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57-04T	11/17/11	15534

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SOLID WASTE SECTION  
ASHEVILLE REGIONAL OFFICE

November 3, 2011

Mr. Allen Gaither, PE  
Solid Waste Permitting Section  
Division of Waste Management  
North Carolina Department of Environment and Natural Resources  
2090 U.S. Highway 70  
Swannanoa, North Carolina 28778

RE: Trailer Staging Area Improvements  
Highlands MSW/C&D Transfer Station  
Macon County, North Carolina  
Permit # 57-04T

Dear Mr. Gaither:

On behalf of Macon County, North Carolina, McGill Associates would like to submit for your review and concurrence the plans for the proposed Trailer Staging Area Improvements to be constructed at the Highlands MSW/C&D Transfer Station. The Transfer Station is located at 1080 Rich Gap Road and operates under Permit Number 57-04T.

The present area used for staging transfer trailers consists of an approximate sixty-foot by sixty-foot (60'x60') gravel surfaced area located to the east of the existing transfer station. The proposed improvements will upgrade this area to include two (2) ten-foot (10') wide by fifty-foot (50') long reinforced concrete trailer staging area pads. The trailer staging area pads are designed such that all run-off from the paved area is collected in a trench drain collection system located on the lower end of the pad. Each trench drain will be constructed with two (2) outlet drain pipes. One pipe will drain to the existing storm drain system and the other pipe will drain to the existing leachate collection tank serving the transfer station. A conical shaped plug will be utilized to control the direction of flow from the trench drain. The existing water service line will be extended to provide a source of water for periodic wash down of concrete pads.

As noted above, the direction of flow from the trench drain collection system will be controlled through the placement of a conical shaped plug made of neoprene or a similar flexible type material. The plug will be placed in a pipe opening and tightened down to secure in place and prevent leakage. Which particular drain line is plugged will depend on the activity taking place on the particular concrete pad. When a transfer trailer containing a source of liquid contamination (i.e., loaded trailer, etc.) is parked on the pad, the storm drain line for that pad will be plugged. This will allow liquid collected in the trench drain to flow directly to the existing leachate collection tank. The existing leachate collection tank has sufficient volume to accept this flow and is equipped with a functioning high-level alarm system. Once a trailer has been removed and the pad washed down, the conical plug may be relocated to plug the leachate drain

line thereby allowing stormwater run-off to flow directly to the existing storm drain system. Each drain line will be permanently labeled with a cast or stamped-in-place letter to distinguish its particular function. A "D" will be used to define the drain line going to the storm drain system and the drain line going to the leachate collection tank will be labeled with an "L". The drain line system is designed such that the staging area pads are able to function independently of each other as far as one draining to the storm drain system while the other drains to the leachate collection tank. At no time will both drain lines be plugged in a particular trench drain collection trench. One of the drain lines must be open at all times. At least one (1) spare conical plug will be maintained on site to serve as a back up should one of the plugs in use become misplaced, damaged or fail to function as required.

The Facility's staff will be trained in the proper operation and procedures associated with the use and placement of the conical plugs. The staff will also increase the frequency of visually inspecting the level of leachate in the leachate collection tank. This will be done to ensure adequate volume is available to handle the leachate flow associated with the trailer staging area concrete pads. When required, the tank will be pumped down and the leachate hauled to and treated by an approved wastewater treatment facility.

To facilitate your review of this proposed project, we have enclosed an eleven-inch (11") by seventeen-inch (17") set of review drawings as well as a full size set in electronic format. We appreciate your consideration of Macon County's request for concurrence to proceed with the construction of the proposed Trailer Staging Area Improvements at the Highlands MSW/C&D Transfer Station. The County will notify your office when work begins and prior to placing the trailer staging area pads in operation. Thanks again for your consideration of our request and please do not hesitate to contact us if you have any further questions regarding this submittal or if you require additional information.

Sincerely,  
McGILL ASSOCIATES, P.A.



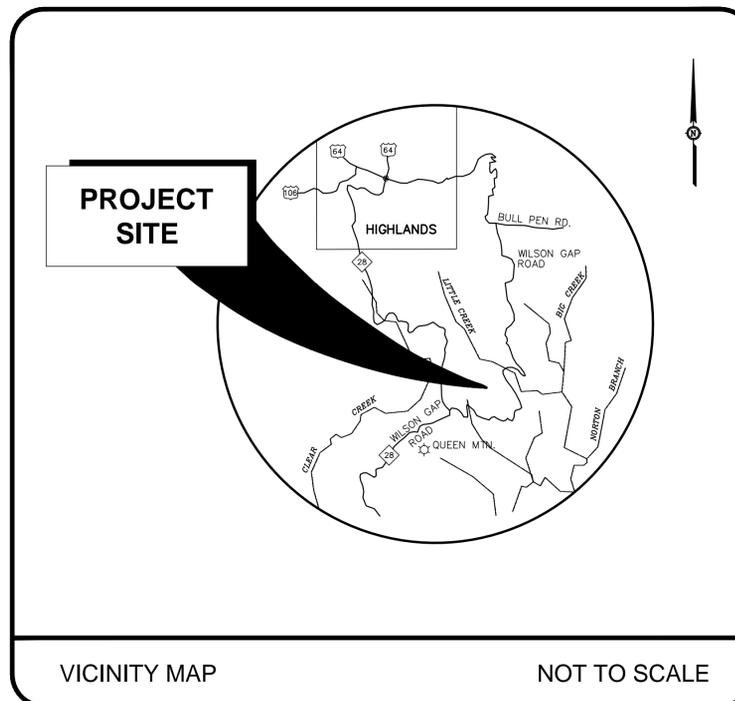
WILLIAM H. SPERRY, PE  
Project Manager

Enclosures

cc: Mr. Chris Stahl, Director, Macon County Solid Waste Department, w/enclosures  
Mr. Jeff Bishop, PE, McGill Associates, w/o enclosures  
Mr. Mark Cathey, PE, McGill Associates, w/o enclosures

# TRAILER STAGING AREA IMPROVEMENTS HIGHLANDS MSW / C&D TRANSFER STATION MACON COUNTY

## MACON COUNTY, NORTH CAROLINA



### SCHEDULE OF DRAWINGS

- G-001 . . . . . COVER SHEET
- G-002 . . . . . GENERAL NOTES AND LEGENDS
- C-101 . . . . . EXISTING CONDITIONS
- C-102 . . . . . SITE IMPROVEMENTS
- C-501 . . . . . MISCELLANEOUS DETAILS
- C-502 . . . . . MISCELLANEOUS DETAILS



