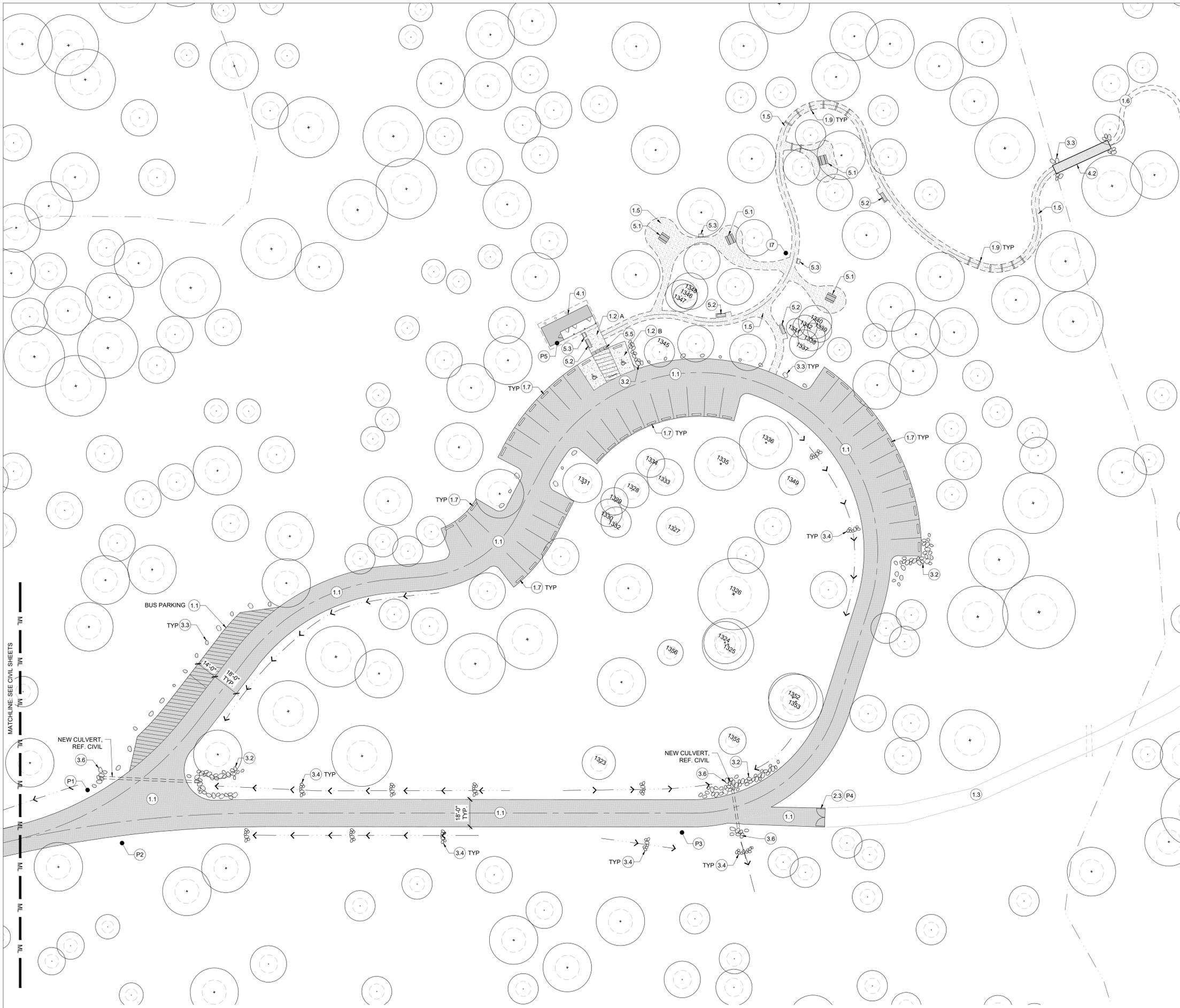


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SYMBOLS LEGEND

SYMBOL	ITEM
(Circle with dot)	EXISTING TREE TO PROTECT
(Dashed line)	PROPERTY LINE / LIMIT OF CONTRACT
(Line with arrows)	VEGETATED SWALE
(Line with 'M')	MATCHLINE
(Dotted line)	EXISTING SWALES
(Hatched area)	100 YEAR FLOODPLAIN BOUNDARY

MATERIALS LEGEND

SYMBOL	#	ITEM	REF.
1.0 PAVING & CURBS			
(Stippled pattern)	1.1	VEHICULAR CHIPSEAL PAVING	REF CIVIL
(Grid pattern)	1.2	CONCRETE PAVING A. PEDESTRIAN B. VEHICULAR	3,4/L400
(Dotted pattern)	1.3	EXISTING ROAD TO REMAIN	
(Cross-hatched pattern)	1.4	TWO TRACK TRAIL	
(Stippled pattern)	1.5	STABILIZED DG TRAIL	1,2/L400
(Dotted pattern)	1.6	HIKING TRAIL	1/L401
(Line with dots)	1.7	WHEEL STOP	9/L400
(Line with dots)	1.8	CONCRETE FLUSH CURB	REF CIVIL
(Line with dots)	1.9	LUMBER STEPS	10/L400
2.0 FENCE & GATES			
(Line with dots)	2.1	GAME FENCE	1/L402
(Line with dots)	2.2	VEHICULAR ENTRY GATE	2/L402
(Line with dots)	2.3	MANUAL ACCESS GATE	3/L402
3.0 SITE WALLS & DRAINAGE			
(Line with dots)	3.1	STONE ENTRY WALL	8/L400
(Line with dots)	3.2	LOW BOULDER WALL	7/L400
(Circle with dot)	3.3	LANDSCAPE BOULDER	
(Line with dots)	3.4	BOULDER CHECK DAM	3/L401
(Line with dots)	3.5	BIODEGRADABLE EROSION CONTROL BLANKET	8/L401
(Line with dots)	3.6	CULVERT OUTFALL	7/L401
4.0 SITE STRUCTURES			
(Line with dots)	4.1	VAULT RESTROOM	1/L403
(Line with dots)	4.2	WOOD BOARDWALK	6/L400
(Line with dots)	4.3	TRAIL CULVERT	2/L401
5.0 SITE FURNISHINGS			
(Line with dots)	5.1	PICNIC TABLE	3/L403
(Line with dots)	5.2	BENCH	2/L403
(Line with dots)	5.3	TRASH RECEPTACLE	4/L403
(Line with dots)	5.4	VEHICULAR BOLLARD A. STEEL BOLLARD B. STEEL BOLLARD W/ GATE PINPAD	4/L402
(Line with dots)	5.5	DETECTABLE WARNING PLATE	
SIGNAGE, REF. L200B			
(Line with dots)	E, 1-5	MAIN ENTRY	
(Line with dots)	P, 1-5	TRAILHEAD LOOP	
(Line with dots)	M, 1-3	MAINTENANCE LOOP	
(Line with dots)	R, 1-6	MAIN ROAD AND DISPERSED	
(Line with dots)	I, 1-7	INTERPRETIVE SIGN	

LAYOUT NOTES:

- CONTRACTOR TO FIELD STAKE ALL ROAD AND HARDSCAPE LAYOUT FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION AND SITE CLEARING.
- CONTRACTOR TO FIELD STAKE CENTER LINE OF ALL PATHS FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO SETTING FORMS.
- CONTRACTOR TO GIVE LANDSCAPE ARCHITECT FIVE (5) BUSINESS DAYS NOTICE PRIOR TO ALL SITE VISITS TO OBSERVE LAYOUT.

VEGETATION AND SOIL PROTECTION NOTES:

COORDINATE WITH LANDSCAPE ARCHITECT TO TEMPORARILY RELOCATE TREE PROTECTION FENCING AS NEEDED TO INSTALL HARDSCAPE ELEMENTS

TEXAS
PARKS & WILDLIFE

TEN EYCK
LANDSCAPE ARCHITECTS

1224 EAST 12TH STREET
SUITE 313
AUSTIN, TEXAS 78702
512 813 9959 P
www.teneyck.com

12/19/2025

LLANO COUNTY TEXAS

ENCHANTED ROCK STATE NATURAL AREA CENTENNIAL PARK #1 PH.1

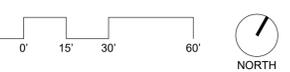
NORTH ROCK INITIAL PUBLIC USE PROJECT NUMBER: 1112549

DATE: 12/19/2025
DESIGNED BY: TELA
DRAWN BY: TELA
REVIEWED BY: MT/SS
REVISED:
REVISED:

SHEET TITLE
HARDSCAPE PLAN - PARKING LOOP

SHEET NUMBER
L204

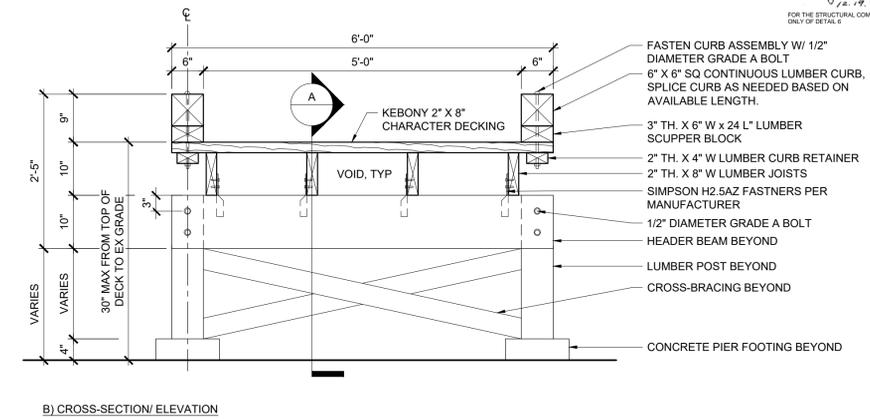
1 HARDSCAPE PLAN - PARKING LOOP & TRAILHEAD
1" = 30'-0"



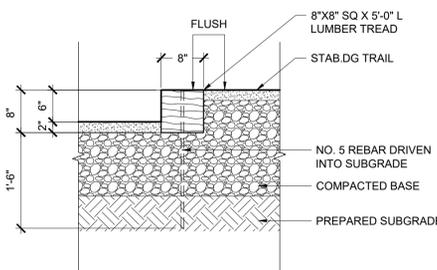
BID READY CONSTRUCTION DOCUMENTS



- NOTES:
1. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR LA APPROVAL PRIOR TO CONSTRUCTION
2. ALL MATERIAL TYPE OTHER THAN DECKING SHALL BE PRESSURE TREATED WOOD, NO 2
3. DECKING MATERIAL TO BE KEBONY CHARACTER, INSTALL PER MFR RECOMMENDATIONS
4. DESIGN LOAD: 100 PSF PEDESTRIAN

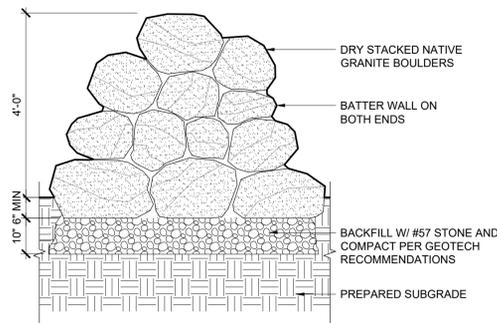


- NOTES:
REF. MATERIAL SCHEDULE FOR FINISHES



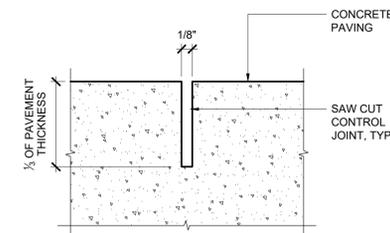
SECTION
10 LUMBER STEPS
3/4" = 1'-0"

- NOTES:
1. REF. MAT SCHED SALVAGED MATERIAL NOTES
2. TO MATCH EX ENCHANTED ROCK MAIN ENTRY WALL



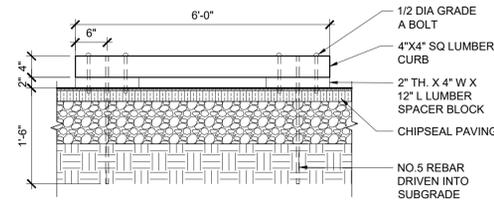
SECTION
8 STONE ENTRY WALL
1/2" = 1'-0"

- NOTES:
1. SEE SPECIFICATIONS FOR MOCK-UP REQUIREMENTS
2. SEE JOINTING PLAN FOR JOINT LAYOUT
3. SAW CUT JOINTS SHALL BE STRAIGHT AND CONTINUOUS



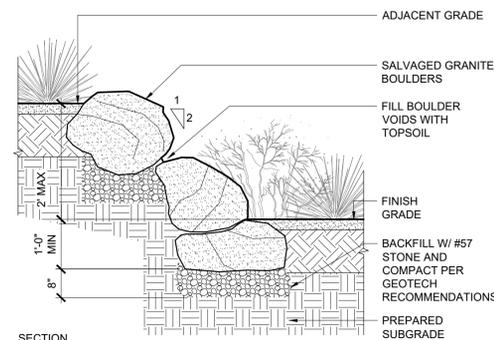
SECTION
5 SAWCUT CONTROL JOINT
FULL SCALE

- NOTES:
1. REF. MATERIAL SCHEDULE FOR FINISHES
2. INSTALL 12\"/>



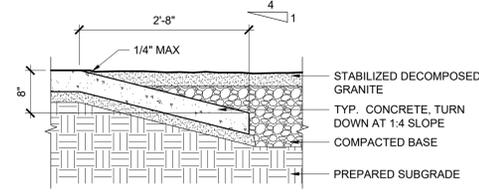
SECTION
9 TIMBER WHEEL STOP
3/4" = 1'-0"

