Planning Commission
Work Session Agenda

Date: Thursday, May 29, 2025
Time: 4:30 PM

Location: Bella Vista District Court
2483 Forest Hills Blvd

Planning Commission regular meetings are live streamed and archived for your convenience. View the meeting at its scheduled time or after at: https://bit.ly/bvmeetingslive.

I. Call to Order

II. Roll Call

Members: Daniel Ellis, PE, Chairman; Doug Farner, Vice-Chairman; Gail Klesen, Secretary; Clayton Sedberry, JB Portillo; Jack Wagnon, and Linda Lloyd.

III. Consideration of Minutes

A. Regular Meeting Minutes: May 12, 2025

IV. Unfinished Business

A. **WVR-2025-58625**: A waiver request of retaining wall setbacks for an existing unpermitted retaining wall at 6 Cardiff Circle; Parcel 16-05159-000; Applicant Zach Estep; Presented by Planner Hyatt

V. New Business

A. **PZD-2025-58573:** A proposed planned zoning district to provide a modernized 55+ residential community in Bella Vista at 102 Fairway Drive; Parcel 16-11099-000; Applicant Linda Lloyd (Owl Commons); Presented by Director Robertson

B. **LSD-2025-58918**: a large-scale development proposal within the city limits for the third extension of the Razorback Greenway from Mercy Way to Riordan Road; Parcels 16-40644-001; 16-40644-000; 16-40645-001; 16-40236-000; 16-79389-000; 16-70324-000; 16-40221-801 and 16-31932-000; Applicant Luke Jost, P.E., Crafton Tull; Presented by Trails Manager Workman

C. **WVR-2025-59112**: A waiver request of pedestrian accommodation requirements, surfacing requirements, and access drive width requirements associated with LSD 58554 in the planning area along Punkin Hollow Road; Parcel 15-18996-003; Applicant David McGehee; Presented by Planner Hyatt

D. **LSD-2025-58554**: A large-scale development proposal in the planning area for a proposed cell tower development along Punkin Hollow Road; Parcel 15-18996-003; Applicant David McGehee; Presented by Planner Hyatt

E. **LSD-2025-58745**: A large-scale redevelopment proposal of the existing Towncenter Shopping Center site located at 404 Towncenter; Parcel 16-40168-000; Applicant Crafton Tull; Presented by Planner Hyatt

VI. Open Discussion

VII. Announcements

VIII. Adjournment

Planning Commission
Regular Meeting Minutes
May 12, 2025
2483 Forest Hills Blvd

I. CALL TO ORDER

Chairman Ellis called the meeting to order at 4:57 PM

II. ROLL CALL

Members: Daniel Ellis, PE, Chairman; Doug Farner, Vice-Chairman; Gail Klesen, Secretary; Clayton Sedberry; JB Portillo; Jack Wagnon, and Linda Lloyd.

Member Absent: None.

III. CONSIDERATION OF MINUTES

A. *Regular Meeting Minutes – April 14, 2025*

On a motion by Mr. Farner and a second by Ms. Portillo, the April 14, 2025 minutes were approved by a voice vote.

IV. PUBLIC INPUT

A. Chairman Ellis opened the public input session.
B. Chairman Ellis closed the public input session.

V. UNFINISHED BUSINESS

A. WVR-2025-58092: A Waiver request on several retaining wall requirements for an existing unpermitted terraced wall at 39 Bradford Drive; Parcel 16-25435-000; Applicant JSC Custom Homes, LLC; Presented by Planner LaRue.

1. Planner LaRue presented the staff report in the packet.
2. A discussion was held regarding the request.
3. Applicant, Susan Yoes was present to answer questions.
4. A motion to approve the waiver with all staff conditions was made by Mr. Sedberry and second was made by Ms. Portillo.

JB Portillo – Y
Jack Wagnon - Y
Linda Lloyd - Y
Gail Klesen - Y
Clayton Sedberry - Y
Doug Farner - Y
Daniel Ellis – Y
Motion approved with seven yes votes. (7-0)

VI. NEW BUSINESS

A. CUP-2025-58265: A conditional use permit request for a temporary firework stand at 8862 W. McNelly Rd; Parcel 16-40780-001; Applicant Meramec Specialty Group; Presented by Planner Grady.

1. Planner Grady presented the staff report in the packet.
2. A discussion was held regarding the request.
3. Applicant Ryan Blue was present to answer questions.
4. Chairman Ellis opened the public hearing.
5. Chairman Ellis closed the public hearing.
6. A motion to approve the conditional use permit was made by Mr. Farner and a second was made by Ms. Lloyd.

   Jack Wagnon – Y
   Linda Lloyd – Y
   Gail Klesen – Y
   Clayton Sedberry – Y
   Doug Farner – Y
   JB Portillo – Y
   Daniel Ellis – Y
   Motion approved with seven yes votes. (7-0)

B. WVR-2025-58581: A waiver request of pedestrian accommodations, general standards, and access management and parking facility design standards for an unpermitted parking lot in the planning area associated with LSD 58580; Parcel 18-07976-000; Applicant Garrett Greer and Don Callaway; Presented by Senior Planner Hyatt.

1. Senior Planner Hyatt presented the staff report in the packet.
2. Applicant Don Callaway was present to answer questions.
3. A discussion was held regarding the request and the Large-Scale Development.
4. A motion to approve the waiver with the conditions; any gravel within the right-of-way will be paved, the site will be returned to grass or redeveloped and the erosion control measures will be developed to city engineer requirements was made by Mr. Wagnon and a second was made by Ms. Portillo.

   Linda Lloyd – Y
   Gail Klesen – Y
   Clayton Sedberry – Y
   Doug Farner – Y
   JB Portillo - Y
   Jack Wagnon - Y
   Daniel Ellis - Y
   Motion approved with seven yes votes. (7-0)

C. LSD-2025-58580: A large-scale development proposal in the planning area for an unpermitted parking lot near 9304 Commonwealth Road; Parcel 18-07976-000; Applicant Garrett Greer and Don Callaway; Presented by Senior Planner Hyatt.

1. Senior Planner Hyatt presented the staff report in the packet in conjunction with Item B. WVR-2025-58581.
2. The applicant Don Callaway was present to answer questions.
3. A discussion was held regarding the request.
4. A motion to approve the large-scale development was made by Mr. Farner and a second was made by Mr. Sedberry.

Gail Klesen – Y
Clayton Sedberry – Y
Doug Farner – Y
JB Portillo – Y
Jack Wagnon - Y
Linda Lloyd – Y
Daniel Ellis - Y

Motion approved with seven yes votes. (7-0)

D. WVR-2025-58625: A waiver request of retaining wall setbacks for an existing unpermitted retaining wall at 6 Cardiff Circle; Parcel 16-05159-000; Applicant Zach Estep; Presented by Senior Planner Hyatt.

1. Senior Planner Hyatt presented the staff report in the packet.
2. A discussion was held regarding the request.
3. The applicant was not present.
4. A motion to table the waiver to the June meeting was made by Ms. Klesen and a second was made by Mr. Sedberry.

Motion approved by voice vote; seven yes votes (7-0)

E. WVR: 2025-58806: A waiver request of easement dedication requirements for PLA 58045 in the planning area near 8827 E McNelly Road; Parcel 18-08032-001; Applicant Sand Creek Engineering; Presented by Senior Planner Hyatt.

1. Senior Planner Hyatt presented the staff report in the packet.
2. The applicant Tim Sorey was present to answer questions.
3. A discussion was held regarding the request.
4. A motion to approve the waiver was made by Mr. Farner and a second was made by Mr. Wagnon.

Doug Farner – Y
JB Portillo – Y
Jack Wagnon - Y
Linda Lloyd – Y
Gail Klesen – Y
Clayton Sedberry - Y
Daniel Ellis - Y

Motion approved with seven yes votes. (7-0)

F. PLA-2025-58045: A proposed lot combination in the planning area near 8827 E McNelly Road; Parcel 18-08032-001; Applicant Sand Creek Engineering; Presented by Senior Planner Hyatt.

1. Senior Planner Hyatt presented the staff report in the packet in conjunction with item E. WVR 2025-58806.
2. A discussion was held regarding the request.
3. A motion to approve the lot combination was made by Ms. Lloyd and a second was made by Ms. Portillo.

JB Portillo – Y
Jack Wagnon - Y
Linda Lloyd – Y
Gail Klesen – Y
Clayton Sedberry – Y
Doug Farner - Y
Daniel Ellis - Y

Motion approved with seven yes votes. (7-0)

G. WVR-2025-58560: A waiver request of subdivision design standards for LSP 58184 near 12670 Miller Church Road; Parcel 18-09646-006; Applicant Alan Reid & Associates; Presented by Planner LaRue.

1. Planner LaRue presented the staff report in the packet.
2. Applicant Brian Shewmaker was present for questions.
3. A discussion was held regarding the request.
4. A motion to approve the waiver was made by Mr. Farner and a second was made by Ms. Klesen.

Jack Wagnon - Y
Linda Lloyd – Y
Gail Klesen – Y
Clayton Sedberry – Y
Doug Farner – Y
JB Portillo - Y
Daniel Ellis - Y

Motion approved with seven yes votes. (7-0)

H. LSP-2025-58184: A proposed lot split in the planning area near 12670 Miller Road; Parcel 18-09646-006; Applicant Alan Reid & Associates; Presented by Planner LaRue.

1. Planner LaRue presented the staff report in the packet in conjunction with Item G. WVR-2025-58560.
2. A discussion was held regarding the request.
3. A motion to approve the lot split was made by Ms. Klesen and a second was made by Mr. Farner.

Linda Lloyd – Y
Gail Klesen – Y
Clayton Sedberry – Y
Doug Farner – Y
JB Portillo – Y
Jack Wagnon - Y
Daniel Ellis - Y

Motion approved with seven yes votes. (7-0)

I. Meeting Approval: Approving a special work session meeting for the Zoning and Development Code Reform on June 30, 2025 at 4:30 PM at District Court; Presented by Director Robertson.

1. A motion to approve the special meeting was made by Ms. Klesen and a second was made by Mr. Sedberry.

Motion approved by voice vote; seven yes votes (7-0)

VII. COMMITTEE REPORTS

None.

VIII. OPEN DISCUSSION

A. Commissioner Lloyd suggested to be more timeframe specific when tabling items.
B. Commissioner Lloyd asked how to better regulate contractors' bad practices in regards to retaining walls.
C. Commissioner Portillo asked about backlog work load once the new code comes into effect.

IX. ANNOUNCEMENTS

A summary of upcoming meetings was announced.

IIX. ADJOURNMENT

Chairman Ellis adjourned the meeting at 5:49 pm.

SUBMITTED BY:

_____

Sarah Costa, Office Manager
City of Bella Vista

APPROVED AND ACCEPTED THIS 9TH DAY OF JUNE 2025:

_____

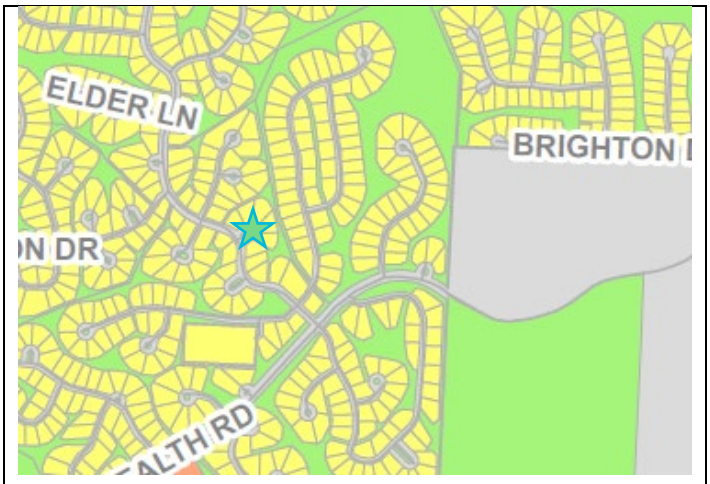
Daniel Ellis, P.E., Chairman
Bella Vista Planning Commission

_____

Gail Klesen, Secretary
Bella Vista Planning Commission

Meeting Information:
2483 Forest Hill Blvd
May 12, 2025
Reviewer:
Christopher Hyatt
Senior Planner

Project Number	WVR-2025-58625
Applicant	Zach Estep
Address/Location	6 Cardiff Circle
Current Zoning	R-1 Single Family Residential
Site Area	.34 acres
Nature of Request	Seeking a waiver of Sec. 107-342(e)(1) and (e)(2).



Zoning Map

Future Land Use Plan

Property Description
This property is located in the eastern area of Bella Vista City Limits and is located on Parcel #16-05159-000. Lot 24, Block 7. Brecknock Subdivision.

Regulation
Development Code Sec. 107-342 (e)(1) states a retaining wall shall be placed a minimum of ten feet or 1.5 times the height of the wall, whichever is greater, away from existing or proposed structures. Sec. 107-342 (e)(2) states that a retaining wall shall be placed a minimum of 7.5 feet or 1.5 times the height of the wall, whichever is greater, away from property lines.

Request
The applicant is requesting to waive the 107-342(e)(1) and (e)(2) setback requirements for an existing retaining wall behind a single-family residential home.

Background
The applicant placed retaining walls behind the single-family home back in August of 2022, prior to obtaining permits. Staff had previously met with the owner and applicant early in 2024, to work on solutions, and discussed the need for the wall, with their circumstances being due to the topography and support for the back deck. The walls sit roughly 6 feet, at the closest point, behind the deck of the home, supporting the foundations for the deck posts, and vary in height from 4.5' to 5.5' with one wall extending to the South property line. Staff has received an engineered analysis and approval of the designs and has included that in your packet. POA Common Property is located behind the subject site, so any failure of the wall would not impact adjacent homes and would not prevent the orderly subdivision of other land in the area. The subject property has single family homes to the North and South of the property. The zoning code shows this parcel is surrounded by single-family residential and common property. The Future Land Use Plan shows this parcel to be located in a Type 1 Neighborhood Center with the Master Street Plan showing Cardiff Circle as a non-classified residential street. It should be noted that this waiver is not considering the private easement encroachment.

Public Comment
None at the time of this report.

Outstanding Technical Comments
None at the time of this report.

Recommendation
If approved by Planning Commission, staff recommends the condition that the property owner of Parcel 16-05160-000 approves of the retaining wall touching the property line prior to wall permit issuance.

Sec. 107-35 Waiver Review Requirements

When, by the strict interpretation of Chapter 107, an applicant incurs undue restrictions on the physical property to be subdivided or developed, a waiver for such requirements may be granted by the planning commission. **Under no circumstance** should a waiver be granted because of a personal hardship or for personal or emotional reasons. Waivers shall not be granted based strictly on financial hardship. A waiver is determined by the strict interpretation and enforcement of the rules and regulations upon a given piece of property to be subdivided or developed. No waiver shall be granted unless the planning commission finds all of the following:

1. That there are special circumstances or conditions affecting the land involved such that the strict application of the provision of these regulations would deprive the applicant of the reasonable use of this land.
2. That the waiver is necessary for the preservation and enjoyment of a substantial property right of the applicant.
3. That the granting of the waiver will not be detrimental to the public health, safety and welfare or injurious to other property in the area.
4. That the granting of the waiver will not have the effect of preventing the orderly subdivision of other land in the area in accord with the provision of these regulations.

Four affirmative votes of the planning commission's authorized membership shall be necessary for the passage of any waiver.

Sec. 107-35 Waiver Review Procedures

- Under exceptional circumstances, the planning commission may grant waivers at the time of final plat approval.
- In granting the waiver, the planning commission shall prescribe any conditions that it deems necessary to or desirable in the public interest.
- In considering the petition for a waiver, the planning commission shall take into account the nature of the proposed use of land involved, existing uses of land in the area, proximity to public utilities, the number of persons who will reside or work in the proposed subdivision, and the probable effect of such waiver upon traffic conditions and upon the public health, safety and general welfare in the vicinity.
- The findings of the planning commission, together with the specific facts upon which findings are based, shall be incorporated into the official minutes of the planning commission meetings at which such waiver is granted. Waivers may be granted only when in harmony with the general purpose and intent of these regulations.

BOUNDARY & PARTIAL TOPOGRAPHIC SURVEY

FIELD WORK:
SEPTEMBER 10, 11, 12 & 23, 2024

BASIS OF BEARING:
GPS OBSERVATION - AR NORTH ZONE
NAD83(2011) HORIZONTAL DATUM

BASIS OF ELEVATION:
ON-SITE NETWORK GPS OBSERVATION
NAVD88 VERTICAL DATUM

CONTOUR INTERVAL:
1 FOOT

PROPERTY ZONED:
R-1

BUILDING SETBACKS:

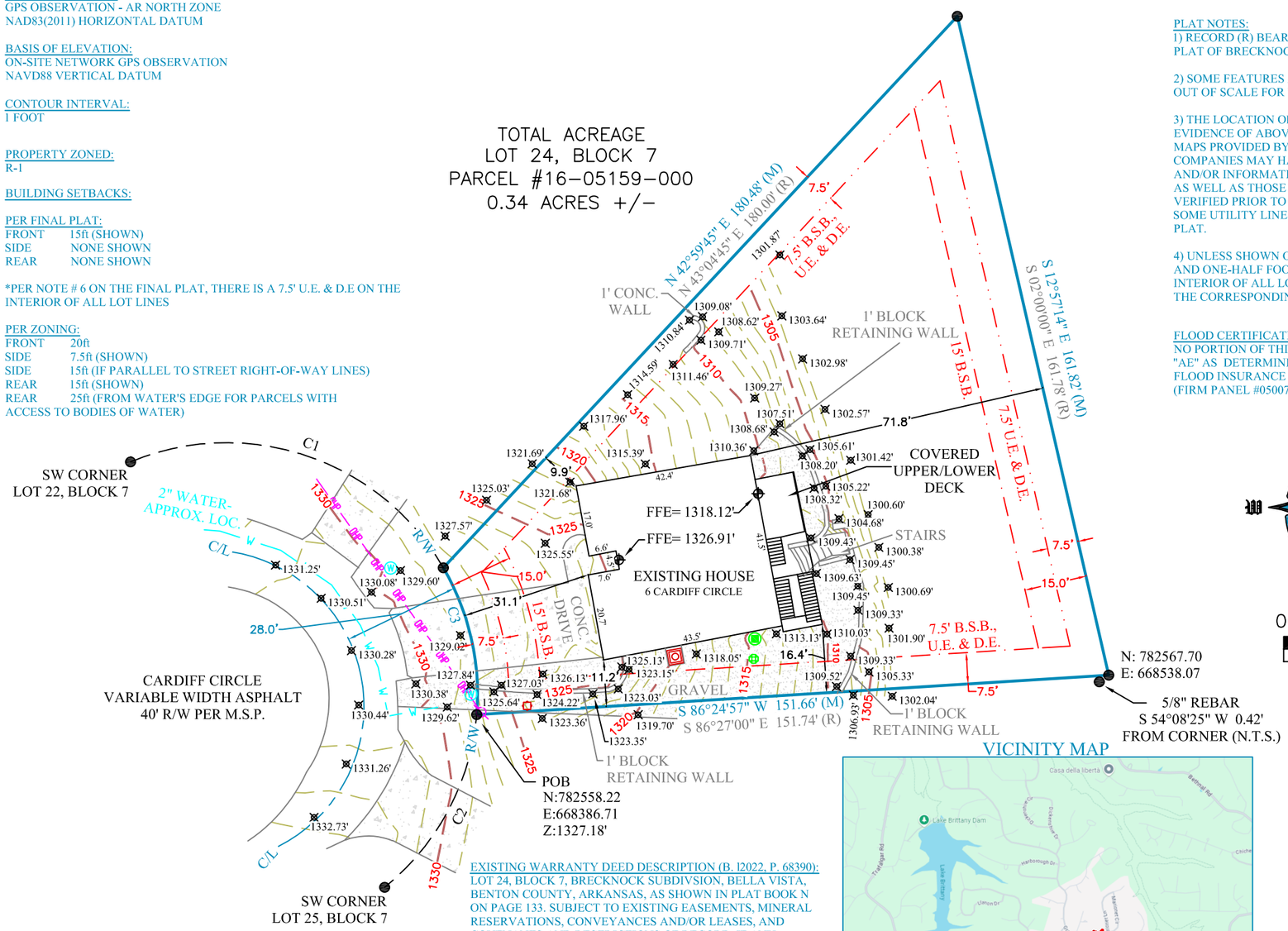
PER FINAL PLAT:

FRONT	15ft (SHOWN)
SIDE	NONE SHOWN
REAR	NONE SHOWN

*PER NOTE # 6 ON THE FINAL PLAT, THERE IS A 7.5' U.E. & D.E ON THE INTERIOR OF ALL LOT LINES

PER ZONING:

FRONT	20ft
SIDE	7.5ft (SHOWN)
SIDE	15ft (IF PARALLEL TO STREET RIGHT-OF-WAY LINES)
REAR	15ft (SHOWN)
REAR	25ft (FROM WATER'S EDGE FOR PARCELS WITH ACCESS TO BODIES OF WATER)



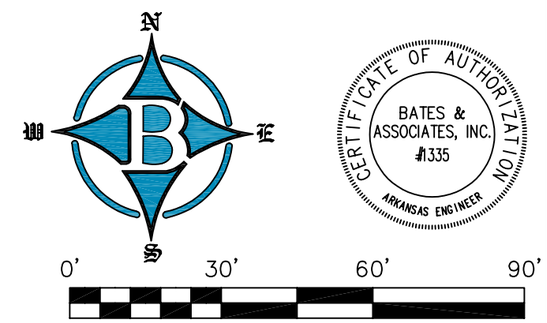
PLAT NOTES:
1) RECORD (R) BEARINGS AND DISTANCES ARE SHOWN PER THE FINAL PLAT OF BRECKNOCK SUBDIVISION (N-133) WHERE POSSIBLE.

2) SOME FEATURES AND/OR SYMBOLS ON THIS PLAT MAY BE SHOWN OUT OF SCALE FOR VISUAL CLARITY.

3) THE LOCATION OF UTILITIES SHOWN HEREON ARE FROM OBSERVED EVIDENCE OF ABOVE GROUND APPURTENANCES, GIS, AND/OR UTILITY MAPS PROVIDED BY LOCAL UTILITY COMPANIES. NOT ALL UTILITY COMPANIES MAY HAVE RESPONDED TO OUR REQUEST FOR MAPS AND/OR INFORMATION. ALL UTILITY LINES APPEARING ON THIS PLAT, AS WELL AS THOSE THAT MAY EXIST UNDERGROUND NEED TO BE VERIFIED PRIOR TO DOING ANY TYPE OF EXCAVATION OR DESIGN. SOME UTILITY LINES MAY ALSO EXIST THAT WERE NOT SHOWN ON THIS PLAT.

4) UNLESS SHOWN OTHERWISE ON THE PLAT, ALL LOTS HAVE A SEVEN AND ONE-HALF FOOT UTILITY AND DRAINAGE EASEMENT ON THE INTERIOR OF ALL LOT LINES, SUCH EASEMENTS TO BE PARALLEL WITH THE CORRESPONDING LOT LINE. (SEE PLAT NOTE #6BOOK N, PAGE 133)

FLOOD CERTIFICATION:
NO PORTION OF THIS PROPERTY IS LOCATED WITHIN FLOOD ZONE "A" OR "AE" AS DETERMINED BY THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP FOR BENTON COUNTY, ARKANSAS. (FIRM PANEL #05007C0080J. DATED 09/28/2007)



GRAPHIC SCALE (IN FEET)
1 Inch = 30ft.

I HEREBY CERTIFY THIS TO BE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF ON THIS THE 23RD DAY OF SEPTEMBER, 2024.

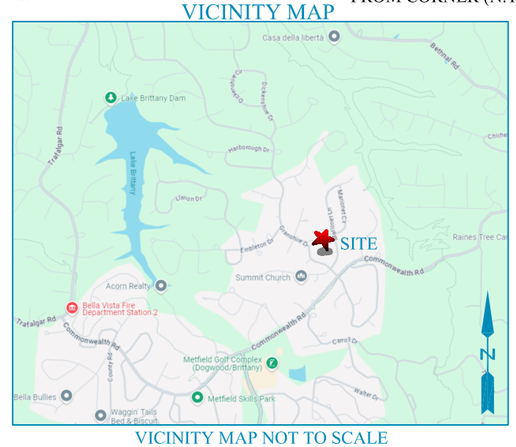
REGISTERED PROFESSIONAL LAND SURVEYOR
STATE OF ARKANSAS
NO. 1642
SIGNATURE
DERRICK L. THOMAS

DATE: 10/21/24

IF THE SIGNATURE ON THIS SEAL IS NOT AN ORIGINAL AND NOT BLUE IN COLOR THEN IT SHOULD BE ASSUMED THAT THIS PLAT MAY HAVE BEEN ALTERED. THE ABOVE CERTIFICATION SHALL NOT APPLY TO ANY COPY THAT DOES NOT BEAR AN ORIGINAL SEAL AND SIGNATURE.

CERTIFICATE OF AUTHORIZATION
BATES & ASSOCIATES, INC.
#1335
ARKANSAS ENGINEER

VICINITY MAP



VICINITY MAP NOT TO SCALE

EXISTING WARRANTY DEED DESCRIPTION (B. l2022, P. 68390):
LOT 24, BLOCK 7, BRECKNOCK SUBDIVISION, BELLA VISTA, BENTON COUNTY, ARKANSAS, AS SHOWN IN PLAT BOOK N ON PAGE 133. SUBJECT TO EXISTING EASEMENTS, MINERAL RESERVATIONS, CONVEYANCES AND/OR LEASES, AND COVENANTS AND RESTRICTIONS OF RECORD, IF ANY.

REFERENCE DOCUMENTS:
1) FINAL PLAT OF BRECKNOCK SUBDIVSION FILED IN BOOK N AT PAGE 133
2) WARRANTY DEED FILED IN BOOK L2022 AT PAGE 68390

CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE	TANGENT
C1	60.00'	86.38'	79.11'	S 71°18'42" E	82°29'28"	52.61'
C2	60.00'	48.13'	46.85'	N 28°05'20" E	45°57'29"	25.44'
C3	60.00'	36.64'	36.07'	N 12°48'13" W	34°59'25"	18.91'

LEGEND: THESE STANDARD SYMBOLS WILL BE FOUND IN THE DRAWING.

- (R) RECORD BEARING & DISTANCE
- (M)MEASURED BEARING & DISTANCE
- FOUND 5/8" REBAR
- FINISHED FLOOR ELEVATION (FFE)
- AC CONDENSER UNIT
- ELECTRICAL METER
- POWER POLE
- SEPTIC LID
- CLEANOUT
- WATER METER
- SPOT ELEVATION
- BOUNDARY LINE (MEASURED)
- TIE LINE
- CENTERLINE OF ROAD
- RIGHT-OF-WAY
- OVERHEAD POWER LINE
- UTILITY EASEMENT
- BUILDING SETBACK

BATES & ASSOCIATES
Engineers · Surveyors
7230 S. Pleasant Ridge Dr. · Fayetteville, Arkansas 72704 · 479.442.9350

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FOR USE AND BENEFIT OF:
JOHN CARR

ADDRESS:
6 CARDIFF CIRCLE
BELLA VISTA, ARKANSAS

DATE: 10/16/24
SCALE: 1"=30'
SURVEYED: TH
DRAFTED: ML
DRAFT DATE: 10/16/24
REVIEWED: DT
COA #1335

LOCATION:
LOT 24
BLOCK 7
BRECKNOCK
SUBDIVISION

DRAWING #24-236

SUBJECT RETAINING WALLS – SEE PAGES S2 -4

SUBJECT RETAINING WALLS

General Notes:

1. Applicable building codes: Arkansas Building Code 2021, International Building Code 2021, TMS 402-2016.
2. Compacted C ballast used for footings
3. Leveling pad- minimum 6" thick compacted AHTD class 7 crushed stone road base compacted to 95% standard compaction (ASTM 0698).
4. Foundation zone- undisturbed sandy clay with shale soil with a plasticity index less than 20 with an effective friction =26
5. Minimum wall embedment of 1 block for walls under 6 feet.
6. A geotechnical report was not supplied for the project and the soil properties used were assumed for the site based on other sites in the area.
7. Wall batter will be 1.0 inch per block course.
8. The top and bottom of the wall elevations and sloped in the vicinity of the wall must be verified by the wall installer before beginning wall construction. The wall designer must review any changes to the wall dimensions or slopes around the wall.
9. The wall designer assumes no liability for information provided by others or not verified.
10. All C ballast fill must be compacted in maximum 8.0 inch thick lifts and compacted with a minimum of two passes with a vibratory plate compactor. All soil fill must be placed in a maximum 8.0 inch thick lifts and compacted with a minimum of 95% standard compaction (ASTM 0698). For commercial projects, the compaction of each lift must be verified by the testing agency of record with at least one test per 2500 sq. ft. of fill placed per lift, per day.
11. Maximum wall bearing pressure = 1200 psf.
12. The long-term static groundwater level is assumed to be below the bottom of the wall (greater than 6.0 feet).
13. All quantities do not include any waste of overlap required and are based on in-place compacted volumes. The installer must verify all quantities.
14. Wall heights shown must not be exceeded without the consultation and approval of the wall designer.
15. Bi-Axial geo-grid may be used in place of that shown.
16. All reinforcing geogrid must be strata 200 geogrid as shown on the wall drawings.
17. All utilities behind, in front and under the wall should be installed before commencing wall construction to limit disturbance and damage to the grid and undermining of the wall. The compaction of all utility backfill under the block and grid zones must be verified to be at least 95% standard compaction (ASTM 0698).
18. Maximum slopes of 30° behind and in front of the wall and shall not be exceeded without the consultation and approval of the wall designer.
19. Care must be taken when installing and pavements, utilities, irrigation, structures or landscaping behind the wall so as not to damage the geogrid or wall face. Any damaged geogrid or wall face distortion must be replaced.
20. Any springs, seeps or other water sources noted in the wall excavations must be immediately reported to the wall designer for remedial action.
21. No live or dead loads other than pedestrian traffic within 10.0ft behind the wall.
22. All filter fabric must be Mirafi 140N not-woven fabric or approved equivalent.
23. Factors of safety used in the wall design: sliding = 1.5, overturning = 2.0 bearing capacity = 2.0 global stability analysis = 1.3. The engineering stamp on the drawing confirms these values were exceeded.
24. Safety precautions (including handrails) during and after construction are the responsibility of the contractor and owner.

RETAINING WALL AND BACKFILL NOTES:

- CONSULT CITY REGARDING PLACEMENT OF WALL NEAR PROPERTY LINES AND EASEMENTS.
- SAFETY RAILINGS ARE REQUIRED WHERE REQUIRED BY ICC IRC
- BACKFILL AS NEEDED WITH SB2 BEHIND WALL (EXPANSIVE SOIL/CLAYS NOT ALLOWED)
- DRAINAGE IS REQUIRED BEHIND THE WALL
- THIS DRAWING DOES NOT DEFINE COMPACTION REQUIREMENTS FOR CONSTRUCTION ON FILL SOILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 19005
STEVEN A. RYAN
2/26/2025

APPROVALS

ADVANCED STRUCTURAL CONSULTANTS
501.240.9213 479.439.0260
INFO@STRUCTURALCONSULT.COM

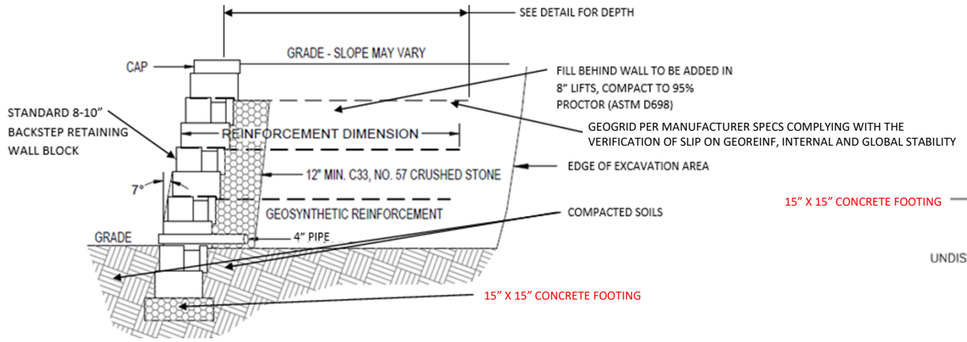
LANDSCAPE BLOCK RETAINING WALL INSTALLATION

ADDRESS – 6 CARDIFF CIR, BELLA VISTA, AR

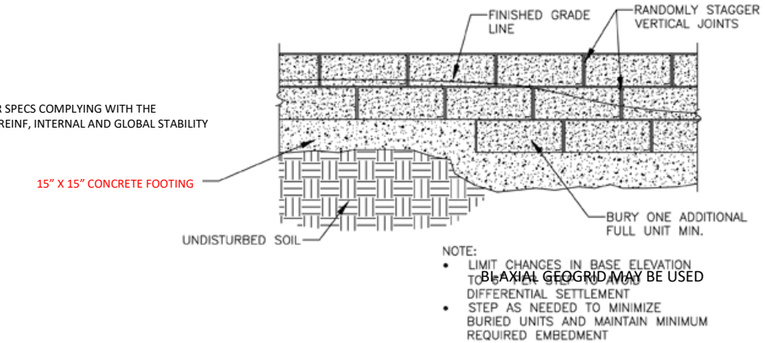
DATE – 2/4/25

REVISION

S1.0



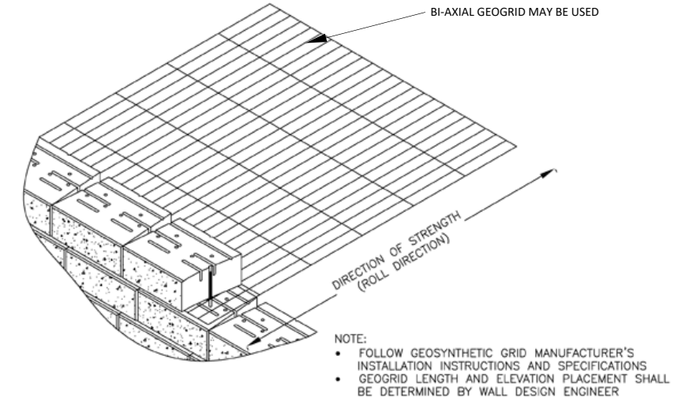
WALL CONSTRUCTION SECTION VIEW



BI-AXIAL GEOGRID MAY BE USED

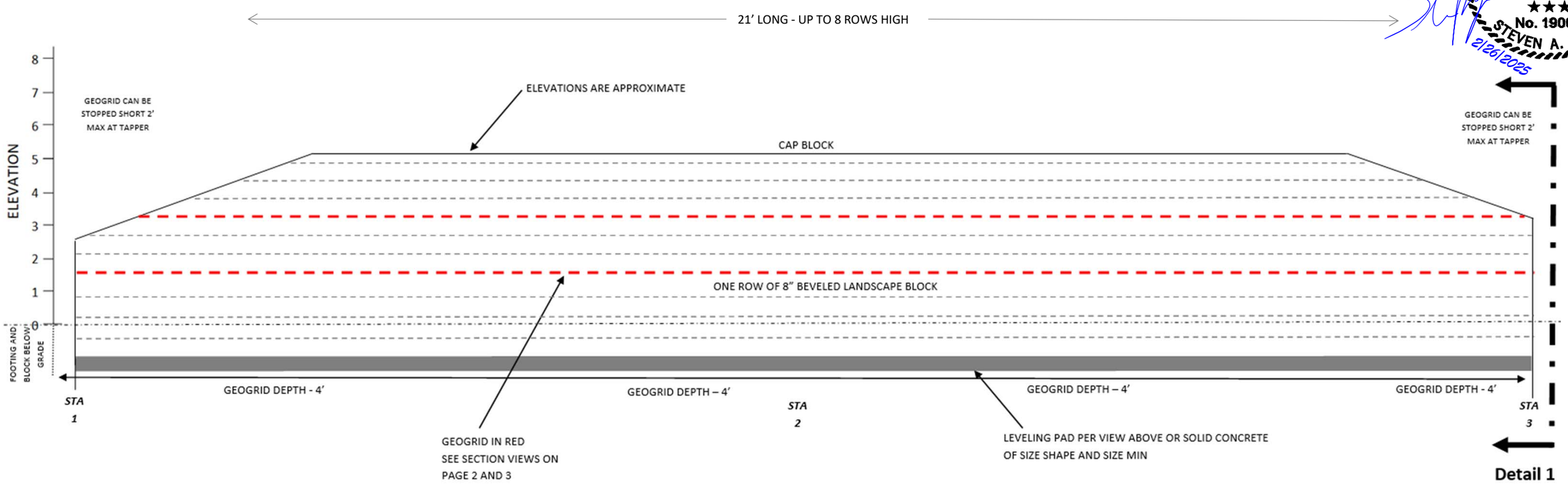
STEPPING BASE DETAIL

(If required)



GEO-GRID INSTALLATION DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 19005
STEVEN A. RYAN
2/26/2025



WEST RETAINING WALL ELEVATION VIEW

RETAINING WALL AND BACKFILL NOTES:

1. Max wall height is per elevation above.
2. Depth of geogrid to be per the drawing below. Spacing can vary up or down one row of block only.
3. Any drainage to soils retaining by the walls should be routed in 4" pipe so that the water does not excessively saturate the ground behind the wall.
4. Installer must have experience building walls and thoroughly read the installation instructions and limitations from the block manufacturer. Always install wall per block manufacturer specifications.
5. See sheet S3.0 for details on drainage, and curved wall installations.

APPROVALS

ADVANCED STRUCTURAL CONSULTANTS
501.240.9213 479.439.0260
INFO@STRUCTURALCONSULT.COM

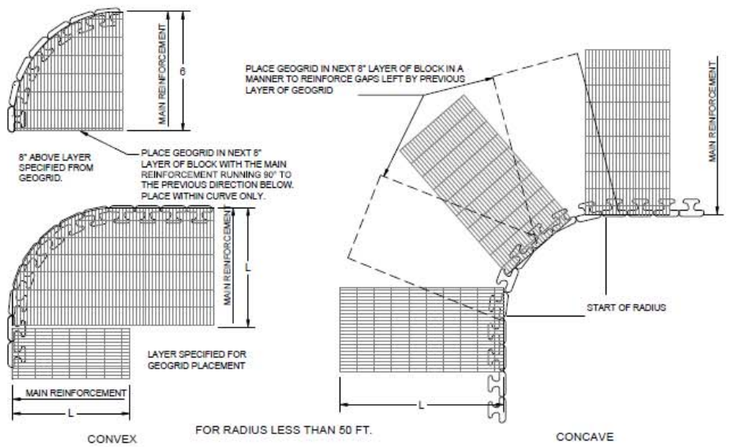
LANDSCAPE BLOCK RETAINING WALL INSTALLATION

ADDRESS – 6 CARDIFF CIR, BELLA VISTA, AR

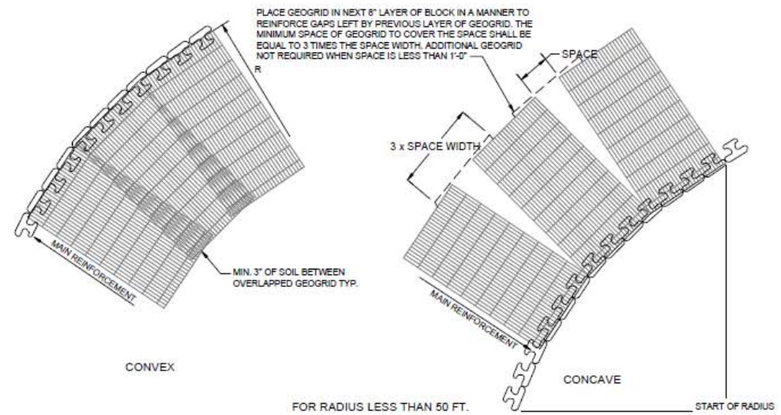
DATE – 2/4/25

REVISION

S2.0



REQUIREMENTS FOR CURVED WALLS



REQUIREMENTS FOR CURVED WALLS

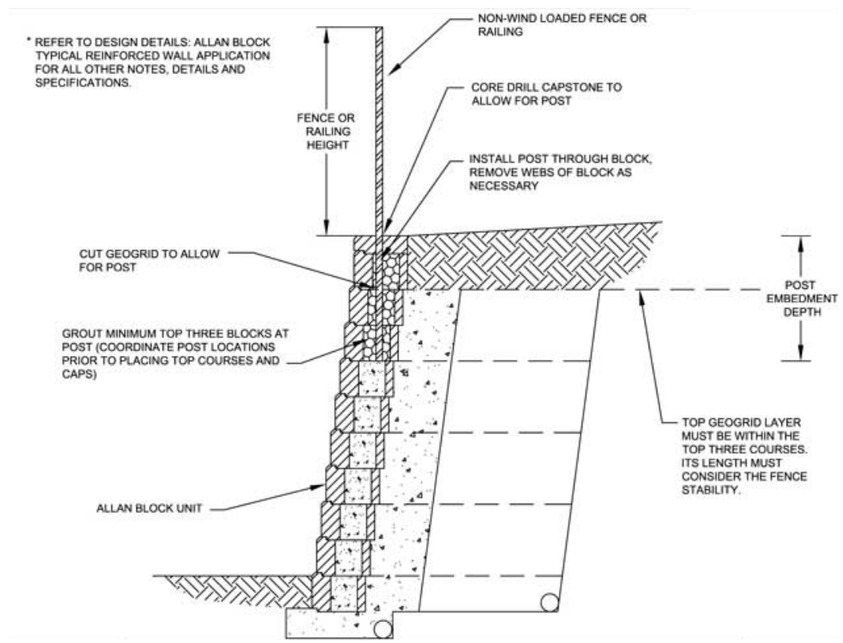
TABLE R401.4.1
PRESUMPTIVE LOAD-BEARING VALUES OF FOUNDATION MATERIALS[a]

CLASS OF MATERIAL	LOAD-BEARING PRESSURE (pounds per square foot)
Crystalline bedrock	12,000
Sedimentary and foliated rock	4,000
Sandy gravel and/or gravel (GW and GP)	3,000
Sand, silty sand, clayey sand, silty gravel and clayey gravel (SW, SP, SM, SC, GM and GC)	2,000
Clay, sandy, silty clay, clayey silt, silt and sandy siltclay (CL, ML, MH and CH)	1,500[b]

For SI: 1 pound per square foot = 0.0479 kPa.

a. Where soil tests are required by Section R401.4, the allowable bearing capacities of the soil shall be part of the recommendations.

b. Where the building official determines that in-place soils with an allowable bearing capacity of less than 1,500 psf are likely to be present at the site, the allowable bearing capacity shall be determined by a soils investigation.



FENCE RAILING DETAIL

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 19005
STEVEN A. RYAN
2/26/2025

APPROVALS

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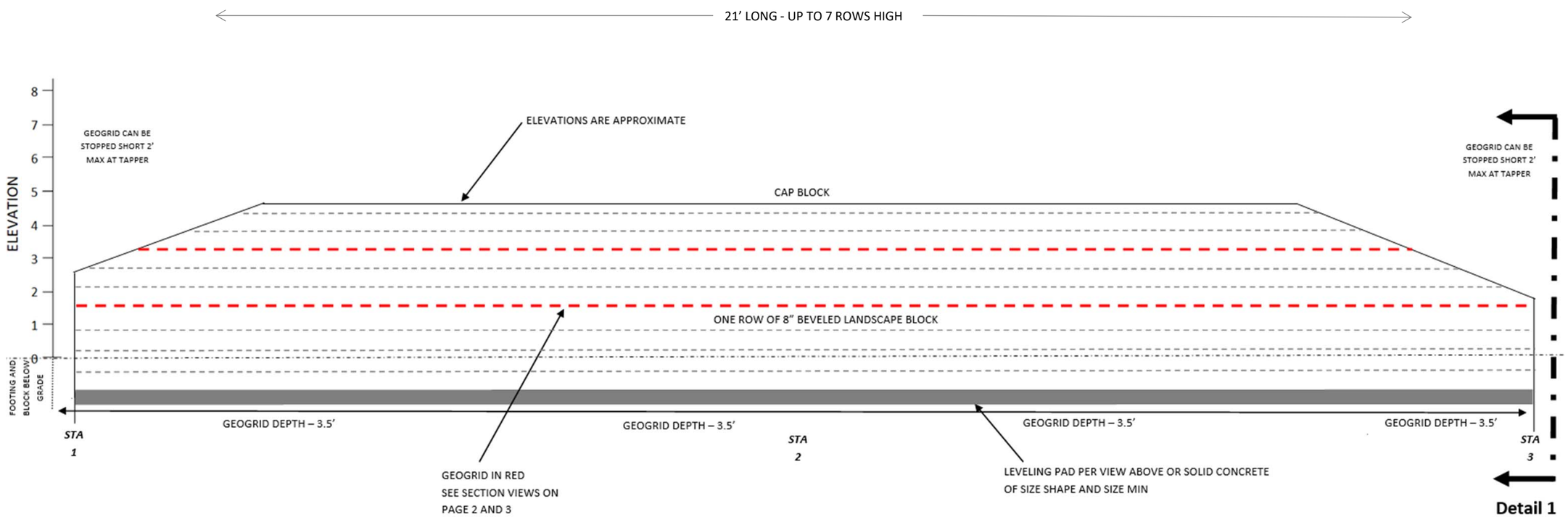
LANDSCAPE BLOCK RETAINING WALL INSTALLATION

ADDRESS – 6 CARDIFF CIR, BELLA VISTA, AR

DATE – 2/4/25

REVISION

S3.0



EAST RETAINING WALL ELEVATION VIEW

RETAINING WALL AND BACKFILL NOTES:

1. Max wall height is per elevation above.
2. Depth of geogrid to be per the drawing below. Spacing can vary up or down one row of block only.
3. Any drainage to soils retaining by the walls should be routed in 4" pipe so that the water does not excessively saturate the ground behind the wall.
4. Installer must have experience building walls and thoroughly read the installation instructions and limitations from the block manufacturer. Always install wall per block manufacturer specifications.
5. See sheet S3.0 for details on drainage, and curved wall installations.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 19005
STEVEN A. RYAN
2/26/2025

APPROVALS

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LANDSCAPE BLOCK RETAINING WALL INSTALLATION

ADDRESS – 6 CARDIFF CIR, BELLA VISTA, AR

DATE – 2/4/25

REVISION

S4.0

Tyvek
HomeWrap
Ridout
BARRICADE WRAP

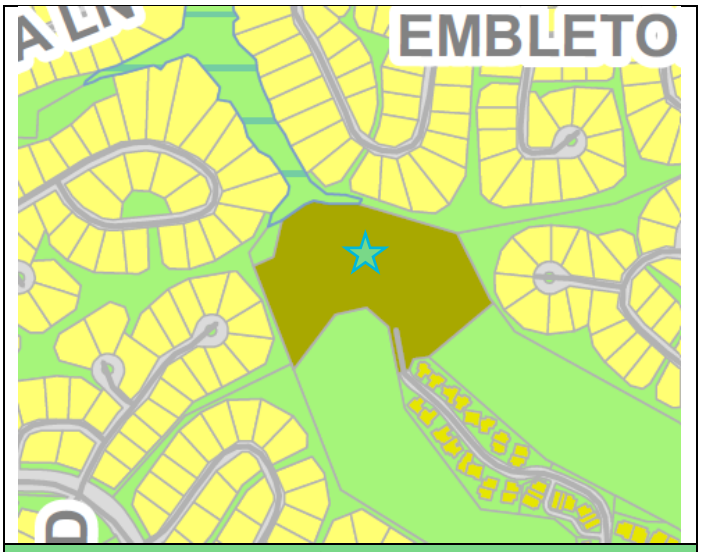
Jackson

HARBOR
FREIGHT
QUALITY TOOLS
LOWEST PRICES
KOBALT

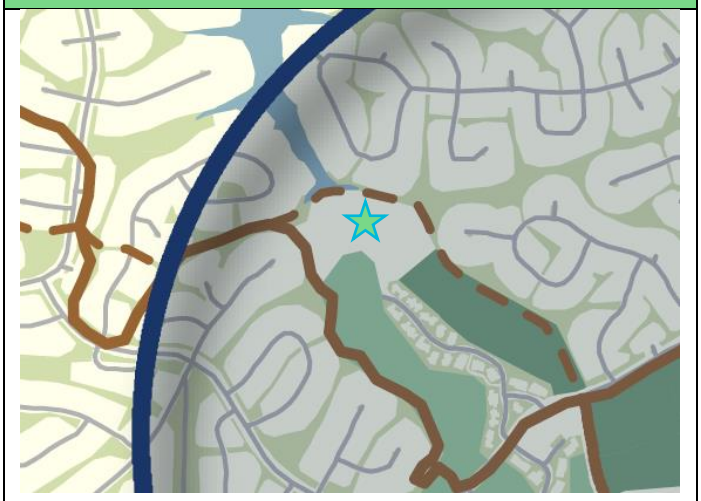
Meeting Information:
2483 Forest Hills Blvd
May 29, 2025 at 4:30 PM

Reviewer:
Taylor Robertson, MPA
Director

Project Number	PZD-2025-58573
Applicant	Linda Lloyd
Address/Location	102 Fairway Drive
Current Zoning	R-3 Multi-Family Residential
Site Area	7.69 acres
Nature of Request	Proposing a New Planned Zoning District



Zoning Map



Future Land Use Plan

Property Description
This property is located in the southeast area of Bella Vista City Limits and is located on Parcel #16-11099-000. Lot 1, Block 6 of the Duxford Subdivision.

Regulation
Sec. 109-86 sets forth Planned Zoning District submittal, review, and approval criteria.

Request
The applicant is proposing a 55+ residential master planned community known as Owl Commons with the subject regulation.

Background
The applicant is proposing a planned zoning district to allow for a master planned community for ages 55 and older to provide a modernized style of architecture and unique low intensity mixed uses to support the residents within the community. This proposal includes 4.06 acres of open recreational green space, 2.10 acres of single-family, and .14 acres of community facility districts with a total of 23 single-family units and two nonresidential buildings. These districts support a combination of uses--single-family residential being the primary use. Several community gathering spaces are being dedicated including a community house, a dog park, a kayak dock, a dog run, and three park spaces. Should this district be approved by the Council, a subdivision review of platting and engineering design will follow. Staff finds that the intent of this Planned Zoning District meets all of the review criteria in 109-86(f). Over half of this property is being dedicated and reserved for recreation and open space (53%) and is less intense than what it is currently zoned (up to 123 units, 14 permitted uses, and 18 conditional uses).

Public Comment
None at the time of this report.

Outstanding Technical Comments
Minor comments sent to applicant.

Recommendation
Staff recommends approval based on the analysis with above so long as minor comments are addressed.

Sec. 109-86 Planned Zoning District Procedures

A planned zoning district shall follow all procedures for zoning ordinance amendments outlined in zoning code section 109-40, in addition to the specific requirements contain in this section. Upon rezoning approval and if the planned zoning district requires only easement dedications, the applicant shall prepare and easement dedication plat which shall be reviewed by staff. Upon staff approval, the applicant shall record the easement dedication plat at the county recorder's office and shall provide two file marked copies to the Planning and Development Department. Upon rezoning approval and if the planned zoning district requires rights-of-way to be dedicated to conform with the master street plan and/or to allow dedication of road infrastructure to the public, the applicant shall prepare a right-of-way dedication plat that depicts the required right-of-way and easement reservations. The right-of-way dedication plat shall be reviewed by staff for conformance with the master development plan. Upon staff approval, the applicant may proceed with planned improvements within the proposed right-of-way. Upon completion of planned improvements within the right(s)-of-way, the applicant shall proceed with filing a final plat in accordance with Article IV of the Subdivision Code. All infrastructure improvements that will be dedicated to the public shall be reviewed and approved as provided in Subdivision Code subsections 107-250(a) through 1007-250(h). In cases of conflict, the specific standards of the approved planned zoning district shall prevail. f publicly dedicated improvements will be part of the planning zoning district, building permits may be issued by the City after receipt of a right-of-way dedication plat and adherence to the Arkansas Fire Prevention Code has been determined. Plans for publicly dedicated improvements shall be filed at the same time as building plans.

Sec. 109-86 Planned Zoning District Review Criteria

Property may be rezoned to a planned zoning district subject to a recommendation from the planning commission and affirmative vote of the city council. The planning commission and city council may approve a proposed PZD subject to the following review criteria:

1. The development does not have a negative effect upon the future development of the area;
2. The development provides for compatibility with the surrounding land uses;
3. The development provides for an orderly and creative arrangement of land uses that are harmonious and beneficial to the community;
4. The development provides for more usable and suitably located open space, recreation areas, and other common facilities that would not otherwise be required under conventional land development regulations;
5. The development maximizes enhancement or minimally disrupts existing natural features and amenities; and
6. The development utilizes site characteristics such as geographic location, topography, size or shape to achieve the purpose and intent of this section.

The planning commission or city council may impose conditions, restrictions, or more stringent standards when reviewing a planned zoning district so as to minimize or reduce any injurious effects to the public's health, safety, and welfare. In the event that the zoning and development standards described in the planned zoning district's zoning description, master development plan, and architectural elevations are not fully implemented **within three years**, the parcel for which the PZD was proposed shall revert to its re-proposal zoning district. Such reversionary language shall be contained in the ordinance establishing the planned zoning district.

OWL COMMONS

nature & community

Addendum to Letter to the Planning Commission -

We request that the Planning Commission grant a waiver of 107-249 Table 2 - required Street ROW of 40 feet. We had originally designed a community with a public road and a 40' ROW. Then Carroll Electric came in with their design standards which required excessive setbacks from structures and placement outside the Road ROW (unlike the water and sewer). This required a complete redesign which would have put the road an extra 15' from the inner loop of houses and the houses on the outer loop an extra 15' from the road ROW (a total of 30' away from the original placement).

Owl Commons is designed around provisions in the PZD ordinance for "residential use that is innovative and cannot be achieved through traditional zoning" and to "encourage efficient land for preservation of sensitive environmental areas such as open space " and "allow for creative and imaginative design". The 2040 Comprehensive Plan recommends "Expand housing types - support a variety of living opportunities... and mixed use environments that allow residents to "age in place" or maintain a residence throughout their life".

The Carroll Electric requirements would have expanded the footprint of the developed areas into existing treed areas that Owl Commons wants to protect and required houses to be built on more challenging terrain, thus disturbing hillsides. Designing a community with a private road and a smaller ROW was the only way to enable Owl Commons to be built and stay within our goals and principles. Because of these factors we request a waiver of the 40' ROW in Table 2.

As per Section 107-227, we seek a waiver for submission of the following requirements at this time, on this set of plans.

Note that these items, as needed, will be submitted on the PPL after approval of the PZD request. When those additional items are approved by the Planning Commission, we would then be granted our GEC permit in order to complete site improvements prior to final plat approvals.

107-225
10 - there are no streets that form a project boundary
13
16
17
22 - there are no proposed storm sewer or drainage structures
23 -

24 - there have been no occurrences of previous overflow septic or sewer on-site or in proximity of site
27
28 - note that Owl Commons will provide 3 on site fire hydrants
29 - hydrant locations are shown, details will be provided on next submission
30
31
32 - all will be underground, with the exception of one possible pole to bring electric on to the site from the existing pole coming down from Harrington Dr near the POA Well House - Carroll Electric will be providing engineered plans
33 - there are no existing overhead facilities
34
35
36
40 - there are no "out-lots"
41 - Owl Commons is not phased
42 - no erosion problems on site or downstream
43 - none known
46
49
50
52

Water infrastructure details

Waiver is requested to requirement for a second fire access road. Note that this has been approved as allowed by Fire Chief Steve Simms.

Linda Lloyd
Owl Commons

Owl Commons - Planned Zoning District

I. General Provisions

The purpose of the Planned Zoning District (PZD) is to establish regulations for a Residential mixed-use development known as Owl Commons, which promotes a combination of single-family residential dwellings, a community common house and office/studio, while incorporating open space/recreation area and innovative design elements that are not achievable through conventional zoning districts.

The Owl Commons PZD encompasses approximately 7.69 acres located on parcel 16-11099-000 in Bella Vista, AR. The development is designed to include 23 single-family residential units.

II. Zoning Districts

Open Space/Recreation -

The Open Space/Recreation (OS/R) is designed to protect and enhance vital natural resources such as exceedingly steep topography, woodlands, and wildlife habitat. Further, this district serves to restrict development in areas not suitable for or capable of sustaining development, while allowing certain recreational uses which are not detrimental to the land. Open Space shall be preserved and maintained for conservation and recreational purposes as delineated in the restrictive covenants for Owl Commons. A Homeowners' Association (HOA) shall be responsible for the improvement, operation, and maintenance of all open space areas.

Residential Single Family -

The Residential Single Family District (RSF) provides for single-family development supported by open space, and shared community amenities. This serves as the primary neighborhood pattern in Owl Commons.

Community Facility -

The Community Facility District (CF) provides for a community Common House and an office/studio building to serve as central gathering and amenity spaces for residents and their guests. Permitted activities include resident meetings, community meals, social events, recreational activities, and temporary guest accommodations. The Community Facilities are not intended for commercial use. The HOA shall establish policies to regulate usage and hours for these facilities.

No other land uses shall be permitted, and no conditional use permits shall be requested for uses other than those listed below.

Use Category	Abbreviation	Acreage	Definition
Open Space/ Recreation	OS/R	4.06	The Open Space/Recreation (OS/R) is designed to protect and enhance vital natural resources such as exceedingly steep topography, woodlands, and wildlife habitat. Further, this district serves to restrict development in areas not suitable for or capable of sustaining development, while allowing certain recreational uses which are not detrimental to the land.
Residential Single Family	RSF	2.10	The Residential Single-Family District (RSF) provides for single-family development supported by open space, and shared community amenities. This serves as the primary neighborhood pattern in Owl Commons.
Community Facilities	CF	.14	The Community Facility District (CF) provides for a community Common House and an office/studio building to serve as central gathering and amenity spaces for residents and their guests. Permitted activities include resident meetings, community meals, social events, recreational activities, and temporary guest accommodations. The Community Facilities are not intended for commercial use.

P=Permitted Use C=Conditional Use	PZD	Acreage
Use Types		
Agricultural Uses		
Crop Production	P	
Horticulture	P	
Open Space/Recreation		
Open Space/Recreation	P	4.06
Residential Uses		
Single-Family Residential	P	2.10
Community Facility		
Community Facility	P	.14
Commercial Uses		
Short-term rentals		0
Parking Uses		
Off-Street Parking	P	
Transportation Uses		
Trails for biking & cycling	P	
Vehicle/Pedestrian Circulation	P	1.39
Miscellaneous Uses		
Accessory Alternative Energy Production	P	
Total		7.69

III. Development Standards

Density - A maximum of four (4) dwelling units per gross acre

Building Setbacks:

1. Minimum front setback from all property lines shall be 0 feet
2. A minimum setback of 0 feet is established parallel to all street right-of-way lines
3. A minimum side setback of 0 feet is established parallel to side property lines.
4. A minimum rear setback of 0 feet is established parallel to side property lines.
5. *Along bodies of water* Lots or parcels with access to bodies of water shall have at least a 25 foot setback from the water's edge in which no primary or accessory structures may be built other than a kayak dock and kayak storage rack.

*Note that a zoning variance on architectural standards for residential garage placement was approved under ZVR-2024-54679

Height Requirements:

1. The maximum building height for all structures shall be 40 feet

Lot and Area Requirements:

1. The Minimum lot size shall be no less than 2000 Square Feet or .0459 acres
2. The minimum street frontage shall be no less than 0 feet
3. The minimum lot width shall be no less than 0 feet
4. The minimum lot depth shall be no less than 0 feet
5. There shall be no maximum lot coverage
6. The minimum green space coverage within Owl Commons shall be 50 percent

Landscaping, Screening, and Buffering:

The purpose of this is to ensure a maximum of open space and green area and to maintain and provide Native Habitat.

Soil and climatic conditions. Trees and other vegetation shall be planted in soil and climatic conditions which are appropriate for their growth habits. Plants used in the landscape design shall to the greatest extent be:

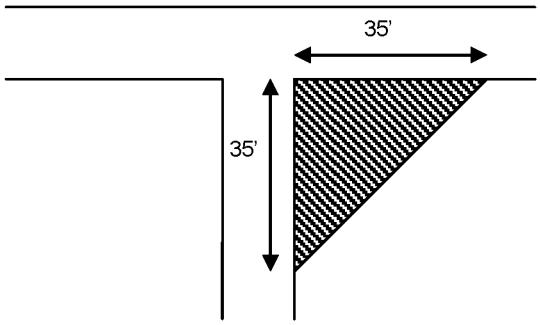
1. Appropriate to the conditions in which they are to be planted.
2. Native and have non-invasive growth habits
3. Encourage low Maintenance, high-quality design
4. Wildflower yards and Native Grasses are highly encouraged while stone yards and/or lawn grass are strongly discouraged
5. Vegetative screening will not be required between single family residences and Community Facilities.
6. Native plant materials and existing wooded common areas shall provide the required landscaping, screening and buffering.

7. Landscaping enhances the environmental and visual character of the community.
8. Green space requirements preserve and stabilize the area's ecological balance by establishing a healthier environment
9. Green areas help to mitigate the negative effects of air and noise pollution by using trees and plants as buffers.

General provisions:

Sight distances

1. Safe sight distances at intersections and points of access must be maintained.
2. No landscaping between 30 and 60 inches in height shall be placed within the sight triangle of an intersection.



Sight Triangle ,

Parking Requirements:

1. Single-family residential dwelling units shall have a minimum of one (1) off-street parking space per dwelling unit
2. Parking for Community Facilities shall be provided at a minimum ratio of 1 space per 1,000 square feet of gross finished floor area and include ADA space.
3. Total parking shall maintain at least 1.5 parking spaces per residential dwelling unit
4. Parking space dimensions shall be 9 feet by 19 feet
5. Bicycle parking and loading space shall be provided at the Common House.
6. Off-street parking shall be paved and spaces not on residential lots shall include barriers and appropriate striping. These spots shall be used solely for operable vehicles and not for storage.
7. Accessible spaces shall comply with ADA requirements.

Subdivision Standards

1. Owl Loop is related appropriately to the existing topography to produce buildable lots and is of reasonable gradient. Street grades and alignment conform reasonably to the original topography. Sudden and frequent changes in grade are avoided.
2. The Street design is appropriate for the type of development proposed and integrated with the street system in the adjoining subdivisions.
3. Owl Loop is designed to permit efficient drainage and utility systems and require the minimum pavement length needed to provide convenient and safe access to property. The street intersection is laid out as at right angles as possible.
4. The private road shall be maintained by the Owl Commons HOA.

Signage Requirements:

1. Maximum total square footage per parcel: 125 square feet
2. Awning: maximum area of 25% of awning, must be flat against surface, two feet minimum from the back of curbline of street or parking area, fabric may not extend more than one foot below its rigid mount, must maintain 8 feet vertical clearance above a public right of way or front yard setback
3. Roof: maximum area of 25% of roof surface, may not project above the height of the building or roof, are limited to a single roof surface, and multiple roof signs are prohibited

Monument/Freestanding Signage:

1. Maximum height 8 feet
2. Maximum area 25 square feet

Signage Landscaping Required:

1. A defined, bordered, landscaped area at the base of the sign
2. The required landscaped area shall be parallel to the face of the sign
3. The required landscaped area shall be at least 50 square feet in area, be kept neat, weed-free and in compliance with the original site plan
4. For signs with multiple faces, the landscaped area shall be allocated so that a portion of the required landscaping is located in front of each sign face
5. The required landscaped area shall contain living plant materials covering at least 50 percent of the defined landscaped area. Artificial plant materials are not authorized for use
6. A plan of the landscaped area with the name, quantity, and spacing of plant materials shall be included as a part of the sign permit application.

Fencing

1. Fence installation shall secure any required permits from the City of Bella Vista and/or the Architectural Control Committee (ACC).
2. Front yard fences shall not exceed 36" in height (and cannot be chain link) while others may go to a maximum of 6'. The finished surface for all fences shall face outward from the property. Materials can be chain link, split rail, picket, aluminum, post and rail or wood privacy fence.
3. Fencing on golf course lots (lots 9,10,11 and 12) must remain 20' from rear property line.

Lighting

1. The direct or reflected light from any light fixture shall not create a traffic hazard to operators of motor vehicles or to operators of aircraft, and no colored lights may be used in such a way as to be confused or construed as street traffic or air traffic control devices.
2. No blinking, flashing, or fluttering lights, or other illuminated device that has a changing light intensity, brightness, or color, is permitted.
3. All outdoor lighting shall meet the functional security needs of the proposed land use without adversely affecting surrounding properties and the natural environment, meet Dark Sky standards and be energy efficient.
4. All new and replacement light fixtures shall be full cutoff, except that light sources not exceeding 500 lumens for individual light fixtures, 150 lumens for individual lights in a light string (e.g., patio lights), and 3000 Kelvin in color temperature are not required to be full cutoff.
5. Light sources shall be concealed or shielded to minimize the potential for glare and light pollution.
6. Freestanding light fixtures shall be mounted no higher than 20 feet from the ground.

Implementation

In the event that the zoning and development standards described in this Planned Zoning District are not fully implemented within three years, the undeveloped portions of the parcel(s) for which the PZD was proposed shall revert to its pre-proposal zoning district.

OWL COMMONS

BELLA VISTA, BENTON, ARKANSAS

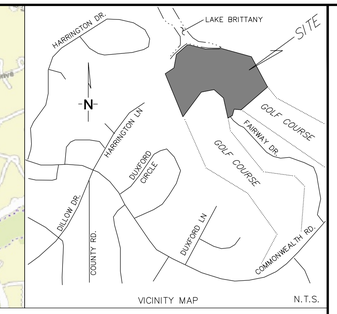
INDEX OF SHEETS

C-1.0 COVER SHEET
C-2.0 ZONING AND DEVELOPMENT PLAN
C-3.0 MASTER SITE PLAN
C-3.1 PROPOSED PLATTING & SUBDIVISION OF LAND
C-3.2 UTILITY PLAN
C-3.3 PRELIMINARY DRAINAGE PLAN
C-3.4 BUFFERING & SCREENING

REVISION **REV. NO.**

CAUTION:
INFORMATION ON THIS DRAWING CONCERNING TYPE & LOCATION OF UNDERGROUND & OTHER UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE & LOCATION OF UNDERGROUND & OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

GENERAL VICINITY MAP (1/4 MILE RADIUS)
1" = 1000'



PROJECT LOCATION MAP
NOT TO SCALE

i. General Provisions

ii. Authority
1. This planned zoning district (PZD) master development plan is authorized by the City of Bella Vista Zoning Code. The provisions of this PZD master development plan shall run with the land. The landowners, their successors, heirs, or assigns shall be bound by the master development plan, as amended and approved by the city council.

iii. Adoption
1. The adoption of this PZD master development plan shall evidence the findings and decision of the city council that this planned zoning district for Owl Commons is in general conformity with the city's future land use plan, master street plan, and other policy documents in force at the time of its adoption.
2. The provisions of this PZD master development plan shall prevail and govern the development of Owl Commons, provided, however, that where the provisions of this master development plan do not address a particular subject, the relevant provisions of the City's Code, as amended, or any other applicable resolutions or regulations of the City, shall be applicable.

iv. Reversion.
1. In the event that the zoning and development standards described in the planned zoning district's zoning description(s), master development plan, and architectural elevations are not fully implemented within three years, those undeveloped portions of the parcel(s) for which the PZD was proposed shall revert to its pre-proposal zoning district.

v. Enforcement.
1. To further the mutual interests of the residents, occupants, and owners of the PZD master development plan and of the public in the preservation and integrity of the plan, the provisions of this plan relating to the use of land, statements of commitments, development and architectural standards, and the location of common open space shall run in favor of the city and shall be enforceable at law or in equity by the city without limitation on any power or regulation otherwise granted by law.

vi. Conflict
1. Where there is more than one provision within the PZD master development plan that covers the same subject matter, the provision which is most restrictive or imposes

vii. Maximum Level of Development
1. The total number of dwellings or the total commercial, business, or industrial intensity approved for development within the land use category(ies) is the maximum development requested for platting or construction. The actual number of dwellings or level of development for commercial, business, or industrial properties may be less due to subdivision or site improvement plan requirements or other requirements of the City Code."

ADJACENT PROPERTIES WITHIN 100 FEET OF SUBJECT PROPERTY

	Parcel ID	Owner	Zoning	Acreage
1	16-11100-000	BVPOA	P1	21.72
2	16-11101-000	BVPOA	P1	6.83
3	16-14199-000	BELLA VISTA VILLAGE PROPERTY OWNERS ASSOCIATION	P1	11.26
4	16-14189-000	RYAN & MARY BETHANY HOLLIS	R1	0.37
5	16-14190-000	HARRINGTON LANE PROPERTIES LLC	R1	0.33
6	16-14191-000	HARRINGTON LANE PROPERTIES LLC	R1	0.37
7	16-14192-000	VISTAVA INC	R1	0.33
8	16-14132-000	MCELHONE, SEAN & TRACY	R1	0.31
9	16-14133-000	JENSEN REVOCABLE TRUST - DENNIS P & LINDA G	R1	0.37
10	16-14134-000	JENSEN REVOCABLE TRUST - DENNIS P & LINDA G	R1	0.57
11	16-77993-000	BVPOA	P1	42.58
12	16-11769-000	BVPOA	P1	10.17
13	16-11703-000	MIKE & JOSIE FAMILY TRUST - MORRISON, MICHAEL & DEDUSSI, JOSEPHINE	R1	0.37
14	16-11704-000	TRUSTY, MICHAEL H & SHELLEY K	R1	0.32
15	16-11705-000	TRUSTY, MICHAEL H & SHELLEY K	R1	0.34
16	16-11706-000	TRUSTY, MICHAEL H & SHELLEY K	R1	0.50
17	16-11707-000	TRUSTY, MICHAEL H & SHELLEY K	R1	0.47
18	16-05173-000	BVPOA	P1	14.77
19	16-05038-000	ADAMS, TIMOTHY DANIEL & AMIEE MICHELLE	R1	0.32
20	16-05037-000	SOULES, TIMOTHY M	R1	0.30
21	16-05036-000	SOULES, TIMOTHY M	R1	0.40
22	16-34656-000	BV TOWNHOUSE ASSOC	P1	2.31
23	16-34676-000	KKG INC	R2	0.06
24	16-34675-000	LEWIS PHILLIP J & KATHERINE M	R2	0.06
25	16-11099-000	BELLA VISTA VILLAGE PROPERTY OWNERS ASSOCIATION	P1	0.21

CONTACT INFORMATION

CITY OF BELLA VISTA PLANNING AND DEVELOPMENT
101 TOWN CENTER
PO BOX 5655
BELLA VISTA, AR 72714
TAYLOR ROBERTSON
479-855-8285

UTILITIES INFORMATION

ELECTRIC
CARROLL ELECTRIC
920 HWY 62 SPUR
PO BOX 4000
BERRYVILLE, AR 72616
DALTON MOORE
800-432-9720 EXT 1168

SEWER
VILLAGE WASTE WATER
380 BELLA VISTA WAY
BELLA VISTA, AR 72714
FRANK KNIGHT
479-855-7613

WATER
BELLA VISTA PROPERTY OWNERS ASSOCIATION
51 HUNTLEY LANE
BELLA VISTA, AR 72715
479-855-8000

DESIGN TEAMS

DEVELOPER
OWL COMMONS
LINDA LLOYD
479-855-2280

DEVELOPMENT SERVICES
RST DEVELOPMENT SERVICES
TAYLOR SIZEMORE
928-814-4191

CIVIL ENGINEERING
ZANEVAN ENGINEERING
1221 OAK STREET
CARTHAGE, MO 64836
JASON ECKHART P.E.
417-800-2500

ARCHITECT
ARCHITECTS 226, INC.
RUSSELL RUDZINSKI, AIA
russell@a226.com

I, J. Jason Eckhart, hereby certify that this plan correctly represents a plan prepared under my direction and engineering requirements of the Bella Vista Subdivision Regulations have been complied with.

Date of Execution: _____

_____
Registered Engineer, State of Arkansas

This plat has been given preliminary plat approval only and has not been approved for recording purposes as a public record. This certificate expires on _____ (date).

Date of Execution: _____

_____
Chairman, City of Bella Vista Planning Commission

FLOOD ZONE
X

BFE
N/A

COMMUNITY
BELLA VISTA, CITY OF

ZONING INFORMATION

RESIDENTIAL - R3

LEGAL DESCRIPTION

Survey Description:

LOT 1, BLOCK 6, DUXFORD SUBDIVISION, BELLA VISTA, BENTON COUNTY, ARKANSAS

SW CORNER OF THE SW CORNER OF S29 T21N R30W

ARKANSAS REGISTERED PROFESSIONAL ENGINEER
JASON ECKHART
PE-11539
5/9/2025

ARKANSAS CERTIFICATE OF AUTHORITY #4090

REVISIONS

NO.	DESCRIPTION	BY	DATE

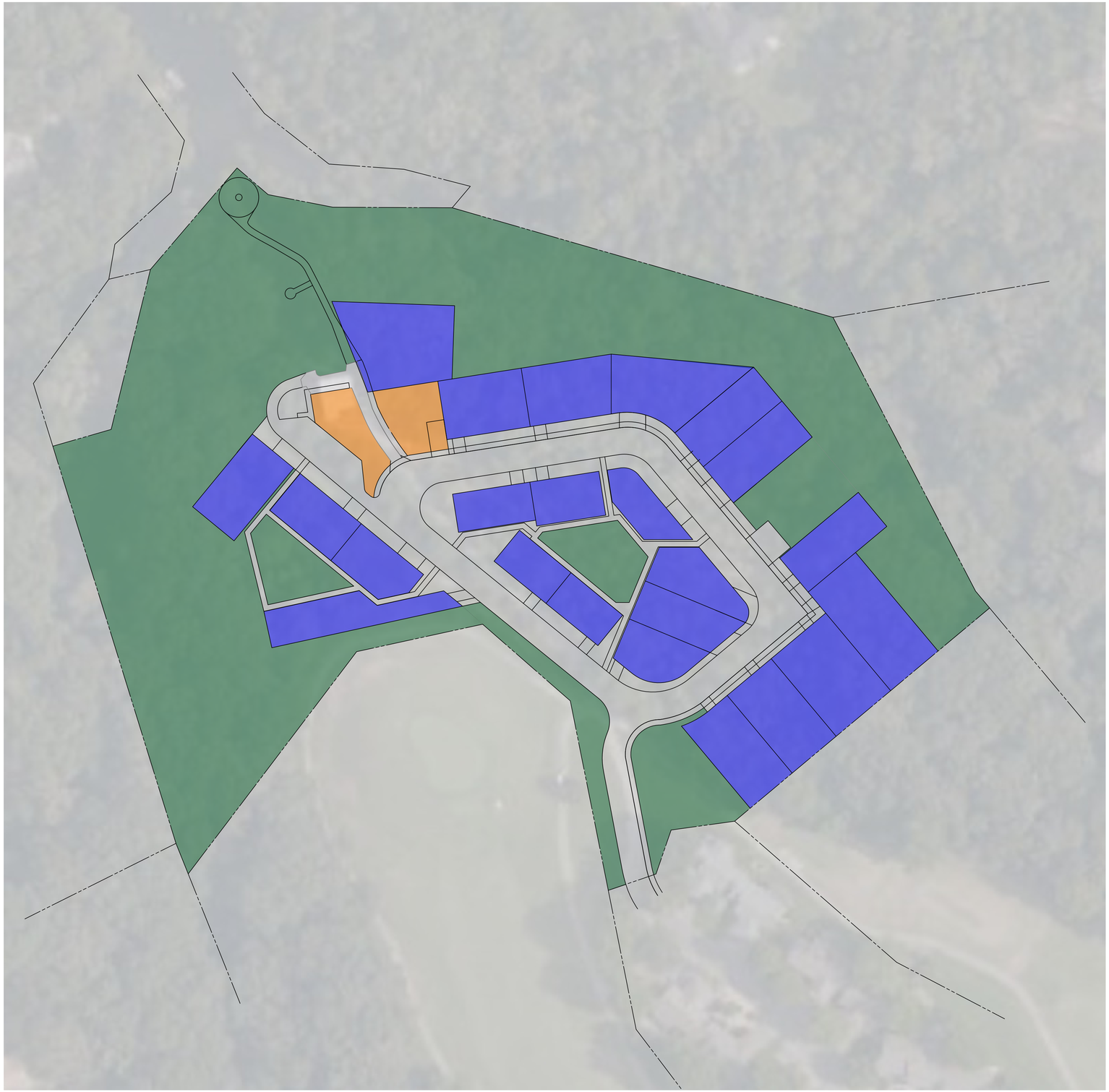
OWL COMMONS
102 FAIRWAY DRIVE
BELLA VISTA, ARKANSAS 72714

C-1.0
COVER SHEET

PROJECT NUMBER: 230082
DATE: 03/28/2025

ZANEVAN ENGINEERING
PHONE: 417-800-2500
1221 OAK ST
CARTHAGE, MO 64836

ARKANSAS CERTIFICATE OF AUTHORITY #4090



LAND USE CATEGORIES

	USE TYPE	ZONING DISTRICT	ACREAGE
	OPEN SPACE / RECREATION	OS/R	4.06 AC
	RESIDENTIAL SINGLE FAMILY	RSF	2.10 AC
	COMMUNITY FACILITY	CF	0.14 AC

LEGEND

	VEHICLE PEDESTRIAN CIRCULATION	1.39 AC

ARKANSAS CERTIFICATE OF AUTHORITY #4090

ARKANSAS REGISTERED PROFESSIONAL ENGINEER 5/9/2025 P341533 JOHN JASON ECKHART

REVISIONS

NO.	DESCRIPTION	BY	DATE

OWL COMMONS

102 FAIRWAY DRIVE
BELLA VISTA, ARKANSAS 72714

C-2.0

ZONING AND DEVELOPMENT PLAN

PROJECT NUMBER:
230082
DATE:
03/28/2025

ZANEVAN ENGINEERING
PHONE: 417-920-2500
1221 OAK ST.
CARTHAGE, MO 64836

LEGEND

- PARKING ZONES
- TRAFFIC CIRCULATION PATTERN NOTATION
- PEDESTRIAN CIRCULATION PATTERN NOTATION
- —W— WATER MAIN
- —SS— 3"Ø SEWER PRESSURE MAIN
- PROPOSED UTILITY / ACCESS EASEMENTS
- PROPOSED ACCESS EASEMENT
- PROPOSED DRAINAGE EASEMENTS
- EXISTING EASEMENTS
- PROPOSED PROPERTY LINES
- —x— EXISTING PROPERTY LINES
- PROPOSED FENCING

OPEN SPACE REQUIREMENTS:

TOTAL ACREAGE: 7.69 AC
REQUIRED ACREAGE FOR OPEN SPACE: 1.54 AC

PROVIDED OPEN SPACE: 4.06 AC

COMMON OPEN SPACE SHALL BE LAND DEVOTED TO CONSERVATION OR RECREATIONAL PURPOSES AND SHALL BE DESIGNATED TO REMAIN UNDEVELOPED, EXCEPT WITHIN THE PROVISIONS PROVIDED BELOW. COMMON OPEN SPACE SHALL BE OPEN TO OWNERS, TENANTS, AND CUSTOMERS WITHIN THE PLANNED ZONING DISTRICT, AND SHALL ADHERE TO THE FOLLOWING REQUIREMENTS:

1. MINIMUM AREA. A MINIMUM OF 20 PERCENT OF THE TOTAL PROJECT AREA, EXCLUSIVE OF RIGHTS-OF-WAY, SHALL BE DEVOTED TO COMMON OPEN SPACE.

2. OPEN SPACE TO BE DISTRIBUTED THROUGHOUT THE PLANNED ZONING DISTRICT IN RELATIONSHIP TO THE DWELLING UNITS OR OTHER USE AREAS THAT ARE INTENDED TO BE SERVED BY THE COMMON OPEN SPACE.

3. OPEN SPACE CALCULATIONS MAY INCLUDE (IF PRESENT): WETLANDS AND WATER BODIES, INCLUDING THE NORMAL POOL ELEVATION SURFACE AREA OF RETENTION PONDS; ACTIVE DETENTION PONDS; IDENTIFIED FLOODPLAINS AND FLOODWAYS IN THE CURRENTLY EFFECTIVE FEMA FLOOD MAPS ADOPTED BY THE CITY; VEGETATED AND LANDSCAPED AREAS, EXCLUDING REQUIRED PARKING LOT LANDSCAPING REQUIREMENTS; NATURAL BUFFER AREAS BETWEEN THE PLANNED ZONING DISTRICT AND ADJACENT PROPERTIES; PUBLIC PLAZAS AND HARD SURFACE RECREATION AREAS; AND PEDESTRIAN PATHS, TRAILS, AND SIDEWALKS, EXCLUSIVE OF THOSE REQUIRED BY THE SUBDIVISION CODE.

STRUCTURE DATA

NO.	HOUSE TYPE* (AS SHOWN)	HEIGHT (AS SHOWN)	MAXIMUM HEIGHT
1	TYPE B1	12'-2"	16'-3 $\frac{11}{16}$"
2	TYPE A1	16'-3 $\frac{11}{16}$"	16'-3 $\frac{11}{16}$"
3	TYPE A1	16'-3 $\frac{11}{16}$"	16'-3 $\frac{11}{16}$"
4	TYPE B1	12'-2"	16'-3 $\frac{11}{16}$"
5	TYPE B2	13'-4.25"	16'-3 $\frac{11}{16}$"
6	TYPE B2	13'-4.25"	16'-3 $\frac{11}{16}$"
7	TYPE B2	13'-4.25"	16'-3 $\frac{11}{16}$"
8	TYPE B2	13'-4.25"	16'-3 $\frac{11}{16}$"
9	TYPE A2	14'-10.5"	16'-3 $\frac{11}{16}$"
10	TYPE A2	14'-10.5"	16'-3 $\frac{11}{16}$"
11	TYPE A2	14'-10.5"	16'-3 $\frac{11}{16}$"
12	TYPE B2	13'-4.25"	16'-3 $\frac{11}{16}$"
13	TYPE A2	14'-10.5"	16'-3 $\frac{11}{16}$"
14	TYPE A1	16'-3 $\frac{11}{16}$"	16'-3 $\frac{11}{16}$"
15	TYPE A2	14'-10.5"	16'-3 $\frac{11}{16}$"
16	TYPE B1	12'-2"	16'-3 $\frac{11}{16}$"
17	TYPE B2	13'-4.25"	16'-3 $\frac{11}{16}$"
18	TYPE B2	13'-4.25"	16'-3 $\frac{11}{16}$"
19	TYPE A2	14'-10.5"	16'-3 $\frac{11}{16}$"
20	TYPE B2	13'-4.25"	16'-3 $\frac{11}{16}$"
21	TYPE B2	13'-4.25"	16'-3 $\frac{11}{16}$"
22	TYPE A2	14'-10.5"	16'-3 $\frac{11}{16}$"

HOUSE TYPES LISTED ABOVE ARE AS SHOWN ON THE PLANS AS EXAMPLES ONLY. IT IS THE INTENT OF THE DEVELOPMENT TO ALLOW FOR A SELECTION BETWEEN THE 6 HOUSE TYPES (A1, A2, A3, B1, B2, B3) FOR EACH LOT, AS AVAILABLE ACCORDING TO SETBACK, EASEMENT, AND UTILITY REQUIREMENTS. MAXIMUM HOUSE HEIGHT OF 16'-3 $\frac{11}{16}$".

ARKANSAS REGISTERED PROFESSIONAL ENGINEER
5/9/2025
JOHN JASON ECKHART
PE-11539
ARKANSAS CERTIFICATE OF AUTHORITY #4090

REVISIONS

NO.	DESCRIPTION	BY	DATE

OWL COMMONS

102 FAIRWAY DRIVE
BELLA VISTA, ARKANSAS 72714

C-3.0
MASTER SITE PLAN

PROJECT NUMBER: 230082
DATE: 03/28/2025

ZANEVAN ENGINEERING
PHONE: 417-862-2500
2701 OAK ST
CARTHAGE, MO 64836

ARKANSAS CERTIFICATE OF AUTHORITY #4090

LEGEND

- PROPOSED UTILITY / ACCESS EASEMENT
- PROPOSED ACCESS EASEMENT
- PROPOSED DRAINAGE EASEMENT
- EXISTING EASEMENTS
- PROPOSED PROPERTY LINES
- EXISTING PROPERTY LINES

ADDRESSING PLAN	
NO.	PROPOSED ADDRESS
1	101 OWL LOOP
2	103 OWL LOOP
3	105 OWL LOOP
4	107 OWL LOOP
5	109 OWL LOOP
6	111 OWL LOOP
7	113 OWL LOOP
8	115 OWL LOOP
9	102 OWL LOOP
10	104 OWL LOOP
11	106 OWL LOOP
12	108 OWL LOOP
13	110 OWL LOOP
14	112 OWL LOOP
15	114 OWL LOOP
16	116 OWL LOOP
17	118 OWL LOOP
18	120 OWL LOOP
19	134 OWL LOOP
20	132 OWL LOOP
21	130 OWL LOOP
22	128 OWL LOOP
23	124 OWL LOOP
24	122 OWL LOOP (OFFICE)
	126 OWL LOOP (COMMUNITY HOUSE)

ARKANSAS REGISTERED PROFESSIONAL ENGINEER
JOHN JASON ECKHART
PE-11539
5/9/2025

ARKANSAS CERTIFICATE OF AUTHORITY #4090

REVISIONS

NO.	DESCRIPTION	BY	DATE

OWL COMMONS

102 FAIRWAY DRIVE
BELLA VISTA, ARKANSAS 72714

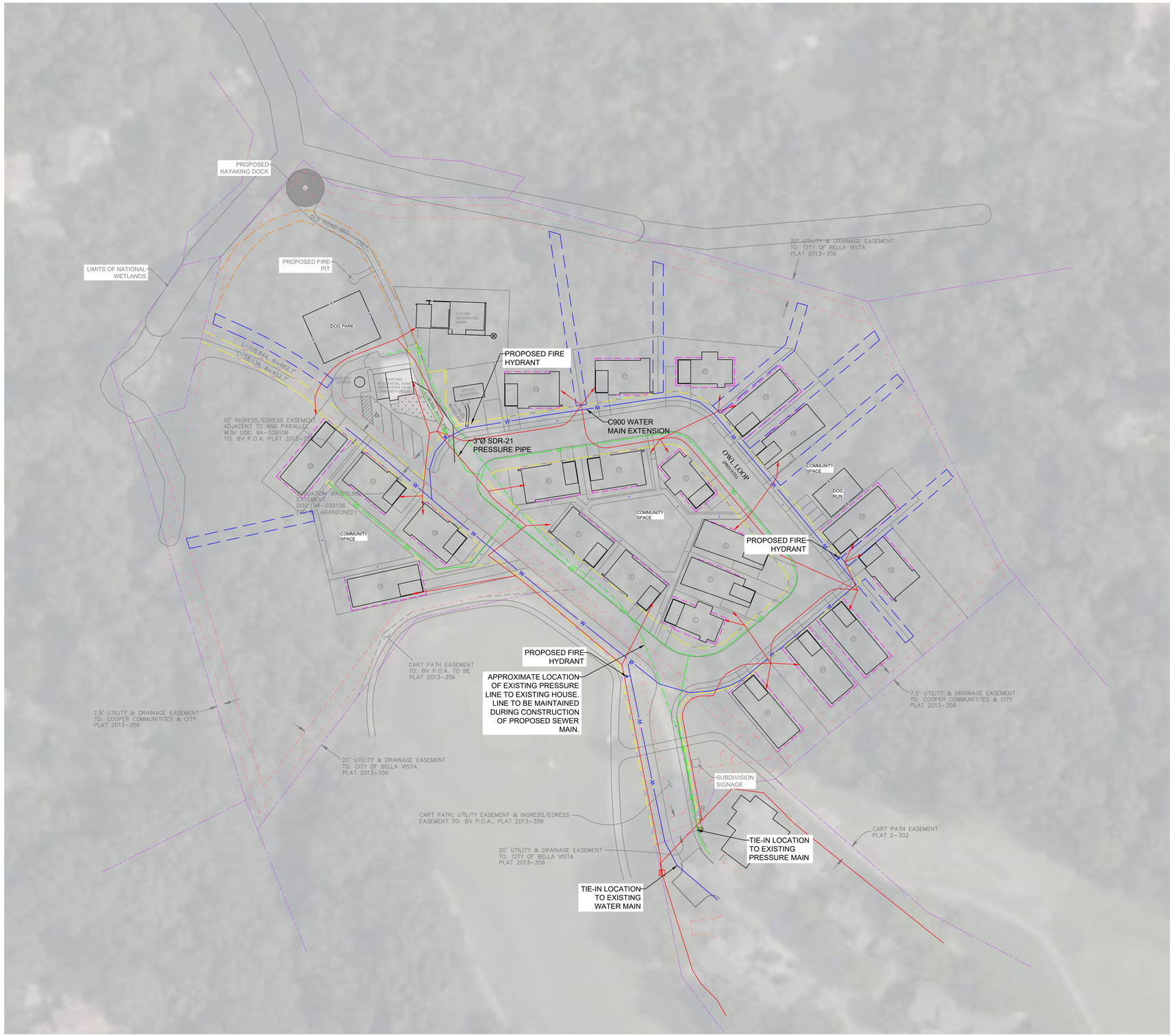
C-3.1

PROPOSED PLATTING / SUBDIVISION OF LAND

PROJECT NUMBER:
230082
DATE:
03/28/2025

ZANEVAN ENGINEERING
PHONE: 417-905-2500
22 N. 3rd ST.
CARTHAGE, MO 64836

ARKANSAS CERTIFICATE OF AUTHORITY #4090



LEGEND

- WATER MAIN
- 3"Ø SDR-21 SEWER PRESSURE MAIN
- PRELIMINARY ELECTRIC SERVICE
- PROPOSED UTILITY AND ACCESS EASEMENT
- PROPOSED ACCESS EASEMENT
- PROPOSED DRAINAGE EASEMENT
- EXISTING EASEMENTS
- PROPOSED PROPERTY LINES
- EXISTING PROPERTY LINES

NOTE:

ELECTRICAL INFORMATION IS PRELIMINARY AND ONLY SHOWN FOR REFERENCE. FINAL LAYOUT AND ELECTRICAL PLANS WILL BE PROVIDED BY CARROLL ELECTRIC COOPERATIVE CORPORATION.

ARKANSAS REGISTERED PROFESSIONAL ENGINEER
JOHN JASON ECKHART
P-11533
5-9-2025

ARKANSAS CERTIFICATE OF AUTHORITY #2050

REVISIONS

NO.	DESCRIPTION	BY	DATE

OWL COMMONS

102 FAIRWAY DRIVE
BELLA VISTA, ARKANSAS 72714

C-3.2
UTILITY PLAN

PROJECT NUMBER: 230082
DATE: 03/28/2025

ZANEVAN ENGINEERING
PHONE: 417-800-2500
1221 OAK ST.
CARTHAGE, MO 64836

ARKANSAS CERTIFICATE OF AUTHORITY #4050

NOTES:

SITE DRAINAGE IS TO UTILIZE EXISTING DRAINAGE EASEMENTS ALONG THE NORTHERN EDGE OF THE PROPERTY LIMITS. THE SITE'S TOPOGRAPHY NATURALLY DRAINS TO THESE SWALES INTO LAKE BRITTANY.

INTERNAL DRAINAGE IS EITHER TO BE GRADED TO VEGETATIVE SWALES, DENOTED AS "MAJOR SITE DRAINAGE SWALE" OR SHEET FLOW TO THE EXISTING DRAINAGE EASEMENTS TO TAKE ADVANTAGE OF THE EXISTING VEGETATION TO PREVENT ADDITIONAL SEDIMENTATION FROM FLOWING INTO LAKE BRITTANY.

THE SITE IS NOT EXPECTED TO UTILIZE BELOW GRADE STORMWATER DETENTION STRUCTURES.

ARKANSAS REGISTERED PROFESSIONAL ENGINEER
JOHN JASON ECKHART
PE-11539
5/9/2025

ARKANSAS CERTIFICATE OF AUTHORITY #4000

REVISIONS

NO.	DESCRIPTION	BY	DATE

OWL COMMONS

102 FAIRWAY DRIVE
BELLA VISTA, ARKANSAS 72714

C-3.3

PRELIMINARY DRAINAGE PLAN

PROJECT NUMBER: 230082
DATE: 03/28/2025

ZANEVAN ENGINEERING
PHONE: 417-862-2500
1221 OWL ST.
CARTHAGE, MO 64836

ARKANSAS CERTIFICATE OF AUTHORITY #4000

LEGEND

- PINE TREE (TO BE RETAINED)
- MISC. TREES (TO BE RETAINED)
- TREE COVERED AREAS (TO BE RETAINED AS PERMITTED BY GRADING).

NOTES:

THE SITE IS CONSIDERED TO BE HEAVILY WOODED WITH A NUMBER OF TREES OVER 6" OR MORE IN SIZE. TREES DESIGNATED ABOVE ARE MARKED OUT AS THOSE PLANNED TO BE RETAINED POST-CONTRUCTION.

SITE DESIGN AND CONSTRUCTION ARE TO BE DESIGNED IN SUCH A WAY TO LIMIT THE CUTTING DOWN OF AS MANY TREES AS POSSIBLE. FINAL PLANS WILL SHOW LIMITS OF GRADING.

MISC. TREES AS SHOWN ARE WITHIN A HEAVILY WOODED AREA. EXACT TREES WHICH REMAIN MAY VARY.

ARKANSAS REGISTERED PROFESSIONAL ENGINEER
5/9/2025
JOHN JASON ECKHART
PE-11539

ARKANSAS CERTIFICATE OF AUTHORITY #4090

REVISIONS

NO.	DESCRIPTION	BY	DATE

OWL COMMONS

102 FAIRWAY DRIVE
BELLA VISTA, ARKANSAS 72714

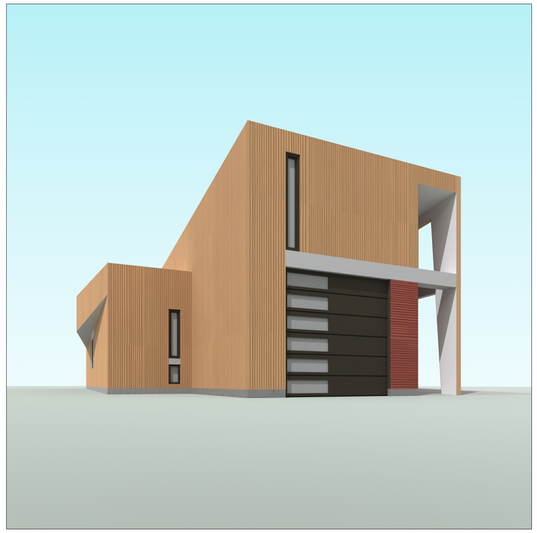
C-3.4

BUFFERING & SCREENING

PROJECT NUMBER: 230082
DATE: 03/28/2025

ZANEVAN ENGINEERING
PHONE: 417-862-2500
121 OWL ST.
CARTHAGE, MO 64836

ARKANSAS CERTIFICATE OF AUTHORITY #4090



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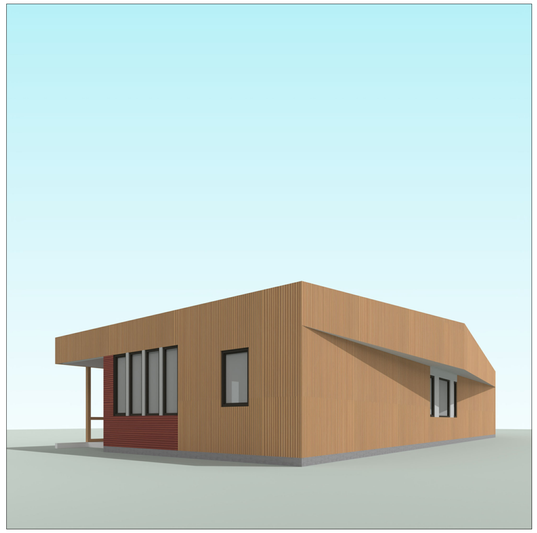

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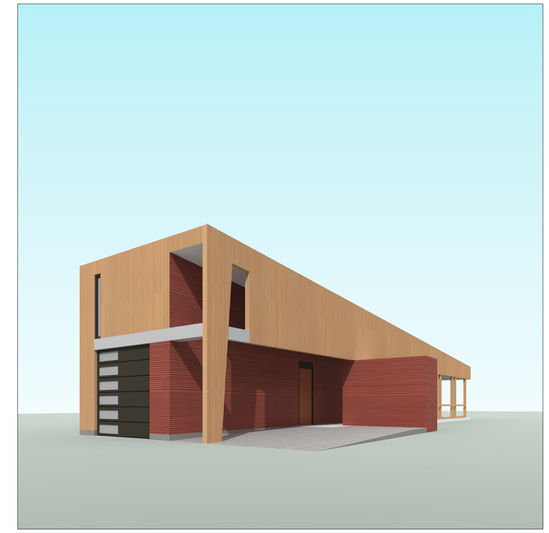
VIEW 2



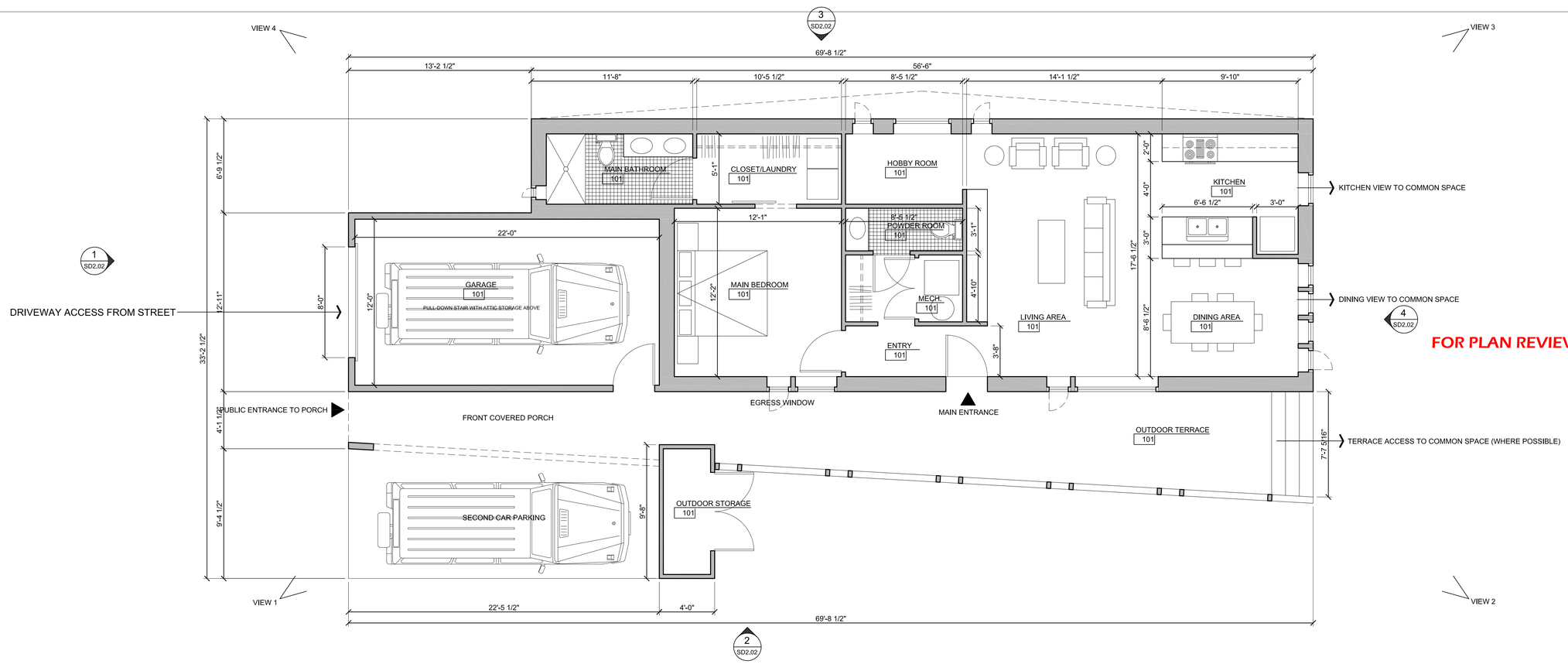
VIEW 1

COLORS ARE APPROXIMATIONS OF "RUSTIC" AND "TAN" LISTED IN THE MATERIAL COLOR CHARTS. FINAL COLORS OF BUILDING MATERIALS ARE GREATLY DEPENDENT ON FACTORS SUCH AS LIGHT, ATMOSPHERIC CONDITIONS, AND WEAR.

SEE FLOOR PLAN FOR VIEW LOCATIONS

2 SD2.01 TYPE A1 - 1- BEDROOM PLUS - NARROW FACE TOWARD STREET - EXTERIOR VIEWS

SCALE: NOT TO SCALE



FOR PLAN REVIEW PURPOSE ONLY

1 SD2.01 TYPE A1 - 1-BEDROOM PLUS - 998 SF OUTSIDE FACE OF WALL (EXCLUDING GARAGE) - 838 SF INTERIOR FLOOR AREA

SCALE: 1/4" = 1'-0"

REVISIONS

PRELIMINARY
FOR PZD APPLICATION ONLY

OWL COMMONS HOUSES
102 FAIRWAY DRIVE (CURRENT ADDRESS)
BELLA VISTA, ARKANSAS 72714

architects 226 inc. 3259 north kings cross fayetteville, arkansas 72703 479.283.4977

Project #
DATE: MAR. 30, 2025
Drawn: rr
Checked: yr

a226 architects 226 inc

PLAN TYPE A1
PRELIMINARY PLAN

SCHEMATIC DESIGN 02

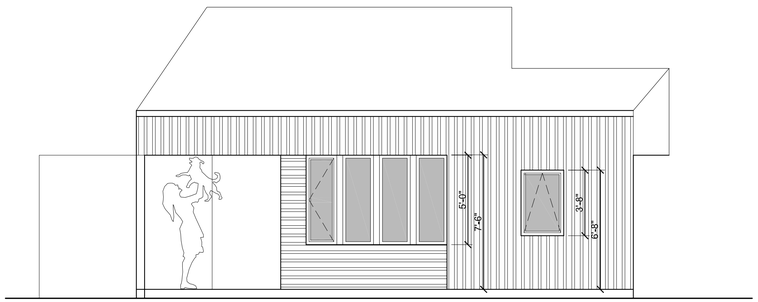
SD2.01

GENERAL NOTES ON ELEVATIONS:

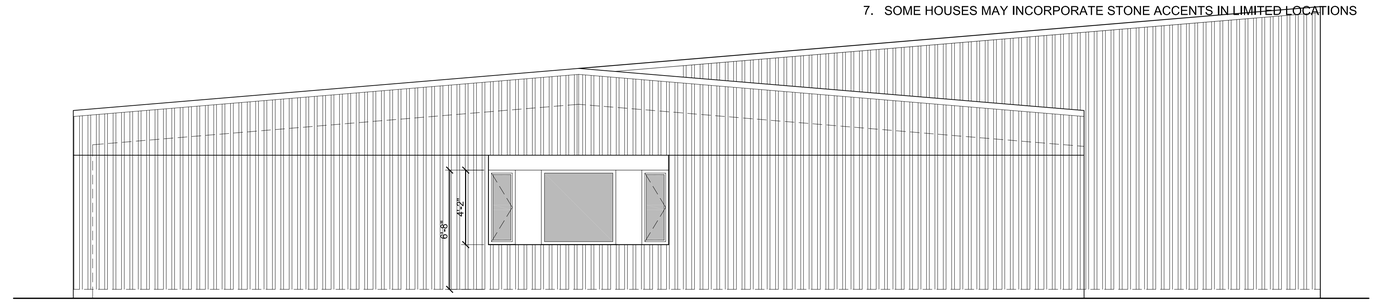
METAL PANELS OF COLOR "A"

METAL PANELS OF SECOND COLOR

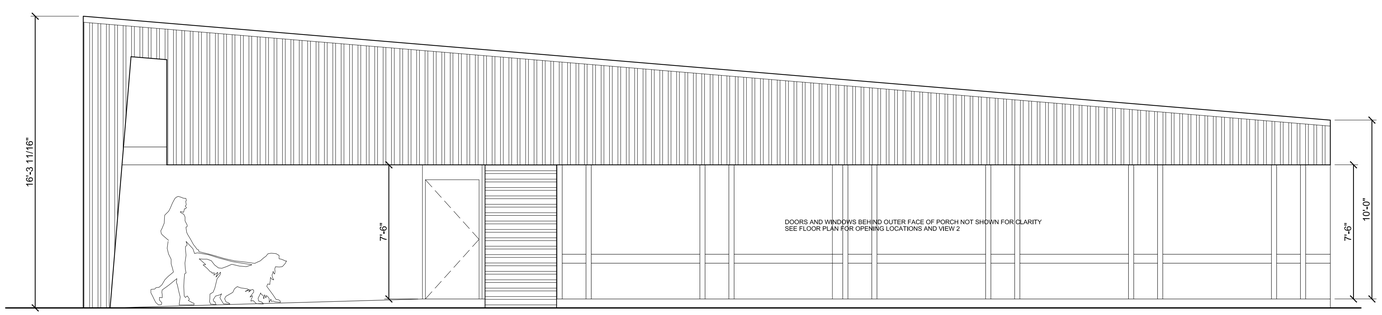
1. PREFINISHED METAL WALL CLADDING TYPICAL FOR ALL EXTERIOR WALLS
2. PREFINISHED METAL STANDING SEAM ROOF TYPICAL FOR ALL LOW-SLOPE ROOF SURFACES.
3. PREFINISHED METAL TRIM, GUTTERS AND DOWNSPOUTS TO MATCH COLOR OF ADJACENT WALL OR FASCIA SURFACES
4. FIBERGLASS WINDOW FRAMES AND INSULATED GLASS
5. EXTERIOR DOORS MAY BE PAINTED ACCENT COLOR AS ALLOWED IN THE BELLA VISTA DESIGN GUIDELINES.
6. FOUNDATIONS TO BE CMU WITH EITHER A PAINTED SURFACE TO MATCH ADJACENT WALL PANELS, ARCHITECTURAL DECORATIVE BLOCK, STAINED TO MATCH ADJACENT WALL PANELS, OR INTEGRALLY COLORED CMU.
7. SOME HOUSES MAY INCORPORATE STONE ACCENTS IN LIMITED LOCATIONS



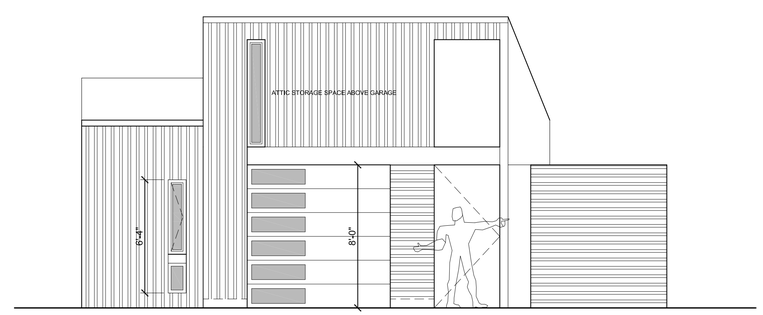
4 SD2.02 TYPE A1 - 1-BEDROOM PLUS - WOODS/COMMON SPACE ELEV.
SCALE: 1/4" = 1'-0"



3 SD2.02 TYPE A1 - 1-BEDROOM PLUS - PRIVATE SIDE ELEVATION
SCALE: 1/4" = 1'-0"



2 SD2.02 TYPE A1 - 1-BEDROOM PLUS ONE STORY - PORCH ELEVATION
SCALE: 1/4" = 1'-0"



GENERAL NOTES ON FOUNDATIONS:

THESE HOUSE TYPES ARE ILLUSTRATED ON A FLAT GROUND PLANE. GIVEN THE VARIETY OF HOUSE TYPES AND VARIED TOPOGRAPHY OF THE DEVELOPMENT, MANY HOUSES WILL HAVE EXPOSED FOUNDATION WALLS. CARE HAS BEEN TAKEN TO LOCATE THE STREET-FACING SIDE OF THE HOUSE AT GRADE SO THAT ANY EXPOSED FOUNDATION WALLS WILL OCCUR BETWEEN HOUSES AND AT THE REAR.

1 SD2.02 TYPE A1 - 1-BEDROOM PLUS ONE STORY - STREET ELEVATION
SCALE: 1/4" = 1'-0"

REVISIONS

PRELIMINARY
FOR PZD APPLICATION ONLY

OWL COMMONS HOUSES
102 FAIRWAY DRIVE (CURRENT ADDRESS)
BELLA VISTA, ARKANSAS 72714

architects 226 inc. 3259 north kings cross fayetteville, arkansas 72703 479.283.4977

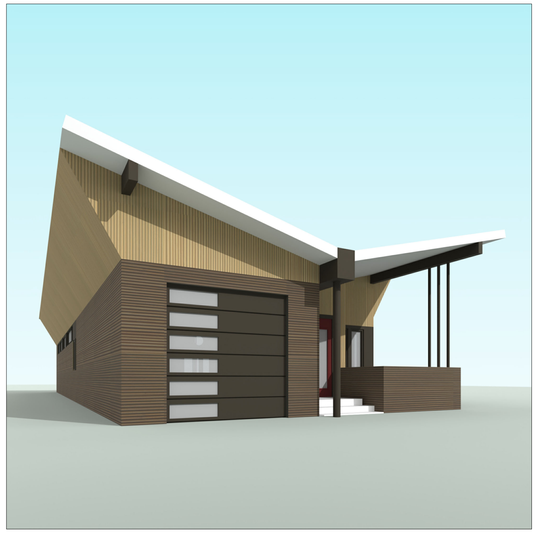
Project #
DATE: MAR. 30, 2025
Drawn: rr
Checked: yr

architects 226 inc

PLAN TYPE A1
PRELIM. ELEVATIONS

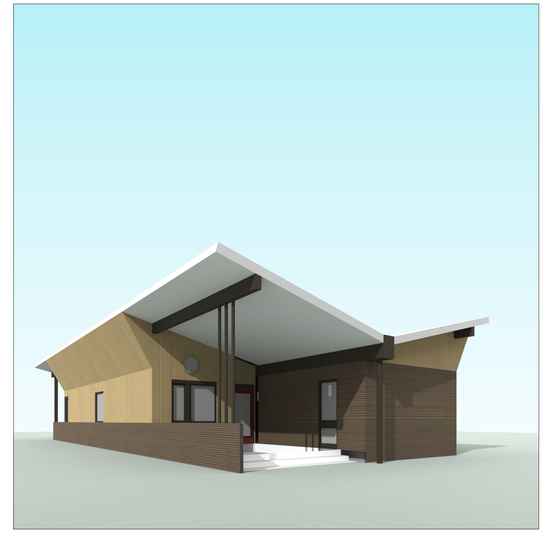
SCHEMATIC DESIGN 02

SD2.02

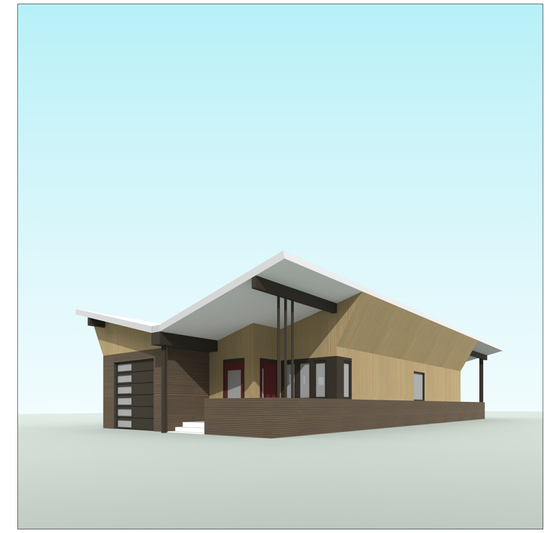


VIEW 4

VIEW 3



VIEW 2



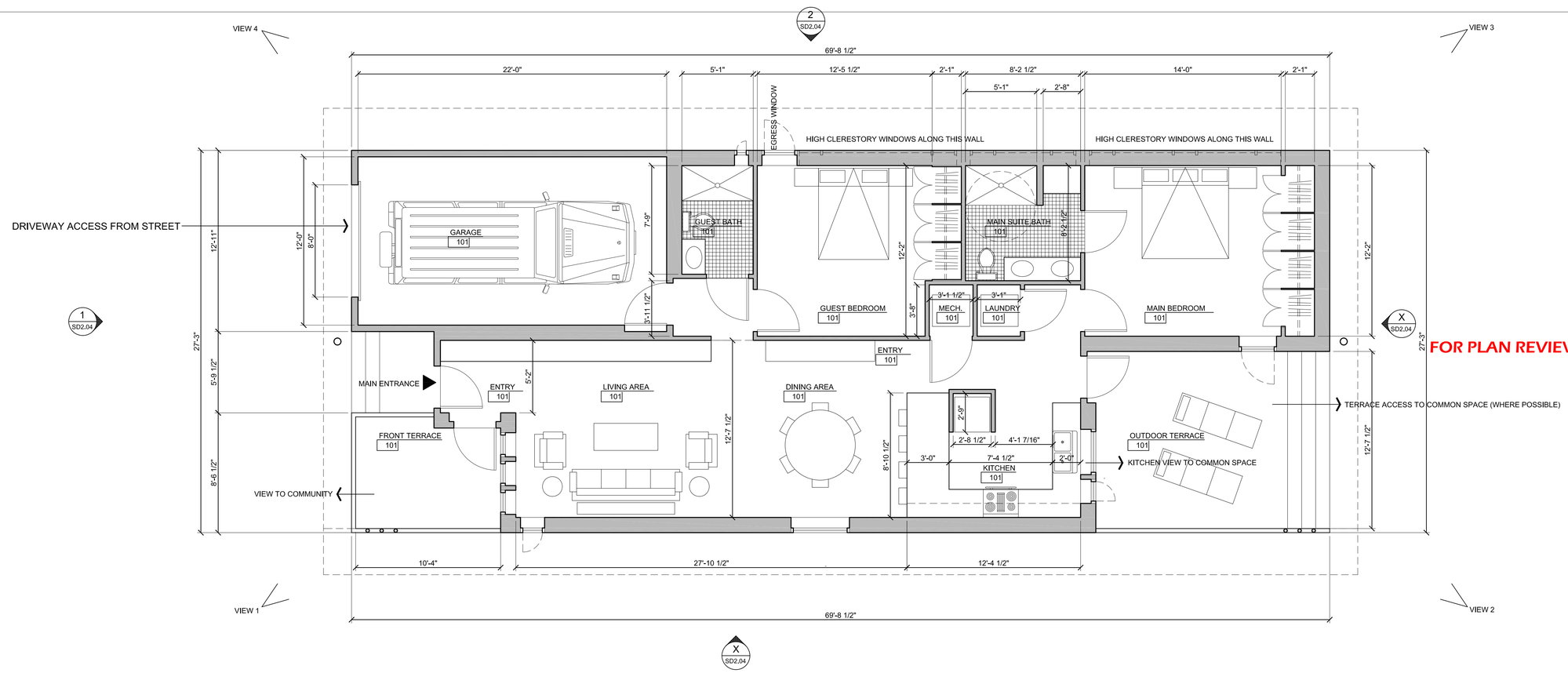
VIEW 1

COLORS ARE APPROXIMATIONS OF "BURNISHED SLATE" AND "DESERT" LISTED IN THE MATERIAL COLOR CHARTS. FINAL COLORS OF BUILDING MATERIALS ARE GREATLY DEPENDENT ON FACTORS SUCH AS LIGHT, ATMOSPHERIC CONDITIONS, AND WEAR.

2 / SD2.03 TYPE A2 - 2- BEDROOM - ONE STORY - NARROW FACE TOWARD STREET - EXTERIOR VIEWS

SCALE: NOT TO SCALE

SEE FLOOR PLAN FOR VIEW LOCATIONS



FOR PLAN REVIEW PURPOSE ONLY

1 / SD2.03 TYPE A2 - 2-BEDROOM - ONE STORY - 1,282 SF OUTSIDE FACE OF WALL (EXCLUDING GARAGE) - 1,092 SF INTERIOR FLOOR AREA

SCALE: 1/4" = 1'-0"

REVISIONS

PRELIMINARY
FOR PZD APPLICATION ONLY

OWL COMMONS HOUSES
102 FAIRWAY DRIVE (CURRENT ADDRESS)
BELLA VISTA, ARKANSAS 72714

architects 226 inc. 3259 north kings cross fayetteville, arkansas 72703 479.283.4977

Project #
DATE: MAR. 30, 2025
Drawn: rr
Checked: yr

a226 architects 226 inc

PLAN TYPE A2
PRELIMINARY PLAN

SCHEMATIC DESIGN 02

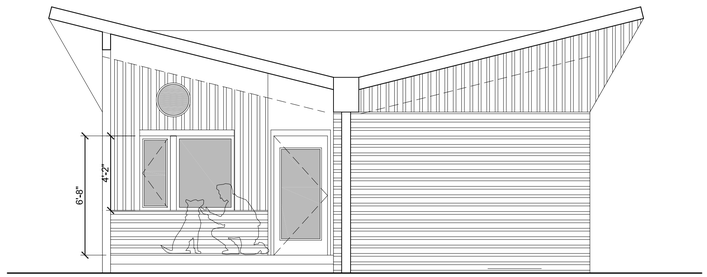
SD2.03

GENERAL NOTES ON ELEVATIONS:

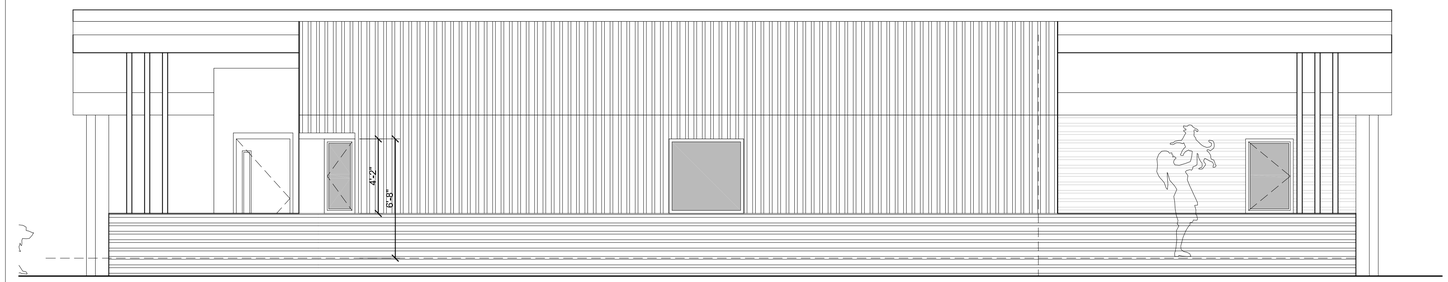
METAL PANELS OF COLOR "A"

METAL PANELS OF SECOND COLOR

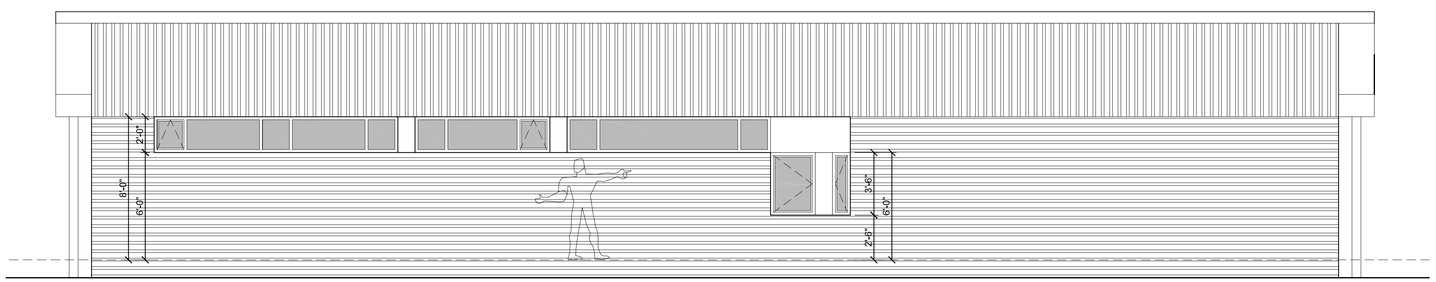
1. PREFINISHED METAL WALL CLADDING TYPICAL FOR ALL EXTERIOR WALLS
2. PREFINISHED METAL STANDING SEAM ROOF TYPICAL FOR ALL LOW-SLOPE ROOF SURFACES.
3. PREFINISHED METAL TRIM, GUTTERS AND DOWNSPOUTS TO MATCH COLOR OF ADJACENT WALL OR FASCIA SURFACES
4. FIBERGLASS WINDOW FRAMES AND INSULATED GLASS
5. EXTERIOR DOORS MAY BE PAINTED ACCENT COLOR AS ALLOWED IN THE BELLA VISTA DESIGN GUIDELINES.
6. FOUNDATIONS TO BE CMU WITH EITHER A PAINTED SURFACE TO MATCH ADJACENT WALL PANELS, ARCHITECTURAL DECORATIVE BLOCK, STAINED TO MATCH ADJACENT WALL PANELS, OR INTEGRALLY COLORED CMU.
7. SOME HOUSES MAY INCORPORATE STONE ACCENTS IN LIMITED LOCATIONS



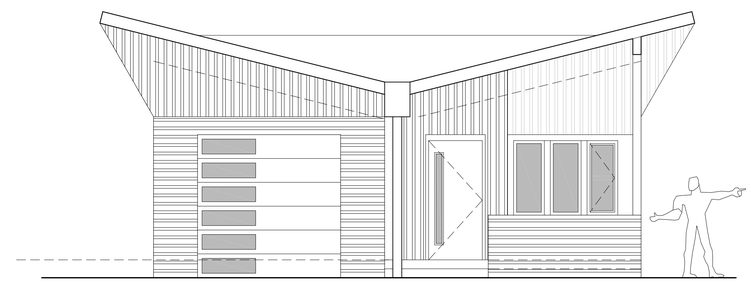
4 SD2.04 TYPE A2 - 2-BEDROOM - ONE STORY - COMMON SPACE ELEV.
SCALE: 1/4" = 1'-0"



3 SD2.04 TYPE A2 - 2-BEDROOM ONE STORY - PRIVATE SIDE ELEVATION
SCALE: 1/4" = 1'-0"



2 SD2.04 TYPE A2- 2-BEDROOM - ONE STORY - PRIVATE ELEVATION
SCALE: 1/4" = 1'-0"



1 SD2.04 TYPE A2 - 2-BEDROOM ONE STORY - STREET ELEVATION
SCALE: 1/4" = 1'-0"

GENERAL NOTES ON FOUNDATIONS:

THESE HOUSE TYPES ARE ILLUSTRATED ON A FLAT GROUND PLANE. GIVEN THE VARIETY OF HOUSE TYPES AND VARIED TOPOGRAPHY OF THE DEVELOPMENT, MANY HOUSES WILL HAVE EXPOSED FOUNDATION WALLS. CARE HAS BEEN TAKEN TO LOCATE THE STREET-FACING SIDE OF THE HOUSE AT GRADE SO THAT ANY EXPOSED FOUNDATION WALLS WILL OCCUR BETWEEN HOUSES AND AT THE REAR.

REVISIONS

PRELIMINARY
FOR PZD APPLICATION ONLY

OWL COMMONS HOUSES
102 FAIRWAY DRIVE (CURRENT ADDRESS)
BELLA VISTA, ARKANSAS 72714

architects 226 inc. 3259 north kings cross fayetteville, arkansas 72703 479.283.4977

Project #
DATE: MAR. 30, 2025
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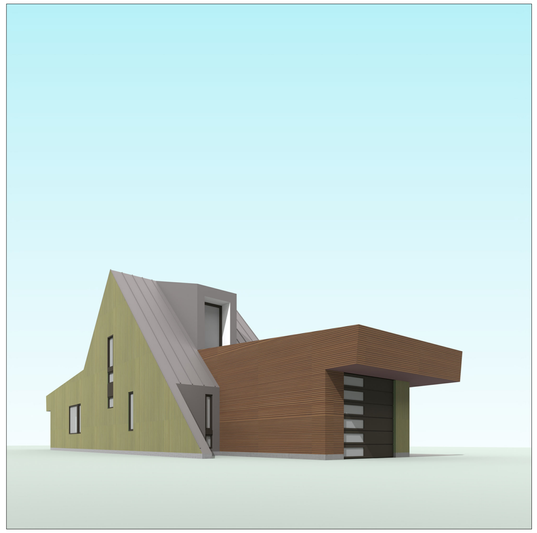
Checked: yr

architects 226 inc

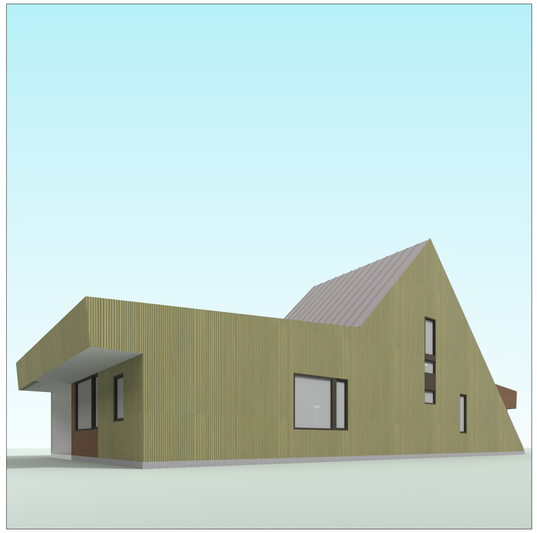
PLAN TYPE A2
PRELIM. ELEVATIONS

SCHEMATIC DESIGN 02

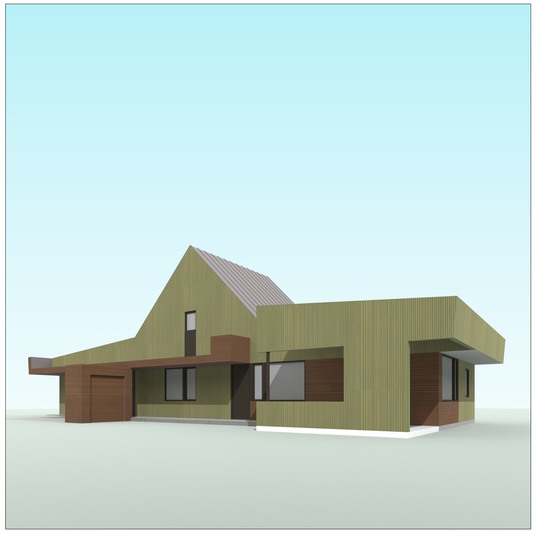
SD2.04



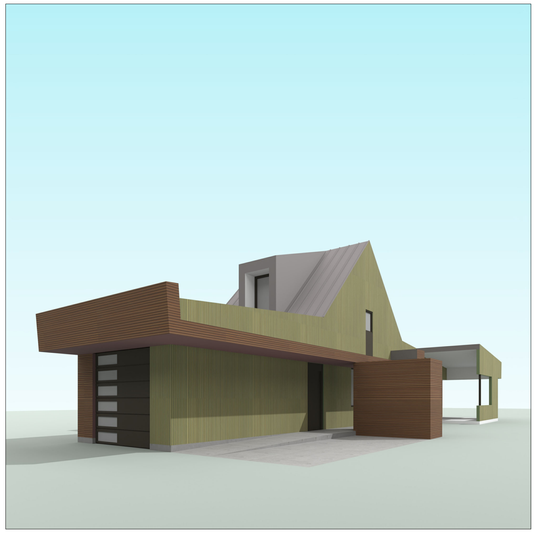
VIEW 4



VIEW 3



VIEW 2



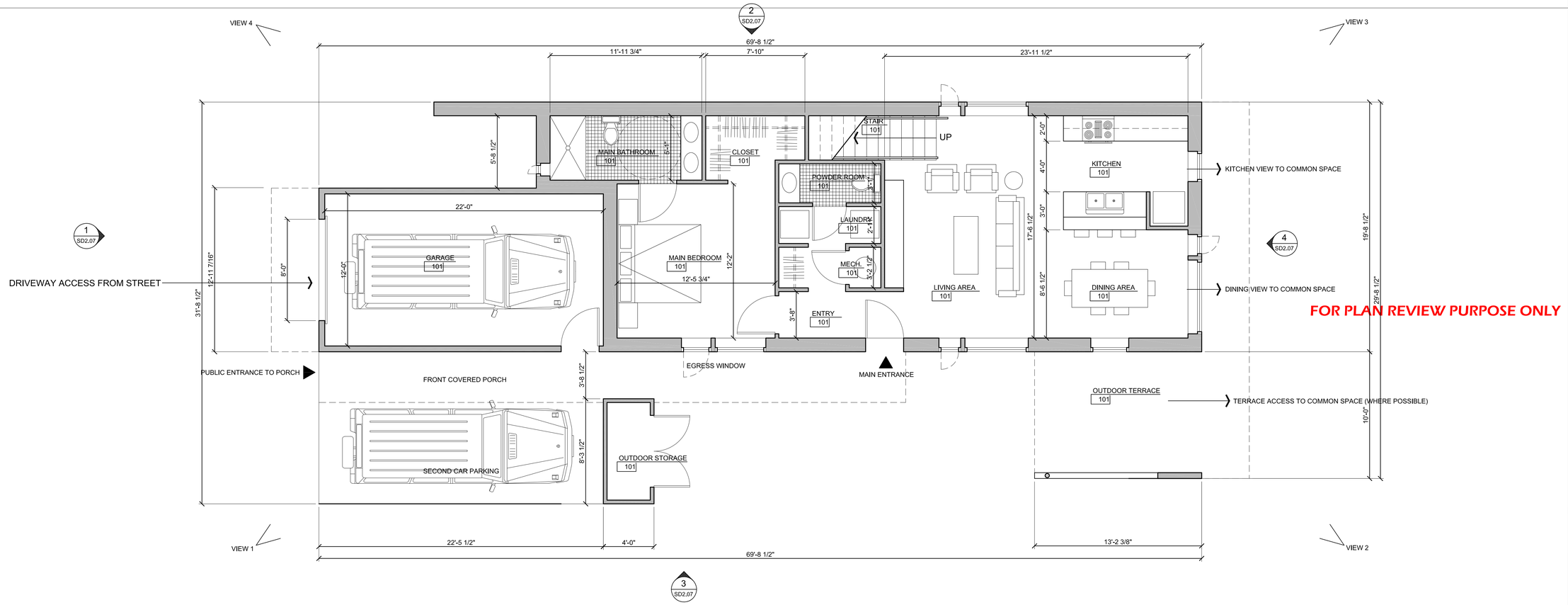
VIEW 1

COLORS ARE APPROXIMATIONS OF "COLONY" AND "BROWN" LISTED IN THE MATERIAL COLOR CHARTS. FINAL COLORS OF BUILDING MATERIALS ARE GREATLY DEPENDENT ON FACTORS SUCH AS LIGHT, ATMOSPHERIC CONDITIONS, AND WEAR.

2 / SD2.05 TYPE A3 - 2-BEDROOM - TWO STORY - NARROW FACE TOWARD STREET - EXTERIOR VIEWS

SCALE: NOT TO SCALE

SEE FLOOR PLAN FOR VIEW LOCATIONS



FOR PLAN REVIEW PURPOSE ONLY

1 / SD2.05 TYPE A3 - 2-BEDROOM - TWO STORY - 1,282 SF OUTSIDE FACE OF WALL (EXCLUDING GARAGE) - 1,043 SF INTERIOR FLOOR AREA

SCALE: 1/4" = 1'-0"

REVISIONS

PRELIMINARY
FOR PZD APPLICATION ONLY

OWL COMMONS HOUSES
102 FAIRWAY DRIVE (CURRENT ADDRESS)
BELLA VISTA, ARKANSAS 72714

architects 226 inc. 3259 north kings cross fayetteville, arkansas 72703 479.283.4977

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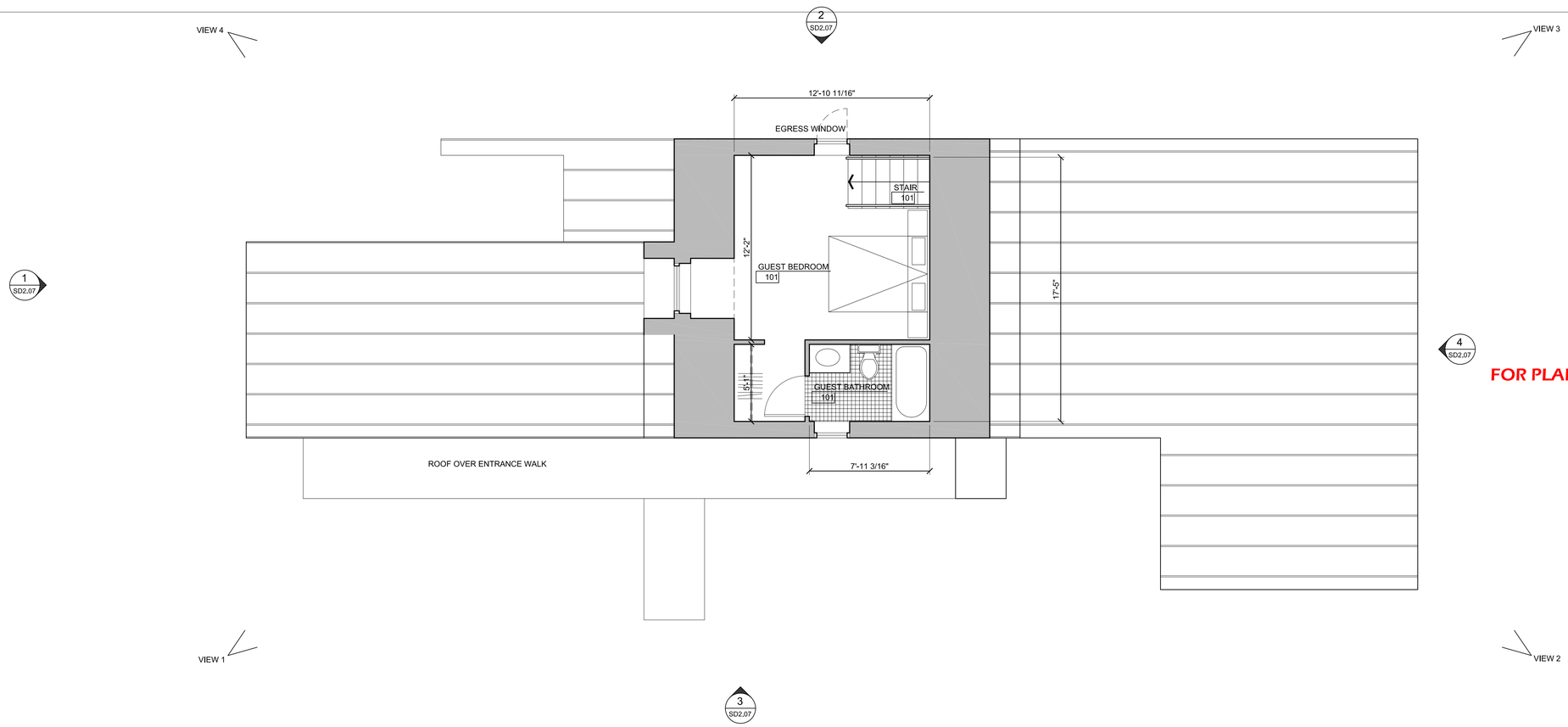
architects 226 inc

PLAN TYPE A3
PRELIMINARY PLAN

SCHEMATIC DESIGN 02

SD2.05



FOR PLAN REVIEW PURPOSE ONLY

1 SD2.06 TYPE A3 - 2-BEDROOM - TWO STORY - SECOND FLOOR PLAN

SCALE: 1/4" = 1'-0"

REVISIONS

PRELIMINARY
FOR PZD APPLICATION ONLY

OWL COMMONS HOUSES
102 FAIRWAY DRIVE (CURRENT ADDRESS)
BELLA VISTA, ARKANSAS 72714

architects 226 inc. 3259 north kings cross fayetteville, arkansas 72703 479.283.4977

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PLAN TYPE A3
SECOND FLOOR PLAN

SCHEMATIC DESIGN 02

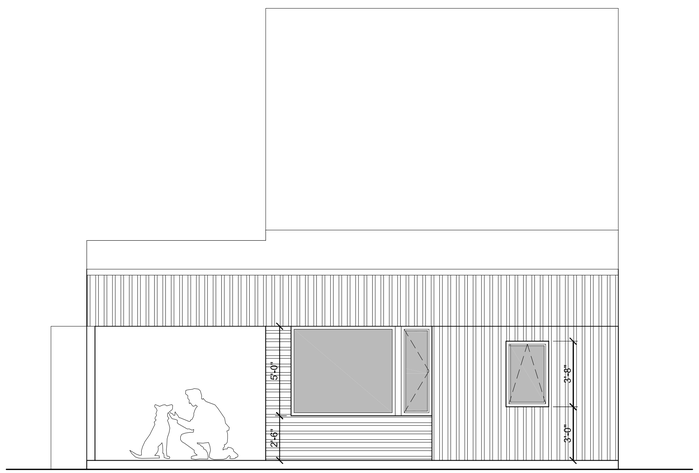
SD2.06

GENERAL NOTES ON ELEVATIONS:

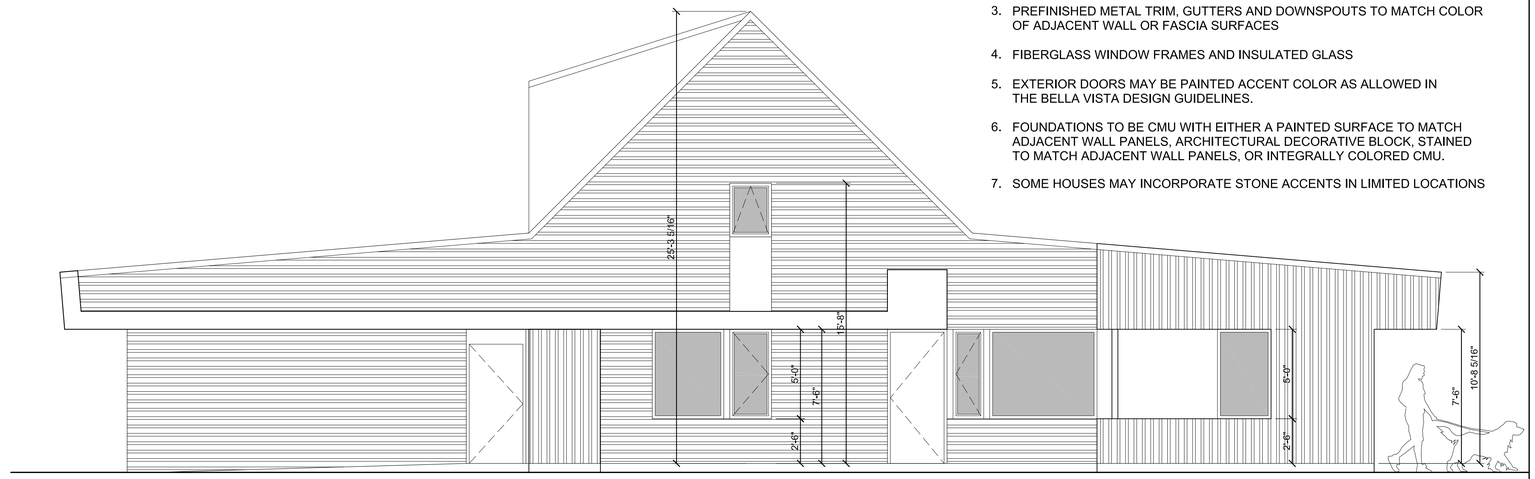
METAL PANELS OF COLOR "A"

METAL PANELS OF SECOND COLOR

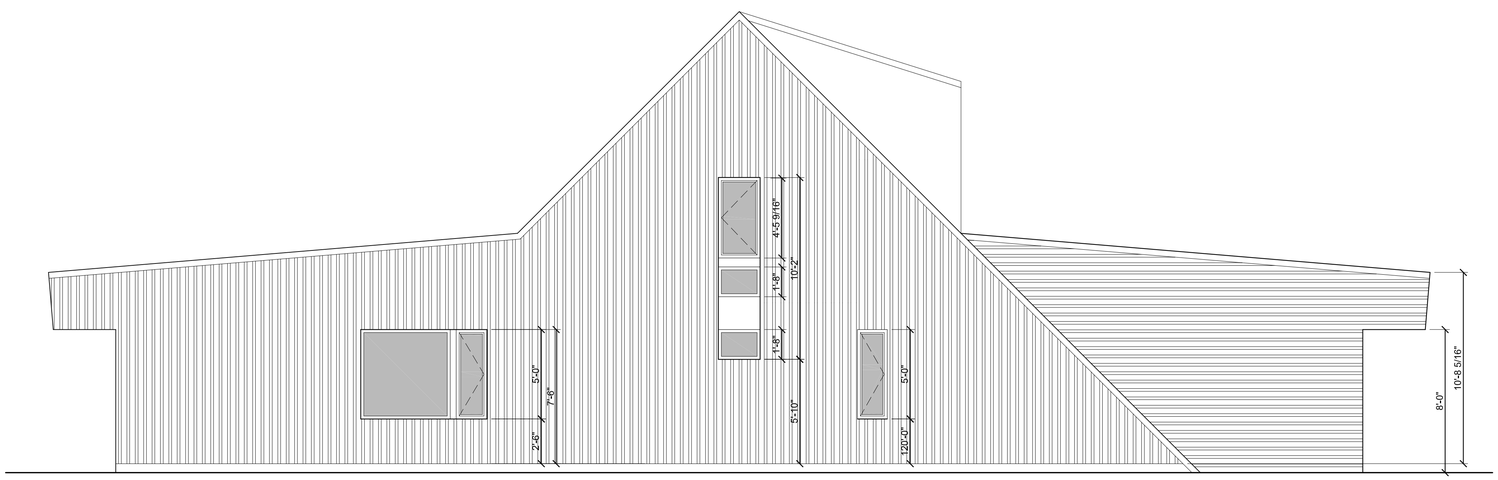
1. PREFINISHED METAL WALL CLADDING TYPICAL FOR ALL EXTERIOR WALLS
2. PREFINISHED METAL STANDING SEAM ROOF TYPICAL FOR ALL LOW-SLOPE ROOF SURFACES.
3. PREFINISHED METAL TRIM, GUTTERS AND DOWNSPOUTS TO MATCH COLOR OF ADJACENT WALL OR FASCIA SURFACES
4. FIBERGLASS WINDOW FRAMES AND INSULATED GLASS
5. EXTERIOR DOORS MAY BE PAINTED ACCENT COLOR AS ALLOWED IN THE BELLA VISTA DESIGN GUIDELINES.
6. FOUNDATIONS TO BE CMU WITH EITHER A PAINTED SURFACE TO MATCH ADJACENT WALL PANELS, ARCHITECTURAL DECORATIVE BLOCK, STAINED TO MATCH ADJACENT WALL PANELS, OR INTEGRALLY COLORED CMU.
7. SOME HOUSES MAY INCORPORATE STONE ACCENTS IN LIMITED LOCATIONS



4 SD2.07 TYPE A3 - 2-BEDROOM - TWO STORY END ELEVATION
SCALE: 1/4" = 1'-0"



2 SD2.07 TYPE A3 - 2-BEDROOM -TWO STORY - PORCH SIDE ELEVATION
SCALE: 1/4" = 1'-0"



2 SD2.07 TYPE A3 - 2-BEDROOM - TWO STORY - SIDE ELEVATION
SCALE: 1/4" = 1'-0"

GENERAL NOTES ON FOUNDATIONS:

THESE HOUSE TYPES ARE ILLUSTRATED ON A FLAT GROUND PLANE. GIVEN THE VARIETY OF HOUSE TYPES AND VARIED TOPOGRAPHY OF THE DEVELOPMENT, MANY HOUSES WILL HAVE EXPOSED FOUNDATION WALLS. CARE HAS BEEN TAKEN TO LOCATE THE STREET-FACING SIDE OF THE HOUSE AT GRADE SO THAT ANY EXPOSED FOUNDATION WALLS WILL OCCUR BETWEEN HOUSES AND AT THE REAR.

1 SD2.07 TYPE A3 - 2-BEDROOM - TWO STORY - STREET ELEV.
SCALE: 1/4" = 1'-0"

REVISIONS

PRELIMINARY
FOR PZD APPLICATION ONLY

OWL COMMONS HOUSES
102 FAIRWAY DRIVE (CURRENT ADDRESS)
BELLA VISTA, ARKANSAS 72714

architects 226 inc. 3259 north kings cross fayetteville, arkansas 72703 479.283.4977

Project #
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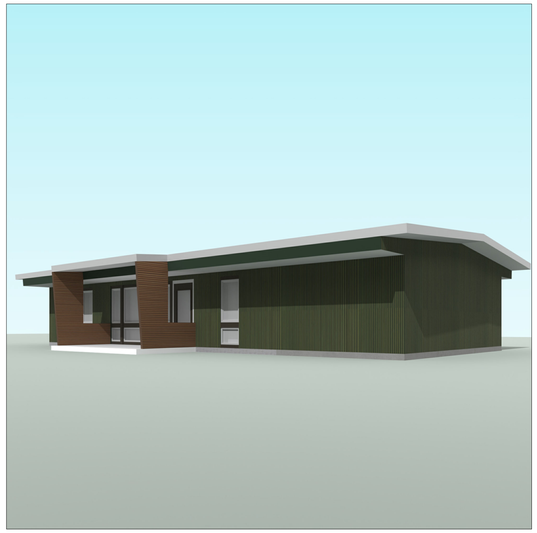
architects 226 inc

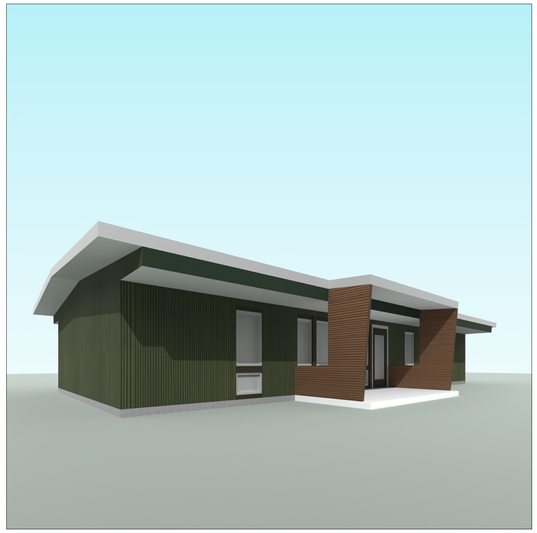
PLAN TYPE A3
PRELIM. ELEVATIONS

SCHEMATIC DESIGN 02

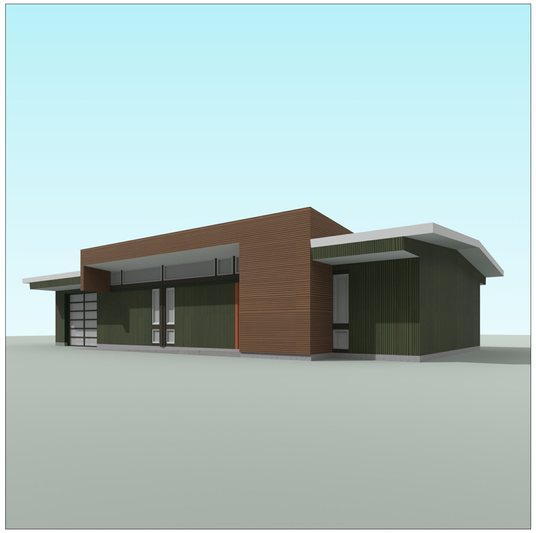
SD2.07



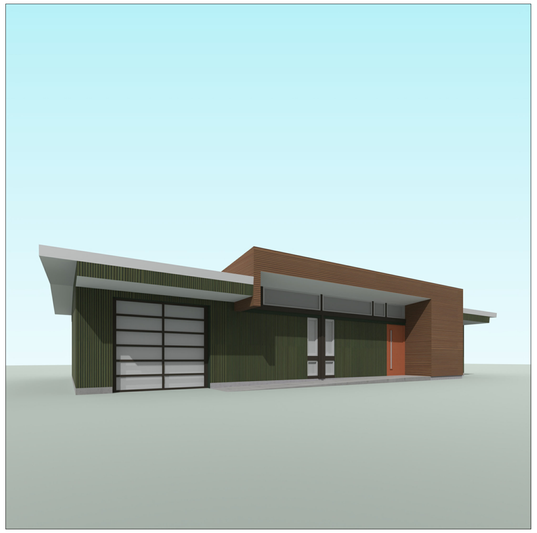
VIEW 4 TERRACE AND LIVING SPACE VIEW OUT TO COMMON SPACES



VIEW 3



VIEW 2



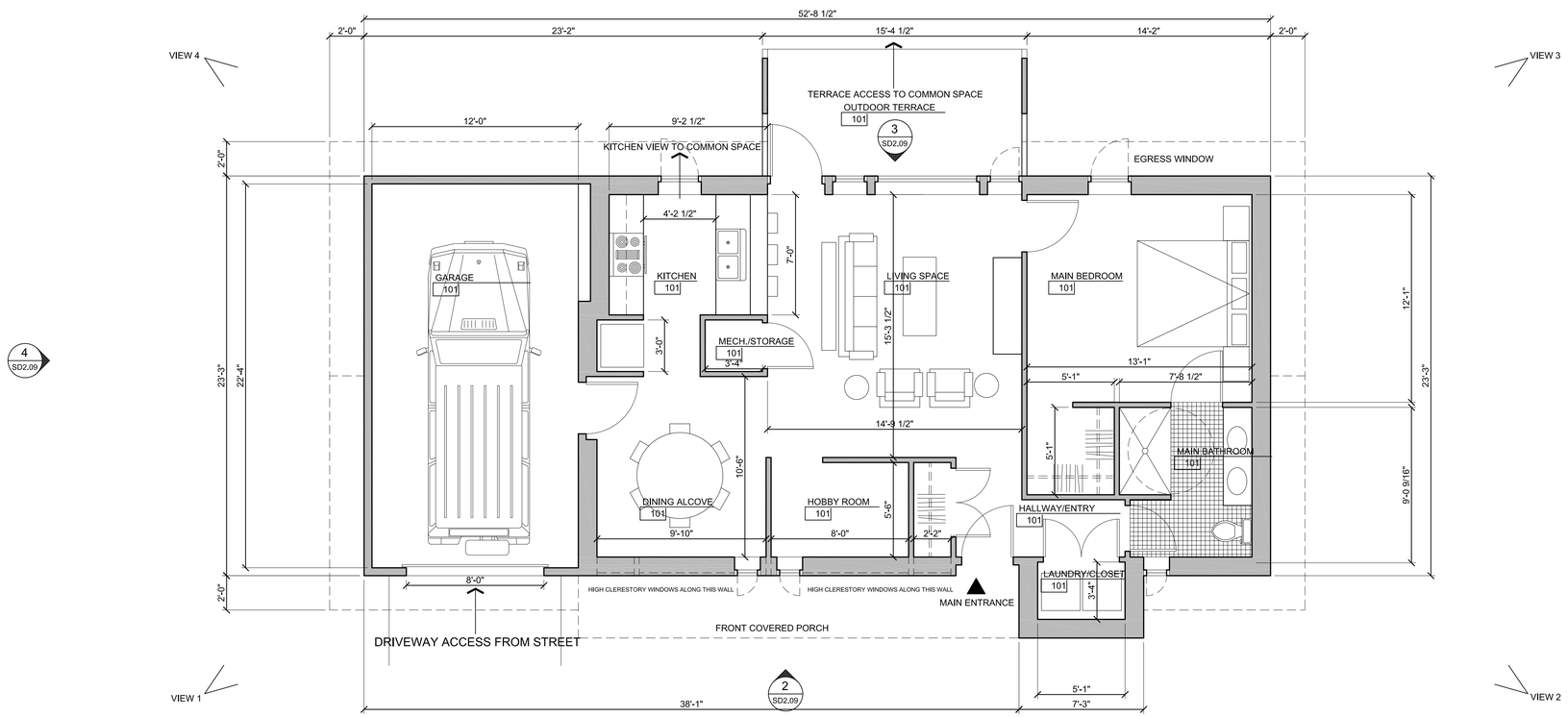
VIEW 1

COLORS ARE APPROXIMATIONS OF "FERN" AND "BROWN" LISTED IN THE MATERIAL COLOR CHARTS. FINAL COLORS OF BUILDING MATERIALS ARE GREATLY DEPENDENT ON FACTORS SUCH AS LIGHT, ATMOSPHERIC CONDITIONS, AND WEAR.

SEE FLOOR PLAN FOR VIEW LOCATIONS

2 / SD2.08 TYPE B1 - 1 BEDROOM PLUS - BROAD FACE TOWARD STREET - EXTERIOR VIEWS

SCALE: NOT TO SCALE



FOR PLAN REVIEW PURPOSE ONLY

1 / SD2.08 TYPE B1 - 1-BEDROOM PLUS - 956 SF OUTSIDE FACE OF WALL (EXCLUDING GARAGE) - 816 SF INTERIOR FLOOR AREA

SCALE: 1/4" = 1'-0"

REVISIONS

PRELIMINARY
FOR PZD APPLICATION ONLY

OWL COMMONS HOUSES
102 FAIRWAY DRIVE (CURRENT ADDRESS)
BELLA VISTA, ARKANSAS 72714

architects 226 inc. 3259 north kings cross fayetteville, arkansas 72703 479.283.4977

Project #
DATE: MAR. 30, 2025
Drawn: rr
Checked: yr

architects 226 inc

PLAN TYPE B1
PRELIMINARY PLAN

SCHEMATIC DESIGN 02

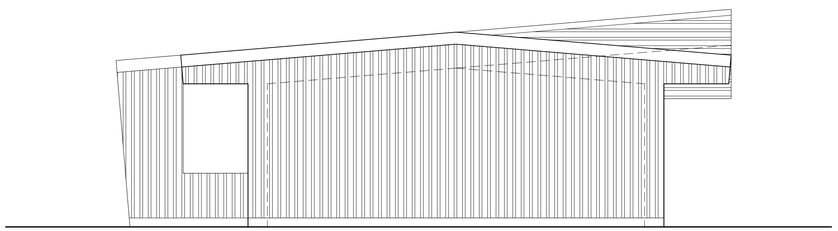
SD2.08

GENERAL NOTES ON ELEVATIONS:

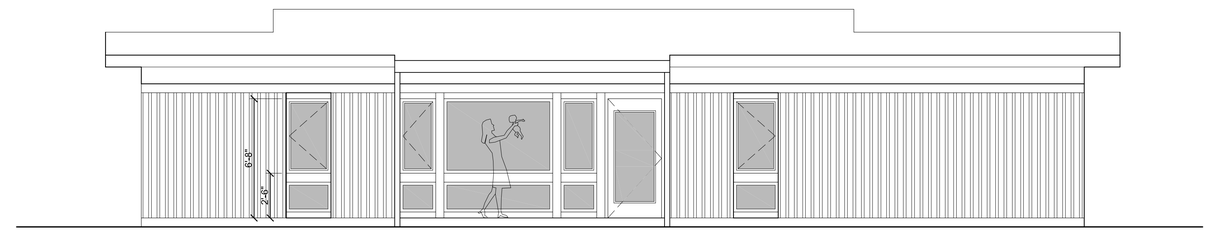
METAL PANELS OF COLOR "A"

METAL PANELS OF SECOND COLOR

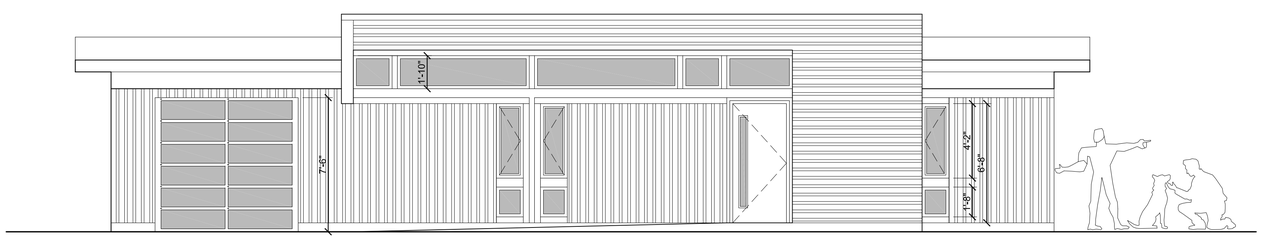
1. PREFINISHED METAL WALL CLADDING TYPICAL FOR ALL EXTERIOR WALLS
2. PREFINISHED METAL STANDING SEAM ROOF TYPICAL FOR ALL LOW-SLOPE ROOF SURFACES.
3. PREFINISHED METAL TRIM, GUTTERS AND DOWNSPOUTS TO MATCH COLOR OF ADJACENT WALL OR FASCIA SURFACES
4. FIBERGLASS WINDOW FRAMES AND INSULATED GLASS
5. EXTERIOR DOORS MAY BE PAINTED ACCENT COLOR AS ALLOWED IN THE BELLA VISTA DESIGN GUIDELINES.
6. FOUNDATIONS TO BE CMU WITH EITHER A PAINTED SURFACE TO MATCH ADJACENT WALL PANELS, ARCHITECTURAL DECORATIVE BLOCK, STAINED TO MATCH ADJACENT WALL PANELS, OR INTEGRALLY COLORED CMU.
7. SOME HOUSES MAY INCORPORATE STONE ACCENTS IN LIMITED LOCATIONS



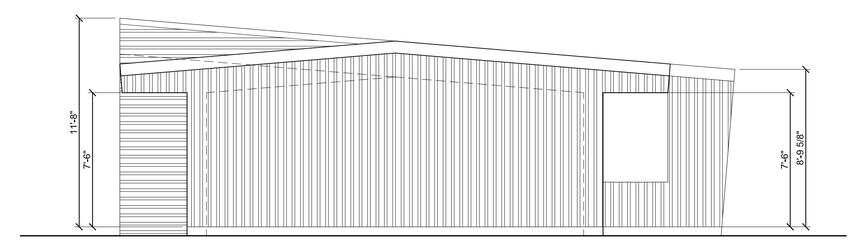
4 SD2.09 TYPE B1 - 1-BEDROOM PLUS - SIDE ELEVATION
SCALE: 1/4" = 1'-0"



3 SD2.09 TYPE B1 - 1-BEDROOM PLUS - ELEVATION FACING COMMON AREAS
SCALE: 1/4" = 1'-0"



2 SD2.09 TYPE B1 - 1-BEDROOM PLUS - STREET-FACING ELEVATION
SCALE: 1/4" = 1'-0"



GENERAL NOTES ON FOUNDATIONS:

THESE HOUSE TYPES ARE ILLUSTRATED ON A FLAT GROUND PLANE. GIVEN THE VARIETY OF HOUSE TYPES AND VARIED TOPOGRAPHY OF THE DEVELOPMENT, MANY HOUSES WILL HAVE EXPOSED FOUNDATION WALLS. CARE HAS BEEN TAKEN TO LOCATE THE STREET-FACING SIDE OF THE HOUSE AT GRADE SO THAT ANY EXPOSED FOUNDATION WALLS WILL OCCUR BETWEEN HOUSES AND AT THE REAR.

1 SD2.09 TYPE B1 - 1-BEDROOM PLUS - SIDE ELEVATION
SCALE: 1/4" = 1'-0"

REVISIONS

PRELIMINARY
FOR PZD APPLICATION ONLY

OWL COMMONS HOUSES
102 FAIRWAY DRIVE (CURRENT ADDRESS)
BELLA VISTA, ARKANSAS 72714

architects 226 inc. 3259 north kings cross fayetteville, arkansas 72703 479.283.4977

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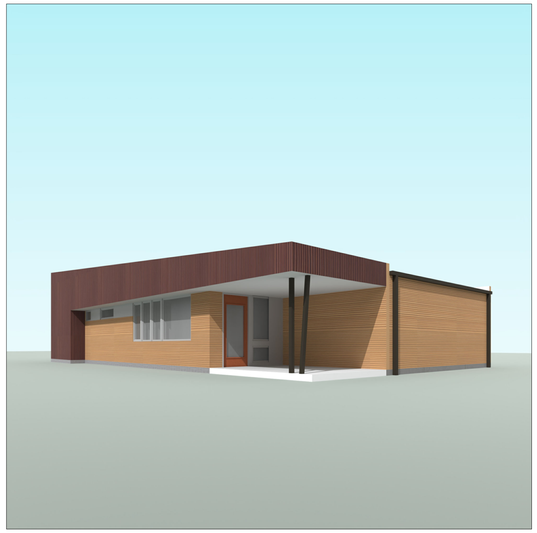
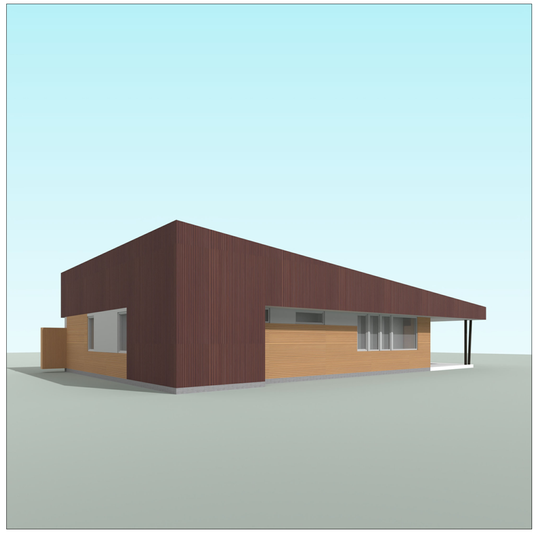
PLAN TYPE B1
PRELIM. ELEVATIONS

SCHEMATIC DESIGN 02

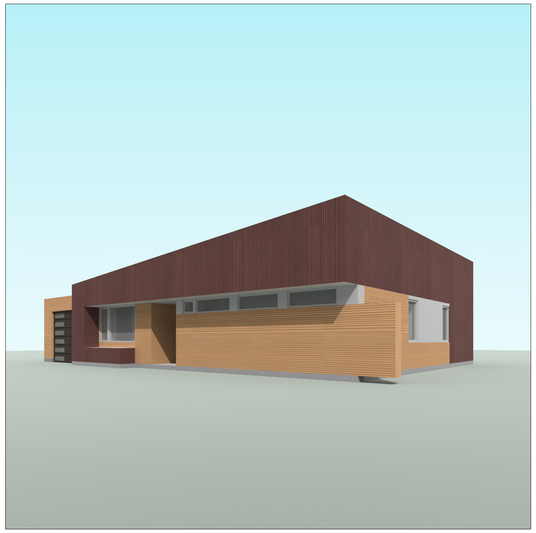
SD2.09



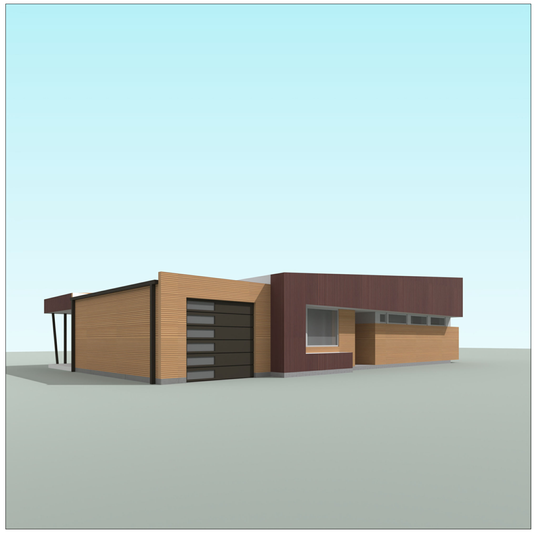
VIEW 4 TERRACE AND LIVING SPACE VIEW OUT TO COMMON SPACES



VIEW 3



VIEW 2



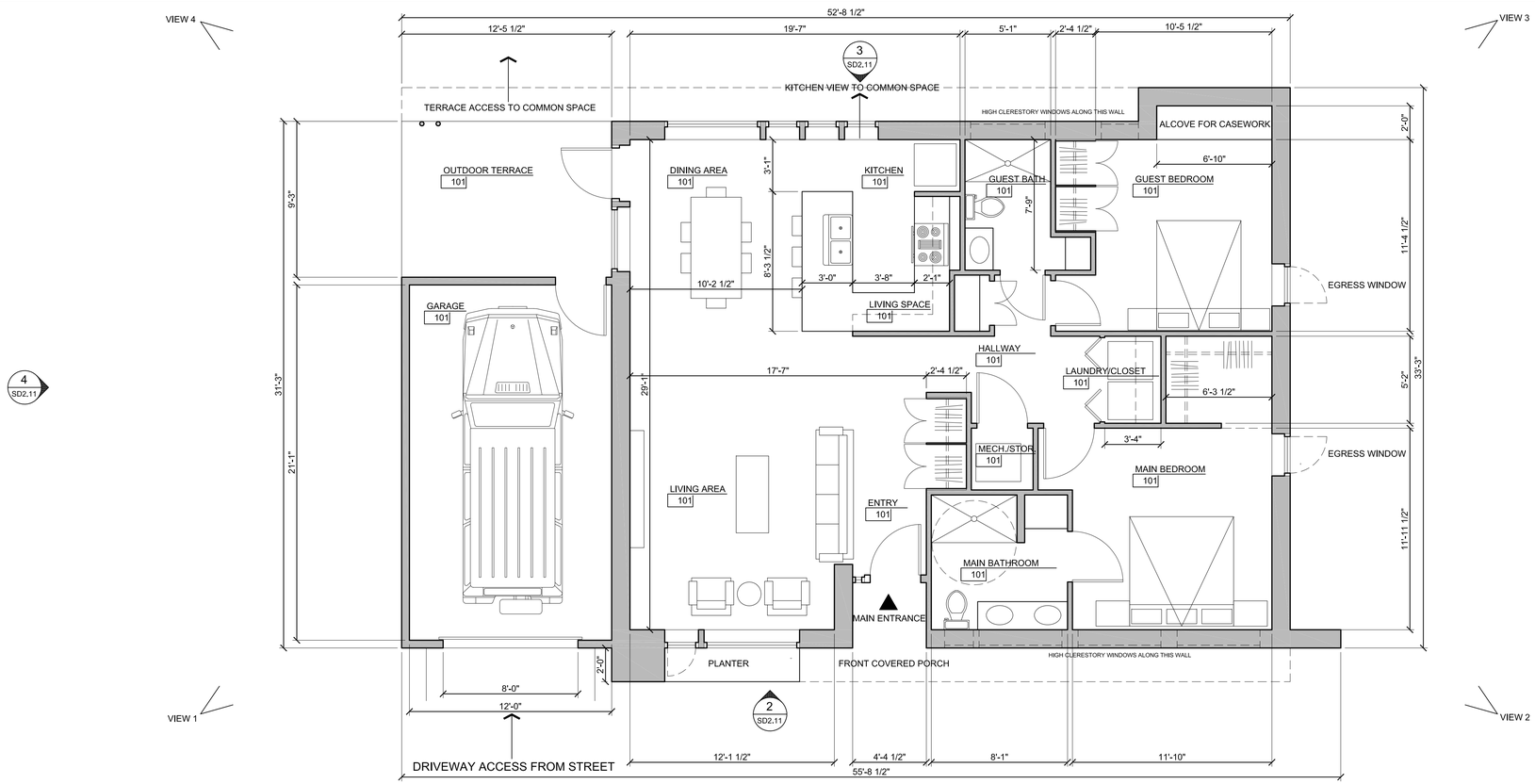
VIEW 1

COLORS ARE APPROXIMATIONS OF "BURGUNDY" AND "TAN" LISTED IN THE MATERIAL COLOR CHARTS. FINAL COLORS OF BUILDING MATERIALS ARE GREATLY DEPENDENT ON FACTORS SUCH AS LIGHT, ATMOSPHERIC CONDITIONS, AND WEAR.

2 SD2.10 TYPE B2 - 2- BEDROOM ONE STORY - BROAD FACE TOWARD STREET - EXTERIOR VIEWS

SCALE: NOT TO SCALE

SEE FLOOR PLAN FOR VIEW LOCATIONS



FOR PLAN REVIEW PURPOSE ONLY

1 SD2.10 TYPE B2 - 2-BEDROOM - ONE STORY - 1,258 SF OUTSIDE FACE OF WALL (EXCLUDING GARAGE) - 1,102 SF INTERIOR FLOOR AREA

SCALE: 1/4" = 1'-0"

REVISIONS

PRELIMINARY
FOR PZD APPLICATION ONLY

OWL COMMONS HOUSES
102 FAIRWAY DRIVE (CURRENT ADDRESS)
BELLA VISTA, ARKANSAS 72714

architects 226 inc. 3259 north kings cross fayetteville, arkansas 72703 479.283.4977

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architects 226 inc

PLAN TYPE B2
PRELIMINARY PLAN

SCHEMATIC DESIGN 02

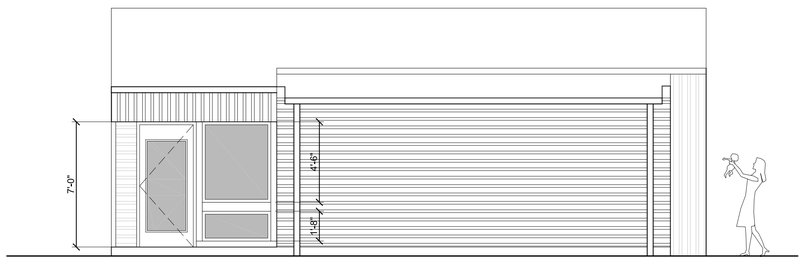
SD2.10

GENERAL NOTES ON ELEVATIONS:

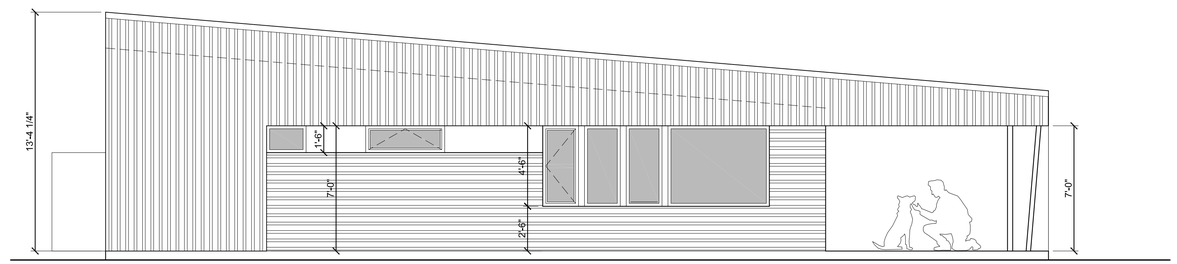
METAL PANELS OF COLOR "A"

METAL PANELS OF SECOND COLOR

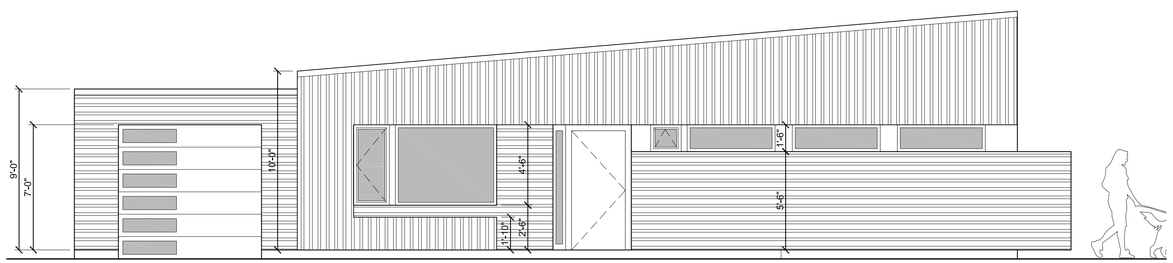
1. PREFINISHED METAL WALL CLADDING TYPICAL FOR ALL EXTERIOR WALLS
2. PREFINISHED METAL STANDING SEAM ROOF TYPICAL FOR ALL LOW-SLOPE ROOF SURFACES.
3. PREFINISHED METAL TRIM, GUTTERS AND DOWNSPOUTS TO MATCH COLOR OF ADJACENT WALL OR FASCIA SURFACES
4. FIBERGLASS WINDOW FRAMES AND INSULATED GLASS
5. EXTERIOR DOORS MAY BE PAINTED ACCENT COLOR AS ALLOWED IN THE BELLA VISTA DESIGN GUIDELINES.
6. FOUNDATIONS TO BE CMU WITH EITHER A PAINTED SURFACE TO MATCH ADJACENT WALL PANELS, ARCHITECTURAL DECORATIVE BLOCK, STAINED TO MATCH ADJACENT WALL PANELS, OR INTEGRALLY COLORED CMU.



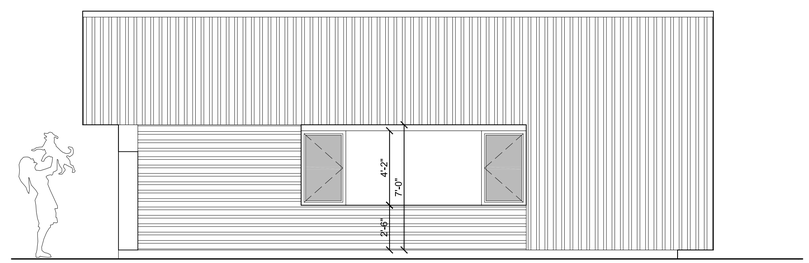
4 SD2.11 TYPE B2 - 2-BEDROOM - ONE STORY - SIDE ELEVATION
SCALE: 1/4" = 1'-0"



3 SD2.11 TYPE B2 - 2-BEDROOM - ONE STORY - ELEVATION FACING COMMON AREAS
SCALE: 1/4" = 1'-0"



2 SD2.11 TYPE B2 - 2-BEDROOM - ONE STORY - STREET-FACING ELEVATION
SCALE: 1/4" = 1'-0"



1 SD2.11 TYPE B2 - 2-BEDROOM - ONE STORY - SIDE ELEVATION
SCALE: 1/4" = 1'-0"

GENERAL NOTES ON FOUNDATIONS:

THESE HOUSE TYPES ARE ILLUSTRATED ON A FLAT GROUND PLANE. GIVEN THE VARIETY OF HOUSE TYPES AND VARIED TOPOGRAPHY OF THE DEVELOPMENT, MANY HOUSES WILL HAVE EXPOSED FOUNDATION WALLS. CARE HAS BEEN TAKEN TO LOCATE THE STREET-FACING SIDE OF THE HOUSE AT GRADE SO THAT ANY EXPOSED FOUNDATION WALLS WILL OCCUR BETWEEN HOUSES AND AT THE REAR.

REVISIONS

PRELIMINARY
FOR PZD APPLICATION ONLY

OWL COMMONS HOUSES
102 FAIRWAY DRIVE (CURRENT ADDRESS)
BELLA VISTA, ARKANSAS 72714

architects 226 inc. 3259 north kings cross fayetteville, arkansas 72703 479.283.4977

Project #
DATE: MAR. 30, 2025
Drawn: rr
Checked: yr

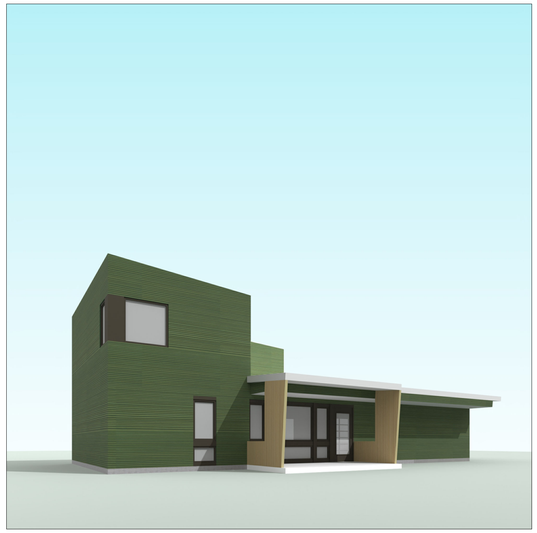
architects 226 inc

PLAN TYPE B2
PRELIM. ELEVATIONS

SCHEMATIC DESIGN 02

SD2.11

VIEW 4 TERRACE AND LIVING SPACE VIEW OUT TO COMMON SPACES



VIEW 3

VIEW 2

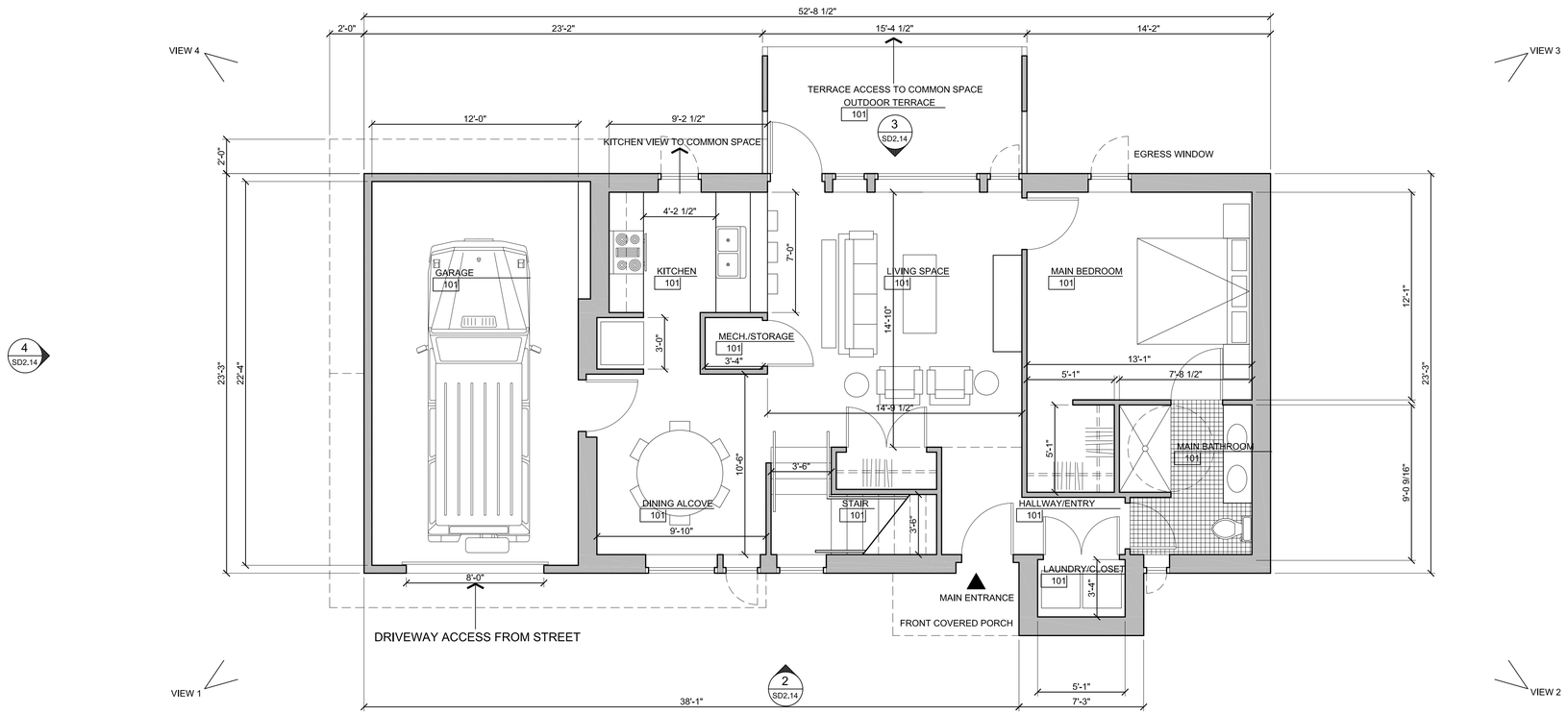
VIEW 1

COLORS ARE APPROXIMATIONS OF "FOREST" AND "DESERT" LISTED IN THE MATERIAL COLOR CHARTS. FINAL COLORS OF BUILDING MATERIALS ARE GREATLY DEPENDENT ON FACTORS SUCH AS LIGHT, ATMOSPHERIC CONDITIONS, AND WEAR.

