

STATE OF GEORGIA: ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE. DATE OF DECLASSIFICATION: 01/01/2020. AUTHORITY: 5 U.S.C. 552, 44 CFR 101.11.

CONSTRUCTION PLANS

FOR

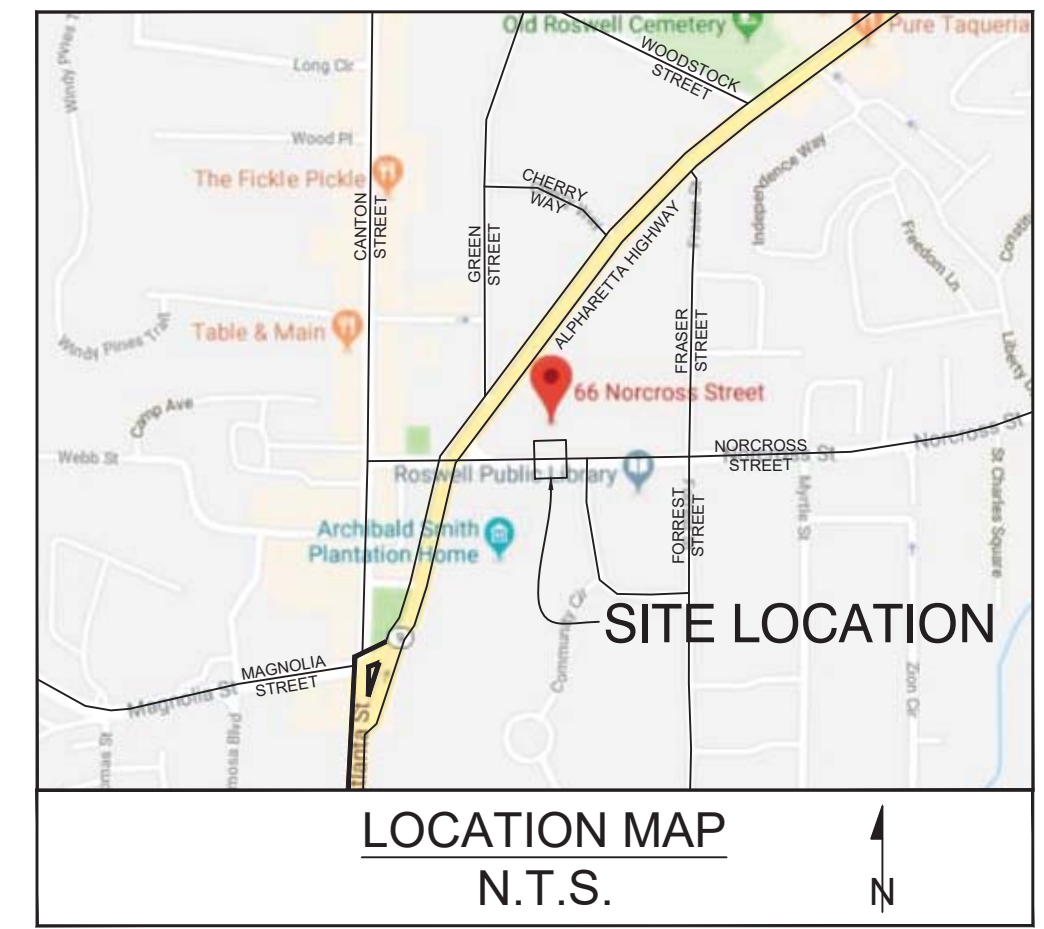
NORCROSS STREET CULVERT REPLACEMENT

CITY OF ROSWELL



66 NORCROSS STREET
ROSWELL, GA 30075
LAND LOTS 412 & 413, 1ST DISTRICT, 2ND SECTION

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SITE AREA = 0.44 AC
 TOTAL DISTURBED AREA = 0.44 AC

24 HR. CONTACT:
 ADAM LYON
 (770) 401-8349



CONSTRUCTION SCHEDULE

ACTIVITY	START DATE	FINISH DATE
EROSION CONTROL DEVICES & TREE PROTECTION MEASURES	WEEK 1	-
CLEARING & GRUBBING	WEEK 1	WEEK 1
PIPE INSTALLATION	WEEK 2	WEEK 3
PAVING	WEEK 3	WEEK 3
GRASSING	WEEK 2	WEEK 3
MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES	WEEK 2	WEEK 4
FINAL LANDSCAPING, GRASSING/ REMOVE E & S DEVICES	WEEK 4	WEEK 5

NOTICE TO CONTRACTOR

- THE CONTRACTOR SHALL FIELD VERIFY THE ONSITE T.B.M. W/ EXISTING ELEVATIONS. THE CONTRACTOR SHALL IMMEDIATELY CONTACT W.K. DICKSON & CO., INC. @ 770.955.5574 IF ANY DISCREPANCIES ARE FOUND IN ELEVATIONS SHOWN.
- PRIOR TO CONSTRUCTION, DIGGING, OR EXCAVATION THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES (PUBLIC OR PRIVATE) THAT MAY EXIST AND CROSS THROUGH THE AREA(S) OF CONSTRUCTION, WHETHER INDICATED ON THE PLANS OR NOT. CALL "811" A MINIMUM OF 72 HOURS PRIOR TO DIGGING OR EXCAVATING. REPAIRS TO ANY UTILITY DAMAGED RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

WKD CONTACT: MATT ABLES
 770.955.5574

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 SUITE 100
 ATLANTA, GA 30339
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 WWW.WKDICKSON.COM

GSWCC NO. 80940
 EXPIRATION DATE 08/30/2020

PROFESSIONAL SEAL

NO.	DATE	DESCRIPTION	HMA	BY

PROJECT NAME: NORCROSS STREET CULVERT REPLACEMENT
 DRAWING TITLE: COVER

PROJ. MGR.: DRB
 DESIGN BY: HMA
 DRAWN BY: HMA
 PROJ. DATE: 07/13/2018
 DRAWING NUMBER:
C-01 OF 17
 WKD PROJ. NO.:
 20180237.01.AT

RELEASED FOR PERMITTING

FILE PATH: C:\Program Files\2018\77077\AT - Norcross Street Culvert Replacement\20180237.01.MASTER_CULVERTS STREET CHgs_MANGLE_10/26/2018 11:24:42 AM

DRAWING IS TO BE PRINTED ON A 24 INCH BY 36 INCH SHEET. THE CITY OF ROSWELL IS NOT RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED IN THIS DRAWING. ANY CHANGES TO THE INFORMATION OR THE DRAWING SHALL BE THE RESPONSIBILITY OF THE USER OF THIS DRAWING. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES AND FOR OBTAINING A CURRENT RECORD DRAWING FOR THE PROJECT. ANY CHANGES TO THE DRAWING SHALL BE THE RESPONSIBILITY OF THE USER OF THIS DRAWING.

GENERAL NOTES:

- PROJECT IS LOCATED IN THE CITY OF ROSWELL, WITHIN A COMMERCIAL AREA.
 - NOTIFY THE CITY OF ROSWELL ENVIRONMENTAL/PUBLIC WORKS DEPARTMENT (E/PWD) ENGINEERING DIVISION AT LEAST 72 HOURS PRIOR TO BEGINNING OF LAND DISTURBANCE. AN INSPECTION WILL BE ASSIGNED AND A PRE-CONSTRUCTION MEETING SCHEDULED AT THIS TIME.
 - THE EXISTENCE AND LOCATIONS OF ALL BOUNDARIES, PROPERTY LINES, AND RIGHT-OF-WAY LINES REPRESENTED WITHIN THESE CONSTRUCTION DOCUMENTS ARE APPARENT, AND ARE BASED ON FIELD INVESTIGATION. CONTRACTOR IS TO VERIFY EACH, AS APPROPRIATE, PRIOR TO LAND DISTURBANCE OR CONSTRUCTION ACTIVITY.
 - ALL STORMWATER CONSTRUCTION SHALL CONFORM TO THE CITY OF ROSWELL E/PWD DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS, LATEST EDITION.
 - ALL WORK PERFORMED AND/OR RELATED TO THE CONSTRUCTION WITHIN THE ROW SHALL BE RETURNED TO PRE-EXISTING CONDITIONS OR BETTER PER CITY OF ROSWELL D.O.T. STANDARDS.
 - ALL WORK PERFORMED AND/OR RELATED TO THE CONSTRUCTION ON PRIVATE PROPERTY SHALL BE RETURNED TO PRE-EXISTING CONDITIONS OR BETTER TO THE SATISFACTION OF THE ENGINEER AND/OR PROPERTY OWNER.
 - ALL AREAS OF NEW LINE INSTALLATION SHALL BE THOROUGHLY STABILIZED UTILIZING STANDARD BEST MANAGEMENT PRACTICES, AND SHALL BE RETURNED TO PRE-EXISTING CONDITIONS OR BETTER.
 - EXISTING CONTOURS ARE BASED UPON UNITED STATES DEPARTMENT OF INTERIOR GEOLOGICAL SURVEY (USGS) TOPOGRAPHIC MAP, THE CITY OF ROSWELL E/PWD GIS INFORMATION, AND FIELD SURVEYS.
 - ALL CONTRACTORS FOR GRADING, EROSION CONTROL, AND STORMWATER SYSTEM CONSTRUCTION SHALL BE APPROVED BY THE CITY OF ROSWELL.
 - CONTRACTORS HAVE THE RESPONSIBILITY TO COMPLY WITH EROSION CONTROL REQUIREMENTS OF THE LOCAL LAND DISTURBANCE PERMIT AND NPDES GENERAL PERMIT IF APPLICABLE.
 - CONTRACTOR IS RESPONSIBLE FOR PROPERLY DISPOSING OF ALL CONSTRUCTION DEBRIS.
 - ALL FILL MATERIAL TO BE COMPACTED TO 95% MAXIMUM DRY DENSITY, STANDARD PROCTOR (COMPACT FILL MATERIAL IN 6" LIFTS).
 - THE SCHEDULE OF TRENCH BACKFILL IS AS FOLLOWS:
 - CLASS III BACKFILL SHALL BE USED IN PAVED AREAS SUCH AS ROADWAYS AND DRIVEWAYS, AND IN GRAVEL DRIVE AND PARKING AREAS, AS PER STANDARDS AND DETAILS. CLASS III BACKFILL SHALL ALSO BE USED TO AN EXTENT OF 10 FEET BEYOND EDGE OF ALL PAVED AND GRAVELED AREAS. IN THESE 10-FOOT EXTENSION AREAS, REPLACE GRANULAR MATERIAL WITH SELECT BACKFILL IN THE TOP 6-INCHES OF MATERIAL SO THAT VEGETATION CAN BE ESTABLISHED.
 - ALL REMAINING BACKFILL AREAS SHALL BE CLASS IV BACKFILL, AS PER STANDARDS AND DETAILS.
 - EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE BASED UPON THE BEST AVAILABLE INFORMATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING UTILITY LOCATIONS PRIOR TO CONSTRUCTION.
 - ALL CONSTRUCTION SHALL CONFORM TO APPLICABLE CITY OF ROSWELL E/PWD, CITY OF ROSWELL, AND GEORGIA DEPARTMENT OF TRANSPORTATION STANDARDS, SPECIFICATIONS, AND ORDINANCES.
 - ALL TRENCHES ARE TO BE CLOSED AT THE END OF EACH WORK DAY.
 - THE CONTRACTOR IS TO COORDINATE THE SERVICE OUTAGE OR POTENTIAL SERVICE OUTAGE WITH THE UTILITY OWNER AND TO PROVIDE ADVANCE NOTIFICATION (MINIMUM 48 HOURS) TO THE AFFECTED CUSTOMERS.
 - ALL CONCRETE AND/OR ASPHALT DRIVEWAYS ARE TO BE OPEN CUT UNLESS OTHERWISE NOTED.
 - "AS-BUILT" DRAWINGS SHALL BE FIELD VERIFIED AND STAMPED BY A STATE OF GEORGIA LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR.
 - THE CONTRACTOR WILL BE REQUIRED TO FURNISH THE CITY OF ROSWELL E/PWD AND DOT UTILITY ENGINEERS WITH AS-BUILTS FOR THE STORMWATER IMPROVEMENTS.
 - ALL LINES TO HAVE MINIMUM COVER AS PER GDOT STANDARDS (SEE GDOT STANDARD 1030-D).
 - ALL KNOWN UTILITY FACILITIES ARE SHOWN SCHEMATICALLY ON THESE PLANS AND ARE NOT NECESSARILY ACCURATE IN LOCATION AS TO PLAN OR ELEVATION. UTILITY FACILITIES SUCH AS SERVICE LINES OR UNKNOWN FACILITIES NOT SHOWN ON THESE PLANS WILL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY UNDER THIS REQUIREMENT, EXCEPT AS NOTED BELOW. "EXISTING UTILITY FACILITIES" MEANS ANY UTILITY THAT EXISTS ON THIS PROJECT IN ITS ORIGINAL, RELOCATED, OR NEWLY INSTALLED POSITION. THE CONTRACTOR WILL NOT BE HELD RESPONSIBLE FOR THE COST OF REPAIRS TO DAMAGED UTILITY FACILITIES OTHER THAN SERVICE FROM STREET MAINS TO ABUTTING PROPERTY. WHEN SUCH FACILITIES ARE NOT SHOWN ON THESE PLANS AND THEIR EXISTENCE IS UNKNOWN TO THE CONTRACTOR PRIOR TO THE DAMAGES OCCURRING, PROVIDING THE ENGINEER DETERMINES THE CONTRACTOR HAS OTHERWISE FULLY COMPLIED WITH THE SPECIFICATIONS. ALL UTILITY FACILITIES WHICH ARE IN CONFLICT WITH CONSTRUCTION AND ARE NOT COVERED AS SPECIFIC ITEMS IN THE DETAILED ESTIMATE ARE TO BE REMOVED OR RELOCATED TO CLEAR CONSTRUCTION IN ADVANCE OF HIS WORK.
 - UTILITY WORK COORDINATION WILL BE REQUIRED AS PART OF THIS CONTRACT. THE CONTRACTOR SHALL BE REQUIRED TO USE THE ONE-CALL CENTER PHONE NUMBER 1-800-282-7411, FOR PURPOSE OF COORDINATING THE MARKING OF UNDERGROUND UTILITIES. THE CONTRACTOR'S ATTENTION IS CALLED TO THE STATE OF GEORGIA CODES PERTAINING TO "COOPERATION WITH UTILITIES".
 - UTILITY COORDINATION SHALL BE INCLUDED INTO THE PROJECT SCHEDULE AND IT IS THE EXPLICIT RESPONSIBILITY OF THE CONTRACTOR TO ASSURE THAT THE PROJECT SCHEDULE INCLUDES THE NECESSARY RELOCATION. THE CONTRACTOR WILL NOT BE PAID FOR THIS COORDINATION. THE CONTRACTOR SHALL SEEK ASSISTANCE FROM ALL UTILITY COMPANIES TO LOCATE AND PROTECT THEIR FACILITIES.
 - ALL COSTS FOR EARTHWORK AND GRADING SHALL BE INCLUDED IN THE PRICE BID. LUMP SUM. ANY EARTHWORK QUANTITIES SHOWN FOR INFORMATION ONLY AND ARE BASED ON ASSUMED SHRINKAGE FACTORS FOR ESTIMATING PURPOSES. THE CITY OF ROSWELL E/PWD ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE CONSIDERED IF THE CONTRACTOR RELIES ON THE EARTHWORK QUANTITIES SHOWN AND LATER FINDS THAT CONDITIONS ENCOUNTERED ON CONSTRUCTION ARE DIFFERENT THAN THOSE INDICATED ON THE PLANS.
 - IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FURNISH SUITABLE BORROW MATERIAL FOR THE PROJECT AND DISPOSE OF ANY UNSUITABLE OR WASTE MATERIAL. DURING CONSTRUCTION ALL NECESSARY EROSION CONTROL FEATURES SHALL BE INCORPORATED AND MAINTAINED. UPON COMPLETION THE SITE SHALL BE GRADED SMOOTH WITHOUT VERTICAL BANKS, DRESSED AND GRASSED TO THE OWNER'S SATISFACTION.
 - ALL DRIVEWAYS, WHERE ACCESS IS ALLOWED, SHALL BE PLACED AS DIRECTED BY THE ENGINEER. ALL DRIVEWAYS THAT ARE TO BE CONSTRUCTED SHALL BE REPLACED, IN KIND, I.E., ASPHALT FOR ASPHALT, CONCRETE FOR CONCRETE, AND GRAVEL FOR EARTH. THE DRIVEWAY LOCATIONS INDICATED ON THE PLANS ARE FROM THE BEST AVAILABLE DATA. THE CONTRACTOR SHALL CONSTRUCT NEW DRIVEWAYS TO MATCH THE ACTUAL FIELD LOCATION OF EXISTING DRIVEWAYS WHERE THEY ARE NOT IN CONFLICT WITH THE RULES AND REGULATIONS. THE CONTRACTOR SHALL OBTAIN THE APPROVAL OF THE ENGINEER PRIOR TO MAKING ANY REVISIONS SUCH AS TO LOCATION, WIDTH AND/OR NUMBER OF DRIVES TO BE CONSTRUCTED. WHERE REQUIRED, DRIVES SHALL BE PAVED AS FOLLOWS:

ASPHALTIC DRIVES
COMMERCIAL:
2" ASPHALTIC CONCRETE "F"
8" CONCRETE CLASS "B"

CONCRETE DRIVES
COMMERCIAL:
8" CONCRETE MIN. 3000 PSI
- ALL DRIVES TO HAVE A MINIMUM OF 1-1/2" ASPHALT TO R/W LIMITS OR TO END OF R/W EASEMENT.
- ACCESS MUST BE MAINTAINED AT ALL TIMES FOR THE RESIDENTS.
- ALL ANTICIPATED FEDERAL, STATE, AND LOCAL PERMITS REQUIRED FOR THE PROJECT HAVE BEEN OBTAINED. ALL ANTICIPATED RIGHTS-OF-WAY AND EASEMENTS REQUIRES FOR THIS PROJECT HAVE BEEN OBTAINED.
- CONTRACTOR SHALL COMPLY WITH ALL CITY, COUNTY, STATE, AND FEDERAL ORDINANCES WHEN WORKING IN FLOWING STREAMS.
- ALL DRIVES SHALL BE SAW CUT TO PROVIDE A NEAT EDGE FOR JOINING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL PAVING DUE TO VARIATIONS BETWEEN THE INFORMATION SHOWN WITHIN THE CONSTRUCTION DOCUMENTS AND THE ACTUAL CONSTRUCTED CONDITIONS.

EROSION CONTROL NOTES:

- THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES."
- EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE."
- ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 5 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."

TREE PRESERVATION:

- WHEN DIGGING NEAR TREES, THE CONTRACTOR SHALL PRUNE ALL EXPOSED ROOTS ONE INCH IN DIAMETER OR LARGER ON THE SIDE OF THE TRENCH ADJACENT TO THE TREES. PRUNING SHALL CONSIST OF MAKING A CLEAN CUT FLUSH WITH THE SIDE OF THE TRENCH TO PROMOTE NEW ROOT GROWTH.
- THE CONTRACTOR SHALL PROTECT ALL TREES AND VEGETATION ON SITE EXCEPT AS NOTED ON THE PLANS OR APPROVED BY THE ENGINEER.
- PROTECT THE TRUNKS OF ANY TREES WITHIN THE TEMPORARY OR PERMANENT EASEMENT WITH STRAPPED ON PLANKING.
- PRUNING OF TREE LIMBS TO PROVIDE CLEARANCE FOR EQUIPMENT AND MATERIALS SHALL BE DONE ACCORDING TO STANDARD ARBORICULTURAL PRACTICE (SEE ANSI A300-1995).

SIGNS AND PAVEMENT MARKING:

- ALL SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND ANY APPLICABLE CITY OF ROSWELL E/PWD STANDARDS.
- RAISED PAVEMENTS MARKINGS (RPM'S) SHALL BE PROVIDED PER GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD DETAILS.
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC UNLESS OTHERWISE NOTED.
- ALL REGULATORY SIGNS SHALL HAVE HIGH INTENSITY GRADE SHEETING. ALL OTHER SIGNS ENGINEER GRADE SHEETING. ALL SIGNS SHALL BE ON 5052-H38 FLAT ALUMINUM ALLOY (0.080 GAUGE THICKNESS) MEETING FHWA SPECIFICATIONS FOR CORNER RADII. ALL SIGNS SHALL MEET OR EXCEED GEORGIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR RETROREFLECTIVITY AND COLOR.
- ALL SIGNS, UNLESS OTHERWISE NOTE, SHALL BE INSTALLED ON 12 - 3/4 PER FOOT "U" CHANNEL POSTS. THESE POSTS SHALL BE DARK GREEN (WEATHER RESISTANT, RUST INHIBITIVE, HIGH QUALITY ENAMEL), STANDARD INSTALLATION DEPTH IS 2 FEET. WHERE STREET NAME BLADES (D3'S) ARE SPECIFIED ABOVE STOP SIGNS (R1-1'S), THESE BLADES SHALL BE ATTACHED TO THE "U" CHANNEL POSTS USING VULCAN VS-7 BOLT-THRU CAPS AND CROSSES (OR THEIR EQUIVALENT).
- IN RESIDENTIAL AREAS SIGNS SHALL BE LOCATED ON, OR AS CLOSE AS POSSIBLE, TO PROPERTY LINES.
- THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF EXISTING TRAFFIC CONTROL SIGNS THROUGHOUT CONSTRUCTION. THIS INCLUDES CLEANING AND REPLACEMENT OF EXISTING SIGNS SHOULD THESE SIGNS NEED CLEANING, REPAIR OR REPLACEMENT DURING CONSTRUCTION.
- ALL PAVEMENT MARKINGS DAMAGED DURING CONSTRUCTION SHOULD BE REPLACED IN THE SAME LIKE MANNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ALL SIGNS, PUBLIC AND PRIVATE, TO THE PRE-EXISTING CONDITIONS OR BETTER.

CITY OF ROSWELL D.O.T. STANDARDS:

- APPROVAL COVERS WORK ON CITY OF ROSWELL RIGHT-OF-WAY ONLY. ANY REQUIRED APPROVALS FROM OTHER GOVERNING AUTHORITIES ARE THE APPLICANTS RESPONSIBILITY.
- CITY OF ROSWELL ASSUMES NO RESPONSIBILITY OR LIABILITY FOR ANY WORK PERFORMED, AS A RESULT OF PERMIT APPROVAL, WHICH MAY ENCROACH ONTO PRIVATE PROPERTY. IT IS THE APPLICANTS RESPONSIBILITY TO VERIFY THE RIGHT-OF-WAY AND DETERMINE THE LIMITS OF THE RIGHT-OF-WAY IN RELATION TO THE EXISTING ROADWAY PAVEMENT, PRIOR TO COMMENCEMENT OF WORK. REQUIRED PRIVATE EASEMENTS ARE THE APPLICANTS RESPONSIBILITY. APPLICANT PROCEEDS AT APPLICANTS OWN RISK.
- ROAD CUTS ARE AUTHORIZED UNDER THIS PERMIT APPROVAL.
- NO INDIVIDUAL, PARTNERSHIP, CORPORATION OR OTHER ENTITY OR ANY KIND WHATSOEVER SHALL ENGAGE IN ANY EXCAVATION OR TRENCHING EXCEPT IN COMPLIANCE WITH THE PROVISIONS OF THE SECTION 1021 OF THE DOUGLAS COUNTY UNIFIED DEVELOPMENT CODE AND IN COMPLIANCE
- REFER TO CITY OF ROSWELL D.O.T. STANDARD NOTES AND OTHER CONDITIONS OF APPROVAL PER THE APPROVAL LETTER FOR THE PROJECT.

