

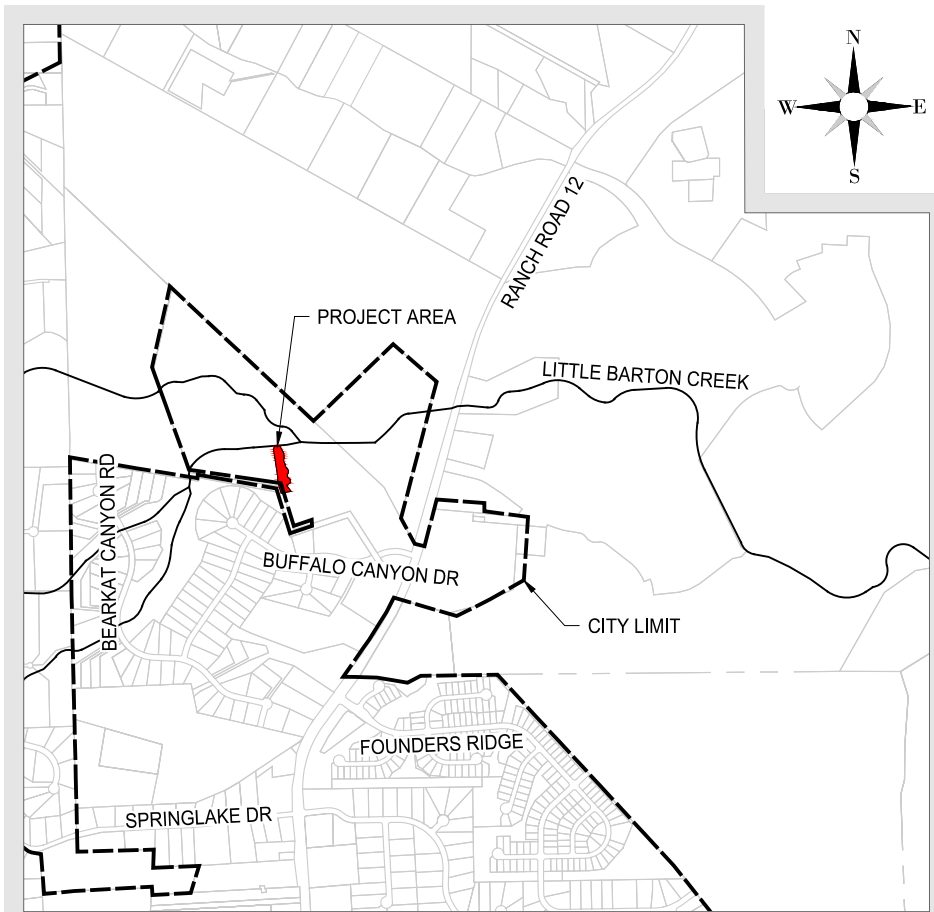
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# CONSTRUCTION PLANS FOR RANCH HOUSE ROAD PHASE 2

APRIL 2023

PROJECT # PARKS-2023-0001

THESE PLANS ARE FULL SIZE AT 11" X 17"



APPROX. SCALE: 1" = 2,000'

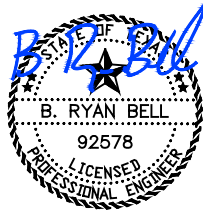
PREPARED FOR:

**CITY OF DRIPPING SPRINGS, TEXAS**



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PREPARED BY:



B. RYAN BELL, P.E.

4/27/2023

DATE

RECOMMENDED BY:

*Chad Gilpin*

CHAD GILPIN, P.E. - CITY ENGINEER

4/27/2023

DATE

APPROVED BY:

CRAIG RICE, DEPUTY PUBLIC WORKS DIRECTOR

DATE

CONTRACTOR: \_\_\_\_\_

CONSTRUCTION START: \_\_\_\_\_

CONSTRUCTION ACCEPTED: \_\_\_\_\_

TOTAL CONSTRUCTION COST: \_\_\_\_\_

PREPARED BY:



T.B.P.L.S. Firm Registration # 10193770  
T.B.P.E. Firm Registration # F-9266  
9701 BRODIE LN, SUITE 203  
AUSTIN, TX 78748  
PH: 512.220.8100

NOTES:

1. THIS PROJECT LIES WITHIN THE CITY LIMITS OF DRIPPING SPRINGS, TEXAS AND IS ZONED PP PUBLIC PARK.
2. THIS PROJECT LIES WITHIN THE CONTRIBUTING ZONE OF THE EDWARDS AQUIFER.
3. BEARING ORIENTATION IS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE 4204, NAD83. COORDINATES AND DISTANCES SHOWN HEREON ARE IN GRID.
4. A PORTION OF THIS PROJECT LIES WITHIN ZONE AE AS IDENTIFIED BY THE FEDERAL MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP COMMUNITY PANEL NO. 48209C01005F DATED SEPTEMBER 2, 2005 HAYS COUNTY, TEXAS AND INCORPORATED AREAS. NO FILL IS BEING PLACED WITHIN THE FLOODWAY AS PART OF THE PROPOSED DRAINAGE AND ROADWAY IMPROVEMENTS.
5. THE PROPOSED IMPROVEMENT PLANS WERE PREPARED WITH THE BEST INFORMATION AVAILABLE THROUGH SURVEY, RECORD DRAWINGS, AND FIELD OBSERVATIONS. PER DIRECTION FROM THE CITY, GEOTECHNICAL PAVEMENT ANALYSIS AND RECOMMENDATIONS WERE NOT PERFORMED AS PART OF THE PROJECT.
6. CONTRACTOR IS RESPONSIBLE FOR ANY ADDITIONAL SURVEY VERIFICATION REQUIRED TO COMPLETE THE PROJECT.

**A. GENERAL CONSTRUCTION NOTES**

- THE CONTRACTOR IS TO CONTACT ONE OF THE FOLLOWING FOR THE LOCATION OF EXISTING FACILITIES AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES:
  - TEXAS EXCAVATION SAFETY SYSTEM (TESS) 1-800-245-4545
  - TEXAS ONE CALL SYSTEM (TOCS) 1-800-344-8377
- PRIOR TO ANY CONSTRUCTION, THE ENGINEER SHALL CONVENE A PRE-CONSTRUCTION CONFERENCE BETWEEN THE CITY, THE CONTRACTOR, OTHER UTILITY COMPANIES, ANY AFFECTED PARTIES AND ANY OTHER ENTITY THE CITY OR ENGINEER MAY REQUIRE.
- ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION. OSHA STANDARDS MAY BE PURCHASED FROM THE GOVERNMENT PRINTING OFFICE; INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 611 E. 6TH STREET, AUSTIN, TEXAS.
- CONTRACTOR SHALL TAKE ALL DUE PRECAUTIONS TO PROTECT EXISTING FACILITIES FROM DAMAGE. ANY DAMAGE INCURRED TO EXISTING FACILITIES AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR, AT NO ADDITIONAL COST TO OWNER.
- CONTRACTOR TO GIVE NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS OR PERSONS IN CHARGE OF PUBLIC AND PRIVATE UTILITIES AFFECTED BY HIS OPERATIONS AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS REGARDING EXCESS AND WASTE MATERIAL, INCLUDING METHODS OF HANDLING AND DISPOSAL.
- CONTRACTOR TO COORDINATE INTERRUPTIONS OF ALL UTILITIES AND SERVICES. ALL WORK TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY COMPANY OR AGENCY INVOLVED.
- WHEN UN-LOCATED OR INCORRECTLY LOCATED, A BREAK IN UTILITY LINES, OR OTHER UTILITIES AND SERVICES ARE ENCOUNTERED DURING SITE WORK OPERATIONS, CONTRACTOR SHALL NOTIFY THE APPLICABLE UTILITY COMPANY IMMEDIATELY TO OBTAIN PROCEDURE DIRECTIONS. CONTRACTOR SHALL COOPERATE WITH THE APPLICABLE UTILITY COMPANY IN MAINTAINING ACTIVE SERVICES IN OPERATION.
- WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE HIS WORK TO WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. CLEAN-UP SHALL BE TO THE SATISFACTION OF THE CITY.
- CONTRACTOR SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. RECORD SHALL BE KEPT IN AN ONSITE SET OF MARKED-UP RECORD DRAWINGS.
- CONTRACTOR TO LOCATE, PROTECT, AND MAINTAIN BENCHMARKS, MONUMENTS, CONTROL POINTS AND PROJECT ENGINEERING REFERENCE POINTS. RE-ESTABLISH DISTURBED OR DESTROYED ITEMS BY REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, AT NO ADDITIONAL COST TO OWNER.
- CONTRACTOR SHALL STRIP SIX (6) INCHES OF TOPSOIL FROM ALL AREAS SUBJECT TO GRADE MODIFICATION. REMOVE ALL AREAS OF WEAK SOIL.
- THE CONTRACTOR SHALL PROTECT ALL EXISTING FENCES. IN THE EVENT THAT A FENCE MUST BE REMOVED, THE CONTRACTOR SHALL REPLACE SAID FENCE OR PORTION THEREOF WITH THE SAME TYPE OF FENCING TO A QUALITY OF EQUAL OR BETTER THAN THE ORIGINAL FENCE.
- UPON COMPLETION OF THE PROJECT, THE SITE(S) AS DEFINED HEREIN SHALL BE CLEANED OF ALL DEBRIS AND LEFT IN A NEAT AND PRESENTABLE CONDITION.
- ALL ADJOINING PAVEMENT SECTIONS SHALL BE PROTECTED DURING ALL PHASES OF CONSTRUCTION AND ANY DAMAGES INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED AND/OR REPLACED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR TO CONTROL DUST CAUSED BY THE WORK AND COMPLY WITH POLLUTION CONTROL REGULATIONS OF GOVERNING AUTHORITIES (NO SEPARATE PAY).
- TRAFFIC CONTROLS TO BE INSTALLED IN ACCORDANCE WITH THE CURRENT TxDOT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND TxDOT BARRICADE AND CONSTRUCTION STANDARDS.
- RE-VEGETATE ALL DISTURBED AREAS UPON COMPLETION OF THE WORK PER CITY CONSTRUCTION STANDARDS.
- CONTRACTOR TO EXERCISE CAUTION DURING CONSTRUCTION NEAR AND AROUND GAS LINES AND POWER LINES.
- ALL WORK IS TO BE PERFORMED BETWEEN THE FOLLOWING HOURS:  
8:00 A.M. TO 5:00 P.M. MONDAY - FRIDAY  
ALL WORK REQUIRING CITY INSPECTION SHALL BE PERFORMED MONDAY THRU FRIDAY. THE CITY RESERVES THE RIGHT TO REQUIRE THE CONTRACTOR TO UNCOVER ALL WORK PERFORMED WITHOUT INSPECTION.
- THE CONTRACTOR SHALL MAKE AN EXAMINATION OF THE PROJECT SITE AND COMPLETELY FAMILIARIZE HIMSELF WITH THE NATURE AND EXTENT OF ANY WORK TO BE ACCOMPLISHED. NO EXTRA COMPENSATION WILL BE ALLOWED FOR ANY WORK MADE NECESSARY BY UNUSUAL CONDITIONS OR OBSTACLES ENCOUNTERED DURING THE PROGRESS OF THE WORK, WHEN SUCH CONDITIONS OR OBSTACLES ARE READILY APPARENT UPON A VISIT TO THE SITE. IF THERE ARE ANY QUESTIONS OF THIS REGARD OR IF THERE ARE ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL SITE CONDITIONS THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO THE SUBMISSION OF BIDS.
- IN THOSE CASES WHERE FIXED FEATURES REQUIRE, THE DESIGN SLOPES INDICATED HEREIN AND ON THE CROSS SECTIONS MAY BE MODIFIED IN THE FIELD AS DETERMINED BY THE CITY IF EXISTING CONDITIONS SO REQUIRE.

- ACCESS TO RESIDENCES, BUSINESSES, AND DRIVEWAYS ALONG THE PROJECT MUST RECEIVE PRIORITY BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF HIS MATERIALS AND EQUIPMENT FROM THEFT, VANDALISM, ANIMALS, FIRE, ETC. WHILE SAID MATERIALS AND EQUIPMENT ARE ON THE PROJECT, WHETHER STORED OR INSTALLED IN PLACE, UNTIL THE PROJECT HAS BEEN ACCEPTED BY THE CITY.

**B. ENVIRONMENTAL NOTES**

- THE CONTRACTOR TO INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, GRADING, OR EXCAVATION). CONTRACTOR TO REMOVE EROSION/SEDIMENTATION CONTROLS AT THE COMPLETION OF THE PROJECT AND GRASS RESTORATION.
- THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS TO BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN. DEVIATIONS FROM THE APPROVED PLAN MUST BE SUBMITTED TO AND APPROVED BY THE OWNER'S REPRESENTATIVE.
- ALL DISTURBED AREAS TO BE RESTORED UPON COMPLETION OF CONSTRUCTION. NO SEPARATE PAYMENT WILL BE MADE FOR RE-VEGETATION ACTIVITIES. ALL MATERIALS AND LABOR SHALL BE SUBSIDIARY TO OTHER BID ITEMS.
- RESTORATION TO BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1-1/2 INCHES HIGH WITH 85% COVERAGE, PROVIDED NO BARE SPOTS LARGER THAN 25 SQUARE FEET EXIST.
- A MINIMUM OF FOUR (4) INCHES OF TOPSOIL TO BE PLACED IN ALL AREAS DISTURBED BY CONSTRUCTION.
- THE CONTRACTOR TO SEED, SOD OR HYDROMULCH ALL EXPOSED CUTS AND FILLS UPON COMPLETION OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR ALL IRRIGATION WATER REQUIRED TO ESTABLISH GRASS TO THE REQUIRED 85% COVERAGE.
- EROSION AND SEDIMENTATION CONTROLS TO BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILDUP WITHIN TREE DRIPLINE.
- TO AVOID SOIL COMPACTION, CONTRACTOR SHALL NOT ALLOW VEHICULAR TRAFFIC, PARKING, OR STORAGE OF EQUIPMENT OR MATERIALS IN THE TREE DRIPLINE AREAS.
- WHERE A FENCE IS CLOSER THAN FOUR (4) FEET TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF EIGHT (8) FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE FENCING.
- TREES TO BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
- ANY ROOT EXPOSED BY THE CONSTRUCTION ACTIVITY TO BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOPSOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN TWO DAYS, COVER THEM WITH ORGANIC MATTER IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
- CONTRACTOR TO PRUNE VEGETATION TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND EQUIPMENT BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.) ALL FINISHED PRUNING TO BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE "**NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES**").
- THE CONTRACTOR IS TO INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY RAINFALL EXCEEDING 1/4 INCH TO VERIFY THAT THEY HAVE NOT BEEN SIGNIFICANTLY DISTURBED. ANY ACCUMULATED SEDIMENT AFTER A SIGNIFICANT RAINFALL TO BE REMOVED AND PLACED IN THE OWNER DESIGNATED SPOIL DISPOSAL.

**C. EROSION & SEDIMENT CONTROL - SEQUENCE OF CONSTRUCTION:**

- TEMPORARY EROSION AND SEDIMENTATION CONTROLS ARE TO BE INSTALLED AS INDICATED ON THE APPROVED SITE PLAN CONSTRUCTION PLAN AND IN ACCORDANCE WITH THE EROSION SEDIMENTATION CONTROL PLAN (ESC) AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP) THAT IS REQUIRED TO BE POSTED ON THE SITE. INSTALL TREE PROTECTION, INITIATE TREE MITIGATION MEASURES AND CONDUCT "PRE - CONSTRUCTION" TREE FERTILIZATION (IF APPLICABLE).
- THE ENVIRONMENTAL PROJECT MANAGER, AND/OR SITE SUPERVISOR, AND/OR DESIGNATED RESPONSIBLE PARTY, AND THE GENERAL CONTRACTOR WILL FOLLOW THE EROSION SEDIMENTATION CONTROL PLAN (ESC) AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) POSTED ON THE SITE. TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE REVISED, IF NEEDED, TO COMPLY WITH CITY INSPECTORS' DIRECTIVES, AND REVISED CONSTRUCTION SCHEDULE RELATIVE TO THE WATER QUALITY PLAN REQUIREMENTS AND THE EROSION PLAN.
- THE TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE EROSION SEDIMENTATION CONTROL PLAN (ESC) AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) POSTED ON THE SITE.
- BEGIN SITE CLEARING/CONSTRUCTION (OR DEMOLITION) ACTIVITIES.
- COMPLETE CONSTRUCTION AND START RE-VEGETATION OF THE SITE AND INSTALLATION OF LANDSCAPING.
- AFTER A FINAL INSPECTION HAS BEEN CONDUCTED BY THE CITY INSPECTOR AND WITH APPROVAL FROM THE CITY INSPECTOR, REMOVE THE TEMPORARY EROSION AND SEDIMENTATION CONTROLS AND COMPLETE ANY NECESSARY FINAL RE-VEGETATION RESULTING FROM REMOVAL OF THE CONTROLS. CONDUCT ANY MAINTENANCE AND REHABILITATION OF THE WATER QUALITY PONDS OR CONTROLS.

**D. STREET AND DRAINAGE NOTES:**

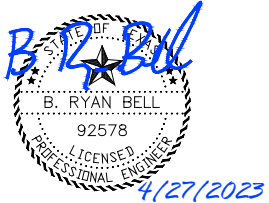
- ALL TESTING SHALL BE DONE BY AN INDEPENDENT LABORATORY AT THE CITY'S EXPENSE. ANY RETESTING SHALL BE PAID FOR BY THE CONTRACTOR. A CITY INSPECTOR SHALL BE PRESENT DURING ALL TESTS. TESTING SHALL BE COORDINATED WITH THE CITY INSPECTOR AND HE SHALL BE GIVEN A MINIMUM OF 24 HOURS NOTICE PRIOR TO ANY TESTING.
- BACKFILL BEHIND THE CURB SHALL BE COMPACTED TO OBTAIN A MINIMUM OF 95% MAXIMUM DENSITY TO WITHIN 3" OF TOP OF CURB. MATERIAL USED SHALL BE PRIMARILY GRANULAR WITH NO ROCKS LARGER THAN 6" IN THE GREATEST DIMENSION. THE REMAINING 3" SHALL BE CLEAN TOPSOIL FREE FROM ALL CLODS AND SUITABLE FOR SUSTAINING PLANT LIFE.
- DEPTH OF COVER FOR ALL CROSSINGS UNDER PAVEMENT INCLUDING GAS, ELECTRIC, TELEPHONE, CABLE TV, WATER SERVICES, ETC., SHALL BE A MINIMUM OF 30" BELOW SUBGRADE UNLESS OTHERWISE SPECIFIED ON THE PLAN.
- ALL R.C.P. SHALL BE MINIMUM CLASS III.

**E. TRAFFIC CONTROL:**

- IMPLEMENT ONE-LANE, TWO-WAY TRAFFIC CONTROL IN ACCORDANCE WITH TCP(1-2)-18.
- ALL LANES SHALL BE OPENED TO TRAFFIC AT THE END OF EACH WORK DAY.
- TRAFFIC CONTROL PLANS SHOWN WITHIN THESE PLANS ARE A MINIMUM REQUIREMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL SIGNS, BARRICADES, FLAGMEN OR OTHER TRAFFIC CONTROL DEVICES AS NECESSARY FOR THE SAFETY OF THE TRAVELING PUBLIC. ALL TRAFFIC CONTROLS SHALL BE COMPLIANT WITH CURRENT TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- THE CONTRACTOR MAY SUBMIT ALTERNATE TRAFFIC CONTROL PLANS TO THE CITY ENGINEER FOR REVIEW AND APPROVAL.
- ACCESS TO ALL DRIVES, SIDE ROADS, BARNS, STABLES AND GATES, BOTH PUBLIC AND PRIVATE, ARE TO BE MAINTAINED AT ALL TIMES.



ENGINEER'S SEAL:



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REVISIONS:

NO.	REVISION	DATE

DATE: 4/27/2023  
 DESIGNED BY: DC  
 CHECKED BY: RB  
 PROJ #: PARKS-2023-0001



PROJECT:  
**RANCH HOUSE ROAD  
PHASE 2**

SHEET TITLE:  
**GENERAL NOTES**



SCHEDULE OF QUANTITIES:

TXDOT SPEC	ITEM DESCRIPTION	UNITS	BASE BID	ADD ALT 1	COMBINED TOTAL
			QTY	QTY	QTY
0100 6001	PREPARING ROW	AC	1.28	0.43	1.71
0104 6021	REMOVING CONC (CURB)	LF	8	8	16
0110 6001	EXCAVATION (ROADWAY)	CY	894	315	1,209
0110 6002	EXCAVATION (CHANNEL)	CY	54	0	54
0164 6003	BROADCAST SEED (PERM) (RURAL) (CLAY)	SY	1,407	444	1,851
0247 6382	FL BS (CMP IN PLC)(TY A GR 5)(8")	SY	2,619	1,134	3,753
0310 6001	PRIME COAT (MULTI OPTION)	GAL	534	227	761
0432 6031	RIPRAP (STONE PROTECTION)(12 IN)	CY	40	0	40
0464 6017	RC PIPE (CL IV)(18 IN)	LF	56	0	56
0466 6003	HEADWALL (CH - FW - 0) (DIA= 18 IN)	EA	1	0	1
0467 6356	SET (TY II) (18 IN) (RCP) (3: 1) (C)	EA	2	0	2
0500 6001	MOBILIZATION	LS	1	0	1
0502 6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	2	0	2
0506 6003	ROCK FILTER DAMS (INSTALL) (TY 3)	LF	30	0	30
0506 6011	ROCK FILTER DAMS (REMOVE)	LF	30	0	30
0506 6038	TEMP SEDMT CONT FENCE (INSTALL)	LF	944	523	1,467
0506 6039	TEMP SEDMT CONT FENCE (REMOVE)	LF	944	523	1,467
0506 6041	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	50	35	85
0506 6043	BIODEG EROSN CONT LOGS (REMOVE)	LF	50	35	85
0529 6001	CONCRETE CURB	LF	8	8	16
0529 6032	CONCRETE GUTTER (MODIFIED)	LF	541	380	921
0531 6001	CONC SIDEWALKS (4")	SY	34	0	34
0644 6060	IN SM RD SN SUP&AM TYTWT(1)WS(P)	EA	2	0	2
0666 6170	REFL PAV MRK TY II (W) 4" (SLD)	LF	325	0	325
0666 6182	REFL PAV MRK TY II (W) 24" (SLD)	LF	42	0	42
0666 6197	REFL PAV MRK TY II (W) (SYMBOL)	EA	2	0	2
1004 6001	TREE PROTECTION	EA	20	2	22
3076 6003	D-GR HMA TY-B PG64-22 (EXEMPT)(8 IN)	SY	39	0	39
3076 6081	D-GR HMA TY-D PG70-22 (EXEMPT)(2 IN)	SY	2,670	1,131	3,801
5057 6001	PRECAST CONCRETE WHEEL STOPS	EA	2	0	2

**ADD ALTERNATE 1**

ALL PROPOSED WORK SHOWN ON THE PLANS BETWEEN STA 15+68.55 - 20+00.00

**NOTES RELATED TO PAY ITEMS AND SPECIFICATIONS**

WHERE HAYS COUNTY SPECIFICATIONS FOR ROADWAY DESIGN, PAVING AND DRAINAGE ARE IN CONFLICT WITH TXDOT SPECIFICATIONS LISTED ABOVE HAYS COUNTY SPECIFICATIONS SHALL SUPERSEDE. WHERE ADDITIONAL INFORMATION PROVIDED BELOW CONFLICTS WITH EITHER THE TXDOT OR HAYS COUNTY SPECIFICATIONS THE INFORMATION BELOW SHALL SUPERSEDE.

THERE WILL BE NO SEPARATE PAY ITEM FOR TEMPORARY WATER FOR IRRIGATION AND ESTABLISHMENT OF GRASSES. ALL IRRIGATION WATER REQUIRED FOR THE ESTABLISHMENT OF 85% COVER FOR THIS PROJECT SHALL BE SUBSIDIARY TO THIS PAY ITEM.

THERE WILL BE NO SEPARATE PAY ITEM FOR FURNISHING AND PLACING TOPSOIL. ON-SITE EXCAVATED SOILS OR ON-SITE SOIL STOCKPILES LOCATED NEAR THE RANCH HOUSE PAVILION CENTER MAY BE USED FOR TOPSOIL AND SHOULDER EMBANKMENT PURPOSES UPON APPROVAL BY THE ENGINEER.

TXDOT ITEM 110 - EXCAVATION (ROADWAY)

REMOVAL OF EXISTING ASPHALT AND BASE MATERIAL SHALL BE SUBSIDIARY TO THIS PAY ITEM.

TXDOT ITEM 351- CONC SIDEWALKS

RELOCATING EXISTING WOODEN PEDESTRIAN FENCE & RECONSTRUCTING PORTION OF EXISTING WOOD FENCE IS SUBSIDIARY TO THIS PAY ITEM.

TXDOT ITEM 666 - REFLECTORIZED PAVEMENT MARKINGS

GLASS BEADS ARE NOT REQUIRED FOR PARKING PAVEMENT MARKINGS.

TXDOT ITEM 3076 - HOT MIX ASPHALT CONCRETE PAVEMENT

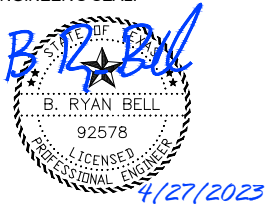
HMAC, TACK COAT AND PRIME COAT SHALL BE APPLIED AT THE FOLLOWING RATES:

HMAC TY B	115 LB/SY/IN
HMAC TY D	115 LB/SY/IN
PRIME COAT	0.2 GAL/SY



T.B.P.L.S. Firm Registration # 10193770  
T.B.P.E. Firm Registration # F-8266  
9701 BRODIE LANE #203  
AUSTIN, TX 78748  
PH: 512.220.8100

ENGINEER'S SEAL:



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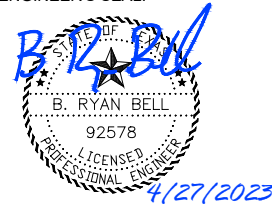
**RANCH HOUSE ROAD  
PHASE 2**

SHEET TITLE:

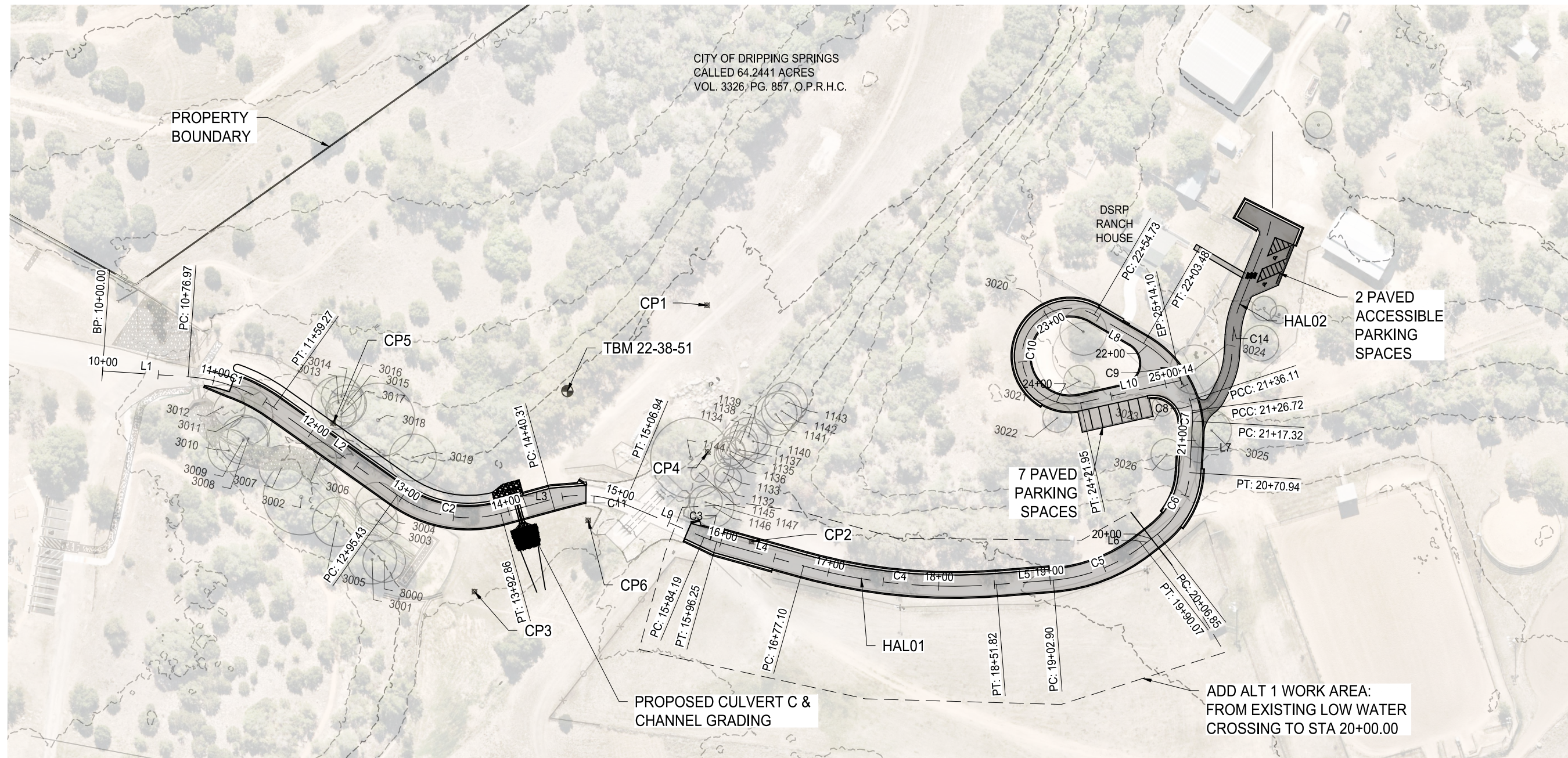
**SCHEDULE OF  
QUANTITIES**



ENGINEER'S SEAL:



CITY OF DRIPPING SPRINGS  
CALLED 64.2441 ACRES  
VOL. 3326, PG. 857, O.P.R.H.C.



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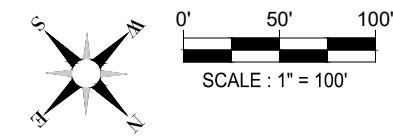
- SEE ROADWAY DETAILS SHEET 11 FOR PROPOSED ROADWAY TYPICAL SECTIONS.
- CONTRACTOR SHALL TIE PROPOSED PAVEMENT TO EXISTING GROUND, MAINTAIN EXISTING DRAINAGE PATTERNS UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL RE-VEGETATE ALL DISTURBED AREAS.
- CONTRACTOR SHALL SAW-CUT AND/OR ADJUST EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH AND CONTINUOUS TRANSITION GRADE.
- CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY OBSTRUCTIONS THAT MAY IMPEDE OR PREVENT THE PROPER CONSTRUCTION OF THE PROJECT.