- NOTES:
1. REF. MAT SCHED FOR SALVAGED MATERIAL NOTES

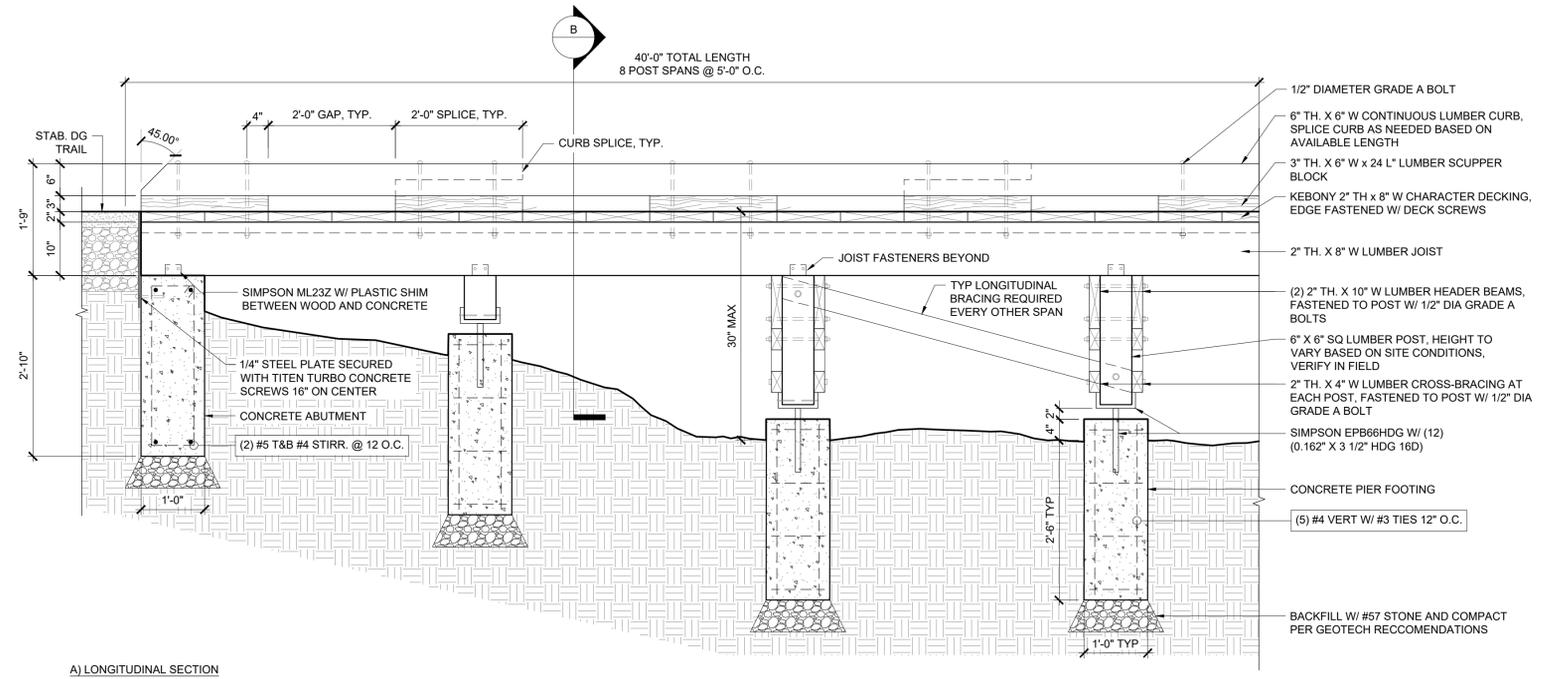


SECTION
7 LOW BOULDER RETAINING WALL
1/2" = 1'-0"

- NOTES:
1. WHERE STABILIZED DG MEETS NEW CONCRETE PAVING, THE VERTICAL DISTANCE BETWEEN THE TWO SHALL BE NO GREATER THAN 1/4\"/>



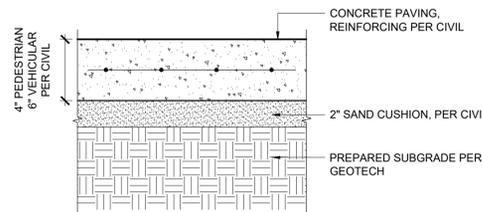
SECTION
4 DG TO CONCRETE TRANSITION
3/4" = 1'-0"



A) LONGITUDINAL SECTION

SECTION
6 WOOD BOARDWALK
3/4" = 1'-0"

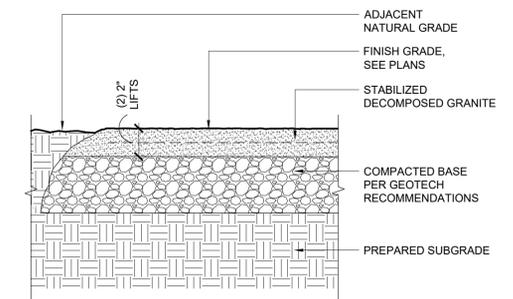
- TYPICAL PAVING NOTES:
1. REF CIVIL FOR SUBGRADE PREPARATION, BASE MATERIAL & DEPTH, AND PAVING DEPTH & REINFORCING. CONTRACTOR SHALL MEET OR EXCEED ALL PAVING RECOMMENDATIONS.
2. ALL CONCRETE WITHIN ACCESSIBLE ROUTES SHALL HAVE A 4.9% MAX SLOPE, UNLESS OTHERWISE INDICATED AS A RAMP. CROSS SLOPE SHALL BE NO GREATER THAN 2% AND NO LESS THAN 0.5%.
3. FINISHED GRADES AT ADJACENT PAVING SHALL NOT EXCEED +/- 1/4\"/>



SECTION
3 CONCRETE PAVING - TYPICAL
1 1/2" = 1'-0"

STABILIZED DECOMPOSED GRANITE GENERAL NOTES:

- SIZE OF DECOMPOSED GRANITE TO BE 1/4" MINUS; REF. MATERIAL SCHEDULE FOR COLOR
- REFERENCE SPECIFICATION 32 15 00 FOR PREP, EXECUTION, AND INSTALLATION REQUIREMENTS
- STABILIZER AND GRANITE SHALL BE PRE-MIXED PRIOR TO INSTALLATION.
- PLACE, WATER AND COMPACT DECOMPOSED GRANITE SURFACE IN TWO LIFTS TO 95% AT OPTIMUM MOISTURE CONTENT.
- DO NOT USE WHACKERS OR VIBRATORY ROLLERS FOR COMPACTION. DECOMPOSED GRANITE PAVEMENT SHALL BE ALLOWED TO SETTLE NATURALLY (AS APPROVED) WITHIN THE DRIP LINE OF EXISTING TREES.
- WHERE STABILIZED DG MEETS EXISTING OR NEW PAVING SURFACES, THE VERTICAL DISTANCE BETWEEN THE TWO SHALL BE NO GREATER THAN 1/4\"/>

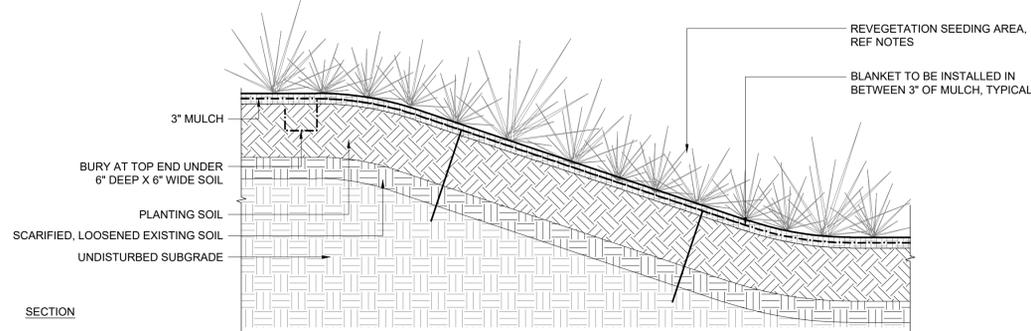


SECTION
1 STABILIZED DG TRAIL
1" = 1'-0"

SECTION
2 STABILIZED DG TRAIL - NOTES
1" = 1'-0"

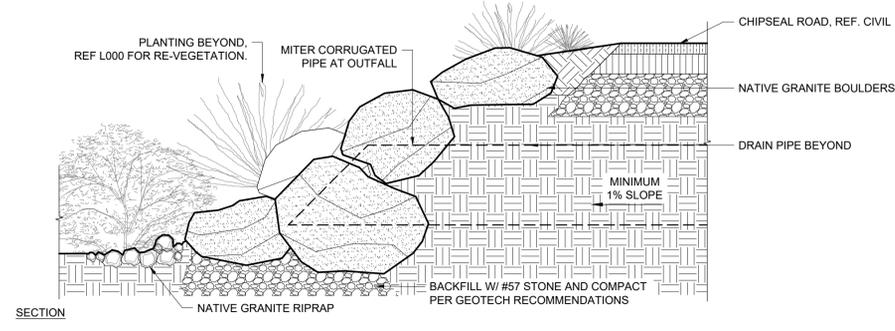
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- NOTES:
1. SEE L000 FOR REVEGETATION NOTES, AND GRADING PLAN FOR LOCATION
2. INSTALL BLANKET PER MANUFACTURER'S RECOMMENDATIONS
3. OVERLAP ADJACENT ROLL SECTIONS & SECURE MAT AT TOP & BOTTOM OF SLOPE
4. REF. SPECS FOR MULCH REQUIREMENTS

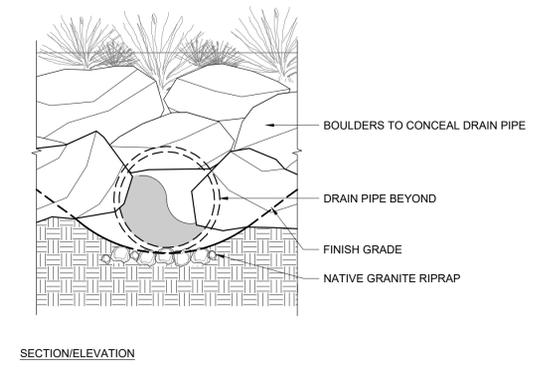


SECTION
8 BIODEGRADABLE EROSION CONTROL BLANKET
3/4" = 1'-0"

- NOTES:
1. INLETS AND OUTLETS SHALL BE HIDDEN FROM THE VIEW OF ADJACENT ROADWAYS WITH BOULDERS.
2. PROVIDE MINIMUM COVER OVER PIPES PER CIVIL DRAWINGS.
3. CONTRACTOR TO PROVIDE IN-PLACE MOCKUP FOR APPROVAL.
4. REF. MAT SCHED FOR SALVAGED MATERIAL NOTES.



SECTION
7 CULVERT OUTFALL
3/4" = 1'-0"

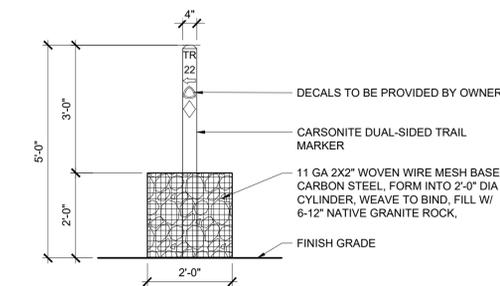


SECTION/ELEVATION



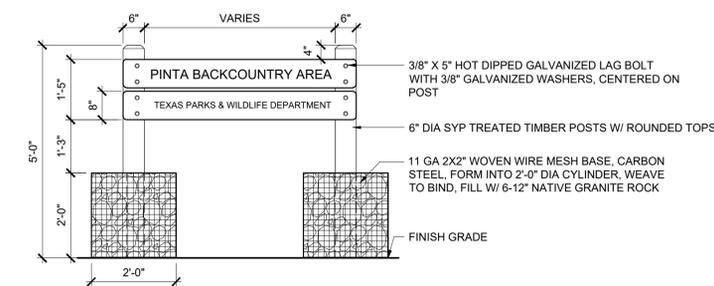
6 WOOD SIGN REFERENCE IMAGE

- NOTES:
1. REF SIGNAGE SCHEDULE FOR FINISHES AND QTY
2. INSTALL 4'-0" FROM TRAIL EDGE TO CLOSEST EDGE OF SIGN, TYPICAL
3. REF. MAT SCHED FOR SALVAGED MATERIAL NOTES



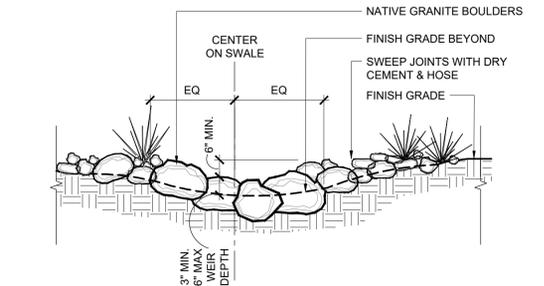
SECTION
5 TRAIL SIGN
1/2" = 1'-0"

- NOTES:
1. REF SIGNAGE SCHEDULE FOR FINISHES AND QTY
2. INSTALL 4'-0" FROM TRAIL EDGE TO CLOSEST EDGE OF SIGN, TYPICAL
3. REF. MAT SCHED FOR SALVAGED MATERIAL NOTES



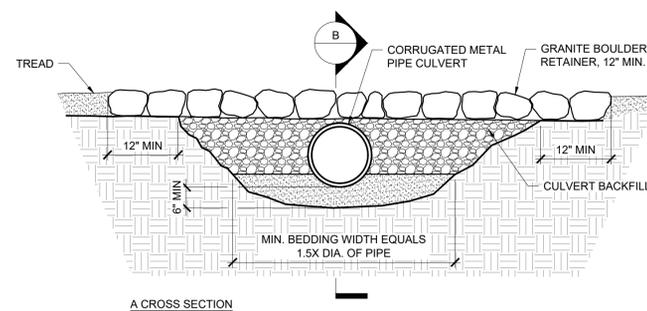
SECTION
4 INFORMATIONAL SIGN
1/2" = 1'-0"

- NOTES:
1. REF. MAT SCHED FOR SALVAGED MATERIAL NOTES

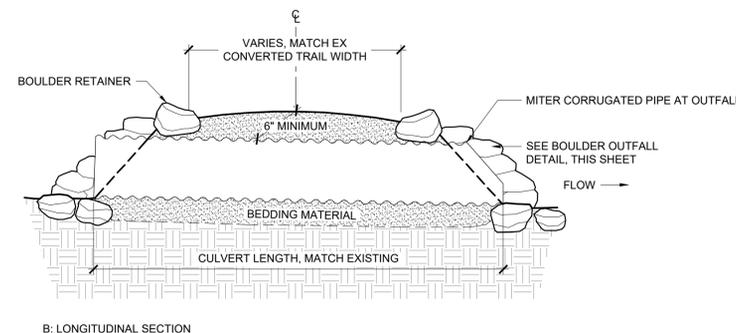


SECTION
3 STONE CHECK DAM
3/8" = 1'-0"