SEE FLOOR PLAN FOR VIEW LOCATIONS

2 / SD2.12 TYPE B3 - 2-BEDROOM - TWO STORY - BROAD FACE TOWARD STREET - EXTERIOR VIEWS

SCALE: NOT TO SCALE



FOR PLAN REVIEW PURPOSE ONLY

1 / SD2.12 TYPE B3 - 2-BEDROOM - TWO STORY - 1,349 SF OUTSIDE FACE OF WALL (EXCLUDING GARAGE) - 1,171 SF INTERIOR FLOOR AREA

SCALE: 1/4" = 1'-0"

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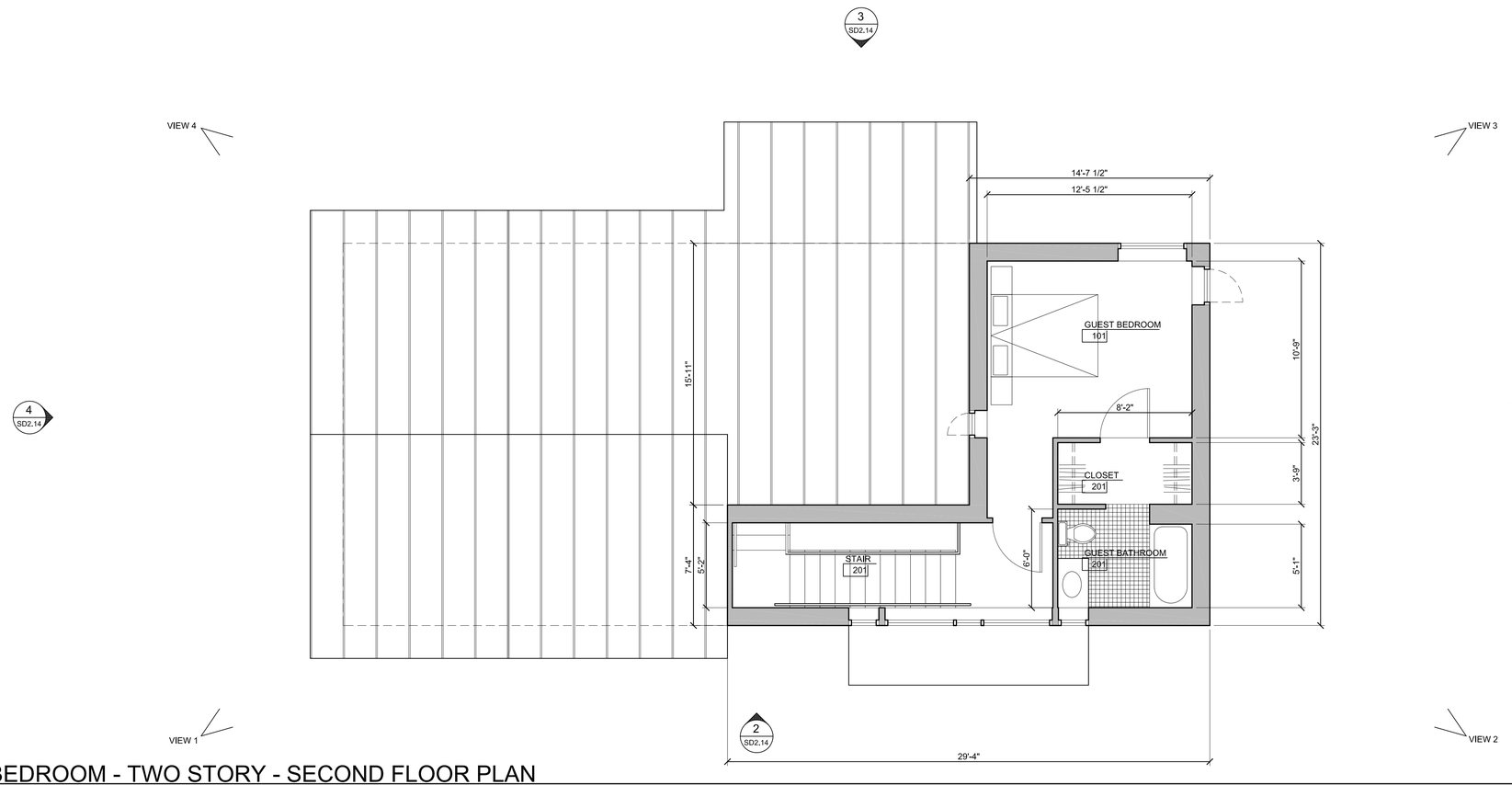
architects 226 inc

PLAN TYPE B3
PRELIMINARY PLAN

SCHEMATIC DESIGN 02

SD2.12



1 SD2.13 TYPE B3 - 2-BEDROOM - TWO STORY - SECOND FLOOR PLAN

SCALE: 1/4" = 1'-0"

FOR PLAN REVIEW PURPOSE ONLY

REVISIONS

PRELIMINARY
FOR PZD APPLICATION ONLY

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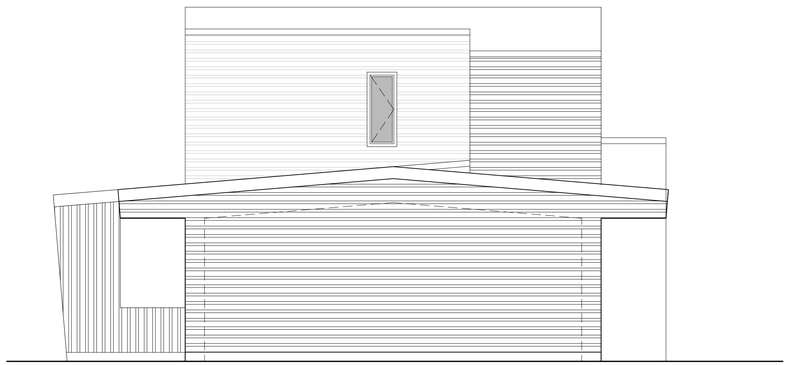
PLAN TYPE B3
SECOND FLOOR PLAN

SCHEMATIC DESIGN 02

SD2.13



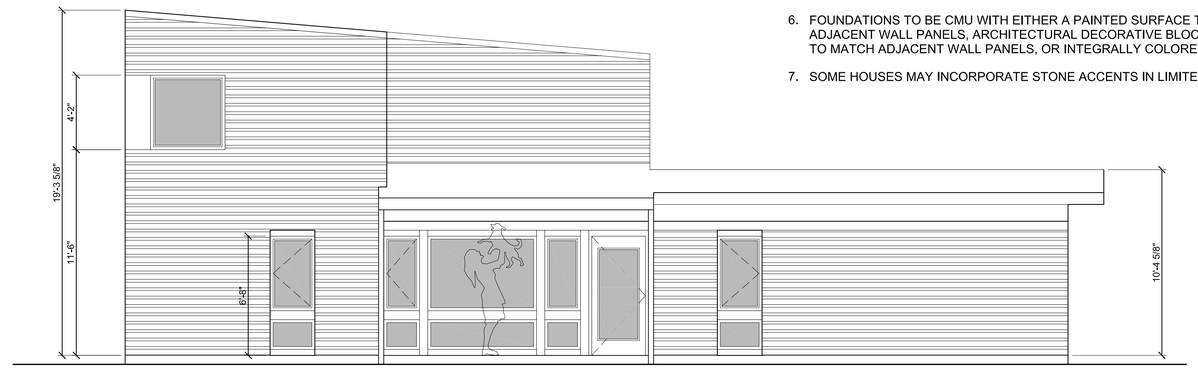
4 SD2.14 TYPE B3 - 2-BEDROOM - TWO STORY - SIDE ELEVATION
SCALE: 1/4" = 1'-0"

GENERAL NOTES ON ELEVATIONS:

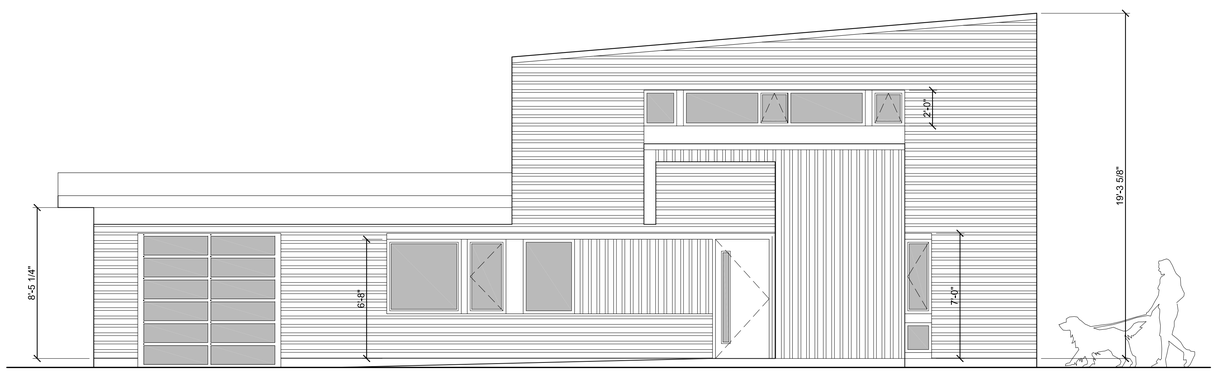
METAL PANELS OF COLOR "A"

METAL PANELS OF SECOND COLOR

1. PREFINISHED METAL WALL CLADDING TYPICAL FOR ALL EXTERIOR WALLS
2. PREFINISHED METAL STANDING SEAM ROOF TYPICAL FOR ALL LOW-SLOPE ROOF SURFACES.
3. PREFINISHED METAL TRIM, GUTTERS AND DOWNSPOUTS TO MATCH COLOR OF ADJACENT WALL OR FASCIA SURFACES
4. FIBERGLASS WINDOW FRAMES AND INSULATED GLASS
5. EXTERIOR DOORS MAY BE PAINTED ACCENT COLOR AS ALLOWED IN THE BELLA VISTA DESIGN GUIDELINES.
6. FOUNDATIONS TO BE CMU WITH EITHER A PAINTED SURFACE TO MATCH ADJACENT WALL PANELS, ARCHITECTURAL DECORATIVE BLOCK, STAINED TO MATCH ADJACENT WALL PANELS, OR INTEGRALLY COLORED CMU.
7. SOME HOUSES MAY INCORPORATE STONE ACCENTS IN LIMITED LOCATIONS



3 SD2.14 TYPE B3 - 2-BEDROOM - TWO STORY - WOODS/COMMON SPACE ELEVATION
SCALE: 1/4" = 1'-0"



2 SD2.14 TYPE B3 - 2-BEDROOM - TWO STORY - STREET-FACING ELEVATION
SCALE: 1/4" = 1'-0"

GENERAL NOTES ON FOUNDATIONS:

THESE HOUSE TYPES ARE ILLUSTRATED ON A FLAT GROUND PLANE. GIVEN THE VARIETY OF HOUSE TYPES AND VARIED TOPOGRAPHY OF THE DEVELOPMENT, MANY HOUSES WILL HAVE EXPOSED FOUNDATION WALLS. CARE HAS BEEN TAKEN TO LOCATE THE STREET-FACING SIDE OF THE HOUSE AT GRADE SO THAT ANY EXPOSED FOUNDATION WALLS WILL OCCUR BETWEEN HOUSES AND AT THE REAR.

1 SD2.14 TYPE B3 - 2-BEDROOM - TWO STORY - SIDE ELEVATION
SCALE: 1/4" = 1'-0"

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a226 architects 226 inc

PLAN TYPE B3
PRELIM. ELEVATIONS

SCHEMATIC DESIGN 02

SD2.14

OWL COMMONS
nature & community

Colors -

Using the metal central central guard color chart we propose the following colors as acceptable, rustic, tan, Hunter, burnished slate, burgundy, Brown, desert,,colony, fern, forest terrane, and ash.

The standard seam roofing, the gutters and downspouts the soffit and fascia and also the window frames would be in the same colors with the addition of bronze - stone accents would all be of varying earth tones - Colors would be used randomly so as to not be repetitive - The soffit fascia windows and roof colors would be complementary to the colors in the body of the house

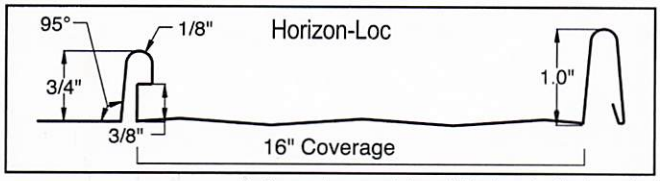
This color palette would produce a neighborhood that is welcoming and distinctive while being at home in its rustic woodland setting of Bella Vista and coordinating with the existing structures currently on the property

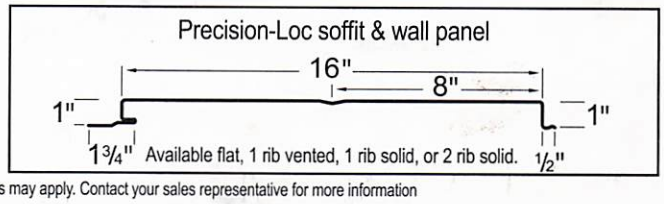
Concealed Fastener Color Chart

CENTRALGUARD™
Powered by Valspar's WeatherX™ technology

All colors meet ENERGY STAR® requirements for steep slope roofs.
Available in 26 gauge

Rustic	Tan	Hunter	Charcoal
Gray	Lt. Stone	Burnished Slate	Brown
Brilliant	Polar	Hawaiian	Burgundy
Crimson	Gold	Colony	Desert
Gallery	Fern	Copper Metallic ✢ ◊	Forest





Profiles or colors may only be available at one location. Longer lead times may apply. Contact your sales representative for more information

✢ Kynar 500®/Hylar 5000® color. Contact salesperson for accurate pricing.
◊ Color variation between orders is normal and not a cause for rejection. Panels manufactured in Copper Metallic must be installed in the same direction. See directional arrows or stickers provided on your panels.

All colors carry a 40 year limited paint warranty.
See warranty sheets for warranty criteria.

Paint for all colors is provided by valspar

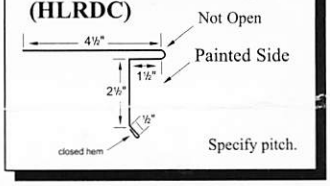
Metal Central™
METAL BUILDING COMPONENTS

CLRCHRT13004

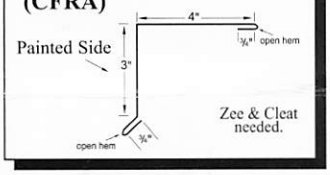
CENTRALGUARD™ is a trademark of CENTRAL STATES MANUFACTURING, INC.

Concealed Fastener Trims

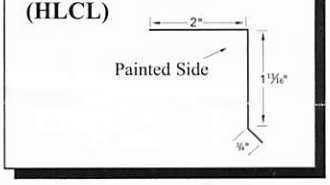
Horizon-Loc Drip Edge (HLRDC)



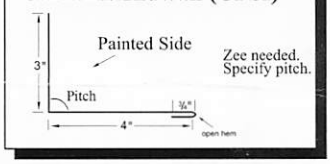
Open Hem Rake (CFRA)



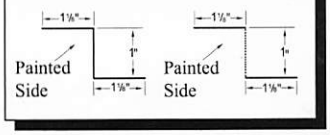
Horizon-Loc Cleat (HLCL)



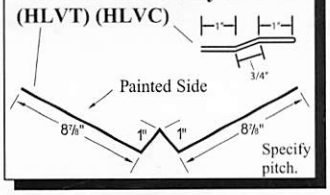
Horizon-Loc Open Hem Sidewall/Endwall (CFSI)



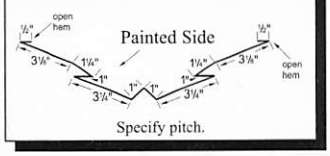
Horizon-Loc Zee or Vented Zee Closure (HLZC) (HLVZC)



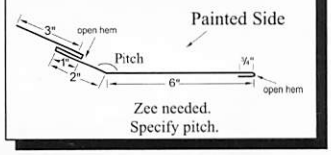
Horizon-Loc Valley & Cleat (HLVT) (HLVC)



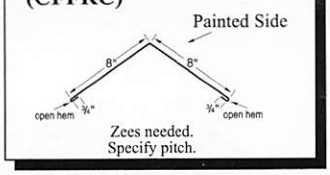
Open Hem Valley (CFVT)



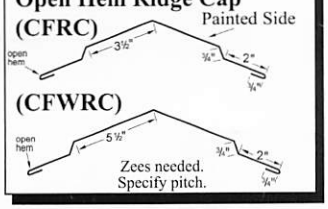
Open Hem Gambrel (CFGA)



Open Hem Flat Ridge (CFFRC)

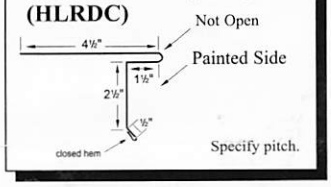


Open Hem Ridge Cap (CFRC)

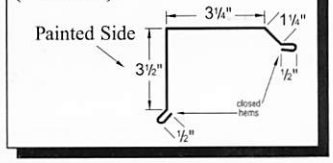


Exposed Fastener Trims

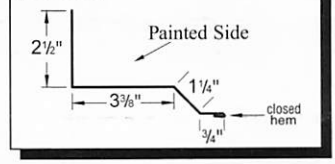
Horizon-Loc Drip Edge (HLRDC)



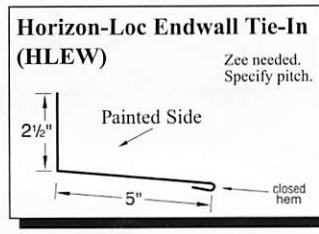
Horizon-Loc Rake Trim (HLRRT)



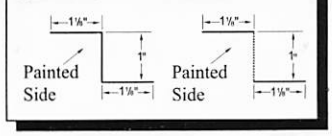
Horizon-Loc Sidewall Tie-In (HLSW)



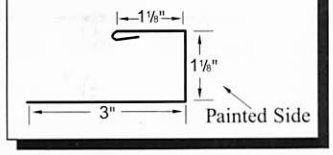
Horizon-Loc Endwall Tie-In (HLEW)



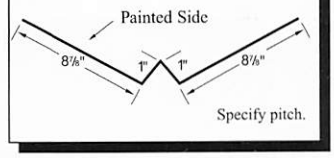
Horizon-Loc Zee or Vented Zee Closure (HLZC) (HLVZC)



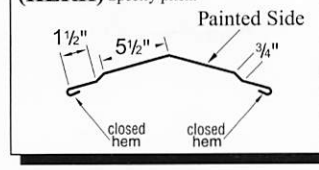
Horizon-Loc J-Trim (HLJT)



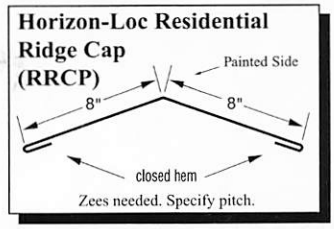
Horizon-Loc Valley (HLVT)



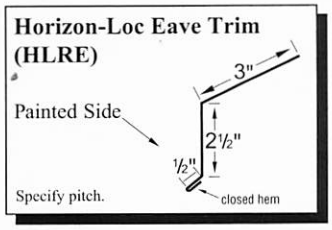
Horizon-Loc Ridge Cap (HLRH) Specify pitch.



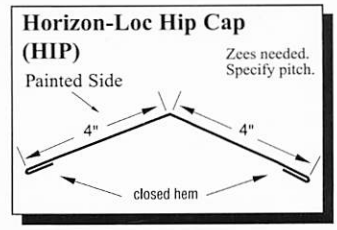
Horizon-Loc Residential Ridge Cap (RRCP)

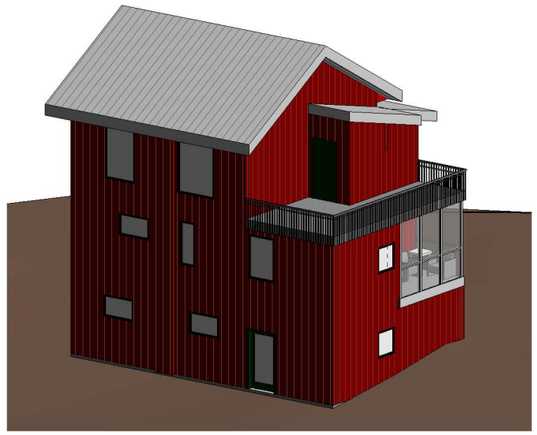


Horizon-Loc Eave Trim (HLRE)



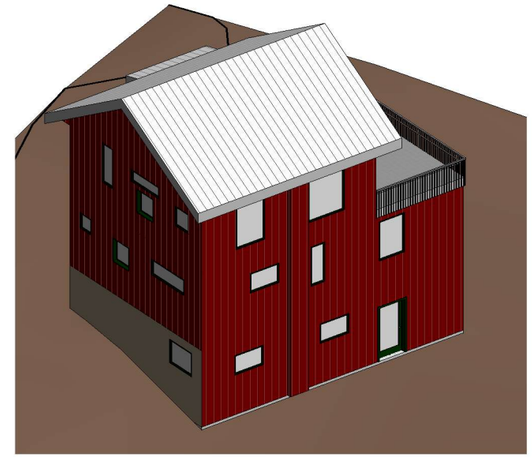
Horizon-Loc Hip Cap (HIP)





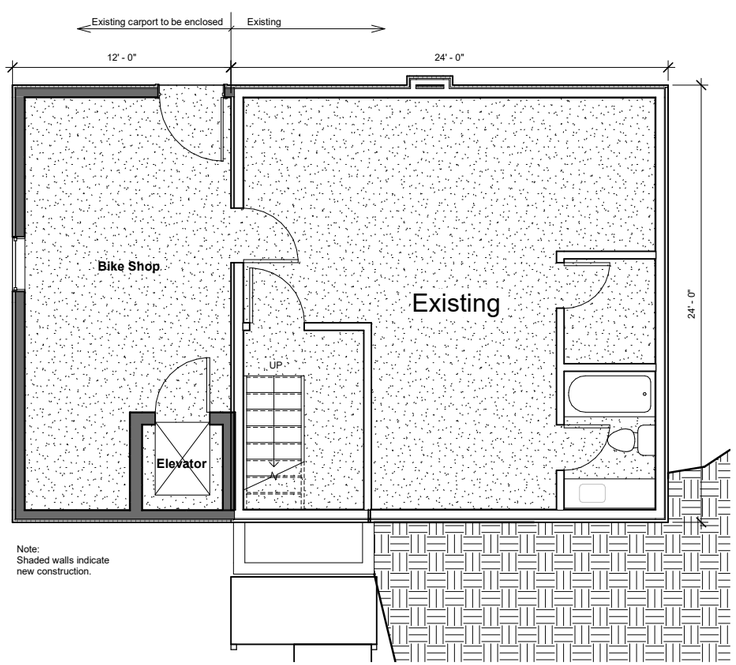
4 Axon 1

8 Axon 2

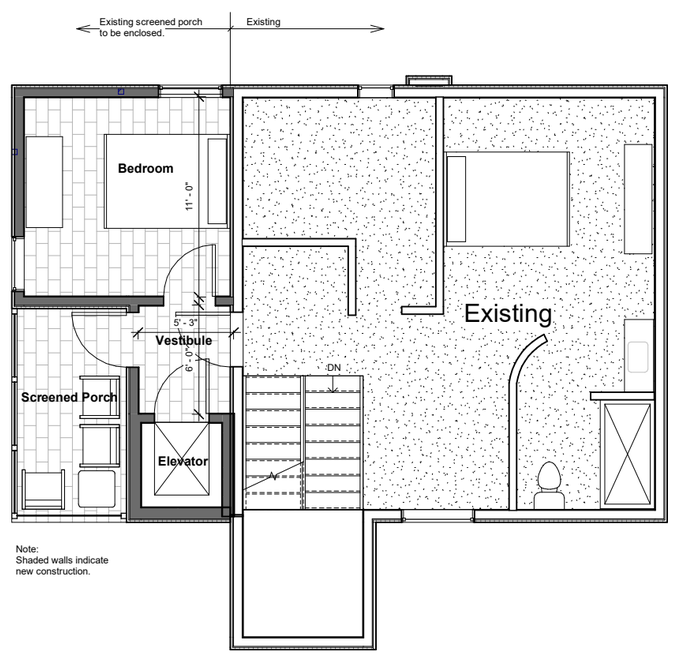


9 Axon 3

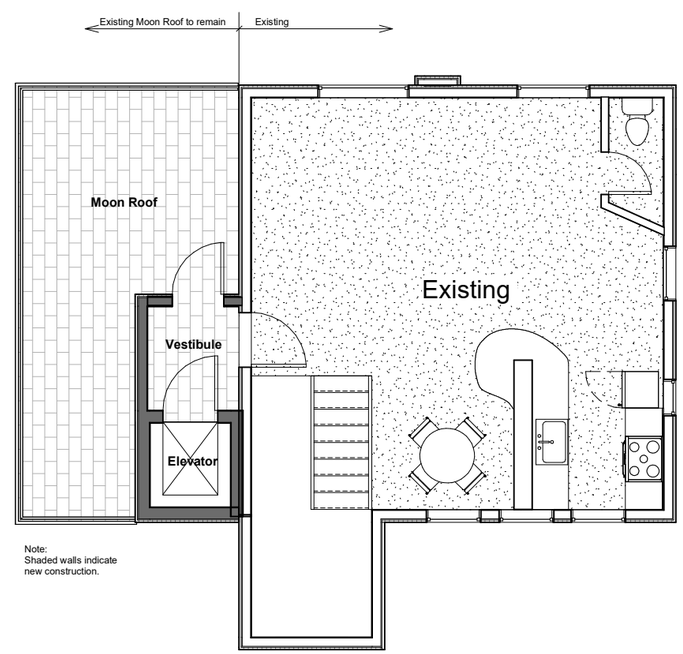
10 Axon 4



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



2 Level 2
1/4" = 1'-0"



3 Level 3
1/4" = 1'-0"

COMMON HOUSE

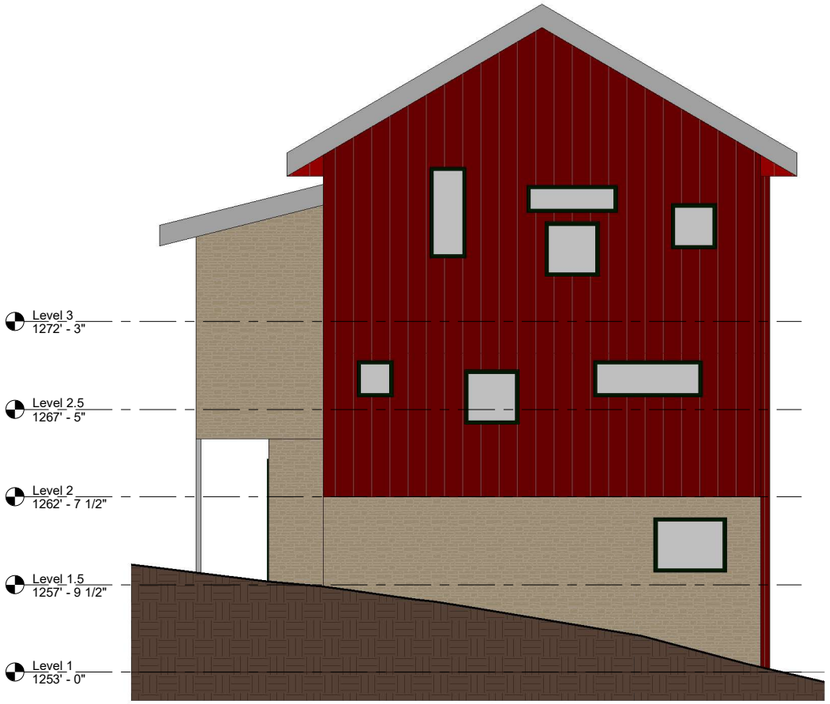
OWL COMMONS
Bella Vista, Arkansas

D. Yume Rudzinski architects 226, inc.
Nov 5, 2020
No. 3423
Arkansas

Project Number	
3/30/2025 8:02:40 PM	
Author	
Checker	

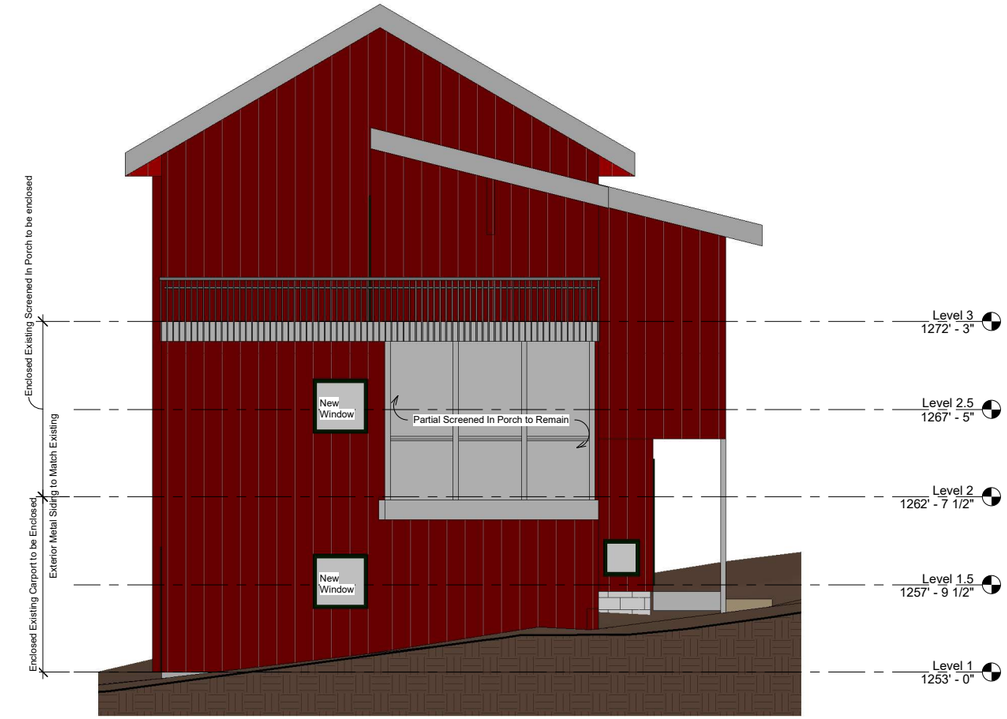
Floor Plans

A1

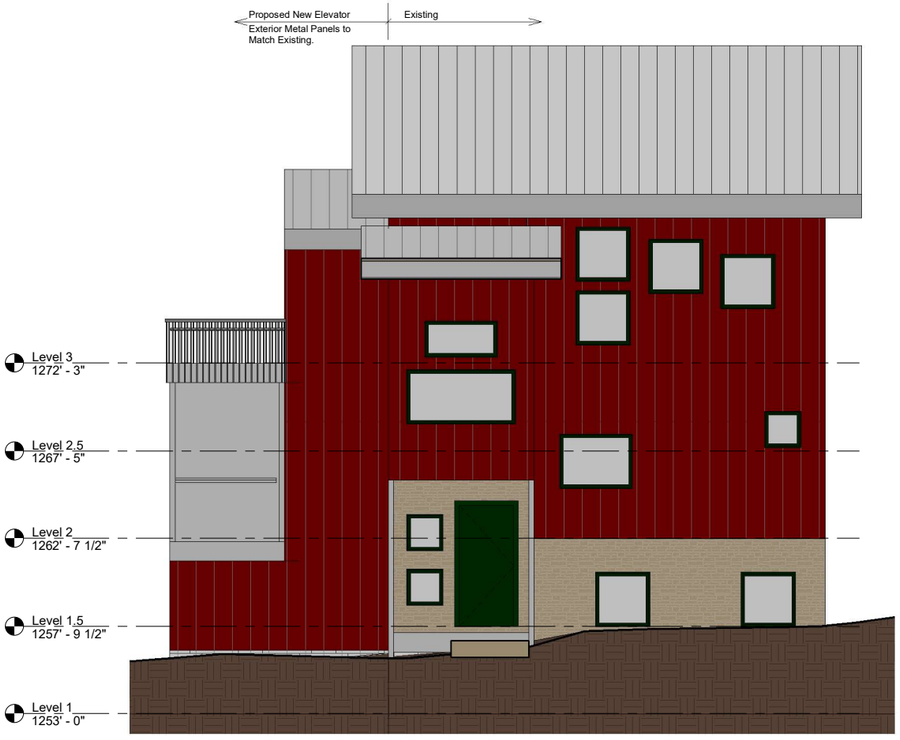


Existing, no change

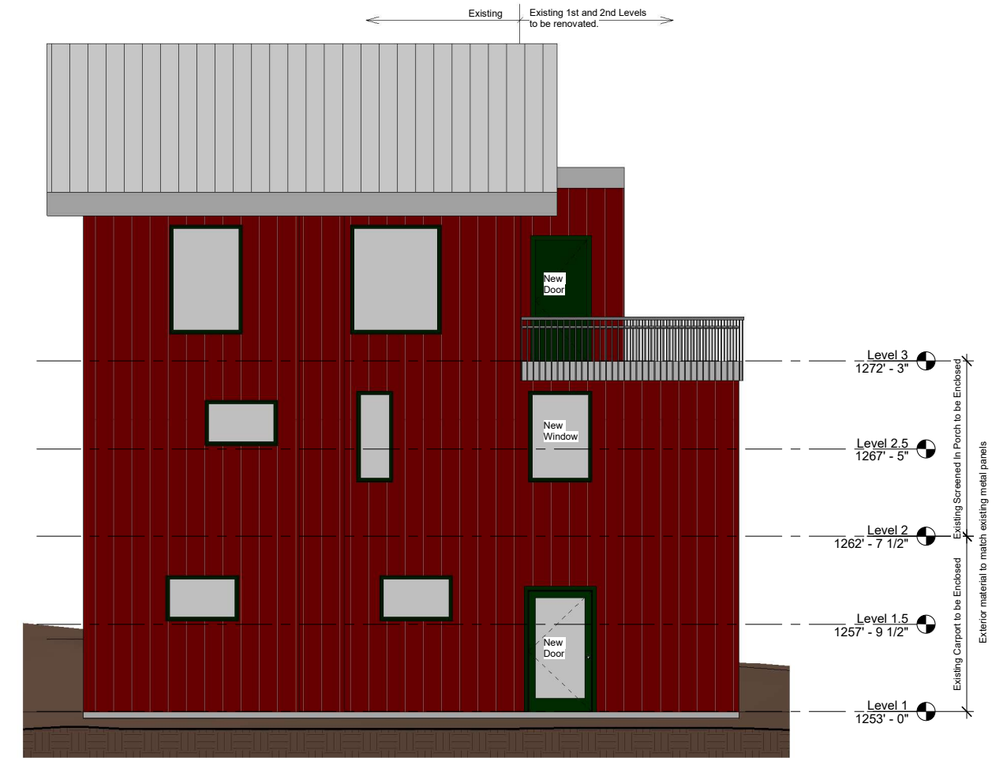
1 East Elevation
1/4" = 1'-0"



4 West Elevation
1/4" = 1'-0"



3 South Elevation
1/4" = 1'-0"



2 North Elevation
1/4" = 1'-0"

COMMON HOUSE

OWL COMMONS

Bella Vista, Arkansas

D. Yume Rudzinski architects 226, inc. Nov 5, 2020 No. 3423 Arkansas

Project Number	
3/30/2025 8:02:43 PM	
Author	
Checker	

Elevations

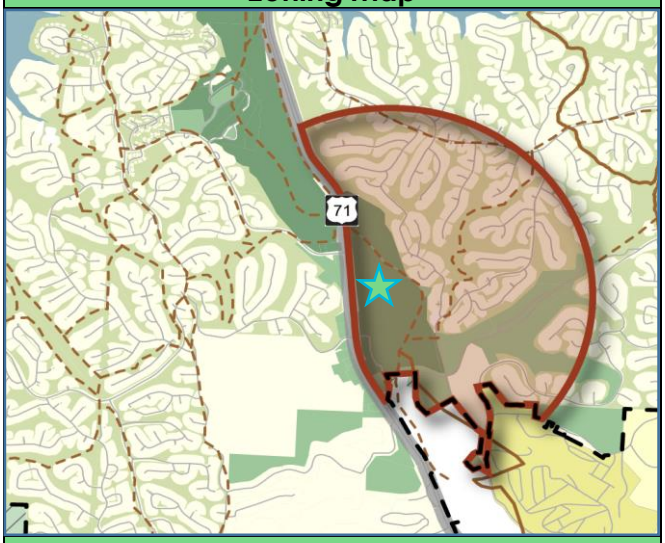
A2

Meeting Information:
2483 Forest Hills Blvd
May 29, 2025 at 4:30 PM

Reviewer:
Megan Workman,
Trails and Active
Transportation Manager

Project Number	LSD-58918
Applicant	Luke Jost, P.E, Crafton Tull
Address/Location	Multiple Tracts of Land
Current Zoning	R-1, P-1, C-2, and C-4
Site Area	Multiple Tracts of Land
Nature of Request	A request to extend the Razorback Greenway and to improve the Bluebird Trailhead.

Zoning Map



Future Land Use Plan

Property Description
The project site, containing parcels 16-40644-001; 16-40644-000; 16-40645-001; 16-40236-000; 16-79389-000; 16-70324-000; 16-40221-801 and 16-31932-000, within Arkansas Department of Transportation and City of Bella Vista right-of-way, is centrally located within the Bella Vista city limits; situated northeast of the intersection of Mercy Way and Bella Vista Way.

Regulation
Sec. 107-162 sets forth review and approval requirements for developments other than a single-family residence or duplex. Otherwise known as, a large-scale development.

Request
The applicant seeks approval for a proposed large-scale development described within, known Razorback Greenway phase III from Mercy Way to Riordan Road.

Background
The subject area is fronted by Riordan Road, a minor arterial, Bella Vista Way, a major arterial, Mercy Way, a minor arterial, and Sugar Creek Center, an unclassified street. Located within and adjacent to a Community Destination node, along a priority 1 bike route, within a corridor designed to promote pedestrian connectivity, this proposal is congruent with recommendations made the Comprehensive Plan 2040. The applicant proposes to establish a Trail Use, which is permitted by-right in all districts, across the parcels referenced above, containing R-1, Single-Family Residential, P-1, Conservation, C-2, Light Commercial, and C-4, Shopping Center zoning designations. The improvement area is in Flood Zone AE and portions are located inside the 100-year floodplain. This project aims to extend the Razorback Greenway from its current terminus on Mercy Way, traveling north along Little Sugar Creek. It will then turn west to pass under the Bella Vista Way bridge, located north of Riordan Road, before heading south to it's new terminus at the Bluebird Trailhead on Riordan Road. Improvements include approximately 4,296 linear feet of new 10-foot to 12-foot hard surface multi-use path, drainage improvements, and overhead lighting within the corridor located under the Bella Vista Way bridge, within the ArDOT right-of-way. The existing parking lot, previously approved by the Planning Commission via LSD-2021-41505, will be resurfaced with an asphalt overlay with this proposal. *This project was previously approved under LSD-2023-51885, granted a six-month extension in August of 2024, which expired on February 12, 2025.*
Link to drainage report

Public Comment
None

Outstanding Technical Comments
None

Recommendation
Staff recommends approval of this request.

Sec. 107-162 Large Scale Development Review and Approval

Planning Commission Action**:** All developments other than those excepted by subsection (a)(1) of this section shall be submitted to the planning commission, which shall approve, approve with conditions, or disapprove the submitted plan. The planning commission is required to take such action within 90 days of submission unless the applicant agrees to a postponement. All planning commission approvals to any development plan shall be signified by the signature on the development plan of the chairperson of the planning commission.

Sec. 107-163 Large Scale Development Review Criteria

The mayor or his designee, planning commission or city council may refuse approval of any development plan for any of the following reasons:

5. *Incomplete application.* The development plan is not submitted in accordance with the requirements of this article.
6. *Violation of law.* The proposed development or construction would violate a city ordinance, or a state or federal law.
7. *Dangerous traffic conditions.* The proposed development would create or compound a dangerous traffic condition. For the purpose of this article, a "dangerous traffic condition" shall be construed to mean a traffic condition in which the risk of accidents involving motor vehicles is significant due to factors such as, but not limited to, high traffic volume, topography, or the nature of the traffic pattern.
8. *Lack of utilities.* Adequate water, sewer, and electrical utilities are not readily available to the property and the developer has made no provision for extending such service to the development, or the provision of these utilities cannot obtain approval by the state health department, or other appropriate department.
9. *Inadequate drainage conditions.* The property to be developed reflects an extreme drainage problem uncorrected by the proposed development plan.
10. *Other actions required.* The plans pertain to a parcel which requires prior platting or rezoning.
11. *Other.* Any other circumstances as determined by the planning commission.

Crafton Tull

901 N 47th Street, Suite 400
Rogers, AR 72756

479.636.4838 (ph)
479.631.6224 (fax)

May 21, 2025

Megan Workman
Trails and Active Transportation Manager
City of Bella Vista

RE: Razorback Greenway Extension Phase 3

Ms. Workman & Planning Commissioners:

We respectfully request your consideration of the Razorback Greenway Extension Phase 3 project for LSD approval. This project was previously approved in 2024 but that approval has lapsed while we worked out the final details to gain ARDOT approval. As you may remember, this project is to construct an extension of the Razorback Greenway from the Mercy Way bridge over Little Sugar Creek along the creek to the existing trailhead parking lot off Riodan Drive.

Coordination with ARDOT has led to the following plan changes:

- Addition of lighting under the Hwy 71B bridge.
- Changes to the retaining wall design under the Highway 71B bridge.

Should you have any questions or concerns, please let me know.

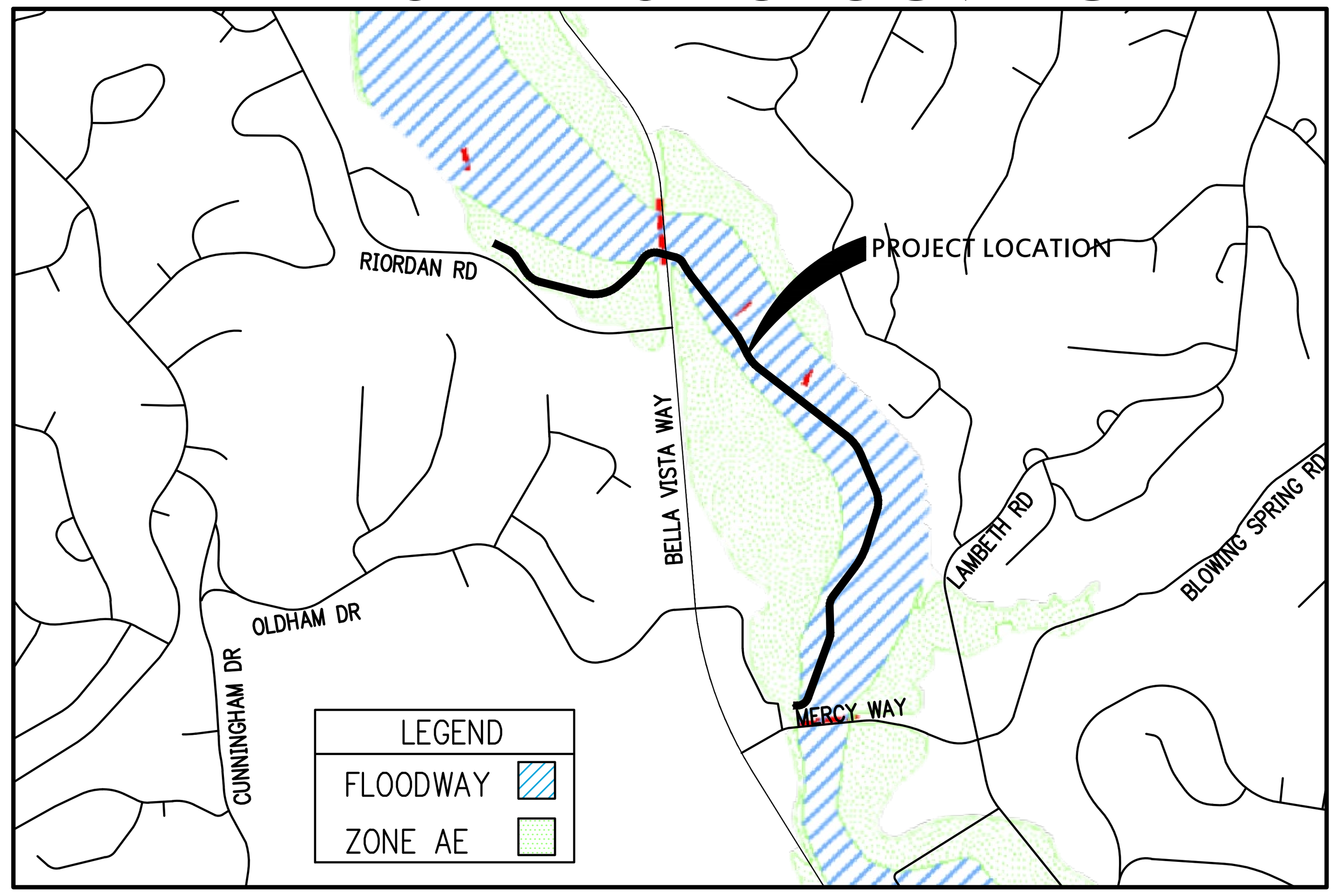
Respectfully,

Luke Jost, PE
Vice President
Crafton Tull

RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, ARKANSAS

LSD-2025-58918



VICINITY MAP
NTS

Arkansas One Call
811
Know what's **below**.
Call before you dig.

Sheet List Table

SHEET NUMBER	SHEET TITLE
C–001	COVER SHEET
C–002	STANDARD NOTES
C–101	OVERALL SITE PLAN
C–201 – C–210	TRAIL PLAN & PROFILE (1 – 10)
C–211	RETAINING WALL 1 P&P
C–212	PARKING LOT PLAN
C–301 – C–305	GRADING & EROSION CONTROL (1 – 5)
C–306 – C–309	SIGNING AND STRIPING (1 – 4)
C–501	TYPICAL SECTIONS
C–502	DETAILS
C–503	DRAINAGE DETAILS
C–504 – C–506	EROSION CONTROL DETAILS (1 – 3)
C–507	TREE PRESERVATION DETAILS
C–508	RETAINING WALL DETAIL
C–509 – C–510	FLEXAMAT DETAILS (1 – 2)
C–801 – C–813	CROSS SECTIONS (1 – 13)
E–001	ELECTRICAL DETAILS AND NOTES
E–101	ELECTRICAL SITE PLAN
E–102	SITE PHOTOMETRIC PLAN

LEGEND (EXISTING SYMBOLS)

SYMBOLS

- FOUND IRON PIN
- LIGHT POLE
- POWER POLE
- TELEPHONE PEDESTAL
- TV PEDESTAL
- MANHOLE
- SANITARY SEWER CLEANOUT
- GAS METER
- GAS VALVE
- STORM SEWER PIPE
- DOWN GUY
- WATER VALVE
- FIRE HYDRANT ASSEMBLY
- AIR RELEASE VALVE
- FIRE DEPARTMENT CONNECTION
- WATER METER
- SPRINKLER HEAD
- ELECTRIC PEDESTAL
- GRATED INLET
- DROP INLET
- TREE

LINEWORK

- EASEMENT
- CURB
- INTERMEDIATE CONTOUR (1206)
- INDEX CONTOUR (1205)
- SANITARY SEWER LINE (SS)
- GAS LINE (G)
- WATER LINE (SPECIFY SIZE & TYPE) (W)
- UNDERGROUND TELEPHONE (UGT)
- UNDERGROUND ELECTRIC (UGE)
- OVERHEAD ELECTRIC (OHE)
- UNDERGROUND TELEVISION (UGTV)
- OVERHEAD TELEVISION (OHTV)
- CHAIN LINK FENCE
- WOOD FENCE
- BARBED WIRE FENCE
- FIBER OPTIC (FO)
- RIGHT OF WAY
- ROAD CENTERLINE

LEGEND (CONSTRUCT)

SYMBOLS

- SET IRON PIN
- LIGHT POLE
- POWER POLE
- TELEPHONE PEDESTAL
- TV PEDESTAL
- MANHOLE
- SANITARY SEWER CLEANOUT
- GAS METER
- GAS VALVE
- STORM SEWER PIPE
- (X–X) STRUCTURE NUMBER
- WATER VALVE
- FIRE HYDRANT ASSEMBLY
- AIR RELEASE VALVE
- FIRE DEPARTMENT CONNECTION
- WATER METER
- BACK FLOW PREVENTER
- REDUCER
- RECTANGULAR DROP INLET, GRATED INLET OR JUNCTION BOX (SPECIFY ON PLAN SHEET)
- CIRCULAR DROP INLET, GRATED INLET OR JUNCTION BOX (SPECIFY ON PLAN SHEET)

LINEWORK

- EASEMENT
- CURB
- INTERMEDIATE CONTOUR (1206)
- INDEX CONTOUR (1205)
- SANITARY SEWER LINE (SS)
- GAS LINE (G)
- WATER LINE (W)
- UNDERGROUND TELEPHONE (UGT)
- UNDERGROUND ELECTRIC (UGE)
- OVERHEAD ELECTRIC (OHE)
- FIBER OPTIC (FO)
- UNDERGROUND TELEVISION
- OVERHEAD TELEVISION (OHTV)
- CHAIN LINK FENCE
- WOOD FENCE
- BARBED WIRE FENCE
- BUILDING SET BACK
- RIGHT OF WAY
- PROPERTY LINE
- ROAD CENTERLINE

GENERAL NOTES

1. THE DESIGN, INSPECTION, AND CERTIFICATION OF ANY RETAINING WALL SHOWN OR REFERENCED HEREIN, INCLUDING BUT NOT LIMITED TO, SEGMENTAL RETAINING WALLS, MASS GRAVITY WALLS, GABION WALLS, ETC., GREATER THAN FORTY–EIGHT INCHES IN HEIGHT, SHALL BE BY OTHERS. ANY RETAINING WALL DATA SHOWN OR REFERENCED HEREIN SHALL BE ONLY FOR COORDINATION OF THE WALL LOCATION AND ELEVATIONS.
2. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE DRAWINGS IS BASED ON A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE DRAWINGS. CRAFTON TULL ASSUMES NO RESPONSIBILITY REGARDING THE ACCURACY OF THE DEPICTED LOCATION(S) OF THE UNDERGROUND FACILITIES ON THESE DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ANY OTHER FACILITIES NOT SHOWN ON THESE DRAWINGS. CONTRACTOR SHALL VERIFY LOCATION OF ALL FACILITIES BEFORE BEGINNING WORK.
3. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE ENGINEER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN OR NEAR THE CONSTRUCTION SITE.
4. THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICES, IS THE PROPERTY OF CRAFTON, TULL & ASSOCIATES, INC. AND IS NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CRAFTON, TULL & ASSOCIATES, INC.
5. CONTRACTOR SHALL NOT CAUSE ANY LONG–TERM INCONVENIENCE TO THE PUBLIC, ADJACENT PROPERTY OWNERS, PEDESTRIANS, ETC. DURING CONSTRUCTION OF THIS PROJECT. CONTRACTOR SHALL PROVIDE ACCESS TO ALL ADJACENT PROPERTIES AT ALL TIMES DURING CONSTRUCTION.
6. CONTRACTOR SHALL CONTACT THE ENGINEER FOR CLARIFICATION IF A DISCREPANCY OR INCONSISTENCY IS IDENTIFIED IN THE PLANS OR SPECIFICATIONS.
7. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SHEETING, SHORING, AND SPECIAL EXCAVATION MEASURES REQUIRED ON THE PROJECT WHICH ARE NECESSARY TO CONFORM TO OSHA, FEDERAL, STATE AND LOCAL REGULATIONS.
8. ENGINEER OF RECORD SHALL OBSERVE THE INSTALLATION OF THE WATER & SEWER MAINS. BEYOND THAT SCOPE, CRAFTON TULL & ASSOCIATES, INC. (CTA) HAS NOT BEEN RETAINED BY THE OWNER FOR CONSTRUCTION ADMINISTRATION OR OBSERVATION SERVICES FOR THE WORK INDICATED ON THESE DRAWINGS. THEREFORE, CTA HEREBY NOTIFIES ALL PARTIES INVOLVED THAT CRAFTON, TULL & ASSOCIATES, INC. ASSUMES NO RESPONSIBILITY FOR THE INTERPRETATION, COORDINATION, OR ADMINISTRATION OF THESE DOCUMENTS AND/OR DEVIATIONS THEREOF. FURTHERMORE, CRAFTON, TULL & ASSOCIATES, INC. WILL NOT BE RESPONSIBLE FOR ANY EFFECTS THAT ANY CHANGES TO THESE DOCUMENTS MAY HAVE ON ANY RELATED TRADES, CONSTRUCTION SEQUENCES, OR OPERATION OF THE COMPLETED PROJECT EXCEPT AS SPECIFICALLY NOTED IN THE AGREEMENT BETWEEN CRAFTON, TULL & ASSOCIATES AND THE OWNER.
9. ENERGIZED ELECTRICAL LINE SAFETY, WARNINGS, AND ADVANCED NOTICES: ALL OWNERS, GENERAL CONTRACTORS, AND SUBCONTRACTORS ASSOCIATED WITH THIS PROJECT SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH, COMPLYING WITH, AND THE ENFORCEMENT OF ARKANSAS CODES AR ST § 11–5–307 AND § AR ST 11–5–308 AND ANY OTHER CURRENT STATE CODES PERTAINING TO ADVANCE NOTICE REQUIREMENTS AND FOR SAFETY OF ALL PERSONNEL, INCLUDING THE GENERAL PUBLIC, PERTAINING TO ANY WORK, MOVEMENT, AND ACTIVITY IN CLOSE PROXIMITY TO ANY ENERGIZED ELECTRICAL LINE.

SITE STABILIZATION AND CERTIFICATION

CRAFTON TULL CANNOT CERTIFY THE SITE AS COMPLETE IN ORDER TO OBTAIN THE CERTIFICATE OF OCCUPANCY UNTIL ALL DISTURBED AREAS RELATED TO THE CONSTRUCTION OF THE PROJECT, BOTH ONSITE AND OFFSITE, HAVE BEEN STABILIZED PER THE PLANS AND SPECIFICATIONS AND ALL REQUIREMENTS SPELLED OUT IN PERMITS ISSUED BY THE STATE AND LOCAL AUTHORITIES HAVE BEEN MET.

PROJECT INFORMATION

SITE ENGINEER: CRAFTON TULL
LUKE JOST, P.E.
901 N. 47TH ST., SUITE 400
ROGERS, AR 72756
479–636–4838

UTILITY CONTACTS

ENGINEERING DEPARTMENT
PLANNING AND DEVELOPMENT DEPARTMENT
PO BOX 5655
101 TOWN CENTER
BELLA VISTA, AR 72714
PHONE: (479) 855–8285

STREET DEPARTMENT
CITY OF BELLA VISTA
PHONE: (479) 876–1204

WATER
BELLA VISTA POA WATER DEPARTMENT
51 HUNTLEY LANE
BELLA VISTA, AR 72715
PHONE: (479) 855–8000

SANITARY SEWER
VILLAGE WASTE WATER
380 BELLA VISTA WAY
BELLA VISTA, AR. 72714
PHONE: (479) 855–7613

ELECTRIC
CARROLL ELECTRIC
PO BOX 4000
920 HWY 62 SPUR
BERRYVILLE, AR. 72616
PHONE: 1 (800) 432–9720

THIS LARGE SCALE DEVELOPMENT IS HEREBY APPROVED BY CITY OF BELLA VISTA PLANNING COMMISSION:

BELLA VISTA PLANNING COMMISSION CHAIR — DATE

FLOOD NOTE:
THIS PROPERTY IS IN FLOOD ZONE "A" OR "AE", AND IS INSIDE THE 100–YEAR FLOOD PLAIN AS SHOWN ON THE NATIONAL FLOOD INSURANCE PROGRAM'S FIRM PANEL NUMBER 05007C0080J, EFFECTIVE DATE SEPTEMBER 28, 2007.

THE ABOVE STATEMENT IS FOR INFORMATION ONLY AND THIS SURVEYOR ASSUMES NO LIABILITY FOR THE CORRECTNESS OF THE CITED MAP(S). IN ADDITION, NO INDEPENDENT STUDY OF THE LIKELIHOOD OF FLOODING OF THE SURVEYED PROPERTY HAS BEEN DONE BY THE SURVEYOR AND NO OPINION OF FLOOD HAZARDS IS INCLUDED IN THIS SURVEY. THE FLOOD HAZARD ZONE BOUNDARIES SHOWN HEREON WERE SCALED FROM THE MAPS CITED AND ARE NOT THE RESULT OF INDEPENDENT COMPUTATION OR ANALYSIS.

901 N. 47th St., Suite 400
Rogers, Arkansas 72756
Crafton Tull
architecture | engineering | surveying
479.636.4838 t 479.631.6224 f

CERTIFICATE OF AUTHORIZATION:
CERTIFICATE OF AUTHORIZATION — CRAFTON, TULL & ASSOCIATES, INC. No. 109 — ARKANSAS ENGINEER

RAZORBACK GREENWAY EXTENSION PHASE III
BELLA VISTA, AR

Key Plan

No.	Description	Date

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PROJECT NO: 22110100
ISSUE DATE: 05/16/2025
CONTACT: L. JOST
QC by: G. LONG
QC Date: 7/18/2023

ISSUED FOR REVIEW

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 18699 — LUCAS K. JOST
05/21/2025

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COVER SHEET

C-001

DRAWING: G:\22110100_RZBGRNPH3\INFRASTRUCTURE\CIVIL\DWG\COVER SHEET.DWG
LAYOUT: COVER SHEET, LAST SAVED: TV5317, 5/15/2025 4:43:48 PM
LAST PLOTTED BY: TIM VAN DINE, 5/15/2025 4:44:15 PM ("PLOTTED BY:" VALID ON HARD COPY ONLY)

SITE NOTES

1. THE DESIGN, INSPECTION, AND CERTIFICATION OF ANY RETAINING WALL SHOWN OR REFERENCED HEREIN, INCLUDING BUT NOT LIMITED TO, SEGMENTAL RETAINING WALLS, MASS GRAVITY WALLS, GABION WALLS, ETC., GREATER THAN FORTY-EIGHT INCHES IN HEIGHT, SHALL BE BY OTHERS. ANY RETAINING WALL DATA SHOWN OR REFERENCED HEREIN SHALL BE FOR COORDINATION OF THE WALL LOCATION AND ELEVATIONS ONLY.
2. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY/COUNTY/STATE/FEDERAL REGULATIONS AND CODES AND OSHA STANDARDS.
3. ALL CURB DIMENSIONS AND RADII ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
4. ALL PAVEMENT MARKINGS DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
5. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
6. ALL CURB/SIDEWALK/HANDICAP RAMP DESIGNS SHALL CONFORM TO ADA STANDARDS OR LOCAL RESTRICTIVE CODES, WHICHEVER IS MORE RESTRICTIVE.
7. CONTRACTOR SHALL ENSURE ALL NECESSARY PERMITS ARE OBTAINED PRIOR TO CONSTRUCTION START.
8. CONTRACTOR SHALL MATCH NEW CURB AND GUTTER, CONCRETE, AND PAVEMENT TO EXISTING IN GRADE AND ALIGNMENT.
9. CONTRACTOR SHALL MAINTAIN ALL EXISTING PARKING, SIDEWALKS, DRIVES, ETC. CLEAR AND FREE FROM ANY CONSTRUCTION ACTIVITY AND/OR MATERIAL TO ENSURE EASY AND SAFE PEDESTRIAN AND VEHICULAR TRAFFIC TO AND FROM THE SITE.

ACCESSIBILITY NOTES

1. ACCESSIBLE ROUTES SHALL MEET THE LATEST EDITIONS AND GUIDELINES PROVIDED BY THE FAIR HOUSING ACT (FHA) AND/OR THE AMERICANS WITH DISABILITIES ACT (ADA).
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONSTRUCT THE ACCESSIBLE ROUTES PER THESE PLANS AND THE FHA/ADA GUIDELINES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCY IN THE DETAILS AND GRADES PROVIDED ON THE GRADING PLAN PRIOR TO PLACING ANY CONCRETE.
3. THE MAXIMUM CROSS SLOPE SHALL NOT EXCEED 2% FOR ANY ACCESSIBLE ROUTE.
4. THE MAXIMUM RUNNING SLOPE SHALL NOT EXCEED 5% FOR AN ACCESSIBLE ROUTE UNLESS A RAMP IS PROVIDED THAT MEETS THE REQUIREMENTS OF AN ACCESSIBLE ROUTE (SEE DETAILS).
5. ACCESSIBLE ROUTE DETAILS FOR SIDEWALKS, CROSSWALKS, RAMPS, HANDRAILS, AND HANDICAP PARKING STALLS ARE PROVIDED ON SHEETS C-50?.
6. NEITHER THE OWNER NOR THE ENGINEER WILL MAKE EXHAUSTIVE CHECKS OF THE CONTRACTOR'S WORK ON THE ACCESSIBLE ROUTES. RATHER, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONSTRUCT THE ACCESSIBLE ROUTES PER THE PLANS AND DETAILS TO ENSURE COMPLIANCE WITH THE FHA/ADA.
7. AT HIS OWN EXPENSE, THE CONTRACTOR SHALL REMOVE AND REPLACE ANY SECTIONS OF AN ACCESSIBLE ROUTE THAT EXCEED THE MAXIMUM GRADES. THIS SHALL BE STRICTLY ENFORCED.

DEMOLITION NOTES

1. CONTRACTOR SHALL ABIDE BY ALL FEDERAL, STATE, AND LOCAL CODES FOR THE DEMOLITION AND DISPOSAL OF ALL MATERIALS.
2. CRAFTON, TULL AND ASSOCIATES, INC. SHALL NOT BE LIABLE FOR ANY DEMOLITION PROCEDURES, SCHEDULING, AND DISPOSAL OF ANY MATERIALS.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE SURE THAT ADJACENT PROPERTY IS NOT DAMAGED AND IS ACCESSIBLE AT ALL TIMES, AND THAT CONSTRUCTION DOES NOT CREATE ANY HARDSHIP TO LAND OWNERS ADJACENT TO THE CONSTRUCTION SITE.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSING IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES, OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE, STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE SPECIFICATIONS.
5. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE DISCONNECTION, REMOVAL AND RELOCATION OF ALL UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
6. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING EXISTING IRRIGATION SYSTEM IN THE AREAS OF SITE IMPROVEMENTS. THE CONTRACTOR SHALL CAP THE EXISTING IRRIGATION SYSTEM TO REMAIN SUCH THAT THE REMAINING SYSTEM SHALL CONTINUE TO FUNCTION PROPERLY.
7. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR ONSITE LOCATIONS OF EXISTING UTILITIES.
8. ALL EXISTING SEWERS, PIPING AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH WORK. UTILITIES DETERMINED TO BE ABANDONED AND LEFT IN PLACE SHALL BE GROUTED IF UNDER BUILDINGS.
9. ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC CABLE AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE.
10. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC.
11. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED PRIOR TO DEMOLITION.
12. CONTRACTOR MAY LIMIT SAW-CUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE CONSTRUCTION PLANS BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR.
13. CONTRACTOR SHALL MAINTAIN ALL EXISTING PARKING, SIDEWALKS, DRIVES, ETC. CLEAR AND FREE FROM ANY CONSTRUCTION ACTIVITY AND/OR MATERIAL TO ENSURE EASY AND SAFE PEDESTRIAN AND VEHICULAR TRAFFIC TO AND FROM THE SITE.
14. THE CONTRACTOR SHALL COORDINATE WATERMAIN WORK WITH THE FIRE DEPARTMENT AND THE CITY/COUNTY UTILITY DEPARTMENT TO PLAN WATERMAIN IMPROVEMENTS AND TO ENSURE ADEQUATE FIRE PROTECTION IS CONSTANTLY AVAILABLE TO THE SITE THROUGHOUT THIS SPECIFIC WORK AND THROUGH ALL PHASES OF CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR ARRANGING/PROVIDING ANY REQUIRED WATERMAIN SHUT-OFFS WITH THE CITY/COUNTY DURING CONSTRUCTION. ANY COSTS ASSOCIATED WITH WATERMAIN SHUT-OFFS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION WILL BE PROVIDED.
15. DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE. REPAIRS SHALL RESTORE DAMAGED ITEMS TO EQUAL OR BETTER THAN, EXISTING CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING ALL EXISTING DAMAGE AND NOTIFYING CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION START.
16. ALL TRENCHES AND/OR EXCAVATED AREAS SHALL BE FILLED/TESTED IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERING REPORT.
17. IF SEPTIC TANKS ARE FOUND PRESENT WITHIN THE LIMITS OF DISTURBANCE THEY SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL LAWS.
18. IF THE CONTRACTOR FINDS ANY UNDERGROUND TANKS ON SITE THEY SHALL CONTACT THE ENGINEER IMMEDIATELY.
19. ALL WELLS SHALL BE CAPPED AND CLOSED IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL LAW.

GRADING AND DRAINAGE NOTES

1. THE DESIGN, INSPECTION, AND CERTIFICATION OF ANY RETAINING WALL SHOWN OR REFERENCED HEREIN, INCLUDING BUT NOT LIMITED TO, SEGMENTAL RETAINING WALLS, MASS GRAVITY WALLS, GABION WALLS, ETC., GREATER THAN FORTY-EIGHT INCHES IN HEIGHT, SHALL BE BY OTHERS. ANY RETAINING WALL DATA SHOWN OR REFERENCED HEREIN SHALL BE FOR COORDINATION OF THE WALL LOCATION AND ELEVATIONS ONLY.
2. THE OWNER/CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR OBTAINING AND PROVIDING SEPARATE AND INDEPENDENT RETAINING WALL DESIGNS, INSPECTIONS, AND CERTIFICATIONS BY A REGISTERED PROFESSIONAL ENGINEER OTHER THAN CRAFTON TULL. THIS SHALL ALSO APPLY TO ANY ASSOCIATED AND NECESSARY PUBLIC SAFETY DEVICES INCLUDING, BUT NOT LIMITED TO, PEDESTRIAN SAFETY RAILS.
3. THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF EXISTING UTILITIES ON SITE OR IN RIGHT-OF-WAY. ALL UTILITIES MUST BE LOCATED PRIOR TO GRADING START.
4. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
5. ALL CUT OR FILL SLOPES SHALL BE A MAX 3:1 SLOPE OR FLATTER UNLESS OTHERWISE NOTED.
6. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITION OR BETTER.
7. ALL STORM SEWER PIPE CONNECTIONS TO STRUCTURES SHALL BE GROUTED TO ENSURE CONNECTION AT STRUCTURE IS WATERTIGHT. ALL STORM SEWER STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT IN TO INVERT OUT.
8. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY WHEN IN PAVED AND TRAFFIC AREAS.
9. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH THE PAVEMENT AND SHALL HAVE TRAFFIC BEARING RINGS AND COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 1" ABOVE FINISH GRADE. LIDS SHALL BE LABELED PER JURISDICTIONAL SPECIFICATIONS.
10. SITE GRADING SHALL NOT PROCEED UNTIL APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED. THE CONTRACTOR SHALL ADHERE TO ALL TERMS AND CONDITIONS AS OUTLINED IN THE GENERAL NPDES PERMIT AND THE SWPPP FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
11. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL TO FINAL GRADE.
12. TOPOGRAPHIC INFORMATION TAKEN FROM A TOPOGRAPHIC SURVEY BY LAND SURVEYORS. IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON PLANS, CONTACT ENGINEER IMMEDIATELY.
13. THE CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS THROUGHOUT ALL PHASES OF CONSTRUCTION.
14. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
15. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ENSURE A SMOOTH FIT AND CONTINUOUS GRADE.
16. CONTRACTOR SHALL MAINTAIN ALL EXISTING PARKING, SIDEWALKS, DRIVES, ETC. CLEAR AND FREE FROM ANY CONSTRUCTION ACTIVITY AND/OR MATERIAL TO ENSURE EASY AND SAFE PEDESTRIAN AND VEHICULAR TRAFFIC TO AND FROM THE SITE.
17. IF WET AREAS ARE ENCOUNTERED ON-SITE THE CONTRACTOR SHALL COORDINATE WITH THE GEOTECHNICAL ENGINEER FOR THE DESIGN AND PLACEMENT OF A FRENCH DRAIN SYSTEM.

UTILITY NOTES

1. THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF EXISTING UTILITIES WITHIN THE WORK ZONE.
2. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES' INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING FACILITIES. CONTRACTOR SHALL COORDINATE AND SCHEDULE TIE-INS/CONNECTIONS WITH ALL UTILITY COMPANIES.
3. ALL UNDERGROUND LINES SHALL BE INSTALLED, INSPECTED, AND APPROVED PRIOR TO BACKFILLING.
4. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICE.
5. GENERAL CONTRACTOR IS TO COORDINATE WITH APPROPRIATE UTILITY COMPANIES PRIOR TO CONSTRUCTION, ADJUSTMENT, OR RELOCATION OF EXISTING UTILITIES.
6. THRUST BLOCKING SHALL BE PROVIDED AT ALL BENDS, TEES, AND FIRE HYDRANTS.
7. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR FITTING.
8. MINIMUM HORIZONTAL SEPARATION BETWEEN THE OUTSIDE WALL OF THE WATERLINE AND THE OUTSIDE WALL OF THE SANITARY SEWER LINE OR SANITARY SEWER MANHOLE SHALL BE AT LEAST TEN FEET. WHERE WATERLINES CROSS SANITARY SEWERS THE WATERLINE SHALL BE PLACED ABOVE THE SEWER WITH A MINIMUM VERTICAL SEPARATION, OUTSIDE-TO-OUTSIDE, OF 18". IF IT IS NOT POSSIBLE TO CONFORM TO THESE DIMENSIONS OR DEFINED PLACEMENT, THE WATERLINE SHALL BE ENCASED IN WATERTIGHT PIPE WITH SEALED WATERTIGHT ENDS EXTENDING AT LEAST TEN FEET EITHER SIDE OF THE CROSSING.
9. THE CONTRACTOR SHALL INCLUDE IN THE BID PRICE ALL MATERIAL AND LABOR ASSOCIATED WITH THE TESTING OF THE WATER AND SEWER LINES REQUIRED BY THE LOCAL AND/OR STATE AGENCIES.
10. TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH FINISHED PAVEMENT ELEVATIONS, AND MANHOLES IN UNPAVED AREAS TO BE 1" ABOVE FINISHED GROUND ELEVATIONS WITH WATER TIGHT LIDS.
11. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL REGULATIONS.
12. ALL MATERIALS, CONSTRUCTION, AND INSPECTION FOR WATER AND SANITARY SEWER LINES SHALL BE PER THE SPECIFICATIONS OF THE APPROPRIATE AGENCY.
13. THE CONTRACTOR SHALL COORDINATE WITH THE FIRE DEPARTMENT AND THE WATER COMPANY TO PLAN THE IMPROVEMENTS TO THE WATER MAINS AND TO ENSURE ADEQUATE FIRE PROTECTION IS CONSTANTLY AVAILABLE TO THE SITE THROUGHOUT THE PROJECT. CONTRACTOR WILL BE RESPONSIBLE FOR ARRANGING ANY REQUIRED WATER MAIN SHUT-OFFS WITH THE WATER COMPANY DURING CONSTRUCTION. ALL COSTS ASSOCIATED WITH WATERMAIN SHUT-OFFS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR; NO ADDITIONAL COMPENSATION WILL BE PROVIDED.
14. DAMAGE TO ALL EXISTING FACILITIES DESIGNATED TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.
15. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS, AND EXACT UTILITY ENTRANCE LOCATIONS.
16. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TAP AND TIE ON FEES REQUIRED AS WELL AS COSTS OF UNDERGROUND SERVICE CONNECTIONS TO THE BUILDING.
17. GENERAL CONTRACTOR SHALL PROVIDE ALL CONDUITS AS SHOWN ON THE PLANS, VERIFY LOCATION OF UTILITY TIE-INS, AND PROVIDE NYLON PULL CORDS INSIDE THE CONDUIT.
18. THE CONTRACTOR SHALL INCLUDE IN BID PRICE THE DAILY RECORD KEEPING OF THE RECORD CONDITION OF ALL OF THE UNDERGROUND UTILITIES, CONSTRUCTION STAKE-OUT, PREPARATION OF THE NECESSARY/REQUIRED WATER AND SEWER RECORD DRAWINGS TO BE SUBMITTED, AND ALL OTHER INFORMATION REQUIRED FOR OBTAINING PERMITS AND RELEASE OF BONDS.
19. ENERGIZED ELECTRICAL LINE SAFETY, WARNINGS, AND ADVANCED NOTICES: ALL OWNERS, GENERAL CONTRACTORS, AND SUBCONTRACTORS ASSOCIATED WITH THIS PROJECT SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH, COMPLYING WITH, AND THE ENFORCEMENT OF ARKANSAS CODES AR ST § 11-5-307 AND § AR ST 11-5-308 AND ANY OTHER CURRENT STATE CODES PERTAINING TO ADVANCE NOTICE REQUIREMENTS AND FOR SAFETY OF ALL PERSONNEL, INCLUDING THE GENERAL PUBLIC, PERTAINING TO ANY WORK, MOVEMENT, AND ACTIVITY IN CLOSE PROXIMITY TO ANY ENERGIZED ELECTRICAL LINE.

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RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

No.	Description	Date

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PROJECT NO: 22110100
ISSUE DATE: 05/16/2025
CONTACT: L. JOST
QC by: G. LONG
QC Date: 7/18/2023

ISSUED FOR REVIEW

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STATE OF ARKANSAS ★ ★ ★ REGISTERED PROFESSIONAL ENGINEER ★ ★ ★ No. 18699 LUCAS K. JOST

05/21/2025

STANDARD NOTES

C-002

DRAWING: G:\22110100_RZBGRNPH3\INFRASTRUCTURE\CIVIL\DWG\COVER SHEET.DWG
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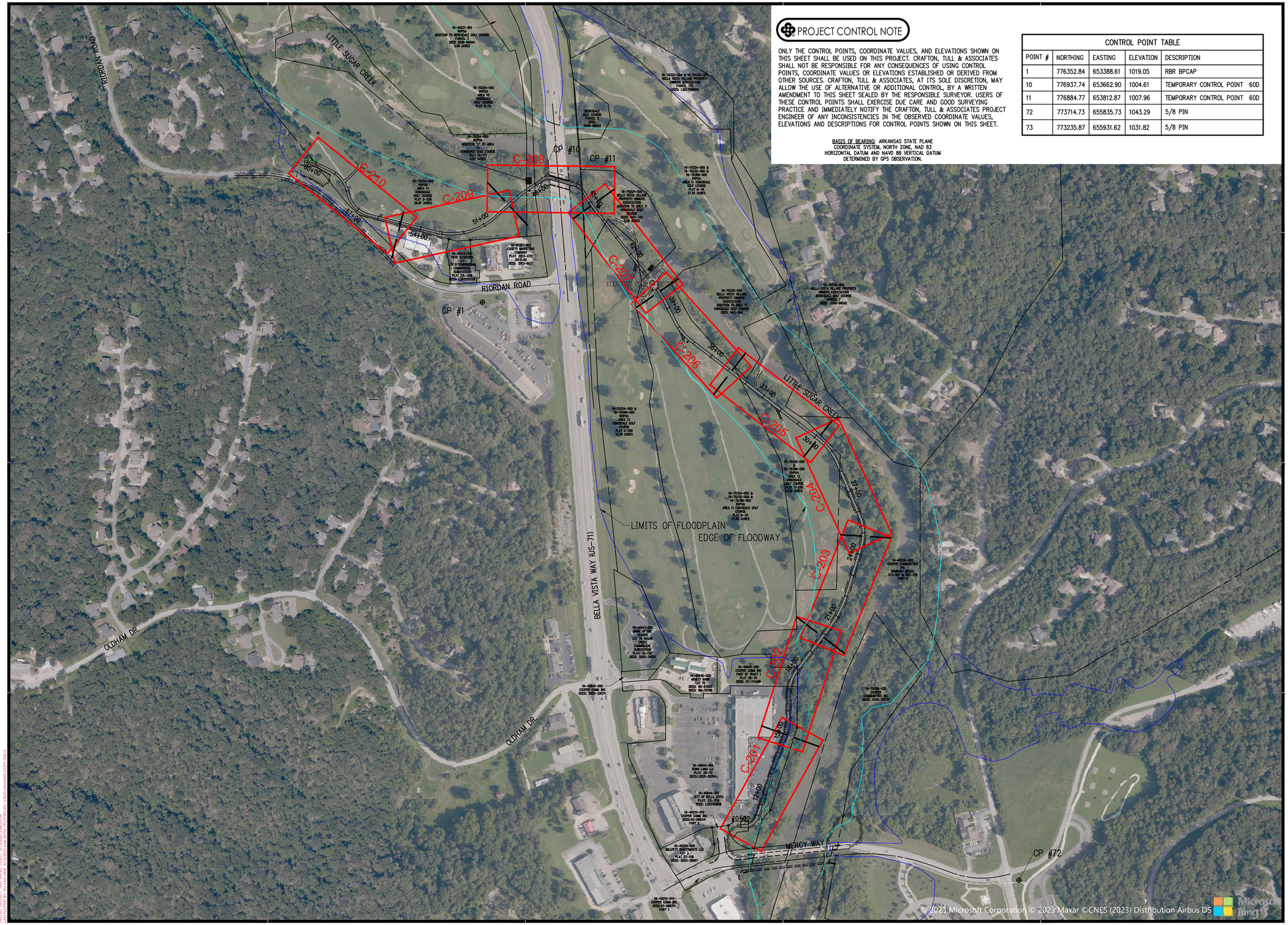

PROJECT CONTROL NOTE

ONLY THE CONTROL POINTS, COORDINATE VALUES, AND ELEVATIONS SHOWN ON THIS SHEET SHALL BE USED ON THIS PROJECT. CRAFTON, TULL & ASSOCIATES SHALL NOT BE RESPONSIBLE FOR ANY CONSEQUENCES OF USING CONTROL POINTS, COORDINATE VALUES OR ELEVATIONS ESTABLISHED OR DERIVED FROM OTHER SOURCES. CRAFTON, TULL & ASSOCIATES, AT ITS SOLE DISCRETION, MAY ALLOW THE USE OF ALTERNATIVE OR ADDITIONAL CONTROL, BY A WRITTEN AMENDMENT TO THIS SHEET SEALED BY THE RESPONSIBLE SURVEYOR. USERS OF THESE CONTROL POINTS SHALL EXERCISE DUE CARE AND GOOD SURVEYING PRACTICE AND IMMEDIATELY NOTIFY THE CRAFTON, TULL & ASSOCIATES PROJECT ENGINEER OF ANY INCONSISTENCIES IN THE OBSERVED COORDINATE VALUES, ELEVATIONS AND DESCRIPTIONS FOR CONTROL POINTS SHOWN ON THIS SHEET.

BASIS OF BEARING: ARKANSAS STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NAD 83 HORIZONTAL DATUM AND NAVD 88 VERTICAL DATUM DETERMINED BY GPS OBSERVATION.

CONTROL POINT TABLE

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	776352.84	653388.61	1019.05	RBR BPCAP
10	776937.74	653662.90	1004.61	TEMPORARY CONTROL POINT 60D
11	776884.77	653812.87	1007.96	TEMPORARY CONTROL POINT 60D
72	773714.73	655835.73	1043.29	5/8 PIN
73	773235.87	655931.62	1031.82	5/8 PIN

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No. 109
ARKANSAS ENGINEER

GRAPHIC SCALE IN FEET
200' 0 200'

RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

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No. 18699
LUCAS K. JOST
05/21/2025

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OVERALL SITE PLAN

C-101

DRAWING: C:\22110100_RZRGRNWY\INFRASTRUCTURE\CIVIL\DWG\OVERALL SITE PLAN.DWG
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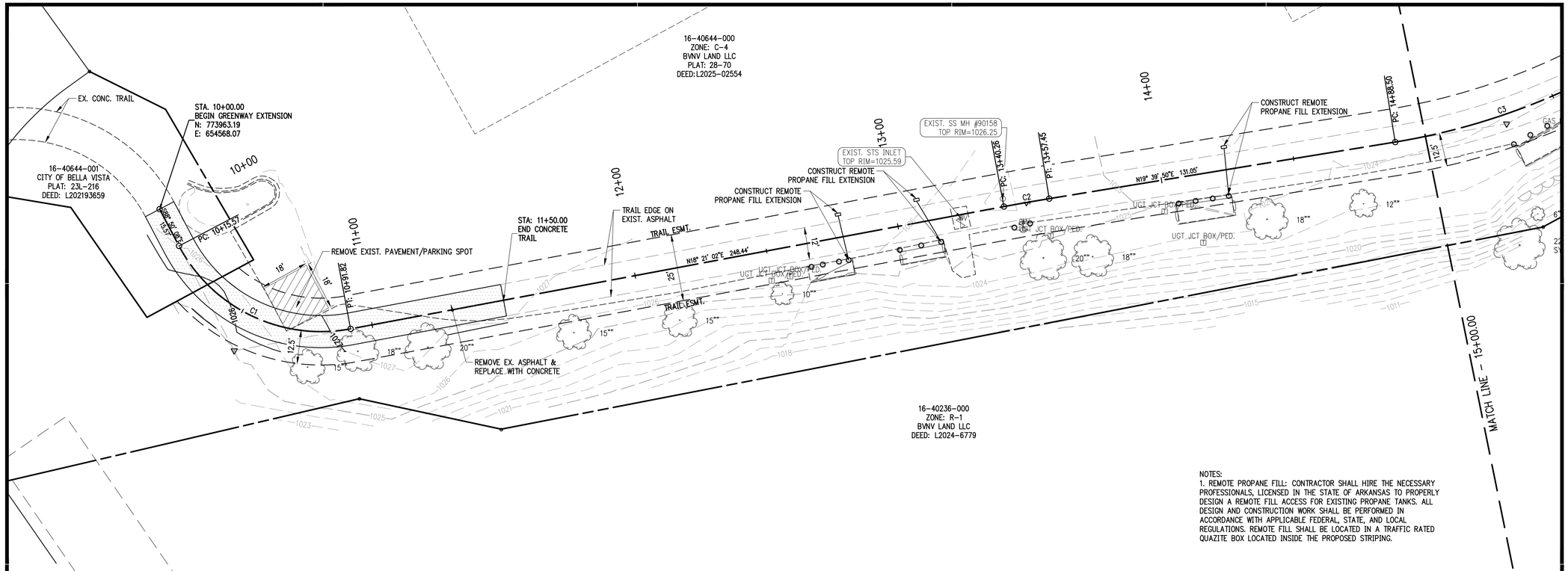
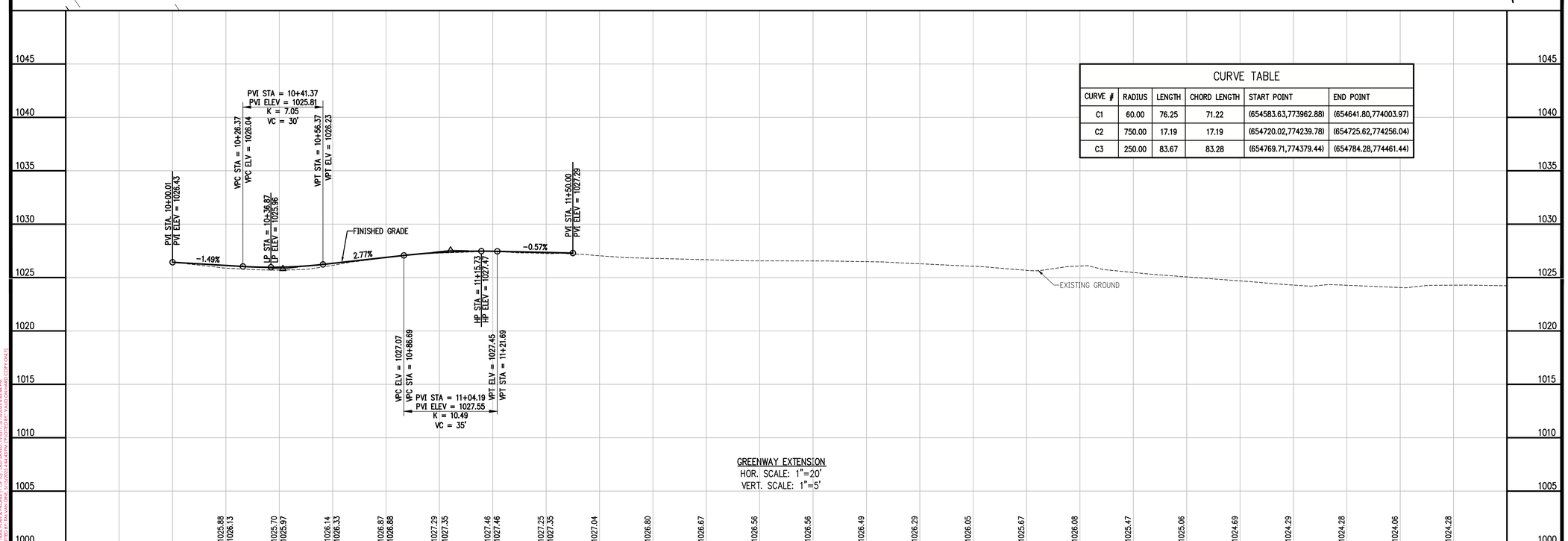


NOTES:
1. REMOTE PROPANE FILL: CONTRACTOR SHALL HIRE THE NECESSARY PROFESSIONALS, LICENSED IN THE STATE OF ARKANSAS TO PROPERLY DESIGN A REMOTE FILL ACCESS FOR EXISTING PROPANE TANKS. ALL DESIGN AND CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. REMOTE FILL SHALL BE LOCATED IN A TRAFFIC RATED QUAZITE BOX LOCATED INSIDE THE PROPOSED STRIPING.



GREENWAY EXTENSION
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

CURVE TABLE

CURVE #	RADIUS	LENGTH	CHORD LENGTH	START POINT	END POINT
C1	60.00	76.25	71.22	(654583.63,773962.88)	(654641.80,774003.97)
C2	750.00	17.19	17.19	(654720.02,774239.78)	(654725.62,774256.04)
C3	250.00	83.67	83.28	(654769.71,774379.44)	(654784.28,774461.44)

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RAZORBACK GREENWAY EXTENSION PHASE III

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TRAIL PLAN & PROFILE (1 OF 10)

C-201

DRAWING: G:\22110100_BERGMPHS\INFRASTRUCTURE\CIVIL\DWG\TRAILS\PLATS.DWG
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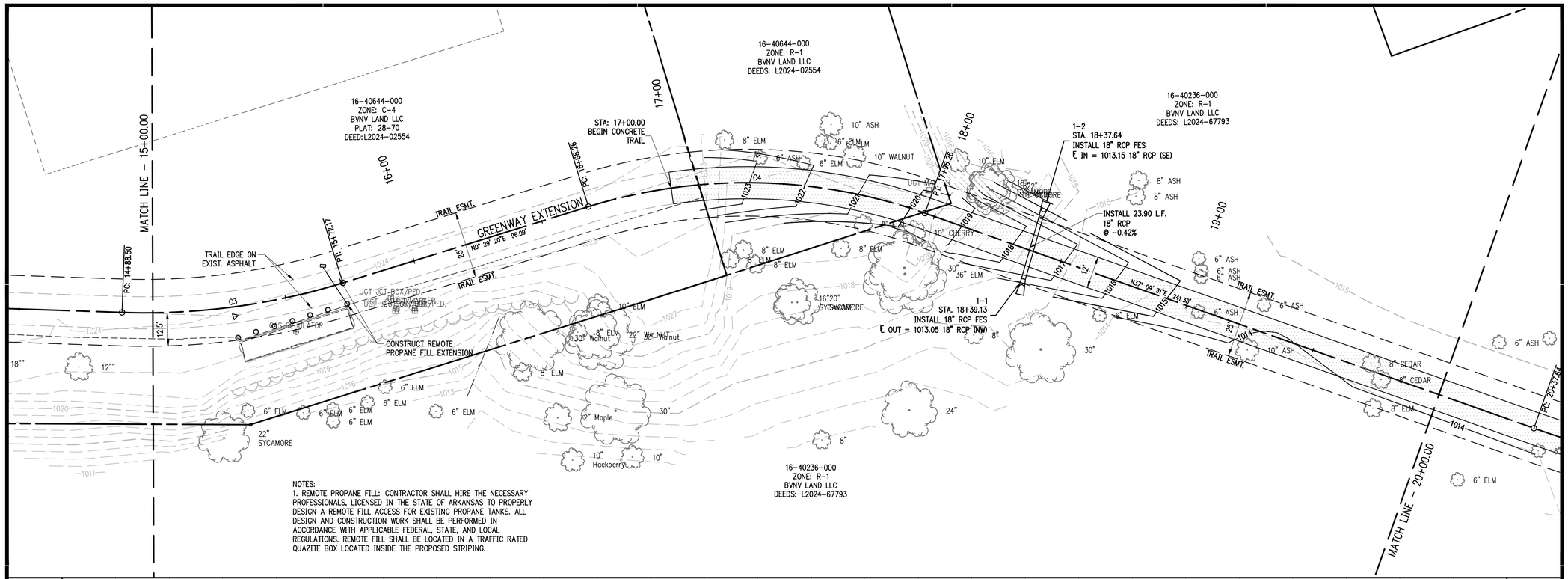

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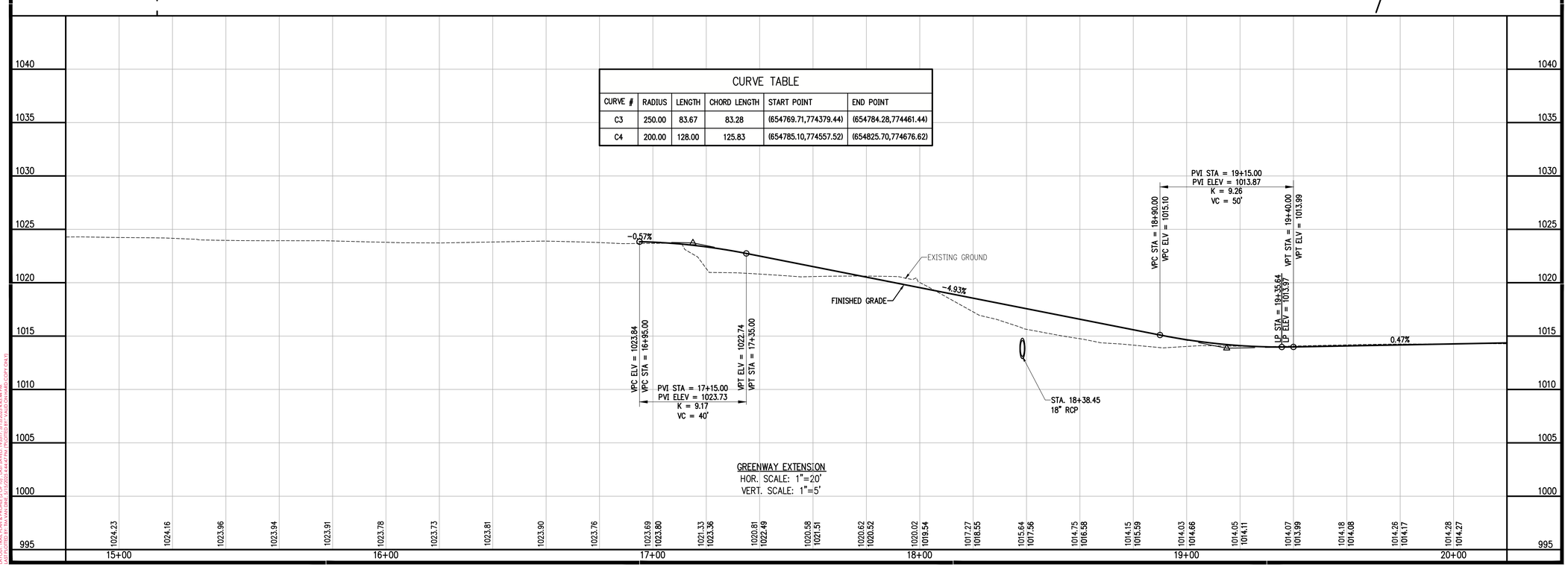
CURVE TABLE

CURVE #	RADIUS	LENGTH	CHORD LENGTH	START POINT	END POINT
C3	250.00	83.67	83.28	(654769.71,774379.44)	(654784.28,774461.44)
C4	200.00	128.00	125.83	(654785.10,774557.52)	(654825.70,774676.62)



GREENWAY EXTENSION
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

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RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

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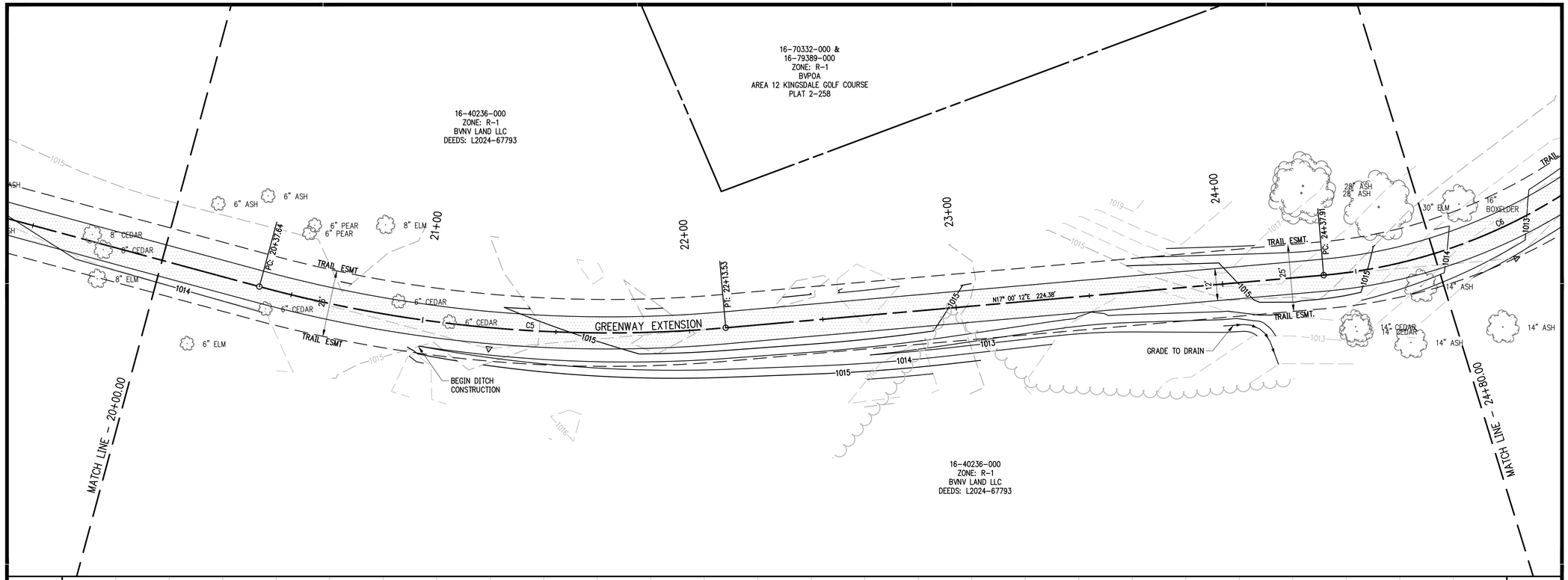
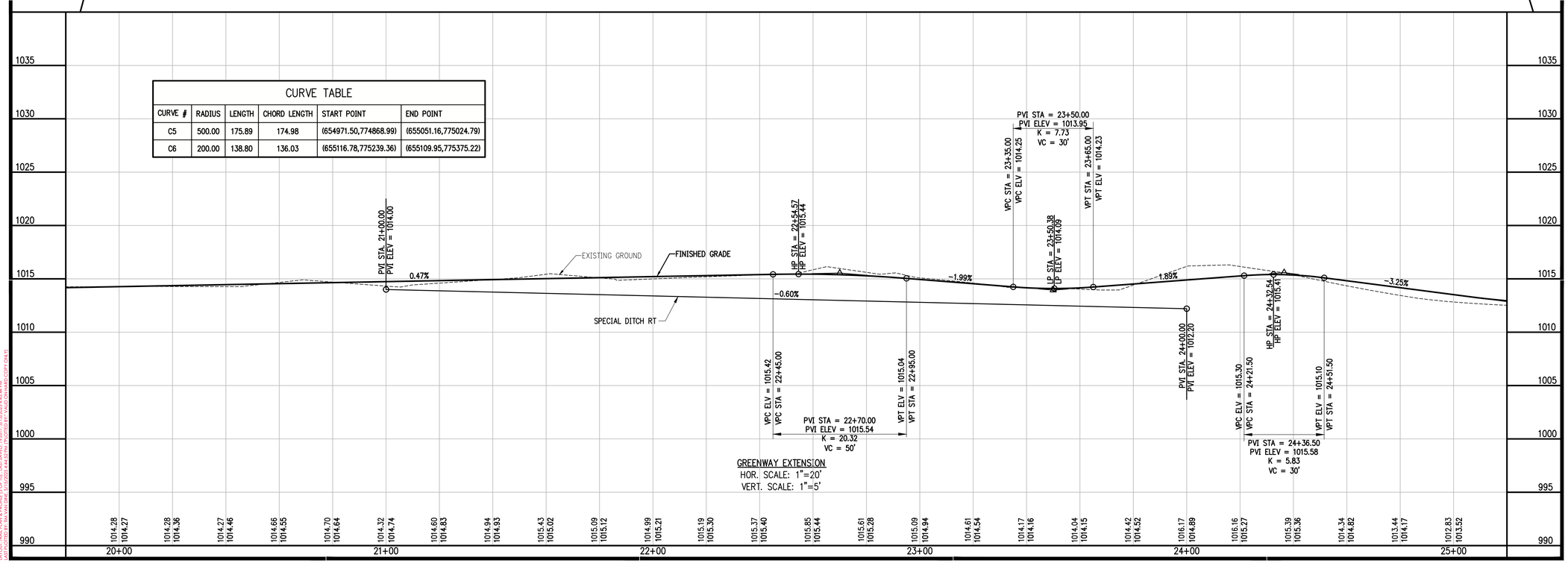
TRAIL PLAN & PROFILE (2 OF 10)

C-202



CURVE TABLE					
CURVE #	RADIUS	LENGTH	CHORD LENGTH	START POINT	END POINT
C5	500.00	175.89	174.98	(654971.50,774868.99)	(655051.16,775024.79)
C6	200.00	138.80	136.03	(655116.78,775239.36)	(655109.95,775375.22)



GREENWAY EXTENSION
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RAZORBACK GREENWAY EXTENSION PHASE III

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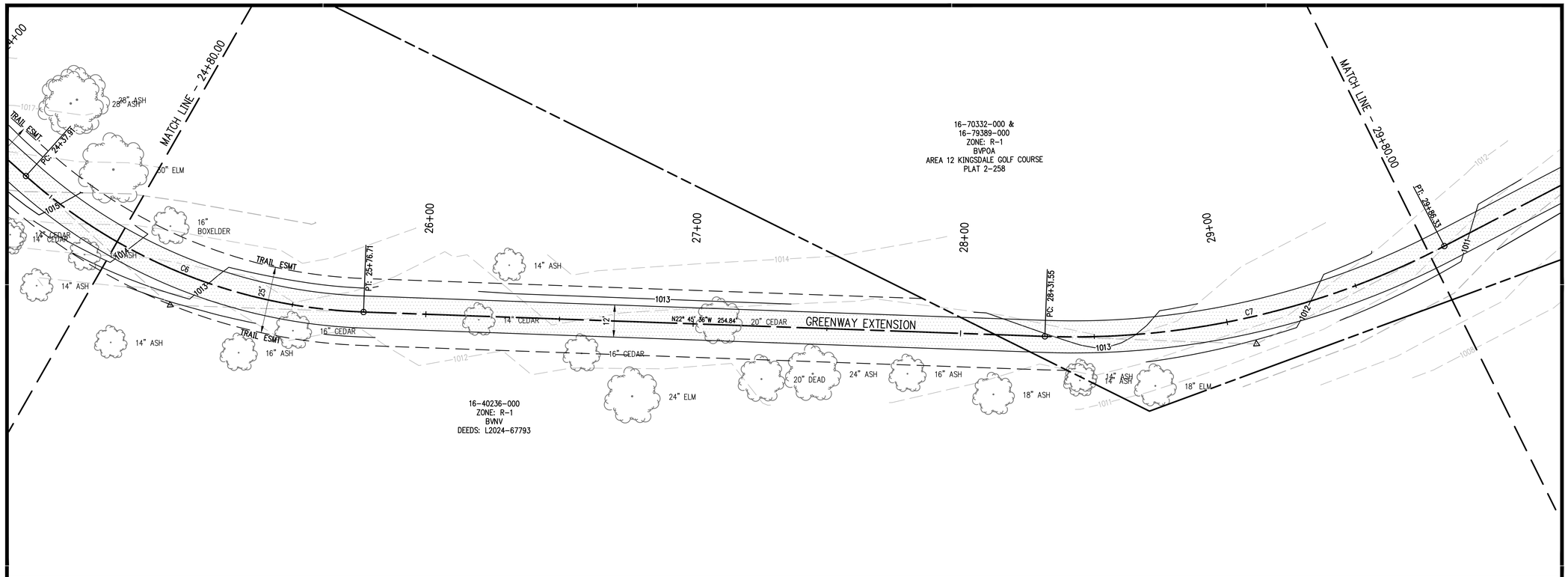
05/21/2025

TRAIL PLAN & PROFILE (3 OF 10)

C-203



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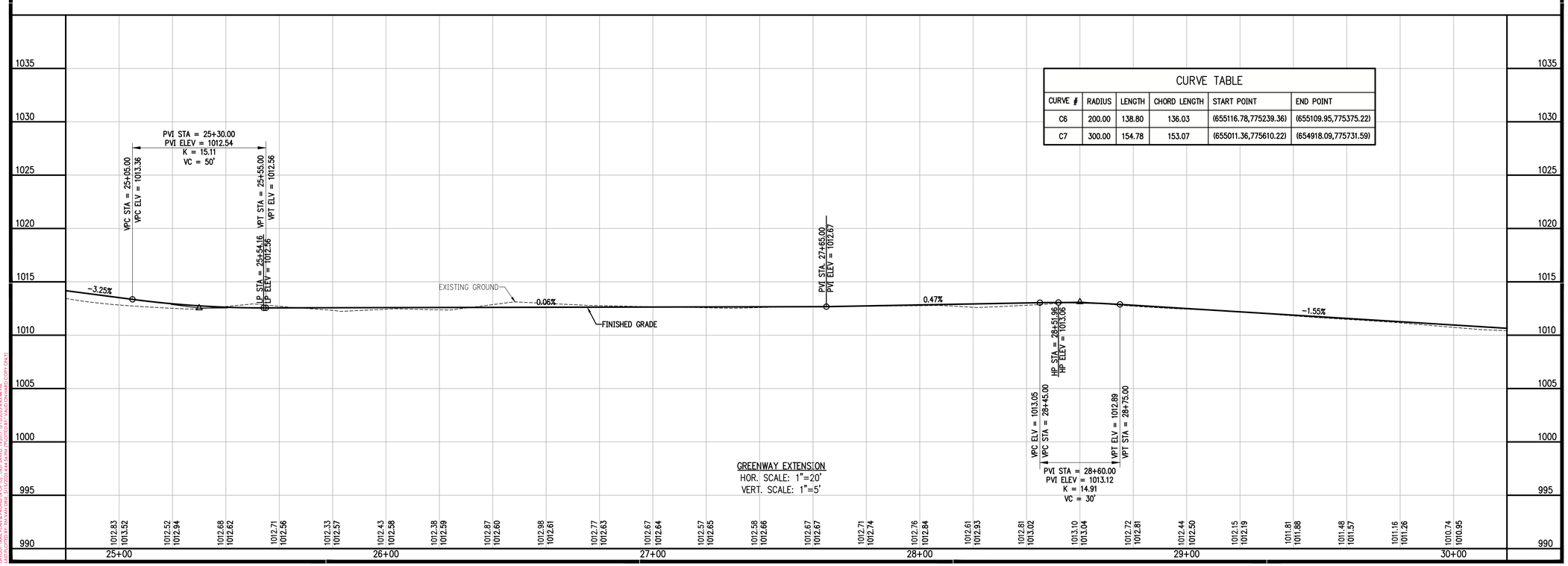

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GRAPHIC SCALE IN FEET
20' 0 20'

RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

No.	Description	Date

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PROJECT NO: 22110100
ISSUE DATE: 05/16/2025
CONTACT: L. JOST
QC by: G. LONG
QC Date: 7/18/2023

ISSUED FOR REVIEW

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 18699 LUCAS K. JOST
05/21/2025

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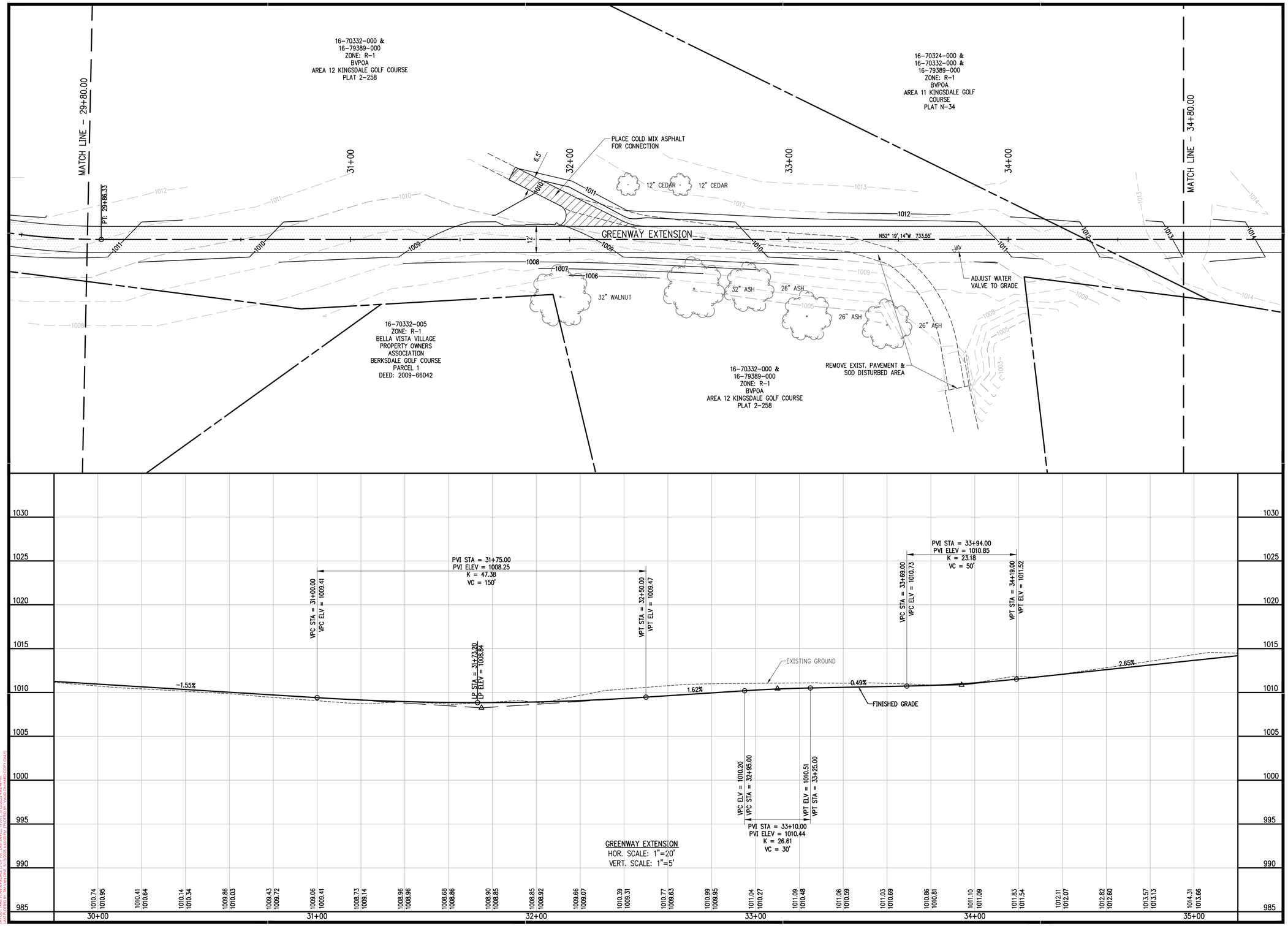
TRAIL PLAN & PROFILE (4 OF 10)

C-204



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RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

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QC Date: 7/18/2023

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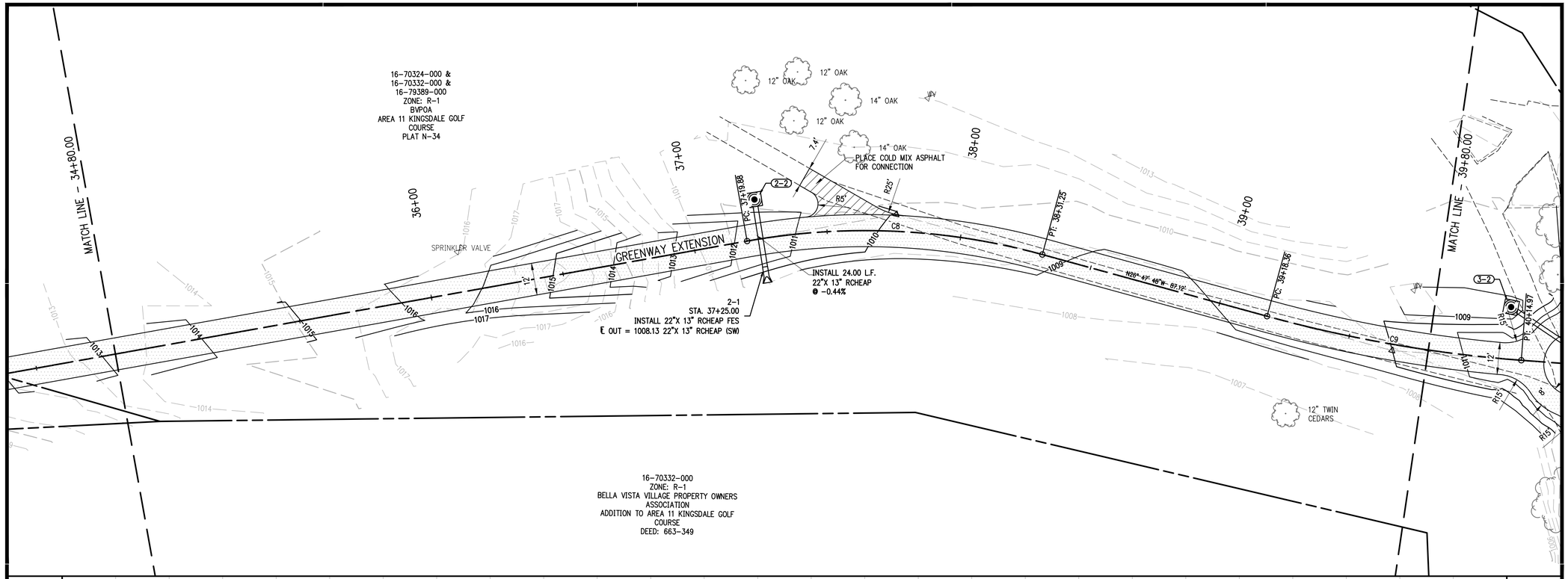
TRAIL PLAN & PROFILE (5 OF 10)

C-205

DRAWING: C:\22110100_BENTONVILLE\INFRASTRUCTURE\CIVIL\DWG\TRAIL PLAN.DWG
LAYOUT: TRAIL PLAN & PROFILE (5 OF 10) LAST SAVED: 7/20/2023 8:40:44 PM
PLOTTED BY: LUCAS JOST LAST PLOTTED: 7/20/2023 8:40:44 PM
TRAIL PLAN & PROFILE (5 OF 10) - PLAN (COPY ONLY)



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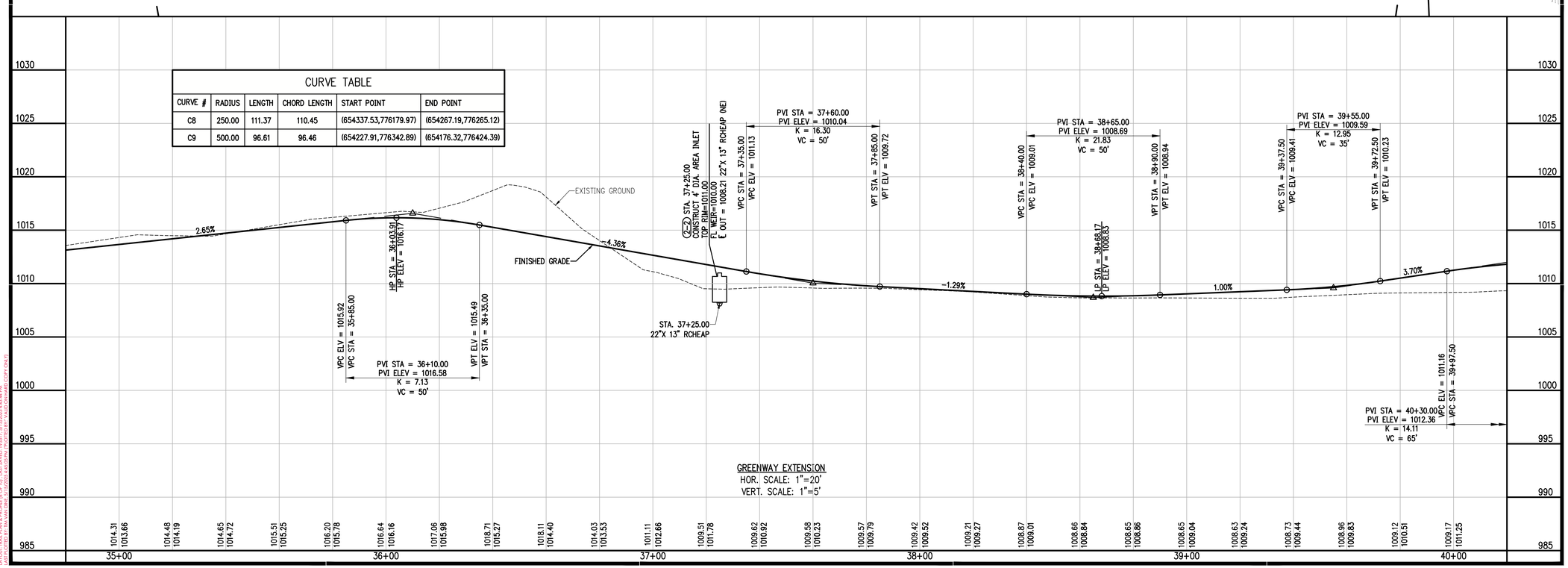

GREENWAY EXTENSION
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

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RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

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QC Date: 7/18/2025

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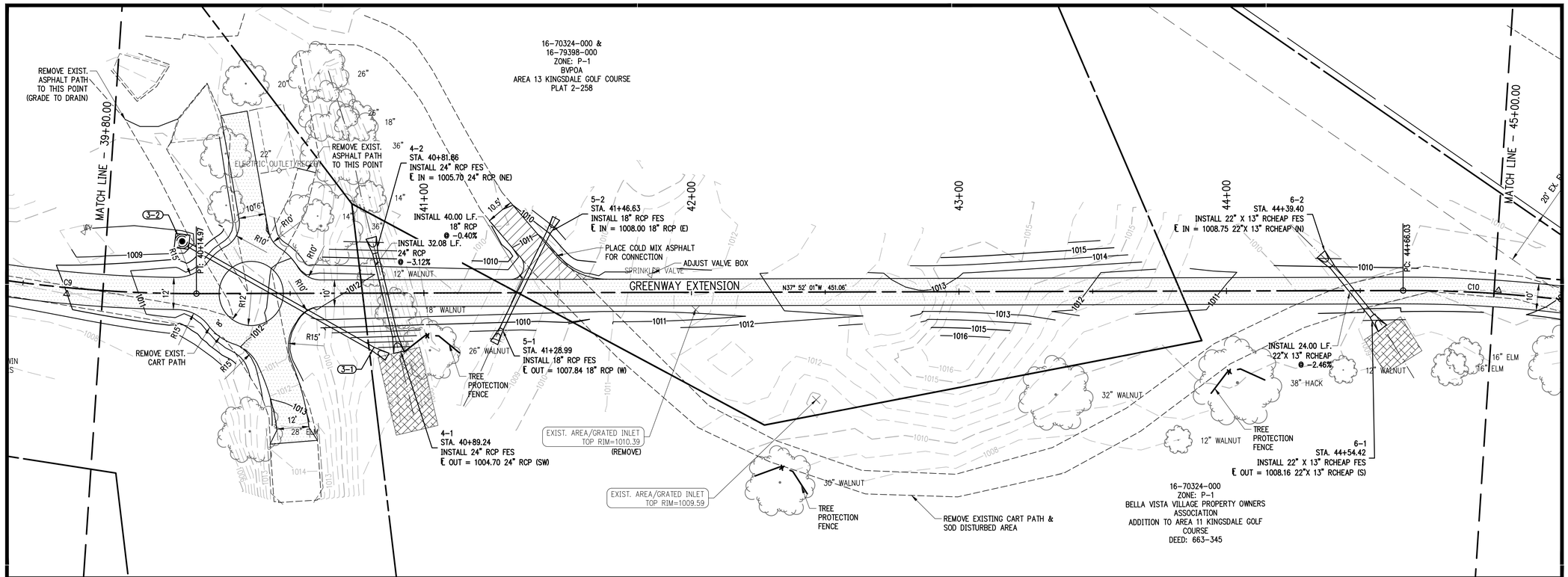
C-206



CURVE TABLE					
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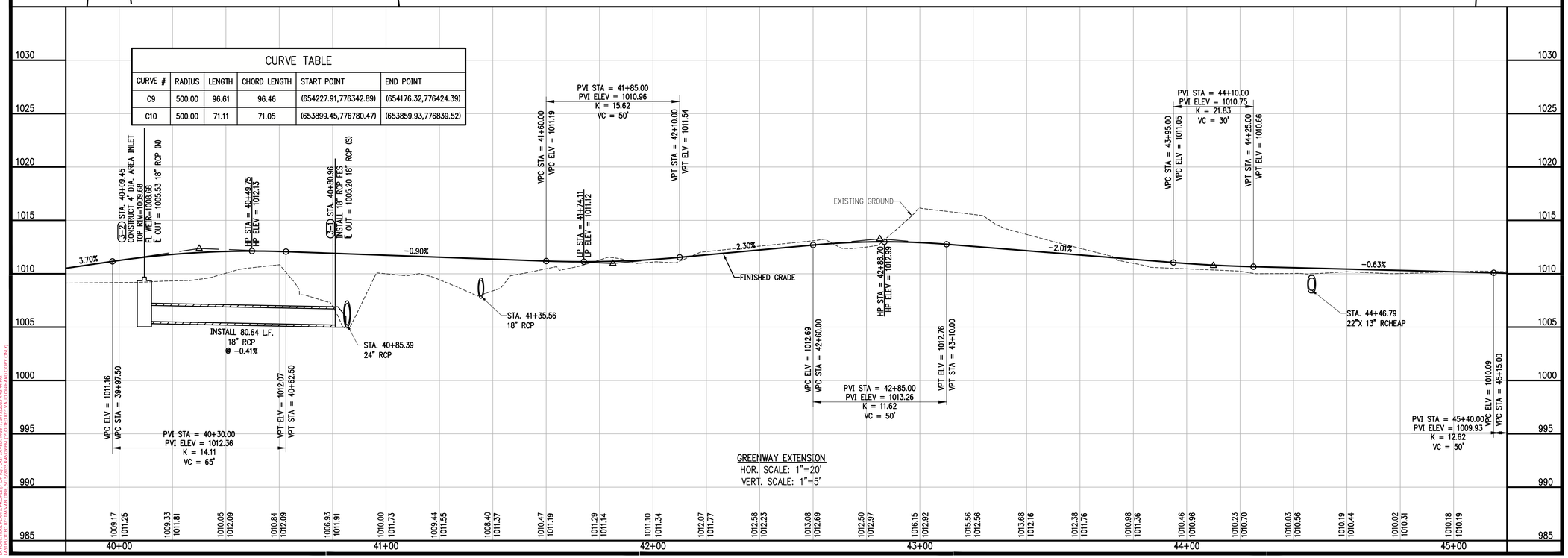
C10	500.00	71.11	71.05	(653899.45,776780.47)	(653859.93,776839.52)



GREENWAY EXTENSION
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

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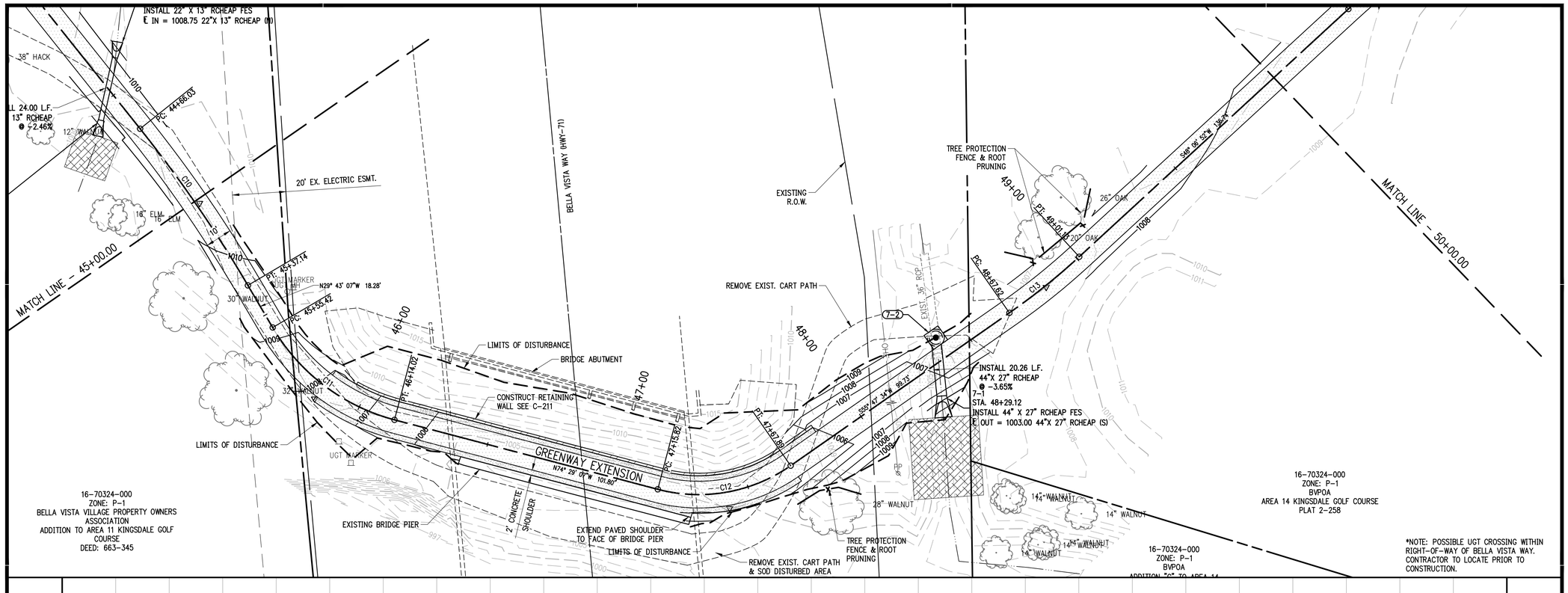
C-207



CURVE TABLE					
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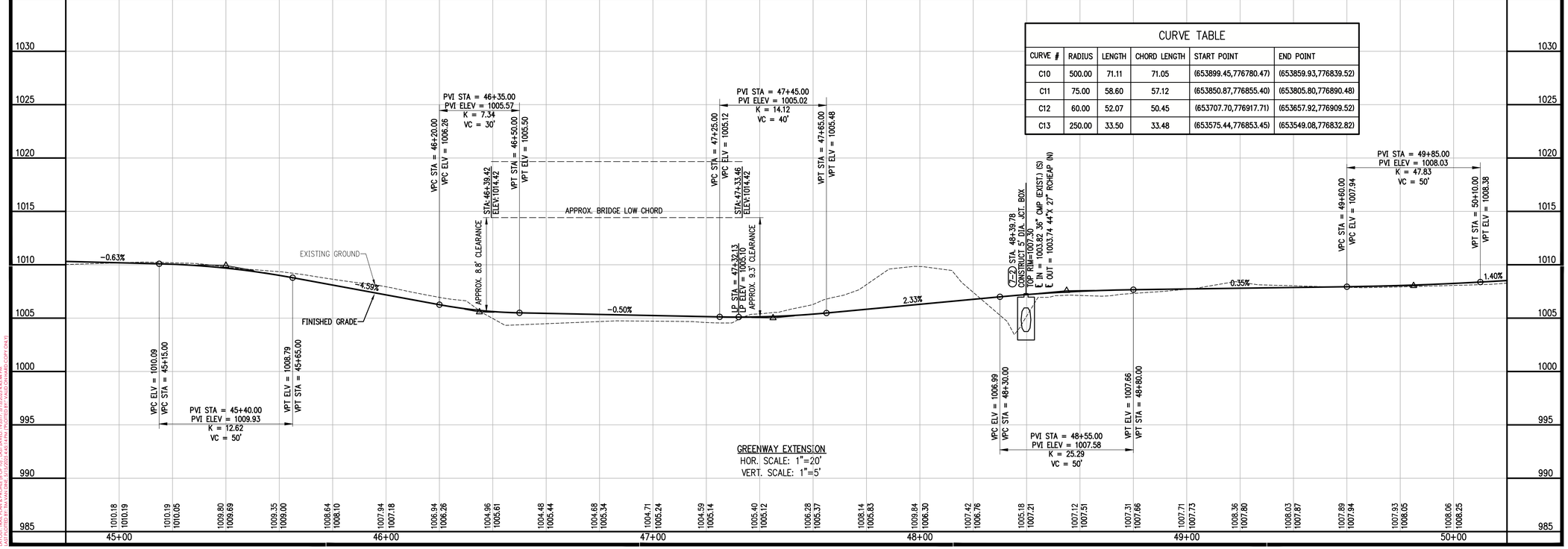
C11	75.00	58.60	57.12	(653850.87,776855.40)	(653805.80,776890.48)
C12	60.00	52.07	50.45	(653707.70,776917.71)	(653657.92,776909.52)
C13	250.00	33.50	33.48	(653575.44,776853.45)	(653549.08,776832.82)



GREENWAY EXTENSION
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VERT. SCALE: 1"=5'

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RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

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TRAIL PLAN & PROFILE (8 OF 10)

C-208

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LAYOUT: TRAIL PLAN & PROFILE (8 OF 10) LAST SAVED: 5/20/2025 4:40:44 PM
PLOTTED BY: LUCAS JOST LAST PLOTTED: 5/21/2025 8:46:24 AM
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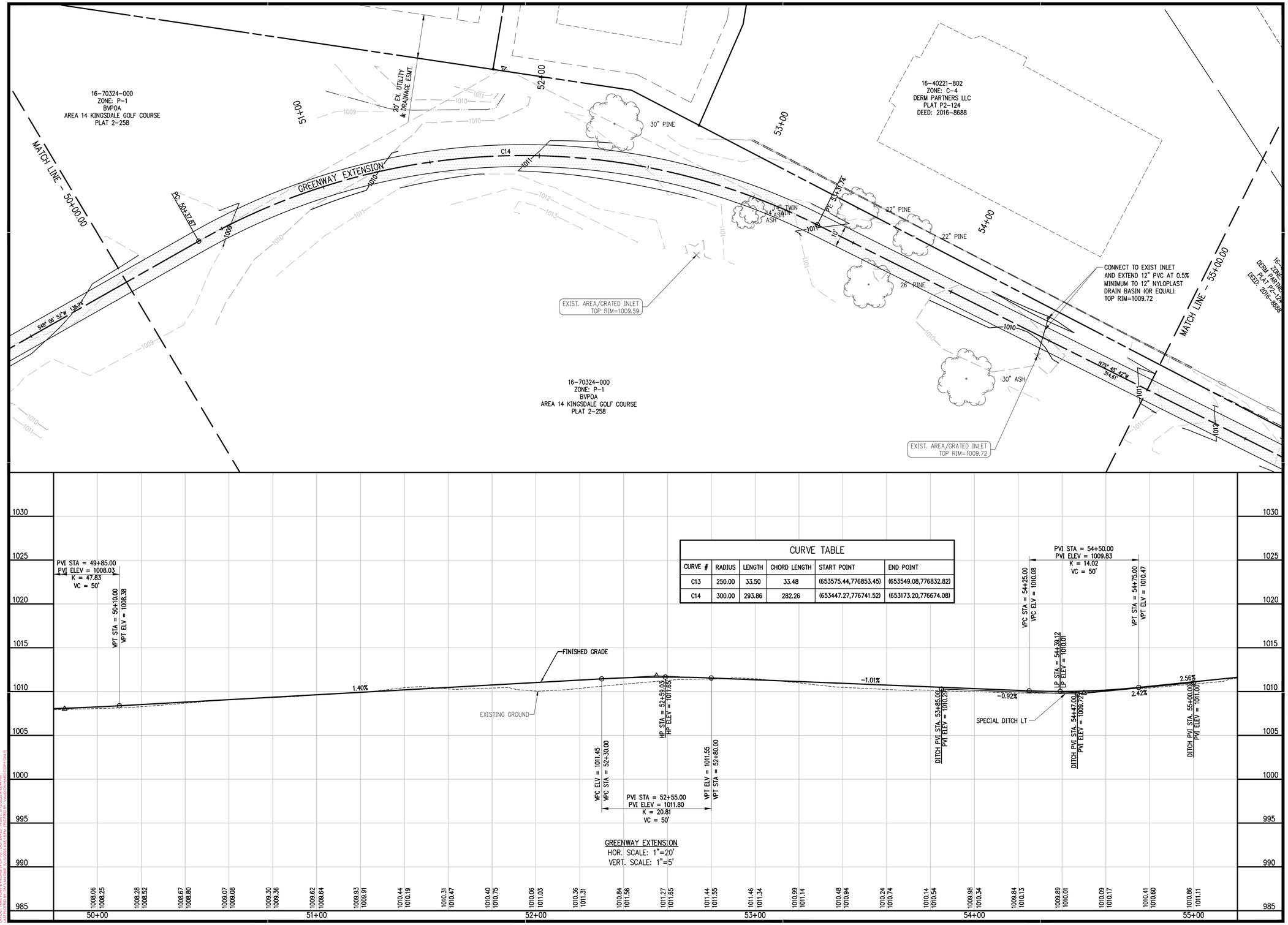

CURVE TABLE					
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C14	300.00	293.86	282.26	(653447.27,776741.52)	(653173.20,776674.08)

GREENWAY EXTENSION
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

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GRAPHIC SCALE IN FEET
20' 0 20'

RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

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TRAIL PLAN & PROFILE (9 OF 10)

C-209

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LAYOUT: TRAIL PLAN & PROFILE (9 OF 10) LAST SAVED: 5/20/2025 4:40:44 PM
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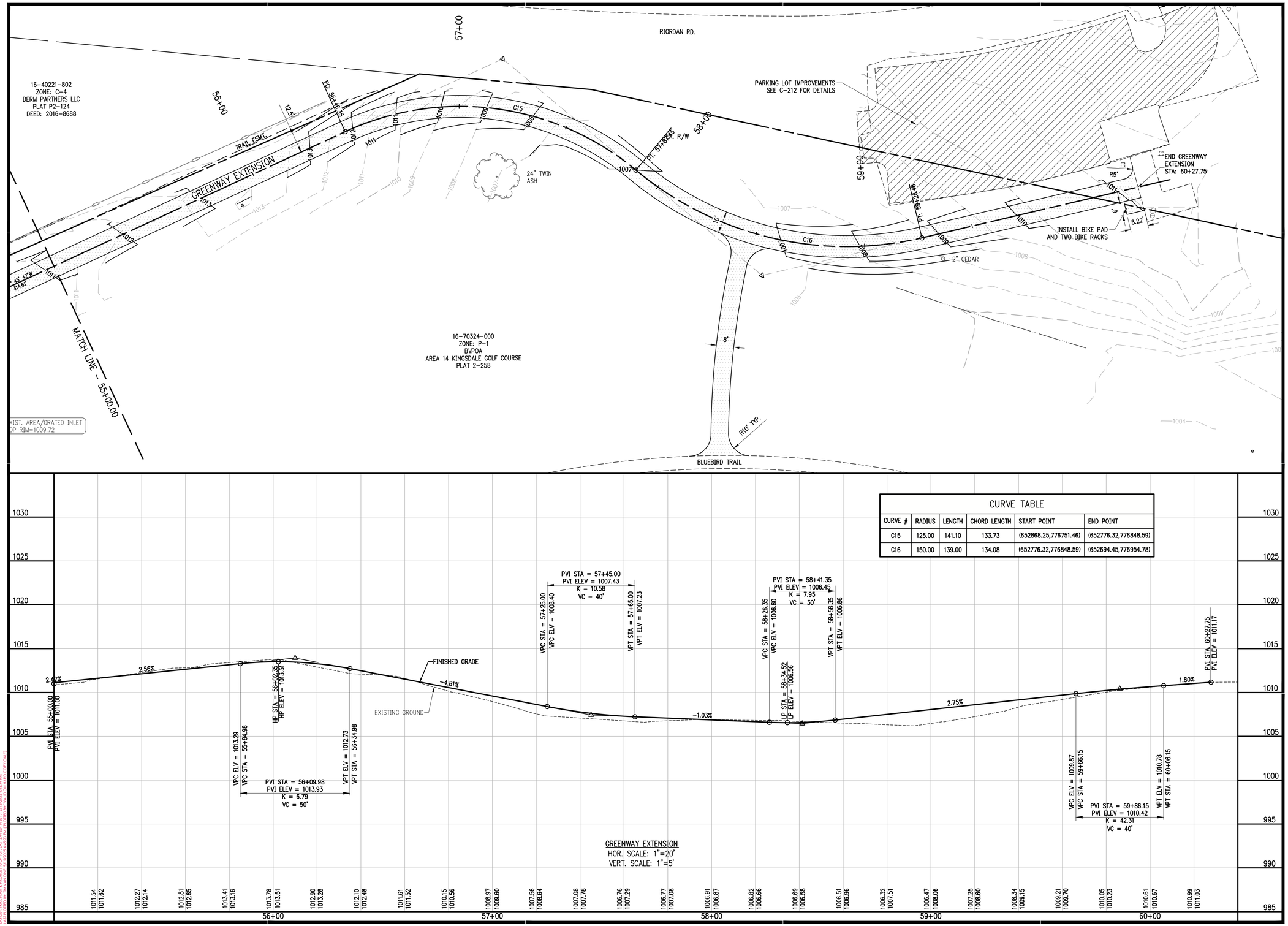

CURVE TABLE					
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C16	150.00	139.00	134.08	(652776.32,776848.59)	(652694.45,776954.78)

GREENWAY EXTENSION
HOR. SCALE: 1"=20'
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RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

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TRAIL PLAN & PROFILE (10 OF 10)

C-210

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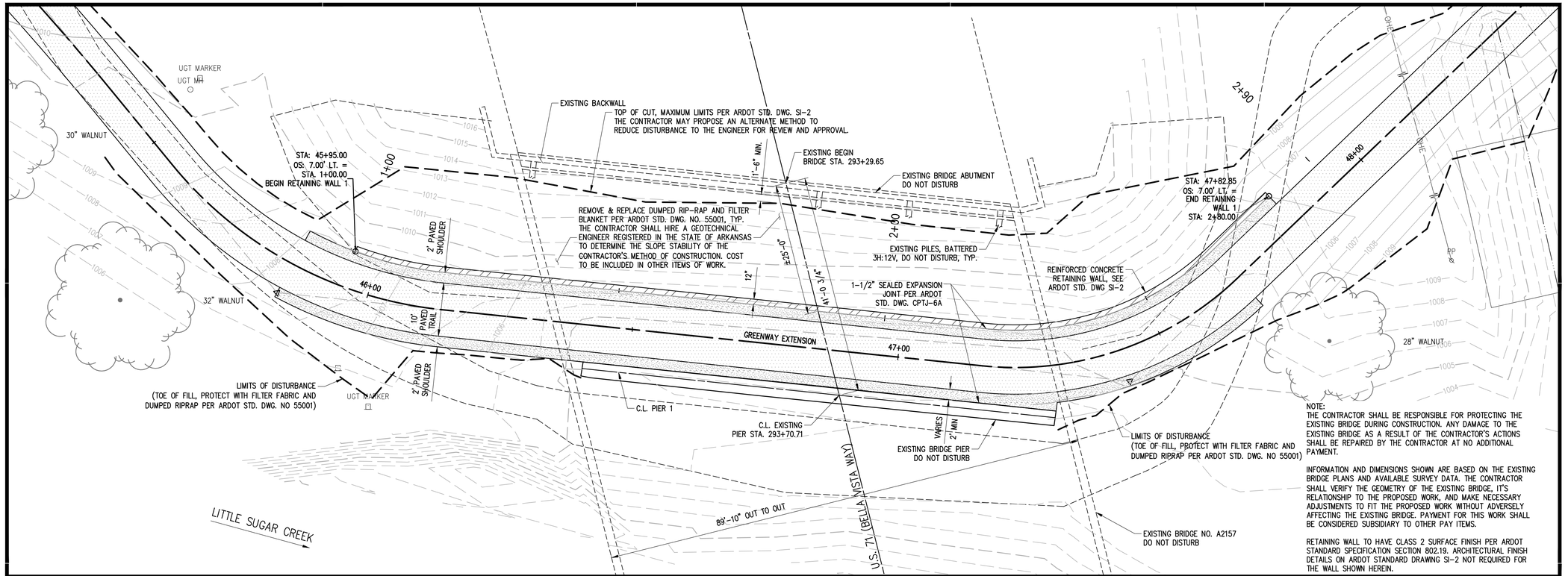
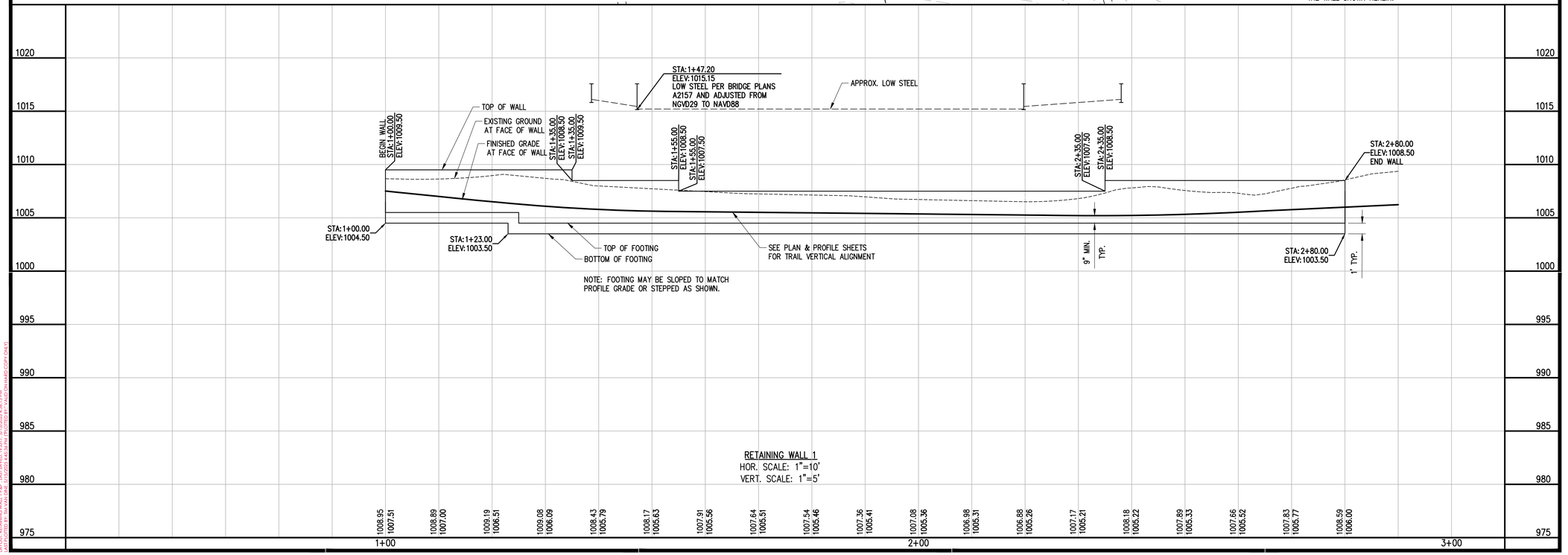


NOTE:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE EXISTING BRIDGE DURING CONSTRUCTION. ANY DAMAGE TO THE EXISTING BRIDGE AS A RESULT OF THE CONTRACTOR'S ACTIONS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL PAYMENT.

INFORMATION AND DIMENSIONS SHOWN ARE BASED ON THE EXISTING BRIDGE PLANS AND AVAILABLE SURVEY DATA. THE CONTRACTOR SHALL VERIFY THE GEOMETRY OF THE EXISTING BRIDGE, IT'S RELATIONSHIP TO THE PROPOSED WORK, AND MAKE NECESSARY ADJUSTMENTS TO FIT THE PROPOSED WORK WITHOUT ADVERSELY AFFECTING THE EXISTING BRIDGE. PAYMENT FOR THIS WORK SHALL BE CONSIDERED SUBSIDIARY TO OTHER PAY ITEMS.

RETAINING WALL TO HAVE CLASS 2 SURFACE FINISH PER ARDOT STANDARD SPECIFICATION SECTION 802.19. ARCHITECTURAL FINISH DETAILS ON ARDOT STANDARD DRAWING SI-2 NOT REQUIRED FOR THE WALL SHOWN HEREIN.



RETAINING WALL 1
HOR. SCALE: 1"=10'
VERT. SCALE: 1"=5'

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RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

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05/21/2025

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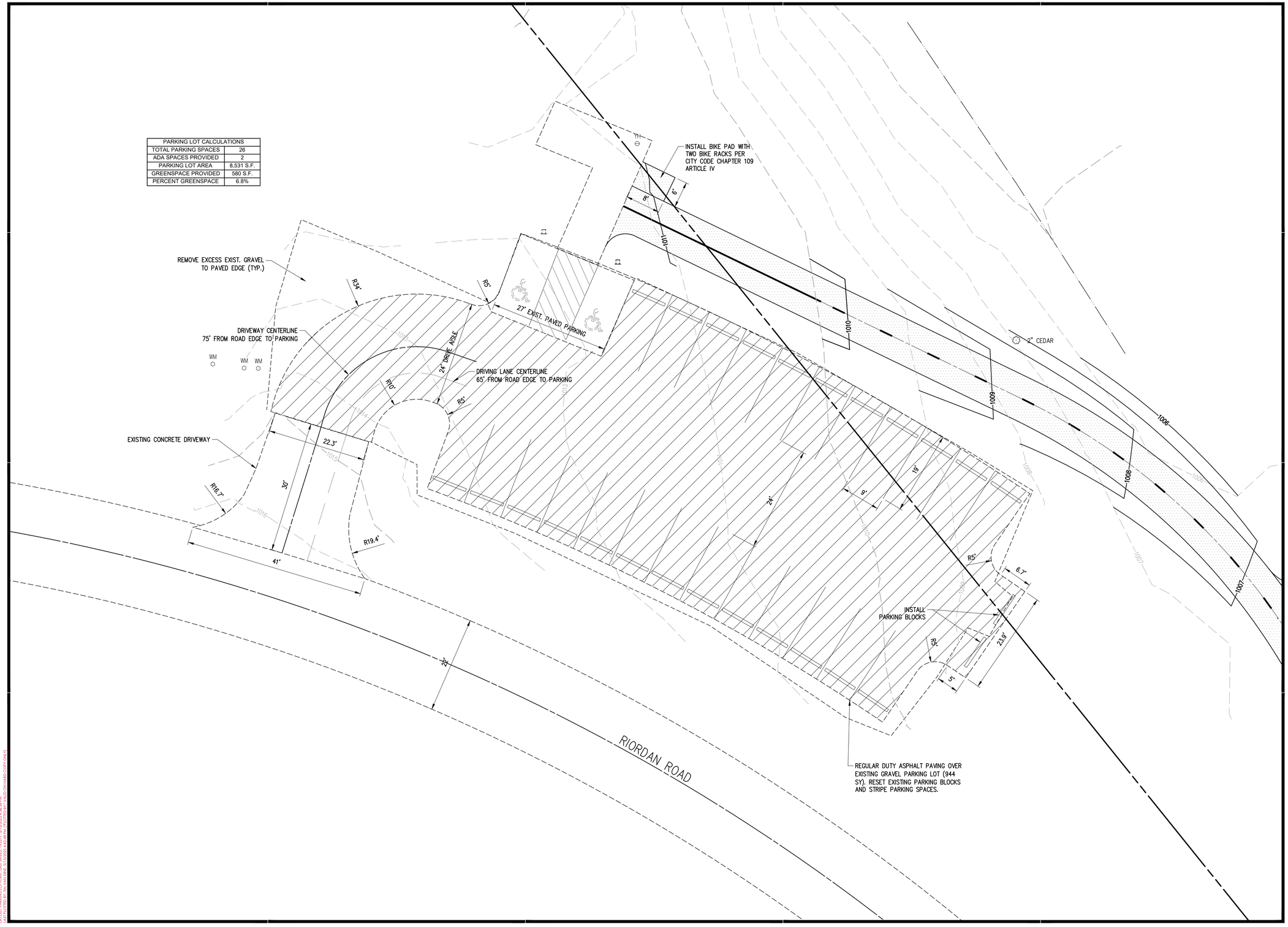
RETAINING WALL 1 P&P

C-211

DRAWING: C-22110100 R:\ENGINEERING\INFRASTRUCTURE\CIVIL\DWG\RETAINING WALL P&P.DWG
LAYOUT: RETAINING WALL P&P - LAST SAVED: 7/18/2023 3:11:02 PM
LAST PLOTTED: 7/18/2023 3:11:28 PM BY: LUCAS JOST (CRAFTON HARD COPY CONV.)

PARKING LOT CALCULATIONS	
TOTAL PARKING SPACES	26
ADA SPACES PROVIDED	2
PARKING LOT AREA	8,531 S.F.
GREENSPACE PROVIDED	580 S.F.
PERCENT GREENSPACE	6.8%



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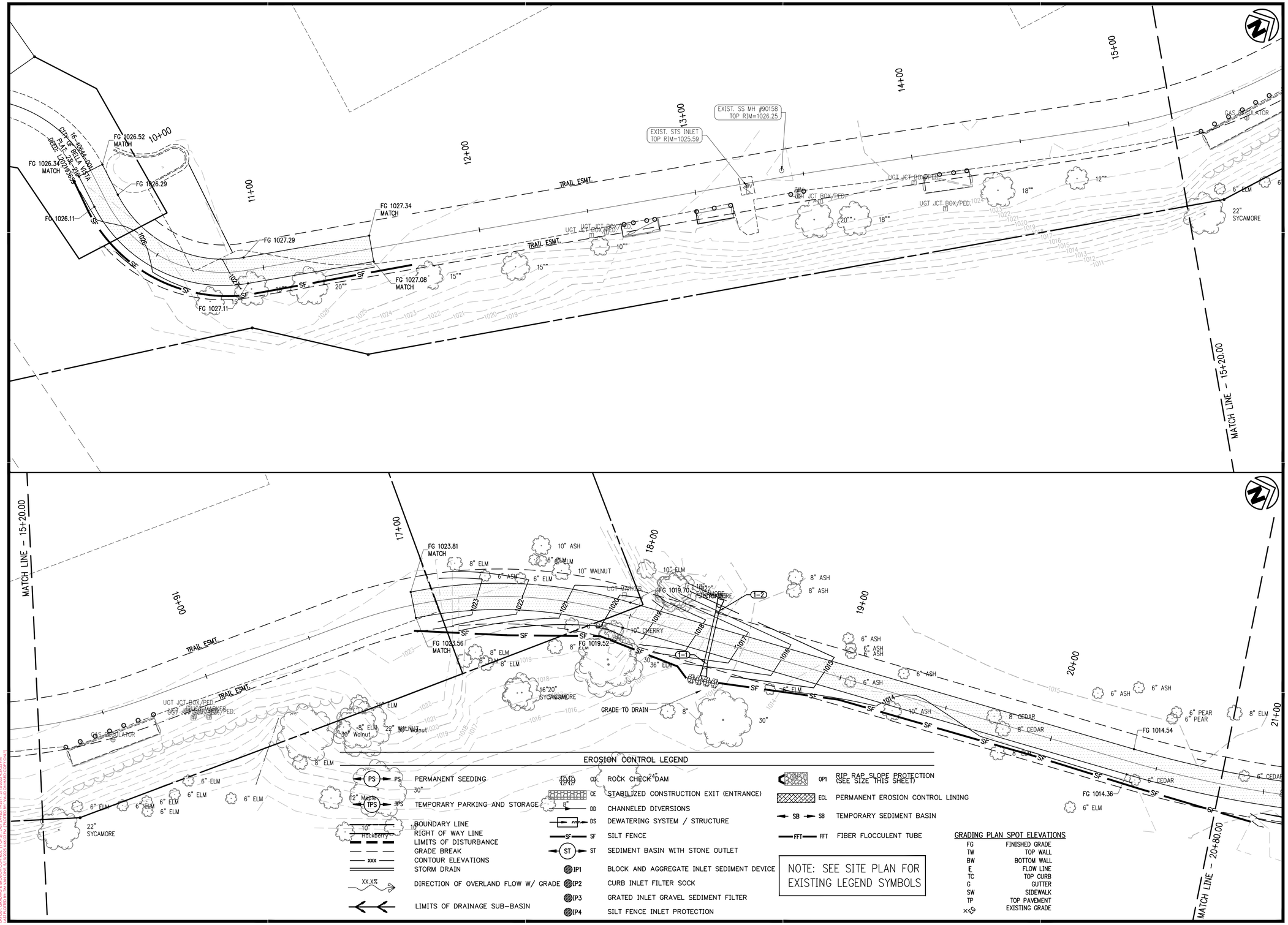
PARKING LOT PLAN

C-212

DRAWING: G:\22110100_RZBGNWY\WRK\ARCH\CTUB\CIVIL\DWG\-PARKING PLAN.DWG
LAYOUT: PARKING LOT PLAN - LAST SAVED: 7/18/2025 4:28:34 PM
PLOTTED BY: LUCAS K. JOST - LAST PLOTTED: 7/18/2025 4:28:34 PM
XREFS: CTUB-BASE; CTUB-TOPO; CTUB-BLDG; CTUB-PROP; CTUB-CHMOD; CTUB-CHMOD-COPY (2MLT)



EROSION CONTROL LEGEND

PS	PERMANENT SEEDING	CD	ROCK CHECK DAM	OP1	RIP RAP SLOPE PROTECTION (SEE SIZE THIS SHEET)
TPS	TEMPORARY PARKING AND STORAGE	CE	STABILIZED CONSTRUCTION EXIT (ENTRANCE)	ECL	PERMANENT EROSION CONTROL LINING
	BOUNDARY LINE	DD	CHANNELED DIVERSIONS	SB	TEMPORARY SEDIMENT BASIN
	RIGHT OF WAY LINE	DS	DEWATERING SYSTEM / STRUCTURE	FFT	FIBER FLOCCULENT TUBE
	LIMITS OF DISTURBANCE	SF	SILT FENCE		
	GRADE BREAK	ST	SEDIMENT BASIN WITH STONE OUTLET		
xxx	CONTOUR ELEVATIONS	IP1	BLOCK AND AGGREGATE INLET SEDIMENT DEVICE		
	STORM DRAIN	IP2	CURB INLET FILTER SOCK		
XX.X%	DIRECTION OF OVERLAND FLOW W/ GRADE	IP3	GRATED INLET GRAVEL SEDIMENT FILTER		
	LIMITS OF DRAINAGE SUB-BASIN	IP4	SILT FENCE INLET PROTECTION		

NOTE: SEE SITE PLAN FOR EXISTING LEGEND SYMBOLS

GRADING PLAN SPOT ELEVATIONS

FG	FINISHED GRADE
TW	TOP WALL
BW	BOTTOM WALL
E	FLOW LINE
TC	TOP CURB
G	GUTTER
SW	SIDEWALK
TP	TOP PAVEMENT
×ES	EXISTING GRADE

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QC by: G. LONG
QC Date: 7/18/2023

ISSUED FOR REVIEW

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 18699
LUCAS K. JOST
05/21/2025

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GRADING & EROSION CONTROL (1 OF 5)

C-301

DRAWING: C:\221100\DESIGN\INFRASTRUCTURE\CIVIL\DWG\GRADING & EROSION CONTROL.DWG
LAYOUT: GRADING & EROSION CONTROL (1 OF 5) PLOT DATE: FRIDAY, 5/16/2025 4:25:24 PM
XREFS: XREF: BASE; XREF: TOPO; XREF: BOUNDARY; XREF: PROPOSED; XREF: PLAT

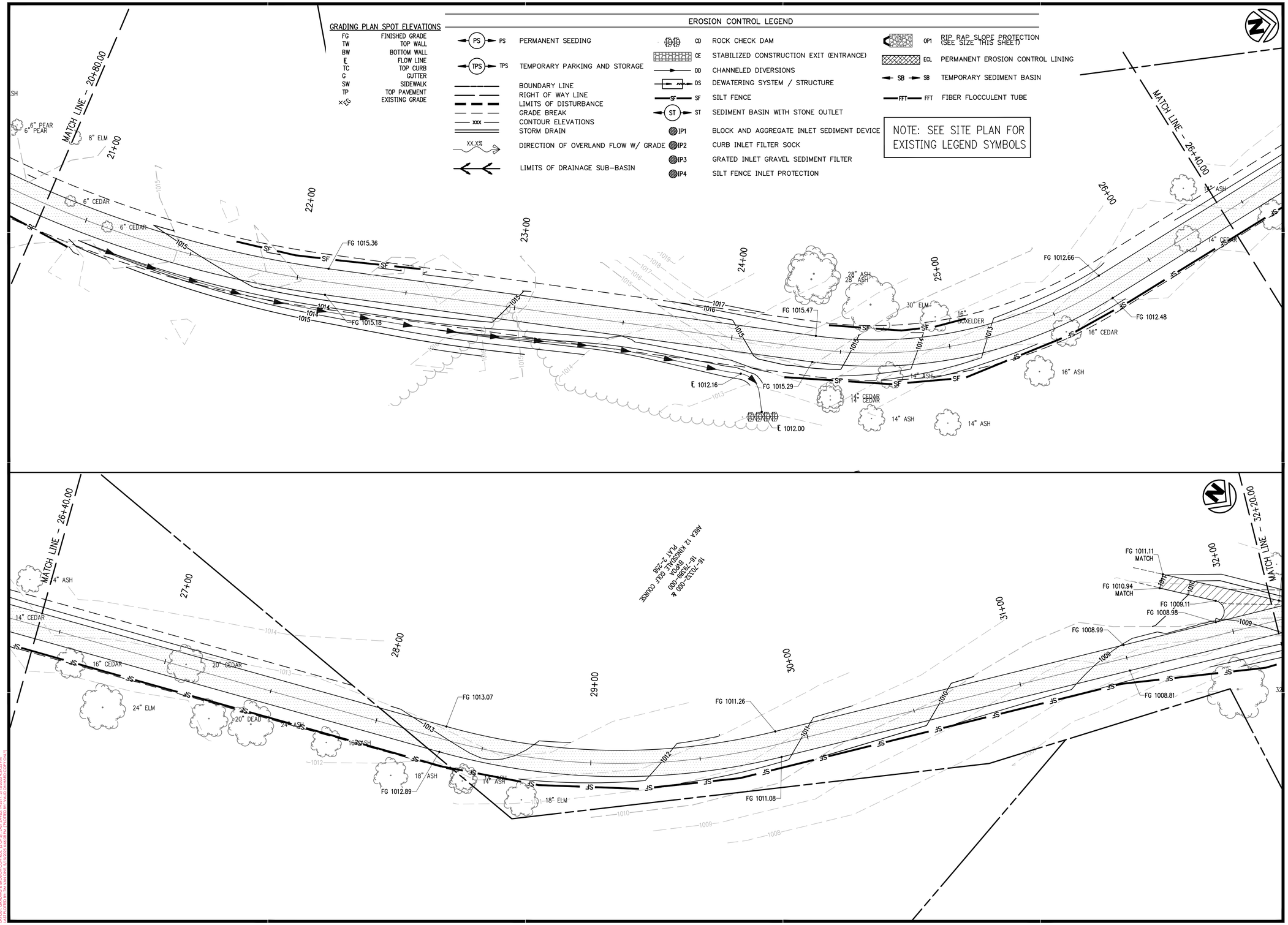
GRADING PLAN SPOT ELEVATIONS

FG	FINISHED GRADE
TW	TOP WALL
BW	BOTTOM WALL
℄	FLOW LINE
TC	TOP CURB
G	GUTTER
SW	SIDEWALK
TP	TOP PAVEMENT
+EG	EXISTING GRADE

EROSION CONTROL LEGEND

PS	PERMANENT SEEDING	CD	ROCK CHECK DAM	OP1	RIP RAP SLOPE PROTECTION (SEE SIZE THIS SHEET)
TPS	TEMPORARY PARKING AND STORAGE	CE	STABILIZED CONSTRUCTION EXIT (ENTRANCE)	ECL	PERMANENT EROSION CONTROL LINING
	BOUNDARY LINE	DD	CHANNELED DIVERSIONS	SB	TEMPORARY SEDIMENT BASIN
	RIGHT OF WAY LINE	DS	DEWATERING SYSTEM / STRUCTURE	FFT	FIBER FLOCCULENT TUBE
	LIMITS OF DISTURBANCE	SF	SILT FENCE		
	GRADE BREAK	ST	SEDIMENT BASIN WITH STONE OUTLET		
xxx	CONTOUR ELEVATIONS	IP1	BLOCK AND AGGREGATE INLET SEDIMENT DEVICE		
	STORM DRAIN	IP2	CURB INLET FILTER SOCK		
XX.X%	DIRECTION OF OVERLAND FLOW W/ GRADE	IP3	GRATED INLET GRAVEL SEDIMENT FILTER		
	LIMITS OF DRAINAGE SUB-BASIN	IP4	SILT FENCE INLET PROTECTION		

NOTE: SEE SITE PLAN FOR EXISTING LEGEND SYMBOLS



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architecture | engineering | surveying
479.636.4838 t 479.631.6224 f

CERTIFICATE OF AUTHORIZATION:
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GRAPHIC SCALE IN FEET
20' 0 20'

RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

No.	Description	Date

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PROJECT NO: 22110100
ISSUE DATE: 05/16/2025
CONTACT: L. JOST
QC by: G. LONG
QC Date: 7/18/2023

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GRADING & EROSION CONTROL (2 OF 5)

C-302

DRAWING: G:\22110100_RZRGRNWY\INFRASTRUCTURE\CIVIL\DWG\GRADING & EROSION CONTROL.DWG
LAYOUT: GRADING & EROSION CONTROL (2 OF 5) XREF: XVIEW: PV317, 317-320,324-329,331
PLOTTED BY: LUCAS JOST LAST SAVED: 5/20/2025 4:29:33 PM

EROSION CONTROL LEGEND

PS	PERMANENT SEEDING	CD	ROCK CHECK DAM	OP1	RIP RAP SLOPE PROTECTION (SEE SIZE THIS SHEET)
TPS	TEMPORARY PARKING AND STORAGE	CE	STABILIZED CONSTRUCTION EXIT (ENTRANCE)	ECL	PERMANENT EROSION CONTROL LINING
	BOUNDARY LINE	DD	CHANNELED DIVERSIONS	SB	TEMPORARY SEDIMENT BASIN
	RIGHT OF WAY LINE	DS	DEWATERING SYSTEM / STRUCTURE	FFT	FIBER FLOCCULENT TUBE
	LIMITS OF DISTURBANCE	SF	SILT FENCE		
	GRADE BREAK	ST	SEDIMENT BASIN WITH STONE OUTLET		
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NOTE: SEE SITE PLAN FOR EXISTING LEGEND SYMBOLS

GRADING PLAN SPOT ELEVATIONS

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℄	FLOW LINE
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SW	SIDEWALK
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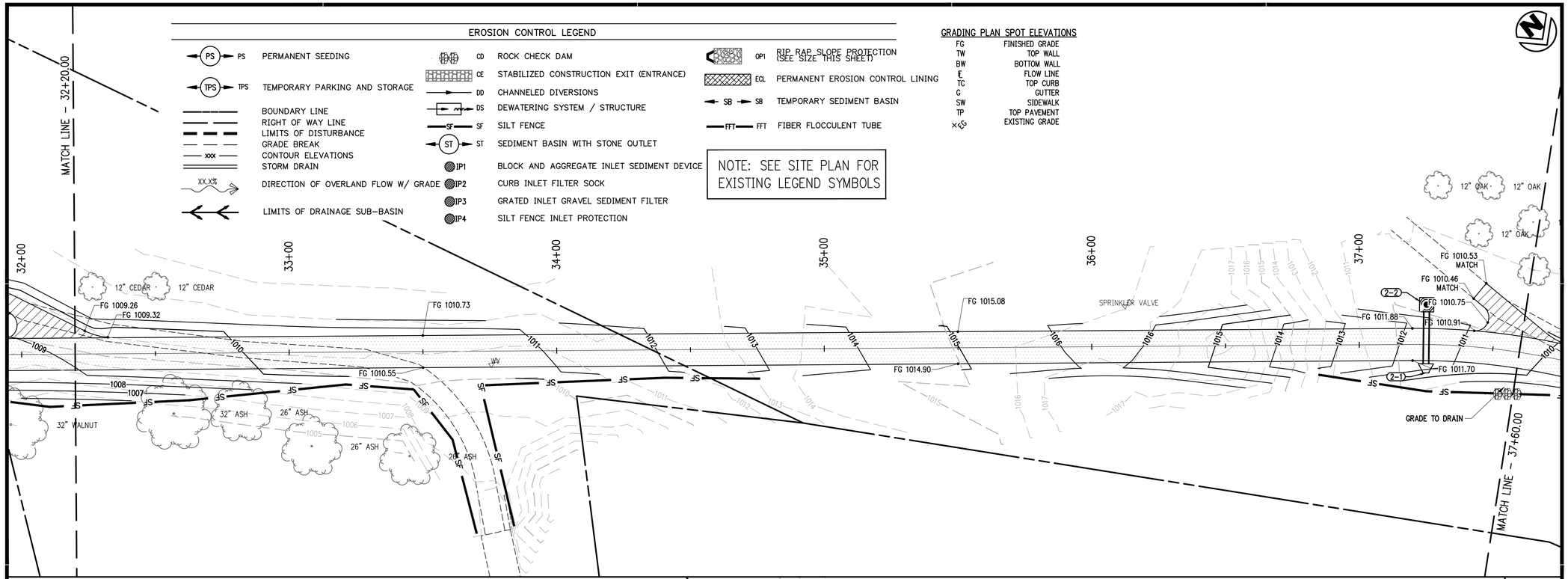

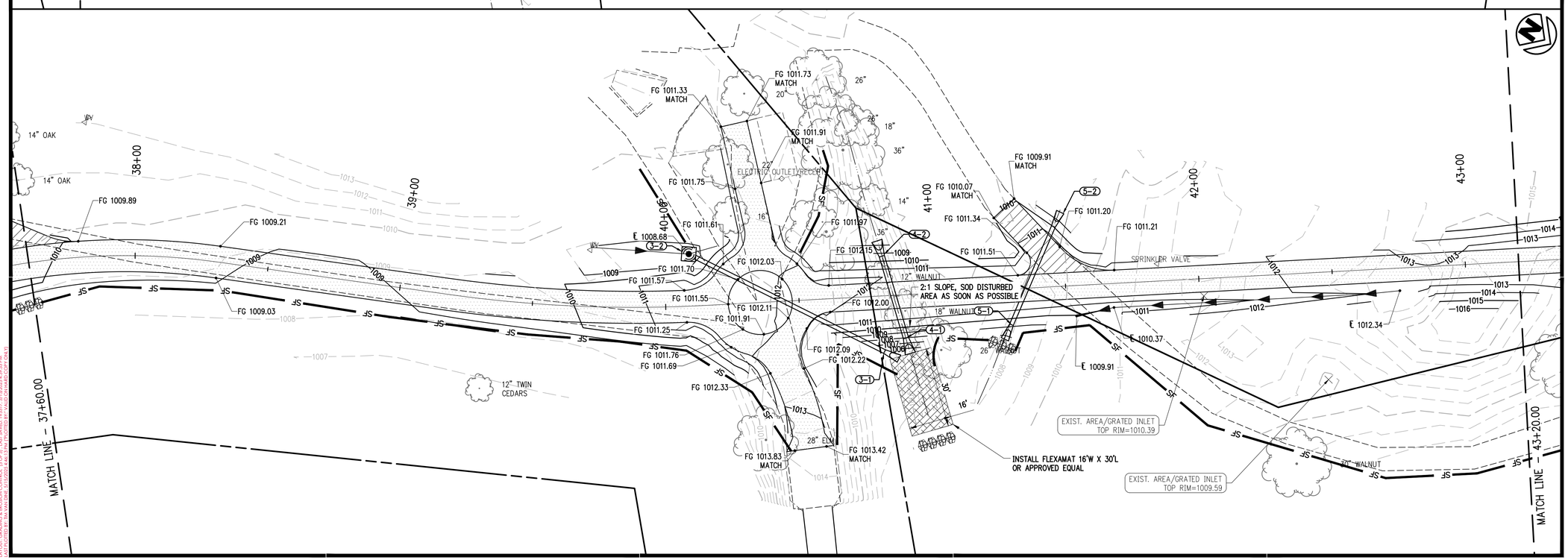

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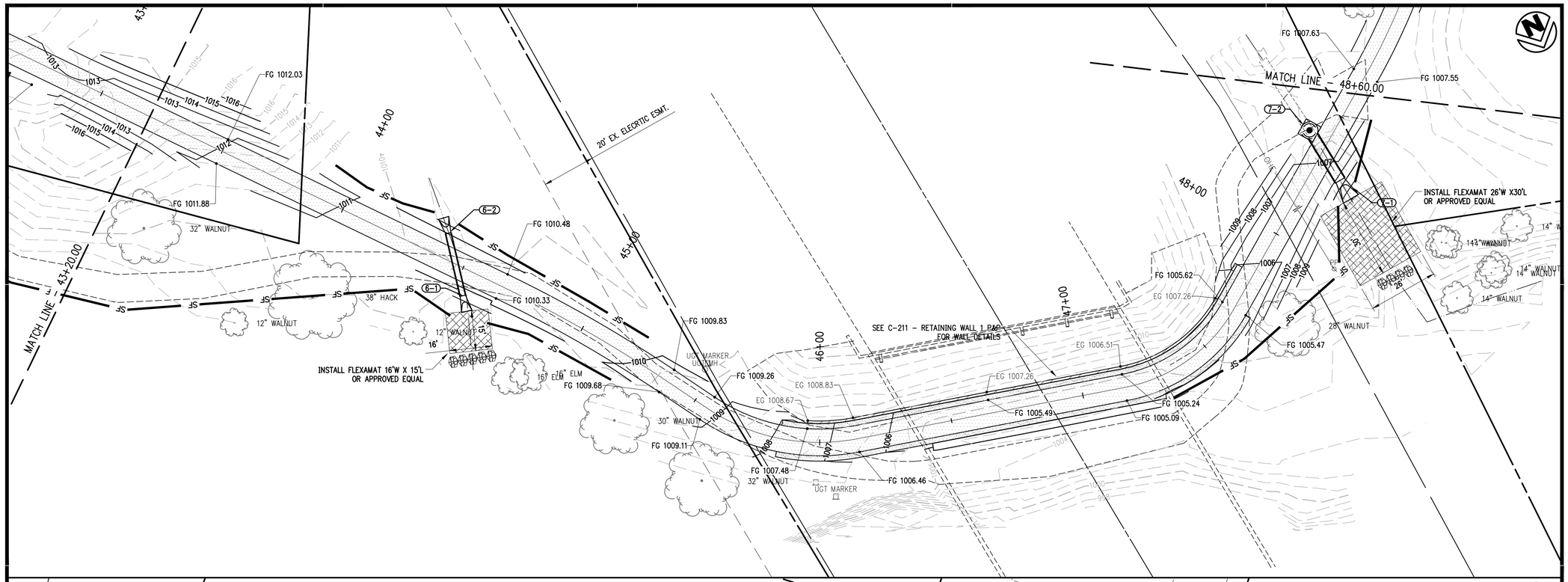
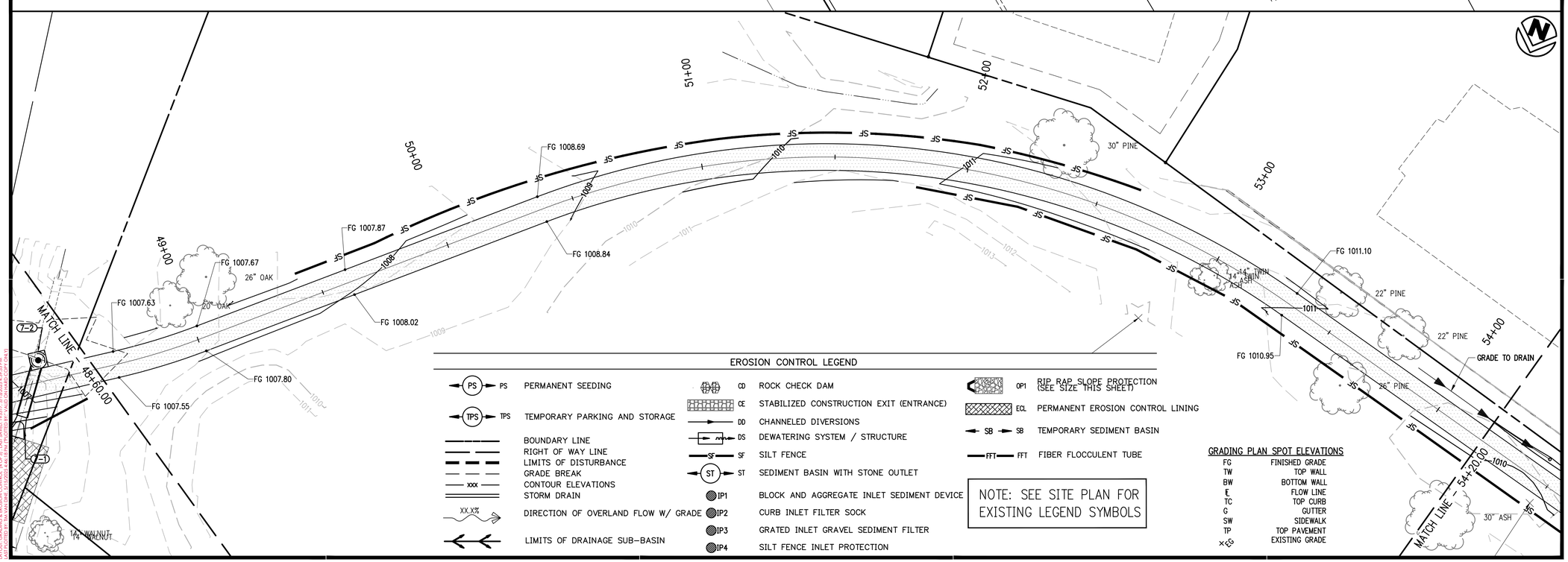
05/21/2025

GRADING & EROSION CONTROL (3 OF 5)

C-303





EROSION CONTROL LEGEND

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TPS	TEMPORARY PARKING AND STORAGE	CE	STABILIZED CONSTRUCTION EXIT (ENTRANCE)	ECL	PERMANENT EROSION CONTROL LINING
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RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

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LUCAS K. JOST
05/21/2025

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GRADING & EROSION CONTROL (4 OF 5)

C-304

DRAWING: C:\22110100_RZRGNWY\WPA\TRUE\CIVIL\DWG\GRADING & EROSION CONTROL.DWG
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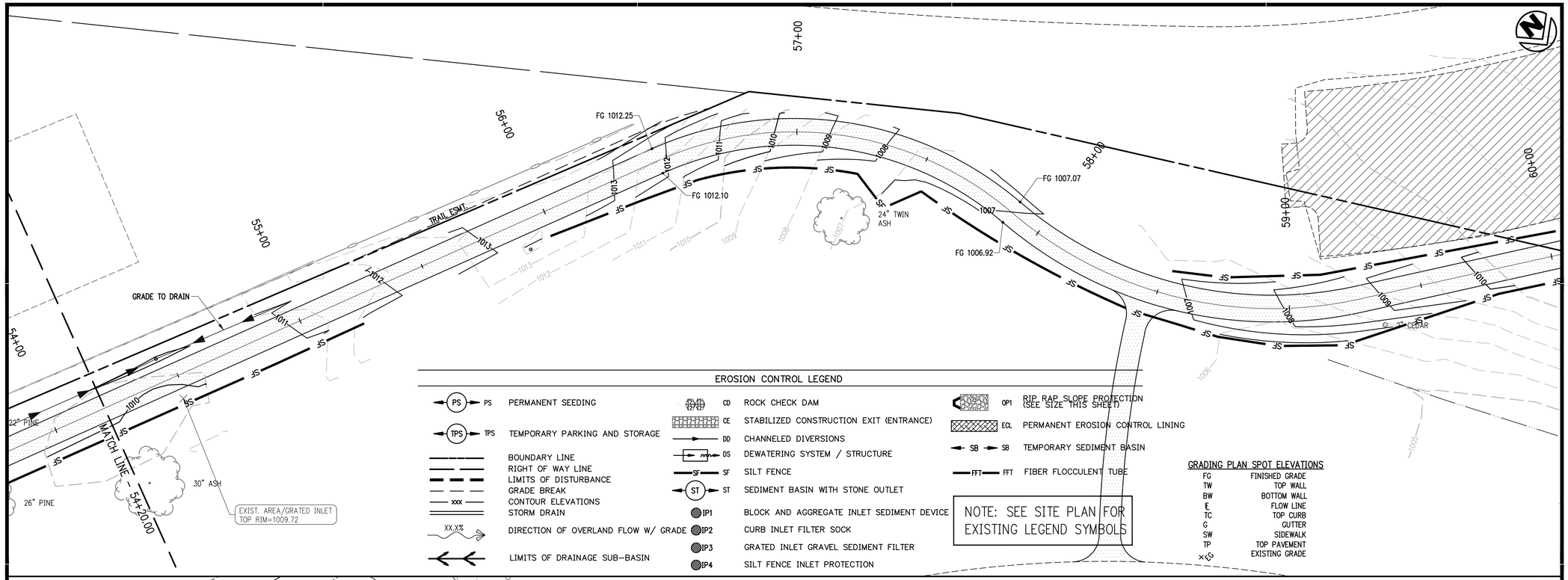
PLOTTED BY: LUCAS JOST LAST PLOTTED: 5/20/25 4:25:37 PM CT



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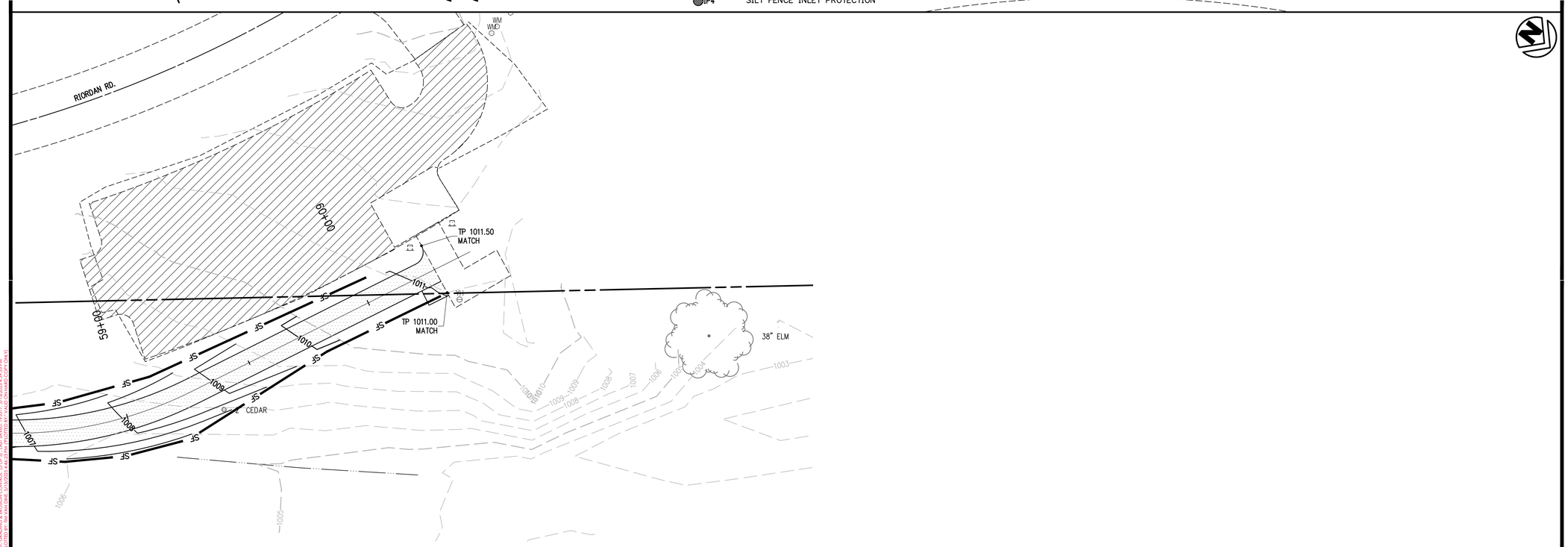

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RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

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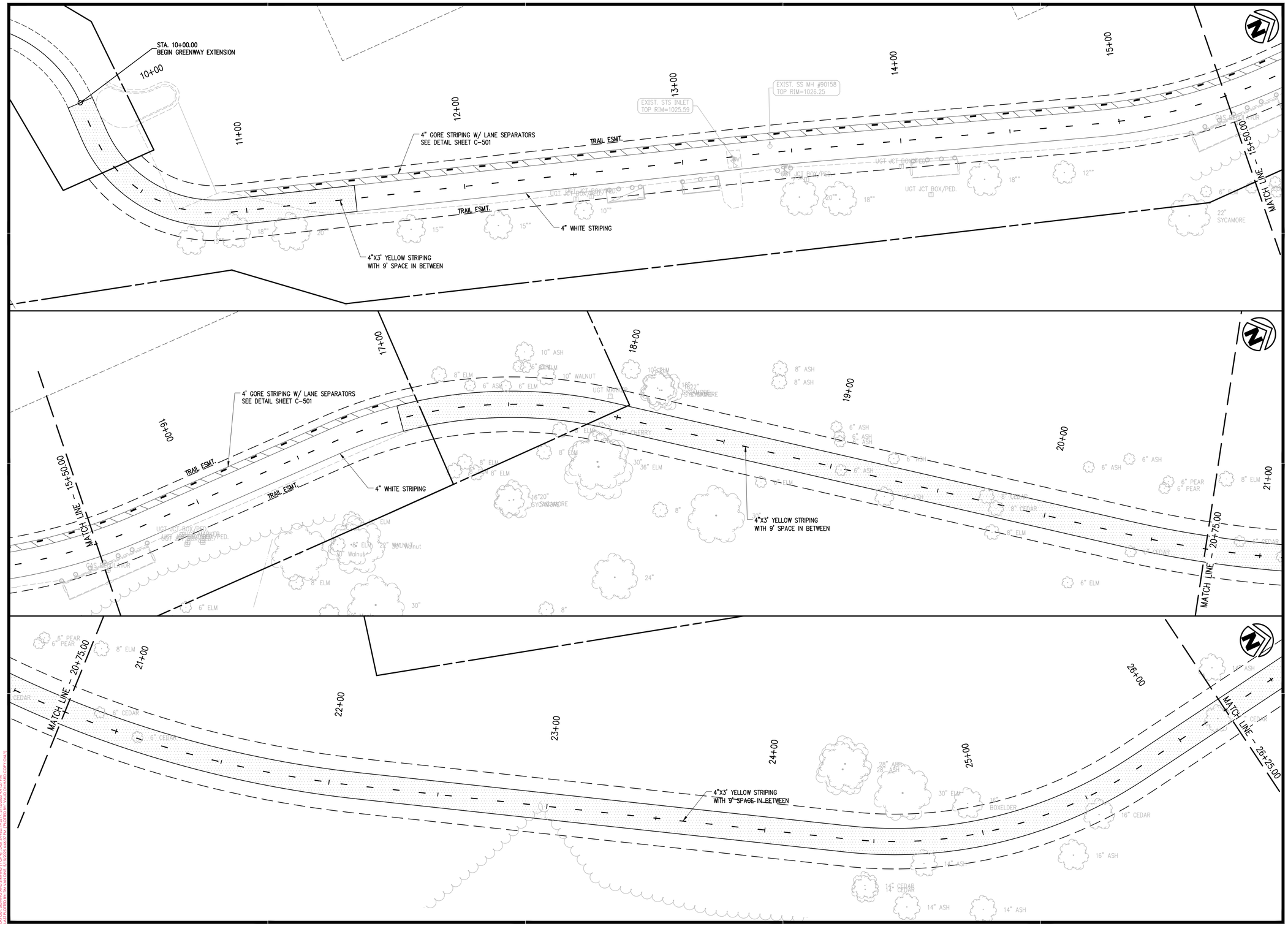
GRADING & EROSION CONTROL (5 OF 5)

C-305

DRAWING: C:\22110100 DESIGN\INFRASTRUCTURE\CIVIL\DWG\GRADING & EROSION CONTROL.DWG
LAYOUT: GRADING & EROSION CONTROL (5 OF 5) - LAST SAVED: FRIDAY, 5/16/2025 4:25:28 PM
PLOTTED BY: LUCAS JOST - LAST PLOTTED: FRIDAY, 5/16/2025 4:25:28 PM



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SIGNING AND STRIPING (1 OF 4)

C-306

DRAWING: G:\22110100 JERSEYPINE\INFRASTRUCTURE\CIVIL\DWG\TRAIL STRIPING PLAN.DWG
LAYOUT: SIGNING AND STRIPING (1 OF 4) LAST SAVED: 7/18/2025, 8:57:22 AM, L.JOST
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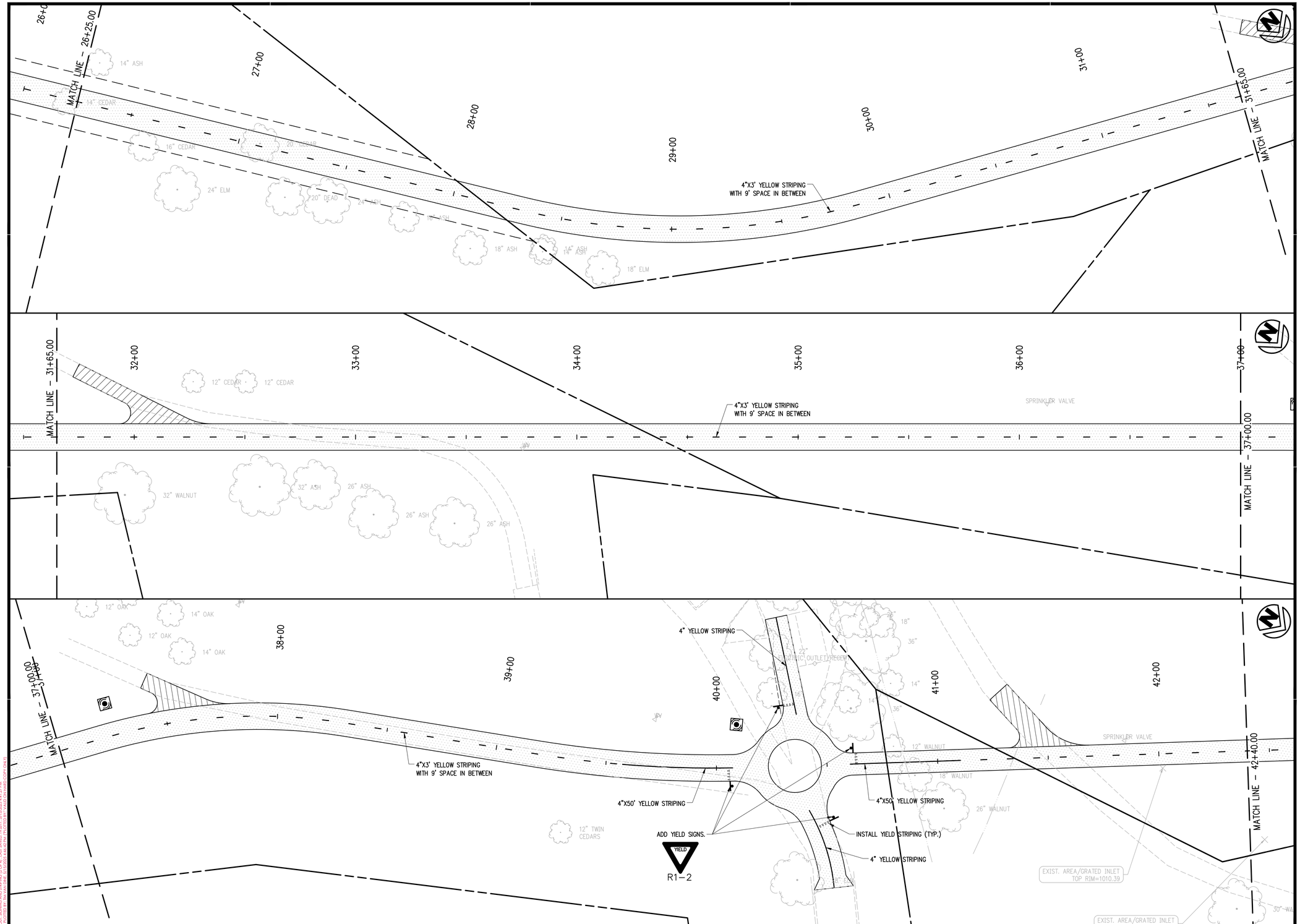

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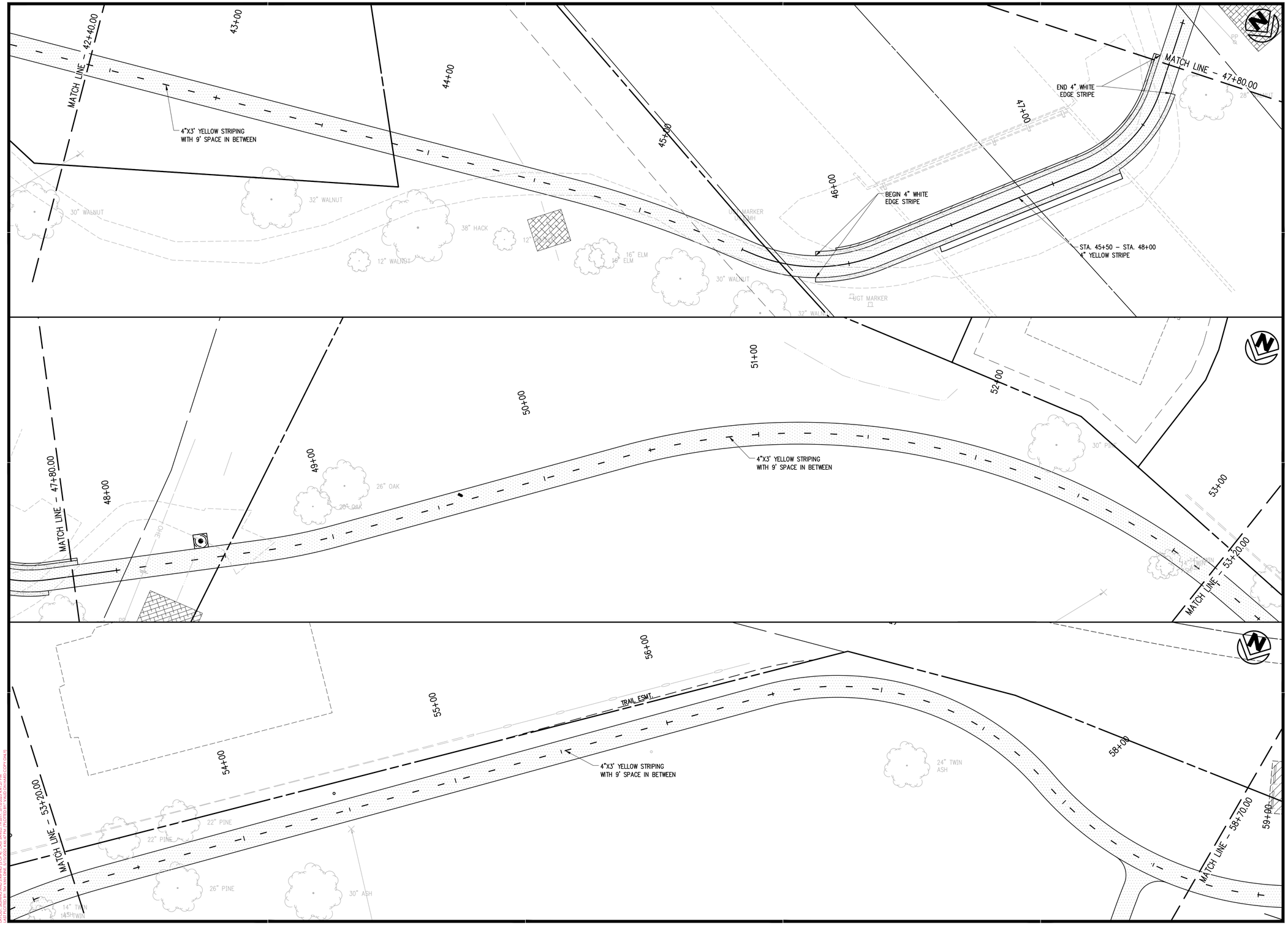
SIGNING AND STRIPING (2 OF 4)

C-307



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SIGNING AND STRIPING (3 OF 4)

C-308

DRAWING: G:\22110100_BERSERPHIS\ARTISTIC\CIVIL\DWG\TRAIL STRIPING PLANS.DWG
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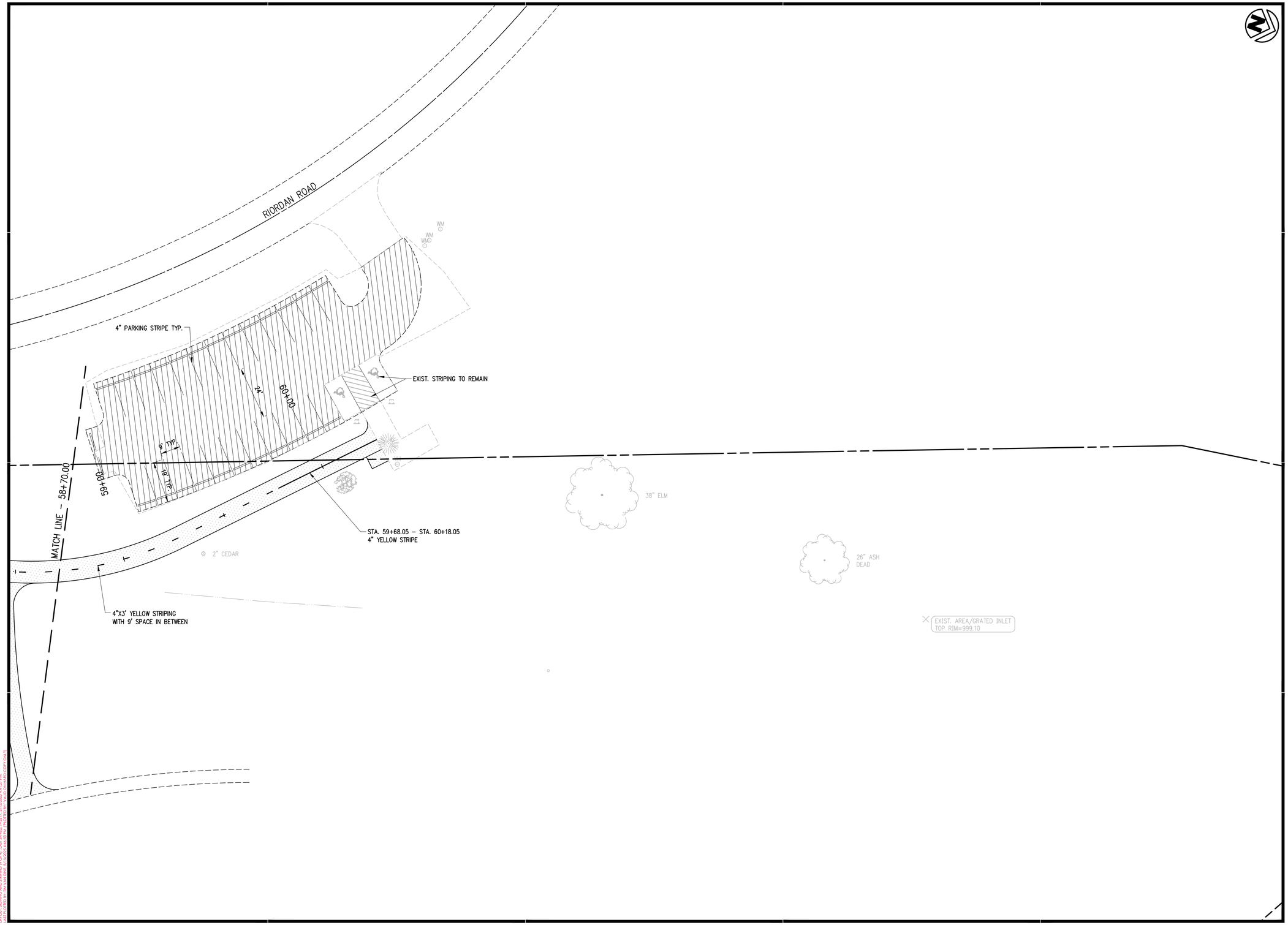

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SIGNING AND STRIPING (4 OF 4)

C-309

DRAWING: G:\22110100 JERSEYPINES INFRASTRUCTURE\CIVIL\DWG\FINAL STRIPING PLAN.DWG
LAYOUT: SIGNING AND STRIPING (4 OF 4) LAST SAVED: 7/18/2023, 8:51:22 AM, 1:27 PM
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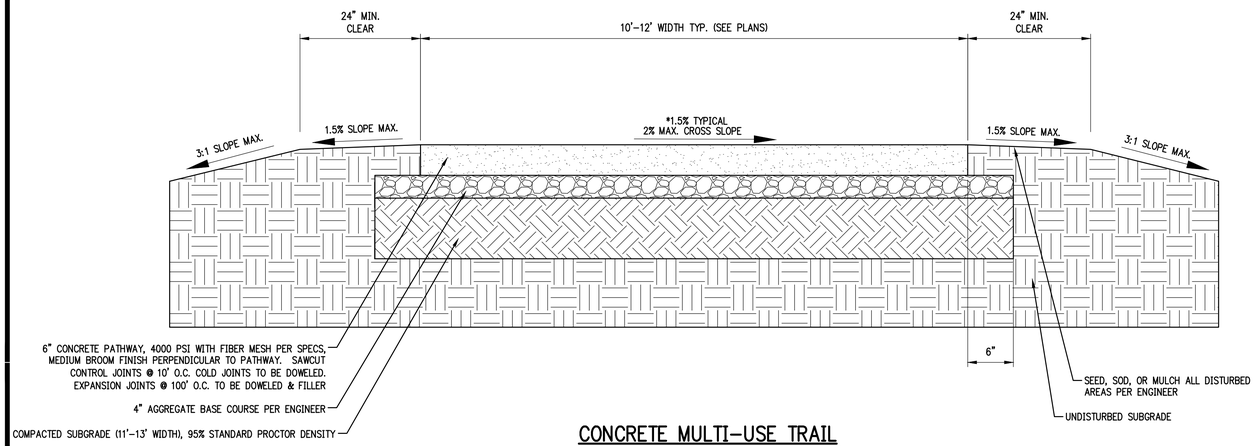
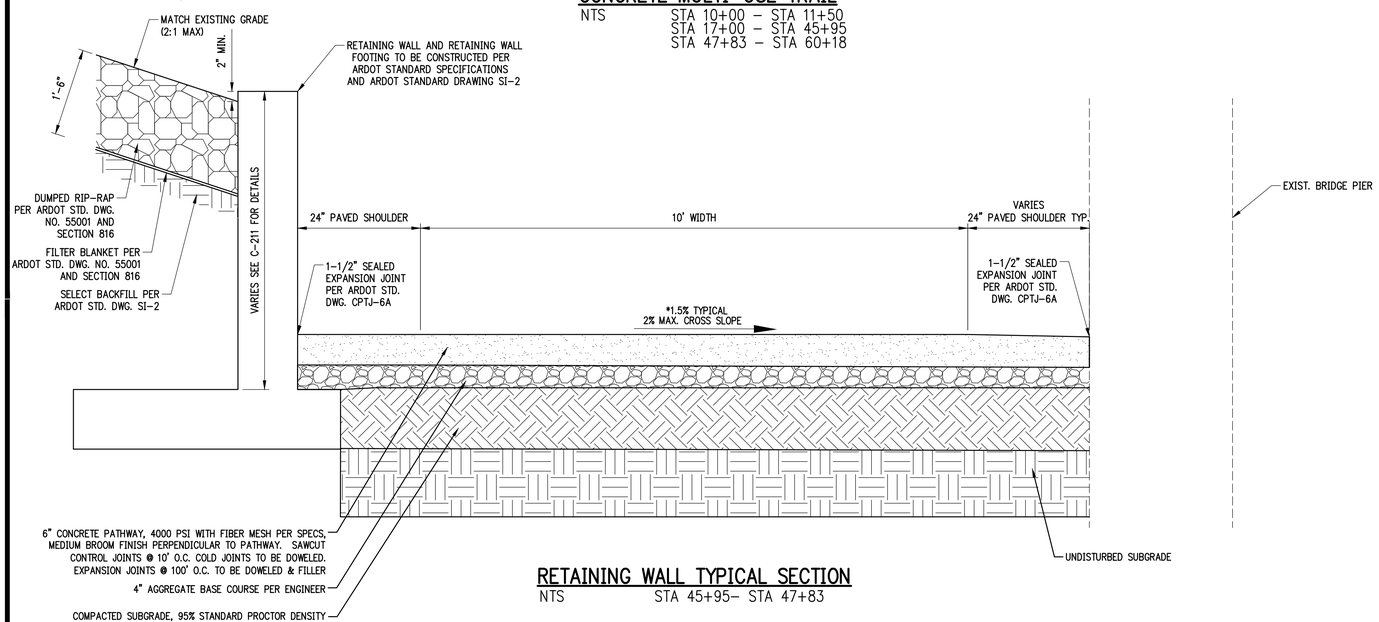


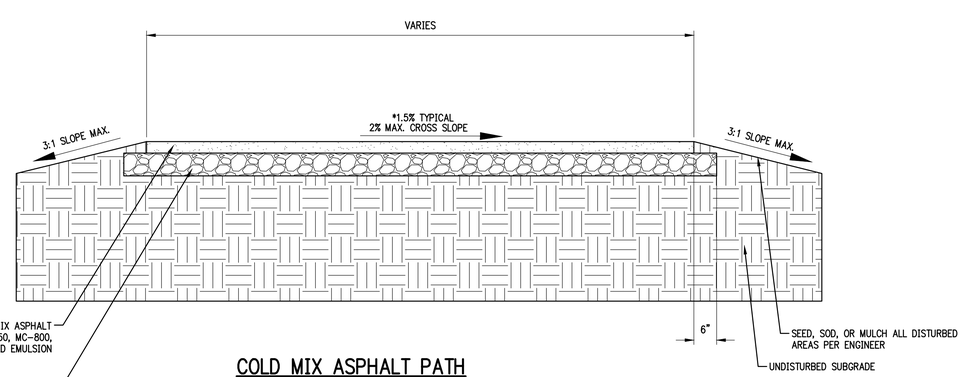
CONCRETE MULTI-USE TRAIL

NTS STA 10+00 – STA 11+50
STA 17+00 – STA 45+95
STA 47+83 – STA 60+18



RETAINING WALL TYPICAL SECTION

NTS STA 45+95– STA 47+83



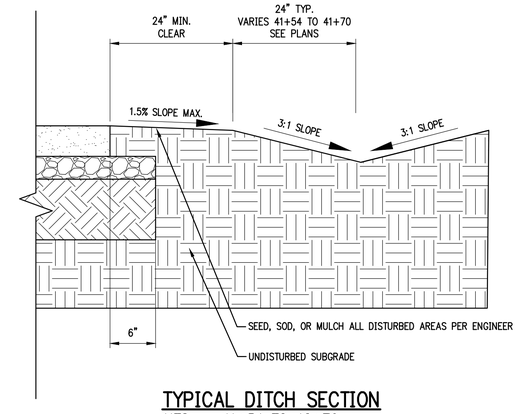
COLD MIX ASPHALT PATH

NTS CONNECTIONS–SEE PLANS

NOTES

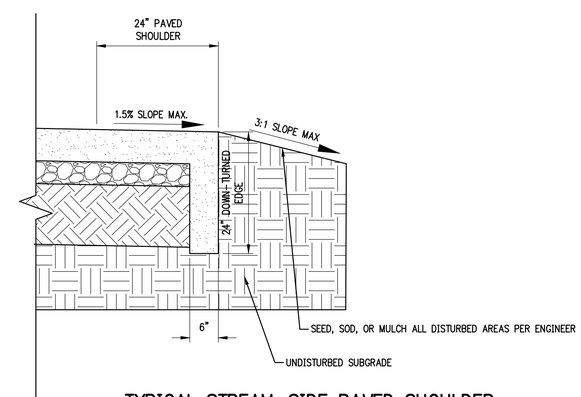
*SLOPE DIRECTION AS FOLLOWS:
LT-RT: STA. 10+00 – 48+70; 52+35 – 60+00
RT-LT: STA. 48+70 – 52+35; 60+60 – 64+55

1. IF COMPACTED SUBGRADE DOES NOT PASS DENSITY TESTING, UNDERCUT USING A MINIMUM OF 8" STRUCTURAL FILL AS BY ENGINEER
2. VERTICAL CLEARANCE TYP. 10'
3. SOILS AND VEHICLE LOADS PER ENGINEER
4. CONCRETE AND AGGREGATE DEPTH PER ENGINEER
5. SLOPES BEYOND 24" MIN. CLEAR AREA SHALL NOT EXCEED 3:1
6. MAXIMUM RUNNING SLOPE SHALL BE 5% UNLESS NOTED ON PLANS
7. DOWELS ARE TO BE 0.5" X 16" DOWEL W/ EXPANSION CAP OR SLEEVE AT ONE END @ 18" O.C.
8. FILLER SHALL CONFORM TO AASHTO M213-81 AND BE 0.5" X 6" & HAVE A FILLER CAP
9. JOINTS MUST BE SAW CUT WITH DIMENSIONS 1/4" WIDE X 1-1/2" DEEP



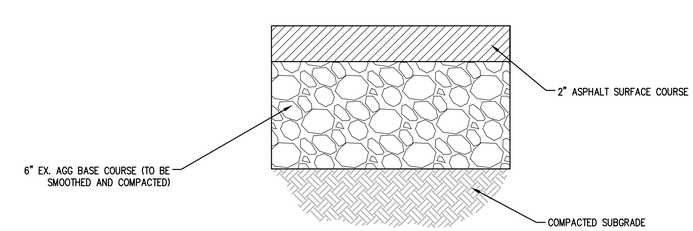
TYPICAL DITCH SECTION

NTS 41+54 TO 42+70



TYPICAL STREAM-SIDE PAVED SHOULDER

NTS 45+85 TO 46+40
47+30 TO 47+68



PARKING LOT SURFACING SECTION

NTS

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Rogers, Arkansas 72756
Crafton Tull
architecture | engineering | surveying
479.636.4838 t 479.631.6224 f

CERTIFICATE OF AUTHORIZATION:
CERTIFICATE OF AUTHORIZATION
CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

No.	Description	Date

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PROJECT NO: 22110100
ISSUE DATE: 05/16/2025
CONTACT: L. JOST
QC by: G. LONG
QC Date: 7/18/2023

ISSUED FOR REVIEW

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 18699
LUCAS K. JOST
05/21/2025

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TYPICAL SECTIONS

C-501

DRAWING: G:\22110100_RZRGRNWY\ARFR\ARSRC\PLAN\CONSTRUCTION\TYPICAL SECTIONS.DWG
LAYOUT: TYPICAL SECTIONS - LAST SAVED: 5/21/2025 4:42:53 PM
PLOTTED BY: LUCAS JOST - LAST PLOTTED: 5/21/2025 4:42:55 PM
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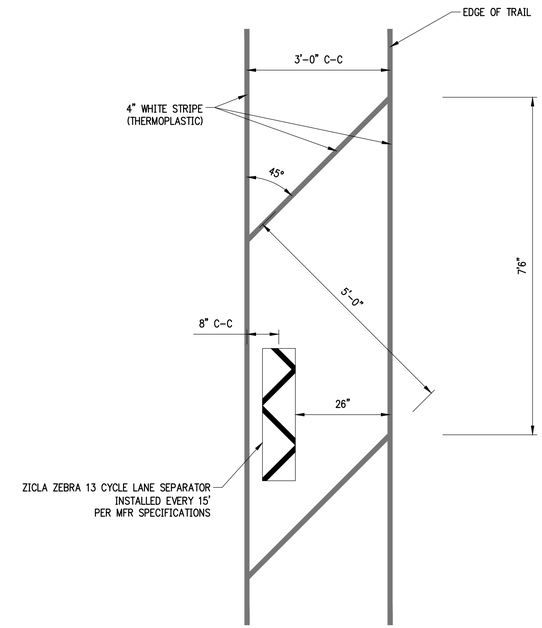
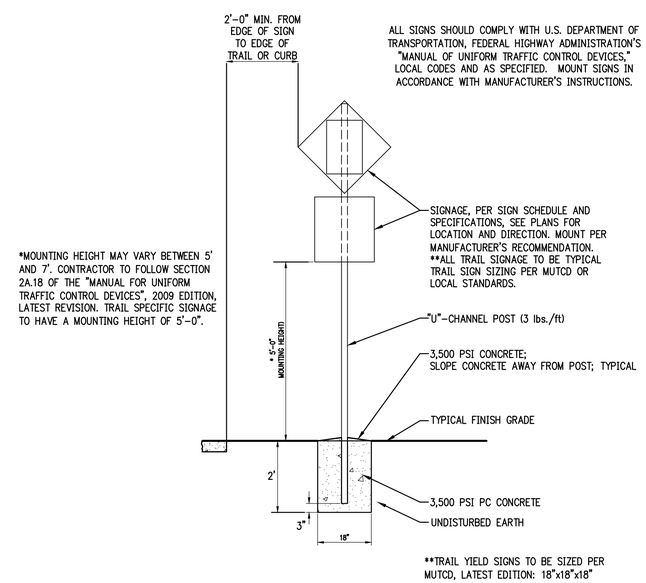


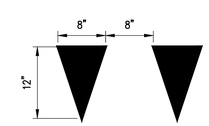
GORE STRIPING DETAIL

NTS STA 11+00– STA 17+00



TRAIL SIGNAGE

NTS



TRAIL YIELD STRIPING

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RAZORBACK GREENWAY
EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

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No. 18699
LUCAS K. JOST
05/21/2025

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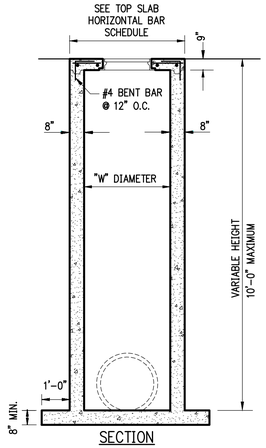
DETAILS

C-502

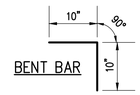
DRAWING: G:\22110100_RZRGRNWY\WFA\SRC\CHER\CIVIL\DWG\TYPICAL SECTIONS.DWG
LATEST REVISED: LAST SAVED: Wed, May 21, 2025 4:42:38 PM
LATEST PLOTTED: Wed, May 21, 2025 4:42:38 PM PLOTTED BY: VALID DWH ARD (SOFT CHILT)

TOP SLAB HORIZONTAL REINFORCEMENT SCHEDULE		
TOP SLAB THICKNESS	"W" INSIDE DIAMETER OF INLET BARREL	TOP SLAB BARS, VEHICLE LOADS
VEHICLE LOADS, 9"	6'-0" MAXIMUM	#5s @ 6" O.C. EACH WAY, DOUBLE MAT

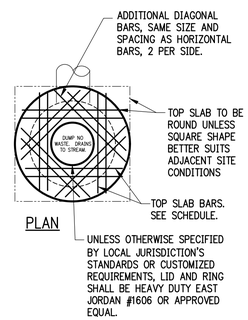
"W" BARREL DIAMETER TO BE DETERMINED BY CONSIDERING DEPTH OF BURY, PIPE SIZES AND PIPE ARRANGEMENT REQUIREMENTS.	"W" INLET INSIDE DIAMETER SCHEDULE	
	DIAMETER OF LARGEST PIPE ENTERING INLET	"W" MINIMUM INLET DIAMETER
	12" TO 27"	4'-0" DIA.
	30" TO 42"	5'-0" DIA.
	48" TO 54"	6'-0" DIA.
	PIPES ARE LIMITED TO 60 DEGREES. IF GREATER, USE NEXT LARGER-DIAMETER INLET BARREL.	



