Floyd County, Georgia

MASS GRADING

EROSION & SEDIMENT CONTROL PLANS

(FOR CLEARING AND GRADING PERMIT ONLY)

North Floyd Rail Site

Georgia Highway 53 at Georgia Highway 140

LOCATED IN LAND LOTS 224, 257 & 258 OF THE 24TH
DISTRICT AND 3RD SECTION OF FLOYD COUNTY, GEORGIA

OWNER (PRIMARY PERMITTEE) & 24 HOUR CONTACT:
DEVELOPMENT AUTHORITY OF FLOYD COUNTY AND
ROME-FLOYD COUNTY DEVELOPMENT AUTHORITY
P.O. BOX 6221
ROME, GA 30162
PHONE: 770-887-2461

GEORGIA REGISTERED 19571 PROFESSIONAL ENGINEER CHARLES F. HARGRIP, JR.

GSWCC CERTIFICATION #22354

THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES SHALL OCCUR PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.

CONSTRUCTION WASTE AND/OR VEGETATIVE MATERIAL MAY NOT BE BURNED OR BURIED AND MUST BE TAKEN TO A STATE APPROVED LANDFILL.

PROJECT NO. E368
APRIL 30, 2015
REVISED: DECEMBER 3, 2015
REVISED: FEBRUARY 19, 2016

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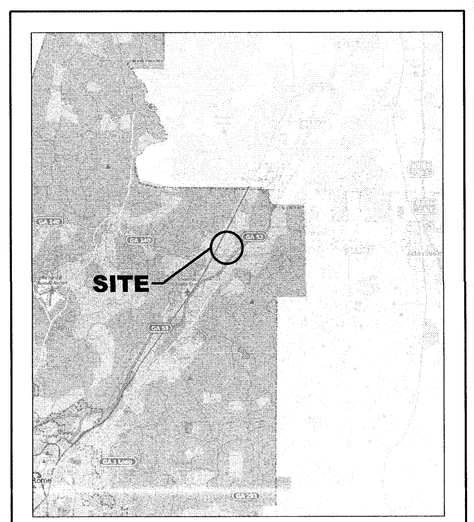
SES

Southern Engineering & Surveying, Inc.
201 Broad Street
Suite 300
Rome, Georgia 30161
ph:(706)235-4143 f:(706)235-4191
www.southernEandS.com



LOCATION MAP

SES
Southern Engineering & Surveying, Inc.
201 Broad Street
Suite 300
Rome, Georgia 30161
p:(706)235-4143 f:(706)235-4191
www.southernengandS.com
LEVEL II CERTIFICATION NO. 2-2894

NORTH FLOYD RAIL SITE

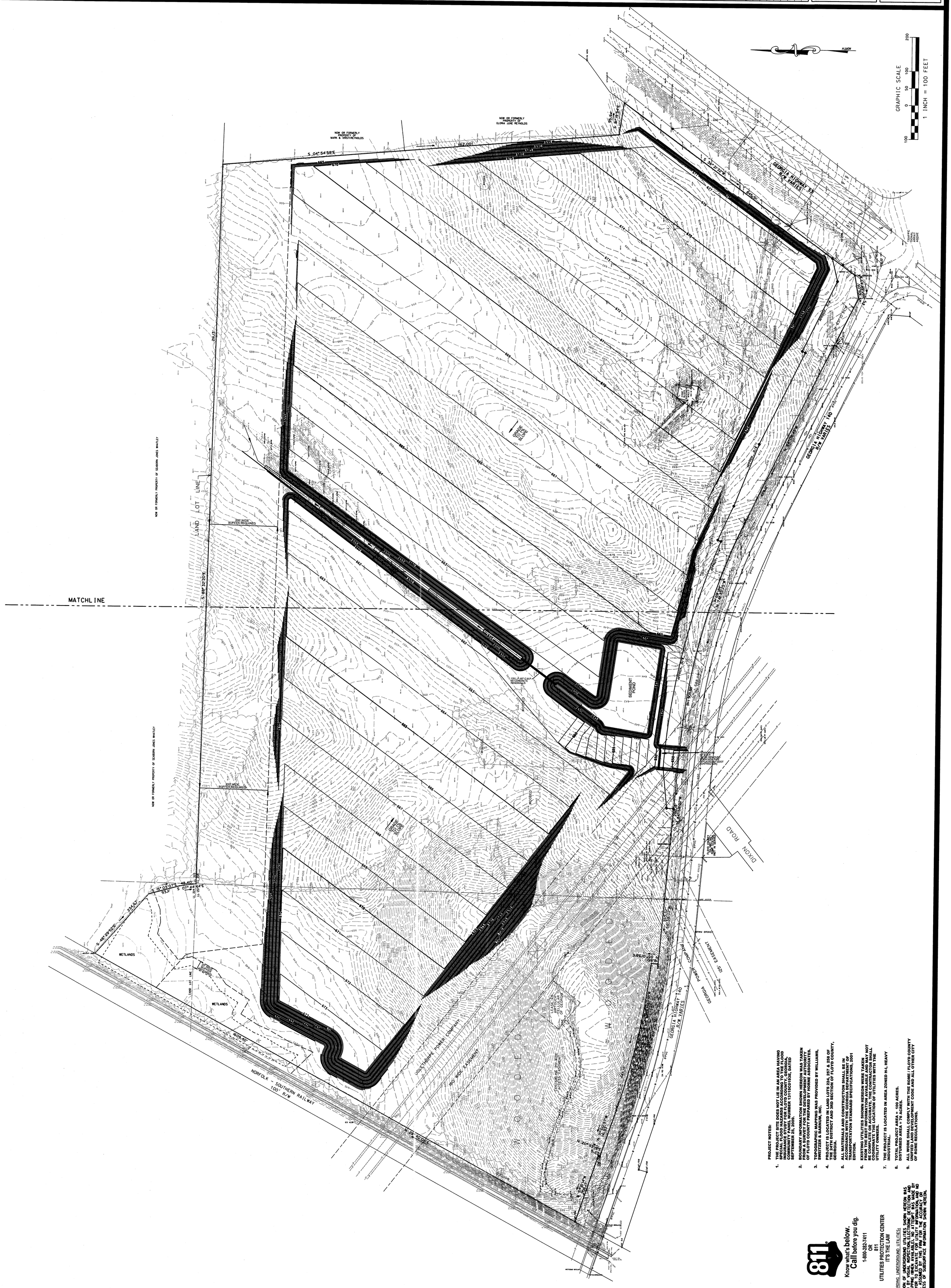
Georgia Highway 53 at Georgia Highway 140

NO.	REVISION FOR	DATE
1	GENERAL REVISIONS	12/3/15
2	REVISED G.D.O.T. R/W	2/19/16

OVERALL GRADING PLAN

DESIGNED BY: RO
APPROVED BY: CH
DATE: 4/30/2015
DRAWING NO.: E508 - C-2

C-2

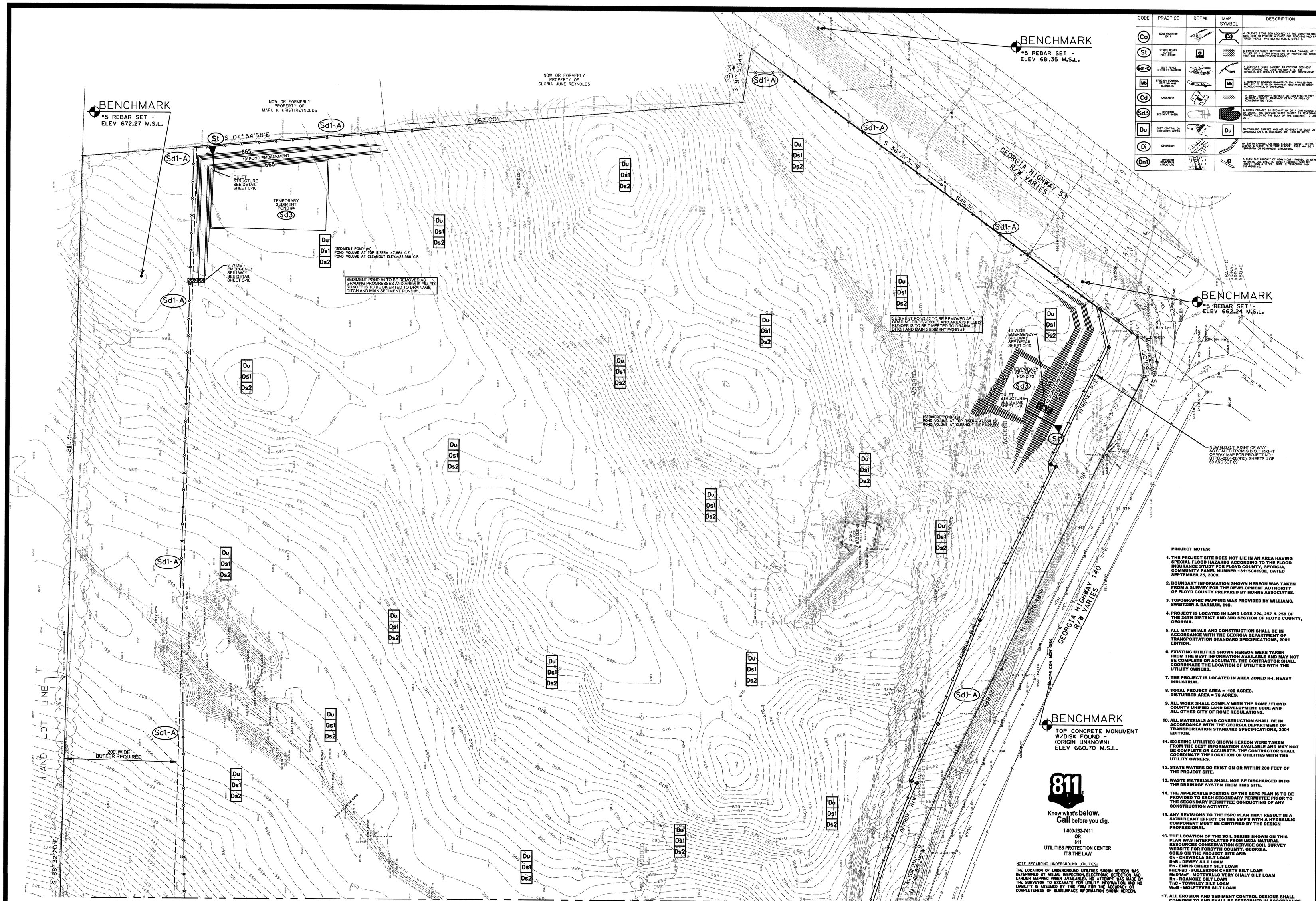


PROJECT NOTES:

1. THE PROJECT SITE DOES NOT LIE IN AN AREA HAVING SPECIAL FLOOD HAZARDS ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR FLOYD COUNTY, GEORGIA, COMMUNITY PANEL NUMBER 13115C0175E, DATED SEPTEMBER 25, 2009.
2. BOUNDARY INFORMATION SHOWN HEREON WAS TAKEN FROM A SURVEY FOR THE DEVELOPMENT AUTHORITY OF FLOYD COUNTY PREPARED BY HORNE ASSOCIATES.
3. TOPOGRAPHIC MAPPING WAS PROVIDED BY WILLIAMS, SWEITZER & BARNUM, INC.
4. PROJECT IS LOCATED IN LAND LOTS 224, 257 & 258 OF THE 24TH DISTRICT AND 3RD SECTION OF FLOYD COUNTY, GEORGIA.
5. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, 2001 EDITION.
6. EXISTING UTILITIES SHOWN HEREON WERE TAKEN FROM THE BEST INFORMATION AVAILABLE AND MAY NOT BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL CONFIRM THE LOCATION OF UTILITIES WITH THE UTILITY OWNERS.
7. THE PROJECT IS LOCATED IN AREA ZONED H-I, HEAVY INDUSTRIAL.
8. TOTAL PROJECT AREA = 100 ACRES.
DISTURBED AREA = 76 ACRES.
9. ALL WORK SHALL COMPLY WITH THE ROME / FLOYD COUNTY UNIFIED LAND DEVELOPMENT CODE AND ALL OTHER CITY OF ROME REGULATIONS.

811
Know what's below.
Call before you dig.
1-800-282-7411
OR
811
UTILITIES PROTECTION CENTER
IT'S THE LAW

NOTE REGARDING UNDERGROUND UTILITIES:
THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON WAS ESTIMATED BY VISUAL INSPECTION, ELECTRONIC DETECTION AND EARLIER MAPPING, UNDERGROUND UTILITIES MAY ALSO BE PRESENT. THE SURVEYOR TO EXCAVATE FOR UTILITY INFORMATION, AND NO LIABILITY IS ASSUMED BY THIS FIRM FOR THE ACCURACY OR COMPLETENESS OF SUBSURFACE INFORMATION SHOWN HEREON.



CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Co	CONSTRUCTION EXIT		Co	A CRUSHED STONE BED LOCATED AT THE CONSTRUCTION SITE EXIT TO PROVIDE A PLACE FOR REMOVING MUD FROM TIRES THEREBY PROTECTING PUBLIC STREETS.
St	STORM DRAIN OUTLET PROTECTION			A FIXED OR SHORT SECTION OF SUPRAP CHANNEL AT THE OUTLET OF A STORM DRAIN PIPE TO PREVENTING EROSION FROM THE CONCENTRATED RUNOFF.
Sd1-A	SILT FENCE SEDIMENT BARRIER			A SEDIMENT FENCE BARRIER TO PREVENT SEDIMENT FROM LEAVING A DISTURBED AREA. THIS TYPE OF BARRIER IS USUALLY TEMPORARY AND INCIDENTAL.
Mb	EROSION CONTROL MATTING AND BLANKETS		Mb	A PROTECTIVE COVERING BLANKETS OR SOIL STABILIZATION MATTING TO PROTECT SOIL FROM EROSION ON SLOPES, CHANNELS, OR SHORELINES.
Cd	CHECKDAM			A SMALL TEMPORARY BARRIER OR DAM CONSTRUCTED ACROSS A SMALL DRAINAGE DITCH OR AREA OF CONCENTRATED FLOW.
Sd3	TEMPORARY SEDIMENT BASIN			A BASIN CREATED BY EXCAVATION OR A DAM ACROSS A DRAINAGE WAY WITH AN ERTHEN RUNOFF DISCHARGE STRUCT ALLOWING THE BULK OF THE SEDIMENT TO DROP OUT.
Du	DUST CONTROL ON DISTURBED AREAS		Du	CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADWAYS AND SPIRLAR SITES.
Di	DIVERSION			AN EARTH CHANNEL OR DIKE LOCATED ABOVE, BELOW, OR ACROSS A SLOPE TO DIVERT RUNOFF. THIS MAY BE A TEMPORARY OR PERMANEST STRUCTURE.
Dn1	TEMPORARY DOWNFRAIN STRUCTURE			A FLEXIBLE CONDUIT OF HEAVY-DUTY FABRIC OR OTHER MATERIAL DESIGNED TO SAFELY CONDUCT SURFACE WATER DOWN A SLOPE. THIS IS TEMPORARY AND INEXPENSIVE.

PROJECT NOTES:

1. THE PROJECT SITE DOES NOT LIE IN AN AREA HAVING SPECIAL FLOOD HAZARDS ACCORDING TO THE FLOOD INSURANCE STUDY FOR FLOYD COUNTY, GEORGIA, COMMUNITY PANEL NUMBER 13115C0193E, DATED SEPTEMBER 25, 2009.
2. BOUNDARY INFORMATION SHOWN HEREON WAS TAKEN FROM A SURVEY FOR THE DEVELOPMENT AUTHORITY OF FLOYD COUNTY PREPARED BY NORNE ASSOCIATES.
3. TOPOGRAPHIC MAPPING WAS PROVIDED BY WILLIAMS, SWEITZER & BARNUM, INC.
4. PROJECT IS LOCATED IN LAND LOTS 224, 257 & 258 OF THE 24TH DISTRICT AND 3RD SECTION OF FLOYD COUNTY, GEORGIA.
5. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, 2001 EDITION.
6. EXISTING UTILITIES SHOWN HEREON WERE TAKEN FROM THE BEST INFORMATION AVAILABLE AND MAY NOT BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF UTILITIES WITH THE UTILITY OWNERS.
7. THE PROJECT IS LOCATED IN AREA ZONED H-I, HEAVY INDUSTRIAL.
8. TOTAL PROJECT AREA = 100 ACRES.
   DISTURBED AREA = 76 ACRES.
9. ALL WORK SHALL COMPLY WITH THE ROME / FLOYD COUNTY UNIFIED LAND DEVELOPMENT CODE AND ALL OTHER CITY OF ROME REGULATIONS.
10. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, 2001 EDITION.
11. EXISTING UTILITIES SHOWN HEREON WERE TAKEN FROM THE BEST INFORMATION AVAILABLE AND MAY NOT BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF UTILITIES WITH THE UTILITY OWNERS.
12. STATE WATERS DO EXIST ON OR WITHIN 200 FEET OF THE PROJECT SITE.
13. WASTE MATERIALS SHALL NOT BE DISCHARGED INTO THE DRAINAGE SYSTEM FROM THIS SITE.
14. THE APPLICABLE PORTION OF THE ESPC PLAN IS TO BE PROVIDED TO EACH SECONDARY PERMITTEE PRIOR TO THE SECONDARY PERMITTEE CONDUCTING OF ANY CONSTRUCTION ACTIVITY.
15. ANY REVISIONS TO THE ESPC PLAN THAT RESULT IN A SIGNIFICANT EFFECT ON THE BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.
16. THE LOCATION OF THE SOIL SERIES SHOWN ON THIS PLAN WAS INTERPOLATED FROM USDA NATURAL RESOURCES CONSERVATION SERVICE SOIL SURVEY WEBSITE FOR FORSYTH COUNTY, GEORGIA.
    SOILS ON THE PROJECT SITE ARE:
    Ck - CHEWACLA SILT LOAM
    Dh8 - DEWEY SILT LOAM
    En - ENNIS CHERTY SILT LOAM
    FuC/FuD - FULLERTON CHERTY SILT LOAM
    MaD/MsF - MOTEVALLO VERY SHALY SILT LOAM
    Rn - ROANOKE SILT LOAM
    TnC - TOWNLEY SILT LOAM
    WoB - WOLFTEVER SILT LOAM
17. ALL EROSION AND SEDIMENT CONTROL DESIGNS SHALL CONFORM TO AND SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE PUBLICATION TITLED "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA", PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMITTEE OF GEORGIA.
18. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
19. EROSION CONTROL BARRIERS ARE TO BE PUT IN PLACE BEFORE GRADING OPERATIONS BEGIN AND SHALL BE LEFT IN PLACE UNTIL GRASSING IS COMPLETED AND THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. SEDIMENT SHALL BE REMOVED FROM BEHIND THE BARRIERS ONCE IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE BARRIER.

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NOTE REGARDING UNDERGROUND UTILITIES:
THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON WAS DETERMINED BY VISUAL INSPECTION, ELECTRONIC DETECTION AND EARLIER MAPPING (WHEN AVAILABLE). NO ATTEMPT WAS MADE BY THE SURVEYOR TO EXCAVATE FOR UTILITY INFORMATION, AND NO LIABILITY IS ASSUMED BY THIS FIRM FOR THE ACCURACY OR COMPLETENESS OF SUBSURFACE INFORMATION SHOWN HEREON.

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING. IF AN AREA IS EXPECTED TO BE UNDISTURBED FOR LONGER THAN SIX MONTHS, THEN PERMANENT PERENNIAL VEGETATION SHALL BE USED. MULCH USED FOR TEMPORARY STABILIZATION SHALL BE APPLIED TO A DEPTH OF 2 TO 4 INCHES PROVIDING COMPLETE SOIL COVER.

IN ACCORDANCE WITH PERMIT GAR100001, CONSTRUCTION MUST BE COMPLETE AND 100% OF THE SITE MUST BE "STABILIZED" WITH A STAND OF GRASS BEFORE A NOTICE OF TERMINATION CAN BE FILED WITH THE E.P.D.

IN ACCORDANCE WITH GAR100001, THE OWNER MUST CONTACT THE DESIGN PROFESSIONAL WITHIN 7 DAYS OF COMMENCEMENT OF LAND DISTURBING ACTIVITIES FOR CERTIFICATION OF THE INITIAL EROSION & SEDIMENT CONTROL MEASURES SHOWN ON THE PLAN.

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.

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

OWNER & 24 HOUR CONTACT
DEVELOPMENT AUTHORITY OF FLOYD COUNTY
AND ROME-FLOYD COUNTY DEVELOPMENT AUTHORITY
P.O. BOX 6221
ROME, GEORGIA 30162

GRAPHIC SCALE
60 0 30 60 120
1 INCH = 60 FEET

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p:(706)235-4143 f:(706)235-4191
www.southernEandS.com

GEORGIA REGISTERED PROFESSIONAL ENGINEER 19579 CHARLES F. HARDIN JR.
LEVEL II CERTIFICATION NO. 22984

NORTH FLOYD RAIL SITE

Georgia Highway 53 at Georgia Highway 140

NO.	REVISION FOR	DATE
1	GENERAL REVISIONS	12/3/15
2	REVISED G.D.O.T. R/W	2/19/16

EROSION & SEDIMENT CONTROL PLAN

INITIAL PHASE

DESIGNED BY: PO
APPROVED BY: CH
DATE: 4-30-2015
DRAWING NO.: E368 - C-3

C-3

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING. IF AN AREA IS EXPECTED TO BE UNDISTURBED FOR LONGER THAN SIX MONTHS, THEN PERMANENT PERENNIAL VEGETATION SHALL BE USED. MULCH USED FOR TEMPORARY STABILIZATION SHALL BE APPLIED TO A DEPTH OF 2 TO 4 INCHES PROVIDING COMPLETE SOIL COVER.

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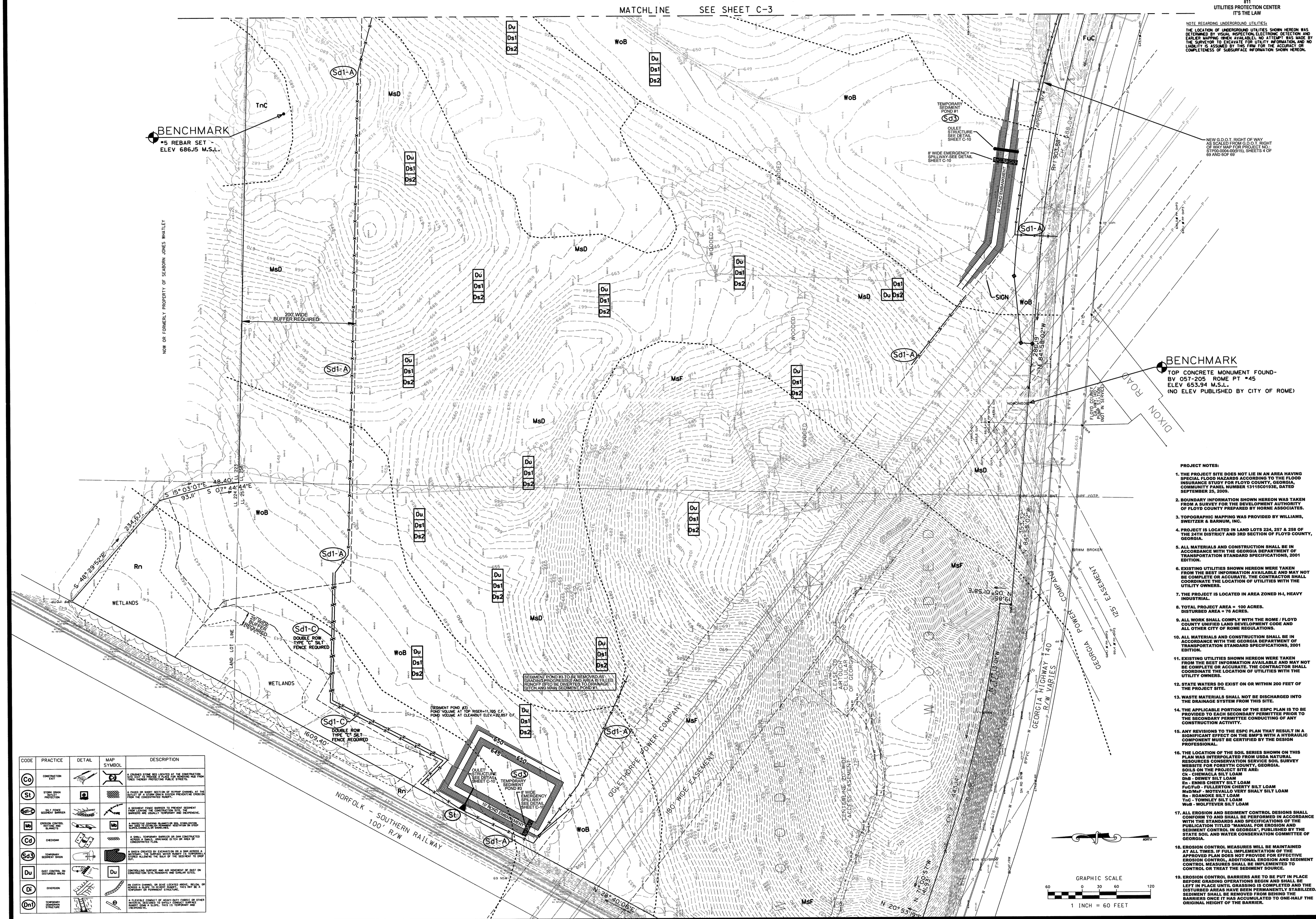

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Co	CONSTRUCTION EXIT		Co	A CRUSHED STONE BED LOCATED AT THE CONSTRUCTION EXIT TO REDUCE THE AMOUNT OF MUD TRACKED OR HAULED FROM THE PROJECT SITE ONTO PUBLIC STREETS.
St	STORM DRAIN OUTLET PROTECTION			A PAVED OR SHORT SECTION OF RIPRAP CHANNEL AT THE OUTLET OF A STORM DRAIN TO PREVENT EXCESSIVE EROSION FROM THE CONCENTRATED RUNOFF.
Sd1-C	SILT FENCE SEDIMENT BARRIER			A SEDIMENT FENCE BARRIER TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THE BARRIERS ARE USUALLY TEMPORARY AND INEXPENSIVE.
Ms	EROSION CONTROL MATTING AND BLANKETS		Ms	A PROTECTIVE COVERING (BLANKETS) OR STABILIZATION MATERIAL (MATTING) APPLIED TO THE SURFACE OF AN ERODIBLE SLOPE, CHANNEL OR SHORELINE.
Cd	CHECKDAM			A SMALL, TEMPORARY BARRIER OR DAM CONSTRUCTED ACROSS A DRAINAGE CHANNEL OR SWALE TO CUT DOWN THE VELOCITY OF CONCENTRATED FLOW.
Sd3	TEMPORARY SEDIMENT BASIN			A BASIN CREATED BY EXCAVATION OR A DAM ACROSS A WATERWAY. THE SURFACE WATER RUNOFF IS TEMPORARILY STORED ALLOWING THE SOLID OF THE SEDIMENT TO DROP OUT.
Du	DUST CONTROL ON DISTURBED AREAS		Du	CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITE, ROADWAYS AND SIMILAR SITES.
Di	DIVERSION			AN EARTH CHANNEL OR DIKE LOCATED ABOVE, BELOW, OR TOWARD A SLOPE TO REDIRECT RUNOFF. THIS MAY BE A TEMPORARY OR PERMANENT STRUCTURE.
Dm1	TEMPORARY DOWNDRAIN STRUCTURE			A FLEXIBLE CONDUIT OF HEAVY-DUTY FABRIC OR OTHER MATERIAL USED TO CARRY WATER DOWN A STEEP SLOPE. THIS IS TEMPORARY AND INEXPENSIVE.

