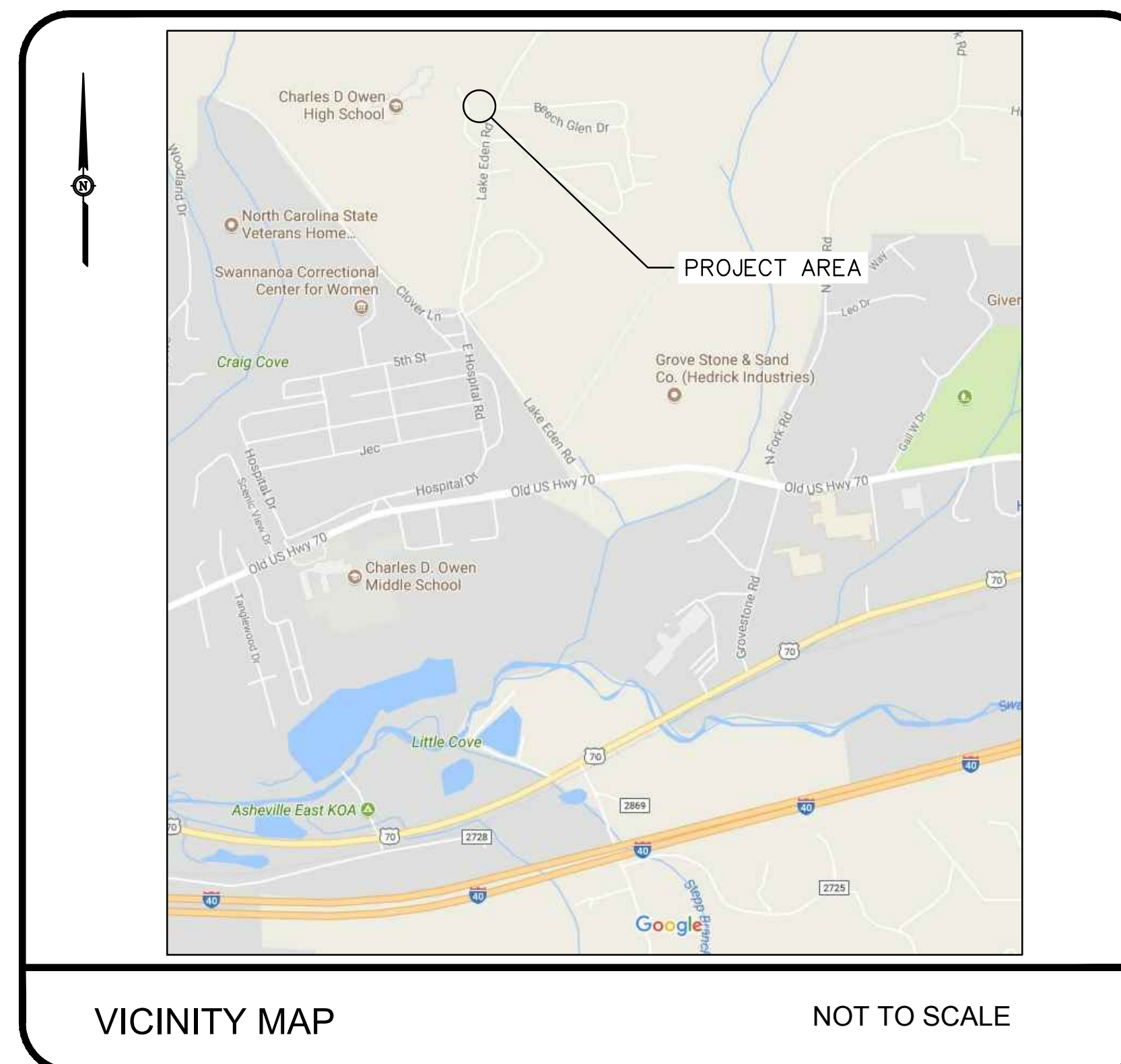


CHARLES D. OWEN HIGH SCHOOL DETENTION POND REFURBISHMENT

BUNCOMBE COUNTY SCHOOLS

BUNCOMBE COUNTY, NORTH CAROLINA



SCHEDULE OF DRAWINGS

- G-001 COVER SHEET
- CD-101EXISTING CONDITIONS & EROSION CONTROL PLAN
- C-101 POND REFURBISHMENT PLAN
- C-501 POND REFURBISHMENT DETAILS

**NORTH CAROLINA LAND QUALITY SECTION
EROSION CONTROL NOTES**

REVISION DATE - MARCH, 2016

GENERAL: ALL EROSION CONTROL MEASURES ARE TO BE PERFORMED IN STRICT ACCORDANCE WITH REQUIREMENTS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF LAND RESOURCES, LAND QUALITY SECTION. THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE COMPLIED WITH FOR ALL WORK.

