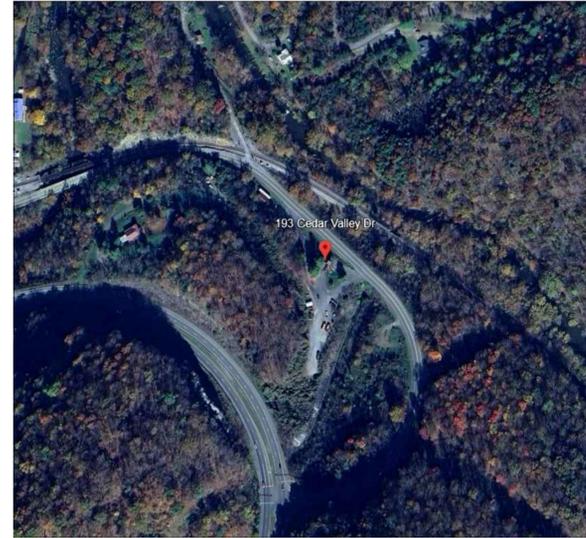


VICINTY MAP



LOCATION MAP

Cedar Bluff Transfer Station

Conceptual Plans

193 Cedar Valley Drive

Cedar Bluff, Virginia

DESIGN CRITERIA:

CODE:..... VCC 2021
 ACI- 2019
 ASCE 7-10

OCCUPANCY:.....UTILITY
 RISK CATEGORY.....II

PROJECT NO. 250309
 AUGUST 2025

DRAWING INDEX:

DESCRIPTION	SHEET NO.
COVER.....	C-01
SITE PLAN.....	C-02
SECTIONS.....	C-03
OVERALL PLAN.....	C-04
CONCRETE PLAN.....	C-05
DETAILS.....	C-06

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Cedar Bluff Transfer Station Proposal
193 Cedar Valley Drive
Cedar Bluff, Virginia

