CIVIL DESIGN DRAWINGS

FOR

STOCKBRIDGE CITY HALL TURNAROUND AND PARKING ADDITION

Development Plan Review Approval
By: [signature]
Date: 7/17/13

Soil Erosion Plan Approval
By: [signature]
Date: 7/17/13

LAND LOT 61, 12th DISTRICT
STOCKBRIDGE, GEORGIA

MAY 2013

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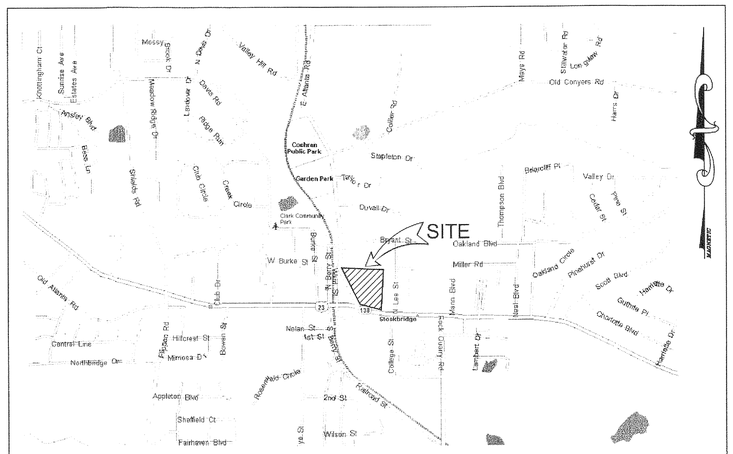
8.0 - 8.6	CONSTRUCTION, EROSION CONTROL, & LANDSCAPE DETAILS
9.0	ADD ALTERNATE WALL CONSTRUCTION



VICINITY MAP

N.T.S.

DEVELOPMENT DATA

1. OWNER / DEVELOPER CITY OF STOCKBRIDGE 4640 NORTH HENRY BLVD STOCKBRIDGE, GA 30281 24 HOUR CONTACT: DAVID MILLIRON, CITY MANAGER 770-389-7904	4. FLOOD ZONE DATA THE PARCEL SHOWN HEREIN DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AREA PER HENRY COUNTY PRESENT AND FUTURE MAP PANEL 69, DATED MAY 2010. 5. PROPERTY ADDRESS 4640 NORTH HENRY BLVD. STOCKBRIDGE, GA 30281
2. ENGINEER FALCON DESIGN CONSULTANTS 2010 AVALON PARKWAY SUITE 300 McDONOUGH, GA 30253 (770) 389-8666	6. SITE REQUIREMENTS PROJECT AREA OVERALL DEVELOPMENT 8.41 AC. DISTURBED ACREAGE 0.22 AC. IMPERVIOUS AREA (NEW) 2,750 S.F.
3. SOURCE OF DATA FALCON DESIGN CONSULTANTS 2010 AVALON PARKWAY SUITE 300 McDONOUGH, GA 30253 (770) 389-8666	7. ENVIRONMENTAL DATA THERE ARE NO WETLANDS OR LIVE STREAMS WITHIN 200' OF THE PROJECT SITE 8. ZONING RA (CONDITIONAL USE) 9. PROPOSED USE PARKING LOT

Any REVISIONS to this set of approved plans must be submitted to the Development Plan Review Dept for approval.
Soil erosion prevention measures must be installed and inspected prior to any grading activity.
The Developer shall notify Henry Co. Building Dept (770-288-6051) at least 24 hours before any stage of construction begins.

IT'S THE LAW!
CALL BEFORE YOU DIG 800-282-7411
UTILITIES PROTECTION CENTER
72 HOURS NOTICE REQUIRED

Know what's **below.**
Call before you dig.
UTILITIES PROTECTION CENTER
1 (800) 282-7411 THROUGHOUT GEORGIA
OR DIAL 811

FALCON DESIGN
ENGINEERING PLANNING SURVEYING

GEORGIA REGISTERED No. 020440 PROFESSIONAL ENGINEER
[signature] 7/16/13

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FIRST SUBMITTAL DATE: 5/24/13

REVISIONS	
1.	6/6/13 - PER COUNTY COMMENTS, ADDED STORM PIPE
2.	7/16/13 - ADD ALTERNATE WALL CONST., CHANGED GRADES
3.	
4.	

GENERAL NOTES:

GENERAL NOTES:

1. CAUTION, UNDERGROUND SERVICE ALERT! THE CONTRACTOR SHALL TELEPHONE TOLL FREE 1-800-282-7411 A MINIMUM OF 48 HOURS PRIOR TO THE START OF ANY EXCAVATION AS SHOWN AND NOTED ON THE APPROVED PLANS.

2. ALL NECESSARY PERMITS TO PERFORM THE WORK AS SHOWN AND NOTED HEREON SHALL BE OBTAINED PRIOR TO THE START OF CONSTRUCTION FROM HENRY COUNTY.

3. ALL CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE RULES, REGULATIONS AND STANDARDS OF THE GEORGIA STATE D.O.T. (DEPARTMENT OF TRANSPORTATION) AND HENRY COUNTY.

4. UNDERGROUND UTILITY LINE LOCATIONS (IF ANY) ARE APPROX. ONLY, AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT LOCATION OF ANY SUCH UTILITIES. UTILITIES SHOWN ON PLANS ARE FOR THE CONTRACTORS CONVENIENCE ONLY. THE ENGINEER ASSUMES NO RESPONSIBILITY TO VERIFY ALL UTILITY LOCATIONS. CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL DAMAGES TO EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY EXISTING UTILITIES WILL EFFECT OR IMPEDE THE PROGRESSION OR COMPLETION OF THE DESIGN INTENT OF THESE CONSTRUCTION DOCUMENTS.

5. THERE IS NO 100 YEAR FLOOD PLAIN ON THIS SITE PER FEMA FLOOD PLAIN COMMUNITY PANEL NUMBER 13151C0069C, DATED MAY 16, 2006. THIS PROPERTY IS NOT LOCATED WITHIN A LIMITED DEVELOPMENT AREA OR WATERSHED PROTECTION DISTRICT.

6. THERE ARE NO LIVE STREAMS AND/OR WETLANDS LOCATED WITHIN 200 FT. OF THIS PROJECT SITE.

7. THE CONTRACTOR SHALL COORDINATE RELOCATION OF ANY EXISTING UTILITIES WITH THE APPROPRIATE UTILITY ENTITY PRIOR TO THE START OF ANY CONSTRUCTION.

8. THE OWNER SHALL DIRECT THE CONTRACTOR AS TO WHAT EXISTING VEGETATION ON SITE SHALL BE REMOVED BEYOND THE CLEARING LIMITS AS SHOWN AND NOTED HEREON. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN PROTECTING EXISTING TREES. COORDINATE ALL TREE REMOVAL WITH OWNER PRIOR TO THE START OF ANY CONSTRUCTION.

9. MISCELLANEOUS MAPPING NOTES:

A. UTILITIES SHOWN ARE LOCATIONS OF GROUND IDENTIFIABLE ITEMS. ADDITIONAL UTILITIES MAY EXIST ABOVE OR BELOW THE GROUND. THE SURVEYOR & ENGINEER ACCEPTS NO RESPONSIBILITY FOR THE COMPLETENESS OF THIS DATA.

B. THIS PROPERTY IS SUBJECT TO ALL RIGHT-OF-WAYS & EASEMENTS SHOWN OR NOT SHOWN, RECORDED OR NOT RECORDED.

10. THE CONTRACTOR SHALL REMOVE AND ABANDON EXISTING UTILITIES ONLY AFTER APPROVAL FROM ALL INTERESTED PARTIES. THESE FACILITIES MAY INCLUDE, BUT NOT BE LIMITED TO: EXISTING ON-SITE DRAINAGE PIPING, ON-SITE PRIVATE ELECTRICAL LINES AND APPURTENANCES, ABANDONED EROSION CONTROL DEVICES AND STRUCTURES. THE CONTRACTOR SHALL COORDINATE ANY AND ALL ABANDONMENT AND/OR RELOCATION WITH THE APPROPRIATE UTILITY COMPANIES OR ENTITY. ANY DISPOSAL OF SAID FACILITIES SHALL BE DONE IN ACCORDANCE WITH LOCAL UTILITY AND/OR GOVERNMENTAL REGULATIONS. RELOCATION AND/OR ABANDONMENT OF SAID FACILITIES AND/OR UTILITIES SHALL BE DONE AT THE EXPENSE OF THE OWNER/DEVELOPER. PERMITS (IF ANY) SHALL BE OBTAINED BY THE CONTRACTOR AND/OR OWNER/DEVELOPER.

11. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT PRIOR TO ORDERING PROJECT MATERIALS, THAT THE MOST CURRENT SET OF CONSTRUCTION DOCUMENTS HAVE BEEN OBTAINED FROM THE PROJECT ENGINEER INCLUDING, BUT NOT LIMITED TO, THE PERMITTED SET(S) FROM ALL APPLICABLE AGENCIES AS APPROPRIATE. THE PROJECT ENGINEER ACCEPTS NO RESPONSIBILITY FOR IMPROPER ORDERING OF MATERIALS.

12. ALL CONSTRUCTION MUST CONFORM TO HENRY COUNTY STANDARDS AND SPECIFICATIONS, WHETHER OR NOT REVIEW COMMENTS WERE MADE.

13. ALL SILT BARRIERS MUST BE PLACED AS ACCESS IS OBTAINED DURING CLEARING. NO GRADING SHALL BE DONE UNTIL SILT BARRIER INSTALLATION AND STORMWATER MANAGEMENT FACILITIES ARE CONSTRUCTED.

14. SILT BARRIERS TO BE PLACED AS SHOWN AND/OR AS DIRECTED BY PROJECT ENGINEER AND/OR HENRY COUNTY INSPECTOR.

15. NOTIFY INSPECTOR 24 HOURS PRIOR TO CONSTRUCTION.

16. ALL AREAS USED AS BURIAL PITS DURING DEVELOPMENT MUST BE LOCATED OUTSIDE OF RIGHT-OF-WAY AND ARE TO BE LOCATED ON THE FINAL PLAT. GEORGIA DNR EPD REQUIREMENTS ARE TO BE MET: "NO PORTION OF WASTE DISPOSAL AREA SHALL BE LOCATED WITHIN ONE HUNDRED (100) LINEAR FEET OF ANY PROPERTY LINE OR ENCLOSED STRUCTURE."

17. THE OWNER/DEVELOPER AND ENGINEER HAVE REVIEWED THE APPROPRIATE LOCAL, STATE, AND FEDERAL REGULATIONS REGARDING DEVELOPMENT ACTIVITIES ADJACENT TO FLOOD PLAINS AND WETLANDS AND HAVE DETERMINED THAT THIS DEVELOPMENT PLAN SATISFIES THE STANDARDS PRESENTED IN APPLICABLE REGULATIONS.

18. THIS PROJECT TO BE SERVED BY PUBLIC GRAVITY SEWER. ALL SEWERS MUST BE GRAVITY FED, UNLESS SPECIFICALLY APPROVED BY HENRY COUNTY , AND SO NOTED ON DEVELOPMENT PLANS. (SEE WATER AND SEWER NOTES)

19. WATER SERVICE TO BY PROVIDED BY HENRY COUNTY WATER & SEWER AUTHORITY. (SEE WATER AND SEWER NOTES)

20. ALL EROSION AND SEDIMENTATION CONTROLS, AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO GRADING.

21. SIGNING AND STRIPING TO BE PROVIDED BY THE DEVELOPER ACCORDING TO M.U.T.C.D. SPECIFICATIONS.

22. ALL FILL AREAS MUST BE COMPACTED TO A MINIMUM OF 95 % STANDARD PROCTOR.

23. FOR ALL PROPOSED DEVELOPMENTS, OTHER THAN PUBLIC SINGLE-FAMILY RESIDENTIAL, EXECUTE AND RETURN THE OPERATION & MAINTENANCE AGREEMENT. IT MUST BE EXECUTED AND RECORDED AT THE HENRY COUNTY COURT HOUSE PRIOR TO FINAL PLAN APPROVAL. THE AGREEMENT IS AVAILABLE ON THE HENRY COUNTY STORMWATER MANAGEMENT WEBSITE IN THE TECHNICAL & ENGINEERING SECTION. CONTACT THE STORMWATER DEPARTMENT AT (770) 288-7260 FOR INFORMATION.

24. NO WOODY VEGETATION IS ALLOWED WITHIN 15' OF THE DOWNSTREAM TOE OF EARTHEN EMBANKMENT,

25. ALL RETAINING WALL DESIGNS GREATER THAN 4' IN HEIGHT SHALL BE SUBMITTED AND APPROVED BY THE HENRY COUNTY BUILDING DEPARTMENT PRIOR TO INSTALLATION. POURED CONCRETE WALLS ARE REQUIRED FOR RESIDENTIAL POND RETAINING WALLS.

26. ALL STORM PIPE AND STRUCTURES SHALL COMPLY WITH GA DOT STANDARDS FOR DESIGN, CONSTRUCTION, AND INSTALLATION.

STATE WATERS BUFFER NOTE:

THERE IS ESTABLISHED A 25 FOOT BUFFER ALONG THE BANKS OF ALL STATE WATERS, AS MEASURED HORIZONTALLY FROM THE POINT WHERE VEGETATION HAS BEEN WRESTED BY NORMAL STREAM FLOW OR WAVE ACTION. NO LAND DISTURBING ACTIVITIES SHALL BE CONDUCTED WITHIN A BUFFER AND A BUFFER SHALL REMAIN IN ITS NATURAL, UNDISTURBED STATE OF VEGETATION UNTIL ALL LAND DISTURBING ACTIVITIES ON THE CONSTRUCTION SITE ARE COMPLETED. ONCE THE FINAL STABILIZATION OF THE SITE IS ACHIEVED, A BUFFER MAY BE THINNED OR TRIMMED OF VEGETATION AS LONG AS A PROTECTIVE VEGETATIVE COVER REMAINS TO PROTECT WATER QUALITY AND AQUATIC HABITAT AND A NATURAL CANOPY IS LEFT IN SUFFICIENT QUANTITY TO KEEP SHADE ON THE STREAM BED; PROVIDED, HOWEVER, THAT ANY PERSON CONSTRUCTING A SINGLE FAMILY RESIDENCE, WHEN SUCH RESIDENCE IS CONSTRUCTED BY OR UNDER CONTRACT WITH THE OWNER FOR HIS OR HER OWN OCCUPANCY, MAY THIN OR TRIM VEGETATION IN A BUFFER AT ANY TIME AS LONG AS PROTECTIVE VEGETATIVE COVER REMAINS TO PROTECT WATER QUALITY AND AQUATIC HABITAT AND A NATURAL CANOPY IS LEFT IN SUFFICIENT QUANTITY TO KEEP SHADE ON THE STREAM.

GRADING NOTES: PLACEMENT AND COMPACTION

1. GROUND SURFACE PREPARATION: REMOVE VEGETATION INCLUDING GRASS, ROOTS, AND SURFICIAL ORGANICS, DEBRIS, UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO PLACEMENT OF FILLS. PLOW STRIP, OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERT. TO 2 HORIZ. SO THAT FILL MATERIAL WILL BOND WITH EXISTING SURFACE. WHEN EXISTING GROUND SURFACE HAS A DENSITY LESS THAN THAT SPECIFIED UNDER COMPACTION FOR PARTICULAR AREA CLASSIFICATION, BREAK UP GROUND SURFACE, PULVERIZE, MOISTURE CONDITION TO OPTIMUM MOISTURE CONTENT, AND COMPACT TO REQUIRED DEPTH AND PERCENTAGE OF MAXIMUM DENSITY.

2. PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 12 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT AND NOT MORE THAN 6 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.

3. BEFORE COMPACTION, MOISTEN AND AERATE EACH LAYER AS NECESSARY TO PROVIDE OPTIMUM MOISTURE CONTENT. COMPACT EACH LAYER TO REQUIRED PERCENTAGE OF MAXIMUM DRY DENSITY OR RELATIVE DRY DENSITY FOR EACH AREA CLASSIFICATION. DO NOT PLACE BACKFILL OR FILL MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN OR CONTAIN FROST OR ICE.

4. COMPACT SUBGRADE AND EACH LAYER OF BACKFILL OF FILL MAT'L TO AT LEAST 95 % OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY TO A DEPTH OF 6" BELOW BOTTOM OF FINAL GRADE.

5. MOISTURE CONTROL: WHERE SUBGRADE OR LAYER OF SOIL MATERIAL MUST BE MOISTURE CONDITIONED BEFORE COMPACTION, UNIFORMLY APPLY WATER TO SURFACE OF SUBGRADE OR LAYER OF SOIL MAT'L. APPLY WATER IN MINIMUM QUANTITY AS NECESSARY TO PREVENT FREE WATER FROM APPEARING ON SURFACE DURING OR SUBSEQUENT TO COMPACTION OPERATIONS.

6. REMOVE AND REPLACE, OR SCARIFY AND AIR DRY, SOIL MATERIAL THAT IS TOO WET TO PERMIT COMPACTION TO SPECIFIED DENSITY.

7. SPREAD SOIL MATERIAL THAT HAS BEEN REMOVED BECAUSE IT IS TOO WET TO PERMIT COMPACTION. ASSIST DRYING BY DISCING, HARROWING, OR PULVERIZING UNTIL MOISTURE CONTENT IS REDUCED TO A SATISFACTORY VALUE.

8. QUALITY CONTROL TESTING DURING CONSTRUCTION: ALLOW GEOTECHNICAL TESTING SERVICE TO INSPECT AND APPROVE EACH SUB-GRADE AND BACKFILL OR FILL LAYER BEFORE FURTHER BACKFILL OR CONSTRUCTION WORK IS PERFORMED. TEST SHALL BE PERFORMED EVERY 10,000 SQ. FT. OF AREA PER ONE FOOT LIFT (OR AS DIRECTED BY A REGISTERED GEOTECHNICAL ENGINEER.

9. GEOTECHNICAL SPEC'S DEPICTED HEREON ARE GUIDELINES ONLY AND SHOULD BE VERIFIED BY A REGISTERED GEOTECHNICAL ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. RECOMMENDATIONS FROM A REGISTERED GEOTECHNICAL ENGINEER (IF ANY) SHALL SUPERSEDE THE ABOVE REFERENCED SPEC'S.

10. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER OF THE DISCOVERY OF ANY GROUNDWATER, SUBSURFACE SEEPAGE OR SPRINGS DURING THE COURSE OF CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO CONSULT WITH A REGISTERED GEOTECHNICAL ENGINEER TO INSPECT THE SITE, AND TO MAKE ANY RECOMMENDATIONS REGARDING EVIDENCE AND REMEDIATION (IF ANY) OF SAID SUBSURFACE WATERS.

11. ALL CUT AND FILL SLOPES (WITH THE EXCEPTION OF DETENTION AND SEDIMENT PONDS) SHALL BE LESS THAN OR EQUAL TO 2:1. POND SLOPES SHALL BE 3:1 UNLESS OTHERWISE NOTED.

12. HENRY COUNTY ASSUMES NO RESPONSIBILITY FOR THE OVERFLOW OR EROSION OF NATURAL DRAINS OR THE MAINTENANCE OF STORM DRAINS BEYOND THE EXTENT OF THE STREET RIGHT OF WAY.

13. OWNER WILL PROVIDE GEOTECHNICAL SERVICES DURING CONSTRUCTION.

14. OWNER WILL PROVIDE INITIAL CONSTRUCTION STAKING, BUT RESTAKES WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

HOW TO USE THESE DRAWINGS:

1. THE PLANS, PROFILES, DETAILS, SPECIFICATIONS AND OTHER DESIGN APPURTENANCES CONTAINED HEREIN ARE FOR INFORMATION, PERMITTING, AND CONSTRUCTION PURPOSES. THESE DOCUMENTS ARE NOT VALID FOR CONSTRUCTION UNTIL SIGNED AND SEALED BY THE ENGINEER OF RECORD AND THE APPROPRIATE PERMITS ARE OBTAINED FROM LOCAL GOVERNING AUTHORITIES.
2. ADDITIONAL PROVISIONS MAY BE REQUIRED DURING CONSTRUCTION DUE TO SITE CONDITIONS, WEATHER, OR REQUESTS BY THE INSPECTOR.
3. THE FEATURES, DISTANCES, AND ANGLES ON THESE DRAWINGS SHALL NOT BE SCALED. IF THE NECESSARY DIMENSIONS ARE NOT PROVIDED, THE CONTRACTOR SHALL NOTIFY THE OWNER OR ENGINEER FOR CLARITY.
4. PIPE LENGTHS ARE MEASURED TO THE CENTER OF THE STRUCTURES IN LINEAR HORIZONTAL FEET AND PIPE SIZES ARE MEASURED BY INSIDE DIAMETER IN INCHES UNLESS OTHERWISE NOTED.
5. THE PROPOSED GRADING SHOWN ON THESE PLANS REPRESENTS THE FINISHED SURFACE ELEVATIONS UNLESS OTHERWISE NOTED.