- PRIOR TO BEGINNING WORK ON THE PROJECT THE CONTRACTOR SHALL OBTAIN FROM THE OWNER A COPY OF THE "EROSION AND SEDIMENT CONTROL APPROVAL" FROM THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF LAND QUALITY, OR THE LOCAL AUTHORIZED PROGRAM. THE APPROVAL NOTICE MUST BE POSTED ON-SITE DURING ALL GRADING AND CONSTRUCTION ACTIVITIES.
 - INSTALL ALL EROSION CONTROL MEASURES AS REQUIRED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF LAND RESOURCES, LAND QUALITY SECTION. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AT THE END AND BEGINNING OF EACH WORK DAY AND MAINTAINED AS REQUIRED.
- NOTE: ALL UTILITY INSTALLATION WITHIN 25' OF A RIVER OR STREAM BANK SHALL BE INSTALLED PER STREAM PROTECTION DURING EXCAVATION. DETAIL SEEDING AND MULCHING SHALL BE COMPLETED DAILY IN AREAS NOTED AS STREAM PROTECTION AREAS. SILT FENCE IN THESE AREAS SHALL NOT BE INSTALLED CLOSER THAN 5' FROM CREEK BANK UNLESS FIELD CONDITIONS PREVENT SUFFICIENT CLEARANCE. ALL SILT FENCES SHALL BE INSPECTED AND CLEANED AS NEEDED AFTER EACH RAIN.**
- NO WORK SHALL BE PERFORMED IN STREAM FROM OCTOBER 15 TO APRIL 15 (TO ACCOMMODATE COE AND DWQ RECOMMENDATIONS CONCERNING WORK IN TROUT WATERS.)
 - CONTRACTOR IS TO PLACE PERMANENT STAKES MARKING CLEARLY THE 25' BUFFER FOR STREAMS WHERE SHOWN ON THE PLANS AND THE MARKERS ARE TO BE VISIBLE AT ALL TIMES DURING CONSTRUCTION.
 - OBTAIN CERTIFICATE OF COMPLIANCE THROUGH ON-SITE INSPECTION BY A REPRESENTATIVE OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF LAND RESOURCES, LAND QUALITY SECTION.
 - CONSTRUCTION SHALL BE LIMITED TO 2000' OF CONTIGUOUS ROAD CORRIDOR UNTIL ALL CUTS, FILLS, AND DITCHES ARE STABILIZED FOR THAT 2000' SECTION. UPON STABILIZATION OF THAT SECTION ANOTHER 2000' SECTION CAN BE CONSTRUCTED AND STABILIZED.
 - ALL STREAM CROSSINGS AND PERENNIAL STREAMS WILL BE ALIGNED WITH THE NATURAL STREAM PATTERNS ABOVE AND BELOW THE PROPOSED ROAD. ARCH CULVERTS WILL BE USED AND FOOTERS WILL BE CONSTRUCTED IN UNDISTURBED BANKS AWAY FROM THE STREAM FLOW.
 - PROCEED WITH GRADING, CLEARING AND GRUBBING. NOTE: NO OFF SITE DISPOSAL OF MATERIAL IS ALLOWED UNLESS THE DISPOSAL SITE HAS AN APPROVED EROSION CONTROL PLAN.
 - SEED AND PLACE EROSION CONTROL MATTING ON ALL CUT AND FILL SLOPES THAT ARE NOT ROCK IMMEDIATELY UPON COMPLETION OF SLOPE STABILIZATION.
 - ALL TEMPORARY STREAM AND CREEK CROSSINGS FOR EQUIPMENT DURING CONSTRUCTION SHALL BE MADE USING TEMPORARY BRIDGES. NO STREAM BANK OR STREAM BED DISTURBANCE SHALL BE ALLOWED FOR EQUIPMENT CROSSINGS.
 - SEED AND MULCH DENUDEED AREAS DAILY AFTER FINISHED GRADE IS ESTABLISHED. GROUND SURFACES NOT CLASSIFIED AS OPEN FIELDS SHALL BE LOOSENEED TO A DEPTH OF 6" WITH ALL LARGE ROCKS, CLUMPS OF EARTH AND EXCESSIVE SPOIL MATERIAL REMOVED. SEED AND SOIL AMENDMENTS SHALL BE PLACED ON A PREPARED SEEDBED AT THE FOLLOWING RATES PER ACRE. STRAW MULCH SHALL BE TACKED WITH TACKING AGENT APPLIED BY HYDROSEEDER.

LIME	4,000 LBS
FERTILIZER (10-10-10)	1,000 LBS
KY-31 FESCUE (POA PRATENSIS)	100 LBS (MOWED AND MAINTAINED AREAS ONLY)
OR CREEPING RED FESCUE	100 LBS (NATURAL AREAS AND STREAMBANKS)
STRAW MULCH	60-80 BALES
FOR SUMMER SEEDING ADD TO THE ABOVE:	
GERMAN MILLET (SETARIA ITALICA)	40 LBS
SMALL-STEMMED SUDAN GRASS (SORGHUM BICOLOR)	50 LBS
FOR WINTER SEEDING ADD TO THE ABOVE:	
RYE GRAIN (SECAE CEREALE)	120 LBS

IF HYDROSEEDING, WOOD CELLULOSE MAY BE USED IN ADDITION TO STRAW MULCH AT THE RATE OF 1,000 LBS PER ACRE.