CITY OF ROSWELL STORMWATER NOTES

- STORMWATER MANAGEMENT STRUCTURES ON PRIVATE PROPERTY MUST BE MAINTAINED BY THE PROPERTY OWNER. ALL SUBSEQUENT OWNERS MUST BE INFORMED OF OPERATIONS AND MAINTENANCE REQUIREMENTS. FAILURE TO MAINTAIN STORMWATER INFRASTRUCTURE MAY RESULT IN ENFORCEMENT ACTION. CHANGES AND MODIFICATIONS TO STORMWATER INFRASTRUCTURE (PUBLIC AND PRIVATE) MUST BE APPROVED BY THE CITY OF CITY OF ROSWELL E/PWD.
- DOWNSTREAM IMPACTS OF DEVELOPMENT ARE THE RESPONSIBILITY OF THE OWNER. DEVELOPMENT MAY NOT CAUSE DOWNSTREAM IMPACTS SUCH AS INCREASED FLOOD HAZARD, EROSION OF OFF-SITE SOILS AND STREAM CHANNELS, OR IMPAIRMENT OF WATER QUALITY OF RECEIVING WATERS.
- APPROVAL IS BASED ON INFORMATION SUPPLIED ON THESE DRAWINGS. IF UNKNOWN CONDITIONS ARE ENCOUNTERED, OR SITE CONDITIONS CHANGE, OR THESE PLANS ARE OTHERWISE FOUND TO BE NOT REPRESENTATIVE OF SITE CONDITIONS, CONTACT THE CITY OF ROSWELL E/PWD ENGINEERING DEPARTMENT. DESIGN REVISION AND RE-SUBMITTAL MAY BE REQUIRED.
- CONSTRUCTION, WHICH IMPACTS STREAMS, WETLANDS, OR OTHER ENVIRONMENTALLY SENSITIVE AREAS, SHALL COMPLY WITH APPLICABLE LOCAL, STATE, AND FEDERAL LAWS. PLAN APPROVAL BY WSA DOES NOT RELIEVE THE OWNER, DEVELOPER, AND CONTRACTOR OF THE OBLIGATION TO APPLY FOR AND OBTAIN REQUIRED PERMITS AND COMPLY WITH CURRENT REGULATIONS. DEVELOPMENT MAY NOT OCCUR IN FLOOD PRONE AREAS AS DEFINED BY THE CITY OF ROSWELL E/PWD. UNAUTHORIZED DEVELOPMENT WILL BE ORDERED REMOVED AND RESTORATION OF THE SITE REQUIRED, BOTH AT THE EXPENSE OF THE DEVELOPER.
- APPROVAL BY THE CITY OF ROSWELL E/PWD SIGNIFIES THAT THE CITY OF ROSWELL HAS DEEMED THESE PLANS TO BE IN ACCORDANCE WITH CURRENT DESIGN STANDARDS AND DOES NOT CONSTITUTE PLAN APPROVAL AS REQUIRED BY THE EROSION AND SEDIMENTATION CONTROL ACT. THE EROSION AND SEDIMENT CONTROL PLANS WERE REVIEWED AND APPROVED BY THE NATURAL RESOURCE CONSERVATION SERVICE AS REQUIRED.
- APPROVAL OF THESE PLANS IS BASED ON SUBMITTED INFORMATION REGARDING EXTENTS OF SOIL DISTURBANCE, SCHEDULE OF ACTIVITIES, AND PROPOSED MEASURES TO CONTROL EROSION AND SEDIMENT CONTROL. SIGNIFICANT CHANGES TO PROJECT DESIGN OR SCHEDULE ELEMENTS MUST BE APPROVED BY THE CITY OF ROSWELL.
- PLAN APPROVAL DOES NOT RELEASE ANY PARTY FROM DUTY TO COMPLY WITH LOCAL, STATE, AND FEDERAL LAW. IT IS UNLAWFUL TO INCREASE TURBIDITY IN RECEIVING WATERS MORE THAN 25 NTU. THE CITY OF ROSWELL E/PWD REQUIRES THAT EVERY SERVICE CONNECTION BE EQUIPPED WITH A BACKFLOW PREVENTION DEVICE. FACILITIES THAT, IN THE OPINION OF THE CITY OF ROSWELL, MAY POTENTIALLY INTRODUCE HAZARDOUS OR TOXIC SUBSTANCES INTO THE WATER SUPPLY WILL BE REQUIRED TO INSTALL A REDUCED PRESSURE ASSEMBLY THAT VENTS TO THE ATMOSPHERE. CITY OF ROSWELL E/PWD REQUIRES THAT EVERY APPROVAL OF THESE PLANS DOES NOT CONSTITUTE A GUARANTEE OF WATER OR SEWERAGE CAPACITY. CAPACITY IS NOT ALLOCATED UNTIL IT IS PURCHASED THROUGH THE SALE OF A WATER METER.
- ANY MODIFICATIONS/CHANGES TO AN EXISTING OR ADDITIONS TO A PORTION OF THE WATER, SEWER, OR STORMWATER SYSTEMS IS REQUIRED TO BE INSPECTED AND OR REVIEWED BY CITY OF ROSWELL E/PWD.
- PLAN APPROVAL DOES NOT RELEASE THE OWNER, DEVELOPER, OR CONTRACTOR FROM RESPONSIBILITY FOR ENVIRONMENTAL DAMAGE, PROPERTY DAMAGE, OR ENDANGERMENT OF PUBLIC HEALTH. RESPONSIBLE PARTIES SHALL MITIGATE IMPACTS, REPAIR DAMAGE, AND COMPENSATE AFFECTED PARTIES AS REQUIRED BY LOCAL AND STATE LAW.
- ALL CONSTRUCTION AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH CURRENT RULES AND REGULATIONS AND DESIGN STANDARDS AND SPECIFICATIONS PUBLISHED BY THE CITY OF ROSWELL E/PWD. IT IS THE RESPONSIBILITY OF EACH DEVELOPER AND CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL CURRENT CITY OF ROSWELL E/PWD RULES AND STANDARDS.
- THE CITY OF ROSWELL E/PWD WILL OBTAIN BORE PERMITS AND ROAD CUT PERMITS AT THE LOCAL AND STATE LEVELS FOR ALL APPROVED PROJECTS. ROAD BORE/CUT WORK SHALL NOT BEGIN UNTIL PERMITS ARE OBTAINED.
- CONTRACTOR SHALL NOTIFY THE CITY OF ROSWELL E/PWD DEPARTMENT 72 HOURS BEFORE CONSTRUCTION.

UTILITY PROVIDERS:

GAS
SOUTHERN COMPANY GAS
10 PEACHTREE STREET NE
ATLANTA, GA 30309
AMANDA FLAKE
(404) 584-4338
G2SOGASLINELOC@SOUTHERNCO.COM

POWER
GEORGIA POWER COMPANY
823 JEFFERSON STREET
ATLANTA, GA 30318
(404) 506-4569
IKE COLLINS

WATER
CITY OF ROSWELL
105 DOBBS DRIVE
ROSWELL, GA 30075
(770) 641-3707
CHRIS BOYD

COMMUNICATION
AT&T
208 S. AKARD ST.
DALLAS, TX 75202
ANGELO HINES
(770) 784-3972

CHARTER COMMUNICATIONS
JIMMY PRICE
(404) 597-2712

VERIZON / MCI
2400 N GLENVILLE
RICHARDSON, TX 75082
(478) 471-1042
DENNIS RAINEY

XXO / AGLN
10 PEACHTREE PLACE NE
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GSWCC NO. 80940
EXPIRATION DATE 06/30/2020



PROFESSIONAL SEAL

REVISION RECORD	NO	DATE	DESCRIPTION

PROJECT NAME:
NORCROSS STREET CULVERT REPLACEMENT
RELEASED FOR PERMITTING

DRAWING TITLE:
GENERAL NOTES AND LEGEND

PROJ. MGR.: DRB
DESIGN BY: HMA
DRAWN BY: HMA
PROJ. DATE: 10/26/2018
DRAWING NUMBER:

C-02 OF 17

WKD PROJ. NO.:
20180237.01.AT

RELEASED FOR PERMITTING

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GSWCC NO. 80940
EXPIRATION DATE 06/30/2020



REVISION RECORD	DATE	DESCRIPTION	BY

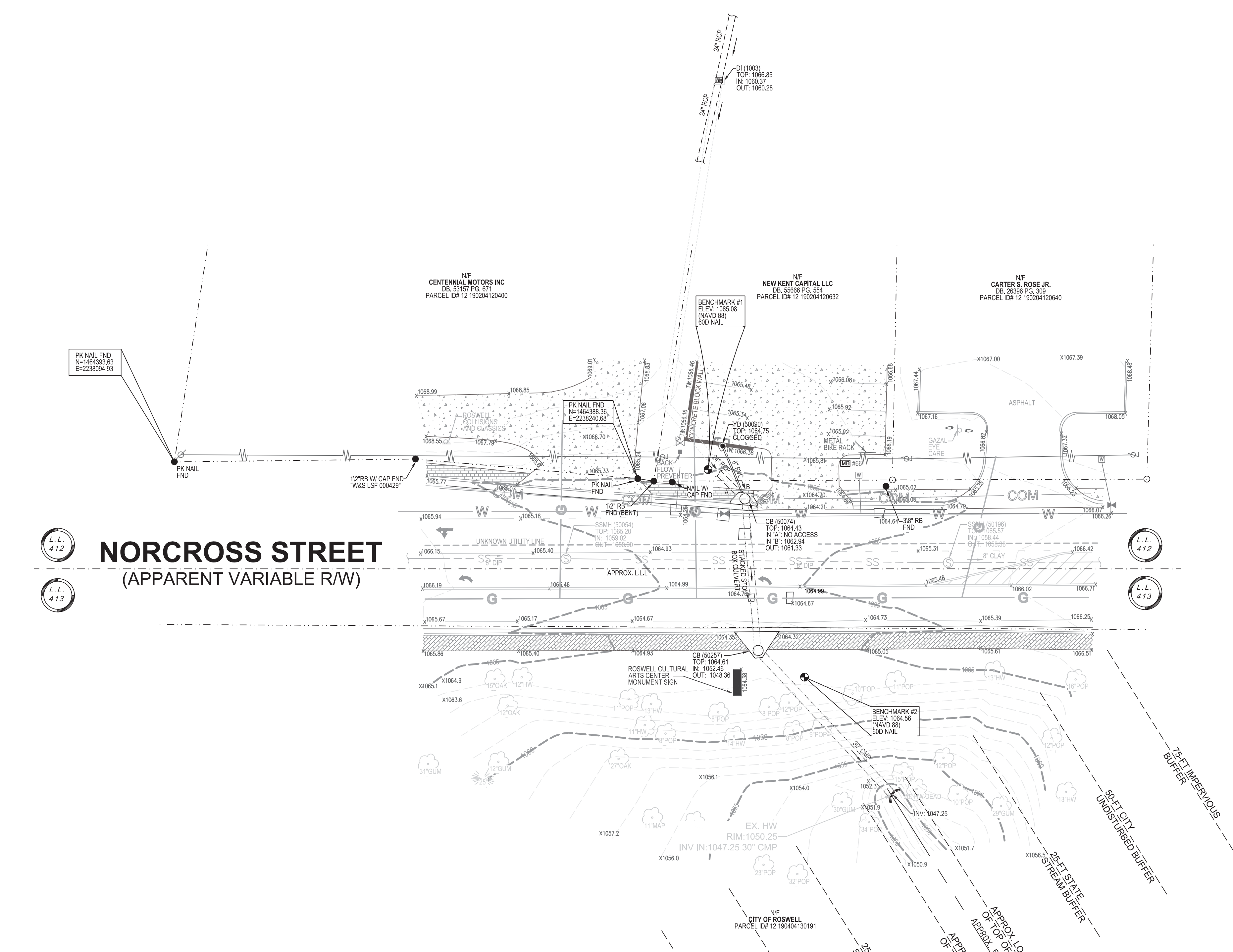
EXISTING CONDITIONS LEGEND

	CURB AND GUTTER (C&G)		CATCH BASIN (DWCB)
	FENCE		CATCH BASIN (SWCB)
	HANDRAIL		DROP INLET (DI)
	STORM DRAIN LINE		JUNCTION BOX (JB)
	SANITARY SEWER		HEAD WALL (HW)
	WATER LINE		CURB INLET (CI)
	GAS LINE		FLARED END SECTION (FES)
	OVERHEAD POWER LINE		OUTLET CONTROL STRUCTURE
	UNDERGROUND COMMUNICATION		YARD DRAIN INLET
	MAJOR TOPOGRAPHIC CONTOUR		SS MANHOLE (MH)
	MINOR TOPOGRAPHIC CONTOUR		CLEAN OUT (CO)
	PROPERTY LINE		LIGHT POLE (LP)
	IRRIGATION CONTROL VALVE (ICV)		POWER POLE WITH LIGHT
	FIRE HYDRANT (FH)		POWER POLE (PP)
	WATER VALVE (WV)		UTILITY MANHOLE (UM)
	WATER METER (WM)		SPOTLIGHT
	FIRE DEPT. CONNECTION (FDC)		GAS METER (GM)
	WATER VALVE MARKER		GAS VALVE (GV)
	TRANSFORMER BOX (TX)		TELEPHONE PEDESTAL
	AIR CONDITIONER (AC)		COMMUNICATION BOX
	ELECTRIC METER (EM)		TRAFFIC SIGNAL
	ELECTRIC UTILITY		BOLLARD (BO)
	GREASE TRAP (GT)		MAIL BOX
	X 1000.00 SPOT ELEVATION		CONCRETE AREA
			BRICK AREA
			TREE

P# POT HOLE LOCATION

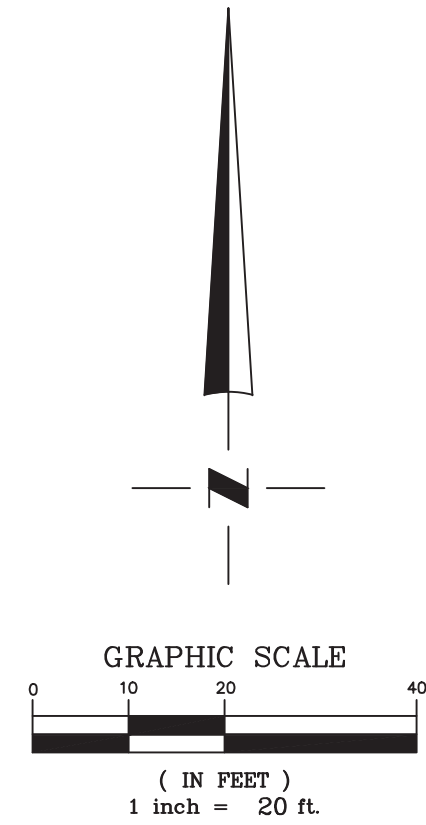
POT HOLE SCHEDULE (PROVIDED BY OTHERS)		
POT HOLE NO.	UTILITY	DISTANCE TO TOP PIPE
P1	12 INCH WATER	2.8'
P2	1 INCH GAS (SERVICE LINE)	1.8'
P3	GAS	3.9'
P4	6 INCH WATER (OLD LINE)	3.6'
P5	12 INCH WATER	3.9'
P5	12 INCH WATER	3.6'

NORCROSS STREET
(APPARENT VARIABLE R/W)



UTILITY NOTE
THE CONSTRUCTION CONTRACTOR SHOULD PERFORM A UTILITY LOCATION BEFORE PROJECT ONSET, POT HOLE UTILITIES TO IDENTIFY CONFLICTS, PERFORM THE NECESSARY COORDINATION WITH UTILITY PROVIDERS IF A UTILITY RELOCATION IS JUDGED NEEDED BASED ON THE DESIGN SPECIFICATIONS, AND MAKE EFFORTS TO RESTRAIN AND PROTECT UTILITIES DURING ALL PHASES OF CONSTRUCTION

BOUNDARY AND TOPOGRAPHIC SURVEY FROM PLAT BY TERRAMARK LAND SURVEYING, INC., DATED 07/10/2018.



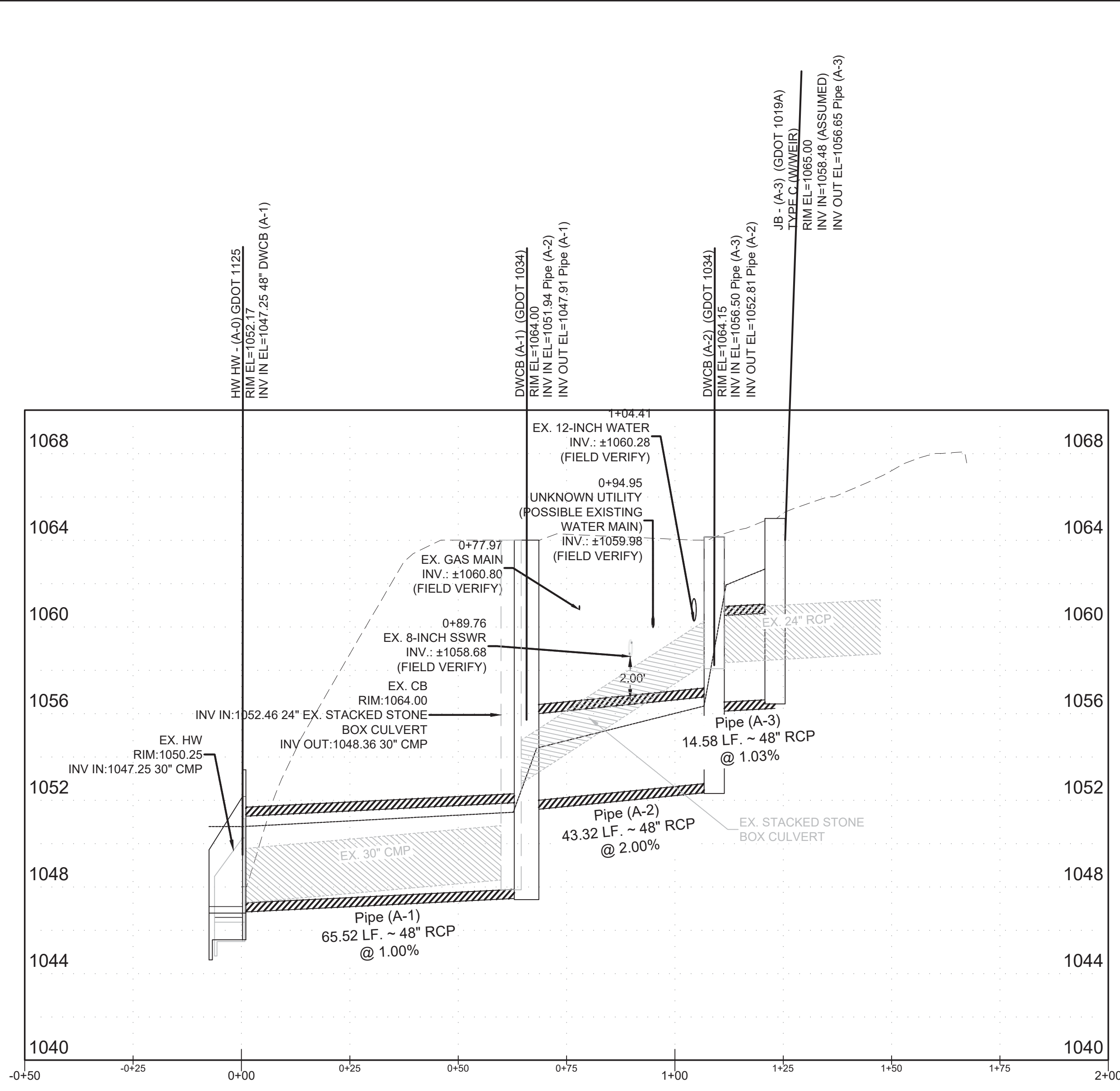
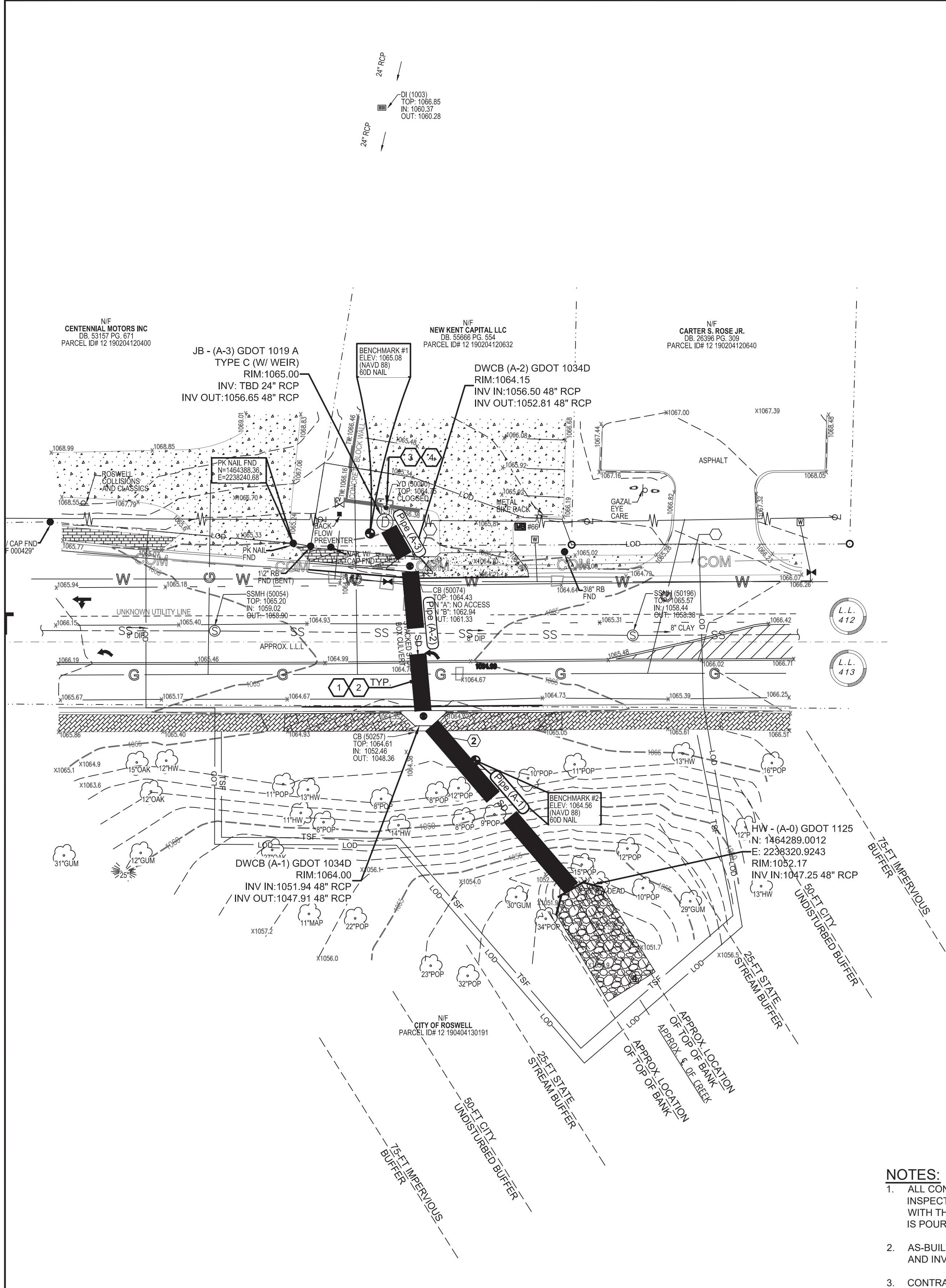
RELEASED FOR PERMITTING

PROJECT NAME:
NORCROSS STREET CULVERT REPLACEMENT
RELEASED FOR PERMITTING

DRAWING TITLE:
EXISTING CONDITIONS

PROJ. MGR.: DRB
DESIGN BY: HMA
DRAWN BY: HMA
PROJ. DATE: 10/26/2018
DRAWING NUMBER:
C-03 OF 17
WKD PROJ. NO.:
20180237.01.AT

CONTRACTOR SHALL VERIFY ALL UTILITIES AND RECORD THEM AS SHOWN ON THIS DRAWING. ANY CHANGES TO THIS DRAWING SHALL BE MADE BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. ANY CHANGES TO THIS DRAWING SHALL BE MADE BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. ANY CHANGES TO THIS DRAWING SHALL BE MADE BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.



