FROM THE INTERSECTION OF MAIN STREET AND RICHARDSON COURT, ±16 FEET FROM THE NORTHEAST CORNER OF A BRIDGE.  
ELEV= 647.13

BM#2 SQUARE WITH "X" CUT SET ON CONCRETE HEADWALL, EAST SIDE OF COUNTRY CLUB ROAD (F.M. NO. 1378), AT THE INTERSECTION OF COUNTRY CLUB ROAD AND ESTATES PARKWAY (F.M. NO. 2170).  
ELEV= 587.52

BM#3 SQUARE WITH "X" CUT SET ON CONCRETE HEADWALL, EAST SIDE OF COUNTRY CLUB ROAD (F.M. NO. 1378), ±240 FEET NORTH FROM THE CENTERLINE INTERSECTION OF COUNTRY CLUB ROAD AND SKYVIEW DRIVE.  
ELEV= 589.81



CHIT	5/3/2022
POND GRADING REVISIONS	
No.	
REVISIONS	
DATE	
BY	

**Kimley-Horn**

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 PHONE: 972-770-1300  
 WWW.KIMLEY-HORN.COM  
 TEXAS REGISTERED ENGINEERING FIRM F-928

**GRADING AND DRAINAGE PLAN (2 OF 6)**

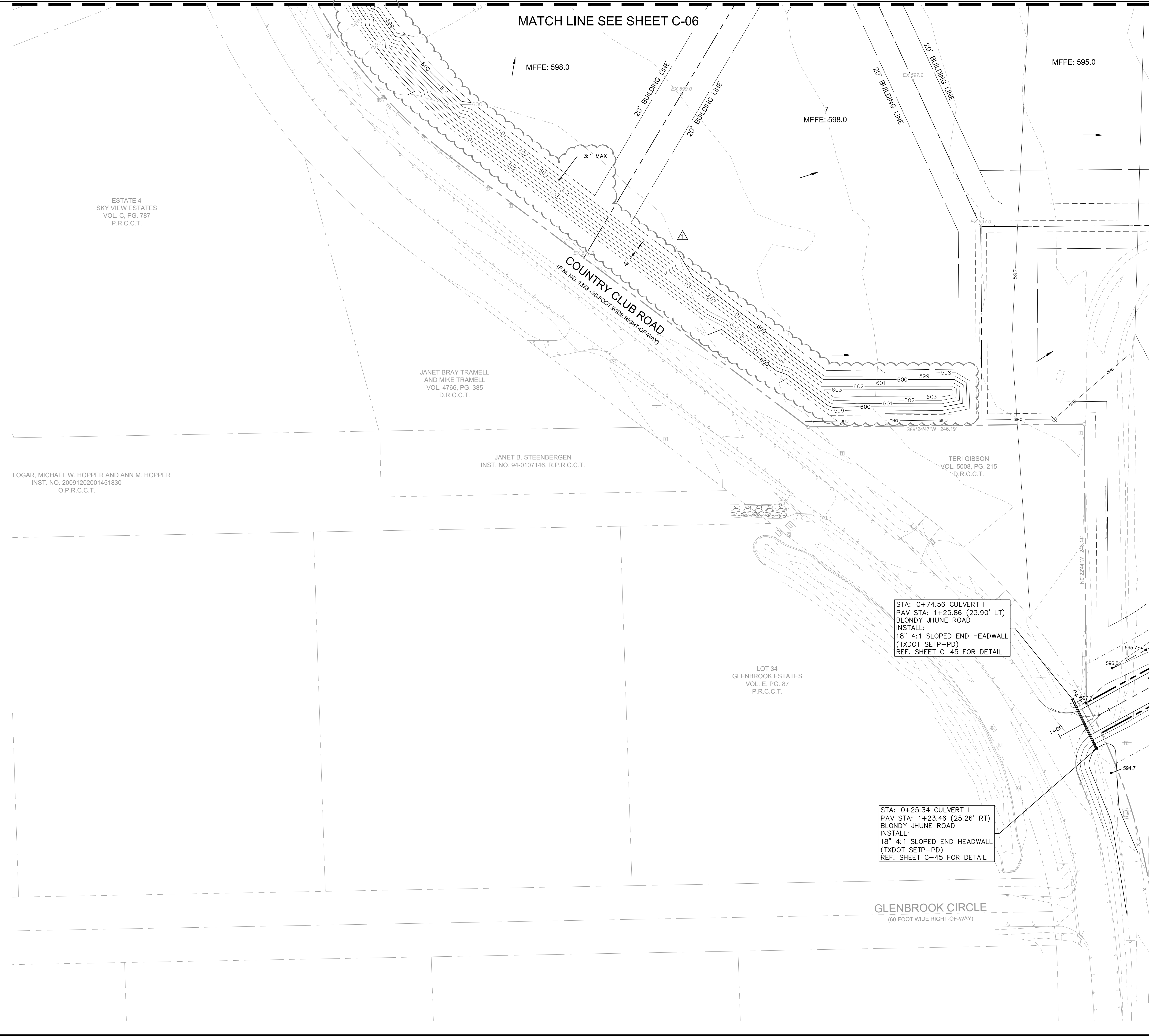
**HENDRICK FARM**

CITY OF LUCAS  
COLLIN COUNTY, TEXAS

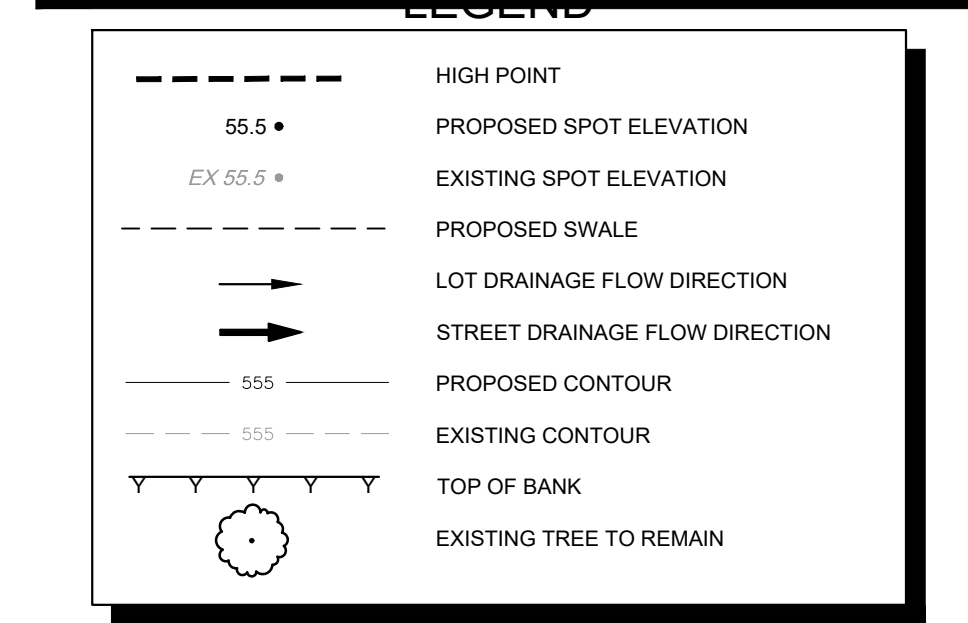
SHEET NUMBER  
**C-07**



Plotted By: Hitech, C.J. Date: May 10, 2022 09:44:18am File Path: K:\DAL\Civil\064041015-Hendrick Farm\CAD\Plan Sheets\C-Grading\Plan.dwg  
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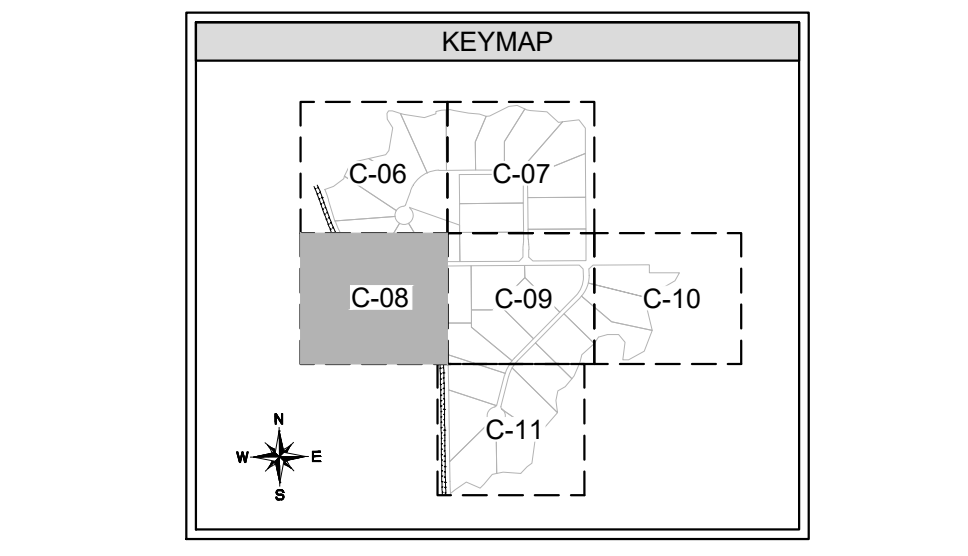
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  - SEE SHEET C-24 FOR CULVERT PLAN AND PROFILES.
  - SEE SHEET C-23 FOR DETENTION POND CALCULATIONS.
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DATE: 05/19/2023 BY: SARAH SCOTT



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BM#3 SQUARE WITH "X" CUT SET ON CONCRETE HEADWALL, EAST SIDE OF COUNTRY CLUB ROAD (F.M. NO. 1378), ±240 FEET NORTH FROM THE CENTERLINE INTERSECTION OF COUNTRY CLUB ROAD AND SKYVIEW DRIVE.  
 ELEV= 589.81



ADDED BERM GRADING	NO.	REVISIONS	DATE	BY

**Kimley-Horn**

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 TEXAS REGISTERED ENGINEERING FIRM F-928

**SARAH E. SCOTT**  
 113285  
 LICENSED PROFESSIONAL ENGINEER  
 5/3/2022

KHA PROJECT: 064041015  
 DATE: JANUARY 2022  
 SCALE: AS SHOWN  
 DESIGNED BY: CRA  
 DRAWN BY: MSM  
 CHECKED BY: SES

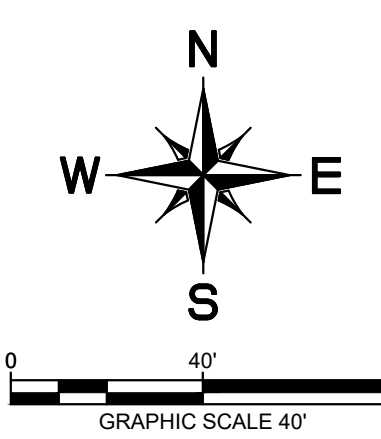
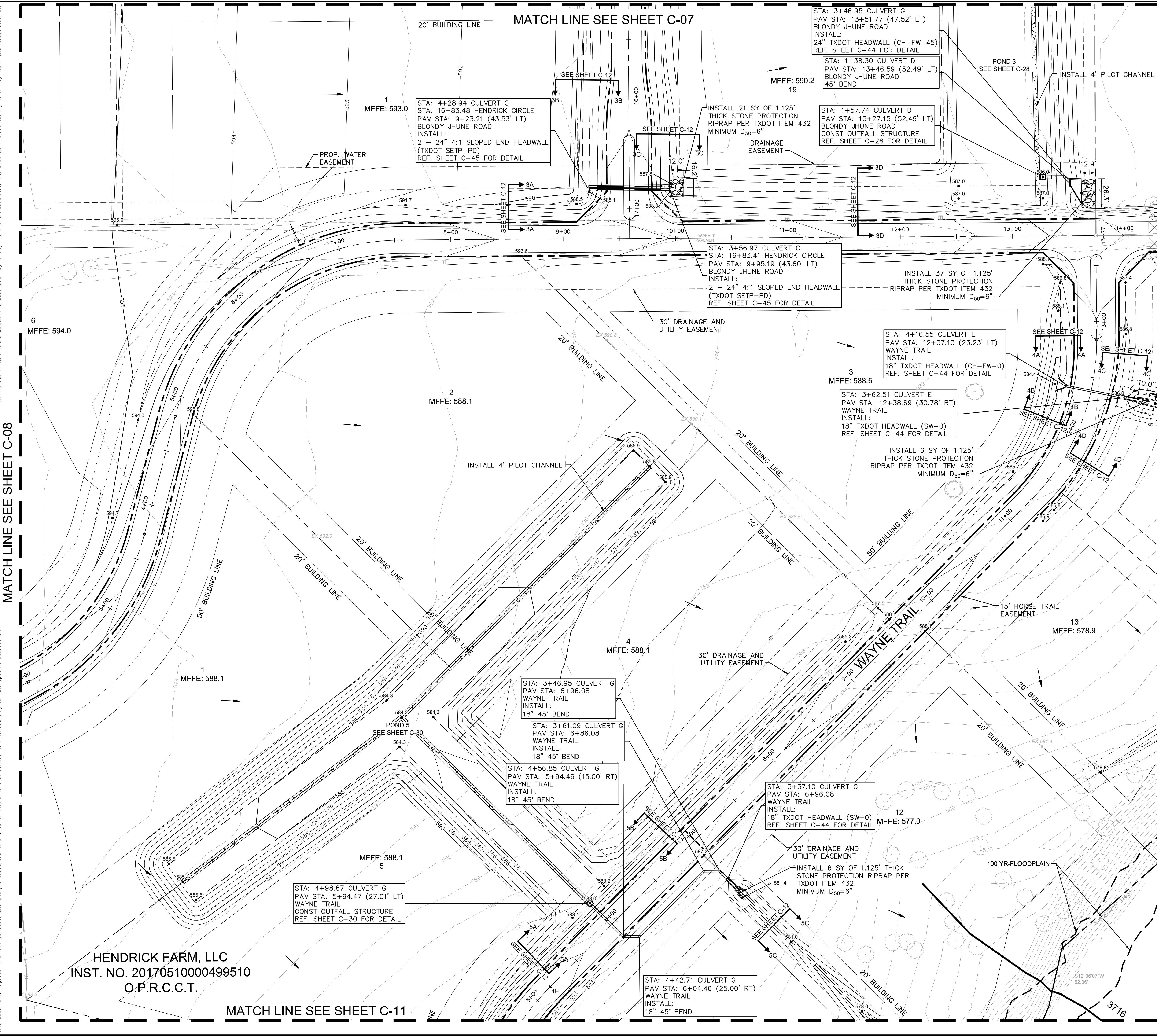
**GRADING AND DRAINAGE PLAN (3 OF 6)**

**HENDRICK FARM**  
 CITY OF LUCAS  
 COLLIN COUNTY, TEXAS

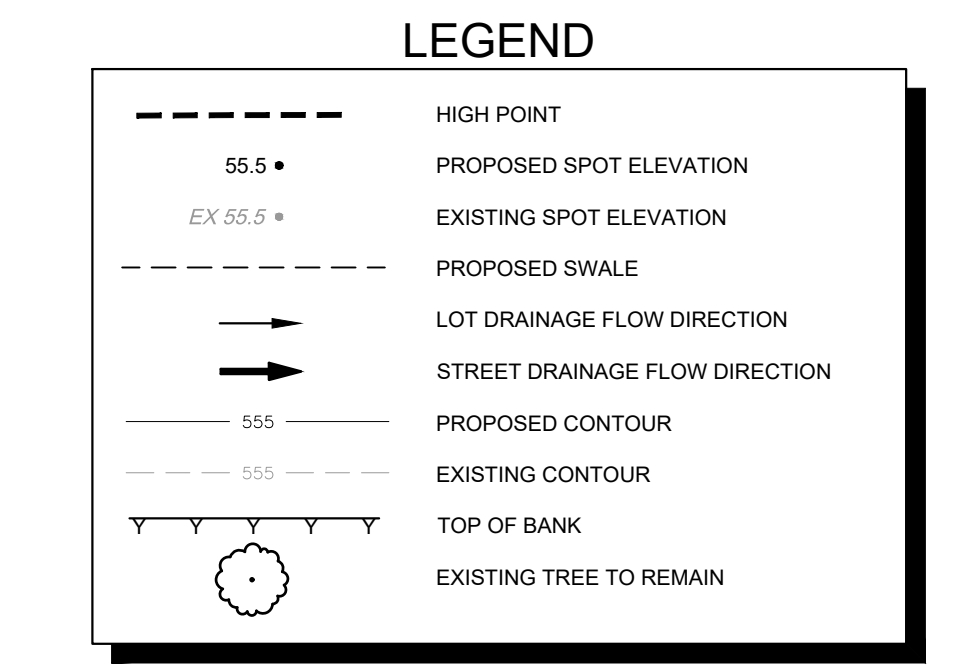
SHEET NUMBER  
**C-08**



Plotted By: Matthew James, Date: March 09, 2022 01:48:43pm, File Path: K:\DAL\_Civil\064041015-Hendrick Farm\Grading\Plan\_Sheets\C-Grading\Plan.dwg, This document, together with the concepts and designs presented herein, is intended only for the specific purpose and without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



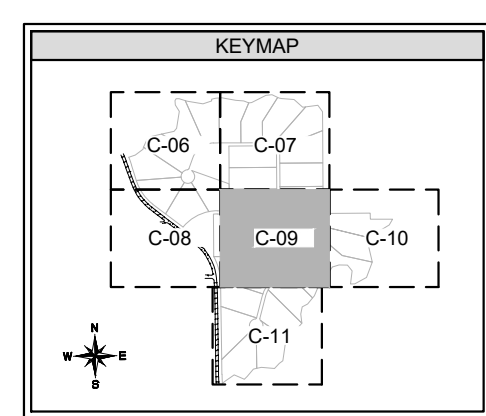
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DATE: 05/19/2023 BY: SARAH SCOTT



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### BENCHMARKS

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ELEV= 587.52

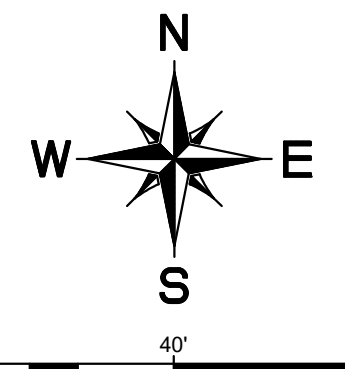
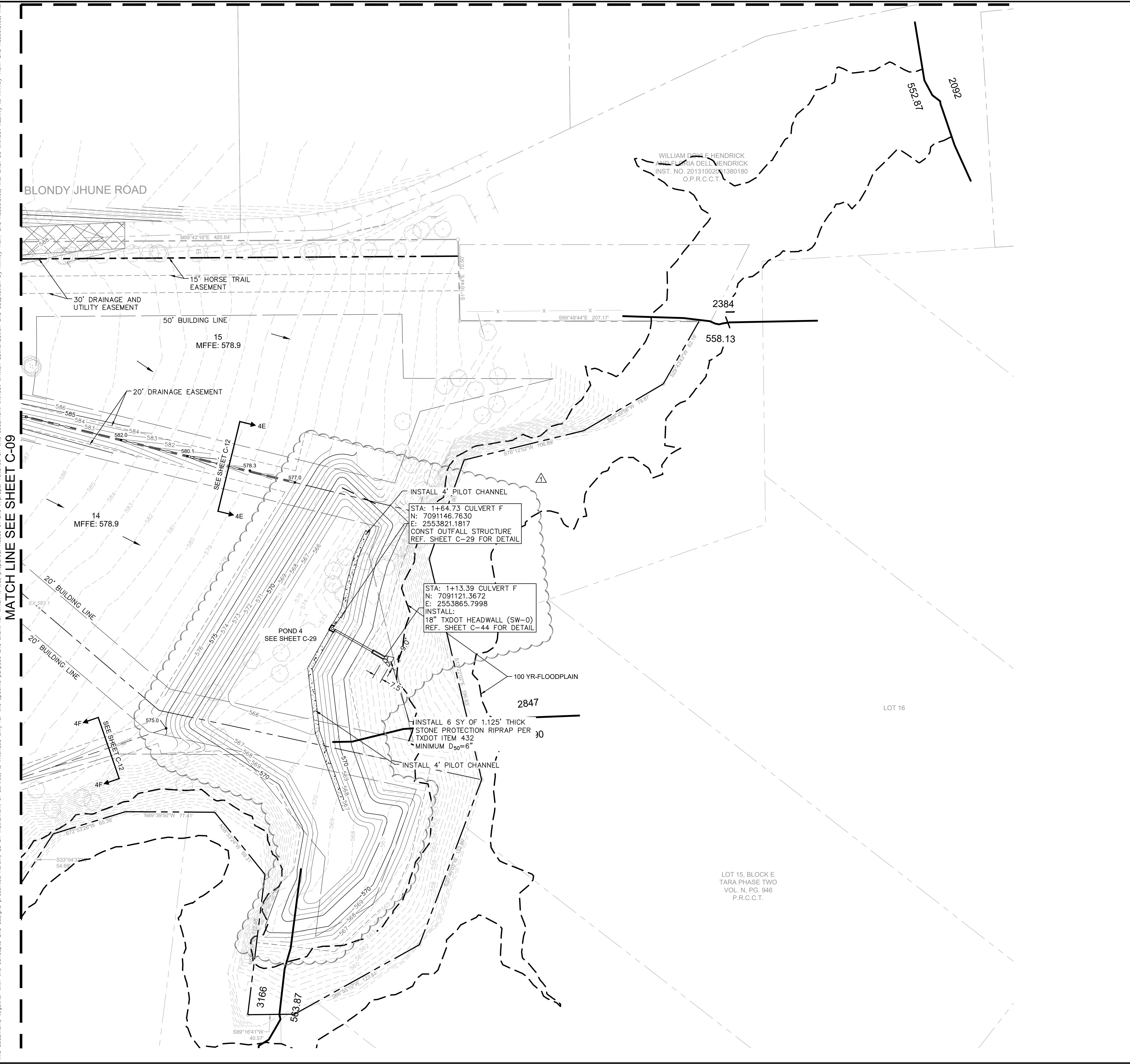
BM#3 SQUARE WITH "X" CUT SET ON CONCRETE HEADWALL, EAST SIDE OF COUNTRY CLUB ROAD (F.M. NO. 1378), ±240 FEET NORTH FROM THE CENTERLINE INTERSECTION OF COUNTRY CLUB ROAD AND SKYVIEW DRIVE.  
ELEV= 589.81



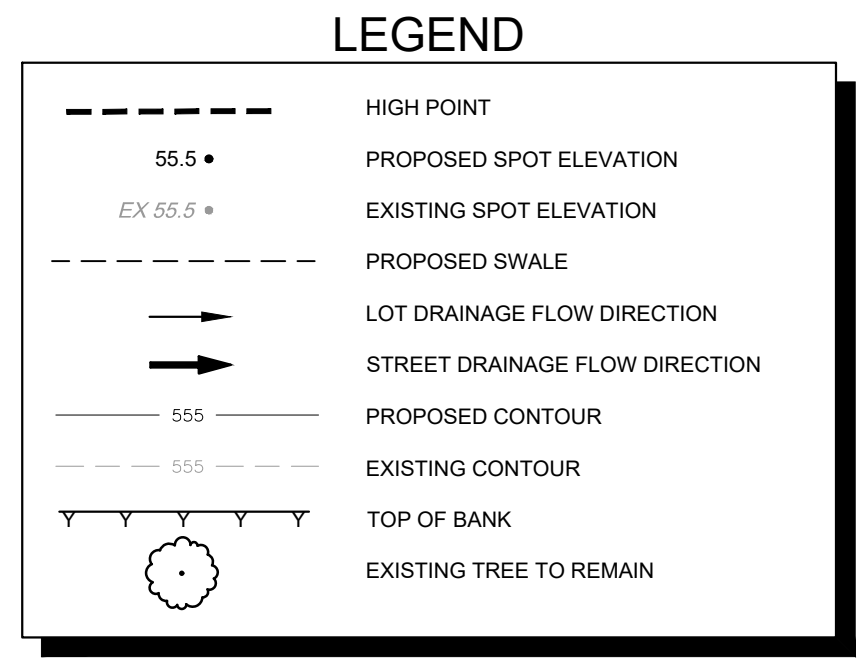
KHA PROJECT 064041015	DATE JANUARY 2022	DESIGNED BY: CRA DRAWN BY: MSM CHECKED BY: SES	REVISIONS	BY
	SCALE: AS SHOWN			DATE
<h2>Kimley-Horn</h2> <p>© 2021 KIMLEY-HORN AND ASSOCIATES, INC. 13455 NOEL ROAD, SUITE 700, DALLAS, TX 75240 WWW.KIMLEY-HORN.COM TEXAS REGISTERED ENGINEERING FIRM F-998</p>				
<h3>GRADING AND DRAINAGE PLAN (4 OF 6)</h3>		<h2>HENDRICK FARM</h2> <p>CITY OF LUCAS COLLIN COUNTY, TEXAS</p>		
<p>SHEET NUMBER <b>C-09</b></p>				



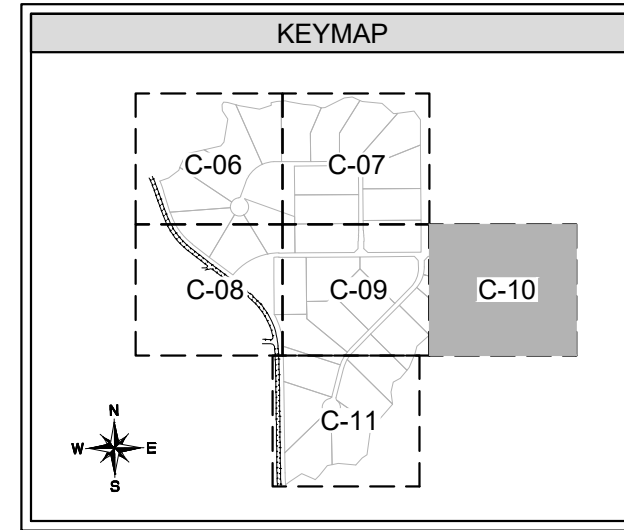
Plotted By: Hitch, C.J. Date: May 04, 2022 08:19:20am File Path: K:\DAL\_Civil\06401015-Hendrick Farm\CAD\Plan Sheets\C-Grading\Plan.dwg  
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 DATE: 05/19/2023 BY: SARAH SCOTT

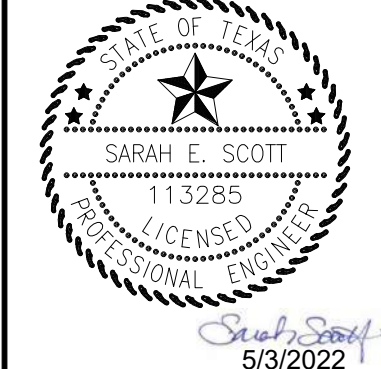


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 ELEV= 589.81



NO.	REVISIONS	DATE	BY

**Kimley-Horn**  
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 TEXAS REGISTERED ENGINEERING FIRM F-928



KHA PROJECT	06404015
DATE	JANUARY 2022
SCALE	AS SHOWN
DESIGNED BY:	CRA
DRAWN BY:	MSM
CHECKED BY:	SES

**GRADING AND DRAINAGE PLAN (5 OF 6)**

**HENDRICK FARM**  
 CITY OF LUCAS  
 COLLIN COUNTY, TEXAS

SHEET NUMBER  
**C-10**



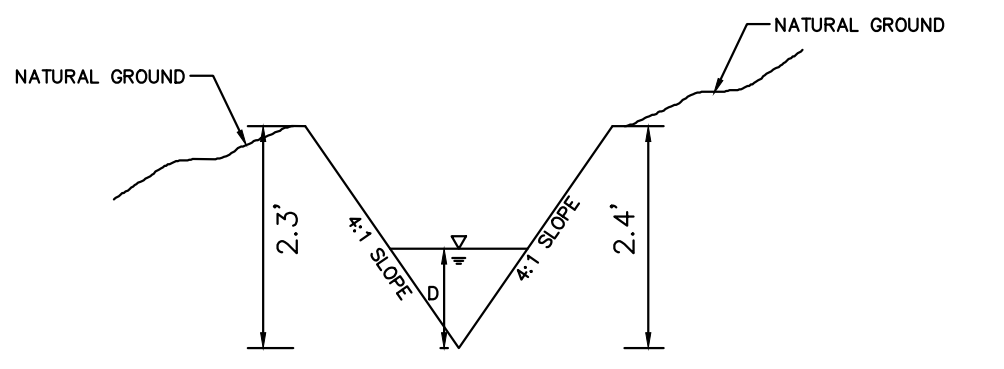




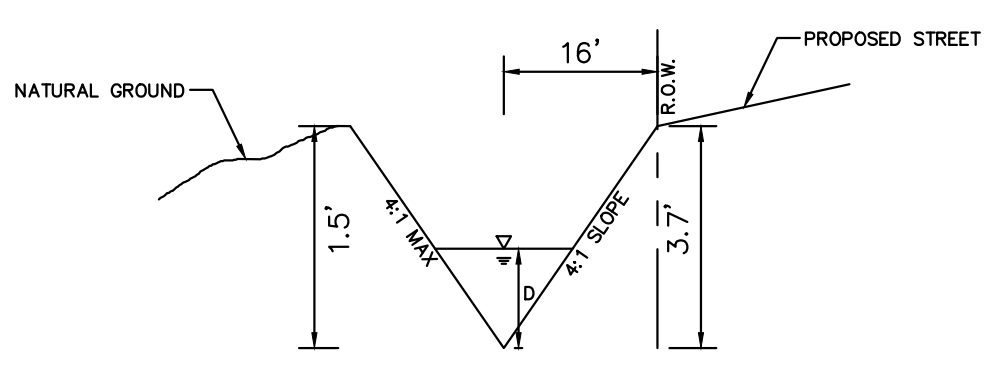
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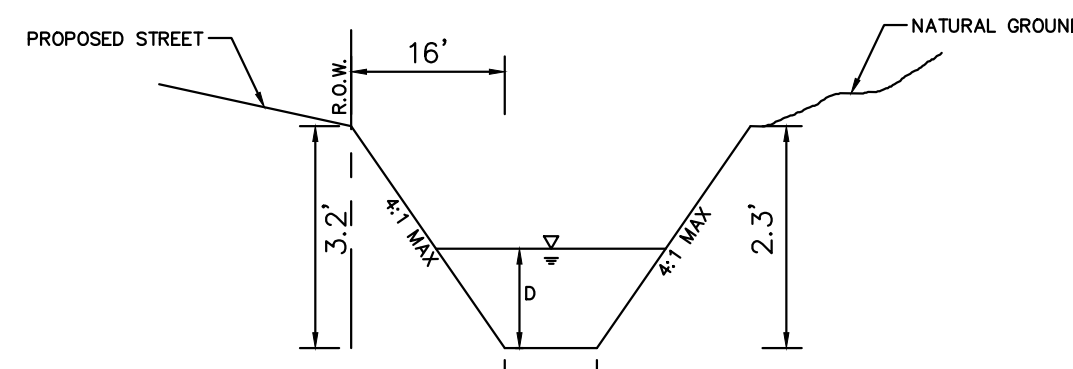
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 $D_{25} = 1.14$  FT;  $D_{100} = 1.34$  FT  
**SECTION 2A-2A**  
 NTS  
 SEE SHEET C-07



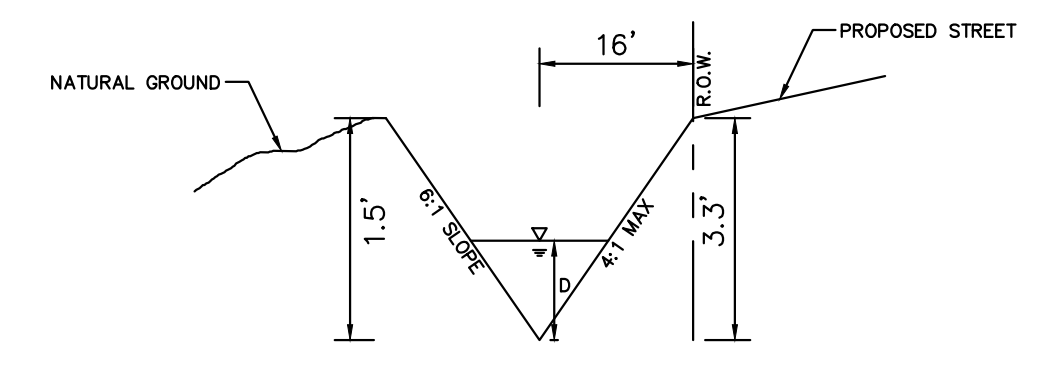
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**SECTION 2B-2B**  
 NTS  
 SEE SHEET C-07



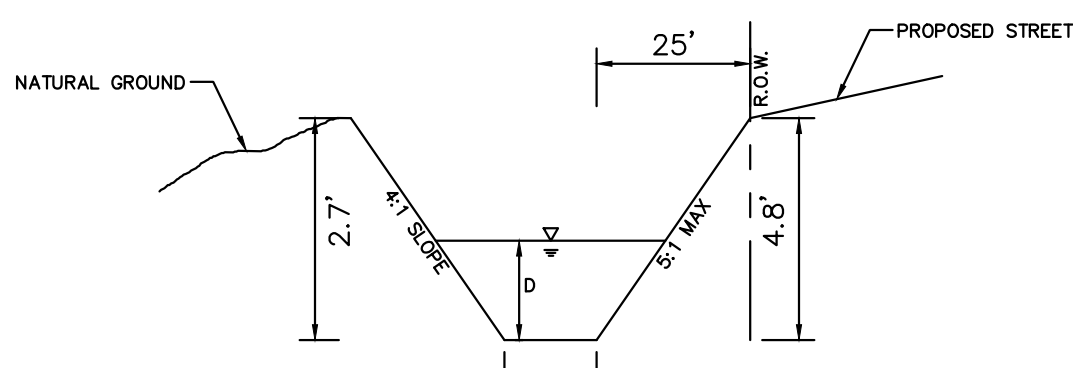
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**SECTION 3A-3A**  
 NTS  
 SEE SHEET C-09



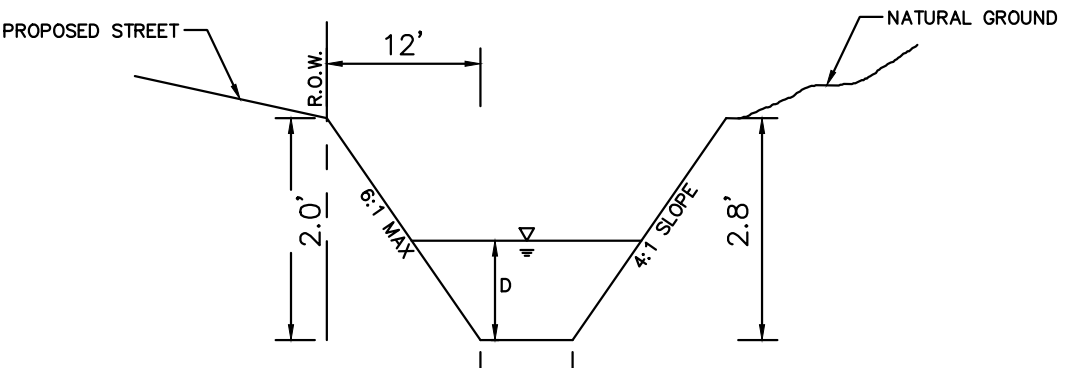
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**SECTION 3B-3B**  
 NTS  
 SEE SHEET C-09



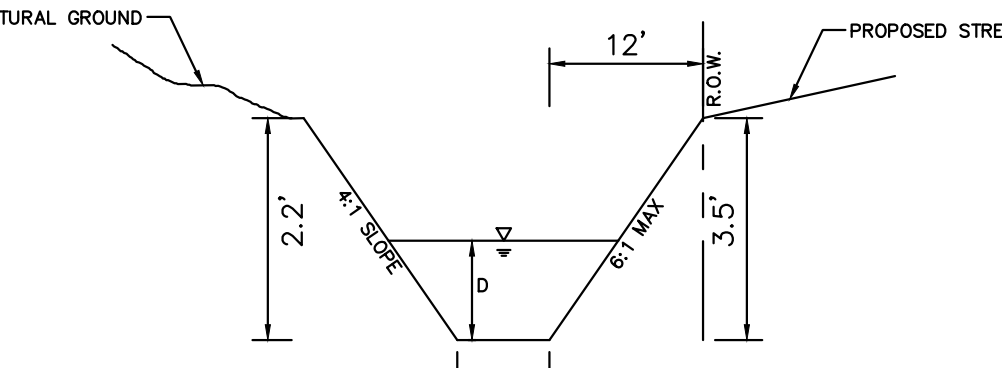
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**SECTION 3C-3C**  
 NTS  
 SEE SHEET C-09



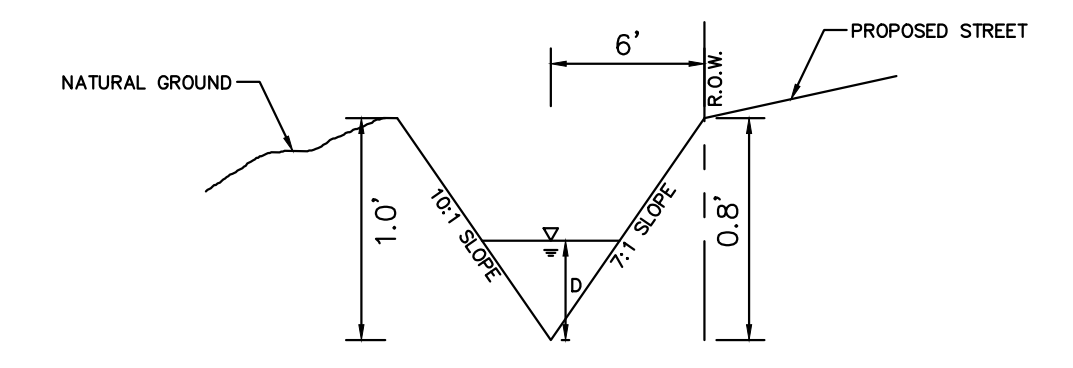
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**SECTION 3D-3D**  
 NTS  
 SEE SHEET C-09



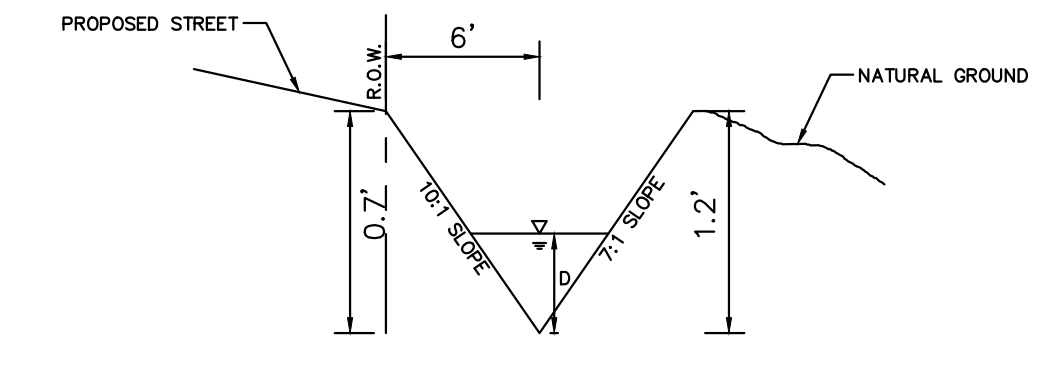
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**SECTION 4A-4A**  
 NTS  
 SEE SHEET C-09