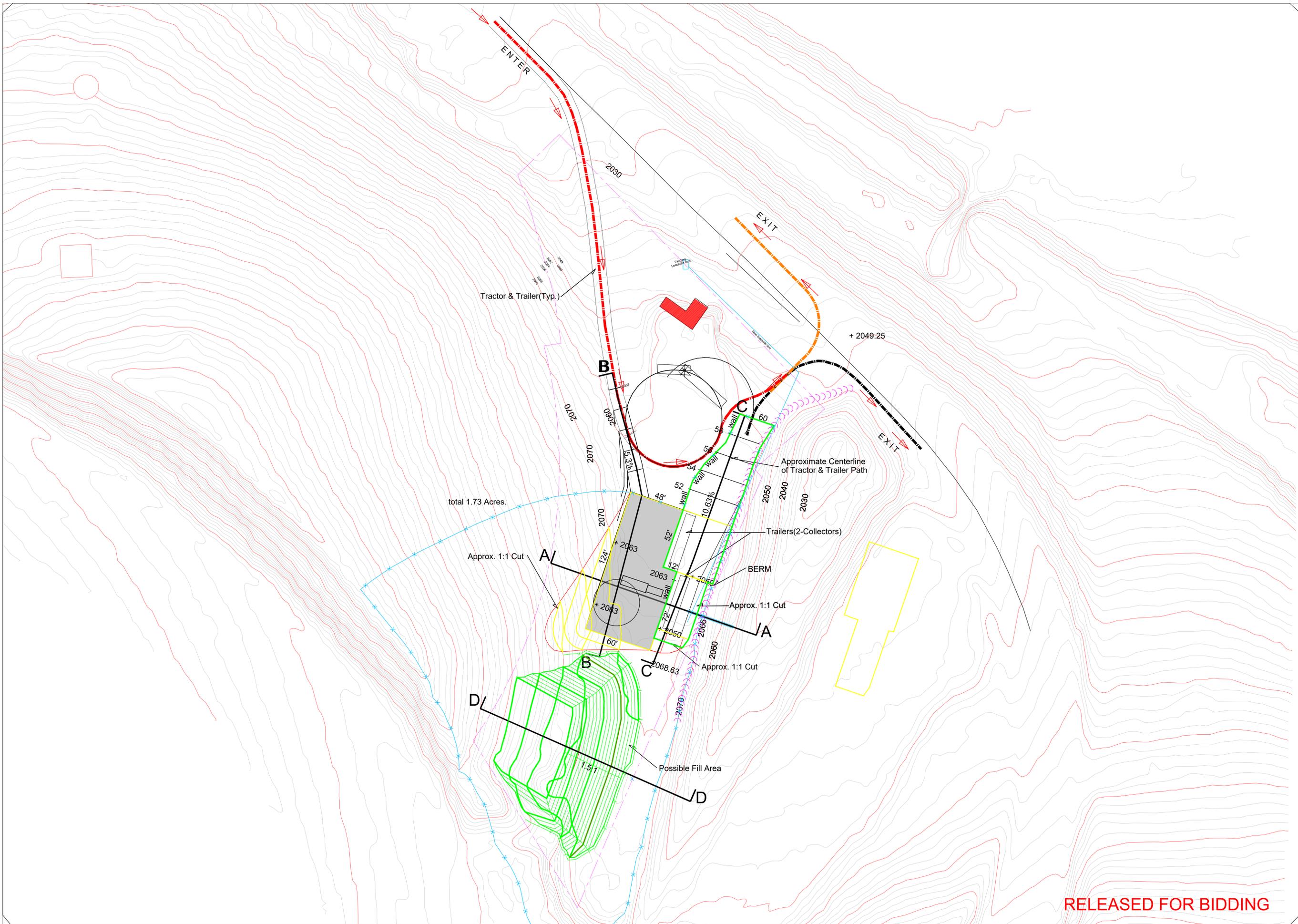
101 REYNOLDS AVE
 BLUEFIELD, VA 24605

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NO.	DATE	REVISION	BY

Cover Page

ENGINEER <i>RLS</i>	CHECKED BY <i>RLS</i>
JOB NO. P000000	DRAWN BY SC
SCALE AS SHOWN	DATE 06/2025
C-01	
SHEET NO 1 OF 6	

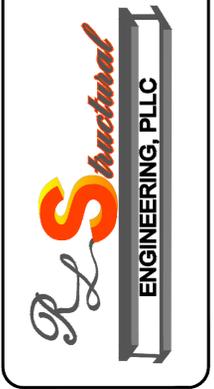


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Cedar Bluff Transfer Station Proposal
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 Cedar Bluff, Virginia

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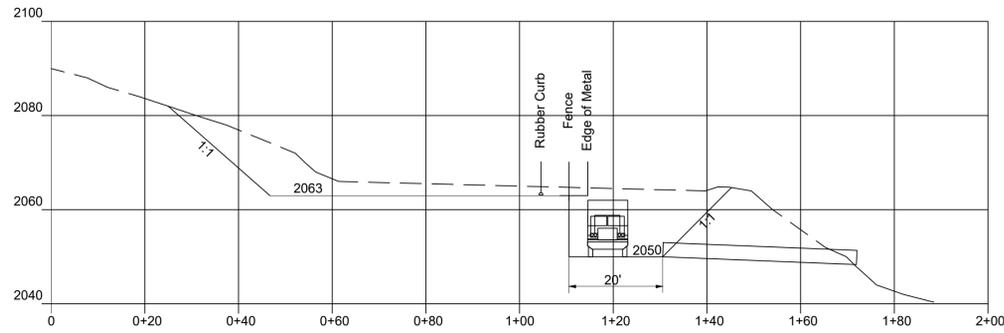


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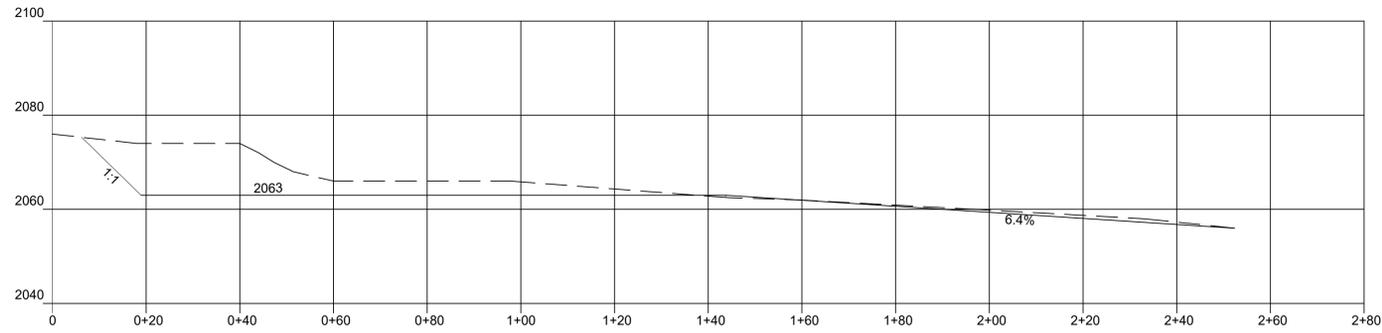
Site Plan

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JOB NO. P250309	DRAWN BY SC
SCALE AS SHOWN	DATE 06/2025

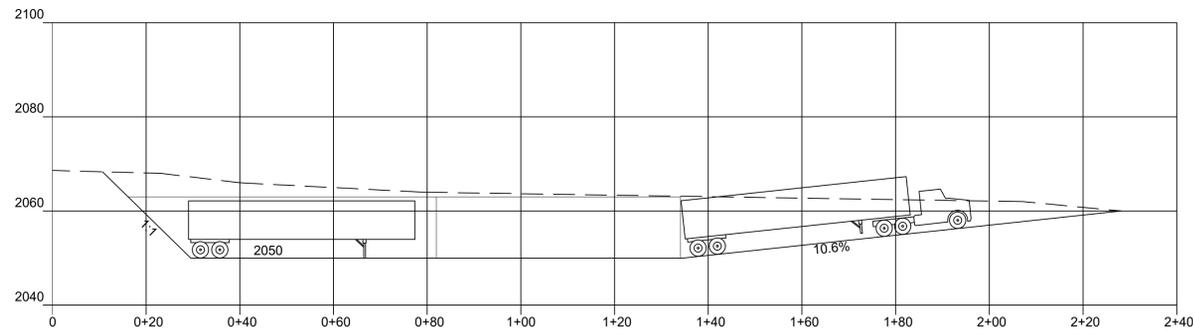
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 SHEET NO.
 2 OF 6



