

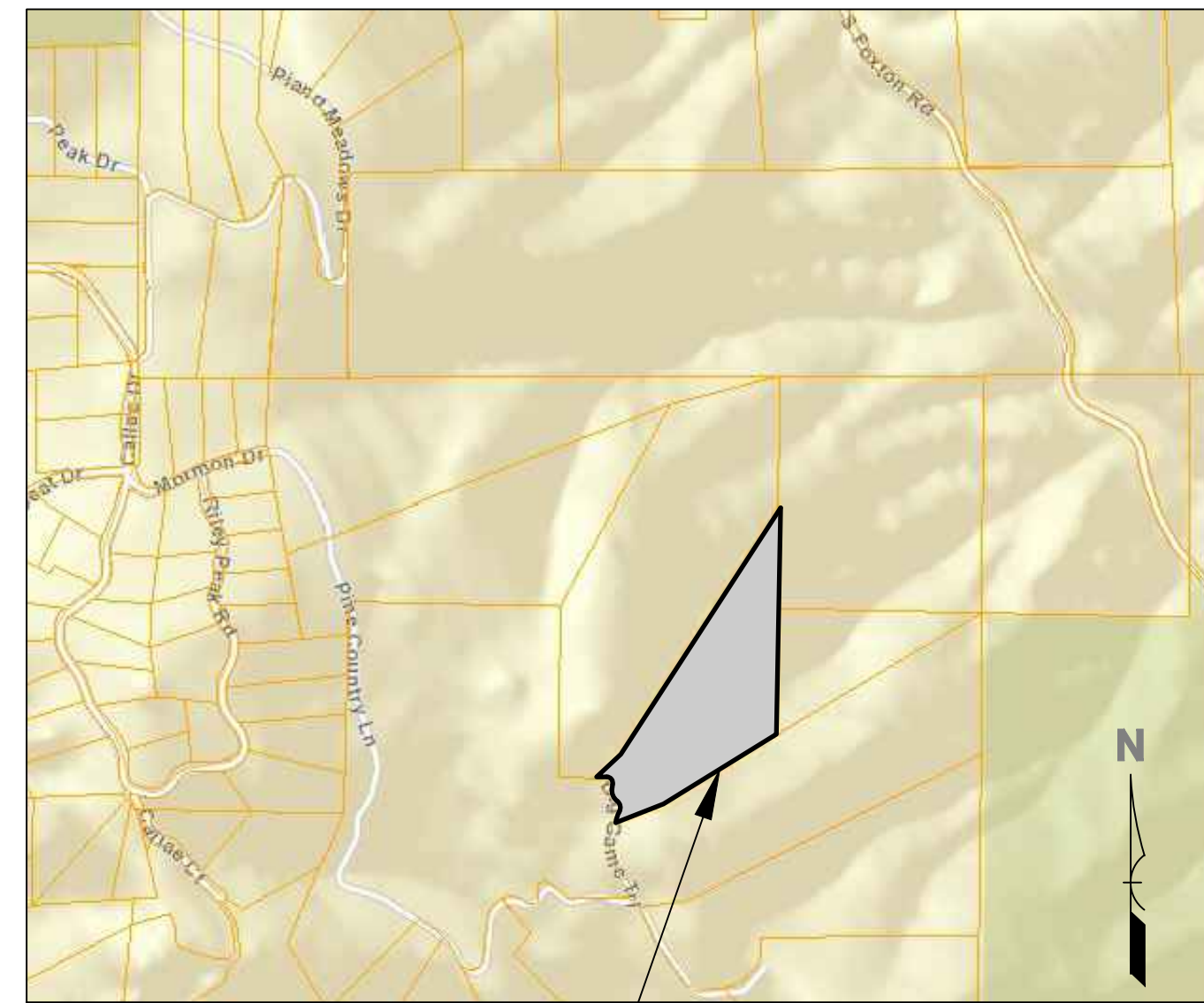
# GRADING, EROSION AND SEDIMENT CONTROL PLAN AND PRIVATE ACCESS DRIVEWAY PLAN

PREPARED FOR:  
**JOE & DIANNE RUNDELL**  
5749 S DEPEW CIRCLE  
LITTLETON, COLORADO 80123

PROJECT SITE:  
**LOT 4, BEING A PART OF LAND SURVEY PLAT RECORDED MARCH 10, 2000  
AT RECEPTION NUMBER F1026872 (SEE DEED FOR COMPLETE DESCRIPTION)  
23047 BIG GAME TRAIL  
CONIFER CO 80433**



APPROXIMATE PROJECT LOCATION



LOCATION AND VICINITY MAP  
NOT TO SCALE

APPROXIMATE PROJECT LOCATION

**SHEET INDEX:**

1. C-1 COVER SHEET/CONSTRUCTION NOTES
2. C-2 SITE PLAN
3. C-3 DRIVEWAY DETAILS
4. C-4 EROSION AND SEDIMENT CONTROL SITE PLAN
5. C-5 EROSION AND SEDIMENT CONTROL DETAILS
6. D-1 ABRIDGED DRAINAGE REPORT - DRAINAGE SITE PLAN

**PROJECT SCHEDULE:**

1. INITIAL EROSION CONTROL INSTALLATION - MARCH, 2023
2. INITIAL GRADING AND EXCAVATION: MARCH, 2023
3. FINISH GRADING: JULY, 2023 WEATHER DEPENDING
4. FINAL EROSION CONTROL AND SEEDING: JULY, 2023 WEATHER DEPENDING
5. PROJECT DAYS AND HOURS OF OPERATION: MONDAY THROUGH FRIDAY 8:00AM - 5:00 PM

**PROJECT CONTACTS:**

**PROPERTY OWNERS:**  
JOE & DIANNE RUNDELL  
5749 S DEPEW CIRCLE  
LITTLETON, COLORADO 80123  
(303) 472-0229

**SURVEYOR:**  
PWSI, INC.  
7550 WEST YALE  
SUITE B-110  
DENVER, COLORADO 80227  
303-904-1345  
RICK@PWSI.NET

**TOPOGRAPHIC DATA**  
PWSI, INC.  
7550 WEST YALE  
SUITE B-110  
DENVER, COLORADO 80227  
303-904-1345  
RICK@PWSI.NET

**JEFFERSON COUNTY TRANSPORTATION AND ENGINEERING:**  
100 JEFFERSON COUNTY PARKWAY, #3500  
GOLDEN, CO 80419  
303-271-8495

**ESTIMATED CUT/FILL QUANTITIES:**

CUT: 1022 Cu Yds  
FILL: 451 Cu Yds  
TOTAL: 571 Cu Yds CUT

**DISTURBANCE DETAILS:**

TOTAL DISTURBED AREA: 21,632 sq. ft.  
MAXIMUM SLOPE OF EXISTING TERRAIN TO BE DISTURBED: 17.8%

**IMPERVIOUS AREAS ON SUBJECT PARCEL:**

PROPOSED DRIVEWAY: 6,739 sq. ft.  
PROPOSED HOUSE & GARAGE: 3,760 sq. ft.  
PROPOSED DECKS & STEPS: 1,558 sq. ft.  
PROPOSED CONCRETE LANDINGS & PATIO: 223 sq. ft.  
PROPOSED RETAINING WALLS: 140 sq. ft.  
TOTAL IMPERVIOUS SURFACE: 12,320 sq. ft.

**IMPERVIOUS AREA WITHIN 100' ROADWAY EASEMENT:**

PROPOSED DRIVEWAY: 736 sq. ft.  
EXISTING BIG GAME TRAIL: 1,410 sq. ft.  
TOTAL IMPERVIOUS SURFACE: 2,146 sq. ft.

**GRADING AND EROSION CONTROL NOTES:**

1. THE CONTRACTOR MUST NOTIFY THE JEFFERSON COUNTY DIVISION OF TRANSPORTATION AND ENGINEERING (303.271.8495) AT LEAST 3 DAYS PRIOR TO STARTING CONSTRUCTION.
2. ALL GRADING, EROSION AND SEDIMENT CONTROL MUST CONFORM TO APPROVED PLANS. REVISIONS TO LAND DISTURBANCE AREAS, SLOPES, AND/OR EROSION AND SEDIMENT CONTROL MEASURES ARE NOT PERMITTED WITHOUT PRIOR APPROVAL FROM THE JEFFERSON COUNTY PLANNING AND ZONING DIVISION. FIELD MODIFICATIONS TO AN EQUIVALENT BMP THAT DOES NOT AFFECT THE SITE HYDROLOGY MAY BE APPROVED BY JEFFERSON COUNTY TRANSPORTATION AND ENGINEERING STAFF.
3. THE APPROVED PLANS ARE VALID FOR TWO (2) YEARS FROM THE DATE OF APPROVAL FROM JEFFERSON COUNTY.
4. THE LANDOWNER AND/OR CONTRACTOR IS RESPONSIBLE FOR OBTAINING A PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, AT LEAST 10 DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES FOR LAND DISTURBANCE AREAS OF ONE ACRE OR GREATER. THE PERMIT MUST BE KEPT CURRENT THROUGHOUT THE CONSTRUCTION PROCESS.
5. PERMANENT OR TEMPORARY SOIL STABILIZATION MEASURES SHALL BE APPLIED TO DISTURBED AREAS WITHIN 14 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. SOIL STOCKPILE SHALL BE PERMANENTLY OR TEMPORARILY STABILIZED WITHIN 14 DAYS IF THE STOCKPILE IS NOT BEING ACTIVELY UTILIZED FOR CONSTRUCTION PURPOSES. SOIL STABILIZATION MEASURES SHALL BE APPLIED WITHIN 14 DAYS TO DISTURBED AREAS WHICH MAY NOT BE AT FINAL GRADE, BUT WILL BE LEFT DORMANT FOR LONGER THAN 60 DAYS.
6. THE LANDOWNER AND/OR CONTRACTOR MUST IMMEDIATELY TAKE ALL NECESSARY STEPS TO CONTROL SEDIMENT DISCHARGE.
7. ALL DISTURBED SLOPES (UNLESS IN A COMPETENT ROCK CUT) GREATER THAN OR EQUAL TO 3:1 (H:V), FLOW LINES OF SWALES, GUTTER DOWNSPOUTS, OR ADDITIONAL AREAS AT THE DISCRETION OF COUNTY STAFF, SHALL BE PROTECTED WITH AN EROSION CONTROL BLANKET OR EQUIVALENT BMP.
8. THE LANDOWNER AND/OR CONTRACTOR IS RESPONSIBLE FOR CLEAN UP AND REMOVAL OF ALL SEDIMENT AND DEBRIS FROM ALL DRAINAGE INFRASTRUCTURE AND PUBLIC FACILITIES DURING THE ENTIRE CONSTRUCTION PROCESS.
9. THE LANDOWNER AND/OR CONTRACTOR MUST TAKE REASONABLE PRECAUTIONS TO ENSURE THAT VEHICLES DO NOT TRACK OR SPILL EARTH MATERIALS ON TO STREETS/ROADS AND MUST IMMEDIATELY REMOVE SUCH MATERIALS IF THIS OCCURS.
10. THE LANDOWNER AND/OR CONTRACTOR IS RESPONSIBLE FOR CONTROLLING LITTER SUCH AS DISCARDED MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, AND SANITARY WASTE AS APPLICABLE. IN ADDITION, SPILL PREVENTION AND CONTAINMENT BMPs FOR CONSTRUCTION MATERIALS, WASTE, AND FUEL MUST BE PROVIDED, AS APPLICABLE. LOCATIONS OF STOCKPILES, CONCRETE WASHOUT AREAS, AND TRASH RECEPTACLES MUST BE CLEARLY SHOWN ON THE PLANS. LITTERING IS DEFINED AND ENFORCED BY CRS 18-4-511.
11. THE EROSION AND SEDIMENT CONTROL PLAN SHALL BE MODIFIED BY THE JEFFERSON COUNTY PLANNING AND ZONING DEPARTMENT, OR ITS AUTHORIZED REPRESENTATIVE, AS FIELD CONDITIONS WARRANT WITH APPROVAL FROM ENGINEER AND/OR 285 ENGINEERING.

