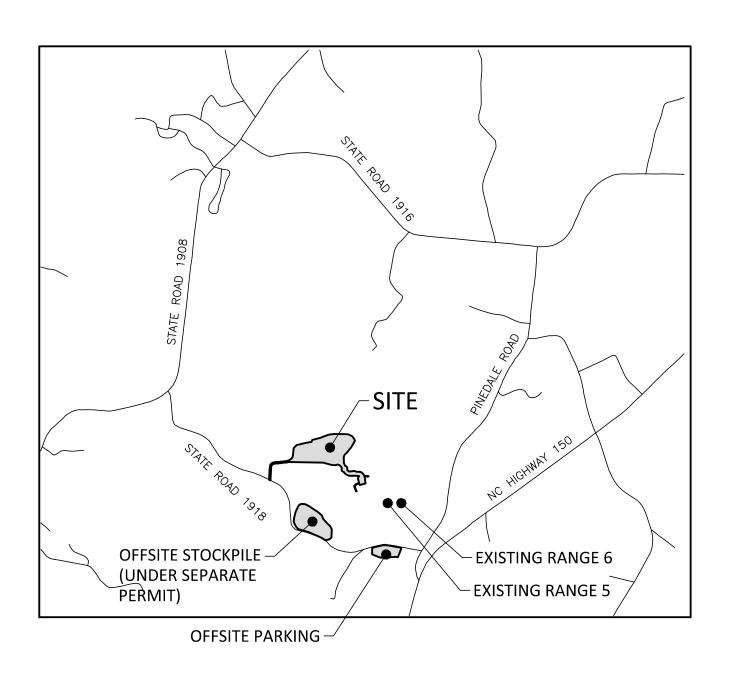
FOOTHILLS SHOOTING COMPLEX IMPROVEMENTS SKEET AND TRAP EXPANSION

283 FIELDING ROAD CHERRYVILLE, NORTH CAROLINA 28021

CONSTRUCTION DRAWINGS

PROJECT NUMBER: CCY-18010 DATE: MAY 4th, 2020



| | SITE DATA BLOCK |
|-------------------------|---|
| OWNER/ DEVELOPER | CLEVELAND COUNTY P.O. BOX 1210 SHELBY, NORTH CAROLINA 28151 |
| PARCEL | PIN NO. 2568036106 |
| DEED BOOK | 1540-1996 |
| ZONING DISTRICT | HEAVY INDUSTRIAL/RURAL AGRICULTURE |
| RIVER BASIN | YAD (YADKIN PEE DEE) |
| EXISTING USE | LANDFILL AND SHOOTING RANGE |
| PROPOSED USE | LANDFILL AND SHOOTING RANGE |
| REQUIRED PARKING SPACES | N/A |
| PARCEL ACREAGE | 918.25 ACRES |
| DISTURBED AREA | 19.73 ACRES (2.15%) |

VICINITY MAP



CONTRACTOR SHALL NOTIFY "NC811" (811) OR (1-800-632-4949) AT LEAST 3 FULL BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF "NC811". REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY

SHEET INDEX

- **EXISTING CONDITIONS**
- OFFSITE PARKING EXISTING CONDITIONS
- DEMOLITION PLAN
- OVERALL SITE PLAN
- SITE PLAN
- OVERALL GRADING PLAN
- GRADING PLAN UTILITY PLAN
- OFFSITE PARKING DEMOLITION PLAN
- OFFSITE PARKING SITE PLAN OFFSITE PARKING - GRADING PLAN
- PROFILE ACCESS ROAD
- PLAN AND PROFILE STORM OUTFALL "A"
- EC-1 EROSION CONTROL PLAN STAGE 1
- **EROSION CONTROL PLAN STAGE 2** OFFSITE PARKING - EROSION CONTROL PLAN - STAGE 1
- EC-4 OFFSITE PARKING EROSION CONTROL PLAN STAGE 2
- EC-5 EROSION CONTROL DETAILS
- EC-6 EROSION CONTROL DETAILS
- EC-7 EROSION CONTROL DETAILS
- SW-1 STORM WATER CONTROL MEASURE PLAN VIEW SW-2 STORM WATER CONTROL MEASURE DETAILS
- SITE DETAILS
- NATIONAL RIFLE ASSOCIATION SITE DETAILS
- D-3 STORM DRAINAGE DETAILS
- E0.00 ELEC. SYMBOLS, LEGENDS AND ABBREVIATIONS
- E1.00 ELECTRICAL SITE PLAN
- E5.00 ELECT. DETAILS



2905 Meridian Parkway Durham, NC 27713

phone 919. 361. 5000 fax 919. 361. 2269 license number: C-0293, C-187

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CONTACT

MARK HAMLETT, PE. hamlett@mcadamsco.com PHONE: 919.361.5000

CLIENT

CLEVELAND COUNTY P.O. BOX 1210

SHELBY, NORTH CAROLINA 28151

PROJECT DIRECTORY

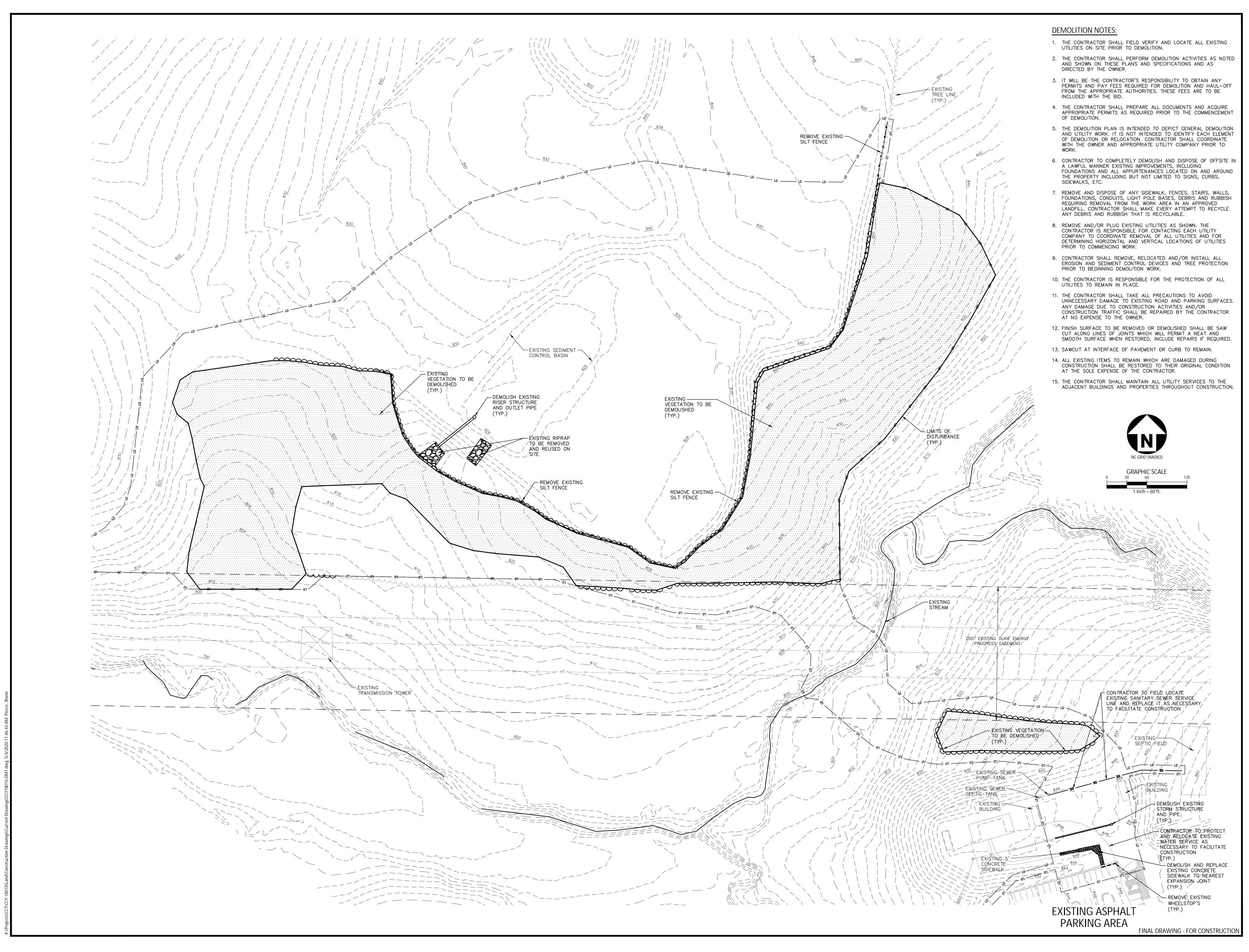


REVISIONS

NO. DATE

PERMITTING DRAWINGS FOR:

FOOTHILLS SHOOTING COMPLEX IMPROVEMENTS SKEET AND TRAP EXPANSION CLEVELAND COUNTY, NC. 2802: PROJECT NUMBER: CCY-18010





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CLEVELAND COUNTY

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REVISIONS

NO. DATE

PLAN INFORMATION

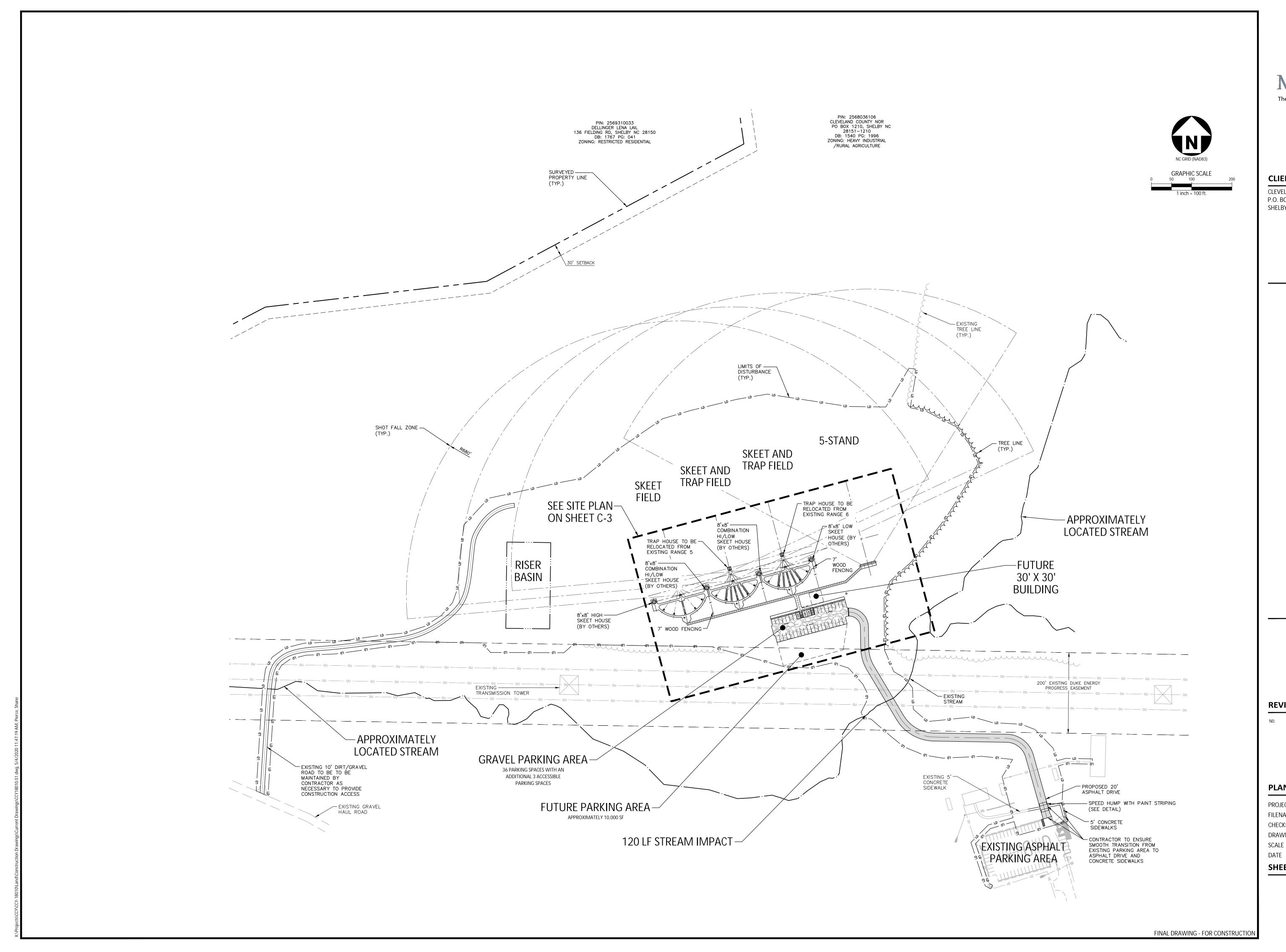
PROJECT NO. CCY-18010 FILENAME CHECKED BY DRAWN BY SCALE

SHEET

DATE

DEMOLITION

07.11.2019





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REVISIONS

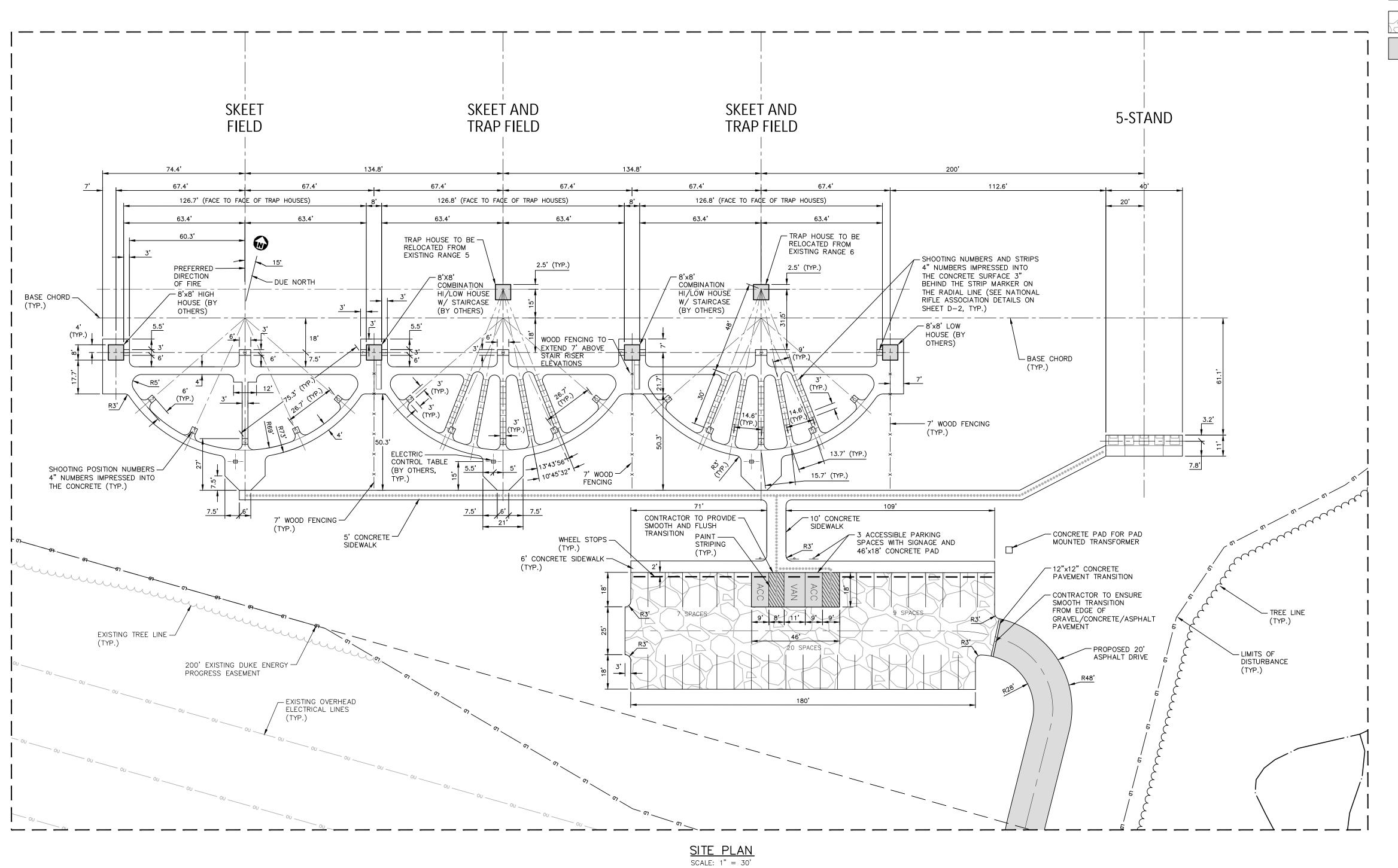
NO. DATE

PLAN INFORMATION

PROJECT NO. CCY-18010 FILENAME CCY18010-S1 CHECKED BY MJM DRAWN BY SCALE 1"=100'

07.11.2019

SHEET



SITE LEGEND

ACC VAN ACCESSIBLE ROUTE —— LD —— LD — LIMITS OF DISTURBANCE

EASEMENT LINE CENTERLINE GRAVEL PAVEMENT (SEE DETAIL SHEET D-1) ASPHALT PAVEMENT (SEE DETAIL SHEET D-1)

ACCESSIBLE PARKING STALL

VAN ACCESSIBLE PARKING STALL

WOODED AREA

SIGNAGE



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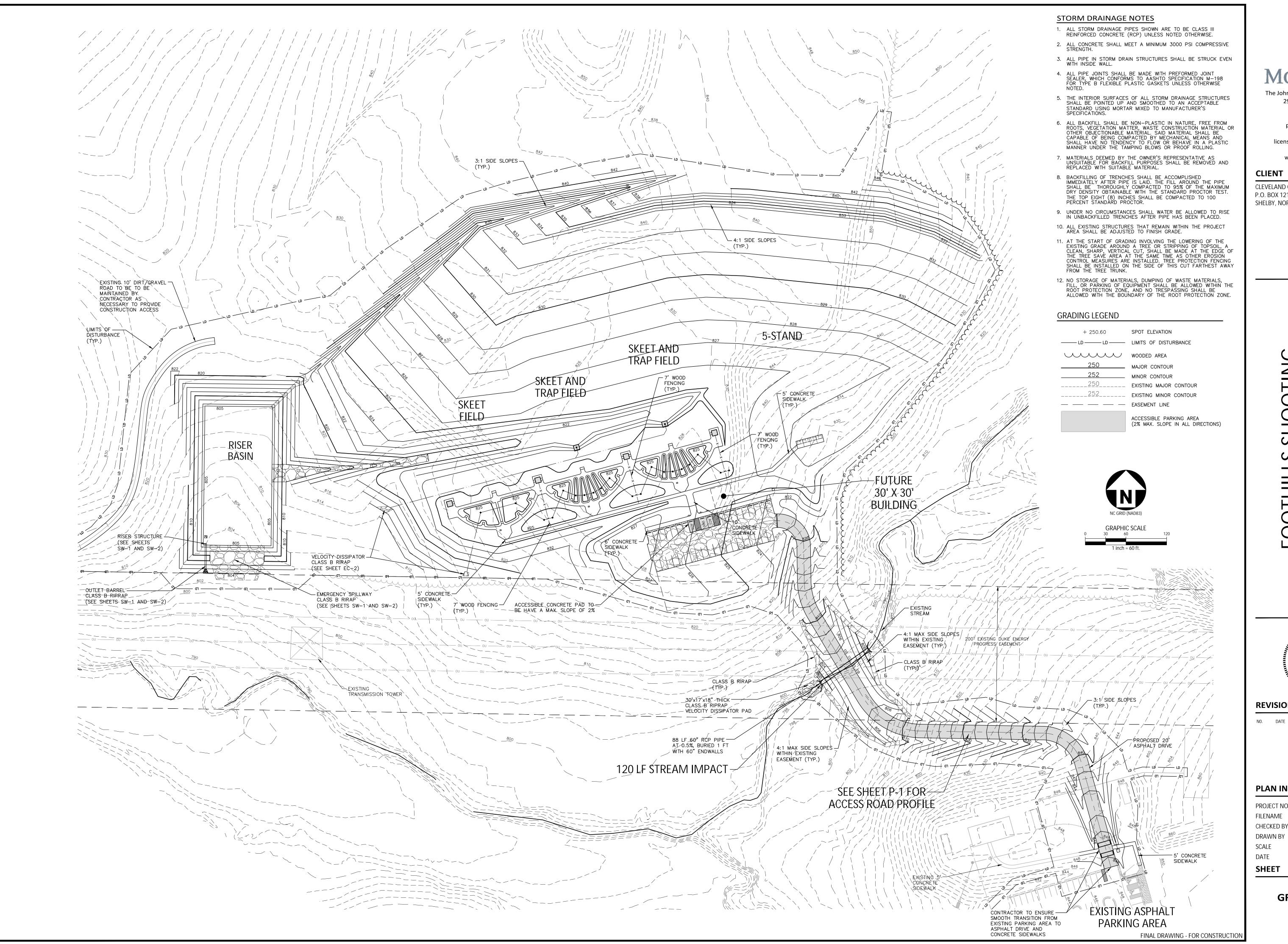
REVISIONS

NO. DATE

PLAN INFORMATION

PROJECT NO. CCY-18010 FILENAME CHECKED BY DRAWN BY SCALE 1"=100'