**BENCHMARK:**  
TBM 22-38-51: COTTON SPINDLE SET IN ELM TREE, 120' SOUTH OF CREEK, 100' WEST OF ASPHALT ROAD. ELEVATION 1,10.52 FT

**PAVED PARKING SUMMARY:**  
NEW SPACES: 7  
NEW ACCESSIBLE SPACES: 2  
NEW SPACES TOTAL: 9

**CONTROL POINT SUMMARY**

POINT ID	NORTHING	EASTING	ELEVATION
TBM1	13991844.0200'	2256189.6390'	1150.52'
CP1	13991875.0100'	2256045.8680'	1149.02'
CP2	13992055.7700'	2256163.5470'	1147.77'
CP3	13991916.5500'	2256374.2430'	1145.27'
CP4	13991970.7000'	2256136.3550'	1144.40'
CP5	13991719.6662'	2256361.2247'	1151.76'
CP6	13991940.8300'	2256256.2820'	1145.96'



**LEGEND**

- PROPOSED ASPHALT PAVEMENT
- BENCHMARK
- CONTROL POINT
- EXIST TREE TO REMAIN
- EXIST 5' CONTOUR
- EXIST 25' CONTOUR



PROJECT:  
**RANCH HOUSE ROAD  
PHASE 2**

SHEET TITLE:  
**OVERALL SITE PLAN**



BEGIN HAL01  
N 13,991,542.7907 E 2,256,478.2823 10+00.00

BEGIN LINE 1 (L1)  
N42° 19' 36"W 76.97'  
N 13,991,599.6968 E 2,256,426.4532 10+76.97  
END LINE 1 (L1)

BEGIN CURVE 1 (C1)  
BC N 13,991,599.6968 E 2,256,426.4532 10+76.97  
CTR N 13,991,700.7003 E 2,256,537.3508  
PI N 13,991,630.9064 E 2,256,398.0280

DIRECTION BACK N42° 19' 36"W  
RADIUS 150.00'  
DELTA 31°26'10"(RT)  
LENGTH 82.30'  
TANGENT 42.21'  
CHORD DIRECTION N26° 36' 31"W DISTANCE 81.27'  
DIRECTION AHEAD N10° 53' 26"W

EC N 13,991,672.3602 E 2,256,390.0524 11+59.27  
END CURVE 1 (C1)

BEGIN LINE 2 (L2)  
N10° 53' 26"W 136.16'  
N 13,991,806.0633 E 2,256,364.3280 12+95.43  
END LINE 2 (L2)

BEGIN CURVE 2 (C2)  
BC N 13,991,806.0633 E 2,256,364.3280 12+95.43  
CTR N 13,991,785.2806 E 2,256,256.3091  
PI N 13,991,857.2958 E 2,256,354.4709

DIRECTION BACK N10° 53' 26"W  
RADIUS 110.00'  
DELTA 50°44'57"(LT)  
LENGTH 97.43'  
TANGENT 52.17'  
CHORD DIRECTION N36° 15' 55"W DISTANCE 94.28'  
DIRECTION AHEAD N61° 38' 23"W

EC N 13,991,882.0782 E 2,256,308.5606 13+92.86  
END CURVE 2 (C2)

BEGIN LINE 3 (L3)  
N61° 38' 23"W 47.45'  
N 13,991,904.6191 E 2,256,266.8028 14+40.31  
END LINE 3 (L3)

BEGIN CURVE 11 (C11)  
BC N 13,991,904.6191 E 2,256,266.8028 14+40.31  
CTR N 13,991,992.6170 E 2,256,314.3042  
PI N 13,991,921.0557 E 2,256,236.3534

DIRECTION BACK N61° 38' 23"W  
RADIUS 100.00'  
DELTA 38°10'25"(RT)  
LENGTH 66.63'  
TANGENT 34.60'  
CHORD DIRECTION N42° 33' 10"W DISTANCE 65.40'  
DIRECTION AHEAD N23° 27' 58"W

EC N 13,991,952.7964 E 2,256,222.5745 15+06.94  
END CURVE 11 (C11)

BEGIN LINE 9 (L9)  
N23° 27' 58"W 77.25'  
N 13,992,023.6600 E 2,256,191.8121 15+84.19  
END LINE 9 (L9)

BEGIN CURVE 3 (C3)  
BC N 13,992,023.6600 E 2,256,191.8121 15+84.19  
CTR N 13,991,985.8305 E 2,256,104.6689  
PI N 13,992,029.1994 E 2,256,189.4074

DIRECTION BACK N23° 27' 58"W  
RADIUS 95.00'  
DELTA 7°16'28"(LT)  
LENGTH 12.06'  
TANGENT 6.04'  
CHORD DIRECTION N27° 06' 12"W DISTANCE 12.05'  
DIRECTION AHEAD N30° 44' 25"W

EC N 13,992,034.3897 E 2,256,186.3207 15+96.25  
END CURVE 3 (C3)

BEGIN LINE 4 (L4)  
N30° 44' 25"W 80.85'  
N 13,992,103.8804 E 2,256,144.9939 16+77.10  
END LINE 4 (L4)  
BEGIN CURVE 4 (C4)  
BC N 13,992,103.8804 E 2,256,144.9939 16+77.10  
CTR N 13,991,848.3061 E 2,255,715.2477  
PI N 13,992,179.7405 E 2,256,099.8792

DIRECTION BACK N30° 44' 25"W  
RADIUS 500.00'  
DELTA 20°01'18"(LT)  
LENGTH 174.72'  
TANGENT 88.26'  
CHORD DIRECTION N40° 45' 04"W DISTANCE 173.84'  
DIRECTION AHEAD N50° 45' 44"W

EC N 13,992,235.5695 E 2,256,031.5184 18+51.82  
END CURVE 4 (C4)

BEGIN LINE 5 (L5)  
N50° 45' 44"W 51.07'  
N 13,992,267.8741 E 2,255,991.9624 19+02.90  
END LINE 5 (L5)

BEGIN CURVE 5 (C5)  
BC N 13,992,267.8741 E 2,255,991.9624 19+02.90  
CTR N 13,992,151.6951 E 2,255,897.0812  
PI N 13,992,296.2472 E 2,255,957.2204

DIRECTION BACK N50° 45' 44"W  
RADIUS 150.00'  
DELTA 33°17'51"(LT)  
LENGTH 87.17'  
TANGENT 44.86'  
CHORD DIRECTION N67° 24' 39"W DISTANCE 85.95'  
DIRECTION AHEAD N84° 03' 34"W

EC N 13,992,300.8896 E 2,255,912.6055 19+90.07  
END CURVE 5 (C5)

BEGIN LINE 6 (L6)  
N84° 03' 34"W 16.78'  
N 13,992,302.6262 E 2,255,895.9153 20+06.85  
END LINE 6 (L6)

BEGIN CURVE 6 (C6)  
BC N 13,992,302.6262 E 2,255,895.9153 20+06.85  
CTR N 13,992,228.0290 E 2,255,888.1532  
PI N 13,992,306.1605 E 2,255,861.9496

DIRECTION BACK N84° 03' 34"W  
RADIUS 75.00'  
DELTA 48°57'42"(LT)  
LENGTH 64.09'  
TANGENT 34.15'  
CHORD DIRECTION S71° 27' 35"W DISTANCE 62.16'  
DIRECTION AHEAD S46° 58' 44"W

EC N 13,992,282.8617 E 2,255,836.9831 20+70.94  
END CURVE 6 (C6)

BEGIN LINE 7 (L7)  
S46° 58' 44"W 46.39'  
N 13,992,251.2146 E 2,255,803.0707 21+17.32  
END LINE 7 (L7)

BEGIN CURVE 7 (C7)  
BC N 13,992,251.2146 E 2,255,803.0707 21+17.32  
CTR N 13,992,214.6594 E 2,255,837.1841  
PI N 13,992,248.0006 E 2,255,799.6267

DIRECTION BACK S46° 58' 44"W  
RADIUS 50.00'  
DELTA 10°45'52"(LT)  
LENGTH 9.39'  
TANGENT 4.71'  
CHORD DIRECTION S41° 35' 48"W DISTANCE 9.38'  
DIRECTION AHEAD S36° 12' 52"W

EC N 13,992,244.1999 E 2,255,796.8436 21+26.72  
END CURVE 7 (C7)

COMPOUND CURVE

BEGIN CURVE 8 (C8)  
BC N 13,992,244.1999 E 2,255,796.8436 21+26.72  
CTR N 13,992,214.6594 E 2,255,837.1841  
PI N 13,992,240.3992 E 2,255,794.0604

DIRECTION BACK S36° 12' 52"W  
RADIUS 50.00'  
DELTA 10°45'52"(LT)  
LENGTH 9.39'  
TANGENT 4.71'  
CHORD DIRECTION S30° 49' 56"W DISTANCE 9.38'  
DIRECTION AHEAD S25° 27' 00"W

EC N 13,992,236.1456 E 2,255,792.0361 21+36.11  
END CURVE 8 (C8)

COMPOUND CURVE

BEGIN CURVE 9 (C9)  
BC N 13,992,236.1456 E 2,255,792.0361 21+36.11  
CTR N 13,992,196.1813 E 2,255,876.0114  
PI N 13,992,204.3251 E 2,255,776.8925

DIRECTION BACK S25° 27' 00"W  
RADIUS 93.00'  
DELTA 41°30'22"(LT)  
LENGTH 67.37'  
TANGENT 35.24'  
CHORD DIRECTION S4° 41' 49"W DISTANCE 65.91'  
DIRECTION AHEAD S16° 03' 22"E

EC N 13,992,170.4596 E 2,255,786.6392 22+03.48  
END CURVE 9 (C9)

BEGIN LINE 8 (L8)  
S16° 03' 22"E 51.25'  
N 13,992,121.2077 E 2,255,800.8142 22+54.73  
END LINE 8 (L8)

BEGIN CURVE 10 (C10)  
BC N 13,992,121.2077 E 2,255,800.8142 22+54.73  
CTR N 13,992,133.1005 E 2,255,842.1368  
PI N 13,992,226.6390 E 2,255,770.4705

DIRECTION BACK S16° 03' 22"E  
RADIUS 43.00'  
DELTA 222°48'15"(LT)  
LENGTH 167.21'  
TANGENT 109.71'  
CHORD DIRECTION N52° 32' 30"E DISTANCE 80.07'  
DIRECTION AHEAD N58° 51' 37"W

EC N 13,992,169.9047 E 2,255,864.3732 24+21.95  
END CURVE 10 (C10)

BEGIN LINE 10 (L10)  
N58° 51' 37"W 92.15'  
N 13,992,217.5575 E 2,255,785.5014 25+14.10  
END LINE 10 (L10)

N 13,992,217.5575 E 2,255,785.5014 25+14.10  
END HAL01

Begin HAL02  
N 13,992,245.5310 E 2,255,797.8529 10+00.00

BEGIN Line 11 (L11)  
N51° 52' 16"W 2.55'  
N 13,992,247.1042 E 2,255,795.8486 10+02.55  
END Line 11 (L11)

BEGIN Curve 12 (C12)  
BC N 13,992,247.1042 E 2,255,795.8486 10+02.55  
CTR N 13,992,227.4386 E 2,255,780.4128  
PI N 13,992,255.5193 E 2,255,785.1275

Direction Back N51° 52' 16"W  
Radius 25.00'  
Delta 57°11'44"(LT)  
Length 24.96'  
Tangent 13.63'  
Chord Direction N80° 28' 08"W Distance 23.93'  
Direction Ahead S70° 56' 00"W

EC N 13,992,251.0670 E 2,255,772.2461 10+27.50  
END Curve 12 (C12)

BEGIN Line 12 (L12)  
S70° 56' 00"W 11.75'  
N 13,992,247.2293 E 2,255,761.1425 10+39.25  
END Line 12 (L12)

BEGIN Curve 13 (C13)  
BC N 13,992,247.2293 E 2,255,761.1425 10+39.25  
CTR N 13,992,181.0696 E 2,255,784.0093  
PI N 13,992,242.3861 E 2,255,747.1299

Direction Back S70° 56' 00"W  
Radius 70.00'  
Delta 23°55'01"(LT)  
Length 29.22'  
Tangent 14.83'  
Chord Direction S58° 58' 29"W Distance 29.01'  
Direction Ahead S47° 00' 59"W

EC N 13,992,232.2779 E 2,255,736.2840 10+68.47  
END Curve 13 (C13)

BEGIN Line 13 (L13)  
S47° 00' 59"W 16.85'  
N 13,992,220.7890 E 2,255,723.9565 10+85.32  
END Line 13 (L13)

BEGIN Curve 14 (C14)  
BC N 13,992,220.7890 E 2,255,723.9565 10+85.32  
CTR N 13,992,286.6283 E 2,255,662.5954  
PI N 13,992,210.7977 E 2,255,713.2361

Direction Back S47° 00' 59"W  
Radius 90.00'  
Delta 18°29'47"(RT)  
Length 29.05'  
Tangent 14.65'  
Chord Direction S56° 15' 52"W Distance 28.93'  
Direction Ahead S65° 30' 45"W

EC N 13,992,204.7235 E 2,255,699.8998 11+14.38  
END Curve 14 (C14)

BEGIN Line 14 (L14)  
S65° 30' 45"W 59.51'  
N 13,992,180.0586 E 2,255,645.7457 11+73.88  
END Line 14 (L14)

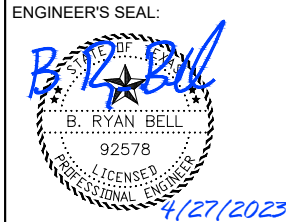
BEGIN Curve 15 (C15)  
BC N 13,992,180.0586 E 2,255,645.7457 11+73.88  
CTR N 13,992,089.0533 E 2,255,687.1950  
PI N 13,992,172.0352 E 2,255,628.1297

Direction Back S65° 30' 45"W  
Radius 100.00'  
Delta 21°54'38"(LT)  
Length 38.24'  
Tangent 19.36'  
Chord Direction S54° 33' 26"W Distance 38.01'  
Direction Ahead S43° 36' 07"W

EC N 13,992,158.0177 E 2,255,614.7801 12+12.13  
END Curve 15 (C15)

BEGIN Line 15 (L15)  
S43° 36' 07"W 62.06'  
N 13,992,113.0754 E 2,255,571.9792 12+74.19  
END Line 15 (L15)

N 13,992,113.0754 E 2,255,571.9792 12+74.19  
End HAL02



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REVISIONS: Table with columns NO., REVISION, DATE

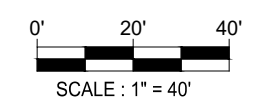
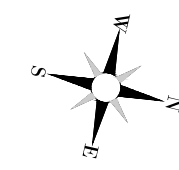
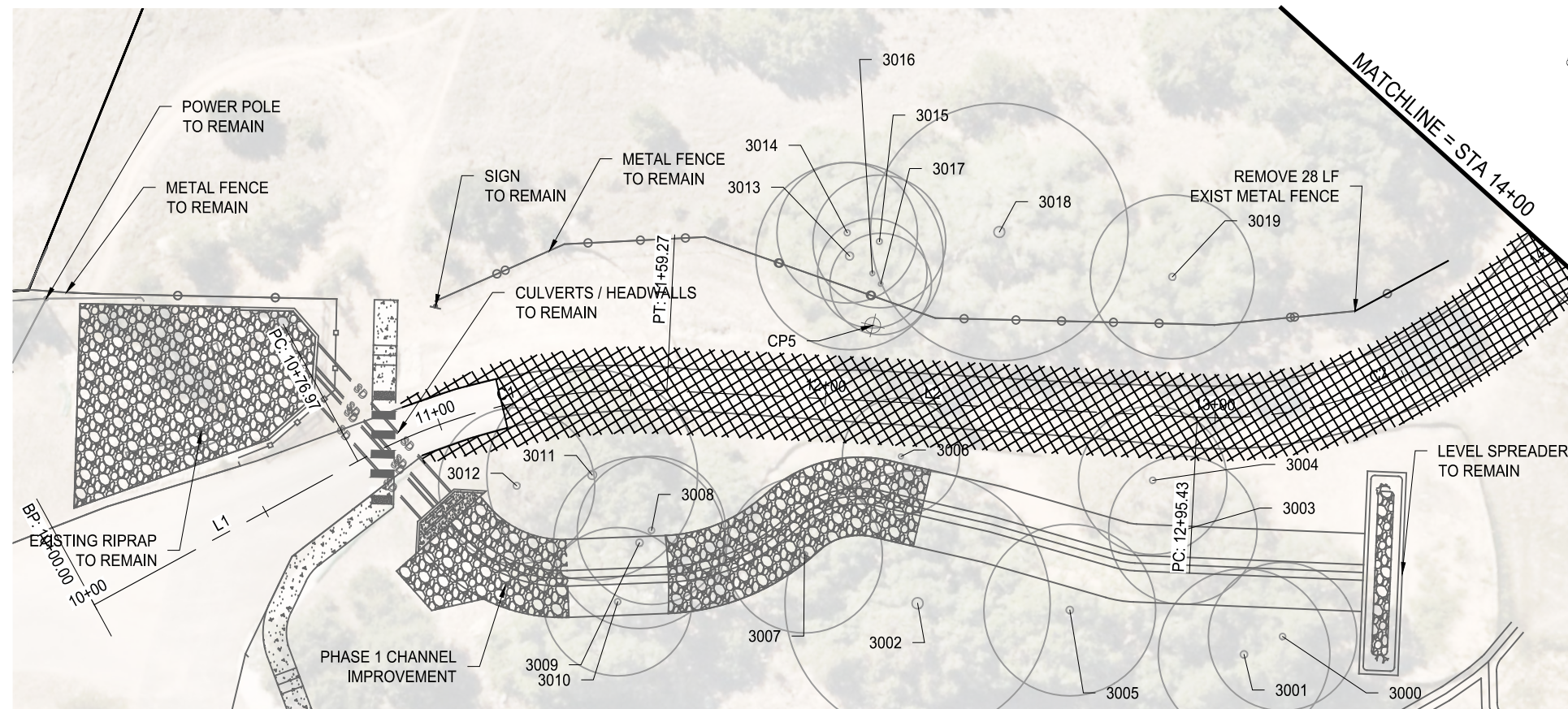
DATE: 4/27/2023  
DESIGNED BY: DC  
CHECKED BY: RB  
PROJ #: PARKS-2023-0001



PROJECT:  
RANCH HOUSE ROAD  
PHASE 2

SHEET TITLE:  
HORIZONTAL  
ALIGNMENT DATA



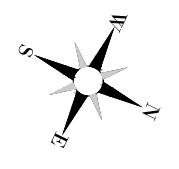
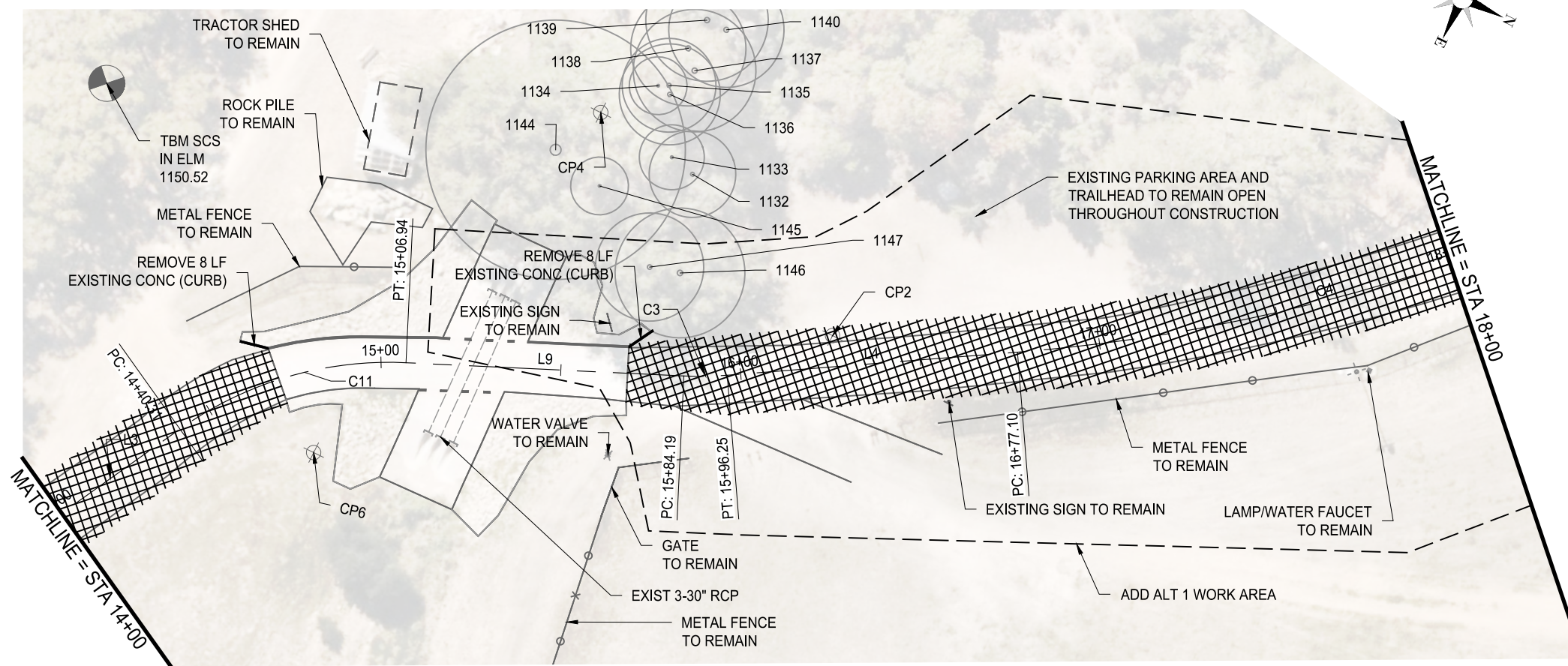


**LEGEND**

- REMOVE ASPHALT AND BASE
- BENCHMARK
- CONTROL POINT
- EXIST TREE TO REMAIN
- EXIST 1' CONTOUR
- EXIST 5' CONTOUR
- PROPERTY BOUNDARY

**NOTES:**

1. CONTRACTOR TO MATCH EXISTING GRADE, MAINTAIN EXISTING DRAINAGE CONTOURS & DRAINAGE PATTERNS UNLESS OTHERWISE NOTED.
2. CONTRACTOR TO RE-VEGETATE ALL DISTURBED AREAS UPON COMPLETION OF THE WORK IN COMPLIANCE WITH THE ENVIRONMENTAL NOTES AND SPECIFICATIONS IN THESE DOCUMENTS.
3. CONTRACTOR SHALL ADJUST TO PROPOSED FINISHED GRADE ALL EXISTING VALVES, MANHOLES, MANHOLE COVERS, CLEANOUTS, INLET COVERS AND/OR ANY OTHER OBJECTS WITHIN THE PROJECT AREA, IF APPLICABLE.
4. CONTRACTOR SHALL SAW-CUT AND/OR ADJUST EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH AND CONTINUOUS TRANSITION GRADE.
5. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT BOTH OVERHEAD AND UNDERGROUND UTILITIES EXIST IN THE VICINITY OF THE CONSTRUCTION AREA. THE EXACT LOCATION OF UNDERGROUND UTILITIES IS NOT CERTAIN. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE AREA UTILITY COMPANIES FOR EXACT LOCATIONS AT LEAST 48 HOURS PRIOR TO CONSTRUCTION OR COMMENCING ANY WORK SO AS TO PREVENT ANY DAMAGE OR INTERFERENCE WITH PRESENT UTILITIES.
6. THE CONTRACTOR SHALL PROTECT ALL AREAS OF THE RIGHT-OF-WAY WHICH ARE NOT INCLUDED IN THE ACTUAL LIMITS OF THE PROPOSED CONSTRUCTION FROM DESTRUCTION. CARE SHALL BE EXERCISED TO PREVENT DAMAGE TO TREES, VEGETATION AND OTHER NATURAL SURROUNDINGS. THE CONTRACTOR, AT HIS EXPENSE, SHALL RESTORE ANY AREAS DISTURBED AS A RESULT OF THEIR OPERATIONS TO A CONDITION AS GOOD AS, OR BETTER THAN, THAT PRESENT PRIOR TO CONSTRUCTION.
7. A PRE-CONSTRUCTION MEETING WITH THE CITY ENGINEER AND CONTRACTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
8. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY OBSTACLES THAT MAY IMPEDE OR PREVENT THE PROPER CONSTRUCTION OF THE PROJECT.
9. CONTRACTOR SHALL INSTALL EROSION AND SEDIMENTATION CONTROLS AS NEEDED TO PREVENT THE MIGRATION OF SEDIMENT DOWNSTREAM INTO EXISTING INFRASTRUCTURE OR ONTO ADJACENT PROPERTIES.
10. SEE TRAFFIC CONTROL PLAN.
11. SAWCUTTING SHALL BE SUBSIDIARY TO APPLICABLE BID ITEMS.



**GILPIN**  
ENGINEERING COMPANY

T.B.P.L.S. Firm Registration # 10193770  
T.B.P.E. Firm Registration # F-8266  
9701 BRODIE LANE #203  
AUSTIN, TX 78748  
PH: 512.220.8100

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**REVISIONS:**

NO.	REVISION	DATE

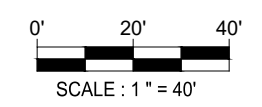
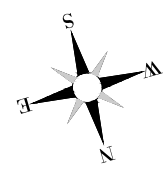
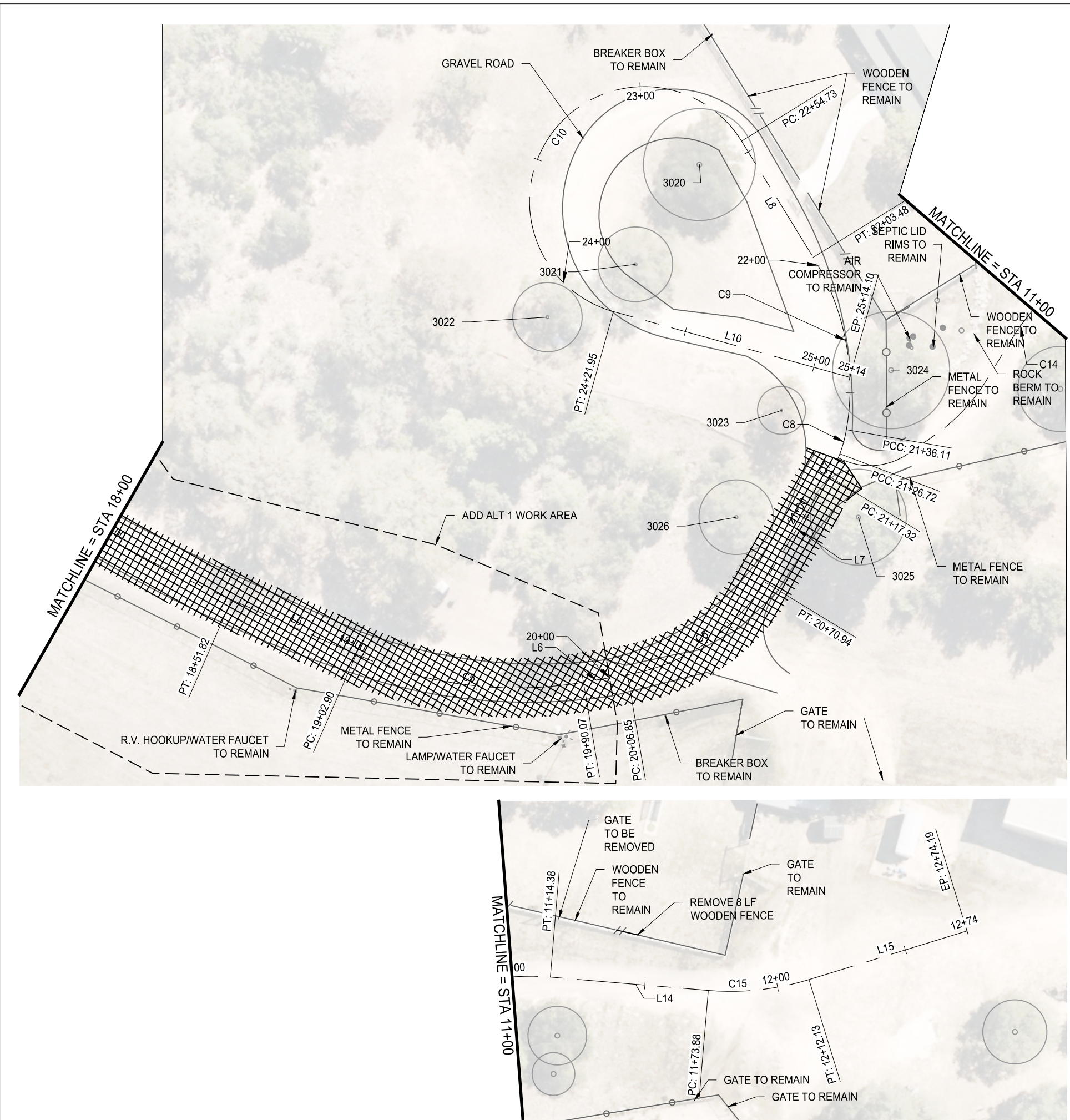
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DESIGNED BY: DC  
CHECKED BY: RB  
PROJ #: PARKS-2023-0001



PROJECT:  
**RANCH HOUSE ROAD  
PHASE 2**

SHEET TITLE:  
**EXISTING CONDITIONS  
& DEMOLITION PLAN  
1 OF 2**



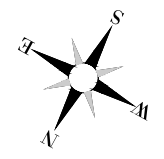


**LEGEND**

- REMOVE ASPHALT AND BASE
- BENCHMARK
- CONTROL POINT
- EXIST TREE TO REMAIN
- EXIST 1' CONTOUR
- EXIST 5' CONTOUR
- PROPERTY BOUNDARY

**NOTES:**

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4. CONTRACTOR SHALL SAW-CUT AND/OR ADJUST EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH AND CONTINUOUS TRANSITION GRADE.
5. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT BOTH OVERHEAD AND UNDERGROUND UTILITIES EXIST IN THE VICINITY OF THE CONSTRUCTION AREA. THE EXACT LOCATION OF UNDERGROUND UTILITIES IS NOT CERTAIN. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE AREA UTILITY COMPANIES FOR EXACT LOCATIONS AT LEAST 48 HOURS PRIOR TO CONSTRUCTION OR COMMENCING ANY WORK SO AS TO PREVENT ANY DAMAGE OR INTERFERENCE WITH PRESENT UTILITIES.
6. THE CONTRACTOR SHALL PROTECT ALL AREAS OF THE RIGHT-OF-WAY WHICH ARE NOT INCLUDED IN THE ACTUAL LIMITS OF THE PROPOSED CONSTRUCTION FROM DESTRUCTION. CARE SHALL BE EXERCISED TO PREVENT DAMAGE TO TREES, VEGETATION AND OTHER NATURAL SURROUNDINGS. THE CONTRACTOR, AT HIS EXPENSE, SHALL RESTORE ANY AREAS DISTURBED AS A RESULT OF THEIR OPERATIONS TO A CONDITION AS GOOD AS, OR BETTER THAN, THAT PRESENT PRIOR TO CONSTRUCTION.
7. A PRE-CONSTRUCTION MEETING WITH THE CITY ENGINEER AND CONTRACTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
8. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY OBSTACLES THAT MAY IMPEDE OR PREVENT THE PROPER CONSTRUCTION OF THE PROJECT.
9. CONTRACTOR SHALL INSTALL EROSION AND SEDIMENTATION CONTROLS AS NEEDED TO PREVENT THE MIGRATION OF SEDIMENT DOWNSTREAM INTO EXISTING INFRASTRUCTURE OR ONTO ADJACENT PROPERTIES.
10. SEE TRAFFIC CONTROL PLAN.
11. SAWCUTTING SHALL BE SUBSIDIARY TO APPLICABLE BID ITEMS.