**GENERAL CONSTRUCTION NOTES**

1. 285 ENGINEERING AND/OR ENGINEER IS TO BE NOTIFIED PRIOR TO ANY PLAN CHANGES OR ON-SITE DESIGN MODIFICATIONS.
2. ALL EXISTING TOPOGRAPHIC SURVEY DATA SHOWN ON THESE PLANS HAS BEEN OBTAINED AND CERTIFIED BY OTHERS. 285 ENGINEERING AND/OR ENGINEER HAS UNDERTAKEN NO FIELD VERIFICATION OF THIS TOPOGRAPHY INFORMATION, AND MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREOF OF THIS TOPOGRAPHY.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES AND SHOULD NOT RELY SOLELY ON THESE CONSTRUCTION PLANS FOR UTILITY LOCATIONS. DAMAGE TO ANY EXISTING UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
4. THE CONTRACTOR SHALL CONFINE HIS OPERATIONS TO THE CONSTRUCTION LIMITS OF THE PROJECT AND IN NO WAY SHALL ENCROACHMENT OCCUR ONTO ADJACENT PROPERTIES UNLESS LEGAL EASEMENTS ARE OBTAINED. ALL FILL AND CUT SLOPES SHALL BE SETBACK FROM THE PROPERTY LINE IN ACCORDANCE WITH ALL APPLICABLE BUILDING CODES. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY AGREEMENTS NECESSARY OR DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES TO PUBLIC OR PRIVATE PROPERTY, INCLUDING UTILITIES.
5. 285 ENGINEERING AND/OR ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND IS NOT LIABLE FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW EASTBOUND WESTBOUND AND/OR ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES OR CONFLICTS.
6. THE CONSTRUCTION SURVEYOR SHALL VERIFY PROPOSED GRADES AND INVERT ELEVATIONS, FLOW LINES, ALIGNMENTS, SETBACKS AND TOPOGRAPHY PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR SHALL NOTIFY JEFFERSON COUNTY DIVISION OF HIGHWAYS AND TRANSPORTATION AT LEAST THREE DAYS PRIOR TO STARTING CONSTRUCTION.
8. THE LANDOWNER AND CONTRACTOR SHALL BE RESPONSIBLE FOR AND VERIFY, PRIOR TO CONSTRUCTION, PERMIT ISSUANCE, SITE CONDITIONS, SETBACKS, PROPERTY LINES, BUILDING LOCATION, DIMENSIONS, MATERIALS, QUANTITIES, ELEVATIONS AND GRADE FINISHES. ALL WORK SHALL COMPLY WITH APPLICABLE GOVERNING CODES AND MANUFACTURER SPECIFICATIONS.
9. THE LANDOWNER AND/OR CONTRACTOR IS RESPONSIBLE FOR OBTAINING A PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, AT LEAST 10 DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES FOR LAND DISTURBANCE AREAS OF ONE ACRE OR GREATER. THE PERMIT MUST BE KEPT CURRENT THROUGHOUT THE CONSTRUCTION DURATION.
10. THE STORMWATER VOLUME CAPACITY OF DETENTION PONDS MUST BE RESTORED AND STORM SEWER LINES WILL BE CLEANED UPON COMPLETION OF THE PROJECT. THE LANDOWNER/CONTRACTOR ARE RESPONSIBLE FOR THE REMOVAL OF ALL SEDIMENT AND DEBRIS FROM DRAINAGE STRUCTURES AND OTHER PUBLIC FACILITIES.
11. THE LANDOWNER/CONTRACTOR IS RESPONSIBLE FOR CONTROLLING WASTE SUCH AS, DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER, AND SANITARY WASTE, AS APPLICABLE. IN ADDITION, SPILL PREVENTION AND CONTAINMENT BMP'S FOR CONSTRUCTION MATERIALS, WASTE, AND FUEL MUST BE PROVIDED AS APPLICABLE.
12. THERE ARE NO FLOODPLAIN BOUNDARIES ON THIS SITE.
13. THERE ARE GEOLOGICAL HAZARD AREAS ON THIS SITE, LOCATED OUTSIDE OF THE PROPOSED DEVELOPMENT.
14. PLANS ARE BASED UPON THE JEFFERSON COUNTY ROADWAY DESIGN AND CONSTRUCTION MANUAL AND THE SMALL SITE EROSION CONTROL MANUAL. REFER TO THESE REFERENCE SOURCES FOR FURTHER DETAIL, FOLLOW ALL REQUIREMENTS PRESENTED.
15. MAXIMUM CUT AND FILL SLOPES SHALL NOT EXCEED 2 FOOT HORIZONTAL: 1 FOOT VERTICAL (2:1).
16. ALL FILL ONSITE SHALL BE COMPACTED TO 95% DENSITY OF STANDARD PROCTOR.

**JEFFERSON COUNTY GRADING, EROSION AND SEDIMENT CONTROL NOTES**

1. THE GESC PLAN HEREIN PROVIDED IS SUBMITTED TO FULFILL JEFFERSON COUNTY LAND DISTURBANCE ZONING REQUIREMENTS. ADDITIONAL GRADING, EROSION OR SEDIMENT CONTROL MEASURES, WHETHER PHYSICAL OR ADMINISTRATIVE, MAY BE REQUIRED OF THE PERMIT HOLDER DUE TO UNFORESEEN CHANGES IN THE CONSTRUCTION SITE, OR IF THE PLAN AS SUBMITTED DOES NOT ADEQUATELY CONTROL SITE EROSION OR THE RELEASE OF SEDIMENT OFFSITE.
2. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO GRADING ACTIVITIES, TO THE MAXIMUM EXTENT PRACTICABLE.
3. AT ALL TIMES DURING CONSTRUCTION, ALL TEMPORARY AND PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO PREVENT ACCELERATED EROSION ON THE SITE AND ADJACENT PROPERTIES.
4. ALL TOPSOIL SHALL BE SALVAGED. TOPSOIL AND OVERBURDEN SHALL BE REDISTRIBUTED WITHIN THE GRADED AREA AFTER ROUGH GRADING TO PROVIDE A SUITABLE BASE FOR AREAS, WHICH SHALL BE SEEDED AND PLANTED. RUNOFF FROM THE STOCKPILED AREAS SHALL BE CONTROLLED TO PREVENT EROSION.
5. IF IT IS NECESSARY TO MOVE MATERIAL IN EXCESS OF 300 CUBIC YARDS TO ANOTHER UNINCORPORATED JEFFERSON COUNTY SITE, A GRADING PERMIT OR NOTICE OF INTENT IS NECESSARY FOR THE OFF-SITE PROPERTY. IF THE MATERIAL IS MOVED TO A PROPERTY LOCATED WITHIN ANOTHER JURISDICTION, EVIDENCE IS REQUIRED THAT THE LOCAL GOVERNMENT HAS APPROVED THE GRADING OPERATION.
6. SOIL STABILIZATION MEASURES SHALL BE APPLIED WITHIN 14 DAYS TO DISTURBED AREAS, WHICH MAY NOT BE AT FINAL GRADE, BUT WILL BE LEFT DORMANT FOR LONGER THAN 60 DAYS.
7. FUGITIVE DUST EMISSIONS RESULTING FROM GRADING ACTIVITIES AND/OR WIND SHALL BE CONTROLLED USING THE BEST AVAILABLE CONTROL TECHNOLOGY, AS DEFINED BY THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, AT THE TIME OF GRADING.
8. EARTH MATERIALS AND CONSTRUCTION SUPPLIES ARE TO BE STORED ON A CONSTRUCTION SITE STAGING AREA, AND ARE NOT TO BE STORED ON THE STREET OR SIDEWALK. LOCATIONS OF STOCKPILES, CONCRETE WASHOUT AREAS AND TRASH RECEPTACLES ARE CLEARLY LOCATED ON THE PLANS.
9. THERE ARE 0 FLOODPLAIN BOUNDARIES ON THE SITE.
10. THERE ARE 0 DRAINAGE FACILITIES ON THIS SITE.
11. PORTIONS OF THE SUBJECT SITE ARE MAPPED AS GEOLOGICAL HAZARD AREAS (SLOPES >30%).
12. THERE ARE 2 MAJOR OUTCROPS NEAR THE PROPOSED DEVELOPMENT.
13. ALL DISTURBED SLOPES GREATER THAN OR EQUAL TO 30% SHALL BE PROTECTED WITH AN EROSION BLANKET.
14. ALL GUTTER DOWNSPOUTS AND FLOWLINES OF SWALES SHALL BE PROTECTED WITH AN EROSION BLANKET.
15. PRIOR TO CLOSING OF THE HOME, THE SOIL SHALL BE STABILIZED BY EITHER LANDSCAPE MATERIAL, STRAW BLANKETS, OR SEED AND CRIMPED MULCH.



**Know what's below.  
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CONIFER, CO 80433  
720-515-1781  
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PROJECT NUMBER:  
2022358