DATE 07.11.2019 SHEET





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REVISIONS

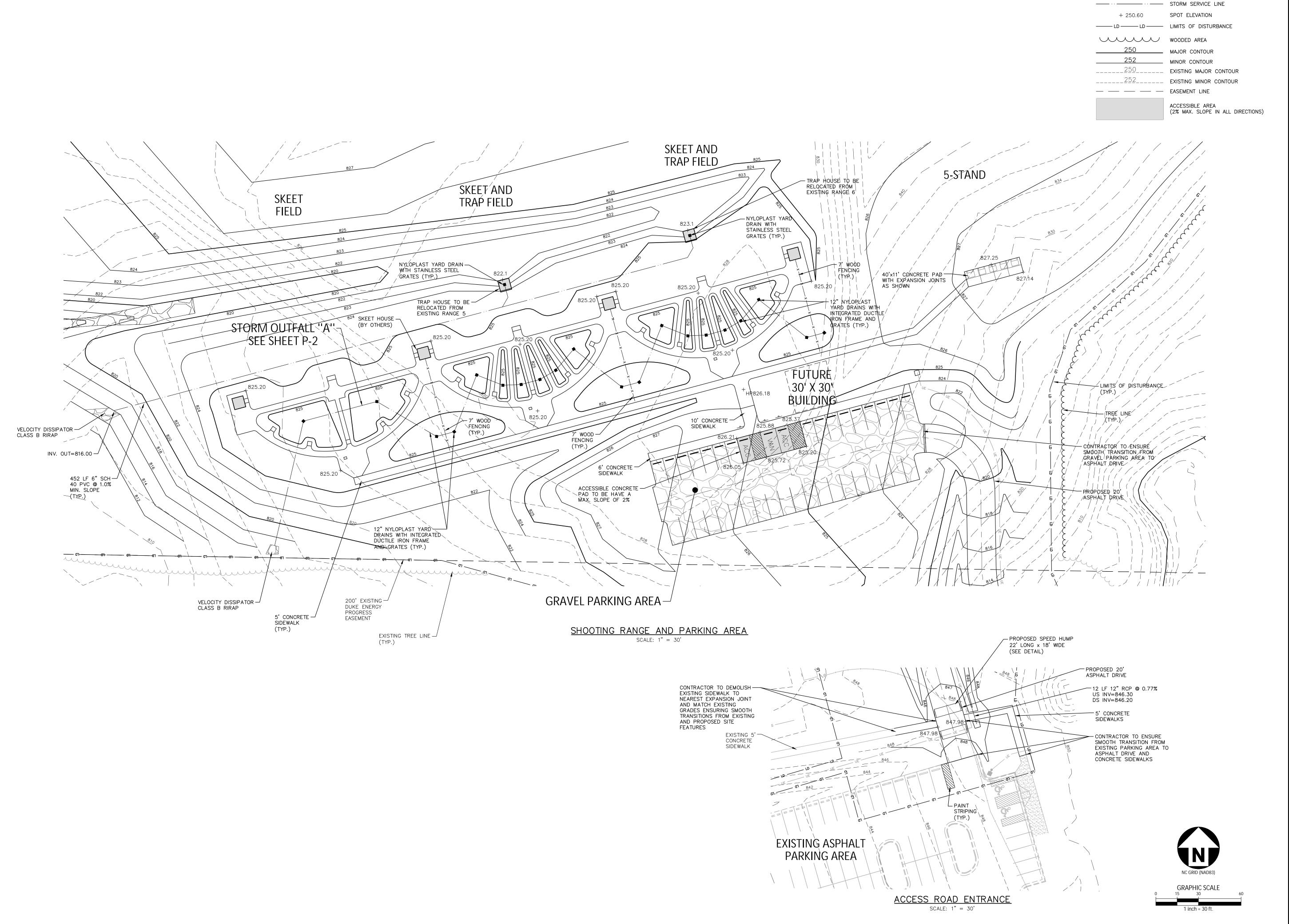
PLAN INFORMATION

PROJECT NO. CCY-18010 FILENAME CHECKED BY

DRAWN BY SCALE 07.11.2019

SHEET

OVERALL GRADING PLAN





GRADING LEGEND

STORM SERVICE INLET

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CLEVELAND COUNTY
P.O. BOX 1210
SHELBY, NORTH CAROLINA 28151

-OOTHILLS SHOOTING MPLEX IMPROVEMENTS SKEET AND TRAP EXPANSION NG ROAD, CHERRYVILLE, CLEVELAND COUNTY, NC. 280



REVISIONS

NO. DATE

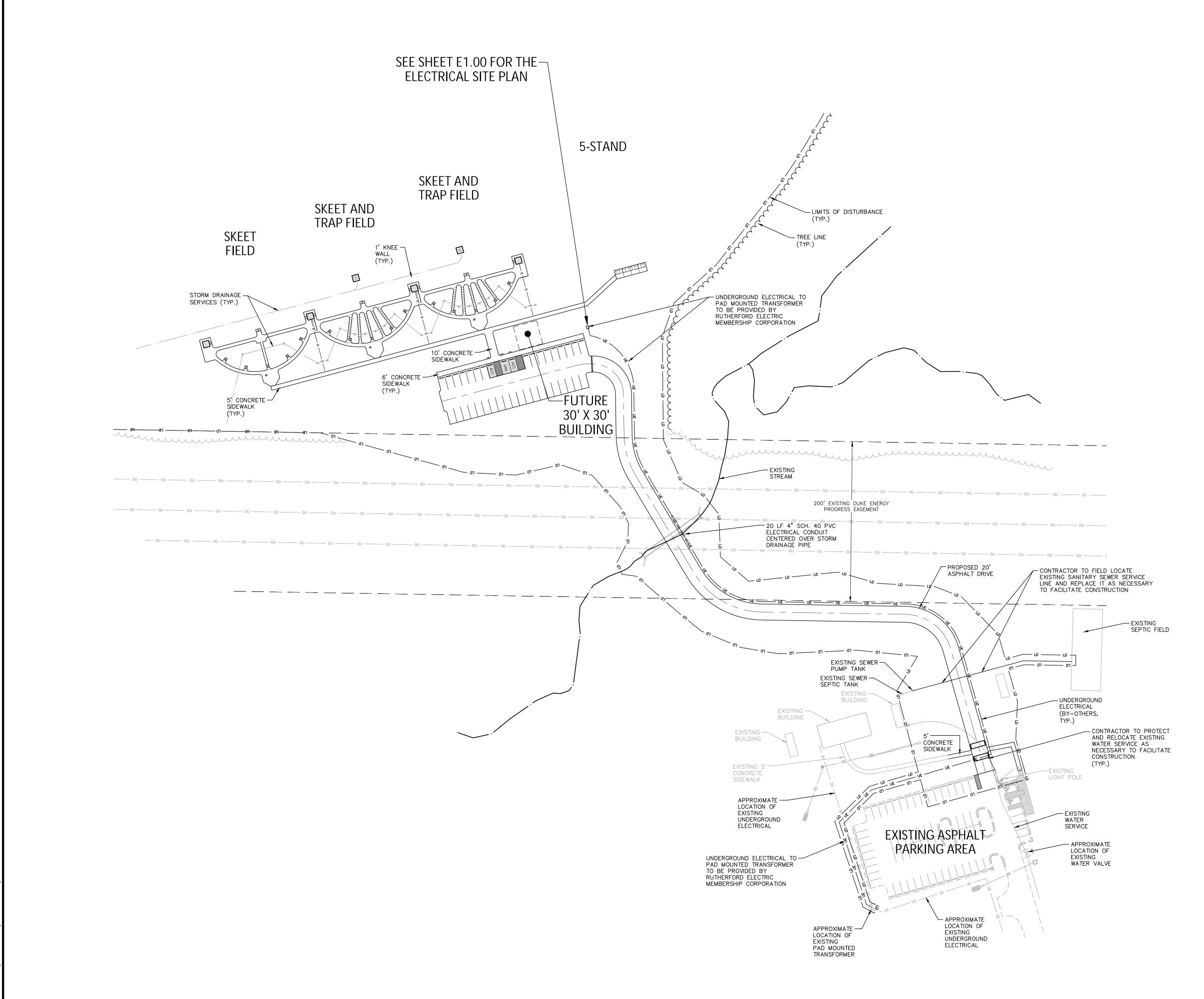
PLAN INFORMATION

PROJECT NO. CCY-18010
FILENAME CCY18010-G2
CHECKED BY MJM
DRAWN BY SMP
SCALE 1"=30'
DATE 07.11.2019

DATE SHEET

> GRADING PLAN

FINAL DRAWING - FOR CONSTRUCTION



UTILITY NOTES:

SANITARY SEWER:

- MINIMUM COVER OF 5 FEET IN TRAFFIC AREAS TO BE PROVIDED FOR ALL COLLECTOR LINES 4 INCHES AND LARGER. IF LESS THAN 5 FEET, DUCTILE IRON PIPE SHALL BE REQUIRED.
- 2. ALL SANITARY SEWER TO BE SCH 40 PVC.
- 3. ALL WATER LINES SHALL HAVE 18" VERTICAL AND 10 FT. HORIZONTAL SEPARATION AROUND SEWER LINES UNLESS OTHERWISE SHOWN. IF UNABLE TO MAINTAIN CLEARANCES, OR SANITARY CROSSES ABOVE WATER, BOTH LINES SHALL BE DUCTILE IRON FOR A MINIMUM OF 10 FT. ON EITHER SIDE OF THE CROSSING.
- 4. ALL STORM LINES SHALL HAVE 24" OF VERTICAL SEPARATION FROM SEWER LINES UNLESS OTHERWISE SHOWN.

WATER:

- ALL WATER LINES SHOWN ARE TO BE C900/DR18 PVC OR TYPE K COPPER TUBING ASTM B-88 WITH A MINIMUM OF 36" COVER.
- 2. ALL WATERLINES TO BE INSTALLED WITH 18" OF VERTICAL SEPARATION AND 10' OF HORIZONTAL SEPARATION FROM OTHER UTILITIES UNLESS OTHERWISE SHOWN
- 3. SHUT DOWN OF WATER MAIN SHALL BE COORDINATED WITH NORTH CAROLINA WILDLIFE RESOURCES COMMISSION MANAGEMENT, UTILITY OWNER AND ANY AFFECTED RESIDENCES.
- 4. ALL WATER SERVICES PROPOSED BY THIS PROJECT WILL BE PRIVATE SYSTEMS.
- ALL ABANDONED WATER LINE TO BE FILLED WITH FLOWABLE FILL AND ABANDONED IN PLACE UNLESS OTHERWISE APPROVED BY THE OWNER AND ENGINEER.

UTILITY LEGEND

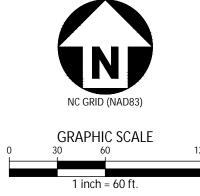
— LD — LD — LIMITS OF DISTURBANCE

WOODED AREA

— UE — UE — UNDERGROUND ELECTRIC

— EASEMENT LINE

— SEWER SERVICE LINE





MCADAMS

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FOUTHILLS SHOUTING COMPLEX IMPROVEMENTS SKEET AND TRAP EXPANSION 33 FIELDING ROAD, CHERRYVILLE, CLEVELAND COUNTY, NC. 280



REVISIONS

NO. DATE

PLAN INFORMATION

PROJECT NO. CCY-18010
FILENAME CCY18010-U
CHECKED BY MJM
DRAWN BY SMP
SCALE 1"=60'
DATE 07.11.2019

SHEET

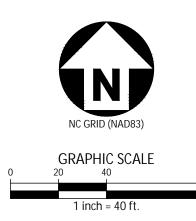
UTILITY

C-6

PIN: 2568036106 CLEVELAND COUNTY NOR PO BOX 1210, SHELBY NC 28151-1210 DB: 1540 PG: 1996 CLEVELAND/COUNTY SHOOTING RANGE ZONING: HEAVY INDUSTRIAL /RURAL AGRICULTURE APPROXIMATE — PROPERTY LINE EXISTING ————FIRE HYDRANT EXISTING —— GAS MARKER DRAINAGE - EXISTING FENCE TO BE REMOVED POWER POLE AND REPLACED AS NECESSARY TO FACILITATE GRAVEL TO \ CONSTRUCTION REMAIN EXISTING EDGE OF ASPHALT ENTRANCE EXISTING STORM STRUCTURE AND PIPE TO BE PROTECTED EXISTING GRAVEL TO BE REMOVED - EXISTING RAIL ROAD - LIMITS OF DISTURBANCE

DEMOLITION NOTES

- THE CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL EXISTING UTILITIES ON SITE PRIOR TO DEMOLITION.
- 2. THE CONTRACTOR SHALL PERFORM DEMOLITION ACTIVITIES AS NOTED AND SHOWN ON THESE PLANS AND SPECIFICATIONS AND AS DIRECTED BY THE OWNER.
- 3. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY PERMITS AND PAY FEES REQUIRED FOR DEMOLITION AND HAUL-OFF FROM THE APPROPRIATE AUTHORITIES. THESE FEES ARE TO BE INCLUDED WITH THE BID.
- 4. THE CONTRACTOR SHALL PREPARE ALL DOCUMENTS AND ACQUIRE APPROPRIATE PERMITS AS REQUIRED PRIOR TO THE COMMENCEMENT OF DEMOLITION.
- 5. THE DEMOLITION PLAN IS INTENDED TO DEPICT GENERAL DEMOLITION AND UTILITY WORK, IT IS NOT INTENDED TO IDENTIFY EACH ELEMENT OF DEMOLITION OR RELOCATION. CONTRACTOR SHALL COORDINATE WITH THE OWNER AND APPROPRIATE UTILITY COMPANY PRIOR TO
- 6. CONTRACTOR TO COMPLETELY DEMOLISH AND DISPOSE OF OFFSITE IN A LAWFUL MANNER EXISTING IMPROVEMENTS, INCLUDING FOUNDATIONS AND ALL APPURTENANCES LOCATED ON AND AROUND THE PROPERTY INCLUDING BUT NOT LIMITED TO SIGNS, CURBS, SIDEWALKS, ETC.
- REMOVE AND DISPOSE OF ANY SIDEWALK, FENCES, STAIRS, WALLS, FOUNDATIONS, CONDUITS, LIGHT POLE BASES, DEBRIS AND RUBBISH REQUIRING REMOVAL FROM THE WORK AREA IN AN APPROVED LANDFILL. CONTRACTOR SHALL MAKE EVERY ATTEMPT TO RECYCLE ANY DEBRIS AND RUBBISH THAT IS RECYCLABLE.
- 8. REMOVE AND/OR PLUG EXISTING UTILITIES AS SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING EACH UTILITY COMPANY TO COORDINATE REMOVAL OF ALL UTILITIES AND FOR DETERMINING HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES PRIOR TO COMMENCING WORK.
- 9. CONTRACTOR SHALL REMOVE, RELOCATED AND/OR INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AND TREE PROTECTION PRIOR TO BEGINNING DEMOLITION WORK.
- 10. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN IN PLACE.
- 11. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID UNNECESSARY DAMAGE TO EXISTING ROAD AND PARKING SURFACES. ANY DAMAGE DUE TO CONSTRUCTION ACTIVITIES AND/OR CONSTRUCTION TRAFFIC SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
- 12. FINISH SURFACE TO BE REMOVED OR DEMOLISHED SHALL BE SAW CUT ALONG LINES OF JOINTS WHICH WILL PERMIT A NEAT AND SMOOTH SURFACE WHEN RESTORED, INCLUDE REPAIRS IF REQUIRED.
- 13. SAWCUT AT INTERFACE OF PAVEMENT OR CURB TO REMAIN. 14. ALL EXISTING ITEMS TO REMAIN WHICH ARE DAMAGED DURING
- CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE SOLE EXPENSE OF THE CONTRACTOR.
- 15. THE CONTRACTOR SHALL MAINTAIN ALL UTILITY SERVICES TO THE ADJACENT BUILDINGS AND PROPERTIES THROUGHOUT CONSTRUCTION.





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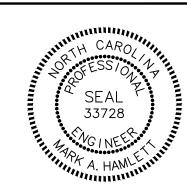
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CLIENT

CLEVELAND COUNTY

P.O. BOX 1210

SHELBY, NORTH CAROLINA 28151



REVISIONS

PLAN INFORMATION

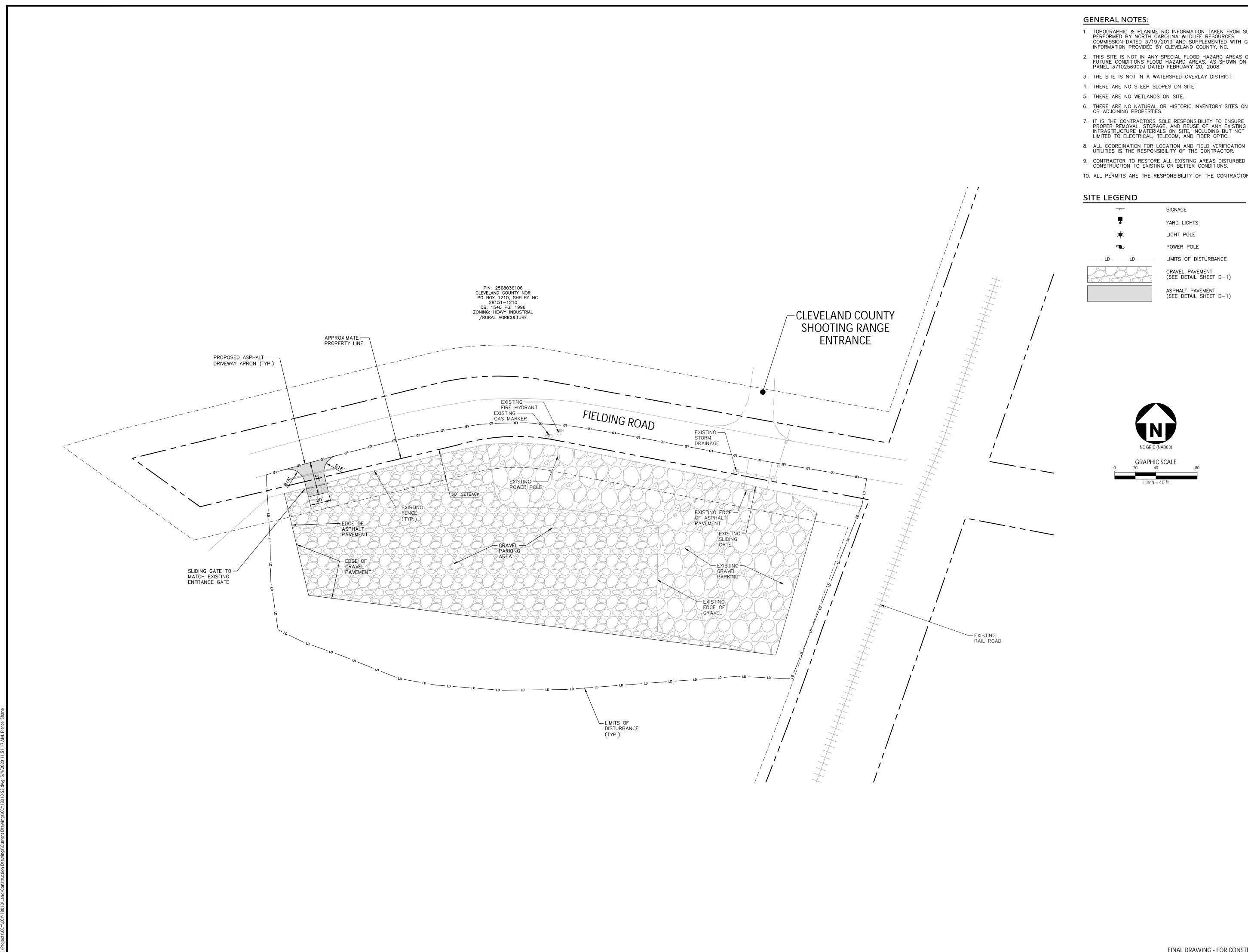
CHECKED BY

SCALE DATE 07.11.2019

FINAL DRAWING - FOR CONSTRUCTION

SHEET

OFFSITE PARKING DEMOLITION PLAN

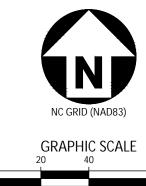


GENERAL NOTES:

- TOPOGRAPHIC & PLANIMETRIC INFORMATION TAKEN FROM SURVEY PERFORMED BY NORTH CAROLINA WILDLIFE RESOURCES COMMISSION DATED 3/19/2019 AND SUPPLEMENTED WITH GIS INFORMATION PROVIDED BY CLEVELAND COUNTY, NC.
- THIS SITE IS NOT IN ANY SPECIAL FLOOD HAZARD AREAS OR FUTURE CONDITIONS FLOOD HAZARD AREAS, AS SHOWN ON FIRM PANEL 3710256900J DATED FEBRUARY 20, 2008.
- 3. THE SITE IS NOT IN A WATERSHED OVERLAY DISTRICT.
- 4. THERE ARE NO STEEP SLOPES ON SITE.
- 5. THERE ARE NO WETLANDS ON SITE.
- 6. THERE ARE NO NATURAL OR HISTORIC INVENTORY SITES ON THIS OR ADJOINING PROPERTIES.
- 8. ALL COORDINATION FOR LOCATION AND FIELD VERIFICATION OF UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 9. CONTRACTOR TO RESTORE ALL EXISTING AREAS DISTURBED BY CONSTRUCTION TO EXISTING OR BETTER CONDITIONS.
- 10. ALL PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

SITE LEGEND

| SIGNAGE |
|--|
| YARD LIGHTS |
| LIGHT POLE |
| POWER POLE |
| LIMITS OF DISTURBANCE |
| GRAVEL PAVEMENT (SEE DETAIL SHEET D- |
| ASPHALT PAVEMENT (SEE DETAIL SHEET D- |
| |





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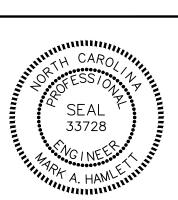
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CLEVELAND COUNTY

P.O. BOX 1210 SHELBY, NORTH CAROLINA 28151



REVISIONS

NO. DATE

PLAN INFORMATION

PROJECT NO. CCY-18010 FILENAME CHECKED BY DRAWN BY SCALE 1"=40' DATE 07.11.2019

SHEET **OFFSITE PARKING**

SITE PLAN

FINAL DRAWING - FOR CONSTRUCTION

----PIN: 2568036106 CLEVELAND COUNTY NOR PO BOX 1210, SHELBY NC 28151-1210 DB: 1540 PG: 1996 CLEVELAND COUNTY SHOOTING RANGE ZONING: HEAVY INDUSTRIAL ENTRANCE /RURAL AGRICULTURE APPROXIMATE — PROPERTY LINE CONTRACTOR MATCH -EXISTING GRADE AND ENSURE A SMOOTH TRANSITION EXISTING ————FIRE HYDRANT SLIDING GATE TO -EXISTING — MATCH EXISTING GAS MARKER ENTRANCE GATE EXISTING -**ENTRANCE** DRAINAGE ADJUST -POWER POLE EXISTING DROP INLET TO FINISHED - EXISTING RAIL ROAD

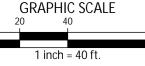
STORM DRAINAGE NOTES

- ALL STORM DRAINAGE PIPES SHOWN ARE TO BE CLASS III REINFORCED CONCRETE (RCP) UNLESS NOTED OTHERWISE.
- 2. ALL CONCRETE SHALL MEET A MINIMUM 3000 PSI COMPRESSIVE STRENGTH.
- 3. ALL PIPE IN STORM DRAIN STRUCTURES SHALL BE STRUCK EVEN WITH INSIDE WALL.
- 4. ALL PIPE JOINTS SHALL BE MADE WITH PREFORMED JOINT SEALER, WHICH CONFORMS TO AASHTO SPECIFICATION M-198 FOR TYPE B FLEXIBLE PLASTIC GASKETS UNLESS OTHERWISE NOTED.
- 5. THE INTERIOR SURFACES OF ALL STORM DRAINAGE STRUCTURES SHALL BE POINTED UP AND SMOOTHED TO AN ACCEPTABLE STANDARD USING MORTAR MIXED TO MANUFACTURER'S SPECIFICATIONS.
- 6. ALL BACKFILL SHALL BE NON—PLASTIC IN NATURE, FREE FROM ROOTS, VEGETATION MATTER, WASTE CONSTRUCTION MATERIAL OR OTHER OBJECTIONABLE MATERIAL. SAID MATERIAL SHALL BE CAPABLE OF BEING COMPACTED BY MECHANICAL MEANS AND SHALL HAVE NO TENDENCY TO FLOW OR BEHAVE IN A PLASTIC MANNER UNDER THE TAMPING BLOWS OR PROOF ROLLING.
- MATERIALS DEEMED BY THE OWNER'S REPRESENTATIVE AS UNSUITABLE FOR BACKFILL PURPOSES SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL.
- 8. BACKFILLING OF TRENCHES SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PIPE IS LAID. THE FILL AROUND THE PIPE SHALL BE THOROUGHLY COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY OBTAINABLE WITH THE STANDARD PROCTOR TEST. THE TOP EIGHT (8) INCHES SHALL BE COMPACTED TO 100 PERCENT STANDARD PROCTOR.
- 9. UNDER NO CIRCUMSTANCES SHALL WATER BE ALLOWED TO RISE IN UNBACKFILLED TRENCHES AFTER PIPE HAS BEEN PLACED.
- 10. ALL EXISTING STRUCTURES THAT REMAIN WITHIN THE PROJECT AREA SHALL BE ADJUSTED TO FINISH GRADE.
- 11. AT THE START OF GRADING INVOLVING THE LOWERING OF THE EXISTING GRADE AROUND A TREE OR STRIPPING OF TOPSOIL, A CLEAN, SHARP, VERTICAL CUT, SHALL BE MADE AT THE EDGE OF THE TREE SAVE AREA AT THE SAME TIME AS OTHER EROSION CONTROL MEASURES ARE INSTALLED. TREE PROTECTION FENCING SHALL BE INSTALLED ON THE SIDE OF THIS CUT FARTHEST AWAY FROM THE TREE TRUNK.
- 12. NO STORAGE OF MATERIALS, DUMPING OF WASTE MATERIALS, FILL, OR PARKING OF EQUIPMENT SHALL BE ALLOWED WITHIN THE ROOT PROTECTION ZONE, AND NO TRESPASSING SHALL BE ALLOWED WITH THE BOUNDARY OF THE ROOT PROTECTION ZONE.