**GENERAL NOTES**

- ALL CONSTRUCTION OUTSIDE RIGHTS-OF-WAY SHALL TAKE PLACE WITHIN THE PERMANENT AND TEMPORARY ACCESS EASEMENTS SHOWN.
- CONTRACTOR SHALL REPAIR ALL DISTURBED AREAS TO EQUAL OR BETTER CONDITION THAN THE ORIGINAL SITE, OR AS NOTED.
- LOCATIONS OF EXISTING UTILITIES AS SHOWN ARE APPROXIMATE ONLY. EXACT LOCATIONS ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR. AT LEAST THREE DAYS PRIOR TO CONSTRUCTION, CONTRACTOR MUST NOTIFY EXISTING UTILITY OWNERS. CALL BEFORE YOU DIG. NORTH CAROLINA ONE CALL (1-800-632-4949).
- ALL WORK NEAR AND AROUND WATERWAYS MUST CONFORM TO THE RULES OF THE STATE OF NORTH CAROLINA.
- CONTRACTOR MUST PROVIDE EROSION CONTROL DEVICES TO CONTROL RUNOFF FROM THE CONSTRUCTION SITE. CONTRACTOR WILL BE RESPONSIBLE FOR ANY FINES THAT MAY BE LEVIED DUE TO POLLUTION CREATED DURING CONSTRUCTION.
- CONTRACTOR SHALL FOLLOW ALL FEDERAL, STATE AND LOCAL HEALTH AND SAFETY REGULATIONS PERTAINING TO CONSTRUCTION OPERATIONS.
- WATER LINES SHALL HAVE 3'-0" MINIMUM COVER UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
- WATER AND SEWER LINES SHALL HAVE A MINIMUM 10' HORIZONTAL SEPARATION OR A MINIMUM 18" VERTICAL SEPARATION WITH THE WATER OVER SEWER, OR BOTH WATER AND SEWER LINES SHALL BE DUCTILE IRON PIPE 10' EITHER SIDE OF THE CROSSING.
- WATER AND STORM SEWER LINES SHALL HAVE A MINIMUM 12" VERTICAL SEPARATION.
- SEE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- LEGAL DESCRIPTIONS FOR PROPOSED EASEMENTS BY OTHERS.
- CONTRACTOR SHALL NOTIFY THE PROPER LOCAL AUTHORITIES 24 HOURS PRIOR TO ANY ROAD BEING CLOSED FOR CONSTRUCTION, INCLUDING BUT NOT LIMITED TO LOCAL NEWSPAPER, RADIO STATION, FIRE DEPARTMENT, COUNTY SHERIFF'S DEPARTMENT, AMBULANCE, AND COUNTY EMERGENCY AGENCY. ALL TRAFFIC CONTROL SHALL CONFORM TO THE REQUIREMENTS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND THE TOWN OF FLETCHER PUBLIC WORKS DEPARTMENT.
- CONTRACTOR SHALL NOTIFY THE ENGINEER AFTER EXISTING BURIED UTILITIES HAVE BEEN LOCATED AND 24 HOURS PRIOR TO CONSTRUCTION.
- ALL FENCE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED WITH LIKE MATERIALS IN A WORKMANLIKE MANNER AND IN ACCORDANCE WITH STANDARD FENCE CONSTRUCTION PRACTICES AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL FIELD LOCATE ALL BURIED TELEPHONE LINE IN CONFLICT WITH CONSTRUCTION. WHERE NECESSARY, EXISTING BURIED TELEPHONE LINE SHALL BE TEMPORARILY MOVED DURING CONSTRUCTION AND RE-LAID AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING ROADS DURING CONSTRUCTION AND SHALL REPAIR ROADS PER REQUIREMENTS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND THE TOWN OF FLETCHER PUBLIC WORKS DEPARTMENT. NO OPEN CUTS OF EXISTING ROADS SHALL BE ALLOWED EXCEPT WHERE INDICATED ON THE DRAWINGS OR WHERE SPECIFIC PERMISSION IS GRANTED BY THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND THE TOWN OF FLETCHER PUBLIC WORKS DEPARTMENT. SAND OR A SIMILAR MATERIAL APPROVED BY THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION SHALL BE PLACED ON THE ROAD TO AID IN THE CLEAN UP AFTER CONSTRUCTION. A MINIMUM OF 2" OF SAND SHALL BE PLACED ON THE ROAD PRIOR TO STOCKPILING SPOIL MATERIAL ON THE ROAD SURFACE TO FACILITATE CLEANUP.