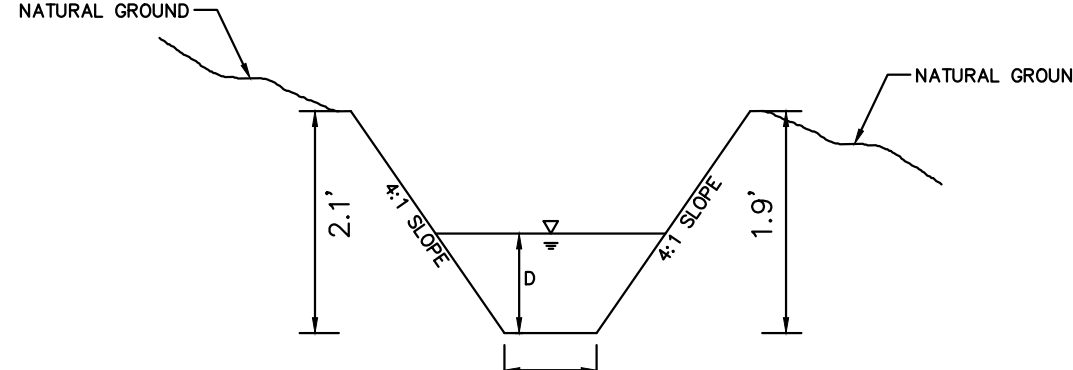
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**SECTION 4B-4B**  
 NTS  
 SEE SHEET C-09



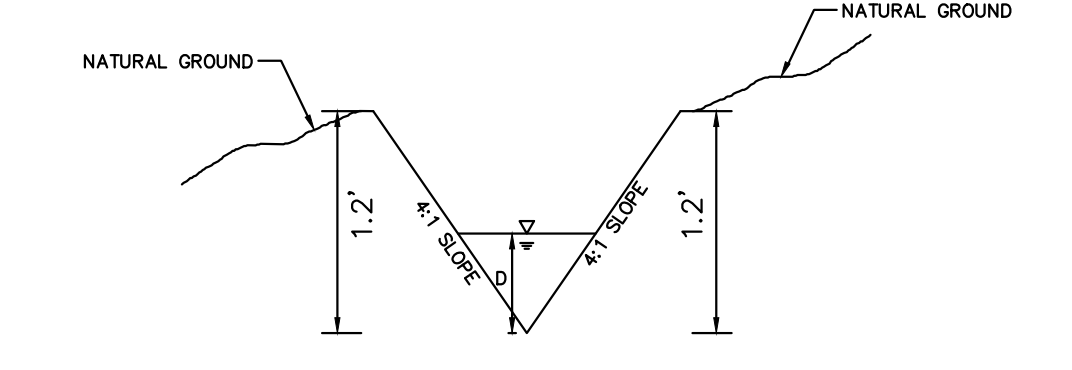
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**SECTION 4C-4C**  
 NTS  
 SEE SHEET C-09



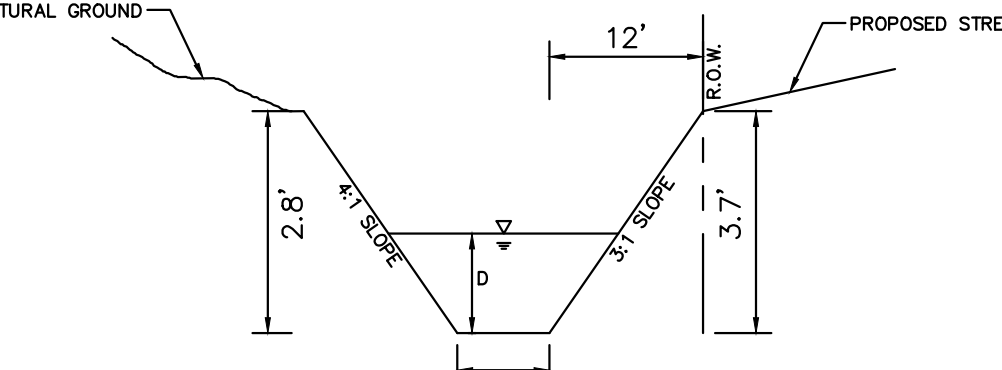
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**SECTION 4D-4D**  
 NTS  
 SEE SHEET C-09



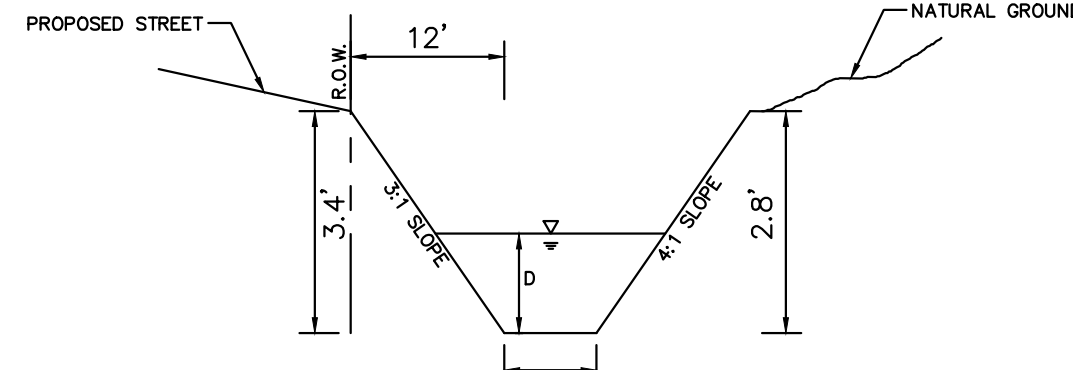
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 $S = 0.0781$  FT/FT  
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 $D_{25} = 0.50$  FT;  $D_{100} = 0.60$  FT  
**SECTION 4E-4E**  
 NTS  
 SEE SHEET C-10



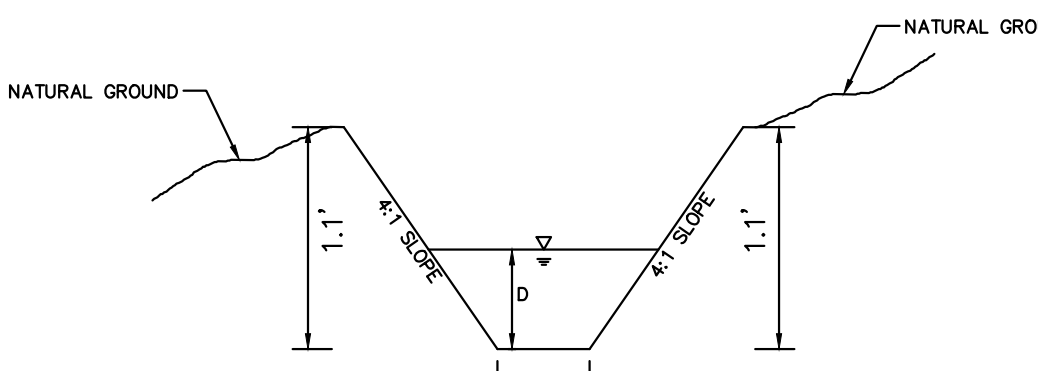
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**SECTION 4F-4F**  
 NTS  
 SEE SHEET C-10



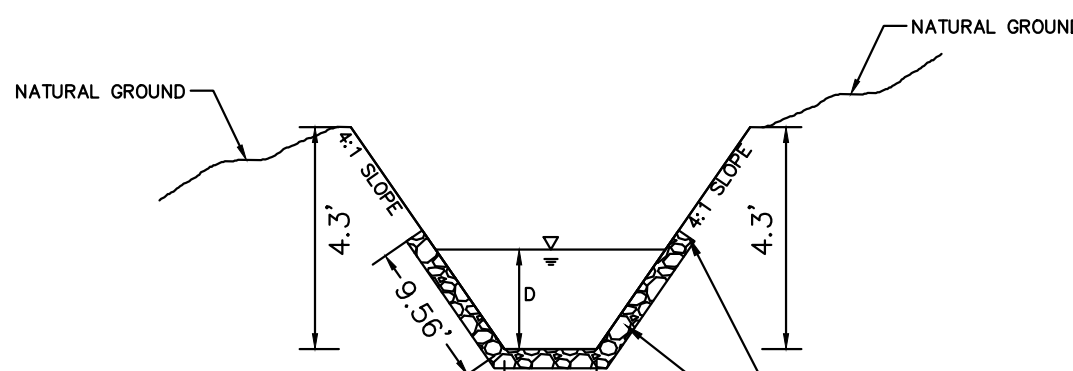
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**SECTION 5A-5A**  
 NTS  
 SEE SHEET C-09



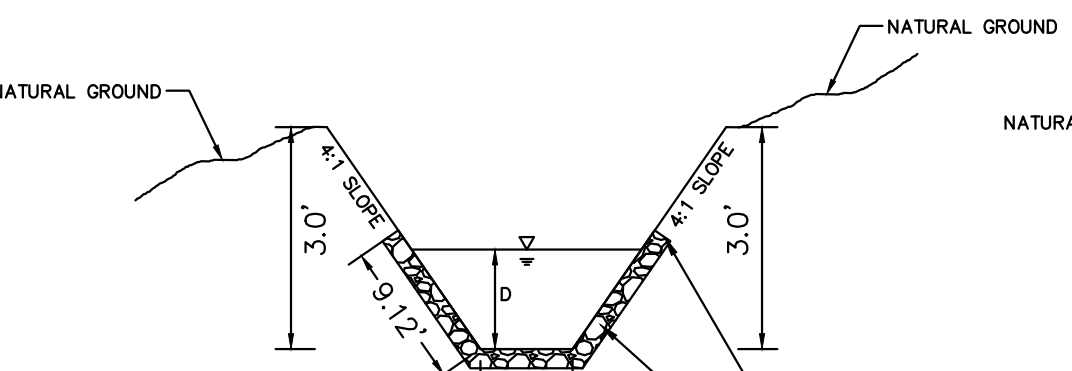
$n = 0.03$   
 $Q_{25} = 7.21$  CFS;  $Q_{100} = 10.82$  CFS  
 $S = 0.0070$  FT/FT  
 $V_{25} = 2.26$  FPS;  $V_{100} = 2.54$  FPS  
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**SECTION 5B-5B**  
 NTS  
 SEE SHEET C-09



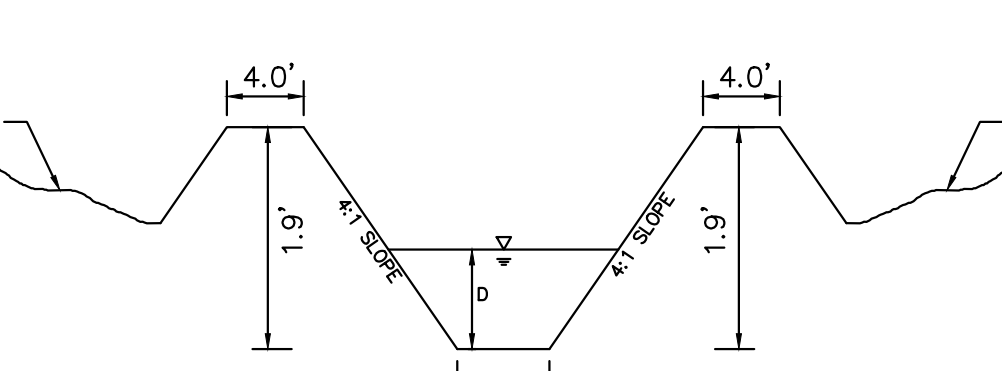
$n = 0.03$   
 $Q_{25} = 14.45$  CFS;  $Q_{100} = 21.68$  CFS  
 $S = 0.0465$  FT/FT  
 $V_{25} = 5.04$  FPS;  $V_{100} = 5.66$  FPS  
 $D_{25} = 0.48$  FT;  $D_{100} = 0.60$  FT  
**SECTION 5C-5C**  
 NTS  
 SEE SHEET C-09



$n = 0.069$   
 $Q_{25} = 51.40$  CFS;  $Q_{100} = 80.68$  CFS  
 $S = 0.0169$  FT/FT  
 $V_{25} = 2.83$  FPS;  $V_{100} = 3.17$  FPS  
 $D_{25} = 1.69$  FT;  $D_{100} = 2.07$  FT  
**SECTION A-A**  
 NTS  
 SEE SHEET C-11



$n = 0.069$   
 $Q_{25} = 51.40$  CFS;  $Q_{100} = 80.68$  CFS  
 $S = 0.0222$  FT/FT  
 $V_{25} = 3.13$  FPS;  $V_{100} = 3.51$  FPS  
 $D_{25} = 1.59$  FT;  $D_{100} = 1.95$  FT  
**SECTION B-B**  
 NTS  
 SEE SHEET C-11



$n = 0.069$   
 $Q_{25} = 42.35$  CFS;  $Q_{100} = 65.86$  CFS  
 $S = 0.0359$  FT/FT  
 $V_{25} = 3.41$  FPS;  $V_{100} = 3.84$  FPS  
 $D_{25} = 1.17$  FT;  $D_{100} = 1.45$  FT  
**SECTION C-C**  
 NTS  
 SEE SHEET C-11

**RECORD DRAWING**  
 THIS DRAWING HAS BEEN REVISED TO SHOW THOSE CHANGES DURING THE CONSTRUCTION PROCESS REPORTED BY THE CONTRACTOR TO KIMLEY-HORN AND ASSOCIATES, INC. AND CONSIDERED TO BE SIGNIFICANT. THIS DRAWING IS NOT GUARANTEED TO BE "AS BUILT" BUT IS BASED ON THE INFORMATION MADE AVAILABLE.  
 DATE: 05/19/2023 BY: SARAH SCOTT

**BENCHMARKS**  
 ELEVATIONS BASED ON CITY OF ALLEN GPS CONTROL.  
 BM#1 (CITY OF ALLEN MONUMENT NO. 2) 3-1/2-INCH ALUMINUM DISC FOUND IN CONCRETE, LOCATED 3350 FEET EAST FROM THE INTERSECTION OF MAIN STREET AND RICHARDSON COURT, ±16 FEET FROM THE NORTHEAST CORNER OF A BRIDGE.  
 ELEV = 647.13  
 BM#2 SQUARE WITH "X" CUT SET ON CONCRETE HEADWALL, EAST SIDE OF COUNTRY CLUB ROAD (F.M. NO. 1378), AT THE INTERSECTION OF COUNTRY CLUB ROAD AND ESTATES PARKWAY (F.M. NO. 2170).  
 ELEV = 587.52  
 BM#3 SQUARE WITH "X" CUT SET ON CONCRETE HEADWALL, EAST SIDE OF COUNTRY CLUB ROAD (F.M. NO. 1378), ±240 FEET NORTH FROM THE CENTERLINE INTERSECTION OF COUNTRY CLUB ROAD AND SKYVIEW DRIVE.  
 ELEV = 589.81

NO.	REVISIONS	DATE	BY

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 WWW.KIMLEY-HORN.COM  
 PH: 972-770-1300  
 TEXAS REGISTERED ENGINEERING FIRM F-998

STATE OF TEXAS  
 SARAH E. SCOTT  
 113285  
 LICENSED PROFESSIONAL ENGINEER  
 1/31/2022

KHA PROJECT 064041015  
 DATE JANUARY 2022  
 SCALE AS SHOWN  
 DESIGNED BY: CRA  
 DRAWN BY: CDH  
 CHECKED BY: SES

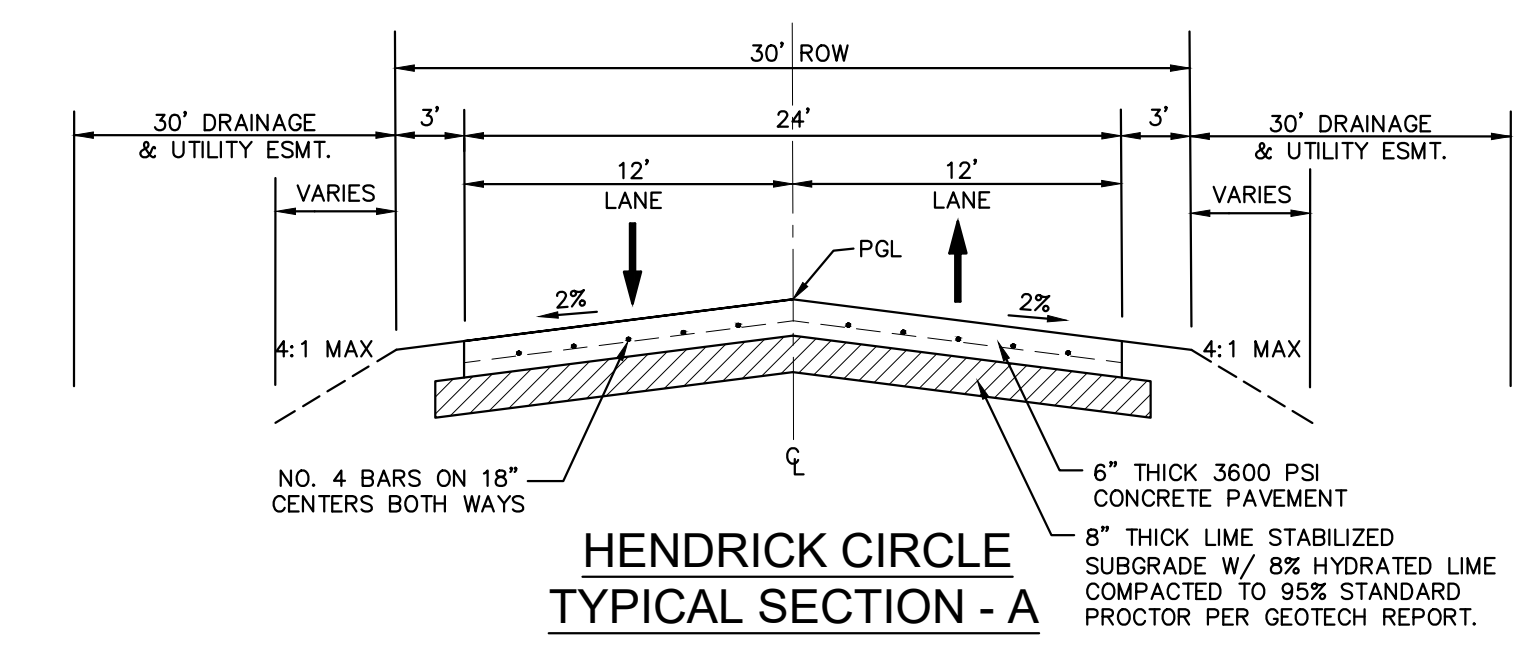
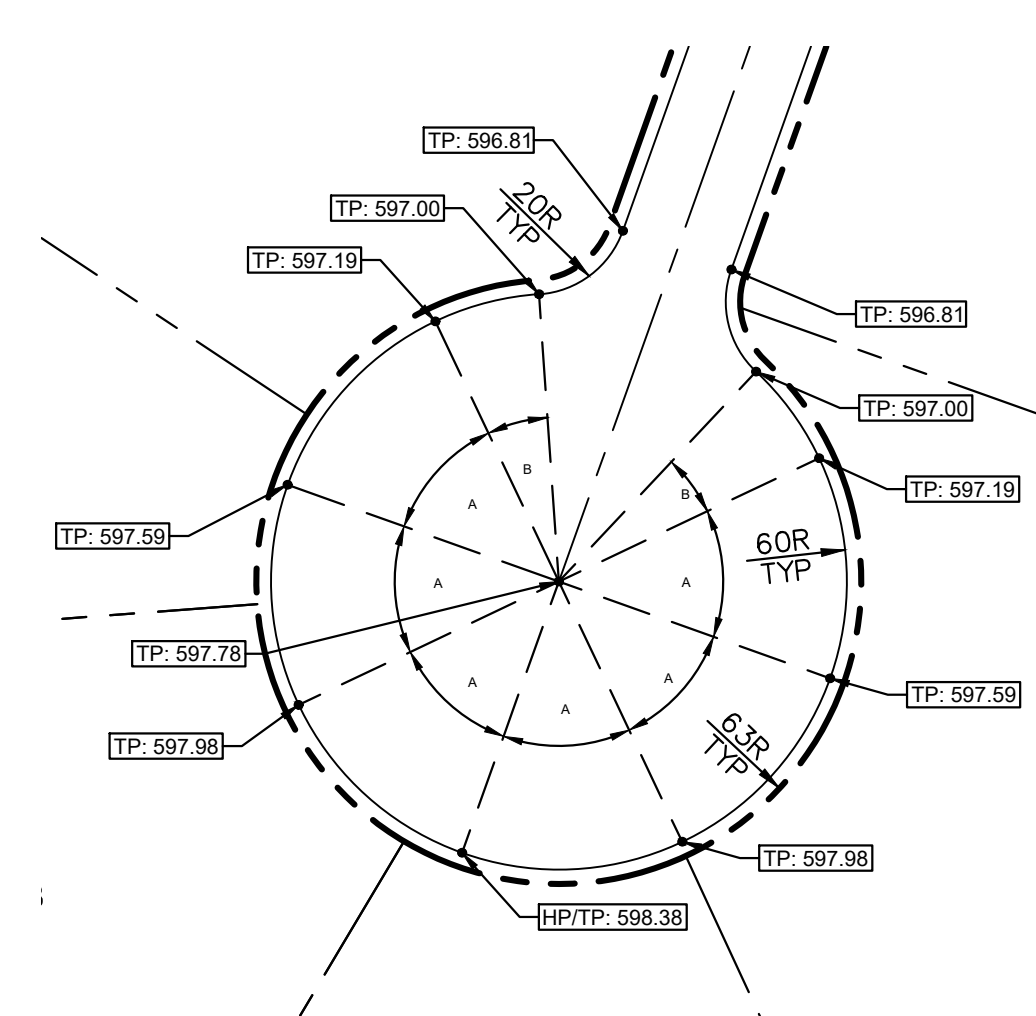
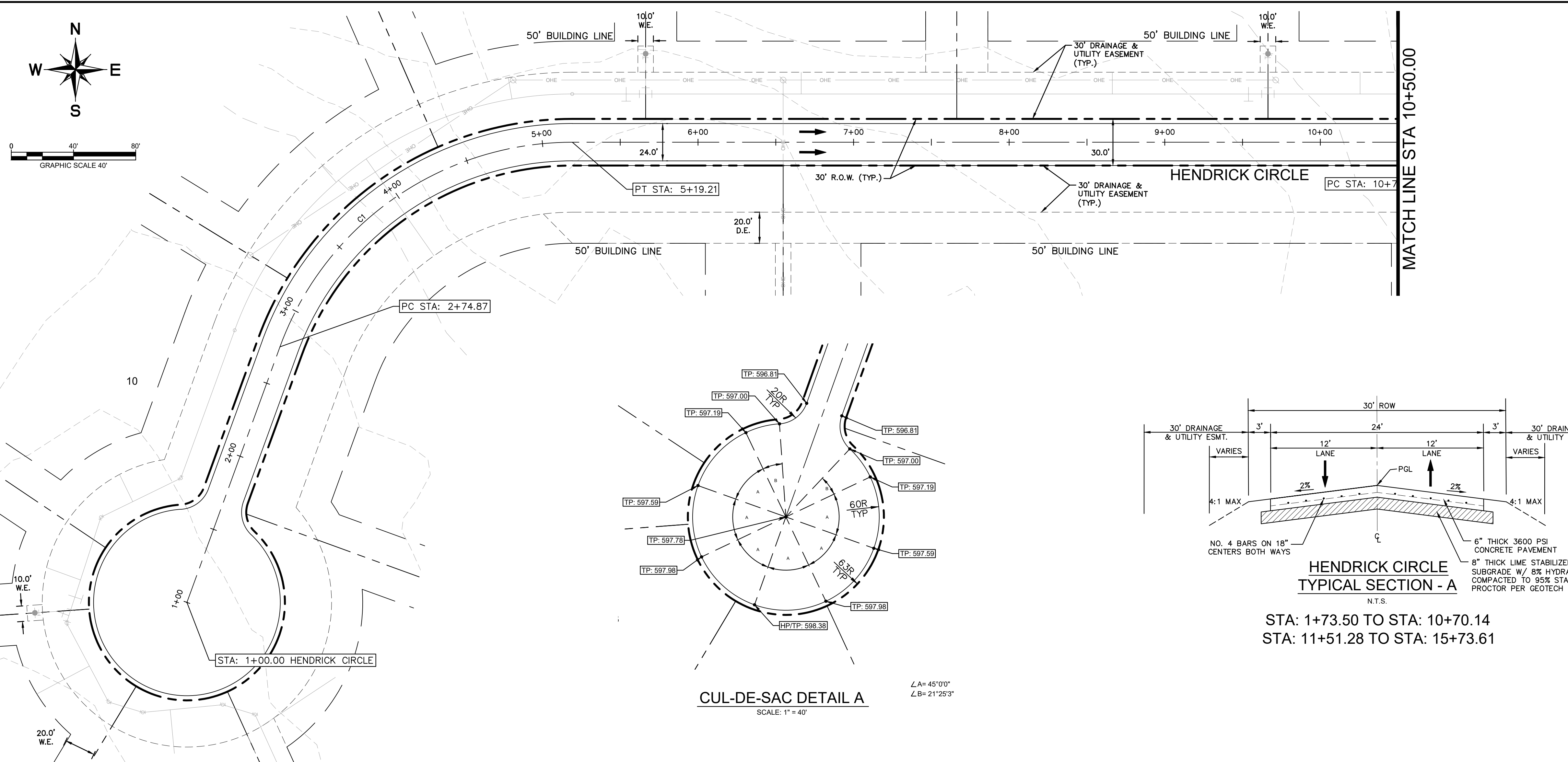
**HENDRICK FARM**  
 CITY OF LUCAS  
 COLLIN COUNTY, TEXAS

CHANNEL CROSS SECTIONS

SHEET NUMBER  
**C-12**



Plotted By: Matthew James, Date: March 09, 2022, 01:49:37pm, File Path: K:\DAL\_Civil\064041015-Hendrick Farm\CAD\Plan Sheets\C-Paving P&P.dwg  
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CURVE TABLE						
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C1	200.00'	244.35'	N54°38'16"E	229.43'	70°00'00"	140.04'

**RECORD DRAWING**

THIS DRAWING HAS BEEN REVISED TO SHOW THOSE CHANGES DURING THE CONSTRUCTION PROCESS REPORTED BY THE CONTRACTOR TO KIMLEY-HORN AND ASSOCIATES, INC. AND CONSIDERED TO BE SIGNIFICANT. THIS DRAWING IS NOT GUARANTEED TO BE "AS BUILT" BUT IS BASED ON THE INFORMATION MADE AVAILABLE.

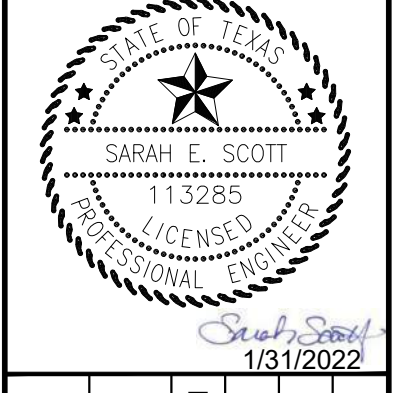
DATE: 05/19/2023 BY: SARAH SCOTT

NO.	REVISIONS	DATE	BY

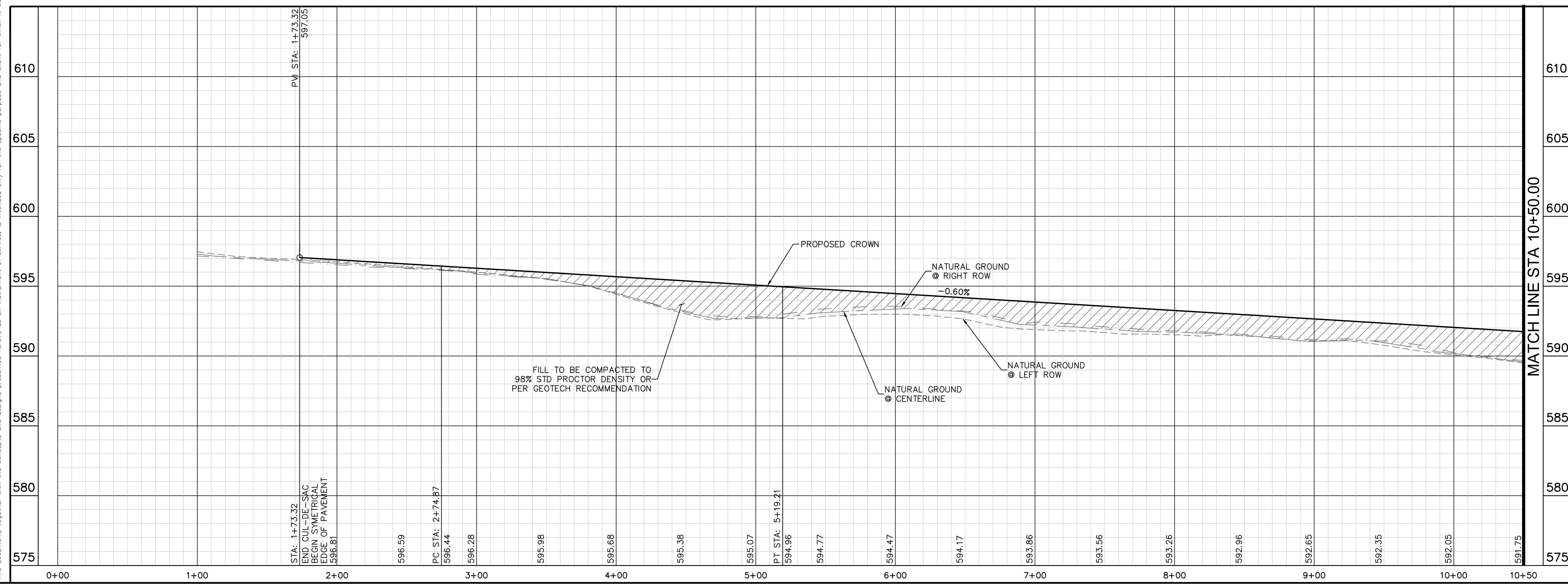
**Kimley-Horn**

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 WWW.KIMLEY-HORN.COM

TEXAS REGISTERED ENGINEERING FIRM F-998



KHA PROJECT	064041015
DATE	JANUARY 2022
SCALE	AS SHOWN
DESIGNED BY:	CRA
DRAWN BY:	HCL
CHECKED BY:	SES



**PAVING PLAN & PROFILE - HENDRICK CIRCLE**

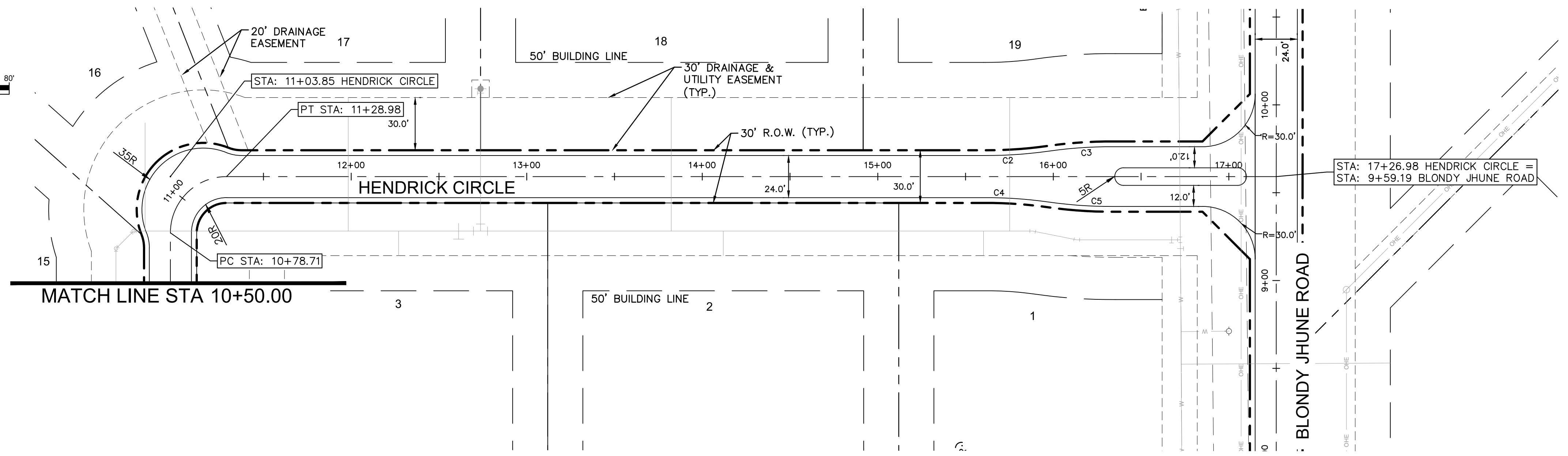
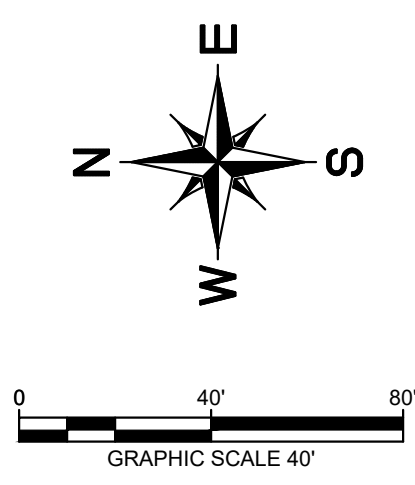
**HENDRICK FARM**

CITY OF LUCAS  
 COLLIN COUNTY, TEXAS

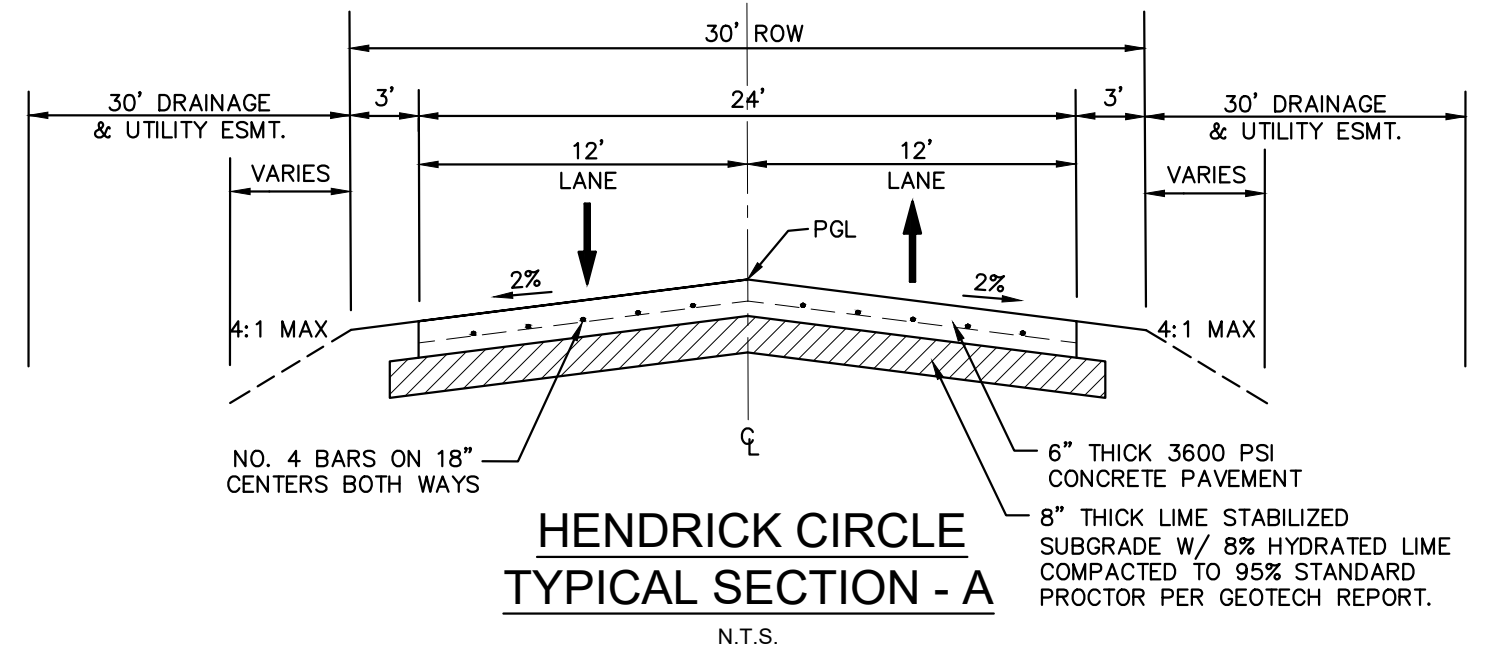
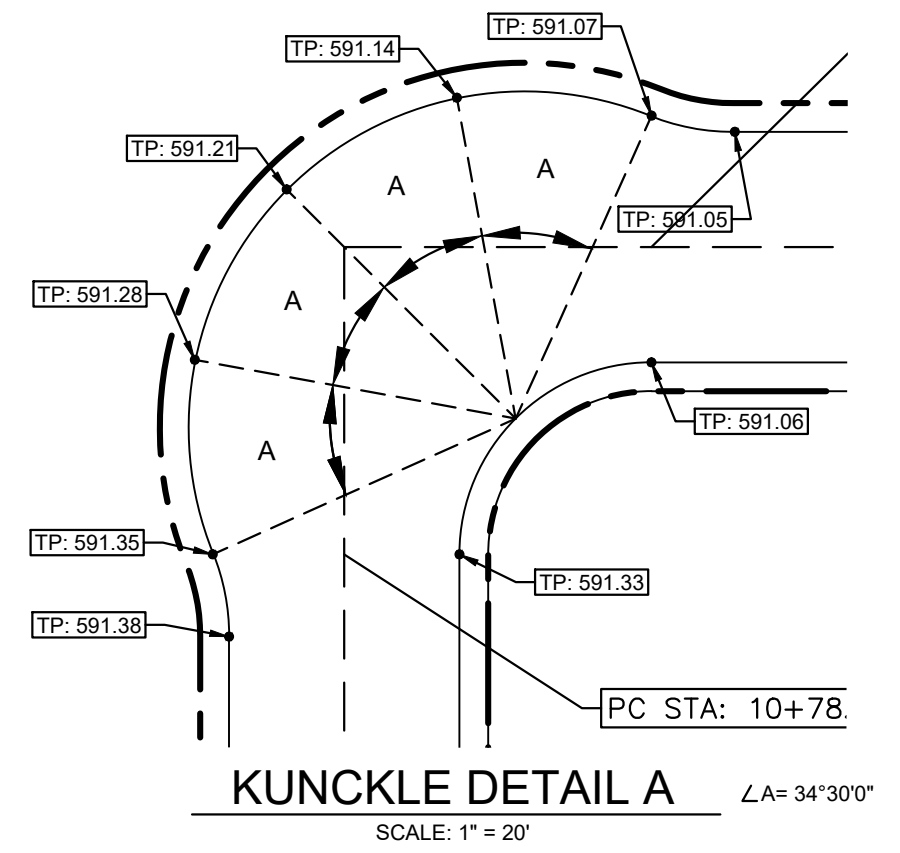
SHEET NUMBER  
**C-13**