GRADING LEGEND

| SPOT ELEVATION |
|------------------------|
| LIMITS OF DISTURBANCE |
| WOODED AREA |
| MAJOR CONTOUR |
| MINOR CONTOUR |
| EXISTING MAJOR CONTOUR |
| EXISTING MINOR CONTOUR |
| |







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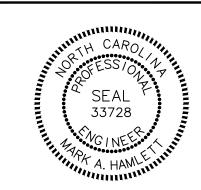
license number: C-0293, C-187

CLIENT

CLEVELAND COUNTY

P.O. BOX 1210 SHELBY, NORTH CAROLINA 28151

COMPLEX IMPROVEMENTS SKEET AND TRAP EXPANSION FIELDING ROAD, CHERRYVILLE, CLEVELAND COUNTY, NC. 280



REVISIONS

NO. DATE

PLAN INFORMATION

PROJECT NO. CCY-18010
FILENAME CCY18010-G3
CHECKED BY MJM
DRAWN BY SMP
SCALE 1"=40'
DATE 07.11.2019

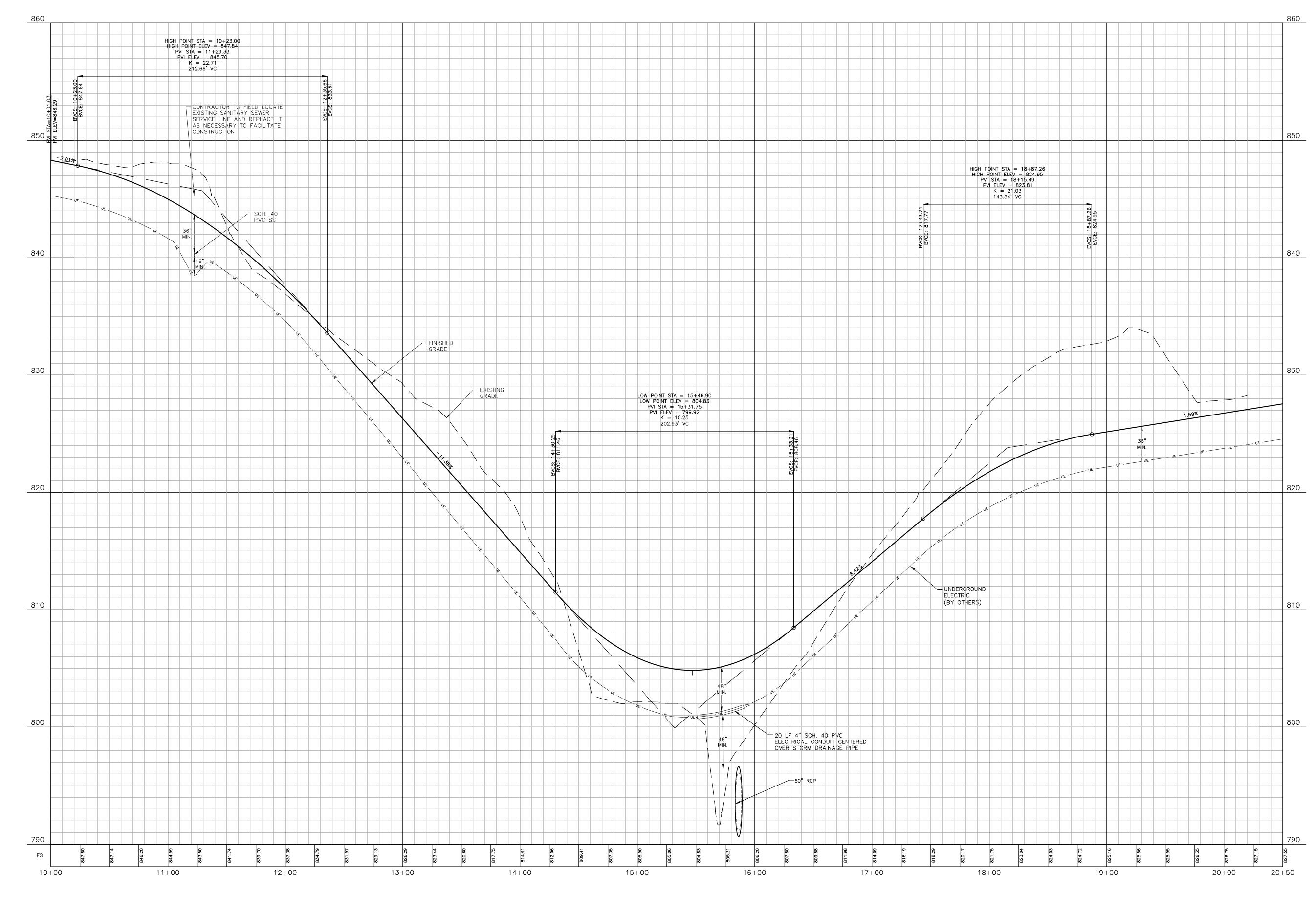
DATE SHEET

FINAL DRAWING - FOR CONSTRUCTION

OFFSITE PARKING GRADING PLAN

C-9

ACCESS ROAD





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CLIENT CLEVELAND COUNTY P.O. BOX 1210 SHELBY, NORTH CAROLINA 28151 **REVISIONS** NO. DATE

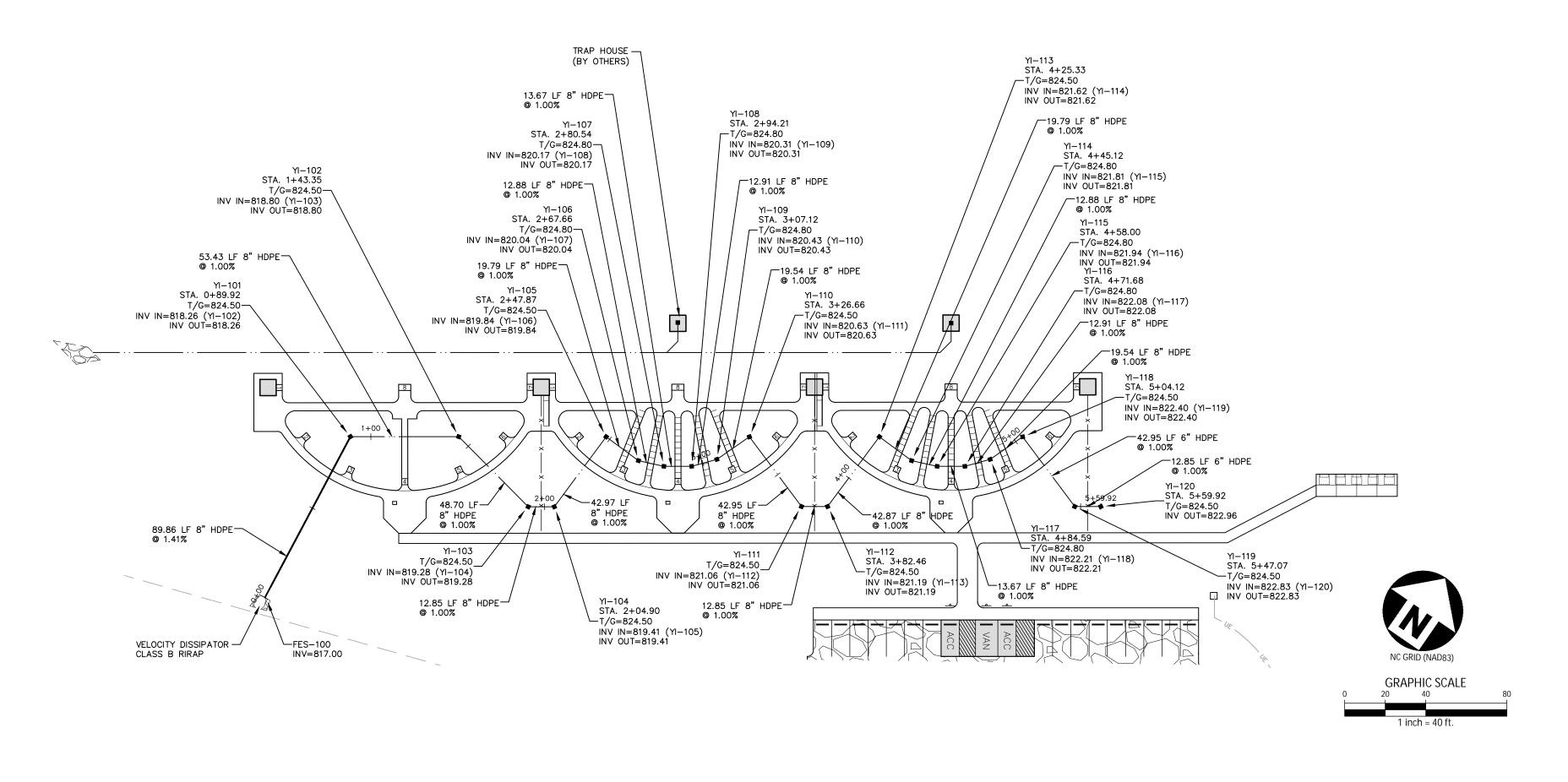


FOOTHILLS SHOOTING COMPLEX IMPROVEMENTS SKEET AND TRAP EXPANSION 283 FIELDING ROAD, CHERRYVILLE, CLEVELAND COUNTY, NC. 28021 PLAN INFORMATION PROJECT NO. CCY-18010 FILENAME CCY18010-P1

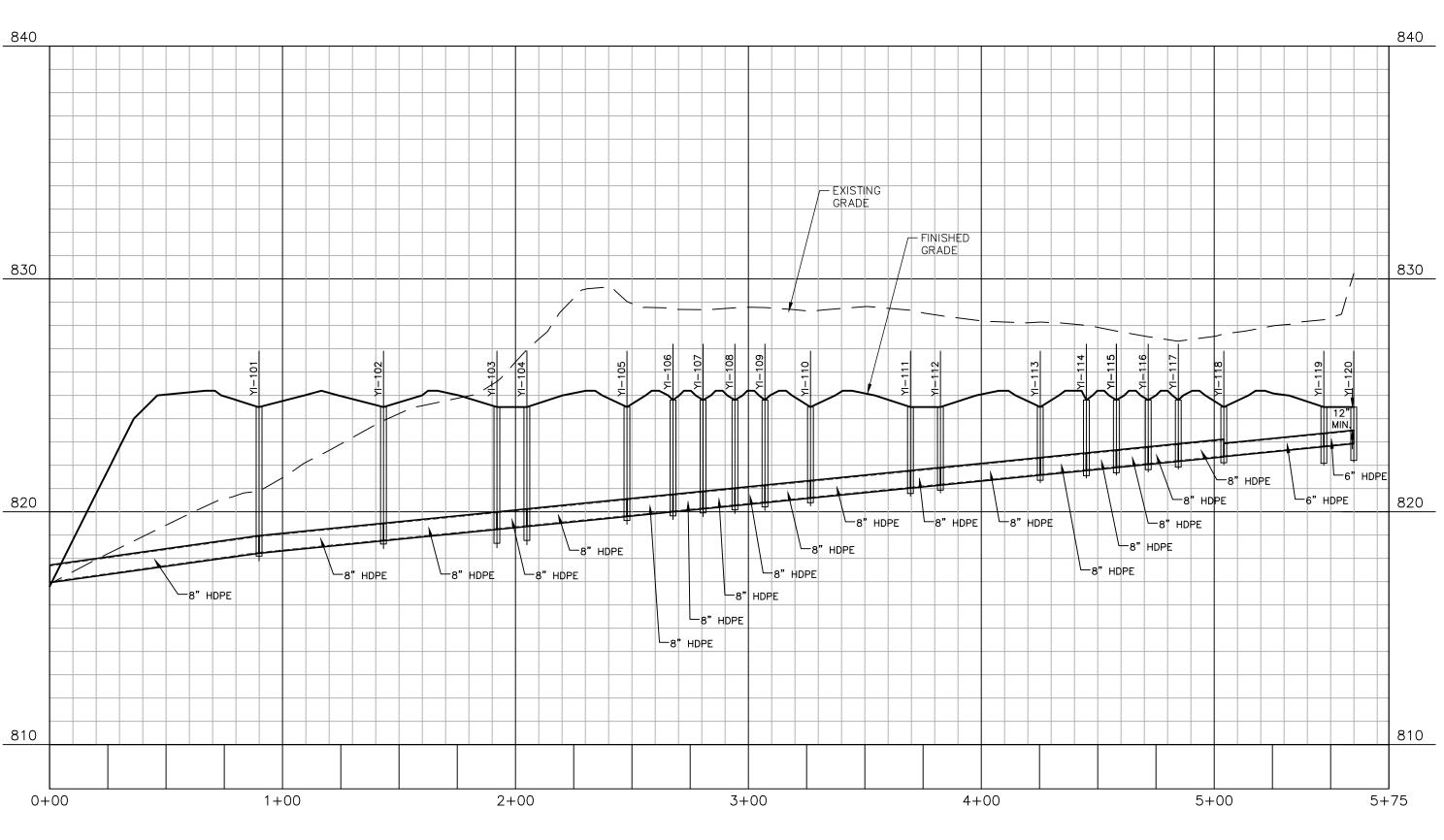
CHECKED BY DRAWN BY SCALE 1"=40'/1"=4' DATE 05.03.2019

PROFILE ACCESS ROAD, STA. 10+00 THRU STA. 20+50

FINAL DRAWING - FOR CONSTRUCTION



STORM OUTFALL "A"



FINAL DRAWING - FOR CONSTRUCTION



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CLIENT CLEVELAND COUNTY P.O. BOX 1210 SHELBY, NORTH CAROLINA 28151 **REVISIONS** NO. DATE

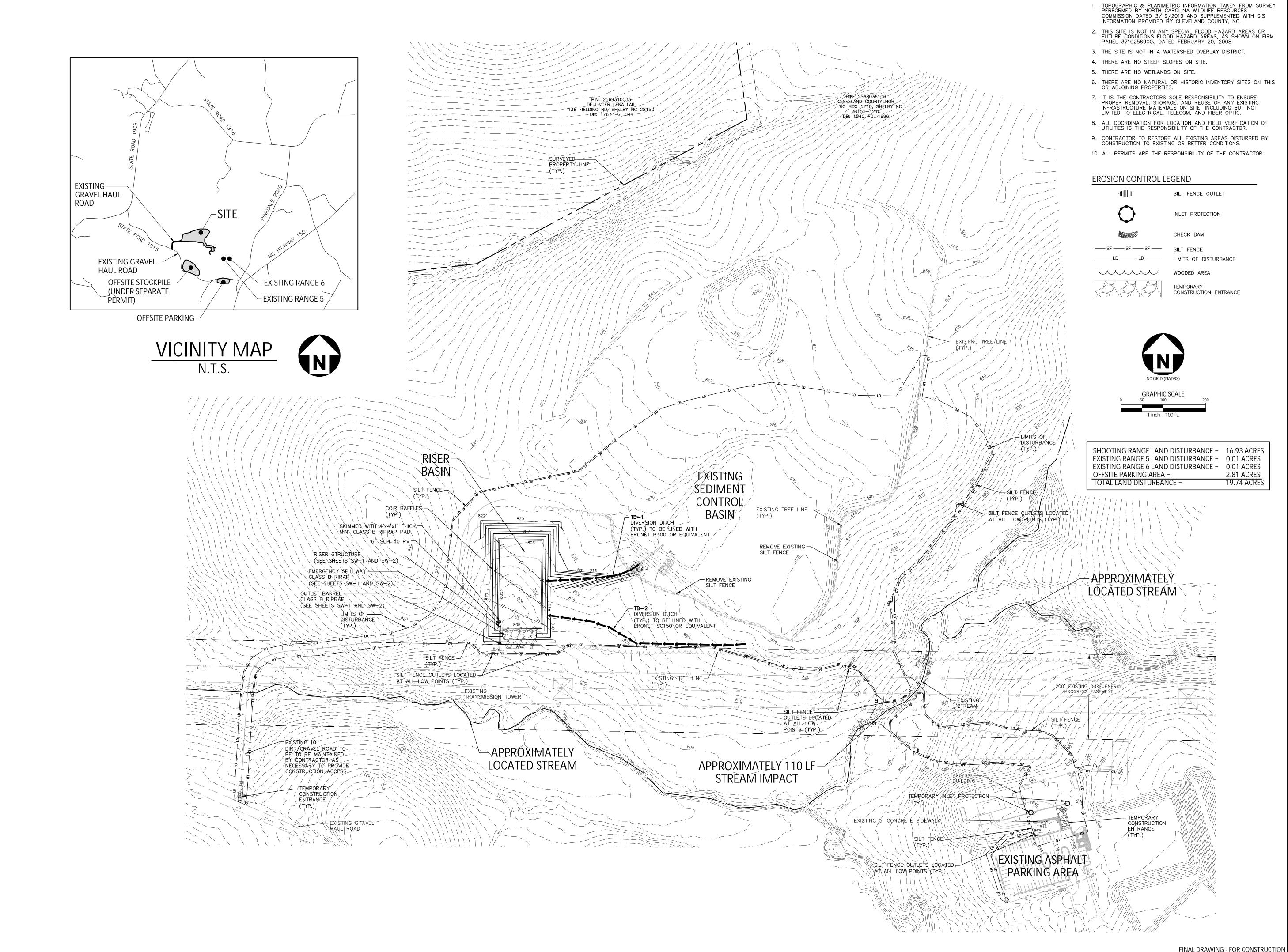


FOOTHILLS SHOOTING COMPLEX IMPROVEMENTS SKEET AND TRAP EXPANSION

PROJECT NO. CCY-18010 FILENAME CCY18010-P2 CHECKED BY DRAWN BY SCALE 1"=40'/1"=4' 283 FIELDING ROAD, CHERRYVILLE, CLEVELAND COUNTY, NC. 28021 DATE 05.03.2019

PLAN INFORMATION

PLAN AND PROFILE STORM OUTFALL "A"







The John R. McAdams Company, Inc.

2905 Meridian Parkway

Durham, NC 27713

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fax 919. 361. 2269

license number: C-0293, C-187

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CLEVELAND COUNTY

SHELBY, NORTH CAROLINA 28151

P.O. BOX 1210

REVISIONS

NO. DATE

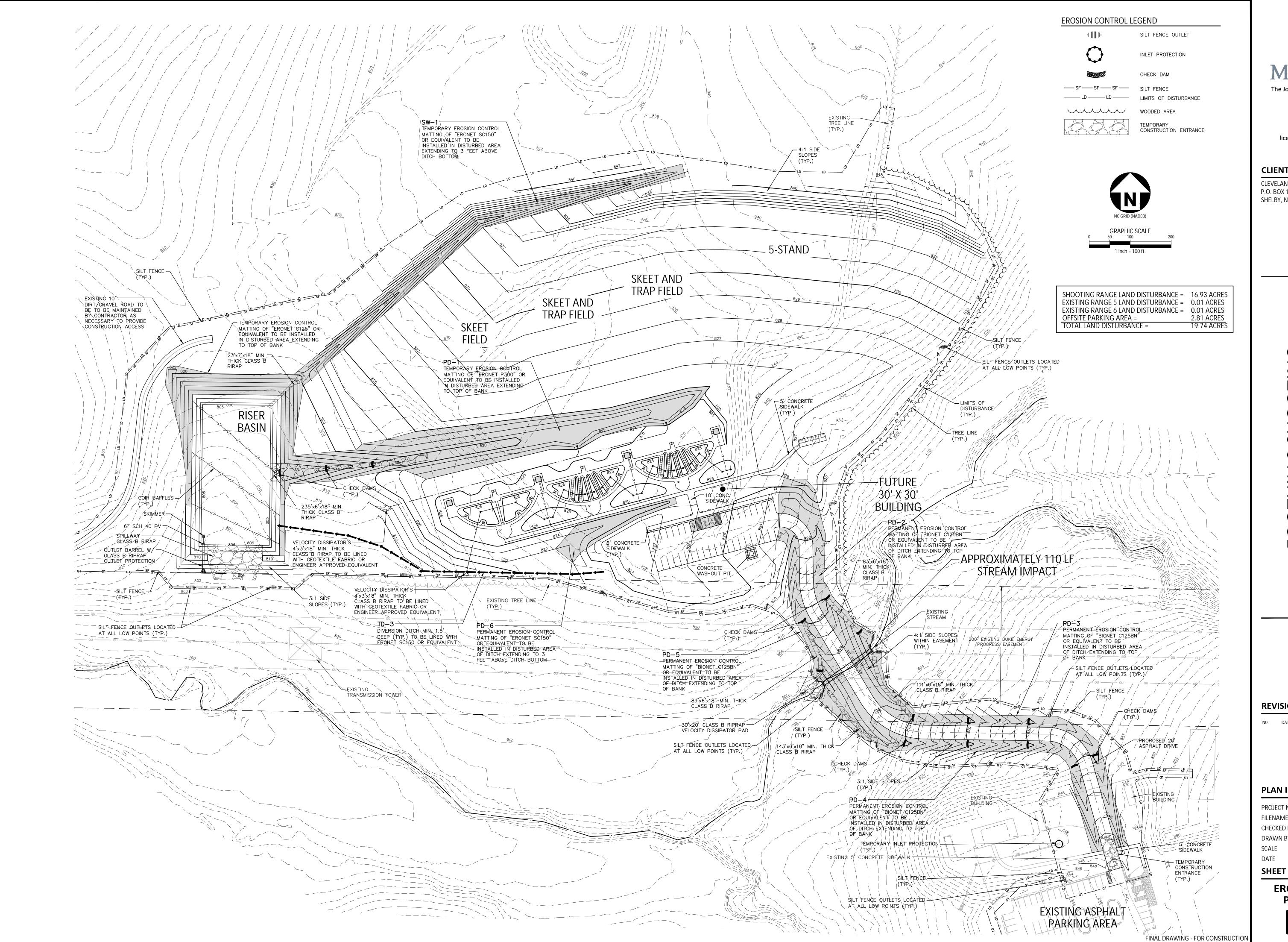
PLAN INFORMATION

PROJECT NO. CCY-18010 FILENAME CCY18010-EC1 CHECKED BY DRAWN BY

SCALE 1"=100' DATE 07.11.2019

SHEET

EROSION CONTROL PLAN - PHASE 1





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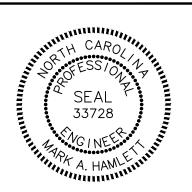
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REVISIONS

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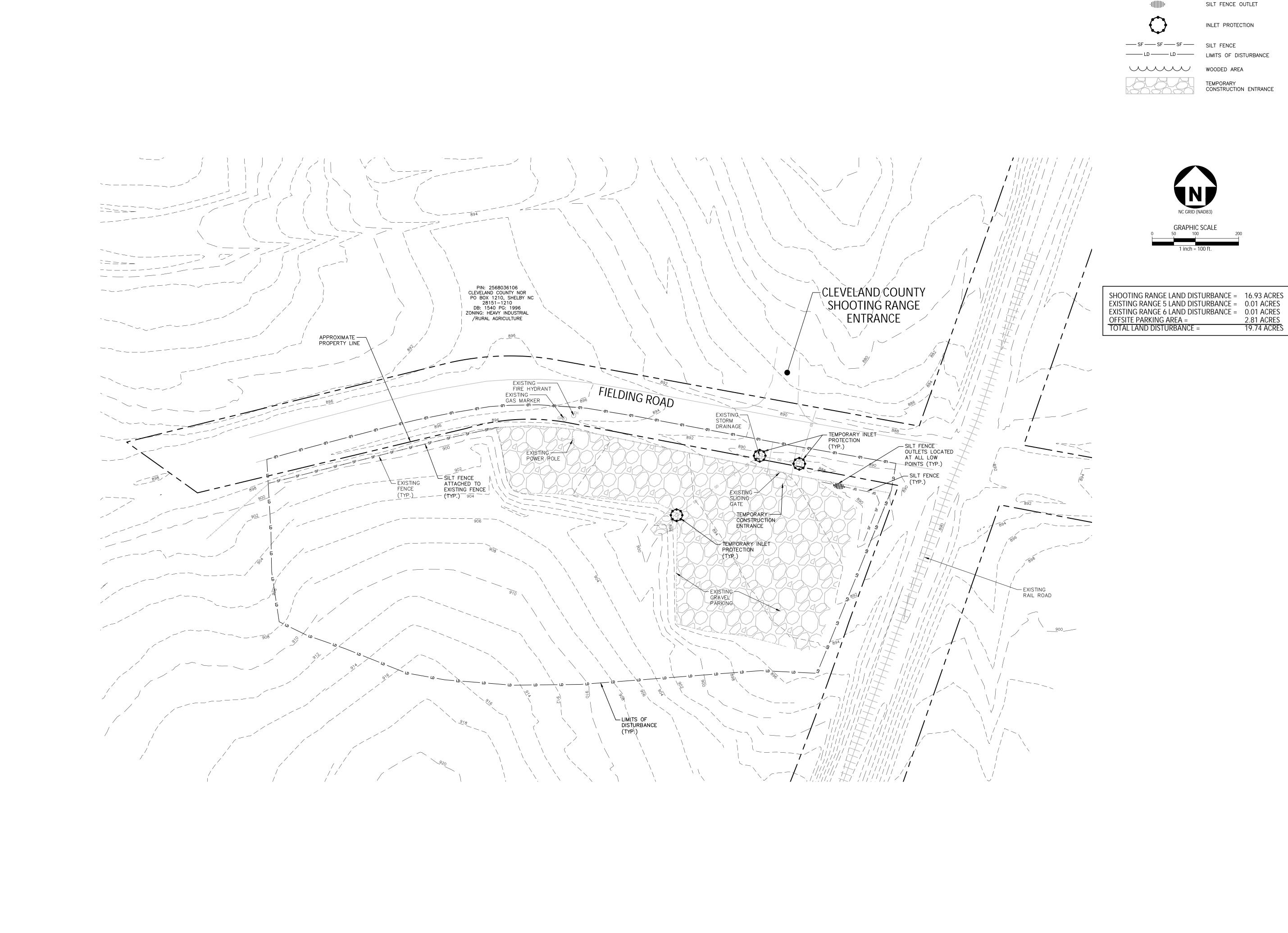
PLAN INFORMATION