OWNER/CONTRACTOR ACKNOWLEDGEMENT:

1. THE PLANS, SPECIFICATIONS, AND REPORTS CONTAINED HEREIN ARE INSTRUMENTS OF FALCON DESIGN CONSULTANTS, LLC AND SHALL NOT BE COPIED, PUBLISHED, SOLD, OR OTHERWISE DISSEMINATED WITHOUT WRITTEN CONSENT BY FALCON DESIGN CONSULTANTS, LLC. UPON COMPLETION OF SAID DESIGN OR LAWSUITS, APPROVAL BY LOCAL GOVERNING AUTHORITIES, AND FULL COMPENSATION BY THE OWNER OR DEVELOPER, THESE PLANS, SPECIFICATIONS, AND REPORTS MAY BE RELEASED AT THE DISCRETION OF THE OWNER OR DEVELOPER AND THE LOCAL GOVERNING AUTHORITY. AT SUCH TIME FALCON DESIGN CONSULTANTS, LLC WILL MAKE THIS INFORMATION AVAILABLE IN PAPER OR ELECTRONIC FORMAT. ADDITIONAL FEES MAY APPLY.
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3. ALL WORK SHALL COMPLY WITH LOCAL, STATE, AND FEDERAL CODES AS APPLICABLE. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND LICENSES PRIOR TO COMMENCING CONSTRUCTION.

FALCON DESIGN
ENGINEERING PLANNING SURVEYING
2010 AVALON PARKWAY, SUITE 300
MCDONOUGH, GEORGIA 30253
Ph. (770) 389-8666 - Fax (770) 389-8656
VISIT US ON OUR WEBSITE:
www.fdc-llc.com

GENERAL NOTES
FOR
STOCKBRIDGE CITY HALL
TURNAROUND & PARKING ADDITION
LOCATED IN:
STOCKBRIDGE, GEORGIA
LAND LOT 61, 12TH DISTRICT

REVISIONS

1.	
2.	
3.	
4.	

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OR DIAL 811

DATE:	05-24-13
SCALE:	NTS
FILE NUMBER:	ENG-00
DRAWN BY:	ALP

GEORGIA REGISTERED No. 030440 PROFESSIONAL ENGINEER ADAM L. PRICE
5/24/13

GSWCC# 0000009371

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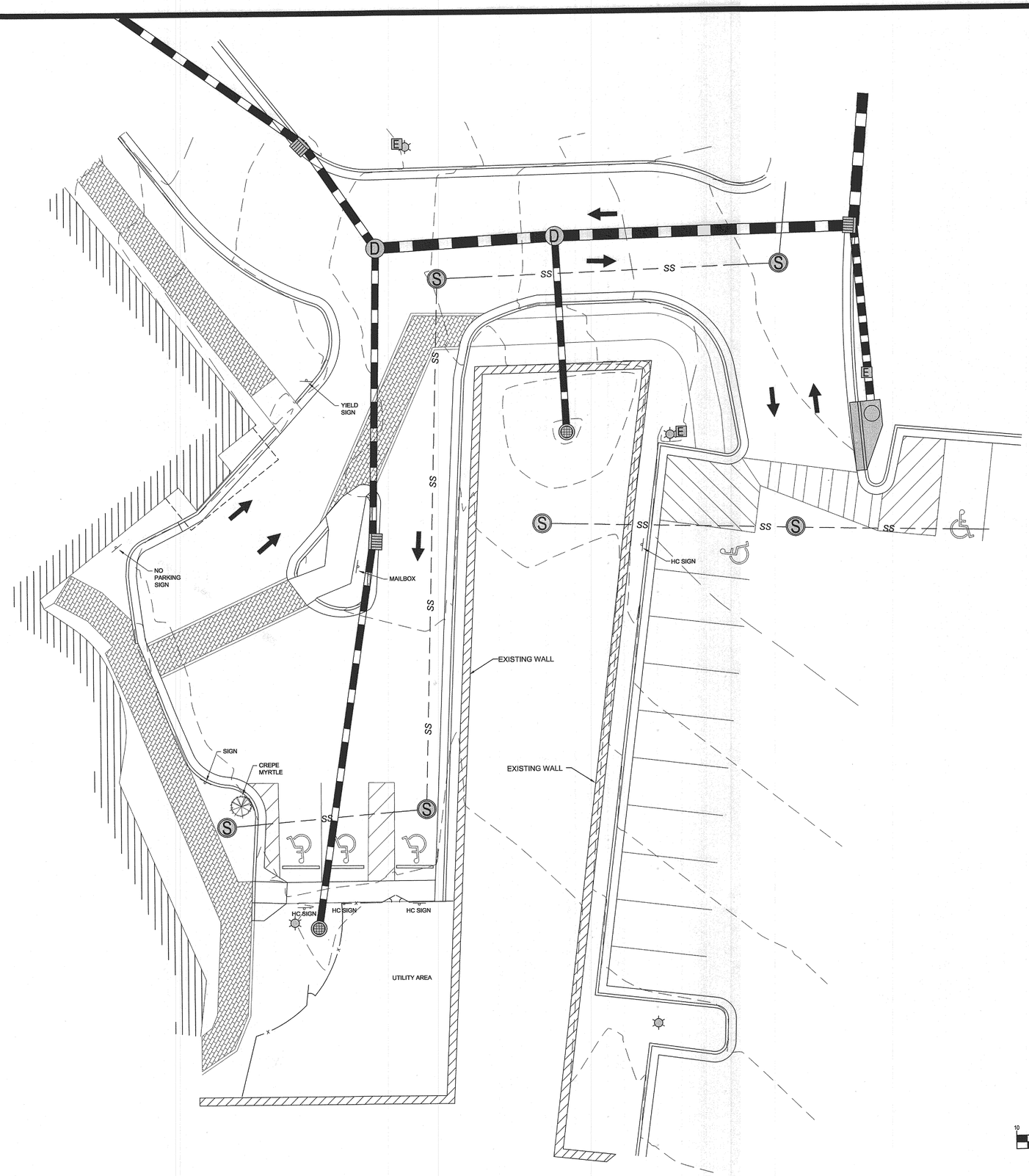
LEGEND

DB	DEED BOOK
PB	PLAT BOOK
PG	PAGE
LL	LAND LOT
OTP	OPEN TOP PIPE
RB	REBAR
IPF	IRON PIN FOUND
IPS	IRON PIN SET
CTP	CRIMP TOP PIPE
C&G	CURB & GUTTER
R/W	EDGE OF PAVEMENT
N/F	NOW OR FORMERLY
-E-	OVERHEAD POWER LINE
sq ft	SQUARE FOOT
REF	REFERENCE
TBM	TEMPORARY BENCHMARK
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
RCP	REINFORCED CONCRETE PIPE
DIP	DUCTILE IRON PIPE
PVC	POLYVINYL CHLORIDE PIPE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
CMP	CORRUGATED METAL PIPE
ℙ	PROPERTY LINE
℄	CENTERLINE
ID	IDENTIFICATION
B.S.L.	BUILDING SETBACK LINE
BOC	BACK OF CURB
C	CURVE LABEL
CI	CURB INLET
DE	DRAINAGE EASEMENT
EOP	EDGE OF PAVEMENT
FH	FIRE HYDRANT
L	LINE LABEL
N/F	NOW OR FORMERLY
PKS	PK NAIL SET
SSE	SANITARY SEWER EASEMENT
UE	UTILITY EASEMENT
SWMF	STORMWATER MANAGEMENT FACILITY
C/0	SEWER CLEAN OUT
	IRON PIN FOUND
	IRON PIN SET
	CALCULATED POINT
	POWER POLE
	FIRE HYDRANT
	WATER VALVE
	WATER METER
	JUNCTION BOX
	SANITARY SEWER MANHOLE
	DROP INLET
	R/W MONUMENT
	SINGLE WING CATCH BASIN
	DOUBLE WING CATCH BASIN
	CURB INLET
	HEADWALL
	FLARED END SECTION
	GAS METER
	GAS VALVE
	ELECTRIC TRANSFORMER
	TELEPHONE PEDESTAL
	LIGHT POST
	EX. DROP INLET
	EX. BRICK PAVERS



GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

FALCON DESIGN ENGINEERING PLANNING SURVEYING
2010 AVALON PARKWAY, SUITE 300
MCDONOUGH, GEORGIA 30253
TEL: (770) 957-8486 FAX: (770) 957-8656
VISIT US ON OUR WEBSITE: www.2dc-llc.com

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LAND LOT 61, 12TH DISTRICT

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(ATLANTA AREA 770-623-0377)
(ALL DIAL 811)

DATE:	05-24-13
SCALE:	1"=10'
FILE NUMBER:	ENG-00
DRAWN BY:	ALP

GEORGIA REGISTERED No. 020440 PROFESSIONAL ENGINEER ADAM LANE PRICE
05-24-13

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P:\Projects\City of Stockbridge\CITY HALL\STOCKBRIDGE-CITY-HALL-ENG-00-C3D.dwg, EXIST, aprice, May 28, 2013 - 12:17:32pm

LEGEND

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	LIGHT POST
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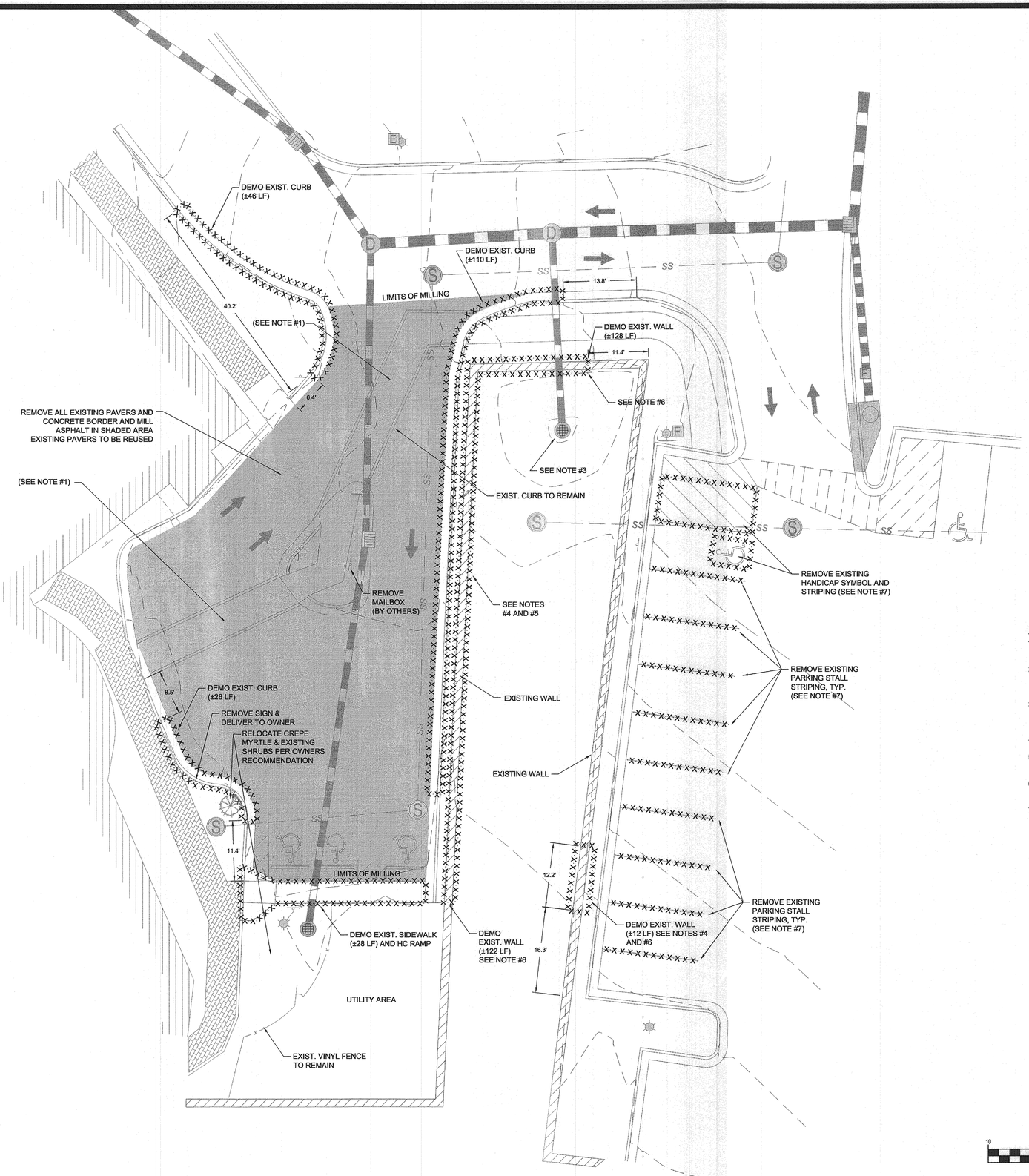
	EX. BRICK PAVERS
xxxxxxxxx	TO BE REMOVED



DEMOLITION NOTES:

1. CONTRACTOR TO REMOVE AND REINSTALL EXISTING PAVERS WITH NEW PAVERS TO MATCH.
2. CONTRACTOR TO MILL EXISTING ASPHALT PAVEMENT ±2" AND DISPOSE OF WASTE MATERIAL. CONTRACTOR TO REMOVE EXISTING CONCRETE PAVER BORDER AND DISPOSE OF WASTE MATERIAL.
3. CONTRACTOR TO PROVIDE TEMPORARY STORM WATER BMP'S IN ACCORDANCE WITH GEORGIA MANUAL FOR EROSION AND SEDIMENT CONTROL.
4. CONTRACTOR TO SAW CUT AND REMOVE EXISTING WALL AND FOOTING.
5. CONTRACTOR TO REMOVE AND REUSE EXISTING STONE CAPS FROM DEMOLISHED WALL. SURPLUS CAPS TO BE DELIVERED TO THE CITY.
6. CONTRACTOR SHALL REMOVE AND REPLACE ALL CAST STONE CAPS AT EACH SAWCUT WALL OPENING TO MAINTAIN A UNIFORM OVERHANG.
7. CONTRACTOR TO REMOVE EXISTING PARKING AND HANDICAP STRIPING BY NON-DESTRUCTIVE METHOD TO BE SUBMITTED TO ENGINEER FOR APPROVAL.

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

FALCON DESIGN
ENGINEERING PLANNING SURVEYING
2010 AVALON PARKWAY, SUITE 100
MCDONOUGH, GEORGIA 30253
P: (770) 946-8447 F: (770) 946-8446
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www.falcon-design.com

DEMOLITION PLAN
FOR
STOCKBRIDGE CITY HALL TURNAROUND & PARKING ADDITION
LOCATED IN:
STOCKBRIDGE, GEORGIA
LAND LOT 61, 12TH DISTRICT

REVISIONS

1.	ADDED STORM PIPE - 6/6/13
2.	
3.	
4.	

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UTILITIES PROTECTION CENTER
(FORMERLY GUPS AFFILIATES)
OR DIAL 811

DATE:	05-24-13
SCALE:	1"=10'
FILE NUMBER:	ENG-00
DRAWN BY:	ALP

GEORGIA REGISTERED No. 030440 PROFESSIONAL ENGINEER ADAM L. PRICE
6/6/13

GSWCC# 0000009371

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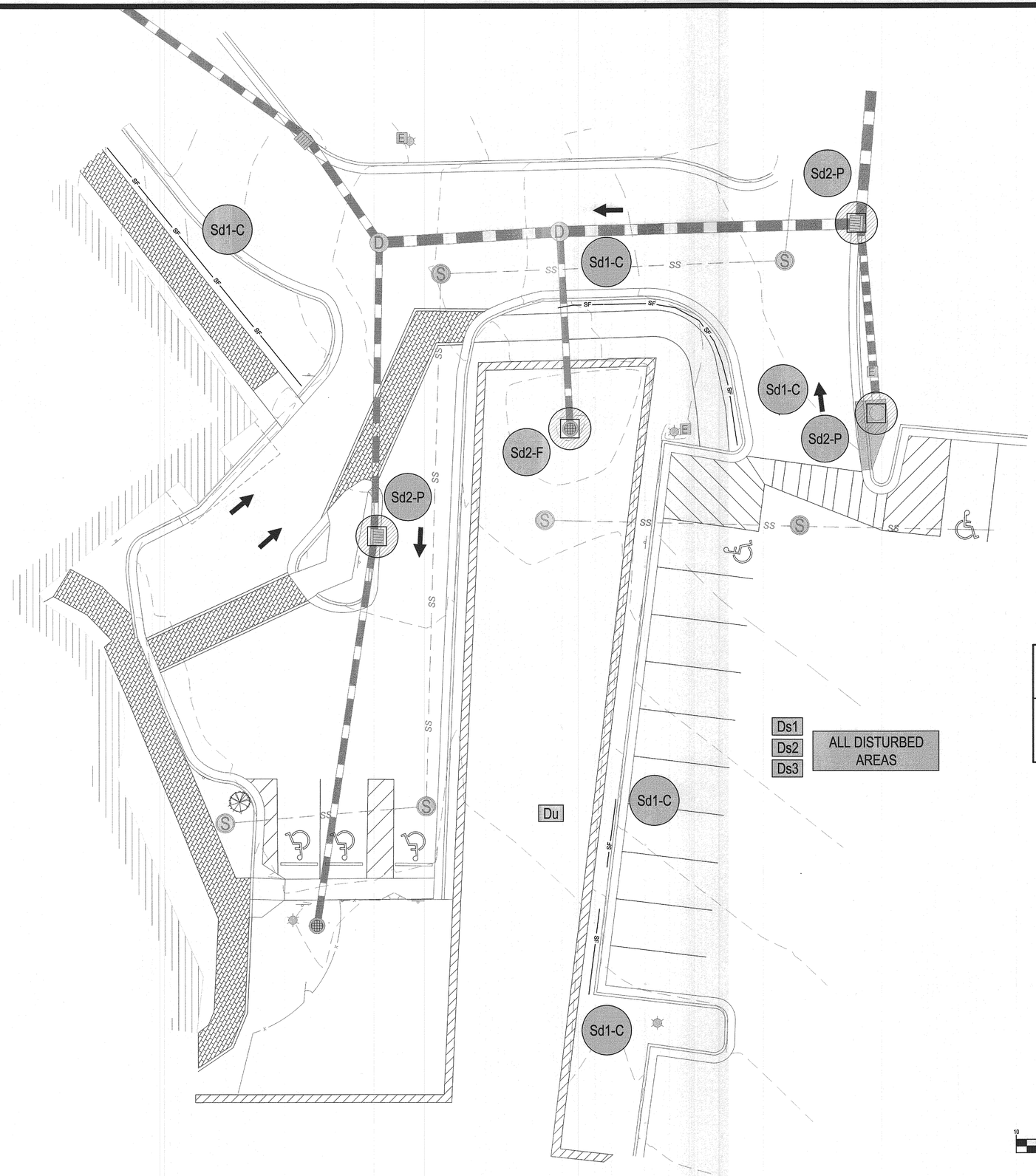
P:\Projects\City of Stockbridge\CITY HALL\STOCKBRIDGE-CITY-HALL-ENG-00-C3D.dwg, DEMO, shayes, Jun 06, 2013 - 2:17:31pm



SILT STORAGE REQUIREMENTS

DISTURBED AREA: 0.22 Ac.
REQUIRED STORAGE: 67 CY / Ac. * 0.22 Ac.= 14.74 CY

SILT STORAGE PROVIDED

AVAILABLE STORAGE (SILT FENCE): 143 LF.
143 LF. x 16.76 CY. / 100 LF. SILT FENCE= 23.97 CY.

TOTAL SILT STORAGE PROVIDED: 23.97 CY.

EROSION CONTROL NOTES:

24 HR. CONTACT: DAVID MILLIRON, CITY MANAGER
PHONE: (770) 389-7904

TOTAL SITE ACREAGE: ±8.41 ac. / TOTAL DISTURBED ACREAGE: ±0.22 ac.

"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."

"ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."