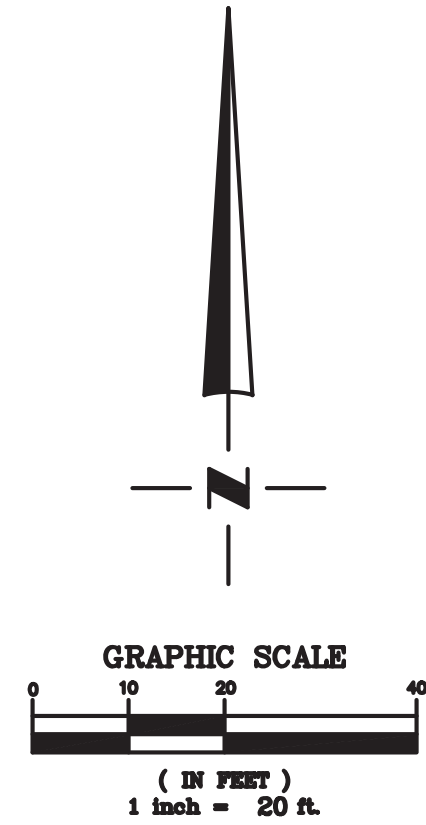
PROPOSED STORM PROFILE
 Vertical : Horizontal Scale
 4 : 1

UTILITY NOTE
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- NOTES:**
- ALL CONCRETE FORMWORK AND REINFORCING BARS TO BE INSPECTED BY THE FIELD REPRESENTATIVE IN CONJUNCTION WITH THE CONTRACTOR'S REPRESENTATIVE BEFORE CONCRETE IS POURED.
 - AS-BUILT DRAWING SHALL CONTAIN ALL RELEVANT ELEVATIONS AND INVERTS.
 - CONTRACTOR TO ESTABLISH TEMPORARY SUPPORT FOR EXISTING UTILITIES AND MAINTAIN IT THROUGHOUT CONSTRUCTION.
 - CONTRACTOR TO MAINTAIN UTILITY SERVICES DURING CONSTRUCTION, WITH MINIMAL INTERRUPTION.
 - CONTRACTOR TO BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGED CURB OR DRIVEWAYS DURING CONSTRUCTION.
 - PROTECT ALL OVERHEAD AND UNDERGROUND UTILITIES
 - CONTRACTOR RESPONSIBLE FOR RELOCATION OF ALL UTILITIES WHERE NECESSARY

NAME	SIZE	MATERIAL	LENGTH	SLOPE	HGL DOWN (FT)	HGL UP (FT)	START INV EL (FT)	END INV EL (FT)	NORTHING	EASTING
Pipe (A-1)	48"	RCP	65.52'	1.00%	1050.78	1051.44	1047.91	1047.25	1464338.64	2238278.16
Pipe (A-2)	48"	RCP	43.32'	2.00%	1054.40	1056.34	1052.81	1051.94	1464381.79	2238274.26
Pipe (A-3)	48"	RCP	14.58'	1.03%	1061.93	1062.67	1056.65	1056.50	1464394.47	2238267.08

- # PROPOSED STORM AND GRADING NOTES**
- INSTALL ALL PIPES USING GDOT BEDDING DETAIL 1030D AND 1401
 - CONTRACTOR SHALL PROVIDE ALL NECESSARY SHORING DURING THE INSTALLATION AND CONSTRUCTION PROCESS TO PROTECT UTILITIES, INFRASTRUCTURE AND TRENCH STABILITY.
 - YARD INLET W/ SWAMP - INCLUDES ALL APPURTENANCES TO CONNECT CONCRETE FLUME TO JUNCTION BOX.
 - 6-INCH PVC TO CONNECT TO JUNCTION BOX. MIN 1% SLOPE.



RELEASED FOR PERMITTING

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80940

 PROFESSIONAL SEAL

NO	DATE	CITY OF ROSWELL COMMENTS	DESCRIPTION	HMA	BY

PROJECT NAME: NORCROSS STREET CULVERT REPLACEMENT RELEASED FOR PERMITTING
 DRAWING TITLE: GRADING AND DRAINAGE PLAN
 PROJECT MANAGER: DRB
 DESIGN BY: HMA
 DRAWN BY: HMA
 PROJECT DATE: 10/26/2018
 DRAWING NUMBER: C-06 OF 17
 WKD PROJ. NO.: 20180237.01.AT

PROVIDED TO THE CONTRACTOR FOR INFORMATION ONLY. THIS DOCUMENT IS NOT A CONTRACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF ALL DATA AND INFORMATION PROVIDED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF ROSWELL AND THE GEORGIA DEPARTMENT OF TRANSPORTATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF ROSWELL AND THE GEORGIA DEPARTMENT OF TRANSPORTATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF ROSWELL AND THE GEORGIA DEPARTMENT OF TRANSPORTATION.

FILE PATH: \\P:\Projects\2018\20180713\180713AT - Norcross Street - Current\Permitting\GIS\DWG\180713AT - Norcross Street.dwg; Project: 180713AT - Norcross Street.dwg; Date: 07/13/2018 11:35:54 AM

DETOUR TRAFFIC PLAN

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND PERMITTING A REQUIRED DETOUR PLAN FOR THE PROPOSED CONSTRUCTION ACTIVITIES.
2. THE DETOUR PLAN SHALL BE APPROVED BY THE CITY OF ROSWELL, D.O.T. PRIOR TO THE BEGINNING OF CONSTRUCTION.



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PROFESSIONAL SEAL

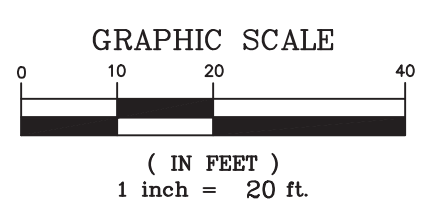
REVISION RECORD	DESCRIPTION	DATE	BY

NORCROSS STREET (APPARENT VARIABLE R/W)

IF ANY CONFLICTS OR DISCREPANCIES ARE DISCOVERED, EITHER ON THE CONSTRUCTION DOCUMENTS OR THE FIELD CONDITIONS, THE CONTRACTOR MUST NOTIFY THE ENGINEER IMMEDIATELY, AND SHALL NOT COMMENCE OPERATION UNTIL THE CONFLICTS OR DISCREPANCIES ARE RESOLVED.



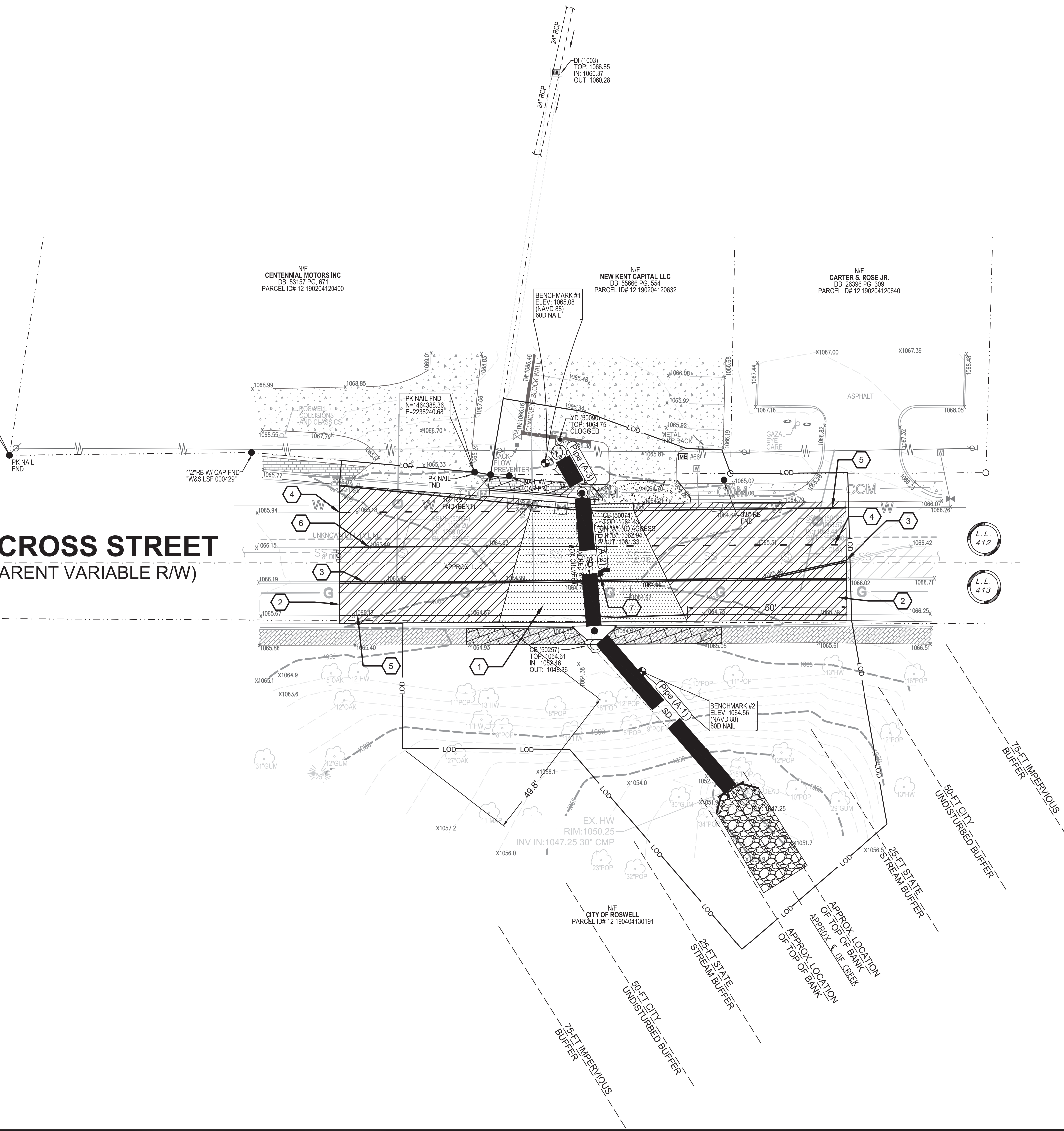
Know what's below.
Call before you dig.



PAVING LEGEND

- BRICK SIDEWALK (RETAIN BRICKS FOR REPLACEMENT)
- FULL DEPTH PAVEMENT REPAIR:
1-1/2 INCH TYPE F SURFACE ASPHALT
8-1/2 INCH CLASS A CONCRETE BASE (SEE GDOT DETAIL)
- 1-1/2 INCH MILL/OVERLAY (TYPE F ASPHALT)
- CONCRETE DRIVEWAY
- LIMITS OF DISTURBANCE

- PROPOSED PAVING NOTES**
1. FULL DEPTH PAVEMENT REPAIR
 2. 1-1/2 INCH MILL/OVERLAY LIMIT (MIN. 50-FT)
 3. 4-IN. DOUBLE STRIPE: SOLID YELLOW
 4. 4-IN. SINGLE STRIPE: DASHED WHITE (2-FT. SEG / 6-FT. GAP)
 5. 4-IN. SINGLE EDGE STRIPE: SOLID WHITE
 6. 4-IN. SINGLE STRIPE: SOLID WHITE
 7. TRAFFIC DETAIL - TURN ARROW



RELEASED FOR PERMITTING

PROJECT NAME: NORCROSS STREET CULVERT REPLACEMENT
 RELEASED FOR PERMITTING

DRAWING TITLE: PAVING PLAN

PROJ. MGR.: DRB
 DESIGN BY: HMA
 DRAWN BY: TAL
 PROJ. DATE: 07/13/2018
 DRAWING NUMBER:
C-07 OF 17
 WKD PROJ. NO.:
 20180237.01.AT

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EROSION CONTROL NOTES:

1. EROSION CONTROL PRACTICES MUST COMPLY WITH THE MINIMUM BEST MANAGEMENT PRACTICES FOR EROSION CONTROL AND SHALL COMPLY WITH THE STANDARDS AND SPECIFICATIONS IN THE "MANUAL FOR EROSION CONTROL AND SEDIMENT CONTROL IN GEORGIA".
2. EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY GRADING ON SITE.
3. DISTURBED AREAS LEFT IDLE FOR FIVE DAYS, AND NOT TO FINAL GRADE, WILL BE ESTABLISHED WITH TEMPORARY MULCH (Ds1) OR VEGETATION (Ds2). DISTURBED AREAS LEFT IDLE FOR TWO WEEKS OR MORE WILL BE ESTABLISHED WITH PERMANENT VEGETATION (Ds3). ALL AREAS AT FINAL GRADE WILL BE ESTABLISHED WITH PERMANENT VEGETATION IMMEDIATELY UPON COMPLETION. WHEN HAND PLANTING, MULCH (HAY OR STRAW) SHOULD BE UNIFORMLY SPREAD OVER SEEDED AREA WITHIN 24 HOURS OF SEEDING, DURING UNSUITABLE GROWING SEASONS, MULCH WILL BE USED AS A TEMPORARY COVER (Ds3). ON SLOPES THAT ARE 2:1 OR STEEPER, MULCH WILL BE ANCHORED.
4. IN CONCENTRATED FLOW AREAS: ALL SLOPES STEEPER THAN 2.5:1, HEIGHT TEN FEET OR GREATER, AND CUTS AND FILLS WITHIN STREAM BUFFER, STABILIZE WITH THE APPROPRIATE EROSION CONTROL MATTING OR BLANKET.
5. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
6. SEDIMENT/EROSION CONTROL DEVICES MUST BE CHECKED AFTER EACH STORM EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE THIRD OF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.
7. THE USE OF POLYMERS (PAMS) IS ACCEPTED AS A BMP AS RECOMMENDED BY THE STATE SOIL & WATER CONSERVATION COMMISSION BMP "GREEN BOOK". POLYMERS USED TO STABILIZE CONSTRUCTION SITES MUST BE USED IN CONJUNCTION WITH MULCHING AND OR HYDROSEEDING.
8. MULCH, TEMPORARY VEGETATION, AND PERMANENT (PERENNIAL) VEGETATION SHALL BE COMPLETED ON ALL EXPOSED AREAS WITHIN 14 DAYS AFTER DISTURBANCE.
9. ADDITIONAL EROSION CONTROL DEVICES MAY BE REQUIRED BY ENGINEER DURING CONSTRUCTION.
10. INSTALL Rd PRIOR TO START OF DEMOLITION.
11. INSTALL S1 AND RIPRAP TO STABILIZE BANK AND CHANNEL AT END OF CONSTRUCTION.
12. INSTALL SILT FENCE (Sd1-S) ABOVE NEW HEADWALLS ONCE CONSTRUCTED TO CONTROL RUNOFF PRIOR TO FULL BANK/SHOULDER STABILIZATION.
13. INSTALL SLOPE STABILIZATION MATTING (SS) AS SLOPES AND CONDITIONS REQUIRE.



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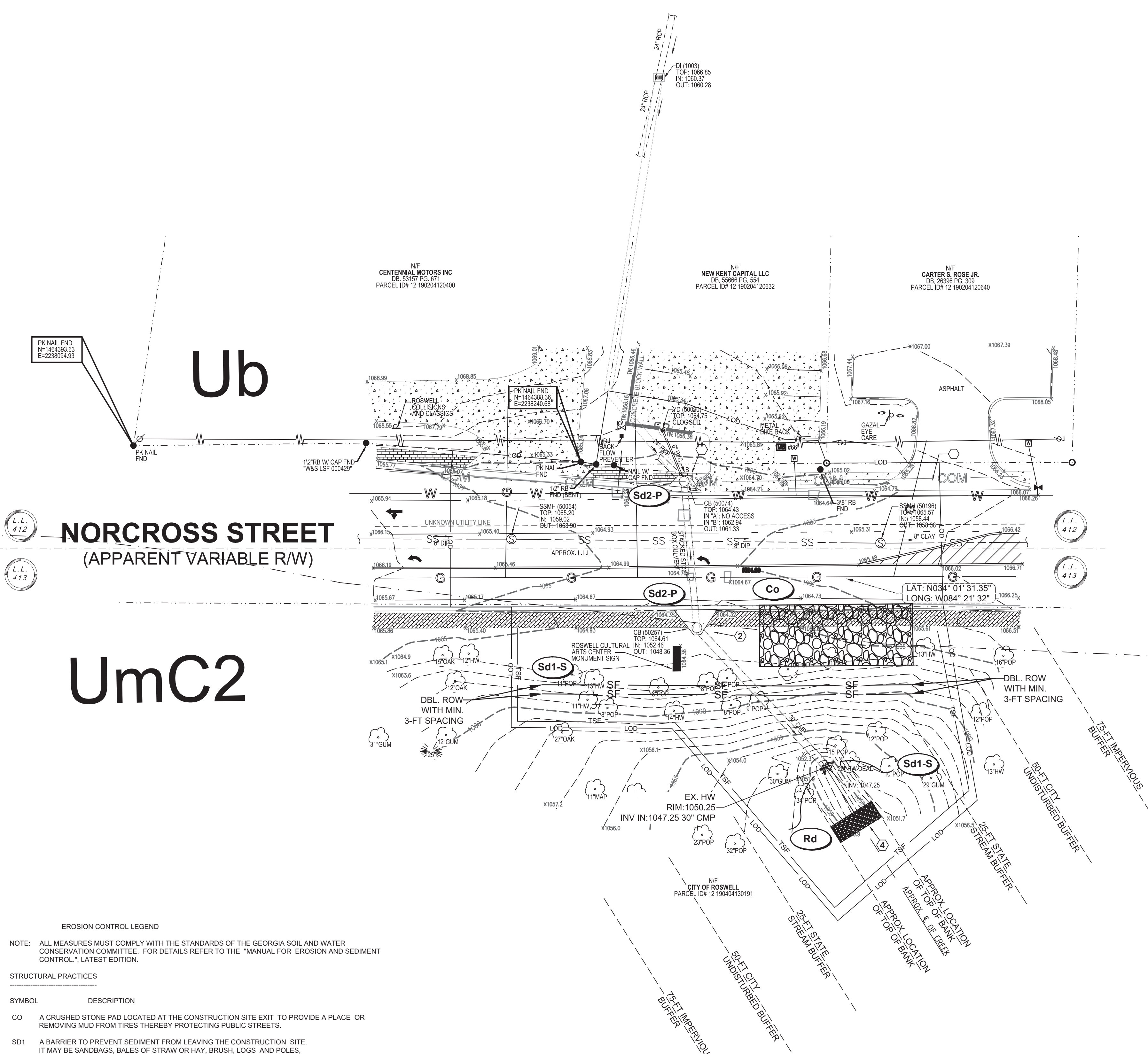
REVISION RECORD	DESCRIPTION	DATE	BY

PROJECT NAME:
NORCROSS STREET CULVERT REPLACEMENT
RELEASED FOR PERMITTING

DRAWING TITLE:
INITIAL ESC

PROJ. MGR.: DRB
DESIGN BY: HMA
DRAWN BY: HMA
PROJ. DATE: 10/26/2018
DRAWING NUMBER:
C-08 OF 17
WKD PROJ. NO.:
20180237.01.AT

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EROSION CONTROL LEGEND

	Co	CONSTRUCTION EXIT
	Sd1-S	TYPE "C" SILT FENCE - SENSITIVE
	Sd2-P	CURB INLET PROTECTION
	LOD	LIMITS OF DISTURBANCE
	TSF	TREE SAVE FENCE
		SOIL TYPE
	Rd	ROCK DAM FILTER

EROSION CONTROL LEGEND

NOTE: ALL MEASURES MUST COMPLY WITH THE STANDARDS OF THE GEORGIA SOIL AND WATER CONSERVATION COMMITTEE. FOR DETAILS REFER TO THE "MANUAL FOR EROSION AND SEDIMENT CONTROL", LATEST EDITION.

STRUCTURAL PRACTICES

SYMBOL	DESCRIPTION
CO	A CRUSHED STONE PAD LOCATED AT THE CONSTRUCTION SITE EXIT TO PROVIDE A PLACE OR REMOVING MUD FROM TIRES THEREBY PROTECTING PUBLIC STREETS.
SD1	A BARRIER TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. IT MAY BE SANDBAGS, BALES OF STRAW OR HAY, BRUSH, LOGS AND POLES, GRAVEL OR A SEDIMENT FENCE. THE BARRIERS ARE USUALLY TEMPORARY AND INEXPENSIVE.
SD2	AN IMPOUNDING AREA CREATED BY EXCAVATING AROUND A STORM DRAIN DROP INLET. THE EXCAVATED AREA WILL BE FILLED AND STABILIZED ON COMPLETION OF CONSTRUCTION ACTIVITIES.

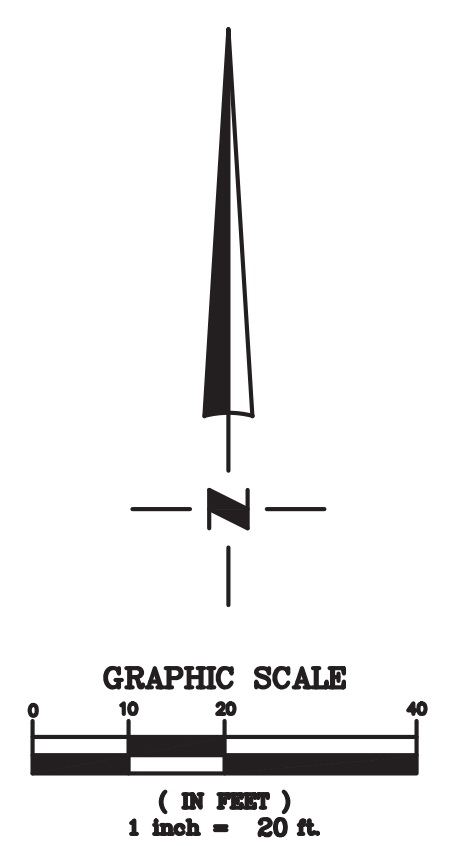
VEGETATIVE PRACTICES

SYMBOL	DESCRIPTION
DU	CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADS, AND DEMOLITION SITES.

