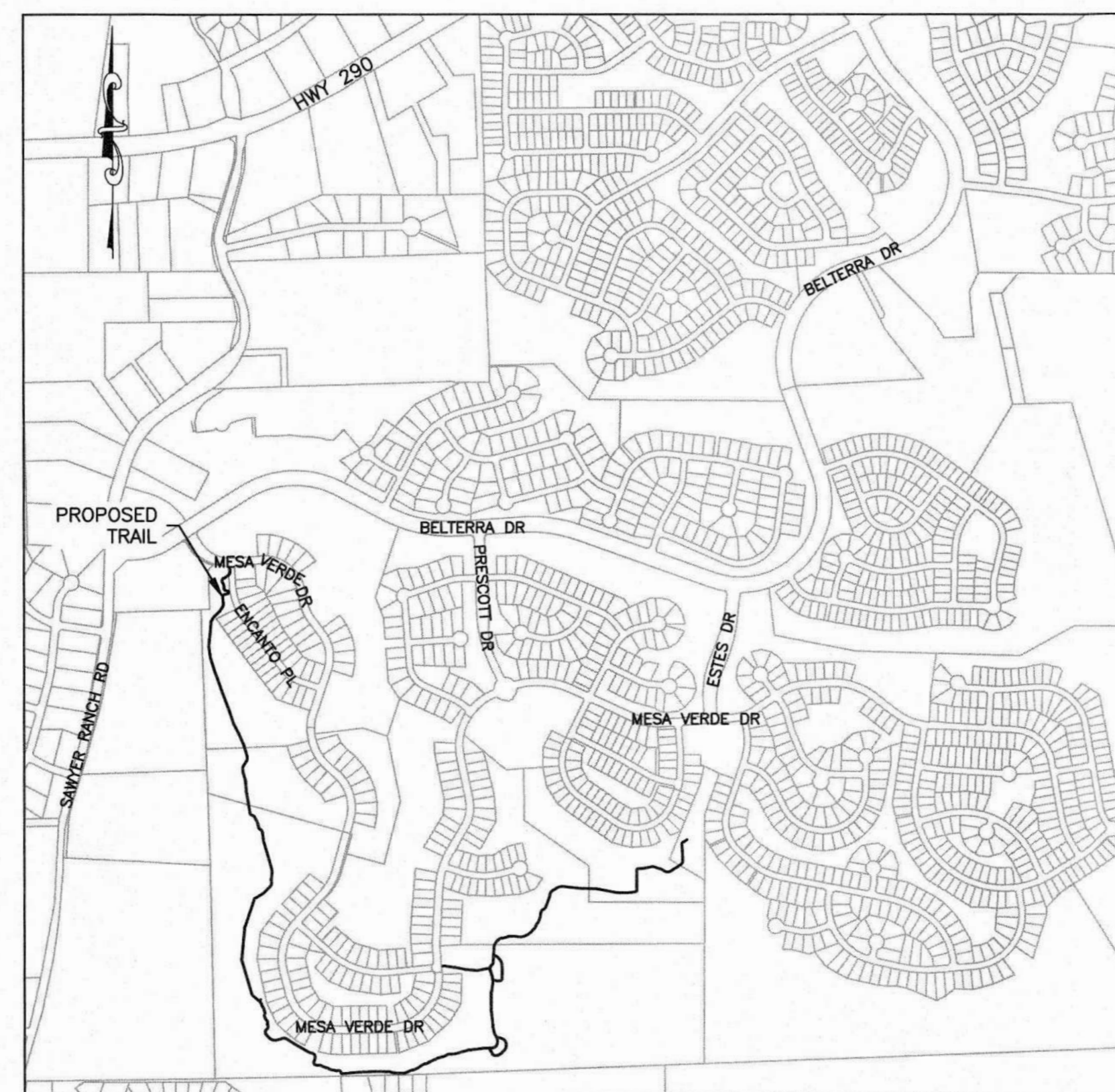


# CONSTRUCTION PLANS FOR HCWCID NO. 2 BELTERRA TRAIL EXTENSION

LEGAL DESCRIPTION: BELTERRA SECTION 15 LOT 31 BLOCK C  
 BELTERRA SECTION 21-1 LOT 36 BLOCK B  
 BELTERRA SECTION 21-2 LOT 37 BLOCK A  
 BELTERRA SECTION 20-1 LOT 16 BLOCK C  
 BELTERRA SECTION 20-2 LOT 7 BLOCK B  
 A0175 JAMES FLOYD SURVEY, ACRES 3.15 (R138250)

OWNER / DEVELOPER: HAYS COUNTY WCID No. 2  
 C/O WINSTEAD PC  
 401 CONGRESS AVENUE, SUITE 2100  
 AUSTIN, TEXAS 78701

ENGINEER: BURGESS & NIPLÉ, INC.  
 235 LEDGE STONE DR.  
 AUSTIN, TEXAS 78737  
 512.432.1000



SITE MAP  
 SCALE 1" = 1000'

SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
1	COVER
2	GENERAL NOTES
3	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
4	WATER QUALITY BMPs AND CALCULATIONS 1 OF 4
5	WATER QUALITY BMPs AND CALCULATIONS 2 OF 4
6	WATER QUALITY BMPs AND CALCULATIONS 3 OF 4
7	WATER QUALITY BMPs AND CALCULATIONS 4 OF 4
8	OVERALL SITE PLAN & INDEX SHEET
9	MAIN TRAIL STA. 1+00 TO 8+00
10	MAIN TRAIL STA. 8+00 TO 22+50
11	MAIN TRAIL STA. 22+50 TO 37+00
12	MAIN TRAIL STA. 37+00 TO 52+50
13	MAIN TRAIL STA. 52+50 TO 62+50 & TRAIL 'B' PLAN
14	MAIN TRAIL STA. 62+50 TO 69+50 & TRAIL 'C' PLAN
15	MAIN TRAIL STA. 69+50 TO 77+00 & TRAIL 'D' PLAN
16	MAIN TRAIL STA. 77+00 TO END
17	CULVERT CROSSING
18	TRAIL DETAILS
19	EROSION & SEDIMENTATION CONTROL DETAILS

WATERSHED STATUS:

1. THIS PROJECT IS WITHIN THE BEAR CREEK WATER SHED.
2. THIS PROJECT IS LOCATED WITHIN THE EDWARDS AQUIFER CONTRIBUTING ZONE.

FLOOD PLAIN NOTE:

NO PORTION OF THE PROJECT IS LOCATED WITHIN A ZONE A FLOOD HAZARD AREA AS DELINEATED ON THE FLOOD INSURANCE RATE MAP NO. 48209C0140F AND 48209C1028F, EFFECTIVE DATE SEPTEMBER 2, 2005, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).

ZONING:

THIS DEVELOPMENT IS SUBJECT TO THE FOSTER RANCH DEVELOPMENT AGREEMENT DATED MAY 1, 2001 BETWEEN THE CITY OF DRIPPING SPRINGS, TEXAS AND MAK FOSTER RANCH, L.P. RECORDED IN VOLUME 2509, PG 813, PUBLIC RECORDS OF HAYS COUNTY, TEXAS.

NOTE:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS, THE CITY MUST RELY UPON THE ADEQUACY OF WORK OF THE DESIGN ENGINEER.

CITY OF DRIPPING SPRINGS DEVELOPMENT PERMIT # \_\_\_\_\_

REVIEWED BY:

\_\_\_\_\_  
 CITY OF DRIPPING SPRINGS ADMINISTRATOR      DATE

\_\_\_\_\_  
 CITY ENGINEER      DATE

\_\_\_\_\_  
 EMERGENCY SERVICES DISTRICT #6      DATE

APPROVED BY:

*Lauren Barzilla*      (1-22-2021)  
 ENGINEER      DATE

\_\_\_\_\_  
 HAYS COUNTY      DATE

\_\_\_\_\_  
 HAYS COUNTY WCID NO. 2      DATE



235 LEDGE STONE DR.  
 AUSTIN, TX 78737  
**B&N**  
 burgessniplé.com

HCWCID NO. 2  
 BELTERRA TRAIL EXTENSION  
 COVER

NO.	DESCRIPTION	DATE

JOB NO: 1987-001  
 DATE: 11/19/2021  
 DESIGNED BY: JB, CC  
 DRAWN BY: JB, CC  
 CHECKED BY: LBB  
 APPROVED BY: LBB



**CONSTRUCTION SEQUENCING:**

1. INSTALL TEMPORARY EROSION CONTROLS PRIOR TO ANY SITE CLEARING AND GRUBBING.
2. CONSTRUCT TRAIL AND SIDEWALK PER STANDARD SPECIFICATIONS
3. COMPLETE PERMANENT EROSION CONTROL AND RESTORATION OF SITE VEGETATION.
4. REMOVE AND DISPOSE OF TEMPORARY EROSION CONTROLS.
5. COMPLETE ANY NECESSARY FINAL DRESS UP OF AREAS DISTURBED

**GENERAL ENGINEERING NOTES:**

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF HAYS COUNTY WCID NO. 2, THE CITY OF DRIPPING SPRINGS, AND HAYS COUNTY, CITY OF AUSTIN STANDARD SPECIFICATIONS SHALL GOVERN CONSTRUCTION WHERE NO OTHER REQUIREMENTS EXIST.
2. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR OR HIS/HER AUTHORIZED REPRESENTATIVE SHALL CONVENE A PRE-CONSTRUCTION CONFERENCE BETWEEN THE CITY OF DRIPPING SPRINGS, THE CONSULTING ENGINEER, OWNER, COUNTY INSPECTOR, HAYS COUNTY WCID NO. 2, AND ANY OTHER AFFECTED PARTIES, INCLUDING BUT NOT LIMITED TO, THE TCEQ. NOTIFY ALL SUCH PARTIES AT LEAST 48 HOURS PRIOR TO THE TIME OF THE CONFERENCE AND 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.
3. THE CONTRACTOR SHALL GIVE THE CITY, COUNTY AND THE ENGINEER 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION.
4. ANY EXISTING PAVEMENT, CURBS AND/OR SIDEWALKS DAMAGED OR REMOVED WILL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE BEFORE ACCEPTANCE OF THE SUBDIVISION.
5. THE LOCATION OF ANY WATER AND/OR WASTEWATER LINES OR OTHER UTILITIES TO BE CROSSED OR CONNECTED SHALL BE VERIFIED BY THE CONTRACTOR AT THE TIME OF COMMENCEMENT OF CONSTRUCTION.
6. MANHOLE FRAMES, COVERS, AND WATER VALVES SHALL BE SET TO FINISHED PAVEMENT GRADE BY THE UTILITY CONTRACTOR. ALL UTILITY ADJUSTMENTS SHALL BE COMPLETED PRIOR TO FINAL PAVING CONSTRUCTION. COMPENSATION FOR UTILITY ADJUSTMENTS SHALL BE PAID FOR IN THE UNIT BID PRICE FOR EACH APPURTENANCE. NO ADDITIONAL PAYMENT WILL BE MADE FOR UTILITY ADJUSTMENTS.
7. CONTRACTOR SHALL VERIFY EXACT DEPTH AND LOCATION OF ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, DRIVEWAYS, PAVEMENT, CURB & GUTTER, SIDEWALKS, ETC. SHALL BE REPAIRED BY THE CONTRACTOR, OR THE UTILITY, AT UTILITY'S OPTION, AND SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
8. ALL WATER MAINS SHALL HAVE A MINIMUM 42 INCHES OF COVER FROM FINISHED/NATURAL GRADE OR 36 INCHES BELOW ACTUAL SUBGRADE UNLESS OTHERWISE DENOTED ON THE PLANS.
9. CONTACT SHALL BE MADE TO BURGESS & NIPLE, INC. 48 HOURS PRIOR TO CONNECTION TO EXISTING WATER, WASTEWATER, AND/OR TREATED EFFLUENT LINES.
10. WATER AND WASTEWATER ALIGNMENTS SHOWN ON THE PLANS SHALL BE ACHIEVED BY DEFLECTION WITHIN THE MANUFACTURER'S SPECIFICATIONS, EXCEPT WHERE SPECIFIC FITTINGS ARE CALLED FOR ON THE PLANS. IF FITTINGS ARE REQUIRED WHERE NOT SHOWN ON THE PLANS, THERE WILL BE NO ADDITIONAL PAY.
11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING UTILITIES, INCLUDING BUT NOT LIMITED TO, GAS LINES, WATERLINES, VALVE BOXES, FIRE HYDRANTS, STRUCTURES, AND OTHER APPURTENANCES THAT LIE WITHIN THE RIGHT-OF-WAY OR EASEMENTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR ALL UTILITIES, DRIVEWAYS, PAVEMENT, CURB & GUTTER, SIDEWALKS, FENCES, AND ANY OTHER ITEMS DAMAGED DURING CONSTRUCTION REGARDLESS OF WHETHER ALL ITEMS ARE SHOWN ON THE PLANS AT HIS SOLE EXPENSE. THE LOCATION SHOWN OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES IS APPROXIMATE. IN ADDITION TO NORMAL PRECAUTIONS WHEN EXCAVATING, TAKE EXTRA CAUTION WHEN EXCAVATING WITHIN 25 FT. OF ANY UTILITIES SHOWN ON THE PLANS.
12. WHENEVER EXISTING UTILITIES, NOT INDICATED ON THE PLANS, PRESENT OBSTRUCTIONS TO GRADE AND ALIGNMENT OF PIPE, IMMEDIATELY NOTIFY BURGESS & NIPLE, INC., WHO WILL DETERMINE WHENEVER EXISTING IMPROVEMENTS ARE TO BE RELOCATED, OR GRADE AND ALIGNMENT OF PIPE CHANGED. WHERE NECESSARY TO MOVE SERVICES, POLES, GUY WIRES, PIPELINES, ETC., AS DETERMINED BY THE ENGINEERS, THE CONTRACTOR WILL MAKE ARRANGEMENTS WITH THE OWNER OF THE UTILITY TO BE MOVED AND HAVE IT MOVED. THE COST OF ANY UTILITY RELOCATION WILL BE AT THE CONTRACTOR'S SOLE EXPENSE. OWNER WILL NOT BE LIABLE FOR RELOCATION COSTS OR DAMAGES ON ACCOUNT OF DELAYS DUE TO CHANGES MADE BY OWNERS OF OTHER PRIVATELY OR PUBLICLY OWNED UTILITIES WHICH HINDER PROGRESS OF THE WORK.
13. CONTRACTOR TO INCLUDE ADDITIONAL FLUSHING VALVES AND TEST CONNECTIONS AS NECESSARY TO PERFORM TEST AND STERILIZATION OPERATION. THERE WILL BE NO ADDITIONAL PAY FOR THESE VALVES AND CONNECTIONS USED FOR TESTING AND STERILIZATION PURPOSES, EXCEPT FOR THOSE SPECIFICALLY SHOWN ON THE PLANS. ALL FLUSHING ACTIVITY SHALL BE METERED AND RECORDED.
14. ALL CONSTRUCTION ACTIVITIES, INCLUDING ACCESS, EGRESS, TRAVEL, STOCKPILING, ETC. ARE TO BE CONFINED TO AREAS IDENTIFIED BY THE OWNER.
15. ALL EXCESS SPOIL MATERIAL SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK EFFORT, INCLUDE COSTS IN RELATED BID ITEMS.
16. REFER TO THE PLANS FOR DETAILS ON "PIPE BEDDING AND BACKFILL", "CONCRETE ENCASEMENT", "CONCRETE THRUST BLOCKING", AND "HORIZONTAL AND VERTICAL BENDS", "FIRE HYDRANT ASSEMBLY", AND OTHER DETAILS.
17. TREE DAMAGES AND CLEARING OUTSIDE THE RIGHT-OF-WAY OR EASEMENTS ARE EXPRESSLY PROHIBITED.
18. PIPE, FITTINGS AND JOINTS: WATER -PVC DR 14, C-900, WITH BOLTLESS GASKETED JOINTS AND C.I., M.J. OR FLANGE FITTINGS UNLESS OTHERWISE SHOWN ON THE PLANS, GRAVITY SEWER -PVC SDR-35 WITH BOLTLESS GASKETED JOINTS, UNLESS OTHERWISE SHOWN ON THE PLANS. FIRE HYDRANT LEAD - DUCTILE IRON, CLASS 50, MECHANICAL JOINTS AND C.I. (D.I. ENDS) FITTINGS, UNLESS OTHERWISE SHOWN ON THE PLANS.
19. ALL GATE VALVES SHALL HAVE RESILIENT VALVE SEATS.
20. THE EXACT LOCATION OF GATE VALVES SHALL BE AT P.C. OF THE CURB AT INTERSECTIONS OR 4 FT. FROM FIRE HYDRANT IF AT THE SAME LOCATION. THE GATE VALVES SHALL NEVER BE LOCATED WITHIN THE CONCRETE CURB AND GUTTER.
21. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH MINIMUM OF 8 MIL POLYETHYLENE WRAP.
22. AT ALL LOCATIONS WHERE A WATERLINE CROSSES A WASTEWATER LINE, THE CONSTRUCTION SHALL STRICTLY COMPLY WITH ALL APPLICABLE RULES AND REGULATIONS OF THE TCEQ.
23. THE CONTRACTOR SHALL FURNISH THE ENGINEER ONE SET OF "AS-BUILT" PLANS REFLECTING ALL CHANGES MADE IN THE FIELD.
24. THE ENGINEER SHALL BE GIVEN 48 HOURS NOTICE PRIOR TO ANY TESTING PHASE (DENSITY, PRESSURE, LEAKAGE, ETC.).
25. THE CONTRACTOR SHALL PROVIDE ALL TRAFFIC CONTROL NECESSARY TO PERFORM THE CONSTRUCTION IN A SAFE MANNER TO PROTECT THE PUBLIC SAFETY. NO SEPARATE PAY.
26. THE COST OF ALL FITTINGS SHALL BE INCLUDED IN THE PER FOOT UNIT COST OF PIPE.
27. THE CONTRACTOR SHALL PROVIDE PLUGS AT ALL PIPE STUB-OUTS. NO SEPARATE PAY.
28. THE CONTRACTOR SHALL GIVE NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS, OR PERSONS IN CHARGE OF UTILITIES AFFECTED BY HIS OPERATIONS PRIOR TO COMMENCING WORK. THE CONTRACTOR IS RESPONSIBLE FOR ASSURING THAT ALL PERMITS NECESSARY TO LEGALLY PERFORM THE WORK HAVE BEEN OBTAINED PRIOR TO COMMENCING CONSTRUCTION. REQUIRED PERMITS THAT CAN BE ISSUED TO THE CONTRACTOR ONLY WILL BE OBTAINED AT THE CONTRACTOR'S EXPENSE.
29. IF BLASTING IS PLANNED BY THE CONTRACTOR, A BLASTING PERMIT MUST BE SECURED PRIOR TO COMMENCEMENT OF ANY BLASTING.
30. THE CITY OF AUSTIN SPECIFICATION ITEM 509 WILL BE REQUIRED AS A MINIMUM TRENCH SAFETY MEASURE. CONTRACT DOCUMENTS REQUIRE A TRENCH SAFETY PLAN AND INCLUDE A PAY ITEM FOR TRENCH SAFETY MEASURES, IN COMPLIANCE WITH TEXAS HOUSE BILL 1569.
31. ALL SIGNAGE AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH HAYS COUNTY REQUIREMENTS AND TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
32. PRIOR TO FINAL ACCEPTANCE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH HAYS COUNTY STANDARD SPECIFICATIONS.
33. LOT PINS REMOVED, COVERED, OR MOVED DURING CONSTRUCTION SHALL BE RELOCATED AT THE CONTRACTOR'S SOLE EXPENSE BY A REGISTERED PROFESSIONAL LAND SURVEYOR.
34. THE CITY OF AUSTIN OR ANY OTHER AGENCY LOGO SHALL NOT APPEAR ON ANY MANHOLE LIDS, VALVE BOX COVERS OR ANY OTHER RELATED APPURTENANCE. ALL ITEMS MENTIONED SHALL BE APPROVED AS A SUBMITTAL.
35. NO SAND BEDDING OR BACKFILL WILL BE ALLOWED FOR WATER, WASTEWATER, AND STORM SEWER LINES.
36. **BENCH MARKS:**

**TBM 2:**

MAG NAIL WITH WASHER STAMPED "BGE TRAV" SET IN ASPHALT AT THE CENTER OF THE SOUTH END OF A PARKING LOT FOR A NEIGHBORHOOD PARK LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF MESA VERDE DRIVE AND MERION DRIVE.

ELEV: 1128.66'  
 N: 13979371.12'  
 E: 2289078.78' (NAVD 88, GEOID 18)

**TBM 3:**

MAG NAIL WITH WASHER STAMPED "BGE TRAV" SET IN ASPHALT AT THE CENTER OF THE CUL-DE-SAC AT THE EAST END OF MEDINA HILLS COURT.

ELEV: 1111.59'  
 N: 13978302.50'  
 E: 2287414.67' (NAVD 88, GEOID 18)

**HAYS COUNTY CONSTRUCTION NOTES:**

1. SEVENTY-TWO (72) HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION, THE DEVELOPER SHALL ARRANGE A PRE-CONSTRUCTION CONFERENCE WITH ALL PERTINENT PARTIES.
2. ALL ROADWAY AND DRAINAGE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HAYS COUNTY SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS FROM HAYS COUNTY ROAD AND BRIDGE DEPARTMENT PRIOR TO BEGINNING ANY ON-SITE CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING THE NECESSARY INSPECTIONS FROM THE HAYS COUNTY ROAD AND BRIDGE DEPARTMENT. ALL REPAIRS TO IMPROVEMENTS CAUSED BY CONTRACTOR'S FAILURE TO INSTALL IMPROVEMENTS IN ACCORDANCE WITH HAYS COUNTY SPECIFICATIONS AND THESE CONSTRUCTION PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. HAYS COUNTY ROAD AND BRIDGE DEPARTMENT'S ACCEPTANCE OF THE IMPROVEMENTS ARE CONTINGENT ON REPAIRS BEING MADE TO HAYS COUNTY'S SATISFACTION. DELAYS CAUSED BY REPAIRS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
3. CONTRACTOR SHALL ENSURE THE VEHICLES LEAVING THE CONSTRUCTION SITE ONTO PUBLICLY MAINTAINED ROADWAYS ARE CLEAR OF MUD AND DEBRIS.
4. NO EXPLOSIVES SHALL BE USED FOR THIS PROJECT WITHOUT TCEQ APPROVAL.
5. ALL HOLES, TRENCHES AND OTHER HAZARDOUS AREAS SHALL BE ADEQUATELY PROTECTED BY BARRICADES, FENCING, LIGHTS AND/OR OTHER PROTECTIVE DEVICES AT ALL TIMES.
6. CONTRACTOR SHALL COMPLY WITH CONSTRUCTION SEQUENCING AS SPECIFIED UNDER CONSTRUCTION SEQUENCING THIS SHEET.
7. PERMIT IS REQUIRED FOR CONSTRUCTION IN "RIGHT OF WAY" : HAYS COUNTY ORDINANCE 7.10. NO DRIVEWAY, UTILITY CONSTRUCTION, MAILBOXES, LANDSCAPING OR ANY OTHER ENCROACHMENT INTO RIGHT-OF-WAY OR EASEMENT SHALL BE ALLOWED WITHOUT FIRST OBTAINING A PERMIT FROM THE HAYS COUNTY ROAD AND BRIDGE DEPARTMENT.
8. PRIOR TO THE INSTALLATION OF ANY ROAD BUILDING MATERIAL THE SUBGRADE SHALL BE INSPECTED BY HAYS COUNTY. PRIOR TO PAVING, BASE MATERIAL SHALL BE INSPECTED BY HAYS COUNTY. THE OWNER OR HIS AGENT SHALL NOTIFY THE HAYS COUNTY ROAD DIRECTOR TWENTY-FOUR (24) HOURS PRIOR TO THE TIME WHEN THE INSPECTION IS NEEDED : ORDINANCE 1.05:2.06.
9. ALL ROAD SUBGRADE AND EMBANKMENTS SHALL BE COMPLETED TO A MINIMUM DENSITY OF NINETY FIVE PERCENT (95%) ACCORDING TO AASHTO T-99, METHOD D.
10. EACH COURSE OF BASE MATERIAL SHALL BE COMPACTED TO A DENSITY OF 100 PERCENT (100%), ACCORDING TO TXDOT TEST METHOD TEX-113-E.

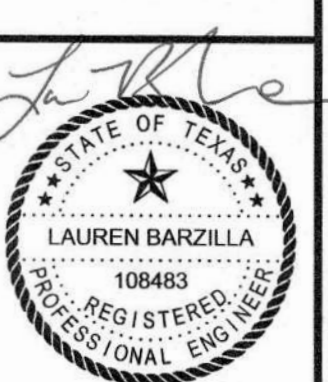
235 LEDGE STONE DR.  
 AUSTIN, TX 78737



HCWCID NO. 2  
 BELTERRA TRAIL EXTENSION  
 GENERAL NOTES

NO.	DESCRIPTION	DATE

JOB NO: 1987-001  
 DATE: 11/19/2021  
 DESIGNED BY: JB, CC  
 DRAWN BY: JB, CC  
 CHECKED BY: LBB  
 APPROVED BY: LBB



11-22-2021



GENERAL NOTES:

THE CONTRACTOR SHALL COMPLY WITH ALL OF THE REQUIREMENTS SET FORTH IN THE TEXAS COMMISSION OF ENVIRONMENTAL QUALITY (TCEQ) "TEXAS POLLUTION DISCHARGE ELIMINATION SYSTEM" (TPDES). INFORMATION ON THE TPDES CONSTRUCTION GENERAL PERMITS MAY BE OBTAINED BY CONTACTING THE TCEQ AT 512-339-2929. INFORMATION IS ALSO AVAILABLE THROUGH TCEQ WEB SITE AT "www.tnrc.state.tx.us/waterperm/wpperm/construct.html". DISCLAIMER: INFORMATION CONTAINED IN THIS PARAGRAPH IS BASED UPON THE BEST INFORMATION AVAILABLE AT THE TIME OF PLAN PREPARATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SECURE ALL NECESSARY FORMS AND DOCUMENTATION AND COMPLY WITH THE PROVISIONS OF THE TPDES.

THE CONTRACTOR WILL BE REQUIRED TO FOLLOW BEST MANAGEMENT PRACTICES AND TO USE AND MAINTAIN SEDIMENTATION AND WATER POLLUTION CONTROL DEVICES AS REQUIRED.

THE CONTRACTOR SHALL PROVIDE THE OWNER 48 HOURS NOTICE PRIOR TO DISTURBING ANY VEGETATION OR BEGINNING ANY SITE PREPARATION IN ADVANCE OF THE EARTHWORK OPERATION. THE 48 HOUR NOTICE PROVIDES THE OWNER THE REQUIRED TIME TO FILE AND POST THE "NOTICE OF INTENT" (NOI) WITH THE TCEQ.

THE CONTRACTOR SHALL NOT RECEIVE FINAL PAYMENT FOR THE PROJECT UNTIL THE UNPAVED AREAS HAVE ACHIEVED 70% VEGETATIVE COVER WITH PERMANENT GRASSES, AND THE OWNER HAS FILED THE "NOTICE OF TERMINATION" (NOT) WITH THE TCEQ.

IN AREAS THAT HAVE ACHIEVED 70% VEGETATIVE COVER (WHEN COMPARED TO THE SURROUNDING, UNDISTURBED, VEGETATIVE COVER), THE CONTRACTOR MAY REMOVE AND REUSE ANY TEMPORARY EROSION CONTROL DEVICES (THAT ARE IN REASONABLE CONDITION) ON OTHER LOCATIONS IN THE DEVELOPMENT. ADDITIONAL SEEDING MAY BE REQUIRED TO VEGETATE THE AREAS WHERE THE STRUCTURAL CONTROLS WERE REMOVED.

