

CITATIONS IN PARENTHESIS INDICATE SECTIONS OF THE CURRENT CGP.

1. SWPPP REQUIREMENTS (3.0)

- 1.1. HAS THE SWPPP TEMPLATE BEEN PREPARED BY AN INDIVIDUAL THAT HAS THE FOLLOWING CERTIFICATIONS (3.1.1) YES NO (CHECK ALL THAT APPLY BELOW)
 - 1.1.1. CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC); OR
 - 1.1.2. TDEC LEVEL II
- 1.2. DOES THE EPSC PLANS INVOLVE STRUCTURAL DESIGN, HYDRAULIC, HYDROLOGIC OR OTHER ENGINEERING CALCULATIONS FOR EPSC STRUCTURAL MEASURES (SEDIMENT BASINS, ETC.)? YES NO (3.1.1)

IF YES, HAVE THE EPSC PLANS BEEN PREPARED, STAMPED AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT?

YES NO
- 1.3. DO THE PROJECT STORMWATER OUTFALLS DISCHARGE INTO THE FOLLOWING? (5.4.1) YES NO (CHECK ALL THAT APPLY BELOW)
 - 1.3.1. IMPAIRED WATERS (303d FOR SILTATION OR HABITAT ALTERATION)
 - 1.3.2. TENNESSEE KNOWN EXCEPTIONAL WATERS

IF YES, HAVE THE EPSC PLANS BEEN PREPARED BY AN INDIVIDUAL WHO HAS COMPLETED TDEC LEVEL II? YES NO N/A (5.4.1.b); AND

IF YES, HAS THE SWPPP TEMPLATE BEEN PREPARED BY AN INDIVIDUAL WHO HAS COMPLETED TDEC LEVEL II? YES NO N/A (5.4.1.b)

NOTE: ALTHOUGH THE RECEIVING WATERS ARE NOT CLASSIFIED AS IMPAIRED BY SILTATION OR HABITAT ALTERATION OR AS EXCEPTIONAL WATERS OF THE STATE, THE RECEIVING WATERS WILL BE ASSUMED TO BE EXCEPTIONAL WATERS OF THE STATE FOR CONSERVATIVE DESIGN AND CONSTRUCTION PURPOSES.

2. SITE DESCRIPTION (3.5.1)

- 2.1. PROJECT LIMITS REFER TO EROSION CONTROL PLAN SHEET C-5, C-6, AND C-7 (3.5.1.g):
- 2.2. PROJECT DESCRIPTION: (3.5.1.a)

TITLE: THE UNIVERSITY OF TENNESSEE STORMWATER MANAGEMENT, ASSISTANCE, RESEARCH, & TRAINING (SMART) CENTER

COUNTY: ROANE COUNTY

LOCATION: UNION VALLEY ROAD, OAK RIDGE, TN
- 2.3. SITE MAP(S): REFER TO APPENDIX 3 – USGS QUADRANGLE MAP (3.5.1.g)
- 2.4. DESCRIPTION OF EXISTING SITE TOPOGRAPHY (3.5.1.d): THE TRACT GENERALLY DRAINS FROM THE NORTHWEST TO THE SOUTHEAST FROM THE TOP OF PINE RIDGE TOWARDS AN EMBAYMENT OF MELTON HILL RESERVOIR. REFER TO APPENDIX 3 – USGS QUADRANGLE MAP.
- 2.5. MAJOR SOIL DISTURBING ACTIVITIES (3.5.1.b) (CHECK ALL THAT APPLY)
 - 2.5.1. CLEARING AND GRUBBING
 - 2.5.2. EXCAVATION
 - 2.5.3. CUTTING AND FILLING
 - 2.5.4. FINAL GRADING AND SHAPING
 - 2.5.5. UTILITIES
 - 2.5.6. OTHER (DESCRIBE): _____
- 2.6. TOTAL PROJECT AREA (3.5.1.c): 100 ACRES
- 2.7. TOTAL AREA TO BE DISTURBED (3.5.1.c): 20 ACRES

IF GREATER THAN 50 ACRES, HAS CONSTRUCTION PROJECT PHASING BEEN SPECIFIED IN SECTION 3 BELOW AND IN THE PLANS (3.5.3.1.k)?

YES NO N/A

NOTE: BECAUSE THE ENTIRE DISTURBED AREA WILL NOT EXCEED 50 ACRES, ONLY ONE PHASE IS REQUIRED FOR THE PROJECT. HOWEVER, THE PROJECT WILL BE SEQUENCED IN THE THREE STAGES DESCRIBED BELOW. IN THIS WAY, THE TOTAL UNSTABILIZED DISTURBED AREA SHOULD NEVER EXCEED APPROXIMATELY 10 ACRES.
- 2.8. ARE THERE ANY SEASONAL LIMITATIONS ON WORK? YES NO

IF YES, DESCRIBE AND LIST THE CORRESPONDING PLAN SHEET: _____

2.9. SOIL PROPERTIES (3.5.1.e)(4.1.1)

SOIL PROPERTIES FOR THE PRIMARY SOILS ARE LISTED IN THE TABLE BELOW.

SOIL PROPERTIES			
PRIMARY SOIL NAME	HSG	% OF SITE	ERODIBILITY (k value)
ARMUCHEE SILT LOAM, 5 TO 12 PERCENT SLOPES	C	10.0	0.49
ARMUCHEE SILT LOAM, 12 TO 20 PERCENT SLOPES	C	1.8	0.49
ARMUCHEE SILT LOAM, 20 TO 35 PERCENT SLOPES	C	11.7	0.49
ARMUCHEE CHANNERY SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPES, ERODED	C	6.9	0.20
ARMUCHEE-MONTEVALLO COMPLEX, 25 TO 60 PERCENT SLOPES	C	26.8	0.49
MONTEVALLO CHANNERY SILT LOAM, 5 TO 12 PERCENT SLOPES	D	25.6	0.32
MONTEVALLO CHANNERY SILT LOAM, 20 TO 35 PERCENT SLOPES	D	17.2	0.32

2.10. PROJECT RUNOFF COEFFICIENTS AND AREA PERCENTAGES (3.5.1.f)

RUNOFF COEFFICIENTS FOR EXISTING CONDITIONS			
AREA TYPE	AREA(AC)	PERCENTAGE OF WATERSHED (%)	RUNOFF COEFFICIENT
WOODS: GOOD SOIL D	19.0	100%	77.0
WEIGHTED CURVE NUMBER OR C-FACTOR =			77.0

RUNOFF COEFFICIENTS FOR POST-CONSTRUCTION CONDITIONS			
AREA TYPE	AREA(AC)	PERCENTAGE OF WATERSHED (%)	RUNOFF COEFFICIENT
WOODS: GOOD - SOIL D	7.0	30.4%	77.0
PASTURE: GOOD - SOIL D	12.9	56.1%	80.0
IMPERVIOUS	3.1	13.5%	98.0
WEIGHTED CURVE NUMBER OR C-FACTOR =			

3. ORDER OF CONSTRUCTION ACTIVITIES (3.5.1.b, 3.5.2.a)

STAGE	DESCRIPTION
1	CLEAR, GRUB, AND GRADE CONSTRUCTION EXIT
	CLEAR, GRUB, AND GRADE SEDIMENT BASIN AND DRAINAGE SWALE
	CLEAR, GRUB, AND GRADE TEMPORARY ACCESS ROAD UP TO EAST STREAM
	CLEAR, GRUB, AND GRADE PARKING AREAS AND BUILDING PADS
2	INSTALL CULVERT AND EAST ACCESS ROAD STREAM CROSSING
	CLEAR, GRUB, AND GRADE SEDIMENT BASIN AND DRAINAGE SWALE
	CLEAR, GRUB, AND GRADE REMAINING TEMPORARY ACCESS ROAD
	CLEAR, GRUB, AND GRADE RESEARCH AND DEMONSTRATION INFRASTRUCTURE
3	CLEAR, GRUB, GRADE, AND CONSTRUCT SUPPLY RESERVOIR AND ASSOCIATED INFRASTRUCTURE
	STABILIZE TEMPORARY ACCESS ROAD AS PERMANENT ACCESS ROAD
	REMOVE TEMPORARY EPSC PRACTICES, STABILIZE (FINAL) SITE, AND LANDSCAPE

- 3.1. PERFORM CLEARING AND GRUBBING (NOT MORE THAN 15 DAYS PRIOR TO GRADING OR EARTH-MOVING. REFER TO THE STABILIZATION PRACTICES BELOW).
- 3.2. STABILIZE DISTURBED AREAS WITHIN 14 DAYS OF COMPLETING ANY PHASE OF ACTIVITY.

4. STREAM, OUTFALL, WETLAND, TMDL AND ECOLOGY INFORMATION

4.1. STREAM INFORMATION

WILL CONSTRUCTION AND/OR EROSION PREVENTION AND SEDIMENT CONTROLS IMPACT ANY STREAMS? YES NO

4.1.1. STREAM INFORMATION

4.1.1.1. THE STRUCTURAL EPSC MEASURES HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND HAVE BEEN INCLUDED IN THE AQUATIC RESOURCE ALTERATION (ARAP) PERMIT OR SECTION 401 CERTIFICATION (3.5.1.i). REFER TO THE LIST OF APPLICABLE ENVIRONMENTAL PERMITS. ALL PERMITS WILL BE MAINTAINED ON SITE IN THE "DOCUMENTATION AND PERMITS" BINDER.

4.1.1.2. RECEIVING STREAMS (3.5.1.j)

RECEIVING STREAM INFORMATION			
NATURAL RESOURCE LABEL	NAME OF RECEIVING NATURAL RESOURCE	IMPAIRED FOR SILTATION OR HABITAT ALTERATION (YES OR NO)	KNOWN EXCEPTIONAL QUALITY WATERS (YES OR NO)
STR-1	EAST UNNAMED STREAM	NO	NO
STR-2	WEST UNNAMED STREAM	NO	NO

NOTE: ALTHOUGH THE RECEIVING WATERS ARE NOT CLASSIFIED AS IMPAIRED BY SILTATION OR HABITAT ALTERATION OR AS EXCEPTIONAL WATERS OF THE STATE, THE RECEIVING WATERS WILL BE ASSUMED TO BE EXCEPTIONAL WATERS OF THE STATE FOR CONSERVATIVE DESIGN AND CONSTRUCTION PURPOSES.

4.1.2. ARE BUFFER ZONES REQUIRED? YES NO (4.1.2, 5.4.2)

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) _____

IF YES, CHECK THE APPROPRIATE BOX BELOW FOR SIZE OF BUFFER

60-FEET FOR IMPAIRED AND EXCEPTIONAL WATERS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 30-FEET)

30-FEET FOR ALL OTHER STREAMS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 15-FEET)


4.1.3. ARE THERE BUFFER ZONE EXEMPTIONS? YES NO N/A (4.1.2.1)

4.2. OUTFALL INFORMATION :

A SEDIMENT BASIN OR EQUIVALENT MEASURE(S) WILL BE PROVIDED FOR ANY OUTFALL IN A DRAINAGE AREA:

4.2.1. OF TEN ACRES OR MORE FOR AN OUTFALL(S) THAT DOES NOT DISCHARGE TO AN IMPAIRED STREAM OR KNOWN EXCEPTIONAL QUALITY WATER (3.5.3.3)

4.2.2. OF FIVE ACRES OR MORE FOR AN OUTFALL(S) THAT DISCHARGES TO AN IMPAIRED STREAM OR KNOWN EXCEPTIONAL QUALITY WATER (5.4.1.f).

		UNIVERSITY OF TENNESSEE SMART CENTER UNION VALLEY ROAD, OAK RIDGE, TN 37830 ROANE COUNTY, TENNESSEE	
		STORM WATER POLLUTION PREVENTION PLAN	
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DATE: 4/30/2014	DATE: 4/30/2014		

4.2.3. OUTFALL TABLE (3.5.1.d, 5.4.1.f)

OUTFALL INFORMATION					
OUTFALL LABEL	SLOPE (%)	DRAINAGE AREA (AC)	SEDIMENT BASIN OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	SUB-OUTFALL (e.g. A, B, C)†	RECEIVING NATURAL RESOURCE NAME OR LABEL
OUT-1	10-20	9.5	Y	-	EAST STREAM
OUT-2	5-10	0.2	N	-	EAST STREAM
OUT-3	5-10	0.1	N	-	EAST STREAM
OUT-4	5-10	0.1	N	-	EAST STREAM
OUT-5	5-10	0.1	N	-	EAST STREAM
OUT-6	10-20	6.8	Y	-	EAST STREAM
OUT-7	10-20	6.8	Y	-	EAST STREAM
OUT-8	10-20	6.8	Y	-	WEST STREAM

†NOTE: SUB-OUTFALLS ARE DEFINED AS OUTFALLS THAT DISCHARGE WITHIN THE PROJECT AND DO NOT DIRECTLY DISCHARGE OFF ROW OR INTO WATERS OF THE STATE.

4.2.4. WHERE POSSIBLE, HAS NON-PROJECT RUN-ON BEEN DIVERTED THROUGH THE PROJECT SO THAT THE OFF-SITE RUN-ON WILL NOT FLOW OVER DISTURBED AREAS WITHIN THE ROW, THUS SEPARATING NON-PROJECT RUN-OFF FROM PROJECT RUN-OFF THEREBY REDUCING THE DRAINAGE AREA TO ANY ONE OUTFALL? YES NO

4.2.5. ARE EQUIVALENT MEASURES BEING SUBSTITUTED FOR A SEDIMENT BASIN(S)? YES NO

4.2.6. HAVE ALL OUTFALLS BEEN LABELED ON THE EPSC PLAN SHEETS (3.5.1.g, 5.4.1.f)? YES NO

4.2.7. HAVE ALL OUTFALLS BEEN LABELED ON A USGS TOPOGRAPHIC MAP INCLUDED IN THE "DOCUMENTATION AND PERMITS" BINDER (2.6.2)? YES NO

4.3. WETLAND INFORMATION

WILL CONSTRUCTION AND/OR EROSION AND SEDIMENT CONTROLS IMPACT ANY WETLANDS? YES NO

4.4. TOTAL MAXIMUM DAILY LOADS (TMDL) INFORMATION (3.5.10)

4.4.1. IS THIS PROJECT LOCATED IN A WATERSHED THAT MAINTAINS AN EPA APPROVED TMDL FOR SILTATION? YES NO

4.4.2. IF YES, IS THIS PROJECT LOCATED WITHIN A SUBWATERSHED WITH A WASTE LOAD ALLOCATION (WLA)? YES NO N/A

4.4.3. IF YES, DOES THE PROJECT HAVE A DIRECT DISCHARGE TO A 303(d) LISTED STREAM FOR SILTATION OR HABITAT ALTERATION? YES NO N/A

4.4.4. IF YES, HAS A SUMMARY OF THE CONSULTATION (LETTER) BEEN INCLUDED WITH THE SWPPP DOCUMENTATION? YES NO N/A

4.5. ECOLOGY INFORMATION (3.5.5.e)

ARE THERE STATE OR FEDERALLY LISTED SPECIES LOCATED WITHIN THE PROJECT AREA? SPECIAL NOTES ARE REQUIRED TO DESCRIBE MEASURES NECESSARY TO PREVENT "TAKING" OF LEGALLY PROTECTED STATE OR FEDERALLY LISTED THREATENED OR ENDANGERED AQUATIC FAUNA AND/OR CRITICAL HABITAT.

YES NO NO NOTES REQUIRED

IF YES, LIST ALL PLAN SHEETS WHERE SPECIAL NOTES HAVE BEEN ADDED.

5. EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES (3.5.3)

5.1. EPSC MEASURES MUST BE DESIGNED, INSTALLED AND MAINTAINED TO CONTROL STORMWATER VOLUME AND VELOCITY WITHIN THE SITE TO MINIMIZE EROSION. (4.1.1)

5.2. EPSC MEASURES MUST CONTROL STORMWATER DISCHARGES, INCLUDING BOTH PEAK FLOWS AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS, STREAM CHANNELS AND STREAM BANKS. (4.1.1)

5.3. HAVE THE CONTROL MEASURES BEEN DESIGNED ACCORDING TO THE SIZE AND SLOPE OF THE DISTURBED DRAINAGE AREA (3.5.3.3)? YES NO

5.4. THE CONTROL MEASURES HAVE, AT A MINIMUM, BEEN DESIGNED FOR THE 5-YEAR, 24 HOUR STORM EVENT (3.5.3.3, 5.4.1.a).

5.5. ARE THE LIMITS OF DISTURBANCE CLEARLY MARKED ON THE EPSC PLANS? (3.5.1.n) YES NO

5.6. HAVE PHASED EPSC PLANS BEEN PREPARED FOR THE PROJECT? (3.5.2) YES NO (IF YES, CHECK ONE BELOW)

5.6.1. PROJECT DISTURBED AREA IS THAN LESS THAN 5 ACRES (MINIMUM OF TWO PHASES OF EPSC PLANS)

5.6.2. PROJECT DISTURBED AREA IS GREATER THAN 5 ACRES (MINIMUM OF THREE PHASES OF EPSC PLANS)

5.7. IS ADDITIONAL PHYSICAL OR CHEMICAL TREATMENT OF STORMWATER RUNOFF NECESSARY (5.4.1.a)? YES NO

5.8. HAVE STEEP SLOPES (GREATER THAN 35%) BEEN MINIMALLY DISTURBED AND/OR PROTECTED BY CONVEYING RUNOFF NON-EROSIVELY AROUND OR OVER THE SLOPE? (3.5.3.2) (10 "STEEP SLOPE") YES NO

5.9. ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE RESEARCHED, APPLIED IN ACCORDANCE WITH MANUFACTURE'S GUIDELINES AMD FULLY DESCRIBED ON THE EPSC PLANS (3.5.3.1.b).

5.10. ALL EPSC CONTROL MEASURES WILL BE INSTALLED ACCORDING TO REFERENCED STANDARDS.

5.11. EPSC MEASURES WILL NOT BE INSTALLED IN A STREAM WITHOUT FIRST OBTAINING US COE SECTION 404, TDEC ARAP, AND TVA PERMITS.

5.12. DISCHARGES FROM DEWATERING ACTIVITIES ARE PROHIBITED UNLESS MANAGED BY CONTROLS PROVIDING EQUIVALENT LEVEL OF TREATMENT (FILTRATION) (4.14)

5.13. DISCHARGES FROM SEDIMENT BASINS AND IMPOUNDMENTS MUST USE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT, UNLESS INFEASIBLE. (4.1.7)

5.14. STABILIZATION PRACTICES

PRE-CONSTRUCTION VEGETATIVE COVER WILL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 15 DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA WILL BE SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED. (3.5.3.1.h)

5.15. STABILIZATION MEASURES WILL BE INITIATED AS SOON AS POSSIBLE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY OR PERMANENT STABILIZATION WILL BE COMPLETED WITHIN 14 DAYS AFTER ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED IN THAT AREA. PERMANENT STABILIZATION WILL REPLACE TEMPORARY MEASURES AS SOON AS PRACTICABLE. (3.5.3.2)

5.16. STEEP SLOPES (3.5.3.2)

STEEP SLOPES ARE DEFINED AS A NATURAL OR CREATED SLOPE OF 35% GRADE OR STEEPER REGARDLESS OF HEIGHT. STEEP SLOPES SHALL BE TEMPORARILY STABILIZED NOT LATER THAN 7 DAYS AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED.

6. CONSTRUCTION SUPPORT ACTIVITIES - BORROW AND WASTE AREAS (1.2.2)(3.5.3.1.g)

WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR. THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS INCLUDING, BUT NOT LIMITED TO NPDES, AQUATIC RESOURCES ALTERATION PERMIT(S) CORPS OF ENGINEERS SECTION 404 PERMITS, AND TVA SECTION 26A PERMITS TO DISPOSE OF WASTE MATERIALS.

7. MAINTENANCE AND INSPECTION

7.1. INSPECTION PRACTICES (3.5.8)

7.1.1. INSPECTORS MUST HAVE SUCCESSFULLY COMPLETED THE TDEC FUNDAMENTALS OF EROSION AND SEDIMENT CONTROL COURSE (TDEC LEVEL I) AND MAINTAIN THE CERTIFICATION. A COPY OF THE INSPECTOR'S CERTIFICATION SHOULD BE KEPT ON SITE. (3.5.8.1)

7.1.2. INSPECTIONS WILL BE CONDUCTED AT LEAST TWICE EVERY CALENDAR WEEK AND AT LEAST 72 HOURS APART. (3.5.8.2.a)

7.1.3. THE FREQUENCY OF EPSC INSPECTIONS MAY BE REDUCED TO ONCE A MONTH (I.E. EXTREME DROUGHT CONDITIONS, FROZEN GROUND, ETC.) WITH WRITTEN NOTIFICATION TO THE LOCAL ENVIRONMENTAL FIELD OFFICE AND SUBSEQUENT TDEC APPROVAL. WRITTEN NOTIFICATION MUST INCLUDE THE INTENT TO CHANGE FREQUENCY AND JUSTIFICATION. (3.5.8.2.a)

7.1.4. ALL DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AREAS USED FOR MATERIAL STORAGE THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, AND EACH OUTFALL WILL BE INSPECTED. (3.5.8.2.b)

7.1.5. THE INSPECTOR WILL OVERSEE THE REQUIREMENTS OF OTHER CONSTRUCTION-RELATED WATER QUALITY PERMITS (I.E. TDEC ARAP, US COE AND TVA SECTION 26a PERMITS) FOR CONSTRUCTION ACTIVITIES AROUND WATERS OF THE STATE. (10)

7.1.6. THE SWPPP WILL BE REVISED AS NECESSARY BASED ON THE RESULTS OF THE INSPECTION. REVISION(S) WILL BE RECORDED WITHIN 7 DAYS OF THE INSPECTION. REVISION(S) WILL BE IMPLEMENTED WITHIN 14 DAYS OF THE INSPECTION. (3.8.5.2.e AND 3.8.5.2.f)

7.1.7. THE INSPECTOR SHALL CONDUCT PRE-CONSTRUCTION INSPECTIONS TO VERIFY AREAS THAT ARE NOT TO BE DISTURBED HAVE BEEN MARKED IN THE SWPPP AND IN THE FIELD BEFORE LAND DISTURBANCE ACTIVITIES BEGIN AND INITIAL MEASURES HAVE BEEN INSTALLED. (10 "INSPECTOR") (3.5.1.n)

7.1.8. INSPECTIONS WILL BE DOCUMENTED ON THE CONSTRUCTION STORMWATER INSPECTION CERTIFICATION FORM PROVIDED IN APPENDIX C OF THE CGP AND INCLUDE THE SCOPE OF THE INSPECTION, NAME(S), TITLE AND TN EPSC CERTIFICATION NUMBER OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, CURRENT APPROXIMATE DISTURBED ACREAGE AT TIME OF INSPECTION, CHECKLIST (NOC, SWPPP, RAIN GAUGE, SITE CONTACT INFORMATION, ETC.) AND MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE SWPPP. (3.5.8.2.g)


7.1.9. DOCUMENTATION OF INSPECTIONS WILL BE MAINTAINED ON SITE IN THE "DOCUMENTATION AND PERMITS" BINDER.

7.1.10. THESE INSPECTION REQUIREMENTS DO NOT APPLY TO DEFINABLE AREAS OF THE SITE THAT HAVE MET FINAL STABILIZATION REQUIREMENTS AND HAVE BEEN NOTED IN THE SWPPP.

7.1.11. TRAINED CERTIFIED INSPECTORS SHALL COMPLETE INSPECTION DOCUMENTATION TO THE BEST OF THEIR ABILITY. FALSIFYING INSPECTION RECORDS OR OTHER DOCUMENTATION OR FAILURE TO COMPLETE INSPECTION DOCUMENTATION SHALL RESULT IN A VIOLATION OF THIS PERMIT AND ANY OTHER APPLICABLE ACTS OR RULES. (3.8.5.2.h)

7.2. DULY AUTHORIZED REPRESENTATIVE (7.7.3)

THE PROJECT SUPERVISOR/CONTRACTOR MAY DELEGATE AN INDIVIDUAL AND/OR CONSULTANT TO SIGN EPSC INSPECTIONS REPORTS. FOR SATISFYING SIGNATORY REQUIREMENTS FOR EPSC INSPECTION REPORTS, THE PROJECT SUPERVISOR/CONTRACTOR AND NEWLY AUTHORIZED INDIVIDUAL ACCEPTING RESPONSIBILITY MUST SUBMIT WRITTEN AUTHORIZATION TO THE LOCAL TDEC EFO.

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DATE: 4/30/2014	DATE: 4/30/2014		

7.3. MAINTENANCE PRACTICES (3.5.3.1 AND 3.5.7)

- 7.3.1. ALL CONTROLS WILL BE MAINTAINED IN GOOD AND EFFECTIVE OPERATING ORDER. NECESSARY REPAIRS OR MAINTENANCE WILL BE ACCOMPLISHED BEFORE THE NEXT STORM EVENT AND IN NO CASE MORE THAN 7 DAYS AFTER THE NEED IS IDENTIFIED. IN A CASE WHERE THE ACTIVITY IS DEEMED IMPRACTICABLE, ANY SUCH CONDITIONS WILL BE DOCUMENTED (3.5.8.2.e).
- 7.3.2. ALL CONTROLS WILL BE MAINTAINED IN ACCORDANCE WITH STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES. (3.5.3.1.b)
- 7.3.3. SEDIMENT WILL BE REMOVED FROM SEDIMENT TRAPS, SILT FENCE, SEDIMENT BASINS, AND OTHER CONTROLS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%. (3.5.3.1.e)
- 7.3.4. CHECK DAMS WILL BE INSPECTED FOR STABILITY. SEDIMENT WILL BE REMOVED WHEN DEPTH REACHES ONE-HALF (½) THE HEIGHT OF THE DAM.
- 7.3.5. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER WILL BE PICKED UP AND REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFF OF THE SITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EROSION CONTROL WILL BE REMOVED. (3.5.3.1.f)
- 7.3.6. ALL SEEDED AREAS WILL BE CHECKED FOR BARE SPOTS, EROSION WASHOUTS, AND VIGOROUS GROWTH FREE OF SIGNIFICANT WEED INFESTATIONS.
- 7.3.7. THE PROJECT SUPERVISOR OR THEIR DESIGNEE AND THE CONTRACTOR'S SITE SUPERINTENDENT ARE RESPONSIBLE FOR INSPECTIONS. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE PROJECT SUPERVISOR OR THEIR DESIGNEE WILL COMPLETE THE INSPECTION REPORTS AND DISTRIBUTE COPIES PER THE CONTRACT.