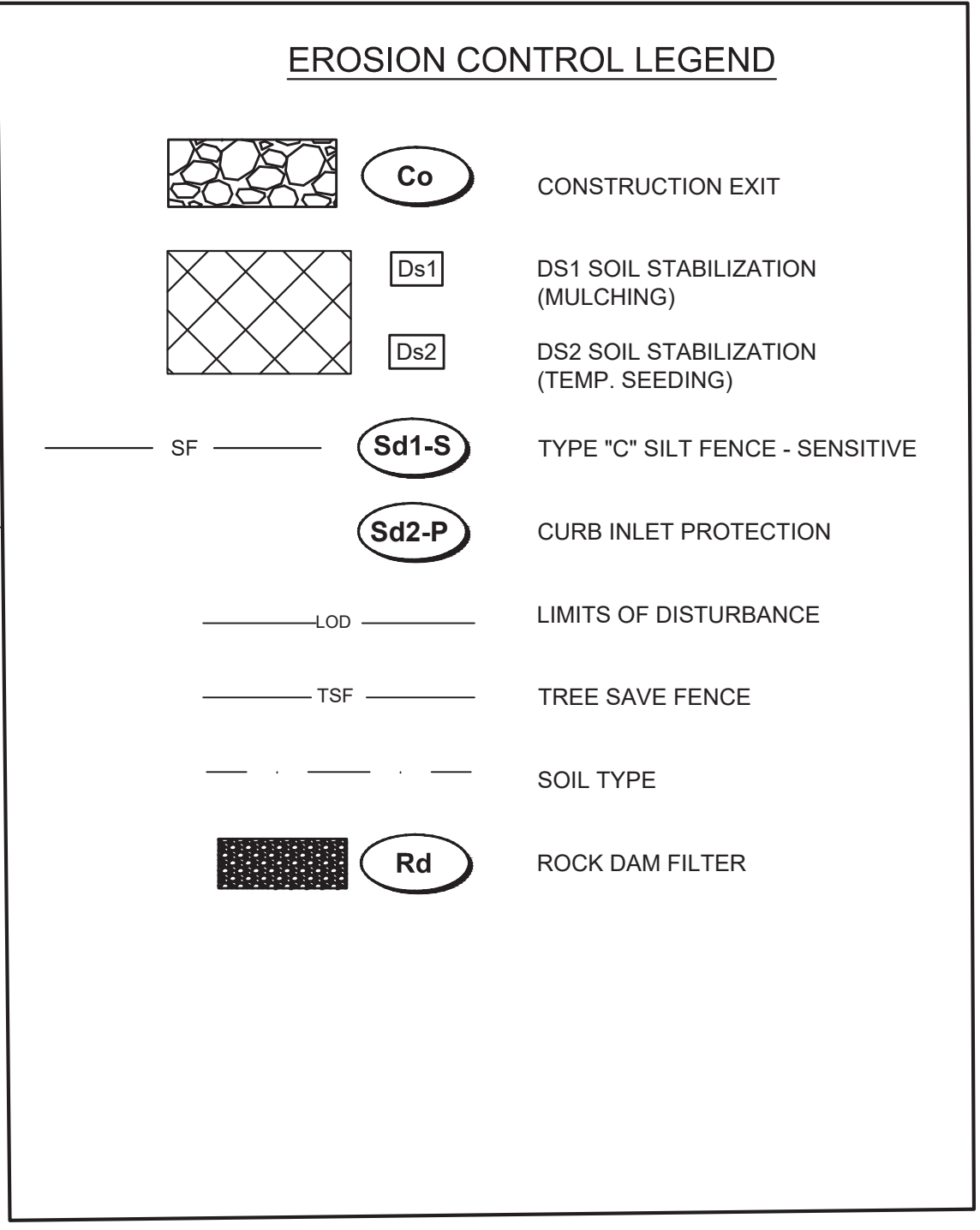
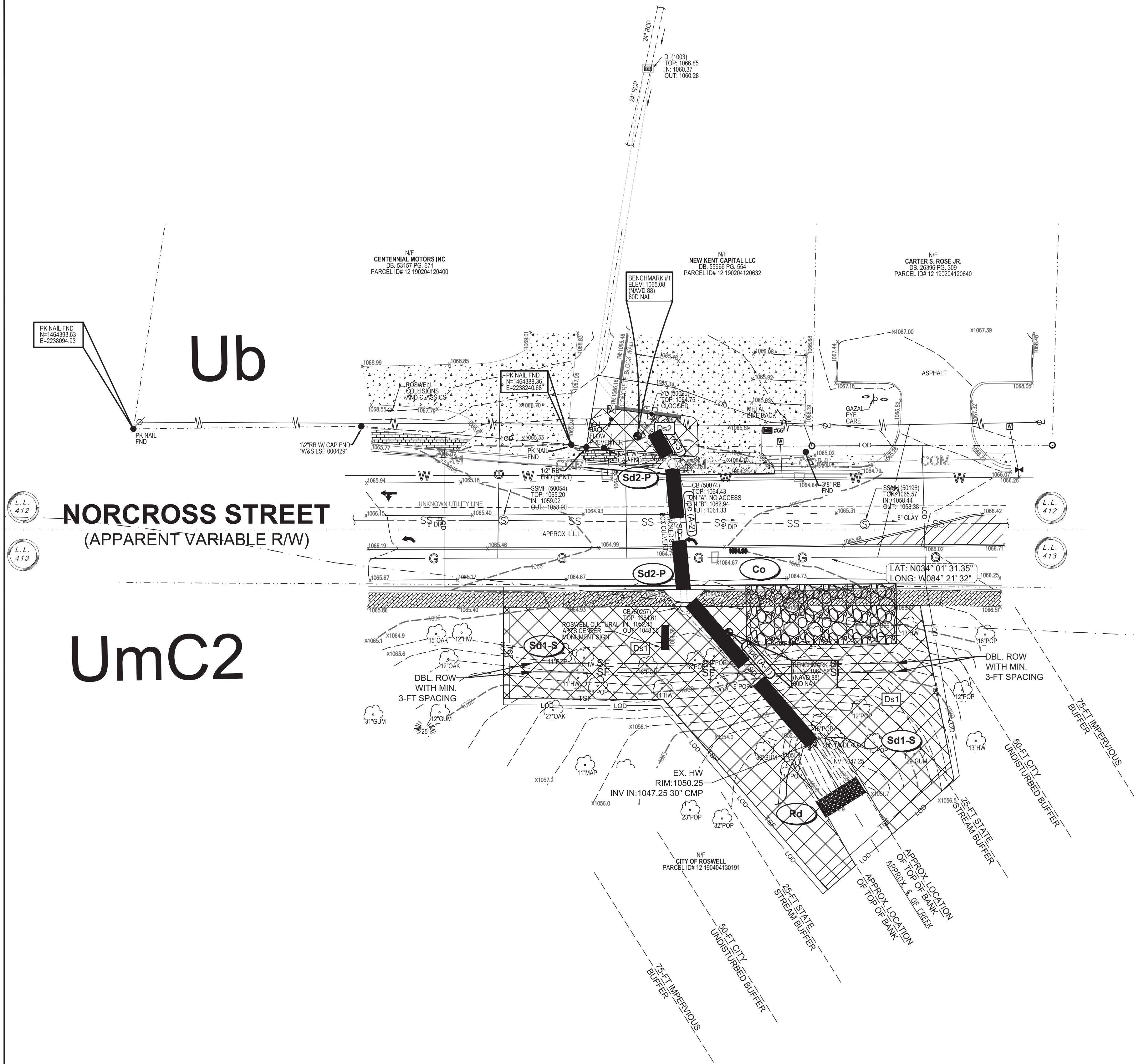
SOIL TYPES

Ub URBAN LAND

UmC2 URBAN LAND - MADISON-BETHEHEM COMPLEX, 2 TO 10 PERCENT SLOPES, MODERATELY ERODED



CONTRACTOR TO VERIFY ALL UTILITIES, SURVEY AND EXISTING CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL UTILITIES, SURVEY AND EXISTING CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL UTILITIES, SURVEY AND EXISTING CONDITIONS.



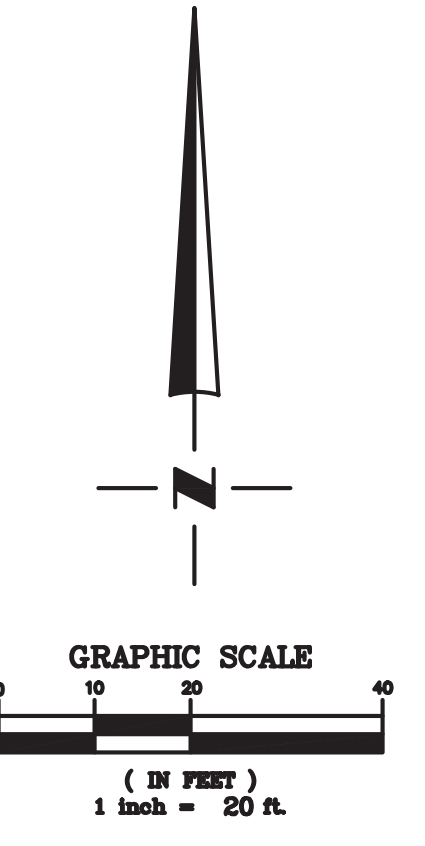
SOIL TYPES

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PROFESSIONAL SEAL

REVISION RECORD	DESCRIPTION	HMA	BY
1	CITY OF ROSWELL COMMENTS		

DATE: 10/26/2018

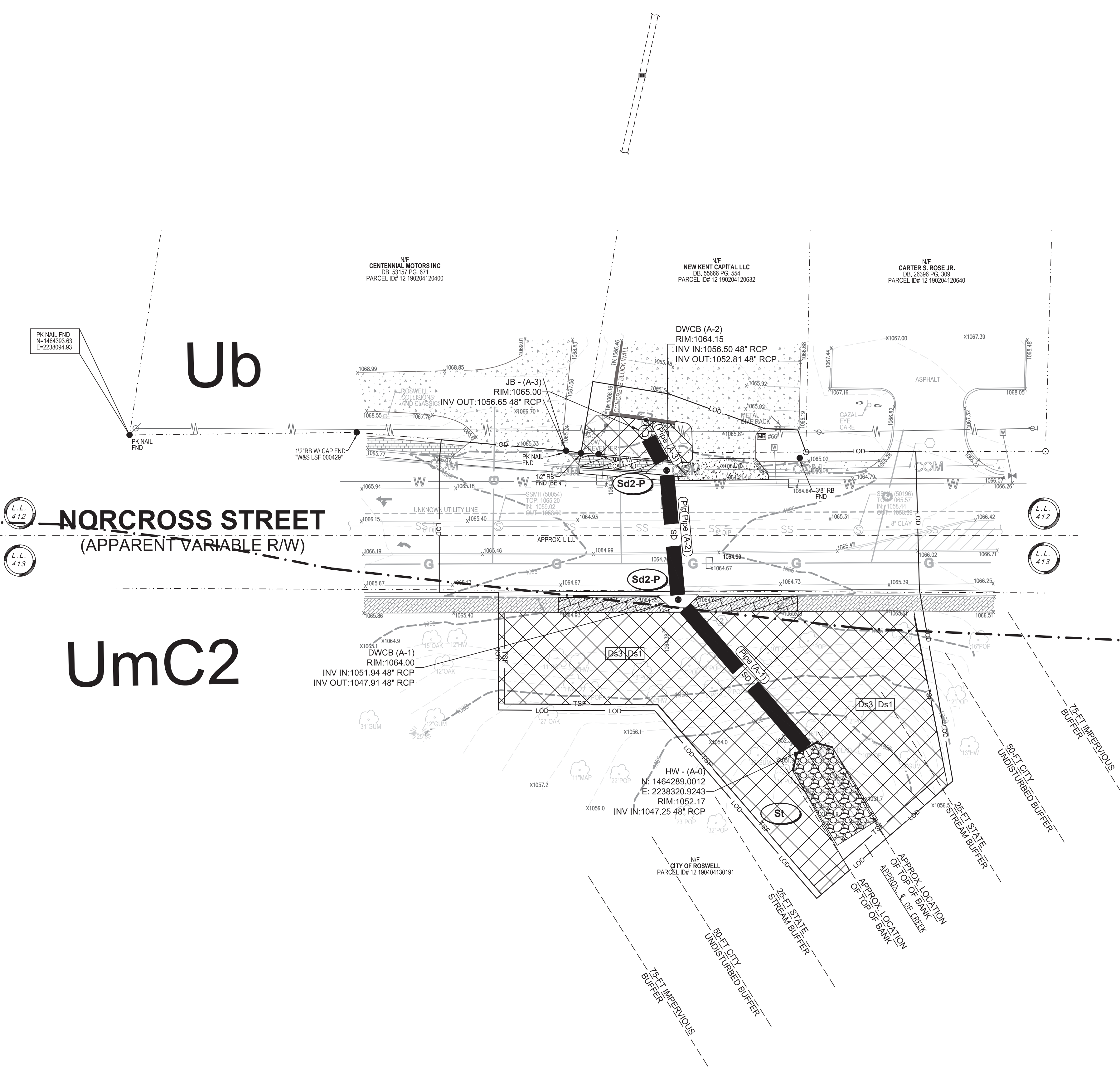
PROJECT NAME: NORCROSS STREET CULVERT REPLACEMENT RELEASED FOR PERMITTING

DRAWING TITLE: INTERMEDIATE ESC

PROJ. MGR.: DRB
 DESIGN BY: HMA
 DRAWN BY: HMA
 PROJ. DATE: 10/26/2018
 DRAWING NUMBER: C-09 OF 17
 WKD PROJ. NO.: 20180237.01.AT

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Ub

NORCROSS STREET
(APPARENT VARIABLE R/W)

UmC2

L.L. 412
L.L. 413

EROSION CONTROL NOTES:

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8. MULCH, TEMPORARY VEGETATION, AND PERMANENT (PERENNIAL) VEGETATION SHALL BE COMPLETED ON ALL EXPOSED AREAS WITHIN 14 DAYS AFTER DISTURBANCE.
9. ADDITIONAL EROSION CONTROL DEVICES MAY BE REQUIRED BY ENGINEER DURING CONSTRUCTION.
10. INSTALL R_d PRIOR TO START OF DEMOLITION.
11. INSTALL S_I AND R_IP RAP TO STABILIZE BANK AND CHANNEL AT END OF CONSTRUCTION.
12. INSTALL SILT FENCE (S_{d1}-S) ABOVE NEW HEADWALLS ONCE CONSTRUCTED TO CONTROL RUNOFF PRIOR TO FULL BANK/SHOULDER STABILIZATION.
13. INSTALL SLOPE STABILIZATION MATTING (SS) AS SLOPES AND CONDITIONS REQUIRE.

EROSION CONTROL LEGEND

Co

Ds1

Ds3

Ds4

SF

LOD

TSF

St

CONSTRUCTION EXIT

DS1 SOIL STABILIZATION (MULCHING)

DS3 SOIL STABILIZATION (PERM. VEGETATION)

DS4 SOIL STABILIZATION (SODDING)

TYPE "C" SILT FENCE - SENSITIVE

CURB INLET PROTECTION

LIMITS OF DISTURBANCE

TREE SAVE FENCE

SOIL TYPE

STORM DRAIN OUTLET PROTECTION (DOT D55A)

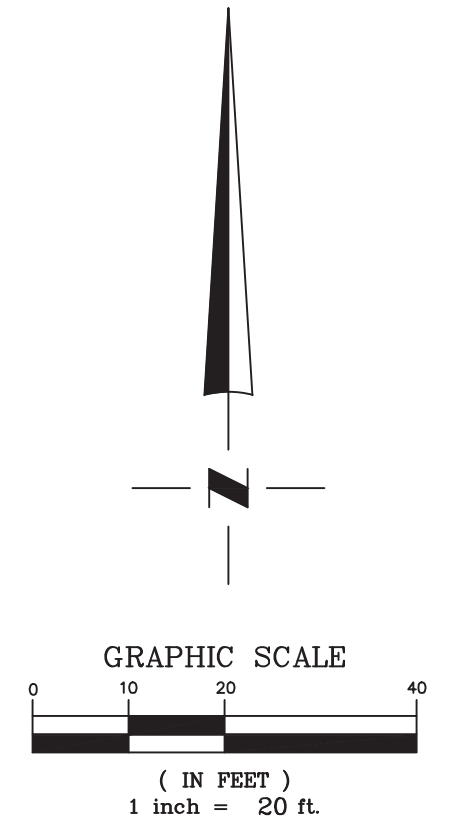
SOIL TYPES

Ub URBAN LAND

UmC2 URBAN LAND - MADISON-BETHLEHEM COMPLEX, 2 TO 10 PERCENT SLOPES, MODERATELY ERODED

St (TYPE I) RIP RAP

PIPE	SIZE	100YR (CFS)	VEL (FPS)	La (FT)	D (IN)	W1 (FT)	W2 (FT)	d50 (FT)	TAILWATER
A-1	48"	142	12	33	36	12	12	1.0	MINIMUM



WK DICKSON
community infrastructure consultants

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80940

PROFESSIONAL SEAL

REVISION RECORD	DATE	DESCRIPTION	HMA	BY

PROJECT NAME:
NORCROSS STREET CULVERT REPLACEMENT
RELEASED FOR PERMITTING

DRAWING TITLE:
FINAL ESC

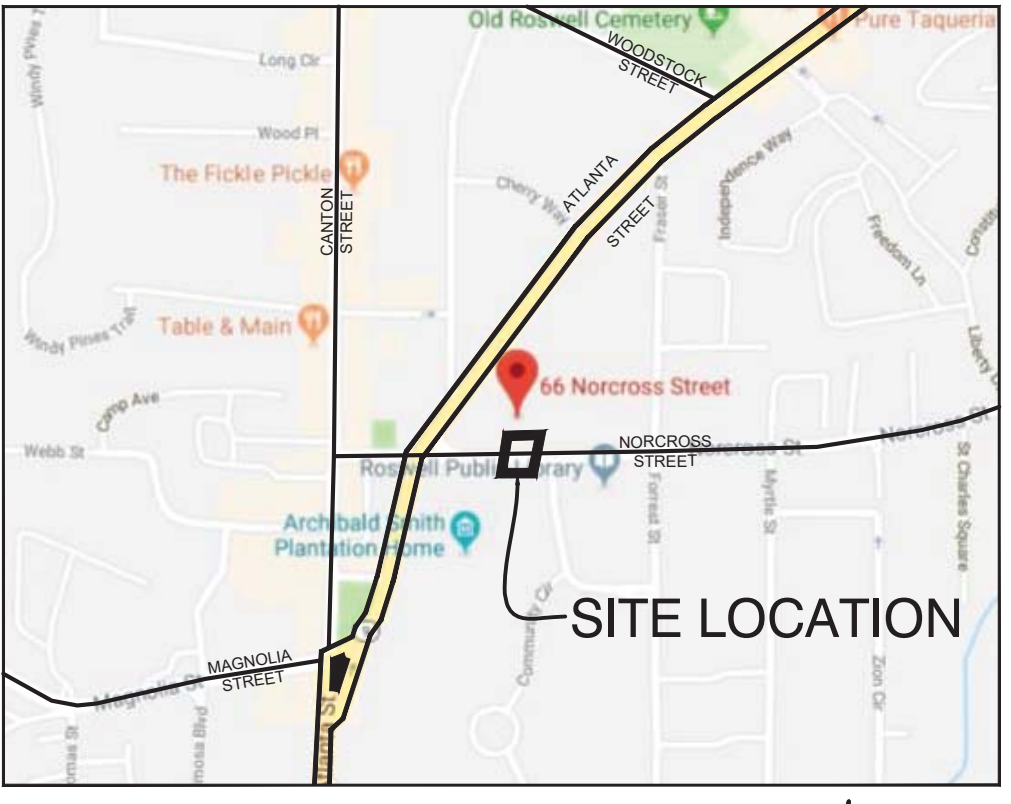
PROJ. MGR.: DRB
DESIGN BY: HMA
DRAWN BY: HMA
PROJ. DATE: 10/26/2018
DRAWING NUMBER:
C-10 OF 17
WKD PROJ. NO.:
20180237.01.AT

RELEASED FOR PERMITTING

STATE OF GEORGIA, DEPARTMENT OF ENVIRONMENTAL PROTECTION (EPD) PERMIT NO. EPD-1000022
 DESIGN PROFESSIONAL'S CERTIFICATION TO CONDUCT EROSION, SEDIMENTATION AND POLLUTION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND SHALL BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. THE APPLICABLE EROSION, SEDIMENTATION AND POLLUTION CONTROL CHECK LIST IS LOCATED ON THE 4TH EROSION NOTE SHEET.

EROSION, SEDIMENTATION & POLLUTION CONTROL NOTES

- 1. EROSION, SEDIMENT, AND POLLUTION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND SHALL BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. THE APPLICABLE EROSION, SEDIMENTATION AND POLLUTION CONTROL CHECK LIST IS LOCATED ON THE 4TH EROSION NOTE SHEET.
- 2. LEVEL II CERTIFIED DESIGN PROFESSIONAL: HAROLD M. ABLES
GSWCC CERTIFICATION # 80940
- 3. 24 HOUR CONTACT: ADAM LYON (770) 401-8349
- 4. PRIMARY PERMITTEE: CITY OF ROSWELL,
66 NORCROSS STREET, ROSWELL, GA 30075 (770) 401-8349
- 5. DISTURBED AREA: 0.44 AC ACRES
TOTAL SITE AREA: 0.44 AC ACRES
THE LIMITS OF DISTURBANCE FOR EACH PHASE OF CONSTRUCTION IS SHOWN ON THE SITE PLAN.
LIMITS OF DISTURBANCE IS NOT GREATER THAN 50 ACRES.
- 6. THE PROPOSED PROJECT IS LOCATED IN FULTON COUNTY, GEORGIA, LAND LOTS 412 & 413, 1ST DISTRICT, 2ND SECTION NEAR 115 NORCROSS STREET AND 1027 ALPHARETTA STREET.
GPS LOCATION LAT: N 34.0253 LONG: W 84.3550
- 7. INITIAL DATE ON THE PLANS: 07/13/2018 REVISION DATE: N/A
- 8. CONSTRUCTION ACTIVITY CONSISTS OF: CULVERT REPLACEMENT AND IMPROVEMENT.
- 9. VICINITY MAP:



LOCATION MAP
N.T.S.

- 10. THE RECEIVING WATERS FOR THIS PROJECT IS A TRIBUTARY TO HOG WALLOW CREEK. THIS PROJECT DOES NOT DISCHARGE STORM WATER DIRECTLY INTO AN IMPAIRED STREAM, BUT IT IS LOCATED WITHIN ONE LINEAR MILE OF AN IMPAIRED STREAM.

DESIGN PROFESSIONAL'S CERTIFICATION:

11. "I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION."

12. "I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100002"

Harold M. Ables
 HAROLD M. ABLES,
 LEVEL II CERTIFIED DESIGN PROFESSIONAL
 GSWCC CERTIFICATION NO. 80940 EXP. 06/30/2020

13. I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR THE MONITORING OF: (A) ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES SHOWN ON THE USGS TOPOGRAPHIC MAP AND ALL OTHER FIELD VERIFIED PERENNIAL AND INTERMITTENT STEAMS AND OTHER WATER BODIES, OR (B) WHERE ANY SUCH SPECIFIC IDENTIFIED PERENNIAL OR INTERMITTENT STREAM AND OTHER WATER BODY IS NOT PROPOSED TO BE SAMPLED, I HAVE DETERMINED IN MY PROFESSIONAL JUDGMENT, UTILIZING THE FACTORS REQUIRED IN THE GENERAL NPDES PERMIT NO. GAR 100002, THAT THE INCREASE IN THE TURBIDITY OF EACH SPECIFIC IDENTIFIED SAMPLED RECEIVING WATER WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED UN-SAMPLED RECEIVING WATER.

14. THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS, PERIMETER CONTROL BMP'S, AND SEDIMENT BASINS IN ACCORDANCE WITH PART IV.A.5. WITHIN 7 DAYS AFTER INSTALLATION.

15. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50- FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

16. THIS PROJECT DOES NOT ENCROACH ON ANY BUFFERS.

17. AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL. REVISIONS OR AMENDMENTS SHOULD BE SUBMITTED TO THE LOCAL ISSUING AUTHORITY FOR REVIEW.

18. WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

WASTE MATERIALS

ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN THE DUMPSTER. THE DUMPSTER WILL BE EMPTIED A MINIMUM OF ONCE PER WEEK OR MORE OFTEN IF NECESSARY AND TRASH WILL BE HAULED AS REQUIRED BY LOCAL REGULATION. NO CONSTRUCTION WASTE WILL BE BURIED ONSITE.