**GILPIN**  
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REVISIONS:

NO.	REVISION	DATE

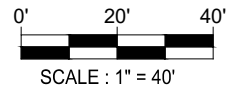
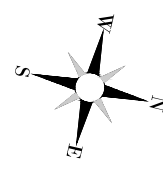
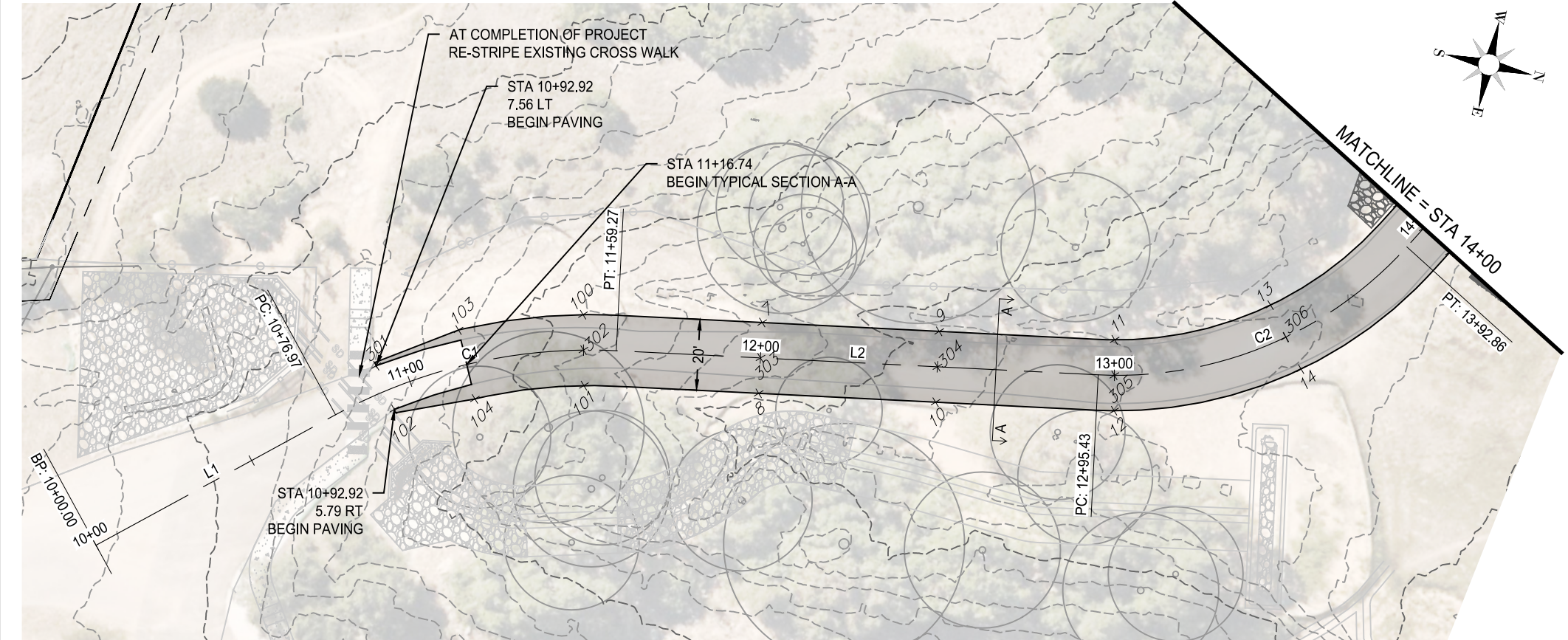
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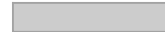



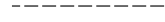

PROJECT:  
**RANCH HOUSE ROAD  
PHASE 2**

SHEET TITLE:  
**EXISTING CONDITIONS  
& DEMOLITION PLAN  
2 OF 2**



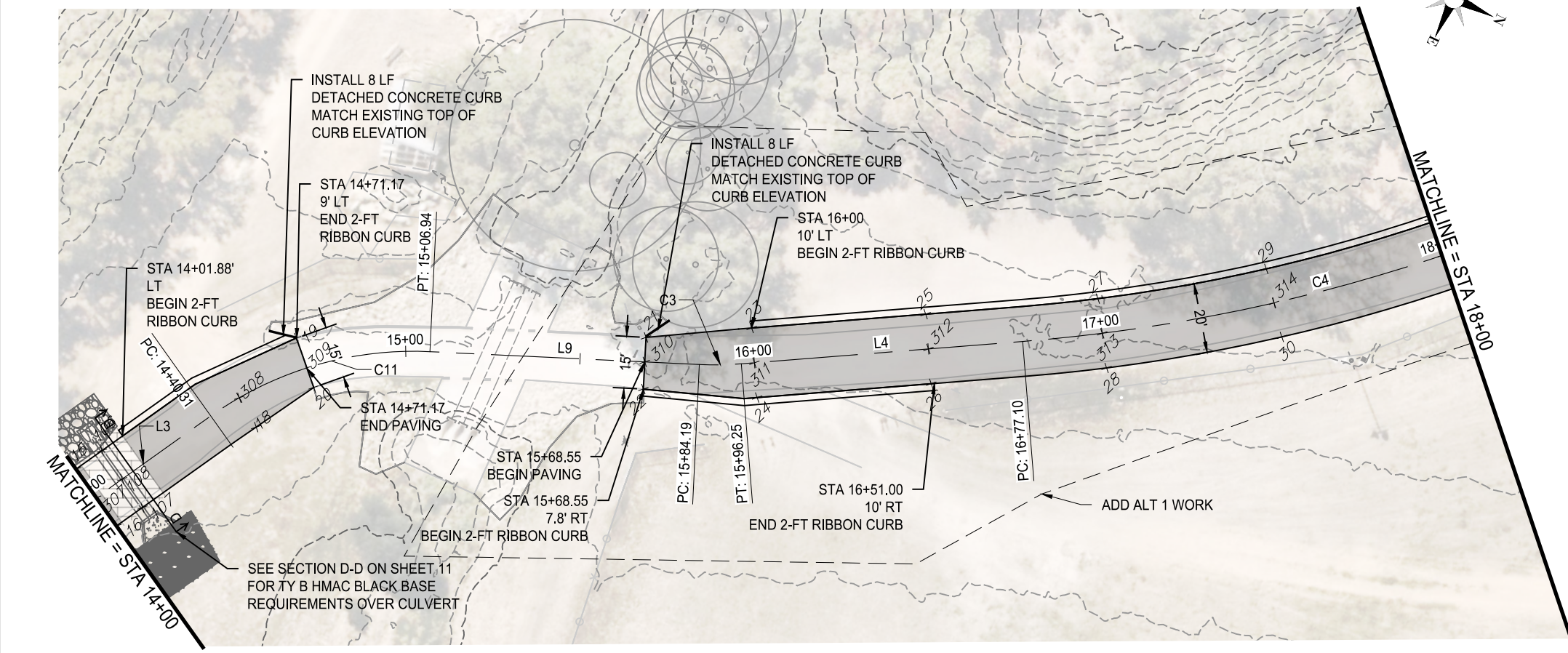
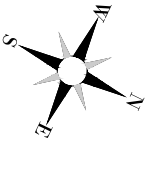


**LEGEND**

-  PROPOSED ASPHALT PAVEMENT
-  BENCHMARK
-  EXIST TREE TO REMAIN
-  EXIST 1' CONTOUR
-  EXIST 5' CONTOUR
-  DESIGN POINT: SEE POINT SUMMARY TABLE SHEET 5

**NOTES:**

1. CONTRACTOR TO MATCH EXISTING GRADE, MAINTAIN EXISTING DRAINAGE CONTOURS & DRAINAGE PATTERNS UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL ADJUST TO PROPOSED FINISHED GRADE ALL EXISTING VALVES, MANHOLES, MANHOLE COVERS, CLEANOUTS, INLET COVERS AND/OR ANY OTHER OBJECTS WITHIN THE PROJECT AREA, IF APPLICABLE.
3. CONTRACTOR SHALL SAW-CUT AND/OR ADJUST EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH AND CONTINUOUS TRANSITION GRADE.
4. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT BOTH OVERHEAD AND UNDERGROUND UTILITIES EXIST IN THE VICINITY OF THE CONSTRUCTION AREA. THE EXACT LOCATION OF UNDERGROUND UTILITIES IS NOT CERTAIN. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE AREA UTILITY COMPANIES FOR EXACT LOCATIONS AT LEAST 48 HOURS PRIOR TO CONSTRUCTION OR COMMENCING ANY WORK SO AS TO PREVENT ANY DAMAGE OR INTERFERENCE WITH PRESENT UTILITIES.
5. THE CONTRACTOR SHALL PROTECT ALL AREAS OF THE RIGHT-OF-WAY WHICH ARE NOT INCLUDED IN THE ACTUAL LIMITS OF THE PROPOSED CONSTRUCTION FROM DESTRUCTION. CARE SHALL BE EXERCISED TO PREVENT DAMAGE TO TREES, VEGETATION AND OTHER NATURAL SURROUNDINGS. THE CONTRACTOR, AT HIS EXPENSE, SHALL RESTORE ANY AREAS DISTURBED AS A RESULT OF THEIR OPERATIONS TO A CONDITION AS GOOD AS, OR BETTER THAN, THAT PRESENT PRIOR TO CONSTRUCTION.
6. SAWCUTTING SHALL BE SUBSIDIARY TO APPLICABLE BID ITEMS.
7. REFER TO ROADWAY POINT TABLE SUMMARY ON THE GRADING POINTS & TREE LIST SHEET 13.



**GILPIN**  
ENGINEERING COMPANY

T.B.P.L.S. Firm Registration # 10193770  
T.B.P.E. Firm Registration # F-8266  
9701 BRODIE LANE #203  
AUSTIN, TX 78748  
PH: 512.220.8100

ENGINEER'S SEAL:

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NO.	REVISION	DATE

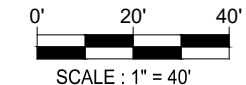
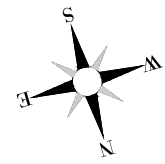
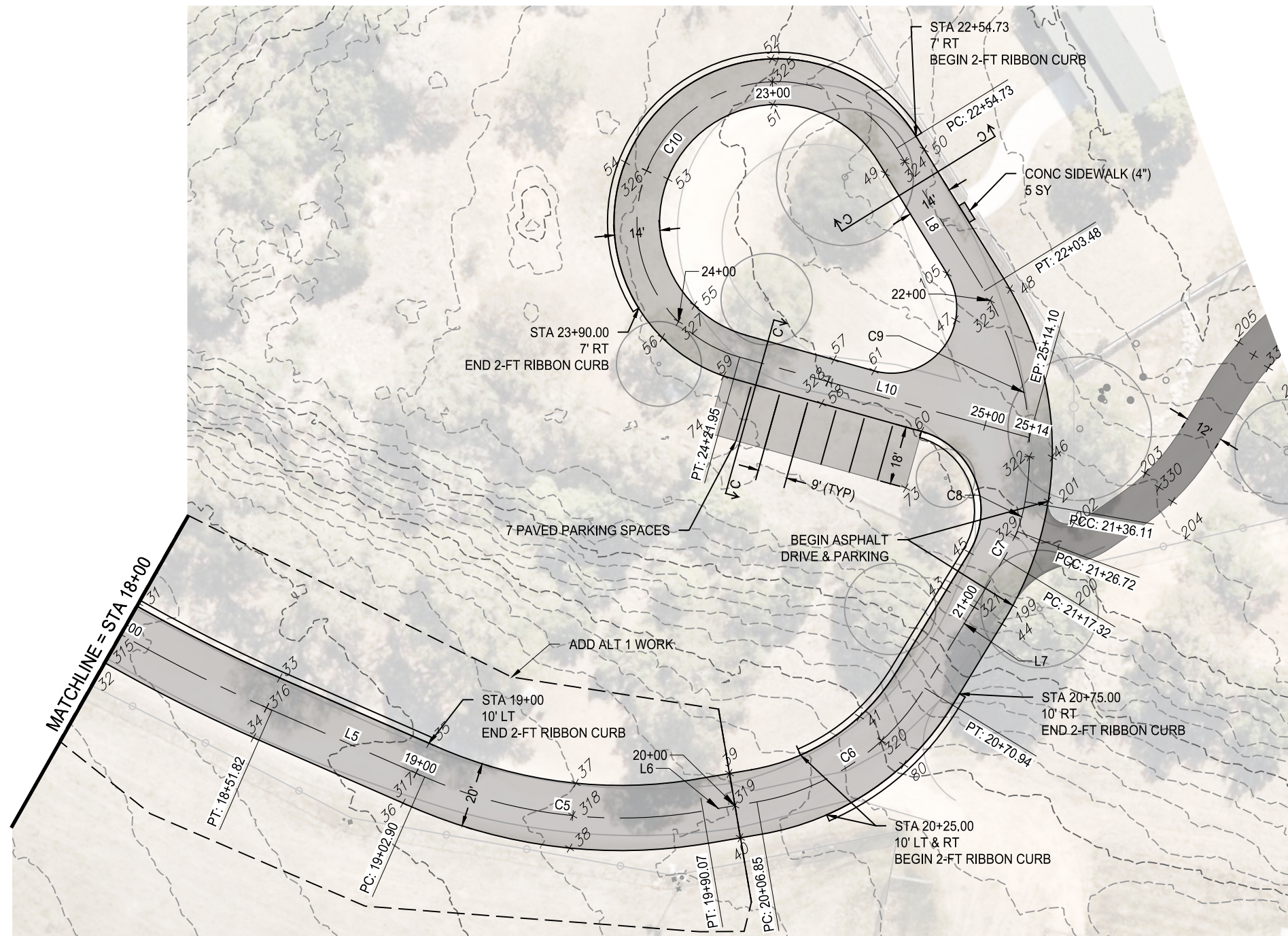
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DESIGNED BY: DC  
CHECKED BY: RB  
PROJ #: PARKS-2023-0001



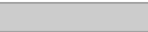



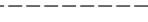
PROJECT:  
**RANCH HOUSE ROAD  
PHASE 2**

SHEET TITLE:  
**PAVING PLAN  
(1 OF 3)**





**LEGEND**

-  PROPOSED ASPHALT PAVEMENT
-  BENCHMARK
-  EXIST TREE TO REMAIN
-  EXIST 1' CONTOUR
-  EXIST 5' CONTOUR

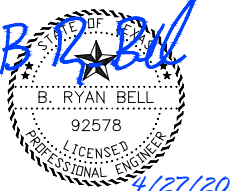
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ENGINEER'S SEAL:



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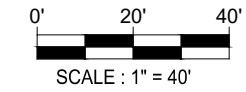
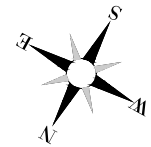


**DRIPPING SPRINGS**  
Texas

PROJECT:  
**RANCH HOUSE ROAD  
PHASE 2**

SHEET TITLE:  
**PAVING PLAN  
(2 OF 3)**



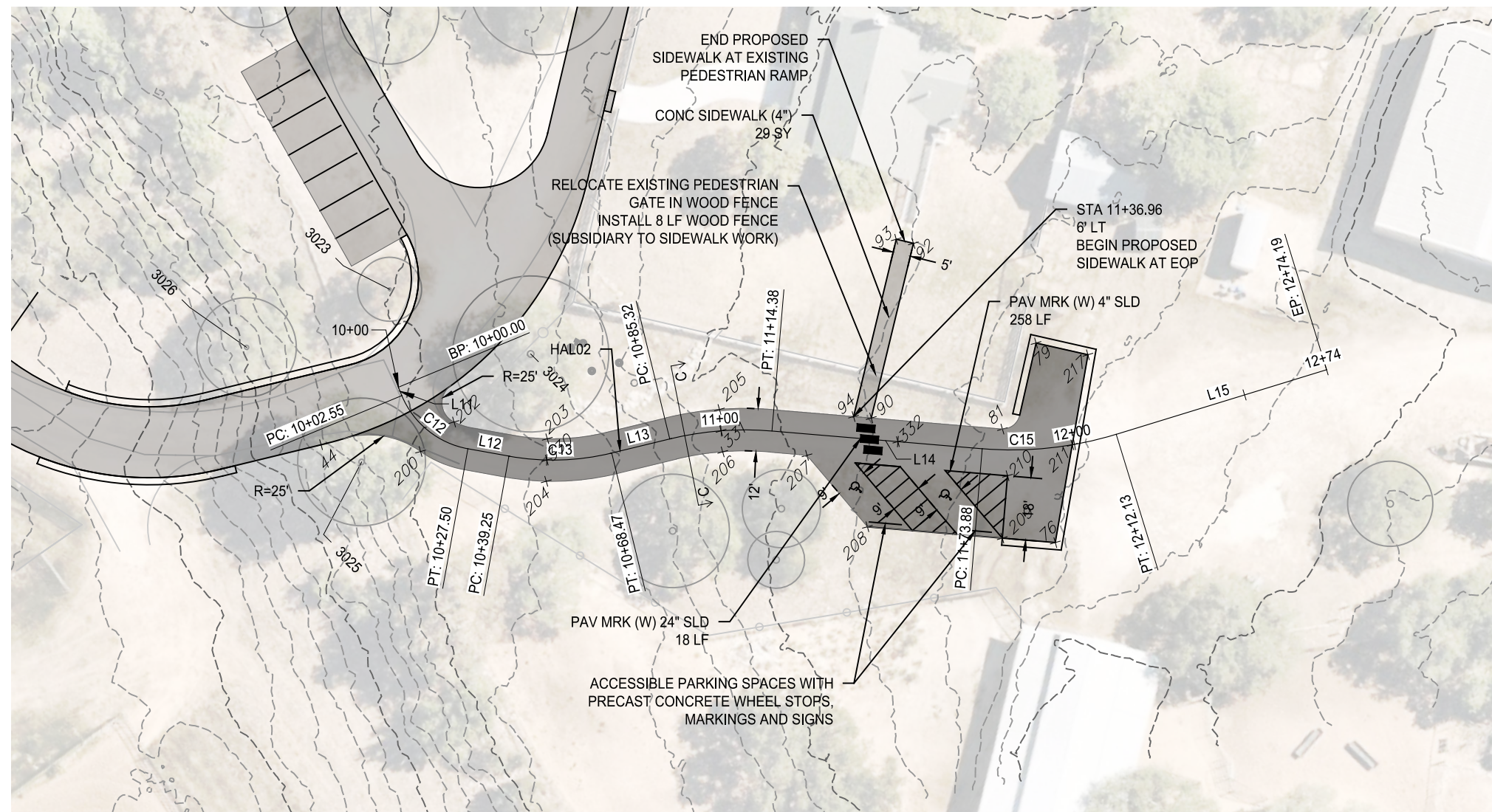


**LEGEND**

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- BENCHMARK
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ENGINEER'S SEAL:  
  
B. RYAN BELL  
92578  
LICENSED PROFESSIONAL ENGINEER  
4/27/2023

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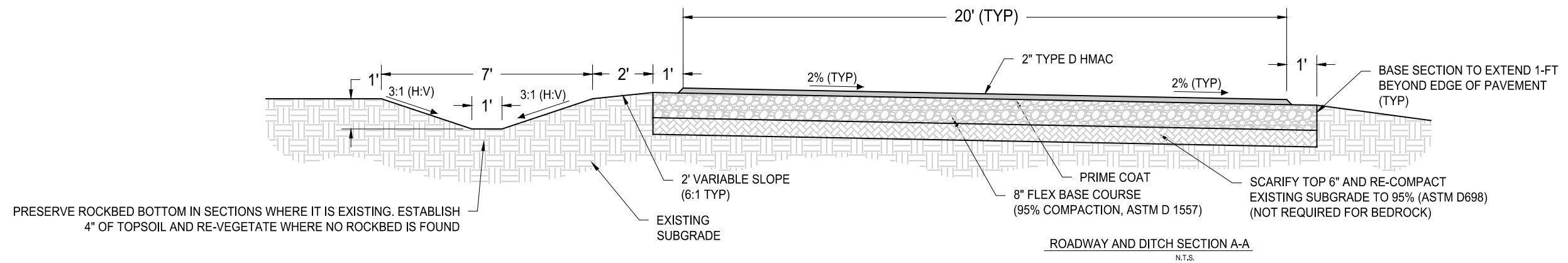
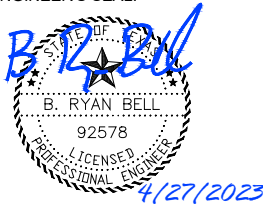


PROJECT:  
**RANCH HOUSE ROAD  
PHASE 2**

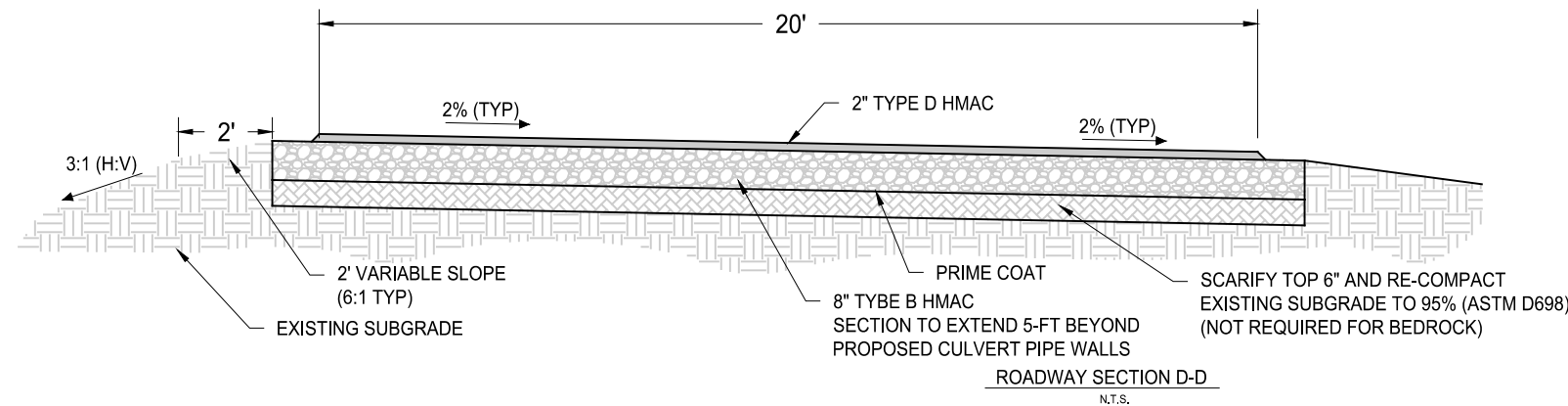
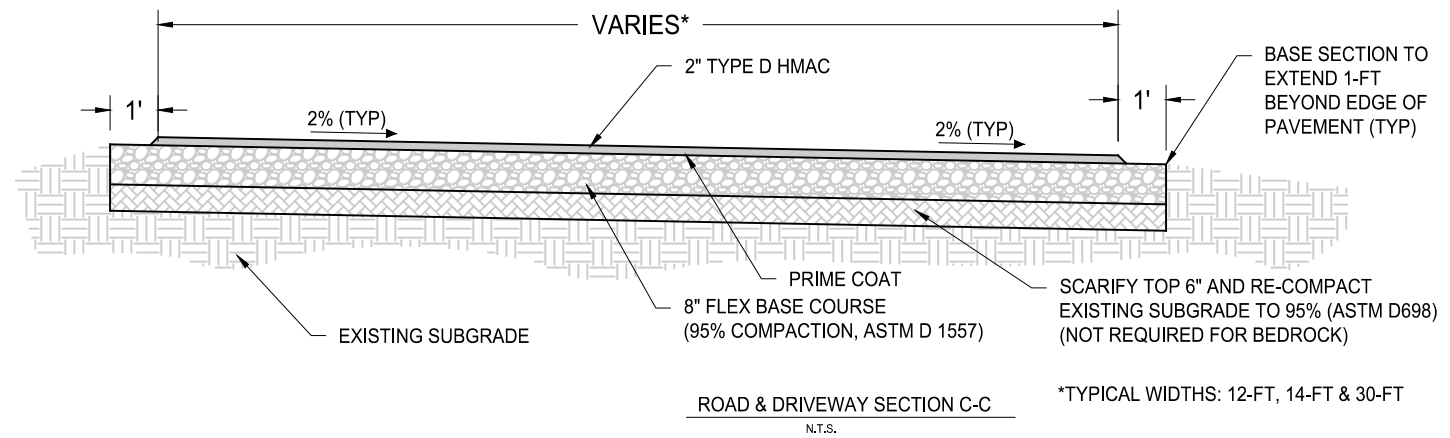
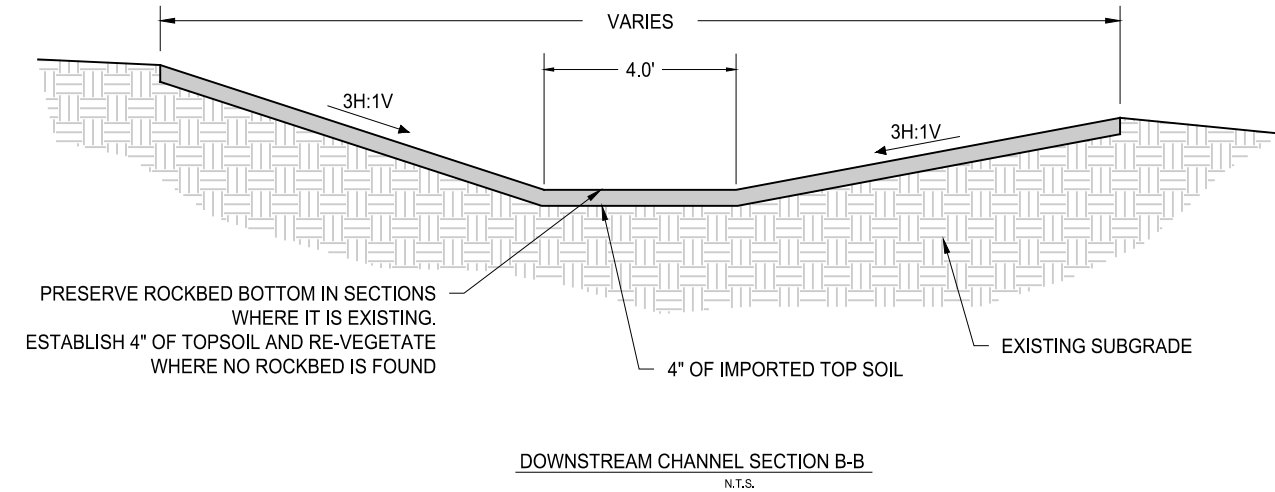
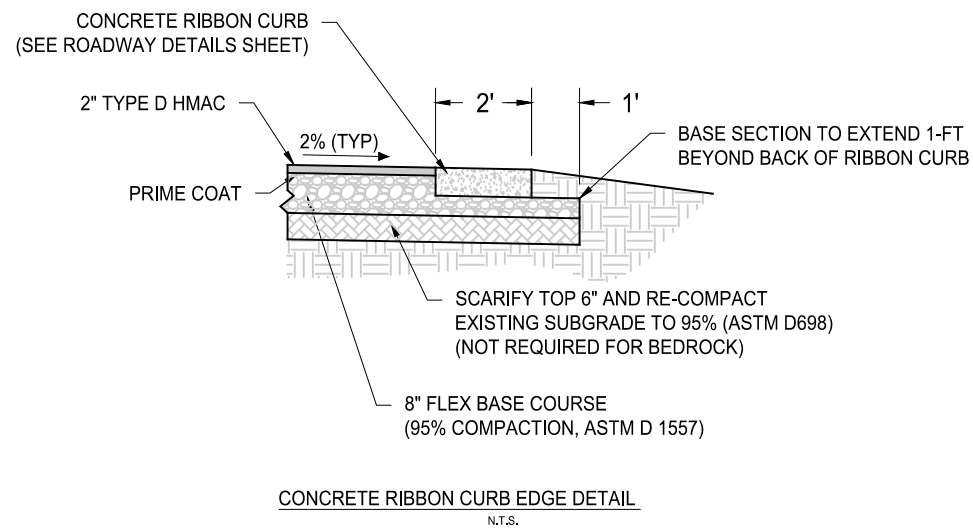
SHEET TITLE:  
**PAVING PLAN  
(3 OF 3)**



ENGINEER'S SEAL:



PRESERVE ROCKBED BOTTOM IN SECTIONS WHERE IT IS EXISTING. ESTABLISH 4" OF TOPSOIL AND RE-VEGETATE WHERE NO ROCKBED IS FOUND



NOTES:

- CONTRACTOR IS TO GRADE AND INSTALL THE SWALE RE-VEGETATION MEASURES AT THE START OF THE PROJECT TO REDUCE EROSION POTENTIAL AS WORK PROGRESSES.
- SUBGRADE SHALL BE COMPACTED IN CONFORMANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM 210S.
- HMAc SURFACE COURSE SHALL HAVE A 1:1 (H:V) EDGE TAPER IN ALL LOCATIONS WITHOUT CONCRETE RIBBON CURB.