**GENERAL CONSTRUCTION NOTES**

REVISION DATE - JUNE 16, 2009

- FINISH GRADE TOLERANCES SHALL BE AS NOTED IN THE SPECIFICATIONS. THE ENGINEER MAY MAKE GRADE CHANGES AS REQUIRED IN THE FIELD WITHOUT EFFECTING THE BID PRICE.
- UNLESS OTHERWISE STATED, ALL FILL AREAS SHALL BE CONSTRUCTED IN LAYERS OF 8" MAXIMUM THICKNESS, WITH WATER ADDED OR SOIL CONDITIONED TO THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE ENGINEER AND COMPACTED WITH A SHEEP'S FOOT ROLLER TO A COMPACTION EQUAL TO OR GREATER THAN 95% (100% IN THE TOP 2' OF THE SUB GRADE BELOW ROADWAYS AND PARKING LOTS) OF THE DENSITY OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH THE STANDARD PROCTOR METHOD OF MOISTURE-DENSITY RELATIONSHIP TEST, ASTM D698 OR AASHTO-99 UNLESS SPECIFIED IN OTHER SPECIFICATIONS.
- ENTIRE AREA TO BE GRADED SHALL BE CLEARED AND GRUBBED. NO FILL SHALL BE PLACED ON ANY AREA NOT CLEARED AND GRUBBED.
- ALL SOIL EROSION CONTROL MEASURES REQUIRED BY THE GRADING PLAN SHALL BE PERFORMED PRIOR TO GRADING, CLEARING OR GRUBBING. ALL EROSION CONTROL DEVICES SUCH AS SILT FENCES, ETC., SHALL BE MAINTAINED IN WORKABLE CONDITION FOR THE LIFE OF THE PROJECT AND SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT ONLY ON THE ENGINEER'S APPROVAL. PAYMENT SHALL BE CONSIDERED INCIDENTAL TO LUMP SUM BID PRICE. IF DURING THE LIFE OF THE PROJECT, A STORM CAUSES SOIL EROSION WHICH CHANGES FINISH GRADES OR CREATES "GULLIES" AND "WASHED AREAS", THESE SHALL BE REPAIRED AT NO EXTRA COST, AND ALL SILT WASHED OFF OF THE PROJECT SITE ON ADJACENT PROPERTY SHALL BE REMOVED AS DIRECTED BY THE ENGINEER AT NO EXTRA COST. THE CONTRACTOR SHALL ADHERE TO ANY APPROVED EROSION CONTROL PLANS WHETHER INDICATED IN THE CONSTRUCTION PLANS OR UNDER SEPARATE COVER.
- DISPOSABLE MATERIAL
  - CLEARING AND GRUBBING WASTES SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF BY THE CONTRACTOR AT HIS EXPENSE, UNLESS SPECIFIED OTHERWISE.
  - SOLID WASTES TO BE REMOVED, SUCH AS SIDEWALKS, CURBS, PAVEMENT, ETC., MAY BE PLACED IN SPECIFIC DISPOSAL AREAS ONLY WHEN DELINEATED ON THE PLANS OR OTHERWISE REMOVED FROM THE SITE AS REQUIRED BY THE SPECIFICATIONS. THIS MATERIAL SHALL HAVE A MINIMUM COVER OF 2'. THE CONTRACTOR SHALL MAINTAIN SPECIFIED COMPACTION REQUIREMENTS IN THESE AREAS. WHEN DISPOSAL SITES ARE NOT PROVIDED, THE CONTRACTOR SHALL REMOVE THIS WASTE FROM THE SITE AND PROPERLY DISPOSE OF IT AT HIS EXPENSE.
  - ABANDONED UTILITIES SUCH AS CULVERTS, WATER PIPE, HYDRANTS, CASTINGS, PIPE APPURTENANCES, UTILITY POLES, ETC., SHALL BE THE PROPERTY OF THE SPECIFIC UTILITY AGENCY, OR COMPANY HAVING JURISDICTION BEFORE THE CONTRACTOR CAN REMOVE, DESTROY, SALVAGE, REUSE, SELL OR STORE FOR HIS OWN USE ANY ABANDONED UTILITY, HE MUST PRESENT TO THE OWNER WRITTEN PERMISSION FROM THE UTILITY INVOLVED.
- IN THE EVENT EXCESSIVE GROUNDWATER OR SPRINGS ARE ENCOUNTERED WITHIN THE LIMITS OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL NECESSARY UNDER DRAINS AND STONE AS DIRECTED BY THE ENGINEER. ALL WORK SHALL BE PAID BASED UPON UNIT BID PRICES, UNLESS SPECIFIED OTHERWISE.
- THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ADJUSTMENT OF ALL UTILITY SURFACE ACCESSES WHETHER HE PERFORMS THE WORK OR A UTILITY COMPANY PERFORMS THE WORK.
- THE CONTRACTOR SHALL CONTROL ALL "DUST" BY PERIODIC WATERING AND SHALL PROVIDE ACCESS AT ALL TIMES FOR PROPERTY OWNERS WITHIN THE PROJECT AREA AND FOR EMERGENCY VEHICLES. ALL OPEN DITCHES AND HAZARDOUS AREAS SHALL BE CLEARLY MARKED IN ACCORDANCE WITH THE SPECIFICATIONS.
- ALL AREAS WHERE THERE IS EXPOSED DIRT SHALL BE SEEDED, FERTILIZED AND MULCHED ACCORDING TO THE SPECIFICATIONS. THE FINISHED SURFACE SHALL BE TO GRADE AND SMOOTH, FREE OF ALL ROCKS LARGER THAN 3". EQUIPMENT TRACKS, DIRT CLOUDS, BUMPS, RIDGES AND COUGES PRIOR TO SEEDING; THE SURFACE SHALL BE LOOSENEED TO A DEPTH OF 4"-6" TO ACCEPT SEED. THE CONTRACTOR SHALL NOT PROCEED WITH SEEDING OPERATIONS WITHOUT FIRST OBTAINING THE ENGINEER'S APPROVAL OF THE GRADED SURFACE. ALL SEEDING SHALL BE PERFORMED BY A MECHANICAL "HYDRO-SEEDER". HAND SEEDING SHALL BE AUTHORIZED ON AN AREA BY AREA APPROVAL BY THE ENGINEER. DISTURBED AREAS SHOULD THEN BE MATTED WITH SHORT-TERM PHOTODEGRADABLE EROSION CONTROL MATTING AS SHOWN ON THE PLANS OR IF REQUIRED TO ESTABLISH VEGETATION.
- WHERE SPECIFIED, STORM DRAIN PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP) CONFORMING TO AASHTO M-170, AS CONTAINED IN NCDOT STANDARD SPECIFICATION 1032-9 FOR WALL "B" TYPE.
 

WHERE SPECIFIED, STORM DRAIN PIPE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE). SMOOTH WALL INTERIOR, WITH WATER TIGHT JOINTS, BACKFILLED WITH # 57 WASHED STONE UP TO MIN. 6" OVER THE TOP OF THE PIPE. HDPE PIPE SHALL BE "HANGOR BLUE SEAL" OR APPROVED EQUAL.

WHERE SPECIFIED, CORRUGATED METAL STORM DRAIN PIPE (CMP) SHALL BE ALUMINIZED TYPE 2 CORRUGATED STEEL MANUFACTURED IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO M-36. THE PIPE SHALL BE MANUFACTURED FROM ALUMINIZED STEEL TYPE 2 MATERIAL CONFORMING TO THE REQUIREMENTS OF AASHTO M-274. ALL PIPE SHALL BE FURNISHED WITH ROLLED ENDS AND SHALL BE JOINED WITH HUGGER BANDS. THE USE OF DIMPLE BANDS WILL NOT BE ALLOWED. PIPE THROUGH 24" DIAMETER SHALL BE 16 GAUGE, PIPE THROUGH 42" DIAMETER SHALL BE 14 GAUGE, PIPE THROUGH 54" DIAMETER SHALL BE 12 GAUGE.
- CONTRACTOR SHALL VERIFY ALL ELEVATIONS BEFORE INSTALLATION OF FACILITIES.
- CATCH BASINS CAST-IN-PLACE SHALL CONFORM TO THE REQUIREMENTS OF NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES (LATEST EDITION) ARTICLES 840-1 THROUGH 840-3. CURB INLET CATCH BASIN SHALL CONFORM TO NCDOT STANDARD DETAILS 840.02 THROUGH 840.04. DROP INLETS SHALL CONFORM TO STANDARD DETAIL 840.14. JUNCTION BOXES SHALL CONFORM TO STANDARD DETAIL 840.31.
- CURB INLET FRAME, GRATE AND HOOD SHALL BE NEENAH R-3233D, PRODUCTS BY DEWEY BROS., U.S. FOUNDRY OR EQUAL. DROP INLET FRAME AND GRATE SHALL BE NEENAH R-3339A OR EQUAL. FIELD INLET COVER SHALL CONFORM TO NCDOT STANDARD DETAIL 840.04, OPENING FACING UPSTREAM.
- CONCRETE AND MASONRY FOR SITE WORK ELEMENTS SHALL MEET THE REQUIREMENTS OF APPROPRIATE SECTION OF NCDOT STANDARD SPECIFICATIONS FOR ROAD AND STRUCTURES (LATEST EDITION). CONCRETE SHALL BE CLASS A OR B, 4000 PSI MINIMUM, MEETING THE REQUIREMENTS OF SECTION 1000, CONSTRUCTED IN ACCORDANCE WITH SECTION 825. MASONRY SHALL MEET THE REQUIREMENTS OF SECTION 1040, CONSTRUCTED IN ACCORDANCE WITH SECTION 830 AND/OR 834.
- TOPS OF PROPOSED FRAMES AND GRATES SHALL BE FLUSH WITH FINISHED GRADE.
- PRE-CAST CONCRETE BOXES ARE ACCEPTABLE ALTERNATIVES FOR PROPOSED CATCH BASINS.

**NORTH CAROLINA LAND QUALITY SECTION**

**EROSION CONTROL NOTES**

REVISION DATE - OCTOBER, 2011

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 AVAILABLE 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.
 