ALL PERSONNEL WILL BE INSTRUCTED ON PROPER PROCEDURES FOR WASTE DISPOSAL. A NOTICE STATING THESE PRACTICES WILL BE POSTED AT THE JOBSITE AND THE CONTRACTOR WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

EROSION, SEDIMENTATION & POLLUTION CONTROL NOTES (continued)

19. "THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES."
20. "EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE."
21. "ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."
22. THIS PROJECT DOES DISCHARGE STORM WATER DOWNSTREAM INTO HOG WALLER CREEK, AN IMPAIRED STREAM SEGMENT, BUT IS NOT WITHIN 1 LINEAR MILE UPSTREAM OF AND WITHIN THE SAME WATERSHED AS, ANY PORTION OF AN BIOTA IMPAIRED STREAM SEGMENT. THE PROJECT MUST COMPLY WITH PART III.C. OF THE PERMIT. THE APPENDIX I LIST OF ALL THE BMP'S THAT WILL BE USED FOR THOSE AREAS OF THE SITE WHICH DISCHARGES INTO THE IMPAIRED STREAM SHALL BE LISTED ON THE PLANS.
23. A TMDL IMPLEMENTATION PLAN FOR SEDIMENT HAS NOT BEEN FINALIZED FOR THE IMPAIRED STREAM SEGMENT (IDENTIFIED IN ITEM #22 ABOVE) AT LEAST SIX MONTHS PRIOR TO SUBMITTAL OF NOI. THE ES&PC MUST ADDRESS ANY SITE SPECIFIC CONDITIONS OR REQUIREMENTS INCLUDED IN THE TMDL IMPLEMENTATION PLAN. THERE IS NO TMDL IMPLEMENTATION PLAN FOR SEDIMENT FOR HOG WALLER CREEK.
24. CONCRETE WASH DOWN OF TOOLS, CONCRETE MIXER CHUTES, HOPPERS AND THE REAR OF THE VEHICLE IS PERMITTED. WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED. THIS PROJECT DOES NOT ALLOW THE CONCRETE WASHDOWN ON THE PROJECT SITE. SEE ES&PC PLANS FOR LOCATION IF ALLOWED.
25. SPILL PREVENTION AND HAZARDOUS WASTES
- ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL, STATE, AND/OR FEDERAL REGULATIONS AND BY THE MANUFACTURER OF SUCH PRODUCTS. THE JOB SITE SUPERINTENDENT, WHO WILL ALSO BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED, WILL INSTRUCT SITE PERSONAL IN THESE PRACTICES. MATERIAL SAFETY DATA SHEETS (MSDS'S) FOR EACH SUBSTANCE WITH HAZARDOUS PROPERTIES THAT IS USED ON THE JOB SITE WILL BE OBTAINED AND USED FOR THE PROPER MANAGEMENT OF POTENTIAL WASTES THAT MAY RESULT FROM THESE PRODUCTS. AN MSDS WILL BE POSTED IN THE IMMEDIATE AREA WHERE SUCH PRODUCT IS STORED AND/OR USED AND ANOTHER COPY OF EACH MSDS WILL BE MAINTAINED IN THE ES&PC FILE AT THE JOB SITE CONSTRUCTION TRAILER OFFICE. EACH EMPLOYEE WHO MUST HANDLE A SUBSTANCE WITH HAZARDOUS PROPERTIES WILL BE INSTRUCTED ON THE USE OF MSDS SHEETS AND THE SPECIFIC INFORMATION IN THE APPLICABLE MSDS FOR THE PRODUCT HE/SHE IS USING, PARTICULARLY REGARDING SPILL CONTROL TECHNIQUES.
- THE CONTRACTOR WILL IMPLEMENT THE SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN FOUND WITHIN THIS ES&PC AND WILL TRAIN ALL PERSONNEL IN THE PROPER CLEANUP AND HANDLING OF SPILLED MATERIALS. NO SPILLED HAZARDOUS MATERIALS OR HAZARDOUS WASTES WILL BE ALLOWED TO COME IN CONTACT WITH STORMWATER DISCHARGES. IF SUCH CONTACT OCCURS, THE STORMWATER DISCHARGE WILL BE CONTAINED ON SITE UNTIL APPROPRIATE MEASURES IN COMPLIANCE WITH STATE AND FEDERAL REGULATION ARE TAKEN TO DISPOSE OF SUCH CONTAMINATED STORMWATER. IT SHALL BE THE RESPONSIBILITY OF THE JOB SITE SUPERINTENDENT TO PROPERLY TRAIN ALL PERSONNEL IN THE USE OF THE SPCC PLAN.

SOIL CLEANUP AND CONTROL PRACTICES

- LOCAL, STATE AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL.
- MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO, BROOMS, DUSTPANS, MAPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAND, SAWDUST AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS.
- SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.
- ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, STATE AND FEDERAL REGULATIONS.
- FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.
- FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITH 24 HOURS AT 1-800-426-2675.
- FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD WILL BE CONTACTED WITHIN 24 HOURS.
- FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.

THE CONTRACTOR SHALL NOT STORE MORE THAN 1320 GALLONS OF PETROLEUM ON SITE INCLUDING CAPACITIES OF EQUIPMENT.
 THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THIS PLAN IF ANY ONE PIECE OF EQUIPMENT HAS A CAPACITY GREATER THAN 660 GALLONS. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY A LICENSED PROFESSIONAL.

26. A DESCRIPTION OF THE MEASURES THAT WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORM WATER AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED ARE: MULCHING AND SEEDING, SLOPE STABILIZATION AND RIP RAP.

27. A DESCRIPTION OF THE MEASURES THAT WILL BE INSTALLED TO REDUCE THE POLLUTANTS IN STORM WATER DISCHARGE ARE: INITIAL PHASE OF THE PLAN INCLUDES SILT FENCING TO PREVENT SEDIMENT FROM LEAVING THE SITE ALONG WITH INLET PROTECTION. LIMITS OF DISTURBANCE FOR THE INITIAL PHASE ARE TO BE ONLY THE AREAS NEEDED TO INSTALL INITIAL BMP'S. THE INTERMEDIATE PHASE BMP'S INCLUDE INLET PROTECTION, SILT FENCE, OUTLET PROTECTION, MULCHING AND TEMPORARY SEEDING. THE FINAL PHASE OF THE PLAN INCLUDES PERMANENT SEEDING AND THE FINAL INSTALLATION AND USE OF THE CULVERT WITH RIP RAP APRONS.

28. SEE EROSION CONTROL NOTE SHEET (3) FOR DESCRIPTION OF THE INTENDED SEQUENCE OF MAJOR ACTIVITIES.

CONSTRUCTION SCHEDULE

ACTIVITY	START DATE	FINISH DATE
EROSION CONTROL DEVICES & TREE PROTECTION MEASURES	WEEK 1	-
CLEARING & GRUBBING	WEEK 1	WEEK 1
PIPE INSTALLATION	WEEK 2	WEEK 3
PAVING	WEEK 3	WEEK 3
GRASSING	WEEK 2	WEEK 3
MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES	WEEK 2	WEEK 4
FINAL LANDSCAPING, GRASSING/ REMOVE E & S DEVICES	WEEK 4	-

29. INSPECTIONS:

PERMITTEE REQUIREMENTS.

- (1) EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE, CERTIFIED PERSONNEL INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.
- (2) MEASURE RAINFALL ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING PERENNIALS APPROPRIATE FOR THE REGION.
- (3) CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES RAINFALL OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY OR ANY NON-WORKING FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, WHICHEVER OCCURS FIRST: (A) DISTURBED AREAS OF THE PRIMARY PERMITTEE'S CONSTRUCTION SITE; (B) AREAS USED BY THE PRIMARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION; AND (C) STRUCTURAL CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITTEE MUST COMPLY WITH PART IV.D.4.a.(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.
- (4) CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E., UNTIL A NOTICE OF TERMINATION IS SUBMITTED TO EPD) THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEMS AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGED LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S).
- (5) BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION.
- (6) A REPORT OF EACH INSPECTION THAT INCLUDES THE NAME(S) OF THE CERTIFIED PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, CONSTRUCTION PHASE (I.E., INITIAL, INTERMEDIATE OR FINAL) MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.4.a(5), OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION PROJECT THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY END OF THE SECOND BUSINESS DAY AND/OR WORKING DAY AND SHALL IDENTIFY ALL INCIDENTS OF BEST MANAGEMENT PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN. WHERE THE REPORT DOES NOT IDENTIFY ANY INCIDENTS, THE INSPECTION REPORT SHALL CONTAIN A STATEMENT THAT THE BEST MANAGEMENT PRACTICES ARE IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G.2. OF THIS PERMIT.

30. THRU 34.

SAMPLING FREQUENCY AND REPORTING:
NOT REQUIRED FOR THIS PROJECT



REVISION RECORD	DESCRIPTION	HMA	BY
1	CITY OF ROSWELL COMMENTS	DATE	NO

PROJECT NAME: NORCROSS STREET CULVERT REPLACEMENT
 RELEASED FOR PERMITTING
DRAWING TITLE: NPDES NOTES 1

PROJ. MGR.: DRB
 DESIGN BY: HMA
 DRAWN BY: HMA
 PROJ. DATE: 10/26/2018
 DRAWING NUMBER:

C-11 OF 17

WKD PROJ. NO.:
20180237.01.AT

RELEASED FOR PERMITTING

35. DESCRIPTION OF APPROPRIATE CONTROLS AND MEASURES THAT WILL BE IMPLEMENTED AT THE CONSTRUCTION SITE INCLUDING INITIAL, INTERMEDIATE AND FINAL PHASE BMP'S.

INITIAL PHASE

EROSION CONTROL NOTES

- PRIOR TO THE LAND DISTURBING ACTIVITY, THE CONTRACTOR SHOULD SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE AREA SITE DEVELOPMENT INSPECTOR.
- NO STAGING AREAS, MATERIAL STORAGE, CONCRETE WASH OUT AREAS, FUEL STORAGE, OR DEBRIS BURN AND BURIAL HOLES SHOULD BE LOCATED WITHIN 50 FT OF DESIGNATED TREE PROTECTION AREAS OR STREAM BUFFERS.
- A COPY OF THE ES&PC PLAN MUST BE PRESENT ON THE SITE AT ALL TIMES.
- PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITIES, THE LIMITS OF LAND DISTURBANCE SHOULD BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS. THE LOCATION AND EXTENT OF ALL AUTHORIZED LAND DISTURBANCE ACTIVITY SHOULD BE DEMARCATED FOR THE DURATION OF THE CONSTRUCTION ACTIVITY, NO LAND DISTURBANCE SHALL OCCUR OUTSIDE THE APPROVED LIMITS INDICATED ON THE APPROVED PLANS.
- IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION ENTRANCE/EXITS, ALL PERIMETER EROSION CONTROL AND STORMWATER MANAGEMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE CLEARING PHASE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
- TYPE "C" SILT FENCE SHOULD BE INSTALLED AT THE PERIMETER OF THE DISTURBED AREA AS SHOWN ON THE PLAN. SILT SHOULD BE REMOVED WHEN ACCUMULATION REACHES 1/2 HEIGHT OF THE BARRIER. THE PERIMETER SILT FENCE SHOULD BE INSPECTED WEEKLY AND AFTER QUALIFYING RAIN EVENTS FOR ANY FAILURES. ANY FAILURES OF SAID FENCING SHOULD BE REPAIRED IMMEDIATELY.
- INLET SEDIMENT PROTECTION MEASURES SHALL BE INSTALLED ON ALL EXISTING STORM STRUCTURES AS SHOWN ON THE PLAN.
- STONE CHECK DAMS SHALL BE INSTALLED IN AREAS OF CONCENTRATED FLOWS AS SHOWN ON THE PLAN.
- TREE PROTECTION FENCING AND STREAM BUFFER LIMITS SHOULD BE INSTALLED PRIOR TO THE START OF ANY LAND DISTURBANCE ACTIVITY AND MAINTAINED UNTIL FINAL LANDSCAPE IS INSTALLED. THE TREE PROTECTION FENCING SHOULD BE INSPECTED DAILY. ANY FAILURES OF SAID FENCING SHOULD BE REPAIRED IMMEDIATELY.
- AFTER INSTALLATION OF INITIAL EROSION CONTROL MEASURES, THE SITE CONTRACTOR SHALL SCHEDULE AN INSPECTION BY THE PROJECT DESIGN PROFESSIONAL. NO OTHER CONSTRUCTION ACTIVITIES SHOULD OCCUR UNTIL THE PROJECT DESIGN PROFESSIONAL APPROVES THE INSTALLATION OF SAID EROSION CONTROL MEASURES. IF UNFORESEEN CONDITIONS EXIST IN THE FIELD THAT WARRANT ADDITIONAL EROSION CONTROL MEASURES, THE CONTRACTOR SHOULD CONSTRUCT ANY ADDITIONAL EROSION CONTROL DEVICES DEEMED NECESSARY BY THE SITE INSPECTION WITH CONSULTATION WITH THE DESIGN PROFESSIONAL.
- AFTER APPROVAL OF THE INITIAL EROSION CONTROL INSTALLATION, THE CONTRACTOR MAY PROCEED WITH REMAINING CLEARING AND GRUBBING ACTIVITIES.
- MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 14 DAYS OF LAND DISTURBANCE.
- PERMITTEES SHALL INSPECT CONTROL MEASURES AS REQUIRED BY NPDES.
- FAILURE TO INSTALL, OPERATE, OR MAINTAIN ALL EROSION CONTROL MEASURES CAN RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE APPROVED EROSION CONTROL PLANS.
- NO BURY OR BURN PITS SHALL BE PERMITTED ON THE PROJECT SITE WITHOUT WRITTEN AUTHORIZATION BY THE OWNER.
- SILT FENCE SHALL BE INSTALLED AS SHOWN ON THE PLAN AS ACCESS IS OBTAINED DURING CLEARING. NO GRADING SHALL TAKE PLACE UNTIL ALL SILT FENCE AND TEMPORARY SEDIMENT PONDS AND/OR RETROFITTED DETENTION PONDS ARE CONSTRUCTED AS SHOWN ON THE CLEARING PHASE EROSION CONTROL PLAN.
- ALL DISTURBED AREAS LEFT MULCHED AFTER 30 DAYS SHALL BE STABILIZED WITH TEMPORARY VEGETATION.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED DAILY BY CONTRACTOR TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
- THE SITE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES INCLUDING REPLACING OR REPAIRING ANY DAMAGED DEVICES DUE TO ANY CONSTRUCTION ACTIVITY BY OTHERS.

INTERMEDIATE PHASE

EROSION CONTROL NOTES

- PERFORMANCE TO ENSURE THAT LAND STRIPPED OF ITS NATURAL GROUND COVER IS EXPOSED ONLY IN SMALL QUANTITIES AND THEREFORE LIMITED DURATION, BEFORE PERMANENT EROSION PROTECTION IS ESTABLISHED.
- EARTHWORK OPERATIONS IN THE VICINITY OF STREAM BUFFERS SHOULD BE CAREFULLY CONTROLLED TO AVOID DUMPING OR SLOUGHING INTO THE BUFFER AREAS.
- SEDIMENT SHALL NOT BE WASHED INTO INLETS. IT SHALL BE REMOVED FROM THE SEDIMENT TRAPS AND DISPOSED OF AND STABILIZED SO THAT IT WILL NOT ENTER THE INLETS AGAIN.
- TYPE "C" SILT FENCE SHALL BE PLACED 10' FROM THE TOE OF ALL DIRT STOCK PILE AREAS. STOCK PILES ARE TO BE COVERED AT THE END OF EACH DAY.
- INLET SEDIMENT PROTECTION MEASURES SHALL BE INSTALLED ON ALL STORM STRUCTURES AS THEY ARE CONSTRUCTED.
- STORM DRAIN OUTLET PROTECTION SHALL BE PLACED AT ALL OUTLET HEADWALLS AS SOON AS THE HEADWALL IS CONSTRUCTED.
- STONE CHECK DAMS SHALL BE INSTALLED IN AREAS OF CONCENTRATED FLOWS IF SHOWN ON THE PLAN.
- MULCH, TEMPORARY VEGETATION, OR PERMANENT VEGETATION SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 14 DAYS OF LAND DISTURBANCE.
- SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE CHECKED WEEKLY AND AFTER EACH QUALIFYING RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED IF SEDIMENT ACCUMULATION HAS REACHED 1/2 THE CAPACITY OF THE DEVICE.
- EROSION CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE DESIGN PROFESSIONAL IMMEDIATELY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING BARRIERS AT THE TOE OF SLOPES UNDER CONSTRUCTION. THESE BARRIERS SHALL BE AS SHOWN IN THE PLANS. THE BARRIERS MAY BE RELOCATED AND REUSED AFTER PERMANENT SLOPE STABILIZATION BECOMES FULLY ESTABLISHED. AS THEY ARE RELOCATED, ANY DEFECTIVE MATERIALS IN THE BARRIER SHALL BE REPLACED. IN ADDITION, ALL DEBRIS AND SILT AT THE PREVIOUS LOCATION SHALL BE REMOVED.
- CUT SLOPES ARE NOT TO EXCEED "2H:1V"
FILL SLOPES ARE NOT TO EXCEED "2.5H:1V"
- ALL DRAINAGE SWALES SHALL BE APPLIED WITH PERMANENT VEGETATIVE COVER AS SOON AS FINAL GRADE IS ACHIEVED.
- ALL GRADED AREAS SHALL BE APPLIED WITH PERMANENT VEGETATIVE COVER AS SOON AS FINAL GRADE IS ACHIEVED.
- ALL DISTURBED AREAS LEFT MULCHED AFTER 30 DAYS SHALL BE STABILIZED WITH TEMPORARY GRASSING.
- FAILURE TO INSTALL, OPERATE, OR MAINTAIN ALL EROSION CONTROL MEASURES CAN RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE APPROVED EROSION CONTROL PLANS.
- THE SITE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES INCLUDING REPLACING OR REPAIRING ANY DAMAGED DEVICES DUE TO ANY CONSTRUCTION ACTIVITY BY OTHERS.

FINAL PHASE

EROSION CONTROL NOTES

- SEDIMENT SHALL NOT BE WASHED INTO INLETS. IT SHALL BE REMOVED FROM THE SEDIMENT TRAPS AND DISPOSED OF AND STABILIZED SO THAT IT WILL NOT ENTER THE INLETS AGAIN.
- MULCH, TEMPORARY VEGETATION, OR PERMANENT VEGETATION SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 14 DAYS OF LAND DISTURBANCE.
- ALL DISTURBED AREAS LEFT MULCHED AFTER 30 DAYS SHALL BE STABILIZED WITH TEMPORARY GRASSING.
- WHERE APPLICABLE, AFTER CURBING, GRADED AGGREGATE BASE, AND PAVEMENT HAVE BEEN INSTALLED, ALL INLET SEDIMENT TRAPS ON SINGLE AND DOUBLE WING CATCH BASINS ALONG WITH ANY CURB INLETS SHALL BE REMOVED AND REPLACED WITH CURB FILTER INLET PROTECTION.
- ALL GRADING SHOULD BE APPLIED WITH PERMANENT VEGETATIVE COVER AS SOON AS FINAL GRADE IS ACHIEVED.
- EROSION AND SEDIMENT CONTROL MEASURES SHOULD BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.
- CONTRACTOR SHALL INSPECT CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
- FAILURE TO INSTALL, OPERATE, OR MAINTAIN ALL EROSION CONTROL MEASURES CAN RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE APPROVED EROSION CONTROL PLANS.
- THE SITE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES INCLUDING REPLACING OR REPAIRING ANY DAMAGED DEVICES DUE TO ANY CONSTRUCTION ACTIVITY BY OTHERS.
- UPON COMPLETE SITE STABILIZATION OF PERMANENT GROUND COVER, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND DISPOSE OF THEM UNLESS NOTED ON PLANS.
- GRAPHIC SCALE AND NORTH ARROWS ARE DISPLAYED ON THE PLAN SHEETS.
- TOPOGRAPHIC INFORMATION OBTAINED FROM PARTIAL TOPOGRAPHIC SURVEY FOR CITY OF ROSWELL BY TERRAMARK LAND SURVEYING, INC. EXISTING AND PROPOSED CONTOUR LINES ARE DISPLAYED ON THE EROSION AND SEDIMENT CONTROL SHEETS.
- USE OF ALTERNATE BMP'S WHOSE PERFORMANCE HAS BEEN DOCUMENTED TO BE EQUIVALENT TO OR SUPERIOR TO CONVENTIONAL BMP'S AS CERTIFIED BY A DESIGN PROFESSIONAL (UNLESS DISAPPROVED BY EPD OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION). PLEASE REFER TO THE ALTERNATE BMP GUIDANCE DOCUMENT FOUND AT WWW.GASWCC.GEORGIA.GOV
- USE OF ALTERNATIVE BMP FOR APPLICATION TO THE EQUIVALENT BMP LIST. PLEASE REFER TO APPENDIX A-2 OF THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA 2016 EDITION.

- FOR THE STATE WATERS ADJACENT TO THE PROJECT LIMITS, 25-FOOT, 50-FOOT AND 75-FT BUFFERS ARE SHOWN ON THE EROSION CONTROL PLAN SHEETS AS APPLICABLE.
- THERE ARE STATE WATERS LOCATED WITHIN 200 FEET OF THIS PROJECT. SEE FLOOD INSURANCE MAP NO. NO. 13121C0063G REVISED SEPTEMBER 18, 2013. NO PARTS OF THE PROJECT IS LOCATED IN A FLOOD ZONE AREA.
- DELINEATION AND ACREAGE OF CONTRIBUTING DRAINAGE AREAS ON THE PROJECT SITE ARE SHOWN ON THE EROSION CONTROL PLAN SHEETS.
- HYDROLOGY STUDY AND MAPS OF DRAINAGE BASINS FOR BOTH PRE- AND POST DEVELOPMENT CONDITIONS ARE NOT APPLICABLE FOR THIS PROJECT.

WEIGHTED PRE-CONSTRUCTION CURVE NUMBER =
WEIGHTED POST-CONSTRUCTION CURVE NUMBER =
SEE SITE HYDROLOGIC STUDY FOR ADDITIONAL INFORMATION

- STORM-DRAIN PIPE AND WEIR VELOCITIES WITH APPROPRIATE OUTLET PROTECTION TO ACCOMMODATE DISCHARGES WITHOUT EROSION ARE SHOWN ON THE EROSION CONTROL PLAN SHEETS. STORM WATER DISCHARGE POINTS ARE IDENTIFIED/DELINEATED AS WELL ON THE EROSION CONTROL PLAN SHEETS.

- SOIL SERIES FOR THIS PROJECT ARE SHOWN ON THE EROSION CONTROL PLANS SHEETS AND LISTED BELOW:

MAP SYMBOL	NAME	HYDROLOGIC SOIL GROUP
Ub	URBAN LAND	-
UmC2	URBAN LAND-MADISON-BETHLEHEM COMPLEX, 2 TO 10 PERCENT SLOPES, MODERATELY ERODED	-

- LIMITS OF DISTURBANCE FOR EACH PHASE OF CONSTRUCTION IS DISPLAYED ON THE EROSION CONTROL PLAN SHEETS AND COVER PAGE.

- A MINIMUM OF 67 CY PER ACRE SEDIMENT STORAGE PER ACRES DRAINED IS PROVIDED USING SILT FENCE.

PROVIDE A MINIMUM OF 67 CUBIC YARDS OF SEDIMENT STORAGE PER ACRE DRAINED USING A TEMPORARY SEDIMENT BASIN, RETROFITTED DETENTION POND, AND/OR EXCAVATED INLET SEDIMENT TRAPS FOR EACH COMMON DRAINAGE LOCATION. SEDIMENT STORAGE VOLUME MUST BE IN PLACE PRIOR TO AND DURING ALL LAND DISTURBANCE ACTIVITIES UNTIL FINAL STABILIZATION OF THE SITE HAS BEEN ACHIEVED. A WRITTEN JUSTIFICATION EXPLAINING THE DECISION TO USE EQUIVALENT CONTROLS WHEN A SEDIMENT BASIN IS NOT ATTAINABLE MUST BE INCLUDED IN THE PLAN FOR EACH COMMON DRAINAGE LOCATION IN WHICH A SEDIMENT BASIN IS NOT PROVIDED. A WRITTEN JUSTIFICATION AS TO WHY 67 CUBIC YARDS OF STORAGE IS NOT ATTAINABLE MUST ALSO BE GIVEN. WORKSHEETS FROM THE MANUAL MUST BE INCLUDED FOR STRUCTURAL BMP'S AND ALL CALCULATIONS USED BY THE DESIGN PROFESSIONAL TO OBTAIN THE REQUIRED SEDIMENT STORAGE WHEN USING EQUIVALENT CONTROLS. WHEN DISCHARGING FROM SEDIMENT BASINS AND IMPOUNDMENTS, PERMITTEES ARE REQUIRED TO UTILIZE OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SURFACE, UNLESS INFEASIBLE. IF OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SURFACE ARE NOT FEASIBLE, A WRITTEN JUSTIFICATION EXPLAINING THIS DECISION MUST BE INCLUDED IN THE PLAN.