- NOTES:
1. SIZE OF NEW CULVERTS TO MATCH EXISTING, VERIFY IN FIELD
2. REF. CIVIL FOR CULVERT INSTALLATION, BEDDING MATERIAL, AND BACKFILL

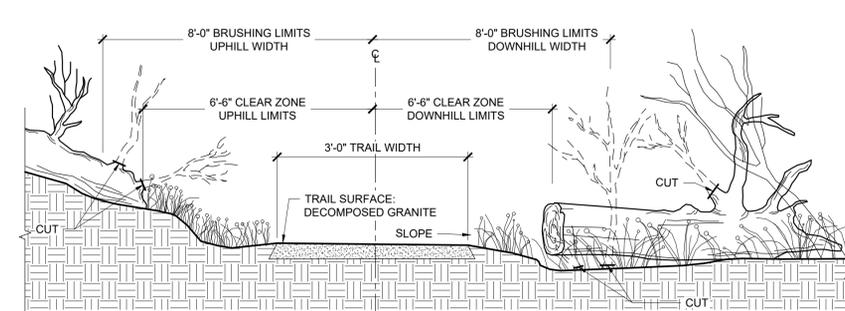


A CROSS SECTION
2 TRAIL CULVERT
1/2" = 1'-0"



B: LONGITUDINAL SECTION

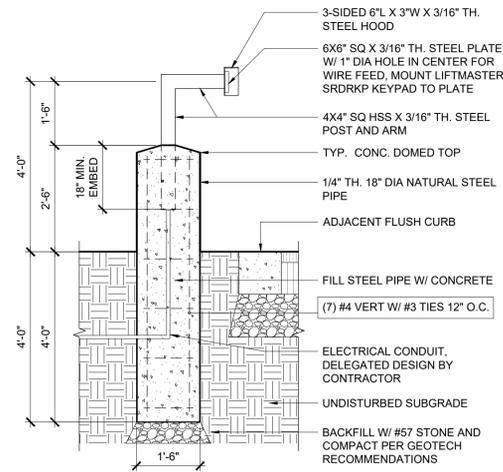
- NOTES:
1. CLEAR ZONE: REMOVAL OF ALL OBSTRUCTING OBJECTS AND VEGETATION.
2. BRUSHING LIMITS: REMOVAL OF LARGE BRANCHES AND OTHER VEGETATION IN CONFLICT WITH SIGHTLINES AND SAFETY.
3. REMOVE AND HARVEST TOP ORGANIC SOIL LAYERS DOWN TO MINERAL SOIL FOR TRAIL COMPACTION.
4. COMPACT MINERAL SOIL AND DECOMPOSED GRANITE SURFACE IN TWO LIFTS TO 95% OPTIMUM MOISTURE CONTENT, PER GEOTECH RECOMMENDATIONS
5. TRAIL SURFACE SHALL BE ALLOWED TO SETTLE NATURALLY (AS APPROVED) WITHIN DRIP LINE OF EXISTING TREES



1 HIKING TRAIL - NEW
3/4" = 1'-0"

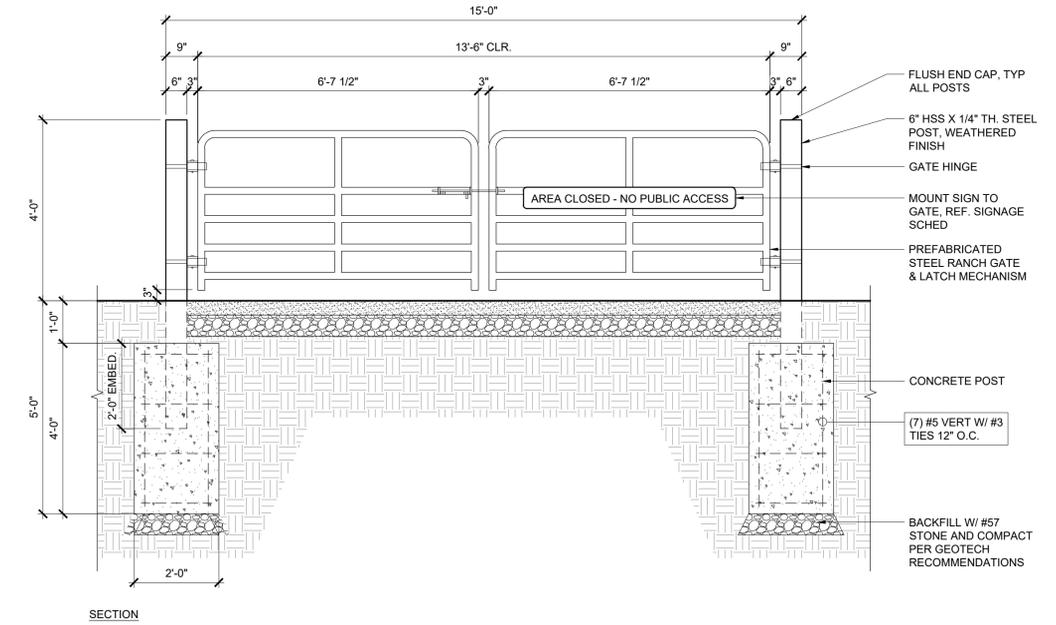


- NOTES:
1. ALL STEEL TO HAVE NATURAL WEATHERED FINISH
 2. MITER ALL CORNERS; WELD ALL SEAMS; GRIND SMOOTH ALL WELDS, BURRS, AND SHARP EDGES.
 3. INSTALL GATE PINPAD PER MANUFACTURER RECOMMENDATIONS



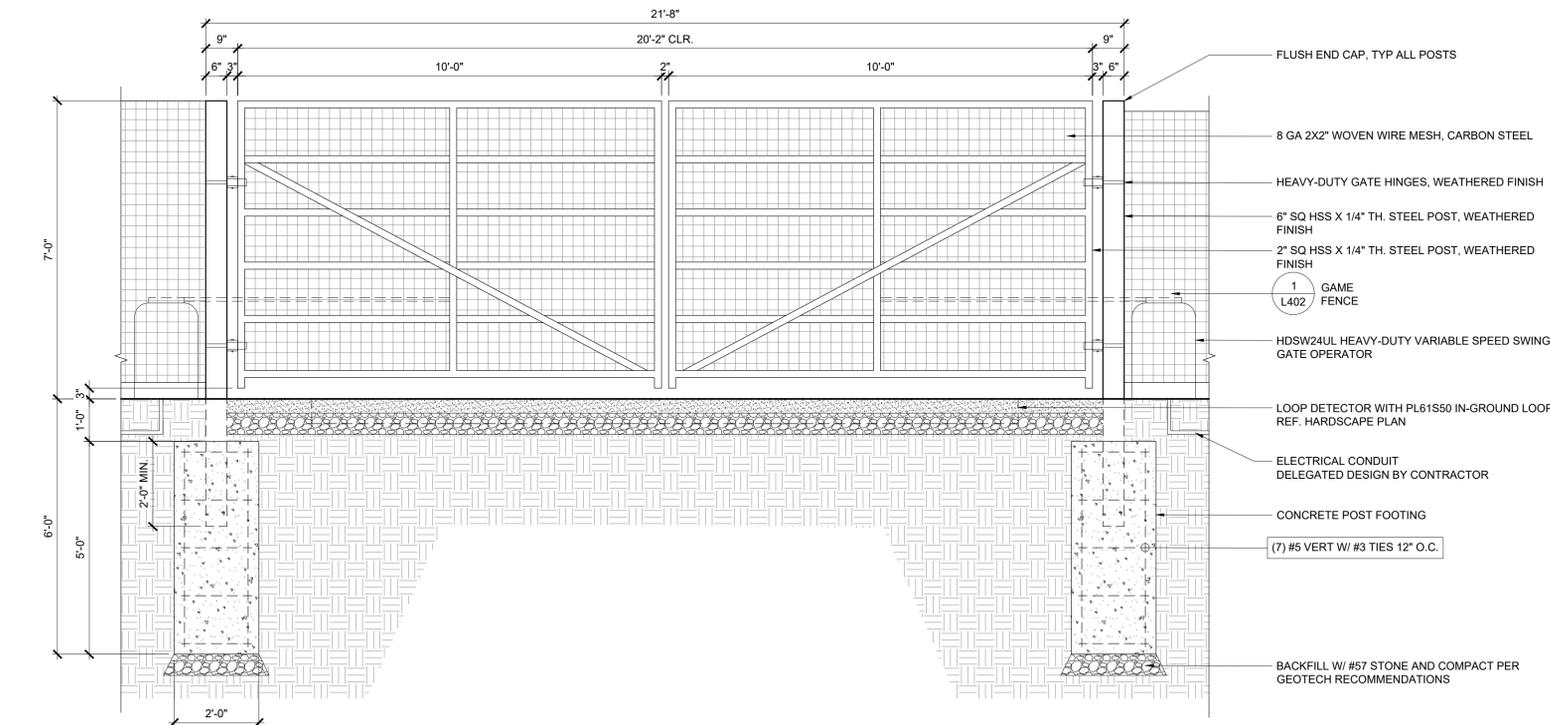
4 BOLLARD W/ GATE PIN-PAD
1/2" = 1'-0"

- NOTES:
1. USE SALVAGED RANCH GATES IF POSSIBLE. CONTRACTOR TO SUBMIT PREFAB STEEL RANCH GATE AND HARDWARE FOR LA & OWNER APPROVAL



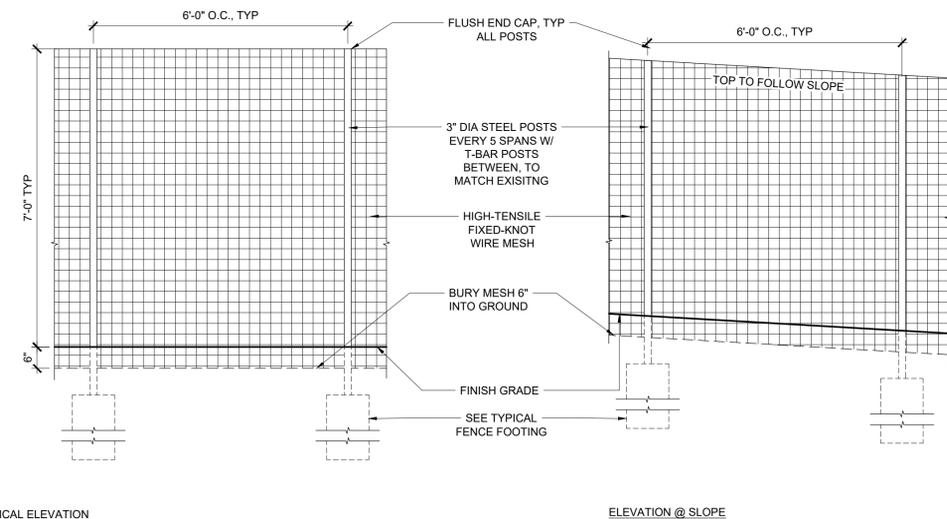
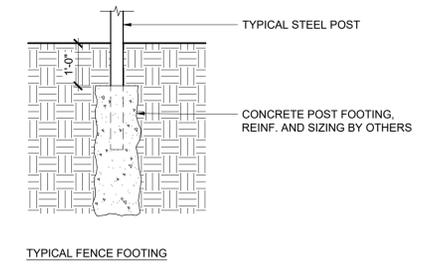
3 VEHICULAR GATE - MANUAL ACCESS
1/2" = 1'-0"

- NOTES:
1. SITE ELEVATIONS ARE FOR GENERAL DESIGN INTENT ONLY. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO LA FOR APPROVAL PRIOR TO FABRICATION AND INSTALLATION.
 2. INSTALL GATE OPERATOR, PIN PAD, AND LOOP DETECTOR PER MANUFACTURER'S INSTRUCTIONS.
 3. PROVIDE KNOX BOX ACCESS PER LOCAL AND COUNTY FIRE CODE
 4. MITER ALL CORNERS; WELD ALL SEAMS; GRIND SMOOTH ALL WELDS, BURRS, AND SHARP EDGES.
 5. HIGH FENCE REQUIREMENTS AND INTEGRITY MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. SEE 31 TX ADMIN CODE 65.605 - FACILITY STANDARDS AND CARE OF DEER. PHASE GATE AND FENCE REMOVE. CONSTRUCTION AS NEEDED TO ACHIEVE REQ.



2 VEHICULAR ENTRY GATE
1/2" = 1'-0"

- NOTES:
1. FENCE DESIGN, ENGINEERING AND LAYOUT TO BE DELEGATED DESIGN BY CONTRACTOR
 2. SUBMIT SHOP DRAWINGS AND MOCKUP FOR LA APPROVAL PRIOR TO FABRICATION OR INSTALLATION.
 3. HIGH FENCE REQUIREMENTS AND INTEGRITY MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. SEE 31 TX ADMIN CODE 65.605 - FACILITY STANDARDS AND CARE OF DEER. PHASE GATE AND FENCE REMOVE. CONSTRUCTION AS NEEDED TO ACHIEVE REQ.