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 AREA WITHIN 15 DAYS AFTER FINISHED GRADE ARE ESTABLISHED. 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 RESCUE (POA PRATENSIS)	100 LBS
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 GRASS (SECAE CEREALE)	120 LBS
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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
WEeping LOVEGRASS (ERAGROSTIS CURVALA)	2 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 USE. 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 (SORGHASTRUM NUTANS), LITTLE BLUESTEM (SCHIZACHYRIUM SCOPARIUM), SWITCHGRASS (Panicum VIRGATUM).	15 LBS/ACRE EACH
AUGUST THRU MAY - GREENRYE (SECALE CEREALE)	25 LBS/ACRE EACH
MAY 1 THRU AUGUST - MILLET (PENNISETUM GLAUCUM)	25 LBS/ACRE EACH

TREES - SILKY DOGWOOD (CORNUS AMONUM), SILKY WILLOW (SALIX SERICEA), HAZEL ALDER (ALMUS 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.

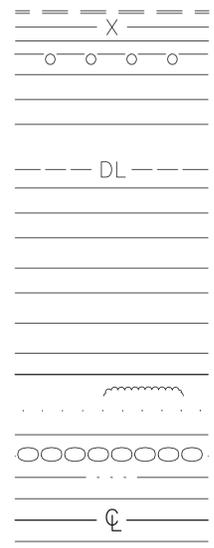
NPDES PERMITS - NOTE -FOR PROJECTS REQUIRING NPDES PERMITS, THE FOLLOWING STABILIZATION SCHEDULE SHALL APPLY:

SITE AREA DESCRIPTION	STABILIZATION TIMEFRAME	STABILIZATION TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) 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 HOW ZONES)

- MAINTAIN SOIL EROSION CONTROL MEASURES UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
- 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.

**EXISTING CONDITIONS LEGEND**

- TELEPHONE PEDESTAL
- ELECTRIC PEDESTAL
- CABLE TV PEDESTAL
- SIGN
- UNDERGROUND CABLE TV SIGN
- UNDERGROUND FIBER OPTIC CABLE SIGN
- UNDERGROUND TELEPHONE CABLE SIGN
- UNDERGROUND GAS LINE SIGN
- UNDERGROUND ELECTRIC LINE SIGN
- LIGHT POLE
- UTILITY POLE
- GUY WIRE ANCHOR
- MANHOLE
- SANITARY SEWER MANHOLE
- STORM DRAIN MANHOLE
- COMMUNICATION MANHOLE
- ELECTRICAL MANHOLE
- JUNCTION BOX
- SPIGOT/YARD HYDRANT
- SEWER CLEAN-OUT
- ELECTRIC SERVICE STUB-OUT
- GAS SERVICE STUB-OUT
- CATCH BASIN
- CURB INLET
- WATER METER
- FIRE HYDRANT
- WATER VALVE
- BLOW OFF VALVE
- GAS METER
- GAS VALVE
- IRRIGATION CONTROL VALVE
- POST INDICATOR VALVE
- ELECTRIC JUNCTION BOX OR OUTLET



- CULVERT
- FENCE
- SILT FENCE
- GUARD RAIL
- APPROXIMATE LOCATION OF EXISTING SEWER LINES
- APPROXIMATE LOCATION OF EXISTING WATER LINES
- APPROXIMATE LOCATION OF EXISTING GAS LINES
- TOP & TOE LINES
- DITCH LINES
- APPROXIMATE LOCATION OF UNDERGROUND CABLE TV LINE
- APPROXIMATE LOCATION OF OVERHEAD CABLE TV LINE
- APPROXIMATE LOCATION OF UNDERGROUND FIBER OPTIC CABLE LINE
- APPROXIMATE LOCATION OF UNDERGROUND ELECTRIC LINE
- APPROXIMATE LOCATION OF OVERHEAD ELECTRIC LINE
- APPROXIMATE LOCATION OF UNDERGROUND TELEPHONE LINES
- APPROXIMATE LOCATION OF OVERHEAD TELEPHONE LINES
- RIGHT-OF-WAY
- TREELINE
- SHRUBLINE
- PROPERTY LINE NOT SURVEYED
- ROCKLINE
- STREAM LINE
- CENTERLINE ROADS
- CENTERLINE OTHER THAN ROADS
- SWAMPLINE/WETLANDS
- IPS
- IRON PIN SET
- REBAR FOUND
- OTIPF
- OPEN TOP IRON PIN FOUND
- CTIPF
- CRIMPED TOP IRON PIN FOUND
- CMU
- CONCRETE MASONRY UNIT
- R/W
- RIGHT OF WAY
- Q
- CENTERLINE
- C
- CURVE (SEE CURVE TABLE)
- POB
- POINT OF BEGINNING
- CP
- CALCULATED POINT
- PB
- PLAT BOOK
- DB
- DEED BOOK
- L
- LINE (SEE LINE TABLE)
- BLDG
- BUILDING
- QIP
- CAST IRON PIPE
- CMP
- CORRUGATED METAL PIPE
- CONC
- CONCRETE
- CMU
- CONCRETE MASONRY UNIT
- CPP
- CORRUGATED PLASTIC PIPE
- DIP
- DUCTILE IRON PIPE
- E&T
- ELECTRIC & TELEPHONE
- FOC
- FIBER OPTIC CABLE
- GP
- GALVANIZED IRON PIPE
- O/H
- OVERHEAD
- RCP
- REINFORCED CONCRETE PIPE
- U/G
- UNDERGROUND
- VCP
- VITRIFIED CLAY PIPE
- PVC
- POLYVINYL CHLORIDE PIPE
- FTE
- FINISHED FLOOR ELEVATION
- PAGE
- REFERENCE
- DOT
- DEPARTMENT OF TRANSPORTATION
- NGS
- NATIONAL GEODETIC SURVEY
- NCSF
- NORTH CAROLINA STATE PLANE



TRAILER STAGING AREA IMPROVEMENTS  
HIGHLANDS MSW / C&D TRANSFER STATION  
**MACON COUNTY**  
MACON COUNTY, NORTH CAROLINA

JOB NO.: 11.00710  
DATE: NOVEMBER, 2011  
DESIGNED BY: WHS  
CADD BY: KS  
DESIGN REVIEW: \_\_\_\_\_  
CONST. REVIEW: \_\_\_\_\_  
FILE NAME: 11.00710-Trailer Parking Area Improvements.dwg