ALL SEEDING SHALL BE MAINTAINED, WATERED ETC., UNTIL A PERMANENT VEGETATIVE GROUND COVER IS ESTABLISHED OVER ALL DISTURBED AREAS.

FOR ALL SLOPES 2:1 OR STEEPER ADD TO THE ABOVE:

PURE LIVE SEED SWITCHGRASS	4 LBS
BROWNTOP MILLET OR PEARL MILLET (PENNISETUM GLAUCUM)	8 LBS
GRAIN SORGHUM (SORGHUM BICOLOR (L) MOENCH SSP. BICOLOR)	2 LBS

ALL SLOPES 2:1 OR STEEPER SHALL BE COVERED BY EROSION CONTROL MATTING.

NATIVE SEEDING:

THE CORRECT SEEDBED pH IS 5.5 TO 6.5.

APPLY ZERO NITROGEN AT PLANTING.

INCORPORATE SOIL AMENDMENTS INTO TOPSOIL/ROOT ZONE BEFORE SEEDING.

FIRM SEEDBED BEFORE SEEDING (TRAVEL WITH DOZER CLEATS).

SEEDING DEPTH FOR ALL NATIVE SSP. EXCEPT E.GAMAGRASS (TRIPSACUM DACTYBIDES) NEED TO BE 1/4" - 1/2". GREATER DEPTHS CAUSE HIGH SEED MORTALITY.

SPECIALIZED SEEDING IMPLEMENTS ARE REQUIRED. SEED MIXES AND RATES TO MATCH SEEDER USED. A NO-TILL, DROP SEEDER OR BROADCASTER WITH PRECISION METERING TO CONTROL SMALL SEED FLOW AND PICKER WHEEL AGITATORS TO HANDLE FLUFFY SEED ARE BEST SUITED FOR NATIVE SEED.

NATIVE PLANT SEEDING MIX FOR STREAM OR RIVERBANK STABILIZATION

SEEDING FOR STREAM OR RIVERBANK STABILIZATION SHALL BE A MIXTURE OF NATIVE GRASSES, PLANTS AND TREES. NATIVE PLANT MIX SHALL INCLUDE THE FOLLOWING:

GRASSES - BIG BLUESTEM (ANDROPOGON GERARDII), INDIAN GRASS (SORGASTRUM NUTANS), LITTLE BLUESTEM (SCHIZACHYRIUM SCOPARIUM), SWITCHGRASS (PANICUM VIRGATUM),	15 LBS/ACRE EACH
AUGUST THRU MAY - GREENRYE (SECAE CEREALE)	25 LBS/ACRE EACH
MAY 1 THRU AUGUST - MILLET (PENNISETUM GLAUCUM)	25 LBS/ACRE EACH

TREES - SILKY DOGWOOD (CORNIUS AMONUM), SILKY WILLOW (SALIX SERICEA), HAZEL ALDER (ALNUS SERRULATA) AND ELDERBERRY (SAMBUEUS CANADENSIS)