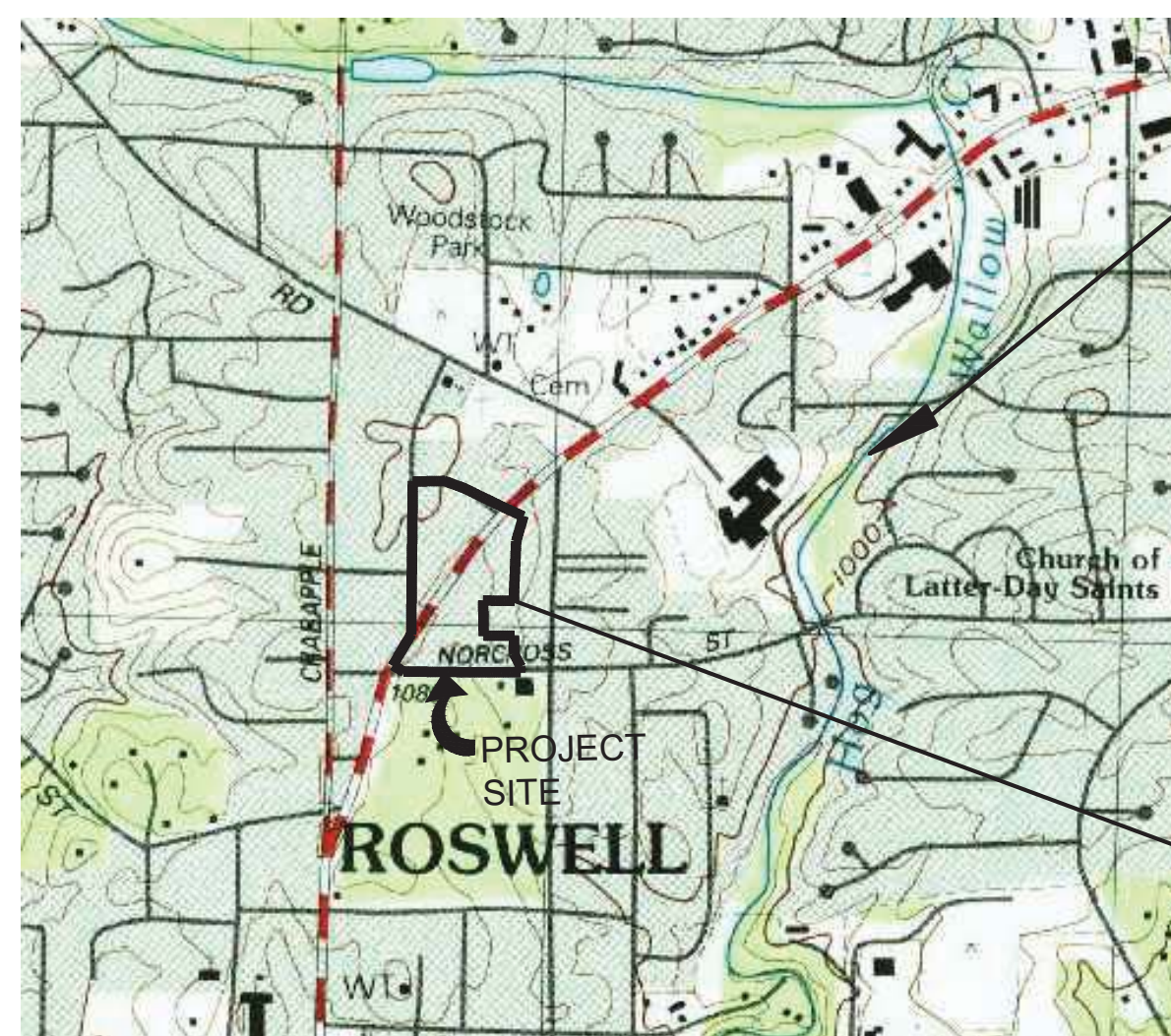
EROSION AND SEDIMENT CONTROL BMP'S						
LOCATION	DRAINED AREA (ACRES)	DISTURBED AREA (ACRES)	REQ SED STORAGE (CU YDS)	TOTAL STORAGE VOL PROVIDED (CU YDS)	SILT FENCE	
					LENGTH (FT)	VOLUME (CU FT)
STREAM						
D.A.	13	0.44	29.48	60	200	60
TOTAL	13	0.44	29.48	60	200	60

REQUIRED SEDIMENT STORAGE = AREA x 67 CYS/AC
SILT FENCE STORAGE = 0.3 CY/FT AVERAGE

- LOCATION OF BEST MANAGEMENT PRACTICES THAT ARE CONSISTENT WITH, AND NO LESS STRINGENT THAN, THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA ARE SHOWN ON THE EROSION CONTROL PLAN SHEETS AND DETAIL SHEETS. USE UNIFORM CODING SYMBOLS FROM THE MANUAL, CHAPTER 6, WITH LEGEND. REFER TO EROSION CONTROL DETAIL SHEET FOR THE CODING LEGEND. BMP'S ARE SHOWN ON THE EROSION CONTROL PLAN SHEETS.

- DETAILED DRAWINGS FOR ALL STRUCTURAL PRACTICES ARE SHOWN ON THE EROSION CONTROL PLAN SHEETS AND DETAIL SHEETS.

USGS MAP



HOG WALLOW CREEK

OFFSITE AREA = 13 ACRES

RECEIVING WATERS AND STREAM MAP
NTS



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NO	DATE	CITY OF ROSWELL COMMENTS	DESCRIPTION	BY	HMA	REVISION RECORD

PROJECT NAME:
NORCROSS STREET CULVERT REPLACEMENT
RELEASED FOR PERMITTING

DRAWING TITLE:
NPDES NOTES 2

PROJ. MGR.:	DRB
DESIGN BY:	HMA
DRAWN BY:	HMA
PROJ. DATE:	10/26/2018
DRAWING NUMBER:	

C-12 OF 17

WKD PROJ. NO.:
20180237.01.AT

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51. VEGETATIVE PLAN

VEGETATIVE PLAN

NON-NATIVE GRASS SEEDING TABLE 1

(Temporary and Permanent Seed Types for Shoulders, Medians and Slopes 3:1 or Flatter)
GRASSING SCHEDULE
ZONE 2

Common Name	Botanical Name	Class/Type	Rate/Acre	Planting Zone	Planting Dates
Common Bermuda Grass (Hulled)	<i>Cynodon dactylon</i>	Required Permanent Grass Ds3*	10 (11)	1	April 16 - August 31
Common Bermuda Grass (Unhulled)			10 (11)		
Common Bermuda Grass (Hulled)	<i>Cynodon dactylon</i>	Required Permanent Grass Ds3*	10 (11)	2,3,4	April 1 - October 15
Common Bermuda Grass (Unhulled)			10 (11)		
Bahia Grass			<i>Paspalum notatum</i>		
Rye Grass, Millet, Cereal Grass (Oats)	<i>Lolium pennae spsp.</i> <i>Multiflorum</i> , <i>Echinochloa carygalla</i> , <i>Avena sativa</i>	Temporary Grass Ds2	50 (56)	1	September 1 - April 15
Rye Grass, Millet, Cereal Grass (Oats)	<i>Lolium pennae spsp.</i> <i>Multiflorum</i> , <i>Echinochloa carygalla</i> , <i>Avena sativa</i>	Temporary Grass Ds2	50 (56)	2,3,4	October 16 - March 31

* REFER TO L06.1 FOR PLANTING SCHEDULE.

NON-NATIVE SEEDING TABLE 2
(Temporary and Permanent Seed Types for back slopes, fill slopes and areas which will not be subject to frequent mowing, slopes steeper than 3:1)

Common Name	Botanical Name	Class/Type	Rate/Acre	Planting Zone	Planting Dates
Interstate Leqdeza	<i>Leopoda sericea</i>	Permanent Grass	50(56)	1,2	March 1 - August 31
Weping Lovegrass	<i>Eragrostis curvula</i>	Temporary Grass	10(11)		
Interstate Leqdeza	<i>Leopoda sericea</i>	Permanent Grass	75(84)	1,2	September 1 - February 28
Tall Fescue	<i>Festuca arundinacea</i>	Temporary Grass	50(56)		
Interstate Leqdeza	<i>Leopoda sericea</i>	Permanent Grass	50(56)	3,4	April 1 - October 31
Weping Love Grass	<i>Eragrostis curvula</i>	Temporary Grass	10(11)		
Interstate Leqdeza	<i>Leopoda sericea</i>	Permanent Grass	50(56)	3,4	November 1 - March 31
Weping Love Grass	<i>Eragrostis curvula</i>	Temporary Grass	10(11)		

FERTILIZER REQUIREMENTS FOR PERMANENT VEGETATION

TYPES OF SPECIES	PLANTING YEAR	FERTILIZER (N-P-K)	RATE (LBS/ACRE)	N TOP DRESSING RATE (LBS/ACRE)
COOL SEASON GRASSES	FIRST	6-12-12	1500	50-100
	SECOND	6-12-12	1000	--
	MAINTENANCE	10-10-10	400	30
COOL SEASON GRASSES AND LEGUMES	FIRST	6-12-12	1500	0-50
	SECOND	0-10-10	1000	--
	MAINTENANCE	0-10-10	400	--
WARM SEASON GRASSES	FIRST	6-12-12	1500	50-100
	SECOND	6-12-12	800	50-100
	MAINTENANCE	10-10-10	400	30
WARM SEASON GRASSES AND LEGUMES	FIRST	6-12-12	1500	50
	SECOND	0-10-10	1000	--
	MAINTENANCE	0-10-10	400	--

FERTILIZER REQUIREMENTS FOR TEMPORARY VEGETATION

TYPES OF SPECIES	PLANTING YEAR	FERTILIZER (N-P-K)	RATE (LBS/ACRE)	N TOP DRESSING RATE (LBS/ACRE)
COOL SEASON GRASSES	FIRST	6-12-12	1500	50-100
	SECOND	6-12-12	1000	--
	MAINTENANCE	10-10-10	400	30
COOL SEASON GRASSES AND LEGUMES	FIRST	6-12-12	1500	0-50
	SECOND	0-10-10	1000	--
	MAINTENANCE	0-10-10	400	--
TEMPORARY COVER CROPS SEEDED ALONE	FIRST	10-10-10	500	30
WARM SEASON GRASSES	FIRST	6-12-12	1500	50-100
	SECOND	6-12-12	800	50-100
	MAINTENANCE	10-10-10	400	30

MULCH - DRY STRAW @ 2 TONS/AC
AGRICULTURAL LIME @ 1 TON/AC UNLESS SOIL TEST INDICATES OTHERWISE

** Ds-1 APPLY 2 TONS/AC DRY STRAW ON ALL EXPOSED AREAS WITHIN 14 DAYS OF LAND DISTURBANCE.

MISC NOTES

52. PRODUCT SPECIFIC PRACTICES

PETROLEUM BASED PRODUCTS - CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS AND STORM WATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.

PAINTS/FINISHES/SOLVENTS - ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCT WILL NOT BE DISCHARGED TO THE STORM WATER COLLECTION SYSTEM. EXCESS PRODUCT, MATERIALS USED WITH THESE PRODUCTS AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

CONCRETE TRUCK WASHING - NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONSITE.

FERTILIZER/HERBICIDES - THESE PRODUCTS WILL BE APPLIED AT RATES THAT DO NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP ESTABLISHMENT OR IN THE GSWCC MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA. ANY STORAGE OF THESE MATERIALS WILL BE UNDER ROOF IN SEALED CONTAINERS.

BUILDING MATERIALS - NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ONSITE. ALL SUCH MATERIAL WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES.

SANITARY WASTES

53. ALL SANITARY WASTE UNITS WILL BE LOCATED IN ONE AREA WHERE THE LIKELIHOOD OF THE UNIT CONTRIBUTING TO STORM WATER DISCHARGE IS NEGLIGIBLE. ADDITIONAL CONTAINMENT BMP'S MUST BE IMPLEMENTED, SUCH AS GRAVEL BAGS OR SPECIALLY DESIGNED PLASTIC SKID CONTAINERS AROUND THE BASE, TO PREVENT WASTES FROM CONTRIBUTING TO STORM WATER DISCHARGES. THE LOCATION OF SANITARY WASTE UNITS MUST BE IDENTIFIED ON THE EROSION CONTROL PLAN GRADING PHASE, BY THE CONTRACTOR ONCE THE LOCATIONS HAVE BEEN DETERMINED.

54. A MINIMUM OF ONE PORTABLE SANITARY UNIT WILL BE PROVIDED FOR EVERY TEN (10) WORKERS ON THE SITE. ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONE TIME PER WEEK BY A LICENSED PORTABLE FACILITY PROVIDER IN COMPLETE COMPLIANCE WITH LOCAL AND STATE REGULATIONS.

NO SANITARY SEWER/SEPTIC SYSTEM WILL SERVE THIS PROJECT.

55. ALL EROSION CONTROL MEASURES AND DEVICES SHALL BE CHECKED DAILY AND ANY TOPSOIL STORAGE AREAS WILL BE COVERED AT THE END OF EACH WORK DAY.

55. MINIMIZING WIND EROSION AND CONTROLLING DUST WILL BE ACCOMPLISHED BY ONE OR MORE OF THE FOLLOWING METHODS:

- A. COVERING 30% OR MORE OF THE SOIL SURFACE WITH NON-ERODIBLE MATERIAL.
- B. ROUGHENING THE SOIL TO PRODUCE RIDGES PERPENDICULAR TO THE PREVAILING WIND.
- C. FREQUENT WATERING OF EXCAVATION AND FILL AREAS.
- D. PROVIDING GRAVEL OR PAVING AT ENTRANCE/EXIT DRIVES.

56. BEST MANAGEMENT PRACTICES SHALL BE MAINTAINED TO MINIMIZE OFF-SITE VEHICLE TRACKING OF SEDIMENT AND THE GENERATION OF DUST.

57. ALL AD VALOREM TAXES OWED AND DUE RELATED TO THIS SITE AND PROJECT HAVE BEEN PAID.

58. ALL EROSION CONTROL MEASURES AND DEVICES SHALL BE CHECKED DAILY

NOTE:
CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL NPDES REQUIREMENTS FOR THE CONSTRUCTION PROJECT.



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80940



PROFESSIONAL SEAL

NO.	DATE	DESCRIPTION	HMA	BY

PROJECT NAME:
NORCROSS STREET CULVERT REPLACEMENT
RELEASED FOR PERMITTING

DRAWING TITLE:
NPDES NOTES 3

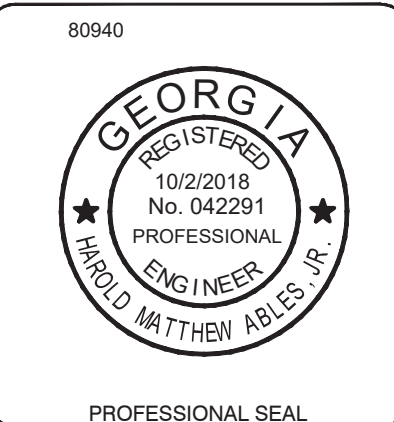
PROJ. MGR.: DRB
DESIGN BY: HMA
DRAWN BY: HMA
PROJ. DATE: 10/26/2018
DRAWING NUMBER:

C-13 OF 17

WKD PROJ. NO.:
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NO	DATE	CITY OF ROSWELL COMMENTS	HMA	BY

**EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
STAND ALONE CONSTRUCTION PROJECTS**

SWCD: _____

Project Name: NORCROSS ST CULVERT REPLACEMENT Address: NORCROSS ST
City/County: ROSWELL, COEB Date on Plans: Oct-18

Plan Included
Page # Y/N **TO BE SHOWN ON ES&PC PLAN**

- C-14 Y/N 1 The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted.
(The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed.)
- C-11 Y 2 Level II certification number issued by the Commission, signature and seal of the certified design professional. *(Signature, seal and Level II number must be on each sheet pertaining to ES&PC plan or the Plan will not be reviewed.)*
- N/A 3 Limits of disturbance shall be no greater than 50 acres at any one time without prior written authorization from the EPD District Office. If EPD approves the request to disturb 50 acres or more at any one time, the plan must include at least 4 of the BMPs listed in Appendix 1 of this checklist.
(A copy of the written approval by EPD must be attached to the plan for the plan to be reviewed.)
- C-11 Y 4 The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls.
- C-11 Y 5 Provide the name, address and phone number of primary permittee.
- CV Y 6 Note total and disturbed acreage of the project or phase under construction.
- C-11 Y 7 Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.
- C-11 Y 8 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
- C-11 Y 9 Description of the nature of construction activity.
- C-11 Y 10 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
- C-11 Y 11 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.
- C-11 Y 12 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on page 15 of the permit.
- C-11 Y 13 Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on page 15 of the permit.*
- C-11 Y 14 Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation."
- C-11 Y 15 Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."
- C-11 Y 16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.

- C-11 Y 17 Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional."
- C-11 Y 18 Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a section 404 permit."
- C-11 Y 19 Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."
- C-11 Y 20 Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."
- C-11 Y 21 Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
- N/A 22 Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as, any portion of an Biota Impaired Stream Segment must comply with Part III, C. of the Permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment."
- N/A 23 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan."
- C-11 Y 24 BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited."
- C-11 Y 25 Provide BMPs for the remediation of all petroleum spills and leaks.
- C-11 Y 26 Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed."
- C-11 Y 27 Description of the practices that will be used to reduce the pollutants in storm water discharges."
- C-11 Y 28 Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).
- C-11 Y 29 Provide complete requirements of inspections and record keeping by the primary permittee."
- N/A 30 Provide complete requirements of sampling frequency and reporting of sampling results."
- N/A 31 Provide complete details for retention of records as per Part IV.F. of the permit."
- N/A 32 Description of analytical methods to be used to collect and analyze the samples from each location."
- N/A 33 Appendix B rationale for NTU values at all outfall sampling points where applicable."
- C-12 Y 34 Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged."
- C-12 Y 35 A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the plan may combine all of the BMPs into a single phase."
- C-8-10 Y 36 Graphic scale and North arrow.
- C-8-10 Y 37 Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:

Map Scale	Ground Slope	Contour Intervals, ft.
1 inch = 100ft or larger scale	Flat 0 - 2% Rolling 2 - 8% Steep 8% +	0.5 or 1 1 or 2 2.5 or 10

- C-12 Y 38 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.org.
- C-12 Y 39 Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition."
- C-8-10 Y 40 Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to state waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.
- C-12 Y 41 Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site.
- Y 42 Delineation and acreage of contributing drainage basins on the project site.
- C-12 Y 43 Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions."
- C-12 Y 44 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
- C-9-10 Y 45 Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.
- C-8-10 Y 46 Soil series for the project site and their delineation.
- CV Y 47 The limits of disturbance for each phase of construction.
- C12 Y 48 Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual included for structural BMPs and all calculations used by the storage design professional to obtain the required sediment when using equivalent controls. When discharging from sediment basins and impoundments, permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the plan.
- C-8-10 Y 49 Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.
- C15 Y 50 Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.
- C-13 Y 51 Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of the year that seeding will take place and for the appropriate geographic region of Georgia.

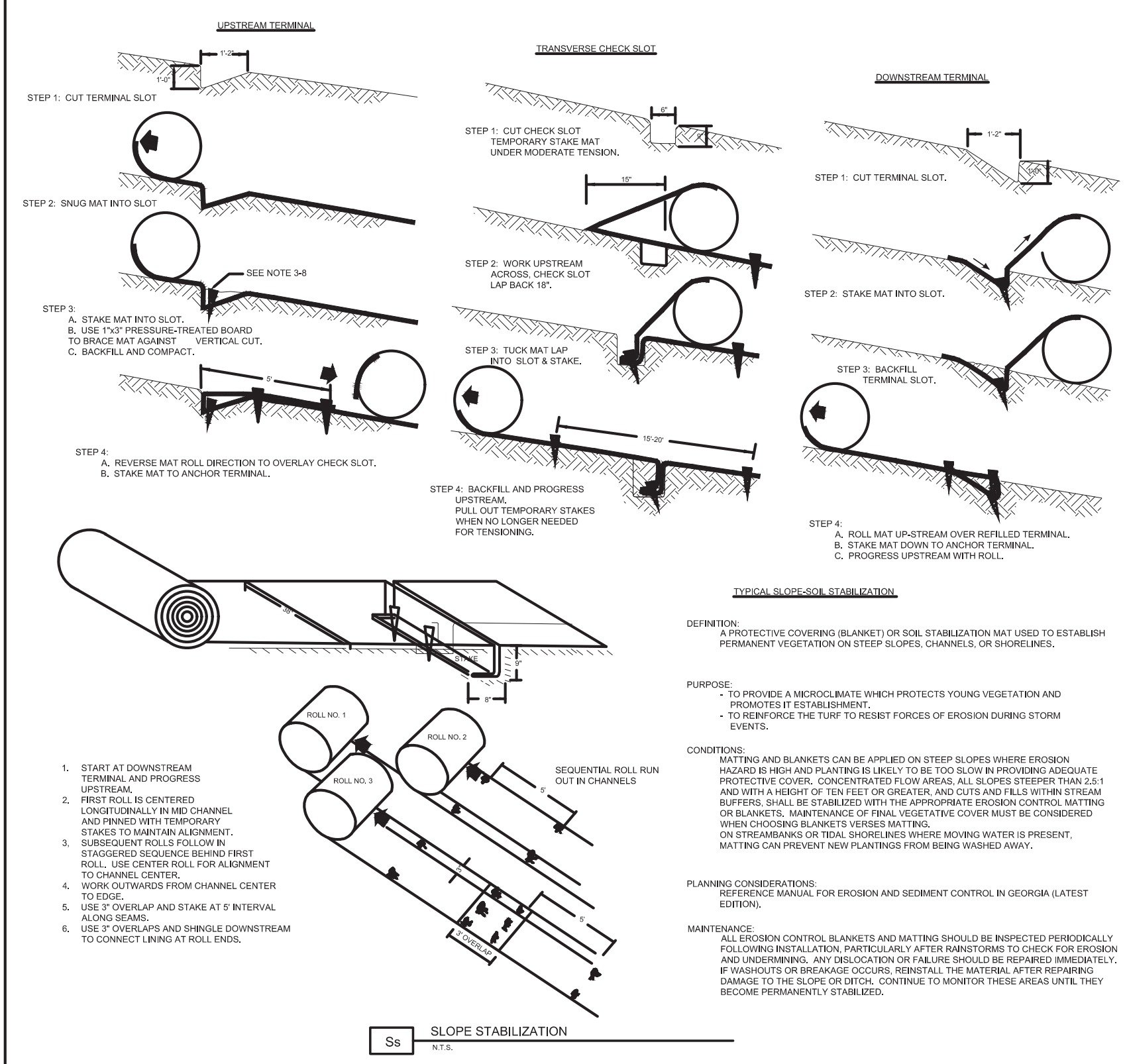
*If using this checklist for a project that is less than 1 acre and not part of a common development but within 200 ft of a perennial stream the * checklist items would be N/A. **Effective January 1, 2017**

RELEASED FOR PERMITTING

PROJECT NAME: **NORCROSS STREET CULVERT REPLACEMENT**
RELEASED FOR PERMITTING
DRAWING TITLE: **NPDES-4**

PROJ. MGR.: _____ DRB
DESIGN BY: _____ HMA
DRAWN BY: _____ HMA
PROJ. DATE: 10/26/2018
DRAWING NUMBER:
C-14 OF 17
WKD PROJ. NO.: 20180237.01.AT