PRIOR TO ACCEPTANCE AND FINAL PAYMENT, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES.

ALL TEMPORARY EROSION CONTROL DEVICES SHALL BE PLACED PRIOR TO CONSTRUCTION IN ANY AREA, OR AS SOON AS PRACTICAL.

THE CONTRACTOR SHALL PROVIDE FOR ALL INTERIM DRAINAGE ON THE PROJECT. THE INTERIM DRAINAGE SHALL ENSURE THAT ALL RUNOFF IS CHANNIELED TO THE TEMPORARY CONTROL DEVICES.

THE CONTRACTOR SHALL TAKE THE STEPS NECESSARY TO ENSURE THAT ALL CONSTRUCTION TRAFFIC LEAVING THE PROJECT SHALL NOT TRACK MUD OR OTHER DEBRIS ONTO ANY ROADWAY, PUBLIC STREET OR ANY ROADWAY WITHIN THE DEVELOPMENT. SHOULD MUD OR OTHER DEBRIS BE TRACKED ONTO ANY ROADWAY, THE CONTRACTOR SHALL TAKE IMMEDIATE STEPS TO REMOVE IT TO THE SATISFACTION OF THE OWNER AND/OR ANY REGULATORY AUTHORITY.

TEMPORARY CONSTRUCTION ENTRANCES SHALL BE UTILIZED WHERE NECESSARY.

SPRINKLING OF ROADWAYS SHALL BE REQUIRED TO CONTROL DUST.

THE CONTRACTOR SHALL MODIFY, AS NECESSARY, ANY TEMPORARY EROSION CONTROL DEVICES SO THAT THEY SERVE THEIR INTENDED PURPOSE.

THE CONTRACTOR SHALL MAINTAIN ALL TEMPORARY EROSION DEVICES TO A CONDITION SIMILAR TO THAT OF WHEN IT WAS ORIGINALLY INSTALLED.

THE CONTRACTOR SHALL KEEP ALL TEMPORARY EROSION CONTROL DEVICES FREE OF SILT AND/OR ANY OTHER MATERIAL THAT MAY ACCUMULATE. REMOVAL SHALL OCCUR AS SOON AS PRACTICAL AFTER A RAINFALL. IN NO INSTANCE SHALL SILT BE PERMITTED TO ACCUMULATE TO A DEPTH ABOVE, OR IN EXCESS OF 50% OF THE DESIGN CAPACITY OF THE DEVICE.

AS REQUIRED BY THE OWNER, THE CONTRACTOR SHALL ACCOMPANY THE OWNER DURING THE INSPECTION OF THE EROSION CONTROL DEVICES TO DISCUSS MODIFICATIONS TO ENSURE THE DEVICES SERVE THEIR INTENDED PURPOSE.

THE CONTRACTOR SHALL PROTECT ALL AREAS (TREES AND MATURE VEGETATION). WHETHER WITHIN OR OUTSIDE OF THE ACTUAL LIMITS OF CONSTRUCTION. THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO A CONDITION AS GOOD AS, OR BETTER THAN, THAT PRESENT PRIOR TO THE CONSTRUCTION.

ALL CONSTRUCTION AND CONSTRUCTION EQUIPMENT SHALL REMAIN WITHIN THE LIMITS OF CONSTRUCTION UNLESS THE OWNER HAS GRANTED PRIOR AUTHORIZATION.

IN THE EVENT THE CONTRACTOR ESTABLISHES A YARD ON THE PROJECT. HE SHALL BE RESPONSIBLE FOR ESTABLISHING HIS OWN STORM WATER POLLUTION PREVENTION PLAN AND COMPLYING WITH THE REQUIREMENTS THEREOF.

THE CONTRACTOR SHALL KEEP THE DEVELOPMENT FREE FROM LITTER.

CONTACT: HAYS COUNTY WCID NO. 2 DISTRICT ENGINEER  
LAUREN BARZILLA, P.E.  
BURGESS AND NIPLE, INC.  
235 LEDGE STONE DRIVE  
AUSTIN, TX 78737  
512-432-1000  
LAUREN.BARZILLA@BURGESSNIPLE.COM

TEMPORARY AND PERMANENT EROSION CONTROL AND SEDIMENTATION CONTROL NOTES  
PERMANENT EROSION AND SEDIMENTATION CONTROL

- 1. ALL DISTURBED AREAS SHALL BE RESTORED AS SPECIFIED AND IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATIONS - SERIES 600, ENVIRONMENTAL ENHANCEMENT. A MINIMUM OF FOUR INCHES OF TOPSOIL SHALL BE PLACED IN ALL DISTURBED AREAS (EXCEPT ROCK).
- 2. THE SEEDED OR PLANTED AREA IS TO BE IRRIGATED OR SPRINKLED IN A MANNER WHICH WILL NOT ERODE THE TOPSOIL BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF SIX INCHES. THE IRRIGATION SHALL OCCUR AT TEN DAY INTERVALS FOR THE FIRST TWO MONTHS. RAINFALL OCCURRENCES OF AT LEAST 1/2 INCH SHALL POSTPONE THE WATERING OPERATIONS FOR ONE WEEK.
- 3. WHEN REQUIRED, NATIVE GRASS SEEDING SHALL COMPLY WITH SECTION 604.6 (NATIVE GRASS SEEDING) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS - SERIES 600, ENVIRONMENTAL ENHANCEMENT.

SITE DESCRIPTION

- A. THE PROJECT SHALL CONSIST OF THE CONSTRUCTION OF PARK FACILITIES, DECOMPOSED GRANITE TRAILS, CONCRETE TRAILS AND NATURE TRAILS.
- B. SEQUENCE OF MAJOR ACTIVITIES:
  - INSTALLATION OF EROSION/ SEDIMENTATION CONTROLS.
  - CLEAR TRAIL PATH AND AREA FOR PARK FACILITIES.
  - SUBGRADE EXCAVATION FOR DECOMPOSED GRANITE AND CONCRETE TRAILS AND PARK FACILITIES.
  - CONSTRUCT DECOMPOSED GRANITE AND CONCRETE TRAILS AND PARK FACILITIES. INSTALL CULVERTS FOR DRAINAGE CROSSINGS.
  - REVEGETATION OF DISTURBED AREAS.
  - REMOVAL AND PROPER DISPOSAL OF EROSION/SEDIMENTATION CONTROLS ONCE PERMANENT VEGETATION IS ESTABLISHED.
- C. ESTIMATE OF SITE AREA:
  - TOTAL SIZE: 5.38 ACRES
  - TOTAL DISTURBED AREA: 5.38 ACRES
- D. ESTIMATED SITE RUNOFF COEFFICIENTS FOR THE 100 YEAR STORM ARE BETWEEN 0.46 AND 0.57.
  - THE SOIL IS BOLAR CLAY LOAM, 1 TO 3 PERCENT SLOPES, BRACKETT - ROCK OUTCROP - COMFORT COMPLEX, 1 TO 8 PERCENT SLOPES, BRACKETT - ROCK OUTCROP - REAL COMPLEX, 8 TO 30 PERCENT SLOPES, AND SUNEV CLAY LOAM, 1 TO 3 PERCENT SLOPES.
- E. LOCATION MAP (COVER SHEET)
- F. THERE IS NO INDUSTRIAL ACTIVITY OTHER THAN CONSTRUCTION ACTIVITIES
- G. RECEIVING WATERS:
  - RUNOFF FROM THE SITE DISCHARGES TO TRIBUTARIES OF BEAR CREEK, A TRIBUTARY OF ONION CREEK, WHICH DISCHARGES TO THE COLORADO RIVER, FLOWING TO THE GULF OF MEXICO.

STRUCTURAL PRACTICES

- SILT FENCES
- HAY BALES
- ROCK BERMS
- DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
- DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
- DIVERSION DIKE AND SWALE COMBINATION
- BRUSH BERMS
- CONCRETE FLUMES
- STABILIZED (ROCK) CONSTRUCTION ENTRANCES
- SEDIMENT TRAPS
- SEDIMENT BASINS
- STONE OUTLET STRUCTURES CURB AND GUTTERS
- STORM SEWERS
- VELOCITY CONTROL DEVICES

STABILIZATION PRACTICES

- TEMPORARY VEGETATION
- PERMANENT VEGETATION
- CELLULOSE FIBER MULCHING
- VEGETATIVE BUFFER STRIPS
- PROTECTION OF TREES
- PROTECTION OF MATURE VEGETATION
- GEOTEXTILES
- SOD STABILIZATION

INSPECTIONS

QUALIFIED PERSONNEL SHALL INSPECT DISTURBED AREAS THAT HAVE NOT BEEN FINALLY STABILIZED, STORAGE AREAS, STRUCTURAL CONTROLS, AND AREAS WHERE CONSTRUCTION AND OTHER VEHICLES LEAVE THE SITE AT LEAST ONCE EVERY FOURTEEN (14) DAYS AND WITHIN TWENTY-FOUR (24) HOURS OF THE END OF A STORM EVENT OF 1/2 INCHES OR GREATER.

DISTURBED AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR POTENTIAL FOR, SEDIMENT ENTERING THE DRAINAGE SYSTEM.

AFTER THE INSPECTIONS, THE SWPPP SHALL BE MODIFIED AS NECESSARY TO INCLUDE ADDITIONAL BMP'S (BEST MANAGEMENT PRACTICES) DESIGNED TO CORRECT DEFICIENCIES IDENTIFIED.

REVISIONS (MODIFICATIONS) SHALL BE COMPLETED WITHIN SEVEN (7) CALENDAR DAYS FOLLOWING THE INSPECTION, IF POSSIBLE IMPLEMENT BEFORE NEXT STORM EVENT.

IF EXISTING BMP'S NEED TO BE MODIFIED OR ADDITIONAL BMP'S ARE REQUIRED, IMPLEMENTATIONS SHALL BE COMPLETED PRIOR TO THE NEXT ANTICIPATED STORM EVENT OR AS SOON AS PRACTICAL.

A REPORT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTIONS, AND MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE SWPPP SHALL BE MADE AND RETAINED AS PART OF THE SWPPP FOR AT LEAST THREE (3) YEARS FROM THE DATE THE "NOTICE OF TERMINATION" (NOT) IS SUBMITTED.

THE OBSERVATIONS SHOULD INCLUDE:

- SEDIMENT DISCHARGES FROM THE SITE
- LOCATION OF BMP'S THAT SHOULD BE MAINTAINED
- LOCATION OF BMP'S THAT WERE INADEQUATE
- LOCATION WHERE ADDITIONAL BMP'S SHALL BE INSTALLED

WHERE AN INSPECTION DOES NOT INDICATE THAT MODIFICATIONS TO EXISTING BMP'S ARE NECESSARY OR ADDITIONAL BMP'S ARE REQUIRED, A REPORT SHALL BE PREPARED WITH A CERTIFICATION THAT THE FACILITY IS IN COMPLIANCE WITH THE SWPPP AND THE TPDES PERMIT.

STANDARD PERMIT CONDITIONS

- 1. THE PERMITTEE HAS A DUTY TO COMPLY WITH ALL PERMIT CONDITIONS. FAILURE TO COMPLY WITH ANY PERMIT CONDITION IS A VIOLATION OF THE PERMIT AND STATUTES UNDER WHICH IT WAS ISSUED, AND IS GROUNDS FOR ENFORCEMENT ACTION, FOR TERMINATING COVERAGE UNDER THIS GENERAL PERMIT, OR FOR REQUIRING A DISCHARGER TO APPLY FOR AND OBTAIN AN INDIVIDUAL TPDES PERMIT.

- 2. AUTHORIZATION UNDER THIS GENERAL PERMIT MAY BE SUSPENDED OR REVOKED FOR CAUSE, FILING A NOTICE OF PLANNED CHANGES OR ANTICIPATED NON-COMPLIANCE BY THE PERMITTEE DOES NOT STAY ANY PERMIT CONDITION. THE PERMITTEE MUST FURNISH TO THE EXECUTIVE DIRECTOR, UPON REQUEST AND WITHIN A REASONABLE TIME, ANY INFORMATION NECESSARY FOR THE EXECUTIVE DIRECTOR TO DETERMINE WHETHER CAUSE EXISTS FOR REVOKING, SUSPENDING, OR TERMINATING AUTHORIZATION UNDER THIS PERMIT. ADDITIONALLY, THE PERMITTEE MUST PROVIDE TO THE EXECUTIVE DIRECTOR, UPON REQUEST, COPIES OF ALL RECORDS THAT THE PERMITTEE IS REQUIRED TO MAINTAIN AS A CONDITION OF THIS GENERAL PERMIT.
- 3. IT IS NOT A DEFENSE FOR A DISCHARGER IN AN ENFORCEMENT ACTION THAT IT WOULD HAVE BEEN NECESSARY TO HALT OR REDUCE THE PERMITTED ACTIVITY TO MAINTAIN COMPLIANCE WITH THE PERMIT CONDITIONS.
- 4. INSPECTION AND ENTRY SHALL BE ALLOWED UNDER TEXAS WATER CODE CHAPTERS 26-28, HEALTH AND SAFETY CODE §§ 361.032-361.033 AND 361.037, AND 40 CODE OF FEDERAL REGULATIONS (CFR) § 122.41(i). THE STATEMENT IN TEXAS WATER CODE § 26.014 THAT COMMISSION ENTRY OF A FACILITY SHALL OCCUR ACCORDING TO AN ESTABLISHMENT'S RULES AND REGULATIONS CONCERNING SAFETY, INTERNAL SECURITY, AND FIRE PROTECTION IS NOT GROUNDS FOR DENIAL OR RESTRICTION OF ENTRY TO ANY PART OF THE FACILITY OR SITE, BUT MERELY DESCRIBES THE COMMISSION'S DUTY TO OBSERVE APPROPRIATE RULES AND REGULATIONS DURING AN INSPECTION.
- 5. THE DISCHARGER IS SUBJECT TO ADMINISTRATIVE, CIVIL, AND CRIMINAL PENALTIES, AS APPLICABLE, UNDER TEXAS WATER CODE §§ 26.136, 26.212, AND 26.213 FOR VIOLATIONS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
  - a. NEGLIGENTLY OR KNOWINGLY VIOLATING CWA, §§ 301, 302, 306, 307, 308, 318, OR 405, OR ANY CONDITION OR LIMITATION IMPLEMENTING ANY SECTIONS IN A PERMIT ISSUED UNDER CWA § 402, OR ANY REQUIREMENT IMPOSED IN A PRETREATMENT PROGRAM APPROVED UNDER CWA, §§ 402(a)(3) OR 402(b)(8);
  - b. KNOWINGLY MAKING ANY FALSE STATEMENT, REPRESENTATION, OR CERTIFICATION IN ANY RECORD OR OTHER DOCUMENT SUBMITTED OR REQUIRED TO BE MAINTAINED UNDER A PERMIT, INCLUDING MONITORING REPORTS OR REPORTS OF COMPLIANCE OR NONCOMPLIANCE.
- 6. ALL REPORTS AND OTHER INFORMATION REQUESTED BY THE EXECUTIVE DIRECTOR MUST BE SIGNED BY THE PERSON AND IN THE MANNER REQUIRED BY 30TAC § 305.128 (RELATING TO SIGNATORIES TO REPORTS).
- 7. AUTHORIZATION UNDER THIS GENERAL PERMIT DOES NOT CONVEY PROPERTY OR WATER RIGHTS OF ANY SORT AND DOES NOT GRANT ANY EXCLUSIVE PRIVILEGE.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) CONTRIBUTING ZONE PLAN  
GENERAL CONSTRUCTION NOTES

- 1. WRITTEN CONSTRUCTION NOTIFICATION SHOULD BE PROVIDED TO THE APPROPRIATE TCEQ REGIONAL OFFICE NO LATER THAN 48 HOURS PRIOR TO COMMENCEMENT OF THE REGULATED ACTIVITY. INFORMATION SHOULD INCLUDE THE DATE ON WHICH THE REGULATED ACTIVITY WILL COMMENCE, THE NAME OF THE APPROVED PLAN FOR THE REGULATED ACTIVITY, AND THE NAME OF THE PRIME CONTRACTOR WITH THE NAME AND TELEPHONE NUMBER OF THE CONTACT PERSON.
- 2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT SHOULD BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED CONTRIBUTING ZONE PLAN AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTOR(S) SHOULD KEEP COPIES OF THE APPROVED PLAN AND APPROVAL LETTER ON-SITE.
- 3. NO TEMPORARY ABOVEGROUND HYDROCARBON AND HAZARDOUS SUBSTANCE STORAGE TANK SYSTEM MAY BE INSTALLED WITHIN 150 FEET IF A DOMESTIC, INDUSTRIAL, IRRIGATION, OR PUBLIC WATER SUPPLY WELL.
- 4. PRIOR TO COMMENCING CONSTRUCTION, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY SELECTED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND GOOD ENGINEERING PRACTICES. CONTROLS SPECIFIED IN THE SWPPP SECTION OF THE APPROVED EDWARDS AQUIFER CONTRIBUTING ZONE PLAN ARE REQUIRED DURING CONSTRUCTION. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THE CONTROLS MUST REMAIN IN PLACE UNTIL DISTURBED AREAS ARE REVEGETATED AND THE AREAS HAVE BECOME PERMANENTLY STABILIZED.
- 5. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS TO WATER QUALITY (E.G., FUGITIVE SEDIMENT IN STREET BEING WASHED INTO SURFACE STREAMS OR SENSITIVE FEATURES BY THE NEXT RAIN).
- 6. SEDIMENT MUST BE REMOVED FROM SEDIMENT TRAPS OR SEDIMENTATION PONDS NOT LATER THAN WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50%. A PERMANENT STAKE MUST BE PROVIDED THAT CAN INDICATE WHEN THE SEDIMENT OCCUPIES 50% OF THE BASIN VOLUME.
- 7. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES (E.G., SCREENING OUTFALLS, PICKED UP DAILY).
- 8. ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE AND STORED ON-SITE MUST HAVE PROPER E&S CONTROLS INSTALLED.
- 9. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, AND CONSTRUCTION ACTIVITIES WILL NOT RESUME WITHIN 21 DAYS. WHEN THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY IS PRECLUDED BY WEATHER CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.
- 10. THE FOLLOWING RECORDS SHOULD BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST: THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR; THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
- 11. THE HOLDER OF ANY APPROVED CONTRIBUTING ZONE PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
  - A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY BEST MANAGEMENT PRACTICES OR STRUCTURE(S), INCLUDING BUT NOT LIMITED TO TEMPORARY OR PERMANENT PONDS, DAMS, BERMS, SILT FENCES, AND DISCRETIONARY STRUCTURES;
  - B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED;
  - C. ANY CHANGE THAT WOULD SIGNIFICANTLY IMPACT THE ABILITY TO PREVENT POLLUTION OF THE EDWARDS AQUIFER AND HYDROLOGICALLY CONNECTED SURFACE WATER; OR
  - D. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED IN A CONTRIBUTING ZONE PLAN AS UNDEVELOPED.

CONTACT: TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
AUSTIN REGIONAL OFFICE  
12100 PARK 35 CIRCLE  
AUSTIN, TX 78753  
PHONE: 512-339-2929  
FAX: 512-339-3795

235 LEDGE STONE DR.  
AUSTIN, TX 78737



HCWCID NO. 2  
BELTERRA TRAIL EXTENSION  
STORM WATER POLLUTION  
PREVENTION PLAN (SWPPP)

NO.	DESCRIPTION	DATE

JOB NO:	1987-001
DATE:	11/19/2021
DESIGNED BY:	JB, CC
DRAWN BY:	JB, CC
CHECKED BY:	LBB
APPROVED BY:	LBB

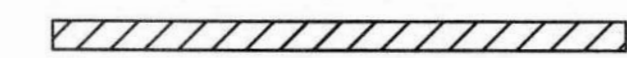


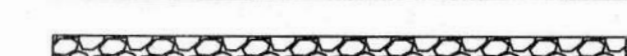
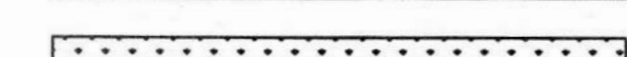


lawrence - Apr 07, 2022 - 1:45pm - I:\e:\M:\DRG\1987-HCWCID No. 2 Trail Extension Project\CAD\SHREETS\1987-SWPPP POST NOD.dwg





**LEGEND**

-  PORTION OF TRAIL TREATED BY PROPOSED FILTER STRIP
-  PORTION OF TRAIL TREATED BY EXISTING POND
-  PORTION OF TRAIL UNTREATED
-  PORTION OF THE TRAIL OVER EXISTING IMPERVIOUS COVER
-  PROPOSED FILTER STRIP

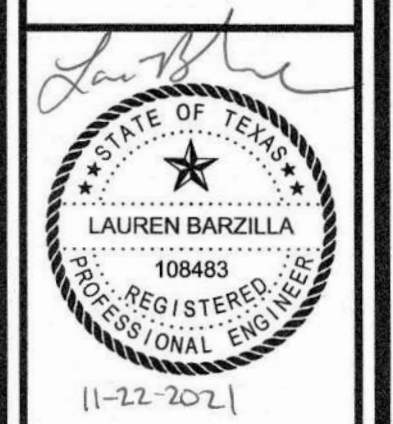
235 LEDGE STONE DR.  
AUSTIN, TX 78737



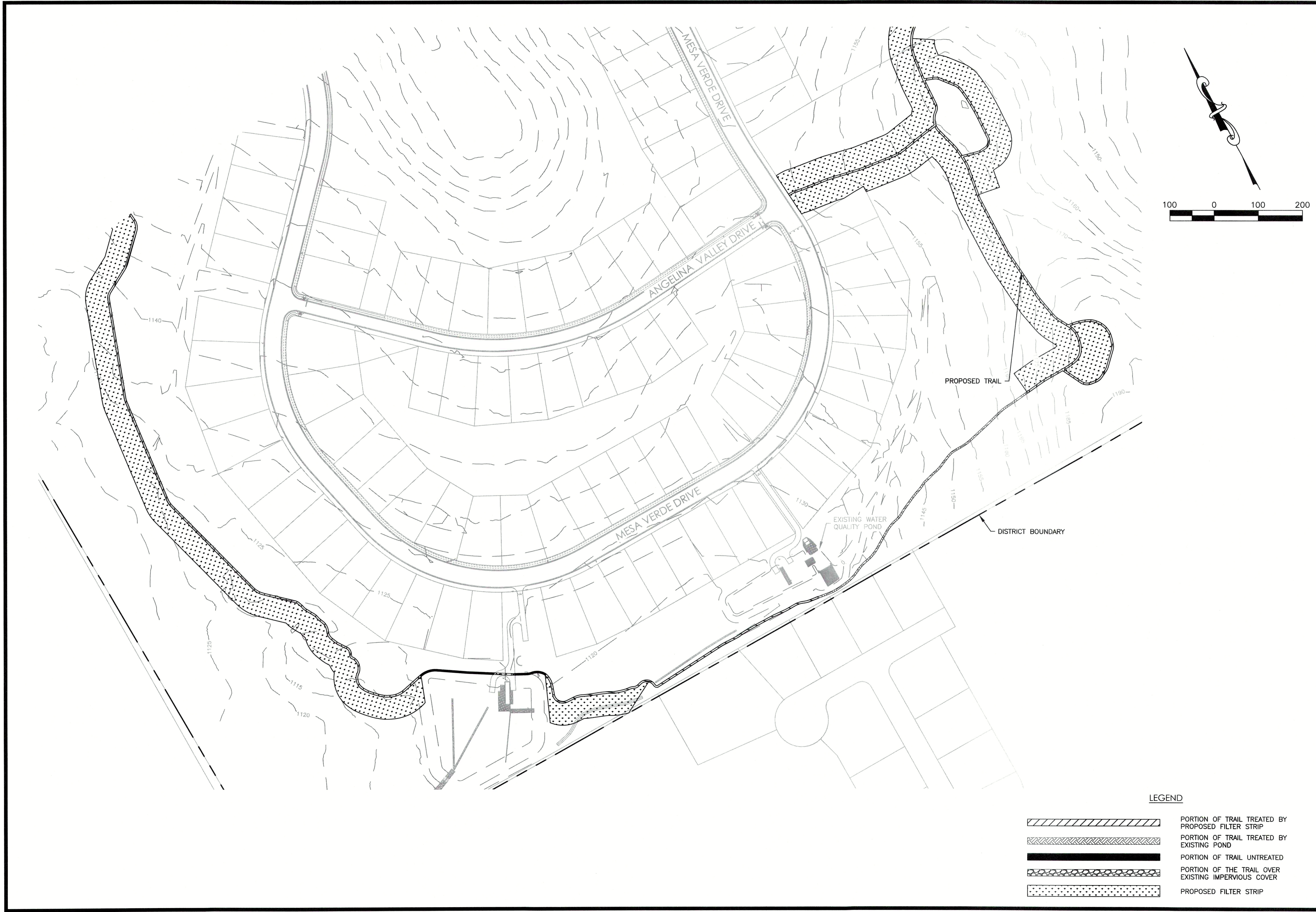
**HCWCID NO. 2  
BELTERRA TRAIL EXTENSION  
WATER QUALITY BMPs AND  
CALCULATIONS 1 OF 4**

NO.	DESCRIPTION	DATE

JOB NO: 1987-001  
DATE: 11/19/2021  
DESIGNED BY: JB, CC  
DRAWN BY: JB, CC  
CHECKED BY: LBB  
APPROVED BY: LBB







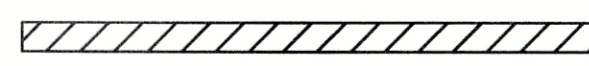


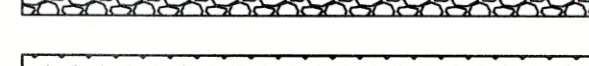
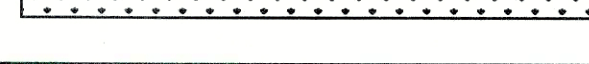
HCWCD NO. 2  
BELTERRA TRAIL EXTENSION  
WATER QUALITY BMPs AND  
CALCULATIONS 2 OF 4