8. **SITE ASSESSMENTS** (3.1.2)

QUALITY ASSURANCE SITE ASSESSMENTS OF EROSION PREVENTION AND SEDIMENT CONTROLS REQUIRED:
 YES NO

9. **STORMWATER MANAGEMENT** (3.5.4)

- 9.1. STORMWATER MANAGEMENT WILL BE HANDLED BY TEMPORARY CONTROLS OUTLINED IN THIS SWPPP AND ANY PERMANENT CONTROLS NEEDED TO MEET PERMANENT STORMWATER MANAGEMENT NEEDS IN THE POST CONSTRUCTION PERIOD. PERMANENT CONTROLS WILL BE SHOWN ON THE PLANS AND NOTED AS PERMANENT.
- 9.2. DESCRIBE ANY SPECIFIC POST-CONSTRUCTION MEASURES THAT WILL CONTROL VELOCITY, POLLUTANTS, AND/OR EROSION (3.5.1.f, 3.5.4): EXISTING POND, RIPRAP APRONS, CATCH BASIN INSERTS
- 9.3. OTHER ITEMS NEEDING CONTROL (3.5.5)

9.3.1. CONSTRUCTION MATERIALS

THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD. (CHECK ALL THAT APPLY).

- 9.3.1.1. LUMBER, GUARDRAIL, TRAFFIC CONTROL DEVICES
- 9.3.1.2. CONCRETE WASHOUT
- 9.3.1.3. CONCRETE AND CORRUGATED METAL PIPES
- 9.3.1.4. MINERAL AGGREGATES, ASPHALT
- 9.3.1.5. EARTH
- 9.3.1.6. LIQUID TRAFFIC STRIPING MATERIALS, PAINT
- 9.3.1.7. ROCK
- 9.3.1.8. CURING COMPOUND
- 9.3.1.9. EXPLOSIVES
- 9.3.1.10. OTHER

THESE MATERIALS WILL BE HANDLED AS NOTED IN THIS SWPPP.

9.3.2. WASTE MATERIALS (3.5.5.b)

WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED

OF BY THE CONTRACTOR. THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS INCLUDING, BUT NOT LIMITED TO NPDES, AQUATIC RESOURCES ALTERATION PERMIT(S) CORPS OF ENGINEERS SECTION 404 PERMITS, AND TVA SECTION 26A PERMITS TO DISPOSE OF WASTE MATERIALS.

9.3.3. HAZARDOUS WASTE (3.5.5.c) (7.9)

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN A MANNER WHICH IS COMPLIANT WITH LOCAL OR STATE REGULATIONS. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES, AND THE INDIVIDUAL DESIGNATED AS THE CONTRACTOR'S ON-SITE REPRESENTATIVE WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF HAZARDOUS MATERIAL.

9.3.4. SANITARY WASTE (3.5.5.b)

PORTABLE SANITARY FACILITIES WILL BE PROVIDED ON ALL CONSTRUCTION SITES. SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS IN A TIMELY MANNER BY A LICENSED WASTE MANAGEMENT CONTRACTOR OR AS REQUIRED BY ANY LOCAL REGULATIONS. THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF SANITARY WASTE.

9.3.5. OTHER MATERIALS

THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD. (CHECK ALL THAT APPLY).

- 9.3.5.1. FERTILIZERS AND LIME
 - 9.3.5.2. PESTICIDES AND/OR HERBICIDES
 - 9.3.5.3. DIESEL AND GASOLINE
 - 9.3.5.4. MACHINERY LUBRICANTS (OIL AND GREASE)
- THESE MATERIALS WILL BE HANDLED AS NOTED THIS SWPPP.

10. **NON-STORMWATER DISCHARGES** (3.5.9)

10.1. THE FOLLOWING NON-STORMWATER DISCHARGES ARE ANTICIPATED DURING THE COURSE OF THIS PROJECT (CHECK ALL THAT APPLY):

- 10.1.1. DEWATERING OF WORK AREAS OF COLLECTED STORMWATER AND GROUND WATER
- 10.1.2. WATERS USED TO WASH VEHICLES (OF DUST AND SOIL) WHERE DETERGENTS ARE NOT USED AND DETENTION AND/OR FILTERING IS PROVIDED BEFORE THE WATER LEAVES SITE
- 10.1.3. WATER USED TO CONTROL DUST (3.5.3.1.n)
- 10.1.4. POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS FROM WHICH CHLORINE HAS BEEN REMOVED TO THE MAXIMUM EXTENT PRACTICABLE
- 10.1.5. UNCONTAMINATED GROUNDWATER OR SPRING WATER
- 10.1.6. FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH POLLUTANTS
- 10.1.7. OTHER:

10.2. ALL ALLOWABLE NON-STORMWATER DISCHARGES WILL BE DIRECTED TO STABLE DISCHARGE STRUCTURES PRIOR TO LEAVING THE SITE. FILTERING OR CHEMICAL TREATMENT MAY BE NECESSARY PRIOR TO DISCHARGE.

10.3. THE DESIGN OF ALL IMPACTED EPSC MEASURES RECEIVING FLOW FROM ALLOWABLE NON-STORMWATER DISCHARGES MUST BE DESIGNED TO HANDLE THE VOLUME OF THE NON-STORMWATER COMPONENT.

10.4. WASH DOWN OR WASTE DISCHARGE OF CONCRETE TRUCKS WILL NOT BE PERMITTED ON-SITE UNLESS PROPER SETTLEMENT AREAS HAVE BEEN PROVIDED IN ACCORDANCE WITH BOTH STATE AND FEDERAL REGULATIONS.

10.5. ARE ANY DISCHARGES ASSOCIATED WITH INDUSTRIAL (NON-CONSTRUCTION STORMWATER) ACTIVITY EXPECTED (3.5.1.h)?

YES NO

IF YES, SPECIFY THE LOCATION OF THE ACTIVITY AND ITS PERMIT NUMBER.

11. **SPILL PREVENTION, MANAGEMENT AND NOTIFICATION** (3.5.5.c, 5.1)

11.1. SPILL PREVENTION (3.5.5.c)

- 11.1.1. MATERIAL MANAGEMENT
 - 11.1.1.1. HOUSEKEEPING

ONLY PRODUCTS NEEDED WILL BE STORED ON-SITE BY THE CONTRACTOR. EXCEPT FOR BULK MATERIALS THE CONTRACTOR WILL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING WILL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHEN POSSIBLE, ALL PRODUCTS WILL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFF SITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS WILL BE FOLLOWED. THE CONTRACTOR'S SITE SUPERINTENDENT WILL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL. DUST GENERATED WILL BE CONTROLLED IN AN ENVIRONMENTALLY SAFE MANNER. VEGETATION AREAS NOT ESSENTIAL TO THE CONSTRUCTION PROJECT WILL BE PRESERVED AND MAINTAINED AS NOTED ON THE PLANS.

11.1.1.2. HAZARDOUS MATERIALS

PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THE CONTAINER IS NOT RESEALABLE. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHEETS WILL BE RETAINED IN A SAFE PLACE TO RELAY IMPORTANT PRODUCT INFORMATION. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S LABEL DIRECTIONS FOR DISPOSAL WILL BE FOLLOWED. MAINTENANCE AND REPAIR OF ALL EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, DEGREASING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL, AND OTHER ACTIVITIES WHICH MAY RESULT IN THE ACCIDENTAL RELEASE OF CONTAMINANTS WILL BE CONDUCTED ON AN IMPERVIOUS SURFACE AND UNDER COVER DURING WET WEATHER TO PREVENT THE RELEASE OF CONTAMINANTS ONTO THE GROUND. WHEEL WASH WATER WILL BE COLLECTED AND ALLOWED TO SETTLE OUT SUSPENDED SOLIDS PRIOR TO DISCHARGE. WHEEL WASH WATER WILL NOT BE DISCHARGED DIRECTLY INTO ANY STORMWATER SYSTEM OR STORMWATER TREATMENT SYSTEM. POTENTIAL PH-MODIFYING MATERIALS SUCH AS: BULK CEMENT, CEMENT KILN DUST, FLY ASH, NEW CONCRETE WASHINGS AND CURING WATERS, CONCRETE PUMPING, AND MIXER WASHOUT WATERS WILL BE COLLECTED ON SITE AND MANAGED TO PREVENT CONTAMINATION OF STORMWATER RUNOFF.


11.1.1.3. PRODUCT SPECIFIC PRACTICES

11.1.1.3.1. PETROLEUM PRODUCTS: ALL ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED.

11.1.1.3.2. FERTILIZERS: FERTILIZERS WILL BE APPLIED ONLY IN THE AMOUNTS SPECIFIED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZERS WILL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER. FERTILIZERS WILL BE STORED IN AN ENCLOSED AREA UNDER COVER. THE CONTENTS OF PARTIALLY USED FERTILIZER BAGS WILL BE TRANSFERRED TO SEALABLE CONTAINERS TO AVOID SPILLS.

11.1.1.3.3. PAINTS: ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. THE EXCESS WILL BE DISPOSED OF ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE STATE AND LOCAL REGULATIONS.

11.1.1.3.4. CONCRETE TRUCKS: CONTRACTORS WILL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED AND NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE. UPON COMPLETION OF CONSTRUCTION WASHOUT AREAS WILL BE PROPERLY STABILIZED.

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11.2. SPILL MANAGEMENT

- 11.2.1. IN ADDITION TO THE PREVIOUS HOUSEKEEPING AND MANAGEMENT PRACTICES, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP IF NECESSARY.
- 11.2.2. FOR ALL HAZARDOUS MATERIALS STORED ON SITE, THE MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEAN UP WILL BE CLEARLY POSTED. SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF THE INFORMATION AND CLEANUP SUPPLIES.
- 11.2.3. APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT WILL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE AREA ON-SITE AND UNDER COVER. AS APPROPRIATE, EQUIPMENT AND MATERIALS MAY INCLUDE ITEMS SUCH AS BOOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR CLEAN UP PURPOSES.
- 11.2.4. ALL SPILLS WILL BE CLEANED IMMEDIATELY AFTER DISCOVERY AND THE MATERIALS DISPOSED OF PROPERLY. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
- 11.2.5. THE CONTRACTOR'S SITE SUPERINTENDENT WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SITE SUPERINTENDENT HAS HAD APPROPRIATE TRAINING FOR HAZARDOUS MATERIALS HANDLING, SPILL MANAGEMENT, AND CLEANUP.
- 11.2.6. IF SPILLS REPRESENT AN IMMINENT THREAT OF ESCAPING THE SITE AND ENTERING RECEIVING WATERS, PERSONNEL WILL RESPOND IMMEDIATELY TO CONTAIN THE RELEASE AND NOTIFY THE SUPERINTENDENT AFTER THE SITUATION HAS BEEN STABILIZED.
- 11.2.7. IF OIL SHEEN IS OBSERVED ON SURFACE WATER (E.G. SETTLING PONDS, DETENTION PONDS, SWALES), ACTION WILL BE TAKEN IMMEDIATELY TO REMOVE THE MATERIAL CAUSING THE SHEEN. THE CONTRACTOR WILL USE APPROPRIATE MATERIALS TO CONTAIN AND ABSORB THE SPILL. THE SOURCE OF THE OIL SHEEN WILL ALSO BE IDENTIFIED AND REMOVED OR REPAIRED AS NECESSARY TO PREVENT FURTHER RELEASES.
- 11.2.8. IF A SPILL OCCURS THE CONTRACTOR WILL BE RESPONSIBLE FOR COMPLETING THE SPILL REPORTING FORM.
- 11.2.9. SPILL RESPONSE EQUIPMENT WILL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR AS NECESSARY TO REPLACE ANY MATERIALS USED IN SPILL RESPONSE ACTIVITIES.

11.3. SPILL NOTIFICATION (5.1)

- WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO OR IN EXCESS OF A REPORTABLE QUANTITY ESTABLISHED UNDER EITHER 40 CFR 117 OR 40 CFR 302 OCCURS DURING A 24 HOUR PERIOD:
- 11.3.1. A WRITTEN DESCRIPTION OF THE RELEASE, DATE OF RELEASE AND
- 11.3.2. CIRCUMSTANCES LEADING TO THE RELEASE, WHAT ACTIONS WERE TAKEN TO MITIGATE EFFECTS OF THE RELEASE, AND STEPS TAKEN TO MINIMIZE THE CHANCE OF FUTURE OCCURRENCES WILL BE SUBMITTED TO THE APPROPRIATE TDEC ENVIRONMENTAL FIELD OFFICE WITHIN 14 DAYS OF KNOWLEDGE OF THE RELEASE.
- 11.3.3. THE SWPPP MUST BE MODIFIED WITHIN 14 DAYS OF KNOWLEDGE OF THE RELEASE PROVIDING A DESCRIPTION OF THE RELEASE, CIRCUMSTANCES LEADING TO THE RELEASE, AND THE DATE OF RELEASE. THE SWPPP WILL BE REVIEWED AND MODIFIED AS NECESSARY TO IDENTIFY MEASURES TO PREVENT THE REOCCURRENCE OF SUCH RELEASES AND TO RESPOND TO SUCH RELEASES.

12. RECORD-KEEPING

12.1. REQUIRED RECORDS

- CONTRACTOR OR THEIR DESIGNEE WILL MAINTAIN AT THE SITE THE FOLLOWING RECORDS OF CONSTRUCTION ACTIVITIES (3.5.3.1.m) (6.2.1):
- 12.1.1. THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR
- 12.1.2. THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE
- 12.1.3. THE DATES WHEN STABILIZATION MEASURES ARE INITIATED
- 12.1.4. RECORDS OF TWICE WEEKLY EPSC INSPECTION REPORTS AND CORRECTIVE MEASURES
- 12.1.5. RECORDS OF QUALITY ASSURANCE SITE ASSESSMENTS

12.1.6. COPY OF SITE EPSC INSPECTOR'S TDEC LEVEL 1 CERTIFICATION

12.1.7. RAINFALL MONITORING PLAN (3.5.3.1.o)

12.1.7.1. EQUIPMENT

AT A MINIMUM, THE CONTRACTOR WILL INSTALL A FENCE POST TYPE RAIN GAUGE TO MEASURE RAINFALL. THE STANDARD FENCE POST RAIN GAUGE WILL BE A WEDGE-SHAPED GAUGE THAT MEASURES UP TO 6 INCHES OF RAINFALL. AN ENGLISH SCALE WILL BE PROVIDED ON ONE FACE, WITH A METRIC SCALE ON THE OTHER FACE. GRADUATION WILL BE PERMANENTLY MOLDED IN DURABLE WEATHER-RESISTANT PLASTIC. THE MINIMUM GRADUATION WILL BE 0.01 INCH (OR 0.1MM). AN ALUMINUM BRACKET WITH SCREWS MAY BE USED TO MOUNT THE GAUGE ON A WOODEN SUPPORT.

12.1.7.2. LOCATION

THE RAIN GAUGE WILL BE LOCATED AT THE PROJECT SITE, IN AN OPEN AREA SUCH THAT THE MEASUREMENT WILL NOT BE INFLUENCED BY OUTSIDE FACTORS (I.E. OVERHANGS, GUTTER, TREES, ETC). ALTERNATIVELY, A REFERENCE SITE MAY BE USED. A REFERENCE SITE IS THE DOCUMENTATION FROM THE CLOSEST GAUGE WITHIN PROXIMITY OF THE PROJECT FROM A RECOGNIZED SOURCE SUCH AS THE NOAA NATIONAL WEATHER SERVICE.

12.1.7.3. METHODS

12.1.7.3.1. RAINFALL MONITORING WILL BE INITIATED PRIOR TO CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING, OR FILLING, EXCEPT AS SUCH MINIMAL CLEARING MAY BE NECESSARY TO INSTALL A RAIN GAUGE IN AN OPEN AREA. THE RAIN GAUGE WILL BE CHECKED FOR OPERATIONAL SOUNDNESS DAILY (DURING NORMAL BUSINESS HOURS) IN WET TIMES AND WEEKLY IN DRY TIMES. GAUGES WILL BE REPAIRED OR REPLACED ON THE SAME DAY IF FOUND TO BE NON-OPERATIONAL OR MISSING.

12.1.7.3.2. EACH RAIN GAUGE WILL BE READ (FOR DETAILED RECORDS OF RAINFALL) AND EMPTIED AFTER EVERY RAINFALL EVENT OCCURRING ON THE PROJECT SITE AT APPROXIMATELY THE SAME TIME OF THE DAY (DURING NORMAL BUSINESS HOURS). DURING PERIODS OF DRY CONDITIONS, IT WILL NOT BE NECESSARY TO READ THE RAIN GAUGE EVERY DAY. IN LIEU OF THIS REQUIREMENT ON WEEKENDS AND ON STATE HOLIDAYS, THE RAIN GAUGES CAN BE EMPTIED THE NEXT BUSINESS DAY AND A REFERENCE SITE USED FOR A RECORD OF DAILY AMOUNT OF PRECIPITATION FOR THOSE DAYS. A REFERENCE SITE IS THE DOCUMENTATION FROM THE CLOSEST GAUGE WITHIN PROXIMITY OF THE PROJECT FROM A RECOGNIZED SOURCE SUCH AS THE NOAA NATIONAL WEATHER SERVICE.

12.1.7.3.3. DETAILED RECORDS WILL BE RECORDED OF RAINFALL EVENTS INCLUDING DATES, AMOUNTS OF RAINFALL, AND THE APPROXIMATE DURATION (OR THE STARTING AND ENDING TIMES).

12.1.7.3.4. IF, IN THE EVENT THAT THE RAINFALL EVENT IS STILL IN PROGRESS AT THE DAILY RECORDING TIME, THE GAUGE WILL BE EMPTIED AND THE RECORD WILL INDICATE THAT THE STORM EVENT WAS STILL IN PROGRESS.

12.1.7.3.5. RAIN GAUGE INFORMATION (DETAILED RECORDS), INCLUDING THE LOCATION OF THE NEAREST OUTFALL, WILL BE RECORDED ON THE EPSC INSPECTION REPORT FORMS AT THE TIME OF MEASUREMENT.

12.2. KEEPING PLANS CURRENT (3.4)

CONTRACTOR OR THEIR DESIGNEE WILL MODIFY AND UPDATE THE SWPPP WHEN ANY OF THE FOLLOWING CONDITIONS APPLY:

- 12.2.1. WHENEVER THERE IS A CHANGE IN THE SCOPE OF THE PROJECT THAT WOULD BE EXPECTED TO HAVE A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO THE WATERS OF THE STATE AND WHICH HAS NOT OTHERWISE BEEN ADDRESSED IN THE SWPPP;

12.2.2. WHENEVER INSPECTIONS OR INVESTIGATIONS BY SITE OPERATORS, LOCAL, STATE, OR FEDERAL OFFICIALS INDICATE THE SWPPP IS PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS FROM CONSTRUCTION ACTIVITY SOURCES, OR IS OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY; WHERE LOCAL, STATE, OR FEDERAL OFFICIALS DETERMINE THAT THE SWPPP IS INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES, A COPY OF ANY CORRESPONDENCE TO THAT EFFECT MUST BE RETAINED IN THE SWPPP;

12.2.3. WHEN ANY NEW OPERATOR AND/OR SUB-OPERATOR IS ASSIGNED OR RELIEVED OF THEIR RESPONSIBILITY TO IMPLEMENT A PORTION OF THE SWPPP;

12.2.4. TO PREVENT A NEGATIVE IMPACT TO LEGALLY PROTECTED STATE OR FEDERALLY LISTED OR PROPOSED THREATENED OR ENDANGERED AQUATIC FAUNA;

12.2.5. WHEN THERE IS A CHANGE IN CHEMICAL TREATMENT METHODS INCLUDING: USE OF DIFFERENT TREATMENT CHEMICALS, DIFFERENT DOSAGE OR APPLICATION RATES OR A DIFFERENT AREA OF APPLICATION NOT SPECIFIED ON THE EPSC PLANS; OR

12.2.6. WHEN A TMDL IS DEVELOPED FOR THE RECEIVING WATERS FOR A POLLUTANT OF CONCERN (SILTATION AND/OR HABITAT ALTERATION)

12.3. MAKING PLANS ACCESSIBLE

12.3.1. CONTRACTOR WILL RETAIN A COPY OF THIS SWPPP (INCLUDING A COPY OF THE "DOCUMENTATION AND PERMITS" BINDER AT THE CONSTRUCTION SITE (OR OTHER LOCATION ACCESSIBLE TO TDEC AND THE PUBLIC) FROM THE DATE CONSTRUCTION COMMENCES TO THE DATE OF FINAL STABILIZATION. CONTRACTOR WILL HAVE A COPY OF THE SWPPP AVAILABLE AT THE LOCATION WHERE WORK IS OCCURRING ON-SITE FOR THE USE OF OPERATORS AND THOSE IDENTIFIED AS HAVING RESPONSIBILITIES UNDER THE SWPPP WHENEVER THEY ARE ON THE CONSTRUCTION SITE. (6.2)

12.3.2. PRIOR TO THE INITIATION OF LAND DISTURBING ACTIVITIES AND UNTIL THE SITE HAS MET THE FINAL STABILIZATION CRITERIA, CONTRACTOR OR THEIR DESIGNEE WILL POST A NOTICE NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE WITH THE FOLLOWING INFORMATION (3.3.3) (6.2.1):

12.3.2.1. A COPY OF THE NOTICE OF COVERAGE (NOC) WITH THE NPDES PERMIT NUMBER FOR THE PROJECT;

12.3.2.2. THE INDIVIDUAL NAME, COMPANY NAME, E-MAIL ADDRESS (IF APPLICABLE) AND TELEPHONE NUMBER OF THE LOCAL PROJECT SITE OWNER AND OPERATOR CONTACT;

12.3.2.3. A BRIEF DESCRIPTION OF THE PROJECT; AND

12.3.2.4. THE LOCATION OF THE SWPPP.


12.3.3. ALL INFORMATION DESCRIBED IN SECTION 10.3.2 MUST BE MAINTAINED IN LEGIBLE CONDITION. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE DUE TO SAFETY CONCERNS, THE NOTICE SHALL BE POSTED IN A LOCAL BUILDING. THE NOTICE MUST BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION WHERE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY.

12.4. NOTICE OF TERMINATION (8.0)

12.4.1. WHEN ALL STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES THAT ARE AUTHORIZED BY THE PERMIT ARE ELIMINATED BY FINAL STABILIZATION, CONTRACTOR WILL SUBMIT A NOTICE OF TERMINATION (NOT) THAT IS SIGNED IN ACCORDANCE WITH THE PERMIT TO THE LOCAL ENVIRONMENTAL FIELD OFFICE.

12.4.2. FOR THE PURPOSES OF THE CERTIFICATION REQUIRED BY THE NOT, THE ELIMINATION OF STORMWATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY MEANS THE FOLLOWING:

12.4.2.1. ALL EARTH-DISTURBING ACTIVITIES ON THE SITE ARE COMPLETED AND ALL DISTURBED SOILS AT THE PORTION OF THE CONSTRUCTION SITE WHERE THE OPERATOR HAD CONTROL HAVE BEEN FINALLY STABILIZED; AND

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- 12.4.2.2. ALL CONSTRUCTION MATERIALS, WASTE AND WASTE HANDLING DEVICES, AND ALL EQUIPMENT, AND VEHICLES THAT WERE USED DURING CONSTRUCTION HAVE BEEN REMOVED AND PROPERLY DISPOSED; AND
- 12.4.2.3. ALL STORMWATER CONTROLS THAT WERE INSTALLED AND MAINTAINED DURING CONSTRUCTION, EXCEPT THOSE THAT ARE INTENDED FOR LONG-TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE, HAVE BEEN REMOVED; AND
- 12.4.2.4. ALL POTENTIAL POLLUTANTS AND POLLUTANT GENERATING ACTIVITIES ASSOCIATED WITH CONSTRUCTION HAVE BEEN REMOVED; AND
- 12.4.2.5. THE PERMITTEE HAS IDENTIFIED WHO IS RESPONSIBLE FOR ONGOING MAINTENANCE OF ANY STORMWATER CONTROLS LEFT ON THE SITE FOR LONG-TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE; AND
- 12.4.2.6. TEMPORARY EPSC MEASURES HAVE BEEN OR WILL BE REMOVED AT AN APPROPRIATE TIME TO ENSURE FINAL STABILIZATION IS MAINTAINED; AND
- 12.4.2.7. ALL STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES FROM THE IDENTIFIED SITE THAT ARE AUTHORIZED BY A NPDES GENERAL PERMIT HAVE OTHERWISE BEEN ELIMINATED FROM THE PORTION OF THE CONSTRUCTION SITE WHERE THE OPERATOR HAD CONTROL.

12.5. RETENTION OF RECORDS (6.2)

THE PERMITTEE WILL RETAIN COPIES OF THE SWPPP, ALL REPORTS REQUIRED BY THE PERMIT, AND RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT FOR THE PROJECT FOR A PERIOD OF AT LEAST THREE (3) YEARS FROM THE DATE THE NOT WAS FILED.