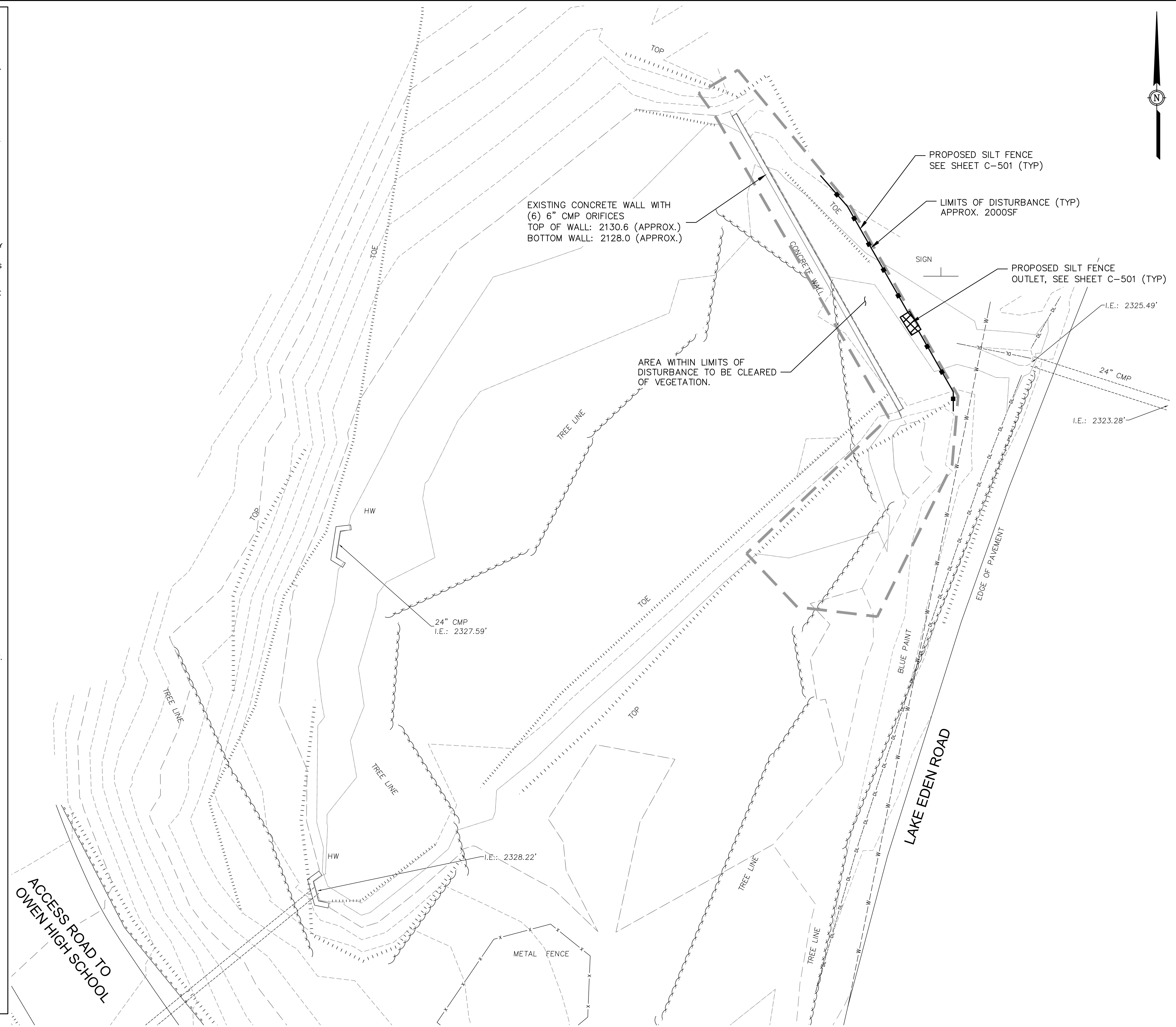
NATIVE PLANT MIX VARIATIONS SHALL BE APPROVED BY ENGINEER.

NOTE: NO FERTILIZER SHALL BE USED WITHIN 10' OF TOP OF STREAM OR RIVER BANK.

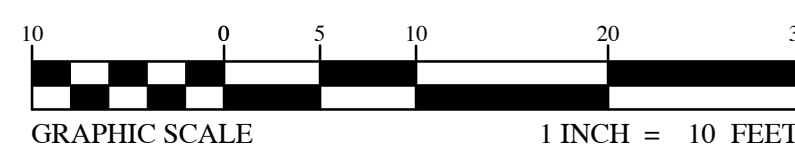
NPDES PERMITS - NOTE -FOR PROJECTS REQUIRING NPDES PERMITS, THE FOLLOWING STABILIZATION SCHEDULE SHALL APPLY:

SITE AREA DESCRIPTION	STABILIZATION TIMEFRAME	STABILIZATION TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7-DAYS FOR SLOPES GREATER THAN 50 FEET IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETERS AND HQW ZONES)

- MAINTAIN SOIL EROSION CONTROL MEASURES UNTIL PERMANENT GROUND COVER IS ESTABLISHED. INSPECT ALL EROSION CONTROL MEASURES WEEKLY, AFTER EVERY RAIN AND DAILY DURING PROLONGED RAIN EVENTS.
- REMOVE SOIL EROSION CONTROL MEASURES AND STABILIZE THESE AREAS.
- REQUEST FINAL APPROVAL BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF LAND RESOURCES, LAND QUALITY SECTION.



PLAN



NO.	DATE	BY	REVISION DESCRIPTION

McGill ASSOCIATES
ENGINEERING-PLANNING-FINANCE
35 BROAD STREET ASHEVILLE, NC 28801 PH: (828) 252-4075 FIRM LICENSE # C-4459