BEGIN SECTION D-D: STA 14+01.88  
END SECTION D-D: STA 14+16.42

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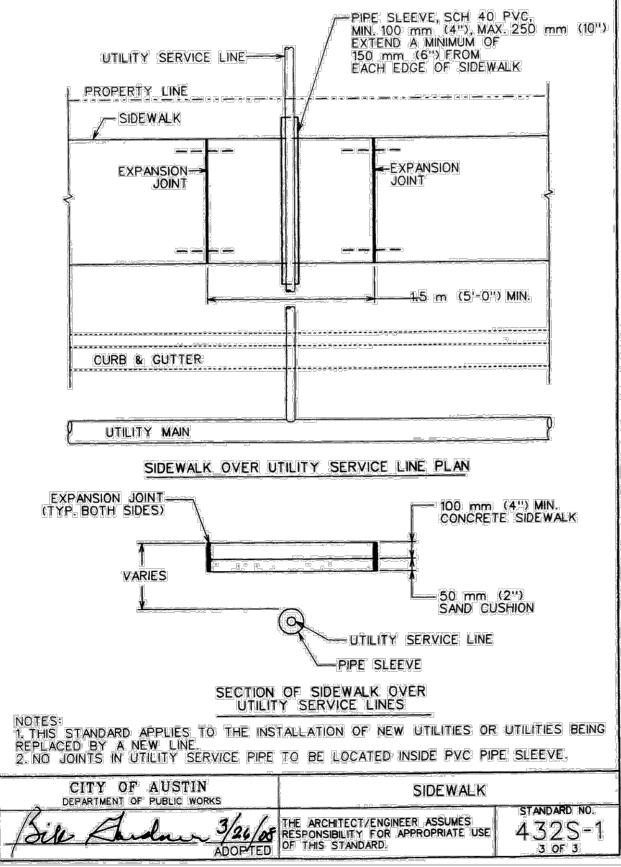
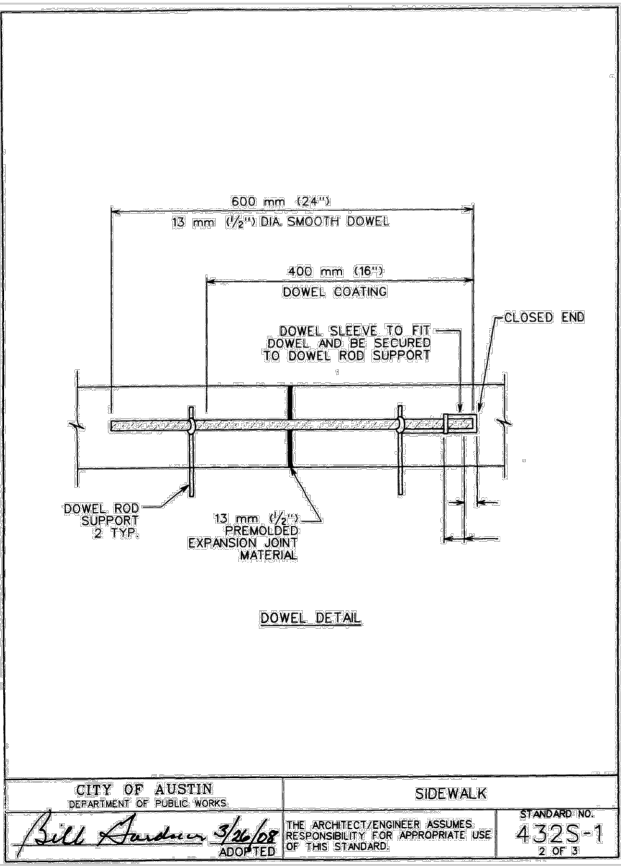
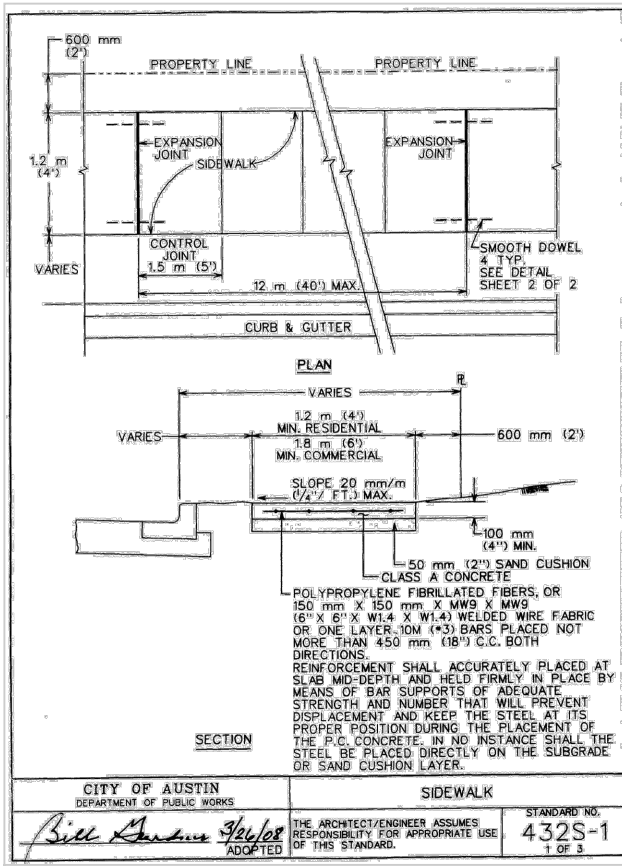
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PROJECT:  
RANCH HOUSE ROAD  
PHASE 2

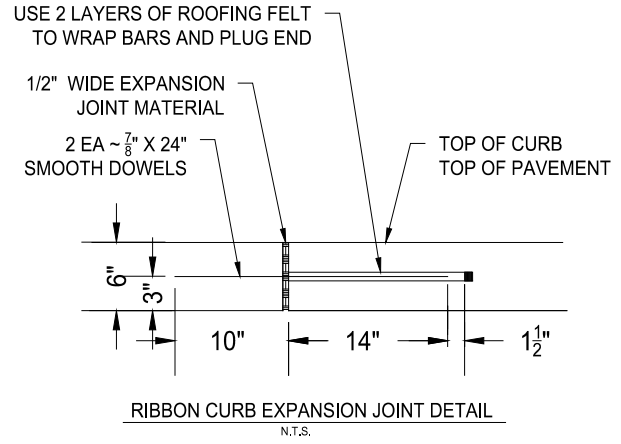
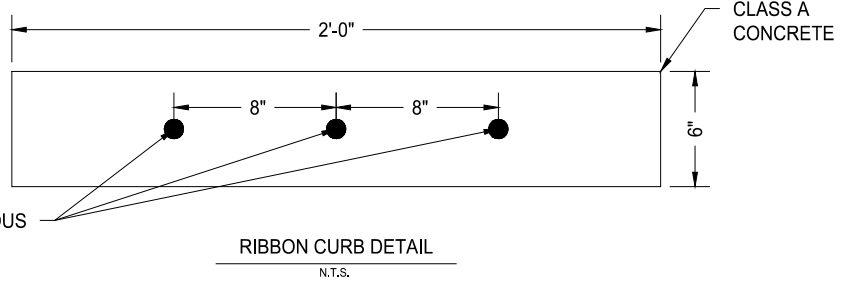
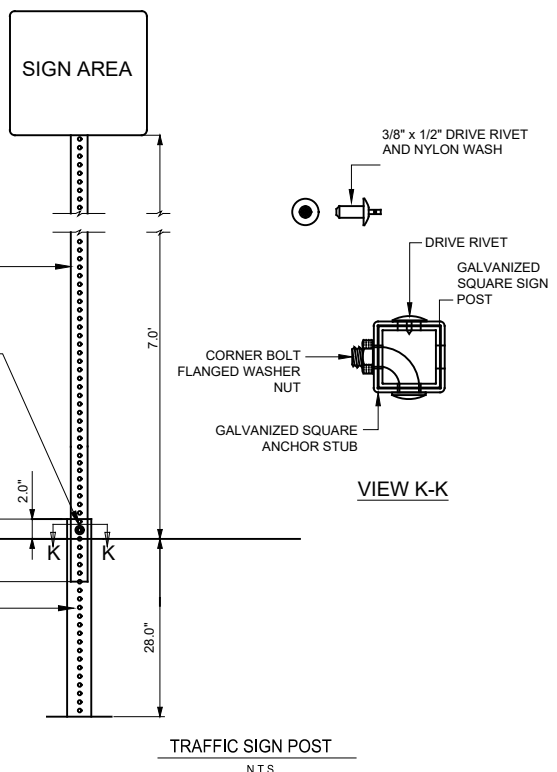
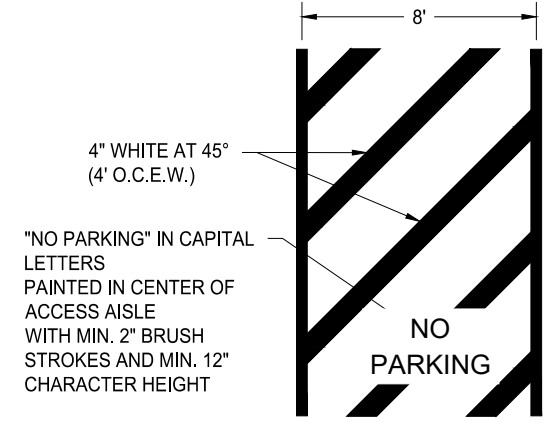
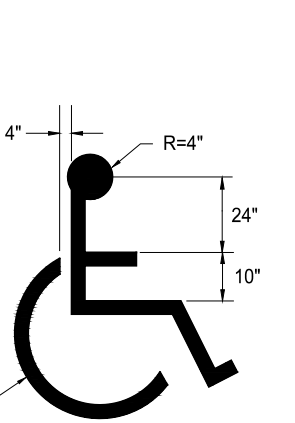
SHEET TITLE:  
TYPICAL SECTIONS





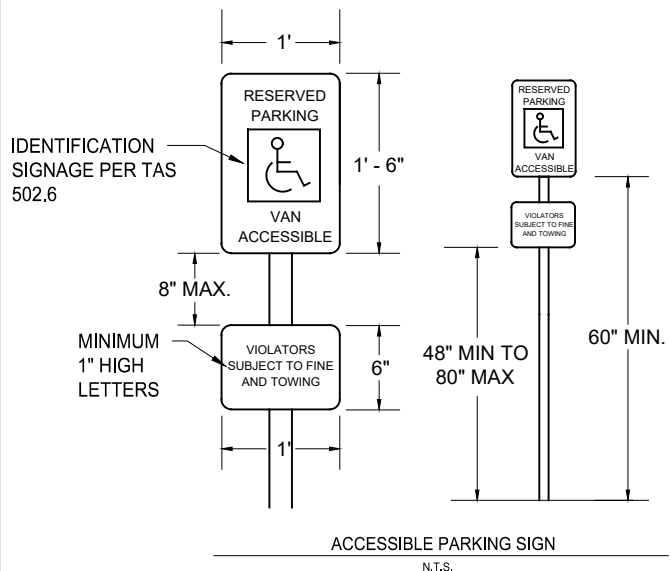
**NOTES:**

1. ALL PAINT SHALL BE 4" WIDE REFLECTIVE PAINT: WHITE ON ASPHALT PAVING AND YELLOW ON CONCRETE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
2. ALL PAVEMENT MARKINGS SHALL BE PAINTED TWICE.



**RIBBON CURB NOTES:**

1. CONCRETE SHALL BE CLASS A.
2. IN LOCATIONS OF PROPOSED RIBBON CURB, EXTEND THE FLEX BASE 1-FT BEYOND THE BACK OF RIBBON CURB.
3. ROUND EXPOSED SHARP EDGES WITH A ROUNDING TOOL, TO A MINIMUM RADIUS OF 1/4 INCH.
4. WHERE PLACEMENT OF CURB OR CURB AND GUTTER IS NOT ADJACENT TO CONCRETE PAVEMENT, EXPANSION JOINTS SHALL BE PROVIDED AT NO MORE THAN 45-FT INCREMENTS, AT STRUCTURES, CURB RETURNS AT STREETS, AND AT LOCATIONS DIRECTED BY THE ENGINEER.
5. TRANSVERSE TOOLED JOINTS SHALL BE PLACED AT 15-FT INCREMENTS.



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**ENGINEER'S SEAL:**

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**PROJECT:**  
RANCH HOUSE ROAD  
PHASE 2

**SHEET TITLE:**  
ROADWAY DETAILS

12 OF 28

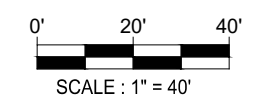
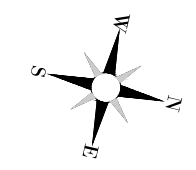
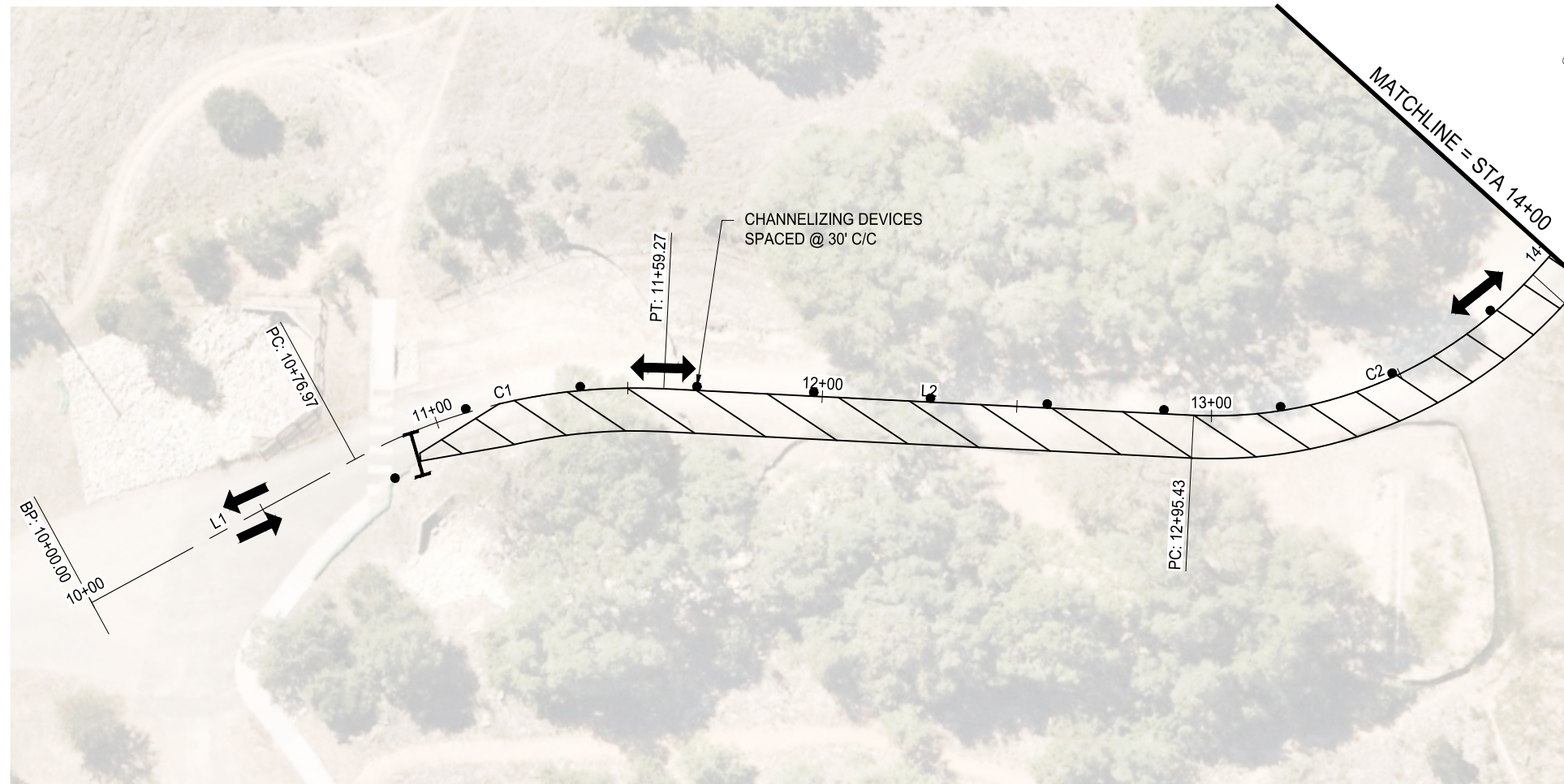


ROADWAY GRADING POINT SUMMARY TABLE

POINT	NORTHING	EASTING	ALIGNMENT	STA	OFF	EXIST ELEV	PROP ELEV	EXIST CROSS SLOPE	PROP CROSS SLOPE
301	13991607.567	2256410.260	HAL01	10+92.92	-7.56	1158.11	1158.11		
102	13991615.46	2256421.03	HAL01	10+92.92	5.79	1157.23	1157.23	-6.59%	-6.59%
103	13991627.72	2256394.97	HAL01	11+16.74	-10	1156.06	1156.06		
104	13991636.85	2256412.76	HAL01	11+16.74	10	1155.70	1155.70	-1.80%	-1.80%
100	13991660.82	2256382.4	HAL01	11+50.00	-10	1153.93	1154.82	-6.90%	2.00%
302	13991663.32	2256392.08	HAL01	11+50.00	0	1154.62	1154.62	-	-
101	13991665.81	2256401.77	HAL01	11+50.00	10	1153.71	1154.42	-9.10%	-2.00%
7	13991710.47	2256372.54	HAL01	12+00.00	-10	1151.84	1152.05	-0.10%	2.00%
303	13991712.36	2256382.36	HAL01	12+00.00	0	1151.85	1151.85	-	-
8	13991714.25	2256392.18	HAL01	12+00.00	10	1150.89	1151.65	-9.60%	-2.00%
9	13991759.57	2256363.09	HAL01	12+50.00	-10	1148.52	1149.92	-12.00%	2.00%
304	13991761.46	2256372.91	HAL01	12+50.00	0	1149.72	1149.72	-	-
10	13991763.34	2256382.73	HAL01	12+50.00	10	1149.35	1149.52	-3.70%	-2.00%
11	13991808.24	2256353.64	HAL01	13+00.00	-10	1147.81	1148.42	-4.10%	2.00%
305	13991810.54	2256363.37	HAL01	13+00.00	0	1148.22	1148.22	-	-
12	13991812.83	2256373.1	HAL01	13+00.00	10	1148.18	1148.02	-0.40%	-2.00%
13	13991848.64	2256333.67	HAL01	13+50.00	-10	1147.02	1147.39	-1.70%	2.00%
306	13991854.98	2256341.41	HAL01	13+50.00	0	1147.19	1147.19	-	-
14	13991861.31	2256349.15	HAL01	13+50.00	10	1147.22	1146.99	0.30%	-2.00%
15	13991876.67	2256297.53	HAL01	14+00.00	-10	1146.79	1147.00	-0.10%	2.00%
307	13991885.47	2256302.28	HAL01	14+00.00	0	1146.80	1146.80	-	-
16	13991894.27	2256307.03	HAL01	14+00.00	10	1146.71	1146.60	-0.90%	-2.00%
106	13991881.02	2256289.48	HAL01	14+09.15	-10	1146.75	1146.98	-0.30%	2.00%
108	13991889.82	2256294.23	HAL01	14+09.15	0	1146.78	1146.78	-	-
107	13991898.62	2256298.98	HAL01	14+09.15	10	1146.69	1146.58	-0.90%	-2.00%
308	13991909.63	2256258.51	HAL01	14+50.00	0	1146.77	1146.91		
18	13991917.68	2256263.93	HAL01	14+50.00	9.7	1146.72	1146.72	-0.52%	-2.00%
19	13991916.7	2256236	HAL01	14+70.90	-9.07	1147.53	1147.53		
309	13991923.2	2256242.32	HAL01	14+71.17	0	1146.98	1146.98		
20	13991927.46	2256246.47	HAL01	14+71.36	5.94	1146.87	1146.87		
22	13992012.38	2256205.21	HAL01	15+68.50	7.8	1147.05	1147.05		
310	13992009.31	2256198.04	HAL01	15+68.55	0	1147.17	1147.17		
21	13992006.55	2256191.57	HAL01	15+68.59	-7.03	1147.28	1147.28		
23	13992032.5	2256175.81	HAL01	16+00.00	-10	1147.55	1147.55	2.00%	1.00%
311	13992037.61	2256184.4	HAL01	16+00.00	0	1147.35	1147.45	-	-
24	13992042.72	2256193	HAL01	16+00.00	10	1147.00	1147.35	-3.50%	-1.00%
25	13992075.48	2256150.25	HAL01	16+50.00	-10	1147.88	1147.88	0.40%	1.00%
312	13992080.59	2256158.85	HAL01	16+50.00	0	1147.84	1147.78	-	-
26	13992085.7	2256167.44	HAL01	16+50.00	10	1147.71	1147.68	-1.30%	-1.00%
27	13992117.79	2256124.49	HAL01	17+00.00	-10	1148.11	1148.11	0.40%	1.00%
313	13992123.29	2256132.84	HAL01	17+00.00	0	1148.07	1148.01	-	-
28	13992128.79	2256141.19	HAL01	17+00.00	10	1147.96	1147.91	-1.10%	-1.00%
29	13992157.3	2256095.54	HAL01	17+50.00	-10	1148.45	1148.45	-0.40%	1.00%
314	13992163.6	2256103.3	HAL01	17+50.00	0	1148.49	1148.35	-	-
30	13992169.91	2256111.07	HAL01	17+50.00	10	1148.39	1148.25	-1.00%	-1.00%
31	13992193.01	2256062.09	HAL01	18+00.00	-11	1148.99	1148.99	-0.09%	1.00%
315	13992200.77	2256069.89	HAL01	18+00.00	0	1149.00	1148.88	-	-
32	13992207.82	2256076.98	HAL01	18+00.00	10	1148.96	1148.78	-0.40%	-1.00%
33	13992226.69	2256026.58	HAL01	18+50.00	-10	1149.47	1149.47	-1.10%	1.00%
316	13992234.41	2256032.93	HAL01	18+50.00	0	1149.58	1149.37	-	-
34	13992242.14	2256039.28	HAL01	18+50.00	10	1149.66	1149.27	0.80%	-1.00%
35	13992258.3	2255987.88	HAL01	19+00.00	-10	1150.10	1150.10	-3.00%	1.00%
317	13992266.04	2255994.2	HAL01	19+00.00	0	1150.40	1150.00	-	-
36	13992273.79	2256000.53	HAL01	19+00.00	10	1150.23	1149.90	-1.70%	-1.00%
37	13992282.18	2255947.81	HAL01	19+50.00	-10	1151.11	1151.11	-2.70%	1.00%
318	13992291.5	2255951.44	HAL01	19+50.00	0	1151.38	1151.01	-	-
38	13992300.82	2255955.06	HAL01	19+50.00	10	1151.15	1150.91	-2.30%	-1.00%
39	13992291.97	2255901.69	HAL01	20+00.00	-10	1152.32	1152.32	-1.00%	-1.00%
319	13992301.92	2255902.73	HAL01	20+00.00	0	1152.42	1152.42	-	-
40	13992311.86	2255903.76	HAL01	20+00.00	10	1152.57	1152.52	1.50%	1.00%
41	13992285.93	2255858.62	HAL01	20+50.00	-10	1155.35	1155.55	-3.00%	-1.00%
320	13992294.84	2255854.07	HAL01	20+50.00	0	1155.65	1155.65	-	-
80	13992303.75	2255849.53	HAL01	20+50.00	10	1155.53	1155.75	-1.20%	1.00%

POINT	NORTHING	EASTING	ALIGNMENT	STA	OFF	EXIST ELEV	PROP ELEV	EXIST CROSS SLOPE	PROP CROSS SLOPE
43	13992255.72	2255822.56	HAL01	21+00.00	-10	1163.14	1163.21	-0.70%	0.00%
321	13992263.03	2255815.74	HAL01	21+00.00	0	1163.21	1163.21	-	-
44	13992270.35	2255808.91	HAL01	21+00.00	10	1162.49	1163.21	-7.20%	0.00%
45	13992246.5	2255812.67	HAL01	21+13.52	-10	1164.57	1164.57		
329	13992245.53	2255797.85	HAL01	21+25.05	0	1165.21	1165.21	-	-
322	13992223.21	2255787.02	HAL01	21+50.00	0	1165.94	1165.85	-	-
46	13992225.24	2255780.33	HAL01	21+50.00	7	1165.99	1165.99	0.71%	2.00%
47	13992176.74	2255797.53	HAL01	22+00.00	-12.15	1166.84	1167.46	-3.62%	-2.00%
323	13992173.82	2255785.74	HAL01	22+00.00	0	1167.28	1167.70	-	-
48	13992172.14	2255778.94	HAL01	22+00.00	7	1167.84	1167.84	8.00%	2.00%
105	13992162.37	2255796.25	HAL01	22+13.91	-7	1167.36	1167.61		
49	13992127.69	2255806.23	HAL01	22+50.00	-7	1167.60	1167.82	-4.00%	-2.00%
324	13992125.76	2255799.51	HAL01	22+50.00	0	1167.88	1167.96	-	-
50	13992123.82	2255792.78	HAL01	22+50.00	7	1168.10	1168.10	3.14%	2.00%
51	13992098.11	2255833.65	HAL01	23+00.00	-7	1165.85	1165.85	2.14%	2.14%
325	13992091.31	2255832.01	HAL01	23+00.00	0	1165.70	1165.70	-	-
52	13992084.51	2255830.36	HAL01	23+00.00	7	1165.40	1165.40	-4.29%	-4.29%
53	13992111.43	2255870.89	HAL01	23+50.00	-7	1164.73	1164.69	2.57%	2.00%
326	13992107.22	2255876.48	HAL01	23+50.00	0	1164.55	1164.55	-	-
54	13992103.01	2255882.07	HAL01	23+50.00	7	1164.37	1164.41	-2.57%	-2.00%
55	13992150.89	2255873.43	HAL01	24+00.00	-7	1164.85	1164.73	3.71%	2.00%
327	13992154.35	2255879.52	HAL01	24+00.00	0	1164.59	1164.59	-	-
56	13992157.81	2255885.6	HAL01	24+00.00	7	1164.43	1164.45	-2.29%	-2.00%
59	13992174.16	2255870.67	HAL01	24+19.20	7	1164.67	1164.67		
74	13992189.65	2255880.03	HAL01	24+19.93	25.07	1163.83	1163.83	-4.65%	-2.00%
57	13992178.42	2255836.74	HAL01	24+50.00	-7	1165.26	1165.39	0.14%	2.00%
328	13992184.41	2255840.36	HAL01	24+50.00	0	1165.25	1165.25	-	-
58	13992190.4	2255843.98	HAL01	24+50.00	7	1165.01	1165.11	-3.43%	-2.00%
61	13992185.02	2255825.81	HAL01	24+62.77	-7	1165.53	1165.53		
60	13992206.82	2255816.8	HAL01	24+81.75	7	1165.20	1165.20		
73	13992222.23	2255826.11	HAL01	24+81.75	25	1164.61	1164.61	-3.28%	-2.00%
199	13992265.75	2255804.17	HAL02	10+05.31	20.08	1163.42	1164.12		
201	13992237.91	2255785.14	HAL02	10+08.60	-13.51	1165.61	1166.31		
200	13992258.28	2255783.51	HAL02	10+16.69	6.00	1165.18	1165.18		
202	13992246.41	2255779.35	HAL02	10+20.59	-6.00	1165.58	1165.58		
203	13992237.65	2255754.1	HAL02	10+50.00	-6.00	1166.20	1166.20	2.50%	0.50%
330	13992242.95	2255751.29	HAL02	10+50.00	0.00	1166.05	1166.17	-	-
204	13992248.26	2255748.49	HAL02	10+50.00	6.00	1166.22	1166.14	2.83%	-0.50%
205	13992206.67	2255715.8	HAL02	11+00.00	-6.04	1169.54	1169.54	4.30%	0.50%
331	13992211.7	2255712.45	HAL02	11+00.00	0.00	1169.28	1169.51	-	-
206	13992216.66	2255709.15	HAL02	11+00.00	5.96	1169.24	1169.48	-0.67%	-0.50%
207	13992205.87	2255687.94	HAL02	11+24.78	6.00	1170.17	1170.17		
94	13992189.9	2255681.84	HAL02	11+36.96	-6.00	1170.81	1170.81		
90	13992187.83	2255677.29	HAL02	11+41.96	-6.00	1171.06	1171.06		
208	13992215.12	2255663.21	HAL02	11+43.45	24.67	1171.24	1171.24		
93	13992140.38	2255695.83	HAL02	11+44.75	-56.87	1170.93	1170.93		
92	13992139.03	2255691.04	HAL02	11+49.67	-56.11	1170.97	1170.97		
332	13992189.96	2255667.48	HAL02	11+50.00	0.00				





**LEGEND**

- UNDER CONSTRUCTION
- CHANNELIZING DEVICES
- TY III BARRICADE
- TRAFFIC DIRECTION
- ONE-LANE TWO-WAY TRAFFIC

**GILPIN**  
ENGINEERING COMPANY

T.B.P.L.S. Firm Registration # 10193770  
T.B.P.E. Firm Registration # F-8266  
9701 BRODIE LANE #203  
AUSTIN, TX 78748  
PH: 512.220.8100

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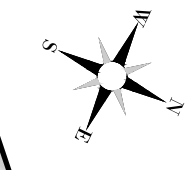
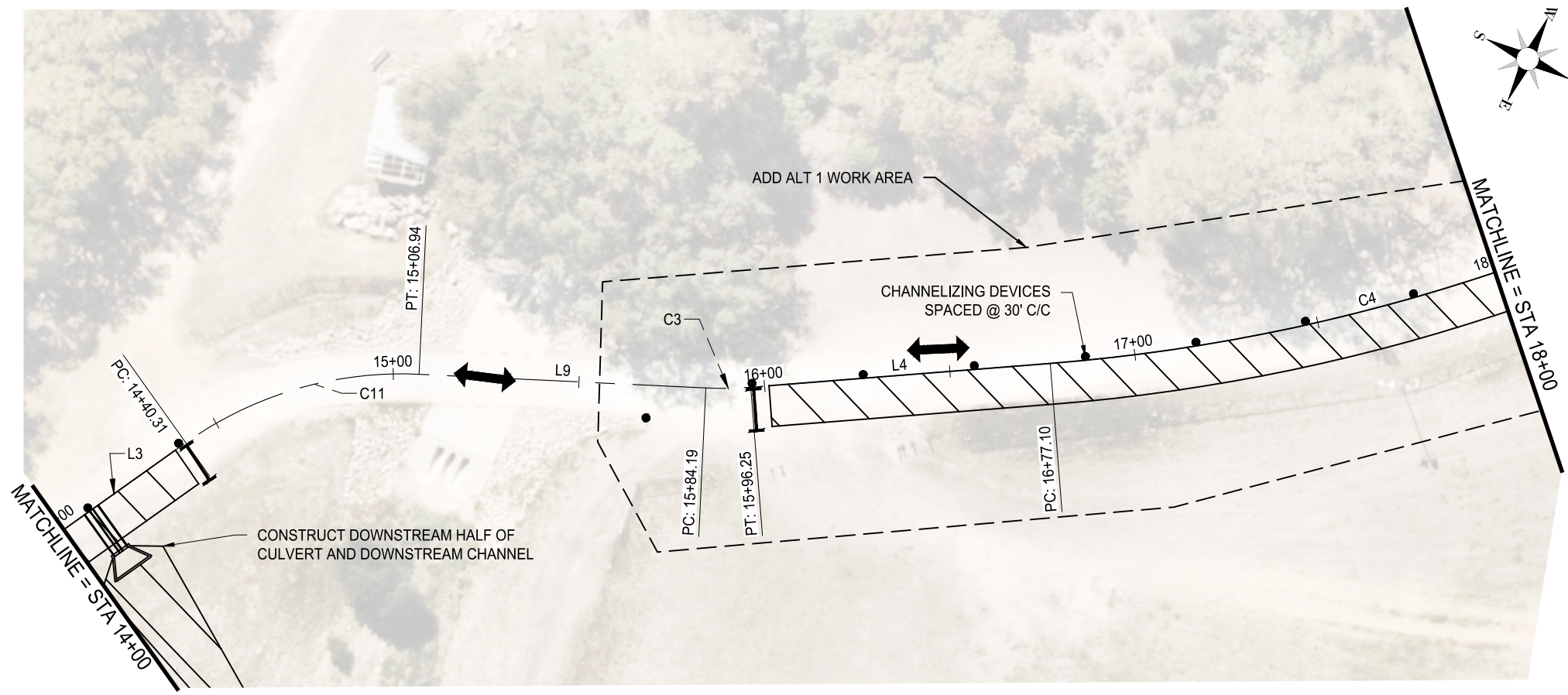
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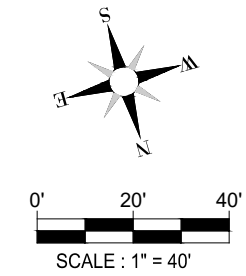
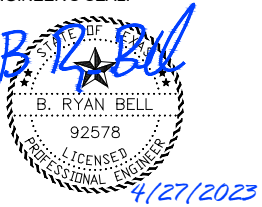
PROJECT:  
**RANCH HOUSE ROAD  
PHASE 2**