PROJECT NO. CCY-18010 FILENAME CHECKED BY

DRAWN BY SCALE DATE

1"=60' 07.11.2019

EROSION CONTROL PLAN - PHASE 2



EROSION CONTROL LEGEND

SILT FENCE OUTLET

INLET PROTECTION

TEMPORARY
CONSTRUCTION ENTRANCE

EXISTING RANGE 5 LAND DISTURBANCE = 0.01 ACRES EXISTING RANGE 6 LAND DISTURBANCE = 0.01 ACRES

2.81 ACRES 19.74 ACRES **MCADAMS**

The John R. McAdams Company, Inc. 2905 Meridian Parkway Durham, NC 27713

phone 919. 361. 5000 fax 919. 361. 2269 license number: C-0293, C-187

www.mcadamsco.com

CLIENT

CLEVELAND COUNTY P.O. BOX 1210 SHELBY, NORTH CAROLINA 28151



REVISIONS

NO. DATE

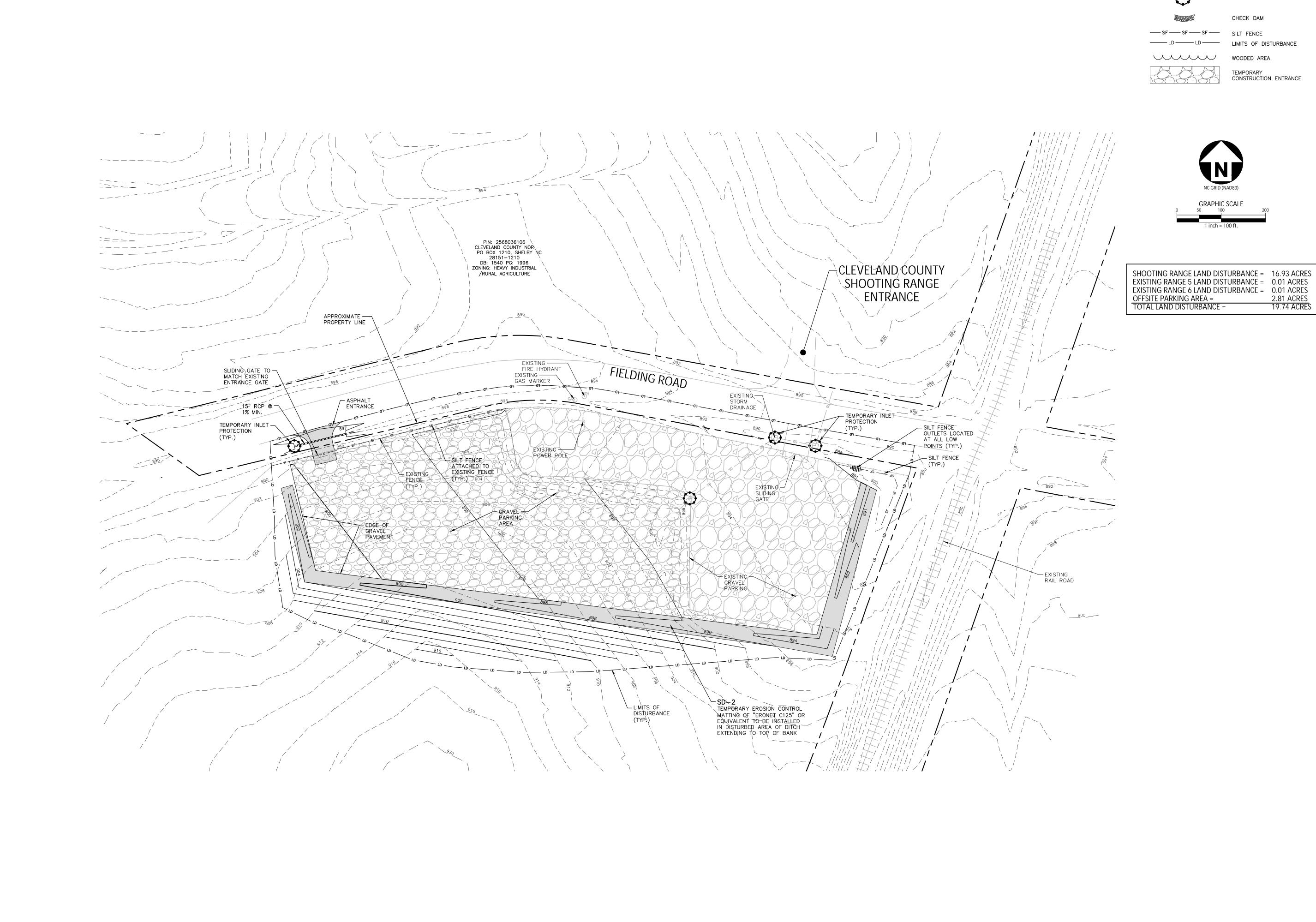
PLAN INFORMATION

PROJECT NO. CCY-18010 CHECKED BY

SCALE DATE 07.11.2019

SHEET

OFFSITE PARKING EROSION CONTROL PLAN STAGE 1



EROSION CONTROL LEGEND

SILT FENCE OUTLET



INLET PROTECTION

2.81 ACRES 19.74 ACRES



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PLAN INFORMATION

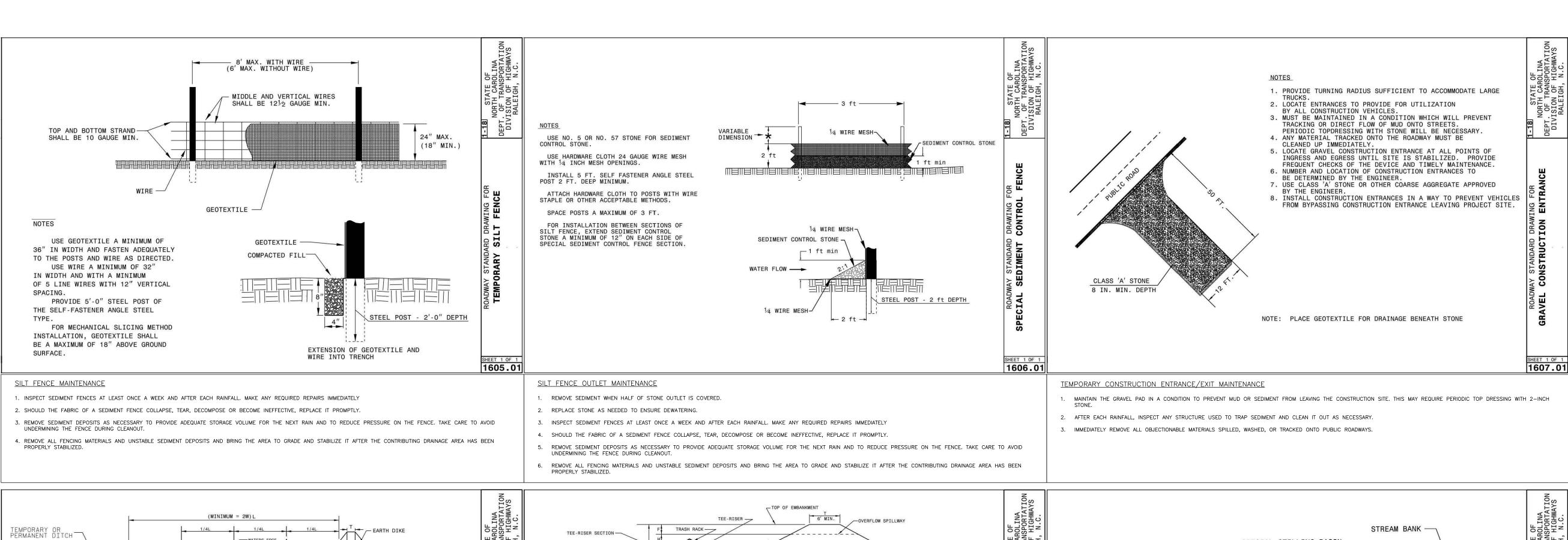
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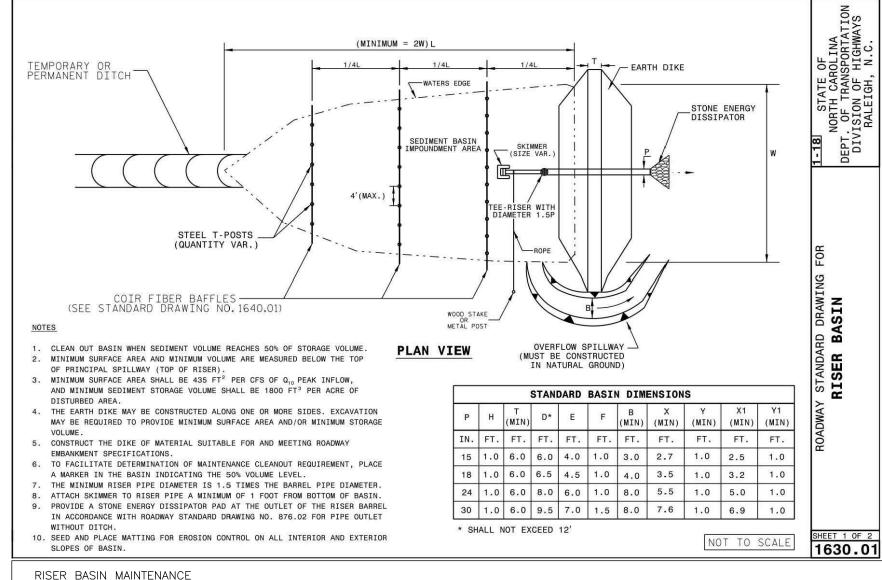
SCALE 07.11.2019

DATE SHEET

FINAL DRAWING - FOR CONSTRUCTION

OFFSITE PARKING EROSION CONTROL PLAN STAGE 2





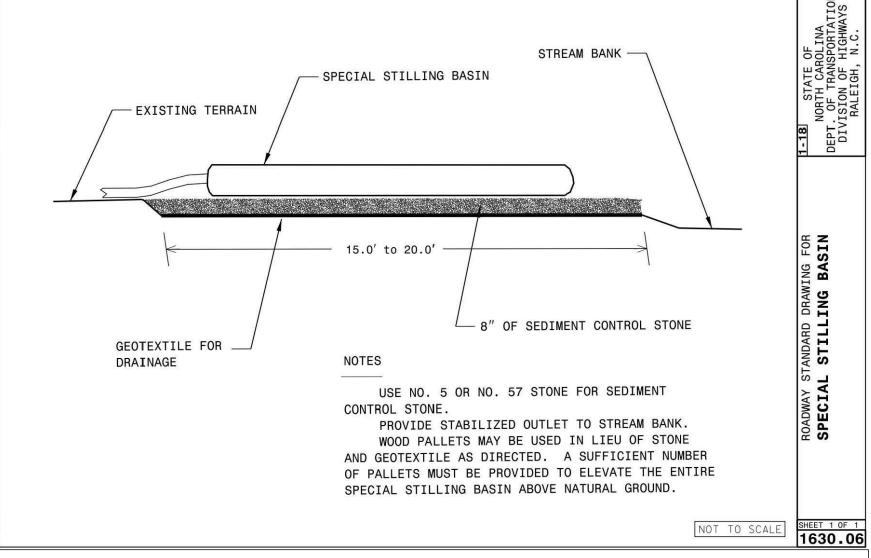
RISER BASIN MAINTENANCE

- INSPECT TEMPORARY SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN IT ACCUMULATES TO ONE—HALF THE DESIGN DEPTH. PLACE REMOVED SEDIMENT IN AN AREA WITH SEDIMENT
- 2. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE RISER AND POOL AREA.

* ALL PIPE SECTIONS CORRUGATED SQUARE STEEL PLATE REMOVE ORGANIC MATERIAL & ROOT MAT 14" THICK (WELDED FROM BENEATH EMBANKMENT TO TEE SECTION) SECTIONAL VIEW ALTERNATE ANTI-FLOTATION METHOD NOT TO SCALE 1630.01

SKIMMER MAINTENANCE

- 1. INSPECT SKIMMER SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE—HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE—HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.
- 2. REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM. IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE THE DEBRIS.
- 3. IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.
- 4. CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL
- TRASH AND OTHER DEBRIS FROM THE SKIMMER AND POOL AREAS.
- 5. FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.



DIRT BAG MAINTENANCE

- . FOLLOW ALL MANUFACTURER RECOMMENDATIONS FOR INSPECTION AND MAINTENANCE GUIDELINES. REPLACE DEWATERING BAGS WHEN TRAPPED SEDIMENT HAS ACCUMULATED TO 50% OF THE BAG CAPACITY OR IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- 2. DEWATERING BAGS ARE FULL WHEN THEY NO LONGER EFFICIENTLY FILTER SEDIMENT OR PASS WATER AT A REASONABLE RATE.

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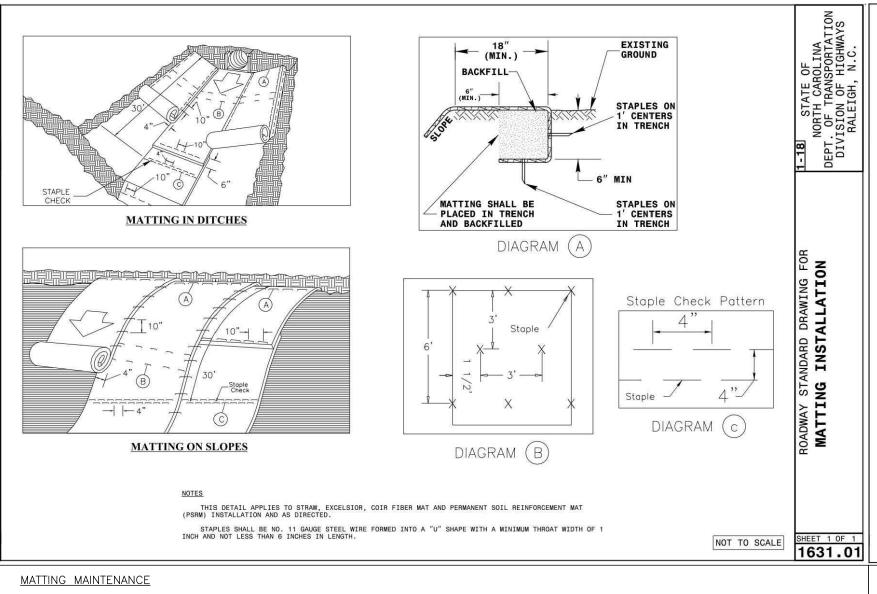
NO. DATE

PLAN INFORMATION

PROJECT NO. CCY-18010 FILENAME CCY18010-EC5 CHECKED BY MJM DRAWN BY SCALE NONE DATE 07.11.2019

SHEET

EROSION CONTROL



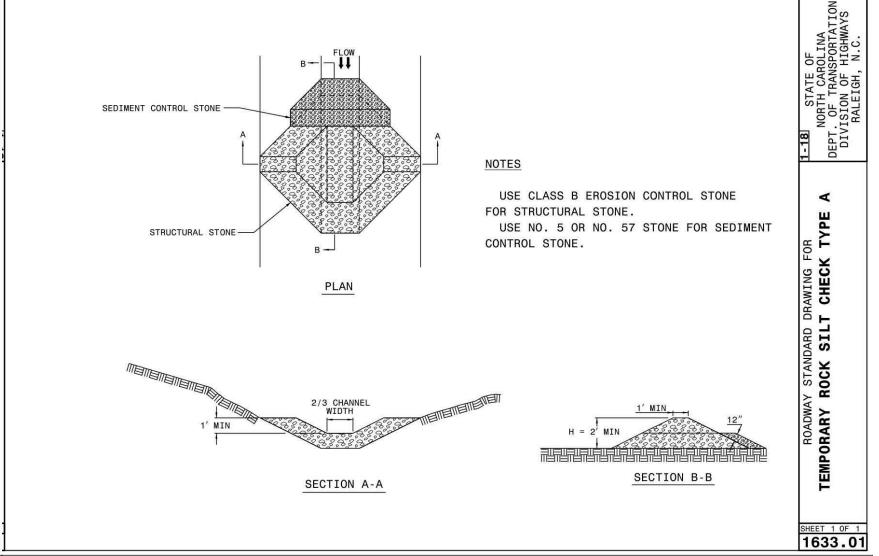
INSPECT ALL MULCHES PERIODICALLY, AND AFTER RAINSTORMS TO CHECK FOR RILL EROSION, DISLOCATION OR FAILURE. WHERE EROSION IS OBSERVED, APPLY ADDITIONAL

MULCH. IF WASHOUT OCCURS, REPAIR THE SLOPE GRADE, RESEED AND REINSTALL MULCH. CONTINUE INSPECTIONS UNTIL VEGETATION IS FIRMLY ESTABLISHED.

-1/4" WIRE MESH 14" WIRE MESH --SEE NOTE FOR POST DESCRIPTION MAXIMUM POST SPACING 4 FT Variable * USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL STONE. USE 24 GAUGE MINIMUM WIRE SEDIMENT ----SEDIMENT -MESH HARDWARE CLOTH WITH PLACE TOP OF WIRE MESH A MINIMUM OF ONE FOOT BELOW THE SHOULDER OR ANY IVERSION POINT ATTACH HARDWARE CLOTH TO - AVERAGE BOX POSTS WITH PLASTIC TIES, WIRE FASTENERS, OR OTHER APPROVED DIMENSION VARIABLE DIMENSION VARIABLE ATTACHMENT DEVICE INSTALL WIRE MESH UNDER SECTION A-A SECTION Y-Y SEDIMENT CONTROL STONE USE 5' STEEL POST, INSTALLED DEEP MINIMUM, AND OF THE SELF-FASTENER ANGLE STEEL TYPE. SINGLE-DIRECTIONAL FLOW MULTI-DIRECTIONAL FLOW SPACE POST A MAXIMUM 1632.03

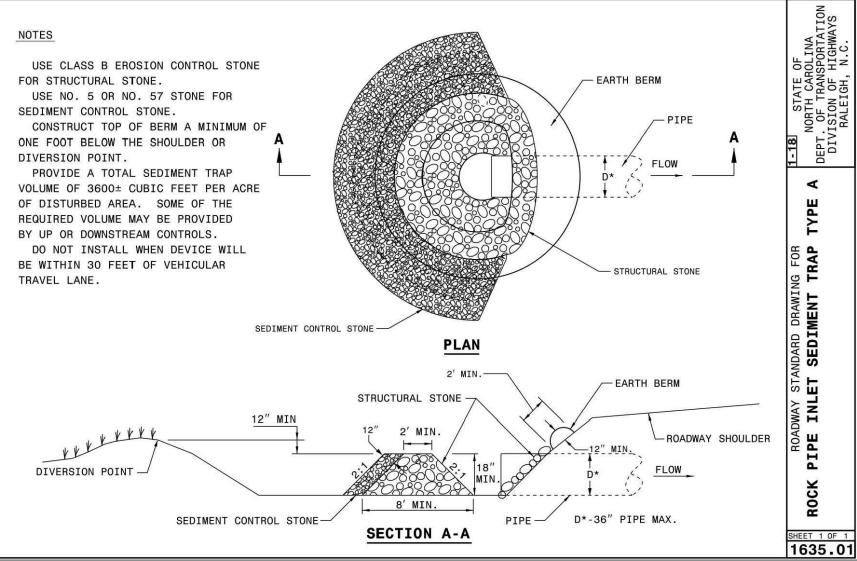
DROP INLET PROTECTION MAINTENANCE

- 1. INSPECT THE BARRIER AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL AND MAKE REPAIRS AS NEEDED. 2. REMOVE SEDIMENT AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS.
- 3. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED, REMOVE ALL MATERIALS AND ANY UNSTABLE SOIL, AND EITHER SALVAGE OR DISPOSE OF IT PROPERLY. BRING THE DISTURBED AREA TO PROPER GRADE, THEN SMOOTH AND COMPACT IT. APPROPRIATELY STABILIZE ALL BARE AREAS AROUND THE INLET



CHECK DAM MAINTENANCE

- INSPECT CHECK DAMS AND CHANNELS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. CLEAN OUT SEDIMENT, STRAW, LIMBS, OR OTHER DEBRIS THAT COULD CLOG THE CHANNEL WHEN NEEDED
- . ANTICIPATE SUBMERGENCE AND DEPOSITION ABOVE THE CHECK DAM AND EROSION FROM HIGH FLOWS AROUND THE EDGES OF THE DAM. CORRECT ALL DAMAGE IMMEDIATELY. IF SIGNIFICANT EROSION OCCURS BETWEEN DAMS, ADDITIONAL MEASURES CAN BE TAKEN SUCH AS, INSTALLING A PROTECTIVE RIPRAP LINER IN THAT PORTION OF THE CHANNEL.
- . REMOVE SEDIMENT ACCUMULATED BEHIND THE DAMS AS NEEDED TO PREVENT DAMAGE TO CHANNEL VEGETATION, ALLOW THE CHANNEL TO DRAIN THROUGH THE STONE CHECK DAM, AND PREVENT LARGE FLOWS FROM CARRYING SEDIMENT OVER THE DAM. ADD STONES TO DAMS AS NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION.



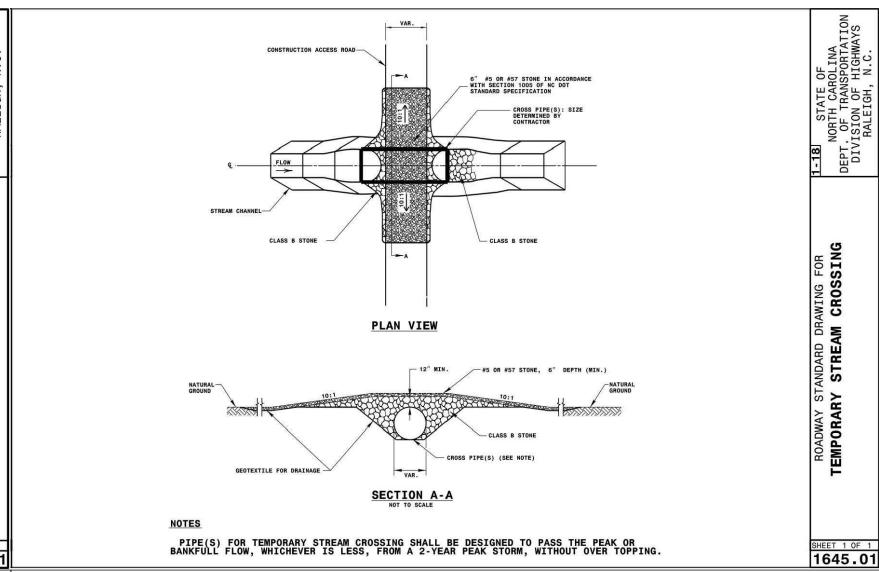
PIPE INLET SEDIMENT TRAP MAINTENANCE

- 1. INSPECT ROCK PIPE INLET PROTECTION AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (½ INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE SEDIMENT STORAGE AREA TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE—HALF THE DESIGN DEPTH OF THE TRAP. PLACE THE SEDIMENT THAT IS REMOVED IN THE DESIGNATED DISPOSAL AREA AND REPLACE THE CONTAMINATED PART OF THE GRAVEL FACING.
- 2. CHECK THE STRUCTURE FOR DAMAGE. ANY RIPRAP DISPLACED FROM THE STONE HORSESHOE MUST BE REPLACED IMMEDIATELY.
- 3. AFTER ALL THE SEDIMENT—PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL THE UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS AND PROVIDE PERMANENT GROUND COVER (SURFACE STABILIZATION).

INSTALL POST TO ANCHOR DRAPE BAFFLE MATERIAL OVER WIRE STRAND BAFFLE TO SIDE OF BASIN AND AND SECURE WITH PLASTIC TIES AT POSTS AND ON WIRE EVERY 12' TENSION WIRE STRAND SHALL BE SECURED TO POST TO SUPPORT BAFFLE MATERIAL VARIABLE DEPTH SECURE BOTTOM OF BAFFLE TO GROUND WITH 12" STAPLES BAFFLE MATERIAL BAFFLE MATERIAL AT 12" MAXIMUM SPACING 11 GAUGE LANDSCAPE STAPLE 1. INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT SPACING OF 1/4 THE BASIN LENGTH. 2. TWO(2) COIR FIBER BAFFLES CAN BE STEEL POST - 2'-0" DEPTH INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF 1/3 THE BASIN LENGTH. BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN 3. TOP HEIGHT OF COIR FIBER BAFFLES SHALL NOT BE BELOW BASE OF SPILLWAY USING 12" LANDSCAPE STAPLES ELEVATION. 1640.01

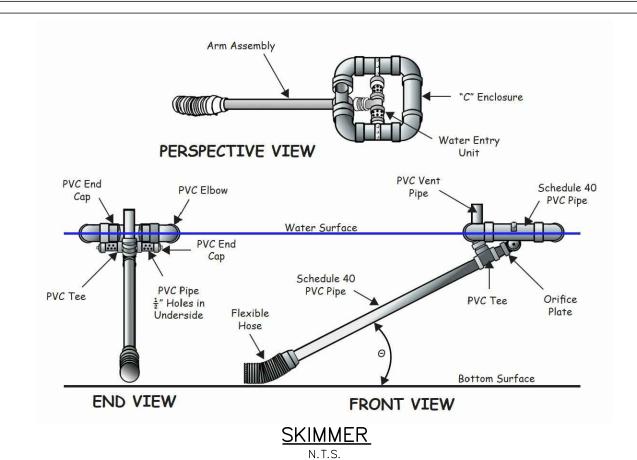
COIR BAFFLE MAINTENANCE

- 1. INSPECT BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
- 2. BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE,
- 3. REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL, TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. TAKE CARE TO AVOID DAMAGING THE BAFFLES DURING CLEANOUT, AND REPLACE IF DAMAGED DURING CLEANOUT OPERATIONS. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.
- 4. AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, REMOVE ALL BAFFLE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE, AND STABILIZE IT.