1 GAME FENCE
1/2" = 1'-0"



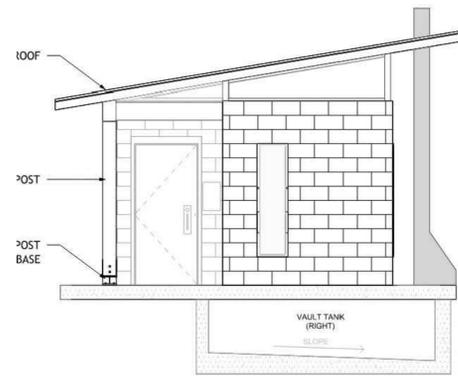
4 CE240-CHR
BEARSAVER



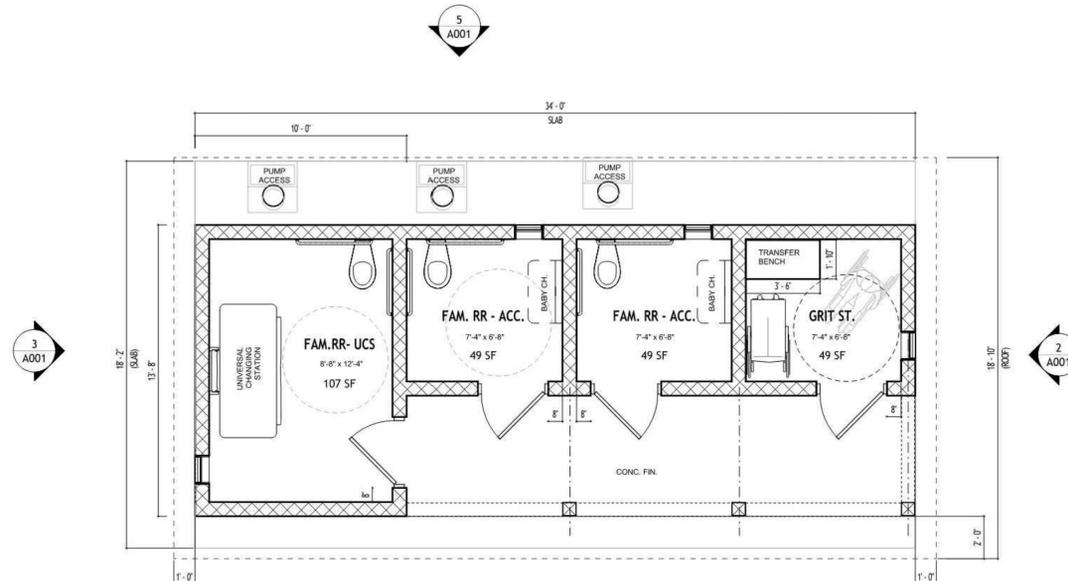
3 537-60TMR PICNIC TABLE
DUMOR



2 535-60TMR
DUMOR

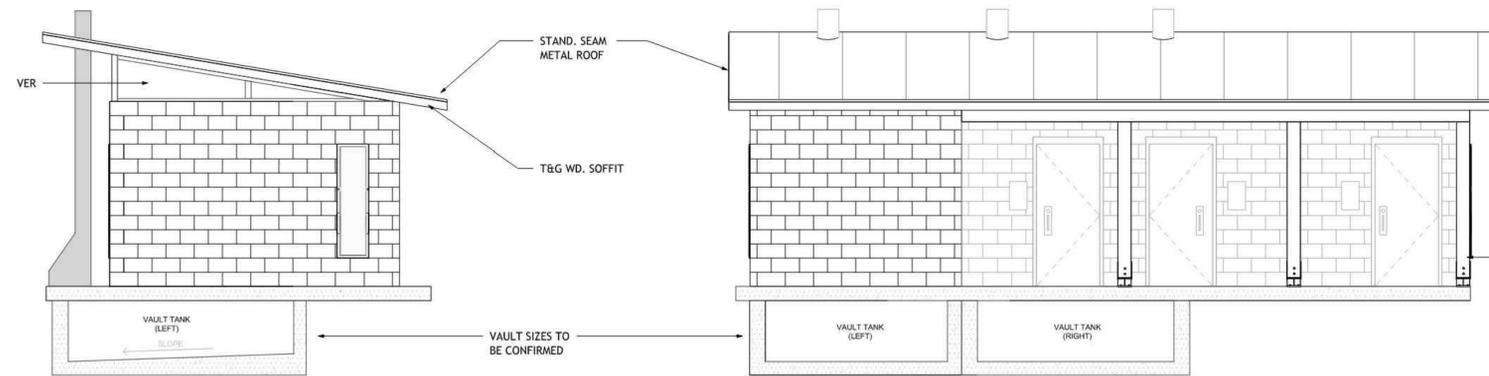


2 RIGHT ELEVATION
1/4" = 1'-0"



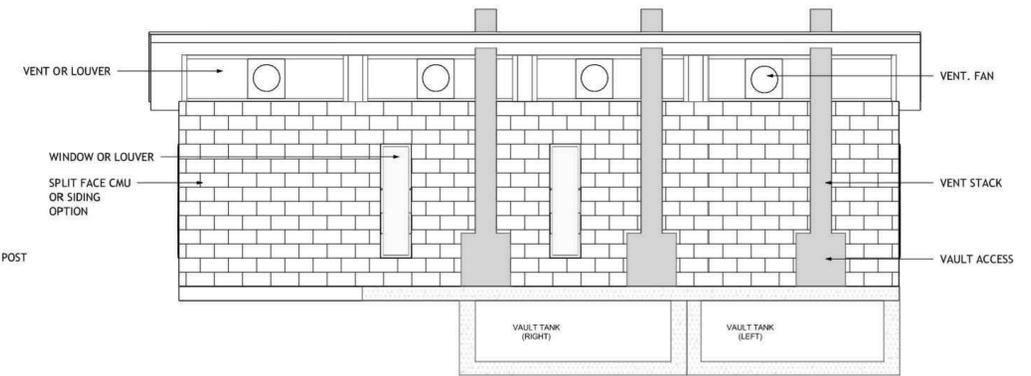
1 VAULT RESTROOM PLAN
1/4" = 1'-0"

NOTE: VAULT TOILET FINAL DESIGN TO BE PROVIDED, SHOP-MANUFACTURED, AND DELIVERED BY 3RD PARTY VENDOR. CONTRACTOR IS RESPONSIBLE FOR EXCAVATION AND PAD PREP.



EFTELEVATION
1/4" = 1'-0"

4 FRONTELEVATION
1/4" = 1'-0"



5 REARELEVATION
1/4" = 1'-0"

1 VAULT TOILET (BY OTHERS)
1/4" = 1'-0"



12/19/2025

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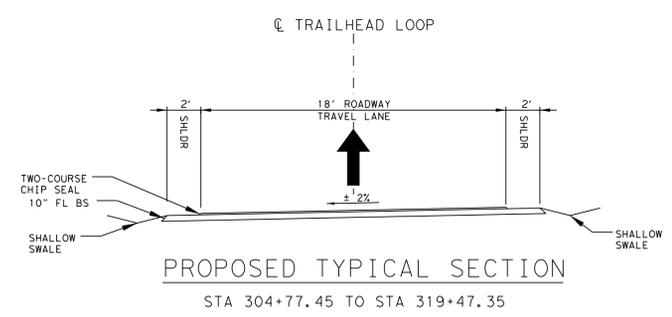
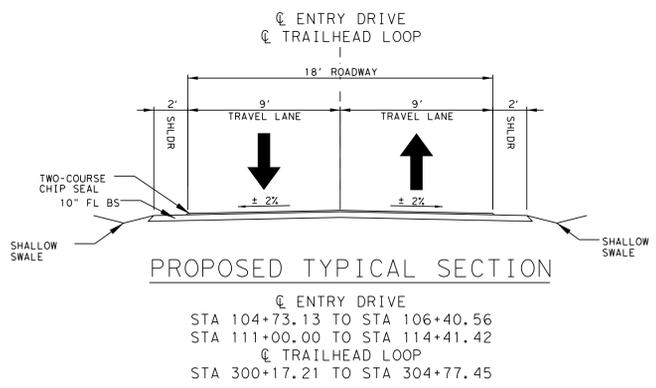
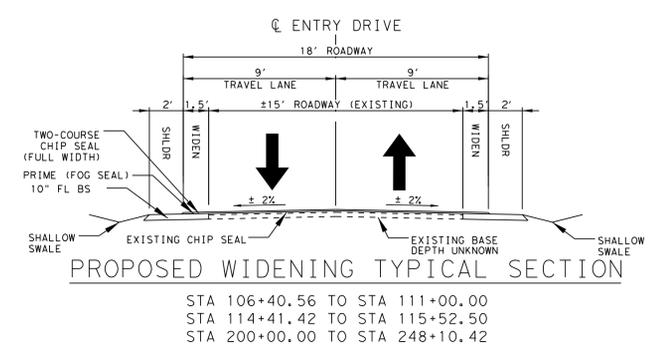
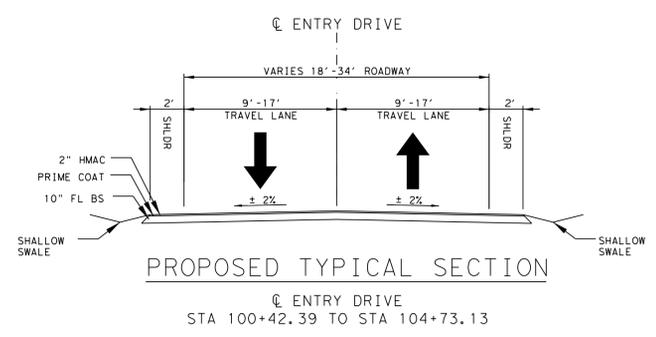
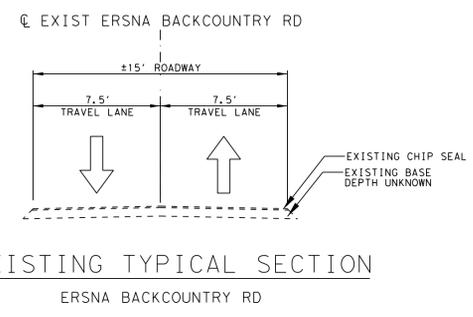


**ENCHANTED ROCK
STATE NATURAL AREA
EXPANSION
ROADWAY IMPROVEMENTS**
TPWD PROJECT NO. 1211483

DATE: 12/19/2025
DESIGNED BY: GARVER
DRAWN BY: GARVER
REVIEWED BY: JWB

SHEET TITLE
TYPICAL SECTIONS

SHEET NUMBER
C01



PAVEMENT GENERAL NOTES

1. HMAC = TYPE D (TXDOT ITEM 341)
2. PRIME COAT = TXDOT ITEM MC-30
3. FOG SEAL = TXDOT ITEM 315, SS-1
4. FLEXIBLE BASE = TXDOT ITEM 247, GRADE 1-2, TYPE A.

CHIP SEAL SPECIFICATIONS				
COURSE	ASPHALT		AGGREGATE	
	TYPE	APPLICATION RATE (GAL/SY)	TYPE	APPLICATION RATE (SY/CY)
FIRST	AC20-5TR	0.5	3S, SAC	90
SECOND	AC20-5TR	0.4	4S, SAC	90



REGISTRATION NO.
F-5713

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**ENCHANTED ROCK
STATE NATURAL AREA
EXPANSION
ROADWAY IMPROVEMENTS**
TPWD PROJECT NO. 1211483

DATE: 12/19/2025
DESIGNED BY: GARVER
DRAWN BY: GARVER
REVIEWED BY: JWB

SHEET TITLE
ROADWAY
PLAN VIEW-
ENTRY
DRIVE

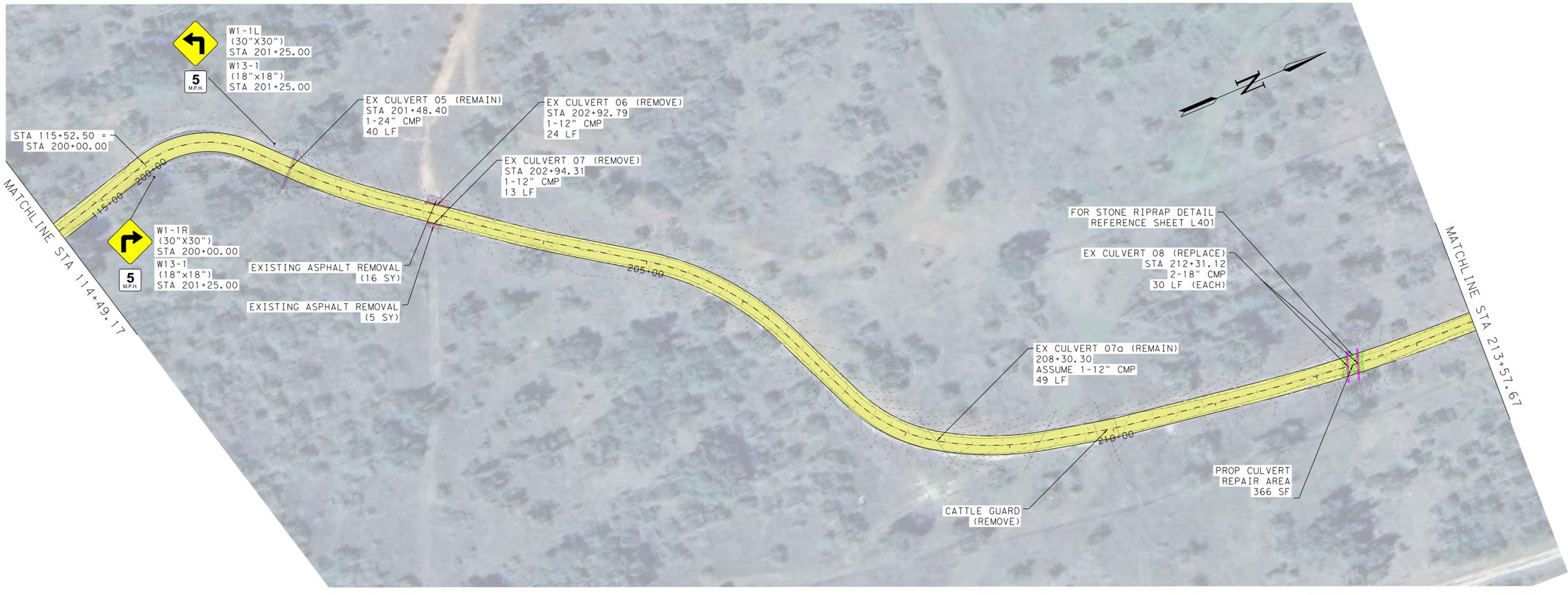
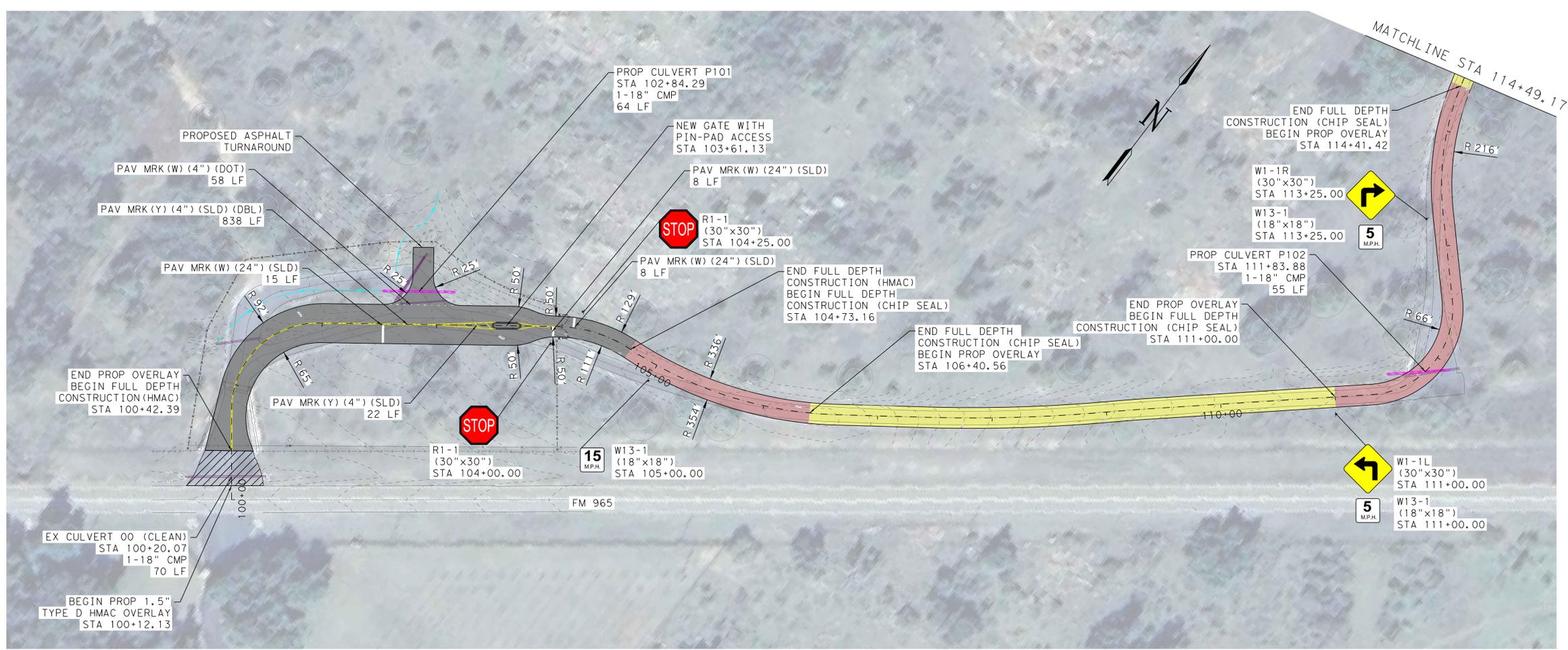
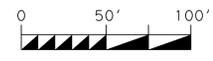
SHEET NUMBER
C05