SHEET TITLE:  
**TRAFFIC CONTROL  
PLAN PH1, SHEET 1**

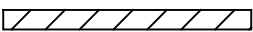






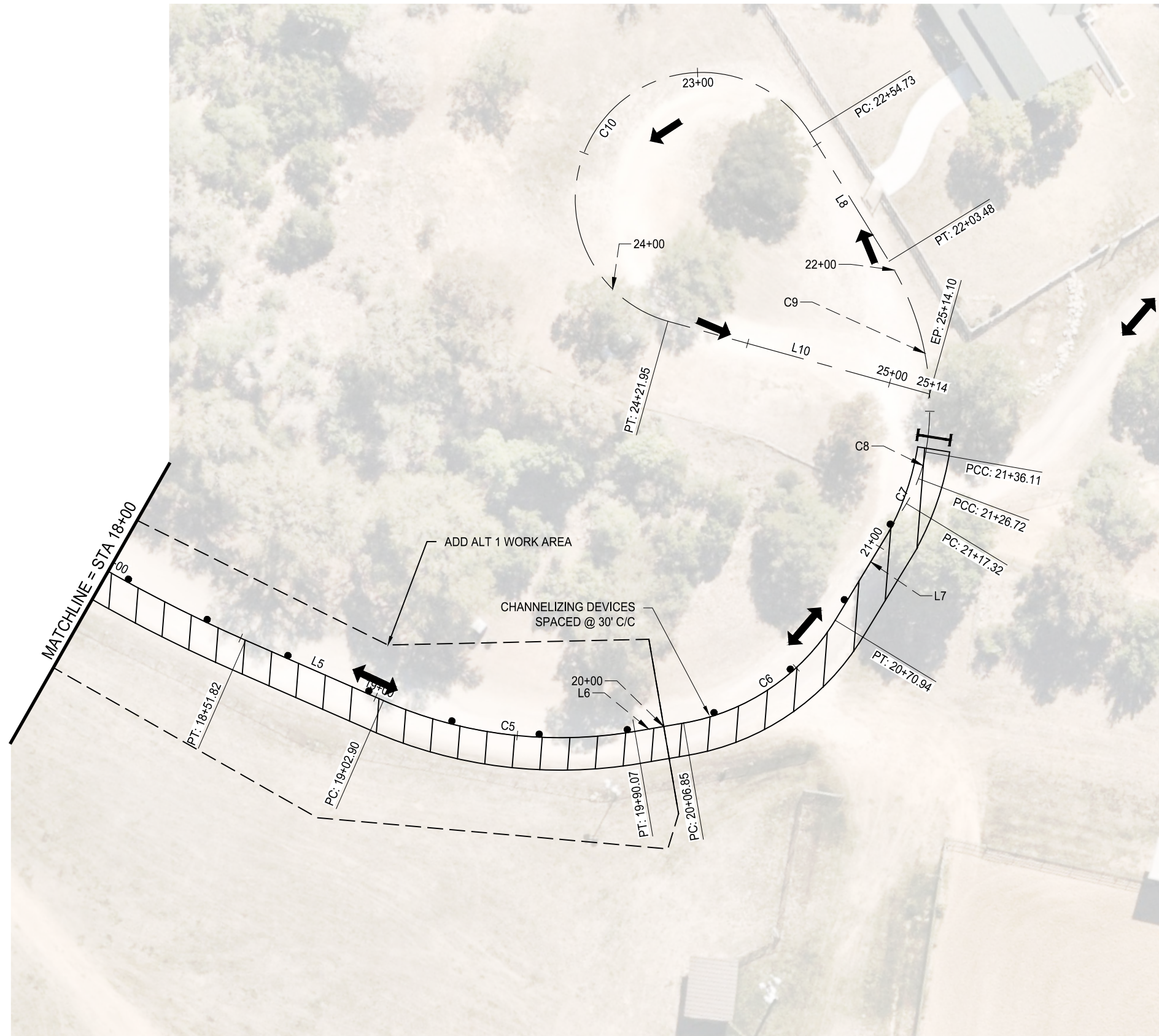


ENGINEER'S SEAL:



LEGEND

-  UNDER CONSTRUCTION
-  CHANNELIZING DEVICES
-  TY III BARRICADE
-  TRAFFIC DIRECTION
-  ONE-LANE TWO-WAY TRAFFIC



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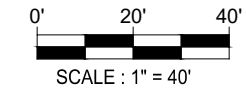
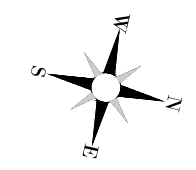
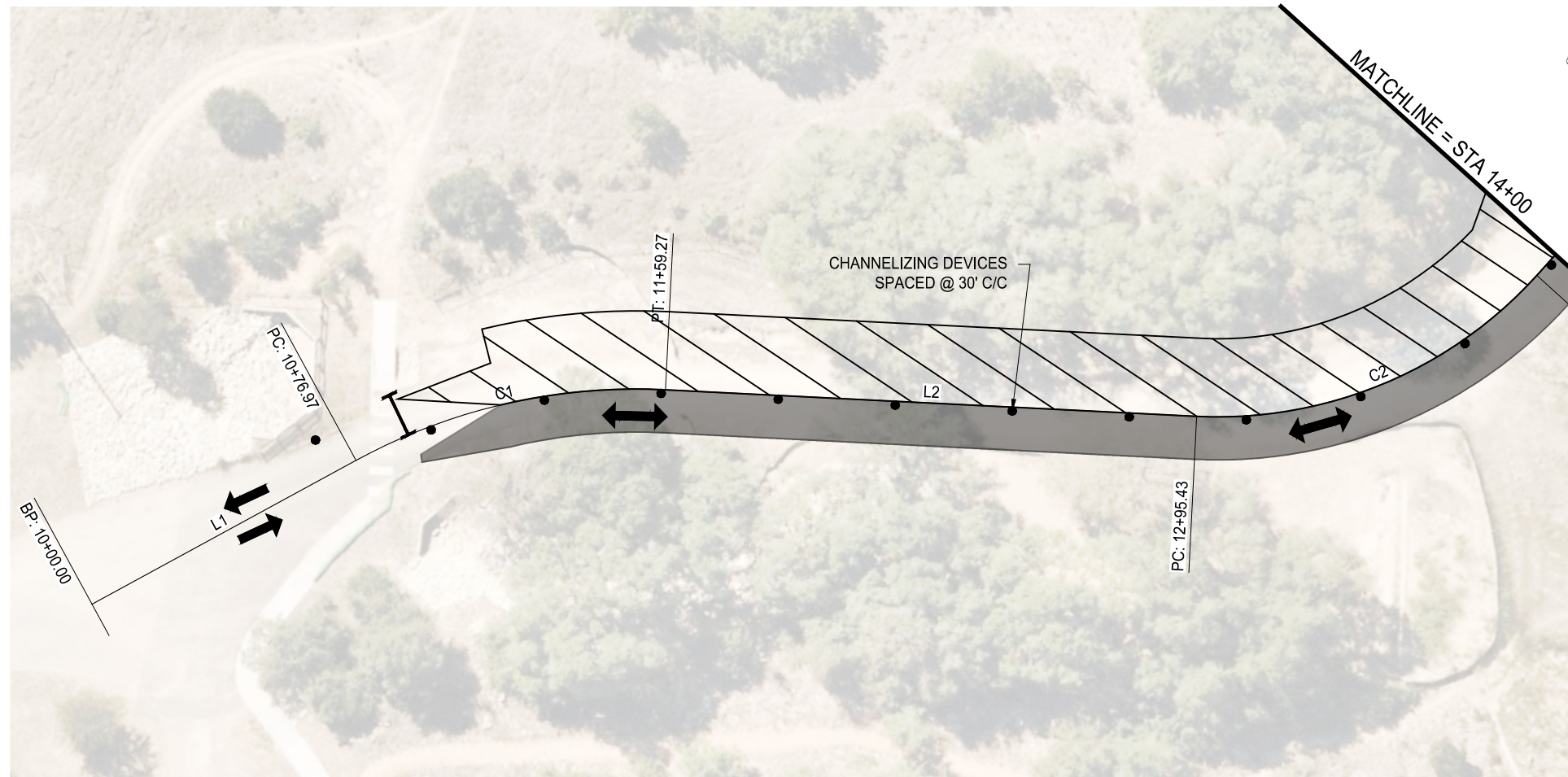
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PROJ #: PARKS-2023-0001



PROJECT:  
RANCH HOUSE ROAD  
PHASE 2

SHEET TITLE:  
TRAFFIC CONTROL  
PLAN PH1, SHEET 2





**LEGEND**

- UNDER CONSTRUCTION
- PREVIOUS CONSTRUCTION
- CHANNELIZING DEVICES
- TY III BARRICADE
- TRAFFIC DIRECTION
- ONE-LANE TWO-WAY TRAFFIC

**GILPIN**  
ENGINEERING COMPANY

T.B.P.L.S. Firm Registration # 10193770  
T.B.P.E. Firm Registration # F-8266  
9701 BRODIE LANE #203  
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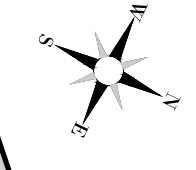
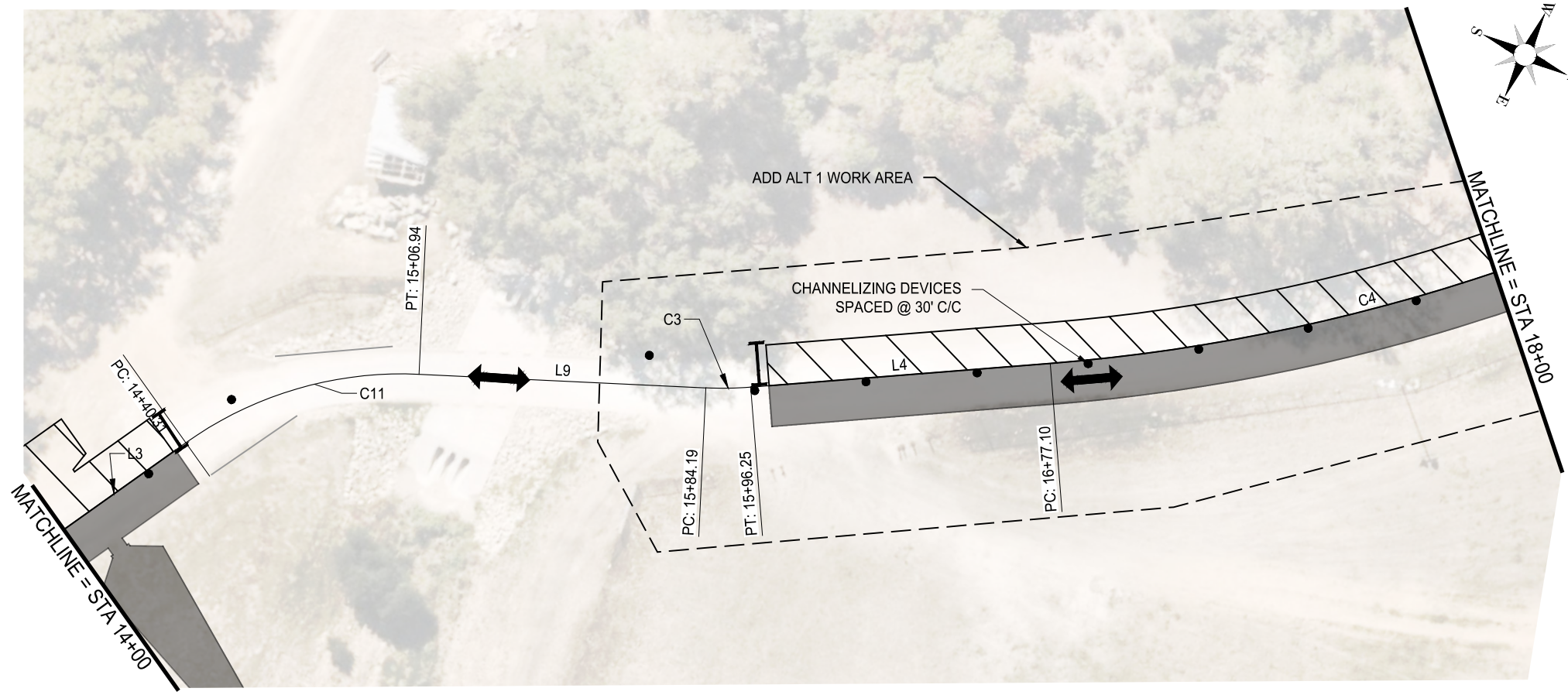
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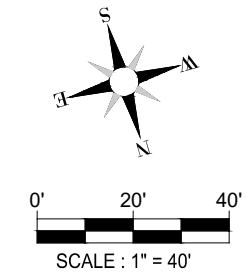
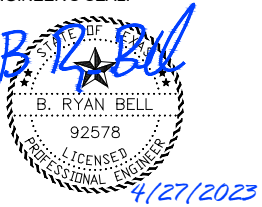
PROJECT:  
**RANCH HOUSE ROAD  
PHASE 2**

SHEET TITLE:  
**TRAFFIC CONTROL  
PLAN PH2, SHEET 1**





ENGINEER'S SEAL:



**LEGEND**

- UNDER CONSTRUCTION
- PREVIOUS CONSTRUCTION
- CHANNELIZING DEVICES
- TY III BARRICADE
- TRAFFIC DIRECTION
- ONE-LANE TWO-WAY TRAFFIC

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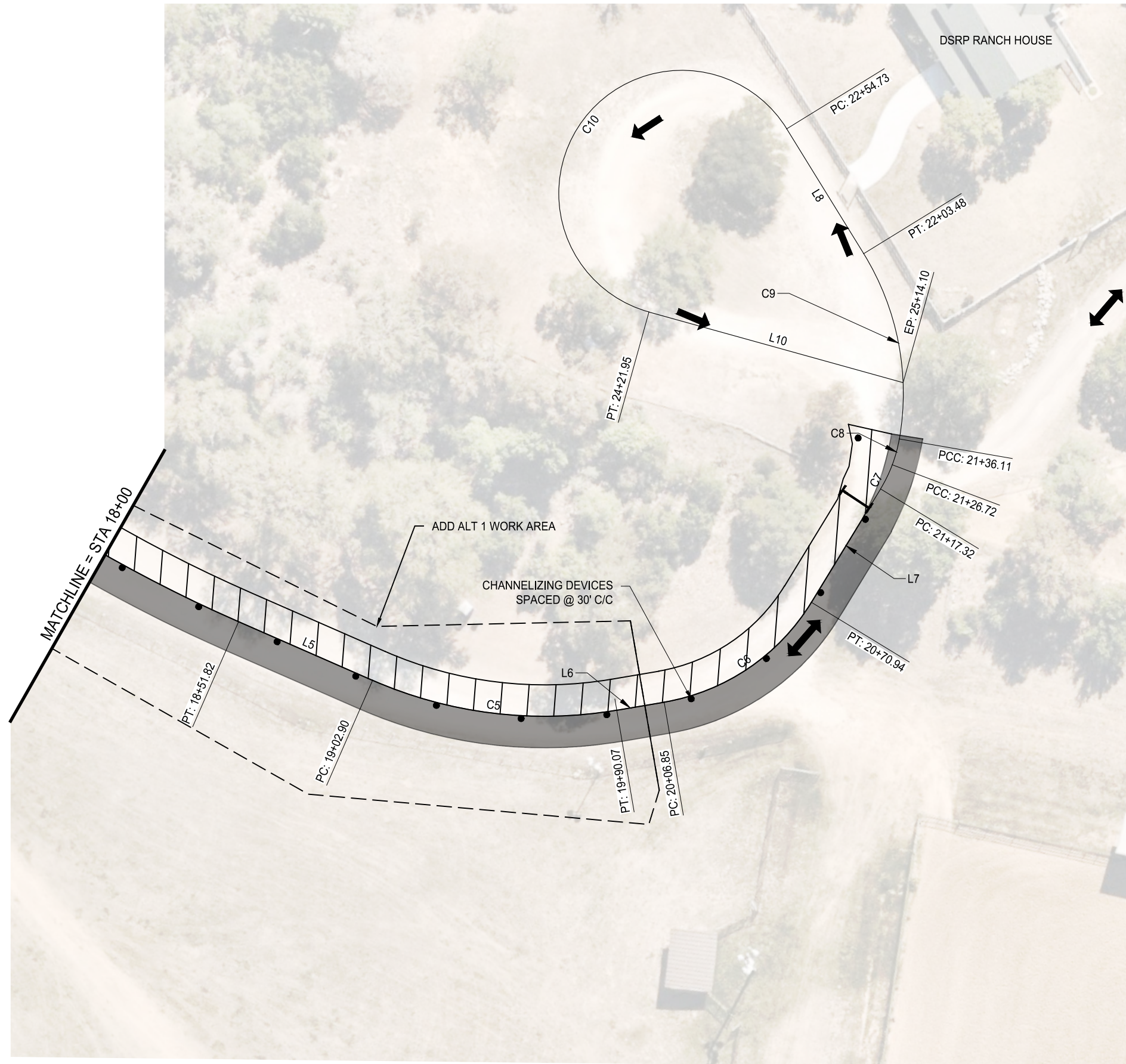
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PROJ #: PARKS-2023-0001



PROJECT:  
**RANCH HOUSE ROAD  
PHASE 2**

SHEET TITLE:  
**TRAFFIC CONTROL  
PLAN PH2, SHEET 2**



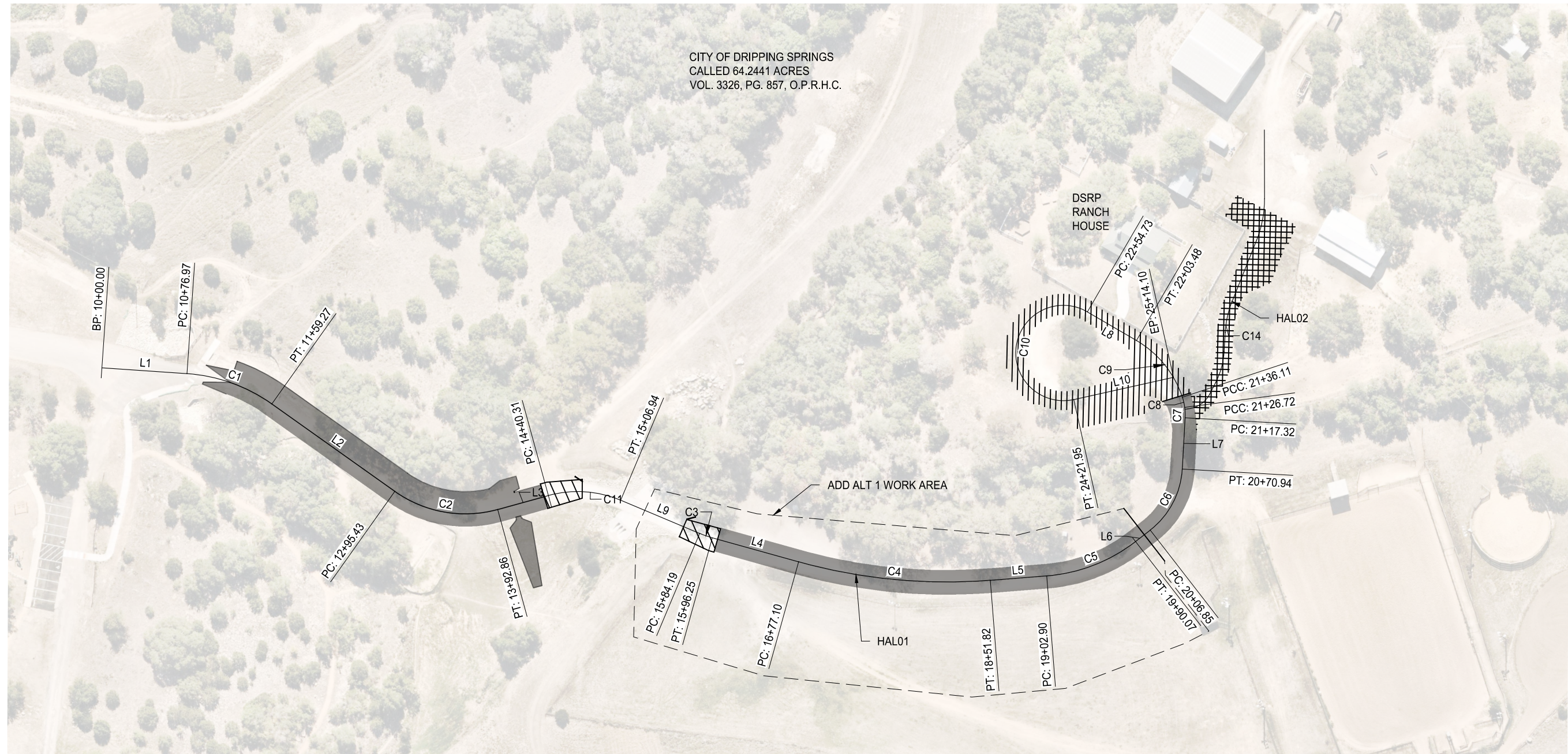
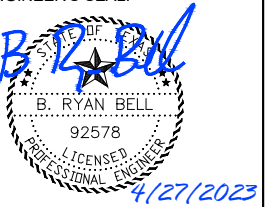


CITY OF DRIPPING SPRINGS  
 CALLED 64.2441 ACRES  
 VOL. 3326, PG. 857, O.P.R.H.C.



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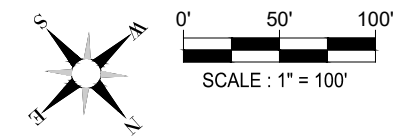


PROJECT:  
 RANCH HOUSE ROAD  
 PHASE 2

SHEET TITLE:  
 TRAFFIC CONTROL  
 PLAN PHASE 3

NOTES:

1. ACCESS TO THE RANCH HOUSE FOR CITY STAFF MUST BE MAINTAINED MONDAY THRU FRIDAY, 7AM TO 7PM.
2. IF NECESSARY, COMPLETE CLOSURES MAY BE ARRANGED THROUGH THE DEPUTY PUBLIC WORKS DIRECTOR FOR LIMITED SATURDAYS AND SUNDAYS OR AFTER HOURS (7PM TO 7AM) AT THE DISCRETION OF THE CITY BASED ON SCHEDULES FOR PLANNED EVENTS AT RANCH PARK.



LEGEND

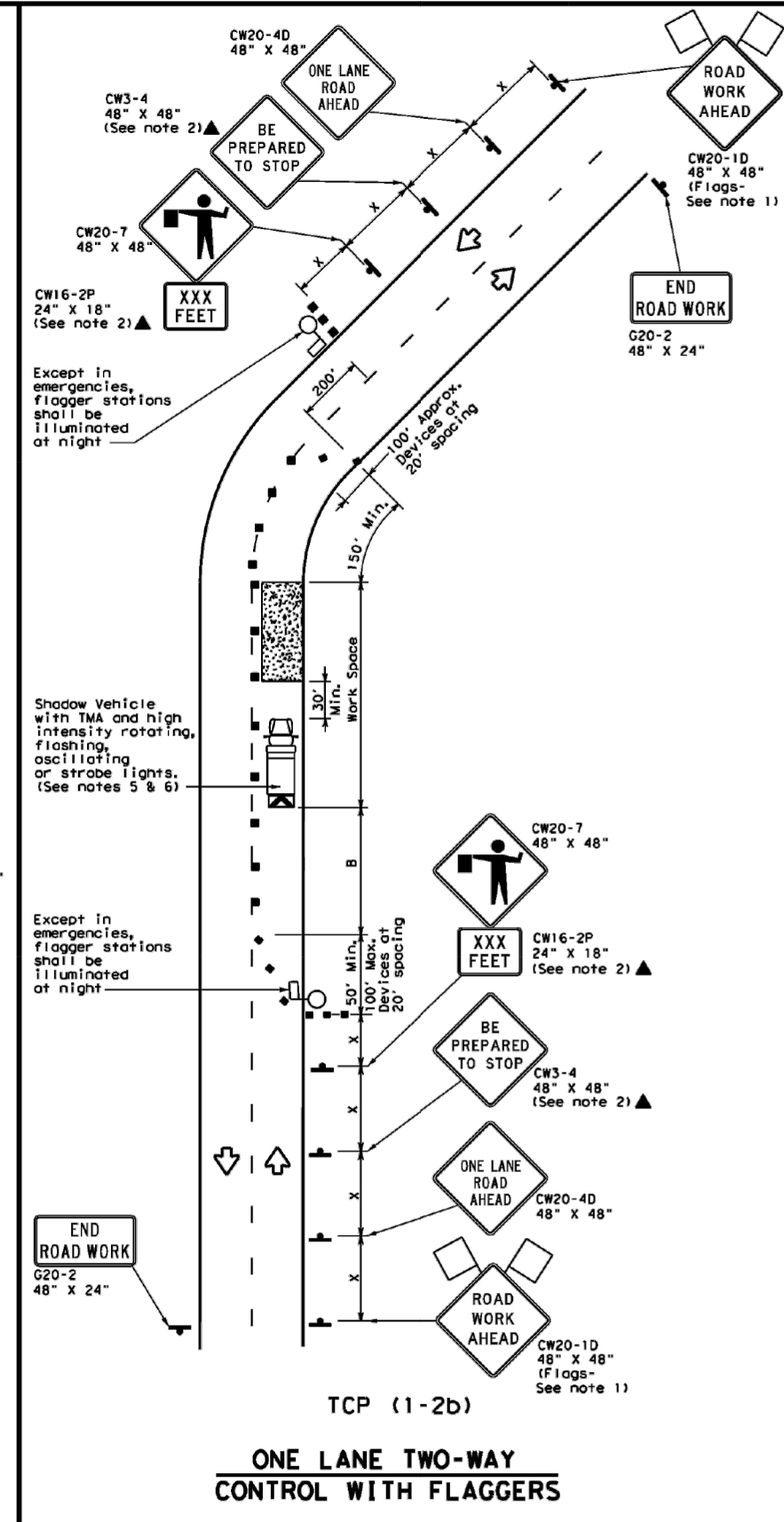
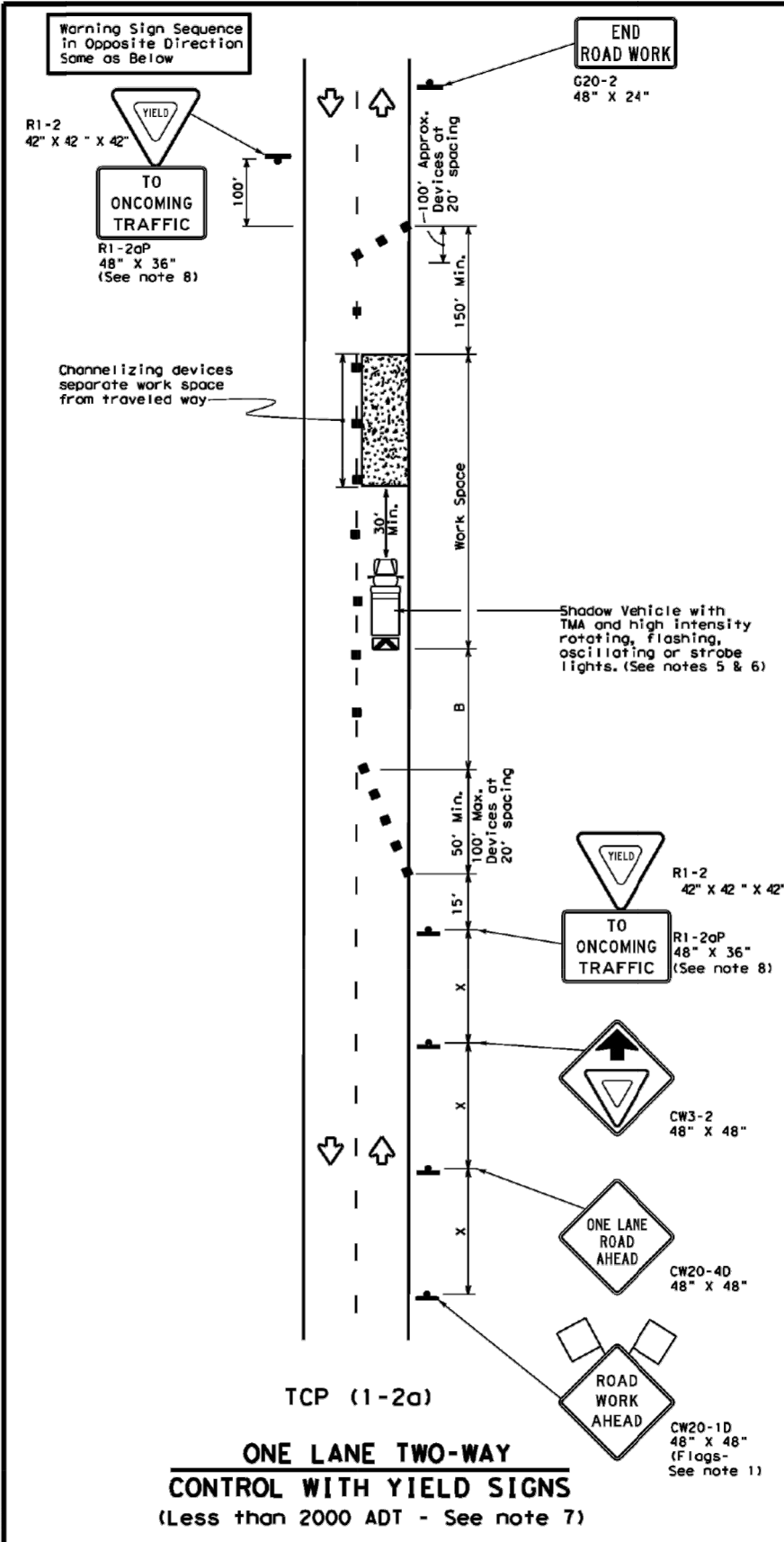
	PHASE 3 - STEP 1 WORK
	PHASE 3 - STEP 2 WORK
	PREVIOUS CONSTRUCTION
	CHANNELIZING DEVICES
	TY III BARRICADE



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DATE: FILE:



**LEGEND**

	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board		Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed * S	Formula L = WS / 60	Minimum Desirable Taper Lengths **			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "x" Distance	Suggested Longitudinal Buffer Space "B"	Stopping Sight Distance
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent			
30	L = WS / 60	150'	165'	180'	30'	60'	120'	90'	200'
35		205'	225'	245'	35'	70'	160'	120'	250'
40		265'	295'	320'	40'	80'	240'	155'	305'
45	L = WS	450'	495'	540'	45'	90'	320'	195'	360'
50		500'	550'	600'	50'	100'	400'	240'	425'
55		550'	605'	660'	55'	110'	500'	295'	495'
60		600'	660'	720'	60'	120'	600'	350'	570'
65		650'	715'	780'	65'	130'	700'	410'	645'
70	700'	770'	840'	70'	140'	800'	475'	730'	
75	750'	825'	900'	75'	150'	900'	540'	820'	

\* Conventional Roads Only  
\*\* Taper lengths have been rounded off.  
L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

**TYPICAL USAGE**

	MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
		✓	✓		

- GENERAL NOTES**
- Flags attached to signs where shown are REQUIRED.
  - All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
  - The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4D "ONE LANE ROAD AHEAD" sign, but proper sign spacing shall be maintained.
  - Sign spacing may be increased or an additional CW20-1D "ROAD WORK AHEAD" sign may be used if advance warning ahead of the flagger or R1-2 "YIELD" sign is less than 1500 feet.
  - A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
  - Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
- TCP (1-2a)**
- R1-2 "YIELD" sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work spaces should be no longer than one half city block. In rural areas on roadways with less than 2000 ADT, work spaces should be no longer than 400 feet.
  - R1-2 "YIELD" sign with R1-2aP "TO ONCOMING TRAFFIC" plaque shall be placed on a support at a 7 foot minimum mounting height.
- TCP (1-2b)**
- Flaggers should use two-way radios or other methods of communication to control traffic.
  - Length of work space should be based on the ability of flaggers to communicate.
  - If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain adequate stopping sight distance to the flagger and a queue of stopped vehicles (see table above).
  - Channelizing devices on the center-line may be omitted when a pilot car is leading traffic and approved by the Engineer.
  - Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situations.