GENERAL NOTES AND LEGENDS

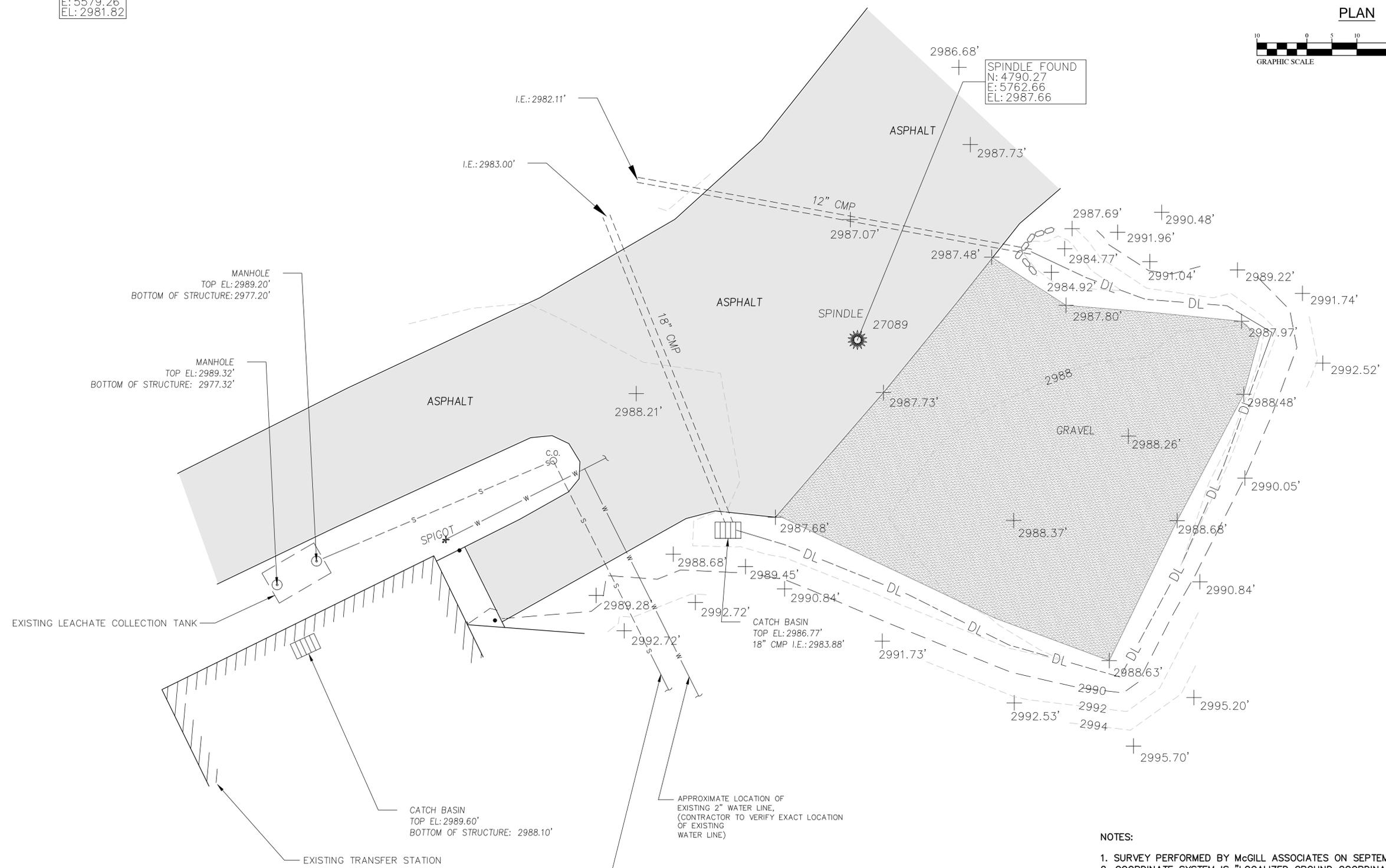
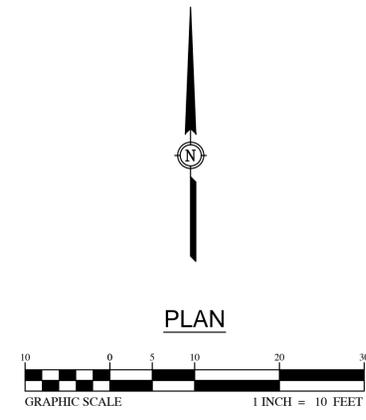
SHEET  
**G-002**

NO.	DATE	BY	REVISION DESCRIPTION



1877  
Q IPS

IPS  
N: 4878.81  
E: 5579.26  
EL: 2981.82



SPINDLE FOUND  
N: 4790.27  
E: 5762.66  
EL: 2987.66

MANHOLE  
TOP EL: 2989.20'  
BOTTOM OF STRUCTURE: 2977.20'

MANHOLE  
TOP EL: 2989.32'  
BOTTOM OF STRUCTURE: 2977.32'

CATCH BASIN  
TOP EL: 2986.77'  
18" CMP I.E.: 2983.88'

CATCH BASIN  
TOP EL: 2989.60'  
BOTTOM OF STRUCTURE: 2988.10'

APPROXIMATE LOCATION OF EXISTING 2" WATER LINE, (CONTRACTOR TO VERIFY EXACT LOCATION OF EXISTING WATER LINE)

APPROXIMATE LOCATION OF EXISTING 6" D.I.P. DRAIN LINE, (CONTRACTOR TO VERIFY EXACT LOCATION OF EXISTING 6" D.I.P. DRAIN LINE)

- NOTES:
1. SURVEY PERFORMED BY MCGILL ASSOCIATES ON SEPTEMBER 15, 2011.
  2. COORDINATE SYSTEM IS "LOCALIZED GROUND COORDINATE SYSTEM".

NO.	DATE	BY	REVISION DESCRIPTION



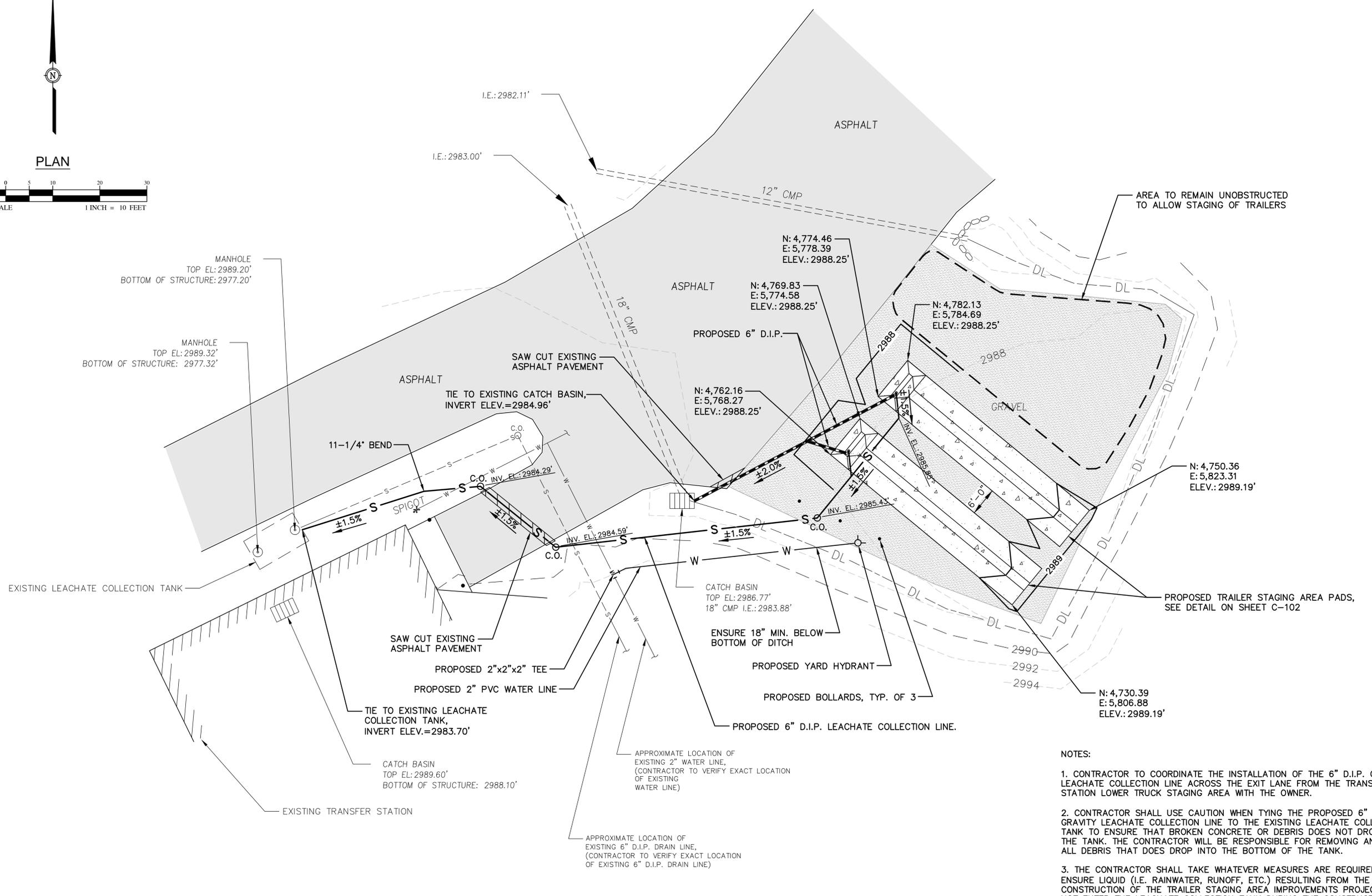
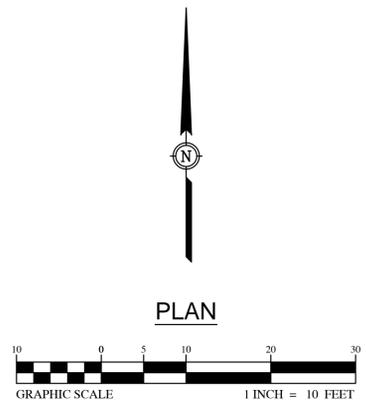
Q:201111.00710\Design\Solid Waste\Drawings\11.00710 - Trailer Parking Area Improvements.dwg 11/10/2011 3:51 PM KELLY