NO.	DESCRIPTION	DATE

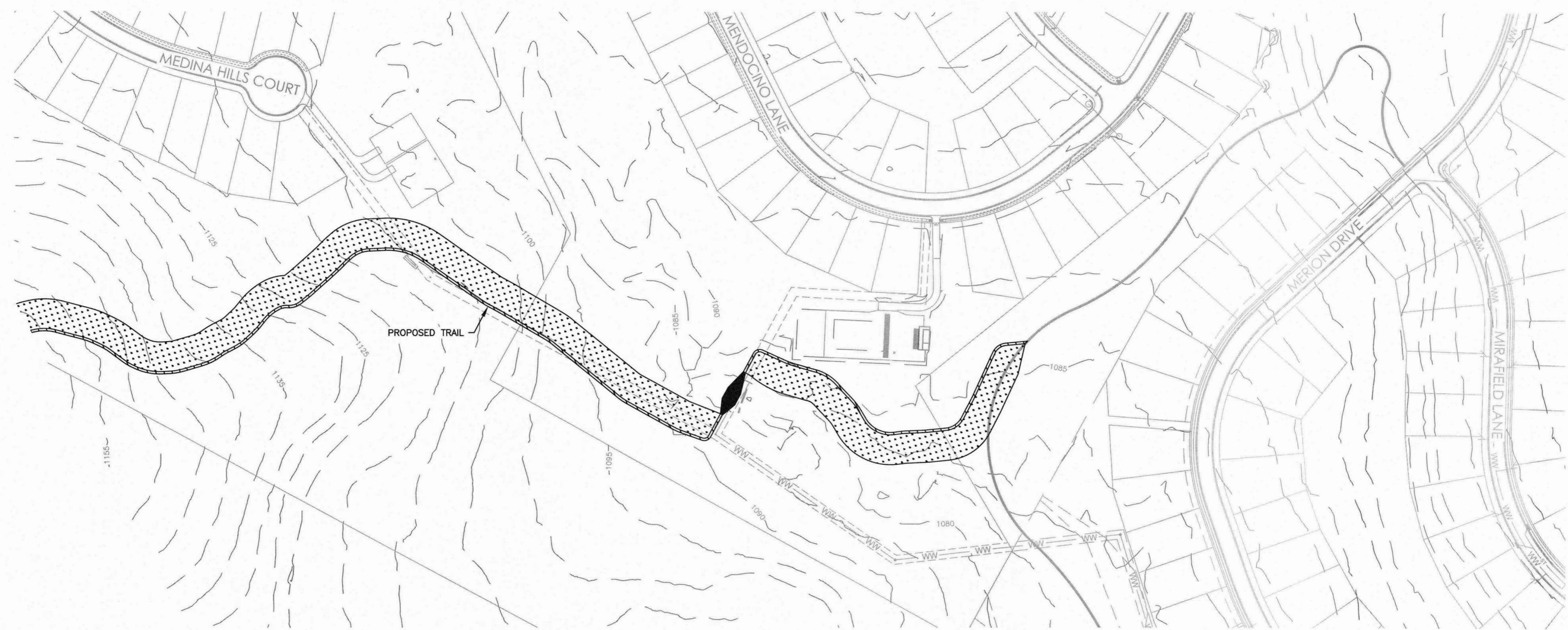
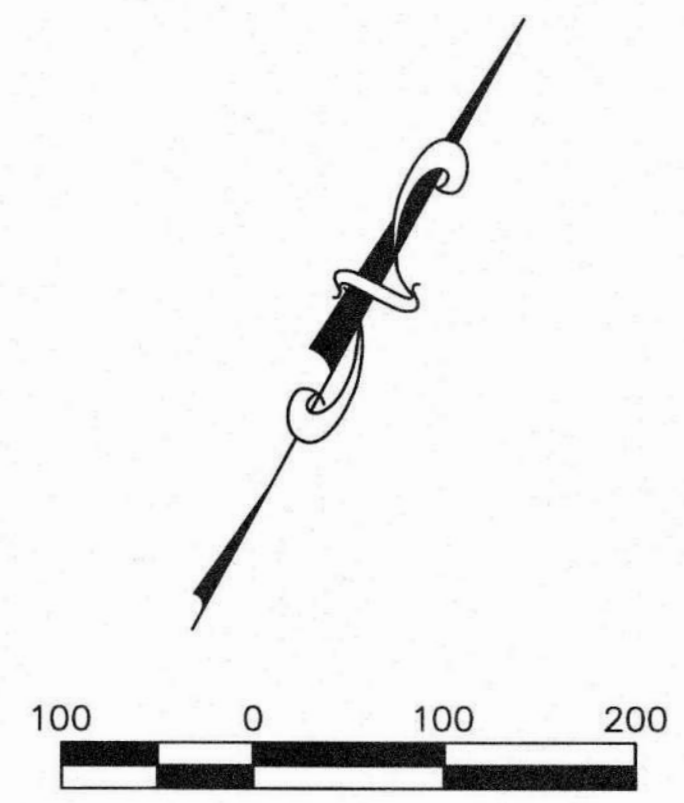
JOB NO:	1987-001
DATE:	11/19/2021
DESIGNED BY:	JB, CC
DRAWN BY:	JB, CC
CHECKED BY:	LBB
APPROVED BY:	LBB



LEGEND

-  PORTION OF TRAIL TREATED BY PROPOSED FILTER STRIP
-  PORTION OF TRAIL TREATED BY EXISTING POND
-  PORTION OF TRAIL UNTREATED
-  PORTION OF THE TRAIL OVER EXISTING IMPERVIOUS COVER
-  PROPOSED FILTER STRIP







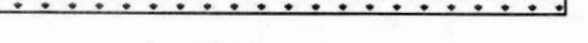


HCWID NO. 2  
BELTERRA TRAIL EXTENSION  
WATER QUALITY BMPs AND  
CALCULATIONS 3 OF 4

NO.	DESCRIPTION	DATE

JOB NO:	1987-001
DATE:	11/19/2021
DESIGNED BY:	JB, CC
DRAWN BY:	JB, CC
CHECKED BY:	LBB
APPROVED BY:	LBB



- LEGEND**
-  PORTION OF TRAIL TREATED BY PROPOSED FILTER STRIP
  -  PORTION OF TRAIL TREATED BY EXISTING POND
  -  PORTION OF TRAIL UNTREATED
  -  PORTION OF THE TRAIL OVER EXISTING IMPERVIOUS COVER
  -  PROPOSED FILTER STRIP



Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.  
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.  
Characters shown in red are data entry fields.  
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

Page 3-29 Equation 3.3:  $L_M = 27.7(A_N \times P)$

where:  $L_{M \text{ TOTAL PROJECT}} =$  Required TSS removal resulting from the proposed development = 80% of increased load  
 $A_N =$  Net increase in impervious area for the project  
 $P =$  Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Hays	acres
Total project area included in plan =	0.93	acres
Predevelopment impervious area within the limits of the plan =	0.00	acres
Total post-development impervious area within the limits of the plan =	0.93	acres
Total post-development impervious cover fraction =	1.00	
P =	33	inches

$L_{M \text{ TOTAL PROJECT}} = 846$  lbs.

\* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = 2

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = 2

Total drainage basin/outfall area =	0.06	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	0.06	acres
Post-development impervious fraction within drainage basin/outfall area =	1.00	
$L_{M \text{ THIS BASIN}} =$	55	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Sand Filter  
Removal efficiency = 89 percent

- Aqualogic Cartridge Filter
- Bioretention
- Contech StormFilter
- Constructed Wetland
- Extended Detention
- Grassy Swale
- Retention / Irrigation
- Sand Filter
- Stormceptor
- Vegetated Filter Strips
- Vortechs
- Wet Basin
- Wet Vault

4. Calculate Maximum TSS Load Removed ( $L_R$ ) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7:  $L_R = (\text{BMP efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$

where:  $A_c =$  Total On-Site drainage area in the BMP catchment area  
 $A_i =$  Impervious area proposed in the BMP catchment area  
 $A_p =$  Pervious area remaining in the BMP catchment area  
 $L_R =$  TSS Load removed from this catchment area by the proposed BMP

$A_c =$	0.06	acres
$A_i =$	0.06	acres
$A_p =$	0.00	acres
$L_R =$	61	lbs.

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired  $L_{M \text{ THIS BASIN}} = 61$  lbs.

F = 1.00

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 Pages 3-34 to 3-36

Rainfall Depth =	4.00	inches
Post Development Runoff Coefficient =	0.90	
On-site Water Quality Volume =	784	cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP =	0.00	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0	
Off-site Runoff Coefficient =	0.00	
Off-site Water Quality Volume =	0	cubic feet

Storage for Sediment = 157 cubic feet  
Total Capture Volume (required water quality volume(s) x 1.20) = 941 cubic feet

The following sections are used to calculate the required water quality volume(s) for the selected BMP.  
The values for BMP Types not selected in cell C45 will show NA.

9. Filter area for Sand Filters Designed as Required in RG-348 Pages 3-58 to 3-63

9A. Full Sedimentation and Filtration System

Water Quality Volume for sedimentation basin = 941 cubic feet

Minimum filter basin area = 44 square feet

Maximum sedimentation basin area = 392 square feet For minimum water depth of 2 feet  
Minimum sedimentation basin area = 98 square feet For maximum water depth of 8 feet

9B. Partial Sedimentation and Filtration System

Water Quality Volume for combined basins = 941 cubic feet

Minimum filter basin area = 78 square feet

Maximum sedimentation basin area = 314 square feet For minimum water depth of 2 feet  
Minimum sedimentation basin area = 20 square feet For maximum water depth of 8 feet

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.  
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1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

Page 3-29 Equation 3.3:  $L_M = 27.7(A_N \times P)$

where:  $L_{M \text{ TOTAL PROJECT}} =$  Required TSS removal resulting from the proposed development = 80% of increased load  
 $A_N =$  Net increase in impervious area for the project  
 $P =$  Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Hays	acres
Total project area included in plan =	0.93	acres
Predevelopment impervious area within the limits of the plan =	0.00	acres
Total post-development impervious area within the limits of the plan =	0.93	acres
Total post-development impervious cover fraction =	1.00	
P =	33	inches

$L_{M \text{ TOTAL PROJECT}} = 846$  lbs.

\* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = 2

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	0.81	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	0.81	acres
Post-development impervious fraction within drainage basin/outfall area =	1.00	
$L_{M \text{ THIS BASIN}} =$	740	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Vegetated Filter Strips  
Removal efficiency = 85 percent

- Aqualogic Cartridge Filter
- Bioretention
- Contech StormFilter
- Constructed Wetland
- Extended Detention
- Grassy Swale
- Retention / Irrigation
- Sand Filter
- Stormceptor
- Vegetated Filter Strips
- Vortechs
- Wet Basin
- Wet Vault

4. Calculate Maximum TSS Load Removed ( $L_R$ ) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7:  $L_R = (\text{BMP efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$

where:  $A_c =$  Total On-Site drainage area in the BMP catchment area  
 $A_i =$  Impervious area proposed in the BMP catchment area  
 $A_p =$  Pervious area remaining in the BMP catchment area  
 $L_R =$  TSS Load removed from this catchment area by the proposed BMP

$A_c =$	0.81	acres
$A_i =$	0.81	acres
$A_p =$	0.00	acres
$L_R =$	786	lbs.

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired  $L_{M \text{ THIS BASIN}} = 786$  lbs.

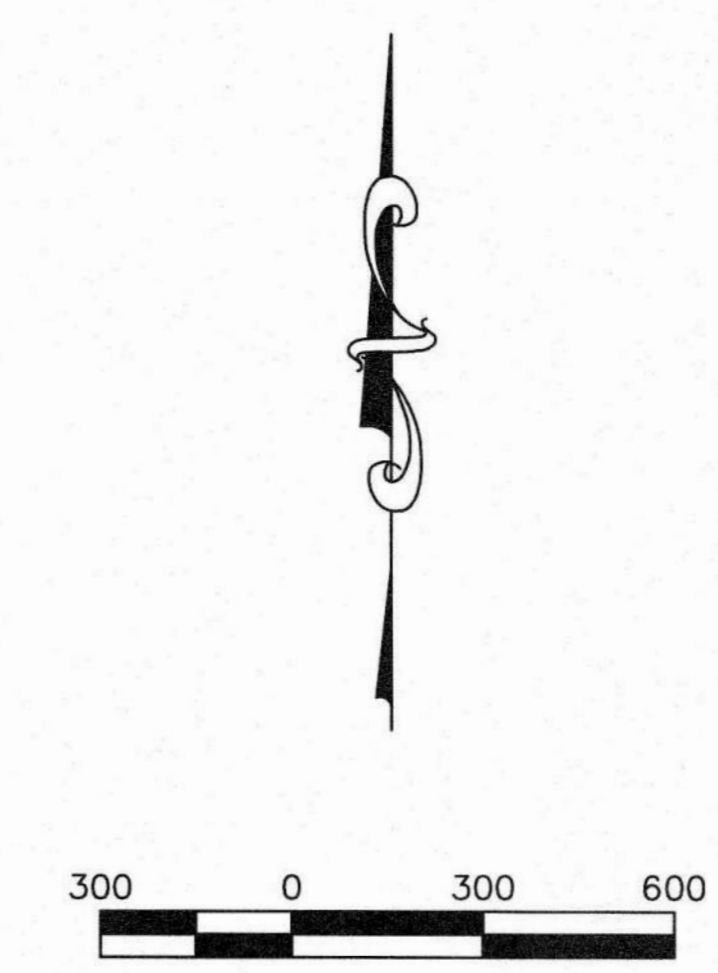
F = 1.00

NO.	DESCRIPTION	DATE

JOB NO:	1987-001
DATE:	11/19/2021
DESIGNED BY:	JB, CC
DRAWN BY:	JB, CC
CHECKED BY:	LBB
APPROVED BY:	LBB







**LEGEND**

	PROPERTY BOUNDARY
	EXISTING MAJOR CONTOURS
	WATER QUALITY BUFFER ZONES
	PROPOSED TRAIL

235 LEDGE STONE DR.  
AUSTIN, TX 78737

**B&N**  
burgessniple.com

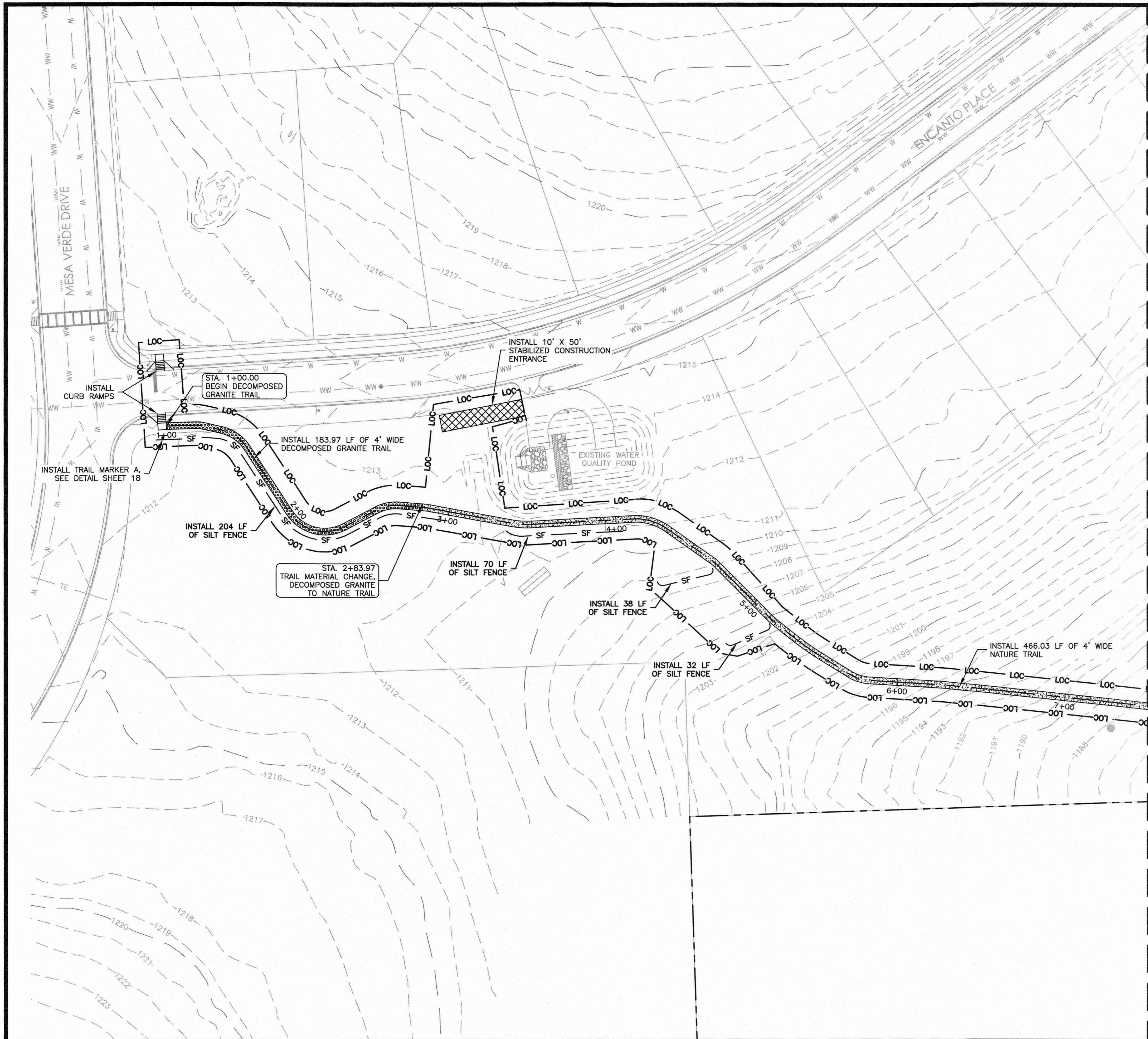
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BELTERRA TRAIL EXTENSION  
OVERALL SITE PLAN & INDEX SHEET

NO.	DESCRIPTION	DATE

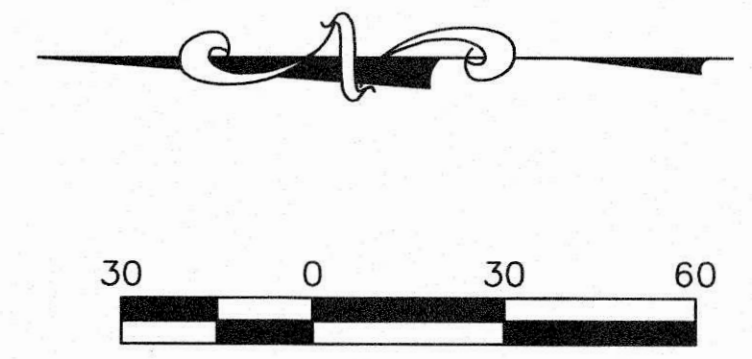
JOB NO: 1987-001  
DATE: 11/19/2021  
DESIGNED BY: JB, CC  
DRAWN BY: JB, CC  
CHECKED BY: LBB  
APPROVED BY: LBB







MATCHLINE STA. 7+50  
SEE SHEET 10



- NOTES:**
- CONTRACTOR TO AVOID ALL EXISTING UTILITIES INCLUDING BUT NOT LIMITED TO SPRAY HEADS, VALVE BOXES, ETC. CONTRACTOR WILL REROUTE PROPOSED TRAIL AS NECESSARY TO AVOID DISTURBING EXISTING FACILITIES. CONTACT ENGINEER IF A FIELD CHANGE IS NEEDED. NO SEPARATE PAY.
  - CONTRACTOR SHALL AVOID REMOVING ANY TREES NOT CALLED OUT AS "TO BE REMOVED" IN THE PLANS. CONTRACTOR WILL REROUTE PROPOSED TRAIL AS NECESSARY TO AVOID REMOVING TREES NOT CALLED OUT ON PLANS. NO SEPARATE PAY.
  - CONTRACTOR SHOULD COORDINATE WITH DISTRICT IRRIGATOR PRIOR TO SUBSTANTIAL COMPLETION TO ADJUST HEADS OF THE EXISTING IRRIGATION SYSTEM TO ENSURE THAT THE PROPOSED TRAILS ARE NOT WITHIN THE IRRIGATED AREA. NO SEPARATE PAY.
  - EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS. CONTRACTOR SHOULD FIELD VERIFY PRIOR TO CONSTRUCTION.
  - ALL CONSTRUCTION LOCATED WITHIN TCEQ WATER QUALITY ZONES SHALL BE DONE IN ACCORDANCE WITH ALL TCEQ RULES.

**LEGEND**

	PROPERTY BOUNDARY
	EXISTING MAJOR CONTOURS
	EXISTING MINOR CONTOURS
	PROPOSED CONCRETE TRAIL
	PROPOSED DECOMPOSED GRANITE TRAIL
	PROPOSED NATURE TRAIL
	LIMITS OF CONSTRUCTION
	PROPOSED SILT FENCE
	EXISTING TREES (TO REMAIN)
	EXISTING TREES (TO BE REMOVED)
	ROCK BERM
	EXISTING IRRIGATION VALVES
	EXISTING IRRIGATION SPRAY HEADS
	EXISTING TREATED EFFLUENT LINES

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AUSTIN, TX 78737

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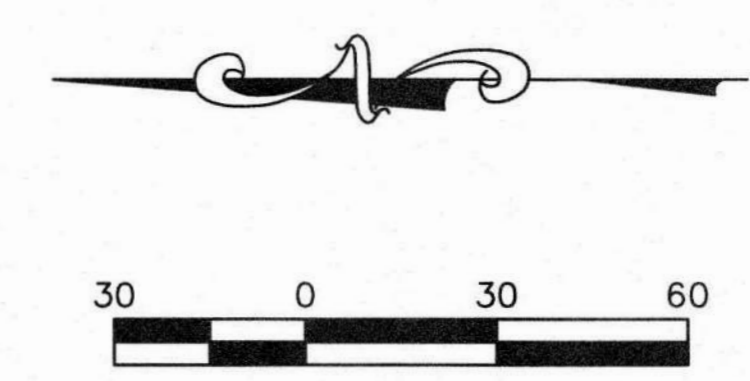
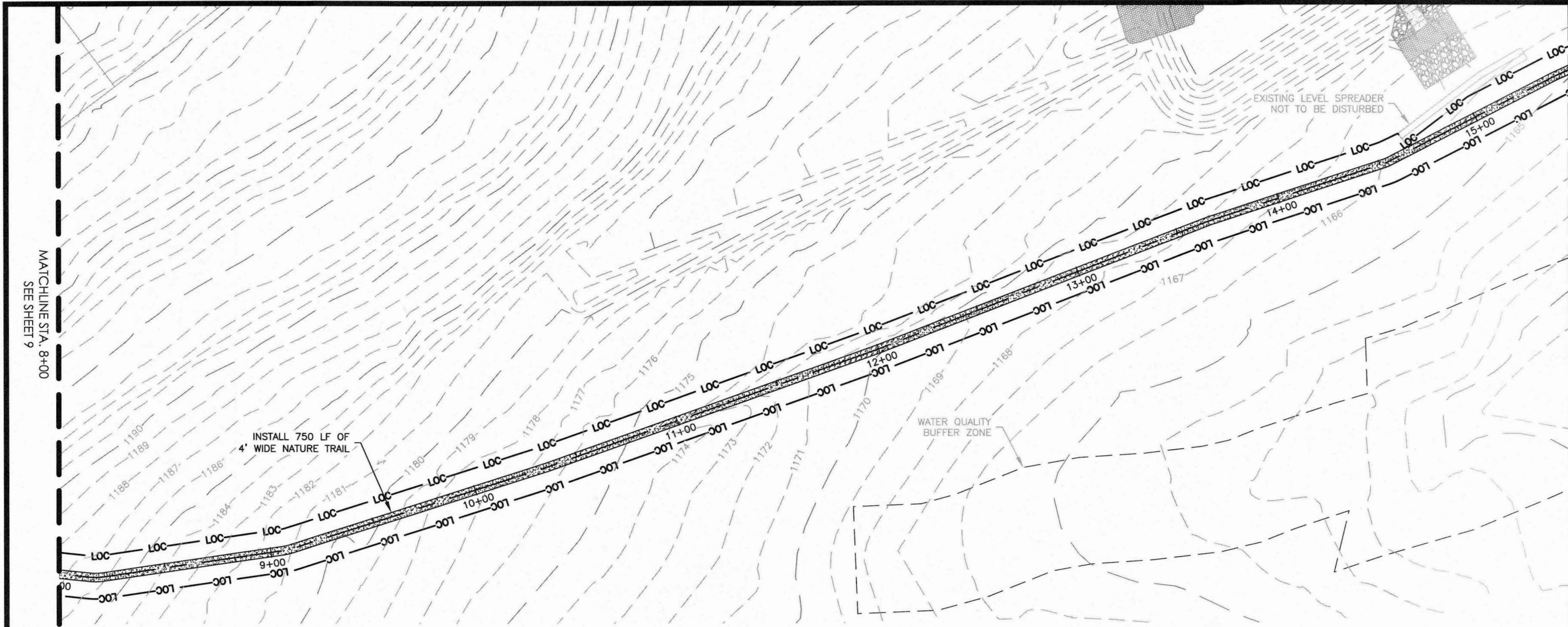
HCWID NO. 2  
BELTERRA TRAIL EXTENSION  
MAIN TRAIL STA. 1+00 TO 7+50

NO.	DESCRIPTION	DATE

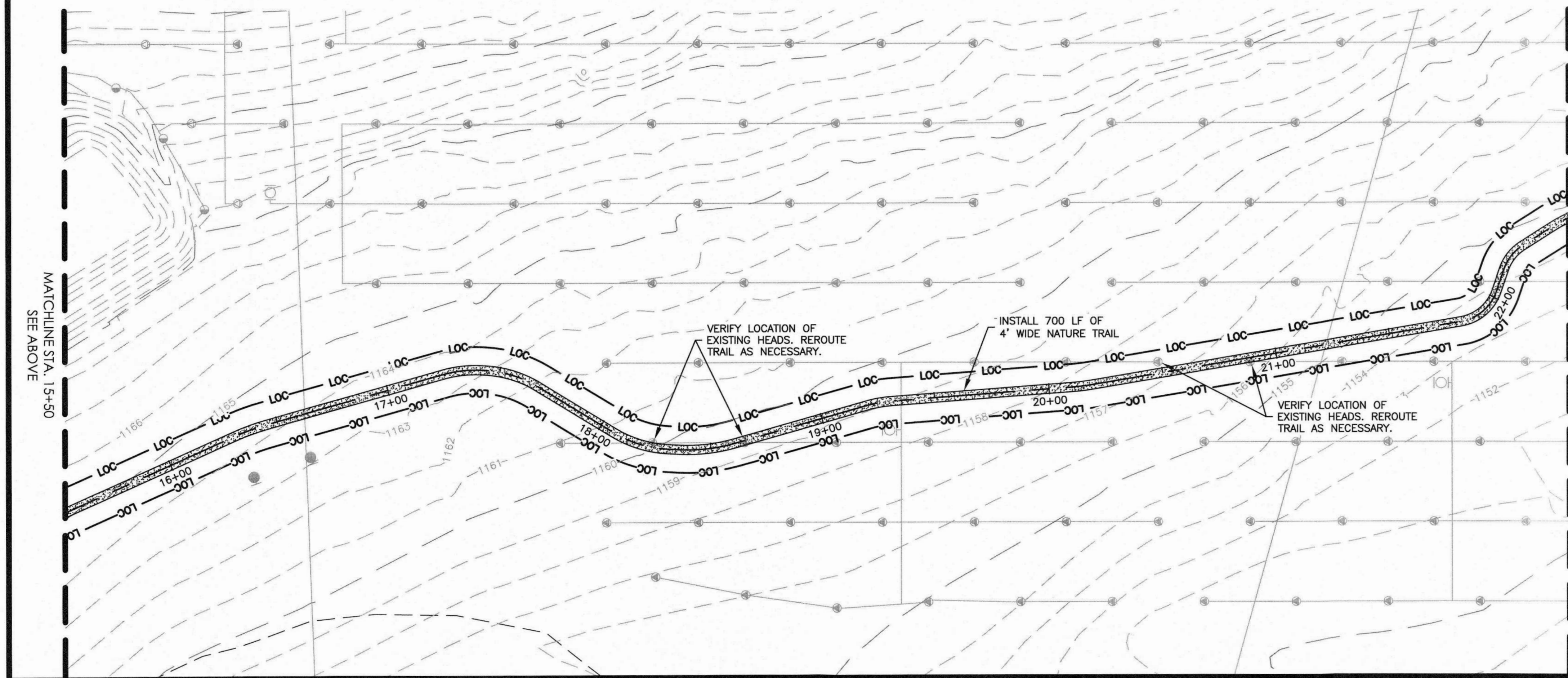
JOB NO: 1987-001  
DATE: 11/19/2021  
DESIGNED BY: JB, CC  
DRAWN BY: JB, CC  
CHECKED BY: LBB  
APPROVED BY: LBB







MATCHLINE STA. 15+50  
SEE BELOW



- NOTES:**
- CONTRACTOR TO AVOID ALL EXISTING UTILITIES INCLUDING BUT NOT LIMITED TO SPRAY HEADS, VALVE BOXES, ETC. CONTRACTOR WILL REROUTE PROPOSED TRAIL AS NECESSARY TO AVOID DISTURBING EXISTING FACILITIES. CONTACT ENGINEER IF A FIELD CHANGE IS NEEDED. NO SEPARATE PAY.
  - CONTRACTOR SHALL AVOID REMOVING ANY TREES NOT CALLED OUT AS "TO BE REMOVED" IN THE PLANS. CONTRACTOR WILL REROUTE PROPOSED TRAIL AS NECESSARY TO AVOID REMOVING TREES NOT CALLED OUT ON PLANS. NO SEPARATE PAY.
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  - EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS. CONTRACTOR SHOULD FIELD VERIFY PRIOR TO CONSTRUCTION.
  - ALL CONSTRUCTION LOCATED WITHIN TCEQ WATER QUALITY ZONES SHALL BE DONE IN ACCORDANCE WITH ALL TCEQ RULES.