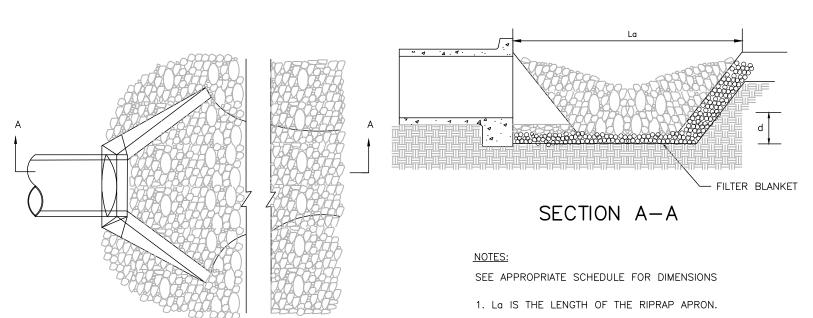
TEMPORARY STREAM CROSSING MAINTENANCE

1. INSPECT TEMPORARY STREAM CROSSINGS AFTER RUNOFF-PRODUCING RAINS TO CHECK FOR BLOCKAGE IN CHANNEL, EROSION OF ABUTMENTS, CHANNEL SCOUR, RIPRAP DISPLACEMENT, OR PIPING. MAKE ALL REPAIRS IMMEDIATELY TO PREVENT FURTHER DAMAGE TO THE INSTALLATION.



SKIMMER MAINTENANCE

INSPECT SKIMMER SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE—HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER. IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE THE DEBRIS. IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.



2. D = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6"

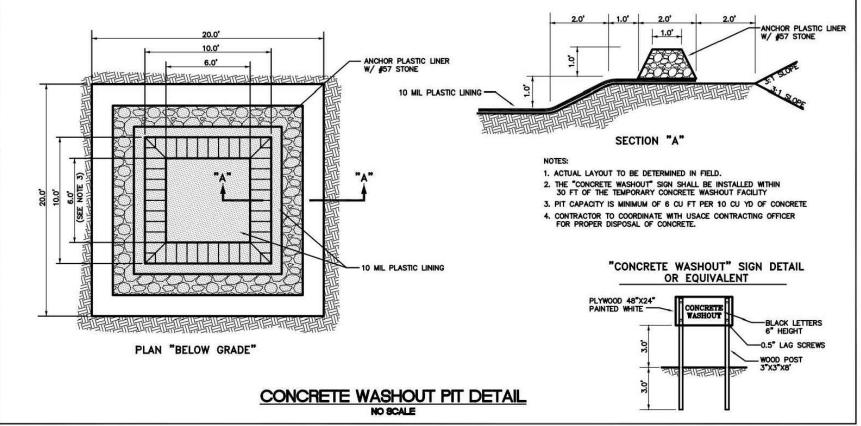
PIPE CULVERT OUTLET PROTECTION 3. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

PIPE CULVERT OUTLET PROTECTION MAINTENANCE

FOR DEFINED CHANNEL

N.T.S.

1. INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.



CONCRETE WASHOUT MAINTENANCE

FILLED TO OVER 75 PERCENT CAPACITY.

- 1. CONCRETE WASHOUT FACILITIES SHOULD BE INSPECTED DAILY AND AFTER HEAVY RAINS TO CHECK FOR LEAKS, IDENTIFY ANY PLASTIC LININGS AND SIDEWALLS HAVE BEEN DAMAGED BY CONSTRUCTION ACTIVITIES, AND DETERMINE WHETHER THEY HAVE BEEN
- 2. WHEN THE WASHOUT CONTAINER IS FILLED TO OVER 75 PERCENT OF ITS CAPACITY, THE WASH WATER SHOULD BE VACUUMED OFF OR ALLOWED TO EVAPORATE TO AVOID OVERFLOWS. THEN WHEN THE REMAINING CEMENTITIOUS SOLIDS HAVE HARDENED, THEY SHOULD BE REMOVED AND RECYCLED.
- 3. DAMAGES TO THE CONTAINER SHOULD BE REPAIRED PROMPTLY.
- 4. BEFORE HEAVY RAINS, THE WASHOUT CONTAINER'S LIQUID LEVEL SHOULD BE LOWERED OR THE CONTAINER SHOULD BE COVERED TO AVOID AN OVERFLOW DURING THE RAIN STORM.

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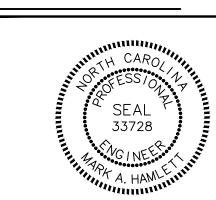
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CLEVELAND COUNTY P.O. BOX 1210

SHELBY, NORTH CAROLINA 28151



REVISIONS

NO. DATE

PLAN INFORMATION

PROJECT NO. CCY-18010 FILENAME CCY18010-EC6 CHECKED BY MJM DRAWN BY NONE SCALE

DATE 07.11.2019

SHEET

EROSION CONTROL

| Inspect | Frequency (during normal business hours) | Inspection records must include: |
|--|---|---|
| (1) Rain gauge maintained in good working order | Daily | Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded at "zero." The permittee may use another rain-monitoring device approved by the Division. |
| (2) E&SC Measures | At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours | Identification of the measures inspected, Date and time of the inspection, Name of the person performing the inspection, Indication of whether the measures were operating properly, Description of maintenance needs for the measure, Description, evidence, and date of corrective actions taken. |
| (3) Stormwater discharge outfalls (SDOs) | At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours | 1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken. |
| (4) Perimeter of site | At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours | If visible sedimentation is found outside site limits, then a record of the following shall be made: Actions taken to clean up or stabilize the sediment that has left the site limits, Description, evidence, and date of corrective actions taken, and an explanation as to the actions taken to control future releases. |
| (5) Streams or wetlands onsite or offsite (where accessible) | At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours | If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: Description, evidence and date of corrective actions taken, and Regional Office per Part III, Section C, Item (2)(a) of this permit of this permit. |
| (6) Ground stabilization measures | After each phase of grading | The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible. |

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH

mplementing the details and specifications on this plan sheet will result in the construction

activity being considered compliant with the Ground Stabilization and Materials Handling

sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the

delegated authority having jurisdiction. All details and specifications shown on this sheet

Stabilize within th many calendar

days after ceasing

may not apply depending on site conditions and the delegated authority having jurisdiction.

equired Ground Stabilization Timeframes

Timeframe variations

None

not steeper than 2:1, 14 days are

f slopes are 10' or less in length and are

7 days for slopes greater than 50' in

7 days for perimeter dikes, swales,

ditches, perimeter slopes and HQW

10 days for Falls Lake Watershed

here is zero slope

other mulches and tackifiers

sufficient to restrain erosion

reinforcement matting

Hvdroseeding

Geotextile fabrics such as permanent soil

Shrubs or other permanent plantings covered

· Uniform and evenly distributed ground cover

Structural methods such as concrete, asphalt or

Rolled erosion control products with grass seed

Note: After the permanent cessation of construction activities, any areas with temporary

ground stabilization shall be converted to permanent ground stabilization as soon as

activity. Temporary ground stabilization shall be maintained in a manner to render the

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the

• Temporary grass seed covered with straw or | • Permanent grass seed covered with straw or

Select flocculants that are appropriate for the soils being exposed during

construction, selecting from the NC DWR List of Approved PAMS/Flocculants.

PAMS/Flocculants and in accordance with the manufacturer's instructions.

or surrounded by secondary containment structures.

Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.

Apply flocculants at the concentrations specified in the *NC DWR List of Approved*

Provide ponding area for containment of treated Stormwater before discharging

Store flocculants in leak-proof containers that are kept under storm-resistant cover

surface stable against accelerated erosion until permanent ground stabilization is achieved.

practicable but in no case longer than 90 calendar days after the last land disturbing

days for perimeter dikes, swales,

ditches, perimeter slopes and HQW Zone

-10 days for Falls Lake Watershed unless

ength and with slopes steeper than 4:1

THE NCG01 CONSTRUCTION GENERAL PERMIT

SECTION E: GROUND STABILIZATION

Site Area Description

a) Perimeter dikes,

(b) High Quality Wat∈

(HQW) Zones

(d) Slopes 3:1 to 4:1

Areas with slopes

flatter than 4:1

GROUND STABILIZATION SPECIFICATION

techniques in the table below:

other mulches and tackifiers

without temporary grass seed

Rolled erosion control products with or

Appropriately applied straw or other mulch

POLYACRYLAMIDES (PAMS) AND FLOCCULANT

Hydroseeding

• Plastic sheeting

swales, ditches, an

Slopes steeper than

perimeter slopes

SELF-INSPECTION, RECORDKEEPING AND REPORTING

CTION B: RECORDKEEPING

requirement not practical:

E&SC Plan Documentation The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be documented in the manner

| Item to Document | Documentation Requirements |
|---|---|
| (a) Each E&SC Measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC Plan. | Initial and date each E&SC Measure on a copy of the approved E&SC Plan or complete, date and sign an inspection report that lists each E&SC Measure shown on the approved E&SC Plan. This documentation is required upon the initial installation of the E&SC Measures or if the E&SC Measures are modified after initial installation. |
| (b) A phase of grading has been completed. | Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate completion of the construction phase. |
| (c) Ground cover is located and installed in accordance with the approved E&SC Plan. | Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications. |
| (d) The maintenance and repair requirements for all E&SC Measures have been performed. | Complete, date and sign an inspection report. |
| (e) Corrective actions have been taken to E&SC Measures. | Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate the completion of the corrective action. |

. Additional Documentation In addition to the E&SC Plan documents above, the following items shall be kept on the and available for agency inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this

(a) This general permit as well as the certificate of coverage, after it is received.

(b) Records of inspections made during the previous 30 days. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

All data used to complete the Notice of Intent and older inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

DEMLR Monitoring Form DEMLR Form Rev. 04012019

INSPECTION AND MONITORING RECORDS FOR ACTIVITIES UNDER STORMWATER GENERAL PERMIT NCG010000 AND SELF-INSPECTION RECORDS FOR LAND DISTURBING ACTIVITIES PER G.S. 113A-54.1

| Project Name | | Land Quality or Local Program Project # |
|--|--------------|---|
| Financially Responsible Party, (FRP) / Permittee | | County |
| INSPECTOR | Name | Employer |
| Inspector Type (Mark) X | Address | |
| FRP/Permittee | | |
| Agent/Designee | Phone Number | Email Address |

| | Rain Amt (inches) | Phase of Grading | | |
|----------------|-------------------------------------|--|---|--|
| Day / Date | Daily Rainfall Required, except for | check the applicable box(es) | X | |
| 24,, 24,5 | Holidays or Weekends. If no rain, | Installation of perimeter erosion and sediment control measures | | |
| | indicate with a "zero" | Clearing and grubbing of existing ground cover | | |
| М | | Completion of any phase of grading of slopes or fills | | |
| τ | | Installation of storm drainage facilities | | |
| W | | Completion of all land-disturbing activity, construction or development | | |
| Th | | Permanent ground cover sufficient to restrain erosion has been established | | |
| F | | | | |
| Sat (Optional) | | | | |
| Sun (Optional) | | | | |

| Sun (Optional) | | |
|--|------------------|--|
| ART 1C: Signature of Inspector | | |
| By this signature, I certify in accordance wi | th the NCG010000 | permit & G.S. 113A-54.1 that this report is accurate and complete to the best of my knowledge. |
| Financially Responsible Party / Permittee or A | gent / Designee | Date |
| | | |
| | GROU | IND STABILIZATION TIMEFRAMES |
| Site Area Description | Stabilization | Timeframe Variations |
| Perimeter dikes, swales and slopes | 7 Days | None |
| High Quality Water (HQW) Zones | 7 Days | None |
| Slopes Steeper than 3:1 | 7 Days | 14 days for slopes 10 ft or less in length and not steeper than 2:1 10 days for Falls Lake Watershed |
| Slopes 3:1 to 4:1 | 14 Days | 7 days for slopes greater than 50 ft in length, 10 days for Falls Lake Watershed |
| All other areas with slopes flatter than 4:1 | 14 Days | 10 days for Falls Lake Watershed |

DEMLR Monitoring Form DEMLR Form Rev. 04012019

PART 2A: EROSION AND SEDIMENTATION CONTROL MEASURES: Measures must be inspected at least ONCE PER 7 CALENDAR DAYS AND WITHIN

| | | | | | | Inspection Date | Describe Actions Needed Corrective actions should be performed as soon | Date Noted as Corrected |
|---|---------------------------------|---|---------------------------|---|--|--------------------|---|-------------------------------|
| Measure ID or Location and Description | Operating Properly? (Y/N) | Any Repair or Maintenance Needed? (Y/N) | Proposed Dimensions (ft.) | Measures Ins Actual Dimensions (ft.) | significant Deviation from Plan? (Y/N) | | as possible and before the next storm event | |
| | -80 | | * | | | | | |
| | | | * | | | | | |

*New erosion and sedimentation control measures installed since the last inspection should be documented here or by initialing and dating each measure or practice shown on a copy of the approved erosion and sedimentation control plan. List Dimensions of Measures such as Sediment Basins and Riprap Aprons

| Stormwater Discharge Outfalls Inspected | | | | | | | Date |
|---|---|--|-----------------------------|--|--------------------|---|---------|
| Stormwater Discharge Outfall ID or Location | Any Visible Sedimentation in Streams, Wetlands or Outside Site Limits? (Y/N) | | Visible Erosion below | Any visible oil sheen, floating or suspended solids or discoloration? (Y/N) | Inspection Date | Report Visible Sedimentation to streams or wetlands to Land Quality within 24 Hours https://deq.nc.gov/contact/regional-offices Describe Actions Needed Corrective actions should be performed as soon as possible and before the next storm event | Noted a |
| | | | | | | | |
| | 1 | | | | | | 1 |

| Areas Where Land Disturbance Has Been Completed or Temporarily Stopped | Time Limit for Ground Cover 7 days or 14 days | Is Ground Cover Sufficient to Restrain Erosion? (Y/N) | Inspection Date | Describe Actions Needed | Noted as Corrected |
|---|--|--|--------------------|-------------------------|-----------------------|
| | | | | | |
| | | | | | |
| | | | | | |

CONSTRUCTION ACTIVITIES THAT HAVE AN E&SC PLAN APPROVED ON OR AFTER APRIL 1, 2019 ARE REQUIRED TO FILL OUT AND SUBMIT AN ELECTRONIC NOTICE OF INTENT (e-NOI) FORM. ALL CONSTRUCTION ACTIVITIES ARE REQUIRED TO FOLLOW THE NEW NCG01 PERMIT REGARDLESS OF WHEN THEY WERE APPROVED.

SEEDING AND MULCHING:

The kinds of seed and fertilizer, and the rates of application of seed, fertilizer, and limestone, shall be as stated below. During periods of overlapping dates, the kind of seed to be used shall be determined. All rates are in pounds per acre.

Shoulder and Median Areas

Kentucky Bluegrass Kentucky Bluegrass Hard Fescue 25# Rye Grain German or Browntop Millet Fertilizer 4000# 4000#

Areas Beyond the Mowing Pattern, Waste and Borrow Areas:

| igust 1 | - June 1 | May 1 - S | eptember 1 |
|---------|--------------------|----------------|--------------------------|
| 0# | Tall Fescue | 100# | Tall Fescue |
| # | Kentucky Bluegrass | 15# | Kentucky Bluegrass |
| # | Hard Fescue | 30# | Hard Fescue |
| # | Rye Grain | 10# | German or Browntop Mille |
| 0# | Fertilizer | 500# | Fertilizer |
| 00# | Limestone | 4000# | Limestone |
| | Approv | ved Tall Fescu | e Cultivars |

| 2 Milliemmum | Duster | Magchan | Kendidon |
|--------------|------------------------|--------------|--------------------|
| Avenger | Endeavor | Masterpiece | Scorpion |
| Barlexas | Escalade | Matador | Shelby |
| Barlexas II | Falcon II, III, IV & V | Matador GT | Signia |
| Barrera | Fidelity | Millennium | Silverstar |
| Barrington | Finesse II | Montauk | Southern Choice II |
| Biltmore | Firebird | Mustang 3 | Stetson |
| Bingo | Focus | Olympic Gold | Tarheel |
| Bravo | Grande II | Padre | Titan Ltd |
| Cayenne | Greenkeeper | Paraiso | Titanium |
| Chapel Hill | Greystone | Picasso | Tomahawk |
| Chesapeake | Inferno | Piedmont | Tacer |
| Constitution | Justice | Pure Gold | Trooper |
| Chipper | Jaguar 3 | Prospect | Turbo |
| Coronado | Kalahari | Quest | Ultimate |
| Coyote | Kentucky 31 | Rebel Exeda | Watchdog |
| Davinci | Kitty Hawk | Rebel Sentry | Wolfpack |
| Dynasty | Kitty Hawk 2000 | Regiment II | |

Appendix C | Regional Seed Mixes that Provide Stabilization of Graded Areas

SEEDING AND MULCHING:

| | Approved 1 | Kentucky Bluegras | s Cultivars: |
|----------|------------|--------------------|--------------|
| Alpine | Bariris | Envicta | Rugby |
| Apollo | Bedazzled | Impact | Rugby II |
| Arcadia | Bordeaux | Kenblue | Showcase |
| Arrow | Champagne | Midnight | Sonoma |
| Award | Chicago II | Midnight II | |
| | Approv | ved Hard Fescue Cu | ıltivars: |
| Chariot | Nordic | Rhino | Warwick |
| Firefly | Oxford | Scaldis II | |
| Heron | Reliant II | Spartan II | |
| Minotone | Poliont IV | Stanahanga | |

Reliant IV Stonehenge On cut and fill slopes 2:1 or steeper add 20# Sericea Lespedeza January 1 - December 31.

20-20 analysis and as directed. TEMPORARY SEEDING:

Fertilizer shall be the same analysis as specified for Seeding and Mulching and applied at the rate of 400 pounds and seeded at the rate of 50 pounds per acre. German Millet, or Browntop Millet shall be used in summer months and rye grain during the remainder of the year. The Engineer will determine the exact dates for using each kind of seed.

Fertilizer shall be 10-20-20 analysis. A different analysis of fertilizer may be used provided the 1-2-2

ratio is maintained and the rate of application adjusted to provide the same amount of plant food as a 10-

FERTILIZER TOPDRESSING:

Fertilizer used for topdressing shall be 16-8-8 grade and shall be applied at the rate of 500 pounds per acre. A different analysis of fertilizer may be used provided the 2-1-1 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as 16-8-8 analysis and as directed.

SUPPLEMENTAL SEEDING:

The kinds of seed and proportions shall be the same as specified for Seeding and Mulching, and the rate of application may vary from 25# to 75# per acre. The actual rate per acre will be determined prior to the time of topdressing and the Contractor will be notified in writing of the rate per acre, total quantity needed, and areas on which to apply the supplemental seed. Minimum tillage equipment, consisting of a sod seeder shall be used for incorporating seed into the soil as to prevent disturbance of existing vegetation. A clodbuster (ball and chain) may be used where degree of slope prevents the use of a sod

Appendix C | Regional Seed Mixes that Provide Stabilization of Graded Areas

The John R. McAdams Company, In 2905 Meridian Parkway Durham, NC 27713

fax 919. 361. 2269 license number: C-0293, C-187

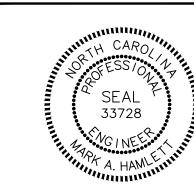
www.mcadamsco.com

phone 919. 361. 5000

CLIENT

CLEVELAND COUNTY

P.O. BOX 1210 SHELBY, NORTH CAROLINA 2815



REVISIONS

NO. DATE

PLAN INFORMATION

PROJECT NO. CCY-18010 FILENAME CCY18010-EC7 CHECKED BY MJM DRAWN BY NONE SCALE DATE 07.11.2019

SHEET

EROSION CONTROL

TEMPORARY SEEDING MAINTENANCE REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER

ERMANENT SEEDING MAINTENANCE SOIL ADDITIVES SHALL BE APPLIED PER SOILS TEST TAKEN PRIOR TO, DURING AND AFTER CONSTRUCTION. ADDITIVE RATES ARE INCLUDED WITH THE TEMPORARY AND PERMANENT SEEDING SCHEDULES PROVIDED WITH THIS PLAN SET.

AREAS SHALL BE REFERTILIZED IF GROWTH RATES AND NECESSARY GROUND COVER RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER

AREAS SHOULD BE INSPECTED REGULARLY FOR INVASIVE SPECIES. INVASIVES SPECIES SHALL BE TREATED IMMEDIATELY WITH APPROPRIATE CULTURAL PRACTICES AND/OR BY THE USE OF SEASONALLY-APPROPRIATE AND SITE APPROPRIATE HERBICIDES (PER NCDEQ EROSION AND SEDIMENTATION MANUAL). QUIPMENT AND VEHICLE MAINTENANCE

Maintain vehicles and equipment to prevent discharge of fluids. Provide drip pans under any stored equipment.

Identify leaks and repair as soon as feasible, or remove leaking equipment from the Collect all spent fluids, store in separate containers and properly dispose as

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

hazardous waste (recycle when possible). Remove leaking vehicles and construction equipment from service until the problem

Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials

ITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

Never bury or burn waste. Place litter and debris in approved waste containers Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.

Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available. Locate waste containers on areas that do not receive substantial amounts of runoff

from upland areas and does not drain directly to a storm drain, stream or wetland. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers. Anchor all lightweight items in waste containers during times of high winds.

Empty waste containers as needed to prevent overflow. Clean up immediately if

containers overflow. B. Dispose waste off-site at an approved disposal facility. 9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

Do not dump paint and other liquid waste into storm drains, streams or wetlands. Locate paint washouts at least 50 feet away from storm drain inlets and surface

waters unless no other alternatives are reasonably available. Contain liquid wastes in a controlled area.

Containment must be labeled, sized and placed appropriately for the needs of site. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place

on a gravel pad and surround with sand bags. Provide staking or anchoring of portable toilets during periods of high winds or in high

Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace

with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably

Protect stockpile with silt fence installed along toe of slope with a minimum offset of

five feet from the toe of stockpile. Provide stable stone access point when feasible Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated

erosion on disturbed soils for temporary or permanent control needs.

CLEARLY MARKED SIGNAGE NOTING DEVICE (18"X24" MIN.) 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY. 3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE. 3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE. BELOW GRADE WASHOUT STRUCTURE

SELF-INSPECTION, RECORDKEEPING AND REPORTING

They are less than 25 gallons but cannot be cleaned up within 24 hours, They cause sheen on surface waters (regardless of volume), or

Releases of hazardous substances in excess of reportable quantities under Section 311

(c) Noncompliance with the conditions of this permit that may endanger health or the

After a permittee becomes aware of an occurrence that must be reported, he shall contact

the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be

Reporting Timeframes (After Discovery) and Other Requirements

Within 7 calendar days, a report that contains a description of the

sediment and actions taken to address the cause of the deposition.

Division staff may waive the requirement for a written report on a

If the stream is named on the NC 303(d) list as impaired for sediment-

monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance

• Within 24 hours, an oral or electronic notification. The notification

shall include information about the date, time, nature, volume and

A report at least ten days before the date of the bypass, if possible

noncompliance, and its causes: the period of noncompliance.

including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and

prevent reoccurrence of the noncompliance. [40 CFR 122.41(I)(6). Division staff may waive the requirement for a written report on a

The report shall include an evaluation of the anticipated quality and

with the federal or state impaired-waters conditions.

Within 24 hours, an oral or electronic notification

bypasses [40 CFR • Within 7 calendar days, a report that includes an evaluation of the

with the conditions • Within 7 calendar days, a report that contains a description of the

related causes, the permittee may be required to perform additional

reported to the Division's Emergency Response personnel at (800) 662-7956, (800)

(a) Visible sediment • Within 24 hours, an oral or electronic notification.

location of the spill or release.

quality and effect of the bypass. (e) Noncompliance • Within 24 hours, an oral or electronic notification

effect of the bypass.

case-by-case basis

of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA

They are within 100 feet of surface waters (regardless of volume).

CTION C: REPORTING

(b) Oil spills if:

Occurrences that must be reported

They are 25 gallons or more,

Permittees shall report the following occurrences:

(Ref: 40 CFR 302.4) or G.S. 143-215.85.

2. Reporting Timeframes and Other Requirements

858-0368 or (919) 733-3300.

Occurrence

deposition in a

(b) Oil spills and

substances per Iter

(c) Anticipated

bypasses [40 CFR

L22.41(m)(3)]

122.41(m)(3)]

may endanger

CFR 122.41(I)(7)]

of this permit that

release of hazardous

stream or wetland

(b) Anticipated bypasses and unanticipated bypasses.