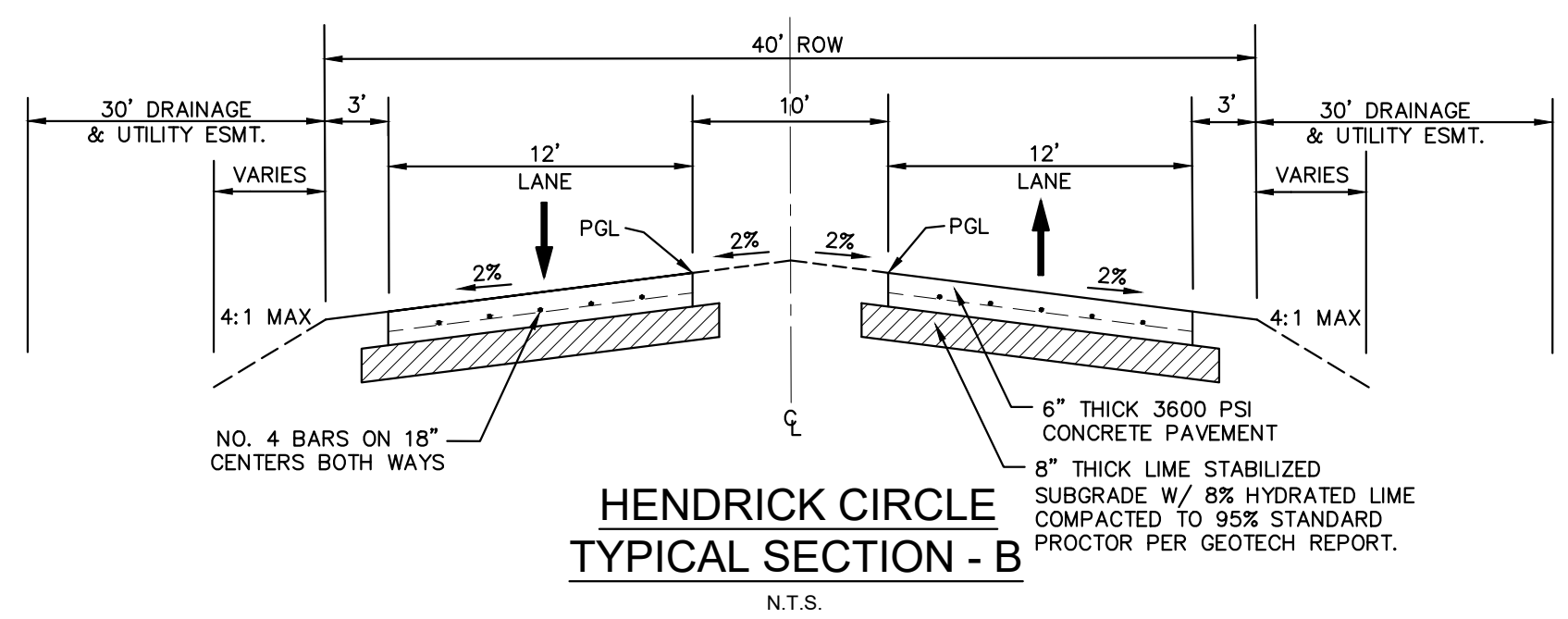
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CURVE TABLE						
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C2	250.00'	37.62'	S4°10'35"E	37.58'	8°37'18"	18.84'
C3	250.00'	37.62'	N4°10'35"W	37.58'	8°37'18"	18.84'
C4	250.00'	37.62'	N3°27'06"E	37.58'	8°37'18"	18.84'
C5	250.00'	37.62'	S3°27'06"W	37.58'	8°37'18"	18.84'



**HENDRICK CIRCLE**  
 TYPICAL SECTION - A  
 N.T.S.  
 STA: 1+73.50 TO STA: 10+70.14  
 STA: 11+51.28 TO STA: 15+73.61



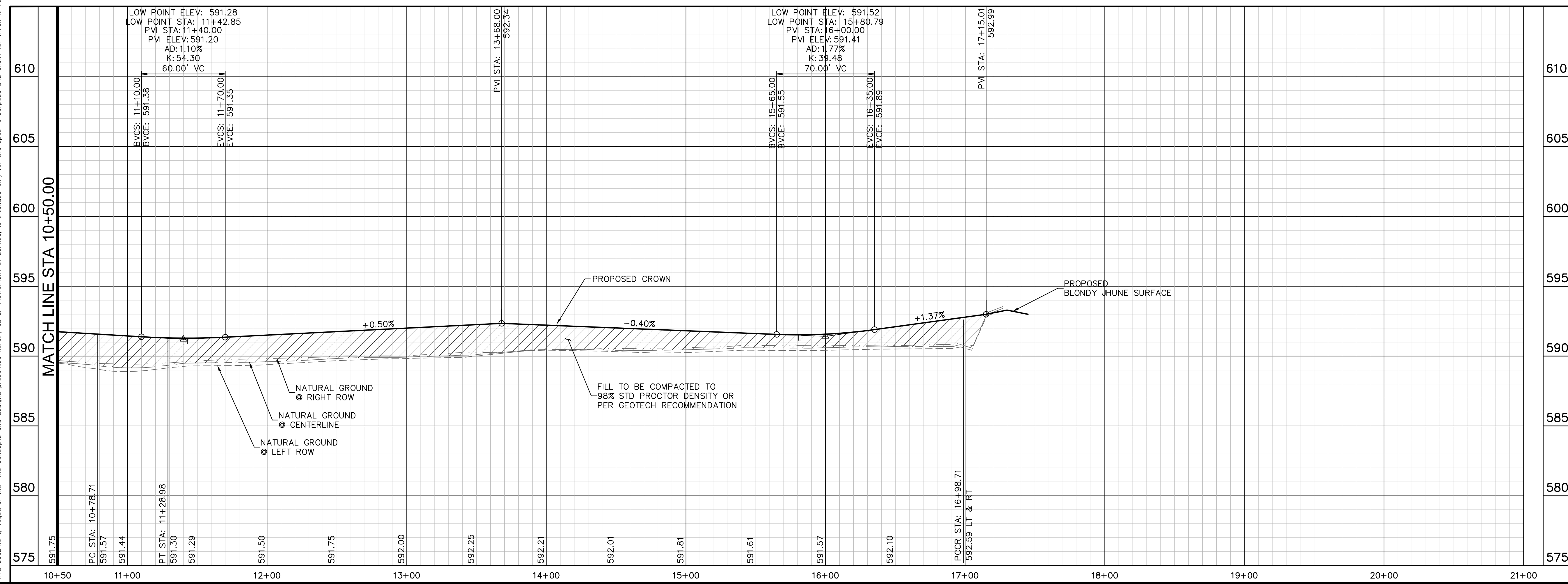
**HENDRICK CIRCLE**  
 TYPICAL SECTION - B  
 N.T.S.  
 STA: 16+53.74 TO STA: 16+98.60

**RECORD DRAWING**  
 THIS DRAWING HAS BEEN REVISED TO SHOW THOSE CHANGES DURING THE CONSTRUCTION PROCESS REPORTED BY THE CONTRACTOR TO KIMLEY-HORN AND ASSOCIATES, INC. AND CONSIDERED TO BE SIGNIFICANT. THIS DRAWING IS NOT GUARANTEED TO BE "AS BUILT" BUT IS BASED ON THE INFORMATION MADE AVAILABLE.  
 DATE: 05/19/2023 BY: SARAH SCOTT

**Kimley-Horn**  
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KHA PROJECT	06404015
DATE	JANUARY 2022
SCALE	AS SHOWN
DESIGNED BY:	CRA
DRAWN BY:	CRA
CHECKED BY:	SES



**PROFILE SCALE**  
 1" = 40' HORIZONTAL  
 1" = 4' VERTICAL

**PAVING NOTES**

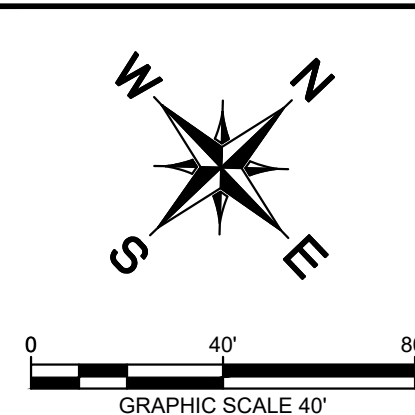
- SEE TYPICAL SECTION (THIS SHEET) FOR STANDARD PAVEMENT SECTIONS.
- SEE SHEET C-19 FOR SIGNAGE.
- PUBLIC IMPROVEMENTS WITHIN THE R.O.W. SHALL ADHERE TO THE CITY GENERAL NOTES WHEN IN CONTRADICTION TO PRIVATE NOTES THROUGHOUT THE PLAN SET.

**BENCHMARKS**  
 ELEVATIONS BASED ON CITY OF ALLEN GPS CONTROL.  
 BM#1 (CITY OF ALLEN MONUMENT NO. 2) 3-1/2-INCH ALUMINUM DISC FOUND IN CONCRETE. LOCATED 3350 FEET EAST FROM THE INTERSECTION OF MAIN STREET AND RICHARDSON COURT. ±16 FEET FROM THE NORTHEAST CORNER OF A BRIDGE.  
 ELEV= 647.13  
 BM#2 SQUARE WITH "X" CUT SET ON CONCRETE HEADWALL, EAST SIDE OF COUNTRY CLUB ROAD (F.M. NO. 1378), AT THE INTERSECTION OF COUNTRY CLUB ROAD AND ESTATES PARKWAY (F.M. NO. 2170).  
 ELEV= 587.52  
 BM#3 SQUARE WITH "X" CUT SET ON CONCRETE HEADWALL, EAST SIDE OF COUNTRY CLUB ROAD (F.M. NO. 1378), ±240 FEET NORTH FROM THE CENTERLINE INTERSECTION OF COUNTRY CLUB ROAD AND SKYVIEW DRIVE.  
 ELEV= 589.81

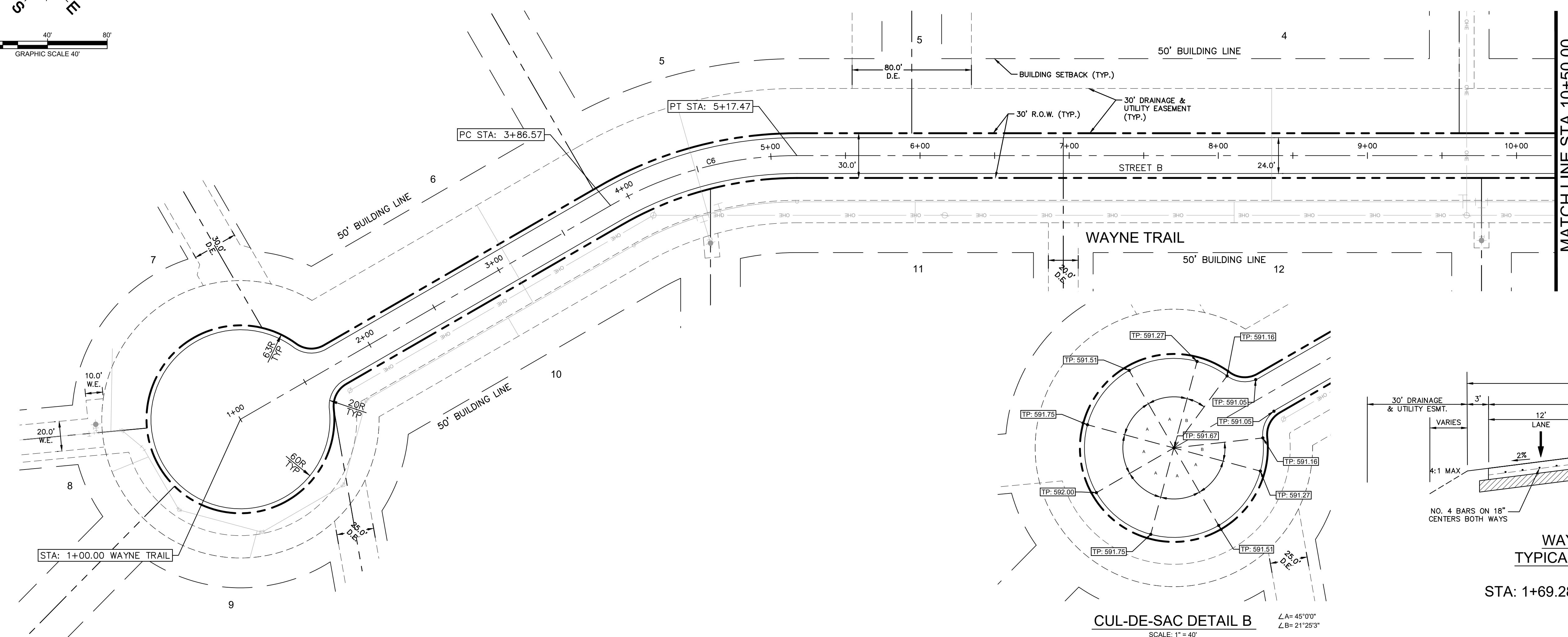
**PAVING PLAN & PROFILE - HENDRICK CIRCLE (CONT)**  
**HENDRICK FARM**  
 CITY OF LUCAS  
 COLLIN COUNTY, TEXAS  
 SHEET NUMBER  
**C-14**



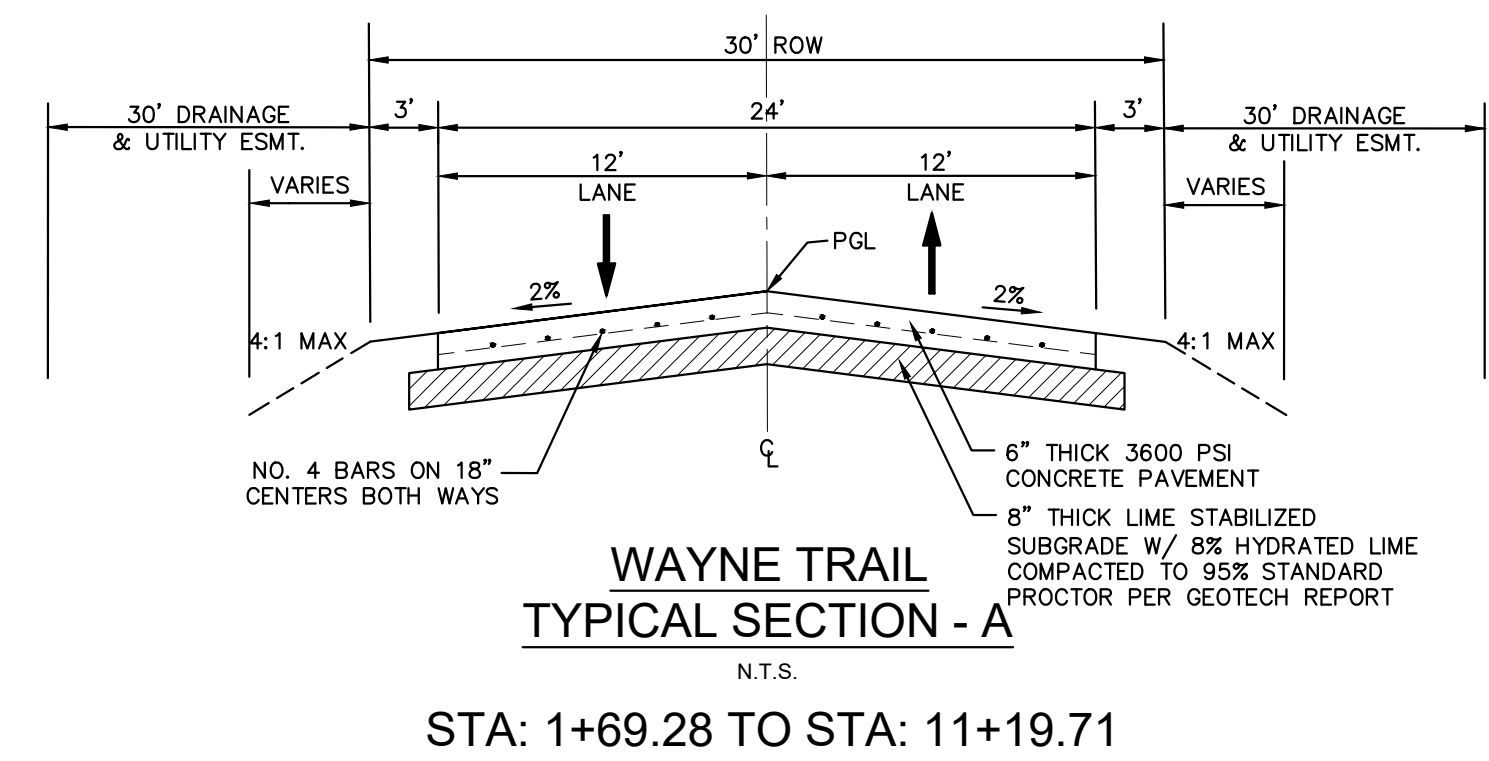
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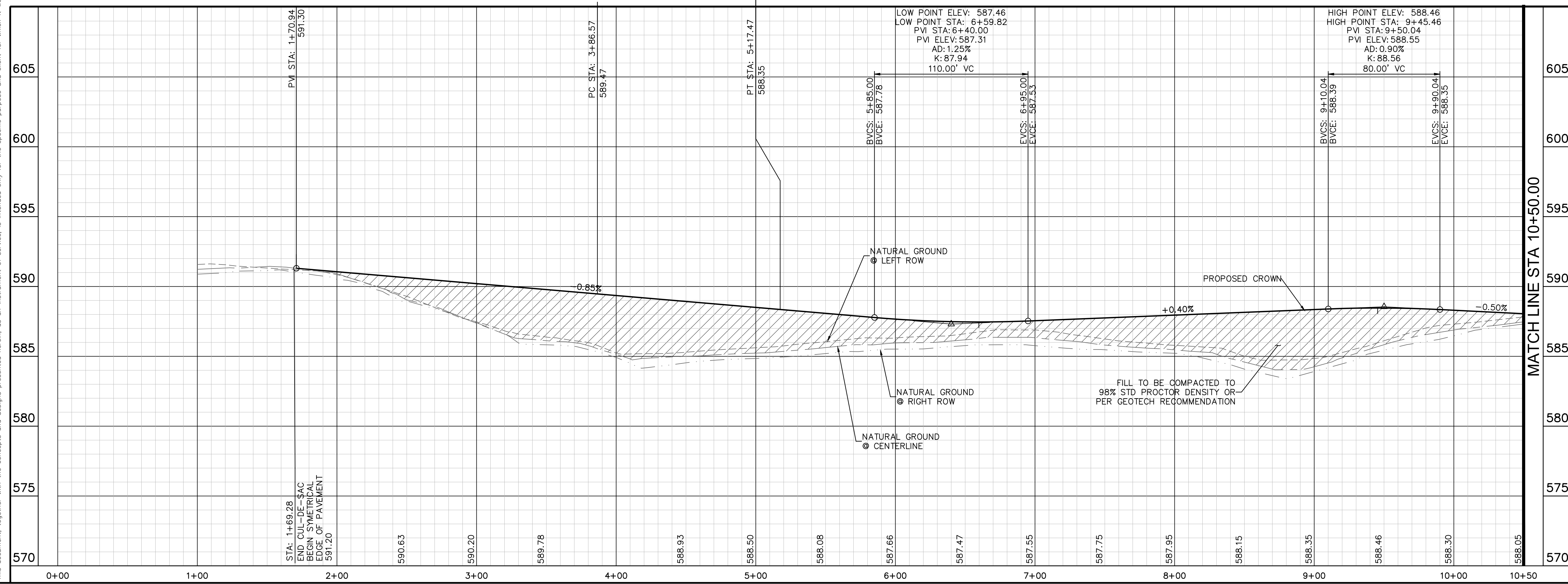
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C6	250.00'	130.90'	N29°38'16"E	129.41'	30°00'00"	66.99'



**RECORD DRAWING**  
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 DATE: 05/19/2023 BY: SARAH SCOTT



**WAYNE TRAIL**



**PROFILE SCALE**  
 1" = 40' HORIZONTAL  
 1" = 4' VERTICAL

**PAVING NOTES**

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- SEE SHEET C-19 FOR SIGNAGE.
- PUBLIC IMPROVEMENTS WITHIN THE R.O.W. SHALL ADHERE TO THE CITY GENERAL NOTES WHEN IN CONTRADICTION TO PRIVATE NOTES THROUGHOUT THE PLAN SET.

**BENCHMARKS**  
 ELEVATIONS BASED ON CITY OF ALLEN GPS CONTROL.  
 BM#1 (CITY OF ALLEN MONUMENT NO. 2) 3-1/2-INCH ALUMINUM DISC FOUND IN CONCRETE. LOCATED 3350 FEET EAST FROM THE INTERSECTION OF MAIN STREET AND RICHARDSON COURT. ±16 FEET FROM THE NORTHEAST CORNER OF A BRIDGE.  
 ELEV= 647.13  
 BM#2 SQUARE WITH "X" CUT SET ON CONCRETE HEADWALL, EAST SIDE OF COUNTRY CLUB ROAD (F.M. NO. 1378), AT THE INTERSECTION OF COUNTRY CLUB ROAD AND ESTATES PARKWAY (F.M. NO. 2170).  
 ELEV= 587.52  
 BM#3 SQUARE WITH "X" CUT SET ON CONCRETE HEADWALL, EAST SIDE OF COUNTRY CLUB ROAD (F.M. NO. 1378), ±240 FEET NORTH FROM THE CENTERLINE INTERSECTION OF COUNTRY CLUB ROAD AND SKYVIEW DRIVE.  
 ELEV= 589.81

KHA PROJECT  
06404015

DATE  
JANUARY 2022

SCALE  
AS SHOWN

DESIGNED BY  
CRA

DRAWN BY  
HCL

CHECKED BY  
SES

KIMLEY-HORN

TEXAS REGISTERED ENGINEERING FIRM F-998

PAVING PLAN & PROFILE - WAYNE TRAIL

HENDRICK FARM  
CITY OF LUCAS  
COLLIN COUNTY, TEXAS

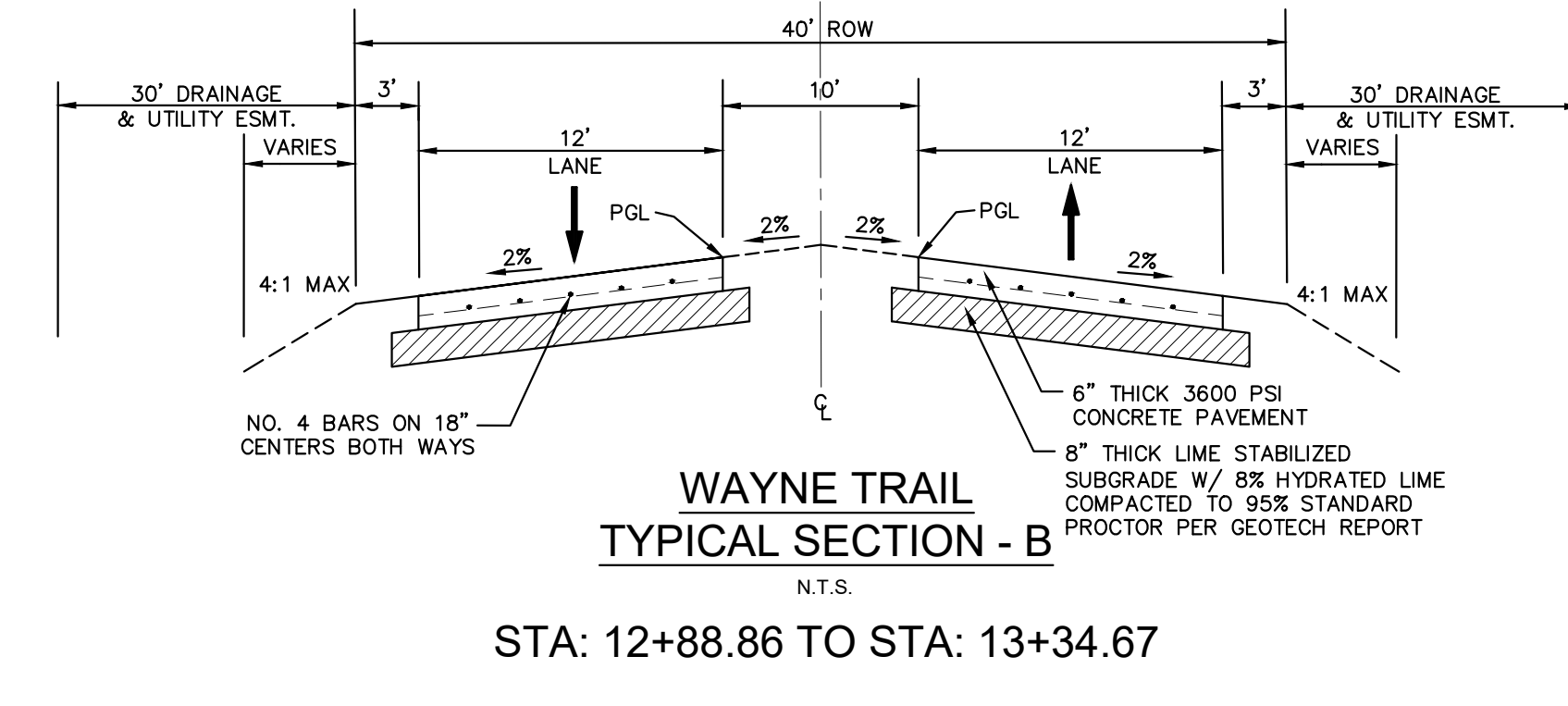
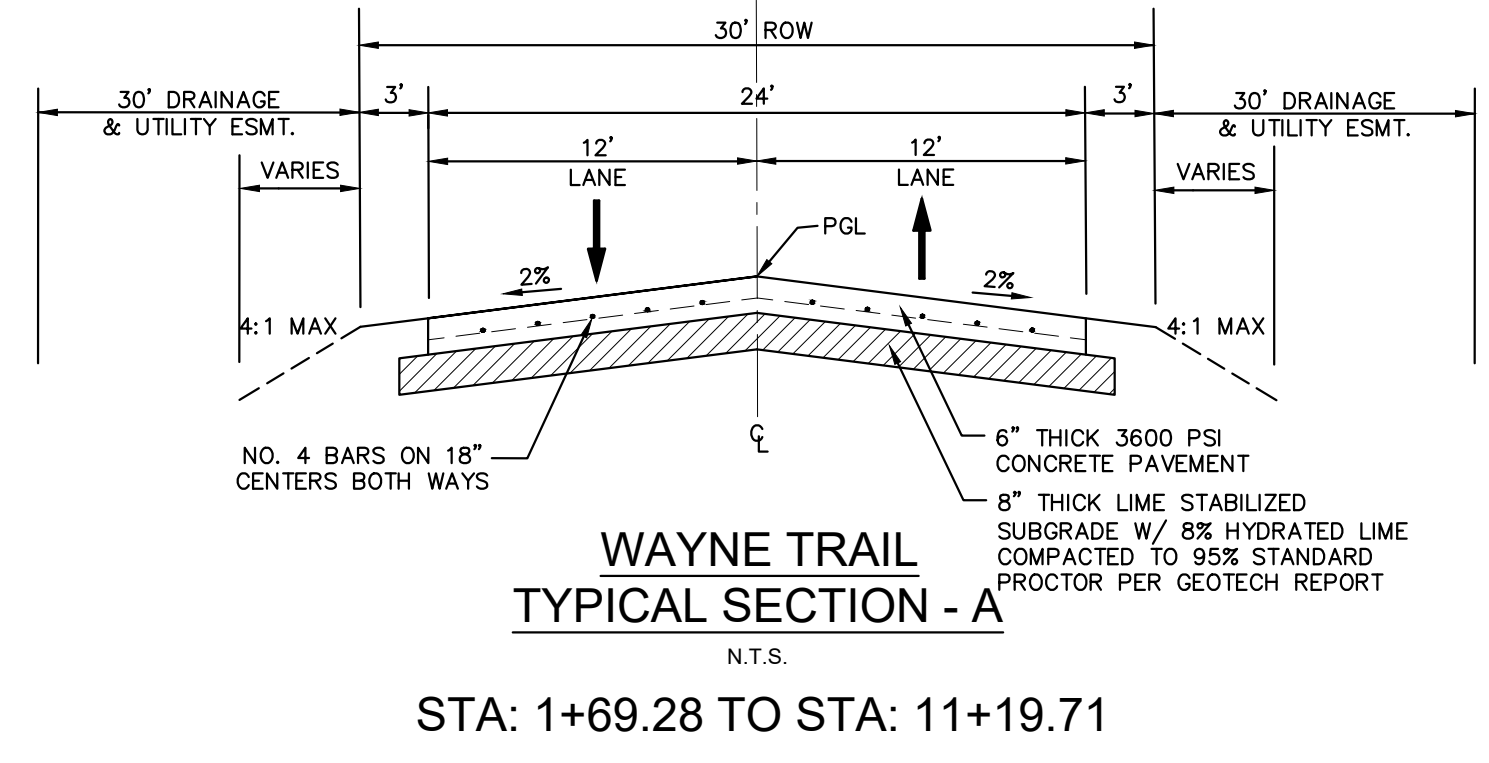
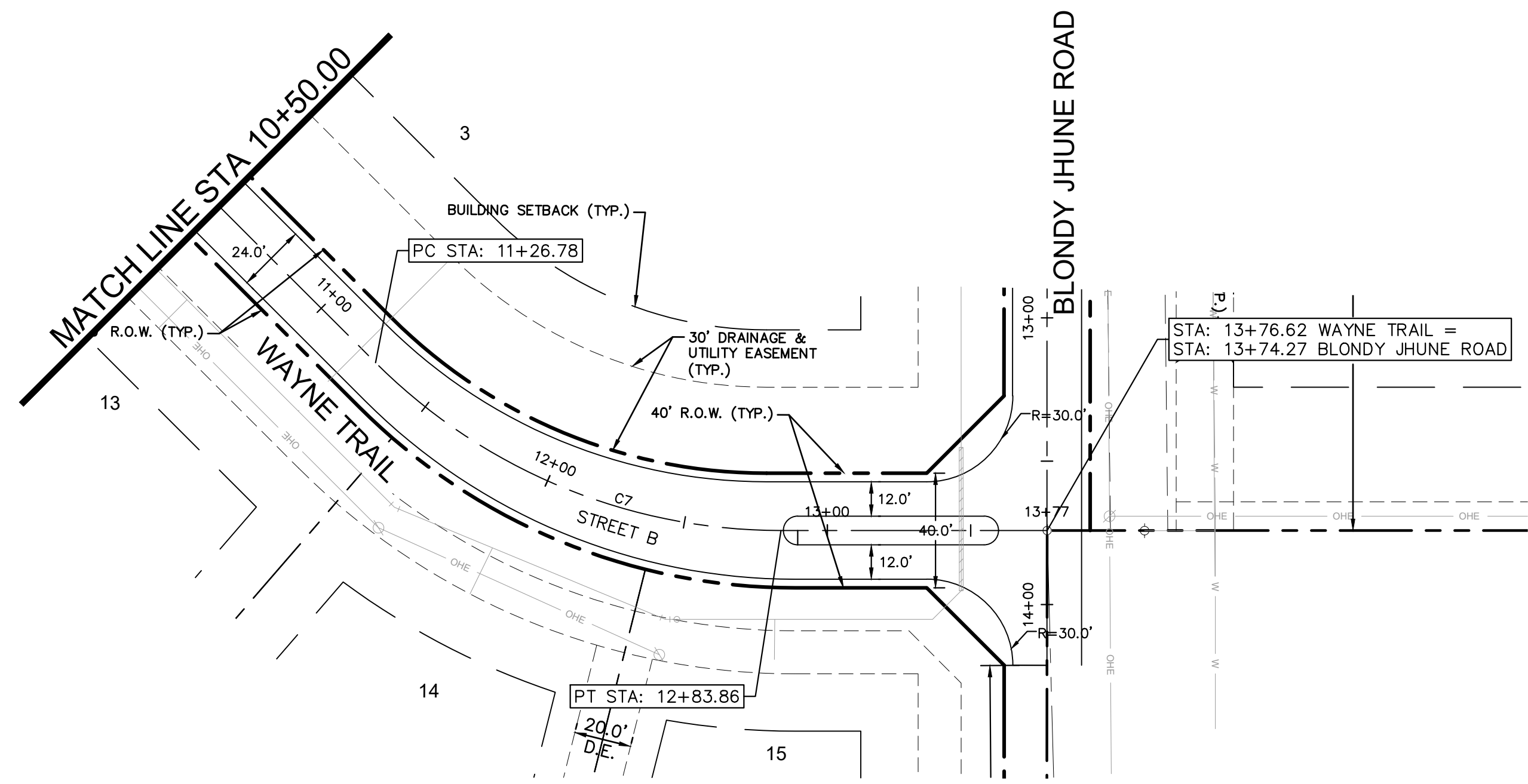
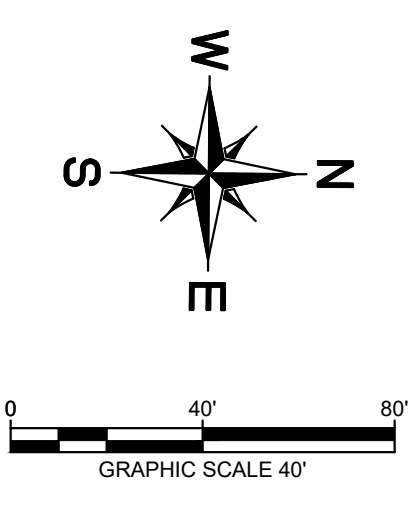
SHEET NUMBER  
C-15

REVISIONS  
No.

BY  
DATE

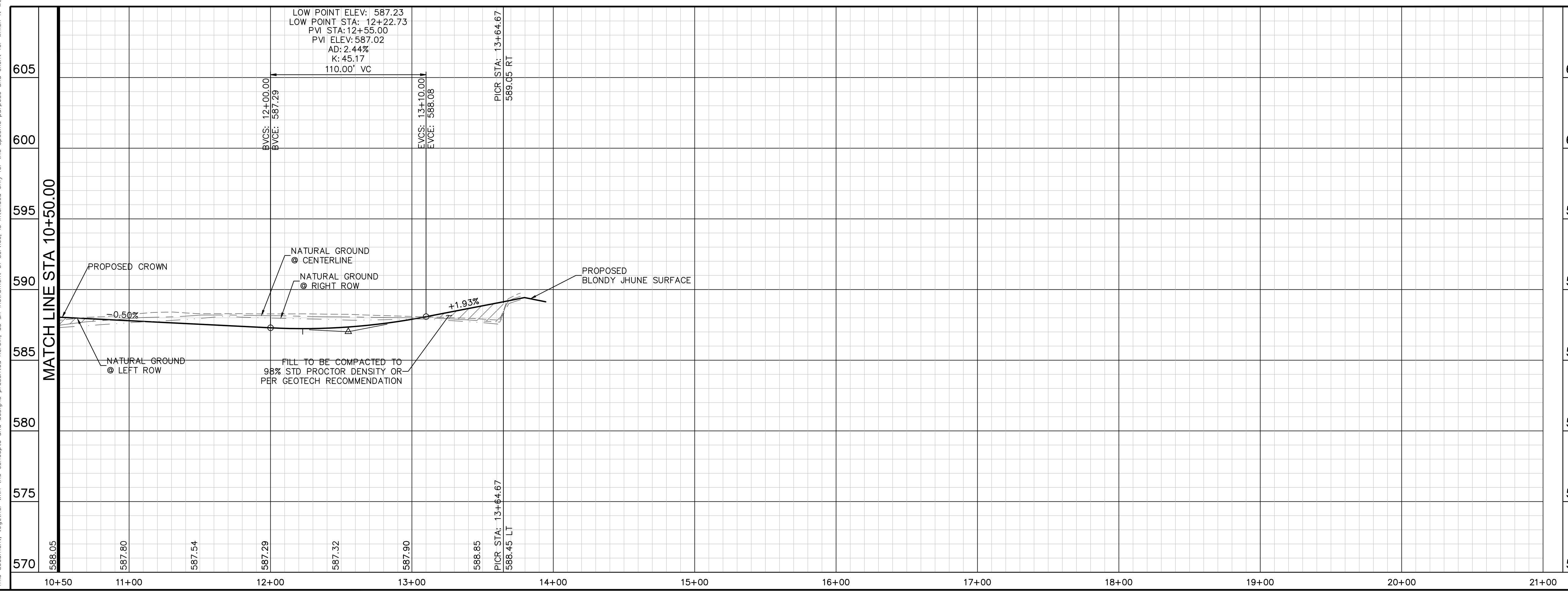


Plotted By: Matthew James Date: March 09, 2022 01:50:17pm File Path: K:\DAL\Civil\064041015-Hendrick Farm\CAD\Plan Sheets\C-Paving\_P&P.dwg  
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CURVE TABLE						
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C7	200.00'	157.08'	N22°08'16"E	153.07'	45°00'00"	82.84'

WAYNE TRAIL



**RECORD DRAWING**  
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 DATE: 05/19/2023 BY: SARAH SCOTT

**PROFILE SCALE**  
 1" = 40' HORIZONTAL  
 1" = 4' VERTICAL

**PAVING NOTES**

- SEE TYPICAL SECTION (THIS SHEET) FOR STANDARD PAVEMENT SECTIONS.
- SEE SHEET C-19 FOR SIGNAGE.
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**BENCHMARKS**  
 ELEVATIONS BASED ON CITY OF ALLEN GPS CONTROL.

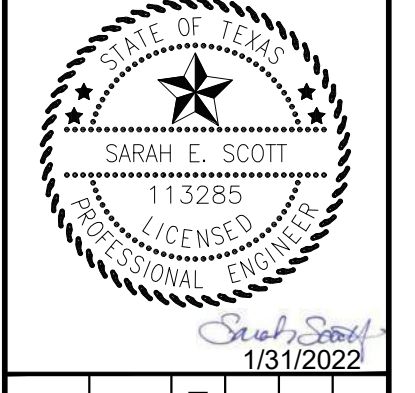
BM#1 (CITY OF ALLEN MONUMENT NO. 2) 3-1/2-INCH ALUMINUM DISC FOUND IN CONCRETE. LOCATED 3350 FEET EAST FROM THE INTERSECTION OF MAIN STREET AND RICHARDSON COURT. ±16 FEET FROM THE NORTHEAST CORNER OF A BRIDGE.  
 ELEV= 647.13

BM#2 SQUARE WITH "X" CUT SET ON CONCRETE HEADWALL, EAST SIDE OF COUNTRY CLUB ROAD (F.M. NO. 1378), AT THE INTERSECTION OF COUNTRY CLUB ROAD AND ESTATES PARKWAY (F.M. NO. 2170).  
 ELEV= 587.52

BM#3 SQUARE WITH "X" CUT SET ON CONCRETE HEADWALL, EAST SIDE OF COUNTRY CLUB ROAD (F.M. NO. 1378), ±240 FEET NORTH FROM THE CENTERLINE INTERSECTION OF COUNTRY CLUB ROAD AND SKYVIEW DRIVE.  
 ELEV= 589.81

REVISIONS		DATE	BY
No.			