PROJECT NOTES:

1. THE PROJECT SITE DOES NOT LIE IN AN AREA HAVING SPECIAL FLOOD HAZARDS ACCORDING TO THE FLOOD INSURANCE STUDY FOR FLOYD COUNTY, GEORGIA, COMMUNITY PANEL NUMBER 13115C0193E, DATED SEPTEMBER 25, 2009.
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12. STATE WATERS DO EXIST ON OR WITHIN 200 FEET OF THE PROJECT SITE.
13. WASTE MATERIALS SHALL NOT BE DISCHARGED INTO THE DRAINAGE SYSTEM FROM THIS SITE.
14. THE APPLICABLE PORTION OF THE ESPC PLAN IS TO BE PROVIDED TO EACH SECONDARY PERMITTEE PRIOR TO THE SECONDARY PERMITTEE CONDUCTING OF ANY CONSTRUCTION ACTIVITY.
15. ANY REVISIONS TO THE ESPC PLAN THAT RESULT IN A SIGNIFICANT EFFECT ON THE BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.
16. THE LOCATION OF THE SOIL SERIES SHOWN ON THIS PLAN WAS INTERPOLATED FROM USDA NATURAL RESOURCES CONSERVATION SERVICE SOIL SURVEY WEBSITE FOR FORSYTH COUNTY, GEORGIA.
    SOILS ON THE PROJECT SITE ARE:
    Ck - CHEWACLA SILT LOAM
    DnB - DEWEY SILT LOAM
    En - ENNIS CHERTY SILT LOAM
    FuC/FuD - FULLERTON CHERTY SILT LOAM
    MsD/MsF - MOTEVALLO VERY SHALY SILT LOAM
    Rn - ROANOKE SILT LOAM
    TnC - TOWNLEY SILT LOAM
    WoB - WOLFTEVER SILT LOAM
17. ALL EROSION AND SEDIMENT CONTROL DESIGNS SHALL CONFORM TO AND SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE PUBLICATION TITLED "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA", PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMITTEE OF GEORGIA.
18. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
19. EROSION CONTROL BARRIERS ARE TO BE PUT IN PLACE BEFORE GRADING OPERATIONS BEGIN AND SHALL BE LEFT IN PLACE UNTIL GRASSING IS COMPLETED AND THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. SEDIMENT SHALL BE REMOVED FROM BEHIND THE BARRIERS ONCE IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE BARRIER.

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GEORGIA REGISTERED No. 18579 PROFESSIONAL ENGINEER CHARLES F. HARDIN, JR.
LEVEL II CERTIFICATION NO. 22334

NORTH FLOYD RAIL SITE

Georgia Highway 53 at Georgia Highway 140

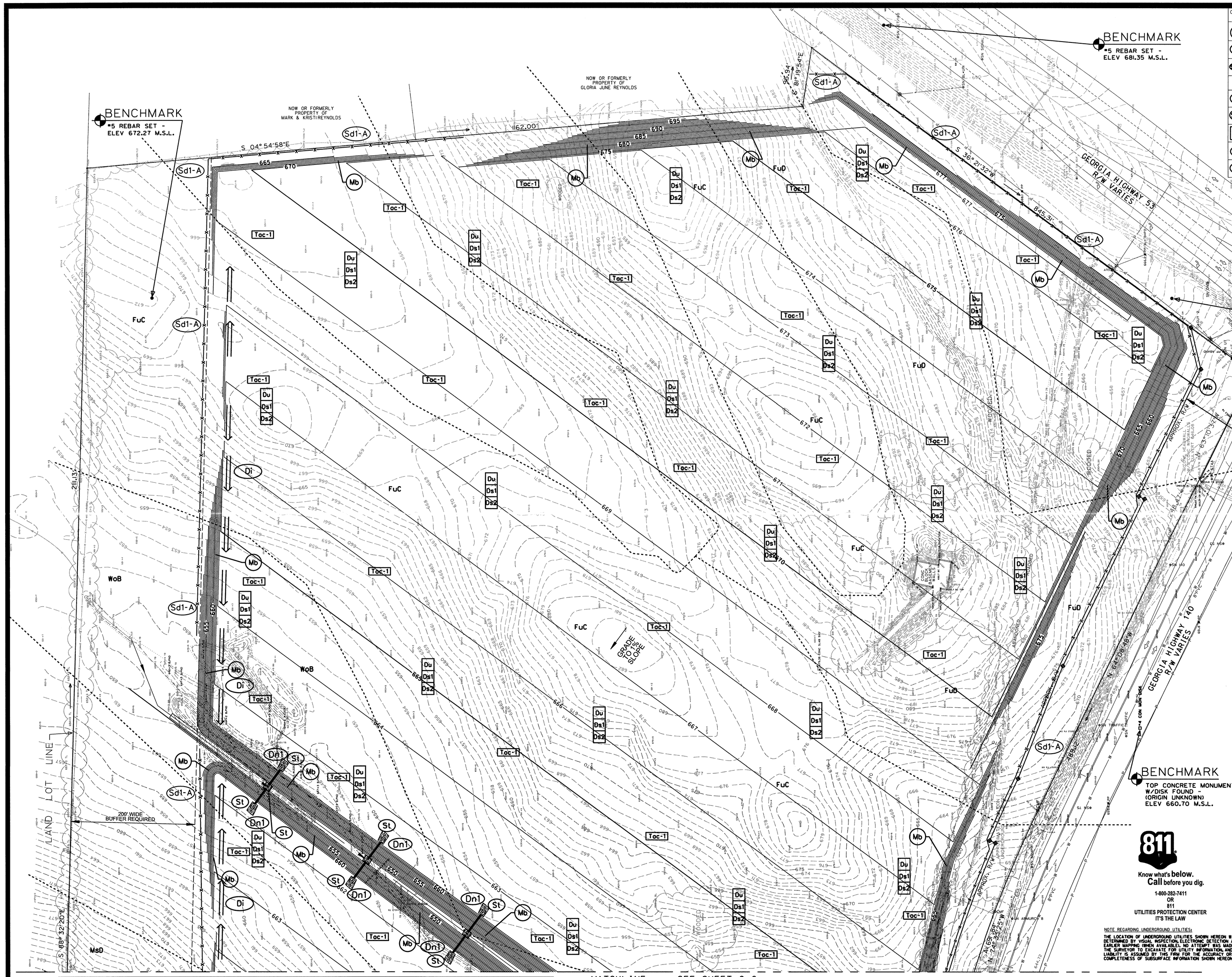
NO.	REVISION FOR	DATE
1	GENERAL REVISIONS	12/3/15
2	REVISED G.D.O.T. R/W	2/19/16

EROSION & SEDIMENT CONTROL PLAN

INITIAL PHASE

DESIGNED BY: PO
APPROVED BY: CH
DATE: 4-30-2015
DRAWING NO.: E368 - C-4

C-4



CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Co	CONSTRUCTION EXIT		Co	A CRUSHED STONE BED LOCATED AT THE CONSTRUCTION SITE EXIT TO REDUCE SILT LOAD FOR VEHICLES AND FROM TIRES THEREBY PROTECTING PUBLIC STREETS.
St	STORM DRAIN OUTLET PROTECTION		St	A PAVED OR SHORT SECTION OF RIPRAP CHANNEL AT THE OUTLET OF A STORM DRAIN SYSTEM PREVENTING EROSION FROM THE CONCENTRATED RUNOFF.
Sd1-C	SILT FENCE SEDIMENT BARRIER			A SEDIMENT FENCE BARRIER TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THE BARRIERS ARE USUALLY TEMPORARY AND INEXPENSIVE.
Mb	EROSION CONTROL MATTING AND BLANKETS		Mb	A PROTECTIVE COVERING (BLANKETS OR SOD, SYNTHETICS, MATTING) TO ESTABLISH PERMANENT VEGETATION ON USER-SLOPES, CHANNELS OR SHORELINES.
Cd	CHECKDAM		Cd	A SMALL TEMPORARY BARRIER OR DAM CONSTRUCTED ACROSS A SMALL DRAINAGE DITCH OR AREA OF CONCENTRATED FLOW.
Sd3	TEMPORARY SEDIMENT BASIN			A BASIN CREATED BY EXCAVATION OR A DAM ACROSS A WATERWAY, THE SURFACE WATER RUNOFF IS TEMPORARILY STORED ALLOWING THE BULK OF THE SEDIMENT TO DROP OUT.
Du	DUST CONTROL ON DISTURBED AREAS		Du	CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADWAYS AND SIMILAR SITES.
Di	DIVERSION			AN EARTH CHANNEL OR DIKE LOCATED ABOVE, BELOW, OR ACROSS A SLOPE TO DIVERT RUNOFF. THIS MAY BE A TEMPORARY OR PERMANENT STRUCTURE.
Dn1	TEMPORARY DOWNDRAIN STRUCTURE			A FLEXIBLE CONDUIT OF HEAVY-DUTY FABRIC OF OTHER MATERIAL DESIGNED TO SAFELY CONDUCT SURFACE WATER DOWN A SLOPE. THIS IS TEMPORARY AND INEXPENSIVE.

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING. IF AN AREA IS EXPECTED TO BE UNDISTURBED FOR LONGER THAN SIX MONTHS, THEN PERMANENT PERENNIAL VEGETATION SHALL BE USED. MULCH USED FOR TEMPORARY STABILIZATION SHALL BE APPLIED TO A DEPTH OF 2 TO 4 INCHES PROVIDING COMPLETE SOIL COVER.

IN ACCORDANCE WITH PERMIT GAR100001, CONSTRUCTION MUST BE COMPLETE AND 100% OF THE SITE MUST BE "STABILIZED" WITH A STAND OF GRASS BEFORE A NOTICE OF TERMINATION CAN BE FILED WITH THE E.P.D.

IN ACCORDANCE WITH GAR100001, THE OWNER MUST CONTACT THE DESIGN PROFESSIONAL WITHIN 7 DAYS OF COMMENCEMENT OF LAND DISTURBING ACTIVITIES FOR CERTIFICATION OF THE INITIAL EROSION & SEDIMENT CONTROL MEASURES SHOWN ON THE PLAN.

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.

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

OWNER & 24 HOUR CONTACT

DEVELOPMENT AUTHORITY OF FLOYD COUNTY
AND ROME-FLOYD COUNTY DEVELOPMENT AUTHORITY
P.O. BOX 6221
ROME, GEORGIA 30162

GRAPHIC SCALE

60 0 30 60 120

1 INCH = 60 FEET

PROJECT NOTES:

1. THE PROJECT SITE DOES NOT LIE IN AN AREA HAVING SPECIAL FLOOD HAZARDS ACCORDING TO THE FLOOD INSURANCE STUDY FOR FLOYD COUNTY, GEORGIA, COMMUNITY PANEL NUMBER 13115C0193E, DATED SEPTEMBER 25, 2009.
2. BOUNDARY INFORMATION SHOWN HEREON WAS TAKEN FROM A SURVEY FOR THE DEVELOPMENT AUTHORITY OF FLOYD COUNTY PREPARED BY HORNE ASSOCIATES.
3. TOPOGRAPHIC MAPPING WAS PROVIDED BY WILLIAMS, SWEITZER & BARNUM, INC.
4. PROJECT IS LOCATED IN LAND LOTS 224, 257 & 258 OF THE 24TH DISTRICT AND 3RD SECTION OF FLOYD COUNTY, GEORGIA.
5. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, 2001 EDITION.
6. EXISTING UTILITIES SHOWN HEREON WERE TAKEN FROM THE BEST INFORMATION AVAILABLE AND MAY NOT BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF UTILITIES WITH THE UTILITY OWNERS.
7. THE PROJECT IS LOCATED IN AREA ZONED H-I, HEAVY INDUSTRIAL.
8. TOTAL PROJECT AREA = 100 ACRES.
   DISTURBED AREA = 75 ACRES.
9. ALL WORK SHALL COMPLY WITH THE ROME / FLOYD COUNTY UNIFIED LAND DEVELOPMENT CODE AND ALL OTHER CITY OF ROME REGULATIONS.
10. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, 2001 EDITION.
11. EXISTING UTILITIES SHOWN HEREON WERE TAKEN FROM THE BEST INFORMATION AVAILABLE AND MAY NOT BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF UTILITIES WITH THE UTILITY OWNERS.
12. STATE WATERS DO EXIST ON OR WITHIN 200 FEET OF THE PROJECT SITE.
13. WASTE MATERIALS SHALL NOT BE DISCHARGED INTO THE DRAINAGE SYSTEM FROM THIS SITE.
14. THE APPLICABLE PORTION OF THE ESPC PLAN IS TO BE PROVIDED TO EACH SECONDARY PERMITTEE PRIOR TO THE SECONDARY PERMITTEE CONDUCTING OF ANY CONSTRUCTION ACTIVITY.
15. ANY REVISIONS TO THE ESPC PLAN THAT RESULT IN A SIGNIFICANT EFFECT ON THE BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.
16. THE LOCATION OF THE SOIL SERIES SHOWN ON THIS PLAN WAS INTERPOLATED FROM USDA NATURAL RESOURCES CONSERVATION SERVICE SOIL SURVEY WEBSITE FOR FORSYTH COUNTY, GEORGIA.
    SOILS ON THE PROJECT SITE ARE:
    Ck - CHEWACLA SILT LOAM
    DhB - DEWEY SILT LOAM
    En - ENNIS CHERTY SILT LOAM
    FuC/FuD - FULLERTON CHERTY SILT LOAM
    MsD/MsF - MOTEVALLO VERY SHALY SILT LOAM
    Rn - ROANOKE SILT LOAM
    TnC - TOWNLEY SILT LOAM
    WoB - WOLFTEVER SILT LOAM
17. ALL EROSION AND SEDIMENT CONTROL DESIGNS SHALL CONFORM TO AND SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE PUBLICATION TITLED "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA", PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMITTEE OF GEORGIA.
18. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
19. EROSION CONTROL BARRIERS ARE TO BE PUT IN PLACE BEFORE GRADING OPERATIONS BEGIN AND SHALL BE LEFT IN PLACE UNTIL GRASSING IS COMPLETED AND THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. SEDIMENT SHALL BE REMOVED FROM BEHIND THE BARRIERS ONCE IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE BARRIER.