LEGEND

- PROP FULL DEPTH HMAC
- PROP FULL DEPTH CHIP SEAL
- PROP OVERLAY WIDENING
- PROP 1.5" TYPE D HMAC OVERLAY
- PROP EDGE OF PAVEMENT
- EXIST EDGE OF PAVEMENT
- PROP CULVERT
- EXIST CULVERT
- PROP CONTOURS
- EXIST CONTOURS
- PROP SWALE
- EXIST SWALE
- PROP BY OTHERS PARKING
- PROP BY OTHERS FENCE
- EXIST FENCE

NOTES:

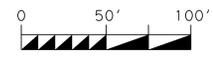
1. REFERENCE SHEET C01 FOR GENERAL LOCATION OF SHOULDERS AND DRAINAGE SWALES.
2. REFERENCE SHEET L000 FOR FIELD VERIFICATION AROUND ROCK OUTCROPPINGS.
3. FOR DRAINAGE DETAILS, REFERENCE SHEET C08.
4. REFERENCE SHEET L103 AND L104 FOR GRADING DETAILS.
5. CONTRACTOR TO VERIFY THE FINAL ALIGNMENT AND LIMITS OF THE PROPOSED PAVEMENT TO AVOID EXISTING TREES AND ROCK FORMATIONS. FIELD ADJUSTMENTS MUST BE APPROVED BY THE ENGINEER AND TPWD.





- LEGEND**
- PROP FULL DEPTH HMAC
 - PROP FULL DEPTH CHIP SEAL
 - PROP OVERLAY WIDENING
 - PROP 1.5" TYPE D HMAC OVERLAY
 - PROP EDGE OF PAVEMENT
 - EXIST EDGE OF PAVEMENT
 - PROP CULVERT
 - EXIST CULVERT
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 - EXIST CONTOURS
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- NOTES:**
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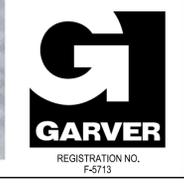


ENCHANTED ROCK STATE NATURAL AREA EXPANSION ROADWAY IMPROVEMENTS
 TPWD PROJECT NO. 1211483

DATE: 12/19/2025
 DESIGNED BY: GARVER
 DRAWN BY: GARVER
 REVIEWED BY: JWB

SHEET TITLE
 ROADWAY PLAN VIEW - ENTRY DRIVE

SHEET NUMBER
 C06



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**ENCHANTED ROCK
STATE NATURAL AREA
EXPANSION
ROADWAY IMPROVEMENTS**
TPWD PROJECT NO. 1211483

DATE: 12/19/2025
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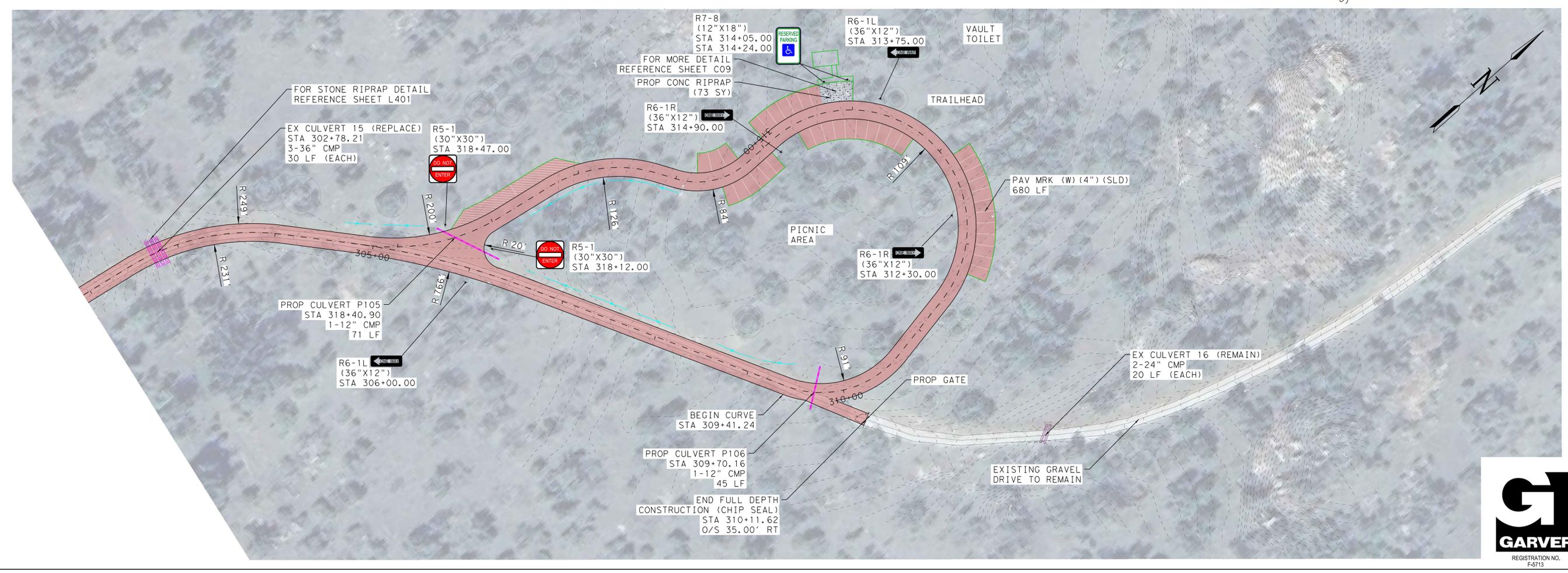
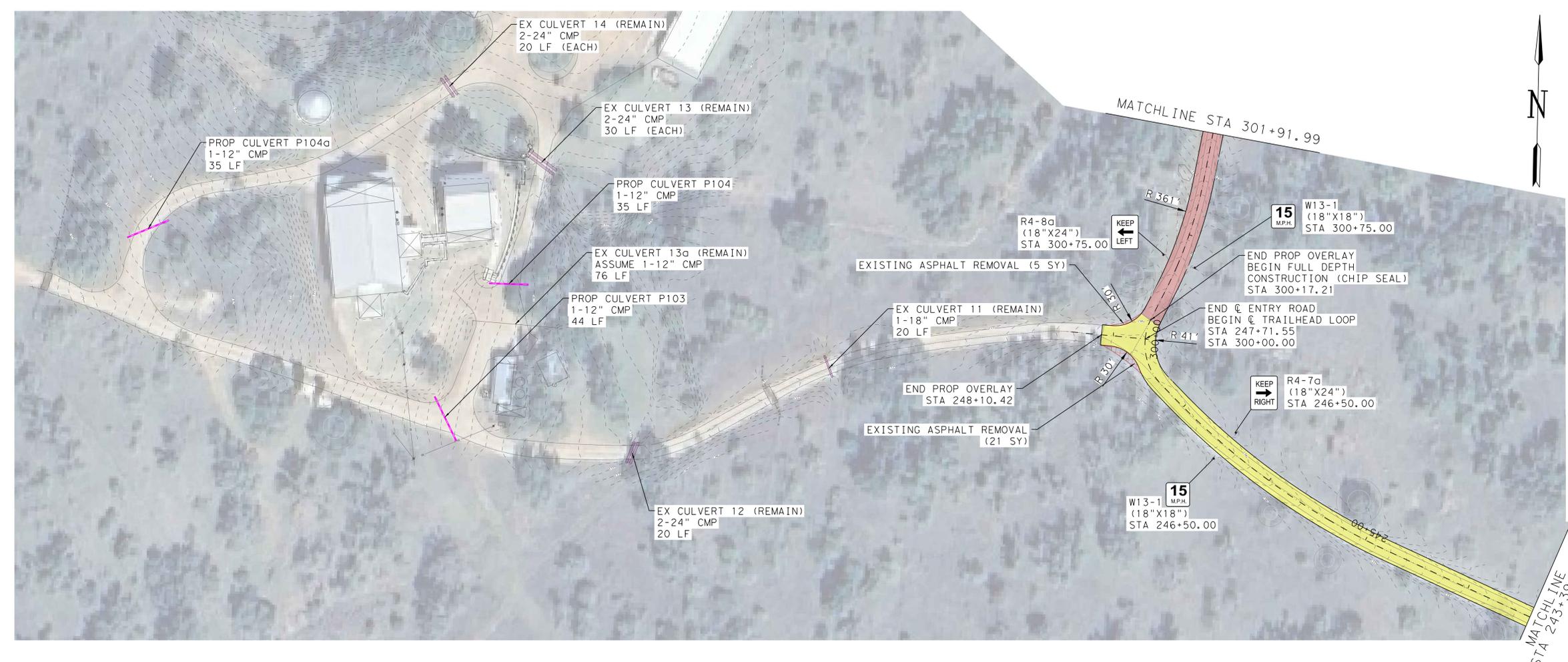
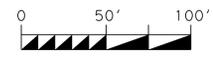
**SHEET TITLE
PLAN VIEW -
ENTRY
DRIVE AND
TRAILHEAD LOOP**

**SHEET NUMBER
C07**

LEGEND

- PROF FULL DEPTH HMA/C
- PROF FULL DEPTH CHIP SEAL
- PROF OVERLAY WIDENING
- PROF 1.5" TYPE D HMA/C OVERLAY
- PROF EDGE OF PAVEMENT
- EXIST EDGE OF PAVEMENT
- PROF CULVERT
- EXIST CULVERT
- PROF CONTOURS
- EXIST CONTOURS
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HYDROLOGIC DRAINAGE DATA

DA I.D.	CUMULATIVE A (ACRES)	RUNOFF COMPUTATIONS																			
		2-YEAR			5-YEAR		10-YEAR		25-YEAR		50-YEAR		100-YEAR								
		C1	A1	C2	A2	C3	A3	Cw	Tc (min)	I ₂ (in/hr)	Q ₂ (cfs)	I ₅ (in/hr)	Q ₅ (cfs)	I ₁₀ (in/hr)	Q ₁₀ (cfs)	I ₂₅ (in/hr)	Q ₂₅ (cfs)	I ₅₀ (in/hr)	Q ₅₀ (cfs)	I ₁₀₀ (in/hr)	Q ₁₀₀ (cfs)
DA P101	3.42	0.95	0.12	0.30	3.30	0.70	0.00	0.32	11.0	4.44	4.86	5.57	6.10	6.51	7.12	7.80	8.53	8.78	9.61	9.78	10.71
DA P102	8.90	0.95	0.20	0.30	8.70	0.70	0.00	0.31	10.0	4.61	12.73	5.78	15.96	6.75	18.63	8.08	22.30	9.09	25.09	10.12	27.92
DA P103	0.30	0.95	0.00	0.30	0.30	0.70	0.00	0.30	10.0	4.61	0.42	5.78	0.52	6.75	0.61	8.08	0.73	9.09	0.82	10.12	0.91
DA P104	0.67	0.95	0.00	0.30	0.37	0.70	0.30	0.48	10.0	4.61	1.48	5.78	1.86	6.75	2.17	8.08	2.60	9.09	2.92	10.12	3.25
DA P104a	0.05	0.95	0.00	0.30	0.05	0.70	0.00	0.30	10.0	4.61	0.07	5.78	0.09	6.75	0.10	8.08	0.12	9.09	0.14	10.12	0.15
DA P105	0.87	0.95	0.00	0.30	0.87	0.70	0.00	0.30	10.0	4.61	1.20	5.78	1.51	6.75	1.76	8.08	2.11	9.09	2.37	10.12	2.64
DA P106	1.17	0.95	0.00	0.30	1.17	0.70	0.00	0.30	10.0	4.61	1.62	5.78	2.03	6.75	2.37	8.08	2.84	9.09	3.19	10.12	3.55