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KHA PROJECT	064041015
DATE	JANUARY 2022
SCALE	AS SHOWN
DESIGNED BY:	CRA
DRAWN BY:	HCL
CHECKED BY:	SES

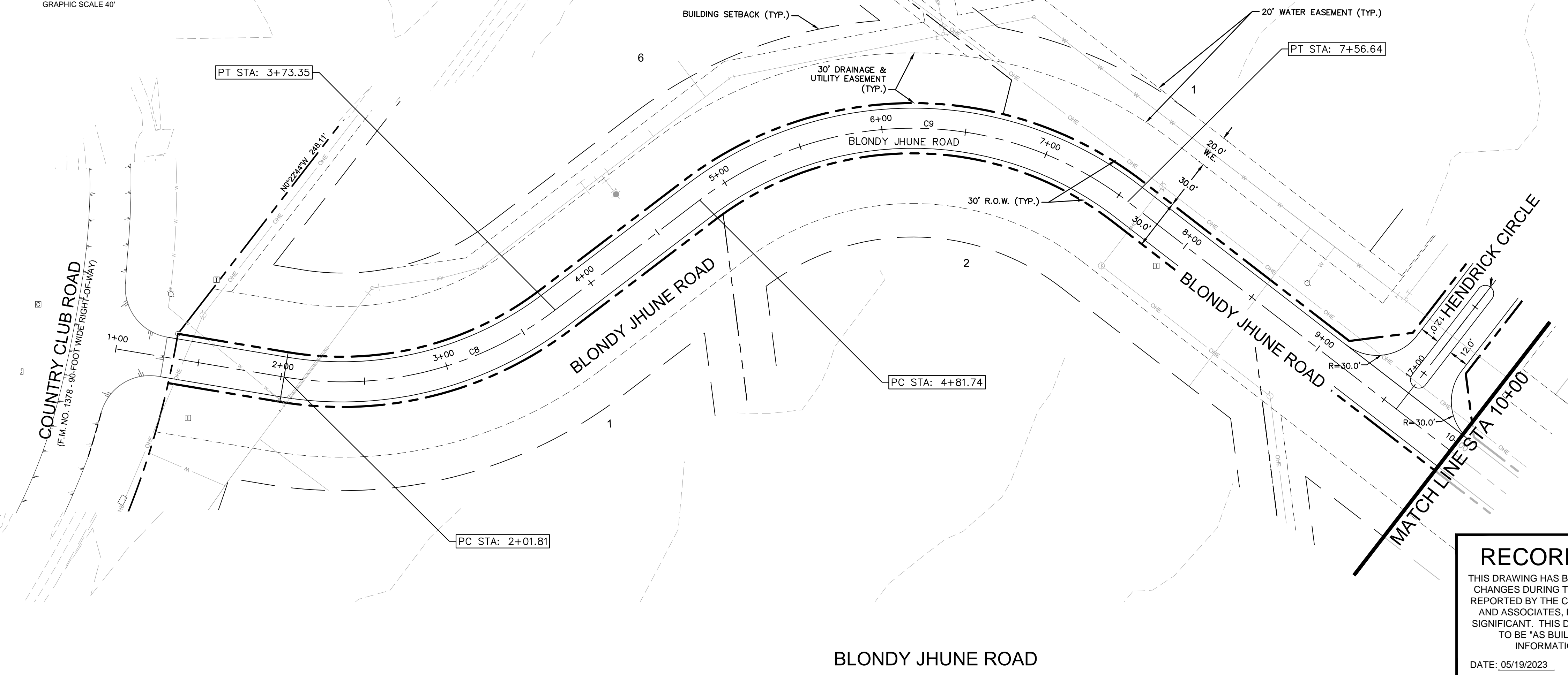
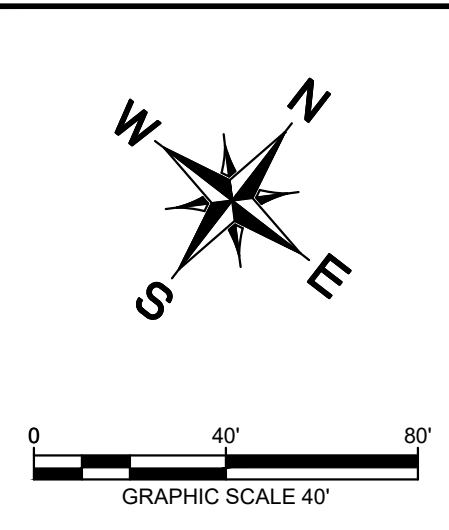
PAVING PLAN & PROFILE -  
 WAYNE TRAIL (CONT)

**HENDRICK FARM**  
 CITY OF LUCAS  
 COLLIN COUNTY, TEXAS

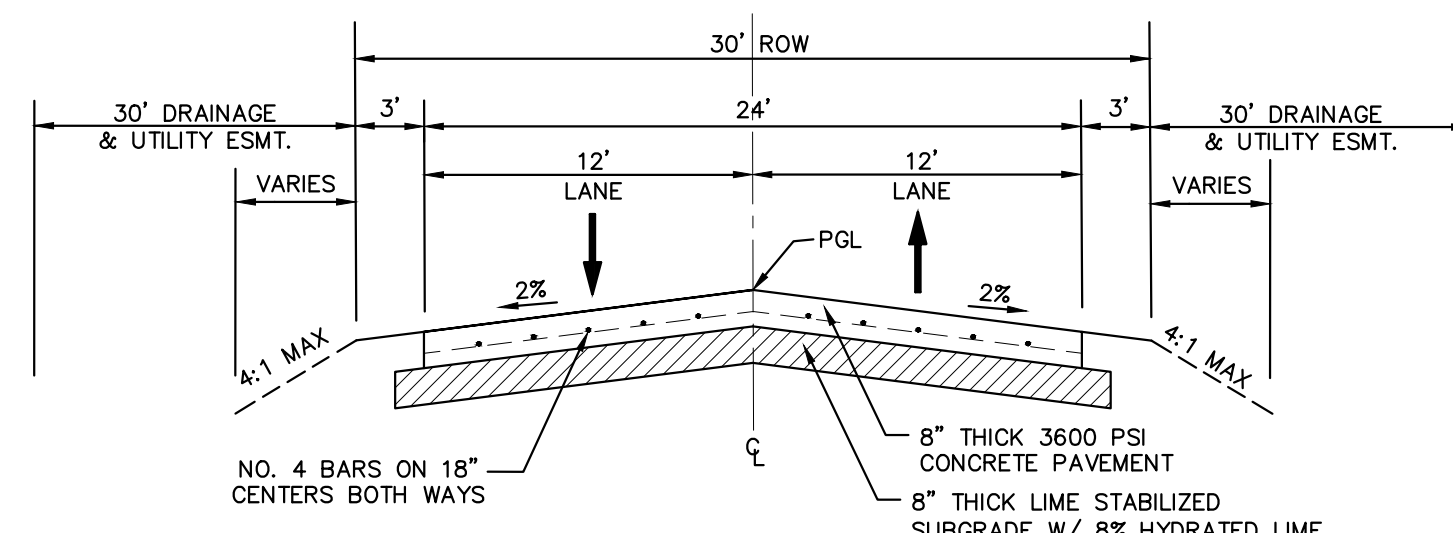
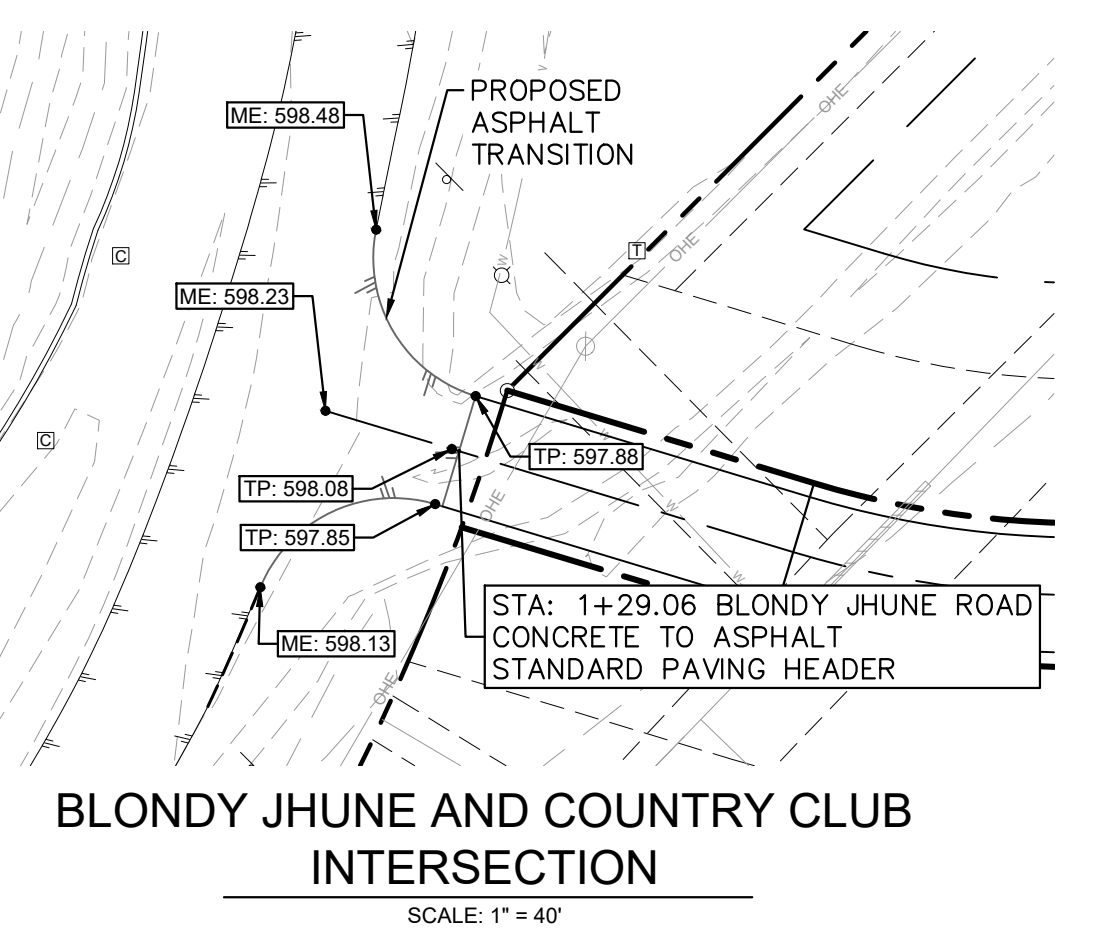
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CURVE TABLE						
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C8	210.00'	171.54'	N38°02'22"E	166.81'	46°48'13"	90.88'
C9	210.00'	274.90'	N52°08'21"E	255.69'	75°00'11"	161.15'

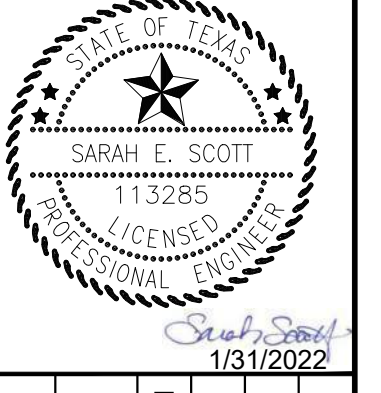


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 DATE: 05/19/2023 BY: SARAH SCOTT

**BLONDY JHUNE ROAD**  
**TYPICAL SECTION - A**  
 N.T.S.  
 STA: 1+29.06 TO STA: 9+12.19  
 STA: 10+06.19 TO STA: 13+27.19

NO.	REVISIONS	DATE	BY

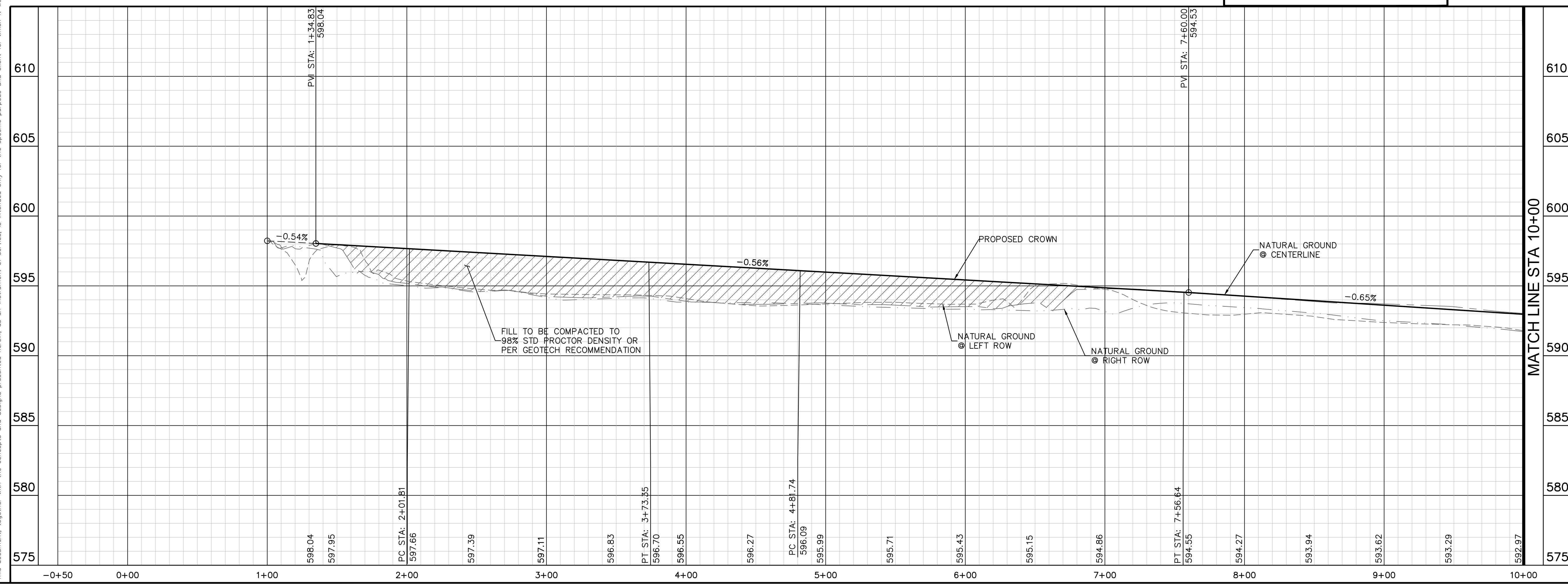
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KHA PROJECT	064041015
DATE	JANUARY 2022
SCALE	AS SHOWN
DESIGNED BY:	CRA
DRAWN BY:	HCL
CHECKED BY:	SES

**PAVING PLAN & PROFILE**  
**BLONDY JHUNE ROAD**

**HENDRICK FARM**  
 CITY OF LUCAS  
 COLLIN COUNTY, TEXAS  
 SHEET NUMBER  
**C-17**



**PROFILE SCALE**  
 1" = 40' HORIZONTAL  
 1" = 4' VERTICAL

**PAVING NOTES**

- SEE TYPICAL SECTION (THIS SHEET) FOR STANDARD PAVEMENT SECTIONS.
- SEE SHEET C-19 FOR SIGNAGE.
- PUBLIC IMPROVEMENTS WITHIN THE R.O.W. SHALL ADHERE TO THE CITY GENERAL NOTES WHEN IN CONTRADICTION TO PRIVATE NOTES THROUGHOUT THE PLAN SET.

**BENCHMARKS**  
 ELEVATIONS BASED ON CITY OF ALLEN GPS CONTROL.

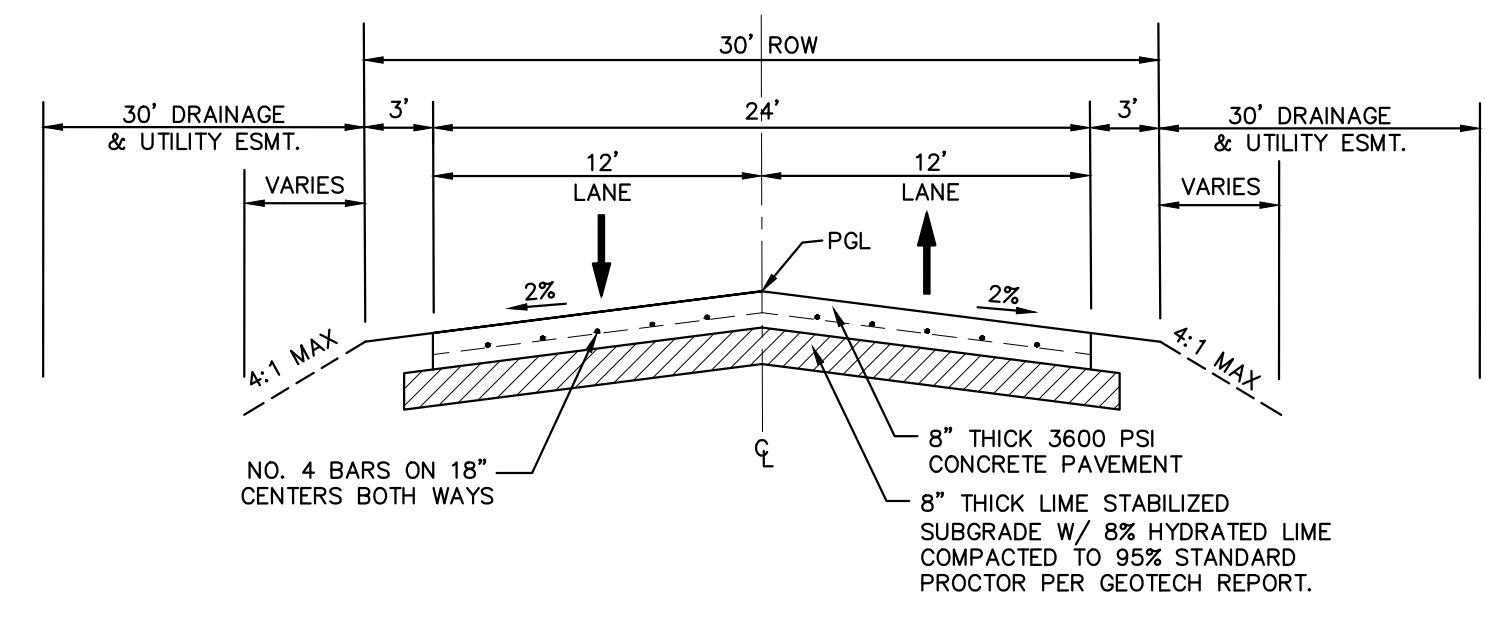
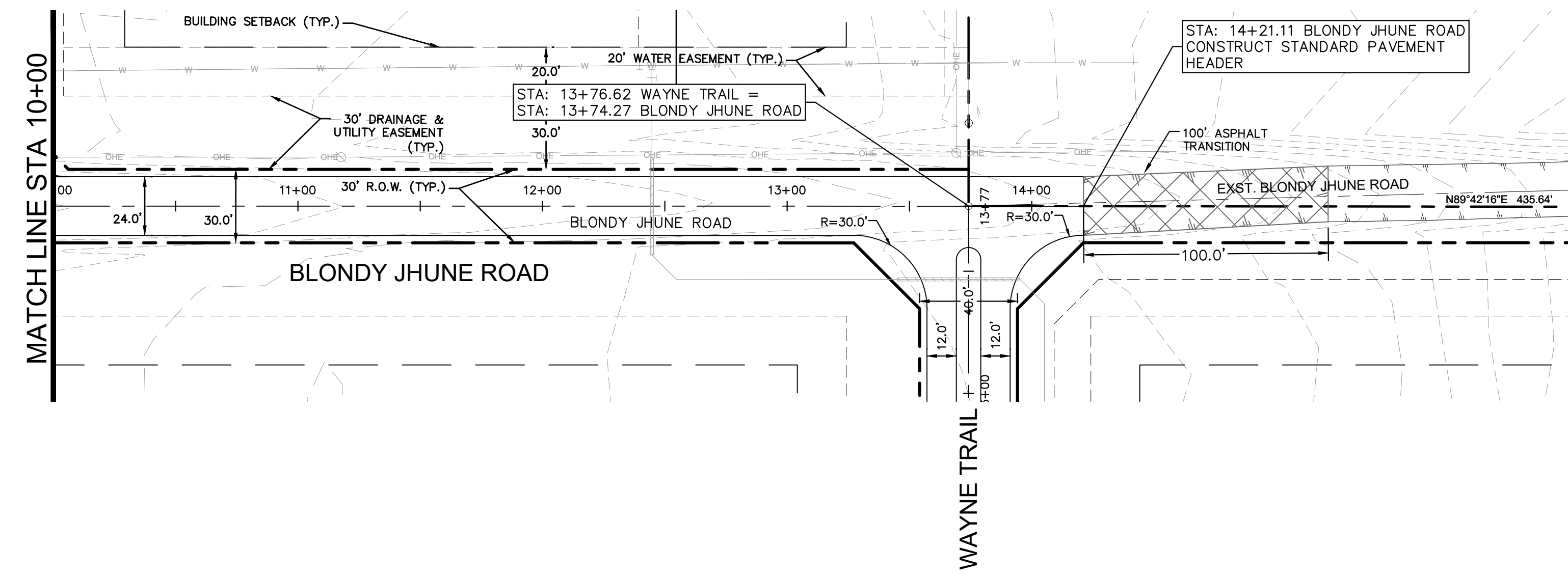
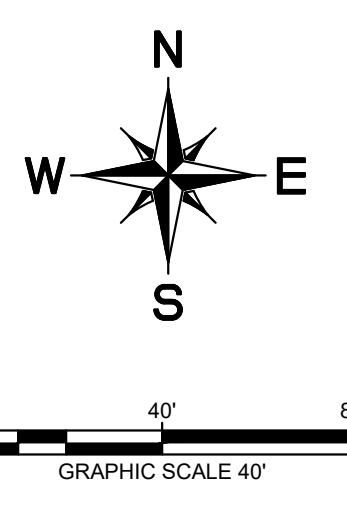
BM#1 (CITY OF ALLEN MONUMENT NO. 2) 3-1/2-INCH ALUMINUM DISC FOUND IN CONCRETE, LOCATED 3350 FEET EAST FROM THE INTERSECTION OF MAIN STREET AND RICHARDSON COURT, ±16 FEET FROM THE NORTHEAST CORNER OF A BRIDGE.  
 ELEV= 647.13

BM#2 SQUARE WITH "X" CUT SET ON CONCRETE HEADWALL, EAST SIDE OF COUNTRY CLUB ROAD (F.M. NO. 1378), AT THE INTERSECTION OF COUNTRY CLUB ROAD AND ESTATES PARKWAY (F.M. NO. 2170).  
 ELEV= 587.52

BM#3 SQUARE WITH "X" CUT SET ON CONCRETE HEADWALL, EAST SIDE OF COUNTRY CLUB ROAD (F.M. NO. 1378), ±240 FEET NORTH FROM THE CENTERLINE INTERSECTION OF COUNTRY CLUB ROAD AND SKYVIEW DRIVE.  
 ELEV= 589.81



Plotted By: Matthew James Date: March 09, 2022 01:50:46pm File Path: K:\DAL\_Civil\06404015-Hendrick Farm\CAD\Plan Sheets\C-Paving P&P.dwg  
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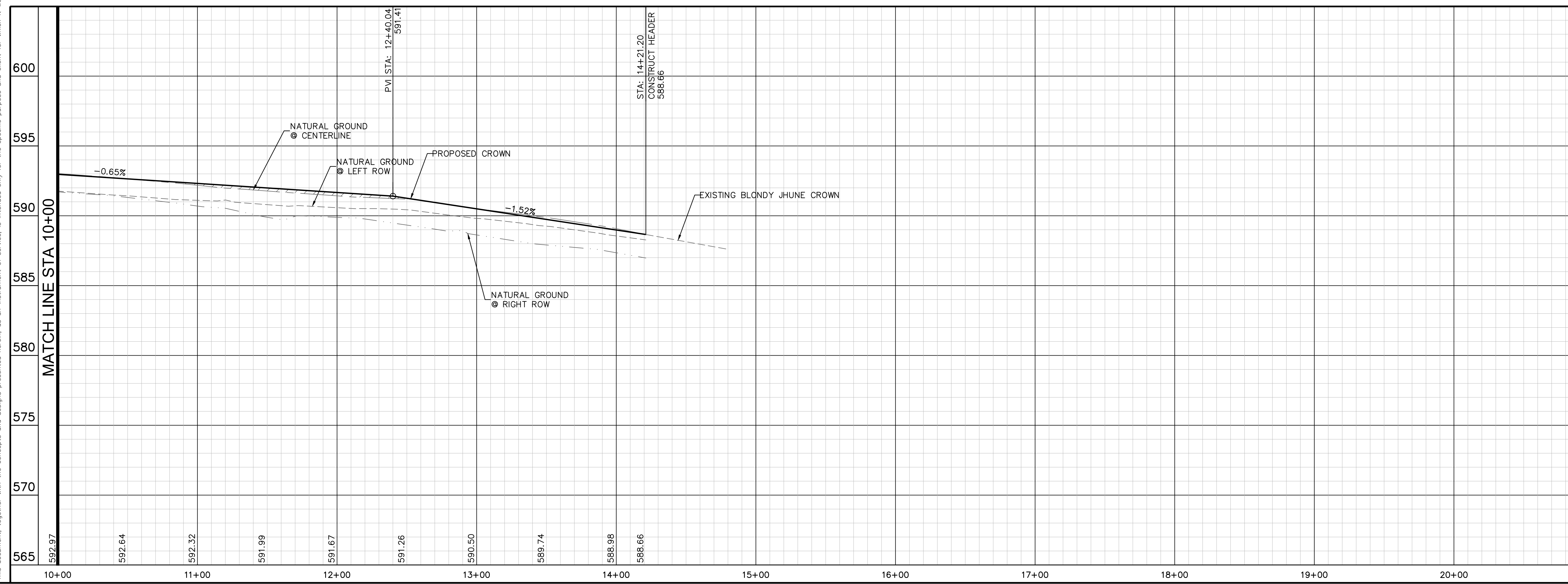
**BLONDY JHUNE ROAD**  
**TYPICAL SECTION - A**  
 N.T.S.  
 STA: 1+29.06 TO STA: 9+12.19  
 STA: 10+06.19 TO STA: 13+27.19

**RECORD DRAWING**  
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KHA PROJECT	06404015
DATE	JANUARY 2022
SCALE	AS SHOWN
DESIGNED BY:	CRA
DRAWN BY:	HCL
CHECKED BY:	SES

**BLONDY JHUNE ROAD**



**PAVING PLAN & PROFILE**  
**BLONDY JHUNE ROAD**  
**(CONT)**

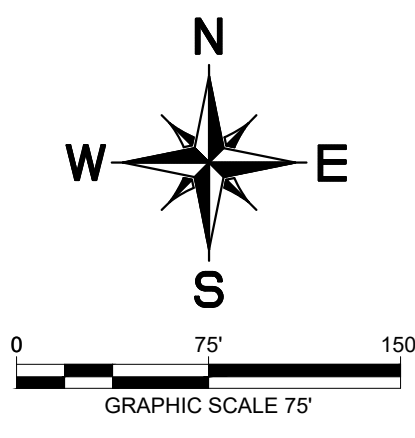
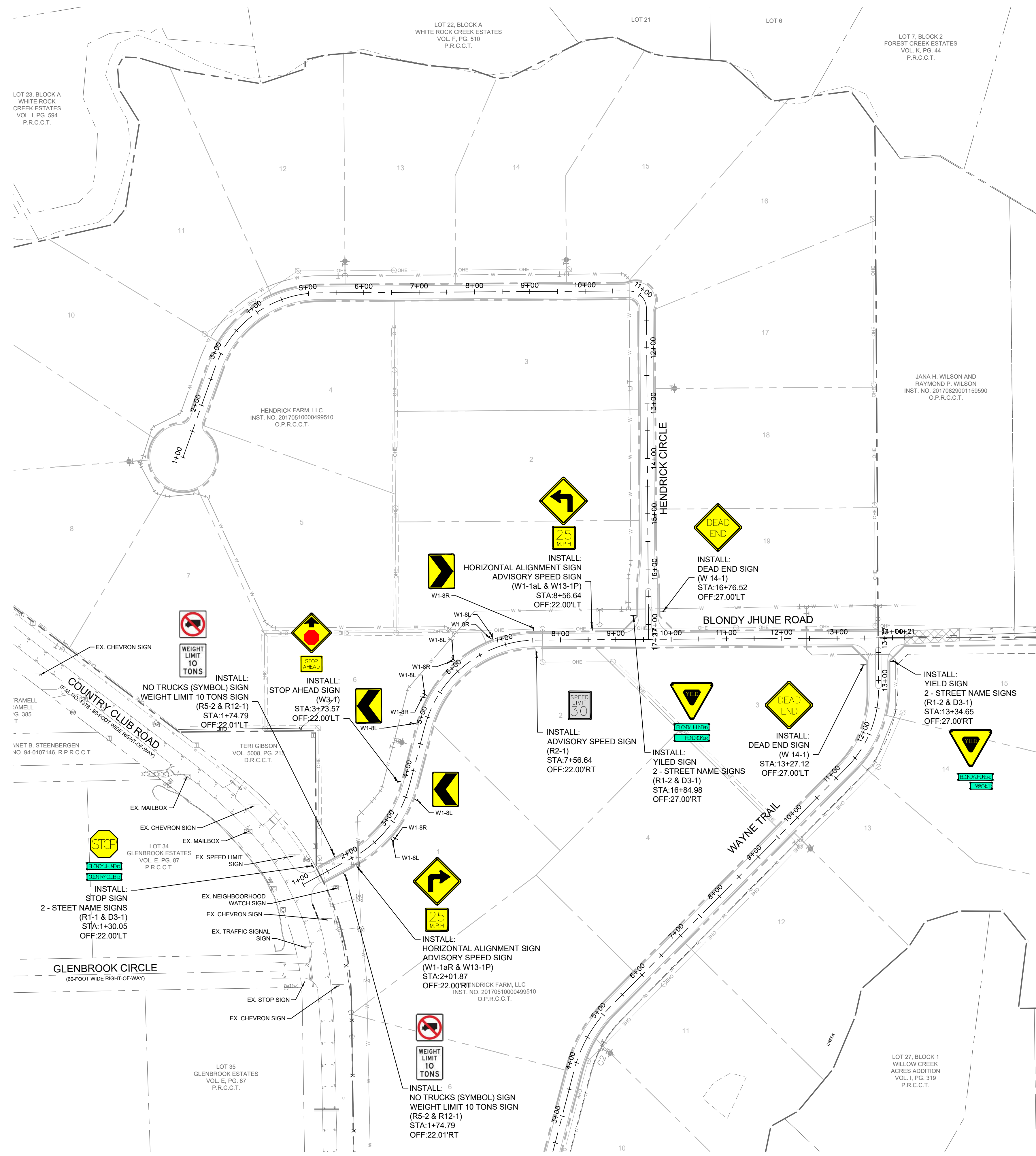
**HENDRICK FARM**  
 CITY OF LUCAS  
 COLLIN COUNTY, TEXAS

SHEET NUMBER  
**C-18**

NO.	REVISIONS	DATE	BY



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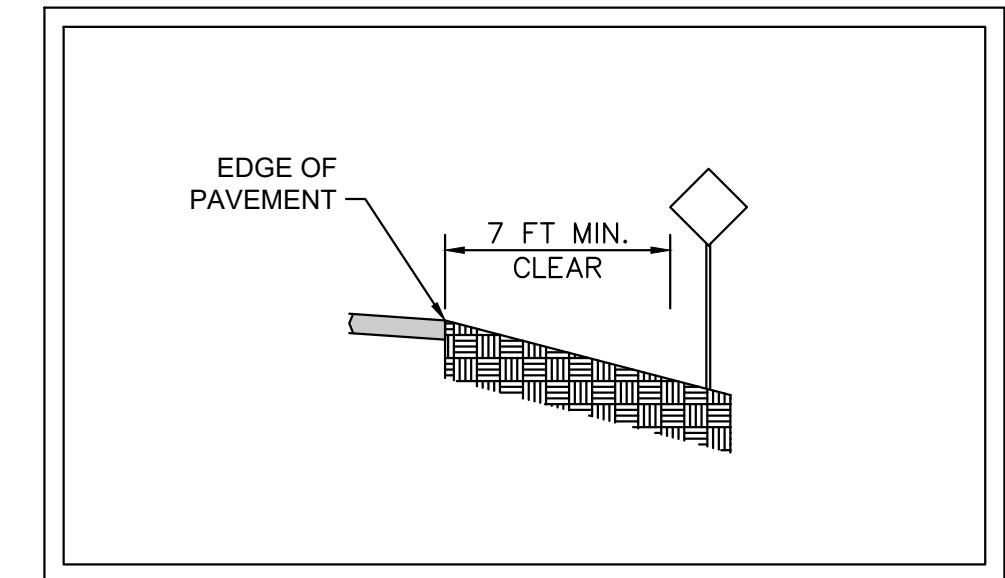


**EXISTING SITE FEATURES**

○ SIGN	▽ MONITORING WELL
⊕ FLAG POLE	□ FIBER OPTIC BOX
⊙ GREASE TRAP	⊙ GAS STORAGE TANK
⊙ ELEVATION BENCHMARK	⊙ TRAFFIC BOLLARD
⊙ FUEL TANK	⊙ FIRE HYDRANT
⊙ GUY ANCHOR	⊙ WATER METER
⊙ UTILITY POLE	⊙ TELEPHONE MANHOLE
⊙ WATER VALVE	⊙ LIGHT POLE
⊙ SANITARY SEWER CLEAN OUT	⊙ TRANSFORMER
⊙ SANITARY SEWER MANHOLE	⊙ GAS METER
⊙ ELECTRIC BOX	

**LINE TYPE LEGEND**

---	BOUNDARY LINE
- - - -	EASEMENT LINE
---	BUILDING LINE
---	WATER LINE
---	SANITARY SEWER LINE
---	STORM SEWER LINE
---	UNDERGROUND GAS LINE
---	UNDERGROUND ELECTRIC LINE
---	UNDERGROUND TELEPHONE LINE
---	OVERHEAD ELECTRIC LINE
---	FENCE
---	ASPHALT PAVEMENT



**TYPICAL SIGN PLACEMENT**  
N.T.S.

**RECORD DRAWING**  
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 DATE: 05/19/2023 BY: SARAH SCOTT

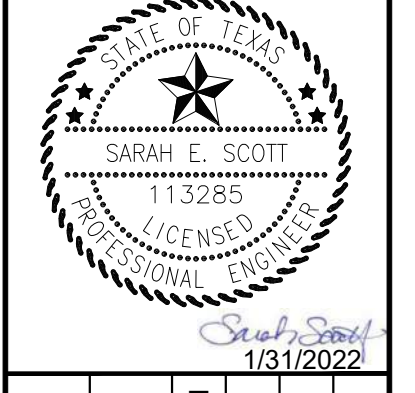
**CAUTION!!**  
 CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

**BENCHMARKS**  
 ELEVATIONS BASED ON CITY OF ALLEN GPS CONTROL.  
 BM#1 (CITY OF ALLEN MONUMENT NO. 2) 3-1/2-INCH ALUMINUM DISC FOUND IN CONCRETE, LOCATED 3350 FEET EAST FROM THE INTERSECTION OF MAIN STREET AND RICHARDSON COURT, ±16 FEET FROM THE NORTHEAST CORNER OF A BRIDGE.  
 ELEV= 647.13  
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 ELEV= 589.81



NO.	REVISIONS	DATE	BY

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KHA PROJECT	064041015
DATE	JANUARY 2022
SCALE	AS SHOWN
DESIGNED BY:	CRA
DRAWN BY:	MSM
CHECKED BY:	SES

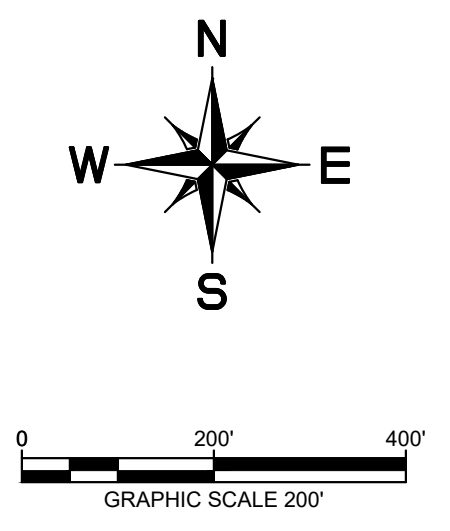
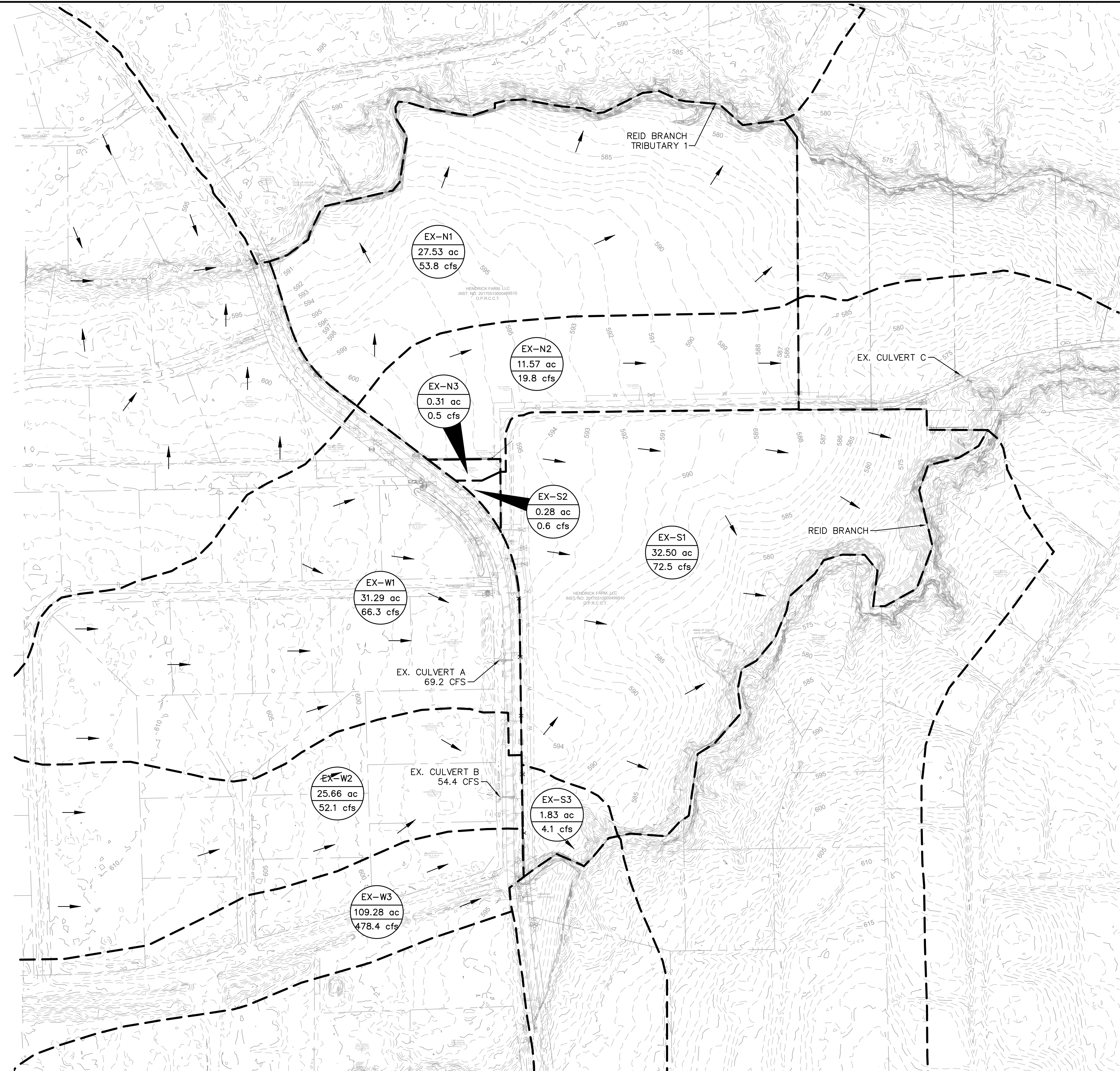
**SIGNAGE PLAN**

**HENDRICK FARM**  
 CITY OF LUCAS  
 COLLIN COUNTY, TEXAS

SHEET NUMBER  
**C-19**



Plotted By: Matthews, James Date: March 09, 2022 01:51:23pm File Path: K:\DAL\Civil\064041015-Hendrick Farm\CAD\Plan Sheets\C-Existing Drainage Area Map.dwg  
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**DRAINAGE DESIGN CRITERIA**

Q100 = C\*I\*A  
 Q = FLOW IN CUBIC FEET PER SECOND (CFS)  
 C = RUNOFF COEFFICIENT = 0.55 (1 ACRE+ RESIDENTIAL)  
 0.35 (OPEN SPACE)  
 I = INTENSITY (TIME OF CONCENTRATION = TC)  
 I = B / (TC + D)^E (PER NOAA ATLAS 14)  
 E = 0.7172  
 B = 75.709  
 D = 8.121  
 TC = VARIES  
 A = DRAINAGE AREA IN ACRES

**DRAINAGE GENERAL NOTES**

1. CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. SEE STORM DRAIN PLAN & PROFILE SHEETS FOR DETAILED INFORMATION ON STORM DRAIN LINES.
3. ALL STORM DRAIN LINES SHALL BE RCP, CLASS III UNLESS OTHERWISE NOTED.
4. REFERENCE FLOODPLAIN STUDY PREPARED BY KIMLEY-HORN, DATED FEBRUARY 26, 2018, FOR FULL EXTENTS OF EXISTING DRAINAGE AREAS, FLOODPLAIN INFORMATION, AND EX TIMES OF CONCENTRATION.