SECTION



BENT BAR



PLAN

NOTES:
1. PROVIDE 3/4" CHAMFER ON ALL EXPOSED EDGES UNLESS ADJACENT TO SIDEWALKS OR OTHER CONCRETE SURFACES.
2. BASE AND INLET WALLS TO BE POURED MONOLITHICALLY.
3. PIPES MAY ENTER BOX FROM ANY ANGLE OR ELEVATION APPROVED BY THE ENGINEER.
4. ALL #4 & #5 REINFORCING BARS TO BE GRADE 60 AND HAVE 1-1/2" MINIMUM COVER. >#5, 2" COVER.
5. PROVIDE DOUBLE MAT FOR SQUARE-TOP SLAB.
6. TOP SLAB, CLASS B, 3500#, 4%-7% A.E.

TRAFFIC-RATED

TYPICAL TRAFFIC-RATED CIRCULAR-BARREL JUNCTION BOX

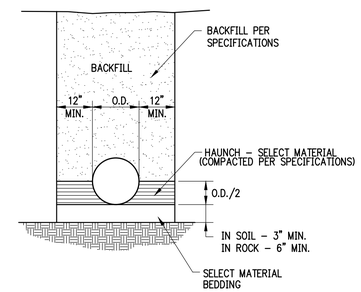
NTS

NOTE: THIS DETAIL IS GENERIC, NOT JURISDICTION OR SITE-SPECIFIC. USE JURISDICTION-SPECIFIC DETAILS WHEN AND WHERE REQUIRED.

REVISED 04/16/15

NOTES:
1. UNDER PAVEMENT, BACKFILL ENTIRE EXCAVATION WITH "ENTER TYPE HERE" AGGREGATE BASE MATERIAL COMPACTED IN 8" LIFTS TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY.

CONSTRUCTION SEQUENCE
1. PLACE SELECT BEDDING MATERIAL TO GRADE.
2. COMPACT SELECT BEDDING BELOW THE PIPE.
3. INSTALL PIPE TO GRADE.
4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE MIDDLE OF THE PIPE.
5. COMPLETE BACKFILL ACCORDING TO SPECIFICATIONS.

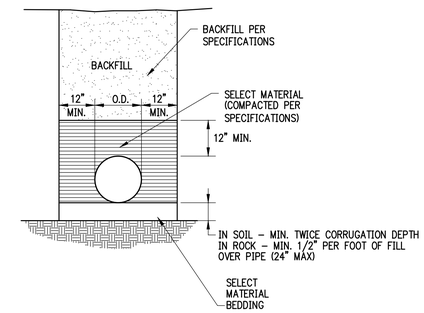


CONCRETE PIPE INSTALLATION

NTS

NOTES:
1. UNDER PAVEMENT, BACKFILL ENTIRE EXCAVATION WITH "ENTER TYPE HERE" AGGREGATE BASE MATERIAL COMPACTED IN 8" LIFTS TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY.

CONSTRUCTION SEQUENCE
1. PLACE SELECT BEDDING MATERIAL TO GRADE.
2. COMPACT SELECT BEDDING BELOW THE PIPE.
3. INSTALL PIPE TO GRADE.
4. COMPLETE STRUCTURAL BACKFILL OPERATION BY WORKING FROM SIDE TO SIDE OF THE PIPE, THE SIDE TO STRUCTURAL BACKFILL DIFFERENTIAL SHALL NOT TO EXCEED 24 INCHES OR 1/3 THE SIZE OF THE PIPE WHICHEVER IS LESS.

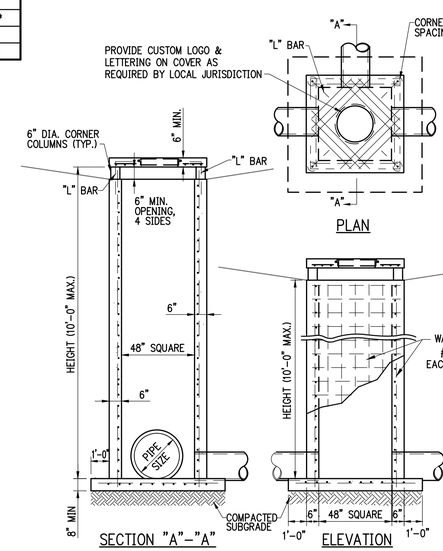


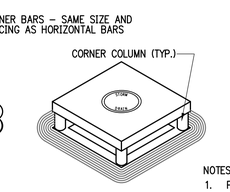
METAL PIPE INSTALLATION

NTS

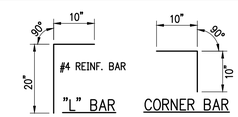
CONCRETE CHARACTERISTICS	CLASS A	CLASS B
MIN. COMPRESSION STRENGTH (PSI AT 28 DAYS)	3000	3500
MIN. CEMENT CONTENT (BAGS PER CUBIC YARD)	5.5	6.0
MAX. NET WATER / 94LB. BAG (GALLONS)	6.5	5.5
SLUMP RANGE (INCHES)	1-4*	1-4*
AIR CONTENT RANGE (%)	4-7	4-7
MAX. FLY ASH CONTENT (%)	20	20

* MAX. SLUMP SHALL BE 2" WHEN SLIP FORM PAVEMENT METHODS ARE USED.





PICTORIAL VIEW



NOTES:
1. PROVIDE 3/4" CHAMFER ON ALL EXPOSED EDGES UNLESS ADJACENT TO SIDEWALKS OR OTHER CONCRETE SURFACES.
2. BASE AND INLET WALLS TO BE POURED MONOLITHICALLY.
3. PIPES MAY ENTER BOX FROM ANY ANGLE OR ELEVATION APPROVED BY THE ENGINEER.
4. ALL #4 & #5 REINFORCING BARS TO BE GRADE 60 AND HAVE 1-1/2" MINIMUM COVER. >#5, 2" COVER.
5. TOP SLAB, CLASS B, 3500#, 4%-7% A.E
6. PIPES SHALL NOT CONNECT AT OR WITHIN 6" OF ANY CORNER EDGE.

NON-TRAFFIC RECTANGULAR AREA INLET REINFORCEMENT SCHEDULE							
L (LENGTH) INSIDE BOX	W (WIDTH) INSIDE BOX	H (HEIGHT) TOP OF BOX TO ℄	T (TOP) SLAB THICKNESS	A (WALL) THICKNESS	TOP SLAB STEEL	RING AND LID DIAGONAL BARS	BOTTOM SLAB STEEL
4'	4'	10' MAX.	6"	6"	#4s @ 6" BOTH WAYS	8-#4s @ 6" X 5' LONG	#4s @ 6" BOTH WAYS

NON-TRAFFIC ONLY

TYPICAL 4'X4' NON-TRAFFIC RECTANGULAR BARREL AREA INLET

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NOTE: THIS DETAIL IS GENERIC, NOT JURISDICTION OR SITE-SPECIFIC. USE JURISDICTION-SPECIFIC DETAILS WHEN AND WHERE REQUIRED.

REVISED 04/16/15

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DRAINAGE DETAILS

C-503

DRAWING: G:\22110100_BTS\SRP\INFRASTRUCTURE\CIVIL\DWG\DRAINAGE_DETAILS.DWG
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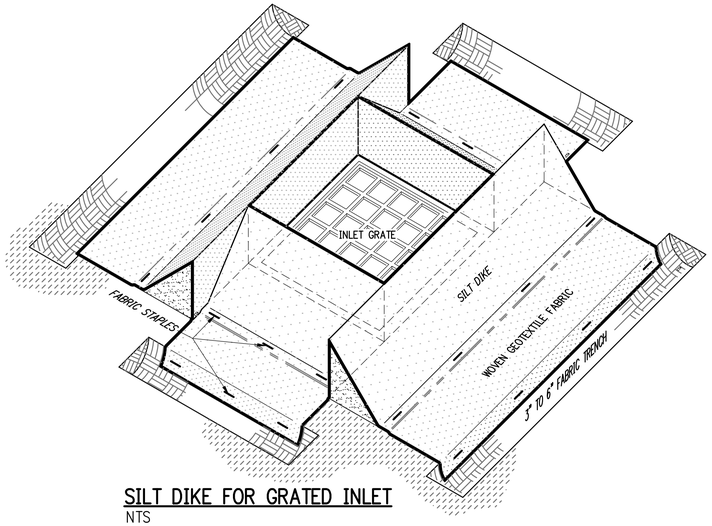
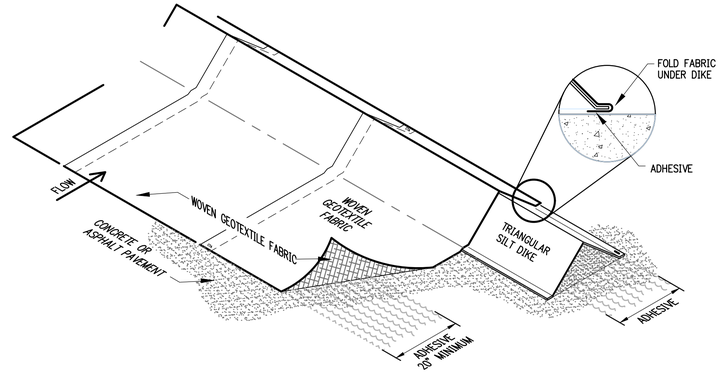
PLOTTED BY: Lucas Jost | LAST SAVED: 5/21/2025 4:52:27 PM | PAUL DRHARD (SOFT CHILT)



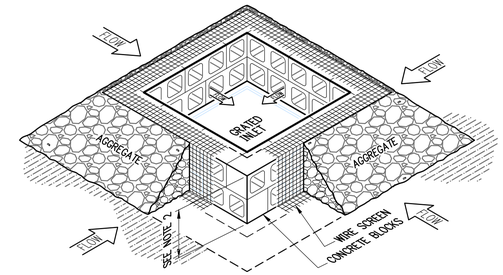
SILT DIKE FOR GRATED INLET
NTS



ADHESIVES: CONCRETE PAVEMENT – USE LIQUID NAIL OR APPROVED EQUAL.
ASPHALT PAVEMENT – USE EMULSIFIED ASPHALT.

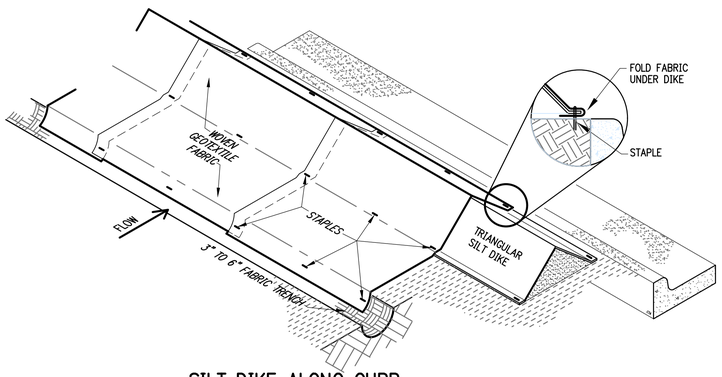
ADHESIVE SHALL BE PLACED AT FABRIC LAPS AND 20" MINIMUM ALONG EDGES.

SILT DIKE (FOR CONTINUOUS BARRIER)
NTS

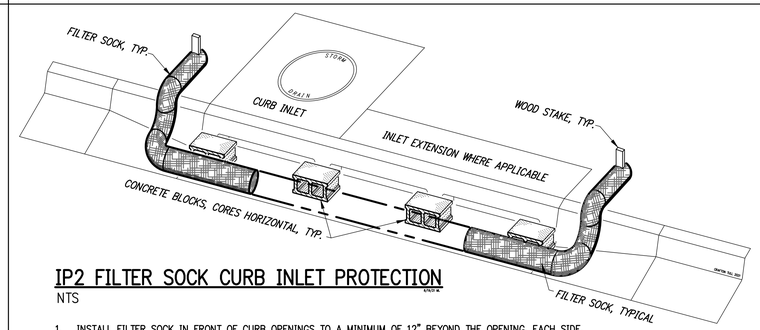


1. PLACE/STACK CONCRETE BLOCKS IN A SINGLE ROW AROUND PERIMETER OF INLET ON THEIR SIDES WITH ENDS OF ADJACENT BLOCKS ABUTTING.
2. HEIGHT OF BARRIER VARIES. USE STACKS OF 4–INCH, 8–INCH, OR 12–INCH TO ACHIEVE 12" MINIMUM AND 14" MAXIMUM HEIGHT.
3. PLACE HARDWARE CLOTH/WIRE MASH WITH 1/2" MAXIMUM OPENINGS ON VERTICAL FACE OF CONCRETE BLOCKS.
4. THE AGGREGATE SHALL BE NON–ERODIBLE MATERIAL.

IP1 BLOCK AND AGGREGATE INLET SEDIMENT DEVICE
NTS

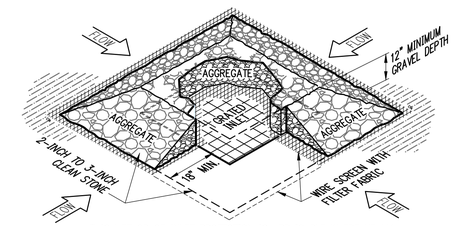


SILT DIKE ALONG CURB
NTS



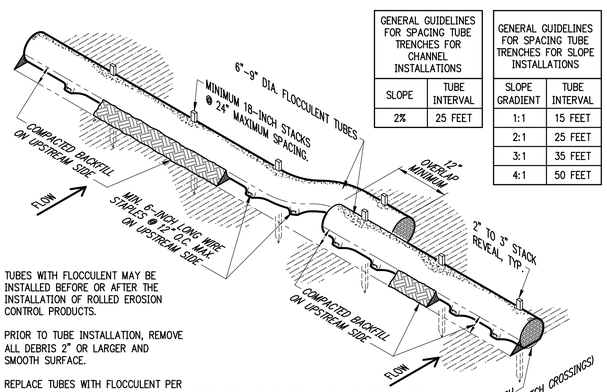
IP2 FILTER SOCK CURB INLET PROTECTION
NTS

1. INSTALL FILTER SOCK IN FRONT OF CURB OPENINGS TO A MINIMUM OF 12" BEYOND THE OPENING, EACH SIDE.
2. ANCHOR THE FILTER SOCK BEHIND THE CURB WITH WOODEN STACKS 12" MINIMUM INTO SOIL.
3. USE 8" DIAMETER FILTER SOCK FOR STANDARD CURB INLET. SLIGHTLY COMPACT TO CURB HEIGHT DURING CURB INSTALLATION.
4. MAINTAIN FREE OF DEBRIS AND SEDIMENT TO ENSURE PROPER FLOW AND FUNCTION. OVERFLOW OF FILTER IS ACCEPTABLE DURING SEVERE STORM EVENTS.
5. FILTER SOCK SHALL BE POSITIONED TO PROVIDE A PERMEABLE BARRIER TO THE DRAIN AND COLLECT SEDIMENT OUTSIDE THE SOCK.
6. CONCRETE BLOCKS SHALL BE PLACED WITH CORES HORIZONTAL AT EACH END AND EVERY FOUR FEET MAXIMUM WITHIN.



THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

IP3 GRATED INLET GRAVEL SEDIMENT FILTER
NTS



GENERAL GUIDELINES FOR SPACING TUBE TRENCHES FOR CHANNEL INSTALLATIONS	
SLOPE	TUBE INTERVAL
2%	25 FEET

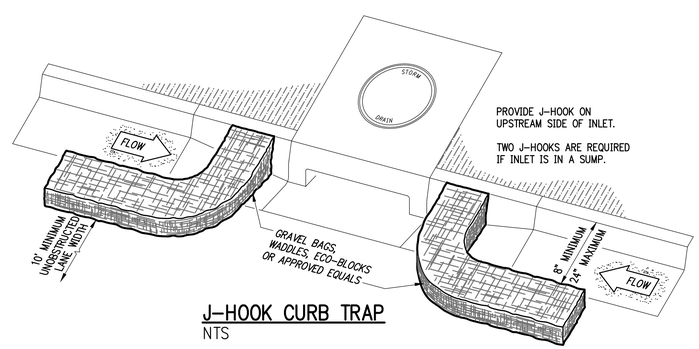
GENERAL GUIDELINES FOR SPACING TUBE TRENCHES FOR SLOPE INSTALLATIONS	
SLOPE GRADIENT	TUBE INTERVAL
1:1	15 FEET
2:1	25 FEET
3:1	35 FEET
4:1	50 FEET

TUBES WITH FLOCCULENT MAY BE INSTALLED BEFORE OR AFTER THE INSTALLATION OF ROLLED EROSION CONTROL PRODUCTS.

PRIOR TO TUBE INSTALLATION, REMOVE ALL DEBRIS 2" OR LARGER AND SMOOTH SURFACE.

REPLACE TUBES WITH FLOCCULENT PER MANUFACTURE'S SPECIFICATIONS.

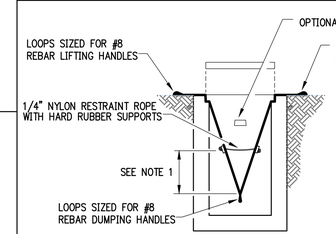
FIBER FLOCCULENT TUBES
NTS



PROVIDE J–HOOK ON UPSTREAM SIDE OF INLET.

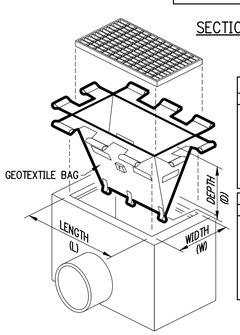
TWO J–HOOKS ARE REQUIRED IF INLET IS IN A SUMP.

J–HOOK CURB TRAP
NTS



SECTION

1. EMPTY FILTER SACK WHEN BRIGHTLY COLORED EXPANSION RESTRAINT IS COVERED BY SILT.
2. GEOTEXTILE WILL BE A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS REQUIREMENTS IN THE SPECIFICATIONS TABLE.
3. AN OIL ADSORBENT PAD OR PILLOW CAN BE PURCHASED WHEN OIL SPILLS ARE A CONCERN.
4. INSPECT PER REGULATORY REQUIREMENTS.
5. THE WIDTH, "W", OF THE FILTER SACK WILL MATCH THE INSIDE WIDTH OF THE GRATED INLET BOX.
6. THE DEPTH, "D", OF THE FILTER SACK WILL BE BETWEEN 18 INCHES AND 36 INCHES.
7. THE LENGTH, "L", OF THE FILTER SACK WILL MATCH THE INSIDE LENGTH OF THE GRATED INLET BOX.
8. DO NOT USE ON ROADWAYS WHERE PONDING MAY CAUSE A TRAFFIC HAZARD.



LOW TO MODERATE FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D–4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D–4632	20 %
PUNCTURE	ASTM D–4833	120 LBS
MULLEN BURST	ASTM D–3786	800 PSI
TRAPEZOID TEAR	ASTM D–4533	120 LBS
UV RESISTANCE	ASTM D–4355	80 %
APPARENT OPENING SIZE	ASTM D–4751	40 US SIEVE
FLOW RATE	ASTM D–4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D–4491	0.55 SEC –1

MODERATE TO HIGH FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D–4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D–4632	20 %
PUNCTURE	ASTM D–4833	135 LBS
MULLEN BURST	ASTM D–3786	420 PSI
TRAPEZOID TEAR	ASTM D–4533	45 LBS
UV RESISTANCE	ASTM D–4355	90 %
APPARENT OPENING SIZE	ASTM D–4751	20 US SIEVE
FLOW RATE	ASTM D–4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D–4491	1.5 SEC –1

GRATED INLET FILTER SACKS
NTS

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Rogers, Arkansas 72756
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CERTIFICATE OF AUTHORIZATION:
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CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

No.	Description	Date

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PROJECT NO: 22110100
ISSUE DATE: 05/16/2025
CONTACT: L. JOST
QC by: G. LONG
QC Date: 7/18/2025

ISSUED FOR REVIEW

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 18699
LUCAS K. JOST

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05/21/2025

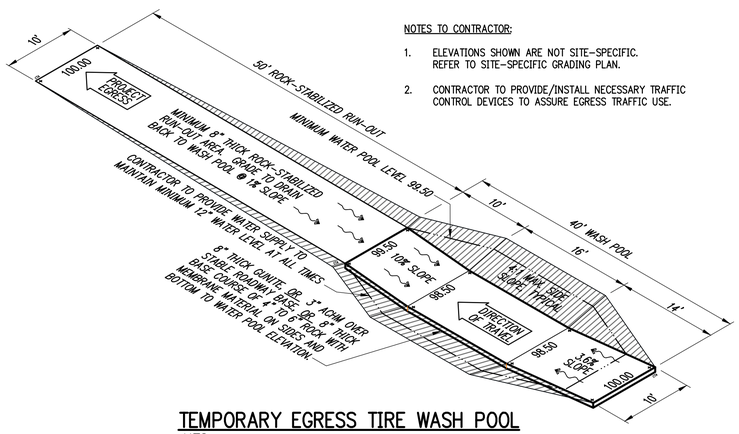
EROSION CONTROL DETAILS (1 OF 3)

C-504

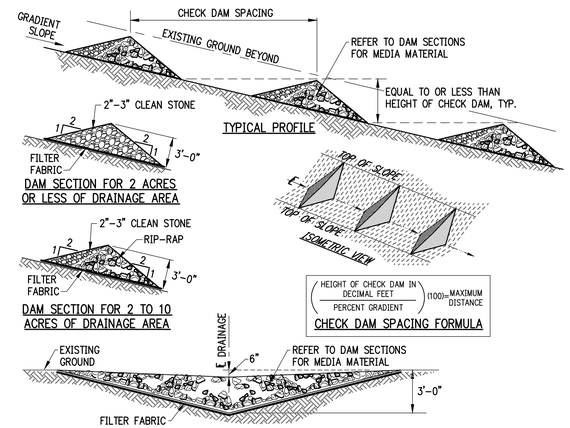
DRAWING: G:\22110100_RZRGRNWY\INFRASTRUCTURE\CIVIL\DWG\EROSION CONTROL DETAILS.DWG
LAYOUT: EROSION CONTROL DETAILS (1 OF 3) LAST SAVED: JR 1648 - 7/25/2025 - 4:43:08 PM
PLOTTED BY: JOSHUA RIGGS - 7/25/2025 - 4:43:08 PM PLOT SCALE: 1:1 PAGE SIZE: ANSI D (24.00 X 36.00 IN)

NOTES TO CONTRACTOR:

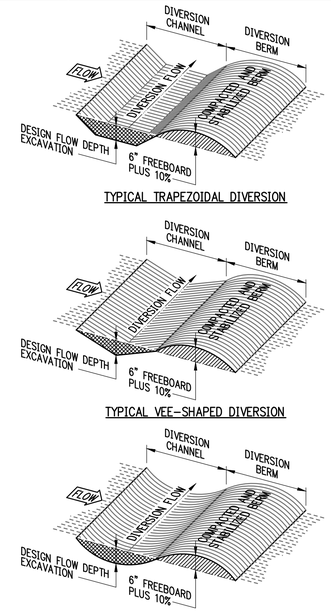
1. ELEVATIONS SHOWN ARE NOT SITE-SPECIFIC. REFER TO SITE-SPECIFIC GRADING PLAN.
2. CONTRACTOR TO PROVIDE/INSTALL NECESSARY TRAFFIC CONTROL DEVICES TO ASSURE EGRESS TRAFFIC USE.



TEMPORARY EGRESS TIRE WASH POOL
NTS

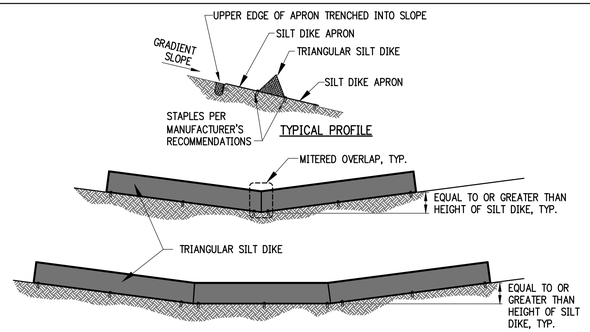


ROCK CHECK DAM
NTS

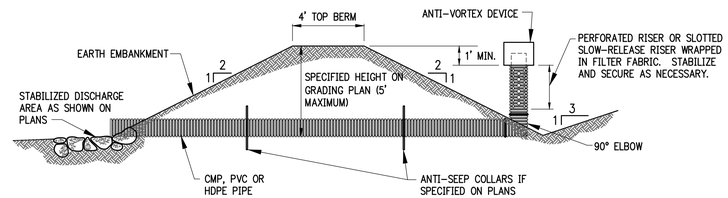


NOTES:
1. REMOVE ANY VEGETATION AND SCARIFY OR BENCH ADJACENT SOILS PRIOR TO PLACING BERM.
2. BERM MATERIALS MUST BE ADEQUATELY COMPACTED AND STABILIZED.

CHANNELED DIVERSIONS
NTS



SILT DIKE CHECK DAM
NTS



SEDIMENT BASIN WITH PIPE OUTLET
NTS

NOTES:
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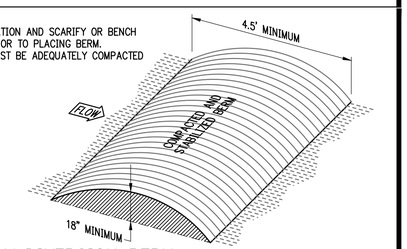
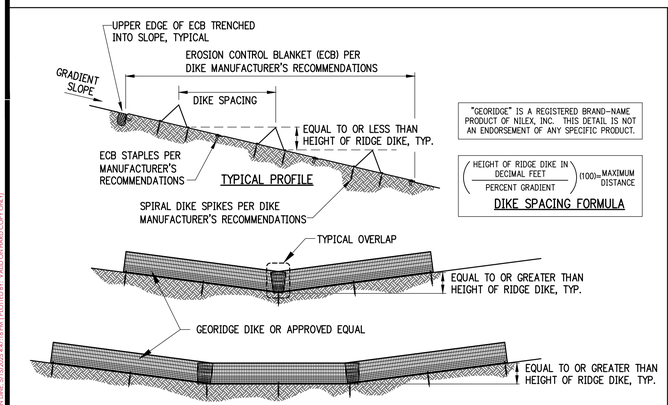


TEMPORARY DIVERSION BERM
NTS

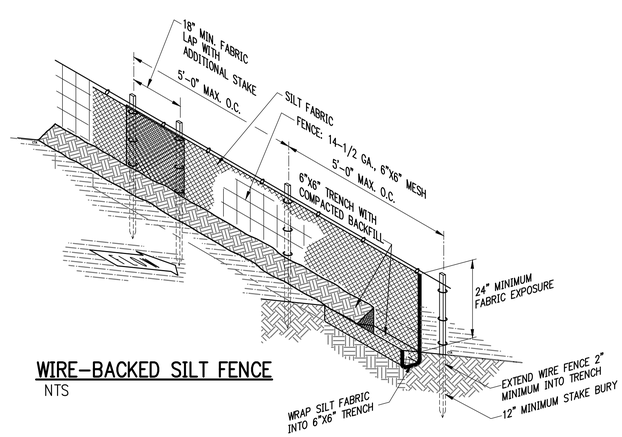


"GEORIDGE" IS A REGISTERED BRAND-NAME PRODUCT OF NILEX, INC. THIS DETAIL IS NOT AN ENDORSEMENT OF ANY SPECIFIC PRODUCT.

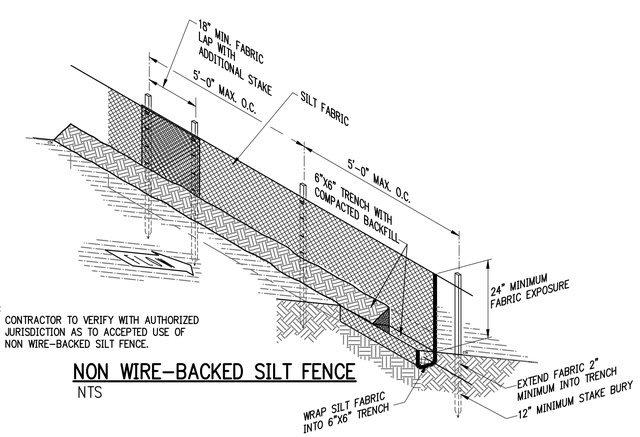
(HEIGHT OF RIDGE DIKE IN DECIMAL FEET / PERCENT GRADIENT)(100)=MAXIMUM DISTANCE

DIKE SPACING FORMULA

PERMEABLE HDPE DITCH CHECK
NTS



WIRE-BACKED SILT FENCE
NTS



NOTE:
1. CONTRACTOR TO VERIFY WITH AUTHORIZED JURISDICTION AS TO ACCEPTED USE OF NON WIRE-BACKED SILT FENCE.

NON WIRE-BACKED SILT FENCE
NTS

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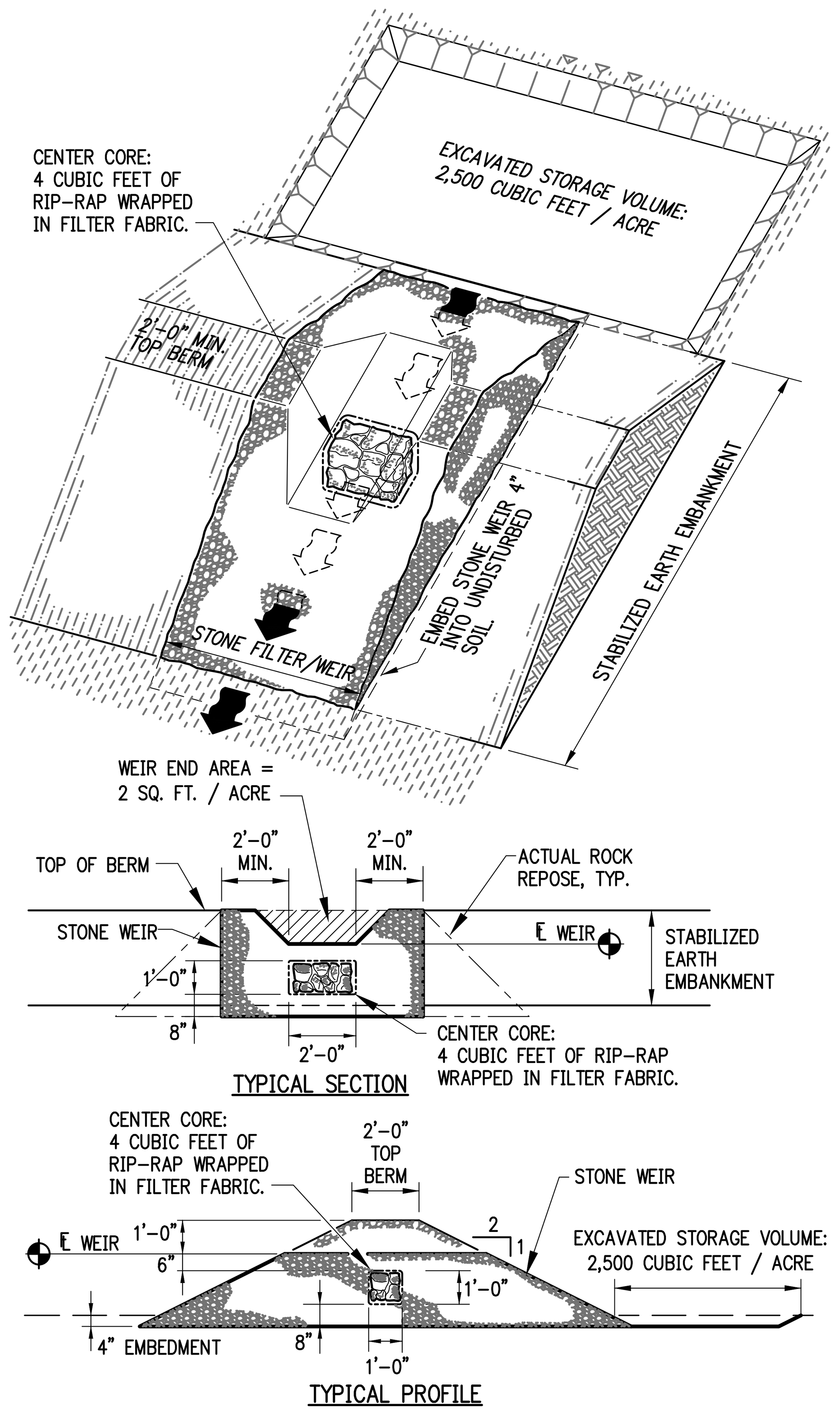
EROSION CONTROL DETAILS (2 OF 3)

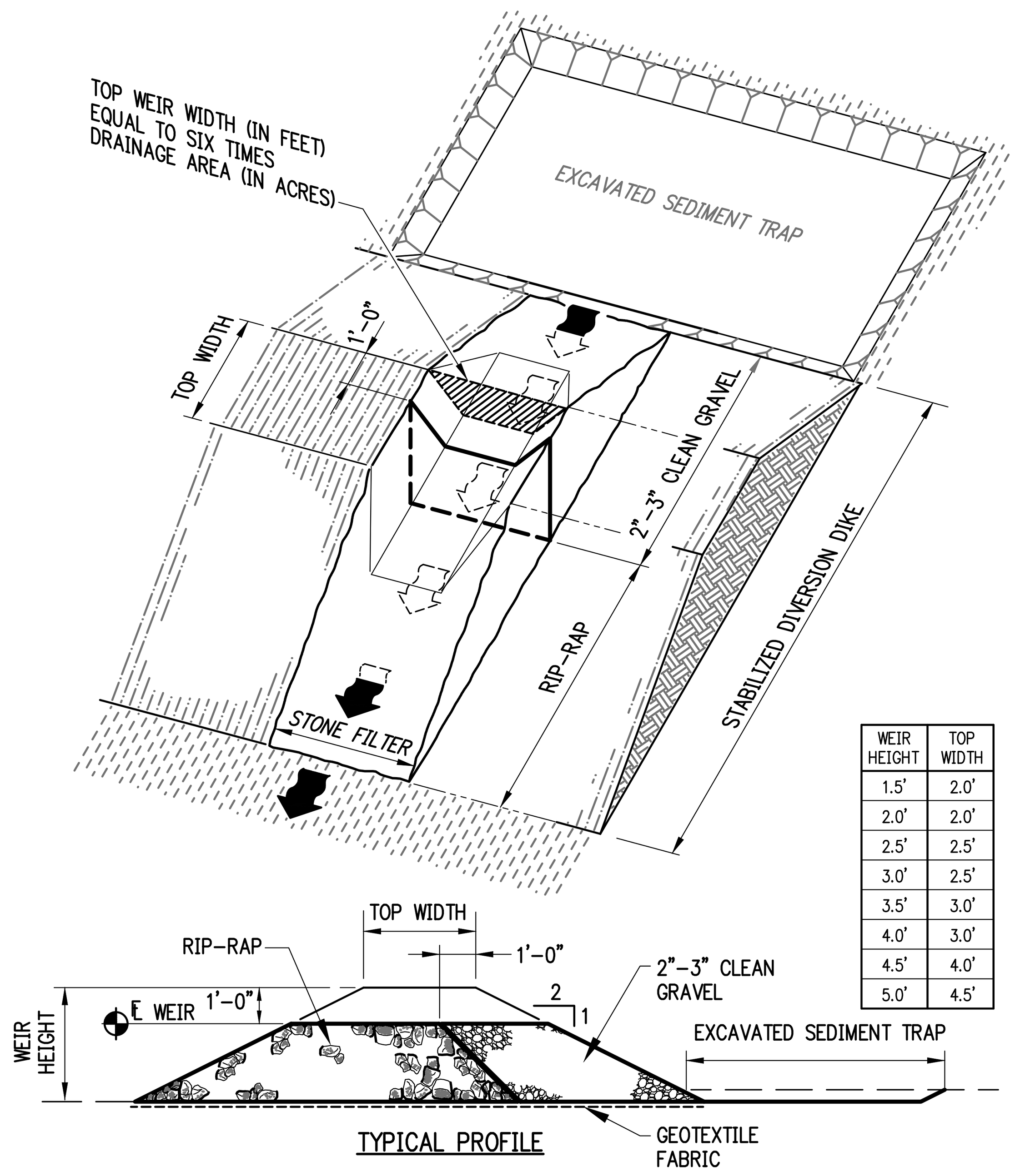
C-505

DRAWING: C:\22110100_BENTONVILLE\INFRASTRUCTURE\CIVIL\DWG\EROSION CONTROL DETAILS.DWG
LAYOUT: EROSION CONTROL DETAILS (2 OF 3) LAST SAVED: 7/18/2023 1:45:48 PM
PLOTTED BY: LUCAS JOST LAST PLOTTED: 7/20/2023 9:45:08 PM CDT



SEDIMENT BASIN WITH STONE OUTLET

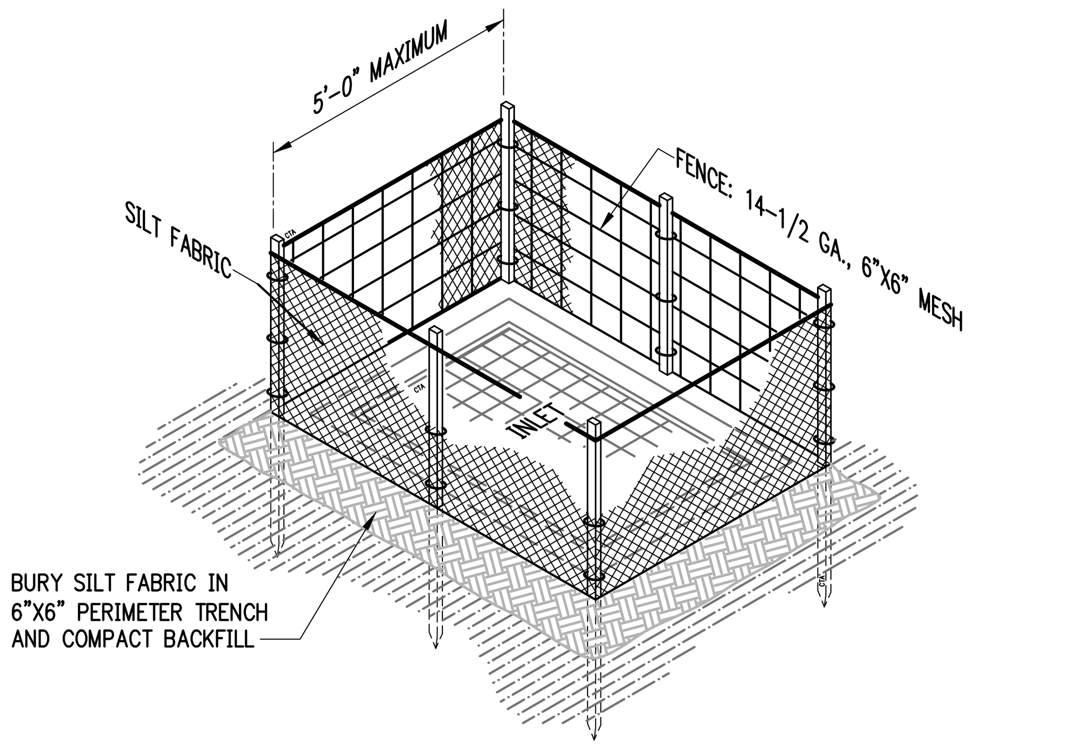
FOR DRAINAGE AREAS GREATER THAN TEN ACRES



WEIR HEIGHT	TOP WIDTH
1.5'	2.0'
2.0'	2.0'
2.5'	2.5'
3.0'	2.5'
3.5'	3.0'
4.0'	3.0'
4.5'	4.0'
5.0'	4.5'

SEDIMENT BASIN WITH STONE OUTLET

FOR DRAINAGE AREAS LESS THAN TEN ACRES

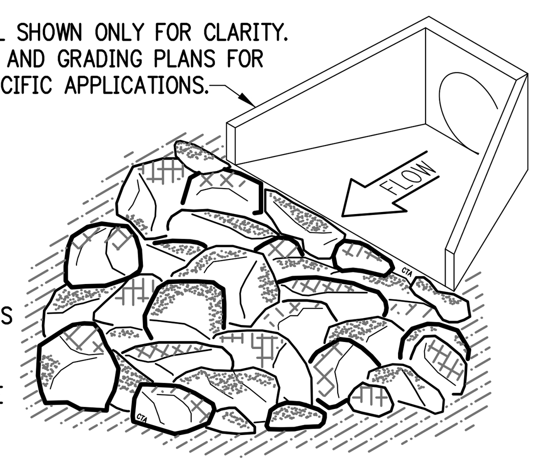


SILT FABRIC SHALL BE SECURITY FASTENED TO WIRE FENCING.

IP4 SILT FENCE INLET PROTECTION

NTS

HEADWALL SHOWN ONLY FOR CLARITY. SEE SITE AND GRADING PLANS FOR SITE-SPECIFIC APPLICATIONS.



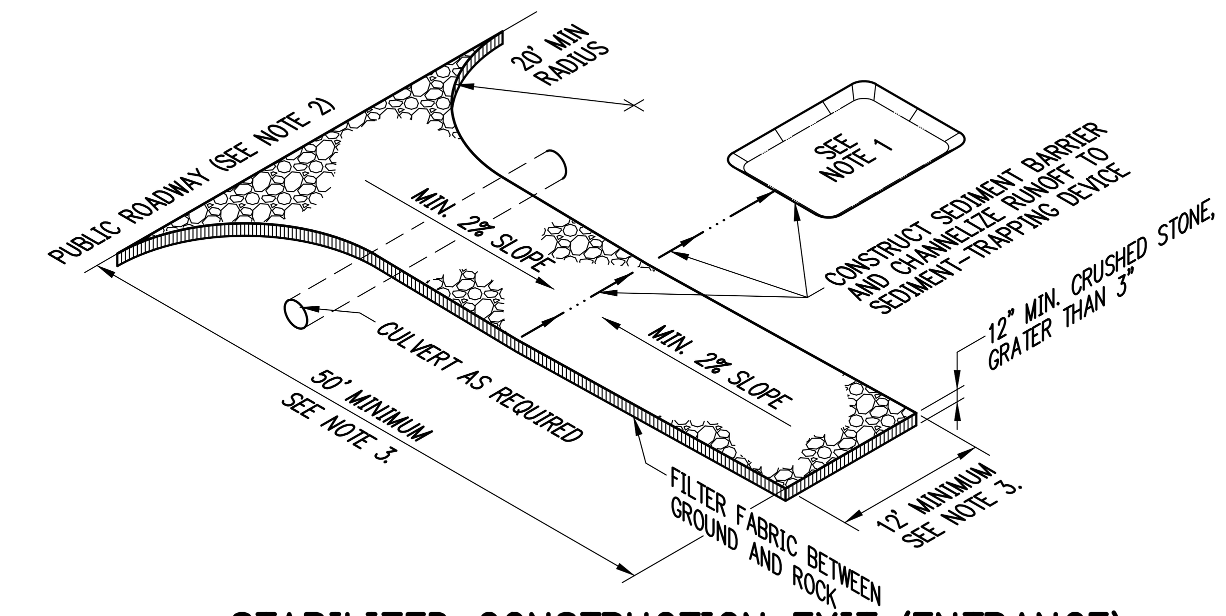
SEE SITE PLAN FOR DIMENSIONS AND LIMITS OF RIP-PAP.

PERMANENT RIP-RAP SHALL BE GROUTED AS SPECIFIED.

STONES SHALL CONSIST OF FIELD STONE OR ROUGH, UNHEWN QUARRY STONE AS NEARLY UNIFORM IN SIZE AS PRACTICAL. STONES SHALL BE DENSE, RESISTANT TO THE ACTION OF WIND AND WATER, AND SUITABLE IN ALL ASPECTS FOR THE INTENDED USE. ALL STONES SHALL WEIGH BETWEEN 50-150 POUNDS EACH AND AT LEAST 60% OF THE STONES SHALL WEIGH MORE THAN 100 POUNDS EACH.

RIP-RAP SLOPE PROTECTION

NTS



1. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCE/EXIT IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES EXIT ONTO THE PUBLIC ROADS. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF SITE.

2. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

3. LENGTH AND WIDTH TO SUIT SITE, CONSTRUCTION TRAFFIC AND EFFECTIVENESS.

STABILIZED CONSTRUCTION EXIT (ENTRANCE)

NTS

DRAWING: G:\22110100_RZBGRNPH3\INFRASTRUCTURE\CIVIL\DWG\EROSION CONTROL DETAILS.DWG
LAYOUT: EROSION CONTROL DETAILS (3 OF 3) , LAST SAVED: JK1461, 7/25/2023 4:45:48 PM
LAST PLOTTED BY: TIM VAN DINE, 5/15/2025 4:47:21 PM ("PLOTTED BY:" VALID ON HARD COPY ONLY)

PHASE I

1. INSTALL STABILIZED CONSTRUCTION ENTRANCES/EXITS.
2. PREPARE TEMPORARY PARKING AND STORAGE AREAS. UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING: TRAILER, PARKING, LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASH-OUT, MASON'S AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., DENOTE THEM ON THE SITE MAPS IMMEDIATELY AND NOTE ANY CHANGES IN THE LOCATIONS AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS.
3. CONSTRUCT THE SILT FENCES ON THE SITE.
4. CONSTRUCT THE SEDIMENTATION AND SEDIMENT TRAP BASINS.
5. HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEER CONSULTANT TO PERFORM INSPECTION OF BMPs. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORM WATER PRE-CONSTRUCTION MEETING WITH ENGINEER AND ALL GROUND-DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.
6. CLEAR AND GRUB THE SITE.
7. START CONSTRUCTION OF THE BUILDING PAD AND STRUCTURES.
8. BEGIN GRADING THE SITE.

PHASE II

1. TEMPORARILY SEED DENUDED AREAS.
2. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
3. INSTALL RIP-RAP AROUND OUT STRUCTURES.
4. INSTALL INLET PROTECTION AROUND ALL STORM SEWER STRUCTURES.
5. PREPARE SITE FOR PAVING.
6. PAVE SITE.
7. INSTALL INLET PROTECTION DEVICES.
8. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING.
9. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES IF SITE IS STABILIZED.

GENERAL EROSION NOTES:

A. THE STORMWATER POLLUTION PREVENTION PLAN IS COMPRISED OF THIS DRAWING (SITE MAP), THE STANDARD DETAILS, THE PLAN NARRATIVE, ATTACHMENTS INCLUDED IN THE SPECIFICATIONS SECTION 312800 (EROSION AND SEDIMENTATION CONTROL), PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.

B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND THE STATE OF ARKANSAS NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

C. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.

D. BEST MANAGEMENT PRACTICES (BMP) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AND APPLICABLE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY THE PERMITTING AGENCY OR OWNER.

E. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON THE SITE AT ALL TIMES.

F. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.

G. GENERAL CONTRACTOR SHALL DENOTE THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, AND AREA FOR PORTABLE FACILITIES, OFFICE TRAILERS AND TOILET FACILITIES.

H. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE AND EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.

I. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN UP FUEL OR CHEMICAL SPILLS AND LEAKS.

J. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM-BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

K. RUBBISH, TRASH, GARBAGE, LITTER OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM BEING BLOWN OR WASHED OFF-SITE.

L. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN AND SWPPP SHALL BE INITIATED AS SOON AS POSSIBLE.

M. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 14 DAYS SHALL BE TEMPORARY SEEDED.

N. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.

O. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCE/EXIT IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES EXIT ONTO THE PUBLIC ROADS. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF-SITE.

P. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

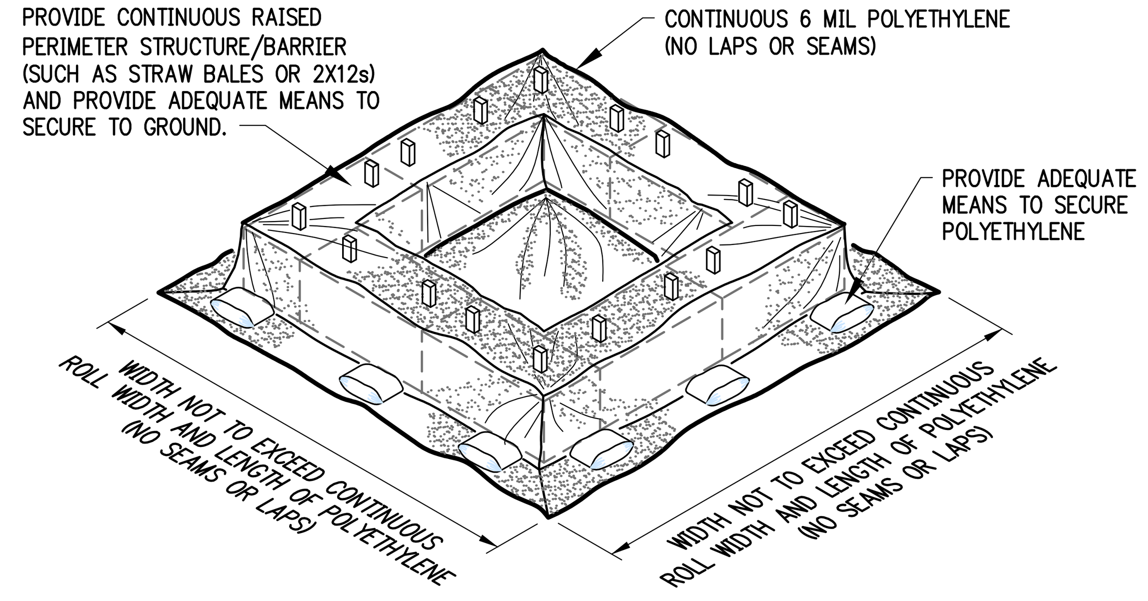
Q. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

R. ON-SITE AND OFF-SITE STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH THE GENERAL PERMIT.

S. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

T. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO PREVENT EROSION.

U. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.



CONCRETE WASH-OUT BASIN

NTS

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
ROUGH GRADE / SEDIMENT CONTROL																		
TEMPORARY CONTROL MEASURES																		
STRIP & STOCKPILE TOPSOIL																		
STORM FACILITIES																		
TEMPORARY CONSTRUCTION ROADS																		
FOUNDATION / BUILDING CONSTRUCTION																		
SITE CONSTRUCTION																		
PERMANENT CONTROL STRUCTURES																		
FINISH GRADING																		
LANDSCAPING/SEED/FINAL STABILIZATION																		

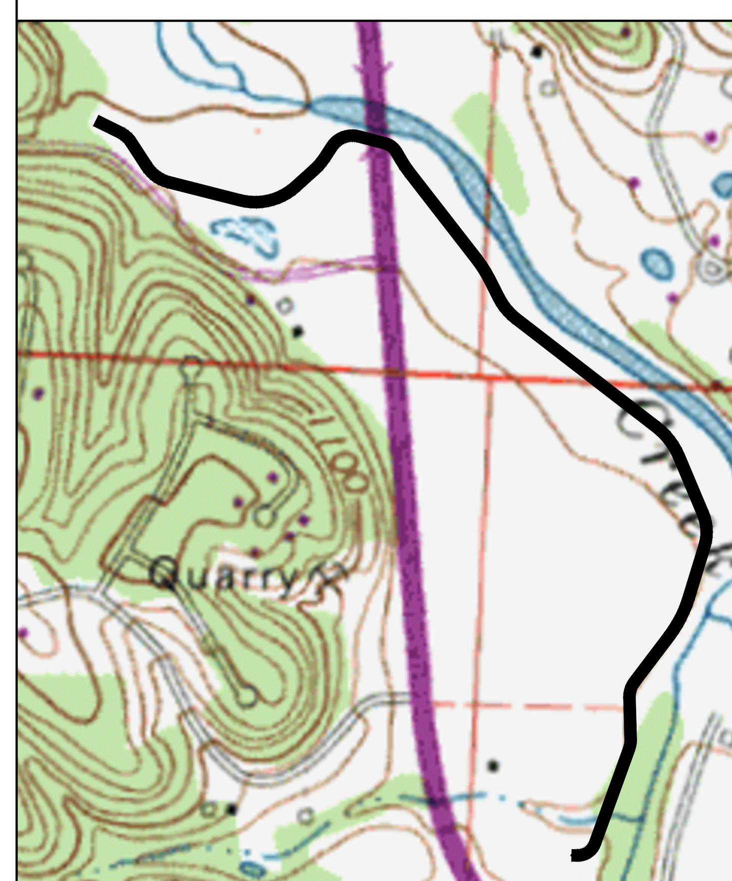
ACREAGE SUMMARY	
IMPERVIOUS AREA	ENTER ACREAGE
SEEDED AREA	ENTER ACREAGE
TOTAL DISTURBED	ENTER ACREAGE

DEVELOPER/OWNER:
ENTER DEVELOPER INFORMATION

SITE OPERATOR/GENERAL CONTRACTOR:

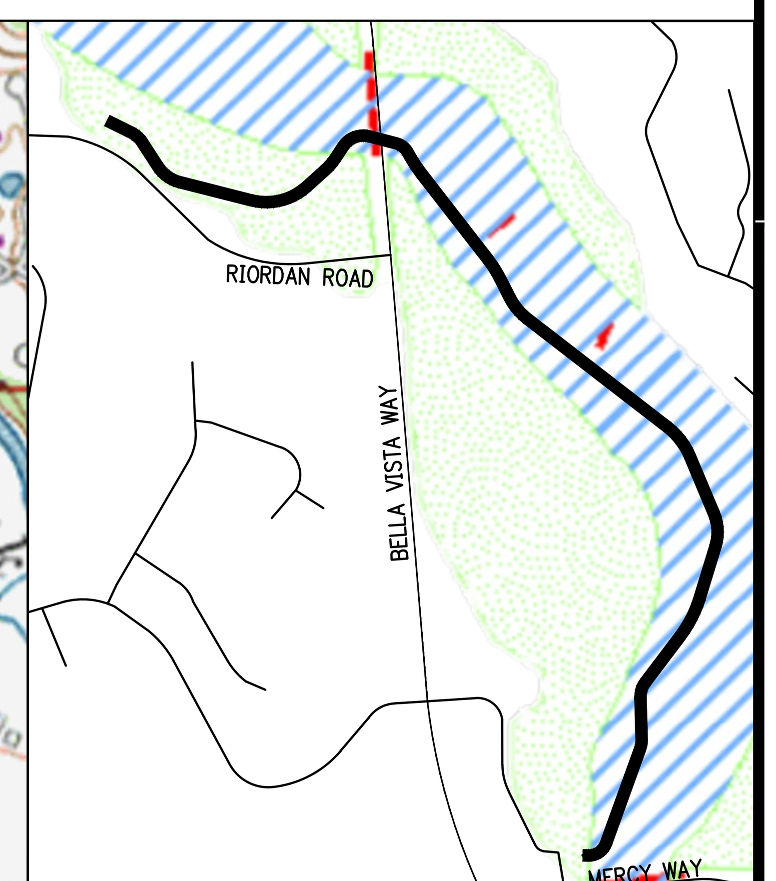
SUPERINTENDENT:

T.B.M.
ENTER BENCHMARK INFORMATION



USGS QUADRANGLE MAP

NTS



VICINITY MAP

NTS

901 N. 47th St., Suite 400
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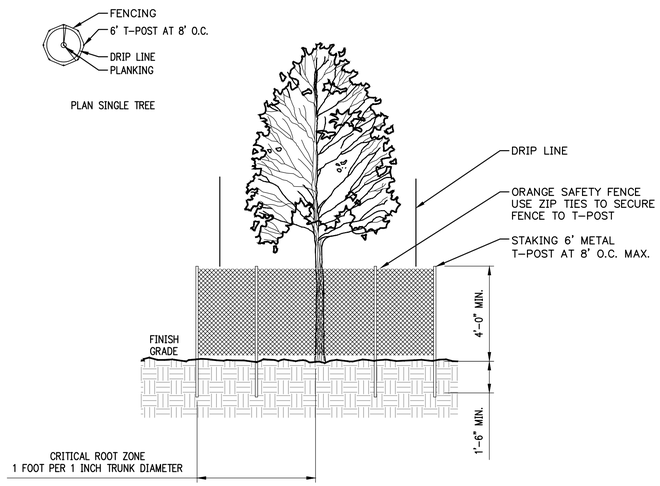
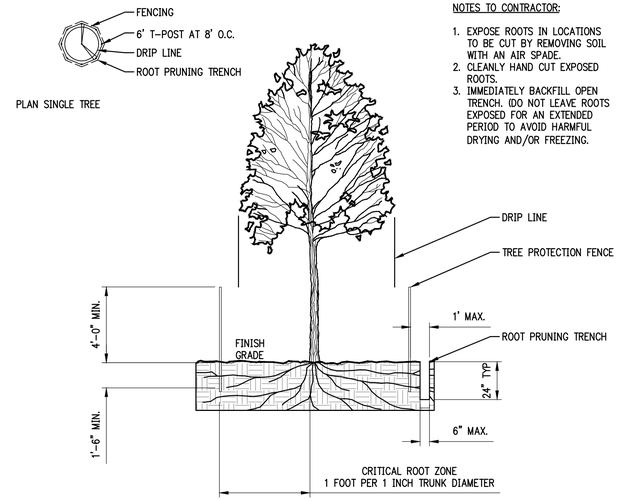
EROSION CONTROL DETAILS (3 OF 3)

C-506



TREE PRESERVATION FENCING DETAIL

NTS

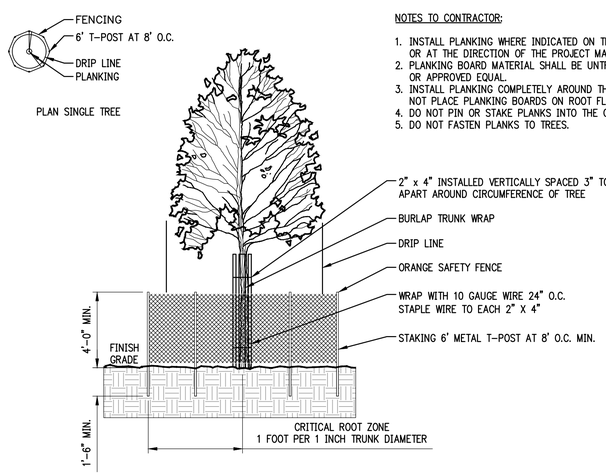


NOTES TO CONTRACTOR:

1. EXPOSE ROOTS IN LOCATIONS TO BE CUT BY REMOVING SOIL WITH AN AIR SPADE.
2. CLEANLY HAND CUT EXPOSED ROOTS.
3. IMMEDIATELY BACKFILL OPEN TRENCH. (DO NOT LEAVE ROOTS EXPOSED FOR AN EXTENDED PERIOD TO AVOID HARMFUL DRYING AND/OR FREEZING.

ROOT PRUNING DETAIL

NTS



NOTES TO CONTRACTOR:

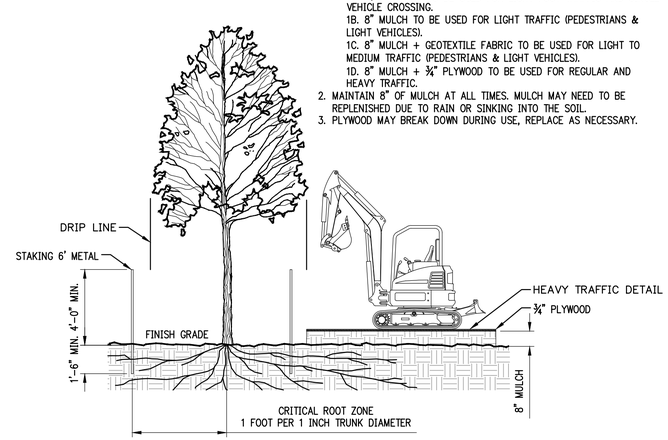
1. INSTALL PLANKING WHERE INDICATED ON THE DRAWINGS OR AT THE DIRECTION OF THE PROJECT MANAGER.
2. PLANKING BOARD MATERIAL SHALL BE UNTREATED PINE OR APPROVED EQUAL.
3. INSTALL PLANKING COMPLETELY AROUND THE TREE. DO NOT PLACE PLANKING BOARDS ON ROOT FLARE OF TREE.
4. DO NOT PIN OR STAKE PLANKS INTO THE GROUND.
5. DO NOT FASTEN PLANKS TO TREES.

TREE PRESERVATION FENCING AND PLANKING DETAIL

NTS

NOTES TO CONTRACTOR:

1. TECHNIQUES TO BE SPECIFIED BY URBAN FORESTRY (EXAMPLES 1A–1D).
   - 1A. ¾" PLYWOOD TO BE USED FOR LIGHT FOOT TRAFFIC AND SINGLE VEHICLE CROSSING.
   - 1B. 8" MULCH TO BE USED FOR LIGHT TRAFFIC (PEDESTRIANS & LIGHT VEHICLES).
   - 1C. 8" MULCH + GEOTEXTILE FABRIC TO BE USED FOR LIGHT TO MEDIUM TRAFFIC (PEDESTRIANS & LIGHT VEHICLES).
   - 1D. 8" MULCH + ¾" PLYWOOD TO BE USED FOR REGULAR AND HEAVY TRAFFIC.
2. MAINTAIN 8" OF MULCH AT ALL TIMES. MULCH MAY NEED TO BE REPLENISHED DUE TO RAIN OR SINKING INTO THE SOIL.
3. PLYWOOD MAY BREAK DOWN DURING USE, REPLACE AS NECESSARY.



SOIL COMPACTION PREVENTION DETAIL

NTS

901 N. 47th St., Suite 400
Rogers, Arkansas 72756
Crafton Tull
architecture | engineering | surveying
479.636.4838 t 479.631.6224 f

CERTIFICATE OF AUTHORIZATION:

CERTIFICATE OF AUTHORIZATION
CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

RAZORBACK GREENWAY
EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

No.	Description	Date

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PROJECT NO: 22110100
ISSUE DATE: 05/16/2025
CONTACT: L. JOST
QC by: G. LONG
QC Date: 7/18/2023

ISSUED FOR REVIEW

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 18699
LUCAS K. JOST
05/21/2025

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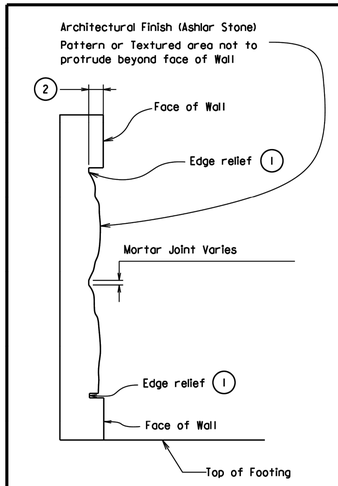
TREE PRESERVATION DETAILS

C-507

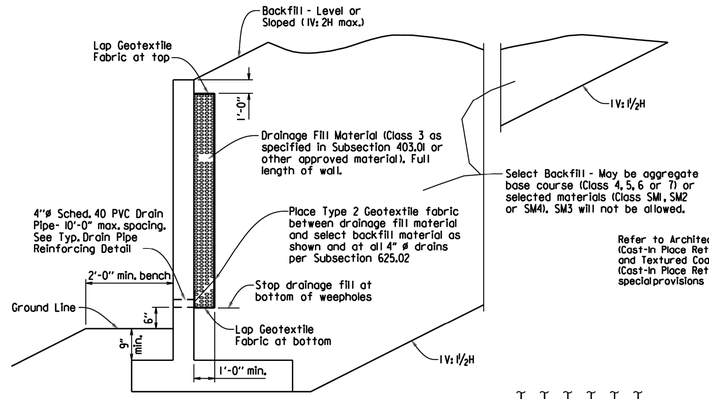
DRAWING: G:\22110100.R28\BIM\INFRASTRUCTURE\CIVIL\DWG\TREE PRESERVATION DETAILS.DWG
LAYOUT: TREE PRESERVATION DETAILS LAST SAVED: JL 140:17:2025 14:05:51 PM
PLOTTED BY: LUCAS JOST LAST PLOTTED: 05/21/2025 2:14:00 PM



ARCHITECTURAL FINISH DETAILS

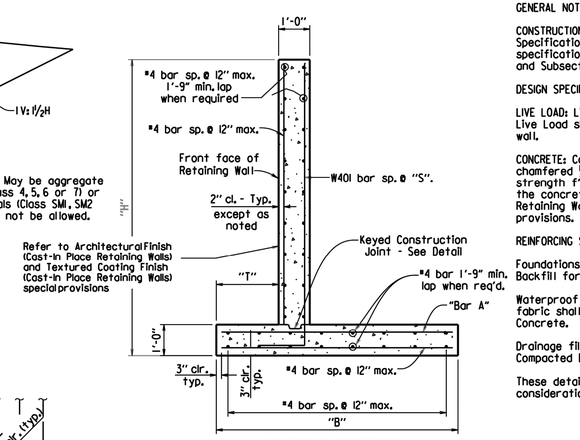
N.T.S.

1. Provide edge relief around perimeter of Texture. Edge relief dimensions shall match manufacturers edge distance.
2. Depth of Ashlar Stone pattern approx. 1 5/8". See SP "Architectural Finish".



TYPICAL DRAINAGE & BACKFILL DETAILS

N.T.S



TYPICAL SECTION

N.T.S

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: Arkansas Department of Transportation Standard Specifications for Highway Construction (Current Edition) with applicable supplemental specifications and special provisions. Unless otherwise noted in the plans, Section and Subsection refer to the Standard Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications, Sixth Edition (2012).

LIVE LOAD: Live Load Surcharge is not included in the design of these walls. Vehicular Live Load shall not be allowed within a distance equal to one-half the height of the wall.

CONCRETE: Concrete shall be poured in the dry and all exposed corners to be chamfered ½". All concrete shall be Class S with a minimum 28 day compressive strength f'c = 3,500 psi. A Class 2 Surface finish shall be used on all surfaces of the concrete unless otherwise noted. Refer to Architectural Finish (Cast-in Place Retaining Walls) and Textured Coating Finish (Cast-in Place Retaining Walls) special provisions.

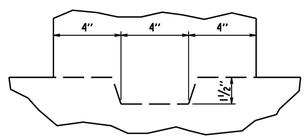
REINFORCING STEEL: All reinforcing steel shall conform to AASHTO M31 or M53, Grade 60.

Foundations for footings shall be prepared in accordance with subsection 801.04. Backfill for retaining walls shall be in accordance with subsection 801.08.

Waterproof Membrane (Type C), waterstops, preformed joints, weep holes & geotextile fabric shall not be paid for directly, but shall be considered subsidiary to Class S Concrete.

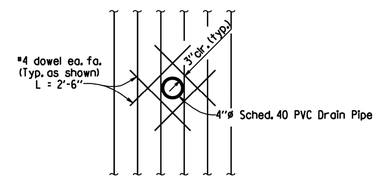
Drainage fill material (Class 3) and select backfill shall be measured and paid for as Compacted Embankment.

These details are not intended for use along streams or ditches without consideration for scour.



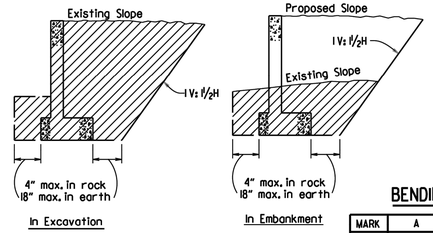
KEYED CONSTRUCTION JOINT DETAIL

N.T.S



TYPICAL DRAIN PIPE REINFORCING DETAIL

N.T.S



NOTE: Hatched area denotes maximum limits of pay excavation.

DETAILS OF EXCAVATION

N.T.S

TABLE OF RETAINING WALL VARIABLES (SLOPED BACKFILL) (1V: 2H MAX.)

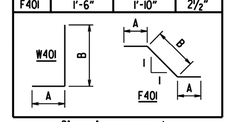
"H"	"T"	"B"	"S"	"Bar A" Size @ Spacing
3'-0"	9"	2'-6"	12"	#4 @ 12"
4'-0"	9"	3'-6"	12"	#4 @ 12"
5'-0"	9"	4'-6"	12"	#4 @ 12"
6'-0"	9"	5'-6"	12"	#4 @ 6"
7'-0"	9"	6'-6"	12"	#5 @ 6½"
8'-0"	1'-6"	8'-0"	7½"	#6 @ 6"
9'-0"	1'-11"	9'-6"	5"	#8 @ 6"

TABLE OF RETAINING WALL VARIABLES (LEVEL BACKFILL)

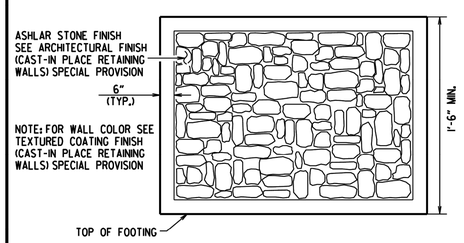
"H"	"T"	"B"	"S"	"Bar A" Size @ Spacing
3'-0"	9"	2'-6"	12"	#4 @ 12"
4'-0"	9"	3'-6"	12"	#4 @ 12"
5'-0"	9"	4'-0"	12"	#4 @ 12"
6'-0"	9"	4'-6"	12"	#4 @ 12"
7'-0"	9"	5'-6"	12"	#4 @ 10"
8'-0"	9"	6'-0"	12"	#5 @ 10"
9'-0"	1'-0"	7'-0"	12"	#5 @ 6½"

BENDING DIAGRAMS

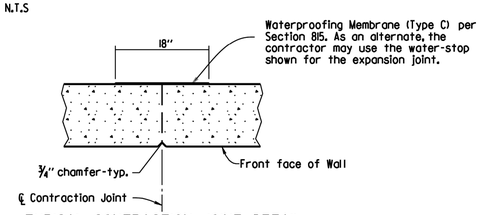
MARK	A	B	P.D.
W401	8"	"H" - 6"	3"
F401	1'-6"	1'-10"	2½"



Dimensions are out to out of bars.



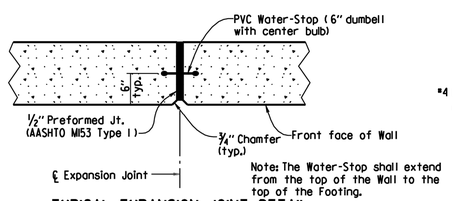
ASHLAR STONE FINISH DETAIL



TYPICAL CONTRACTION JOINT DETAIL

N.T.S.

Note: 20'-0" Max. Spacing between Contraction Joints. Horizontal reinforcement shall be continuous through Contraction joints.

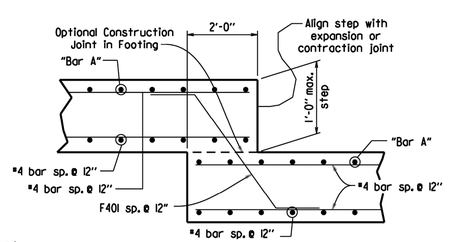


Note: The Water-Stop shall extend from the top of the Wall to the top of the Footing.

TYPICAL EXPANSION JOINT DETAIL

N.T.S.

Note: 60'-0" Max. Spacing between Expansion Joints. Horizontal reinforcing shall stop 2" from ℄ Expansion Joint.



FOOTING STEP DETAIL

N.T.S.

NOTES:

Wall pattern shall be applied to the exposed surfaces of wall in accordance with SP "Architectural Finish (Cast-in Place Retaining Walls)" and as shown in the plans. Care shall be taken with form liner handling and installation to ensure aesthetic quality of the wall texturing is maintained. Where form liner panels require modification to conform to the location, dimensions and lines shown in the plans, the Contractor shall provide edge relief matching that of the unaltered form liner. Payment for wall texturing shall be in accordance with SP "Architectural Finish (Cast-in Place Retaining Walls)".

No adjustments will be made in concrete volume due to the use of "Architectural Finish". Class "S" Concrete shall be measured in accordance with Subsection 802.24(a). Care shall be taken in placing concrete to avoid segregation and to eliminate flow lines.

Class 3 Textured Coating Finish shall be applied to wall surfaces as specified in SP "Textured Coating Finish (Cast-in Place Retaining Walls)" and in accordance with Subsection 802.19(b)(3).

SEISMIC ZONE: These walls have been designed for the following site adjusted peak ground accelerations (A_S):
Level Backfill - $A_S \leq .40g$
Sloped Backfill (1V: 2H max.) - $A_S \leq .30g$

DATE	REVISION	DATE FILMED
5-14-20	ADDED ASHLAR STONE FINISH DETIAL AND NOTES. REVISED TYP. SECTION AND GEN. NOTES.	
5-12-16	REVISED SLOPES FOR SELECT BACKFILL	
2-27-14	REVISED GENERAL NOTES	
7-26-12	DRAWING ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

REINFORCED CONCRETE RETAINING WALL (WITHOUT LIVE LOAD SURCHARGE)

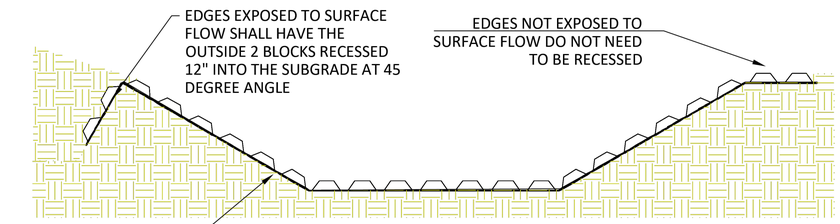
STANDARD DRAWING SI - 2

ARDOT DETAILS

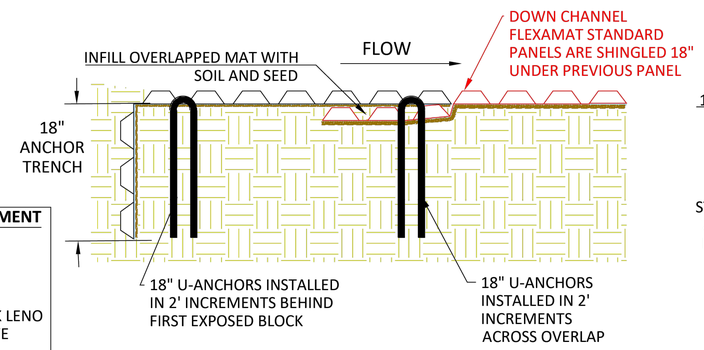
RETAINING WALL DETAIL

C-508

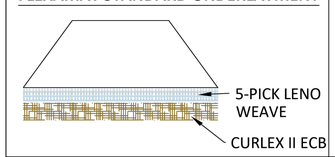
METHOD FOR TREATING EDGES EXPOSED TO SURFACE SHEET FLOW



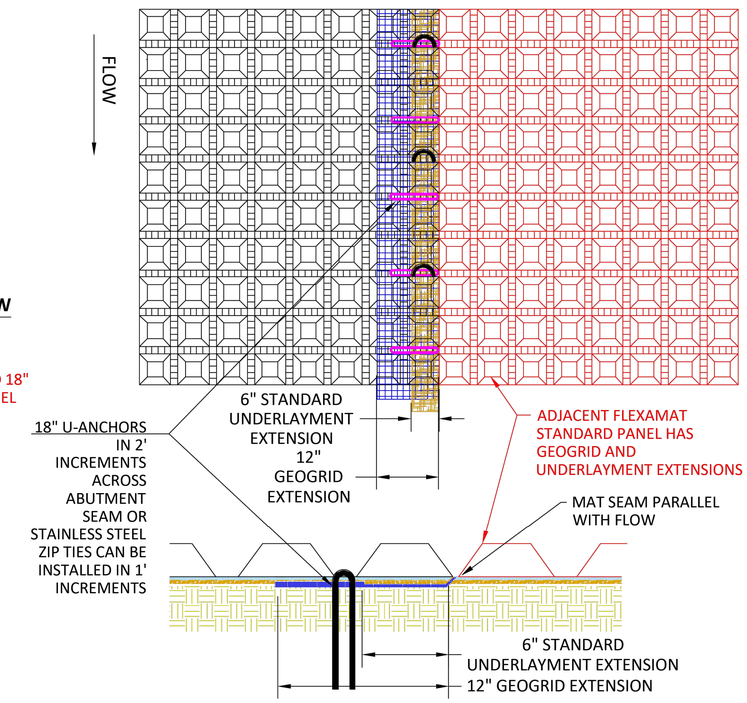
LEADING EDGE ANCHOR TRENCH AND OVERLAP SEAMS PERPENDICULAR TO FLOW



FLEXAMAT STANDARD UNDERLAYMENT



ABUTMENT METHOD FOR WIDER THAN 16'



FLEXAMAT STANDARD CHANNEL - LAYOUT PARALLEL TO FLOW

CONSTRUCTION NOTES:

1. AN ENGINEER OR MANUFACTURES REPRESENTATIVE SHALL BE ONSITE FOR THE START OF THE INSTALLATION.
2. GRADE CHANNEL SO THAT WATER WILL FLOW DOWN CENTER OF THE CHANNEL AND BE CONTAINED TO THE CHANNEL. ALL SUBGRADE SURFACES PREPARED FOR PLACEMENT OF MATS SHALL BE SMOOTH AND FREE OF ALL ROCKS, STICKS, ROOTS, OTHER PROTRUSIONS, OR DEBRIS OF ANY KIND.
3. PRIOR TO FLEXAMAT STANDARD INSTALLATION SEED AND FERTILIZE THE PREPARED SUBGRADE WITH SITE SPECIFIC SEED MIX AND IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.
4. INSTALL FLEXAMAT STANDARD ROLLS, USING THE WIDEST ROLLS POSSIBLE TO AVOID SEAMS.
   - 4.1. FOR CHANNELS THAT ARE WIDER THAN 16', INSTALL 15.5' WIDE FLEXAMAT STANDARD ROLLS THAT INCLUDE 12" GEOGRID EXTENSIONS WITH A 6" STANDARD UNDERLAYMENT EXTENSIONS. THESE SEAMS ARE PARALLEL WITH FLOW, THE ADJACENT MAT INSTALLED OVER THE EXTENSIONS. ENSURE GEOGRID AND STANDARD UNDERLAYMENT EXTENSIONS ARE LAYING FLAT ON SUBGRADE PRIOR TO INSTALLING ADJACENT MAT.
   - 4.2. SECURE THE ABUTMENT PARALLEL WITH FLOW BY INSTALLING 18" U-ANCHORS IN 2' INCREMENTS OR 20" STAINLESS STEEL ZIP TIES IN 1' INCREMENTS THROUGH THE EXTENSION OVERLAP. U ANCHORS OR ZIP TIES TO BE INSTALLED PERPENDICULAR TO FLOW. ZIP TIES SHALL ENCOMPASS 3 CORDS OF GEOGRID FROM EACH MAT.
5. FOR ADDITIONAL SECTIONS OF MAT, SECURE SEAM PERPENDICULAR WITH FLOW BY OVERLAPPING THE DOWNSTREAM SECTION 18" WITH UPSTREAM SECTION OF MAT. PRIOR TO INSTALLING OVERLAP, FLIP UPSTREAM MAT BACK 24". EXCAVATE 2.25'" OF SOIL 18" FROM END OF UPSTREAM MAT. DOWNSTREAM SECTION IS LAID IN THE SHALLOW TRENCH. RETURN AND TAMP SOIL OVER INITIAL EDGE AND SEED. FLIP END OF UPSTREAM MAT OVER THE SOIL COVERED AND SEEDED INITIAL LEADING EDGE OF DOWNSTREAM MAT.
   - 5.1. SECURE OVERLAPS PERPENDICULAR TO FLOW BY INSTALLING 18" U-ANCHORS IN 2' INCREMENTS OR 20" STAINLESS STEEL ZIP TIES IN 1' INCREMENTS THROUGH THE OVERLAP. ZIP TIES SHALL ENCOMPASS 3 CORDS OF GEOGRID FROM EACH MAT.
6. AT THE INITIAL LEADING EDGE OF THE FLEXAMAT STANDARD ARMORED CHANNEL, EMBED THE MAT 18" IN A VERTICAL ANCHOR TRENCH. FILL AND COMPACT ANCHOR TRENCH WITH SUITABLE FILL. AT

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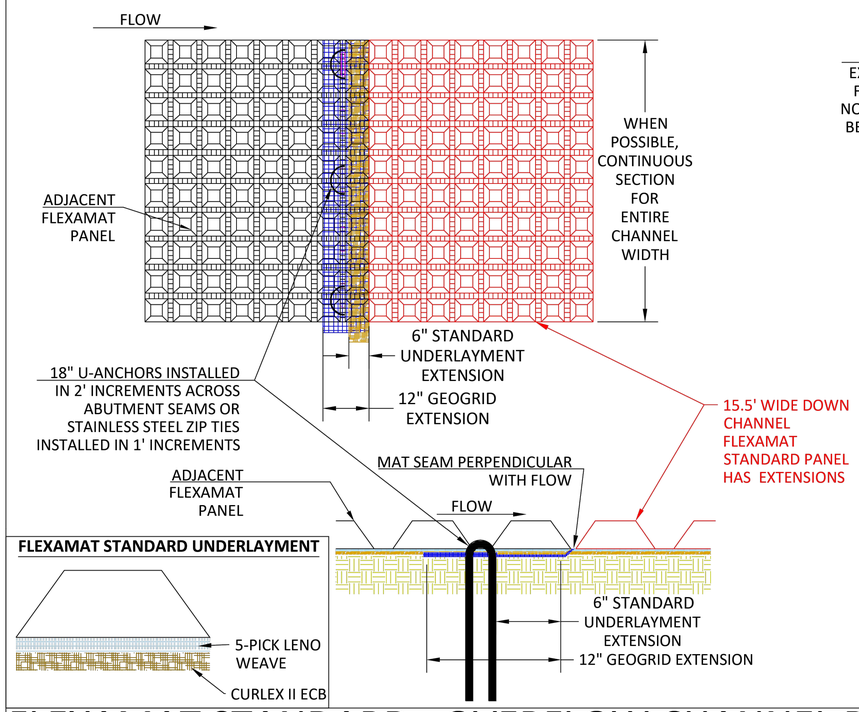
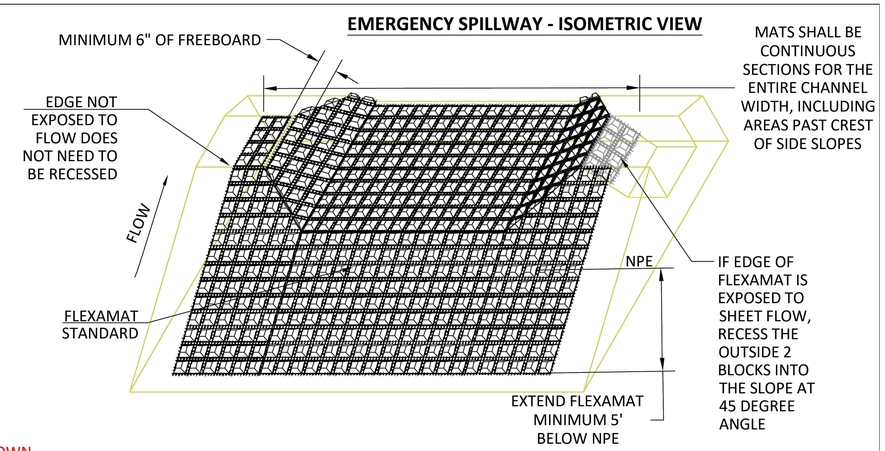
REV 1

ABUTMENT METHOD FOR SEAMS PERPENDICULAR WITH FLOW

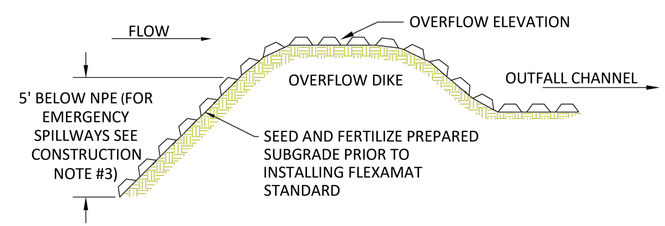


FLEXAMAT STANDARD UNDERLAYMENT

EMERGENCY SPILLWAY - ISOMETRIC VIEW



OVERFLOW DIKE - PROFILE VIEW



FLEXAMAT STANDARD - OVERFLOW CHANNEL PERPENDICULAR TO FLOW

CONSTRUCTION NOTES:

1. AN ENGINEER OR MANUFACTURERS REPRESENTATIVE SHALL BE ONSITE FOR THE START OF THE INSTALLATION.
2. ALL SUBGRADE SURFACES PREPARED FOR PLACEMENT OF MATS SHALL BE SMOOTH AND FREE OF ALL ROCKS, STICKS, ROOTS, OTHER PROTRUSIONS, OR DEBRIS OF ANY KIND. THE PREPARED SURFACE SHALL PROVIDE A FIRM UNYIELDING SUBGRADE FOR THE MATS.
3. PRIOR TO THE FLEXAMAT STANDARD INSTALLATION SEED AND FERTILIZE SUBGRADE WITH SITE SPECIFIC SEED MIX IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.
4. MAT SHALL EXTEND 5' BELOW NORMAL POND ELEVATION. (FOR EMERGENCY OVERFLOW INSTALLATIONS EXTEND THE MAT 3' DOWN THE INSIDE FACE OF THE OVERFLOW DIKE.)
5. INSTALL FLEXAMAT STANDARD ROLLS. MANUFACTURER RECOMMENDS INSTALLING THE WIDEST MAT POSSIBLE FOR SPILLWAY APPLICATIONS.
6. INSTALLATION STARTS AT THE DOWN CHANNEL END AND MOVES UP THE CHANNEL, TOWARDS THE START OF CHANNEL.
   - 6.1. FOR WIDTHS WIDER THAN 16', INSTALL 15.5' WIDE MATS WITH GEOGRID AND STANDARD UNDERLAYMENT EXTENSIONS. INSTALL ADJACENT MAT OVER THE 12" GEOGRID AND 6" STANDARD UNDERLAYMENT EXTENSIONS OF THE ADJACENT MATS. ENSURE THE GEOGRID AND STANDARD UNDERLAYMENT EXTENSIONS ARE LAYING FLAT ON THE SUBGRADE BEFORE INSTALLING ADJACENT MAT OVER THE EXTENSIONS.
   - 6.2. INSTALL 18" U-ANCHORS IN 2' INCREMENTS OR STAINLESS STEEL ZIP TIES IN 1' INCREMENTS ACROSS MAT ABUTMENT SEAMS. INSTALL U-ANCHORS AND ZIP TIES PERPENDICULAR TO FLOW DIRECTLY BEHIND FIRST BLOCK OF THE UP-CHANNEL MAT. U-ANCHORS SHALL ENCOMPASS TWO CORDS OF GEOGRID ON EACH MAT. ZIP TIES SHALL ENCOMPASS 3 CORDS OF GEOGRID FROM EACH MAT.
7. AT THE END OF THE ARMORED SPILLWAY, EMBED THE MAT 18" IN A TERMINATION TRENCH. FILL AND COMPACT TERMINATION TRENCH WITH SUITABLE FILL. (AS SPECIFIED BY EOR.)

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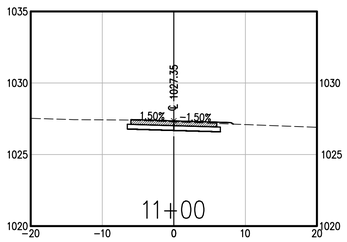
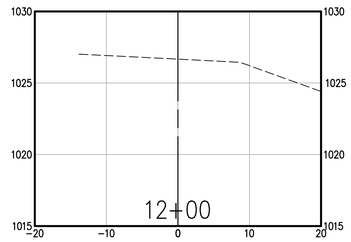
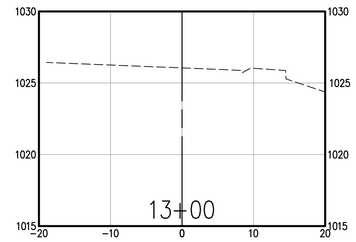
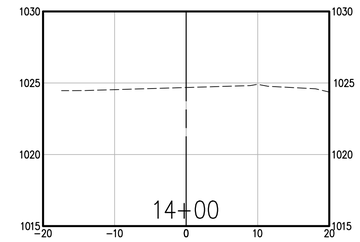
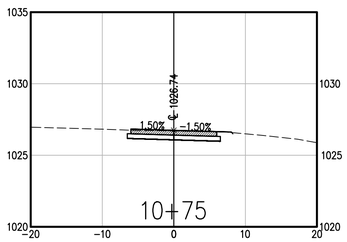
REV - 1

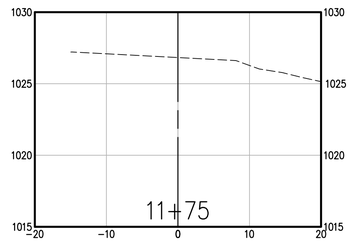


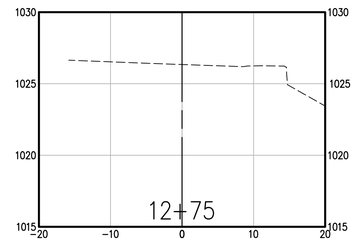


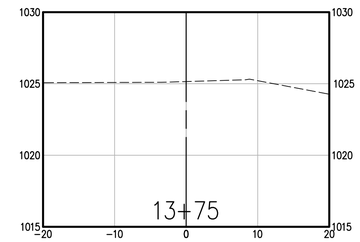


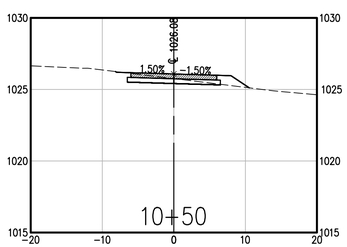


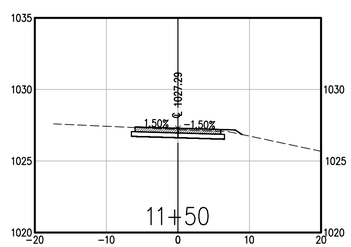


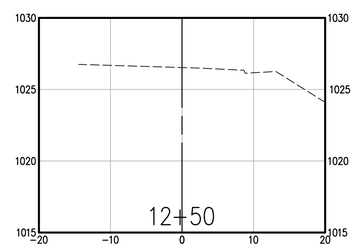


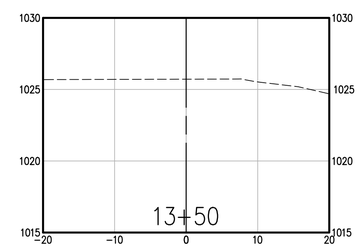


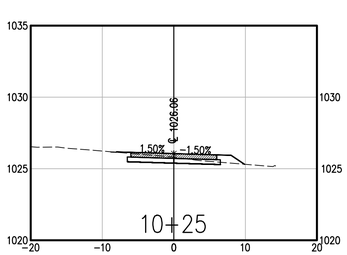


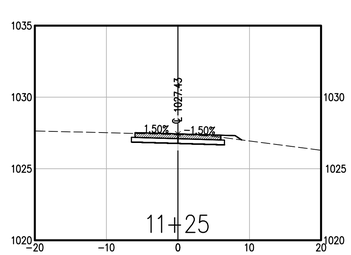


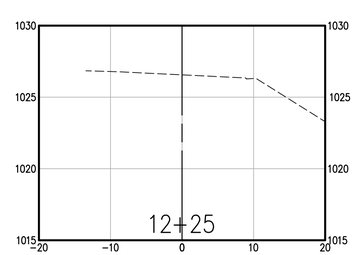


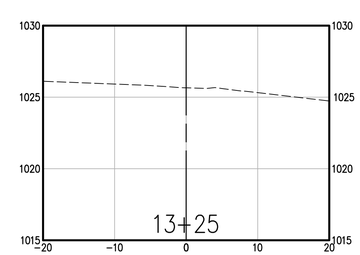












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CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

No.	Description	Date

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PROJECT NO: 22110100
ISSUE DATE: 05/16/2025
CONTACT: L. JOST
QC by: G. LONG
QC Date: 7/18/2023

ISSUED FOR REVIEW

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 18699
LUCAS K. JOST
05/21/2025

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CROSS SECTIONS (1 OF 13)

C-801

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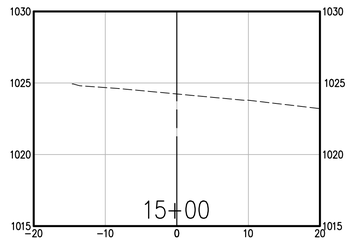
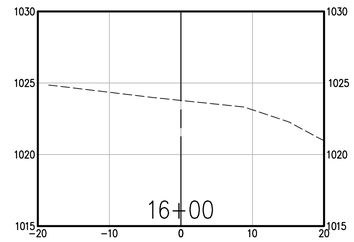
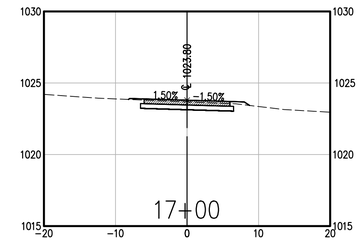
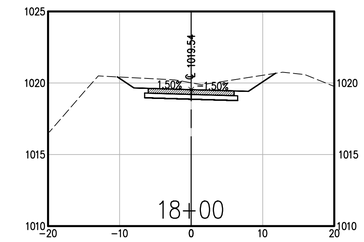
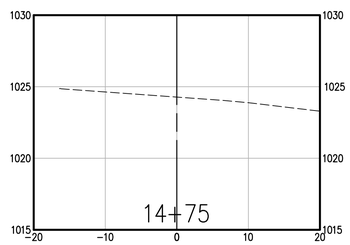
PLOTTED BY: LUCAS JOST | LAST PLOTTED: FRIDAY, 1/10/2025 11:18:19 PM

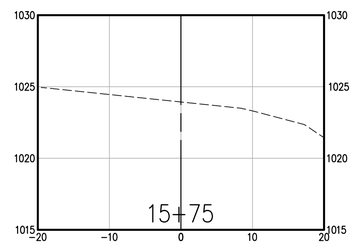


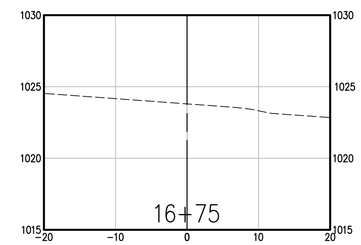


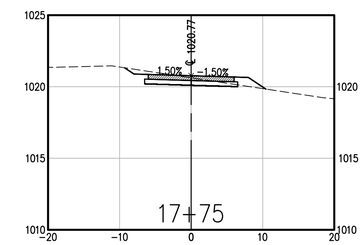


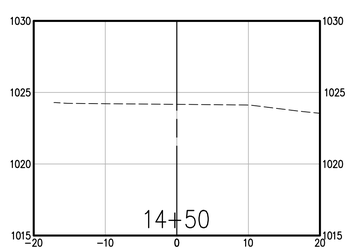


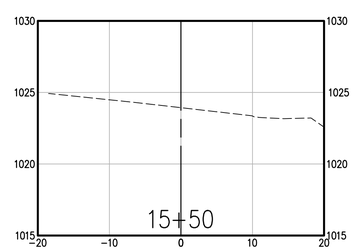


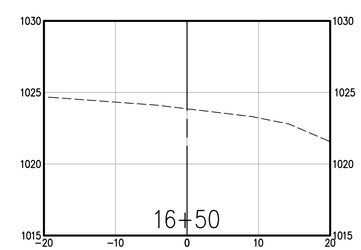


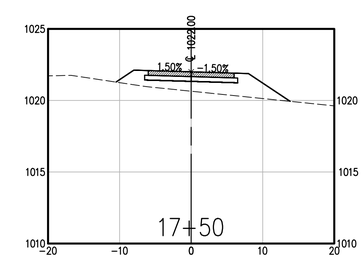


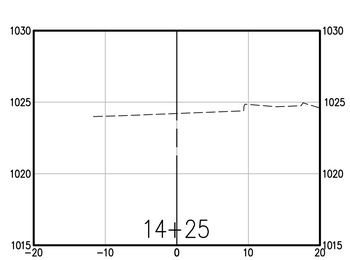


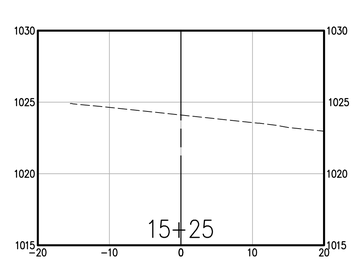


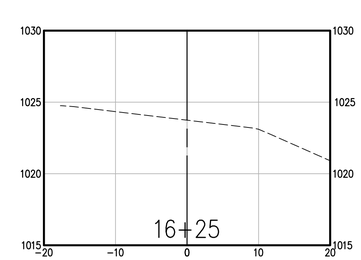


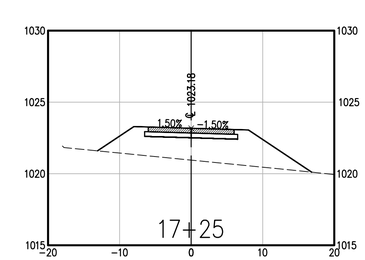












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No. 109
ARKANSAS ENGINEER

RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

No.	Description	Date

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PROJECT NO: 22110100
ISSUE DATE: 05/16/2025
CONTACT: L. JOST
QC by: G. LONG
QC Date: 7/18/2025

ISSUED FOR REVIEW

STATE OF ARKANSAS
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No. 18699
LUCAS K. JOST
05/21/2025

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CROSS SECTIONS (2 OF 13)

C-802

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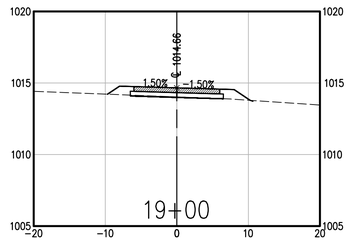

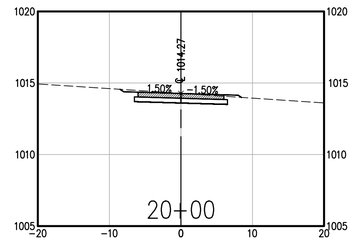

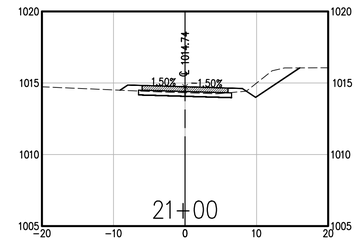

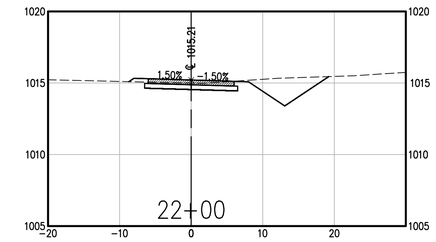

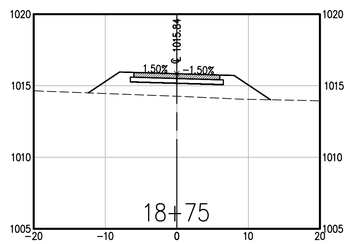

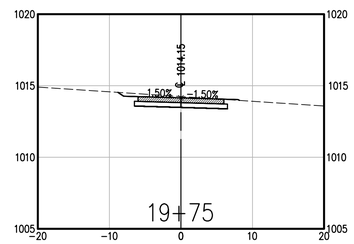

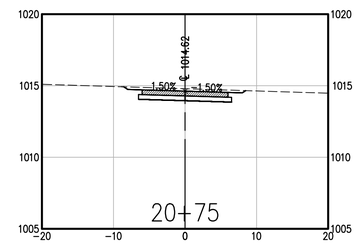

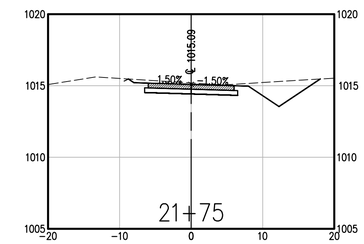

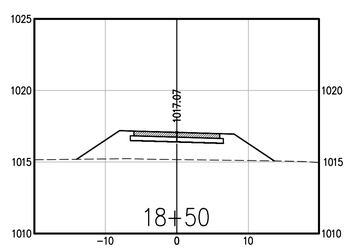

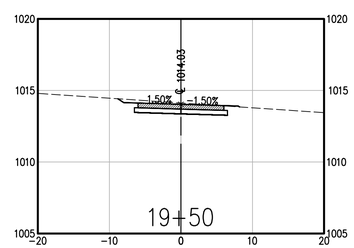

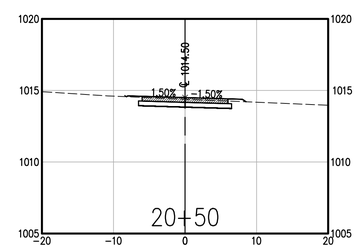

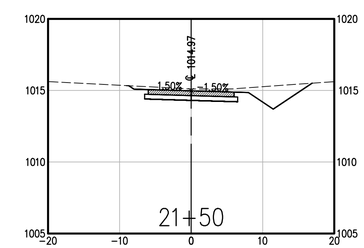

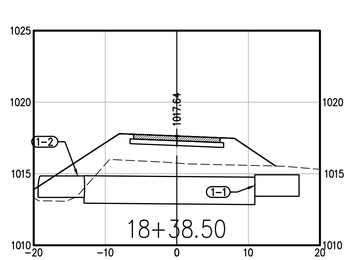

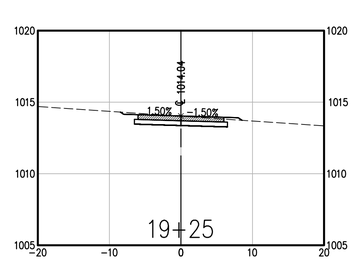

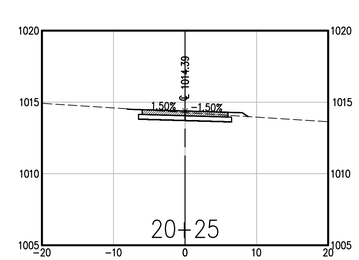

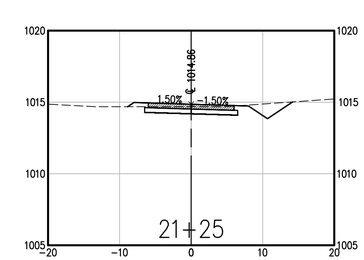

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RAZORBACK GREENWAY EXTENSION PHASE III

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CROSS SECTIONS (3 OF 13)

C-803

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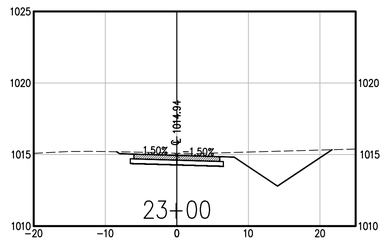

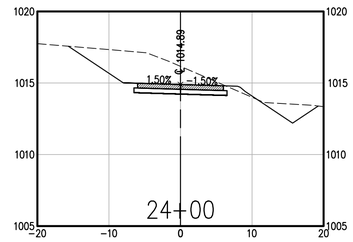

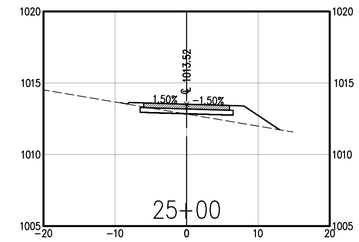

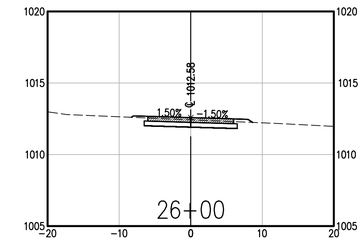

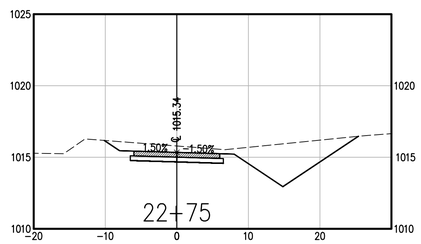

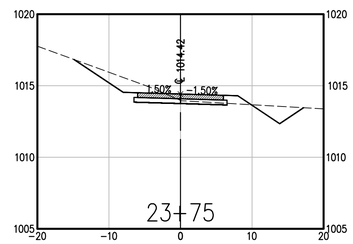

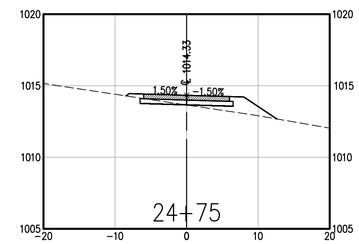

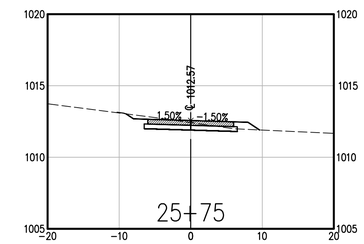

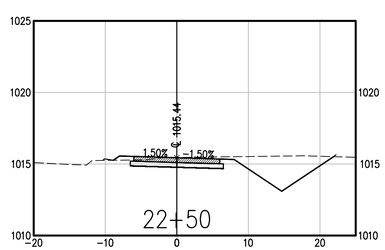

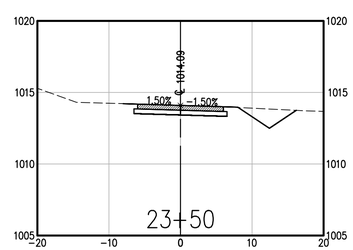

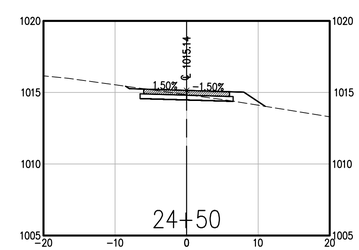

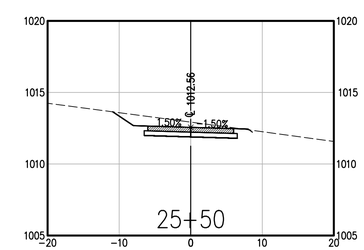

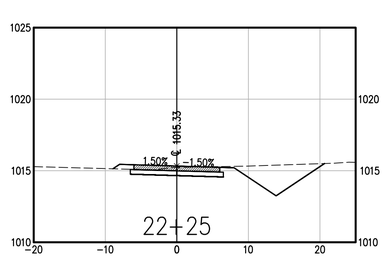

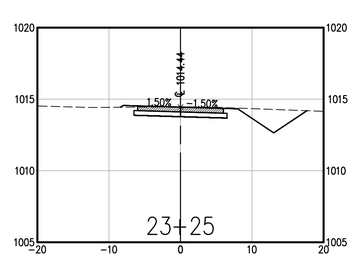

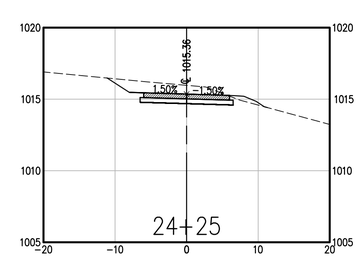

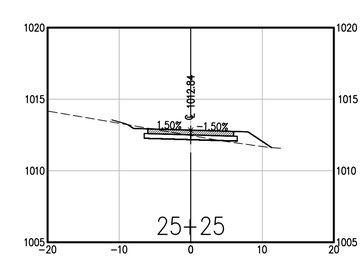

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RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

No.	Description	Date

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PROJECT NO: 22110100
ISSUE DATE: 05/16/2025
CONTACT: L. JOST
QC by: G. LONG
QC Date: 7/18/2023

ISSUED FOR REVIEW

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 18699 LUCAS K. JOST
05/21/2025

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CROSS SECTIONS (4 OF 13)

C-804

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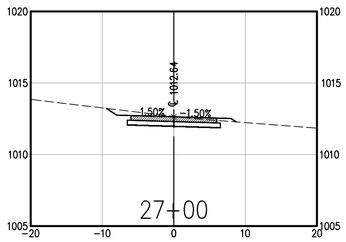

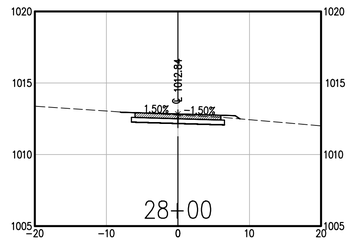

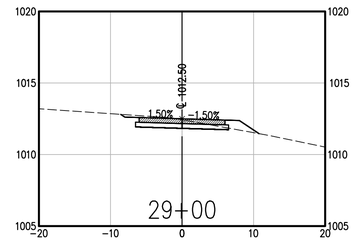

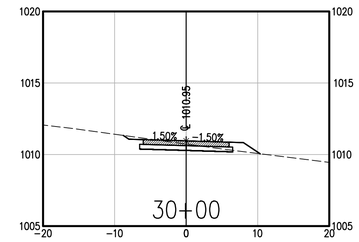

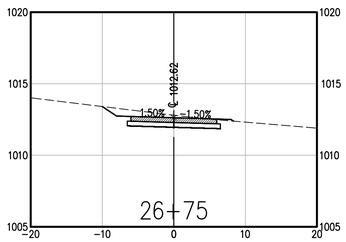

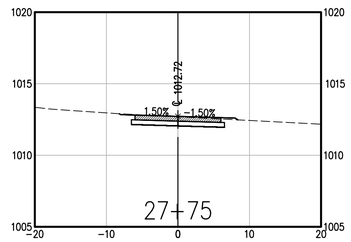

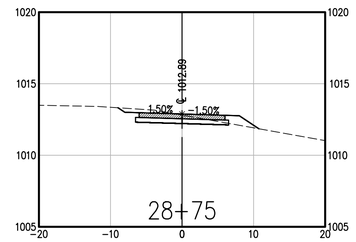

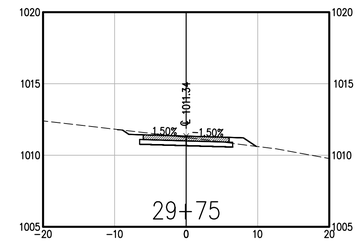

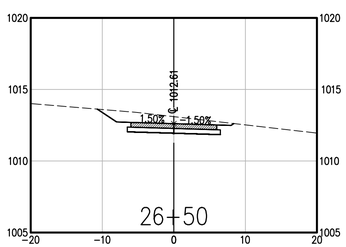

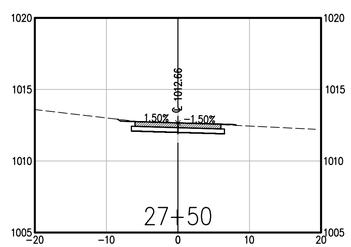

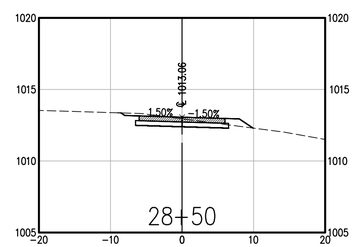

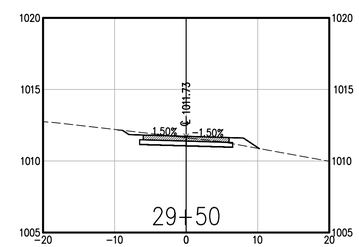

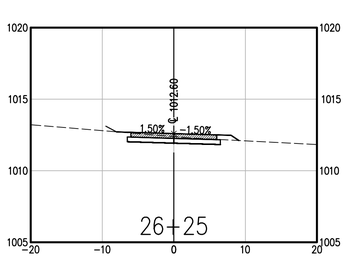

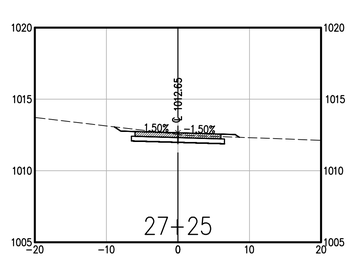

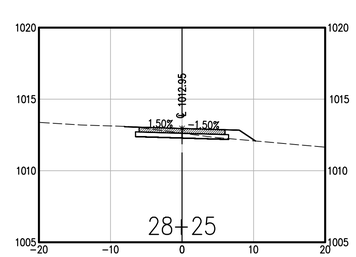

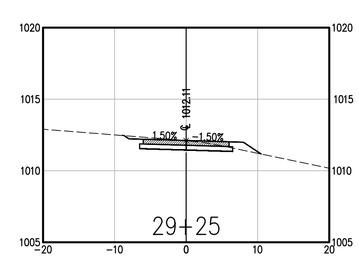

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No. 109
ARKANSAS ENGINEER

RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

No.	Description	Date

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PROJECT NO: 22110100
ISSUE DATE: 05/16/2025
CONTACT: L. JOST
QC by: G. LONG
QC Date: 7/18/2023

ISSUED FOR REVIEW

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 18699
LUCAS K. JOST
05/21/2025

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CROSS SECTIONS (5 OF 13)

C-805

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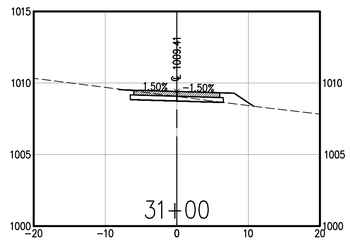

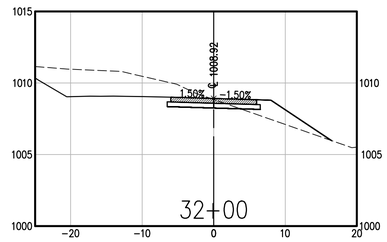

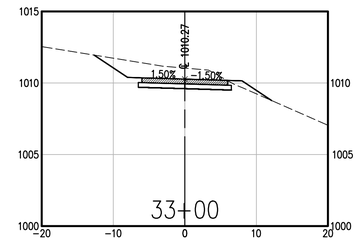

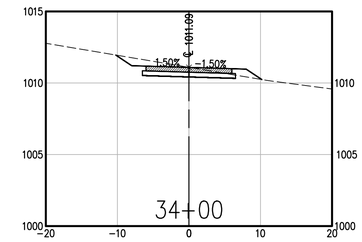

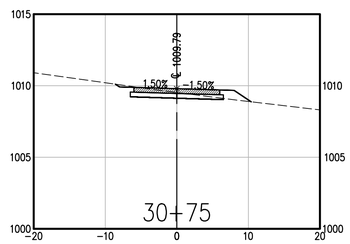

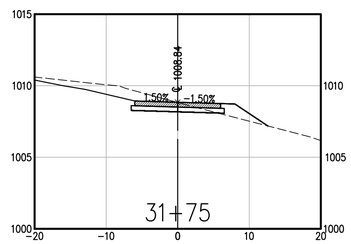

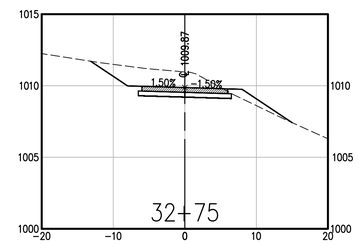

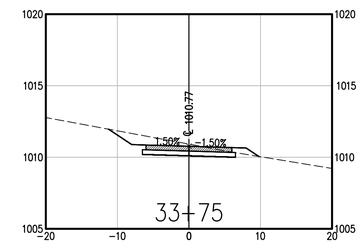

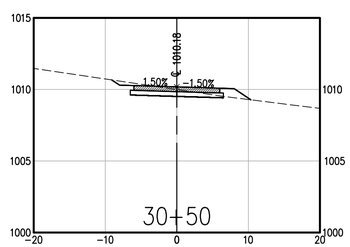

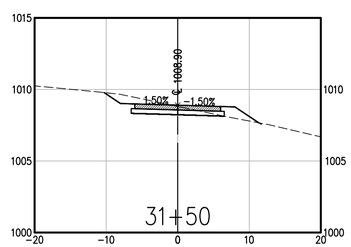

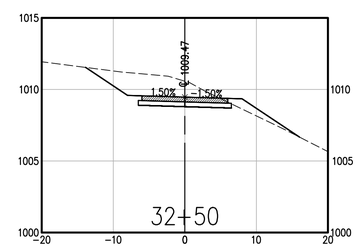

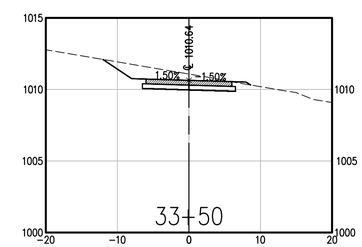

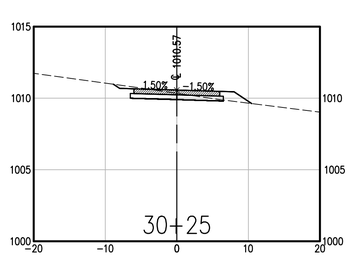

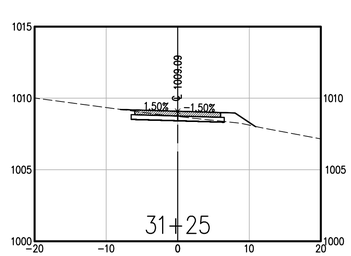

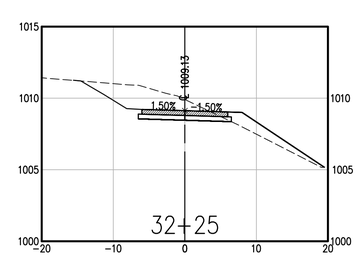

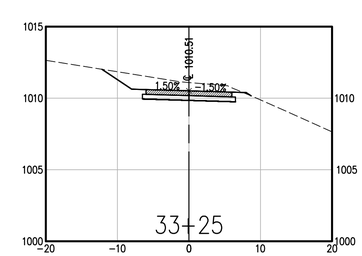

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LUCAS K. JOST
05/21/2025

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CROSS SECTIONS (6 OF 13)

C-806

DRAWING: G:\22110100 RZRGRNWY\INFRASTRUCTURE\CIVIL\DWG\CROSS SECTIONS.DWG
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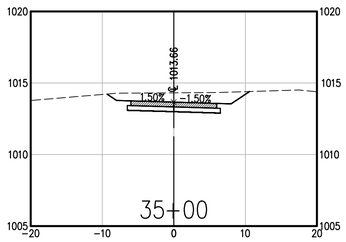

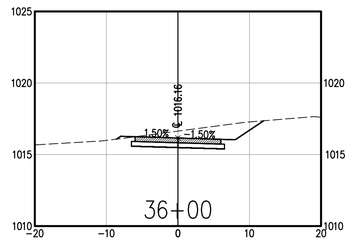

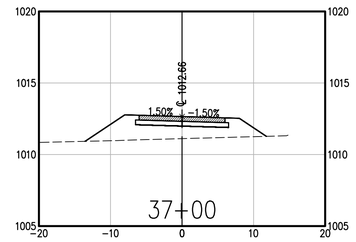

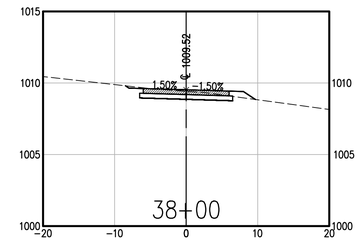

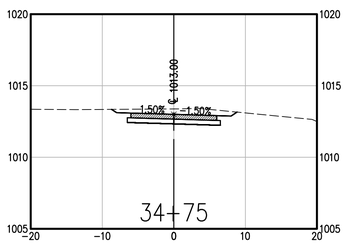

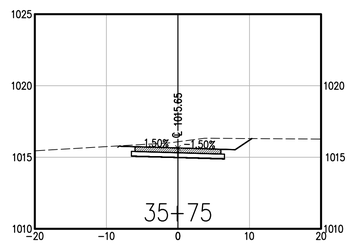

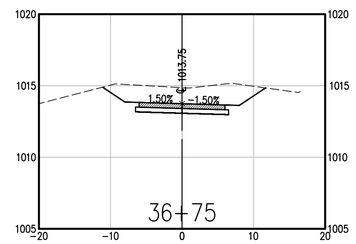

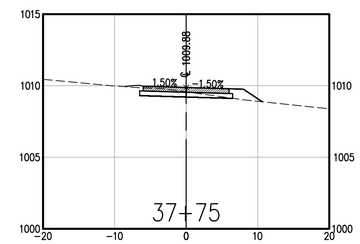

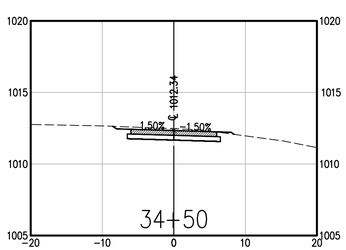

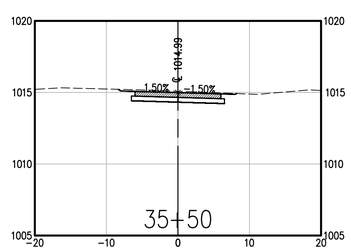

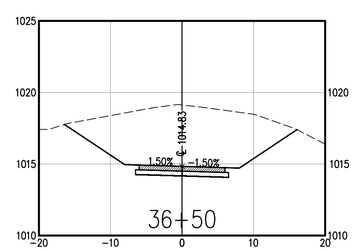

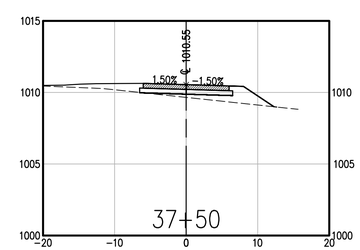

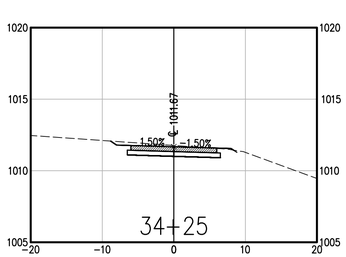

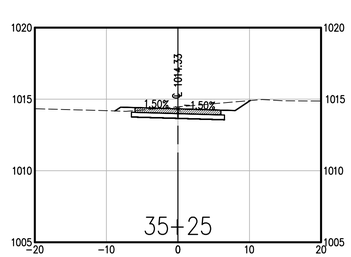

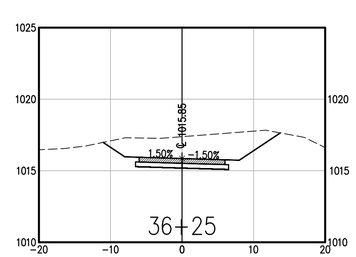

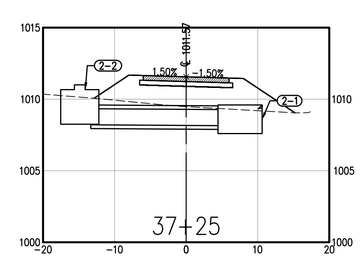

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CERTIFICATE OF AUTHORIZATION:

CERTIFICATE OF AUTHORIZATION
CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

No.	Description	Date

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PROJECT NO: 22110100
ISSUE DATE: 05/16/2025
CONTACT: L. JOST
QC by: G. LONG
QC Date: 7/18/2023

ISSUED FOR REVIEW

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 18699
LUCAS K. JOST
05/21/2025

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CROSS SECTIONS (7 OF 13)

C-807

DRAWING: G:\22110100 RZRGRNWY\INFRASTRUCTURE\CIVIL\DWG\CROSS SECTIONS.DWG
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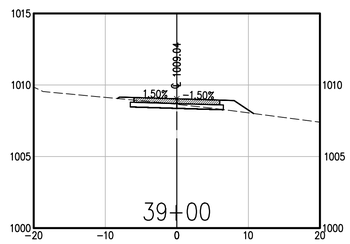
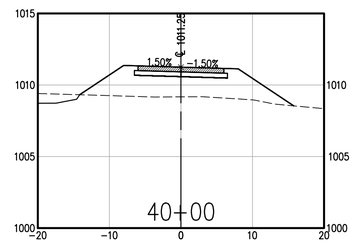
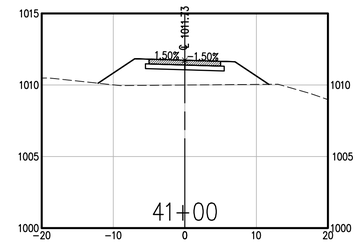
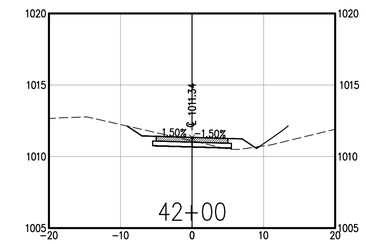
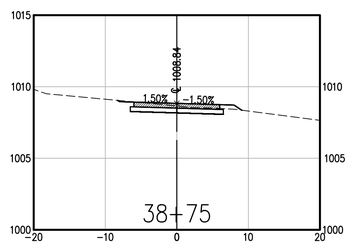
PLOTTED BY: LUCAS JOST LAST PLOTTED: FRIDAY, 7/10/2026 11:18 PM CDT

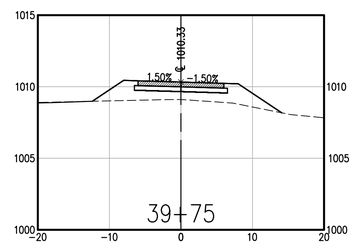


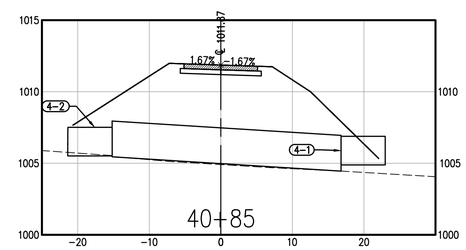


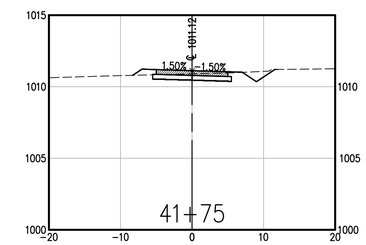


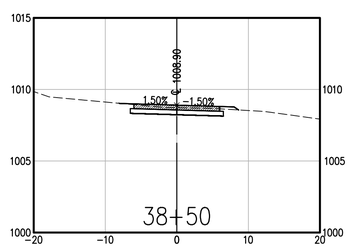


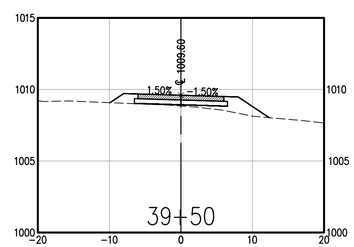


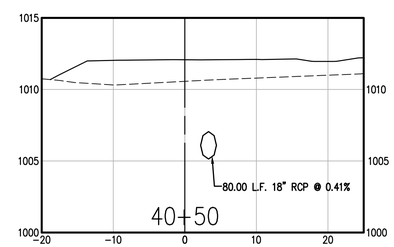


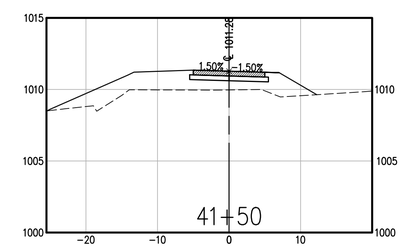


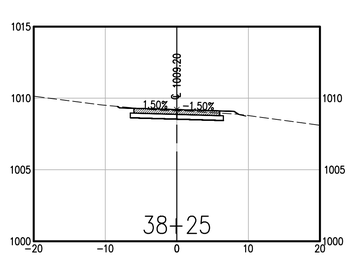


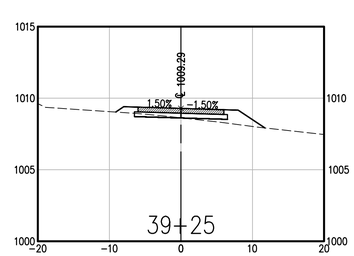


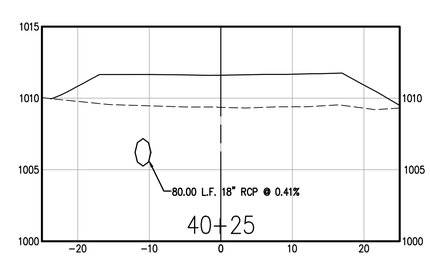


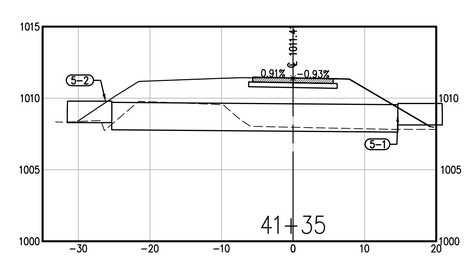












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No. 18699
LUCAS K. JOST
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CROSS SECTIONS (8 OF 13)

C-808

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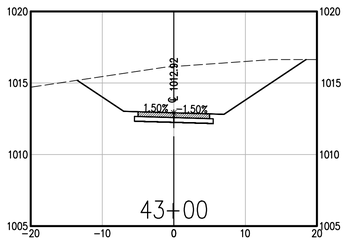
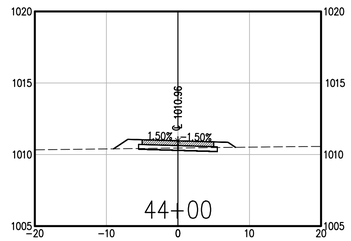
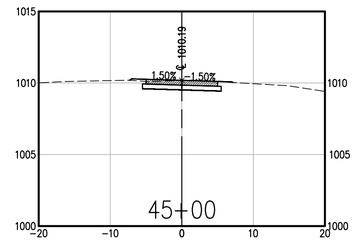
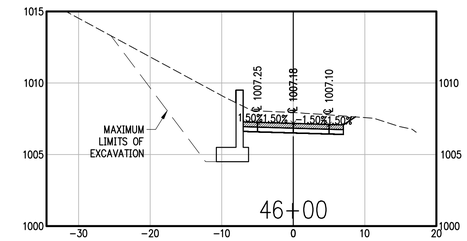
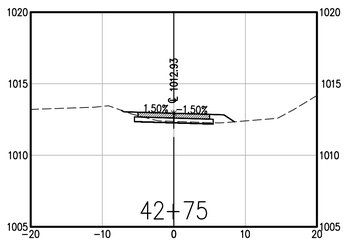
PLOTTED BY: LUCAS JOST (LUCAS.JOST@CRAFTONTULL.COM) LAST PLOTTED: FRIDAY 07/10/26 11:18:19 PM CDT

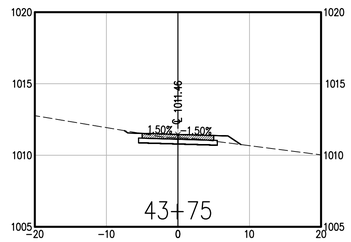


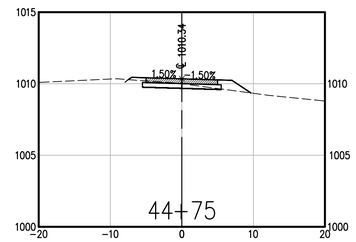


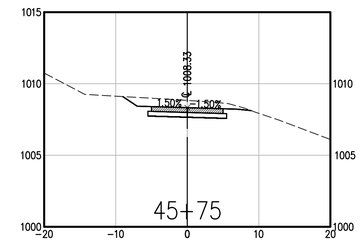


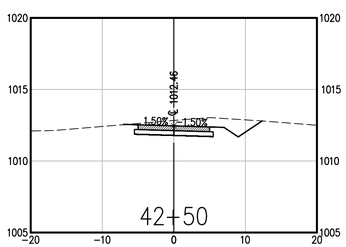


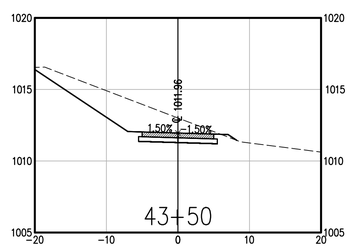


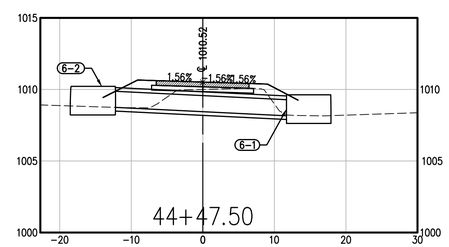


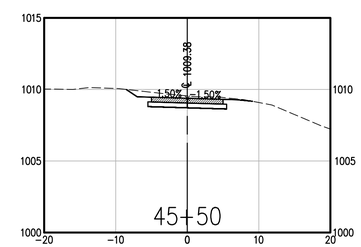


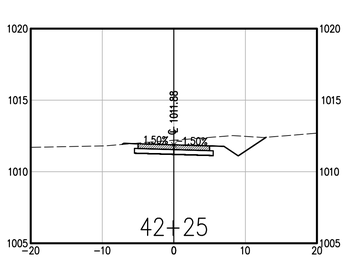


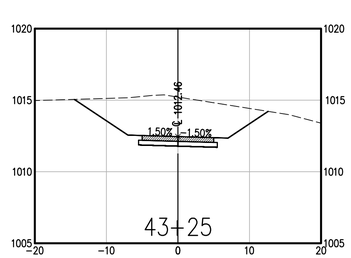


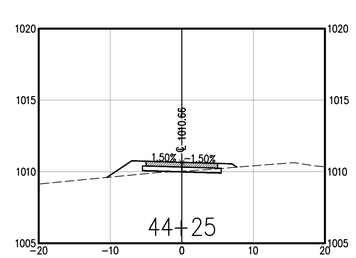


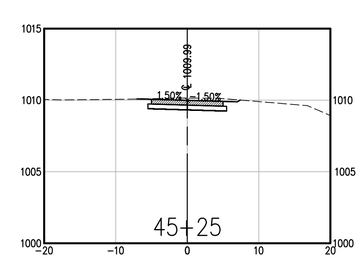












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CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

RAZORBACK GREENWAY
EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

No.	Description	Date

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PROJECT NO: 22110100
ISSUE DATE: 05/16/2025
CONTACT: L. JOST
QC by: G. LONG
QC Date: 7/18/2023

ISSUED FOR REVIEW

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 18699
LUCAS K. JOST
05/21/2025

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CROSS SECTIONS (9 OF 13)

C-809

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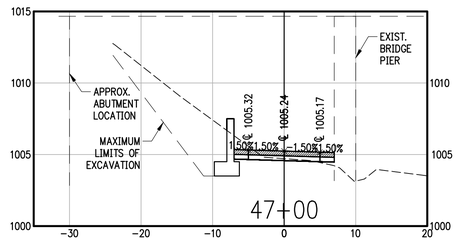
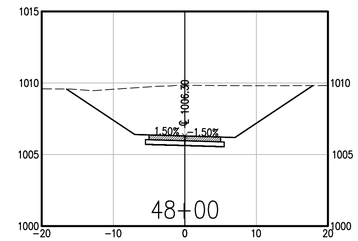
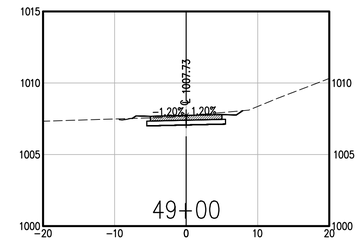
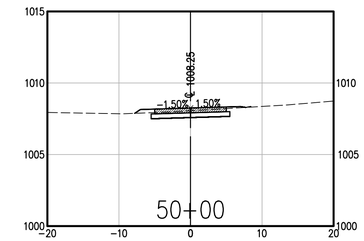
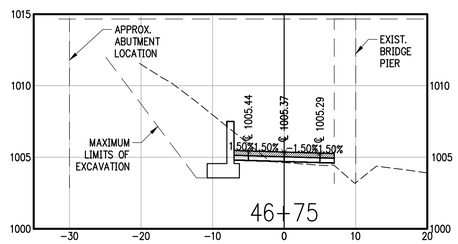
PLOTTED BY: LUCAS JOST LAST PLOTTED: FRIDAY, 5/16/2025 11:19:59 PM

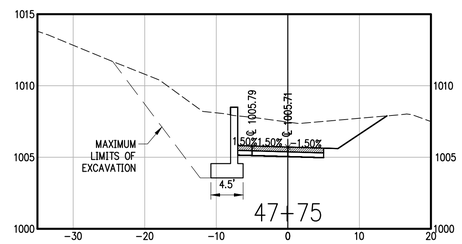


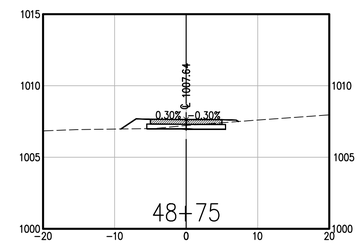


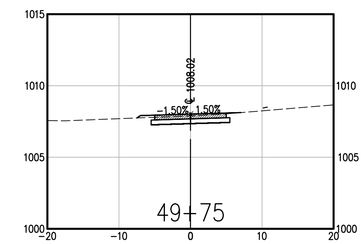


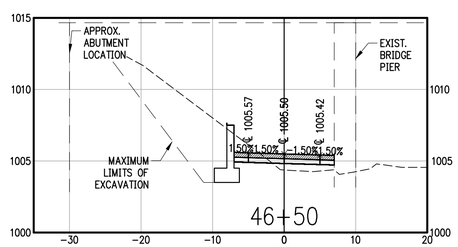


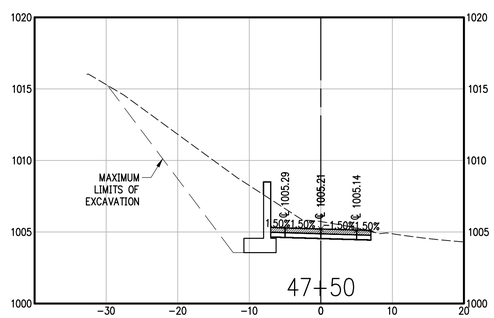


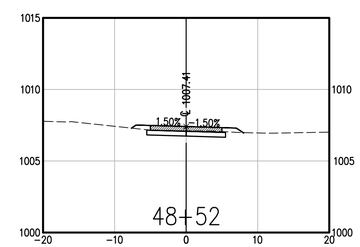


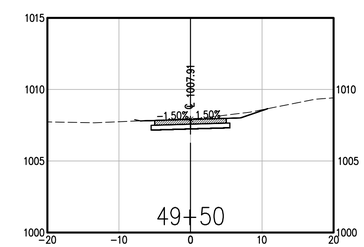


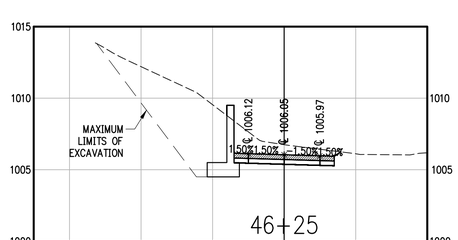


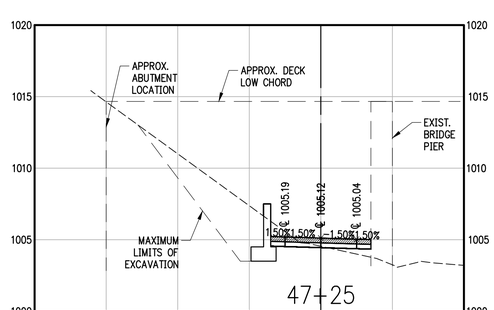


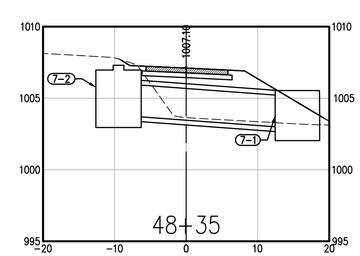


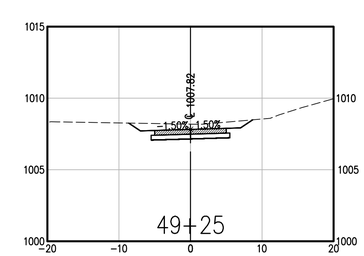












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No. 109
ARKANSAS ENGINEER

RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

No.	Description	Date

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PROJECT NO: 22110100
ISSUE DATE: 05/16/2025
CONTACT: L. JOST
QC by: G. LONG
QC Date: 7/18/2025

ISSUED FOR REVIEW

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 18699
LUCAS K. JOST
05/21/2025

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CROSS SECTIONS (10 OF 13)

C-810

DRAWING: G:\22110100 RZRGRNWY\INFRASTRUCTURE\CIVIL\DWG\CROSS SECTIONS.DWG
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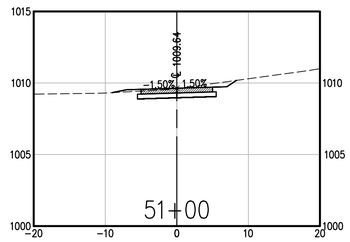
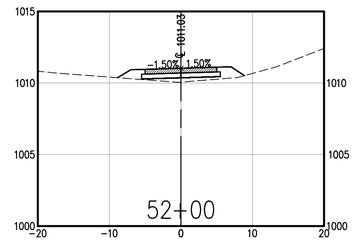
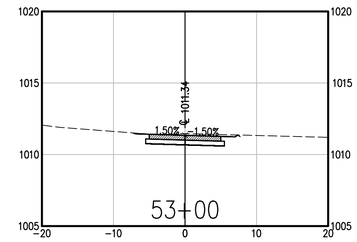
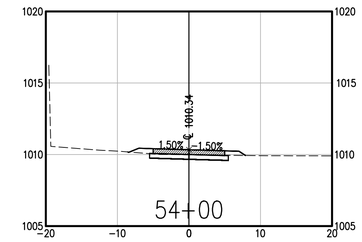
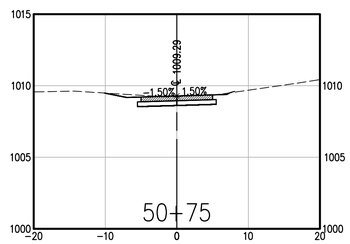
PLOTTED BY: LUCAS JOST (LUCAS.JOST@CRAFTONTULL.COM)

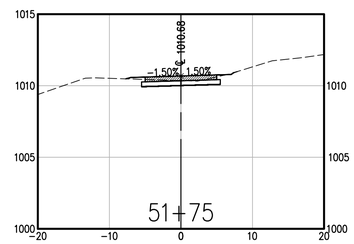


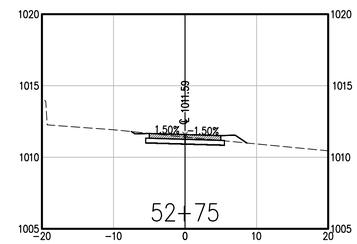


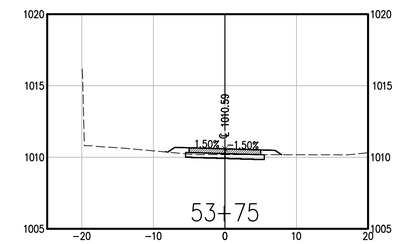


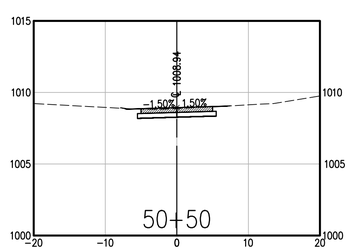


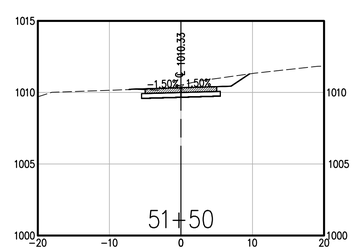


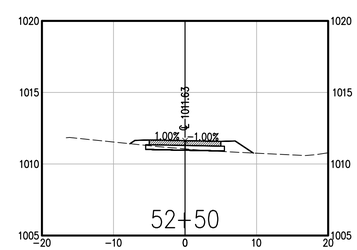


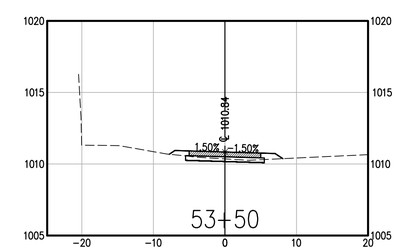


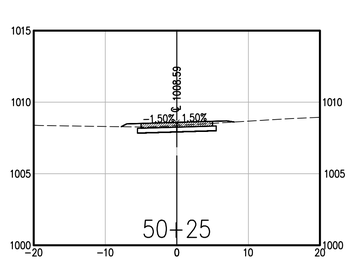


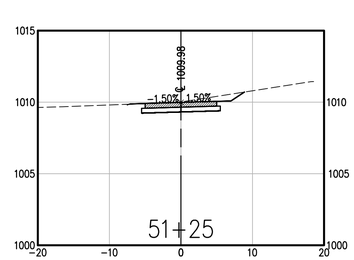


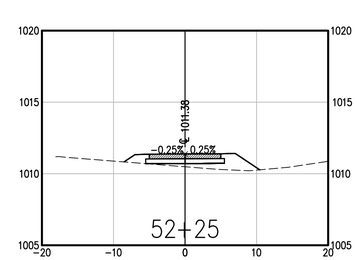


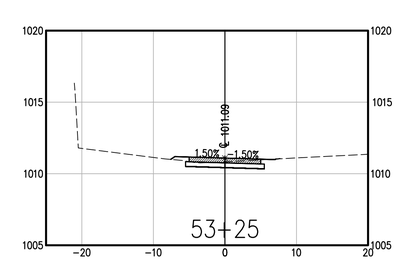












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CROSS SECTIONS (11 OF 13)

C-811

DRAWING: G:\22110100 RZRGRNWY\INFRASTRUCTURE\CIVIL\DWG\CROSS SECTIONS.DWG
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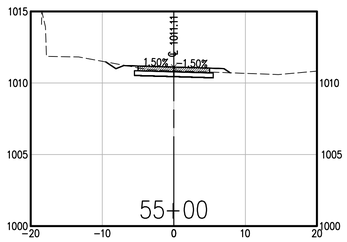
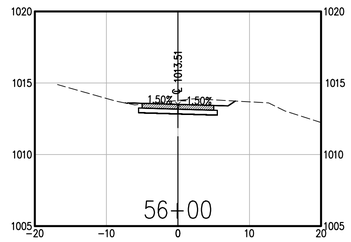
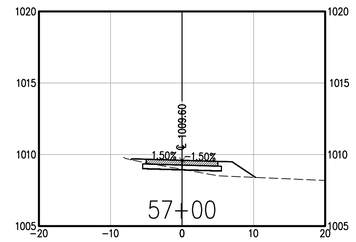
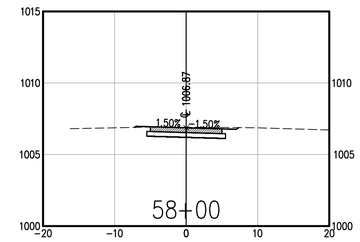
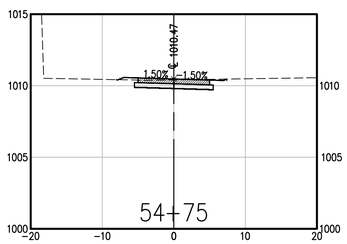
PLOTTED BY: LUCAS JOST LAST PLOTTED: FRIDAY, 5/16/2025 11:13:37 PM (CDT)

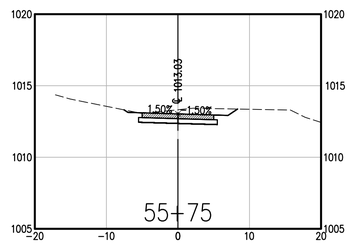


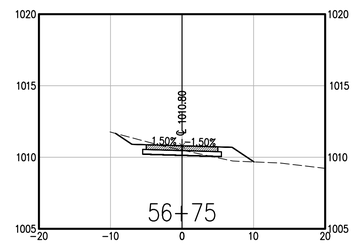


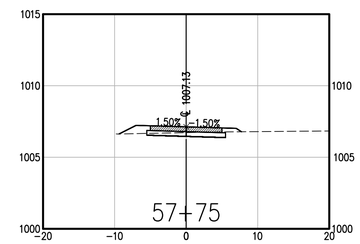


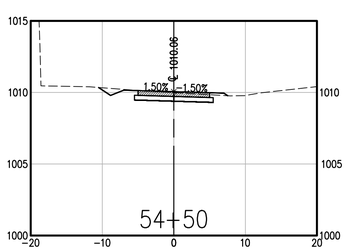


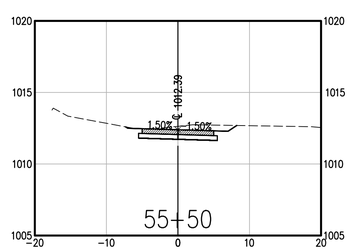


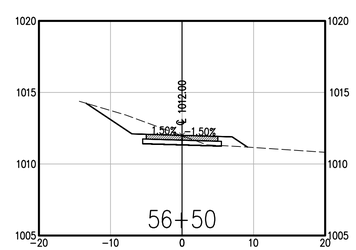


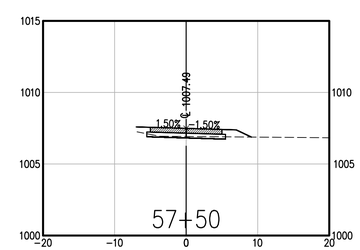


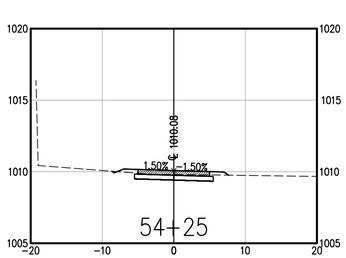


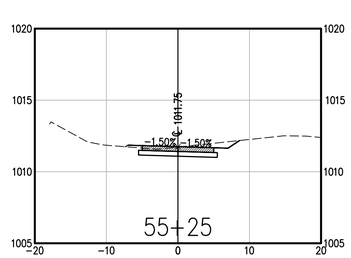


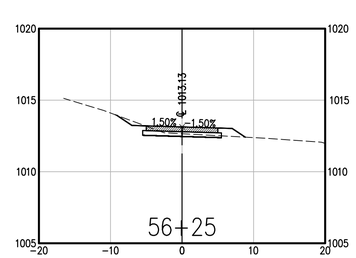


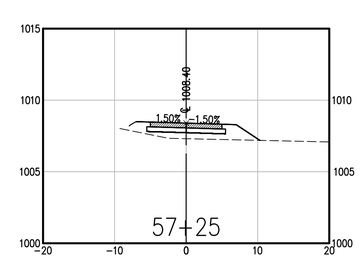












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CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

No.	Description	Date

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PROJECT NO: 22110100
ISSUE DATE: 05/16/2025
CONTACT: L. JOST
QC by: G. LONG
QC Date: 7/18/2023

ISSUED FOR REVIEW

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 18699
LUCAS K. JOST
05/21/2025

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CROSS SECTIONS (12 OF 13)

C-812

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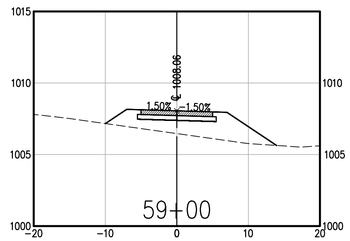

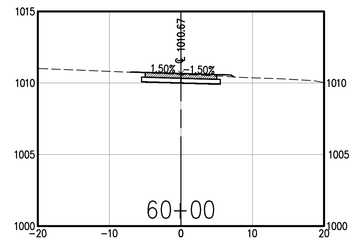

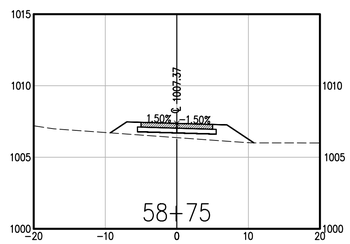

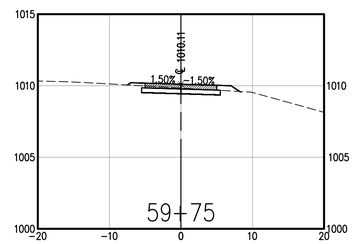

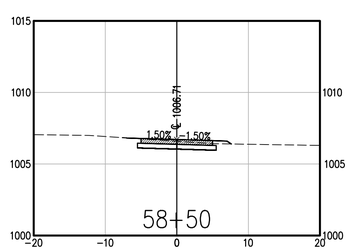

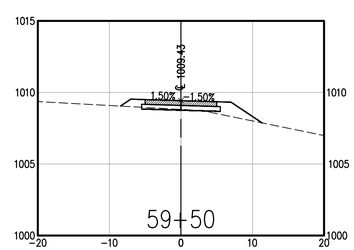

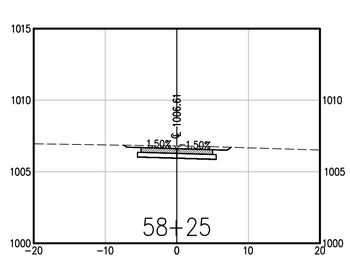

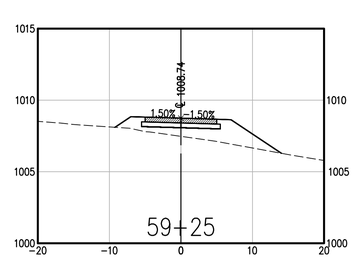

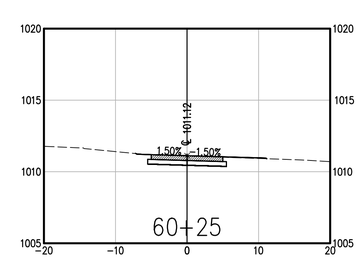

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CROSS SECTIONS (13 OF 13)

C-813

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ELECTRICAL SPECIFICATIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 WORK INCLUDED
A. Furnish labor, materials, apparatus, tools, equipment, transportation, temporary construction and services as required to make a complete working electrical installation, as shown on the drawings or described in these specifications. The work shall include materials, appliances, and apparatus not specifically mentioned herein or noted on drawings, but required for a complete installation, in addition, it shall include connection, inter-connection, and power for electrical equipment furnished under other sections.
B. It is the intent of this Section of the Specifications and accompanying Electrical Drawings to require these systems to be furnished complete in every respect, furnish all wiring and equipment needed and usually furnished in connection with such work, whether specifically mentioned or not.
C. Contractor shall review all contract documents including, but not limited to, architectural ceiling plans, architectural details, door hardware schedules, and mechanical documents. All power service wiring, branch circuit wiring, control wiring, or other wiring necessary for complete operation of equipment or fixtures not specifically required to be installed under another section of this specification, shall be provided whether or not such wiring is specifically shown on electrical drawings or described in Division 26 specifications.
D. Contractor shall visit the site to become familiar with existing conditions. Electrical work shall be done in accordance with NEC and all applicable federal, state, and local codes.

1.3 PERMITS
A. Procure all necessary permits for work installed; pay all fees and charges connected herein. Deliver certificates of approval by authorities having jurisdiction over work, to the Owner, before the work will be finally accepted.
B. Contact the local power company prior to bidding the project to verify all requirements and, upon being awarded the contract, shall make all arrangements, pay all fees, and acquire all permits as required for the installation of the electrical service and systems as hereinafter specified and shown. The contractor shall hold the Owner harmless for any costs required for initial connections to utility lines.

1.4 UNDER-SLAB OR UNDERGROUND UTILITIES
A. Dimensions for all under-slab utilities are critical for later equipment installation. Cross reference all Drawings and Equipment Specifications with this work including the elevations showing dimensional location of all stubs for equipment.

1.5 GUARANTEES AND INSTRUCTIONS
A. Guarantee all equipment, systems and work furnished and installed under this Section for a period of one (1) year from date of substantial completion thereof, against defects in material, design and workmanship.
B. Failure of any part or parts during guarantee, owing to above causes, shall be replaced promptly upon notice by Architect, without charge to the Owner.

1.6 COORDINATE WITH OTHER TRADES
A. The Electrical Contractor shall check with the General Contractor and other contractors, either under his control or those responsible solely to the Owner for any work being performed under this specification to determine whether there will be any interference with the electrical work. If the Electrical Contractor fails to coordinate with other contractors and the electrical work is later found to interfere with their work, then he shall make necessary changes without additional cost or delay to the Owner to eliminate such interferences.
B. Electrically operated equipment furnished and installed under other Sections shall be connected under this Section.

PART 2 - PRODUCTS

2.1 CONDUCTORS AND CABLES
A. Unless specifically indicated on drawings or herein, conductors, shall be single conductor, copper, insulated for 600 volts, manufacturer's standard product, and marked as required by NEC type of insulation shall be as follows:
1. Service conductor to be THW, XHHW, OR THWN.
2. Branch circuits and feeders no. 8 and smaller to be type THHN, THWN, XHHW.
3. No. 8 or larger shall be stranded. No. 10 and smaller shall be solid.
4. Minimum branch circuit conductor size to be no. 12. Line voltage control wiring may be no. 14 where properly protected by overcurrent device.
5. Low voltage control (thermostat, etc.) Circuits shall utilize 18 gauge, 600 volt, multi-conductor copper cable, unless shown otherwise.
6. Make splices and terminations only in accessible boxes, wireways, cabinets, or fixtures.
7. AluminumandCopper Conductors: Comply with NEMA WC 70/ICEA S-95-658.
8. Conductor Insulation: Comply with NEMA WC 70/ICEA S-95-658 for Type THW-2, Type THHN/THWN-2, Type XHHW-2, Type UF, Type USE, and Type SO.
9. Multiconductor Cable: Comply with NEMA WC 70/ICEA S-95-658 for armored cable, Type AC, metal-clad cable, Type MC, nonmetallic-sheathed cable, Type NM, Type SO, and Type USE with ground wire.

2.2 CONNECTORS AND SPLICES
A. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.
B. Joint Sealant: Asphaltic-butyl material with adhesion, cohesion, flexibility, and durability properties necessary to withstand maximum hydrostatic pressures at the installation location with the ground-water level at grade.

2.3 SYSTEM DESCRIPTION
A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
B. Comply with NFPA 70.

2.4 RACEWAYS AND FITTINGS
A. General:
1. Install no more than the equivalent of three 90-degree bends in any conduit run except for control wiring conduits, for which fewer bends are allowed. Support within 12 inches (300 mm) of changes in direction.
2. Conduit, in general, shall be concealed in all finished areas.
3. Conduits shall be of size shown on drawings. If size is omitted, determine from NEC
4. Conduit connections to boxes of sheet steel to be made with proper fittings such as locknuts or box connectors made up tight so as to assure effective electrical continuity.
5. Low voltage shall be run according to NEC article 720 and local jurisdiction.
6. MC Cable is not permitted.
7. Boxes and Enclosures, Aboveground: NEMA 250, Type 3R. Boxes supporting lighting fixtures shall be equipped with fixture stud. Leave no unused openings. Boxes to be equal to Steel City or Hubbell.

B. CONDUIT
1. Rigid Steel Conduit: Galvanized. Comply with ANSI C80.1.
2. RNC: NEMA TC 2, Type EPC-40-PVC and Type EPC-80-PVC), UL 651, with matching fittings by same manufacturer as the conduit, complying with NEMA TC 3 and UL 514B.

C. Listing and Labeling: Metal and nonmetal conduits, tubing, and fittings shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
D. Boxes and handholes for use in underground systems shall be designed and identified as defined in NFPA 70, for intended location and application.
E. Boxes installed in wet areas shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.5 GROUNDING SYSTEM
A. All items required to be grounded by article 250 of the NEC shall be grounded as provided therein or as shown on the drawings. All raceways shall include green insulated grounding conductor.
B. Bonding shall be provided when required to assure electrical continuity.
C. Refer to Electrical Grounding Detail for further detail.

2.6 WIRING DEVICES
A. Wiring devices shall be equal in quality, function and general appearance to the following:
1. Flush wall switches: 20A, 120/277V, specification grade, equal to 1221-I Hubbell for single pole. Furnish 2-pole, 3-way, etc., as required, same series.
2. Wall receptacles: 20A, 125V, 2P, 3W, grounding, NEMA 5-20R specification grade; equal to 5362-I Hubbell receptacles to be duplex as indicated on drawings.
   a. Single convenience receptacle: 53611 Hubbell.
   b. GFCI receptacle: GF53621 Hubbell.
   c. Telephone jack (four conductor): CX141 Hubbell.
3. Refer to architectural finish schedule for color.

2.7 LIGHTING FIXTURES
A. Electrical contractor shall furnish all lighting fixtures complete with lamps, mounting accessories, etc., as shown on Lighting Fixture Schedule.

2.8 LIGHTING CONTROL DEVICES
A. TIME SWITCHES: Solid state, programmable, with alphanumeric display; complying with UL 917.
B. OUTDOOR PHOTOELECTRIC SWITCHES: Solid state, with dry contacts rated for 1800 VA, to operate connected load, complying with UL 773.
C. INDOOR OCCUPANCY SENSORS: Wall- or ceiling-mounted, solid-state indoor occupancy sensors with a separate power pack.
D. SWITCHBOX-MOUNTED OCCUPANCY SENSORS: Automatic-wall-switch occupancy sensor, suitable for mounting in a single gang switchbox.
E. LIGHTING CONTACTORS: Electrically operated and mechanically held, combination-type lighting contactors complying with NEMA ICS 2 and UL 508.
F.

2.9 SAFETY AND DISCONNECT SWITCHES
A. Safety and disconnect switches shall be heavy duty type, quick make, quick break fused with ratings and sizes as noted on plans and required by codes. Lug connections to be 75°c rated.
B. Switches shall be weather proof in outdoor locations or as required by local codes. Disconnect switches that are installed at HVAC equipment shall be fused if not protected with a HACR breaker in accordance with equipment name plate and manufacturer's requirement per the NEC, state and local codes.
C. Manual motor starters less overload protection heaters are to be used as a disconnecting means only where indicated on drawings for motors above 1 1/2hp at 120 volts and 2hp at 240 volts that do not require auxiliary control. Motors that are below 1 1/2hp at 120 volts and 2hp at 240 volts are to be provided with Hubbell "HBL1221" or "HBL1222" or equivalent ac switch.
D. Manufacturer shall be Square "D" or approved equal.
E. Fuses shall be Bussman current limiting time delay, type LPS and/or type KRPC, as required.