EXISTING CULVERT INFORMATION

EXISTING CULVERTS						REPLACEMENT CULVERTS		
CULVERT	ALIGNMENT	STATIONS	SIZE	LENGTH (FT)	STATUS	CULVERT	SIZE	LENGTH
CULVERT 00	ENTRY DR	100+20.07	1-18" CMP	70	TO BE CLEANED	-	-	-
CULVERT 01	ENTRY DR	101+31.50	1-24" CMP	40	TO BE REMOVED	-	-	-
CULVERT 02	ENTRY DR	102+77.25	2-12" CMP	43	TO BE REMOVED	-	-	-
CULVERT 03	ENTRY DR	102+85.36	1-12" CMP	37	TO BE REMOVED	-	-	-
CULVERT 04	ENTRY DR	111+87.38	1-18" CMP	46	TO BE REMOVED	-	-	-
CULVERT 05	ENTRY DR	201+48.40	1-24" CMP	40	TO REMAIN	-	-	-
CULVERT 06	ENTRY DR	202+92.79	1-12" CMP	24	TO BE REMOVED	-	-	-
CULVERT 07	ENTRY DR	202+94.31	1-12" CMP	13	TO BE REMOVED	-	-	-
CULVERT 07a	ENTRY DR	208+30.30	* 1-12" CMP	49	TO REMAIN	-	-	-
CULVERT 08	ENTRY DR	212+31.12	2-18" CMP	20	TO BE REPLACED	CULVERT P08	2-18" CMP	30 (EACH)
CULVERT 08a	ENTRY DR	230+32.12	1-12" CMP	20	TO BE REPLACED	CULVERT P08a	1-12" CMP	30
CULVERT 09	ENTRY DR	239+32.82	1-12" CMP	21	TO BE REPLACED	CULVERT P09	1-12" CMP	30
CULVERT 10	ENTRY DR	242+36.77	1-12" CMP	20	TO BE REPLACED	CULVERT P10	1-12" CMP	26
CULVERT 11	PROP MAINTENANCE AREA		1-18" CMP	20	TO REMAIN	-	-	-
CULVERT 12	PROP MAINTENANCE AREA		2-24" CMP	20	TO REMAIN	-	-	-
CULVERT 13a	PROP MAINTENANCE AREA		* 1-12" CMP	76	TO REMAIN	-	-	-
CULVERT 13	PROP MAINTENANCE AREA		2-24" CMP	30	TO REMAIN	-	-	-
CULVERT 14	PROP MAINTENANCE AREA		2-24" CMP	20	TO REMAIN	-	-	-
CULVERT 15	TRAILHEAD LOOP	302+78.21	3-36" CMP	24	TO BE REPLACED	CULVERT P15	3-36" CMP	30
CULVERT 16	TRAILHEAD LOOP		2-24" CMP	20	TO REMAIN	-	-	-

* ESTIMATED CULVERT SIZING, NEEDS FIELD VERIFICATION

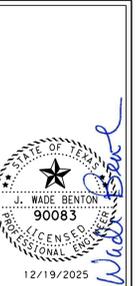
PROPOSED CULVERT INFORMATION

PROPOSED NEW CULVERTS					CULVERT DETAILS			
CULVERT	ALIGNMENT	STATIONS	SIZE	LENGTH (FT)	U/S ELEV	D/S ELEV	ROADWAY ELEV	ROADWAY WIDTH
CULVERT P101	ENTRY DRIVE	102+84.29	1-18" CMP	64	1289.00	1288.00	1290.25	29
CULVERT P102	ENTRY DRIVE	111+83.88	1-18" CMP	55	1277.00	1276.50	1279.00	30
CULVERT P103	PROP MAINTENANCE AREA		1-12" CMP	44	1342.00	1341.50	1343.25	30
CULVERT P104	PROP MAINTENANCE AREA		1-12" CMP	35	1340.00	1339.50	1342.00	20
CULVERT P104a	PROP MAINTENANCE AREA		1-12" CMP	35	1369.00	1368.50	1370.00	26
CULVERT P105	TRAILHEAD LOOP	318+40.90	1-12" CMP	71	1327.50	1327.00	1329.50	46
CULVERT P106	TRAILHEAD LOOP	309+70.16	1-12" CMP	45	1334.75	1334.50	1336.00	20

NOTE: CONTRACTOR TO FIELD VERIFY CULVERT INLET ELEVATIONS TO MAINTAIN MINIMUM COVER OVER TOP OF PIPE ALONG WITH POSITIVE FLOW.



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ENCHANTED ROCK STATE NATURAL AREA EXPANSION ROADWAY IMPROVEMENTS
TPWD PROJECT NO. 1211483

DATE: 12/19/2025
DESIGNED BY: GARVER
DRAWN BY: GARVER
REVIEWED BY: JWB

SHEET TITLE
CULVERT DETAILS & CALCS

SHEET NUMBER
C08



REGISTRATION NO. F-5713

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WORK.

J. WADE BENTON
90083
LICENSED PROFESSIONAL
ENGINEER
12/19/2025
Wade Benton

ENCHANTED ROCK
STATE NATURAL AREA
EXPANSION
ROADWAY IMPROVEMENTS
TPWD PROJECT NO. 1211483

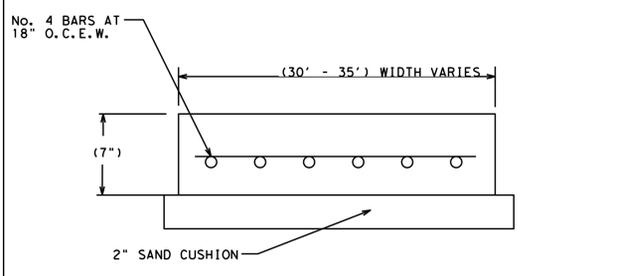
DATE: 12/19/2025
DESIGNED BY: GARVER
DRAWN BY: GARVER
REVIEWED BY: JWB

SHEET TITLE
DETAILS

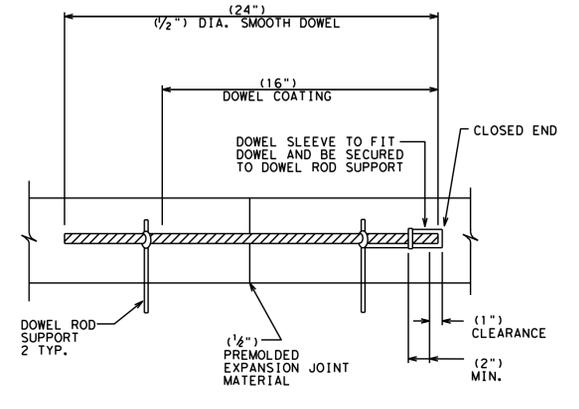
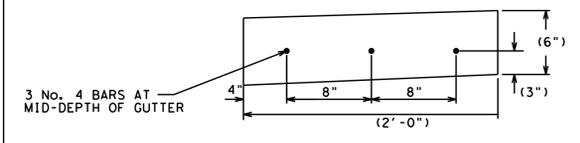
SHEET NUMBER
C09



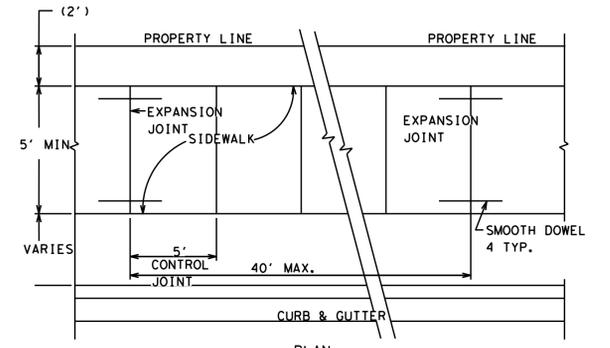
BID READY CONSTRUCTION DOCUMENTS



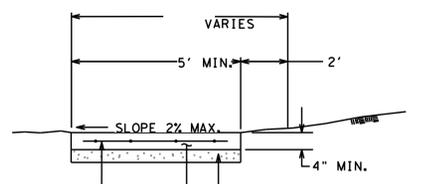
CONCRETE FLATWORK IN PARKING AREAS



DOWEL DETAIL



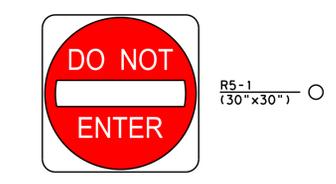
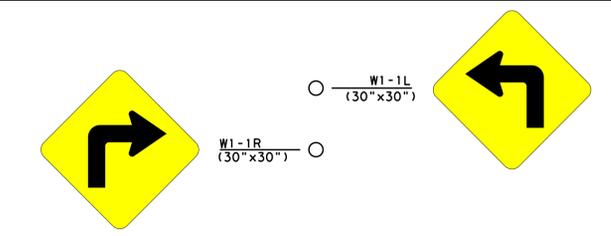
PLAN
SIDEWALK DETAIL



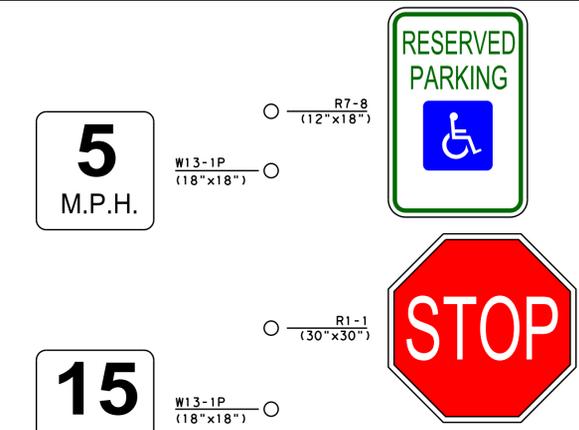
REINFORCEMENT SHALL ACCURATELY BE PLACED AT SLAB MID-DEPTH AND HELD FIRMLY IN PLACE BY MEANS OF BAR SUPPORTS OF ADEQUATE STRENGTH AND NUMBER THAT WILL PREVENT DISPLACEMENT AND KEEP THE STEEL AT ITS PROPER POSITION DURING THE PLACEMENT OF THE P.C. CONCRETE. IN NO INSTANCE SHALL THE STEEL BE PLACED DIRECTLY ON THE SUBGRADE OR SAND CUSHION LAYER.

2" SAND CUSHION
CLASS A CONCRETE (3000 PSI)
POLYPROPYLENE FIBRILLATED FIBERS, OR
6" X 6" X W1.4 X W1.4 WELDED WIRE FABRIC
OR ONE LAYER #3 BARS PLACED NOT
MORE THAN 18" C.C. BOTH
DIRECTIONS.

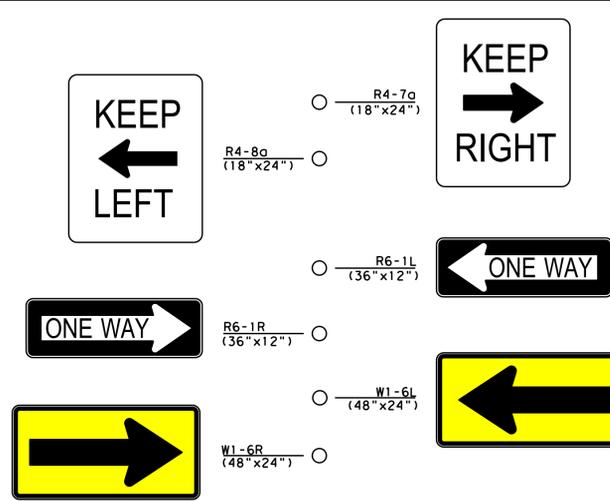
SECTION
SIDEWALK DETAIL



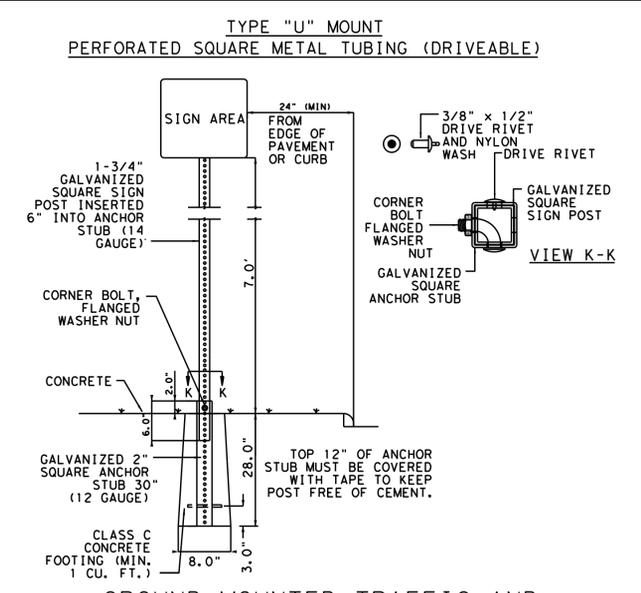
SIGN DETAILS



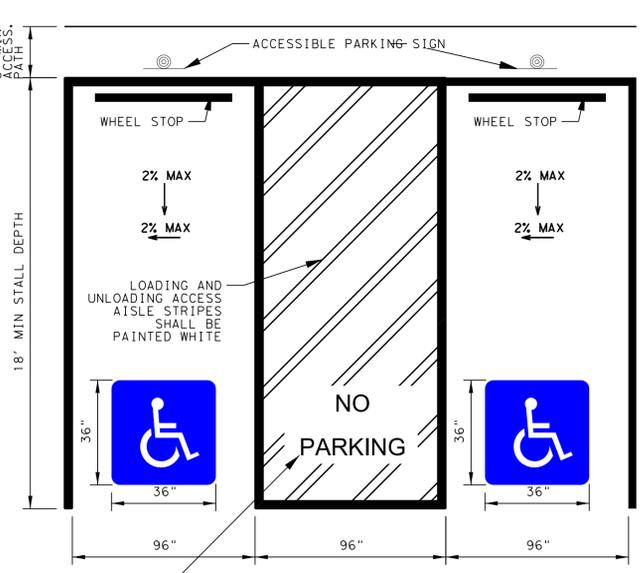
SIGN DETAILS



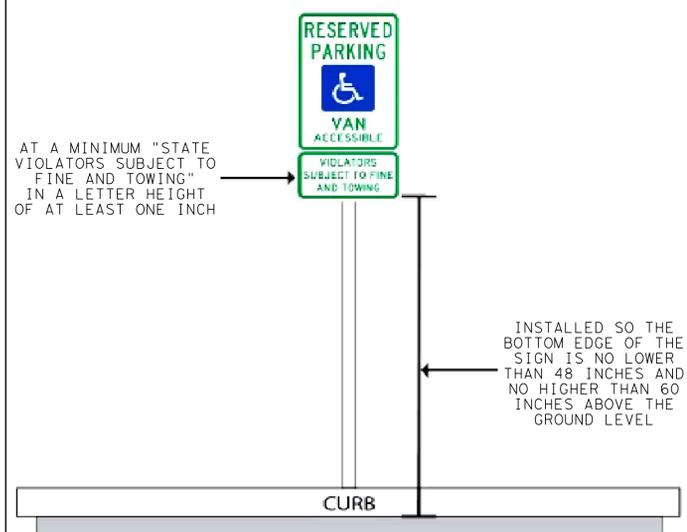
SIGN DETAILS



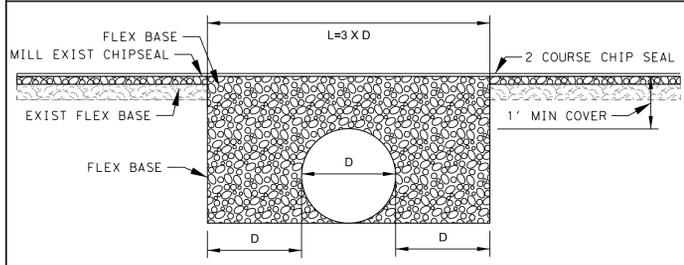
GROUND MOUNTED TRAFFIC AND
STREET NAME SIGNS - CONCRETE



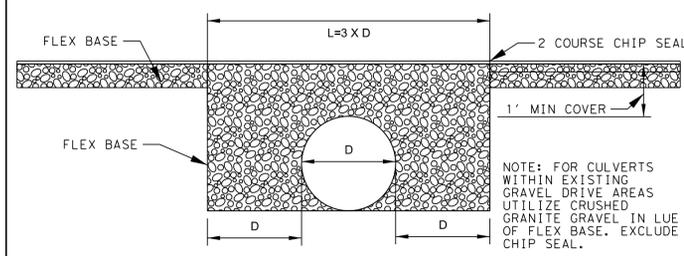
ACCESSIBLE ROUTE



ACCESSIBLE PARKING SPACE SIGNAGE



CULVERT BEDDING DETAIL



CULVERT BEDDING DETAIL

STORMWATER POLLUTION PREVENTION PLAN (SWP3):