13. SITE WIDE/PRIMARY PERMITTEE CERTIFICATION (7.7.5)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

 AUTHORIZED PERSONNEL SIGNATURE (3.3.1)

 PRINTED NAME

 TITLE

 DATE

14. SECONDARY PERMITTEE (OPERATOR) CERTIFICATION (7.7.6)

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE REVIEWED THIS DOCUMENT, ANY ATTACHMENTS, AND THE SWPPP REFERENCED ABOVE. BASED ON MY INQUIRY OF THE CONSTRUCTION SITE OWNER/DEVELOPER IDENTIFIED ABOVE AND/OR MY INQUIRY OF THE PERSON DIRECTLY RESPONSIBLE FOR ASSEMBLING THIS NOI AND SWPPP, I BELIEVE THE INFORMATION SUBMITTED IS ACCURATE. I AM AWARE THAT THIS NOI, IF APPROVED, MAKES THE ABOVE-DESCRIBED CONSTRUCTION ACTIVITY SUBJECT TO NPDES PERMIT NUMBER TNR100000, AND THAT CERTAIN OF MY ACTIVITIES ON-SITE ARE THEREBY REGULATED. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS, AND FOR FAILURE TO COMPLY WITH THESE PERMIT REQUIREMENTS.

 AUTHORIZED OPERATOR (CONTRACTOR) SIGNATURE (3.3.1)

 PRINTED NAME

 TITLE

 DATE

15. ENVIRONMENTAL PERMITS (9.0)

LIST ALL ENVIRONMENTAL PERMITS AND EXPIRATION DATES FOR PROJECT

ENVIRONMENTAL PERMITS			
PERMIT	YES OR NO	PERMIT OR TRACKING NO.	EXPIRATION DATE*
TDEC ARAP	YES	PENDING	
CORPS OF ENGINEERS (COE)	NO		
TVA 26A	NO		
TDEC CGP	YES	PENDING	
OTHER:	N/A		



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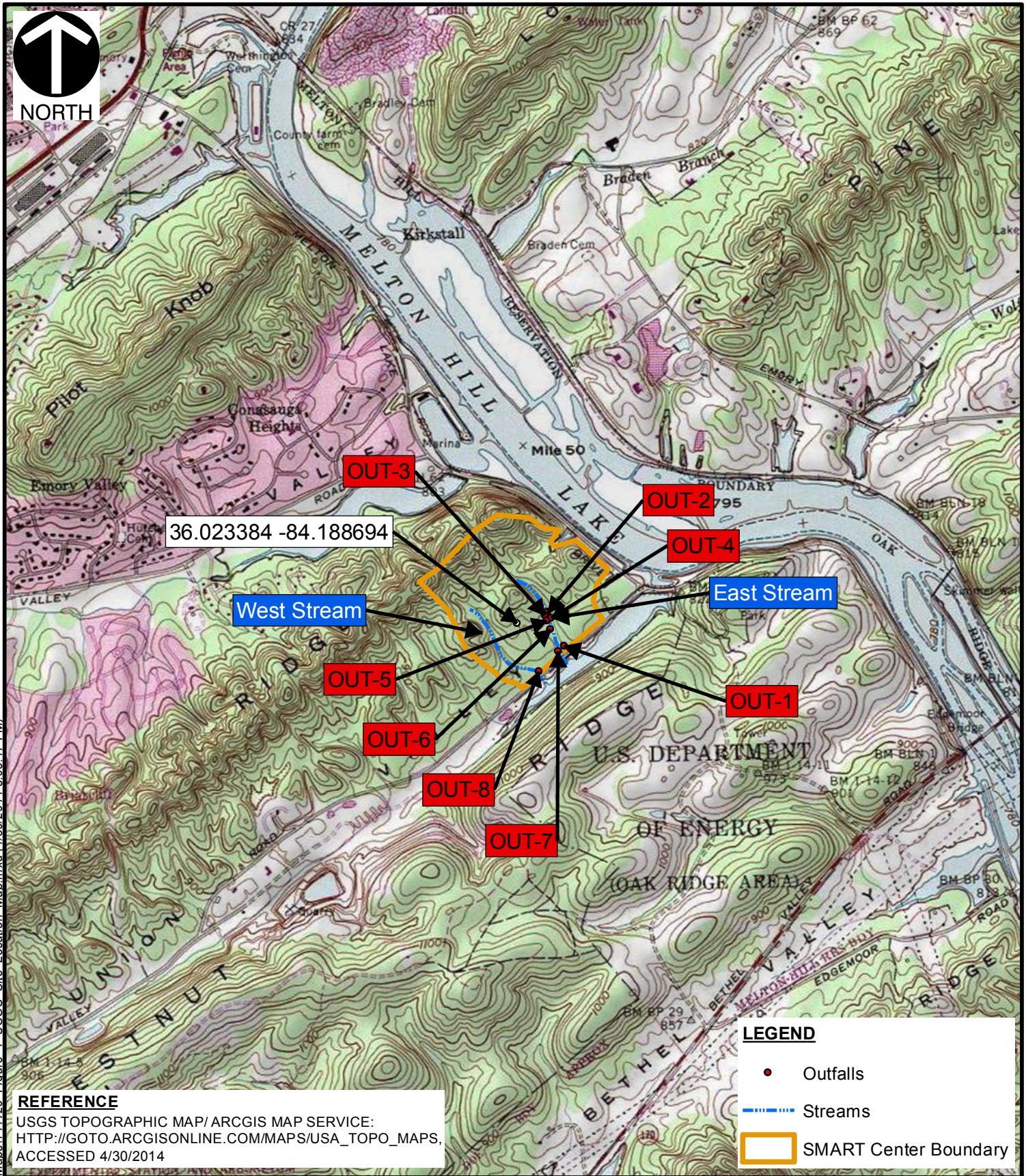
STORM WATER POLLUTION
 PREVENTION PLAN

DRAWN BY: JMB
 DATE: 4/30/2014

CHECKED BY: SEC
 DATE: 4/30/2014

PROJECT NO.: 132-670

SHEET NO.: 5



REFERENCE
 USGS TOPOGRAPHIC MAP/ ARCGIS MAP SERVICE:
[HTTP://GOTO.ARCGISONLINE.COM/MAPS/USA_TOPO_MAPS](http://gto.arcgis.com/maps/usa_topo_maps),
 ACCESSED 4/30/2014

LEGEND

- Outfalls
- — — Streams
- SMART Center Boundary



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 OAK RIDGE, TN

USGS SITE LOCATION MAP

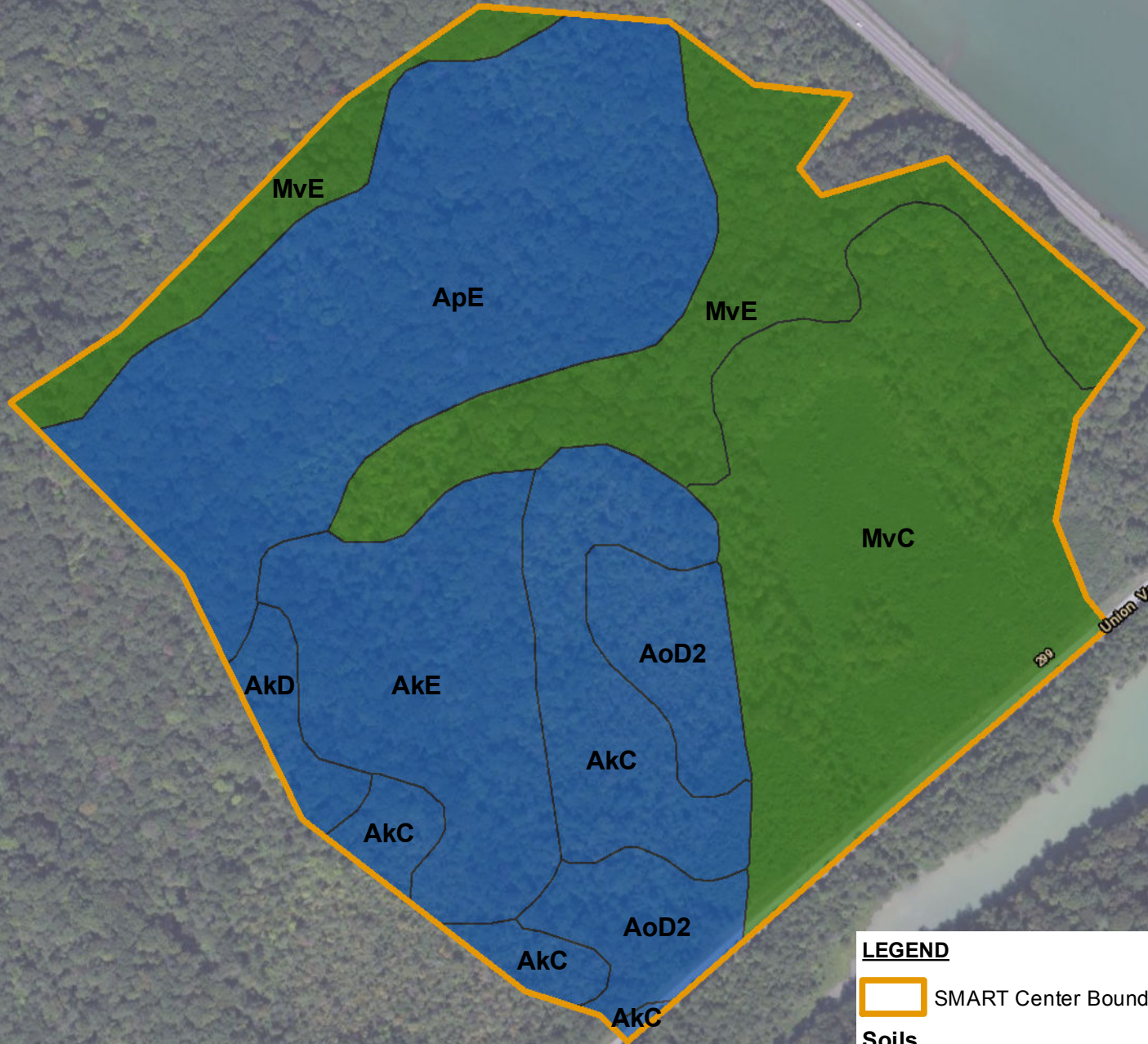
USVR-NASHI.P:20141141-1201-GIS/Maps/141120_Figure 1_USGS_Site_Location_Map.mxd (4/30/2014 3:08:47 PM)

DRAWN BY:	JMB	CHECKED BY:	SEC	APPROVED BY:	DRAFT	FIGURE NO:	1
DATE:	4/30/2014	SCALE:	1" = 2,000'	PROJECT NO:	141-120		



Melton Lake Dr

Union Valley Rd



LEGEND

- SMART Center Boundary
- Soils**
- HSG**
- C
- D

REFERENCE
 ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
[HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY](http://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY),
 ACCESSED 4/30/2014, IMAGERY DATE: 2010.

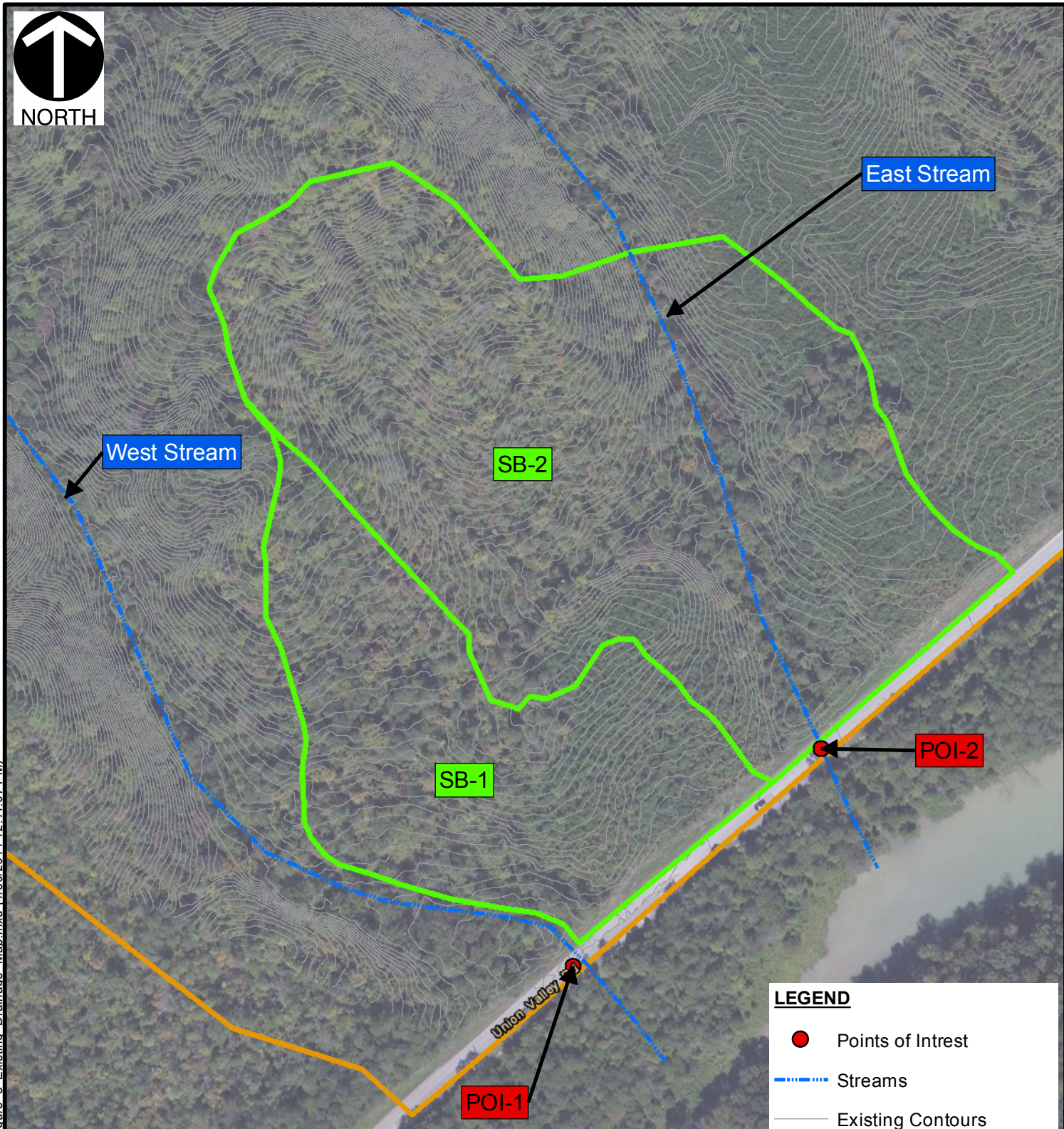
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 OAK RIDGE, TN

SOILS MAP

DRAWN BY:	JMB	CHECKED BY:	SEC	APPROVED BY:	DRAFT	FIGURE NO:	2
DATE:	4/30/2014	SCALE:	1" = 400'	PROJECT NO:	141-120		



\\SVR-NASHI.P\120141\41-120-GIS\Maps\141120_Figure 3_Existing Drainage Map.mxd (4/30/2014 12:11:07 PM)

REFERENCE
ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
[HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY](http://gto.arcgis.com/maps/world_imagery),
ACCESSED 4/30/2014, IMAGERY DATE: 2010.

LEGEND

- Points of Intrest
- Streams
- Existing Contours
- Existing Watershed
- SMART Center Boundary



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RESEARCH, & TRAINING (SMART) CENTER
OAK RIDGE, TN

EXISTING DRAINAGE MAP

DRAWN BY:	JMB	CHECKED BY:	SEC	APPROVED BY:	DRAFT	FIGURE NO:	3
DATE:	4/30/2014	SCALE:	1" = 200'	PROJECT NO:	141-120		



East Stream

SB-2A

SB-1A

SB-2B

SB-1B

POI-2

West Stream

POI-1

LEGEND

- Points of Interest
- Streams
- Proposed Contours
- Proposed Watershed
- Limits of disturbance
- SMART Center Boundary

REFERENCE
 ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
[HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY](http://gto.arcgis.com/maps/world_imagery),
 ACCESSED 4/30/2014, IMAGERY DATE: 2010.

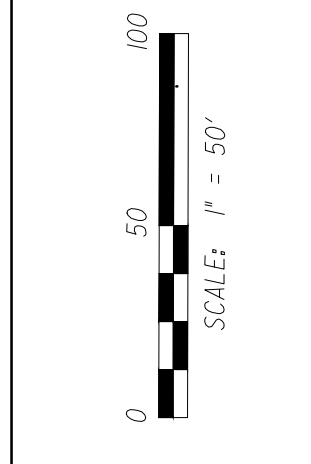


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PROPOSED DRAINAGE MAP

I:\SVR-NASHI\PI\20141141-1201-GIS\Maps\141120_Figure 4 Proposed Drainage Map.mxd (4/30/2014 12:10:26 PM)

DRAWN BY:	JMB	CHECKED BY:	SEC	APPROVED BY:	DRAFT	FIGURE NO:	4
DATE:	4/30/2014	SCALE:	1" = 200'	PROJECT NO:	141-120		



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MASTER STORMWATER
 DRAINAGE PLAN

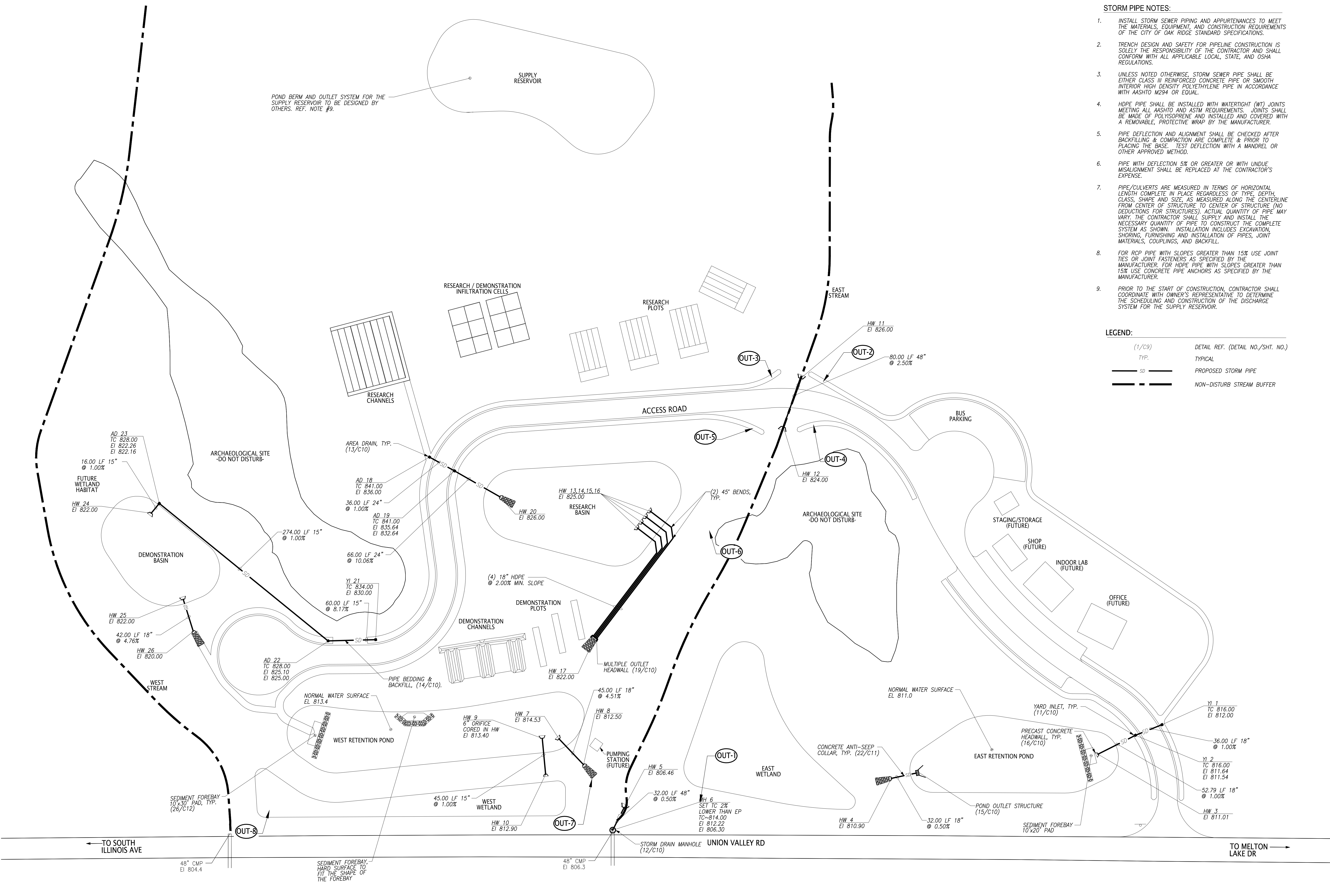


STORM PIPE NOTES:

1. INSTALL STORM SEWER PIPING AND APPURTENANCES TO MEET THE MATERIALS, EQUIPMENT, AND CONSTRUCTION REQUIREMENTS OF THE CITY OF OAK RIDGE STANDARD SPECIFICATIONS.
2. TRENCH DESIGN AND SAFETY FOR PIPELINE CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM WITH ALL APPLICABLE LOCAL, STATE, AND OSHA REGULATIONS.
3. UNLESS NOTED OTHERWISE, STORM SEWER PIPE SHALL BE EITHER CLASS III REINFORCED CONCRETE PIPE OR SMOOTH INTERIOR HIGH DENSITY POLYETHYLENE PIPE IN ACCORDANCE WITH AASHTO M294 OR EQUAL.
4. HDPE PIPE SHALL BE INSTALLED WITH WATERTIGHT (WT) JOINTS MEETING ALL AASHTO AND ASTM REQUIREMENTS. JOINTS SHALL BE MADE OF POLYISOPRENE AND INSTALLED AND COVERED WITH A REMOVABLE, PROTECTIVE WRAP BY THE MANUFACTURER.
5. PIPE DEFLECTION AND ALIGNMENT SHALL BE CHECKED AFTER BACKFILLING & COMPACTION ARE COMPLETE & PRIOR TO PLACING THE BASE. TEST DEFLECTION WITH A MANDREL OR OTHER APPROVED METHOD.
6. PIPE WITH DEFLECTION 5% OR GREATER OR WITH UNDUE MISALIGNMENT SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
7. PIPE/CULVERTS ARE MEASURED IN TERMS OF HORIZONTAL LENGTH COMPLETE IN PLACE REGARDLESS OF TYPE, DEPTH, CLASS, SHAPE AND SIZE, AS MEASURED ALONG THE CENTERLINE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE (NO DEDUCTIONS FOR STRUCTURES). ACTUAL QUANTITY OF PIPE MAY VARY. THE CONTRACTOR SHALL SUPPLY AND INSTALL THE NECESSARY QUANTITY OF PIPE TO CONSTRUCT THE COMPLETE SYSTEM AS SHOWN. INSTALLATION INCLUDES EXCAVATION, SHORING, FURNISHING AND INSTALLATION OF PIPES, JOINT MATERIALS, COUPLINGS, AND BACKFILL.
8. FOR RCP PIPE WITH SLOPES GREATER THAN 15% USE JOINT TIES OR JOINT FASTENERS AS SPECIFIED BY THE MANUFACTURER. FOR HDPE PIPE WITH SLOPES GREATER THAN 15% USE CONCRETE PIPE ANCHORS AS SPECIFIED BY THE MANUFACTURER.
9. PRIOR TO THE START OF CONSTRUCTION, CONTRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVE TO DETERMINE THE SCHEDULING AND CONSTRUCTION OF THE DISCHARGE SYSTEM FOR THE SUPPLY RESERVOIR.

LEGEND:

(1/C9)	DETAIL REF. (DETAIL NO./SHT. NO.)
TYP.	TYPICAL
SD	PROPOSED STORM PIPE
---	NON-DISTURB STREAM BUFFER



POND BERM AND OUTLET SYSTEM FOR THE SUPPLY RESERVOIR TO BE DESIGNED BY OTHERS. REF. NOTE #9.