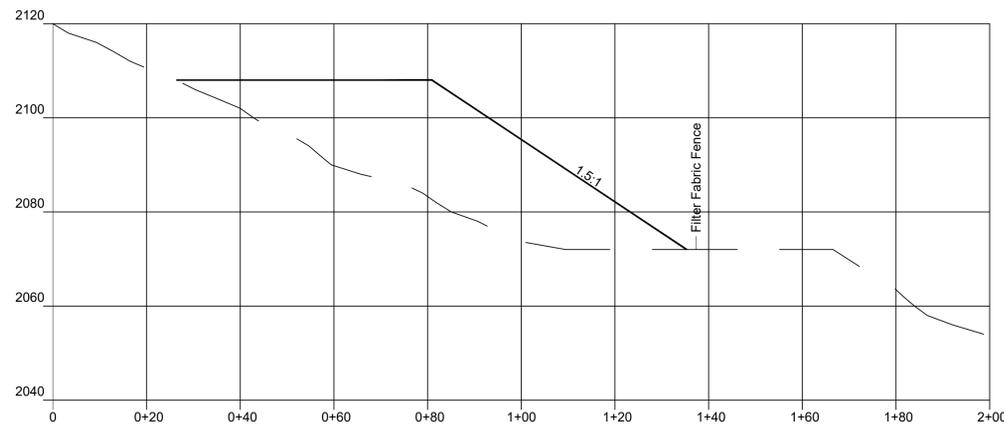
Section A-A



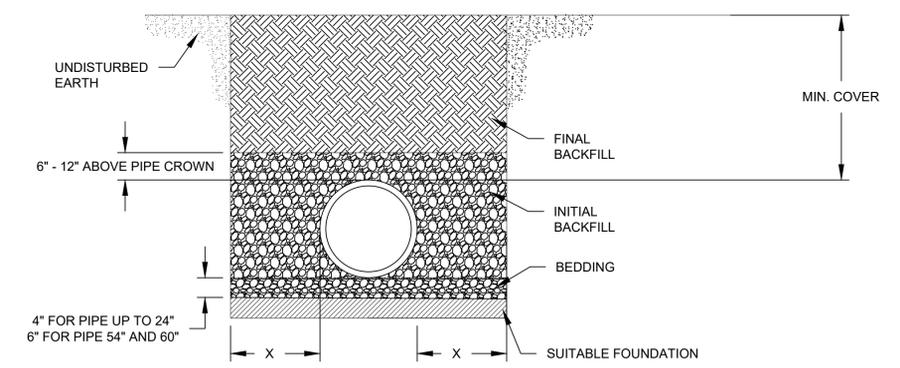
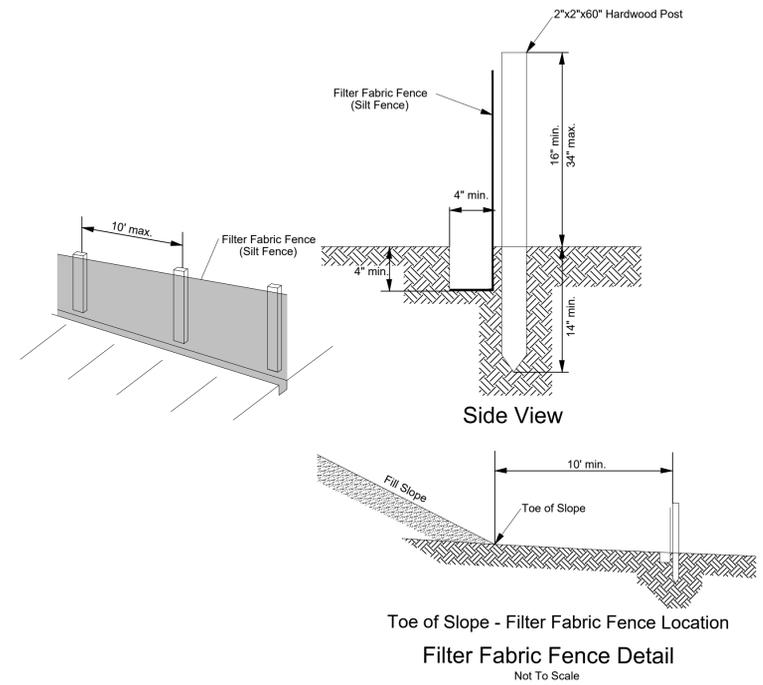
Section B-B



Section C-C



Section D-D



NOTES:

- ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION
- MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
- FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
- BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-1500mm).
- INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
- MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LAOD)*
12" - 48"	12"	48"
x	304.800000	1219.200000
60" (1500mm)	24"	60"
	609.600000	1524.000000

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

RECOMMENDED MINIMUM SPACING

PIPE DIAM.	MIN. "X"
36"	18"

FOLLOW EROSION & CONTROL PLAN/STORMWATER PLAN (E&S/SWPPP)

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Highland Dairy Waste Storage Facility
12394 Kilmachronan Dr.
Glade Spring, Virginia