EXISTING SITE CONDITIONS:
SITE IS CURRENTLY A PARKING AREA AND OPEN SPACE AT CITY HALL

PROPOSED SITE CONDITIONS:
NEW PARKING AREA

RECEIVING WATERS:
BRUSH CREEK

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

FALCON DESIGN PLANNING & ENGINEERING SURVEYING
3010 AVALON PARKWAY, SUITE 100
MCDONOUGH, GEORGIA 30253
PH. (770) 898-9565 - FAX (770) 898-9565
VISIT US ON OUR WEBSITE: www.dc-llc.com

EROSION CONTROL PLAN - PHASE 1
FOR
STOCKBRIDGE CITY HALL
TURNAROUND & PARKING ADDITION
LOCATED IN:
STOCKBRIDGE, GEORGIA
LAND LOT 61, 12TH DISTRICT

REVISIONS

1.	ADDED STORM PIPE - 6/6/13
2.	
3.	
4.	

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1 (800) 282-7411 TROUSDUT GEORGIA
OC 2-24-171

DATE:	05-24-13
SCALE:	1"=10'
FILE NUMBER:	ENG-00
DRAWN BY:	ALP

GEORGIA REGISTERED No. 030440 PROFESSIONAL ENGINEER

6/6/13

GSWCC# 0000009371

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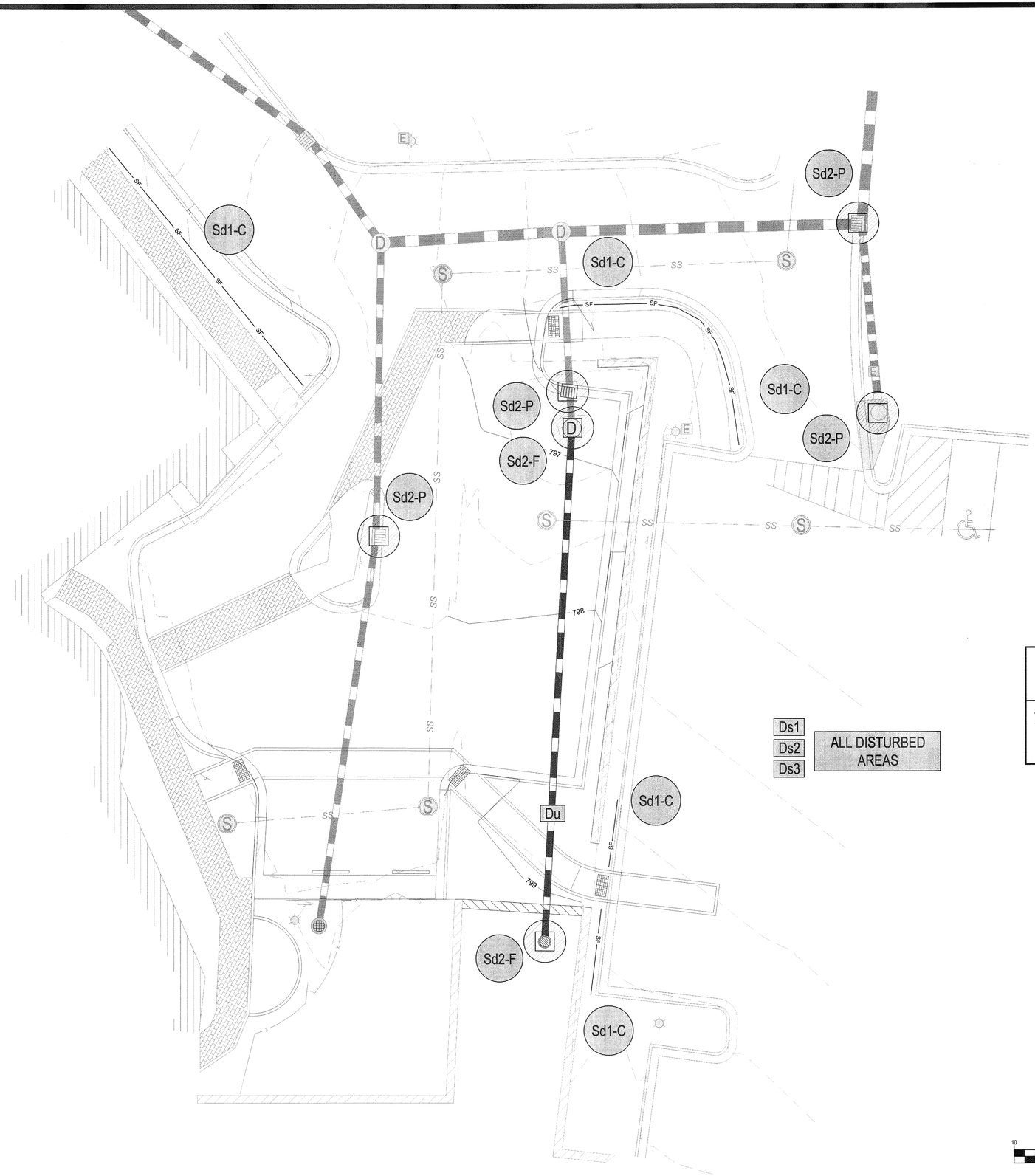

MAGNETIC NORTH

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PHONE: (770) 389-7904

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PROPOSED SITE CONDITIONS:
NEW PARKING AREA

RECEIVING WATERS:
BRUSH CREEK

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

FALCON DESIGN
ENGINEERING PLANNING SURVEYING
2810 AVALON PARKWAY, SUITE 300
STOCKBRIDGE, GEORGIA 30281
Ph. (770) 389-8664 Fax (770) 389-8666
VISIT US ON OUR WEBSITE: www.fdc-llc.com

EROSION CONTROL PLAN - PHASE 2
FOR
STOCKBRIDGE CITY HALL TURNAROUND & PARKING ADDITION
LOCATED IN:
STOCKBRIDGE, GEORGIA
LAND LOT 61, 12TH DISTRICT

REVISIONS

1.	ADDED STORM PIPE - 6/6/13
2.	WALL CONST., CHANGED GRADES 7/16/13
3.	
4.	

811 Know what's below. Call before you dig.
UTILITIES PROTECTION CENTER
1-800-282-7411 (1-800-GA-811)
OR 404.671

DATE:	05-24-13
SCALE:	1"=10'
FILE NUMBER:	ENG-00
DRAWN BY:	ALP

GEORGIA REGISTERED No. 030440 PROFESSIONAL ENGINEER ADMAK PRICE

GSWCC# 0000009371

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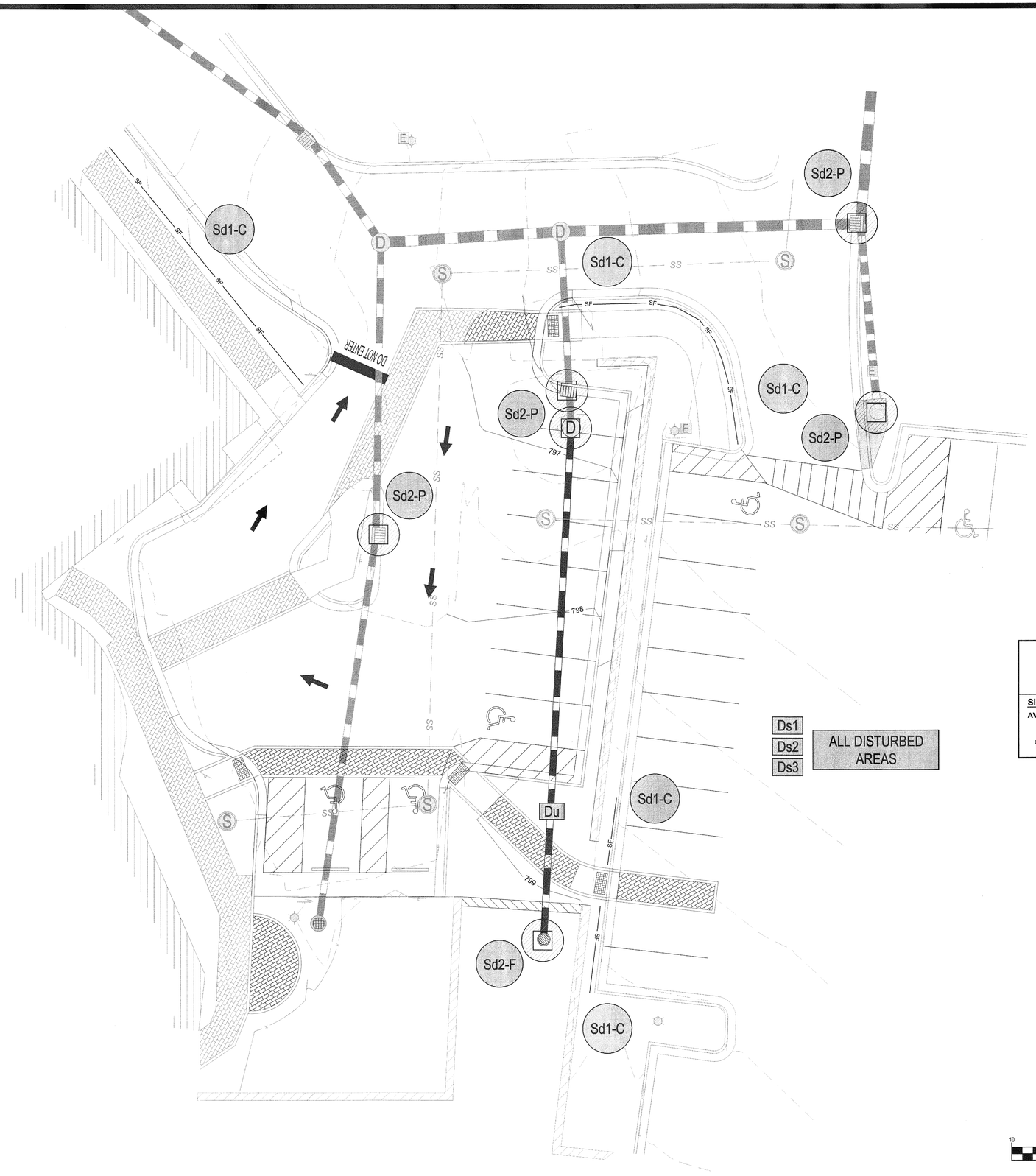

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NEW PARKING AREA

RECEIVING WATERS:
BRUSH CREEK

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

FALCON DESIGN
ENGINEERING PLANNING SURVEYING
2810 AVALON PARKWAY, SUITE 300
MCDONOUGH, GEORGIA 30253
TELEPHONE: (770) 898-9115 FAX: (770) 898-8656
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EROSION CONTROL PLAN - PHASE 3
FOR
STOCKBRIDGE CITY HALL TURNAROUND & PARKING ADDITION
LOCATED IN:
STOCKBRIDGE, GEORGIA
LAND LOT 61, 12TH DISTRICT

REVISIONS

1.	ADDED STORM PIPE - 6/6/13
2.	
3.	
4.	

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(800) 282-7411
OR DIAL 811

DATE:	05-24-13
SCALE:	1"=10'
FILE NUMBER:	ENG-00
DRAWN BY:	ALP

GEORGIA REGISTERED No. 030440 PROFESSIONAL ENGINEER ALAN L. PRICE 7/16/13

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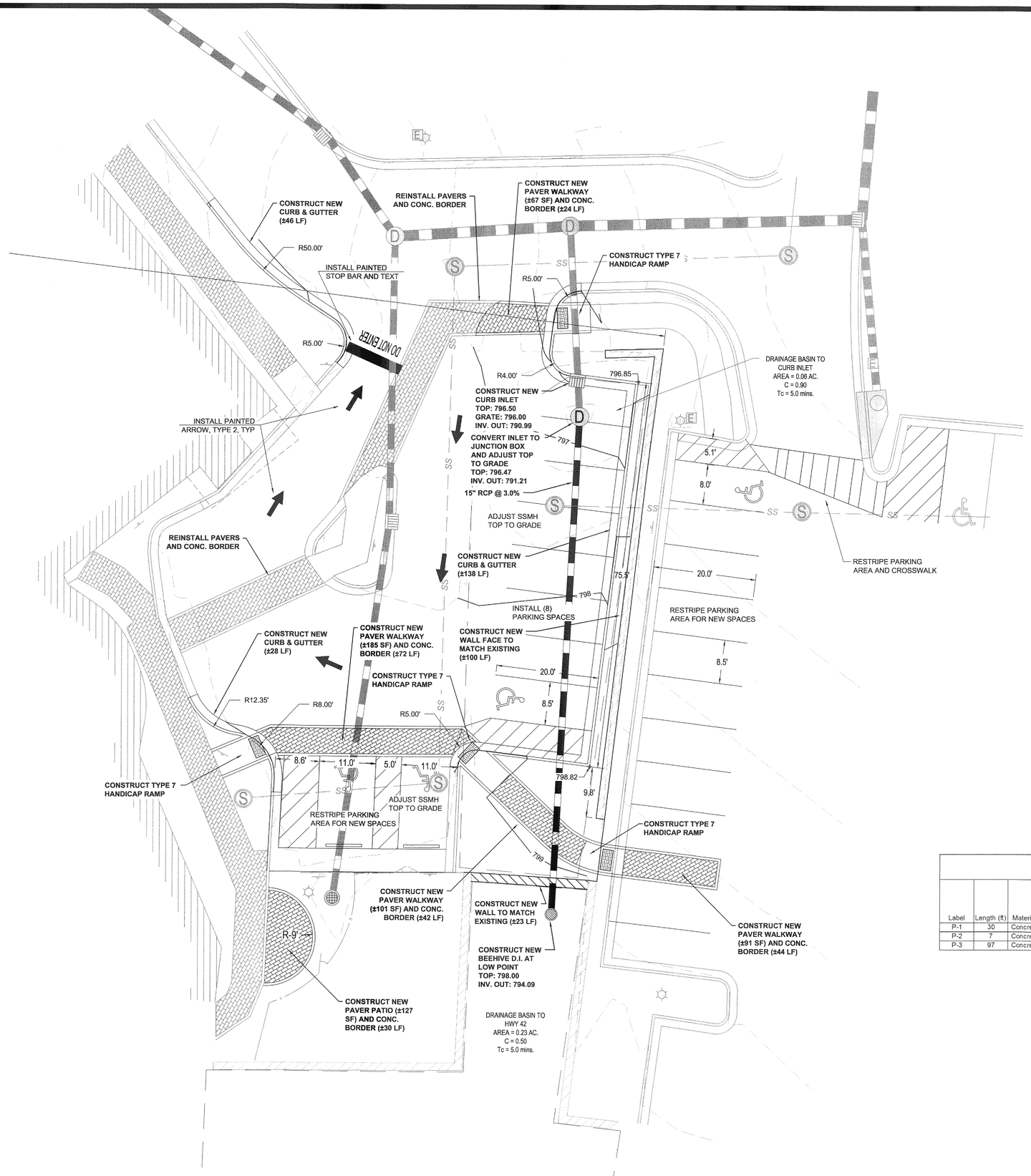

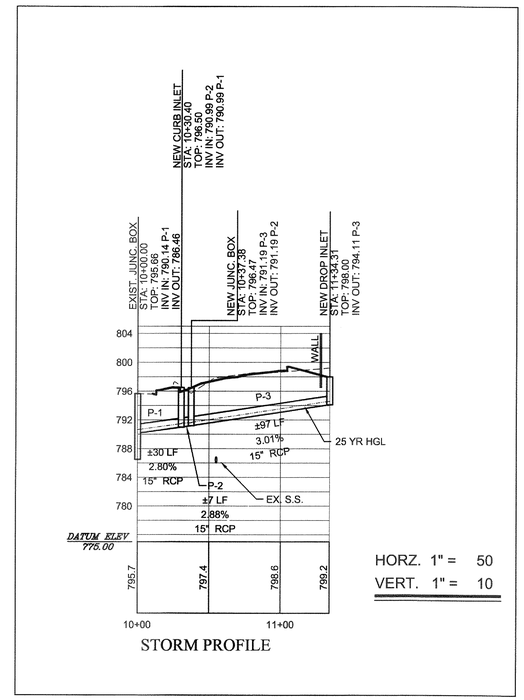

STORM PROFILE

25-YR PIPE CHART

Label	Length (ft)	Material	Mannings n	Section Size	Constructed Slope (ft/ft)	Upstream Inlet Area (acres)	Upstream Inlet CA (acres)	System CA (acres)	Upstream Inlet Rational Flow (cfs)	System Rational Flow (cfs)	Full Capacity (cfs)	Average Velocity (ft/s)	Upstream Structure Hydraulic Grade (ft)	Downstream Structure Hydraulic Grade (ft)	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)
P-1	30	Concrete	0.013	15 inch	0.03	0.06	0.05	0.17	0.46	1.41	10.87	6.12	791.46	790.14	790.99	790.14
P-2	7	Concrete	0.013	15 inch	0.03	N/A	N/A	0.12	N/A	0.96	10.92	5.48	791.58	791.54	791.19	790.99
P-3	97	Concrete	0.013	15 inch	0.030	0.23	0.12	0.12	0.97	0.97	11.21	5.60	794.50	791.65	794.11	791.19

CONTRACTOR NOTES:

1. ALL STRIPING TO BE INSTALLED PER MUTCD, LATEST EDITION. CONTRACTOR TO OBTAIN ENGINEER APPROVAL OF STRIPING MATERIAL PRIOR TO INSTALLATION.

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

FALCON DESIGN
ENGINEERING PLANNING SURVEYING
2019 AVALON PARKWAY, SUITE 100
MCDONOUGH, GEORGIA 30253
TEL: (678) 854-1000 FAX: (678) 854-1006
VISIT US ON OUR WEBSITE: WWW.FALCONDESIGN.COM

CONSTRUCTION PLAN
FOR
STOCKBRIDGE CITY HALL TURNAROUND & PARKING ADDITION
LOCATED IN:
STOCKBRIDGE, GEORGIA
LAND LOT 61, 12TH DISTRICT

REVISIONS

1.	PER COUNTY FIRE COMMENTS, ADD STORM - 6/6/13
2.	
3.	
4.	
5.	

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UTILITIES PROTECTION CENTER
1-800-282-7411 (TWO-CALL)
GA 811

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DRAWN BY:	ALP

GEORGIA REGISTERED No. 030440 PROFESSIONAL ENGINEER
7/16/13

GSWCC# 0000009371

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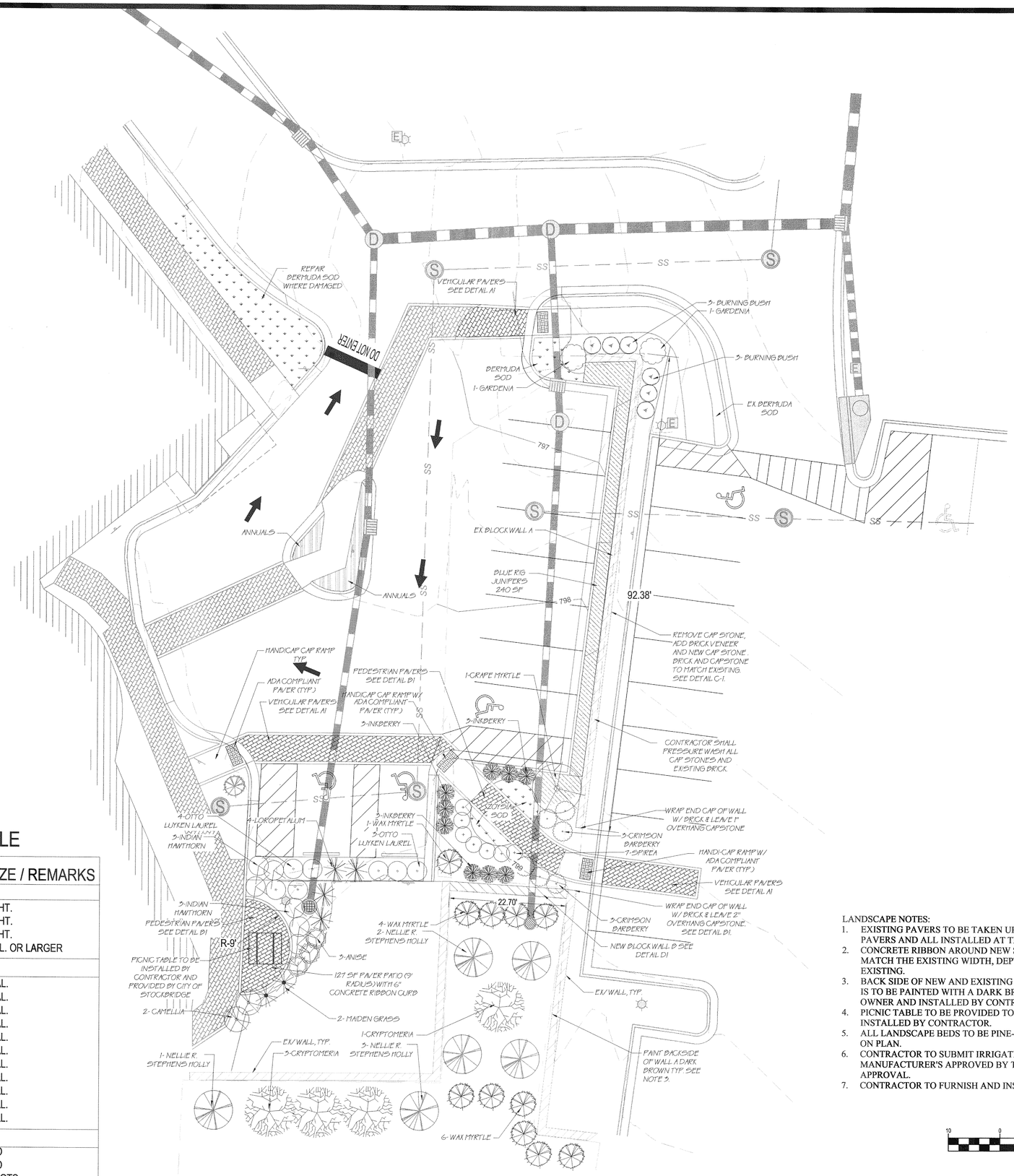

LEGEND

- CRYPTOMERIA
- NELLIE R. STEVENS
- WAX MYRTLE
- BURNING BUSH
- CAMELLIA
- CRIMSON BARBERRY
- FLORIDA ANISE
- GARDENIA AUGUSTA BEAUTY
- INDIAN HAWTHORNE
- INKBERRY
- LOROPETALUM
- MAIDEN GRASS
- OTTO LUYKEN LAURELS
- SPIREA GOLD MOUND
- BLUE RUG JUNIPER
- BERMUDA OR ZOYSIA SOD
- ANNUAL COLOR

PLANTING SCHEDULE

QTY.	BOTANICAL NAME	COMMON NAME	SIZE / REMARKS
TREES			
4	CRYPTOMERIA JAPONICA	CRYPTOMERIA	7'-8' HT.
6	ILEX x NELLY R. STEVENS	NELLY R. STEVENS HOLLY	4'-6' HT.
1	LAGERSTROEMIA INDICA 'TUSKEGEE'	TUSKEGEE CRAPE MYRTLE	7'-8' HT.
10	MYRICA CERIFERA	WAX MYRTLE	5 GAL. OR LARGER
SHRUBS			
6	BERBERIS THUNBERGII 'CRIMSON PYGMY'	CRIMSON BARBERRY	3 GAL.
2	CAMELLIA SASANQUA	CAMELLIA	3 GAL.
2	GARDENIA JASMINOIDES	GARDENIA 'AUGUSTA BEAUTY'	3 GAL.
9	ILEX GLABRA	INKBERRY	3 GAL.
3	ILLICIUM FLORIDANUM	FLORIDA ANISE	3 GAL.
80	JUNIPERUS HORIZONTALIS	BLUE RUG JUNIPER	3 GAL.
4	LOROPETALUM CHINENSE	LOROPETALUM	3 GAL.
2	MISCANTHUS SINENSIS GRACILLIMUS	MAIDEN GRASS	3 GAL.
7	PRUNUS LAUROCERASUS	OTTO LUYKEN LAUREL	3 GAL.
6	RHAPHIOLEPIS INDICA	INDIAN HAWTHORN	3 GAL.
7	SPIREA JAPONICA 'GOLD MOUND'	GOLD MOUND SPIREA	3 GAL.
GROUNDCOVER			
61 SF	ZOYSIA SOD	ZOYSIA SOD	SOD
250 SF	BERMUDA SOD	BERMUDA SOD	SOD
90 SF	ANNUAL FLOWERS	ANNUALS	4" POTS

LANDSCAPE NOTES:

1. EXISTING PAVERS TO BE TAKEN UP AND MIXED IN WITH THE NEW PAVERS AND ALL INSTALLED AT THE SAME TIME.
2. CONCRETE RIBBON AROUND NEW SIDEWALK AND PATIO AREA TO MATCH THE EXISTING WIDTH, DEPTH AND CHARACTERISTICS OF THE EXISTING.
3. BACK SIDE OF NEW AND EXISTING WALL THAT IS CURRENTLY STUCCO IS TO BE PAINTED WITH A DARK BROWN COLOR TO BE CHOSEN BY OWNER AND INSTALLED BY CONTRACTOR.
4. PICNIC TABLE TO BE PROVIDED TO CONTRACTOR BY OWNER AND INSTALLED BY CONTRACTOR.
5. ALL LANDSCAPE BEDS TO BE PINE-STRAW UNLESS OTHERWISE STATED ON PLAN.
6. CONTRACTOR TO SUBMIT IRRIGATION PLAN UTILIZING MANUFACTURER'S APPROVED BY THE OWNER TO OWNER FOR APPROVAL.
7. CONTRACTOR TO FURNISH AND INSTALL APPROVED IRRIGATION PLAN

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

FALCON DESIGN
ENGINEERING PLANNING SURVEYING
2010 AVALON PARKWAY, SUITE 100
MCDONOUGH, GEORGIA 30253
TELEPHONE: (678) 583-8656
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WWW.FALCONDESIGN.COM

LANDSCAPE PLAN
FOR
STOCKBRIDGE CITY HALL TURNAROUND & PARKING ADDITION
LOCATED IN:
STOCKBRIDGE, GEORGIA
LAND LOT 61, 12TH DISTRICT

REVISIONS
1. ADDED STORM PIPE - 6/6/13
2.
3.
4.