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OR
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UTILITIES PROTECTION CENTER
IT'S THE LAW

NOTE REGARDING UNDERGROUND UTILITIES:
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GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 19579 CHARLES F. HARDIN
LEVEL II CERTIFICATION NO.: 22354

NORTH FLOYD RAIL SITE

Georgia Highway 53 at Georgia Highway 140

NO.	REVISION FOR	DATE
1	GENERAL REVISIONS	12/3/15
2	REVISED G.D.O.T. R/W	2/19/16

EROSION & SEDIMENT CONTROL PLAN

INTERMEDIATE PHASE

DESIGNED BY: ZO
APPROVED BY: CH
DATE: 4-30-2015
DRAWING NO.: E368 - C-5

C-5

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING. IF AN AREA IS EXPECTED TO BE UNDISTURBED FOR LONGER THAN SIX MONTHS, THEN PERMANENT PERENNIAL VEGETATION SHALL BE USED. MULCH USED FOR TEMPORARY STABILIZATION SHALL BE APPLIED TO A DEPTH OF 2 TO 4 INCHES PROVIDING COMPLETE SOIL COVER.

IN ACCORDANCE WITH PERMIT GAR100001, CONSTRUCTION MUST BE COMPLETE AND 100% OF THE SITE MUST BE "STABILIZED" WITH A STAND OF GRASS BEFORE A NOTICE OF TERMINATION CAN BE FILED WITH THE E.P.D.

IN ACCORDANCE WITH GAR100001, THE OWNER MUST CONTACT THE DESIGN PROFESSIONAL WITHIN 7 DAYS OF COMMENCEMENT OF LAND DISTURBING ACTIVITIES FOR CERTIFICATION OF THE INITIAL EROSION & SEDIMENT CONTROL MEASURES SHOWN ON THE PLAN.

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.

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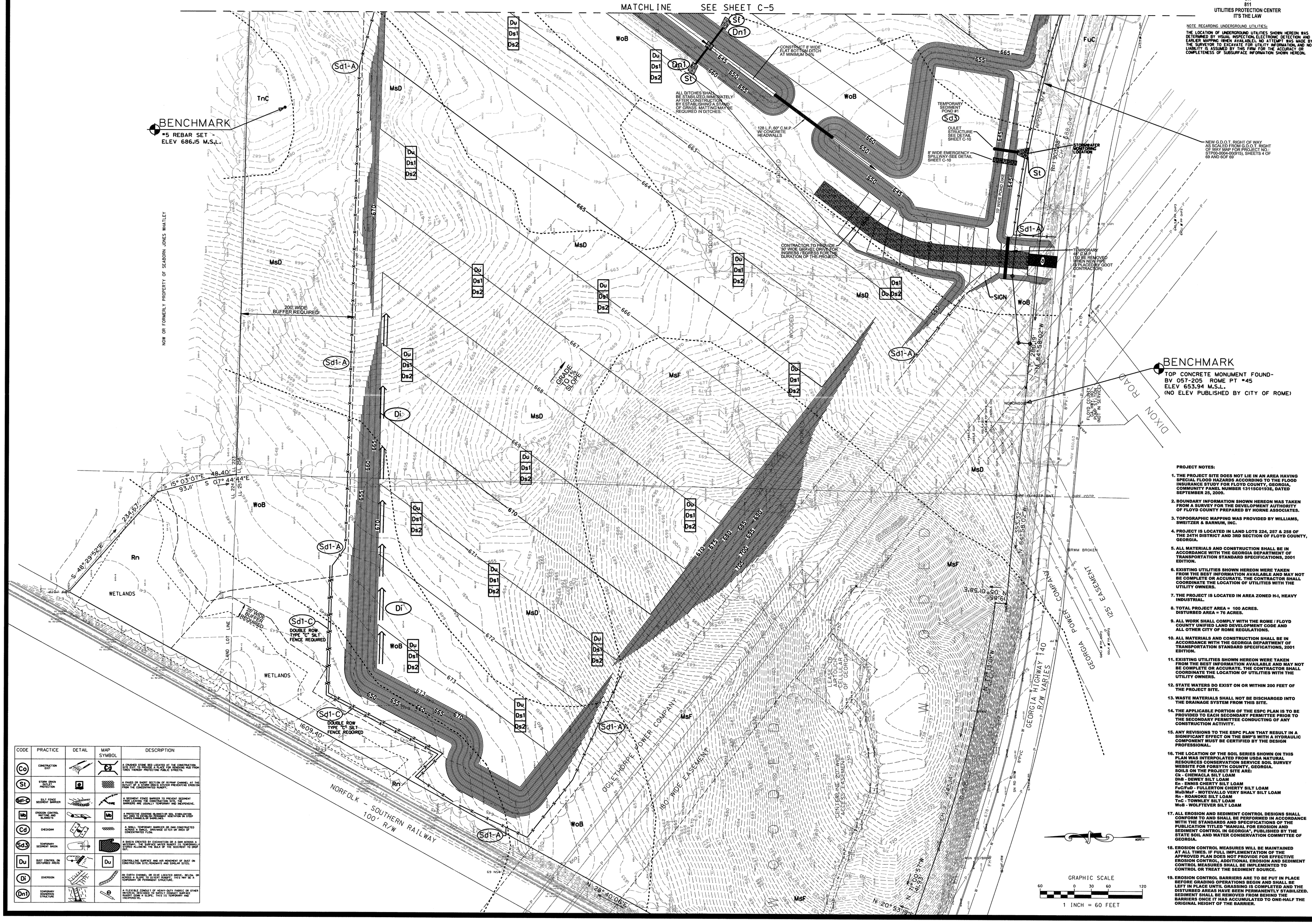

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Co	CONSTRUCTION EXIT		Co	A CRUSHED STONE BED LOCATED AT THE CONSTRUCTION SITE FOR THE PURPOSE OF REMOVING MUD FROM TIRES THEREBY PROTECTING PUBLIC STREETS.
St	STORM DRAIN OUTLET PROTECTION			A PAVED OR SHORT SECTION OF RIPRAP CHANNEL AT THE OUTLET OF A STORM DRAIN TO PREVENT EROSION FROM THE CONCENTRATED RUNOFF.
Sd1-C	SILT FENCE SEDIMENT BARRIER			A SEDIMENT FENCE BARRIER TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THESE BARRIERS ARE USUALLY TEMPORARY AND INEXPENSIVE.
Mb	EROSION CONTROL MATTING AND BLANKETS		Mb	A PROTECTIVE COVERING (BLANKET OR MAT) STABILIZES THE SOIL TO PROTECT THE SOIL SURFACE FROM EROSION ON STEEP SLOPES, CHANNELS, OR SHORELINES.
Cd	CHECKDAM			A SMALL TEMPORARY BARRIER OR DAM CONSTRUCTED ACROSS A SMALL DRAINAGE DITCH OR AREA OF CONCENTRATED FLOW.
Sd3	TEMPORARY SEDIMENT BASIN			A BASIN CREATED BY EXCAVATION OR A DAM ACROSS A DRAINAGE WAY TO EXPOSE SEDIMENT-LADEN RUNOFF TO SUFFICIENT STORAGE ALLOWING THE BULK OF THE SEDIMENT TO DROP OUT.
Du	DUST CONTROL ON DISTURBED AREAS		Du	CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADWAYS AND SIMILAR SITES.
Di	DIVERSION			AN EARTH CHANNEL OR DIKE LOCATED ABOVE, BELOW, OR ACROSS A SLOPE TO DIVERT RUNOFF. THIS MAY BE A TEMPORARY OR PERMANENT STRUCTURE.
Dn1	TEMPORARY DOWNHILL CONVEYANCE STRUCTURE			A FLEXIBLE CONDUIT OF HEAVY-DUTY FABRIC OR OTHER MATERIAL DESIGNED TO SAFELY CONDUCT SURFACE RUNOFF DOWN A SLOPE. THIS IS TEMPORARY AND INEXPENSIVE.

PROJECT NOTES:

1. THE PROJECT SITE DOES NOT LIE IN AN AREA HAVING SPECIAL FLOOD HAZARDS ACCORDING TO THE FLOOD INSURANCE STUDY FOR FLOYD COUNTY, GEORGIA, COMMUNITY PANEL NUMBER 13115C0193E, DATED SEPTEMBER 25, 2009.
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8. TOTAL PROJECT AREA = 100 ACRES.
   DISTURBED AREA = 76 ACRES.
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12. STATE WATERS DO EXIST ON OR WITHIN 200 FEET OF THE PROJECT SITE.
13. WASTE MATERIALS SHALL NOT BE DISCHARGED INTO THE DRAINAGE SYSTEM FROM THIS SITE.
14. THE APPLICABLE PORTION OF THE ESPC PLAN IS TO BE PROVIDED TO EACH SECONDARY PERMITTEE PRIOR TO THE SECONDARY PERMITTEE CONDUCTING OF ANY CONSTRUCTION ACTIVITY.
15. ANY REVISIONS TO THE ESPC PLAN THAT RESULT IN A SIGNIFICANT EFFECT ON THE BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.
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    SOILS ON THE PROJECT SITE ARE:
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19. EROSION CONTROL BARRIERS ARE TO BE PUT IN PLACE BEFORE GRADING OPERATIONS BEGIN AND SHALL BE LEFT IN PLACE UNTIL GRASSING IS COMPLETED AND THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. SEDIMENT SHALL BE REMOVED FROM BEHIND THE BARRIERS ONCE IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE BARRIER.

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GEORGIA REGISTERED PROFESSIONAL ENGINEER CHARLES F. HARDIN JR.
LEVEL II CERTIFICATION NO. 22284

NORTH FLOYD RAIL SITE

Georgia Highway 53 at Georgia Highway 140

NO.	REVISION FOR	DATE
1	GENERAL REVISIONS	12/3/15
2	REVISED G.D.O.T. R/W	2/19/16

EROSION & SEDIMENT CONTROL PLAN

INTERMEDIATE PHASE

DESIGNED BY: PO
APPROVED BY: CH
DATE: 4-30-2015
DRAWING NO.: JM8 - C-6

C-6

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Co	CONSTRUCTION EXIT		Co	A CRUSHED STONE BED LOCATED AT THE CONSTRUCTION SITE EXIT TO PROVIDE A PLACE FOR REMOVING MUD FROM TIRES THEREBY PROTECTING PUBLIC STREETS.
St	STORM DRAIN OUTLET PROTECTION			A FIBROUS OR GRAVEL BASIN BELOW THE OUTLET OF A STORM DRAIN OUTLET PREVENTING EROSION FROM THE CONCENTRATED FLOW.
Sdf-C	SILT FENCE SEDIMENT BARRIER			A SEDIMENT FENCE BARRIER TO PREVENT SEDIMENT ENTRY LEAVING OR CONTRIBUTING TO THE WATERWAYS. THESE BARRIERS ARE USUALLY TEMPORARY AND INEXPENSIVE.
Mb	EROSION CONTROL MATTING AND BLANKETS		Mb	A PROTECTIVE COVERING SUBJECTED TO STABILIZATION ACTIVITIES TO ENHANCE SEEDING ESTABLISHMENT ON STEEP SLOPES CHANNELS OR SHORELINES.
Cd	CHECKDAM			A SMALL TEMPORARY BARRIER OR DAM CONSTRUCTED ACROSS A SMALL DRAINAGE DITCH OR AREA OF CONCENTRATED FLOW.
Sd3	TEMPORARY SEDIMENT BASIN			A BASIN CREATED BY EXCAVATION OR A DAM ACROSS A DRAINAGE WAY TO EXPOSE SEDIMENT TO ALLOW SEDIMENT TO BE STORED ALLOW AS THE BULK OF THE SEDIMENT TO DROP OUT.
Du	DUST CONTROL ON DISTURBED AREAS		Du	CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITE,ROADWAYS AND SIMILAR SITES.
Di	DIVERSION			AN EARTH CHANNEL OR DIKE LOCATED ABOVE, BELOW, OR ACROSS A SLOPE TO DIVERT RUNOFF. THIS MAY BE A TEMPORARY OR PERMANENT STRUCTURE.
Dn1	TEMPORARY DOWNDRAIN STRUCTURE			A FLEXIBLE CONDUIT OF HEAVY-DUTY FABRIC OR OTHER MATERIAL DESIGNED TO SAFELY CONDUCT SURFACE RUNOFF DOWN A SLOPE. THIS IS TEMPORARY AND REVERSIBLE.