JOB NO.: 11.00710  
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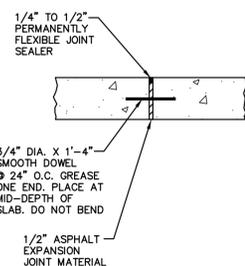
- NOTES:
1. CONTRACTOR TO COORDINATE THE INSTALLATION OF THE 6" D.I.P. GRAVITY LEACHATE COLLECTION LINE ACROSS THE EXIT LANE FROM THE TRANSFER STATION LOWER TRUCK STAGING AREA WITH THE OWNER.
  2. CONTRACTOR SHALL USE CAUTION WHEN TYING THE PROPOSED 6" D.I.P. GRAVITY LEACHATE COLLECTION LINE TO THE EXISTING LEACHATE COLLECTION TANK TO ENSURE THAT BROKEN CONCRETE OR DEBRIS DOES NOT DROP INTO THE TANK. THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING ANY AND ALL DEBRIS THAT DOES DROP INTO THE BOTTOM OF THE TANK.
  3. THE CONTRACTOR SHALL TAKE WHATEVER MEASURES ARE REQUIRED TO ENSURE LIQUID (I.E. RAINWATER, RUNOFF, ETC.) RESULTING FROM THE CONSTRUCTION OF THE TRAILER STAGING AREA IMPROVEMENTS PROJECT, DOES NOT ENTER THE LEACHATE COLLECTION TANK DURING THE CONSTRUCTION PROCESS. SHOULD THE CONTRACTOR ALLOW LIQUID TO ENTER THE LEACHATE TANK THEN THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH REMOVING ALL LIQUID/LEACHATE FROM THE TANK AT THE END OF THE CONSTRUCTION PERIOD AND PROPERLY DISPOSING OF THE LIQUID/LEACHATE. THE CONTRACTOR WILL BE REQUIRED TO USE AN OWNER APPROVED HAULER AND WILL DISPOSE OF THE LIQUID/LEACHATE AT THE OWNER APPROVED DISPOSAL FACILITY.

NO.	DATE	BY	REVISION DESCRIPTION

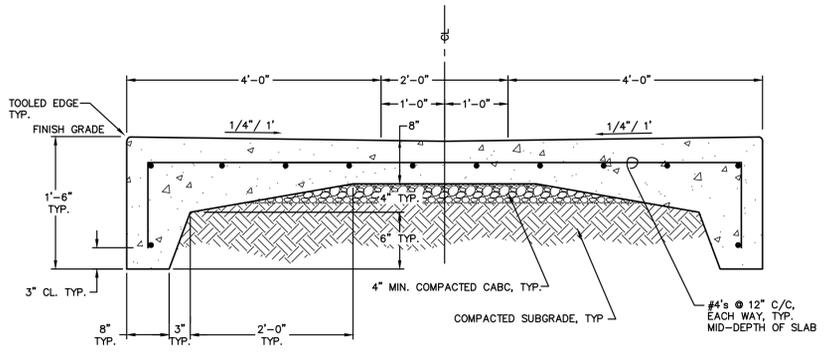
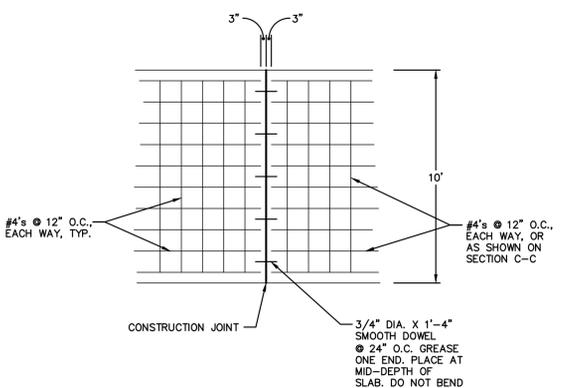
**LEGEND**  
 — 1960 — PROPOSED CONTOUR  
 - - - 2994 - - - EXISTING CONTOUR



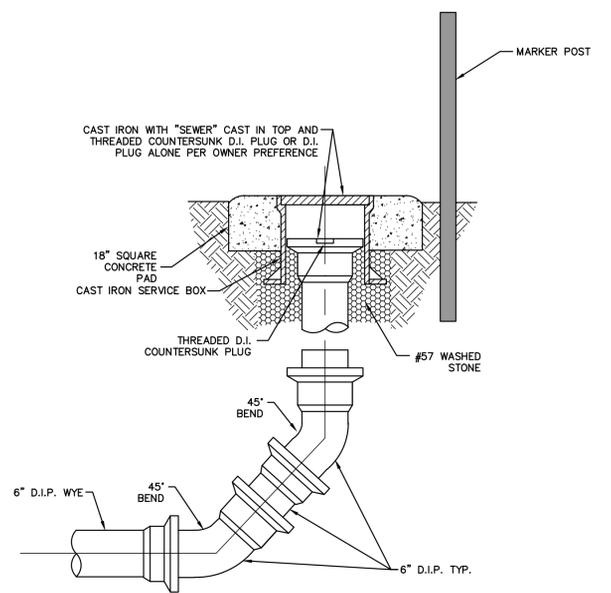
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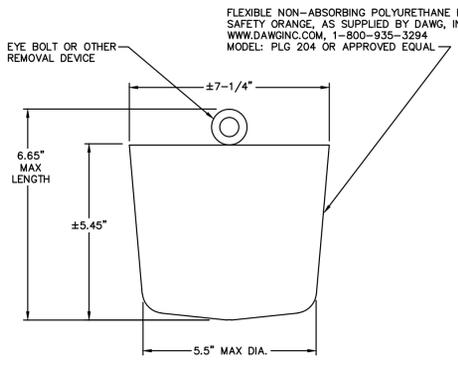
**CONSTRUCTION JOINT DETAIL**  
NOT TO SCALE