**LEGEND**

	PROPERTY BOUNDARY
	EXISTING MAJOR CONTOURS
	EXISTING MINOR CONTOURS
	PROPOSED CONCRETE TRAIL
	PROPOSED DECOMPOSED GRANITE TRAIL
	PROPOSED NATURE TRAIL
	LIMITS OF CONSTRUCTION
	PROPOSED SILT FENCE
	EXISTING TREES (TO REMAIN)
	EXISTING TREES (TO BE REMOVED)
	ROCK BERM
	EXISTING IRRIGATION VALVES
	EXISTING IRRIGATION SPRAY HEADS
	EXISTING TREATED EFFLUENT LINES

235 LEDGE STONE DR.  
AUSTIN, TX 78737

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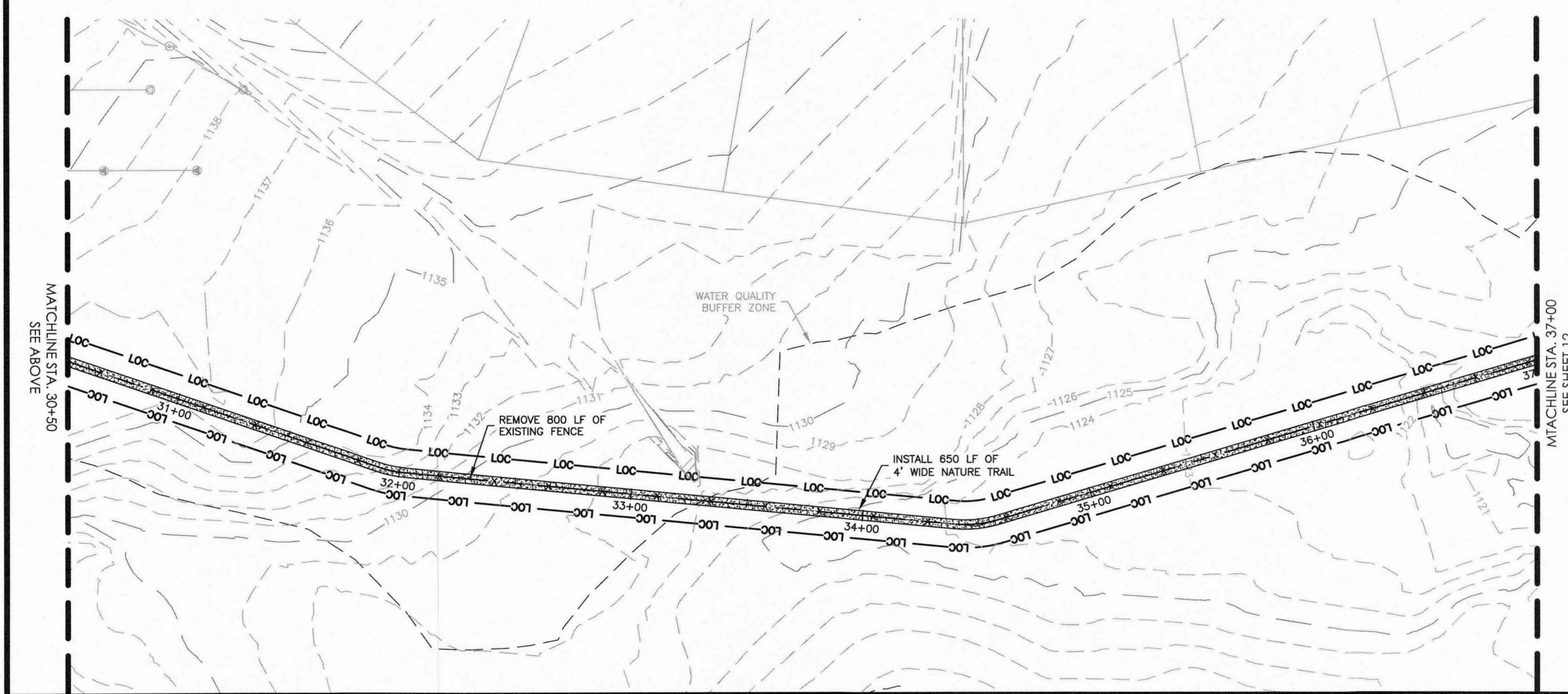
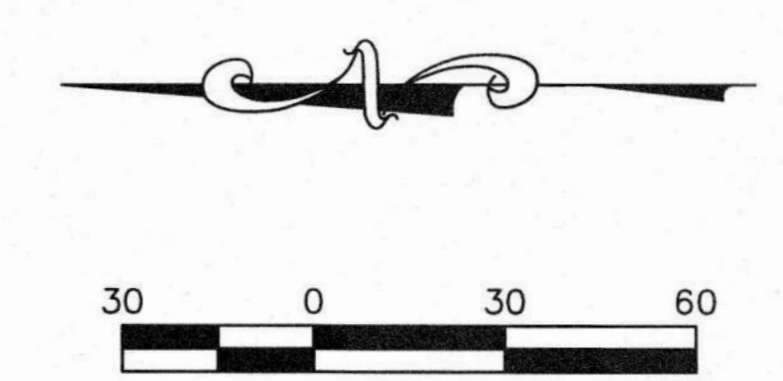
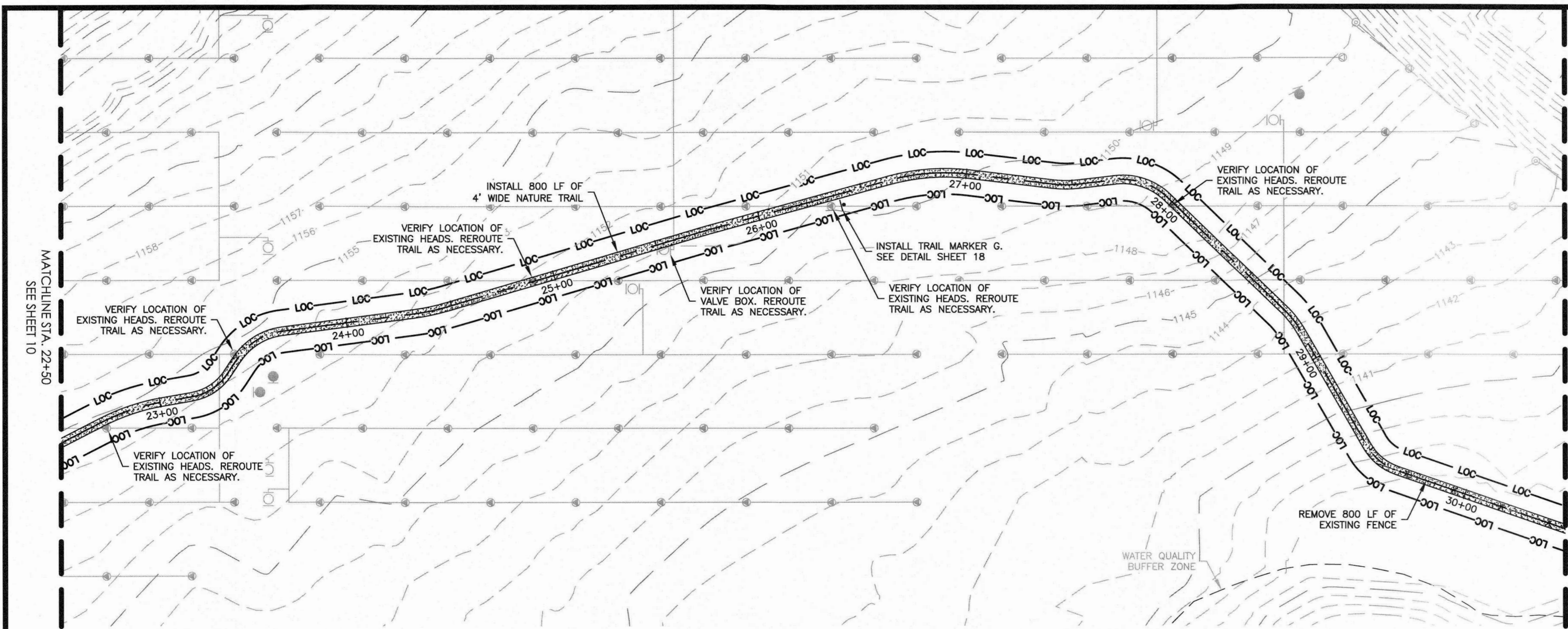
HCWCD NO. 2  
BELTERRA TRAIL EXTENSION  
MAIN TRAIL STA. 8+00 TO 22+50

NO.	DESCRIPTION	DATE

JOB NO: 1987-001  
DATE: 11/19/2021  
DESIGNED BY: JB, CC  
DRAWN BY: JB, CC  
CHECKED BY: LBB  
APPROVED BY: LBB







- NOTES:**
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  5. ALL CONSTRUCTION LOCATED WITHIN TCEQ WATER QUALITY ZONES SHALL BE DONE IN ACCORDANCE WITH ALL TCEQ RULES.

**LEGEND**

	PROPERTY BOUNDARY
	EXISTING MAJOR CONTOURS
	EXISTING MINOR CONTOURS
	PROPOSED CONCRETE TRAIL
	PROPOSED DECOMPOSED GRANITE TRAIL
	PROPOSED NATURE TRAIL
	LIMITS OF CONSTRUCTION
	PROPOSED SILT FENCE
	EXISTING TREES (TO REMAIN)
	EXISTING TREES (TO BE REMOVED)
	ROCK BERM
	EXISTING IRRIGATION VALVES
	EXISTING IRRIGATION SPRAY HEADS
	EXISTING TREATED EFFLUENT LINES

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AUSTIN, TX 78737

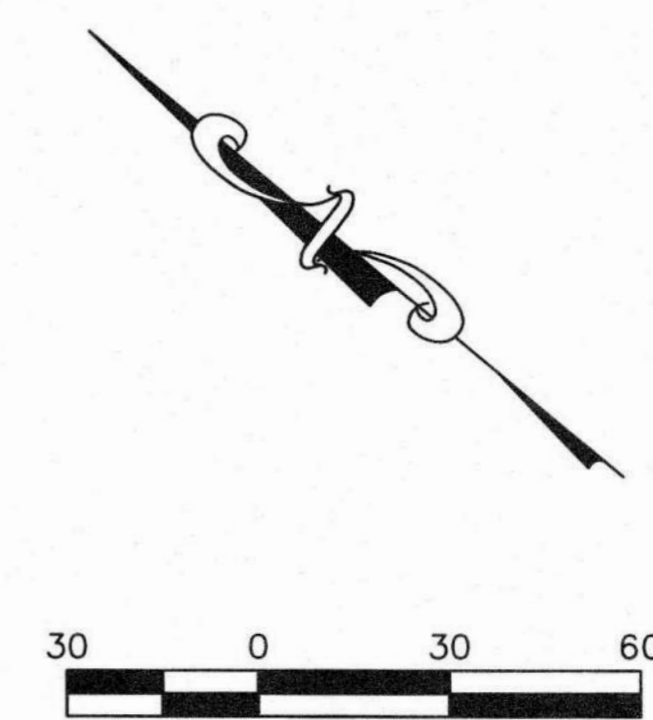
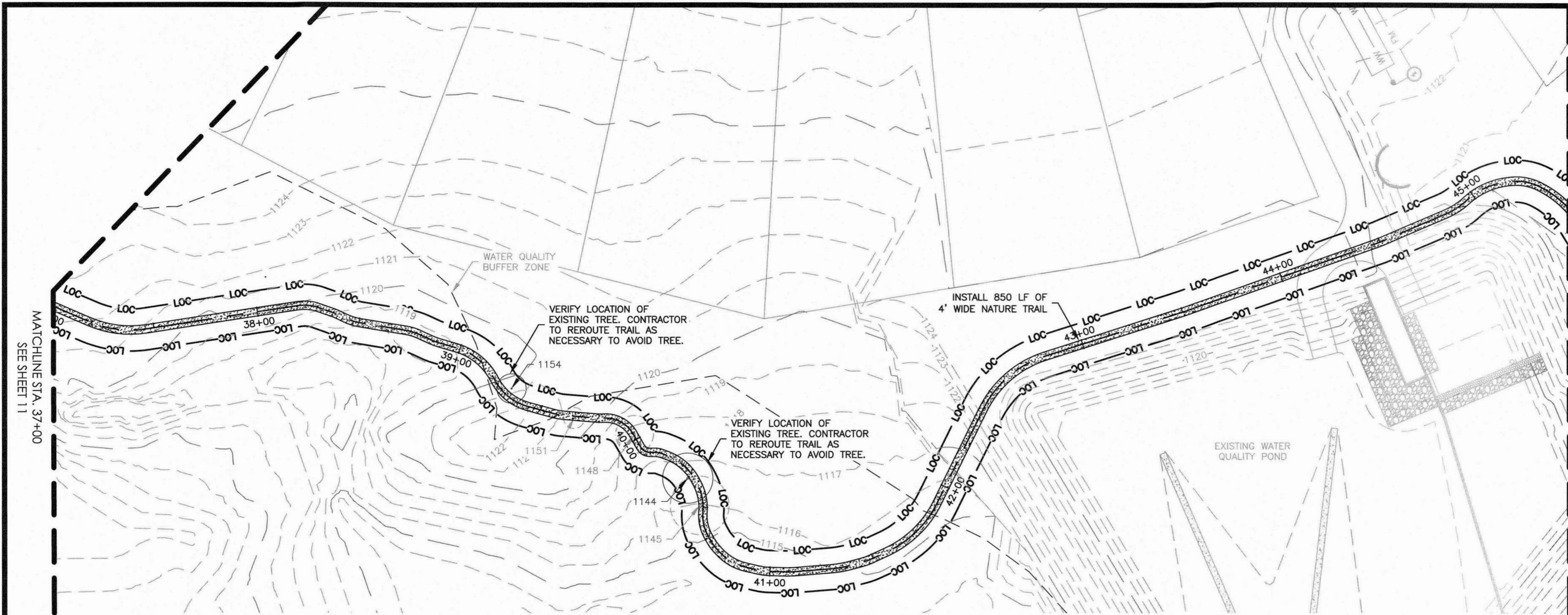
HCWID NO. 2  
BELTERRA TRAIL EXTENSION  
MAIN TRAIL STA. 22+50 TO 37+00

NO.	DESCRIPTION	DATE

JOB NO:	1987-001
DATE:	11/19/2021
DESIGNED BY:	JB, CC
DRAWN BY:	JB, CC
CHECKED BY:	LBB
APPROVED BY:	LBB





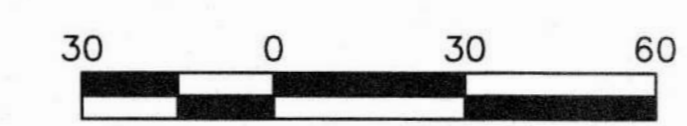
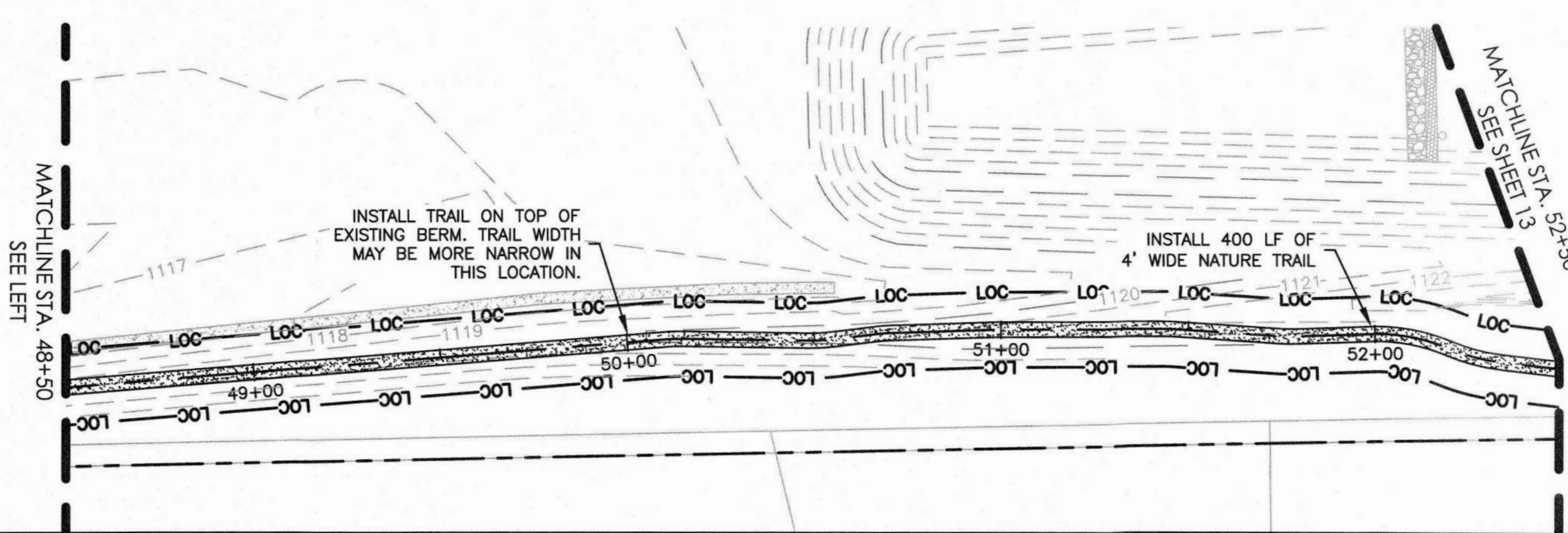
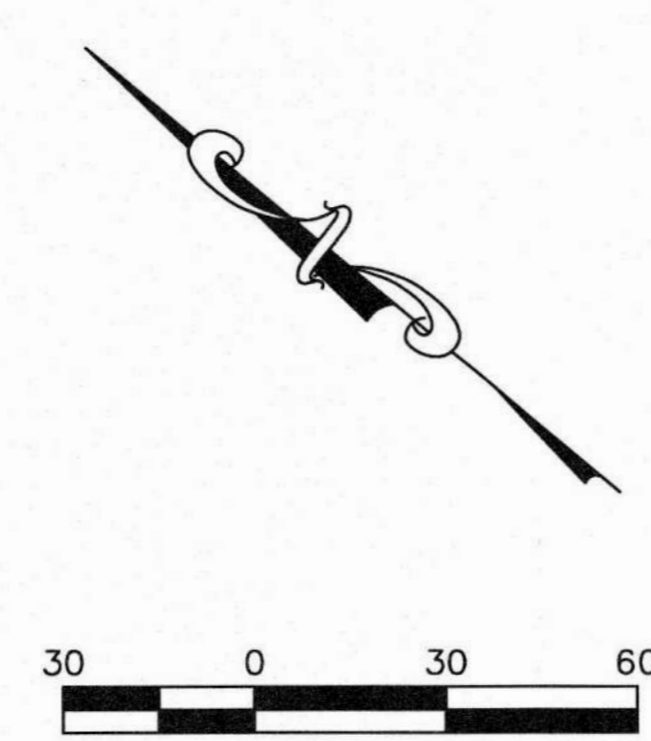
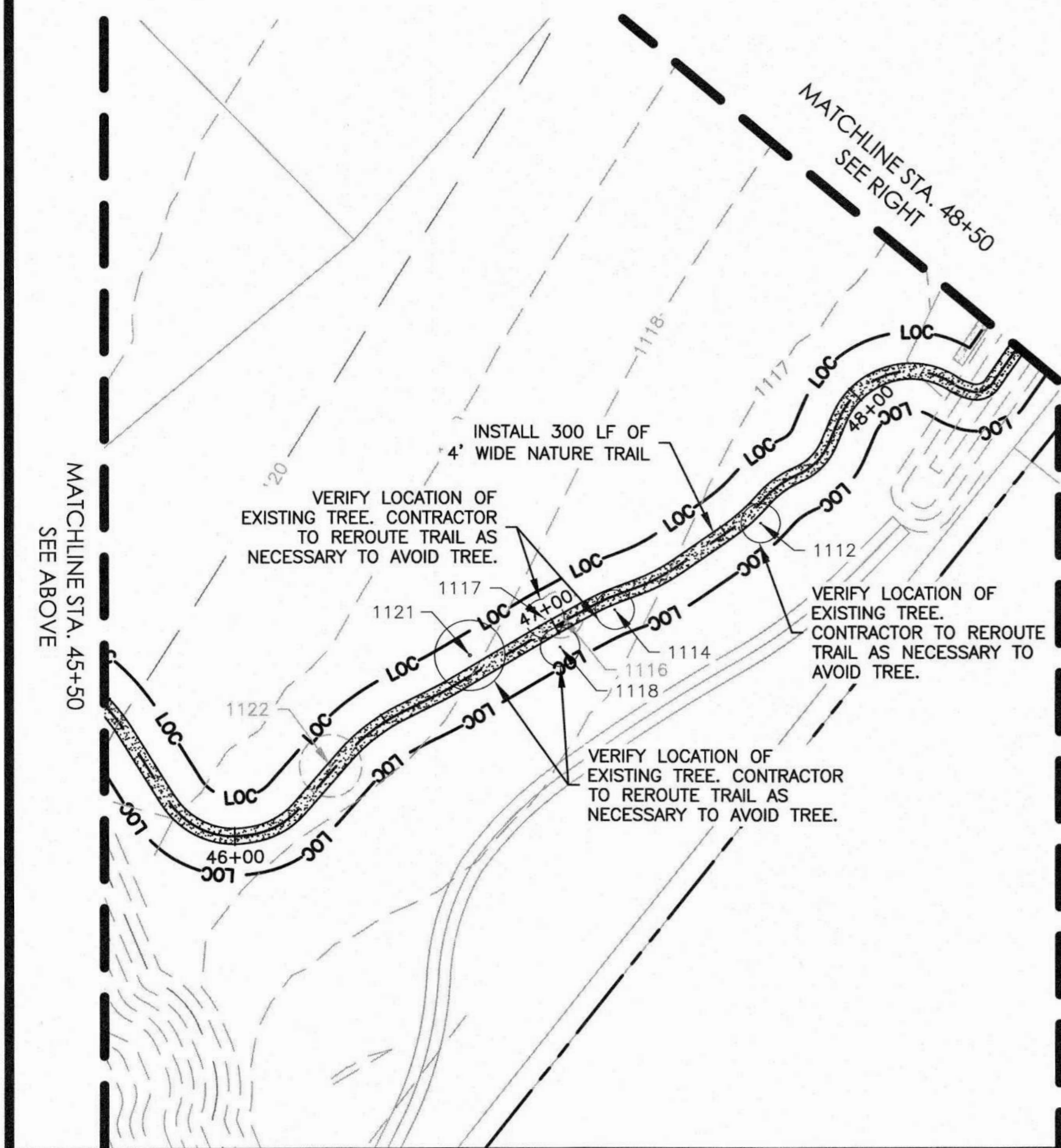


**TREE TABLE**

TAG NO.	DESCRIPTION
1015	15" CEDAR (6-6-4-4-4)
1112	5" LIVE OAK
1114	5" LIVE OAK
* 1116	6" LIVE OAK
1117	5" LIVE OAK
1118	5" LIVE OAK
1121	9" LIVE OAK
* 1122	8" CEDAR
1144	12" LIVE OAK
* 1145	14" LIVE OAK
* 1148	9" CEDAR
* 1151	5" CEDAR
1154	7" LIVE OAK

\*TREES TO BE REMOVED

- NOTES:**
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  - CONTRACTOR SHALL AVOID REMOVING ANY TREES NOT CALLED OUT AS "TO BE REMOVED" IN THE PLANS. CONTRACTOR WILL REROUTE PROPOSED TRAIL AS NECESSARY TO AVOID REMOVING TREES NOT CALLED OUT ON PLANS. NO SEPARATE PAY.
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  - ALL CONSTRUCTION LOCATED WITHIN TCEQ WATER QUALITY ZONES SHALL BE DONE IN ACCORDANCE WITH ALL TCEQ RULES.