Texas Department of Transportation  
Traffic Operations Division Standard

**TRAFFIC CONTROL PLAN**  
**ONE-LANE TWO-WAY**  
**TRAFFIC CONTROL**

**TCP (1-2) - 18**

FILE: tcp1-2-18.dgn	DN:	CK:	DN:	CK:
© TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS				
4-90 4-98				
2-94 2-12				
1-97 2-18				
	DIST	COUNTY	SHEET NO.	

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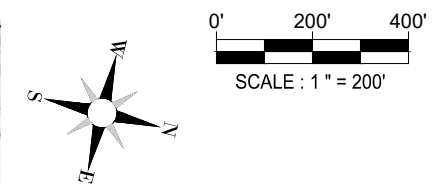
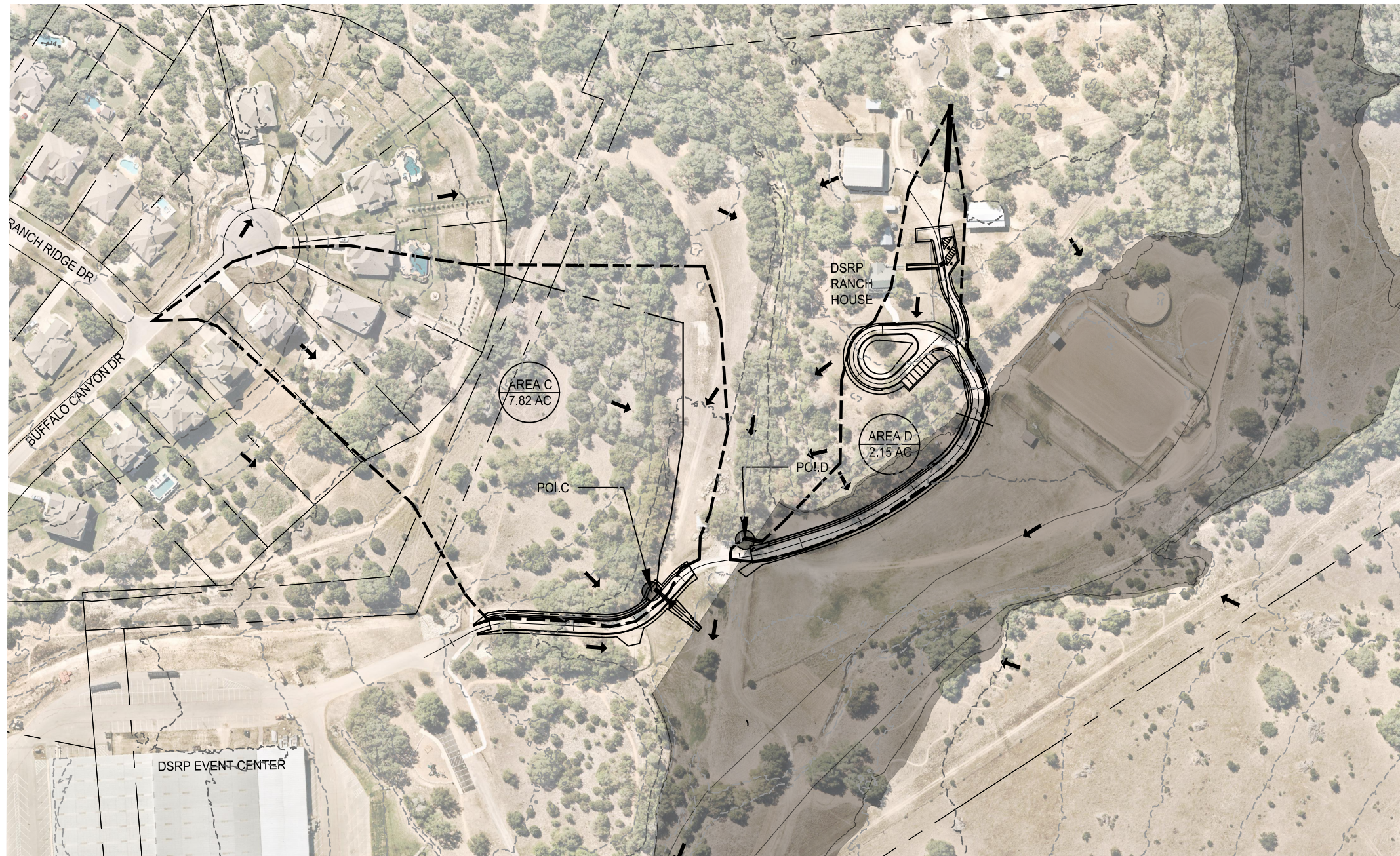
DATE: 4/27/2023  
DESIGNED BY: DC  
CHECKED BY: RB  
PROJ #: PARKS-2023-0001



PROJECT:  
RANCH HOUSE ROAD  
PHASE 2

SHEET TITLE:  
TRAFFIC CONTROL  
DETAILS





**LEGEND**

- EXIST 5 FT CONTOUR
- EXIST 25 FT CONTOUR
- DRAINAGE AREA BOUNDARY
- TIME OF CONCENTRATION PATH
- ← FLOW DIRECTION
- FEMA 100-YR FLOODPLAIN

**GILPIN**  
ENGINEERING COMPANY

T.B.P.L.S. Firm Registration # 10193770  
T.B.P.E. Firm Registration # F-8266  
9701 BRODIE LANE #203  
AUSTIN, TX 78748  
PH: 512.220.8100

ENGINEER'S SEAL:

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REVISIONS:

NO.	REVISION	DATE

DATE: 4/27/2023  
DESIGNED BY: DC  
CHECKED BY: RB  
PROJ #: PARKS-2023-0001



PROJECT:  
**RANCH HOUSE ROAD  
PHASE 2**

SHEET TITLE:  
**DRAINAGE AREA MAP**

**NOTES:**

1. THE PROPOSED SITE IS LOCATED PARTIALLY WITHIN THE 100-YEAR FEMA ZONE AE FLOODPLAIN, PRELIMINARY PANEL 48209C0105G, HAYS COUNTY, TEXAS AND INCORPORATED AREAS (ISSUED 12/14/2022).
2. THE SITE IS LOCATED WITHIN THE EDWARDS AQUIFER CONTRIBUTING ZONE.
3. THE SITE IS LOCATED IN THE LITTLE BARTON CREEK WATERSHED.
4. EXISTING CONTOURS WERE GENERATED FROM THE BEXAR & TRAVIS COUNTIES LIDAR (2021) AVAILABLE ON THE TEXAS NATURAL RESOURCES INFORMATION SYSTEM (TNRIS) DATABASE.
5. THE 24-HOUR STORM EVENT RAINFALL DATA USED FOR THIS DRAINAGE ANALYSIS WAS OBTAINED FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) AND IS CURRENT FOR THE CITY OF DRIPPING SPRINGS AT THE TIME THIS SITE PLAN WAS COMPLETED.
6. ALL DRAINAGE DESIGN CRITERIA USED FOR THIS DRAINAGE ANALYSIS OTHER THAN THE STORM EVENT RAINFALL DATA WAS OBTAINED FROM THE CURRENT CITY OF AUSTIN DRAINAGE CRITERIA MANUAL.

Area ID	DRAINAGE AREA SUMMARY									
	Area			CN	TC (min)	Tlag (min)	Q - Peak Flows			
	(SF)	(AC)	(Sq Mi)				2 YR (CFS)	10 YR (CFS)	25 YR (CFS)	100 YR (CFS)
C	340663.6	7.82	0.0122196	70	19.56	11.73	10.4	24.7	35.4	53.8
D	97188.1	2.23	0.0034861	73	17.92	10.75	3.5	7.9	11.0	16.4

STORM DURATION	RAINFALL PRECIPITATION DEPTHS			
	DEPTH 2-YR (IN)	DEPTH 10-YR (IN)	DEPTH 25-YR (IN)	DEPTH 100-YR (IN)
15 MIN	1.04	1.59	1.95	2.55
1 HR	1.92	2.94	3.63	4.78
2 HR	2.38	3.75	4.75	6.56
3 HR	2.64	4.25	5.48	7.80
6 HR	3.11	5.11	6.68	9.79
12 HR	3.57	5.90	7.76	11.40
24 HR	4.05	6.73	8.82	12.90



CHANNEL HYDRAULIC SUMMARY																	
CHANNEL SEGMENT	BEGIN STA	END STA	LENGTH	US ELEV	DS ELEV	SLOPE	MANNING'S N	BOTTOM WIDTH	SIDE SLOPE	2-YEAR STORM				100-YEAR STORM			
										FLOW (CFS)	DEPTH (FT)	AVG V (FT/S)	AVG SHEAR STRESS (LB/SQ FT)	FLOW (CFS)	DEPTH (FT)	AVG V (FT/S)	AVG SHEAR STRESS (LB/SQ FT)
C.01	00+13.50	00+50.00	36.5	1156.68	1153.76	8.00%	0.035	0	3:1	1.6	0.38	3.8	0.887	8.1	0.69	5.7	1.630
C.02	00+50.00	01+00.00	50.0	1153.76	1151.76	4.00%	0.035	0	3:1	2.1	0.47	3.1	0.560	10.8	0.87	4.7	1.034
C.03	01+00.00	01+50.00	50.0	1151.76	1149.76	4.00%	0.035	0	3:1	2.6	0.51	3.3	0.606	13.5	0.95	5.0	1.124
C.04	01+50.00	02+00.00	50.0	1149.76	1148.01	3.50%	0.035	0	3:1	3.1	0.56	3.3	0.581	16.1	1.04	5.0	1.078
C.05	02+00.00	02+50.00	50.0	1148.01	1146.76	2.50%	0.035	0	3:1	3.6	0.63	3.0	0.468	18.8	1.17	4.5	0.869
C.06	02+50.00	02+77.23	27.2	1146.76	1146.49	1.00%	0.035	0	3:1	4.2	0.80	2.2	0.235	21.5	1.47	3.3	0.434
C.07	02+77.23	02+96.25	19.0	1146.49	1144.76	9.08%	0.045	0	3:1	5.2	0.63	4.4	1.682	26.9	1.16	6.7	3.114
C.08	03+34.50	03+91.50	57.0	1144.51	1144.00	0.89%	0.030	4	3:1	10.4	0.63	2.8	0.258	53.8	1.45	4.4	0.512



**LEGEND**

- EXIST TREE TO REMAIN
- EXIST 1' CONTOUR
- EXIST 5' CONTOUR

**NOTES:**

1. SECTIONS A-A, AND B-B SEE TYPICAL SECTIONS SHEET 11.
2. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY OBSTACLES THAT MAY IMPEDE OR PREVENT THE PROPER CONSTRUCTION OF THE PROJECT.

**GILPIN**  
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**REVISIONS:**

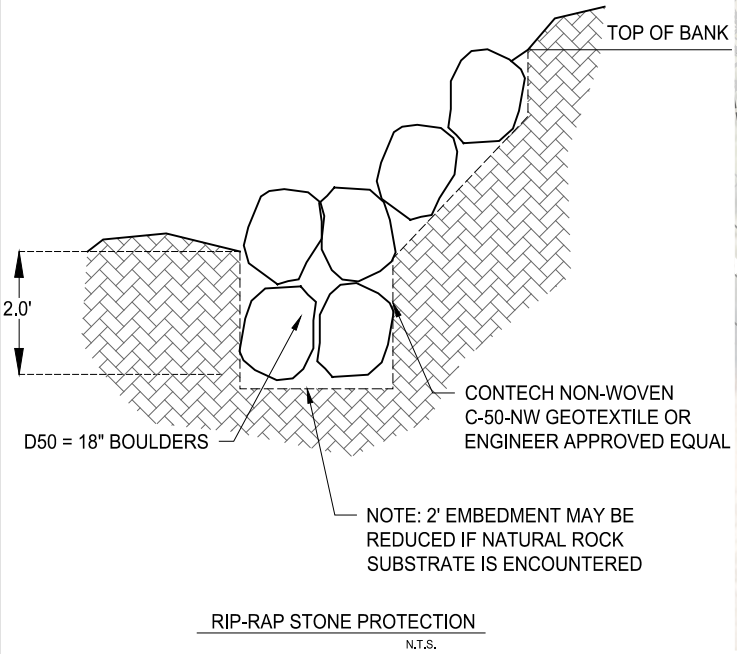
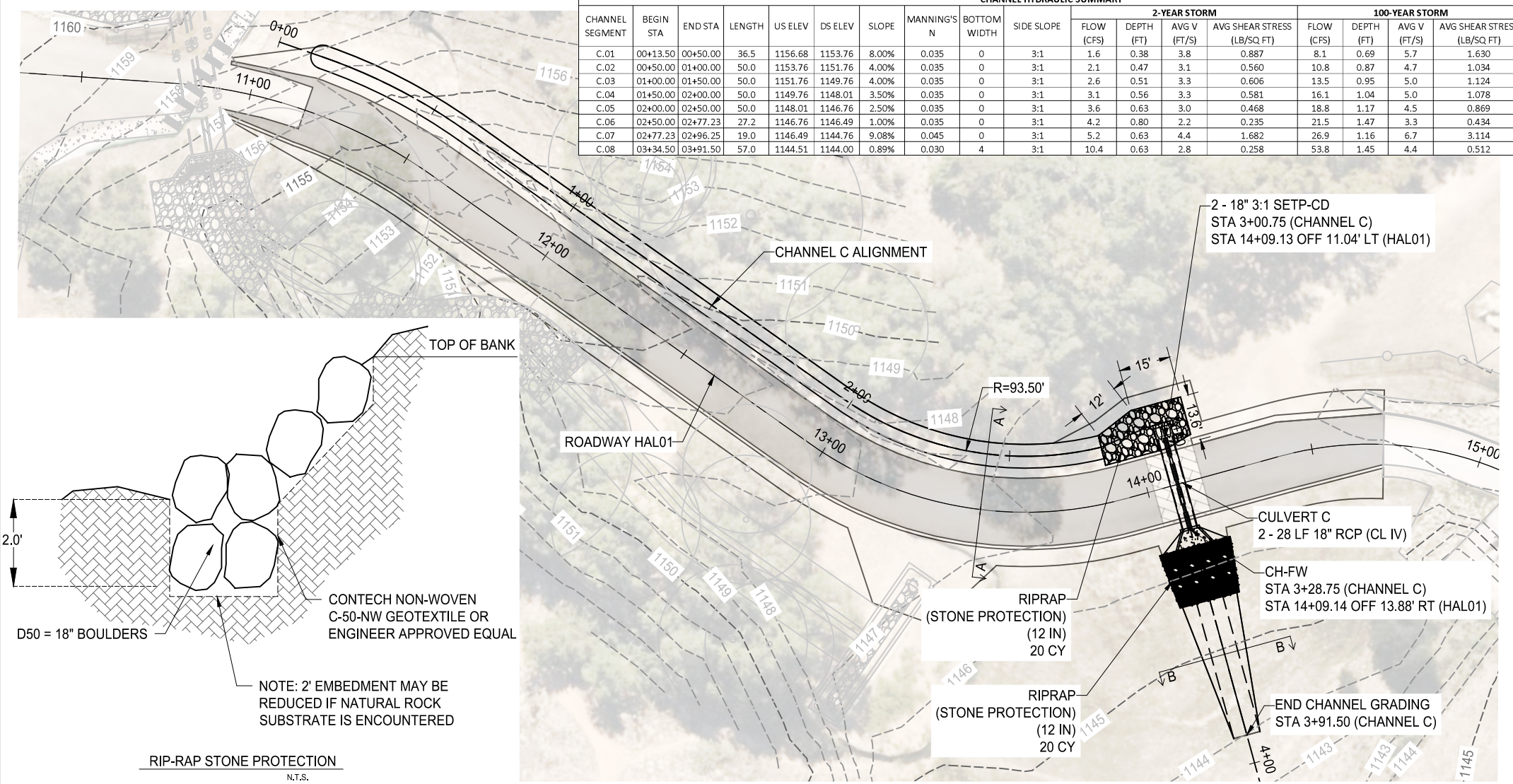
NO.	REVISION	DATE

DATE: 4/27/2023  
DESIGNED BY: DC  
CHECKED BY: RB  
PROJ #: PARKS-2023-0001

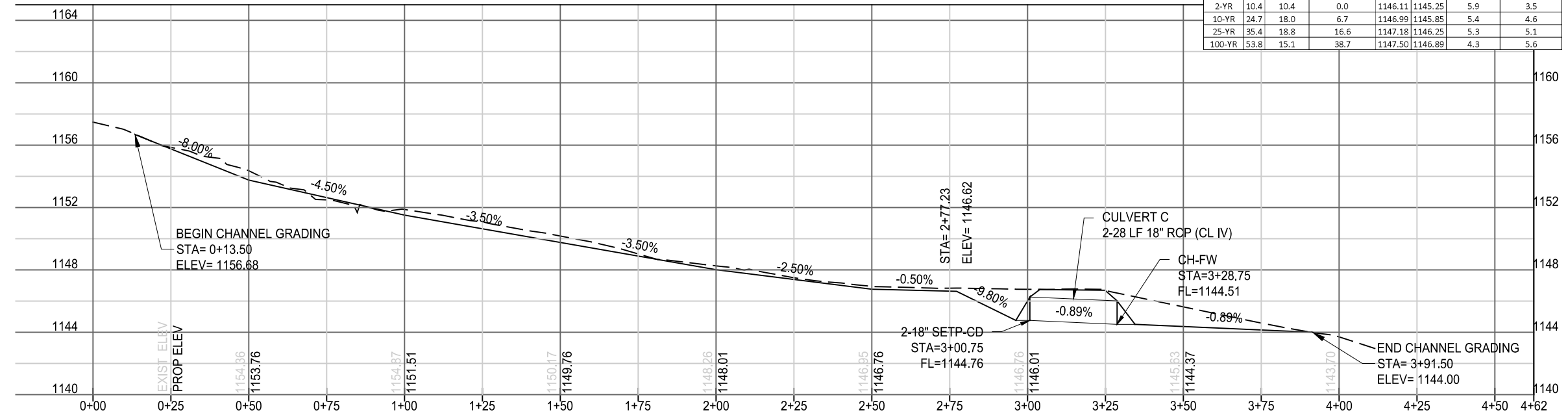


PROJECT:  
**RANCH HOUSE ROAD  
PHASE 2**

SHEET TITLE:  
**CULVERT LAYOUT  
& CHANNEL GRADING**



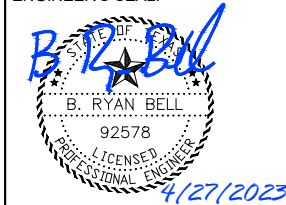
**CHANNEL C PROFILE**



CULVERT HYDRAULIC SUMMARY							
STORM EVENT	Q	CULVERT Q	OVERTOPPING Q	US WSE	DS WSE	CULVERT V (FT/S)	TAILWATER V (FT/S)
2-YR	10.4	10.4	0.0	1146.11	1145.25	5.9	3.5
10-YR	24.7	18.0	6.7	1146.99	1145.85	5.4	4.6
25-YR	35.4	18.8	16.6	1147.18	1146.25	5.3	5.1
100-YR	53.8	15.1	38.7	1147.50	1146.89	4.3	5.6

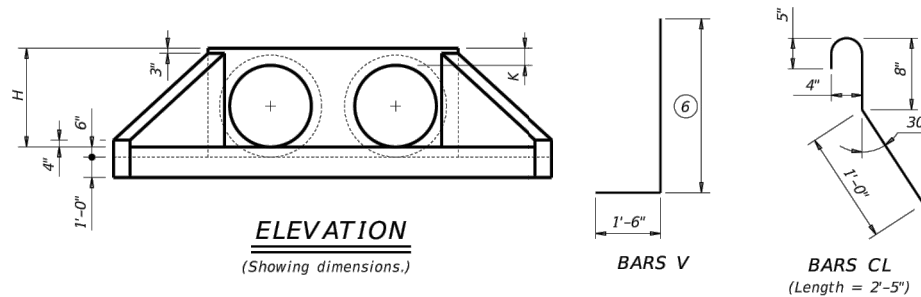


ENGINEER'S SEAL:



**TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL** ⑤

Slope	Dia of Pipe (D)	Values for One Pipe				Values to be Added for Each Add'l Pipe				
		W	X	Y	L	Reinf (Lbs)	Conc (CY) ①	X and W	Reinf (Lbs)	Conc (CY) ①
2:1	12"	4'-7 1/2"	2'-6"	2'-10"	3'-3 3/4"	88	0.6	1'-9"	20	0.2
	15"	5'-5 3/4"	2'-9 1/2"	3'-4"	3'-10 1/4"	103	0.7	2'-2"	24	0.3
	18"	6'-4 1/4"	3'-1"	3'-10"	4'-5"	124	0.9	2'-8"	32	0.3
	21"	7'-2 3/4"	3'-4 1/2"	4'-4"	5'-0"	143	1.1	3'-1"	43	0.4
	24"	8'-2 1/2"	3'-9 1/2"	4'-10"	5'-7"	164	1.3	3'-7"	50	0.5
	27"	9'-1"	4'-1"	5'-4"	6'-2"	179	1.5	3'-11"	56	0.6
	30"	9'-11 1/2"	4'-4 1/2"	5'-10"	6'-8 3/4"	203	1.7	4'-4"	65	0.8
	33"	10'-10"	4'-8"	6'-4"	7'-3 3/4"	224	2.0	4'-8"	71	0.9
	36"	11'-8 1/4"	4'-11 1/2"	6'-10"	7'-10 3/4"	249	2.2	5'-1"	81	1.0
	42"	13'-5 1/4"	5'-6 1/2"	7'-10"	9'-0 1/2"	298	2.8	5'-10"	97	1.3
	48"	15'-9"	6'-1 1/2"	9'-4"	10'-9 1/4"	360	3.8	6'-7"	117	1.7
	54"	17'-5 3/4"	6'-8 1/2"	10'-4"	11'-11 1/4"	427	4.5	7'-6"	151	2.1
60"	19'-2 3/4"	7'-3 1/2"	11'-4"	13'-1"	481	5.3	8'-3"	174	2.5	
66"	20'-11 1/2"	7'-10 1/2"	12'-4"	14'-3"	544	6.2	8'-9"	194	2.9	
72"	22'-8 1/2"	8'-5 1/2"	13'-4"	15'-4 3/4"	601	7.1	9'-4"	213	3.3	
3:1	12"	6'-3"	2'-6"	4'-3"	4'-11"	118	0.8	1'-9"	22	0.2
	15"	7'-5"	2'-9 1/2"	5'-0"	5'-9 1/4"	137	1.1	2'-2"	28	0.3
	18"	8'-6 3/4"	3'-1"	5'-9"	6'-7 3/4"	170	1.3	2'-8"	37	0.5
	21"	9'-8 3/4"	3'-4 1/2"	6'-6"	7'-6"	195	1.6	3'-1"	48	0.6
	24"	11'-0"	3'-9 1/2"	7'-3"	8'-4 1/2"	227	2.0	3'-7"	58	0.7
	27"	12'-2"	4'-1"	8'-0"	9'-2 3/4"	251	2.3	3'-11"	67	0.8
	30"	13'-4"	4'-4 1/2"	8'-9"	10'-1 1/4"	293	2.7	4'-4"	77	1.0
	33"	14'-5 3/4"	4'-8"	9'-6"	10'-11 3/4"	318	3.1	4'-8"	84	1.2
	36"	15'-7 3/4"	4'-11 1/2"	10'-3"	11'-10"	351	3.5	5'-1"	96	1.4
	42"	17'-11 1/2"	5'-6 1/2"	11'-9"	13'-6 3/4"	432	4.5	5'-10"	119	1.7
	48"	21'-1 3/4"	6'-1 1/2"	14'-0"	16'-2"	537	6.1	6'-7"	146	2.3
	54"	23'-5 1/2"	6'-8 1/2"	15'-6"	17'-10 3/4"	630	7.3	7'-6"	186	2.9
60"	25'-9 1/4"	7'-3 1/2"	17'-0"	19'-7 1/2"	719	8.7	8'-3"	219	3.4	
66"	28'-1"	7'-10 1/2"	18'-6"	21'-4 1/4"	811	10.1	8'-9"	242	3.9	
72"	30'-4 3/4"	8'-5 1/2"	20'-0"	23'-1 1/4"	924	11.7	9'-4"	272	4.4	
4:1	12"	7'-10 3/4"	2'-6"	5'-8"	6'-6 1/2"	148	1.1	1'-9"	24	0.3
	15"	9'-4"	2'-9 1/2"	6'-8"	7'-8 1/2"	181	1.5	2'-2"	32	0.4
	18"	10'-9 1/2"	3'-1"	7'-8"	8'-10 1/4"	221	1.9	2'-8"	42	0.5
	21"	12'-2 3/4"	3'-4 1/2"	8'-8"	10'-0"	260	2.3	3'-1"	57	0.7
	24"	13'-9 1/2"	3'-9 1/2"	9'-8"	11'-2"	301	2.8	3'-7"	67	0.9
	27"	15'-3"	4'-1"	10'-8"	12'-3 3/4"	334	3.3	3'-11"	77	1.0
	30"	16'-8 1/4"	4'-4 1/2"	11'-8"	13'-5 3/4"	385	3.8	4'-4"	89	1.3
	33"	18'-1 3/4"	4'-8"	12'-8"	14'-7 1/2"	425	4.5	4'-8"	101	1.4
	36"	19'-7"	4'-11 1/2"	13'-8"	15'-9 1/4"	472	5.1	5'-1"	115	1.7
	42"	22'-5 3/4"	5'-6 1/2"	15'-8"	18'-1"	583	6.5	5'-10"	141	2.1
	48"	26'-6 1/4"	6'-1 1/2"	18'-8"	21'-6 3/4"	730	8.9	6'-7"	175	2.8
	54"	29'-5"	6'-8 1/2"	20'-8"	23'-10 1/4"	875	10.7	7'-6"	226	3.6
60"	32'-3 3/4"	7'-3 1/2"	22'-8"	26'-2"	996	12.7	8'-3"	264	4.3	
66"	35'-2 1/2"	7'-10 1/2"	24'-8"	28'-5 3/4"	1,140	14.9	8'-9"	300	4.9	
72"	38'-1 1/4"	8'-5 1/2"	26'-8"	30'-9 1/2"	1,297	17.3	9'-4"	334	5.6	
6:1	12"	11'-2"	2'-6"	8'-6"	9'-9 3/4"	224	1.9	1'-9"	28	0.4
	15"	13'-2 1/4"	2'-9 1/2"	10'-0"	11'-6 1/4"	268	2.5	2'-2"	37	0.5
	18"	15'-2 1/2"	3'-1"	11'-6"	13'-3 1/4"	330	3.2	2'-8"	50	0.7
	21"	17'-2 3/4"	3'-4 1/2"	13'-0"	15'-0 1/4"	387	3.9	3'-1"	69	0.9
	24"	19'-4 1/2"	3'-9 1/2"	14'-6"	16'-9"	453	4.8	3'-7"	80	1.2
	27"	21'-4 3/4"	4'-1"	16'-0"	18'-5 3/4"	512	5.7	3'-11"	96	1.4
	30"	23'-5 1/4"	4'-4 1/2"	17'-6"	20'-2 1/2"	593	6.7	4'-4"	110	1.7
	33"	25'-5 1/2"	4'-8"	19'-0"	21'-11 1/4"	675	7.8	4'-8"	127	2.0
	36"	27'-5 3/4"	4'-11 1/2"	20'-6"	23'-8"	735	9.0	5'-1"	144	2.3
	42"	31'-6 1/4"	5'-6 1/2"	23'-6"	27'-1 1/2"	922	11.5	5'-10"	179	3.0
	48"	37'-3 1/2"	6'-1 1/2"	28'-0"	32'-4"	1,191	15.9	6'-7"	231	4.0
	54"	41'-4 1/4"	6'-8 1/2"	31'-0"	35'-9 1/2"	1,424	19.2	7'-6"	300	5.0
60"	45'-4 3/4"	7'-3 1/2"	34'-0"	39'-3"	1,631	22.9	8'-3"	353	6.0	

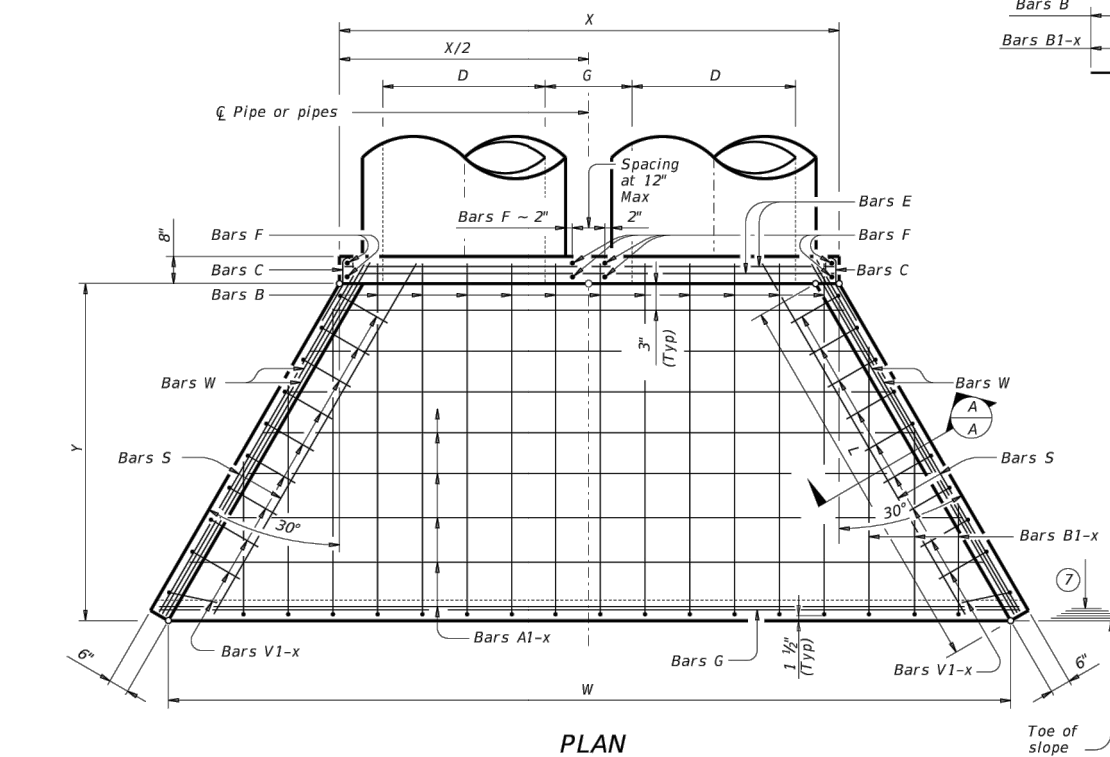
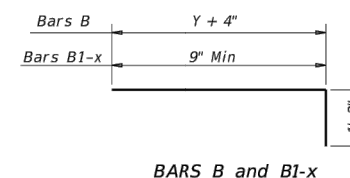