ARCHAEOLOGICAL SITE -DO NOT DISTURB-

ARCHAEOLOGICAL SITE -DO NOT DISTURB-

SEDIMENT FOREBAY 10'x30' PAD, TYP. (26/C12)

SEDIMENT FOREBAY, HARD SURFACE TO FIT THE SHAPE OF THE FOREBAY

STORM DRAIN MANHOLE (12/C10)

PRECAST CONCRETE HEADWALL, TYP. (16/C10)

MULTIPLE OUTLET HEADWALL (19/C10)

DEMONSTRATION CHANNELS

DEMONSTRATION PLOTS

RESEARCH CHANNELS

RESEARCH / DEMONSTRATION INFILTRATION CELLS

ACCESS ROAD

BUS PARKING

SHOP (FUTURE)

INDOOR LAB (FUTURE)

OFFICE (FUTURE)

STAGING/STORAGE (FUTURE)

EAST STREAM

WEST STREAM

TO SOUTH ILLINOIS AVE

TO MELTON LAKE DR

48" CMP EI 804.4

48" CMP EI 806.3

HW 3 EI 811.01

52.79 LF 18" @ 1.00%

Y1 2 TC 816.00 EI 811.64 EI 811.54

36.00 LF 18" @ 1.00%

Y1 1 TC 816.00 EI 812.00

NORMAL WATER SURFACE EL 811.0

45.00 LF 18" @ 4.51%

HW 8 EI 812.50

HW 7 EI 814.53

HW 9 ORIFICE CORED IN HW EI 813.40

HW 10 EI 812.90

HW 17 EI 822.00

HW 13,14,15,16 EI 825.00

HW 20 EI 826.00

AD 19 TC 841.00 EI 835.64 EI 832.64

AD 18 TC 841.00 EI 836.00

AD 23 TC 828.00 EI 822.26 EI 822.16

AD 22 TC 828.00 EI 825.10 EI 825.00

AD 19 TC 841.00 EI 835.64 EI 832.64

AD 18 TC 841.00 EI 836.00

AD 23 TC 828.00 EI 822.26 EI 822.16

AD 22 TC 828.00 EI 825.10 EI 825.00

AD 19 TC 841.00 EI 835.64 EI 832.64

AD 18 TC 841.00 EI 836.00

AD 23 TC 828.00 EI 822.26 EI 822.16

AD 22 TC 828.00 EI 825.10 EI 825.00

AD 19 TC 841.00 EI 835.64 EI 832.64

AD 18 TC 841.00 EI 836.00

AD 23 TC 828.00 EI 822.26 EI 822.16

AD 22 TC 828.00 EI 825.10 EI 825.00

AD 19 TC 841.00 EI 835.64 EI 832.64

AD 18 TC 841.00 EI 836.00

HW 4 EI 810.90

32.00 LF 18" @ 0.50%

CONCRETE ANTI-SEEP COLLAR, TYP. (22/C11)

HW 6 SET TO 2% LOWER THAN EP TC=814.00 EI 812.22 EI 806.30

HW 5 EI 806.46

HW 8 EI 812.50

HW 7 EI 814.53

HW 9 ORIFICE CORED IN HW EI 813.40

HW 10 EI 812.90

HW 17 EI 822.00

HW 13,14,15,16 EI 825.00

HW 20 EI 826.00

AD 19 TC 841.00 EI 835.64 EI 832.64

AD 18 TC 841.00 EI 836.00

AD 23 TC 828.00 EI 822.26 EI 822.16

AD 22 TC 828.00 EI 825.10 EI 825.00

AD 19 TC 841.00 EI 835.64 EI 832.64

AD 18 TC 841.00 EI 836.00

AD 23 TC 828.00 EI 822.26 EI 822.16

AD 22 TC 828.00 EI 825.10 EI 825.00

AD 19 TC 841.00 EI 835.64 EI 832.64

AD 18 TC 841.00 EI 836.00

AD 23 TC 828.00 EI 822.26 EI 822.16

AD 22 TC 828.00 EI 825.10 EI 825.00

AD 19 TC 841.00 EI 835.64 EI 832.64

AD 18 TC 841.00 EI 836.00

AD 23 TC 828.00 EI 822.26 EI 822.16

AD 22 TC 828.00 EI 825.10 EI 825.00

AD 19 TC 841.00 EI 835.64 EI 832.64

AD 18 TC 841.00 EI 836.00

AD 23 TC 828.00 EI 822.26 EI 822.16

HW 11 EI 826.00

80.00 LF 48" @ 2.50%

OUT-2

OUT-3

OUT-4

OUT-5

OUT-6

OUT-7

OUT-8

OUT-1

OUT-2

OUT-3

OUT-4

OUT-5

HW 11 EI 826.00

80.00 LF 48" @ 2.50%

OUT-2

OUT-3

OUT-4

OUT-5

OUT-6

OUT-7

OUT-8

OUT-1

OUT-2

OUT-3

OUT-4

OUT-5

HW 11 EI 826.00

80.00 LF 48" @ 2.50%

OUT-2

OUT-3

OUT-4

OUT-5

OUT-6

OUT-7

OUT-8

OUT-1

OUT-2

OUT-3

OUT-4

OUT-5

HW 11 EI 826.00

80.00 LF 48" @ 2.50%

OUT-2

OUT-3

OUT-4

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OUT-1

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OUT-5

HW 11 EI 826.00

80.00 LF 48" @ 2.50%

OUT-2

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OUT-8

OUT-1

OUT-2

OUT-3

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OUT-5

HW 11 EI 826.00

80.00 LF 48" @ 2.50%

OUT-2

OUT-3

OUT-4

OUT-5

OUT-6

OUT-7

OUT-8

OUT-1

OUT-2

OUT-3

OUT-4

OUT-5

HW 11 EI 826.00

80.00 LF 48" @ 2.50%

OUT-2

OUT-3

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OUT-1

OUT-2

OUT-3

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OUT-5

HW 11 EI 826.00

80.00 LF 48" @ 2.50%

OUT-2

OUT-3

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OUT-5

HW 11 EI 826.00

80.00 LF 48" @ 2.50%

OUT-2

OUT-3

OUT-4

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OUT-1

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OUT-5

HW 11 EI 826.00

80.00 LF 48" @ 2.50%

OUT-2

OUT-3

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OUT-7

OUT-8

OUT-1

OUT-2

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OUT-4

OUT-5

HW 11 EI 826.00

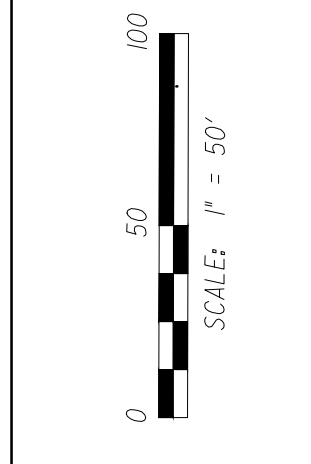
80.00 LF 48" @ 2.50%

OUT-2

OUT-3

OUT-4

OUT-5



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EROSION PREVENTION &
SEDIMENT CONTROL PLAN
STAGE 1



LEGEND:

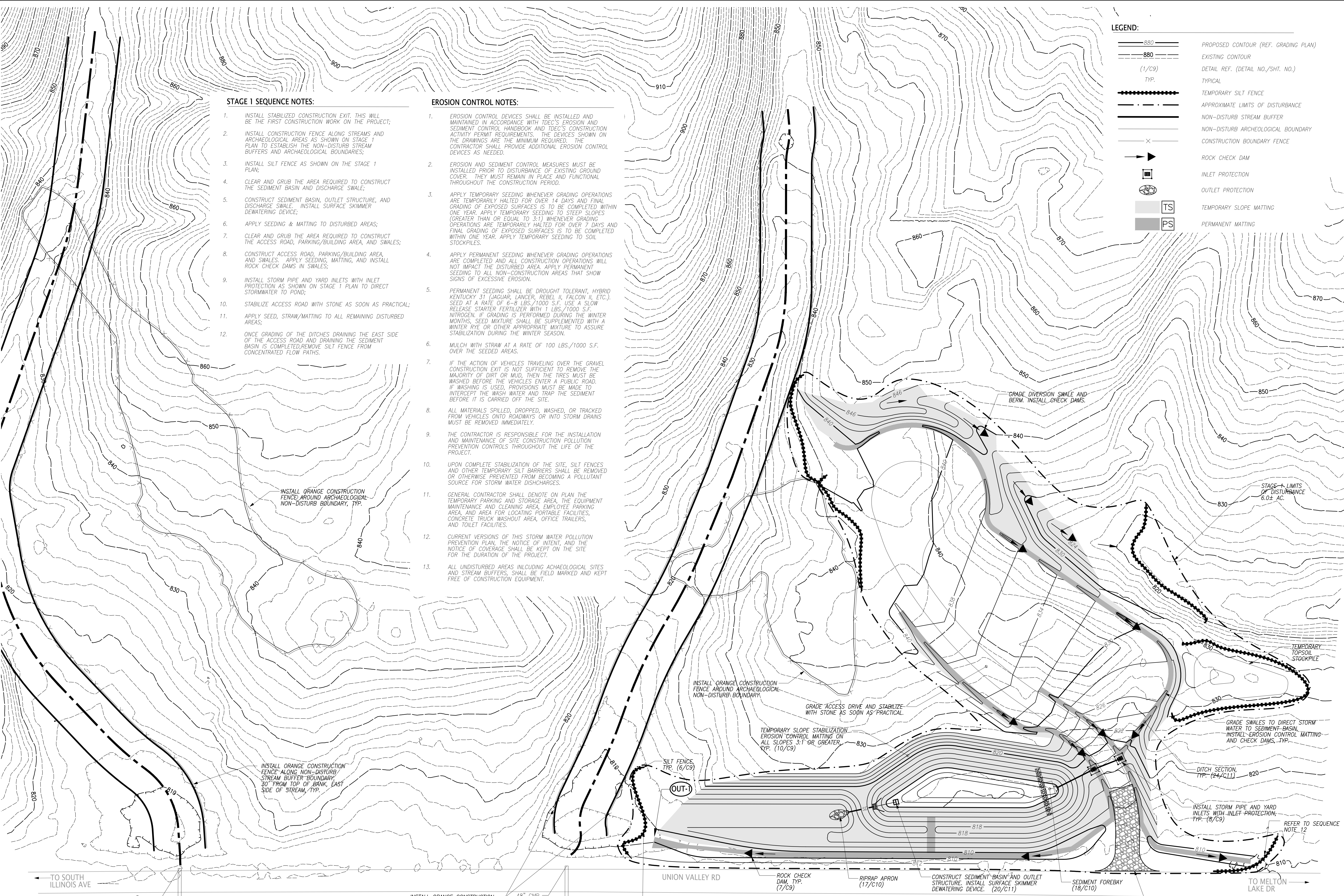
	PROPOSED CONTOUR (REF. GRADING PLAN)
	EXISTING CONTOUR
	DETAIL REF. (DETAIL NO./SHT. NO.)
	TYPICAL
	TEMPORARY SILT FENCE
	APPROXIMATE LIMITS OF DISTURBANCE
	NON-DISTURB STREAM BUFFER
	NON-DISTURB ARCHAEOLOGICAL BOUNDARY
	CONSTRUCTION BOUNDARY FENCE
	ROCK CHECK DAM
	INLET PROTECTION
	OUTLET PROTECTION
	TEMPORARY SLOPE MATTING
	PERMANENT MATTING

STAGE 1 SEQUENCE NOTES:

1. INSTALL STABILIZED CONSTRUCTION EXIT. THIS WILL BE THE FIRST CONSTRUCTION WORK ON THE PROJECT;
2. INSTALL CONSTRUCTION FENCE ALONG STREAMS AND ARCHAEOLOGICAL AREAS AS SHOWN ON STAGE 1 PLAN TO ESTABLISH THE NON-DISTURB STREAM BUFFERS AND ARCHAEOLOGICAL BOUNDARIES;
3. INSTALL SILT FENCE AS SHOWN ON THE STAGE 1 PLAN;
4. CLEAR AND GRUB THE AREA REQUIRED TO CONSTRUCT THE SEDIMENT BASIN AND DISCHARGE SWALE;
5. CONSTRUCT SEDIMENT BASIN, OUTLET STRUCTURE, AND DISCHARGE SWALE. INSTALL SURFACE SKIMMER DEWATERING DEVICE;
6. APPLY SEEDING & MATTING TO DISTURBED AREAS;
7. CLEAR AND GRUB THE AREA REQUIRED TO CONSTRUCT THE ACCESS ROAD, PARKING/BUILDING AREA, AND SWALES; APPLY SEEDING, MATTING, AND INSTALL ROCK CHECK DAMS IN SWALES;
8. CONSTRUCT ACCESS ROAD, PARKING/BUILDING AREA, AND SWALES. APPLY SEEDING, MATTING, AND INSTALL ROCK CHECK DAMS IN SWALES;
9. INSTALL STORM PIPE AND YARD INLETS WITH INLET PROTECTION AS SHOWN ON STAGE 1 PLAN TO DIRECT STORMWATER TO POND;
10. STABILIZE ACCESS ROAD WITH STONE AS SOON AS PRACTICAL;
11. APPLY SEED, STRAW/MATting TO ALL REMAINING DISTURBED AREAS;
12. ONCE GRADING OF THE DITCHES DRAINING THE EAST SIDE OF THE ACCESS ROAD AND DRAINING THE SEDIMENT BASIN IS COMPLETED, REMOVE SILT FENCE FROM CONCENTRATED FLOW PATHS.

EROSION CONTROL NOTES:

1. EROSION CONTROL DEVICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH IDEC'S EROSION AND SEDIMENT CONTROL HANDBOOK AND IDEC'S CONSTRUCTION ACTIVITY PERMIT REQUIREMENTS. THE DEVICES SHOWN ON THE DRAWINGS ARE THE MINIMUM REQUIRED; THE CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION CONTROL DEVICES AS NEEDED.
2. EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSTALLED PRIOR TO DISTURBANCE OF EXISTING GROUND COVER. THEY MUST REMAIN IN PLACE AND FUNCTIONAL THROUGHOUT THE CONSTRUCTION PERIOD.
3. APPLY TEMPORARY SEEDING WHENEVER GRADING OPERATIONS ARE TEMPORARILY HALTED FOR OVER 14 DAYS AND FINAL GRADING OF EXPOSED SURFACES IS TO BE COMPLETED WITHIN ONE YEAR. APPLY TEMPORARY SEEDING TO STEEP SLOPES (GREATER THAN OR EQUAL TO 3:1) WHENEVER GRADING OPERATIONS ARE TEMPORARILY HALTED FOR OVER 7 DAYS AND FINAL GRADING OF EXPOSED SURFACES IS TO BE COMPLETED WITHIN ONE YEAR. APPLY TEMPORARY SEEDING TO SOIL STOCKPILES.
4. APPLY PERMANENT SEEDING WHENEVER GRADING OPERATIONS ARE COMPLETED AND ALL CONSTRUCTION OPERATIONS WILL NOT IMPACT THE DISTURBED AREA. APPLY PERMANENT SEEDING TO ALL NON-CONSTRUCTION AREAS THAT SHOW SIGNS OF EXCESSIVE EROSION.
5. PERMANENT SEEDING SHALL BE DROUGHT TOLERANT, HYBRID KENTUCKY 31 (JAGUAR, LANGER, REBEL II, FALCON II, ETC.), SEED AT A RATE OF 6-8 LBS./1000 S.F. USE A SLOW RELEASE STARTER FERTILIZER WITH 1 LBS./1000 S.F. NITROGEN. IF GRADING IS PERFORMED DURING THE WINTER MONTHS, SEED MIXTURE SHALL BE SUPPLEMENTED WITH A WINTER RYE OR OTHER APPROPRIATE MIXTURE TO ASSURE STABILIZATION DURING THE WINTER SEASON.
6. MULCH WITH STRAW AT A RATE OF 100 LBS./1000 S.F. OVER THE SEEDED AREAS.
7. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION EXIT IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.
8. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
9. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF SITE CONSTRUCTION POLLUTION PREVENTION CONTROLS THROUGHOUT THE LIFE OF THE PROJECT.
10. UPON COMPLETE STABILIZATION OF THE SITE, SILT FENCES AND OTHER TEMPORARY SILT BARRIERS SHALL BE REMOVED OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.
11. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA, THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, CONCRETE TRUCK WASHOUT AREA, OFFICE TRAILERS, AND TOILET FACILITIES.
12. CURRENT VERSIONS OF THIS STORM WATER POLLUTION PREVENTION PLAN, THE NOTICE OF INTENT, AND THE NOTICE OF COVERAGE SHALL BE KEPT ON THE SITE FOR THE DURATION OF THE PROJECT.
13. ALL UNDISTURBED AREAS INCLUDING ARCHAEOLOGICAL SITES AND STREAM BUFFERS, SHALL BE FIELD MARKED AND KEPT FREE OF CONSTRUCTION EQUIPMENT.



TO SOUTH ILLINOIS AVE

48" CMP
El 804.4

INSTALL ORANGE CONSTRUCTION FENCE ALONG NON-DISTURB STREAM BUFFER BOUNDARY 30' FROM TOP OF BANK, BOTH SIDES OF STREAM. (2/C9)

48" CMP
El 806.3

REFER TO SEQUENCE NOTE 12

UNION VALLEY RD

ROCK CHECK DAM, TYP. (7/C9)

RIPRAP APRON (17/C10)

CONSTRUCT SEDIMENT BASIN AND OUTLET STRUCTURE. INSTALL SURFACE SKIMMER DEWATERING DEVICE. (20/C11)

SEDIMENT FOREBAY (18/C10)

CONSTRUCTION ENTRANCE/EXIT (5/C9)

TO MELTON LAKE DR

DITCH SECTION, TYP. (24/C11)

GRADE SWALES TO DIRECT STORM WATER TO SEDIMENT BASIN. INSTALL EROSION CONTROL MATTING AND CHECK DAMS, TYP.

TEMPORARY TOPSOIL STOCKPILE

STAGE 1 LIMITS OF DISTURBANCE 6.0± AC.

GRADE DIVERSION SWALE AND BERM. INSTALL CHECK DAMS.

INSTALL ORANGE CONSTRUCTION FENCE AROUND ARCHAEOLOGICAL NON-DISTURB BOUNDARY

GRADE ACCESS DRIVE AND STABILIZE WITH STONE AS SOON AS PRACTICAL.

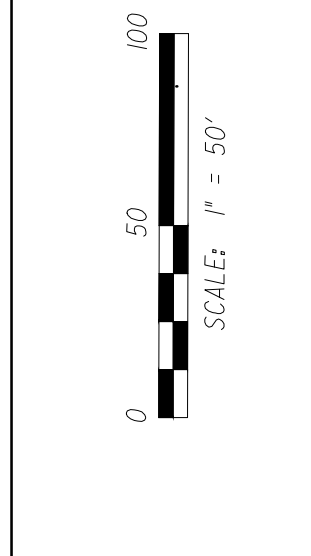
TEMPORARY SLOPE STABILIZATION EROSION CONTROL MATTING ON ALL SLOPES 3:1 OR GREATER, TYP. (10/C9)

SILT FENCE, TYP. (6/C9)

INSTALL ORANGE CONSTRUCTION FENCE ALONG NON-DISTURB STREAM BUFFER BOUNDARY 30' FROM TOP OF BANK, EAST SIDE OF STREAM, TYP.

INSTALL ORANGE CONSTRUCTION FENCE AROUND ARCHAEOLOGICAL NON-DISTURB BOUNDARY, TYP.

INSTALL STORM PIPE AND YARD INLETS WITH INLET PROTECTION, TYP. (8/C9) REFER TO SEQUENCE NOTE 12



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EROSION PREVENTION &
SEDIMENT CONTROL PLAN
STAGE 2



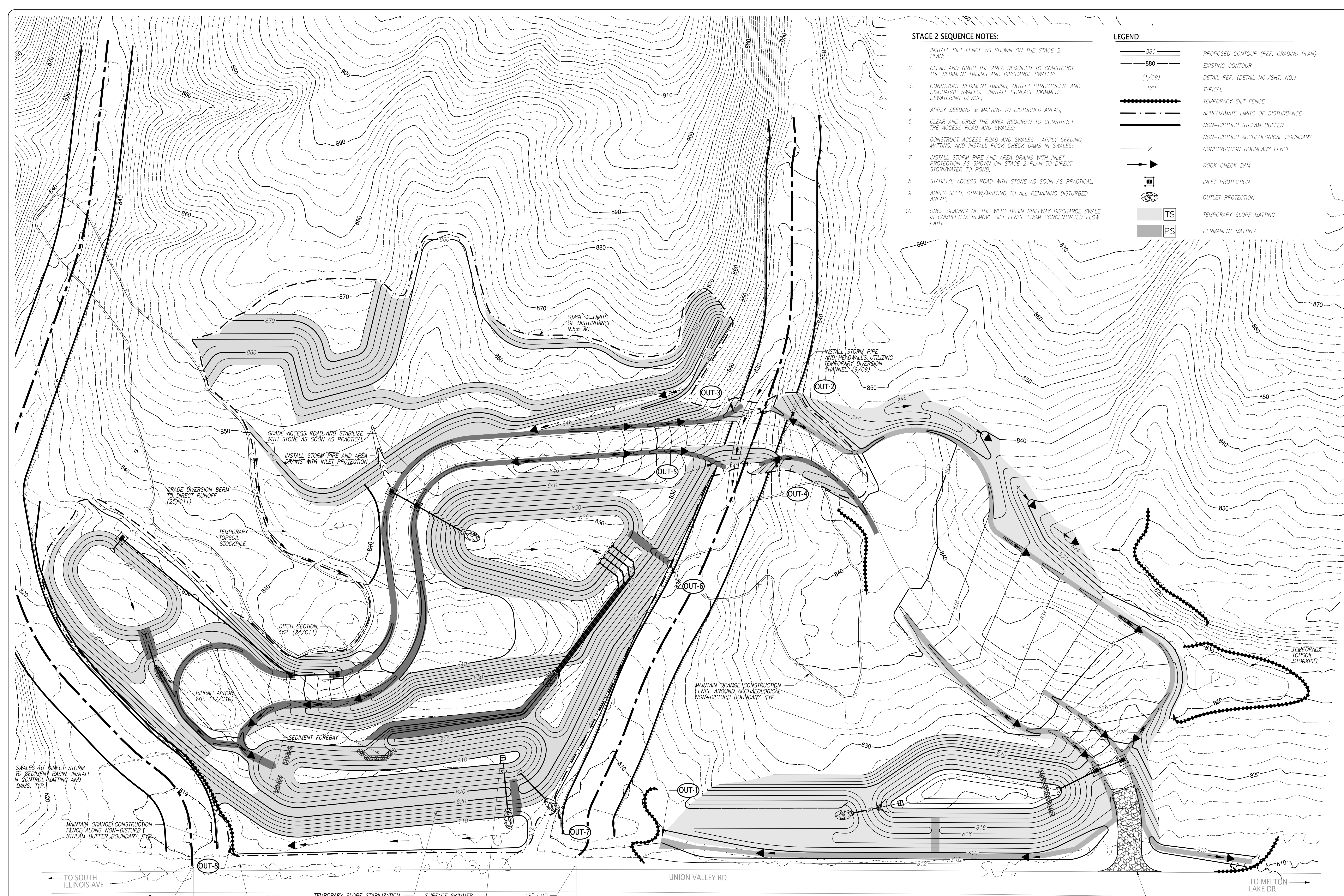
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STAGE 2 SEQUENCE NOTES:

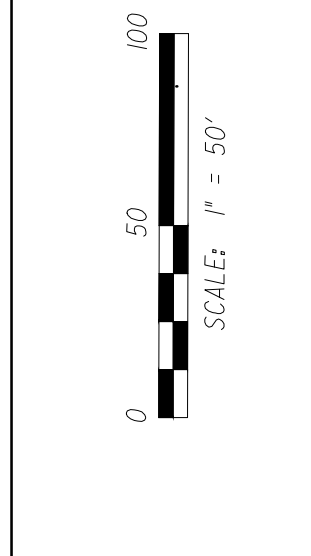
1. INSTALL SILT FENCE AS SHOWN ON THE STAGE 2 PLAN;
2. CLEAR AND GRUB THE AREA REQUIRED TO CONSTRUCT THE SEDIMENT BASINS AND DISCHARGE SWALES;
3. CONSTRUCT SEDIMENT BASINS, OUTLET STRUCTURES, AND DISCHARGE SWALES. INSTALL SURFACE SKIMMER DEWATERING DEVICE;
4. APPLY SEEDING & MATTING TO DISTURBED AREAS;
5. CLEAR AND GRUB THE AREA REQUIRED TO CONSTRUCT THE ACCESS ROAD AND SWALES;
6. CONSTRUCT ACCESS ROAD AND SWALES. APPLY SEEDING, MATTING, AND INSTALL ROCK CHECK DAMS IN SWALES;
7. INSTALL STORM PIPE AND AREA DRAINS WITH INLET PROTECTION AS SHOWN ON STAGE 2 PLAN TO DIRECT STORMWATER TO POND;
8. STABILIZE ACCESS ROAD WITH STONE AS SOON AS PRACTICAL;
9. APPLY SEED, STRAW/MATting TO ALL REMAINING DISTURBED AREAS;
10. ONCE GRADING OF THE WEST BASIN SPILLWAY DISCHARGE SWALE IS COMPLETED, REMOVE SILT FENCE FROM CONCENTRATED FLOW PATH.