101 REYNOLDS AVE
BLUEFIELD, VA 24605
276-245-8977
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REV#	DATE	REVISIONS	BY#

Sections

ENGINEER: ENGINER CHECKED BY: CHECKED-BY
JOB NO: 240948 DRAWN BY: SC
SCALE: AS SHOWN DATE: 06/2025

C-03
SHEET NO: 3 OF 6

GENERAL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE OVERALL CONSTRUCTION SITE.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED.
3. THE CONTRACTOR SHALL INVESTIGATE ACTUAL LOCATIONS OF UNDERGROUND LINES AND UTILITIES BEFORE EXCAVATING AND ADVISE ENGINEER OF ANY VARIATIONS. ALL EXCAVATIONS NEAR THESE LINES TO BE CARRIED OUT WITH EXTREME CAUTION.
4. THE CONTRACTOR SHALL CONTACT "MISS UTILITY OF VIRGINIA" 72 HOURS BEFORE ANY EXCAVATION WORK IS TO BEGIN.
5. THE CONTRACTOR SHALL REFER TO DRAWINGS OF OTHER TRADES AND VENDOR DRAWINGS FOR EMBEDDED ITEM AND RECESSES NOT SHOWN ON THE STRUCTURAL DRAWINGS.
6. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS OF EXISTING CONSTRUCTION WHICH AFFECT NEW CONSTRUCTION AND REPORT VARIATIONS TO THE ENGINEER PRIOR TO SUBMISSION OF SHOP DRAWINGS.
7. THE CONTRACTOR SHALL VERIFY ALL SIZES AND LOCATIONS OF ALL MECHANICAL AND ELECTRICAL OPENINGS AND EQUIPMENT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL OPENING AND SLEEVES FOR THE PROPER DISTRIBUTION OF ALL UTILITY LINES THROUGHOUT THE BUILDING.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE BRACING FOR THE STRUCTURE SO THAT IT WILL BE STABLE DURING ALL STAGES OF CONSTRUCTION. RETAINING WALLS AND BASEMENT WALLS MUST BE SHORED PRIOR TO BACKFILLING. SHORES SHALL REMAIN IN PLACE UNTIL ALL SUPPORTING STRUCTURES ARE IN PLACE AND HAVE OBTAINED THEIR DESIGN STRENGTH EITHER BY CYLINDER TESTING OR 28 DAY WAIT PERIOD. THE DESIGN OF SHORING IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PERFORMED BY AN ENGINEER LICENSED IN THE STATE IN WHICH THE WORK IS BEING DONE.

CONCRETE NOTES

1. ALL CONCRETE TO BE DESIGNED IN ACCORDANCE WITH ACI 318-19, 350-20, IBC OR VCC.
2. ALL CONCRETE SHALL DEVELOP A 28 DAY MINIMUM COMPRESSION STRENGTH OF 4500 PSI. SHALL BE AIR-ENTRAINED TO A TOTAL AIR CONTENT OF 5% -8% OF THE VOLUME BATCH. THE MINIMUM SLUMP SHALL BE 3" TO A MAXIMUM SLUMP OF 6" AS TESTED IN ACCORDANCE WITH THE ASTM C-143. MAX WATER CEMENT RATIO SHALL BE 0.45. TYPE II CEMENT. SUBMIT CONCRETE MIX DESIGN TO ENGINEER.
3. ALL REINFORCING BARS SHALL BE ASTM 615, GRADE 60 AND IN ACCORDANCE WITH ACI 318-19 OR LATEST EDITION. IT SHALL NOT BE TACK WELDED, WELDED, HEATED OR CUT.
4. HORIZONTAL FOOTING AND HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS WITH 90° BENDS AND EXTENSIONS OR BE PROVIDED WITH CORNER BARS OF EQUIVALENT SIZE THAT ARE LAPPED WITH A CLASS B TENSION SPLICE AT CORNERS AND INTERSECTIONS. TOP BAR CRITERIA SHALL APPLY IF 12" OF MORE FRESH CONCRETE IS PLACED BELOW THE BAR. ALL BAR SPLICES SHALL BE CLASS 'B' TENSION SPLICES UNLESS OTHERWISE NOTED.
5. SLABS-ON-GRADE SHALL HAVE A MINIMUM OF 6X6 XW2.9XW2.9 WELDED WIRE FABRIC LAPPED ONE FULL MESH AND SECURELY FASTENED ON ENDS AND SIDES AND PLACED ON CHAIRS IN CENTER OF SLAB. CONSTRUCTION JOINTS OR CRACK CONTROL JOINTS A MINIMUM OF 15 FT O.C UNLESS OTHERWISE NOTED ON PLANS.
6. ALL FOUNDATION EXCAVATIONS SHALL BE COMPACTED IN ORDER TO PREVENT SETTLEMENT. DO NOT PLACE FOOTINGS OR SLABS AGAINST SUBGRADE CONTAINING FREE WATER, FROST, OR ICE.
7. ONE 6" LAYER MINIMUM OF CRUSHED STONE COMPACTED TO 98% STD. PROCTOR IN PLACE PRIOR TO FOUNDATION PLACEMENT
8. REFER TO THE LATEST EDITION OF ACI 305 FOR HOT WEATHER CONCRETING OR REFER TO THE LATEST EDITION OF ACI 306 FOR COLD WEATHER CONCRETING
9. ALL EMBEDDED STRUCTURAL STEEL SHALL BE ASTM A-36 UNLESS OTHERWISE NOTED. ANCHOR BOLTS SHALL BE A-307 UNLESS OTHERWISE NOTED.
10. PROVIDE TWO (2) #5 BARS ON ALL SIDES OF OPENINGS IN CONCRETE WALLS WHERE LARGEST DIMENSION EXCEEDS 12". EXTEND BARS 2'-0" BEYOND EDGE OF OPENING.
11. PROVIDE 2-#4 DIAGONAL BARS IN THE TOP FACE OF SLAB-ON-GRADE AT ALL RE-ENTRANT CORNERS. EXTEND REINFORCING BARS PAST RE-ENTRANT CORNERS A MINIMUM OF TENSION DEVELOPMENT LENGTH (L_d).
12. INTERSECTING WALLS SHALL BE KEYS IF PLACED SEPARATELY. RUN HORIZONTAL WALL REINFORCING CONTINUOUSLY INTO INTERSECTING WALL.
13. ALL ANCHOR BOLTS TO HILTI HIT-Z ANCHOR RODS W/ HIT-HY 200 ADHESIVE AND TO BE CLEAN AND FREE OF GREASE OR PAINT. DO NOT PLACE ANCHORS IN CRACKED BRICK/CONCRETE UNLESS APPROVED BY ENGINEER.
14. RETAINING WALLS AND BASEMENT WALLS MUST BE SHORED PRIOR TO BACKFILLING. SHORES SHALL REMAIN IN PLACE UNTIL ALL SUPPORTING STRUCTURES ARE IN PLACE AND HAVE OBTAINED THEIR DESIGN STRENGTH EITHER BY CYLINDER TESTING OR 28 DAY WAIT PERIOD. THE DESIGN OF SHORING IS THE RESPONSIBILITY OF THE CONTRACTOR.