**LEGEND**

---	PROPERTY BOUNDARY
- - - - -	EXISTING MAJOR CONTOURS
- - - - -	EXISTING MINOR CONTOURS
---	PROPOSED CONCRETE TRAIL
---	PROPOSED DECOMPOSED GRANITE TRAIL
---	PROPOSED NATURE TRAIL
LOC LOC	LIMITS OF CONSTRUCTION
SF SF	PROPOSED SILT FENCE
○	EXISTING TREES (TO REMAIN)
○	EXISTING TREES (TO BE REMOVED)
—○—	ROCK BERM
○	EXISTING IRRIGATION VALVES
○	EXISTING IRRIGATION SPRAY HEADS
—○—	EXISTING TREATED EFFLUENT LINES

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HCWCD NO. 2  
BELTERRA TRAIL EXTENSION  
MAIN TRAIL STA. 37+00 TO 52+50

NO.	DESCRIPTION	DATE

JOB NO: 1987-001  
DATE: 11/19/2021  
DESIGNED BY: JB, CC  
DRAWN BY: JB, CC  
CHECKED BY: LBB  
APPROVED BY: LBB



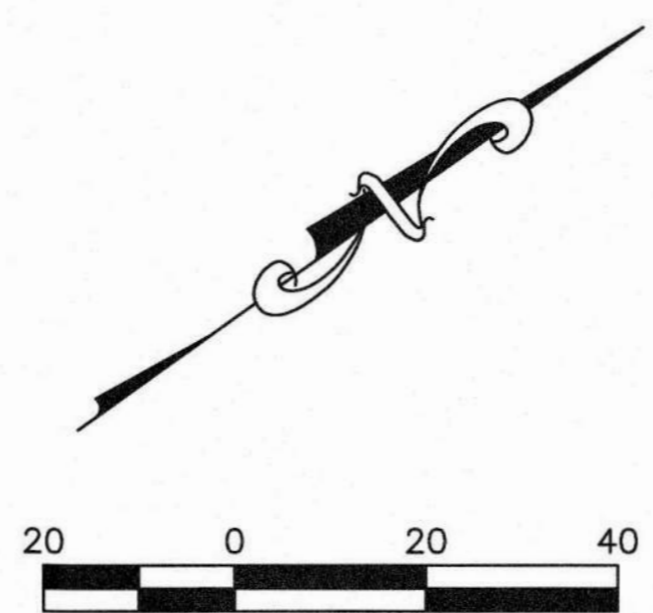
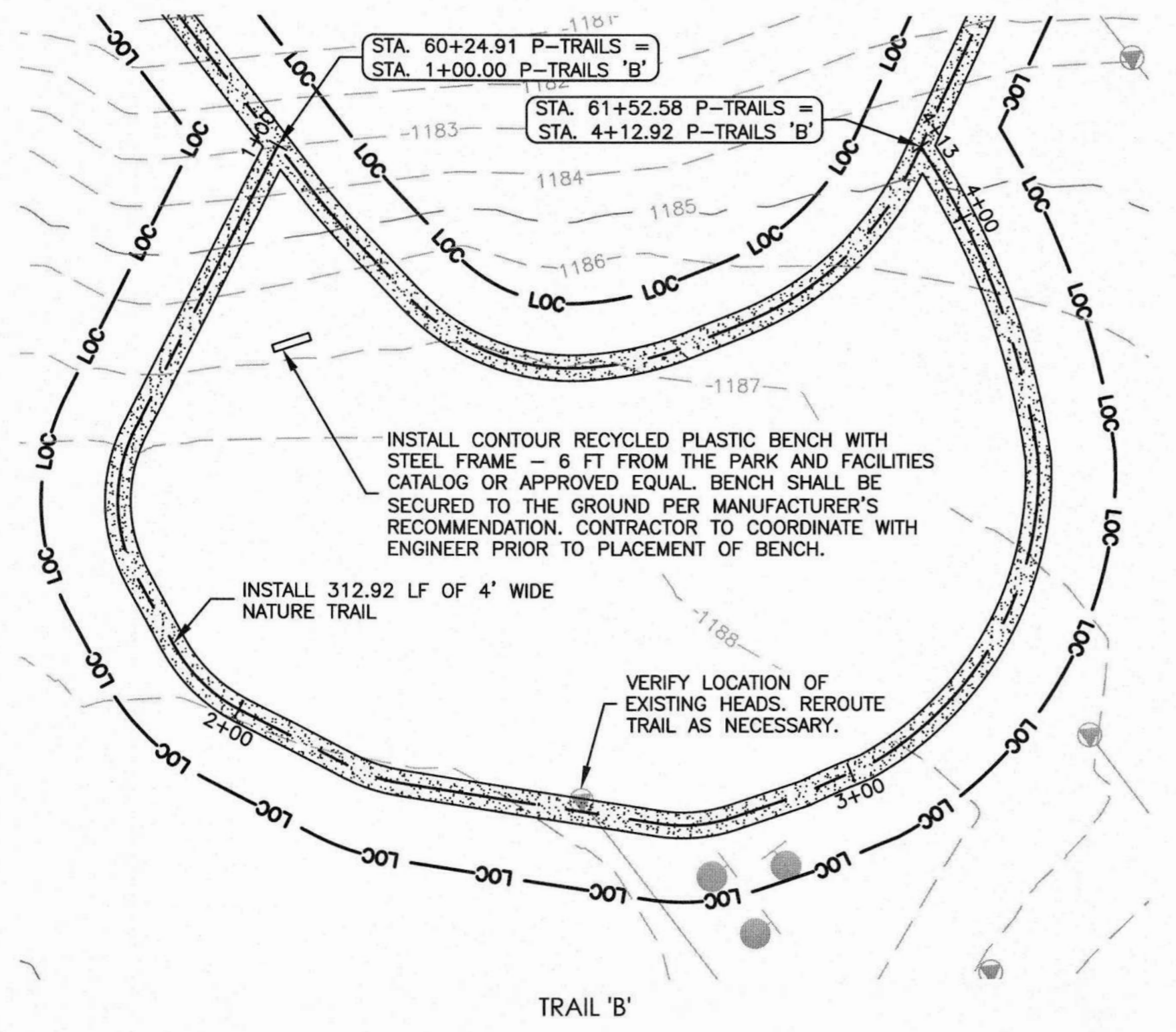
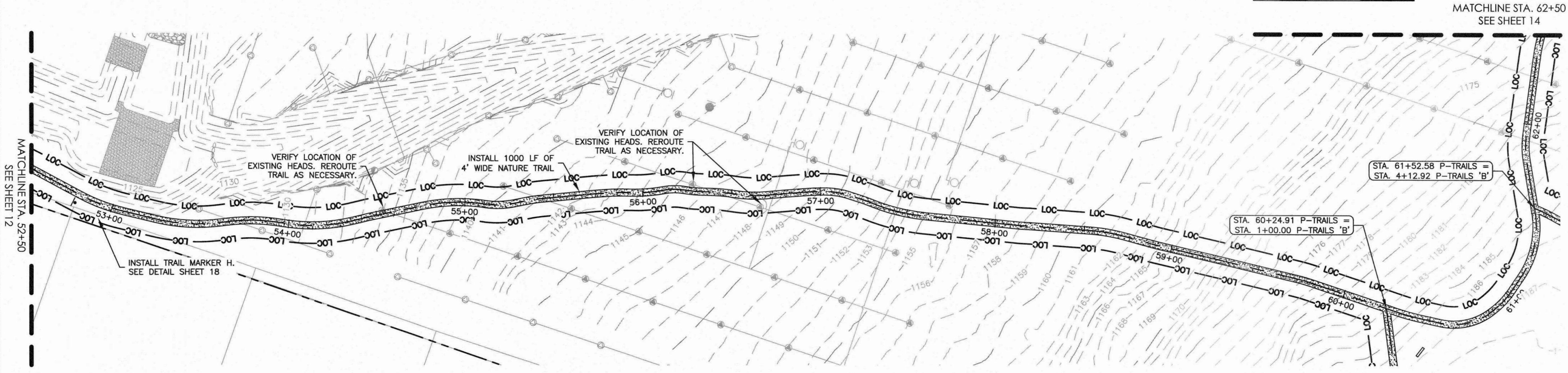
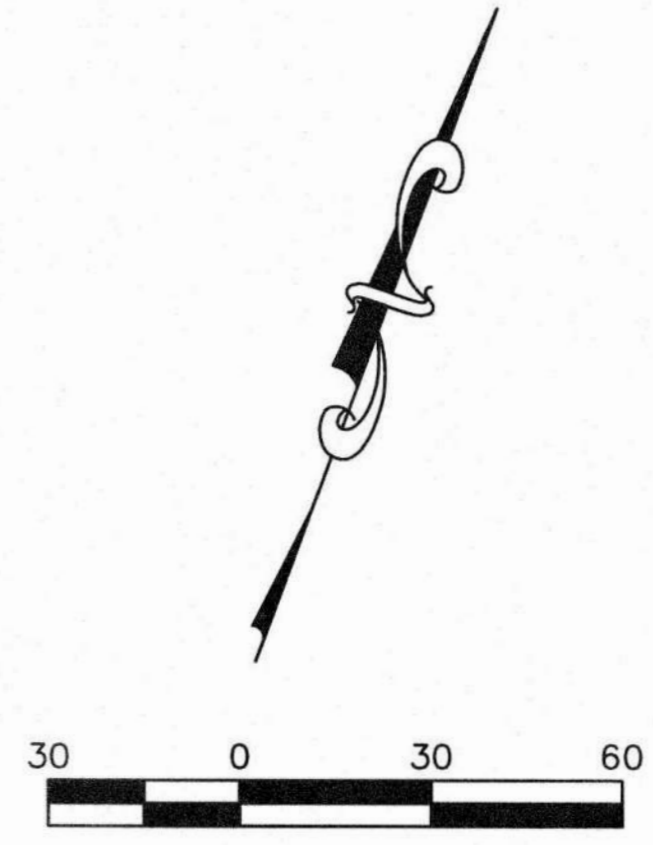
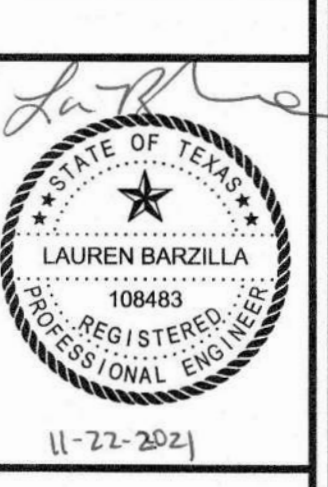
SHEET: 12 OF 19



HCWID NO. 2  
BELTERRA TRAIL EXTENSION  
MAIN TRAIL STA. 52+50 TO 62+50 &  
TRAIL 'B' PLAN

NO.	DESCRIPTION	DATE

JOB NO:	1987-001
DATE:	11/19/2021
DESIGNED BY:	JB, CC
DRAWN BY:	JB, CC
CHECKED BY:	LBB
APPROVED BY:	LBB

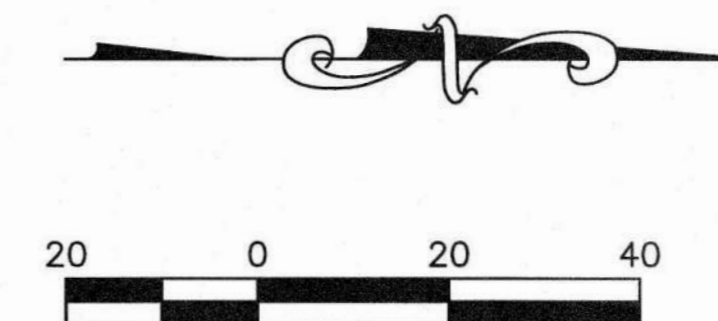
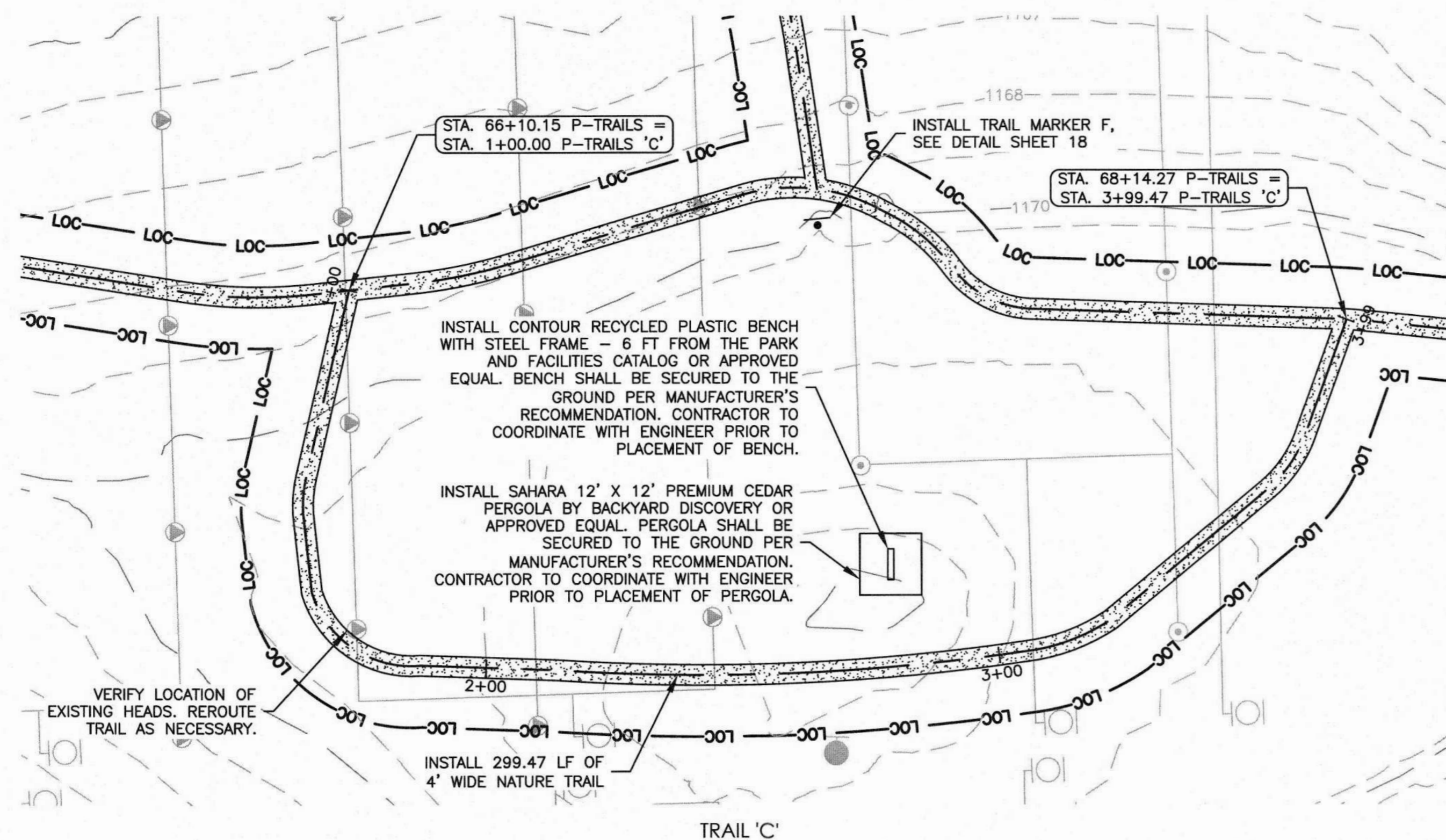
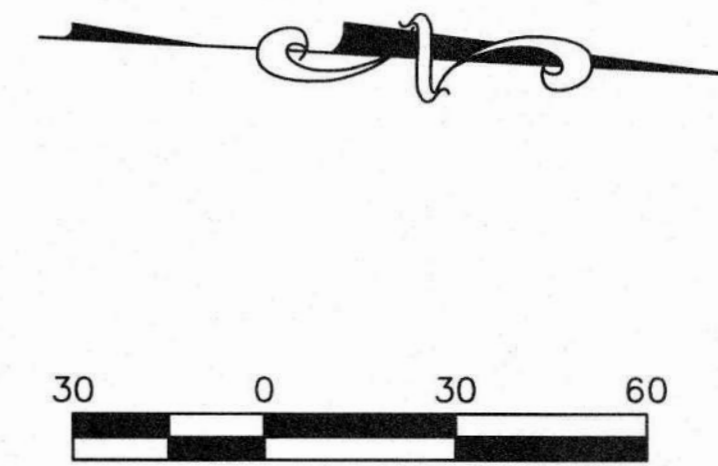
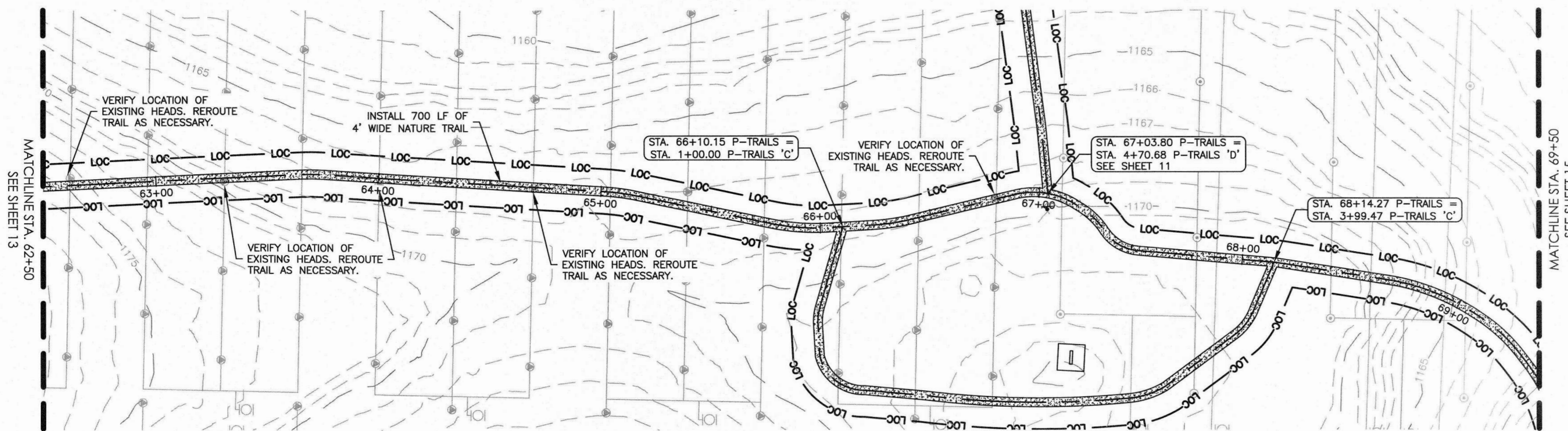


**LEGEND**

---	PROPERTY BOUNDARY
--- 1180 ---	EXISTING MAJOR CONTOURS
--- 1181 ---	EXISTING MINOR CONTOURS
---	PROPOSED CONCRETE TRAIL
---	PROPOSED DECOMPOSED GRANITE TRAIL
---	PROPOSED NATURE TRAIL
LOC LOC	LIMITS OF CONSTRUCTION
SF SF	PROPOSED SILT FENCE
○	EXISTING TREES (TO REMAIN)
○	EXISTING TREES (TO BE REMOVED)
□	ROCK BERM
□	EXISTING IRRIGATION VALVES
●	EXISTING IRRIGATION SPRAY HEADS
—●—	EXISTING TREATED EFFLUENT LINES

- NOTES:**
- CONTRACTOR TO AVOID ALL EXISTING UTILITIES INCLUDING BUT NOT LIMITED TO SPRAY HEADS, VALVE BOXES, ETC. CONTRACTOR WILL REROUTE PROPOSED TRAIL AS NECESSARY TO AVOID DISTURBING EXISTING FACILITIES. CONTACT ENGINEER IF A FIELD CHANGE IS NEEDED. NO SEPARATE PAY.
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**NOTES:**

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**LEGEND**

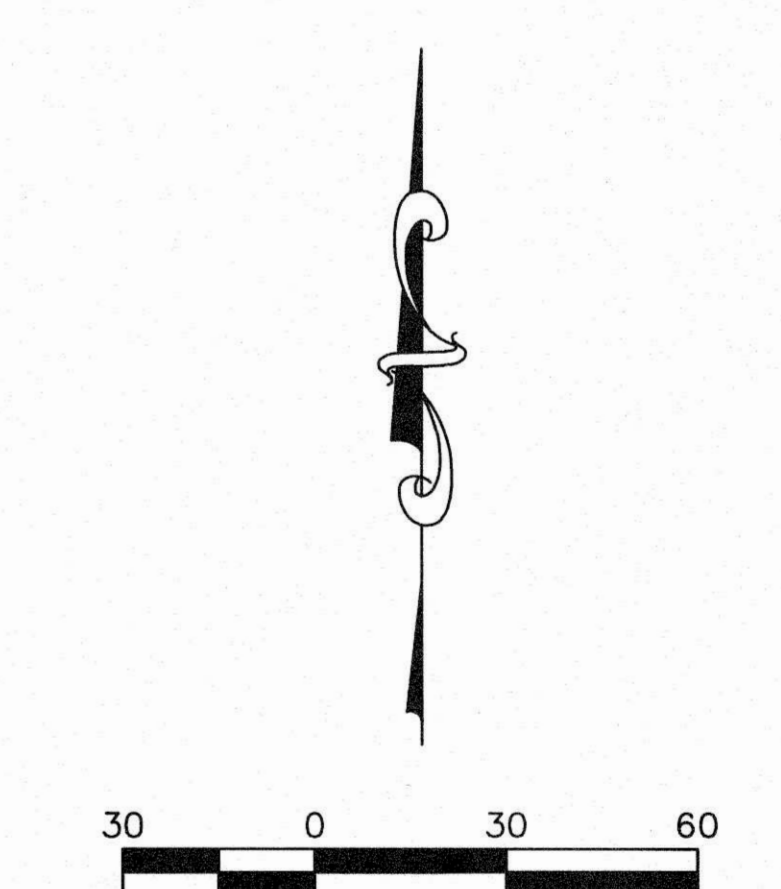
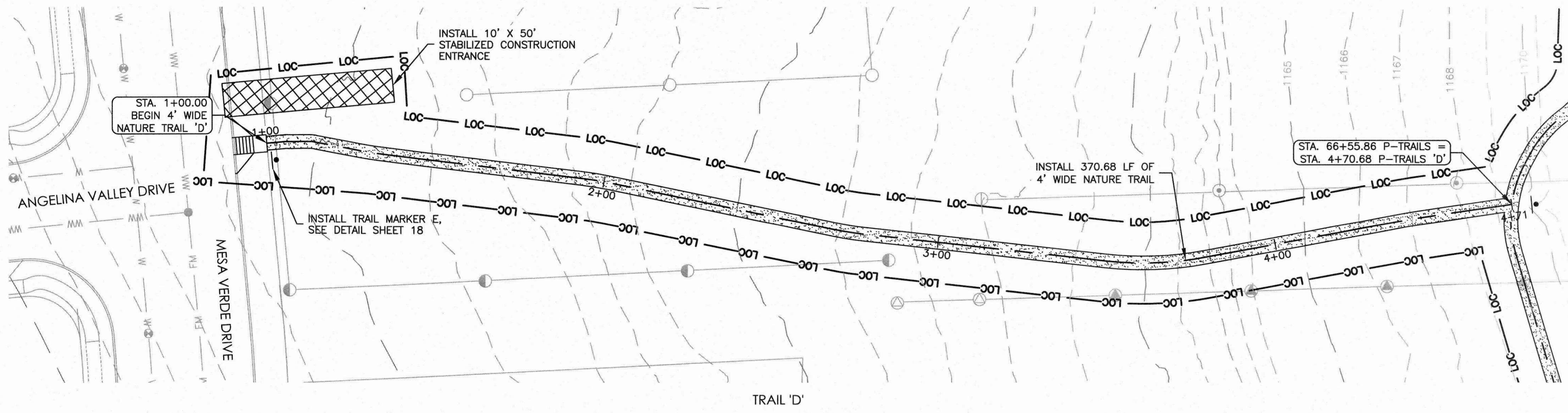
- — — — — PROPERTY BOUNDARY
- — — — — EXISTING MAJOR CONTOURS
- — — — — EXISTING MINOR CONTOURS
- — — — — PROPOSED CONCRETE TRAIL
- — — — — PROPOSED DECOMPOSED GRANITE TRAIL
- — — — — PROPOSED NATURE TRAIL
- LOC — LOC — LIMITS OF CONSTRUCTION
- SF — SF — PROPOSED SILT FENCE
- EXISTING TREES (TO REMAIN)
- EXISTING TREES (TO BE REMOVED)
- — — — — ROCK BERM
- EXISTING IRRIGATION VALVES
- EXISTING IRRIGATION SPRAY HEADS
- EXISTING TREATED EFFLUENT LINES

NO.	DESCRIPTION	DATE

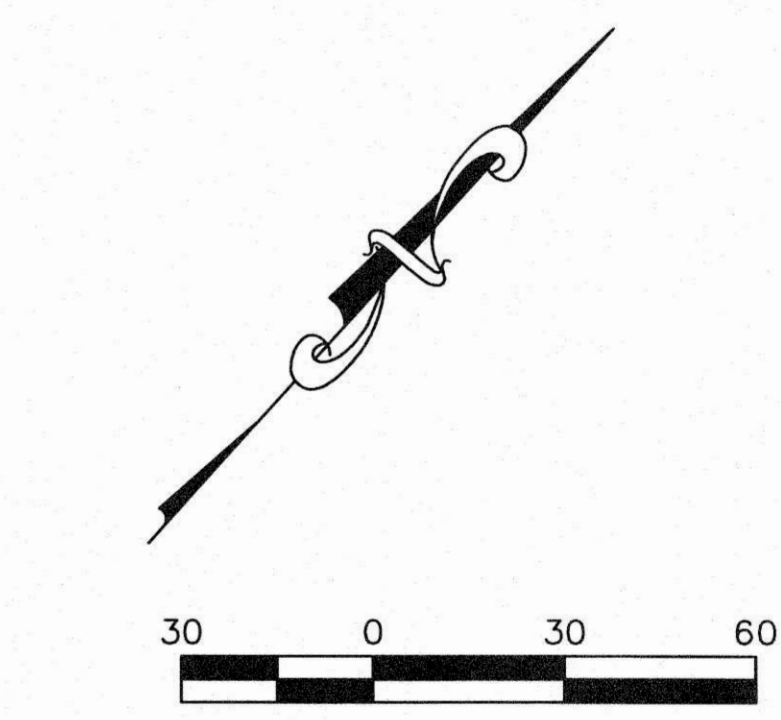
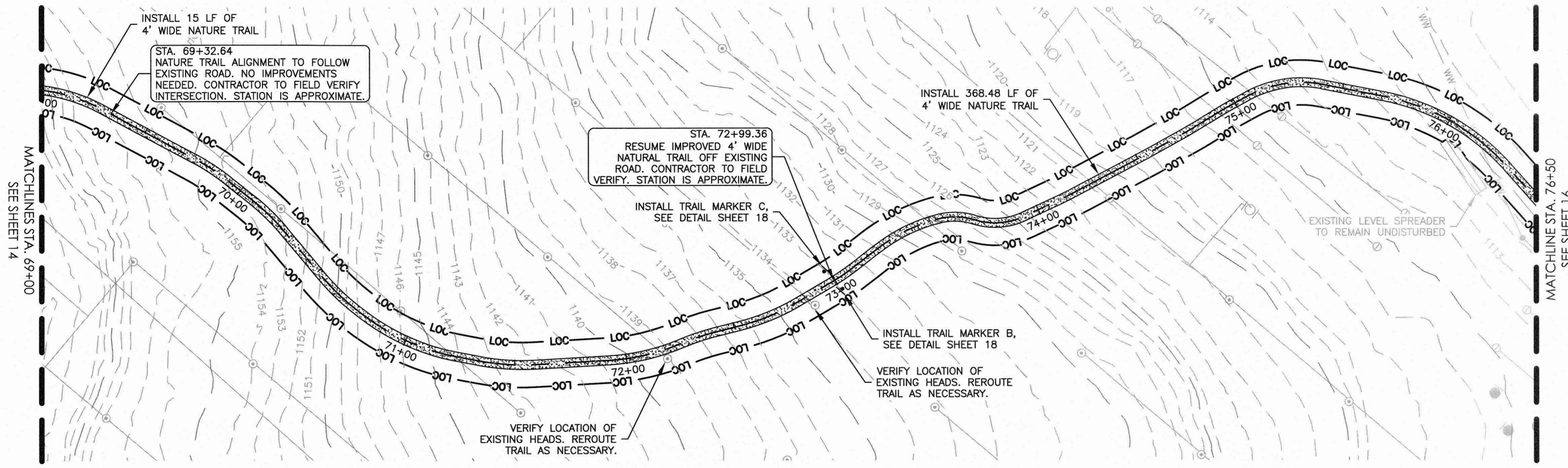
JOB NO: 1987-001  
DATE: 11/19/2021  
DESIGNED BY: JB, CC  
DRAWN BY: JB, CC  
CHECKED BY: LBB  
APPROVED BY: LBB







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**LEGEND**

- — — — — PROPERTY BOUNDARY
- --- --- EXISTING MAJOR CONTOURS
- --- --- EXISTING MINOR CONTOURS
- ▨▨▨▨▨▨▨▨▨▨ PROPOSED CONCRETE TRAIL
- ▨▨▨▨▨▨▨▨▨▨ PROPOSED DECOMPOSED GRANITE TRAIL
- ▨▨▨▨▨▨▨▨▨▨ PROPOSED NATURE TRAIL
- LOC — LOC — LIMITS OF CONSTRUCTION
- SF — SF — PROPOSED SILT FENCE
- EXISTING TREES (TO REMAIN)
- EXISTING TREES (TO BE REMOVED)
- ▭ ROCK BERM
- EXISTING IRRIGATION VALVES
- EXISTING IRRIGATION SPRAY HEADS
- — — — — EXISTING TREATED EFFLUENT LINES