PARCEL ID:  
70-061-00-004

PROPERTY ADDRESS:  
23047 BIG GAME TRAIL  
CONIFER, COLORADO 80433

CLIENT:  
JOE & DIANNE RUNDELL

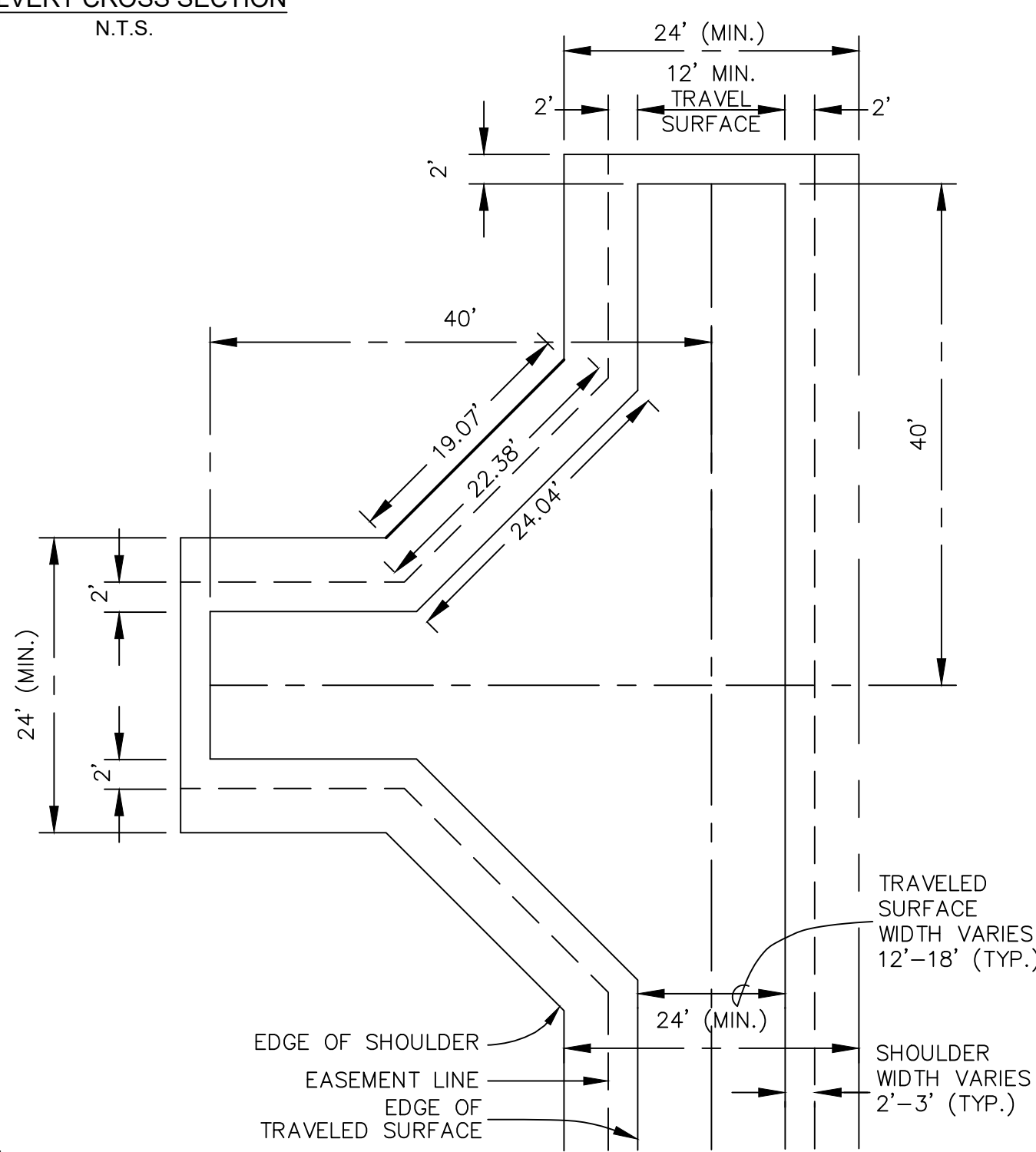
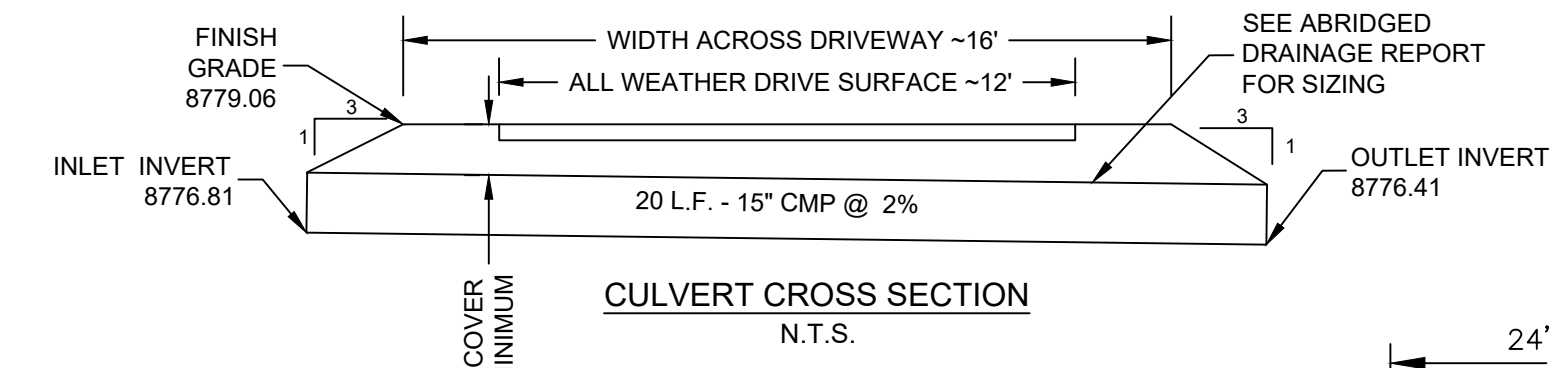
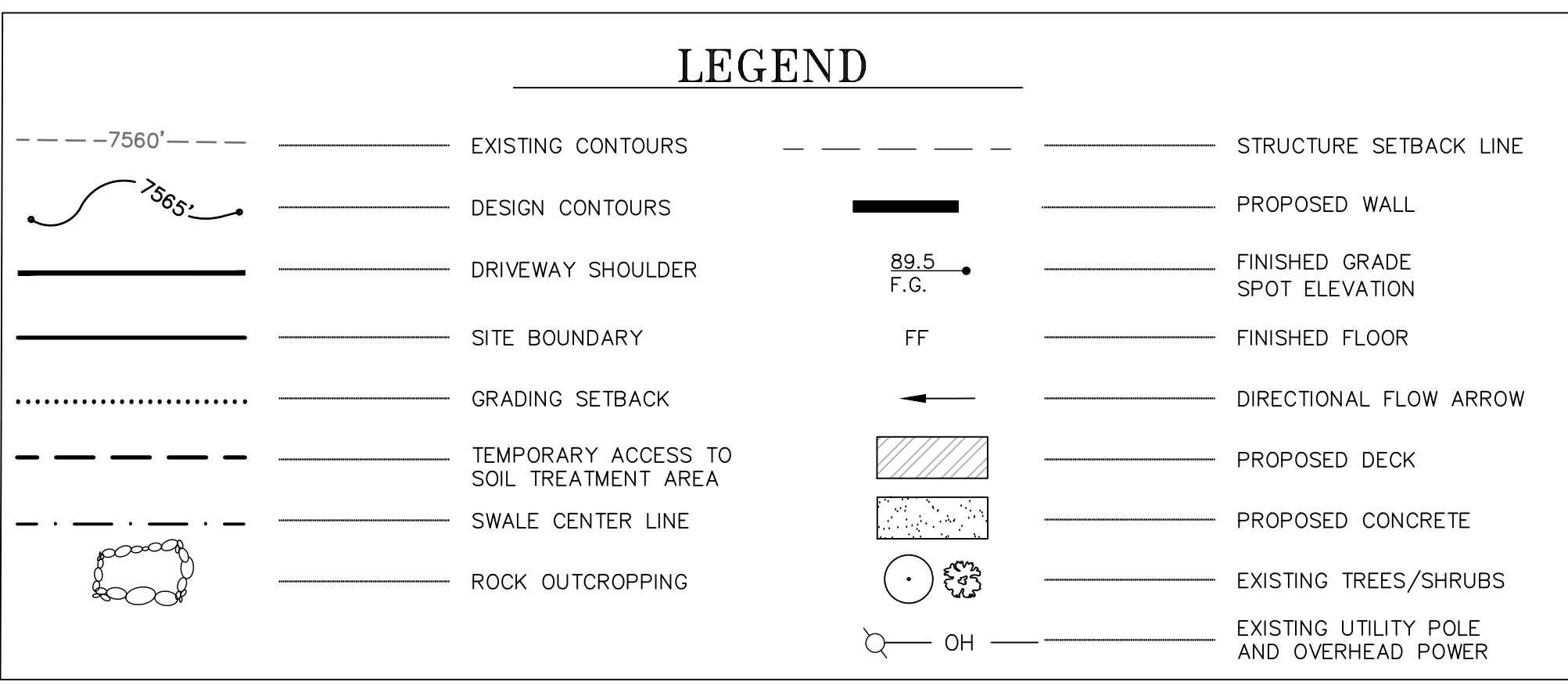
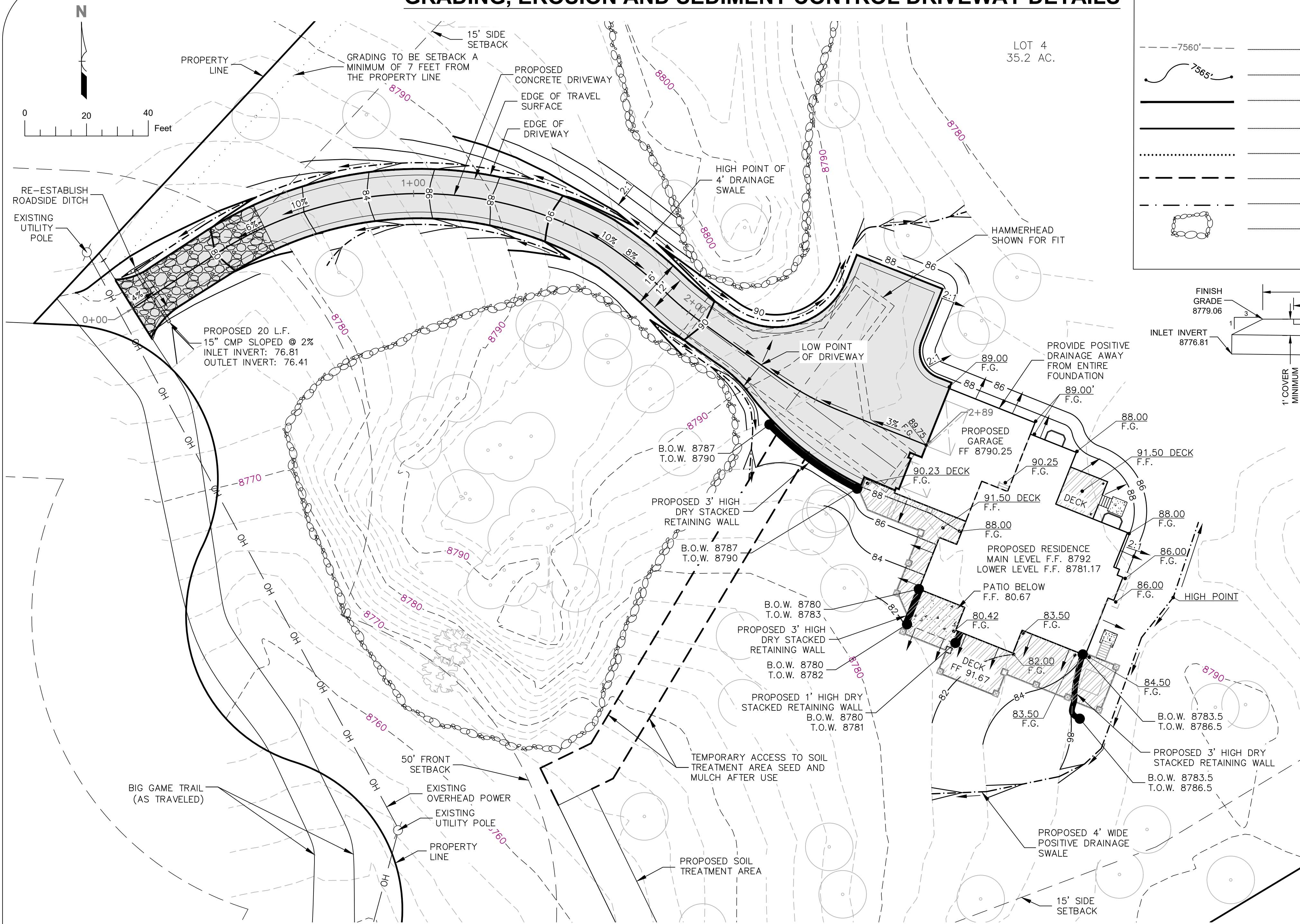
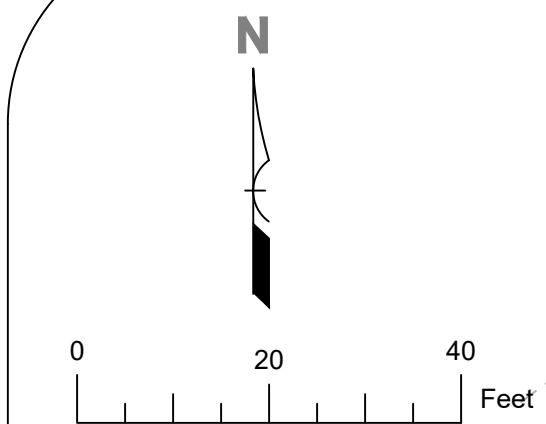
Revisions		
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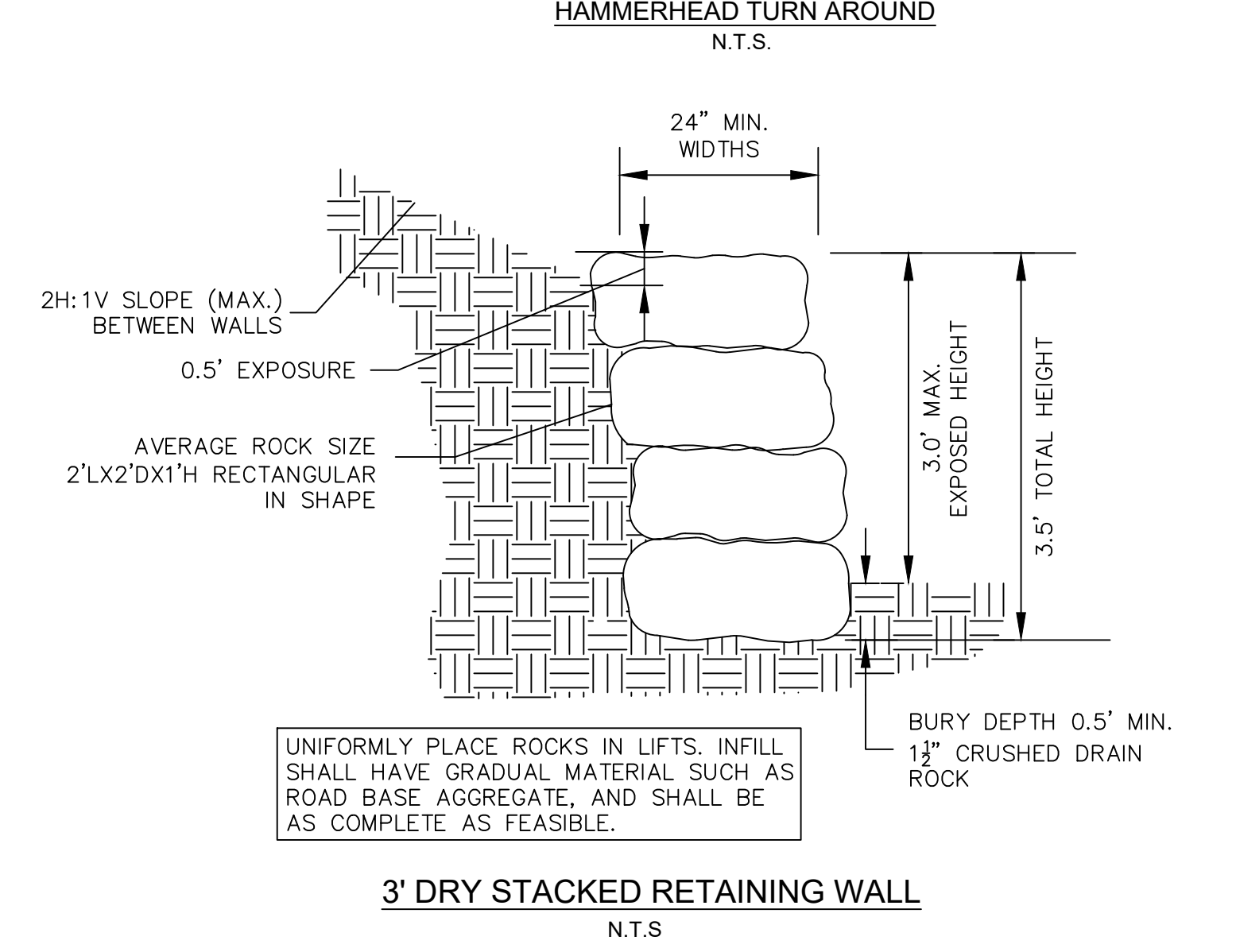
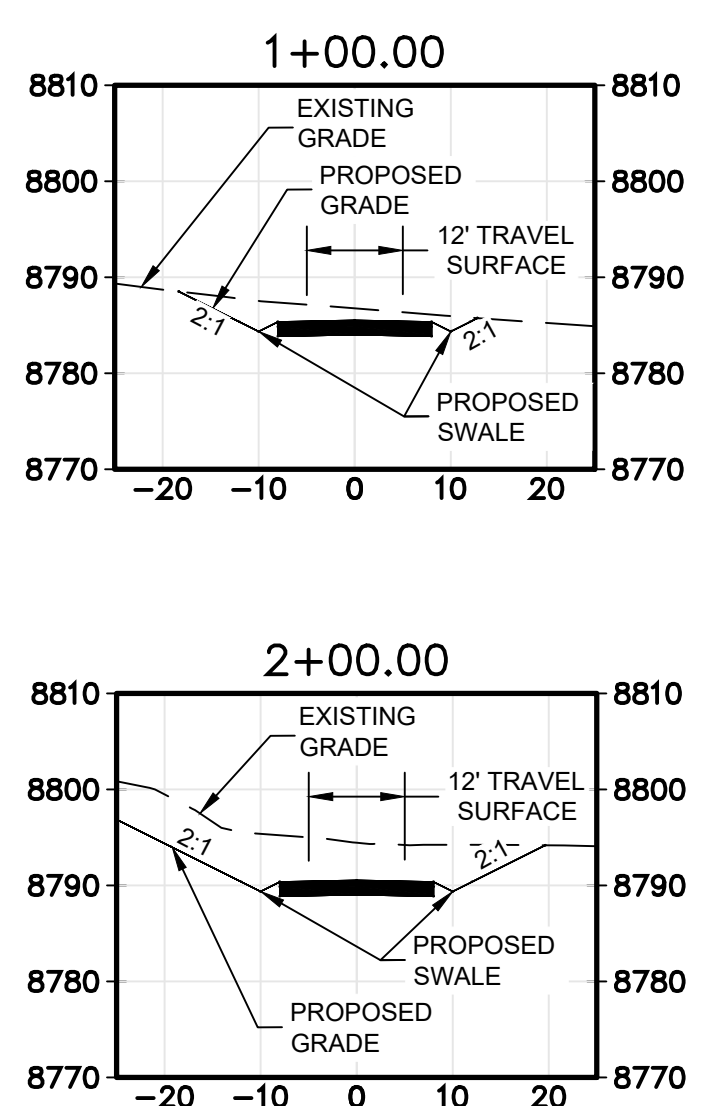
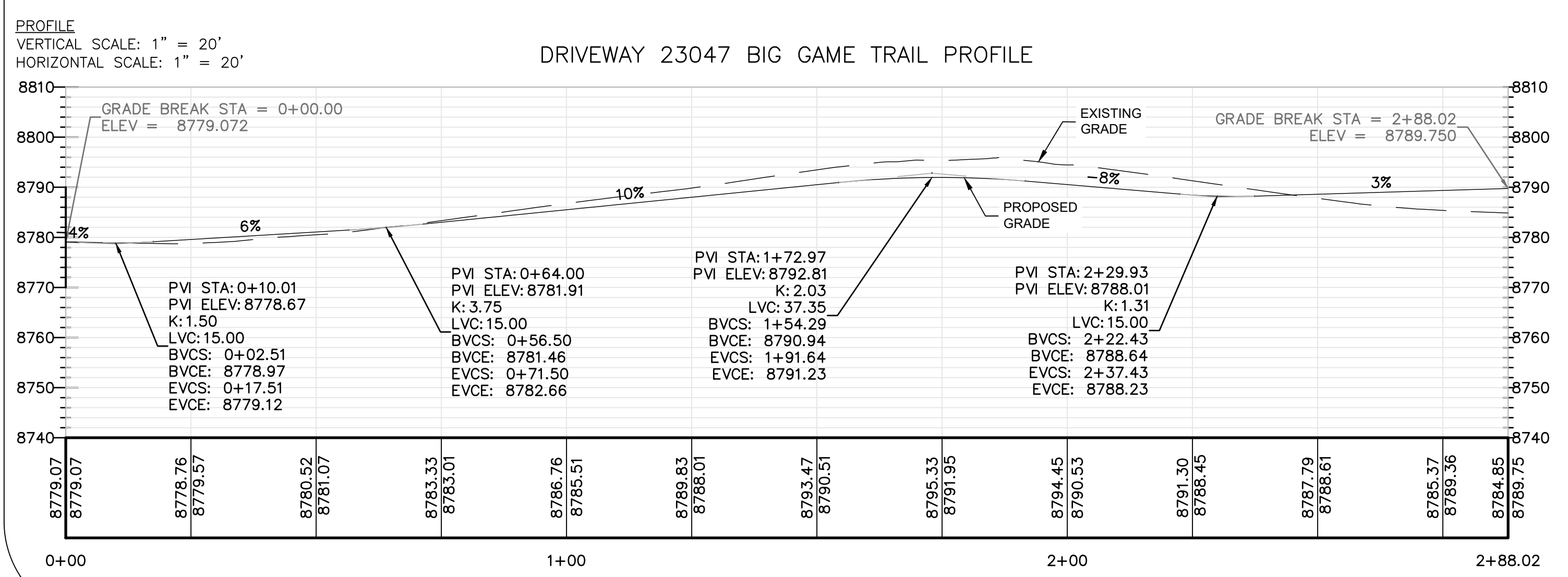
Project	2022358	Sheet	C-1
Date	01/29/2023		
Drawn By	JDM		
Scale	SHOWN		