**TABLE OF REINFORCING STEEL** ⑤

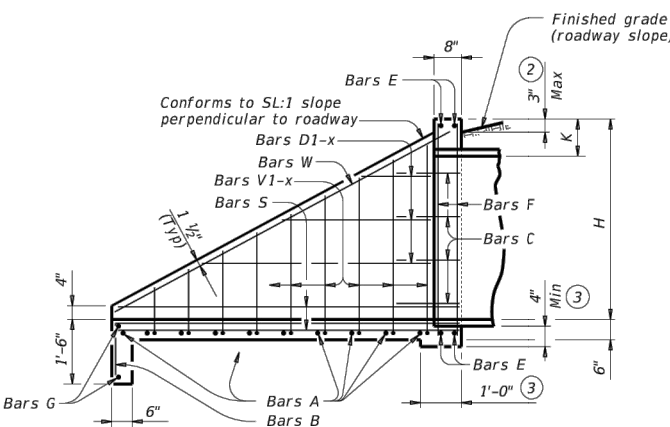
Bar	Size	Spa	No.
A	#4	1'-0"	~
B	#3	1'-6"	~
C	#4	1'-0"	~
D	#3	1'-0"	~
E	#5	~	4
F	#5	~	~
G	#3	~	2
S	#4	~	6
V	#4	1'-0"	~
W	#5	~	4

**TABLE OF CONSTANT DIMENSIONS**

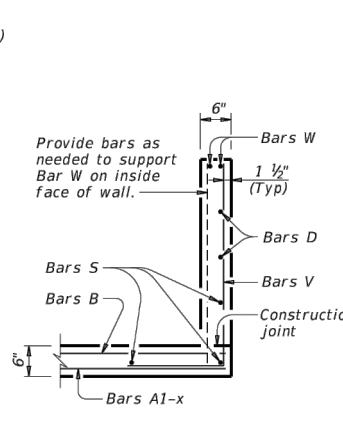
Dia of Pipe (D)	G	K ④	H
12"	0'-9"	1'-0"	2'-0"
15"	0'-11"	1'-0"	2'-3"
18"	1'-2"	1'-0"	2'-6"
21"	1'-4"	1'-0"	2'-9"
24"	1'-7"	1'-0"	3'-0"
27"	1'-8"	1'-0"	3'-3"
30"	1'-10"	1'-0"	3'-6"
33"	1'-11"	1'-0"	3'-9"
36"	2'-1"	1'-0"	4'-0"
42"	2'-4"	1'-0"	4'-6"
48"	2'-7"	1'-3"	5'-3"
54"	3'-0"	1'-3"	5'-9"
60"	3'-3"	1'-3"	6'-3"
66"	3'-3"	1'-3"	6'-9"
72"	3'-4"	1'-3"	7'-3"



**PLAN**



**TYPICAL WING ELEVATION**



**SECTION A-A**

- Quantities shown are for concrete pipe and will increase slightly for metal pipe installations.
- For vehicle safety, construct curbs no more than 3" above finished grade. Reduce curb heights, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
- Provide a 1'-0" footing as shown where required to maintain 4" minimum cover for pipes.
- Dimensions shown are usual and maximum.
- Quantities shown are for one structure end only (one headwall).
- Min Length =  $6" + 3" \times \left( \frac{12 \times H - 7}{12 \times L} \right)$   
Max Length =  $12 \times H - 3" \times \left( \frac{12 \times H - 7}{12 \times L} \right) - 1"$
- Lengths of wings based on SL:1 slope along this line.

**MATERIAL NOTES:**  
Provide Grade 60 reinforcing steel.  
Provide Class C concrete (f'c = 3,600 psi).

**GENERAL NOTES:**  
Designed according to AASHTO LRFD Bridge Design Specifications.  
Do not mount bridge rails of any type directly to these culvert headwalls.  
This standard may not be used for wall heights, H, exceeding the values shown.

Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing dimensions are out-to-out of bars.

Texas Department of Transportation  
Bridge Division Standard

**CONCRETE HEADWALLS WITH FLARED WINGS FOR 0° SKEW PIPE CULVERTS**

**CH-FW-0**

FILE: chfw00se-20.dgn DW: TxDOT CK: TxDOT DW: TxDOT CK: TxDOT  
©TxDOT February 2020 CONT SECT JOB HIGHWAY  
REVISIONS  
DIST COUNTY SHEET NO.

DATE: 4/27/2023  
DESIGNED BY: DC  
CHECKED BY: RB  
PROJ #: PARKS-2023-0001



PROJECT:  
RANCH HOUSE ROAD  
PHASE 2

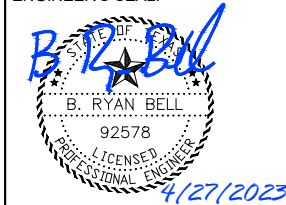
SHEET TITLE:  
DRAINAGE DETAILS  
(CH-FW-0)

DISCLAIMER: The use of this standard is governed by the Texas Engineering Practice Act. No warranty of any kind is made by Gilpin Engineering Company for the use of this standard to other forms or for incorrect results or damages resulting from its use.

DATE:  
FILE:

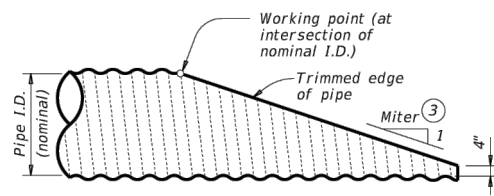


ENGINEER'S SEAL:



**CROSS PIPE LENGTHS AND PIPE RUNNER LENGTHS** ① ②

Nominal Culvert I.D.	Pipe Culvert Spa - G	Cross Pipe Length	Pipe Runner Length											
			3:1 Side Slope				4:1 Side Slope				6:1 Side Slope			
			0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew
24"	1' - 7"	3' - 5"	N/A	N/A	N/A	5' - 10"	N/A	N/A	N/A	8' - 1"	N/A	N/A	12' - 9"	
27"	1' - 8"	3' - 8"	N/A	N/A	5' - 5"	6' - 11"	N/A	N/A	7' - 7"	9' - 7"	N/A	N/A	14' - 11"	
30"	1' - 10"	3' - 11"	N/A	N/A	6' - 4"	8' - 0"	N/A	N/A	8' - 9"	11' - 0"	N/A	N/A	17' - 0"	
33"	1' - 11"	4' - 2"	6' - 2"	6' - 5"	7' - 3"	9' - 1"	8' - 6"	8' - 10"	10' - 0"	12' - 5"	13' - 3"	13' - 9"	19' - 2"	
36"	2' - 1"	4' - 5"	6' - 11"	7' - 3"	8' - 2"	10' - 2"	9' - 6"	9' - 11"	11' - 2"	13' - 10"	14' - 9"	15' - 3"	21' - 3"	
42"	2' - 4"	4' - 11"	8' - 6"	8' - 10"	9' - 11"	12' - 4"	11' - 7"	12' - 0"	13' - 6"	16' - 8"	17' - 9"	18' - 5"	25' - 7"	
48"	2' - 7"	5' - 5"	10' - 1"	10' - 5"	11' - 9"	N/A	13' - 7"	14' - 2"	15' - 10"	N/A	20' - 9"	21' - 6"	N/A	
54"	3' - 0"	5' - 11"	11' - 8"	12' - 1"	N/A	N/A	15' - 8"	16' - 3"	N/A	N/A	23' - 10"	24' - 8"	N/A	
60"	3' - 3"	6' - 5"	13' - 3"	N/A	N/A	N/A	17' - 9"	N/A	N/A	N/A	26' - 10"	N/A	N/A	



NOTE: All pipe runners, calculations, and dimensions are based on the pipe culverts mitered as shown in this detail. Alternate styles of mitered ends will require that appropriate adjustments be made to the values presented on this standard.

**SIDE ELEVATION OF TYPICAL PIPE CULVERT MITER**

(Showing corrugated metal pipe (CMP) culvert. Details of reinforced concrete pipe (RCP) culvert are similar.)

**TYPICAL PIPE CULVERT MITERS** ③

Side Slope	0° Skew	15° Skew	30° Skew	45° Skew
3:1	3:1	3.106:1	3.464:1	4.243:1
4:1	4:1	4.141:1	4.619:1	5.657:1
6:1	6:1	6.212:1	6.928:1	8.485:1

**CONDITIONS WHERE PIPE RUNNERS ARE NOT REQUIRED** ②

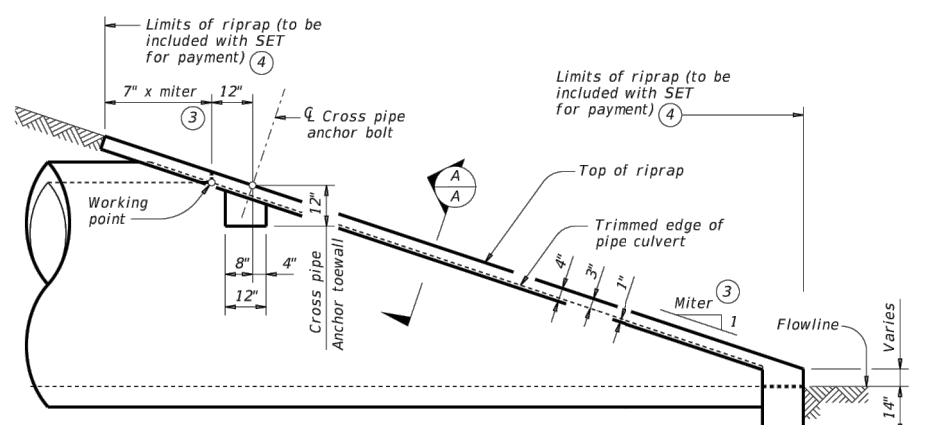
Nominal Culvert I.D.	Single Pipe Culvert	Multiple Pipe Culverts
12" thru 21"	Skews thru 45°	Skews thru 45°
24"	Skews thru 45°	Skews thru 30°
27"	Skews thru 30°	Skews thru 15°
30"	Skews thru 15°	Skews thru 15°
33"	Skews thru 15°	Always required
36"	Normal (no skew)	Always required
42" thru 60"	Always required	Always required

**STANDARD PIPE SIZES AND MAX PIPE RUNNER LENGTHS** ①

Pipe Size	Pipe O.D.	Pipe I.D.	Max Pipe Runner Length
2" STD	2.375"	2.067"	N/A
3" STD	3.500"	3.068"	10' - 0"
4" STD	4.500"	4.026"	19' - 8"
5" STD	5.563"	5.047"	34' - 2"

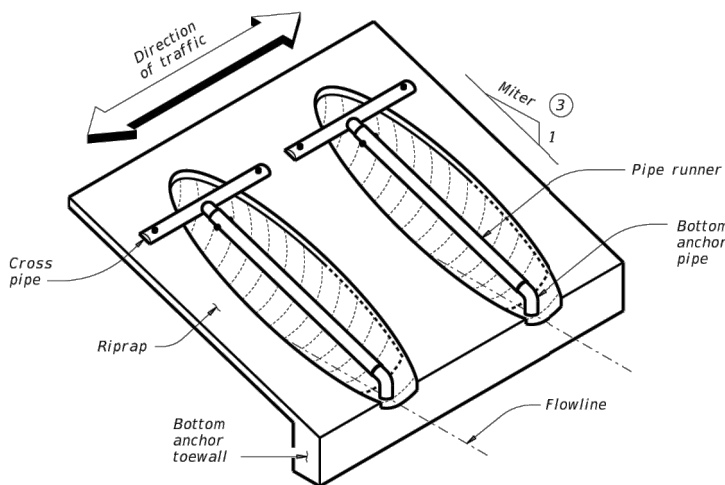
**ESTIMATED CONCRETE RIPRAP QUANTITIES (CY)** ⑤

Nominal Culvert I.D.	3:1 Side Slope				4:1 Side Slope				6:1 Side Slope			
	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew
12"	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.7	0.8
15"	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.9
18"	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.9	1.0
21"	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.9	0.9	0.9	1.0	1.2
24"	0.6	0.7	0.7	0.8	0.8	0.8	0.8	1.0	1.0	1.0	1.1	1.3
27"	0.7	0.7	0.8	0.9	0.8	0.9	0.9	1.1	1.1	1.1	1.2	1.4
30"	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.2	1.2	1.2	1.3	1.6
33"	0.8	0.8	0.9	1.0	1.0	1.0	1.1	1.3	1.3	1.4	1.5	1.7
36"	0.9	0.9	0.9	1.1	1.1	1.1	1.2	1.4	1.4	1.5	1.6	1.8
42"	1.0	1.0	1.1	1.3	1.2	1.3	1.3	1.6	1.6	1.7	1.8	2.1
48"	1.1	1.1	1.2	N/A	1.4	1.4	1.5	N/A	1.9	1.9	2.1	N/A
54"	1.3	1.3	N/A	N/A	1.6	1.6	N/A	N/A	2.1	2.1	N/A	N/A
60"	1.4	N/A	N/A	N/A	1.7	N/A	N/A	N/A	2.3	N/A	N/A	N/A



**SIDE ELEVATION OF CAST-IN-PLACE CONCRETE**

(Showing reinforced concrete pipe (RCP) culvert. Details of corrugated metal pipe (CMP) culvert are similar. Pipe runners not shown for clarity)



**ISOMETRIC VIEW OF TYPICAL INSTALLATION**

(Showing installation with no skew.)

① Provide pipe runner of the size shown in the tables. Provide cross pipe of the same size as the pipe runner. Provide cross pipe stub out and bottom anchor pipe of the next smaller size pipe as shown in the Standard Pipe Sizes and Max Pipe Runner Lengths table.

② This standard allows for the placement of only one pipe runner across each culvert pipe opening. In order to limit the clear opening to be traversed by an errant vehicle, the following conditions must be met:

- For 60" culvert pipes, the skew must not exceed 0°.
- For 54" culvert pipes, the skew must not exceed 15°.
- For 48" culvert pipes, the skew must not exceed 30°.
- For all culvert pipe sizes 42" and less, the skew must not exceed 45°.

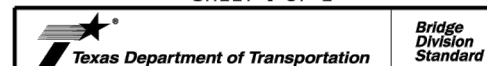
If the above conditions cannot be met, the designer should consider using a safety end treatment with flared wings. For further information, refer to the TxDOT Roadway Design Manual.

③ Miter = slope of mitered end of pipe culvert.

④ Riprap placed beyond the limits shown will be paid for as concrete riprap in accordance with Item 432, "Riprap".

⑤ Quantities shown are for one end of one reinforced concrete pipe (RCP) culvert. For multiple pipe culverts or for corrugated metal pipe (CMP) culverts, quantities will need to be adjusted. Riprap quantities are for Contractor's information only.

SHEET 1 OF 2



**SAFETY END TREATMENT FOR 12" DIA TO 60" DIA PIPE CULVERTS TYPE II ~ CROSS DRAINAGE**

**SETP-CD**

FILE: setpcdse-20.dgn	DW: GAF	CK: CAT	DW: JRP	CK: GAF
©TxDOT February 2020	CONT SECT	JOB	HIGHWAY	
REVISIONS	DIST	COUNTY	SHEET NO.	

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PROJ #: PARKS-2023-0001



PROJECT: RANCH HOUSE ROAD PHASE 2

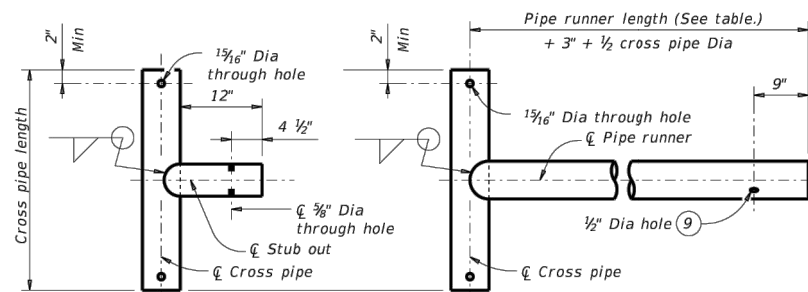
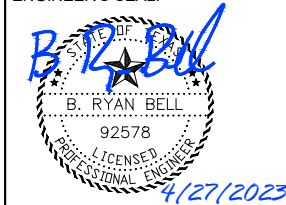
SHEET TITLE: DRAINAGE DETAILS (SETP-CD)

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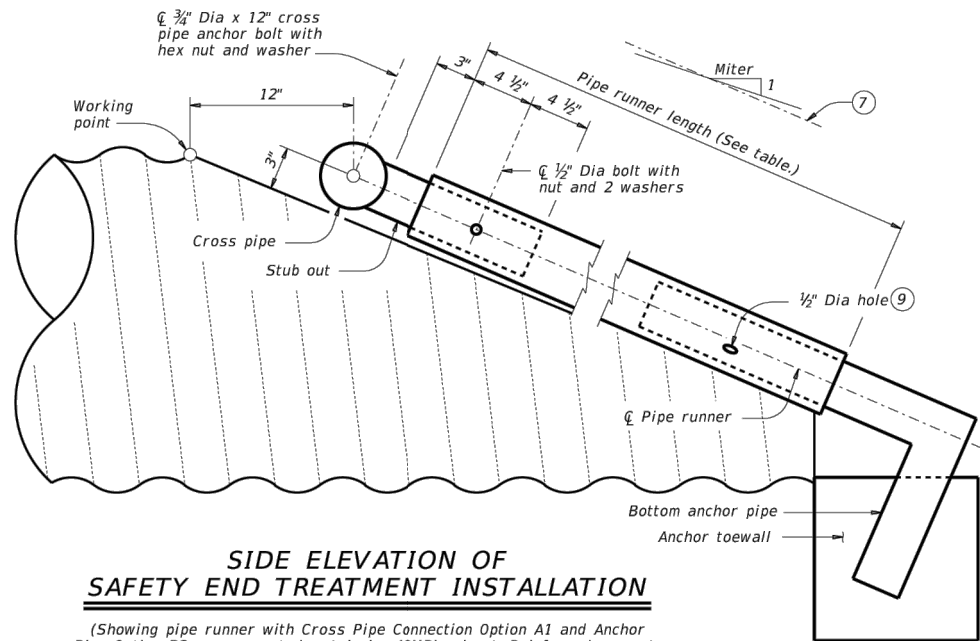
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ENGINEER'S SEAL:

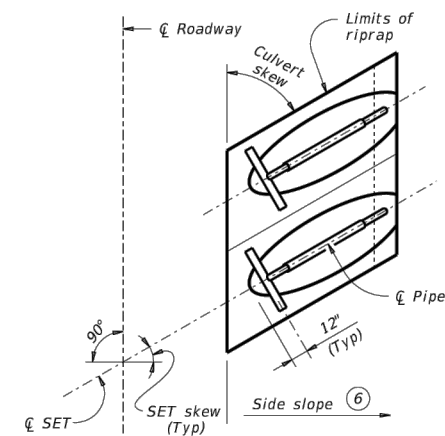


**OPTION A1**                      **OPTION A2**  
**CROSS PIPE AND CONNECTIONS DETAILS**

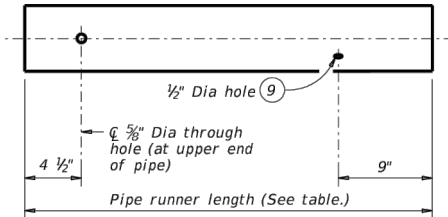


**SIDE ELEVATION OF SAFETY END TREATMENT INSTALLATION**

(Showing pipe runner with Cross Pipe Connection Option A1 and Anchor Pipe Option B2 on corrugated metal pipe (CMP) culvert. Reinforced concrete pipe culvert (RCP) details are similar. Riprap not shown for clarity)

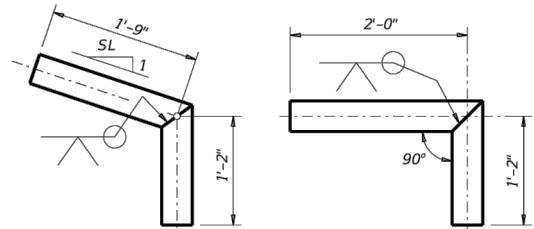


**PLAN OF SKEWED INSTALLATION**

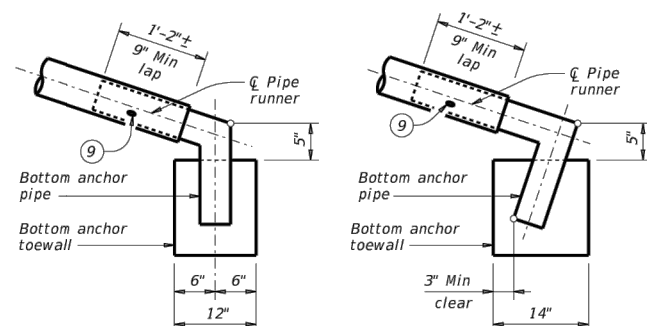


NOTE: The separate pipe runner shown is required when Cross Pipe Connection Option A1 is used.

**PIPE RUNNER DETAILS**

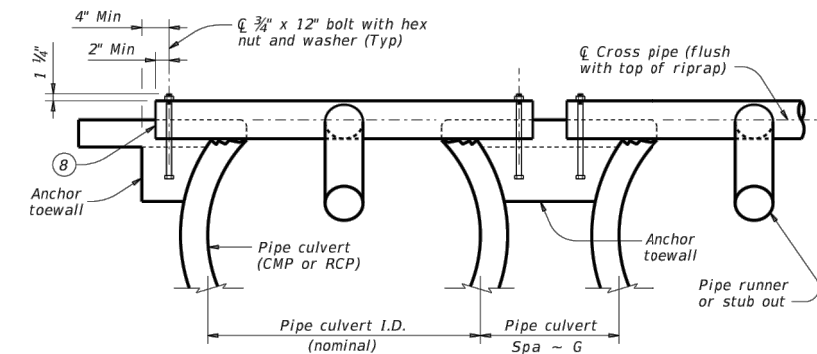


**OPTION B1**                      **OPTION B2**  
**BOTTOM ANCHOR PIPE DETAILS** ⑩



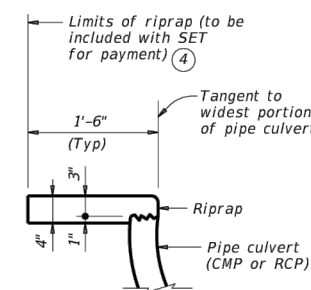
**OPTION B1**                      **OPTION B2**  
**BOTTOM ANCHOR TOEWALL DETAILS**

(Culvert and riprap not shown for clarity.)



**SHOWING CROSS PIPE AND ANCHOR TOEWALL**

**SECTION A-A**



**SHOWING TYPICAL PIPE CULVERT AND RIPRAP**

- ④ Riprap placed beyond the limits shown will be paid for as concrete riprap in accordance with Item 432, "Riprap".
- ⑥ Recommended values of side slope are 3:1, 4:1, and 6:1. All quantities, calculations, and dimensions shown herein are based on these recommended values. Slope of 3:1 or flatter is required for vehicle safety.
- ⑦ Note that actual slope of pipe runner may vary slightly from side slope of riprap and trimmed culvert pipe edge.
- ⑧ Ensure that riprap concrete does not flow into the cross pipe so as to permit disassembly of the bolted connection to allow cleanout access.
- ⑨ After installation, inspect the 1/2 inch hole to ensure that the lap of the pipe runner with the bottom anchor pipe is adequate.
- ⑩ At fabricator's option, a heat bend to a smooth 5" radius or a manufactured elbow (of the same material as the runner) may be substituted for the mitered and welded joint in the bottom anchor pipe.

**MATERIAL NOTES:**

Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.  
Provide pipe runners, cross pipes, and anchor pipes conforming to the requirements of ASTM A53 (Type E or S, Gr B), ASTM A500 Gr B, or API 5LX52.  
Provide ASTM A307 bolts and nuts.  
Galvanize all steel components, except concrete reinforcing, after fabrication.  
Repair galvanizing damaged during transport or construction in accordance with the specifications.

**GENERAL NOTES:**

Pipe runners are designed for a traversing load of 1,800 pounds at yield as recommended by Research Report 280-1, "Safety Treatment of Roadside Cross-Drainage Structures", Texas Transportation Institute, March 1981.  
Safety end treatments (SET) shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the pipe runners.  
Payment for riprap and toewall is included in the price bid for each safety end treatment.  
Construct concrete riprap and all necessary inverts in accordance with the requirements of Item 432, "Riprap".

SHEET 2 OF 2

Texas Department of Transportation  
**SAFETY END TREATMENT FOR 12" DIA TO 60" DIA PIPE CULVERTS TYPE II ~ CROSS DRAINAGE**  
SETP-CD

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©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS	DIST	COUNTY	SHEET NO.	



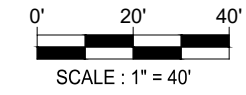
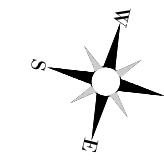
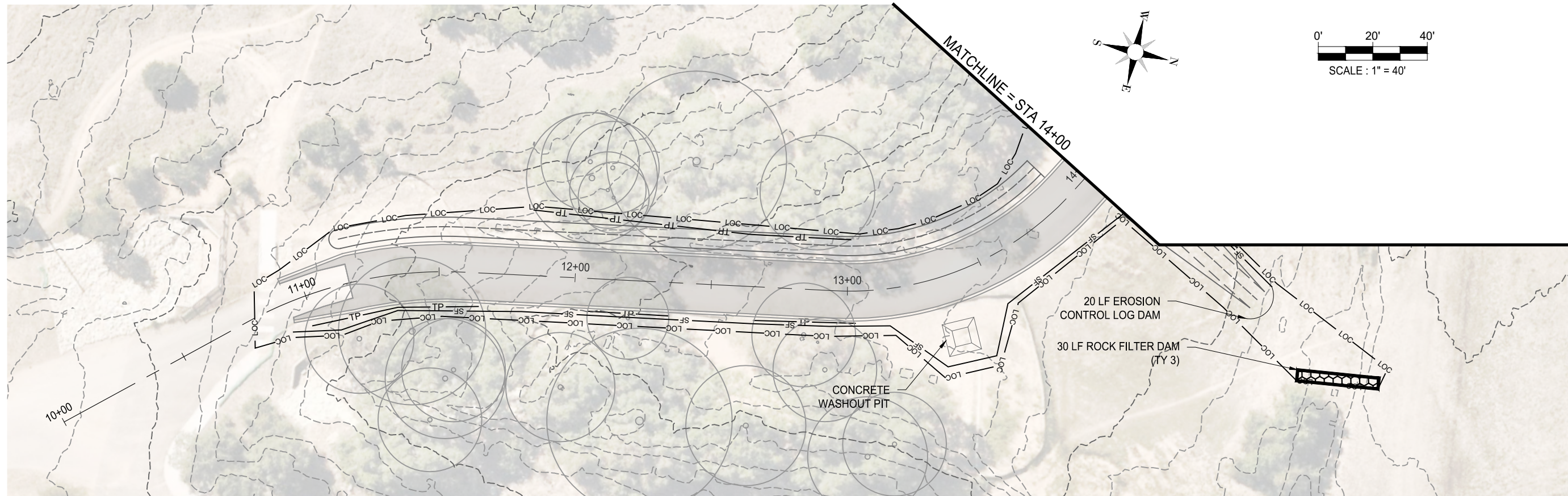
PROJECT:  
**RANCH HOUSE ROAD PHASE 2**

SHEET TITLE:  
**DRAINAGE DETAILS (SETP-CD)**

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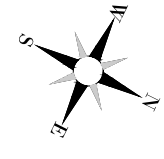
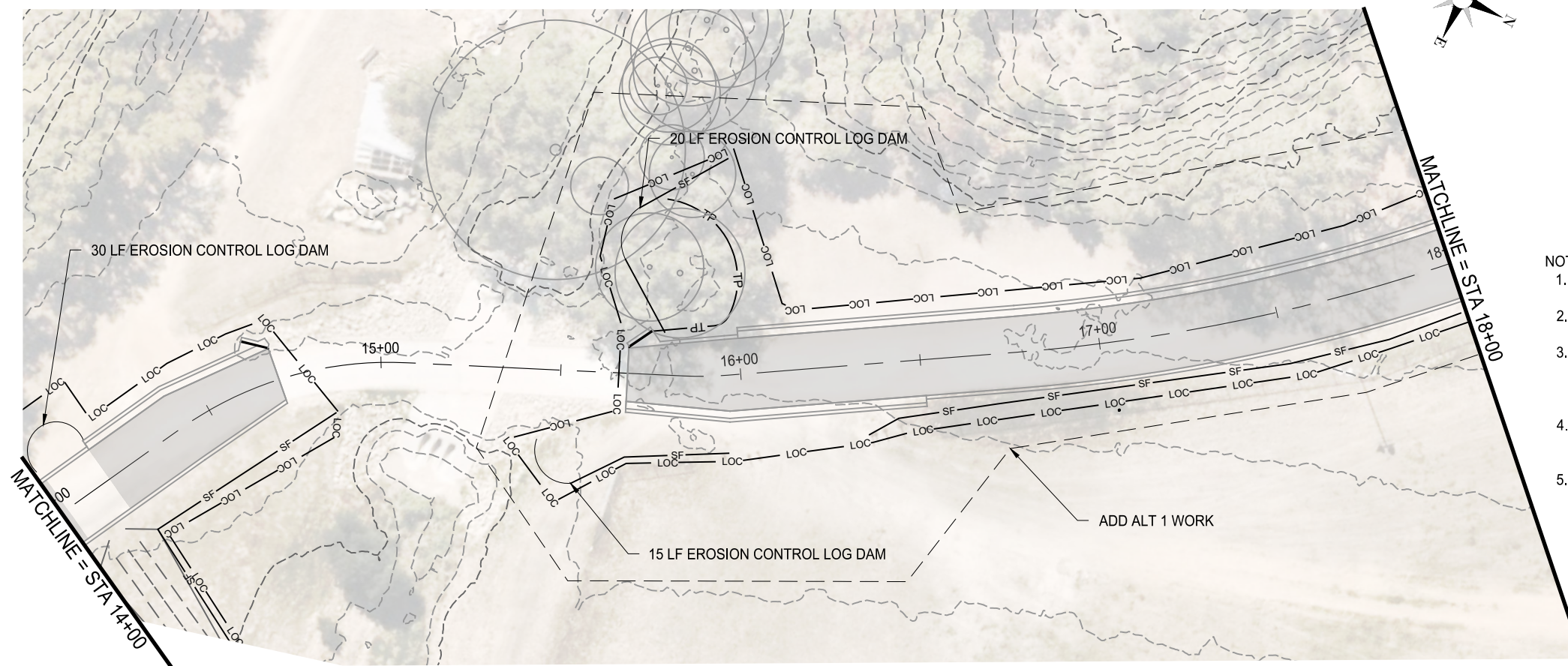


**GILPIN**  
ENGINEERING COMPANY

T.B.P.L.S. Firm Registration # 10193770  
T.B.P.E. Firm Registration # F-9266  
9701 BRODIE LANE #203  
AUSTIN, TX 78748  
PH: 512.220.8100

ENGINEER'S SEAL:

B. RYAN BELL  
92578  
LICENSED PROFESSIONAL ENGINEER  
4/27/2023



**LEGEND**

- PROPOSED PAVEMENT
- EXISTING TREE TO REMAIN
- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- TREE PROTECTION
- SILT FENCE
- LIMITS OF CONSTRUCTION
- CONCRETE WASHOUT

- NOTES:
- TOTAL LIMITS OF CONSTRUCTION IS APPROXIMATELY 1.71 ACRES.
  - REFER TO EROSION AND SEDIMENTATION CONTROL DETAILS SHEETS FOR MORE INFORMATION ON INSTALLATION.
  - ALL DISTURBED AREAS SHALL BE RE-VEGETATED. RE-VEGETATION TO BE ESTABLISHED AT 70% COVERAGE AND COMPLETED PER CITY OF AUSTIN RE-VEGETATION SPECIFICATION.
  - CONTRACTOR TO SCHEDULE WORK HOURS OF INSTALLATIONS WITH DSRP OPERATOR TO AVOID DISRUPTION OF ONGOING OR SCHEDULED MAINTENANCE WORK.
  - WORK EQUIPMENT AND MACHINERY IS TO BE CLEARED FROM PROXIMITY DSRP MAINTENANCE STAFF WORK AREAS WHEN NOT IN USE.