CONCRETE SAMPLING & TESTING NOTES

1. CONCRETE SAMPLING SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF ASTM C172, STANDARD PRACTICE FOR SAMPLING OF FRESHLY MIXED CONCRETE.
2. SAMPLING OF CONCRETE SHOULD BE DONE FOR ANY GIVEN DAY THAT CONCRETE IS PLACED. (4) FOUR CYLINDERS WILL BE TAKEN FOR EVERY 50 Cu. Yds. PLACED. IF PLACED AMOUNT OF CONCRETE IN A GIVEN DAY DOES NOT EXCEED 50 Cu. Yds., THEN ONLY (1) 4 CYLINDER SAMPLE SHALL BE REQUIRED.
3. SAMPLES SHALL BE TAKEN AT REGULAR INTERVALS THROUGHOUT THE DISCHARGE OF AN ENTIRE BATCH, BUT NOT AT THE BEGINNING OR THE END OF THE DISCHARGE. SAMPLES SHOULD BE NOTED AS TO ITS LOCATION IN THE WORK, THE AIR TEMPERATURE, AND ANY UNUSUAL CONDITIONS PRESENT AT THE TIME OF THE SAMPLE.
4. MOLDING OF SAMPLE CYLINDERS ARE TO BE PERFORMED WITHIN 15 MINUTES AFTER THE SAMPLE WAS OBTAINED.
5. MOLDING OF THE CYLINDERS SHALL BE DONE IN ACCORDANCE WITH ASTM C31, STANDARD PRACTICE FOR MAKING AND CURING CONCRETE TEST SPECIMENS IN THE FIELD
6. ALL MOLDS ARE TO BE FILLED IN (3) THREE EQUAL LAYERS. EACH LAYER IS PUDDLED WITH (25) TWENTY-FIVE STROKES OF A 3/8" DIAMETER STEEL ROD ABOUT 24 INCHES LONG WITH A BULLET-POINTED TIP. REINFORCING BARS, REBAR, OR ANY OTHER TOOL ARE NOT ACCEPTABLE.
7. CARE SHALL BE TAKEN WHEN STORING AND TRANSPORTING CONCRETE TEST CYLINDERS. CYLINDERS NEED TO BE STORED UPRIGHT ON A LEVEL SURFACE AWAY FROM DIRECT SUNLIGHT, EXTREME WEATHER CONDITIONS OR ANY OTHER SITUATION THAT COULD COMPROMISE THE NATURAL CURING OF THE SAMPLE.
8. CYLINDERS CAN BE TRANSPORTED TO THE TESTING LABORATORY ONLY AFTER A MINIMUM OF 24 HOURS HAVE PASSED SINCE MOLDING. SAMPLES TRANSPORTED BEFORE 48 HOURS AFTER MOLDING SHALL NOT BE DEMOLDED PRIOR TO TRANSPORTATION. SAMPLES MUST BE TRANSPORTED TO THE LABORATORY NO LATER THAN 48 HOURS AFTER THE INITIAL MOLDING. DURING TRANSPORTATION, SPECIMENS MUST BE PROTECTED USING SUITABLE CUSHIONING MATERIAL TO PREVENT DAMAGE FROM JARRING AND FROM DAMAGE OF FREEZING OR MOISTURE LOSS.
9. TESTING SHALL BE PERFORMED IN ACCORDANCE WITH ASTM STANDARDS UNLESS OTHERWISE NOTED. ONE CYLINDER SHALL BE BROKEN AT 7 DAYS, ONE CYLINDER AT 14 DAYS, ONE CYLINDER AT 28 DAYS WITH THE REMAINING FOURTH CYLINDER HELD IN RESERVE.