2.10 PANELBOARDS
A. All panelboards shall be factory assembled of the bolted circuit breaker type with solid copper bussing, fully sized copper neutral, 100% ground bussing, and overall hinged/lockable door. All circuit breakers shall be of the quick break design. Thermal magnetic type, trip free and trip indicating. All panels shall be dead front and flush mounted switching duty rate.
B. Contractor shall furnish and install a type written directory card of the circuits and place in panel door for new and existing panels.
C. All panelboards phase amperage shall be balanced to within 10 percent Max. to Min. reassurance non lighting branch circuits as required and note changes on record drawings.
D. All lug connections to be 75°C rated.

PART 3 - EXECUTION

3.1 INSTALLATION - GENERAL
A. Cooperate with other Sections for the proper execution of electrical work. Supply and cooperate in the placement of inserts, sleeves and other equipment to be installed in masonry. Carefully cut necessary holes for the installation of equipment and patch in such a manner as to match the original work.
B. Use solvent-cemented joints in ducts and fittings and make watertight according to manufacturer's written instructions.
C. Provide temporary closure at terminations of ducts that have cables pulled. Seal spare ducts at terminations.

3.2 SERVICE INSTALLATION
A. The Contractor shall notify One-Call services for underground utility locations at least 48 hours prior to trenching, digging, or excavation.
B. See Site Plan for service requirements. Include any changes required in the Electrical panels, switches, motors, wiring, breaker sizes, and equipment necessary to adapt to the service available, the requirements of the Utility Company, or Local Codes.

3.3 ROUGH-IN
A. Verify final locations for rough-ins with field measurements and with the requirements of the actual equipment to be connected.
B. Refer to drawings and equipment specifications for rough-in requirements.
C. Install no more than the equivalent of three 90-degree bends in any conduit run except for control wiring conduits, for which fewer bends are allowed. Support within 12 inches (300 mm) of changes in direction.
D. Field cut openings for ducts and conduits according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

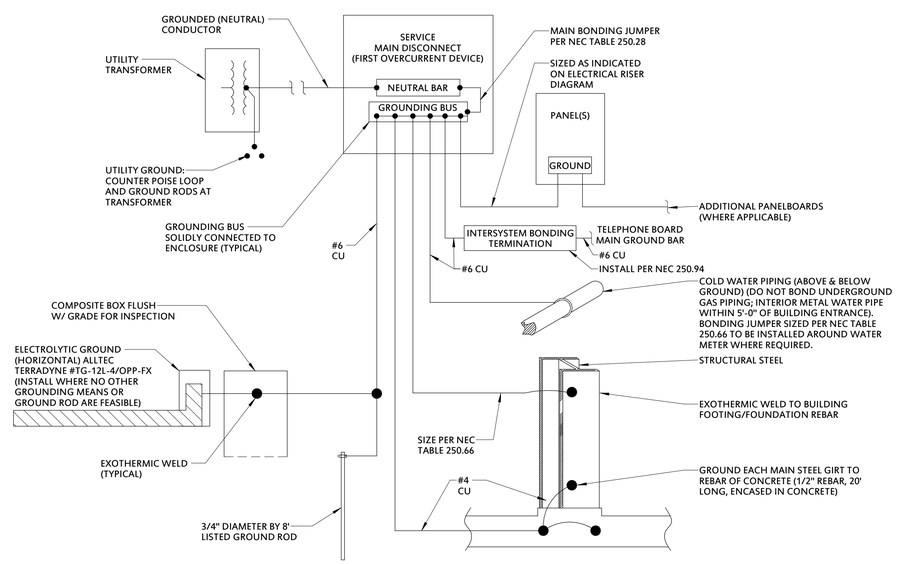
GENERAL NOTES:

1. WHERE STATED ELECTRICAL CONTRACTOR IS TO PROVIDE MATERIAL, IT IS TO BE KNOWN THAT PROVIDE MEANS TO FURNISH AND INSTALL.
2. PRIOR TO BID, THE CONTRACTOR SHALL VISIT THE JOB SITE TO DETERMINE ALL EXISTING CONDITIONS AND THE EXTENT OF WORK TO BE DONE.
3. CONTRACTOR SHALL BE LICENSED TO PERFORM WORK IN THE STATE IN WHICH THIS PROJECT WILL BE COMPLETED. CONTRACTOR SHALL MAINTAIN A COPY OF THEIR LICENSE AGREEMENT WITH THEM TO SHOW TO INSPECTORS WHERE REQUIRED BY LOCAL CODES.
4. CONTACT UTILITY COMPANY PRIOR TO BID AND INCLUDE ALL FEES REQUIRED FOR CONNECTION OF THE UTILITIES.
5. PROVIDE TEMPORARY ELECTRICAL POWER AND LIGHTING TO JOB SITE, AS REQUIRED.
6. PROVIDE A GROUNDING CONDUCTOR IN ALL RACEWAYS, SIZED PER NATIONAL ELECTRICAL CODE.
7. ALL CONDUCTORS #10 AND SMALLER SHALL BE SOLID COPPER AND ALL CONDUCTORS #8 AND LARGER SHALL BE STRANDED COPPER USING BOLTED LUGS AT TERMINALS.
8. ALL WIRING DEVICES SHALL BE INSTALLED PLUMB, SQUARE, AND TRUE. ALL DEVICES INSTALLED AT A SINGLE LOCATION SHALL BE ALIGNED.
9. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR MARKING ALL SWITCHES, RECEPTACLES, AND FIXED EQUIPMENT WITH THE BRANCH CIRCUIT PANEL NAME AND NUMBER SERVING EACH DEVICE.
10. ALL DEVICE PLATES, OUTLET COVERS, ETC., FINISH/COLOR AS SPECIFIED UNLESS OTHERWISE DIRECTED BY THE CIVIL ENGINEER.
11. MINIMUM WIRE SIZE SHALL BE #12 AWG UNLESS OTHERWISE SPECIFIED.
12. ALL CONDUIT SHALL BE INSTALLED UNDERGROUND UNLESS NOTED OTHERWISE ON PLANS.
13. WHERE CONDUIT IS SURFACE MOUNTED IN EXPOSED LOCATIONS, CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER, GROUPED WHERE PRACTICAL. COORDINATE CONDUIT ROUTING AND ALL PENETRATIONS THROUGH FINISHED SURFACES WITH ALL OTHER DISCIPLINES AS REQUIRED.
14. VERIFY THAT ALL NEW, RELOCATED AND EXISTING DEVICES IN SPECIFIED AREAS OF WORK ARE OPERATING PROPERLY. REPAIR AS REQUIRED.

ELECTRICAL SYMBOL LEGEND

(NOTE: ALL SYMBOLS MAY NOT BE USED)

Symbol	Description
	SCONCE/WALL PACK LIGHTING FIXTURE
PP	UTILITY POWER POLE
J	JUNCTION BOX
P	SERVICE POLE
X	MOTOR CONNECTION (NO. DENOTES HP)
SW	DISCONNECT SWITCH (DESIGNATION, SEE SWITCH SCHEDULE)
	CONTACTOR
	MOTOR STARTER
	COMBINATION STARTER-DISCONNECT
T	TRANSFORMER
PE	PHOTO ELECTRIC CONTROL SENSOR
TC	TIME CLOCK CONTROLLER
FLUSH / SURFACE	PANELBOARDS
	DISTRIBUTION BOARD
	MULTI-USE PANEL
	WEATHERHEAD
	ELECTRICAL GROUND
	CONDUIT CONCEALED IN WALLS OR ABOVE CEILINGS
	CONDUIT CONCEALED IN OR UNDER FLOORS OR GRADE
	CONDUIT HOMERUN (ARROWS DENOTE NO. OF CKTS)
AM	ABOVE MILLWORK
AFF	ABOVE FINISHED FLOOR, MIDDLE OF DEVICE
AFG	ABOVE FINISHED GRADE
EWC	ELECTRIC WATER COOLER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFEP	GROUND FAULT EQUIPMENT PROTECTION
IG	ISOLATED GROUND
NF	NON-FUSIBLE
NL	NIGHT LIGHT
NS	NON-SWITCHED
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
VFD	VARIABLE FREQUENCY DRIVE UNIT
WP	WEATHERPROOF DEVICE
WR	WEATHERPROOF RATED



NOTE: BOND ALL STRUCTURAL STEEL AND INTERIOR METALLIC PIPING, INCLUDING BUT NOT LIMITED TO GAS PIPING AND FIRE SPRINKLER PIPING, PER NEC 250.104.

1 GROUNDING DIAGRAM
N.T.S.

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RAZORBACK GREENWAY EXTENSION PHASE III

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CHECKED BY: J. KEITH

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STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER #12010 JENNIFER CORA KEITH

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ELECTRICAL DETAILS AND NOTES

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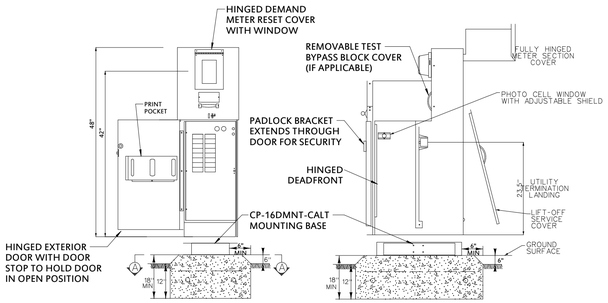
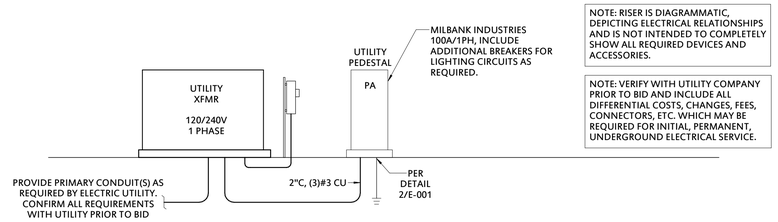


3 METERED COMMERCIAL PEDESTAL - 100 AMP

N.T.S.

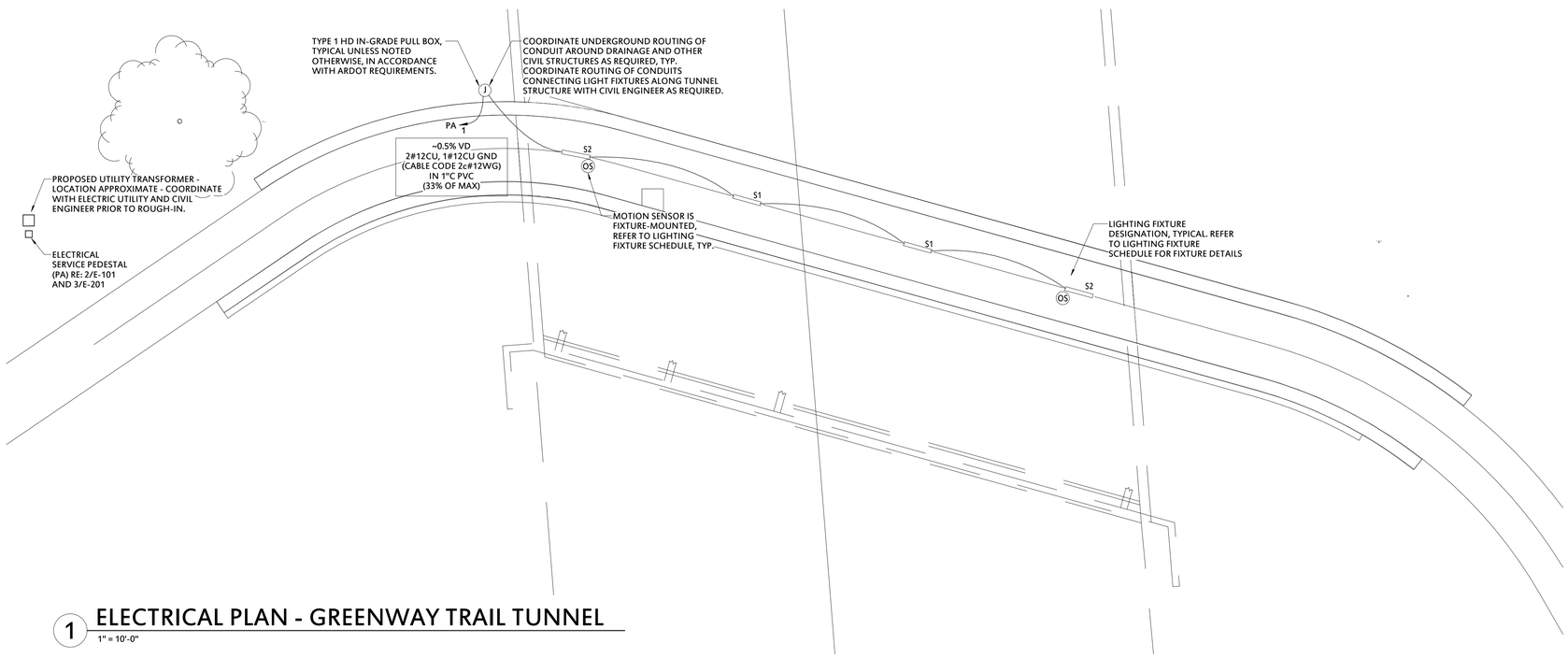


NOTE: RISER IS DIAGRAMMATIC, DEPICTING ELECTRICAL RELATIONSHIPS AND IS NOT INTENDED TO COMPLETELY SHOW ALL REQUIRED DEVICES AND ACCESSORIES.

NOTE: VERIFY WITH UTILITY COMPANY PRIOR TO BID AND INCLUDE ALL DIFFERENTIAL COSTS, CHANGES, FEES, CONNECTORS, ETC. WHICH MAY BE REQUIRED FOR INITIAL, PERMANENT, UNDERGROUND ELECTRICAL SERVICE.

2 ELECTRICAL RISER DIAGRAM

N.T.S.



1 ELECTRICAL PLAN - GREENWAY TRAIL TUNNEL

1" = 10'-0"

ELECTRICAL SITE GENERAL NOTES

1. MAKE ALL CONNECTIONS TO LIGHT FIXTURES IN ACCORDANCE WITH NEC 410.
2. LIGHTING FIXTURE LOCATIONS AND SYMBOLS ARE SCHEMATIC IN NATURE. REFER TO CIVIL SHEETS FOR ADDITIONAL DETAILS.
3. CONNECT OCCUPANCY SENSORS SUCH THAT ANY SENSOR WILL CONTROL ENTIRE AREA(S) SHOWN TO BE SWITCHED.
4. CONDUITS & CONDUCTORS
   A. INSTALL ALL UNDERGROUND CONDUCTORS IN SCHEDULE 40 CONDUIT WITH RIGID CONDUIT LONG SWEEP ELBOWS.
   B. INSTALL CONDUIT BENEATH ROADWAY SURFACES VIA PUSHING OR DIRECTIONAL BORING WHERE REQUIRED. REFER TO NEC TABLE 300.5 FOR MINIMUM COVER REQUIREMENTS.
   C. COORDINATE ROUTING OF ALL CONDUITS TO AVOID OTHER TRADES.
5. INSTALL PULL STRINGS IN ALL CONDUITS INSTALLED FOR FUTURE USE.
6. SET PULL BOX(ES) ON GRAVEL OR CRUSHED STONE BEDDING TO SUPPORT AND FACILITATE DRAINAGE.
7. MARK ALL PULL BOX LIDS PER BELOW (NOTE, COPPER IS SPECIFIED ON PLANS, HOWEVER THE BOX SHALL BE LABELED AS "ALUMINUM" AS A THEFT DETERRANT):

   ARDOT
   ELECTRIC
   ALUMINUM

RISER DIAGRAM NOTES

1. VERIFY WITH UTILITY COMPANY PRIOR TO BID AND INCLUDE ALL DIFFERENTIAL COSTS, CHANGES, FEES, CONNECTORS, ETC. WHICH MAY BE REQUIRED FOR CHANGES TO ELECTRICAL SERVICE AND FOR TEMPORARY POWER DURING CONSTRUCTION.
2. DO NOT USE RISER DIAGRAM TO LOCATE EQUIPMENT. REFER TO ELECTRICAL PLANS FOR LOCATIONS.
3. RISER IS DIAGRAMMATIC, DEPICTING ELECTRICAL RELATIONSHIPS AND IS NOT INTENDED TO COMPLETELY SHOW ALL REQUIRED DEVICES AND ACCESSORIES.
4. PROVIDE A TYPED CIRCUIT DIRECTORY AT PEDESTAL. BREAKERS SHALL BE AS LISTED BELOW, ADDITIONAL SPACE SHALL BE PROVIDED IN PEDESTAL PANEL FOR FUTURE ELECTRICAL SERVICES AS REQUIRED.
   A. MAIN BREAKER (SERVICE RATED): 100/2
   B. 20/1 CIRCUIT BREAKER FOR LIGHTING CIRCUIT
   C. 20/1 SPARE CIRCUIT BREAKER
5. PROVIDE PLASTIC NAMEPLATE WITH 3/4" MINIMUM, CONTRASTING COLOR ENGRAVED LETTERS IF NOT EXISTING FOR EACH PANELBOARD. THE NAMEPLATE SHALL BE BOLTED OR POP-RIVETED TO EQUIPMENT.

901 N. 47th St., Suite 400
Rogers, Arkansas 72756
Crafton Tull
architecture | engineering | surveying
479.636.4838 t 479.631.6224 f
www.craftontull.com

CERTIFICATE OF AUTHORIZATION
CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

ELECTRICAL ENGINEER:
JENNIFER C. KEITH, P.E.
P.O. Box 7503
Springdale, AR 72766
jckeith@cs2ee.com
479.790.0593

RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

No.	Description	Date

This document, and the ideas and designs incorporated herein, as an instrument of professional service, is the property of Crafton, Tull & Associates, Inc., and is not to be used, in whole or in part, for any other project, without the written authorization of Crafton, Tull & Associates, Inc.

PROJECT NO: 22110100
ISSUE DATE: 09/18/2024
CONTACT: L. JOST
CHECKED BY: J. KEITH

ISSUED FOR REVIEW

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER #12010 JENNIFER C. KEITH
09/13/24

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Digitally signed by Jennifer C. Keith (Date: 2025.05.13 14:09:51 -05'00')
Jennifer C. Keith, P.E. reviewed document

ELECTRICAL SITE PLAN

E-101

LIGHTING FIXTURE SCHEDULE

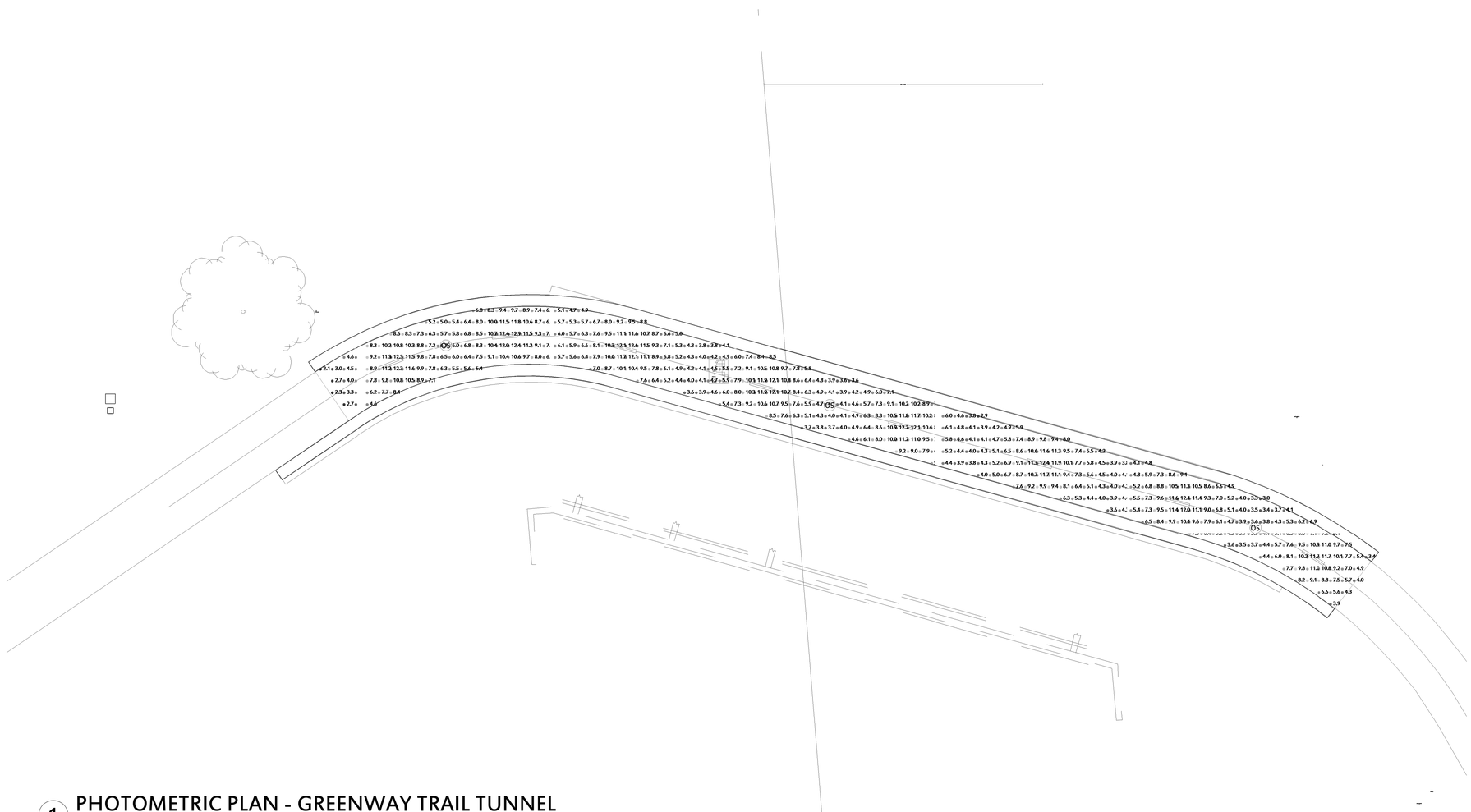
TYPE	DESCRIPTION	MANUFACTURER	MODEL NUMBER	VOLTS	VA	LAMP	MOUNTING	NOTES
S1	GASKETED STRIP FIXTURE	HOLOPHANE	EMS L48 4000LM LPPFL WD MVOLT GZ10 40K 80CRI WLFEND2 TRS STSL	120 V	24 VA	LED	SURFACE	1,2,3

LIGHTING FIXTURE SCHEDULE NOTES:

1. ALL FIXTURES TO BE PROVIDED WITH 4000K CCT UNLESS NOTED OTHERWISE ON PLANS
2. FIXTURES SHALL BE FURNISHED EXACTLY AS SPECIFIED ON SCHEDULE. SUBSTITUTIONS FOR SPECIFIED SUBSTITUTIONS SHALL MEET THE BASIC REQUIREMENTS AND BE EQUIVALENT TO THE FIXTURES SCHEDULED ABOVE.
3. COORDINATE FINAL MOUNTING LOCATIONS WITH CIVIL ENGINEER PRIOR TO ROUGH-IN
4. PROVIDE FIXTURE LISTED AND LABELED FOR WET LOCATIONS

PHOTOMETRIC CALCULATION

Calculation Points Name	Average	Maximum	Minimum	Avg/Min	Max/Min
GREENWAY TUNNEL	7.2 fc	12.9 fc	2.1 fc	3.5	6.2



1 PHOTOMETRIC PLAN - GREENWAY TRAIL TUNNEL

1" = 10'-0"

901 N. 47th St., Suite 200
Rogers, Arkansas 72756

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ELECTRICAL ENGINEER:
JENNIFER C. KEITH, P.E.
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Springdale, AR 72766
jckeith@cs2ee.com
479.790.0593

RAZORBACK GREENWAY EXTENSION PHASE III

BELLA VISTA, AR

Key Plan

No.	Description	Date

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PROJECT NO: 22110100
ISSUE DATE: 09/18/2024
CONTACT: L. JOST
CHECKED BY: J. KEITH

ISSUED FOR REVIEW

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
#12010
JENNIFER CORA KEITH

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SITE PHOTOMETRIC PLAN

E-102

9/20/2024 4:16:13 PM
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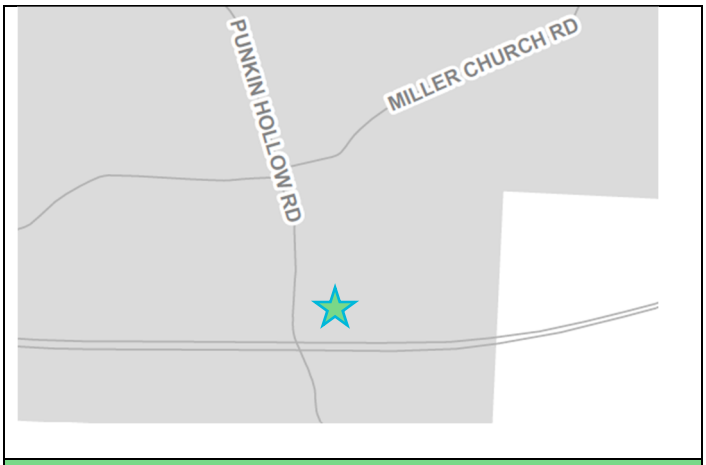
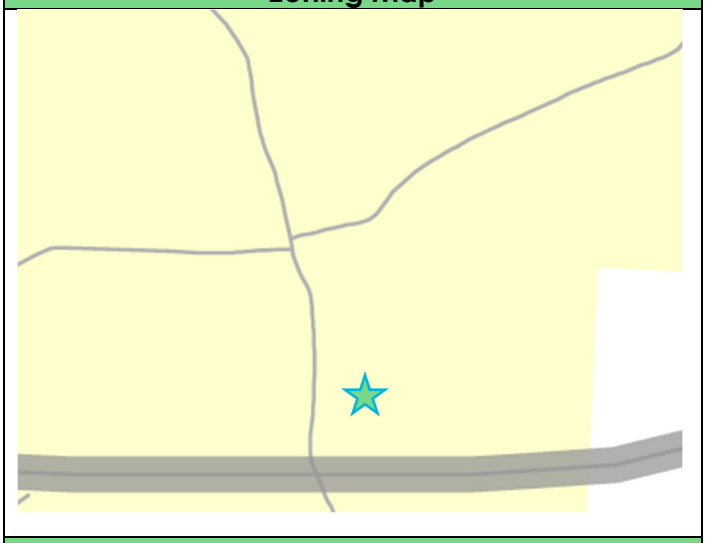
Meeting Information:
2483 Forest Hills Blvd
May 29, 2025 at 4:30 pm

Reviewer:
Christopher Hyatt,
Senior Planner

Project Number	WVR 59112 & LSD 58554
Applicant	David McGehee
Address/Location	Punkin Hollow Road
Current Zoning	Planning Area
Site Area	+/- 90.35 acres
Nature of Request	Seeking a waiver and large-scale development approval for new cell tower.



Zoning Map



Future Land Use Plan

Property Description
This property is located South of Bella Vista City Limits and is located on Parcel # 15-18996-003 along Punkin Hollow Road.

Regulation
Section 107-250 (m) requires pedestrian accommodations consisting of sidewalks, trails, or other reasonable alternatives for connectivity. Sec. 107-314(a) establishes surfacing requirements for access drives. Sec 107-315(2)(b) regulates access drive widths. Sec. 107-162 sets forth review and approval requirements for developments other than a single-family residence or duplex. Otherwise known as, a large-scale development.

Request
The applicant is requesting a waivers from Sec. 107-250(m), Sec. 107-314(a), Sec. 107-315(2)(b), along with the proposed large-scale development for a new cell tower.

Background
The proposed tower will be 195' in height and will sit 597' East of the road. The +/-90.35 acre lot will hold a 6400 square foot fenced in perimeter containing the tower, generator, and facility equipment. Access to the facility is controlled via a 12' wide crushed limestone gravel drive leading to a 12' wide leaf gate at the fenced perimeter. The access drive will be paved within the right-of-way. ARDOT has approved the design without a State Highway Permit, to which, they will review post construction. The site, once constructed, will be unmanned, only visited for maintenance, equipment upgrades, and repair. Applicant does not foresee any traffic increases with this proposed project. The Happy Egg development to the North and West sits roughly 165' away from the tower, but the applicant has provided a fall certification letter from their PE stating that in the unlikely event of a tower failure, the chicken houses would not be affected. The tower would fall within a 95' radius. Additionally, the PE provided stamped foundation drawings indicating the proposed foundation can support three times the proposed antennae load to accommodate any future antennae additions. Due to the nature of the request, and the access that will be managed for the site the applicant is requesting waivers from the above-mentioned sections to forgo placing a sidewalk along the frontage and provide a crushed limestone access and fenced location, with the 12-foot-wide access drive. Punkin Hollow Road is classified as a Collector per the Master Street Plan. Per the Future Land Use map, the site is surrounded by Benton County.

Public Comment
None at the time of this report.

Outstanding Technical Comments
None at the time of this report.

Recommendation
Due to the number of waivers, Staff has no recommendation at this time.

Sec. 107-35 Waiver Review Requirements

When, by the strict interpretation of Chapter 107, an applicant incurs undue restrictions on the physical property to be subdivided or developed, a waiver for such requirements may be granted by the planning commission. **Under no circumstance** should a waiver be granted because of a personal hardship or for personal or emotional reasons. Waivers shall not be granted based strictly on financial hardship. A waiver is determined by the strict interpretation and enforcement of the rules and regulations upon a given piece of property to be subdivided or developed. No waiver shall be granted unless the planning commission finds all of the following:

1. That there are special circumstances or conditions affecting the land involved such that the strict application of the provision of these regulations would deprive the applicant of the reasonable use of this land.
2. That the waiver is necessary for the preservation and enjoyment of a substantial property right of the applicant.
3. That the granting of the waiver will not be detrimental to the public health, safety and welfare or injurious to other property in the area.
4. That the granting of the waiver will not have the effect of preventing the orderly subdivision of other land in the area in accord with the provision of these regulations.

Four affirmative votes of the planning commission's authorized membership shall be necessary for the passage of any waiver.

Sec. 107-35 Waiver Review Procedures

- Under exceptional circumstances, the planning commission may grant waivers at the time of final plat approval.
- In granting the waiver, the planning commission shall prescribe any conditions that it deems necessary to or desirable in the public interest.
- In considering the petition for a waiver, the planning commission shall take into account the nature of the proposed use of land involved, existing uses of land in the area, proximity to public utilities, the number of persons who will reside or work in the proposed subdivision, and the probable effect of such waiver upon traffic conditions and upon the public health, safety and general welfare in the vicinity.
- The findings of the planning commission, together with the specific facts upon which findings are based, shall be incorporated into the official minutes of the planning commission meetings at which such waiver is granted. Waivers may be granted only when in harmony with the general purpose and intent of these regulations.

Sec. 107-162 Large Scale Development Review and Approval

Planning Commission Action**:** All developments other than those excepted by subsection (a)(1) of this section shall be submitted to the planning commission, which shall approve, approve with conditions, or disapprove the submitted plan. The planning commission is required to take such action within 90 days of submission unless the applicant agrees to a postponement. All planning commission approvals to any development plan shall be signified by the signature on the development plan of the chairperson of the planning commission.

Sec. 107-163 Large Scale Development Review Criteria

The mayor or his designee, planning commission or city council may refuse approval of any development plan for any of the following reasons:

5. *Incomplete application.* The development plan is not submitted in accordance with the requirements of this article.
6. *Violation of law.* The proposed development or construction would violate a city ordinance, or a state or federal law.
7. *Dangerous traffic conditions.* The proposed development would create or compound a dangerous traffic condition. For the purpose of this article, a "dangerous traffic condition" shall be construed to mean a traffic condition in which the risk of accidents involving motor vehicles is significant due to factors such as, but not limited to, high traffic volume, topography, or the nature of the traffic pattern.
8. *Lack of utilities.* Adequate water, sewer, and electrical utilities are not readily available to the property and the developer has made no provision for extending such service to the development, or the provision of these utilities cannot obtain approval by the state health department, or other appropriate department.
9. *Inadequate drainage conditions.* The property to be developed reflects an extreme drainage problem uncorrected by the proposed development plan.
10. *Other actions required.* The plans pertain to a parcel which requires prior platting or rezoning.
11. *Other.* Any other circumstances as determined by the planning commission.

WAIVER REQUEST LETTER

RE: Request City of Bella Vista Waiver approval for Pedestrian Accommodations per Chapter 107, Article 9, Sec. 107-250; RE proposed monopole Wireless Communications Facility (tower) on Parcel number 15-18996-003 in Benton County, south of City Limits within Planning area.

The Towers, LLC, d/b/a Vertical Bridge, applicant, is requesting City of Bella Vista Planning Commission **Waiver** of pedestrian accommodation requirements for its Large Scale Development request to construct a new monopole Wireless Tower Facility 195' in height on the East side of Punkin Hollow Road, just north of US I-49.

Vertical Bridge has a 30' wide access and utility easement under lease, with an approx. 12' space between its easement and the abutting property to the North. The tower site access features a 12' wide access road to the rear of the property, that will feature a turning apron/flare, and will cross a sizable, existing stormwater runoff swale that is part of the Interstate overpass just South of the property.

There are several unique circumstances with this proposed installation related to this request. The site would likely be the southernmost termination point of any pedestrian walkway, since the Interstate overpass has a steep slope with bridge supports that do not leave enough room for any pedestrian connection to property South of the bridge, a short distance of which is still in the City's planning area. This section of Punkin Hollow Road (a/k/a CR 39) is classified as a Collector Street, with a speed limit of 35 mph. Per the City's Ordinance, this would mandate a 150' minimum driveway spacing. This would leave very limited space between the proposed development and the Interstate Right-of-Way (much of which is a gully, with steep slope to the South) for any future development or pedestrian accommodation. Finally, although WCF's are allowed in the City's Planning Area via the Large-Scale Development process, the tower site will be unmanned, with access generally limited to installation and maintenance of the proposed site. Public access, vehicular or pedestrian, is generally not encouraged, with signage to be posted at the (locked) compound and road gate. For these reasons, we would like to request the waiver from this requirement.

Additional Waiver Requests: Request waiver approval of Article XI, Section 107-314(a) Surfacing: This section calls for access road to be constructed from "asphalt, concrete, brick, or semi-permeable pavement" The initial entry area of the proposed site access, within the Punkin Hollow Road ROW, is proposed with an all concrete apron and 15'6" wide access that will extend from the edge of pavement of Punkin Hollow Road up the grade approx. 50' to the owner's property line. This access (with culvert) and drainage design integration was approved by ARDOT (please see Site Plan Sheet 3.0 and 3.3 for driveway details). From there 557' back to the site is proposed a high-grade, all-

weather crushed limestone gravel drive 12' in width. This drive will have limited access to authorized service vehicles, typically small pickup trucks, visits which will average approx. one monthly, and so will not generate, or maintain any regular or through traffic. Regarding the permeability, the proposed drive material will be permeable, and as designed will have a negligible effect on the on the runoff from nearby drainage basins (please see Drainage Study for this site dated 4/29/25 submitted with this request).

Request waiver approval of Article XI, Section 107-315 Parking Lot Standards(2) Width: Section calls for "properties adjacent to collector streets…access drives shall be a minimum of 20 fee and a maximum of 39 feet"; we are requesting this waiver for a 12' wide access drive, due to the nature of its specific use as a limited access service road to a communications site, not open to the public, and not connected to any other use that would necessitate additional traffic. Due to the location between the Interstate and Poultry house facility, there will not likely be any need for shared use of the drive that would require the drive to be expanded to the standards of a more typical commercial development (which would normally generate additional traffic). Please note that the wider drive would likely increase the drainage impact as well, which as proposed is minimal.

Thank you for your acceptance of this request, and we look forward to any discussion of this matter at the City's Work Session. Please feel free to contact me if you have any questions or need any further documentation.

Sincerely,

David McGehee, Agent for Applicant
The Towers, LLC d/b/a Vertical Bridge

APPLICATION LETTER

RE: Request City of Bella Vista Large Scale Development approval for a new monopole Wireless Communications Facility (tower) on Parcel number 15-18996-003 in Benton County.

The Towers, LLC, d/b/a Vertical Bridge, applicant, is requesting City of Bella Vista Planning Commission approval of a Large Scale Development request to construct a new monopole Wireless Tower Facility 195' in height on the East side of Punkin Hollow Road, just north of US I-49. Site is proposed 597' East of the Punkin Hollow Rd ROW, and approx. 250' North of the US I-49 ROW, with access proposed directly off Punkin Hollow Road via a new all-weather access road. The location is not located within the City Limits of Bella Vista, but is located in the City's Planning area, so will be subject to review via the City's Ordinance Sec. 107-281(a)(2)(b). Vertical Bridge has obtained an Option and Lease Agreement with the current property owner, **Mrs. Lari M. Short**, for this Facility (recorded copy of Memorandum of Option to Lease agreement attached with the application for reference).

Subject property is 90.35 acres in size, and is mostly undeveloped. Site is proposed in Lot 1A of the owner's platted property, which is in the City's designated planning area, but does not currently have designated zoning districts. The owner sold a 6.4 acre tract North of the proposed site, which has been developed with poultry houses. This site meets the City's setback and separation criteria for projects in the City's planning area, with site just over ½ of the tower height to the nearest ROW line (99' to the NW), and the accessory structures proposed in the SE corner of the fenced compound, a few feet farther away. Following initial discussions with the City, a reviewer expressed concerns about the distance of the tower to the nearby poultry house (165'±, less than tower height), so Vertical Bridge has provided a PE stamped Fall Certification Letter stating that in the unlikely event of tower failure, it would collapse within a 95' radius, inside the subject property lines (please see attached letter). There do not appear to be any occupiable structures within 800' or so of the site. In a related requirement, please find attached P.E.stamped full set of foundation drawings for this site, per Development requirements. Both documents were run with (3) times the proposed antenna loading, to accommodate future wireless tenants, for which the site has been designed (per City 107-281(c)(2)).

This site has been developed in partnership with Verizon Wireless, whose Wireless Engineering team has selected this location to meet a specific wireless coverage need in this area, and also to "offload" usage from the Applicant's nearby existing sites, which will allow them to operate more effectively. Please see attached "Proof of Need" statement and before/after coverage maps provided by Verizon Wireless Engineer Jacob Mauterstock detailing the need and objectives of the site. There are no existing

structures in the area on which to collocate, so construction of a new structure was the only way to reach these coverage objectives. There *is* a tower 0.33 miles to the NW off Miller Church Rd, built in 1996, but it is a radio tower with much less robust construction rather than a cellular tower, and was not designed (and cannot structurally support) the proposed cellular antenna loading (per City 107-281(b)(4)(c)).

The site will be accessed by a new 12' wide, all weather crushed limestone gravel drive directly off Punkin Hollow Rd. The road design includes a turn apron that will be paved from the existing public road through the ROW area and include a culvert to be integrated into the existing road drain (see Sheet 3.3 "Driveway Plan" for road and apron/culvert design details, also Sheet 3.0 and Sheet 3.1 "Compound details and Erosion Control notes") of attached site plans for details. Also attached is Engineering correspondence with ARDOT Engineering Dept. approving the design without a State Highway Permit requirement). The site will feature a 25'x70' turnaround area at the fenced compound entrance for service vehicle parking and turnaround, and will be secured by a 6' chain link security perimeter fence with a locked gate and with warning signage (per ord. sec 107-281(c)(5)—please see site plan sheet 3.2 for details). The site location is well off the road, and is surrounded on three sides (N-E-S) by an existing treeline. On the W side (facing Punkin Hollow Rd), some trees will remain, along with a poultry house that will shield the base of the site from view. As a result, Vertical Bridge did not submit a landscape plan, and is requesting a waiver from this requirement (subject to staff review and comment).

Other due diligence attached include statements that the RF emissions from the site will be well below FCC applicable limits and will only operate in licensed frequency bands (please see the second paragraph of Verizon Engineer letter referenced above). This site has been reviewed and approved by the FAA, with their Determination of No Hazard to Air Navigation submitted with this package. Per FAA review, this site will not require tower lighting.

This site will be unmanned, and once constructed will only be visited for maintenance, equipment upgrades, and repair. It will not increase traffic flow in the area. Necessary utilities will be power and fiber. Since the site will not require or utilize water or sewer connections, Vertical Bridge would like to request a waiver of the Site Development requirements related to these connections listed in Sec. 107-225.

This site will serve the public convenience and welfare because the use will be designed, constructed, and maintained in compliance with all local, state, and federal codes and regulatory compliance, including FAA, FCC, and all other applicable government agencies.

Thank you for your acceptance of this request, and please contact me if you have any questions or need further documentation.

3/28/2025

David McGehee, CMI Acquisitions
Authorized Agent for the Applicant

PROPERTY ADDRESS
0 PUNKIN HOLLOW ROAD, BENTONVILLE, AR 72712
BENTON COUNTY

CERTIFICATION PARCEL #15-18996-003 /BENTON COUNTY, ARKANSAS

I HEREBY CERTIFY TO: VERTICAL BRIDGE REIT, LLC, A DELAWARE LIMITED LIABILITY COMPANY, ITS SUBSIDIARIES, AND THEIR RESPECTIVE SUCCESSORS AND/OR ASSIGNS; AND (II) TORONTO DOMINION (TEXAS) LLC, AS ADMINISTRATIVE AGENT, FOR ITSELF AND ON BEHALF OF THE LENDERS PARTIES FROM TIME TO TIME TO THAT CERTAIN SECOND AMENDED AND RESTATED LOAN AGREEMENT DATED JUNE 17, 2016 WITH VERTICAL BRIDGE HOLDCO, LLC, AS BORROWER, AND VERTICAL BRIDGE HOLDCO PARENT, LLC, AS PARENT, AS MAY BE AMENDED, RESTATED, MODIFIED OR RENEWED, THEIR SUCCESSORS AND ASSIGNS AS THEIR INTERESTS MAY APPEAR; AND SUMMIT SETTLEMENT SERVICES, LLC.

AS PER SUMMIT SETTLEMENT SERVICES, LLC. COMMITMENT FOR TITLE INSURANCE, COMMITMENT NO. VTB-181057-C, ISSUED MAY 23, 2024, THE FOLLOWING ITEMS ARE OF SURVEY MATTERS:

1. ANY DEFECT, LIEN, ENCUMBRANCE, ADVERSE CLAIM, OR OTHER MATTER THAT APPEARS FOR THE FIRST TIME IN THE PUBLIC RECORDS OR IS CREATED, ATTACHES, OR IS DISCLOSED BETWEEN THE COMMITMENT DATE AND THE DATE ON WHICH ALL OF THE SCHEDULE B, PART I – REQUIREMENTS ARE MET.

2. (A) TAXES OR ASSESSMENTS THAT ARE NOT SHOWN AS EXISTING LIENS BY THE RECORDS OF ANY TAXING AUTHORITY THAT LEVIES TAXES OR ASSESSMENTS ON REAL PROPERTY OR BY THE PUBLIC RECORDS; (B) PROCEEDINGS BY A PUBLIC AGENCY THAT MAY RESULT IN TAXES OR ASSESSMENTS, OR NOTICES OF SUCH PROCEEDINGS, WHETHER OR NOT SHOWN BY THE RECORDS OF SUCH AGENCY OR BY THE PUBLIC RECORDS.

3. ANY FACTS, RIGHTS, INTERESTS, OR CLAIMS THAT ARE NOT SHOWN BY THE PUBLIC RECORDS BUT THAT COULD BE ASCERTAINED BY AN INSPECTION OF THE LAND OR THAT MAY BE ASSERTED BY PERSONS IN POSSESSION OF THE LAND.

4. EASEMENTS, LIENS OR ENCUMBRANCES, OR CLAIMS THEREOF, NOT SHOWN BY THE PUBLIC RECORDS.

5. ANY LIEN FOR SERVICES, LABOR, OR MATERIALS IN CONNECTION WITH IMPROVEMENTS, REPAIRS OR RENOVATIONS PROVIDED BEFORE, ON, OR AFTER DATE OF POLICY, NOT SHOWN BY THE PUBLIC RECORDS.

6. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION, OR ADVERSE CIRCUMSTANCE AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND AND NOT SHOWN BY THE PUBLIC RECORDS.

7. ANY MINERAL OR MINERAL RIGHTS LEASED, GRANTED OR RETAINED BY CURRENT OR PRIOR OWNERS.

8. ANY DISPUTE AS TO THE BOUNDARIES CAUSED BY THE CHANGE IN THE LOCATION OF ANY WATER BODY WITHIN OR ADJACENT TO THE LAND PRIOR TO THE DATE OF POLICY, AND ANY ADVERSE CLAIM TO ALL OR PART OF THE LAND THAT IS, AT DATE OF POLICY, OR WAS PREVIOUSLY, UNDER WATER.

9. DISCREPANCIES OR SHORTAGE IN THE SQUARE FOOTAGE, ACREAGE OR AREA OF THE LAND.

10. TAXES AND ASSESSMENTS FOR THE YEAR 2023 AND ALL SUBSEQUENT YEARS ARE A LIEN BUT NOT YET DUE AND PAYABLE.

11. RIGHT-OF-WAY EASEMENT BETWEEN LOYD WAYNE SHORT AND JO ANN SHORT; AND BENTON COUNTY RURAL WATER DEVELOPMENT AUTHORITY, DATED DECEMBER 4, 1998 AND RECORDED JANUARY 4, 1999 IN (INSTRUMENT) 99000114, IN BENTON COUNTY, ARKANSAS. DOES NOT APPEAR TO AFFECT THE LESSEE'S PREMISE OR EASEMENTS.

12. RIGHT-OF-WAY EASEMENT BETWEEN LOYD WAYNE SHORT AND JO ANN SHORT; AND BENTON COUNTY RURAL WATER DEVELOPMENT AUTHORITY, DATED DECEMBER 4, 1998 AND RECORDED JANUARY 4, 1999 IN (INSTRUMENT) 99000113, IN BENTON COUNTY, ARKANSAS. DOES NOT APPEAR TO AFFECT THE LESSEE'S PREMISE OR EASEMENTS.

13. RIGHT-OF-WAY EASEMENT BETWEEN LOYD WAYNE SHORT AND JO ANN SHORT; AND BENTON COUNTY RURAL WATER DEVELOPMENT AUTHORITY, DATED OCTOBER 11, 1998 AND RECORDED NOVEMBER 19, 1998 IN (INSTRUMENT) 98125450, IN BENTON COUNTY, ARKANSAS. DOES NOT APPEAR TO AFFECT THE LESSEE'S PREMISE BUT DOES APPEAR TO AFFECT THE LESSEE'S ACCESS EASEMENT.

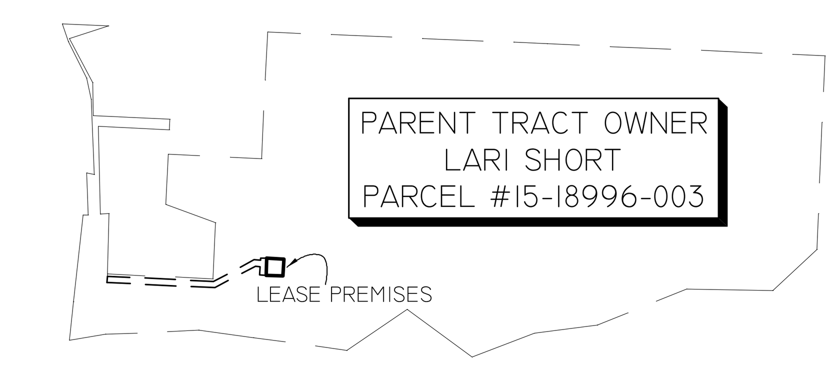
14. ANY AND ALL MATTERS DISCLOSED ON THE MAP ENTITLED "PLAT MAP" DATED MAY 15, 2020 AND RECORDED MAY 15, 2020 IN , (INSTRUMENT) L202027579 IN BENTON COUNTY, ARKANSAS. THE REFERENCED PLAT DOES SHOW A 15.00' WATER LINE EASEMENT THAT DOES APPEAR TO AFFECT THE LESSEE'S ACCESS EASEMENT, AS DEPICTED.

15. ANY AND ALL MATTERS DISCLOSED ON THE MAP ENTITLED "PLAT MAP" DATED SEPTEMBER 18, 2023 AND RECORDED SEPTEMBER 18, 2023 IN , (INSTRUMENT) L202348331 IN BENTON COUNTY, ARKANSAS. THE REFERENCED PLAT DOES SHOW A 15.00' WATER LINE EASEMENT AND A 20.00' UTILITY EASEMENT THAT DOES APPEAR TO AFFECT THE LESSEE'S ACCESS EASEMENT, AS DEPICTED.

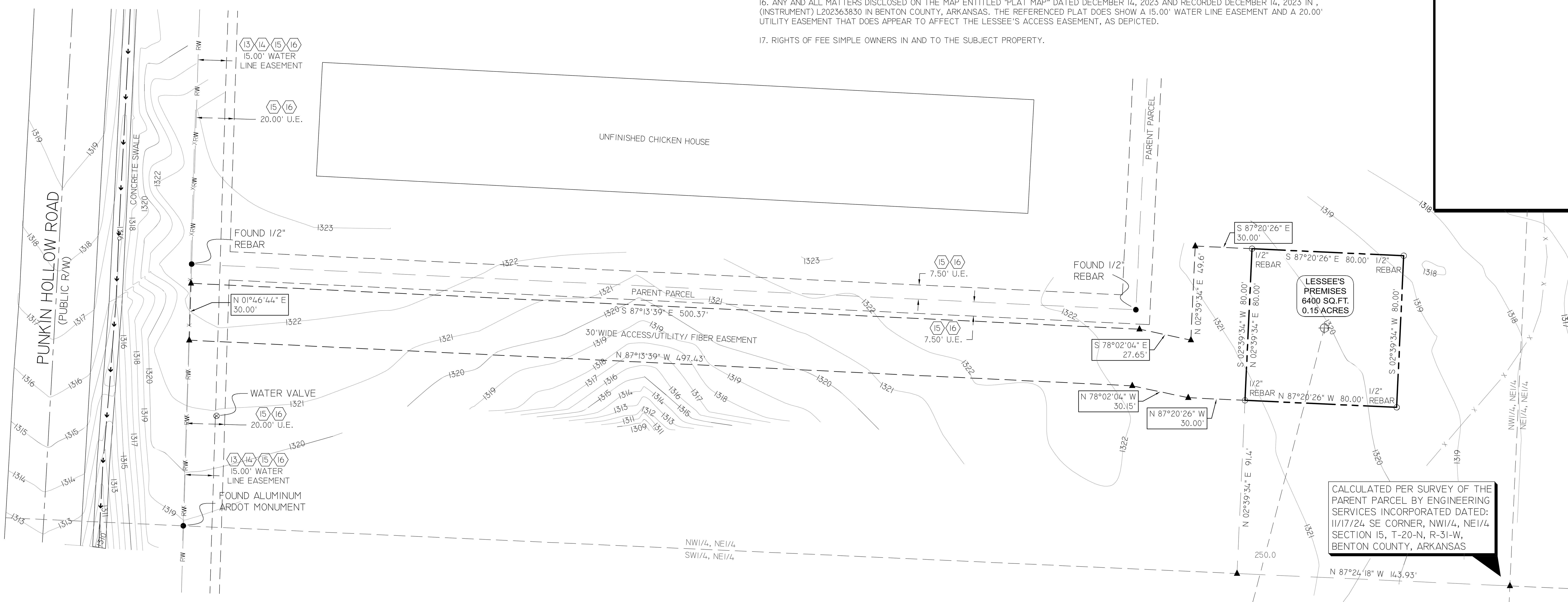
16. ANY AND ALL MATTERS DISCLOSED ON THE MAP ENTITLED "PLAT MAP" DATED DECEMBER 14, 2023 AND RECORDED DECEMBER 14, 2023 IN , (INSTRUMENT) L202363830 IN BENTON COUNTY, ARKANSAS. THE REFERENCED PLAT DOES SHOW A 15.00' WATER LINE EASEMENT AND A 20.00' UTILITY EASEMENT THAT DOES APPEAR TO AFFECT THE LESSEE'S ACCESS EASEMENT, AS DEPICTED.

17. RIGHTS OF FEE SIMPLE OWNERS IN AND TO THE SUBJECT PROPERTY.

UNLESS NOTED, ALL DATA IS EXPRESSED IN NAD83 & NAVD88			
LOCATION/DESCRIPTION	LATITUDE	LONGITUDE	ELEVATION
TOWER NAD83/NAVD88	36°24'45.45" (36.41262)	-94°15'40.70" (94.26131)	1314.5



PARENT PARCEL KEY



250' SETBACK

R/W LINE OF I-49 (R/W VARIES)

15 16 7.50' U.E.

PARTENT PARCEL

LOT 1D OF THE SHORT SUBDIVISION, IN CENTERTON, BENTON COUNTY, ARKANSAS, AS SHOWN ON THE PLAT FILED FOR RECORD IN THE OFFICE OF THE CIRCUIT CLERK AND EX-OFFICIO RECORDER AS DOCUMENT L202363830.

PARCEL ID: 15-18996-003

THIS BEING THE SAME PROPERTY CONVEYED TO TIMOTHY SHORT AND LARI SHORT, HUSBAND AND WIFE BY A DEED FROM TIMOTHY SHORT, TRUSTEE OF THE LOYD WAYNE SHORT REVOCABLE TRUST DATED OCTOBER 25, 2012 DATED 12/29/2021 AND RECORDED 1/04/2022 IN INSTRUMENT 202200701 IN THE COUNTY OF BENTON, STATE OF ARKANSAS.

LESSEE'S PREMISES

BEING A PART OF THE NW1/4, NE1/4 SECTION 15, T-20-N, R-31-W, BENTON COUNTY, ARKANSAS MORE PARTICULARLY DESCRIBED AS BEGINNING AT THE SOUTHEAST CORNER OF THE SAID NW1/4, NE1/4; THENCE N 87°24'18" W 143.93 FEET; THENCE N 02°39'34" E 91.40 FEET TO THE TRUE POINT OF BEGINNING; THENCE N 02°39'34" E 80.00 FEET; THENCE S 87°20'26" E 80.00 FEET; THENCE S 02°39'34" W 80.00 FEET; THENCE N 87°20'26" W 80.00 FEET TO THE POINT OF BEGINNING, HAVING AN AREA OF 6400.0 SQUARE FEET, 0.15 ACRES MORE OR LESS.

LESSEE'S ACCESS/UTILITY/FIBER EASEMENT

BEING A PART OF THE NW1/4, NE1/4, SECTION 15, T-20-N, R-31-W, BENTON COUNTY, ARKANSAS MORE PARTICULARLY DESCRIBED AS BEGINNING AT THE SOUTHEAST CORNER OF THE SAID NW1/4, NE1/4; THENCE N 87°24'18" W 143.93 FEET; THENCE N 02°39'34" E 91.40 FEET TO THE TRUE POINT OF BEGINNING; THENCE N 87°20'26" W 30.00 FEET; THENCE N 78°02'04" W 30.15 FEET; THENCE N 87°13'39" W 497.43 FEET TO THE RIGHT-OF-WAY LINE OF PUMPKIN HOLLOW ROAD; THENCE ALONG THE SAID RIGHT-OF-WAY LINE N 01°46'44" E 30.00 FEET; THENCE LEAVING THE RIGHT-OF-WAY OF PUMPKIN HOLLOW ROAD S 87°13'39" E 500.37 FEET; THENCE S 78°02'04" E 27.65 FEET; THENCE N 02°39'34" E 49.60 FEET; THENCE S 87°20'26" E 30.00 FEET; THENCE S 02°39'34" W 80.00 FEET TO THE POINT OF BEGINNING.

GENERAL NOTES:

1. TRACT IS SUBJECT TO RESTRICTIVE COVENANTS, SUBDIVISION, PLANNING AND ZONING REGULATIONS OF RECORD, IF ANY, AND IS SUBJECT TO SUCH FACTS AS AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.

2. NO STATEMENT IS MADE CONCERNING SUBSURFACE CONDITIONS OR OVERHEAD CONTAINERS OR FACILITIES WHICH MAY AFFECT THE USE OR DEVELOPMENT OF THE TRACT, ENVIRONMENTAL AND SUBSURFACE CONDITIONS WERE NOT EXAMINED AS PART OF THIS SURVEY.

3. THIS PROPERTY IS SUBJECT TO ALL ROADWAYS, EASEMENTS AND/OR RESERVATIONS THAT ARE OF RECORD OR ARE PHYSICALLY IN PLACE.

4. BEARINGS ARE REFERENCED TO ARKANSAS STATE PLANE GRID NORTH (NAD83).

5. THE PURPOSE OF THIS SURVEY IS TO ESTABLISH AND DESCRIBE A LEASE PARCEL AND ASSOCIATED EASEMENTS. THIS IS NOT A BOUNDARY SURVEY OF THE PARENT PARCEL.

6. THE LESSEE'S LAND SPACE LIES IN FLOOD ZONE "X", AREA OF MINIMAL FLOOD HAZARD, ACCORDING TO FLOOD INSURANCE RATE MAP #05007C0070J, SEPTEMBER 28, 2007.

7. ACCESS & UTILITY EASEMENTS TERMINATE AT OR IN PUBLIC RIGHT OF WAY.

8. AT THE TIME OF THE SURVEY THERE WERE NO VISIBLE ENCROACHMENTS LOCATED ON THE LEASE AREA OR EASEMENTS OTHER THAN WHAT IS SHOWN

9. THE LEASE AND EASEMENT AREAS LIE ENTIRELY WITHIN THE PARENT PARCEL.

REGISTERED STATE OF ARKANSAS NO. 1526 SIGNATURE JARED R. PAVATT PROFESSIONAL LAND SURVEYOR

CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAT REPRESENTS A SURVEY BY ME ON THIS DATE AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND ABILITY. PROPERTY CORNERS ARE LOCATED WITH EXISTING MONUMENTS IN THE AREA.

BEARINGS ARE BASED ON ARKANSAS STATE PLANE GRID NORTH DERIVED FROM GPS OBSERVATIONS.

0 30 60 90

C COPYRIGHT HERITAGE ENGINEERING 2024

LEGEND

F.A.A. 1A LOCATION	— G —
LIGHT POLE (O/H ELEC)	(G)
POWER POLE	TELEPHONE LINE
GUY LINE	TELEPHONE RISER
OVERHEAD ELECTRIC	SANITARY SEWER MANHOLE
U/G ELECTRIC	FENCE LINE
WATER LINE	STORM SEWER MANHOLE
WATER METER	
WATER VALVE	CALCULATED OR ANGLE POINT
TITLE EXCEPTION	1/2" IRON ROD WITH CAP SET
	IRON ROD FOUND

HE
ENGINEERING EXCELLENCE
Heritage Engineering
P.O. BOX 505
Benton, Arkansas 72018
(501)939-2303
FAX (501)939-2016
www.HeritageEngineering.net

verticalbridge

PUMPKIN HOLLOW AR #US-AR-5227
THE TOWERS, LLC

SHEET TITLE:
LEASE & EASEMENT SURVEY

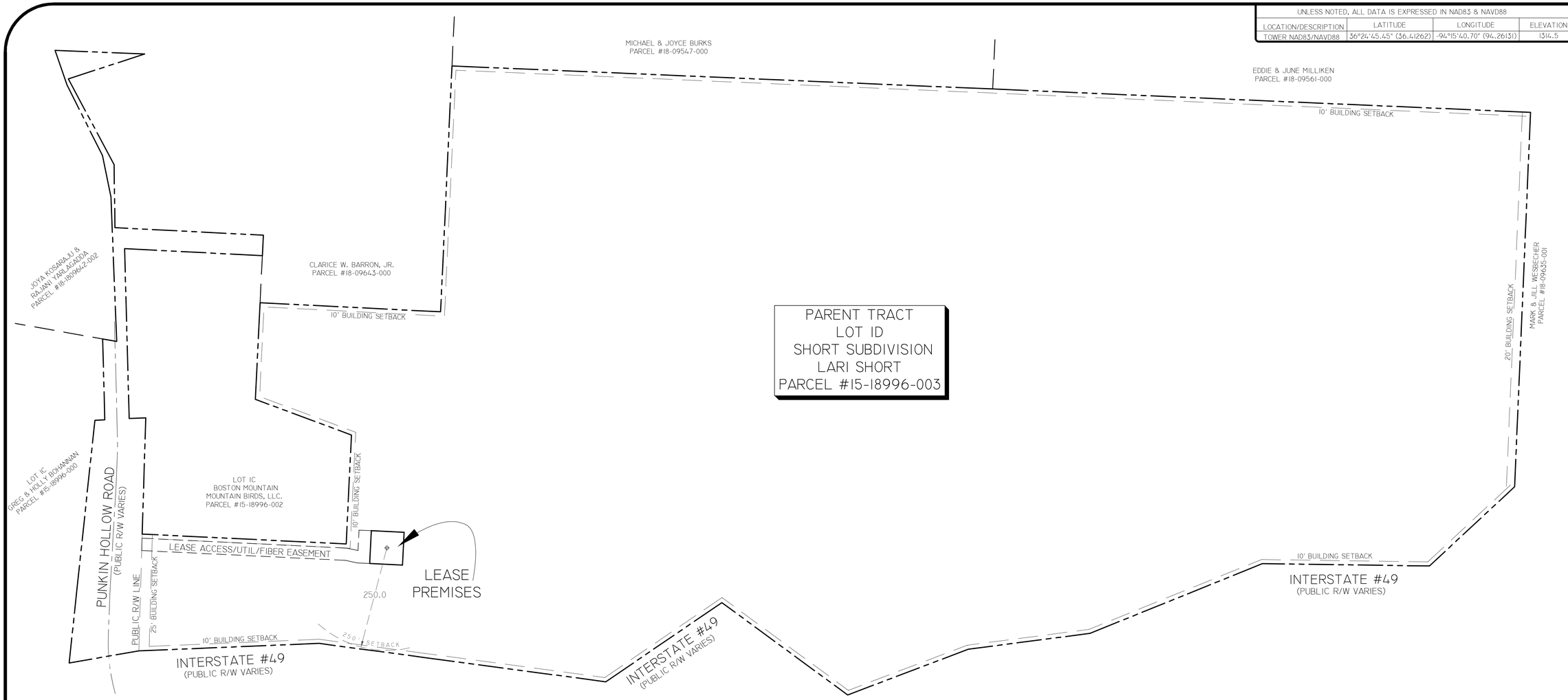
HE JOB NO.:	2024-
FILE NAME:	
PLOT SCALE:	1:30
ISSUE DATE 1:	23 JUNE 2024
ISSUE DATE 2:	08 AUG 2024
ISSUE DATE 3:	06 NOV 2024
ISSUE DATE 4:	
ISSUE DATE 5:	
ISSUE DATE 6:	

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING HAS BEEN REDUCED AND IS NOT TO SCALE

DRAWN BY:	A P
CHECKED BY:	J P

SHEET No.
2.0

UNLESS NOTED, ALL DATA IS EXPRESSED IN NAD83 & NAVD88			
LOCATION/DESCRIPTION	LATITUDE	LONGITUDE	ELEVATION
TOWER NAD83/NAVD88	36°24'45.45" (36.41262)	-94°15'40.70" (94.26131)	1314.5



PARTENT PARCEL

LOT ID OF THE SHORT SUBDIVISION, IN CENTERTON, BENTON COUNTY, ARKANSAS, AS SHOWN ON THE PLAT FILED FOR RECORD IN THE OFFICE OF THE CIRCUIT CLERK AND EX-OFFICIO RECORDER AS DOCUMENT L202363830.

PARCEL ID: 15-18996-003

THIS BEING THE SAME PROPERTY CONVEYED TO TIMOTHY SHORT AND LARI SHORT, HUSBAND AND WIFE BY A DEED FROM TIMOTHY SHORT, TRUSTEE OF THE LOYD WAYNE SHORT REVOCABLE TRUST DATED OCTOBER 25, 2012 DATED 12/29/2021 AND RECORDED 1/04/2022 IN INSTRUMENT 202200701 IN THE COUNTY OF BENTON, STATE OF ARKANSAS.

REGISTERED STATE OF ARKANSAS NO. 1326 SIGNATURE FRED R. BONALL PROFESSIONAL LAND SURVEYOR

CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAT REPRESENTS A SURVEY BY ME ON THIS DATE AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND ABILITY. PROPERTY CORNERS ARE LOCATED WITH EXISTING MONUMENTS IN THE AREA.

N W E S

BEARINGS ARE BASED ON ARKANSAS STATE PLANE GRID NORTH DERIVED FROM GPS OBSERVATIONS.

0 120 240 360

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LEGEND

- F.A.A. 1A LOCATION
- LIGHT POLE (O/H ELEC)
- POWER POLE
- GUY LINE
- OHP — OVERHEAD ELECTRIC
- U/G — U/G ELECTRIC
- W — WATER LINE
- WATER METER
- WATER VALVE
- TITLE EXCEPTION
- G —
- TELEPHONE LINE
- TELEPHONE RISER
- SANITARY SEWER MANHOLE
- X — FENCE LINE
- STORM SEWER MANHOLE
- CALCULATED OR ANGLE POINT
- 1/2" IRON ROD WITH CAP SET
- IRON ROD FOUND

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Benton, Arkansas 72018
(501)939-2303
FAX (501)939-2016
www.HeritageEngineering.net

verticalbridge

PUMPKIN HOLLOW AR #US-AR-5227
THE TOWERS, LLC

SHEET TITLE: LOT ID BOUNDARY KEY SHEET

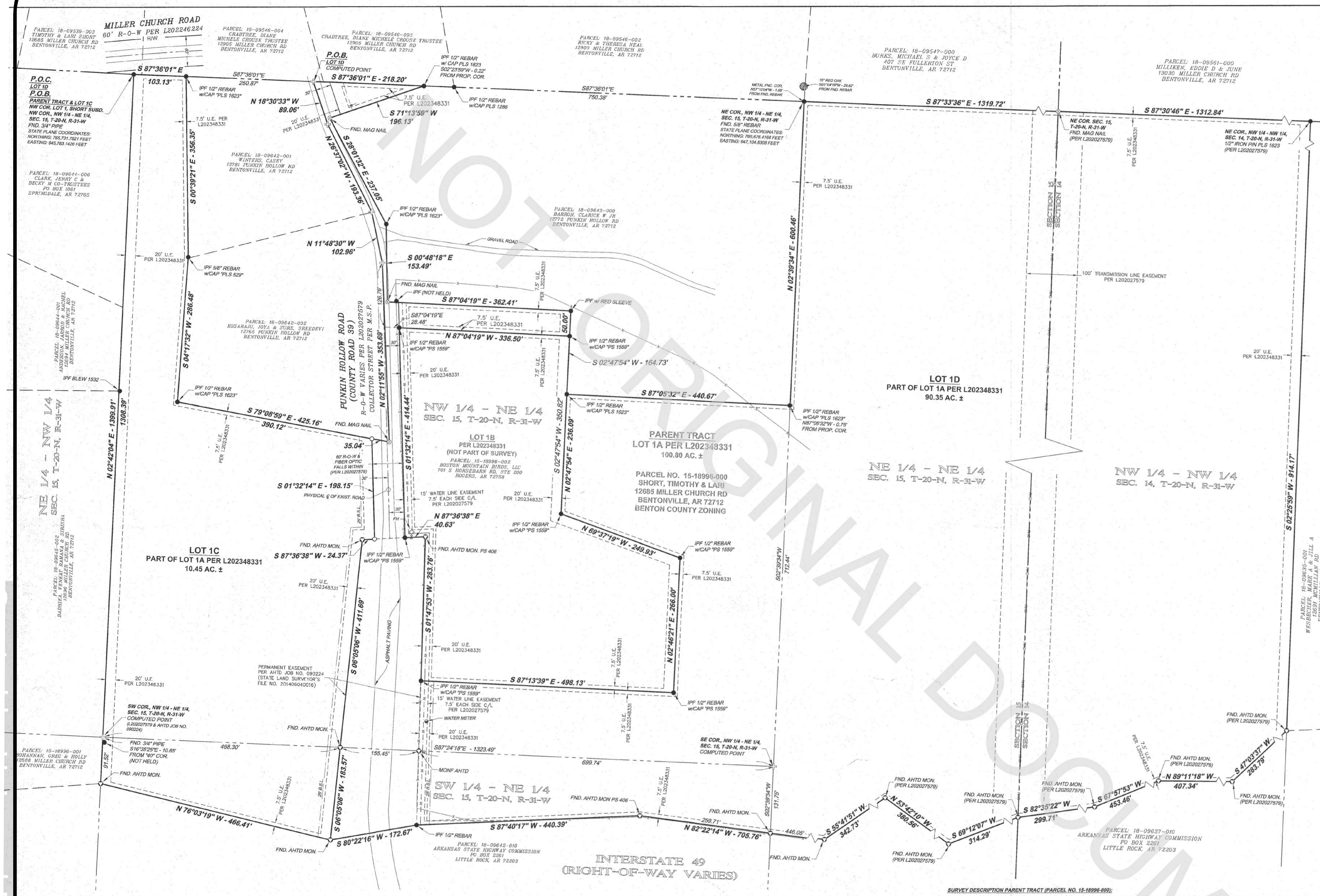
HE JOB NO.:	2024-
FILE NAME:	
PLOT SCALE:	1:120
ISSUE DATE 1:	02 MAY 2025
ISSUE DATE 2:	
ISSUE DATE 3:	
ISSUE DATE 4:	
ISSUE DATE 5:	
ISSUE DATE 6:	

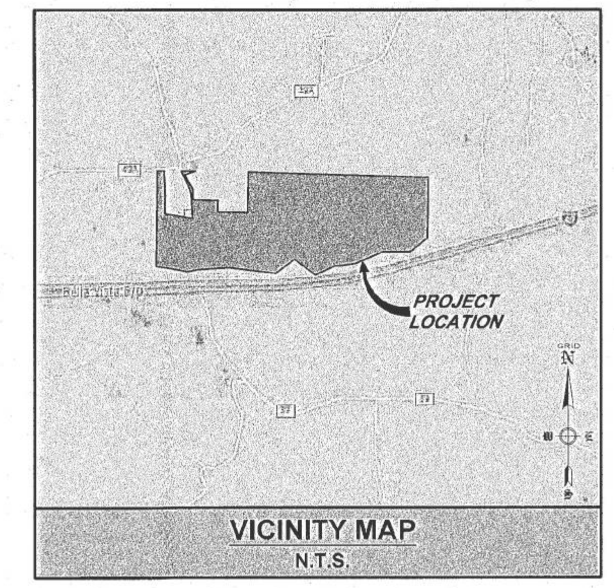
WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING HAS BEEN REDUCED AND IS NOT TO SCALE

DRAWN BY:	A P
CHECKED BY:	J P

SHEET No.
2.1

L202363830 12/14/2023 2:45:5
Brenda DeShields,Circuit C
BENTON CO Circuit Clerk & Rec





RECORDING INFORMATION

GRID N TRUE N

GRAPHIC REPRESENTATION ONLY

BASIS OF BEARINGS: ARKANSAS STATE PLANE COORDINATE SYSTEM NORTH ZONE 0301 ALL DISTANCES ARE GRID

0 50 100 200
SCALE 1" = 100'

SURVEYOR'S NOTES:

THIS SURVEY IS VALID ONLY IF THE DRAWING INCLUDES THE ORIGINAL SEAL AND SIGNATURE OF THE SURVEYOR. THE ORIGINAL SIGNATURE, IF NOT BLUE IN COLOR, IS NOT VALID.

PLAT CLOSURE DECLARATION:

THIS PLAT HAS BEEN CALCULATED FOR CLOSURE AND IS FOUND TO BE ACCURATE TO WITHIN ONE FOOT IN 2,294,627 FEET.

FEMA FLOOD PLAIN ZONE:

THIS PROPERTY IS NOT WITHIN A FLOOD PLAIN ZONE AS SHOWN ON THE F.I.R.M. MAP # 05007C0070J, PANEL 70 OF 560, BENTON COUNTY, ARKANSAS & INCORPORATED AREAS. EFFECTIVE DATE: SEPTEMBER 28, 2007.

UTILITIES:

THE UTILITY INFORMATION, IF ANY SHOWN HEREON, WAS OBSERVED BY THE SURVEYOR ON-SITE AND IS BASED ON ABOVE GROUND UTILITY FEATURES AND RECORD DOCUMENTS ONLY.

THE DESIGNATIONS AND LOCATIONS OF THESE UTILITY FEATURES SHOWN HEREON ARE NOT TO BE CONSTRUED AS ALL INCLUSIVE OR ABSOLUTE AND ARE PROVIDED WITHOUT WARRANTY.

REFERENCES:

EVERY DOCUMENT OF RECORD REVIEWED AND CONSIDERED AS A PART OF THIS SURVEY IS NOTED BELOW. THE SURVEYOR RESEARCHED OR WAS PROVIDED NECESSARY DEEDS, RIGHT-OF-WAY MAPS, AND OTHER PERTINENT INFORMATION AS SHOWN BELOW. THE SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR COURT CASE DECREES, ADVERSE POSSESSION CLAIMS, SUBSURFACE RIGHTS OR OWNERSHIP, ENCUMBRANCES, OR RESTRICTIVE COVENANTS.

ALL RECORDS LISTED BELOW ARE IN THE OFFICE OF THE CIRCUIT CLERK AND EX-OFFICIO RECORDER OF BENTON COUNTY, ARKANSAS UNLESS OTHERWISE NOTED.

A. **CORRECTION WARRANTY DEED:** TIMOTHY SHORT AND LARI SHORT, RECORDED JANUARY 4, 2022, INSTRUMENT NO. L202200701.
B. **WARRANTY DEED:** GREG BOHANNAN AND HOLLY BOHANNAN, RECORDED FEBRUARY 27, 2023, INSTRUMENT NO. L202309134.
C. **PLAT:** SHORT SUBDIVISION, BY ARKOMA SURVEYING AND MAPPING, PLLC, LANCE GEREMY MATHIS, AR PLS NO. 1623, RECORDED MAY 15, 2020, INSTRUMENT NO. L202027579.
D. **RIGHT OF WAY ACQUISITION:** JOB #090224 BY CRAFTON TULL , JAMES H. THOMPSON, AR PLS 406 DATED MAY, 2014. RECORDED WITH THE STATE LAND SURVEYOR'S OFFICE AS FILE NO. 201406040016.
E. **INCIDENTAL SUBDIVISION:** BY ENGINEERING SERVICES, INC., RODNEY WOODS, AR PLS NO. 1559, RECRODED SEPTEMBER 18, 2023, INSTRUMENT NO. L202348331.
F. **WARRANTY DEED:** BOSTON MOUNTAIN BIRDS, LLC, RECORDED OCTOBER 13, 2023, INSTRUMENT NO. L202353536.

SURVEY DESCRIPTION LOT 1C:

PART OF LOT 1A AS SHOWN ON THE INCIDENTAL SUBDIVISION PLAT FILED FOR RECORD AS INSTRUMENT NO. L202348331 OF THE BENTON COUNTY RECORDS, ARKANSAS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 1A ALSO BEING THE NORTHWEST CORNER OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION FIFTEEN (15), TOWNSHIP TWENTY (20) NORTH, RANGE THIRTY-ONE (31) WEST OF THE FIFTH PRINCIPAL MERIDIAN, BENTON COUNTY, ARKANSAS, SAID POINT BEING A FOUND 3/4 INCH PIPE; THENCE ALONG THE NORTH LINES OF SAID LOT 1A AND SAID NW 1/4 OF THE NE 1/4, S87°36'01"E A DISTANCE OF 103.13 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623"; THENCE LEAVING SAID NORTH LINES, S00°39'21"E A DISTANCE OF 356.35 FEET TO A FOUND 5/8 INCH REBAR WITH CAP "PLS 529"; THENCE S04°17'32"W A DISTANCE OF 286.48 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623"; THENCE S79°08'59"E A DISTANCE OF 390.12 FEET TO A SET 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE S01°32'14"E A DISTANCE OF 198.15 FEET TO A SET 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE S87°36'38"W A DISTANCE OF 24.37 FEET TO A FOUND AHTD MONUMENT; THENCE S06°05'06"W A DISTANCE OF 411.69 FEET TO A FOUND AHTD MONUMENT; THENCE CONTINUING S06°05'06"W A DISTANCE OF 183.57 FEET TO A FOUND AHTD MONUMENT; THENCE N76°03'19"W A DISTANCE OF 466.41 FEET TO THE WEST LINE OF THE SW 1/4 OF THE NE 1/4 OF SAID SECTION 15 AND A FOUND AHTD MONUMENT; THENCE LEAVING SAID NORTHERLY RIGHT-OF-WAY LINE AND ALONG SAID WEST LINE AND THE WEST LINE OF SAID NW 1/4 OF THE NE 1/4, N02°42'04"E A DISTANCE OF 1399.91 FEET TO THE **POINT OF BEGINNING**, CONTAINING 10.45 ACRES, MORE OR LESS, AND SUBJECT TO ALL RIGHTS-OF-WAY, EASEMENTS AND RESTRICTIVE COVENANTS OF RECORD AND FACT.

SURVEY DESCRIPTION LOT 1D:

PART OF LOT 1A AS SHOWN ON THE INCIDENTAL SUBDIVISION PLAT FILED FOR RECORD AS INSTRUMENT NO. L202348331 OF THE BENTON COUNTY RECORDS, ARKANSAS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID LOT 1A ALSO BEING THE NORTHWEST CORNER OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION FIFTEEN (15), TOWNSHIP TWENTY (20) NORTH, RANGE THIRTY-ONE (31) WEST OF THE FIFTH PRINCIPAL MERIDIAN, BENTON COUNTY, ARKANSAS, SAID POINT BEING A FOUND 3/4 INCH PIPE; THENCE ALONG THE NORTH LINES OF SAID LOT 1A AND SAID NW 1/4 OF THE NE 1/4, S87°36'01"E A DISTANCE OF 354.00 FEET TO THE **POINT OF BEGINNING**, SAID POINT BEING IN PUNKIN HOLLOW ROAD; THENCE CONTINUING S87°36'01"E A DISTANCE OF 218.20 FEET TO A POINT FROM WHICH BEARS A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623" S02°23'59"W A DISTANCE OF 0.22 FEET; THENCE LEAVING SAID NORTH LINE, S71°13'59"W A DISTANCE OF 196.13 FEET TO A FOUND "MAG" NAIL IN PUNKIN HOLLOW ROAD ; THENCE LEAVING SAID PUNKIN HOLLOW ROAD, S28°01'32"E A DISTANCE OF 237.05 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623"; THENCE S00°48'18"E A DISTANCE OF 153.49 FEET TO A FOUND "MAG" NAIL; THENCE S87°04'19"E A DISTANCE OF 362.41 FEET TO A FOUND REBAR WITH RED SLEEVE; THENCE S02°47'54"W A DISTANCE OF 50.00 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N87°04'19"W A DISTANCE OF 336.50 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE S01°32'14"E A DISTANCE OF 414.44 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N87°36'38"E A DISTANCE OF 40.63 FEET TO A FOUND AHTD MONUMENT WITH CAP "PS 406"; THENCE S01°47'53"W A DISTANCE OF 283.76 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE S87°13'39"E A DISTANCE OF 498.13 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N02°46'21"E A DISTANCE OF 266.00 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N69°37'19"W A DISTANCE OF 249.93 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N02°47'54"E A DISTANCE OF 236.09 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623"; THENCE S87°05'32"E A DISTANCE OF 440.67 FEET TO A POINT ON THE EAST LINE OF SAID LOT 1A ALSO BEING THE EAST LINE OF SAID NW 1/4 OF THE NE 1/4 FROM WHICH A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623" BEARS N87°05'32"W A DISTANCE OF 0.75 FEET; THENCE ALONG SAID EAST LINES, N02°39'34"E A DISTANCE OF 600.46 FEET TO THE NORTH LINE OF SAID LOT 1A AND THE NORTHEAST CORNER OF SAID NW 1/4 OF THE NE 1/4, SAID POINT BEING A FOUND 5/8 INCH REBAR; THENCE LEAVING SAID EAST LINES AND ALONG THE NORTH LINES OF SAID LOT 1A AND THE NE 1/4 OF THE NE 1/4 OF SAID SECTION 15, S87°33'36"E A DISTANCE OF 1319.72 FEET TO THE NORTHEAST CORNER OF SAID SECTION 15 AND A "MAG" NAIL; THENCE CONTINUING ALONG THE NORTH LINE OF SAID LOT 1A AND ALONG THE NORTH LINE OF THE NW 1/4 OF THE NW 1/4 OF SECTION 14, S87°30'46"E A DISTANCE OF 1312.84 FEET TO THE NORTHEAST CORNER OF SAID NW 1/4 OF THE NW 1/4 AND A 1/2 INCH REBAR WITH CAP "PLS 1623"; THENCE LEAVING SAID NORTH LINES AND ALONG THE EAST LINE OF SAID LOT 1A AND SAID NW 1/4 OF THE NW 1/4, S02°25'59"W A DISTANCE OF 914.17 FEET TO THE NORTHERLY RIGHT-OF-WAY LINE OF INTERSTATE 49 AND AN AHTD MONUMENT; THENCE LEAVING SAID EAST LINES AND ALONG SAID NORTHERLY LINE, S47°03'37"W A DISTANCE OF 283.79 FEET TO AN AHTD MONUMENT; THENCE N89°11'18"W A DISTANCE OF 407.34 FEET TO AN AHTD MONUMENT; THENCE S67°57'53"W A DISTANCE OF 453.46 FEET TO AN AHTD MONUMENT; THENCE S82°35'22"W A DISTANCE OF 299.71 FEET TO AN AHTD MONUMENT; THENCE S69°12'07"W A DISTANCE OF 314.29 FEET TO AN AHTD MONUMENT; THENCE N53°42'10"W A DISTANCE OF 380.56 FEET TO AN AHTD MONUMENT; THENCE S55°41'51"W A DISTANCE OF 342.73 FEET TO A FOUND AHTD MONUMENT; THENCE N82°22'14"W A DISTANCE OF 705.76 FEET TO A FOUND AHTD MONUMENT "PS 406"; THENCE S87°40'17"W A DISTANCE OF 440.39 FEET TO A FOUND 1/2 INCH REBAR; THENCE S80°22'16"W A DISTANCE OF 172.67 FEET TO A FOUND AHTD MONUMENT; THENCE LEAVING SAID NORTHERLY RIGHT-OF-WAY LINE, N06°05'06"E A DISTANCE OF 183.57 FEET TO A FOUND AHTD MONUMENT; THENCE CONTINUING N06°05'06"E A DISTANCE OF 411.69 FEET TO A FOUND AHTD MONUMENT; THENCE N87°36'38"E A DISTANCE OF 24.37 FEET TO A SET 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N01°32'14"W A DISTANCE OF 198.15 FEET TO A SET 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE S79°08'59"E A DISTANCE OF 35.04 FEET TO A FOUND "MAG" NAIL IN PUNKIN HOLLOW ROAD; THENCE ALONG SAID PUNKIN HOLLOW ROAD, N02°11'55"W A DISTANCE OF 353.69 FEET; THENCE N11°48'30"W A DISTANCE OF 102.96 FEET; THENCE N26°37'02"W A DISTANCE OF 193.36 FEET; THENCE N18°30'33"W A DISTANCE OF 89.06 FEET TO THE **POINT OF BEGINNING**, CONTAINING 90.35 ACRES, MORE OR LESS, AND SUBJECT TO THE RIGHT-OF-WAY OF PUNKIN HOLLOW ROAD AND ALL RIGHTS-OF-WAY, EASEMENTS AND RESTRICTIVE COVENANTS OF RECORD AND FACT.

SURVEY DESCRIPTION PARENT TRACT (PARCEL NO. 15-18996-000):

LOT 1A AS SHOWN ON THE INCIDENTAL SUBDIVISION PLAT FILED FOR RECORD AS INSTRUMENT NO. L202348331 OF THE BENTON COUNTY RECORDS, ARKANSAS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 1A ALSO BEING THE NORTHWEST CORNER OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION FIFTEEN (15), TOWNSHIP TWENTY (20) NORTH, RANGE THIRTY-ONE (31) WEST OF THE FIFTH PRINCIPAL MERIDIAN, BENTON COUNTY, ARKANSAS, SAID POINT BEING A FOUND 3/4 INCH PIPE; THENCE ALONG THE NORTH LINES OF SAID LOT 1A AND SAID NW 1/4 OF THE NE 1/4, S87°36'01"E A DISTANCE OF 103.13 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623"; THENCE LEAVING SAID NORTH LINES, S00°39'21"E A DISTANCE OF 356.35 FEET TO A FOUND 5/8 INCH REBAR WITH CAP "PLS 529"; THENCE S04°17'32"W A DISTANCE OF 286.48 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623"; THENCE S79°08'59"E A DISTANCE OF 425.16 FEET TO A FOUND "MAG" NAIL IN PUNKIN HOLLOW ROAD; THENCE ALONG SAID PUNKIN HOLLOW ROAD, N02°11'55"W A DISTANCE OF 353.69 FEET; THENCE N11°48'30"W A DISTANCE OF 102.96 FEET; THENCE N26°37'02"W A DISTANCE OF 193.36 FEET; THENCE N18°30'33"W A DISTANCE OF 89.06 FEET TO THE NORTH LINE OF SAID NW 1/4 OF THE NE 1/4; THENCE LEAVING SAID PUNKIN HOLLOW ROAD AND ALONG SAID NORTH LINE, S87°36'01"E A DISTANCE OF 218.20 FEET TO A POINT FROM WHICH BEARS A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623" S02°23'59"W A DISTANCE OF 0.22 FEET; THENCE LEAVING SAID NORTH LINE, S71°13'59"W A DISTANCE OF 196.13 FEET TO A FOUND "MAG" NAIL IN PUNKIN HOLLOW ROAD ; THENCE LEAVING SAID PUNKIN HOLLOW ROAD, S28°01'32"E A DISTANCE OF 237.05 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623"; THENCE S00°48'18"E A DISTANCE OF 153.49 FEET TO A FOUND "MAG" NAIL; THENCE S87°04'19"E A DISTANCE OF 362.41 FEET TO A FOUND REBAR WITH RED SLEEVE; THENCE S02°47'54"W A DISTANCE OF 50.00 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N87°04'19"W A DISTANCE OF 336.50 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE S01°32'14"E A DISTANCE OF 414.44 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N87°36'38"E A DISTANCE OF 40.63 FEET TO A FOUND AHTD MONUMENT WITH CAP "PS 406"; THENCE S01°47'53"W A DISTANCE OF 283.76 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE S87°13'39"E A DISTANCE OF 498.13 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N02°46'21"E A DISTANCE OF 266.00 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N69°37'19"W A DISTANCE OF 249.93 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N02°47'54"E A DISTANCE OF 236.09 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623"; THENCE S87°05'32"E A DISTANCE OF 440.67 FEET TO A POINT ON THE EAST LINE OF SAID LOT 1A ALSO BEING THE EAST LINE OF SAID NW 1/4 OF THE NE 1/4 FROM WHICH A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623" BEARS N87°05'32"W A DISTANCE OF 0.75 FEET; THENCE ALONG SAID EAST LINES, N02°39'34"E A DISTANCE OF 600.46 FEET TO THE NORTH LINE OF SAID LOT 1A AND THE NORTHEAST CORNER OF SAID NW 1/4 OF THE NE 1/4, SAID POINT BEING A FOUND 5/8 INCH REBAR; THENCE LEAVING SAID EAST LINES AND ALONG THE NORTH LINES OF SAID LOT 1A AND THE NE 1/4 OF THE NE 1/4 OF SAID SECTION 15, S87°33'36"E A DISTANCE OF 1319.72 FEET TO THE NORTHEAST CORNER OF SAID SECTION 15 AND A "MAG" NAIL; THENCE CONTINUING ALONG THE NORTH LINE OF SAID LOT 1A AND ALONG THE NORTH LINE OF THE NW 1/4 OF THE NW 1/4 OF SECTION 14, S87°30'46"E A DISTANCE OF 1312.84 FEET TO THE NORTHEAST CORNER OF SAID NW 1/4 OF THE NW 1/4 AND A 1/2 INCH REBAR WITH CAP "PLS 1623"; THENCE LEAVING SAID NORTH LINES AND ALONG THE EAST LINE OF SAID LOT 1A AND SAID NW 1/4 OF THE NW 1/4, S02°25'59"W A DISTANCE OF 914.17 FEET TO THE NORTHERLY RIGHT-OF-WAY LINE OF INTERSTATE 49 AND AN AHTD MONUMENT; THENCE LEAVING SAID EAST LINES AND ALONG SAID NORTHERLY LINE, S47°03'37"W A DISTANCE OF 283.79 FEET TO AN AHTD MONUMENT; THENCE N89°11'18"W A DISTANCE OF 407.34 FEET TO AN AHTD MONUMENT; THENCE S67°57'53"W A DISTANCE OF 453.46 FEET TO AN AHTD MONUMENT; THENCE S82°35'22"W A DISTANCE OF 299.71 FEET TO AN AHTD MONUMENT; THENCE S69°12'07"W A DISTANCE OF 314.29 FEET TO AN AHTD MONUMENT; THENCE N53°42'10"W A DISTANCE OF 380.56 FEET TO AN AHTD MONUMENT; THENCE S55°41'51"W A DISTANCE OF 342.73 FEET TO A FOUND AHTD MONUMENT; THENCE N82°22'14"W A DISTANCE OF 705.76 FEET TO A FOUND AHTD MONUMENT "PS 406"; THENCE S87°40'17"W A DISTANCE OF 440.39 FEET TO A FOUND 1/2 INCH REBAR; THENCE S80°22'16"W A DISTANCE OF 172.67 FEET TO A FOUND AHTD MONUMENT; THENCE N76°03'19"W A DISTANCE OF 466.41 FEET TO THE WEST LINE OF THE SW 1/4 OF THE NE 1/4 OF SAID SECTION 15 AND A FOUND AHTD MONUMENT; THENCE LEAVING SAID NORTHERLY RIGHT-OF-WAY LINE AND ALONG SAID WEST LINE AND THE WEST LINE OF SAID NW 1/4 OF THE NE 1/4, N02°42'04"E A DISTANCE OF 1399.91 FEET TO THE **POINT OF BEGINNING**, CONTAINING 100.80 ACRES, MORE OR LESS, AND SUBJECT TO THE RIGHT-OF-WAY OF PUNKIN HOLLOW ROAD AND ALL RIGHTS-OF-WAY, EASEMENTS AND RESTRICTIVE COVENANTS OF RECORD AND FACT.

OWNER:	SHORT, TIMOTHY & LARI 12685 MILLER CHURCH RD BENTONVILLE, AR 72712
SURVEYOR:	ENGINEERING SERVICES, INC. 1207 S. OLD MISSOURI ROAD P.O. BOX 282 SPRINGDALE, AR 72765
WORK ORDER #:	23241
ZONING:	BENTON COUNTY ZONING
SETBACKS:	FRONT - 25' SIDE - 10' REAR - 20'

LEGEND

———	PROPERTY LINE	P.O.C.	POINT OF COMMENCEMENT
— — —	PROPOSED NEW LOT LINE	P.O.B.	POINT OF BEGINNING
— - —	SECTION LINE	●	IPF - IRON PIN FOUND (AS NOTED)
- - -	SECTION "40" LINE	▽	FOUND MONUMENT (AS NOTED)
— —	ADJACENT OWNER	○	IRON PIN SET w/ CAP "PS 1559"
- - - -	EASEMENT (AS NOTED)	⊗	FOUND "MAG" NAIL
—— R/W ——	RIGHT-OF-WAY	✣	COMPUTED POINT
— - —	PHYSICAL CENTERLINE OF ROAD	◒	WATER METER (WM)
——x——	WIRE FENCE LINE		FIRE HYDRANT (FH)
— W —	WATER LINE	⋈	WATER VALVE (WV)
— OHU —	OVERHEAD UTILITY LINE		

CERTIFICATE OF OWNERSHIP:

WE, THE UNDERSIGNED, OWNERS OF THE REAL ESTATE SHOWN AND DESCRIBED HEREIN, DO HEREBY CERTIFY THAT WE HAVE LAID OFF, PLATTED, AND SUBDIVIDED AND DO HEREBY LAY OFF, PLAT, SUBDIVIDE SAID REAL ESTATE IN ACCORDANCE WITH THIS PLAT, AND WE DO HEREBY DEDICATE TO THE USE OF THE PUBLIC THE STREETS, ALLEYS, DRIVES, AND EASEMENTS AS SHOWN ON SAID PLAT.

Timothy Short 12-6-23
TIMOTHY SHORT DATE

SOURCE OF TITLE: DEED INSTRUMENT NO. L202200701

Lari Short 12/6/23
LARI SHORT DATE

SOURCE OF TITLE: DEED INSTRUMENT NO. L202200701

ACKNOWLEDGMENT

STATE OF ARKANSAS)
)
COUNTY OF BENTON)

ON THIS DAY BEFORE THE UNDERSIGNED, A NOTARY PUBLIC DULY QUALIFIED AND ACTING IN AND FOR THE COUNTY, AND STATE AFORESAID, PERSONALLY APPEARED TIMOTHY SHORT AND LARI SHORT, SATISFACTORILY PROVEN TO BE THE PERSONS WHOSE NAMES APPEAR AS THE OWNERS IN THE FOREGOING INSTRUMENT, AND STATED THAT THEY HAVE EXECUTED THE SAME FOR THE CONSIDERATION, USES AND PURPOSES THEREIN STATED.

IN WITNESS WHEREOF, I HEREUNTO SET MY HAND AND ON THIS 6th DAY OF December, 2023

Karri Layton 3-26-31
NOTARY PUBLIC MY COMMISSION EXPIRES

KARRI LAYTON
Notary Public - Arkansas
Benton County
Commission # 12715890
My Commission Expires Mar 26, 2031

CERTIFICATE OF APPROVAL

PURSUANT TO THE CITY OF BELLA VISTA SUBDIVISION REGULATIONS AND ALL OTHER CONDITIONS AND APPROVALS HAVING BEEN COMPLETED, THIS DOCUMENT IS HEREBY ACCEPTED. THIS CERTIFICATE IS HEREBY EXECUTED UNDER THE AUTHORITY OF THE SAID RULES AND REGULATIONS.

12.14.23
DIRECTOR, COMMUNITY DEVELOPMENT SERVICES DATE

CERTIFICATE OF SURVEYING ACCURACY:

I, RODNEY WOODS, HEREBY CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS A BOUNDARY SURVEY MADE BY ME AND BOUNDARY MARKERS AND LOT CORNERS SHOWN HEREON ACTUALLY EXIST AND THEIR LOCATION, TYPE AND MATERIAL ARE CORRECTLY SHOWN AND ALL MINIMUM REQUIREMENTS OF THE ARKANSAS MINIMUM STANDARDS FOR LAND SURVEYORS HAVE BEEN MET.

Rodney Woods 12-4-2023
REGISTERED LAND SURVEYOR DATE
STATE OF ARKANSAS REGISTRATION NO. 1559

REGISTERED PROFESSIONAL LAND SURVEYOR STATE OF ARKANSAS NO. 1559 RODNEY WOODS SIGNATURE

NOTE: SEPTIC COMPLIANCE AND BUILDABILITY

1. APPROVAL OF THE PLAT DOES NOT GUARANTEE FUTURE SEPTIC COMPLIANCE.
2. APPROVAL OF THE PLAT DOES NOT GUARANTEE THE LOTS ARE BUILDABLE.

User Name: C
CERTIFICATE OF
STATE OF ARKANSAS, COUNTY OF
I hereby certify that this instrum
Filed and Recorded in the Official
L202363830 12/14/2023 2:45
Brenda DeShields,Circuit
BENTON CO, AR FEE

202402057298

PLAT CODE: 500-20N-31W-0-14-400-04-1559
PLAT CODE: 500-20N-31W-0-15-100-04-1559

REVISION	DATE	DESCRIPTION
1	11/17/23	REVISED PER CITY COMMENTS

CERTIFICATE OF AUTHORIZATION ENGINEERING SERVICES, INC. 131 ARKANSAS ENGINEER

LSP-2023-52125

INCIDENTAL SUBDIVISION
FOR GREG BOHANNON
BENTON COUNTY, ARKANSAS

SCALE: 1"=100' | DATE: November 17, 2023 | DRAWN BY:KND/RER

ENGINEERING SERVICES, INCORPORATED
SPRINGDALE, ARKANSAS

© COPYRIGHT 2023, ENGINEERING SERVICES, INC. 10/26/2023 10:54 AM

W.O.# 23241 | SHEET 1 / 1

HE
ENGINEERING EXCELLENCE
Heritage Engineering
P.O. BOX 505
Benton, Arkansas 72018
(501)939-2303
FAX (501)939-2016
www.HeritageEngineering.net

verticalbridge

PUMPKIN HOLLOW AR #US-AR-5227
THE TOWERS, LLC

SHEET TITLE:
SUBDIVISION PLAT

HE JOB NO.:	2024-
FILE NAME:	
PLOT SCALE:	1:120
ISSUE DATE 1:	02 MAY 2025
ISSUE DATE 2:	
ISSUE DATE 3:	
ISSUE DATE 4:	
ISSUE DATE 5:	
ISSUE DATE 6:	
DRAWN BY:	A P
CHECKED BY:	J P

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING HAS BEEN REDUCED AND IS NOT TO SCALE

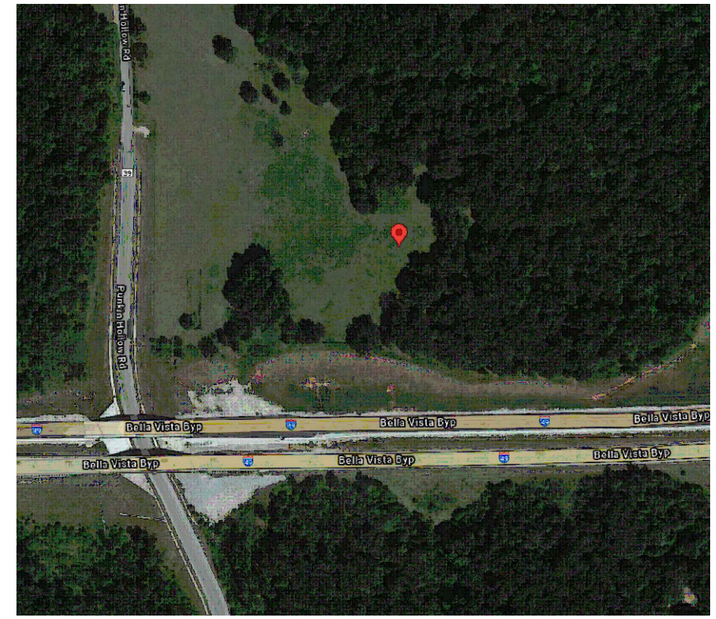
SHEET No.
2.2

NOT ORIGINAL DOCUMENT

vertical bridge

SITE NAME

PUMPKIN HOLLOW RD - ARKANSAS
VB SITE ID: US-AR-5232



N

VICINITY MAP

SHEET INDEX

SHEET	TITLE
1.0	COVER SHEET
2.0	BOUNDARY SURVEY (SHEET 1 OF 3)
2.1	BOUNDARY SURVEY (SHEET 2 OF 3)
2.2	BOUNDARY SURVEY (SHEET 3 OF 3)
3.0	OVERALL SITE & TOPO COMPOUND PLAN
3.1	COMPOUND DETAILS & EROSION CONTROL NOTES
3.2	COMPOUND FENCE ELEVATIONS & DETAILS
3.3	DRIVEWAY PLAN & PROFILE
3.4	ACCESS DRIVE DISTANCES
4.0	TOWER ELEVATION & ANTENNA DETAILS
4.1	RF DESIGN SHEET (1 OF 2)
4.2	RF DESIGN SHEET (2 OF 2)
4.3	ANTENNA MOUNT SPECIFICATION SHEET (BY OTHERS)
4.4	MICROWAVE PATH DATASHEET & MICROWAVE FORM
4.5	MICROWAVE MOUNT SPECIFICATION SHEET
5.0	WAVE GUIDE BRIDGE, GPS ELEVATION, SECTION, PLAN & DETAILS
5.1	EQUIPMENT PAD PLANS & AWNING/ICE BRIDGE LAYOUT
5.2	OUTDOOR EQUIPMENT ELEVATIONS
5.3	PV-WC1012-312X162 CANOPY (BY OTHERS)
5.4	GENERATOR SPECIFICATION SHEET (BY OTHERS)
6.0	EQUIPMENT MAT PLANS, SECTIONS & NOTES
6.1	OUTDOOR OVP CUTSHEET
7.0	UTILITY ROUTING PLAN
7.1	BREAKER BOX ELECTRIC SCHEMATIC
7.2	ELECTRIC SCHEMATIC & POWER RISER BLOCK DIAGRAM
7.3	UTILITY DISTRIBUTION RACK ELEVATIONS & DETAILS
7.4	OVERALL FIBER AND POWER ROUTE
8.0	COMPOUND GROUNDING PLAN & NOTES
8.1	GROUNDING DETAILS, SHEET 1 OF 3
8.2	GROUNDING DETAILS, SHEET 2 OF 3
8.3	GROUNDING DETAILS, SHEET 3 OF 3
9.0	GENERAL NOTES & SPECIFICATIONS
9.1	SPECIFICATIONS
9.2	GENERAL NOTES

NOTE: GC TO REFER TO SEPARATE TOWER/FOUNDATION DRAWINGS DESIGNED BY OTHERS

PROJECT DATA

SITE NAME: PUMPKIN HOLLOW / US-AR-5232
STATE: ARKANSAS
COUNTY: BENTON
911 ADDRESS: 12716 PUNKIN HOLLOW RD BENTONVILLE, AR 72712

TOWER/SITE OWNER: THE TOWERS, LLC
PROJECT: NEW MONOPOLE TOWER SITE

PARENT PROPERTY OWNER: TIMOTHY AND LARI SHORT
CONTACT: LARI SHORT
ADDRESS: 12685 MILLER CHURCH ROAD BENTONVILLE, AR 72712
PHONE NO: 479-531-9048

ELECTRIC UTILITY: CARROLL ELECTRIC
PHONE NO: 800-432-9720
CONTACT PERSON: N/A

TELCO PROVIDER: PENDING TELCO PROVIDER
PHONE NO: TBD
CONTACT PERSON: TBD

Arkansas 811
Know what's below. Call before you dig.

TOWER DATA

TOWER TYPE: MONOPOLE
FAA FILING HEIGHT: 199'
TOWER HEIGHT: 195'
PROPOSED ANTENNA CENTERLINE: 190'
LATITUDE: N 36° 24' 45.45" (NAD 83)
LONGITUDE: W 94° 15' 40.70" (NAD 83)
GROUND ELEVATION: 1320.1' (NAVD88)

REV 1:
-1.0: REVISED SHEET INDEX, REVISED VZW CONSTRUCTION ENGINEER, AND ADDED TELCO PROVIDER INFO
-3.0: ADDED SITE WORK NOTES
-3.2: REVISED FENCE DETAIL
-4.0: REVISED TOWER ELEVATION, REVISED ANTENNA DETAIL AND ADDED MICROWAVE ANTENNA DETAIL
-4.4: ADDED SHEET 4.4
-4.5: ADDED SHEET 4.5

REV 2:
-ALL SHEETS: REVISED TITLE BLOCK
-1.0: REVISED SHEET INDEX
-2.0: REVISED SURVEY PER COMMENTS FROM BELLA VISTA
-2.1: REVISED SURVEY PER COMMENTS FROM BELLA VISTA
-2.2: REVISED SURVEY PER COMMENTS FROM BELLA VISTA
-3.0: REVISED ACCESS DRIVE IN ROW
-3.3: REVISED DRIVEWAY PLAN AND ADDED CULVERT DETAIL
-3.4: CREATED SHEET 3.4 FOR ACCESS DRIVE DISTANCE

PROJECT DIRECTORY

ENGINEER: HERITAGE ENGINEERING
CONTACT PERSON: ERIC WARFORD
ADDRESS: P.O. BOX 505 BENTON, ARKANSAS 72018
PHONE NO: (501) 939 - 2303

SURVEYOR: CORNERSTONE SURVEYING
CONTACT PERSON: JARED R. PAVATT
ADDRESS: P.O. BOX 1074 GREENBRIER, AR 72058
PHONE NO: 501-679-1318

CARRIER DATA

RAWLAND CONSTRUCTION DRAWINGS PREPARED FOR: verizon

VZW PROJECT ID: 16133676
VZW MDG LOCATION ID: 5000070521

VZW CONSTRUCTION ENGINEER: JASON THOMAS
PHONE NO: (501) 353-4320

EQUIP. PADS: 4'-0" x 12'-0" & 4'-0" x 8'-0"
GROUNDING: TYPICAL

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CERTIFICATE OF AUTHORIZATION HERITAGE ENGINEERING PLLC NO. 1133 ARKANSAS ENGINEER

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER ERIC WARFORD

HE ENGINEERING EXCELLENCE
Heritage Engineering PLLC
P.O. BOX 505
Benton, Arkansas 72018
(501) 939-2303
FAX (501) 939-2016

vertical bridge

PROJECT: PUMPKIN HOLLOW RD / US-AR-5227
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE: COVER SHEET

HE JOB NO.:	2024-0092
FILE NAME:	240092C1.0.DWG
PLOT SCALE:	1:1
REV. 0:	11/15/2024
REV. 1:	03/21/2025
REV. 2:	05/02/2025

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING HAS BEEN REDUCED AND IS NOT TO SCALE

SCALE:	NTS
DESIGNED BY:	STS
DRAWN BY:	STS
CHECKED BY:	EAW

SHEET No.
1.0

PROPERTY ADDRESS
0 PUNKIN HOLLOW ROAD, BENTONVILLE, AR 72712
BENTON COUNTY

CERTIFICATION PARCEL #15-18996-003 /BENTON COUNTY, ARKANSAS

I HEREBY CERTIFY TO: VERTICAL BRIDGE REIT, LLC, A DELAWARE LIMITED LIABILITY COMPANY, ITS SUBSIDIARIES, AND THEIR RESPECTIVE SUCCESSORS AND/OR ASSIGNS; AND (II) TORONTO DOMINION (TEXAS) LLC, AS ADMINISTRATIVE AGENT, FOR ITSELF AND ON BEHALF OF THE LENDERS PARTIES FROM TIME TO TIME TO THAT CERTAIN SECOND AMENDED AND RESTATED LOAN AGREEMENT DATED JUNE 17, 2016 WITH VERTICAL BRIDGE HOLDCO, LLC, AS BORROWER, AND VERTICAL BRIDGE HOLDCO PARENT, LLC, AS PARENT, AS MAY BE AMENDED, RESTATED, MODIFIED OR RENEWED, THEIR SUCCESSORS AND ASSIGNS AS THEIR INTERESTS MAY APPEAR; AND SUMMIT SETTLEMENT SERVICES, LLC.

AS PER SUMMIT SETTLEMENT SERVICES, LLC. COMMITMENT FOR TITLE INSURANCE, COMMITMENT NO. VTB-181057-C, ISSUED MAY 23, 2024, THE FOLLOWING ITEMS ARE OF SURVEY MATTERS:

1. ANY DEFECT, LIEN, ENCUMBRANCE, ADVERSE CLAIM, OR OTHER MATTER THAT APPEARS FOR THE FIRST TIME IN THE PUBLIC RECORDS OR IS CREATED, ATTACHES, OR IS DISCLOSED BETWEEN THE COMMITMENT DATE AND THE DATE ON WHICH ALL OF THE SCHEDULE B, PART I – REQUIREMENTS ARE MET.

2. (A) TAXES OR ASSESSMENTS THAT ARE NOT SHOWN AS EXISTING LIENS BY THE RECORDS OF ANY TAXING AUTHORITY THAT LEVIES TAXES OR ASSESSMENTS ON REAL PROPERTY OR BY THE PUBLIC RECORDS; (B) PROCEEDINGS BY A PUBLIC AGENCY THAT MAY RESULT IN TAXES OR ASSESSMENTS, OR NOTICES OF SUCH PROCEEDINGS, WHETHER OR NOT SHOWN BY THE RECORDS OF SUCH AGENCY OR BY THE PUBLIC RECORDS.

3. ANY FACTS, RIGHTS, INTERESTS, OR CLAIMS THAT ARE NOT SHOWN BY THE PUBLIC RECORDS BUT THAT COULD BE ASCERTAINED BY AN INSPECTION OF THE LAND OR THAT MAY BE ASSERTED BY PERSONS IN POSSESSION OF THE LAND.

4. EASEMENTS, LIENS OR ENCUMBRANCES, OR CLAIMS THEREOF, NOT SHOWN BY THE PUBLIC RECORDS.

5. ANY LIEN FOR SERVICES, LABOR, OR MATERIALS IN CONNECTION WITH IMPROVEMENTS, REPAIRS OR RENOVATIONS PROVIDED BEFORE, ON, OR AFTER DATE OF POLICY, NOT SHOWN BY THE PUBLIC RECORDS.

6. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION, OR ADVERSE CIRCUMSTANCE AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND AND NOT SHOWN BY THE PUBLIC RECORDS.

7. ANY MINERAL OR MINERAL RIGHTS LEASED, GRANTED OR RETAINED BY CURRENT OR PRIOR OWNERS.

8. ANY DISPUTE AS TO THE BOUNDARIES CAUSED BY THE CHANGE IN THE LOCATION OF ANY WATER BODY WITHIN OR ADJACENT TO THE LAND PRIOR TO THE DATE OF POLICY, AND ANY ADVERSE CLAIM TO ALL OR PART OF THE LAND THAT IS, AT DATE OF POLICY, OR WAS PREVIOUSLY, UNDER WATER.

9. DISCREPANCIES OR SHORTAGE IN THE SQUARE FOOTAGE, ACREAGE OR AREA OF THE LAND.

10. TAXES AND ASSESSMENTS FOR THE YEAR 2023 AND ALL SUBSEQUENT YEARS ARE A LIEN BUT NOT YET DUE AND PAYABLE.

11. RIGHT-OF-WAY EASEMENT BETWEEN LOYD WAYNE SHORT AND JO ANN SHORT; AND BENTON COUNTY RURAL WATER DEVELOPMENT AUTHORITY, DATED DECEMBER 4, 1998 AND RECORDED JANUARY 4, 1999 IN (INSTRUMENT) 99000114, IN BENTON COUNTY, ARKANSAS. DOES NOT APPEAR TO AFFECT THE LESSEE'S PREMISE OR EASEMENTS.

12. RIGHT-OF-WAY EASEMENT BETWEEN LOYD WAYNE SHORT AND JO ANN SHORT; AND BENTON COUNTY RURAL WATER DEVELOPMENT AUTHORITY, DATED DECEMBER 4, 1998 AND RECORDED JANUARY 4, 1999 IN (INSTRUMENT) 99000113, IN BENTON COUNTY, ARKANSAS. DOES NOT APPEAR TO AFFECT THE LESSEE'S PREMISE OR EASEMENTS.

13. RIGHT-OF-WAY EASEMENT BETWEEN LOYD WAYNE SHORT AND JO ANN SHORT; AND BENTON COUNTY RURAL WATER DEVELOPMENT AUTHORITY, DATED OCTOBER 11, 1998 AND RECORDED NOVEMBER 19, 1998 IN (INSTRUMENT) 98125450, IN BENTON COUNTY, ARKANSAS. DOES NOT APPEAR TO AFFECT THE LESSEE'S PREMISE BUT DOES APPEAR TO AFFECT THE LESSEE'S ACCESS EASEMENT.

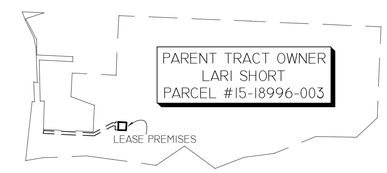
14. ANY AND ALL MATTERS DISCLOSED ON THE MAP ENTITLED "PLAT MAP" DATED MAY 15, 2020 AND RECORDED MAY 15, 2020 IN , (INSTRUMENT) L202027579 IN BENTON COUNTY, ARKANSAS. THE REFERENCED PLAT DOES SHOW A 15.00' WATER LINE EASEMENT THAT DOES APPEAR TO AFFECT THE LESSEE'S ACCESS EASEMENT, AS DEPICTED.

15. ANY AND ALL MATTERS DISCLOSED ON THE MAP ENTITLED "PLAT MAP" DATED SEPTEMBER 18, 2023 AND RECORDED SEPTEMBER 18, 2023 IN , (INSTRUMENT) L202348331 IN BENTON COUNTY, ARKANSAS. THE REFERENCED PLAT DOES SHOW A 15.00' WATER LINE EASEMENT AND A 20.00' UTILITY EASEMENT THAT DOES APPEAR TO AFFECT THE LESSEE'S ACCESS EASEMENT, AS DEPICTED.

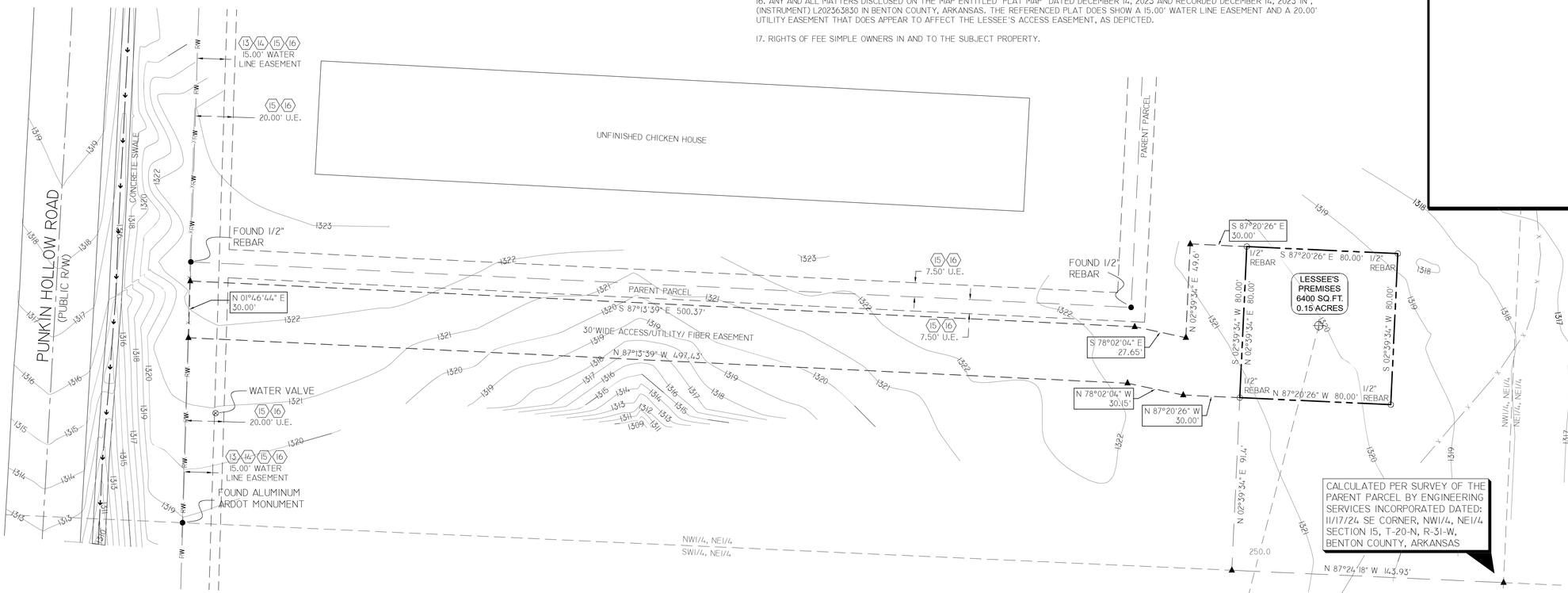
16. ANY AND ALL MATTERS DISCLOSED ON THE MAP ENTITLED "PLAT MAP" DATED DECEMBER 14, 2023 AND RECORDED DECEMBER 14, 2023 IN , (INSTRUMENT) L202363830 IN BENTON COUNTY, ARKANSAS. THE REFERENCED PLAT DOES SHOW A 15.00' WATER LINE EASEMENT AND A 20.00' UTILITY EASEMENT THAT DOES APPEAR TO AFFECT THE LESSEE'S ACCESS EASEMENT, AS DEPICTED.

17. RIGHTS OF FEE SIMPLE OWNERS IN AND TO THE SUBJECT PROPERTY.

UNLESS NOTED, ALL DATA IS EXPRESSED IN NAD83 & NAVD88			
LOCATION/DESCRIPTION	LATITUDE	LONGITUDE	ELEVATION
TOWER NAD83/NAVD88	36°24'45.45" (36.41262)	-94°15'40.70" (94.26131)	1314.5



PARENT PARCEL KEY



GENERAL NOTES:

1. TRACT IS SUBJECT TO RESTRICTIVE COVENANTS, SUBDIVISION, PLANNING AND ZONING REGULATIONS OF RECORD, IF ANY, AND IS SUBJECT TO SUCH FACTS AS AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.

2. NO STATEMENT IS MADE CONCERNING SUBSURFACE CONDITIONS OR OVERHEAD CONTAINERS OR FACILITIES WHICH MAY AFFECT THE USE OR DEVELOPMENT OF THE TRACT, ENVIRONMENTAL AND SUBSURFACE CONDITIONS WERE NOT EXAMINED AS PART OF THIS SURVEY.

3. THIS PROPERTY IS SUBJECT TO ALL ROADWAYS, EASEMENTS AND/OR RESERVATIONS THAT ARE OF RECORD OR ARE PHYSICALLY IN PLACE.

4. BEARINGS ARE REFERENCED TO ARKANSAS STATE PLANE GRID NORTH (NAD83).

5. THE PURPOSE OF THIS SURVEY IS TO ESTABLISH AND DESCRIBE A LEASE PARCEL AND ASSOCIATED EASEMENTS. THIS IS NOT A BOUNDARY SURVEY OF THE PARENT PARCEL.

6.THE LESSEE'S LAND SPACE LIES IN FLOOD ZONE "X", AREA OF MINIMAL FLOOD HAZARD, ACCORDING TO FLOOD INSURANCE RATE MAP #05007C0070J, SEPTEMBER 28, 2007.

7. ACCESS & UTILITY EASEMENTS TERMINATE AT OR IN PUBLIC RIGHT OF WAY.

8. AT THE TIME OF THE SURVEY THERE WERE NO VISIBLE ENCROACHMENTS LOCATED ON THE LEASE AREA OR EASEMENTS OTHER THAN WHAT IS SHOWN

9. THE LEASE AND EASEMENT AREAS LIE ENTIRELY WITHIN THE PARENT PARCEL.

PARTENT PARCEL

LOT ID OF THE SHORT SUBDIVISION, IN CENTERTON, BENTON COUNTY, ARKANSAS, AS SHOWN ON THE PLAT FILED FOR RECORD IN THE OFFICE OF THE CIRCUIT CLERK AND EX-OFFICIO RECORDER AS DOCUMENT L202363830.

PARCEL ID: 15-18996-003

THIS BEING THE SAME PROPERTY CONVEYED TO TIMOTHY SHORT AND LARI SHORT, HUSBAND AND WIFE BY A DEED FROM TIMOTHY SHORT, TRUSTEE OF THE LOYD WAYNE SHORT REVOCABLE TRUST DATED OCTOBER 25, 2012 DATED 12/29/2021 AND RECORDED 1/04/2022 IN INSTRUMENT 202200701 IN THE COUNTY OF BENTON, STATE OF ARKANSAS.

LESSEE'S PREMISES

BEING A PART OF THE NW1/4, NE1/4 SECTION 15, T-20-N, R-31-W, BENTON COUNTY, ARKANSAS MORE PARTICULARLY DESCRIBED AS BEGINNING AT THE SOUTHEAST CORNER OF THE SAID NW1/4, NE1/4; THENCE N 87°24'18" W 143.93 FEET; THENCE N 02°39'34" E 91.40 FEET TO THE TRUE POINT OF BEGINNING; THENCE N 02°39'34" E 80.00 FEET; THENCE S 87°20'26" E 80.00 FEET; THENCE S 02°39'34" W 80.00 FEET; THENCE N 87°20'26" W 80.00 FEET TO THE POINT OF BEGINNING, HAVING AN AREA OF 6400.0 SQUARE FEET, 0.15 ACRES MORE OR LESS.

LESSEE'S ACCESS/UTILITY/FIBER EASEMENT

BEING A PART OF THE NW1/4, NE1/4, SECTION 15, T-20-N, R-31-W, BENTON COUNTY, ARKANSAS MORE PARTICULARLY DESCRIBED AS BEGINNING AT THE SOUTHEAST CORNER OF THE SAID NW1/4, NE1/4; THENCE N 87°24'18" W 143.93 FEET; THENCE N 02°39'34" E 91.40 FEET TO THE TRUE POINT OF BEGINNING; THENCE N 87°20'26" W 30.00 FEET; THENCE N 78°02'04" W 30.15 FEET; THENCE LEAVING THE RIGHT-OF-WAY OF PUMPKIN HOLLOW ROAD S 87°13'39" E 500.37 FEET; THENCE S 78°02'04" E 27.65 FEET; THENCE N 02°39'34" E 49.60 FEET; THENCE S 87°20'26" E 30.00 FEET; THENCE S 02°39'34" W 80.00 FEET TO THE POINT OF BEGINNING.

REGISTERED
STATE OF ARKANSAS
NO. 1826
ARKANSAS
FRED R. PARTT
PROFESSIONAL LAND SURVEYOR

CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAT REPRESENTS A SURVEY BY ME ON THIS DATE AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND ABILITY. PROPERTY CORNERS ARE LOCATED WITH EXISTING MONUMENTS IN THE AREA.

N
W E
S

BEARINGS ARE BASED ON ARKANSAS STATE PLANE GRID NORTH DERIVED FROM GPS OBSERVATIONS.

0 30 60 90

C COPYRIGHT HERITAGE ENGINEERING 2024

LEGEND

- F.A.A. 1A LOCATION
- LIGHT POLE (O/H ELEC)
- POWER POLE
- GUY LINE
- OVERHEAD ELECTRIC
- U/G ELECTRIC
- WATER LINE
- WATER METER
- WATER VALVE
- TITLE EXCEPTION
- G
- TELEPHONE LINE
- TELEPHONE RISER
- SANITARY SEWER MANHOLE
- FENCE LINE
- STORM SEWER MANHOLE
- CALCULATED OR ANGLE POINT
- 1/2" IRON ROD WITH CAP SET
- IRON ROD FOUND

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Heritage Engineering
P.O. BOX 505
Benton, Arkansas 72018
(501)939-2303
FAX (501)939-2016
www.HeritageEngineering.net

verticalbridge

PUMPKIN HOLLOW AR #US-AR-5227
THE TOWERS, LLC

SHEET TITLE:
LEASE & EASEMENT SURVEY

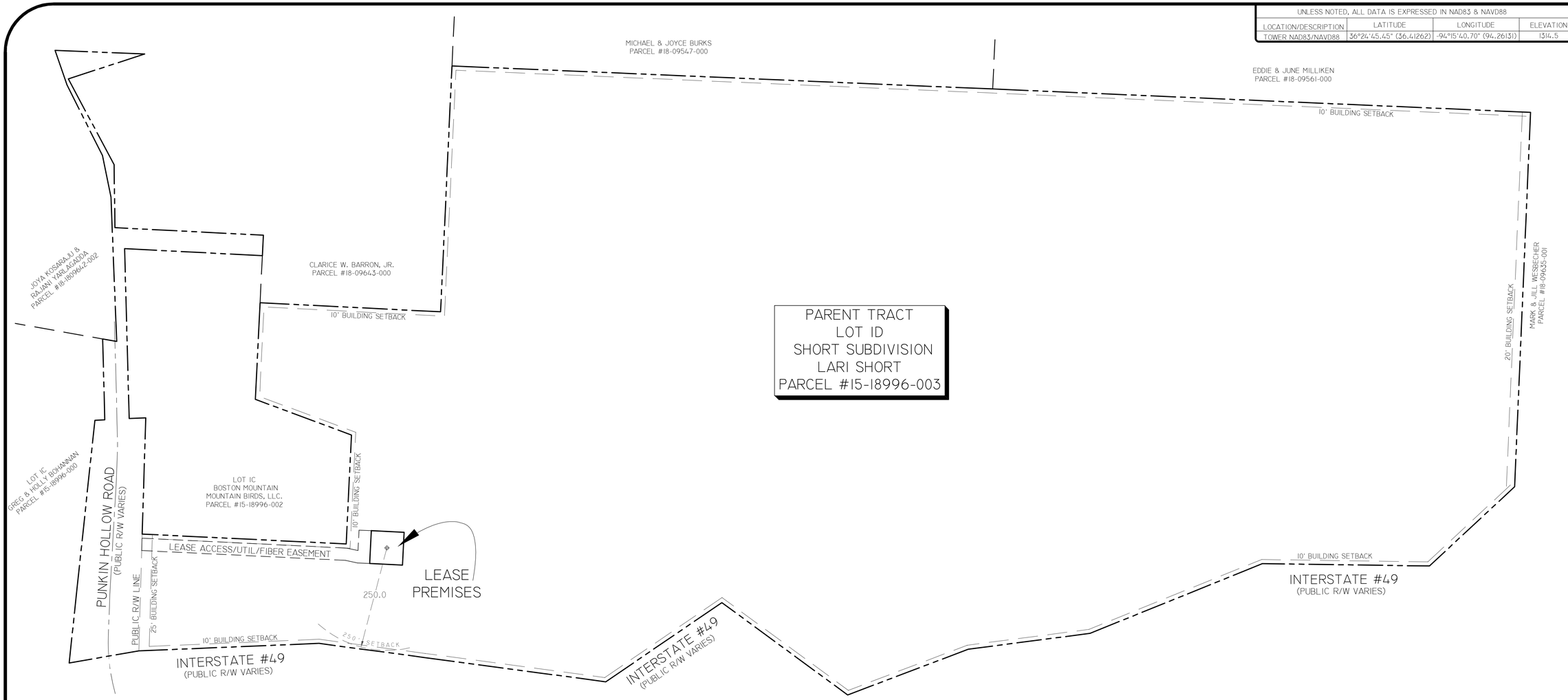
HE JOB NO.:	2024-
FILE NAME:	
PLOT SCALE:	1:30
ISSUE DATE 1:	23 JUNE 2024
ISSUE DATE 2:	08 AUG 2024
ISSUE DATE 3:	06 NOV 2024
ISSUE DATE 4:	
ISSUE DATE 5:	
ISSUE DATE 6:	

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING HAS BEEN REDUCED AND IS NOT TO SCALE

DRAWN BY:	A.P.
CHECKED BY:	J.P.

SHEET No.
2.0

UNLESS NOTED, ALL DATA IS EXPRESSED IN NAD83 & NAVD88			
LOCATION/DESCRIPTION	LATITUDE	LONGITUDE	ELEVATION
TOWER NAD83/NAVD88	36°24'45.45" (36.41262)	-94°15'40.70" (94.26131)	1314.5



PARTENT PARCEL

LOT ID OF THE SHORT SUBDIVISION, IN CENTERTON, BENTON COUNTY, ARKANSAS, AS SHOWN ON THE PLAT FILED FOR RECORD IN THE OFFICE OF THE CIRCUIT CLERK AND EX-OFFICIO RECORDER AS DOCUMENT L202363830.

PARCEL ID: 15-18996-003

THIS BEING THE SAME PROPERTY CONVEYED TO TIMOTHY SHORT AND LARI SHORT, HUSBAND AND WIFE BY A DEED FROM TIMOTHY SHORT, TRUSTEE OF THE LOYD WAYNE SHORT REVOCABLE TRUST DATED OCTOBER 25, 2012 DATED 12/29/2021 AND RECORDED 1/04/2022 IN INSTRUMENT 202200701 IN THE COUNTY OF BENTON, STATE OF ARKANSAS.

REGISTERED
STATE OF ARKANSAS
NO. 1326
SIGNATURE
FRED R. BONALL
PROFESSIONAL LAND SURVEYOR

CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAT REPRESENTS A SURVEY BY ME ON THIS DATE AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND ABILITY. PROPERTY CORNERS ARE LOCATED WITH EXISTING MONUMENTS IN THE AREA.

N
W E
S

BEARINGS ARE BASED ON ARKANSAS STATE PLANE GRID NORTH DERIVED FROM GPS OBSERVATIONS.

0 120 240 360

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LEGEND

- F.A.A. 1A LOCATION
- LIGHT POLE (O/H ELEC)
- POWER POLE
- GUY LINE
- OHP — OVERHEAD ELECTRIC
- U/G — U/G ELECTRIC
- W — WATER LINE
- WATER METER
- WATER VALVE
- 3 — TITLE EXCEPTION
- G —
- C
- T — TELEPHONE LINE
- TELEPHONE RISER
- S — SANITARY SEWER MANHOLE
- X — FENCE LINE
- D — STORM SEWER MANHOLE
- CALCULATED OR ANGLE POINT
- 1/2" IRON ROD WITH CAP SET
- IRON ROD FOUND

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FAX (501)939-2016
www.HeritageEngineering.net

verticalbridge

PUMPKIN HOLLOW AR #US-AR-5227
THE TOWERS, LLC

SHEET TITLE:
LOT ID BOUNDARY KEY SHEET

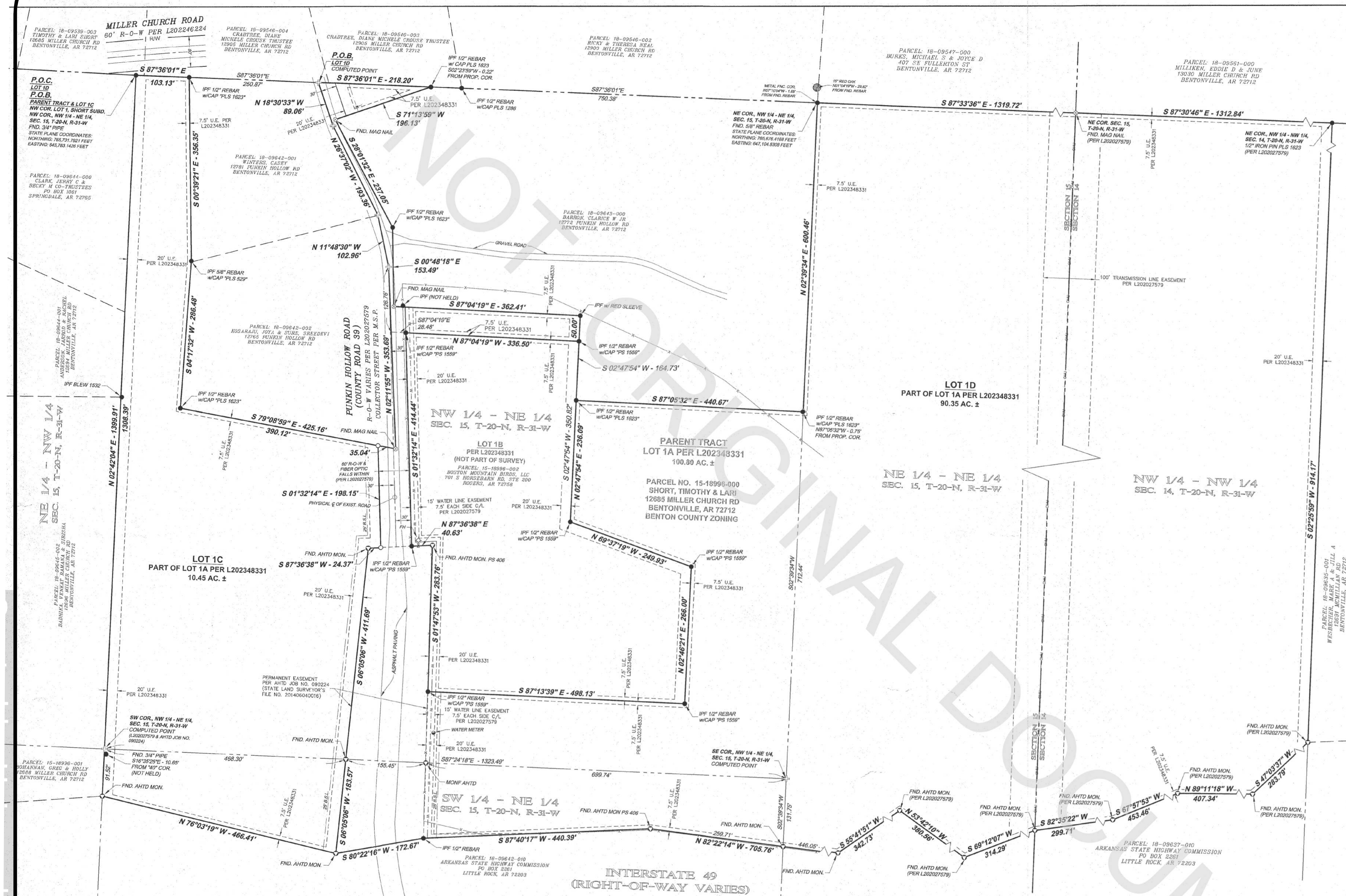
HE JOB NO.:	2024-
FILE NAME:	
PLOT SCALE:	1:120
ISSUE DATE 1:	02 MAY 2025
ISSUE DATE 2:	
ISSUE DATE 3:	
ISSUE DATE 4:	
ISSUE DATE 5:	
ISSUE DATE 6:	

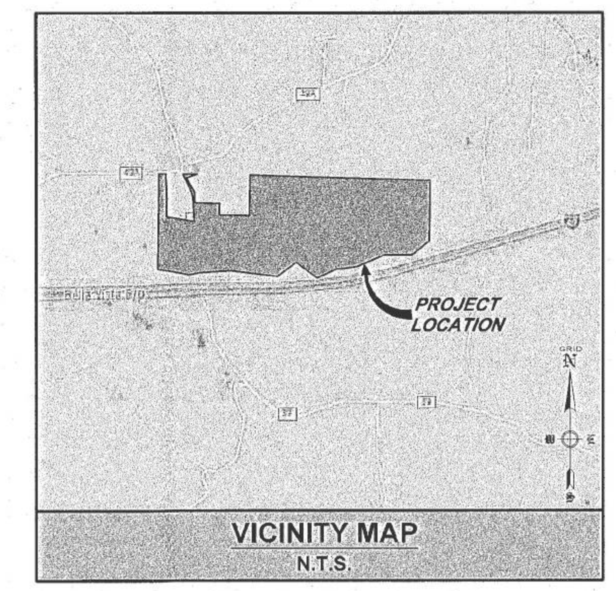
WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING HAS BEEN REDUCED AND IS NOT TO SCALE

DRAWN BY:	A P
CHECKED BY:	J P

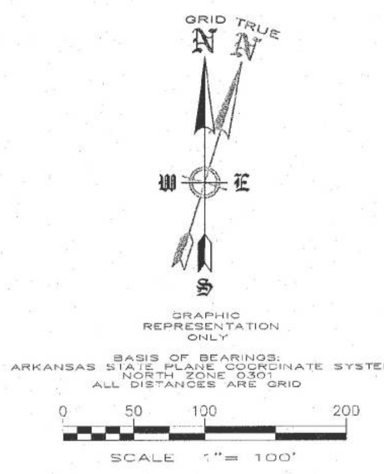
SHEET No.
2.1

L202363830 12/14/2023 2:45
Brenda DeShields,Circuit C
BENTON CO Circuit Clerk & Rec





RECORDING INFORMATION



SURVEYOR'S NOTES:

THIS SURVEY IS VALID ONLY IF THE DRAWING INCLUDES THE ORIGINAL SEAL AND SIGNATURE OF THE SURVEYOR. THE ORIGINAL SIGNATURE, IF NOT BLUE IN COLOR, IS NOT VALID.

PLAT CLOSURE DECLARATION:

THIS PLAT HAS BEEN CALCULATED FOR CLOSURE AND IS FOUND TO BE ACCURATE TO WITHIN ONE FOOT IN 2,294,627 FEET.

FEMA FLOOD PLAIN ZONE:

THIS PROPERTY IS NOT WITHIN A FLOOD PLAIN ZONE AS SHOWN ON THE F.I.R.M. MAP # 05007C0070J, PANEL 70 OF 560, BENTON COUNTY, ARKANSAS & INCORPORATED AREAS. EFFECTIVE DATE: SEPTEMBER 28, 2007.

UTILITIES:

THE UTILITY INFORMATION, IF ANY SHOWN HEREON, WAS OBSERVED BY THE SURVEYOR ON-SITE AND IS BASED ON ABOVE GROUND UTILITY FEATURES AND RECORD DOCUMENTS ONLY.

THE DESIGNATIONS AND LOCATIONS OF THESE UTILITY FEATURES SHOWN HEREON ARE NOT TO BE CONSTRUED AS ALL INCLUSIVE OR ABSOLUTE AND ARE PROVIDED WITHOUT WARRANTY.

REFERENCES:

EVERY DOCUMENT OF RECORD REVIEWED AND CONSIDERED AS A PART OF THIS SURVEY IS NOTED BELOW. THE SURVEYOR RESEARCHED OR WAS PROVIDED NECESSARY DEEDS, RIGHT-OF-WAY MAPS, AND OTHER PERTINENT INFORMATION AS SHOWN BELOW. THE SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR COURT CASE DECREES, ADVERSE POSSESSION CLAIMS, SUBSURFACE RIGHTS OR OWNERSHIP, ENCUMBRANCES, OR RESTRICTIVE COVENANTS.

ALL RECORDS LISTED BELOW ARE IN THE OFFICE OF THE CIRCUIT CLERK AND EX-OFFICIO RECORDER OF BENTON COUNTY, ARKANSAS UNLESS OTHERWISE NOTED.

A. **CORRECTION WARRANTY DEED:** TIMOTHY SHORT AND LARI SHORT, RECORDED JANUARY 4, 2022, INSTRUMENT NO. L202200701.
B. **WARRANTY DEED:** GREG BOHANNAN AND HOLLY BOHANNAN, RECORDED FEBRUARY 27, 2023, INSTRUMENT NO. L202309134.
C. **PLAT:** SHORT SUBDIVISION, BY ARKOMA SURVEYING AND MAPPING, PLLC, LANCE GEREMY MATHIS, AR PLS NO. 1623, RECORDED MAY 15, 2020, INSTRUMENT NO. L202027579.
D. **RIGHT OF WAY ACQUISITION:** JOB #090224 BY CRAFTON TULL , JAMES H. THOMPSON, AR PLS 406 DATED MAY, 2014. RECORDED WITH THE STATE LAND SURVEYOR'S OFFICE AS FILE NO. 201406040016.
E. **INCIDENTAL SUBDIVISION:** BY ENGINEERING SERVICES, INC., RODNEY WOODS, AR PLS NO. 1559, RECRODED SEPTEMBER 18, 2023, INSTRUMENT NO. L202348331.
F. **WARRANTY DEED:** BOSTON MOUNTAIN BIRDS, LLC, RECORDED OCTOBER 13, 2023, INSTRUMENT NO. L202353536.

SURVEY DESCRIPTION LOT 1C:

PART OF LOT 1A AS SHOWN ON THE INCIDENTAL SUBDIVISION PLAT FILED FOR RECORD AS INSTRUMENT NO. L202348331 OF THE BENTON COUNTY RECORDS, ARKANSAS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 1A ALSO BEING THE NORTHWEST CORNER OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION FIFTEEN (15), TOWNSHIP TWENTY (20) NORTH, RANGE THIRTY-ONE (31) WEST OF THE FIFTH PRINCIPAL MERIDIAN, BENTON COUNTY, ARKANSAS, SAID POINT BEING A FOUND 3/4 INCH PIPE; THENCE ALONG THE NORTH LINES OF SAID LOT 1A AND SAID NW 1/4 OF THE NE 1/4, S87°36'01"E A DISTANCE OF 103.13 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623"; THENCE LEAVING SAID NORTH LINES, S00°39'21"E A DISTANCE OF 356.35 FEET TO A FOUND 5/8 INCH REBAR WITH CAP "PLS 529"; THENCE S04°17'32"W A DISTANCE OF 286.48 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623"; THENCE S79°08'59"E A DISTANCE OF 390.12 FEET TO A SET 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE S01°32'14"E A DISTANCE OF 198.15 FEET TO A SET 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE S87°36'38"W A DISTANCE OF 24.37 FEET TO A FOUND AHTD MONUMENT; THENCE S06°05'06"W A DISTANCE OF 411.69 FEET TO A FOUND AHTD MONUMENT; THENCE CONTINUING S06°05'06"W A DISTANCE OF 183.57 FEET TO A FOUND AHTD MONUMENT; THENCE N76°03'19"W A DISTANCE OF 466.41 FEET TO THE WEST LINE OF THE SW 1/4 OF THE NE 1/4 OF SAID SECTION 15 AND A FOUND AHTD MONUMENT; THENCE LEAVING SAID NORTHERLY RIGHT-OF-WAY LINE AND ALONG SAID WEST LINE AND THE WEST LINE OF SAID NW 1/4 OF THE NE 1/4, N02°42'04"E A DISTANCE OF 1399.91 FEET TO THE **POINT OF BEGINNING**, CONTAINING 10.45 ACRES, MORE OR LESS, AND SUBJECT TO ALL RIGHTS-OF-WAY, EASEMENTS AND RESTRICTIVE COVENANTS OF RECORD AND FACT.

SURVEY DESCRIPTION LOT 1D:

PART OF LOT 1A AS SHOWN ON THE INCIDENTAL SUBDIVISION PLAT FILED FOR RECORD AS INSTRUMENT NO. L202348331 OF THE BENTON COUNTY RECORDS, ARKANSAS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID LOT 1A ALSO BEING THE NORTHWEST CORNER OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION FIFTEEN (15), TOWNSHIP TWENTY (20) NORTH, RANGE THIRTY-ONE (31) WEST OF THE FIFTH PRINCIPAL MERIDIAN, BENTON COUNTY, ARKANSAS, SAID POINT BEING A FOUND 3/4 INCH PIPE; THENCE ALONG THE NORTH LINES OF SAID LOT 1A AND SAID NW 1/4 OF THE NE 1/4, S87°36'01"E A DISTANCE OF 354.00 FEET TO THE **POINT OF BEGINNING**, SAID POINT BEING IN PUNKIN HOLLOW ROAD; THENCE CONTINUING S87°36'01"E A DISTANCE OF 218.20 FEET TO A POINT FROM WHICH BEARS A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623" S02°23'59"W A DISTANCE OF 0.22 FEET; THENCE LEAVING SAID NORTH LINE, S71°13'59"W A DISTANCE OF 196.13 FEET TO A FOUND "MAG" NAIL IN PUNKIN HOLLOW ROAD ; THENCE LEAVING SAID PUNKIN HOLLOW ROAD, S28°01'32"E A DISTANCE OF 237.05 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623"; THENCE S00°48'18"E A DISTANCE OF 153.49 FEET TO A FOUND "MAG" NAIL; THENCE S87°04'19"E A DISTANCE OF 362.41 FEET TO A FOUND REBAR WITH RED SLEEVE; THENCE S02°47'54"W A DISTANCE OF 50.00 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N87°04'19"W A DISTANCE OF 336.50 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE S01°32'14"E A DISTANCE OF 414.44 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N87°36'38"E A DISTANCE OF 40.63 FEET TO A FOUND AHTD MONUMENT WITH CAP "PS 406"; THENCE S01°47'53"W A DISTANCE OF 283.76 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE S87°13'39"E A DISTANCE OF 498.13 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N02°46'21"E A DISTANCE OF 266.00 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N69°37'19"W A DISTANCE OF 249.93 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N02°47'54"E A DISTANCE OF 236.09 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623"; THENCE S87°05'32"E A DISTANCE OF 440.67 FEET TO A POINT ON THE EAST LINE OF SAID LOT 1A ALSO BEING THE EAST LINE OF SAID NW 1/4 OF THE NE 1/4 FROM WHICH A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623" BEARS N87°05'32"W A DISTANCE OF 0.75 FEET; THENCE ALONG SAID EAST LINES, N02°39'34"E A DISTANCE OF 600.46 FEET TO THE NORTH LINE OF SAID LOT 1A AND THE NORTHEAST CORNER OF SAID NW 1/4 OF THE NE 1/4, SAID POINT BEING A FOUND 5/8 INCH REBAR; THENCE LEAVING SAID EAST LINES AND ALONG THE NORTH LINES OF SAID LOT 1A AND THE NE 1/4 OF THE NE 1/4 OF SAID SECTION 15, S87°33'36"E A DISTANCE OF 1319.72 FEET TO THE NORTHEAST CORNER OF SAID SECTION 15 AND A "MAG" NAIL; THENCE CONTINUING ALONG THE NORTH LINE OF SAID LOT 1A AND ALONG THE NORTH LINE OF THE NW 1/4 OF THE NW 1/4 OF SECTION 14, S87°30'46"E A DISTANCE OF 1312.84 FEET TO THE NORTHEAST CORNER OF SAID NW 1/4 OF THE NW 1/4 AND A 1/2 INCH REBAR WITH CAP "PLS 1623"; THENCE LEAVING SAID NORTH LINES AND ALONG THE EAST LINE OF SAID LOT 1A AND SAID NW 1/4 OF THE NW 1/4, S02°25'59"W A DISTANCE OF 914.17 FEET TO THE NORTHERLY RIGHT-OF-WAY LINE OF INTERSTATE 49 AND AN AHTD MONUMENT; THENCE LEAVING SAID EAST LINES AND ALONG SAID NORTHERLY LINE, S47°03'37"W A DISTANCE OF 283.79 FEET TO AN AHTD MONUMENT; THENCE N89°11'18"W A DISTANCE OF 407.34 FEET TO AN AHTD MONUMENT; THENCE S67°57'53"W A DISTANCE OF 453.46 FEET TO AN AHTD MONUMENT; THENCE S82°35'22"W A DISTANCE OF 299.71 FEET TO AN AHTD MONUMENT; THENCE S69°12'07"W A DISTANCE OF 314.29 FEET TO AN AHTD MONUMENT; THENCE N53°42'10"W A DISTANCE OF 380.56 FEET TO AN AHTD MONUMENT; THENCE S55°41'51"W A DISTANCE OF 342.73 FEET TO A FOUND AHTD MONUMENT; THENCE N82°22'14"W A DISTANCE OF 705.76 FEET TO A FOUND AHTD MONUMENT "PS 406"; THENCE S87°40'17"W A DISTANCE OF 440.39 FEET TO A FOUND 1/2 INCH REBAR; THENCE S80°22'16"W A DISTANCE OF 172.67 FEET TO A FOUND AHTD MONUMENT; THENCE LEAVING SAID NORTHERLY RIGHT-OF-WAY LINE, N06°05'06"E A DISTANCE OF 183.57 FEET TO A FOUND AHTD MONUMENT; THENCE CONTINUING N06°05'06"E A DISTANCE OF 411.69 FEET TO A FOUND AHTD MONUMENT; THENCE N87°36'38"E A DISTANCE OF 24.37 FEET TO A SET 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N01°32'14"W A DISTANCE OF 198.15 FEET TO A SET 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE S79°08'59"E A DISTANCE OF 35.04 FEET TO A FOUND "MAG" NAIL IN PUNKIN HOLLOW ROAD; THENCE ALONG SAID PUNKIN HOLLOW ROAD, N02°11'55"W A DISTANCE OF 353.69 FEET; THENCE N11°48'30"W A DISTANCE OF 102.96 FEET; THENCE N26°37'02"W A DISTANCE OF 193.36 FEET; THENCE N18°30'33"W A DISTANCE OF 89.06 FEET TO THE **POINT OF BEGINNING**, CONTAINING 90.35 ACRES, MORE OR LESS, AND SUBJECT TO THE RIGHT-OF-WAY OF PUNKIN HOLLOW ROAD AND ALL RIGHTS-OF-WAY, EASEMENTS AND RESTRICTIVE COVENANTS OF RECORD AND FACT.

SURVEY DESCRIPTION PARENT TRACT (PARCEL NO. 15-18996-000):

LOT 1A AS SHOWN ON THE INCIDENTAL SUBDIVISION PLAT FILED FOR RECORD AS INSTRUMENT NO. L202348331 OF THE BENTON COUNTY RECORDS, ARKANSAS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 1A ALSO BEING THE NORTHWEST CORNER OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION FIFTEEN (15), TOWNSHIP TWENTY (20) NORTH, RANGE THIRTY-ONE (31) WEST OF THE FIFTH PRINCIPAL MERIDIAN, BENTON COUNTY, ARKANSAS, SAID POINT BEING A FOUND 3/4 INCH PIPE; THENCE ALONG THE NORTH LINES OF SAID LOT 1A AND SAID NW 1/4 OF THE NE 1/4, S87°36'01"E A DISTANCE OF 103.13 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623"; THENCE LEAVING SAID NORTH LINES, S00°39'21"E A DISTANCE OF 356.35 FEET TO A FOUND 5/8 INCH REBAR WITH CAP "PLS 529"; THENCE S04°17'32"W A DISTANCE OF 286.48 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623"; THENCE S79°08'59"E A DISTANCE OF 425.16 FEET TO A FOUND "MAG" NAIL IN PUNKIN HOLLOW ROAD; THENCE ALONG SAID PUNKIN HOLLOW ROAD, N02°11'55"W A DISTANCE OF 353.69 FEET; THENCE N11°48'30"W A DISTANCE OF 102.96 FEET; THENCE N26°37'02"W A DISTANCE OF 193.36 FEET; THENCE N18°30'33"W A DISTANCE OF 89.06 FEET TO THE NORTH LINE OF SAID NW 1/4 OF THE NE 1/4; THENCE LEAVING SAID PUNKIN HOLLOW ROAD AND ALONG SAID NORTH LINE, S87°36'01"E A DISTANCE OF 218.20 FEET TO A POINT FROM WHICH BEARS A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623" S02°23'59"W A DISTANCE OF 0.22 FEET; THENCE LEAVING SAID NORTH LINE, S71°13'59"W A DISTANCE OF 196.13 FEET TO A FOUND "MAG" NAIL IN PUNKIN HOLLOW ROAD ; THENCE LEAVING SAID PUNKIN HOLLOW ROAD, S28°01'32"E A DISTANCE OF 237.05 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623"; THENCE S00°48'18"E A DISTANCE OF 153.49 FEET TO A FOUND "MAG" NAIL; THENCE S87°04'19"E A DISTANCE OF 362.41 FEET TO A FOUND REBAR WITH RED SLEEVE; THENCE S02°47'54"W A DISTANCE OF 50.00 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N87°04'19"W A DISTANCE OF 336.50 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE S01°32'14"E A DISTANCE OF 414.44 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N87°36'38"E A DISTANCE OF 40.63 FEET TO A FOUND AHTD MONUMENT WITH CAP "PS 406"; THENCE S01°47'53"W A DISTANCE OF 283.76 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE S87°13'39"E A DISTANCE OF 498.13 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N02°46'21"E A DISTANCE OF 266.00 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N69°37'19"W A DISTANCE OF 249.93 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PS 1559"; THENCE N02°47'54"E A DISTANCE OF 236.09 FEET TO A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623"; THENCE S87°05'32"E A DISTANCE OF 440.67 FEET TO A POINT ON THE EAST LINE OF SAID LOT 1A ALSO BEING THE EAST LINE OF SAID NW 1/4 OF THE NE 1/4 FROM WHICH A FOUND 1/2 INCH REBAR WITH CAP "PLS 1623" BEARS N87°05'32"W A DISTANCE OF 0.75 FEET; THENCE ALONG SAID EAST LINES, N02°39'34"E A DISTANCE OF 600.46 FEET TO THE NORTH LINE OF SAID LOT 1A AND THE NORTHEAST CORNER OF SAID NW 1/4 OF THE NE 1/4, SAID POINT BEING A FOUND 5/8 INCH REBAR; THENCE LEAVING SAID EAST LINES AND ALONG THE NORTH LINES OF SAID LOT 1A AND THE NE 1/4 OF THE NE 1/4 OF SAID SECTION 15, S87°33'36"E A DISTANCE OF 1319.72 FEET TO THE NORTHEAST CORNER OF SAID SECTION 15 AND A "MAG" NAIL; THENCE CONTINUING ALONG THE NORTH LINE OF SAID LOT 1A AND ALONG THE NORTH LINE OF THE NW 1/4 OF THE NW 1/4 OF SECTION 14, S87°30'46"E A DISTANCE OF 1312.84 FEET TO THE NORTHEAST CORNER OF SAID NW 1/4 OF THE NW 1/4 AND A 1/2 INCH REBAR WITH CAP "PLS 1623"; THENCE LEAVING SAID NORTH LINES AND ALONG THE EAST LINE OF SAID LOT 1A AND SAID NW 1/4 OF THE NW 1/4, S02°25'59"W A DISTANCE OF 914.17 FEET TO THE NORTHERLY RIGHT-OF-WAY LINE OF INTERSTATE 49 AND AN AHTD MONUMENT; THENCE LEAVING SAID EAST LINES AND ALONG SAID NORTHERLY LINE, S47°03'37"W A DISTANCE OF 283.79 FEET TO AN AHTD MONUMENT; THENCE N89°11'18"W A DISTANCE OF 407.34 FEET TO AN AHTD MONUMENT; THENCE S67°57'53"W A DISTANCE OF 453.46 FEET TO AN AHTD MONUMENT; THENCE S82°35'22"W A DISTANCE OF 299.71 FEET TO AN AHTD MONUMENT; THENCE S69°12'07"W A DISTANCE OF 314.29 FEET TO AN AHTD MONUMENT; THENCE N53°42'10"W A DISTANCE OF 380.56 FEET TO AN AHTD MONUMENT; THENCE S55°41'51"W A DISTANCE OF 342.73 FEET TO A FOUND AHTD MONUMENT; THENCE N82°22'14"W A DISTANCE OF 705.76 FEET TO A FOUND AHTD MONUMENT "PS 406"; THENCE S87°40'17"W A DISTANCE OF 440.39 FEET TO A FOUND 1/2 INCH REBAR; THENCE S80°22'16"W A DISTANCE OF 172.67 FEET TO A FOUND AHTD MONUMENT; THENCE N76°03'19"W A DISTANCE OF 466.41 FEET TO THE WEST LINE OF THE SW 1/4 OF THE NE 1/4 OF SAID SECTION 15 AND A FOUND AHTD MONUMENT; THENCE LEAVING SAID NORTHERLY RIGHT-OF-WAY LINE AND ALONG SAID WEST LINE AND THE WEST LINE OF SAID NW 1/4 OF THE NE 1/4, N02°42'04"E A DISTANCE OF 1399.91 FEET TO THE **POINT OF BEGINNING**, CONTAINING 100.80 ACRES, MORE OR LESS, AND SUBJECT TO THE RIGHT-OF-WAY OF PUNKIN HOLLOW ROAD AND ALL RIGHTS-OF-WAY, EASEMENTS AND RESTRICTIVE COVENANTS OF RECORD AND FACT.

OWNER: SHORT, TIMOTHY & LARI
12685 MILLER CHURCH RD
BENTONVILLE, AR 72712

SURVEYOR: ENGINEERING SERVICES, INC.
1207 S. OLD MISSOURI ROAD
P.O. BOX 282
SPRINGDALE, AR 72765

WORK ORDER #: 23241

ZONING: BENTON COUNTY ZONING

SETBACKS: FRONT - 25'
SIDE - 10'
REAR - 20'

LEGEND

Symbol	Description	Symbol	Description
———	PROPERTY LINE	P.O.C.	POINT OF COMMENCEMENT
— — —	PROPOSED NEW LOT LINE	P.O.B.	POINT OF BEGINNING
— - - —	SECTION LINE	●	IPF - IRON PIN FOUND (AS NOTED)
— - - —	SECTION "40" LINE	▽	FOUND MONUMENT (AS NOTED)
— — — —	ADJACENT OWNER	○	IRON PIN SET w/ CAP "PS 1559"
- - - - -	EASEMENT (AS NOTED)	⊗	FOUND "MAG" NAIL
——— R/W ———	RIGHT-OF-WAY	✛	COMPUTED POINT
— - —	PHYSICAL CENTERLINE OF ROAD	◒	WATER METER (WM)
——x——	WIRE FENCE LINE	✧	FIRE HYDRANT (FH)
— W —	WATER LINE	⋈	WATER VALVE (WV)
— OHU —	OVERHEAD UTILITY LINE		

CERTIFICATE OF OWNERSHIP:

WE, THE UNDERSIGNED, OWNERS OF THE REAL ESTATE SHOWN AND DESCRIBED HEREIN, DO HEREBY CERTIFY THAT WE HAVE LAID OFF, PLATTED, AND SUBDIVIDED AND DO HEREBY LAY OFF, PLAT, SUBDIVIDE SAID REAL ESTATE IN ACCORDANCE WITH THIS PLAT, AND WE DO HEREBY DEDICATE TO THE USE OF THE PUBLIC THE STREETS, ALLEYS, DRIVES, AND EASEMENTS AS SHOWN ON SAID PLAT.

Timothy Short 12-6-23
TIMOTHY SHORT DATE

SOURCE OF TITLE: DEED INSTRUMENT NO. L202200701

Lari Short 12/6/23
LARI SHORT DATE

SOURCE OF TITLE: DEED INSTRUMENT NO. L202200701

ACKNOWLEDGMENT

STATE OF ARKANSAS)
)
COUNTY OF BENTON)

ON THIS DAY BEFORE THE UNDERSIGNED, A NOTARY PUBLIC DULY QUALIFIED AND ACTING IN AND FOR THE COUNTY, AND STATE AFORESAID, PERSONALLY APPEARED TIMOTHY SHORT AND LARI SHORT, SATISFACTORILY PROVEN TO BE THE PERSONS WHOSE NAMES APPEAR AS THE OWNERS IN THE FOREGOING INSTRUMENT, AND STATED THAT THEY HAVE EXECUTED THE SAME FOR THE CONSIDERATION, USES AND PURPOSES THEREIN STATED.

IN WITNESS WHEREOF, I HEREUNTO SET MY HAND AND ON THIS 6th DAY OF December, 2023

Karri Layton 3-26-31
NOTARY PUBLIC MY COMMISSION EXPIRES

KARRI LAYTON
Notary Public - Arkansas
Benton County
Commission # 12715890
My Commission Expires Mar 26, 2031

CERTIFICATE OF APPROVAL

PURSUANT TO THE CITY OF BELLA VISTA SUBDIVISION REGULATIONS AND ALL OTHER CONDITIONS AND APPROVALS HAVING BEEN COMPLETED, THIS DOCUMENT IS HEREBY ACCEPTED. THIS CERTIFICATE IS HEREBY EXECUTED UNDER THE AUTHORITY OF THE SAID RULES AND REGULATIONS.

[signature] 12.14.23
DIRECTOR, COMMUNITY DEVELOPMENT SERVICES DATE

CERTIFICATE OF SURVEYING ACCURACY:

I, RODNEY WOODS, HEREBY CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS A BOUNDARY SURVEY MADE BY ME AND BOUNDARY MARKERS AND LOT CORNERS SHOWN HEREON ACTUALLY EXIST AND THEIR LOCATION, TYPE AND MATERIAL ARE CORRECTLY SHOWN AND ALL MINIMUM REQUIREMENTS OF THE ARKANSAS MINIMUM STANDARDS FOR LAND SURVEYORS HAVE BEEN MET.

Rodney Woods 12-4-2023
REGISTERED LAND SURVEYOR DATE
STATE OF ARKANSAS REGISTRATION NO. 1559

REGISTERED STATE OF ARKANSAS NO. 1559 RW SIGNATURE RODNEY WOODS PROFESSIONAL LAND SURVEYOR

NOTE: SEPTIC COMPLIANCE AND BUILDABILITY

1. APPROVAL OF THE PLAT DOES NOT GUARANTEE FUTURE SEPTIC COMPLIANCE.
2. APPROVAL OF THE PLAT DOES NOT GUARANTEE THE LOTS ARE BUILDABLE.

User Name: C
CERTIFICATE OF
STATE OF ARKANSAS, COUNTY OF
I hereby certify that this instrume
Filed and Recorded in the Official R
L202363830 12/14/2023 2:45
Brenda DeShields,Circuit
BENTON CO, AR FEE

202402057298

PLAT CODE: 500-20N-31W-0-14-400-04-1559
PLAT CODE: 500-20N-31W-0-15-100-04-1559

CERTIFICATE OF AUTHORIZATION ENGINEERING SERVICES, INC. 131 ARKANSAS ENGINEER

REVISION	DATE	DESCRIPTION
1	11/17/23	REVISED PER CITY COMMENTS

LSP-2023-52125

INCIDENTAL SUBDIVISION
FOR GREG BOHANNON
BENTON COUNTY, ARKANSAS

SCALE: 1"=100' | DATE: November 17, 2023 | DRAWN BY:KND/RER

ENGINEERING SERVICES, INCORPORATED
SPRINGDALE, ARKANSAS

© COPYRIGHT 2023, ENGINEERING SERVICES, INC. 10/20/2023 10:54 AM

W.O.# 23241 | SHEET 1 / 1

ENGINEERING EXCELLENCE
Heritage Engineering
P.O. BOX 505
Benton, Arkansas 72018
(501)939-2303
FAX (501)939-2016
www.HeritageEngineering.net

verticalbridge

PUMPKIN HOLLOW AR #US-AR-5227
THE TOWERS, LLC

SHEET TITLE:
SUBDIVISION PLAT

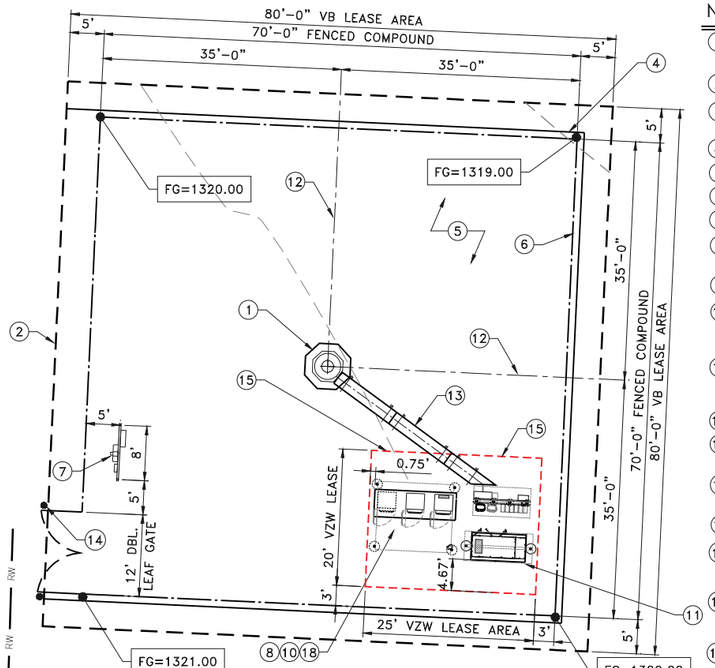
HE JOB NO.:	2024-
FILE NAME:	
PLOT SCALE:	1:120
ISSUE DATE 1:	02 MAY 2025
ISSUE DATE 2:	
ISSUE DATE 3:	
ISSUE DATE 4:	
ISSUE DATE 5:	
ISSUE DATE 6:	

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING HAS BEEN REDUCED AND IS NOT TO SCALE

DRAWN BY:	A P
CHECKED BY:	J P

SHEET No.
2.2

NOT ORIGINAL DOCUMENT



ENLARGED COMPOUND PLAN

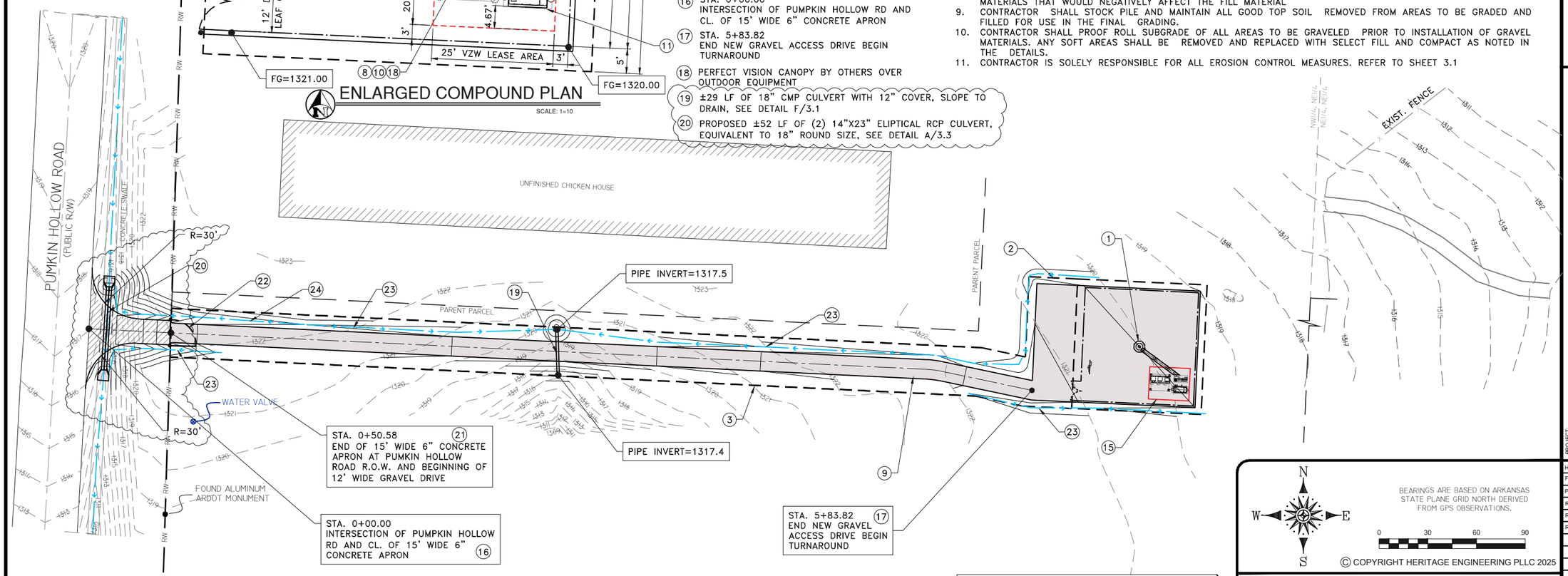
SCALE: 1=10

NOTES BY SYMBOL "◯"

1. NEW 195' MONOPOLE TOWER (CL TOWER FG = 1320.00) AND (TOC = 1320.50)
2. 80'x80' LEASE AREA, SEE SHT. 2.0
3. 30' WIDE UTILITY & INGRESS/EGRESS EASEMENT, SEE SHT. 2.0
4. LIMITS OF GRAVEL, SEE A/3.1
5. CRUSHED STONE SURFACE, REFER TO SHT. 3.1
6. 70'x70' FENCED COMPOUND, REFER TO SHT. 3.2
7. UTILITY DISTRIBUTION RACK, REFER TO SHT. 7.3
8. SLOPE NEW GRAVEL SURFACE TO DRAIN AWAY FROM VERIZON'S FOUNDATION.
9. NEW 12' WIDE ACCESS DRIVE, SEE DET. B/3.1
10. ELEVATION OF TOP OF PAD FDN. FOR VERIZON's. 4'-0" x 12'-0" EQUIPMENT PAD EQUALS 1314.25
11. ELEVATION OF TOP OF PAD FDN. FOR VERIZON's. 4'-0"x 8'-0" GENERATOR PAD EQUALS 1314.25
12. CENTER LINE OF TOWER
13. WAVE GUIDE BRIDGE APPROX 28 L.F. SEE SHT. 5.0
14. CONTRACTOR TO INSTALL TWO GATE KEEPER DEVICES. REFER TO SHT. 3.2
15. 20'x25' VZW LEASE AREA (500 SQ. FT.)
16. STA. 0+00.00 INTERSECTION OF PUMPKIN HOLLOW RD AND CL. OF 15' WIDE 6" CONCRETE APRON
17. STA. 5+83.82 END NEW GRAVEL ACCESS DRIVE BEGIN TURNAROUND
18. PERFECT VISION CANOPY BY OTHERS OVER OUTDOOR EQUIPMENT
19. ±29 LF OF 18" CMP CULVERT WITH 12" COVER, SLOPE TO DRAIN, SEE DETAIL F/3.1
20. PROPOSED ±52 LF OF (2) 14"X23" ELIPTICAL RCP CULVERT, EQUIVALENT TO 18" ROUND SIZE, SEE DETAIL A/3.3
21. STA. 0+50.58 END OF 15' WIDE 6" CONCRETE APRON AT PUMKIN HOLLOW ROAD R.O.W. AND BEGINNING OF 12' WIDE GRAVEL DRIVE
22. 16' WIDE FARM GATE, SEE SHEET 3.1
23. DRAINAGE DITCH, SLOPE TO DRAIN, SEE SHEET 3.1

SITE WORK NOTES:

1. TOPOGRAPHIC & BOUNDARY DATA WERE TAKEN FROM A SURVEY PREPARED BY CORNERSTONE SURVEYING & MAPPING.
2. CONTRACTOR IS SOLELY RESPONSIBLE TO LOCATE ALL EXISTING UNDERGROUND UTILITIES. NO EXISTING UTILITIES SHALL BE DISTURBED WITHOUT THE WRITTEN APPROVAL OF APPROPRIATE AUTHORITIES.
3. CONTRACTOR IS SOLELY RESPONSIBLE TO LOCATE ALL EXISTING UNDERGROUND UTILITIES. NO EXISTING UTILITIES SHALL BE DISTURBED WITHOUT THE WRITTEN APPROVAL OF APPROPRIATE AUTHORITIES.
4. ALL MATERIAL USED FOR FILL WITHIN THE COMPOUND AREA SHALL BE APPROVED BY THE OWNER'S MATERIALS LABORATORY. APPROVED MATERIAL USED AS FILL SHALL BE PLACED IN HORIZONTAL LIFTS HAVING A MAXIMUM LOOSE LIFT THICKNESS OF EIGHT (8) INCHES. EACH LIFT SHALL BE COMPACTED TO MAXIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR COMPACTION PROCEDURES (ASTM D 1157). ADDITIONALLY, COMPACTION TESTS SHALL BE TAKEN ON EVERY OTHER LIFT.
5. CONTRACTOR SHALL INSTALL/USE ALL REQUIRED EQUIPMENT SO AS TO STANDARDS DICTATED BY O.S.H.A., FEDERAL, STATE COMPLY WITH ALL SAFETY STANDARDS AND LOCAL REGULATIONS
6. CONTRACTOR SHALL COORDINATE WITH APPROPRIATE UTILITY COMPANY AS LISTED ON THE COVER SHEET FOR ADJUSTMENT OF UTILITY LINES AFFECTED BY CUT AND FILL.
7. AREAS TO BE GRADED SHALL BE CLEARED AND GRUBBED SO AS TO REMOVE ALL ORGANIC MATERIAL INCLUDING BUT NOT LIMITED TO VEGETATION, TREES, ROOTS, DEBRIS OR OTHER MATERIALS THAT WOULD AFFECT THE STABILITY OF FILL. IF UNCERTAINTY EXISTS AS TO THE SUITABILITY OF ANY MATERIAL, THE CONTRACTOR SHALL HAVE A REGISTERED GEOTECHNICAL ENGINEER MAKE THE FINAL DETERMINATION
8. CONTRACTOR SHALL ENSURE THAT THE FILL MATERIAL BE FREE OF ORGANIC MATERIALS, FROZEN MATERIALS, MUCK, HIGHLY COMPRESSIBLE MATERIALS, ROCKS, RUBBISH, TIMBER, BRUSH, STUMPS, BUILDING DEBRIS AND OTHER MATERIALS THAT WOULD NEGATIVELY AFFECT THE FILL MATERIAL
9. CONTRACTOR SHALL STOCK PILE AND MAINTAIN ALL GOOD TOP SOIL REMOVED FROM AREAS TO BE GRADED AND FILLED FOR USE IN THE FINAL GRADING.
10. CONTRACTOR SHALL PROOF ROLL SUBGRADE OF ALL AREAS TO BE GRAVELED PRIOR TO INSTALLATION OF GRAVEL MATERIALS. ANY SOFT AREAS SHALL BE REMOVED AND REPLACED WITH SELECT FILL AND COMPACT AS NOTED IN THE DETAILS.
11. CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL EROSION CONTROL MEASURES. REFER TO SHEET 3.1



OVERALL SITE PLAN

SCALE: 1 = 30

PROPOSED MONOPOLE TOWER

CENTER LAT/LONG (NAD83)
LAT: 36° 24' 45.45" N
LONG: 94° 15' 40.70" W
EXIST. GROUND ELEVATION (NAVD88)
ELEVATION: 1320.1 FEET (AMSL)

BEARINGS ARE BASED ON ARKANSAS STATE PLANE GRID NORTH DERIVED FROM GPS OBSERVATIONS.

0 30 60 90

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LEGEND

- F.A.A. 1A LOCATION
- LIGHT POLE (O/H ELEC)
- POWER POLE
- GUY LINE
- OVERHEAD ELECTRIC
- U/G ELECTRIC
- WATER LINE
- WATER METER
- WATER VALVE
- TITLE EXCEPTION
- TELEPHONE LINE
- TELEPHONE RISER
- SANITARY SEWER MANHOLE
- FENCE LINE
- STORM SEWER MANHOLE
- CALCULATED OR ANGLE POINT
- 1/2" IRON ROD WITH CAP SET
- IRON ROD FOUND

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING HAS BEEN REDUCED AND IS NOT TO SCALE

DRAWN BY: STS
CHECKED BY: EAW

SHEET No.
3.0

CERTIFICATE OF AUTHORIZATION
HERITAGE ENGINEERING PLLC NO. 1133
ARKANSAS ENGINEER
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
E.C. WARFORD
HE ENGINEERING EXCELLENCE
Heritage Engineering
P.O. BOX 505
Benton, Arkansas 72018
(501)939-2303
FAX (501)939-2016
www.HeritageEngineering.net

vertical bridge

PROJECT: PUMPKIN HOLLOW RD / US-AR-5227
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE: OVERALL SITE & TOPO COMPOUND PLAN

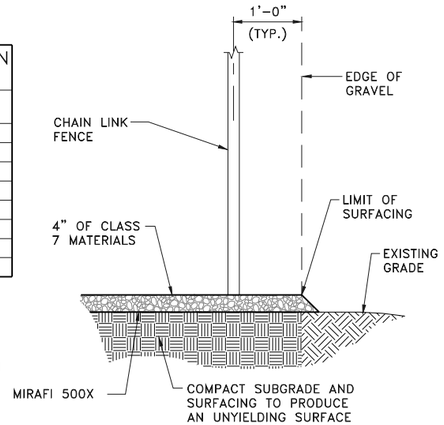
HE JOB NO.:	2024-0092
FILE NAME:	240092C3.0.DWG
PLOT SCALE:	1:30
REV. 0:	11/15/2024
REV. 1:	03/21/2025
REV. 2:	05/02/2025

CLASS 7 GRADIATION SCHEDULE	
SIEVE SIZE	PERCENT PASSING
1 1/2"	100
1"	60–100
3/4"	50–90
3/8"	———
#4	25–55
#10	———
#40	10–30
#200	3–10

MAXIMUM PLACITITY INDEX (MINUS #40 MATERIAL)

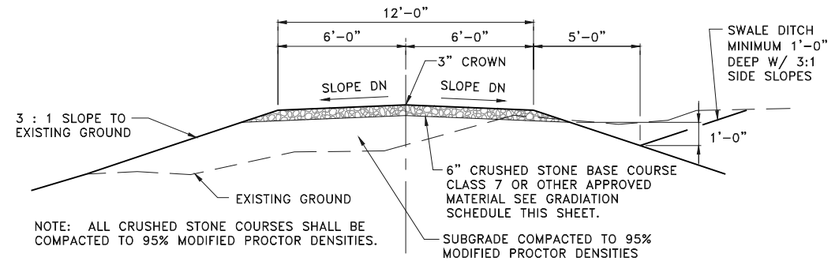
MINIMUM PERCENT CRUSHER RUN MATERIAL

GRADING SHALL COMPLY WITH REQUIREMENTS OF AASHTO T11 AND T27



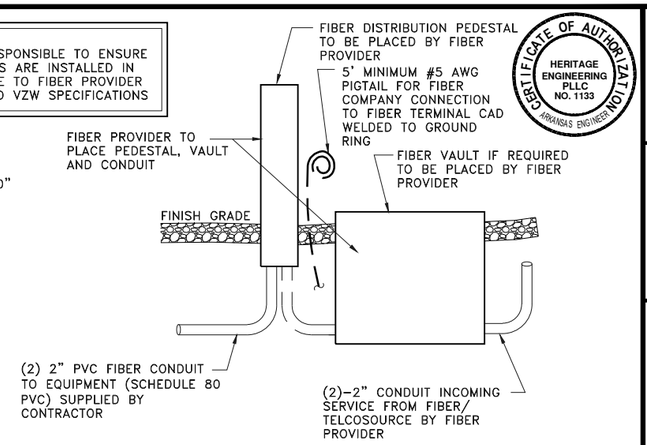
A 3.1 SITE COMPOUND SURFACE DETAIL
SCALE: NTS.

NOTE:
CONTRACTOR IS RESPONSIBLE TO ENSURE ALL FIBER CONDUITS ARE INSTALLED IN STRICT ACCORDANCE TO FIBER PROVIDER SPECIFICATIONS AND VZW SPECIFICATIONS

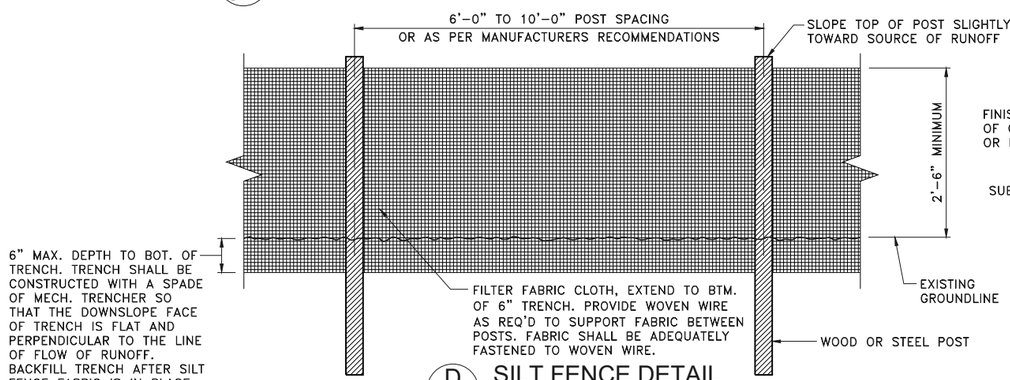


NOTE: ALL CRUSHED STONE COURSES SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITIES.

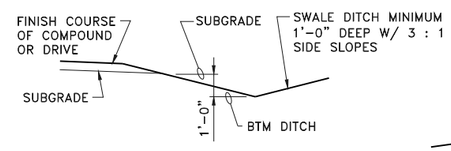
B 3.1 ACCESS DRIVE
SCALE: NTS.



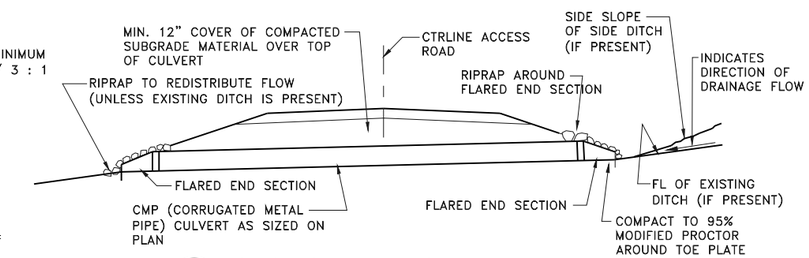
C 3.1 FIBER VAULT DETAIL
SCALE: NTS.



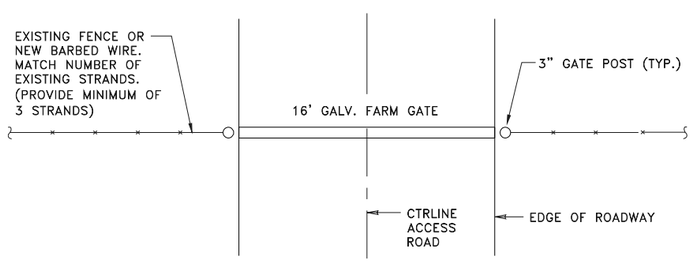
D 3.1 SILT FENCE DETAIL
SCALE: NTS.



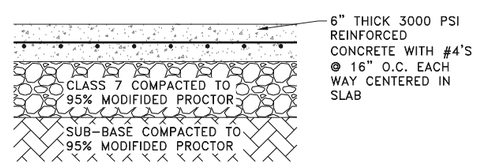
E 3.1 TYPICAL SWALE DITCH
SCALE: NTS.



F 3.1 SECTION THRU CULVERT
SCALE: NTS.



G 3.3 TYPICAL FARM GATE DETAIL
SCALE: NTS.



H 3.1 TYP. CONCRETE APRON DETAIL
SCALE: NTS.

SOIL AND EROSION CONTROL

1. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL, AND OTHER REQUIREMENTS OF GOVERNMENTAL AUTHORITIES HAVING JURISDICTION.
2. CONSTRUCTION AT THE SITE WILL BEGIN WITH THE INSTALLATION OF EROSION CONTROL MEASURES SUFFICIENT TO CONTROL SEDIMENT DEPOSITS AND EROSION.
3. EROSION CONTROL DEVICES SHALL BE INSTALLED BEFORE GROUND DISTURBANCE OCCURS. IT IS THE CONTRACTORS RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE CONSTRUCTION MANAGER IMMEDIATELY.
4. ALL SILT BARRIERS MUST BE PLACED AS ACCESS IS OBTAINED DURING CLEARING. NO GRADING SHALL BE DONE UNTIL SILT BARRIER IS INSTALLED.
5. CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED. CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
6. THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT WHEN THE SILT REACHES 6" IN HEIGHT WITHIN SILT FENCE BARRIERS.
7. FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES MAY RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED.
8. A COPY OF THE APPROVED LAND DISTURBANCE PLAN AND PERMIT IF REQUIRED SHALL BE PRESENT ON THE JOB SITE WHENEVER LAND DISTURBANCE ACTIVITY IS IN PROGRESS.
9. ANY AREA OF DISTURBANCE LEFT EXPOSED OR IS ANTICIPATED THAT IT WILL BE EXPOSED BEYOND THE EXPOSURE PERIOD REQUIRED BY LOCAL AUTHORITIES SHALL BE STABILIZED WITH TEMPORARY SEEDING.
10. EROSION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES. ADDITIONAL EROSIONS AND SEDIMENT CONTROL MEASURES SHALL BE PROVIDED IF REQUIRED UPON INSPECTION BY AND DIRECTION FROM LOCAL AUTHORITIES.
11. UPON COMPLETION OF WORK, OR AS DIRECTED BY EROSION CONTROL AUTHORITIES, ALL DISTURBED AREAS NOT IMPROVED WITH GRAVEL SHALL BE SEEDED WITH PERMANENT SEEDING MATERIAL SUITABLE FOR THE LOCAL GROWING AREA.
12. FILTER CLOTH SHALL HAVE APPROVED BACKING OR A BUILT–IN REINFORCED STRUCTURE AS RECOMMENDED BY THE MANUFACTURER TO SUPPORT THE FILTER CLOTH. THE MULLEN BURST STRENGTH OF FILTER CLOTH SHALL BE GREATER THAN 150 PSI AND THE EDGES SHALL BE TREATED TO PREVENT UNRAVELING.
13. A PRE ASSEMBLED SILT FENCE MEETING THE REQUIREMENTS OF THIS DRAWING IS ACCEPTABLE IN LIEU OF A FIELD CONSTRUCTED SILT FENCE.
14. SILT FENCE TO BE REMOVED AFTER CONSTRUCTION IS COMPLETE.
15. PLACE STRAW BALES ON ALL DOWN STREAM SIDE OF ALL SILT FENCES. BALES SHALL BE PLACED END TO END AGAINST NEW SILT FENCES.