LEGEND:

- 880 PROPOSED CONTOUR (REF. GRADING PLAN)
- 880 EXISTING CONTOUR
- (1/C9) TYP. TYPICAL
- TEMPORARY SILT FENCE
- APPROXIMATE LIMITS OF DISTURBANCE
- NON-DISTURB STREAM BUFFER
- NON-DISTURB ARCHAEOLOGICAL BOUNDARY
- CONSTRUCTION BOUNDARY FENCE
- ROCK CHECK DAM
- INLET PROTECTION
- OUTLET PROTECTION
- TS TEMPORARY SLOPE MATTING
- PS PERMANENT MATTING



TO SOUTH ILLINOIS AVE
48" CMP
El 804.4
SILT FENCE,
TYP. (6/C9)
TEMPORARY SLOPE STABILIZATION
EROSION CONTROL MATTING ON
ALL SLOPES 3:1 OR GREATER,
TYP. (10/C9)
SURFACE SKIMMER
DEWATERING DEVICE
48" CMP
El 806.3
UNION VALLEY RD
TO MELTON LAKE DR
CONSTRUCTION
ENTRANCE/EXIT
(5/C9)



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EROSION PREVENTION &
SEDIMENT CONTROL PLAN
STAGE 3



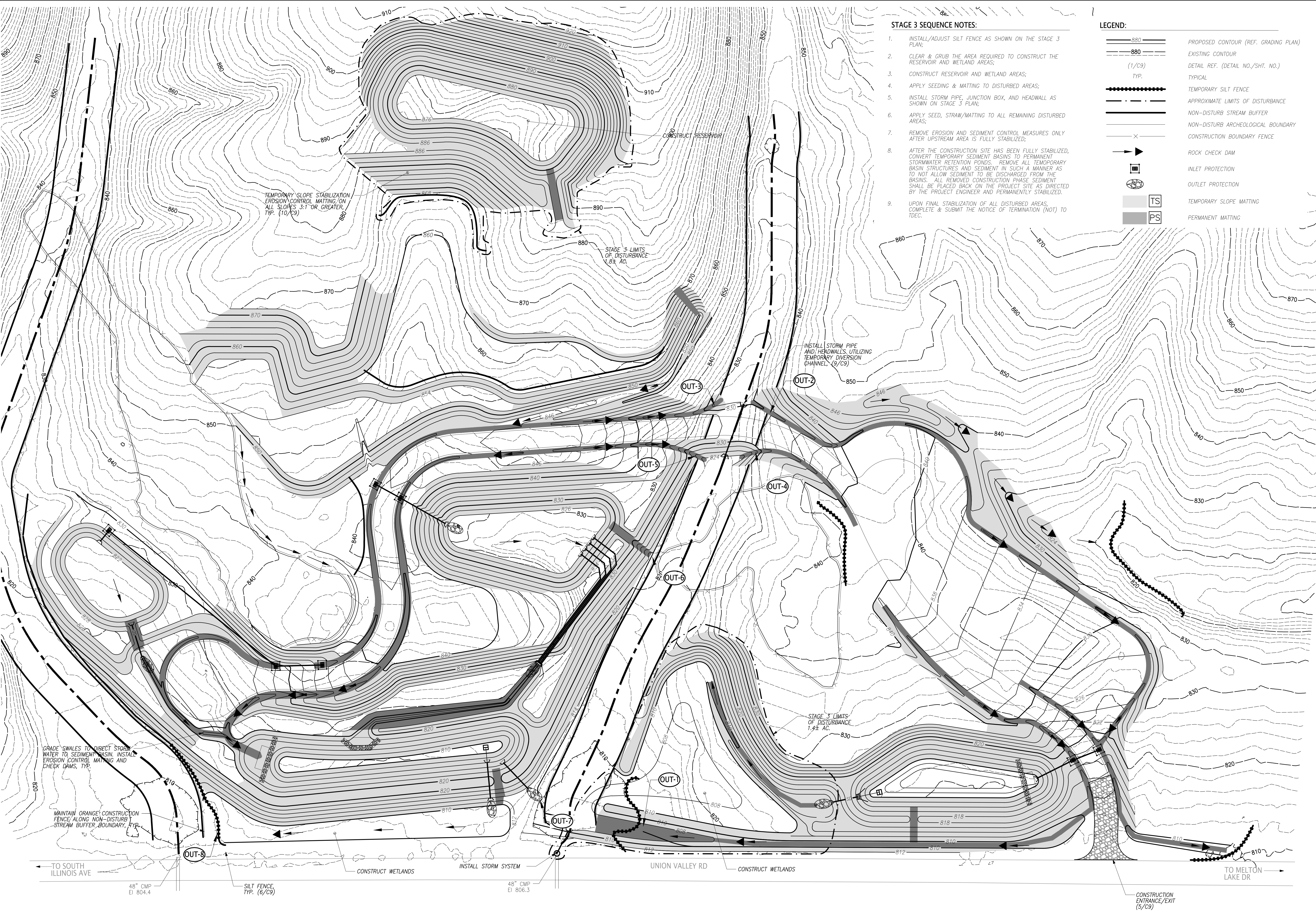
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STAGE 3 SEQUENCE NOTES:

1. INSTALL/ADJUST SILT FENCE AS SHOWN ON THE STAGE 3 PLAN;
2. CLEAR & GRUB THE AREA REQUIRED TO CONSTRUCT THE RESERVOIR AND WETLAND AREAS;
3. CONSTRUCT RESERVOIR AND WETLAND AREAS;
4. APPLY SEEDING & MATTING TO DISTURBED AREAS;
5. INSTALL STORM PIPE, JUNCTION BOX, AND HEADWALL AS SHOWN ON STAGE 3 PLAN;
6. APPLY SEED, STRAW/MATting TO ALL REMAINING DISTURBED AREAS;
7. REMOVE EROSION AND SEDIMENT CONTROL MEASURES ONLY AFTER UPSTREAM AREA IS FULLY STABILIZED;
8. AFTER THE CONSTRUCTION SITE HAS BEEN FULLY STABILIZED, CONVERT TEMPORARY SEDIMENT BASINS TO PERMANENT STORMWATER RETENTION PONDS. REMOVE ALL TEMPORARY BASIN STRUCTURES AND SEDIMENT IN SUCH A MANNER AS TO NOT ALLOW SEDIMENT TO BE DISCHARGED FROM THE BASINS. ALL REMOVED CONSTRUCTION PHASE SEDIMENT SHALL BE PLACED BACK ON THE PROJECT SITE AS DIRECTED BY THE PROJECT ENGINEER AND PERMANENTLY STABILIZED.
9. UPON FINAL STABILIZATION OF ALL DISTURBED AREAS, COMPLETE & SUBMIT THE NOTICE OF TERMINATION (NOT) TO TDEC.

LEGEND:

- 880 PROPOSED CONTOUR (REF. GRADING PLAN)
- 880 EXISTING CONTOUR
- (1/C9) DETAIL REF. (DETAIL NO./SHT. NO.)
- TYP. TYPICAL
- TEMPORARY SILT FENCE
- APPROXIMATE LIMITS OF DISTURBANCE
- NON-DISTURB STREAM BUFFER
- NON-DISTURB ARCHEOLOGICAL BOUNDARY
- CONSTRUCTION BOUNDARY FENCE
- ROCK CHECK DAM
- INLET PROTECTION
- OUTLET PROTECTION
- TS TEMPORARY SLOPE MATTING
- PS PERMANENT MATTING



TEMPORARY SLOPE STABILIZATION
EROSION CONTROL MATTING, ON
ALL SLOPES 3:1 OR GREATER,
TYP. (10/C9)

STAGE 3 LIMITS
OF DISTURBANCE
1.84 AC.

INSTALL STORM PIPE
AND HEADWALLS, UTILIZING
TEMPORARY DIVERSION
CHANNEL. (9/C9)

STAGE 3 LIMITS
OF DISTURBANCE
1.4# AC.

GRADE SWALES TO DIRECT STORM
WATER TO SEDIMENT BASIN. INSTALL
EROSION CONTROL MATTING AND
CHECK DAMS, TYP.

MAINTAIN ORANGE CONSTRUCTION
FENCE ALONG NON-DISTURB
STREAM BUFFER BOUNDARY, TYP.

TO SOUTH
ILLINOIS AVE

48" CMP
EI 804.4

SILT FENCE,
TYP. (6/C9)

CONSTRUCT WETLANDS

INSTALL STORM SYSTEM

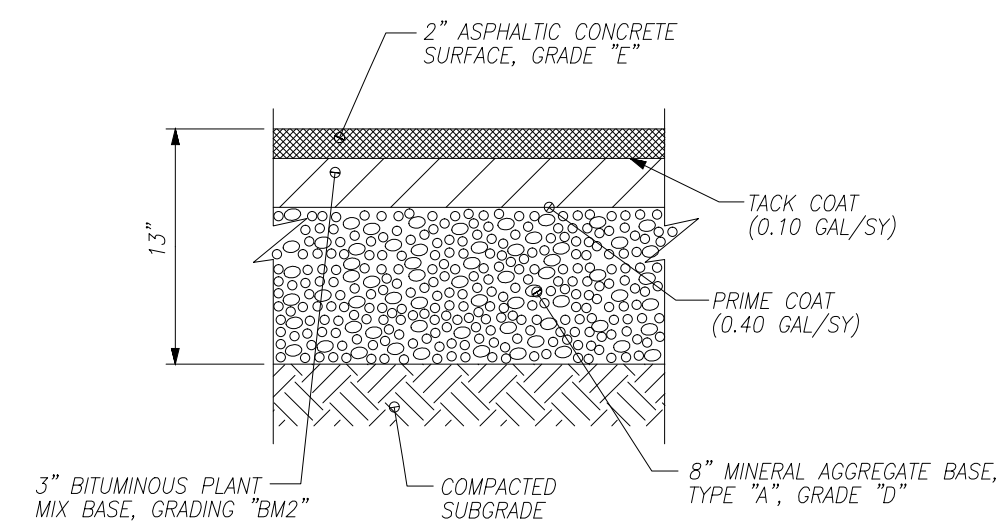
48" CMP
EI 806.3

UNION VALLEY RD

CONSTRUCT WETLANDS

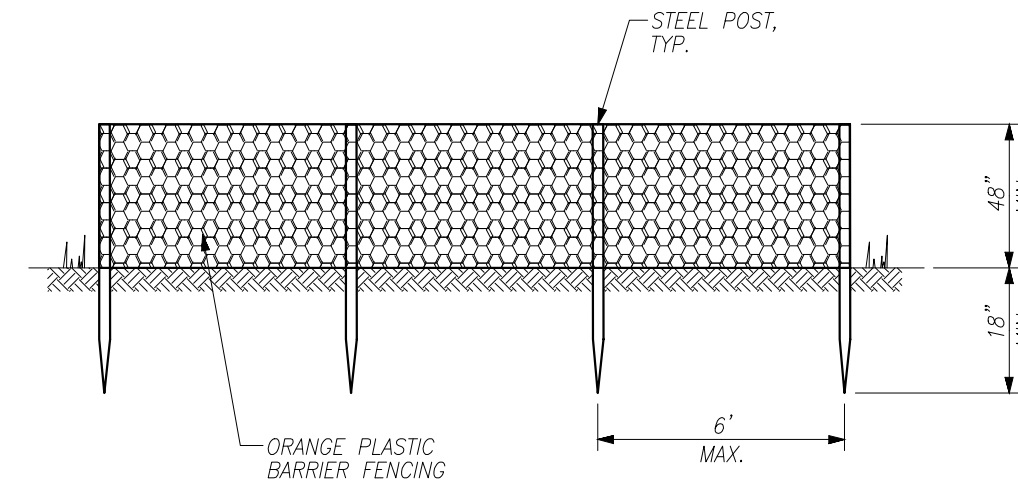
CONSTRUCTION
ENTRANCE/EXIT
(5/C9)

TO MELTON
LAKE DR



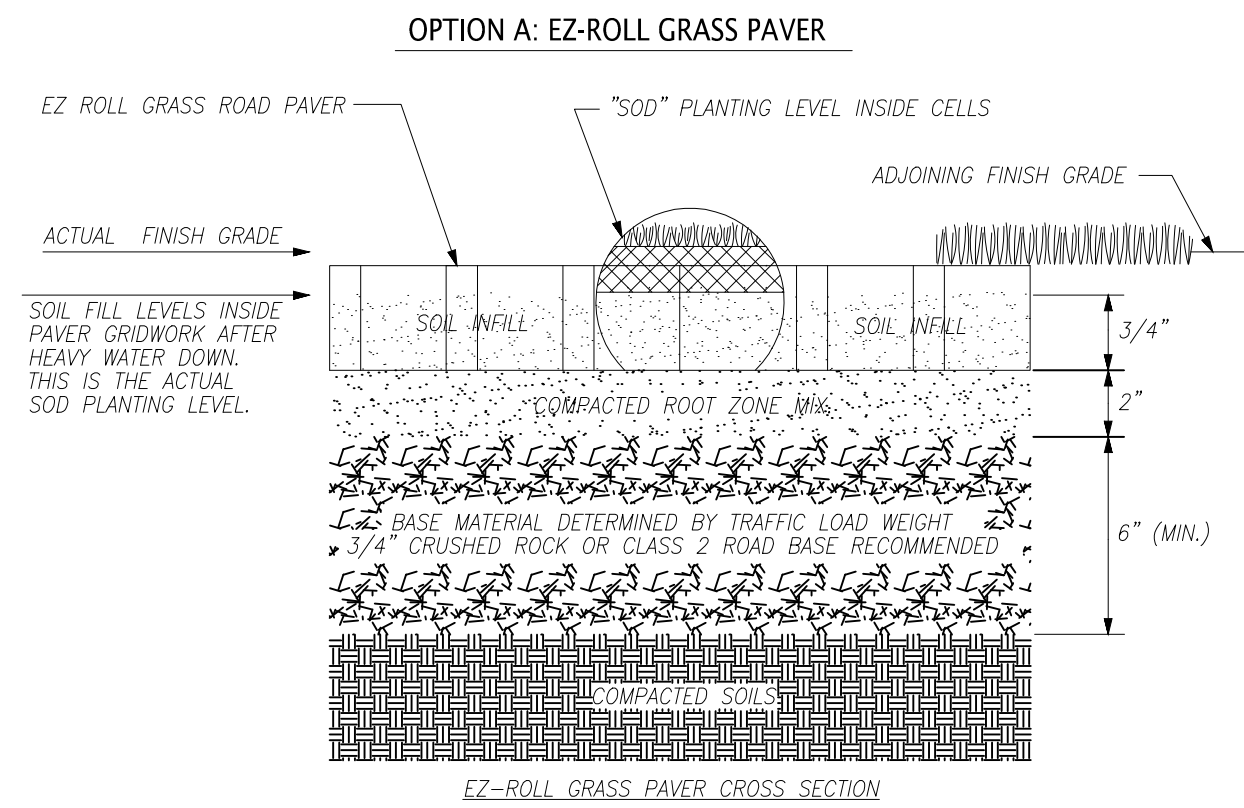
- NOTES:**
- PAVEMENT HAS NOT BEEN DESIGNED FOR CONSTRUCTION TRAFFIC/ACTIVITIES. USE OF THESE SURFACES FOR CONSTRUCTION ACTIVITIES SHALL BE DONE AT THE CONTRACTOR'S CONVENIENCE AND RISK. DAMAGE TO PAVEMENT RESULTING FROM THESE ACTIVITIES SHALL BE REPAIRED IN CONFORMANCE WITH THE INITIAL PAVEMENT SPECIFICATIONS.

1 ASPHALT PAVEMENT SECTION
C9 N.T.S.



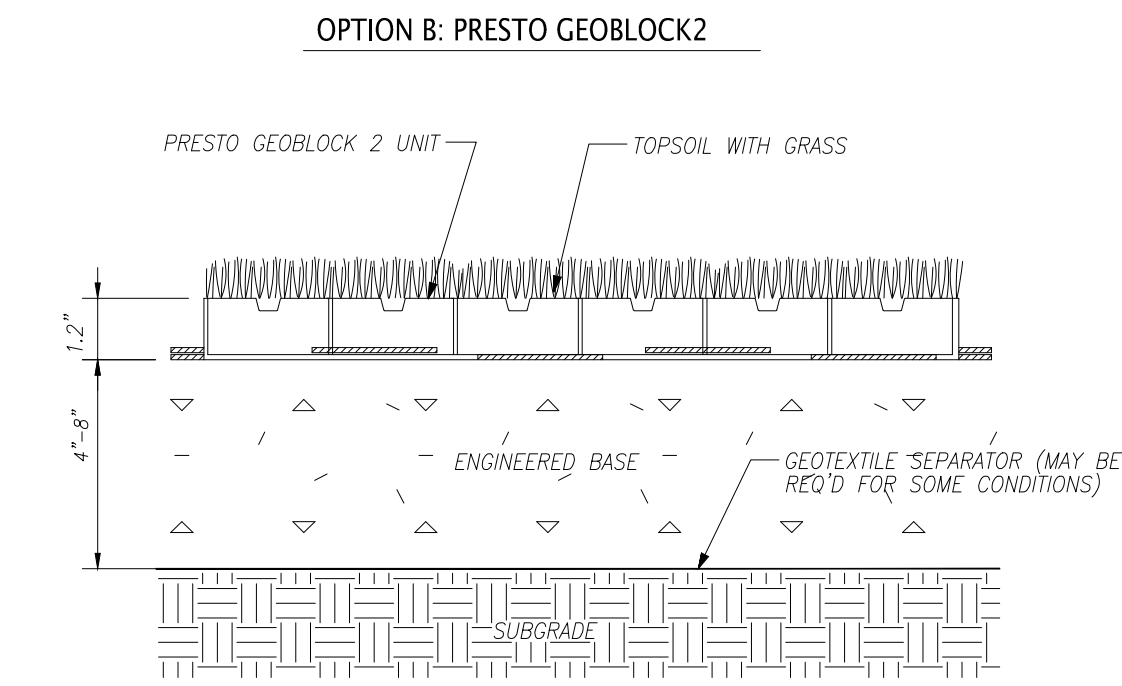
- NOTES:**
- ALL CONSTRUCTION FENCING SHALL BE IN PLACE PRIOR TO GRADING ACTIVITY.

2 CONSTRUCTION FENCE
C9 N.T.S.



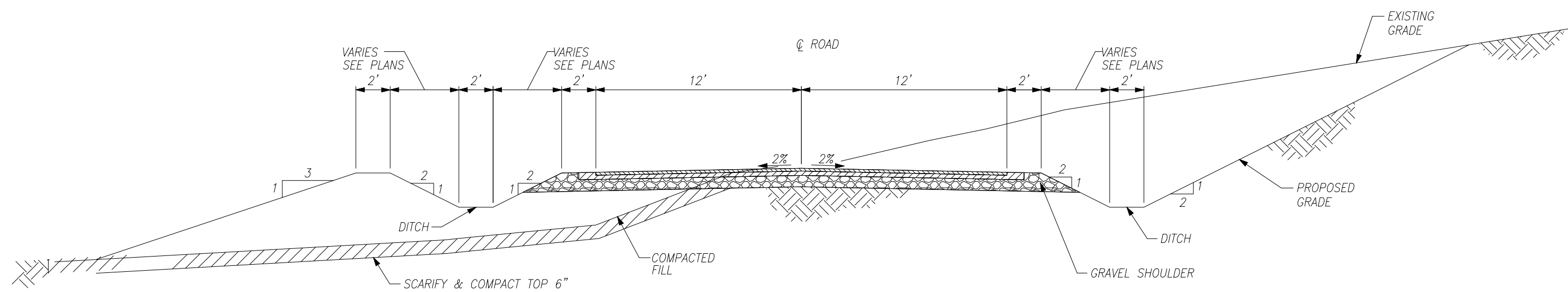
- NOTES:**
- COMPOSITION OF THE SOIL INFILL MATERIAL WILL BE BASED ON LOCAL CONDITIONS AND DETERMINED BY THE LANDSCAPE ARCHITECT OR AS SPECIFIED IN THE CONTRACT DOCUMENTS.
 - GRASS SEED OR SOD TYPE TO BE AS SPECIFIED IN THE CONTRACT DOCUMENTS OR BY DESIGN LANDSCAPE ARCHITECT.

3 GEOTEXTILE GRASS REINFORCEMENT
C9 N.T.S.

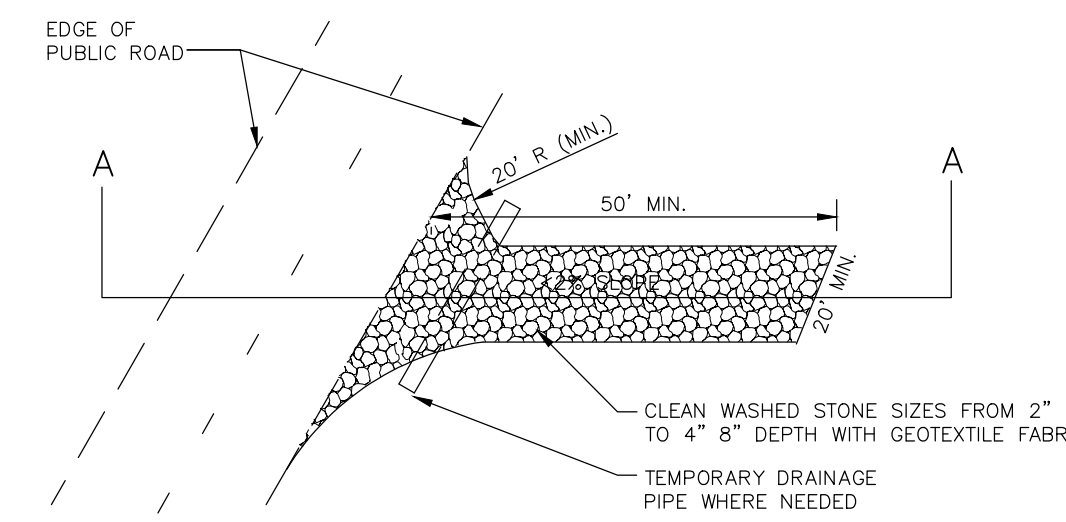


- NOTES:**
- PRESTO GEOBLOCK 2 PAVEMENT CROSS SECTION**
- SUITABLE TOPSOIL SHOULD BE PULVERIZED PRIOR TO FILLING THE CELLS AND CONTAIN SUFFICIENT ORGANIC CONTENT TO SUPPORT VEGETATIVE GROWTH. SANDY LOAM IS A RECOMMENDED TOPSOIL. CLAY AND CLAY LOAM MATERIALS ARE NOT UNACCEPTABLE.
 - ENGINEERED BASE SHALL CONSIST OF A HOMOGENEOUS MIXTURE OF 1) CLEAR CRUSHED STONE HAVING AN AASHTO #5 OR SIMILAR DESIGNATION BLENDED WITH 2) PULVERIZED TOPSOIL AND 3) VOID COMPONENT GENERALLY CONTAINING AIR AND/OR WATER. THIS HOMOGENEOUS MIXTURE WILL PROMOTE VEGETATIVE GROWTH AND PROVIDE STRUCTURAL SUPPORT.
 - THE AGGREGATE PORTION SHALL HAVE A PARTICLE RANGE FROM 0.375 TO 1.0 IN WITH A 150 OF 0.5 IN. THE PERCENTAGE VOID SPACE AFTER COMPACTION SHALL BE AT LEAST 30%. THE PULVERIZED TOPSOIL SHALL EQUAL 25% OF THE TOTAL VOLUME AND BE ADDED AND BLENDED TO PRODUCE A HOMOGENEOUS MIXTURE PRIOR TO PLACEMENT. ONCE PLACED, THE MIXTURE SHALL BE COMPACTION TO 95% STANDARD PROCTOR.

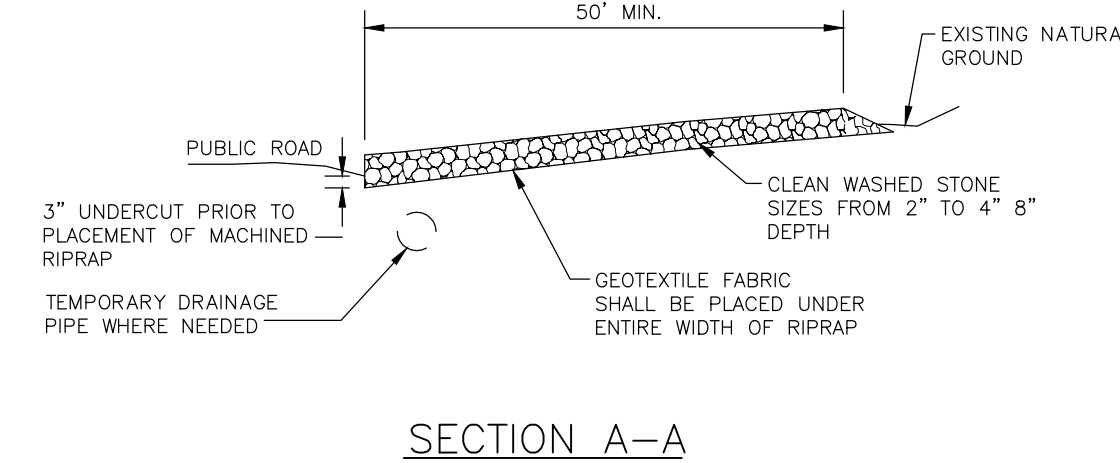
4 TYPICAL 24' ROAD SECTION
C9 N.T.S.



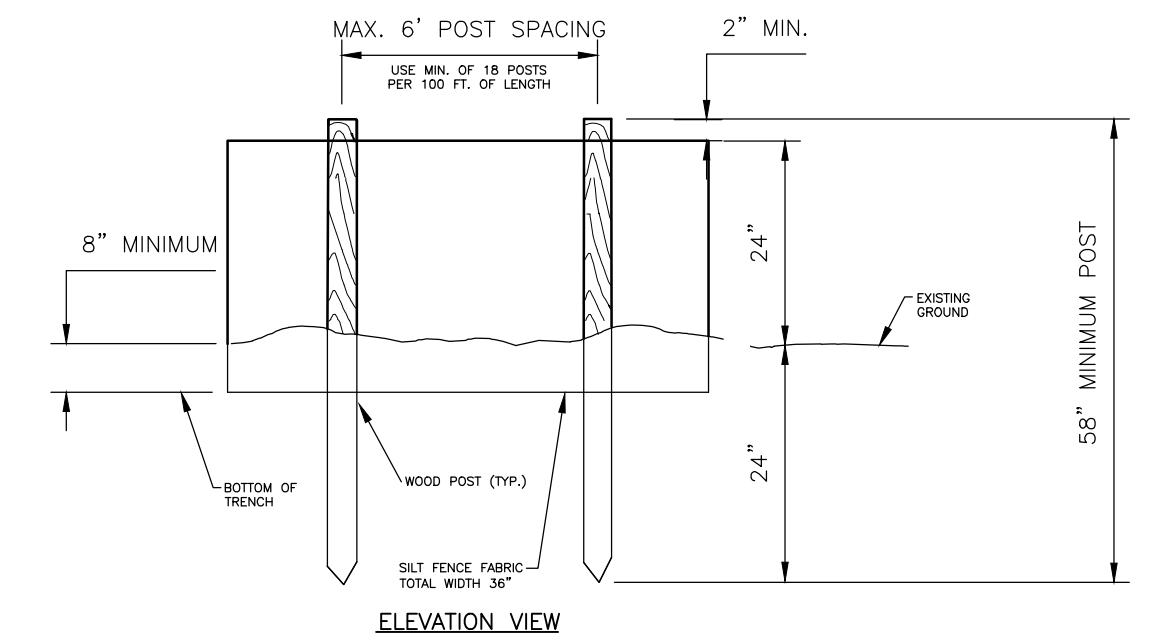
4 TYPICAL 24' ROAD SECTION
C9 N.T.S.