Cedar Bluff Transfer Station Proposal
 193 Cedar Valley Drive
 Cedar Bluff, Virginia

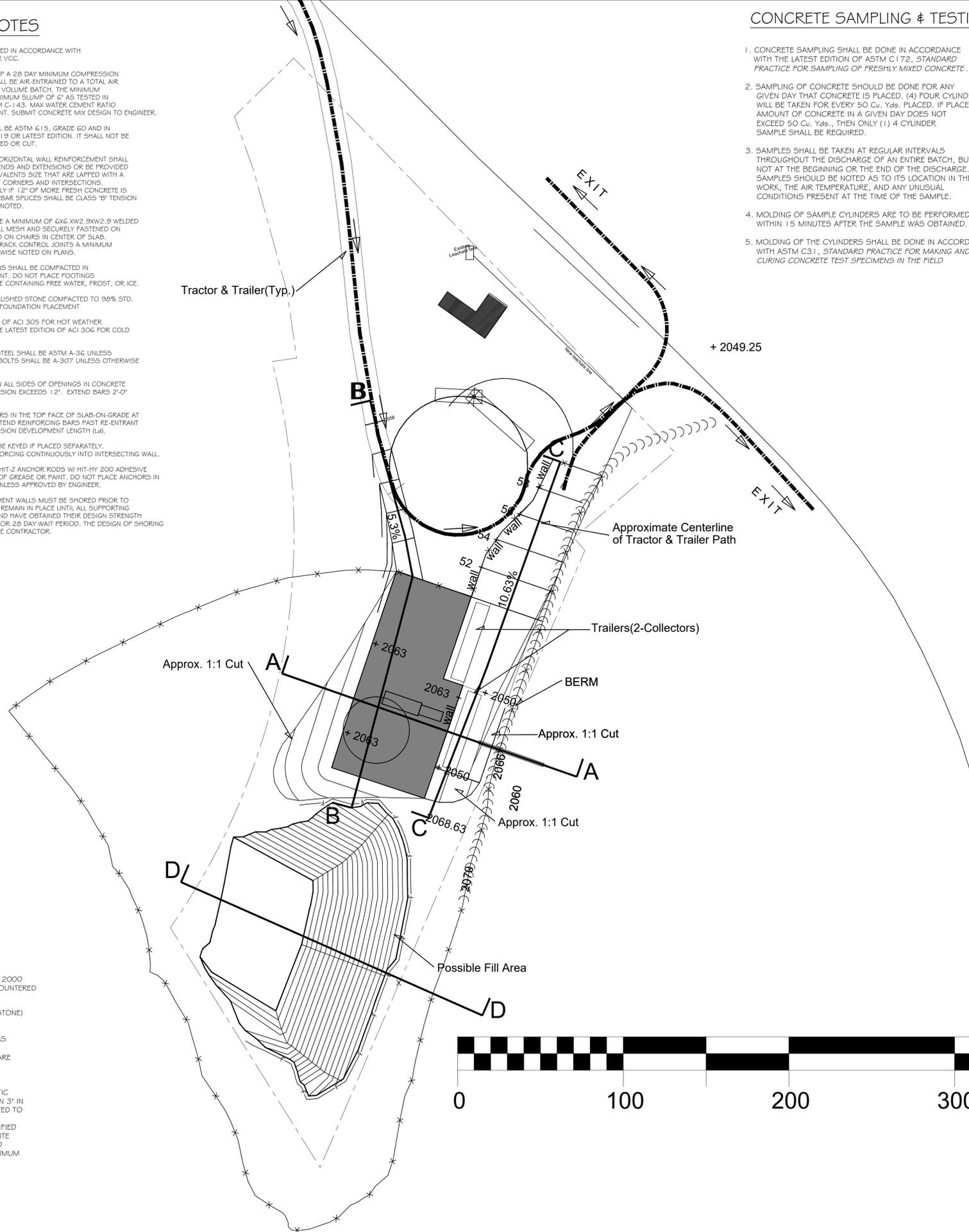
101 REYNOLDS AVE
 BLUEFIELD, VA 24605
 276-245-8977
 RLSENG.COM
RL Structural
 ENGINEERING, PLLC