# GRADING, EROSION AND SEDIMENT CONTROL DRIVEWAY DETAILS



- NOTE:
- SEE SECTION 3.7.8 FOR DESIGN CRITERIA.
  - A COMPUTER GENERATED TURN STUDY USING THE LOCAL FIRE DISTRICT APPARATUS SPECIFICATIONS MAY BE REQUIRED TO DEMONSTRATE THAT FIRE APPARATUS CAN NEGOTIATE A PROPOSED TURNAROUND.



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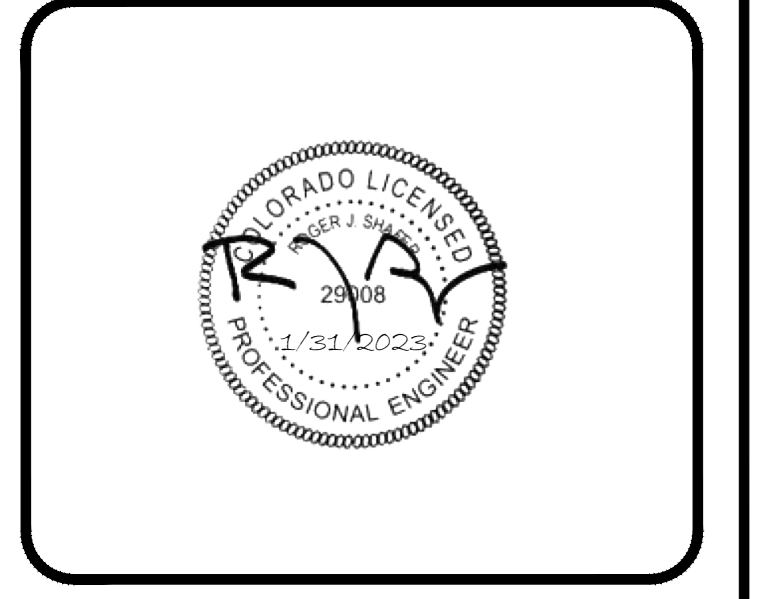
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JOE & DIANNE RUNDELL

Revisions		
No.	Revision/Issue	Date



Project	2022358	Sheet	C-3
Date	01/29/2023		
Drawn By	JDM		
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# GRADING, EROSION AND SEDIMENT CONTROL EROSION CONTROL SITE PLAN AND DETAILS

LEGEND			
-7560'	EXISTING CONTOURS		PORTABLE RESTROOM
-7565'	DESIGN CONTOURS		CONCRETE WASH AREA
	DRIVEWAY SHOULDER		STABILIZED STAGING AREA
	SITE BOUNDARY		EROSION CONTROL BLANKET
	SWALE CENTER LINE		SEED AND MULCH
	EXISTING ACCESS DRIVE		SEDIMENT CONTROL LOG
	EXISTING TWO TRACK TRAIL		VEHICLE TRACKING CONTROL

NOTE:  
ALL SEDIMENT CONTROL LOGS TO BE PLACED A MINIMUM OF FIVE FEET FROM THE TOE OF SLOPE, OF THE DISTURBANCE.  
ALL STOCKPILES TO HAVE A MAXIMUM ALLOWABLE HEIGHT OF FIFTY FEET MEASURED FROM THE EXISTING GRADE.