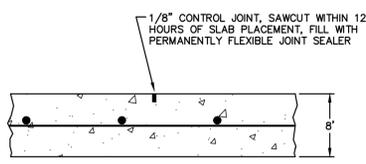
**SECTION A-A**  
NOT TO SCALE



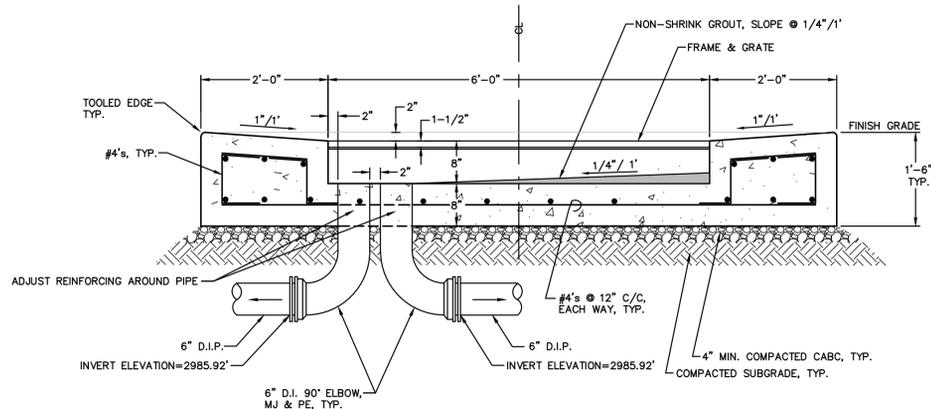
**CLEANOUT DETAIL**  
NTS



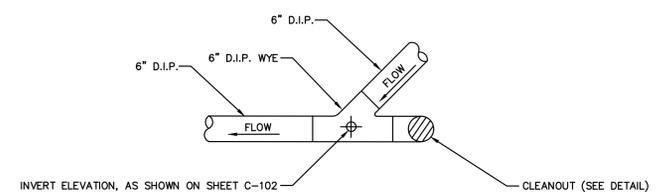
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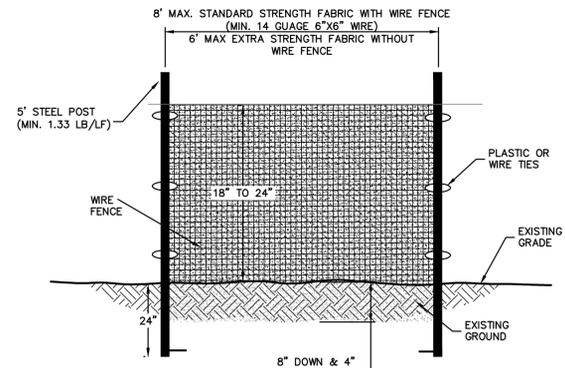
**CONTROL JOINT DETAIL**  
NOT TO SCALE



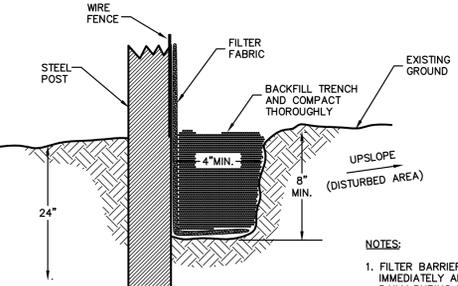
**SECTION B-B**  
NOT TO SCALE



**CLEANOUT PLAN**  
NTS

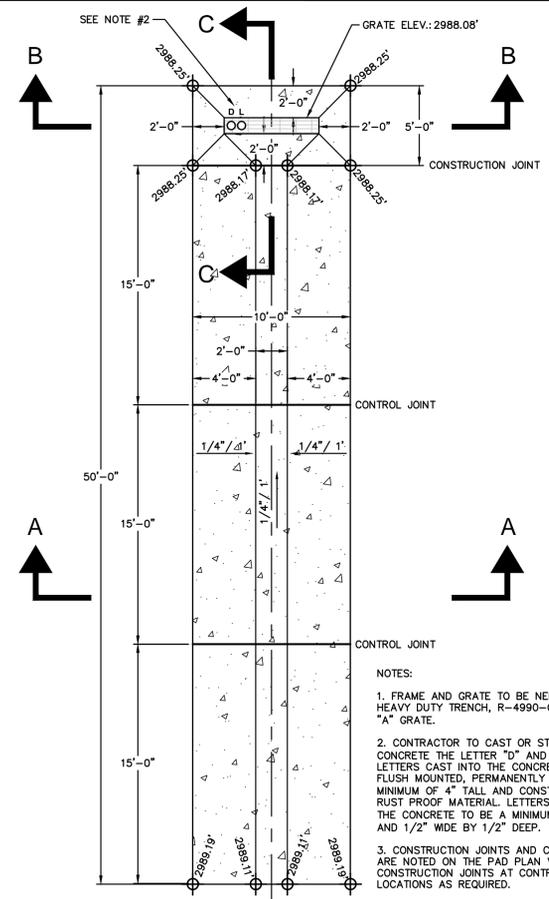


**SECTION VIEW**

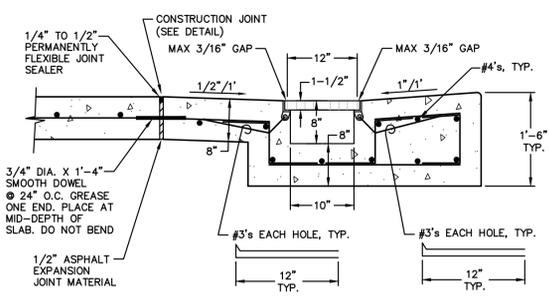


SLOPE	SLOPE LENGTH(FT)	MAXIMUM AREA(SQFT)
<2%	100	10,000
2 TO 5%	75	7,500
5 TO 10%	50	5,000
10 TO 20%	25	2,500
>20%	15	1,500

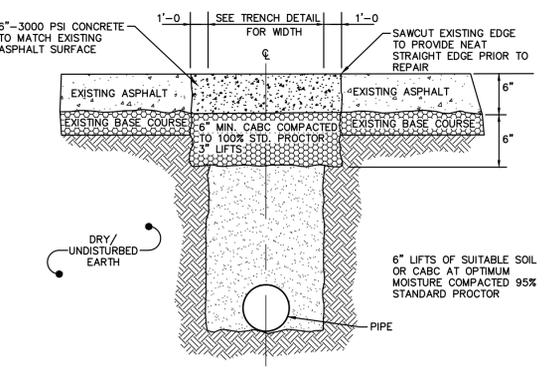
**SEDIMENTATION/SILT FENCE**  
REVISION DATE - NOVEMBER 3, 2008