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING. IF ANY AREA IS EXPECTED TO BE UNDISTURBED FOR LONGER THAN SIX MONTHS, THEN PERMANENT PERENNIAL VEGETATION SHALL BE USED. MULCH USED FOR TEMPORARY STABILIZATION SHALL BE APPLIED TO A DEPTH OF 2 TO 4 INCHES PROVIDING COMPLETE SOIL COVER.

IN ACCORDANCE WITH PERMIT GAR100001, CONSTRUCTION MUST BE COMPLETE AND 100% OF THE SITE MUST BE "STABILIZED" WITH A STAND OF GRASS BEFORE A NOTICE OF TERMINATION CAN BE FILED WITH THE E.P.D.

IN ACCORDANCE WITH GAR100001, THE OWNER MUST CONTACT THE DESIGN PROFESSIONAL WITHIN 7 DAYS OF COMMENCEMENT OF LAND DISTURBING ACTIVITIES FOR CERTIFICATION OF THE INITIAL EROSION & SEDIMENT CONTROL MEASURES SHOWN ON THE PLAN.

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OWNER & 24 HOUR CONTACT

DEVELOPMENT AUTHORITY OF FLOYD COUNTY
AND ROME-FLOYD COUNTY DEVELOPMENT AUTHORITY
P.O. BOX 6221
ROME, GEORGIA 30162

GRAPHIC SCALE

60 0 30 60 120

1 INCH = 60 FEET

PROJECT NOTES:

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LEVEL II CERTIFICATION NO.: 22354

NORTH FLOYD RAIL SITE

Georgia Highway 53 at Georgia Highway 140

NO.	REVISION FOR	DATE
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2	REVISED G.D.O.T. R/W	2/19/16

EROSION & SEDIMENT CONTROL PLAN

FINAL PHASE

DESIGNED BY: ZO
APPROVED BY: CH
DATE: 4-30-2015
DRAWING NO.: E368 - C-7

C-7

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING. IF AN AREA IS EXPECTED TO BE UNDISTURBED FOR LONGER THAN SIX MONTHS, THEN PERMANENT PERENNIAL VEGETATION SHALL BE USED. MULCH USED FOR TEMPORARY STABILIZATION SHALL BE APPLIED TO A DEPTH OF 2 TO 4 INCHES PROVIDING COMPLETE SOIL COVER.

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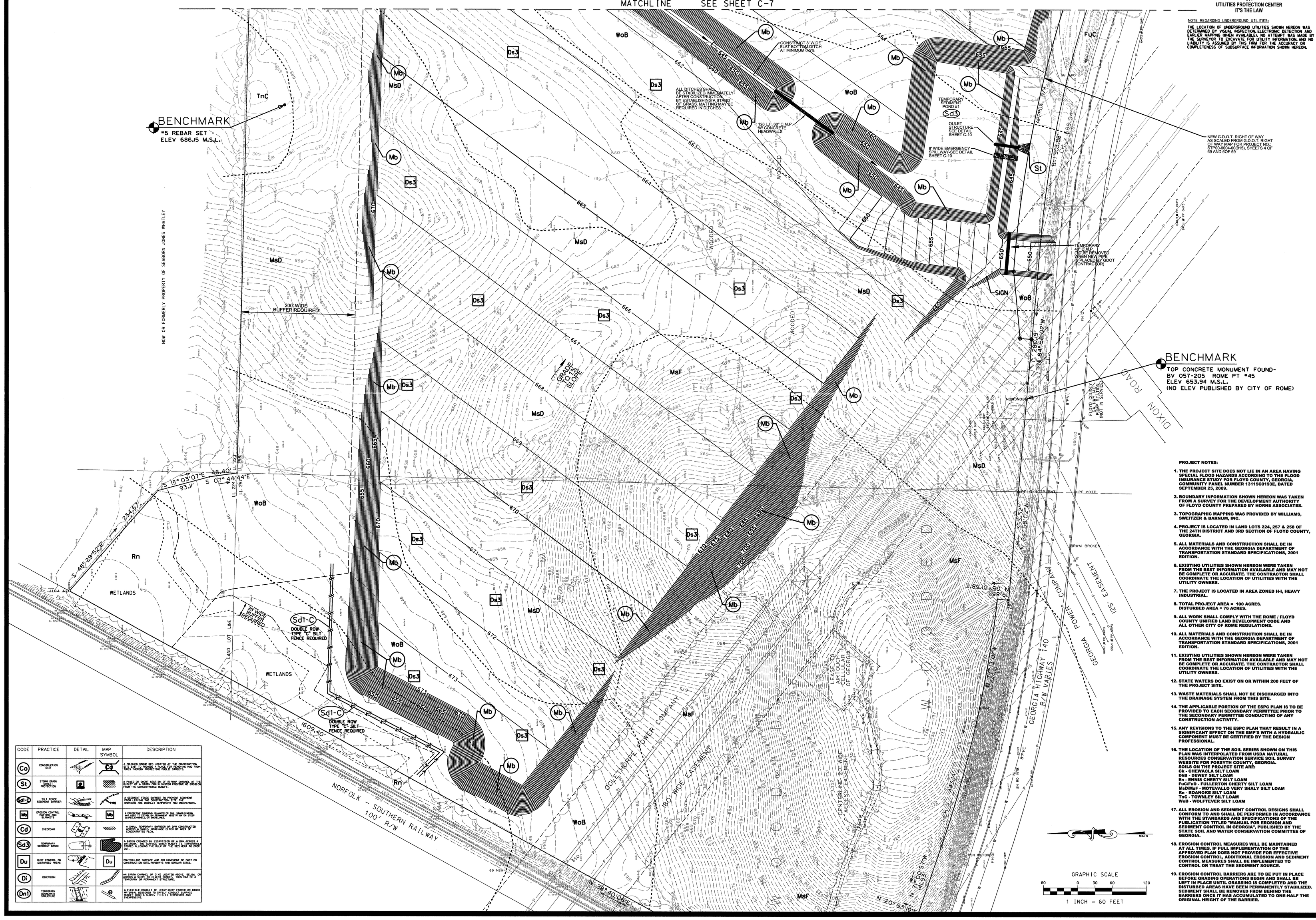


CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Co	CONSTRUCTION EXIT		Co	A CRUSHED STONE BED LOCATED AT THE CONSTRUCTION SITE EXIT TO PROVIDE A DEPOSITION OF MUD FROM TIRES THEREBY PROTECTING PUBLIC STREETS.
St	STORM DRAIN OUTLET PROTECTION			A PAVED OR SHORT SECTION OF RIPRAP CHANNEL AT THE OUTLET OF A STORM DRAIN SYSTEM PREVENTING EROSION FROM THE CONCENTRATED FLOW.
Sd1-C	SILT FENCE SEDIMENT BARRIER			A SEDIMENT FENCE BARRIER TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THE BARRIERS ARE USUALLY TEMPORARY AND INEXPENSIVE.
Mb	EROSION CONTROL MATTING AND BLANKETS		Mb	A PROTECTIVE COVERING OF MATTING ON SOIL STABILIZATION MUST BEGIN TO ESTABLISH PERMANENT VEGETATION ON STEEP SLOPES, CHANNELS OR SHORELINES.
Cd	CHECKDAM		Cd	A SMALL, TEMPORARY BARRIER OR DAM CONSTRUCTED ACROSS A SMALL, DRAINAGE DITCH OR AREA OF CONCENTRATED FLOW.
Sd3	TEMPORARY SEDIMENT BASIN		Sd3	A BASIN CREATED BY EXCAVATION OR A DAM ACROSS A WATERWAY. THE SURFACE WATER RUNOFF IS TEMPORARILY STORED ALLOWING THE BULK OF THE SEDIMENT TO DROP OUT.
Du	DUST CONTROL ON DISTURBED AREAS		Du	CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITE, ROADWAYS AND SIMILAR SITES.
Di	DIVERSION			AN EARTH CHANNEL OR DIKE LOCATED ABOVE, BELOW, OR ACROSS A SLOPE TO DIVERT RUNOFF. THIS MAY BE A TEMPORARY OR PERMANENT STRUCTURE.
Dn1	TEMPORARY DOWNFORN STRUCTURE			A FLEXIBLE CONDUIT OF HEAVY-DUTY FABRIC OR OTHER MATERIAL DESIGNED TO CONVEY RUNOFF DOWN A RUNOFF DIVERSION (SLOPE). THIS IS TEMPORARY AND INEXPENSIVE.

PROJECT NOTES:

1. THE PROJECT SITE DOES NOT LIE IN AN AREA HAVING SPECIAL FLOOD HAZARDS ACCORDING TO THE FLOOD INSURANCE STUDY FOR FLOYD COUNTY, GEORGIA, COMMUNITY PANEL NUMBER 13115C0193E, DATED SEPTEMBER 25, 2009.
2. BOUNDARY INFORMATION SHOWN HEREON WAS TAKEN FROM A SURVEY FOR THE DEVELOPMENT AUTHORITY OF FLOYD COUNTY PREPARED BY HORNE ASSOCIATES.
3. TOPOGRAPHIC MAPPING WAS PROVIDED BY WILLIAMS, SWEITZER & BARNUM, INC.
4. PROJECT IS LOCATED IN LAND LOTS 224, 257 & 258 OF THE 24TH DISTRICT AND 3RD SECTION OF FLOYD COUNTY, GEORGIA.
5. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, 2001 EDITION.
6. EXISTING UTILITIES SHOWN HEREON WERE TAKEN FROM THE BEST INFORMATION AVAILABLE AND MAY NOT BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF UTILITIES WITH THE UTILITY OWNERS.
7. THE PROJECT IS LOCATED IN AREA ZONED H-I, HEAVY INDUSTRIAL.
8. TOTAL PROJECT AREA = 100 ACRES.
   DISTURBED AREA = 75 ACRES.
9. ALL WORK SHALL COMPLY WITH THE ROME / FLOYD COUNTY UNIFIED LAND DEVELOPMENT CODE AND ALL OTHER CITY OF ROME REGULATIONS.
10. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, 2001 EDITION.
11. EXISTING UTILITIES SHOWN HEREON WERE TAKEN FROM THE BEST INFORMATION AVAILABLE AND MAY NOT BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF UTILITIES WITH THE UTILITY OWNERS.
12. STATE WATERS DO EXIST ON OR WITHIN 200 FEET OF THE PROJECT SITE.
13. WASTE MATERIALS SHALL NOT BE DISCHARGED INTO THE DRAINAGE SYSTEM FROM THIS SITE.
14. THE APPLICABLE PORTION OF THE ESPC PLAN IS TO BE PROVIDED TO EACH SECONDARY PERMITTEE PRIOR TO THE SECONDARY PERMITTEE CONDUCTING OF ANY CONSTRUCTION ACTIVITY.
15. ANY REVISIONS TO THE ESPC PLAN THAT RESULT IN A SIGNIFICANT EFFECT ON THE BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.
16. THE LOCATION OF THE SOIL SERIES SHOWN ON THIS PLAN WAS INTERPOLATED FROM USDA NATURAL RESOURCES CONSERVATION SERVICE SOIL SURVEY WEBSITE FOR FORSYTH COUNTY, GEORGIA.
    SOILS ON THE PROJECT SITE ARE:
    Ck - CHEWACLA SILT LOAM
    DhB - DEWEY SILT LOAM
    En - ENNIS CHERTY SILT LOAM
    FuC/FuD - FULLERTON CHERTY SILT LOAM
    MsD/MsF - MOTEVALLO VERY SHALY SILT LOAM
    Rn - ROANOKE SILT LOAM
    TnC - TOWNLEY SILT LOAM
    WoB - WOLFTEVER SILT LOAM
17. ALL EROSION AND SEDIMENT CONTROL DESIGNS SHALL CONFORM TO AND SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE PUBLICATION TITLED "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA", PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMITTEE OF GEORGIA.
18. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
19. EROSION CONTROL BARRIERS ARE TO BE PUT IN PLACE BEFORE GRADING OPERATIONS BEGIN AND SHALL BE LEFT IN PLACE UNTIL GRASSING IS COMPLETED AND THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. SEDIMENT SHALL BE REMOVED FROM BEHIND THE BARRIERS ONCE IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE BARRIER.

SES
Southern Engineering & Surveying, Inc.
201 Broad Street
Suite 300
Rome, Georgia 30161
p:(706)235-4143 f:(706)235-4191
www.southernEandS.com

GEORGIA REGISTERED PROFESSIONAL ENGINEER CHARLES F. HARDING, JR.
LEVEL II CERTIFICATION NO. 22284

NORTH FLOYD RAIL SITE

Georgia Highway 53 at Georgia Highway 140

NO.	REVISION FOR	DATE
1	GENERAL REVISIONS	12/3/15
2	REVISED G.D.O.T. R/W	2/19/16

EROSION & SEDIMENT CONTROL PLAN

FINAL PHASE

DESIGNED BY: PO
APPROVED BY: CH
DATE: 4-30-2015
DRAWING NO.: E368 - C-8

C-8

NPDES GENERAL PERMIT GAR100001
COMPLIANCE NOTES AND MONITORING PROGRAM

1. SITE DESCRIPTION & NARRATIVE:

a. The proposed development will consist of mass grading of approximately 76 acres. The site is approximately 100 acres in size and approximately 76 acres will be disturbed.

The project is located in an area zoned H-I, Heavy Industrial.