### GRADING AND EROSION CONTROL NOTES:

1. THE CONTRACTOR MUST NOTIFY THE JEFFERSON COUNTY DIVISION OF TRANSPORTATION AND ENGINEERING (303.271.8495) AT LEAST 3 DAYS PRIOR TO STARTING CONSTRUCTION.
2. ALL GRADING, EROSION AND SEDIMENT CONTROL MUST CONFORM TO APPROVED PLANS. REVISIONS TO LAND DISTURBANCE AREAS, SLOPES, AND/OR EROSION AND SEDIMENT CONTROL MEASURES ARE NOT PERMITTED WITHOUT PRIOR APPROVAL FROM THE JEFFERSON COUNTY PLANNING AND ZONING DIVISION. FIELD MODIFICATIONS TO AN EQUIVALENT BMP THAT DOES NOT AFFECT THE SITE HYDROLOGY MAY BE APPROVED BY JEFFERSON COUNTY TRANSPORTATION AND ENGINEERING STAFF.
3. THE APPROVED PLANS ARE VALID FOR TWO (2) YEARS FROM THE DATE OF APPROVAL FROM JEFFERSON COUNTY.
4. THE LANDOWNER AND/OR CONTRACTOR IS RESPONSIBLE FOR OBTAINING A PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, AT LEAST 10 DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES FOR LAND DISTURBANCE AREAS OF ONE ACRE OR GREATER. THE PERMIT MUST BE KEPT CURRENT THROUGHOUT THE CONSTRUCTION PROCESS.
5. EROSION CONTROL BMP'S MUST BE INSTALLED PRIOR TO GRADING ACTIVITIES.
6. APPROVED EROSION AND SEDIMENT CONTROL BMP'S SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR FOR THE DURATION OF THE PROJECT. AT A MINIMUM, THE PROPERTY OWNER OR CONTRACTOR SHALL INSPECT ALL BMP'S IN ACCORDANCE WITH THE APPROVED PLANS. ALL NECESSARY MAINTENANCE AND REPAIR ACTIVITIES SHALL BE COMPLETED IMMEDIATELY. ACCUMULATED SEDIMENT AND CONSTRUCTION DEBRIS SHALL BE REMOVED AND PROPERLY DISCARDED.
7. ALL TOPSOIL MUST BE SALVAGED, SEGREGATED, AND STOCKPILED SEPARATELY FROM THE OVERBURDEN. TOPSOIL AND OVERBURDEN MUST BE RE-DISTRIBUTED WITHIN THE GRADED AREA AFTER ROUGH GRADING TO PROVIDE A SUITABLE BASE FOR AREAS THAT MUST BE SEED AND PLANTED. RUNOFF FROM THE STOCKPILED AREA MUST BE CONTROLLED TO PREVENT EROSION AND SEDIMENTATION OF RECEIVING WATERS.
8. SOILS THAT ARE STOCKPILED FOR MORE THAN THIRTY (30) DAYS SHALL BE SEED AND MULCHED WITHIN FOURTEEN (14) DAYS OF STOCKPILE CONSTRUCTION.
9. THE LANDOWNER AND/OR CONTRACTOR MUST IMMEDIATELY TAKE ALL NECESSARY STEPS TO CONTROL SEDIMENT DISCHARGE.
10. SOIL STABILIZATION MEASURES SHALL BE APPLIED WITHIN 14 DAYS TO DISTURBED AREAS, WHICH MAY NOT BE AT FINAL GRADE, BUT WILL BE LEFT DORMANT FOR LONGER THAN 60 DAYS.
11. ALL DISTURBED SLOPES (UNLESS IN A COMPETENT ROCK CUT) GREATER THAN OR EQUAL TO 3:1 (H:V) FLOW LINES OF SWALES, GUTTER DOWNSPOUTS, OR ADDITIONAL AREAS AT THE DISCRETION OF COUNTY STAFF, SHALL BE PROTECTED WITH AN EROSION CONTROL BLANKET OR EQUIVALENT BMP.
12. IF IT IS NECESSARY TO MOVE MATERIAL IN EXCESS OF 300 CUBIC YARDS AND/OR IN EXCESS OF 10,000 SQUARE FEET OF LAND DISTURBANCE AREA TO OR FROM ANOTHER UNINCORPORATED JEFFERSON COUNTY SITE, A GRADING PERMIT OR NOTICE OF INTENT (NOI) IS NECESSARY FOR THE OFF-SITE PROPERTY. IF THE MATERIAL IS MOVED TO A PROPERTY LOCATED WITHIN ANOTHER JURISDICTION, EVIDENCE IS REQUIRED THAT THE LOCAL GOVERNMENT HAS APPROVED THE GRADING OPERATION.
13. THE LANDOWNER AND/OR CONTRACTOR IS RESPONSIBLE FOR CLEAN UP AND REMOVAL OF ALL SEDIMENT AND DEBRIS FROM ALL DRAINAGE INFRASTRUCTURE AND PUBLIC FACILITIES DURING THE ENTIRE CONSTRUCTION PROCESS.
14. THE LANDOWNER AND/OR CONTRACTOR MUST TAKE REASONABLE PRECAUTIONS TO ENSURE THAT VEHICLES DO NOT TRACK OR SPILL EARTH MATERIALS ON TO STREETS/ROADS AND MUST IMMEDIATELY REMOVE SUCH MATERIALS IF THIS OCCURS.
15. THE LANDOWNER AND/OR CONTRACTOR IS RESPONSIBLE FOR CONTROLLING LITTER SUCH AS DISCARDED MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, AND SANITARY WASTE AS APPLICABLE. IN ADDITION, SPILL PREVENTION AND CONTAINMENT BMP'S FOR CONSTRUCTION MATERIALS, WASTE, AND FUEL MUST BE PROVIDED, AS APPLICABLE. LOCATIONS OF STOCKPILES, CONCRETE WASHOUT AREAS, AND TRASH RECEPTACLES MUST BE CLEARLY SHOWN ON THE PLANS. LITTERING IS DEFINED AND ENFORCED BY CRS 18-4-511.
16. FUGITIVE DUST EMISSIONS RESULTING FROM GRADING ACTIVITIES AND/OR WIND SHALL BE CONTROLLED USING THE BEST AVAILABLE CONTROL TECHNOLOGY, AS DEFINED BY THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, AT THE TIME OF GRADING.
17. EARTH MATERIALS AND CONSTRUCTION SUPPLIES ARE TO BE STORED ON THE CONSTRUCTION SITE STAGING AREA, AND ARE NOT TO BE STORED ON THE STREET OR SIDEWALK. LOCATIONS OF STOCKPILES, CONCRETE WASHOUT AREAS AND TRASH RECEPTACLES ARE CLEARLY LOCATED ON THE PLANS.
18. THE EROSION AND SEDIMENT CONTROL PLAN SHALL BE MODIFIED BY THE JEFFERSON COUNTY PLANNING AND ZONING DEPARTMENT, OR ITS AUTHORIZED REPRESENTATIVE, AS FIELD CONDITIONS WARRANT WITH APPROVAL FROM ENGINEER AND/OR 285 ENGINEERING.

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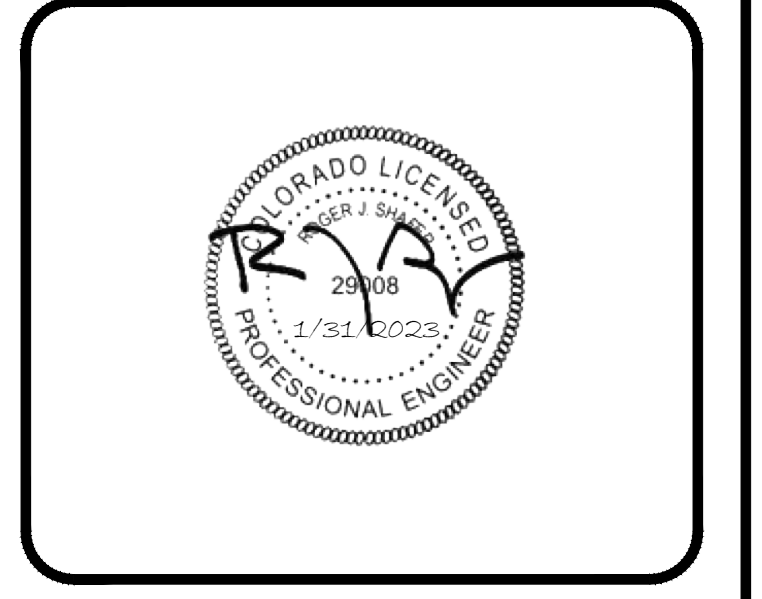
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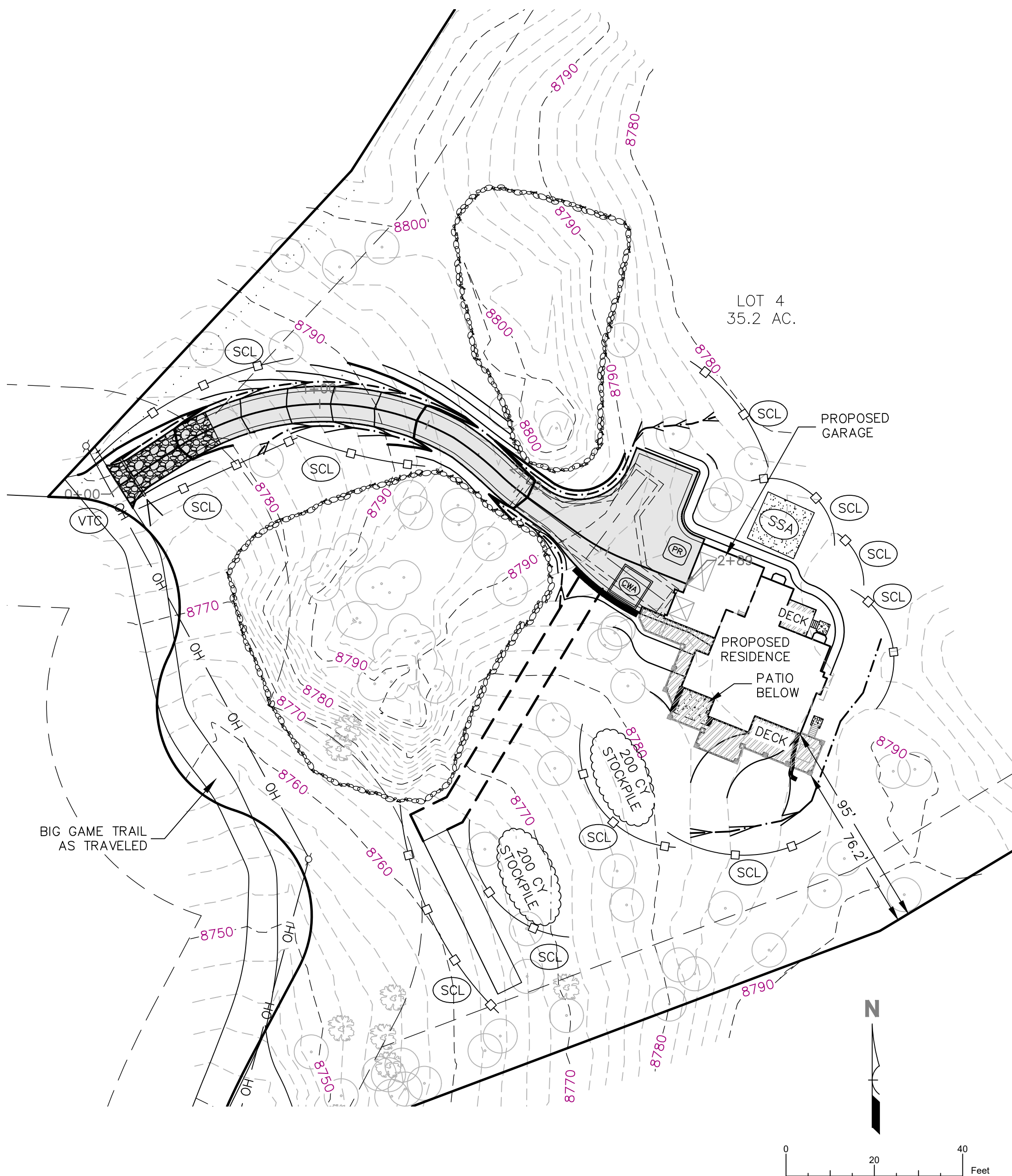
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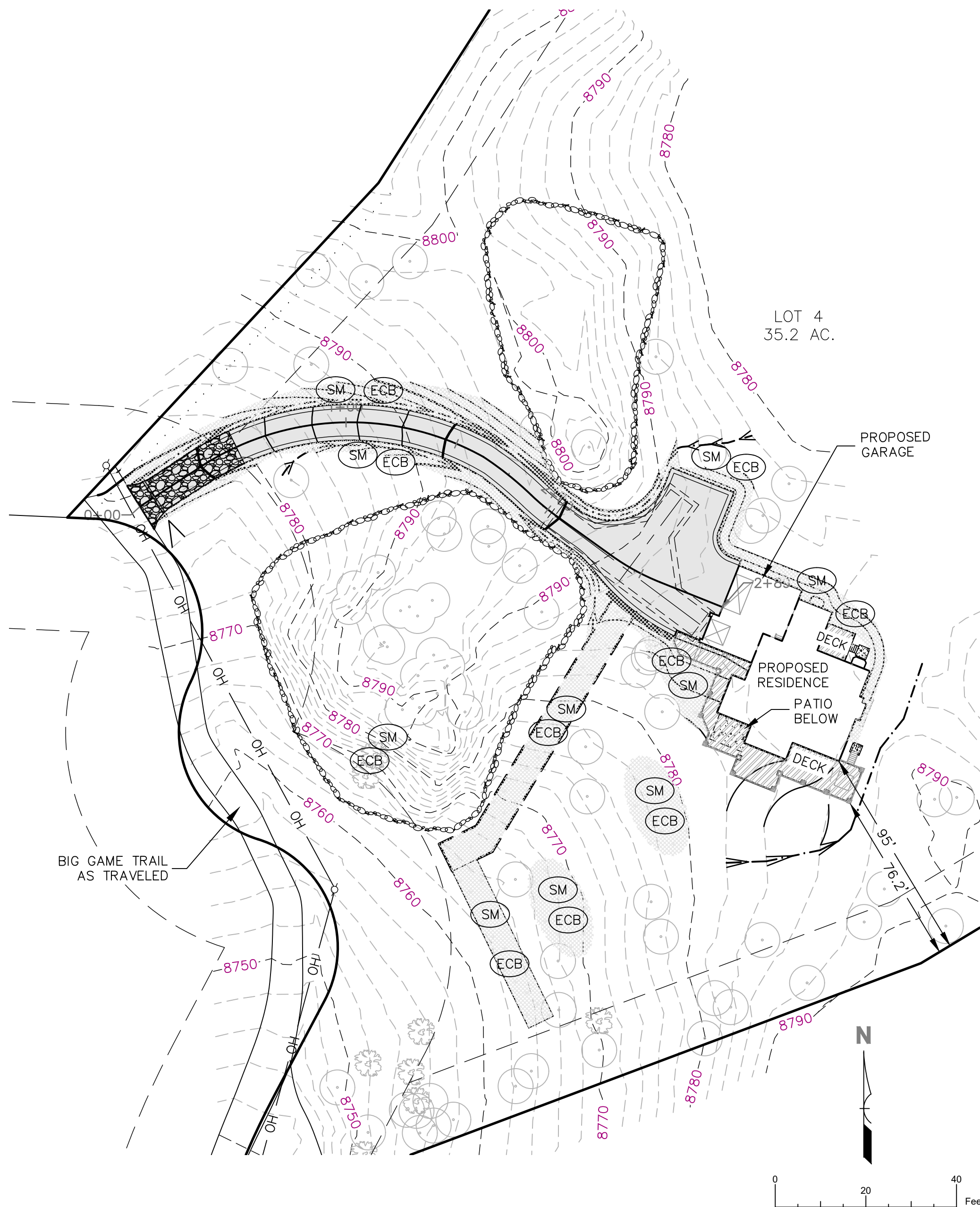