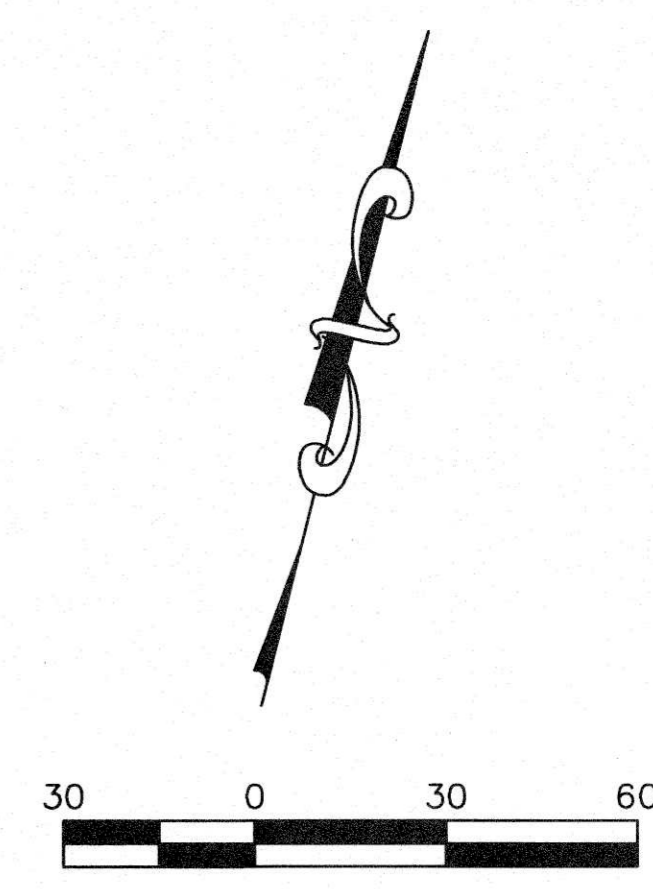
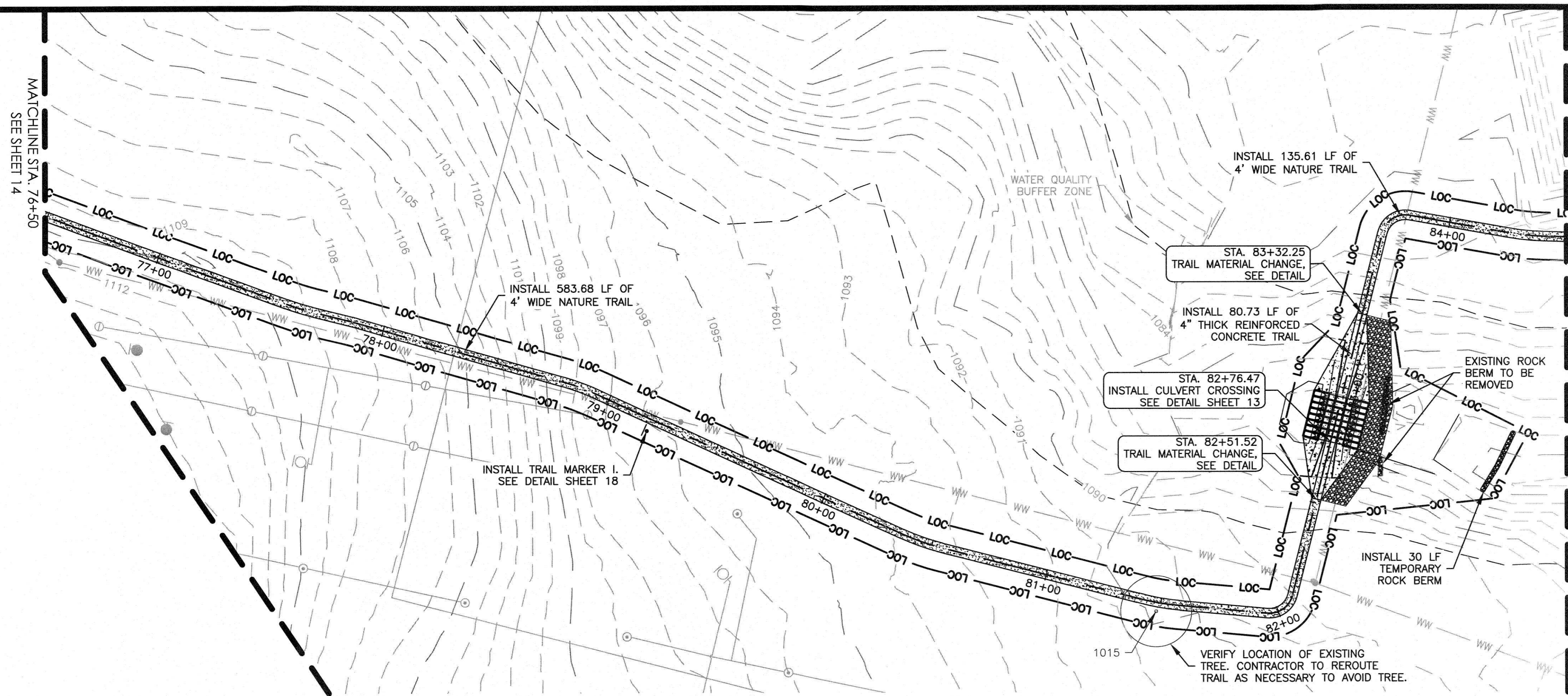
235 LEDGE STONE DR.  
AUSTIN, TX 78737

HCWCD NO. 2  
BELTERRA TRAIL EXTENSION  
MAIN TRAIL STA. 69+00 TO 76+50 &  
TRAIL 'D' PLAN

NO.	DESCRIPTION	DATE

JOB NO: 1987-001  
DATE: 11/19/2021  
DESIGNED BY: JB, CC  
DRAWN BY: JB, CC  
CHECKED BY: LBB  
APPROVED BY: LBB





**TREE TABLE**

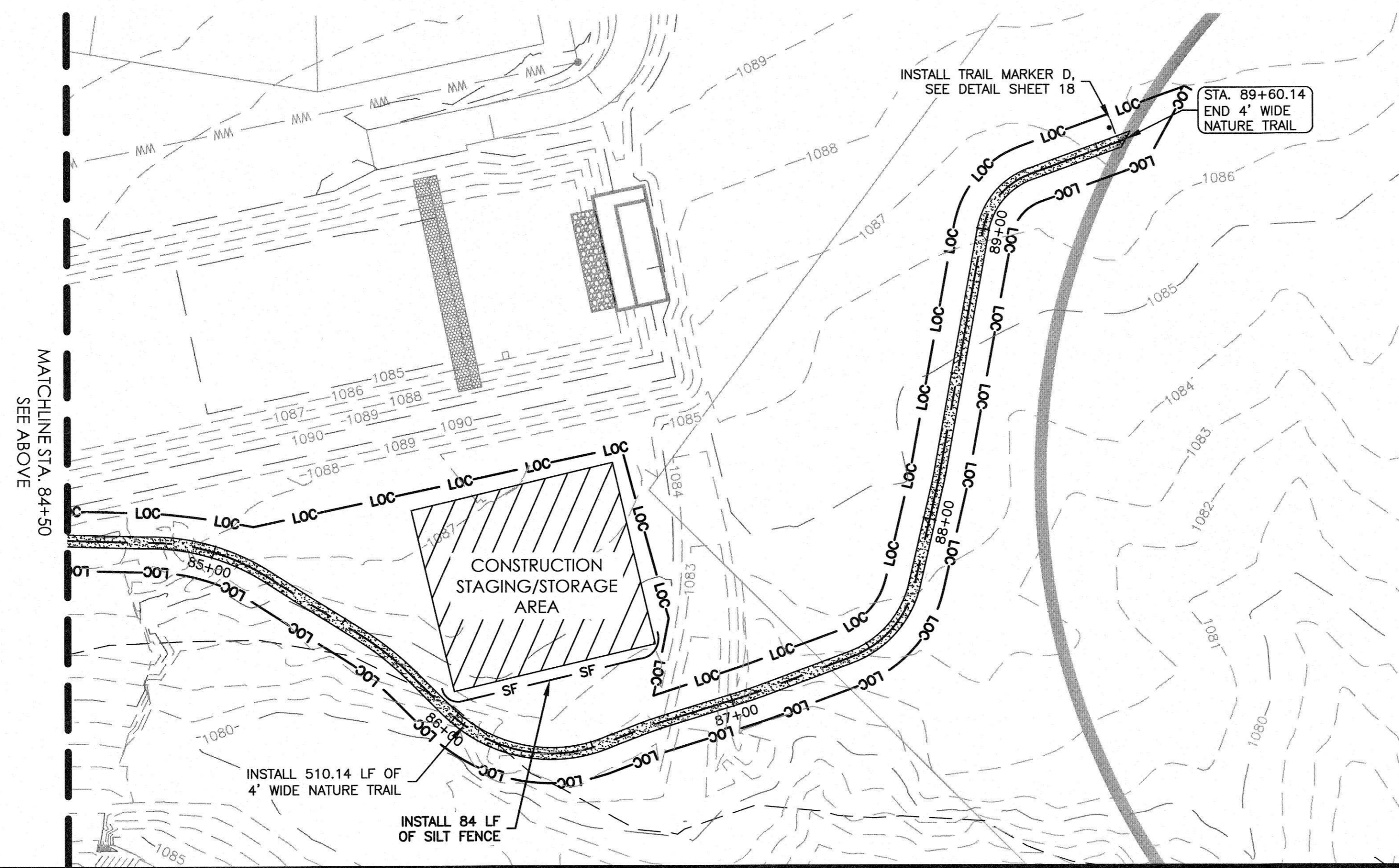
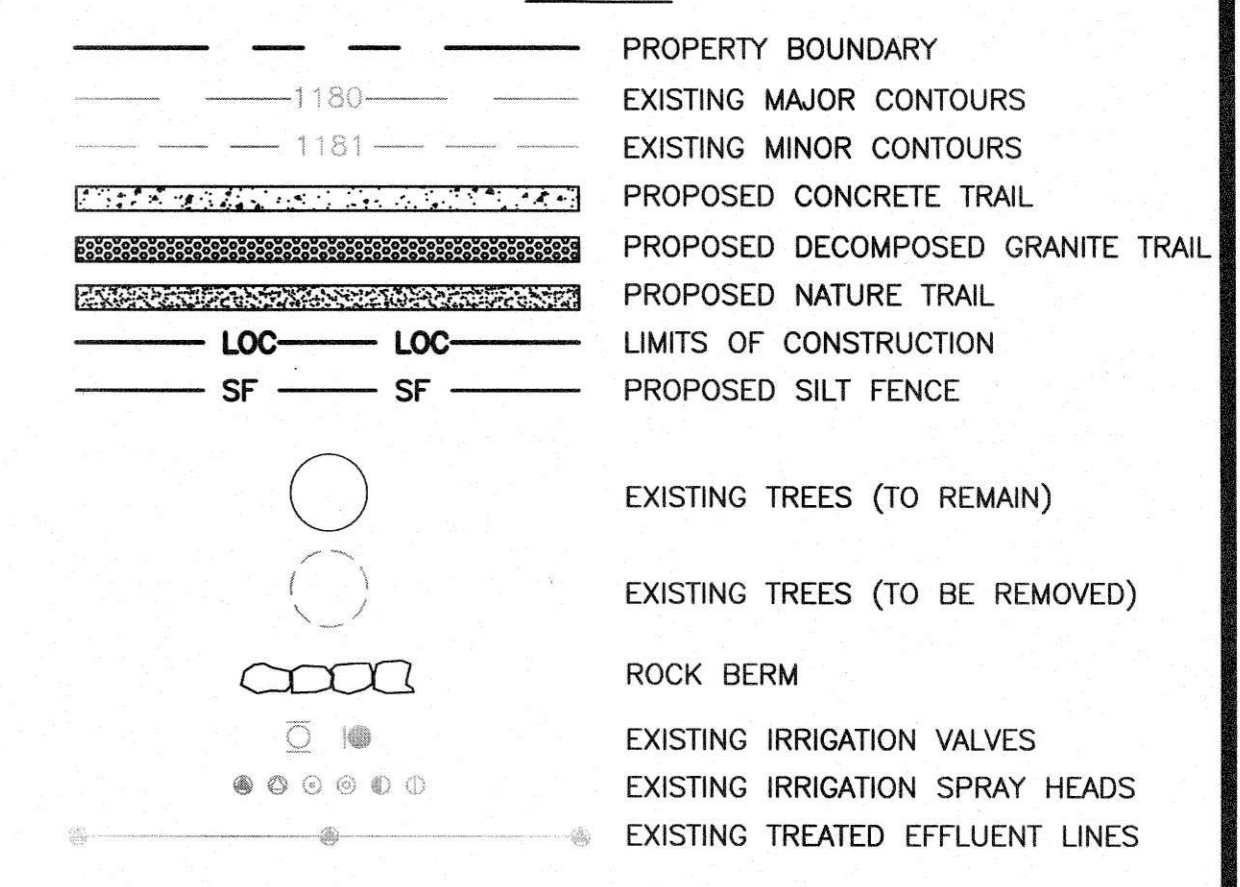
TAG NO.	DESCRIPTION
1015	15" CEDAR (6-6-4-4)
1112	5" LIVE OAK
1114	5" LIVE OAK
* 1116	6" LIVE OAK
1117	5" LIVE OAK
1118	5" LIVE OAK
1121	9" LIVE OAK
* 1122	8" CEDAR
1144	12" LIVE OAK
* 1145	14" LIVE OAK
* 1148	9" CEDAR
* 1151	5" CEDAR
1154	7" LIVE OAK

\*TREES TO BE REMOVED

**NOTES:**

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**LEGEND**



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AUSTIN, TX 78737

**B&N**  
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HCWICD NO. 2  
BELTERRA TRAIL EXTENSION  
MAIN TRAIL STA. 76+50 TO END

NO.	DESCRIPTION	DATE

JOB NO: 1987-001

DATE: 11/19/2021

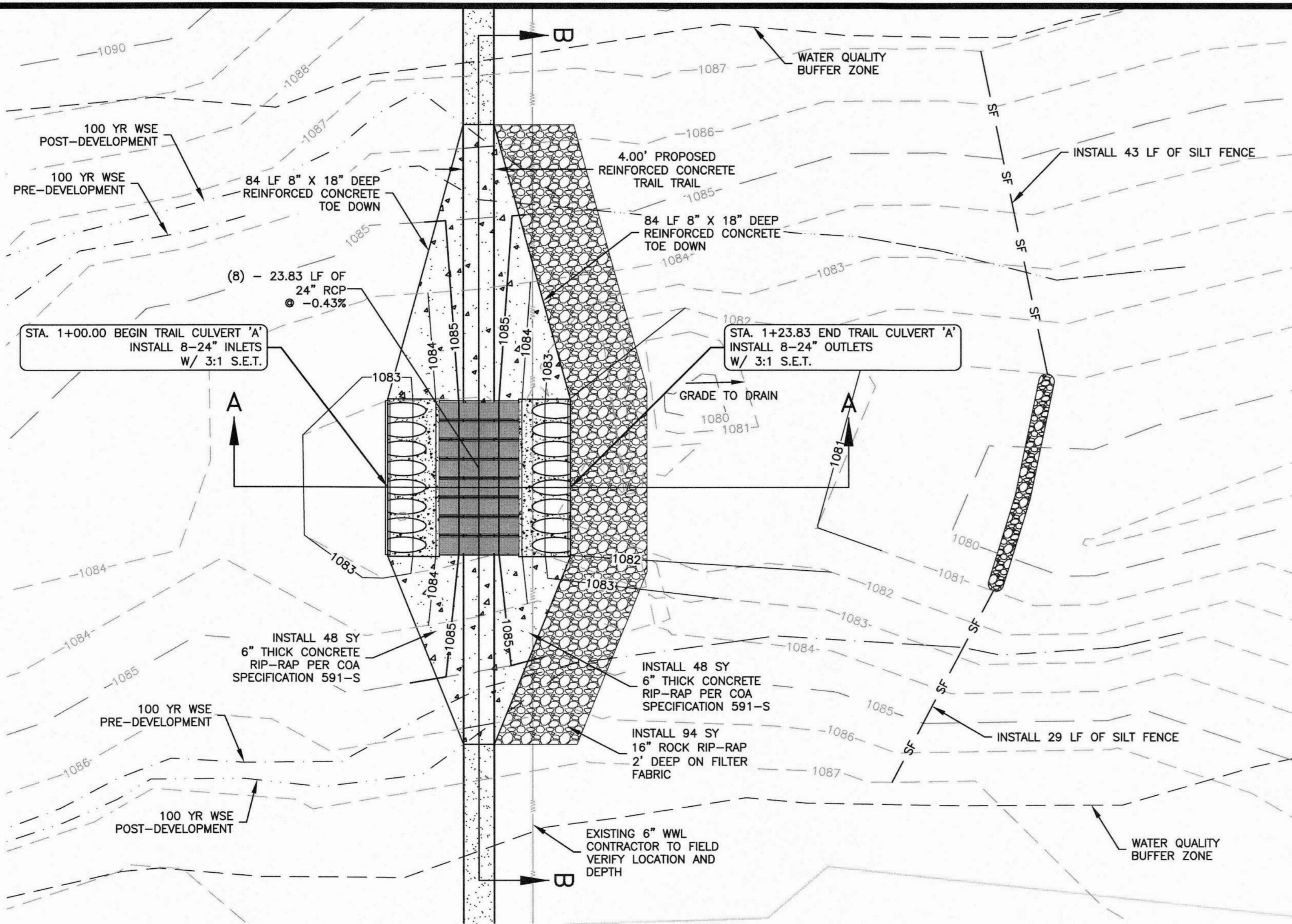
DESIGNED BY: JB, CC

DRAWN BY: JB, CC

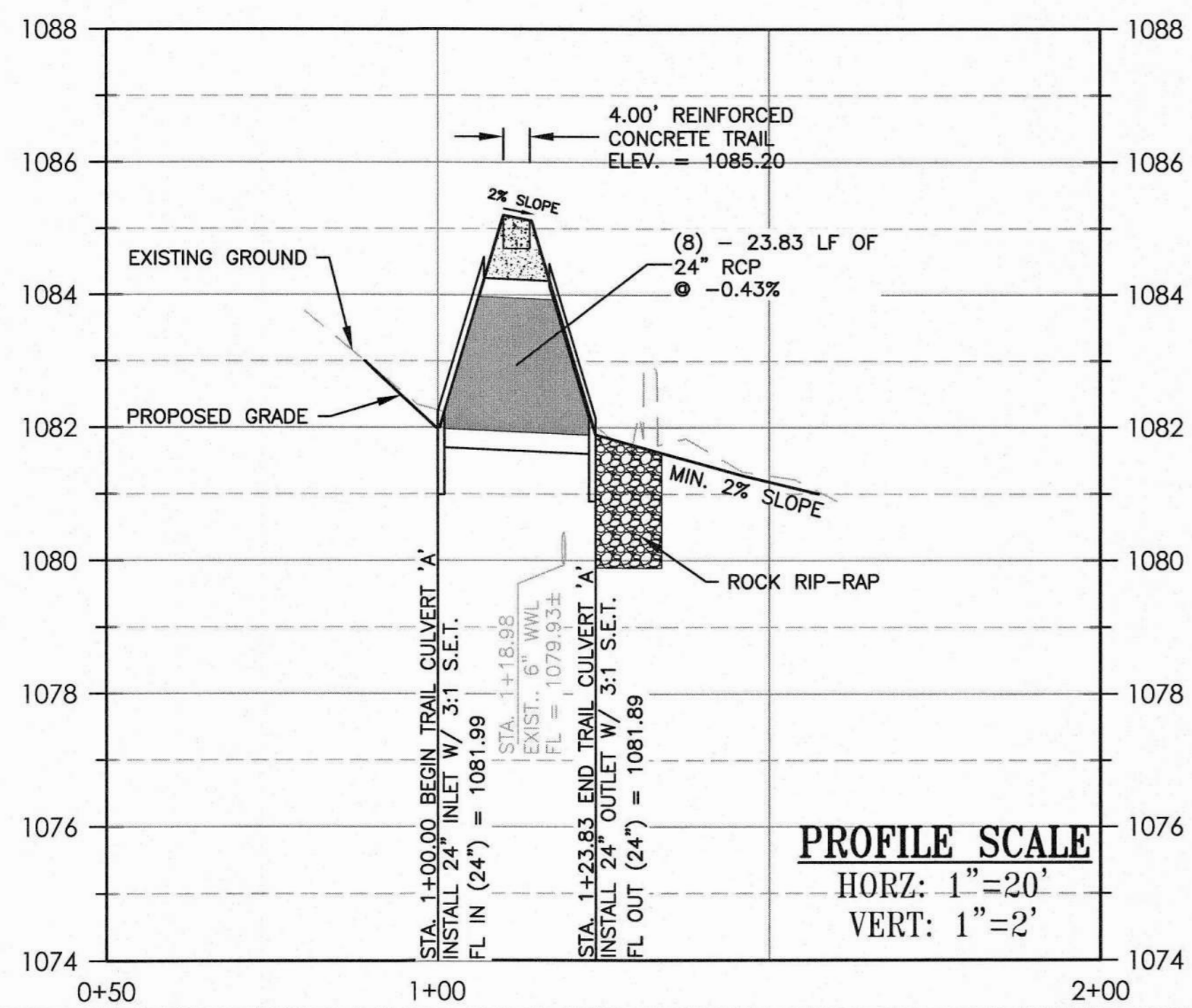
CHECKED BY: LBB

APPROVED BY: LBB

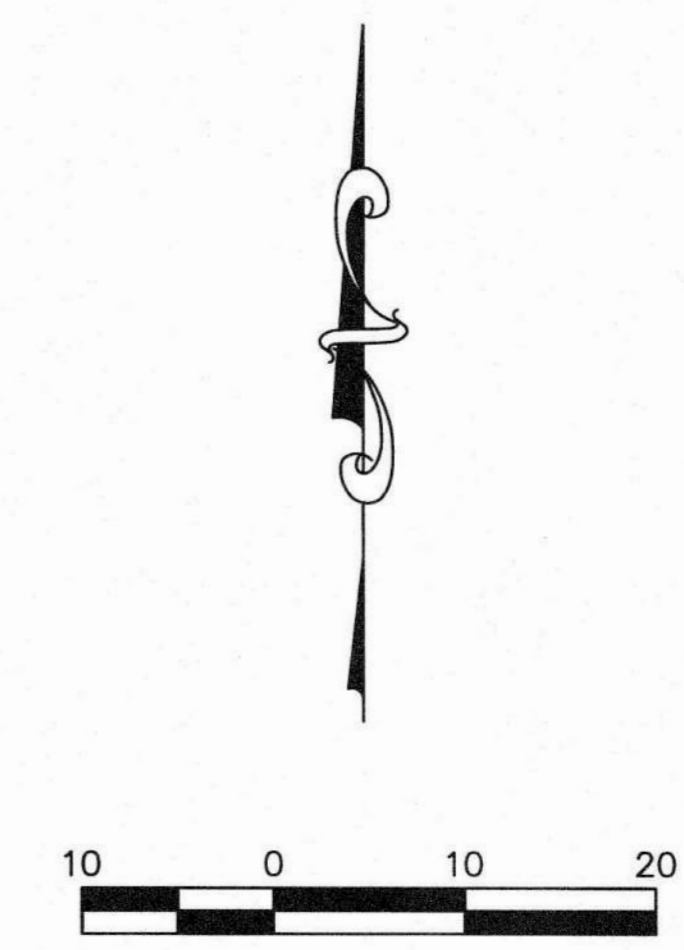
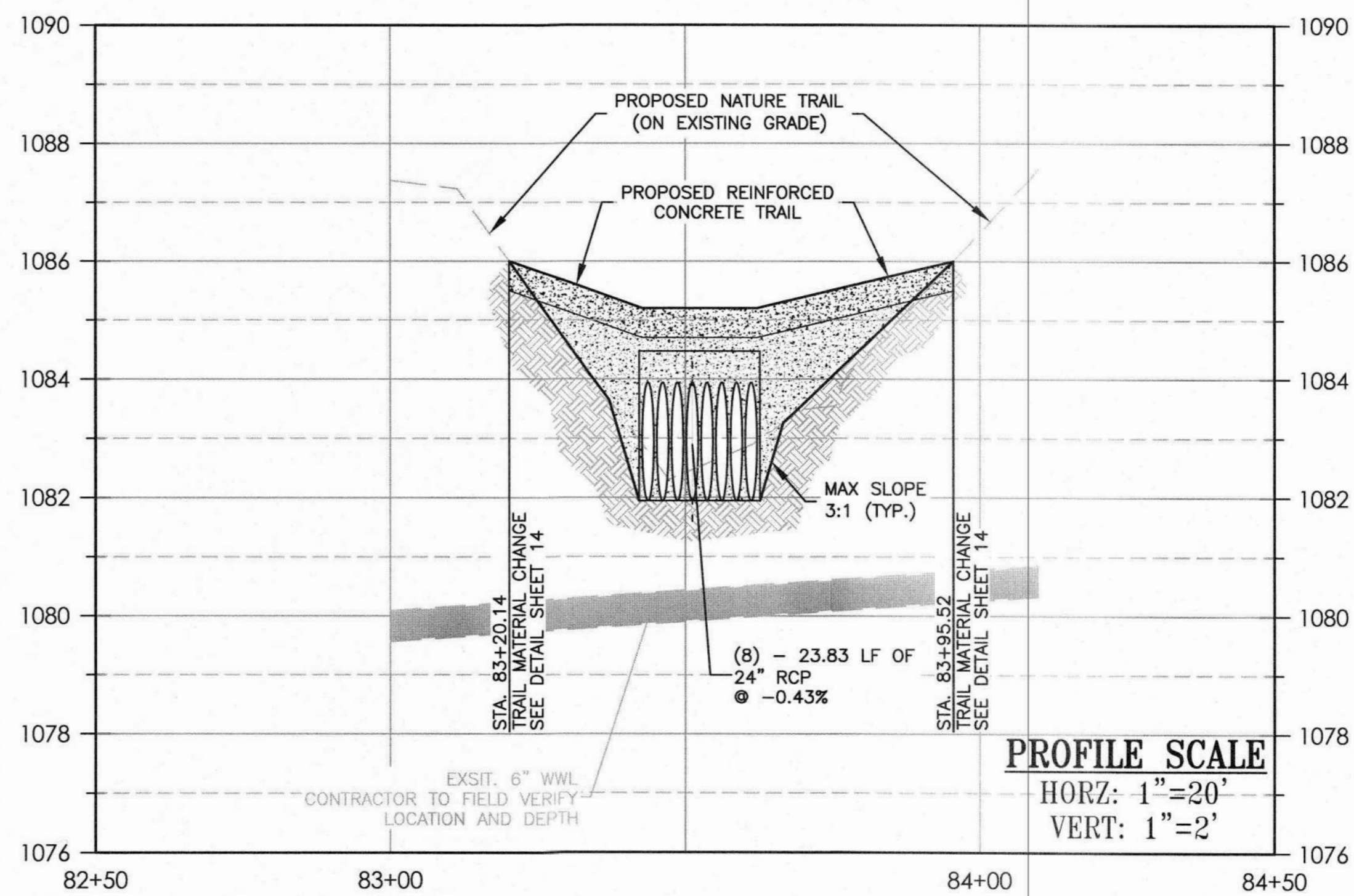




TRAIL CULVERT 'A'



TRAIL CULVERT 'B-B'



LEGEND

---	PROPERTY BOUNDARY
---	PROPOSED CONTOURS
---	PROPOSED CONTOURS
---	EXISTING MAJOR CONTOURS
---	EXISTING MINOR CONTOURS
---	PROPOSED STORMSEWER LINE
---	PROPOSED TRAIL