OWEN HIGH SCHOOL
STORMWATER POND REFURBISHMENT
BUNCOMBE COUNTY SCHOOLS
BUNCOMBE COUNTY, NORTH CAROLINA

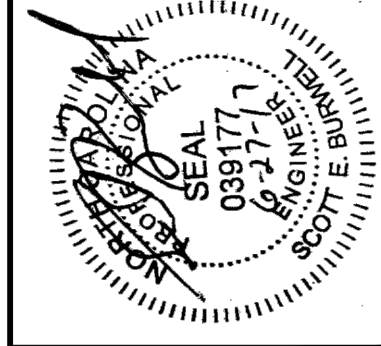
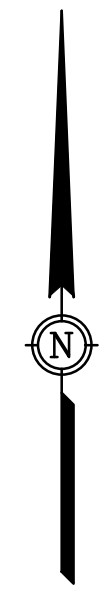
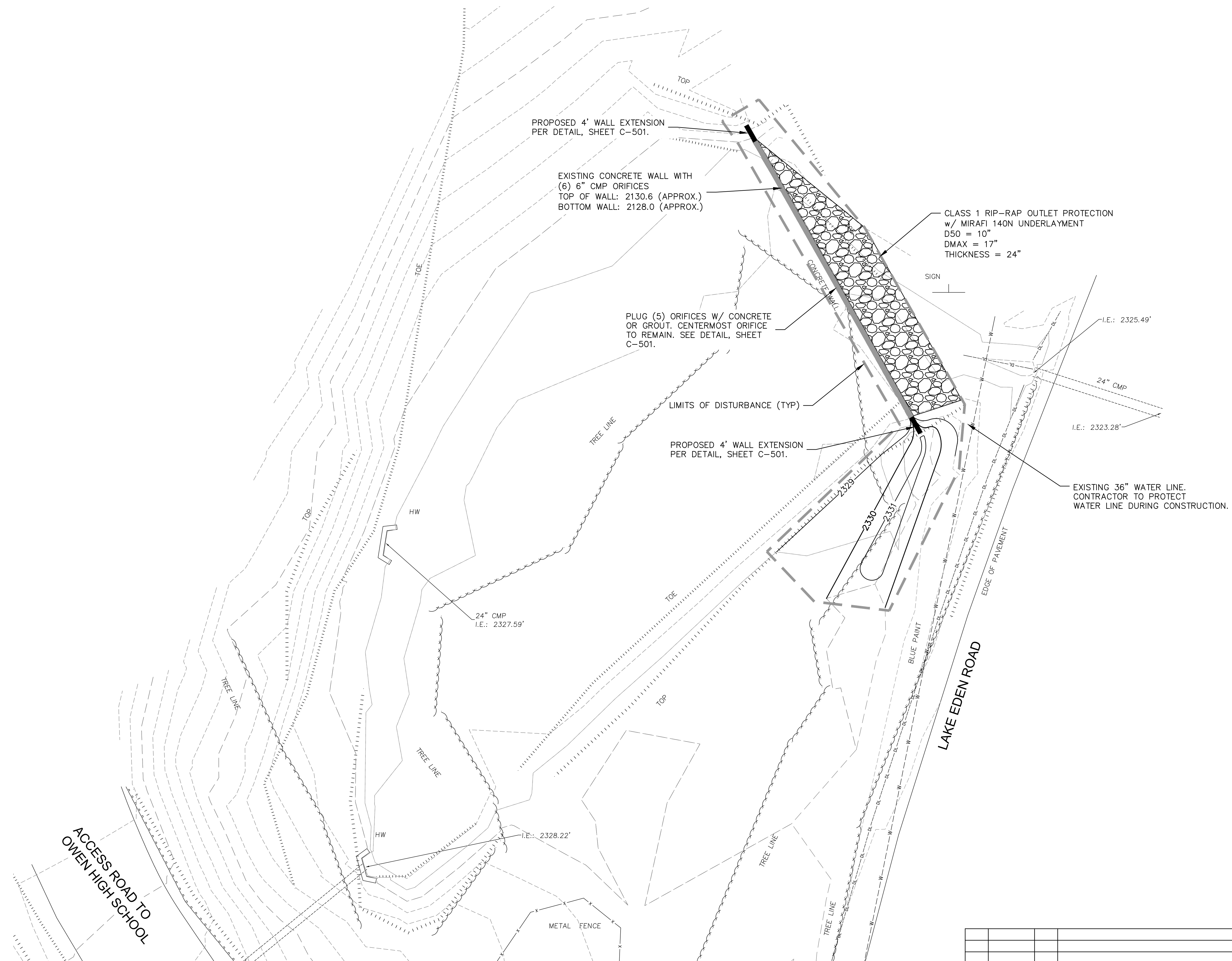
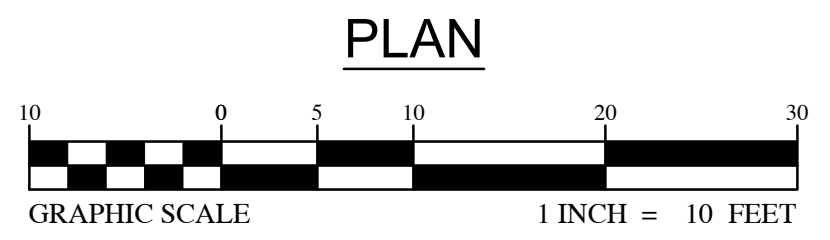
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DATE: JUNE 2017
DESIGNED BY: NLS
CADD BY: NLS
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CONST. REVIEW: _____
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EXISTING CONDITIONS &
EROSION CONTROL PLAN