Project 2022358	Sheet
Date 01/29/2023	C-4
Drawn By JDM	
Scale SHOWN	

## INITIAL GRADING, EROSION AND SEDIMENT CONTROL BMP'S



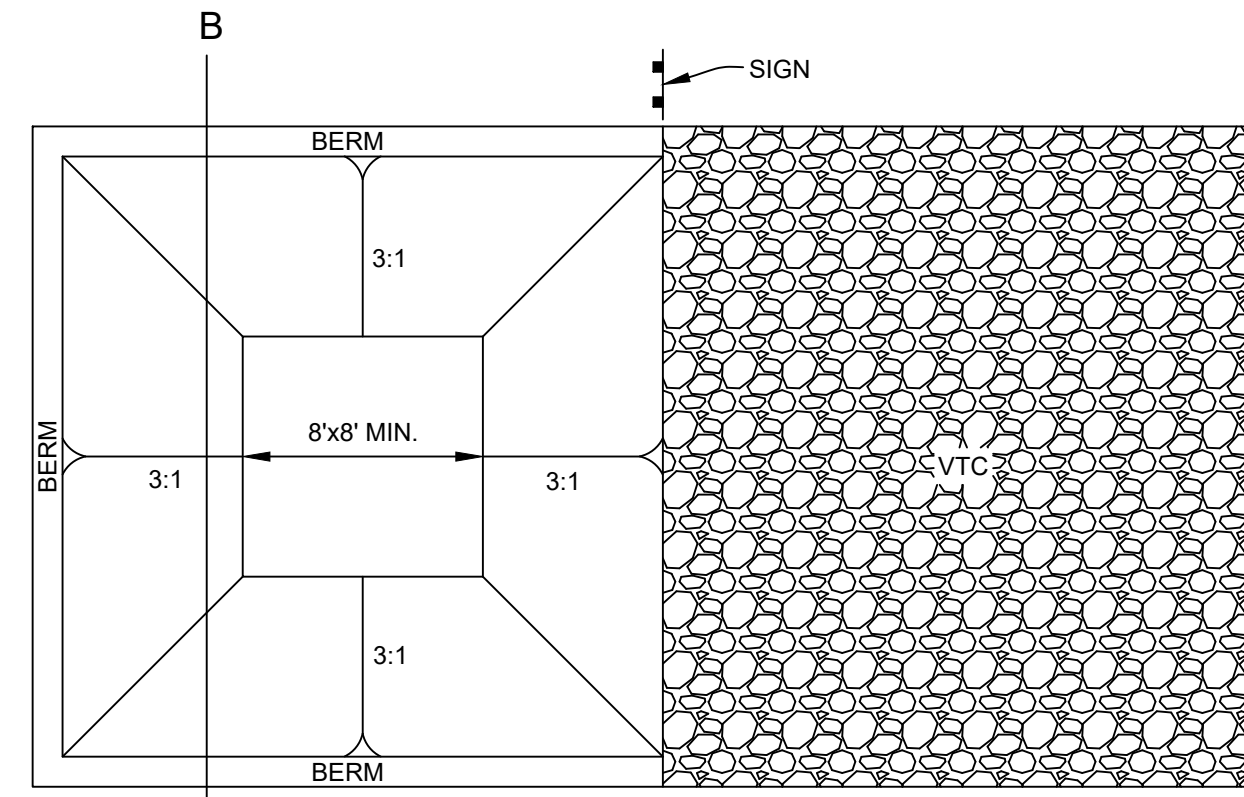
## FINAL GRADING, EROSION AND SEDIMENT CONTROL BMP'S



**SECTION B**  
SCALE: 1" = 10'-0"

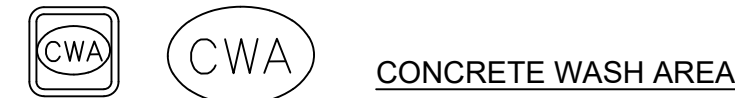
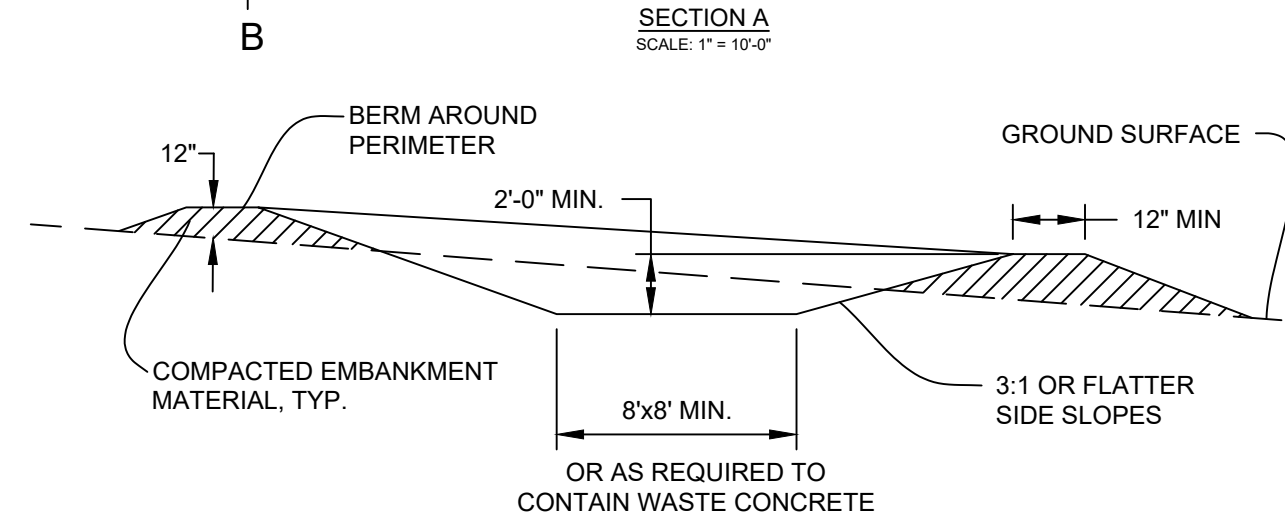
**CONCRETE WASHOUT AREA INSTALLATION NOTES**

- SEE PLAN VIEW FOR LOCATIONS OF CONCRETE WASHOUT AREA. (TO BE PLACED A MINIMUM OF 100' FROM DRAINAGE WAYS, BODIES OF WATER, AND INLETS.)
- THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
- VEHICLE TRACKING CONTROL IS REQUIRED AT THE ACCESS POINT.
- SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
- EXCAVATED MATERIAL SHALL BE UTILIZED IN PERIMETER BERM CONSTRUCTION.



**CONCRETE WASHOUT AREA MAINTENANCE NOTES**

- THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
- AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
- WHEN THE CONCRETE WASHOUT AREA IS REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.
- INSPECT WEEKLY, DURING AND AFTER ANY STORM EVENT.

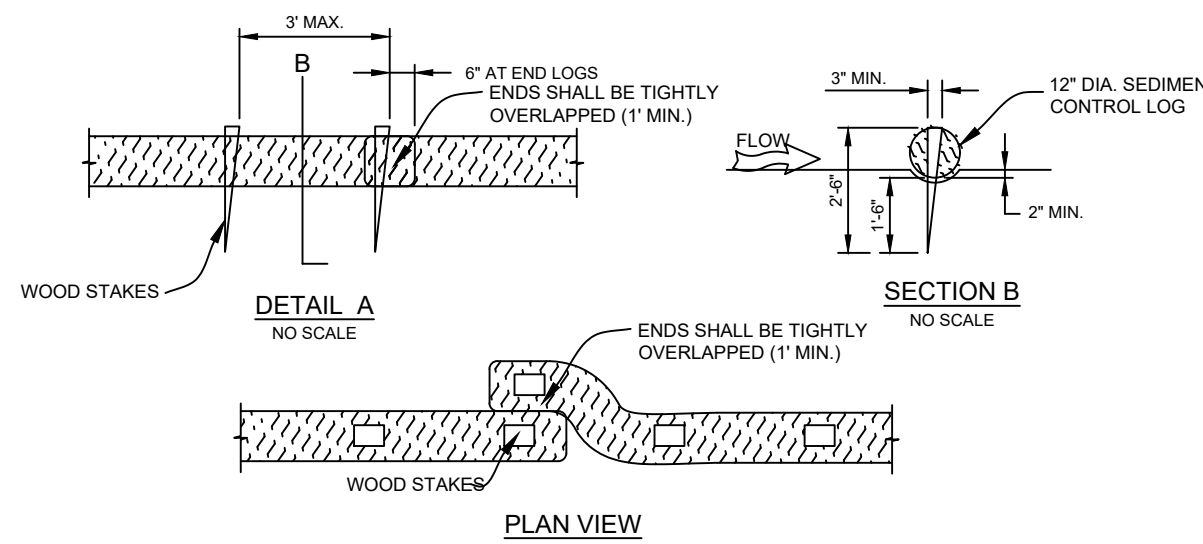


**SEDIMENT CONTROL LOG INSTALLATION NOTES**

- SEDIMENT CONTROL LOGS INDICATED ON INITIAL PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.
- SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR, OR COCONUT FIBER.
- NOT FOR USE IN CONCENTRATED FLOW AREAS.
- THE SEDIMENT CONTROL LOG SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1/2 OF THE DIAMETER OF THE SCL.