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AUSTIN, TX 78737



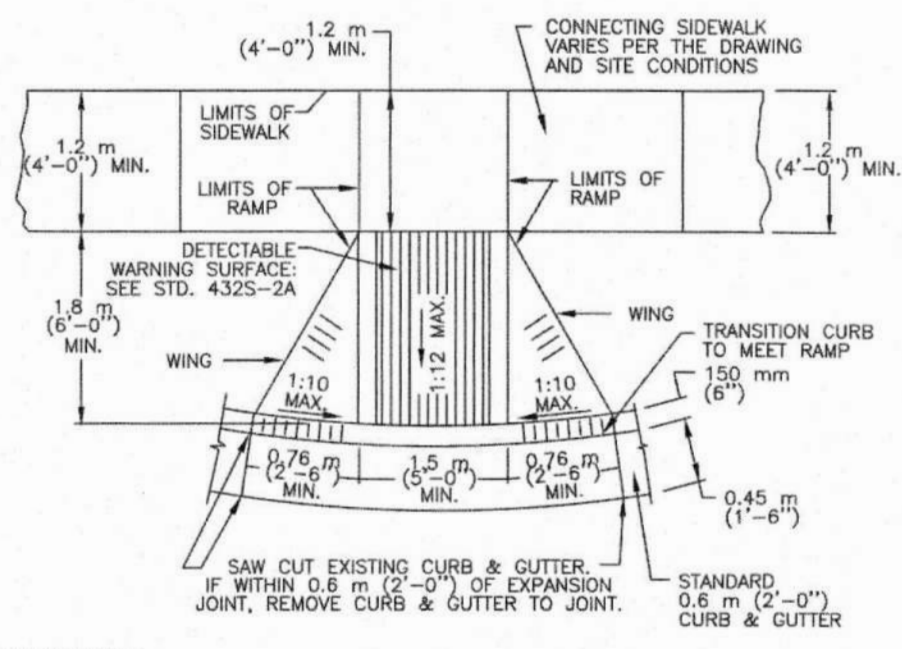
HCWCD NO. 2  
BELTERRA TRAIL EXTENSION  
CULVERT CROSSING

NO.	DESCRIPTION	DATE

JOB NO:	1987-001
DATE:	11/19/2021
DESIGNED BY:	JB, CC
DRAWN BY:	JB, CC
CHECKED BY:	LBB
APPROVED BY:	LBB

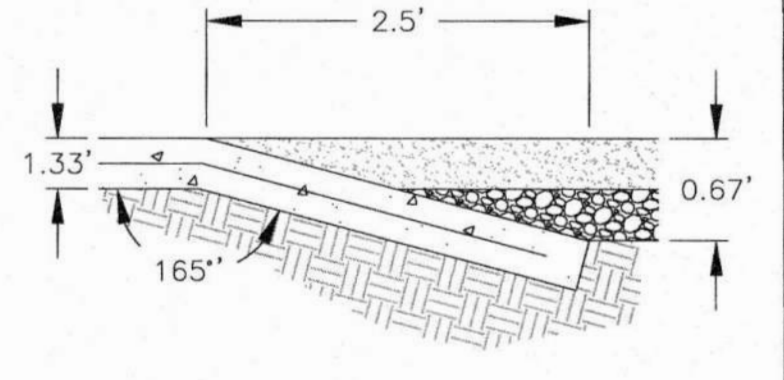




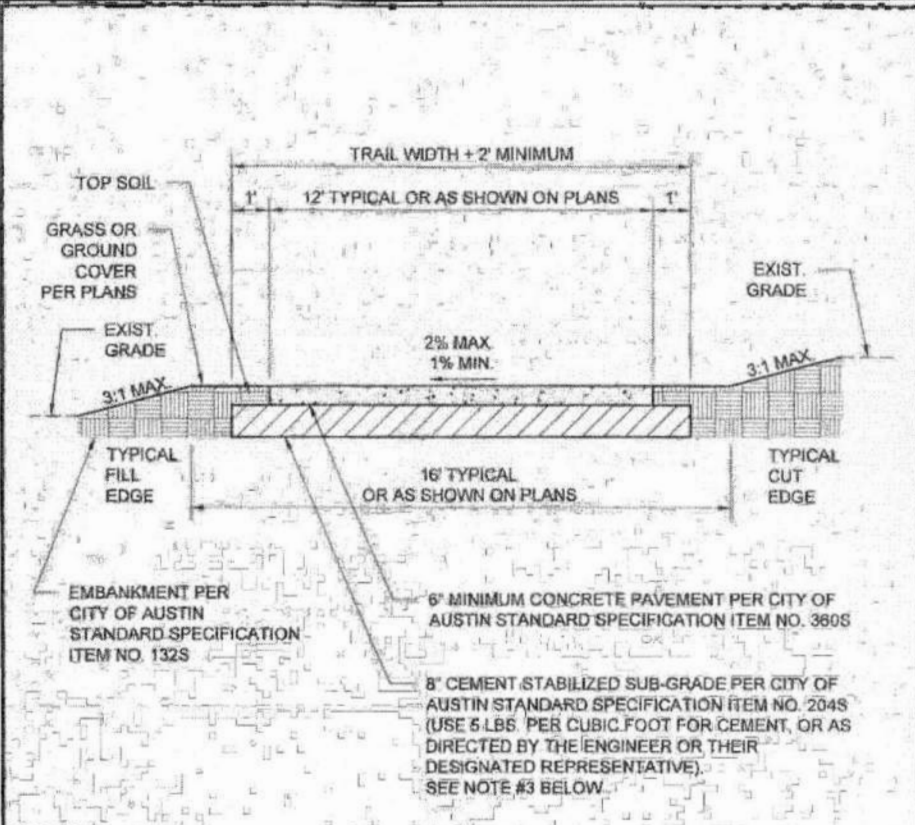


- GENERAL NOTES:**
- RAMP WILL HAVE DETECTABLE WARNING THAT CONSISTS OF A GROOVED SURFACE WITH GROOVES 1/4" DEEP, 3/4" WIDE AND 2" SPACING.
  - GROOVED SURFACE SHALL BE DIED CONCRETE OF CONTRASTING COLOR, CHOSEN BY OWNER. CONTRACTOR TO USE LITHOCHROME CHEMSTAIN COLOR CS-14 DARK WALNUT, SEALED WITH CEMENTITIOUS CLEAR SEALER. L. M. SCOFFIELD COMPANY (1-800-800-8900)
  - TYPICAL SIDEWALK WIDTHS AND CURB RADII ARE SHOWN FOR ILLUSTRATION. REFER TO APPROPRIATE DETAILS FOR SIDEWALK WIDTHS, CURB RADII AND CURB BARRIS.
  - THE PERMISSIBLE CONSTRUCTION JOINT BETWEEN THE RAMP SURFACE AND THE LAYDOWN CURB SHALL BE LIMITED TO 6 mm (1/4") JOINT SIZE. GAPS LARGER THAN 6 mm (1/4") MUST BE APPROVED BY THE PROJECT MANAGER/INSPECTOR. GAPS GREATER THAN 6 mm (1/4") SHALL BE SOLID MORTAR FILLED BETWEEN THE BRICK PAVERS AND CURB UNLESS OTHERWISE INSTRUCTED BY THE PROJECT MANAGER/INSPECTOR.
  - MORTAR SHALL CONFORM TO ITEM 403.5 (6)403.2 (6). MORTAR (GROUT). ALL OTHER CONCRETE SHALL CONFORM TO ITEM 403.403.3. "CONCRETE FOR STRUCTURES" UNLESS NOTED OTHERWISE.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK CURB RAMP
RECORD COPY SIGNED BY BILL GARDNER	03/26/08
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED
STANDARD NO.	432S-1
	1 OF 1

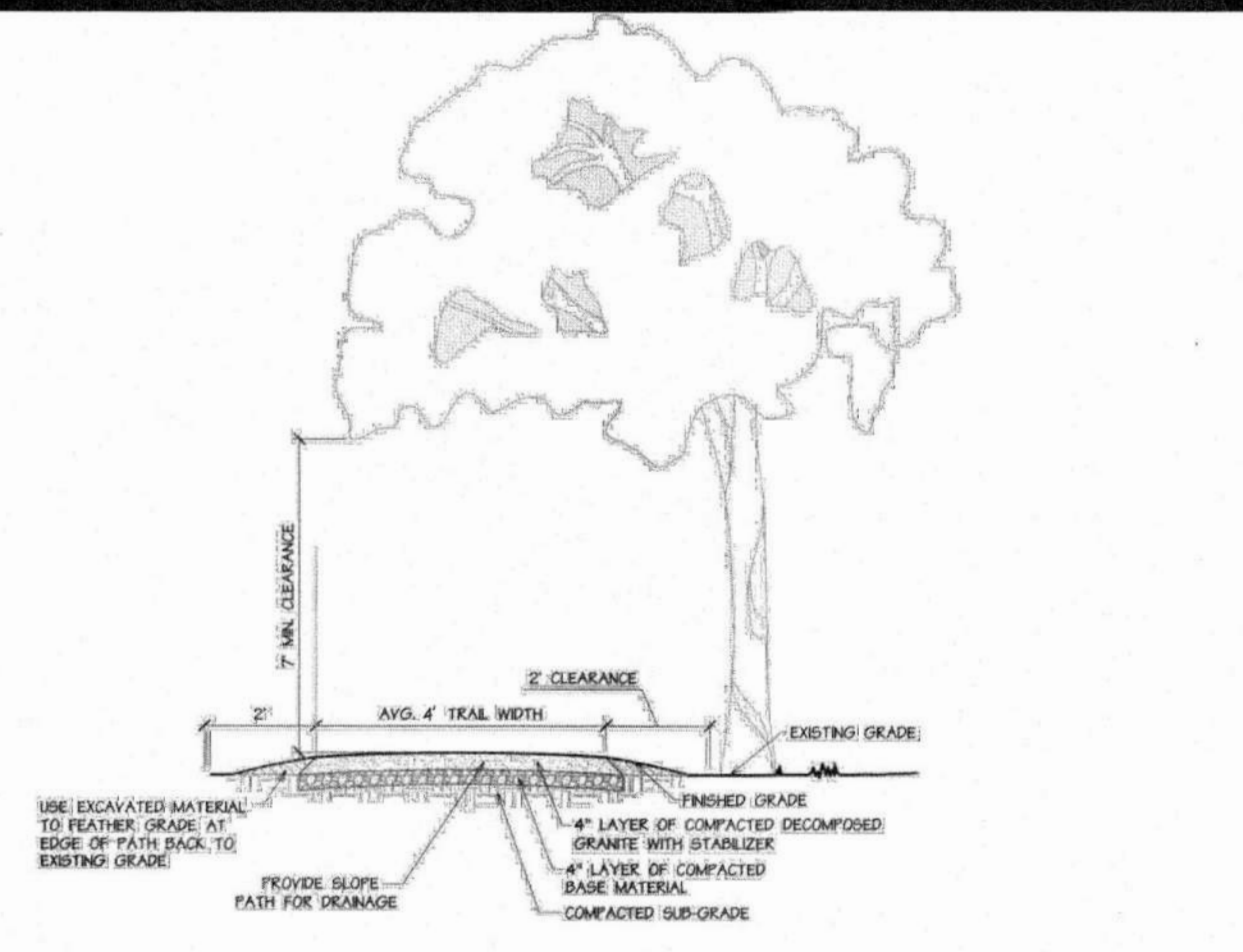


**TRAIL MATERIAL CHANGE**  
NOT TO SCALE



- NOTES:**
- CONTRACTION JOINT PATTERN SHALL BE DETERMINED UPON FINAL CONFIGURATION OF TRAIL DESIGN. CONTRACTION JOINTS SHALL BE MADE USING EARLY-ENTRY SAW CUTTING OR A PREFORMED CONTRACTION JOINT MATERIAL (COP STRIP OR APPROVED EQUIVALENT).
  - RECOMMEND SLIP FORM PAVEMENT FOR CONCRETE AND A RECLAIMER FOR THE SUB-GRADE MIXING.
  - LIME STABILIZED SUB-GRADE (C.O.A. ITEM NO. 2035) COULD BE USED IN-PLACE OF CEMENT STABILIZED SUB-GRADE AS SHOWN ON THE DRAWINGS, AT THE DISCRETION OF THE ENGINEER OR THEIR DESIGNATED REPRESENTATIVE DEPENDING ON THE PROJECT LOCATION AND THE SOIL CONDITIONS. THE DEPTH OF THE SUB-GRADE CAN BE MODIFIED DEPENDING ON THE GEOTECHNICAL ENGINEERING REPORT, AT THE DISCRETION OF THE ENGINEER OR THEIR DESIGNATED REPRESENTATIVE.
  - IF USING A CUT SECTION WITH 3:1 MAXIMUM SIDE SLOPE, A SWALE (U-SHAPED) SHALL BE PROVIDED ON THE SIDE OF THE TRAIL TO PREVENT WATER FROM INFILTRATING THE TRAIL.
  - ALL WORK IN CRITICAL WATER QUALITY ZONE TO COMPLY WITH CITY OF AUSTIN LDC § 23-8-281.

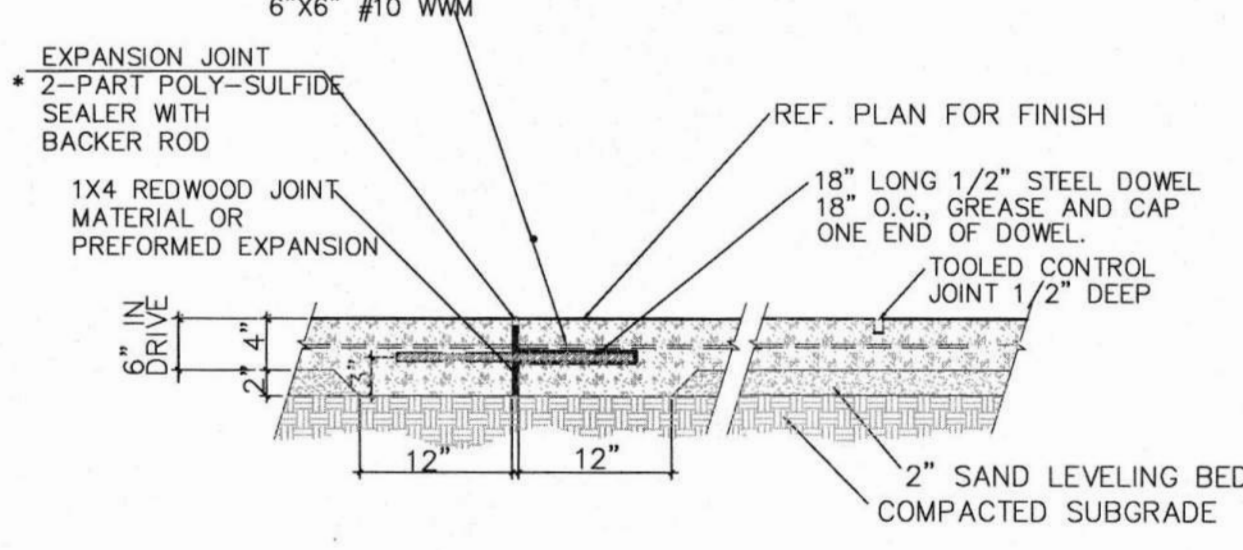
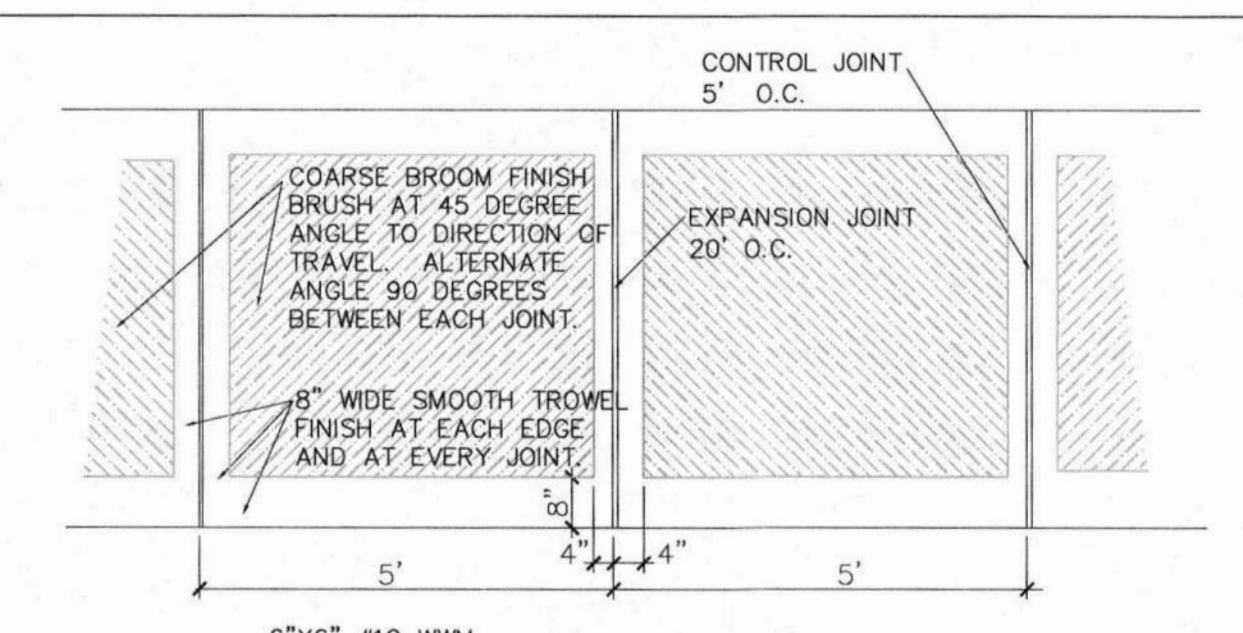
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPICAL CONCRETE URBAN TRAIL DETAIL
RECORD COPY SIGNED BY BILL GARDNER	03/26/08
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED
STANDARD NO.	1302S-1
	1 OF 1



**1 DECOMPOSED GRANITE TRAIL**  
SCALE: N.T.S.

- NOTES:**
- LIGHT DISTURBANCE TO 2" OR LESS.
  - MARK ALL PLANT MATERIAL TO BE REMOVED AND REVIEW WITH ENGINEER.
  - SCAPE TRAIL TO REMOVE VEGETATION FROM TRAIL AND PAVEMENT SURFACE.
  - ACTUAL TRAIL LAYOUT TO BE FIELD DETERMINED AND REVIEWED WITH ENGINEER PRIOR TO CONSTRUCTION.
  - CLEAR ALL BRANCHES TO 7" ABOVE TRAIL.
  - REMOVE ANY STONES GREATER THAN 2" IN DIAMETER.

**2 NATURE TRAIL**  
SCALE: 1/2" = 1'-0"



- NOTES:**
- EXPANSION JOINT MAY BE FORMED WITH REDWOOD OR PREFORMED EXPANSION JOINT MATERIAL. INSTALL WITH "ZIP STRIP" OR 1x1 WOOD STRIP AT SURFACE TO LEAVE A VOID FOR THE JOINT SEALER.
  - EXPANSION JOINTS ARE TO BE 20' ON CENTER UNLESS NOTED OTHERWISE ON PLAN.
  - CONTROL JOINTS ARE TO BE 5' ON CENTER UNLESS NOTED OTHERWISE ON PLAN.
  - JOINT LAYOUT AT WALK CURVES AND INTERSECTIONS SHALL BE ACCORDING TO THE LAYOUT SHOWN ON THE PLAN DOCUMENTS. VARIATIONS TO THE JOINT LAYOUT MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE. FAILURE TO GAIN APPROVAL FOR VARIATIONS MAY BE CAUSE FOR REJECTION OF WORK.

**SIDEWALK PLAN AND FINISH DETAIL** NOT TO SCALE

**STABILIZED DECOMPOSED GRANITE PAVEMENT CONSTRUCTION NOTES:**

- MATERIALS**
- BASE MATERIAL FOR SUBGRADE PREPARATION SHALL BE CRUSHED LIMESTONE AGGREGATE MEETING GRADATIONS AND REQUIREMENTS FOR ROADWAY CONSTRUCTION.
  - GRANITE FOR SURFACE COURSE SHALL BE NATURALLY DECOMPOSED GRANITE FROM REGIONALLY AVAILABLE SOURCES (MARBLE FALLS OR OTHER AREA), RED TO DARK PINK IN COLOR. IT SHALL BE COMPOSED OF A MIXTURE OF UNWASHED, DURABLE PARTICLES OR FRAGMENTS OF GRANITE CONTAINING CLAY FINES TO MEET THE FOLLOWING GRADATIONS:  

RETAINED BY 5/8" SIEVE	0%
RETAINED BY 3/8" SIEVE	15%-25%
RETAINED BY #4 SIEVE	40%-55%
RETAINED BY #10 SIEVE	20%-35%
- CONTRACTOR SHALL SPECIFY SOURCE AND PROVIDE ACTUAL SAMPLE OF AGGREGATE FOR APPROVAL PRIOR TO COMMENCING INSTALLATION.
- SOIL SOLIDIFIER: POLYPAVEMENT, A NON-TOXIC, COLORLESS, LIQUID SOIL STABILIZER THAT BINDS SOIL AND CRUSHED AGGREGATE SCREENINGS TOGETHER CREATING A NATURAL APPEARING, FIRM TRAIL SURFACE. POLYPAVEMENT IS MANUFACTURED AND DISTRIBUTED BY POLYPAVEMENT, P.O. BOX 36339, LOS ANGELES, CALIFORNIA 90036. PHONE: (323)954-2240, FAX: (323)954-2244.
- CONTRACTOR SHALL PROVIDE COPIES OF SOIL SOLIDIFIER DELIVERY RECEIPTS.

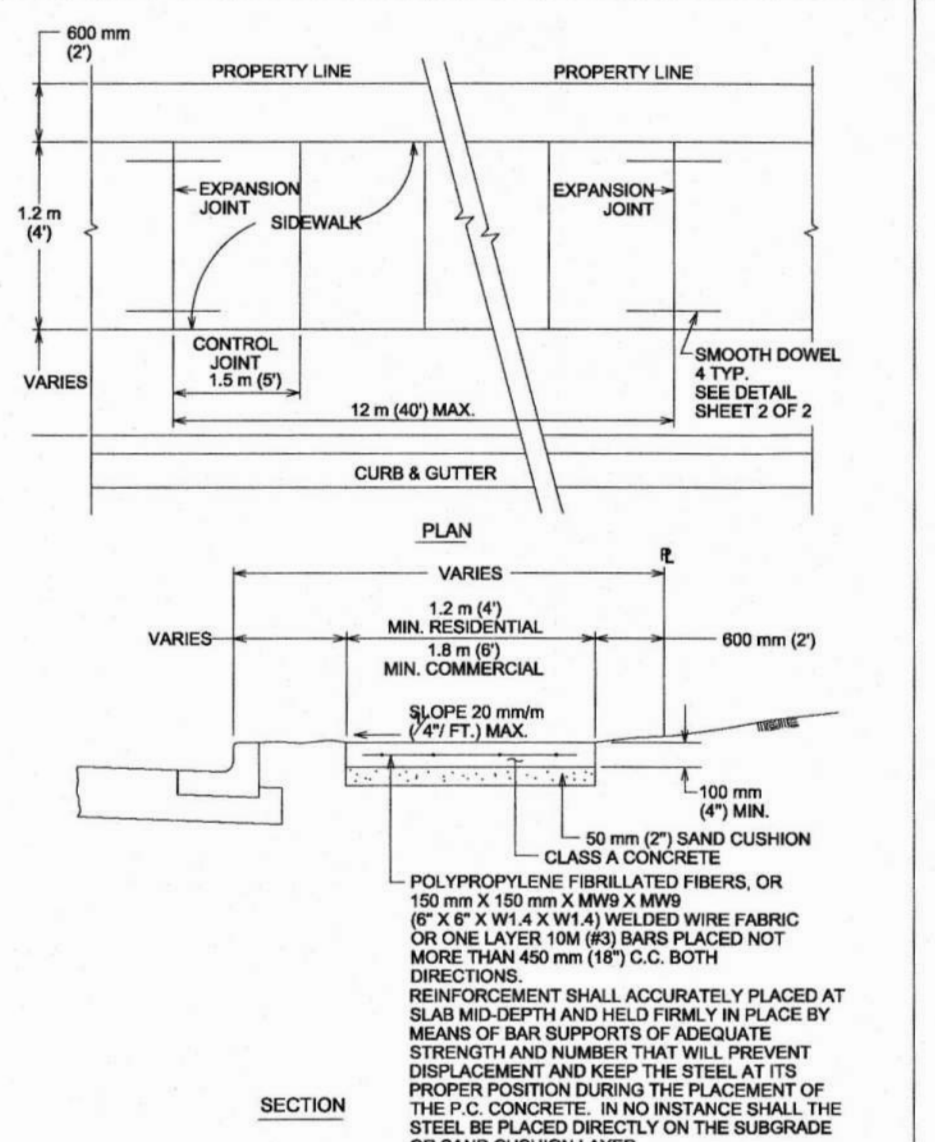
**EXECUTION**

- PREPARE A SAMPLE FINISHED STABILIZED D.G. PAVEMENT FOR APPROVAL BY OWNER'S REPRESENTATIVE, USING ALL SPECIFIED MATERIALS. SAMPLE SECTION SHALL BE 6' X 6'. SAMPLE MAY BE PART OF FINISHED D.G. TRAIL, BUT MUST BE REMOVED IF REJECTED.
- OWNER'S REPRESENTATIVE SHALL REVIEW THE LAYOUT OF THE D.G. SURFACE. THE CONTRACTOR SHALL PROVIDE FLAGS, STAKES, AND PERSONNEL TO MARK THE D.G. SURFACE AT SUFFICIENT INTERVALS TO DEMONSTRATE FINISHED PRODUCT.
- CONTRACTOR SHALL CUT, SHAPE, GRADE, AND COMPACT EXISTING SUBGRADE TO DEPTH OF APPROXIMATELY 8", TO ACCOMMODATE A 4" COMPACTED THICKNESS OF A CRUSHED LIMESTONE BASE COURSE AND 4" COMPACTED THICKNESS OF A DECOMPOSED GRANITE SURFACE COURSE, LEAVING THE FINISHED GRADE OF THE D.G. FLUSH WITH THE EXISTING ADJACENT SUBGRADE. THE EXCAVATED MATERIAL MAY BE USED AS FILL MATERIAL AT THE EDGES OF THE TRAIL IN AREAS OF EXISTING VEGETATION, THE CONTRACTOR SHALL EXERCISE CARE IN USING EQUIPMENT, AVOIDING DAMAGE TO ADJACENT SURFACES AND VEGETATION.
- FOLLOWING PREPARATION OF SUBGRADE, PLACE LIMESTONE BASE COURSE MATERIAL AND COMPACT TO 6" LAYER AT MINIMUM 95% DENSITY. COMPACT BY WETTING AND ROLLING WITH HAND-OPERATED POWER ROLLER, VIBRATORY PLATE OR COMPACTOR OF TYPE AND WEIGHT AS APPROVED TO OBTAIN A DENSE, SMOOTH UNIFORM TEXTURE AND SURFACE.
- SOIL SOLIDIFIER: SOIL SOLIDIFIER SHALL CONSIST OF THOROUGHLY MIXING AND BLENDED POLYPAVEMENT SOIL SOLIDIFIER WITH DECOMPOSED GRANITE MATERIAL, GRADING AND COMPACTING THE DECOMPOSED GRANITE MATERIAL, AND APPLYING A SURFACE TOUGHENING AND SEALING SPRAY-ON APPLICATION OF DILUTED POLYPAVEMENT.
- AFTER FINAL GRADING AND COMPACTING, THE DECOMPOSED GRANITE TRAIL SHALL BE ROTO-TILLED TO A DEPTH OF 4 INCHES. POLYPAVEMENT SHALL BE DILUTED AT THE APPROPRIATE DILUTION RATIO. DILUTED POLYPAVEMENT SHALL BE SPRAY-APPLIED TO THE ROTO-TILLED DECOMPOSED GRANITE MATERIAL AT THE SPREAD RATE CALCULATED TO ACHIEVE OPTIMUM MOISTURE CONTENT FOR COMPACTION AND TO OBTAIN A RESIDUAL POLYPAVEMENT EMULSION CONTENT OF 2.0 PERCENT BY TOTAL VOLUME OF COMPACTED DECOMPOSED GRANITE MATERIAL. THE DILUTED POLYPAVEMENT EMULSION SHALL BE THOROUGHLY BLENDED WITH THE DECOMPOSED GRANITE TO A MINIMUM DEPTH OF 4 INCHES.
- COMPACTION: THE TREATED DECOMPOSED GRANITE MATERIAL SHALL THEN BE GRADED AND COMPACTED TO FINAL ELEVATIONS. WHILE THE DECOMPOSED GRANITE MIX IS STILL THOROUGHLY MOIST, ROLL WITH A HEAVY LAWN ROLLER (MINIMUM 225 POUNDS AND MAXIMUM 30 INCH WIDTH) TO ACHIEVE FINISH GRADE AND INITIAL COMPACTION. HAND TAMP EDGES AROUND BENCHES, SIGN POSTS, ETC. USE HEAVY (1 TON MINIMUM) SMALL RIDER AFTER HAVING INITIALLY USED THE LAWN ROLLER TO OBTAIN THE DESIRED FINAL, DENSE, SMOOTH, UNIFORM TEXTURE. DO NOT USE WACKERS OR VIBRATORY ROLLERS.
- UPON COMPLETING THE DECOMPOSED GRANITE COMPACTION PROCESS, A SPRAY-ON APPLICATION OF 15 TO 1 DILUTED POLYPAVEMENT SHALL BE APPLIED AT THE MINIMUM SPREAD RATE OF 0.20 GALLON PER SQUARE YARD AND ALLOWED TO THOROUGHLY DRY. DRYING TIMES VARY DUE TO EVAPORATION AND WEATHER.
- INSPECTION: FINISH SURFACE OF THE D.G. SHALL BE SMOOTH, UNIFORM AND SOLID. FINAL THICKNESS OF COMPLETED D.G. SHALL NOT VARY MORE THAN 1/2 INCH FROM INDICATED. MAKE MEASUREMENTS BY MEANS OF TEST HOLES AND RANDOM IN FINISHED WALK SURFACE. CORRECT ANY VARIATIONS IN THE THICKNESS BEYOND THE ALLOWABLE 1/2 INCH BY ADDING MATERIAL, SHAPING AND COMPACTING. ALL WORK SHALL BE ACCEPTABLE TO THE LANDSCAPE ARCHITECT.
- CLEANUP: PERFORM CLEANUP ON A DAILY BASIS DURING INSTALLATION OF WORK TO KEEP WORK AREAS AND STOCKPILE TIDY. UPON COMPLETION OF THE WORK, REMOVE FROM SITE ALL DEBRIS AND EQUIPMENT.