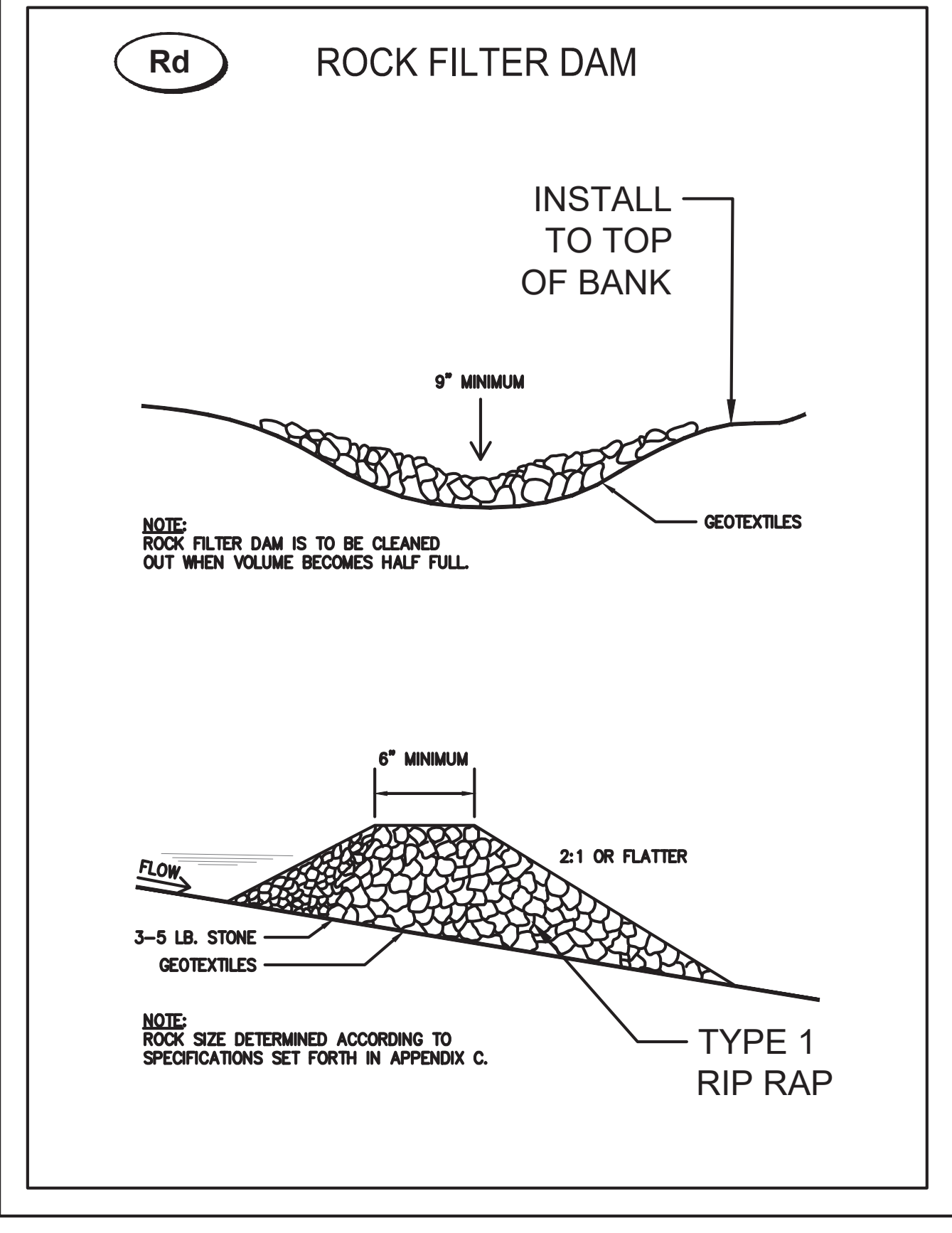
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DEFINITION: Applying plant residues or other suitable materials... SPECIFICATIONS: MULCHING WITHOUT SEEDING... Ds1 DISTURBED AREA STABILIZATION (WITH MULCHING ONLY) Ds2 DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)

DEFINITION: The establishment of temporary vegetative cover with fast growing seedlings... SPECIFICATIONS: Seeding and Shaping... SEEDING RATES FOR PERMANENT SEEDING

NOTICE: VEHICLES TRACKING MUD ONTO THE STREET ARE IN VIOLATION OF THE CODE OF ORDINANCES... City of Roswell Engineering Division



DEFINITION: A permanent vegetative using seeds on highly erodible or critically eroded lands... SPECIFICATIONS: Seeding and Shaping... Ds3 DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION) Ds4 DISTURBED AREA STABILIZATION (WITH SODDING)

DEFINITION: The establishment of temporary vegetative cover with fast growing seedlings... SPECIFICATIONS: Seeding and Shaping... SEEDING RATES FOR PERMANENT SEEDING

NOTICE: VEHICLES TRACKING MUD ONTO THE STREET ARE IN VIOLATION OF THE CODE OF ORDINANCES... City of Roswell Engineering Division

WK DICKSON community infrastructure consultants 2120 POWERS FERRY ROAD SUITE 100 ATLANTA, GA 30339

GEORGIA REGISTERED PROFESSIONAL ENGINEER NO. 042291

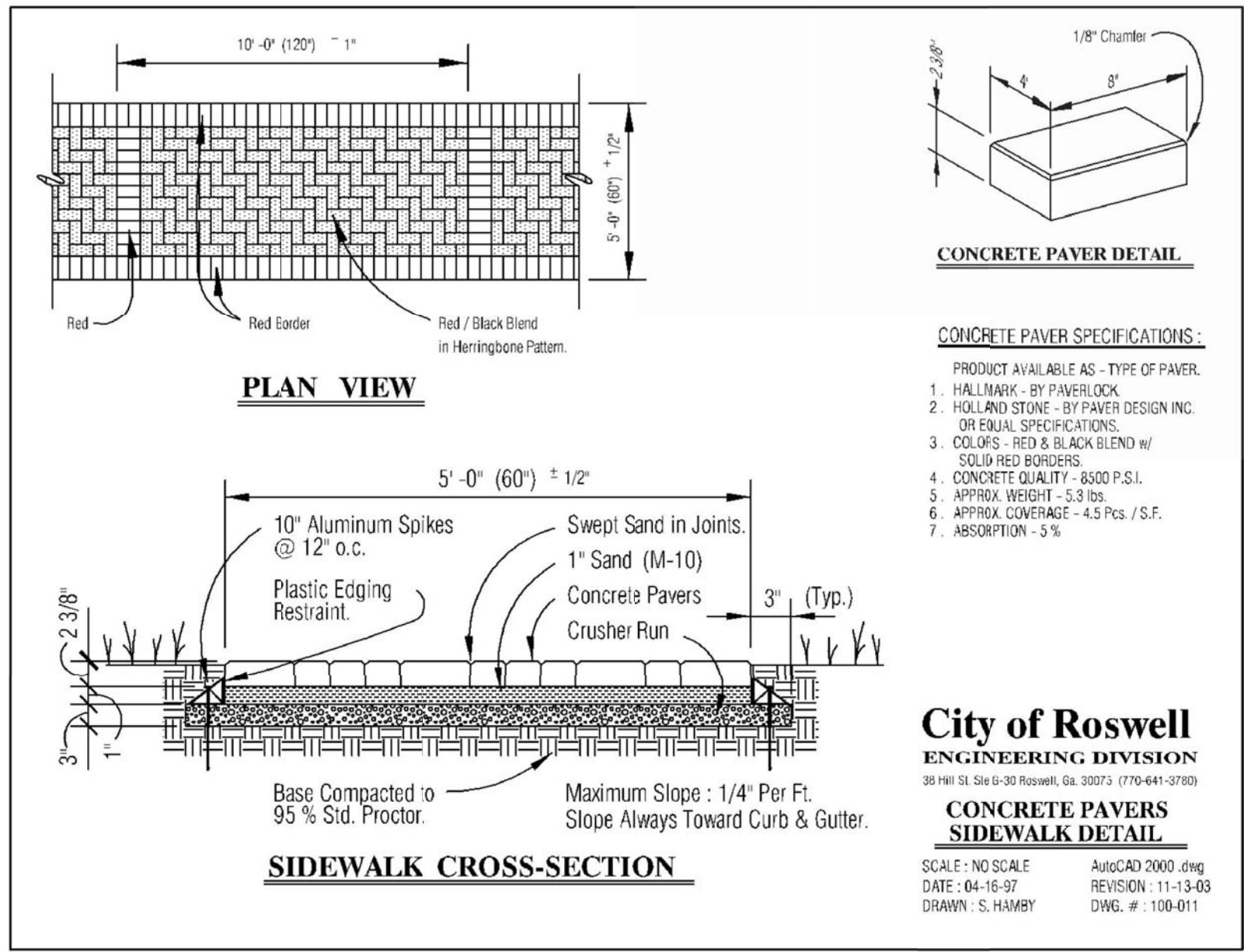
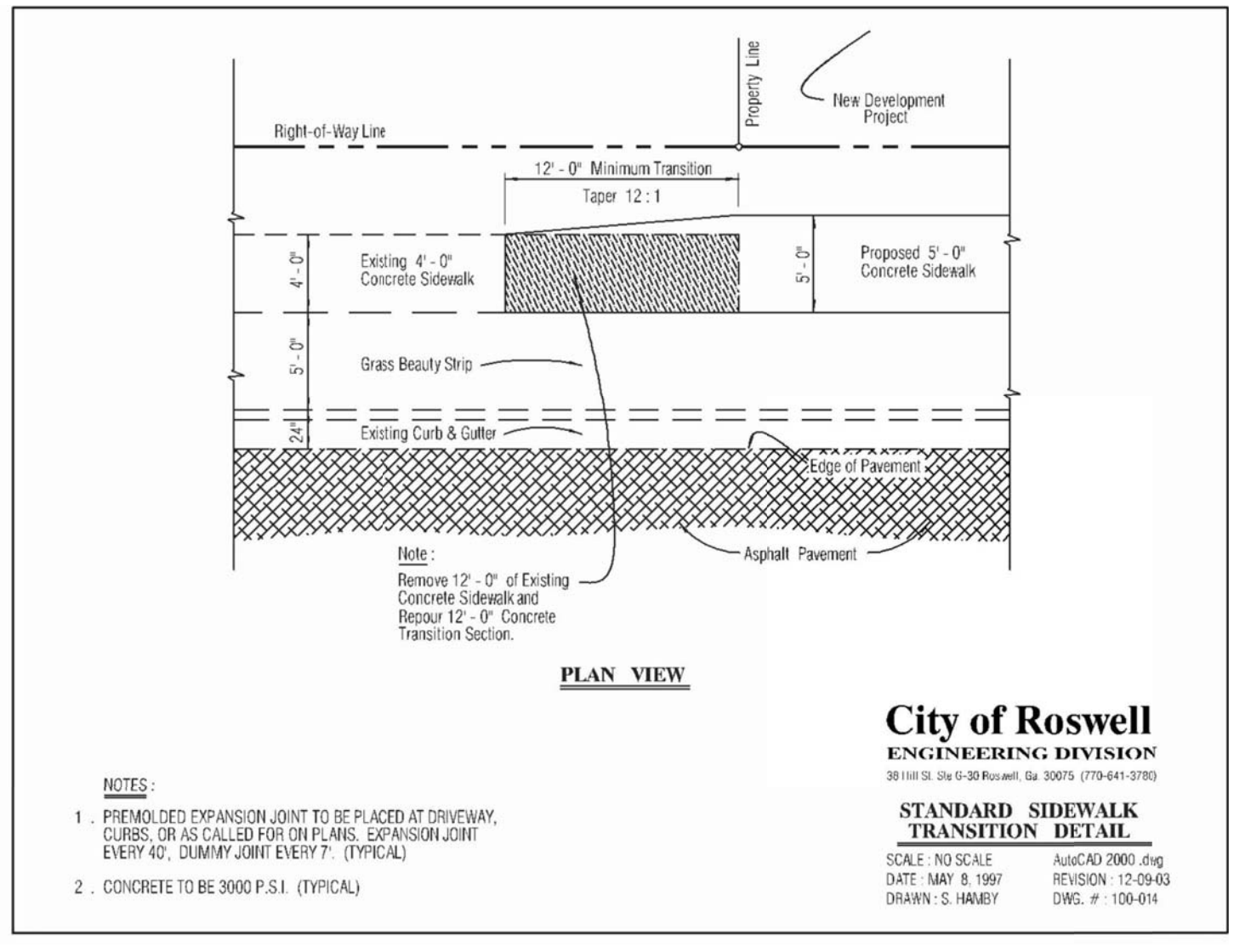
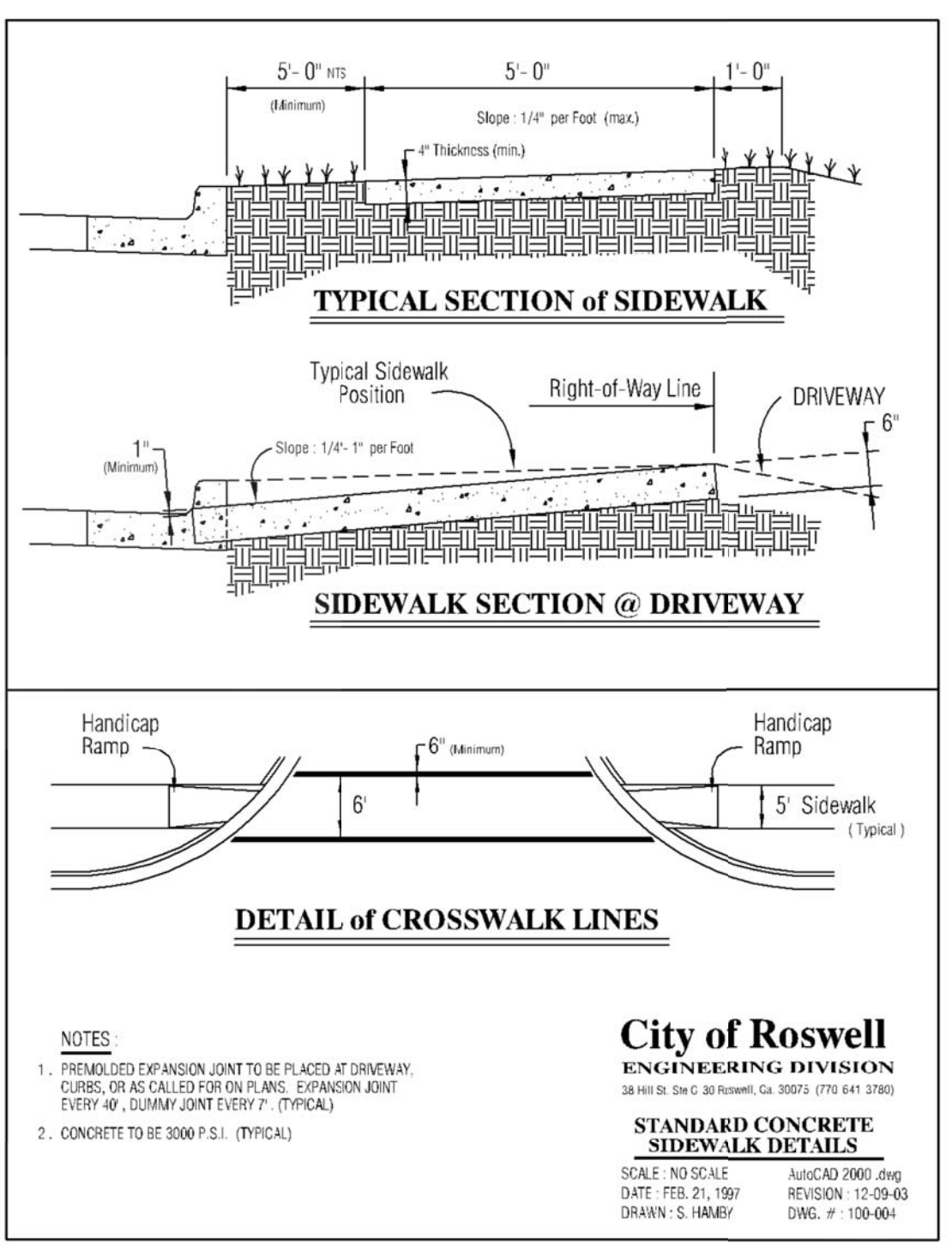
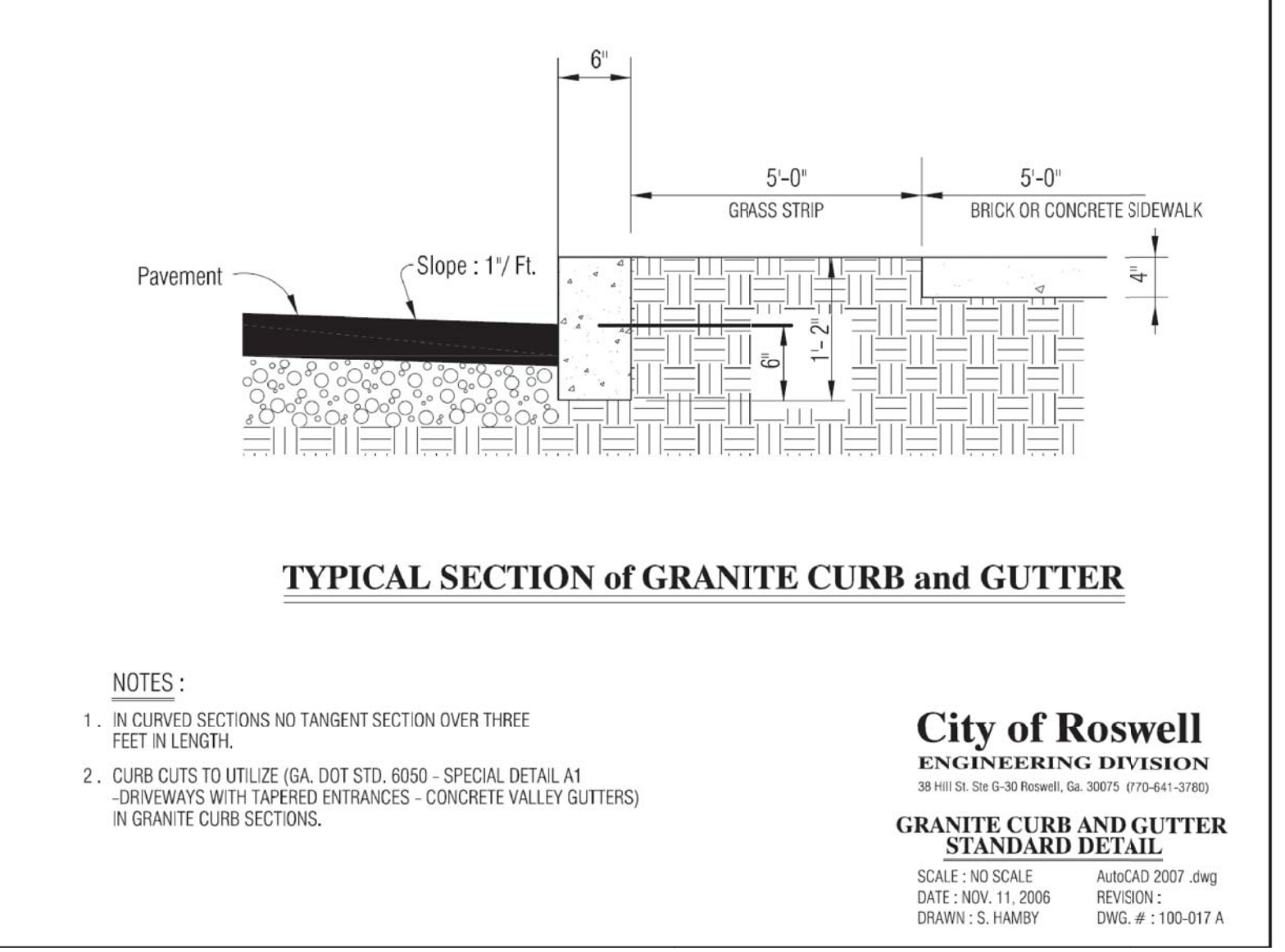
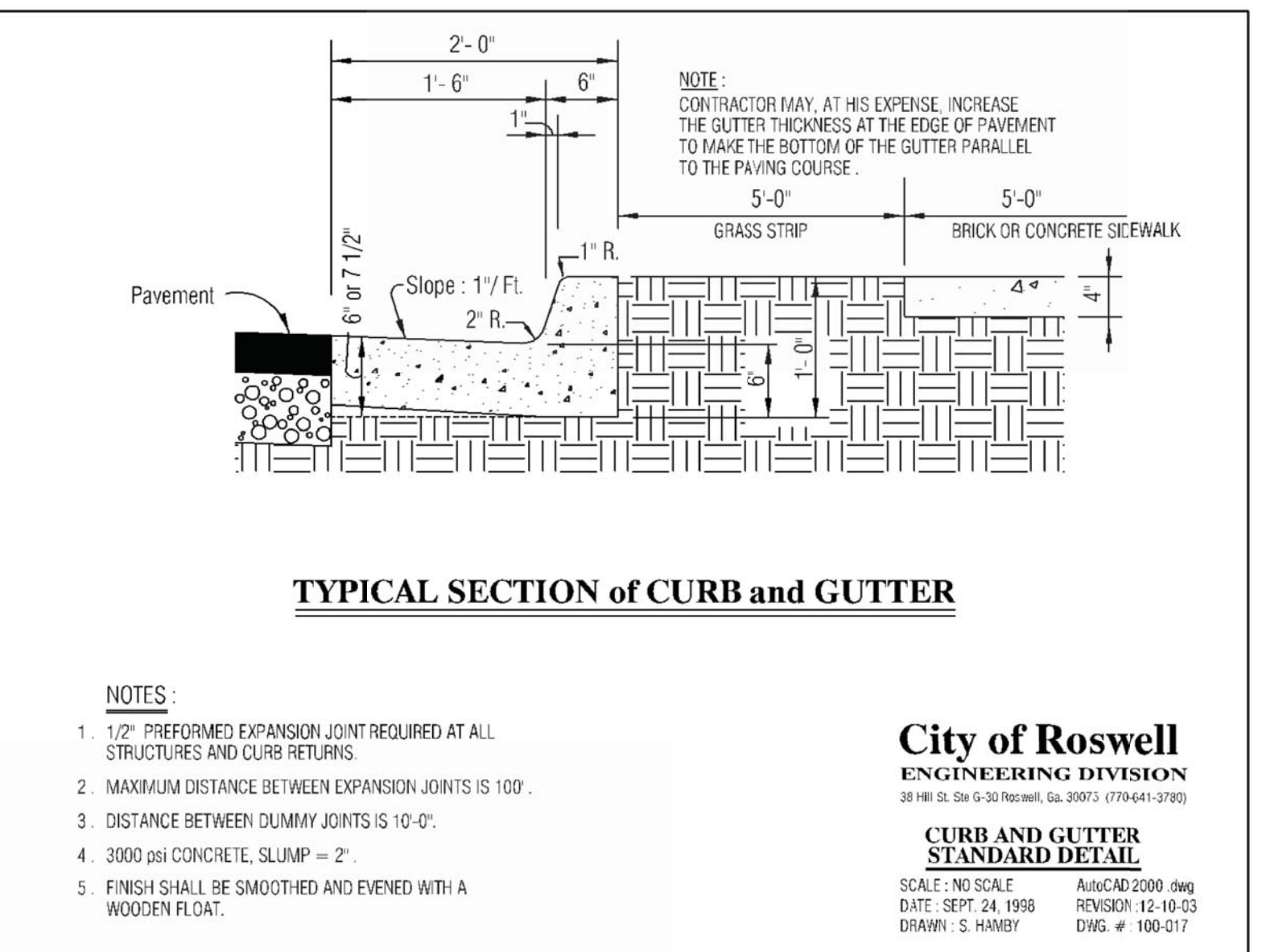
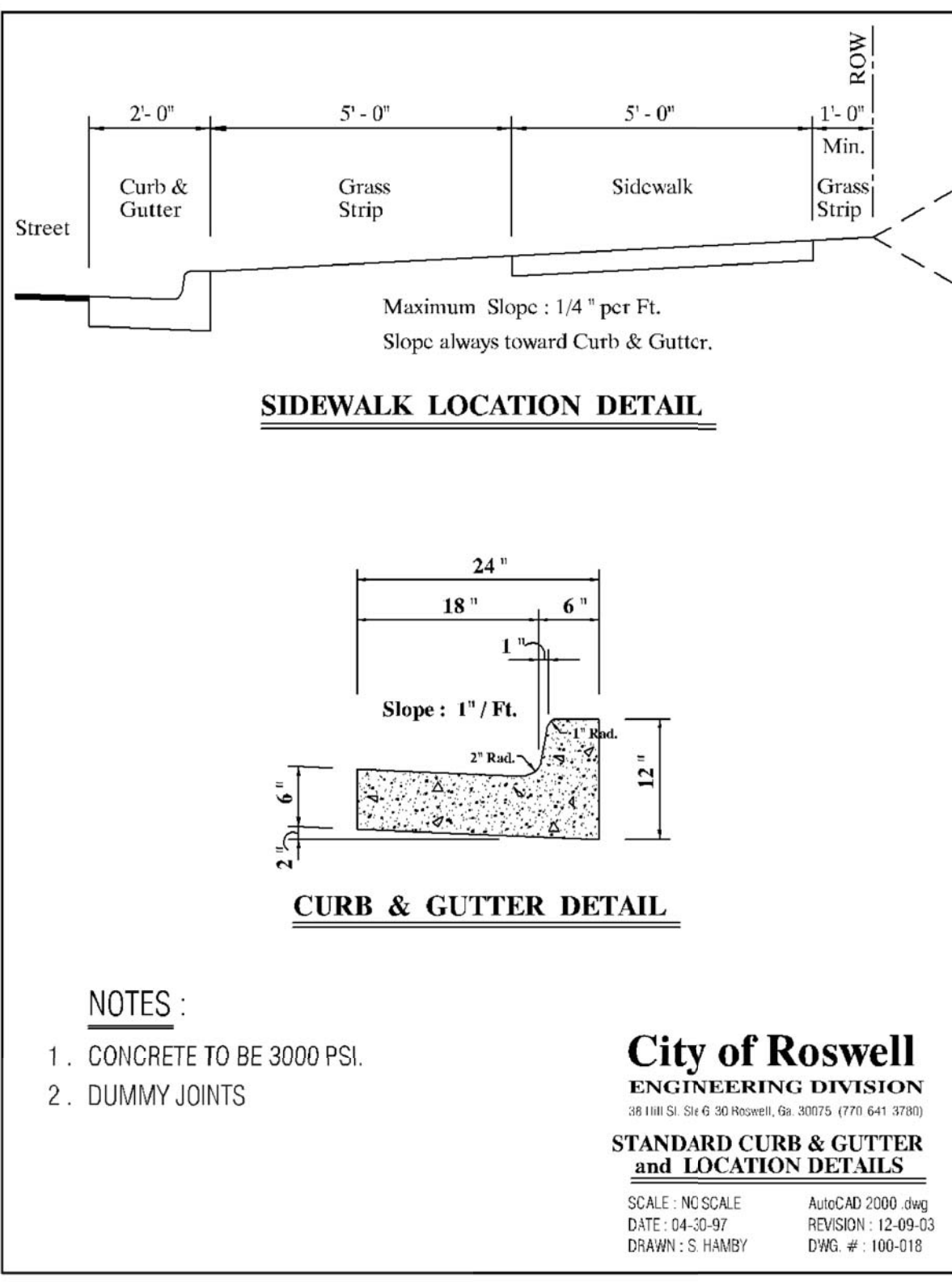
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PROJECT NAME: NORCROSS STREET CULVERT REPLACEMENT RELEASED FOR PERMITTING DRAWING TITLE: EROSION CONTROL DETAILS

PROJ. MGR.: DRB DESIGN BY: HMA DRAWN BY: HMA PROJ. DATE: 10/26/2018 DRAWING NUMBER: C-15 OF 17 WKD PROJ. NO.: 20180237.01.AT

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CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES AND AGENCIES SHALL BE RESPONSIBLE FOR REVIEWING AND APPROVING ALL PERMITS AND APPROVALS. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES AND AGENCIES SHALL BE RESPONSIBLE FOR REVIEWING AND APPROVING ALL PERMITS AND APPROVALS. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES AND AGENCIES SHALL BE RESPONSIBLE FOR REVIEWING AND APPROVING ALL PERMITS AND APPROVALS.