**DRAINAGE AREA TABLE**

DRAINAGE AREA NO.	AREA (ac)	ANTECEDENT FACTOR	RUNOFF COEFFICIENT "C"	TIME OF CONCENTRATION (minutes)	RAINFALL INTENSITY "I"100 (in/hr)	TOTAL FLOW Q100 (cfs)	COLLECTION POINT
EX-N1	27.53	1.00	0.35	30	5.58	53.8	REID BRANCH TRIBUTARY 1
EX-N2	11.57	1.00	0.35	37	4.90	19.8	REID BRANCH VIA EX. CULVERT C
EX-N3	0.31	1.00	0.35	37	4.90	0.5	REID BRANCH VIA EX. CULVERT C
EX-S1	32.50	1.00	0.35	23	6.37	72.5	REID BRANCH
EX-S2	0.28	1.00	0.35	23	6.37	0.6	REID BRANCH
EX-S3	1.83	1.00	0.35	23	6.37	4.1	REID BRANCH
EX-W1	31.29	1.00	0.55	56	3.85	66.3	EX. CULVERT A TO REID BRANCH
EX-W2	25.66	1.00	0.55	59	3.69	52.1	EX. CULVERT A TO REID BRANCH
EX-W3	109.28	1.00	0.55	15	7.96	478.4	REID BRANCH

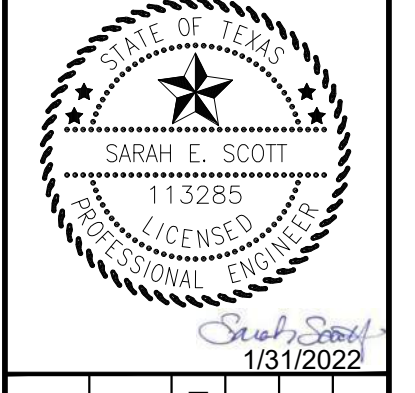
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 DATE: 05/19/2023 BY: SARAH SCOTT

**!!WARNING!!**  
 EXISTING UTILITIES IN THE AREA. CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL EXISTING UTILITIES WITH THE PROVIDER PRIOR TO START OF CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS DISCOVERED. CONTRACTOR IS RESPONSIBLE FOR COORDINATING UTILITY RELOCATION WHERE NECESSARY AND PROTECTING EXISTING UTILITIES (SHOWN OR NOT SHOWN). IF ANY EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL REPLACE THEM AT THEIR OWN EXPENSE.

No.	REVISIONS	DATE	BY

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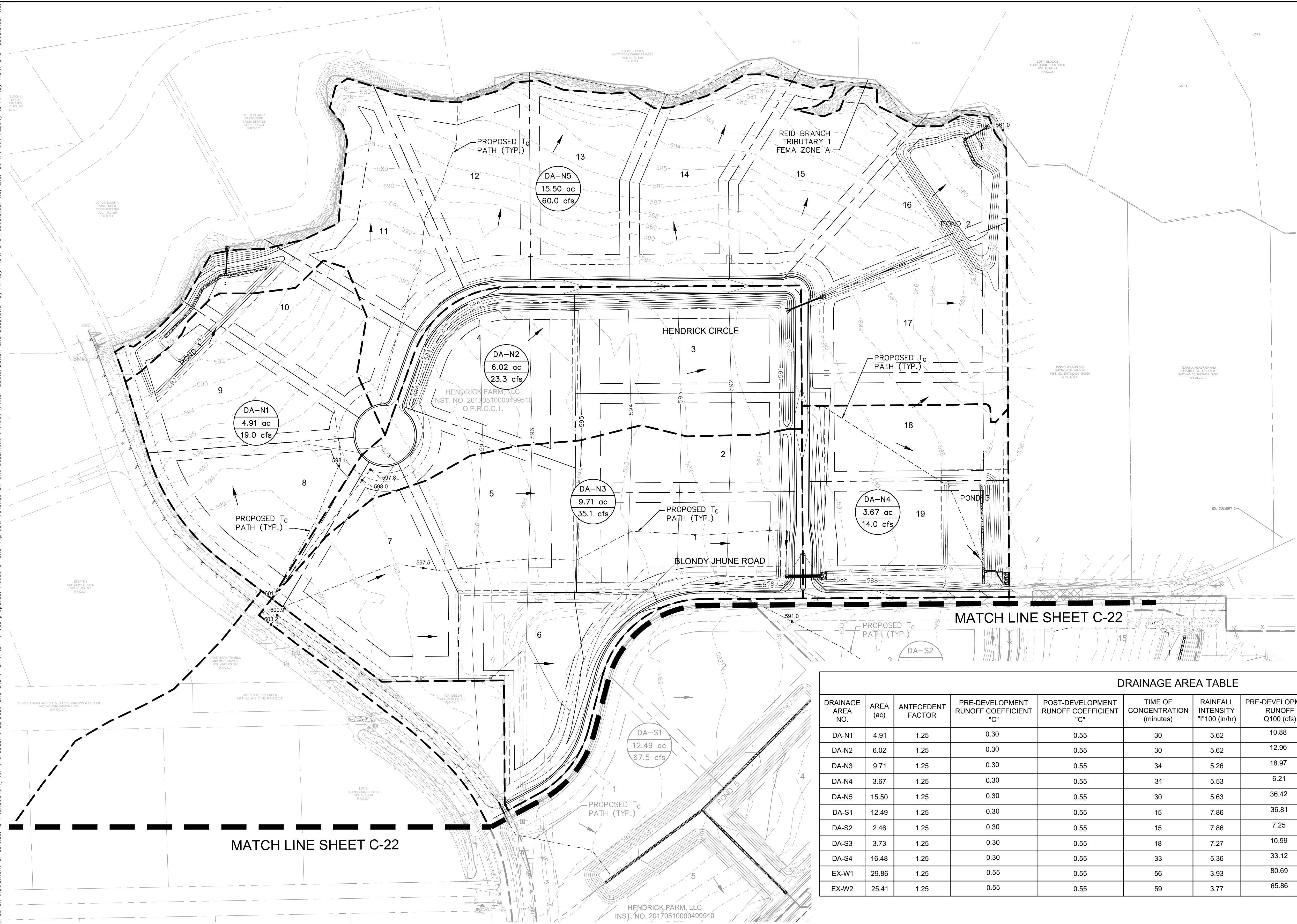
KHA PROJECT 064041015	DATE JANUARY 2022	SCALE AS SHOWN	DESIGNED BY CRA	DRAWN BY SES	CHECKED BY SES
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**EXISTING DRAINAGE AREA MAP**

**HENDRICK FARM**  
 CITY OF LUCAS  
 COLLIN COUNTY, TEXAS



Plotted By: Matthew James, Date: March 09, 2022, 01:51:42pm, File Path: \\DAL-Civil\064041015-Hendrick Farm\Drawings\CAD\Plan Sheets\C-Drainage Area Map.dwg  
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**DRAINAGE DESIGN CRITERIA**

$Q_{100} = 1.25 C^2 I^A$   
 $Q$  = FLOW IN CUBIC FEET PER SECOND (CFS)  
 $C$  = RUNOFF COEFFICIENT = 0.45 (1 ACRE+ RESIDENTIAL)  
 $I$  = INTENSITY (TIME OF CONCENTRATION =  $T_C$ )  
 $I = B / (T_C + D)^E$   
 $E = 0.73702$   
 $B = 86.709$   
 $D = 11$   
 $T_C$  = VARIES  
 $A$  = DRAINAGE AREA IN ACRES

**DRAINAGE GENERAL NOTES**

- CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- SEE STORM DRAIN PLAN & PROFILE SHEETS FOR DETAILED INFORMATION ON STORM DRAIN LINES.
- ALL STORM DRAIN LINES SHALL BE RCP, CLASS III UNLESS OTHERWISE NOTED.

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DATE: 05/19/2023 BY: SARAH SCOTT

**DRAINAGE AREA TABLE**

DRAINAGE AREA NO.	AREA (ac)	ANTECEDENT FACTOR	PRE-DEVELOPMENT RUNOFF COEFFICIENT "C"	POST-DEVELOPMENT RUNOFF COEFFICIENT "C"	TIME OF CONCENTRATION (minutes)	RAINFALL INTENSITY "I"100 (in/hr)	PRE-DEVELOPMENT RUNOFF Q100 (cfs)	POST-DEVELOPMENT RUNOFF Q100 (cfs)	COLLECTION POINT
DA-N1	4.91	1.25	0.30	0.55	30	5.62	10.88	18.95	DETENTION POND 1
DA-N2	6.02	1.25	0.30	0.55	30	5.62	12.96	23.26	DETENTION POND 2
DA-N3	9.71	1.25	0.30	0.55	34	5.26	18.97	35.11	CULVERT C, DET. POND 3
DA-N4	3.67	1.25	0.30	0.55	31	5.53	6.21	13.97	DETENTION POND 3
DA-N5	15.50	1.25	0.30	0.55	30	5.63	36.42	60.01	BYPASS, REID BRANCH TRIBUTARY 1
DA-S1	12.49	1.25	0.30	0.55	15	7.86	36.81	67.49	DETENTION POND 5
DA-S2	2.46	1.25	0.30	0.55	15	7.86	7.25	13.27	CULVERT E, DET. POND 4
DA-S3	3.73	1.25	0.30	0.55	18	7.27	10.99	18.63	DETENTION POND 4
DA-S4	16.48	1.25	0.30	0.55	33	5.36	33.12	60.74	REID BRANCH
EX-W1	29.86	1.25	0.55	0.55	56	3.93	80.69	80.69	EX CULVERT A
EX-W2	25.41	1.25	0.55	0.55	59	3.77	65.86	65.86	EX CULVERT B

**TIME OF CONCENTRATION**  
PRE-PROJECT WATERSHED CONDITIONS  
TR-55 Methodology

SHEET FLOW										SHALLOW CONCENTRATED FLOW										OPEN CHANNEL FLOW										TOTAL
$T_c = (0.007(nL)^0.8)(P2^0.5)(s^0.4)$ 2-year/24-hr Rainfall Depth (in.) from ISWM = 4										$T_c = L / 60 \sqrt{V}$										$T_c = L / 60 \sqrt{V}$ $V = (1.49/n)^{2/3} R^{2/3} s^{1/2}$										
Basin	Length (ft)	Elev <sub>1</sub>	Elev <sub>2</sub>	Slope (ft/ft)	Manning's "n"	T <sub>c1</sub> (min)	Length (ft)	Elev <sub>1</sub>	Elev <sub>2</sub>	Elev <sub>3</sub>	Slope	Condition	TR-55 Fig. 3-1	V <sub>avg</sub> (ft/s)	T <sub>c2</sub> (min)	Length (ft)	Manning's "n"	Width (ft)	Side Slope	Depth (ft)	Area (ft <sup>2</sup> )	Perimeter (ft)	Radius (ft)	Elev <sub>1</sub>	Elev <sub>2</sub>	Slope (ft/ft)	V <sub>avg</sub> (ft/s)	T <sub>c3</sub> (min)	T <sub>cTOTAL</sub> (min)	
EX-DA-1	300	561.6	559.9	0.006	0.150	34.7	428.29	559.890	543.340	0.0386	Unpaved			3.17	2.3														37.0	
DA-S1	22	603.2	600.9	0.105	0.150	1.3	866	600.900	585.400	0.0179	Unpaved			2.16	6.7	478	0.035	30	4	3.0	126.0	54.7	2.3	585.4	583	0.005	5.3	1.5	10.0	
DA-S2	100	594.0	591.0	0.030	0.150	7.5	378	591.000	587.200	0.0101	Unpaved			1.62	3.9	163	0.035	0	4	2.0	16.0	16.5	1.0	587.2	585.4	0.011	6.0	0.5	11.8	
DA-S3	300	589.0	579.1	0.033	0.150	17.3	26	579.100	575.500	0.1385	Unpaved			6.00	0.1	138	0.035	40	4	1.0	44.0	48.2	0.9	575.5	574	0.011	4.2	0.6	17.9	
DA-S4	300	590.9	581.4	0.032	0.150	17.6	110	581.400	567.000	0.1309	Unpaved			5.84	0.3	2200	0.095	30	4	3.0	126.0	54.7	2.3	567.0	549	0.008	2.5	14.8	32.7	
DA-N1	300	601.0	598.1	0.010	0.150	28.2	134	598.100	596.000	0.0157	Unpaved			2.02	1.1	253	0.035	0	4	1.5	9.0	12.4	0.7	596.0	587.8	0.032	6.2	0.7	30.0	
DA-N2	300	601.0	598.0	0.010	0.150	27.8	27	598.000	597.800	0.0074	Unpaved			1.39	0.3	779	0.035	0	4	2.5	25.0	20.6	1.2	597.8	585.6	0.016	6.1	2.1	30.3	
DA-N3	300	601.0	597.5	0.012	0.150	26.2	750	597.500	589.300	0.0109	Unpaved			1.69	7.4	93	0.035	0	4	4.0	64.0	33.0	1.9	589.3	588.2	0.012	7.2	0.2	33.8	
DA-N4	290	591.7	589.5	0.008	0.150	30.3	9	589.500	587.200	0.2556	Unpaved			8.16	0.0	193	0.035	0	4	4.0	64.0	33.0	1.9	587.2	586	0.006	5.2	0.6	30.9	
DA-N5	300	597.0	593.2	0.013	0.150	25.3	327	593.200	589.000	0.0739	Unpaved			4.39	1.2	1200	0.035	20	3	8.0	352.0	70.6	5.0	589.0	561	0.007	6.0	3.3	29.8	

**Detention Summary Table**

Outfall	Existing Contributing Drainage Area	Proposed Contributing Drainage Area	Existing Release (cfs)				Proposed Release (cfs)			
			2-yr	10-yr	25-yr	100-yr	2-yr	10-yr	25-yr	100-yr
1	EX-N1	Pond 1, Pond 2, DA-N5	23.69	33.13	38.95	48.25	23.23	32.07	38.47	48.21
2	EX-N2, EX-N3	Pond 3	10.05	14.06	16.54	20.49	9.68	13.64	16.30	20.47
3	EX-S1, EX-S2, EX-S3	Pond 4, Pond 5, DA-S4	29.43	41.17	48.41	59.98	29.13	40.64	48.23	59.93

**BENCHMARKS**

ELEVATIONS BASED ON CITY OF ALLEN GPS CONTROL.

BM#1 (CITY OF ALLEN MONUMENT NO. 2) 3-1/2-INCH ALUMINUM DISC FOUND IN CONCRETE. LOCATED 3350 FEET EAST FROM THE INTERSECTION OF MAIN STREET AND RICHARDSON COURT, ±16 FEET FROM THE NORTHEAST CORNER OF A BRIDGE.  
 ELEV= 647.13  
 BM#2 SQUARE WITH "X" CUT SET ON CONCRETE HEADWALL, EAST SIDE OF COUNTRY CLUB ROAD (F.M. NO. 1378), AT THE INTERSECTION OF COUNTRY CLUB ROAD AND ESTATES PARKWAY (F.M. NO. 2170).  
 ELEV= 587.52  
 BM#3 SQUARE WITH "X" CUT SET ON CONCRETE HEADWALL, EAST SIDE OF COUNTRY CLUB ROAD (F.M. NO. 1378), ±240 FEET NORTH FROM THE CENTERLINE INTERSECTION OF COUNTRY CLUB ROAD AND SKYVIEW DRIVE.  
 ELEV= 589.81

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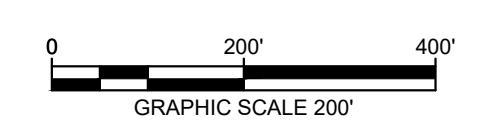
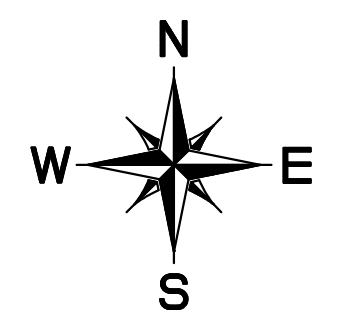
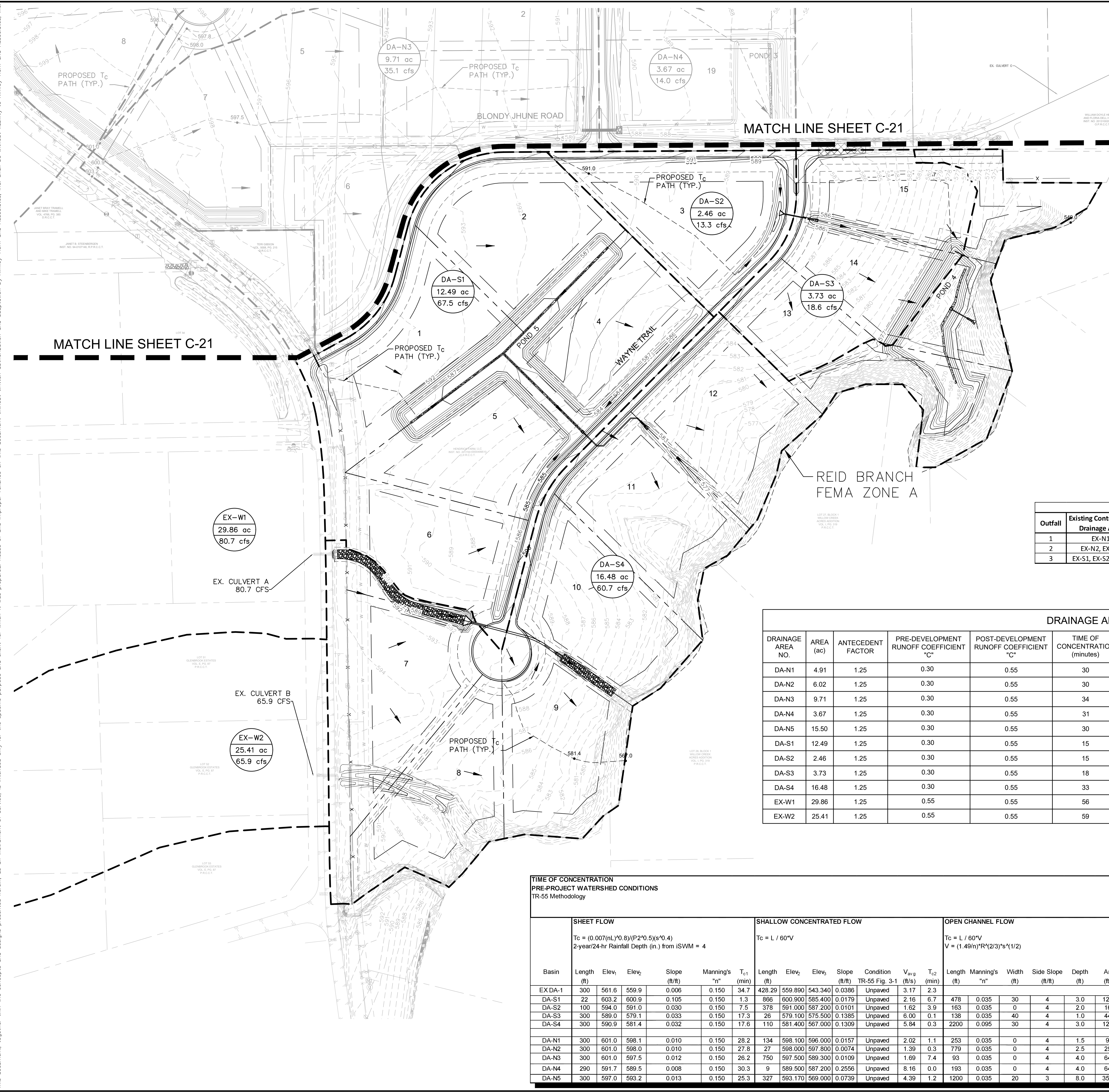
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Plotted By: htc, C. Date: August 17, 2022 03:57:47pm File Path: K:\DAL\Civil\064041015-Hendrick Farm\CAD\Plan Sheets\C-Drainage Area Map.dwg  
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**DRAINAGE DESIGN CRITERIA**

- Q100 = 1.25 C\*IA
- Q = FLOW IN CUBIC FEET PER SECOND (CFS)
- C = RUNOFF COEFFICIENT = 0.45 (1 ACRE+ RESIDENTIAL)
- I = INTENSITY (TIME OF CONCENTRATION = TC)
- I = B / (TC + D)^E
- E = 0.73702
- B = 86.709
- D = 11
- TC = VARIES
- A = DRAINAGE AREA IN ACRES

**DRAINAGE GENERAL NOTES**

1. CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. SEE STORM DRAIN PLAN & PROFILE SHEETS FOR DETAILED INFORMATION ON STORM DRAIN LINES.
3. ALL STORM DRAIN LINES SHALL BE RCP, CLASS III UNLESS OTHERWISE NOTED.

**RECORD DRAWING**

THIS DRAWING HAS BEEN REVISED TO SHOW THOSE CHANGES DURING THE CONSTRUCTION PROCESS REPORTED BY THE CONTRACTOR TO KIMLEY-HORN AND ASSOCIATES, INC. AND CONSIDERED TO BE SIGNIFICANT. THIS DRAWING IS NOT GUARANTEED TO BE "AS BUILT" BUT IS BASED ON THE INFORMATION MADE AVAILABLE.

DATE: 05/19/2023 BY: SARAH SCOTT

Outfall	Existing Contributing Drainage Area	Proposed Contributing Drainage Area	Existing Release (cfs)				Proposed Release (cfs)			
			2-yr	10-yr	25-yr	100-yr	2-yr	10-yr	25-yr	100-yr
1	EX-N1	Pond 1, Pond 2, DA-NS	23.69	33.13	38.95	48.25	23.23	32.07	38.47	48.21
2	EX-N2, EX-N3	Pond 3	10.05	14.06	16.54	20.49	9.68	13.64	16.30	20.47
3	EX-S1, EX-S2, EX-S3	Pond 4, Pond 5, DA-S4	29.43	41.17	48.41	59.98	29.13	40.64	48.23	59.93

DRAINAGE AREA NO.	AREA (ac)	ANTECEDENT FACTOR	PRE-DEVELOPMENT RUNOFF COEFFICIENT "C"	POST-DEVELOPMENT RUNOFF COEFFICIENT "C"	TIME OF CONCENTRATION (minutes)	RAINFALL INTENSITY "I"100 (in/hr)	PRE-DEVELOPMENT RUNOFF Q100 (cfs)	POST-DEVELOPMENT RUNOFF Q100 (cfs)	COLLECTION POINT
DA-N1	4.91	1.25	0.30	0.55	30	5.62	10.88	18.95	DETENTION POND 1
DA-N2	6.02	1.25	0.30	0.55	30	5.62	12.96	23.26	DETENTION POND 2
DA-N3	9.71	1.25	0.30	0.55	34	5.26	18.97	35.11	CULVERT C, DET. POND 3
DA-N4	3.67	1.25	0.30	0.55	31	5.53	6.21	13.97	DETENTION POND 3
DA-N5	15.50	1.25	0.30	0.55	30	5.63	36.42	60.01	BYPASS, REID BRANCH TRIBUTARY 1
DA-S1	12.49	1.25	0.30	0.55	15	7.86	36.81	67.49	DETENTION POND 5
DA-S2	2.46	1.25	0.30	0.55	15	7.86	7.25	13.27	CULVERT E, DET. POND 4
DA-S3	3.73	1.25	0.30	0.55	18	7.27	10.99	18.63	DETENTION POND 4
DA-S4	16.48	1.25	0.30	0.55	33	5.36	33.12	60.74	REID BRANCH
EX-W1	29.86	1.25	0.55	0.55	56	3.93	80.69	80.69	EX CULVERT A
EX-W2	25.41	1.25	0.55	0.55	59	3.77	65.86	65.86	EX CULVERT B

Basin	SHEET FLOW					SHALLOW CONCENTRATED FLOW					OPEN CHANNEL FLOW					T <sub>0</sub> TOTAL (min)											
	Length (ft)	Elev <sub>1</sub>	Elev <sub>2</sub>	Slope (ft/ft)	Manning's "n"	Length (ft)	Elev <sub>1</sub>	Elev <sub>2</sub>	Slope (ft/ft)	Condition	V <sub>avg</sub> (ft/s)	T <sub>c2</sub> (min)	Length (ft)	Manning's "n"	Width (ft)		Side Slope (ft/ft)	Depth (ft)	Area (ft <sup>2</sup> )	Perimeter (ft)	Radius (ft)	Elev <sub>3</sub>	Elev <sub>4</sub>	Slope (ft/ft)	V <sub>avg</sub> (ft/s)	T <sub>c3</sub> (min)	
EX-DA-1	300	561.6	559.9	0.006	0.150	34.7	428.29	559.990	543.340	0.0396	Unpaved	3.17	2.3														37.0
DA-S1	22	603.2	600.9	0.105	0.150	1.3	866	600.900	585.400	0.0179	Unpaved	2.16	6.7	478	0.035	30	4	3.0	126.0	54.7	2.3	585.4	583	0.005	5.3	1.5	10.0
DA-S2	100	594.0	591.0	0.030	0.150	7.5	378	591.000	587.200	0.0101	Unpaved	1.62	3.9	163	0.035	0	4	2.0	16.0	16.5	1.0	587.2	585.4	0.011	6.0	0.5	11.8
DA-S3	300	589.0	579.1	0.033	0.150	17.3	26	579.100	575.500	0.1385	Unpaved	6.00	0.1	138	0.035	40	4	1.0	44.0	48.2	0.9	575.5	574	0.011	4.2	0.6	17.9
DA-S4	300	590.9	581.4	0.032	0.150	17.6	110	581.400	567.000	0.1309	Unpaved	5.84	0.3	2200	0.095	30	4	3.0	126.0	54.7	2.3	567.0	549	0.008	2.5	14.8	32.7
DA-N1	300	601.0	598.1	0.010	0.150	28.2	134	598.100	596.000	0.0157	Unpaved	2.02	1.1	253	0.035	0	4	1.5	9.0	12.4	0.7	596.0	587.8	0.032	6.2	0.7	30.0
DA-N2	300	601.0	598.0	0.010	0.150	27.8	27	598.000	597.800	0.0074	Unpaved	1.39	0.3	779	0.035	0	4	2.5	25.0	20.6	1.2	597.8	585.6	0.016	6.1	2.1	30.3
DA-N3	300	601.0	597.5	0.012	0.150	26.2	750	597.500	589.300	0.0109	Unpaved	1.69	7.4	93	0.035	0	4	4.0	64.0	33.0	1.9	589.3	588.2	0.012	7.2	0.2	33.8
DA-N4	290	591.7	589.5	0.008	0.150	30.3	9	589.500	587.200	0.2556	Unpaved	8.16	0.0	193	0.035	0	4	4.0	64.0	33.0	1.9	587.2	586	0.006	5.2	0.6	30.9
DA-N5	300	597.0	593.2	0.013	0.150	25.3	327	593.170	589.000	0.0739	Unpaved	4.39	1.2	1200	0.035	20	3	8.0	352.0	70.6	5.0	589.0	561	0.007	6.0	3.3	29.8

**BENCHMARKS**

ELEVATIONS BASED ON CITY OF ALLEN GPS CONTROL

BM#1 (CITY OF ALLEN MONUMENT NO. 2) 3-1/2-INCH ALUMINUM DISC FOUND IN CONCRETE, LOCATED 1350 FEET EAST FROM THE INTERSECTION OF MAIN STREET AND RICHARDSON COURT, ±16 FEET FROM THE NORTHEAST CORNER OF A BRIDGE.  
ELEV= 647.13

BM#2 SQUARE WITH "X" CUT SET ON CONCRETE HEADWALL, EAST SIDE OF COUNTRY CLUB ROAD (F.M. NO. 1378), AT THE INTERSECTION OF COUNTRY CLUB ROAD AND ESTATES PARKWAY (F.M. NO. 2170).  
ELEV= 587.52

BM#3 SQUARE WITH "X" CUT SET ON CONCRETE HEADWALL, EAST SIDE OF COUNTRY CLUB ROAD (F.M. NO. 1378), ±240 FEET NORTH FROM THE CENTERLINE INTERSECTION OF COUNTRY CLUB ROAD AND SKYVIEW DRIVE.  
ELEV= 589.81

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Drainage / Detention Calculations for Pond 1  
Modified Rational Method  
100-Year Event

Existing Conditions table with columns: Drainage Area, Area, Time (Tc), C value, I100, Q100.

Proposed Conditions to Pond and Bypass tables with columns: Drainage Area, Area, Time (Tc), C value, I100, Q100.

5.14 cfs Allowable Release  
5.00 cfs Actual Release

Runoff per Storm Event - Developed table with columns: Time (min), I100, C value, Area (ac), Runoff (cfs).

Inflow per Storm Event table with columns: Storm Event, Runoff (cfs), Inflow (ft³).

Outflow per Storm Event

Outflow per Storm Event table with columns: Storm, Time, Release, Outflow (ft³).

Detention Volume

Detention Volume table with columns: Storm, Inflow, Outflow, Storage (ft³).

Drainage / Detention Calculations for Pond 4  
Modified Rational Method  
100-Year Event

Existing Conditions table for Pond 4.

Proposed Conditions to Pond and Bypass tables for Pond 4.

4.82 cfs Allowable Release  
3.23 cfs Actual Release

Runoff per Storm Event - Developed table for Pond 4.

Inflow per Storm Event table for Pond 4.

Outflow per Storm Event

Outflow per Storm Event table for Pond 4.

Detention Volume

Detention Volume table for Pond 4.

Drainage / Detention Calculations for Pond 2  
Modified Rational Method  
100-Year Event

Existing Conditions table for Pond 2.

Proposed Conditions to Pond and Bypass tables for Pond 2.

10.70 cfs Allowable Release  
9.90 cfs Actual Release

Runoff per Storm Event - Developed table for Pond 2.

Inflow per Storm Event table for Pond 2.

Outflow per Storm Event

Outflow per Storm Event table for Pond 2.

Detention Volume

Detention Volume table for Pond 2.

Drainage / Detention Calculations for Pond 3  
Modified Rational Method  
100-Year Event

Existing Conditions table for Pond 3.

Proposed Conditions to Pond and Bypass tables for Pond 3.

20.49 cfs Allowable Release  
20.47 cfs Actual Release

Runoff per Storm Event - Developed table for Pond 3.

Inflow per Storm Event table for Pond 3.

Outflow per Storm Event

Outflow per Storm Event table for Pond 3.

Detention Volume

Detention Volume table for Pond 3.

Drainage / Detention Calculations for Pond 5  
Modified Rational Method  
100-Year Event

Existing Conditions table for Pond 5.

Proposed Conditions to Pond and Bypass tables for Pond 5.

7.22 cfs Allowable Release  
7.17 cfs Actual Release

Runoff per Storm Event - Developed table for Pond 5.

Inflow per Storm Event table for Pond 5.

Outflow per Storm Event

Outflow per Storm Event table for Pond 5.

Detention Volume

Detention Volume table for Pond 5.

Detention Pond 1 - Outfall Structure Summary table with columns: Design Storm, Elevation, Weir, Orifice, Actual, Opening #1, Opening #2, Opening #3, Total.

Detention Pond 2 - Outfall Structure Summary table with columns: Design Storm, Elevation, Weir, Orifice, Actual, Opening #1, Opening #2, Opening #3, Total.

Detention Pond 3 - Outfall Structure Summary table with columns: Design Storm, Elevation, Weir, Orifice, Actual, Opening #1, Opening #2, Opening #3, Total.

Detention Pond 4 - Outfall Structure Summary table with columns: Design Storm, Elevation, Weir, Orifice, Actual, Opening #1, Opening #2, Opening #3, Total.

Detention Pond 5 - Outfall Structure Summary table with columns: Design Storm, Elevation, Weir, Orifice, Actual, Opening #1, Opening #2, Opening #3, Total.

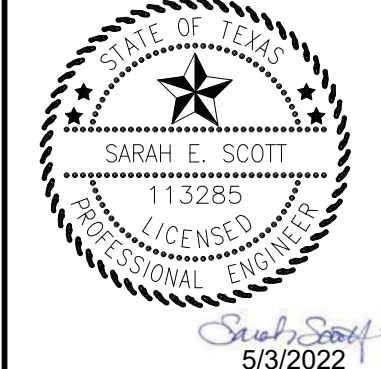
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DATE: 05/19/2023 BY: SARAH SCOTT

REVISIONS FROM UPDATED GRADING table with columns: No., REVISIONS, DATE.

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Project Information table with columns: KHA PROJECT, DATE, SCALE, DESIGNED BY, DRAWN BY, CHECKED BY.