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CERTIFICATE OF AUTHORIZATION HERITAGE ENGINEERING PLLC NO. 1133 ARKANSAS ENGINEER

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER EAW WARFORD

HE ENGINEERING EXCELLENCE
Heritage Engineering PLLC
P.O. BOX 505
Benton, Arkansas 72018
(501) 939-2303
FAX (501) 939-2016

vertical bridge

PROJECT: PUMPKIN HOLLOW RD / US-AR-5227
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE: COMPOUND DETAILS & EROSION CONTROL NOTES

HE JOB NO.:	2024–0092
FILE NAME:	240092C3.1.DWG
PLOT SCALE:	1:96
REV. 0:	11/15/2024
REV. 2:	05/02/2025

WARNING
0 1/2 1
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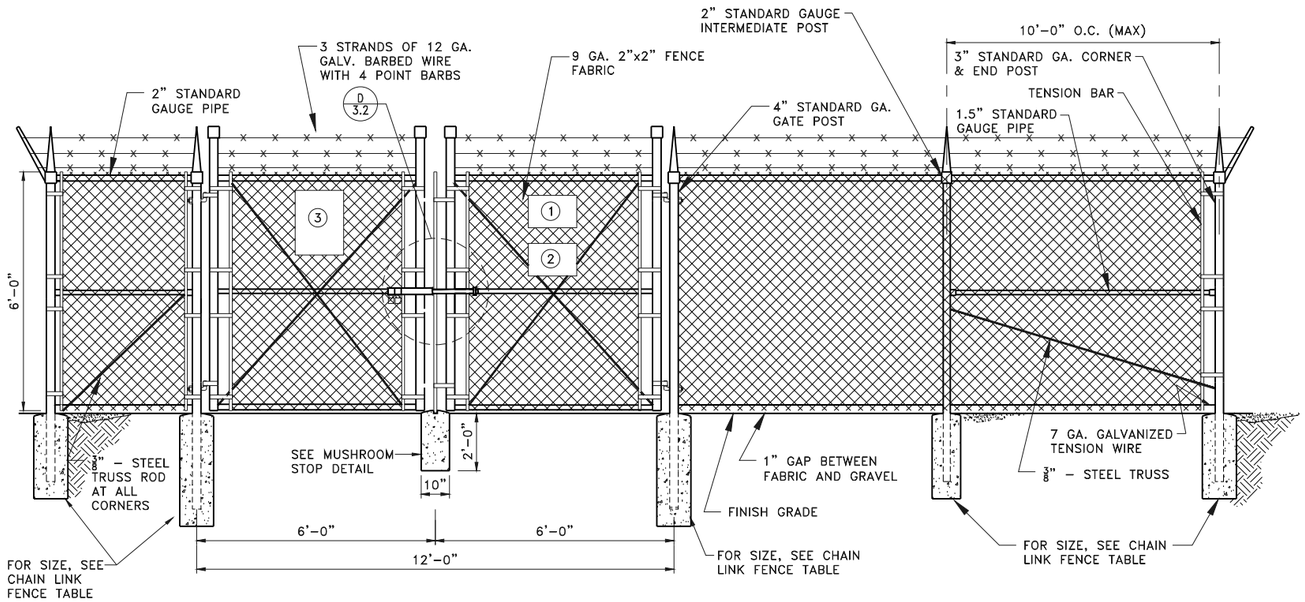
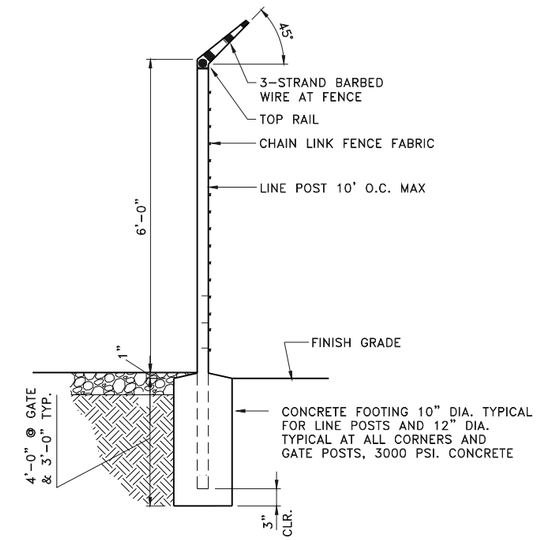
SCALE:	NTS
DESIGNED BY:	STS
DRAWN BY:	STS
CHECKED BY:	EAW

SHEET No.
3.1



A 3.2 CHAIN LINK FENCE & GATE ELEVATION

SCALE: NTS.

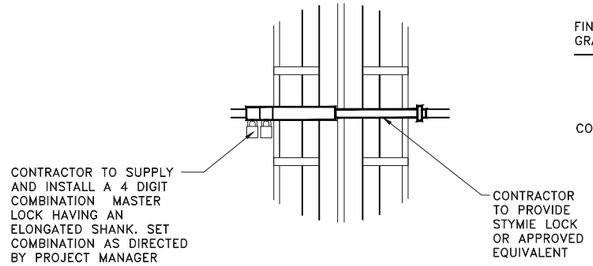


B 3.2 FENCE / BARBED WIRE ARM DETAIL

SCALE: NTS.

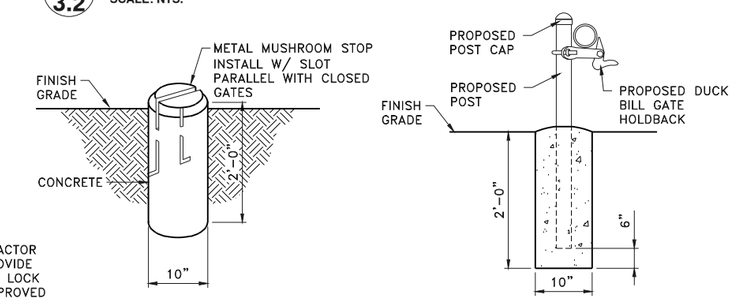
CHAIN LINK FENCE TABLE

FENCE COMPONENT	DIMENSION	HARDWARE AND FEATURES
FABRIC	6' HIGH, 9 GAUGE, 2" ZINC-COATED MESH	SELVEDGE TOP AND BOTTOM
WIRE	BARBED WIRE WITH 4 BARBS	3 RUNS
EXTENSION ARMS	STAMPED STEEL WITH MALLEABLE IRON BASE	45 DEGREE, ANGLED OUTWARD
ALL POSTS SHALL BE SCHEDULE 40 HOT DIP GALVANIZED PIPE		
END AND CORNER POSTS	3" STANDARD GAUGE PIPE (SCH 40)	36" X 12" CONCRETE FOOTING
LINE POSTS	2" STANDARD GAUGE PIPE (SCH 40)	36" X 10" CONCRETE FOOTING
DRIVEWAY GATE POSTS	4" STANDARD GAUGE PIPE (SCH 40)	48" X 12" CONCRETE FOOTING
WALKWAY GATE POSTS	3" STANDARD GAUGE PIPE (SCH 40)	36" X 12" CONCRETE FOOTING
TOP RAILS	1½" STANDARD GAUGE PIPE (SCH 40)	ATTACHED WITH PROPER FITTING
MID RAILS	1½" STANDARD GAUGE PIPE (SCH 40)	ATTACHED WITH PROPER FITTING
BRACE RODS	⅜" STEEL TRUSS	ATTACHED WITH PROPER FITTING
BOTTOM TENSION WIRE	7 GAUGE, 1900 LB. TENSILE STRENGTH	ALL SIDES
TENSION BARS	3/16" X ¾", FULL HEIGHT OF FABRIC	SPACE TENSION BANDS 15" ± O.C.
TIE WIRE	9 GAUGE ALUMINUM	12" O.C. FOR LINE POSTS & GATES 24" O.C. FOR RAILS AND TENSION WIRE
GATE FRAME	2" STANDARD GAUGE PIPE (SCH 40)	WELDED ASSEMBLY, COLD GALV. AND SILVER PAINT WELDED AREAS
POST CAPS	PER POST DIAMETER	ALL POSTS
POST, RAIL AND GATE FITTINGS	AS REQUIRED	STAMPED STEEL OR MALLEABLE CASTING
GATE HINGES	AS REQUIRED	OFFSET TYPE WITH 180°SWING
DOUBLE GATE LATCH	AS REQUIRED	DUCKBILL LATCH ON ACTIVE LEAF, DROP BOLTS ON BOTH LEAFS
GATE STOPS (CLOSED POSITION)	AS REQUIRED	MUSHROOM STOP SET IN CONCRETE
GATE STOPS (OPEN POSITION)	AS REQUIRED	AS REQURIED
LOCK CHAIN	⅜" SIZE, 36" LONG	HOT DIP GALVANIZED OR VINYL COATED



C 3.2 STYMIE LOCK FENCE LOCK DETAIL

SCALE: NTS.



D 3.2 MUSHROOM STOP DETAIL

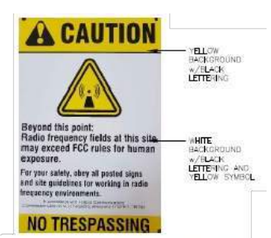
SCALE: NTS.

E 3.2 GATE KEEPER

SCALE: NTS. (TO HOLD GATE OPEN)

① NOTICE - RF SIGN (BLUE)

12" x 18" DIGITAL PRINT MOUNTED TO 0.40 THICK ALUMINUM (OPERATIONS PROVIDED)



② CAUTION - RF SIGN (YELLOW)

12" x 18" DIGITAL PRINT MOUNTED TO 0.40 THICK ALUMINUM (OPERATIONS PROVIDED)

③ VERTICAL BRIDGE ID SIGN

18" HIGH X 24" WIDE (OPERATIONS PROVIDED)

SIGNAGE NOTES:

1. SIGNS SHALL BE FABRICATED FROM CORROSION RESISTANT PRESSED METAL AND PAINTED WITH LONG LASTING UV RESISTANT COATINGS.
2. SIGNS (EXCEPT WHERE NOTED OTHERWISE) SHALL BE MOUNTED TO THE TOWER, GATE, AND FENCE USING A MINIMUM OF 9 GAUGE ALUMINUM WIRE, HOG RINGS (AS UTILIZED IN FENCE INSTALLATIONS) OR BRACKETS WHERE NECESSARY. BRACKETS SHALL BE OF SIMILAR METAL AS THE STRUCTURE TO AVOID GALVANIC CORROSION.

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vertical bridge

PROJECT: PUMPKIN HOLLOW RD / US-AR-5227
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE: COMPOUND FENCE ELEVATIONS & DETAILS

HE JOB NO.:	2024-0092
FILE NAME:	240092C3.2.DWG
PLOT SCALE:	1:12
REV. 0:	11/15/2024
REV. 1:	03/21/2025
REV. 2:	05/02/2025

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DRAWN BY:	STS
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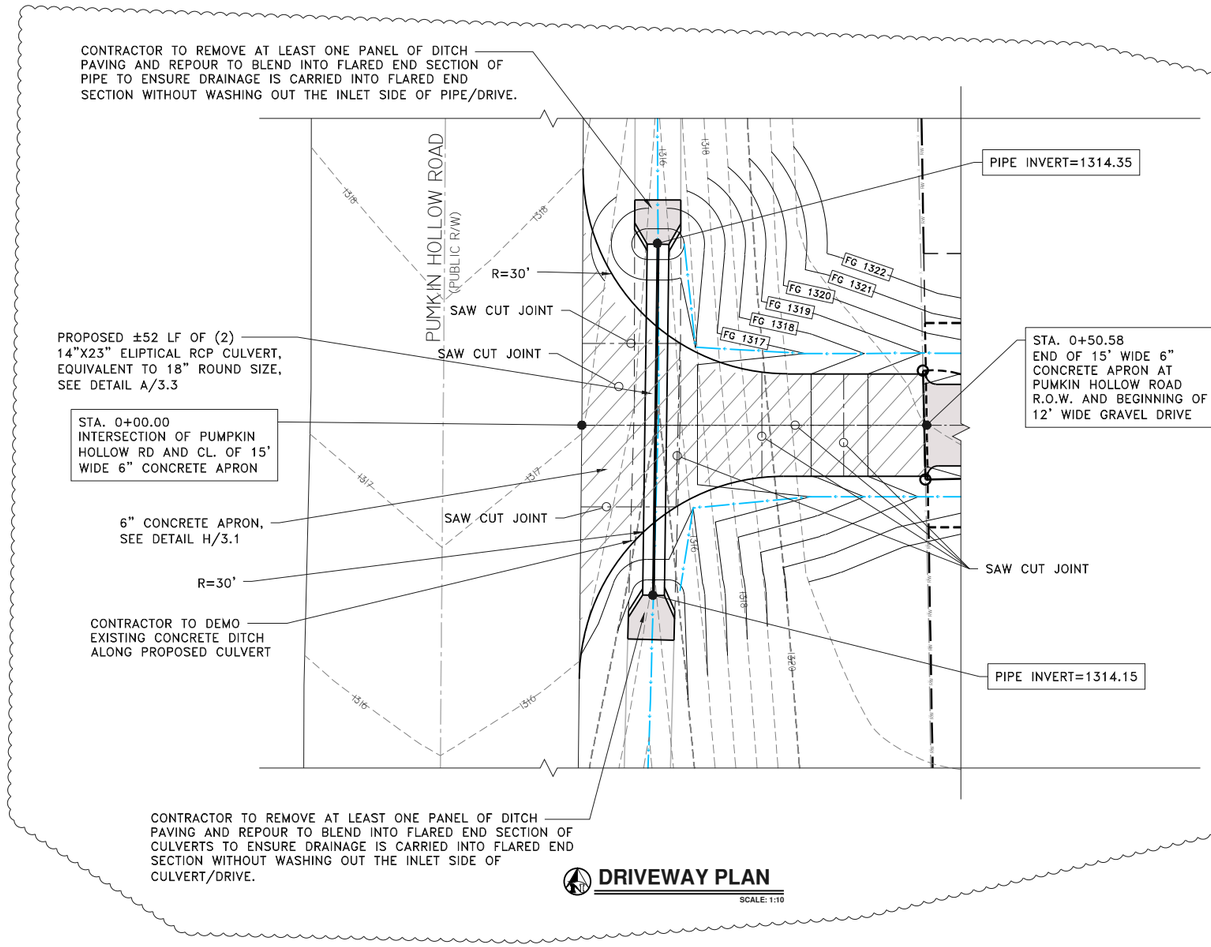
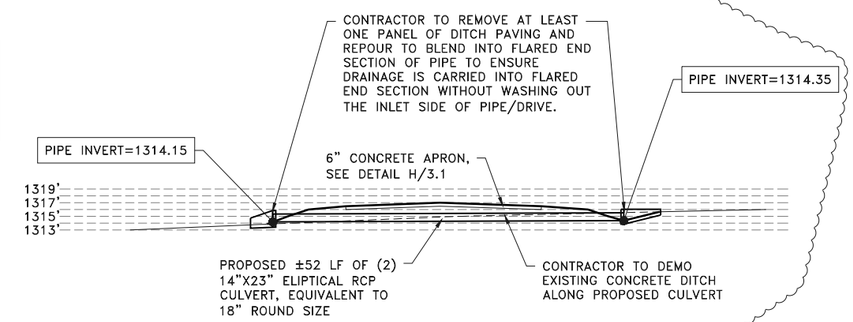
SHEET No.
3.2



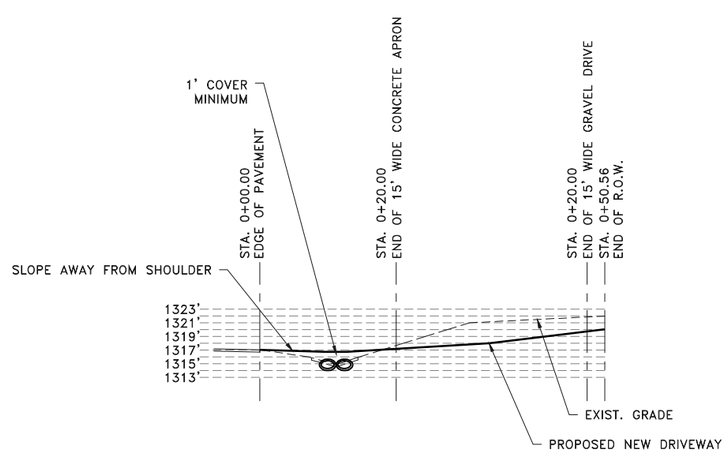
DRIVEWAY PLAN

SCALE: 1:10



A 3.3 SECTION THRU CULVERT

SCALE: NTS.



DRIVEWAY PROFILE

SCALE: 1:10

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vertical bridge

PROJECT: **PUMPKIN HOLLOW RD / US-AR-5227**
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE: DRIVEWAY PLAN & PROFILE

HE JOB NO.:	2024-0092
FILE NAME:	240092C3.3.DWG
PLOT SCALE:	1:10
REV. 0:	11/15/2024
REV. 2:	05/02/2025

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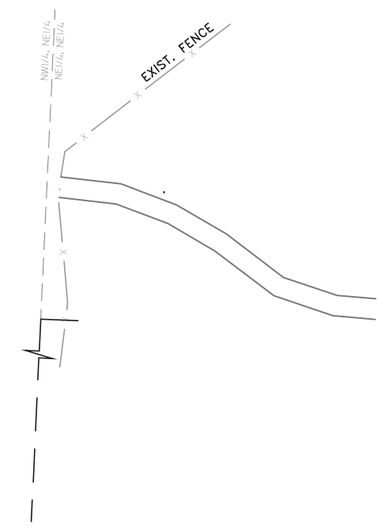
SCALE:	NTS
DESIGNED BY:	VZW
DRAWN BY:	VZW
CHECKED BY:	EAW

SHEET No.
3.3



OVERALL SITE PLAN

SCALE: 1 = 30

N
W E
S

BEARINGS ARE BASED ON ARKANSAS STATE PLANE GRID NORTH DERIVED FROM GPS OBSERVATIONS.

0 30 60 90

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LEGEND

- F.A.A. 1A LOCATION
- LIGHT POLE (O/H ELEC)
- POWER POLE
- GUY LINE
- —OHP— OVERHEAD ELECTRIC
- —U/G— U/G ELECTRIC
- —W— WATER LINE
- WATER METER
- WATER VALVE
- (3) TITLE EXCEPTION
- —G— (G)
- —T— TELEPHONE LINE
- TELEPHONE RISER
- (S) SANITARY SEWER MANHOLE
- —X—X— FENCE LINE
- (D) STORM SEWER MANHOLE
- ▲ CALCULATED OR ANGLE POINT
- ○ 1/2" IRON ROD WITH CAP SET
- ● IRON ROD FOUND

CERTIFICATE OF AUTHORIZATION
HERITAGE ENGINEERING PLLC
NO. 1133
ARKANSAS ENGINEER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
E.A.C. WARFORD
DATE

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www.HeritageEngineering.net

PROJECT:
PUMPKIN HOLLOW RD / US-AR-5227
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE:
ACCESS DRIVE DISTANCES

HE JOB NO.:	2024-0092
FILE NAME:	240092C3.4.DWG
PLOT SCALE:	1:30
REV. 2:	05/02/2025

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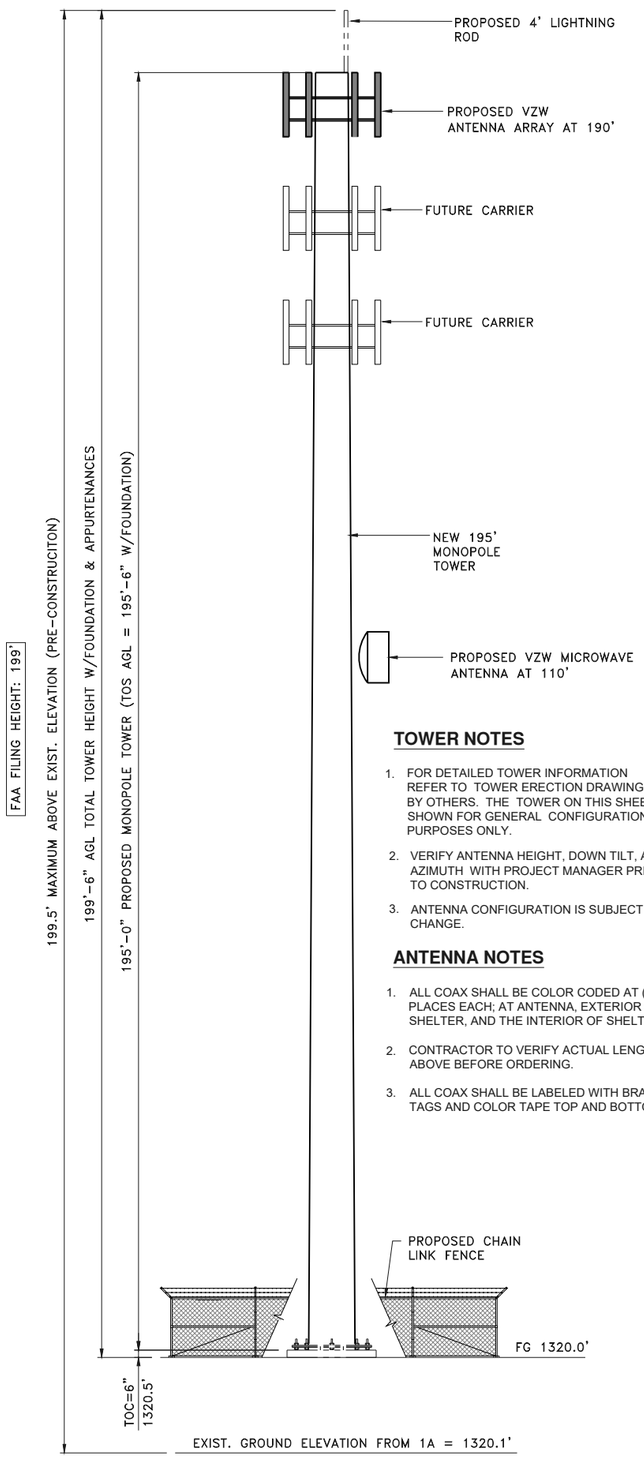
CHECKED BY:	EAW

SHEET No.
3.4



MONOPOLE TOWER ELEVATION

SCALE: NTS.

TOWER NOTES

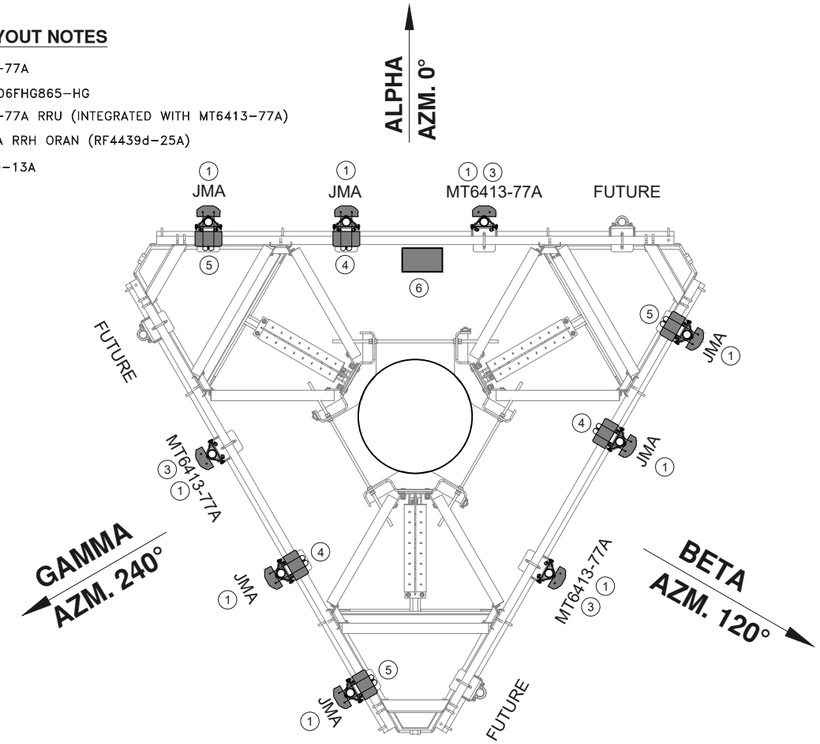
1. FOR DETAILED TOWER INFORMATION REFER TO TOWER ERECTION DRAWINGS BY OTHERS. THE TOWER ON THIS SHEET IS SHOWN FOR GENERAL CONFIGURATION PURPOSES ONLY.
2. VERIFY ANTENNA HEIGHT, DOWN TILT, AND AZIMUTH WITH PROJECT MANAGER PRIOR TO CONSTRUCTION.
3. ANTENNA CONFIGURATION IS SUBJECT TO CHANGE.

ANTENNA NOTES

1. ALL COAX SHALL BE COLOR CODED AT (3) PLACES EACH; AT ANTENNA, EXTERIOR OF SHELTER, AND THE INTERIOR OF SHELTER.
2. CONTRACTOR TO VERIFY ACTUAL LENGTH ABOVE BEFORE ORDERING.
3. ALL COAX SHALL BE LABELED WITH BRASS TAGS AND COLOR TAPE TOP AND BOTTOM

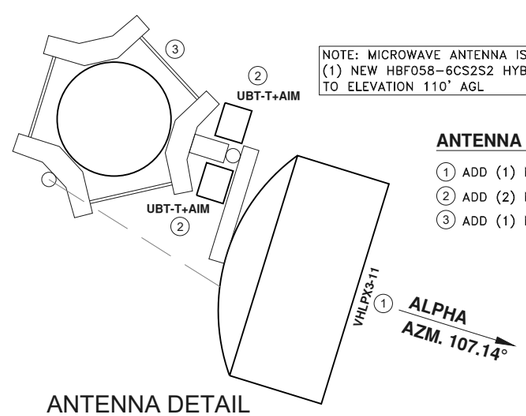
ANTENNA & EQUIPMENT LAYOUT NOTES

1. ADD (3) NEW SAMSUNG MT6413-77A
2. ADD (6) NEW JMA WIRELESS MX06FHG865-HG
3. ADD (0) NEW SAMSUNG MT6413-77A RRU (INTEGRATED WITH MT6413-77A)
4. ADD (3) NEW SAMSUNG B2/B66A RRH ORAN (RF4439d-25A)
5. ADD (3) NEW SAMSUNG RF4461d-13A
6. ADD (1) NEW 12 OVP



ANTENNA DETAIL

SCALE: NTS. @ 190' AGL



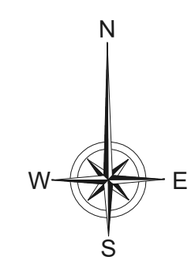
NOTE: MICROWAVE ANTENNA IS TO HAVE (1) NEW HBF058-6CS2S2 HYBRID CABLE TO ELEVATION 110' AGL

ANTENNA & EQUIPMENT LAYOUT NOTES

1. ADD (1) NEW VHLPX3-11
2. ADD (2) NEW UBT-T+AIM
3. ADD (1) NEW COMMSCOPE RM-DM-6 DUAL RING MOUNT KIT

ANTENNA DETAIL

SCALE: NTS. @ 110' AGL



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STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER ERIC WARFORD

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Benton, Arkansas 72018
(501) 939-2303
FAX (501) 939-2016

vertical bridge

PROJECT:
PUMPKIN HOLLOW RD / US-AR-5227
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE:
TOWER ELEVATION & ANTENNA DETAILS

HE JOB NO.:	2024-0092
FILE NAME:	240092C4.0.DWG
PLOT SCALE:	1:96
REV. 0:	11/15/2024
REV. 1:	03/21/2025
REV. 2:	05/02/2025

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DRAWN BY:	STS
CHECKED BY:	EAW

SHEET No.
4.0

verizon
NPP RFDS

SOUTH > South Coast > Central Gulf Coast > North West Arkansas > PUMPKIN HOLLOW RD AR

Singh, Sudhanshu - sudhanshu.singh@verizonwireless.com - 20240919_112812

Project Details		Location Information	
Carrier Aggregation	N	Site Id	616859534
Ecip	N	Search Ring#	
Project Name	MACRO - COVERAGE	E-NodeB ID#	null
Project Alt Name	PUMPKIN HOLLOW RD AR - NEW BUILD	PSLC#	657676
Project Id	16133676	Switch Name	North West Arkansas
Designed Sector Carrier 4G	15	Tower Type	
Designed Sector Carrier 5G	6	Site Type	MACRO
Additional Sector Carrier 4G	0	Street Address	TBD-Short
Additional Sector Carrier 5G	0	City	Bentonville
Suffix		State	AR
FP Solution Type & Tech Type	MCR;4G_700;5G_850;4G_850;4G_AWS;4G_AWS3;5G_L-Sub6;4G_PCS	Zip Code	72712
		County	Benton
		Latitude	36.412747/ 36° 24' 45.889"
		Longitude	-94.260622/ 94° 15' 38.239"

Project Scope

**** 09/19/2024 -
Add 6 MX06FHG865 Antennas
Add 3 MT6413-77A CBAND
Add 3 RF4461d-13A
Add 3 B2/B66A RRH ORAN (RF4439d-25A)
Add 1 OVP on Top
Add 2 6X12 Hybrid cable

Antenna Summary

Added Antenna

700	850	1900	AWS	AWS3	L-Sub6	Make	Model	Center line	Tip Height	Azimuth	Install Type	Quantit
					5G	Samsung	MT6413-77A	190	191.2	0(A),120(B),240(C)	PHYSICAL	3
LTE	LTE,5G	LTE	LTE	LTE		JMA Wireless	MX06FHG865-HG	190	194	0(A),120(B),240(C)	PHYSICAL	6

Removed Antenna

700	850	1900	AWS	AWS3	L-Sub6	Make	Model	Center line	Tip Height	Azimuth	Install Type	Quantit

Retained Antenna

700	850	1900	AWS	AWS3	L-Sub6	Make	Model	Center line	Tip Height	Azimuth	Install Type	Quantit

Added: 9	Removed: 0	Retained: 0

Non Antenna Summary

Added Non Antenna

Equipment Type	Location	700	850	1900	AWS	L-Sub6	Make	Model	Install Type	Quantity
OVP	Tower	LTE	LTE,5G	LTE	LTE	5G		12 OVP	PHYSICAL	1
RRU	Tower			LTE	LTE		Samsung	B2/B66A RRH ORAN (RF4439d-25A)	PHYSICAL	3
Hybrid Cable	Tower	LTE	LTE,5G	LTE	LTE	5G	H & S	MLC Hybrid 6x12	PHYSICAL	2
RRU	Tower					5G	Samsung	MT6413-77A	PHYSICAL	0
RRU	Tower	LTE	LTE,5G				Samsung	RF4461d-13A	PHYSICAL	3

Removed Non Antenna

Equipment Type	Location	700	850	1900	AWS	L-Sub6	Make	Model	Install Type	Quantity

Retained Non Antenna

Equipment Type	Location	700	850	1900	AWS	L-Sub6	Make	Model	Install Type	Quantity

Added: 9	Removed: 0	Retained: 0

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vertical bridge

PROJECT: **PUMPKIN HOLLOW RD / US-AR-5227**
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE: RF DESIGN SHEET (1 OF 2)

HE JOB NO.:	2024-0092
FILE NAME:	240092C4.1.DWG
PLOT SCALE:	1:1
REV. 0:	11/15/2024
REV. 2:	05/02/2025

WARNING
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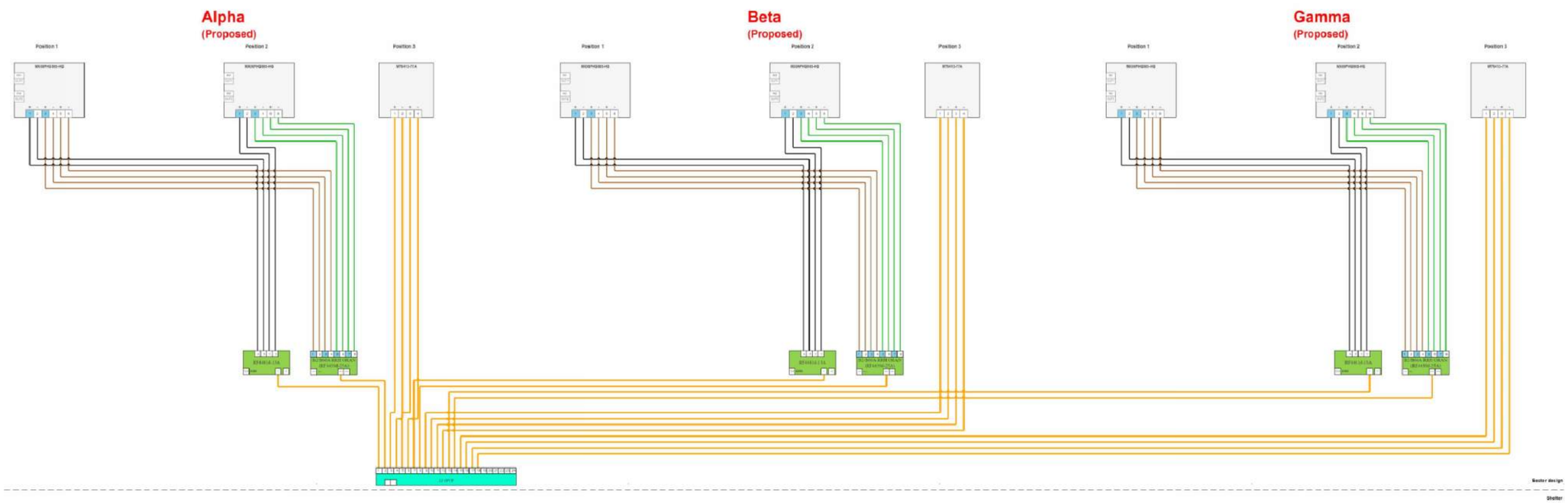
SCALE:	NTS
DESIGNED BY:	VZW
DRAWN BY:	VZW
CHECKED BY:	EAW

SHEET No.
4.1



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NO. 1133
ARKANSAS ENGINEER

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REGISTERED PROFESSIONAL ENGINEER
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Heritage Engineering PLLC
P.O. BOX 505
Benton, Arkansas 72018
(501) 939-2303
FAX (501) 939-2016

vertical bridge

PROJECT:
PUMPKIN HOLLOW RD / US-AR-5227
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-5855-58554

SHEET TITLE:
RF DESIGN SHEET (2 OF 2)

HE JOB NO.:	2024-0092
FILE NAME:	240092C4.2.DWG
PLOT SCALE:	1:1
REV. 0:	11/15/2024
REV. 2:	05/02/2025

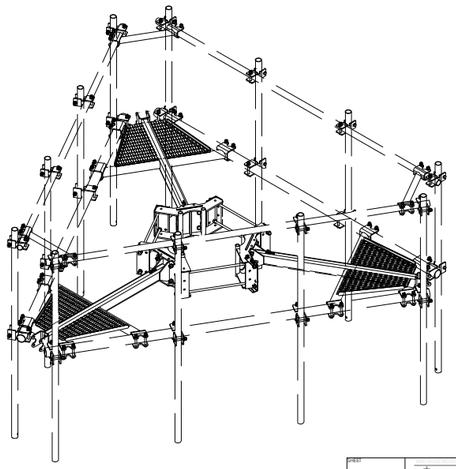
WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING HAS BEEN REDUCED AND IS NOT TO SCALE

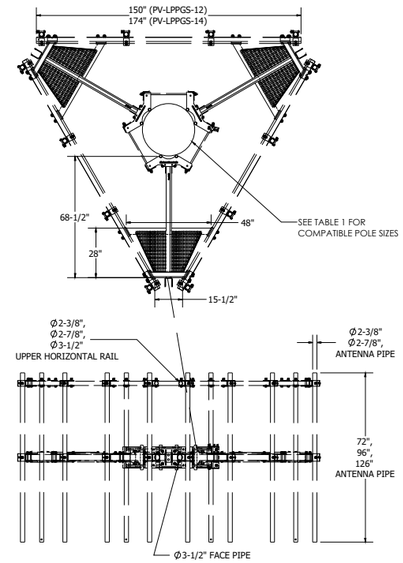
SCALE:	NTS
DESIGNED BY:	VZW
DRAWN BY:	VZW
CHECKED BY:	EAW

SHEET No.
4.2

PV-LPPGS
MONOPOLE GUARDIAN MOUNT

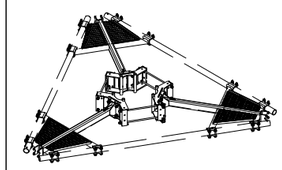
SEE SHEET 2 - TABLE 1 FOR FULL CONFIGURATION DETAILS



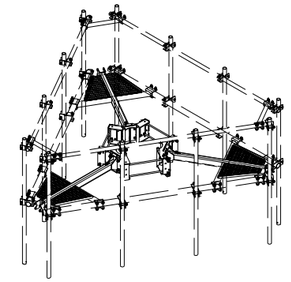


SHEET 1 OF 17	CATEGORY 02_Monopole	11	BOM TABLES UPDATED - BASE KITS	12/29/22	PERFECT VISION
	SERIES 01_Triangular	10	ADDED SEPARATE EPA & WEIGHTS TABLE	2/10/22	
6/23/2023 SCALE 1:36	TITLE PV-LPPGS_GUARDIAN	9	ACC1 REPLACE ACC2, PV-CMX-CG-BO REPLACE 115-242	3/16/21	
DIMENSIONS ARE IN INCHES TOLERANCES U.N.O. HOLES: +1/16", -1/32" ANGULAR: PROFILE±1/4, BEND2 ± ° ALL OTHERS: ±1/16"	BY DJN	8	KKGS UPDATE	2/2/21	MONOPOLE GUARDIAN MOUNT
	CHECKED SJS	7	ADDED ALL THREAD NOTE TO COLLARS REPLACED PK8K WITH PV-KKRS	11/11/20	DOCUMENT NUMBER LPPGS-ENG-01-R11 REV 11
	STATUS APPROVED	REV	DESCRIPTION	DATE	

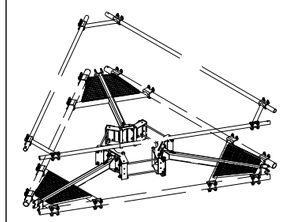
INCLUDED PART OVERVIEW



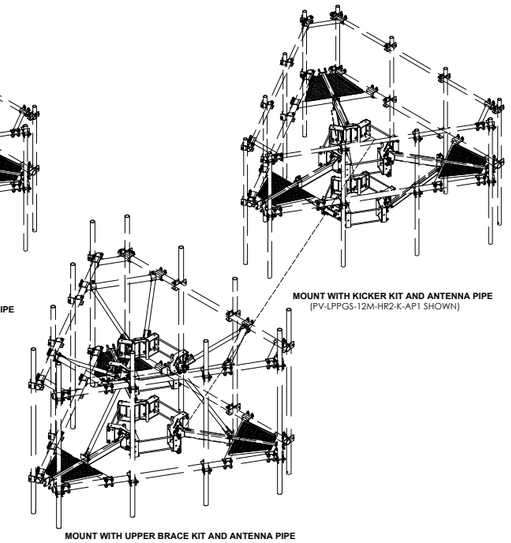
BASE MOUNT
(PV-LPPGS-12M-B SHOWN)



MOUNT WITH UPPER RAIL AND ANTENNA PIPE
(PV-LPPGS-12M-HR2-AP1 SHOWN)



MOUNT WITH UPPER RAIL
(PV-LPPGS-12M-HR2-B SHOWN)



MOUNT WITH KICKER KIT AND ANTENNA PIPE
(PV-LPPGS-12M-HR2-K-AP1 SHOWN)

MOUNT WITH UPPER BRACE KIT AND ANTENNA PIPE
(PV-LPPGS-12M-TKB3-AP4 SHOWN)

Table 5: Threaded Connection Tightening Points

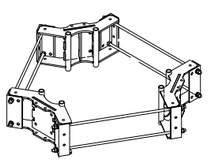
Reference Config	Total Connections
Base Mount	48
Add Upper Rail	60
Add (12) Pipes	108*
Add KKGS	144
Add TKB	168

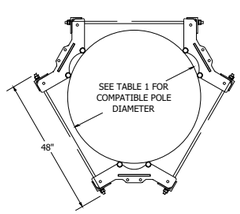
* APPROXIMATELY 40% LESS THAN INDUSTRY AVERAGE OF EQUIVALENT MOUNT

SHEET 5 OF 17	CATEGORY 02_Monopole	11	BOM TABLES UPDATED - BASE KITS	12/29/22	PERFECT VISION
	SERIES 01_Triangular	10	ADDED SEPARATE EPA & WEIGHTS TABLE	2/10/22	
6/23/2023 SCALE 1:40	TITLE PV-LPPGS_GUARDIAN	9	ACC1 REPLACE ACC2, PV-CMX-CG-BO REPLACE 115-242	3/16/21	
DIMENSIONS ARE IN INCHES TOLERANCES U.N.O. HOLES: +1/16", -1/32" ANGULAR: PROFILE±1/4, BEND2 ± ° ALL OTHERS: ±1/16"	BY DJN	8	KKGS UPDATE	2/2/21	MONOPOLE GUARDIAN MOUNT
	CHECKED SJS	7	ADDED ALL THREAD NOTE TO COLLARS REPLACED PK8K WITH PV-KKRS	11/11/20	DOCUMENT NUMBER LPPGS-ENG-01-R11 REV 11
	STATUS APPROVED	REV	DESCRIPTION	DATE	

STANDARD POLE

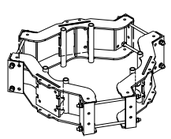
PV-RM1045-GS

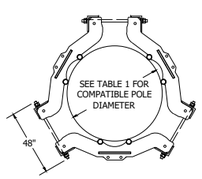




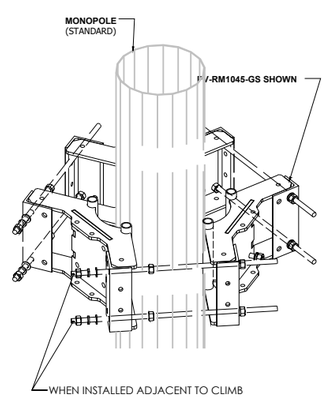
LARGE POLE

PV-RM3060-GS





COLLAR MOUNT INSTALLATION



WHEN INSTALLED ADJACENT TO CLIMB PATH REMOVE EXCESS ALL-THREAD TO PROMOTE CLIMBER SAFETY AND PREVENT CONTACT WITH SAFETY CLIMB WIRE ROPE.
MINIMUM 1" REQUIRED BEYOND HEX NUT

ROD CUT LENGTH

Table 10: Threaded Rod Cut Length (in)

Pole OD (in)	PV-RM1045-GS	PV-RM3060-GS
10	14	-
15	19.5	-
20	24.5	-
25	29	-
30	33.5	24
35	38	26.5
40	42.5	31
45	48	35.5
50	-	40
55	-	44
60	-	48

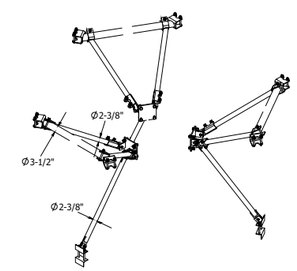
SHEET 8 OF 17	CATEGORY 02_Monopole	11	BOM TABLES UPDATED - BASE KITS	12/29/22	PERFECT VISION
	SERIES 01_Triangular	10	ADDED SEPARATE EPA & WEIGHTS TABLE	2/10/22	
6/23/2023 SCALE 1:20	TITLE PV-LPPGS_GUARDIAN	9	ACC1 REPLACE ACC2, PV-CMX-CG-BO REPLACE 115-242	3/16/21	
DIMENSIONS ARE IN INCHES TOLERANCES U.N.O. HOLES: +1/16", -1/32" ANGULAR: PROFILE±1/4, BEND2 ± ° ALL OTHERS: ±1/16"	BY DJN	8	KKGS UPDATE	2/2/21	MONOPOLE GUARDIAN MOUNT
	CHECKED SJS	7	ADDED ALL THREAD NOTE TO COLLARS REPLACED PK8K WITH PV-KKRS	11/11/20	DOCUMENT NUMBER LPPGS-ENG-01-R11 REV 11
	STATUS APPROVED	REV	DESCRIPTION	DATE	

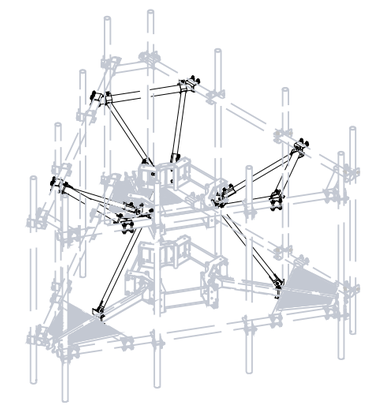
PV-LPP-GS-TKB

GUARDIAN TOP KICKER BRACE KIT
INCLUDED IN KITS:
- PV-LPPGS-12M-TKB3-AP4
- PV-LPPGS-14M-TKB3-AP4
- PV-LPPGS-14L-TKB3-AP4

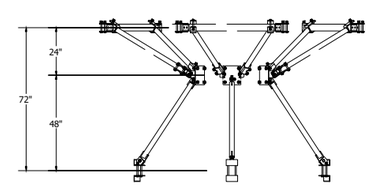
COMPATIBLE WITH 3-1/2" OD UPPER RAIL ONLY

ADDITIONAL EPA: 6.7 SQFT





GUARDIAN MOUNT WITH TKB
(PV-LPPGS-12M-TKB3-AP4 SHOWN)



SHEET 11 OF 17	CATEGORY 02_Monopole	11	BOM TABLES UPDATED - BASE KITS	12/29/22	PERFECT VISION
	SERIES 01_Triangular	10	ADDED SEPARATE EPA & WEIGHTS TABLE	2/10/22	
6/23/2023 SCALE 1:32	TITLE PV-LPPGS_GUARDIAN	9	ACC1 REPLACE ACC2, PV-CMX-CG-BO REPLACE 115-242	3/16/21	
DIMENSIONS ARE IN INCHES TOLERANCES U.N.O. HOLES: +1/16", -1/32" ANGULAR: PROFILE±1/4, BEND2 ± ° ALL OTHERS: ±1/16"	BY DJN	8	KKGS UPDATE	2/2/21	MONOPOLE GUARDIAN MOUNT
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	STATUS APPROVED	REV	DESCRIPTION	DATE	

MONOPOLE MOUNT: PV-LPPGS-12M-HR2-AP2

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CERTIFICATE OF AUTHORIZATION
HERITAGE ENGINEERING PLLC NO. 1133
ARKANSAS ENGINEER

ARKANSAS REGISTERED PROFESSIONAL ENGINEER
CATIC WARFORD

HE ENGINEERING EXCELLENCE
Heritage Engineering PLLC
P.O. BOX 505
Benton, Arkansas 72018
(501) 939-2303
FAX (501) 939-2016

vertical bridge

PROJECT:
PUMPKIN HOLLOW RD / US-AR-5227
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE:
ANTENNA MOUNT SPECIFICATION SHEET (BY OTHERS)

HE JOB NO.:	2024-0092
FILE NAME:	240092C4.3.DWG
PLOT SCALE:	1:48
REV. 0:	11/15/2024
REV. 2:	05/02/2025

WARNING
0 1/2 1
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SCALE:	NTS
DESIGNED BY:	BY OTHERS
DRAWN BY:	BY OTHERS
CHECKED BY:	EAW

SHEET No.
4.3

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A CommScope Company

Microwave Path Datasheet

PCN Date: January 31, 2025 — New Path
Job Number: 250131COMSTI05 — RCN Number: 250131B6

ADMINISTRATIVE INFORMATION		
Site Name	**Pumpkin Hollow**	**Tiver Boulevard**
County / State	Benton County / AR	Benton County / AR
Status / License Basis	Engineering Proposal / Primary	Engineering Proposal / Primary
Radio Service	CF-Common Carrier Fixed	CF-Common Carrier Fixed
Station Class	FXO-Fixed	FXO-Fixed
Call Sign		
Licensee Name	Cellco Partnership - AR/W TN	Cellco Partnership - AR/W TN
SITE INFORMATION		
Latitude (NAD 83)	36 24 45.5 N	36 23 47.6 N
Longitude (NAD 83)	94 15 40.7 W	94 11 48.7 W
Ground Elevation (AMSL)	402.33 m / 1320.0 ft	375.25 m / 1231.1 ft
Antenna Structure Registration #		
Path Azimuth	107.138°	287.176°
Path Length / Atmospheric Loss / Free Space Loss	6.050 km (3.759 mi) / 0.1 dB / 129.1 dB	
PRIMARY ANTENNA INFORMATION		
Antenna Code	77718A	77718A
Manufacturer	CommScope	CommScope
Model / Diameter	VHLPX3-11WA / 3.0 ft	VHLPX3-11WA / 3.0 ft
Gain / Beamwidth / Tilt	38.50 dBi / 2.00° / -0.3°	38.50 dBi / 2.00° / 0.2°
Centerline (AGL)	33.53 m / 110.0 ft	33.53 m / 110.0 ft
Transmit Mode	Tx/Rx	Tx/Rx
RADIO INFORMATION		
Radio Code	M11B27-2	M11B27-2
Manufacturer	Nokia	Nokia
Model Description	Wavence UBT-S/T HP	Wavence UBT-S/T HP
Stability	0.001%	0.001%
Receiver Threshold	-51.00 dBm	-51.00 dBm
ACM Coord Advantage / ATPC / Trigger Level	No / No / -- dBm	No / No / -- dBm
Coordinated Power / RSL	30.9 / -29.3 dBm	30.9 / -29.3 dBm
Fixed Loss: Common / TX / RX	0.5 / 3.5 / 3.5 dB	0.5 / 3.5 / 3.5 dB

Radio Model	Modulation	Emission Designator	Data Rate (kbps)	Power (dB)	EIRP (dB)	RSL (dB)	Power (dB)	EIRP (dB)	RSL (dB)
WVCE11-U-4096A80S-717 HP	4096 QAM	80M0D7W	717000	27.0	61.5	-33.2	27.0	61.5	-33.2
WVCE11-U-2048A80S-657 HP	2048 QAM	80M0D7W	657000	27.5	62.0	-32.7	27.5	62.0	-32.7
WVCE11-U-1024A80S-599 HP	1024 QAM	80M0D7W	599000	28.0	62.5	-32.2	28.0	62.5	-32.2
WVCE11-U-512A80S-540 HP	512 QAM	80M0D7W	540000	29.0	63.5	-31.2	29.0	63.5	-31.2
WVCE11-U-256A80S-499 HP	256 QAM	80M0D7W	499000	29.0	63.5	-31.2	29.0	63.5	-31.2
WVCE11-U-128A80S-435 HP	128 QAM	80M0D7W	435000	29.0	63.5	-31.2	29.0	63.5	-31.2
WVCE11-U-64A80S-367 HP	64 QAM	80M0D7W	367000	29.1	63.6	-31.1	29.1	63.6	-31.1
WVCE11-U-32A80S-293 HP	32 QAM	80M0D7W	293000	30.4	64.9	-29.8	30.4	64.9	-29.8
WVCE11-U-16A80S-234 HP	16 QAM	80M0D7W	234000	30.9	65.4	-29.3	30.9	65.4	-29.3
WVCE11-U-4A80S-117 HP	4 QAM	80M0D7W	117000	30.9	65.4	-29.3	30.9	65.4	-29.3

TRANSMIT FREQUENCIES (MHz)				
80.0 MHz Channel Bandwidth	11565.0 S (5)	11645.0 S (6)	11075.0 S (5)	11155.0 S (6)

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VERIZON WIRELESS MICROWAVE TOWER MODIFICATION FORM

SITE:	**Pumpkin Hollow**	**REQUESTOR:**	Chip Vega	**TITLE:**	Principal Eng-Interconnect	**DATE:**	2/1/2025
Siterra Site #:				**Siterra Project #:**			
P/S Project #:		**Location Code:**	5000070521	**Activity String:**			
Latitude:	36 24 45.45 N	**ASR#:**	None	**Tower Owner:**	Vertical Bridge		
Longitude	094 15 40.70 W	**Tower Type:**	Monopole	**Tower Constructed (Date):**	TBD		
Address1:	12716 Punkin Hollow Road	**City:**	Bentonville				
Address2:	0	**County:**	BENTON	**State:**	AR	**Zip Code:**	72712

EQUIPMENT SPECIFICATIONS

ANTENNA INFORMATION	COMMENTS						
	ANTENNA TYPE	DISH	DISH	DISH	DISH	DISH	DISH
	ANTENNA QUANTITY	1					
	TEMPORARY/PERMANENT	ANNUAL					
	PROJECTED INSTALLATION DATE	TBD					
	PROJECTED REMOVAL DATE	TBD					
	INSTALLATION STATUS : Indicate either Existing, Removing, Proposed, or Never Installed	PROPOSED					
	TO SITE	Pumpkin Hollow					
	CONTRACT NUMBER TO BE MODIFIED						
	TRANSMIT OR RECEIVE	Both					
	MANUFACTURER	Commscope					
	TYPES OF ANTENNAS	3' HP					
	MODEL #	VHLPX3-11					
	ANTENNA WEIGHT (Per Antenna)	37 lbs					
	NOMINAL ANTENNA DIAMETER	3'					
	ANTENNA SPEC. DIAMETER	39.3"					
	RAD CENTER (Ft AGL)	110					
	ANTENNA MOUNT HEIGHT (Ft AGL)	110					
	ANTENNA MOUNT HEIGHT (Ft ARL)	0					
	MOUNT TYPE	4.5" Pipemount					
	TOWER LEG	0					
	AZIMUTH/DIRECTION of RADIATION	107.14°					
RADIO INFORMATION	TRANSMITTER OUTPUT POWER (dBm)	30.9					
	TRANSMITTER OUTPUT POWER (Watts)	1.23					
	TX FREQUENCY (MHz)	11200 V/H					
	RX FREQUENCY (MHz)	11200 V/H					
	LICENSED/UNLICENSED	Licensed					
	ANTENNA GAIN	38.5					
	ANTENNA VERTICAL ANGLE	-0.3					
	(Enter data) EIRP (dBm)	0					
	(Auto-populate) EIRP (Watts)	0.001					
	(Auto-populate) ERP (dBm)	-2.15					
	(Autopopulate) ERP (Watts)	0.000609537					
ODU / RFU Information	#of ODU/RFU per antenna	2					
	MFGR	NOKIA					
	Model #	UBT-T+AIM					
	DirectFit or Tower Mounted	Tower Mounted					
	H x W x D inches	10.5 x 10.2 x 8.4					
	Weight (per ODU) lbs.	18.5					
TRANSMISSION LINE INFORMATION	# of LINES PER ANTENNA	1					
	TRANSMISSION LINE TYPE	HYBRID					
	TRANSMISSION LINE MANUFACTURER	RFS					
	TRANSMISSION LINE MODEL	HBF058-6CS2S2					
	TRANSMISSION LINE DIAMETER/SIZE	0.84"					
	TRANSMISSION LINE WEIGHT (lb/ft)	0.3					
ICE SHIELDS (for Microwave Dishes)	INSTALLATION STATUS :Indicate either Existing, Removing, Proposed, or Never Installed						
	MANUFACTURER						
	MODEL #						
	SHIELD WEIGHT (lbs)						
	SHIELD DIMENSIONS (HxWxD)						
	SHIELD MOUNT HEIGHT (Ft AGL)						

CERTIFICATE OF AUTHORIZATION — HERITAGE ENGINEERING PLLC NO. 1133 — ARKANSAS ENGINEER

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — ERIC WARFORD

HE ENGINEERING EXCELLENCE
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vertical bridge

PROJECT: **PUMPKIN HOLLOW RD / US-AR-5227**
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE: MICROWAVE PATH DATASHEET & MICROWAVE FORM

HE JOB NO.:	2024-0092
FILE NAME:	240092C4.4.DWG
PLOT SCALE:	1:1
REV. 1:	03/21/2025
REV. 2:	03/21/2025

WARNING
0 1/2 1
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SCALE:	NTS
DESIGNED BY:	VZW
DRAWN BY:	VZW
CHECKED BY:	EAW

SHEET No.
4.4

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RM-DM-6

Dual Ring Mount kit for 6 ft Microwave Antenna

Product Classification

Product Type	Universal ring mount

General Specifications

Mounting	Monopole, 254–1270 mm (10–50 in) OD
Pipe, quantity	1
Sectors, quantity	1

Dimensions

Height	254 mm | 10 in
Width	736.6 mm | 29 in
Length	1,600.2 mm | 63 in
Pipe Length	1,600.2 mm | 63 in
Mounting Diameter, maximum	1270 mm | 50 in
Mounting Diameter, minimum	381 mm | 15 in
Pipe Outer Diameter	114.3 mm | 4.5 in
Mounting Circumference, maximum	3,990.34 mm | 157.1 in
Mounting Circumference, minimum	1,196.34 mm | 47.1 in

Material Specifications

Material Type	Hot dip galvanized steel

Packaging and Weights

Included	Hardware | Mount | Pipe
Packaging quantity	1

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COMMSCOPE®

RM-DM-6

Weight, net	178.8 kg | 394.186 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Above maximum concentration value
ROHS	Compliant/Exempted
UK-ROHS	Compliant/Exempted

50

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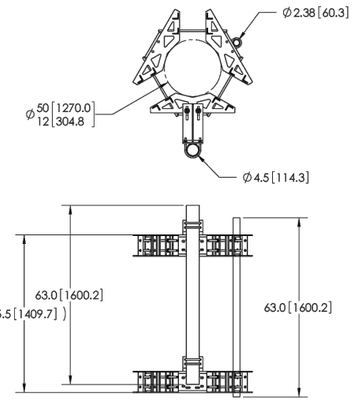
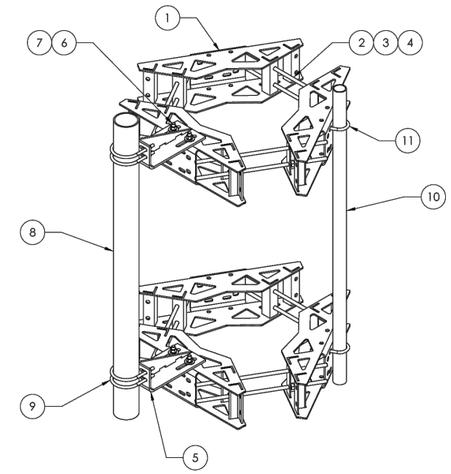
COMMSCOPE®

ITEM	PART NO.	DESCRIPTION	QTY.	WEIGHT
1	MTC328601	10-50 RRU Mount Weldment	6	29.99 LBS
2	MT-382-24	5/8" X 24" GALV THREADED ROD	12	2.07 LBS
3	GWL-05	5/8" GALV LOCK WASHER	24	0.03 LBS
4	GN05A	5/8" GALV HEX NUT (A194 2H)	24	0.12 LBS
5	MTC315902	14" L-Bracket	2	15.46 LBS
6	GB-0520A	5/8" X 2" GALV BOLT KIT (A325)	4	0.27 LBS
7	GWF-05	5/8" GALV FLAT WASHER	4	0.03 LBS
8	MT-653-63	4.5" O.D. PLAIN END PIPE	1	56.35 LBS
9	GUB-4456	1/2" X 4-5/8" X 6-1/2" GALV U-BOLT	4	0.91 LBS
10	MT-650-63	Ø2.375" OD x 63" PIPE	1	19.08 LBS
11	GUB-4240	1/2" X 2-1/2" X 4" GALV U-BOLT	2	0.56 LBS
12	MT38240	5/8" X 40" GALV THREADED ROD	12	3.46 LBS

NOT SHOWN

REVISIONS				
REV.	ZONE	DESCRIPTION	BY	DATE
A		INITIAL RELEASE	MSM	10/19/212





NOTES:
1. ALL METRIC DIMENSIONS ARE IN BRACKETS.
2. FITS MONOPOLES 12"–50" OD.
3. MT38240 USED FOR 30"–50" POLE ODs.

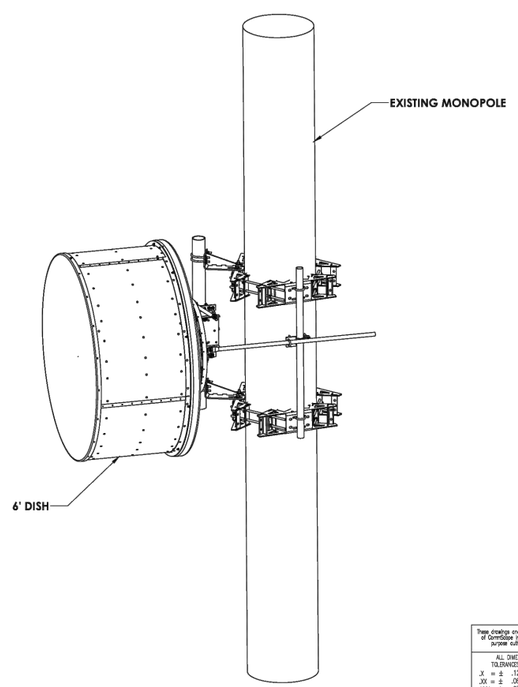
These drawings and specifications are the proprietary property of CommScope Inc. and may be used only for the specific purpose authorized in writing by CommScope Inc.

ALL DIMENSIONS ARE IN INCHES U.O.S.
TOLERANCES UNLESS OTHERWISE SPECIFIED:
.X = ± .12 ANGLES ±2°
.XX = ± .06 FRACTIONS ±1/32
.XXX= ± .03

REMOVE BURRS AND BREAK EDGES .005

DO NOT SCALE THIS PRINT

DRAWN BY: MSM	SHEET: 1 of 2	PART NUMBER: RM-DM-6	
DESIGNED BY: TP	SCALE: NTS	DESCRIPTION: 6' Microwave 12"–50" Monopole Mount	
DATE: 10/19/12	MATERIAL: A36, A500	DRAWING TITLE: ASSEMBLY DRAWING	
REVISION: A	FINISH: GALV A123	COMMSCOPE® Hickory, NC 28602 U.S.A.	
	WEIGHT: 363.62 LBS		



DO NOT SCALE THIS PRINT

DRAWN BY: MSM	SHEET: 2 of 2	PART NUMBER: RM-DM-6	
DESIGNED BY: TP	SCALE: NTS	DESCRIPTION: 6' Microwave 12"–50" Monopole Mount	
DATE: 10/19/12	MATERIAL: A36, A500	DRAWING TITLE: ASSEMBLY DRAWING	
REVISION: A	FINISH: GALV A123	COMMSCOPE® Hickory, NC 28602 U.S.A.	
	WEIGHT: 363.62 LBS		

CERTIFICATE OF AUTHORIZATION
HERITAGE ENGINEERING PLLC
NO. 1133
ARKANSAS ENGINEER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
EAW
ERIC A. WARFORD

HE ENGINEERING EXCELLENCE
Heritage Engineering PLLC
P.O. BOX 505
Benton, Arkansas 72018
(501) 939-2303
FAX (501) 939-2016

vertical bridge

PROJECT:
PUMPKIN HOLLOW RD / US-AR-5227
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE:
MICROWAVE MOUNT SPECIFICATION SHEET

HE JOB NO.:	2024–0092
FILE NAME:	240092C4.5.DWG
PLOT SCALE:	1:1
REV. 1:	03/21/2025
REV. 2:	05/02/2025

WARNING
0 1/2 1
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SCALE:	NTS
DESIGNED BY:	VZW
DRAWN BY:	VZW
CHECKED BY:	EAW

SHEET No.
4.5

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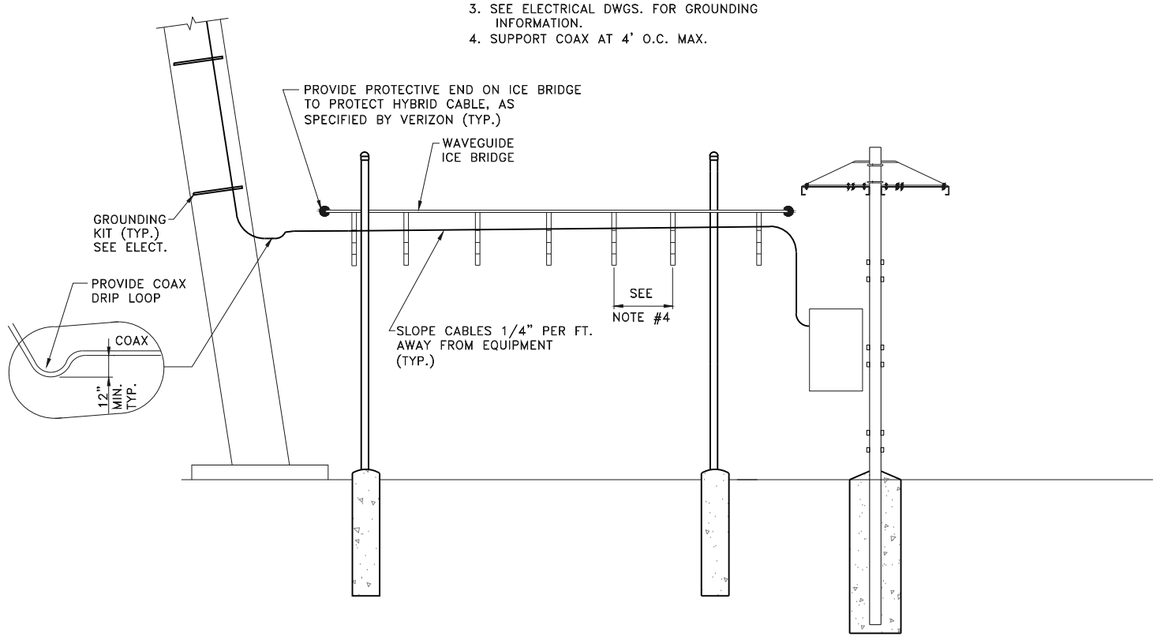
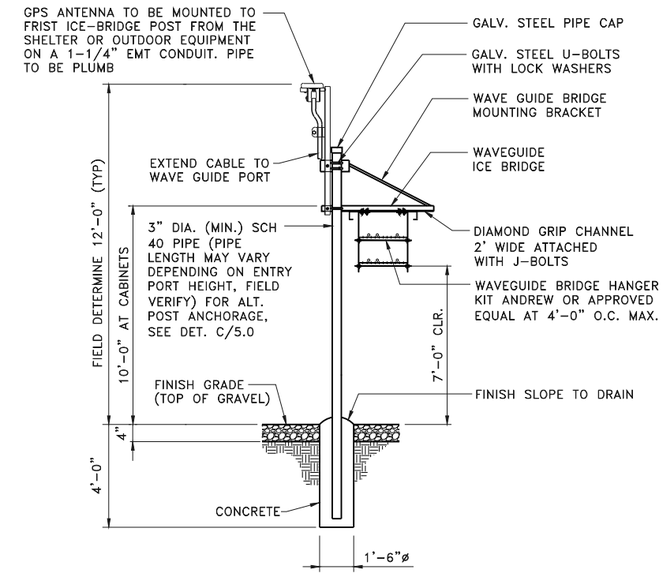
NOTES :

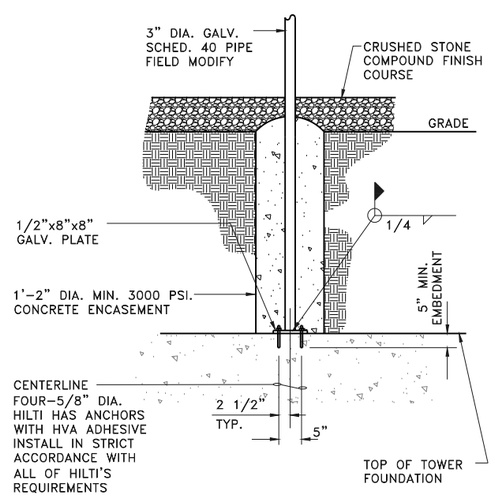
1. CONTRACTOR SHALL GRADE SITE TO DRAIN AWAY FROM EQUIP. PAD.
2. SEE SHT. 5.0 FOR EQUIP. PAD INFORMATION.
3. SEE ELECTRICAL DWGS. FOR GROUNDING INFORMATION.
4. SUPPORT COAX AT 4' O.C. MAX.



A 5.0 TYPICAL WAVE GUIDE BRIDGE ELEVATION
SCALE: NTS.

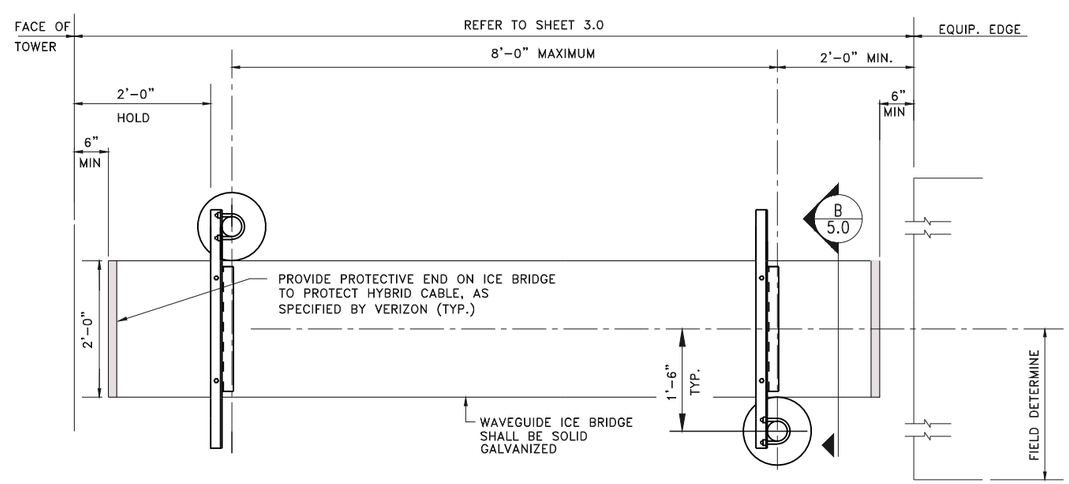


B 5.0 SECTION @ WAVE GUIDE BRIDGE
SCALE: NTS.



NOTE:
ALL WELDS AND DAMAGED AREAS OF GALVANIZING SHALL BE COATED WITH TWO COATS OF BALVANOX COLD GALVANIZING COMPOUND.

C 5.0 ALTERNATE POST ANCHORAGE @ WAVE GUIDE BRIDGE POST
SCALE: NTS.



D 5.0 TYPICAL WAVE GUIDE BRIDGE PLAN VIEW
SCALE: 1/2"=1'-0"

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STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — 24TC WARFORD

HE ENGINEERING EXCELLENCE
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FAX (501) 939-2016

vertical bridge

PROJECT:
PUMPKIN HOLLOW RD / US-AR-5227
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE:
WAVE GUIDE BRIDGE, GPS ELEVATION, SECTION, PLAN & DETAILS

HE JOB NO.:	2024-0092
FILE NAME:	240092C5.0.DWG
PLOT SCALE:	1:24
REV. 0:	11/15/2024
REV. 2:	05/02/2025

WARNING
0 1/2 1
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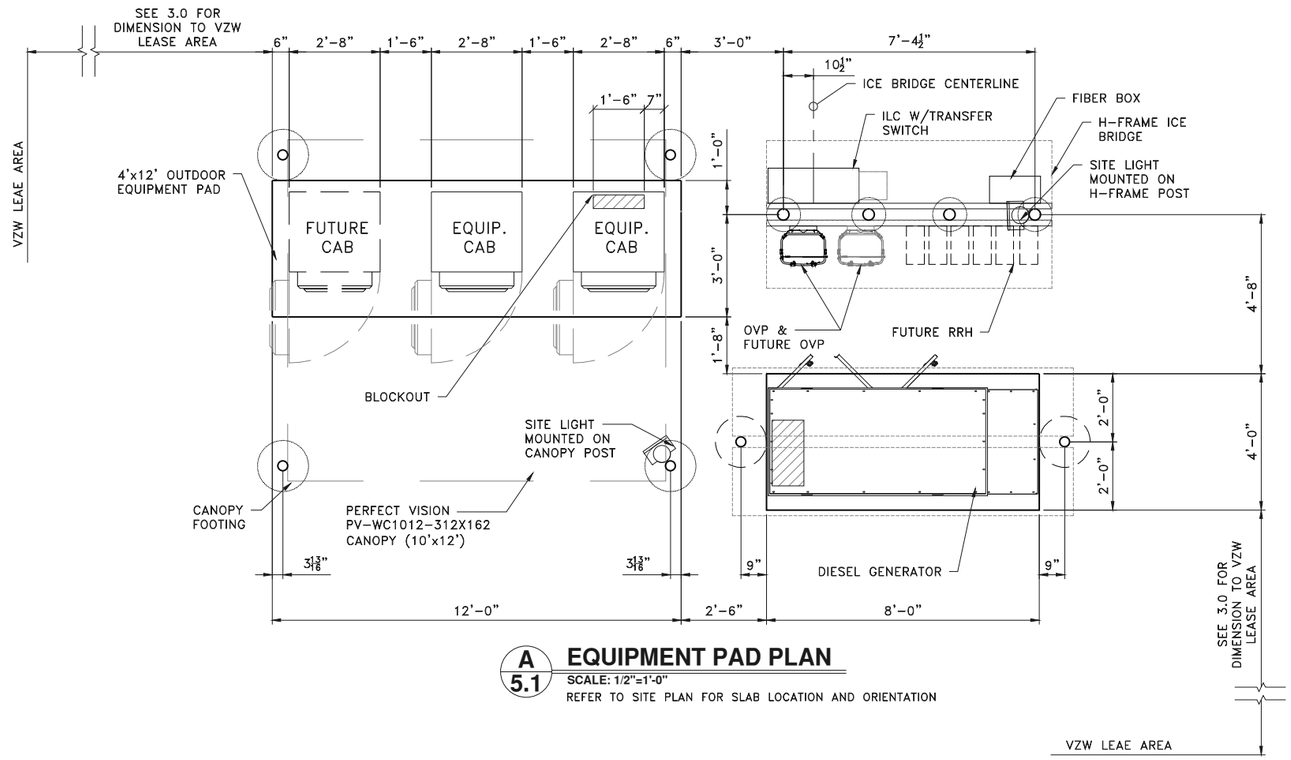
DESIGNED BY:	STS
DRAWN BY:	STS
CHECKED BY:	EAW

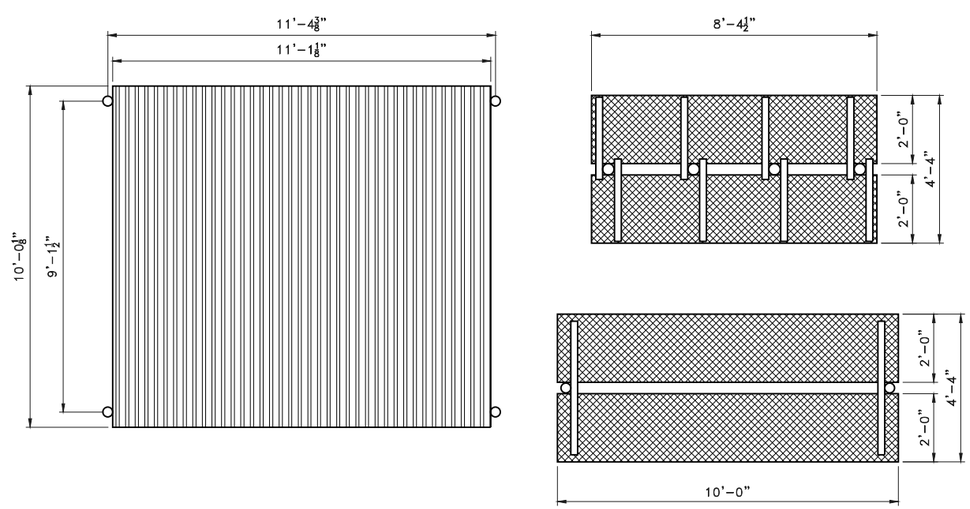
SHEET No.
5.0



A 5.1 EQUIPMENT PAD PLAN

SCALE: 1/2"=1'-0"

REFER TO SITE PLAN FOR SLAB LOCATION AND ORIENTATION



B 5.1 AWNING/ICE BRIDGE LAYOUT

SCALE: 1/2"=1'-0"

REFER TO SITE PLAN FOR SLAB LOCATION AND ORIENTATION

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STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER CALIC WARFORD

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FAX (501) 939-2016

vertical bridge

PROJECT:
PUMPKIN HOLLOW RD / US-AR-5227
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE:
EQUIPMENT PAD PLANS & AWNING/ICE BRIDGE LAYOUT

HE JOB NO.:	2024-0092
FILE NAME:	240092C5.1.DWG
PLOT SCALE:	1:24
REV. 0:	11/15/2024
REV. 2:	05/02/2025

WARNING
0 1/2 1
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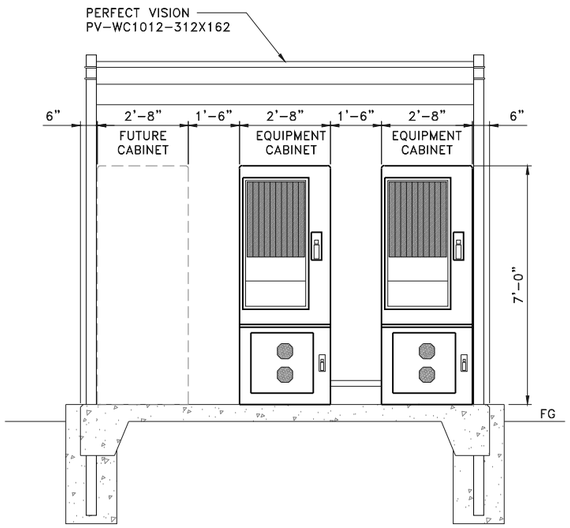
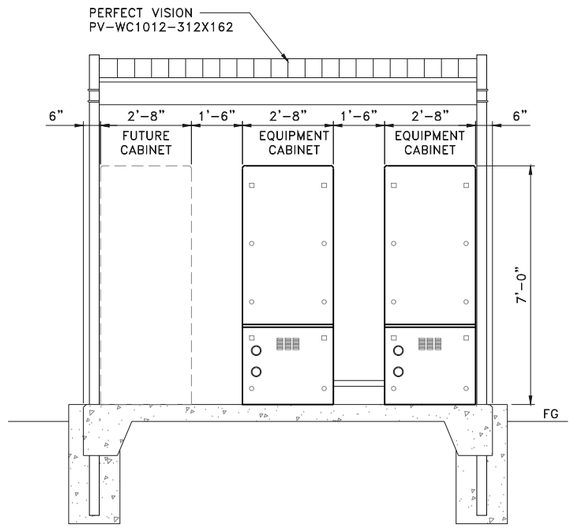
SCALE:	NTS
DESIGNED BY:	STS
DRAWN BY:	STS
CHECKED BY:	EAW

SHEET No.
5.1



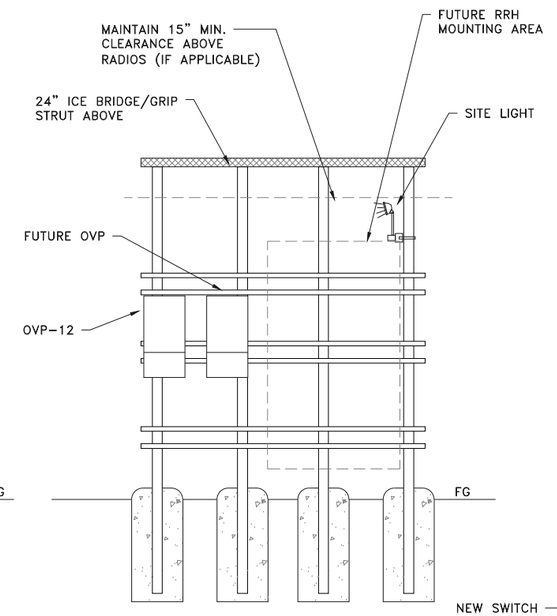
FRONT



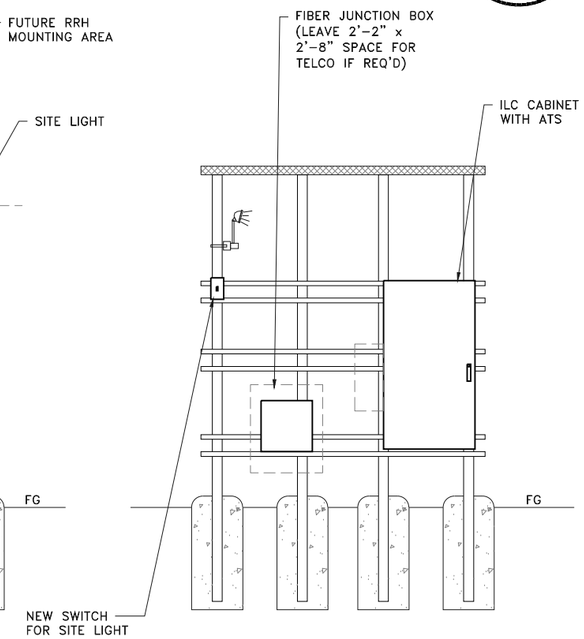
BACK

A 5.2 EQUIPMENT CABINET ELEVATIONS

SCALE: 1/2"=1'-0"



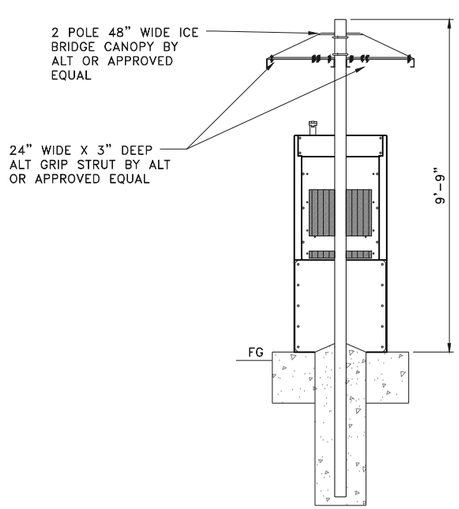
FRONT



BACK

B 5.2 EQUIPMENT UTILITY RACK ELEVATIONS

SCALE: 1/2"=1'-0"



C 5.2 GENERATOR ELEVATION

SCALE: NTS

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ERIC WARFORD

HE ENGINEERING EXCELLENCE
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FAX (501) 939-2016

vertical bridge

PROJECT:
PUMPKIN HOLLOW RD / US-AR-5227
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE:
OUTDOOR EQUIPMENT ELEVATIONS

HE JOB NO.:	2024-0092
FILE NAME:	240092C5.2.DWG
PLOT SCALE:	1:24
REV. 0:	11/15/2024
REV. 2:	05/02/2025

WARNING
0 1/2 1
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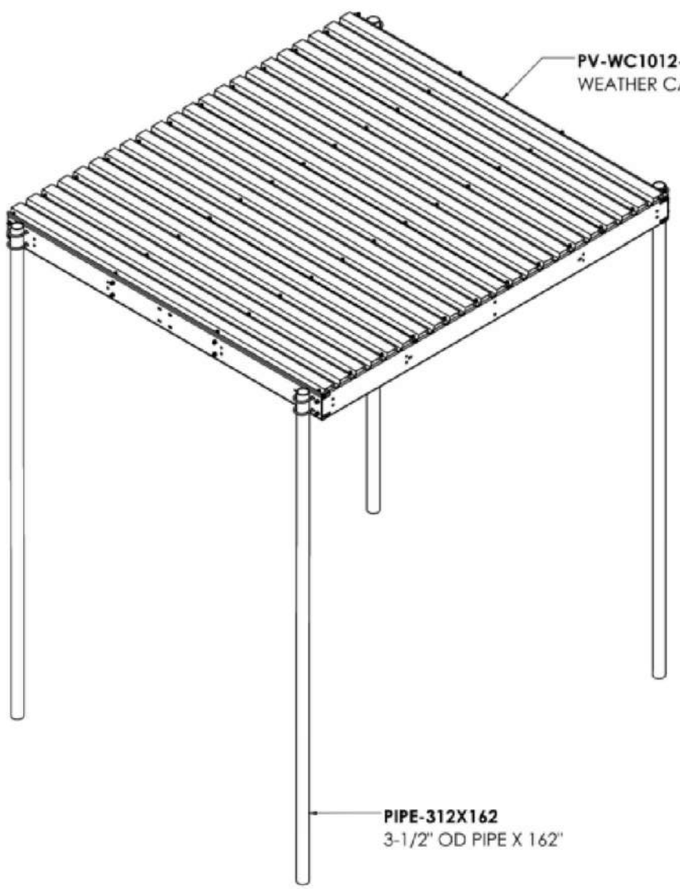
SCALE:	NTS
DESIGNED BY:	STS
DRAWN BY:	STS
CHECKED BY:	EAW

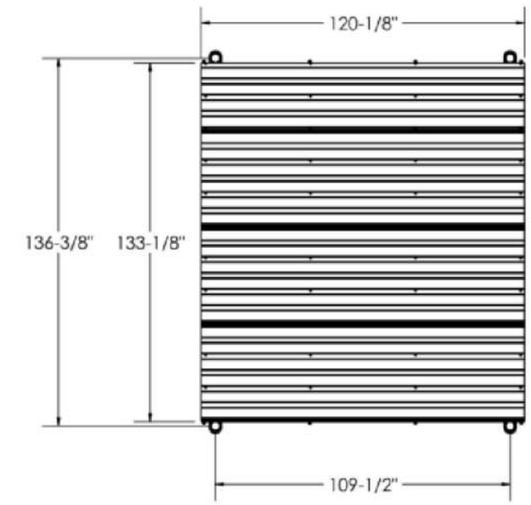
SHEET No.
5.2

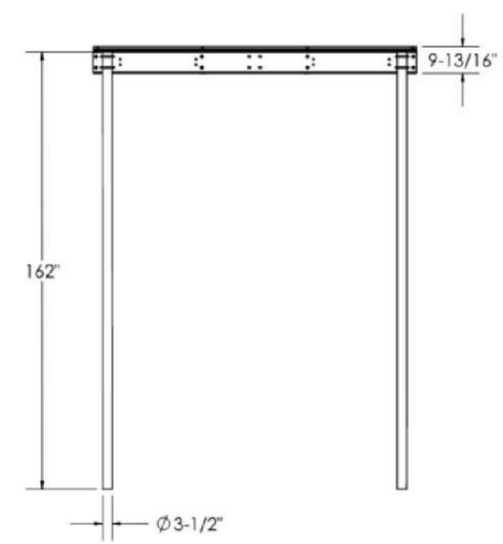
PV-WC1012-312X162

WEATHER CANOPY 10' X 12' PAD, 13'-6" PIPE LENGTH

Included Parts				
			Included Parts	
Part Number	Description	Weight (lbs)	PV-WC1012-NP	PIPE-312X162
PV-WC1012-312X162	WEATHER CANOPY 10' X 12' PAD, (4) POST, 13'-6" PIPE LENGTH	1306	1	4







PIPES:
- Ø3-1/2" OD (NPS 3 SCH 40)
- A500 GR. C

WEATHER COVER:
- 1.5B ROOF DECKING
- 18GA

HARDWARE:
- 1/2" x 3-9/16" x 5-1/2" x 2-1/2" U-BOLT HW KIT
- 1/2" x 1-1/2" x 1" A325 STRUCTURAL BOLT KIT
- 3/8" x 1-1/2" x 1" A325 STRUCTURAL BOLT KIT

ALL ITEMS GALVANIZED

SHEET 1 OF 1	THIRD ANGLE PROJECTION	CATEGORY 07_Equipment Platforms & Canopies	4		
		SERIES 01_Equipment Platforms & Canopies	3		
11/24/2020	SCALE 1:64	TYPE PV-WC_Weather Canopy	2		
DIMENSIONS ARE IN INCHES TOLERANCES U.N.O. HOLES: +1/16", -1/32" ANGULAR: PROFILE±1/4°, BEND±2° ALL OTHERS: ±1/16"		BY INT	1		
		CHECKED DJN	0	INITIAL RELEASE	11/20/20
		STATUS APPROVED	REV	DESCRIPTION	DATE

PERFECT VISION

WEATHER CANOPY 10' X 12' PAD, 13'-6" PIPE LENGTH

DOCUMENT NUMBER WC-ENG-02-R0 REV 0

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STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER C.W.C. WARFORD

HE ENGINEERING EXCELLENCE
Heritage Engineering PLLC
P.O. BOX 505
Benton, Arkansas 72018
(501) 939-2303
FAX (501) 939-2016

vertical bridge

PROJECT: **PUMPKIN HOLLOW RD / US-AR-5227**
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE: PV-WC1012-312X162 CANOPY (BY OTHERS)

HE JOB NO.:	2024-0092
FILE NAME:	240092C5.3.DWG
PLOT SCALE:	1:1
REV. 0:	11/15/2024
REV. 2:	05/02/2025

WARNING
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SCALE:	NTS
DESIGNED BY:	BY OTHERS
DRAWN BY:	BY OTHERS
CHECKED BY:	EAW

SHEET No. **5.3**

SD030T | 2.2L | 30 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC® INDUSTRIAL POWER

Standby Power Rating
30 kW, 38 kVA, 60 Hz

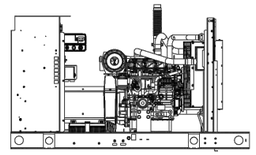


Image used for illustration purposes only

Codes and Standards

Not all codes and standards apply to all configurations. Contact factory for details.

- UL2200, UL6200, UL1236, UL489
- CSA C22.2, ULC S601
- BS5514 and DIN 6271
- SAE J1349
- NFPA 37, 70, 99, 110
- NEC700, 701, 702, 708
- NEMA ICS10, MG1, 250, ICS6, AB1
- ANSI C62.41

Powering Ahead

For over 60 years, Generac has provided innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial applications under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

SD030T | 2.2L | 30 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency
GENERAC® INDUSTRIAL POWER

STANDARD FEATURES

ENGINE SYSTEM

- Oil Drain System
- Air Cleaner
- Level 1 Fan and Belt Guards (Open Set Only)
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Radiator Duct Adapter (Open Set Only)
- Critical Silencer (Enclosed Units Only)
- Engine Coolant Heater

FUEL SYSTEM

- Fuel Lockoff Solenoid
- Primary Fuel Filter

COOLING SYSTEM

- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- 50/50 Ethylene Glycol Antifreeze
- Radiator Drain Extension

ELECTRICAL SYSTEM

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

ALTERNATOR SYSTEM

- UL2200 GEN(protect™
- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Brushless Excitation
- Sealed Bearings
- Rotor Dynamically Spin Balanced
- Amortisseur Winding (3-Phase Only)
- Full Load Capacity Alternator
- Protective Thermal Switch

GENERATOR SET

- Internal Genset Vibration Isolation
- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Multiple Breakers
- Wrapped Exhaust Piping (Enclosed Units Only)
- Standard Factory Testing
- 2 Year Limited Warranty (Standby Rated Units)
- Silencer Mounted in the Discharge Hood (Enclosed Units Only)

ENCLOSURE (IF SELECTED)

- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material (Sound Attenuated Enclosures)
- Gasketed Doors
- Upward Facing Discharge Hoods (Radiator and Exhaust)
- RhinoCoat™ - Textured Polyester Powder Coat Paint

FUEL TANKS (IF SELECTED)

- UL 142/ULC S601
- Double Wall
- Normal and Emergency Vents
- Factory Pressure Tested
- Rupture Basin Alarm
- Fuel Level
- Check Valve In Supply and Return Lines
- RhinoCoat™- Textured Polyester Powder Coat Paint
- Stainless Steel Hardware

CONTROL SYSTEM

Power Zone® 410 Controller

Features

- Programmable Auto Crank
- Selectable Low Speed Exercise
- RS-232 x2
- RS-485 x2
- All-Phase Sensing Digital Voltage Regulator
- On/Off/Manual Switch
- Not in Auto (Flashing Light)
- Emergency Stop
- Modbus® RTU
- CANbus
- Full Range Standby Operation
- Power Factor
- Ruptured Tank Detection
- Auxiliary Shutdown Switch
- Remote Communications
- NFPA110 Module Included (Key Switch, Alarm, EStop)
- PT Function for Full Generator Protection (Contact Factory)

Full System Status Display

- Full System Status Display
- Multilingual 128x64 Graphical Display with Heater
- Easy Status View LED Screen
- 3-Phase AC Volts
- 3-Phase Amps
- kW
- Line Power/Gen Power
- Time
- Date
- Run Hours
- Service Reminders
- Fault History (Alarm Log)
- Oil Pressure
- Oil Temperature Indication and Alarm
- Output for Fuel Level High/Low Warning
- Water Temperature
- Water Level
- Fuel Pressure/Level
- Engine Speed
- Battery Voltage
- Alternator Frequency

Alarms and Warnings

- Common Alarm Output
- Audible Alarm and Silence

SD030T | 2.2L | 30 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency
GENERAC® INDUSTRIAL POWER

CONFIGURABLE OPTIONS

ENGINE SYSTEM

- Oil Heater
- Critical Silencer (Open Set Only)
- Radiator Stone Guard
- Level 1 Fan and Belt Guards (Enclosed Units Only)

FUEL SYSTEM

- NPT Flexible Fuel Line

ELECTRICAL SYSTEM

- 10A UL Listed Battery Charger
- Battery Warmer

ALTERNATOR SYSTEM

- Anti-Condensation Heater
- Tropical Coating
- Permanent Magnet Excitation

GENERATOR SET

- Extended Factory Testing
- 8 Position Load Center
- Pad Vibration Isolation

CIRCUIT BREAKER OPTIONS

- Main Line Circuit Breaker
- 2nd Main Line Circuit Breaker
- 3rd Main Line Circuit Breaker
- Shunt Trip and Auxiliary Contact
- Electronic Trip Breakers

ENCLOSURE

- Level 0 Sound Attenuated
- Level 1 Sound Attenuated
- Level 2 Sound Attenuated
- Steel Enclosure
- Aluminum Enclosure
- Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
- AC/DC Enclosure Lighting Kit
- Door Open Alarm Switch

WARRANTY (STANDBY GENSETS ONLY)

- 2 Year Extended Limited Warranty
- 5 Year Limited Warranty
- 5 Year Extended Limited Warranty
- 7 Year Extended Limited Warranty
- 10 Year Extended Limited Warranty

CONTROL SYSTEM

- NFPA Module
- NFPA 110 Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Oil Temperature Indicator and Alarm
- Inputs (x12) / Outputs (x12)
- Battery Disconnect Switch
- Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- 100 dB Alarm Horn
- Ground Fault Annunciator
- 120V GFCI and 240V Outlets
- 10A Engine Run Relay

FUEL TANKS (SIZES ON LAST PAGE)

- 8 in (203.2 mm) Fill Extension
- 13 in (330.2 mm) Fill Extension
- 19 in (482.6 mm) Fill Extension
- Overfill Protection Valve
- 5 Gallon Spill Box Return Hose
- 5 Gallon Spill Box
- Tank Risers
- 12' Emergency Vent
- Fire Rated Stainless Steel Fuel Hose
- Fuel Drop Tube
- Vent Extensions
- All Tanks Above 52 gal Available in Extended Option

ENGINEERED OPTIONS

ENGINE SYSTEM

- Coolant Heater Ball Valves
- Fluid Containment Pan

GENERATOR SET

- Special Testing

FUEL TANKS

- UL 2085 Tank
- Stainless Steel Tank
- Special Fuel Tanks

SD030T | 2.2L | 30 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency
GENERAC® INDUSTRIAL POWER

APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make	Perkins
EPA Emissions Compliance	Stationary Emergency
EPA Emissions Reference	See Emission Data Sheet
Cylinder #	4
Type	In-line
Displacement - in³ (L)	135 (2.22)
Bore - in (mm)	3.3 (84)
Stroke - in (mm)	3.9 (100)
Compression Ratio	23.3:1
Intake Air Method	Turbocharged/Aftercooled
Cylinder Head	Cast Iron
Piston Type	Aluminum
Crankshaft Type	Forged Steel

Engine Governing

Governor	Electronic Isochronous
Frequency Regulation (Steady State)	±0.5%

Lubrication System

Oil Pump Type	Gear Driven
Oil Filter Type	Full-Flow Cartridge
Crankcase Oil Capacity - qt (L)	11.2 (10.6)

Cooling System

Cooling System Type	Closed Recovery
Fan Type	Pusher
Fan Speed - RPM	1,980
Fan Diameter - in (mm)	18.0 (457.2)

Fuel System

Fuel Type	Ultra Low Sulfur Diesel Fuel
Fuel Specifications	ASTM
Fuel Filtering (Microns)	5
Fuel Inject Pump	Distribution Injection Pump
Fuel Pump Type	Cassette
Injector Type	Indirect
Fuel Supply Line - in (mm)	0.31 (7.94) ID
Fuel Return Line - in (mm)	0.19 (4.76) ID

Engine Electrical System

System Voltage	12 VDC
Battery Charger Alternator	Standard
Battery Size	See Battery Index 0161970SBY
Battery Voltage	12 VDC
Ground Polarity	Negative

STANDARD ALTERNATOR SPECIFICATIONS

Standard Model	K0035124Y26
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<5% (3-Phase Only)
Telephone Interference Factor (TIF)	<50
Standard Excitation	Synchronous Brushless
Bearings	Single Sealed
Coupling	Direct via Flexible Disc
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	±0.25%

SD030T | 2.2L | 30 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency
GENERAC® INDUSTRIAL POWER

OPERATING DATA

POWER RATINGS

	Standby	
Single-Phase 120/240 VAC @1.0pf	30 kW	Amps: 125
Three-Phase 120/208 VAC @0.8pf	30 kW	Amps: 104
Three-Phase 120/240 VAC @0.8pf	30 kW	Amps: 90
Three-Phase 277/480 VAC @0.8pf	30 kW	Amps: 45
Three-Phase 346/600 VAC @0.8pf	30 kW	Amps: 36

MOTOR STARTING CAPABILITIES (SKVA)

	skVA vs. Voltage Dip		
277/480 VAC 3Ø	30%	208/240 VAC 3Ø	35%
K0050124Y26	70	K0050124Y26	74

FUEL CONSUMPTION RATES*

Fuel Pump Lift - ft (m)
3 (1)
Total Fuel Pump Flow (Combustion + Return) - gph (Lph)
16.6 (63.0)

Diesel - gph (Lph)	
Percent Load	Standby
25%	1.0 (3.8)
50%	1.3 (5.0)
75%	1.9 (7.2)
100%	2.7 (10.2)

*Fuel supply installation must accommodate fuel consumption rates at 100% load.

COOLING

		Standby
Coolant Flow	gpm (Lpm)	14.9 (56.4)
Coolant System Capacity	gal (L)	3.3 (12.5)
Heat Rejection to Coolant	BTU/hr (kW)	128,638 (37.7)
Inlet Air	cfm (m³/min)	3,841 (109)
Maximum Operating Ambient Temperature	°F (°C)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)		See Bulletin No. 0199280SSD
Maximum Additional Radiator Backpressure	in H2O (kPa)	0.5 (0.12)

COMBUSTION AIR REQUIREMENTS

	Standby
Flow at Rated Power - scfm (m³/min)	88 (2.5)

ENGINE

		Standby
Rated Engine Speed	RPM	1,800
Horsepower at Rated kW**	hp	49
Piston Speed	ft/min (m/ min)	1,182 (360.3)
BMEP	psi (kPa)	158.8 (1,095.2)

**Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

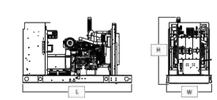
EXHAUST

		Standby
Exhaust Flow (Rated Output)	scfm (m³/ min)	295.6 (8.4)
Maximum Allowable Exhaust Backpressure (Post Silencer)	inHg (kPa)	3.1 (10.5)
Exhaust Temperature (Rated Output)	°F (°C)	892 (748)

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions.
Please contact a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with BS5514 and DIN6271 standards.
Standby - See Bulletin 0187500SSB

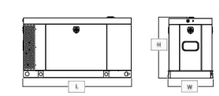
SD030T | 2.2L | 30 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency
GENERAC® INDUSTRIAL POWER

DIMENSIONS AND WEIGHTS*



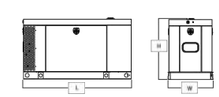
OPEN SET

Run Time - Hours	Usable Capacity - gal (L)	L x W x H - in (mm)	Weight - lbs (kg)
No Tank	-	83.6 (2,122) x 35.0 (888) x 46.3 (1,177)	1,291 (586)
19	52 (197)	83.6 (2,122) x 35.0 (888) x 59.7 (1,517)	1,826 (828)
20	55 (208)	96.0 (2,438) x 35.0 (888) x 59.7 (1,517)	1,870 (848)
48	130 (492)	83.6 (2,122) x 35.0 (888) x 72.7 (1,847)	2,093 (949)
71	190 (719)	96.0 (2,438) x 35.0 (888) x 82.3 (2,091)	2,368 (1,074)
88	237 (897)	83.6 (2,122) x 35.0 (888) x 82.3 (2,091)	2,347 (1,064)



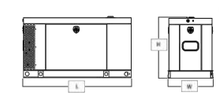
LEVEL 0 SOUND ATTENUATED ENCLOSURE

Run Time - Hours	Usable Capacity - gal (L)	L x W x H - in (mm)	Weight - lbs (kg) Steel	Weight - lbs (kg) Aluminum
No Tank	-	83.6 (2,122) x 35.0 (888) x 47.4 (1,203)	1,476 (669)	1,665 (755)
19	52 (197)	83.6 (2,122) x 35.0 (888) x 60.8 (1,543)	2,011 (912)	2,200 (998)
20	55 (208)	96.0 (2,438) x 35.0 (888) x 60.8 (1,543)	2,065 (937)	2,244 (1,018)
48	130 (492)	83.6 (2,122) x 35.0 (888) x 73.8 (1,874)	2,278 (1,033)	2,467 (1,119)
71	190 (719)	96.0 (2,438) x 35.0 (888) x 83.4 (2,117)	2,553 (1,158)	2,742 (1,244)
88	237 (897)	83.6 (2,122) x 35.0 (888) x 83.4 (2,117)	2,532 (1,148)	2,721 (1,234)



LEVEL 1 SOUND ATTENUATED ENCLOSURE

Run Time - Hours	Usable Capacity - gal (L)	L x W x H - in (mm)	Weight - lbs (kg) Steel	Weight - lbs (kg) Aluminum
No Name	-	83.6 (2,122) x 35.0 (888) x 47.4 (1,203)	1,480 (671)	1,669 (757)
19	52 (197)	83.6 (2,122) x 35.0 (888) x 60.8 (1,543)	2,015 (914)	2,204 (999)
20	55 (208)	96.0 (2,438) x 35.0 (888) x 60.8 (1,543)	2,059 (934)	2,248 (1,020)
48	130 (492)	83.6 (2,122) x 35.0 (888) x 73.8 (1,874)	2,282 (1,035)	2,471 (1,121)
71	190 (719)	96.0 (2,438) x 35.0 (888) x 83.4 (2,117)	2,557 (1,160)	2,746 (1,245)
88	237 (897)	83.6 (2,122) x 35.0 (888) x 83.4 (2,117)	2,536 (1,150)	2,725 (1,236)



LEVEL 2 SOUND ATTENUATED ENCLOSURE

Run Time - Hours	Usable Capacity - gal (L)	L x W x H - in (mm)	Weight - lbs (kg) Steel	Weight - lbs (kg) Aluminum
No Tank	-	83.6 (2,122) x 35.0 (888) x 47.4 (1,203)	1,481 (672)	1,670 (758)
19	52 (197)	83.6 (2,122) x 35.0 (888) x 60.8 (1,543)	2,016 (914)	2,205 (1,000)
20	55 (208)	96.0 (2,438) x 35.0 (888) x 60.8 (1,543)	2,060 (934)	2,249 (1,020)
48	130 (492)	83.6 (2,122) x 35.0 (888) x 73.8 (1,874)	2,283 (1,035)	2,472 (1,121)
71	190 (719)	96.0 (2,438) x 35.0 (888) x 83.4 (2,117)	2,559 (1,160)	2,748 (1,246)
88	237 (897)	83.6 (2,122) x 35.0 (888) x 83.4 (2,117)	2,537 (1,151)	2,726 (1,236)

* All measurements are approximate and for estimation purposes only. Specification characteristics may change without notice. Please contact a Generac Power Systems Industrial Dealer for detailed installation drawings. Extended and not extended tank offerings vary. Contact dealer for options.

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Part No. A0001967298
Rev. B 07/20/2023

STANDARD DIESEL GENERATOR: SD30.1–1PE–237

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CERTIFICATE OF AUTHORIZATION
HERITAGE ENGINEERING PLLC
NO. 1133
ARKANSAS ENGINEER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
ERIC WARFORD

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vertical bridge

PROJECT: PUMPKIN HOLLOW RD / US-AR-5227
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE: GENERATOR SPECIFICATION SHEET (BY OTHERS)

JOB NO.:	2024–0092
FILE NAME:	240092C5.4.DWG
PLOT SCALE:	1:1
REV. 0:	11/15/2024
REV. 2:	05/02/2025

WARNING
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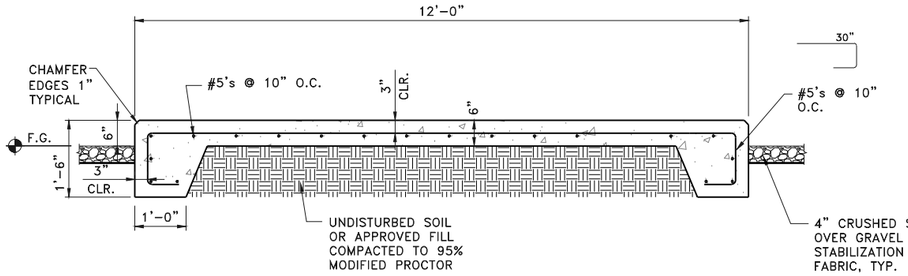
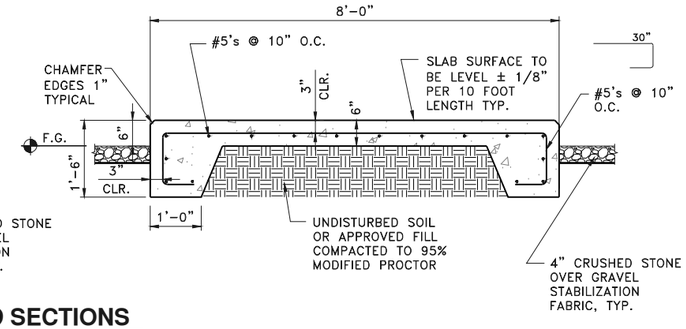
DESIGNED BY:	STS
DRAWN BY:	STS
CHECKED BY:	EAW

SHEET No.
5.4

EQUIPMENT PAD



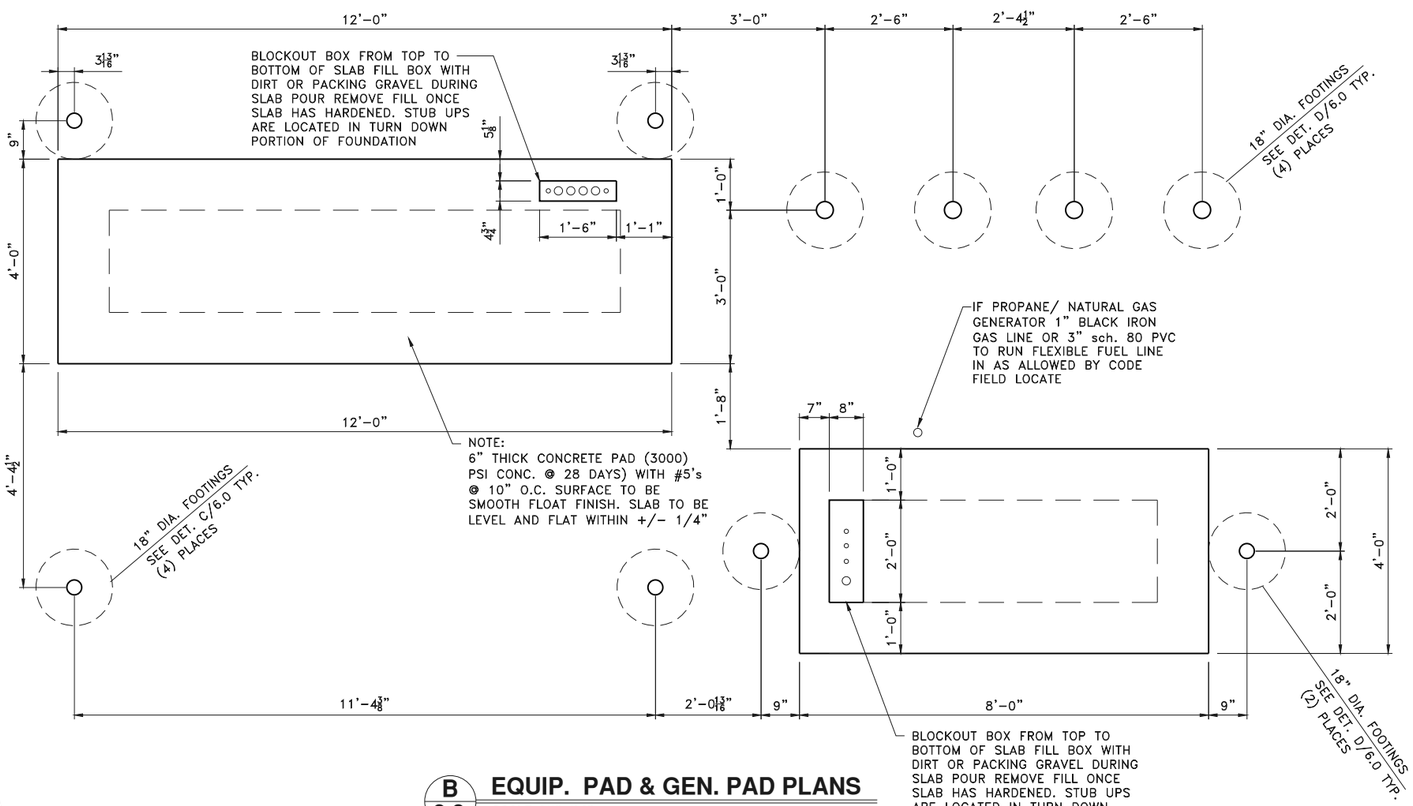
GENERATOR PAD



A 6.0 EQUIP. PAD & GEN. PAD SECTIONS

SCALE: 3/4"=1'-0"

REFER TO SITE PLAN FOR SLAB LOCATION AND ORIENTATION



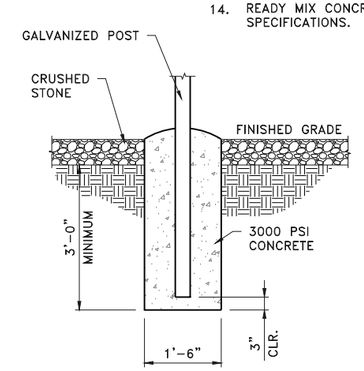
B 6.0 EQUIP. PAD & GEN. PAD PLANS

SCALE: 3/4"=1'-0"

REFER TO SITE PLAN FOR SLAB LOCATION AND ORIENTATION

EQUIPMENT PAD FOUNDATION NOTES:

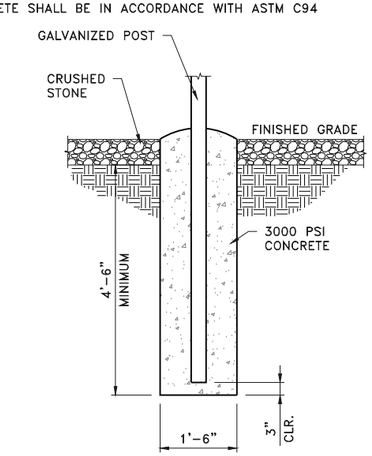
1. STRUCTURAL FILL, IF REQUIRED, SHALL CONSIST OF A SANDY TYPE SOIL MIXTURE OF SANDY SOIL & GRAVEL WHICH SHALL EXHIBIT A LIQUID LIMIT LESS THAN 30 AND SHALL BE COMPACTED TO A MINIMUM OF 98% MAXIMUM STANDARD PROCTOR IN ACCORDANCE WITH ASTM D 698.
2. SUBGRADE SHALL BE SCARIFIED AND COMPACTED TO A MINIMUM OF 95% MAXIMUM STANDARD PROCTOR IN ACCORDANCE WITH ASTM D 698.
3. FOUNDATION ELEMENTS SHOWN WERE DESIGNED ASSUMING A NET ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF
4. CONTRACTOR SHALL VERIFY BEARING CAPACITY CONSTRAINTS PRIOR TO PLACEMENT OF FOUNDATION ELEMENTS. SHOULD BEARING CAPACITY CONSTRAINTS NOT MEET OR EXCEED THOSE SHOWN IN NOTE 3. THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING AND CEASE ACTIVITY UNTIL FURTHER DIRECTED.
5. CONCRETE COMPRESSIVE STRENGTH (F'c) SHALL BE 3000 P.S.I. AT 28 DAYS, 4" NOMINAL SLUMP, 5-7% ENTRAINED AIR.
6. ALL REINFORCING STEEL SHALL BE NEW BILLET STEEL INTERMEDATE GRATE ASTM A-615-60.
7. WELDED WIRE FABRIC FOR CONCRETE SHALL CONFORM TO ASTM A-185 SPECIFICATIONS.
8. COORDINATE WITH ELECTRICAL DRAWINGS FOR OPENINGS, SLEEVES, ANCHORS, HANGERS AND OTHER ITEMS RELATED TO CONCRETE WORK.
9. PROVIDE DETAILING, FABRICATION, AND INSTALLATION OF REINFORCING IN ACCORDANCE WITH ACI 315 AND ACI 318.
10. ALL CONCRETE WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (A.C.I. 318).
11. ALL CONCRETE SHALL BE VIBRATED, TOP OF FOUNDATION SHALL BE SQUARE AND LEVEL WITH SMOOTH FLOAT FINISH AND A 1" CHAMFER AT ITS EDGE.
12. ALL REINFORCING STEEL SHALL BE INSPECTED AND APPROVED VERIZON'S CONSTRUCTION MANAGER PRIOR TO PLACEMENT OF CONCRETE. CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER 48 HOURS BEFORE PLACING CONCRETE.
13. CONCRETE SHALL BE SAMPLE TESTED CONDUCTED IN ACCORDANCE WITH ASTM C31 AND C39.
14. READY MIX CONCRETE SHALL BE IN ACCORDANCE WITH ASTM C94 SPECIFICATIONS.



C 6.0 CANOPY FOOTINGS TYP.

SCALE: 3/4"=1'-0"

NOTE: CONTRACTOR TO VERIFY BLOCKOUT WITH GENERATOR SPECIFICATIONS DRAWINGS BEFORE ANY CONSTRUCTION



D 6.0 CANOPY FOOTINGS TYP.

SCALE: 3/4"=1'-0"

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CERTIFICATE OF AUTHORIZATION HERITAGE ENGINEERING PLLC NO. 1133 ARKANSAS ENGINEER

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vertical bridge

PROJECT: **PUMPKIN HOLLOW RD / US-AR-5227**
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE: EQUIPMENT MAT PLANS, SECTIONS & NOTES

HE JOB NO.:	2024-0092
FILE NAME:	240092C6.0.DWG
PLOT SCALE:	1:16
REV. 0:	11/15/2024
REV. 2:	05/02/2025

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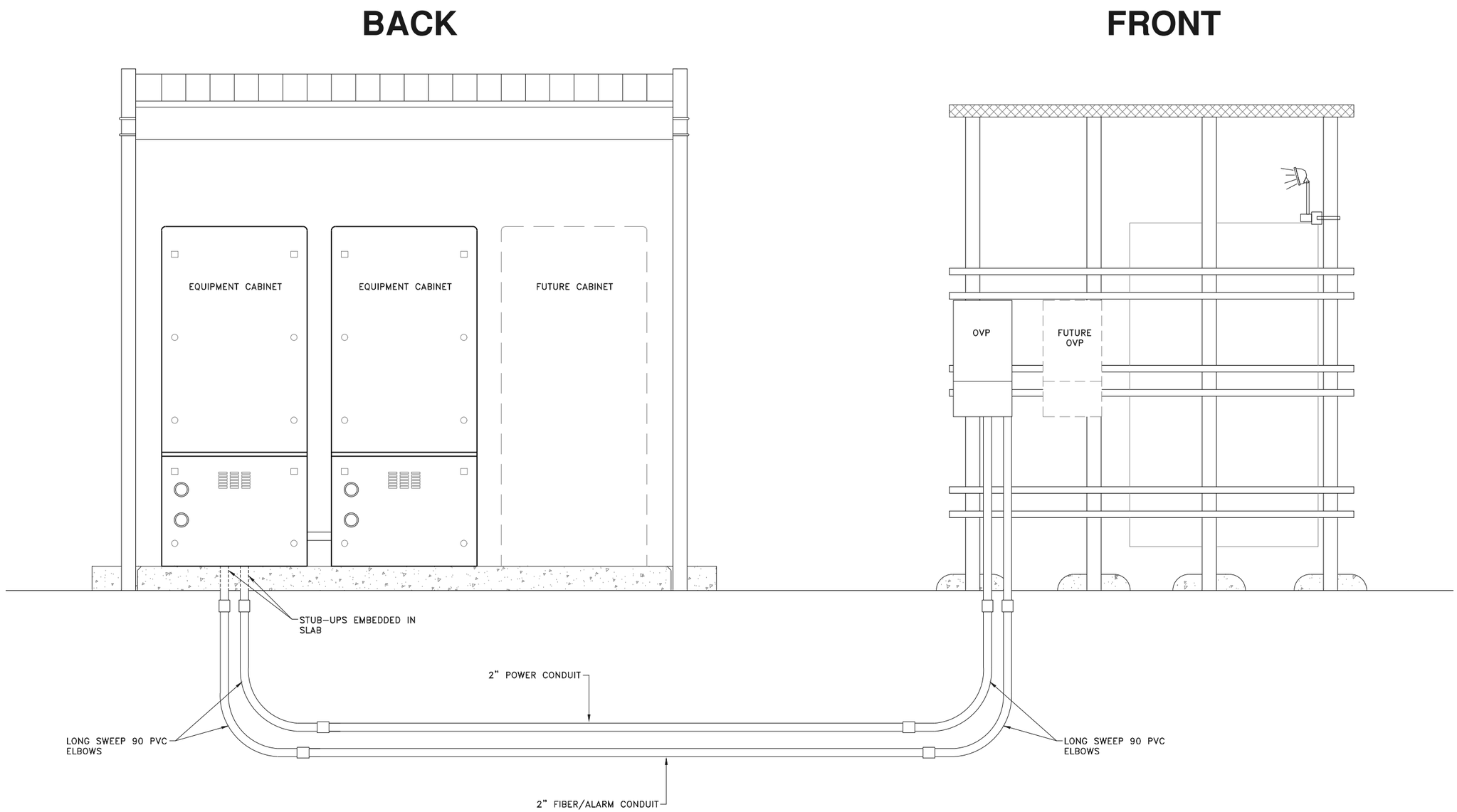

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vertical bridge

PROJECT:
PUMPKIN HOLLOW RD / US-AR-5227
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE:
OUTDOOR OVP CUTSHEET

HE JOB NO.:	2024-0092
FILE NAME:	240092C6.1.DWG
PLOT SCALE:	1:12
REV. 0:	11/15/2024
REV. 2:	05/02/2025

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CHECKED BY:	EAW

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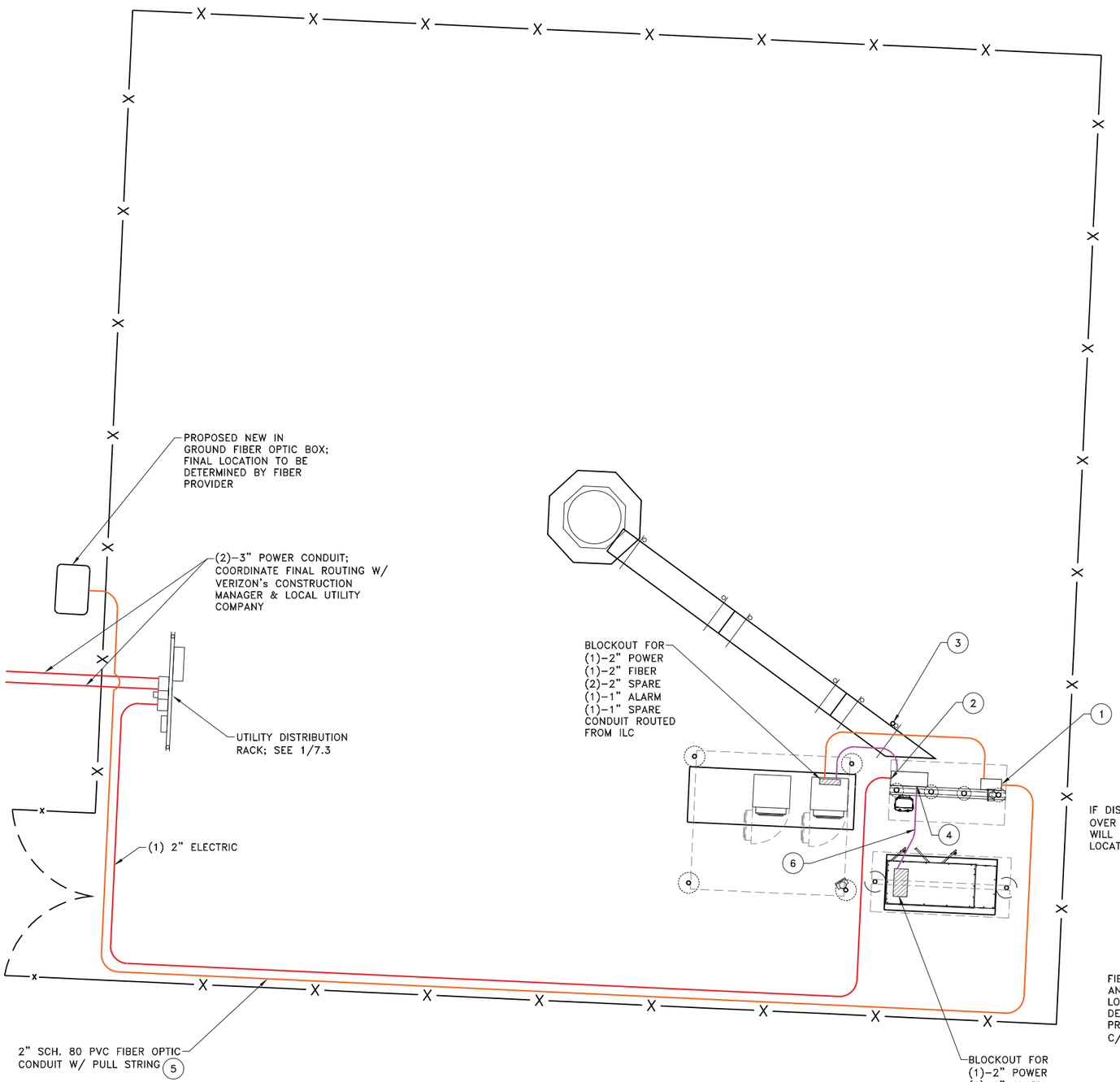


UTILITY ROUTING PLAN

SCALE: NTS.

UTILITY ROUTING NOTES:

1. FIBER OPTIC CONDUIT TO BE RAN TO FIBER/TELCO BOX BEFORE EQUIPMENT CABINET. COORDINATE EXACT LOCATION WITH EQUIPMENT DRAWINGS AND PROJECT MANAGER.
2. POWER CONDUIT INTO ILC AT DESIGNATED POWER ENTRY LOCATION. REFER TO EQUIPMENT DRAWINGS.
3. GPS ANTENNA MOUNTED ON WAVE GUIDE BRIDGE LEG, LOCATION TO BE TO BE FIELD DETERMINED AND VERIFIED W/ PROJECT MANAGER.
4. GENERATOR CONDUITS INTO ILC ENTRY PORTS. COORDINATE EXACT LOCATION WITH EQUIPMENT DRAWINGS AND PROJECT MANAGER.
5. CONTRACTOR SHALL INSTALL 2" SCH. 80 FIBER CONDUIT W/ PULL STRING (50 LF. MAX.) FROM EQUIPMENT CABINET TO FIBER OPTIC BOX OUTSIDE COMPOUND, COORDINATE FINAL LOCATION W/ FIBER OPTIC PROVIDER
6. ALL ALARM WIRING OUTSIDE OF EQUIPMENT PAD SHALL BE DIRECT BURIAL RATED WIRE WITH GEL FILLED CONDUIT, ALARM WIRING FROM GEN TO ILC WHERE ALARM WIRES MAY PASS THROUGH ILC INTO EQUIPMENT CABINET, SEE EQUIPMENT DWGS BY OTHERS.

GENERAL CONTRACTOR TO PROVIDE PULL BOX AS REQUIRED PER NEC

COORDINATE INCOMING SERVICE CONDUITS ROUTING WITH PROJECT MANAGER AND LOCAL UTILITY COMPANIES

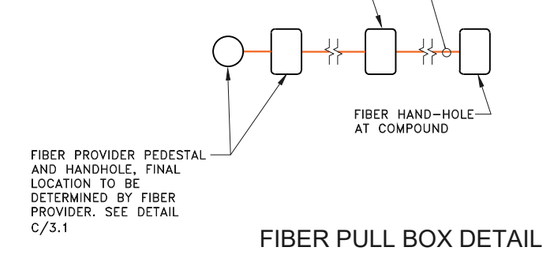
SEE ONE LINE DIAGRAM ON SHEET 7.2 FOR MORE INFORMATION

FIBER OPTIC MARKER SIGN

(2) SIGNS TO BE POSTED ON FENCE INSIDE COMPOUND ALONG THE FIBER PATH

LEGEND

- UNDERGROUND POWER
- UNDERGROUND FIBER OPTIC
- UNDERGROUND ALARM
- MULTIPLE CONDUITS



FIBER PULL BOX DETAIL

FIBER OPTIC MARKER POST

REQUIRED AT HAND HOLE OR PULL BOX OUTSIDE COMPOUND

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vertical bridge

PROJECT: **PUMPKIN HOLLOW RD / US-AR-5227**
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE: UTILITY ROUTING PLAN

HE JOB NO.:	2024–0092
FILE NAME:	240092C7.0.DWG
PLOT SCALE:	1:48
REV. 0:	11/15/2024
REV. 2:	05/02/2025

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CHECKED BY:	EAW

SHEET No.
7.0

	LOAD			LOAD PER PHASE (VA)		WIRE COLOR	LOADS CONTINUOUS	LOADS NON-CONTINUOUS	LOADS SUB-PANEL	WIRE SIZE	GROUNDING WIRE SIZE	TRIP
	DESCRIPTION	QTY.	UNIT V.A.	PHASE A	PHASE B							
1	RECTIFER #1	1	1400	1400		BLK						30
3		1	1400		1400	RED						
5	RECTIFER #3	1	1400	1400		BLK						30
7		1	1400		1400	RED						
9	RECTIFER #5	1	1400	1400		BLK						30
11		1	1400		1400	RED						
13	SPACE					BLK						
15	SPACE					RED						
17	SPACE					BLK						
19	SPACE					RED						
21	SPACE					BLK						30
23	BATTERY CHARGER	1	240	240		RED						
25	BLOCK HEATER	1	1500		1500	BLK						30
27						RED						30
29						BLK						
31						RED						
33						BLK						
35						RED						
37						BLK						
39						RED						
41						BLK						

	SUBTOTAL CONTINUOUS											
	SUBTOTAL NON-CONTINUOUS	–	–									
	SUBTOTAL SUB-PANEL	–	–									

TRIP	GROUNDING WIRE SIZE	WIRE SIZE	LOADS SUB-PANEL	LOADS NON-CONTINUOUS	LOADS CONTINUOUS	WIRE COLOR	LOAD PER PHASE (VA) PHASE B	PHASE A	UNIT V.A.	QTY.	DESCRIPTION	
30						BLK		1400	1400	1	RECTIFER #2	2
						RED	1400		1400	1		4
30						BLK		1400	1400	1	RECTIFER #4	6
						RED	1400		1400	1		8
30						BLK		1400	1400	1	RECTIFER #6	10
						RED	1400		1400	1		12
30						BLK		180	180	1	RECEPTACLE	14
30						RED	180		180	1	RECEPTACLE	16
30						BLK		380	360	4	GFCI REC. & LIGHTS	18
						RED					SPACE	20
						BLK					SPACE	22
						RED					SPACE	24
						BLK					SPACE	26
						RED					SPACE	28
						BLK					SPACE	30
						RED					SPACE	32
						BLK					SPACE	34
						RED					SPACE	36
						BLK					SPACE	38
						RED					SPACE	40
						BLK					SPACE	42

		SUBTOTAL CONTINUOUS			TOTAL KVA CONTINUOUS x 1.25		
–	–	SUBTOTAL NON-CONTINUOUS			TOTAL KVA NON-CONTINUOUS		
–	–	SUBTOTAL SUB-PANEL			TOTAL KVA SUB-PANEL		
					TOTAL KVA		
					TOTAL AMPS		

PANEL DESIGNATION: ELECTRICAL PANEL (ITEM 2)

MAIN LUGS: N/A | MAIN BREAKER: 200 AMP. | BRANCH BREAKER TYPE: SIEMENS G.C. SUPPLIED

VOLTAGE: 120/240 | CYCLE: 60 | PHASE: 1 | WIRES: 3 | MAIN COPPER BUS: 200AMPS

NOTES:

1. ALL WIRE TO BE #12 THHN/THWN UNLESS NOTED OTHERWISE.
   COLOR CODE:
   - A Ø = BLACK
   - B Ø = RED
   - NETURAL = WHITE
   - GROUND = GREEN
2. ALL WORK TO CONFORM TO N.E.C. LATEST STATE ADOPTED EDITION.
3. LABEL SERVICE DISCONNECT WITH A RED TAD.
4. SWITCH LEG CONDUCTORS SHALL BE THE SAME COLOR AS CIRCUIT CONDUCTORS.
5. ALL GFCI RECEPTACLES TO HAVE A DECICATED GROUND WIRE.
6. ALL BREAKERS FOR CIRCUITS FEEDING EQUIPMENT WITH A MAIN INTERNAL OVER-CIECUIT DEVICE SHOULD MATCH THE RATING OF THE OVER-CIRCUIT DEVICE.
7. SEE ELECTRIC SCHEMATIC #2 & #3 SHEETS FOR MORE DETAILS.
8. EQUIPMENT TERMINATION LUGS AND CONDUCTORS ARE RATED AT A MINIMUM OF 75° C.

ELECTRICAL CONTRACTOR TO SIZE ALL ELECTRICAL WIRE FOR FINAL EQUIPMENT SUPPLIED BY VERIZON WIRELESS PER NEC

KEY:

(PC) = PHOTOCELL
M = MOTION DETECTOR
- = CONDUIT GROUND
= NON-DEDICATED GROUND
(#) = DEDICATED GROUND
< # > = ISOLATED GROUND

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CERTIFICATE OF AUTHORIZATION HERITAGE ENGINEERING PLLC NO. 1133 ARKANSAS ENGINEER

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vertical bridge

PROJECT: **PUMPKIN HOLLOW RD / US-AR-5227**
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE: BREAKER BOX ELECTRIC SCHEMATIC

HE JOB NO.:	2024-0092
FILE NAME:	240092C7.1.DWG
PLOT SCALE:	1:1
REV. 0:	11/15/2024
REV. 2:	05/02/2025

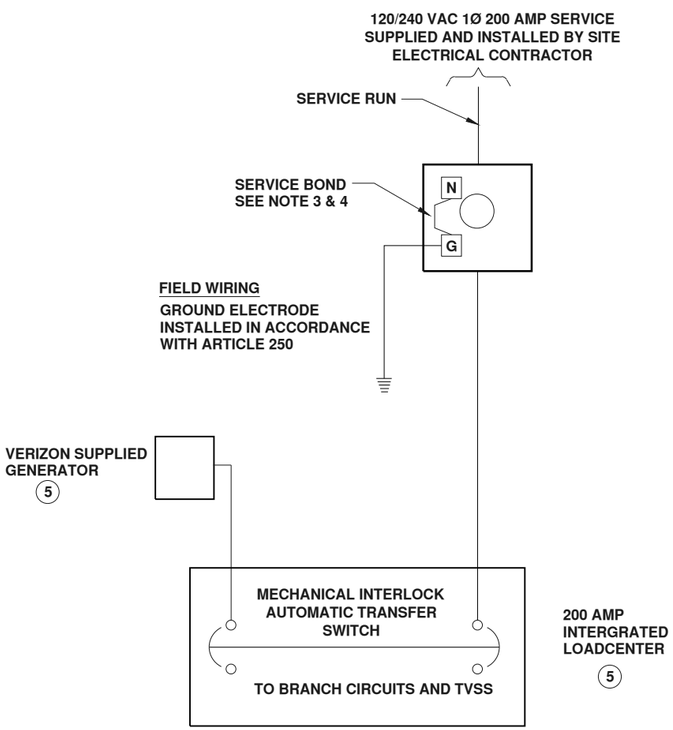
WARNING 0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING HAS BEEN REDUCED AND IS NOT TO SCALE

SCALE:	NTS
DESIGNED BY:	STS
DRAWN BY:	STS
CHECKED BY:	EAW

SHEET No. **7.1**

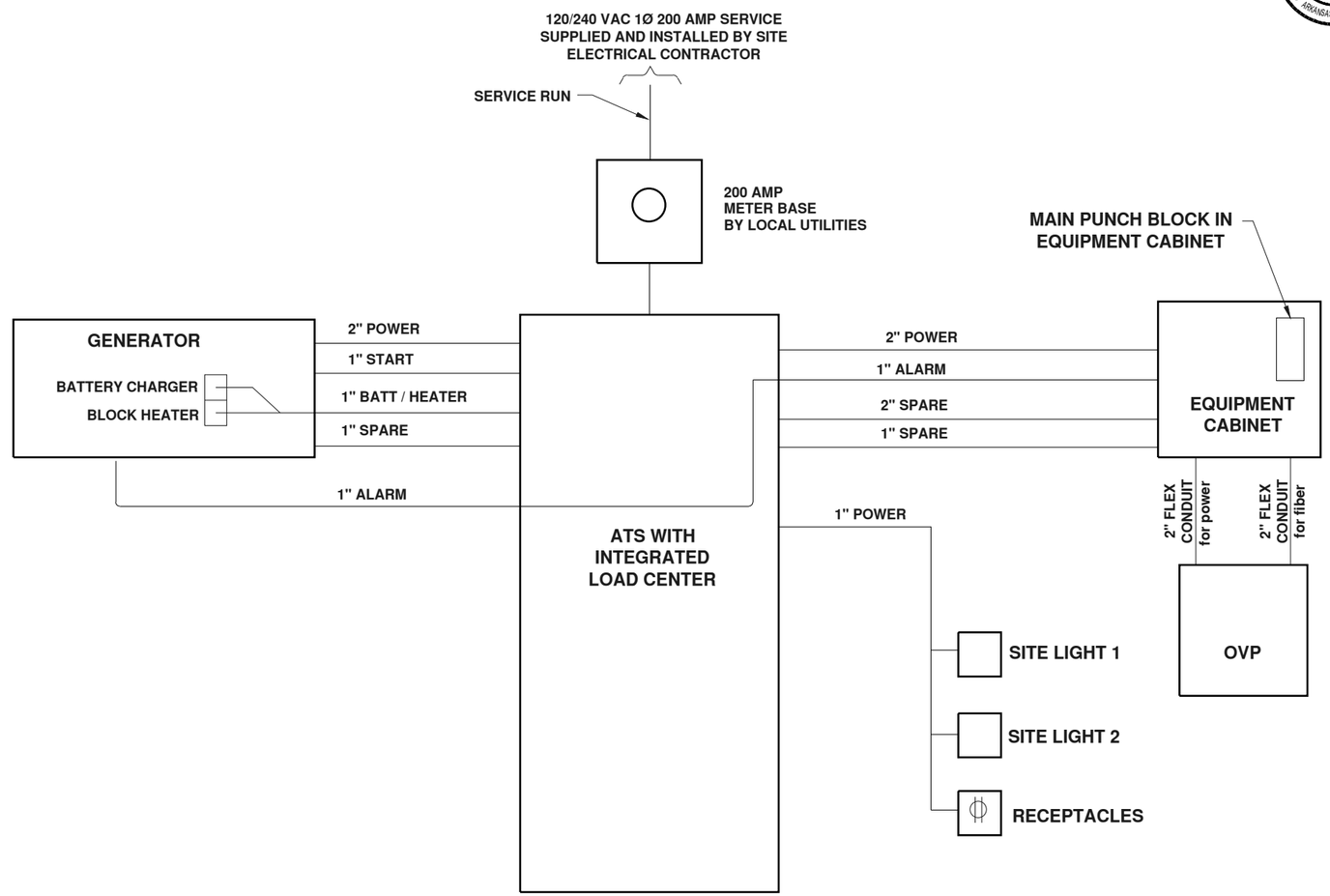
NOTES:

1. BUILDING ELECTRICAL SYSTEM IS RATED AT 10,000 A.I.C. IF HIGHER RATINGS ARE REQUIRED, IT IS THE RESPONSIBILITY OF SITE CONTRACTOR AND VZW CONSTRUCTION ENGINEER TO MEET SUCH REQUIREMENTS.
2. SERVICE BOND IS TO BE MADE BY DEVICES (STRAPS, SCREWS, ETC.) SUPPLIED BY EQUIPMENT MANUFACTURER. IF NO SUCH DEVICE IS SUPPLIED, BOND IS TO BE MADE IN ACCORDANCE WITH NEC ARTICLE 250.
3. WHEN SERVICE OVER CURRENT DISCONNECT IS FIELD INSTALLE AND HAS A NEUTRAL TO GROUND CONNECTION ESTABLISHED, REMOVE NETURAL TO GROUND CONNECTION IN TRANSFER SWITCH.
4. CONDUCTOR OVER CURRENT PROTECTION DEVICE ARE SLECTED IN ACCORDANCE WITH NEC (ARTICLE 240.3).
5. CONDUCTOR SIZING IS SLECTED FROM NEC (ARTICLE 215.2).
6. ALL LUGS THAT HOLD MORE THAN ONE WIRE SHALL BE LISTED FOR MULTI-BARRELL CONNECTIONS.
7. ALL CONDUCTORS SHALL BE COPPER.
8. LABEL SERVICE DISCONNECT WITH A RED TAG.
9. RECOMMENDED SERVICE ENTRANCE CONDUCTOR SIZE (3) 3/0 AWG & (1) #4 GROUND.



POWER RISER BLOCK DIAGRAM - ATS

SCALE: NTS.



ELECTRIC CONDUIT SCHEMATIC

SCALE: NTS.

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vertical bridge

PROJECT: PUMPKIN HOLLOW RD / US-AR-5227
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE: ELECTRIC SCHEMATIC & POWER RISER BLOCK DIAGRAM

HE JOB NO.:	2024-0092
FILE NAME:	240092C7.2.DWG
PLOT SCALE:	1:1
REV. 0:	11/15/2024
REV. 2:	05/02/2025

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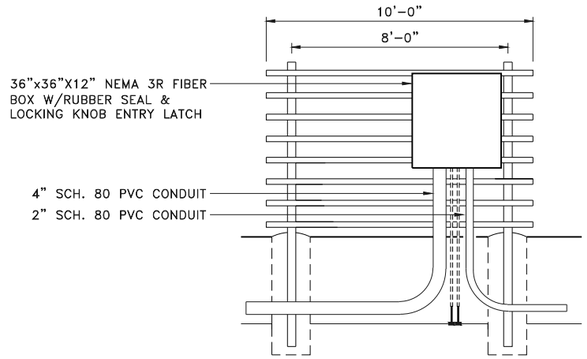
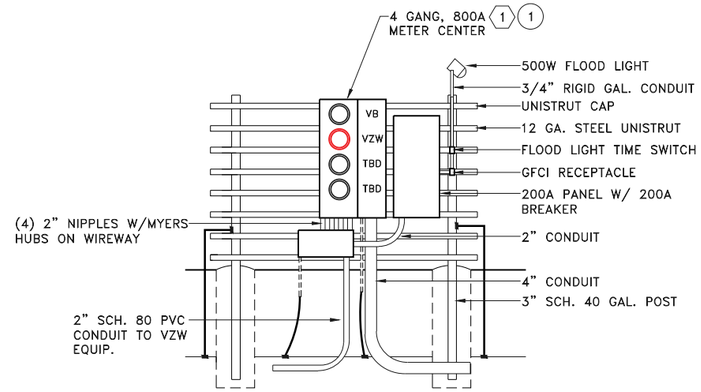
SCALE:	NTS
DESIGNED BY:	STS
DRAWN BY:	STS
CHECKED BY:	EAW

SHEET No.
7.2



VIEW FROM COMPOUND



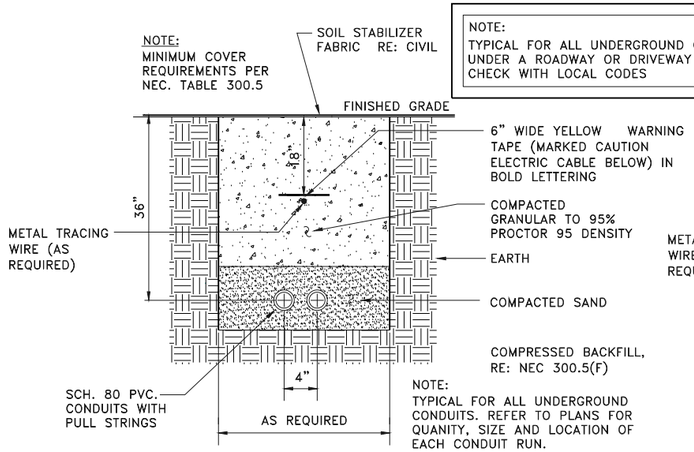
VIEW FROM FENCE

1 / 7.3 UTILITY DISTRIBUTION RACK DETAIL

SCALE: NTS.

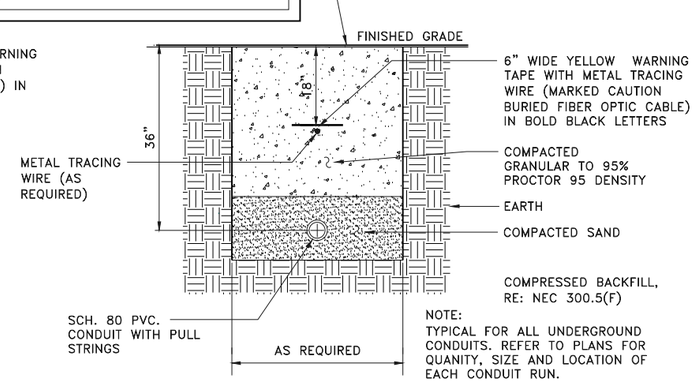
NOTE:
MINIMUM COVER REQUIREMENTS PER NEC. TABLE 300.5

NOTE:
TYPICAL FOR ALL UNDERGROUND CONDUITS BURIED LESS THAN 24" UNDER A ROADWAY OR DRIVEWAY SHALL BE ENCASED IN CONCERTE. CHECK WITH LOCAL CODES



NOTE:
TYPICAL FOR ALL UNDERGROUND CONDUITS. REFER TO PLANS FOR QUANITY, SIZE AND LOCATION OF EACH CONDUIT RUN.

ELECTRIC CONDUIT

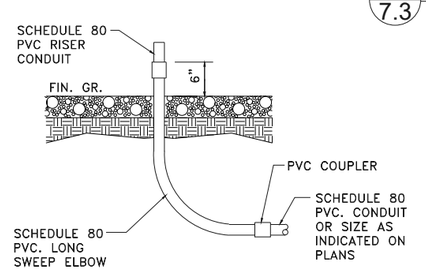


NOTE:
TYPICAL FOR ALL UNDERGROUND CONDUITS. REFER TO PLANS FOR QUANITY, SIZE AND LOCATION OF EACH CONDUIT RUN.

FIBER OPTIC CONDUIT

2 / 7.3 TRENCH DETAILS

SCALE: NTS.



4 / 7.3 LONG SWEEP PVC ELBOW DETAIL

SCALE: NTS.

GENERAL NOTES

1. DIMENSIONS SHOWN ARE APPROXIMATE. EXACT DIMENSIONS MAY BE MODIFIED SLIGHTLY BASED ON EXACT EQUIPMENT OBTAINED, SITE CONDITIONS, AND OWNER PREFERENCES.
2. POWER EQUIPMENT SHALL BE SQUARE D, SIEMENS, CUTLER HAMMER OR GENERAL ELECTRIC. ALL EQUIPMENT MUST BE OF ONE MANUFACTURER.
3. UNUSED CONDUITS SHALL BE SEALED TO PREVENT MOISTURE INSIDE CONDUITS. USED CONDUITS SHALL BE SEALED AFTER SERVICES HAVE BEEN RUN (IN METER CENTER, TELCO ENCLOSURE, AND CARRIER EQUIPMENT).

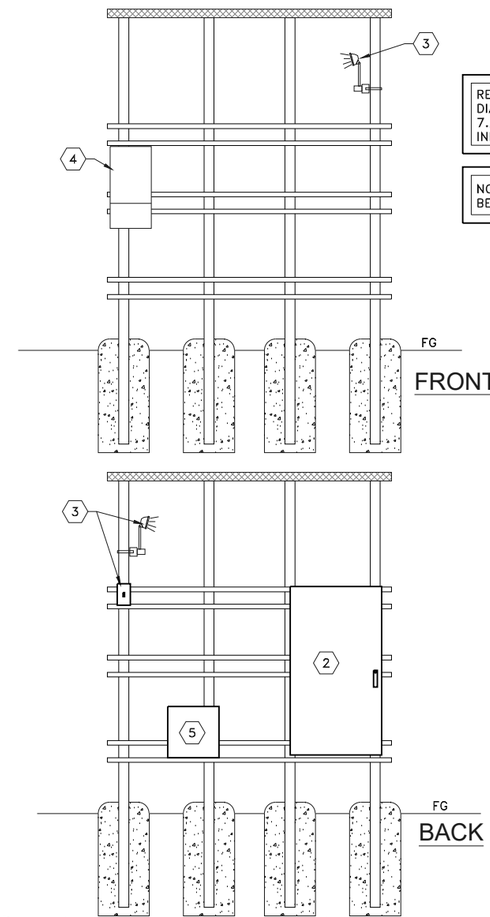
ONE LINE DIAGRAM NOTES BY SYMBOL "◯"

(1) BOND NEUTRAL TO GROUND WITHIN METER CENTER PER NEC 250, LOCAL CODE AND VERIZON'S LATEST GROUNDING SPECS.

(2) PROVIDE NAMEPLATES ON METER CENTER TO INDICATE CARRIER SERVED OR PANEL FED. NAME PLATES SHALL BE PHENOLIC, WHITE LETTERS ON BLACK BACKGROUND.

SCHEDULE OF MATERIALS

ITEM #	QUANT.	DESCRIPTION	PART NUMBER
1	1	CIRCUIT BREAKER, 200A, 120/240V, 2-POLE	SQ. D NEMA3R NPX 84200 X: COORDINATE METER TYPE W/POWER PROVIDER
2	1	INTEGRATED LOAD CENTER W/ATS	VERIZON SUPPLIED
3	1	SITE LITE W/ SWITCH	CONTRACTOR SUPPLIED
4	1	OVP-12	VERIZON SUPPLIED
5	1	FIBER JUNCTION BOX	VERIZON SUPPLIED



REFER TO SINGLE LINE DIAGRAM DRAWING ON SHT. 7.2 FOR ADDITIONAL INFORMATION

NOTE; ALL CONDUIT SHALL BE SCHEDULE 80 PVC.

3 / 7.2 EQUIPMENT UTILITY RACK DIAGRAM

SCALE: NTS.

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vertical bridge

PROJECT: PUMPKIN HOLLOW RD / US-AR-5227
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE: UTILITY DISTRIBUTION RACKS ELEVATIONS & DETAILS

HE JOB NO.:	2024-0092
FILE NAME:	240092C7.3.DWG
PLOT SCALE:	1:24
REV. 0:	11/15/2024
REV. 2:	05/02/2025

WARNING 0 1/2 1
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SCALE:	NTS
DESIGNED BY:	STS
DRAWN BY:	STS
CHECKED BY:	EAW

SHEET No. 7.3

UTILITY ROUTING KEY
– PROPOSED POWER
– PROPOSED UNDERGROUND FIBER

NOTE: FIBER ROUTE IS PRELIMINARY AND FINAL FIBER ROUTE TO BE COORDINATED WITH FIBER PROVIDER

NOTE: ONCE POWER ACCOUNT IS SET UP WITH CARROLL ELECTRIC, THE POWER COMPANY WILL PROVIDE THE POWER EASEMENT FORMS AND POWER EASEMENTS WILL NEED TO BE COORDINATED WITH THE APPROPRIATE LANDOWNERS. 30' POWER EASEMENT FOR OVERHAD POWER AND 15' POWER EASEMENT FOR UNDERGROUND EASEMENT

OVERALL FIBER & POWER ROUTE

SCALE: 1 = 20

NOTE:
THE FIBER ROUTE IS PRELIMINARY AND FINAL FIBER ROUTE IS TO BE COORDINATED WITH THE FIBER PROVIDER

N W E S

BEARINGS ARE BASED ON ARKANSAS STATE PLANE GRID NORTH DERIVED FROM GPS OBSERVATIONS.

0 30 60 90

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vertical bridge

PROJECT: PUMPKIN HOLLOW RD / US-AR-5227
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE: OVERALL FIBER AND POWER ROUTE

HE JOB NO.:	2024-0092
FILE NAME:	240092C7.4.DWG
PLOT SCALE:	1:30
REV. 0:	11/15/2024
REV. 2:	05/02/2025

WARNING
0 1/2 1
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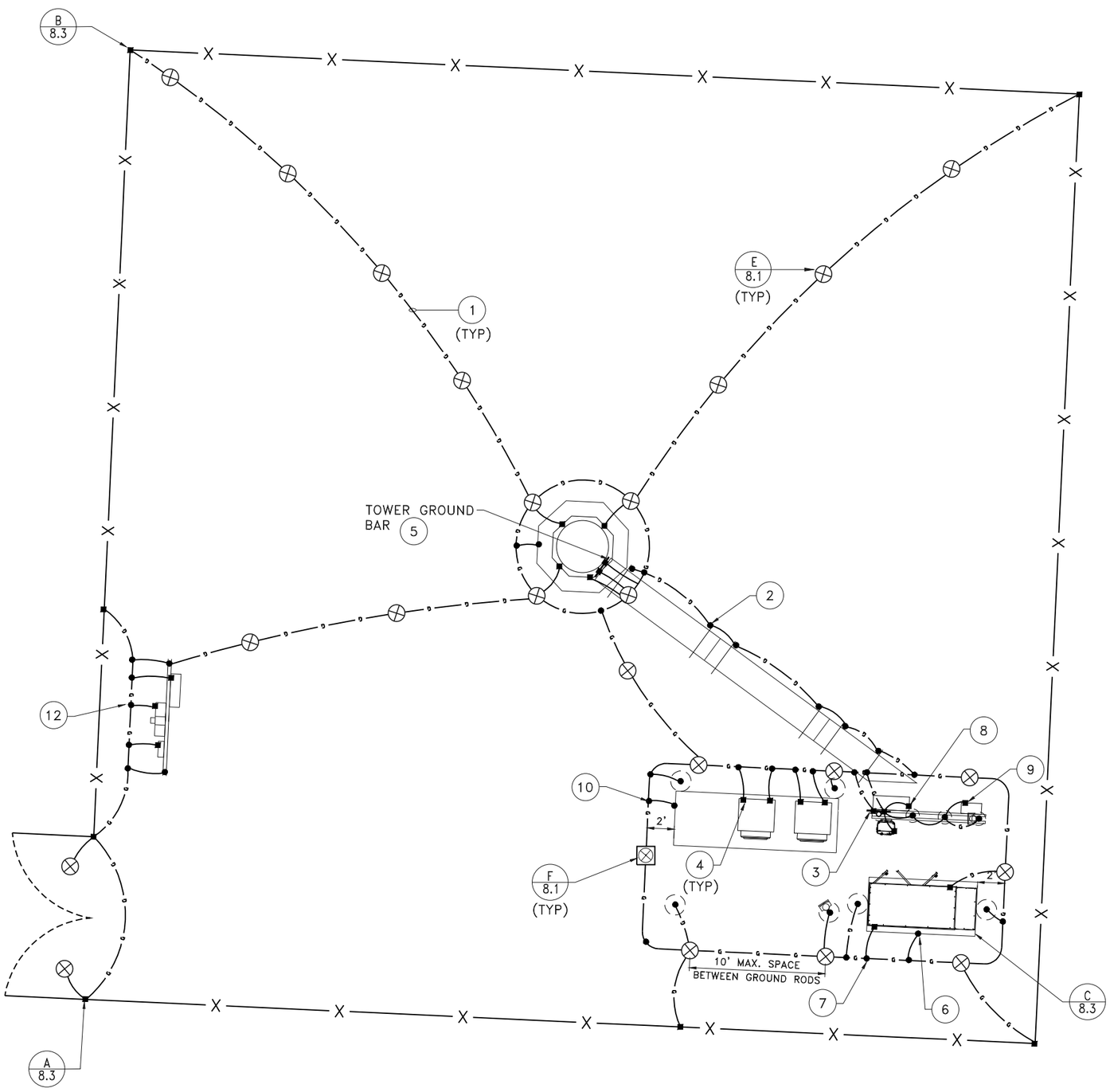
SCALE:	1:30
DESIGNED BY:	HERITAGE
DRAWN BY:	HERITAGE
CHECKED BY:	EAW

SHEET No.
7.4



COMPOUND GROUNDING PLAN

SCALE: NTS.

GENERAL NOTES

1. REFER TO DRAWING 9.2 FOR GENERAL NOTES PERTAINING TO THIS DRAWING
2. GROUND ALL EXTERIOR EXPOSED METAL OBJECTS. USE TWO HOLE MECHANICAL CONNECTORS FOR CONNECTIONS TO FLAT SURFACES.
3. ALL EXTERIOR GROUND BARS MUST BE TINNED.
4. ALL ICE BRIDGE SECTIONS SHALL BE JUMPERED W/ #2 SOLID.

NOTES BY SYMBOL " ◯ "

1. GROUNDING SYSTEM SHALL BE COMPRISED OF #2 AWG SBTC CONDUCTOR, UNLESS NOTED OTHERWISE, BURIED AT 30" MINIMUM BELOW FINISHED GRADE. ALL CONNECTIONS SHALL BE EXOTHERMIC WELD, UNLESS NOTED OTHERWISE.
2. BOND #2 AWG SBTC GROUND CONDUCTORS BELOW GRADE TO EACH SUPPORT LEG ON BOTH SIDES OF THE CABLE SUPPORT STRUCTURE USING EXOTHERMIC WELD CONNECTIONS.
3. BOND (2)–#2 AWG SBTC CONDUCTORS FROM EQUIPMENT PAD BAR NONE GROUND BAR TO EQUIPMENT PAD GROUND RING PER VERIZON DRAWINGS AND CONSTRUCTION MANAGER SPECIFICATIONS AND DIRECTION. RE: A/8.1 AND A/8.2
4. BOND ALL EQUIPMENT CABINETS (TYP. 2–PLACES) WITH 2 HOLE LUG MEETING NEC CODE 250.94 @ CABINET AND TO EQUIPMENT PAD GROUND RING W/ EXOTHERMIC WELD.
5. BOND TOWER BAR NONE GROUND BAR WITH TAMPER RESISTANT MOUNTING HARDWARE TO TOWER GROUND RING USING (2)–#2 AWG SBTC CONDUCTOR SLEEVED IN ½" PVC CONDUIT, SEE SHT. 8.2
6. GROUND GENERATOR FOUNDATION REBAR TO EQUIPMENT PAD GROUND RING. SEE DETAIL C/8.3
7. BOND GENERATOR FRAME (TYP. 2 LOCATIONS) W/ 2 HOLE LUG MEETING NEC CODE 250.94 @ GENERATOE BASE TO EQUIPMENT PAD GROUND RING W/ EXOTHERMIC WELD.
8. BOND RACK MOUNTED ILC CABINET W/ 2 HOLE LUG MEETING NEC CODE 250.94 @ ILC CABINET & TO EQUIPMENT PAD GROUND RING W/ EXOTHERMIC WELD.
9. BOND RACK MOUNTED FIBER CABINET W/ 2 HOLE LUG MEETING NEC CODE 250.94 @ ILC CABINET & TO EQUIPMENT PAD GROUND RING W/ EXOTHERMIC WELD.
10. GROUND NEW EQUIPMENT PAD FOUNDATION REBAR TO EQUIPMENT PAD GROUND RING. SEE DETAILS C/8.2 & F/8.2
11. GROUND NEW TOWER FOUNDATION REBAR TO TOWER GROUND RING. SEE DETAILS G/8.1 & F/8.2
12. BOND METER CAN W/ 2 HOLE LUG MEETING NEC CODE 250.94 @ METER TO POWER RACK GROUND RING W/ EXOTHERMIC WELD.

CONTRACTOR IS SOLELY RESPONSIBLE TO OBTAIN A COPY OF VERIZON'S LATEST REVISION OF GROUNDING REQUIREMENTS (VERIZON'S DOCUMENT "NSTD46") AND INSTALL THE SITE GROUNDING SYSTEM IN ACCORDANCE WITH THE MOST STRINGENT REQUIREMENTS OF THE REFERENCED DOCUMENT OR THE REQUIREMENTS AS SHOWN IN THESE DRAWINGS. NOTE THAT THE REFERENCED DOCUMENT ADDRESSES GROUNDING OF ITEMS THAT ARE NOT SHOWN IN THESE DRAWINGS.

ELECTRICAL LEGEND

①	DRAWING NOTE REFERENCE (NOTES BY SYMBOL)
⊗	5/8"ø X 8'–0" LONG COPPER CLAD STEEL GROUND ROD
⊠	5/8"ø X 8'–0" LONG COPPER CLAD STEEL GROUND ROD IN INSPECTION SLEEVE
●	EXOTHERMIC WELD CONNECTION
■	MECHANICAL CONNECTION
—•—•—	GROUND CONDUCTOR, TYPE AND SIZE AS NOTED, MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE, WHICHEVER IS GREATER

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ARKANSAS ENGINEER

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vertical bridge

PROJECT: **PUMPKIN HOLLOW RD / US-AR-5227**
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE: COMPOUND GROUNDING PLAN & NOTES

HE JOB NO.:	2024–0092
FILE NAME:	240092C8.0.DWG
PLOT SCALE:	1:48
REV. 0:	11/15/2024
REV. 2:	05/02/2025

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SHEET No.
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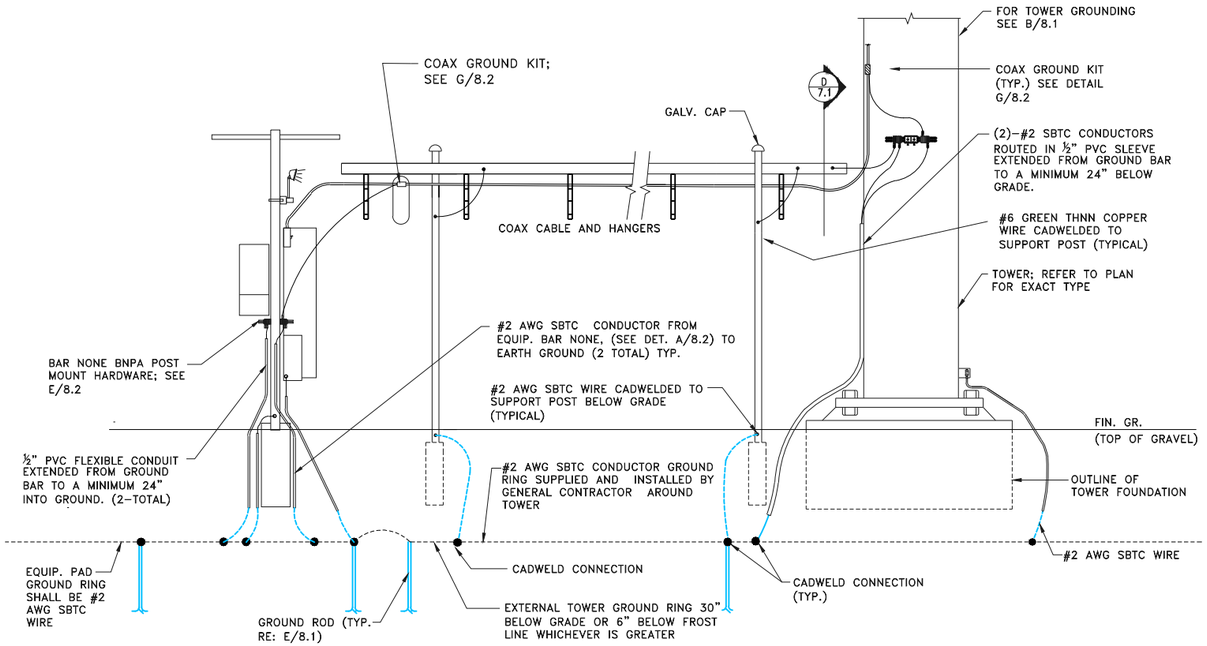
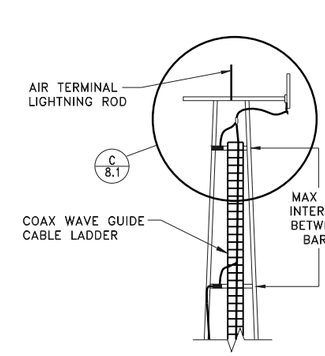
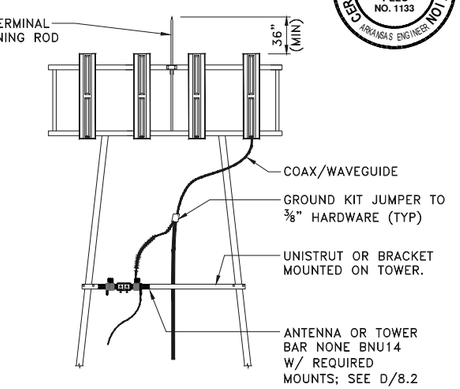


NOTE:
•MINIMUM BEND RADIUS OF #2 SBTC GROUND CONDUCTOR IS 12"

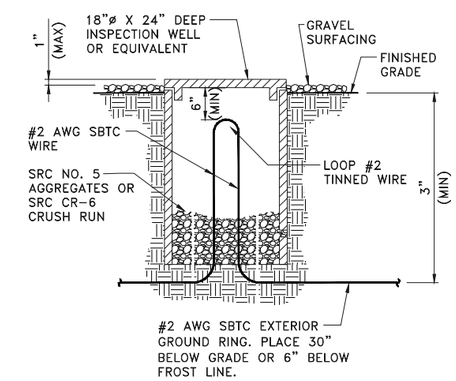
A 8.1 TYPICAL EQUIP. PAD/ WAVEGUIDE BRIDGE/TOWER GROUNDING
N.T.S.



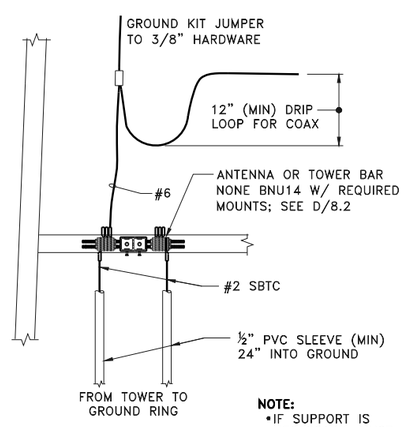
B 8.1 COAX CABLE & ANTENNA GROUNDING DETAIL
N.T.S.



C 8.1 ANTENNA GROUND BAR LOCATION
N.T.S.

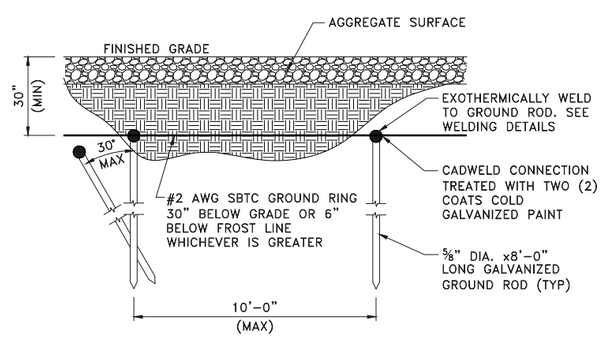


F 8.1 INSPECTION WELL DETAIL
SCALE: N.T.S.

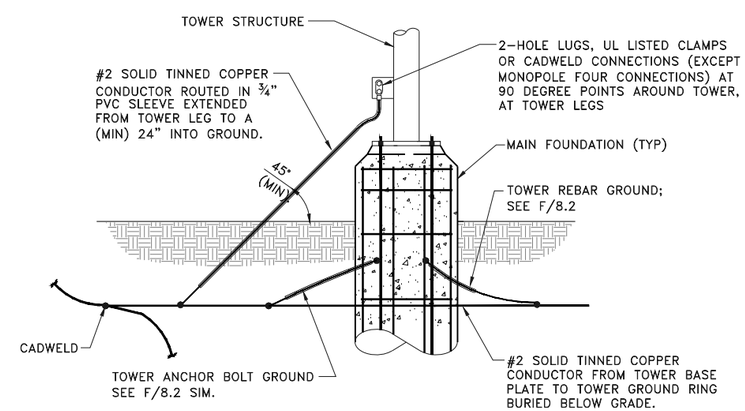


NOTE:
•IF SUPPORT IS NECESSARY, MUST USE NON–METALLIC CLAMP.

D 8.1 TOWER CIGBE WITH COAX/WAVEGUIDE GROUND KITS
N.T.S. ((TYP).) INSTALL AT EACH COAX/WAVEGUIDE ENTRY



E 8.1 GROUND RING & ROD DETAIL
N.T.S.



G 8.1 TOWER GROUNDING DETAIL
NOT TO SCALE

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STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER CALC. WARFORD

HE ENGINEERING EXCELLENCE
Heritage Engineering PLLC
P.O. BOX 505
Benton, Arkansas 72018
(501) 939-2303
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vertical bridge

PROJECT: **PUMPKIN HOLLOW RD / US-AR-5227**
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE: GROUNDING DETAILS, SHEET 1 OF 3

HE JOB NO.:	2024–0092
FILE NAME:	240092C8.1.DWG
PLOT SCALE:	1:16
REV. 0:	11/15/2024
REV. 2:	05/02/2025

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING HAS BEEN REDUCED AND IS NOT TO SCALE

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DESIGNED BY:	STS
DRAWN BY:	STS
CHECKED BY:	EAW

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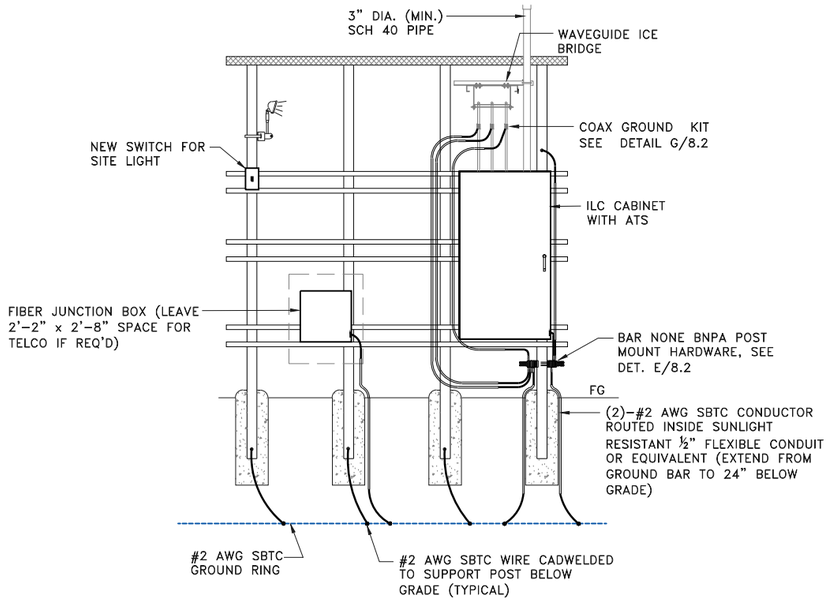
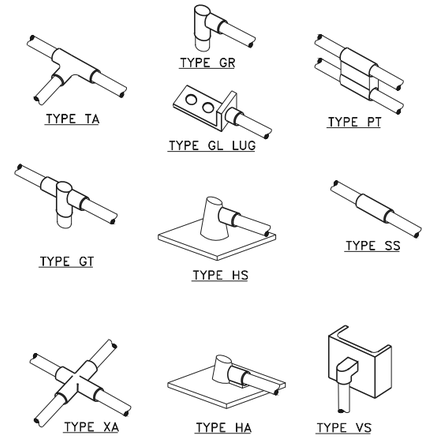
8.1

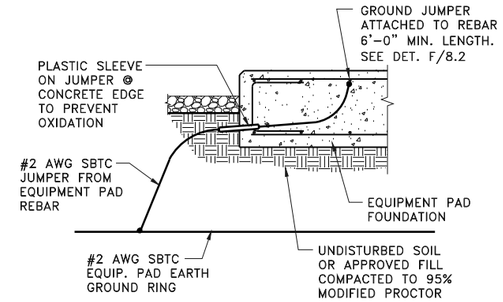


A 8.2 CANOPY GROUND BAR DETAIL
NOT TO SCALE

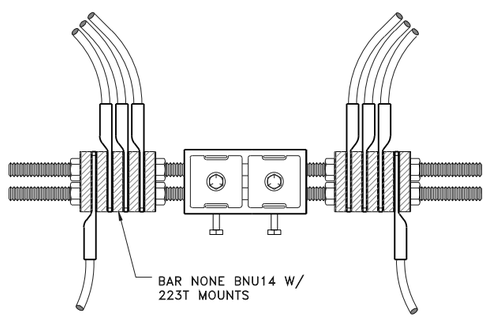


B 8.2 CADWELD CONNECTION TYPES
NOT TO SCALE

LEGEND
SBTC = SOLID BARE TINNED COPPER WIRE
● EXOTHERMIC WELD CONNECTION
■ MECHANICAL CONNECTION

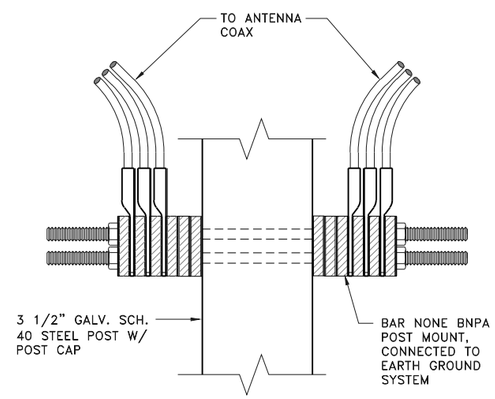


C 8.2 EQUIP. PAD FOUND. GROUNDING DETAIL
NOT TO SCALE

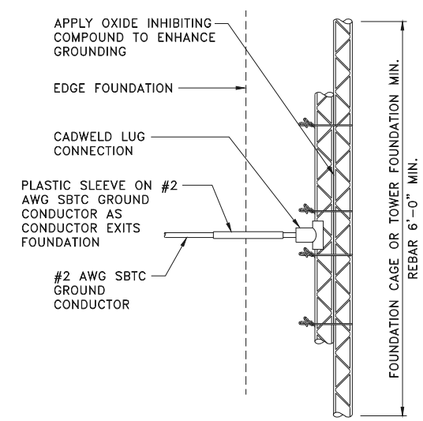


NOTES:
1. DOUBLING UP "OR STACKING" OF CONNECTIONS IS NOT PERMITTED
2. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS
3. GROUND BAR SHALL NOT BE ISOLATED FROM THE TOWER. MOUNT DIRECTLY TO TOWER STEEL.

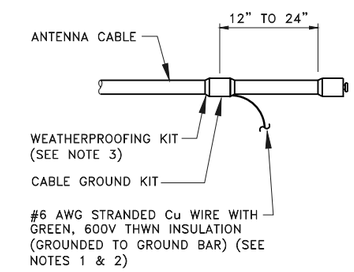
D 8.2 ANTENNA OR TOWER GROUND BAR DETAIL
NOT TO SCALE



E 8.2 POST MOUNT EARTH GROUND SYSTEM
NOT TO SCALE



F 8.2 FOUNDATION GROUNDING DETAIL
N.T.S.



NOTES:
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURE.

WEATHER PROFFING SHALL BE (TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.)

G 8.2 COAX GROUNDING DETAIL
NOT TO SCALE

CERTIFICATE OF AUTHORIZATION — HERITAGE ENGINEERING PLLC NO. 1133 — ARKANSAS ENGINEERS

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — E.A.C. WAREFORD

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vertical bridge

PROJECT:
PUMPKIN HOLLOW RD / US-AR-5227
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE:
GROUNDING DETAILS, SHEET 2 OF 3

HE JOB NO.:	2024-0092
FILE NAME:	240092C8.2.DWG
PLOT SCALE:	1:16
REV. 0:	11/15/2024
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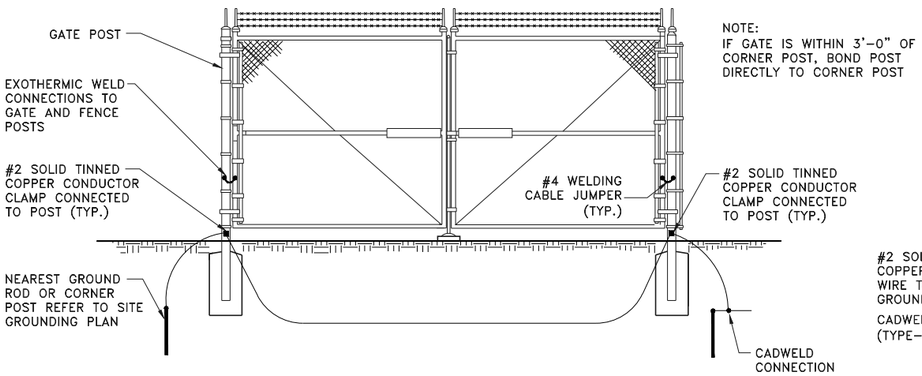

A 8.3 GATE GROUNDING DETAIL
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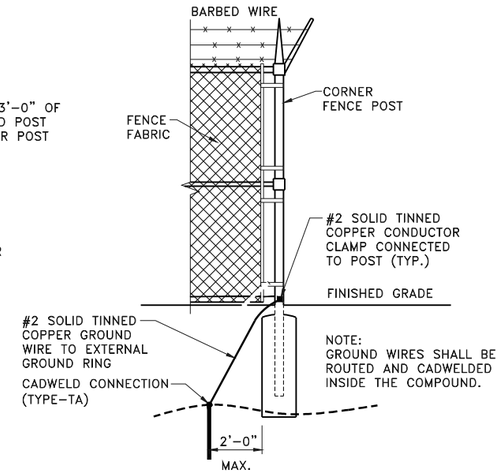
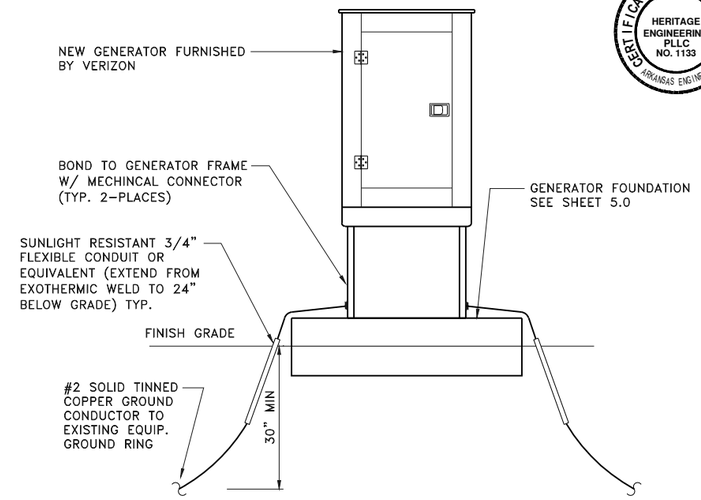


B 8.3 FENCE GROUNDING DETAIL
NOT TO SCALE



C 8.3 GENERATOR GROUND DETAIL
N.T.S.

CERTIFICATE OF AUTHORIZATION
HERITAGE ENGINEERING PLLC NO. 1133
ARKANSAS ENGINEER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
ERIC A. WARFORD

HE ENGINEERING EXCELLENCE
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BELLA VISTA PROJECT #: LSD-2025-58554

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GROUNDING DETAILS, SHEET 3 OF 3

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GENERAL NOTES

1. THE EXISTING TOPOGRAPHY AND VERTICAL GEOMETRY REPRESENTED ON THESE DRAWINGS IS TO BE VERIFIED BY CONTRACTOR. EXISTENCE AND LOCATION OF ALL UNDERGROUND AND OVERHEAD UTILITIES AND SERVICES ARE TO BE ESTABLISHED BY CONTRACTOR THROUGH COORDINATION WITH THE APPROPRIATE UTILITY COMPANY OR AGENCY PRIOR TO GRADING OR START OF CONSTRUCTION. AND THAT ALL WORK CAN BE ACCOMPLISHED PRIOR TO INITIATING ANY WORK.

2. INFORMATION ON THE TOWER, TOWER AND GUY ANCHOR FOUNDATIONS, AND EQUIPMENT CABINETS SHALL BE PROVIDED BY OTHERS.

3. A 20' HORIZONTAL CLEARANCE SHALL BE MAINTAINED FROM ALL EXISTING POWER LINES.

4. ALL SURVEY INFORMATION REFERENCED IN THESE DRAWINGS COMPLIES WITH FAA ORDER 8260.19C ACCURACY TOLERANCES.

5. PROVIDE ALL LABOR, MATERIAL, TOOLS, EQUIPMENT, TRANSPORTATION AND TEMPORARY POWER SERVICES NECESSARY FOR AND INCIDENTAL TO COMPLETION OF ALL WORK AS INDICATED ON THE DRAWINGS AND/OR AS SPECIFIED HEREIN.

6. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND EQUIPMENT UNLESS OTHERWISE INDICATED BY DIMENSIONS OR DETAILS. EXACT EQUIPMENT LOCATIONS SHALL BE GOVERNED BY ACTUAL FIELD CONDITIONS AND/OR INSTRUCTIONS OF THE ENGINEER AND/OR OWNER'S REPRESENTATIVE. DO NOT SCALE DRAWINGS.

7. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AS REQUIRED FOR COMPLETE SYSTEMS, INCLUDING ALL PARTS OBVIOUSLY OR REASONABLY INCIDENTAL TO COMPLETE INSTALLATION, WHETHER SPECIFICALLY INDICATED OR NOT. ALL SYSTEMS SHALL BE COMPLETELY ASSEMBLED, TESTED, ADJUSTED, AND DEMONSTRATED TO BE READY FOR OPERATION PRIOR TO OWNER'S ACCEPTANCE.

8. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL, AND OTHER REQUIREMENTS OF GOVERNMENTAL AUTHORITIES HAVING JURISDICTION

9. THE CONTRACTOR SHALL OBTAIN, PAY FOR AND DELIVER ALL REQUIRED PERMITS, CERTIFICATES OF INSPECTION, INCLUDING UTILITY CONNECTION FEES, ETC., REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. DELIVER CERTIFICATES TO THE OWNER PRIOR TO FINAL ACCEPTANCE OF THE WORK.

10. THE CONTRACTOR SHALL MAINTAIN BENCHMARKS AND OTHER ELEVATION CONTROL POINTS AND SHALL REESTABLISH, IF DISTURBED OR DESTORYED, AT NO ADDITIONAL COST TO THE OWNER.

11. THE CONTRACTOR SHALL PROVIDE TEMPORARY POWER AND LIGHTING OF TOWER IN ACCORDANCE WITH FAA REQUIREMENTS AS CONSTRUCTION OF TOWER PROGRESSES. THE CONTRACTOR SHALL MAINTAIN TEMPORARY POWER AND LIGHTING UNTIL PERMANENT POWER AND LIGHTING ARE PROVIDED.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND OR RESTORATION OF ANY DAMAGE TO THE EXISTING ACCESS ROADWAY AND ANY ADJACENT SITE AREAS AS A RESULT OF HIS USE DURING CONSTRUCTION. ALL DISTURBED AND DAMAGED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER UPON COMPLETION OF ALL WORK.

13. THE CONTRACTOR SHALL REMOVE ALL WASTE, DEBRIS, AND TRASH FORM SITE AND DISPOSE OF IN A LEGAL MANNER.

14. UPON COMPLETION OF WORK, OR AS DIRECTED BY EROSION CONTROL AUTHORITIES, ALL DISTURBED AREAS NOT IMPROVED WITH GRAVEL SHALL BE SEEDED WITH PERMANENT SEEDING MATERIAL SUITABLE FOR THE LOCAL GROWING AREA.

15. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS SHALL VISIT THE JOB SITE AND BE SOLELY RESPONSIBLE FOR ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER.

16. THE CONTRACTOR SHALL RECEIVE IN WRITING, AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.

17. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS OTHERWISE INDICATED OR SPECIFICALLY WHERE LOCAL CODES, OR REGULATIONS TAKE PRECEDENCE.

18. ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK. MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

19. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, USING BEST SKILLS AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATION ALL PORTIONS OF THE WORK UNDER THECONTRACT INCLUDING CONTACT AND COORDINATION WITH THE PROJECT MANAGER AND WITH THE LANDLORD'S AUTHORIZED REPRESENTATIVE.

20. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS WILL BE INCLUDED AS PART OF THE WORK.

21. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, PAVING, CURBS, GALVANIZED SURFACES, ETC., AND UPON COMPLETION OF WORK, REPAIR ANY DAMAGE THAT OCCURRED DURING CONSTRUCTION TO THE SATISFACTION OF THE PROJECT MANAGER.

22. KEEP GENERAL AREA CLEAN, HAZARD FREE AND DISPOSE OF ALL DIRT, DEBRIS RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.

23. CONTRACTOR TO PROVIDE COMPLETE SET OF AS-BUILT DRAWINGS WITHIN 10 WORKING DAYS OF PROJECT COMPLETION

24. REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE BONUDARY SURVEY DRAWING, WILL NOT BE USED TO IDENTIFY OR ESTABLISH THE BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTOR WILL RELY SOLELY ON THE BOUNDARY SURVEY DRAWING AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH, AND WILL NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION AS DEPICTED ON THE BOUNDARY SURVEY. THE CONTRACTOR WILL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ENGINEER.

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2730 GRAVEL SURFACING

DIVISION 3 - CONCRETE

3100 CONCRETE FORMS AND ACCESSORIES
3200 CONCRETE REINFORCEMENT
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DIVISION 1 - GENERAL REQUIREMENTS

SECTION 1100 - SUMMARY

PART 1 - GENERAL

1.1 PURPOSE AND INTENT

A. THESE SPECIFICATIONS AND CONSTRUCTION DRAWINGS ACCOMPANYING THEM DESCRIBE THE WORK TO BE DONE AND THE MATERIALS TO BE FURNISHED FOR THE CONSTRUCTION OF THIS PROJECT.

B. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE FULLY EXPLANATORY AND SUPPLEMENTARY, HOWEVER, SHOULD ANYTHING BE SHOWN, INDICATED, OR SPECIFIED ON ONE AND NOT THE OTHER, IT SHALL BE DONE THE SAME AS IF SHOWN, INDICATED OR SPECIFIED IN BOTH. SHOULD THERE BE ANY DISCREPANCIES BETWEEN REQUIREMENTS SHOWN IN BOTH, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.