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GEORGIA
 REGISTERED
 10/2/2018
 No. 042291
 PROFESSIONAL
 ENGINEER
 WARD MATTHEW ABLES, JR.
 PROFESSIONAL SEAL

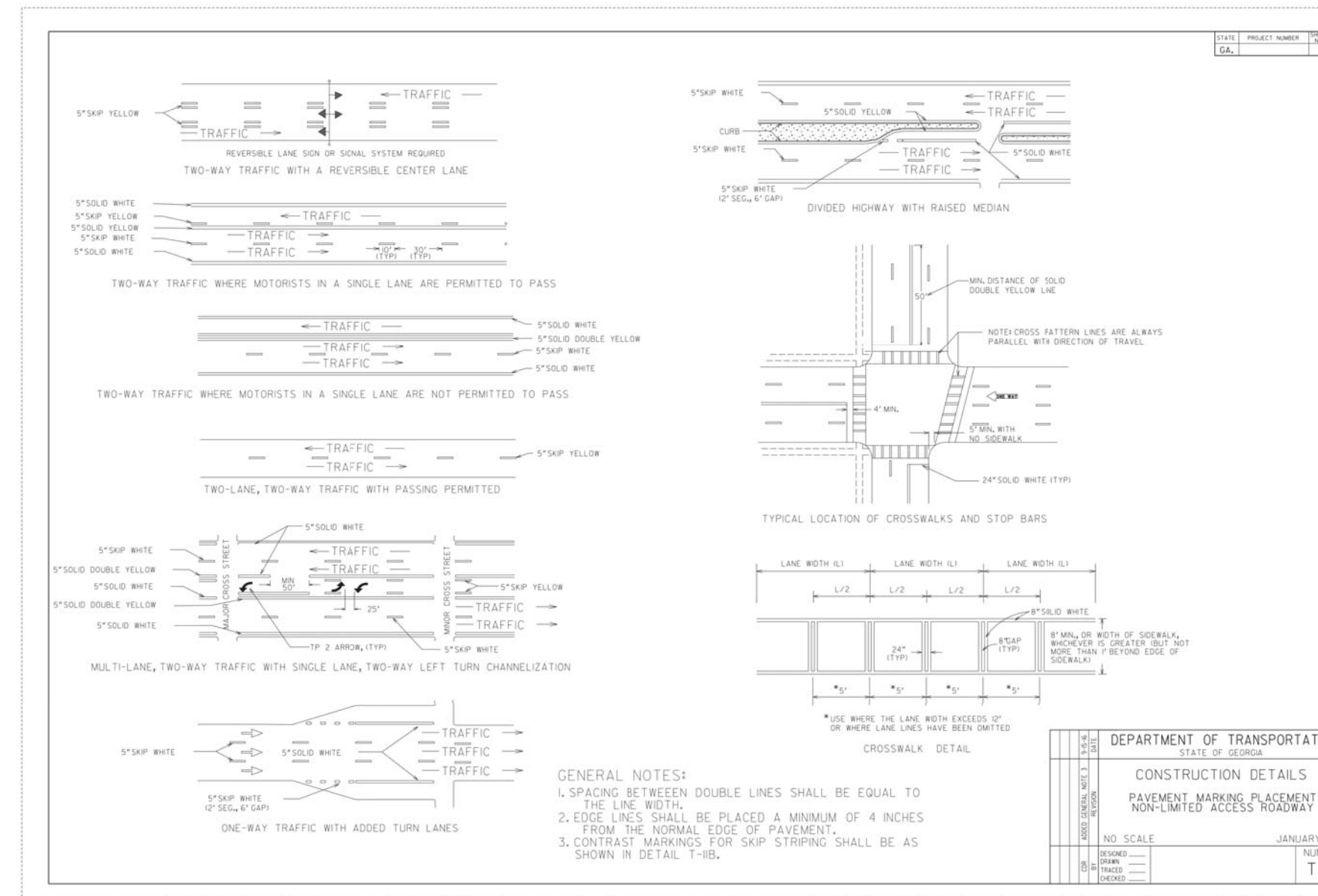
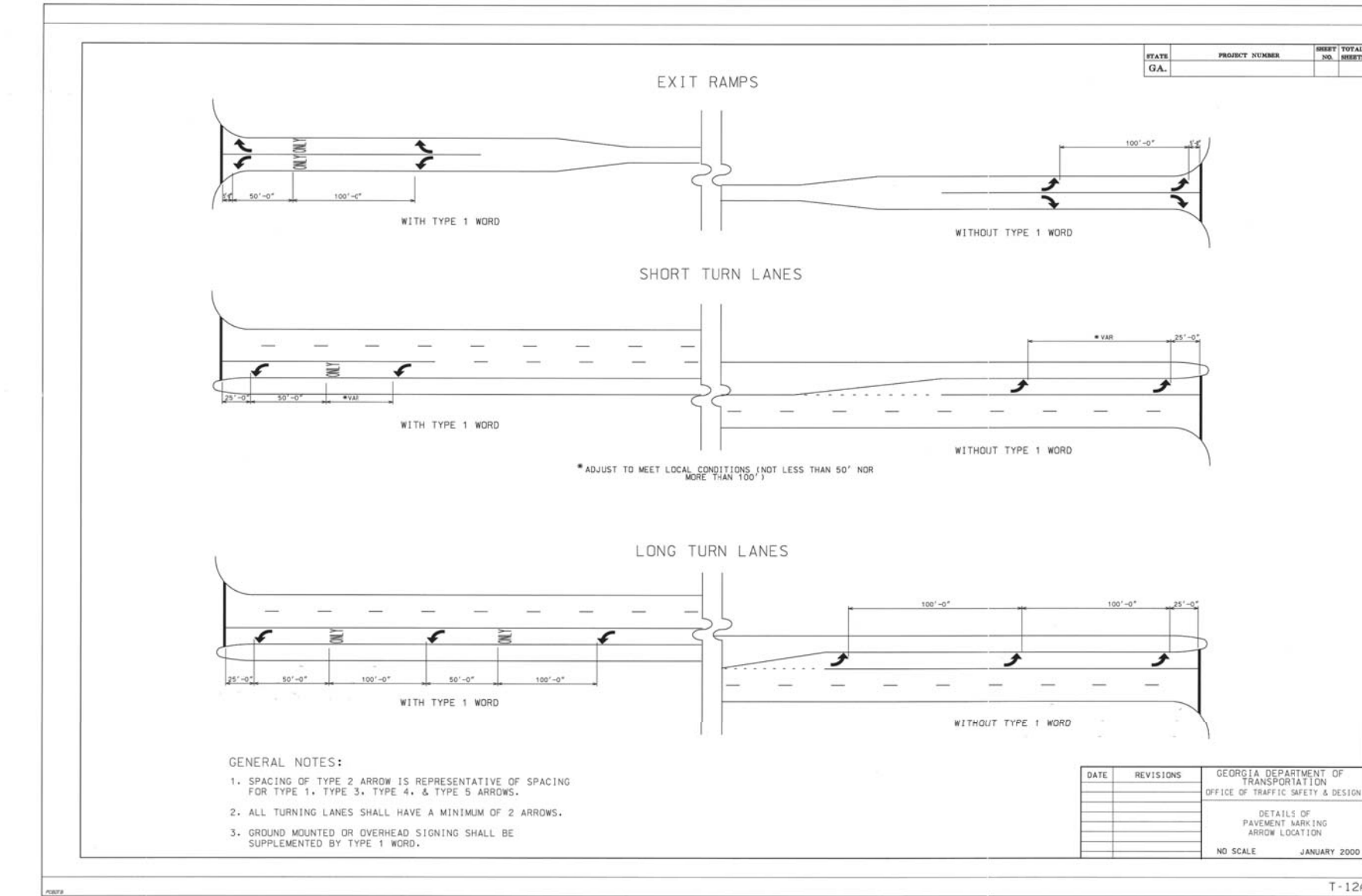
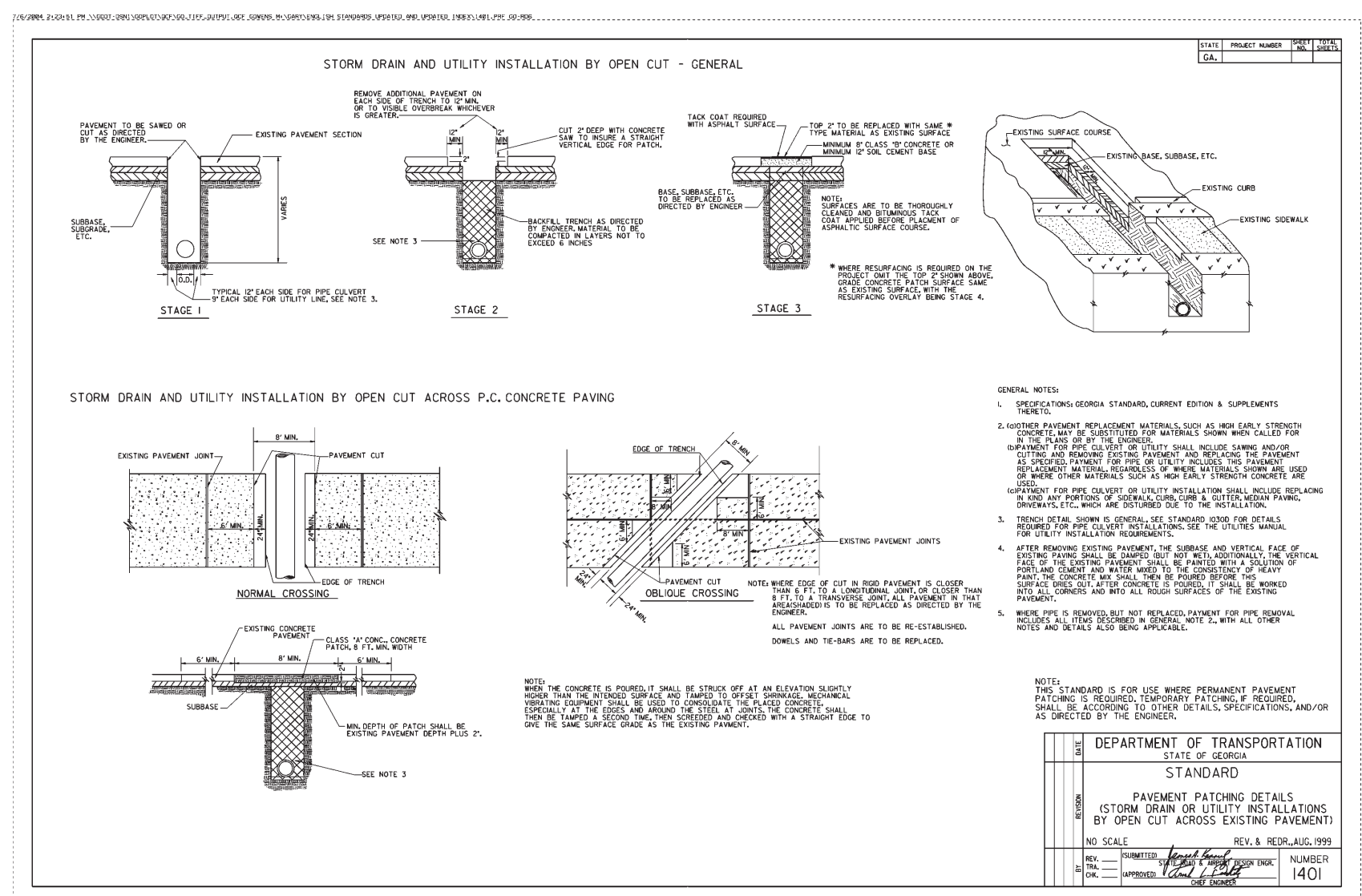
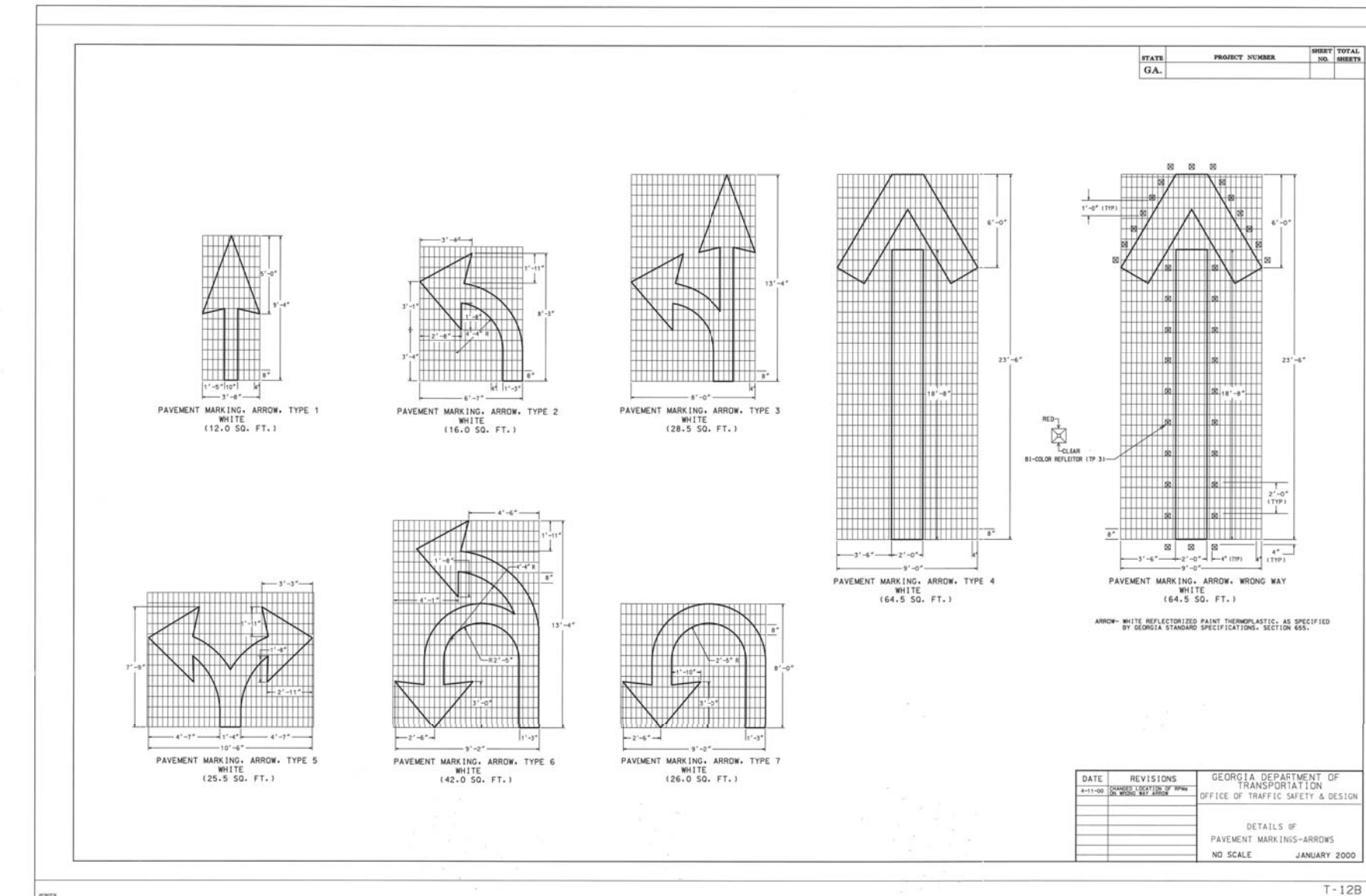
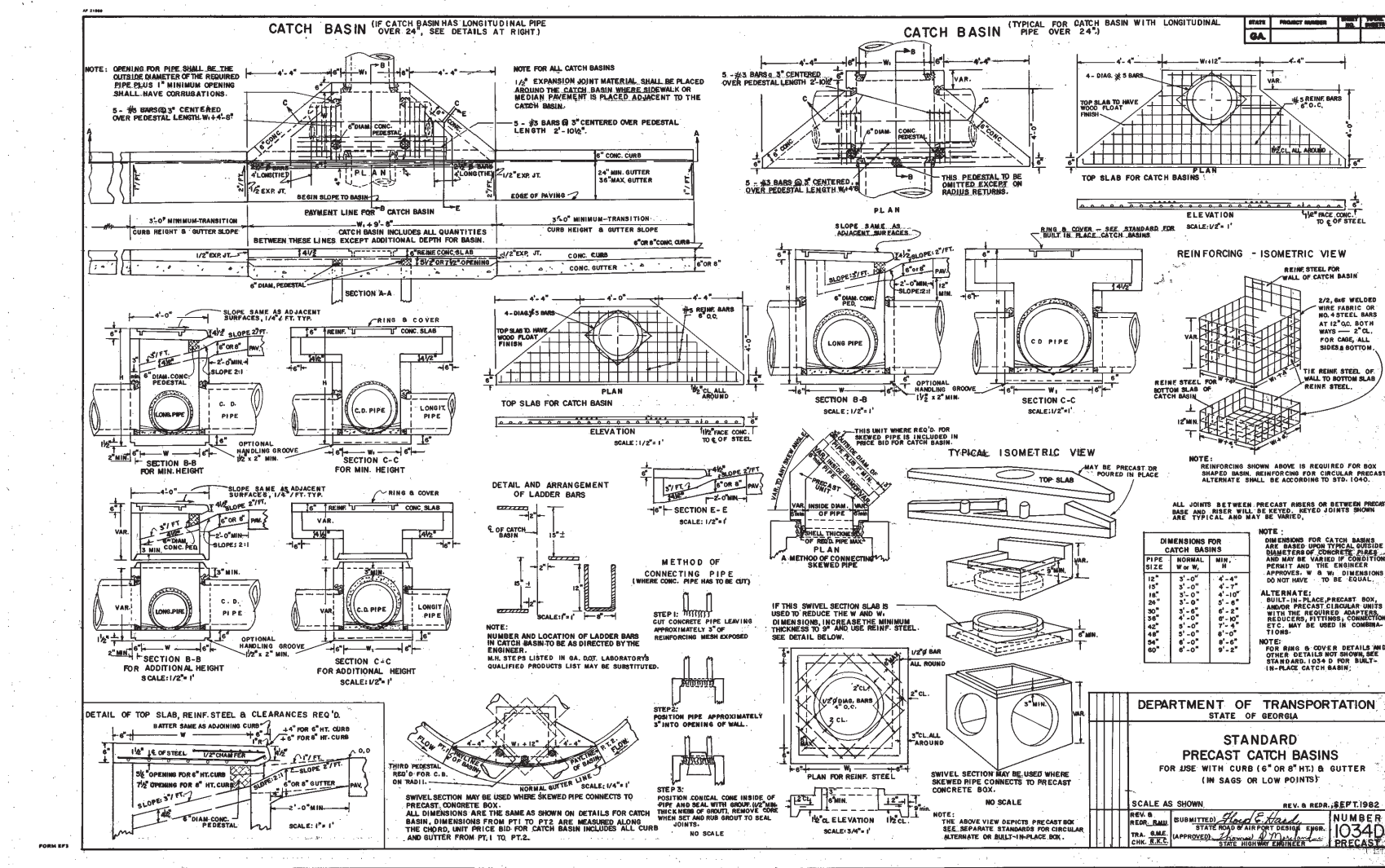
NO.	DATE	CITY OF ROSWELL COMMENTS	DESCRIPTION	HMA	BY
1	10/26/2018				

PROJECT NAME: NORCROSS STREET CULVERT REPLACEMENT
 RELEASED FOR PERMITTING
 DRAWING TITLE: CONSTRUCTION DETAILS

PROJ. MGR.: DRB
 DESIGN BY: HMA
 DRAWN BY: HMA
 PROJ. DATE: 10/26/2018
 DRAWING NUMBER:
C-16 OF 17
 WKD PROJ. NO.: 20180237.01.AT

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GEORGIA
 REGISTERED
 10/2/2018
 No. 042291
 PROFESSIONAL
 ENGINEER
 MATTHEW ABLES, JR.
 PROFESSIONAL SEAL

NO.	DATE	DESCRIPTION	HMA	BY
1	10/26/2018	CITY OF NORCROSS COMMENTS		

PROJECT NAME: NORCROSS STREET CULVERT REPLACEMENT
RELEASED FOR PERMITTING
DRAWING TITLE: CONSTRUCTION DETAILS (2)

PROJ. MGR.: DRB
DESIGN BY: HMA
DRAWN BY: HMA
PROJ. DATE: 10/26/2018
DRAWING NUMBER: C-17 OF 17
WKD PROJ. NO.: 20180237.01.AT

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