This SWP3 has been developed in accordance with the TPDES Construction General Permit TXR150000 (CGP). The Texas Department of Transportation (TxDOT) ensures that project specifications include adequate best management practices (BMPs) for this project.

For all projects with soil disturbing activity and for projects that have Environmental, Permits, Issues, and Commitments (EPICs) dependent on stormwater controls and water quality measures TxDOT will maintain a SWP3 with all pertinent records, correspondence, environmental documents, etc. at the project field office, Area Office, or electronically.

This SWP3 is consistent with requirements specified in applicable stormwater plans and the projects environmental permits, issues, and commitments (EPICs). A copy of the CGP is included in Attachment 2.12 of the SWP3 binder.

1.0 SITE/PROJECT DESCRIPTION

1.1 PROJECT CONTROL SECTION JOB (CSJ):
N/A

1.2 PROJECT LIMITS:
From: 2.70 MILES NORTH OF LLANO AND GILLESPIE COUNTY LINE ON RM 965
To: END OF PRIVATE ROAD

1.3 PROJECT COORDINATES:
BEGIN: (Lat) 30°30'31.80"N, (Long) 98°46'28.83"W
END: (Lat) 30°31'24.10"N, (Long) 98°46'27.55"W

1.4 TOTAL PROJECT AREA (Acres): 13.4

1.5 TOTAL AREA TO BE DISTURBED (Acres): 9.8

1.6 NATURE OF CONSTRUCTION ACTIVITY:
PROPERTY IMPROVEMENTS TO CREATE FUNCTIONAL ACCESS FOR PUBLIC DAY USE VISITORS INCLUDING: NEW GATED ACCESS POINT, RANCH ROAD REPAIRS, NEW PARKING LOOP, AND TRAILHEAD WITH VARIOUS AMENITIES.

1.7 MAJOR SOIL TYPES:

Soil Type	Description
Cec	CASTELL SANDY LOAM, 1 TO 5 PERCENT SLOPES
Fe	FIELD CREEK FINE SANDY LOAM, OCCASIONALLY FLOODED
KoC	KEESE-ROCK OUTCROP COMPLEX, 1 TO 12 PERCENT SLOPES
KoF	KEESE-ROCK OUTCROP COMPLEX, 8 TO 35 % SLOPES, STONEY
LgC	LIGON FINE SANDY LOAM, 1 TO 5 PERCENT SLOPES
LgD	LIGON COBBLY FINE SANDY LOAM, 5 TO 12 PERCENT SLOPES

1.8 PROJECT SPECIFIC LOCATIONS (PSLs):

PSLs must be depicted on the Environmental Layout Sheets in Attachment 1.2 of this SWP3. PSLs may be identified during preconstruction meetings or during the construction process. Please choose from the options below:

- PSLs determined during preconstruction meeting
- PSLs determined during construction
- No PSLs planned for construction

Type	Sheet #s

All off-ROW PSLs required by the Contractor are the Contractor's responsibility. The Contractor shall secure all permits required by local, state, federal laws for off-ROW PSLs. The contractor shall provide diagrams, areas of disturbance, acreage, and BMPs for all off-ROW PSLs within one mile of the project.

1.9 CONSTRUCTION ACTIVITIES:
(Use the following list as a starting point when developing the Construction Activity Schedule and Ceasing Record in Attachment 2.5.)

- X Mobilization
- X Install sediment and erosion controls
- X Blade existing topsoil into windrows, prep ROW, clear and grub
- X Remove existing pavement
- X Grading operations, excavation, and embankment
- X Excavate and prepare subgrade for proposed pavement widening
- X Remove existing culverts, safety end treatments (SETs)
- X Remove existing metal beam guard fence (MBGF), bridge rail
- X Install proposed pavement per plans
- X Install culverts, culvert extensions, SETs
- X Install mow strip, MBGF, bridge rail
- X Place flex base
- X Rework slopes, grade ditches
- X Blade windrowed material back across slopes
- X Revegetation of unpaved areas
- X Achieve site stabilization and remove sediment and erosion control measures

Other: _____

1.10 POTENTIAL POLLUTANTS AND SOURCES:

- X Sediment laden stormwater from stormwater conveyance over disturbed area
- X Fuels, oils, and lubricants from construction vehicles, equipment, and storage
- X Solvents, paints, adhesives, etc. from various construction activities
- X Transported soils from offsite vehicle tracking
- X Construction debris and waste from various construction activities
- X Contaminated water from excavation or dewatering pump-out water
- X Sanitary waste from onsite restroom facilities
- X Trash from various construction activities/receptacles
- X Long-term stockpiles of material and waste

Other: _____

1.11 RECEIVING WATERS:

Receiving waters must be depicted on the Environmental Layout Sheets in Attachment 1.2 of this SWP3. Include Segment # for receiving waters.

Tributaries	Classified Waterbody
KEENER BRANCH	RUAL STREAM

* Add (*) for impaired waterbodies with pollutant in ().

1.12 ROLES AND RESPONSIBILITIES: TxDOT

- Development of plans and specifications
- Submit Notice of Intent (NOI) to TCEQ (25 acres)
- Post Construction Site Notice
- Submit NOI/CSN to local MS4
- Perform SWP3 inspections
- Maintain SWP3 records and update to reflect daily operations
- Complete and submit Notice of Termination to TCEQ
- Maintain SWP3 records for 3 years

Other: _____

1.13 ROLES AND RESPONSIBILITIES: CONTRACTOR

- X Day To Day Operational Control
- X Submit Notice of Intent (NOI) to TCEQ (25 acres)
- X Post Construction Site Notice
- X Submit NOI/CSN to local MS4
- X Install, maintain and modify BMPs
- X Complete and submit Notice of Termination to TCEQ
- X Maintain SWP3 records for 3 years

Other: _____

1.14 LOCAL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) OPERATOR COORDINATION:

MS4 Entity: _____

STORMWATER POLLUTION PREVENTION PLAN (SWP3)

July 2023 Sheet 1 of 2

Texas Department of Transportation

STATE	SHEET	COUNTY
TEXAS		

STORMWATER POLLUTION PREVENTION PLAN (SWP3):

2.0 BEST MANAGEMENT PRACTICES (BMPs) AND CONTROLS, INSPECTION, AND MAINTENANCE

The Contractor shall be the responsible party for implementing the BMPs described herein and for complying with the SWP3 for control of erosion and sedimentation during day-to-day operations. The Contractor shall implement changes to this SWP3 approved by TxDOT within the times specified in this SWP3 or the CGP.

2.1 EROSION CONTROL AND SOIL STABILIZATION BMPs:

T / P

- X X Protection of Existing Vegetation
- X Vegetated Buffer Zones
- X Soil Retention Blankets
- X Geotextiles
- X Mulching/ Hydromulching
- X Soil Surface Treatments
- X Temporary Seeding
- X Permanent Planting, Sodding or Seeding
- X Biodegradable Erosion Control Logs
- X Rock Filter Dams/ Rock Check Dams
- X Vertical Tracking
- X Interceptor Swale
- X Riprap
- X Diversion Dike
- X Temporary Pipe Slope Drain
- X Embankment for Erosion Control
- X Paved Flumes
- X Other: _____

2.2 SEDIMENT CONTROL BMPs:

T / P

- X Biodegradable Erosion Control Logs
- X Dewatering Controls
- X Inlet Protection
- X Rock Filter Dams/ Rock Check Dams
- X Sandbag Berms
- X Sediment Control Fence
- X Stabilizing Construction Erosion
- X Floating Turbidity Barrier
- X Vegetated Buffer Zones
- X Vegetated Filter Strips
- X Other: _____

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets

Sediment control BMPs requiring design capacity calculations (See SWP3 Attachment 1.3.):

T / P

- X Sediment Trap
- Calculated volume runoff from 2-year, 24-hour storm for each acre of disturbed area
- 3,600 cubic feet of storage per acre drained

2.3 PERMANENT CONTROLS:
(Coordinate post-construction BMPs with appropriate TxDOT maintenance sections.)
BMPs To Be Left In Place Post Construction:

Type	Stationing
	From To

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets

2.4 OFFSITE VEHICLE TRACKING CONTROLS:

- X Excess dirt/mud on road removed daily
- X Haul roads dampened for dust control
- X Loaded haul trucks to be covered with tarpaulin
- X Stabilized construction exit
- X Daily street sweeping

Other: _____

2.5 POLLUTION PREVENTION MEASURES:

- X Chemical Management
- X Concrete and Materials Waste Management
- X Debris and Trash Management
- X Dust Control
- X Sanitary Facilities

Other: _____

2.6 VEGETATED BUFFER ZONES:

Natural vegetated buffers shall be maintained as feasible to protect adjacent surface waters. If vegetated natural buffer zones are not feasible due to site geometry, the appropriate additional sediment control measures have been incorporated into this SWP3.

Type	Stationing
	From To

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets

2.7 ALLOWABLE NON-STORMWATER DISCHARGES:

- X Fire hydrant flushings
- X Irrigation drainage
- X Pavement washwater (where spills or leaks have not occurred, and detergents are not used)
- X Potable water sources
- X Springs
- X Uncontaminated groundwater
- X Water used to wash vehicles or control dust
- X Other allowable non-stormwater discharges as allowed by TPDES GP TXR150000.

2.8 DEWATERING:
Dewatering discharges of accumulated stormwater, groundwater, and surface water including discharges from dewatering of trenches, excavations, foundations, vaults, and other points of accumulation are prohibited unless managed by appropriate controls to prevent and minimize the offsite discharge of sediment and other pollutants.

2.9 INSPECTIONS:
All disturbed areas and erosion and sediment control devices shall be inspected at least once every seven (7) days. Inspections shall be performed by TxDOT as indicated on the Field Inspection and Maintenance Report Form 2118 and retained in Attachment 2.5 of this SWP3.

When dewatering activities are present, a daily inspection will be conducted once per day during those activities and documented in accordance with CGP and TxDOT requirements.

2.10 MAINTENANCE:
Control measures shall be properly installed according to specifications. If it is determined that a BMP or control measure is not operating effectively, maintenance must be accomplished as soon as possible and before the next anticipated rain event, but in no case later than 7 calendar days after being able to access the site. Maintenance shall be performed by the Contractor as indicated on the Field Inspection and Maintenance Report Form 2118 and retained in Attachment 2.5 of this SWP3.