C. THE INTENTION OF THE DOCUMENTS IS TO INCLUDE ALL LABOR AND MATERIALS REASONABLY NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK AS STIPULATED IN THE CONTRACT.

D. THE PURPOSE OF THE CONSTRUCTION SPECIFICATIONS IS TO INTERPRET THE INTENT OF THE DRAWINGS AND TO DESIGNATE THE METHOD OF THE PROCEDURE, TYPE AND QUALITY OF MATERIALS REQUIRED TO COMPLETE THE WORK.

E. MINOR DEVIATIONS FROM THE DESIGN LAYOUT ARE ANTICIPATED AND SHALL BE CONSIDERED AS PART OF THE WORK. NO CHANGES THAT ALTER THE CHARACTER OF THE WORK WILL BE MADE OR PERMITTED BY THE OWNER WITHOUT ISSUING A CHANGE ORDER.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

SECTION 1300 - ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 CONFLICTS

A. VERIFY ALL MEASUREMENTS AT THE SITE BEFORE ORDERING MATERIAL OR DOING ANY WORK. NO EXTRA CHARGE OR COMPENSATION WILL BE ALLOWED DUE TO DIFFERENCES BETWEEN ACTUAL DIMENSIONS OR DIMENSIONS SHOWN ON PLANS. SUBMIT NOTICE OF ANY DISCREPANCY IN DIMENSIONS OR OTHERWISE FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK.

B. THE BIDDER, IF AWARDED THE CONTRACT, WILL NOT BE ALLOWED ANY EXTRA COMPENSATION BY REASON OF ANY MATTER OR THING CONCERNING WHICH SUCH BIDDER MIGHT HAVE FULLY INFORMED HIMSELF PRIOR TO BIDDING.

C. NO PLEA OF IGNORANCE OF CONDITIONS THAT EXIST, OR OF DIFFICULTIES OF CONDITIONS THAT MAY BE ENCOUNTERED, OR OF ANY OTHER RELEVANT MATTER CONCERNING THE EXECUTION OF THE WORK WILL BE ACCEPTED AS AN EXCUSE FOR ANY FAILURE OR OMISSION ON THE PART OF THE CONTRACTOR TO FULFILL EVERY DETAIL OF ALL THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS GOVERNING THE WORK.

1.2 CHANGE ORDER CONFLICTS

A. CHANGE ORDERS MAY BE INITIATED BY THE OWNER AND/OR THE CONTRACTOR INVOLVED. THE CONTRACTOR, UPON VERBAL REQUEST FROM THE OWNER SHALL PREPARE A WRITTEN PROPOSAL DESCRIBING THE CHANGES IN WORK OR MATERIALS AND ANY CHANGES IN THE CONTRACT AMOUNT AND PRESENT TO THE OWNER FOR APPROVAL. SUBMIT REQUESTS FOR SUBSTITUTIONS IN THE FORM AND IN ACCORDANCE WITH PROCEDURES REQUIRED FOR CHANGE ORDER PROPOSALS. ANY CHANGES IN SCOPE OF WORK OR MATERIALS WHICH ARE PERFORMED BY THE CONTRACTOR WITHOUT WRITTEN CHANGE ORDER AS DESCRIBED AND APPROVED BY THE OWNER SHALL PLACE FULL RESPONSIBILITY OF THESE ACTIONS ON THE CONTRACTOR.

1.2 CHANGE ORDER CONFLICTS

A. CHANGE ORDERS MAY BE INITIATED BY THE OWNER AND/OR THE CONTRACTOR INVOLVED. THE CONTRACTOR, UPON VERBAL REQUEST FROM THE OWNER SHALL PREPARE A WRITTEN PROPOSAL DESCRIBING THE CHANGES IN WORK OR MATERIALS AND ANY CHANGES IN THE CONTRACT AMOUNT AND PRESENT TO THE OWNER FOR APPROVAL. SUBMIT REQUESTS FOR SUBSTITUTIONS IN THE FORM AND IN ACCORDANCE WITH PROCEDURES REQUIRED FOR CHANGE ORDER PROPOSALS. ANY CHANGES IN SCOPE OF WORK OR MATERIALS WHICH ARE PERFORMED BY THE CONTRACTOR WITHOUT WRITTEN CHANGE ORDER AS DESCRIBED AND APPROVED BY THE OWNER SHALL PLACE FULL RESPONSIBILITY OF THESE ACTIONS ON THE CONTRACTOR.

1.3 RELATED DOCUMENTS AND COORDINATION

A. CIVIL, ELECTRICAL, STRUCTURAL, TOWER DRAWINGS AND ANY OTHER INCLUDED TRADES ARE INTERRELATED. IN PERFORMANCE OF THE WORK, THE CONTRACTOR MUST REFER TO ALL DRAWINGS. ALL COORDINATION IS THE RESPONSIBILITY OF THE CONTRACTOR.

1.4 SHOP DRAWINGS

A. A CONTRACTOR TO SUBMIT SHOP DRAWINGS AS REQUIRED TO THE OWNER FOR APPROVAL.

1.5 PRODUCTS AND SUBSTITUTIONS

A. SUBMIT 3 COPIES OF EACH REQUEST FOR SUBSTITUTION. IN EACH REQUEST IDENTIFY THE PRODUCT OR FABRICATION OR INSTALLATION METHOD TO BE REPLACED BY THE SUBSTITUTION. INCLUDE RELATED SPECIFICATIONS SECTION AND DRAWING NUMBERS AND COMPLETE DOCUMENTATION SHOWING COMPLIANCE WITH THE REQUIREMENTS FOR SUBSTITUTIONS.

B. SUBMIT ALL NECESSARY PRODUCT DATA AND CUT SHEETS WHICH PROPERLY INDICATE AND DESCRIBE THE ITEMS, PRODUCTS AND MATERIALS BEING INSTALLED. THE CONTRACTOR SHALL, IF DEEMED NECESSARY BY THE OWNER, SUBMIT ACTUAL SAMPLES TO THE OWNER FOR APPROVAL IN LIEU OF CUT SHEETS.

1.6 ADMINISTRATION

A. BEFORE THE COMMENCEMENT OF ANY WORK, THE CONTRACTOR WILL ASSIGN A PROJECT MANAGER WHO WILL ACT AS A SINGLE POINT OF CONTACT FOR ALL PERSONNEL INVOLVED IN THE PROJECT. THIS PROJECT MANAGER WILL DEVELOP A MASTER SCHEDULE FOR THE PROJECT WHICH WILL BE SUBMITTED TO THE OWNER PRIOR TO THE COMMENCEMENT OF ANY WORK.

B. SUBMIT A BAR CHART TYPE PROGRESS SCHEDULE NOT MORE THAN 3 DAYS AFTER THE DATE ESTABLISHED FOR COMMENCEMENT OF THE WORK ON THE SCHEDULE. INDICATE A TIME BAR FOR EACH MAJOR CATEGORY OR UNIT OF WORK TO BE PERFORMED AT SITE, PROPERLY SEQUENCED AND COORDINATED WITH OTHER ELEMENTS OF WORK. SHOW COMPLETION OF THE WORK SUFFICIENTLY IN ADVANCE OF THE DATE ESTABLISHED FOR SUBSTANTIAL COMPLETION OF THE WORK.

C. PRIOR TO COMMENCING CONSTRUCTION, THE OWNER SHALL SCHEDULE AN "ON-SITE" MEETING WITH ALL MAJOR PARTIES. THIS WOULD INCLUDE (THOUGH NOT LIMITED TO) THE OWNER, LOCAL TELEPHONE COMPANY, AND THE TOWER ERECTION FOREMAN (IF SUBCONTRACTED).

D. CONTRACTOR SHALL BE EQUIPPED WITH SOME MEANS OF CONSTANT COMMUNICATIONS, SUCH AS MOBILE PHONE OR BEEPER. THIS EQUIPMENT WILL NOT BE SUPPLIED BY THE OWNER NOR WILL CELLULAR SERVICE BE ARRANGED.

E. PROVIDE DAILY UPDATES ON SITE PROGRESS. EITHER VERBAL OR WRITTEN.

F. COMPLETE INVENTORY OF CONSTRUCTION MATERIALS AND EQUIPMENT IS REQUIRED PRIOR TO START OF CONSTRUCTION.

G. THE OWNER SHALL BE NOTIFIED NO LESS THAN 48 HOURS IN ADVANCE OF CONCRETE POURS, TOWER ERECTIONS, AND SHELTER PLACEMENTS.

1.7 INSURANCE AND BONDS

A. CONTRACTOR SHALL AT HIS OWN EXPENSE CARRY AND MAINTAIN FOR THE DURATION OF THE PROJECT ALL INSURANCE AS REQUIRED AND SHALL NOT COMMENCE HIS WORK UNTIL HE HAS PRESENTED A CERTIFICATE(S) OF INSURANCE STATING ALL REQUIRED COVERAGE'S. THIS REQUIREMENT APPLIES TO ANY SUBCONTRACTORS USED BY THE GENERAL CONTRACTOR THAT HAVE BEEN APPROVED BY THE OWNER.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

1.1 PHOTOS

A. PROVIDE PHOTOGRAPHIC EVIDENCE OF ALL FOUNDATION INSTALLATION, GROUNDING, AND TRENCHING AFTER PLACEMENT OF UTILITIES PRIOR TO BACKFILL.

SECTION 1400 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 CODES

A. CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING ALL LAWS, REGULATIONS, AND RULES PROMULGATED BY FEDERAL STATE AND LOCAL AUTHORITIES WITH JURISDICTION OVER THE SITE. THIS RESPONSIBILITY IS IN EFFECT REGARDLESS OF WHETHER THE LAW, ORDINANCE, REGULATION OR RULE IS MENTIONED IN THESE SPECIFICATIONS.

1.2 LICENSING

A. HAVE AND MAINTAIN A VALID CONTRACTOR'S LICENSE FOR THE LOCATION IN WHICH THE WORK IS TO BE PERFORMED. FOR JURISDICTIONS THAT LICENSE INDIVIDUAL TRADES, THE TRADESMAN OR SUBCONTRACTOR'S PERFORMING THOSE TRADES SHALL BE LICENSED. RESEARCH AND COMPLY WITH LICENSING LAWS, PAY LICENSE FEES, AND SELECT AND INFORM SUBCONTRACTORS REGARDING THESE LAWS.

1.3 BUILDING PERMITS

A. OWNER WILL SUBMIT CONSTRUCTION DOCUMENTS TO THE JURISDICTIONAL AUTHORITY FOR PLAN CHECK AND REVIEW. CONTRACTOR WILL SUBMIT LICENSING AND WORKMAN'S COMPENSATION INFORMATION TO THE JURISDICTION AS REQUIRED TO OBTAIN THE BUILDING PERMIT. CONTRACTOR SHALL COORDINATE AND SCHEDULE REQUIRED INSPECTIONS AND POST REQUIRED PERMITS AT THE JOB SITE. COMPLY WITH SPECIFIC PROJECT RELATED REQUESTS AND SUGGESTIONS MADE BY BUILDING INSPECTOR, AND INFORM CONSTRUCTION MANAGER OF ANY SUCH WORK THAT MAY MAY BE BEYOND THE SCOPE OF THE CONTRACT OR DEVIATE FROM THE CONSTRUCTION DOCUMENTS. OWNER WILL REIMBURSE THE CONTRACTOR FOR FEES, FOR PLAN REVIEW, BUILDING PERMIT, CONNECTIONS, AND INSPECTION.

1.4 ZONING REGULATIONS AND CONDITIONAL USE PERMITS

A. OWNER WILL SUBMIT FOR AND OBTAIN ALL ZONING AND CONDITIONAL USE PERMITS. SOME USE PERMITS MAY HAVE SPECIFIC REQUIREMENTS FOR THE SITE RELATED TO CONSTRUCTION, SUCH AS NOISE REGULATIONS, HOURS OF WORK, ACCESS LIMITATIONS, ETC. THE CONSTRUCTION MANAGER WILL INFORM THE CONTRACTOR OF THESE REQUIREMENTS AT THE PRE-BID MEETING OR AS SHOWN IN CONSTRUCTION DOCUMENTS.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

SECTION 1700 - EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 CLEANING

A. KEEP THE SITE FREE FROM ACCUMULATION OF WASTE AND RUBBISH CAUSED BY EMPLOYEES. AT THE COMPLETION OF THE WORK, REMOVE ALL WASTE AND NON-CONSTRUCTION MATERIAL, INCLUDING ALL CONTRACTOR TOOLS, SCAFFOLDING, AND SURPLUS MATERIAL AND LEAVE SITE CLEAN AND READY FOR USE.

1.2 OSHA

A. FOLLOW ALL APPLICABLE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATIONS, AND STATE LAWS BASED IN THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT. THESE REGULATIONS INCLUDE, BUT ARE NOT LIMITED TO, REGULATIONS DEALING WITH TOWER CONSTRUCTION AND SAFETY, EXCAVATIONS AND TRENCHING, AND WORK IN CONFINED SPACES. ENSURE THAT EMPLOYEES AND SUBCONTRACTORS WEAR HARD HATS AT ALL TIMES DURING CONSTRUCTION.

1.3 FAA PERMIT AND TOWER LIGHTING

A. REFER TO CONSTRUCTION MANAGER FOR FAA AND STATE LIGHTING REQUIREMENTS. CONTRACTOR SHALL PROVIDE TEMPORARY FAA APPROVED LIGHTING UNTIL PERMANENT LIGHTING IS OPERATIONAL.

1.4 TOWER SECURITY

A. TOWER MUST BE FENCED, TEMPORARILY OR PERMANENTLY WITHIN 24 HOURS OF ERECTION. DO NOT ALLOW THE GATE ACCESSING THE TOWER AREA TO REMAIN OPEN OR UNATTENDED AT ANY TIME FOR ANY REASON. KEEP THE GATE CLOSED AND LOCKED WHEN NOT IN USE.

1.5 SITE CONTROL

A. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR CONTAINMENT OF SEDIMENT AND CONTROL OF EROSION AT THE SITE. ANY DAMAGE TO ADJACENT OR DOWNSTREAM PROPERTIES WILL BE CORRECTED BY THE CONTRACTOR AT NO EXPENSE TO OWNER.

B. THE CONTRACTOR IS TO MAINTAIN ADEQUATE DRAINAGE AT ALL TIMES. DO NOT ALLOW WATER TO STAND OR POND. ANY DAMAGE TO STRUCTURES OR WORK ON THE SITE CAUSED BY INADEQUATE MAINTENANCE OF DRAINAGE PROVISIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND ANY COST ASSOCIATED WITH REPAIRS FOR SUCH DAMAGE WILL BE AT THE CONTRACTOR'S EXPENSE.

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verticalbridge

PROJECT:
PUMPKIN HOLLOW RD / US-AR-5227
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE:
GENERAL NOTES & SPECIFICATIONS

HE JOB NO.:	2024-0092
FILE NAME:	240092C9.0.DWG
PLOT SCALE:	1:1
REV. 0:	11/15/2024
REV. 2:	05/02/2025

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING HAS BEEN REDUCED AND IS NOT TO SCALE

SCALE:	NTS
DESIGNED BY:	STS
DRAWN BY:	STS
CHECKED BY:	EAW

SHEET No.
9.0

C. ALL WASTE MATERIAL SHALL BE PROPERLY DISPOSED OF OFF-SITE OR AS DIRECTED BY THE CONSTRUCTION MANAGER AND IN ACCORDANCE WITH JURISDICTIONAL AUTHORITIES.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

DIVISION 2 - SITE CONSTRUCTION

SECTION 2300 - EARTHWORK

PART 1 - GENERAL

1.1 SECTION INCLUDES:

A. EXCAVATION, TRENCHING, FILLING, COMPACTION, AND GRADING FOR STRUCTURES, SITE IMPROVEMENTS, AND UTILITIES.

B. MATERIALS FOR SUBBASE, DRAINAGE FILL, FILL, BACKFILL, AND GRAVEL FOR SLABS, PAVEMENTS, AND IMPROVEMENTS.

C. ROCK EXCAVATION WITHOUT BLASTING.

D. SUPPLY OF ADDITIONAL MATERIALS FROM OFFSITE AS REQUIRED.

E. REMOVAL AND LEGAL DISPOSAL OF EXCAVATED MATERIALS AS REQUIRED.

1.2 RELATED SECTIONS

A. 2324 TRENCHING

B. 2370 EROSION AND SEDIMENTATION CONTROL

1.3 QUALITY ASSURANCE

A. COMPACTION: UNDER STRUCTURES, BUILDING SLABS, PAVEMENTS, AND WALKWAYS WILL OBTAIN A 95 PERCENT COMPACTION AT A MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557 OR WITHIN PLUS OR MINUS 3 PERCENT OF OPTIMUM MOISTURE CONTENT.

B. GRADING TOLERANCES OUTSIDE BUILDING LINES:
1. LAWNS, UNPAVED AREAS, AND WALKS, PLUS OR MINUS 1 INCH.
2. UNDER PAVEMENTS, PLUS OR MINUS 1/2 INCH.

C. GRADING TOLERANCE FOR FILL UNDER ALL CONCRETE APPLICATIONS: PLUS OR MINUS 1/2 INCH MEASURED WITH 10 FOOT STRAIGHTEDGE.

PART 2 - PRODUCTS

2.1 MATERIALS (AS APPROVED BY CONSTRUCTION MANAGER OR AS NOTED IN CONSTRUCTION DOCUMENTS.)

A. SUBBASE MATERIAL: GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE OR SLAG, AND NATURAL SAND.

B. WASHED MATERIAL: EVENLY GRADED MIXTURE OF CRUSHED STONE OR GRAVEL, WITH 95 PERCENT PASSING A 1 1/2 INCH SIEVE.

C. GRADING MATERIAL: SATISFACTORY NATIVE OR IMPORTED SOIL MATERIALS FREE OF CLAY, ROCK OR GRAVEL LARGER THAN 2 INCHES IN ANY DIMENSION. DEBRIS, WASTE, FROZEN MATERIALS, AND OTHER UNUSUITABLE MATERIALS WILL NOT BE ALLOWED FOR USE. IMPORTED MATERIALS SHALL HAVE A CLAY CONTENT OF NO MORE THAN 5 PERCENT.

D. BACKFILL MATERIALS: SATISFACTORY NON-COHESIVE NATIVE OR IMPORTED SOILS FREE OF CLAY, ROCK OR GRAVEL LARGER THAN 4 INCHES IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, AND OTHER UNSUITABLE MATERIALS. IMPORTED MATERIAL SHALL HAVE A CLAY CONTENT OF NO MORE THAN 5 PERCENT.

PART 3 - EXECUTION

3.1 GRADING AND SUBGRADE PREPARATION

A. USING ON-SITE EXCAVATION MATERIALS, SHAPE, TRIM, FINISH, AND COMPACT SURFACE AREAS TO CONFORM TO THE LINES, GRADES, AND CROSS SECTIONS SHOWN ON THE DRAWINGS OR AS DESIGNATED BY THE CONSTRUCTION MANAGER.

B. GRADE SURFACES TO DRAIN AND ELIMINATE ANY PONDING OR EROSION.

C. ELIMINATE WHEEL RUTS BY REGRADING.

D. COMPACT THE TOP 12 INCHES OF SUBGRADE IN AREAS UNDERLYING NEW GRAVEL, PAVING, FLOOR SLABS, AND STRUCTURES TO 95 PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557, WITHIN PLUS OR MINUS 3 PERCENT OF OPTIMUM MOISTURE CONTENT.

E. CONSTRUCT FINISHED SURFACE OF GRADED AREAS WITHIN ONE INCH FROM SPECIFIED GRADE.

F. DO NOT STOCKPILE MATERIALS ON TOP OF SUBGRADE UNLESS AUTHORIZED BY CONSTRUCTION MANAGER.

3.2 EXCAVATION AND FILL

A. EXCAVATE TO DEPTH, LINES, AND GRADES SHOWN ON THE PLANS OR AS OTHERWISE SPECIFIED.

B. TEMPORARILY STOCKPILE ON-SITE EXCAVATION AT AN APPROVED LOCATION WITHIN THE WORK AREA UNTIL SITE GRADING IS COMPLETE. STOCKPILE SHALL NOT EXCEED 15 FEET IN HEIGHT.

C. LEGALLY DISPOSE OF EXCESS COMMON EXCAVATION OFF-SITE.

3.3 EMBANKMENT AND BACKFILL

A. CONSTRUCT EMBANKMENT TO THE LINES AND GRADE SHOWN ON THE DRAWINGS.

B. CONSTRUCT EMBANKMENT FROM ON-SITE EXCAVATION MATERIALS WHEN SUITABLE. USE IMPORTED BACKFILL ONLY AFTER AVAILABLE ON-SITE EXCAVATION MATERIALS HAVE BEEN USED.

C. CONSTRUCT IN LIFTS OF NOT MORE THAN 9 INCHES IN LOOSE DEPTH. THE FULL WIDTH OF THE CROSS SECTION SHALL BE BROUGHT UP UNIFORMLY.

D. MATERIAL SHALL BE PLACED IN LAYERS AND SHALL BE NEAR OPTIMUM MOISTURE CONTENT BEFORE ROLLING TO OBTAIN THE PRESCRIBED COMPACTION. WETTING OR DRYING OF THE MATERIAL AND MANIPULATION TO SECURE A UNIFORM MOISTURE CONTENT THROUGHOUT THE LAYER MAY BE REQUIRED. SUCH OPERATIONS SHALL BE INCLUDED IN THE APPROPRIATE BID ITEM. SHOULD THE MATERIAL BE TOO WET TO PERMIT PROPER COMPACTION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE MATERIAL WITH AN ACCEPTABLE MOISTURE CONTENT.

E. DO NOT PLACE FROZEN MATERIAL IN THE EMBANKMENT, AND DO NOT PLACE EMBANKMENT MATERIAL UPON FROZEN MATERIAL.

F. CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF EMBANKMENTS AND THE REPLACEMENT OF ANY PORTION WHICH HAS BECOME DISPLACED DUE TO THE CONTRACTOR'S OPERATIONS.

G. START LAYERS IN THE DEEPEST PORTION OF THE FILL, AND AS PLACEMENT PROGRESSES, CONSTRUCT LAYERS APPROXIMATELY PARALLEL TO THE FINISHED GRADE LINE.

H. ROUTE EQUIPMENT, BOTH LOADED AND EMPTY, OVER THE FULL WIDTH OF EMBANKMENT TO ENSURE UNIFORMITY OF MATERIAL PLACEMENT.

I. COMPACT EMBANKMENT UNDERLYING NEW GRAVEL PAVING, FLOOR SLABS, AND STRUCTURES TO 95 PERCENT MAXIMUM DRY DENSITY, AS DETERMINED BY ASTM D-1557, WITHIN PLUS OR MINUS 3 PERCENT OF OPTIMUM MOISTURE CONTENT. COMPACT NON-STRUCTURAL AREA EMBANKMENTS TO A MINIMUM OF 90 OF MAXIMUM DRY DENSITY.

SECTION 2324 - TRENCHING

PART 1 - GENERAL

CALL LOCAL UNDERGROUND UTILITY LOCATING SERVICE BEFORE ANY EXCAVATION OR TRENCHING.

1.1 PIPE DETECTION AND IDENTIFICATION:

A. ALL ELECTRIC SERVICE TRENCHES SHALL BE MARKED WITH WARNING TAPE.

1.2 TRENCH PROTECTION

A. PROVIDE MATERIALS, LABOR, AND EQUIPMENT NECESSARY TO PROTECT TRENCHES AT ALL TIMES.

B. SHEETING AND BRACING: MEET OR EXCEED OSHA REQUIREMENTS.

PART 2 - PRODUCTS

2.1 MATERIALS:

A. FILL MATERIAL SHALL BE OBTAINED, WHEN POSSIBLE, FROM MATERIALS EXCAVATED FROM TRENCHES ON SITE. STRUCTURAL FILL, SAND, OR SLURRY SHALL BE APPROVED BY THE CONSTRUCTION MANAGER AND SHALL CONFORM TO LOCAL GOVERNING JURISDICTIONS AND UTILITY COMPANY REQUIREMENTS. THE FILL MATERIAL SHALL CONTAIN NO ORGANIC MATERIAL OR ROCKS, NOR SHALL CONTAIN OBJECTIONABLE MATERIALS AND/OR MATERIALS DESIGNATED AS HAZARDOUS OR INDUSTRIAL BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA). THE FILL MATERIAL SHALL CONTAIN FINES SUFFICIENT TO FILL ALL VOIDS IN THE MATERIAL.

PART 3 - EXECUTION

3.1 TRENCH EXCAVATION

A. DIG TRENCH TO LINES AND GRADES SHOWN ON THE PLANS OR AS DIRECTED BY CONSTRUCTION MANAGER.

B. TRENCH LENGTH SHALL BE SUFFICIENT TO ALLOW FOR SATISFACTORY CONSTRUCTION AND INSPECTION OF THE PROJECT, WITHOUT ENDANGERING OTHER CONSTRUCTION WORK OR ADJACENT FACILITIES.

C. DISPOSE OF EXCESS AND UNSUITABLE EXCAVATION MATERIAL PROPERLY, AS DIRECTED BY CONSTRUCTION MANAGER.

D. USE HAND METHODS FOR EXCAVATION THAT CANNOT BE ACCOMPLISHED WITHOUT ENDANGERING EXISTING OR NEW STRUCTURES OR OTHER FACILITIES.

3.2 BACKFILLING

A. NOTIFY THE CONSTRUCTION MANAGER AT LEAST 24 HOURS IN ADVANCE OF BACKFILLING.

B. BACKFILL OR BORROW SOIL SHALL BE PLACED IN 12 INCH LOOSE LIFTS WHEN UTILIZING HEAVY COMPACTION EQUIPMENT OR 6 INCH LOOSE LIFTS WHEN UTILIZING HAND OPERATED TAMPERS.

C. PROTECT CONDUIT FROM LATERAL MOVEMENT, DAMAGE FROM IMPACT, OR UNBALANCED LOADING TO AVOID DISPLACEMENT OF CONDUIT AND/OR STRUCTURES. DO NOT FREE FALL BACKFILL INTO TRENCH UNTIL AT LEAST 12 INCHES OF COVER IS OVER THE CONDUIT.

3.3 COMPACTION

A. COMPACT BACKFILL TO A 95 PERCENT OF MAXIMUM DRY DENSITY, AS DETERMINED BY ASTM D-1557, WITHIN PLUS OR MINUS 3 PERCENT OF OPTIMUM MOISTURE CONTENT.

B. IF REQUIRED COMPACTION DENSITY HAS NOT BEEN OBTAINED, REMOVE THE BACKFILL FROM THE TRENCH OR STRUCTURE, REPLACE WITH APPROVED BACKFILL, AND RECOMPACT AS SPECIFIED.

C. ANY SUBSEQUENT SETTLEMENT OF TRENCH OR STRUCTURE BACKFILL DURING MAINTENANCE PERIOD SHALL BE CONSIDERED THE RESULT OF IMPROPER COMPACTION AND SHALL BE PROMPTLY CORRECTED.

SECTION 2370 - EROSION AND SEDIMENTATION CONTROL

PART 1 - GENERAL

1.1 SECTION INCLUDES APPLICATION OF GEOTEXTILE FABRIC IN THE LOCATIONS AND LIMITS AS SHOWN ON THE SITE DRAWINGS.

PART 2 - PRODUCTS

2.1 GEOTEXTILE FABRIC:

A. MANUFACTURER AND TYPE AS NOTED ON DRAWINGS.

PART 3 - EXECUTION

3.1 GEOTEXTILE FABRIC:

A. LAY GEOTEXTILE FABRIC OVER COMPACTED SUBGRADE AS PER DRAWINGS IN THE COMPOUND AREA AND UNDER LENGTH OF ROAD (WHEN REQUIRED). LAP ALL JOINTS TO A MINIMUM OF 36 INCHES.

SECTION 2730 - GRAVEL SURFACING

PART 1 - GENERAL

1.1 SECTION INCLUDES: APPLICATION OF GRAVEL SURFACE COURSE IN COMPOUND AREA AND ACCESS ROADS AS SHOWN IN THE DRAWINGS.

PART 2 - PRODUCTS

2.1 GRAVEL MATERIAL:

A. CONFORMING TO GRADIATION SCHEDULE ON DRAWINGS.

PART 3 - EXECUTION

3.1 PREPARATION

A. VERIFY SUBSTRATE IS DRY AND THAT GRADIENTS AND ELEVATIONS ARE CORRECT.

B. CORRECT IRREGULARITIES IN SUBSTRATE BY SCARIFYING, RESHAPING, AND RECOMPACTING.

C. DO NOT PLACE AGGREGATE ON SOFT, MUDDY, OR FROZEN SURFACES

3.2 GRAVEL PLACEMENT

A. CONSTRUCT GRAVEL SURFACED AREAS USING CRUSHED AGGREGATE BASE AND FINISH COURSES AS SPECIFIED BY CONSTRUCTION MANAGER OR AS SHOWN IN DRAWINGS.

B. SPREAD GRAVEL AND RAKE TO OBTAIN A UNIFORM SURFACE.

DIVISION 3 - CONCRETE

SECTION 3100 - CONCRETE FORMS AND ACCESSORIES

PART 1 - GENERAL

1.1 SECTION INCLUDES: FORMWORK FOR CAST-IN-PLACE CONCRETE, WITH SHORING, BRACING, AND ANCHORAGE, OPENINGS FOR OTHER WORK, FORM ACCESSORIES, AND FORM STRIPPING.

1.2 DESIGN AND CONSTRUCT FORMWORK, SHORING, AND BRACING TO CONFORM TO CODE REQUIREMENTS; RESULTING CONCRETE SHALL CONFORM TO DESIRED SHAPE, LINE, AND DIMENSIONS.

PART 2 - PRODUCTS

2.1 FORMS: SMOOTH AND FREE OF SURFACE IRREGULARITIES. PLYWOOD FORMS SHALL CONFORM TO APA TYPE B-B STRUCTURAL 1 EXTERIOR GRADE.

2.2 FORM RELEASE AGENTS: COLORLESS MINERAL OIL WHICH WILL NOT STAIN CONCRETE, ABSORB MOISTURE, OR IMPAIR NATURAL BONDING OR COLOR CHARACTERISTICS OF COATING INTENDED FOR USE ON CONCRETE.

PART 3 - EXECUTION

3.1 EARTH FORMS: HAND TRIM SIDES AND BOTTOM OF EARTH FORMS. REMOVE LOOSE SOIL PRIOR TO PLACING CONCRETE.

3.2 OPENINGS: PROVIDE FORMED OPENINGS WHERE SHOWN ON DRAWINGS AND AS REQUIRED FOR UTILITIES AND OTHER TRADES.

3.3 FORM REMOVAL: UPON COMPLETION, REMOVE ALL FORMS, INCLUDING THOSE CONCEALED OR BURIED.

SECTION 3200 - CONCRETE REINFORCEMENT

PART 1 - GENERAL

1.1 SECTION INCLUDES: REINFORCING STEEL BARS, WELDED WIRE FABRIC, AND ACCESSORIES FOR CAST-IN-PLACE CONCRETE CONSTRUCTION MANAGER.

1.2 QUALITY ASSURANCE: UNLESS OTHERWISE NOTED, ALL DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL CONFORM TO THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI 315).

PART 2 - PRODUCTS

2.1 REFER TO STRUCTURAL DRAWINGS FOR ALL MATERIAL REQUIREMENTS.

PART 3 - EXECUTION

3.1 HEATING AND WELDING OF BARS IS PROHIBITED WITH THE EXCEPTION OF WRITTEN APPROVAL BY THE STRUCTURAL ENGINEER.

3.2 ALL REINFORCEMENT BARS TO BE FREE FROM LOOSE RUST AND SCALE.

3.3 CONCRETE COVER

A. UNLESS OTHERWISE NOTED, ALL REINFORCEMENT SHALL HAVE A MINIMUM CONCRETE COVERAGE OF 3 INCHES. THIS MAY REQUIRE SPACERS AND CHAIRS AS REQUIRED BY TESTING AGENCY OR CONSTRUCTION MANAGER.

SECTION 3300 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SECTION INCLUDES: STRUCTURAL CONCRETE (FOOTINGS, FOUNDATIONS, ETC.), SLABS ON GRADE, CONTROL, EXPANSION, OR CONTRACTION JOINTS, CONCRETE FINISHING.

1.2 REFERENCES: ASTM C94 - SPECIFICATION FOR READY MIXED CONCRETE

PART 2 - PRODUCTS

2.1 READY MIXED CONCRETE: ALL CONCRETE SHALL COMPLY WITH ASTM C94 UNLESS NOTED OTHERWISE.

2.2 MINIMUM COMPRESSIVE STRENGTH (F'C) AT 28 DAYS: 4000 PSI FOR TOWER FOUNDATION, AND 3000 PSI FOR ALL OTHER CONCRETE UNLESS SPECIFIED IN DRAWINGS

2.3 AIR ENTRAINMENT: PROVIDE 5% ± 1.0% AIR ENTRAINMENT FOR ALL CONCRETE

SECTION 3 - EXECUTION

3.1 CONCRETE TESTING: ALL FOUNDATION CONCRETE SHALL BE TESTED BY AN INDEPENDENT TESTING AGENCY APPROVED BY THE CONSTRUCTION MANAGER. ALL STRUCTURAL TOWER FOUNDATION CONCRETE MUST BE TESTED. EQUIPMENT OR BUILDING PADS ARE NOT REQUIRED TO BE TESTED, UNLESS OTHERWISE NOTED BY CONSTRUCTION MANAGER. PROVIDE A MINIMUM OF 5 CYLINDERS (2-7-DAY, 2-28-DAY, 1-SPARE) FOR EACH DAYS POUR, OR FOR EVERY 50 YARDS PLACED - WHICHEVER IS GREATER. ADDITIONAL TESTS OR CYLINDERS MAY BE REQUIRED BY CONSTRUCTION MANAGER. A SLUMP, AIR, AND TEMPERATURE TEST SHALL BE PERFORMED FOR EACH SET OF CYLINDERS CAST. PREFERABLY, TESTS SHALL BE PERFORMED AT THE LOCATION OF ANCHOR BOLTS (PIERS - FOR MAT & PIERS, CAISSONS - TOP 1/3 OF CAISSON). TESTS SHALL ALSO BE REQUIRED FOR CONCRETE CONSIDERED BEING LESS THAN DESIREABLE. THE TESTING AGENCY HAS THE AUTHORITY TO NOT ACCEPT CONCRETE NOT MEETING THESE SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR ANY CONCRETE NOT MEETING THESE STANDARDS. THE CONTRACTOR IS RESPONSIBLE OR COORDINATION OF THE TESTING AGENCY A MINIMUM OF 24 HOURS IN ADVANCE OF EACH FOUNDATION POUR.

3.2 CONCRETE PLACEMENT: VIBRATE ALL CONCRETE USING SUFFICIENT HIGH FREQUENCY, LOW AMPLITUDE MECHANICAL IMMERSION TYPE VIBRATORS. INSERT VIBRATORS IN CONCRETE AT REGULAR INTERVALS AND OVER ENTIRE SURFACE TO SOLIDLY FILL CONCRETE AROUND AND BETWEEN REINFORCEMENT BARS AND INTO CORNERS AND IRREGULARITIES. VIBRATE EACH LIFT THOROUGHLY. DISCONTINUE VIBRATION WHEN RISING ENTRAPPED AIR BUBBLES STOP BREAKING THE LEVELING SURFACE. DO NOT OVERVIBRATE AS THIS MAY CAUSE SEGREGATION.

3.3 CONCRETE FINISHING

A. THESE PROVISIONS APPLY TO ALL EXPOSED AND ALL FORMED CONCRETE, EXTERIOR OR INTERIOR, UNLESS SPECIFICALLY DETAILED OTHERWISE. PERFORM PROCEDURES PRIOR TO APPLICATION OF ANY CURING COMPOUNDS.

B. ALL SURFACES: THOROUGHLY CLEAN OF ALL STAINS, SPATTER AND LOOSE MATERIAL

C. FINS, RIDGES, HIGH SPOTS: HONE SMOOTH WITH ABRASIVE POWER GRINDERS WHILE CONCRETE IS GREEN, IMMEDIATELY AFTER FORM REMOVAL.

D. FORM TIE HOLES AND DEEP DEPRESSIONS: FLUSH THOROUGHLY WITH CLEAN WATER AND TAMP TO OVERFULL WITH DRYPACK. CURE 10 DAYS AND HONE FLUSH AND SMOOTH.

E. ROCK POCKETS, HONEYCOMB, SAND STREAKS, DEBRIS AND VOIDS: CUT OUT AT LEAST 1 INCH DEEP WITH SIDES PERPENDICULAR TO SURFACE. FLUSH OUT WITH CLEAN WATER, COAT SURFACE WITH NEAT CEMENT PASTE AND TAMP TO OVERFULL WITH DRYPACK IN AT LEAST TWO LAYERS. CURE FOR 10 DAYS AND HONE FLUSHED AND SMOOTH.

F. CONTRACTOR SHALL VERIFY ALL SIZES AND LOCATIONS OF ALL ELECTRICAL OPENINGS IN EQUIPMENT/BUILDING PADS WITH THE ELECTRICAL DRAWINGS AND SHOP DRAWINGS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL OPENINGS AND SLEEVES FOR PROPER DISTRIBUTION FOR ALL UTILITIES. CONTRACTOR SHALL REFER TO DRAWINGS OF OTHER TRADES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES NOT SHOWN ON STRUCTURAL DRAWINGS. PRIOR TO POURING CONCRETE THE INDEPENDENT TESTING AGENCY SHALL INSPECT ALL FOUNDATION STEEL AND FOUNDATION SUBGRADE.

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vertical bridge

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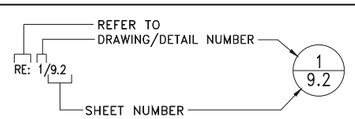
GENERAL CONSTRUCTION NOTES:

1. THE FACILITY IS AN UNOCCUPIED WIRELESS FACILITY.
2. PLANS ARE NOT TO BE SCALED AND ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY, UNLESS NOTED OTHERWISE. THE WORK SHALL INCLUDE PROVIDING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
3. CONTRACTOR SHALL APPLY FOR ALL UTILITY SERVICES (POWER AND TELEPHONE) NO LATER THAN THE NEXT BUSINESS DAY FOLLOWING AWARD OF CONTRACT. COORDINATE WITH ELECTRIC UTILITY COMPANY FOR EXACT TRANSFORMER LOCATION, METERING REQUIREMENTS, AND SERVICE ROUTING. COORDINATE WITH TELEPHONE COMPANY FOR EXACT TELEPHONE REQUIREMENTS AND ROUTING OF SERVICE.
4. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS WILL VISIT THE JOB SITE AND BE RESPONSIBLE FOR ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, AND DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE IMPLEMENTATION ENGINEER AND ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
5. WRITTEN AUTHORIZATION IS REQUIRED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
6. CONTRACTOR SHALL NOT COMMENCE EXCAVATION OR DIGGING UNTIL AFTER CONTRACTOR HAS HAD UTILITY LOCATING SERVICES LOCATE AND IDENTIFY ALL EXISTING UNDERGROUND UTILITIES AND OTHER SYSTEMS. DAMAGE CAUSED TO EXISTING SYSTEMS SHALL BE REPAIRED BY CONTRACTOR AT CONTRACTOR'S EXPENSE.
7. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
8. ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ELECTRICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
9. THE GENERAL CONTRACTOR WILL SUPERVISE AND DIRECT THE WORK USING THE BEST SKILLS AND ATTENTION. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT INCLUDING CONTACT AND COORDINATION WITH THE OWNER AND WITH THE LANDLORD'S AUTHORIZED REPRESENTATIVE.
10. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS WILL BE INCLUDED AS PART OF THE WORK.
11. REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLAT OF THE SURVEY DRAWING, WILL NOT BE USED TO IDENTIFY OR ESTABLISH THE BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTOR WILL RELY SOLELY ON THE PLAT OF SURVEY DRAWING AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH, AND WILL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH THE WORK IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION AS DEPICTED ON THE PLAT OF SURVEY. THE CONTRACTOR WILL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ARCHITECT/ENGINEER.
12. COORDINATE WORK WITH LOCAL UTILITY COMPANY AND CONSTRUCT TO UTILITY COMPANY ENGINEERING PLANS AND SPECIFICATIONS. PROVIDE TRENCHING AND BACKFILL, AND PAY ALL UTILITY FEES UNLESS NOTED OTHERWISE. THE WORK WILL INCLUDE PROVIDING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
13. ALL EXISTING UTILITIES, FACILITIES, CONDITIONS, AND THEIR DIMENSIONS SHOWN ON PLANS HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ARCHITECT/ ENGINEER AND OWNER ASSUME NO RESPONSIBILITY AS TO SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL EXISTING LOCATION OF EXISTING UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY, DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING EXISTING UTILITIES.

DETAIL REFERENCE KEY



GROUNDING NOTES:

1. CONTRACTOR IS SOLELY RESPONSIBLE TO OBTAIN A COPY OF VERIZON'S LATEST REVISION OF GROUNDING REQUIREMENTS AND TO INSTALL THE SITE GROUNDING SYSTEM IN ACCORDANCE WITH THE MOST STRINGENT REQUIREMENTS OF THE REFERENCED DOCUMENT OR THE REQUIREMENTS AS SHOWN IN THESE DRAWINGS. NOTE THAT THE REFERENCED DOCUMENT ADDRESSES GROUNDING OF ITEMS THAT ARE NOT SHOWN IN THESE DRAWINGS.
2. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION REQUIREMENTS AND CONSTRUCTION MAY VARY ACCORDING TO SITE CONDITIONS. VERIFY EXACT EQUIPMENT GROUNDING WITH EQUIPMENT MANUFACTURER AND OWNER.
3. GROUND RODS SHALL BE DRIVEN AT 8'-0" TO 10'-0" INTERVALS OF THE GROUND RING OR RADIALS UNO. GROUND RODS SHALL NOT BE PLACED CLOSER THAN 8'-0" APART PER NEC 250.53. MINIMUM SPACING BETWEEN ELECTROLYTIC GROUND RODS (EGR'S) SHALL BE 20'-0" UNO.
4. INSTALL GROUND CONDUCTORS AND GROUND RODS A MINIMUM OF 18" (MAXIMUM 36") FROM EQUIPMENT CONCRETE SLAB, SPREAD FOOTING, OR FENCE.
5. ALL BELOW GRADE CONNECTIONS: EXOTHERMIC WELD TYPE; ABOVE GRADE CONNECTIONS: EXOTHERMIC WELD TYPE (FENCE AND TOWER) OR MECHANICAL TYPE (2-HOLE LONG-BARREL LUGS WITH MECHANICAL CONNECTORS AT EQUIPMENT). ALL HARDWARE SHALL BE STAINLESS STEEL WITH LOCKWASHERS.
6. CLEAN EXOTHERMIC WELD CONNECTIONS ON GALVANIZED SURFACES THOROUGHLY AND COVER W/ (2) TWO COATS SHERWIN WILLIAMS GALVITE PAINT B350W3 (OR EQUIVALENT).
7. ALL ELECTRICAL AND MECHANICAL GROUND CONNECTIONS SHALL BE TO BARE BRIGHT SURFACES AND HAVE ANTI-OXIDATION COMPOUND APPLIED TO CONNECTION (THOMAS AND BETTS KOPR-SHIELD).
8. THE MINIMUM BEND RADIUS FOR GROUND CONDUCTORS SHALL BE 8 INCHES FOR #6 AWG WIRE AND 12 INCHES FOR #2 AWG AND GREATER WIRE.
9. ITEMS TO BE BONDED TO THE GROUND RING INCLUDE BUT ARE NOT LIMITED TO: CORNER FENCE POSTS AND FENCE POSTS WITHIN 6' OF GROUND RING, GROUND BUS BARS, EQUIPMENT CABINETS OR SHELTERS, EQUIPMENT RACKS, CABLE SUPPORT STRUCTURES, TOWER, GENERATOR, ANY OTHER METALLIC OBJECTS WITHIN 6' OF GROUND RING.
10. GROUNDING INSTALLATIONS AND CONNECTIONS SHALL BE MADE BY ELECTRICAL CONTRACTOR. CONTRACTOR SHALL ENSURE THAT ALL EXOTHERMIC WELD CONNECTIONS SHOOT PROPERLY WITH NO VOIDS OR DETERIORATION TO MATERIALS, LEADS, AND OTHER COMPONENTS. ENSURE THAT EACH LEAD IS OF SUFFICIENT LENGTH TO REACH ITS DESIGNATED TERMINATION POINT OR 24" INTO SHELTER OR EQUIPMENT CABINET, WHICHEVER IS LONGER.
11. OBSERVE NEC AND LOCAL UTILITY REQUIREMENTS FOR ELECTRICAL SERVICE GROUNDING.
12. GROUNDING ATTACHMENT TO TOWER SHALL BE PER MANUFACTURER'S RECOMMENDATIONS OR AT GROUNDING POINTS PROVIDED (4 MINIMUM).
13. GROUND COAXIAL RF CABLES USING GROUND KITS TO GROUND BARS AT TOP, MIDDLE, AND BOTTOM OF TOWER, SEE DRAWING 8.1 FOR DETAILS.
14. ALL EXPOSED GROUND LEADS TO GROUND RING SHALL BE ENCASED IN 3/4" PVC OR FLEXIBLE TYPE CONDUIT TO 24" BELOW GRADE.
15. THE CONTRACTOR SHALL PERFORM BOTH PRE-CONSTRUCTION AND POST-CONSTRUCTION GROUND RESISTANCE MEGGER TESTS ON THE GROUNDING SYSTEM AND SHALL SUBMIT RESULTS IN WRITING TO THE CONSTRUCTION MANAGER. CONDUCT TESTS IN DRY WEATHER, NO LESS THAN 48 HOURS AFTER RAINFALL, AND IN ACCORDANCE WITH THE FALL-OF-POTENTIAL METHOD DEFINED IN IEEE 81 "GUIDE FOR MEASURING EARTH RESISTIVITY".
16. NOTIFY CONSTRUCTION MANAGER WHEN GROUNDING SYSTEM IS COMPLETE AND READY FOR INSPECTION PRIOR TO BACKFILLING. AFTER INSPECTION, BACKFILL ALL EXCAVATION WORK WITH SUITABLE MATERIAL AND COMPACT THOROUGHLY IN 8" LIFTS TO AVOID SINKING.

ABBREVIATIONS

A, AMP	AMPERES	MCB	MAIN CIRCUIT BREAKER
ABT	ABOUT	MLO	MAIN LUGS ONLY
AFF	ABOVE FINISHED FLOOR	MTD	MOUNTED
AFG	ABOVE FINISHED GRADE	N	NEUTRAL
BLDG	BUILDING	NEC	NATIONAL ELECTRICAL CODE
C	CONDUIT	NIC	NOT IN CONTRACT
CAT	CATALOG	NO	NUMBER
CKT	CIRCUIT	NTS	NOT TO SCALE
DWG	DRAWING(S)	RECEPT	RECEPTACLE
EGR	ELECTROLYTIC GROUND ROD	REQD	REQUIRED
EQPT	EQUIPMENT	SCH	SCHEDULE
EXIST	EXISTING	TYP	TYPICAL
FBO	FURNISHED BY OTHERS	UG	UNDERGROUND
FWE	FURNISHED W/ EQUIPMENT	UNO	UNLESS NOTED OTHERWISE
GFI	GROUND FAULT INTERRUPTER	V	VOLT(S)
GND	GROUND	WP	INDICATES WEATHERPROOF
JB	JUNCTION BOX	XFMR	TRANSFORMER
LTG	LIGHTING		

SERVICE ROUTING NOTES:

1. CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANY FOR INSTALLATION EXACT METER BASE TYPE AND OF INCOMING SERVICE CONDUCTORS AND REQUIREMENTS. VERIFY EXACT LOCATION OF EQUIPMENT WITH CONSTRUCTION MANAGER PRIOR TO INSTALLATION.
2. CONDUIT LINES SHALL HAVE A CONTINUOUS SLOPE DOWNWARD AND AWAY FROM THE EQUIPMENT TO THE PROPERTY LINE SO THAT WATER WILL FLOW AWAY FROM THE EQUIPMENT. TRENCHES SHALL BE EXCAVATED ALONG STRAIGHT LINES BEFORE CONDUITS ARE LAID SO THAT THE ELEVATION CAN BE ADJUSTED, IF NECESSARY, TO AVOID UNSEEN OBSTRUCTIONS. MANUFACTURED BENDS SHALL HAVE A MINIMUM RADIUS OF 36" FOR CONDUITS.
3. ALL CONDUITS SHALL BE SEALED WEATHERTIGHT ON INTERIOR AND EXTERIOR OF EQUIPMENT OR SHELTER TO PREVENT MOISTURE INFILTRATION. SEALANTS SHALL BE IDENTIFIED FOR USE WITH THE CABLE INSULATION, SHIELD, OR OTHER COMPONENTS.
4. CELLULAR EQUIPMENT CABINETS OR SHELTERS SHALL BE FURNISHED BY RESPECTIVE CARRIER AND INSTALLED BY CONTRACTOR. CONTRACTOR SHALL OBTAIN EQUIPMENT DRAWINGS AND SPECIFICATIONS TO VERIFY EXACT INSTALLATION DETAILS AND REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY ADDRESSED WITHIN THESE DRAWINGS.
5. CONTRACTOR SHALL FURNISH AND INSTALL PULL BOXES IN CONDUIT RUNS AT EACH OCCURRENCE WHERE EXCEEDING 360 DEGREES IN TOTAL BENDS OR 300' IN LENGTH AT A CONVENIENT INTERMEDIATE LOCATION. PULL BOXES SHALL BE SIZED PER NEC 314.
6. ON SPARE CONDUITS, PROVIDE 2 PULL STRINGS SECURELY FASTENED AT EACH END OF THE CONDUITS. PULL STRINGS SHALL BE 200LB TEST POLYETHYLENE CORD. PROVIDE CAP ON END OF THE CONDUITS AND MARK AS SHOWN ON THE SERVICES ROUTING PLAN.
7. MAINTAIN MINIMUM BENDING RADIUS FOR CONDUIT INSTALLATIONS PER CONDUIT/FIBER MANUFACTURER RECOMMENDATIONS.
8. REFERENCE 7.2 FOR ONE-LINE, CONDUIT AND WIRE SIZE, AND SPECIFICATIONS.
9. PROVIDE MINIMUM OF 36 INCHES WORK CLEARANCE IN FRONT OF EQUIPMENT AND EQUIPMENT RACKS.
10. UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC UP TO THE VERTICAL SWEEP, AT WHICH POINT THE CONDUIT SHALL BE TRANSITIONED TO SCHEDULE 80 PVC UP TO THE EQUIPMENT. CONDUITS UNDER ROAD BEDS OR OTHER HEAVY TRFFIC AREA SHALL BE SCHEDULE 80 WITH 36" RADIUS BENDS, (HEAVY WALL).
11. SPARE CONDUITS SHALL BE CAPPED WEATHERPROOF.
12. ALL CONDUITS SHALL HAVE MEASURABLE-TYPE PULL STRINGS.
13. ALL CONDUIT RISERS SHALL BE SCHEDULE 80 PVC (FURNISHED AND INSTALLED BY CONTRACTOR) UNLESS NOTED OTHERWISE.

ELECTRICAL LEGEND

(1)	DRAWING NOTE REFERENCE (NOTES BY SYMBOL)
⊗	5/8"ø X 8'-0" LONG COPPER CLAD STEEL GROUND ROD
⊠	5/8"ø X 8'-0" LONG COPPER CLAD STEEL GROUND ROD IN INSPECTION SLEEVE
⊠	ELECTROLYTIC GROUND ROD (EGR), 10' X 2"ø, LYNCOLE XIT, ALLTEC/TERADYNE, OR EQUAL
●	EXOTHERMIC WELD CONNECTION
■	MECHANICAL CONNECTION
—— G ——	GROUND CONDUCTOR, TYPE AND SIZE AS NOTED, MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE, WHICHEVER IS GREATER
——	EXPOSED POWER CIRCUIT OR CONDUIT, TYPE AND SIZE AS NOTED
—— E ——	UNDERGROUND ELECTRIC POWER CONDUIT, TYPE AND SIZE AS NOTED
—T——T——	UNDERGROUND TELCO CONDUIT, TYPE AND SIZE AS NOTED
—— OHE ——	OVERHEAD ELECTRIC POWER LINE, TYPE AND SIZE AS NOTED
—— OHT ——	OVERHEAD TELCO LINE, TYPE AND SIZE AS NOTED

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CERTIFICATE OF AUTHORIZATION HERITAGE ENGINEERING PLLC NO. 1133 ARKANSAS ENGINEER

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER E. A. WARFORD

HE ENGINEERING EXCELLENCE
Heritage Engineering PLLC
P.O. BOX 505
Benton, Arkansas 72018
(501) 939-2303
FAX (501) 939-2016

vertical bridge

PROJECT: PUMPKIN HOLLOW RD / US-AR-5227
NEW 195' MONOPOLE TOWER
BELLA VISTA PROJECT #: LSD-2025-58554

SHEET TITLE: GENERAL NOTES

HE JOB NO.:	2024-0092
FILE NAME:	240092C9.2.DWG
PLOT SCALE:	1:1
REV. 0:	11/15/2024
REV. 2:	05/02/2025

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING HAS BEEN REDUCED AND IS NOT TO SCALE

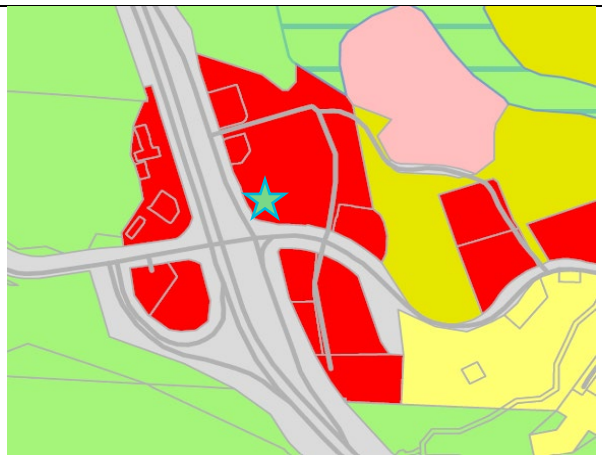
SCALE:	NTS
DESIGNED BY:	STS
DRAWN BY:	STS
CHECKED BY:	EAW

SHEET No.
9.2

Meeting Information:
2483 Forest Hills Blvd
May 29, 2025 at 4:30 pm

Reviewer:
Christopher Hyatt
Senior Planner

Project Number	LSD-2025-58745
Applicant	Crafton Tull
Address/Location	404 Towncenter
Current Zoning	C-3 Central Business District
Site Area	+/-7.82 acres
Nature of Request	Proposing a large-scale development.



Zoning Map

Future Land Use Plan

Property Description
This property is located in the North central area of Bella Vista City Limits and is located on Parcel #16-40168-000. The Towncenter Subdivision.

Regulation
Sec. 107-162 sets forth review and approval requirements for developments other than a single-family residence or duplex. Otherwise known as, a large-scale development.

Request
The applicant is requesting Large-Scale Development approval for a proposed site reconstruction of a parking lot and retaining wall along the western side of the existing Towncenter Shopping Center.

Background
The subject site is zoned C-3 Central Business District and is within the current Towncenter development. The western side of the Towncenter Shopping Center has remained vacant for quite some time with some of the buildings having been previously demolished. The applicant is proposing to reconstruct the parking lot, removing the existing remnants of the previously demolished structures, returning the area to greenspace, while also replacing the existing retaining wall. The access drives will remain unchanged, accessing the site from both Towncenter to the North and Lancashire Boulevard to the South. Per the Master Street Plan, the site is surrounded by an unclassified road to the North and Major Arterials to the West and South

Because no expansions are proposed to the site, no new requirements will be established from the code in regards to the parking lot, however the applicant is reworking the spaces to better achieve compliance in regards to parking space dimensions, drive aisle spacing, and planting requirements.

Staff Note: A replat is to follow this site plan approval.

Public Comment
None at the time of this report.

Outstanding Technical Comments
None at the time of this report.

Recommendation
Due to the analysis above, Staff recommends approval.

Sec. 107-162 Large Scale Development Review and Approval

Planning Commission Action**:** All developments other than those excepted by subsection (a)(1) of this section shall be submitted to the planning commission, which shall approve, approve with conditions, or disapprove the submitted plan. The planning commission is required to take such action within 90 days of submission unless the applicant agrees to a postponement. All planning commission approvals to any development plan shall be signified by the signature on the development plan of the chairperson of the planning commission.

Sec. 107-163 Large Scale Development Review Criteria

The mayor or his designee, planning commission or city council may refuse approval of any development plan for any of the following reasons:

1. *Incomplete application.* The development plan is not submitted in accordance with the requirements of this article.
2. *Violation of law.* The proposed development or construction would violate a city ordinance, or a state or federal law.
3. *Dangerous traffic conditions.* The proposed development would create or compound a dangerous traffic condition. For the purpose of this article, a "dangerous traffic condition" shall be construed to mean a traffic condition in which the risk of accidents involving motor vehicles is significant due to factors such as, but not limited to, high traffic volume, topography, or the nature of the traffic pattern.
4. *Lack of utilities.* Adequate water, sewer, and electrical utilities are not readily available to the property and the developer has made no provision for extending such service to the development, or the provision of these utilities cannot obtain approval by the state health department, or other appropriate department.
5. *Inadequate drainage conditions.* The property to be developed reflects an extreme drainage problem uncorrected by the proposed development plan.
6. *Other actions required.* The plans pertain to a parcel which requires prior platting or rezoning.
7. *Other.* Any other circumstances as determined by the planning commission.

TOWNCENTER EAST PHASE 3

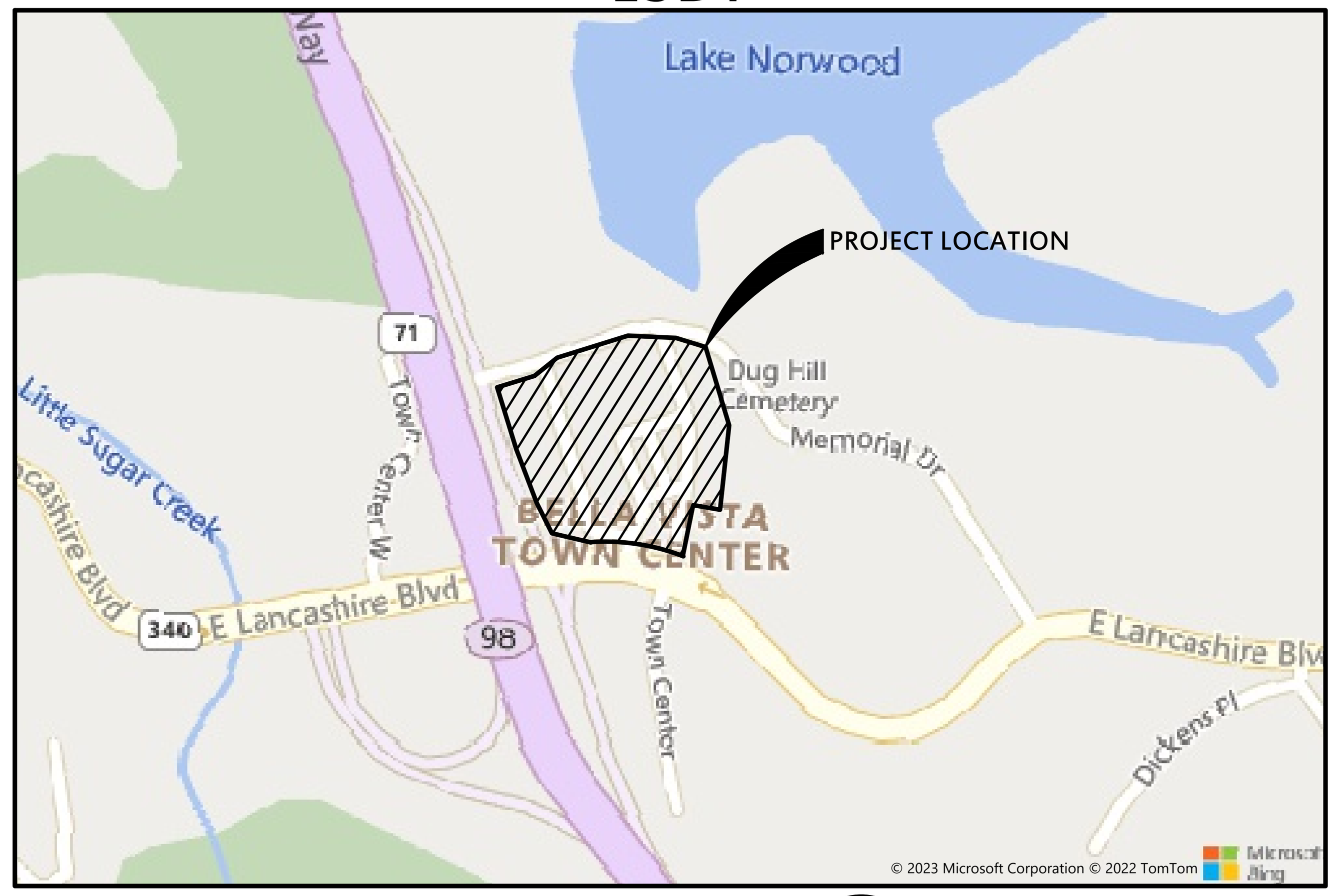
PARKING LOT IMPROVEMENTS

BELLA VISTA, ARKANSAS

LSDP

CERTIFICATE OF APPROVAL PURSUANT TO THE CITY OF BELLA VISTA SUBDIVISION REGULATIONS AND ALL OTHER CONDITIONS AND APPROVALS HAVING BEEN COMPLETED, THIS DOCUMENT IS HEREBY ACCEPTED. THIS CERTIFICATE IS HEREBY EXECUTED UNDER THE AUTHORITY OF THE SAID RULES AND REGULATIONS.

DATE OF EXECUTION:________________ SIGNED________________________________
CITY OF BELLA VISTA MAYOR OR DESIGNEE



VICINITY MAP
NTS

Arkansas One Call
811
Know what's **below**.
Call before you dig.

LEGEND (EXISTING SYMBOLS)

SYMBOLS
- FOUND IRON PIN
- LIGHT POLE
- POWER POLE
- TELEPHONE PEDESTAL
- TV PEDESTAL
- MANHOLE
- SANITARY SEWER CLEANOUT
- GAS METER
- GAS VALVE
- STORM SEWER PIPE
- DOWN GUY
- WATER VALVE
- FIRE HYDRANT ASSEMBLY
- AIR RELEASE VALVE
- FIRE DEPARTMENT CONNECTION
- WATER METER
- SPRINKLER HEAD
- ELECTRIC PEDESTAL
- GRATED INLET
- DROP INLET
- TREE
- TREE TO BE REMOVED

LINEWORK
- EASEMENT
- CURB
- INTERMEDIATE CONTOUR (1206)
- INDEX CONTOUR (1205)
- SANITARY SEWER LINE (SS)
- GAS LINE (G)
- WATER LINE (SPECIFY SIZE & TYPE) (W)
- UNDERGROUND TELEPHONE (UGT)
- UNDERGROUND ELECTRIC (UGE)
- OVERHEAD ELECTRIC (OHE)
- UNDERGROUND TELEVISION (UGTV)
- OVERHEAD TELEVISION (OHTV)
- CHAIN LINK FENCE
- WOOD FENCE
- BARBED WIRE FENCE (X)
- FIBER OPTIC (FO)
- RIGHT OF WAY
- ROAD CENTERLINE

LEGEND (CONSTRUCT)

SYMBOLS
- SET IRON PIN
- LIGHT POLE
- POWER POLE
- TELEPHONE PEDESTAL
- TV PEDESTAL
- MANHOLE
- SANITARY SEWER CLEANOUT
- GAS METER
- GAS VALVE
- STORM SEWER PIPE
- STRUCTURE NUMBER (X-X)
- WATER VALVE
- FIRE HYDRANT ASSEMBLY
- AIR RELEASE VALVE
- FIRE DEPARTMENT CONNECTION
- WATER METER
- BACK FLOW PREVENTER
- REDUCER
- RECTANGULAR DROP INLET, GRATED INLET OR JUNCTION BOX (SPECIFY ON PLAN SHEET)
- CIRCULAR DROP INLET, GRATED INLET OR JUNCTION BOX (SPECIFY ON PLAN SHEET)

LINEWORK
- EASEMENT
- CURB
- INTERMEDIATE CONTOUR (1206)
- INDEX CONTOUR (1205)
- SANITARY SEWER LINE (SS)
- GAS LINE (G)
- WATER LINE (W)
- UNDERGROUND TELEPHONE (UGT)
- UNDERGROUND ELECTRIC (UGE)
- OVERHEAD ELECTRIC (OHE)
- FIBER OPTIC (FO)
- UNDERGROUND TELEVISION (UGTV)
- OVERHEAD TELEVISION (OHTV)
- CHAIN LINK FENCE
- WOOD FENCE
- BARBED WIRE FENCE (X)
- BUILDING SET BACK
- RIGHT OF WAY
- PROPERTY LINE
- ROAD CENTERLINE

GENERAL NOTES

1. THE DESIGN, INSPECTION, AND CERTIFICATION OF ANY RETAINING WALL SHOWN OR REFERENCED HEREIN, INCLUDING BUT NOT LIMITED TO, SEGMENTAL RETAINING WALLS, MASS GRAVITY WALLS, GABION WALLS, ETC., GREATER THAN FORTY-EIGHT INCHES IN HEIGHT, SHALL BE BY OTHERS. ANY RETAINING WALL DATA SHOWN OR REFERENCED HEREIN SHALL BE ONLY FOR COORDINATION OF THE WALL LOCATION AND ELEVATIONS.
2. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE DRAWINGS IS BASED ON A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE DRAWINGS. CRAFTON TULL ASSUMES NO RESPONSIBILITY REGARDING THE ACCURACY OF THE DEPICTED LOCATION(S) OF THE UNDERGROUND FACILITIES ON THESE DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ANY OTHER FACILITIES NOT SHOWN ON THESE DRAWINGS. CONTRACTOR SHALL VERIFY LOCATION OF ALL FACILITIES BEFORE BEGINNING WORK.
3. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE ENGINEER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN OR NEAR THE CONSTRUCTION SITE.
4. THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICES, IS THE PROPERTY OF CRAFTON, TULL & ASSOCIATES, INC. AND IS NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CRAFTON, TULL & ASSOCIATES, INC.
5. CONTRACTOR SHALL NOT CAUSE ANY LONG-TERM INCONVENIENCE TO THE PUBLIC, ADJACENT PROPERTY OWNERS, PEDESTRIANS, ETC. DURING CONSTRUCTION OF THIS PROJECT. CONTRACTOR SHALL PROVIDE ACCESS TO ALL ADJACENT PROPERTIES AT ALL TIMES DURING CONSTRUCTION.
6. CONTRACTOR SHALL CONTACT THE ENGINEER FOR CLARIFICATION IF A DISCREPANCY OR INCONSISTENCY IS IDENTIFIED IN THE PLANS OR SPECIFICATIONS.
7. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SHEETING, SHORING, AND SPECIAL EXCAVATION MEASURES REQUIRED ON THE PROJECT WHICH ARE NECESSARY TO CONFORM TO OSHA, FEDERAL, STATE AND LOCAL REGULATIONS.
8. CRAFTON TULL & ASSOCIATES, INC. (CTA) HAS NOT BEEN RETAINED BY THE OWNER FOR CONSTRUCTION ADMINISTRATION OR OBSERVATION SERVICES FOR THE WORK INDICATED ON THESE DRAWINGS. THEREFORE, CTA HEREBY NOTIFIES ALL PARTIES INVOLVED THAT CRAFTON, TULL & ASSOCIATES, INC. ASSUMES NO RESPONSIBILITY FOR THE INTERPRETATION, COORDINATION, OR ADMINISTRATION OF THESE DOCUMENTS AND/OR DEVIATIONS THEREOF. FURTHERMORE, CRAFTON, TULL & ASSOCIATES, INC. WILL NOT BE RESPONSIBLE FOR ANY EFFECTS THAT ANY CHANGES TO THESE DOCUMENTS MAY HAVE ON ANY RELATED TRADES, CONSTRUCTION SEQUENCES, OR OPERATION OF THE COMPLETED PROJECT EXCEPT AS SPECIFICALLY NOTED IN THE AGREEMENT BETWEEN CRAFTON, TULL & ASSOCIATES AND THE OWNER.
9. ENERGIZED ELECTRICAL LINE SAFETY, WARNINGS, AND ADVANCED NOTICES: ALL OWNERS, GENERAL CONTRACTORS, AND SUBCONTRACTORS ASSOCIATED WITH THIS PROJECT SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH, COMPLYING WITH, AND THE ENFORCEMENT OF ARKANSAS CODES AR ST § 11-5-307 AND § AR ST 11-5-308 AND ANY OTHER CURRENT STATE CODES PERTAINING TO ADVANCE NOTICE REQUIREMENTS AND FOR SAFETY OF ALL PERSONNEL, INCLUDING THE GENERAL PUBLIC, PERTAINING TO ANY WORK, MOVEMENT, AND ACTIVITY IN CLOSE PROXIMITY TO ANY ENERGIZED ELECTRICAL LINE.
10. EASEMENT PLAT REQUIRED BY CERTIFICATE OF OCCUPANCY.
11. ALL CIVIL PLANS USED ON SITE MUST INCLUDE MOST CURRENT STAMP BY BELLA VISTA PLANNING.
12. ALL WATER AND SEWER PUBLIC IMPROVEMENTS TO BE INSTALLED PER BELLA VISTA VILLAGE PROPERTY OWNERS ASSOCIATION WASTEWATER STANDARD TECHNICAL SPECIFICATIONS DATED JULY 7, 2014.

PROPERTY DESCRIPTION

SURVEYOR NOTES:

THE PROPERTY SURVEYED IS WITHIN THE MUNICIPAL LIMITS OF THE CITY OF BELLA VISTA, AR.

THE BOUNDARY DETERMINATION SHOW HEREON WAS BASED UPON THE FOLLOWING DEEDS AND PLATS AND NO OTHERS: DEED RECORDS 97-114489, 2004-42455, 2004-42457 AND PLAT RECORDS 17-197, 17-199, 17-200, 23-122, 23-126, 23-139, 2003-938, 2004-1118 AND AN UNRECORDED ALTA/ACSM LAND TITLE SURVEY PLAT BY PHILLIPS LAND SURVEYING INC. DATED JUNE 26, 2009.

THE SURVEYOR HAS NOT MADE A SEPARATE INVESTIGATION OR SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, OR RESTRICTIVE COVENANTS OR ANY OTHER FACTS WHICH AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE. ANY EASEMENTS SHOWN HEREON CAME TO THE ATTENTION OF THE SURVEYOR IN THE COURSE OF HIS RESEARCH OF THE PROPERTY BOUNDARY. EASEMENT DEED RECORDS 701-730 AND 2009-25988 WERE PROVIDED TO SURVEYOR BY FIRST NATIONAL TITLE COMPANY ON FEBRUARY 25, 2015.

THIS PLAT REPRESENTS A SURVEY CONDUCTED ON THIS PROPERTY ON THE FOLLOWING DATE: FEBRUARY 27, 2015.

THERE MAY BE BUILDINGS AND OTHER IMPROVEMENTS ON THE PROPERTY THAT ARE NOT SHOWN ON THIS PLAT.

SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT CONSIDERED A PART OF THIS SURVEY AND NO INVESTIGATION OF THESE CONDITIONS WAS MADE.

ANY UTILITY LINES, STRUCTURES OR APPURTENANCES SHOWN HEREON ARE FROM A FIELD INVESTIGATION LIMITED TO THE VISIBLE SURFACE OF THE PROPERTY SURVEYED. OTHER UTILITY LINES, STRUCTURES AND APPURTENANCES MAY BE PRESENT ON THE PROPERTY. FOR INFORMATION REGARDING SUCH ITEMS, CONTACT THE APPROPRIATE AGENCIES.

THIS PROPERTY IS NOT IN FLOOD ZONE "A" OR "AE", AND IS OUTSIDE THE 100-YEAR FLOOD PLAIN AS SHOWN ON THE NATIONAL FLOOD INSURANCE PROGRAM'S FIRM PANEL NUMBER 05007C0080J, EFFECTIVE DATE SEPTEMBER 28, 2007.
THE ABOVE STATEMENT IS FOR INFORMATION ONLY AND THIS SURVEYOR ASSUMES NO LIABILITY FOR THE CORRECTNESS OF THE CITED MAP(S). IN ADDITION, NO INDEPENDENT STUDY OF THE LIKELIHOOD OF FLOODING OF THE SURVEYED PROPERTY HAS BEEN DONE BY THE SURVEYOR AND NO OPINION OF FLOOD HAZARDS IS INCLUDED IN THIS SURVEY. THE FLOOD HAZARD ZONE BOUNDARIES SHOWN HEREON WERE SCALED FROM THE MAPS CITED AND ARE NOT THE RESULT OF INDEPENDENT COMPUTATION OR ANALYSIS.

PLAT RECORDS 17-197, 17-199, 17-200, 23-122, 23-126 AND 23-139 ALL HAVE THE FOLLOWING NOTE:
"UNLESS OTHERWISE SHOWN ON THE PLAT, ALL LOTS HAVE A SEVEN AND ONE-HALF FOOT UTILITY AND DRAINAGE EASEMENT TO BE PARALLEL WITH THE CORRESPONDING LOT LINE."
PLAT RECORD 2004-1118 STATES THAT THE BUILDINGS LOCATED IN LOTS 11, 13 & 14 AND 21 TO 34 ENCROACH INTO SOME OF THE ABOVE MENTIONED SEVEN AND ONE-HALF FOOT UTILITY AND DRAINAGE EASEMENTS.

DESCRIPTION:

LOT 9, OF TOWN CENTER NORTH COMMERCIAL SUBDIVISION, AS SHOWN IN PLAT RECORD BOOK 23 AT PAGE 122, LOT 11, OF TOWN CENTER NORTH COMMERCIAL SUBDIVISION, AS SHOWN IN PLAT RECORD BOOK 23 AT PAGE 126, LOT 12, OF TOWN CENTER NORTH COMMERCIAL SUBDIVISION, AS SHOWN IN PLAT RECORD BOOK 17 AT PAGE 199, LOT 13 AND LOT 14, OF TOWN CENTER NORTH COMMERCIAL SUBDIVISION, AS SHOWN IN PLAT RECORD BOOK 17 AT PAGE 200, LOTS 21 TO 34, OF TOWN CENTER NORTH COMMERCIAL SUBDIVISION, AS SHOWN IN PLAT RECORD BOOK 17 AT PAGE 197, LOT 59, OF TOWN CENTER NORTH COMMERCIAL SUBDIVISION, AS SHOWN IN PLAT RECORD BOOK 23 AT PAGE 139, TOGETHER WITH COMMON AND PARKING AREAS, ALL BEING PART OF THE SE 1/4 OF THE SW 1/4 AND PART OF THE NE 1/4 OF THE SW 1/4 OF SECTION 23, TOWNSHIP 21 NORTH, RANGE 31 WEST, BENTON COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 23;
THENCE NORTH 707.70 FEET;
THENCE EAST 2002.53 FEET TO THE POINT OF BEGINNING, SAID POINT BEING A FOUND CHISELED "X" IN AN EXISTING CONCRETE SIDEWALK AND BEING LOCATED ON THE EASTERLY RIGHT-OF-WAY OF U.S. HIGHWAY 71;
THENCE ALONG SAID EASTERLY RIGHT-OF-WAY THE FOLLOWING FIVE COURSES:
THENCE N25°53'43"W 84.67 FEET TO A FOUND ARKANSAS TRANSPORTATION AND HIGHWAY DEPARTMENT MARKER;
THENCE N21°26'33"W 144.93 FEET TO A FOUND ARKANSAS TRANSPORTATION AND HIGHWAY DEPARTMENT MARKER;
THENCE N16°48'11"W 36.37 FEET TO A FOUND IRON PIN;
THENCE N16°42'41"W 9.72 FEET;
THENCE N16°48'09"W 115.00 FEET;
THENCE LEAVING SAID EASTERLY RIGHT-OF-WAY N72°40'48"E 98.34 FEET TO A FOUND IRON PIN;
THENCE N51°42'34"E 72.82 FEET TO A FOUND NAIL IN EXISTING ASPHALT;
THENCE N72°26'39"E 185.01 FEET TO A FOUND NAIL IN EXISTING ASPHALT;
THENCE S87°22'52"E 120.93 FEET TO A FOUND COTTON SPINDLE IN EXISTING ASPHALT;
THENCE S71°58'42"E 77.94 FEET TO A FOUND IRON PIN;
THENCE S17°27'19"E 143.44 FEET TO A FOUND IRON PIN;
THENCE S14°53'20"E 60.00 FEET TO A FOUND IRON PIN;
THENCE S06°07'57"W 213.08 FEET TO A FOUND IRON PIN ON THE NORTH LINE OF LOT 4, OF TOWN CENTER NORTH COMMERCIAL SUBDIVISION, AS SHOWN IN PLAT RECORD BOOK 22 AT PAGE 142;
THENCE ALONG THE NORTH LINE OF SAID LOT 4 N81°28'11"W 68.09 FEET TO A FOUND CHISELED "X" IN AN EXISTING CONCRETE CURB, SAID POINT BEING THE NORTHWEST CORNER OF SAID LOT 4;
THENCE ALONG THE WESTERLY LINE OF SAID LOT 4 S06°21'09"W 5.18 FEET TO A FOUND IRON PIN;
THENCE ALONG THE WESTERLY LINE OF SAID LOT 4 S11°37'00"W 125.06 FEET TO A FOUND COTTON SPINDLE IN EXISTING ASPHALT, SAID POINT BEING ON THE NORTHERLY RIGHT-OF-WAY OF ARKANSAS STATE HIGHWAY 340, ALSO KNOWN AS LANCASHIRE BOULEVARD;
THENCE ALONG SAID NORTHERLY RIGHT-OF-WAY 234.94 FEET ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 537.38 FEET AND A CHORD OF N81°12'39"W 233.07 FEET TO A FOUND CHISELED "X" IN AN EXISTING CONCRETE SIDEWALK;
THENCE ALONG SAID NORTHERLY RIGHT-OF-WAY N76°55'31"W 100.71 FEET TO THE POINT OF BEGINNING, CONTAINING 5.43 ACRES, MORE OR LESS AND SUBJECT TO EASEMENTS, COVENANTS OR RESTRICTIONS OF RECORD OR FACT.

BUILDING SETBACKS

MIN. FRONT SETBACK ALL PROPERTY LINES: 65'
MIN. SIDE SETBACK PARALLEL TO ALL STREET R.O.W. LINES: 35'
MIN. SIDE SETBACK PARALLEL TO SIDE PROPERTY LINES ADJACENT TO NON-RESIDENTIAL DISTRICT: 25'
MIN. SIDE SETBACK PARALLEL TO SIDE PROPERTY LINES ADJACENT TO RESIDENTIAL DISTRICT: 35'
MIN. REAR SETBACK PARALLEL TO REAR PROPERTY LINES ADJACENT TO NON-RESIDENTIAL DISTRICT: 30'
MIN. REAR SETBACK PARALLEL TO REAR PROPERTY LINES ADJACENT TO RESIDENTIAL DISTRICT: 65'

FLOOD NOTE

THIS PROPERTY IS NOT IN FLOOD ZONE "A" OR "AE", AND IS OUTSIDE THE 100-YEAR FLOOD PLAIN AS SHOWN ON THE NATIONAL FLOOD INSURANCE PROGRAM'S FIRM PANEL NUMBER 05007C0080J, EFFECTIVE DATE SEPTEMBER 28, 2007.

THE ABOVE STATEMENT IS FOR INFORMATION ONLY AND THIS SURVEYOR ASSUMES NO LIABILITY FOR THE CORRECTNESS OF THE CITED MAP(S). IN ADDITION, NO INDEPENDENT STUDY OF THE LIKELIHOOD OF FLOODING OF THE SURVEYED PROPERTY HAS BEEN DONE BY THE SURVEYOR AND NO OPINION OF FLOOD HAZARDS IS INCLUDED IN THIS SURVEY. THE FLOOD HAZARD ZONE BOUNDARIES SHOWN HEREON WERE SCALED FROM THE MAPS CITED AND ARE NOT THE RESULT OF INDEPENDENT COMPUTATION OR ANALYSIS.

SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
C-001	COVER SHEET
C-002	PROJECT CONTROL
C-003	DEMOLITION PLAN
C-101	OVERALL SITE PLAN (C)
C-102	SITE PLAN
C-103	GRADING PLAN
C-104	UTILITY PLAN (C)
C-105	PAVING PLAN (C)
C-106	EROSION CONTROL PLAN – PHASE I
C-107	EROSION CONTROL PLAN – PHASE II
C-201	SANITARY SEWER LINE 1 P&P (C)
C-202	STORM SEWER LINE 1&2 P&P (C)
C-501	EROSION CONTROL DETAILS 1 OF 2
C-502	EROSION CONTROL DETAILS 2 OF 2
C-503	STANDARD DETAILS 1 OF 4
C-504	STANDARD DETAILS 2 OF 4
C-505	STANDARD DETAILS 3 OF 4
C-506	STANDARD DETAILS 4 OF 4
C-507	LIGHTING DETAILS 1 OF 3
C-508	LIGHTING DETAILS 2 OF 3
C-509	LIGHTING DETAILS 3 OF 3
L-100	PLANTING PLAN (C)
L-501	PLANTING DETAILS
LI-501	IRRIGATION DETAILS
LI-502	IRRIGATION DETAILS (2)
RW-01	RETAINING WALL DETAILS
RW-02	RETAINING WALL DETAILS
RW-03	RETAINING WALL DETAILS
RW-04	RETAINING WALL DETAILS
RW-05	RETAINING WALL DETAILS
RW-06	RETAINING WALL DETAILS
RW-07	RETAINING WALL DETAILS
RW-08	RETAINING WALL DETAILS
RW-09	RETAINING WALL DETAILS
RW-D1	RETAINING WALL DETAILS
RW-D2	RETAINING WALL DETAILS

PROJECT INFORMATION

FINISHED FLOOR ELEV.	SEE GRADING PLAN, SHEET C-103
SITE AREA:	5.43 ACRES
AREA OF DEVELOPMENT:	1.80 ACRES
BUILDING USAGE:	RETAIL SERVICES
ZONING:	C-3
PROPERTY USAGE:	COMMERCIAL
ADDRESS:	411 TOWN CENTER BELLA VISTA, AR 72714
OWNER:	CRI-COOPER REALTY INVESTMENTS 903 N. 47th STREET, SUITE 100 ROGERS, ARKANSAS 72756 479-246-6735
SITE ENGINEER:	CRAFTON TULL ALI KARR P.E. 901 N. 47TH ST., SUITE 400 ROGERS, AR 72756 479-636-4838
NEW PARKING:	
STANDARD:	59 PARKING STALLS
ADA:	4 PARKING STALLS
TOTAL PARKING:	63 PARKING STALLS

UTILITY CONTACTS

WATER
WATER: BELLA VISTA POA
51 HUNTLEY LN
BELLA VISTA, AR 72715
479-855-5085

GAS
BLACK HILLS ENERGY
1301 FEDERAL WAY
LOWELL, AR 72745-2129
479-333-7009

CABLE UTILITIES
COX COMMUNICATIONS
888-952-3278

SANITARY SEWER
SEWER: VILLAGE WASTE WATER
380 BELLA VISTA WAY
BELLA VISTA, AR 72714
479-855-7613

TELEPHONE
AT&T DIRECTV & U-VERSE
866-722-7500

ELECTRIC
CARROLL ELECTRIC
707 SE WALTON BLVD
BENTONVILLE, AR 72712
479-273-2421

SITE STABILIZATION AND CERTIFICATION

CRAFTON TULL CANNOT CERTIFY THE SITE AS COMPLETE IN ORDER TO OBTAIN THE CERTIFICATE OF OCCUPANCY UNTIL ALL DISTURBED AREAS RELATED TO THE CONSTRUCTION OF THE PROJECT, BOTH ONSITE AND OFFSITE, HAVE BEEN STABILIZED PER THE PLANS AND SPECIFICATIONS AND ALL REQUIREMENTS SPELLED OUT IN PERMITS ISSUED BY THE STATE AND LOCAL AUTHORITIES HAVE BEEN MET.

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Rogers, Arkansas 72756
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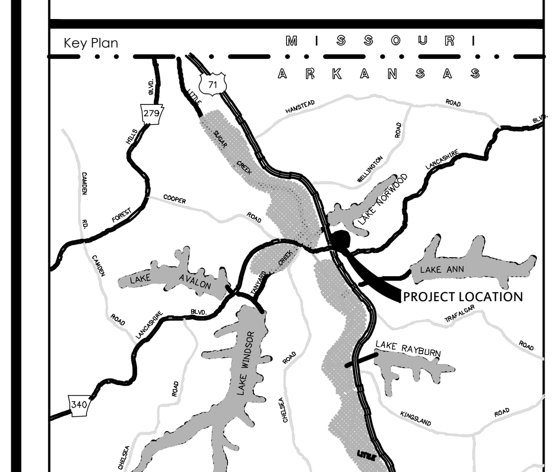
CERTIFICATE OF AUTHORIZATION:
CERTIFICATE OF AUTHORIZATION – CRAFTON, TULL & ASSOCIATES, INC. No. 109 – ARKANSAS ENGINEER

TOWNCENTER EAST PHASE 3
BELLA VISTA, AR



No.	Description	Date
1	1ST SUBMITTAL	10.02.2023
2	2ND SUBMITTAL	10.25.2023
3	3RD SUBMITTAL	12.04.2023
4	4TH SUBMITTAL	12.11.2023

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PROJECT NO: 19105800
ISSUE DATE: 5/21/2025
CONTACT: E.MCMAHON
QC by: M.LOVE
QC Date: 10/05/2023

PRELIMINARY PLANS

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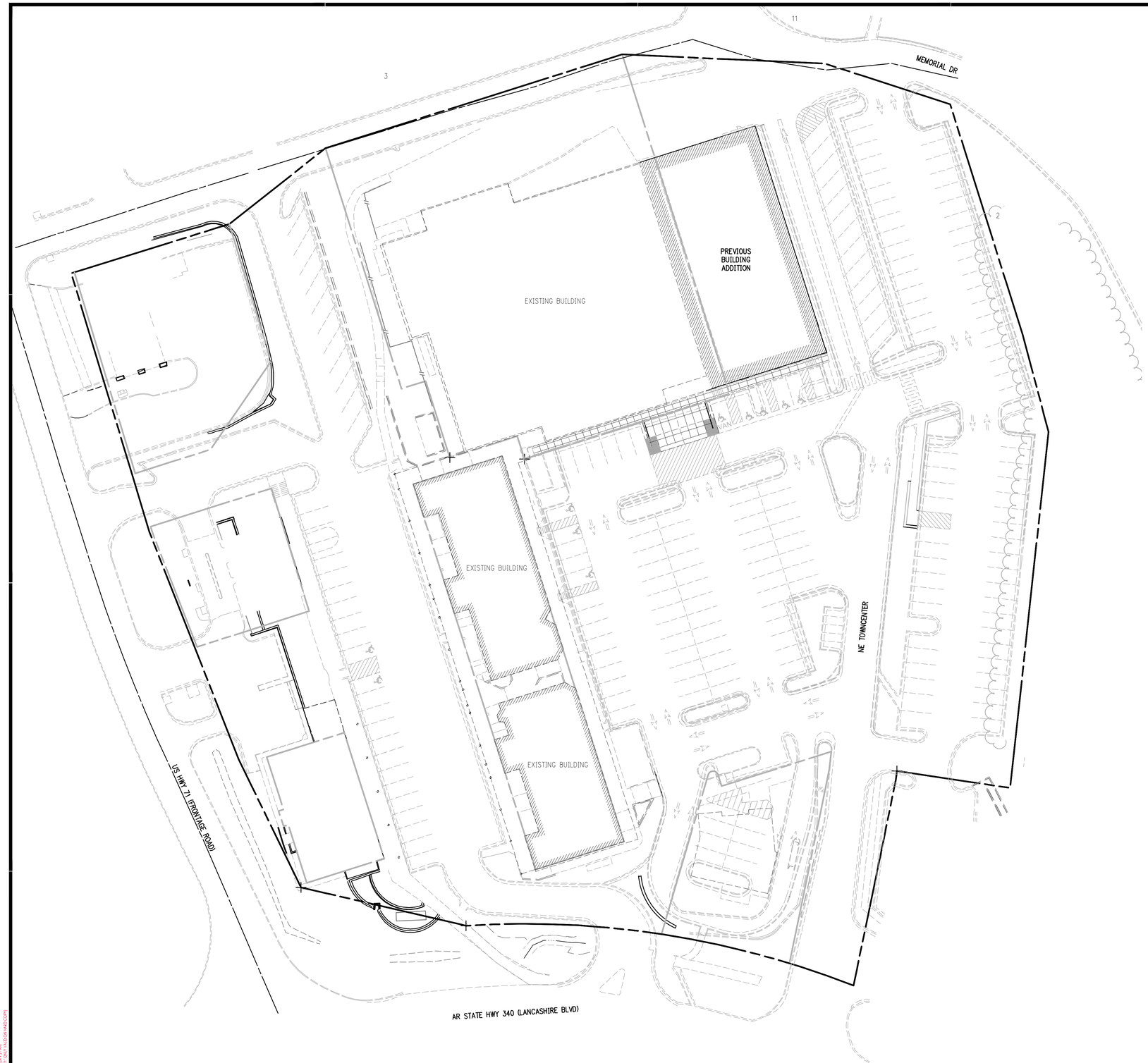
LSD-2025-58745

COVER SHEET

C-001



LEGEND (EXISTING)

SYMBOLS	LINEWORK
⊕ CONTROL POINT	PROPERTY LINE
	CURB

NOTE:
ONLY THE CONTROL POINTS, COORDINATE VALUES, AND ELEVATIONS SHOWN ON THIS SHEET SHALL BE USED ON THIS PROJECT. CRAFTON, TULL & ASSOCIATES SHALL NOT BE RESPONSIBLE FOR ANY CONSEQUENCES OF USING CONTROL POINTS, COORDINATE VALUES OR ELEVATIONS ESTABLISHED OR DERIVED FROM OTHER SOURCES. CRAFTON, TULL & ASSOCIATES, AT ITS SOLE DISCRETION, MAY ALLOW THE USE OF ALTERNATIVE OR ADDITIONAL CONTROL, BY A WRITTEN AMENDMENT TO THIS SHEET SEALED BY THE RESPONSIBLE SURVEYOR. USERS OF THESE CONTROL POINTS SHALL EXERCISE DUE CARE AND GOOD SURVEYING PRACTICE AND IMMEDIATELY NOTIFY THE CRAFTON, TULL & ASSOCIATES PROJECT ENGINEER OF ANY INCONSISTENCIES IN THE OBSERVED COORDINATE VALUES, ELEVATIONS AND DESCRIPTIONS FOR CONTROL POINTS SHOWN ON THIS SHEET.

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CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

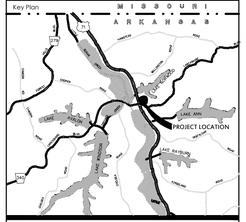
GRAPHIC SCALE IN FEET
30' 0 30'

BASIS OF BEARING: GRID NORTH, ARKANSAS STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NAD 83 HORIZONTAL DATUM AND NAVD 88 VERTICAL DATUM DETERMINED BY GPS OBSERVATION ON THE CITY OF BENTONVILLE CONTROL MONUMENTS USING THEIR PUBLISHED VALUES.

TOWNCENTER EAST PHASE 3

BELLA VISTA, AR

Key Plan



No.	Description	Date

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PROJECT NO: 19105800
ISSUE DATE: 5/21/2025
CONTACT: E.MCMAHON
QC by: M.LOVE
QC Date: 10/05/2023

PRELIMINARY PLANS

NOT FOR CONSTRUCTION
REVIEW SET
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LSD-2025-58745

PROJECT CONTROL

C-002

LEGEND

SYMBOLS TO BE DEMOLISHED

- LIGHT POLE
- POWER POLE
- TELEPHONE PEDESTAL
- MANHOLE
- SANITARY SEWER CLEANOUT
- GAS METER
- STORM SEWER PIPE
- DOWN GUY
- WATER VALVE
- FIRE HYDRANT ASSEMBLY
- WATER METER
- ELECTRIC PEDESTAL
- DROP INLET
- EXISTING TREE

LINEWORK TO BE DEMOLISHED

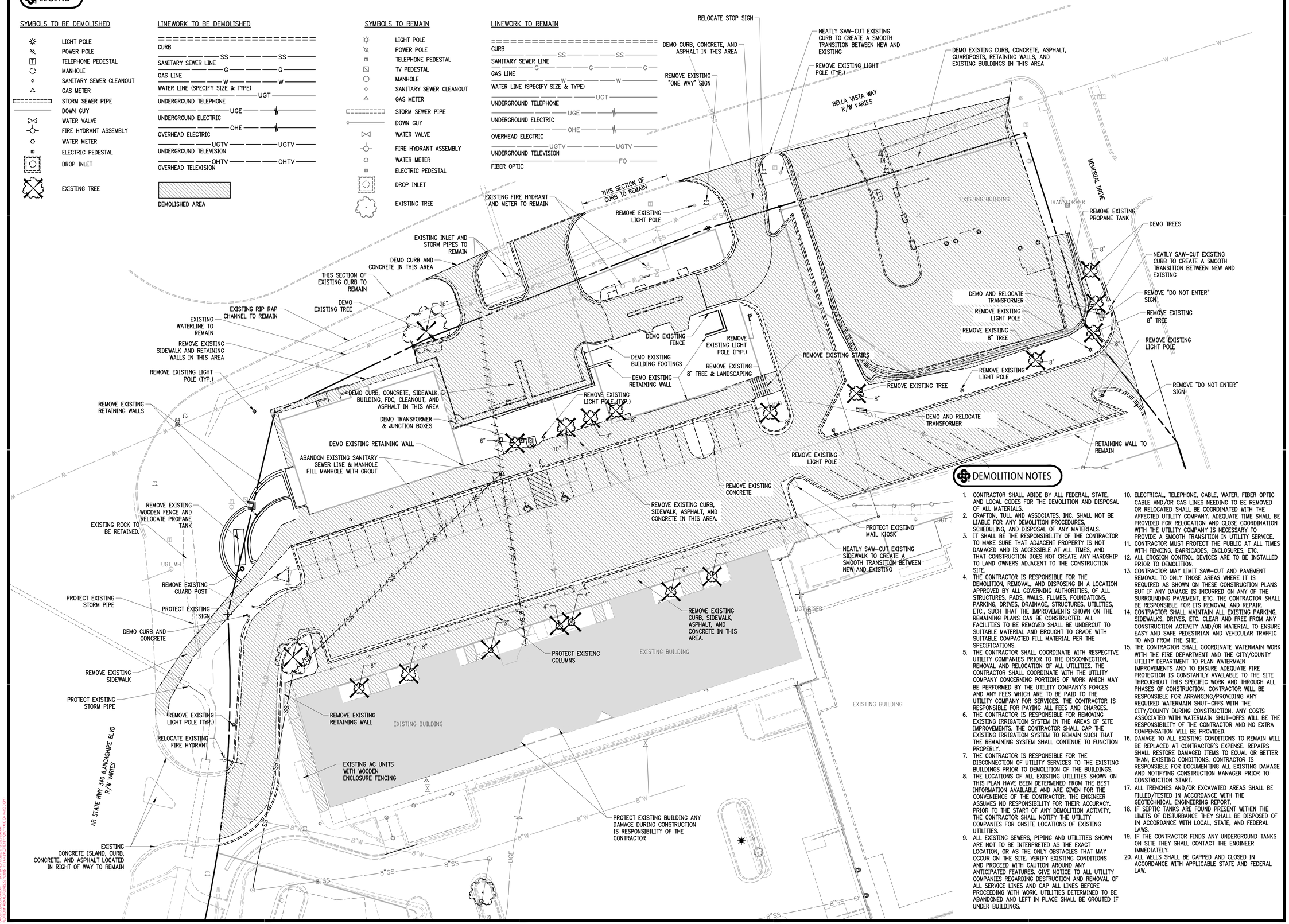
- CURB
- SANITARY SEWER LINE (SS)
- GAS LINE (G)
- WATER LINE (SPECIFY SIZE & TYPE) (W)
- UNDERGROUND TELEPHONE (UGT)
- UNDERGROUND ELECTRIC (UGE)
- OVERHEAD ELECTRIC (OHE)
- UNDERGROUND TELEVISION (UGTV)
- OVERHEAD TELEVISION (OHTV)
- DEMOLISHED AREA

SYMBOLS TO REMAIN

- LIGHT POLE
- POWER POLE
- TELEPHONE PEDESTAL
- TV PEDESTAL
- MANHOLE
- SANITARY SEWER CLEANOUT
- GAS METER
- STORM SEWER PIPE
- DOWN GUY
- WATER VALVE
- FIRE HYDRANT ASSEMBLY
- WATER METER
- ELECTRIC PEDESTAL
- DROP INLET
- EXISTING TREE

LINEWORK TO REMAIN

- CURB
- SANITARY SEWER LINE (SS)
- GAS LINE (G)
- WATER LINE (SPECIFY SIZE & TYPE) (W)
- UNDERGROUND TELEPHONE (UGT)
- UNDERGROUND ELECTRIC (UGE)
- OVERHEAD ELECTRIC (OHE)
- UNDERGROUND TELEVISION (UGTV)
- FIBER OPTIC (FO)



DEMOLITION NOTES

1. CONTRACTOR SHALL ABIDE BY ALL FEDERAL, STATE, AND LOCAL CODES FOR THE DEMOLITION AND DISPOSAL OF ALL MATERIALS.
2. CRAFTON, TULL AND ASSOCIATES, INC. SHALL NOT BE LIABLE FOR ANY DEMOLITION PROCEDURES, SCHEDULING, AND DISPOSAL OF ANY MATERIALS.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE SURE THAT ADJACENT PROPERTY IS NOT DAMAGED AND IS ACCESSIBLE AT ALL TIMES, AND THAT CONSTRUCTION DOES NOT CREATE ANY HARDSHIP TO LAND OWNERS ADJACENT TO THE CONSTRUCTION SITE.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSING IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES, OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE, STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE SPECIFICATIONS.
5. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE DISCONNECTION, REMOVAL AND RELOCATION OF ALL UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
6. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING EXISTING IRRIGATION SYSTEM IN THE AREAS OF SITE IMPROVEMENTS. THE CONTRACTOR SHALL CAP THE EXISTING IRRIGATION SYSTEM TO REMAIN SUCH THAT THE REMAINING SYSTEM SHALL CONTINUE TO FUNCTION PROPERLY.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE DISCONNECTION OF UTILITY SERVICES TO THE EXISTING BUILDINGS PRIOR TO DEMOLITION OF THE BUILDINGS.
8. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR ONSITE LOCATIONS OF EXISTING UTILITIES.
9. ALL EXISTING SEWERS, PIPING AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH WORK. UTILITIES DETERMINED TO BE ABANDONED AND LEFT IN PLACE SHALL BE GROUTED IF UNDER BUILDINGS.
10. ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC CABLE AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE.
11. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC.
12. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED PRIOR TO DEMOLITION.
13. CONTRACTOR MAY LIMIT SAW-CUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE CONSTRUCTION PLANS BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR.
14. CONTRACTOR SHALL MAINTAIN ALL EXISTING PARKING, SIDEWALKS, DRIVES, ETC. CLEAR AND FREE FROM ANY CONSTRUCTION ACTIVITY AND/OR MATERIAL TO ENSURE EASY AND SAFE PEDESTRIAN AND VEHICULAR TRAFFIC TO AND FROM THE SITE.
15. THE CONTRACTOR SHALL COORDINATE WATERMAIN WORK WITH THE FIRE DEPARTMENT AND THE CITY/COUNTY UTILITY DEPARTMENT TO PLAN WATERMAIN IMPROVEMENTS AND TO ENSURE ADEQUATE FIRE PROTECTION IS CONSTANTLY AVAILABLE TO THE SITE THROUGHOUT THIS SPECIFIC WORK AND THROUGH ALL PHASES OF CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR ARRANGING/PROVIDING ANY REQUIRED WATERMAIN SHUT-OFFS WITH THE CITY/COUNTY DURING CONSTRUCTION. ANY COSTS ASSOCIATED WITH WATERMAIN SHUT-OFFS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION WILL BE PROVIDED.
16. DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE. REPAIRS SHALL RESTORE DAMAGED ITEMS TO EQUAL OR BETTER THAN, EXISTING CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING ALL EXISTING DAMAGE AND NOTIFYING CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION START.
17. ALL TRENCHES AND/OR EXCAVATED AREAS SHALL BE FILLED/TESTED IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERING REPORT.
18. IF SEPTIC TANKS ARE FOUND PRESENT WITHIN THE LIMITS OF DISTURBANCE THEY SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL LAWS.
19. IF THE CONTRACTOR FINDS ANY UNDERGROUND TANKS ON SITE THEY SHALL CONTACT THE ENGINEER IMMEDIATELY.
20. ALL WELLS SHALL BE CAPPED AND CLOSED IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL LAW.

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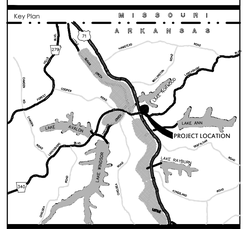
CERTIFICATE OF AUTHORIZATION — CRAFTON, TULL & ASSOCIATES, INC. No. 109 — ARKANSAS ENGINEER

TOWNCENTER EAST PHASE 3

BELLA VISTA, AR

Key Plan



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PROJECT NO: 19105800
ISSUE DATE: 5/21/2025
CONTACT: E.MCMAHON
QC by: M.LOVE
QC Date: 10/05/2023

PRELIMINARY PLANS

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LSD-2025-58745

DEMOLITION PLAN

C-003

PARCEL LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	9.72'	N16° 42' 41"W
L2	72.82'	N51° 42' 34"E
L3	60.00'	S14° 53' 20"E
L4	68.09'	N81° 28' 11"W
L5	5.18'	S6° 21' 09"W

CURVE TABLE					
CURVE #	LENGTH	RADIUS	DELTA	CHORD DIRECTION	CHORD LENGTH
C1	234.94'	537.38'	25°02'57"	N81° 12' 39"W	233.07'

LEGEND (EXISTING SYMBOLS)

SYMBOLS

- FOUND IRON PIN

LINEWORK

- CURB
- RIGHT OF WAY
- ROAD CENTERLINE
- LOT LINE

LEGEND (CONSTRUCT)

SYMBOLS

- SET IRON PIN

LINEWORK

- EASEMENT
- CURB
- BUILDING SET BACK
- RIGHT OF WAY
- PROPERTY LINE
- ROAD CENTERLINE

PROPERTY DESCRIPTION

SURVEYOR NOTES:

THE PROPERTY SURVEYED IS WITHIN THE MUNICIPAL LIMITS OF THE CITY OF BELLA VISTA, AR.

THE BOUNDARY DETERMINATION SHOW HEREON WAS BASED UPON THE FOLLOWING DEEDS AND PLATS AND NO OTHERS: DEED RECORDS 97-114489, 2004-42455, 2004-42457 AND PLAT RECORDS 17-197, 17-199, 17-200, 23-122, 23-126, 23-139, 2003-938, 2004-1118 AND AN UNRECORDED ALTA/ACSM LAND TITLE SURVEY PLAT BY PHILLIPS LAND SURVEYING INC. DATED JUNE 26, 2009.

THE SURVEYOR HAS NOT MADE A SEPARATE INVESTIGATION OR SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, OR RESTRICTIVE COVENANTS OR ANY OTHER FACTS WHICH AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE. ANY EASEMENTS SHOWN HEREON CAME TO THE ATTENTION OF THE SURVEYOR IN THE COURSE OF HIS RESEARCH OF THE PROPERTY BOUNDARY. EASEMENT DEED RECORDS 701-730 AND 2009-25988 WERE PROVIDED TO SURVEYOR BY FIRST NATIONAL TITLE COMPANY ON FEBRUARY 25, 2015.

THIS PLAT REPRESENTS A SURVEY CONDUCTED ON THIS PROPERTY ON THE FOLLOWING DATE: FEBRUARY 27, 2015.

THERE MAY BE BUILDINGS AND OTHER IMPROVEMENTS ON THE PROPERTY THAT ARE NOT SHOWN ON THIS PLAT.

SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT CONSIDERED A PART OF THIS SURVEY AND NO INVESTIGATION OF THESE CONDITIONS WAS MADE.

ANY UTILITY LINES, STRUCTURES OR APPURTENANCES SHOWN HEREON ARE FROM A FIELD INVESTIGATION LIMITED TO THE VISIBLE SURFACE OF THE PROPERTY SURVEYED. OTHER UTILITY LINES, STRUCTURES AND APPURTENANCES MAY BE PRESENT ON THE PROPERTY. FOR INFORMATION REGARDING SUCH ITEMS, CONTACT THE APPROPRIATE AGENCIES.

THIS PROPERTY IS NOT IN FLOOD ZONE "A" OR "AE", AND IS OUTSIDE THE 100-YEAR FLOOD PLAIN AS SHOWN ON THE NATIONAL FLOOD INSURANCE PROGRAM'S FIRM PANEL NUMBER 05007C0080J, EFFECTIVE DATE SEPTEMBER 28, 2007.
THE ABOVE STATEMENT IS FOR INFORMATION ONLY AND THIS SURVEYOR ASSUMES NO LIABILITY FOR THE CORRECTNESS OF THE CITED MAP(S). IN ADDITION, NO INDEPENDENT STUDY OF THE LIKELIHOOD OF FLOODING OF THE SURVEYED PROPERTY HAS BEEN DONE BY THE SURVEYOR AND NO OPINION OF FLOOD HAZARDS IS INCLUDED IN THIS SURVEY. THE FLOOD HAZARD ZONE BOUNDARIES SHOWN HEREON WERE SCALED FROM THE MAPS CITED AND ARE NOT THE RESULT OF INDEPENDENT COMPUTATION OR ANALYSIS.

PLAT RECORDS 17-197, 17-199, 17-200, 23-122, 23-126 AND 23-139 ALL HAVE THE FOLLOWING NOTE:
"UNLESS OTHERWISE SHOWN ON THE PLAT, ALL LOTS HAVE A SEVEN AND ONE-HALF FOOT UTILITY AND DRAINAGE EASEMENT TO BE PARALLEL WITH THE CORRESPONDING LOT LINE."
PLAT RECORD 2004-1118 STATES THAT THE BUILDINGS LOCATED IN LOTS 11, 13 & 14 AND 21 TO 34 ENCROACH INTO SOME OF THE ABOVE MENTIONED SEVEN AND ONE-HALF FOOT UTILITY AND DRAINAGE EASEMENTS.

DESCRIPTION:

LOT 9, OF TOWN CENTER NORTH COMMERCIAL SUBDIVISION, AS SHOWN IN PLAT RECORD BOOK 23 AT PAGE 122, LOT 11, OF TOWN CENTER NORTH COMMERCIAL SUBDIVISION, AS SHOWN IN PLAT RECORD BOOK 23 AT PAGE 126, LOT 12, OF TOWN CENTER NORTH COMMERCIAL SUBDIVISION, AS SHOWN IN PLAT RECORD BOOK 17 AT PAGE 199, LOT 13 AND LOT 14, OF TOWN CENTER NORTH COMMERCIAL SUBDIVISION, AS SHOWN IN PLAT RECORD BOOK 17 AT PAGE 200, LOTS 21 TO 34, OF TOWN CENTER NORTH COMMERCIAL SUBDIVISION, AS SHOWN IN PLAT RECORD BOOK 17 AT PAGE 197, LOT 59, OF TOWN CENTER NORTH COMMERCIAL SUBDIVISION, AS SHOWN IN PLAT RECORD BOOK 23 AT PAGE 139, TOGETHER WITH COMMON AND PARKING AREAS, ALL BEING PART OF THE SE 1/4 OF THE SW 1/4 AND PART OF THE NE 1/4 OF THE SW 1/4 OF SECTION 23, TOWNSHIP 21 NORTH, RANGE 31 WEST, BENTON COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 23;
THENCE NORTH 707.70 FEET;
THENCE EAST 2002.53 FEET TO THE POINT OF BEGINNING, SAID POINT BEING A FOUND CHISELED "X" IN AN EXISTING CONCRETE SIDEWALK AND BEING LOCATED ON THE EASTERLY RIGHT-OF-WAY OF U.S. HIGHWAY 71;
THENCE ALONG SAID EASTERLY RIGHT-OF-WAY THE FOLLOWING FIVE COURSES:
THENCE N25°53'43"W 84.67 FEET TO A FOUND ARKANSAS TRANSPORTATION AND HIGHWAY DEPARTMENT MARKER;
THENCE N21°26'33"W 144.93 FEET TO A FOUND ARKANSAS TRANSPORTATION AND HIGHWAY DEPARTMENT MARKER;
THENCE N16°48'11"W 36.37 FEET TO A FOUND IRON PIN;
THENCE N16°42'41"W 9.72 FEET;
THENCE N16°48'09"W 115.00 FEET;
THENCE LEAVING SAID EASTERLY RIGHT-OF-WAY N72°40'48"E 98.34 FEET TO A FOUND IRON PIN;
THENCE N51°42'34"E 72.82 FEET TO A FOUND NAIL IN EXISTING ASPHALT;
THENCE N72°26'39"E 185.01 FEET TO A FOUND NAIL IN EXISTING ASPHALT;
THENCE S87°22'52"E 120.93 FEET TO A FOUND COTTON SPINDLE IN EXISTING ASPHALT;
THENCE S71°58'42"E 77.94 FEET TO A FOUND IRON PIN;
THENCE S17°27'19"E 143.44 FEET TO A FOUND IRON PIN;
THENCE S14°53'20"E 60.00 FEET TO A FOUND IRON PIN;
THENCE S06°07'57"W 213.08 FEET TO A FOUND IRON PIN ON THE NORTH LINE OF LOT 4, OF TOWN CENTER NORTH COMMERCIAL SUBDIVISION, AS SHOWN IN PLAT RECORD BOOK 22 AT PAGE 142;
THENCE ALONG THE NORTH LINE OF SAID LOT 4 N81°28'11"W 68.09 FEET TO A FOUND CHISELED "X" IN AN EXISTING CONCRETE CURB, SAID POINT BEING THE NORTHWEST CORNER OF SAID LOT 4;
THENCE ALONG THE WESTERLY LINE OF SAID LOT 4 S06°21'09"W 5.18 FEET TO A FOUND IRON PIN;
THENCE ALONG THE WESTERLY LINE OF SAID LOT 4 S11°37'00"W 125.06 FEET TO A FOUND COTTON SPINDLE IN EXISTING ASPHALT, SAID POINT BEING ON THE NORTHERLY RIGHT-OF-WAY OF ARKANSAS STATE HIGHWAY 340, ALSO KNOWN AS LANCASHIRE BOULEVARD;
THENCE ALONG SAID NORTHERLY RIGHT-OF-WAY 234.94 FEET ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 537.38 FEET AND A CHORD OF N81°12'39"W 233.07 FEET TO A FOUND CHISELED "X" IN AN EXISTING CONCRETE SIDEWALK;
THENCE ALONG SAID NORTHERLY RIGHT-OF-WAY N76°55'31"W 100.71 FEET TO THE POINT OF BEGINNING, CONTAINING 5.43 ACRES, MORE OR LESS AND SUBJECT TO EASEMENTS, COVENANTS OR RESTRICTIONS OF RECORD OR FACT.

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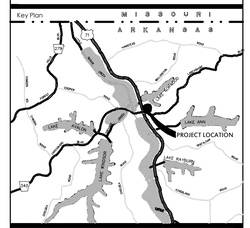
CERTIFICATE OF AUTHORIZATION:
CERTIFICATE OF AUTHORIZATION
CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

GRAPHIC SCALE IN FEET
60' 0 60'

TOWNCENTER EAST PHASE 3

BELLA VISTA, AR

Key Plan



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PROJECT NO: 19105800
ISSUE DATE: 5/21/2025
CONTACT: E.MCMAHON
QC By: M.LOVE
QC Date: 10/05/2023

PRELIMINARY PLANS

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LSD-2025-58745

OVERALL SITE PLAN (C)

C-101

SITE NOTES

1. THE DESIGN, INSPECTION, AND CERTIFICATION OF ANY RETAINING WALL SHOWN OR REFERENCED HEREIN, INCLUDING BUT NOT LIMITED TO, SEGMENTAL RETAINING WALLS, MASS GRAVITY WALLS, GABION WALLS, ETC., GREATER THAN FORTY-EIGHT INCHES IN HEIGHT, SHALL BE BY OTHERS. ANY RETAINING WALL DATA SHOWN OR REFERENCED HEREIN SHALL BE FOR COORDINATION OF THE WALL LOCATION AND ELEVATIONS ONLY.
2. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY/COUNTY/STATE/FEDERAL REGULATIONS AND CODES AND OSHA STANDARDS.
3. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS.
4. ALL CURB DIMENSIONS AND RADII ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
5. ALL PAVEMENT MARKINGS DIMENSIONS FACE OF CURB UNLESS OTHERWISE NOTED.
6. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
7. ALL CURB/SIDEWALK/HANDICAP RAMP DESIGNS SHALL CONFORM TO ADA STANDARDS OR LOCAL RESTRICTIVE CODES, WHICHEVER IS MORE RESTRICTIVE.
8. CONTRACTOR SHALL ENSURE ALL NECESSARY PERMITS ARE OBTAINED PRIOR TO CONSTRUCTION START.
9. CONTRACTOR SHALL MATCH NEW CURB AND GUTTER, CONCRETE, AND PAVEMENT TO EXISTING IN GRADE AND ALIGNMENT.
10. CONTRACTOR SHALL MAINTAIN ALL EXISTING PARKING, SIDEWALKS, DRIVES, ETC. CLEAR AND FREE FROM ANY CONSTRUCTION ACTIVITY AND/OR MATERIAL TO ENSURE EASY AND SAFE PEDESTRIAN AND VEHICULAR TRAFFIC TO AND FROM THE SITE.

PARKING REQUIREMENTS

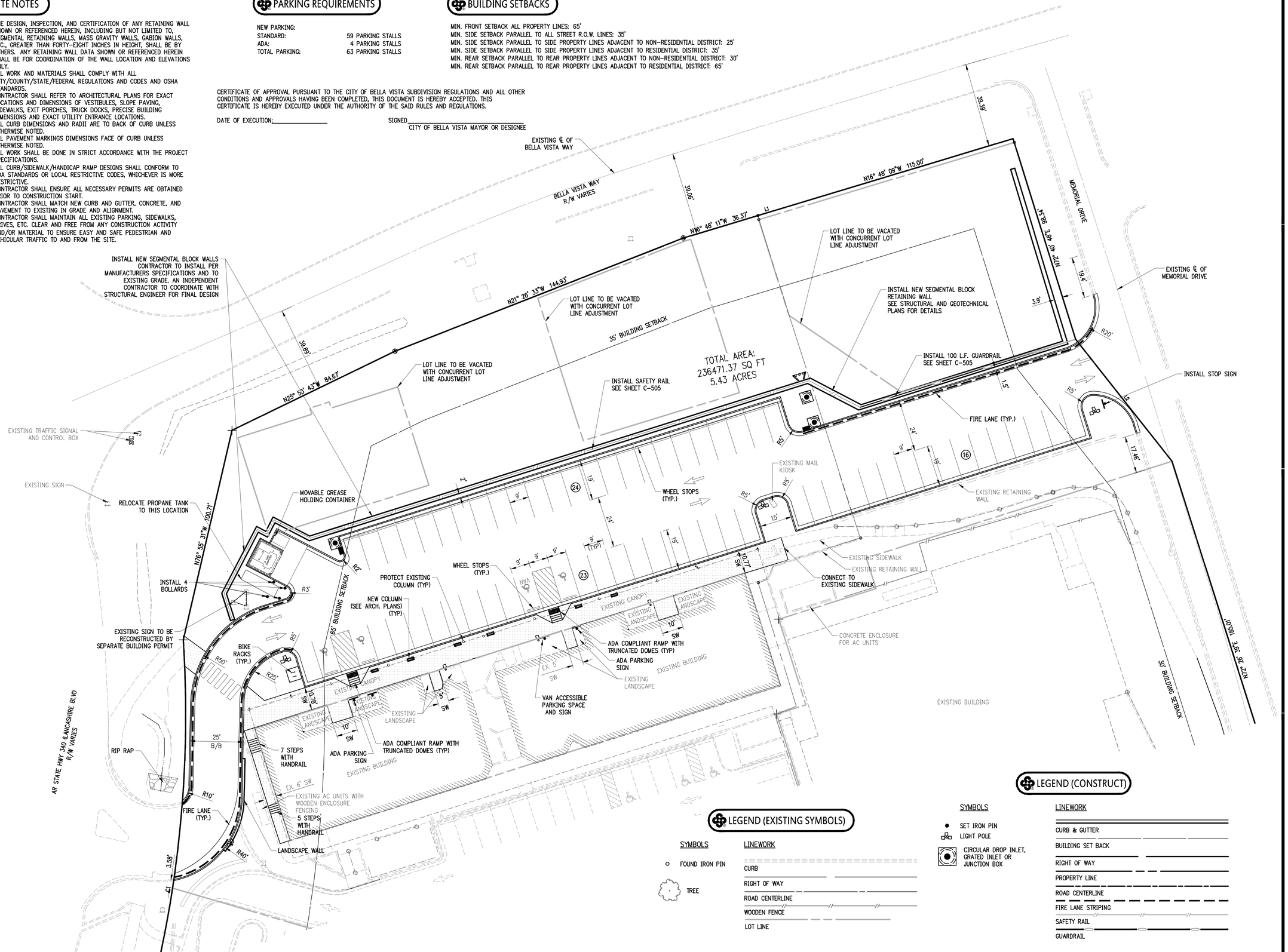
NEW PARKING:	
STANDARD:	59 PARKING STALLS
ADA:	4 PARKING STALLS
TOTAL PARKING:	63 PARKING STALLS

BUILDING SETBACKS

MIN. FRONT SETBACK ALL PROPERTY LINES: 65'
MIN. SIDE SETBACK PARALLEL TO ALL STREET R.O.W. LINES: 35'
MIN. SIDE SETBACK PARALLEL TO SIDE PROPERTY LINES ADJACENT TO NON-RESIDENTIAL DISTRICT: 25'
MIN. SIDE SETBACK PARALLEL TO SIDE PROPERTY LINES ADJACENT TO RESIDENTIAL DISTRICT: 35'
MIN. REAR SETBACK PARALLEL TO REAR PROPERTY LINES ADJACENT TO NON-RESIDENTIAL DISTRICT: 30'
MIN. REAR SETBACK PARALLEL TO REAR PROPERTY LINES ADJACENT TO RESIDENTIAL DISTRICT: 65'

CERTIFICATE OF APPROVAL PURSUANT TO THE CITY OF BELLA VISTA SUBDIVISION REGULATIONS AND ALL OTHER CONDITIONS AND APPROVALS HAVING BEEN COMPLETED, THIS DOCUMENT IS HEREBY ACCEPTED. THIS CERTIFICATE IS HEREBY EXECUTED UNDER THE AUTHORITY OF THE SAID RULES AND REGULATIONS.

DATE OF EXECUTION:_____ SIGNED_____
CITY OF BELLA VISTA MAYOR OR DESIGNEE



LEGEND (EXISTING SYMBOLS)

SYMBOLS	LINEWORK
FOUND IRON PIN	CURB
TREE	RIGHT OF WAY
	ROAD CENTERLINE
	WOODEN FENCE
	LOT LINE

LEGEND (CONSTRUCT)

SYMBOLS	LINEWORK
SET IRON PIN	CURB & GUTTER
LIGHT POLE	BUILDING SET BACK
CIRCULAR DROP INLET, GRATED INLET OR JUNCTION BOX	RIGHT OF WAY
	PROPERTY LINE
	ROAD CENTERLINE
	FIRE LANE STRIPING
	SAFETY RAIL
	GUARDRAIL

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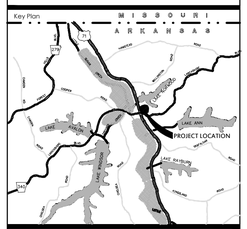
CERTIFICATE OF AUTHORIZATION — CRAFTON, TULL & ASSOCIATES, INC. No. 109 — ARKANSAS ENGINEER

GRAPHIC SCALE IN FEET 20' 0 20'

TOWNCENTER EAST PHASE 3

BELLA VISTA, AR

Key Plan



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PROJECT NO: 19105800
ISSUE DATE: 5/21/2025
CONTACT: E.MCMAHON
QC by: M.LOVE
QC Date: 10/03/2023

PRELIMINARY PLANS

NOT FOR CONSTRUCTION — REVIEW SET

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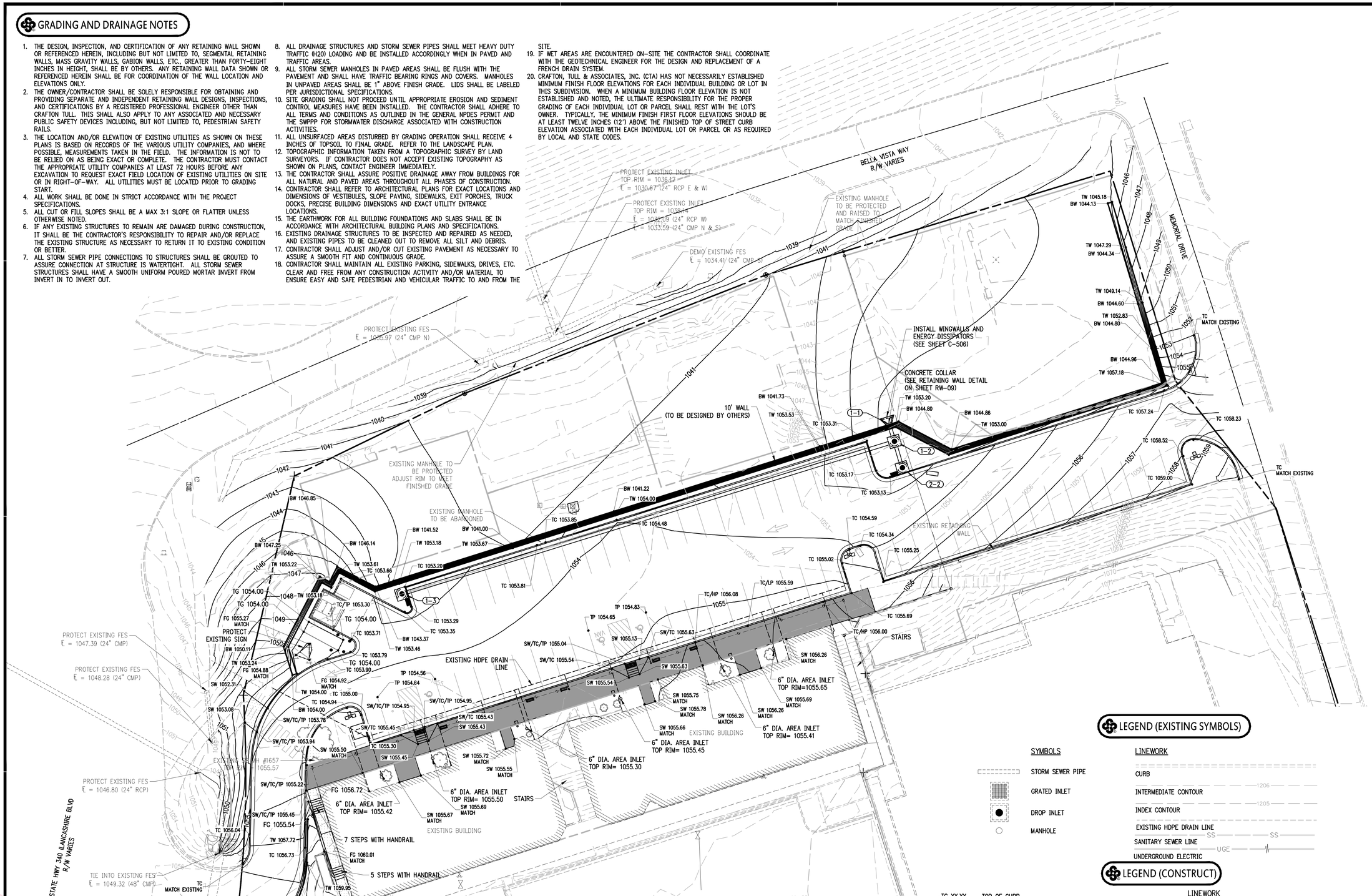
LSD-2025-58745

SITE PLAN

C-102

GRADING AND DRAINAGE NOTES

1. THE DESIGN, INSPECTION, AND CERTIFICATION OF ANY RETAINING WALL SHOWN OR REFERENCED HEREIN, INCLUDING BUT NOT LIMITED TO, SEGMENTAL RETAINING WALLS, MASS GRAVITY WALLS, GABION WALLS, ETC., GREATER THAN FORTY-EIGHT INCHES IN HEIGHT, SHALL BE BY OTHERS. ANY RETAINING WALL DATA SHOWN OR REFERENCED HEREIN SHALL BE FOR COORDINATION OF THE WALL LOCATION AND ELEVATIONS ONLY.
2. THE OWNER/CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR OBTAINING AND PROVIDING SEPARATE AND INDEPENDENT RETAINING WALL DESIGNS, INSPECTIONS, AND CERTIFICATIONS BY A REGISTERED PROFESSIONAL ENGINEER OTHER THAN CRAFTON TULL. THIS SHALL ALSO APPLY TO ANY ASSOCIATED AND NECESSARY PUBLIC SAFETY DEVICES INCLUDING, BUT NOT LIMITED TO, PEDESTRIAN SAFETY RAILS.
3. THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF EXISTING UTILITIES ON SITE OR IN RIGHT-OF-WAY. ALL UTILITIES MUST BE LOCATED PRIOR TO GRADING START.
4. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
5. ALL CUT OR FILL SLOPES SHALL BE A MAX 3:1 SLOPE OR FLATTER UNLESS OTHERWISE NOTED.
6. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITION OR BETTER.
7. ALL STORM SEWER PIPE CONNECTIONS TO STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT. ALL STORM SEWER STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT IN TO INVERT OUT.
8. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY WHEN IN PAVED AND TRAFFIC AREAS.
9. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH THE PAVEMENT AND SHALL HAVE TRAFFIC BEARING RINGS AND COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 1" ABOVE FINISH GRADE. LIDS SHALL BE LABELED PER JURISDICTIONAL SPECIFICATIONS.
10. SITE GRADING SHALL NOT PROCEED UNTIL APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED. THE CONTRACTOR SHALL ADHERE TO ALL TERMS AND CONDITIONS AS OUTLINED IN THE GENERAL NPDES PERMIT AND THE SWPPP FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
11. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL TO FINAL GRADE. REFER TO THE LANDSCAPE PLAN.
12. TOPOGRAPHIC INFORMATION TAKEN FROM A TOPOGRAPHIC SURVEY BY LAND SURVEYORS. IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON PLANS, CONTACT ENGINEER IMMEDIATELY.
13. THE CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS THROUGHOUT ALL PHASES OF CONSTRUCTION.
14. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS.
15. THE EARTHWORK FOR ALL BUILDING FOUNDATIONS AND SLABS SHALL BE IN ACCORDANCE WITH ARCHITECTURAL BUILDING PLANS AND SPECIFICATIONS.
16. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
17. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
18. CONTRACTOR SHALL MAINTAIN ALL EXISTING PARKING, SIDEWALKS, DRIVES, ETC. CLEAR AND FREE FROM ANY CONSTRUCTION ACTIVITY AND/OR MATERIAL TO ENSURE EASY AND SAFE PEDESTRIAN AND VEHICULAR TRAFFIC TO AND FROM THE SITE.
19. IF WET AREAS ARE ENCOUNTERED ON-SITE THE CONTRACTOR SHALL COORDINATE WITH THE GEOTECHNICAL ENGINEER FOR THE DESIGN AND REPLACEMENT OF A FRENCH DRAIN SYSTEM.
20. CRAFTON, TULL & ASSOCIATES, INC. (CTA) HAS NOT NECESSARILY ESTABLISHED MINIMUM FINISH FLOOR ELEVATIONS FOR EACH INDIVIDUAL BUILDING OR LOT IN THIS SUBDIVISION. WHEN A MINIMUM BUILDING FLOOR ELEVATION IS NOT ESTABLISHED AND NOTED, THE ULTIMATE RESPONSIBILITY FOR THE PROPER GRADING OF EACH INDIVIDUAL LOT OR PARCEL SHALL REST WITH THE LOT'S OWNER. TYPICALLY, THE MINIMUM FINISH FIRST FLOOR ELEVATIONS SHOULD BE AT LEAST TWELVE INCHES (12") ABOVE THE FINISHED TOP OF STREET CURB ELEVATION ASSOCIATED WITH EACH INDIVIDUAL LOT OR PARCEL OR AS REQUIRED BY LOCAL AND STATE CODES.



SITE STABILIZATION AND CERTIFICATION

CRAFTON TULL CANNOT CERTIFY THE SITE AS COMPLETE IN ORDER TO OBTAIN THE CERTIFICATE OF OCCUPANCY UNTIL ALL DISTURBED AREAS RELATED TO THE CONSTRUCTION OF THE PROJECT, BOTH ONSITE AND OFFSITE, HAVE BEEN STABILIZED PER THE PLANS AND SPECIFICATIONS AND ALL REQUIREMENTS SPELLED OUT IN PERMITS ISSUED BY THE STATE AND LOCAL AUTHORITIES HAVE BEEN MET.

LEGEND (EXISTING SYMBOLS)

SYMBOLS	LINEWORK
STORM SEWER PIPE	CURB
GRATED INLET	INTERMEDIATE CONTOUR (1206)
DROP INLET	INDEX CONTOUR (1205)
MANHOLE	EXISTING HDPE DRAIN LINE
	SANITARY SEWER LINE (SS)
	UNDERGROUND ELECTRIC (UGE)

LEGEND (CONSTRUCT)

TC XX.XX	TOP OF CURB		STORM SEWER PIPE
TP XX.XX	TOP OF PAVEMENT	(X-X)	STRUCTURE NUMBER
HP XX.XX	HIGH POINT		CIRCULAR DROP INLET, GRATED INLET OR JUNCTION BOX (SPECIFY ON PLAN SHEET)
LP XX.XX	LOW POINT		
FG XX.XX	FINISH GRADE		
SW XX.XX	SIDEWALK		
TC/TP XX.XX	TOP OF CURB/TOP OF PAVEMENT		
TG XX.XX	TOP OF GRATE		
EG XX.XX	EXISTING GRADE		

LINEWORK: CURB; INTERMEDIATE CONTOUR (1206); INDEX CONTOUR (1205); HDPE DRAIN LINE; PROPERTY LINE; PROPERTY LINE

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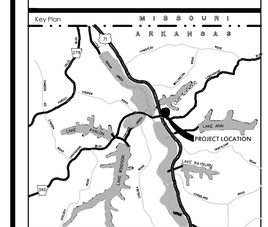
GRAPHIC SCALE IN FEET
20' 0 20'

TOWNCENTER EAST PHASE 3

BELLA VISTA, AR

Key Plan



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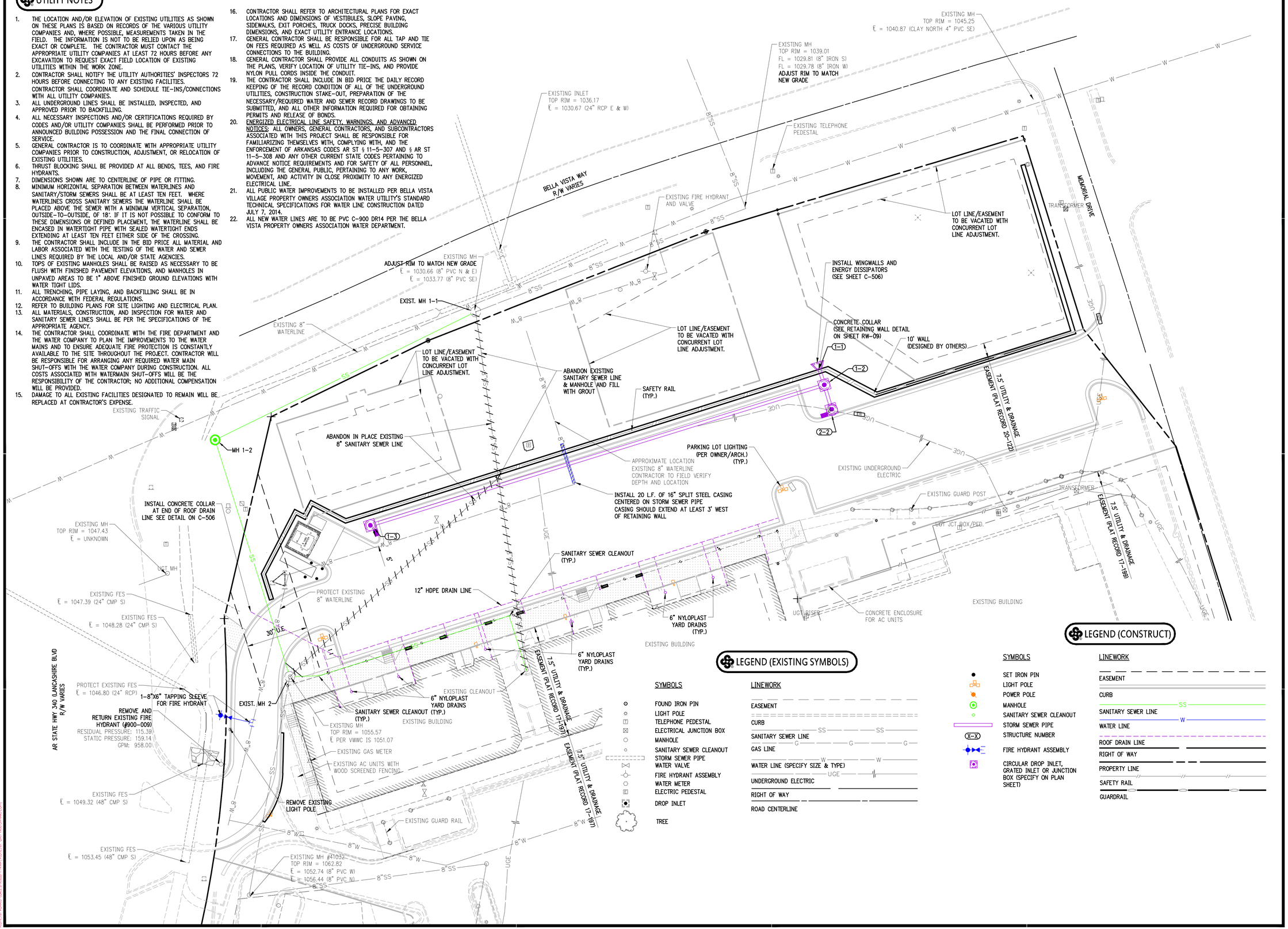
LSD-2025-58745

GRADING PLAN

C-103

UTILITY NOTES

1. THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF EXISTING UTILITIES WITHIN THE WORK ZONE.
2. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES' INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING FACILITIES. CONTRACTOR SHALL COORDINATE AND SCHEDULE TIE-INS/CONNECTIONS WITH ALL UTILITY COMPANIES.
3. ALL UNDERGROUND LINES SHALL BE INSTALLED, INSPECTED, AND APPROVED PRIOR TO BACKFILLING.
4. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICE.
5. GENERAL CONTRACTOR IS TO COORDINATE WITH APPROPRIATE UTILITY COMPANIES PRIOR TO CONSTRUCTION, ADJUSTMENT, OR RELOCATION OF EXISTING UTILITIES.
6. THRUST BLOCKING SHALL BE PROVIDED AT ALL BENDS, TEES, AND FIRE HYDRANTS.
7. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR FITTING.
8. MINIMUM HORIZONTAL SEPARATION BETWEEN WATERLINES AND SANITARY/STORM SEWERS SHALL BE AT LEAST TEN FEET. WHERE WATERLINES CROSS SANITARY SEWERS THE WATERLINE SHALL BE PLACED ABOVE THE SEWER WITH A MINIMUM VERTICAL SEPARATION, OUTSIDE-TO-OUTSIDE, OF 18'. IF IT IS NOT POSSIBLE TO CONFORM TO THESE DIMENSIONS OR DEFINED PLACEMENT, THE WATERLINE SHALL BE ENCASED IN WATERTIGHT PIPE WITH SEALED WATERTIGHT ENDS EXTENDING AT LEAST TEN FEET EITHER SIDE OF THE CROSSING.
9. THE CONTRACTOR SHALL INCLUDE IN THE BID PRICE ALL MATERIAL AND LABOR ASSOCIATED WITH THE TESTING OF THE WATER AND SEWER LINES REQUIRED BY THE LOCAL AND/OR STATE AGENCIES.
10. TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH FINISHED PAVEMENT ELEVATIONS, AND MANHOLES IN UNPAVED AREAS TO BE 1" ABOVE FINISHED GROUND ELEVATIONS WITH WATER TIGHT LIDS.
11. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL REGULATIONS.
12. REFER TO BUILDING PLANS FOR SITE LIGHTING AND ELECTRICAL PLAN.
13. ALL MATERIALS, CONSTRUCTION, AND INSPECTION FOR WATER AND SANITARY SEWER LINES SHALL BE PER THE SPECIFICATIONS OF THE APPROPRIATE AGENCY.
14. THE CONTRACTOR SHALL COORDINATE WITH THE FIRE DEPARTMENT AND THE WATER COMPANY TO PLAN THE IMPROVEMENTS TO THE WATER MAINS AND TO ENSURE ADEQUATE FIRE PROTECTION IS CONSTANTLY AVAILABLE TO THE SITE THROUGHOUT THE PROJECT. CONTRACTOR WILL BE RESPONSIBLE FOR ARRANGING ANY REQUIRED WATER MAIN SHUT-OFFS WITH THE WATER COMPANY DURING CONSTRUCTION. ALL COSTS ASSOCIATED WITH WATERMAIN SHUT-OFFS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR; NO ADDITIONAL COMPENSATION WILL BE PROVIDED.
15. DAMAGE TO ALL EXISTING FACILITIES DESIGNATED TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.
16. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS, AND EXACT UTILITY ENTRANCE LOCATIONS.
17. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TAP AND TIE ON FEES REQUIRED AS WELL AS COSTS OF UNDERGROUND SERVICE CONNECTIONS TO THE BUILDING.
18. GENERAL CONTRACTOR SHALL PROVIDE ALL CONDUITS AS SHOWN ON THE PLANS, VERIFY LOCATION OF UTILITY TIE-INS, AND PROVIDE NYLON PULL CORDS INSIDE THE CONDUIT.
19. THE CONTRACTOR SHALL INCLUDE IN BID PRICE THE DAILY RECORD KEEPING OF THE RECORD CONDITION OF ALL OF THE UNDERGROUND UTILITIES, CONSTRUCTION STAKE-OUT, PREPARATION OF THE NECESSARY/REQUIRED WATER AND SEWER RECORD DRAWINGS TO BE SUBMITTED, AND ALL OTHER INFORMATION REQUIRED FOR OBTAINING PERMITS AND RELEASE OF BONDS.
20. ENERGIZED ELECTRICAL LINE SAFETY, WARNINGS, AND ADVANCED NOTICES: ALL OWNERS, GENERAL CONTRACTORS, AND SUBCONTRACTORS ASSOCIATED WITH THIS PROJECT SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH, COMPLYING WITH, AND THE ENFORCEMENT OF ARKANSAS CODES AR ST § 11-5-307 AND § AR ST 11-5-308 AND ANY OTHER CURRENT STATE CODES PERTAINING TO ADVANCE NOTICE REQUIREMENTS AND FOR SAFETY OF ALL PERSONNEL, INCLUDING THE GENERAL PUBLIC, PERTAINING TO ANY WORK, MOVEMENT, AND ACTIVITY IN CLOSE PROXIMITY TO ANY ENERGIZED ELECTRICAL LINE.
21. ALL PUBLIC WATER IMPROVEMENTS TO BE INSTALLED PER BELLA VISTA VILLAGE PROPERTY OWNERS ASSOCIATION WATER UTILITY'S STANDARD TECHNICAL SPECIFICATIONS FOR WATER LINE CONSTRUCTION DATED JULY 7, 2014.
22. ALL NEW WATER LINES ARE TO BE PVC C-900 DR14 PER THE BELLA VISTA PROPERTY OWNERS ASSOCIATION WATER DEPARTMENT.



LEGEND (EXISTING SYMBOLS)

SYMBOLS

- FOUND IRON PIN
- LIGHT POLE
- TELEPHONE PEDESTAL
- ELECTRICAL JUNCTION BOX
- MANHOLE
- SANITARY SEWER CLEANOUT
- STORM SEWER PIPE
- WATER VALVE
- FIRE HYDRANT ASSEMBLY
- WATER METER
- ELECTRIC PEDESTAL
- DROP INLET
- TREE

LINEWORK

- EASEMENT
- CURB
- SANITARY SEWER LINE (SS)
- GAS LINE (G)
- WATER LINE (SPECIFY SIZE & TYPE) (W)
- UNDERGROUND ELECTRIC (UGE)
- RIGHT OF WAY
- ROAD CENTERLINE

LEGEND (CONSTRUCT)

SYMBOLS

- SET IRON PIN
- LIGHT POLE
- POWER POLE
- MANHOLE
- SANITARY SEWER CLEANOUT
- STORM SEWER PIPE
- STRUCTURE NUMBER
- FIRE HYDRANT ASSEMBLY
- CIRCULAR DROP INLET, GRATED INLET OR JUNCTION BOX (SPECIFY ON PLAN SHEET)

LINEWORK

- EASEMENT
- CURB
- SANITARY SEWER LINE (SS)
- WATER LINE (W)
- ROOF DRAIN LINE
- RIGHT OF WAY
- PROPERTY LINE
- SAFETY RAIL
- GUARDRAIL

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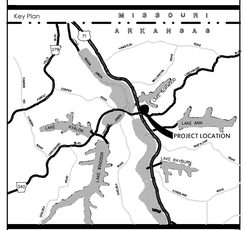
GRAPHIC SCALE IN FEET
20' 0 20'

TOWNCENTER EAST PHASE 3

BELLA VISTA, AR

Key Plan



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ISSUE DATE: 5/21/2025
CONTACT: EMCMAHON
QC by: MLOVE
QC Date: 10/05/2023

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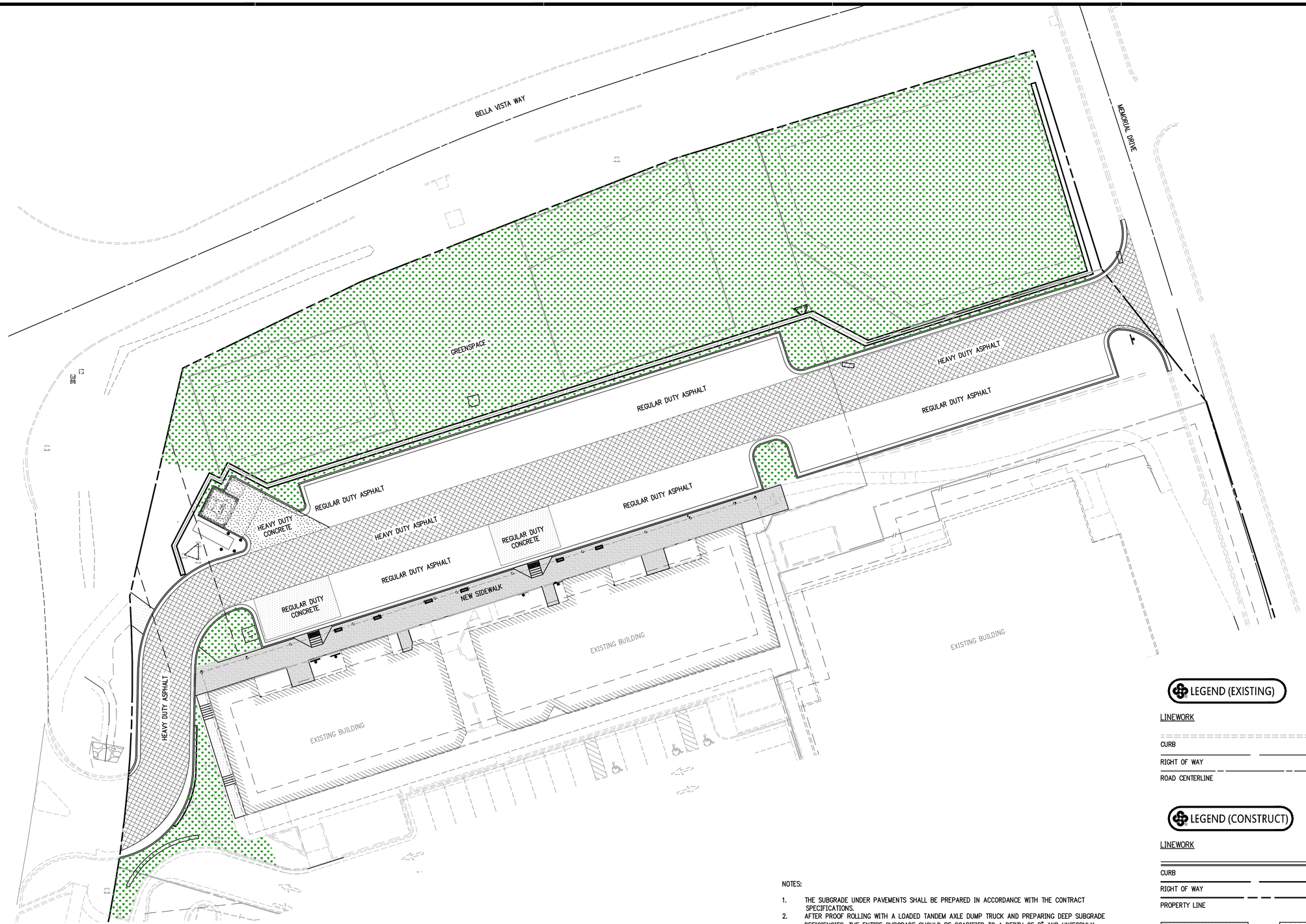
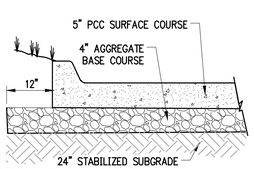
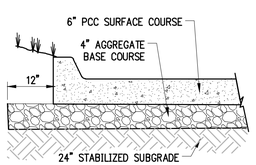
UTILITY PLAN (C)

C-104

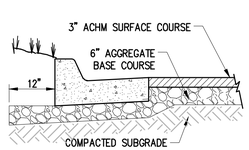




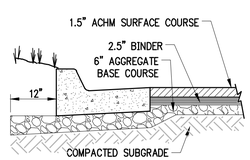
REGULAR DUTY CONCRETE PAVEMENT



HEAVY DUTY CONCRETE PAVEMENT



REGULAR DUTY ASPHALT PAVEMENT



HEAVY DUTY ASPHALT PAVEMENT

NOTES:

1. THE SUBGRADE UNDER PAVEMENTS SHALL BE PREPARED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.
2. AFTER PROOF ROLLING WITH A LOADED TANDEM AXLE DUMP TRUCK AND PREPARING DEEP SUBGRADE DEFICIENCIES, THE ENTIRE SUBGRADE SHOULD BE SCARIFIED TO A DEPTH OF 8" AND UNIFORMLY COMPACTED TO AT LEAST 95% OF MODIFIED PROCTOR.
3. AGGREGATE BASE COURSE MIXTURES SHALL CONFORM WITH THE GRADATION, COMPACTION AND OTHER REQUIREMENTS SHOWN IN THE CONTRACT SPECIFICATIONS OR WITH THE LOCAL STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
4. ASPHALTIC SURFACE AND BINDER COURSES SHALL CONFORM WITH THE GRADATION, COMPACTION AND OTHER REQUIREMENTS SHOWN IN THE CONTRACT SPECIFICATIONS OR WITH THE LOCAL STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
5. PORTLAND CEMENT CONCRETE PAVEMENT SHALL CONFORM WITH THE REQUIREMENTS SHOWN IN THE CONTRACT SPECIFICATIONS OR WITH THE LOCAL STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
6. THE CONTRACTOR SHALL APPLY A TACK COAT TO THE FACE OF THE CONCRETE GUTTER WHERE THE GUTTER CONTACTS ASPHALT.
7. ALL DRIVEWAY SECTIONS WITHIN THE RIGHT-OF-WAY SHALL BE CONSTRUCTED PER LOCAL SPECIFICATIONS AND STREET STANDARDS.

LEGEND (EXISTING)

LINEWORK

CURB

RIGHT OF WAY

ROAD CENTERLINE

LEGEND (CONSTRUCT)

LINEWORK

CURB

RIGHT OF WAY

PROPERTY LINE

CONSTRUCT SIDEWALK

INSTALL REGULAR DUTY CONCRETE

INSTALL HEAVY DUTY ASPHALT

INSTALL HEAVY DUTY CONCRETE

INSTALL REGULAR DUTY ASPHALT

GREENSPACE

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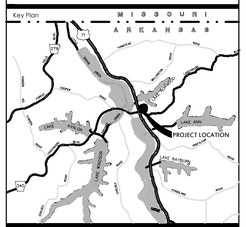
GRAPHIC SCALE IN FEET
20' 0 20'

TOWNCENTER EAST PHASE 3

BELLA VISTA, AR

Key Plan



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QC Date: 10/05/2023

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PAVING PLAN (C)

C-105

EROSION CONTROL LEGEND

PS	PERMANENT SEEDING
TPS	TEMPORARY PARKING AND STORAGE
	BOUNDARY LINE
	RIGHT OF WAY LINE
	LIMITS OF DISTURBANCE
	GRADE BREAK
xxx	CONTOUR ELEVATIONS
	STORM DRAIN
XX.X%	DIRECTION OF OVERLAND FLOW W/ GRADE
	LIMITS OF DRAINAGE SUB-BASIN
CD	ROCK CHECK DAM
CE	STABILIZED CONSTRUCTION EXIT (ENTRANCE)
DD	CHANNELED DIVERSIONS
DS	DEWATERING SYSTEM / STRUCTURE
SF	SILT FENCE
ST	SEDIMENT BASIN WITH STONE OUTLET
IP1	BLOCK AND AGGREGATE INLET SEDIMENT DEVICE
IP2	CURB INLET GRAVEL SEDIMENT FILTER
IP3	GRATED INLET GRAVEL SEDIMENT FILTER
IP4	SILT FENCE INLET PROTECTION
OP1	RIP RAP SLOPE PROTECTION (SEE SIZE THIS SHEET)
EQL	PERMANENT EROSION CONTROL LINING
SB	TEMPORARY SEDIMENT BASIN

NOTE: SEE SITE PLAN FOR EXISTING LEGEND SYMBOLS

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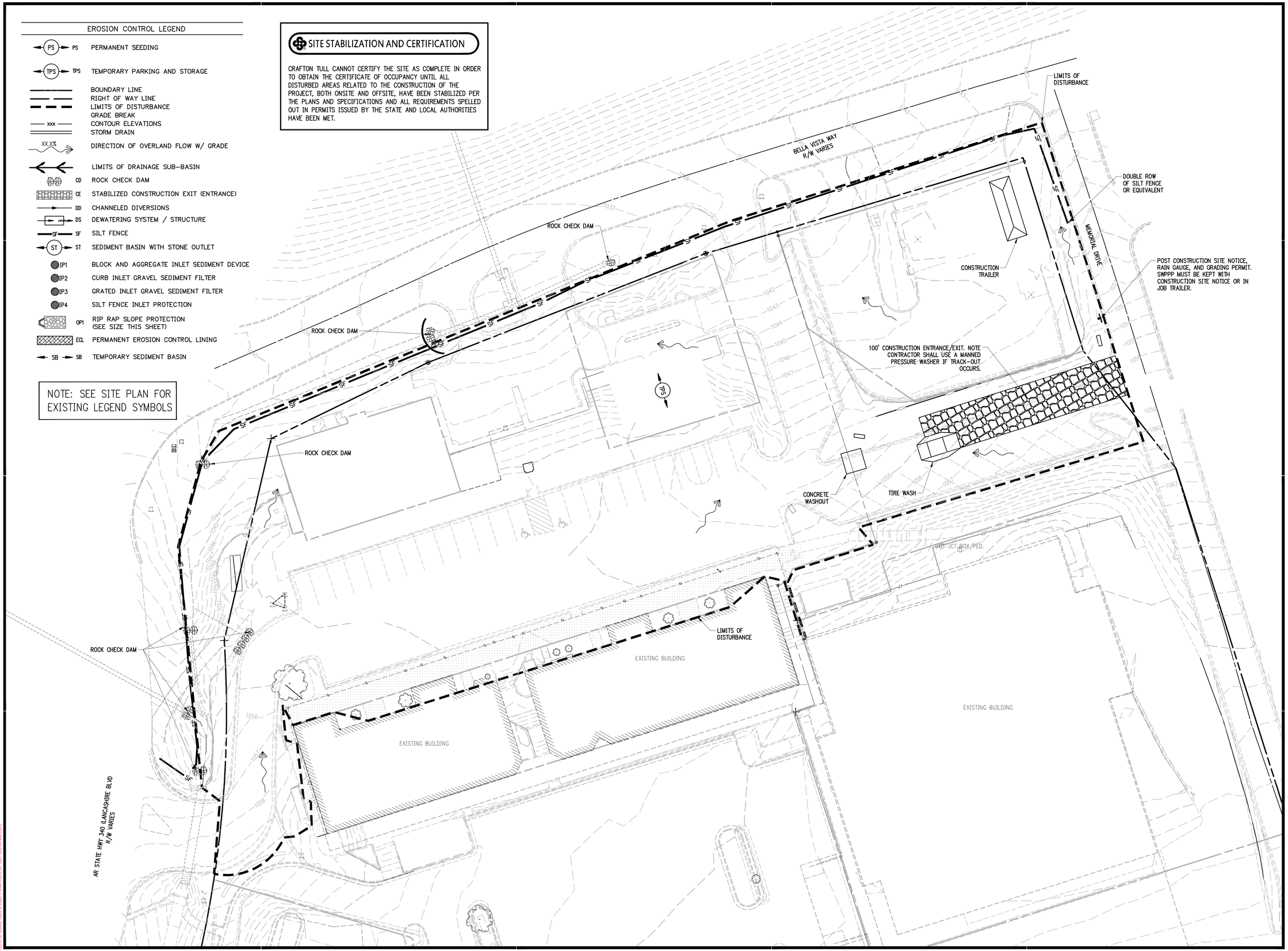

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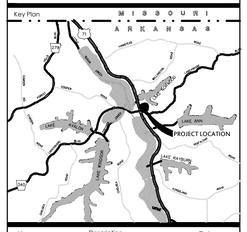
GRAPHIC SCALE IN FEET
20' 0 20'

TOWNCENTER EAST PHASE 3

BELLA VISTA, AR

Key Plan



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EROSION CONTROL PLAN - PHASE I

C-106

EROSION CONTROL LEGEND

PS	PERMANENT SEEDING
TPS	TEMPORARY PARKING AND STORAGE
	BOUNDARY LINE
	RIGHT OF WAY LINE
	LIMITS OF DISTURBANCE
	GRADE BREAK
xxx	CONTOUR ELEVATIONS
	STORM DRAIN
XX.X%	DIRECTION OF OVERLAND FLOW W/ GRADE
	LIMITS OF DRAINAGE SUB-BASIN
CD	ROCK CHECK DAM
CE	STABILIZED CONSTRUCTION EXIT (ENTRANCE)
DD	CHANNELED DIVERSIONS
DS	DEWATERING SYSTEM / STRUCTURE
SF	SILT FENCE
ST	SEDIMENT BASIN WITH STONE OUTLET
IP1	BLOCK AND AGGREGATE INLET SEDIMENT DEVICE
IP2	CURB INLET GRAVEL SEDIMENT FILTER
IP3	GRATED INLET GRAVEL SEDIMENT FILTER
IP4	SILT FENCE INLET PROTECTION
OP1	RIP RAP SLOPE PROTECTION (SEE SIZE THIS SHEET)
EQL	PERMANENT EROSION CONTROL LINING
SB	TEMPORARY SEDIMENT BASIN

NOTE: SEE SITE PLAN FOR EXISTING LEGEND SYMBOLS

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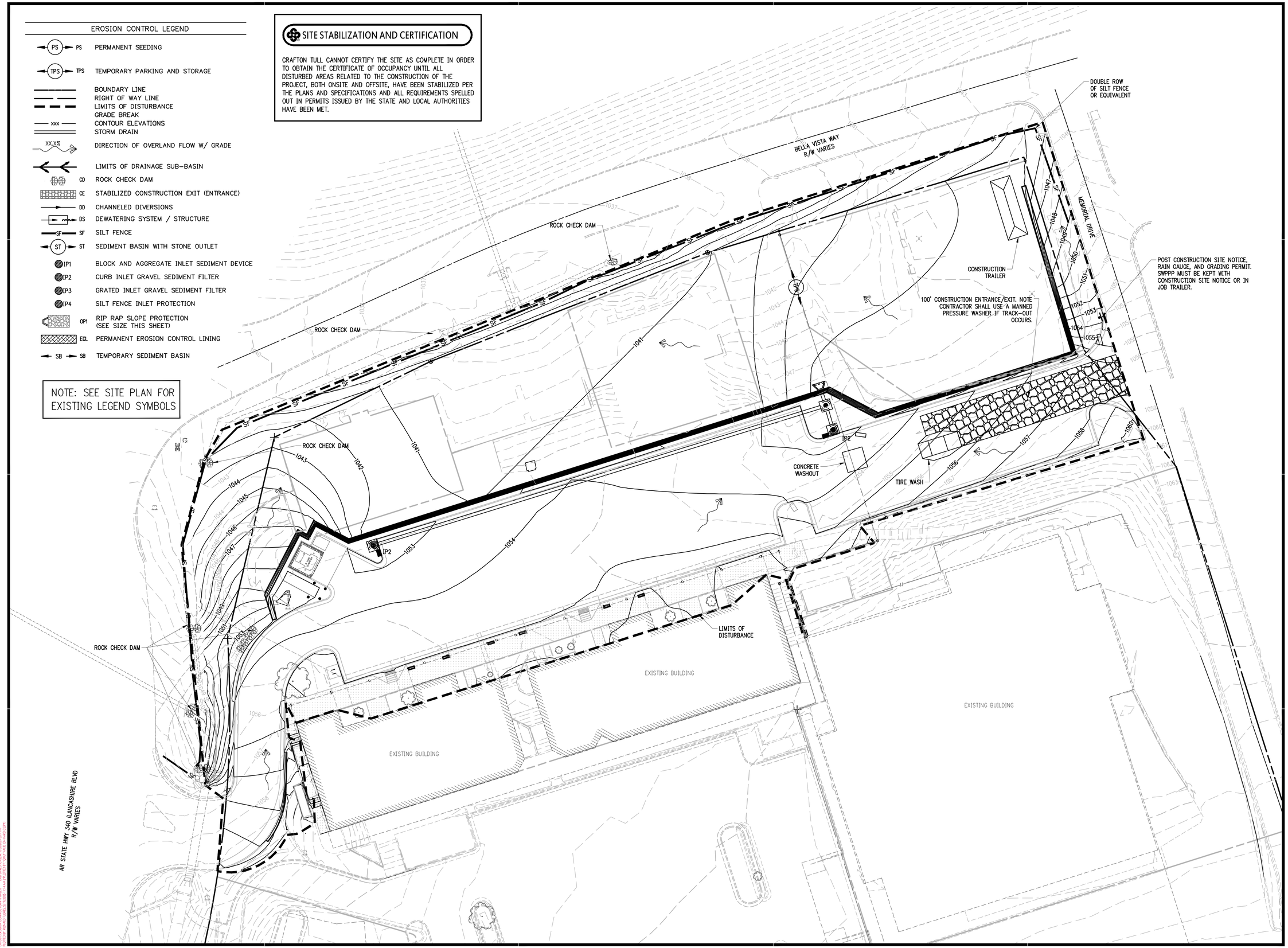

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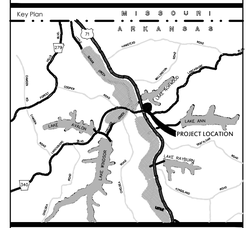
GRAPHIC SCALE IN FEET
20' 0 20'

TOWNCENTER EAST PHASE 3

BELLA VISTA, AR

Key Plan



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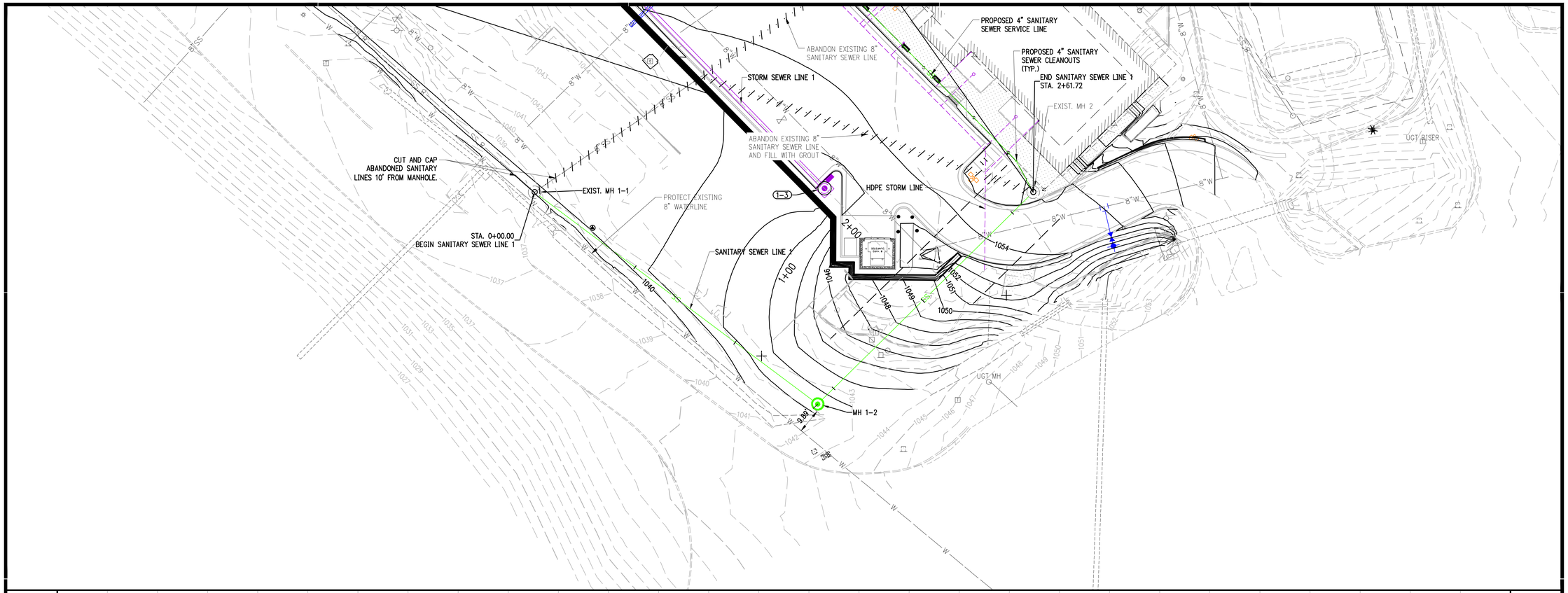
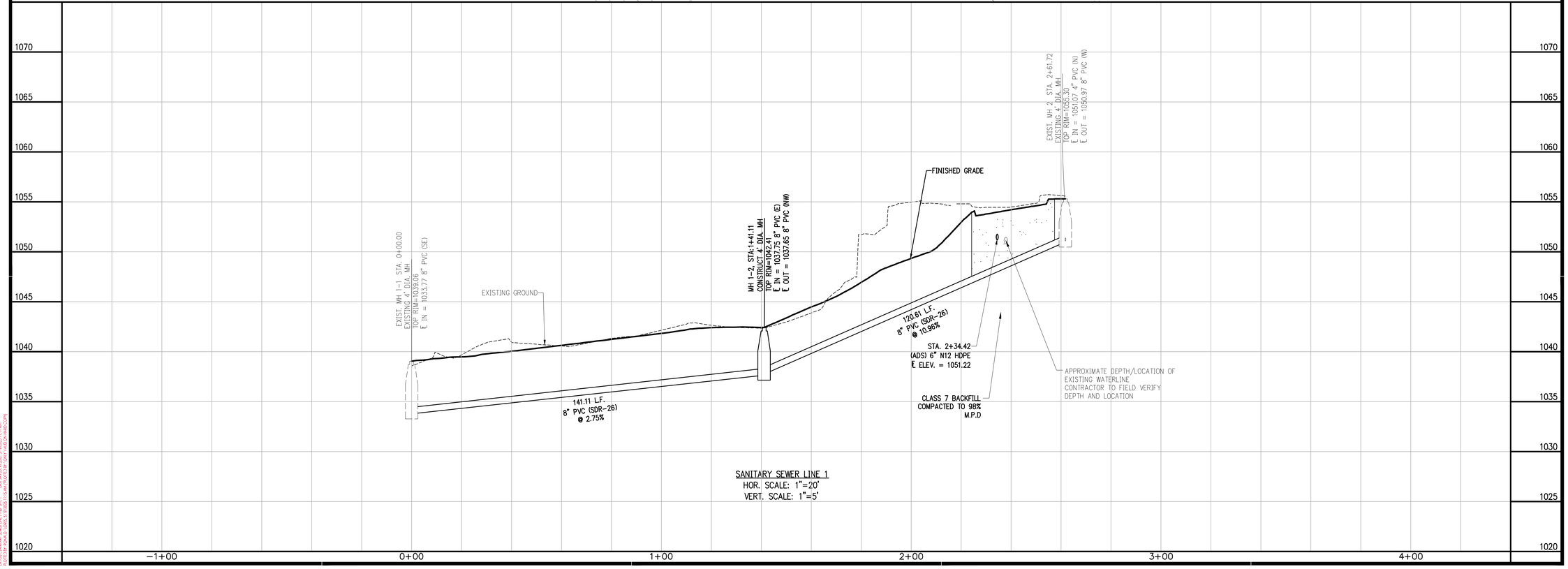
EROSION CONTROL PLAN - PHASE II

C-107





SANITARY SEWER LINE 1
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

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GRAPHIC SCALE IN FEET
20' 0 20'

TOWNCENTER EAST PHASE 3

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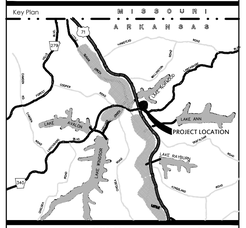
Key Plan



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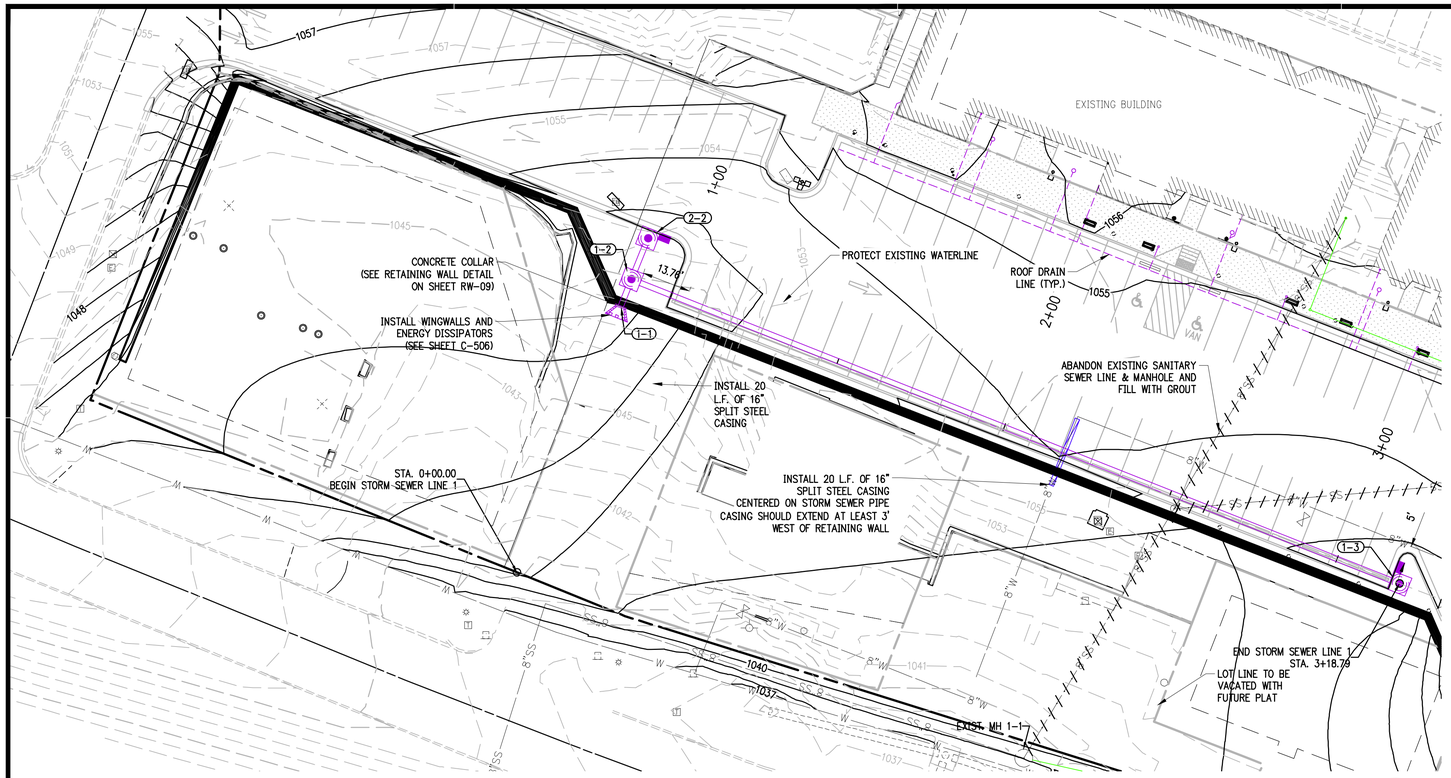
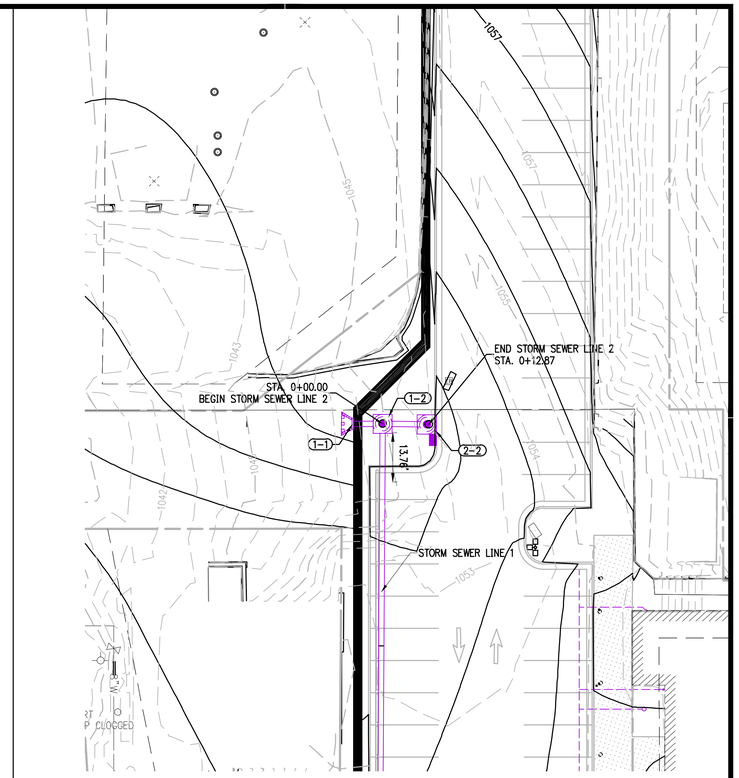
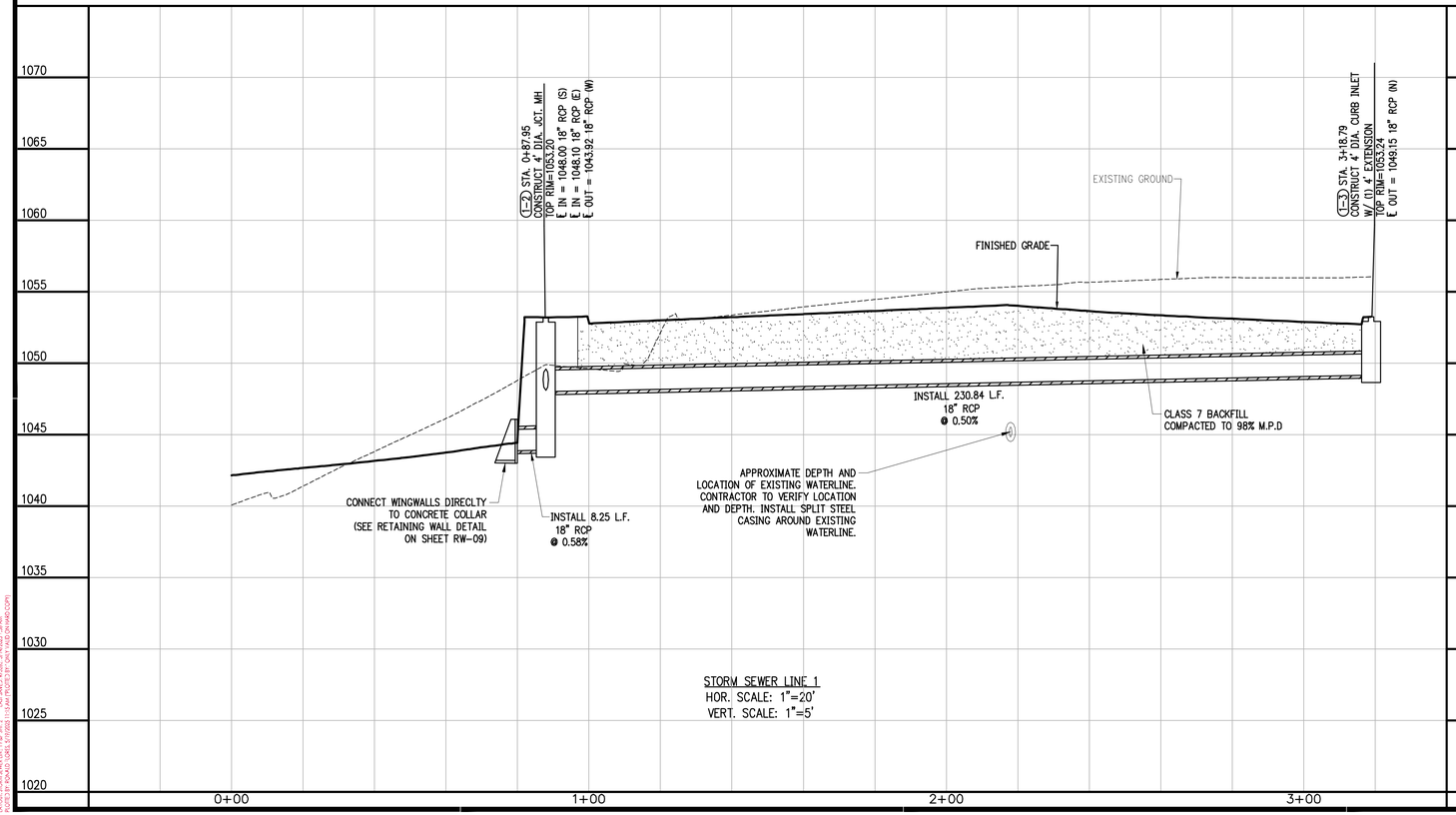
SANITARY SEWER LINE 1 P&P (C)

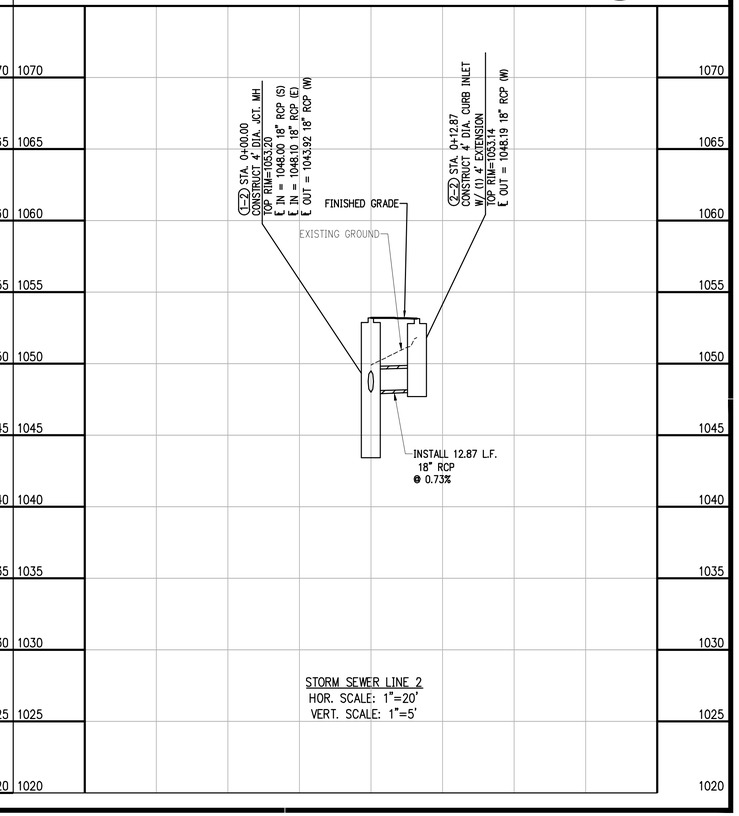
C-201







STORM SEWER LINE 1
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'



STORM SEWER LINE 2
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

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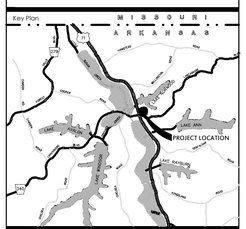
GRAPHIC SCALE IN FEET
20' 0 20'

TOWNCENTER EAST PHASE 3

BELLA VISTA, AR

Key Plan



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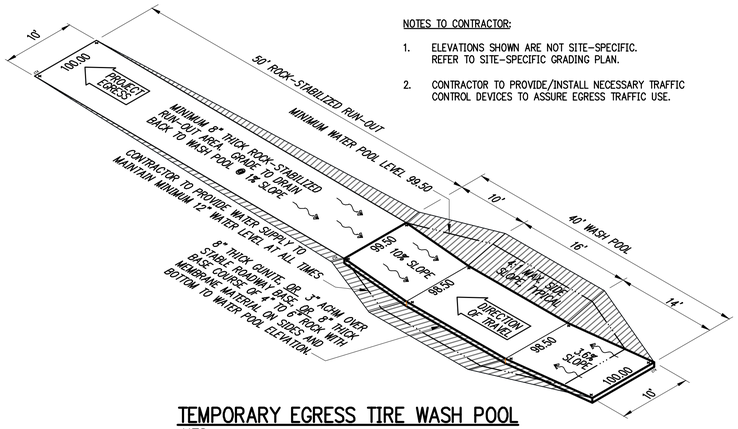
STORM SEWER LINE 1&2 P&P (C)

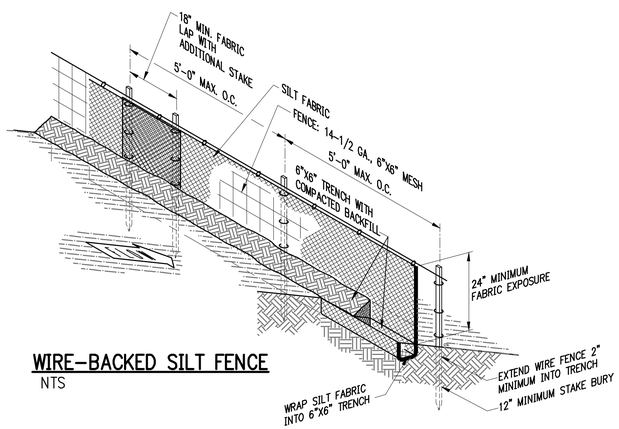
C-202

NOTES TO CONTRACTOR:

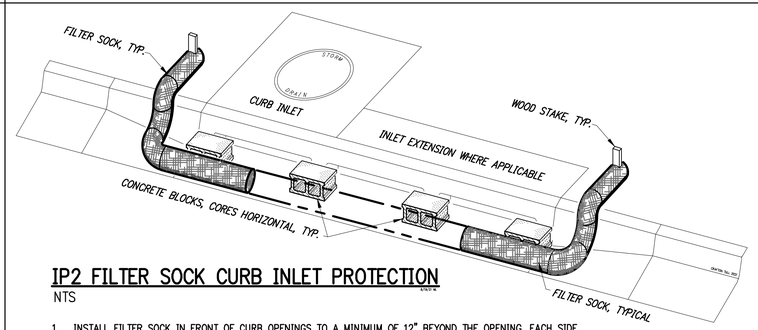
1. ELEVATIONS SHOWN ARE NOT SITE-SPECIFIC. REFER TO SITE-SPECIFIC GRADING PLAN.
2. CONTRACTOR TO PROVIDE/INSTALL NECESSARY TRAFFIC CONTROL DEVICES TO ASSURE EGRESS TRAFFIC USE.



TEMPORARY EGRESS TIRE WASH POOL
NTS

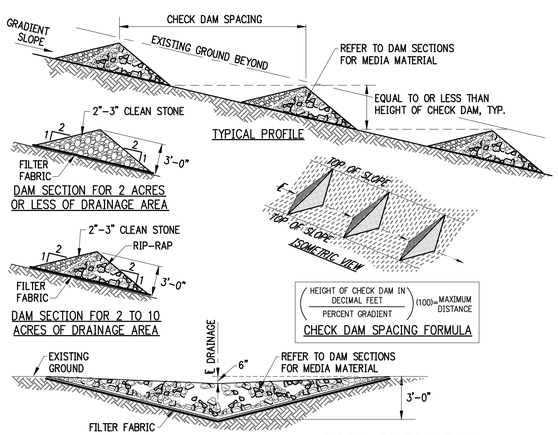


WIRE-BACKED SILT FENCE
NTS

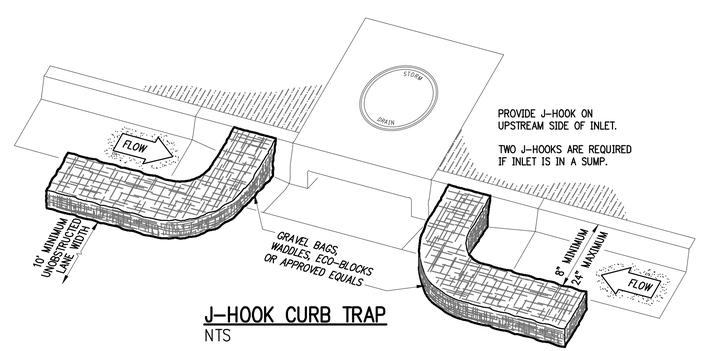


IP2 FILTER SOCK CURB INLET PROTECTION
NTS

1. INSTALL FILTER SOCK IN FRONT OF CURB OPENINGS TO A MINIMUM OF 12" BEYOND THE OPENING, EACH SIDE.
2. ANCHOR THE FILTER SOCK BEHIND THE CURB WITH WOODEN STACKS 12" MINIMUM INTO SOIL.
3. USE 8" DIAMETER FILTER SOCK FOR STANDARD CURB INLET. SLIGHTLY COMPACT TO CURB HEIGHT DURING CURB INSTALLATION.
4. MAINTAIN FREE OF DEBRIS AND SEDIMENT TO ENSURE PROPER FLOW AND FUNCTION. OVERFLOW OF FILTER IS ACCEPTABLE DURING SEVERE STORM EVENTS.
5. FILTER SOCK SHALL BE POSITIONED TO PROVIDE A PERMEABLE BARRIER TO THE DRAIN AND COLLECT SEDIMENT OUTSIDE THE SOCK.
6. CONCRETE BLOCKS SHALL BE PLACED WITH CORES HORIZONTAL AT EACH END AND EVERY FOUR FEET MAXIMUM WITHIN.