811 Know what's below. Call before you dig.
UTILITIES PROTECTION CENTER
1-800-282-7411 (PROJECT GEORGIA)
OR DIAL 811

DATE:	05-24-13
SCALE:	1"=10'
FILE NUMBER:	ENG-00
DRAWN BY:	WRE

GEORGIA REGISTERED No. 030440 PROFESSIONAL ENGINEER
6/6/13

GSWCC# 0000009371

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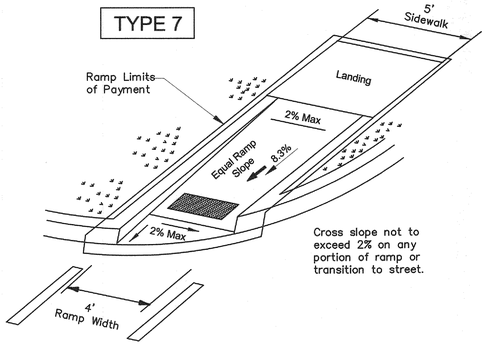
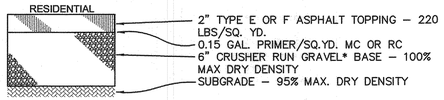


DIRECTIONAL RAMP WITHIN RADIUS

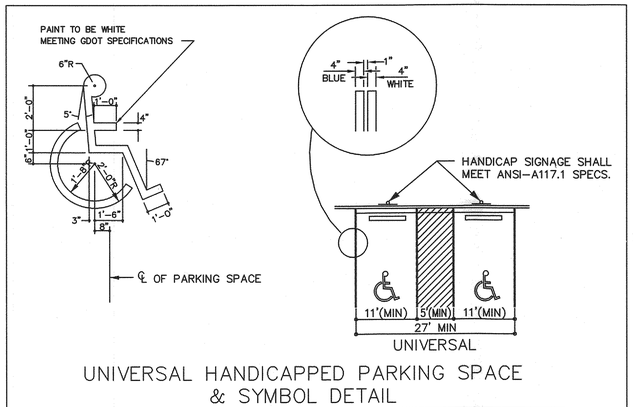
(Sidewalk set back from curb)



COMPACT UPPER 2 FEET OF SUBGRADES CONSISTING OF COUNTY APPROVED FILL IN 6" COMPACTED LIFTS.

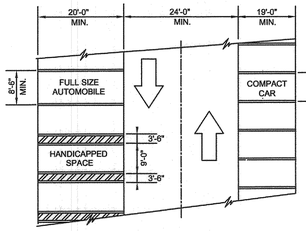
PAVEMENT SECTION

NTS



UNIVERSAL HANDICAPPED PARKING SPACE & SYMBOL DETAIL

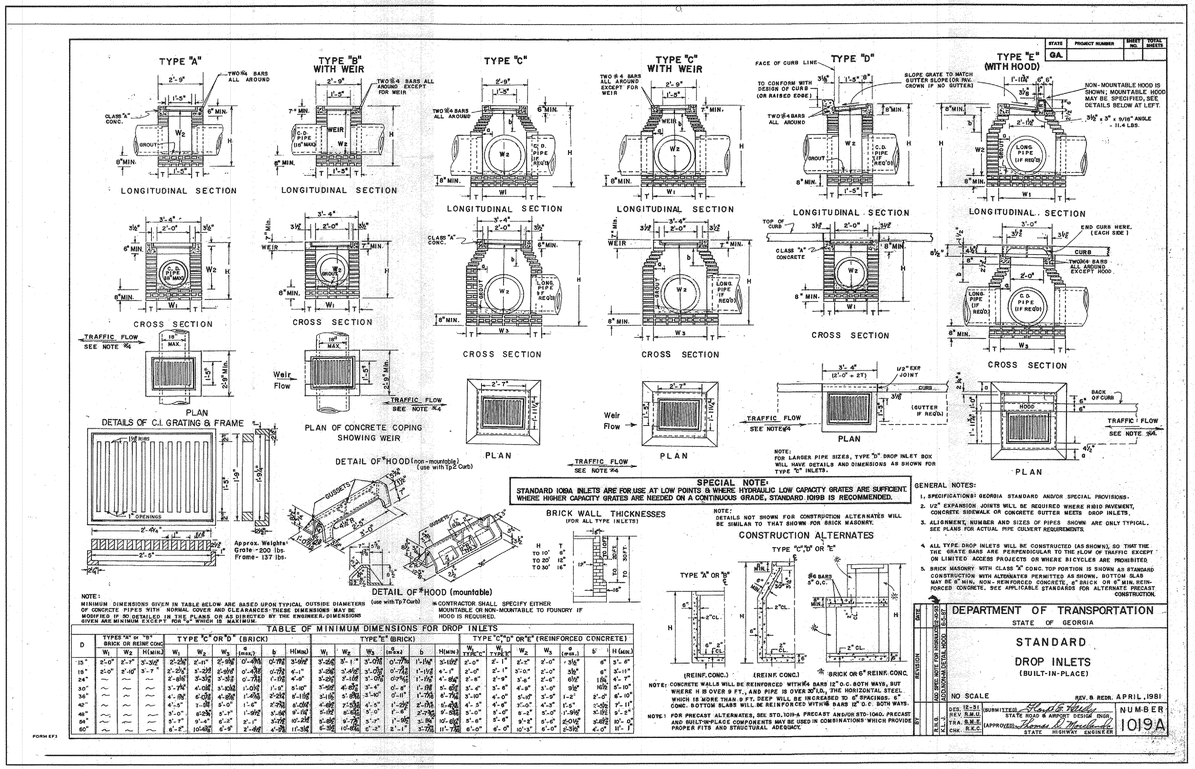
NTS

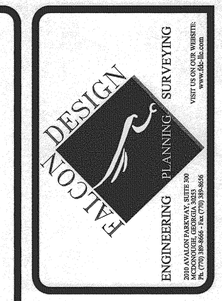


NOTE: PLACE STANDARD HANDICAPPED SIGN & SYMBOL ON H.C. SPACES.

90 PARKING

STANDARD 4.1.1
NTS



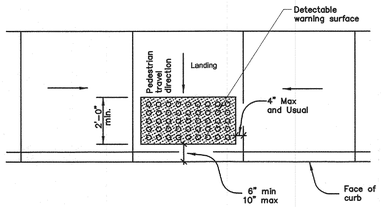


CONSTRUCTION DETAILS
FOR
STOCKBRIDGE CITY HALL
TURNAROUND & PARKING ADDITION
LOCATED IN:
STOCKBRIDGE, GEORGIA
LAND LOT 61, 12TH DISTRICT

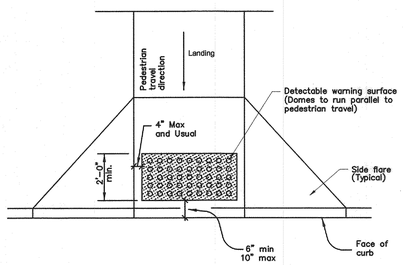
DETECTABLE WARNINGS

General Notes for Detectable Warnings

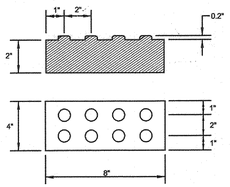
1. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with Section 705 of the Americans with Disabilities Act (ADA). The surface must contrast visually with adjoining surfaces, including side flares. Furnish dark brown or dark red detectable warning surface adjacent to uncolored concrete, unless specified elsewhere in the plans.
2. Detectable warning surfaces must be slip resistant and not allow water to accumulate.
3. Align truncated domes in the direction of pedestrian travel when entering the street.
4. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.
5. Detectable warning surfaces shall be a minimum of 24" in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian access route enters the street.
6. Detectable warning surfaces shall be located so that the edge nearest the curb line is a minimum of 6" and a maximum of 10" from the extension of the face of curb. Detectable warning surfaces may be curved along the corner radius.



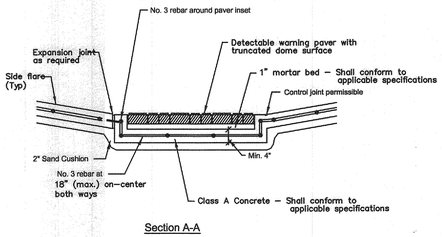
Typical placement of detectable warning surface on landing at street edge.



Typical placement of detectable warning surface on sloping ramp run.



Detectable Warning Paver

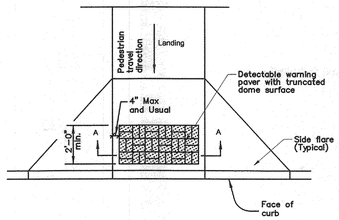


Section A-A

General Notes (Pavers)

Furnish detectable warning paver units meeting all requirements of ASTM C-936, C-33. Lay in a two by two unit basket weave pattern or as directed.

Lay full-size units first followed by closure units consisting of at least 25 percent of a full unit. Cut detectable warning paver units using a power saw.



Truncated Dome Pattern Curb Ramp

DETECTABLE WARNING PAVER (OPTION)

REVISIONS

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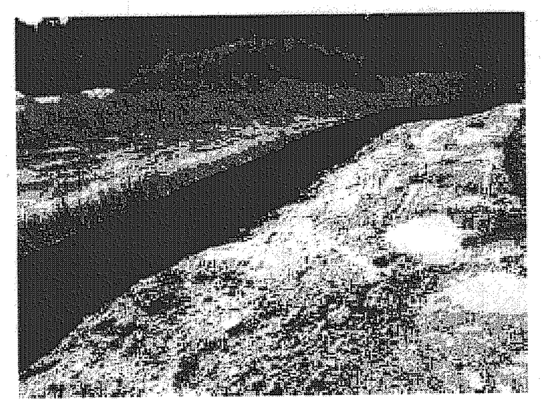
Sediment Barrier (Sd1)



DEFINITION

Sediment barriers are temporary structures typically constructed of silt fence supported by steel or wood posts. Other types of barriers may include sandbags, straw bales, brush piles or other filtering material.

PURPOSE

To prevent sediment carried by sheet flow from leaving the site and entering natural drainage ways or storm drainage system by slowing storm water runoff and causing the deposition of sediment at the structure.

CONDITIONS

Barriers should be installed where runoff can be stored behind the barrier without damaging the fence or the submerged area behind the fence.

Silt fence shall not be installed across streams, ditches, waterways, or other concentrated flow areas.

DESIGN CRITERIA

HAY OR STRAW BALES

Hay or strawbales retain sediment load transported by sheet flow from disturbed areas. The bales' comparatively low flow rate should be considered when choosing the appropriate sediment barrier. Ponding above the bale can occur rapidly. The slope lengths contributing runoff to a bale barrier cannot exceed those listed in Table 6-20.1. Straw and hay bales shall not be used if the project duration is expected to exceed three months.

Table 6-20.1. Criteria For Straw or Hay Bale Placement

Land Slope	Maximum Slope Length Above Bale
Percent	Feet
<2	75
2 to 5	50
5 to 10	35
10 to 20	20
>20	10

SILT FENCE

Like hay or strawbales, silt fence is designed to retain sediment transported by sheet flow from disturbed areas. Silt fence performs the same function as hay or straw bales, allows a higher flow rate, and is usually faster and cheaper to install. Approved silt fence fabrics are listed in the Georgia Department of Transportation Qualified Products List #36 (QPL-36). See Table 6-20.5 for current Georgia DOT silt fence specifications.

Where all runoff is to be stored behind the fence (where no stormwater disposal system is present), maximum slope length behind a silt fence shall not exceed those shown in Table 6-20.2. The drainage area shall not exceed 1/4 acre for every 100 feet of silt fence.

Table 6-20.2. Criteria For Silt Fence Placement

Land Slope	Maximum Slope Length Above Fence
Percent	Feet
<2	100
2 to 5	75
5 to 10	50
10 to 20	25
>20*	15

*In areas where the slope is greater than 20%, a flat area length of 10 feet between the toe of the slope to the fence should be provided.

Type A Silt Fence (Sd1-A)

This 36-inch wide filter fabric shall be used on developments where the life of the project is greater than or equal to six months.

Type B Silt Fence (Sd1-B)

Though only 22-inches wide, this filter fabric allows the same flow rate as Type A silt fence. Type B silt fence shall be limited to use on minor projects, such as residential home sites or small commercial developments where permanent stabilization will be achieved in less than six months.

Type C Silt Fence (Sd1-C)

Type C fence is 36-inches wide with wire reinforcement. The wire reinforcement is necessary because this fabric allows almost three times the flow rate as Type A silt fence. Type C silt fence shall be used where runoff flows or velocities are particularly high or where slopes exceed a vertical height of 10 feet.

Provide a riprap splash pad or other outlet protection device for any point where flow may top the sediment fence. Ensure that the maximum height of the fence at a protected, reinforced outlet does not exceed 1 ft. and that support post spacing does not exceed 4 ft.

CONSTRUCTION SPECIFICATIONS

Sandbags (Sd1-S)
(if approved by local issuing authority)

Should be installed so that flow under or between bags is minimal. Anchoring with steel rods may be required if structure height exceeds two bags.

Hay or Straw Bales (Sd1-Hb)
(if approved by local issuing authority)

Bales will be placed in a single row, lengthwise, on the contour and embedded in the soil to a depth of 4 inches. Bales must be securely anchored in place by stakes or bars driven through the bales or by other acceptable means to prevent displacement. See Figures 6-20.1 and 6-20.2 for installation requirements.

Brush Barrier (Sd1-Bb)
(only during timber clearing operations)

Brush obtained from clearing and grubbing operations may be piled in a row along the perimeter of disturbance at the time of clearing and grubbing. Brush barriers should not be used in developed areas or locations where aesthetics are a concern.

Brush should be wind-rowed on the contour as nearly as possible and may require compaction. Construction equipment may be utilized to satisfy this requirement.

The minimum base width of the brush barrier shall be 5 feet and should be no wider than 10 feet. The height of the brush barrier should be between 3 and 5 feet.

If a greater filtering capacity is required, a commercially available filter fabric may be placed on the side of the brush barrier receiving the sediment-laden runoff. The lower edge of the fabric must be buried in a 6-inch deep trench immediately uphill from the barrier. The upper edge must be stapled, tied or otherwise fastened to the brush barrier. Edges of adjacent fabric pieces must overlap each other. See Figure 6-20.3.

Silt Fence

The manufacturer shall have either an approved color mark yarn in the fabric or label the fabricated silt fence with both the manufacturer and fabric name every 100 feet.

The temporary silt fence shall be installed according to this specification, as shown on the plans or as directed by the engineer. For installation of the fabric, see Figures 6-20.4, 6-20.5, and 6-20.6 respectively.

Post installation shall start at the center of the low-point (if applicable) with remaining posts spaced 6 feet apart for Type A and B silt fences and 4 feet apart for Type C silt fence. While Type A and B silt fences can be used with both wood and steel posts, only steel posts shall be used with Type C silt fence. For post size requirements, see Table 6-20.3. Fasteners for wood posts are listed in Table 6-20.4.

Along stream buffers and other sensitive areas, two rows of Type C silt fence or one row of Type C silt fence backed by haybales shall be used.

MAINTENANCE

Sediment shall be removed once it has accumulated to one-half the original height of the barrier. Filter fabric shall be replaced whenever it has deteriorated to such an extent that the effectiveness of the fabric is reduced (approximately six months). Temporary sediment barriers shall remain in place until disturbed areas have been permanently stabilized. All sediment accumulated at the barrier shall be removed and properly disposed of before the barrier is removed.

Ds1 DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)

MATERIALS AND RATES:

MATERIAL	RATE
STRAW OR HAY	2-4" DEEP
WOOD WASTE, CHIPS, SAW DUST OR BARK	2-3" DEEP(ABOUT 6-9 TONS/ACRE
MATTING OR NETTING	ACCORDING TO MANUFACTURERS RECOMMENDATIONS
CUTBACK ASPHALT	1200 GALLONS/ACRE (1/4 GAL./SQ YD)
POLYETHYLENE FILM	COMPLETELY COVER ACRE

GENERAL NOTES:
1. USE PIEDMONT PLANTING DATES
2. FROM 6/15 TO 9/1 USE SEEDING RATES FOR TEMPORARY SEEDING AND SEED PERMANENTLY IN THE FALL.
3. AFTER SEEDING, MULCH SHALL BE APPLIED AT A RATE OF 2 1/2 TONS/ACRE

Ds2 DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDINGS)

SEEDING RATES FOR TEMPORARY SEEDINGS

SPECIES		RATE PER 1,000 SQ FT	RATE PER ACRE 2	PLANTING DATES Piedmont
RYE	(ALONE)	3.9 POUNDS	3 bu.	8/15-1/1
	(IN MIXTURES)	0.6 POUNDS	1/2 bu.	
ANNUAL RYEGRASS		0.9 POUND	40 lbs.	8/1-4/15
ANNUAL LESPEDEZA	(ALONE)	0.9 POUNDS	40 lbs.	2/15-5/1
	(IN MIXTURES)	0.2 POUNDS	10 lbs.	
WEEPING LOVEGRASS	(ALONE)	0.1 POUNDS	4 lbs.	3/15-6/15
	(IN MIXTURES)	0.05 POUNDS	2 lbs.	
SUDANGRASS		1.4 POUND	60 lbs.	4/1-9/1
BROWNTOP MILLET	(ALONE)	0.9 POUNDS	40 lbs.	4/1-7/15
	(IN MIXTURES)	0.2 POUNDS	10 lbs.	
WHEAT	(ALONE)	4.1 POUNDS	3 bu.	9/1-1/1
	(IN MIXTURES)	0.7 POUNDS	1/2 bu.	