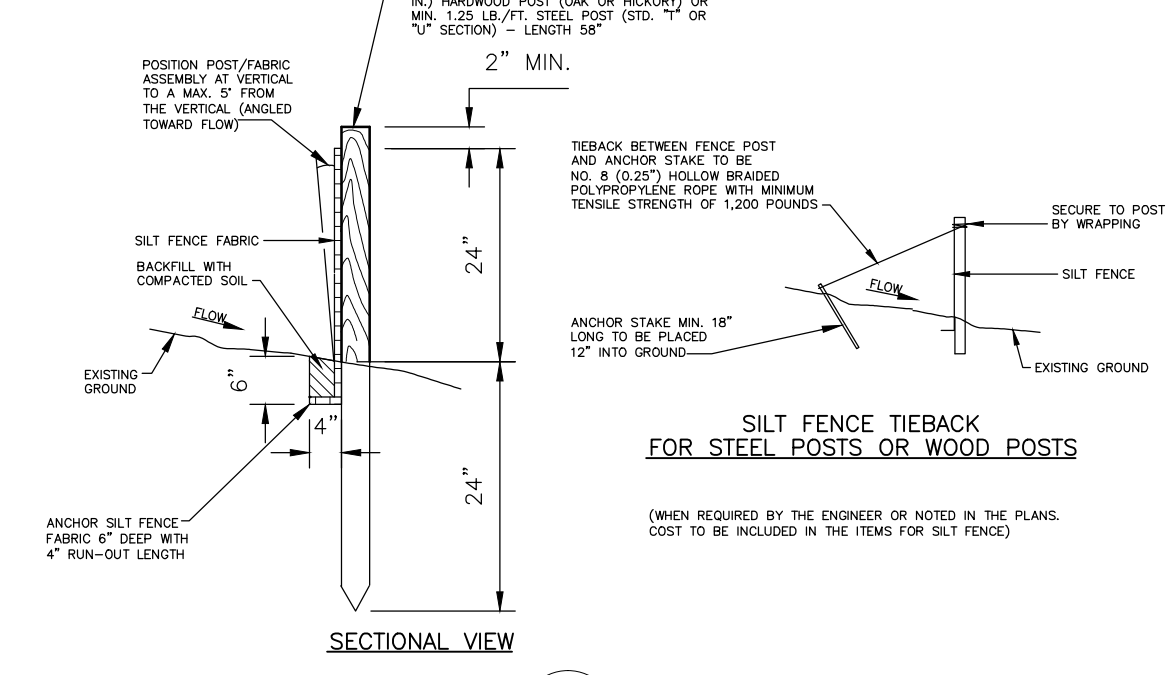
5 CONSTRUCTION EXIT
C9 N.T.S.



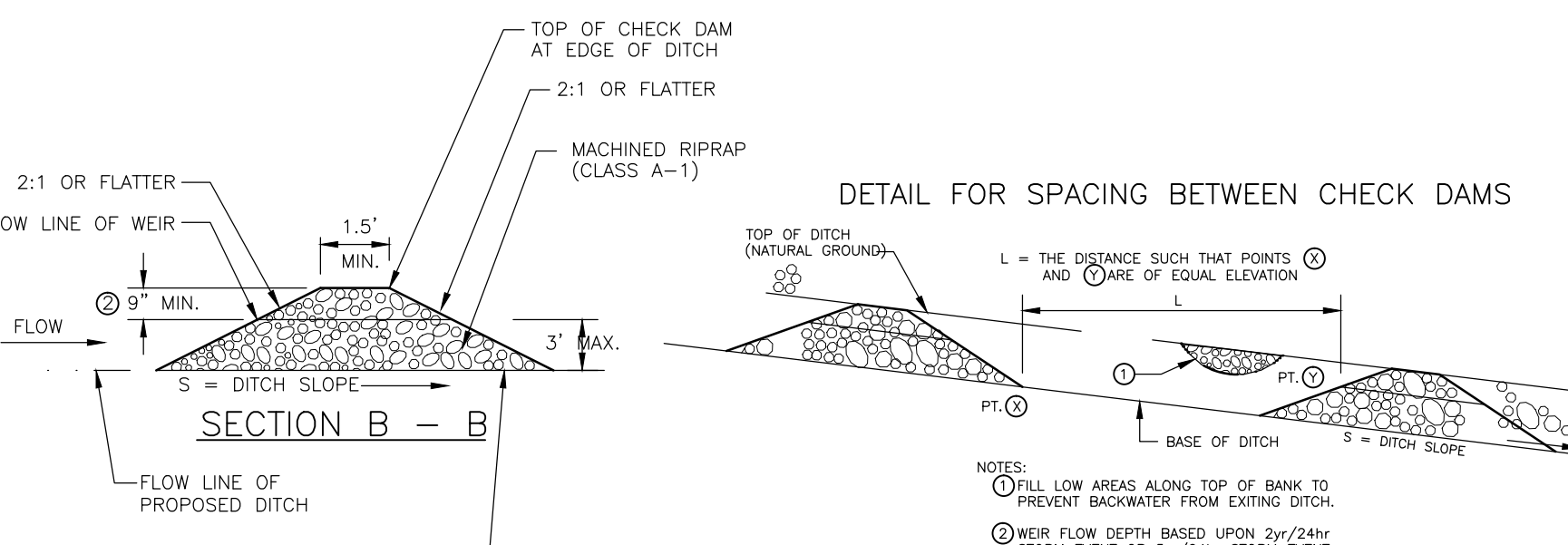
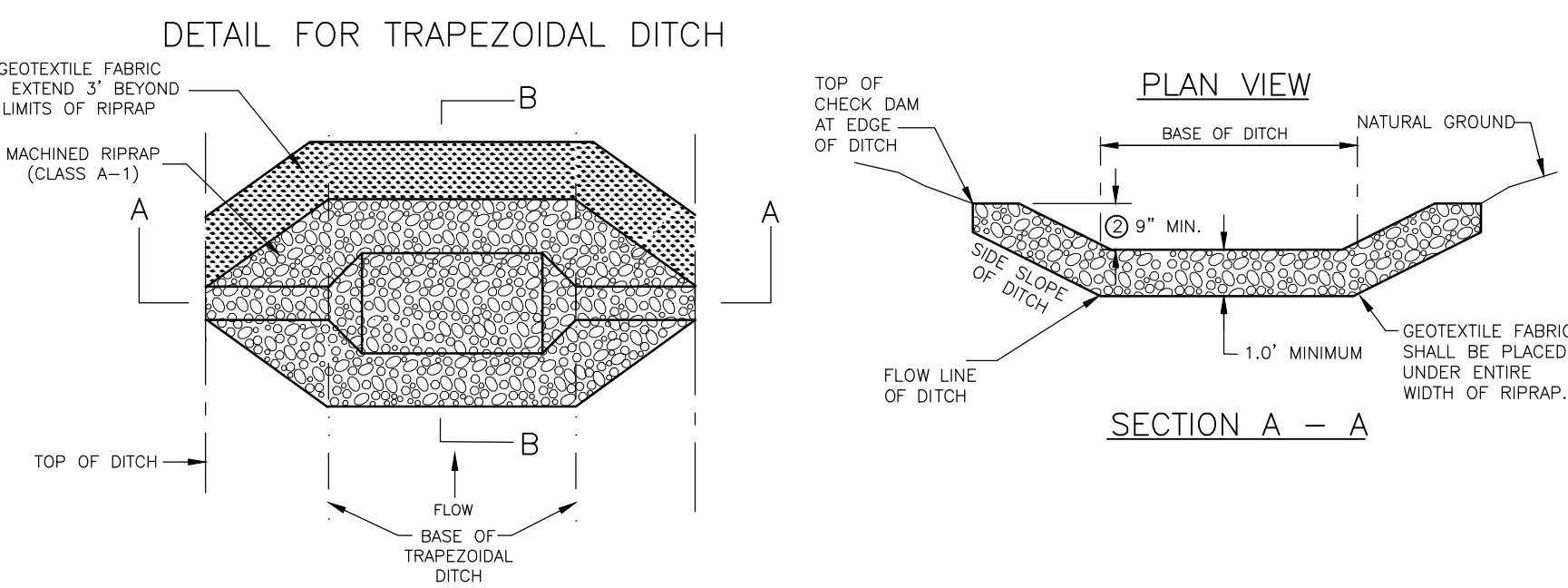
5 CONSTRUCTION EXIT
C9 N.T.S.



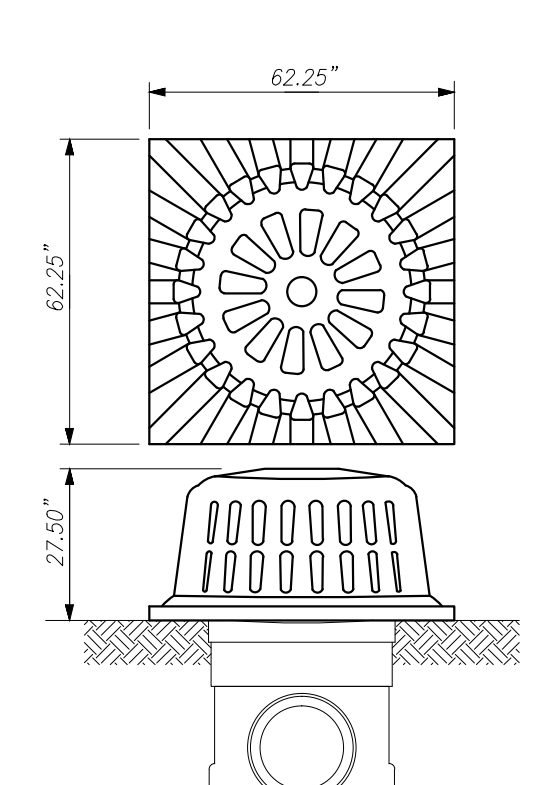
6 SILT FENCE
C9 N.T.S.



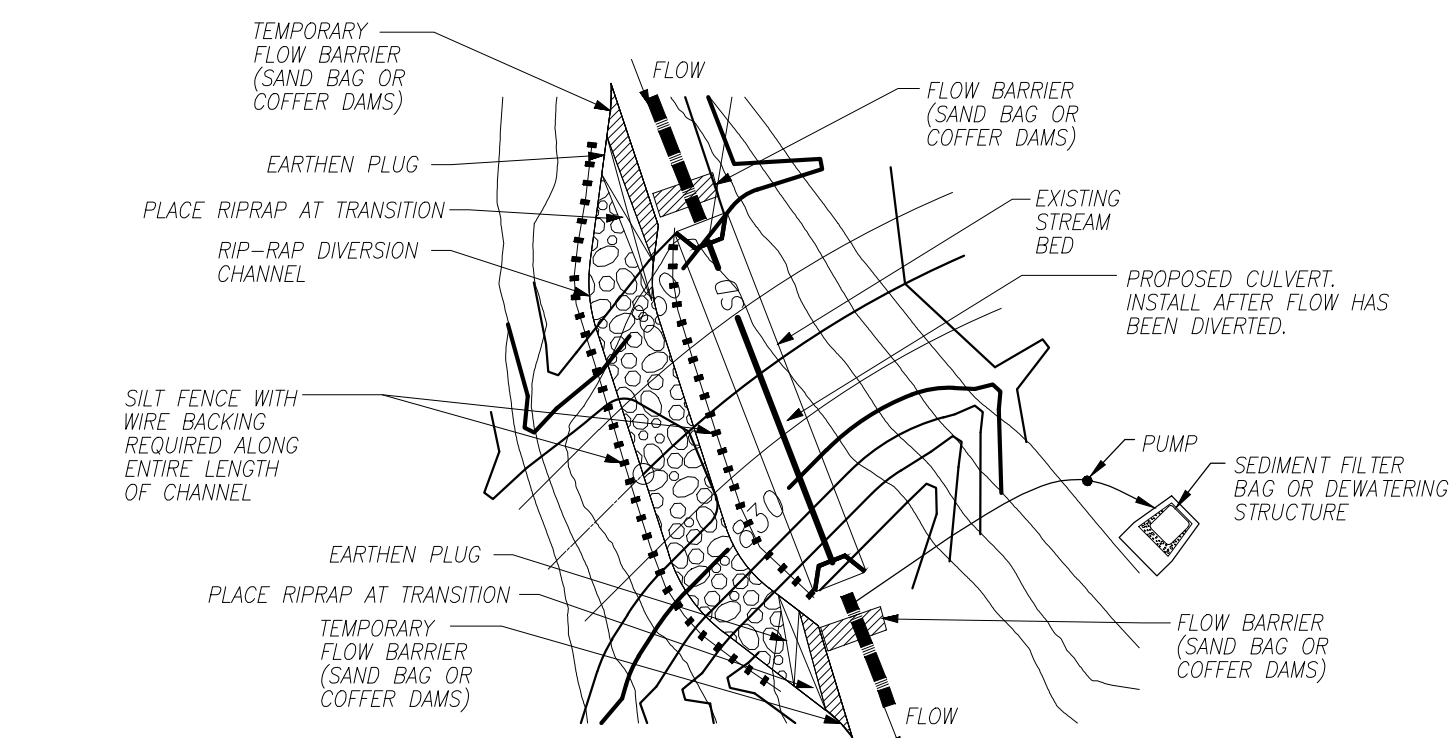
6 SILT FENCE
C9 N.T.S.



7 TEMPORARY ROCK CHECK DAM
C9 N.T.S.

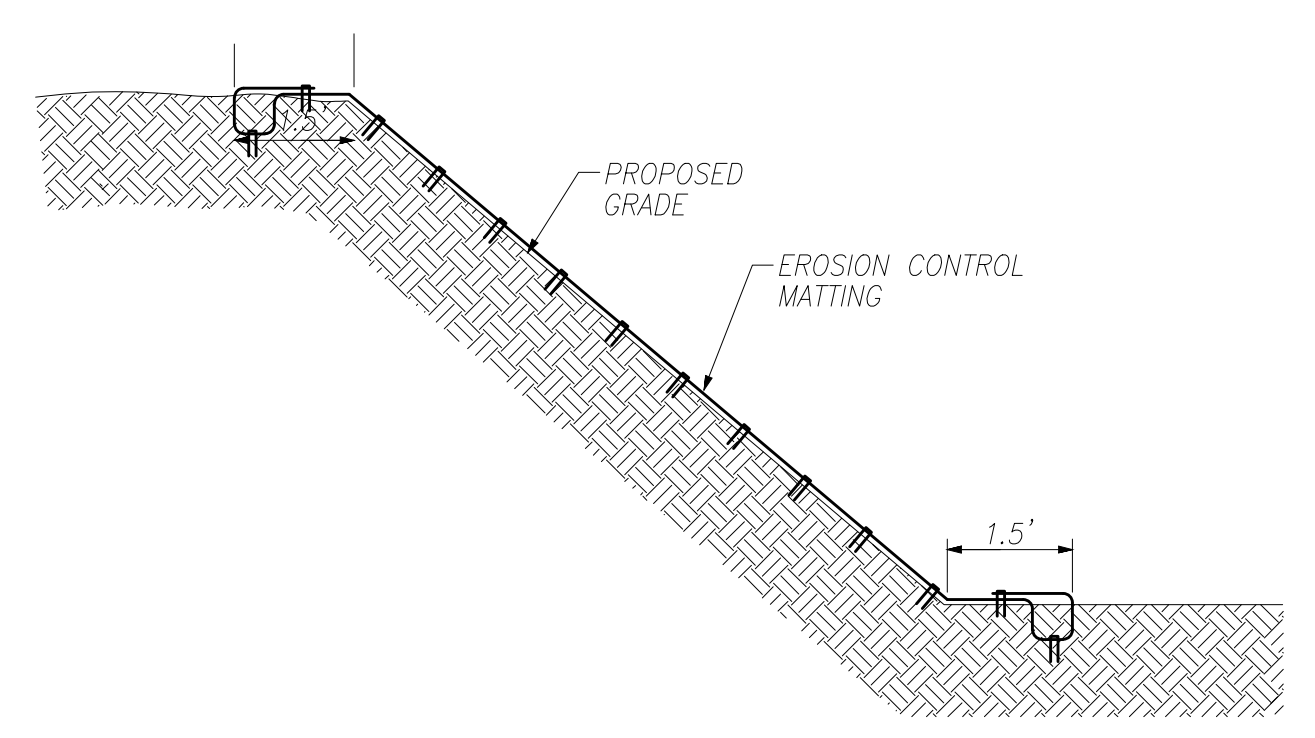


8 INLET PROTECTION
C9 N.T.S.



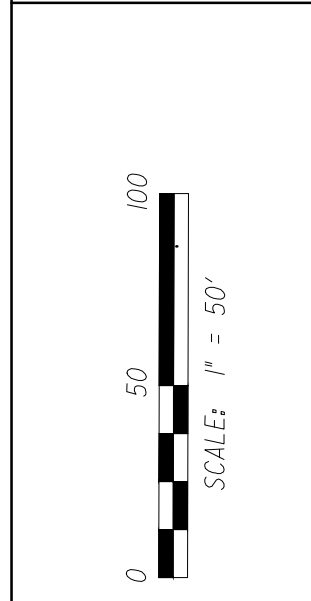
- DIVERSION CHANNEL CONSTRUCTION SEQUENCE:**
- INSTALL TEMPORARY FLOW BARRIERS AT EITHER END OF THE DIVERSION CHANNEL WHERE IT INTERSECTS THE EXISTING STREAM.
 - GRADE THE DIVERSION CHANNEL, LEAVING THE EARTHEN PLUGS AT EITHER END AND PLACE GEOTEXTILE AND RIP RAP IN THE CHANNEL.
 - REMOVE TEMPORARY EARTHEN PLUGS AND FLOW BARRIERS FROM THE DIVERSION CHANNEL AND INSTALL FLOW BARRIERS IN TO EXISTING STREAM TO ROUTE FLOW THROUGH THE DIVERSION CHANNEL.
 - ONCE THE CULVERT HAS BEEN INSTALLED MOVE FLOW BARRIERS FROM STREAM AND REPLACE BACK IN TO DIVERSION CHANNEL. BACKFILL DIVERSION CHANNEL AND REMOVE TEMPORARY FLOW BARRIERS WHEN BACKFILL IS COMPLETE.

9 TEMPORARY STREAM DIVERSION DETAIL
C9 N.T.S.



- NOTES:**
- EROSION CONTROL MATTING FOR SLOPE PROTECTION SHALL BE WESTERN EXCELSIOR, EXCEL S-2 OR EQUAL.
 - ENSURE SUBGRADE IS READY FOR PLACEMENT AND MATTING HAS COMPLETE SOIL CONTACT. DO NOT PLACE OVER WHEEL RUTS, GULLEYS, RILLS, ETC.
 - INSTALL MATTING PER MANUFACTURER'S SPECIFICATIONS.

10 SLOPE STABILIZATION
C9 N.T.S.



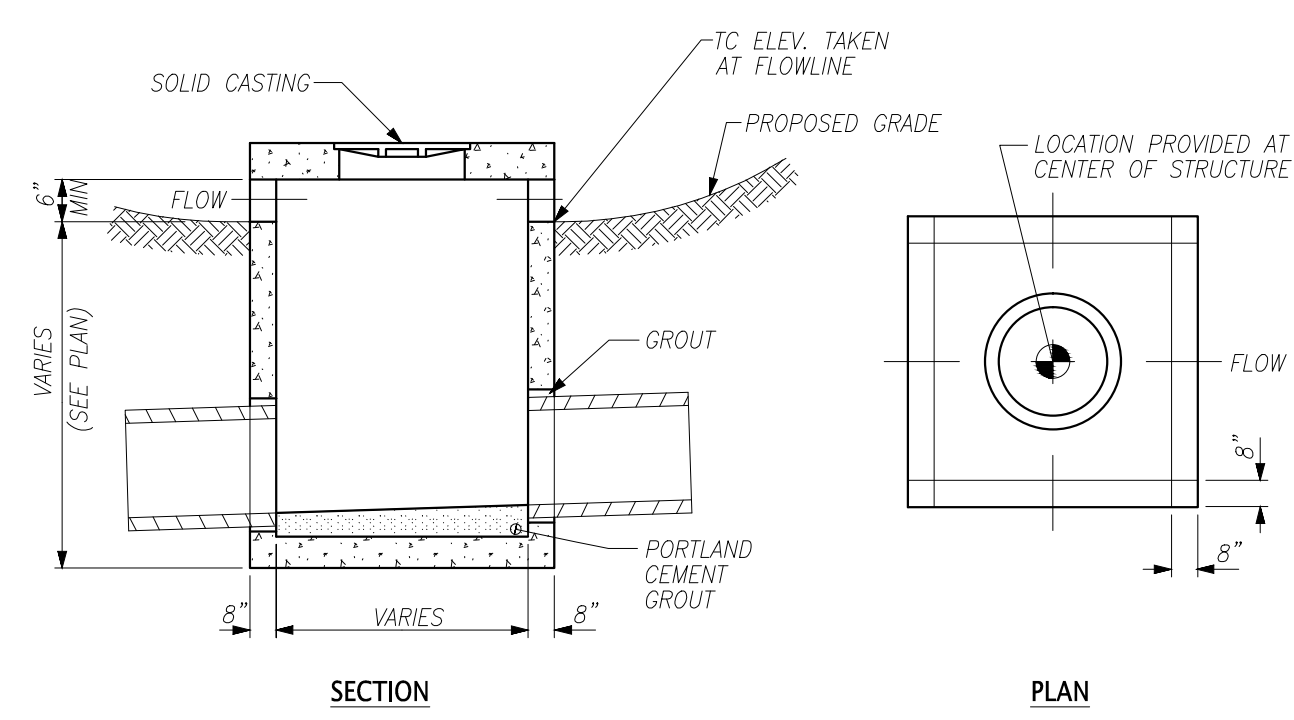
THE UNIVERSITY OF TENNESSEE
2306 E.J. CHAPMAN DRIVE
KNOXVILLE, TN 37996-4531
CONTACT: DANIEL YODER, PH.D.
TELEPHONE NO.: 865.974.7116

SMART CENTER
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OAK RIDGE, TENNESSEE 37830

EROSION PREVENTION &
SEDIMENT CONTROL DETAILS
SHEET 1



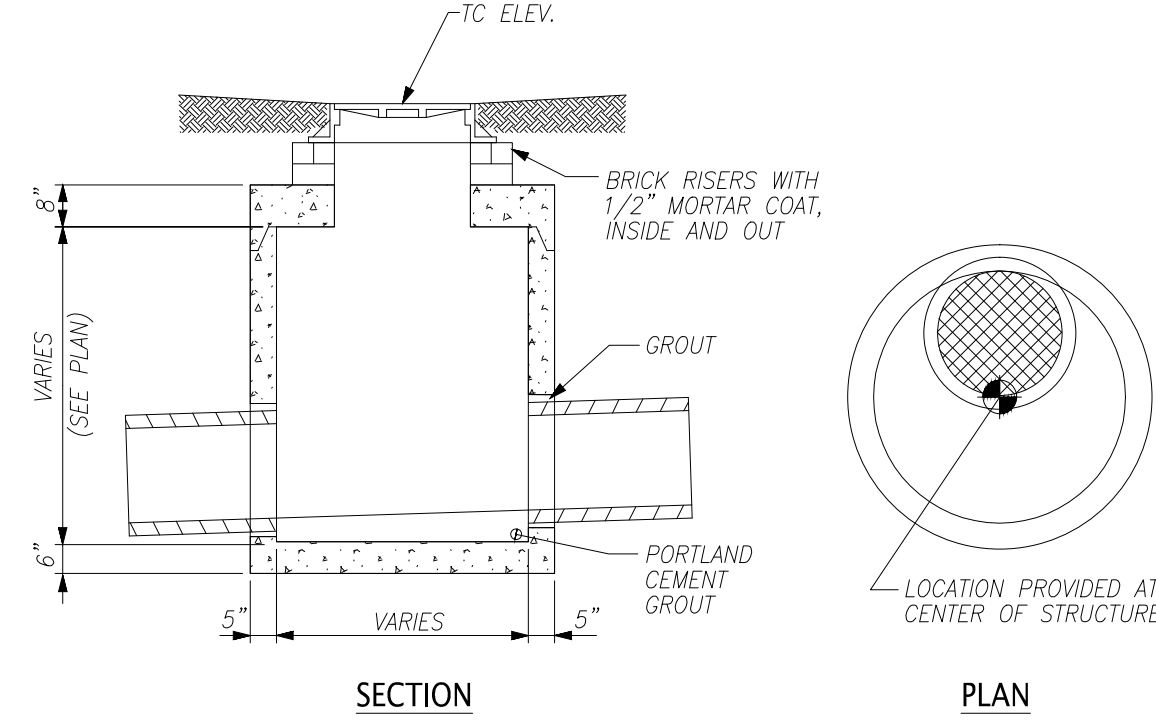
Sheet: C9



NOTES:

1. YARD INLETS SHALL BE SQUARE PRECAST CONCRETE STRUCTURE IN ACCORDANCE WITH ASTM C478 (LATEST REVISION). DIMENSIONS VARY DEPENDING ON PIPE SIZE AND ANGLE OF PIPES IN AND OUT OF STRUCTURE.
2. LADDER BARS SHALL BE PROVIDED PER OSHA REGULATIONS.
3. LOCATION GIVEN AT CENTER OF THE STRUCTURE, TC ELEVATION PROVIDED AT INLET AS SHOWN ABOVE.
4. FRAME AND COVER SHALL BE EJ USA, INC. MODEL NO. V-1960 OR EQUAL. THE COVER SHALL BE STAMPED WITH "STORM SEWER" AND "DUMP NO WASTE...DRAINS TO WATERWAYS" WITH FISH IMAGE, OR EQUAL.

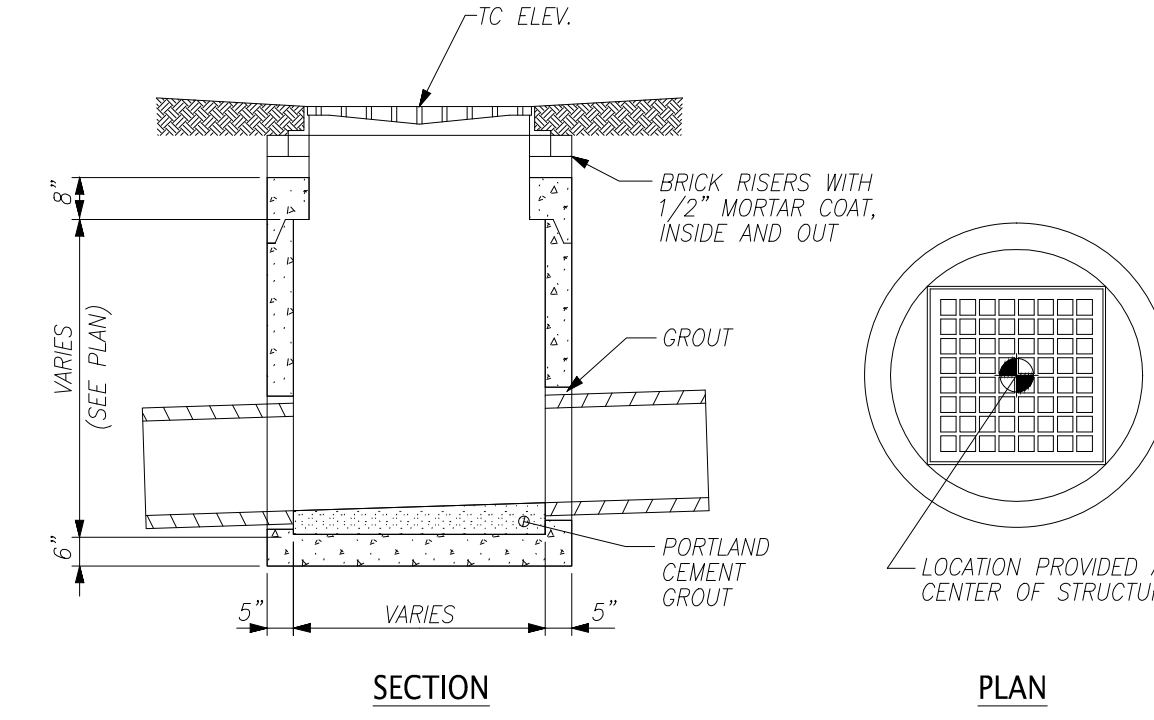
11 YARD INLET
C10 N.T.S.