Construction is expected to begin in June 2015 after initial E & S measures have been installed.

Soil types within the project are Ck, DhB, En, Fuc, FuD, MsD, MsF, Rn, TnC and WoB.

All designs will conform to and all work will be performed in accordance with the publication entitled "Manual for Erosion and Sediment Control in Georgia" and the Georgia Department of Transportation Standard Specifications, 2001 Edition and subsequent amendments.

b. Initial perimeter Best Management Practices (BMPs) will be installed prior to any clearing, grubbing, or excavation. On this project, the perimeter BMP will be primarily silt fencing located along the existing curb and construction exits. As ditch sections are brought to grade, ditch checks will be installed at the spacing indicated on the plans.

c. Total area for this site is 100 acres. The area expected to be disturbed is 76 acres. Total surface water drainage area is approximately 76 acres.

d. Pre-development runoff coefficient: C=0.30; Post-development: C=0.30.

e. Refer to the project construction plans for drainage patterns and approximate slopes after major grading has been accomplished. The Erosion, Sedimentation, and Pollution Control Plan (ESPCP) for this project identifies and generally locates all structural and non-structural controls. Further identified on the ESPCP are the storm water sampling points.

f. The receiving waters is an unknown tributary to Woodward Creek.

2. CONTROLS:

a. The escape of sediment from the site shall be prevented by the installation of erosion control measures and practices prior to or concurrent with land disturbing activities. It should be noted that additional vegetative and structural controls may need to be added in order to adequately control erosion and sedimentation deposition on the project. A record of the dates will be maintained when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the project, and when stabilization measures are initiated.

b. Construction Exit (Co) Construction exists will be constructed of stone. Minimum size of stone will be 1-1/2 to 3 inches in diameter. Construction exits will be a minimum of 50 feet long, 20 feet wide. The depth of the stone will be a minimum of 6 inches. A geotextile underliner will be put in place prior to backfilling with the stone. The purpose of the construction exit is to cut the mud from vehicle tire prior to leaving the site. Due to the nature of some soils, it may be necessary to conduct wheel-washing of vehicles. If this becomes necessary, the washing will be conducted at the construction exit. Construction exits will be installed early on and prior to egress from the site. A construction exit will be employed along the Highway 140 to prevent the transport sediment from the site by vehicular traffic. See the erosion & sediment control plans for exact locations.

c. Disturbed Area Stabilization (with permanent vegetation) (Ds3). Ds3 is a vegetative BMP of permanent cover using grasses, trees, shrubs, or legumes on highly erodible or critically eroded lands. Permanent grassing will be accomplished in accordance with the vegetative plan outline on the ESPCP. Particular attention must be paid also to the lime, fertilizer, and seed rates of this plan. It may become necessary to stabilize some areas of the site during construction using means other than Ds3. This will be accomplished by Disturbed Area Stabilization (with mulching only) (Ds1). The rule of thumb for mulching is as follows: Where grass seed is put in place, mulch depth will be 1-1/2 - 3 inches deep. Where mulch only is applied, much will be 2 to 4 inches deep. Stabilization measures will be initiated as soon as practicable on areas of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after cessation of activity. Where construction activity will resume on a portion of the site within 21 days from when activities ceased (e.g. the total time period that construction activity is temporarily ceased is less than 21 days), then stabilization measures do not have to be initiated on that portion of the site by the 14th day by Ds3 or Ds1. As a minimum, the contractor will complete grassing and/or mulching weekly or as needed to maintain stability of all disturbed soil. When conditions warrant, the Engineer may require more frequent intervals for this work. It is extremely important to get a cover, whether it is mulch, temporary grass or permanent grass. Adequate mulch is a must.

d. Sediment Barrier (Sd1). Sd1 is a temporary structure made of silt fence supported by steel or wood posts, sandbags, straw bales, or other filtering material. Sd1 is designed to slow the velocity of runoff, cause sediment deposition at the fence and filter sediment from the runoff. Sd1 fabric will deteriorate. Therefore, it will need to be replaced at times depending upon the volume of silt deposited and the amount of rainfall. Silt will be removed from against the fabric when the volume meets or exceeds one-half of the height of the fence. Sediment barriers will be established prior to any clearing, grubbing, or excavation.

e. Inlet Sediment Trap (Sd2). A temporary protective device formed around a strom drain drop inlet to trap sediment. Sediment trap on this site will either be constructed with filter fabric and supporting frame (Sd2-F) or for curb inlset protection (Sd2-P). Also used on this site are excavated sediment traps which provide for additional sediment storage by excavating around the trap to a minimum depth of 1.3 feet. sediment storage capacity is calculated at the rate of 67 cubic yards per acre of drainage area. Sediment traps will be installed early in the clearing and grubbing phase and will be removed when construction is completed.

f. Storm Drain Outlet Protection (St). A paved or riprapped channel placed primarily at the outlet of storm drains to reduce the velocity of storm water, reduce erosion and of the receiving channel, and stabilize grades. In certain instances, St can be applied to the inlet of a storm drain to assist in stabilization of slopes. St will be installed. as soon as practical, after installation of storm drains.

3. WASTE DISPOSAL.

a. Waste Materials: No waste materials shall be discharged into waters of the State, except as authorized by a section 404 permit. The Contractor will provide for collection, storage, and removal of construction waste and/or debris from the site to an appropriate land fill site authorized to handle such waste or debris. No waste or debris will be buried on site. Notice of waste disposal practices will be posted at the Contractor's building.

b. No soil shall be stockpiled on site. Excess top soil, excavated material, strippings or unsuitable material shall be removed from the site and disposed of at a permitted site in compliance with erosion sedimentation regulations.

c. Sanitary Waste: All sanitary waste material shall be collected from the portable units a minimum of one time a week or as required by local or state regulations.

d. Non-Storm Water Discharges: It is expected that the following non-storm water discharges will occur during construction: (1) Water from waterline and hydrant flushing; (2) Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred); (3) Uncontaminated ground water (from dewatering excavations). All non-storm water discharges will be directed to sediment traps prior to discharge.

e. Concrete and Asphalt Trucks: Concrete trucks shall not be allowed to wash out or discharge surplus concrete or conduct drum wash water onsite. The Contractor will designate such an area away from drainage ditches, ponds, streams, and/or wetlands for temporary storage of other types of cured concrete to be disposed of. Cured surplus concrete will be treated as waste material and removed from the site. Asphalt trucks will not be permitted to be cleaned on the site.

4. INVENTORY FOR POLLUTION PREVENTION: The following list of materials or substances are expected to be present onsite: Concrete, detergents, asphalt, fertilizers, petroleum-based products, cleaning solvents, other bituminous products.

5. SPILL PREVENTION - MATERIAL MANAGEMENT PRACTICES: The following are the material management practices which shall be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff.

a. Good Housekeeping: The following practices shall be followed:
(1) Store only enough materials to do the job.
(2) Store all materials in their original containers (with the manufacturer's original label) in an orderly orderly manner and, if possible, under an enclosure.
(3) Do not mix substances with each other unless recommended by the manufacturer.
(4) When possible, the entire contents of a product shall be used before disposal of the container.
(5) Follow manufacturer's recommendations for proper use and disposal.
(6) Contractor's job superintendent shall inspect daily to ensure proper use, storage and disposal.
(7) Pollutants or potentially hazardous materials, such as fuels, lubricants, lead paint, chemicals or batteries, shall be transported, stored and utilized in manner to prevent leakage or spillage into the environment.
(8) As much as possible, construction equipment will be such staged (parked) overnight in a common parking area and away from drainage ditches, ponds, streams, and/or wetlands.

b. Product Specific Practices:
(1) Petroleum Products - All onsite vehicles shall be monitored for leaks and receive regular provent maintenance to reduce the chance of leaking. Petroleum products shall be stored in tightly sealed containers which are correctly labeled. Asphalt substrates shall be applied in strict accordance with the manufacturer's recommendations.

(2) Fertilizers - Fertilizers shall be applied only in the minimum amounts specified by the manufacturer. Once applied, work fertilizer into the soil to limit exposure to storm water. Store fertilizer in a covered shed and transfer contents of partially used bags into a sealable plastic bin.

(3) Paints - All containers shall be tightly sealed and stored when not required for use. Excess paint will not be discharged into the storm drainage system. Disposal of surplus paint materials shall conform to local, state and manufacturer's recommended methods.

EROSION, SEDIMENTATION AND POLLUTION CONTROL CERTIFICATION:

"I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of best management practices required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia"(Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR 100001."

"I further certify under penalty of law that these plans were prepared after a site visit to the locations described herein by myself or my authorized agent, under my direct supervision. In addition, I certify that, after notification by the primary permittee, I will visit the site within 7 days after the commencement of construction to determine if BMP's have been installed and are being maintained as designed."

CHARLES F. HARDIN, JR, P.E. - CERT. # 22354

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that certified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

PRIMARY PERMITTEE

6. SPILL CONTROL PRACTICES: In addition to the above practices, the following practices shall be employed for spill prevention and cleanup:

a. Manufacturer's recommended methods for spill cleanup will be clearly posted and personnel made aware of the procedures and the location of the information and cleanup supplies.

b. Material and equipment for spill cleanup, including, but not limited to brooms, dustpans, mops, rags, gloves, goggles, kitty litter, sand, sawdust and plastic and metal trash containers shall be kept in the onsite material storage area.

c. Any and all leaks or spills of petroleum products will be the responsibility of the Contractor to contain, control, and remediate in accordance with all local, state and federal guidelines, ordinances, and laws.

d. The spill area shall be kept well ventilated, and personnel shall wear appropriate protective clothing.

e. Spills of toxic or hazardous materials shall be reported to the appropriate state or local government agency, regardless of size.

f. The spill prevention plan will be adjusted to include measures to avoid the same type of spill from recurring.

g. Place catch pans under trucks observed to be leaking oil or other fluids.

h. Provide a dumpster or other containment system to store fuel storage tanks.

i. Collect and store soil contaminated with petroleum products or other hazardous materials in metal drums for disposal at a legal hazardous waste disposal site.

j. Contractor's job superintendent shall be the spill prevention and cleanup coordinator. He will designate, and provide training for additional onsite personnel who will each be responsible for a particular phase of prevention and cleanup. Names of designated spill prevention and cleanup personnel will be posted in the material storage area and in the Contractor's onsite office.

k. No washdown of concrete tools, concrete mixer chutes or concrete trucks shall be conducted on-site.

7. MONITORING REQUIREMENTS:

a. The NPDES General Storm Water Permit requires that the monitoring program provide for inspecting, sampling, and reporting about the runoff conditions associated with the land-disturbing activities connected with the project. The primary permittee has the responsibility of completing and implementing the Erosion, Sedimentation and Pollution Control Plan (ESPCP) for the construction. This includes all storm water sampling and site inspections, as described below. Secondary permittee's will be required to provide site inspections of their activities, in accordance with the paragraphs below, unless the only work they are doing is performing service line installations. In this case, no site inspections from the utility companies or utility contractors will be required.

b. The primary permittee must provide a copy of the ESPCP or applicable portions of the ESPCP to each secondary permittee prior to the secondary permittee conducting any construction activity. A written acknowledgement of receipt of the ESPCP must be made by the secondary permittee and a copy of such be retained in the primary permittee's records.

c. Refer to General Permit No. GAR 100001, Part 1B, for definitions. General Permit GAR 100001 will be furnished upon request or can be obtained through the internet at the Georgia Environmental Protection Division Website at http://www.state.ga.us/dnr/environ/.

8. STORM WATER SAMPLING:

a. Location: For this project, two storm water outfalls from the construction site will be monotired. The Sampling Locations will be downstream of the discharge points of the temporary sediment ponds. The locations are shown on the Project Plans.

b. Schedule:
(1) Storm water sampling is to commence after all of the Best Management Practices (BMP's) have been implemented for the applicable disturbed areas. This sampling will continue until the first 0.5 inch rainfall event after mass grading.
(2) Given below is the sampling schedule as required by the NPDES General Storm Water Permit. All samples must be taken within 45 minutes of the accumulation of the minimum amount of rainfall in the 24-hour period, and when the runoff reaches the monitoring point, but in no case more than twelve (12) hours after the beginning of the storm water discharge.

Rainfall Event	Sampling Frequency
0.5 inch/24 hours	First event after clearing and grubbing is completed.
0.5 inch/24 hours	First event after mass grading is completed.

(3) As required, a post-storm water inspection will be conducted after the first rain event of 0.5 inch or greater after clearing and grubbing is accomplished. If after this inspection, all BMPs are found to be designed, installed, and/or maintained, no further action is required. However, if any BMPs are found not properly designed, installed, and/or maintained, or otherwise destroyed after the storm, corrective action shall be taken within two (2) days. Additionally, storm water samples will continue to be taken for each subsequent rain event that reaches or exceeds 0.5 inch until the required turbidity standard is achieved or until post-storm event inspections determine that BMPs are properly designed, installed, and maintained.

c. Collection Procedures:
(1) Barring unforeseen circumstances, storm water samples shall be taken with an automatic ISCO GSS Compact Storm Water Sampler. A component of this sampler will include a rain gage for recording the rainfall events and to allow activation of the sampler unit. The probe for the automatic sampler should be placed in the center of the flow line of the ditch at the estimated depth of the flow. Samples will remain in the automatic sampler until the next business day, when they will be collected and tested.
(2) In the event that manual grab samples are required, large mouth, well-cleaned and rinsed glass or plastic jars shall be used for collecting the samples. The manual samples should be taken in the horizontal and vertical center of the flow line of the ditch. Care should be taken to avoid stirring up the bottom sediments, and the sample should be kept free from floating debris. The sampling container should be held so that the opening faces upstream.
(3) For all samples, the sampling container should be thoroughly cleaned to avoid contamination and labeled prior to collecting the samples. Once samples have been collected, they should be well mixed before transferring to a secondary container. The minimum sample size should be 100 ml or approximately 3-1/2 fluid ounces.

d. Method of Analysis:
(1) Storm water samples shall be analyzed in accordance with the methodology and test procedures established by 40 CFR, Part 136. This section of the Code of Federal Regulations (CFR) identifies the required analytical method for turbidity as EPA Method 180.1, Determination of Turbidity by Nephelometry.
(2) The turbidity samples will be analyzed utilizing a portable Hach turbidimeter. The turbidimeter should be satisfactory to measure turbidity up to 1,000 Nephelometric Turbidity Unit (NTU). If it is necessary to dilute the sample to achieve an accurate turbidity reading, the manufacturer's instructions will be followed for specific requirements of dilution.

e. Allowable Turbidity Levels:
(1) In accordance General Permit GAR 100001, for a project size of 76 acres with a drainage area of 100 acres, the allowable turbidity levels in the discharge sample is 75 NTU.