STORMWATER POLLUTION PREVENTION PLAN (SWP3)

July 2023 Sheet 2 of 2

Texas Department of Transportation

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SUMMARY OF SMALL SIGNS

PLAN SHEET NO.	SIGN NO.	SIGN NOMENCLATURE	SIGN	DIMENSIONS	FEAT. ALUMINUM TYPE (A)	EXAL. ALUMINUM TYPE (G)	SM RD SGN ASSM TY XXXXX (X) XX (X-XXXX)				BRIDGE MOUNT CLEARANCE SIGNS (See Note 2)	
							POST TYPE	POSTS	ANCHOR TYPE	PREFABRICATED		TEXT OR 2EXT
COS	01	R1-1	STOP (STA 104+00.00)	30"x30"	X		FRP - Fiberglass	1 or 2	UB-Universal Conc Bolt	WC - Extruded Wing Beam		
	02	R1-1	STOP (STA 104+25.00)	30"x30"	X		TWT - Thin-Wall	1	SA-Silabose-Conc	WC - Extruded Wing Beam		
	03	W13-1	ADVISORY SPEED (PLAQUE) (115 MPH) (STA 105+00.00)	18"x18"	X		10BWG + 10 BWG	1	SB-Silabose-Bolt	U = "U"		
	04	W1-1L	HORIZONTAL ALIGNMENT (STA 111+00.00)	30"x30"	X		S50 - 50 lb	1	WP-Wedge Plastic	EXAL - Extruded Alum Sign Panels		
	05	W13-1	ADVISORY SPEED (PLAQUE) (5 MPH) (STA 111+00.00)	18"x18"	X							
	06	W1-1R	HORIZONTAL ALIGNMENT (STA 113+25.00)	30"x30"	X							
	07	W13-1	ADVISORY SPEED (PLAQUE) (5 MPH) (STA 113+25.00)	18"x18"	X							
	08	W1-1R	HORIZONTAL ALIGNMENT (STA 200+00.00)	30"x30"	X							
	09	W13-1	ADVISORY SPEED (PLAQUE) (5 MPH) (STA 200+00.00)	18"x18"	X							
	10	W1-1L	HORIZONTAL ALIGNMENT (STA 201+25.00)	30"x30"	X							
	11	W13-1	ADVISORY SPEED (PLAQUE) (5 MPH) (STA 201+25.00)	18"x18"	X							
	12	W13-1	ADVISORY SPEED (PLAQUE) (115 MPH) (STA 246+50.00)	18"x18"	X							
	13	R4-70	KEEP RIGHT (STA 246+50.00)	18"x24"	X							
	14	W13-1	ADVISORY SPEED (PLAQUE) (115 MPH) (STA 300+75.00)	18"x18"	X							
	15	R4-80	KEEP LEFT (STA 300+75.00)	18"x24"	X							
	16	R6-1L	ONE WAY (STA 306+00.00)	36"x12"	X							
	17	R6-1R	ONE WAY (STA 312+30.00)	36"x12"	X							
	18	R6-1L	ONE WAY (STA 313+75.00)	36"x12"	X							
	19	R7-8	PARKING RESTRICTIONS (STA 314+05.00)	12"x18"	X							
	20	R7-8	PARKING RESTRICTIONS (STA 314+24.00)	12"x18"	X							
	21	R6-1R	ONE WAY (STA 314+90.00)	36"x12"	X							
	22	RS-1	DO NOT ENTER (STA 318+12.00)	30"x30"	X							
	23	RS-1	DO NOT ENTER (STA 318+47.00)	30"x30"	X							

ALUMINUM SIGN BLANKS THICKNESS

Area	Minimum Thickness
Square Feet	0.080"
Less than 7.5	0.100"
7.5 to 15	0.125"
Greater than 15	

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website:
<http://www.txdot.gov/>

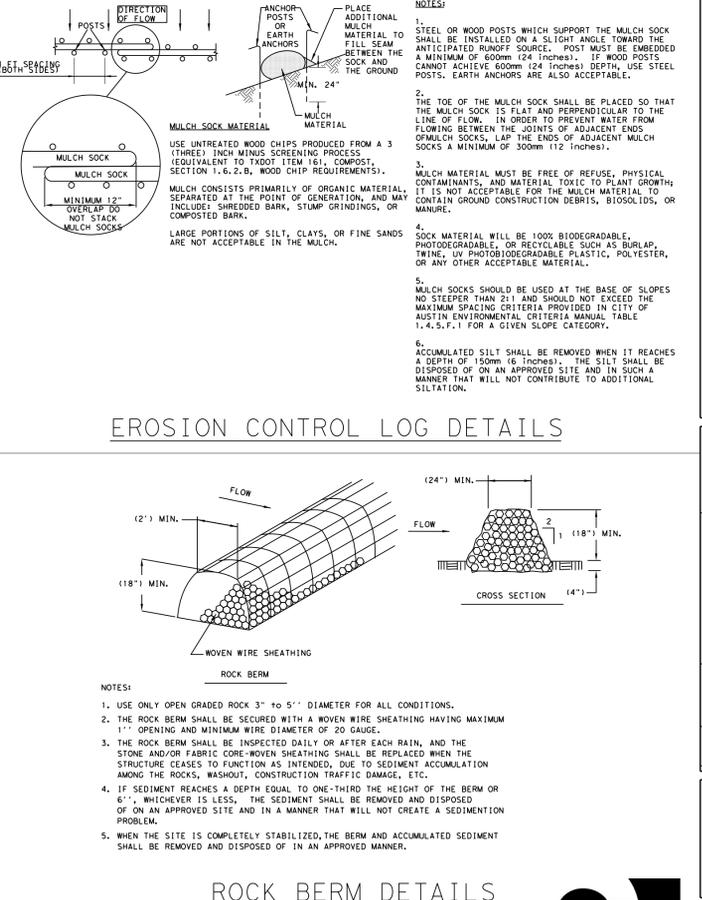
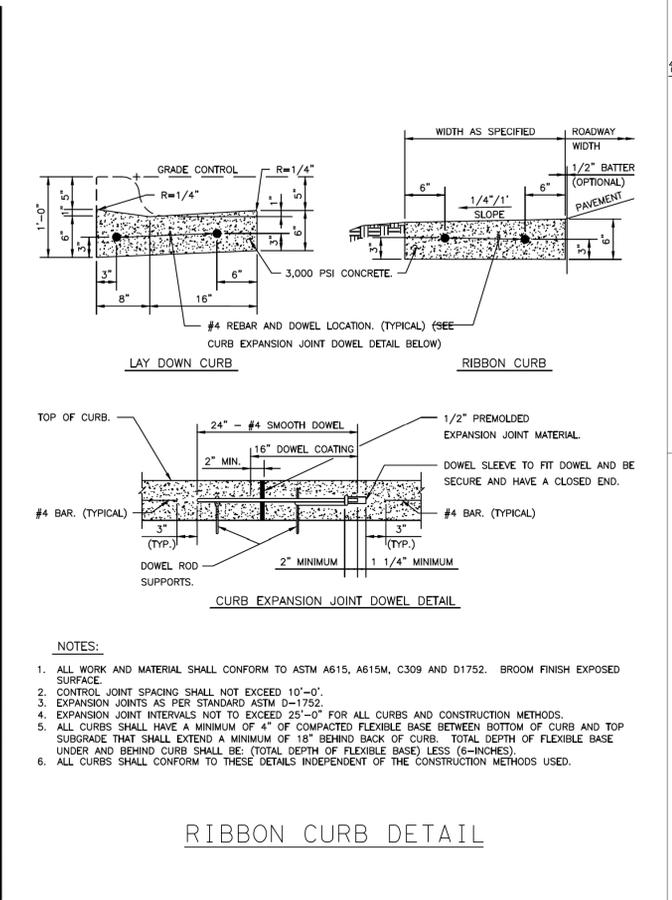
NOTE:

- Sign supports shall be located as shown on the plans, except that the Engineer may shift the sign supports, within design guidelines, where necessary to secure a more desirable location or to avoid conflict with utilities. Unless otherwise shown on the plans, the Contractor shall stake and the Engineer will verify all sign support locations.
- For installation of bridge mount clearance signs, see Bridge Mounted Clearance Sign Assembly (BMC) Standard Sheet.
- For Sign Support Descriptive Codes, see Sign Mounting Details Small Roadway Signs General Notes & Details SMD(GEN).

SUMMARY OF SMALL SIGNS

SOSS

FILE	DATE	BY	CHKD	DATE	BY	CHKD
LLANO						



TEXAS PARKS & WILDLIFE

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J. WADE BENTON
90083
LICENSED PROFESSIONAL ENGINEER
12/19/2025

ENCHANTED ROCK STATE NATURAL AREA EXPANSION ROADWAY IMPROVEMENTS
TPWD PROJECT NO. 1211483

DATE: 12/19/2025
DESIGNED BY: GARVER
DRAWN BY: GARVER
REVIEWED BY: JWB

SHEET TITLE
DETAILS

SHEET NUMBER
C10

REGISTRATION NO. F-5713

BID READY CONSTRUCTION DOCUMENTS



DATE: 12/19/2025
 DESIGNED BY:
 DRAWN BY:
 REVIEWED BY:
 REVISED:
 REVISED:
 REVISED:

SHEET TITLE
 GENERAL NOTES

SHEET NUMBER

S01

CODES

- IBC 2021 International Building Code.
- Wind and Earthquake Loads: Minimum Design Loads and Associated Criteria for Buildings and Other Structures, American Society of Civil Engineers, ASCE 7-16.
- Structural Concrete: Building Code Requirements for Structural Concrete, American Concrete Institute, ACI 318-19.
- Structural Steel: Steel Construction Manual, American Institute of Steel Construction, Fifteenth Edition, Specification for Structural Steel Buildings, AISC 360-16.
- Wood Framing: National Design Specification (NDS) For Wood Construction with 2018 Supplement, American Wood Council, ANSI/AWC NDS-2018, and Special Design Provisions for Wind and Seismic, ANSI/AWC SDPWS-21.

SUBMITTALS

- Shop drawings shall be prepared for all structural items and submitted for review by the Engineer. Contract drawings shall not be reproduced and used as shop drawings. All items deviating from the contract drawings or from previously submitted shop drawings shall be clouded.
- The Contractor shall review shop drawings for compliance with the contract documents and shall certify that they have done so by a stamp noting that the drawings have been "Approved" and bears the signature (or initials) of an authorized representative of the Contractor and the date. Submittals which do not reflect the Contractor's approval, signature, and date will be returned without review. The stamp shall be shown on a submittal cover page provided by the Contractor.
- The Contractor shall be responsible for delays caused by rejection of inadequate shop drawings.
- Where review and return of shop drawings is required or requested, the Engineer will review each submittal and, where possible, return within 2 weeks of receipt.
- Corrections or comments on shop drawings or manufacturer's data sheets do not relieve the Contractor from compliance with requirements of the plans and specifications. The Engineer's review is for general conformance with the requirements of the contract documents. The Contractor is responsible for confirming and correcting all quantities and dimensions, selecting fabrication processes and techniques of construction, and coordinating the work with that of all other contractors.
- Refer to individual sections for specific submittal requirements.

TESTING LABORATORY SERVICES

- Work specified herein shall be performed by a qualified independent Testing Laboratory meeting the requirements of the IBC, selected and paid for by the Owner.
- Concrete inspection and testing:
 - Secure composite samples of concrete at the jobsite in accordance with ASTM C172.
 - Mold and cure three specimens from each sample in accordance with ASTM C31. Test specimens in accordance with ASTM C39. Two specimens shall be tested at 28 days for acceptance and one shall be tested at seven days for information.
 - Perform one strength test (three cylinders) for each pour.
 - Make one slump test for each set of cylinders following the procedural requirements of ASTM C143 and C172.
- Concrete Reinforcement: Inspect all concrete reinforcing steel and embedded metal assemblies prior to placement of concrete for compliance with Contract Documents and shop drawings. All instances of non-compliance shall be immediately brought to the attention of the contractor for correction, and if uncorrected, reported to the engineer.

CAST IN PLACE CONCRETE

- Cast in place concrete shall meet the following requirements:

Class	28 Day Strength	Aggregate		Slump (at point of placement)	Use
		Type	Max. Size		
A	3,500 psi	NW C33	3/4"	5"-7"	All, u.o.n.

- Submittal: Submit proposed mix designs in accordance with ACI 301, Article 4.2.3. Each proposed mix design shall be accompanied by a record of past performance based on at least 30 consecutive strength tests, or by three laboratory trial mixtures with confirmation tests. Submit type, size, details, and locations of embedded conduits, pipes, and sleeves for review by Engineer of Record.

CONCRETE REINFORCING

- Reinforcing steel shall be deformed new billet steel bars in accordance with ASTM A615 grade 60.
- Detailing of reinforcing steel shall conform to the American Concrete Institute Detailing Manual.
- Welding of reinforcing steel will not be permitted. Heat shall not be used in the fabrication or installation of reinforcement.
- Wet setting reinforcing dowels into wet concrete is not permitted, unless written permission from the engineer is provided.
- Reinforcing steel clear cover shall be as follows:
 - Walls: 1 1/2" top; 3" bottom (placed against earth), 2" bottom (above void form); 3" side (placed against earth), 2" side (formed)
 - Piers: 3" bottom, 3" sides
- Submittal: Submit shop drawings for fabrication, bending, and placement of concrete reinforcement. Comply with ACI 315 "Details and Detailing of Concrete Reinforcement". Do not reproduce the contract drawings for use as shop drawings.

TIMBER FRAMING

- All sawn lumber shall be identified by the grade mark or certificate of inspection issued by the certifying agency. Unless otherwise noted in the drawings, structural sawn lumber shall conform to the grading rules of Western Wood Products Association (WWPA), West Coast Lumber Inspection Bureau (WCLIB), or National Lumber Grades Authority (NLGA) and the table below.

Member Use	Size	Species	Grade
Post	6X6	Doug. Fir Larch	No. 2
Beam	2X4 thru 2X12	Doug. Fir Larch	No. 1
- All bolts and lag screws shall have standard washers. All anchor and expansion bolts used in wood to concrete connections in crawspace areas shall be hot-dip galvanized or stainless steel. Use hot-dip galvanized (HDG) or stainless steel nails and fasteners for all wood construction. Fasteners used for Simpson Strong-Tie manufactured connectors shall match the finish material of the product.
- Unless otherwise noted, 8d, 10d, 12d, 16d, and 20d specify common nails and may not be replaced with box or sinker nails.
- Bolts shall be ASTM A307, grade A or better.
- Where Simpson Strong-Tie products are specified, Simpson Strong-Tie connectors are specifically required to meet the structural calculations on plan are assumed to be connected per the manufacturer. Before substituting another brand, confirm load capacity based on reliable published testing data or calculations. The Engineer of Record shall evaluate and give written approval for substitution prior to installation.
- Sawn lumber material shall have a maximum moisture content of 19%.
- Wood materials shall be preservative treated, conforming to the requirements of the applicable AWPA Standard U1 and M4 for the species, product, preservative, and end use. Follow American Lumber Standards Committee (ALSC) quality assurance procedures. Fasteners and anchors (including nuts and washers) in treated wood shall be of stainless steel, hot-dipped zinc-coated galvanized steel, or as per IBC 2015 Section 2304.10.5.

PIERS

- Pier design is based on an allowable loading of 2500 psf in end bearing in accordance with the geotechnical report prepared by Terracon, dated October 31, 2025.
- Piers not specifically located on the plan shall be located on centerline of column above. Where no column occurs, locate on centerline of wall or beam.
- Elevation of top of piers, unless otherwise noted on the drawings, is at the bottom of the deepest intersecting beam or wall supported by the pier.
- Reinforcing cage shall be held securely away from earth at sides and bottom by sets of 3 spacers at a maximum spacing of 8 ft. along the length of the cage and 1'-0" from the bottom.
- Pier reinforcing and concrete shall be placed immediately after drilling operations are complete; in no case shall a pier be drilled that cannot be poured by the end of the workday.
- Reinforcing steel shop drawings shall include placing drawings for templates to set dowels in piers.
- Top of pier shall be of the specified diameter. Form top of pier if required to maintain the specified diameter. Any concrete extending beyond the specified diameter shall be removed.
- The Contractor shall make and maintain accurate records of the drilled pier depths, bearing stratum, depth of penetration into bearing stratum, diameter and location (including off center eccentricities), and shall submit this information to the Engineer.