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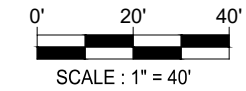
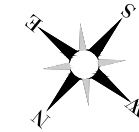
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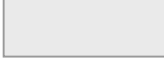






PROJECT:  
**RANCH HOUSE ROAD  
PHASE 2**

SHEET TITLE:  
**EROSION &  
SEDIMENTATION  
CONTROL PLAN**



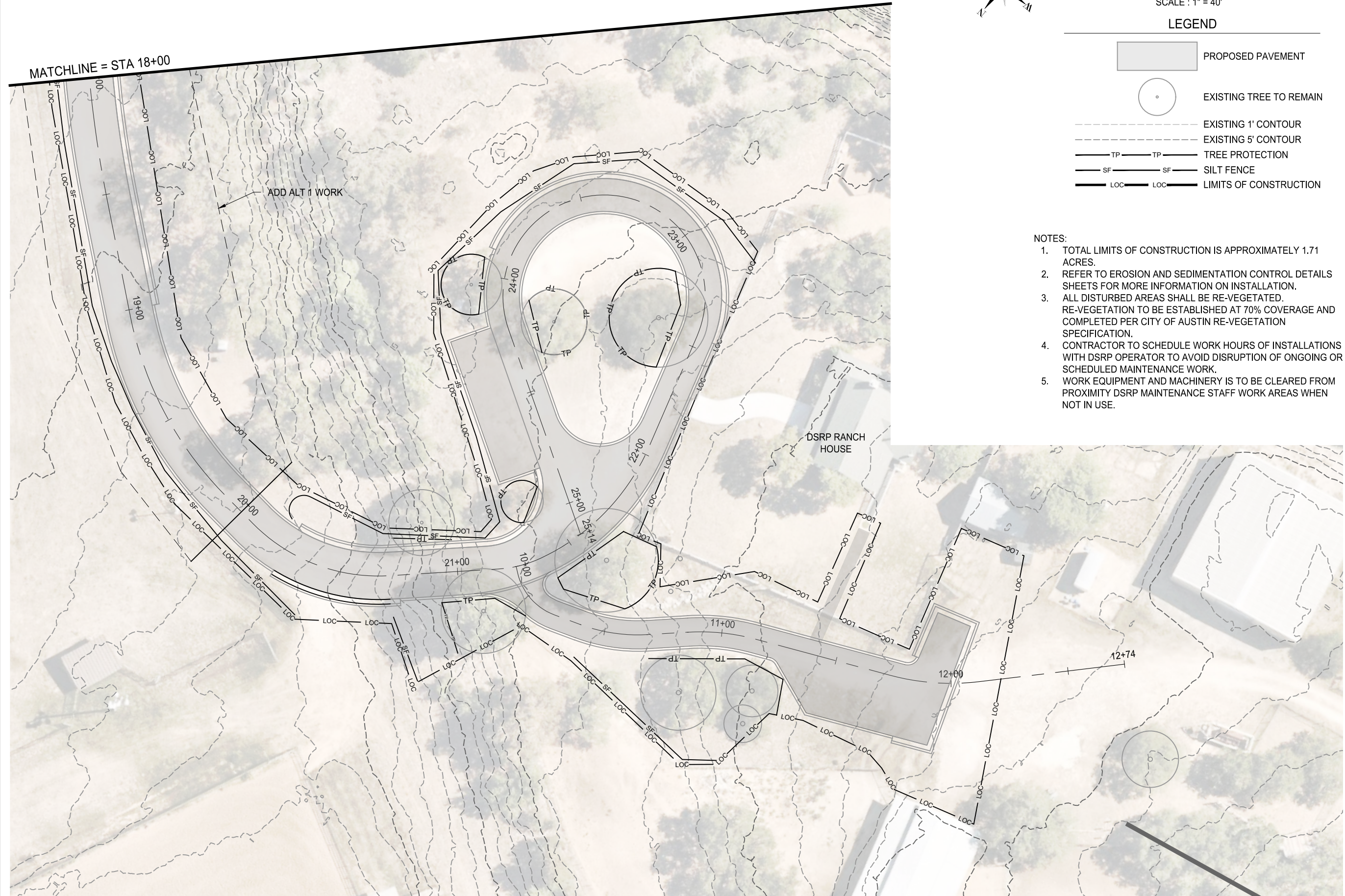


**LEGEND**

-  PROPOSED PAVEMENT
-  EXISTING TREE TO REMAIN
-  EXISTING 1' CONTOUR
-  EXISTING 5' CONTOUR
-  TREE PROTECTION
-  SILT FENCE
-  LIMITS OF CONSTRUCTION

**NOTES:**

1. TOTAL LIMITS OF CONSTRUCTION IS APPROXIMATELY 1.71 ACRES.
2. REFER TO EROSION AND SEDIMENTATION CONTROL DETAILS SHEETS FOR MORE INFORMATION ON INSTALLATION.
3. ALL DISTURBED AREAS SHALL BE RE-VEGETATED. RE-VEGETATION TO BE ESTABLISHED AT 70% COVERAGE AND COMPLETED PER CITY OF AUSTIN RE-VEGETATION SPECIFICATION.
4. CONTRACTOR TO SCHEDULE WORK HOURS OF INSTALLATIONS WITH DSRP OPERATOR TO AVOID DISRUPTION OF ONGOING OR SCHEDULED MAINTENANCE WORK.
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AUSTIN, TX 78748  
PH: 512.220.8100

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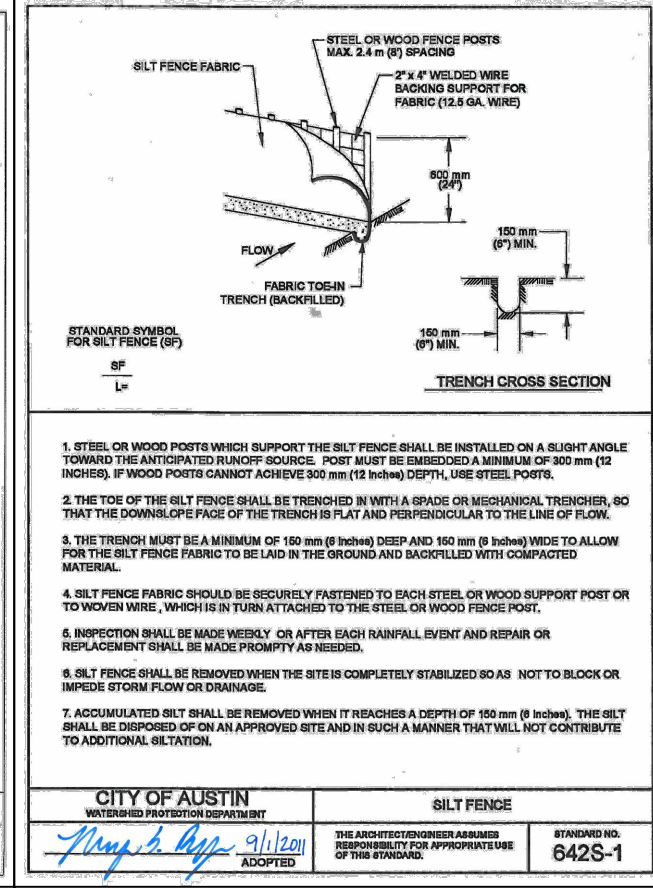
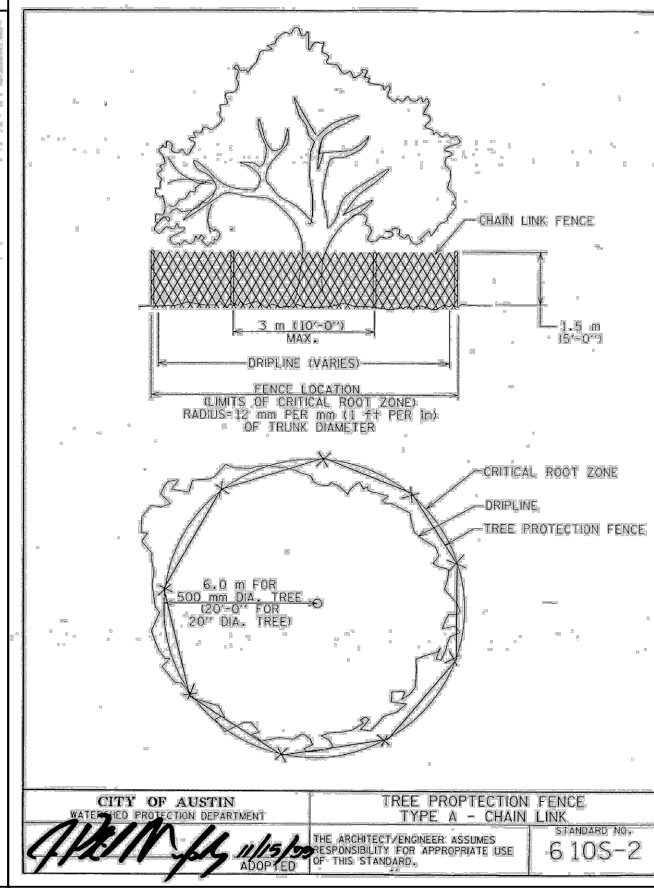
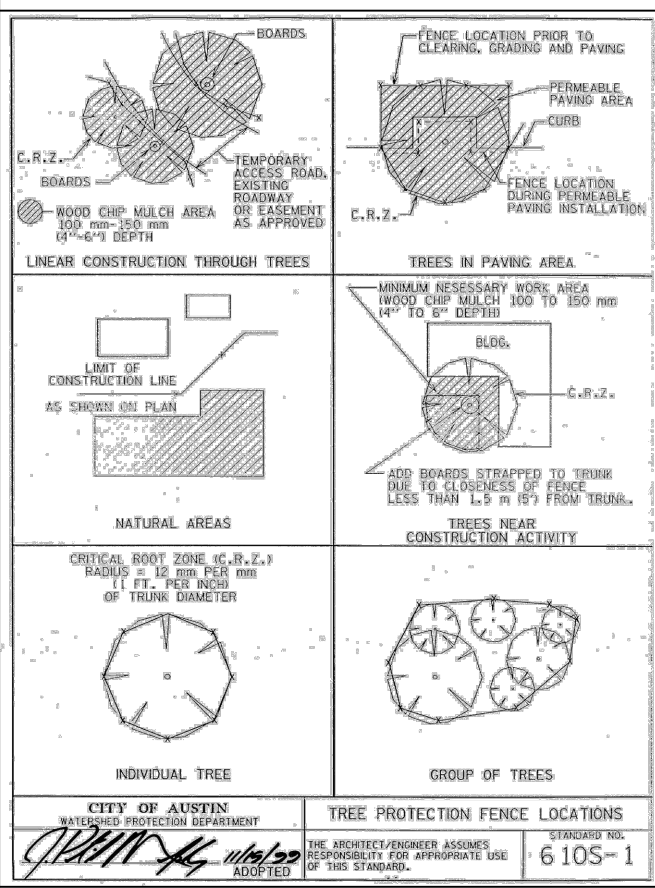
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PROJ #: PARKS-2023-0001



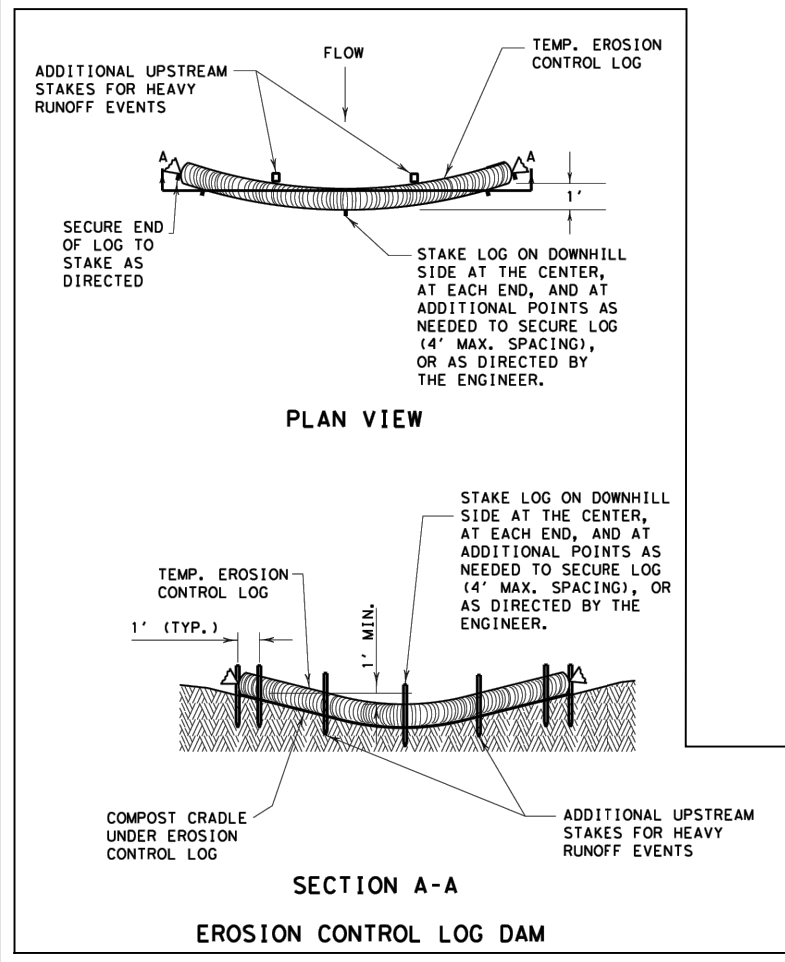
PROJECT:  
**RANCH HOUSE ROAD  
PHASE 2**

SHEET TITLE:  
**EROSION &  
SEDIMENTATION  
CONTROL PLAN**



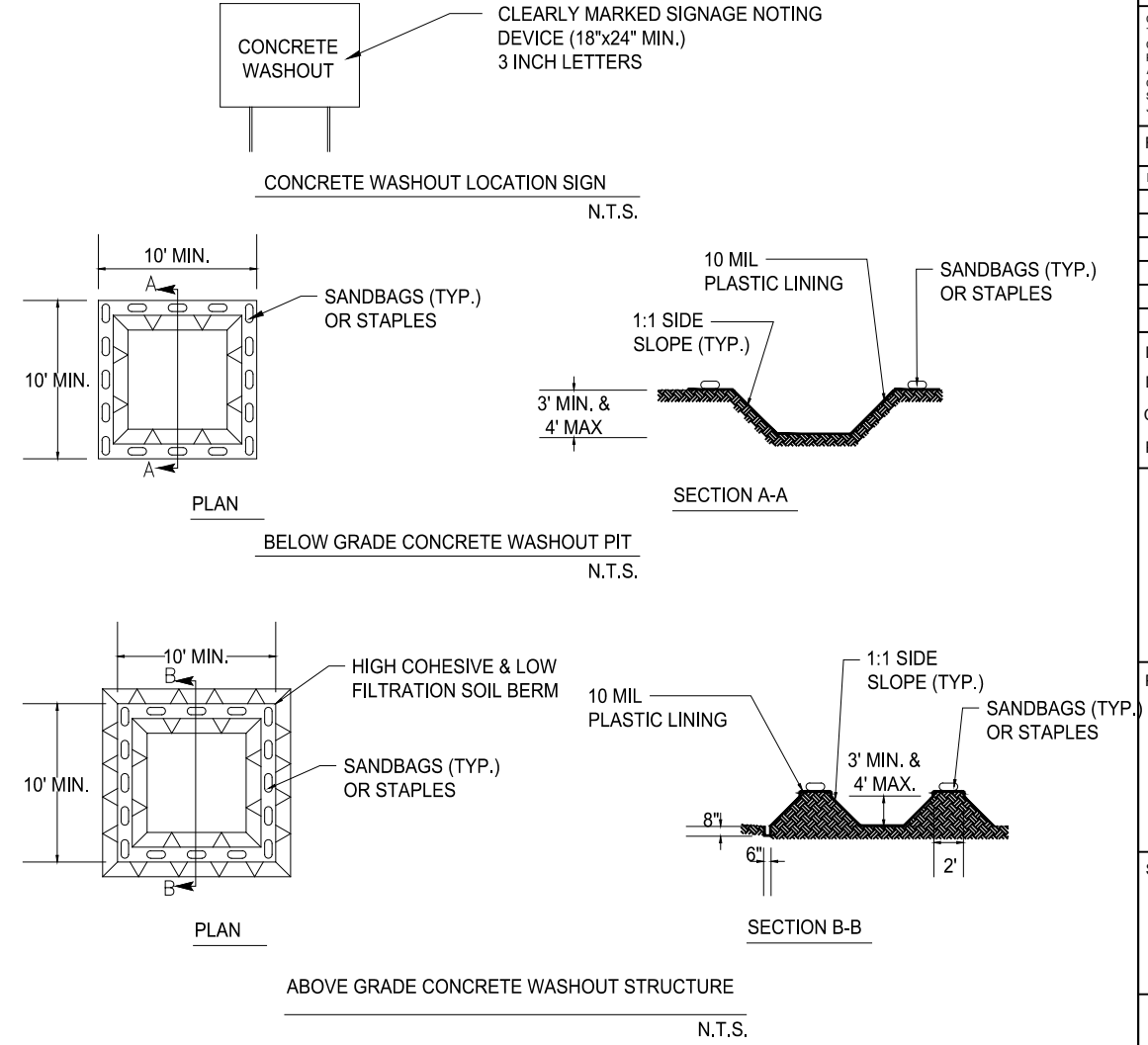


ENGINEER'S SEAL:  
  
 B. RYAN BELL  
 LICENSED PROFESSIONAL ENGINEER  
 4/27/2023



**CONCRETE WASHOUT NOTES:**

- LOCATION SHALL BE INDICATED ON THE PLANS.
- THE CONCRETE WASHOUT STRUCTURES SHALL BE CLEANED OUT WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES' CAPACITY.
- CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH A SIGNAGE NOTING DEVICE.
- ANY PREFABRICATED CONCRETE WASHOUT BINS MUST BE APPROVED BY THE CITY PRIOR TO USE.
- CONCRETE WASHOUT STRUCTURE WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED SUBSIDIARY TO CONCRETE PAY ITEMS.



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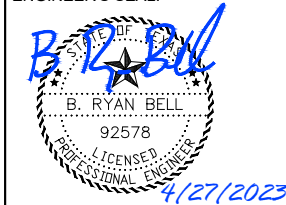


PROJECT:  
**RANCH HOUSE ROAD**  
**PHASE 2**

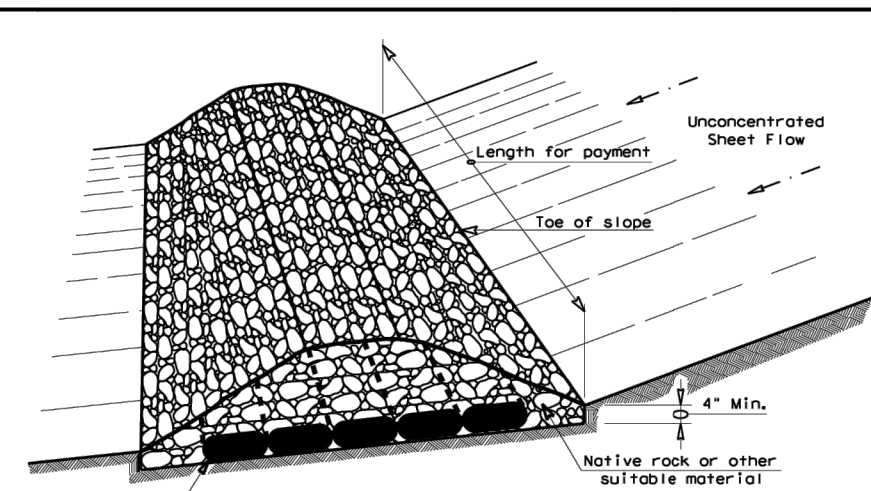
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**ESC DETAILS**



ENGINEER'S SEAL:

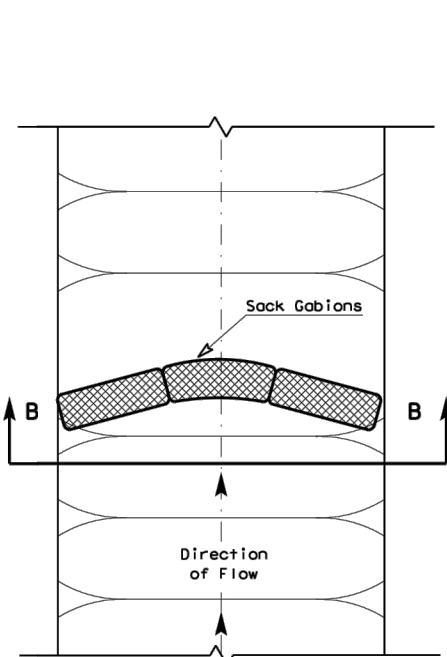


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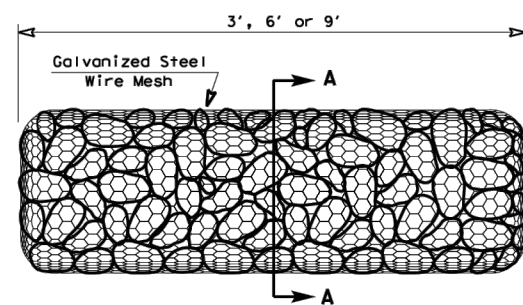


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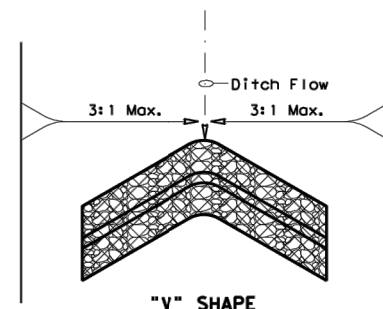


**PLAN VIEW**

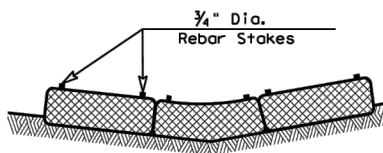


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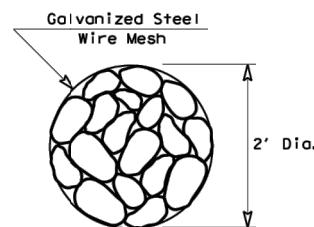
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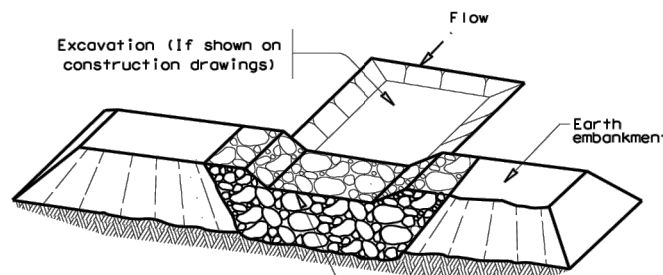
**"V" SHAPE PLAN VIEW**



**SECTION B-B**

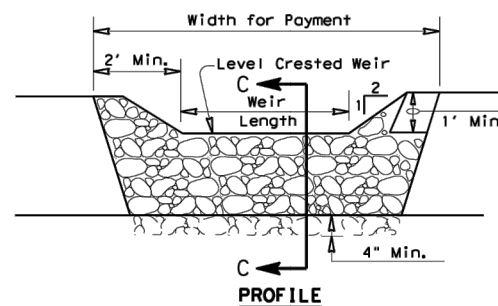


**SECTION A-A**

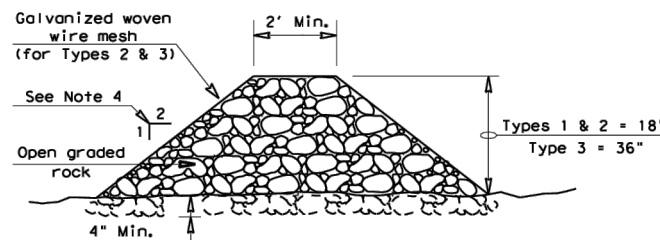


**FILTER DAM AT SEDIMENT TRAP**

(RFD1) OR (RFD2)



**PROFILE**



**SECTION C-C**

**ROCK FILTER DAM USAGE GUIDELINES**

Rock Filter Dams should be constructed downstream from disturbed areas to intercept sediment from overland runoff and/or concentrated flow. The dams should be sized to filter a maximum flow through rate of 60 GPM/FT<sup>2</sup> of cross sectional area. A 2 year storm frequency may be used to calculate the flow rate.

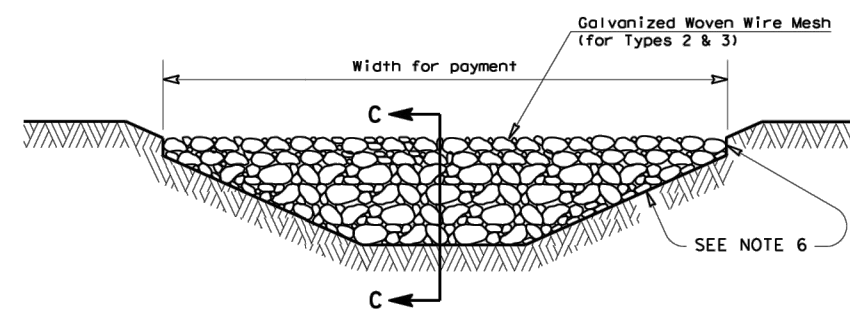
**Type 1** (18" high with no wire mesh) (3" to 6" aggregate): Type 1 may be used at the toe of slopes, around inlets, in small ditches, and at dike or swale outlets. This type of dam is recommended to control erosion from a drainage area of 5 acres or less. Type 1 may not be used in concentrated high velocity flows (approximately 8 Ft/Sec or more) in which aggregate wash out may occur. Sandbags may be used at the embedded foundation (4" deep min.) for better filtering efficiency of low flows if called for on the plans or directed by the Engineer.

**Type 2** (18" high with wire mesh) (3" to 6" aggregate): Type 2 may be used in ditches and at dike or swale outlets.

**Type 3** (36" high with wire mesh) (4" to 8" aggregate): Type 3 may be used in stream flow and should be secured to the stream bed.

**Type 4** (Sack gabions) (3" to 6" aggregate): Type 4 May be used in ditches and smaller channels to form an erosion control dam.

**Type 5:** Provide rock filter dams as shown on plans.



**FILTER DAM AT CHANNEL SECTIONS**

(RFD1) OR (RFD2) OR (RFD3)

**GENERAL NOTES**

- If shown on the plans or directed by the Engineer, filter dams should be placed near the toe of slopes where erosion is anticipated, upstream and/or downstream at drainage structures, and in roadway ditches and channels to collect sediment.
- Materials (aggregate, wire mesh, sandbags, etc.) shall be as indicated by the specification for "Rock Filter Dams for Erosion and Sedimentation Control".
- The rock filter dam dimensions shall be as indicated on the SW3P plans.
- Side slopes should be 2:1 or flatter. Dams within the safety zone shall have sideslopes of 6:1 or flatter.
- Maintain a minimum of 1' between top of rock filter dam weir and top of embankment for filter dams at sediment traps.
- Filter dams should be embedded a minimum of 4" into existing ground.
- The sediment trap for ponding of sediment laden runoff shall be of the dimensions shown on the plans.
- Rock filter dam types 2 & 3 shall be secured with 20 gauge galvanized woven wire mesh with 1" diameter hexagonal openings. The aggregate shall be placed on the mesh to the height & slopes specified. The mesh shall be folded at the upstream side over the aggregate and tightly secured to itself on the downstream side using wire ties or hog rings. For in stream use, the mesh should be secured or staked to the stream bed prior to aggregate placement.
- Sack Gabions should be staked down with 3/4" dia. rebar stakes, and have a double-twisted hexagonal weave with a nominal mesh opening of 2 1/2" x 3 1/4"
- Flow outlet should be onto a stabilized area (vegetation, rock, etc.).
- The guidelines shown hereon are suggestions only and may be modified by the Engineer.

**PLAN SHEET LEGEND**

- Type 1 Rock Filter Dam (RFD1)
- Type 2 Rock Filter Dam (RFD2)
- Type 3 Rock Filter Dam (RFD3)
- Type 4 Rock Filter Dam (RFD4)



**TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES  
ROCK FILTER DAMS  
EC (2) - 16**

FILE: ec216	DN: TxDOT	CK: KM	DN: VP	DN/CK: LS
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REVISIONS	DIST	COUNTY	SHEET NO.	

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**REVISIONS:**

NO.	REVISION	DATE

DATE: 4/27/2023  
DESIGNED BY: DC  
CHECKED BY: RB  
PROJ #: PARKS-2023-0001



PROJECT:

RANCH HOUSE ROAD  
PHASE 2

SHEET TITLE:

ESC DETAILS  
(EC (2)-16)