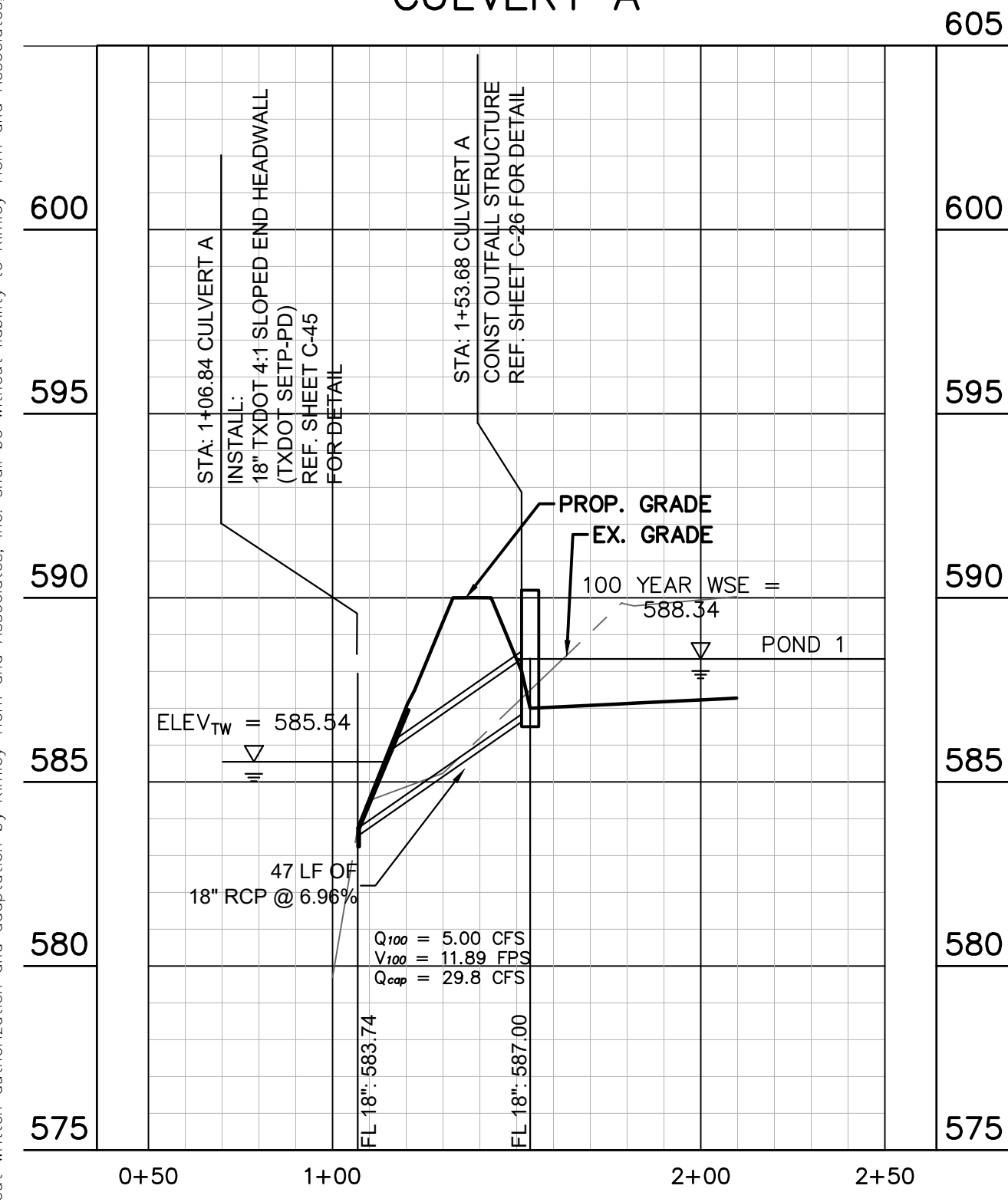
DRAINAGE CALCULATIONS

HENDRICK FARM CITY OF LUCAS COLLIN COUNTY, TEXAS SHEET NUMBER C-23

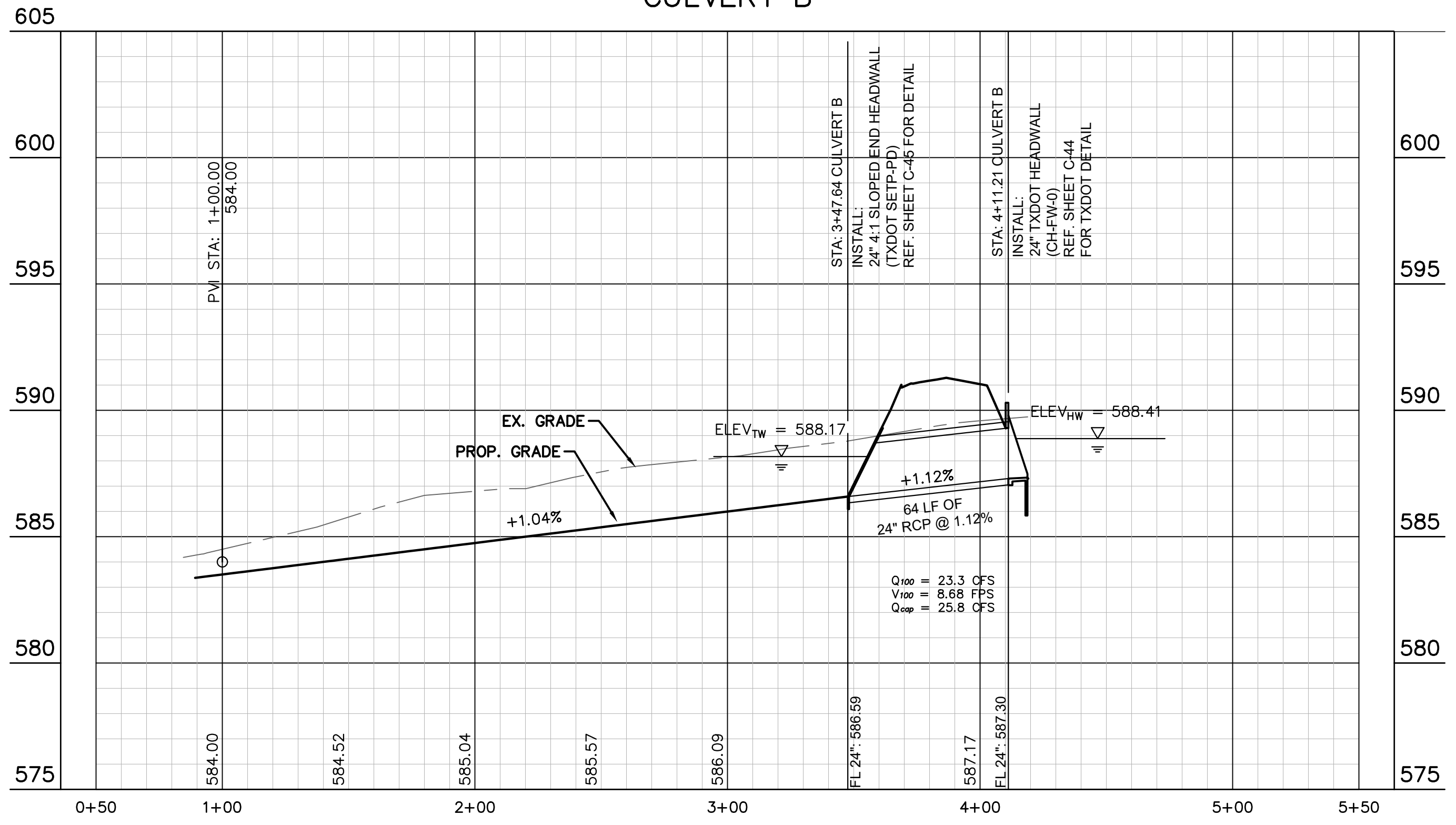


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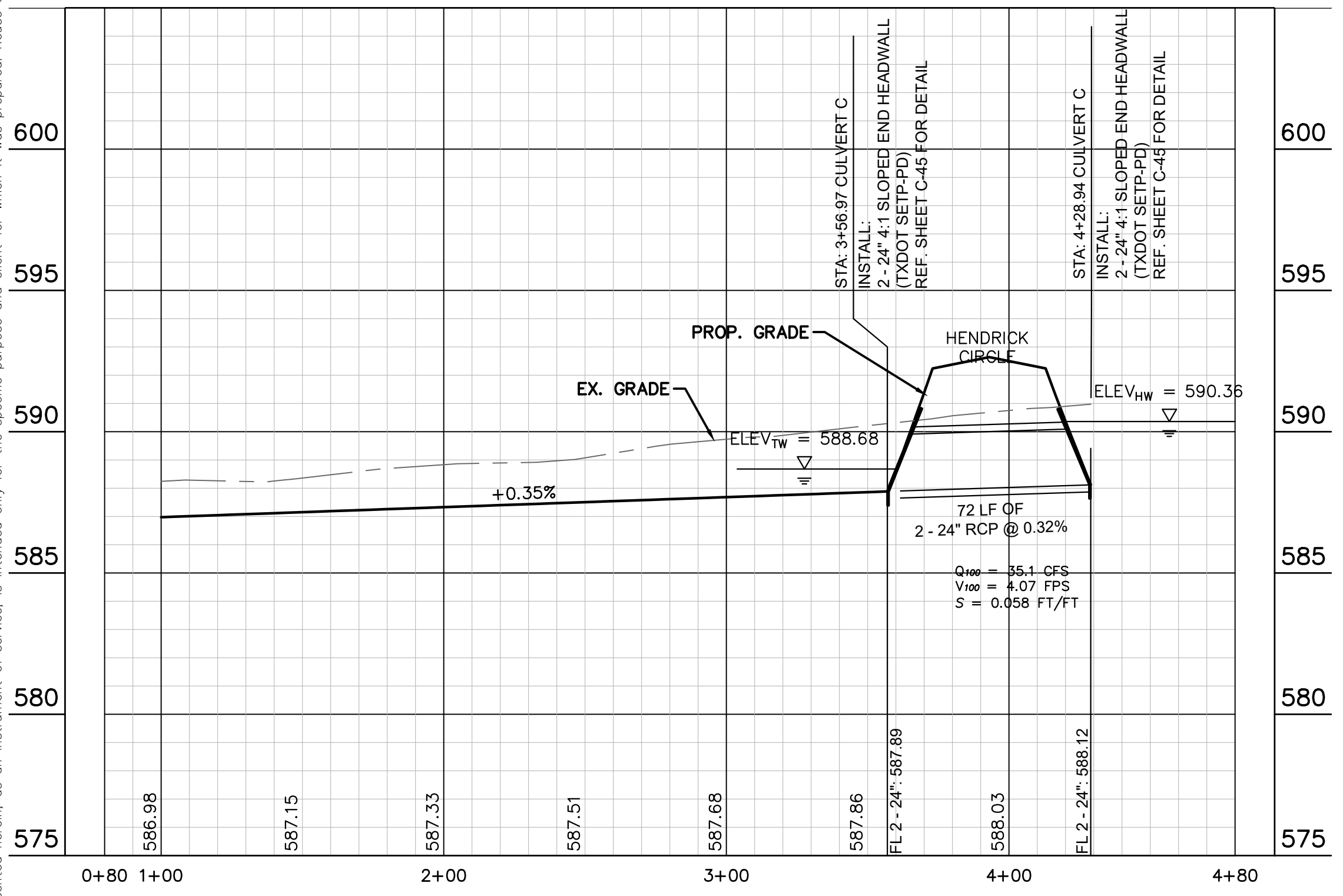
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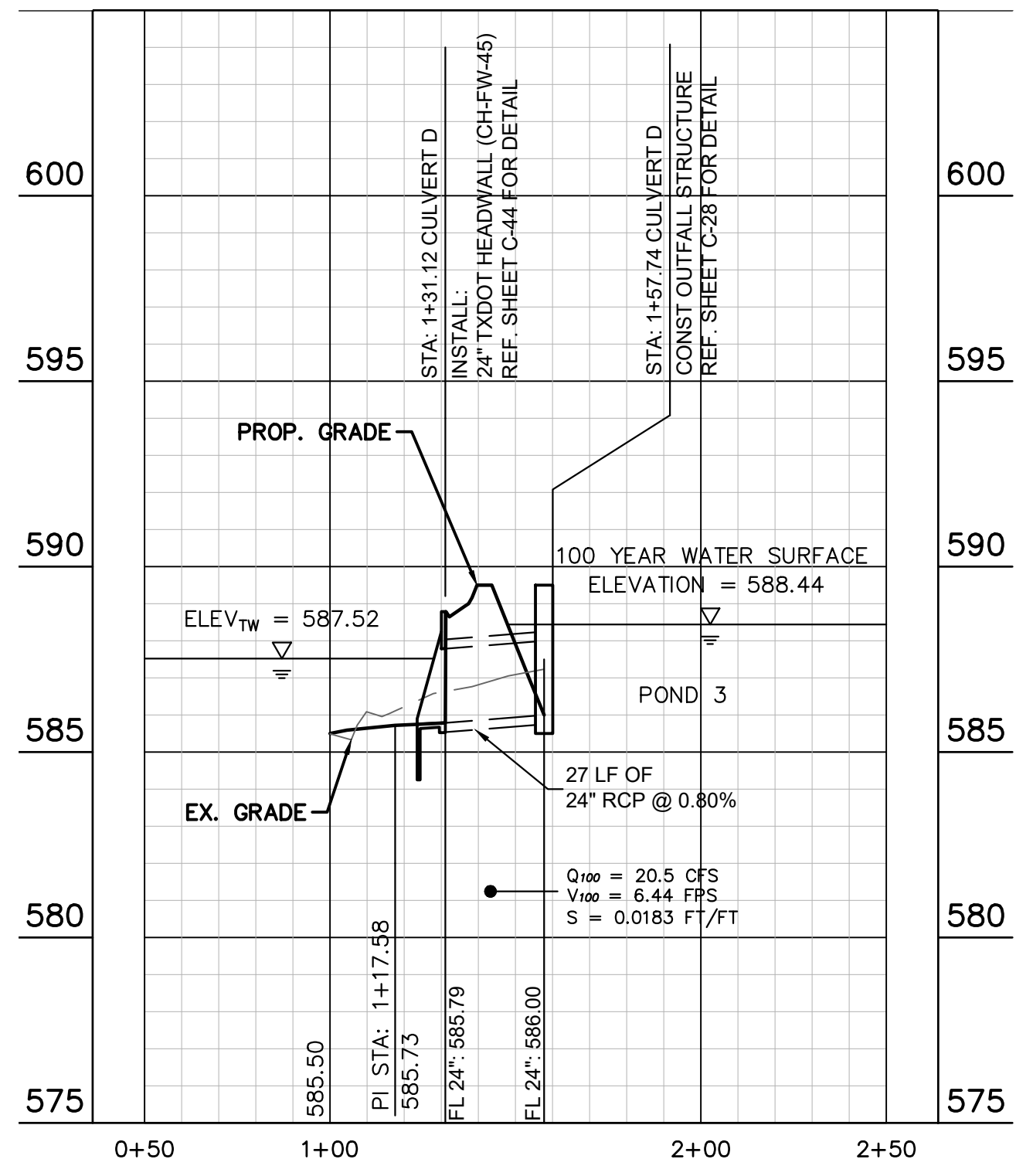
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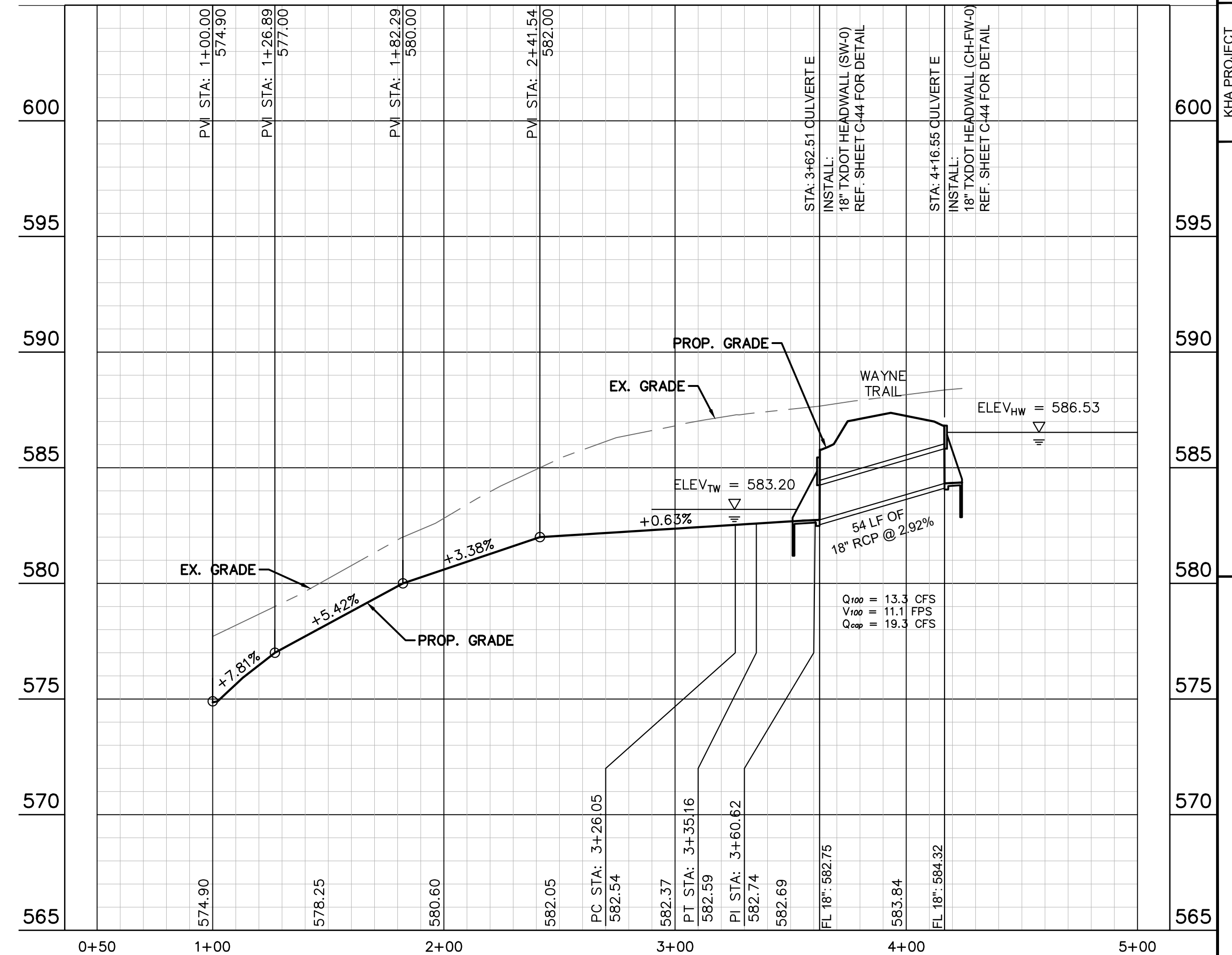
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### CULVERT D



### CULVERT E



**RECORD DRAWING**

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 DATE: 05/19/2023 BY: SARAH SCOTT

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DATE

No.	REVISIONS	DATE

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 WWW.KIMLEY-HORN.COM  
 TEXAS REGISTERED ENGINEERING FIRM F-928

SARAH E. SCOTT  
 113285  
 LICENSED PROFESSIONAL ENGINEER

KHA PROJECT: 06404015  
 DATE: JANUARY 2022  
 SCALE: AS SHOWN  
 DESIGNED BY: CRA  
 DRAWN BY: HCL  
 CHECKED BY: SES

STORM PROFILES (1 OF 2)

HENDRICK FARM

CITY OF LUCAS  
COLLIN COUNTY, TEXAS

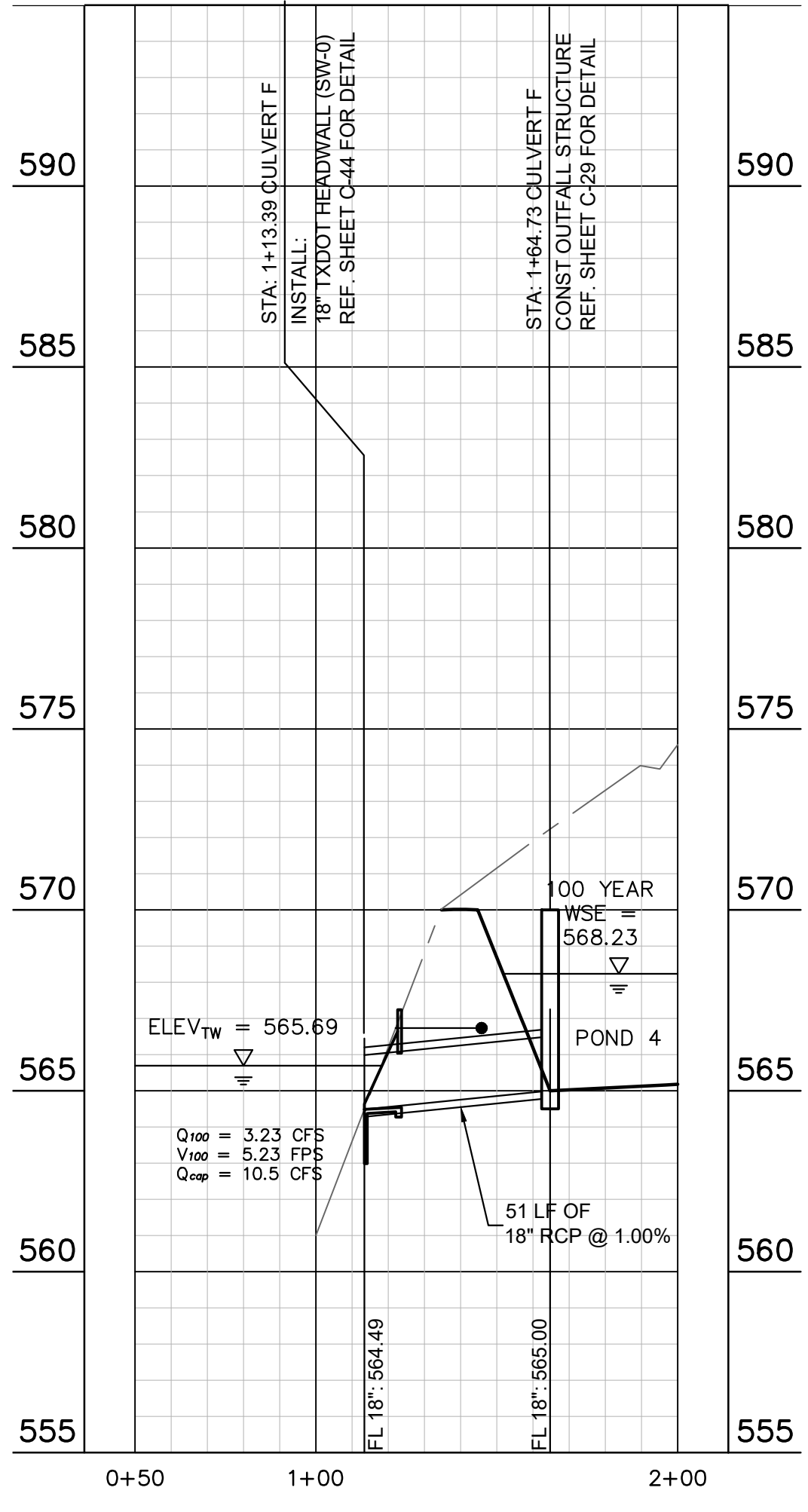
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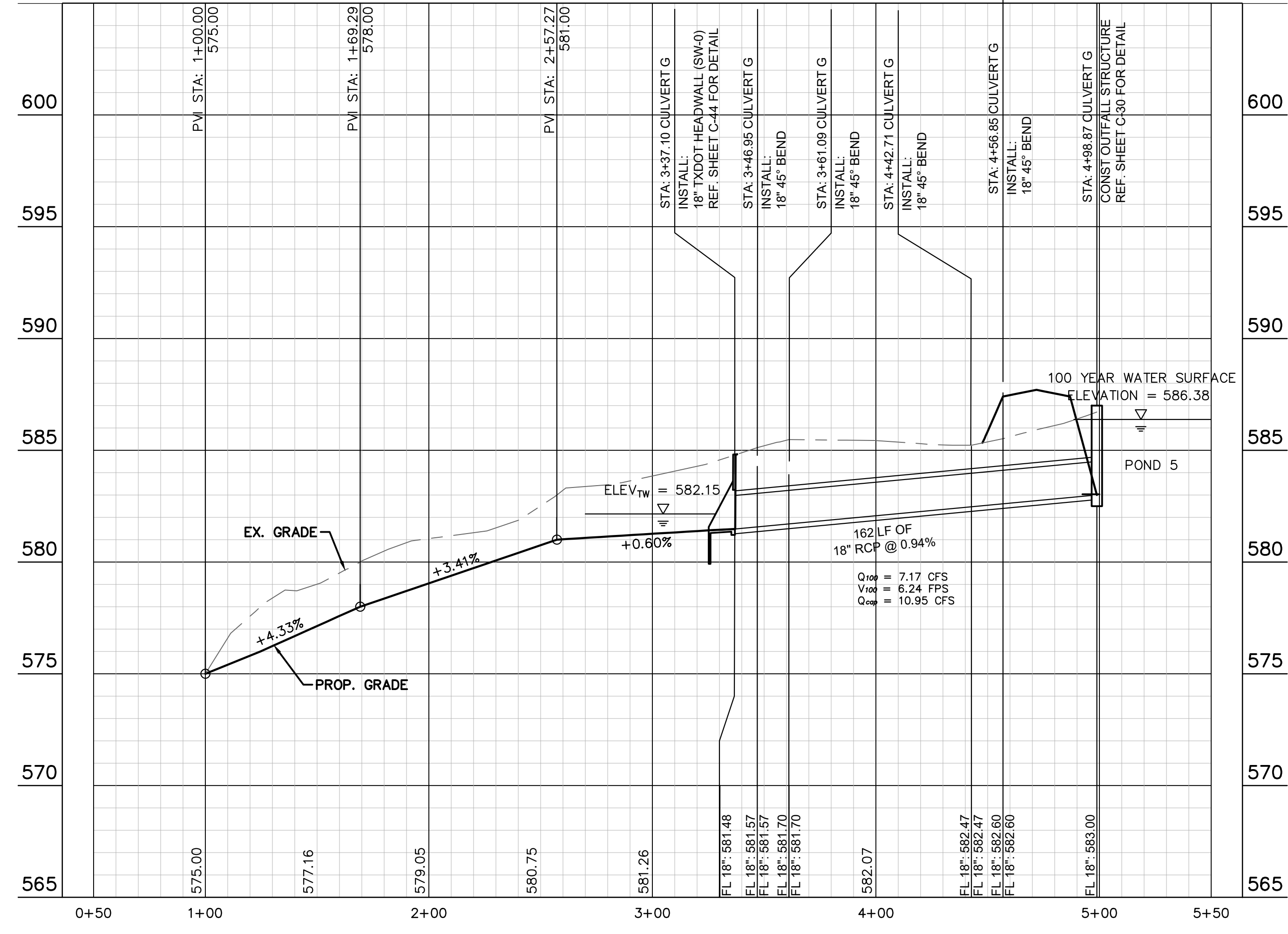


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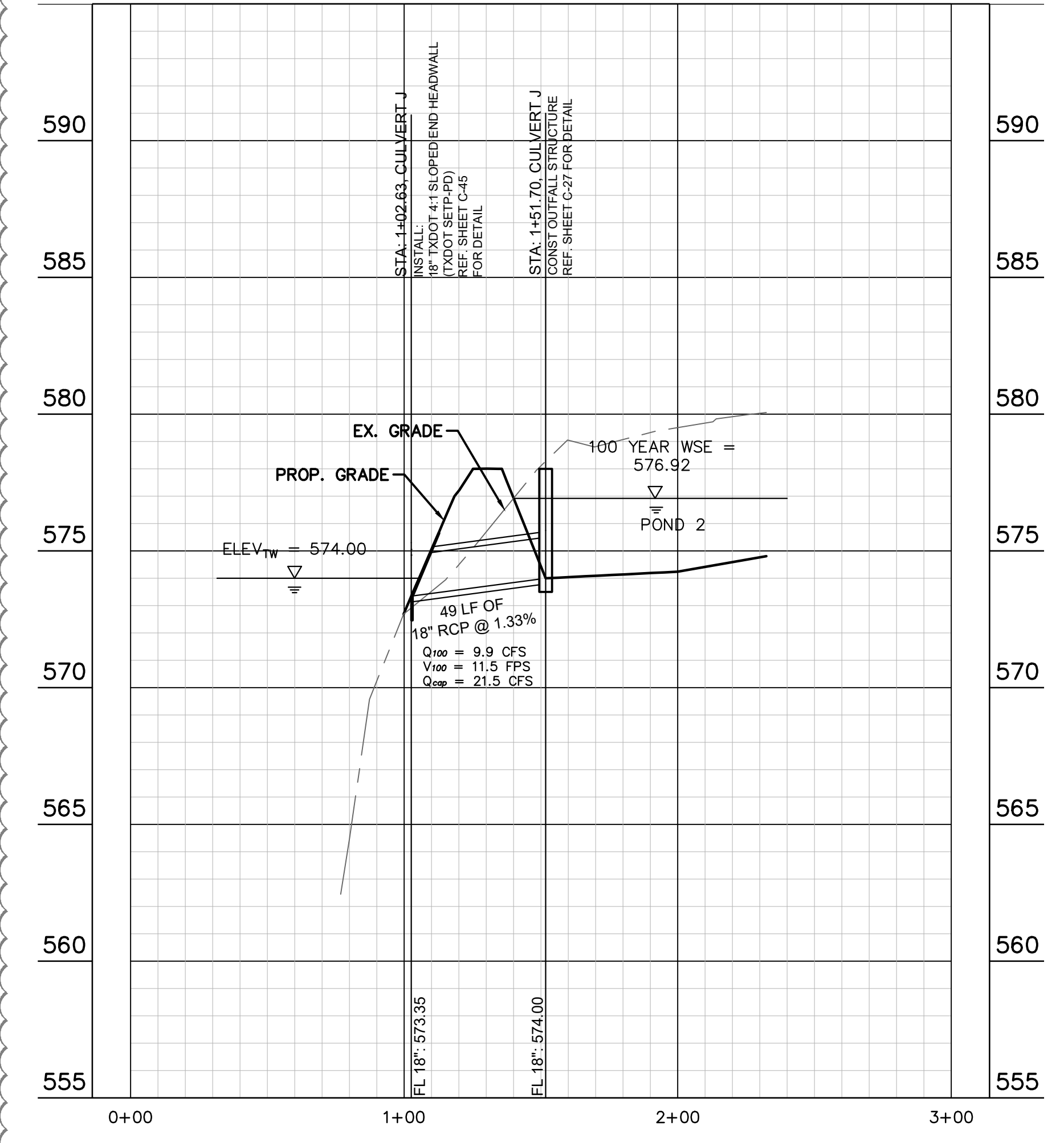
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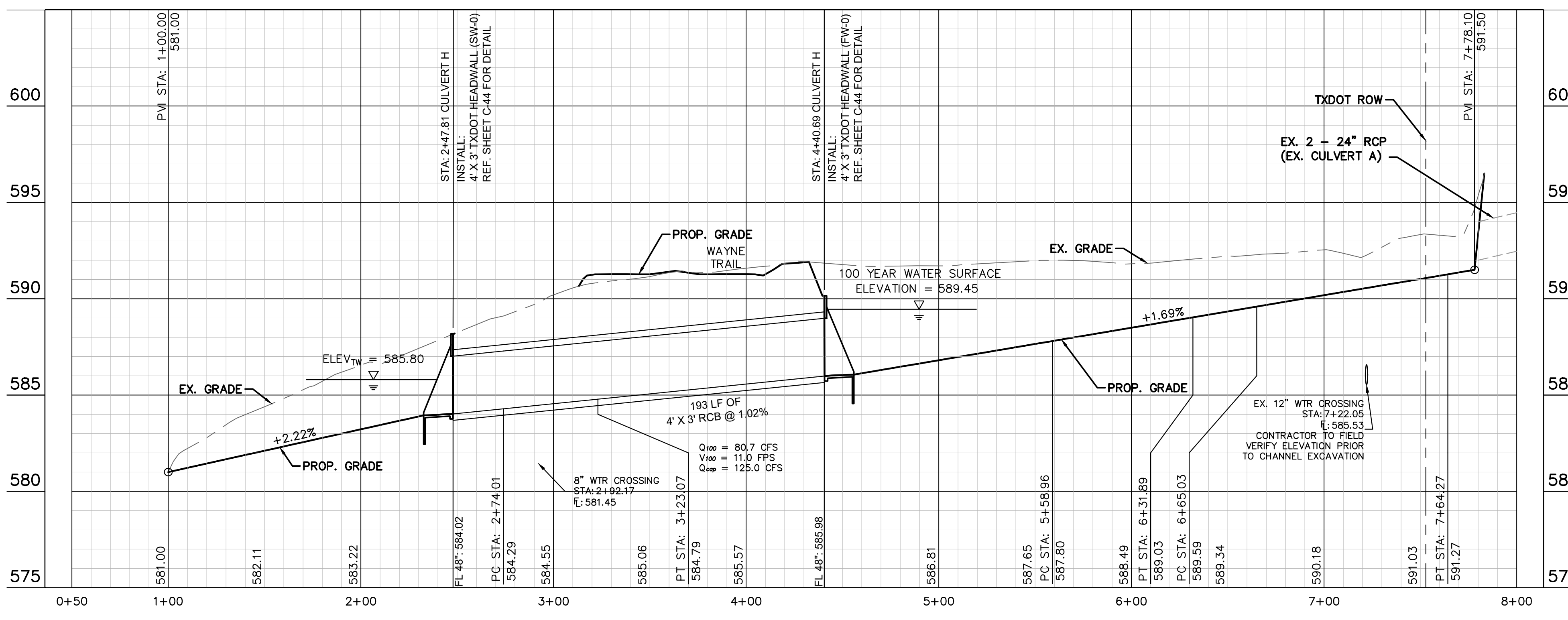
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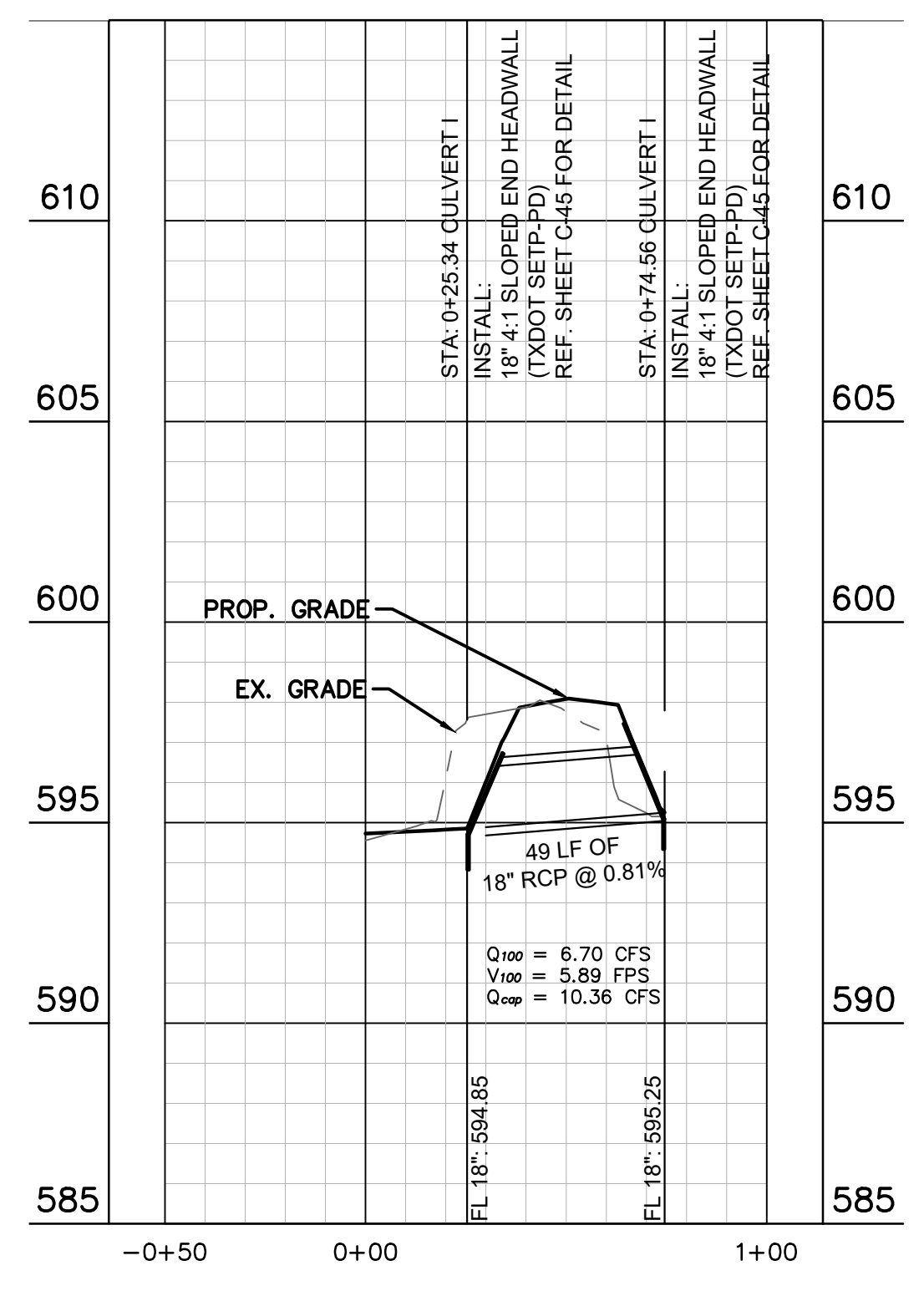
**CULVERT J**



**CULVERT H**



**CULVERT I**

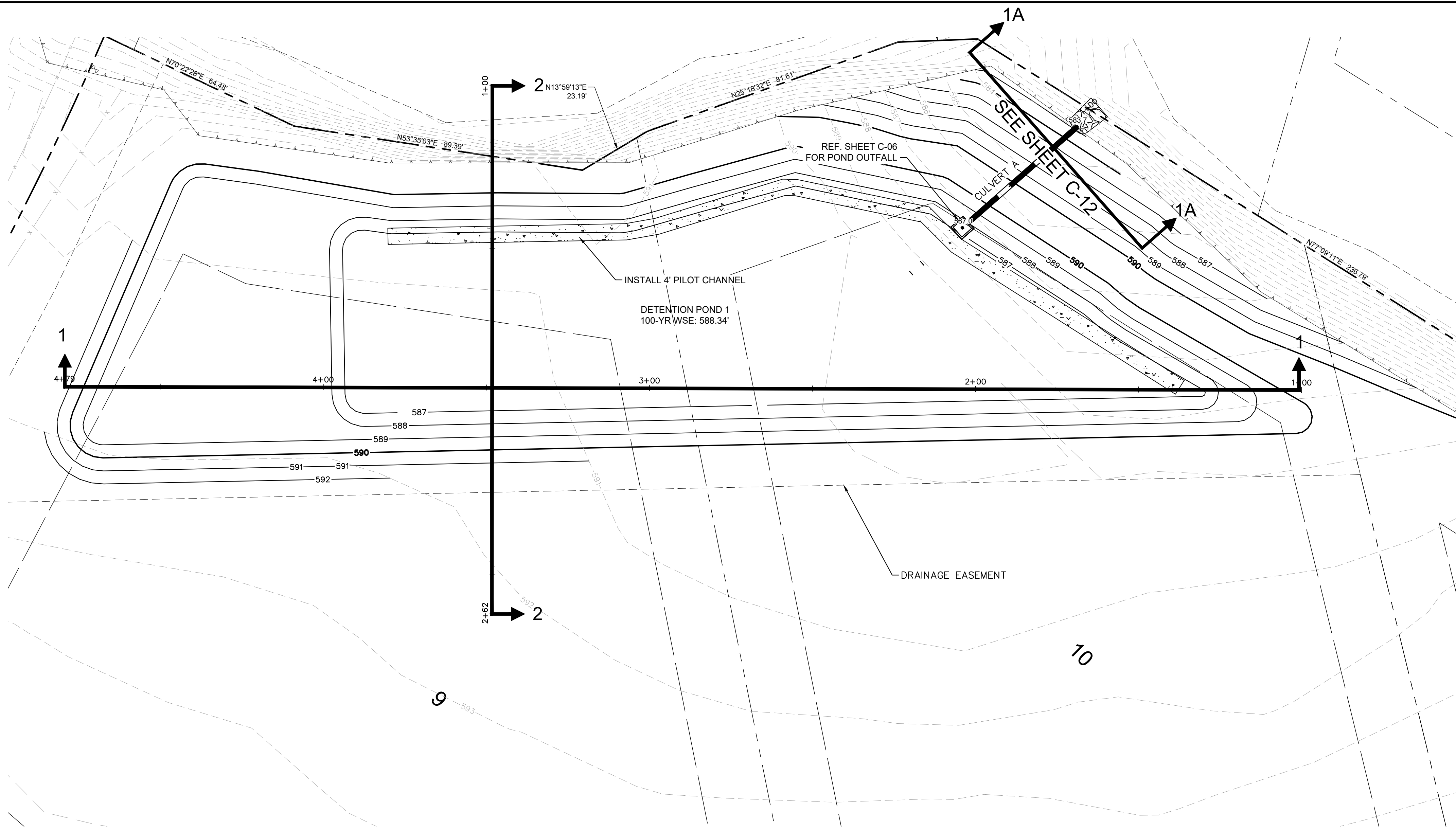


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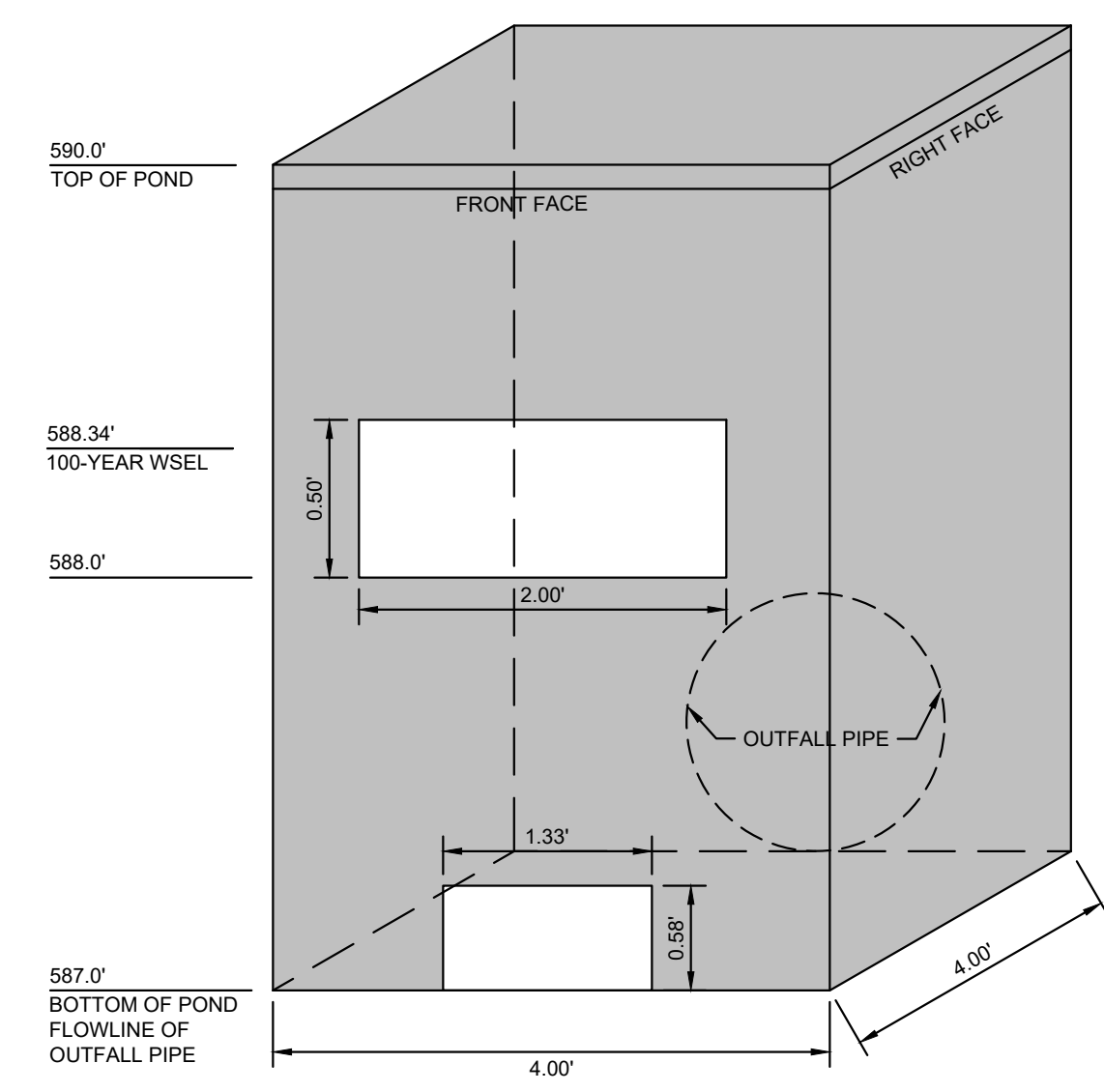
KHA PROJECT 064041015	DATE JANUARY 2022	DESIGNED BY: CRA	DRAWN BY: HCL	CHECKED BY: SES	
	SCALE: AS SHOWN				
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<b>STORM PROFILES (2 OF 2)</b>					
<b>HENDRICK FARM</b> CITY OF LUCAS COLLIN COUNTY, TEXAS					
SHEET NUMBER				REVISIONS	DATE
C-25					