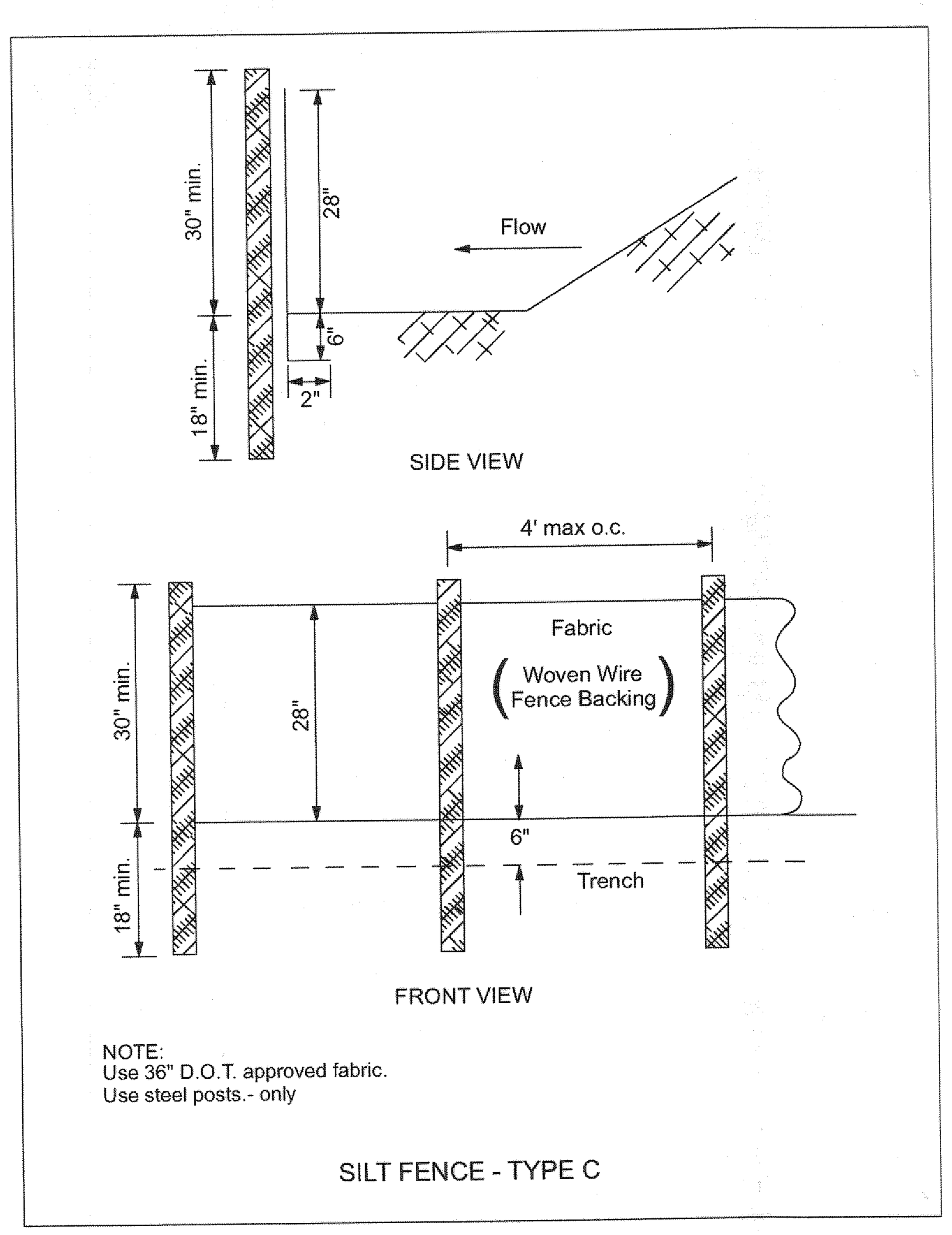
[1] TEMPORARY COVER CROPS ARE VERY COMPETITIVE AND WILL CROWN OUT PERENNIALS IF SEEDED TOO HEAVILY.
[2] REDUCE SEEDING RATES BY 50% WHEN DRILLED.

NOTE: AGRICULTURAL LIME IS REQUIRED FOR ALL GRADED AREAS AT THE RATE OF ONE TO TWO TONS PER ACRE UNLESS SOIL TESTS DETERMINE OTHERWISE.

Ds3 DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)

SPECIES	RATE PER 1,000 SQ FT	RATE PER ACRE 1	PLANTING DATES Piedmont	YEARS TO APPLY FERTILIZER	FERTILIZER ANALYSIS N	P	K	RATE *	N TOP-DRESSING RATE *
WEEPING LOVEGRASS AND VIRGATA OR SERICEA LESPEDEZA	0.1 lbs. 1.4 lbs.	4 lbs. 40 lbs.	3/1-6/15 3/1-6/15	FIRST	6	12	12	1500	50
				SECOND	0	10	10	1000	-
SERICEA LESPEDEZA SEEDBEARING HAY WITH OVERSEEDED WEEPING LOVEGRASS	138 lbs. 0.05 lbs.	3 tons 2 lbs.	10/1-3/1 3/1-6/15	FIRST	6	12	12	1500	50
				SECOND	0	10	10	1000	-
HULLED COMMON BERMUDAGRASS AND SERICEA LESPEDEZA	0.2 lbs. 1.4 lbs.	10 lbs. 60 lbs.	2/15-7/1 3/1-6/15	FIRST	6	12	12	1500	50
				SECOND	0	10	10	1000	-
UNHULLED COMMON BERMUDAGRASS AND VIRGATA OR SERICEA LESPEDEZA SEED HAY	0.2 lbs. 1.4 lbs. 140 lbs.	10 lbs. 40 lbs. 3 tons	11/1-2/1 3/1-6/15 10/1-3/1	FIRST	6	12	12	1500	50
				SECOND	0	10	10	1000	-
TALL FESCUEGRASS AND CLEAN COMBINE RUN VIRGATA OR SERICEA LESPEDEZA	1.1 lbs. 1.4 lbs.	50 lbs. 40 lbs.	8/15-11/1 3/1-6/15	FIRST	6	12	12	1500	0-50 IN SPRING
				SECOND	0	10	10	1000	-
HULLED COMMON BERMUDAGRASS	0.2 lbs.	10 lbs.	2/15-7/1	FIRST	6	12	12	1500	50-100
				SECOND	10	10	10	800	50-100

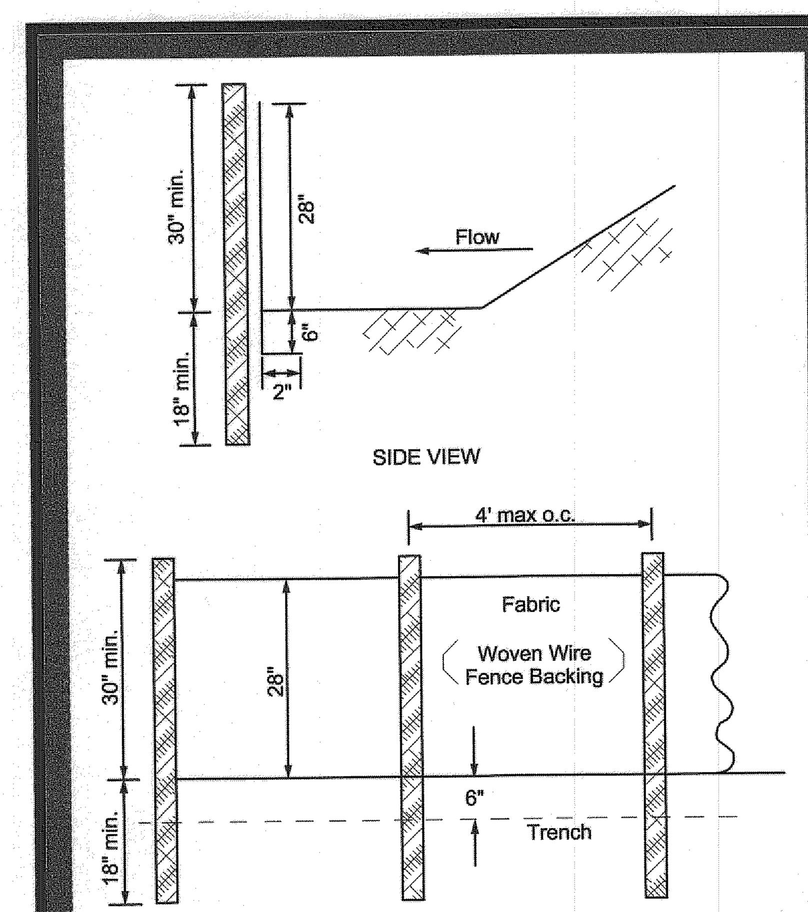
1. REDUCE SEEDING RATES BY 50% WHEN DRILLED.
* FERTILIZER/N TOP-DRESSING RATES INDICATED ARE IN LBS/ACRE.



NOTE:
Use 36" D.O.T. approved fabric.
Use steel posts.- only

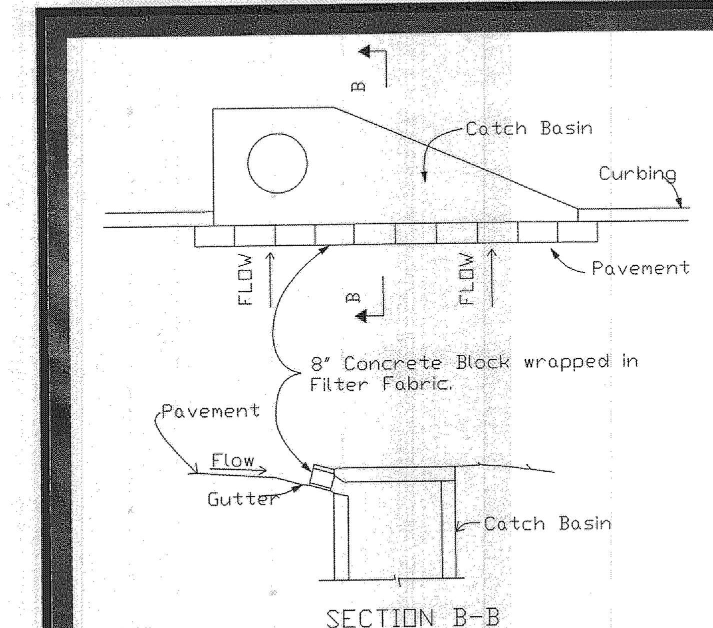
SILT FENCE - TYPE C

Figure 6-20.6



NOTE:
Use 36" D.O.T. approved fabric.
Use steel posts.- only

Sd1-C SILT FENCE - TYPE C
NTS



NOTE: Install filter after any asphalt pavement installation.

Sd2-P CURB INLET FILTER
"PIGS IN BLANKET"
Figure 6-21.5

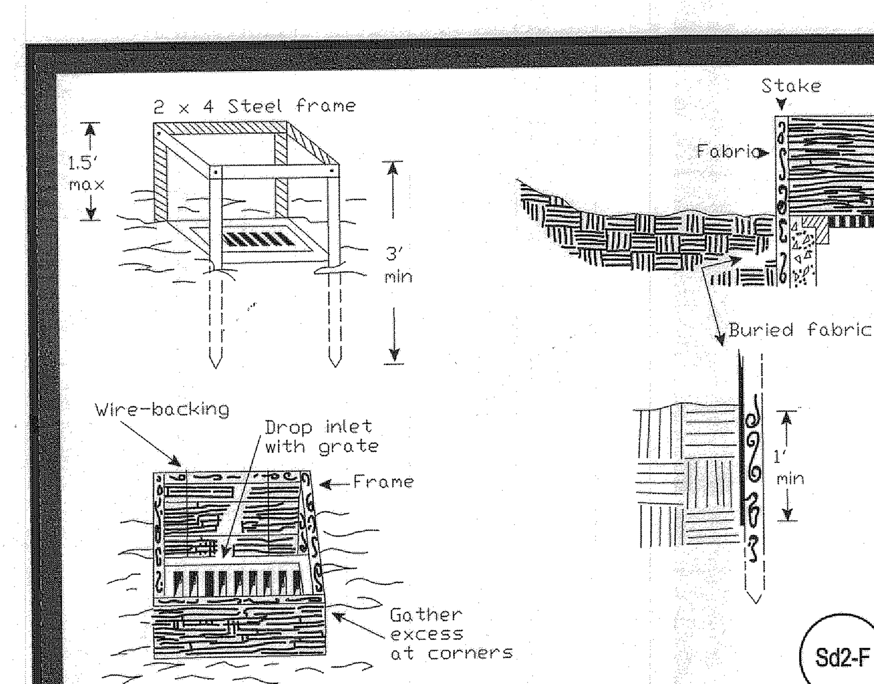


Figure 6-21.1 - Fabric and Supporting Frame For Inlet Projection

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Disturbed Area Stabilization (With Mulching Only) Ds1

DEFINITION

Applying plant residues or other suitable materials, produced on the site if possible, to the soil surface.

PURPOSE

- To reduce runoff and erosion
- To conserve moisture
- To prevent surface compaction or crusting
- To control undesirable vegetation
- To modify soil temperature
- To increase biological activity in the soil

REQUIREMENT FOR REGULATORY COMPLIANCE

Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Mulch can be used as a singular erosion control device for up to six months, but it shall be applied at the appropriate depth, depending on the material used, anchored, and have a continuous 90% cover or greater of the soil surface. Maintenance shall be required to maintain appropriate depth and 90% cover. Temporary vegetation may be employed instead of mulch if the area will remain undisturbed for less than six months. If an area will remain undisturbed for greater than six months, permanent vegetative techniques shall be employed. **Refer to Ds2 -Disturbed Area Stabilization (With Temporary Seeding), Ds3 - Disturbed Area Stabilization (With Permanent Seeding),** and **Ds4 - Disturbed Area Stabilization (With Sodding)**.

SPECIFICATIONS

MULCHING WITHOUT SEEDING

This standard applies to grades or cleared areas where seedings may not have a suitable growing season to produce an erosion retardant cover, but can be stabilized with a mulch cover.

Site Preparation

1. Grade to permit the use of equipment for applying and anchoring mulch.
2. Install needed erosion control measures as required such as dikes, diversions, berms, terraces and sediment barriers.
3. Loosen compact soil to a minimum depth of 3 inches.

Mulching Materials

Select one of the following materials and apply at the depth indicated:

1. *Dry straw or hay* shall be applied at a depth of 2 to 4 inches providing complete soil coverage. One advantage of this material is easy application.
2. *Wood waste* (chips, sawdust or bark) shall be applied at a depth of 2 to 3 inches. Organic material from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching can greatly reduce erosion control costs.
3. *Cutback asphalt* (slow curing) shall be applied at 1200 gallons per acre (or 1/4 gallon per sq. yd.).
4. *Polyethylene film* shall be secured over banks or stockpiled soil material for temporary protection. This material can be salvaged and reused.

Applying Mulch

When mulch is used without seeding, mulch shall be applied to provide full coverage of the exposed area.

1. *Dry straw or hay mulch* and *wood chips* shall be applied uniformly by hand or by mechanical equipment.

4. Apply polyethylene film on exposed areas.

Anchoring Mulch

1. *Straw or hay mulch* can be pressed into the soil with a disk harrow with the disk set straight or with a special "packer disk." Disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disk should be dull enough not to cut the mulch but to press it into the soil leaving much of it in an erect position. **Straw or hay mulch shall be anchored immediately after application.**

Straw or hay mulch spread with special blower-type equipment may be anchored with emulsified asphalt (Grade AE-5 or SS-1). The asphalt emulsion shall be sprayed onto the mulch as it is ejected from the machine. Use 100 gallons of emulsified asphalt and 100 gallons of water per ton of mulch. Tackifers and binders can be substituted for emulsified asphalt. Please refer to specification **Tb - Tackifers and Binders**. Plastic mesh or netting with mesh no larger than one inch by one inch shall be installed according to manufacturer's specifications.

2. Netting of the appropriate size shall be used to anchor *wood waste*. Openings of the netting shall not be larger than the average size of the wood waste chips.
3. *Polyethylene film* shall be anchor trenched at the top as well as incrementally as necessary.

Disturbed Area Stabilization (With Temporary Seeding) Ds2

DEFINITION

The establishment of temporary vegetative cover with fast growing seedings for seasonal protection on disturbed or denuded areas.

PURPOSE

- To reduce runoff and sediment damage of down stream resources
- To protect the soil surface from erosion
- To improve wildlife habitat
- To improve aesthetics
- To improve tilth, infiltration and aeration as well as organic matter for permanent plantings.

REQUIREMENT FOR REGULATORY COMPLIANCE

Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Temporary grassing, instead of mulch, can be applied to rough graded areas that will be exposed for less than six months. If an area is expected to be undisturbed for longer than six months, permanent perennial vegetation shall be used. If optimum planting conditions for temporary grassing is lacking, mulch can be used as a singular erosion control device for up to six months but it shall be applied at the appropriate depth, anchored, and have a continuous 90% cover or greater of the soil surface. Refer to specification **Ds1-Disturbed Area Stabilization (With Temporary Seeding)**.

CONDITIONS

Temporary vegetative measures should be coordinated with permanent measures to assure economical and effective stabilization. Most types of temporary vegetation are ideal to use as companion crops until the permanent vegetation is established. Note: *Some species of temporary vegetation are not appropriate for companion crop plantings because of their potential to out-compete the desired species (e.g. annual ryegrass).* Contact NRCS or the local SWCD for more information.

SPECIFICATIONS

Grading and Shaping

Excessive water run-off shall be reduced by properly designed and installed erosion control practices such as closed drains, ditches, dikes, diversions, sediment barriers and others.

No shaping or grading is required if slopes can be stabilized by hand-seeded vegetation or if hydraulic seeding equipment is to be used.

Seedbed Preparation

When a hydraulic seeder is used, seedbed preparation is not required. When using conventional or hand-seeding, seedbed preparation is not required if the soil material is loose and not sealed by rainfall.

When soil has been sealed by rainfall or consists of smooth cut slopes, the soil shall be pitted, trenched or otherwise scarified to provide a place for seed to lodge and germinate.

Lime and Fertilizer

Agricultural lime is required unless soil tests indicate otherwise. Apply agricultural lime at a rate of one ton per acre. Graded areas require lime application. Soils can be tested to determine if fertilizer is needed. On reasonably fertile soils or soil material, fertilizer is not required. For soils with very low fertility, 500 to 700 pounds of 10-10-10 fertilizer or the equivalent per acre (12-16 lbs./1,000 sq. ft.) shall be applied. Fertilizer should be applied before land preparation and incorporated with a disk, ripper or chisel.

Seeding

Select a grass or grass-legume mixture suitable to the area and season of the year. Seed shall be applied uniformly by hand, cyclone seeder, drill, cultipacker-

seed and fertilizer). Drill or cultipacker seeders should normally place seed one-quarter to one-half inch deep. Appropriate depth of planting is ten times the seed diameter. Soil should be "raked" lightly to cover seed with soil if seeded by hand.

Mulching

Temporary vegetation can, in most cases, be established without the use of mulch. Mulch without seeding should be considered for short term protection. Refer to **Ds1 - Disturbed Area Stabilization (With Mulching Only)**.

Irrigation

During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to a depth that will insure germination of the seed. Subsequent applications should be made when needed.

DISTURBED AREA STABILIZATION (WITH SODDING) Ds4

DEFINITION

A permanent vegetative cover using sods on highly erodible or critically eroded lands.

PURPOSE

- Establish immediate ground cover.
- Reduce runoff and erosion.
  Improve aesthetics and land value.
- Reduce dust and sediments.
- Stabilize waterways, critical areas.
- Filter sediments, nutrients and bugs.
- Reduce downstream complaints.
- Reduce likelihood of legal action.
- Reduce likelihood of work stoppage due to legal action.
- Increase "good neighbor" benefits.

CONDITIONS

This application is appropriate for areas which require immediate vegetative covers, drop inlets, grass swales, and waterways with intermittent flow.

PLANNING CONSIDERATIONS

Sodding can initially be more costly than seeding, but the advantages justify the increased initial costs.

1. Immediate erosion control, green surface, and quick use.
2. Reduced failure as compared to seed as well as the lack of weeds.

Can be established nearly year-round.

Sodding is preferable to seed in waterways and swales because of the immediate protection of the channel after application. Sodding must be staked in concentrated flow areas (See Figure 6-6.1).

Consider using sod framed around drop inlets to reduce sediments and maintaining the grade.

CONSTRUCTION SPECIFICATIONS INSTALLATION

Soil Preparation

Bring soil surface to final grade. Clear surface of trash, woody debris, stones and clods larger than 1". Apply sod to soil surfaces only and not frozen surfaces, or gravel type soils.

Topsoil properly applied will help guarantee a stand. Don't use topsoil recently treated with herbicides or soil sterilants.

Mix fertilizer into soil surface. Fertilize based on soil tests or Table 6-6.1.

Table 6-6.1
Fertilizer Requirements for Soil Surface Application

Fertilizer Type	Fertilizer Rate (lbs./acre)	Fertilizer Rate (lbs./sq.ft.)	Season
10-10-10	1000	.025	Fall

Agricultural lime should be applied based on soil tests or at a rate of 1 to 2 tons per acre.

Installation

Lay sod with tight joints and in straight lines. Don't overlap joints. Stagger joints and do not stretch sod (See Figure 6-6.2)

On slopes steeper than 3:1, sod should be anchored with pins or other approved methods. Installed sod should be rolled or tamped to provide good contact between sod and soil.

Irrigate sod and soil to a depth of 4" immediately after installation.

Sod should not be cut or spread in extremely wet or dry weather. Irrigation should be used to supplement rainfall for a minimum of 2-3 weeks.

MATERIALS

Sod selected should be certified. Sod grown in the general area of the project is desirable.

1. Sod should be machine cut and contain 3/4" (+ or - 1/4") of soil, not including shoots or thatch.
2. Sod should be cut to the desired size within + or - 5%. Torn or uneven pads should be rejected.
3. Sod should be cut and installed within 36 hours of digging.
4. Avoid planting when subject to frost heave or hot weather if irrigation is not available.
5. The sod type should be shown on the plans or installed according to Table 6-6.2. See Figure 6-4.1 for your Resource Area.

Table 6-6.2
Sod Planting Requirements

Grass	Varieties	Resource Area	Growing Season
Bermudagrass	Common Tifway Tifgreen Tiflawn	M-L,P,C P,C P,C P,C	Warm Weather
Bahiagrass	Pensacola	P,C	Warm Weather
Centipede	–	P,C	Warm Weather
St. Augustine	Common Bitterblue Raleigh	C	Warm Weather
Zoysia	Emerald Myer	P,C	Warm Weather
Tall Fescue	Kentucky	M-L,P	Cool Weather

MAINTENANCE

Re-sod areas where an adequate stand of sod is not obtained. New sod should be mowed sparingly. Grass height should not be cut less than 2"-3" or as specified (See Figure 6-6.2).

Apply one ton of agricultural lime as indicated by soil test or every 4-6 years. Fertilize grasses in accordance with soil tests or Table 6-6.3.

Table 6-6.3
Fertilizer Requirements for Sod

Types of Species	Planting Year	Fertilizer (N-P-K)	Rate (lbs./acre)	Nitrogen Top Dressing Rate (lbs./acre)
Cool season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 1000 400	50-100 - 30
Warm season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 800 400	50-100 50-100 30

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FOR
STOCKBRIDGE CITY HALL
TURNAROUND & PARKING ADDITION
LOCATED IN:
STOCKBRIDGE, GEORGIA
LAND LOT 61, 12TH DISTRICT

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Disturbed Area Stabilization (With Permanent Vegetation)

Ds3

DEFINITION

The planting of perennial vegetation such as trees, shrubs, vines, grasses, or legumes on exposed areas for final permanent stabilization. Permanent perennial vegetation shall be used to achieve final stabilization.