SHEET
CD-101

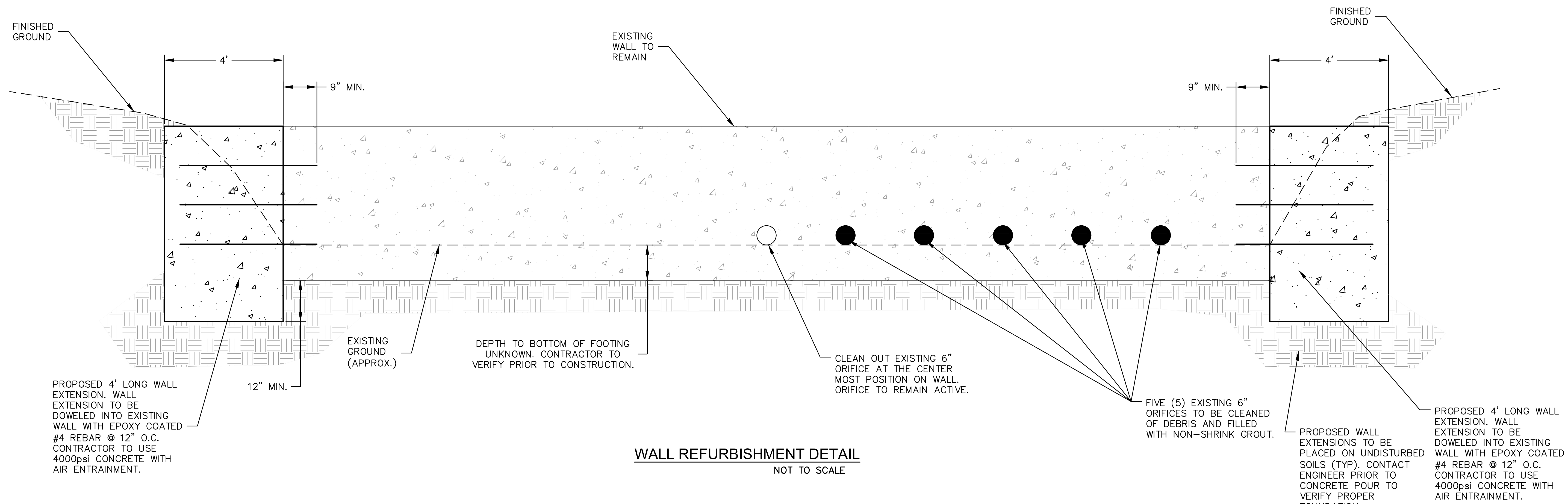
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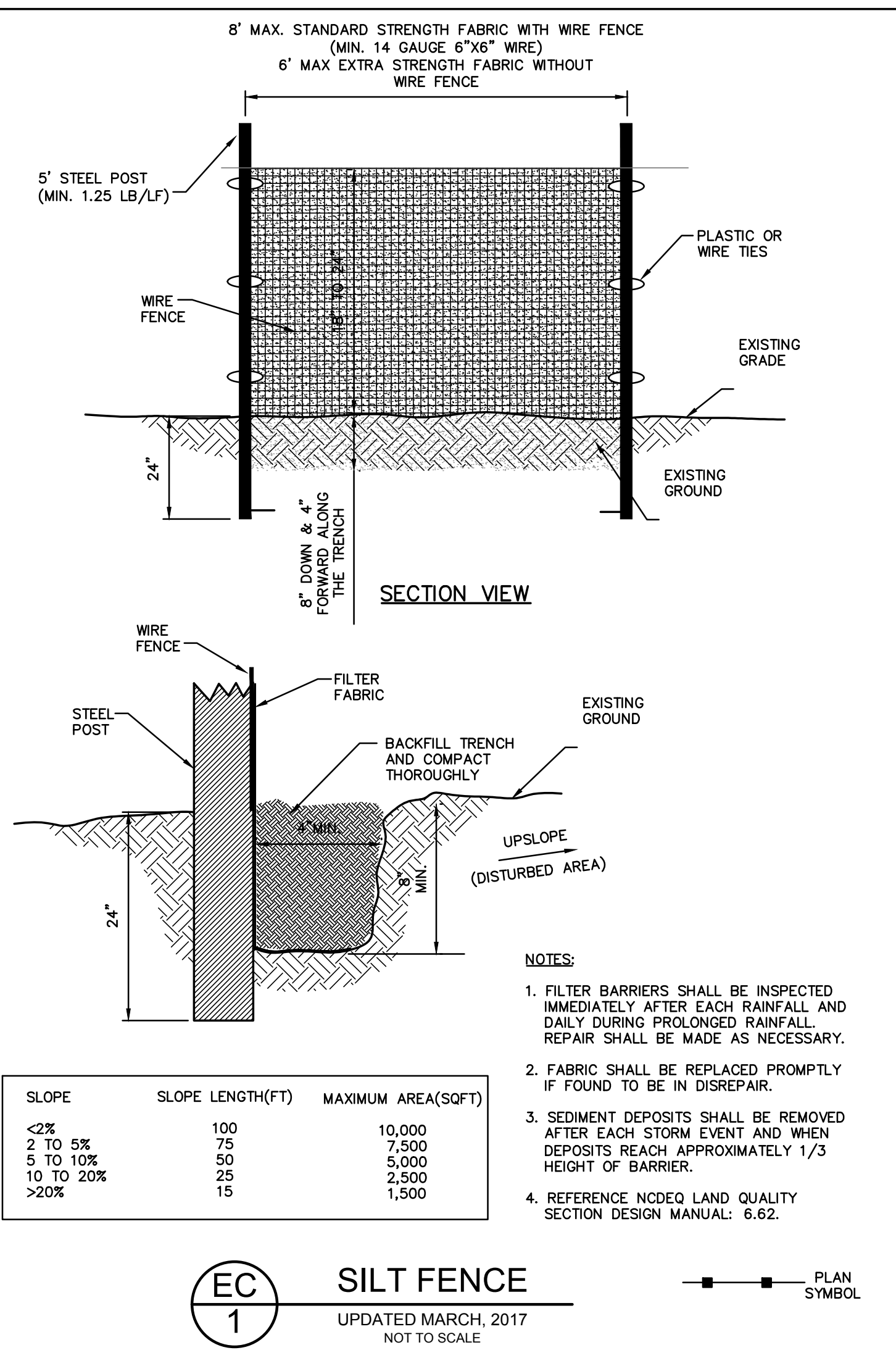