NOTES:

1. MANHOLES SHALL BE CIRCULAR OR SQUARE PRECAST CONCRETE STRUCTURE IN ACCORDANCE WITH ASTM C478 (LATEST REVISION). DIMENSIONS VARY DEPENDING ON PIPE SIZE AND ANGLE OF PIPES IN AND OUT OF STRUCTURE.
2. LADDER BARS SHALL BE PROVIDED PER OSHA REGULATIONS.
3. LOCATION AND TC ELEVATIONS GIVEN AT CENTER OF THE STRUCTURE.
4. FRAME AND COVER SHALL BE EJ USA, INC. MODEL NO. 1045, TYPE A SOLID COVER, OR EQUAL. THE COVER SHALL BE STAMPED WITH "STORM SEWER" AND "DUMP NO WASTE...DRAINS TO WATERWAYS" WITH FISH IMAGE, OR EQUAL.
5. ADJUST ALL SIDES OF THE FRAME AND COVER TO MATCH PAVEMENT CROSS SLOPE AND LONGITUDINAL SLOPE OR FLUSH WITH FINISHED GRADE.

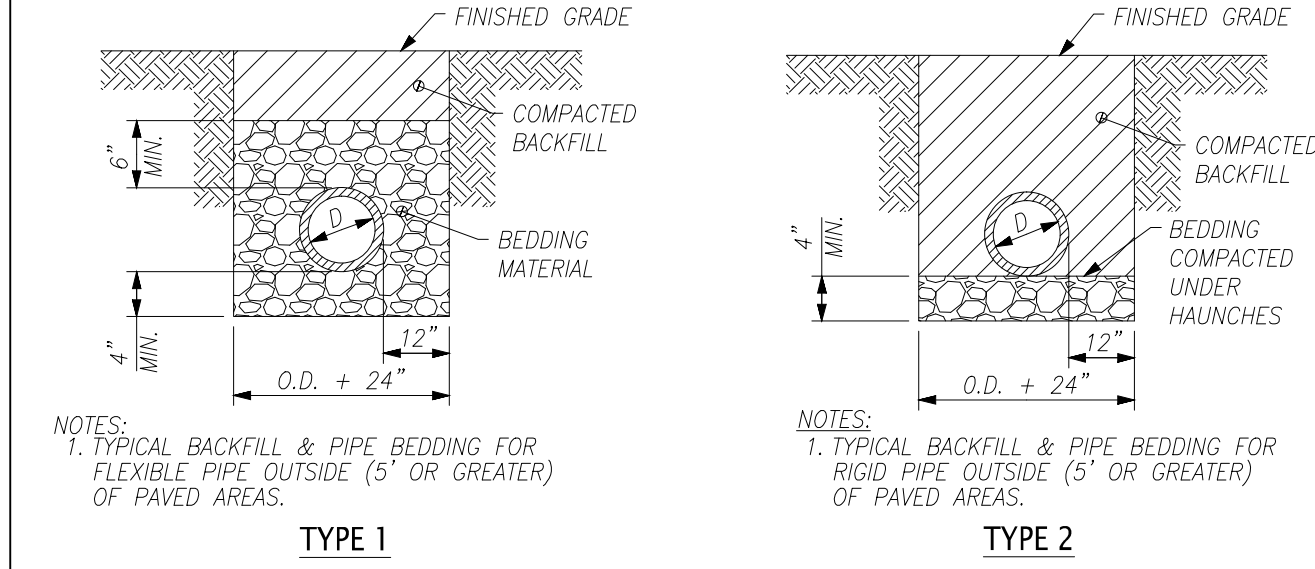
12 STORM DRAIN MANHOLE
C10 N.T.S.



NOTES:

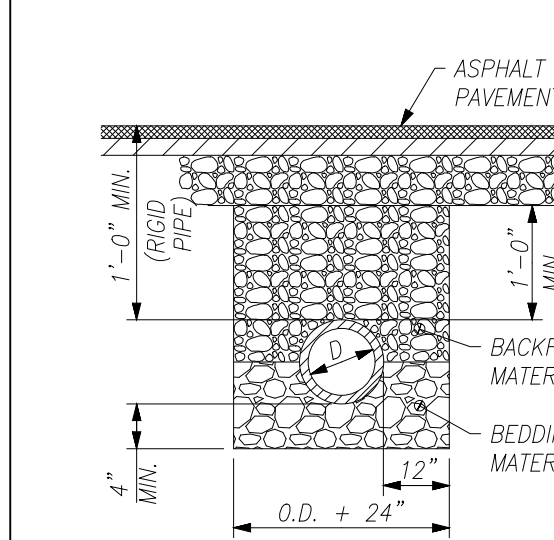
1. AREA DRAINS SHALL BE CIRCULAR OR SQUARE PRECAST CONCRETE STRUCTURE IN ACCORDANCE WITH ASTM C478 (LATEST REVISION). DIMENSIONS VARY DEPENDING ON PIPE SIZE AND ANGLE OF PIPES IN AND OUT OF STRUCTURE.
2. LADDER BARS SHALL BE PROVIDED PER OSHA REGULATIONS.
3. LOCATION AND TC ELEVATIONS GIVEN AT CENTER OF THE STRUCTURE.
4. FRAME AND GRATE SHALL BE EJ USA, INC. MODEL NO. V-5630 OR EQUAL. THE GRATE SHALL BE STAMPED WITH "DUMP NO WASTE...DRAINS TO WATERWAYS" WITH FISH IMAGE, OR EQUAL.
5. ADJUST ALL SIDES OF THE FRAME AND GRATE TO MATCH PAVEMENT CROSS SLOPE AND LONGITUDINAL SLOPE.

13 AREA DRAIN
C10 N.T.S.



TYPE 1

TYPE 2

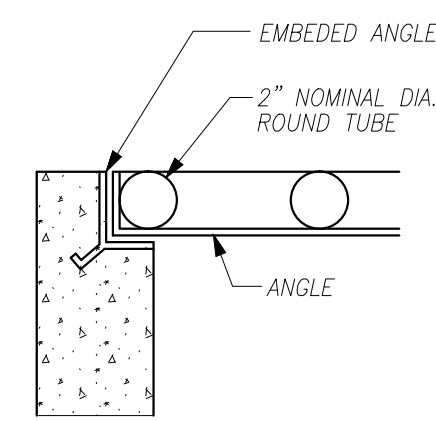


TYPE 3 (PAVED AREAS)

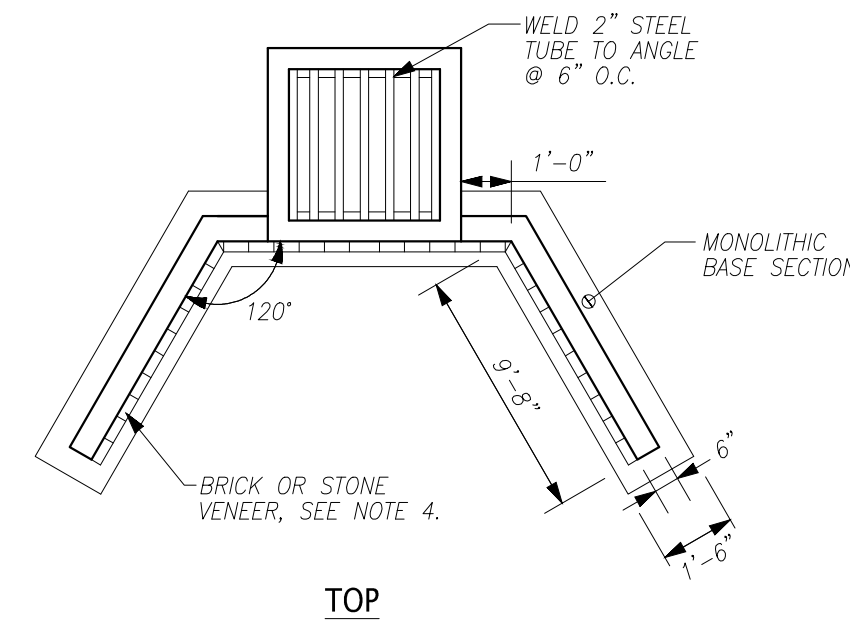
NOTES:

1. BEDDING MATERIAL SHALL HAVE A MINIMUM THICKNESS OF 4 IN. ACTUAL THICKNESS VARIES WITH THE PIPE MATERIAL. INSTALLATION OF BEDDING & BACKFILL SHALL BE IN STRICT COMPLIANCE WITH THE PIPE MANUFACTURER'S SPECIFICATIONS.
2. BEDDING MATERIAL TO BE #57 CRUSHED STONE. BACKFILL MATERIAL ABOVE THE SPRING LINE SHALL BE MINERAL AGGREGATE BASE, TYPE "A", GRADE "D".
3. TRENCH DESIGN AND SAFETY FOR PIPELINE CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM WITH ALL APPLICABLE LOCAL, STATE, AND OSHA REGULATIONS.
4. COMPACT BACKFILL STONE TO 100% OF THE STANDARD PROCTOR DENSITY AT 2% LESS THAN THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY AASHTO 199 METHOD D.

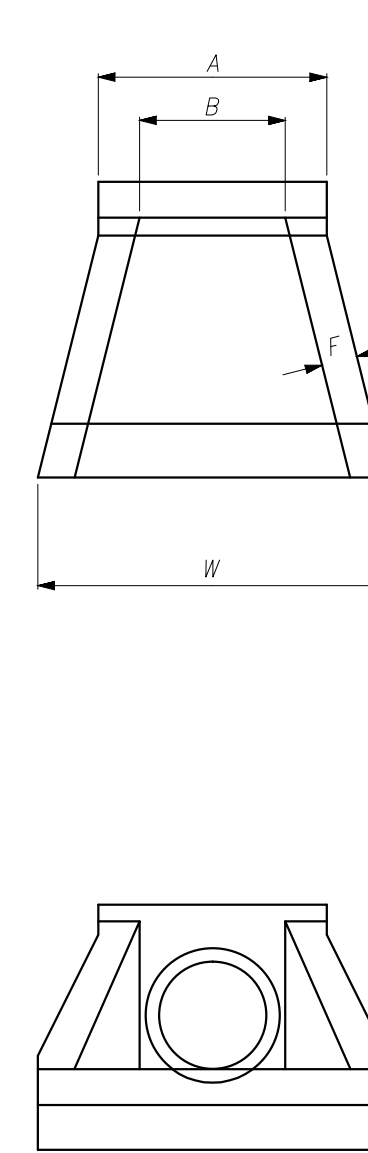
14 PIPE BEDDING & BACKFILL
C10 N.T.S.



ENLARGED VIEW



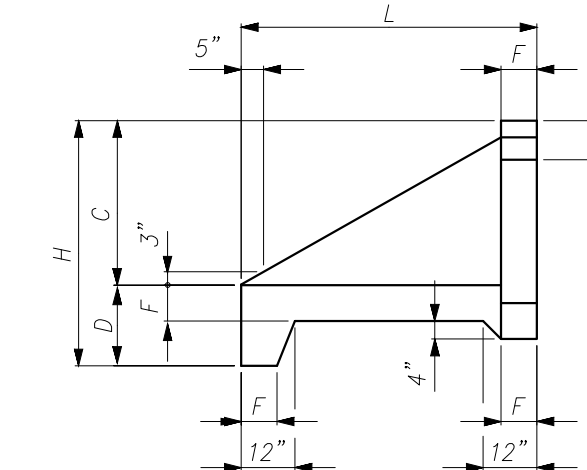
TOP



PIPE SIZE	HOLE SIZE	"W"	"L"	"H"	"A"	"B"	"C"	"D"	"E"	"F"
12"	22"	48"	30"	42"	32"	24"	26"	16"	4"	6"
15"	22"	48"	30"	42"	32"	24"	26"	16"	4"	6"
18"	22"	48"	30"	42"	32"	24"	26"	16"	4"	6"
24"	32"	72"	44"	52"	48"	36"	36"	16"	4"	8"
36"	55"	102"	54"	76"	80"	64"	60"	16"	5"	8"
48"	55"	102"	54"	76"	80"	64"	60"	16"	5"	8"

NOTES:

1. CONCRETE: 4500 PSI @ 28 DAYS.
2. REINFORCING: #4 BAR @ 12" EA. WAY - GR. 60.
3. MINIMUM REBAR COVERAGE - 2"
4. 3/4" CHAMFER ON ALL EXPOSED EDGES.

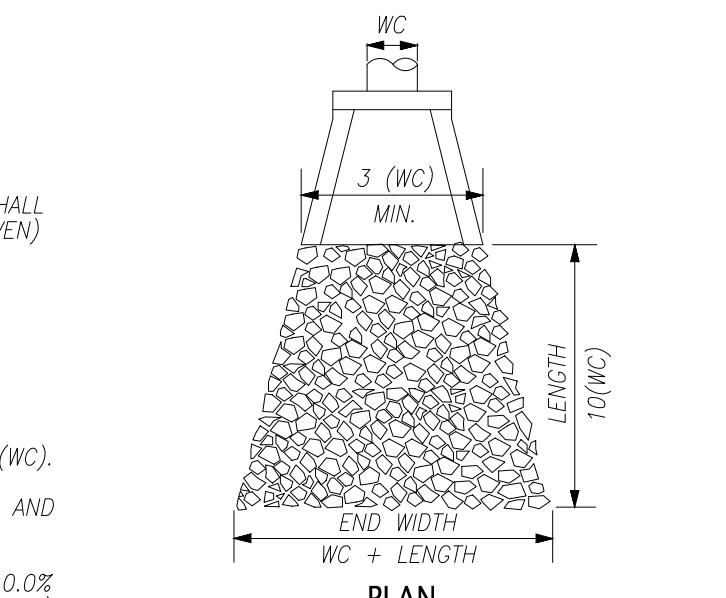


16 PRECAST CONCRETE HEADWALL
C10 N.T.S.

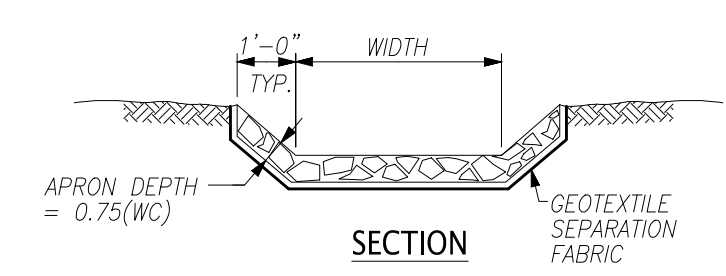
HEADWALL ID	PIPE SIZE (WC)	APRON LENGTH (L)	APRON END WIDTH	AVE. DIA. D50	MAX. DIA. DMAX	APRON DEPTH
HW-4	18"	11'	12.5'	6"	9"	13.5"
HW-8	18"	15'	16.5'	6"	9"	13.5"
HW-17	4x16"	25'	30'	8"	12"	18"
HW-20	24"	35'	37'	8"	12"	18"
HW-26	18"	11'	12.5'	6"	9"	13.5"

NOTES:

1. GEOTEXTILE SEPARATION FABRIC SHALL BE GEOTEX 801 (8 OZ. NON-WOVEN) BY PROVEY OR EQUAL.
2. RIPRAP AVERAGE DIAMETER, D50, SHALL BE 0.33(WC).
3. RIPRAP MAXIMUM DIAMETER, DMAX, SHALL BE 0.50(WC).
4. APRON DEPTH, D, SHALL BE 0.75(WC).
5. ALL ROCK SHALL BE HANDPLACED AND IN A MANNER TO MINIMIZE VOIDS.
6. THE RIPRAP APRON SHALL BE AT 0.0% GRADE (NO SLOPE ALONG ITS LENGTH)

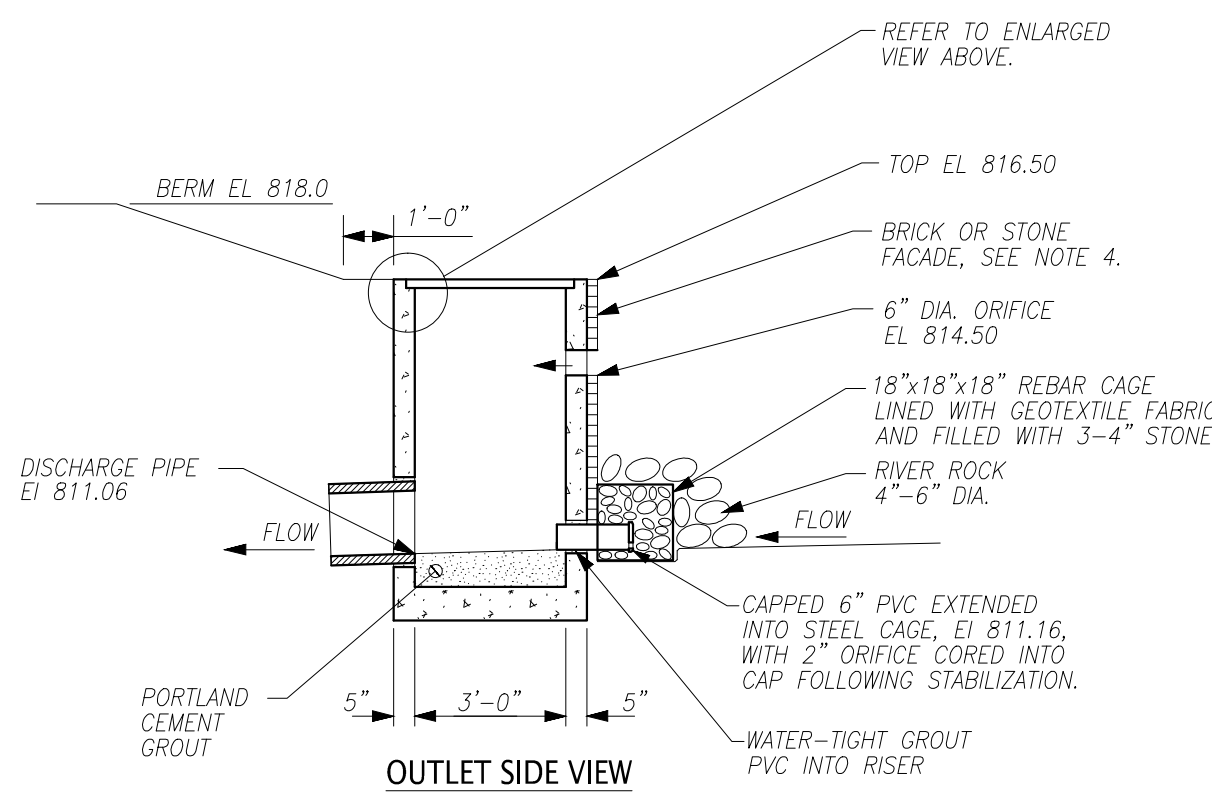


PLAN

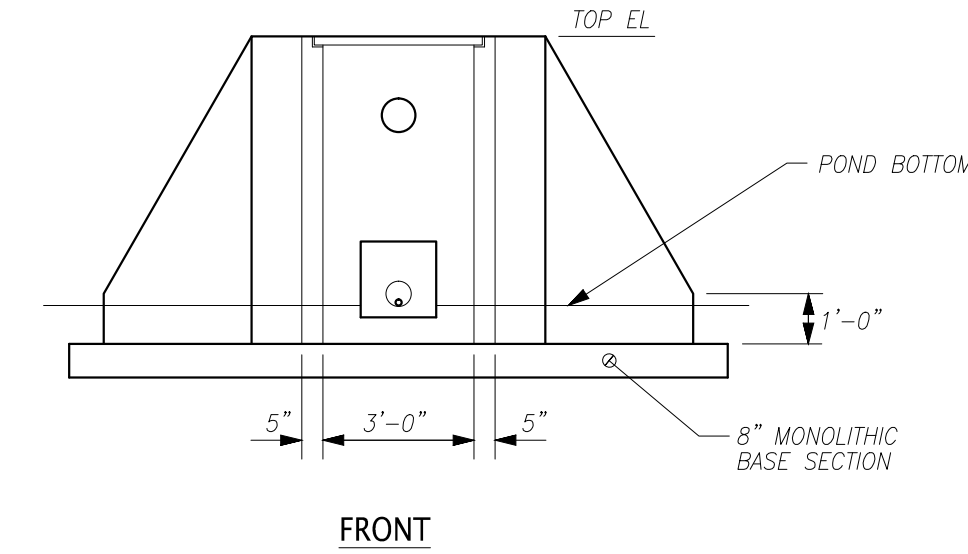


SECTION

17 RIP-RAP APRON
C10 N.T.S.



OUTLET SIDE VIEW



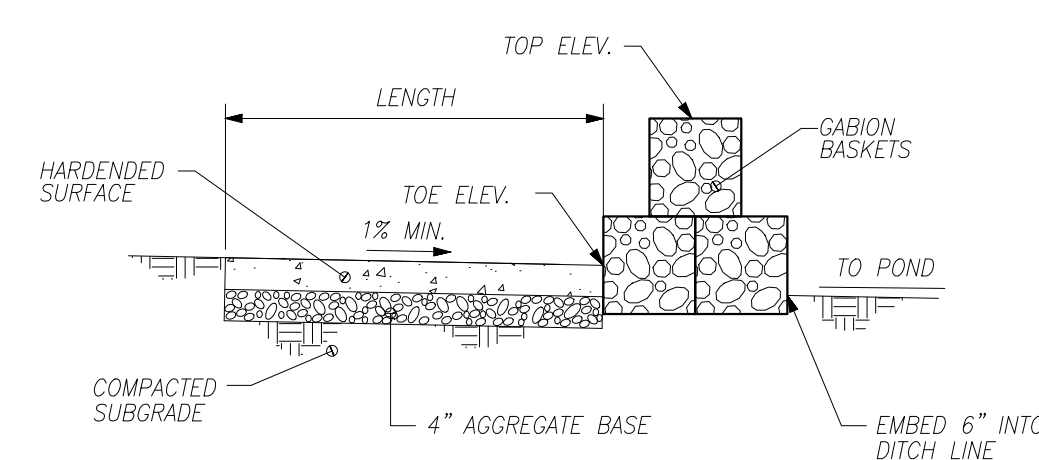
FRONT

15 EAST RETENTION POND OUTLET STRUCTURE
C10 N.T.S.

NOTES:

1. INSTALL SURFACE SKIMMER DEWATERING DEVICE (SEE SURFACE SKIMMER DEWATERING DEVICE DETAIL) AND KEEP ALL OTHER ORIFICES CAPPED UNTIL PERMANENT VEGETATION IS ESTABLISHED.
2. OUTLET RISER SHALL BE SQUARE PRECAST CONCRETE STRUCTURE IN ACCORDANCE WITH ASTM C478 (LATEST REVISION). CONCRETE TO BE Fc = 4000 PSI @ 28 DAYS, REINFORCING STEEL TO MEET THE REQUIREMENTS OF ASTM 4615, Fy = 60,000 PSI.
3. LADDER BARS SHALL BE PROVIDED PER OSHA REGULATIONS.
4. CONTRACTOR SHALL COORDINATE STONE OR BRICK FACADE WITH OWNER PRIOR TO THE START OF CONSTRUCTION.

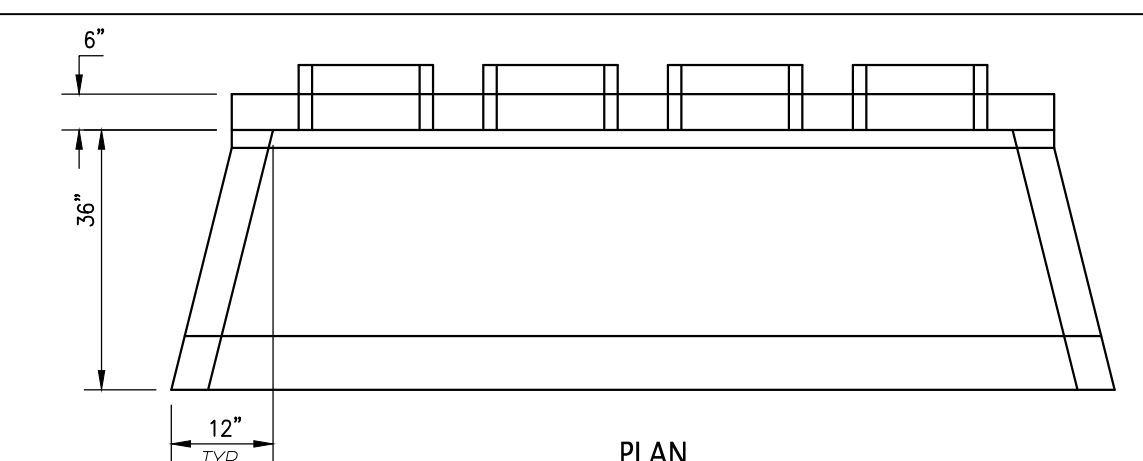
	TOE ELEV.	TOP ELEV.	VOLUME (CF)
WEST BASIN-1	814.5	818.5	42.50
WEST BASIN-2	814.5	818.5	146.20
EAST BASIN	808.0	814.0	432.0



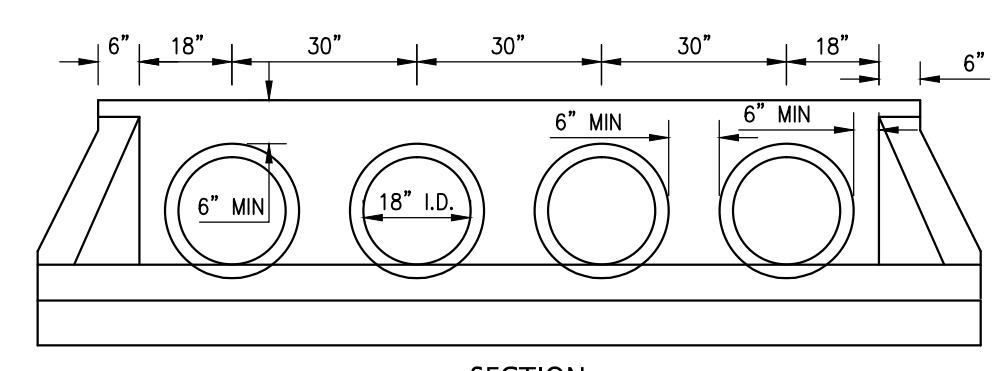
NOTES:

1. THE HARDENED SURFACE SHALL BE CONSTRUCTED OF BLOCK PAVERS OR 4" THICK CONCRETE PAD, COMPACT SUBGRADE AND PLACE SURFACE OVER 4" STONE BASE.