ROCK CHECK DAM
NTS



J-HOOK CURB TRAP
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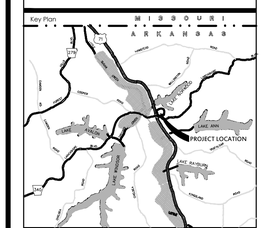
No. 109
ARKANSAS ENGINEER

TOWNCENTER EAST
PHASE 3
BELLA VISTA, AR

Key Plan



No.	Description	Date

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PROJECT NO: 19105800
ISSUE DATE: 5/21/2025
CONTACT: E.MCMAHON
QC by: M.LOVE
QC Date: 10/05/2023

PRELIMINARY PLANS

NOT FOR CONSTRUCTION · REVIEW SET

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LSD-2025-58745

EROSION CONTROL DETAILS 1 OF 2

C-501

PHASE I

1. INSTALL STABILIZED CONSTRUCTION ENTRANCES/EXITS.
2. PREPARE TEMPORARY PARKING AND STORAGE AREAS. UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING: TRAILER, PARKING, LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASH-OUT, MASON'S AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., DENOTE THEM ON THE SITE MAPS IMMEDIATELY AND NOTE ANY CHANGES IN THE LOCATIONS AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS.
3. CONSTRUCT THE SILT FENCES ON THE SITE.
4. CONSTRUCT THE SEDIMENTATION AND SEDIMENT TRAP BASINS.
5. HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEER CONSULTANT TO PERFORM INSPECTION OF BMPs. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORM WATER PRE-CONSTRUCTION MEETING WITH ENGINEER AND ALL GROUND-DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.
6. CLEAR AND GRUB THE SITE.
7. START CONSTRUCTION OF THE BUILDING PAD AND STRUCTURES.
8. BEGIN GRADING THE SITE.

PHASE II

1. TEMPORARILY SEED DENUDED AREAS.
2. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
3. INSTALL RIP-RAP AROUND OUT STRUCTURES.
4. INSTALL INLET PROTECTION AROUND ALL STORM SEWER STRUCTURES.
5. PREPARE SITE FOR PAVING.
6. PAVE SITE.
7. INSTALL INLET PROTECTION DEVICES.
8. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING.
9. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES IF SITE IS STABILIZED.

GENERAL EROSION NOTES:

A. THE STORMWATER POLLUTION PREVENTION PLAN IS COMPRISED OF THIS DRAWING (SITE MAP), THE STANDARD DETAILS, THE PLAN NARRATIVE, ATTACHMENTS INCLUDED IN THE SPECIFICATIONS SECTION 312800 (EROSION AND SEDIMENTATION CONTROL), PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.

B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND THE STATE OF ARKANSAS NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

C. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.

D. BEST MANAGEMENT PRACTICES (BMP) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AND APPLICABLE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY THE PERMITTING AGENCY OR OWNER.

E. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON THE SITE AT ALL TIMES.

F. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.

G. GENERAL CONTRACTOR SHALL DENOTE THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, AND AREA FOR PORTABLE FACILITIES, OFFICE TRAILERS AND TOILET FACILITIES.

H. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE AND EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.

I. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN UP FUEL OR CHEMICAL SPILLS AND LEAKS.

J. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM-BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

K. RUBBISH, TRASH, GARBAGE, LITTER OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM BEING BLOWN OR WASHED OFF-SITE.

L. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN AND SWPPP SHALL BE INITIATED AS SOON AS POSSIBLE.

M. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 14 DAYS SHALL BE TEMPORARY SEEDED.

N. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.

O. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCE/EXIT IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES EXIT ONTO THE PUBLIC ROADS. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF-SITE.

P. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

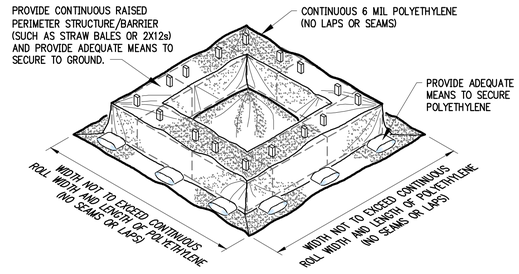
Q. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

R. ON-SITE AND OFF-SITE STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH THE GENERAL PERMIT.

S. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

T. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO PREVENT EROSION.

U. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.



CONCRETE WASH-OUT BASIN

NTS

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
ROUGH GRADE / SEDIMENT CONTROL																		
TEMPORARY CONTROL MEASURES																		
STRIP & STOCKPILE TOPSOIL																		
STORM FACILITIES																		
TEMPORARY CONSTRUCTION ROADS																		
FOUNDATION / BUILDING CONSTRUCTION																		
SITE CONSTRUCTION																		
PERMANENT CONTROL STRUCTURES																		
FINISH GRADING																		
LANDSCAPING/SEED/FINAL STABILIZATION																		

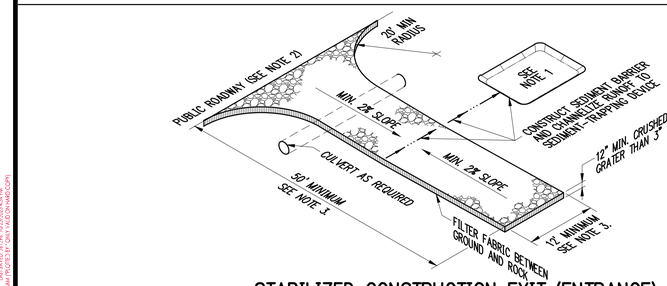
ACREAGE SUMMARY	
IMPERVIOUS AREA	0.67 ACRES
SEEDED AREA	1.13 ACRES
TOTAL DISTURBED	1.80 ACRES

DEVELOPER/OWNER:
ENTER DEVELOPER INFORMATION

SITE OPERATOR/GENERAL CONTRACTOR:

SUPERINTENDENT:

T.B.M.
ENTER BENCHMARK INFORMATION



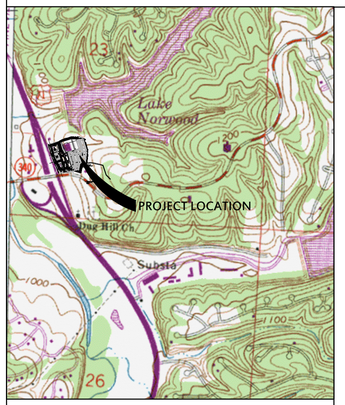
STABILIZED CONSTRUCTION EXIT (ENTRANCE)

NTS

1. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCE/EXIT IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES EXIT ONTO THE PUBLIC ROADS. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF SITE.

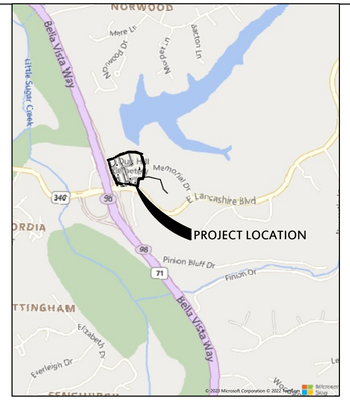
2. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

3. LENGTH AND WIDTH TO SUIT SITE, CONSTRUCTION TRAFFIC AND EFFECTIVENESS.



USGS QUADRANGLE MAP

NTS



VICINITY MAP

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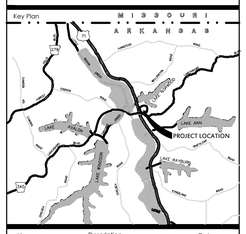

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QC by: M.LOVE
QC Date: 10/05/2023

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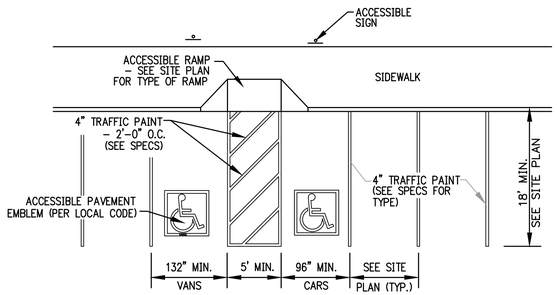
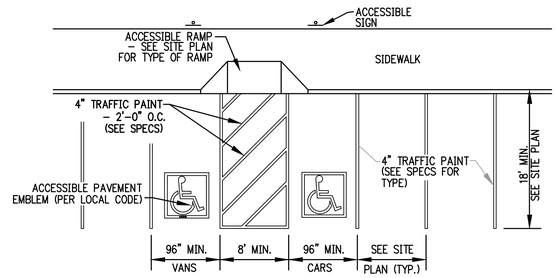
LSD-2025-58745

EROSION CONTROL DETAILS 2 OF 2

C-502



ALTERNATE "A"

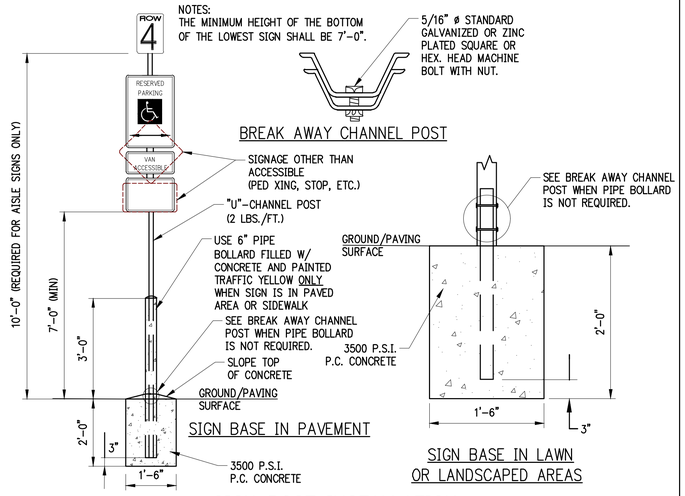


ALTERNATE "B"

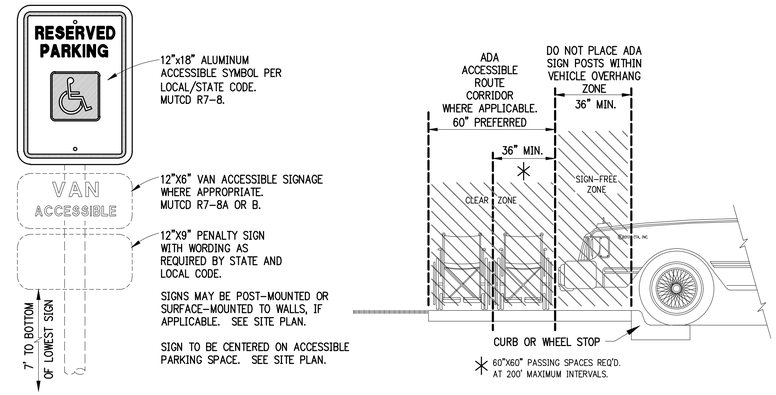
ALL DIMENSIONS ARE TO CENTERLINE OF STRIPE UNLESS OTHERWISE NOTED. COLOR OF ALL ACCESSIBLE TRAFFIC PAINT SHALL BE PER LOCAL CODE (WHITE, YELLOW, ETC.)

208.2.4 VAN PARKING SPACES:
FOR EVERY SIX OR FRACTIONAL OF SIX PARKING SPACES REQUIRED BY 208.2 TO COMPLY WITH 502, AT LEAST ONE SHALL BE A VAN PARKING SPACE COMPLYING WITH 502.

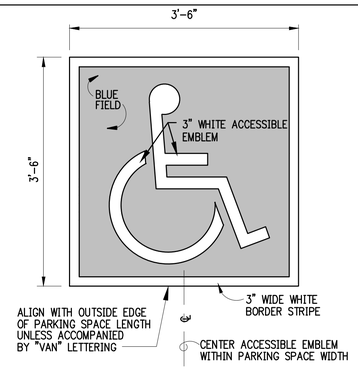
VAN ACCESSIBLE PARKING STRIPING
NTS



SIGN POST INSTALLATION
NTS



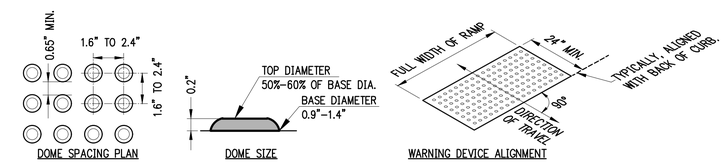
ACCESSIBLE SIGN / PLACEMENT LIMITS
NTS



NOTE: LOCAL CODE MAY REQUIRE A WHITE FIELD WITH BLUE EMBLEM OR ANOTHER COLOR ARRANGEMENT. THE CONTRACTOR SHALL VERIFY THE REQUIRED PAINT COLOR WITH LOCAL OFFICIAL PRIOR TO PAINTING PAVEMENT MARKINGS.

LOCAL AND/OR STATE CODE WILL TAKE PRECEDENCE FOR EMBLEM SIZE, COLOR AND LOCATION.

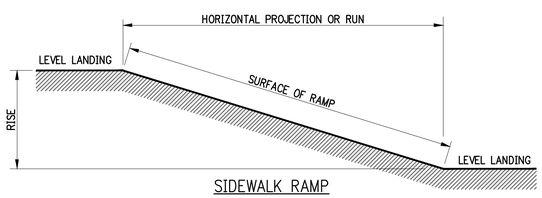
ACCESSIBLE PAVEMENT EMBLEM
NTS



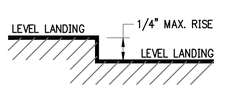
NOTES:

1. DETECTABLE WARNING SURFACES SHALL CONSIST OF TRUNCATED DOMES ALIGNED IN A SQUARE OR RADIAL GRID PATTERN AND SHALL COMPLY WITH ADA 705 GUIDELINES.
2. DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT GUTTER, STREET OR HIGHWAY, OR PEDESTRIAN ACCESS ROUTE SURFACE, EITHER LIGHT–ON–DARK OR DARK–ON–LIGHT.

DETECTABLE WARNING DEVICE
NTS

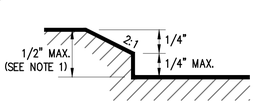


SIDEWALK RAMP



VERTICAL CHANGES IN LEVEL

SLOPE	MAXIMUM RISE	MAXIMUM HORIZONTAL PROJECTION OR RUN
1:12 TO < 1:16 (8.33% TO < 6.25%)	30 INCHES	30 FEET
1:16 TO < 1:20 (6.25% TO < 5.00%)	30 INCHES	40 FEET



BEVELED LEVEL CHANGES

NOTES:

1. CHANGES IN LEVEL GREATER THAN 1/2 INCH SHALL BE ACCOMPLISHED BY MEANS OF A RAMP.
2. RAMP RUN GREATER THAN 6 INCHES OF RISE OR 6 FEET IN HORIZONTAL PROJECTION SHALL HAVE HANDRAILS ON BOTH SIDES, EXCEPT CURB RAMPS.
3. HANDRAILS SHALL BE 34" TO 38" HIGH AND A MINIMUM OF 36" APART. HANDRAILS MUST EXTEND 12" BEYOND TOP AND BOTTOM OF THE RAMP SEGMENT.

IN–LINE ACCESSIBLE ROUTE / SIDEWALK RAMP – CHANGES IN LEVEL
NTS

MINIMUM ACCESSIBLE PARKING SPACE REQUIREMENTS

ON–SITE (PRIVATE) ACCESSIBLE PARKING SCHEDULE		
TOTAL NUMBER OF PARKING SPACES REQUIRED PROVIDED (PER LOT)	TOTAL MINIMUM NUMBER OF ACCESSIBLE PARKING SPACES (60" & 96" AISLES) COLUMN "A"	VAN–ACCESSIBLE PARKING SPACES WITH MIN. 96" WIDE ACCESS AISLE
1 TO 25	1	1
26 TO 50	2	1
51 TO 75	3	1
76 TO 100	4	1
101 TO 150	5	1
151 TO 200	6	1
201 TO 300	7	2
301 TO 400	8	2
401 TO 500	9	2
501 TO 1000	2% OF TOTAL PARKING PROVIDED IN EACH LOT	1/6 OF COLUMN "A"
1001 & OVER	20 PLUS 1 FOR EACH 100 OVER 1000	1/6 OF COLUMN "A"

ON–STREET (PUBLIC) ACCESSIBLE PARKING SCHEDULE	
TOTAL NUMBER OF MARKED OR METERED PARKING SPACES ON THE BLOCK PERIMETER	TOTAL REQUIRED NUMBER OF ACCESSIBLE PARKING SPACES
1 TO 25	1
26 TO 50	2
51 TO 75	3
76 TO 100	4
101 TO 150	5
151 TO 200	6
201 AND OVER	4 PERCENT OF TOTAL

208.2.4 VAN PARKING SPACES:
FOR EVERY SIX OR FRACTIONAL OF SIX PARKING SPACES REQUIRED BY 208.2 TO COMPLY WITH 502, AT LEAST ONE SHALL BE A VAN PARKING SPACE COMPLYING WITH 502.

GENERAL NOTES:

1. IN NEW CONSTRUCTION, UNLESS OTHERWISE INDICATED ON THE PLANS, ACCESSIBLE RAMPS ARE TO BE PROVIDED AT ALL CORNERS OF CURBED STREET INTERSECTIONS AND MID–BLOCK CROSSWALK LOCATIONS, WHERE SHOWN IN PLANS.
2. IN ALTERATIONS, ACCESSIBLE RAMPS ARE TO BE PROVIDED AT CURBED STREET INTERSECTIONS WITH PEDESTRIAN TRAFFIC AND MID–BLOCK CROSSWALK LOCATIONS, WHERE SHOWN IN PLANS.
3. THE LENGTH OF THE RAMP SHALL BE SUCH THAT THE SLOPE DOES NOT EXCEED 1:12. THE SURFACE TEXTURE SHALL BE BROOM FINISH.
4. THE NORMAL GUTTER GRADE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
5. ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
6. THE MINIMUM CONCRETE THICKNESS OF THE RAMP, WALK, & LANDING SHALL BE 4 INCHES.
7. THE MINIMUM WIDTH OF THE RAMPS SHALL BE THE EXISTING WALK WIDTH OR 48 INCHES, WHICHEVER IS GREATER.
8. RAMPS SHALL BE CONSTRUCTED AS NECESSARY TO ENSURE THAT THEY ARE PARALLEL TO A LINE DRAWN FROM THE CENTER OF ONE RAMP TO THE CENTER OF THE RAMP ON THE OPPOSITE SIDE OF THE INTERSECTION.
9. THE DIMENSIONS SHOWN ON THIS DRAWING ARE FOR A 90° INTERSECTION ONLY. DIMENSIONS FOR SKEWED INTERSECTIONS WILL VARY, AND ARE TO BE DETERMINED BY THE ENGINEER.
10. THE MAXIMUM CROSS SLOPES OF RAMPS AND SIDEWALKS SHALL NOT EXCEED 2.0 PERCENT.
11. CONTRACTOR TO ENSURE LATEST–EDITION COMPLIANCE WITH ALL LOCAL, STATE AND FEDERAL ADA ACCESSIBILITY STANDARDS.

THESE DETAILS ARE PRODUCED BY CRAFTON, TULL AND ASSOCIATES, INC., AND BASED ON THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, DEPARTMENT OF JUSTICE, SEPTEMBER 15, 2010. WWW.ADA.GOV

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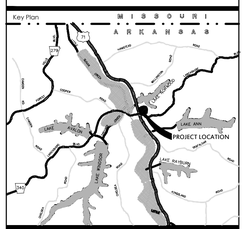

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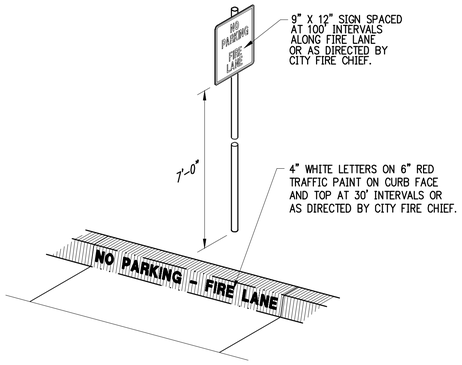
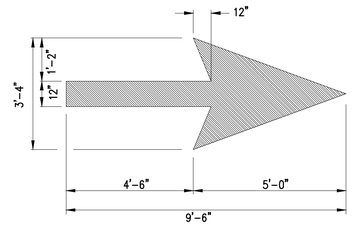
LSD-2025-58745

STANDARD DETAILS 1 OF 4

C-503

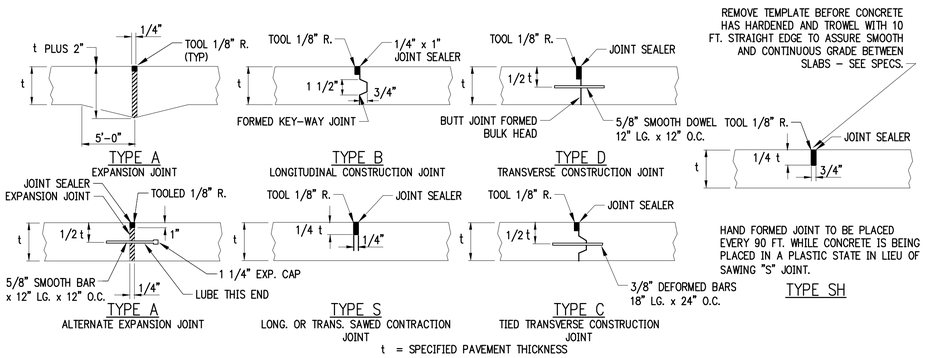


FIRE LANE STRIPING
NTS



PAVEMENT MARKING ARROW
NTS

NOTES:
1. ALL JOINTS SPACING NOT TO EXCEED 15'-0" INTERVALS.
2. SAWED JOINTS SHALL BE CUT AS SOON AS POSSIBLE AFTER FINISH WORK IS COMPLETE & CONCRETE HAS CURED TO ACCEPT TYPE OF SAW EQUIPMENT.
3. ASSURE SAW JOINTS ARE CLEAN AND DRY PRIOR TO THE APPLICATION OF THE JOINT SEALANT.
4. SPECIFIED JOINT SEALANT APPLIED IN ACCORDANCE WITH SEALANT MANUFACTURER'S REQUIREMENTS SEALANT TOOLED 1/8" BELOW PAVEMENT SURFACE.
5. DRILLING BY HAND OR PUSHING DOWEL BARS INTO GREEN CONCRETE IS NOT ACCEPTABLE.
6. COMPLETELY FILL HOLE WITH EPOXY GROUT AND INSERT DOWEL WITH EXPANSION CAPS.
7. DOWELS SHALL BE ALIGNED PERPENDICULAR TO THE JOINT.

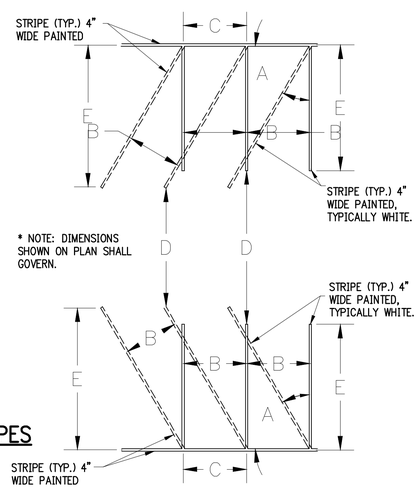


CONCRETE JOINTING
NTS

STRIPING DIMENSIONS						
ANGLE (A)	TYPE	WIDTH (IN FT.) (B)	CURB LENGTH (IN FT.) (C)	ONE-WAY AISLE WIDTH (IN FT.) (D)	TWO-WAY AISLE WIDTH (IN FT.) (D)	STALL DEPTH (IN FT.) (E)
0°	STANDARD	8	22.5	12	24	8
PARALLEL	COMPACT	7.5	19.5	12	24	7.5
30°	STANDARD	9	18	12	24	17
	COMPACT	7.5	15	12	24	14
45°	STANDARD	9	12.5	12	24	19
	COMPACT	7.5	10.5	12	24	16
60°	STANDARD	9	10.5	18	24	20
	COMPACT	7.5	8.5	15	24	16.5
90°	STANDARD	9	9	24	24	19
	COMPACT	7.5	7.5	22	24	15

NOTES:

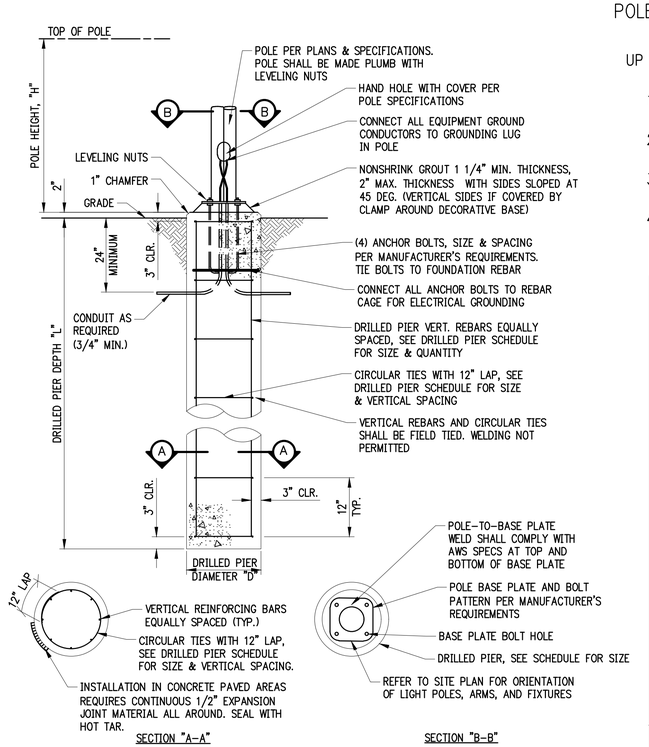
1. LETTERS, NUMBERS AND ARROWS FOR DRIVEWAYS, PARKING LOTS AND STREETS SHALL BE APPLIED ACCORDING TO REQUIREMENTS AS OUTLINED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
2. PAVEMENT MARKINGS ARE TO BE PAINTED REFLECTIVE WHITE. MARKINGS SHALL BE THERMOPLASTIC IF CALLED FOR IN THE PLANS OR SPECIFICATIONS.



PARKING STRIPES
NTS

NOTES:

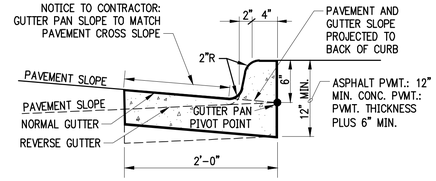
1. LETTERS, NUMBERS AND ARROWS FOR DRIVEWAYS, PARKING LOTS AND STREETS SHALL BE APPLIED ACCORDING TO REQUIREMENTS AS OUTLINED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
2. PAVEMENT MARKINGS TO BE REFLECTIVE WHITE PAINT OR THERMOPLASTIC AS INDICATED IN THE PLANS.



NOTES:
1. 3500 PSI MIN. 28 DAY COMPRESSIVE STRENGTH CONC. WITH GRADE 60 RE-BARS.
2. FOUNDATION EXCAVATION SHALL BE BY AUGER IN UNDISTURBED OR PROPERLY COMPACTED FILL PER SPECIFICATIONS. SIZE OF AUGER SHALL MATCH DIAMETER OF PIER.
3. IF GROUNDWATER IS PRESENT IN AUGER HOLE, REMOVE BEFORE POURING CONCRETE.
4. DESIGN CRITERIA:
   - IN PLACE SOIL IS ASSUMED TO BE CLASS 5 OF IBC 2006, TABLE 1804.2 WITH INCREASED ALLOWABLE LATERAL BEARING OF 200 PSF/FT PER SECTION 1804.3.1.
   - BASIC WIND SPEED (3 SECOND GUST) = 90 MPH
   - EXPOSURE CATEGORY C
   - IMPORTANCE FACTOR = 1.0

ROUND LIGHT FOUNDATION – AT GRADE
NTS

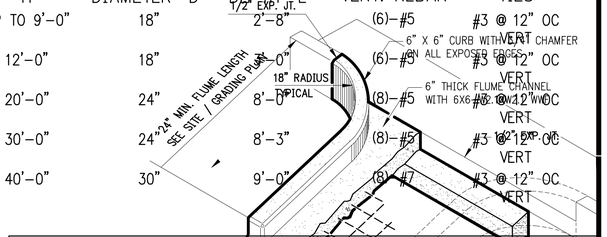
NOTES:
1. CONTRACTOR IS ADVISED TO BE CONSCIOUS OF VARIOUS PAVEMENT CROSS SLOPES, ESPECIALLY AT INTERSECTIONS AND PARKING LOTS.
2. THE CONTRACTOR SHALL APPLY A TACK COAT TO THE FACE OF THE CONCRETE GUTTER WHERE THE GUTTER CONTACTS ASPHALT.
3. CONCRETE FOR CURB AND GUTTER TO BE CLASS A, 3500 PSI, 5.5 BAG MIX WITH 5–8% AIR ENTRAINMENT.
4. ALL CURB AND GUTTER SHALL HAVE A BROOMED FINISH UNLESS OTHERWISE SPECIFIED.
5. SAW CUT JOINTS AT 15' O.C. SEAL WITH ONE PART COLD APPLIED SILICONE JOINT SEALER OR OTHER APPROVED SEALANT. ALL JOINTS TO BE SEALED PRIOR TO FINAL ASPHALT PLACEMENT.
6. PROVIDE 1/2" PREFORMED EXPANSION JOINT MATERIAL (ASPHALT IMPREGNATED FIBERBOARD OR OTHER APPROVED MATERIAL) AT STATIONARY STRUCTURES, (DROP INLETS, END OF CURBS, DRIVEWAYS – SEE DETAIL) OR AS DIRECTED BY ENGINEER.



TYPICAL CURB SECTION
NTS

DRILLED PIER SCHEDULE

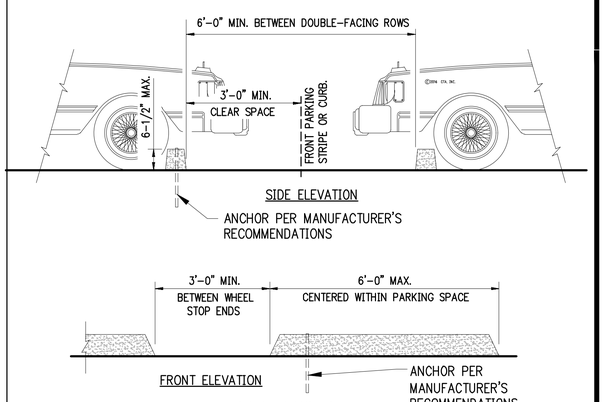
POLE HEIGHT "H"	DRILLED PIER DIAMETER "D"	DRILLED PIER DEPTH "L"	DRILLED PIER VERT. REBAR	CIRCULAR TIES
UP TO 9'-0"	18"	2'-8"	(6)–#5	#3 @ 12" OC VERT
12'-0"	18"	4'-0"	(6)–#6	#3 @ 12" OC VERT
20'-0"	24"	8'-0"	(8)–#5	#3 @ 12" OC VERT
30'-0"	24"	8'-3"	(8)–#5	#3 @ 12" OC VERT
40'-0"	30"	9'-0"	(8)–#7	#3 @ 12" OC VERT



CONCRETE FLUME
NTS

ASTM 1637–95 B. WHEEL STOPS

8.1 PARKING LOTS SHOULD BE DESIGNED TO AVOID THE USE OF WHEEL STOPS.
8.2 WHEEL STOPS SHALL NOT BE PLACED IN PEDESTRIAN WALKWAYS OR FORESEEABLE PEDESTRIAN PATHS.
8.3 WHEEL STOPS SHALL BE IN CONTRAST WITH THEIR SURROUNDINGS. CONCRETE SHALL BE CLASS B
8.4 WHEEL STOPS SHALL BE NO LONGER THAN 6 FEET AND SHALL BE PLACED IN THE CENTER OF THE PARKING STALLS. THE MINIMUM WIDTH OF PEDESTRIAN PASSAGE BETWEEN WHEEL STOPS SHALL BE 3 FEET.
8.5 THE TOP OF WHEEL STOPS SHALL NOT EXCEED 6.5 INCHES ABOVE THE PARKING LOT SURFACE.
8.6 ADEQUATE ILLUMINATION SHALL BE MAINTAINED AT WHEEL STOPS AS GOVERNED BY THE REQUIREMENTS OF LOCAL CODES AND ORDINANCES OR, IN THEIR ABSENCE, BY THE RECOMMENDATIONS SET FORTH BY THE ILLUMINATING ENGINEER SOCIETY OF NORTH AMERICA (IES – APPLICATION AND REFERENCE VOLUMES).
8.7 BOLLARDS, NOT LESS THAN 3'-6" IN HEIGHT, MAY BE PLACED IN THE CENTER OF PARKING STALLS AS AN ALTERNATIVE TO WHEEL STOPS. BOLLARDS SHOULD BE APPROPRIATELY MARKED TO ENHANCE VISIBILITY IN ACCORDANCE WITH ANSI–Z535.1.



WHEEL STOP DETAIL
NTS

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Rogers, Arkansas 72756
Crafton Tull
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479.636.4838 t 479.631.6224 f
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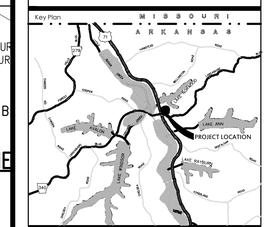
CERTIFICATE OF AUTHORIZATION:
CERTIFICATE OF AUTHORIZATION — CRAFTON, TULL & ASSOCIATES, INC. No. 109 — ARKANSAS ENGINEER

TOWNCENTER EAST
PHASE 3
BELLA VISTA, AR

Key Plan



No.	Description	Date

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PROJECT NO: 19105800
ISSUE DATE: 5/21/2025
CONTACT: EJMCMAHON
QC by: MLOVE
QC Date: 10/03/2023

PRELIMINARY PLANS

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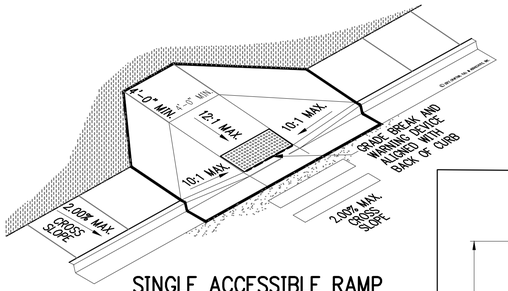
LSD-2025-58745

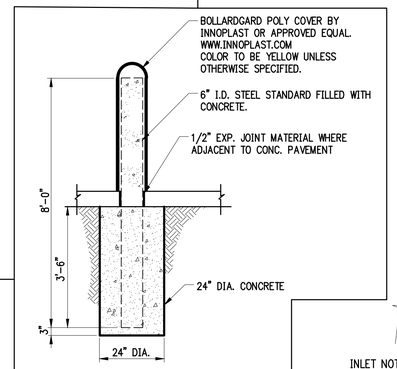
STANDARD DETAILS 2 OF 4

C-504



SINGLE ACCESSIBLE RAMP

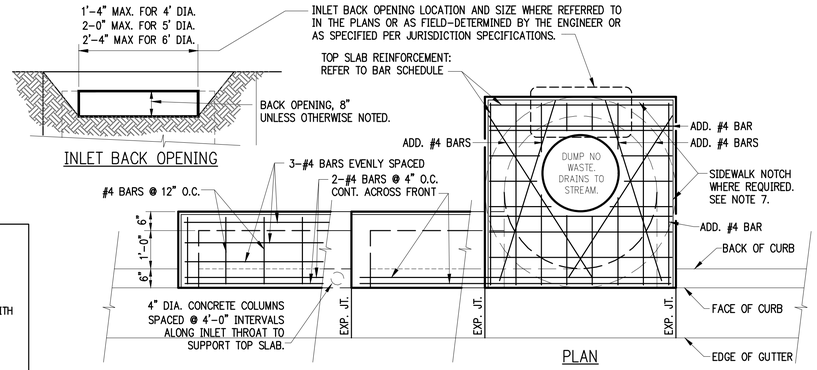
NTS RECESSED WITH FLARED SIDES



SECTION

STATIONARY–BOLLARD

NTS



INLET INSIDE DIAMETER SCHEDULE		
DIAMETER OF LARGEST PIPE ENTERING INLET	INSIDE INLET DIAMETER	MINIMUM INLET WALL THICKNESS
12" TO 27"	4'–0" DIA.	6"
30" TO 42"	5'–0" DIA.	8"
48" TO 54"	6'–0" DIA.	
PIPES ARE LIMITED TO 60 DEGREES. IF GREATER, USE NEXT LARGER–DIAMETER INLET BARREL.		

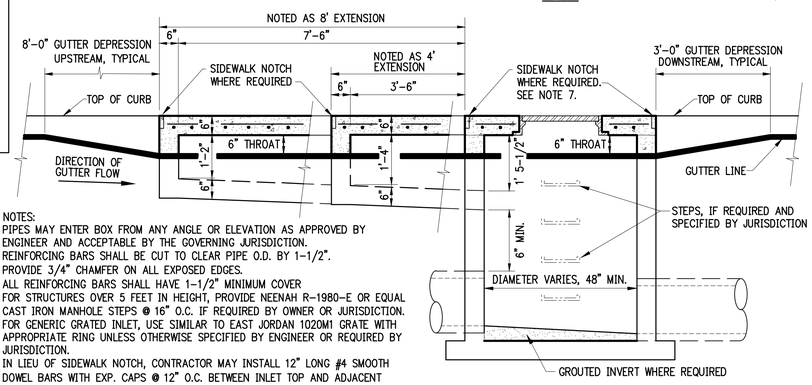
NON–TRAFFIC TOP SLAB REINFORCEMENT SCHEDULE	
INSIDE DIAMETER OF INLET BARREL	TOP SLAB BARS
4'–0"	#4s @ 8" O.C. EACH WAY CENTERED
5'–0"	#4s @ 7" O.C. EACH WAY CENTERED
6'–0"	#5s @ 9" O.C. EACH WAY CENTERED

**REBAR CLEARANCE NOTE
SINGLE MAT: 2–1/2" CLEAR
DOUBLE MAT: 1–1/2" CLEAR

L (LENGTH) ALONG CURB IF APPLICABLE
W (WIDTH) FRONT TO BACK

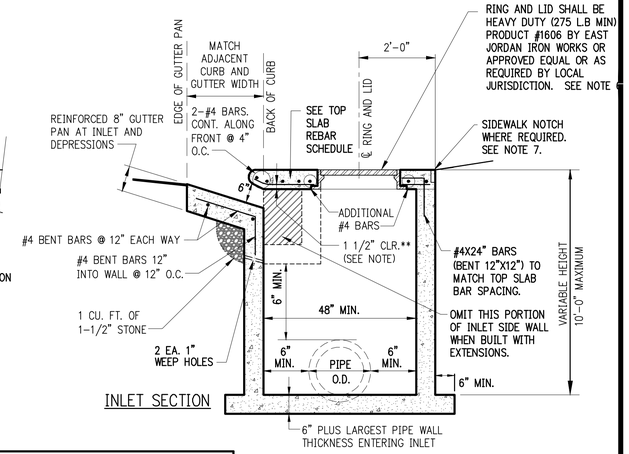
4' X 6'

TYPICAL CURB INLET AND JUNCTION MANHOLE NOMENCLATURE



ELEVATION / SECTION

INLET NOTES:
1. PIPES MAY ENTER BOX FROM ANY ANGLE OR ELEVATION AS APPROVED BY ENGINEER AND ACCEPTABLE BY THE GOVERNING JURISDICTION.
2. REINFORCING BARS SHALL BE CUT TO CLEAR PIPE O.D. BY 1–1/2".
3. PROVIDE 3/4" CHAMFER ON ALL EXPOSED EDGES.
4. ALL REINFORCING BARS SHALL HAVE 1–1/2" MINIMUM COVER
5. FOR STRUCTURES OVER 5 FEET IN HEIGHT, PROVIDE NEENAH R–1980–E OR EQUAL CAST IRON MANHOLE STEPS @ 16" O.C. IF REQUIRED BY OWNER OR JURISDICTION.
6. FOR GENERIC GRATED INLET, USE SIMILAR TO EAST JORDAN 1020M1 GRATE WITH APPROPRIATE RING UNLESS OTHERWISE SPECIFIED BY ENGINEER OR REQUIRED BY JURISDICTION.
7. IN LIEU OF SIDEWALK NOTCH, CONTRACTOR MAY INSTALL 12" LONG #4 SMOOTH DOWEL BARS WITH EXP. CAPS @ 12" O.C. BETWEEN INLET TOP AND ADJACENT SIDEWALK.
8. PROVIDE 6" MINIMUM CLEARANCE BETWEEN PIPE O.D. AND INLET SIDES, TOP, EXTENSIONS, DEPRESSIONS, AND OPENINGS.
9. CONCRETE TO BE CLASS B, 3500#, WITH 4%–7% A.E.
10. TOP OF INLET AND SURFACE OF LID MUST BE FLUSH WITH SIDEWALK. MAXIMUM VERTICAL CHANGE SHALL NOT EXCEED 1/4 INCH.



INLET SECTION

NON-TRAFFIC ONLY

TYPICAL CIRCULAR NON–TRAFFIC CURB INLET (TYPICAL CIRCULAR NON–TRAFFIC JUNCTION BOX & GRATED INLET SIMILAR)

NTS

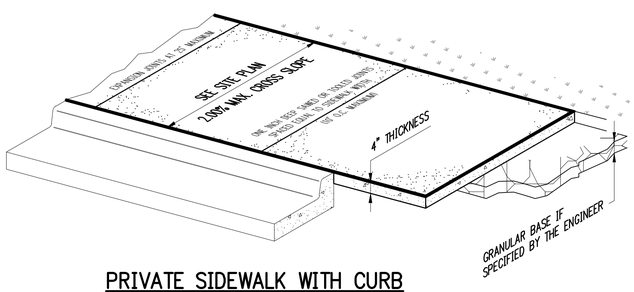
NOTE: THIS DETAIL IS GENERIC, NOT JURISDICTION OR SITE–SPECIFIC. USE JURISDICTION–SPECIFIC DETAILS WHEN AND WHERE REQUIRED.
THIS NON–TRAFFIC DETAIL IS INTENDED FOR SIDEWALK LOADING ONLY WITH UNIFORMLY DISTRIBUTED LIVE LOAD OF 100 PSF OF CONCENTRATED LIVE LOAD OF 3000 POUNDS.

REVISED 8/07/2020

CONCRETE CHARACTERISTICS	CLASS A	CLASS B
MIN. COMPRESSION STRENGTH (PSI AT 28 DAYS)	3000	3500
MIN. CEMENT CONTENT (BAGS PER CUBIC YARD)	5.5	6.0
MAX. NET WATER / 94LB. BAG (GALLONS)	6.5	5.5
SLUMP RANGE (INCHES)	1–4*	1–4*
AIR CONTENT RANGE (%)	4–7	4–7
MAX. FLY ASH CONTENT (%)	20	20

* MAX. SLUMP SHALL BE 2" WHEN SLIP FORM PAVEMENT METHODS ARE USED.

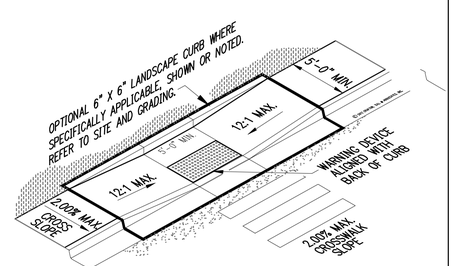
NOTES:
1. PROVIDE 1/2" EXPANSION JOINT BETWEEN SIDEWALK AND ALL FIXED OBJECTS.
2. PROVIDE 1/2" TOOLED RADIUS ON ALL EDGES.
3. CONCRETE TO BE MINIMUM 3500#, AE.



PRIVATE SIDEWALK WITH CURB

NTS

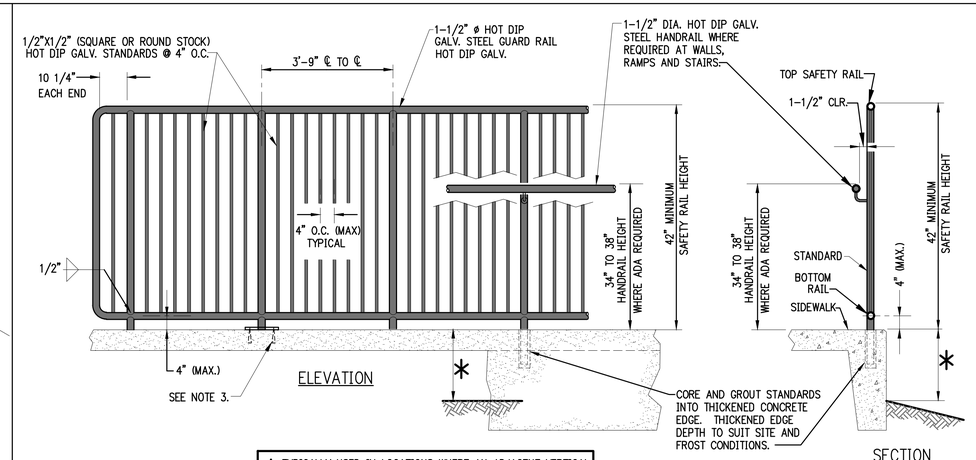
REVISED 05/10/11



ADA-06 DEPRESSED SIDEWALK AND CURB ACCESSIBLE RAMP WITH CROSSWALK

NTS WITH LANDSCAPE CURB

REV 01/16/20



* TYPICALLY USED IN LOCATIONS WHERE AN ADJACENT VERTICAL DROP TO FINISHED GRADE IS 30 INCHES OR GREATER.

SAFETY RAIL

NTS REVISED 08/25/14

REFER TO SHEET RW–D1 FOR STANDARD ANCHOR DETAILS

NOTES:
1. RAILS AND EXTENSIONS TO BE PARALLEL TO RAMP AND APPROACH SURFACE. STANDARDS TO BE VERTICAL AND PLUMB.
2. IF APPLICABLE, RAILS TO PAINTED PER PROJECT ARCHITECT'S SPECIFICATIONS.
3. IF APPLICABLE, ALL ANCHOR BOLTS AND HARDWARE SHALL BE STAINLESS STEEL.

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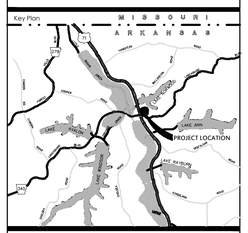
TOWNCENTER EAST PHASE 3

BELLA VISTA, AR

Key Plan



No.	Description	Date

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PROJECT NO: 19105800
ISSUE DATE: 5/21/2025
CONTACT: EJMCMAHON
QC by: M.LOVE
QC Date: 10/05/2023

PRELIMINARY PLANS

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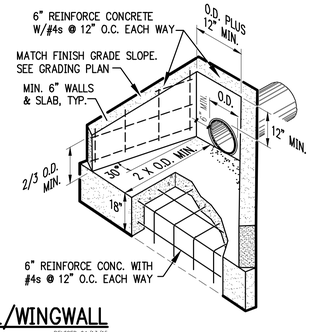
LSD-2025-58745

STANDARD DETAILS 3 OF 4

C-505

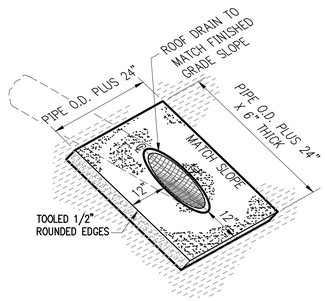
1. PROVIDE 3/4" CHAMFER ON ALL EXPOSED EDGES UNLESS ADJACENT TO SIDEWALKS OR OTHER CONCRETE SURFACES.
2. BASE AND INLET WALLS TO BE POURED MONOLITHICALLY.
3. PIPES MAY ENTER BOX FROM ANY ANGLE OR ELEVATION APPROVED BY THE ENGINEER.
4. ALL #4 & #5 REINFORCING BARS TO BE GRADE 60 AND HAVE 1-1/2" MINIMUM COVER. >#5, 2" COVER.
5. CONCRETE SHALL BE CLASS B, 3500#, 4%-7% A.E.
6. CONTRACTOR SHALL PROVIDE APPROVED PEDESTRIAN SAFETY RAILS AND VEHICULAR GUARD RAILS WHERE NECESSARY OR REQUIRED BY LOCAL, STATE AND FEDERAL CODES.



SINGLE PIPE HEADWALL/WINGWALL

NTS

REVISED 04/13/15

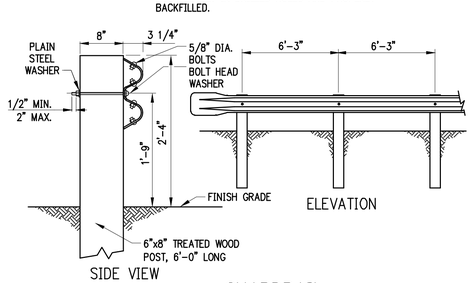


ROOF DRAIN CONCRETE COLLAR

NTS

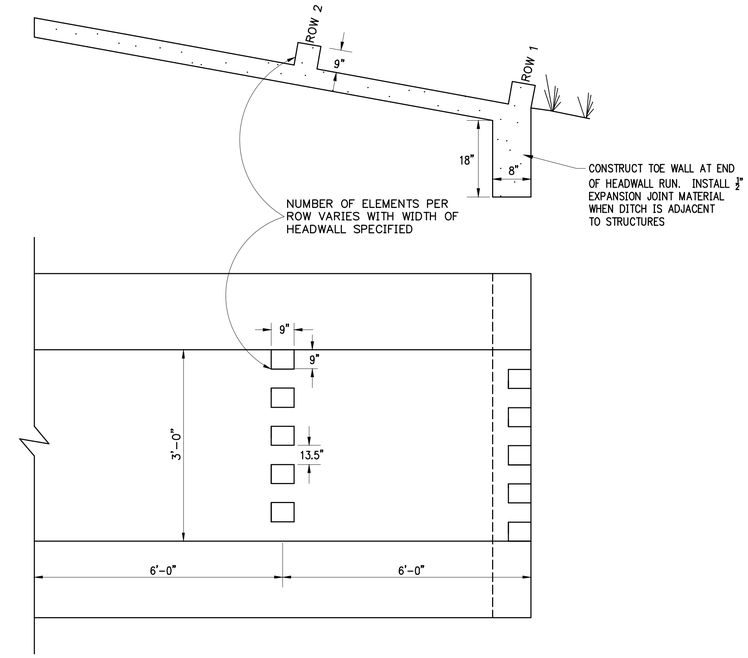
07/25/17

NOTE:
WHERE GUARDRAIL IS INSTALLED ADJACENT TO REINFORCED EARTH WALL, DRIVING OF POSTS POSTS WILL NOT BE PERMITTED, ALL POSTS MUST BE SET IN DRILLED HOLES AND PROPERLY BACKFILLED.



GUARDRAIL

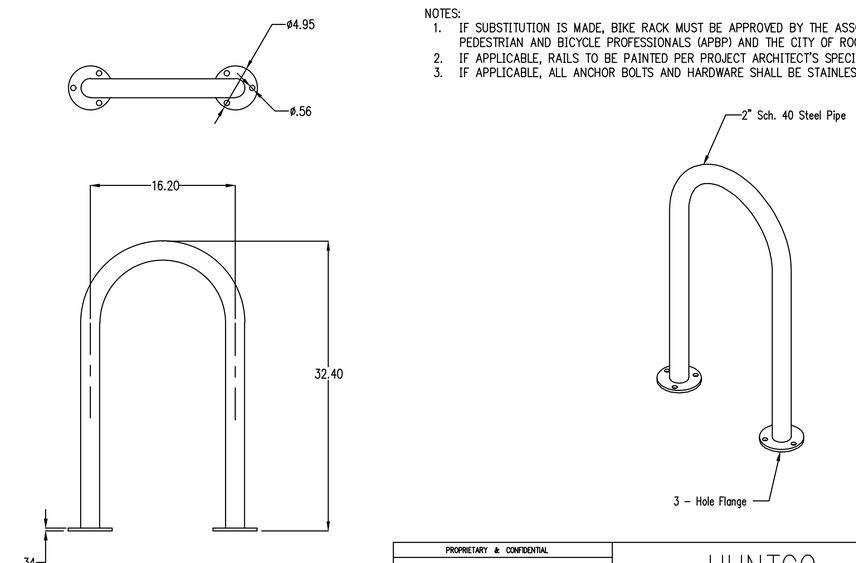
NTS



ENERGY DISSIPATORS

NTS

NOTES:
1. IF SUBSTITUTION IS MADE, BIKE RACK MUST BE APPROVED BY THE ASSOCIATION OF PEDESTRIAN AND BICYCLE PROFESSIONALS (APBP) AND THE CITY OF ROGERS.
2. IF APPLICABLE, RAILS TO BE PAINTED PER PROJECT ARCHITECT'S SPECIFICATIONS.
3. IF APPLICABLE, ALL ANCHOR BOLTS AND HARDWARE SHALL BE STAINLESS STEEL.



PROPRIETARY & CONFIDENTIAL

1-800-547-5909 / WWW.HUNTCO.COM

HUNTCO

BIKE RACK NAME

RAMBLER WIDE FLANGE

901 N. 47th St., Suite 400
Rogers, Arkansas 72756
Crafton Tull
architecture | engineering | surveying
479.636.4838 t 479.631.6224 f
www.craftontull.com

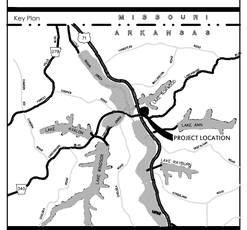
CERTIFICATE OF AUTHORIZATION:

CERTIFICATE OF AUTHORIZATION
CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

TOWNCENTER EAST
PHASE 3

BELLA VISTA, AR

Key Plan



No.	Description	Date

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PROJECT NO: 19105800
ISSUE DATE: 5/21/2025
CONTACT: E.MCMAHON
QC by: M.LOVE
QC Date: 10/05/2023

PRELIMINARY PLANS

NOT FOR CONSTRUCTION · REVIEW SET

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LSD-2025-58745

STANDARD DETAILS 4 OF 4

C-506

ALLEGRO W LED

Architectural Outdoor

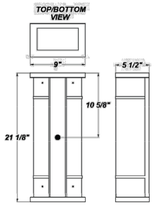
PROJECT:	
TYPE:	
PO#:	QTY:
COMMENTS:	

FEATURES

- Aluminum Housing w/ Textured Black Polyester Powder Coat Finish
- Aluminum End Caps and Trim Bars w/ Textured Black Polyester Powder Coat Finish
- Aluminum Mount Pan w/ Hi-Reflectance White Powder Coat Finish
- Luminous White Acrylic Wrap-Around Diffuser
- Luminous White Acrylic Top and Bottom Lens Panels
- Mounts Over 4" Junction Box w/ Easy-hang Wall Mounting Plate (Included)
- Operating Temperature Range for EB (0°- 50°C)
- CSA Approved For Wet Location For Vertical Mounting
- LED Light Fixture
- Mounting Hardware Included

LINE DRAWING

LINE DRAWING NOT TO SCALE



FINISHES

Antique Copper	Antique Silver	Bronze Mist	Matte Silver	Metallic Black	Sand
Swedish Steel	Textured Black	Textured Bronze	Textured White		

For RAL Colors & Custom Match - Contact Teron Lighting Inc.

TERON LIGHTING
TERONLIGHTING.COM
33 DONALD DR, FAIRFIELD, OH 45014
P: 513.858.6004 F: 513.858.6038
E: SALES@TERONLIGHT.COM

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SEND CUT-SHEET

We reserve the right to revise the design components of any product due to parts availability or change in UL standards, without assuming any obligation or liability to modify any products previously manufactured, and without notice.

ALLEGRO W LED

Architectural Outdoor

PROJECT:	
TYPE:	
PO#:	QTY:
COMMENTS:	

Fixture Core

PRODUCT CODE	SOURCE/WATTAGE	VOLTAGE	DIMMING DRIVER
ALLW - Allegro W	**L38.0-2E1400** - 50W @ 1400mA 0-10V Dimming Driver **L38.0-TE1400** - 60W @ 1400mA ELV Dimming Driver **L36.0-2E1100** - 36W @ 1100mA 0-10V Dimming Driver	**120V** **277V** (50 / 60Hz)	**Not Applicable**
ORDER INFO			
ALLW	L38.0-2E1400	120V	Not Applicable

Example ^ (may not represent a manufacturable product)

Aesthetics & Options

TRIM	FINISH	COLOR TEMP	OPTIONS
Not Applicable	**AC** - Antique Copper **AS** - Antique Silver **BT** - Bronze Mist **MB** - Metallic Black **SM** - Matte Silver **SN** - Sand **SW** - Swedish Steel **TB** - Textured Black (Standard) **BZ** - Textured Bronze **TW** - Textured White	**30K** - 3000K Color Temp **35K** - 3500K Color Temp **40K** - 4000K Color Temp	**EB** - Emergency Battery (L36.0 Only) **F** - Fused **TP** - Tamper Resistant Screws
ORDER INFO			
Not Applicable	AC	30K	EB

Example ^ (may not represent a manufacturable product)

PROD	SOURCE	30K SPECS
ALLW	L36.0	• 30K - 3000K Color Temp • 5465 LED Source Lumens • 151.8 LED Source Lumens per Watt
	L38.3	• 30K - 3000K Color Temp • 5208 LED Source Lumens • 109 LED Source Lumens Per Watt

REPLACEMENT PART	PART NO	NOTES
White Acrylic Lens Assembly	9801460	Operating Temperature Range for EB (0°- 50°C)

Don't see the configuration you are looking for?
Call us today at (513) 858-6004

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ALLEGRO W LED

Architectural Outdoor

PROJECT:	
TYPE:	
PO#:	QTY:
COMMENTS:	

Fixture Core

PRODUCT CODE	SOURCE/WATTAGE	VOLTAGE	DIMMING DRIVER
ALLW - Allegro W	**L19.0-2E700** - 30W @ 700mA 0-10V Dimming Driver **L24.0-2E875** - 33W @ 875mA 0-10V Dimming Driver **L31.0-2E1150** - 44W @ 1150mA 0-10V Dimming Driver	**120V** **277V** (50 / 60Hz)	**Not Applicable**
ORDER INFO			
ALLW	L19.0-2E700	120V	Not Applicable

Example ^ (may not represent a manufacturable product)

Aesthetics & Options

TRIM	FINISH	COLOR TEMP	OPTIONS
Not Applicable	**AC** - Antique Copper **AS** - Antique Silver **BT** - Bronze Mist **MB** - Metallic Black **SM** - Matte Silver **SN** - Sand **SW** - Swedish Steel **TB** - Textured Black (Standard) **BZ** - Textured Bronze **TW** - Textured White	**30K** - 3000K Color Temp **35K** - 3500K Color Temp **40K** - 4000K Color Temp	**F** - Fused **TP** - Tamper Resistant Screws
ORDER INFO			
Not Applicable	AC	30K	F

Example ^ (may not represent a manufacturable product)

PROD	SOURCE	30K SPECS
ALLW	L19.0	• 30K - 3000K Color Temp • 2489 LED Source Lumens • 113 LED Source Lumens Per Watt
	L24.0	• 30K - 3000K Color Temp • 3180 LED Source Lumens • 106 LED Source Lumens Per Watt
	L31.0	• 30K - 3000K Color Temp • 4125 LED Source Lumens • 106 LED Source Lumens Per Watt

REPLACEMENT PART	PART NO	NOTES
White Acrylic Lens Assembly	9801460	Operating Temperature Range for EB (0°- 50°C)

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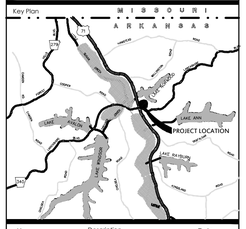

No.	Description	Date

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PROJECT NO: 19105800
ISSUE DATE: 5/21/2025
CONTACT: E.MCMAHON
QC by: M.LOVE
QC Date: 10/05/2023

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LSD-2025-58745

LIGHTING DETAILS 1 OF 3

C-507

McGraw-Edison

DESCRIPTION

The Galleon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated and UL/cUL Listed for wet locations.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction
Extruded aluminum driver enclosure thermally isolated from Light Squares for optimal thermal performance. Heavy-wall, die-cast aluminum end caps enclose housing and die-cast aluminum heat sinks. A unique, patent pending interlocking housing and heat sink provides scalability with superior structural rigidity. 3G vibration tested and rated. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

Optics
Patented, high-efficiency injection-molded AccuLED Optics technology. Optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT 70 CRI. Optional 3000K, 5000K and 6000K CCT.

Electrical
LED drivers are mounted to removable tray assembly for ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Standard with 0-10V dimming. Shipped standard with Eaton proprietary circuit module designed to withstand 10kV of transient line surge. The Galleon LED luminaire is suitable for operation in -40°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Light Squares are IP66 rated. Greater than 90% lumen maintenance expected at 60,000 hours. Available in standard 1A drive current and optional 600mA, 800mA and 1200mA drive currents (nominal).

Mounting
STANDARD ARM MOUNT: Extruded aluminum arm includes internal bolt guides allowing for easy positioning of fixture during mounting. When mounting two or more luminaires at 90° and 120° apart, the EA extended arm may be required. Refer to the arm mounting requirement table. Round pole adapter included. For wall mounting, specify wall mount bracket option. QUICK MOUNT ARM: Adapter is bolted directly to the pole. Quick mount arm slide into place on the adapter and is secured via two screws, facilitating quick and easy installation. The versatile, patent pending, quick mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8". Removal of the door on the quick mount arm enables wiring of the fixture without having to access the driver compartment. A knock-out enables round pole mounting.

Finish
Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Heat sink is powder coated black. Standard housing colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available.

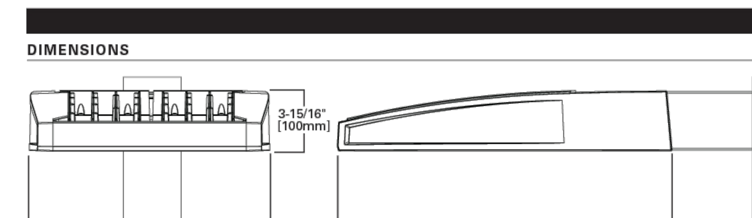
Warranty
Five-year warranty.

GLEON
GALLEON LED

1-10 Light Squares
Solid State LED

AREA/SITE LUMINAIRE

DIMENSIONS



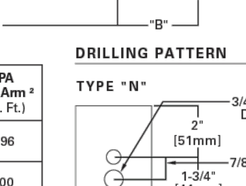
DIMENSION DATA

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Optional Arm Length [1]	Weight with Arm (lbs.)	EPA with Arm [2] (Sq. Ft.)
1-4	15-1/2" (394mm)	7" (178mm)	10" (254mm)	33 (15.0 kgs.)	0.96
5-6	21-5/8" (549mm)	7" (178mm)	10" (254mm)	44 (20.0 kgs.)	1.00
7-8	27-5/8" (702mm)	7" (178mm)	13" (330mm)	54 (24.5 kgs.)	1.07
9-10	33-3/4" (857mm)	7" (178mm)	16" (406mm)	63 (28.6 kgs.)	1.12

NOTES: 1. Optional arm length to be used when mounting two fixtures at 90° on a single pole. 2. EPA calculated with optional arm length.

DRILLING PATTERN

TYPE "N"



CERTIFICATION DATA
UL/cUL Wet Location Listed
ISO 9001
LM79 / LM80 Compliant
3G Vibration Rated
IP66 Rated
DesignLights Consortium™ Qualified*

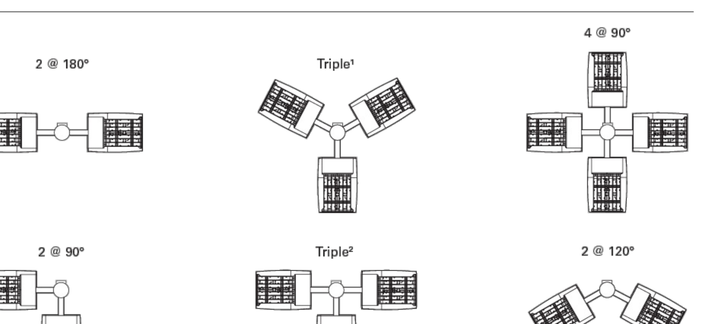
ENERGY DATA
Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120V-277V 50/60Hz
347V & 480V 60Hz
-40°C Min. Temperature
40°C Max. Temperature
50°C Max. Temperature (HA Option)

EATON Powering Business Worldwide

*www.designlights.org

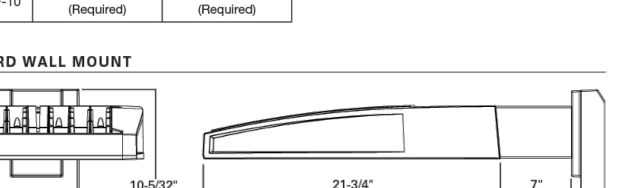
ARM MOUNTING REQUIREMENTS

Configuration	90° Apart	120° Apart
GLEON-AF-01	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-02	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-03	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-04	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-05	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-06	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-07	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-08	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-09	16" Extended Arm (Required)	16" Extended Arm (Required)
GLEON-AF-10	16" Extended Arm (Required)	16" Extended Arm (Required)

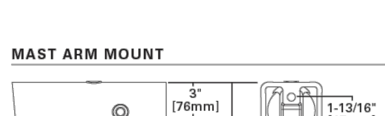


NOTES: 1 Round poles are 3 @ 120°. Square poles are 3 @ 90°. 2 Round poles are 3 @ 90°.

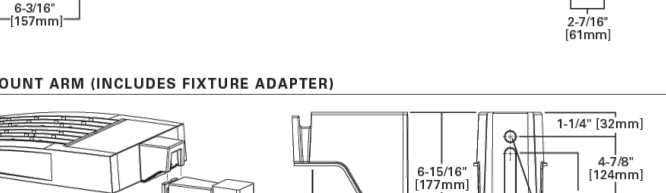
STANDARD WALL MOUNT

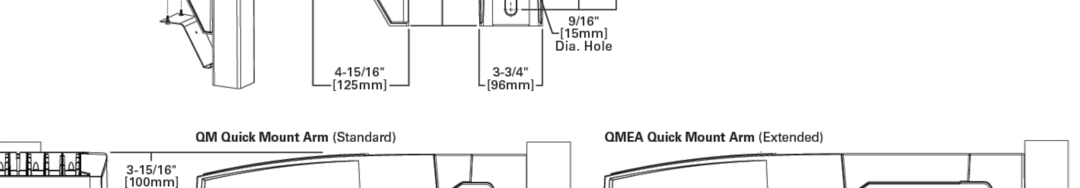


MAST ARM MOUNT



QUICK MOUNT ARM (INCLUDES FIXTURE ADAPTER)





QUICK MOUNT ARM DATA

Number of Light Squares [1, 2]	"A" Width	Weight with QM Arm (lbs.)	Weight with QMEA Arm (lbs.)	EPA (Sq. Ft.)
1-4	15-1/2" (394mm)	35 (15.91 kgs.)	38 (17.27 kgs.)	1.11
5-6 [3]	21-5/8" (549mm)	46 (20.91 kgs.)	49 (22.27 kgs.)	
7-8	27-5/8" (702mm)	56 (25.45 kgs.)	59 (26.82 kgs.)	

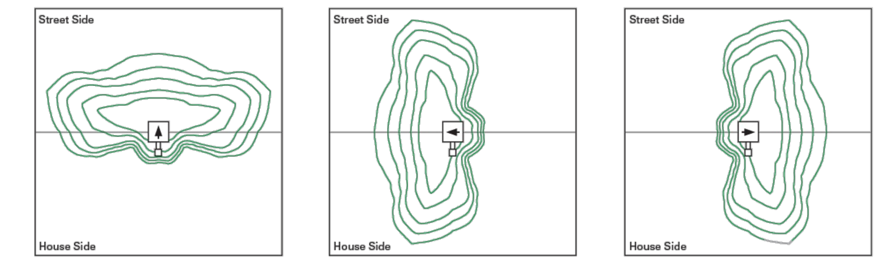
NOTES: 1 QM option available with 1-8 light square configurations. 2 QMEA option available with 1-6 light square configurations. 3 QMEA arm to be used when mounting two fixtures at 90° on a single pole.

EATON Powering Business Worldwide

Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

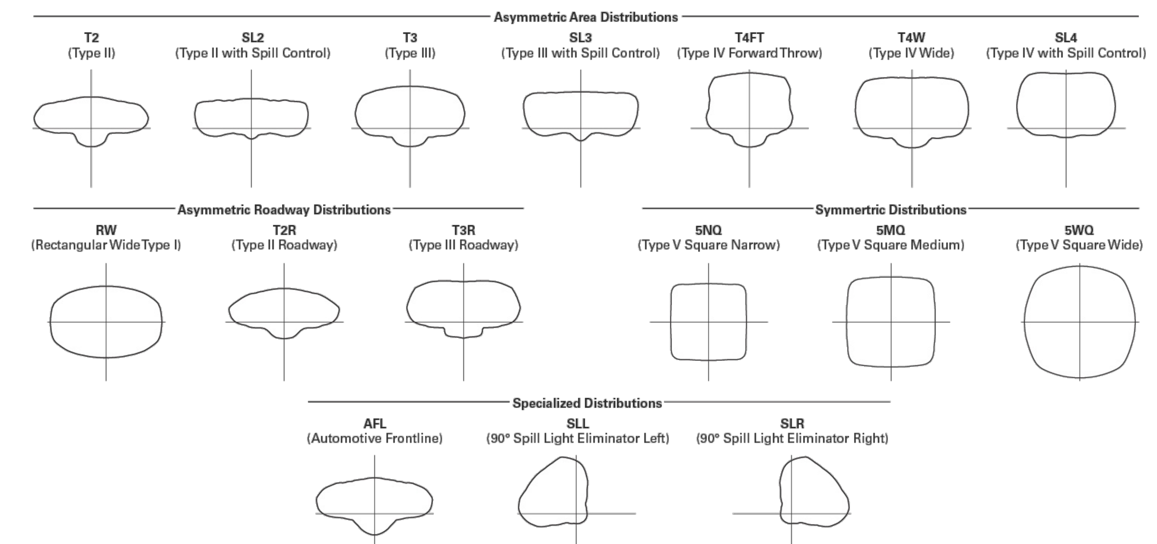
Specifications and dimensions subject to change without notice.

OPTIC ORIENTATION



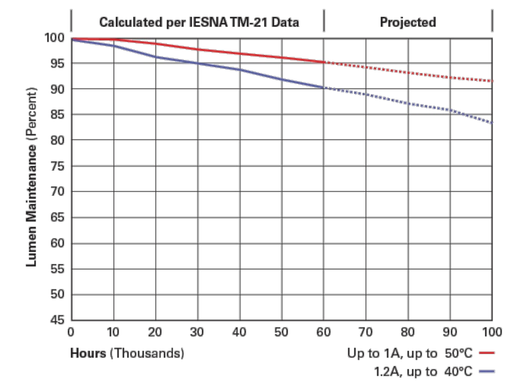
Standard | Optics Rotated Left @ 90° [L90] | Optics Rotated Right @ 90° [R90]

OPTICAL DISTRIBUTIONS



LUMEN MAINTENANCE

Drive Current	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Projected L70 (Hours)
Up to 1A	Up to 50°C	> 95%	416,000
1.2A	Up to 40°C	> 90%	205,000



LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

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NOMINAL POWER LUMENS (1.2A)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		67	129	191	258	320	382	448	511	575	640
Input Current @ 120V (A)		0.58	1.16	1.78	2.31	2.94	3.56	4.09	4.71	5.34	5.87
Input Current @ 208V (A)		0.33	0.63	0.93	1.27	1.57	1.87	2.22	2.52	2.8	3.14
Input Current @ 240V (A)		0.29	0.55	0.80	1.10	1.35	1.61	1.93	2.18	2.41	2.71
Input Current @ 277V (A)		0.25	0.48	0.70	0.96	1.18	1.39	1.69	1.90	2.09	2.36
Input Current @ 347V (A)		0.20	0.39	0.57	0.78	0.96	1.15	1.36	1.54	1.72	1.92
Input Current @ 480V (A)		0.15	0.30	0.43	0.60	0.73	0.85	1.03	1.16	1.28	1.45
Optics											
T2	4000K/5000K Lumens	6,709	13,111	19,562	25,848	32,026	38,325	45,324	51,355	57,286	63,424
	3000K Lumens	5,939	11,606	17,316	22,881	28,349	33,925	40,121	45,459	50,710	56,143
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T2R	4000K/5000K Lumens	7,122	13,919	20,769	27,442	34,000	40,687	48,117	54,519	60,816	67,333
	3000K Lumens	5,939	11,606	17,316	22,881	28,349	33,925	40,121	45,459	50,710	56,143
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
T3	4000K/5000K Lumens	6,838	13,363	19,939	26,346	32,642	39,062	46,196	52,343	58,388	64,646
	3000K Lumens	6,053	11,829	17,650	23,321	28,895	34,578	40,893	46,334	51,685	57,225
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T3R	4000K/5000K Lumens	6,990	13,660	20,382	26,931	33,368	39,930	47,223	53,506	59,686	66,081
	3000K Lumens	6,188	12,092	18,042	23,839	29,537	35,346	41,802	47,364	52,834	58,495
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4FT	4000K/5000K Lumens	6,878	13,440	20,055	26,499	32,832	39,289	46,464	52,646	58,726	65,020
	3000K Lumens	6,088	11,897	17,753	23,457	29,063	34,779	41,130	46,602	51,984	57,556
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T4W	4000K/5000K Lumens	6,789	13,267	19,795	26,156	32,408	38,781	45,864	51,967	57,968	64,180
	3000K Lumens	6,010	11,744	17,523	23,153	28,688	34,329	40,599	46,001	51,313	56,812
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/5000K Lumens	6,697	13,088	19,529	25,804	31,970	38,259	45,245	51,267	57,186	63,315
	3000K Lumens	5,928	11,585	17,287	22,842	28,300	33,867	40,051	45,382	50,621	56,046
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	6,837	13,361	19,936	26,342	32,639	39,057	46,189	52,336	58,380	64,636
	3000K Lumens	6,052	11,827	17,647	23,318	28,892	34,573	40,887	46,328	51,678	57,216
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL4	4000K/5000K Lumens	6,496	12,695	18,943	25,029	31,011	37,110	43,886	49,727	55,470	61,414
	3000K Lumens	5,750	11,238	16,768	22,156	27,451	32,850	38,848	44,018	49,102	54,364
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	7,052	13,781	20,564	27,171	33,664	40,285	47,641	53,981	60,215	66,669
	3000K Lumens	6,242	12,199	18,203	24,052	29,799	35,660	42,172	47,784	53,302	59,015
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
5MQ	4000K/5000K Lumens	7,182	14,034	20,942	27,671	34,284	41,027	48,518	54,975	61,323	67,896
	3000K Lumens	6,358	12,423	18,538	24,494	30,348	36,317	42,948	48,664	54,283	60,102
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
5WQ	4000K/5000K Lumens	7,201	14,073	20,998	27,744	34,375	41,136	48,648	55,121	61,487	68,077
	3000K Lumens	6,374	12,457	18,587	24,559	30,429	36,414	43,063	48,793	54,428	60,262
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	6,009	11,741	17,519	23,148	28,681	34,321	40,589	45,990	51,301	56,798
	3000K Lumens	5,319	10,393	15,508	20,491	25,388	30,381	35,929	40,710	45,412	50,278
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
RW	4000K/5000K Lumens	6,989	13,657	20,378	26,925	33,360	39,921	47,211	53,494	59,672	66,066
	3000K Lumens	6,187	12,089	18,039	23,834	29,530	35,338	41,791	47,353	52,822	58,482
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
AFL	4000K/5000K Lumens	7,014	13,706	20,452	27,023	33,481	40,066	47,383	53,688	59,888	66,306
	3000K Lumens	6,209	12,133	18,104	23,921	29,637	35,466	41,943	47,525	53,013	58,694
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B4-U0-G4	B4-U0-G4

* Nominal data for 70 CRI.

EATON Powering Business Worldwide

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NOMINAL POWER LUMENS (1A)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		59	113	166	225	279	333	391	445	501	558
Input Current @ 120V (A)		0.51	1.02	1.53	2.03	2.55	3.06	3.56	4.08	4.6	5.07
Input Current @ 208V (A)		0.29	0.56	0.82	1.11	1.37	1.64	1.93	2.19	2.46	2.75
Input Current @ 240V (A)		0.26	0.48	0.71	0.96	1.19	1.41	1.67	1.89	2.12	2.39
Input Current @ 277V (A)		0.23	0.42	0.61	0.83	1.03	1.23	1.45	1.65	1.84	2.09
Input Current @ 347V (A)		0.17	0.32	0.50	0.64	0.82	1.00	1.14	1.32	1.50	1.68
Input Current @ 480V (A)		0.14	0.24	0.37	0.48	0.61	0.75	0.91	0.99	1.12	1.28
Optics											
T2	4000K/5000K Lumens	6,116	11,951	17,833	23,563	29,195	34,937	41,317	46,814	52,221	57,817
	3000K Lumens	5,414	10,579	15,786	20,858	25,843	30,926	36,574	41,440	46,226	51,180
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T2R	4000K/5000K Lumens	6,493	12,688	18,932	25,015	30,994	37,090	43,863	49,699	55,439	61,380
	3000K Lumens	5,748	11,231	16,759	22,143	27,436	32,832	38,828	43,994	49,075	54,334
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3	4000K/5000K Lumens	6,234	12,181	18,176	24,017	29,756	35,609	42,111	47,715	53,225	58,930
	3000K Lumens	5,518	10,783	16,089	21,260	26,340	31,521	37,277	42,237	47,115	52,165
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T3R	4000K/5000K Lumens	6,372	12,453	18,580	24,550	30,418	36,400	43,048	48,776	54,409	60,239
	3000K Lumens	5,640	11,023	16,447	21,732	26,926	32,221	38,106	43,177	48,163	53,324
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
T4FT	4000K/5000K Lumens	6,270	12,252	18,282	24,156	29,929	35,815	42,356	47,992	53,534	59,271
	3000K Lumens	5,550	10,845	16,183	21,383	26,493	31,703	37,494	42,483	47,388	52,467
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4W	4000K/5000K Lumens	6,189	12,094	18,045	23,844	29,543	35,352	41,809	47,372	52,843	58,506
	3000K Lumens	5,479	10,706	15,973	21,107	26,151	31,294	37,009	41,934	46,777	51,790
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/5000K Lumens	6,105	11,931	17,803	23,522	29,144	34,877	41,245	46,734	52,130	57,717
	3000K Lumens	5,404	10,561	15,759	20,822	25,798	30,873	36,510	41,369	46,145	51,091
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	6,233	12,180	18,174	24,013	29,753	35,604	42,106	47,708	53,218	58,921
	3000K Lumens	5,517	10,782	16,088	21,256	26,337	31,517	37,272	42,231	47,109	52,157
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL4	4000K/5000K Lumens	5,922	11,572	17,268	22,816	28,269	33,829	40,006	45,330	50,566	55,984
	3000K Lumens	5,242	10,244	15,286	20,197	25,024	29,945	35,413	40,126	44,761	49,557
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	6,429	12,563	18,746	24,768	30,688	36,723	43,429	49,208	54,891	60,775
	3000K Lumens	5,691	11,121	16,594	21,925	27,165	32,507	38,443	43,559	48,590	53,798
	BUG Rating	B2-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5MQ	4000K/5000K Lumens	6,547	12,794	19,090	25,224	31,253	37,400	44,228	50,114	55,902	61,893
	3000K Lumens	5,795	11,325	16,898	22,328	27,665	33,106	39,151	44,361	49,484	54,788
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
5WQ	4000K/5000K Lumens	6,564	12,828	19,141	25,291	31,336	37,499	44,347	50,248	56,051	62,058
	3000K Lumens	5,810	11,355	16,944	22,388	27,739	33,194	39,256	44,480	49,616	54,934
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	5,478	10,703	15,970	21,102	26,145	31,286	37,001	41,924	46,765	51,777
	3000K Lumens	4,849	9,474	14,137	18,679	23,144	27,694	32,753	37,111	41,396	45,833
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	6,371	12,449	18,576	24,544	30,411	36,392	43,037	48,764	54,396	60,225
	3000K Lumens	5,640	11,020	16,443	21,726	26,920	32,214	38,096	43,166	48,151	53,311
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
AFL	4000K/5000K Lumens	6,394	12,494	18,644	24,634	30,521	36,524	43,194	48,942	54,593	60,444
	3000K Lumens	5,660	11,060	16,504	21,806	27,017	32,331	38,235	43,323	48,326	53,505
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4

* Nominal data for 70 CRI.

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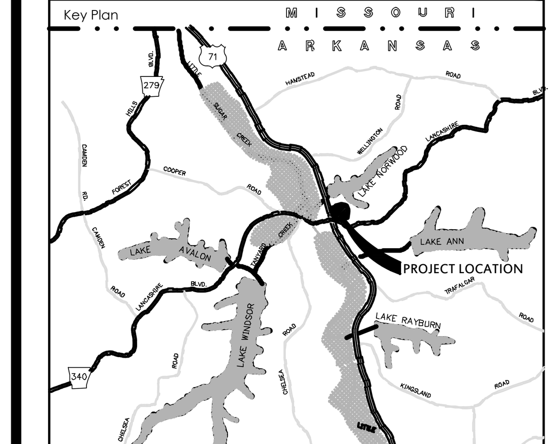
TOWNCENTER EAST PHASE 3

BELLA VISTA, AR

Key Plan



No.	Description	Date

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PROJECT NO: 19105800
ISSUE DATE: 5/21/2025
CONTACT: E.MCMAHON
QC by: M.LOVE
QC Date: 10/05/2023

PRELIMINARY PLANS

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LSD-2025-58745

LIGHTING DETAILS 2 OF 3

C-508

DRAWING: G:\19105800_BVTCPH3\INFRASTRUCTURE\CIVIL\DWG\STANDARD DETAILS.DWG
LAYOUT: LIGHTING DETAILS (2) LAST SAVED: JB1296, 12/26/2023 12:52 PM
PLOTTED BY: RONALD FLORES, 5/19/2025 11:16 AM (PLOTTED BY: ONLY VALID ON HARD COPY)

NOMINAL POWER LUMENS (800MA)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		44	85	124	171	210	249	295	334	374	419
Input Current @ 120V (A)		0.39	0.77	1.13	1.54	1.90	2.26	2.67	3.03	3.39	3.80
Input Current @ 208V (A)		0.22	0.44	0.62	0.88	1.06	1.24	1.50	1.68	1.87	2.12
Input Current @ 240V (A)		0.19	0.38	0.54	0.76	0.92	1.08	1.30	1.46	1.62	1.84
Input Current @ 277V (A)		0.17	0.36	0.47	0.72	0.83	0.95	1.19	1.31	1.42	1.67
Input Current @ 347V (A)		0.15	0.24	0.38	0.49	0.63	0.77	0.87	1.01	1.15	1.52
Input Current @ 480V (A)		0.11	0.18	0.29	0.37	0.48	0.59	0.66	0.77	0.88	0.96
Optics											
T2	4000K/5000K Lumens	4,941	9,656	14,408	19,038	23,588	28,227	33,382	37,823	42,191	46,713
	3000K Lumens	4,374	8,547	12,754	16,852	20,880	24,987	29,550	33,481	37,347	41,350
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5
T2R	4000K/5000K Lumens	5,246	10,251	15,296	20,211	25,041	29,966	35,439	40,154	44,791	49,592
	3000K Lumens	4,644	9,074	13,540	17,891	22,166	26,526	31,371	35,544	39,649	43,899
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
T3	4000K/5000K Lumens	5,037	9,842	14,685	19,404	24,041	28,770	34,024	38,551	43,003	47,612
	3000K Lumens	4,459	8,712	12,999	17,176	21,281	25,467	30,118	34,125	38,066	42,146
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3R	4000K/5000K Lumens	5,148	10,061	15,011	19,835	24,576	29,409	34,780	39,408	43,959	48,669
	3000K Lumens	4,557	8,906	13,288	17,558	21,755	26,033	30,787	34,884	38,913	43,082
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4FT	4000K/5000K Lumens	5,066	9,899	14,770	19,516	24,181	28,936	34,221	38,774	43,252	47,888
	3000K Lumens	4,484	8,763	13,074	17,276	21,405	25,614	30,292	34,323	38,287	42,390
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4W	4000K/5000K Lumens	5,000	9,771	14,579	19,264	23,869	28,562	33,779	38,274	42,694	47,269
	3000K Lumens	4,426	8,649	12,905	17,052	21,129	25,283	29,901	33,880	37,793	41,843
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/5000K Lumens	4,933	9,639	14,383	19,005	23,547	28,178	33,324	37,758	42,118	46,632
	3000K Lumens	4,367	8,532	12,732	16,823	20,844	24,943	29,498	33,423	37,283	41,279
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	5,036	9,841	14,683	19,401	24,039	28,766	34,019	38,546	42,997	47,605
	3000K Lumens	4,458	8,711	12,997	17,174	21,279	25,464	30,114	34,121	38,061	42,140
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
SL4	4000K/5000K Lumens	4,784	9,350	13,951	18,434	22,840	27,332	32,323	36,624	40,854	45,232
	3000K Lumens	4,235	8,277	12,349	16,318	20,218	24,194	28,612	32,420	36,164	40,039
	BUG Rating	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	5,194	10,150	15,145	20,011	24,794	29,670	35,088	39,757	44,349	49,102
	3000K Lumens	4,598	8,985	13,406	17,714	21,948	26,264	31,060	35,193	39,258	43,465
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3
5MQ	4000K/5000K Lumens	5,290	10,337	15,424	20,380	25,250	30,217	35,734	40,489	45,165	50,006
	3000K Lumens	4,683	9,150	13,653	18,040	22,351	26,748	31,632	35,841	39,980	44,265
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
5WQ	4000K/5000K Lumens	5,304	10,365	15,465	20,434	25,318	30,297	35,830	40,597	45,286	50,139
	3000K Lumens	4,695	9,175	13,690	18,088	22,411	26,819	31,717	35,936	40,087	44,383
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	4,426	8,648	12,903	17,049	21,124	25,278	29,894	33,872	37,784	41,832
	3000K Lumens	3,918	7,655	11,422	15,092	18,699	22,376	26,462	29,983	33,446	37,030
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	5,147	10,058	15,009	19,830	24,570	29,402	34,771	39,399	43,949	48,658
	3000K Lumens	4,556	8,903	13,286	17,554	21,749	26,027	30,779	34,876	38,904	43,072
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4
AFL	4000K/5000K Lumens	5,166	10,095	15,063	19,903	24,659	29,509	34,898	39,542	44,108	48,835
	3000K Lumens	4,573	8,936	13,334	17,618	21,828	26,121	30,892	35,003	39,044	43,229
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3

* Nominal data for 70 CRI.

NOMINAL POWER LUMENS (600MA)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		34	66	96	129	162	193	226	257	290	323
Input Current @ 120V (A)		0.30	0.58	0.86	1.16	1.44	1.73	2.03	2.33	2.59	2.89
Input Current @ 208V (A)		0.17	0.34	0.49	0.65	0.84	0.99	1.14	1.30	1.48	1.63
Input Current @ 240V (A)		0.15	0.30	0.43	0.56	0.74	0.87	1.00	1.13	1.30	1.43
Input Current @ 277V (A)		0.14	0.28	0.41	0.52	0.69	0.81	0.93	1.04	1.22	1.33
Input Current @ 347V (A)		0.11	0.19	0.30	0.39	0.49	0.60	0.69	0.77	0.90	0.99
Input Current @ 480V (A)		0.08	0.15	0.24	0.30	0.38	0.48	0.53	0.59	0.71	0.77
Optics											
T2	4000K/5000K Lumens	4,029	7,874	11,749	15,525	19,235	23,019	27,222	30,844	34,406	38,093
	3000K Lumens	3,566	6,970	10,400	13,743	17,027	20,376	24,097	27,303	30,456	33,720
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
T2R	4000K/5000K Lumens	4,278	8,360	12,474	16,482	20,421	24,437	28,900	32,745	36,527	40,441
	3000K Lumens	3,787	7,400	11,042	14,590	18,077	21,632	25,582	28,986	32,334	35,798
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
T3	4000K/5000K Lumens	4,107	8,026	11,976	15,824	19,605	23,461	27,746	31,438	35,068	38,827
	3000K Lumens	3,636	7,105	10,601	14,007	17,354	20,768	24,561	27,829	31,042	34,370
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
T3R	4000K/5000K Lumens	4,198	8,205	12,242	16,175	20,041	23,982	28,363	32,137	35,848	39,689
	3000K Lumens	3,716	7,263	10,837	14,318	17,740	21,229	25,107	28,448	31,733	35,133
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
T4FT	4000K/5000K Lumens	4,131	8,072	12,045	15,915	19,719	23,597	27,907	31,620	35,272	39,052
	3000K Lumens	3,657	7,145	10,662	14,088	17,455	20,888	24,703	27,990	31,223	34,569
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4W	4000K/5000K Lumens	4,077	7,968	11,889	15,710	19,465	23,292	27,546	31,212	34,816	38,547
	3000K Lumens	3,609	7,053	10,524	13,906	17,230	20,618	24,384	27,629	30,819	34,122
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
SL2	4000K/5000K Lumens	4,022	7,861	11,729	15,498	19,202	22,979	27,175	30,791	34,347	38,028
	3000K Lumens	3,560	6,959	10,383	13,719	16,998	20,341	24,055	27,256	30,404	33,662
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
SL3	4000K/5000K Lumens	4,106	8,025	11,974	15,821	19,603	23,458	27,742	31,433	35,064	38,821
	3000K Lumens	3,635	7,104	10,599	14,005	17,353	20,765	24,557	27,824	31,039	34,364
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
SL4	4000K/5000K Lumens	3,902	7,624	11,377	15,033	18,626	22,289	26,359	29,867	33,316	36,886
	3000K Lumens	3,454	6,749	10,071	13,307	16,488	19,730	23,333	26,438	29,491	32,651
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	4,236	8,277	12,351	16,319	20,219	24,196	28,614	32,422	36,166	40,042
	3000K Lumens	3,750	7,327	10,933	14,446	17,898	21,418	25,329	28,700	32,014	35,445
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3
5MQ	4000K/5000K Lumens	4,314	8,429	12,578	16,619	20,591	24,641	29,141	33,019	36,832	40,779
	3000K Lumens	3,819	7,461	11,134	14,711	18,227	21,812	25,796	29,228	32,604	36,098
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
5WQ	4000K/5000K Lumens	4,325	8,452	12,611	16,664	20,646	24,707	29,219	33,106	36,930	40,888
	3000K Lumens	3,828	7,482	11,163	14,751	18,276	21,871	25,865	29,305	32,690	36,194
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
SLL/SLR	4000K/5000K Lumens	3,609	7,052	10,522	13,903	17,226	20,613	24,378	27,622	30,812	34,114
	3000K Lumens	3,195	6,242	9,314	12,307	15,248	18,247	21,579	24,451	27,275	30,198
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	4,197	8,202	12,239	16,171	20,036	23,977	28,356	32,129	35,839	39,680
	3000K Lumens	3,715	7,260	10,834	14,315	17,736	21,224	25,101	28,441	31,725	35,125
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
AFL	4000K/5000K Lumens	4,213	8,232	12,284	16,230	20,109	24,064	28,459	32,246	35,969	39,824
	3000K Lumens	3,729	7,287	10,874	14,367	17,800	21,301	25,192	28,544	31,840	35,252
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3

* Nominal data for 70 CRI.

CONTROL OPTIONS

0-10V (DIM)
This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (P, R and PER7)
Optional button-type photocontrol (P) and photocontrol receptacles (R and PER7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

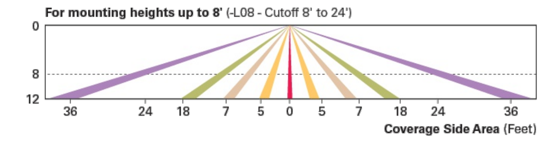
After Hours Dim (AHD)
This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)
These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

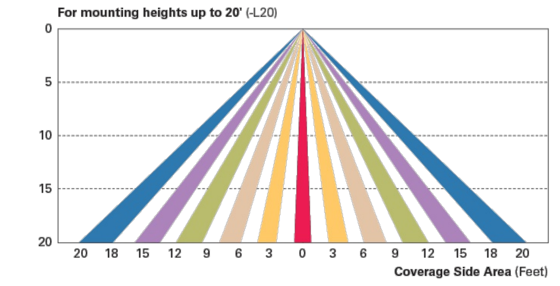
These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for "dusk-to-dawn" control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-40'.

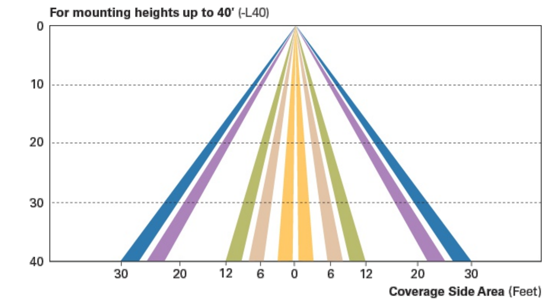
For mounting heights up to 8' (-L08 - Cutoff 8' to 24')



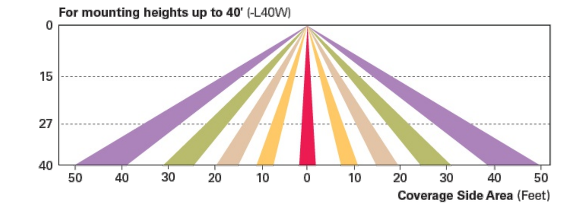
For mounting heights up to 20' (-L20)



For mounting heights up to 40' (-L40)



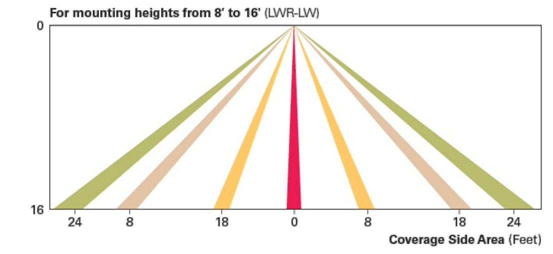
For mounting heights up to 40' (-L40W)



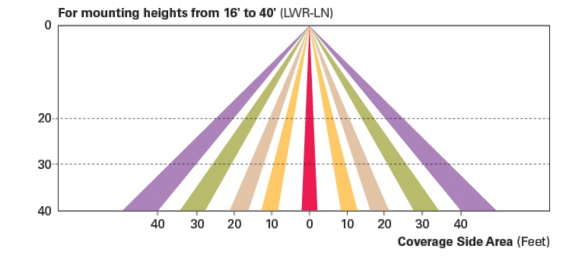
LumaWatt Wireless Control and Monitoring System (LWR-LW and LWR-LN)
The LumaWatt system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt product guides.

For mounting heights from 8' to 16' (LWR-LW)



For mounting heights from 16' to 40' (LWR-LN)



ORDERING INFORMATION

Sample Number: GLEON-AF-04-LED-E1-T3-GM-QM

Product Family [1,2]	Light Engine	Number of Light Squares [3]	Lamp Type	Voltage	Distribution	Color	Mounting
GLEON=Galleon	**AF**=1A Drive Current	**01**=1 **02**=2 **03**=3 **04**=4 **05**=5 **06**=6 **07**=7 [4] **08**=8 [4] **09**=9 [5] **10**=10 [5]	**LED**=Solid State Light Emitting Diodes	**E1**=120-277V **347**=347V [6] **480**=480V [6,7]	**T2**=Type II **T2R**=Type II Roadway **T3**=Type III **T3R**=Type III Roadway **T4FT**=Type IV Forward Throw **T4W**=Type IV Wide **5NQ**=Type V Narrow **5MQ**=Type V Square Medium **5WQ**=Type V Square Wide **SL2**=Type II w/Spill Control **SL3**=Type III w/Spill Control **SL4**=Type IV w/Spill Control **SLL**=90° Spill Light Eliminator Left **SLR**=90° Spill Light Eliminator Right **RW**=Rectangular Wide Type I **AFL**=Automotive Frontline	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White	**[Blank]**=Arm for Round or Square Pole **EA**=Extended Arm [8] **MA**=Mast Arm Adapter [9] **WM**=Wall Mount **QM**=Quick Mount Arm (Standard Length) [10] **QMEA**=Quick Mount Arm (Extended Length) [11]

Options (Add as Suffix)	Accessories (Order Separately)
7030=70 CRI 3000K [12] **8030**=80 CRI 3000K [13] **7050**=70 CRI 5000K [12] **7060**=70 CRI 6000K [12] **600**=Drive Current Factory Set to Nominal 600mA [14] **800**=Drive Current Factory Set to Nominal 800mA [14] **1200**=Drive Current Factory Set to Nominal 1200mA [14,15] **F**=Single Fuse (120, 277 or 347V. Must Specify Voltage) **FF**=Double Fuse (208, 240 or 480V. Must Specify Voltage) **2L**=Two Circuits [16,17] **DIM**=External 0-10V Dimming Leads **P**=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Volatage) **PER7**=NEMA 7-PIN Twistlock Photocontrol Receptacle **R**=NEMA Twistlock Photocontrol Receptacle **AHD145**=After Hours Dim, 5 Hours [18] **AHD245**=After Hours Dim, 6 Hours [18] **AHD255**=After Hours Dim, 7 Hours [18] **AHD355**=After Hours Dim, 8 Hours [18] **HA**=50°C High Ambient [19] **MS/DIM-L08**=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height [20,21] **MS/DIM-L20**=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height [20,22] **MS/DIM-L40**=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height [20,23] **MS/DIM-L40W**=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range) [20,24] **MS/X-L08**=Bi-Level Motion Sensor, Maximum 8' Mounting Height [20,21,25] **MS/X-L20**=Bi-Level Motion Sensor, 9' - 20' Mounting Height [20,22,25] **MS/X-L40**=Bi-Level Motion Sensor, 21' - 40' Mounting Height [20,23,25] **MS/X-L40W**=Bi-Level Motion Sensor, 21' - 40' Mounting Height (Wide Range) [20,24,25] **MS-L08**=Motion Sensor for ON/OFF Operation, Maximum 8' Mounting Height [20,21] **MS-L20**=Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height [20,22] **MS-L40**=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height [20,23] **MS-L40W**=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height (Wide Range) [20,24] **LWR-LW**=LumaWatt Wireless Sensor, Wide Lens for 8' - 16' Mounting Height [26] **LWR-LN**=LumaWatt Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height [26] **L90**=Optics Rotated 90° Left **R90**=Optics Rotated 90° Right **MT**=Factory Installed Mesh Top **TH**=Tool-less Door Hardware **LCF**=Light Square Trim Plate Painted to Match Housing [27] **HSS**=Factory Installed House Side Shield [28] **CE**=CE Marking [29]	**OA/RA1016**=NEMA Photocontrol Multi-Tap - 105-285V **OA/RA1027**=NEMA Photocontrol - 480V **OA/RA1201**=NEMA Photocontrol - 347V **OA/RA1013**=Photocontrol Shorting Cap **OA/RA1014**=120V Photocontrol **MA1252**=10kV Surge Module Replacement **MA1036-XX**=Single Tenon Adapter for 2-3/8" O.D. Tenon **MA1037-XX**=2@180° Tenon Adapter for 2-3/8" O.D. Tenon **MA1197-XX**=3@120° Tenon Adapter for 2-3/8" O.D. Tenon **MA1188-XX**=4@90° Tenon Adapter for 2-3/8" O.D. Tenon **MA1189-XX**=2@90° Tenon Adapter for 2-3/8" O.D. Tenon **MA1190-XX**=3@90° Tenon Adapter for 2-3/8" O.D. Tenon **MA1191-XX**=2@120° Tenon Adapter for 2-3/8" O.D. Tenon **MA1038-XX**=Single Tenon Adapter for 3-1/2" O.D. Tenon **MA1039-XX**=2@180° Tenon Adapter for 3-1/2" O.D. Tenon **MA1192-XX**=3@120° Tenon Adapter for 3-1/2" O.D. Tenon **MA1193-XX**=4@90° Tenon Adapter for 3-1/2" O.D. Tenon **MA1194-XX**=2@90° Tenon Adapter for 3-1/2" O.D. Tenon **MA1195-XX**=3@90° Tenon Adapter for 3-1/2" O.D. Tenon **FSIR-100**=Wireless Configuration Tool for Occupancy Sensor [20] **GLEON-MT1**=Field Installed Mesh Top for 1-4 Light Squares **GLEON-MT2**=Field Installed Mesh Top for 5-6 Light Squares **GLEON-MT3**=Field Installed Mesh Top for 7-8 Light Squares **GLEON-MT4**=Field Installed Mesh Top for 9-10 Light Squares **GLEON-QM**=Quick Mount Arm Kit **GLEON-QMEA**=Quick Mount Extended Arm Kit **LS/HSS**=Field Installed House Side Shield [28,30]

NOTES:
1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
2. DesignLights Consortium™ Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
3. Standard 4000K CCT and minimum 70 CRI.
4. Not compatible with extended quick mount arm (QMEA).
5. Not compatible with standard quick mount arm (QM) or extended quick mount arm (QMEA).
6. Requires the use of an internal step down transformer when combined with sensor options. Not available with sensor at 1200mA. Not available in combination with the HA high ambient and sensor options at 1A.
7. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
8. May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table.
9. Factory installed.
10. Maximum 8 light squares.
11. Maximum 6 light squares.
12. Extended lead times apply. Use dedicated IES files for 3000K, 5000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website.
13. Extended lead times apply. Use dedicated IES files for 3000K, 5000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website.
14. 1 Amp standard. Use dedicated IES files for 600mA, 800mA and 1200mA when performing layouts. These files are published on the Galleon luminaire product page on the website.
15. Not available with HA option.
16. 2L is not available with MS, MS/X or MS/DIM at 347V or 480V. 2L in AF-02 through AF-04 requires a larger housing, normally used for AF-05 or AF-06. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table.
17. Not available with LumaWatt wireless sensors.
18. Requires the use of P photocontrol or the PER7 or R photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information.
19. 50°C lumen maintenance data applies to 600mA, 800mA and 1A drive currents.
20. The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.
21. Approximately 22' detection diameter at 8' mounting height.
22. Approximately 40' detection diameter at 20' mounting height.
23. Approximately 60' detection diameter at 40' mounting height.
24. Approximately 100' detection diameter at 40' mounting height.
25. Replace X with number of Light Squares operating in low output mode.
26. LumaWatt wireless sensors are factory installed only requiring network components RF-EM-1, RF-GW-1 and RF-ROUT-1 in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
27. Not available with house side shield (HSS).
28. Only for use with SL2, SL3, SL4 and AFL distributions. The Light Square trim plate is painted black when the HSS option is selected.
29. CE is not available with the LWR, MS, MS/X, MS/DIM, P, R or PER7 options. Available in 120-277V only.
30. One required for each Light Square.

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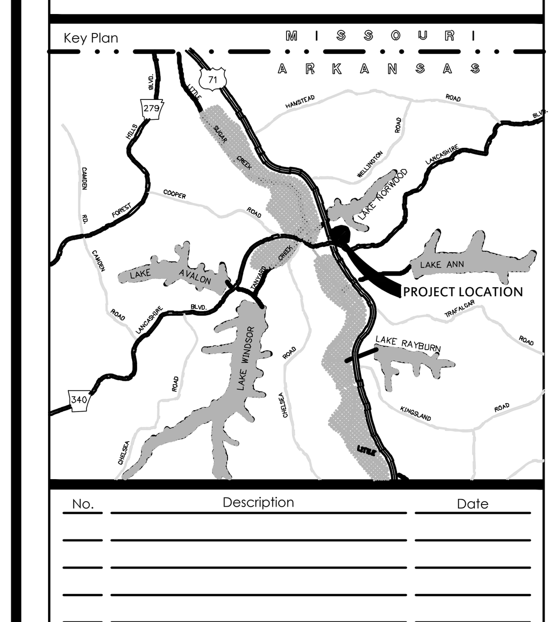
TOWNCENTER EAST PHASE 3

BELLA VISTA, AR

Key Plan



No.	Description	Date

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PROJECT NO: 19105800
ISSUE DATE: 5/21/2025
CONTACT: E.MCMAHON
QC by: M.LOVE
QC Date: 10/05/2023

PRELIMINARY PLANS

NOT FOR CONSTRUCTION ... REVIEW SET ... THIS DOCUMENT IS PRELIMINARY IN NATURE AND IS NOT A FINAL, SIGNED AND SEALED DOCUMENT

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LSD-2025-58745

LIGHTING DETAILS 3 OF 3

C-509

DRAWING: G:\19105800_BVTCPH3\INFRASTRUCTURE\CIVIL\DWG\STANDARD DETAILS.DWG
LAYOUT: LIGHTING DETAILS (3) LAST SAVED: JB1296, 10/26/2023 12:52 PM
PLOTTED BY: RONALD FLORES, 5/19/2025 11:16 AM (PLOTTED BY: ONLY VALID ON HARD COPY)

PLANT SCHEDULE

SYMBOL	QTY	BOTANICAL / COMMON NAME	CONT	CAL	HEIGHT	TYPE
TREES						
	5	MAGNOLIA VIRGINIANA `JN8` / EMERALD TOWER™ SWEETBAY MAGNOLIA	B & B	2"CAL	8`-10` HT.	
PARKING LOT TREES						
	2	QUERCUS SHUMARDII / SHUMARD RED OAK	B & B	2.5" CAL	8`-10` HT.	SHADE
	3	ZELKOVA SERRATA `CITY SPRITE` TM / CITY SPRITE ZELKOVA	B & B	2.5" CAL	8`-10` HT.	SHADE
STREET TREES						
	2	CERCIS CANADENSIS `FOREST PANSY` TM / FOREST PANSY REDBUD	B & B	1.5" CAL	8`-10` HT.	ORNAMENTAL
	2	GLEDITSIA TRIACANTHOS INERMIS `SHADEMASTER` / SHADEMASTER HONEY LOCUST	B & B	2.5" CAL	8`-10` HT.	SHADE
	8	JUNIPERUS VIRGINIANA `TAYLOR` / TAYLOR JUNIPER	B & B		6`-8` HT.	ORNAMENTAL
	5	PISTACIA CHINENSIS / CHINESE PISTACHE	B & B	2.5" CAL	8`-10` HT.	SHADE

SYMBOL	QTY	BOTANICAL / COMMON NAME	SIZE	HEIGHT	SPREAD
SHRUBS					
	15	BUDDLEJA DAVIDII `BLACK KNIGHT` / BLACK KNIGHT BUTTERFLY BUSH	5 GAL	30" HT. MIN.	24" SPREAD MIN.
	19	BUXUS X `GREEN VELVET` / G.V. BOXWOOD	5 GAL	12" HT. MIN.	18" SPREAD MIN.
	8	ITEA VIRGINICA `HENRY`S GARNET` / HENRY`S GARNET SWEETSPIRE	3 GAL	18" HT. MIN.	15" SPREAD MIN.
	40	JUNIPERUS HORIZONTALIS PLUMOSA `ANDORRA` / ANDORRA JUNIPER	3 GAL	12" HT. MIN.	12" SPREAD MIN.
	23	MISCANTHUS SINENSIS 'MORNING LIGHT' / EULALIA GRASS	5 GAL		
	56	RUDBECKIA FULGIDA SULLIVANTII `LITTLE GOLDSTAR` / LITTLE GOLDSTAR CONEFLOWER	1 GAL		

SYMBOL	QTY	BOTANICAL / COMMON NAME	CONT
GROUND COVERS			
	669	EUONYMUS FORTUNEI / WINTERCREEPER	4" POT
	1,084	HYPERICUM CALYCINUM / CREEPING ST. JOHN'S WORT	4" POT
	1,614 SF	LANDSCAPE STONES / WASHED AND SCREENED	S.F.
SOD/SEED			
	42,840 SF	CYNODON DACTYLON `TIFWAY II` / TIFWAY II BERMUDA GRASS	SOLID SOD

PLANTING REQUIRMENTS

STREET TREES:
LANCASHIRE BLVD. (172 LF/ 25) = 7 SHADE TREES REQUIRED & 7 ORNAMENTAL TREES REQUIRED; PROVIDED
70 SHRUBS (50% EVERGREEN) REQUIRED; PROVIDED

PARKING LOTS: 5% INTERIOR GREENSPACE REQUIRED AND 1 TREE PER 14 PARKING STALLS
PARKING LOT AREA (±21,119 SF) = 1,693 SF INTERIOR GREENSPACE REQUIRED
1,693 SF INTERIOR GREENSPACE PROVIDED (8%)
PARKING STALLS (63) = 5 TREES REQUIRED
5 TREES PROVIDED

UTILITIES AND PLANT MATERIALS

1. CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF UTILITIES PRIOR TO LANDSCAPE INSTALLATION AND NOTIFY LANDSCAPE ARCHITECT OF ANY CONFLICTS.
2. TREES AND LANDSCAPING SHALL NOT BE PLACED WHERE THEY INTERFERE WITH SITE DRAINAGE CHANNELS, LINES, OR STRUCTURES, NOR WHERE THEY IMPEDE DETENTION/RETENION FUNCTIONS.
3. TREES WITH A MATURE HEIGHT GREATER THAN 20' SHALL NOT BE PLANTED WITHIN 10' OF OVERHEAD UTILITIES.
4. TREES SHALL NOT BE PLACED WITHIN 5' OF UNDERGROUND UTILITIES.
5. TREES SHALL NOT BE PLACED WITHIN 5' OF ANY ABOVEGROUND ELECTRICAL EQUIPMENT, NOR WITHIN 3' FROM DOORS OF ABOVEGROUND ELECTRIC EQUIPMENT.
6. TREES AND LANDSCAPING THAT OBSCURE VISIBILITY SHALL NOT BE PLACED WITHIN 3' OF A FIRE HYDRANT. ALL OTHER LANDSCAPING MUST BE MAINTAINED TO ENSURE VISIBILITY OF FIRE HYDRANT.
7. CITY RESERVES THE RIGHT TO REMOVE LANDSCAPING THAT BLOCKS ACCESS TO UTILITIES OR FAILS TO MEET THE REQUIREMENTS SET FORTH HEREIN.

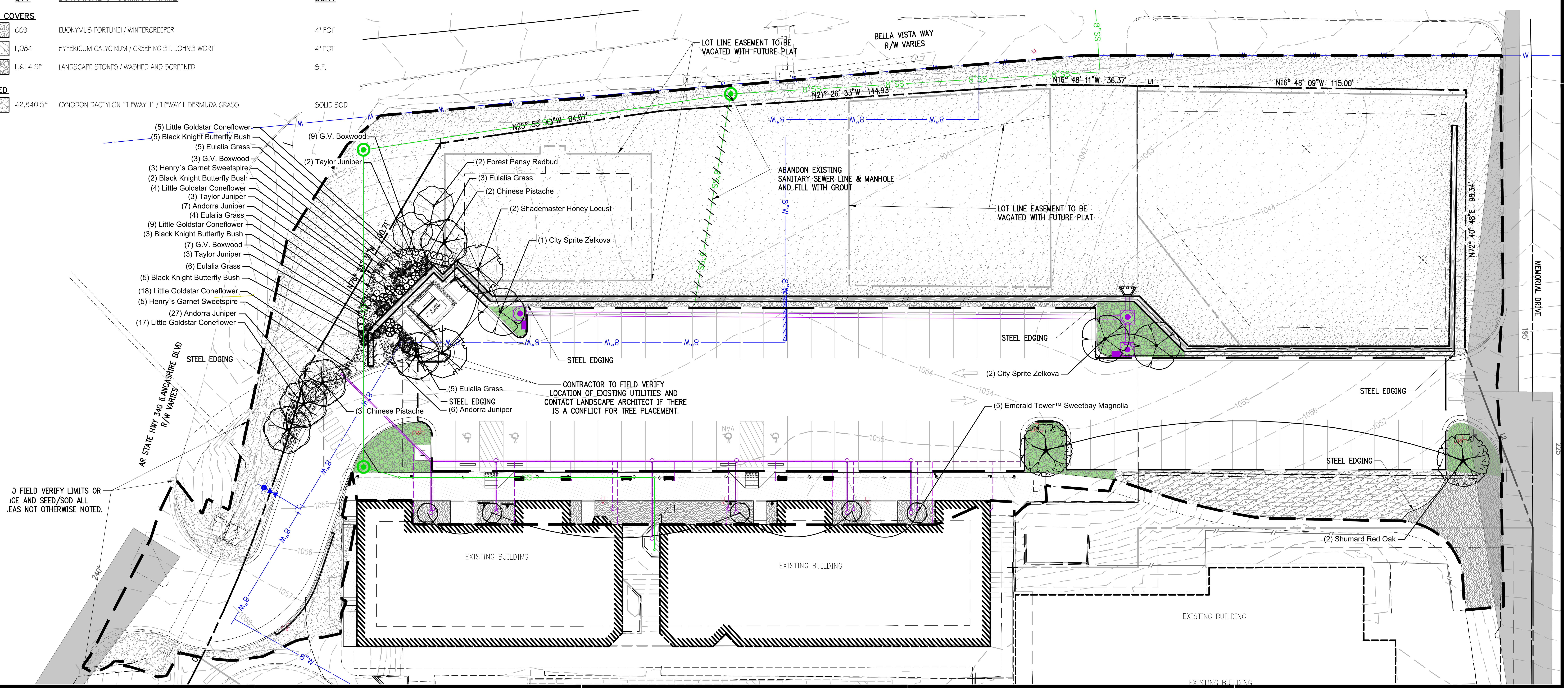
MAINTENANCE NOTES

1. CONTRACTOR SHALL PROVIDE A WARRANTY ON ALL PLANT MATERIALS FOR A MINIMUM OF ONE YEAR FROM PROJECT COMPLETION AND ACCEPTANCE BY OWNER. ANY PLANT MATERIAL THAT DIES, TURNS BROWN, OR DEFOLIATES PRIOR TO WARRANTY EXPIRATION SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.
2. AFTER THE REQUIRED WARRANTY PERIOD, LANDSCAPING SHALL BE MAINTAINED IN HEALTHY LIVING CONDITION BY THE OWNER OF THE PROPERTY. ALL PLANTS THAT DIE SHALL BE REPLACED BY THE OWNER OF THE PROPERTY.
3. HEALTHY TREES SHALL NOT BE REMOVED AT ANY TIME.
4. TREES SHALL NOT BE TOPPED AT ANY TIME.
5. WHEN PRUNING IS NECESSARY TO MAINTAIN THE HEALTH OF THE TREE OR FOR PUBLIC SAFETY, PROPER PRUNING TECHNIQUES AS ESTABLISHED BY THE LATEST EDITION OF ANSI A300 "STANDARDS FOR TREE CARE OPERATIONS" SHALL BE UTILIZED.

LANDSCAPE NOTES

1. CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL UTILITIES PRIOR TO STARTING ANY WORK BY CONTACTING THE ONE-CALL SYSTEM. ALL UTILITY LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE AND ARE BASED ON SURVEY INFORMATION, SITE DEVELOPMENT PLANS, UTILITY RECORDS, ETC.
2. CONTRACTOR SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF WORK. ANY DAMAGES TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCUR AS A RESULT OF LANDSCAPE CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED AT NO COST TO OWNER.
3. ALL PLANT MATERIALS SHALL BE NURSERY GROWN (CONTAINER OR BALLED & BURLAPPED) AND SHALL MEET OR EXCEED THE SIZE AND GRADING REQUIREMENTS ESTABLISHED BY THE LATEST EDITION OF "AMERICAN STANDARDS FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.
4. ALL PLANT MATERIALS MUST BE HEALTHY, VIGOROUS, AND FREE OF PESTS AND/OR DISEASE.
5. ALL PLANT MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND AFTER CONSTRUCTION.
6. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS PRIOR TO PRICING THE WORK.
7. NOTIFY LANDSCAPE ARCHITECT OR DESIGNATED REPRESENTATIVE OF ANY LAYOUT OR QUANTITY DISCREPANCIES PRIOR TO BEGINNING CONSTRUCTION.
8. NO CHANGES TO THE PLANT SCHEDULE ARE ALLOWED WITHOUT APPROVAL OF THE OWNER, LANDSCAPE ARCHITECT, AND CITY. APPROVED ALTERNATE MATERIALS SHALL MEET THE SAME CRITERIA FOR TYPE, SIZE, AND FUNCTION AS THOSE SHOWN ON LANDSCAPE PLAN.
9. PLANTINGS IN EXCESS OF MINIMUM REQUIREMENTS MAY NOT BE REDUCED ONCE APPROVED BY THE PLANNING COMMISSION.
10. ALL PLANT MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS PROVIDED.
11. ALL LAWN AREAS SHALL RECEIVE 4" OF TOPSOIL TO MEET FINAL GRADE IN ACCORDANCE WITH GRADING PLAN.
12. ALL PLANTING BED AREAS SHALL BE PREPARED BY REMOVING EXISTING SOD AND WEEDS. PLANTING BED AREAS SHALL RECEIVE 6" OF TOPSOIL AMENDED TO ENHANCE FAVORABLE GROWING CONDITIONS. SOIL MIX SHALL BE TILLED INTO BED AREA TO A MINIMUM DEPTH OF 12"
13. PLANTING BEDS SHALL RECEIVE A MINIMUM OF 3" SHREDDED HARDWOOD MULCH. ALL TREES NOT LOCATED IN PLANTING BEDS SHALL RECEIVE A MULCH SAUCER PER DETAIL.
14. CONTRACTOR TO FIELD VERIFY THE LIMITS OF DISTURBANCE. ALL DISTURBED AREAS MUST BE STABILIZED PER CITY CODE PRIOR TO PROJECT CLOSE-OUT.
15. TURF AREAS SHALL BE SEEDED OR SODDED PER PLANTING PLAN. REFER TO PLANT SCHEDULE, LANDSCAPE NOTES, AND HYDROSEEDING NOTES FOR SPECIES AND INSTALLATION REQUIREMENTS.
16. ALL SLOPES 3:1 AND GREATER SHALL RECEIVE SOD. ON SLOPES OF 4:1 OR GREATER, SOD SHALL BE STAPLED IN PLACE.
17. ALL ENTRANCE/EXIT PLANTINGS SHALL BE INSTALLED AND MAINTAINED TO PROVIDE CLEAR SIGHT DISTANCE FROM THE STREETS AND ALL SITE ENTRANCES/EXITS PER CITY CODE.
18. IF A LANDSCAPE IRRIGATION SYSTEM IS TO BE CONSTRUCTED, LANDSCAPE CONTRACTOR SHALL CONFIRM LOCATION OF PLANNED IRRIGATION LINE WITH THE IRRIGATION CONTRACTOR PRIOR TO PLANTING BED CONSTRUCTION AND PLANT INSTALLATION.
19. CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTING MATERIAL. (INCLUDING BUT NOT LIMITED TO WATERING, SPRAYING, MULCHING, FERTILIZING, ETC.) IN ALL PLANTING AREAS AND LAWN AREAS UNTIL THE WORK IS APPROVED AND ACCEPTED IN TOTAL BY OWNER.

Arkansas One Call
811
Know what's **below**.
Call before you dig.



...O FIELD VERIFY LIMITS OR ...CE AND SEED/SOD ALL ...EAS NOT OTHERWISE NOTED.

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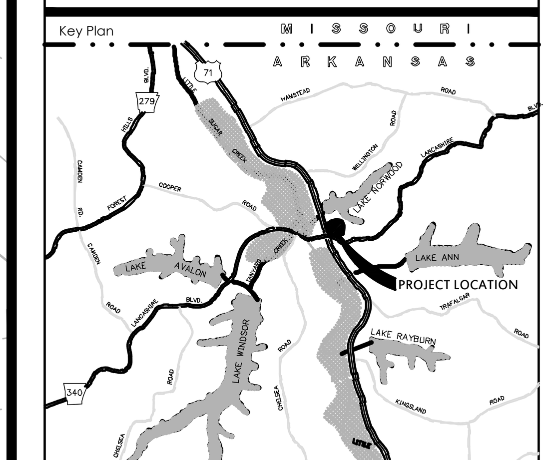
GRAPHIC SCALE IN FEET
20' 0 20'

TOWNCENTER EAST
PHASE 3
BELLA VISTA, AR

Key Plan



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PROJECT NO: 19105800
ISSUE DATE: 5/21/2025
CONTACT: E.MCMAHON
QC by: M.LOVE
QC Date: 10/05/2023

PRELIMINARY PLANS

REGISTERED LANDSCAPE ARCHITECT BARRY RICHMOND WILLIAMS No. 5026 STATE OF ARKANSAS
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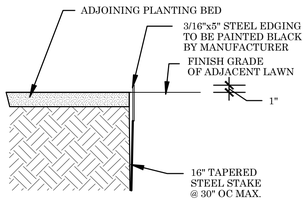
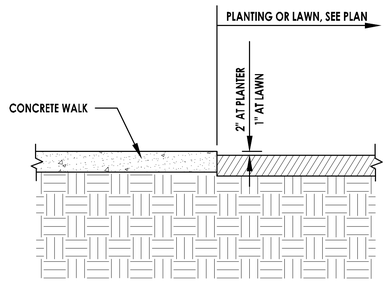
PLANTING PLAN (C)

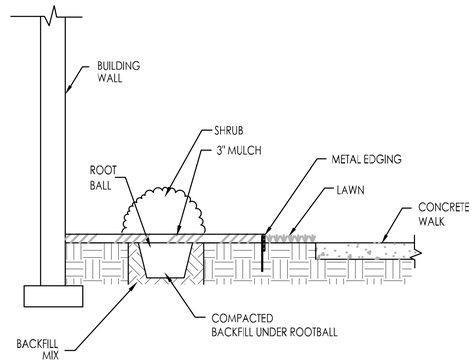
L-101



SECTION - STEEL EDGING
NTS



CONCRETE AT PLANTING DETAIL
NTS



PLANTING BED DETAIL
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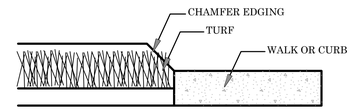

STEEL EDGING DETAIL
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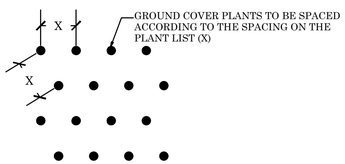
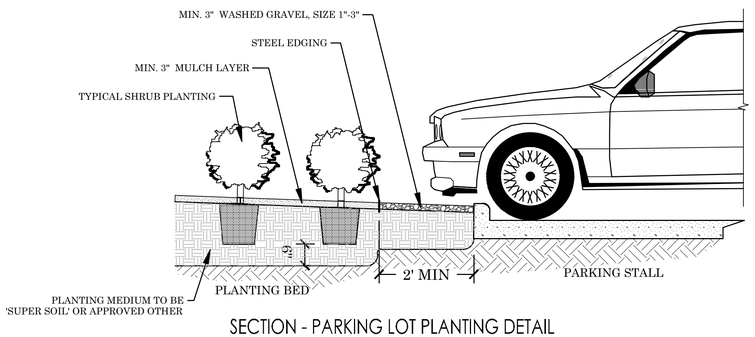


GROUNDCOVER SPACING DETAIL
NTS



SECTION - PARKING LOT PLANTING DETAIL
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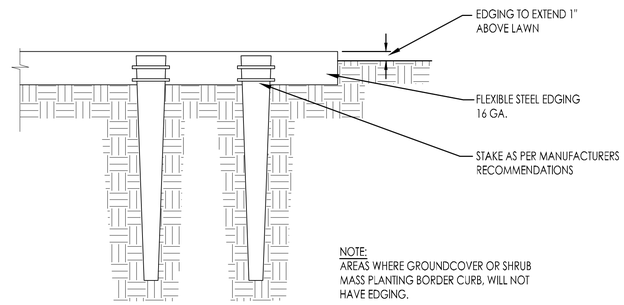
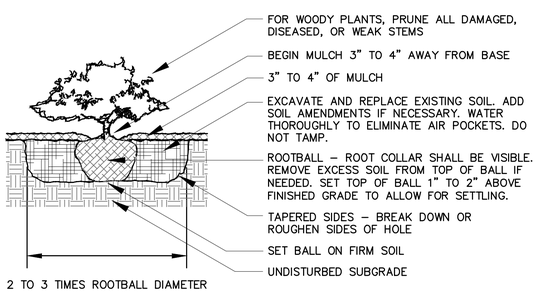


NOTE:
AREAS WHERE GROUNDCOVER OR SHRUB MASS PLANTING BORDER CURB, WILL NOT HAVE EDGING.

CHAMFER EDGING TO BE FLUSH WITH FINISHED GRADE ADJACENT TO PAVING OR CURBS.

STEEL EDGING DETAIL
NTS



SHRUB PLANTING DETAIL
NTS

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TOWNCENTER EAST
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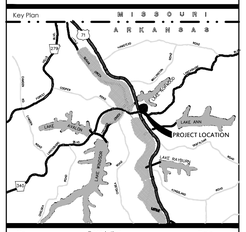

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REGISTERED LANDSCAPE ARCHITECT
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RICHMOND
AR No. 5020
STATE OF ARKANSAS

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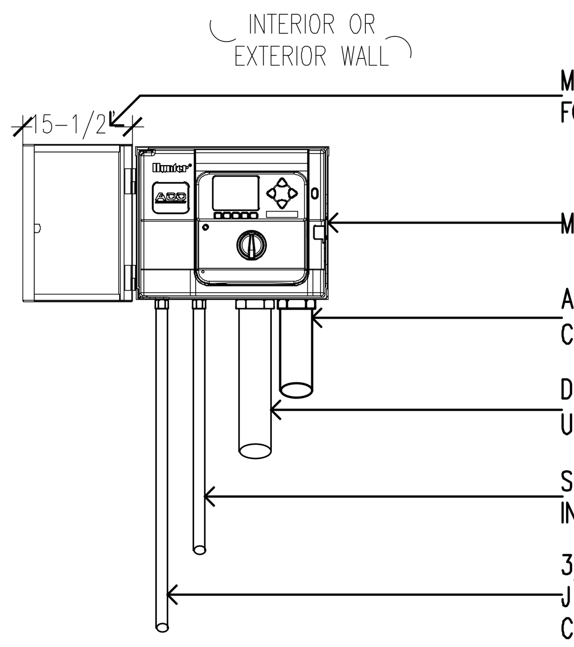
LSD-2025-58745

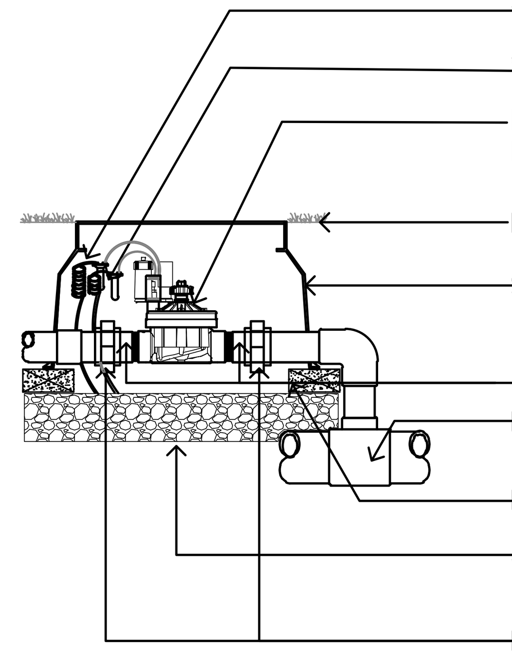
PLANTING DETAILS

L-501

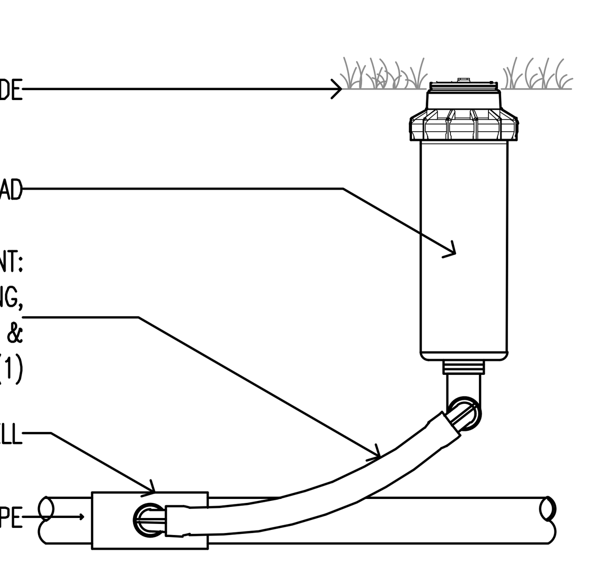
*When using larger GPM nozzles, beware of high friction loss in swing joints.



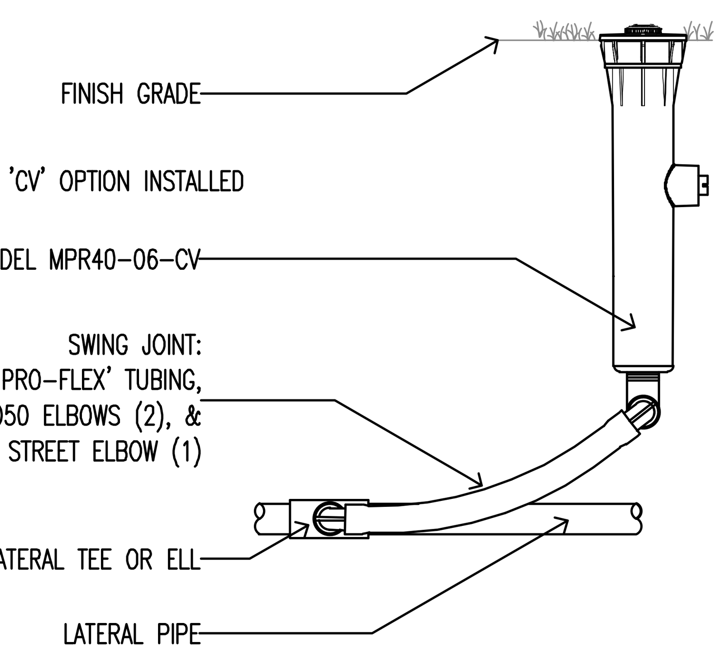
01 ACC-99 CONTROLLER
WALL MOUNT
SCALE: 1" = 1'-0" Hunter IRRIGATION DETAIL



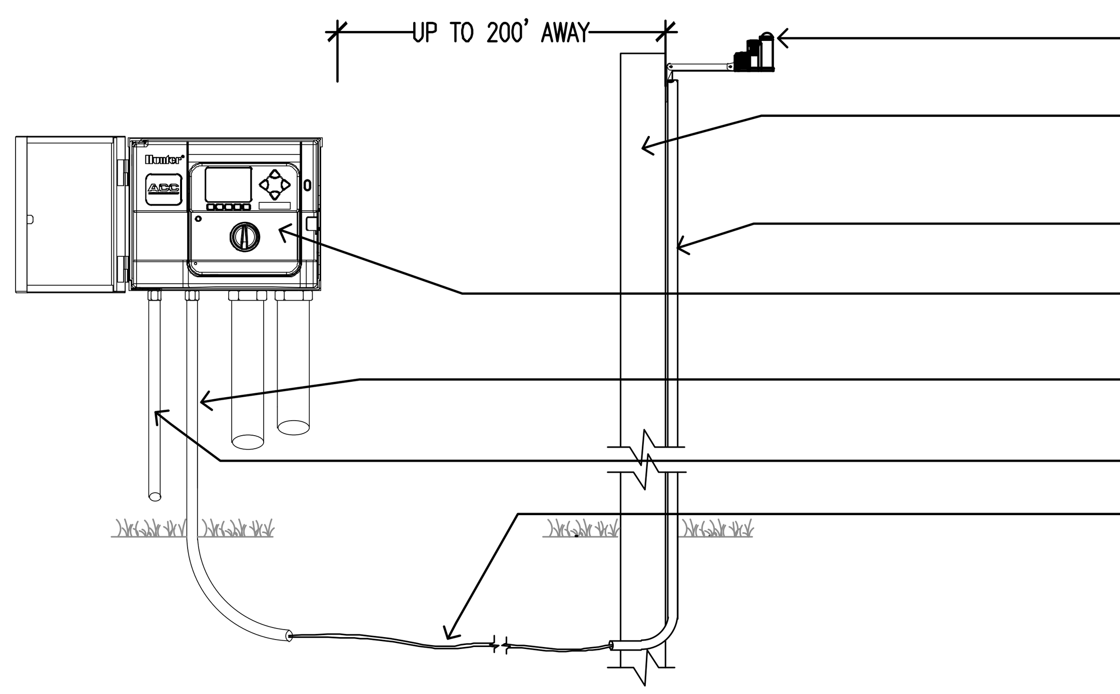
02
PGV GLOBE VALVE
SCALE: 1" = 1'-0" Hunter IRRIGATION DETAIL



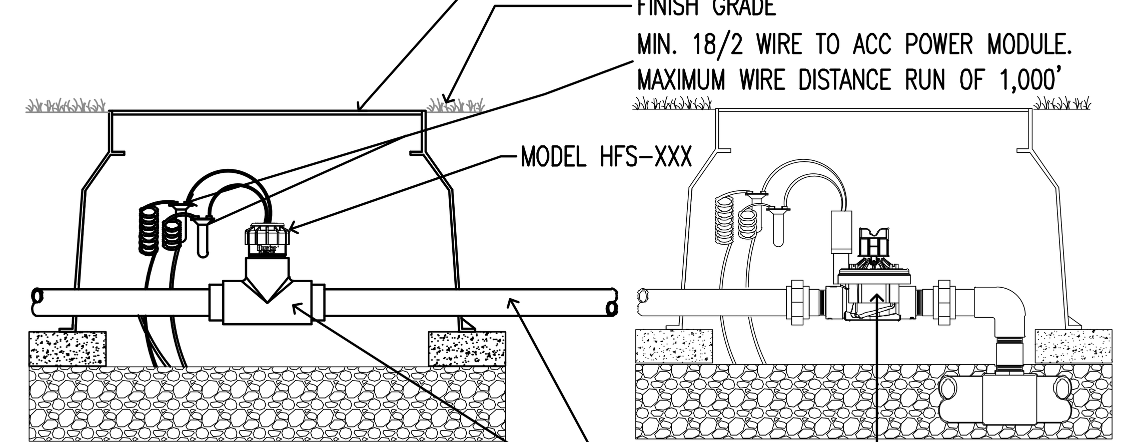
03
PGP ROTOR HEAD
SCALE: 3" = 1'-0" Hunter IRRIGATION DETAIL



04 MPR40-06-CV
MP ROTATOR SPRINKLER
SCALE: 3" = 1'-0" Hunter IRRIGATION DETAIL



07
SOLAR SYNC SYSTEM
SCALE: 1" = 1'-0" Hunter IRRIGATION DETAIL



NOTE INLET PIPE LENGTH OF SENSOR MUST BE MIN. 10X PIPE DIA. STRAIGHT, CLEAN RUN OF PIPE, NO FITTINGS OR TURNS. OUTLET PIPE LENGTH OF SENSOR MUST BE MIN. 5X PIPE DIA. OF STRAIGTH CLEAN RUN OF PIPE, NO FITTINGS OR TURNS.

FCT FITTING SELECTION

FCT100	1 INCH	SCH. 40
FCT150	1.5 INCH	SCH. 40
FCT158	1.5 INCH	SCH. 80
FCT200	2 INCH	SCH. 40
FCT208	2 INCH	SCH. 80
FCT300	3 INCH	SCH. 40
FCT308	3 INCH	SCH. 80
FCT400	4 INCH	SCH. 40

08
HFS FLOW SENSOR
SCALE: 1.5" = 1'-0" Hunter IRRIGATION DETAIL

IRRIGATION NOTES

1. CONTRACTOR SHALL CAREFULLY VERIFY A MINIMUM DYNAMIC WATER PRESSURE OF 85psi WITH A FLOW RATE OF 45gpm AT THE WATER METER LOCATION PRIOR TO INSTALLATION. CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IF WATER PRESSURE IS LESS THAN OR SIGNIFICANTLY HIGHER THAN NOTED.
2. PLEASE NOTE: IF PRESSURE IS NOT SATISFACTORY THERE MAY BE A NEED FOR A BOOSTER PUMP TO ENHANCE PERFORMANCE OF THE SYSTEM. THE LANDSCAPE CONTRACTOR SHALL REPORT PRESSURE FINDINGS TO THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE SYSTEM FOR DETERMINATION OF ANY BOOSTER NEEDS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ALL UTILITIES DURING THE INSTALLATION. CONTRACTOR SHALL SEEK ASSISTANCE FROM THE LOCAL UTILITIES IN THE LOCATION OF THE UTILITIES PRIOR TO EXCAVATION.
4. CONTRACTOR SHALL OBTAIN ANY REQUIRED PERMITS, ADHERE TO ALL MUNICIPAL CODES AND FOLLOW STANDARD AND ACCEPTED LOCAL PRACTICES.
5. AN AUTOMATIC DRAIN VALVE SHALL BE INSTALLED AT THE LOWEST PORTION OF EACH ZONE AND AT 100' INTERVALS ON THE MAINLINE (SEE DETAIL).
6. VALVE WIRING SHALL BE 12 GAUGE SINGLE STRAND COPPER DIRECT BURIAL DECODER SYSTEM IRRIGATION WIRE. PROVIDE ALL SPLICES SHALL BE WATERPROOF AND PLACED AT VALVE LOCATIONS ONLY.
7. ALL LATERAL LINE PIPING SHALL BE CLASS 200 SDR 21 PVC. ALL MAINLINE PIPING SHALL BE SCHEDULE 40 PVC. ALL FITTINGS SHALL BE SCH. 40 TYPE 1. USE A PVC SOLVENT AND PRIMER AS RECOMMENDED/APPROVED BY THE PIPE MANUFACTURER. ALL MATERIAL AND EQUIPMENT SHALL BE OF DOMESTIC MANUFACTURER PROCEEDING WITH RELATED WORK.
8. PLACE ALL PIPING ON THE PERIMETER OF LANDSCAPE AREAS WHERE POSSIBLE. PLACE VALVES IN PLANTING AREAS WHERE POSSIBLE. LIMIT TRENCHING AROUND EXISTING TREES AS MUCH AS POSSIBLE. BE AWARE OF THE LOCATION OF NEW TREES AND SHRUBS AND PLACE PIPING AWAY FROM THE ROOT BALLS.
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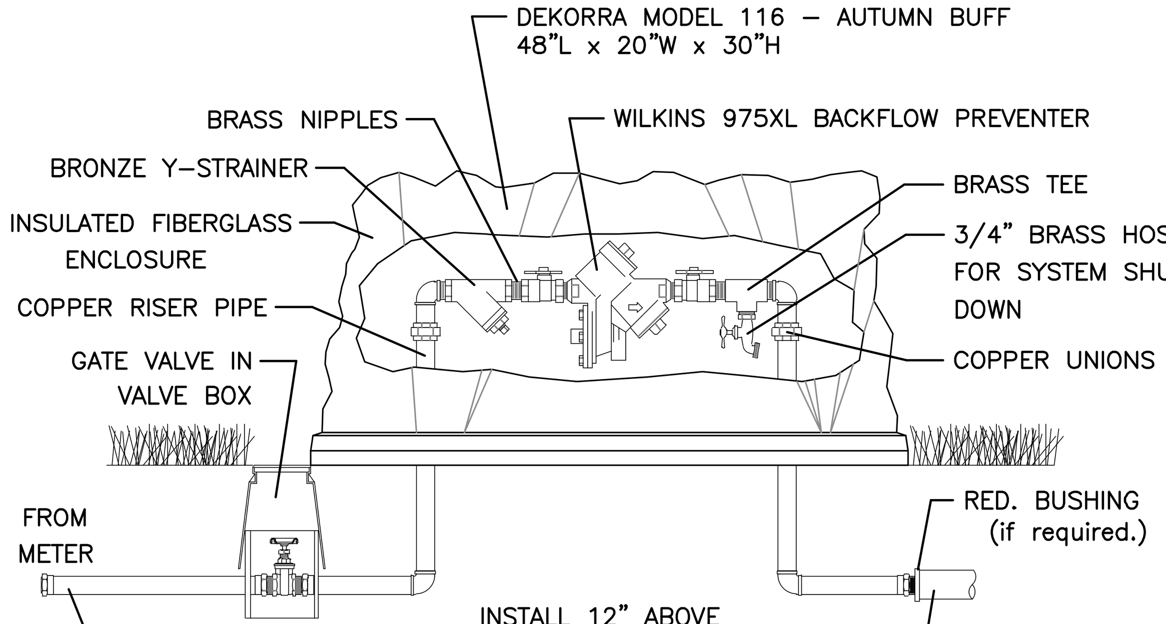
11. COORDINATE LOCATION OF THE CONTROL BOX AND RAIN SENSOR WITH THE OWNER AND/OR ARCHITECT.
12. PROVIDE 100% COVERAGE FOR ALL LANDSCAPE AREAS AND MAKE FINAL ADJUSTMENTS TO OBTAIN OPTIMAL PERFORMANCE. ALL PLANT BEDS SHALL BE DRIP IRRIGATION PLACED ON SEPARATE ZONES FROM THE TURF AREAS.
13. CONTRACTOR TO PROVIDE SERVICE TAPS, LINES AND METER FOR IRRIGATION SYSTEM SERVICE.
14. COMPACT BACK FILL IN ALL TRENCHES TO STANDARD SUB GRADE COMPACTION REQUIREMENTS GIVEN IN SITE GRADING SPECIFICATIONS.
15. CONTRACTOR IS RESPONSIBLE FOR SIZING ALL WIRING TO CONTROL VALVES. DIRECT BURIAL QUALITY WIRE WITH SEALED WATERPROOF CONNECTORS REQUIRED.
16. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURERS DETAILS AND SPECIFICATIONS.
17. WHEN TRENCHING UNDER THE DRIPLINE OF EXISTING TREES EXTREME CARE MUST BE GIVEN TO AVOID ROOT DAMAGE. IF AT ALL POSSIBLE AVOID TRENCHING INSIDE THE DRIPLINE BY GOING AROUND THE TREE RATHER THAN UNDER IT. IF TRENCHING MUST OCCUR UNDER THE DRIPLINE, USE EITHER TUNNELING OR HAND-DIGGING METHODS RATHER THAN A MECHANICAL TRENCHER. MINIMIZE THE IMPACTS OF ROOT SEVERING BY AVOIDING CONSTRUCTION DURING HOT, DRY WEATHER, KEEPING TREES WELL WATERED BEFORE AND AFTER DIGGING AND COVERING ROOTS WITH SOIL OR MULCH AS SOON AS POSSIBLE.

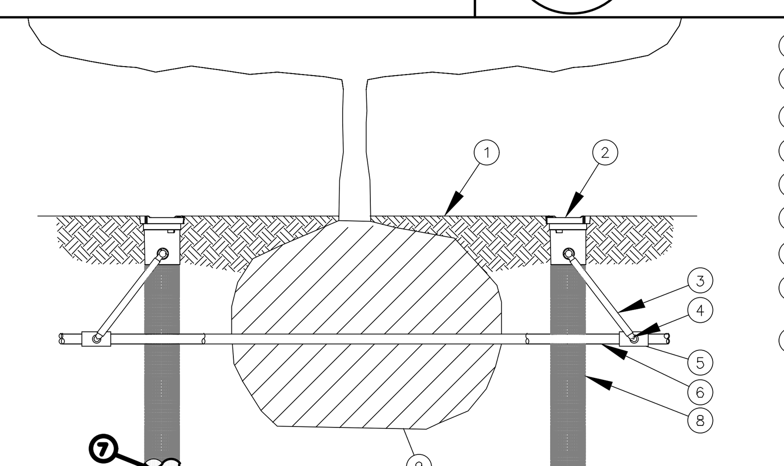
USE EQUIPMENT SPECIFIED AND STANDARDS SHOWN IN THE IRRIGATION DETAILS OF THIS SET

*** TREE WATERING NOTE ***:

1. CONTRACTOR SHALL PLUMB THE RAIN BIRD-RWS-B-C-SOCK 1401 INTO ZONES ACCORDING TO THE FLOWS AND PRESSURES ALLOWED. THESE ZONES SHALL BE ON SEPARATE CONTROL CIRCUITS TO PROVIDE AN ALTERNATE WATERING SOURCE FOR THE TREES DURING ESTABLISHMENT.
2. TREES IN THE DETENTION POND AREA SHALL BE ON ZONES SEPARATE FROM THE MAIN CAMPUS.



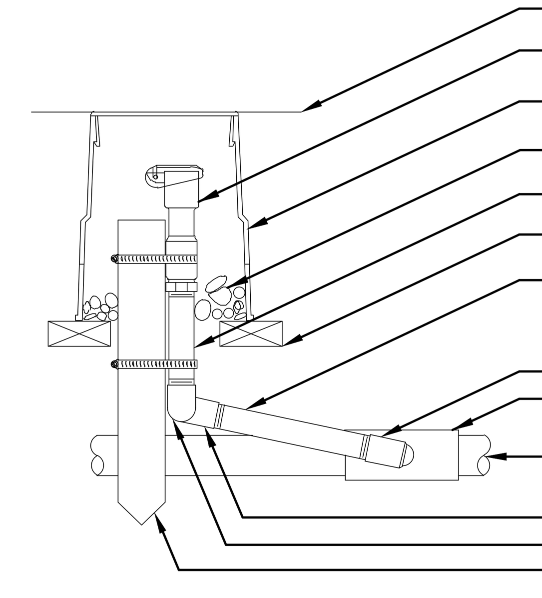
9 WILKINS 975XL BACKFLOW PREVENTER
NOT TO SCALE — REDUCED PRESSURE PRINCIPLE ASSEMBLY WITH DEKORRA COVER



1. FINISH GRADE/TOP OF MULCH
2. ROOT WATERING SYSTEM: RAIN BIRD RWS
3. SWING ASSEMBLY (INCLUDED)
4. 1/2" (1,3 CM) MALE NPT INLET (INCLUDED)
5. PVC SCH 40 TEE OR EL
6. PVC OR POLYETHYLENE LATERAL PIPE
7. OPTIONAL SOCK (RWS-SOCK) FOR SANDY SOILS
8. 4" (10,2 CM) WIDE X 36" (91,4 CM) LONG RIGID BASKET WEAVE CANISTER (INCLUDED)
9. PLANT ROOT BALL

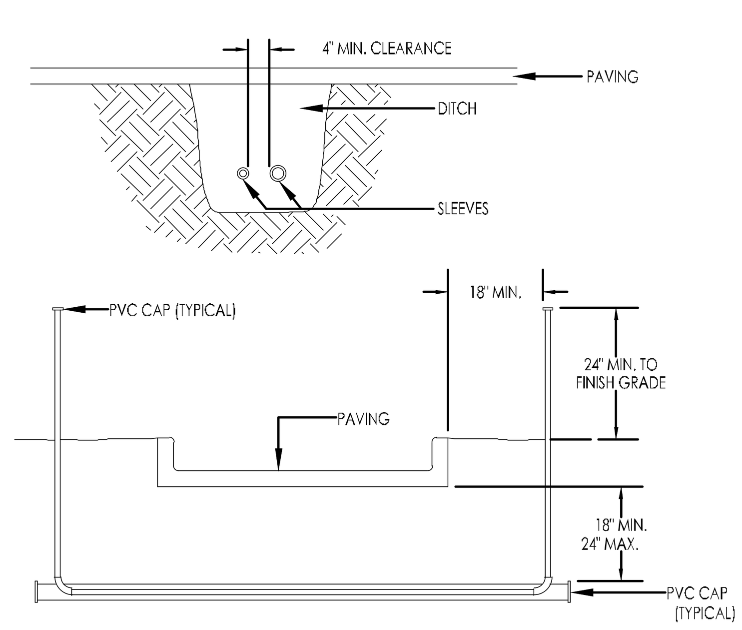
NOTES:
1. POSITION 2-3 UNITS (OR MORE) EVENLY SPACED AROUND PLANT. FOR NEW TREES PLACE NEAR ROOT BALL. FOR EXISTING TREES PLACE HALF THE DISTANCE BETWEEN CANOPY EDGE AND TREE TRUNK.
2. INSTALL PRODUCT WITH TOP EVEN WITH GROUND SURFACE.
3. RWS SERIES AVAILABLE IN THE FOLLOWING MODELS:
   RWS-B-C-1401: 0.25 GPM (0,95 L/M), CHECK VALVE
   RWS-B-1401: 0.25 GPM (0,95 L/M)
   RWS-B-X-1401: 0.25 GPM (0,95 L/M), 18" (45,7 CM) SWING ASSEMBLY
   RWS-B-C-1402: 0.5 GPM (1,9 L/M), CHECK VALVE
   RWS-B-1402: 0.5 GPM (1,9 L/M)
   RWS-B-C-1404: 1.0 GPM (3,8 L/M), CHECK VALVE
4. WHEN INSTALLING IN EXTREMELY HARD OR CLAY SOILS, ADD 3/4" (1,9 CM) GRAVEL UNDER AND AROUND THE UNIT TO ALLOW FASTER WATER INFILTRATION AND ROOT PENETRATION.
5. ONCE RWS HAS BEEN INSTALLED FILL THE BASKET WITH PEA GRAVEL BEFORE LOCKING LID.
6. OPTIONAL RWS-SOCK FOR USE IN SANDY SOILS.

10 ROOT WATERING SYSTEM RWS 07-19-2013
N.T.S. INSTALLATION FOR TREES
PLANTING PLAN



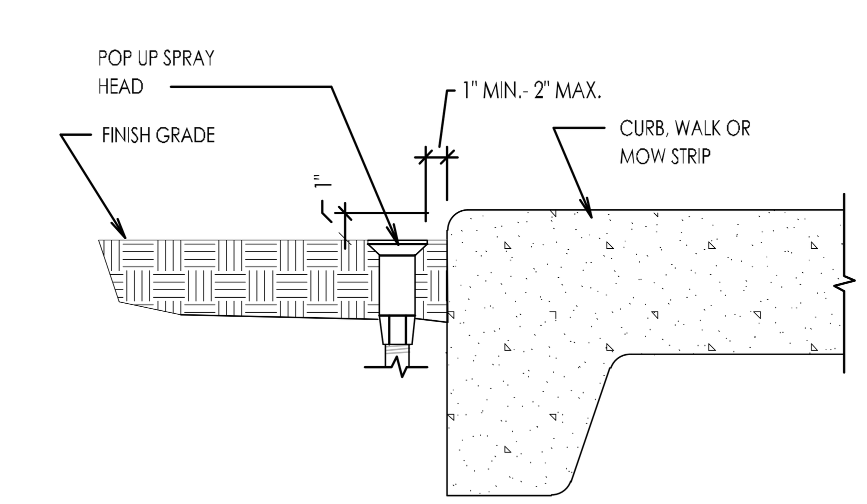
NOTE:
1. FURNISH FITTINGS AND PIPING NOMINALLY SIZED IDENTICAL TO NOMINAL QUICK COUPLING VALVE INLET SIZE.
2. PROVIDE (2) 55-K-1 KEYS AND (1) SH-1 SWIVEL PER QUICK COUPLING VALVE

11 **QUICK-COUPLING VALVE**

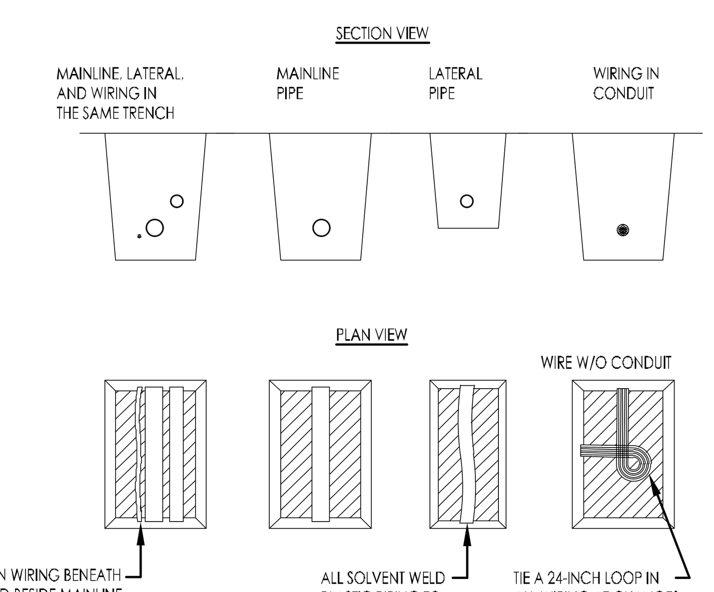


NOTES:
1. ALL PVC IRRIGATION SLEEVES TO BE SCHEDULE 40 PIPE.
2. ALL JOINTS TO BE SOLVENT WELDED AND WATERTIGHT.
3. WHERE THERE IS MORE THAN ONE SLEEVE, EXTEND THE SMALLER SLEEVE TO 24-INCHES MINIMUM ABOVE FINISH GRADE.

12 **SLEEVING**

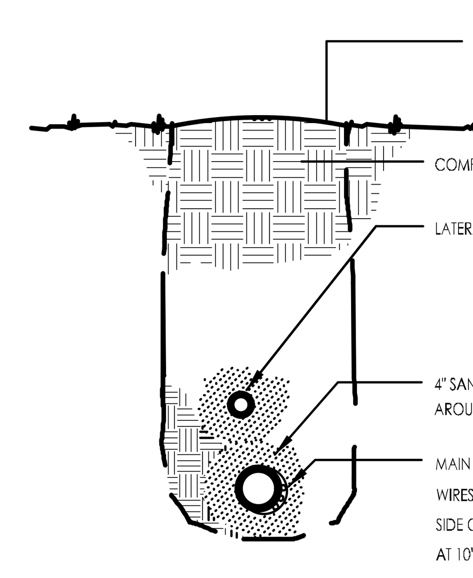


13 **SPRAY HEAD NEXT TO CURB OR WALL**



NOTES:
1. SLEEVE BELOW ALL HARDSCAPE ELEMENTS WITH CLASS 200 PVC TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE WITHIN.
2. FOR PIPE AND WIRE BURIAL DEPTHS SEE SPECIFICATIONS.

14 **PIPE & WIRE TRENCHING**



15 **TRENCH SECTION**

DRAWING: G:\19\105800_BVTCPH3\INFRASTRUCTURE\CIVIL\DWG\VPLANTING P_AN.DWG
LAYOUT: IRRIGATION DETAILS LAST SAVED: 15274, 2/5/2024 10:07 AM
PLOTTED BY: RONALD FLORES, 5/19/2025 11:16 AM (*PLOTTED BY: ONLY VALID ON HARD COPY)

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architecture | engineering | surveying
479.636.4838 t 479.631.6224 f
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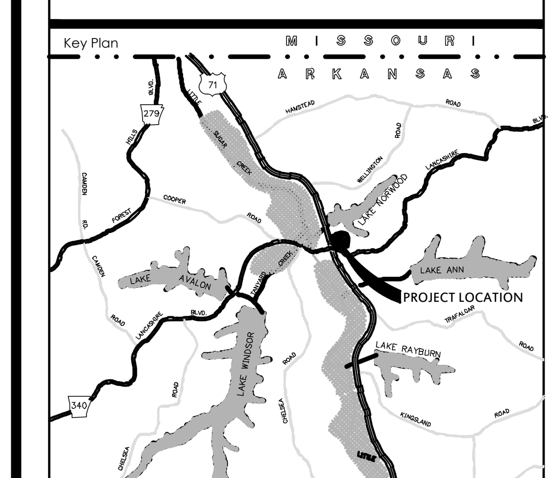
CERTIFICATE OF AUTHORIZATION: CERTIFICATE OF AUTHORIZATION — CRAFTON, TULL & ASSOCIATES, INC. No. 109 — ARKANSAS ENGINEER

TOWNCENTER EAST PHASE 3
BELLA VISTA, AR

Key Plan



No.	Description	Date

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PROJECT NO: 19105800
ISSUE DATE: 5/21/2025
CONTACT: E.MCMAHON
QC by: M.LOVE
QC Date: 10/05/2023

PRELIMINARY PLANS

REGISTERED LANDSCAPE ARCHITECT — BARRY RICHMOND WILLIAMS — No. 5026 — STATE OF ARKANSAS — REVIEW SET NOT FOR CONSTRUCTION — THIS DOCUMENT IS PRELIMINARY IN NATURE AND IS NOT A FINAL, SIGNED AND SEALED DOCUMENT

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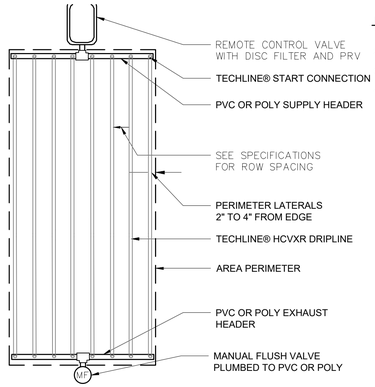
LSD-2025-58745

IRRIGATION DETAILS

LI-501



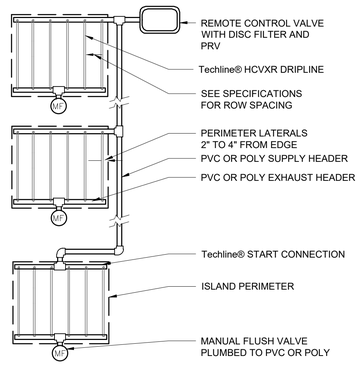
NOTE:
1. RECOMMENDED MINIMUM FILTRATION: 120 MESH
2. PRESSURE AT FLUSH VALVE SHALL BE MIN 21.8 PSI
3. HIGH CHECK VALVE (MAX 8.5' OF WATER (ELEVATION CHANGE))
4. REFER TO MAXIMUM LENGTH OF A SINGLE LATERAL CHART

01 Techline® HCVXR END FEED LAYOUT

NOT TO SCALE

NETAFIM

DETAIL – H101



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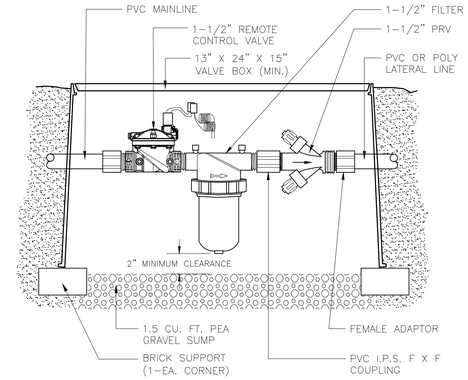
02 Techline® HCVXR ISLAND LAYOUT

NOT TO SCALE

DETAIL – H103

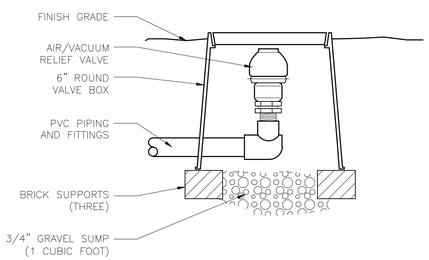


03 COMMERCIAL CONTROL ZONE ASSEMBLY: P/N LVCZ-150 11 - 35 GPM

NOT TO SCALE

NETAFIM

DETAIL – L223

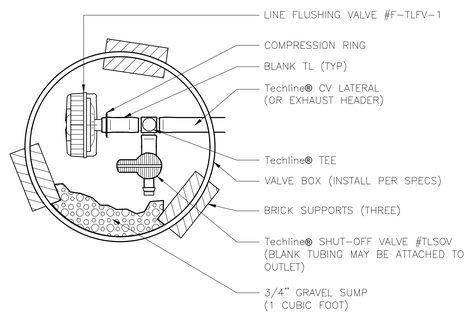


NETAFIM

04 GUARDIAN 1" AIR/VACUUM RELIEF VALVE (PLUMBED TO PVC)

NOT TO SCALE

DETAIL – D281



05 Techline® LINE FLUSHING VALVE WITH SHUT-OFF VALVE

NETAFIM

NOT TO SCALE

DETAIL – D121

IRRIGATION NOTES

1. CONTRACTOR SHALL CAREFULLY VERIFY A MINIMUM DYNAMIC WATER PRESSURE OF 85psi WITH A FLOW RATE OF 45gpm AT THE WATER METER LOCATION PRIOR TO INSTALLATION. CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IF WATER PRESSURE IS LESS THAN OR SIGNIFICANTLY HIGHER THAN NOTED.
2. PLEASE NOTE: IF PRESSURE IS NOT SATISFACTORY THERE MAY BE A NEED FOR A BOOSTER PUMP TO ENHANCE PERFORMANCE OF THE SYSTEM. THE LANDSCAPE CONTRACTOR SHALL REPORT PRESSURE FINDINGS TO THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE SYSTEM FOR DETERMINATION OF ANY BOOSTER NEEDS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ALL UTILITIES DURING THE INSTALLATION. CONTRACTOR SHALL SEEK ASSISTANCE FROM THE LOCAL UTILITIES IN THE LOCATION OF THE UTILITIES PRIOR TO EXCAVATION.
4. CONTRACTOR SHALL OBTAIN ANY REQUIRED PERMITS, ADHERE TO ALL MUNICIPAL CODES AND FOLLOW STANDARD AND ACCEPTED LOCAL PRACTICES.
5. AN AUTOMATIC DRAIN VALVE SHALL BE INSTALLED AT THE LOWEST PORTION OF EACH ZONE AND AT 100' INTERVALS ON THE MAINLINE (SEE DETAIL).
6. VALVE WIRING SHALL BE 12 GAUGE SINGLE STRAND COPPER DIRECT BURIAL DECODER SYSTEM IRRIGATION WIRE. PROVIDE ALL SPLICES SHALL BE WATERPROOF AND PLACED AT VALVE LOCATIONS ONLY.
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LIMITATIONS:
ALLOWING FOR A WIDE VARIETY OF APPLICATIONS AND CONDITIONS, NETAFIM IRRIGATION INC. IS NOT RESPONSIBLE FOR CORRECTNESS OF DESIGN, SPECIFICATION OR ANY OTHER ASPECT OF ANY PROJECT IN WHICH THIS DRAWING MAY BE USED. THIS DRAWING MAY NOT BE MODIFIED OR MERGED INTO OTHER DRAWINGS WITHOUT NETAFIM IRRIGATION INC. WRITTEN AUTHORIZATION. ANY MODIFICATIONS OR REPORTS/OPINIONS MAY BE NECESSARY AND ARE THE SPECIFIER'S RESPONSIBILITY. THE USE OF THESE DRAWINGS AND/OR DATA REPORTED HEREIN IS RESTRICTED TO THE PARTIES TO WHOM THEY ARE ADDRESSED. THESE DRAWINGS AND DATA MAY NOT BE REUSED BY ANY METHOD IN WHOLE OR IN PART IS FULLY AUTHORIZED OWNERSHIP IS RETAINED BY NETAFIM IRRIGATION INC. VISUAL REPRESENTATIONS OF PLANTS MANUAL CONSTITUTE ERRONEOUS ASSUMPTIONS OF PLANT GROWTH AND MAINTENANCE.

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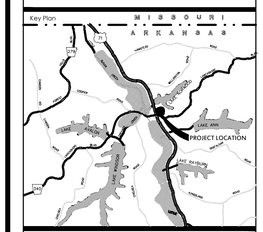
CERTIFICATE OF AUTHORIZATION:
CERTIFICATE OF AUTHORIZATION
CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

TOWNCENTER EAST
PHASE 3

BELLA VISTA, AR

Key Plan



No.	Description	Date

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PROJECT NO: 19105800
ISSUE DATE: 5/21/2025
CONTACT: E.MCMAHON
QC by: M.LOVE
QC Date: 10/03/2023

PRELIMINARY PLANS

THIS DOCUMENT IS PRELIMINARY IN NATURE AND IS NOT A FINAL, SIGNED, SEALED DOCUMENT
REGISTERED LANDSCAPE ARCHITECT
BARRY RICHMOND WILLIAMS
AND SCOPE
STATE OF ARKANSAS

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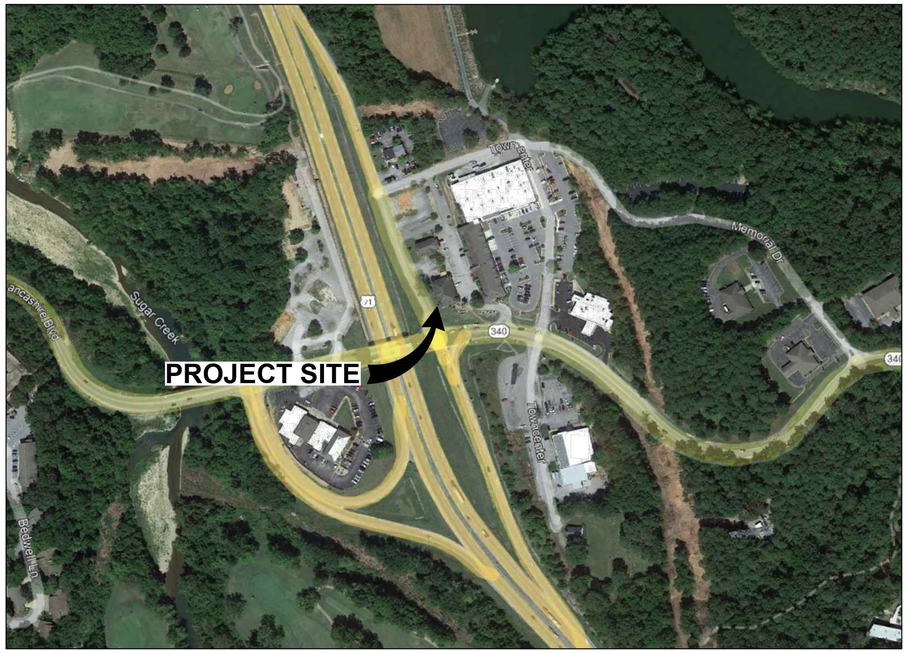
LSD-2025-58745

IRRIGATION DETAILS (2)

LI-502

MECHANICALLY STABILIZED EARTH RETAINING WALL
FOR
TOWNCENTER EAST, PHASE 3
BELLA VISTA, ARKANSAS



NOTE: SITE IMAGE PROVIDED BY GOOGLE EARTH, PRO, 2016.

VICINITY MAP

PREPARED FOR: CRI Cooper Realty Investments, Inc.

Arkansas 811 Know what's below. Call before you dig.

SHEET INDEX

SHEET NUMBER	SHEET DESCRIPTION
RW-01	COVER SHEET
RW-02	TECHNICAL SCOPE OF WORK
RW-03	TECHNICAL SCOPE OF WORK
RW-04	SITE PLAN
RW-05	WALL PLAN & PROFILE
RW-06	WALL PLAN AND PROFILE
RW-07	TYPICAL WALL CROSS SECTION
RW-08	TYPICAL WALL CROSS SECTION
RW-09	TYPICAL WALL CROSS SECTION
RW-D1	WALL CONSTRUCTION DETAILS
RW-D2	WALL CONSTRUCTION DETAILS

REV	DATE	BY	DESCRIPTION

COVER SHEET

TOWNCENTER EAST, PHASE 3

BELLA VISTA WAY & LANCASHIRE BLVD

BELLA VISTA ARKANSAS

Terracon
4686 SOUTH ASH AVENUE, SUITE H-4
TEMPE, AZ 85282
PH: (480) 897-5200
FAX: (480) 897-1133

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7032

11/28/23

RW-01

DESIGNED BY:	JP
DRAWN BY:	JP
APPVD. BY:	TMK
SCALE:	AS SHOWN
DATE:	11/28/23
JOB NO.	65235108
ACAD NO.	01 RW-01
SHEET NO.:	01 OF 11

SECTION 1: GENERAL TECHNICAL NOTES

1.01 Description:

The work shall consist of furnishing and constructing a combination of modular KeyStone block/Miragrid geogrid and rock anchor retaining wall system in accordance with this technical scope of work and in reasonably close conformity with the lines, grades, and dimensions shown on the Grading for Bella Vista Towne Center East Phase 3 by Crafton Tull, Sheet No. C-103, Project No. 19105800, dated 03/17/2022.

1.02 Work Included:

A. Furnishing KeyStone segmental concrete facing, and cap units as shown on the construction drawings.

B. Furnishing Miragrid structural geogrid reinforcement as shown on the construction drawings.

C. Storing, cutting and placing structural geogrid reinforcement as specified herein and as shown on the construction drawings.

D. Storing, cutting and placing geotextile as specified herein and as shown on the construction drawings.

E. Excavation, placement and compaction of unit wall fill and backfill material as specified herein and as shown on the construction drawings.

F. Construction of subsurface drainage systems as shown on the construction drawings.

G. Excavation of soils, Limestone bedrock to the planned grades shown on the grading plans and for the retaining wall construction as specified in the construction drawings. Load and haul excavated soil and bedrock.

H. Erection of KeyStone segmental concrete units and placement of structural geogrid.

I. Drilling rock anchor holes as specified herein and as shown on the construction drawings.

J. Furnishing, placing and grouting rock anchor bar tendons into drill holes.

K. Furnishing and attaching steel pipes, nuts and other fittings to the rock anchors as shown on the construction drawings

1.03 Reference Documents:

A. American Association of State Highway and Transportation Officials (AASHTO)
T-99 Moisture-Density Relations of Soils Using a 5.5 Pound Rammer in a 12-inch Drop

B. American Society for Testing and Materials Standards (ASTM)
A-53 Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
A-775 Specification for Epoxy-Coated Reinforcing Steel Bars
C-33 Specification for Concrete Aggregates
C-140 Methods of Sampling and Testing Concrete Masonry Units
C-150 Specification for Portland Cement
C-1372 Standard Specifications of Segmental Retaining Wall Units
D-422 Method for Particle Size Analysis of Soils
D-698 Method for Laboratory Compaction Characteristics of Soils Using Standard Effort
D-732 Shear Strength of Plastic by the Punch Tool Method
D-790 Flexural Properties Testing of Plastic
D-1556 Method for Density and Unit Weight of Soil in-Place by the Sand Cone Method
D-6938 Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods
D-4253 Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table
D-4254 Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density
D-4595 Tensile Properties of Geotextiles by The Wide-Width Strip Method
D6637 Standard Test Method for Determining Tensile Properties of Geogrids by the Single or Multi-Rib Tensile Method
D6708 Standard Test Method for Measuring Geosynthetic Pullout Resistance in Soil
D-1785 Specification for Rigid Poly (Vinyl Chloride)(PVC) Plastic Pipe, Schedules 40, 80, and 120
D-3963 Specification for Epoxy-Coated Reinforcing Steel

C. National Concrete Masonry Association (NCMA)
NCMA Design Manual for Segmental Retaining Walls

D. Federal Highway Administration (FHWA) – Geotechnical Engineering Circular No. 7 – Soil Nail Walls, 2003, FHWA 0-IF-03-17.

E. Federal Highway Administration (FHWA) – Manual for Design and Construction Monitoring of Soil Nail Walls, 1998, FHWA-SA-069R

F. Crafton Tull, Grading for Bella Vista Towne Center East phase 3, Sheet No. C-103.0, Project No. 19105800, dated 03/17/2022.

G. Terracon Consultants, Inc., Geotechnical Engineering Report, Bella Vista Retaining Wall, Project No. KB235027, Dated July 14, 2023.

H. Where specifications and reference documents conflict, the Engineer shall make final determination of the applicable document.

1.04 Special Provisions:

A. The designs presented herein are based on wall profiles, soil parameters, foundation conditions and loadings stated in documentation as outlined in Section 1.03, Items F and G, Section 4.01.

B. The reinforced backfill to be used in the wall construction must meet specific engineering requirements as outlined in the Technical Scope of Work. The suitability of on-site materials for use in the MSE wall construction, as specified herein, should be determined prior to construction.

C. The Contractor shall be responsible for the cost of all means of subsoil improvement; cost of additional subsoil exploration; and for all labor tools, equipment and incidentals necessary to complete the work.

D. The Contractor shall be responsible for complying with all federal, state and local requirements for execution of the work, including local building inspection and current OSHA excavation regulations.

E. Prior to undertaking any grading or excavation of the site, the Contractor shall confirm the location of proposed retaining walls and all underground features, including utility locations within the area of construction.

F. All work undertaken in the construction of the retaining walls are subject to the quality control/assurance and special inspection provisions outlined in Section 3.15.

G. Work on this project will require careful wall facing deconstruction and removal of existing geogrid reinforcement and backfill soils in a portion of wall A. The contractor shall provide temporary shoring if necessary to complete work on this project.

H. The plans provided to Terracon for the project currently show proposed utilities within the reinforced backfill for the retaining wall. Any utilities constructed behind the wall shall be equipped with a pressure meter to indicate if a wet utility line has ruptured. In no case should water be allowed to collect behind the retaining wall at any time Construction of wet utilities including but not limited to water lines and landscape irrigation should be coordinated with construction of the wall system.

I. Where there is potential for conflict between geogrids and other construction on the project, Terracon should be afforded the opportunity to review construction documents and make a determination on the appropriate course of action. Under no circumstance should geogrid reinforcement be cut or severed unless otherwise explicitly indicated by these construction documents. Any severing of the geogrid performed without the recommendation of Terracon shall be repaired at no cost to the Terracon or the Owner.

J. Excavation along and behind portions of the wall alignment will likely encounter Limestone Bedrock. Contractor shall review the referenced geotechnical engineering report by Terracon for anticipated subsurface conditions at the site. Special wall construction will be necessary where competent bedrock is encountered and full geogrid embedment lengths cannot be installed. The use of rock anchors will be necessary in this case.

K. Terracon has completed engineering design of the proposed retaining walls, including internal stability and local external stability where applicable, based upon the information provided to us as outlined above.

L. Any changes in planned grading, locations of structures or changes in wall profiles should be brought to the attention of Terracon for modification of the wall designs as necessary.

M. Verify all dimensions and grades prior to wall construction.

SECTION 2: MATERIALS

2.01 Definitions:

A. Structural Geogrid – a Miragrid geogrid formed by a regular network of integrally connected tensile elements with apertures of sufficient size to allow interlocking with surrounding soil, rock, or earth and function primarily as reinforcement.

B. Geotextile – a spun-bound non-woven engineering fabric intended for tensile reinforcement with high filtration and permeability characteristics.

C. Segmental Concrete Facing Units – KeyStone segmental concrete facing machine made from portland cement, water and mineral aggregates.

D. Limestone Bedrock - Intact bedrock that is very hard and having few or no fractures.

E. Cap Unit – a KeyStone segmental concrete cap unit.

F. Subdrain – a combined system of slotted pipe, geotextile fabric and gravel, provided for internal drainage behind or below the reinforced backfill.

G. Unit Fill/Gravel Fill Layer – granular fill which is within and behind the segmental concrete facing units.

H. Post Foundation System- a 12" diameter post fence foundation system, used to facilitate fence/railing installation.

I. Reinforced Backfill – compacted soil which is within the reinforced soil volume as outlined on the plans.

J. Foundation Soil – compacted or in-situ soil beneath the entire wall. Foundation Material for this project may also consist of Limestone bedrock.

K. Leveling Pad – a level compacted gravel or non-reinforced concrete footing upon which the first course of segmental concrete facing units are placed.

L. Solid Bar Anchor Tendons – a deformed epoxy coated threaded bar used as rock anchor as shown on plans.

M. Anchor Pipe – a galvanized pipe and fittings used to secure the geogrid to the head of the rock anchors.

N. Epoxy Coating – a fusion bonded electrostatically applied coating.

O. Centralizers – a PVC or steel pipe or tube attached to rock anchor bars sized to allow tremie pipe insertion to bottom of the drill hole.

P. Anchor Grout – Neat cement or sand/cement mixture.

Q. Engineer – Terracon Consultants, Inc.- Phoenix, AZ.

R. Geotechnical Engineer – Terracon Consultants, Inc. – Rogers, AR.

2.02 Structural Geogrids:

A. The geogrids shall be Miragrid structural geogrid as shown on the plans, or geogrid of equivalent long-term design and connection strength with the segmental concrete facing, consisting of regular grid structure of high tenacity polyester multifilament yarns woven in tension and finished with PVC coating.

B. The manufacturer shall provide the certification that the ultimate strength of the geogrid as per ASTM D6637 is equal to or greater than the ultimate strength called for on the drawings.

Geogrid Type	Ultimate Strength	Long Term Design
Miragrid	(lb./ft)	Strength (lb./ft)
3XT	3,500 plf	1,768 plf

2.03 Geotextiles:

A. The geotextile shall be Mirafi 160N as shown on the plans, or equivalent, consisting of spun-bound 100% continuous filament polyester needle punched engineering fabric.

2.04 Segmental Concrete Facing Units:

A. The segmental concrete facing units shall be manufactured by a licensed KeyStone Representative.

B. All concrete wall units including cap units shall have a minimum net 28-day compressive strength of 3,000 psi. The concrete units shall have the required freeze/thaw protection with a maximum absorption rate of 8 percent in southern climates.

1. Cementitious materials used in the manufacture of the units shall be Type I or Type II Portland cement in accordance with ASTM C-150.
2. All aggregates used in the manufacture of the units shall be normal weight conforming to ASTM C-33.
3. Other Constituents - Air entraining agents, coloring pigments, integral water repellents, finely ground silica, and other constituents shall be previously established as suitable for use in segmental concrete retaining wall units and shall conform to applicable ASTM Standards or shall be shown by test or experience not to be detrimental to the durability of the segmental concrete facing units or any material customarily used in masonry construction.

C. Exterior dimensions of units may vary in accordance with ASTM C-1372. KeyStone Compac units shall have a minimum of 1 square foot face area each. Segmental concrete facing unit dimensions shall not differ more than ± 1/8 inch from the manufacturer's published dimensions.

D. KeyStone Compac block units with unit fill shall provide a minimum of 150 psf of wall face area. Fill which is placed within the dimensions of the units may be considered as 80% of the effective weight.

E. KeyStone units shall have angled sides capable of concave and convex alignment curves with a minimum radius of 3-1/2 feet.

F. KeyStone Units shall be interlocked with non-corrosive fiberglass pins.

G. Finish and Appearance

1. All units shall be sound and free of cracks or other defects that would interfere with the proper placing of the unit or significantly impair the strength or permanence of the construction. Minor cracks incidental to the usual method of manufacture, or minor chipping resulting from shipment and delivery, are not grounds for rejection.
2. The exposed surfaces of units shall be free of chips, cracks or other imperfections when viewed from a distance of 10 feet under diffused lighting.

H. Sampling and Testing

1. Sample and test units for compressive strength and absorption in accordance with the applicable provisions of ASTM Method C-140. Compressive strength test specimens shall conform to the saw-cut coupon provisions of section 5.2.4 of ASTM C-140 with the following exceptions:
   a. Coupons shall have a minimum thickness of 1-1/2 inches (38.1 mm).

I. Color

1. Block samples, indicating available colors, shall be provided to the Owner/developer for color selection prior to construction.

J. Facing units removed from the existing wall may be reused in the wall reconstruction provided they are reasonably sound and meet the requirements of this specification. Alternatively, if existing facing units have minor cracks, they may be used in the below grade portions of the retaining wall.

2.05 Base Leveling Pad Materials and Gravel Fill for Block:

A. Base Leveling Pad Material: Material for leveling pad shall consist of compacted sand, gravel, crushed rock or any combination thereof (use soil types GP, GW, SW, SP or SM), a minimum of 6 inches in thickness, constructed to the minimum dimensions shown on the construction drawings. Non-reinforced concrete may also be used.

B. Gravel Fill for units shall consist of clean 1" minus free-draining well graded crushed stone or granular fill, meeting the requirements of the following gradation tested in accordance with ASTM D-422:

Sieve Size	Percent Passing
1 inch	100
3/4 inch	75-100
No. 4	0 – 60
No. 40	0 – 50
No. 200	0 – 5

2.06 Wall Backfill:

A. Reinforced backfill shall consist of suitable granular materials meeting the following gradation as determined in accordance with ASTM D-422:

Sieve Size	Percent Passing
1 1/2 inch	100
1 inch	95 – 100
1/2 inch	25 – 60
No. 4	0 – 10
No. 8	0 – 5

B. USCS soil types CL, CH, ML, MH, or SC shall not be used in any portion of the wall reinforced backfill.

C. All reinforced backfill materials shall also have the minimum engineering properties shown in Section 4.01, Item A.

D. All backfill materials, whether on-site or imported, shall be approved by the Engineer prior to construction.

E. Test results of all proposed backfill materials, whether on-site or imported, shall be submitted to the Engineer for approval prior to construction.

2.07 Subdrain:

A. Geotextile used for subdrain construction shall be non-woven needle-punched fabric such as Mirafi 160N or equivalent.

B. Drain pipe shall be 4-inch diameter slotted PVC or HDPE such as ADS Drainguard or approved equivalent.

C. Gravel shall be clean 3/4-inch minus free draining stone or crushed rock with no more than 5% passing a U.S. No. 200 sieve. Material meeting requirements of Gravel Fill specified in Section 2.05 B is considered acceptable for use in subdrain system.

2.08 Post Foundation System:

A. Post foundation system used for handrail or fence post installation shall be a polypropylene sleeve such as Sleeve-It™ SD-1.

B. The Sleeve-It™ SD-1 product shall be evenly spaced no farther apart than 8 feet on centers in any case.

C. Use of the Sleeve-It™ SD-1 system is limited to the following fencing applications without consideration of wind loading:

1. 8-foot high and under chain link fences
2. 6-foot high and under wood fence with gaps between boards
3. 6-foot high and under balustrade PVC, steel, aluminum or wrought iron fences.

D. For other fencing systems not meeting the criteria above, contact the Sleeve-It™ system manufacturer to determine suitability.

2.09 Rock Anchor Tendons:

A. The tendons shall be AASHTO M31/ASTM A615, Grade 60 deformed steel bar or as shown on plans. All bars used as rock anchors shall be galvanized or epoxy coated.

B. The tendons shall be new, straight, undamaged continuous without splices or welds.

C. The tendons shall be threaded a minimum of 6-inches (150 mm) on the wall anchorage end to allow proper attachment of the steel anchor pipe, nut and other fittings as shown on the plans.

D. The threading may be continuous spiral deformed ribbing provided by the bar deformations (continuous thread bars) or may be cut into a reinforcing bar. If threads are cut into a reinforcing bar, provide the next larger bar size from that shown on plans.

2.10 Epoxy Coating:

A. The epoxy coating, when required, shall be an ASTM A775 fusion bonded electrostatically applied coating.

B. The coating shall be a minimum of 0.016 inches (0.4 mm) in thickness.

C. The coating at the wall anchorage end of the epoxy-coated bars may be omitted over the length provided for threading the nut against the bearing plate.

2.11 Centralizers:

A. Centralizers shall be manufactured from Schedule 40 PVC pipe or tube, steel or other material not detrimental to the anchor steel. Wood shall not be used as a material for fabricating centralizers.

B. The centralizer shall be securely attached to the anchor bar.

C. Centralizer Sizing

1. The centralizer shall be sized to position the anchor bar within 1 inch (25mm) of the center of the drill hole.
2. The centralizer shall allow the tremie pipe to be inserted to the bottom of the drill hole.
3. The centralizer shall allow grout to flow freely up the drill hole.