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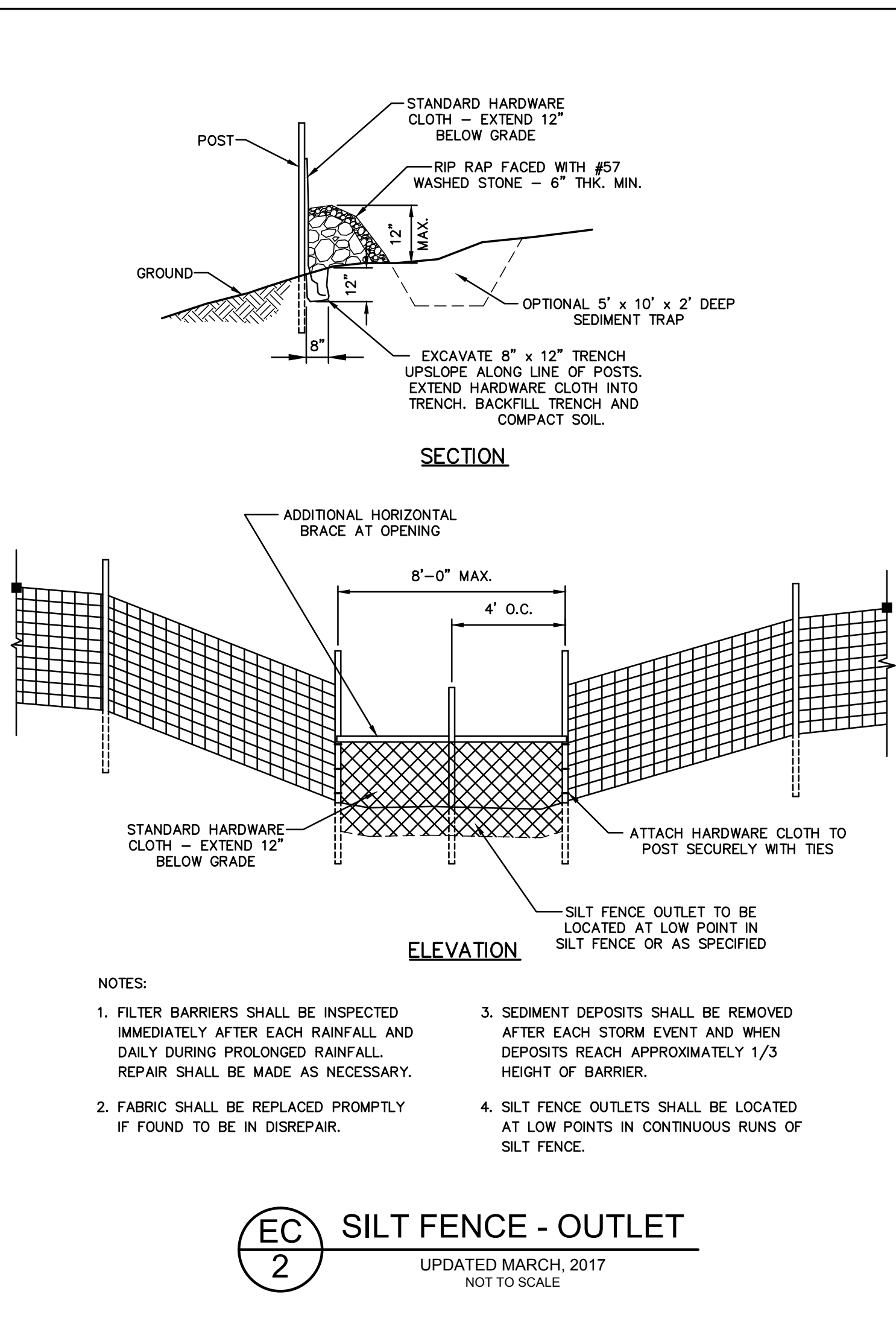
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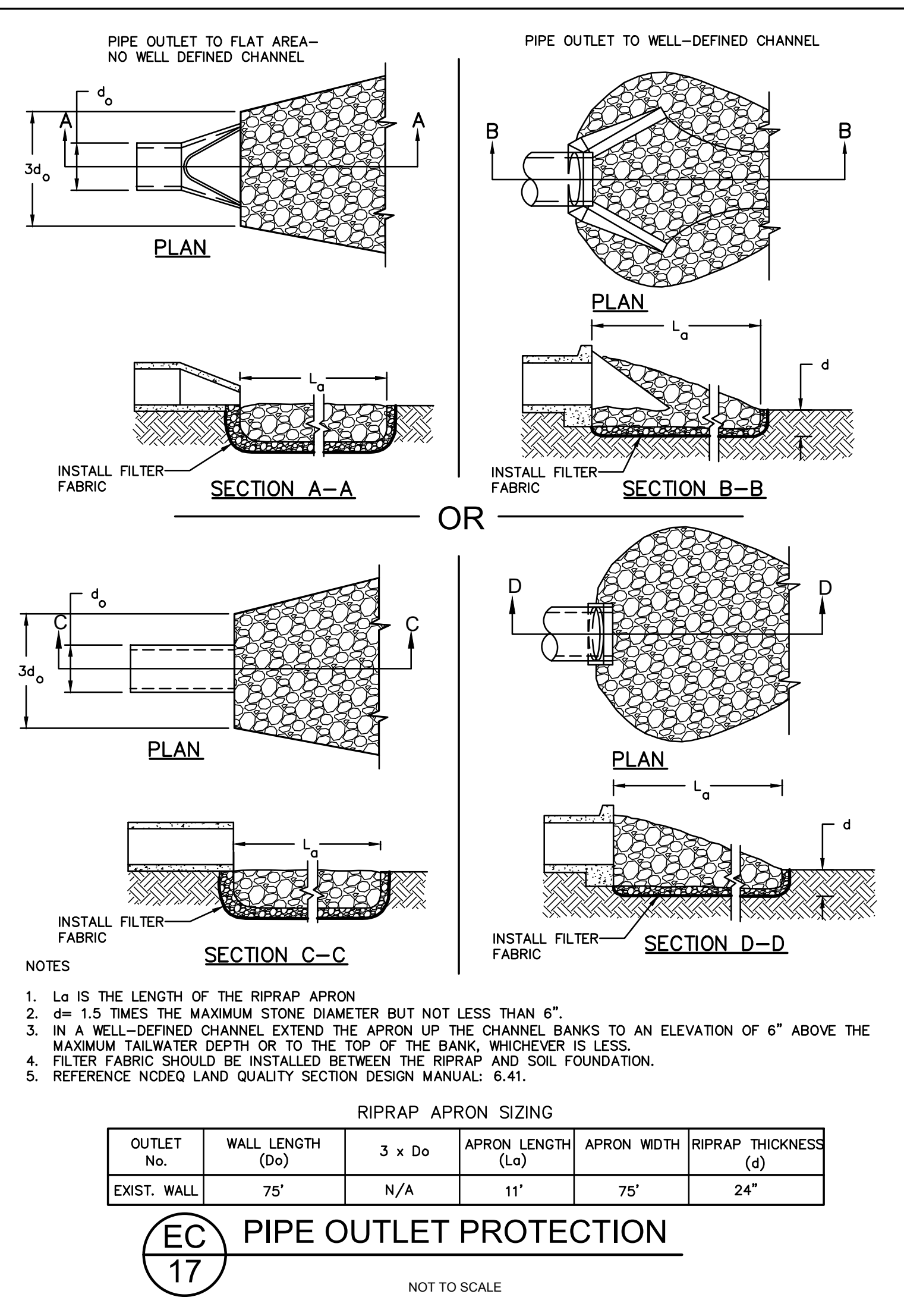
WALL REFURBISHMENT DETAIL
 NOT TO SCALE



EC 1 SILT FENCE
 UPDATED MARCH, 2017
 NOT TO SCALE



EC 2 SILT FENCE - OUTLET
 UPDATED MARCH, 2017
 NOT TO SCALE



RIPRAP APRON SIZING

OUTLET No.	WALL LENGTH (Lo)	3 x Do	APRON LENGTH (Lo)	APRON WIDTH (d)	RIPRAP THICKNESS (d)
EXIST. WALL	75'	N/A	11'	75'	24"

EC 17 PIPE OUTLET PROTECTION
 NOT TO SCALE

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