SOIL NOTES

1. ALL FOUNDATIONS ARE DESIGNED FOR AN ASSUMED ALLOWABLE SOIL BEARING CAPACITY OF 2000 PSF ON NATURAL SOIL. THESE MINIMUM SOIL CONDITIONS SHALL BE VERIFIED. IF ROCK ENCOUNTERED PLEASE CONTACT THE ENGINEER.
2. FOOTING ARE TO BEAR ON UNDISTURBED SOIL OR COMPACTED ENGINEERED FILL (VDOT#57 STONE) AT A MINIMUM DEPTH OF 2'-0" BELOW T/GROUND.
3. PROOF ROLL SITE TO PROVIDE MINIMAL COMPACTION. CONTACT ENGINEER IF ANY SOFT AREAS
4. CONCRETE FOOTINGS SHOULD BE PLACED AS SOON AS POSSIBLE AFTER THE EXCAVATIONS ARE COMPLETED TO PREVENT SOFTENING OF THE SUBGRADE MATERIALS IF LEFT EXPOSED TO AIR AND/OR STANDING WATER FOR AN EXTENDED PERIOD OF TIME.
5. IF FILL IS REQUIRED; THE FILL SHOULD BE FREE OF TRASH, WOOD, TOPSOIL, ORGANICS, PYRITIC MATERIALS, COAL, COAL MINE REFUSE, FROZEN MATERIAL OR PIECES OF ROCK GREATER THAN 3" IN ANY DIMENSION. IT SHOULD BE TESTED AND APPROVED PRIOR TO PLACEMENT AND COMPACTION TO
6. ENGINEERED FILL SHOULD BE PLACED IN 8-INCH LIFTS AND COMPACTION TO 98% OF THE MODIFIED PROCTOR MAXIMUM DENSITY AS DETERMINED BY ASTM D-698 AND SUBSTANTIATED BY ON-SITE TESTING. THE LIFT THICKNESS SHOULD BE REDUCED TO 4-INCHES WHEREVER HAND OPERATED EQUIPMENT IS USED. FILL MATERIAL SHOULD BE MAINTAINED WITHIN 0% TO +3% OF THE OPTIMUM MOISTURE CONTENT DURING PLACEMENT.
7. GENERAL SITE GRADING OUTSIDE THE STRUCTURE SHOULD BE GRADED TO MATCH ORIGINAL SITE CONDITIONS AND SLOPE AWAY FROM FOUNDATION.
8. IF WATER OR MOIST SOIL IS ENCOUNTERED CONTACT THE ENGINEER

LEGEND

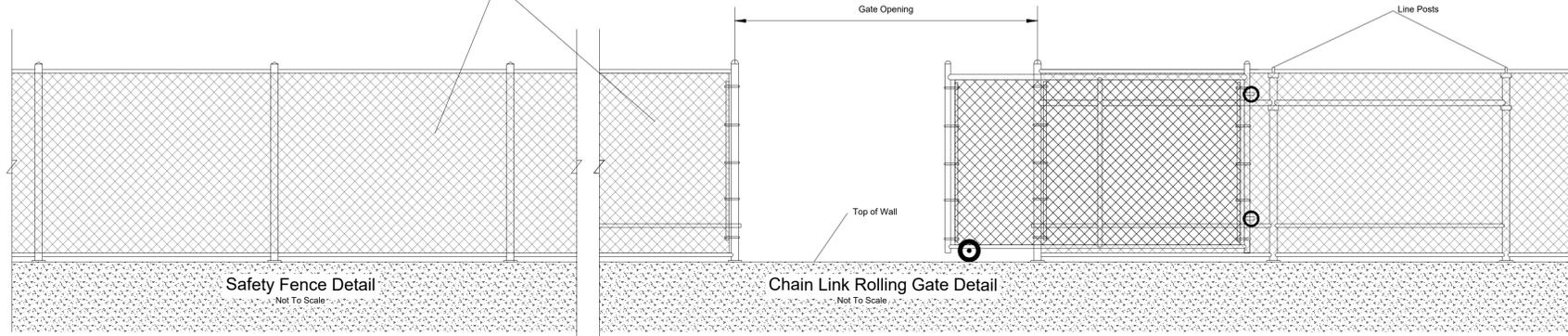
- Approx. Truck Outline
- Trailer(Collector)
- Collector
- Flat Area
- Approx. Property Line
- Truck Travel Path
- Existing Transfer Station
- Drainage Divide
- Berm
- Filter Fabric Fence (Sediment Control)



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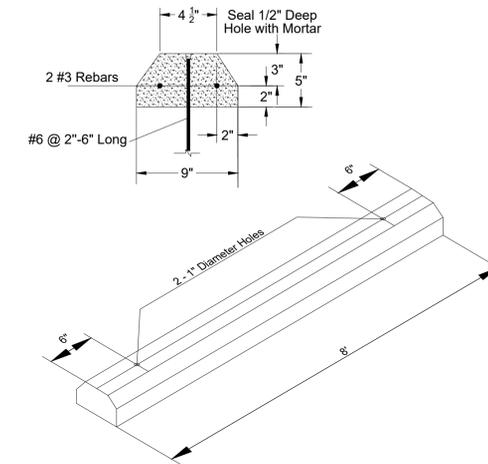
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DWS TITLE			
Overall Plan			
ENGINEER RLS	CHECKED BY RLS		
JOB NO. P250309	DRAWN BY SC		
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C-04			
4 OF 6			

A Four Foot High Protection Chain Link Fence is to be Installed Along the Top of the Wall for Safety Purposes. It is Required Where the Finished Ground Elevation is Within Six Feet of the Top of the Wall, Which Equals Approx. 214 Feet of Fence.