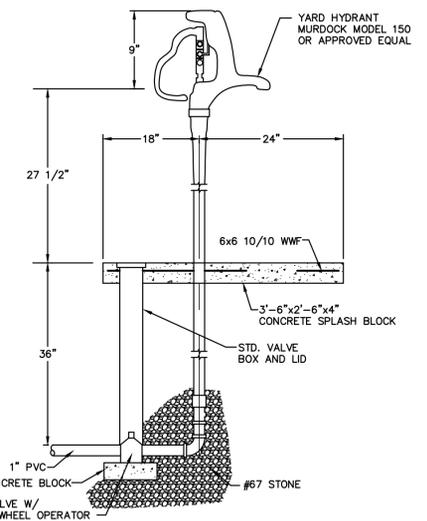
**PAD PLAN VIEW**  
NOT TO SCALE



**SECTION C-C**  
NOT TO SCALE



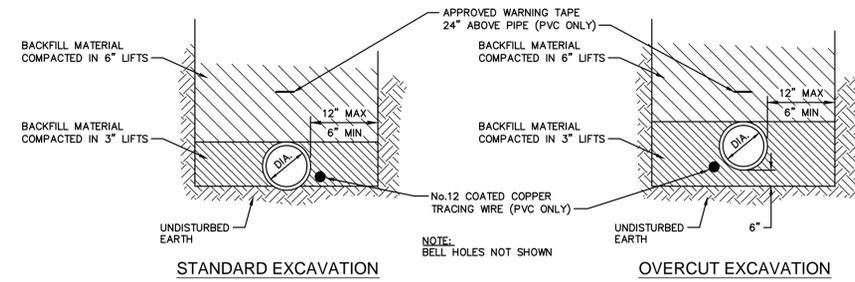
**DRIVE REPAIR - CONCRETE**  
NOT TO SCALE



**YARD HYDRANT**  
REVISION DATE - NOVEMBER 3, 2008

NO.	DATE	BY	REVISION DESCRIPTION

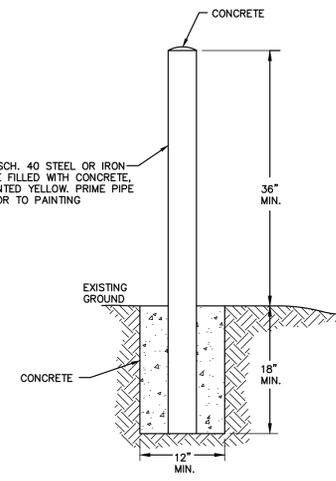
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**NOTE:**  
 1. CONSTRUCTION OF TRENCHES SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL SAFETY AND HEALTH REGULATIONS WHICH HAVE JURISDICTION AT THE PROJECT SITE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE APPLICABLE REGULATIONS AND FOLLOW THEM ACCORDINGLY.  
 2. PAYMENT FOR ROCK EXCAVATION AND SELECT BACKFILL IN TRENCH SHALL BE FOR ACTUAL QUANTITIES AND SHALL NOT EXCEED THE WIDTH OF TRENCH SHOWN ON THIS DETAIL.

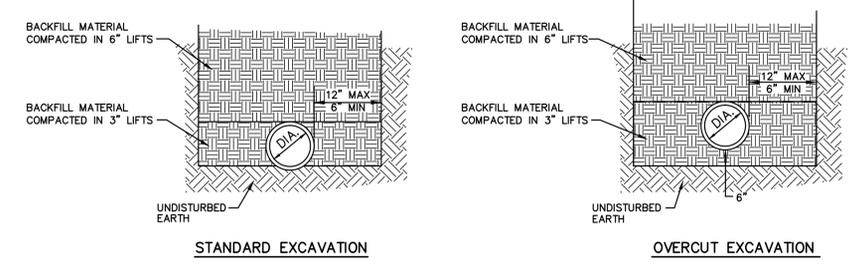
**TYPICAL TRENCHING DETAILS  
 WATER LINES**

REVISION DATE - NOVEMBER 3, 2008

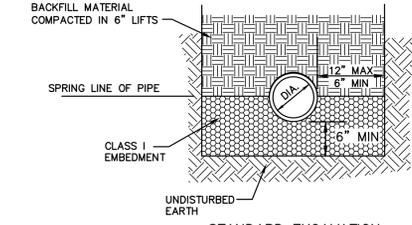


**BOLLARD DETAIL**

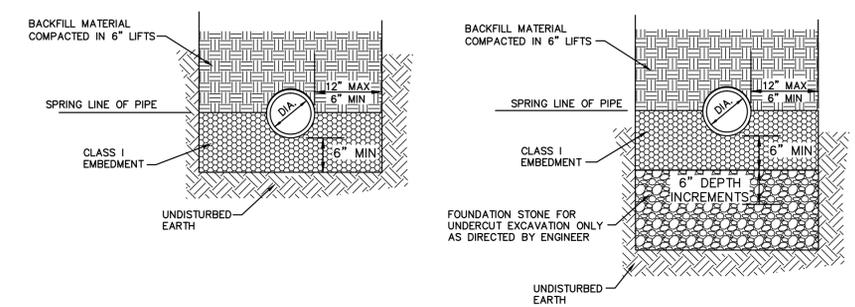
REVISION DATE - NOVEMBER 3, 2008



**DUCTILE IRON GRAVITY SEWER**



**STANDARD EXCAVATION  
 PVC GRAVITY SEWER**



**STANDARD EXCAVATION  
 IN WET CONDITIONS**

**PIPE IN WET OR UNSTABLE CONDITIONS  
 ALL PIPE TYPES  
 (AS DIRECTED BY ENGINEER)**

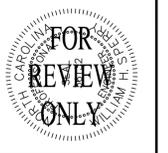
- NOTES:**
- CONSTRUCTION OF TRENCHES SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL SAFETY AND HEALTH REGULATIONS WHICH HAVE JURISDICTION AT THE PROJECT SITE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE APPLICABLE REGULATIONS AND FOLLOW THEM ACCORDINGLY.
  - FOR UNIT PRICE CONTRACTS ONLY, PAYMENT FOR ROCK EXCAVATION AND SELECT BACKFILL IN TRENCH SHALL BE FOR ACTUAL QUANTITIES AND SHALL NOT EXCEED THE WIDTH OF TRENCH SHOWN ON THIS DETAIL.
  - FOR UNIT PRICE CONTRACTS ONLY, PAYMENT FOR FOUNDATION STONE UNDERCUT SHALL BE FOR THE LENGTH OF THE TRENCH REQUIRING UNDERCUT X 6" DEPTH INCREMENTS TO THE DEPTH REQUIRED.
  - CLASS I EMBEDMENT SHALL BE NCDOT STANDARD # 67 STONE OR APPROVED EQUAL. FOUNDATION STONE SHALL BE NCDOT STANDARD # 57 OR # 67 STONE OR APPROVED EQUAL.

**TYPICAL GRAVITY SEWER TRENCHING DETAILS**

REVISION DATE - NOVEMBER 3, 2008

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NO.	DATE	BY	REVISION DESCRIPTION



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