(a) Visible sediment deposition in a stream or wetland.

CONCRETE WASHOUTS

Do not discharge concrete or cement slurry from the site. Dispose of, or recycle settled, hardened concrete residue in accordance with local

and state solid waste regulations and at an approved facility. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within

Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.

Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.

Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.

Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority. Install at least one sign directing concrete trucks to the washout within the project

limits. Post signage on the washout itself to identify this location. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary

products, follow manufacturer's instructions. 0. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

IERBICIDES, PESTICIDES AND RODENTICIDES Store and apply herbicides, pesticides and rodenticides in accordance with label

Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water

or surface water. If a spill occurs, clean area immediately. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE Create designated hazardous waste collection areas on-site.

Do not store hazardous chemicals, drums or bagged materials directly on the ground.

Place hazardous waste containers under cover or in secondary containment.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

GENERAL NOTES

- 1. PRIOR TO CONSTRUCTION, ANY DISCREPANCIES IN THE PLANS AND NOTES SHALL BE BROUGHT TO THE DESIGN ENGINEER'S ATTENTION IMMEDIATELY.
- 2. EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON A FIELD SURVEY AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER
- 3. THE FINAL APPROVAL FOR THIS FACILITY WILL INCLUDE AN APPROVAL BY THE ON-SITE GEOTECHNICAL ENGINEER THAT THE PROJECT WAS CONSTRUCTED PER THE APPROVED PLANS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE ON-SITE GEOTECHNICAL ENGINEER FOR OBSERVATION AND TESTING SUCH THAT THE ON-SITE GEOTECHNICAL ENGINEER CAN APPROVE THE CONSTRUCTION.
- 4. ALL CONSTRUCTION ACTIVITY RELATED TO THE PROPOSED STORMWATER MANAGEMENT FACILITY SHALL BE PER THE DETAILS AND SPECIFICATIONS SHOWN IN THESE DRAWINGS. SOILS, COMPACTION, AND OTHER MISCELLANEOUS DETAILS AND SPECIFICATIONS MAY BE MODIFIED PER THE RECOMMENDATIONS OF THE ON-SITE GEOTECHNICAL ENGINEER. HOWEVER, PRIOR TO IMPLEMENTATION, THE DESIGN ENGINEER SHALL BE NOTIFIED OF ANY DEVIATION FROM THESE DESIGN DRAWINGS, INCLUDING SHOP DRAWINGS FOR ANY PROPOSED
- 5. DURING THE INITIAL STAGES OF CONSTRUCTION, THE STORMWATER MANAGEMENT FACILITY MAY BE USED AS A SEDIMENT BASIN FOR EROSION CONTROL PURPOSES. IF SO, THE CONTRACTOR SHALL FOLLOW THE GENERAL CONSTRUCTION SEQUENCE RELOW:
- 5.1. THE CONTRACTOR SHALL CONSTRUCT THE ENTIRE FACILITY (PERMANENT OUTLET STRUCTURE, DAM, ETC.) WITH THE EXCEPTION OF THE INTERIOR FINE GRADING FOR THE FACILITY. THE INTERIOR FINE GRADING WILL BE CONSTRUCTED ONCE THE EROSION CONTROL PHASE IS COMPLETE.
- 5.2. THE SKIMMER SHALL BE CONNECTED TO THE PERMANENT OUTLET STRUCTURE.
- 5.3. ONCE THE UPSTREAM DRAINAGE AREA IS STABILIZED AND APPROVED BY ENGINEER, THE CONTRACTOR SHALL CLEAN-OUT THE BASIN. ALL SEDIMENT, TRASH, ETC. SHALL BE DISPOSED OF PROPERLY (I.E. PLACED IN A LANDFILL) AND NOT STOCKPILED IN AN AREA WHERE WATER QUALITY COULD BE ADVERSELY AFFECTED. SKIMMER TO REMAIN IN PLACE
- 5.4. ONCE THE BASIN IS CLEANED OUT, AND ALL EROSION CONTROL DEVICES REMOVED, THE CONTRACTOR SHALL CONSTRUCT THE INTERIOR GRADING SHOWN ON THIS SHEET.
- 5.5. ONCE THE GRADING IS COMPLETE, THE CONTRACTOR SHALL REQUEST AN ON-SITE INSPECTION PRIOR TO INSTALLATION OF THE STORMWATER MANAGEMENT VEGETATION. IF THE CONTRACTOR INSTALLS THE PROPOSED VEGETATION PRIOR TO AN INSPECTION, ANY CHANGES TO THE GRADING / RE-PLANTING OF PLANTS WILL BE AT THE CONTRACTOR'S EXPENSE.
- 6. ANY REMOVED TOPSOIL SHALL BE STOCKPILED FOR USE IN SEEDING ON THE DAM EMBANKMENT ONCE FINAL GRADES (AS SHOWN ON THE GRADING PLAN) HAVE BEEN ESTABLISHED WITH COMPACTED FILL. PRIOR TO TOPSOIL INSTALLATION, THE CONTRACTOR SHALL SCARIFY THE TOP 2"-3" OF THE BERM SECTION TO PROMOTE BONDING OF THE TOPSOIL WITH THE COMPACTED FILL. THE TOPSOIL DEPTH SHALL RANGE FROM 3"-4" ON THE DAM EMBANKMENT. PLEASE NOTE THE STOCKPILED TOPSOIL SHALL BE AMENDED, AS DIRECTED BY A LANDSCAPE PROFESSIONAL, PRIOR TO INSTALLATION ON THE EMBANKMENT.
- 7. IT IS ANTICIPATED THAT DEWATERING WILL BE NECESSARY IN THE EXCAVATION AREAS (E.G. EMBANKMENT SUB GRADE, INTERIOR PORTIONS OF THE STORMWATER FACILITY, KEY TRENCH, ETC.). THEREFORE, THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE, AND MAINTAIN ANY PUMPING EQUIPMENT, ETC. NEEDED FOR REMOVAL OF WATER FROM VARIOUS PARTS OF THE STORMWATER FACILITY SITE. DURING PLACEMENT OF FILL WITHIN THESE AREAS, THE CONTRACTOR SHALL KEEP THE WATER LEVEL BELOW THE BOTTOM OF THE EXCAVATION / CONSTRUCTION AREAS. THE MANNER IN WHICH THE WATER IS REMOVED SHALL BE SUCH THAT THE EXCAVATION BOTTOM AND SIDE SLOPES ARE STABLE, WITH NO SEDIMENT DISCHARGED FROM THE SITE (I.E. PUMPED WATER MAY NEED TO BE DIRECTED TO AN APPROVED EROSION CONTROL DEVICE SUCH AS A DIRT BAG (ACF ENVIRONMENTAL), OR ENGINEER APPROVED EQUIVALENT, PRIOR TO DISCHARGE.
- 8. THE RETAINING WALL ALIGNMENT SHOWN ON THESE PLANS DEPICTS THE LOCATION OF THE FRONT FACE OF THE RETAINING WALL AT THE BOTTOM.
- 9. THE RETAINING WALL IS TO BE A DESIGN-BUILD PROJECT(S) BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN FINAL CONSTRUCTION DRAWINGS FROM A REGISTERED PROFESSIONAL ENGINEER AND GAIN ALL REQUIRED PERMITS NECESSARY FOR THE CONSTRUCTION OF THE RETAINING WALL.
- 10. THE RETAINING WALL SHALL BE ASSUMED TO BE BACKFILLED WITH OFF-SITE BORROW MATERIAL OR PROCESSED FILL UNLESS CONTRACTOR CAN PROVIDE OWNER WITH CONFIRMATION FROM THE GEOTECHNICAL ENGINEER AND THE RETAINING WALL DESIGNER THAT READILY AVAILABLE ON-SITE SOILS CAN BE USED.
- 11. THE TOP AND BOTTOM OF WALL ELEVATIONS SHOWN ON THESE PLANS IDENTIFY FINISHED GRADE ELEVATIONS ONLY. THE EXTENT THAT THE RETAINING WALL WILL BE EXTENDED BELOW GRADE TO THE FOOTING SHALL BE IDENTIFIED ON THE RETAINING WALL CONSTRUCTION DRAWINGS.

BERM AND SOIL COMPACTION SPECIFICATIONS

- 1. PRIOR TO CONSTRUCTION, THE ON-SITE GEOTECHNICAL ENGINEER SHALL IDENTIFY BORROW / FILL AREAS AND VERIFY THEIR SUITABILITY FOR USE WITHIN THE DAM EMBANKMENT. ALSO, THE ON-SITE GEOTECHNICAL ENGINEER SHALL PERFORM STANDARD PROCTORS ON THE PROPOSED BORROW MATERIAL TO ENSURE THAT OPTIMUM MOISTURE CONTENT AND COMPACTION CAN BE ACHIEVED / CONTROLLED DURING CONSTRUCTION.
- 2. ALL FILL MATERIALS TO BE USED FOR THE DAM EMBANKMENT SHALL BE TAKEN FROM BORROW AREAS APPROVED BY THE ON-SITE GEOTECHNICAL ENGINEER. THE FILL MATERIAL SHALL BE FREE FROM ROOTS, STUMPS, WOOD, STONES GREATER THAN 6", AND FROZEN OR OTHER OBJECTIONABLE MATERIAL. THE FOLLOWING SOIL TYPES ARE SUITABLE FOR USE AS FILL WITHIN THE DAM EMBANKMENT AND KEY TRENCH: ML AND CL. ALL FILL MATERIALS SHALL BE APPROVED BY THE ONSITE GEOTECHNICAL ENGINEER FOR THE INTENDED USE.
- 3. FILL PLACEMENT FOR THE EMBANKMENT SHALL NOT EXCEED A MAXIMUM 8" LIFT (UNCOMPACTED). EACH LIFT SHALL BE CONTINUOUS FOR THE ENTIRE LENGTH OF EMBANKMENT. BEFORE PLACEMENT OF FILL FOR THE BERM SECTION, ALL UNSUITABLE MATERIAL SHALL BE REMOVED AND THE SURFACE PROPERLY PREPARED FOR FILL PLACEMENT. FILL MATERIAL ADJACENT TO ALL SPILLWAY AND DRAINAGE STRUCTURES SHALL BE PLACED IN 4-INCH (UNCOMPACTED) LIFTS AND HAND-COMPACTED TO THE SAME COMPACTION AND MOISTURE REQUIREMENTS AS THE ENTIRE EMBANKMENT.
- 4. ALL FILL SOILS USED IN THE EMBANKMENT CONSTRUCTION SHALL BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM-698). THE FILL SOILS SHALL BE COMPACTED AT A MOISTURE CONTENT WITHIN -1 TO +3 PERCENT OF ITS OPTIMUM MOISTURE CONTENT. COMPACTION TESTS SHALL BE PERFORMED BY THE ON-SITE GEOTECHNICAL ENGINEER DURING CONSTRUCTION TO VERIFY THAT THE PROPER COMPACTION LEVEL HAS BEEN REACHED. THE FILL SHOULD BE COMPACTED USING A SHEEPSFOOT TYPE COMPACTOR. IN ORDER TO PREVENT DAMAGE TO THE PIPE, NO COMPACTION EQUIPMENT SHALL CROSS ANY PIPE UNTIL MINIMUM COVER IS ESTABLISHED ALONG THE PIPE.
- 5. THE DESIGN ENGINEER SHALL BE PROVIDED WITH REPORTS AND APPROVAL, BY THE ON-SITE GEOTECHNICAL ENGINEER, THAT THE GEOTECHNICAL ASPECTS OF THE FACILITY HAVE BEEN CONSTRUCTED PER PLAN. THEREFORE, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE TESTING AND OBSERVATION WITH THE ON-SITE
- 6. TESTING OF THE NEW FILL MATERIALS SHALL BE PERFORMED TO VERIFY THAT THE RECOMMENDED LEVEL OF COMPACTION IS ACHIEVED DURING CONSTRUCTION. THEREFORE, ONE DENSITY TEST SHALL BE PERFORMED FOR EVERY 2,500 SQUARE FEET OF AREA FOR EVERY LIFT OF FILL OR AS RECOMMENDED BY THE ON-SITE
- 7. TESTING WILL BE REQUIRED ALONG THE 24"Ø CMP OUTLET BARREL AT A FREQUENCY OF ONE TEST PER 25 LF OF PIPE PER VERTICAL FOOT OF FILL OR AS DIRECTED BY THE ON-SITE GEOTECHNICAL ENGINEER.

STATEMENT OF RESPONSIBILITY

ALL REQUIRED MAINTENANCE AND INSPECTIONS OF THIS FACILITY SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER, PER THE EXECUTED OPERATION AND MAINTENANCE AGREEMENT FOR THIS FACILITY.

CONSTRUCTION SEQUENCE

1. PRIOR TO CONSTRUCTION, THE OWNER SHALL OBTAIN A LAND DISTURBING (GRADING), AND ALL OTHER NECESSARY PERMITS FROM APPLICABLE AGENCIES

CONTROL INSPECTOR, AS REQUIRED BY GOVERNING AGENCIES, PRIOR TO ANY CLEARING.

- 2. INSTALL ALL SEDIMENT AND EROSION MANAGEMENT FACILITYS PER THE APPROVED SEDIMENT AND EROSION CONTROL PLAN. THE CONTRACTOR SHALL MAINTAIN ALL APPROVED SEDIMENT AND EROSION MANAGEMENT FACILITYS
 THROUGHOUT THE ENTIRE PROJECT, AS REQUIRED. THE CONTRACTOR SHALL RECEIVE APPROVAL FROM THE EROSION
- 3. CLEAR AND GRUB AREA WITHIN THE LIMITS OF THE PROPOSED DAM CONSTRUCTION. ALL TREES AND THEIR ENTIRE ROOT SYSTEMS MUST BE REMOVED FROM THE DAM FOOTPRINT AREA AND BACKFILLED WITH SUITABLE SOIL MATERIAL. THE BACKFILLED AREAS SHALL BE COMPACTED TO THE SAME STANDARDS AS THE DAM EMBANKMENT. THE REMAINING AREA OF THE EMBANKMENT SHALL BE STRIPPED TO A SUITABLE DEPTH AS DIRECTED BY THE ON-SITE GEOTECHNICAL ENGINEER. ANY RESIDUAL SOILS TO BE LEFT IN PLACE MUST BE WELL SCARIFIED TO PROMOTE BONDING OF THE NEW EMBANKMENT FILL. NO EMBANKMENT MATERIAL SHALL BE PLACED FOR THE DAM OR KEY TRENCH UNTIL APPROVAL OF THE DAM SUBGRADE / TRENCH IS OBTAINED FROM THE ON-SITE GEOTECHNICAL ENGINEER.
- 4. EXCAVATE FOR THE NEW KEY TRENCH ALONG THE CENTERLINE OF THE PROPOSED DAM EMBANKMENT. THE TRENCH SHALL EXTEND A MINIMUM OF 5 FT BELOW EXISTING GRADE OR 2 FT BELOW THE 24"Ø CMP OUTLET BARREL AND SHALL HAVE A MINIMUM BOTTOM WIDTH OF 5 FEET. THE KEY TRENCH SIDESLOPES SHALL BE A MINIMUM OF 1:1 (H:V). THE KEY TRENCH SHALL BE COMPACTED TO THE SAME SPECIFICATION LISTED IN ITEM 4 OF THE SECTION TITLED "BERM AND SOIL COMPACTION SPECIFICATIONS." DEPENDING UPON ON-SITE SOIL CONDITIONS ENCOUNTERED DURING EXCAVATION, THE ON-SITE GEOTECHNICAL ENGINEER MAY VARY THE DEPTH AND DIMENSIONS OF THE KEY TRENCH AS DEEMED NECESSARY. THE ON-SITE GEOTECHNICAL ENGINEER SHALL RETAIN DOCUMENTATION OF ANY VARIATION FOR FUTURE AS-BUILT SUBMITTALS TO CLEVELAND COUNTY.
- BEGIN PLACEMENT OF BACKFILL WITHIN THE KEY TRENCH. THE KEY TRENCH SHALL BE COMPACTED TO THE SPECIFICATIONS
- LISTED ITEM 4 OF THE SECTION TITLED "BERM AND SOIL COMPACTION SPECIFICATIONS." THE KEY TRENCH SHALL BE TESTED PER THE SPECIFICATIONS LISTED IN THAT SECTION.
- 6. PRIOR TO INSTALLATION, SUBGRADE CONDITIONS ALONG THE SPILLWAY PIPES SHOULD BE EVALUATED BY THE ON-SITE GEOTECHNICAL ENGINEER TO ASSESS WHETHER SUITABLE BEARING CONDITIONS EXIST AT THE SUBGRADE LEVEL. SHOULD SOFT OR OTHERWISE UNSUITABLE CONDITIONS BE ENCOUNTERED ALONG THE PIPE ALIGNMENTS, THESE MATERIALS SHOULD BE UNDERCUT AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE UNDERCUT MATERIALS SHALL BE REPLACED WITH ADEQUATELY COMPACTED STRUCTURAL FILL, OR FLOWABLE FILL AS DIRECTED BY THE ON-SITE GEOTECHNICAL ENGINEER.
- 7. BEGIN CONSTRUCTION OF THE NEW EMBANKMENT. FILL MATERIALS SHALL BE PLACED IN MAXIMUM 8" THICK LIFTS
- TO COMPACTION, UNLESS DIRECTED OTHERWISE BY THE ON-SITE GEOTECHNICAL ENGINEER. FILL LIFTS SHALL BE CONTINUOUS OVER THE ENTIRE LENGTH OF FILL. IF IT IS NECESSARY, THE EMBANKMENT FILL MATERIAL WILL BE OVERBUILT IN HORIZONTAL LIFTS AND CUT BACK TO FINAL GRADE IN ORDER TO ACHIEVE PROPER COMPACTION.
- 8. INSTALL RISER / BARREL ASSEMBLY, ALONG WITH THE EMERGENCY DRAIN SYSTEM. THE DRAIN VALVE LOCATED WITHIN THE RISER BOX SHALL BE KEPT OPEN UNTIL AN AS-BUILT CERTIFICATION HAS BEEN COMPLETED BY THE ENGINEER AND AN APPROVAL TO IMPOUND HAS BEEN ISSUED BY ALL APPLICABLE AGENCIES.
- 9. INSTALL 24" Ø CMP OUTLET BARREL SPILLWAY FILTER FROM THE DETAILS SHOWN ON SHEET SW-3.

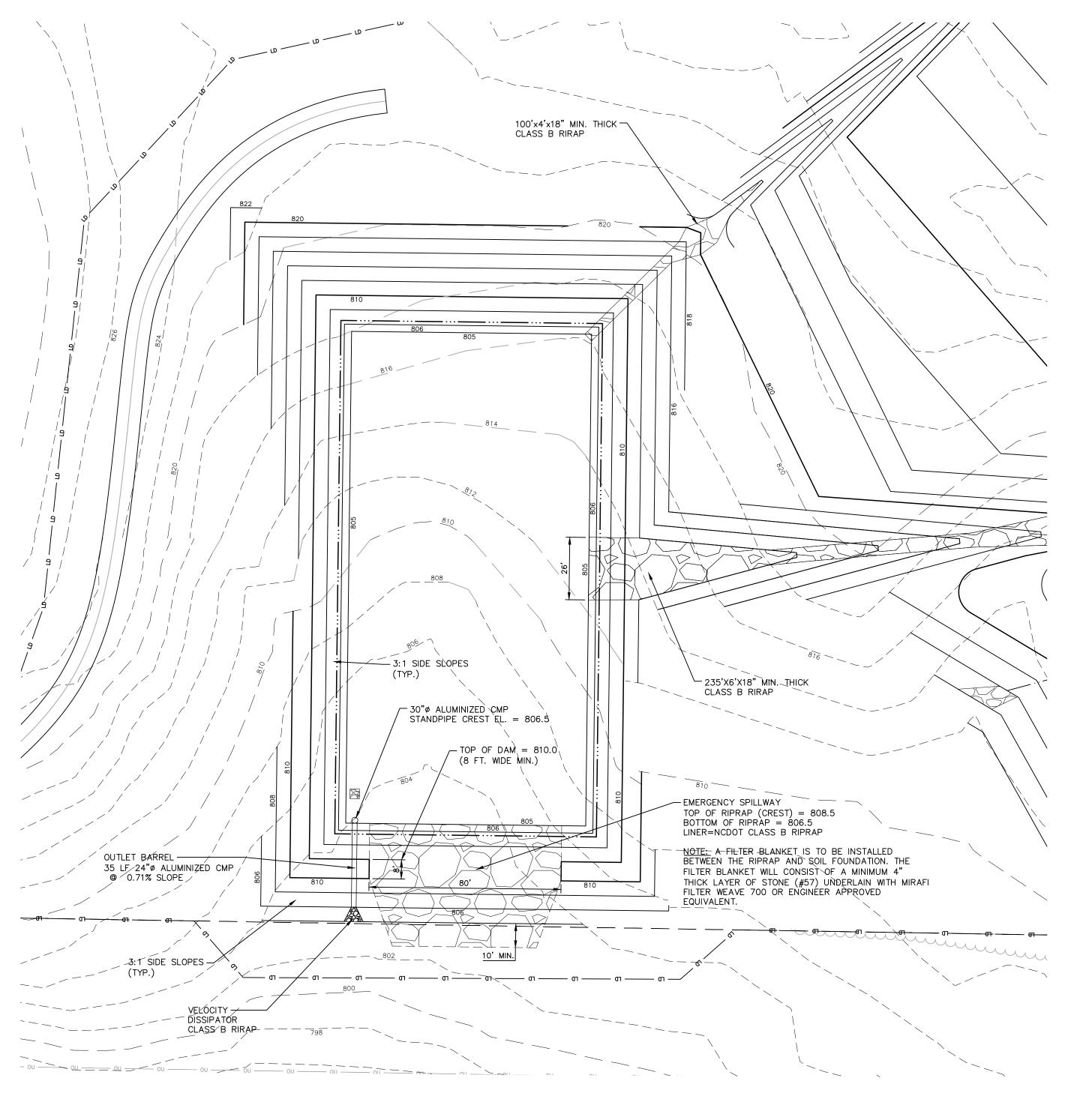
 10. CONSTRUCT EMBANKMENT PER SPECIFICATIONS LISTED IN THE SECTION TITLED "BERM AND SOIL COMPACTION SPECIFICATIONS" AND REQUIREMENTS OF THE ON-SITE GEOTECHNICAL ENGINEER. ALL CHARACTERISTICS OF THE EMBANKMENT FILL MATERIAL SHALL MEET THE STANDARDS SET FORTH IN "BERM AND SOIL COMPACTION SPECIFICATIONS", INCLUDING COMPACTION AND MOISTURE REQUIREMENTS. IF NECESSARY, TO ACHIEVE PROPER COMPACTION, THE EMBANKMENT FILL MATERIAL WILL BE OVERBUILT IN HORIZONTAL LIFTS AND CUT BACK TO PROPER FINAL GRADE. ANY HAND COMPACTION ACTIVITIES AROUND SPILLWAY OR DRAIN STRUCTURES SHALL BE CONDUCTED IN 4-INCH LOOSE LIFTS AND BE TO THE SAME COMPACTION AND MOISTURE REQUIREMENTS AS THE ENTIRE EMBANKMENT. ALL COMPACTION AND MOISTURE TESTING SHALL BE CARRIED OUT AS DIRECTED BY THE ON-SITE GEOTECHNICAL ENGINEER AND AS LISTED IN THE SECTION TITLED "BERM AND SOIL COMPACTION SPECIFICATIONS".
- 11. UPON COMPLETION OF DAM EMBANKMENT, PROMPTLY STABILIZE AND SEED DAM EMBANKMENT PER SEEDING SCHEDULE.
- 12. SCHEDULE A FINAL AS-BUILT INSPECTION AND AS-BUILT SURVEY WITH THE ENGINEER ANY COMMENTS OR DEFICIENCIES
- THE DAM CONSTRUCTION MUST BE CORRECTED TO THE SATISFACTION OF THE ENGINEER AND OWNER BEFORE APPROVAL SHALL BE GRANTED.

OUTLET STRUCTURE MATERIAL SPECIFICATIONS

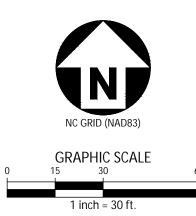
- THE 24"Ø CMP OUTLET BARREL SHALL BE CLASS 350, MEETING THE REQUIREMENTS OF AWWA A21-LATEST. THE PIPES SHALL HAVE PUSH-ON JOINTS.
 THE STRUCTURAL DESIGN FOR THE CMP RISER WITH EXTENDED BASE SHALL BE BY OTHERS. PRIOR TO ORDERING THE
- STRUCTURE, THE CONTRACTOR SHALL PROVIDE, TO THE DESIGN ENGINEER FOR REVIEW, SHOP

 3. PRIOR TO ORDERING, THE CONTRACTOR SHALL SUBMIT TRASH RACK SHOP DRAWINGS TO THE ENGINEER FOR REVIEW. CONTRACTOR SHALL ENSURE THAT AN ACCESS HATCH IS PROVIDED WITHIN THE TRASH RACK (SEE DETAIL FOR LOCATION)

 THAT WILL ALLOW FOR FUTURE MAINTENANCE ACCESS. CONTRACTOR SHALL ALSO PROVIDE A CHAIN AND LOCK FOR SECURING THE ACCESS HATCH. NOTE THE ACCESS HATCH SHALL LINE UP WITH THE ACCESS STEPS AFTER INSTALLATION.