(2) Should the turbidity level exceed 75 NTU from the outfall, proper design, installation, and maintenance of the BMP's shall constitute a complete defense of any allegation of non-compliance.

9. SITE INSPECTIONS: Site inspections required by the NPDES General Storm Water Permit GAR 100001 include daily, weekly, and monthly inspections, as well as, post-rainfall event inspections. All inspections shall be documented.

a. Daily: Daily inspections shall be conducted when any type of construction activity has taken place, at petroleum product storage, usage, and handling areas, and at all locations where vehicles enter/exit the site. Daily inspections shall also include the inspection of all structural control measures (BMP's) and recording of the previous 24-hour rainfall.

b. Weekly and After Rainfall Events: This project will require more than 50 acres of land disturbance. Therefore, in accordance with Part IV.D.3 of the NPDES General Permit 100001, the following areas shall be inspected at least twice every 7 calendar days and within 24 hours of the end of a rainfall event that is 0.5 inches or greater in accordance with Part IV.D.4.a.(3).(a)-(c); secondary permitees, Part IV.D.4.b.(3).(a)-(c); tertiary permitees, Part IV.D.4.c.(3).(a)-(c).:
(1) Disturbed areas without final stabilization.
(2) Material storage areas exposed to precipitation that have not undergone final stabilization.
(3) Structural control measures (BMP's).
(4) The receiving water body(ies).

c. Monthly: Once per month, all areas where final stabilization has been completed shall be inspected. These areas shall be inspected for evidence of, or the potential for, sediments or pollutants entering the drainage system and/or receiving waters. All erosion and sediment control measures identified in the ESPCP that remain in place on the project shall be inspected to verify they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s).

d. If, during the course of the permittees routine inspection, BMP failures are observed which have resulted in sediment deposition into Waters of the State, the permittee shall correct the BMP failures and shall submit a summary of the violations to EPD, in accordance with Part V.A.2. of General Permit GAR 100001.

e. All inspections shall continue until the project has undergone final stabilization and a Notice of Termination (NOT) has been submitted to the EPD.

10. RECORD KEEPING AND REPORTING:

a. Results of all project inspections and storm water monitoring sampling will be documented and maintained on site. Forms will be provided for inspection documentation and reporting. All monitoring records and reports, as well as the Erosion, Sedimentation, and Pollution Control Plans, are required to be retained either on site or at a readily available alternate location if there is no office on site. Records and reports for this project will be maintained at the office of the General Contractor.
The permittee shall retain copies of all Notices of Intent, Notices of Termination, Reports, Plans, Monitoring Reports, and all other supporting data and documentation at their place of business, once construction activity is ceased for a period of three (3) years.

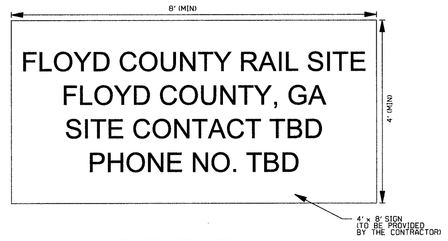
b. As previously stated, storm water monitoring and reporting is the responsibility of the primary permittee. A summary of monitoring results are to be reported to the Georgia Environmental Protection Division (EPD) by the 15th day of the month following the reporting period.

c. A report summarizing the scope of each inspection and the name(s) of personnel making each inspection, the date(s)of each inspection, major observations relating to the implementation of the Erosion, Sedimentation and Pollution Control Plan and actions taken shall be made and retained at the site or be readily available at a designated alternate location until the entire site or that portion of a construction project that has been phased has undergone final stabilization and a Notice of Termination is submitted to EPD. Such reports shall identify any incidents of non-compliance. Where the report does not identify any incidents of non-compliance, the report shall contain a certification that the facility is in compliance with the Erosion, Sedimentation and Pollution Control Plan and this permit. The report shall be signed in accordance with Part V.G. of General Permit GAR 100001.

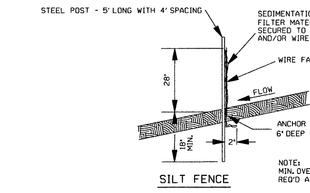
d. Each permittee must document in their records any and all known violations of this permit at his/her site within seven (7) days of his/her knowledge of the violation. A summary of these violations must be submitted to EPD by the permittee at the addresses shown below within fourteen (14) days of his/her discovery of the violation.

e. Any correspondence with the EPD shall be sent return receipt required by certified mail to the following address:

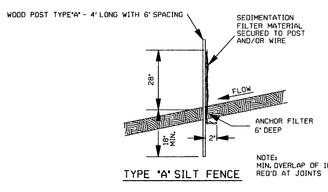
Georgia Environmental Protection Division
Mountain District Office
P.O. Box 3250
Cartersville, Georgia 30120



SITE IDENTIFICATION SIGN
SIGN REQUIRED BY PART III.C.2.d OF THE PERMIT



Sd1-C SEDIMENT BARRIERS



Sd1-A SEDIMENT BARRIERS

ANTICIPATED ACTIVITY SCHEDULE

	ACTIVITY	MONTH 1	2	3	4	5	6	7	8	9	10	11	12
1.	INSTALL SEDIMENT CONTROLS												
2.	CLEARING AND GRUBBING												
3.	STORM DRAINAGE INSTALLATION												
4.	MASS GRADING												
5.	DESILTING OF STORM BASIN												
6.	GRASS (TEMP.) & (PERM)												
7.	FINAL LANDSCAPING												
8.	MAINTAIN EROSION CONTROL												
9.	CLEAN UP												

TYPE OF GRASS	PLANTING SEASON	MIN. LIME RATE	FERTILIZER RATE (6-12-12)	SEED RATE
BERMUDA	MAY 16 - JULY 31	1 TON / Ac.	1500 lb./Ac.	4 lb./Ac.
FESCUE	MAR. 1 - MAY 15 AUG. 1 - NOV. 15	1 TON / Ac.	1500 lb./Ac.	50 lb./Ac.

Ds3 STABILIZATION WITH PERMANENT VEGETATION

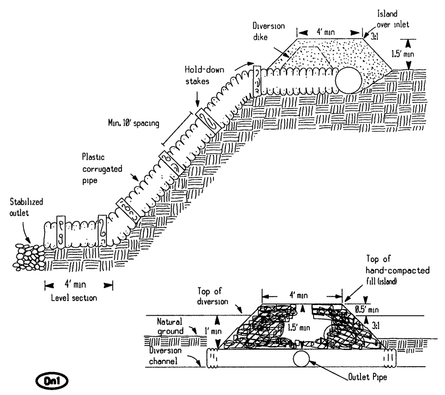
TYPE OF GRASS	PLANTING SEASON	MIN. LIME RATE	FERTILIZER RATE (6-12-12)	SEED RATE
RYE GRASS	MAY 16 - JULY 31	1 TON / Ac.	1500 lb./Ac.	50 lb./Ac.

Ds2 STABILIZATION WITH TEMPORARY SEEDING

MATERIAL	QUANTITY
DRY STRAW OR HAY	2" - 4" DEPTH
WOOD WASTE (SAWDUST, BARK, CHIPS)	2" - 4" DEPTH
CUTBACK ASPHALT (SLOW CURING)	1,200 GAL. PER ACRE (1/4 GAL. PER SQ. YD.)
POLYETHYLENE FILM	COMPLETELY COVERING THE GROUND AND ANCHORED IN AT OUTER EDGES.

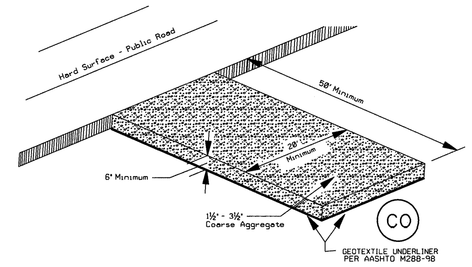
STRAW OR HAY MULCH SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION. MULCH MAY BE ANCHORED BY MECHANICALLY PRESSING INTO SURFACE. IF SPREAD WITH BLOWER EQUIPMENT, MULCH SHALL BE ANCHORED WITH EMULSIFIED ASPHALT (GRADE AE-5 OR SS-1) - 100 GALLONS WATER PER TON OF MULCH. METTING SHALL BE USED TO ANCHOR WOOD WASTE AND CHIPS. POLYETHYLENE SHALL BE TRENCHED IN AT EDGES.

Ds1 MULCHING

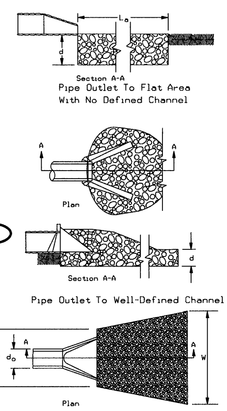


Make all pipe connections watertight and secure so that the joints will not separate in use.

DOWNDRAIN PIPE AND INLET DETAIL



GRAVEL CONSTRUCTION ENTRANCE

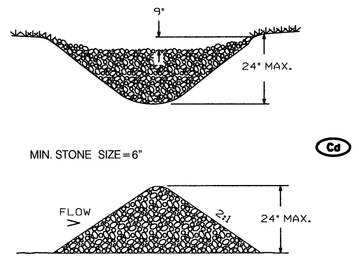


NOTES:
1. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6 INCHES.
2. IF A PIPE DISCHARGES INTO A WELL DEFINED CHANNEL, THE RIPRAP SHALL EXTEND UP TO THE TOP OF THE CHANNEL BANK.
3. RIPRAP REQUIREMENTS APPLY TO ALL DRAINAGE PIPE OUTLETS.

PIPE SIZE	Lo	W	d50 RIPRAP SIZE
18"	18'	7'	3"
24"	12'	10'	3"
36"	6'	14'	6"
36"	24'	22'	6"
48"	32'	48'	6"

STORM DRAIN INLET OUTLET PROTECTION

Di DIVERSION BERM AND DITCH DETAILS



Cd

CHECK DAMS

TEMPORARY METHODS

MULCHING: 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. MULCHES SHOULD BE APPLIED ACCORDING TO MANUFACTURERS 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.

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 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.

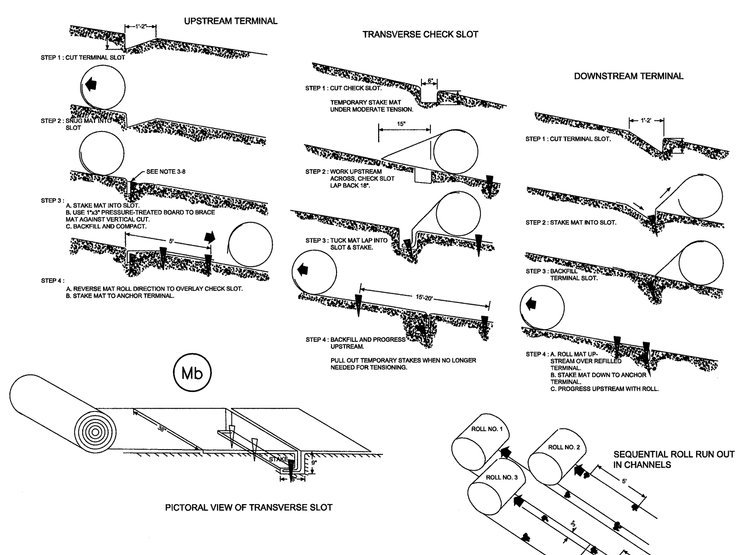
PERMANENT METHODS

PERMANENT VEGETATION: SEE STANDARDS 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.

Du DUST CONTROL ON DISTURBED AREAS



1. START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.
2. FIRST ROLL IS CENTERED LONGITUDINALLY IN CHANNEL. USE TEMPORARY TEMPORARY STAKES TO MAINTAIN ALIGNMENT.
3. SUBSEQUENT ROLLS FOLLOW IN STAGGERED ROW FROM TERMINAL END. USE CENTER ROLL FOR ALIGN-MENT TO CHANNEL CENTER.
4. WORK OUTWARDS FROM CHANNEL CENTER TO EDGE.
5. USE 2' OVERLAP AND STAKE AT 5' INTERVAL ALONG SEAMS.
6. USE 2' OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT LINING AT ROLL ENDS.

SES
Southern Engineering & Surveying, Inc.
201 Broad Street
Suite 300
Rome, Georgia 30161
p:(706)235-4143 f:(706)235-4191
www.southernEland5.com

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 22354 CHARLES F. HARDIN, JR.