18 SEDIMENT FOREBAY
C10 N.T.S.



PLAN

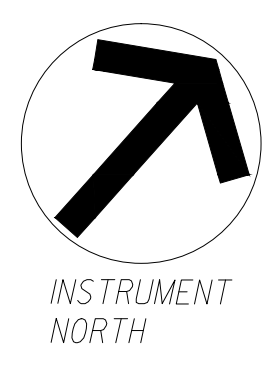


SECTION

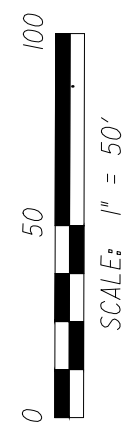
NOTES:

1. CONCRETE: 4500 PSI @ 28 DAYS.
2. REINFORCING: #4 BAR @ 12" EA. WAY - GR. 60.
3. MINIMUM REBAR COVERAGE - 2"
4. 3/4" CHAMFER ON ALL EXPOSED EDGES.

19 MULTIPLE OUTLET HEADWALL (POUR-IN-PLACE)
C10 N.T.S.



INSTRUMENT NORTH



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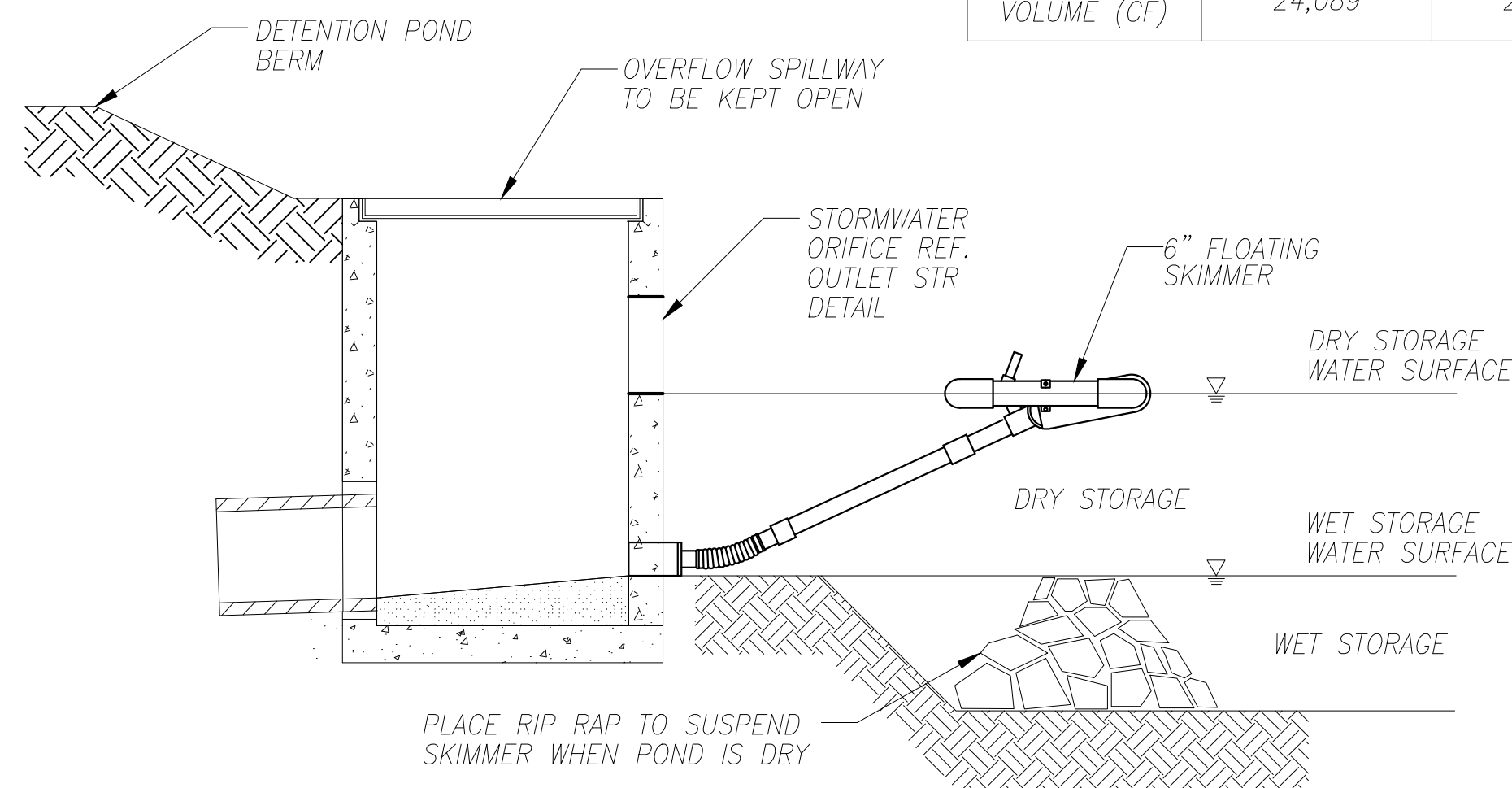
SMART CENTER
901 S. ILLINOIS AVENUE
OAK RIDGE, TENNESSEE 37830

EROSION PREVENTION & SEDIMENT CONTROL DETAILS
SHEET 2



Sheet: **C10**

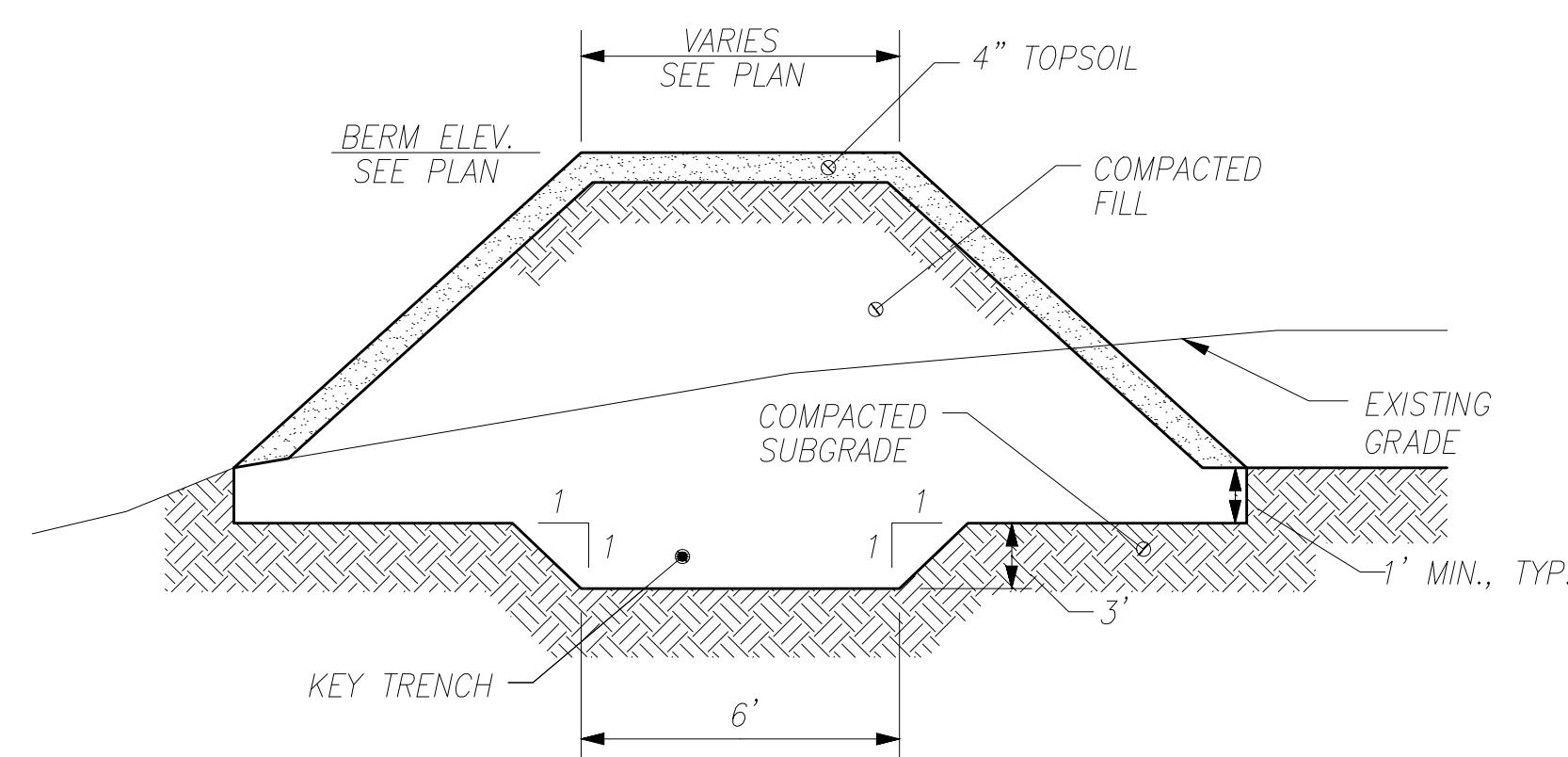
	WEST BASIN	EAST BASIN
DRY STORAGE WATER ELEV.	814.53	814.50
DRY STORAGE VOLUME (CF)	11,718	39,160
WET STORAGE WATER ELEV.	813.40	811.16
WET STORAGE VOLUME (CF)	24,089	29,185



NOTES:

1. INSTALL & MAINTAIN FLOATING SKIMMER PER THE MANUFACTURER'S SPECIFICATIONS.
2. CONNECT SKIMMER TO OUTLET STRUCTURE AT WET STORAGE WATER SURFACE ELEVATION. ALL OTHER ORIFICES BELOW DRY STORAGE WATER SURFACE ELEVATION SHALL BE PLUGGED OR BLOCKED UNTIL SITE IS FULLY STABILIZED.
3. DEWATERING DEVICE SHALL BE FAIRCLOTH SKIMMER, OR APPROVED EQUAL.

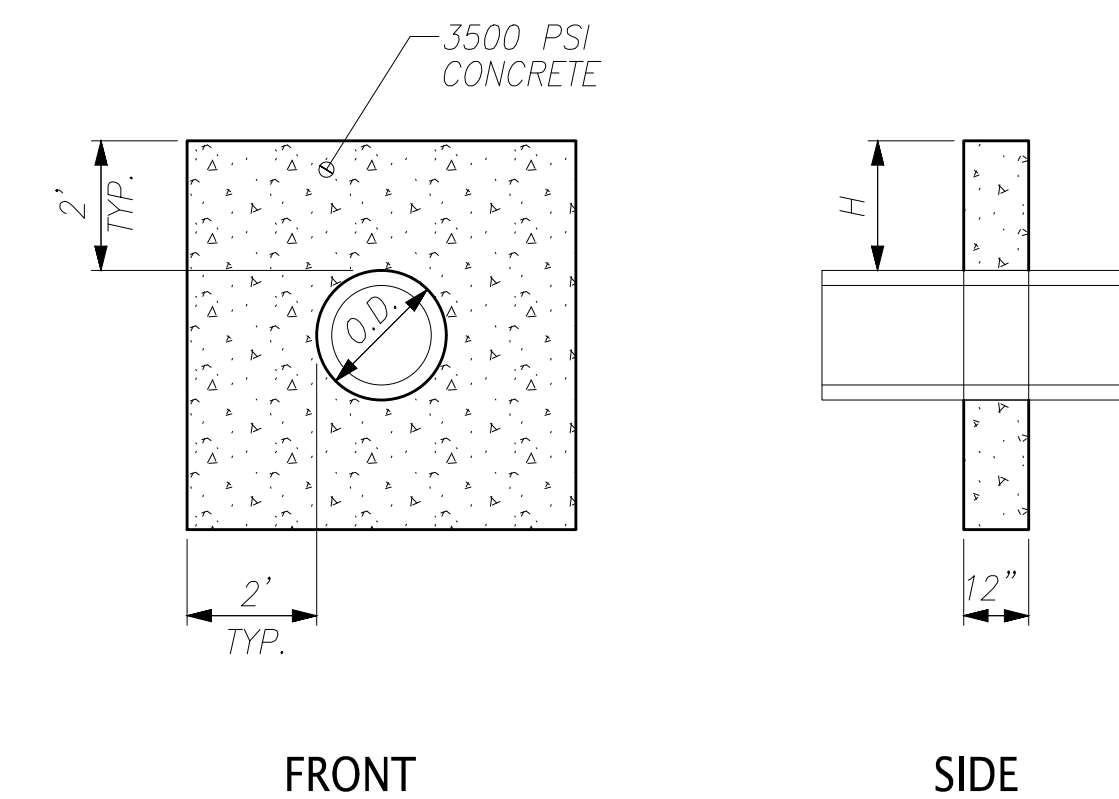
20 SURFACE SKIMMER DEWATERING DEVICE
C11 N.T.S.



NOTES:

1. CONSTRUCT/INSTALL ANTI-SEEP COLLARS (REFER TO DETAIL) ON ALL PIPES THAT GO THROUGH THE BERM.

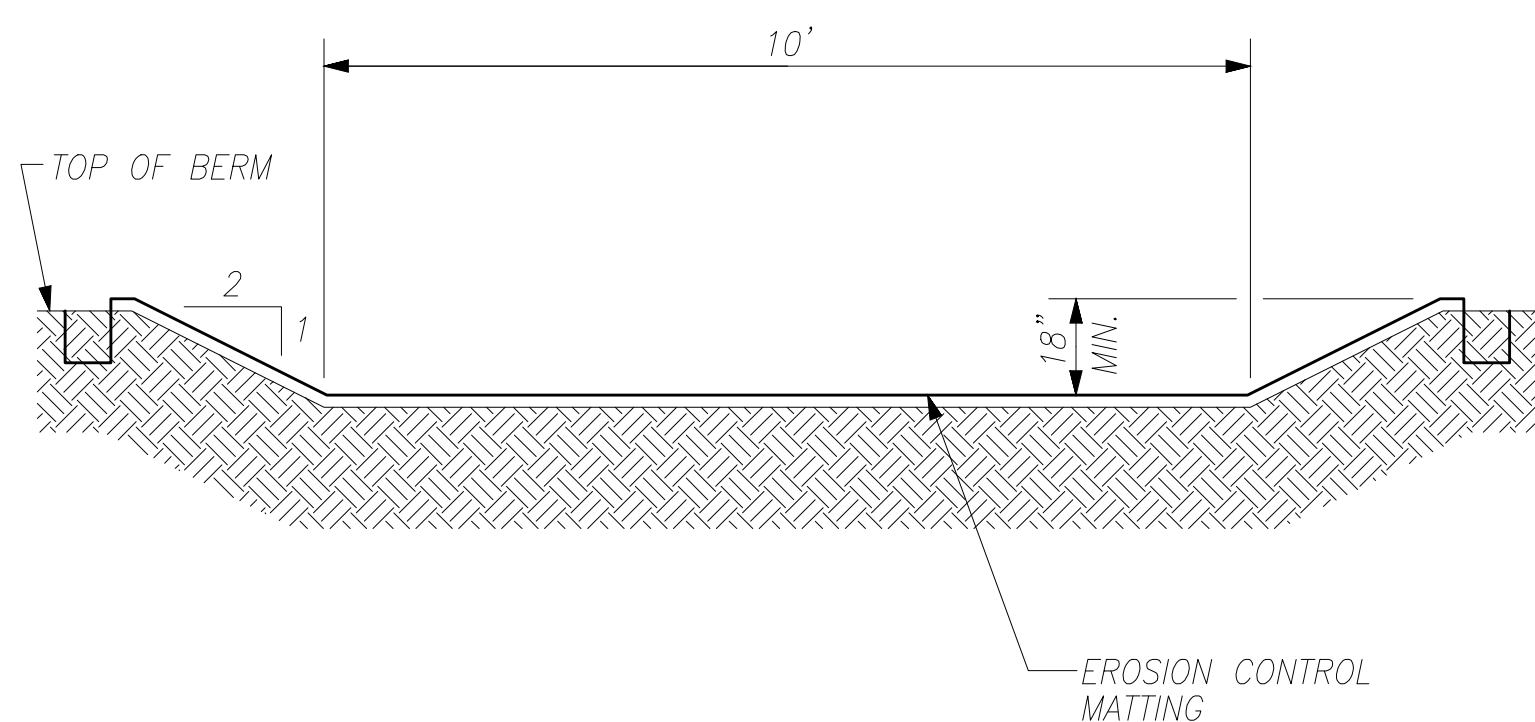
21 RETENTION POND BERM
C11 N.T.S.



NOTES:

1. MAXIMUM SPACING SHALL BE 14 TIMES THE COLLAR HEIGHT (H) OR 25 FT WHICHEVER IS LESS. MINIMUM SPACING IS 10 FT.
2. PROVIDE A COLLAR AT THE HALF-WAY POINT IN THE BERM.
3. PROVIDE A MINIMUM OF ONE COLLAR FOR BERMS LESS THAN 8 FT HIGH AND AT LEAST TWO COLLARS FOR BERMS EQUAL TO OR GREATER THAN 8 FT.

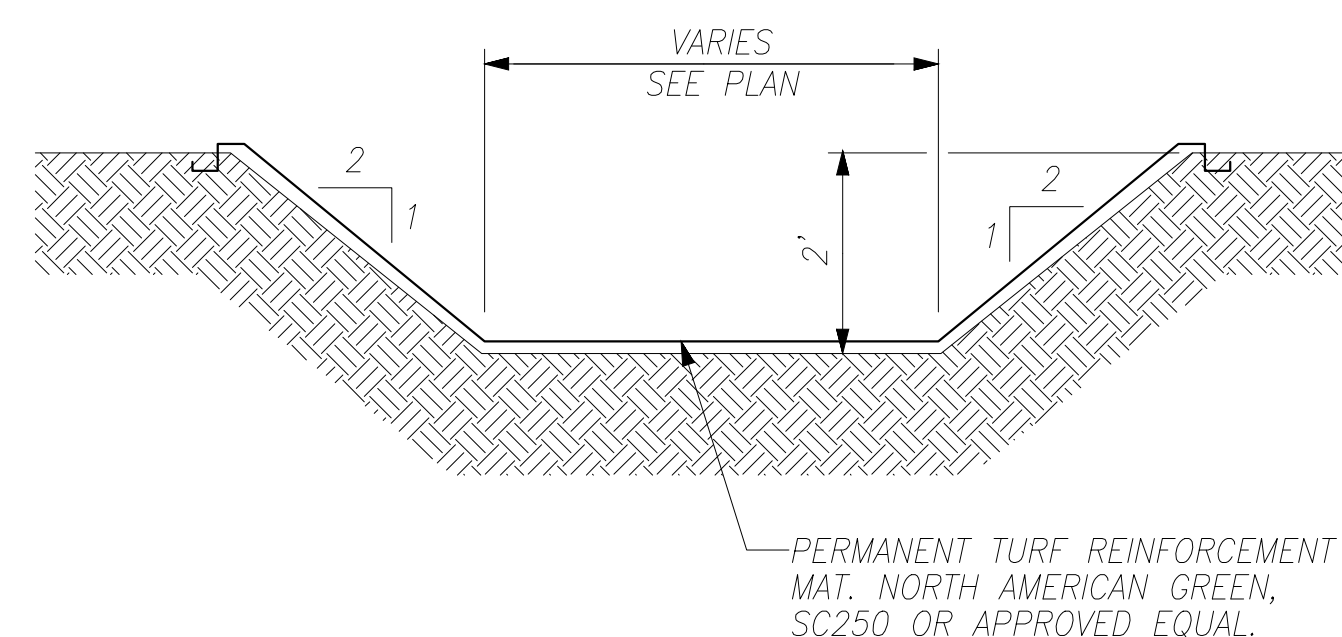
22 CONCRETE ANTI-SEEP COLLAR
C11 N.T.S.



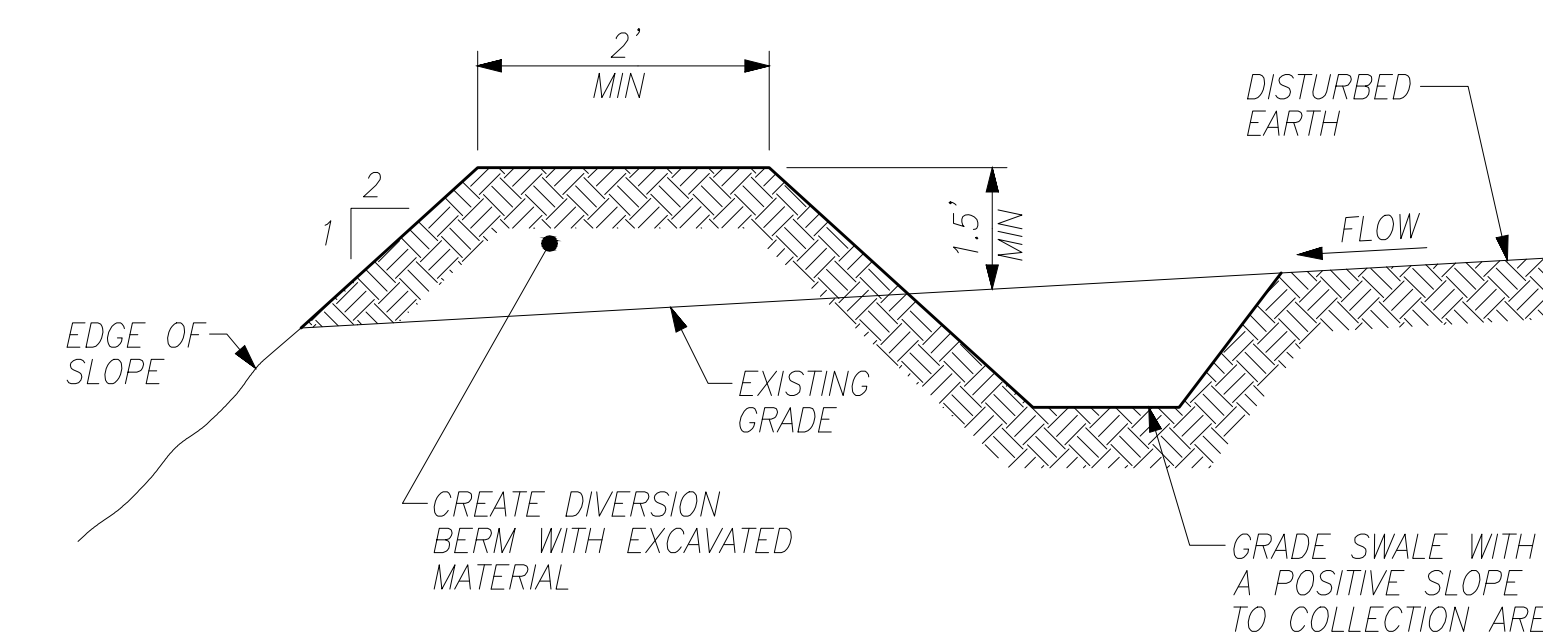
NOTES:

1. EROSION CONTROL MAT SHALL BE PYRAMAT BY SYNTHETIC INDUSTRIES OR EQUAL AND INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.
2. EXTEND MATTING 10' BEYOND TOE OF SLOPE ON THE DOWNHILL SIDE AND 10' BEYOND THE TOP OF SPILLWAY ON THE POND SIDE.

23 EMERGENCY SPILLWAY
C11 N.T.S.



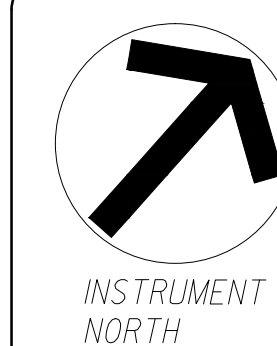
24 DITCH SECTION
C11 N.T.S.



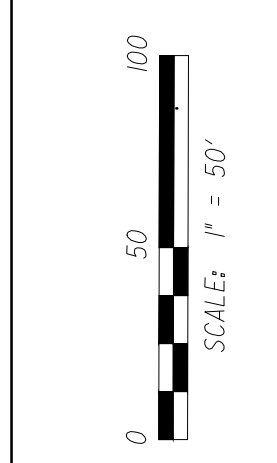
NOTES:

1. PROVIDE SLOPE DRAIN AS NECESSARY TO CONVEY RUNOFF TO A STABILIZED OUTLET.
2. PIPE DIAMETER SHALL CONFORM TO TDEC REQUIREMENTS.

25 DIVERSION BERM
C11 N.T.S.



INSTRUMENT NORTH



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EROSION PREVENTION & SEDIMENT CONTROL DETAILS
SHEET 3