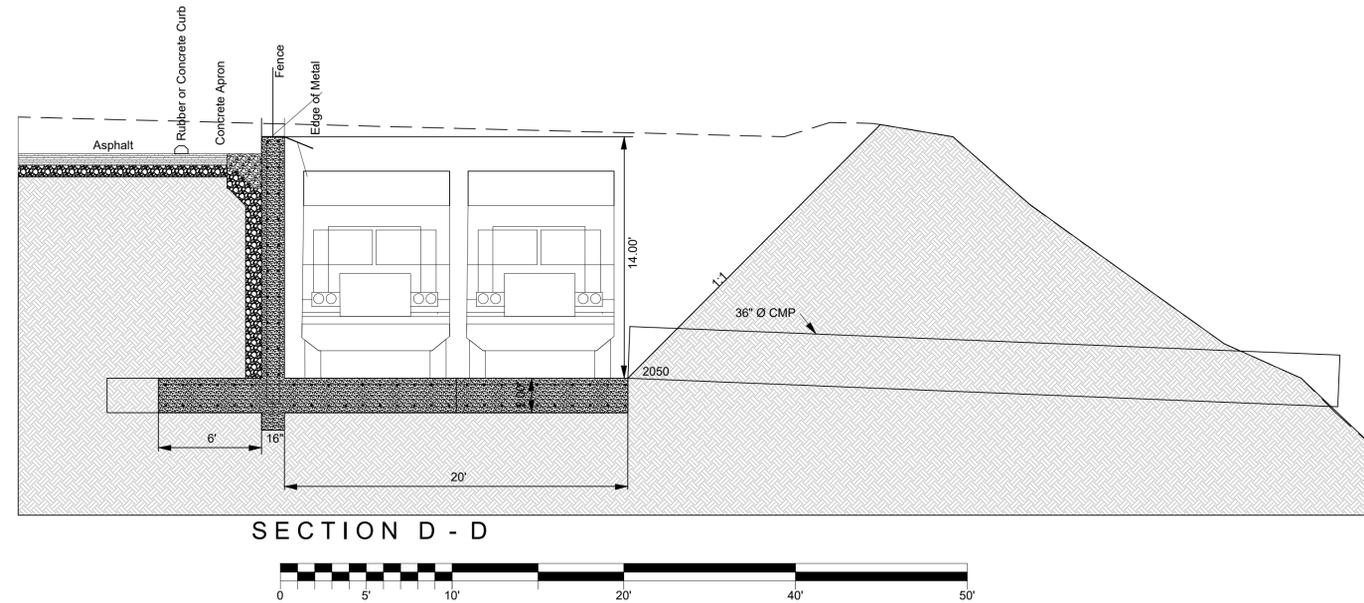


Safety Fence Detail
Not To Scale

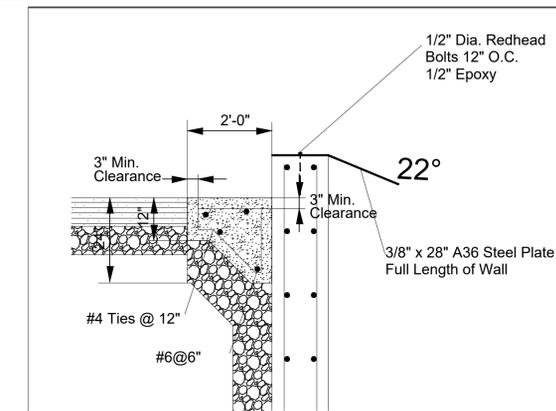
Chain Link Rolling Gate Detail
Not To Scale



Precast Concrete Wheel Stop
Not To Scale



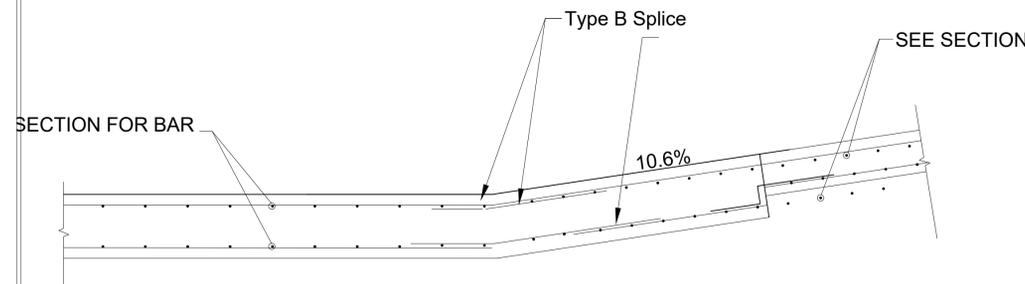
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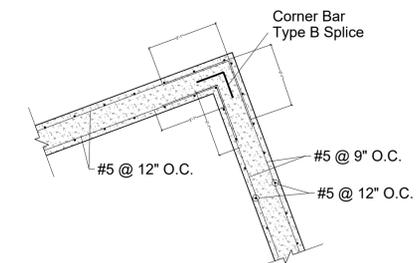
Apron & Metal Dump Plate Detail
Not to Scale



See Detail "B" this Sheet



Detail B
N.T.S.



TYPICAL CORNER DETAIL

SCALE: 3/8" = 1'-0"

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Cedar Bluff Transfer Station Proposal
193 Cedar Valley Drive
Cedar Bluff, Virginia

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BLUEFIELD, VA 24605
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C-06

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6 OF 6