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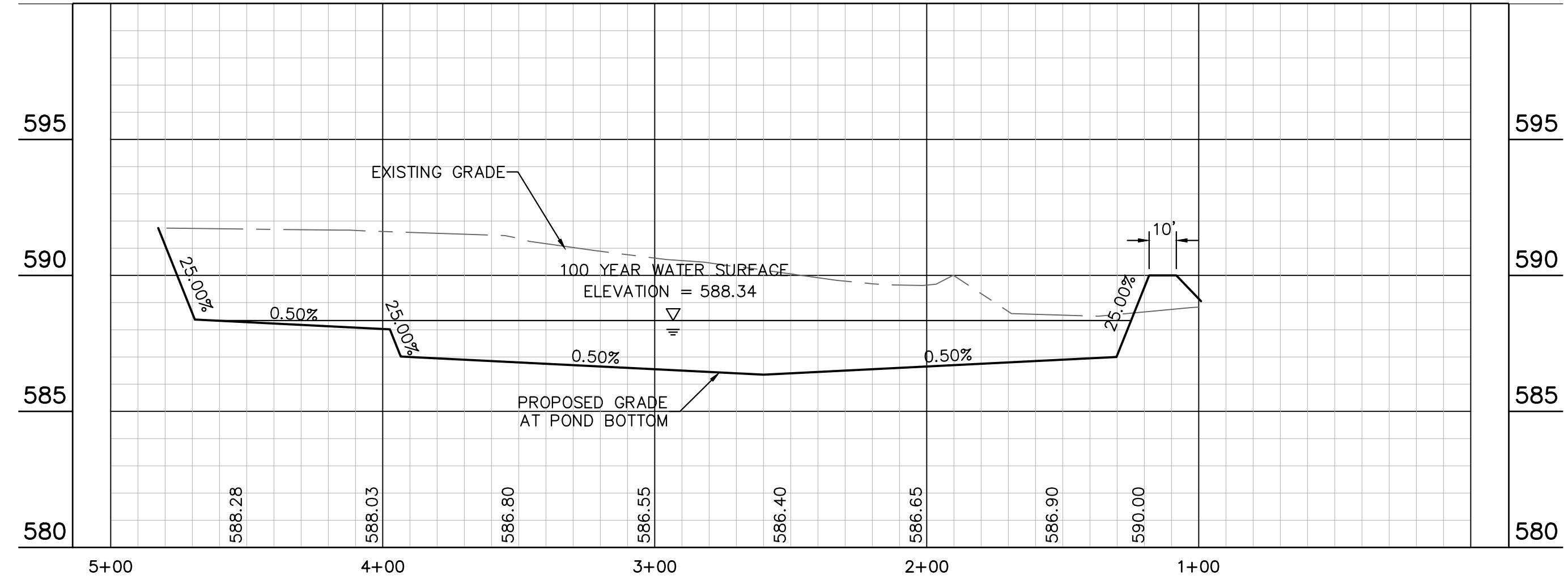
POND 1 OUTFALL STRUCTURE DETAIL



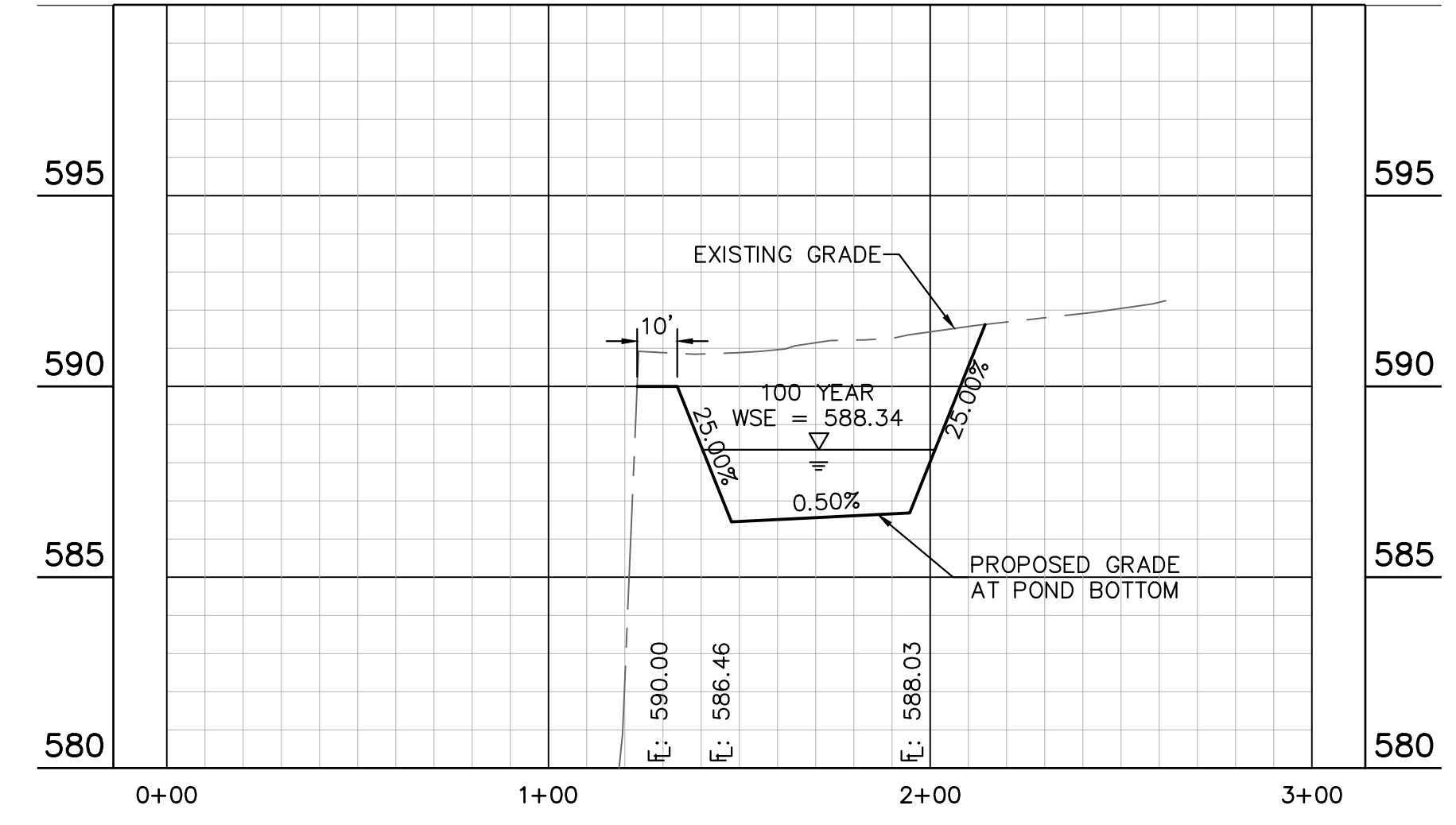
Detention Pond 1 - Summary Table			
Elevation	Area (ac)	Volume (ac-ft)	Volume (ft <sup>3</sup> )
587.0	0.30	0.00	0
588.0	0.44	0.37	16,046
589.0	0.52	0.85	36,978
590.0	0.60	1.41	61,357

Detention Pond 1 - Water Surface Elevation Summary		
Storm Event	Elevation	Volume
2-yr (MRM Calcs) =	587.70	0.26
10-yr (MRM Calcs) =	587.93	0.34
25-yr (MRM Calcs) =	588.10	0.42
100-yr (MRM Calcs) =	588.34	0.53

POND 1 - CROSS SECTION 1



POND 1 - CROSS SECTION 2



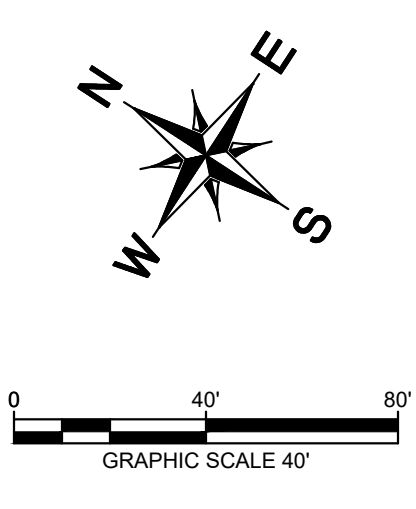
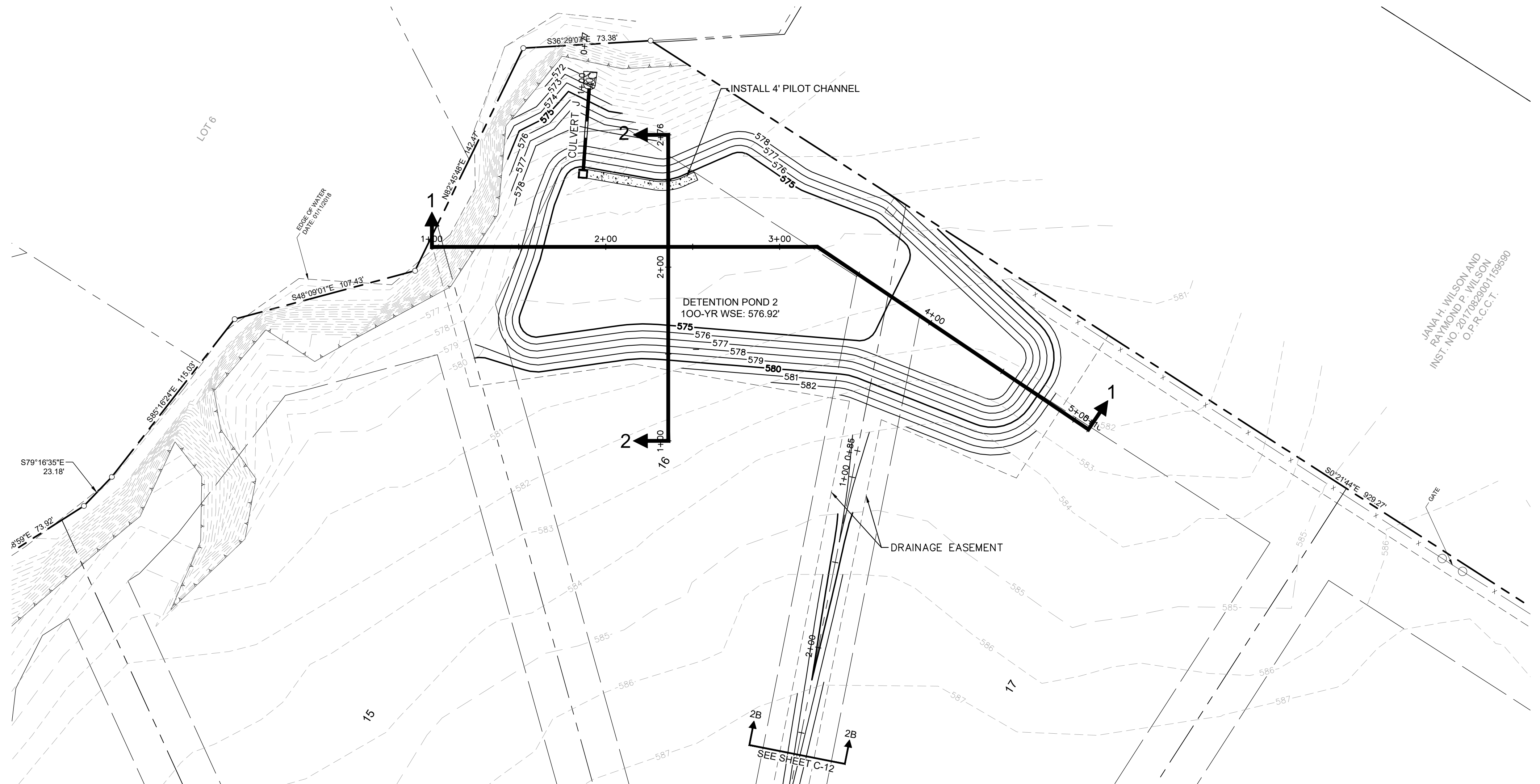
PROFILE SCALE  
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 1" = 4' VERTICAL

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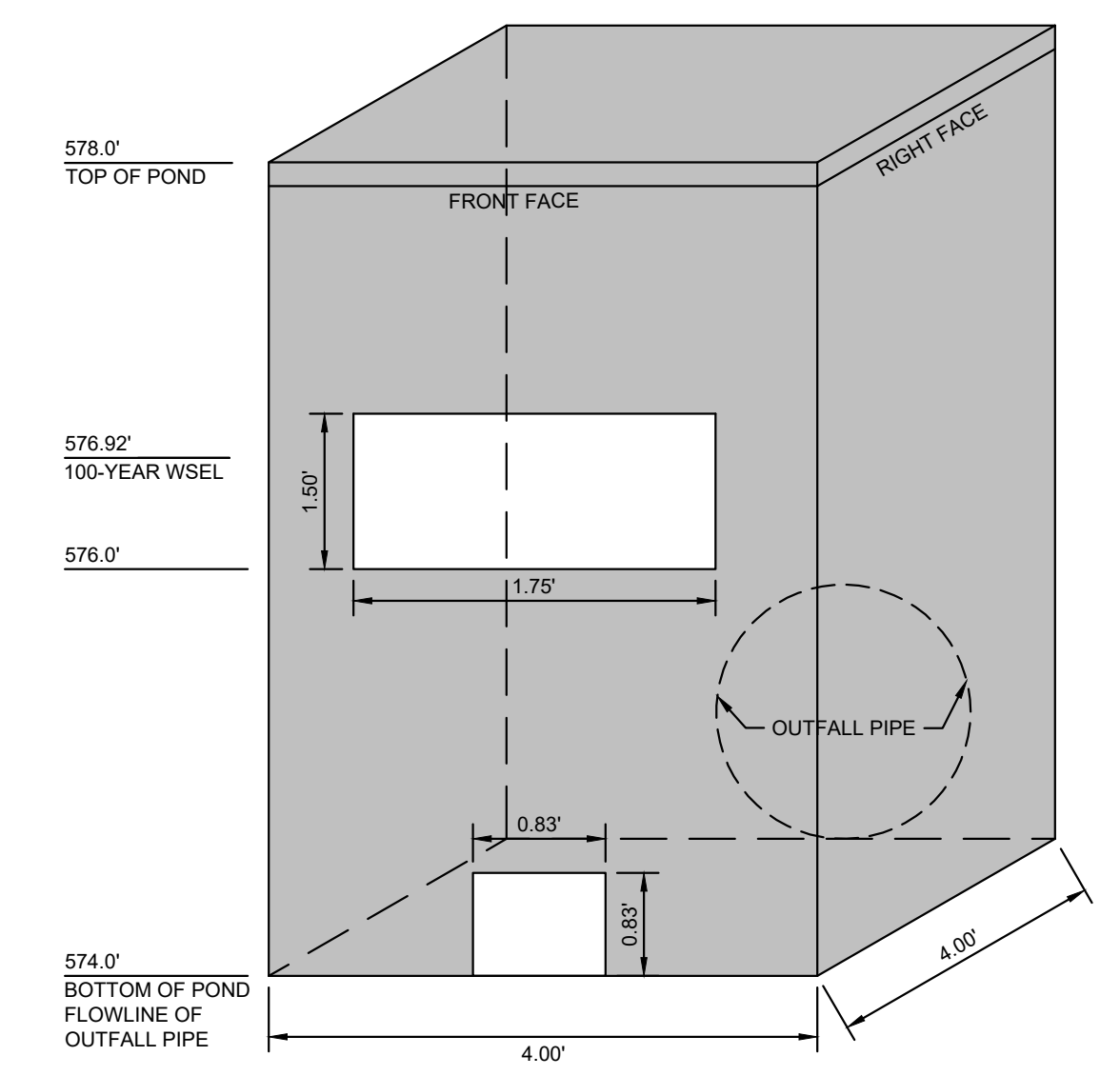
<p>© 2021 KIMLEY-HORN AND ASSOCIATES, INC.                  13455 NOEL ROAD, SUITE 700, DALLAS, TX 75240                  PHONE: 972-770-1300                  WWW.KIMLEY-HORN.COM                  TEXAS REGISTERED ENGINEERING FIRM F-998</p>	No. _____ Revisions _____ Date _____ By _____
	KHA PROJECT: 06404015 DATE: JANUARY 2022 SCALE: AS SHOWN DESIGNED BY: CRA DRAWN BY: CDH CHECKED BY: SES
DETENTION POND PLAN - POND 1	
HENDRICK FARM CITY OF LUCAS COLLIN COUNTY, TEXAS	
SHEET NUMBER <b>C-26</b>	



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POND 2 OUTFALL STRUCTURE DETAIL



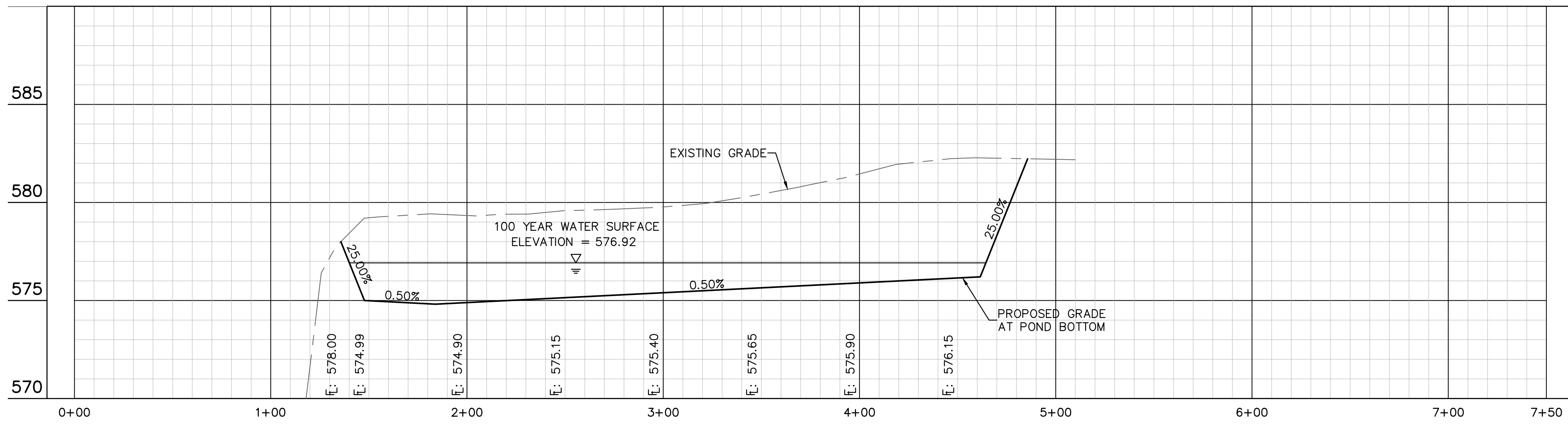
Detention Pond 2 - Summary Table			
Elevation	Area (ac)	Volume (ac-ft)	Volume (ft <sup>3</sup> )
574.0	0.00	0.00	0.00
575.0	0.41	0.20	8,866
576.0	0.55	0.68	29,753
577.0	0.62	1.27	55,284
578.0	0.69	1.92	83,843

Detention Pond 2 - Water Surface Elevation Summary		
Storm Event	Elevation	Volume
2-yr (MRM Calcs)	575.84	0.59
10-yr (MRM Calcs)	576.33	0.87
25-yr (MRM Calcs)	576.56	1.01
100-yr (MRM Calcs)	576.92	1.21

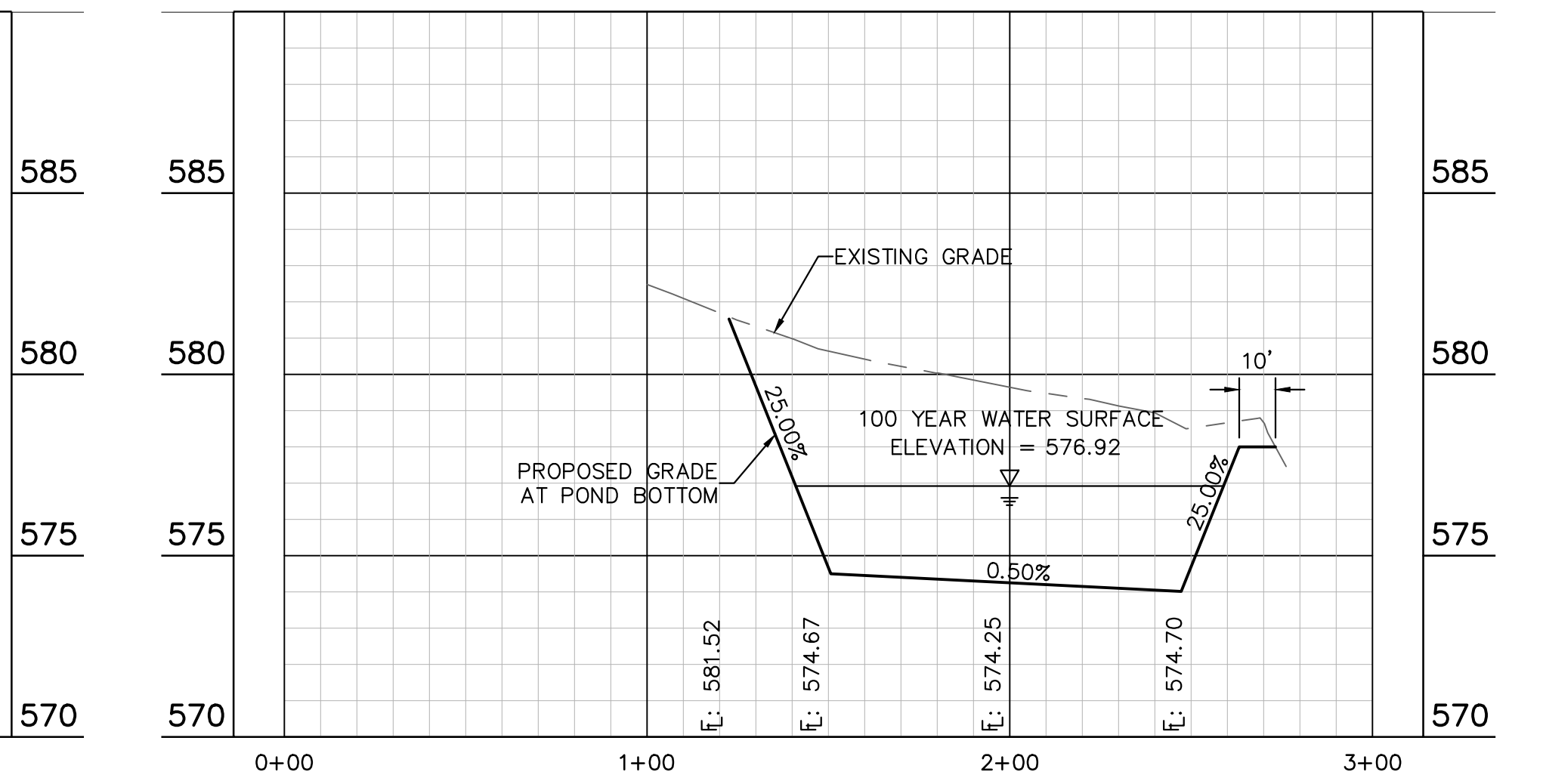
**RECORD DRAWING**  
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PROFILE SCALE  
 1" = 40' HORIZONTAL  
 1" = 4' VERTICAL

POND 2 - CROSS SECTION 1



POND 2 - CROSS SECTION 2



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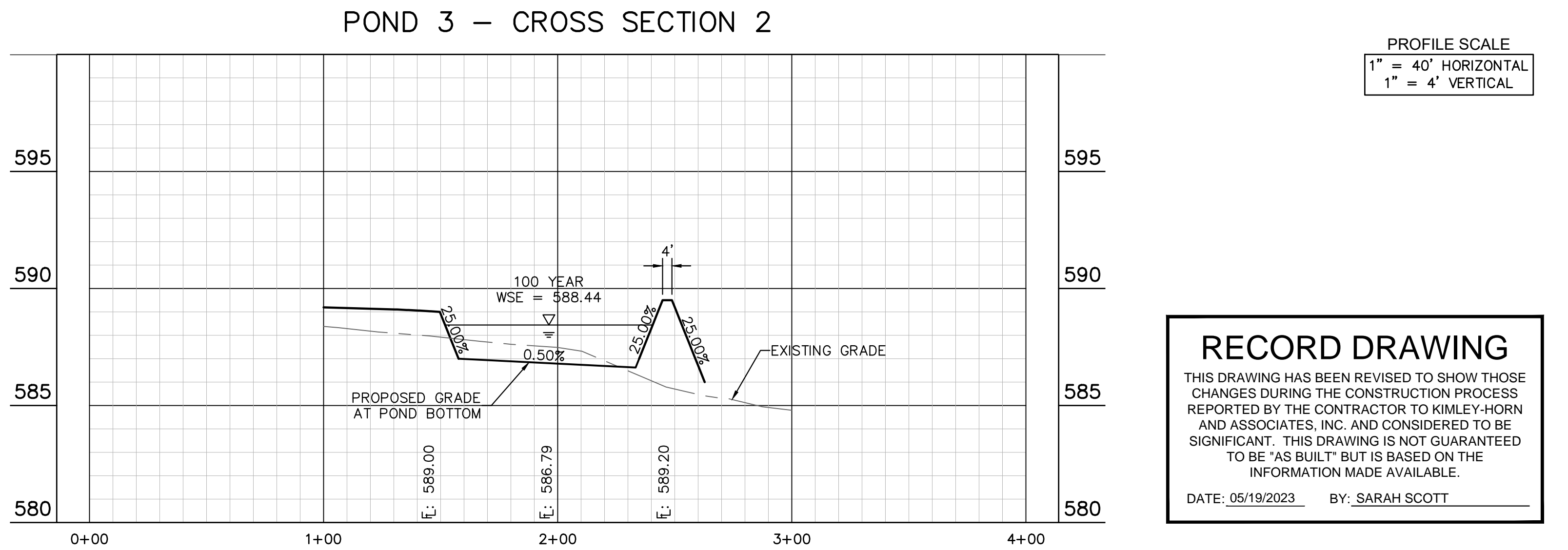
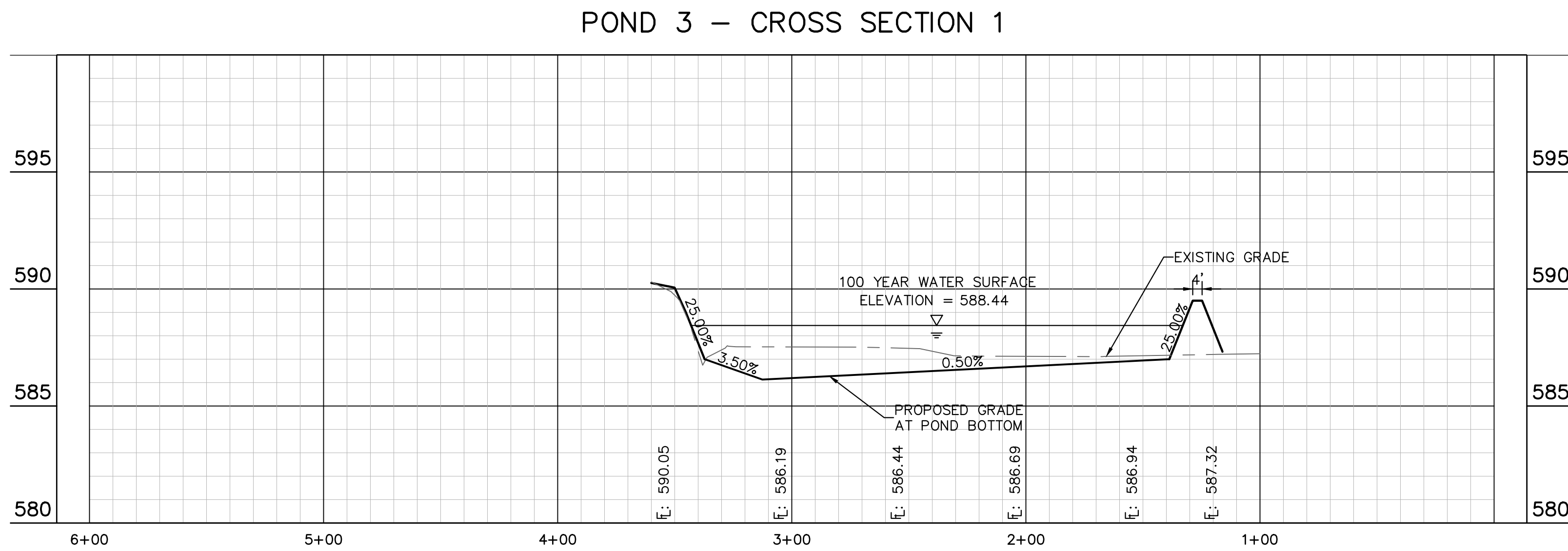
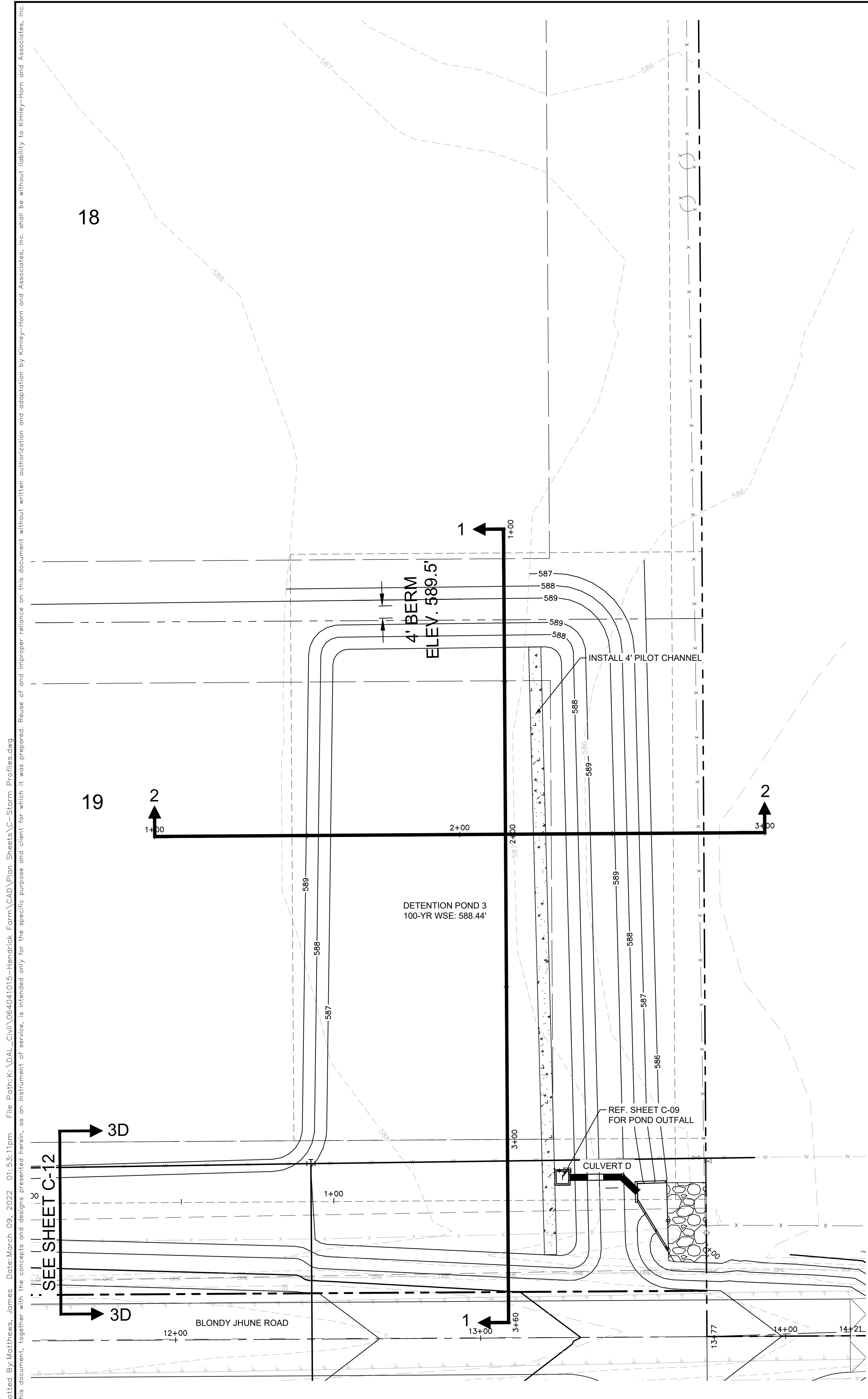
KHA PROJECT	064041015
DATE	JANUARY 2022
SCALE	AS SHOWN
DESIGNED BY:	CRA
DRAWN BY:	CDH
CHECKED BY:	SES

**DETENTION POND PLAN - POND 2**

**HENDRICK FARM**  
 CITY OF LUCAS  
 COLLIN COUNTY, TEXAS

SHEET NUMBER  
**C-27**





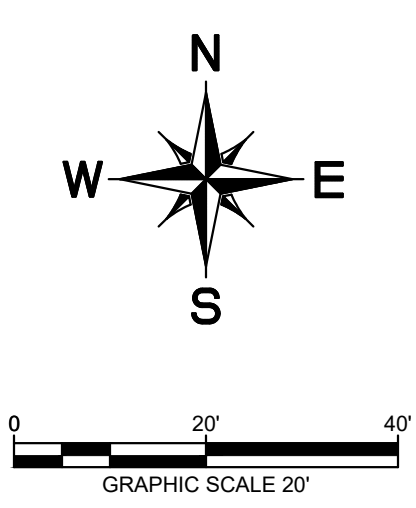
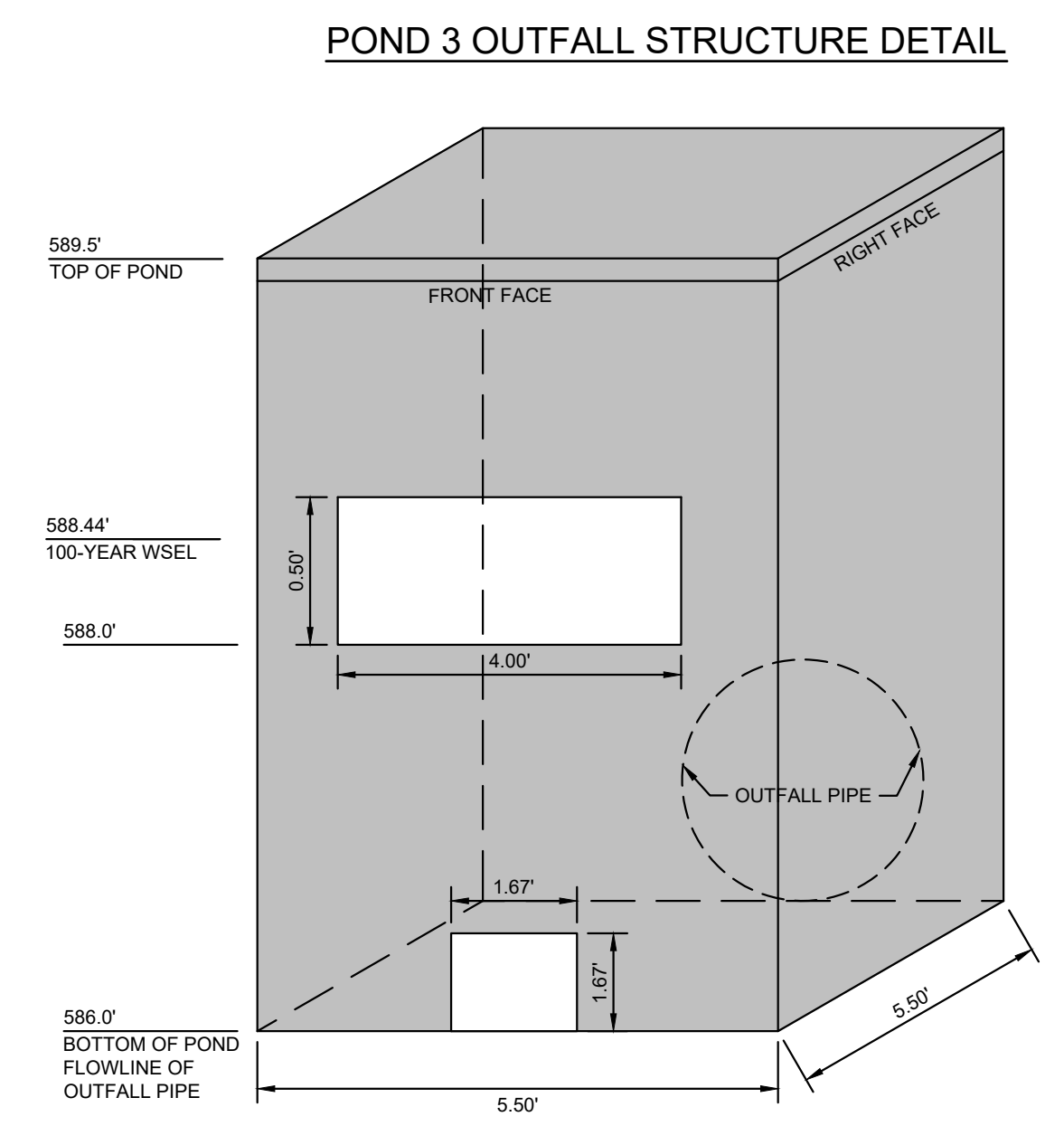
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**Detention Pond 3 - Summary Table**

Elevation	Area (ac)	Volume (ac-ft)	Volume (ft <sup>3</sup> )
586.0	0.00	0.00	0
587.0	0.40	0.20	8,619
588.0	0.51	0.65	28,433
589.0	0.63	1.23	53,393

**Detention Pond 3 - Water Surface Elevation Summary**

Storm Event	Elevation	Volume
2-yr (MRM Calcs) =	587.55	0.45
10-yr (MRM Calcs) =	587.95	0.63
25-yr (MRM Calcs) =	588.14	0.73
100-yr (MRM Calcs) =	588.44	0.91