2.12 Anchor Grout:

A. The material for anchor grout shall consist of neat cement or a sand/cement mixture.

B. The anchor grout shall have a minimum 3 day compressive strength of 1500 psi (10.5 Mpa) and a minimum 28 day compressive strength of 3000 psi (21 Mpa) per AASHTO T106/ASTMC109 and shall consist of one or more of the following materials:

1. Cementitious materials used in anchor grout mixture shall consist of Type I, II, III or V Portland cement in accordance with AASHTO M85/ASTM C150.
2. Fine aggregate materials used in anchor grout mixture shall be in accordance with AASHTO M6/ASTM C33.
3. Admixtures shall be compatible with the grout and mixed in accordance with the manufacturer's recommendations and AASHTO M194/ASTM C494.
   a) Admixtures which control bleeding, improve flowability, reduce water content, and retard setting shall be approved by the Engineer prior to construction.
   b) Expansive admixtures may be used only for filling sealed encapsulations.
   c) Accelerators shall not be used in the anchor grout mixture.

2.13 Steel Anchor Pipe:

A. The steel anchor pipe shall consist of a 3-inch diameter (AISC Pipe 3 x-Strong) steel pipe. The steel anchor pipe shall be galvanized.

2.14 Delivery, Storage, Handling:

A. Structural Geogrid and Geotextiles

1. Contractor shall check to ensure that the proper materials have been received upon delivery.
2. All geogrids shall be stored above -20°F (-29°C).
3. Contractor shall prevent excessive mud, wet cement, epoxy, and like material which may affix themselves to the gridwork, from coming in contact with the geogrid material.
4. Rolled geogrid material may be laid flat or stood on end for storage.
5. Geogrids shall be stored according to manufacturer's recommendations.

B. Segmental Concrete Facing Units

1. Contractor shall check the units upon delivery to ensure that proper materials have been received.
2. Contractor shall prevent excessive mud, wet cement, epoxy, and like materials from coming in contact with and affixing to the units.
3. Contractor shall protect the units from damage (i.e. cracks, chips, spalls). Damaged units shall be evaluated for usage in the wall according to ASTM: C-90 and ASTM: C-1372.

C. Cement, Aggregate and Liquid Admixtures

1. Contractor shall check to ensure that the proper materials have been received upon delivery.
2. Contractor shall store cement to prevent moisture degradation and partial hydration.
3. Cement that is caked or lumpy shall not be used.
4. Cement shall be stored according to manufacturer's recommendations.
5. Contractor shall store aggregates to prevent segregation and contamination from foreign materials.
6. Contractor shall not use bottom 6 inches of aggregate pile when in contact with ground surface.
7. Contractor shall store liquid admixtures to prevent evaporation and freezing.

D. Steel Components

4. Contractor shall check the steel components upon delivery to ensure that proper materials have been received.
5. Steel shall be stored on supports to prevent steel from coming in contact with the ground.
6. Contractor shall protect steel from dirt, rust, and other deleterious substances prior to installation.
7. Contractor shall reject steel with heavy corrosion or pitting, abrasion damage, cuts, nicks, welds and weld splatters. Light rust that has not resulted in pitting is acceptable.
8. Contractor shall place protective wrap over threaded portions of steel reinforcing during handling, installing, grouting and shotcreting.

E. Epoxy Coated Bars

1. Contractor shall handle and store epoxy coated bars in accordance with ASTM D3963.
2. Contractor shall repair damaged epoxy coating in accordance with ASTM A775 and the coater's recommendations. Repairs shall be made using an epoxy repair kit approved by the epoxy manufacturer and repaired areas shall have a minimum coating thickness of 0.01 inch (0.3 mm).

SECTION 3: EXECUTION

3.01 Construction:

A. The excavation shall be carried to the lines and grades shown on the construction drawings and to the extent necessary to place structural geogrid at the required embedment lengths. Contractor shall be careful not to disturb base or existing soils/fills beyond the lines shown except for that necessary to comply with applicable safety regulations.

B. Excavations will be made in a manner which will not disturb the existing construction on the site. Contractor will provide protection or will construct the walls in such a manner to maintain the integrity of existing improvements during construction.

C. In-situ materials excavated from the location of the retaining walls shall be stockpiled on-site at locations designated by the Owner and in locations which will not interfere with the execution of the work.

D. The required excavation for this project is expected to encounter a combination of soil and in-place Limestone bedrock. Refer to the geotechnical Engineering Report for anticipated subsurface conditions.

3.02 Subgrade Preparation:

A. Subgrade shall be excavated as required for placement of the leveling pad as shown on the construction drawings, or as directed by the Geotechnical Engineer.

B. Subgrade shall be examined by the Geotechnical Engineer to confirm that the actual foundation conditions meet or exceed assumed design assumptions. As a minimum, soil shall be proof rolled before construction proceeds. Subgrade conditions not meeting the required strength shall be removed and replaced with acceptable material.

C. Over-excavated areas shall be replaced with compacted granular backfill material or soils approved by the Geotechnical Engineer to the lines and grade shown on the construction drawings.

D. Granular backfill shall be placed in loose lifts not exceeding 10 inches in thickness, compacted to a minimum of 95 percent of the maximum density as determined by AASHTO T-99 or ASTM D-698. The moisture content of the backfill prior to, and during compaction shall be uniformly distributed throughout each layer and shall be within a range of 2% below, to 2% above optimum moisture content.

3.03 Base Leveling Pad:

A. Leveling Pad materials shall be placed as shown on the plans, upon undisturbed soils or compacted subgrade, to a minimum depth of 8 inches.

B. Leveling Pad materials shall be compacted to provide a level hard surface on which to place the first course of units. Leveling Pad materials shall be compacted to a minimum of 95 percent of the maximum density as determined by AASHTO T-99 or ASTM D-698. The moisture content of the backfill material prior to and during compaction shall be uniformly distributed throughout each layer and shall be within a range of 2% below, to 2% above optimum moisture content. If a well-defined maximum density curve cannot be generated by impact compaction in the laboratory, the backfill shall be compacted to a minimum of 75 percent of relative density as determined by ASTM D-4253 and D-4254.

C. Leveling Pad shall be prepared to insure complete contact of retaining wall units with the base.

D. Provided that compaction is maintained, leveling pad materials may be extended linearly beyond the profiles shown on the plans to accommodate full-sized facing units.

3.04 Segmental Concrete Facing Unit Installation:

A. The first course of concrete wall units shall be placed on top of and in full contact with the leveling pad. The units shall be checked for proper elevation and alignment.

B. Units shall be placed side by side for the full length of the wall. Proper alignment may be achieved with the aide of a string line or offset from baseline.

C. All voids between and within concrete wall units shall be filled with tamped unit fill. A minimum of 12 inches of unit fill shall be placed behind concrete wall units.

D. All excess material shall be swept from the top of the units prior to installing the next course. Each course shall be filled prior to proceeding to next course.

E. Install each succeeding course. Backfill as each course is completed. Pull the units forward until the locating surface of the unit contacts the locating surface of units in the preceding course. Pull the units forward as far as possible. Repeat procedure to the extent of wall height.

F. Where the wall changes elevation, units can be stepped or turned into the embankment with a convex return end as appropriate. Provide appropriate buried units on leveling pad in area of convex return end.

3.05 Cap Installation:

A. Place KeyStone Cap units over projecting pins from units below. Pull forward to set back position. Backfill and compact to finished grade.

B. As required, provide permanent mechanical connection to wall units with construction adhesive or epoxy. Apply adhesive or epoxy to bottom surface of cap units and install on units below per the manufacturer's recommendations.

3.06 Subdrain Construction:

A. Subdrains shall be constructed directly behind the segmental facing units to the lines, grades and dimensions shown on the plans.

B. Subdrains should be sloped and drained through weep holes in the face of the wall at a maximum of 30 feet on center.

3.07 Structural Geogrid Installation:

A. Geogrid shall be oriented with the highest strength axis perpendicular to the wall alignment.

B. Geogrid reinforcement shall be placed at the elevation(s) and to the extent(s) shown on the construction drawings or as directed by the Engineer. Where required reinforcements lengths cannot be placed due to the presence of limestone bedrock, refer to Wall Cross Section 2 and related rock anchor sections of this specification for wall construction.

C. The geogrid soil reinforcement shall be laid horizontally on compacted backfill. The geogrid shall be pulled taut and anchored prior to backfill placement on the geogrid. No tensioning of the geogrid materials shall be required.

D. Geogrid reinforcements shall be continuous throughout their embedment length(s). Spliced connections between shorter pieces of geogrid will not be allowed.

E. Tracked construction equipment shall not be operated directly upon the geogrid reinforcement. A minimum fill thickness of 6 inches is required prior to operation of tracked vehicles over the geogrid. Tracked vehicle turning should be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid.

F. No changes to geogrid layout, including, but not limited to, length, geogrid type, or elevation, shall be made without the approval of the Engineer.

3.08 Reinforced Backfill Placement:

A. Reinforced backfill shall be placed, spread, and compacted in such a manner that minimizes the development of slack in the geogrid.

B. Reinforced backfill shall be placed and compacted in lifts not to exceed 6 inches where hand compaction is used, or 8-10 inches where heavy mechanical compaction equipment is used.

C. Reinforced backfill shall be compacted to a minimum of 95 percent of the maximum density as determined by AASHTO T-99 or ASTM D-698. The moisture content of the backfill material prior to and during compaction shall be uniformly distributed throughout each layer and shall be within a range of 2% below, to 2% above optimum moisture content. If a well defined maximum density curve can not be generated by impact compaction in the laboratory, the backfill shall be compacted to a minimum of 70 percent of relative density as determined by ASTM D-4253 and D-4254.

D. Reinforced backfill shall be compacted in all areas to the lines and grades shown on the plans including all sloped areas above the wall.

E. Only lightweight hand-operated compaction equipment shall be allowed within 4 feet of the face of the wall.

3.09 Post Foundation System Installation:

A. Place the Sleeve-It™ SD-1 Systems at locations of fence posts or railings supports at a maximum spacing of 8 feet on center.

B. Assemble and Install Sleeve-It™ SD-1 Systems per manufacturer's recommendations.

C. Prepare a level area approximately 24" wide by 36" deep behind the wall face. The prepared area should be 24" below the proposed top of wall not including the cap stone.

D. Place the Sleeve-It™ unit on the level surface in an upright position with the front edge of the unit flush against the back of the wall. Multiple units should be spaced in accordance with fence specifications no longer than 8 feet on centers.

E. Encapsulate and stabilize the Sleeve-It™ unit by placing and compacting sufficient backfill material layers as required. Slit the geogrid perpendicular to the wall face just enough to fit around the base of the unit while ensuring the geogrid remains properly attached to the wall. Continue the backfilling process until the material reaches the top of the tower. Do not remove the perforated lid until ready to place post. Do not step on perforated lid, as this could cause serious bodily injury.

F. Punch the perforated lid using a mallet or hammer to expose the inside of the Sleeve-It™ unit. Detached lids can be left inside the unit or discarded prior to pouring the infill material.

G. Place post through the exposed area and rest of the flat ground surface area inside the Sleeve-It™ cavity. Ensure that the post is upright and level and hold in place while carefully pouring infill material such as concrete through the exposed cavity. Follow guidelines as specified by infill supplier. Concrete is highly recommended as infill material.

3.10 Geotextile Installation:

A. Geotextiles shall be placed at the elevations, locations and to the extent shown on the Construction drawings.

B. A minimum of 3 inches of soils shall be maintained between any geogrid reinforcement and the geotextile fabric.

C. Geotextile fabric shall also be used for separation of dissimilar materials as shown on the drawings.

3.11 Rock Anchor Installation:

A. The drill holes for the rock anchors shall be made at the locations, orientations, and lengths shown on the plans or as directed by the Engineer.

B. The use of drilling muds such as bentonite slurry is not allowed.

C. Rock Anchor bars shall be as shown on plans or as directed by the Engineer.

D. Rock Anchor bars shall have centralizers sized to position the bar within 1 inch of the center of the drill hole. Centralizers shall be positioned as shown on plans so their maximum center-to center spacing does not exceed 4 feet. Centralizers shall be within 2 feet from the top and bottom of the drill hole.

E. Drill holes shall be inspected for cleanliness prior to insertion of rock anchor bar.

F. Rock anchor bars shall be inserted freely into the entire length of the hole.

G. The rock anchor head location shall be within 6 inches and rock anchor inclination shall be within 3 degrees as shown on plans.

H. Rock anchors not within the specified tolerances shall be replaced. All abandoned drill holes shall be filled with tremied grout.

I. The drill hole shall be grouted after installation of the anchor bar. Each drill hole will be grouted within 2 hours of completion of drilling, unless otherwise approved by the Engineer.

J. Grout shall be injected at the lowest point of each drill hole through a grout tube. Keep the outlet end of the conduit delivering the grout below the surface of the grout as the conduit is withdrawn to prevent the creation of voids. Completely fill the drill hole in one continuous operation. Cold joints in the grout column are not allowed except at the top of the test bond length of proof tested production anchors. Grouting before insertion of the anchor is allowed provided the anchor bar is immediately inserted through the grout to the specified length without difficulty.

K. Maintain grout head or grout pressures sufficient to ensure that the drill hole will be completely filled with grout and to prevent unstable soil/rock or groundwater from contaminating or diluting the grout. Record the grout pressures for rock anchors installed using pressure grouting techniques. Control grout pressures to prevent excessive ground heave or fracturing.

L. Remove the grout and anchor if grouting is suspended for more than 30 minutes or does not satisfy the requirements of this specification or the Plans, and replace with fresh grout and undamaged anchor bar.

3.12 Rock Anchor Testing:

A. Testing Equipment

1. A hydraulic jack and pump capable of providing at least 2 times the design load will be used to apply the load to the anchor.
2. A chair or reaction base will be used to distribute the jack load onto the rock face. The area of the reaction base plate will not be less than 100 square inches.
3. A testing anchor is used behind the jack to grip the tendon during loading.
4. The jack pressure gauge will be calibrated as a set prior to the start of the project. It will be recalibrated if pressure movements are too erratic to obtain valid data of the anchor's capacity.
5. The pressure gauge used for the testing will be large enough to distinguish a 100 psi change in pressure. Also, a force gauge may be used to indicate the force being applied to the anchor. If a pressure gauge is used, the contractor shall provide a pressure vs. force chart for use by the testing team.
6. The ram travel of the jack will be long enough to enable the anchor to deform.
7. The hydraulic jack will be capable of raising the load from one load increment to another in less than one (1) minute.
8. A dial gauge capable of reading a movement to the nearest 0.001 inches will be used to measure anchor movement. The gauge will be located independent of the ground conditions and immediately adjacent to the reaction base.
9. The measurement of deflection shall be taken from an immovable object adjacent to the apparatus and not from the base plate or any other object that could move during the deflection testing.

B. Verification testing shall be performed to verify installation methods and anchor pullout resistance. Verification tests will be performed at locations selected by the contractor and approved by the Engineer. A minimum of two verification tests shall be performed in each different rock unit (i.e. in-place limestone) and for each different drilling/grouting method proposed to be used. Bare anchor bars can be used for the sacrificial verification test anchors.

1. Construct verification test anchors using the same equipment, installation methods, anchor inclination, and drillhole diameter as planned for the production anchors. Changes in the drilling or installation method may require additional verification testing as determined by the Engineer.
2. Verification test anchors shall have both bonded and unbonded lengths. Along the unbonded length, the anchor bar is not grouted. The unbonded length of the test anchors shall be at least 3 feet unless approved otherwise by the Engineer

REV	DATE	BY	DESCRIPTION

TECHNICAL SCOPE OF WORK

TOWNCENTER EAST, PHASE 3

BELLA VISTA WAY & LANCASHIRE BLVD

BELLA VISTA ARKANSAS

Terracon
4685 SOUTH ASH AVENUE, SUITE H-4
TEMPE, AZ 85282
PH. (480) 897-4200
FAX. (480) 897-1133

ARKANSAS REGISTERED PROFESSIONAL ENGINEER

Homan, Michael
Nov 30 2023 2:00 PM

11/30/23 RW-02

DESIGNED BY:	JP
DRAWN BY:	JP
APPVD. BY:	TMK
SCALE:	AS SHOWN
DATE:	11/28/23
JOB NO.	65235108
ACAD NO.	02 RW-02
SHEET NO.:	02 OF 11

3. The bond length of the test anchors shall be determined by the Contractor. The bonded length of the rock anchor during verification tests, LBVT, shall be at least 8 feet but not longer than a maximum length of LBVTmax, such that the anchor load does not exceed 90 percent of the anchor bar tensile allowable load during verification test. Therefore, the following requirements shall be met:

$L_{BVTmax} = C_{RT}\ f_y\ A_t / 2\ A_d$
L_{BVTmax} = Maximum Verification Test Anchor Bonded Length (ft.)
C_{RT} = 0.9 for Grade 60 bars
f_y = Bar Yield or Ultimate Stress (ksi)
(Note: f_y = 60 kips/in^2 for Grade 60 bars)
A_t = Bar Steel Area (in^2)
2 = Pullout resistance safety factor
A_d = Allowable pullout resistance (lb/ft)

The Design Test Load (DTL) during verification testing shall be determined by the following equation:

DTL = Design Test Load (lb) = LBVT x Ad
LBVT = As-built bonded test length (ft); Maximum length is LBVTmax; Minimum length is 4 feet.
Ad = Allowable pullout resistance (lb/ft)

4. Verification test anchors shall be incrementally loaded and unloaded to a maximum test load of 200 percent of the Design Test Load (DTL) in accordance with the following loading schedule. The rock anchor movements shall be recorded at each load increment.

Load	Hold Time
AL (.05 DTL max.)	1 minute
0.25 DTL	10 minutes
0.50 DTL	10 minutes
0.75 DTL	10 minutes
1.00 DTL	10 minutes
1.25 DTL	10 minutes
1.50 DTL (Creep Test)	60 minutes
1.75 DTL	10 minutes
2.00 DTL (Max Test Load)	10 minutes

5. The alignment load (AL) should be the minimum load required to align the testing apparatus and should not exceed 5 percent of the Design Test Load (DTL). Dial gauges should be set to "zero" after the alignment load has been applied.

6. Each load increment shall be held for at least 10 minutes. The verification test anchor shall be monitored for creep at the 1.50 DTL load increment. Anchor movements during the creep portion of the test shall be measured and recorded at 1 minute, 2, 3, 5, 6, 10, 20, 30, 50, and 60 minutes. The load during the creep test shall be maintained within 2 percent of the intended load by use of the load cell.

C. Proof Testing Criteria: To be performed on 5% of the Production Anchors in each anchor row or minimum of 1 per row. Proof Testing shall not be performed until anchor grout and shotcrete facing have cured at least 72 hours:

1. Proof Tests shall be performed by incrementally loading the proof test anchor to the maximum test load of 150 % of the Design Load.

2. At load increments other than maximum test load, the load shall be held long enough to obtain a stable reading.

3. Rock anchor movements shall be recorded at each load increment.

4. Production proof test anchors shall have both bonded and temporary unbonded lengths. The temporary unbonded length of the proof test anchor shall be at least 3 feet. The bonded length of the soil anchor during proof production tests, L_{BPT}, shall be at least 4 feet but not longer than a maximum length, L_{BPTmax}, such that the anchor load does not exceed 80 percent of the anchor bar tensile allowable load during verification test. Therefore, the following requirements shall be met:

$L_{BPTmax} = C_{RT}\ f_y\ A_t / 1.5\ A_d$
L_{BPTmax} = Maximum Proof Test Anchor Bonded Length (ft)
C_{RT} = 0.9 for Grade 60 steel bars
f_y = Bar Yield or Ultimate Stress (ksi)
(Note: f_y = 60 ksi)
A_t = Bar Steel Area (in^2)
1.5 = Pullout resistance safety factor
A_d = Allowable pullout resistance (lb/ft)

The Design Test Load (DTL) during proof testing shall be determined by the following equation:

DTL = Design Test Load (lb) = L_{BPT} x A_d
L_{BPT} = As-built bonded test length (ft), Maximum length is L_{BPTmax}; Minimum length is 5 feet.
A_d = Allowable pullout resistance (lb/ft)

5. Incremental loading for proof testing shall be in accordance with the following loading schedule:

Load	Hold Time
5% of Design Test Load	Until Stable
25% of Design Test Load	Until Stable
50% of Design Test Load	Until Stable
75% of Design Test Load	Until Stable
100% of Design Test Load	Until Stable
125% of Design Test Load	Until Stable
150% of Design Test Load	10 minutes or 60 minutes

A 10-minute or 60 minute creep test shall be performed at the maximum test load. The creep period shall start as soon as the maximum test load is applied and the anchor movement shall be measured and recorded at 1, 2, 3, 5, 6 and 10 minutes. Where anchor movement exceeds 1 mm (0.04-inch) after 10 minute period, the maximum test load shall be maintained for an additional 50 minutes with anchor movement measured and recorded at 20, 30, 50 and 60 minutes.

D. A test anchor shall be considered acceptable when:

1. A total creep movement is less than 1mm (0.04 inch) between 1 and 10 minute reading

2. A total creep movement is less than 2mm (0.08 inches) measured between the 6 and 60 minute readings and the creep rate is linear or decreasing throughout the creep test load hold period.

3. A pullout failure does not occur at the maximum test load. Pullout failure is the load at which attempts to increase the test load result in continued pullout movement.

E. The Engineer may require the Contractor to replace some or all of the installed production anchors between a failed proof test anchor and the adjacent passing proof test anchor. Alternatively, the Engineer may require the installation and testing of additional proof test anchors to verify that adjacent previously installed production anchors have sufficient load carrying capacity. The anchors may not be lengthened beyond the temporary construction easements or the permanent right-of-way shown on the Plans

3.13 Steel Pipe:

A. The steel pipes are to be continuous at every anchor head with the geogrid wrapped around the pipe as shown on plans. The Cantilever end length of the pipe shall not exceed half the maximum anchor horizontal spacing required by the plans.

3.14 Site Drainage:

A. At the end of each day's operation, the Contractor shall slope the last lift of reinforced backfill away from the wall facing to rapidly direct runoff away from the wall face.

B. The Contractor shall not allow surface runoff from adjacent areas to enter the wall construction site.

C. Finished grading at the top of the wall should provide positive drainage away from the retaining wall system to prevent infiltration of water into retained soils which may increase lateral pressures on the structure.

D. Contractor shall place an 8-inch thick low permeable soil layer at the top of wall as required by the drawings

3.15 Quality Assurance:

A. Quality Assurance and Special Inspection for the project, shall be conducted in accordance with the applicable portions of the Uniform Building Code, International Building Code and the Building Construction and Safety Code, NFPA 5000, or as required by the governing building department.

B. All Special Inspectors shall be under the supervision of a registered engineer. Testing and inspection services shall be performed only by trained and experienced personnel and experienced technicians currently qualified for the work they are to perform.

C. If Special Inspection is provided by anyone other than the Engineer of Record, the qualifications of all special inspectors shall be reviewed and approved by the Engineer of Record.

D. All work requiring Special Inspection shall be made available and remain accessible and exposed until it is observed by the Special Inspector.

E. Duties of the Special Inspector:

1. The Special Inspector shall observe the work requiring special inspection for conformance with the approved design drawings and specifications.

2. The Special Inspector shall furnish inspection reports to be kept at the site for use by the Building Official, the Contractor and the Engineer of Record. If Special Inspection is provided by anyone other than the Engineer of Record, reports shall be submitted to the office of the Engineer of Record on a weekly basis. All discrepancies shall be brought to the attention of the Contractor for correction, then if uncorrected, to the design authority and the Building official.

3. Upon completion of the assigned work, the Special Inspector shall complete and sign a final report certifying that to the best of his knowledge, the work is in conformance with the approved plans and specifications, and the applicable workmanship provisions of the code.

H. The following Special Inspection Schedule provides the types, extents and frequency of specific items requiring special inspections and structural tests as part of this project:

SPECIAL INSPECTION SCHEDULE			
Areas requiring special inspection:	Frequency		Comments:
	Continuous	Periodic	
SPECIAL CASES (1705.1)			
Geogrid and Geotextile	X		Special Inspection shall be made of the type, location, orientation and extent of geogrid and geotextile placement in the wall.
Subdrain Installation		X	Special inspection shall be made of the placement and extent of the subdrain system within the wall.
SOILS (1705.6)			
Excavations		X	Verify excavations are extended to proper depth and have reached proper material. Verify competency of Limestone bedrock where encountered.
Field Density		X	In accordance with ASTM D-6938 or ASTM D-1556. • Subgrade – One test every 500 to 1000 square feet of subgrade area. • Base Leveling Pad – One test every 100 lineal feet of wall length. • Reinforced Backfill – One test every 500 to 1000 square feet of backfill per lift.
Moisture-Density Relationships		X	In accordance with AASHTO or ASTM criteria as specified for subgrade, base leveling pad, and reinforced backfill.
Gradation Analysis And Atterberg Limits		X	In accordance with ASTM D-422. • Gravel Fill – One test every 250 cubic yards of material. • Wall Backfill – One test every 500 cubic yards of material.
Wall Backfill	X		Verify use of proper materials, densities and lift thickness during placement and compaction of reinforced backfill.
ROCK ANCHORS AND ANCHOR PIPE			
Verification and Proof Tests		X	At intervals outlined in Section 3.12.
Grout Tests		X	In accordance with ASTM C-109. One test for every 50 cubic yards of grout placed or once per day.
Anchor installation	X		Verify location, orientation, length, bar size and strength, and hole diameter.
Geogrid Anchor Pipe		X	Verify the cantilever end length of the pipe does not exceed half the minimum anchor horizontal spacing.
Face Drain Installation		X	Special inspection shall be made of the placement and extent of the face drain system within each soil anchor wall.

SECTION 4: DESIGN NOTES FOR RETAINING WALL SYSTEM

4.01 Design Parameters:

A. Design of the reinforced soil structure is based on the following parameters:

Wall Segment	Friction Angle	Cohesion	Unit Weight
Reinf. Backfill	32°	0 psf	120 pcf
Clayey Gravel (GC)	32°	0 psf	115 pcf
Clayey Sand (SP/SC)	28°	0 psf	110 pcf
Gravelly Fat Clay (CH)	22°	0 psf	120 pcf
Limestone Bedrock	40°	0 psf	120 pcf

B. Internal Stability of Walls
Minimum Factor of Safety on Geogrid Strength.....1.5
Minimum Factor of Safety on Geogrid Pullout.....1.5
Minimum Factor of Safety on Connections (Peak Load Criterion).....1.5
Internal Compound Stability.....1.3
Percent Coverage of Geogrid.....100%

C. External Stability
Minimum Factor of Safety Against Base Sliding.....1.5
Minimum Factor of Safety Against Overturning.....2.0
Minimum Factor of Safety for Bearing Capacity.....2.0
Minimum Factor of Safety (Global Stability).....1.5
Heavy Traffic Surcharge.....250 psf

D. RocK Anchor Service Load Design Safety and Strength Factors
Strength Factor for Anchor Tendon Strength.....1.8
Strength Factor for Anchor Pullout Resistance.....2.0
Bending Moment Factor for Anchor Pipe.....1.5

E. Factor of Safety Seismic Conditions.....0.75xStatic FS

F. Seismic Acceleration Coefficient (A).....0.071g
Horizontal Seismic Coefficient for Internal and External Stability (kh).....0.098
Horizontal Seismic Coefficient for Global Stability (kh).....0.036

G. Ultimate Bond Strength (Limestone Bedrock).....58 psi

REV	DATE	BY	DESCRIPTION

TECHNICAL SCOPE OF WORK

TOWNCENTER EAST, PHASE 3

BELLA VISTA WAY & LANCASHIRE BLVD

BELLA VISTA ARKANSAS

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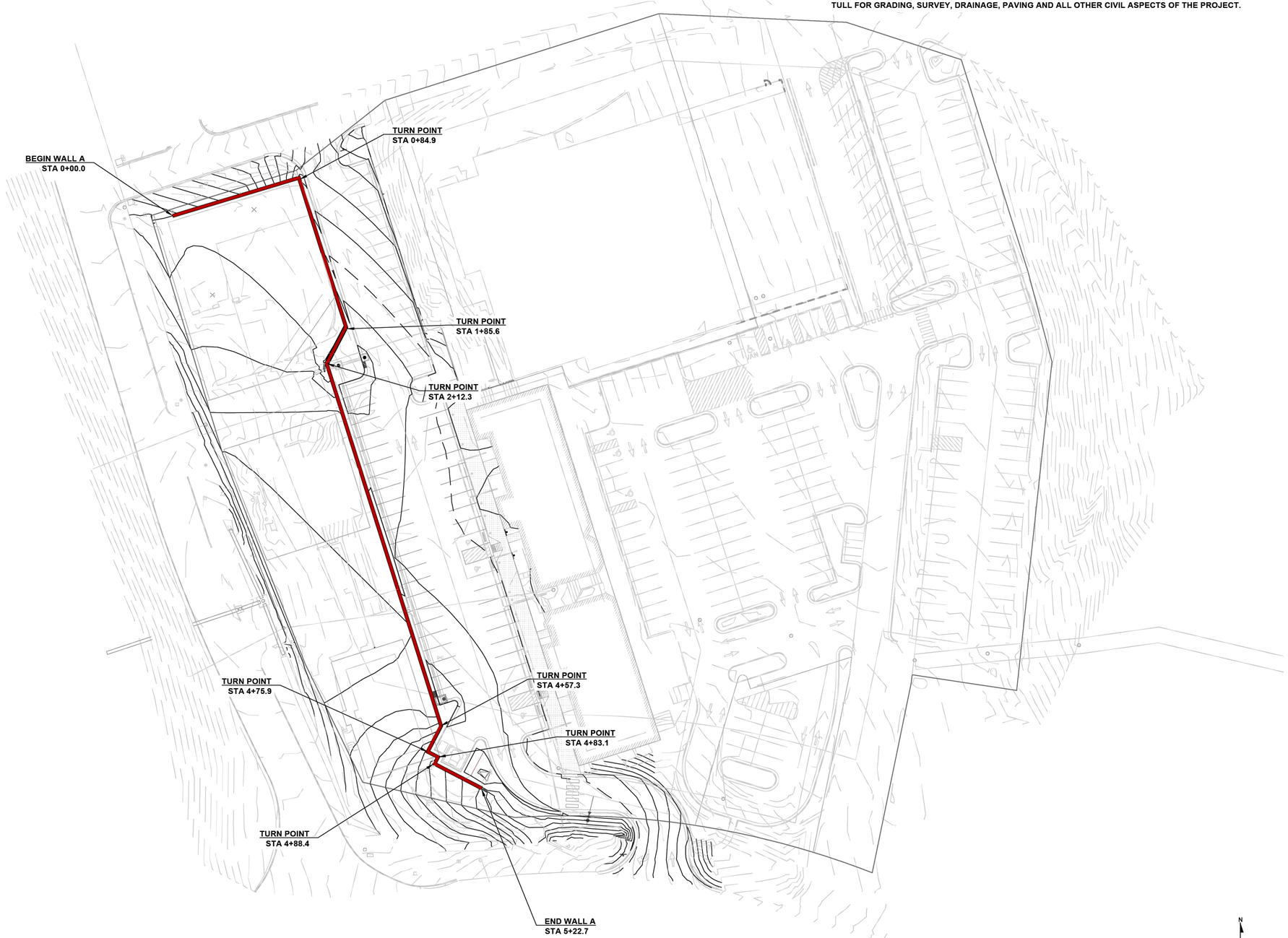
ARKANSAS REGISTERED PROFESSIONAL ENGINEER
Homan, Michael
Nov 30 2023 2:40 PM

11/30/2023 RW-03

DESIGNED BY:	JP
DRAWN BY:	JP
APPVD. BY:	TMK
SCALE:	AS SHOWN
DATE:	11/28/23
JOB NO.	65235108
ACAD NO.	03 RW-03
SHEET NO.:	03 OF 11

SITE PLAN BASED ON THE GRADING PLAN FOR TOWN CENTER EAST PHASE 3 BY CRAFTON TULL, SHEET NO. C-103, PROJECT NO.19105800. DATED MARCH 17, 2023.

THIS SITE PLAN IS FOR WALL LOCATION ONLY. REFER TO THE GRADING AND DRAINAGE PLAN BY CRAFTON TULL FOR GRADING, SURVEY, DRAINAGE, PAVING AND ALL OTHER CIVIL ASPECTS OF THE PROJECT.



REV	DATE	BY	DESCRIPTION

SITE PLAN

TOWNCENTER EAST, PHASE 3

BELLA VISTA WAY & LANCASHIRE BLVD

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STATE OF ARKANSAS
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11/30/2023

RW-04

DESIGNED BY:	JP
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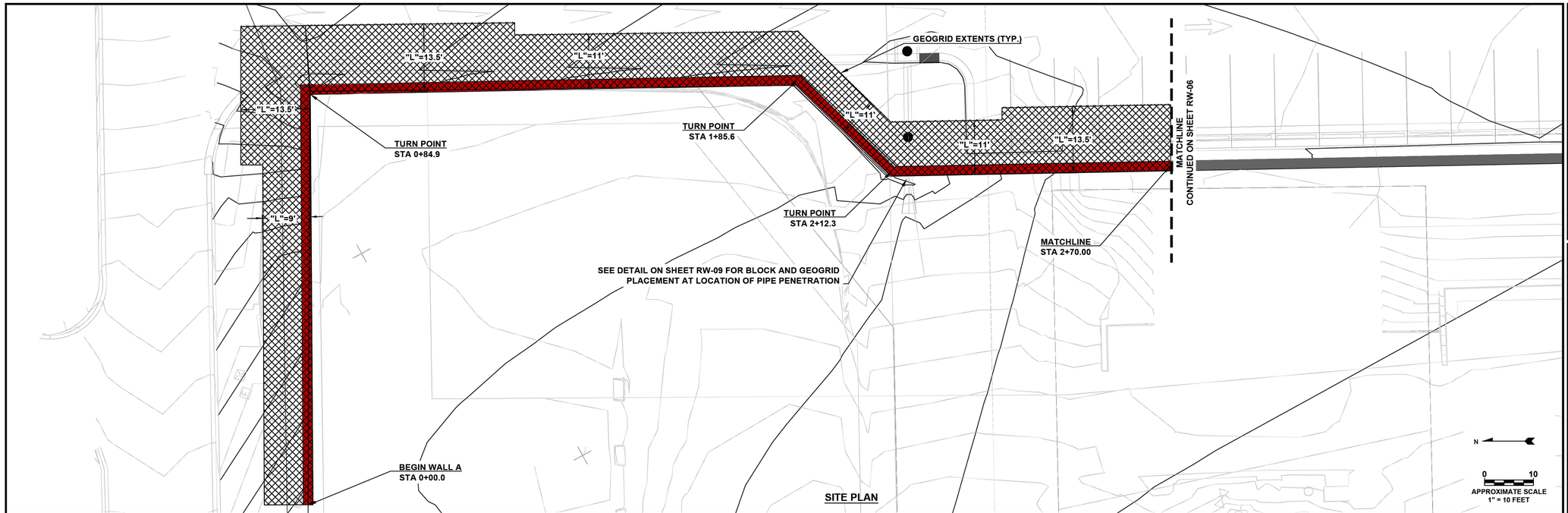
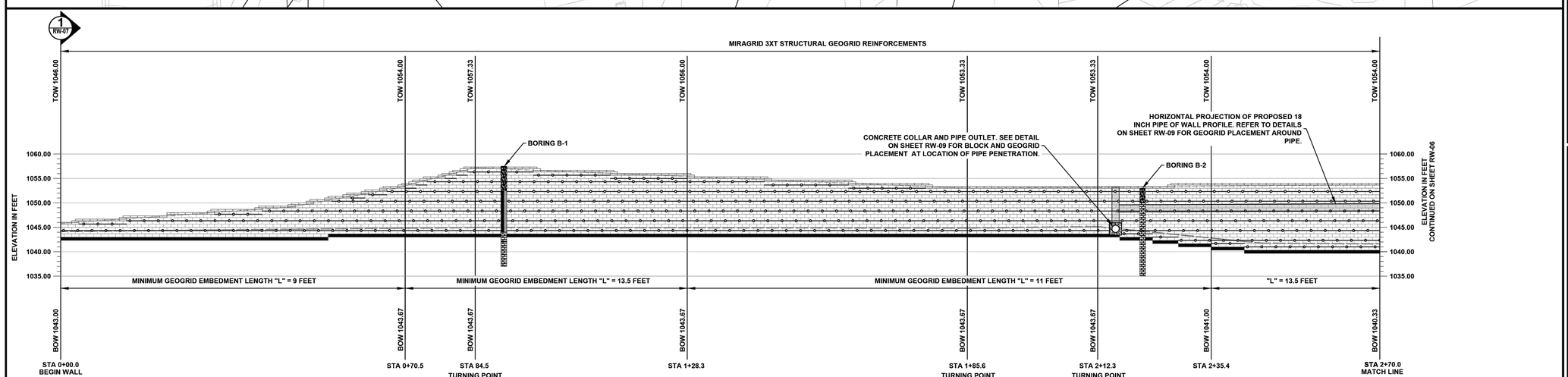
SCALE:	AS SHOWN
DATE:	11/28/23
JOB NO.	65235108
ACAD NO.	04 RW-04
SHEET NO.:	04 OF 11



SITE PLAN



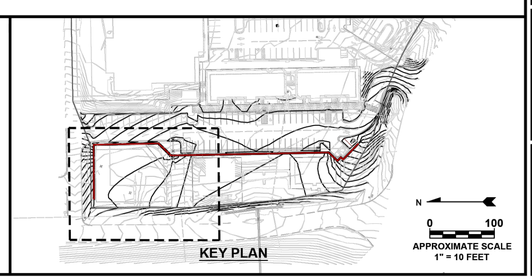
WALL A STA 0+00.0 TO 2+70.0: BLOCK AND GEOGRID PLACEMENT
SCALE: 1" = 10'

LEGEND:

- KEYSTONE CAP UNITS
- KEYSTONE COMPAC III BLOCK UNITS
- 8-INCH LEVELING PAD
- MIRAGRID 3XT STRUCTURAL GEOGRID
- FINISHED GRADE AT TOP OF WALL
- FINISHED GRADE AT BOTTOM OF WALL

STA	STATION ALONG RETAINING WALL ALIGNMENT
"L"	MINIMUM GEOGRID EMBEDMENT LENGTH
TOW	ELEVATION AT TOP OF CAP BLOCK
BOW	ELEVATION AT BOTTOM OF BLOCK; TOP OF LEVELING PAD

- ASPHALT
- CLAYEY GRAVEL
- POORLY GRADED SAND WITH CLAY
- LIMESTONE
- GRAVELLY FAT CLAY
- CLAYEY SAND WITH GRAVEL
- CLAYEY SAND



KEY PLAN

REV	DATE	BY	DESCRIPTION

WALL PLAN & PROFILE

TOWNCENTER EAST, PHASE 3

BELLA VISTA WAY & LANCASHIRE BLVD

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11/30/2023

RW-05

DESIGNED BY:	JP
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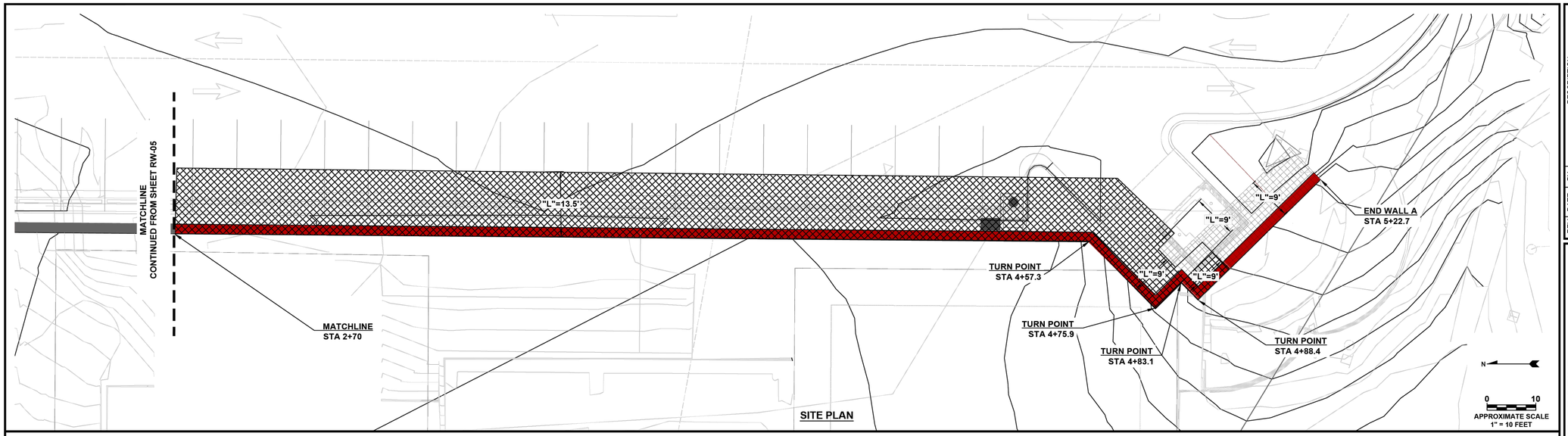
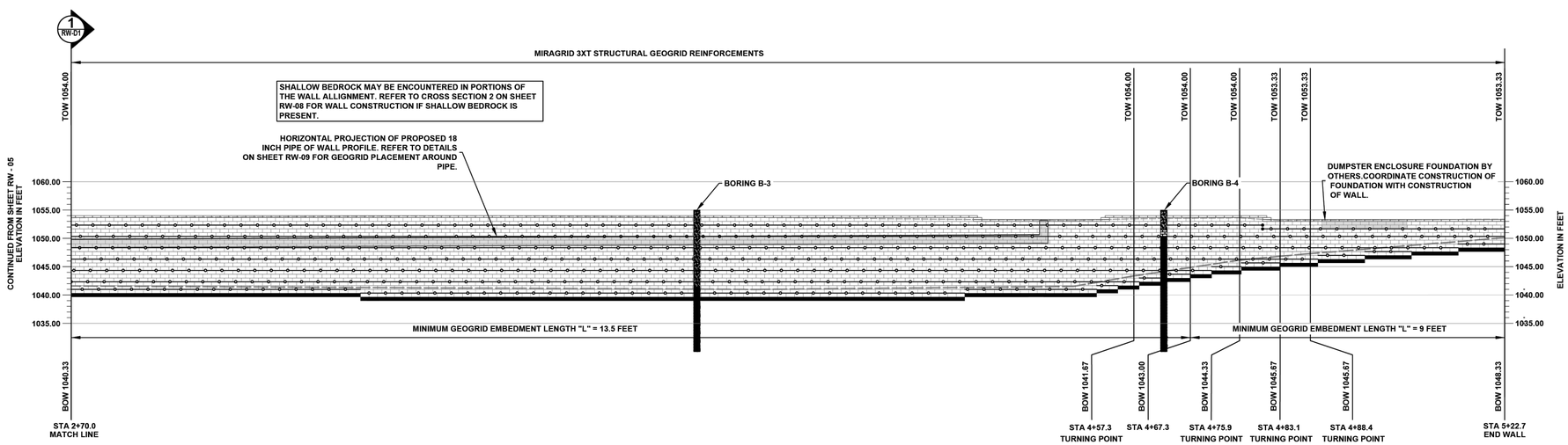
SCALE:	AS SHOWN
DATE:	11/28/23
JOB NO.	65235108
ACAD NO.	05 RW-05
SHEET NO.:	05 OF 11



SITE PLAN



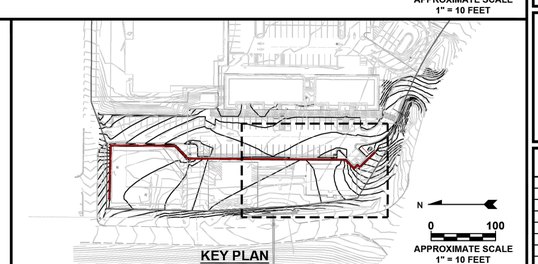
WALL A STA 2+70.0 TO 5+22.7: BLOCK AND GEOGRID PLACEMENT
SCALE: 1" = 10'

LEGEND:

- KEYSTONE CAP UNITS
- KEYSTONE COMPAC III BLOCK UNITS
- 8-INCH LEVELING PAD
- MIRAGRID 3XT STRUCTURAL GEOGRID
- FINISHED GRADE AT TOP OF WALL
- FINISHED GRADE AT BOTTOM OF WALL

STA	STATION ALONG RETAINING WALL ALIGNMENT
"L"	MINIMUM GEOGRID EMBEDMENT LENGTH
TOW	ELEVATION AT TOP OF CAP BLOCK
BOW	ELEVATION AT BOTTOM OF BLOCK; TOP OF LEVELING PAD
⬢	INDICATES CHANGE IN GRID ELEVATION

- ASPHALT
- CLAYEY GRAVEL
- POORLY GRADED SAND WITH CLAY
- LIMESTONE
- GRAVELLY FAT CLAY
- CLAYEY SAND WITH GRAVEL
- CLAYEY SAND



KEY PLAN

REV	DATE	BY	DESCRIPTION

WALL PLAN AND PROFILE

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BELLA VISTA WAY & LANCASHIRE BLVD
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STATE OF ARKANSAS
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No. 7092
11/30/2023

RW-06

DESIGNED BY:	JP
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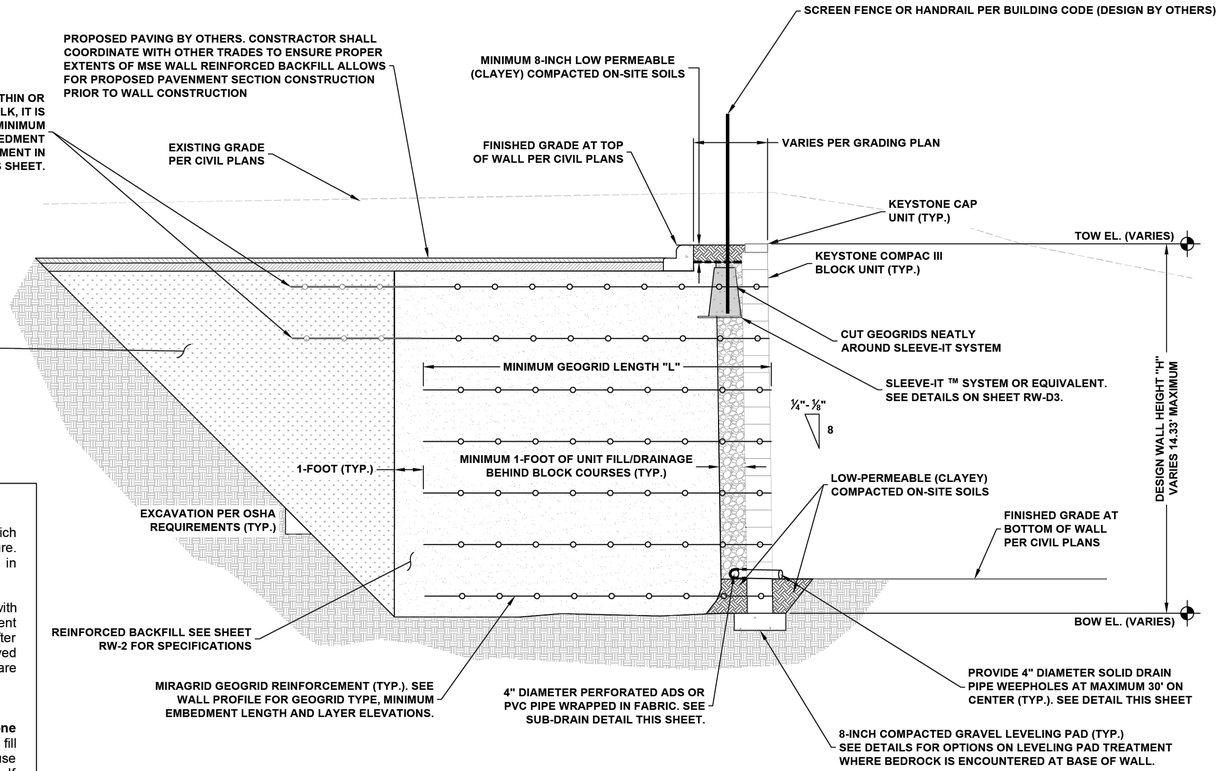
APPV'D. BY:	TMK
SCALE:	AS SHOWN
DATE:	11/28/23
JOB NO.	65235108
ACAD NO.	06 RW-06
SHEET NO.:	06 OF 11

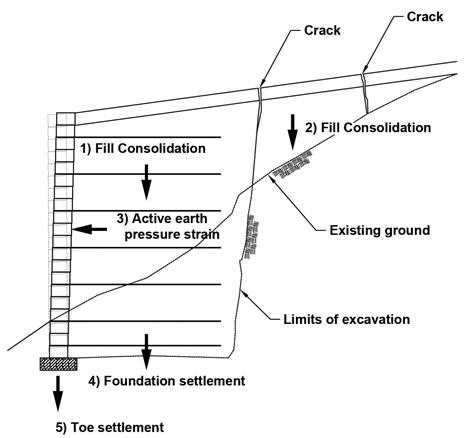


1 TYPICAL RETAINING WALL A CROSS SECTION
N.T.S

Backfill Movement and Soil Cracks

Mechanically Stabilized Earth (MSE) retaining walls are flexible reinforced soil masses, which interact with the foundation and retained backfill zones to provide a stable retaining structure. These soil zones have different stress/strain/consolidation properties which can result in differential movements and strain of the reinforced and retained soil matrix.

Relative movement of the soil masses is typically noted in taller wall or tiered structures with small soil cracks occuring behind the wall structure near the boundary of soil zones with different strain properties. Experience has shown that this type of soil cracking is most noticeable after very heavy rainstorms where the additional saturated soil weight and seepage pressure involved can cause slight differential movement of the masses. A wall schematic and possible causes are shown below:



TYPICAL SECTION

Possible causes of soil cracking

1) **Consolidation of reinforced zone backfill** - Any settlement of reinforced fill relative to adjacent soils may cause cracking at the end of reinforcement. If soils are placed and compacted in dry conditions, water can cause secondary consolidation of the reinforced fill and cracking at the end of the reinforced zone.

2) **Consolidation of retained soil wedge** - Similar to Item 1 causing cracking at the back of fill wedge relative to existing soils.

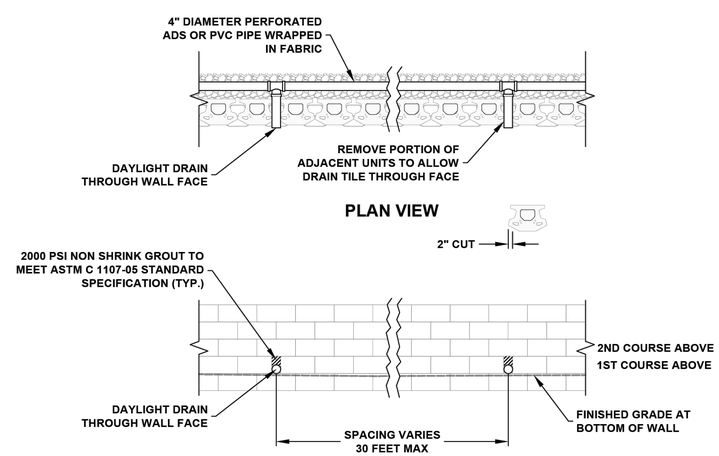
3) **Lateral wall movement due to active earth pressure state** - lesser quality backfill soils exhibit higher lateral movement to mobilize the active earth pressure state. If the reinforced wall mass strains laterally, the fill must settle accordingly and cracking can occur.

4) **Foundation settlement** - The foundation soils of many wall structures have not experienced the loading from the new fill which can cause differential settlement between the wall volume and cut slope.

5) **Toe Settlement** - The wall toe can experience more settlement than the wall heel due to the lack of overburden or confining pressure resulting in slight lateral wall movement in the upper wall section and tension cracking at the end of reinforcement.

Soil cracks can also be a sign of global instability or continuing settlement which requires evaluation by a geotechnical engineer. However, most minor soil cracking observed is structurally insignificant to the long term performance of the wall structure but can lead to reflective cracks in pavement sections and/or separation of curbs when of greater magnitude.

Significantly increasing the length of the upper reinforcement levels to help bridge the potential crack zones can be prudent precaution for projects with flexible pavements extending over all zones. High quality backfill, proper backfill placement and compaction, and firm foundations are the best precautions against soil cracking.



SUB-DRAIN DETAIL FOR TYPICAL WALL SECTION (N.T.S.)

REV	DATE	BY	DESCRIPTION

TYPICAL WALL CROSS SECTION

TOWNCENTER EAST, PHASE 3
BELLA VISTA WAY & LANCASHIRE BLVD
BELLA VISTA ARKANSAS

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No. 7092
11/30/2023

RW-07

DESIGNED BY:	JP
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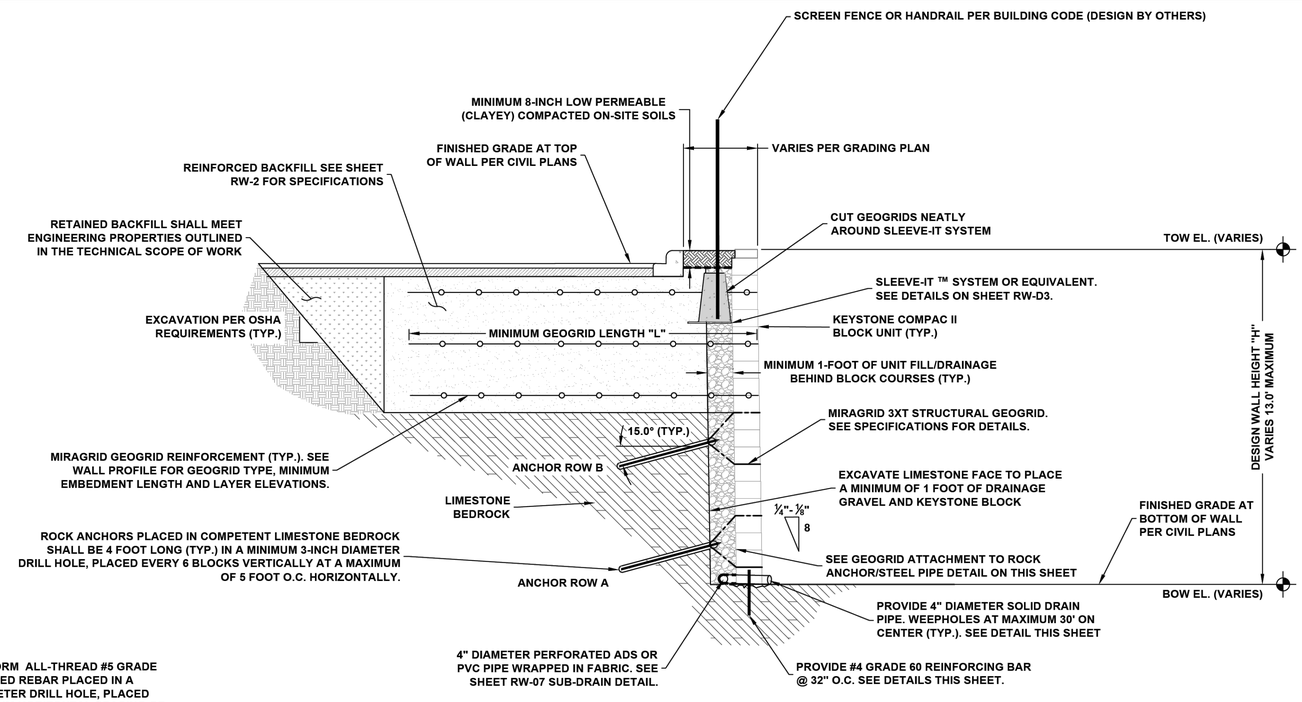
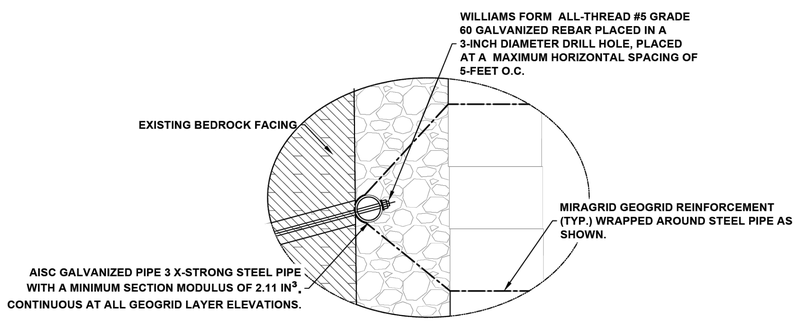
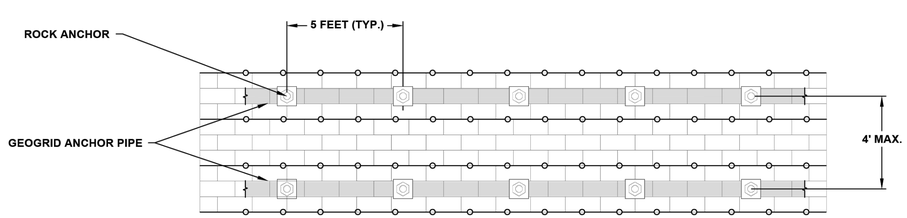
APPV'D. BY:	TMK
SCALE:	AS SHOWN
DATE:	11/28/23
JOB NO.	65235108
ACAD NO.	07 RW-07
SHEET NO.:	07 OF 11



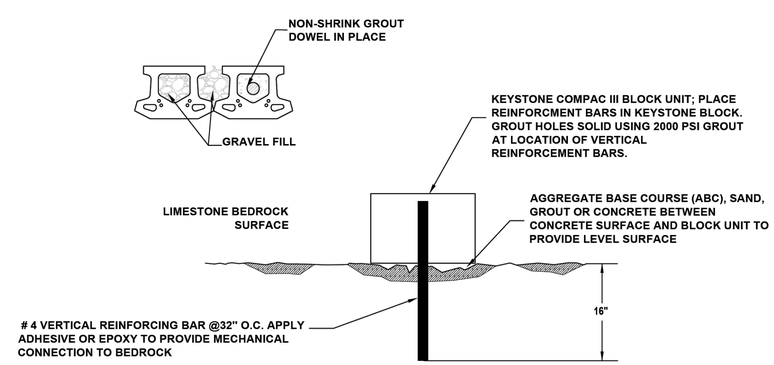
2 TYPICAL RETAINING WALL CROSS SECTION (NOT TO SCALE)
WHERE SHALLOW BEDROCK IS ENCOUNTERED



GEOGRID ATTACHMENT TO ROCK ANCHOR/STEEL PIPE DETAIL



GEOGRID ANCHOR PIPE DETAILS (NTS)



REINFORCING BAR / BLOCK CONNECTION DETAIL

REV.	DATE	BY	DESCRIPTION

TYPICAL WALL CROSS SECTION

TOWNCENTER EAST, PHASE 3

BELLA VISTA WAY & LANCASHIRE BLVD

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STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7032

11/30/2023

RW-08

DESIGNED BY:	JP
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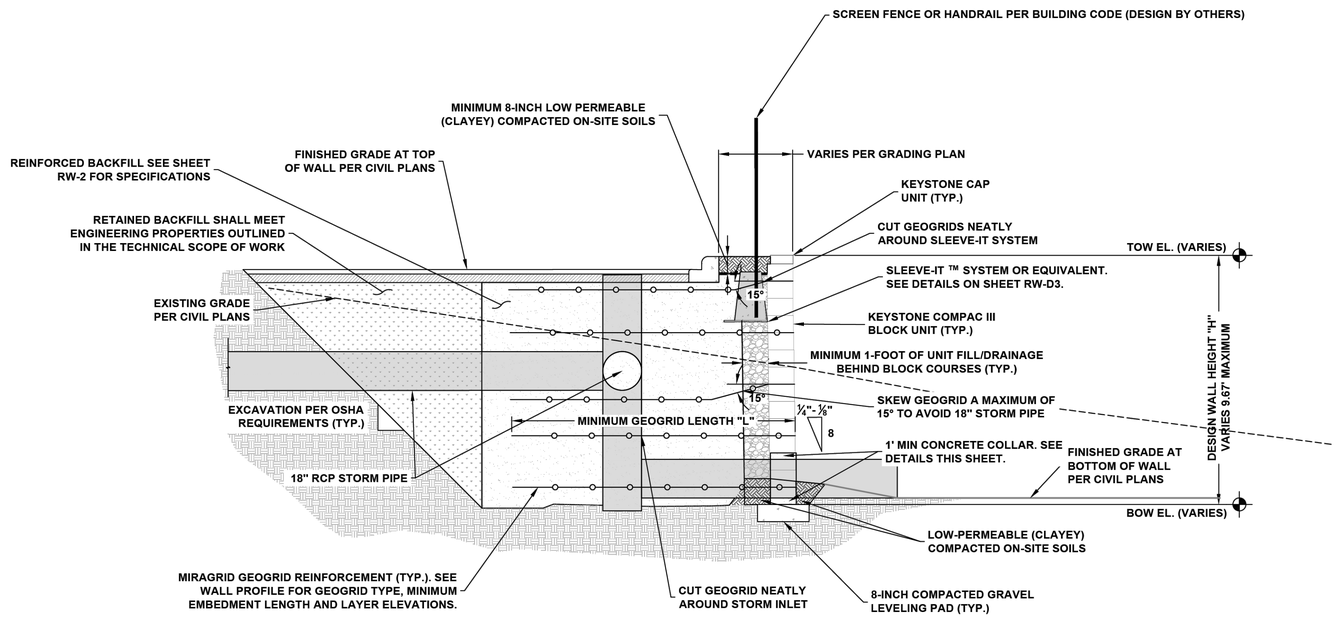
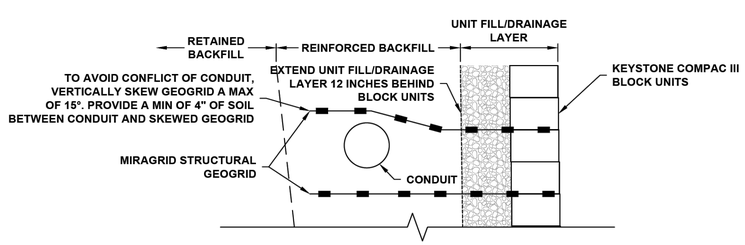
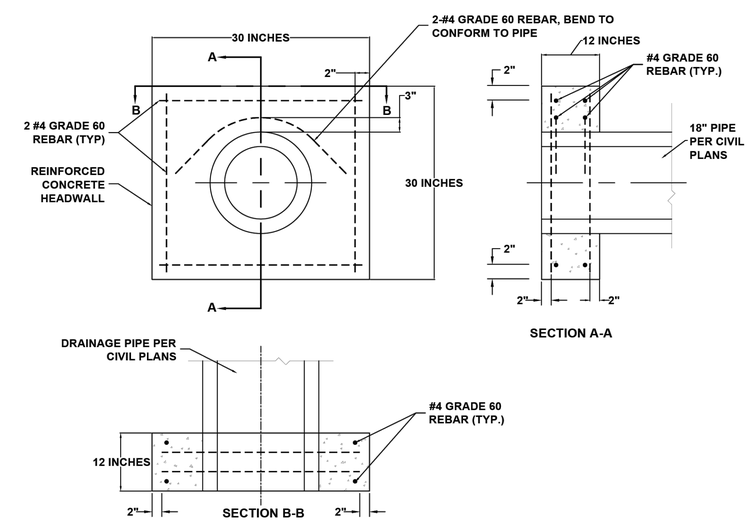
APPV'D. BY:	TMK
SCALE:	AS SHOWN
DATE:	11/28/23
JOB NO.	65235108
ACAD NO.	08 RW-08
SHEET NO.:	08 OF 11



3 RETAINING WALL CROSS SECTION AT STORM PIPE OUTLET (NOT TO SCALE)



SKEWED GEOGRID WHEN CONDUIT EXISTS



CONCRETE HEADWALL REINFORCEMENT DETAIL (NTS.)

REV	DATE	BY	DESCRIPTION

TYPICAL WALL CROSS SECTION

TOWNCENTER EAST, PHASE 3

BELLA VISTA WAY & LANCASHIRE BLVD

BELLA VISTA ARKANSAS

Terracon
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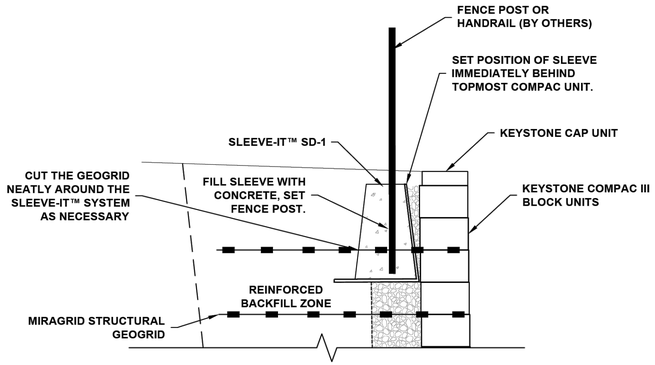
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7092

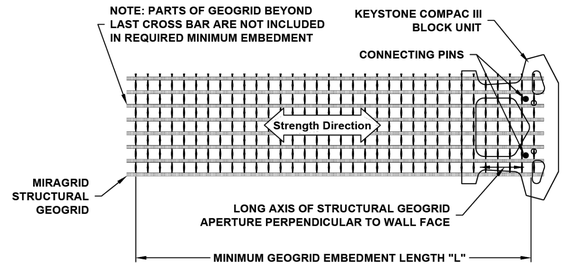
11/15/2023

RW-09

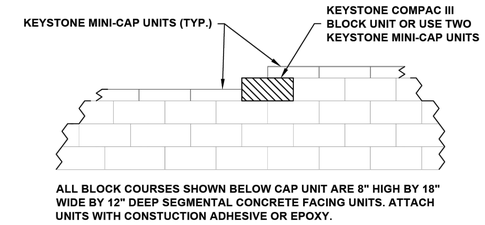
DESIGNED BY:	JP
DRAWN BY:	JP
APPVD. BY:	TMK
SCALE:	AS SHOWN
DATE:	11/28/23
JOB NO.	65235108
ACAD NO.	09 RW-09
SHEET NO.:	09 OF 11



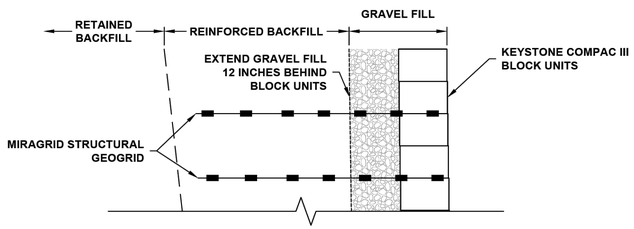
FENCE POST INSTALLATION USING SLEEVE-IT™ SD-1



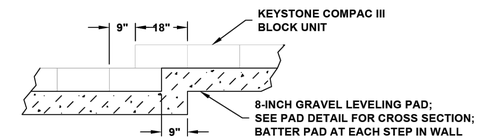
GEOGRID ORIENTATION ON BLOCK



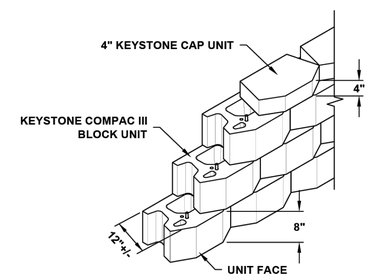
CAP STEP DETAIL



LIMITS OF UNIT FILL AND REINFORCED BACKFILL

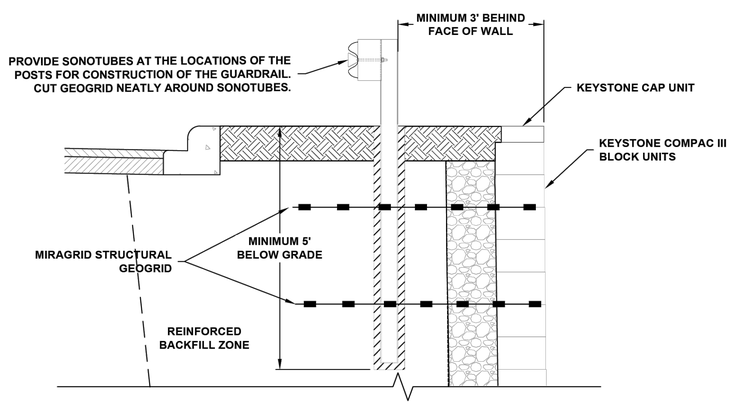


LEVELING PAD STEP DETAIL

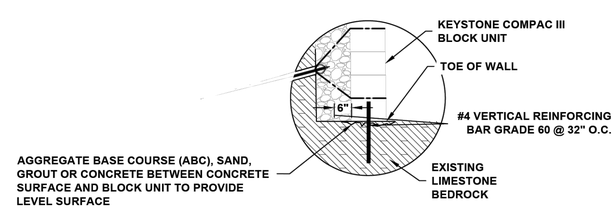


KEYSTONE COMPAC III BLOCK DETAIL

SLEEVE-IT™ SD1 COMPONENTS

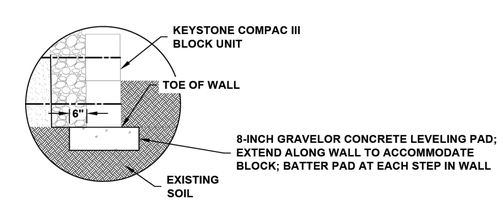


TYPICAL GUARDRAIL DETAIL



IF BEDROCK IS ENCOUNTERED AT OR ABOVE PROPOSED MSE BOTTOM OF WALL ELEVATION, PROVIDE # 4 VERTICAL REINFORCING BAR @32" O.C. APPLY ADHESIVE OR EPOXY TO PROVIDE MECHANICAL CONNECTION TO BEDROCK

OPTION 1



IF BEDROCK IS NOT ENCOUNTERED BELOW PROPOSED MSE BOTTOM OF WALL ELEVATION (VARIES, SEE WALL PROFILE), EXCAVATE INTO SOIL TO PLANNED BOTTOM OF WALL INTO THE SOIL. PLACE 8-INCH GRAVEL OR CONCRETE LEVELING PAD AS SHOWN ABOVE.

OPTION 2

LEVELING PAD OPTIONS DETAILS

REV	DATE	BY	DESCRIPTION

WALL CONSTRUCTION DETAILS

TOWNCENTER EAST, PHASE 3

BELLA VISTA WAY & LANCASHIRE BLVD

BELLA VISTA ARKANSAS

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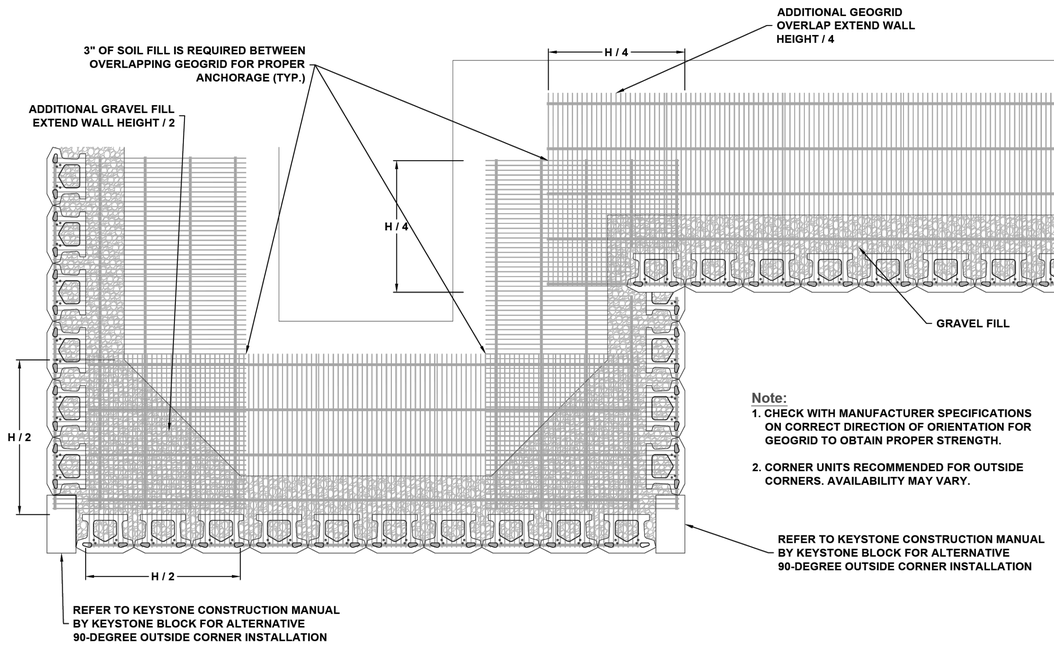
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7092

11/30/2023

RW-D1

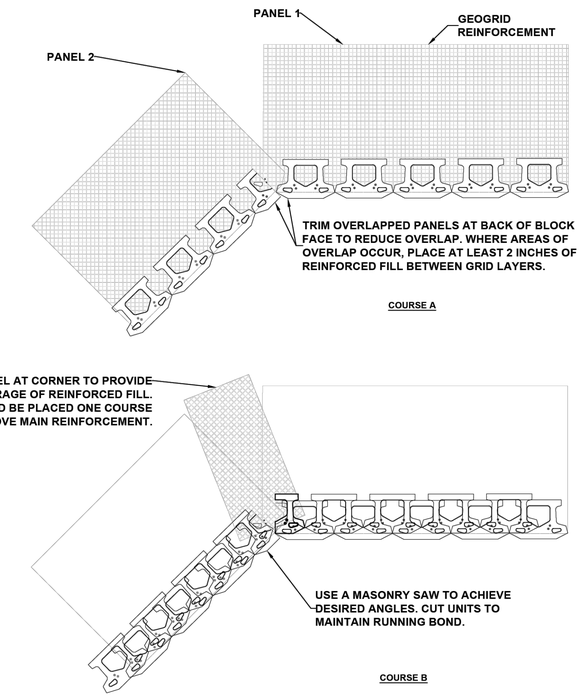
DESIGNED BY:	JP
DRAWN BY:	JP
APPVD. BY:	TMK
SCALE:	AS SHOWN
DATE:	11/28/23
JOB NO.	65235108
ACAD NO.	10 RW-D1
SHEET NO.:	10 OF 11



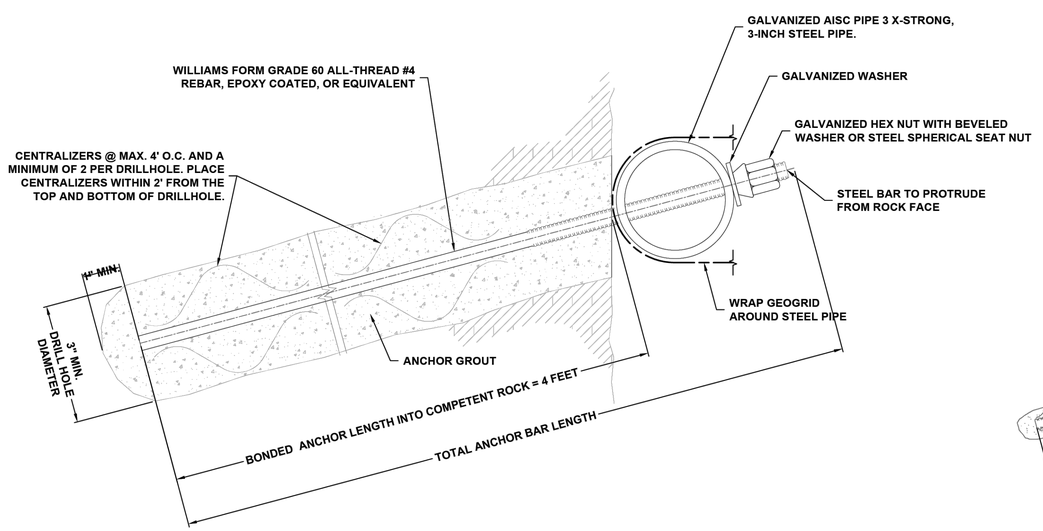
Note:

1. CHECK WITH MANUFACTURER SPECIFICATIONS ON CORRECT DIRECTION OF ORIENTATION FOR GEOGRID TO OBTAIN PROPER STRENGTH.
2. CORNER UNITS RECOMMENDED FOR OUTSIDE CORNERS. AVAILABILITY MAY VARY.

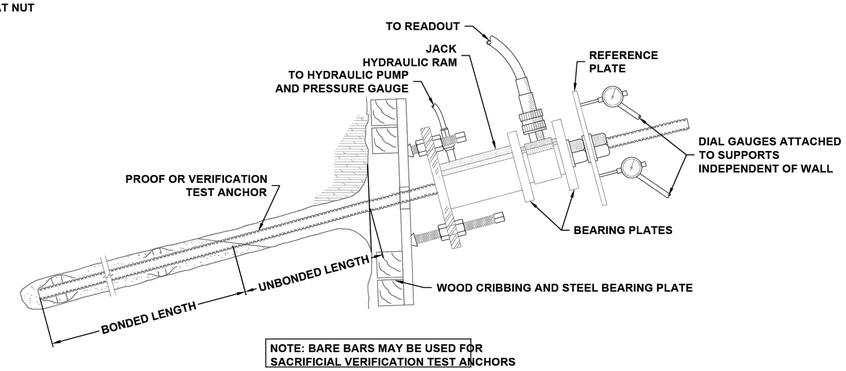
GEOGRID INSTALLATION AT CORNERS



INSIDE ANGLES DETAIL (N.T.S.)



PRODUCTION ROCK ANCHOR DETAIL (N.T.S.)



NOTE: BARE BARS MAY BE USED FOR SACRIFICIAL VERIFICATION TEST ANCHORS

VERIFICATION/PROOF TEST ROCK ANCHOR DETAIL (N.T.S.)

REV	DATE	BY	DESCRIPTION

WALL CONSTRUCTION DETAILS

TOWNCENTER EAST, PHASE 3

BELLA VISTA WAY & LANCASHIRE BLVD

BELLA VISTA ARKANSAS

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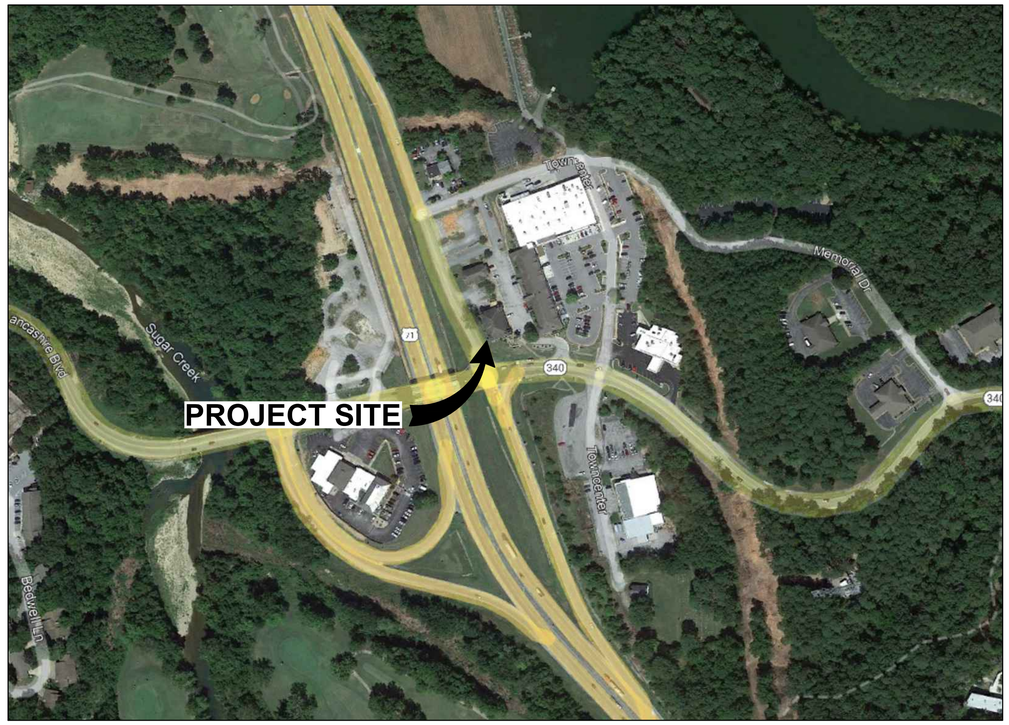
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7092 TIMOTHY MICHAEL KOHLMAN

11/30/2023

RW-D2

DESIGNED BY:	JP
DRAWN BY:	JP
APPVD. BY:	TMK
SCALE:	AS SHOWN
DATE:	11/28/23
JOB NO.	65235108
ACAD NO.	11 RW-02
SHEET NO.:	11 OF 11

MECHANICALLY STABILIZED EARTH RETAINING WALL
FOR
TOWNCENTER EAST, PHASE 3
BELLA VISTA, ARKANSAS



NOTE: SITE IMAGE PROVIDED BY GOOGLE EARTH, PRO, 2016.

VICINITY MAP

PREPARED FOR: CRI Cooper Realty Investments, Inc.

Arkansas 811 — Know what's below. Call before you dig.

SHEET INDEX

SHEET NUMBER	SHEET DESCRIPTION
RW-01	COVER SHEET
RW-02	TECHNICAL SCOPE OF WORK
RW-03	TECHNICAL SCOPE OF WORK
RW-04	SITE PLAN
RW-05	WALL PLAN & PROFILE
RW-06	WALL PLAN AND PROFILE
RW-07	TYPICAL WALL CROSS SECTION
RW-08	TYPICAL WALL CROSS SECTION
RW-09	TYPICAL WALL CROSS SECTION
RW-D1	WALL CONSTRUCTION DETAILS
RW-D2	WALL CONSTRUCTION DETAILS

REV	DATE	BY	DESCRIPTION
1	5/21/25	JP	REVISED GRADING PLAN AND WALL ALIGNMENT

COVER SHEET

TOWNCENTER EAST, PHASE 3
BELLA VISTA WAY & LANCASHIRE BLVD
BELLA VISTA ARKANSAS

terracon
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PRELIMINARY NOT FOR CONSTRUCTION

RW-01

DESIGNED BY:	JP
DRAWN BY:	JP
APPVD. BY:	TMK
SCALE:	AS SHOWN
DATE:	5/21/23
JOB NO.	65235108
ACAD NO.	01 RW-01
SHEET NO.:	01 OF 11

C:\Users\jabear\OneDrive - Terracon Consultants Inc\65235108 Bella Vista - CAD\RW-01.dwg V45 LAST SAVED 5/19/2025 9:41 AM AND PLOTTED 5/20/2025 10:30 AM

SECTION 1: GENERAL TECHNICAL NOTES

1.01 Description:

The work shall consist of furnishing and constructing a combination of modular KeyStone block/Miragrid geogrid and rock anchor retaining wall system in accordance with this technical scope of work and in reasonably close conformity with the lines, grades, and dimensions shown on the Grading for Bella Vista Towne Center East Phase 3 by Crafton Tull, Sheet No. C-103, Project No. 19105800, dated 03/17/2022.

1.02 Work Included:

A. Furnishing KeyStone segmental concrete facing, and cap units as shown on the construction drawings.

B. Furnishing Miragrid structural geogrid reinforcement as shown on the construction drawings.

C. Storing, cutting and placing structural geogrid reinforcement as specified herein and as shown on the construction drawings.

D. Storing, cutting and placing geotextile as specified herein and as shown on the construction drawings.

E. Excavation, placement and compaction of unit wall fill and backfill material as specified herein and as shown on the construction drawings.

F. Construction of subsurface drainage systems as shown on the construction drawings.

G. Excavation of soils, Limestone bedrock to the planned grades shown on the grading plans and for the retaining wall construction as specified in the construction drawings. Load and haul excavated soil and bedrock.

H. Erection of KeyStone segmental concrete units and placement of structural geogrid.

I. Drilling rock anchor holes as specified herein and as shown on the construction drawings.

J. Furnishing, placing and grouting rock anchor bar tendons into drill holes.

K. Furnishing and attaching steel pipes, nuts and other fittings to the rock anchors as shown on the construction drawings

1.03 Reference Documents:

A. American Association of State Highway and Transportation Officials (AASHTO)
T-99 Moisture-Density Relations of Soils Using a 5.5 Pound Rammer in a 12-inch Drop

B. American Society for Testing and Materials Standards (ASTM)
A-53 Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
A-775 Specification for Epoxy-Coated Reinforcing Steel Bars
C-33 Specification for Concrete Aggregates
C-140 Methods of Sampling and Testing Concrete Masonry Units
C-150 Specification for Portland Cement
C-1372 Standard Specifications of Segmental Retaining Wall Units
D-422 Method for Particle Size Analysis of Soils
D-698 Method for Laboratory Compaction Characteristics of Soils Using Standard Effort
D-732 Shear Strength of Plastic by the Punch Tool Method
D-790 Flexural Properties Testing of Plastic
D-1556 Method for Density and Unit Weight of Soil in-Place by the Sand Cone Method
D-6938 Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods
D-4253 Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table
D-4254 Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density
D-4595 Tensile Properties of Geotextiles by The Wide-Width Strip Method
D6637 Standard Test Method for Determining Tensile Properties of Geogrids by the Single or Multi-Rib Tensile Method
D6706 Standard Test Method for Measuring Geosynthetic Pullout Resistance in Soil
D-1785 Specification for Rigid Poly (Vinyl Chloride)(PVC) Plastic Pipe, Schedules 40, 80, and 120
D-3963 Specification for Epoxy-Coated Reinforcing Steel

C. National Concrete Masonry Association (NCMA)
NCMA Design Manual for Segmental Retaining Walls

D. Federal Highway Administration (FHWA) – Geotechnical Engineering Circular No. 7 – Soil Nail Walls, 2003, FHWA 0-IF-03-17.

E. Federal Highway Administration (FHWA) – Manual for Design and Construction Monitoring of Soil Nail Walls, 1998, FHWA-SA-069R

F. Crafton Tull, Grading for Bella Vista Towne Center East phase 3, Sheet No. C-103.0, Project No. 19105800, dated 03/17/2022.

G. Terracon Consultants, Inc., Geotechnical Engineering Report, Bella Vista Retaining Wall, Project No. KB235027, Dated July 14, 2023.

H. Where specifications and reference documents conflict, the Engineer shall make final determination of the applicable document.

1.04 Special Provisions:

A. The designs presented herein are based on wall profiles, soil parameters, foundation conditions and loadings stated in documentation as outlined in Section 1.03, Items F and G, Section 4.01.

B. The reinforced backfill to be used in the wall construction must meet specific engineering requirements as outlined in the Technical Scope of Work. The suitability of on-site materials for use in the MSE wall construction, as specified herein, should be determined prior to construction.

C. The Contractor shall be responsible for the cost of all means of subsoil improvement; cost of additional subsoil exploration; and for all labor tools, equipment and incidentals necessary to complete the work.

D. The Contractor shall be responsible for complying with all federal, state and local requirements for execution of the work, including local building inspection and current OSHA excavation regulations.

E. Prior to undertaking any grading or excavation of the site, the Contractor shall confirm the location of proposed retaining walls and all underground features, including utility locations within the area of construction.

F. All work undertaken in the construction of the retaining walls are subject to the quality control/assurance and special inspection provisions outlined in Section 3.15.

G. Work on this project will require careful wall facing deconstruction and removal of existing geogrid reinforcement and backfill soils in a portion of wall A. The contractor shall provide temporary shoring if necessary to complete work on this project.

H. The plans provided to Terracon for the project currently show proposed utilities within the reinforced backfill for the retaining wall. Any utilities constructed behind the wall shall be equipped with a pressure meter to indicate if a wet utility line has ruptured. In no case should water be allowed to collect behind the retaining wall at any time Construction of wet utilities including but not limited to water lines and landscape irrigation should be coordinated with construction of the wall system.

I. Where there is potential for conflict between geogrids and other construction on the project, Terracon should be afforded the opportunity to review construction documents and make a determination on the appropriate course of action. Under no circumstance should geogrid reinforcement be cut or severed unless otherwise explicitly indicated by these construction documents. Any severing of the geogrid performed without the recommendation of Terracon shall be repaired at no cost to the Terracon or the Owner.

J. Excavation along and behind portions of the wall alignment will likely encounter Limestone Bedrock. Contractor shall review the referenced geotechnical engineering report by Terracon for anticipated subsurface conditions at the site. Special wall construction will be necessary where competent bedrock is encountered and full geogrid embedment lengths cannot be installed. The use of rock anchors will be necessary in this case.

K. Terracon has completed engineering design of the proposed retaining walls, including internal stability and local external stability where applicable, based upon the information provided to us as outlined above.

L. Any changes in planned grading, locations of structures or changes in wall profiles should be brought to the attention of Terracon for modification of the wall designs as necessary.

M. Verify all dimensions and grades prior to wall construction.

SECTION 2: MATERIALS

2.01 Definitions:

A. Structural Geogrid – a Miragrid geogrid formed by a regular network of integrally connected tensile elements with apertures of sufficient size to allow interlocking with surrounding soil, rock, or earth and function primarily as reinforcement.

B. Geotextile – a spun-bound non-woven engineering fabric intended for tensile reinforcement with high filtration and permeability characteristics.

C. Segmental Concrete Facing Units – KeyStone segmental concrete facing machine made from portland cement, water and mineral aggregates.

D. Limestone Bedrock - Intact bedrock that is very hard and having few or no fractures.

E. Cap Unit – a KeyStone segmental concrete cap unit.

F. Subdrain – a combined system of slotted pipe, geotextile fabric and gravel, provided for internal drainage behind or below the reinforced backfill.

G. Unit Fill/Gravel Fill Layer – granular fill which is within and behind the segmental concrete facing units.

H. Post Foundation System- a 12" diameter post fence foundation system, used to facilitate fence/railing installation.

I. Reinforced Backfill – compacted soil which is within the reinforced soil volume as outlined on the plans.

J. Foundation Soil – compacted or in-situ soil beneath the entire wall. Foundation Material for this project may also consist of Limestone bedrock.

K. Leveling Pad – a level compacted gravel or non-reinforced concrete footing upon which the first course of segmental concrete facing units are placed.

L. Solid Bar Anchor Tendons – a deformed epoxy coated threaded bar used as rock anchor as shown on plans.

M. Anchor Pipe – a galvanized pipe and fittings used to secure the geogrid to the head of the rock anchors.

N. Epoxy Coating – a fusion bonded electrostatically applied coating.

O. Centralizers – a PVC or steel pipe or tube attached to rock anchor bars sized to allow tremie pipe insertion to bottom of the drill hole.

P. Anchor Grout – Neat cement or sand/cement mixture.

Q. Engineer – Terracon Consultants, Inc.- Phoenix, AZ.

R. Geotechnical Engineer – Terracon Consultants, Inc. – Rogers, AR.

2.02 Structural Geogrids:

A. The geogrids shall be Miragrid structural geogrid as shown on the plans, or geogrid of equivalent long-term design and connection strength with the segmental concrete facing, consisting of regular grid structure of high tenacity polyester multifilament yarns woven in tension and finished with PVC coating.

B. The manufacturer shall provide the certification that the ultimate strength of the geogrid as per ASTM D6637 is equal to or greater than the ultimate strength called for on the drawings.

Geogrid Type Miragrid	Ultimate Strength (lb./ft)	Long Term Design Strength (lb./ft)
3XT	3,500 plf	1,768 plf

2.03 Geotextiles:

A. The geotextile shall be Mirafi 160N as shown on the plans, or equivalent, consisting of spun-bound 100% continuous filament polyester needle punched engineering fabric.

2.04 Segmental Concrete Facing Units:

A. The segmental concrete facing units shall be manufactured by a licensed KeyStone Representative.

B. All concrete wall units including cap units shall have a minimum net 28-day compressive strength of 3,000 psi. The concrete units shall have the required freeze/thaw protection with a maximum absorption rate of 8 percent in southern climates.

1. Cementitious materials used in the manufacture of the units shall be Type I or Type II Portland cement in accordance with ASTM C-150.

2. All aggregates used in the manufacture of the units shall be normal weight conforming to ASTM C-33.

3. Other Constituents - Air entraining agents, coloring pigments, integral water repellents, finely ground silica, and other constituents shall be previously established as suitable for use in segmental concrete retaining wall units and shall conform to applicable ASTM Standards or shall be shown by test or experience not to be detrimental to the durability of the segmental concrete facing units or any material customarily used in masonry construction.

C. Exterior dimensions of units may vary in accordance with ASTM C-1372. KeyStone Compac units shall have a minimum of 1 square foot face area each. Segmental concrete facing unit dimensions shall not differ more than ± 1/8 inch from the manufacturer's published dimensions.

D. KeyStone Compac block units with unit fill shall provide a minimum of 150 psf of wall face area. Fill which is placed within the dimensions of the units may be considered as 80% of the effective weight.

E. KeyStone units shall have angled sides capable of concave and convex alignment curves with a minimum radius of 3-1/2 feet.

F. KeyStone Units shall be interlocked with non-corrosive fiberglass pins.

G. Finish and Appearance

1. All units shall be sound and free of cracks or other defects that would interfere with the proper placing of the unit or significantly impair the strength or permanence of the construction. Minor cracks incidental to the usual method of manufacture, or minor chipping resulting from shipment and delivery, are not grounds for rejection.

2. The exposed surfaces of units shall be free of chips, cracks or other imperfections when viewed from a distance of 10 feet under diffused lighting.

H. Sampling and Testing

1. Sample and test units for compressive strength and absorption in accordance with the applicable provisions of ASTM Method C-140. Compressive strength test specimens shall conform to the saw-cut coupon provisions of section 5.2.4 of ASTM C-140 with the following exceptions:

a. Coupons shall have a minimum thickness of 1-1/2 inches (38.1 mm).

I. Color

1. Block samples, indicating available colors, shall be provided to the Owner/developer for color selection prior to construction.

J. Facing units removed from the existing wall may be reused in the wall reconstruction provided they are reasonably sound and meet the requirements of this specification. Alternatively, if existing facing units have minor cracks, they may be used in the below grade portions of the retaining wall.

2.05 Base Leveling Pad Materials and Gravel Fill for Block:

A. Base Leveling Pad Material: Material for leveling pad shall consist of compacted sand, gravel, crushed rock or any combination thereof (use soil types GP, GW, SW, SP or SM), a minimum of 8 inches in thickness, constructed to the minimum dimensions shown on the construction drawings. Non-reinforced concrete may also be used.

B. Gravel Fill for units shall consist of clean 1" minus free-draining well graded crushed stone or granular fill, meeting the requirements of the following gradation tested in accordance with ASTM D-422:

Sieve Size	Percent Passing
1 inch	100
3/4 inch	75-100
No. 4	0 – 60
No. 40	0 – 50
No. 200	0 – 5

2.06 Wall Backfill:

A. Reinforced backfill shall consist of suitable granular materials meeting the following gradation as determined in accordance with ASTM D-422:

Sieve Size	Percent Passing
1 1/2 inch	100
1 inch	95 – 100
1/2 inch	25 – 60
No. 4	0 – 10
No. 8	0 – 5

B. USCS soil types CL, CH, ML, MH, or SC shall not be used in any portion of the wall reinforced backfill.

C. All reinforced backfill materials shall also have the minimum engineering properties shown in Section 4.01, Item A.

D. All backfill materials, whether on-site or imported, shall be approved by the Engineer prior to construction.

E. Test results of all proposed backfill materials, whether on-site or imported, shall be submitted to the Engineer for approval prior to construction.

2.07 Subdrain:

A. Geotextile used for subdrain construction shall be non-woven needle-punched fabric such as Mirafi 160N or equivalent.

B. Drain pipe shall be 4-inch diameter slotted PVC or HDPE such as ADS Drainguard or approved equivalent.

C. Gravel shall be clean 3/4-inch minus free draining stone or crushed rock with no more than 5% passing a U.S. No. 200 sieve. Material meeting requirements of Gravel Fill specified in Section 2.05 B is considered acceptable for use in subdrain system.

2.08 Post Foundation System:

A. Post foundation system used for handrail or fence post installation shall be a polypropylene sleeve such as Sleeve-It™ SD-1.

B. The Sleeve-It™ SD-1 product shall be evenly spaced no farther apart than 8 feet on centers in any case.

C. Use of the Sleeve-It™ SD-1 system is limited to the following fencing applications without consideration of wind loading:

1. 8-foot high and under chain link fences

2. 6-foot high and under wood fence with gaps between boards

3. 6-foot high and under balustrade PVC, steel, aluminum or wrought iron fences.

D. For other fencing systems not meeting the criteria above, contact the Sleeve-It™ system manufacturer to determine suitability.

2.09 Rock Anchor Tendons:

A. The tendons shall be AASHTO M31/ASTM A615, Grade 60 deformed steel bar or as shown on plans. All bars used as rock anchors shall be galvanized or epoxy coated.

B. The tendons shall be new, straight, undamaged continuous without splices or welds.

C. The tendons shall be threaded a minimum of 6-inches (150 mm) on the wall anchorage end to allow proper attachment of the steel anchor pipe, nut and other fittings as shown on the plans.

D. The threading may be continuous spiral deformed ribbing provided by the bar deformations (continuous thread bars) or may be cut into a reinforcing bar. If threads are cut into a reinforcing bar, provide the next larger bar size from that shown on plans.

2.10 Epoxy Coating:

A. The epoxy coating, when required, shall be an ASTM A775 fusion bonded electrostatically applied coating.

B. The coating shall be a minimum of 0.016 inches (0.4 mm) in thickness.

C. The coating at the wall anchorage end of the epoxy-coated bars may be omitted over the length provided for threading the nut against the bearing plate.

2.11 Centralizers:

A. Centralizers shall be manufactured from Schedule 40 PVC pipe or tube, steel or other material not detrimental to the anchor steel. Wood shall not be used as a material for fabricating centralizers.

B. The centralizer shall be securely attached to the anchor bar.

C. Centralizer Sizing

1. The centralizer shall be sized to position the anchor bar within 1 inch (25mm) of the center of the drill hole.
2. The centralizer shall allow the tremie pipe to be inserted to the bottom of the drill hole.
3. The centralizer shall allow grout to flow freely up the drill hole.

2.12 Anchor Grout:

A. The material for anchor grout shall consist of neat cement or a sand/cement mixture.

B. The anchor grout shall have a minimum 3 day compressive strength of 1500 psi (10.5 Mpa) and a minimum 28 day compressive strength of 3000 psi (21 Mpa) per AASHTO T106/ASTMC109 and shall consist of one or more of the following materials:

1. Cementitious materials used in anchor grout mixture shall consist of Type I, II, III or V Portland cement in accordance with AASHTO M85ASTM C150.

2. Fine aggregate materials used in anchor grout mixture shall be in accordance with AASHTO M6/ASTM C33.

3. Admixtures shall be compatible with the grout and mixed in accordance with the manufacturer's recommendations and AASHTO M194/ASTM C494.

a) Admixtures which control bleeding, improve flowability, reduce water content, and retard setting shall be approved by the Engineer prior to construction.

b) Expansive admixtures may be used only for filling sealed encapsulations.

c) Accelerators shall not be used in the anchor grout mixture.

2.13 Steel Anchor Pipe:

A. The steel anchor pipe shall consist of a 3-inch diameter (AISC Pipe 3 x-Strong) steel pipe. The steel anchor pipe shall be galvanized.

2.14 Delivery, Storage, Handling:

A. Structural Geogrid and Geotextiles

1. Contractor shall check to ensure that the proper materials have been received upon delivery.

2. All geogrids shall be stored above -20°F (-29°C).

3. Contractor shall prevent excessive mud, wet cement, epoxy, and like material which may affix themselves to the gridwork, from coming in contact with the geogrid material.

4. Rolled geogrid material may be laid flat or stood on end for storage.

5. Geogrids shall be stored according to manufacturer's recommendations.

B. Segmental Concrete Facing Units

1. Contractor shall check the units upon delivery to ensure that proper materials have been received.

2. Contractor shall prevent excessive mud, wet cement, epoxy, and like materials from coming in contact with and affixing to the units.

3. Contractor shall protect the units from damage (i.e. cracks, chips, spalls). Damaged units shall be evaluated for usage in the wall according to ASTM: C-90 and ASTM: C-1372.

C. Cement, Aggregate and Liquid Admixtures

1. Contractor shall check to ensure that the proper materials have been received upon delivery.

2. Contractor shall store cement to prevent moisture degradation and partial hydration.

3. Cement that is caked or lumpy shall not be used.

4. Cement shall be stored according to manufacturer's recommendations.

5. Contractor shall store aggregates to prevent segregation and contamination from foreign materials.

6. Contractor shall not use bottom 6 inches of aggregate pile when in contact with ground surface.

7. Contractor shall store liquid admixtures to prevent evaporation and freezing.

D. Steel Components

4. Contractor shall check the steel components upon delivery to ensure that proper materials have been received.

5. Steel shall be stored on supports to prevent steel from coming in contact with the ground.

6. Contractor shall protect steel from dirt, rust, and other deleterious substances prior to installation.

7. Contractor shall reject steel with heavy corrosion or pitting, abrasion damage, cuts, nicks, welds and weld splatters. Light rust that has not resulted in pitting is acceptable.

8. Contractor shall place protective wrap over threaded portions of steel reinforcing during handling, installing, grouting and shotcreting.

E. Epoxy Coated Bars

1. Contractor shall handle and store epoxy coated bars in accordance with ASTM D3963.

2. Contractor shall repair damaged epoxy coating in accordance with ASTM A775 and the coater's recommendations. Repairs shall be made using an epoxy repair kit approved by the epoxy manufacturer and repaired areas shall have a minimum coating thickness of 0.01 inch (0.3 mm).

SECTION 3: EXECUTION

3.01 Construction:

A. The excavation shall be carried to the lines and grades shown on the construction drawings and to the extent necessary to place structural geogrid at the required embedment lengths. Contractor shall be careful not to disturb base or existing soils/fills beyond the lines shown except for that necessary to comply with applicable safety regulations.

B. Excavations will be made in a manner which will not disturb the existing construction on the site. Contractor will provide protection or will construct the walls in such a manner to maintain the integrity of existing improvements during construction.

C. In-situ materials excavated from the location of the retaining walls shall be stockpiled on-site at locations designated by the Owner and in locations which will not interfere with the execution of the work.

D. The required excavation for this project is expected to encounter a combination of soil and in-place Limestone bedrock. Refer to the geotechnical Engineering Report for anticipated subsurface conditions.

3.02 Subgrade Preparation:

A. Subgrade shall be excavated as required for placement of the leveling pad as shown on the construction drawings, or as directed by the Geotechnical Engineer.

B. Subgrade shall be examined by the Geotechnical Engineer to confirm that the actual foundation conditions meet or exceed assumed design assumptions. As a minimum, soil shall be proof rolled before construction proceeds. Subgrade conditions not meeting the required strength shall be removed and replaced with acceptable material.

C. Over-excavated areas shall be replaced with compacted granular backfill material or soils approved by the Geotechnical Engineer to the lines and grade shown on the construction drawings.

D. Granular backfill shall be placed in loose lifts not exceeding 10 inches in thickness, compacted to a minimum of 95 percent of the maximum density as determined by AASHTO T-99 or ASTM D-698. The moisture content of the backfill prior to, and during compaction shall be uniformly distributed throughout each layer and shall be within a range of 2% below, to 2% above optimum moisture content.

3.03 Base Leveling Pad:

A. Leveling Pad materials shall be placed as shown on the plans, upon undisturbed soils or compacted subgrade, to a minimum depth of 8 inches.

B. Leveling Pad materials shall be compacted to provide a level hard surface on which to place the first course of units. Leveling Pad materials shall be compacted to a minimum of 95 percent of the maximum density as determined by AASHTO T-99 or ASTM D-698. The moisture content of the backfill material prior to and during compaction shall be uniformly distributed throughout each layer and shall be within a range of 2% below, to 2% above optimum moisture content. If a well-defined maximum density curve cannot be generated by impact compaction in the laboratory, the backfill shall be compacted to a minimum of 75 percent of relative density as determined by ASTM D-4253 and D-4254.

C. Leveling Pad shall be prepared to insure complete contact of retaining wall units with the base.

D. Provided that compaction is maintained, leveling pad materials may be extended linearly beyond the profiles shown on the plans to accommodate full-sized facing units.

3.04 Segmental Concrete Facing Unit Installation:

A. The first course of concrete wall units shall be placed on top of and in full contact with the leveling pad. The units shall be checked for proper elevation and alignment.

B. Units shall be placed side by side for the full length of the wall. Proper alignment may be achieved with the aide of a string line or offset from baseline.

C. All voids between and within concrete wall units shall be filled with tamped unit fill. A minimum of 12 inches of unit fill shall be placed behind concrete wall units.

D. All excess material shall be swept from the top of the units prior to installing the next course. Each course shall be filled prior to proceeding to next course.

E. Install each succeeding course. Backfill as each course is completed. Pull the units forward until the locating surface of the unit contacts the locating surface of units in the preceding course. Pull the units forward as far as possible. Repeat procedure to the extent of wall height.

F. Where the wall changes elevation, units can be stepped or turned into the embankment with a convex return end as appropriate. Provide appropriate buried units on leveling pad in area of convex return end.

3.05 Cap Installation:

A. Place KeyStone Cap units over projecting pins from units below. Pull forward to set back position. Backfill and compact to finished grade.

B. As required, provide permanent mechanical connection to wall units with construction adhesive or epoxy. Apply adhesive or epoxy to bottom surface of cap units and install on units below per the manufacturer's recommendations.

3.06 Subdrain Construction:

A. Subdrains shall be constructed directly behind the segmental facing units to the lines, grades and dimensions shown on the plans.

B. Subdrains should be sloped and drained through weep holes in the face of the wall at a maximum of 30 feet on center.

3.07 Structural Geogrid Installation:

A. Geogrid shall be oriented with the highest strength axis perpendicular to the wall alignment.

B. Geogrid reinforcement shall be placed at the elevation(s) and to the extent(s) shown on the construction drawings or as directed by the Engineer. Where required reinforcements lengths cannot be placed due to the presence of limestone bedrock, refer to Wall Cross Section 2 and related rock anchor sections of this specification for wall construction.

C. The geogrid soil reinforcement shall be laid horizontally on compacted backfill. The geogrid shall be pulled taut and anchored prior to backfill placement on the geogrid. No tensioning of the geogrid materials shall be required.

D. Geogrid reinforcements shall be continuous throughout their embedment length(s). Spliced connections between shorter pieces of geogrid will not be allowed.

E. Tracked construction equipment shall not be operated directly upon the geogrid reinforcement. A minimum fill thickness of 6 inches is required prior to operation of tracked vehicles over the geogrid. Tracked vehicle turning should be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid.

F. No changes to geogrid layout, including, but not limited to, length, geogrid type, or elevation, shall be made without the approval of the Engineer.

3.08 Reinforced Backfill Placement:

A. Reinforced backfill shall be placed, spread, and compacted in such a manner that minimizes the development of slack in the geogrid.

B. Reinforced backfill shall be placed and compacted in lifts not to exceed 6 inches where hand compaction is used, or 8-10 inches where heavy mechanical compaction equipment is used.

C. Reinforced backfill shall be compacted to a minimum of 95 percent of the maximum density as determined by AASHTO T-99 or ASTM D-698. The moisture content of the backfill material prior to and during compaction shall be uniformly distributed throughout each layer and shall be within a range of 2% below, to 2% above optimum moisture content. If a well defined maximum density curve can not be generated by impact compaction in the laboratory, the backfill shall be compacted to a minimum of 70 percent of relative density as determined by ASTM D-4253 and D-4254.

D. Reinforced backfill shall be compacted in all areas to the lines and grades shown on the plans including all sloped areas above the wall.

E. Only lightweight hand-operated compaction equipment shall be allowed within 4 feet of the face of the wall.

3.09 Post Foundation System Installation:

A. Place the Sleeve-It™ SD-1 Systems at locations of fence posts or railings supports at a maximum spacing of 8 feet on center.

B. Assemble and Install Sleeve-It™ SD-1 Systems per manufacturer's recommendations.

C. Prepare a level area approximately 24" wide by 36" deep behind the wall face. The prepared area should be 24" below the proposed top of wall not including the cap stone.

D. Place the Sleeve-It™ unit on the level surface in an upright position with the front edge of the unit flush against the back of the wall. Multiple units should be spaced in accordance with fence specifications no longer than 8 feet on centers.

E. Encapsulate and stabilize the Sleeve-It™ unit by placing and compacting sufficient backfill material layers as required. Slit the geogrid perpendicular to the wall face just enough to fit around the base of the unit while ensuring the geogrid remains properly attached to the wall. Continue the backfilling process until the material reaches the top of the tower. Do not remove the perforated lid until ready to place post. Do not step on perforated lid, as this could cause serious bodily injury.

F. Punch the perforated lid using a mallet or hammer to expose the inside of the Sleeve-It™ unit. Detached lids can be left inside the unit or discarded prior to pouring the infill material.

G. Place post through the exposed area and rest of the flat ground surface area inside the Sleeve-It™ cavity. Ensure that the post is upright and level and hold in place while carefully pouring infill material such as concrete through the exposed cavity. Follow guidelines as specified by infill supplier. Concrete is highly recommended as infill material.

3.10 Geotextile Installation:

A. Geotextiles shall be placed at the elevations, locations and to the extent shown on the Construction drawings.

B. A minimum of 3 inches of soils shall be maintained between any geogrid reinforcement and the geotextile fabric.

C. Geotextile fabric shall also be used for separation of dissimilar materials as shown on the drawings.

3.11 Rock Anchor Installation:

A. The drill holes for the rock anchors shall be made at the locations, orientations, and lengths shown on the plans or as directed by the Engineer.

B. The use of drilling muds such as bentonite slurry is not allowed.

C. Rock Anchor bars shall be as shown on plans or as directed by the Engineer.

D. Rock Anchor bars shall have centralizers sized to position the bar within 1 inch of the center of the drill hole. Centralizers shall be positioned as shown on plans so their maximum center-to center spacing does not exceed 4 feet. Centralizers shall be within 2 feet from the top and bottom of the drill hole.

E. Drill holes shall be inspected for cleanliness prior to insertion of rock anchor bar.

F. Rock anchor bars shall be inserted freely into the entire length of the hole.

G. The rock anchor head location shall be within 6 inches and rock anchor inclination shall be within 3 degrees as shown on plans.

H. Rock anchors not within the specified tolerances shall be replaced. All abandoned drill holes shall be filled with tremied grout.

I. The drill hole shall be grouted after installation of the anchor bar. Each drill hole will be grouted within 2 hours of completion of drilling, unless otherwise approved by the Engineer.

J. Grout shall be injected at the lowest point of each drill hole through a grout tube. Keep the outlet end of the conduit delivering the grout below the surface of the grout as the conduit is withdrawn to prevent the creation of voids. Completely fill the drill hole in one continuous operation. Cold joints in the grout column are not allowed except at the top of the test bond length of proof tested production anchors. Grouting before insertion of the anchor is allowed provided the anchor bar is immediately inserted through the grout to the specified length without difficulty.

K. Maintain grout head or grout pressures sufficient to ensure that the drill hole will be completely filled with grout and to prevent unstable soil/rock or groundwater from contaminating or diluting the grout. Record the grout pressures for rock anchors installed using pressure grouting techniques. Control grout pressures to prevent excessive ground heave or fracturing.

L. Remove the grout and anchor if grouting is suspended for more than 30 minutes or does not satisfy the requirements of this specification or the Plans, and replace with fresh grout and undamaged anchor bar.

3.12 Rock Anchor Testing:

A. Testing Equipment

1. A hydraulic jack and pump capable of providing at least 2 times the design load will be used to apply the load to the anchor.

2. A chair or reaction base will be used to distribute the jack load onto the rock face. The area of the reaction base plate will not be less than 100 square inches.

3. A testing anchor is used behind the jack to grip the tendon during loading.

4. The jack pressure gauge will be calibrated as a set prior to the start of the project. It will be recalibrated if pressure movements are too erratic to obtain valid data of the anchor's capacity.

5. The pressure gauge used for the testing will be large enough to distinguish a 100 psi change in pressure. Also, a force gauge may be used to indicate the force being applied to the anchor. If a pressure gauge is used, the contractor shall provide a pressure vs. force chart for use by the testing team.

6. The ram travel of the jack will be long enough to enable the anchor to deform.

7. The hydraulic jack will be capable of raising the load from one load increment to another in less than one (1) minute.

8. A dial gauge capable of reading a movement to the nearest 0.001 inches will be used to measure anchor movement. The gauge will be located independent of the ground conditions and immediately adjacent to the reaction base.

9. The measurement of deflection shall be taken from an immovable object adjacent to the apparatus and not from the base plate or any other object that could move during the deflection testing.

B. Verification testing shall be performed to verify installation methods and anchor pullout resistance. Verification tests will be performed at locations selected by the contractor and approved by the Engineer. A minimum of two verification tests shall be performed in each different rock unit (i.e. in-place limestone) and for each different drilling/grouting method proposed to be used. Bare anchor bars can be used for the sacrificial verification test anchors.

1. Construct verification test anchors using the same equipment, installation methods, anchor inclination, and drillhole diameter as planned for the production anchors. Changes in the drilling or installation method may require additional verification testing as determined by the Engineer.

2. Verification test anchors shall have both bonded and unbonded lengths. Along the unbonded length, the anchor bar is not grouted. The unbonded length of the test anchors shall be at least 3 feet unless approved otherwise by the Engineer

REV.	DATE	BY	DESCRIPTION
1	5/21/25	JP	REVISED GRADING PLAN AND WALL ALIGNMENT

TECHNICAL SCOPE OF WORK

TOWNCENTER EAST, PHASE 3

BELLA VISTA WAY & LANCASHIRE BLVD

BELLA VISTA ARKANSAS

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PRELIMINARY NOT FOR CONSTRUCTION

RW-02

DESIGNED BY:	JP
DRAWN BY:	JP
APPVD. BY:	TMK
SCALE:	AS SHOWN
DATE:	5/21/23
JOB NO.	65235108
ACAD NO.	02 RW-02
SHEET NO.:	02 OF 11

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3. The bond length of the test anchors shall be determined by the Contractor. The bonded length of the rock anchor during verification tests, LBVT, shall be at least 8 feet but not longer than a maximum length of LBVTmax, such that the anchor load does not exceed 90 percent of the anchor bar tensile allowable load during verification test. Therefore, the following requirements shall be met:

L_{BVTmax} = $C_{RT}\ f_y\ A_t\ /\ 2\ A_d$
L_{BVTmax} = Maximum Verification Test Anchor Bonded Length (ft.)
C_{RT} = 0.9 for Grade 60 bars
f_y = Bar Yield or Ultimate Stress (ksi)
(Note: f_y = 60 kips/in^2 for Grade 60 bars)
A_t = Bar Steel Area (in^2)
2 = Pullout resistance safety factor
A_d = Allowable pullout resistance (lb/ft)

The Design Test Load (DTL) during verification testing shall be determined by the following equation:

DTL = Design Test Load (lb) = LBVT x Ad
LBVT = As-built bonded test length (ft); Maximum length is LBVTmax; Minimum length is 4 feet.
Ad = Allowable pullout resistance (lb/ft)

4. Verification test anchors shall be incrementally loaded and unloaded to a maximum test load of 200 percent of the Design Test Load (DTL) in accordance with the following loading schedule. The rock anchor movements shall be recorded at each load increment.

Load	Hold Time
AL (05 DTL max.)	1 minute
0.25 DTL	10 minutes
0.50 DTL	10 minutes
0.75 DTL	10 minutes
1.00 DTL	10 minutes
1.25 DTL	10 minutes
1.50 DTL (Creep Test)	60 minutes
1.75 DTL	10 minutes
2.00 DTL (Max Test Load)	10 minutes

5. The alignment load (AL) should be the minimum load required to align the testing apparatus and should not exceed 5 percent of the Design Test Load (DTL). Dial gauges should be set to "zero" after the alignment load has been applied.

6. Each load increment shall be held for at least 10 minutes. The verification test anchor shall be monitored for creep at the 1.50 DTL load increment. Anchor movements during the creep portion of the test shall be measured and recorded at 1 minute, 2, 3, 5, 6, 10, 20, 30, 50, and 60 minutes. The load during the creep test shall be maintained within 2 percent of the intended load by use of the load cell.

C. Proof Testing Criteria: To be performed on 5% of the Production Anchors in each anchor row or minimum of 1 per row. Proof Testing shall not be performed until anchor grout and shotcrete facing have cured at least 72 hours:

1. Proof Tests shall be performed by incrementally loading the proof test anchor to the maximum test load of 150 % of the Design Load.

2. At load increments other than maximum test load, the load shall be held long enough to obtain a stable reading.

3. Rock anchor movements shall be recorded at each load increment.

4. Production proof test anchors shall have both bonded and temporary unbonded lengths. The temporary unbonded length of the proof test anchor shall be at least 3 feet. The bonded length of the soil anchor during proof production tests, L_{BPT}, shall be at least 4 feet but not longer than a maximum length, L_{BPTmax}, such that the anchor load does not exceed 90 percent of the anchor bar tensile allowable load during verification test. Therefore, the following requirements shall be met:

L_{BPTmax} = $C_{RT}\ f_y\ A_t\ /\ 1.5\ A_d$
L_{BPTmax} = Maximum Proof Test Anchor Bonded Length (ft)
C_{RT} = 0.9 for Grade 60 steel bars
f_y = Bar Yield or Ultimate Stress (ksi)
(Note: f_y = 60 ksi)
A_t = Bar Steel Area (in^2)
1.5 = Pullout resistance safety factor
A_d = Allowable pullout resistance (lb/ft)

The Design Test Load (DTL) during proof testing shall be determined by the following equation:

DTL = Design Test Load (lb) = L_{BPT} x A_d
L_{BPT} = As-built bonded test length (ft), Maximum length is L_{BPTmax}; Minimum length is 5 feet.
A_d = Allowable pullout resistance (lb/ft)

5. Incremental loading for proof testing shall be in accordance with the following loading schedule:

Load	Hold Time
5% of Design Test Load	Until Stable
25% of Design Test Load	Until Stable
50% of Design Test Load	Until Stable
75% of Design Test Load	Until Stable
100% of Design Test Load	Until Stable
125% of Design Test Load	Until Stable
150% of Design Test Load	10 minutes or 60 minutes

A 10-minute or 60 minute creep test shall be performed at the maximum test load. The creep period shall start as soon as the maximum test load is applied and the anchor movement shall be measured and recorded at 1, 2, 3, 5, 6 and 10 minutes. Where anchor movement exceeds 1 mm (0.04-inch) after 10 minute period, the maximum test load shall be maintained for an additional 50 minutes with anchor movement measured and recorded at 20, 30, 50 and 60 minutes.

D. A test anchor shall be considered acceptable when:

1. A total creep movement is less than 1mm (0.04 inch) between 1 and 10 minute reading

2. A total creep movement is less than 2mm (0.08 inches) measured between the 6 and 60 minute readings and the creep rate is linear or decreasing throughout the creep test load hold period.

3. A pullout failure does not occur at the maximum test load. Pullout failure is the load at which attempts to increase the test load result in continued pullout movement.

E. The Engineer may require the Contractor to replace some or all of the installed production anchors between a failed proof test anchor and the adjacent passing proof test anchor. Alternatively, the Engineer may require the installation and testing of additional proof test anchors to verify that adjacent previously installed production anchors have sufficient load carrying capacity. The anchors may not be lengthened beyond the temporary construction easements or the permanent right-of-way shown on the Plans

3.13 Steel Pipe:

A. The steel pipes are to be continuous at every anchor head with the geogrid wrapped around the pipe as shown on plans. The Cantilever end length of the pipe shall not exceed half the maximum anchor horizontal spacing required by the plans.

3.14 Site Drainage:

A. At the end of each day's operation, the Contractor shall slope the last lift of reinforced backfill away from the wall facing to rapidly direct runoff away from the wall face.

B. The Contractor shall not allow surface runoff from adjacent areas to enter the wall construction site.

C. Finished grading at the top of the wall should provide positive drainage away from the retaining wall system to prevent infiltration of water into retained soils which may increase lateral pressures on the structure.

D. Contractor shall place an 8-inch thick low permeable soul layer at the top of wall as required by the drawings

3.15 Quality Assurance:

A. Quality Assurance and Special Inspection for the project, shall be conducted in accordance with the applicable portions of the Uniform Building Code, International Building Code and the Building Construction and Safety Code, NFPA 5000, or as required by the governing building department.

B. All Special Inspectors shall be under the supervision of a registered engineer. Testing and inspection services shall be performed only by trained and experienced personnel and experienced technicians currently qualified for the work they are to perform.

C. If Special Inspection is provided by anyone other than the Engineer of Record, the qualifications of all special inspectors shall be reviewed and approved by the Engineer of Record.

D. All work requiring Special Inspection shall be made available and remain accessible and exposed until it is observed by the Special Inspector.

E. Duties of the Special Inspector:

1. The Special Inspector shall observe the work requiring special inspection for conformance with the approved design drawings and specifications.

2. The Special Inspector shall furnish inspection reports to be kept at the site for use by the Building Official, the Contractor and the Engineer of Record. If Special Inspection is provided by anyone other than the Engineer of Record, reports shall be submitted to the office of the Engineer of Record on a weekly basis. All discrepancies shall be brought to the attention of the Contractor for correction, then if uncorrected, to the design authority and the Building official.

3. Upon completion of the assigned work, the Special Inspector shall complete and sign a final report certifying that to the best of his knowledge, the work is in conformance with the approved plans and specifications, and the applicable workmanship provisions of the code.

H. The following Special Inspection Schedule provides the types, extents and frequency of specific items requiring special inspections and structural tests as part of this project:

SPECIAL INSPECTION SCHEDULE

Areas requiring special inspection:	Frequency: Continuous	Frequency: Periodic	Comments:
SPECIAL CASES (1705.1)			
Geogrid and Geotextile	X		Special Inspection shall be made of the type, location, orientation and extent of geogrid and geotextile placement in the wall.
Subdrain Installation		X	Special inspection shall be made of the placement and extent of the subdrain system within the wall.
SOILS (1705.6)			
Excavations		X	Verify excavations are extended to proper depth and have reached proper material. Verify competency of Limestone bedrock where encountered.
Field Density		X	In accordance with ASTM D-6938 or ASTM D-1556. • Subgrade – One test every 500 to 1000 square feet of subgrade area. • Base Leveling Pad – One test every 100 lineal feet of wall length. • Reinforced Backfill – One test every 500 to 1000 square feet of backfill per lift.
Moisture-Density Relationships		X	In accordance with AASHTO or ASTM criteria as specified for subgrade, base leveling pad, and reinforced backfill.
Gradation Analysis And Atterberg Limits		X	In accordance with ASTM D-422. • Gravel Fill – One test every 250 cubic yards of material. • Wall Backfill – One test every 500 cubic yards of material.
Wall Backfill	X		Verify use of proper materials, densities and lift thickness during placement and compaction of reinforced backfill.
ROCK ANCHORS AND ANCHOR PIPE			
Verification and Proof Tests		X	At intervals outlined in Section 3.12.
Grout Tests		X	In accordance with ASTM C-109. One test for every 50 cubic yards of grout placed or once per day.
Anchor installation	X		Verify location, orientation, length, bar size and strength, and hole diameter.
Geogrid Anchor Pipe		X	Verify the cantilever end length of the pipe does not exceed half the minimum anchor horizontal spacing.
Face Drain Installation		X	Special inspection shall be made of the placement and extent of the face drain system within each soil anchor wall.

SECTION 4: DESIGN NOTES FOR RETAINING WALL SYSTEM

4.01 Design Parameters:

A. Design of the reinforced soil structure is based on the following parameters:

Wall Segment	Friction Angle	Cohesion	Unit Weight
Reinf. Backfill	32°	0 psf	120 pcf
Clayey Gravel (GC)	32°	0 psf	115 pcf
Clayey Sand (SP/SC)	28°	0 psf	110 pcf
Gravelly Fat Clay (CH)	22°	0 psf	120 pcf
Limestone Bedrock	40°	0 psf	120 pcf

B. Internal Stability of Walls
Minimum Factor of Safety on Geogrid Strength.....1.5
Minimum Factor of Safety on Geogrid Pullout.....1.5
Minimum Factor of Safety on Connections (Peak Load Criterion).....1.5
Internal Compound Stability.....1.3
Percent Coverage of Geogrid.....100%

C. External Stability
Minimum Factor of Safety Against Base Sliding.....1.5
Minimum Factor of Safety Against Overturning.....2.0
Minimum Factor of Safety for Bearing Capacity.....2.0
Minimum Factor of Safety (Global Stability).....1.5
Heavy Traffic Surcharge..... 250 psf

D. RocK Anchor Service Load Design Safety and Strength Factors
Strength Factor for Anchor Tendon Strength.....1.8
Strength Factor for Anchor Pullout Resistance.....2.0
Bending Moment Factor for Anchor Pipe.....1.5

E. Factor of Safety Seismic Conditions.....0.75xStatic FS

F. Seismic Acceleration Coefficient (A).....0.071g
Horizontal Seismic Coefficient for Internal and External Stability (kh).....0.098
Horizontal Seismic Coefficient for Global Stability (kh).....0.036

G. Ultimate Bond Strength (Limestone Bedrock).....58 psi

REV.	DATE	BY	DESCRIPTION
1	5/21/25	JP	REVISED GRADING PLAN AND WALL ALIGNMENT

TECHNICAL SCOPE OF WORK

TOWNCENTER EAST, PHASE 3
BELLA VISTA WAY & LANCASHIRE BLVD
BELLA VISTA ARKANSAS

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PRELIMINARY NOT FOR CONSTRUCTION

RW-03

DESIGNED BY:	JP
DRAWN BY:	JP
APPVD. BY:	TMK
SCALE:	AS SHOWN
DATE:	5/21/23
JOB NO.	65235108
ACAD NO.	03_RW-03
SHEET NO.:	03 OF 11

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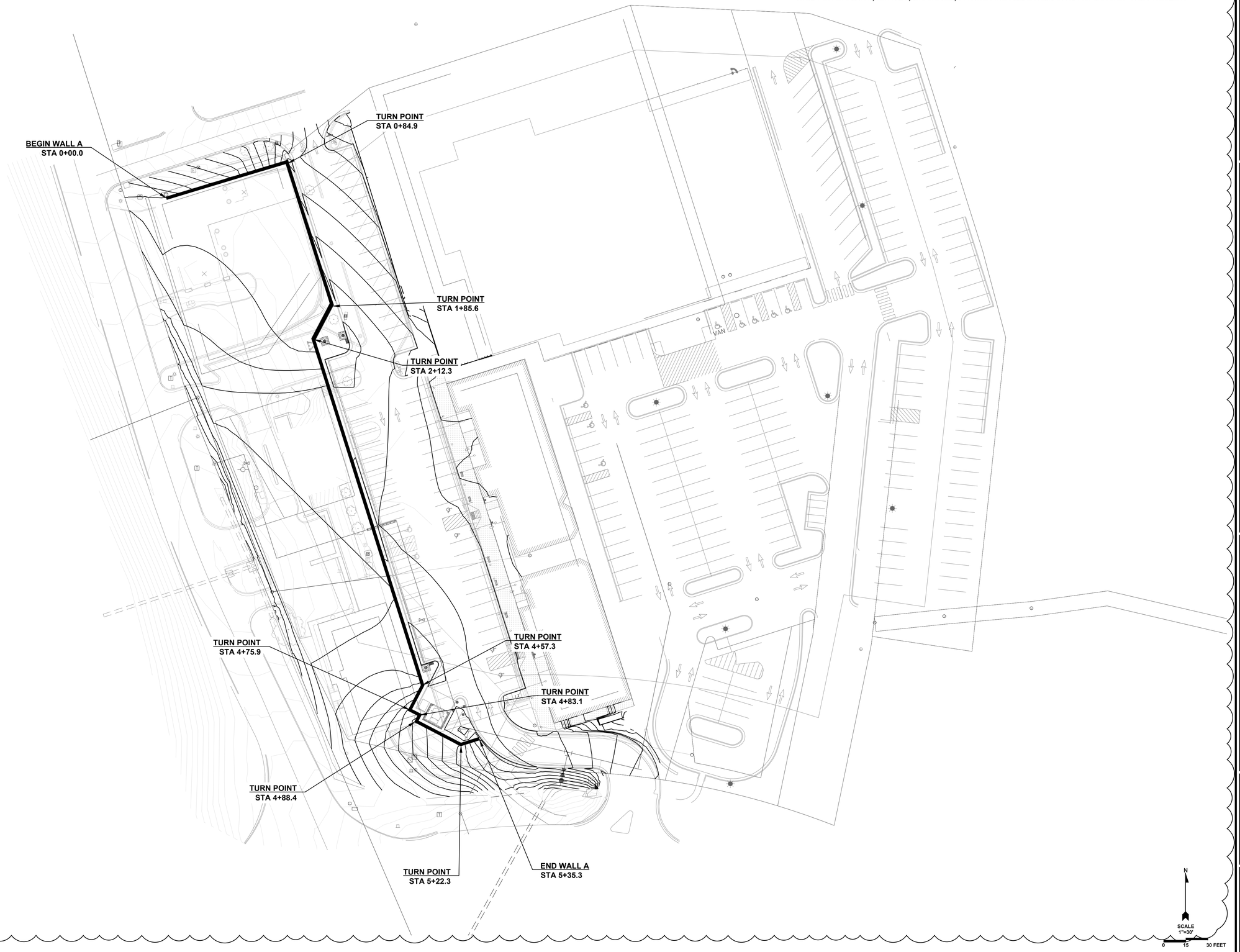
SITE PLAN BASED ON THE GRADING PLAN FOR TOWN CENTER EAST PHASE 3 BY CRAFTON TULL, SHEET NO. C-103, PROJECT NO.19105800. DATED MARCH 17, 2023.

THIS SITE PLAN IS FOR WALL LOCATION ONLY. REFER TO THE GRADING AND DRAINAGE PLAN BY CRAFTON TULL FOR GRADING, SURVEY, DRAINAGE, PAVING AND ALL OTHER CIVIL ASPECTS OF THE PROJECT.



REV.	DATE	BY	DESCRIPTION
1	5/21/25	JP	REVISED GRADING PLAN AND WALL ALIGNMENT

SITE PLAN

TOWNCENTER EAST, PHASE 3

BELLA VISTA WAY & LANCASHIRE BLVD

BELLA VISTA ARKANSAS

terracon

4685 SOUTH ASH AVENUE, SUITE H-4
PH: (480) 897-8200

TEMPE, AZ 85282
FAX: (480) 897-1133

PRELIMINARY
NOT FOR
CONSTRUCTION

RW-04

DESIGNED BY:	JP
DRAWN BY:	JP
APPV'D. BY:	TMK
SCALE:	AS SHOWN
DATE:	5/21/23
JOB NO.	65235108
ACAD NO.	04 RW-04
SHEET NO.:	04 OF 11

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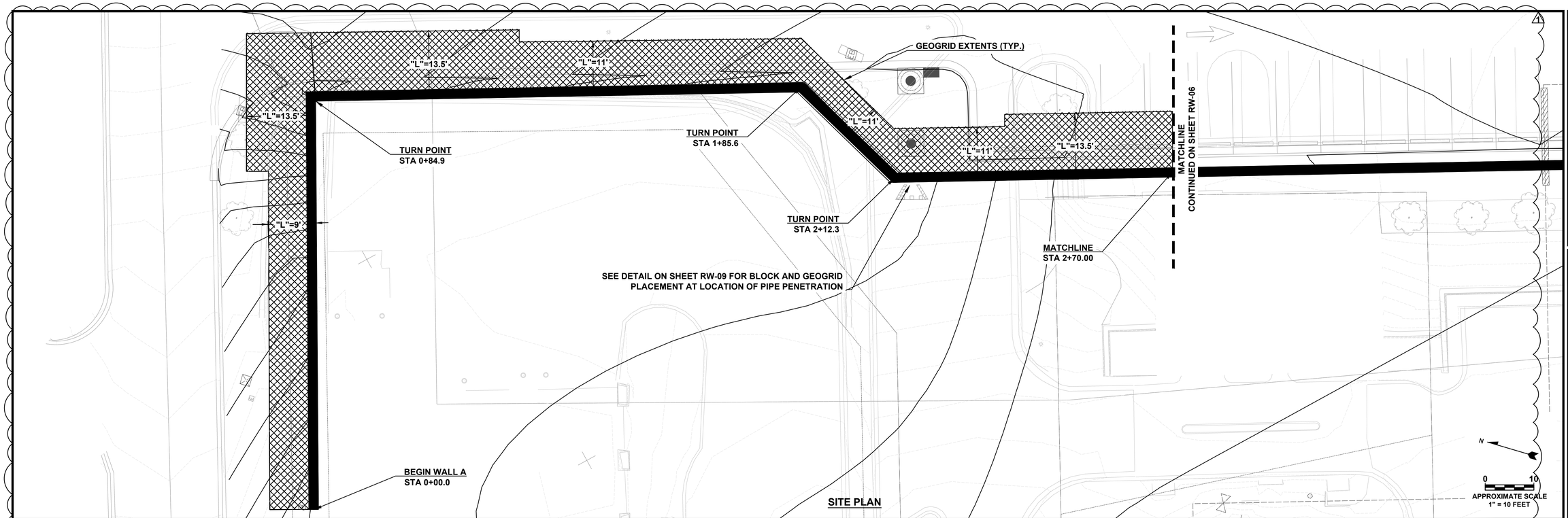
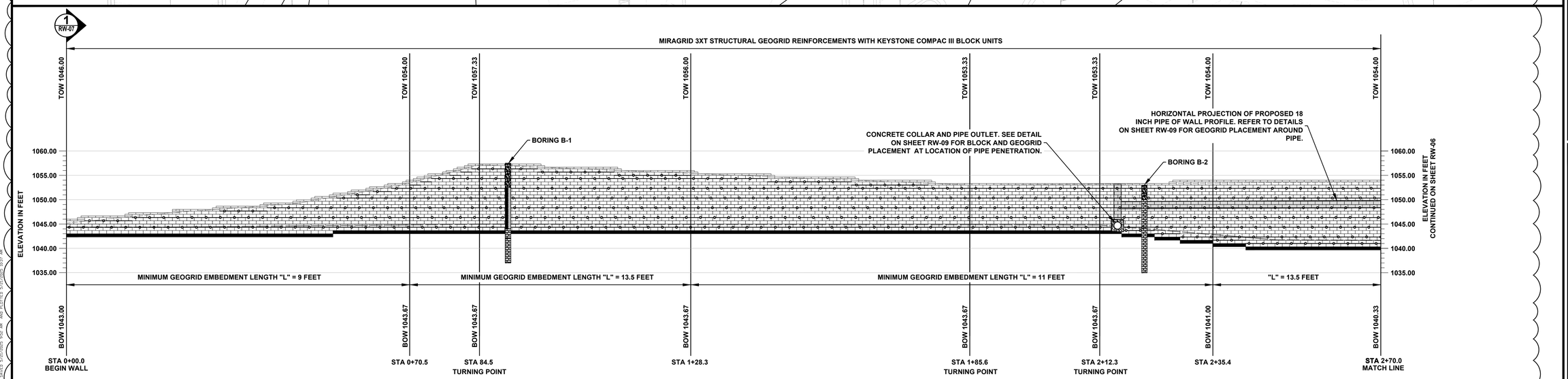


SITE PLAN



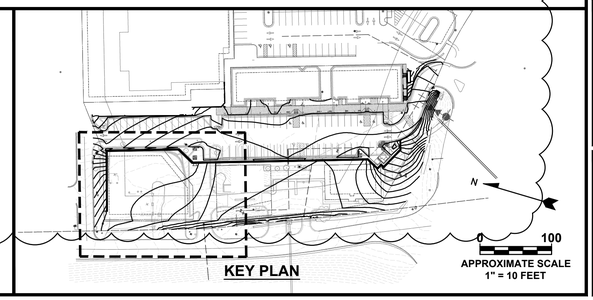
WALL A STA 0+00.0 TO 2+70.0: BLOCK AND GEOGRID PLACEMENT
SCALE: 1" = 10'

LEGEND:

- KEYSTONE CAP UNITS
- KEYSTONE COMPAC III BLOCK UNITS
- 8-INCH LEVELING PAD
- MIRAGRID 3XT STRUCTURAL GEOGRID
- FINISHED GRADE AT TOP OF WALL
- FINISHED GRADE AT BOTTOM OF WALL

STA	STATION ALONG RETAINING WALL ALIGNMENT
"L"	MINIMUM GEOGRID EMBEDMENT LENGTH
TOW	ELEVATION AT TOP OF CAP BLOCK
BOW	ELEVATION AT BOTTOM OF BLOCK; TOP OF LEVELING PAD

- ASPHALT
- LIMESTONE
- CLAYEY SAND
- CLAYEY GRAVEL
- GRAVELLY FAT CLAY
- POORLY GRADED SAND WITH CLAY
- CLAYEY SAND WITH GRAVEL



KEY PLAN

REV	DATE	BY	DESCRIPTION
1	5/21/25	JP	REVISED GRADING PLAN AND WALL ALIGNMENT

WALL PLAN & PROFILE

TOWNCENTER EAST, PHASE 3

BELLA VISTA WAY & LANCASHIRE BLVD

BELLA VISTA ARKANSAS

terracon
4685 SOUTH ASH AVENUE, SUITE H-4
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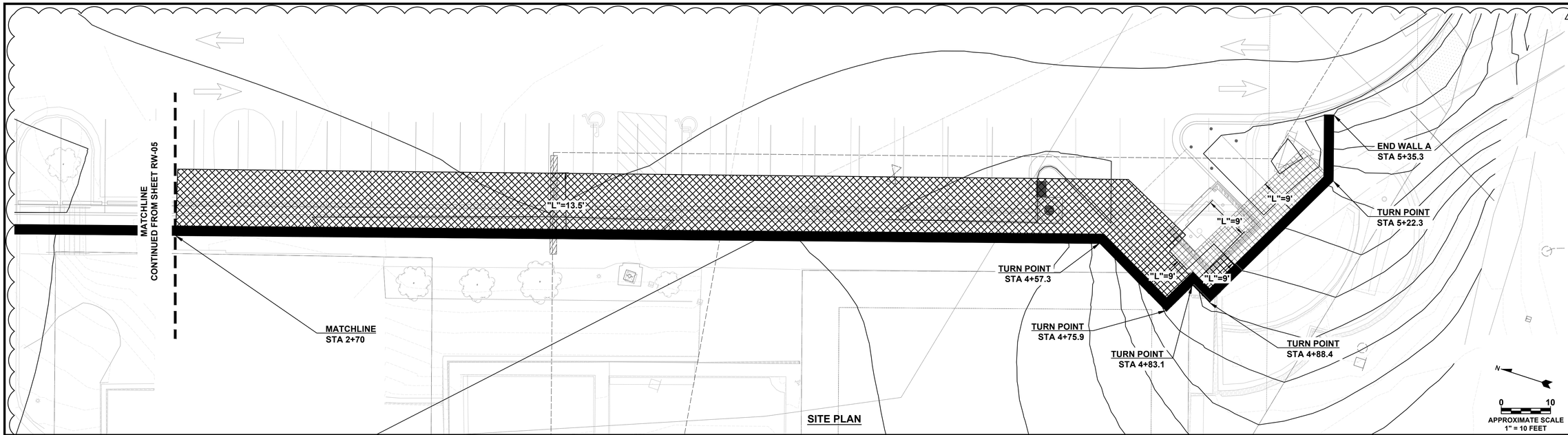
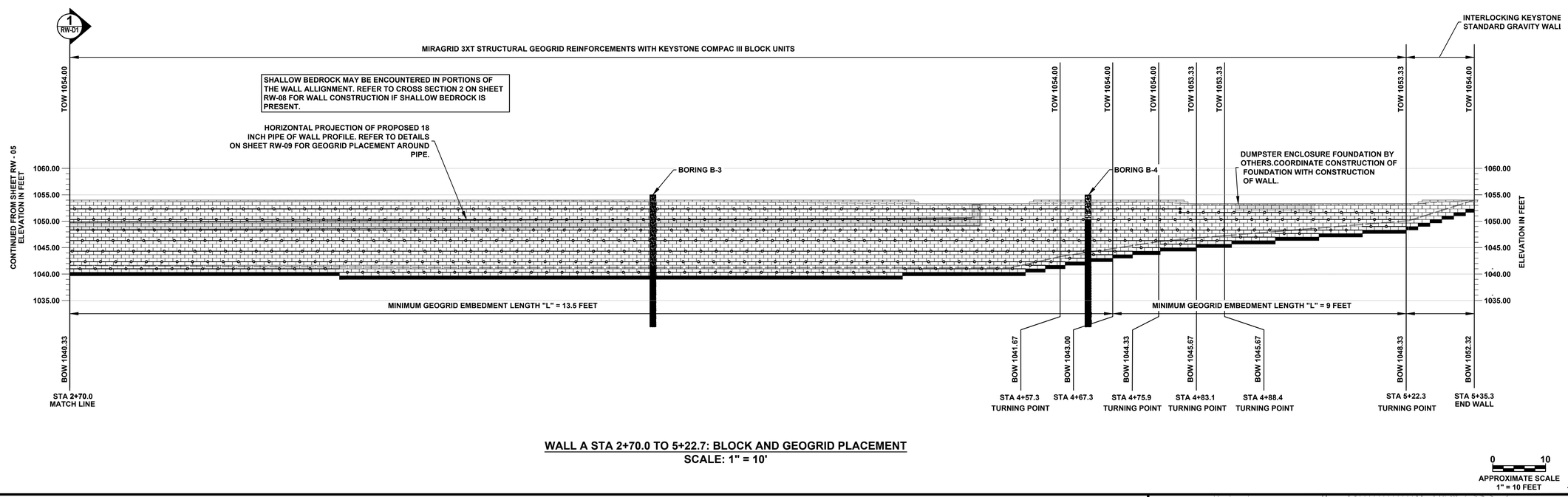
PRELIMINARY NOT FOR CONSTRUCTION

RW-05

DESIGNED BY:	JP
DRAWN BY:	JP
APPV'D. BY:	TMK
SCALE:	AS SHOWN
DATE:	5/21/23
JOB NO.	65235108
ACAD NO.	05 RW-05
SHEET NO.:	05 OF 11



SITE PLAN



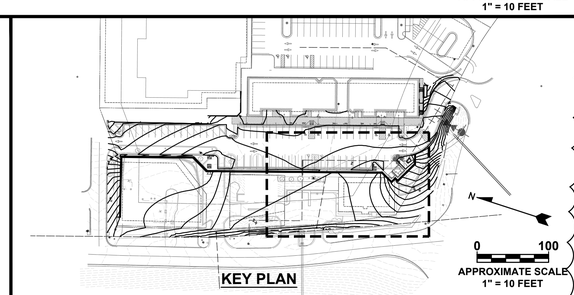
WALL A STA 2+70.0 TO 5+22.7: BLOCK AND GEOGRID PLACEMENT
SCALE: 1" = 10'

LEGEND:

- KEYSTONE CAP UNITS
- KEYSTONE COMPAC III BLOCK UNITS
- 8-INCH LEVELING PAD
- MIRAGRID 3XT STRUCTURAL GEOGRID
- FINISHED GRADE AT TOP OF WALL
- FINISHED GRADE AT BOTTOM OF WALL

STA	STATION ALONG RETAINING WALL ALIGNMENT
"L"	MINIMUM GEOGRID EMBEDMENT LENGTH
TOW	ELEVATION AT TOP OF CAP BLOCK
BOW	ELEVATION AT BOTTOM OF BLOCK; TOP OF LEVELING PAD
⬢	INDICATES CHANGE IN GRID ELEVATION

- ASPHALT
- CLAYEY GRAVEL
- POORLY GRADED SAND WITH CLAY
- LIMESTONE
- GRAVELLY FAT CLAY
- CLAYEY SAND WITH GRAVEL
- CLAYEY SAND



KEY PLAN

REV	DATE	BY	DESCRIPTION
1	5/21/25	JP	REVISED GRADING PLAN AND WALL ALIGNMENT

WALL PLAN AND PROFILE

TOWNCENTER EAST, PHASE 3

BELLA VISTA WAY & LANCASHIRE BLVD

BELLA VISTA ARKANSAS

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TEMPE, AZ 85282
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PRELIMINARY NOT FOR CONSTRUCTION

RW-06

DESIGNED BY:	JP
DRAWN BY:	JP
APPVD. BY:	TMK
SCALE:	AS SHOWN
DATE:	5/21/23
JOB NO.	65235108
ACAD NO.	06 RW-06
SHEET NO.:	06 OF 11

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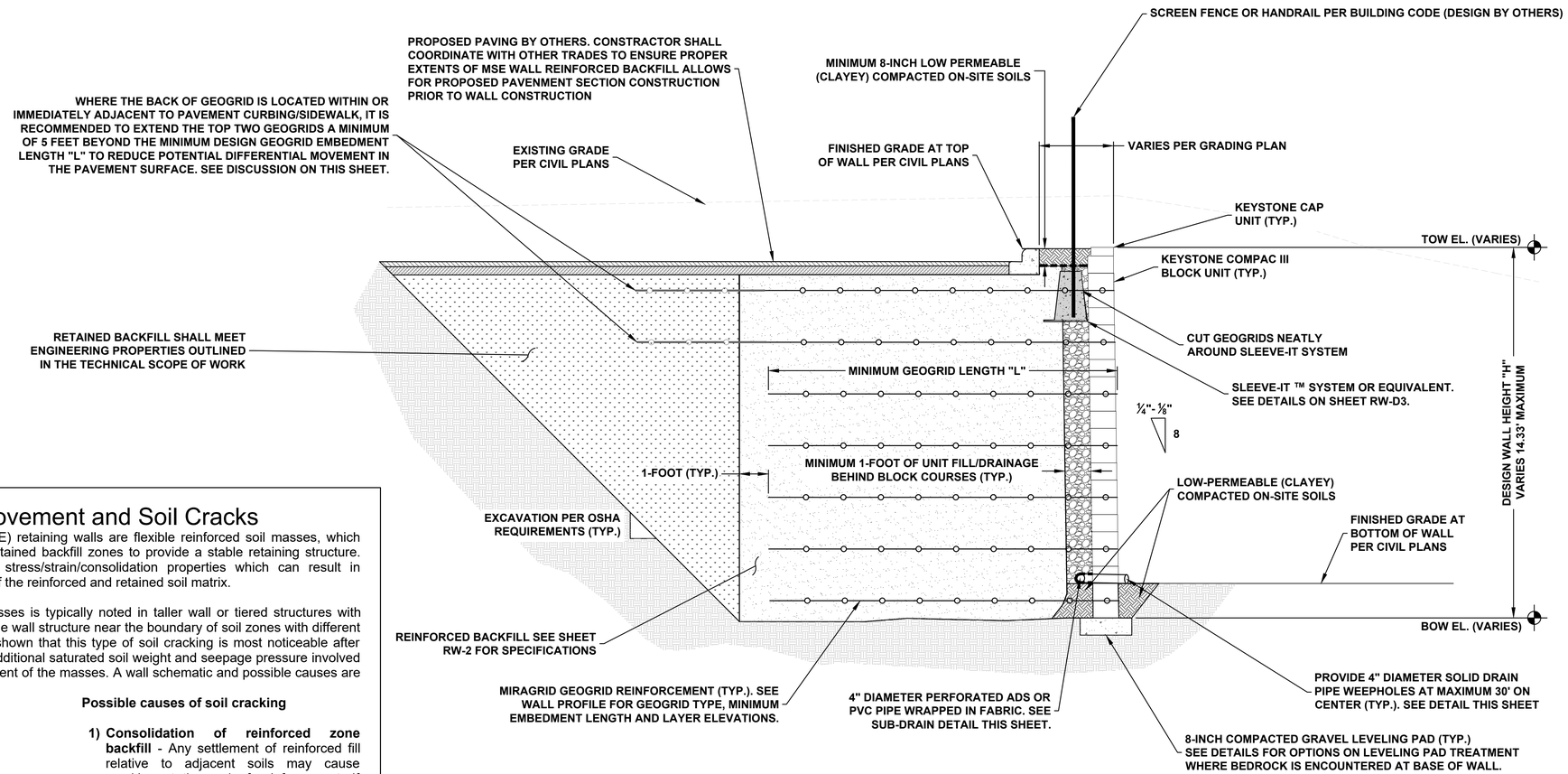


1 **TYPICAL RETAINING WALL A CROSS SECTION**
N.T.S

Backfill Movement and Soil Cracks

Mechanically Stabilized Earth (MSE) retaining walls are flexible reinforced soil masses, which interact with the foundation and retained backfill zones to provide a stable retaining structure. These soil zones have different stress/strain/consolidation properties which can result in differential movements and strain of the reinforced and retained soil matrix.

Relative movement of the soil masses is typically noted in taller wall or tiered structures with small soil cracks occuring behind the wall structure near the boundary of soil zones with different strain properties. Experience has shown that this type of soil cracking is most noticeable after very heavy rainstorms where the additional saturated soil weight and seepage pressure involved can cause slight differential movement of the masses. A wall schematic and possible causes are shown below:

Possible causes of soil cracking

1) **Consolidation of reinforced zone backfill** - Any settlement of reinforced fill relative to adjacent soils may cause cracking at the end of reinforcement. If soils are placed and compacted in dry conditions, water can cause secondary consolidation of the reinforced fill and cracking at the end of the reinforced zone.

2) **Consolidation of retained soil wedge** - Similar to Item 1 causing cracking at the back of fill wedge relative to existing soils.

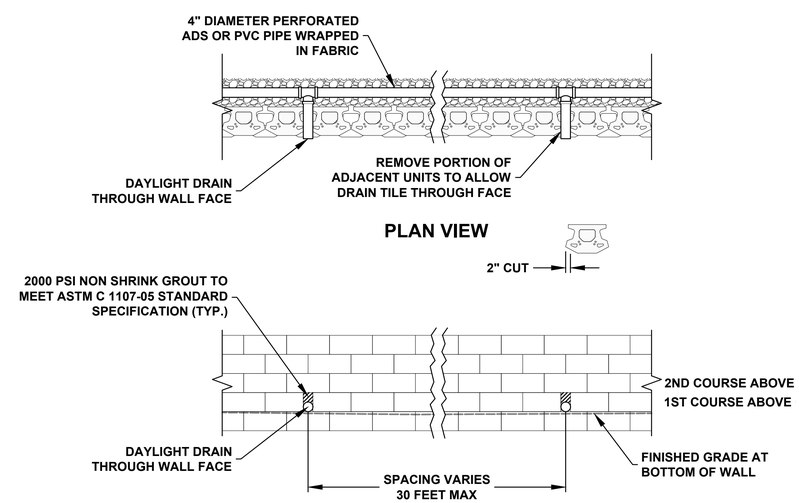
3) **Lateral wall movement due to active earth pressure state** - lesser quality backfill soils exhibit higher lateral movement to mobilize the active earth pressure state. If the reinforced wall mass strains laterally, the fill must settle accordingly and cracking can occur.

4) **Foundation settlement** - The foundation soils of many wall structures have not experienced the loading from the new fill which can cause differential settlement between the wall volume and cut slope.

5) **Toe Settlement** - The wall toe can experience more settlement than the wall heel due to the lack of overburden or confining pressure resulting in slight lateral wall movement in the upper wall section and tension cracking at the end of reinforcement.

Soil cracks can also be a sign of global instability or continuing settlement which requires evaluation by a geotechnical engineer. However, most minor soil cracking observed is structurally insignificant to the long term performance of the wall structure but can lead to reflective cracks in pavement sections and/or separation of curbs when of greater magnitude.

Significantly increasing the length of the upper reinforcement levels to help bridge the potential crack zones can be prudent precaution for projects with flexible pavements extending over all zones. High quality backfill, proper backfill placement and compaction, and firm foundations are the best precautions against soil cracking.



SUB-DRAIN DETAIL FOR TYPICAL WALL SECTION (N.T.S.)

REV	DATE	BY	DESCRIPTION
1	5/21/25	JP	REVISED GRADING PLAN AND WALL ALIGNMENT

TYPICAL WALL CROSS SECTION

TOWNCENTER EAST, PHASE 3
BELLA VISTA WAY & LANCASHIRE BLVD
BELLA VISTA ARKANSAS

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4835 SOUTH ASH AVENUE, SUITE H-4
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PRELIMINARY NOT FOR CONSTRUCTION

RW-07

DESIGNED BY:	JP
DRAWN BY:	JP
APPV'D. BY:	TMK
SCALE:	AS SHOWN
DATE:	5/21/23
JOB NO.	65235108
ACAD NO.	07 RW-07
SHEET NO.:	07 OF 11

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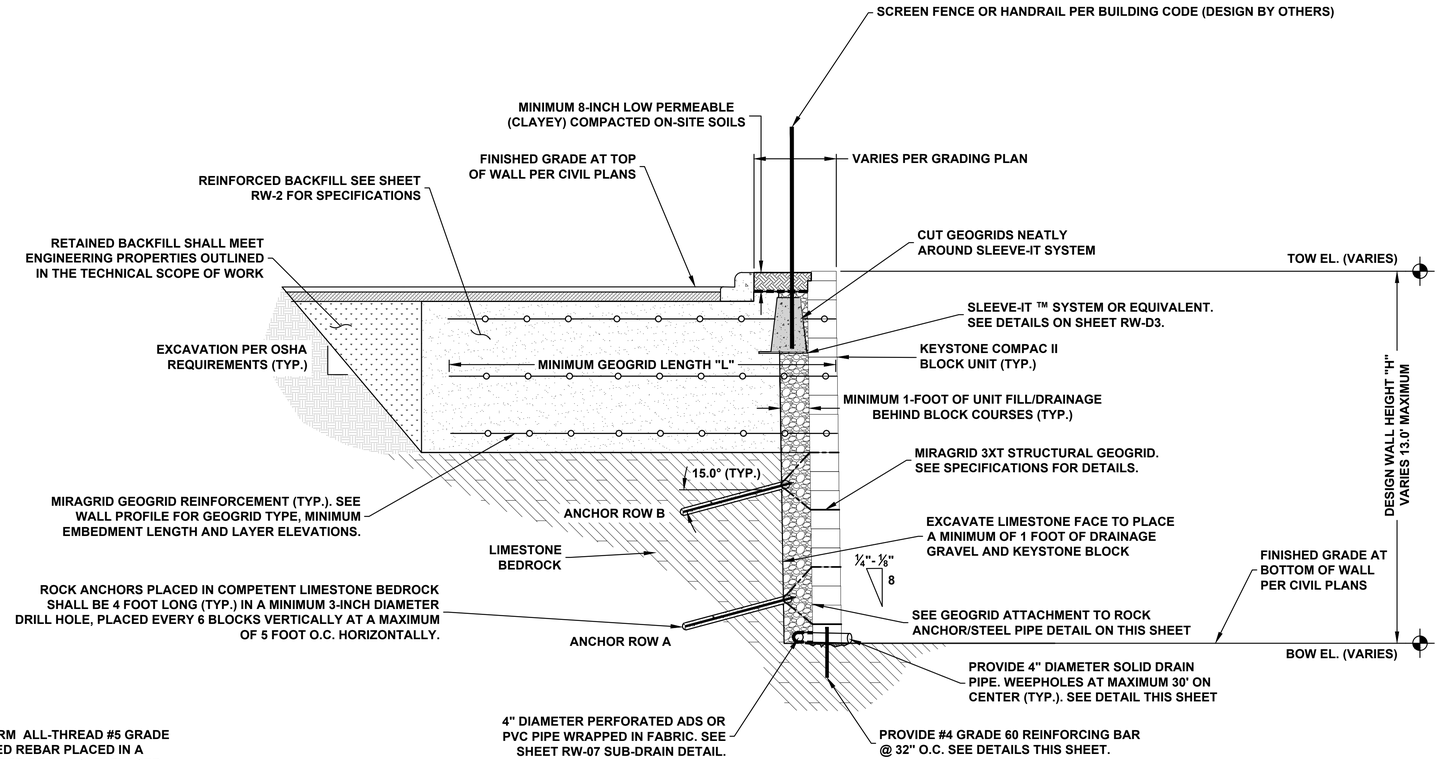
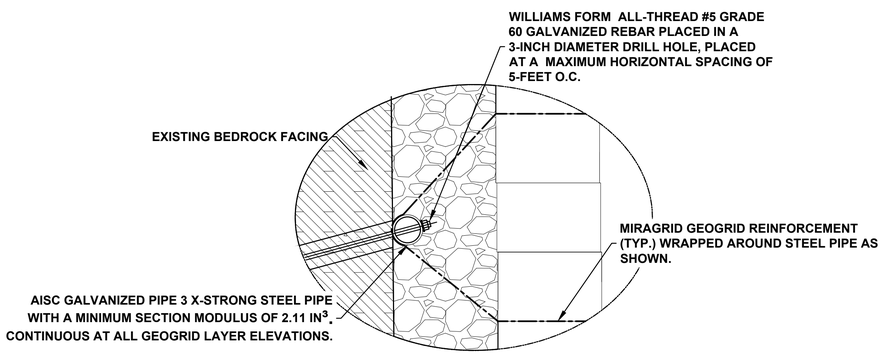
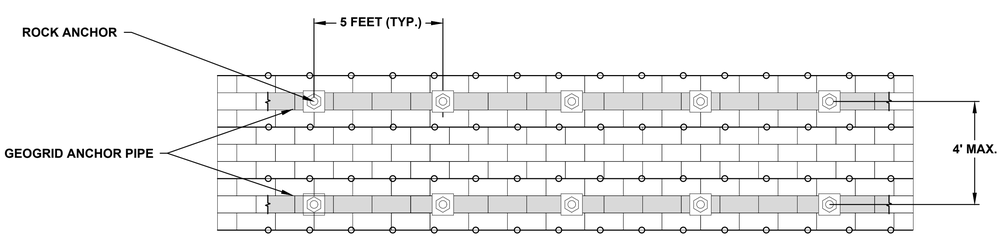


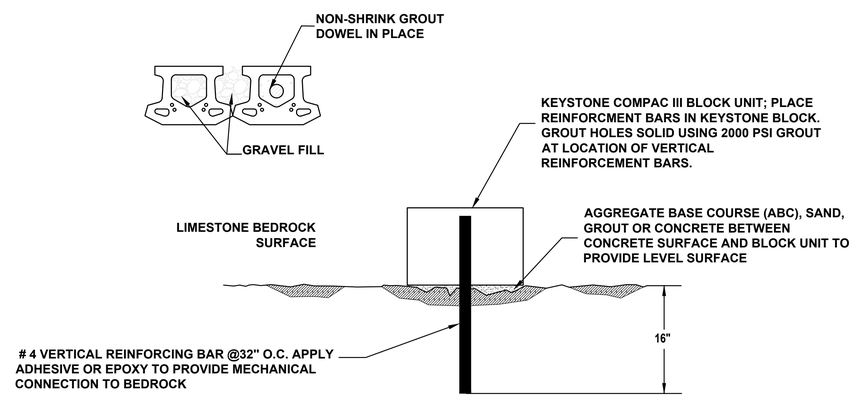
2 TYPICAL RETAINING WALL CROSS SECTION (NOT TO SCALE) WHERE SHALLOW BEDROCK IS ENCOUNTERED



GEOGRID ATTACHMENT TO ROCK ANCHOR/STEEL PIPE DETAIL



GEOGRID ANCHOR PIPE DETAILS (NTS)



REINFORCING BAR / BLOCK CONNECTION DETAIL

REV	DATE	BY	DESCRIPTION
1	5/21/25	JP	REVISED GRADING PLAN AND WALL ALIGNMENT

TYPICAL WALL CROSS SECTION

TOWNCENTER EAST, PHASE 3

BELLA VISTA WAY & LANCASHIRE BLVD

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FAX: (480) 897-1133

PRELIMINARY NOT FOR CONSTRUCTION

RW-08

DESIGNED BY:	JP
DRAWN BY:	JP
APPVD. BY:	TMK
SCALE:	AS SHOWN
DATE:	5/21/23
JOB NO.	65235108
ACAD NO.	08 RW-08
SHEET NO.:	08 OF 11

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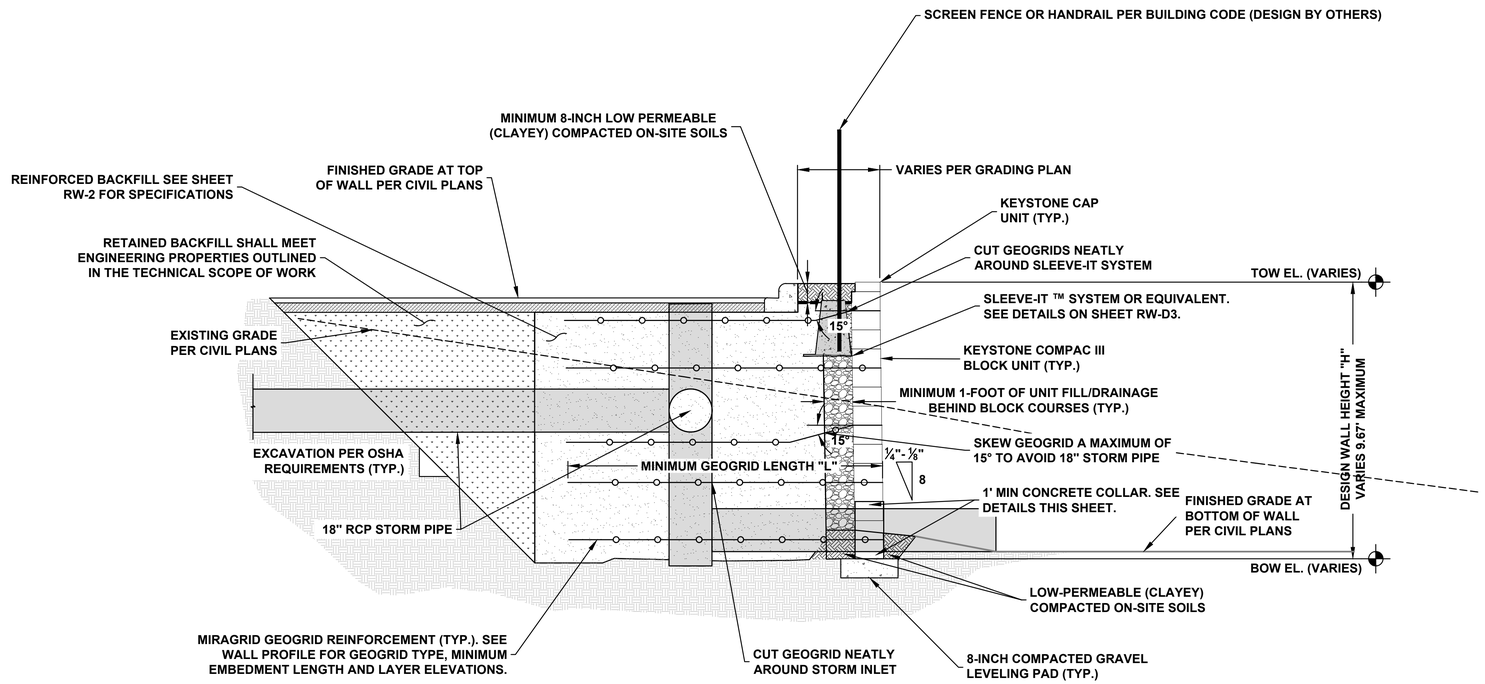
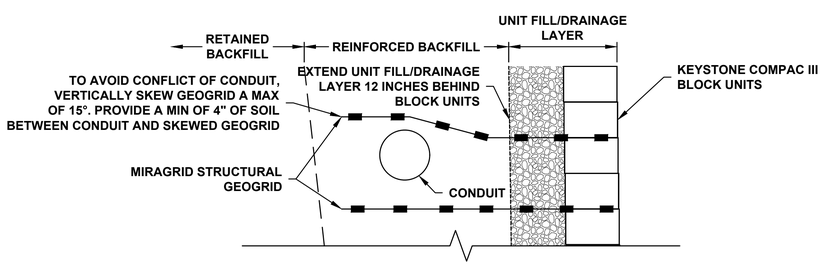
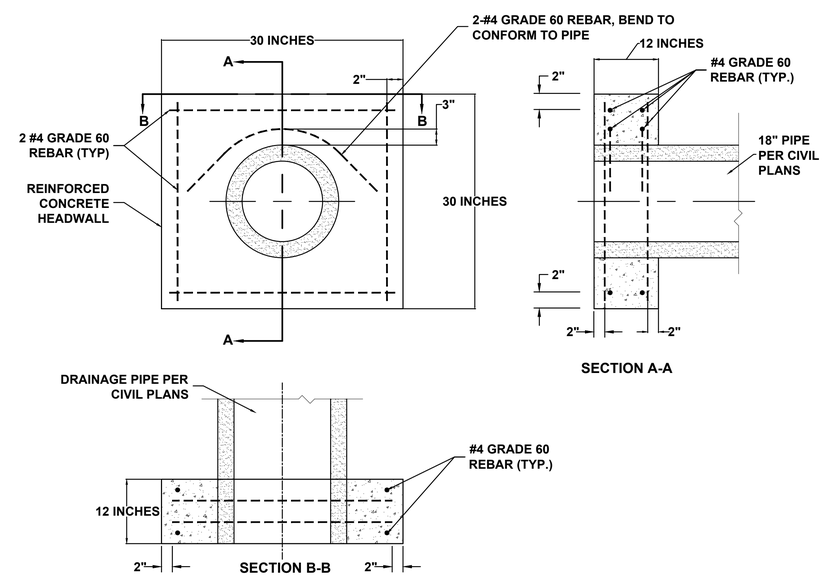


3 RETAINING WALL CROSS SECTION AT STORM PIPE OUTLET (NOT TO SCALE)



SKEWED GEOGRID WHEN CONDUIT EXISTS



CONCRETE HEADWALL REINFORCEMENT DETAIL (NTS.)

REV.	DATE	BY	DESCRIPTION
1	5/21/25	JP	REVISED GRADING PLAN AND WALL ALIGNMENT

TYPICAL WALL CROSS SECTION

TOWNCENTER EAST, PHASE 3

BELLA VISTA WAY & LANCASHIRE BLVD

BELLA VISTA ARKANSAS

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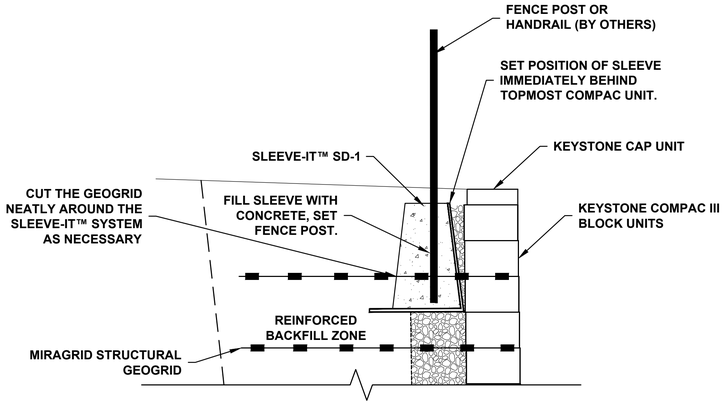
4685 SOUTH ASH AVENUE, SUITE H-4
PH. (480) 897-8200

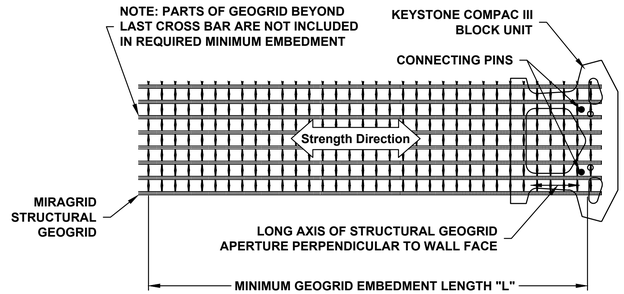
PRELIMINARY NOT FOR CONSTRUCTION

RW-09

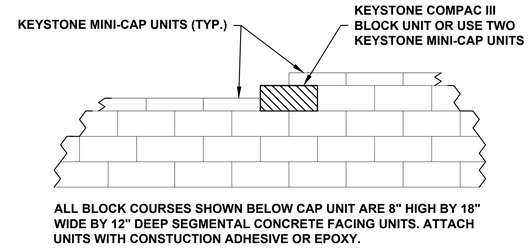
DESIGNED BY:	JP
DRAWN BY:	JP
APPVD. BY:	TMK
SCALE:	AS SHOWN
DATE:	5/21/23
JOB NO.	62235108
ACAD NO.	09 RW-09
SHEET NO.:	09 OF 11



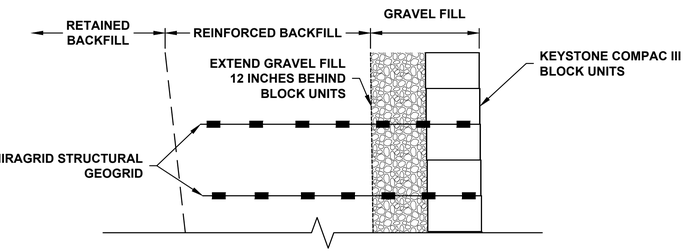
FENCE POST INSTALLATION USING SLEEVE-IT™ SD-1



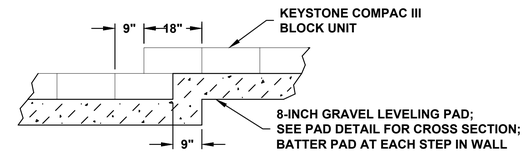
GEOGRID ORIENTATION ON BLOCK



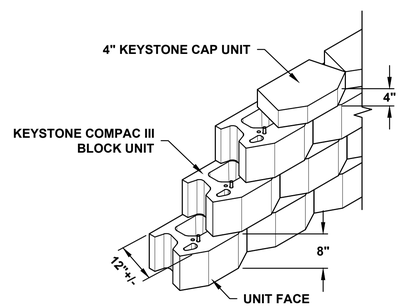
CAP STEP DETAIL



LIMITS OF UNIT FILL AND REINFORCED BACKFILL

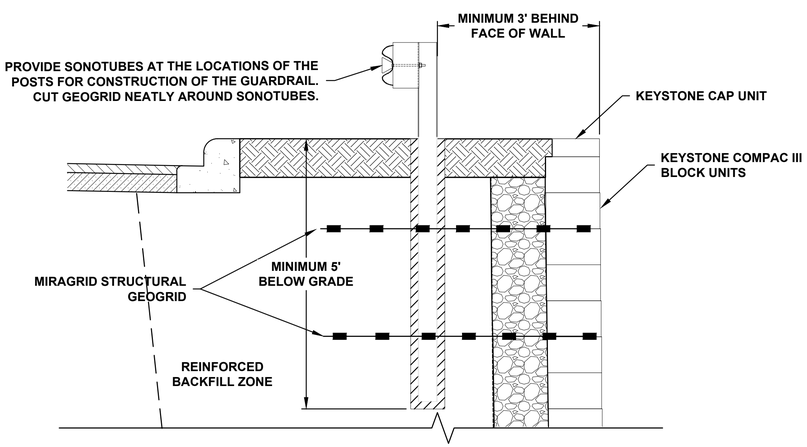


LEVELING PAD STEP DETAIL

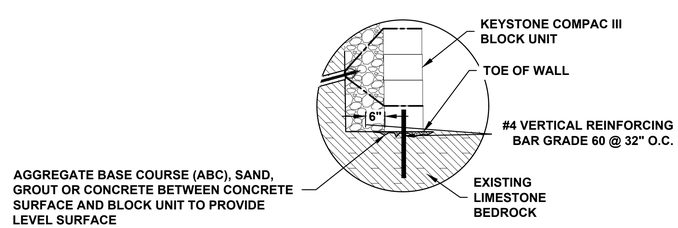


KEYSTONE COMPAC III BLOCK DETAIL

SLEEVE-IT™ SD1 COMPONENTS

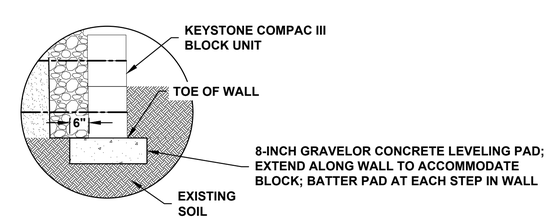


TYPICAL GUARDRAIL DETAIL



IF BEDROCK IS ENCOUNTERED AT OR ABOVE PROPOSED MSE BOTTOM OF WALL ELEVATION, PROVIDE # 4 VERTICAL REINFORCING BAR @32" O.C. APPLY ADHESIVE OR EPOXY TO PROVIDE MECHANICAL CONNECTION TO BEDROCK

OPTION 1



IF BEDROCK IS NOT ENCOUNTERED BELOW PROPOSED MSE BOTTOM OF WALL ELEVATION (VARIES, SEE WALL PROFILE), EXCAVATE INTO SOIL TO PLANNED BOTTOM OF WALL INTO THE SOIL. PLACE 8-INCH GRAVEL OR CONCRETE LEVELING PAD AS SHOWN ABOVE.

OPTION 2

LEVELING PAD OPTIONS DETAILS

REV	DATE	BY	DESCRIPTION
1	5/21/25	JP	REVISED GRADING PLAN AND WALL ALIGNMENT

WALL CONSTRUCTION DETAILS

TOWNCENTER EAST, PHASE 3

BELLA VISTA WAY & LANCASHIRE BLVD

BELLA VISTA ARKANSAS

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4655 SOUTH ASH AVENUE, SUITE H-4
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FAX: (480) 897-1133

PRELIMINARY NOT FOR CONSTRUCTION

RW-D1

DESIGNED BY:	JP
DRAWN BY:	JP
APPVD. BY:	TMK
SCALE:	AS SHOWN
DATE:	5/21/23
JOB NO.	65235108
ACAD NO.	10 RW-D1
SHEET NO.:	10 OF 11

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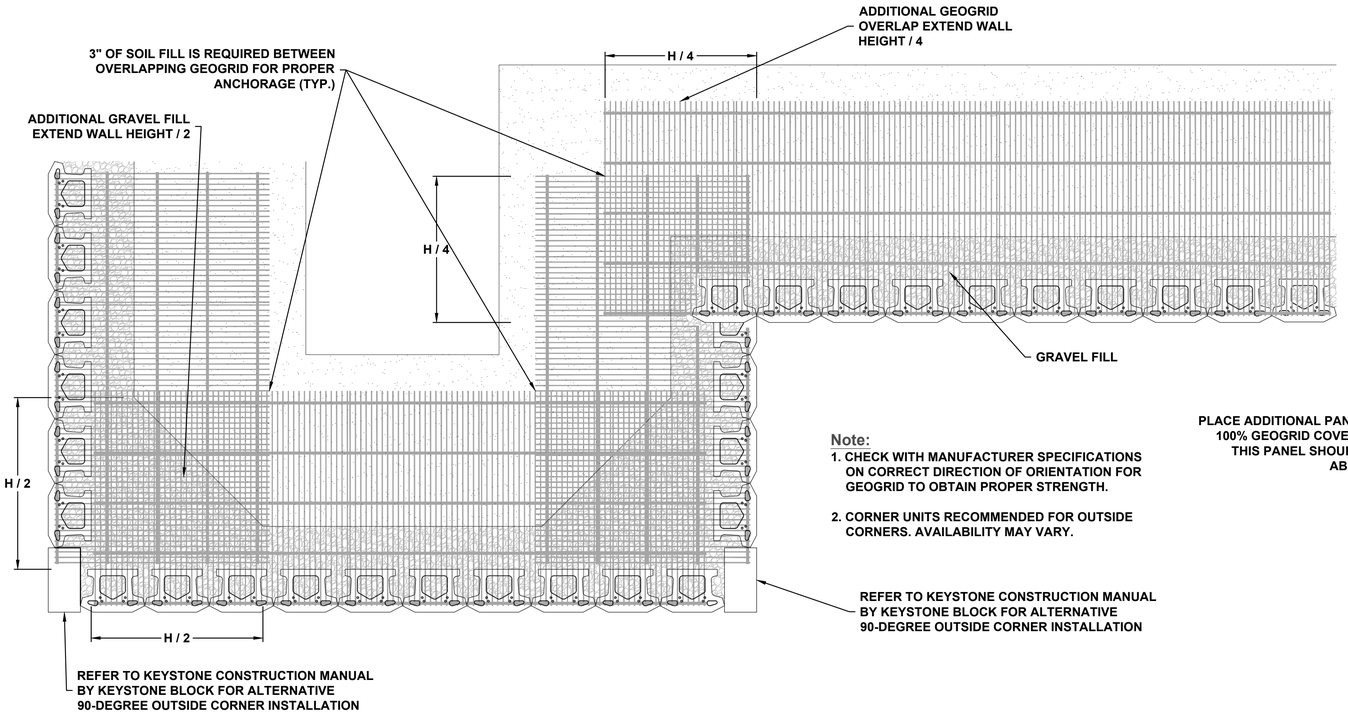
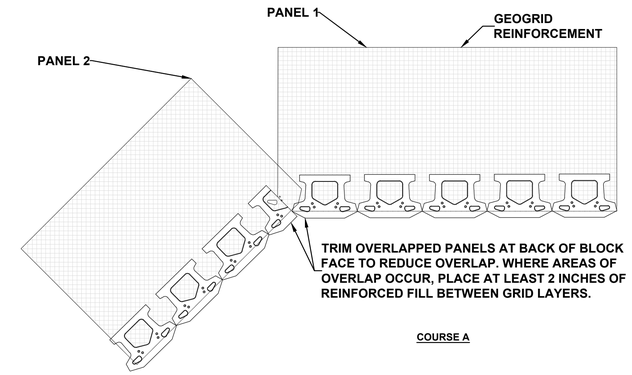


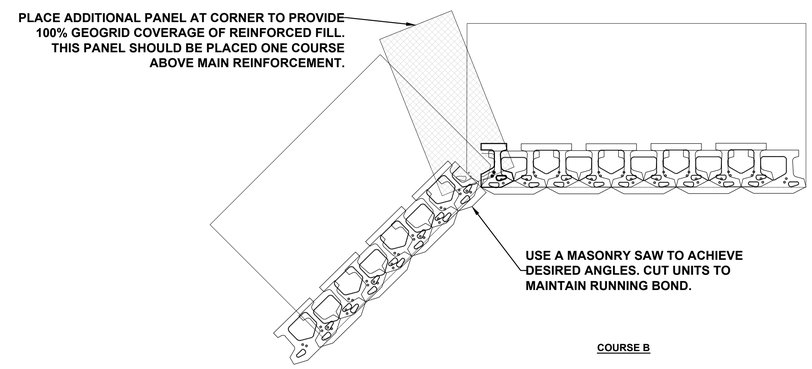
Note:

1. CHECK WITH MANUFACTURER SPECIFICATIONS ON CORRECT DIRECTION OF ORIENTATION FOR GEOGRID TO OBTAIN PROPER STRENGTH.
2. CORNER UNITS RECOMMENDED FOR OUTSIDE CORNERS. AVAILABILITY MAY VARY.

GEOGRID INSTALLATION AT CORNERS

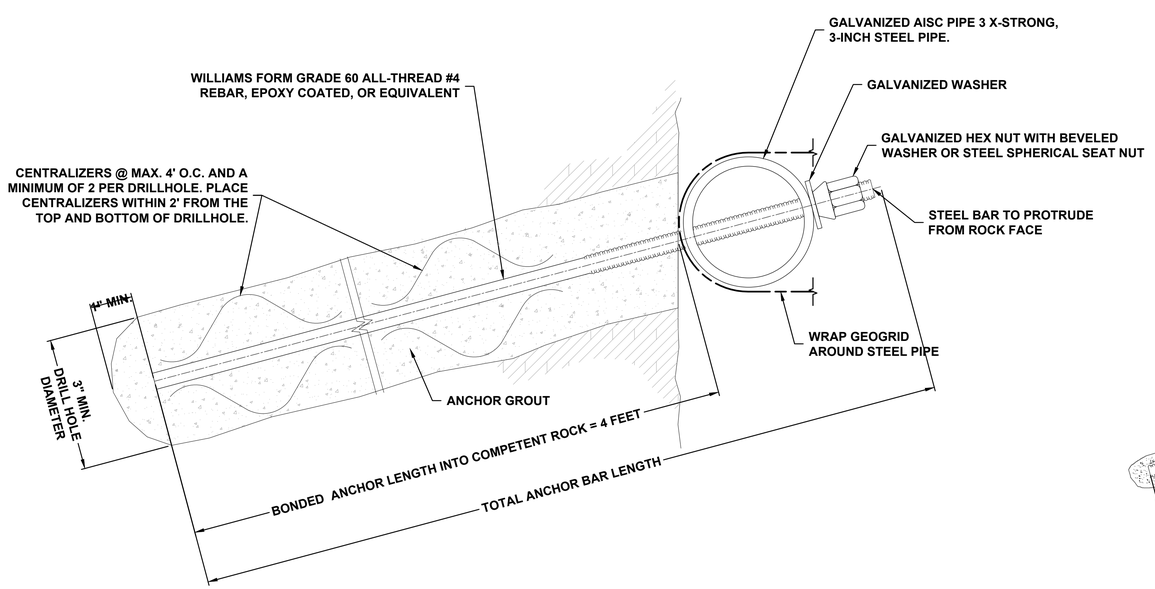


COURSE A

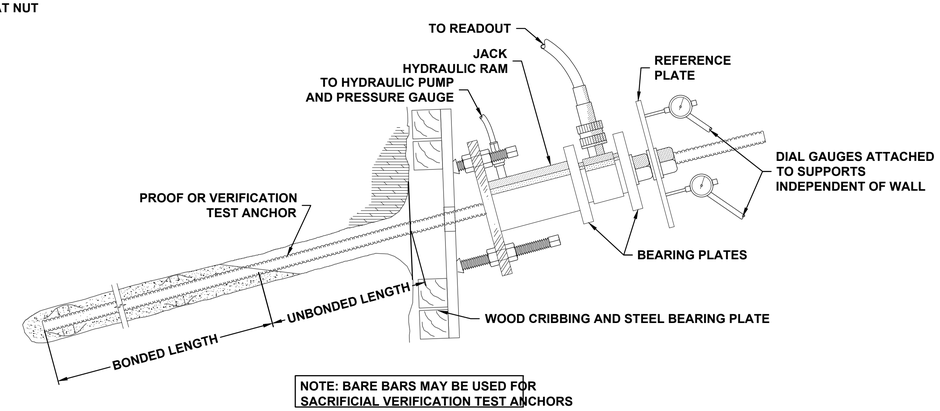


COURSE B

INSIDE ANGLES DETAIL (N.T.S.)



PRODUCTION ROCK ANCHOR DETAIL (N.T.S.)



NOTE: BARE BARS MAY BE USED FOR SACRIFICIAL VERIFICATION TEST ANCHORS

VERIFICATION/PROOF TEST ROCK ANCHOR DETAIL (N.T.S.)

REV	DATE	BY	DESCRIPTION
1	5/21/25	JP	REVISED GRADING PLAN AND WALL ALIGNMENT

WALL CONSTRUCTION DETAILS

TOWNCENTER EAST, PHASE 3

BELLA VISTA WAY & LANCASHIRE BLVD

BELLA VISTA ARKANSAS

terracon
4665 SOUTH ASH AVENUE, SUITE H-4
PH: (480) 897-8200
TEMPE, AZ 85282
FAX: (480) 897-1133

PRELIMINARY NOT FOR CONSTRUCTION

RW-D2

DESIGNED BY:	JP
DRAWN BY:	JP
APPVD. BY:	TMK
SCALE:	AS SHOWN
DATE:	5/21/23
JOB NO.	65235108
ACAD NO.	11 RW-D2
SHEET NO.:	11 OF 11

C:\Users\jaquez\OneDrive - Terracon Consultants Inc\65235108 Bella Vista - CAD\Rw-D2.dwg WAS LAST SAVED 5/19/2025 9:41 AM AND PLOTTED 5/21/2025 10:42 AM