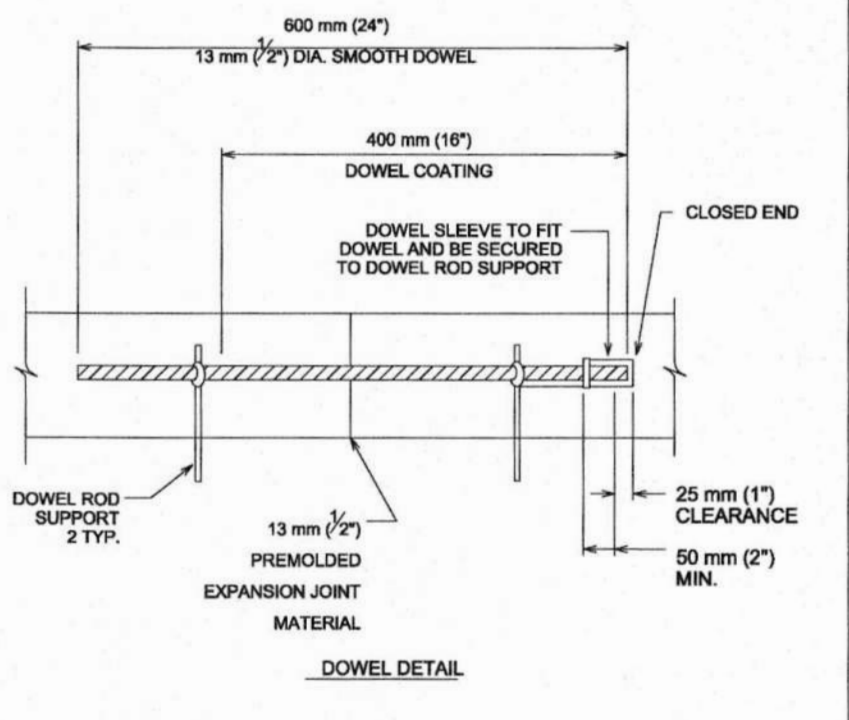
**WARRANTY**

- WARRANT THE STABILIZED D.G. SURFACE TO BE FREE OF DEFECTS FOR A PERIOD OF ONE YEAR. BACKFILL AND REPAIR AREAS WHICH SINK DUE TO INSUFFICIENT COMPACTION.

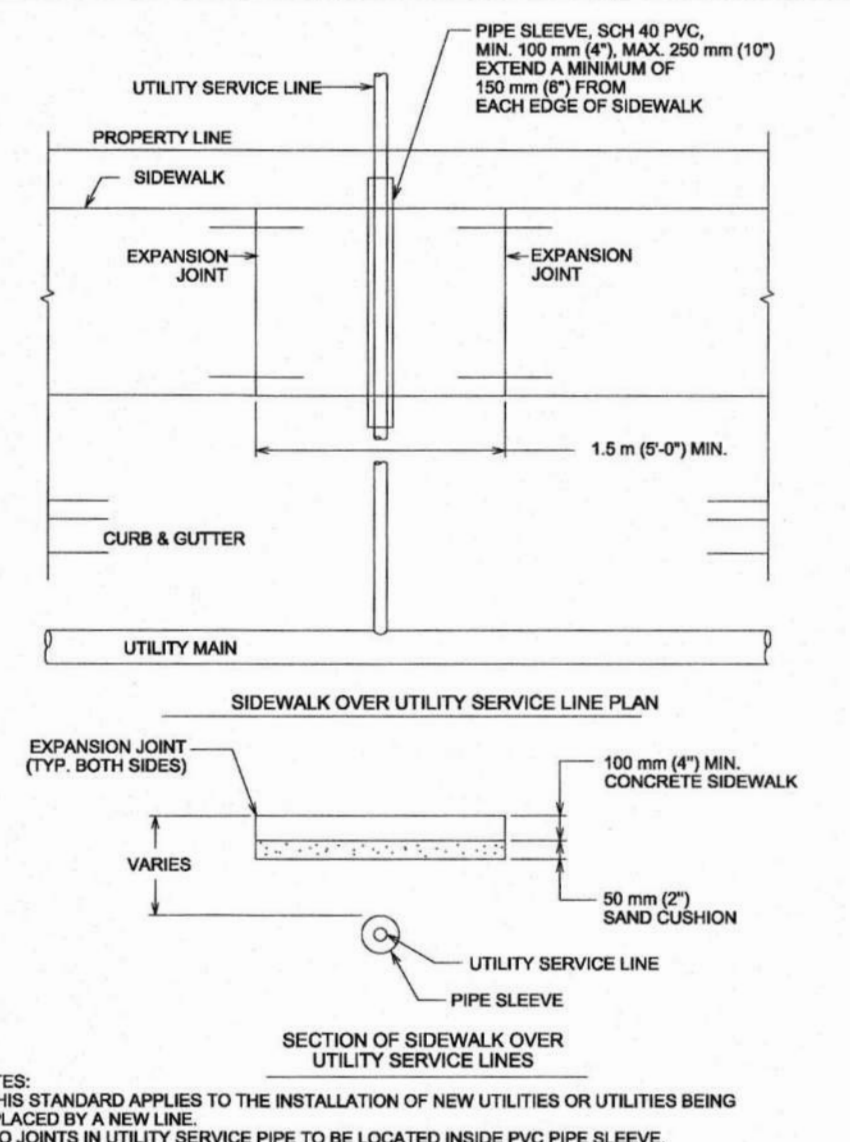
TRAIL MARKERS			TRAIL MARKER NOTES:	
MARKER NO.	DETAIL NO.	MILE MARKER		
A	DETAIL 1			1. TRAIL MARKERS SHOULD BE SIMILAR TO EXISTING TRAIL SIGNS. EXAMPLES OF TRAIL MARKERS CAN BE FOUND AT THE COORDINATES 30.185544034612114, -97.9852321929892 AND ALSO AT 30.188235923406396, -97.9775318353488. MATCH FONT, COLOR, SIZE, MATERIAL AND INSTALLATION METHOD TO EXISTING MARKERS.
B	DETAIL 5			2. TRAIL MARKERS SHALL BE GREEN REFLECTIVE PANELS.
C	DETAIL 4			3. LETTERS AND NUMBERS SHOULD BE WHITE ENGINEER-GRADE, PRESSURE-SENSITIVE SHEETING IN CAPITAL LETTERS ONLY. SPACING SHALL CONFORM WITH DETAIL.
D	DETAIL 2			4. TRAIL MARKER POST SHALL BE 2"x2" GALVANIZED STEEL SQUARE POSTS WITH A CAP ON THE TOP, BURIED 1.5' INTO THE GROUND AND FILLED WITH CONCRETE. HEIGHT OF POST AFTER BURY SHALL BE 54" TO 57" FROM FINISHED GROUND.
E	DETAIL 2			
F	DETAIL 6			
G	DETAIL 3	0.50 mi		
H	DETAIL 3	1.00 mi		
I	DETAIL 3	1.50 mi		



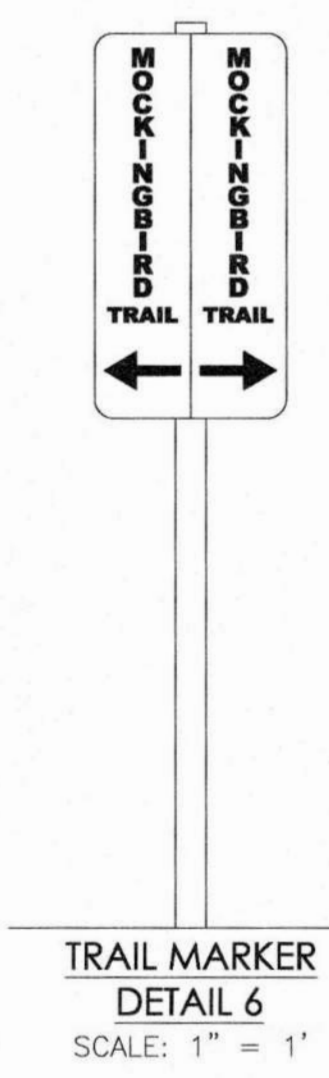
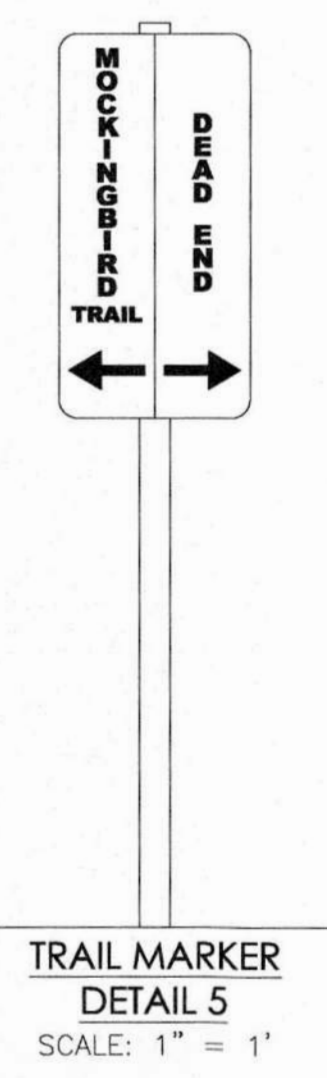
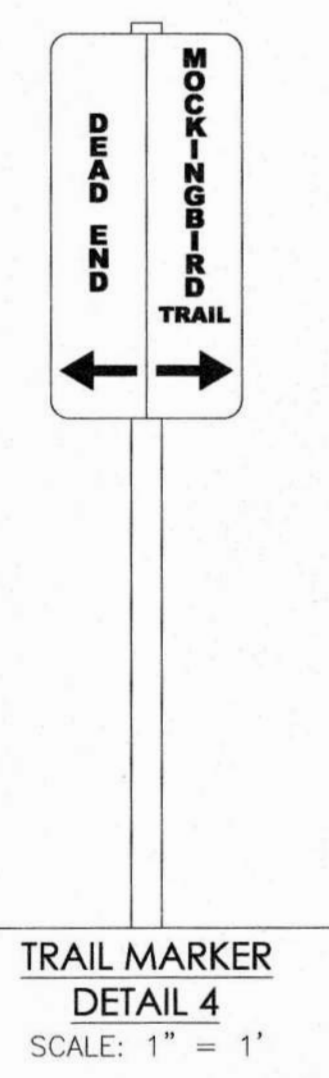
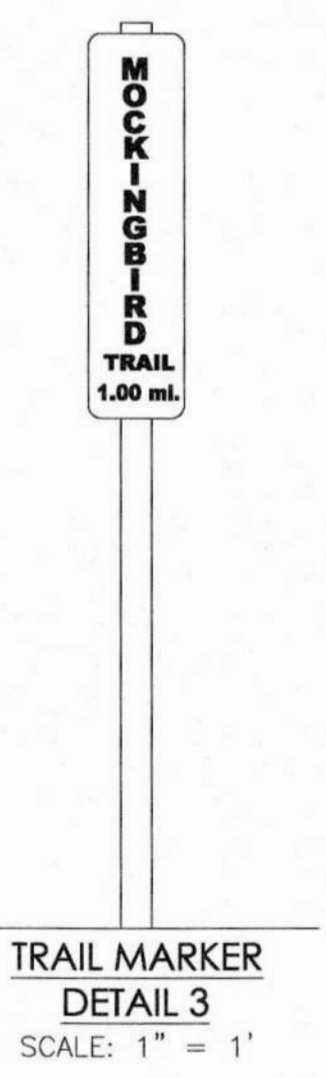
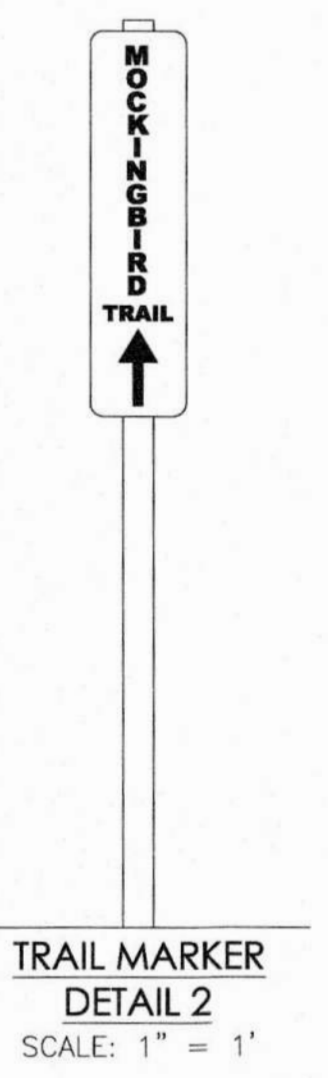
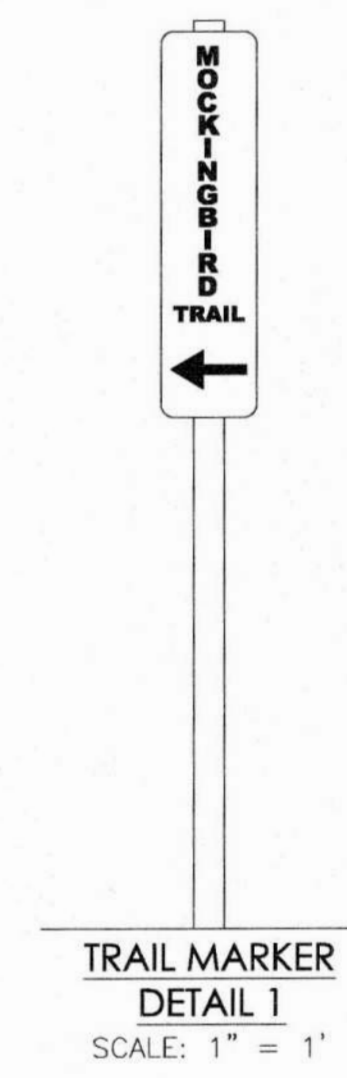
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK
RECORD COPY SIGNED BY BILL GARDNER	03/26/08
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED
STANDARD NO.	432S-1
	1 OF 1



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK
RECORD COPY SIGNED BY BILL GARDNER	03/26/08
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED
STANDARD NO.	432S-1
	1 OF 1



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK
RECORD COPY SIGNED BY BILL GARDNER	03/26/08
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED
STANDARD NO.	432S-1
	1 OF 1



235 LEDGE STONE DR.  
AUSTIN, TX 78737

**B&N**  
burgessniple.com

HCWCD NO. 2  
BELTERRA TRAIL EXTENSION  
TRAIL DETAILS

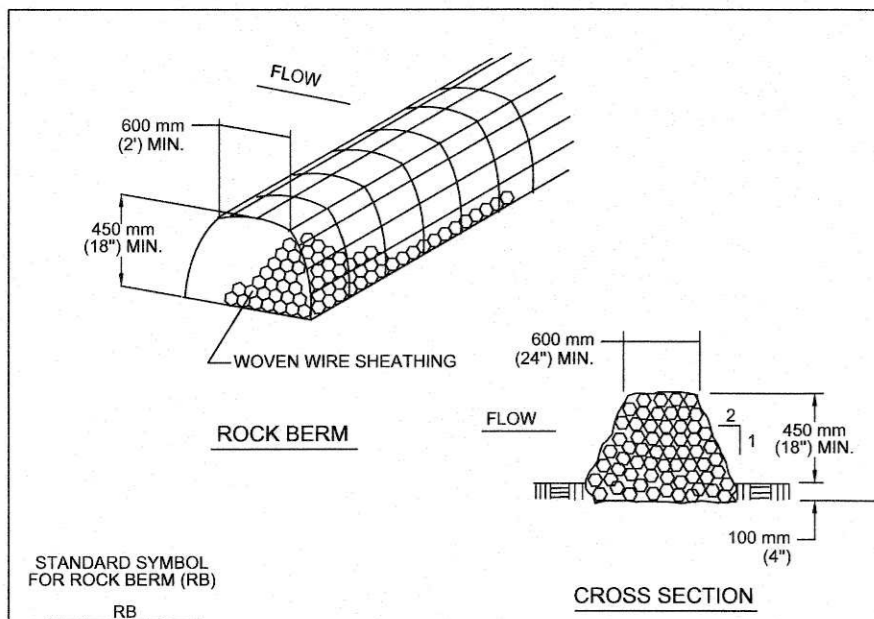
NO.	DESCRIPTION	REVISIONS	DATE

JOB NO: 1987-001  
DATE: 11/19/2021  
DESIGNED BY: JB, CC  
DRAWN BY: JB, CC  
CHECKED BY: LBB  
APPROVED BY: LBB

LAUREN BARZILLA  
REGISTERED PROFESSIONAL ENGINEER  
11-27-2021

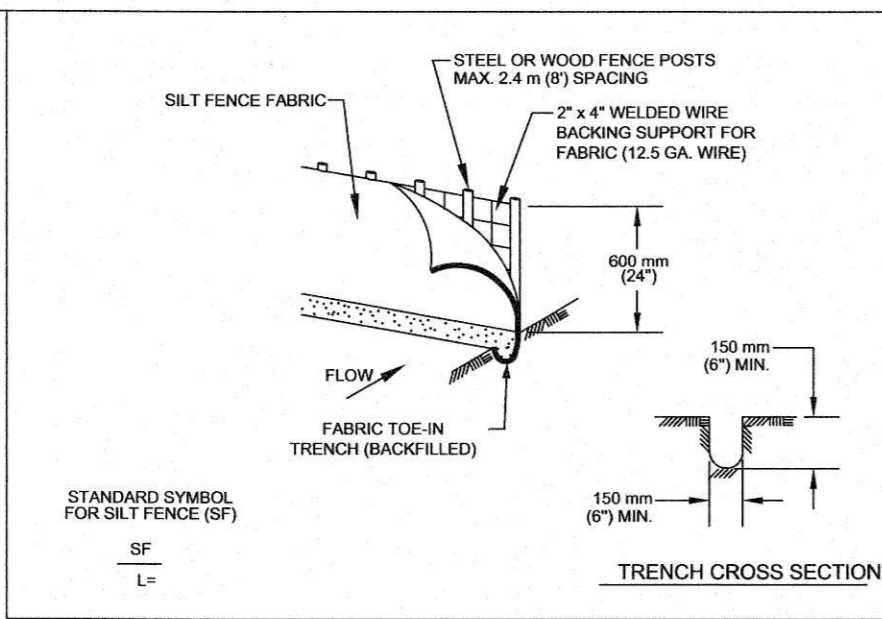
SHEET: 18 OF 19





- NOTES:
1. USE ONLY OPEN GRADED ROCK 75 TO 125 mm (3 TO 5") DIAMETER FOR ALL CONDITIONS.
  2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
  3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
  4. IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTATION PROBLEM.
  5. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

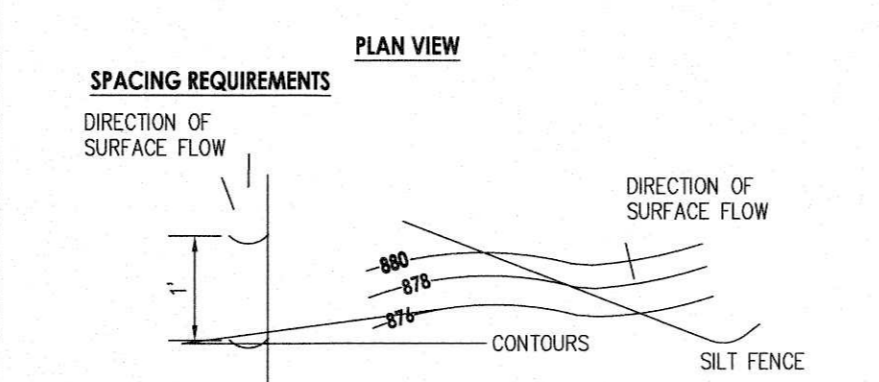
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	ROCK BERM	STANDARD NO. 639S-1
RECORD COPY SIGNED BY MORGAN BYARS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED



1. STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 INCHES) DEPTH, USE STEEL POSTS.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
3. THE TRENCH MUST BE A MINIMUM OF 150 mm (6 INCHES) DEEP AND 150 mm (6 INCHES) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 INCHES). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

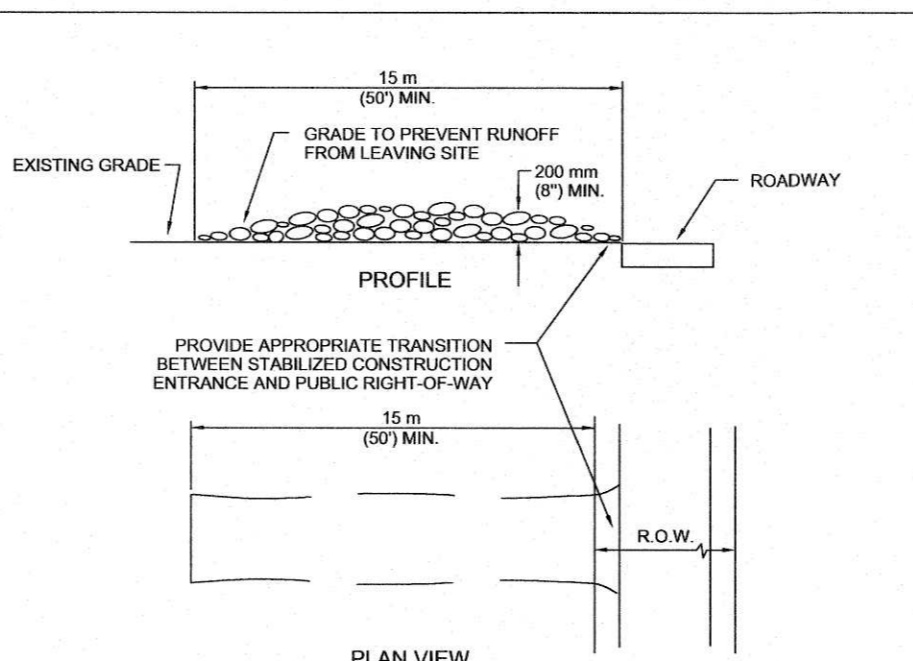
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	SILT FENCE	STANDARD NO. 642S-1
RECORD COPY SIGNED BY MORGAN BYARS	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED

SLOPE ANGLE	SOIL TYPE		
	SILTY	CLAYS	SANDY
VERY STEEP (2:1)	50 FT.	75 FT.	100 FT.
STEEP (1:1)	75 FT.	100 FT.	125 FT.
MODERATE (4:1)	100 FT.	125 FT.	150 FT.
SLIGHT (10:1)	125 FT.	150 FT.	200 FT.



- SPACING REQUIREMENTS
- DIRECTION OF SURFACE FLOW
- DIRECTION OF SURFACE FLOW
- CONTOURS
- SILT FENCE
- SIZING REQUIREMENTS:
- UP-GRADIENT SILT FENCE AND J-HOOK ARE ONE CONTINUOUS LINE
- START DOWN-GRADIENT SILT FENCE LINE AS CLOSE AS POSSIBLE TO THE UP-GRADIENT J-HOOK
- FOR CATCHMENT AREA <0.25 ACRES
- FOR CATCHMENT AREA >0.25 ACRES
- J-HOOK PLACEMENT DETAILS

For more information see the [LCRA WATER QUALITY MANAGEMENT TECHNICAL MANUAL](#).  
For questions or information call LCRA at (800) 776-5272 ext. 2324 or visit [www.lcra.org](#)



- NOTES:
1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
  2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
  3. THICKNESS: NOT LESS THAN 200 mm (8").
  4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
  5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
  6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
  7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	STABILIZED CONSTRUCTION ENTRANCE	STANDARD NO. 641S-1
RECORD COPY SIGNED BY J. PATRICK MURPHY	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADOPTED

235 LEDGE STONE DR.  
AUSTIN, TX 78737

**B&N**  
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HCWCD NO. 2  
BELTERRA TRAIL EXTENSION  
EROSION & SEDIMENTATION CONTROL  
DETAILS

NO.	DESCRIPTION	DATE

JOB NO:	1987-001
DATE:	11/19/2021
DESIGNED BY:	JB, CC
DRAWN BY:	JB, CC
CHECKED BY:	LBB
APPROVED BY:	LBB

STATE OF TEXAS  
LAUREN BARZILLA  
108483  
REGISTERED PROFESSIONAL ENGINEER  
3-17-2022