**SEDIMENT CONTROL LOG MAINTENANCE NOTES**

- THE GESC OPERATOR SHALL INSPECT SEDIMENT CONTROL LOGS DAILY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOGS SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT DEPTH IS WITHIN 1/2 THE HEIGHT OF THE CREST OF LOG.
- SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED.

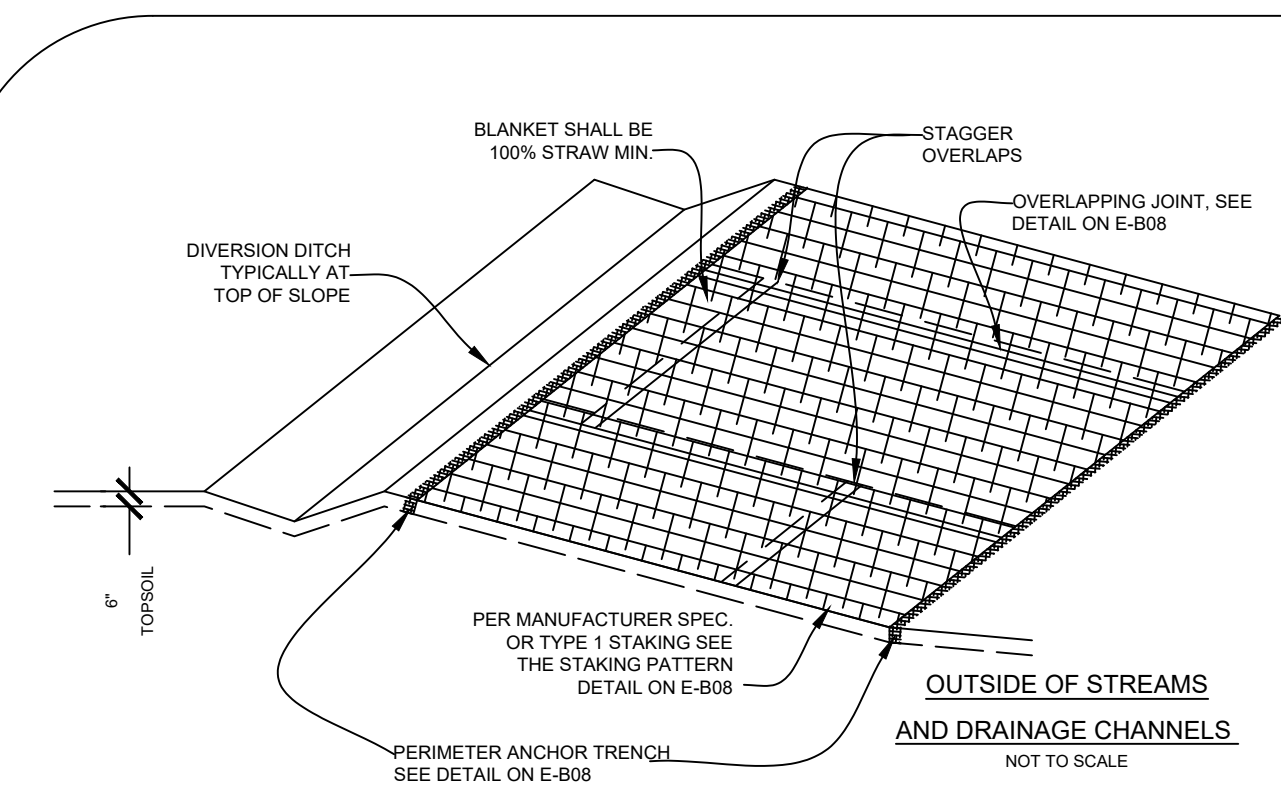


**SEEDING AND MULCHING INSTALLATION NOTES**

- ALL BRANDS FURNISHED SHALL BE FREE FROM ALL NOXIOUS WEEDS.
- THE SEEDER SHALL FURNISH TO THE CONTRACTOR A SIGNED STATEMENT CERTIFYING THAT THE SEED FURNISHED IS FROM A LOT THAT HAS BEEN TESTED BY A RECOGNIZED LABORATORY. SEED WHICH HAS BECOME WET, MOLDED, OR OTHERWISE DAMAGED IN TRANSIT OR IN STORAGE WILL NOT BE ACCEPTABLE.
- DRILL SEEDING MIX SHALL CONFORM TO THE TABLE ON THE RIGHT:
- PERMANENT SEED MIX SHALL BE USED UNLESS OTHERWISE APPROVED BY THE COUNTY.
- ALL AREAS TO BE SEEDED AND MULCHED SHALL HAVE NATIVE TOPSOIL OR APPROVED SOIL AMENDMENTS SPREAD TO A DEPTH OF AT LEAST 6 INCHES (LOOSE DEPTH); HAUL ROADS AND OTHER COMPACTED AREAS SHALL BE LOOSENEED TO A DEPTH OF 6 INCHES PRIOR TO SPREADING TOPSOIL.
- SOIL IS TO BE THOROUGHLY LOOSENEED (TILLED) TO A DEPTH OF AT LEAST 6 INCHES PRIOR TO SEEING. THE TOP 6 INCHES OF THE SEED BED SHALL BE FREE OF ROCKS GREATER THAN 4 INCHES AND SOIL CLODS GREATER THAN 2 INCHES. SEEING OVER ANY COMPACTED AREAS THAT HAVEN'T BEEN THOROUGHLY LOOSENEED SHALL BE REJECTED.
- SEED IS TO BE APPLIED USING A MECHANICAL DRILL TO A DEPTH OF 1/4 INCH. ROW SPACING SHALL BE NO MORE THAN 8 INCHES. MATERIAL USED FOR MULCH SHALL CONSIST OF LONG-STEMMED STRAW. AT LEAST 50 PERCENT OF THE MULCH, BY WEIGHT, SHALL BE 10 INCHES OR MORE IN LENGTH. MULCH SHALL BE APPLIED AND MECHANICALLY ANCHORED TO A DEPTH OF AT LEAST 2 INCHES. MULCH SHALL BE APPLIED AT A RATE OF 4000 LB. OF STRAW PER ACRE.
- IF IT IS NOT POSSIBLE TO DRILL SEED, SEED IS TO BE UNIFORMLY BROADCAST AT TWO TIMES THE DRILLED RATE, THEN LIGHTLY HARROWED TO PROVIDED A SEED DEPTH OF APPROXIMATELY 1/4 INCH, THEN ROLLED TO COMPACT, THEN MULCHED AS SPECIFIED ABOVE.
- SEEING AND MULCHING SHALL BE COMPLETED WITHIN 30 DAYS OF INITIAL EXPOSURE OR 7 DAYS AFTER GRADING IS SUBSTANTIALLY COMPLETE IN A GIVEN AREA.
- MULCH SHALL BE APPLIED WITHIN 24-HOURS OF SEEING.
- TACKIFIER SHOULD BE UTILIZED TO HELP WITH STRAW DISPLACEMENT.

CONIFER MIX				
ARIZONA FESCUE SPECIES	VARIETY	%OF MIX	DRILLED PLANTING PLS LBS/ACRE	BROADCAST PLS LBS/ACRE
	REDONDO	20	0.9	1.8
	WESTERN WHEATGRASS	15	2.4	4.8
	BIG BLUEGRASS	15	0.5	1.0
	SHEEP FESCUE	15	0.7	1.4
	BLUE GRAMA	15	0.5	1.0
	SLENDER WHEATGRASS	10	1.1	2.2
	MOUNTAIN BROME	10	1.9	3.8
	TOTAL	100	8.0 LBS/ACRE	16.0 LBS/ACRE

MOUNTAIN HOME "FIREWISE" MIX				
SPECIES	VARIETY	%OF MIX	DRILLED PLANTING PLS LBS/ACRE	BROADCAST PLS LBS/ACRE
	BLUE GRAMA	20	0.6	1.2
	STREAMBANK WHEATGRASS	20	2.2	4.4
	WESTERN WHEATGRASS	10	1.6	3.2
	THICKSPIKE WHEATGRASS	10	1.1	2.2
	CANBY BLUEGRASS	20	0.8	1.5
	SHEEP FESCUE	20	1	2
	TOTAL	100	7.3 LBS/ACRE	14.5 LBS/ACRE