PURPOSE

- To protect the soil surface from erosion
- To reduce damage from sediment and runoff to down-stream areas
- To improve wildlife habitat and visual resources
- To improve aesthetics

REQUIREMENT FOR REGULATORY COMPLIANCE

This practice shall be applied immediately to rough graded areas that will be undisturbed for longer than six months. This practice or sodding shall be applied immediately to all areas at final grade. **Final Stabilization** means that all soil disturbing activities at the site have been completed, and that for unpaved areas and areas not covered by permanent structures, at least 70% of the soil surface is uniformly covered in permanent vegetation or equivalent permanent stabilization measures (such as the use of rip rap, gabions, permanent mulches or geotextiles) have been employed. Permanent vegetation shall consist of: planted trees, shrubs, perennial vines; a crop of perennial vegetation appropriate for the region, such that within the growing season a 70% coverage by perennial vegetation shall be achieved. Final stabilization applies to each phase of construction. For linear construction projects on land used for agricultural or silvicultural purposes, final stabilization may be accomplished by stabilizing the disturbed land for its agricultural or silvicultural use. Until this standard is satisfied and permanent control measures and facilities are operational, interim stabilization measures and temporary erosion and sedimentation control measures shall not be removed.

CONDITIONS

Permanent perennial vegetation is used to provide a protective cover for exposed areas including cuts, fills, dams, and other denuded areas.

PLANNING CONSIDERATIONS

1. Use conventional planting methods where possible.
2. When mixed plantings are done during marginal planting periods, companion crops shall be used.
3. No-till planting is effective when planting is done following a summer or winter annual cover crop. Sericea lespedeza planted no-till into stands of rye is an excellent procedure.
4. Block sod provides immediate cover. It is especially effective in controlling erosion adjacent to concrete flumes and other structures. Refer to Specification **Ds4-Disturbed Area Stabilization (With Sodding)**.
5. Irrigation should be used when the soil is dry or when summer plantings are done.
6. Low maintenance plants, as well as natives, should be used to ensure long-lasting erosion control.
7. Mowing should not be performed during the quail nesting season (May to September).
8. Wildlife plantings should be included in critical area plantings.

Wildlife Plantings

Commercially available plants beneficial to wildlife species include the following:

Mast Bearing Trees

Beech, Black Cherry, Blackgum, Chestnut, Chinkapin, Hackberry, Hickory, Honey Locust, Native Oak, Persimmon, Sawtooth Oak and Sweetgum.

All trees that produce nuts or fruits are favored by many game species. Hickory provides nuts used mainly by squirrels and bear.

Shrubs and Small Trees

Bayberry, Bicolor Lespedeza, Crabapple, Dogwood, Huckleberry or Native Blueberry, Mountain Laurel, Native Holly, Red Cedar, Red Mulberry, Sumac, Wax Myrtle, Wild Plum and Blackberry.

Plant in patches without tall trees to develop stable shrub communities. All produce fruits used by many kinds of wildlife, except for lespedeza which produces seeds used by quail and songbirds.

Grasses, Legumes, Vines and Temporary Cover

Bahiagrass, Bermudagrass, Grass-Legume mixtures, Partridge Pea, Annual Lespedeza, Orchardgrass (for mountains), Browntop Millet (for temporary cover), and Native grapes.

Provides herbaceous cover in clearings for a game bird brood-rearing habitat. Appropriate legumes such as vetches, clovers, and lespedezas may be mixed with grass, but they may die out after a few years.

CONSTRUCTION SPECIFICATIONS

Grading and Shaping

Grading and shaping may not be required where hydraulic seeding and fertilizing equipment is to be used. Vertical banks shall be sloped to enable plant establishment.

When conventional seeding and fertilizing are to be done, grade and shape where feasible and practical, so that equipment can be used safely and efficiently during seedbed preparation, seeding, mulching and maintenance of the vegetation.

Concentrations of water that will cause excessive soil erosion shall be diverted to a safe outlet. Diversions and other treatment practices shall conform with the appropriate standards and specifications.

Lime and Fertilizer Rates and Analysis

Agricultural lime is required at the rate of one to two tons per acre unless soil tests indicate otherwise. Graded areas require lime application. If lime is applied within six months of planting permanent perennial vegetation, additional lime is not required. Agricultural lime shall be within the specifications of the Georgia Department of Agriculture.

Lime spread by conventional equipment shall be "ground limestone." Ground limestone is calcitic or dolomitic limestone ground so that 90 percent of the material will pass through a 10-mesh sieve, not less than 50 percent will pass through a 50-mesh sieve and not less than 25 percent will pass through a 100-mesh sieve.

Agricultural lime spread by hydraulic seeding equipment shall be "finely ground limestone." Finely ground limestone is calcitic or dolomitic limestone ground so that 98 percent of the material will pass through a 20-mesh sieve and not less than 70 percent will pass through a 100-mesh sieve.

It is desirable to use dolomitic limestone in the Sand Hills, Southern Coastal Plain and Atlantic Coast Flatwoods MLRAs. (See Figure 6-4.1)

Agricultural lime is generally not required where only trees are planted.

Initial fertilization, nitrogen, topdressing, and maintence fertilizer requirements for each species or combination of species are listed in Table 6-5.1.

Lime and Fertilizer Application

When *hydraulic seeding* equipment is used, the initial fertilizer shall be mixed with seed, innoculant (if needed), and wood cellulose or wood pulp fiber mulch and applied in a slurry. The innoculant, if needed, shall be mixed with the seed prior to being placed into the hydraulic seeder. The slurry mixture will be agitated during application to keep the ingredients thoroughly mixed. The mixture will be spread uniformly over the area within one hour after being placed in the hydroseeder.

Finely ground limestone will be mixed with water and applied immediately after mulching is completed or in combination with the top dressing.

When *conventional planting* is to be done, lime and fertilizer shall be applied uniformly in one of the following ways:

1. Apply before land preparation so that it will be mixed with the soil during seedbed preparation.
2. Mix with the soil used to fill the holes, distribute in furrows.
3. Broadcast after steep surfaces are scarified, pitted or trenched.
4. A fertilizer pellet shall be placed at root depth in the closing hole beside each pine tree seedling.

Plant Selection

Refer to Tables 6-4.1, 6-5.2, 6-5.3 and 6-5.4 for approved species. Species not listed shall be approved by the State Resource Conservationist of the Natural Resources Conservation Service before they are used.

Plants shall be selected on the basis of species characteristics, site and soil conditions, planned use and maintenance of the area; time of year of planting, method of planting; and the needs and desires of the land user.

Some perennial species are easily established and can be planted alone. Examples of these are Common Bermuda, Tall Fescue, and Weeping Lovegrass.

Other perennials, such as Bahia Grass and Sericea Lespedeza, are slow to become established and should be planted with another perennial species. The additional species will provide quick cover and ample soil protection until the target perennial species become established. For example, Common seeding combinations are 1) Weeping Lovegrass with Sericea Lespedeza (scarified) and 2) Tall Fescue with Sericea Lespedeza (unscarified).

Plant selection may also include annual companion crops. Annual companion crops should be used only when the perennial species are not planted during their optimum planting period. A common mixture is Brown Top Millet with Common Bermuda in mid-summer. Care should be taken in selecting companion crop species and seeding rates because annual crops will compete with perennial species for water, nutrients, and growing space. A high seeding rate of the companion crop may prevent the establishment of perennial species.

Ryegrass shall not be used in any seeding mixtures containing perennial species due to its ability to out-compete desired species chosen for permanent perennial cover.

Seed Quality

The term "pure live seed" is used to express the quality of seed and is not shown on the label. Pure live seed, PLS, is expressed as a percentage of the seeds that are pure and will germinate. Information on percent germination and purity can be found on seed tags. PLS is determined by multiplying the percent of pure seed with the percent of germination; i.e.,

(PLS = % germination x % purity)

EXAMPLE:

Common bermuda seed
70% germination, 80% purity

PLS = 70% germination x 80% purity

PLS = 56%

The percent of PLS helps you determine the amount of seed you need. If the seeding rate is 10 pounds PLS and the bulk seed is 56 % PLS, the bulk seeding rate is:

<u>10 lbs. PLS/acre</u> = 17.9 lbs/acre
56% PLS

You would need to plant 17.9 lbs/acre to provide 10 lbs/acre of pure live seed.

Seedbed Preparation

Seedbed preparation may not be required where hydraulic seeding and fertilizing equipment is to be used. When conventional seeding is to be used, seedbed preparation will be done as follows:

Broadcast plantings

1. Tillage at a minimum, shall adequately loosen the soil to a depth of 4 to 6 inches; alleviate compaction; incorporate lime and fertilizer; smooth and firm the soil; allow for the proper placement of seed, sprigs, or plants; and allow for the anchoring of straw or hay mulch if a disk is to be used.
2. Tillage may be done with any suitable equipment.
3. Tillage should be done on the contour where feasible.
4. On slopes too steep for the safe operation of tillage equipment, the soil surface shall be pitted or trenched across the slope with appropriate hand tools to provide two places 6 to 8 inches apart in which seed may lodge and germinate. Hydraulic seeding may also be used.

Individual Plants

1. Where individual plants are to be set, the soil shall be prepared by excavating holes, opening furrows, or dibble planting.
2. For nursery stock plants, holes shall be large enough to accommodate roots without crowding.
3. Where pine seedlings are to be planted, subsoil under the row 36 inches deep on the contour four to six months prior to planting. Subsoiling should be done when the soil is dry, preferably in August or September.

Innoculants

All legume seed shall be inoculated with appropriate nitrogen-fixing bacteria. The innoculant shall be a pure culture prepared specifically for the seed species and used within the dates on the container.

A mixing medium recommended by the manufacturer shall be used to bond the innoculant to the seed. For conventional seeding, use twice the amount of innoculant recommended by the manufacturer. For hydraulic seeding, four times the amount of innoculant recommended by the manufacturer shall be used.

All inoculated seed shall be protected from the sun and high temperatures and shall be planted the same day inoculated. No inoculated seed shall remain in the hydroseeder longer than one hour.

Planting

Hydraulic Seeding

Mix the seed (innoculated if needed), fertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be treated. Apply within one hour after the mixture is made.

Conventional Seeding

Seeding will be done on a freshly prepared and firmed seedbed. For broadcast planting, use a cultipacker-seeder, drill, rotary seeder, other mechanical seeder, or hand seeding to distribute the seed uniformly over the area to be treated. Cover the seed lightly with 1/8 to 1/4 inch of soil for small seed and 1/2 to 1 inch for large seed when using a cultipacker or other suitable equipment.

No-Till Seeding

No-till seeding is permissible into annual cover crops when planting is done following maturity of the cover crop or if the temporary cover stand is sparse enough to allow adequate growth of the permanent (perennial) species. No-till seeding shall be done with appropriate no-till seeding equipment. The seed must be uniformly distributed and planted at the proper depth.

Individual Plants

Shrubs, vines and sprigs may be planted with appropriate planters or hand tools. Pine trees shall be planted manually in the subsoil furrow. Each plant shall be set in a manner that will avoid crowding the roots.

Nursery stock plants shall be planted at the same depth or slightly deeper than they grew at the nursery. The tips of vines and sprigs must be at or slightly above the ground surface.

Where individual holes are dug, fertilizer shall be placed in the bottom of the hole, two inches of soil shall be added and the plant shall be set in the hole.

Mulching

Mulch is required for all permanent vegetation applications. Mulch applied to seeded areas shall achieve 75% soil cover. Select the mulching material from the following and apply as indicated:

1. *Dry straw* or *dry hay* of good quality and free of weed seeds can be used. Dry straw shall be applied at the rate of 2 tons per acre. Dry hay shall be applied at a rate of 2 1/2 tons per acre.
2. *Wood cellulose mulch or wood pulp fiber* shall be used with hydraulic seeding. It shall be applied at the rate of 500 pounds per acre. Dry straw or dry hay shall be applied (at the rate indicated above) after hydraulic seeding.
3. One thousand pounds of *wood cellulose or wood pulp fiber*, which includes a tackifier, shall be used with hydraulic seeding on slopes 3/4:1 or steeper .
4. *Sericea lespedeza* hay containing mature seed shall be applied at a rate of three tons per acre.
5. *Pine straw or pine bark* shall be applied at a thickness of 3 inches for bedding purposes. Other suitable materials in sufficient quantity may be used where ornamentals or other ground covers are planted. This is not appropriate for seeded areas.
6. When using temporary erosion control blankets or block sod, mulch is not required.
7. *Bituminous treated roving* may be applied on planted areas on slopes, in ditches or dry waterways to prevent erosion. Bituminous treated roving shall be applied within 24 hours after an area has been planted. Application rates and materials must meet Georgia Department of Transportation specifications.

Wood cellulose and wood pulp fibers shall not contain germination or growth inhibiting factors. They shall be evenly dispersed when agitated in water. The fibers shall contain a dye to allow visual metering and aid in uniform application during seeding.

Applying Mulch

Straw or hay mulch will be spread uniformly within 24 hours after seeding and/or planting. The mulch may be spread by blower-type spreading equipment, other spreading equipment or by hand. Mulch shall be applied to cover 75% of the soil surface.

Wood cellulose or wood fiber mulch shall be applied uniformly with hydraulic seeding equipment.

Anchoring Mulch

Anchor straw or hay mulch immediately after application by one of the following methods:

1. *Emulsified asphalt* can be (a) sprayed uniformly onto the mulch as it is ejected from the blower machine or (b) sprayed on the mulch immediately following mulch application when straw or hay is spread by methods other than special blower equipment.

The combination of asphalt emulsion and water shall consist of a homogeneous mixture satisfactory for spraying. The mixture shall consist of 100 gallons of grade SS-1h or CSS-1h emulsified asphalt and 100 gallons of water per ton of mulch.

Care shall be taken at all times to protect state waters, the public, adjacent property, pavements, curbs, sidewalks, and all other structures from asphalt discoloration.

2. *Hay and straw* mulch shall be pressed into the soil immediately after the mulch is spread. A special "packer disk" or disk harrow with the disks set straight may be used. The disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disks shall be dull enough to press the mulch into the ground without cutting it, leaving much of it in an erect position. Mulch shall not be plowed into the soil.

Synthetic tackifiers or binders approved by GDOT shall be applied in conjunction with or immediately after the mulch is spread. Synthetic tackifiers shall be mixed and applied according to manufacturer's specifications. Refer to **Tb - Tackifiers and Binders**.

4. *Rye or wheat* can be included with Fall and Winter plantings to stabilize the mulch. They shall be applied at a rate of one-quarter to one-half bushel per acre.
5. *Plastic mesh or netting* with mesh no larger than one inch by one inch may be needed to anchor straw or hay mulch on unstable soils and concentrated flow areas. These materials shall be installed and anchored according to manufacturer's specifications.

Bedding Material

Mulch is used as a bedding material to conserve moisture and control weeds in nurseries, ornamental beds, around shrubs, and on bare areas on lawns.

Material	Depth
Grain straw	4" to 6"
Grass Hay	4" to 6"
Pine needles	3" to 5"
Wood waste	4" to 6"

Irrigation

Irrigation will be applied at a rate that will not cause runoff.

Topdressing

Topdressing will be applied on all temporary and permanent (perennial) species planted alone or in mixtures with other species. Recommended rates of application are listed in Table 6-5.1.

Second Year and Maintenance Fertilization

Second year fertilizer rates and maintenance fertilizer rates are listed in Table 6-5.1.

Lime Maintenance Application

Apply one ton of agricultural lime every 4 to 6 years or as indicated by soil tests. Soil tests can be conducted to determine more accurate requirements if desired.

Use and Management

Mow Sericea lespedeza only after frost to ensure that the seeds are mature. Mow between November and March.

Bermudagrass, Bahiagrass and Tall Fescue may be mowed as desired. Maintain at least 6 inches of top growth under any use and management. Moderate use of top growth is beneficial after establishment.

Exclude traffic until the plants are well established. Because of the quail nesting season, mowing should not take place between May and September.

Dust Control on Disturbed Areas

Du

DEFINITION

Controlling surface and air movement of dust on construction sites, roads, and demolition sites.

PURPOSE

- To prevent surface and air movement of dust from exposed soil surfaces.
- To reduce the presence of airborne substances which may be harmful or injurious to human health, welfare, or safety, or to animals or plant life.

CONDITIONS

This practice is applicable to areas subject to surface and air movement of dust where on and off-site damage may occur without treatment.

METHOD AND MATERIALS

A. TEMPORARY METHODS

Mulches. See standard **Ds1 - Disturbed Area Stabilization (With Mulching Only)**. Synthetic resins may be used instead of asphalt to bind mulch material. Refer to standard **Tb-Tackifiers and Binders**. Resins such as Curasol or Terratack should be used according to manufacturer's recommendations.

Vegetative Cover. See standard **Ds2 - Disturbed Area Stabilization (With Temporary Seeding)**.

Spray-on Adhesives. These are used on mineral soils (not effective on muck soils). Keep traffic off these areas. Refer to standard **Tb-Tackifiers and Binders**.

Tillage. This practice is designed to roughen and bring clods to the surface. It is an emergency measure which should be used before wind erosion starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are exampes of equipment which may produce the desired effect.

Irrigation. This is generally done as an emergency treatment. Site is sprinkled with water until the surface is wet. Repeat as needed.

Barriers. Solid board fences, snowfences, burlap fences, crate walls, bales of hay and similar material can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 15 times their height are effective in controlling wind erosion.

Calcium Chloride. Apply at rate that will keep surface moist. May need retreatment.

B. PERMANENT METHODS

Permanent Vegetation. See standard **Ds3 -Disturbed Area Stabilization (With Permanent Vegetation)**. Existing trees and large shrubs may afford valuable protection if left in place.

Topsoiling. This entails covering the surface with less erosive soil material. See standard **Tp - Topsoiling**.

Stone. Cover surface with crushed stone or coarse gravel. See standard **Cr-Construction Road Stabilization**.

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LANDSCAPE/MAINTENANCE SPECIFICATIONS

1. SOIL
   - A. Contractor shall submit a soil test from existing stockpiled topsoil, if any, to determine the type and amount of amendments needed for the area that is to receive stockpiled topsoil.
   - B. Investigate and correct any unsuitable soil conditions.
   - C. New topsoil shall be fertile, friable, natural loam, surface soil, reasonably free of subsoil, clay lumps, brush, weeds and other litter and free of roots, stumps, stones larger than one (1) inch in any direction, and any other matter harmful to plant growth.
   - D. Soil Amendment:
     1. Bonemeal: commercial, raw, finely ground, 4% nitrogen and 20% phosphoric acid.
     2. Superphosphate: soluble mixture of treated minerals; 20% phosphoric acid.
     3. Commercial Fertilizer:
        - a. Conform to all applicable State fertilizer laws.
        - b. Fertilize trees and shrubs the first week of March, July, October.
        - c. Trees: Fertilize with Agriform 21 gram tablets slow-release 20-10-5, one tablet per one half inch of trunk diameter, three times a year. If grass is growing under the canopy, it maybe desirable to apply the fertilizer in 12 inch punch holes.
        - d. Shrubs: Fertilize with Osmocote 18-6-12 slow-release, at the rate of 16 pounds per 1,000 square feet.
        - e. Fertilize azaleas, camellias, gardenias, and dogwoods with their own specific fertilizer.
        - f. Groundcover (excluding sod): Apply one pound of nitrogen, per application, per 1,000 square feet of surface areas, two times a year.
        - g. Sod: Granular, nonburning product, composed of not less than 50% organic, slow acting professional fertilizer. Provide fertilizer not less than 4% phosphoric acid and not less than 2% potassium, and the percentage of nitrogen required to provide not less than one pound of actual nitrogen per 1,000 square feet of sod area. Provide nitrogen in a form that will be available to the sod during the initial period of growth.
   - E. Sand: Clean, washed builders sand, free of salt, weeds, sticks and other debris.
   - F. Organic soil amendment: Pinebark chunks not greater than 3/4" diameter.
   - G. Planting soil mixture shall consist of 1/3 parts organic soil amendment to 1/3 parts approved topsoil to 1/3 parts clean, washed builders sand and commercial fertilizer as required to bring the pH to 5.5 and 6.0.