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DATE

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KHA PROJECT: 064041015  
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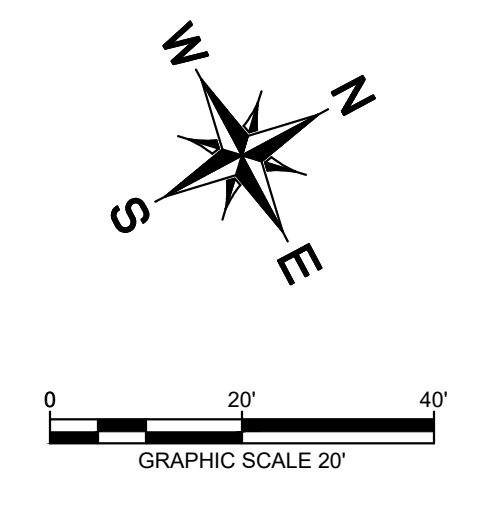
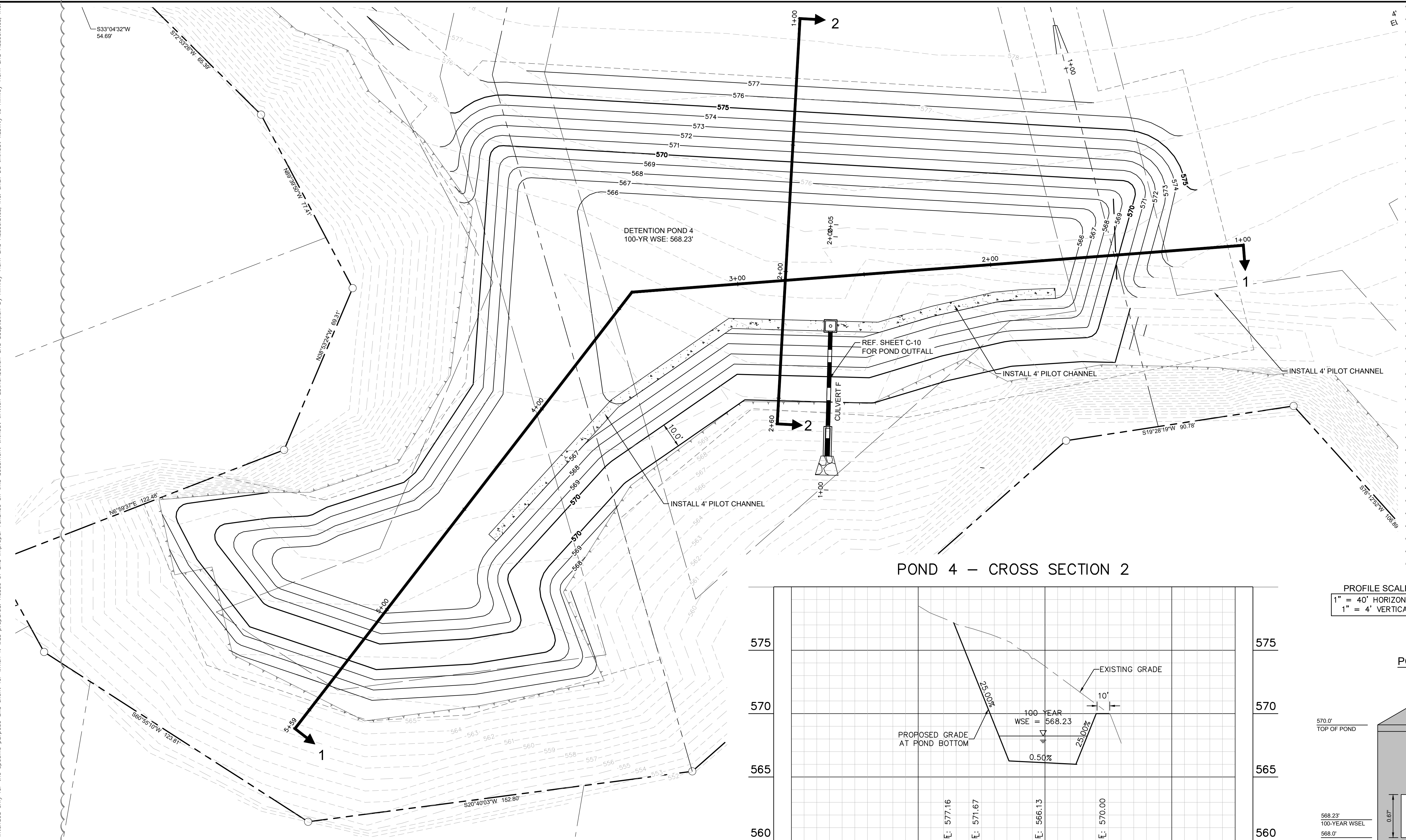
**DETENTION POND PLAN - POND 3**

**HENDRICK FARM**  
 CITY OF LUCAS  
 COLLIN COUNTY, TEXAS

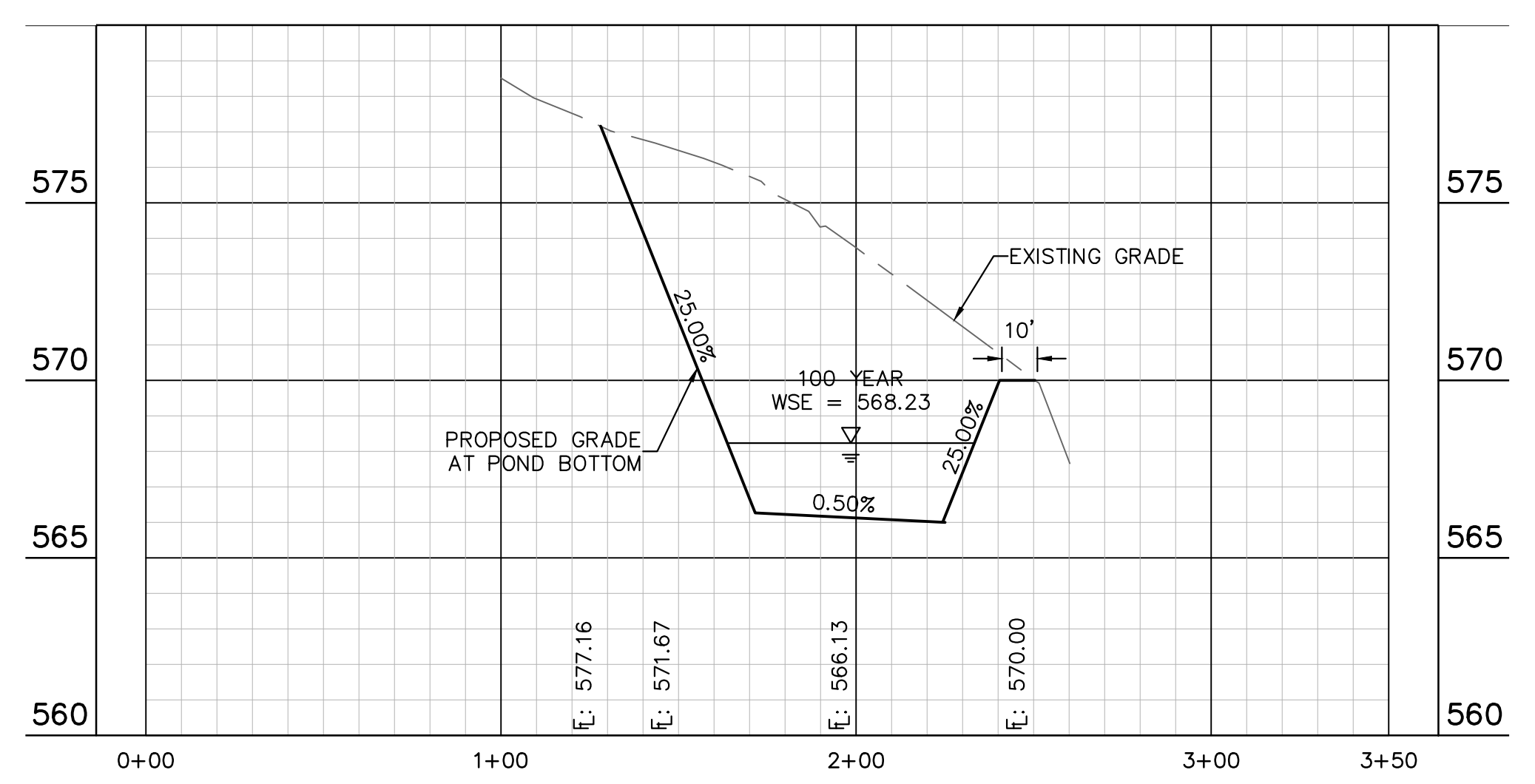
SHEET NUMBER
C-28



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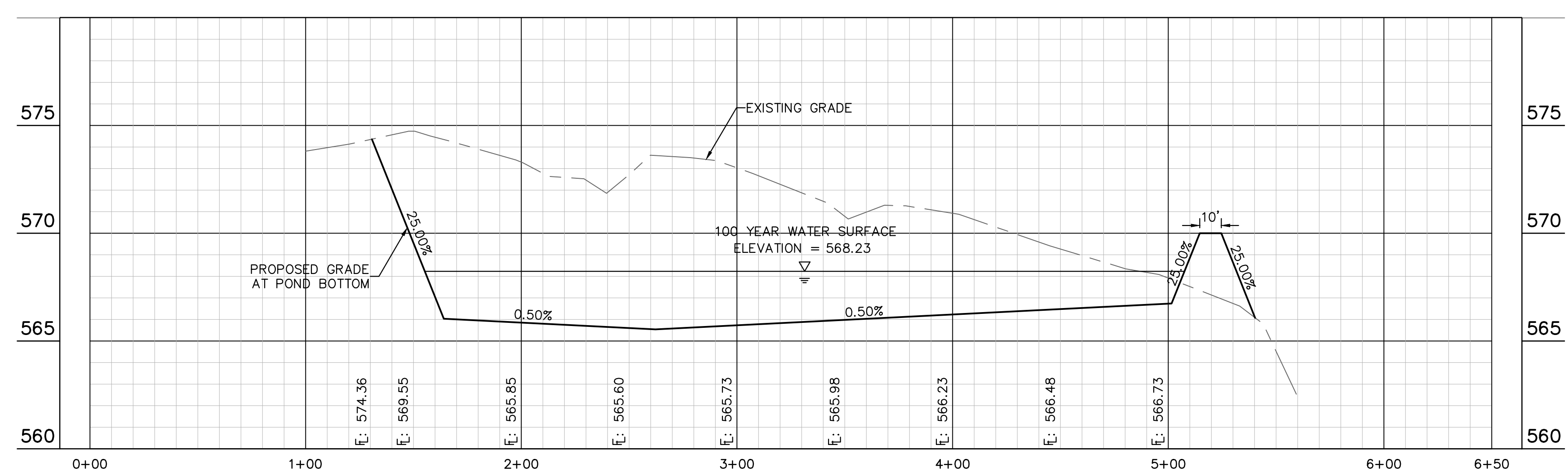


POND 4 - CROSS SECTION 2

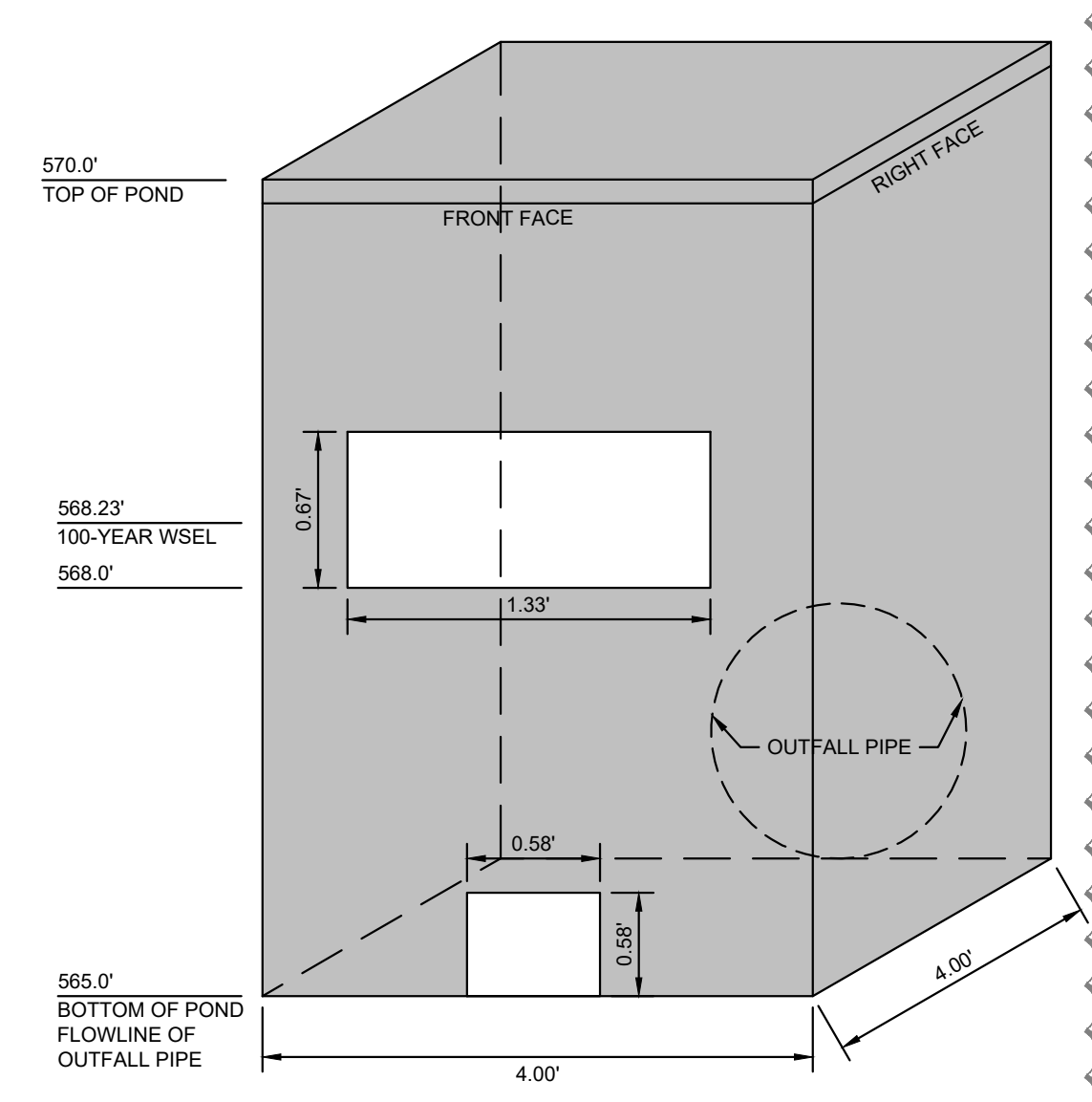


PROFILE SCALE  
 1" = 40' HORIZONTAL  
 1" = 4' VERTICAL

POND 4 - CROSS SECTION 1



POND 4 OUTFALL STRUCTURE DETAIL



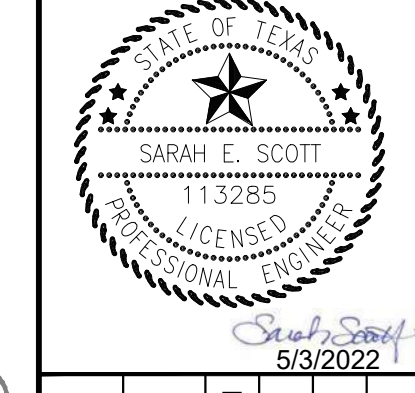
Detention Pond 4 - Summary Table			
Elevation	Area (ac)	Volume (ac-ft)	Volume (ft³)
565.0	0.00	0.00	0.00
566.0	0.23	0.11	4,960
567.0	0.43	0.44	19,361
568.0	0.51	0.92	40,002
569.0	0.60	1.47	64,243
570.0	0.69	2.12	92,233

Detention Pond 4 - Water Surface Elevation Summary		
Storm Event	Elevation	Volume
2-yr (MRM Calcs)	566.87	0.40
10-yr (MRM Calcs)	567.43	0.65
25-yr (MRM Calcs)	567.78	0.81
100-yr (MRM Calcs)	568.23	1.04

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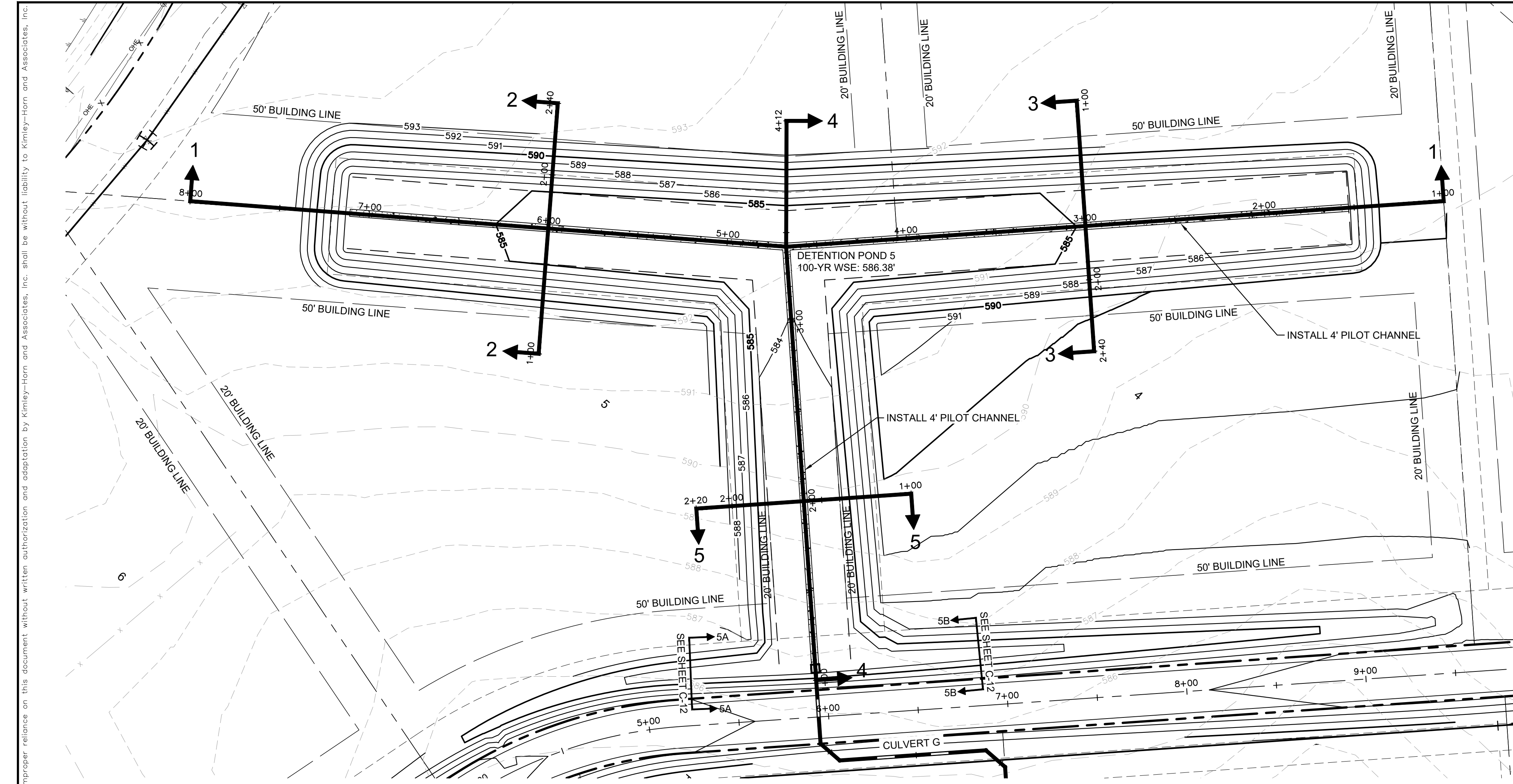
KHA PROJECT	064041015
DATE	JANUARY 2022
SCALE	AS SHOWN
DESIGNED BY:	CRA
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DETENTION POND PLAN -  
 POND 4

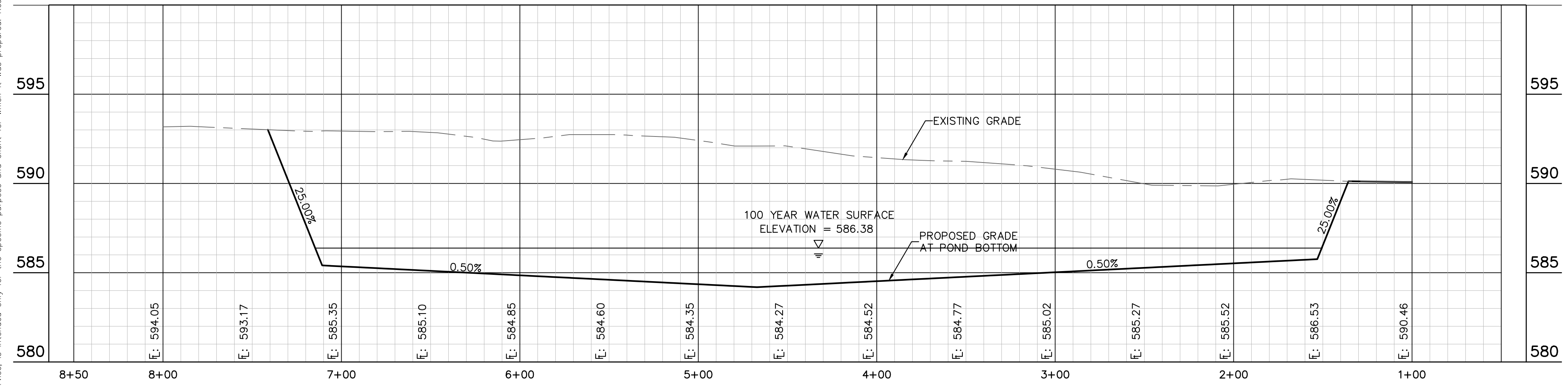
HENDRICK FARM  
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 COLLIN COUNTY, TEXAS

SHEET NUMBER  
**C-29**

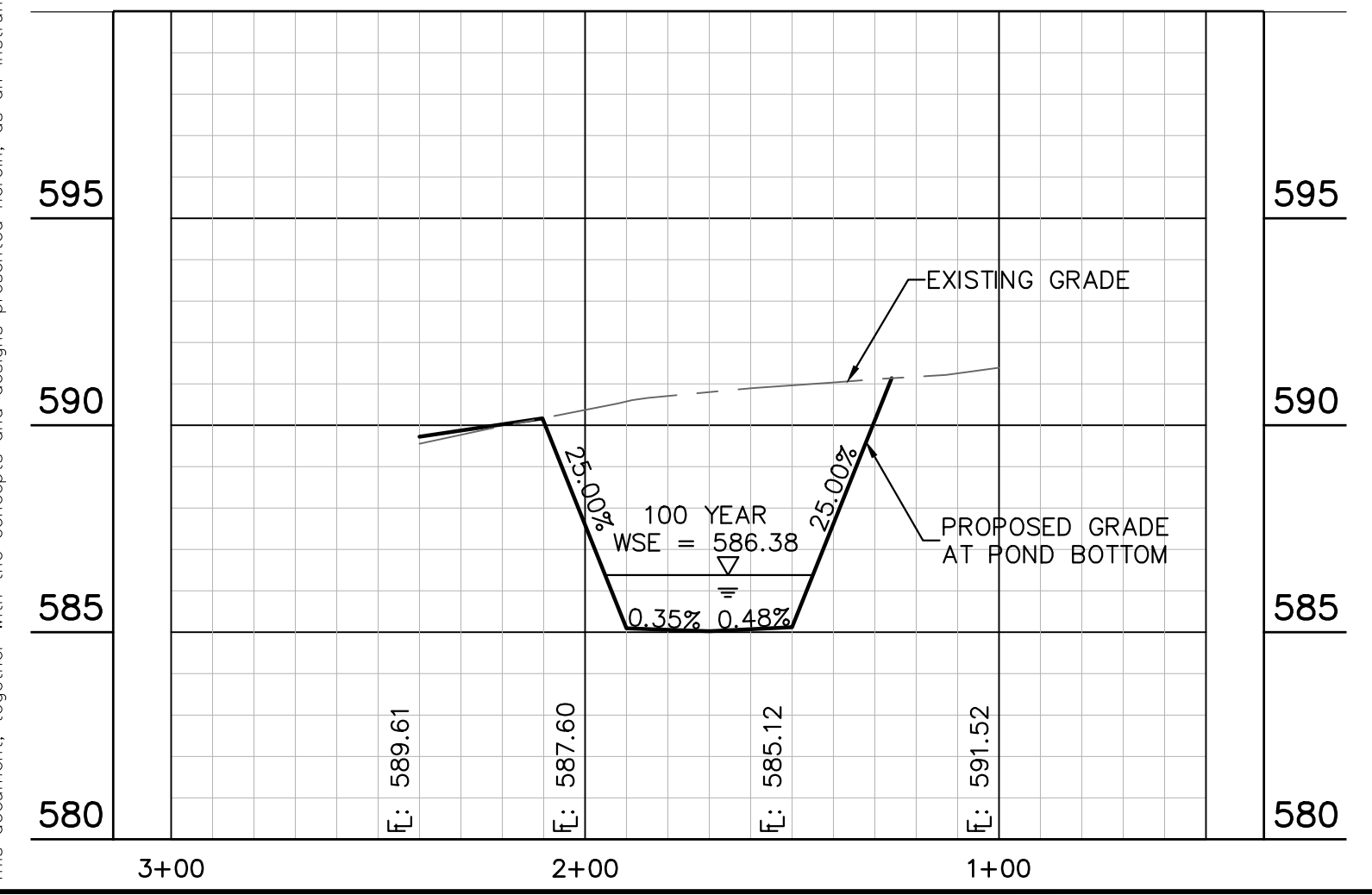




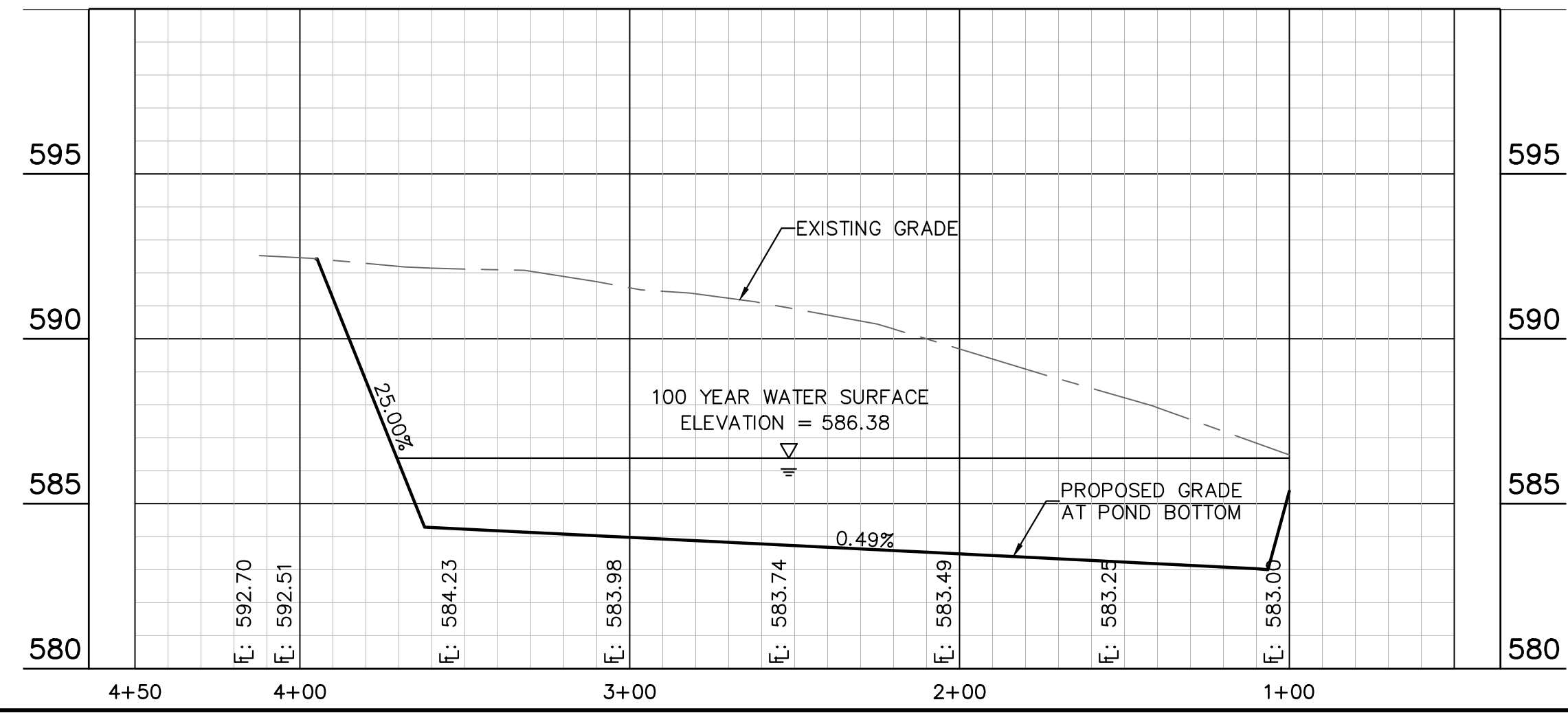
POND 5 – CROSS SECTION 1



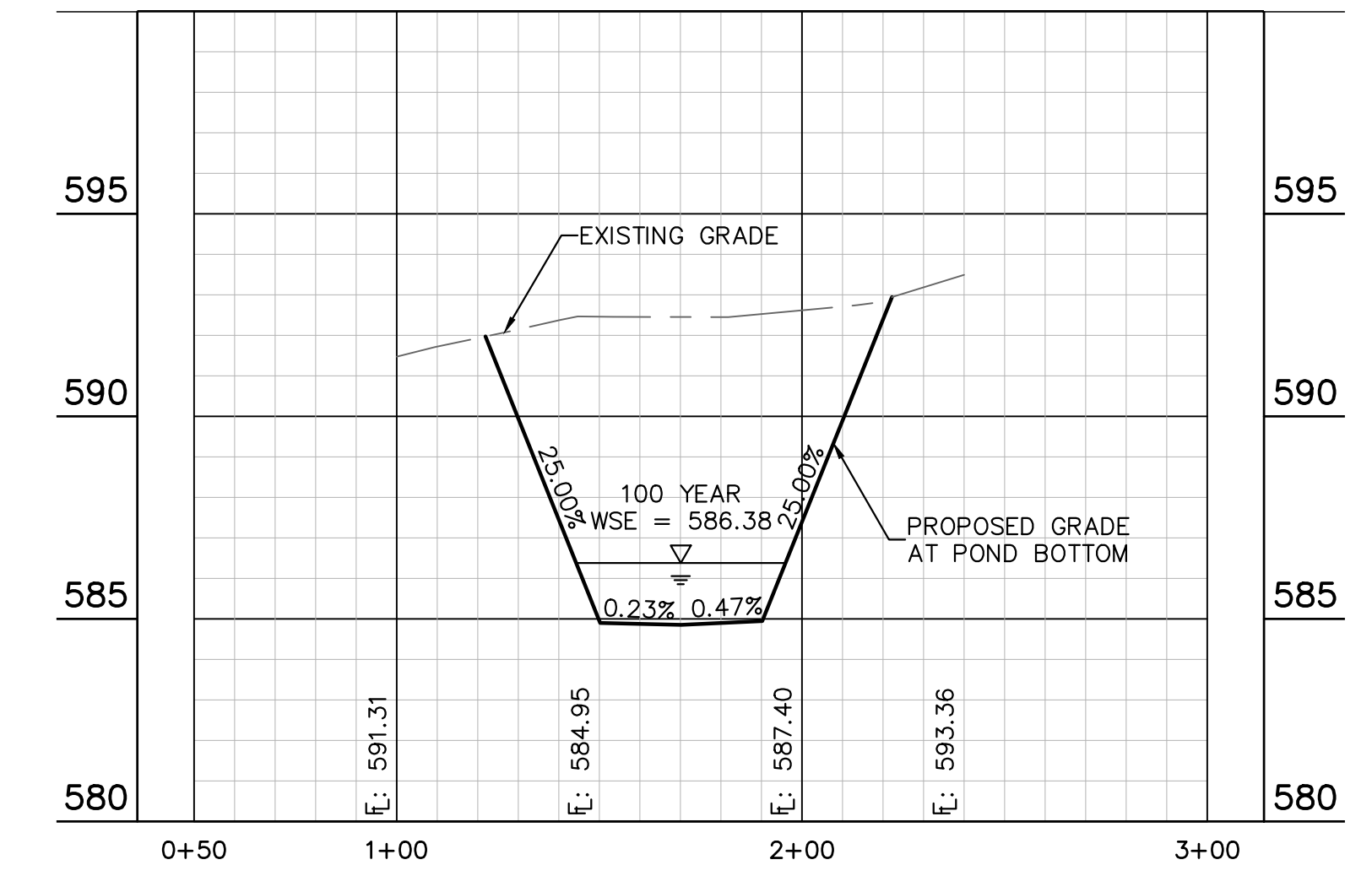
POND 5 – CROSS SECTION 3



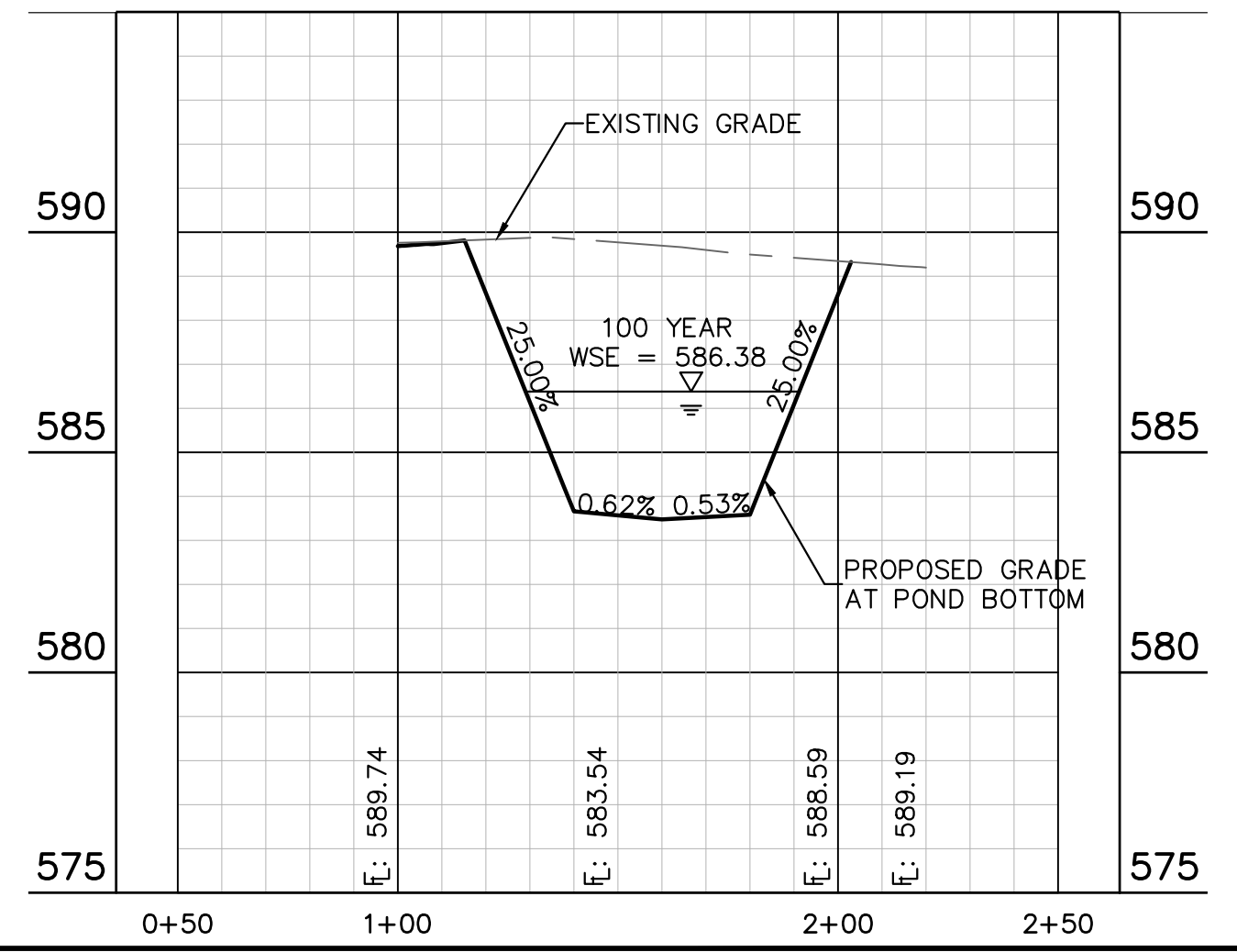
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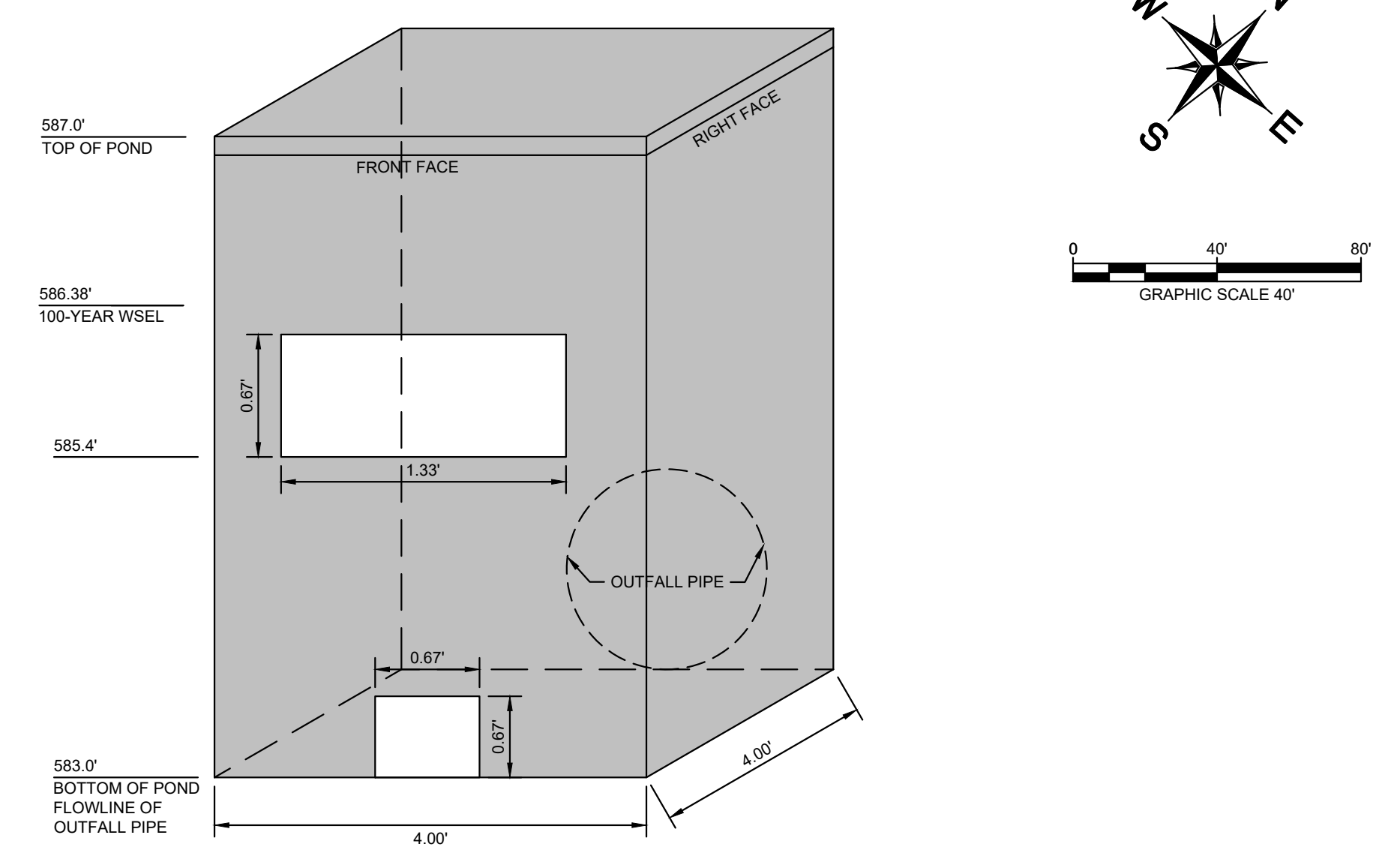
POND 5 – CROSS SECTION 2



POND 5 – CROSS SECTION 5



POND 5 OUTFALL STRUCTURE DETAIL



Detention Pond 5 - Summary Table			
Elevation	Area (ac)	Volume (ac-ft)	Volume (ft <sup>3</sup> )
583.0	0.00	0.00	0
584.0	0.22	0.11	4,590
585.0	0.69	0.56	24,241
586.0	1.18	1.49	64,921
587.0	1.49	2.83	123,093
588.0	2.59	4.86	211,915

Detention Pond 5 - Water Surface Elevation Summary		
Storm Event	Elevation	Volume
5-yr (MRM Calcs)	585.39	0.92
10-yr (MRM Calcs)	585.84	1.34
25-yr (MRM Calcs)	586.06	1.57
100-yr (MRM Calcs)	586.38	1.99

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PROFILE SCALE  
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JANUARY 2022

SCALE  
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DETENTION POND PLAN -  
POND 5

HENDRICK FARM  
CITY OF LUCAS  
COLLIN COUNTY, TEXAS

SHEET NUMBER  
**C-30**