STORMWATER CONTROL MEASURE PLAN VIEW



FINAL DRAWING - FOR CONSTRUCTION



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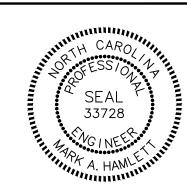
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CLEVELAND COUNTY P.O. BOX 1210

SHELBY, NORTH CAROLINA 2815

THILLS SHOOTING
LEX IMPROVEMENT
T AND TRAP EXPANSION



REVISIONS

NO. DATE

PLAN INFORMATION

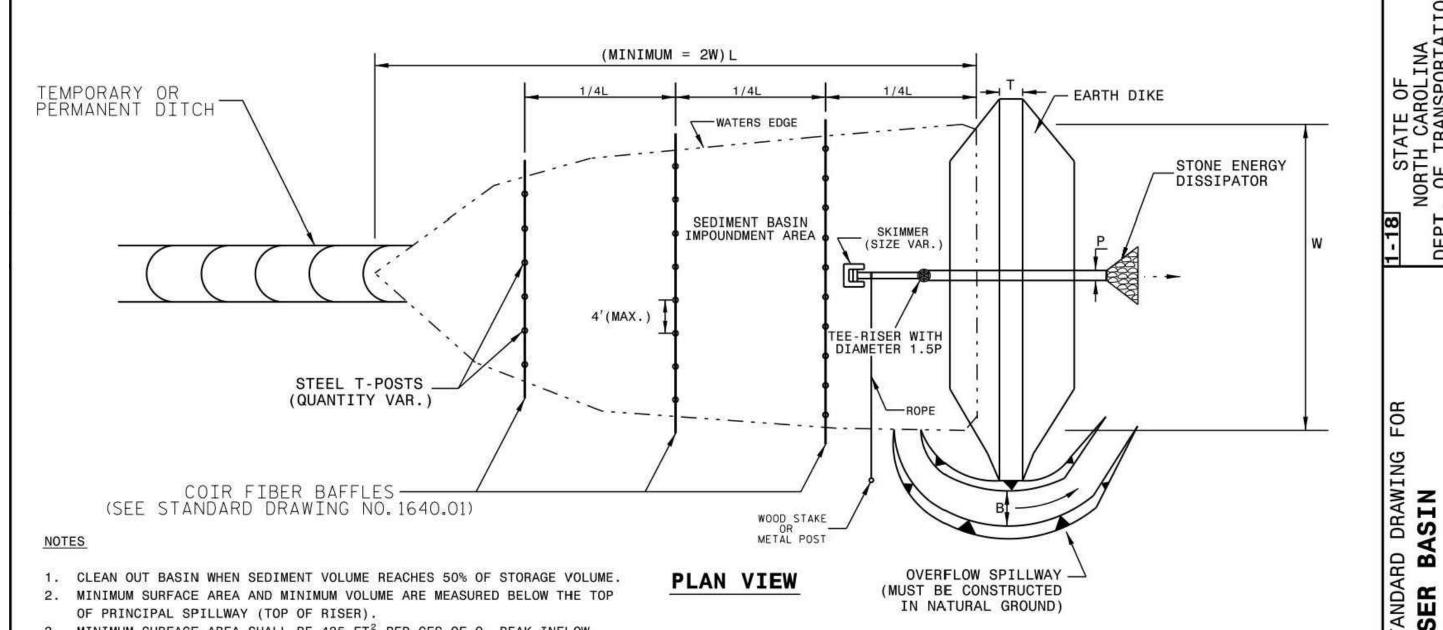
PROJECT NO. CCY-18010
FILENAME CCY18010-S'
CHECKED BY MJM
DRAWN BY SMP

DRAWN BY SMP
SCALE 1"=30'
DATE 07.11.2019

SHEET

STORMWATER CONTROL MEASURE PLAN VIEW

5VV-



| 1000 | |
|------|--|
| 2. | MINIMUM SURFACE AREA AND MINIMUM VOLUME ARE MEASURED BELOW THE TOP |
| | OF PRINCIPAL SPILLWAY (TOP OF RISER). |
| 3. | MINIMUM SURFACE AREA SHALL BE 435 FT2 PER CFS OF Q10 PEAK INFLOW, |

- AND MINIMUM SEDIMENT STORAGE VOLUME SHALL BE 1800 FT3 PER ACRE OF
- 4. THE EARTH DIKE MAY BE CONSTRUCTED ALONG ONE OR MORE SIDES. EXCAVATION MAY BE REQUIRED TO PROVIDE MINIMUM SURFACE AREA AND/OR MINIMUM STORAGE
- 5. CONSTRUCT THE DIKE OF MATERIAL SUITABLE FOR AND MEETING ROADWAY EMBANKMENT SPECIFICATIONS.
- 6. TO FACILITATE DETERMINATION OF MAINTENANCE CLEANOUT REQUIREMENT, PLACE A MARKER IN THE BASIN INDICATING THE 50% VOLUME LEVEL.
- THE MINIMUM RISER PIPE DIAMETER IS 1.5 TIMES THE BARREL PIPE DIAMETER.
- 8. ATTACH SKIMMER TO RISER PIPE A MINIMUM OF 1 FOOT FROM BOTTOM OF BASIN. 9. PROVIDE A STONE ENERGY DISSIPATOR PAD AT THE OUTLET OF THE RISER BARREL IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 876.02 FOR PIPE OUTLET WITHOUT DITCH.
- 10. SEED AND PLACE MATTING FOR EROSION CONTROL ON ALL INTERIOR AND EXTERIOR SLOPES OF BASIN.

ALTERNATE ANTI-FLOTATION METHOD

| | | | STAN | DARD | BASI | N DIMI | ENSION | S | | |
|-----|-----|------------|------|------|------|------------|------------|------------|-------------|-------------|
| Р | н | T (MIN) | D* | Е | F | B (MIN) | X (MIN) | Y (MIN) | X1 (MIN) | Y1 (MIN) |
| IN. | FT. | FT. | FT. | FT. | FT. | FT. | FT. | FT. | FT. | FT. |
| 15 | 1.0 | 6.0 | 6.0 | 4.0 | 1.0 | 3.0 | 2.7 | 1.0 | 2.5 | 1.0 |
| 18 | 1.0 | 6.0 | 6.5 | 4.5 | 1.0 | 4.0 | 3.5 | 1.0 | 3.2 | 1.0 |
| 4 | 1.0 | 6.0 | 8.0 | 6.0 | 1.0 | 8.0 | 5.5 | 1.0 | 5.0 | 1.0 |
| 30 | 1.0 | 6.0 | 9.5 | 7.0 | 1.5 | 8.0 | 7.6 | 1.0 | 6.9 | 1.0 |

NOT TO SCALE

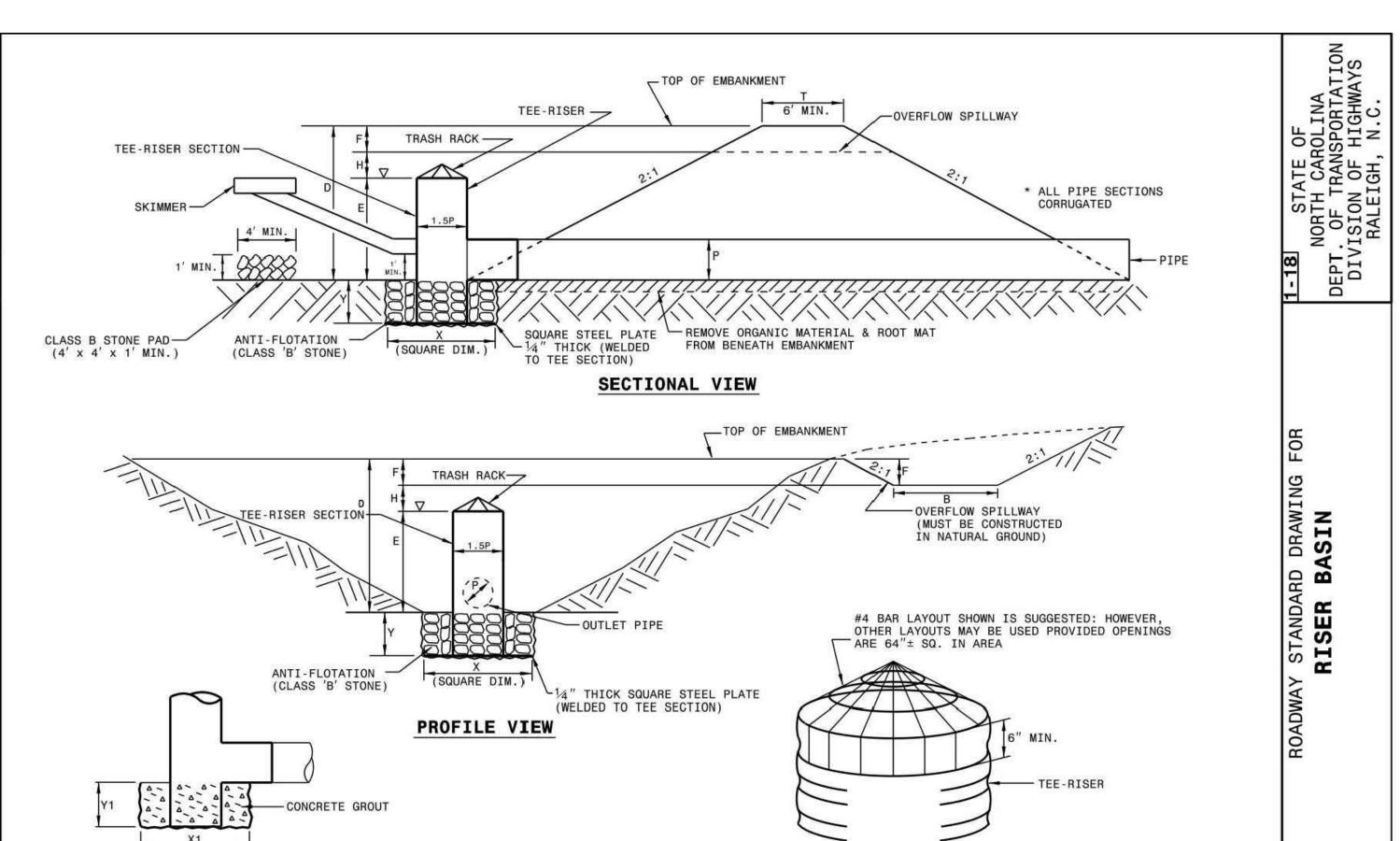
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SHEET 2 OF 2

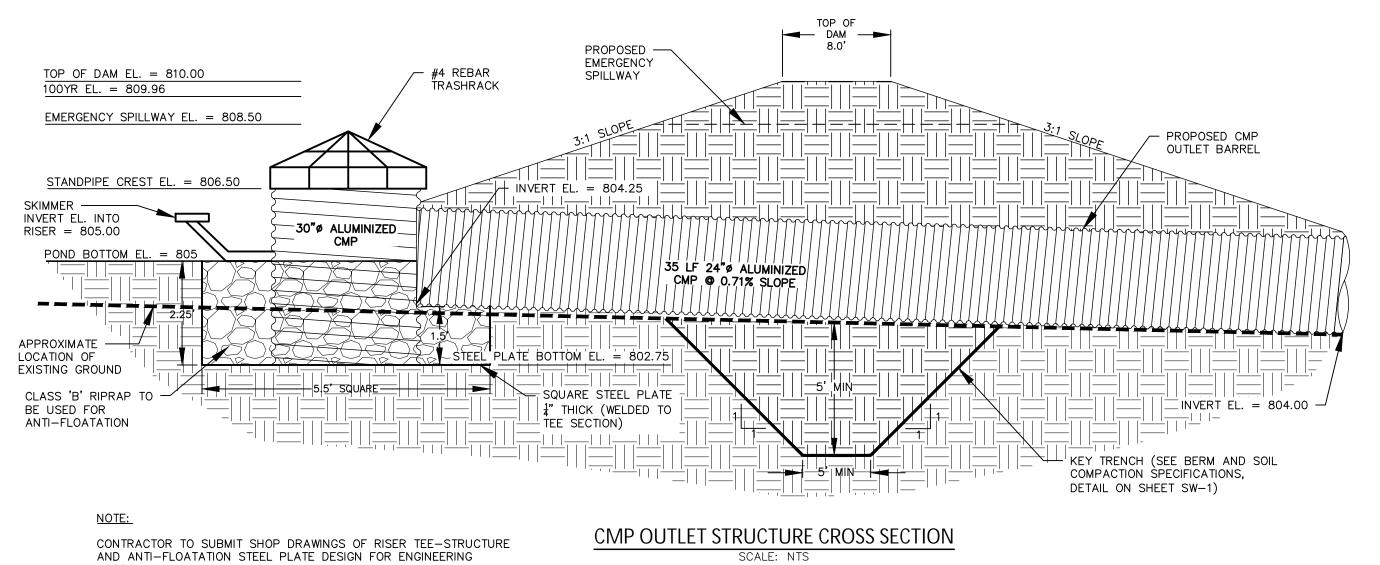
1630.01

1630.01

1-18 STATE NORTH CAR DEPT. OF TRANS DIVISION OF RALEIGH,



TRASH RACK DETAIL



| SEDIMENT BASIN ID | SB-A |
|---------------------------------|----------|
| Q25 (CFS) | 62.0 cfs |
| Bottom Length | 205 ft |
| Bottom Width | 100 ft |
| Sediment Depth | 1.5 ft |
| Freeboard (from Sediment Depth) | 1.5 ft |
| Depth to Crest of Spillway | 2.0 ft |
| Side Slopes1 | 3.0H:1V |
| Spillway Length | 51 ft |
| Height of Berm | 5.0 ft |
| Width of Berm | 32 ft |
| Top of Trap Length | 226 ft |
| Top of Trap Width | 121 ft |
| Storage Volume Required | 21,294 c |
| Storage Volume Prov'd. | 44,750 c |
| Sediment Surface Area Req'd | 24,030 s |
| Sediment Surface Area Prov'd | 24,300 s |
| Drainage Area (AC.) | 17.89 ad |
| | |

11.76 ac

Disturbed Area (AC.)

SEDIMENT BASIN DESIGN TABLE

| Basin ID | Drawdown | Skimmer Type(s) |
|--------------------------------|-----------------------------|---|
| SB-1 | 3 DAYS | 1 — 3 inch Skimmers with a(n) 2.75 inch Orifice |
| | | |
| Notes: | | |
| 1. See details regarding skim | mer design specifications | |
| 2. See details on coir fiber b | affle spacing. | |
| 3. All basins embankments sk | nall be provided with adequ | ate ground cover immediately upon construction. |



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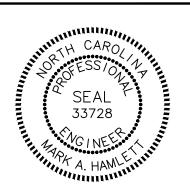
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NO. DATE

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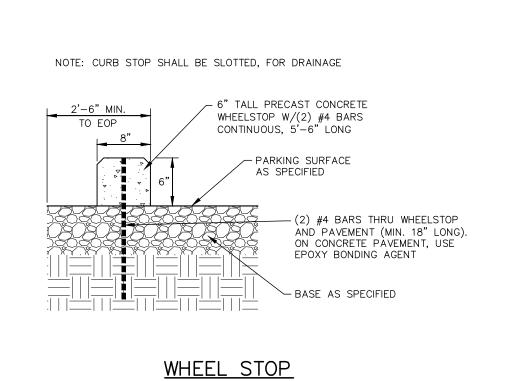
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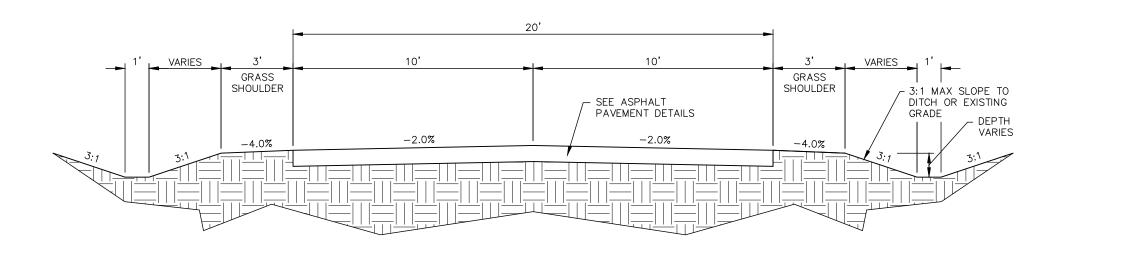
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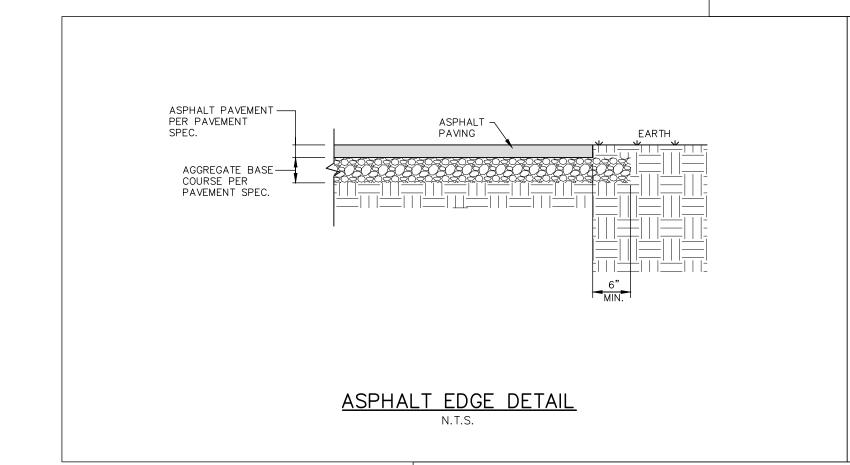
STORMWATER CONTROL **MEASURE DETAILS**

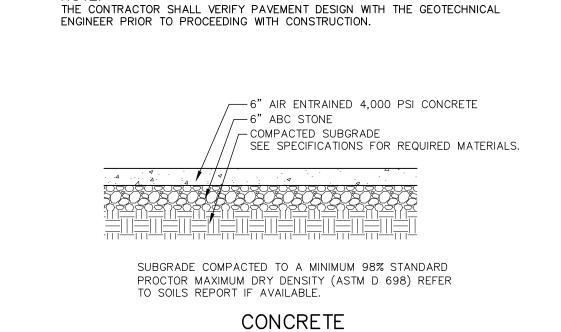
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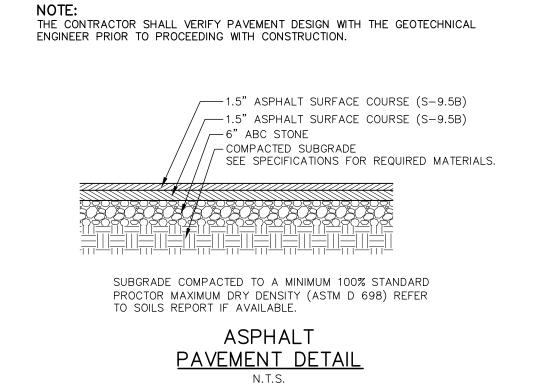
ACCESS ROAD SECTION

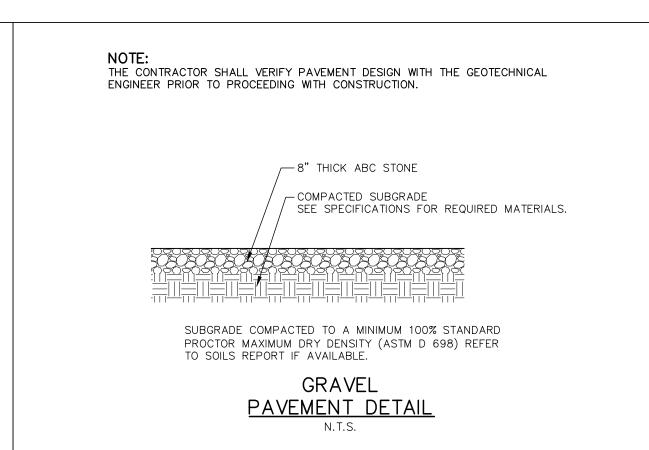


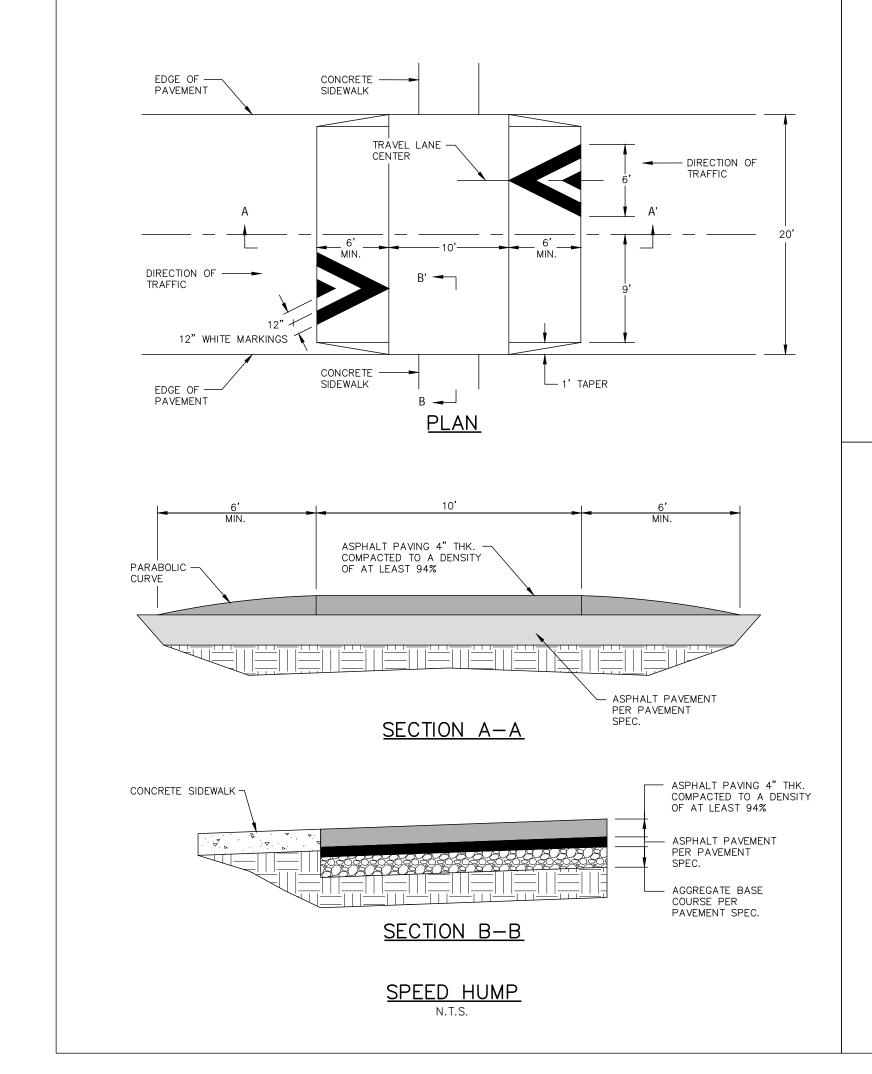


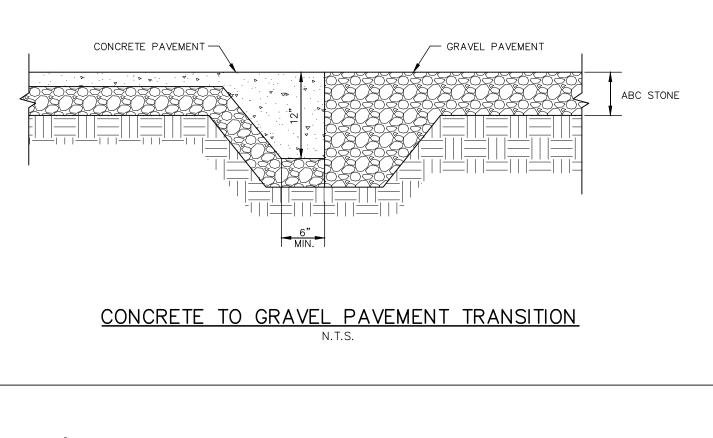
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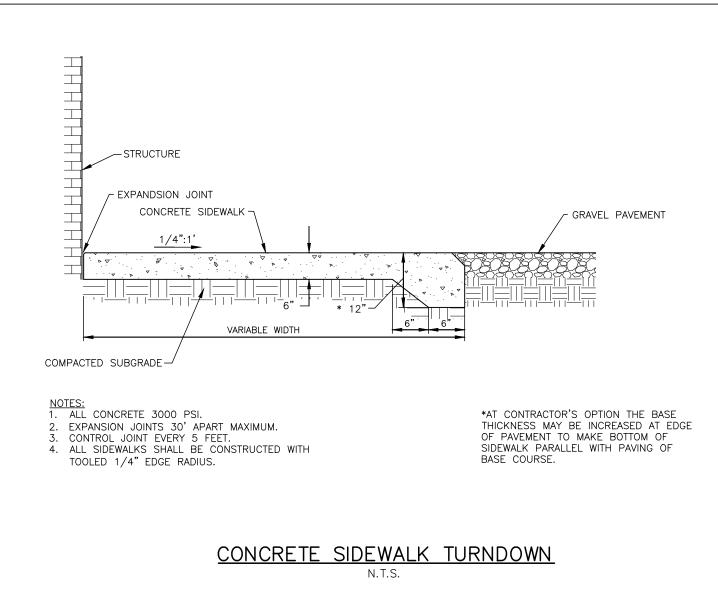
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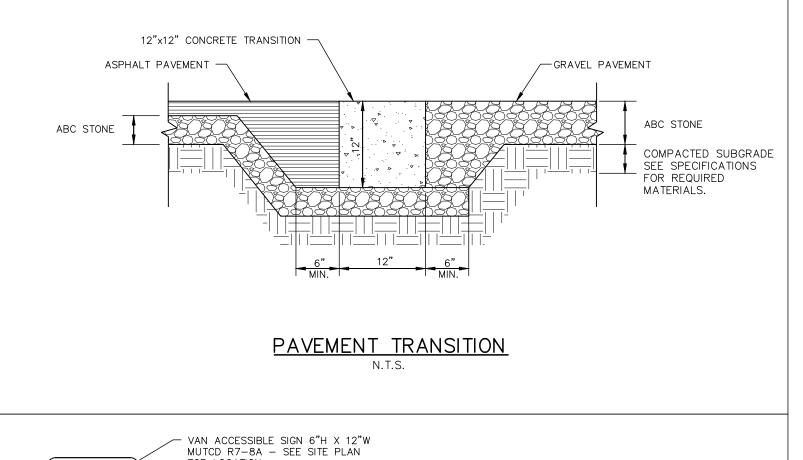