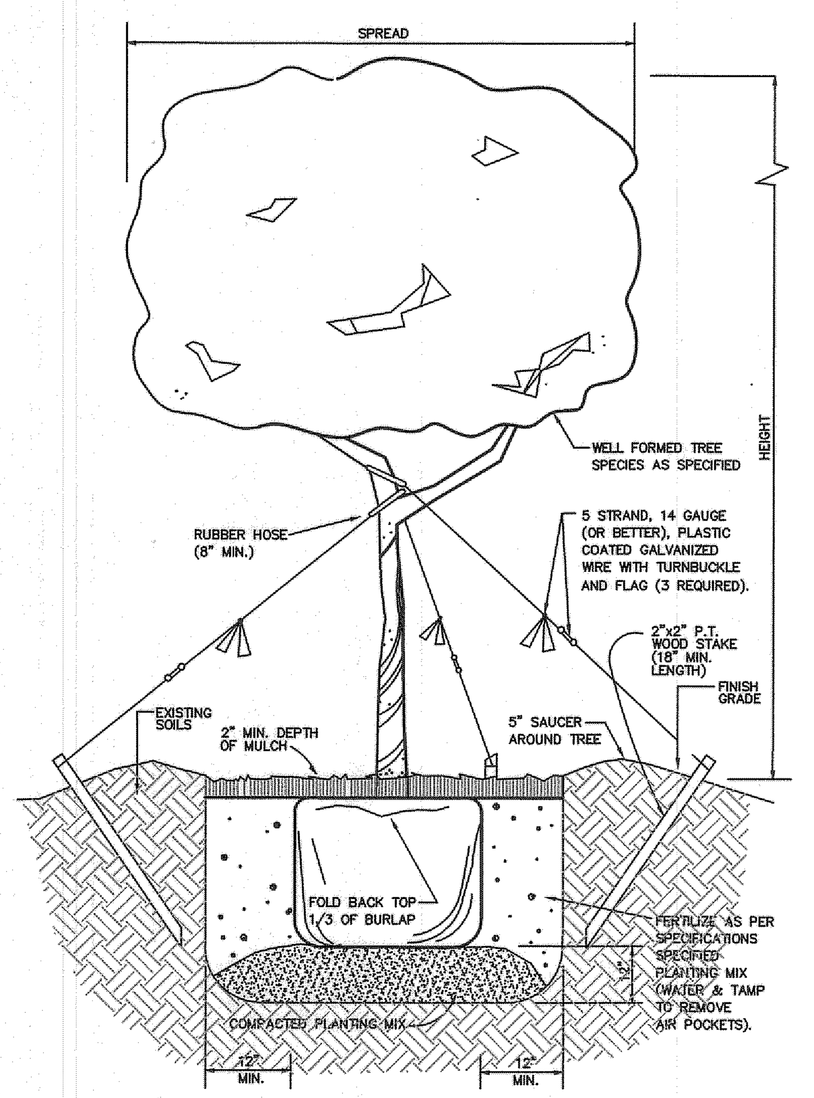
2. SPRAYS

   The use of broad spectrum insecticides is discouraged. Sprays shall be diluted as directed. The plant shall be uniformly sprayed including the underside of leaves. Drift shall be minimized by spraying in the early morning or evening, when there is little breeze.

3. PLANT MATERIAL
   - A. Provide plant material complying with the "American Standards for Nursery Stock" and all other local/state standards.
   - B. Provide trees and shrubs grown in a recognized nursery in accordance with good horticultural practice. Provide health, vigorous stock grown under climatic conditions similar to conditions in the locality of the project and free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions or disfigurements.
   - C. Warrant all plant material for a period of one year after date of substantial completion. Owner shall be responsible for replacing dead plant material after contractor's warranty.
   - D. Remove and replace trees, shrubs or other plants found to be dead or in unhealthy condition during warranty period. Plant missing trees, shrubs and ground cover. Make replacements during growth season following end of warranty period, or as requested by owner. Furnish and plant replacements which comply with requirements shown and specified.

4. INSTALLATION
   - A. Excavation for trees and shrubs: excavate pits, beds and trenches with vertical sides and with bottom of excavation slightly raised at center to provide proper drainage. Loosen hard subsoil in bottom of excavation. Provide adequate tilling to prohibit compaction and remove all foreign objects.
     1. For balled and burlapped (B&B) trees and shrubs, make excavations at least twice as wide as the ball diameter and equal to the ball depth, plus the following allowance for setting of ball on a layer of compacted planting solid mixture.
     2. For container grown stock, excavate as specified for B&B stock, adjusted to size of container width and depth.
     3. Dispose of subsoil removed from landscaped excavations. Do not mix with planting soil or use as backfill.
     4. Fill excavations for trees and shrubs with water and allow to percolate out before planting.
     5. Planting of trees, palms and shrubs: set balled and burlapped (B&B) or container stock on layer of compacted planting soil mixture in the center of pit or trench with top of ball at some elevation as adjacent finished landscape grades. When set, place additional planting soil mixture around base and eliminate voids and air pockets. When excavation is approximately 2/3 full, water thoroughly before placing remainder of backfill. Repeat watering until no more is absorbed. Water again after placing final layer of backfill. Remove burlap from 2/3 of ball sides.
     6. Dish top of planting soil mixture to allow for mulching.
     7. Mulch pits, trenches and planted areas. Provide not less than two (2) inches of mulch and work into top of planting soil mixture and finish level with adjacent grades.
     8. Apply anti-desiccant using power spray to provide an adequate film over trunks, branches, stems, twigs and foliage.
     9. Guy and stake trees immediately after planting as required.

5. PRUNING
   - A. Plants shall be pruned regularly to remove all dead and diseased limbs.
   - B. Any cross-rubbing wood should be removed to prevent disease.
   - C. Hedges shall be trimmed so that the bottom is wider than the top.
   - D. Suckers and water sprouts shall be removed whenever they appear.
   - E. Spring flowering shrubs shall be pruned immediately after spring blooming. Summer blooms shall be pruned in late winter.
   - F. Major pruning should be done in late winter.
   - G. Shrubs shall be pruned no less than, but not limited to the required height of' the particular situation for it is being utilized; i.e., perimeter shrub at minimum 30", sight triangle height of no higher than 3.5 or 4.25 feet, or any other visual height requirements.
   - H. Never remove branches with a flush cut, but instead cut to the outside of the branch collar.
   - I. Maintain the size and proportion of plants to one another and to the landscape as a whole.



LARGE TREE PLANTING DETAIL

(CALIPER GREATER THAN 2")
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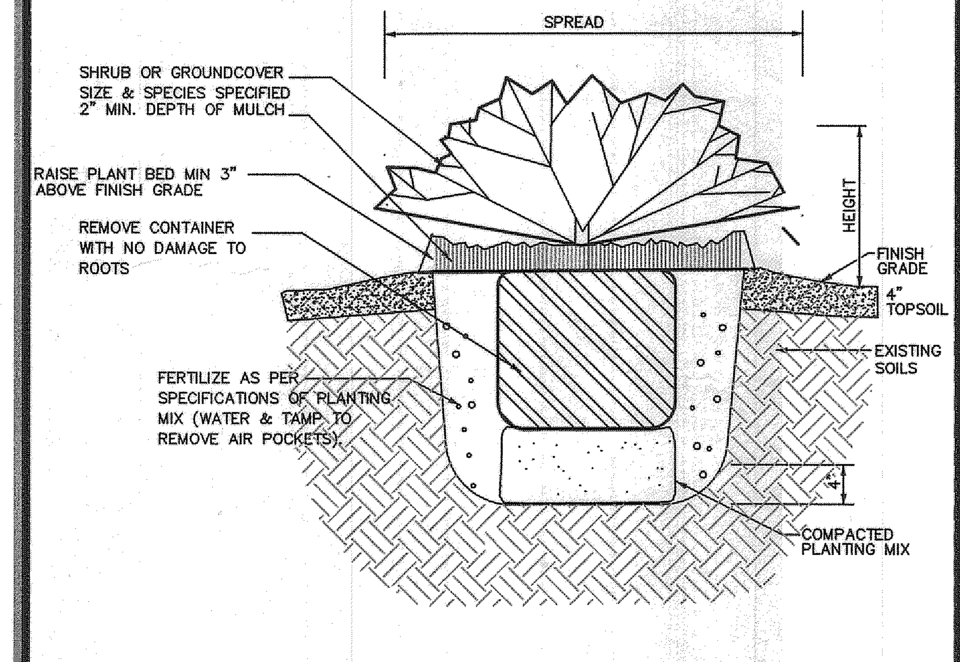

SHRUB AND GROUNDCOVER DETAIL

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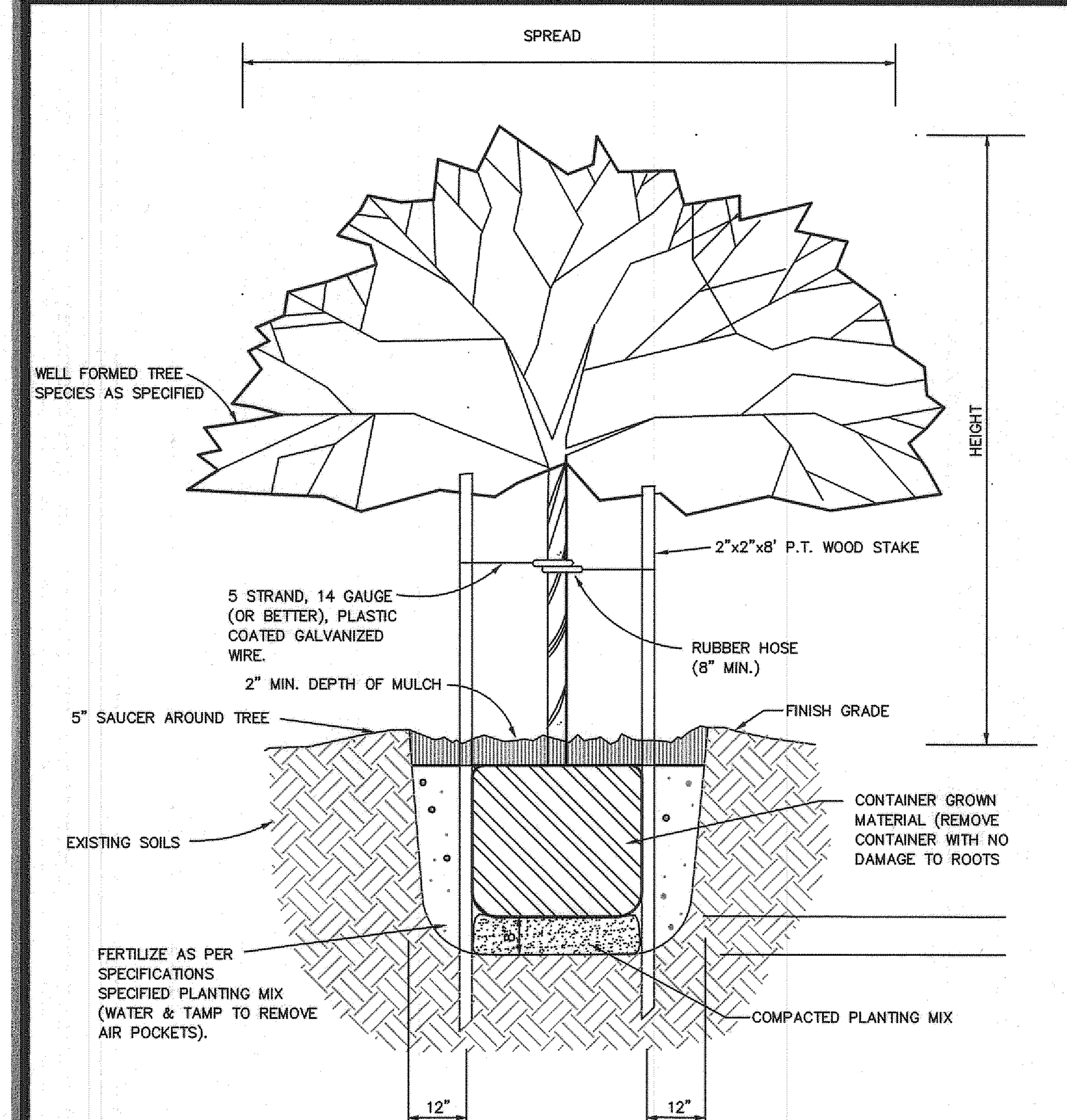
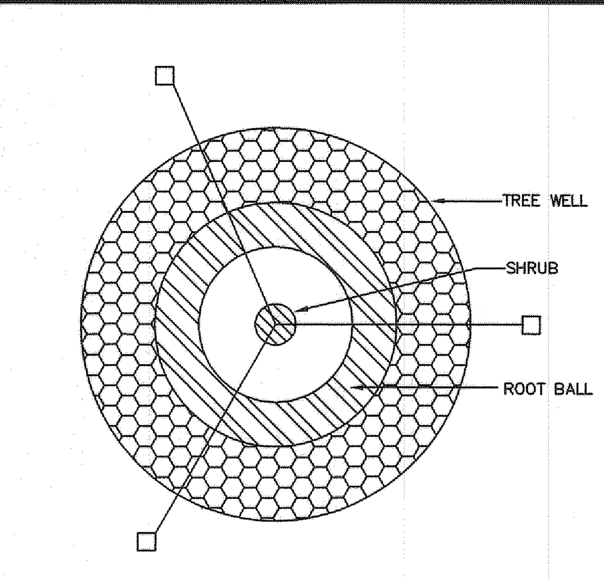
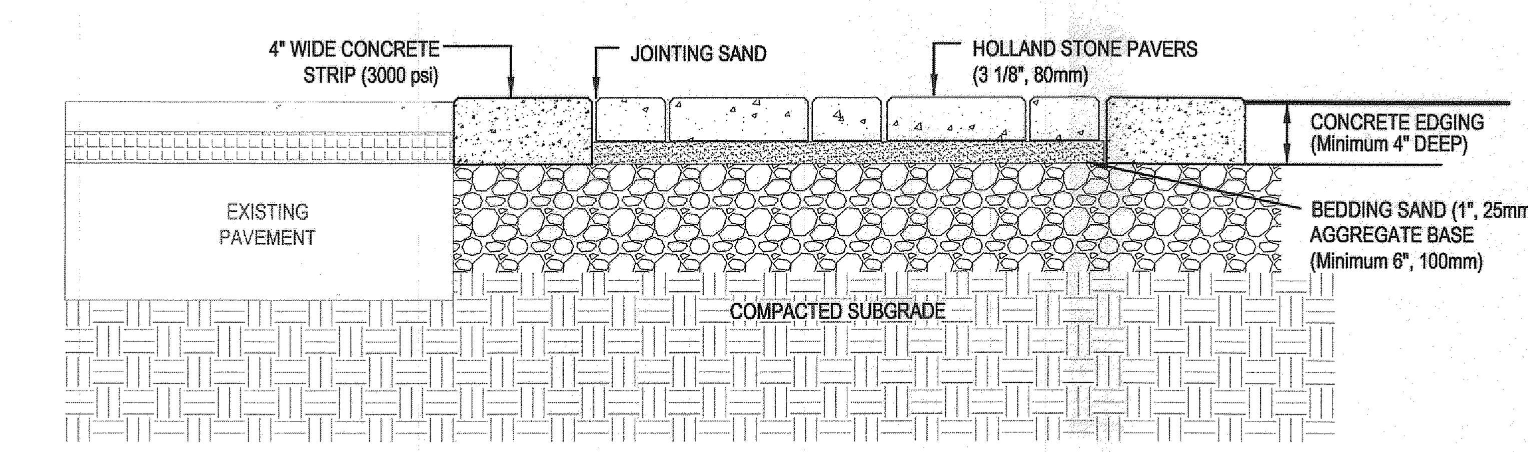


SMALL TREE PLANTING DETAIL

(2" CALIPER OR SMALLER)
N.T.S.





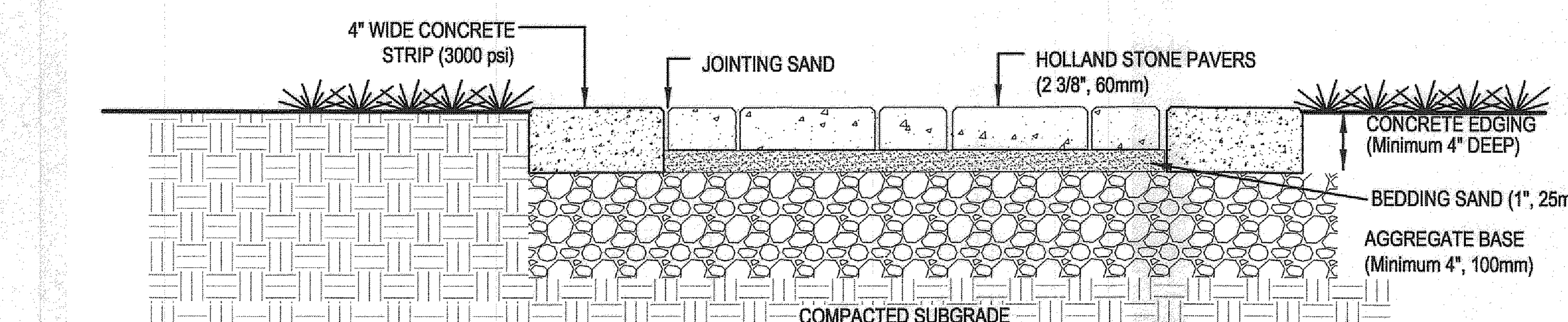
1. HOLLAND STONE 80 MM PAVERS BY BELGARD OR EQUAL. MATCH EXISTING PATTERN AND COLORS. REMOVE EXISTING PAVERS AND MIX IN WITH NEW PAVERS TO CREATE UNIFORM COLOR PATTERN.

HOLLAND STONE 80 MM -GEORGIA BLEND OR EQUAL (CONTRACTOR TO MATCH EX. PAVER COLOR, GA BLEND IS ONLY A SUGGESTION)

A2

TYPICAL PAVER
VEHICULAR APPLICATION
with CONCRETE EDGING

PAVER DETAIL
Cross Section



1. HOLLAND STONE 60 MM PAVERS BY BELGARD OR EQUAL. MATCH EXISTING PATTERN AND COLORS. REMOVE EXISTING PAVERS AND MIX IN WITH NEW PAVERS TO CREATE UNIFORM COLOR PATTERN.

HOLLAND STONE 60 MM -GEORGIA BLEND OR EQUAL (CONTRACTOR TO MATCH EX. PAVER COLOR, GA BLEND IS ONLY A SUGGESTION)

B2

TYPICAL PAVER
PEDESTRIAN APPLICATION
with CONCRETE EDGING

PAVER DETAIL
Cross Section

FALCON DESIGN
ENGINEERING PLANNING SURVEYING
2010 AVALON PARKWAY, SUITE 300
MCDONOUGH, GEORGIA 30253
Ph. (770) 389-8666 - Fax (770) 389-8656
VISIT US ON OUR WEBSITE:
www.fdc-llc.com

LANDSCAPE DETAILS
FOR
STOCKBRIDGE CITY HALL
TURNAROUND & PARKING ADDITION
LOCATED IN:
STOCKBRIDGE, GEORGIA
LAND LOT 61, 12TH DISTRICT

REVISIONS
1.
2.
3.
4.

811
Know what's below.
Call before you dig.
UTILITIES PROTECTION CENTER
1 (800) 282-7411 THROUGHOUT GEORGIA
OR DIAL 811

DATE:	05-24-13
SCALE:	NTS
FILE NUMBER:	ENG-00
DRAWN BY:	ALP

GEORGIA REGISTERED No. 030440 PROFESSIONAL ENGINEER ADAM PRICE 5/24/13

GSWCC# 0000009371

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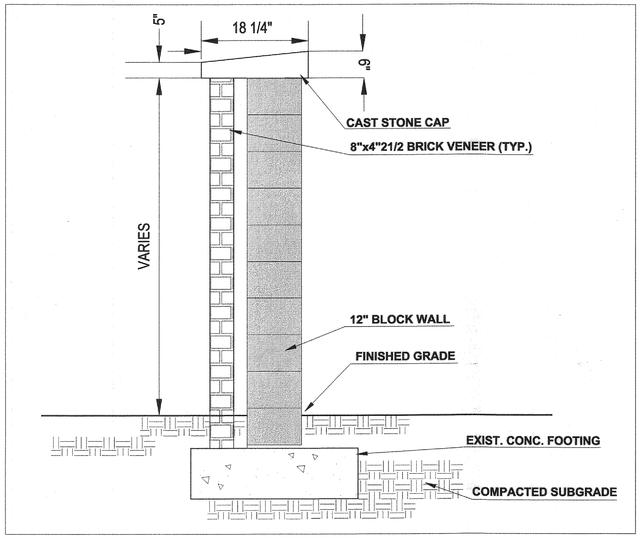
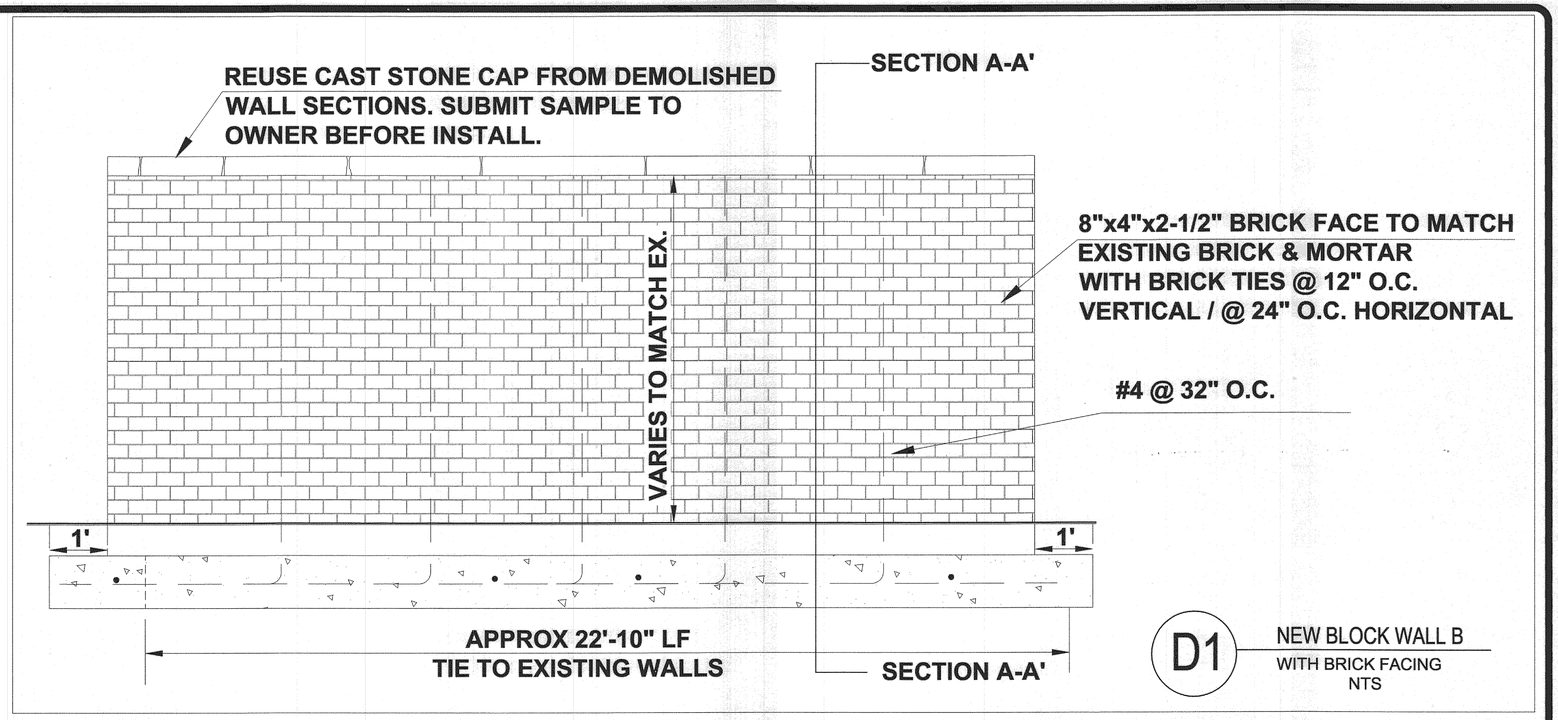
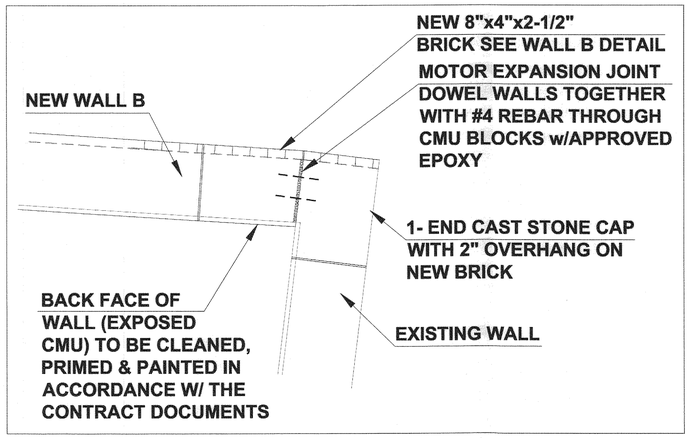