**EROSION CONTROL BLANKET INSTALLATION NOTES**

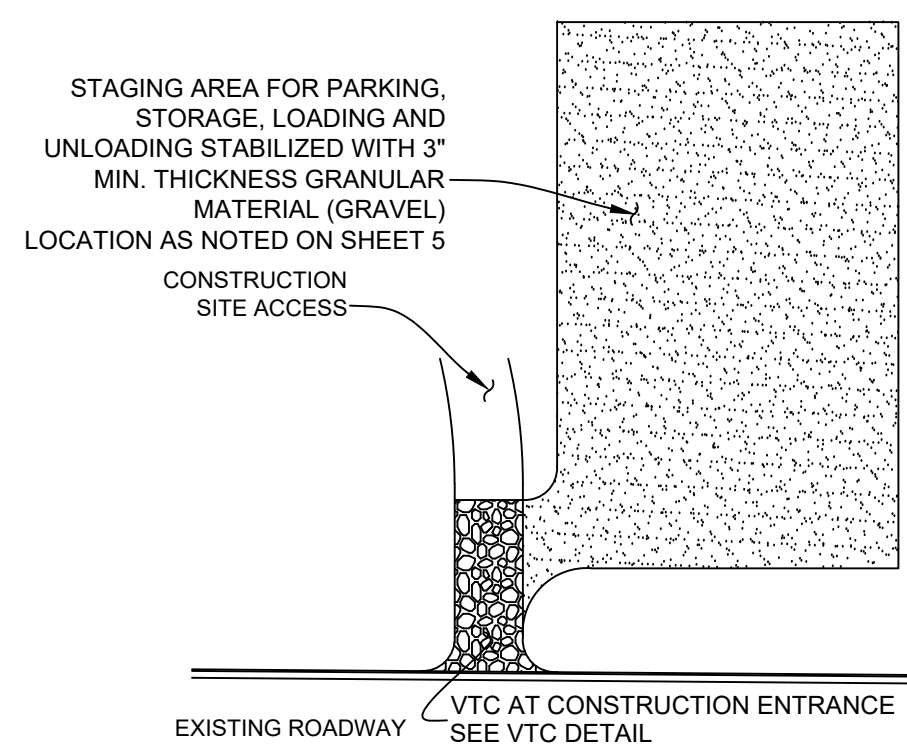
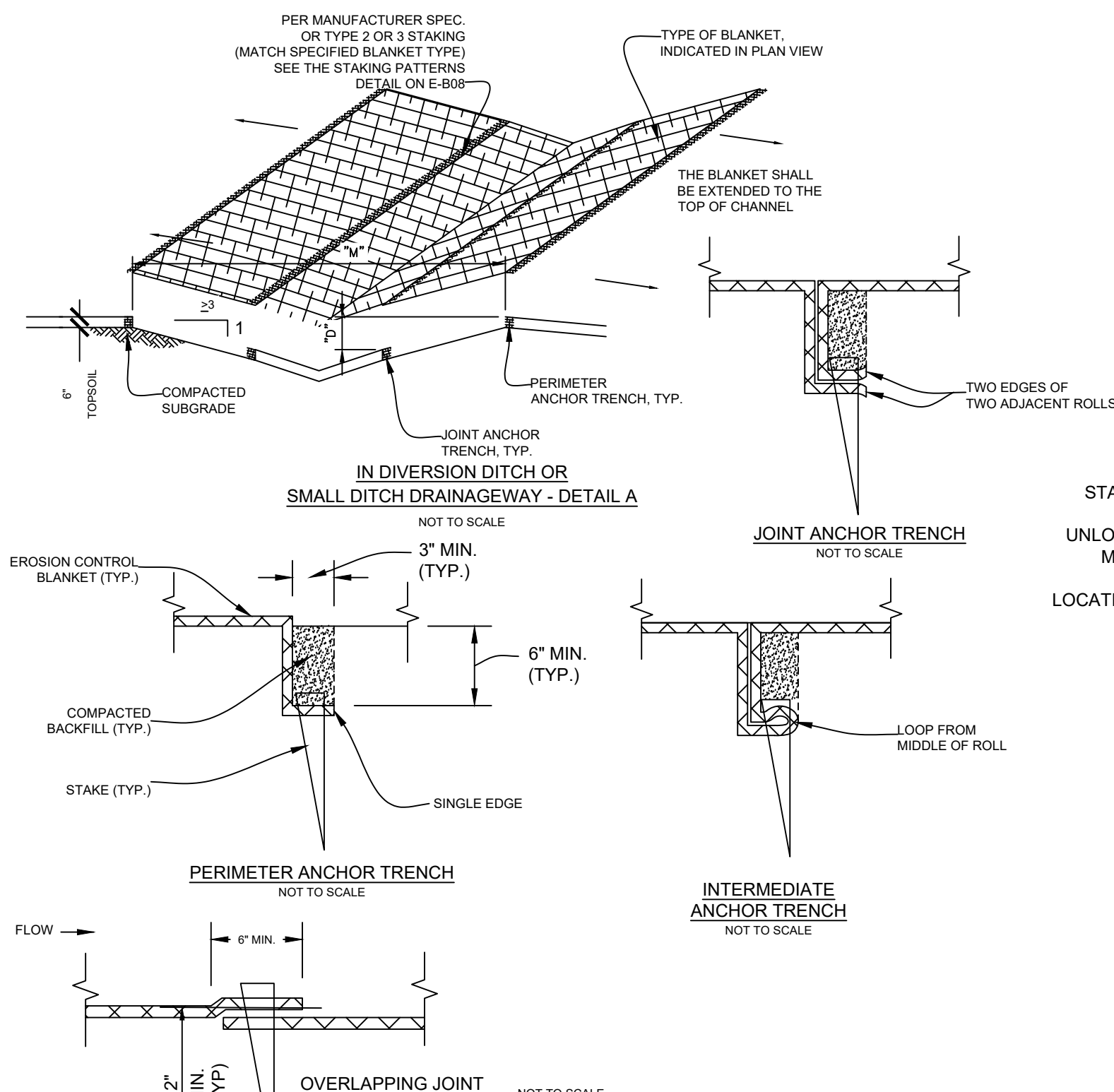
- EROSION CONTROL BLANKETS REQUIRED ON ALL DISTURBED AREAS WITH A SLOPE OF 2:1.
- ALL EROSION CONTROL BLANKETS AND NETTING SHALL BE MADE OF 100% NATURAL AND BIODEGRADABLE MATERIAL; NO PLASTIC OR OTHER SYNTHETIC MATERIAL, EVEN IF PHOTO DEGRADABLE, SHALL BE ALLOWED.
- IN AREAS WHERE EROSION CONTROL BLANKET IS SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEING BELOW THE BLANKET. SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO BLANKET INSTALLATION AND THE BLANKET SHALL BE IN FULL CONTACT WITH SUBGRADE, NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
- PERIMETER ANCHOR TRENCH SHALL BE USED AT OUTSIDE PERIMETER OF ALL BLANKET AREAS.
- POINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF BLANKETS TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL BLANKETS EXCEPT STRAW, WHICH MAY USE AN OVERLAPPING JOINT.
- INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE-HALF THE ROLL LENGTH FOR COCONUT AND EXCELSIOR BLANKETS.
- THE OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF BLANKETS TOGETHER FOR BLANKETS ON SLOPES.
- MATERIAL SPECIFICATIONS OF EROSION CONTROL BLANKET SHALL CONFORM TO THE TABLE BELOW.
- ALL EROSION CONTROL BLANKETS SHALL BE INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS.
- ANY AREAS OF SEEING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING EROSION CONTROL BLANKET SHALL BE RESEEDED AND MULCHED IN ACCORDANCE WITH DETAIL 17.

EROSION CONTROL BLANKET TYPE				
TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	NETTING MIN.
STRAW*	-	100%	-	DOUBLE/NATURAL
STRAW-COCONUT	30% MIN.	70% MAX.	-	DOUBLE/NATURAL
COCONUT	100%	-	-	DOUBLE/NATURAL
EXCELSIOR	-	-	100%	DOUBLE/NATURAL

\* FOR OUTSIDE OF STREAMS AND DRAINAGE CHANNELS

**EROSION CONTROL BLANKET MAINTENANCE NOTES**

- THE CONTRACTOR SHALL INSPECT EROSION CONTROL BLANKETS REGULARLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS AS NECESSARY.
- ANY EROSION CONTROL BLANKET PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE RE-INSTALLED. ANY SUBGRADE AREAS BELOW THE BLANKET THAT HAVE ERODED TO CREATE A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE EROSION CONTROL BLANKET REINSTALLED.



**STABILIZED STAGING AREA INSTALLATION NOTES**

- SEE PLAN VIEW FOR GENERAL LOCATION OF STAGING AREA. CONTRACTOR MAY MODIFY LOCATION AND SIZE OF STABILIZED STAGING AREA WITH COUNTY APPROVAL.
- STABILIZED STAGING AREA SHALL BE LARGE ENOUGH TO FULLY CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
- STAGING AREA SHALL BE STABILIZED PRIOR TO ANY OTHER OPERATIONS ON THE SITE.
- THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM OF 3" OF GRANULAR MATERIAL (GRAVEL).

**STABILIZED STAGING AREA MAINTENANCE NOTES**

- CONTRACTOR SHALL PROVIDE ADDITIONAL THICKNESS OF GRANULAR MATERIAL IF ANY RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.
- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
- ANY ACCUMULATED DIRT OR MUD SHALL BE REMOVED FROM THE SURFACE OF THE STABILIZED STAGING AREA.
- THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED.



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PROJECT NUMBER:  
2022358

PARCEL ID:  
70-061-00-004

PROPERTY ADDRESS:  
23047 BIG GAME TRAIL  
CONIFER, COLORADO 80433

CLIENT:  
JOE & DIANNE RUNDELL

Revisions		
No.	Revision/Issue	Date

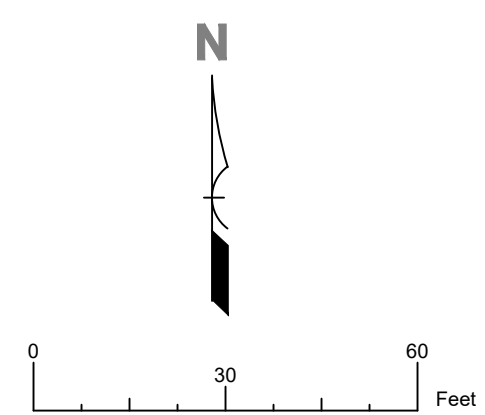
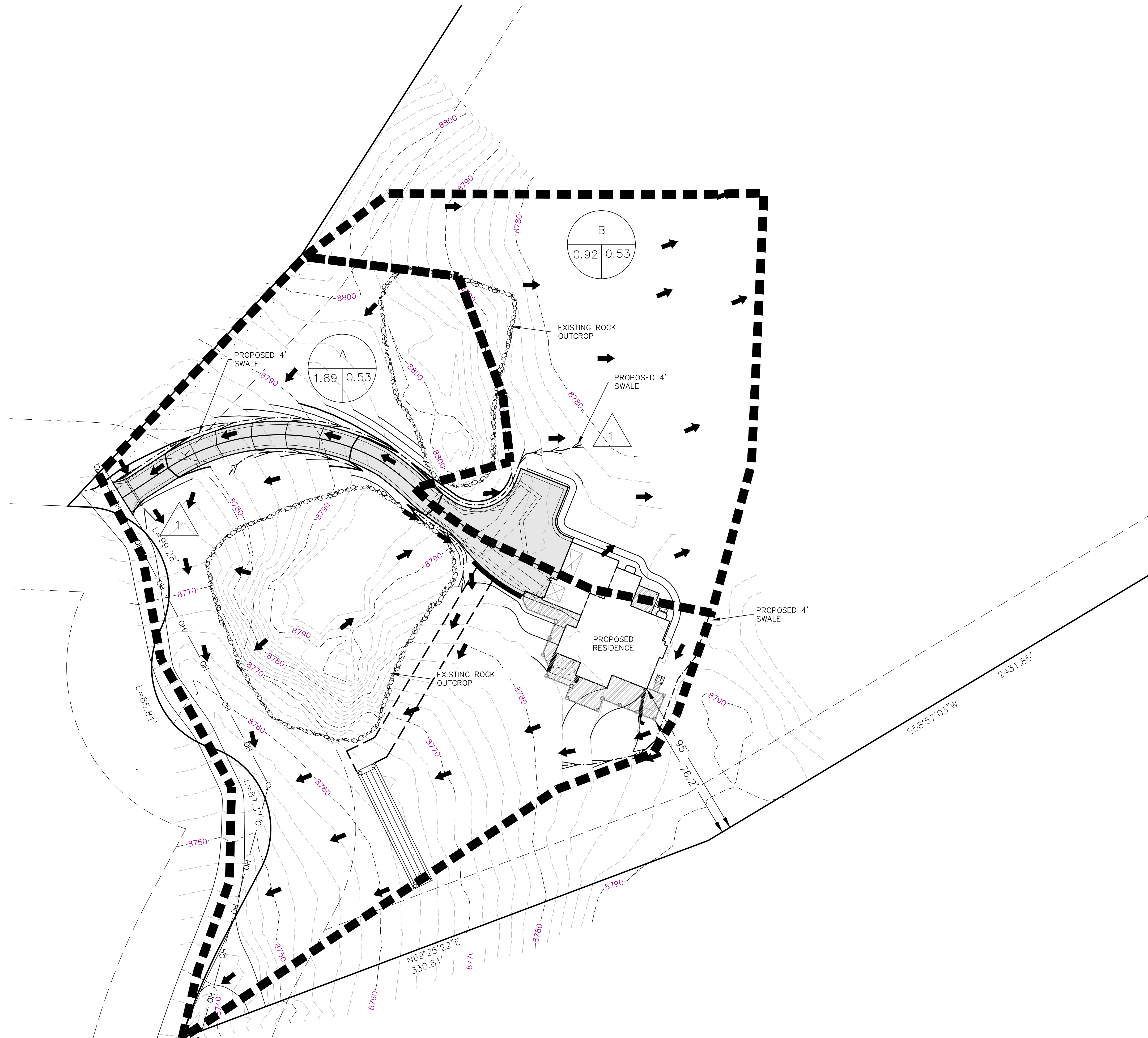


Project	2022358	Sheet	C-5
Date	01/29/2023		
Drawn By	AKR		
Scale	SHOWN		

# ABRIDGED DRAINAGE REPORT - DRAINAGE SITE PLAN

**LEGEND**

- 7560'- EXISTING CONTOURS
- 7565'- DESIGN CONTOURS
- SITE BOUNDARY
- SWALE CENTER LINE
- DRAINAGE BASIN
- FLOW DIRECTION
- A = BASIN DESIGNATION  
B = BASIN AREA (ACRES)  
C = RUNOFF COEFFICIENT (C100)
- DESIGN POINT



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Revisions		
No.	Revision/Issue	Date



Project	2022358	Sheet	D-1
Date	01/29/2023		
Drawn By	JDM		
Scale	SHOWN		