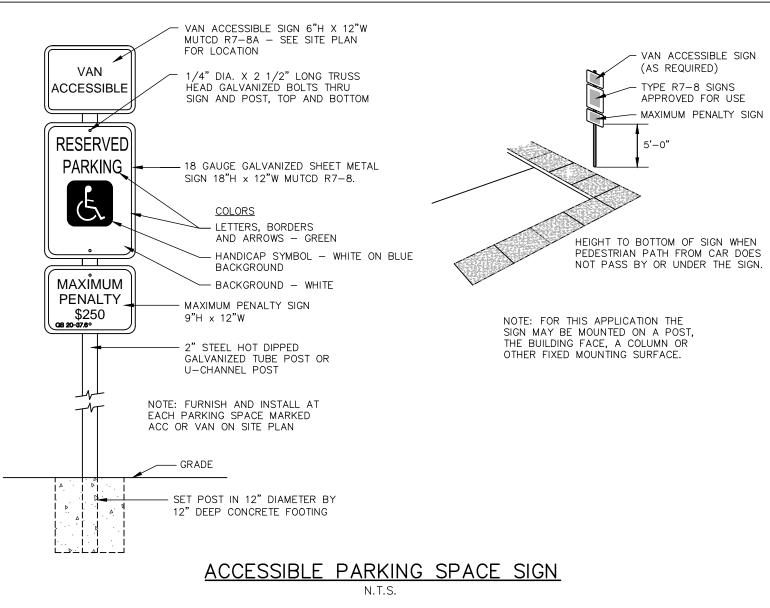














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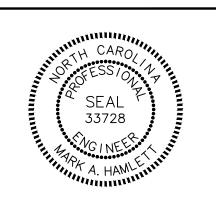
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FOOTHILS SHOOTING COMPLEX IMPROVEMENTS SKEET AND TRAP EXPANSION SKEET AND TRAP EXPANSION



REVISIONS

NO. DATE

PLAN INFORMATION

PROJECT NO. CCY-18010

FILENAME CCY18010-D1

CHECKED BY MJM

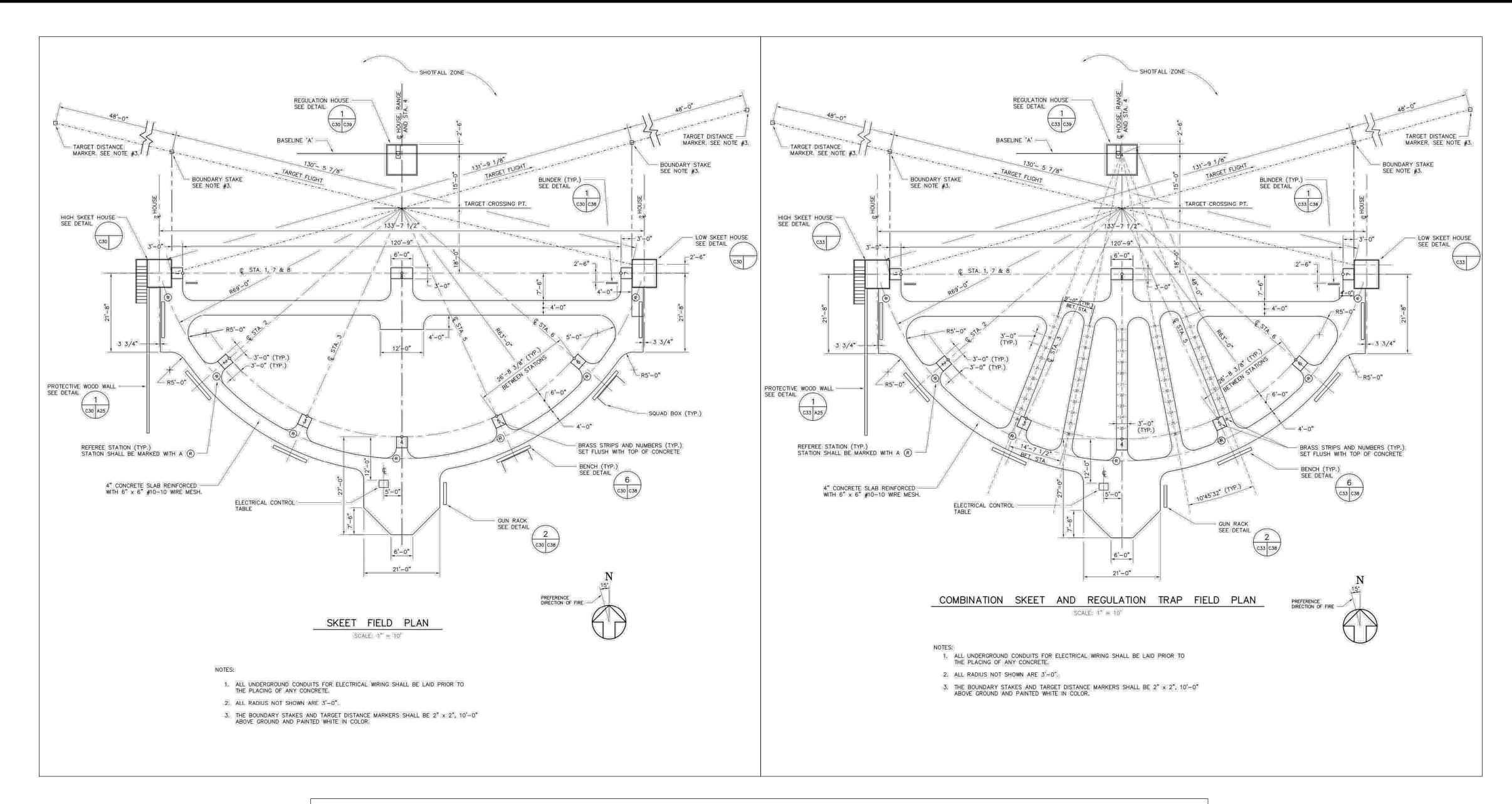
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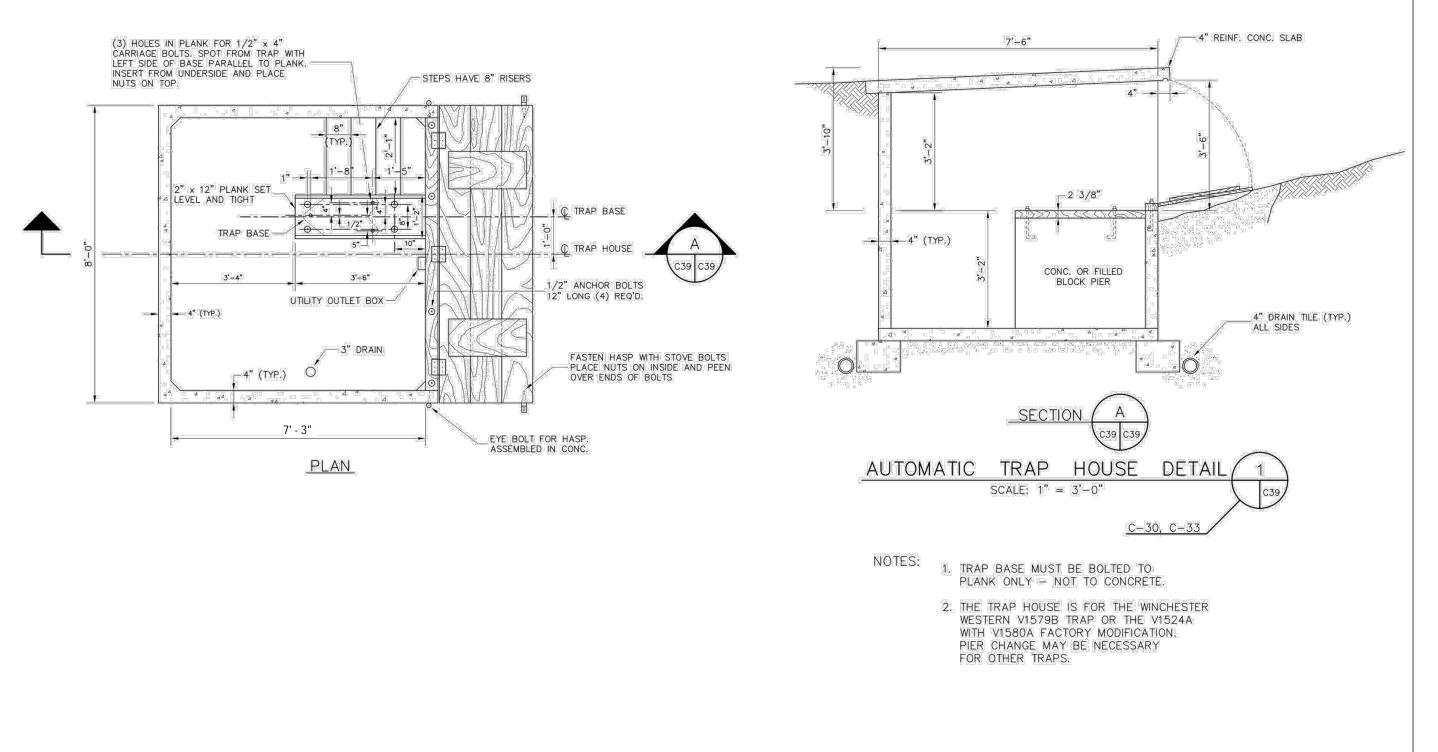
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DATE 07.11.2019

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D-1







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2

COMPLEX IMPROVEMENTS

SKEET AND TRAP EXPANSION



REVISIONS

NO. DATE

PLAN INFORMATION

PROJECT NO. CCY-18010
FILENAME CCY18010-D1
CHECKED BY MJM
DRAWN BY SMP
SCALE NONE

SCALE NONE
DATE 07.11.2019
SHEET

NATIONAL RIFLE ASSOCIATION SITE DETAILS

D-2

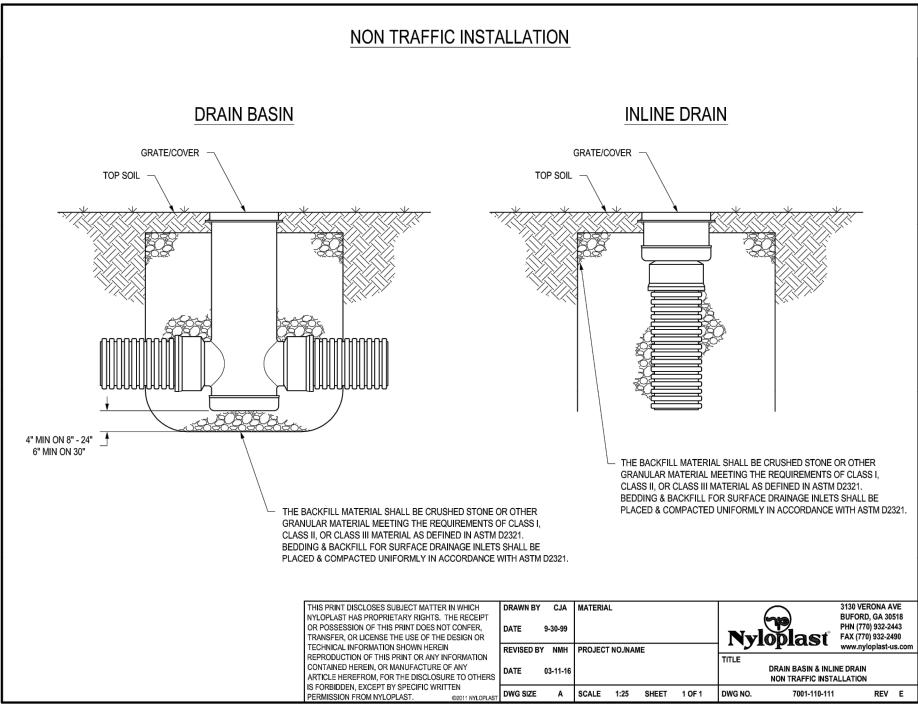
1. THE DETAILS SHOWN WHERE PROVIDED BY THE NATIONAL RIFLE ASSOCIATION FROM "THE RANGE SOURCE BOOK" AND SOME ADJUSTMENTS HAVE BEEN MADE. THE DETAILS ARE FOR REFERENCE ONLY AND ANY CHANGES MUST BE APPROVED BY

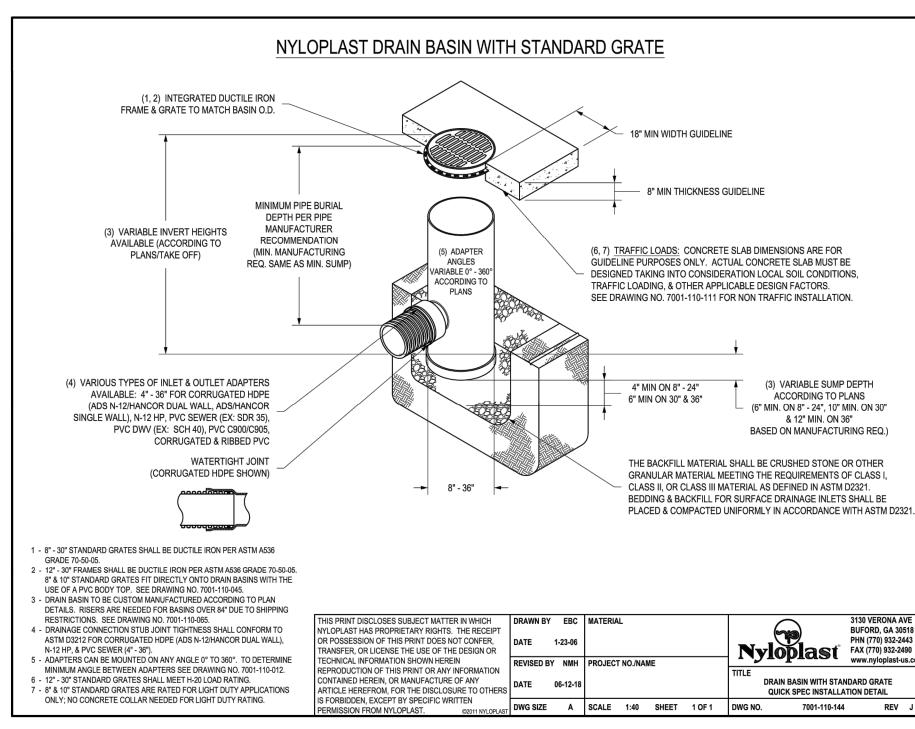
MULTIPLE USE REQUIRES SPECIAL MODIFICATIONS
TO CONDUCT ATA AND INTERNATIONAL EVENTS.
BUILD THE TRAP HOUSE SO THAT THE CONCRETE
PIER OR MACHINE MOUNTING PLATFORM, ABOVE
GROUND WALLS, AND ATTACHMENT HARDWARE CAN

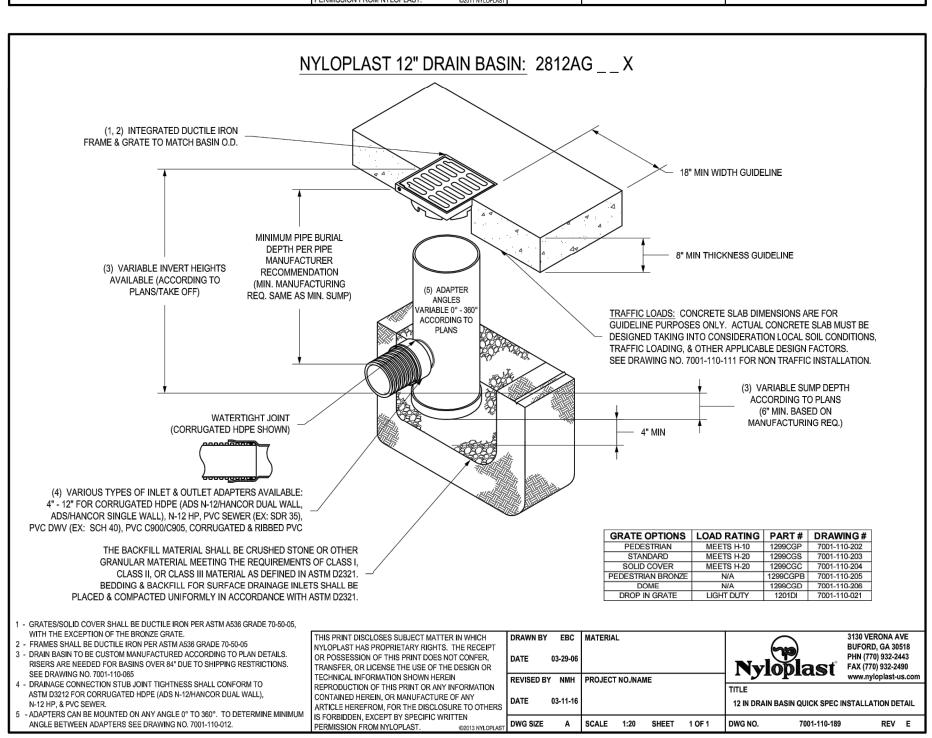
THE OWNER PRIOR TO CONSTRUCTION.

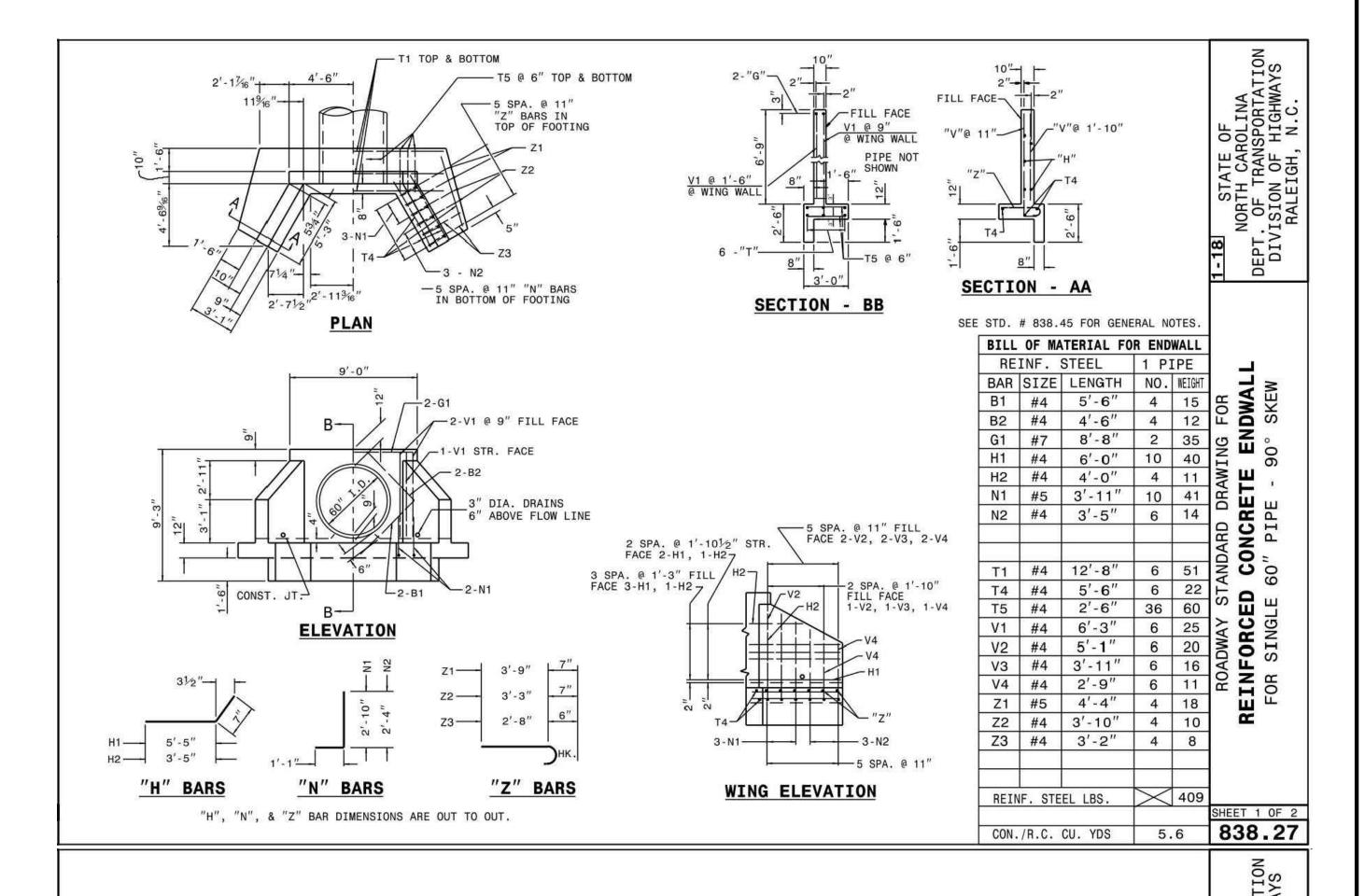
2. A COMBINATION TRAP HOUSE DESIGNED FOR

BE CONVERTED FOR EACH ACTIVITY.









GENERAL NOTES:

USE CLASS "A" CONCRETE.

CHAMFER ALL EXPOSED CORNERS 1".

ALL DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING STEEL ARE TO CENTERS OF BARS.

PLACE A STONE DRAIN CONSISTING OF ONE (1) CUBIC FOOT OF NUMBER 78M STONE CONTAINED IN A POROUS FABRIC AT EACH WEEP HOLE. PLACE SUBDRAIN FINE AGGREGATE BENEATH, AROUND AND OVER THE STONE DRAIN SO THE STONE DRAIN IS COMPLETELY COVERED BY A LAYER OF SUBDRAIN FINE AGGREGATE AT LEAST ONE (1) FOOT THICK. WHERE THERE IS MORE THAN ONE WEEP HOLE IN A WING WALL, PLACE A HORIZONTAL DRAIN OF SUBDRAIN FINE AGGREGATE AT LEAST ONE (1) FOOT SQUARE IN CROSS SECTION TO CONNECT ALL STONE DRAINS. PLACE A VERTICAL DRAIN OF SUBDRAIN FINE AGGREGATE AT LEAST ONE (1) FOOT SQUARE IN CROSS SECTION AT EACH WEEP HOLE TO AN ELEVATION OF TWO (2) FEET BELOW THE SURFACE OF THE EMBANKMENT.

REVISIONS ဂ် **ပ**ွှ NO. DATE

PLAN INFORMATION

The John R. McAdams Company, Inc. 2905 Meridian Parkway Durham, NC 27713

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DATE SHEET

STORM DRAINAGE

07.11.2019

FINAL DRAWING - FOR CONSTRUCTION

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SHEET 1 OF 1

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