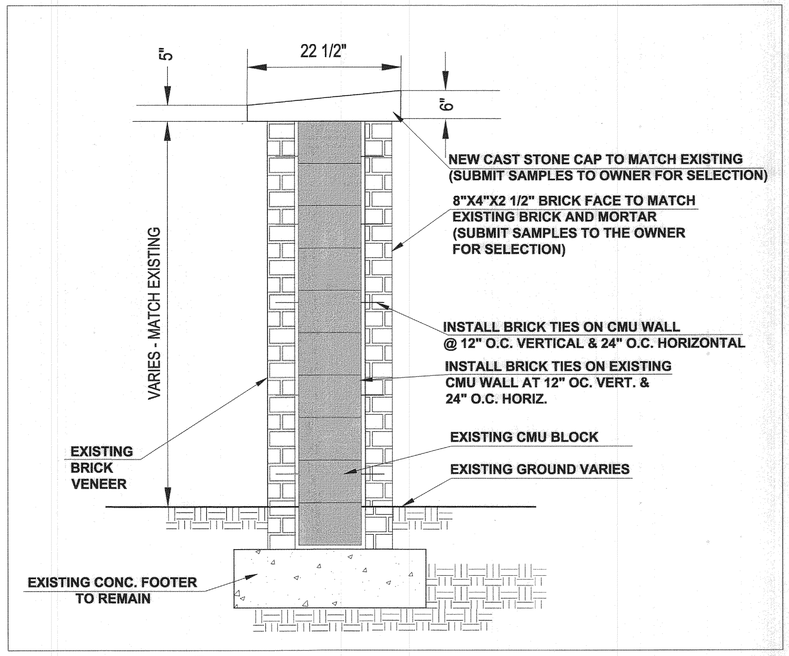
A1 EX. WALL SECTION
NTS



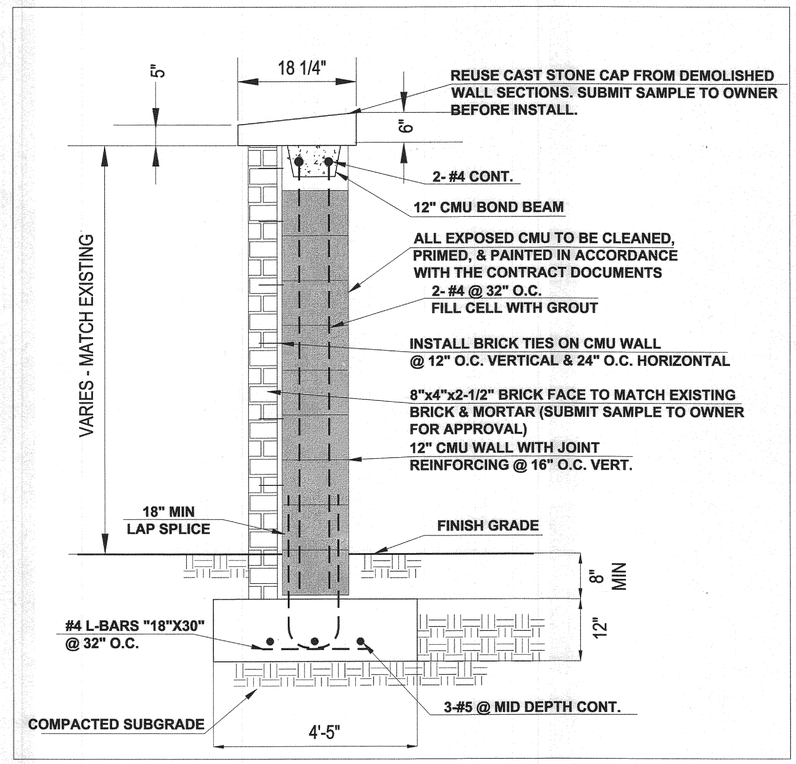
D1 NEW BLOCK WALL B
WITH BRICK FACING
NTS



B1 EX. WALL END CAP TREATMENT
INTERSECTION OF EX. WALL & WALL B
NTS



C1 MODIFIED WALL DETAIL
WITH NEW BRICK VENEER & CAP STONE
NTS



D1.1 NEW BLOCK WALL B
SECTION A-A'
NTS

FALCON DESIGN
ENGINEERING PLANNING SURVEYING
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MCDONOUGH, GEORGIA 30253
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WALL DETAILS
FOR
STOCKBRIDGE CITY HALL
TURNAROUND & PARKING ADDITION
LOCATED IN:
STOCKBRIDGE, GEORGIA
LAND LOT 61, 12TH DISTRICT

REVISIONS
1.
2.
3.
4.

811
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1(800)282-7411(GEORGIA)
OR DIAL 811

DATE:	05-24-13
SCALE:	NTS
FILE NUMBER:	ENG-00
DRAWN BY:	ALP

GEORGIA REGISTERED No. 030440 PROFESSIONAL ENGINEER
5/24/13
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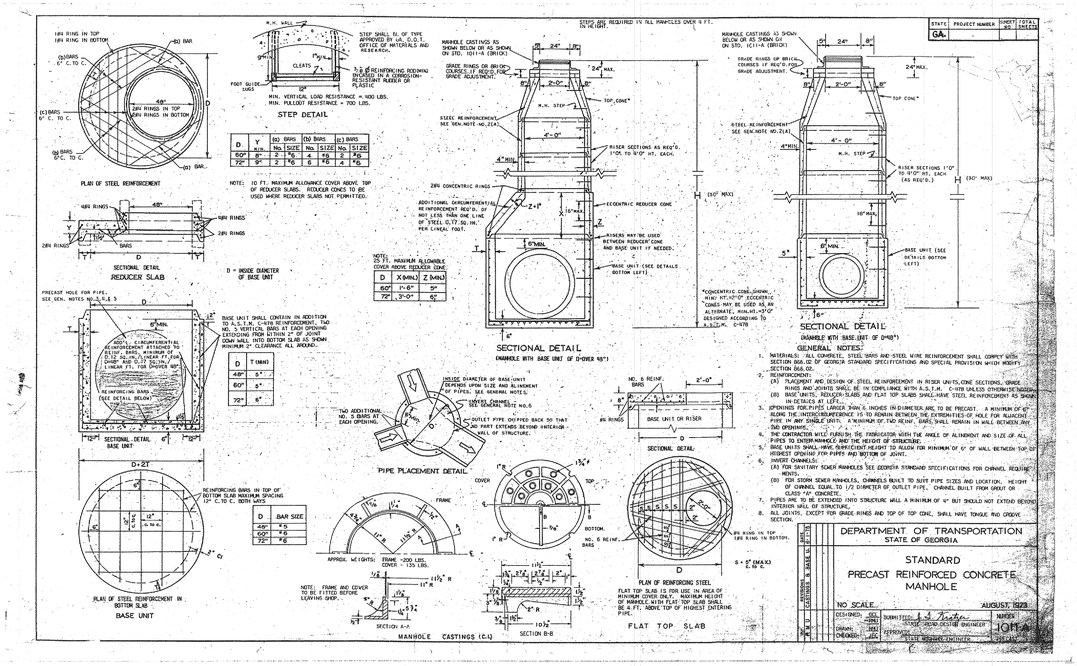

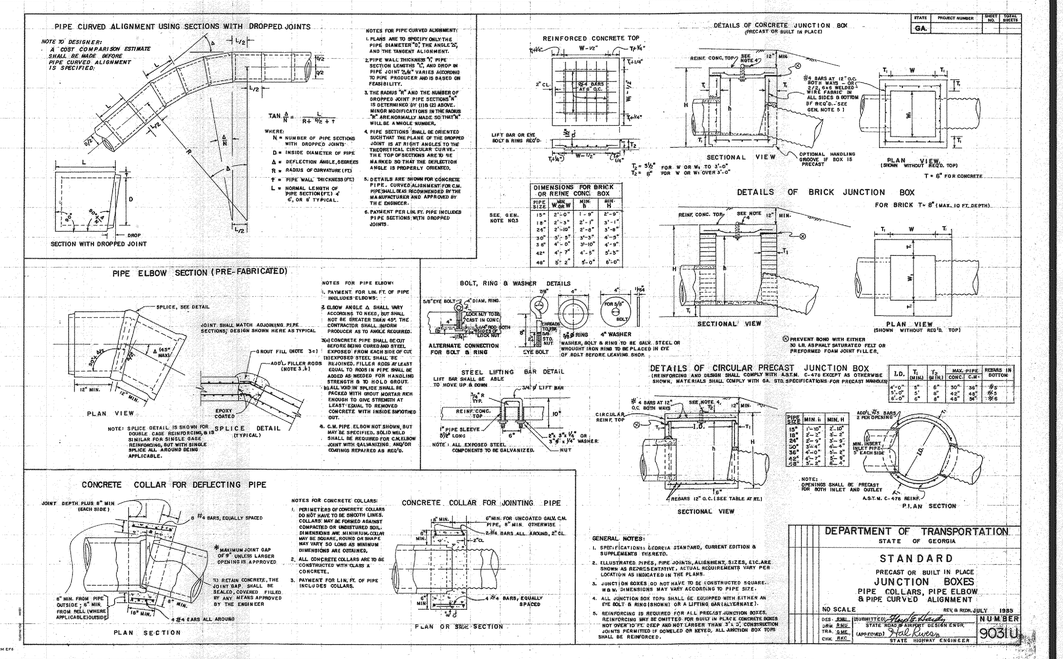

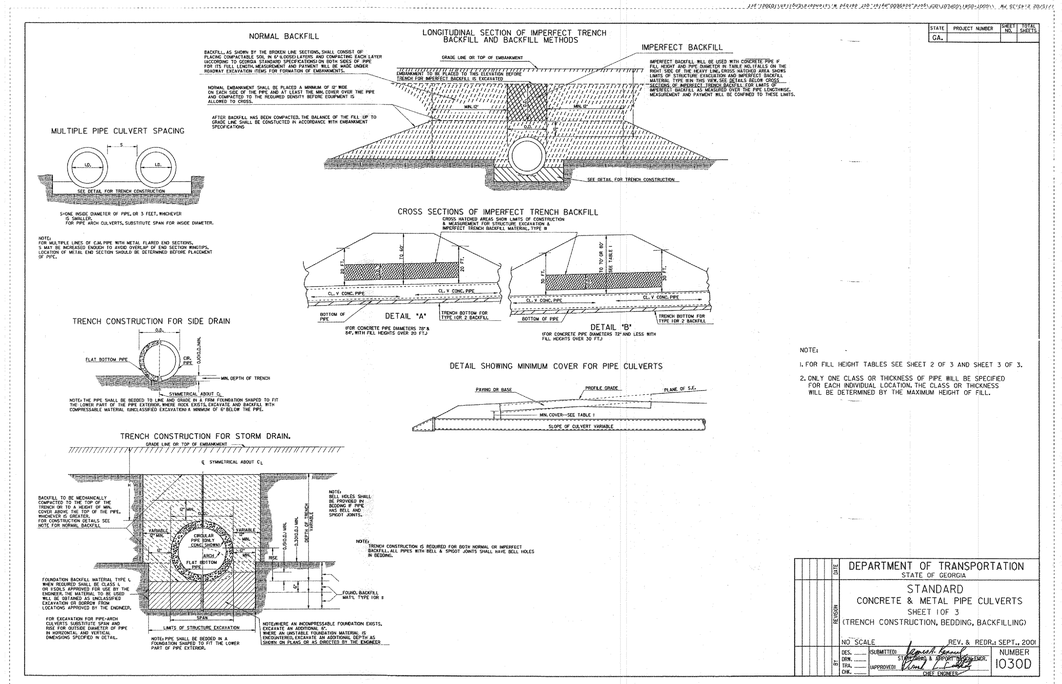

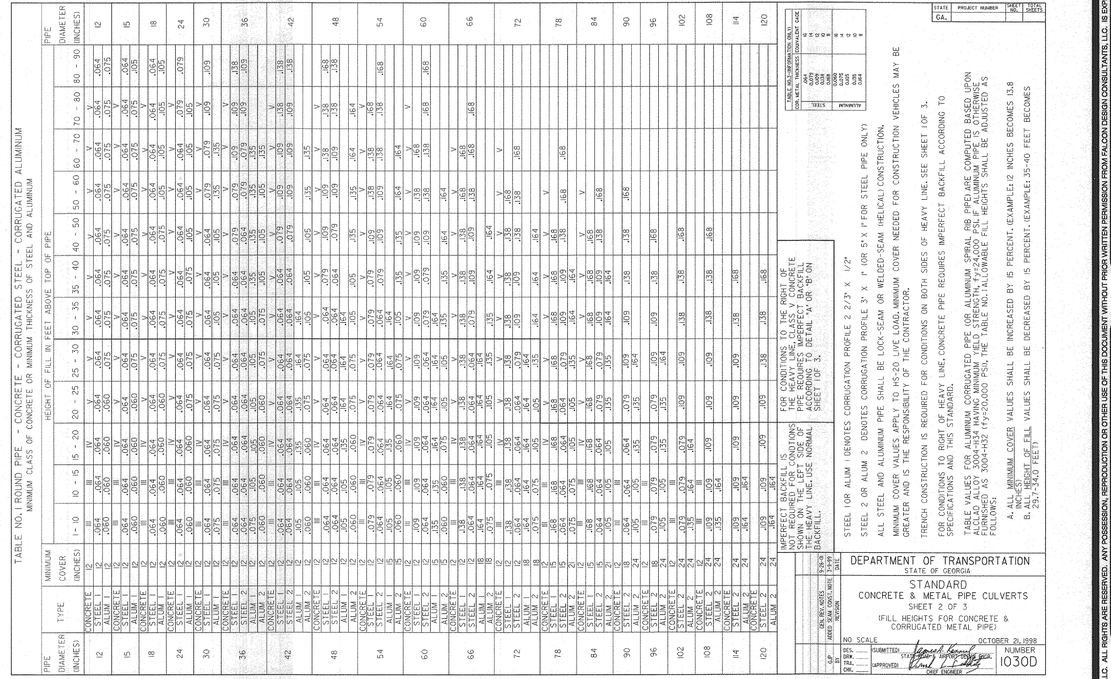

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VISIT US ON OUR WEBSITE: www.dc-llc.com

CONSTRUCTION DETAILS
FOR
STOCKBRIDGE CITY HALL
TURNAROUND & PARKING ADDITION
LOCATED IN:
STOCKBRIDGE, GEORGIA
LAND LOT 61, 12TH DISTRICT

REVISIONS
1. ADDED DETAILS FOR STORM PIPE - 6/6/13
2.
3.
4.

Know what's below. Call before you dig.
UTILITIES PROTECTION CENTER
1 (800) 282-7411 (IN THE ATLANTA AREA)
(IN GEORGIA)

DATE:	05-24-13
SCALE:	NTS
FILE NUMBER:	ENG-00
DRAWN BY:	ALP

GEORGIA REGISTERED No. 030440 PROFESSIONAL ENGINEER
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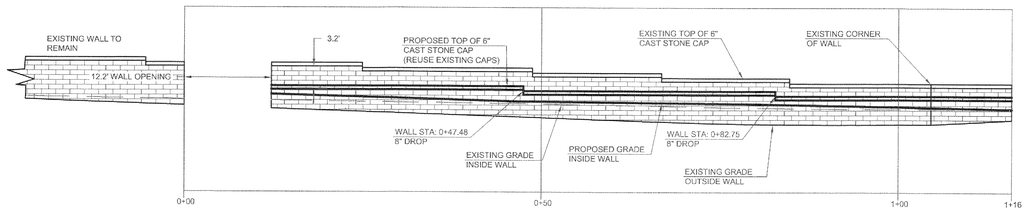
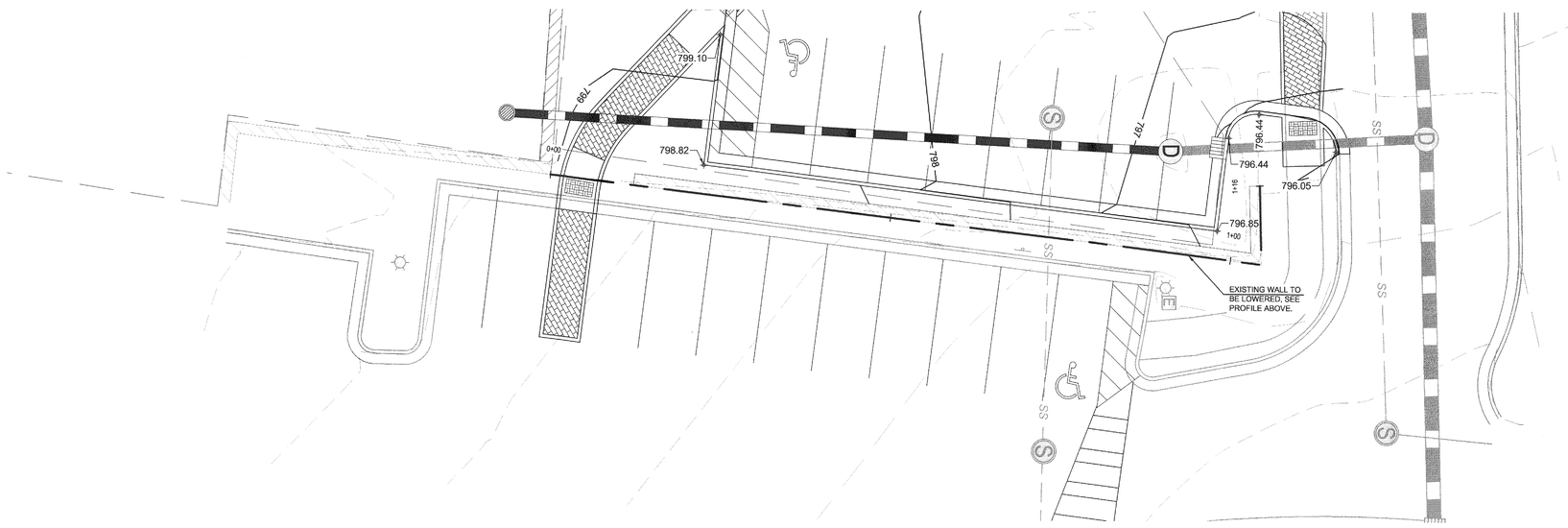
P:\Projects\City of Stockbridge\CITY HALL\STOCKBRIDGE-CITY-HALL-ENG-00-C3D.dwg, DET (7), shayes, Jun 06, 2013 - 12:30:15pm



HORZ. 1" = 10
VERT. 1" = 10



MAGNETIC NORTH

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

FALCON DESIGN
ENGINEERING PLANNING SURVEYING
3010 AVALON PARKWAY, SUITE 100
MCDONOUGH, GEORGIA 30253
VOICE (770) 898-9486 FAX (770) 898-9485
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www.fdg-llc.com

ADD ALTERNATE WALL CONSTRUCTION
FOR
STOCKBRIDGE CITY HALL TURNAROUND & PARKING ADDITION
LOCATED IN:
STOCKBRIDGE, GEORGIA
LAND LOT 61, 12TH DISTRICT

REVISIONS

1.	PER COUNTY FIRE COMMENTS, ADD STORM - 6/6/13
2.	ADD ALTERNATE, CUT WALL - 7/16/13
3.	
4.	

811
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OR DIAL 811

DATE:	05-24-13
SCALE:	1"=10'
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GEORGIA REGISTERED No. 030440 PROFESSIONAL ENGINEER ADAM L. PHILLIPS

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