LEVEL II CERTIFICATION NO.: 22354

NORTH FLOYD RAIL SITE

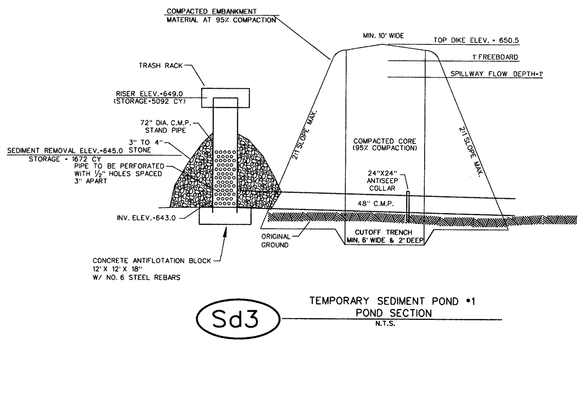
Georgia Highway 53 at Georgia Highway 140

NO.	REVISION FOR	DATE
1	GENERAL REVISIONS	12/3/15
2	REVISED G.D.O.T. R/W	2/19/16

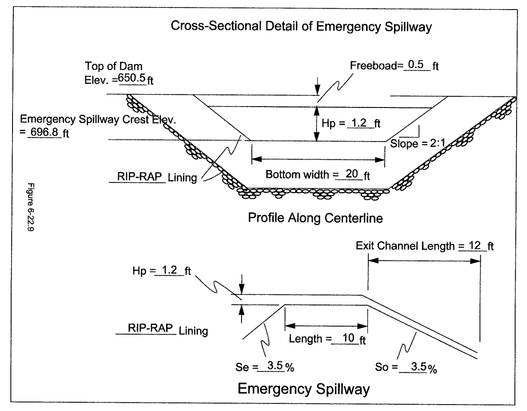
NPDES NOTES AND MISCELLANEOUS DETAILS

DESIGNED BY: PO
APPROVED BY: CH
DATE: 4-30-2015
DRAWING NO.: E368 - C-9

C-9



Sd3 TEMPORARY SEDIMENT POND #1 POND SECTION
N.T.S.



Sk FLOATING SURFACE SKIMMER

ALTERNATE POND OUTLET

CONTRACTOR MAY CHOOSE TO PROVIDE SKIMMER OUTLET AS AN ALTERNATE SEDIMENT POND OUTLET. REQUIRED SKIMMER SHALL BE AN 6" FAIRCLOTH SKIMMER CAPABLE OF DRAINING APPROX. 137,000 C.F. IN 3 DAYS.

EMERGENCY SPILLWAY MUST BE INSTALLED IN ACCORDANCE WITH DESIGN SHEETS AND DETAILS.

POND VOULUME WILL DRAW DOWN OVER A 72 HOUR TIME PERIOD.

TEMPORARY SEDIMENT BASIN DESIGN SHEET

Computed by CR Date 4/20/15
Checked by PO Date 4/20/15

Project Name Floyd County Rail Site
Basin No. 1
Total area draining to basin = 76 acres
Disturbed area draining to basin = 70 acres

Volume
1. Compute minimum required storage volume (V_r).
   V_r = 67 cy/ac * 76 acres = 5092 cy
2. Compute volume of basin at clean-out (V_c).
   V_c = 22 cy/ac * 76 acres = 1672 cy
3. Determine elevation corresponding to minimum required storage volume, V_r
   Minimum riser crest elevation = 649.0 ft (determined by stage/storage relationship)
4. Determine elevation corresponding to clean-out volume, V_c
   Clean-out elevation = 645.5 ft (determined by stage/storage relationship)
   Note: Clean-out elevation shall be clearly marked on the riser or marked by a post near the riser.
5. Compute length of riser.
   Riser length = Minimum elevation of riser crest - Lowest elevation of pipe at riser
   Riser length = 649.0 ft - 645.5 ft
   Riser length = 3.5 ft

Stormwater Runoff
6. Compute peak discharge from a 2-yr, 24-hr storm event.
   Q_2 = 40 cfs (Attach runoff computation sheet.)
7. Compute peak discharge from a 25-yr, 24-hr storm event.
   Q_{25} = 117 cfs (Attach runoff computation sheet.)

Surface Area/Configuration Design
8. Compute minimum basin surface area (SA_{min}).
   SA_{min} = 0.01 ac/cfs * Q_2
   SA_{min} = 0.01 ac/cfs * 40 cfs
   SA_{min} = 0.40 ac = 43560 sf/ac * 0.40 ac = 17,424 sf
9. Check available area at elevation of riser crest.
   Available area = 27,774 sf (determined by stage/storage relationship)
   Available area SA_r ? Yes X No
10. Compute required length to achieve 2:1 L:W ratio.
   Average width = 138 ft
   Required length = 2 * average width
   Required length = 2 * 138 ft
   Required length = 200 ft
   Available length = 200 ft
   2:1 L:W ratio satisfied? Yes X No
   If "no", refer to Figure 6-22.2 for baffle designs. Note any required baffles on E&SC plan and include calculations and details for baffle(s).

Principal Spillway (ps)
11. Determine maximum principal spillway capacity.
   Q_{ps} = Q_2 = 40 cfs
12. Compute the vertical distance between the centerline of the outlet pipe and the emergency spillway crest (H).
   H = 4 ft

TEMPORARY SEDIMENT BASIN DESIGN SHEET
Project Name Floyd County Rail Site
Page 2

13. Compute the total pipe length of the principal spillway, L, using Figure 6-22.3.
   L = [A - (B+C)/2] [D/(D+Z)] * T + E = [650 - (648 + 44)/2] [2 ÷ 2] + 10 = 1
   L = 33 ft
14. Determine diameter of principal spillway (D_p) and flow through the principal spillway (Q) from Table 6-22.1 using H and Q_{ps}.
   D_p = 48 in. Q = 96.5 cfs (value directly from table)
15. Compute actual flow through the principal spillway, using Table 6-22.1 to determine the correction factor for pipe length, L.
   Q_a = Q * correction factor = 111 cfs * 1.06
   Q_a = 117.7 cfs
16. Compute riser diameter (D_r).
   D_r = 1.5 * D_p
   D_r = 1.5 * 48 in.
   D_r = 72 in
   D_r = 72 in.
17. Compute trash rack diameter (D_t).
   D_t = 1.4 * D_r
   D_t = 1.4* 72 in.
   D_t = 101 in.
   D_t = 101 in.
18. Determine the minimum distance between the riser crest and the emergency spillway crest, h, using Table 6-22.2 D_r and Q_a.
   h = 3.0 ft

Concrete Riser Base Design
19. Determine the volume of concrete per vertical foot of riser height needed, from Table 6-22.3 to prevent flotation.
   Required volume of concrete per vertical foot = 20 cf/v.f.
20. Compute total volume of concrete required.
   Total required volume of concrete = Required volume per vertical foot * Riser length
   Total required volume of concrete = 20 cf/v.f. * 12 ft
   Total volume of concrete required = 240 cf
21. Assume base thickness, B (usually 18").
   B = 18 in 1.5 ft
22. Compute required surface area.
   Required surface area = Total volume required / B
   Required surface area = 3 cf / 1.5 ft
   Required surface area = 133 sf
23. Compute riser base length (l) and width (w) (assume square base).
   l = w = (required surface area)^.5
   l = w = (133 sf)^.5
   l = w = 12 ft + 12in/ft* 12 ft = 144 in

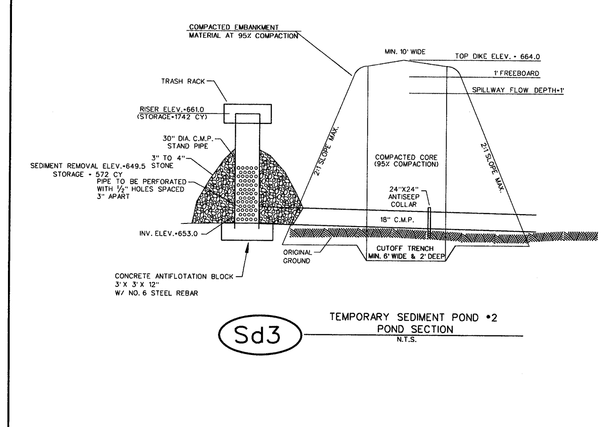
Anti-Seep Collar Design
24. Determine if anti-seep collar is required. If yes, to any of the following conditions, a collar is required:
   NO The settled height of the dam is greater than 15 feet.
   NO The principal spillway diameter (D_p) is smooth pipe larger than 8".
   YES The principal spillway diameter (D_p) is corrugated metal pipe larger than 12".
25. Determine size of anti-seep collar required.
   X **18-inch projection** (for heads (H) less than or equal to 10 feet).
   24-inch projection (for heads (H) greater than 10 feet).

TEMPORARY SEDIMENT BASIN DESIGN SHEET
Project Name Floyd County Rail Site
Page 3

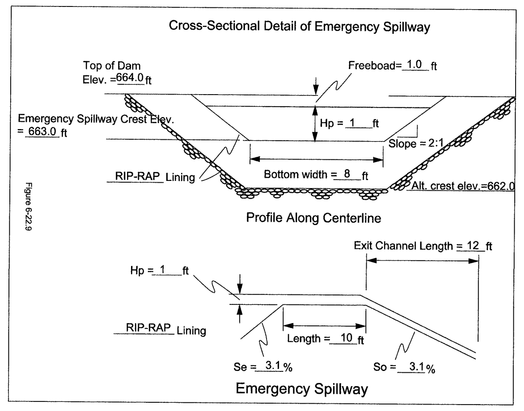
Emergency Spillway (es)
26. Compute minimum capacity of emergency spillway (Q_{es})
   Q_{es} = Q_a - Q_{ps} = 117 cfs - 117.7 cfs
   Q_{es} = -0.7 cfs
27. Determine stage (H.), bottom width (b), velocity (V) and minimum exit slope (S) using Table 6-22.4 and Q_{es}.
   H_e = 1.0 ft b = 29 ft V = 4.5 fps S = 2.8 %
28. Actual entrance channel slope, S_e = 2.8 %
   Note: if S_e is steeper than S (from Table 6-22.4), then the velocity in the exit channel will increase.
   a.) Calculate new exit velocity (V_e)
   V_e = V (S/S_e)^.5 = 4.5 fps * (2.8 / 2.8)^.5
   V_e = 5.0 fps
   Note: Refer to Channel Stabilization (Ch) to determine the proper lining for the emergency spillway.
   Grass ____ **Rip-rap** X **Concrete** ____

Design Elevations
30. **Riser crest elevation** = 649.0 ft
31. Compute minimum emergency spillway crest elevation.
   Minimum emergency spillway crest elevation = Riser crest elevation + h
   Minimum emergency spillway crest elevation = 649.0 ft + 3.0 ft
   Minimum emergency spillway crest elevation = 652.0 ft
32. Determine design high water elevation
   Design high water elevation = Minimum emergency spillway crest elevation + Stage elevation (Hp)
   Design high water elevation = 652.0 ft + 1.0 ft
   Design high water elevation = 653.0 ft
33. Determine elevation of top of dam
   Elevation of top of dam = Design high water elevation + 1 ft freeboard
   Elevation of top of dam = 653.0 ft + 1 ft
   Elevation of top of dam = 654.0 ft

PLEASE NOTE THAT DESIGN VALUES DETERMINED BY THIS SHEET REPRESENT THE MINIMUM REQUIREMENTS FOR A TEMPORARY SEDIMENT BASIN.



Sd3 TEMPORARY SEDIMENT POND #2 POND SECTION
N.T.S.



Sk FLOATING SURFACE SKIMMER

ALTERNATE POND OUTLET

CONTRACTOR MAY CHOOSE TO PROVIDE SKIMMER OUTLET AS AN ALTERNATE SEDIMENT POND OUTLET. REQUIRED SKIMMER SHALL BE AN 3" FAIRCLOTH SKIMMER CAPABLE OF DRAINING APPROX. 60,327 C.F. IN 3 DAYS.

EMERGENCY SPILLWAY MUST BE INSTALLED IN ACCORDANCE WITH DESIGN SHEETS AND DETAILS.

POND VOULUME WILL DRAW DOWN OVER A 72 HOUR TIME PERIOD.

TEMPORARY SEDIMENT BASIN DESIGN SHEET

Computed by CR Date 4/20/15
Checked by PO Date 4/20/15

Project Name Floyd County Rail Site
Basin No. 2
Total area draining to basin = 26 acres
Disturbed area draining to basin = 26 acres

Volume
1. Compute minimum required storage volume (V_r).
   V_r = 67 cy/ac * 26 acres = 1742 cy
2. Compute volume of basin at clean-out (V_c).
   V_c = 22 cy/ac * 26 acres = 572 cy
3. Determine elevation corresponding to minimum required storage volume, V_r
   Minimum riser crest elevation = 661.0 ft (determined by stage/storage relationship)
4. Determine elevation corresponding to clean-out volume, V_c
   Clean-out elevation = 649.5 ft (determined by stage/storage relationship)
   Note: Clean-out elevation shall be clearly marked on the riser or marked by a post near the riser.
5. Compute length of riser.
   Riser length = Minimum elevation of riser crest - Lowest elevation of pipe at riser
   Riser length = 661.0 ft - 649.5 ft
   Riser length = 11 ft

Stormwater Runoff
6. Compute peak discharge from a 2-yr, 24-hr storm event.
   Q_2 = 9 cfs (Attach runoff computation sheet.)
7. Compute peak discharge from a 25-yr, 24-hr storm event.
   Q_{25} = 33 cfs (Attach runoff computation sheet.)

Surface Area/Configuration Design
8. Compute minimum basin surface area (SA_{min}).
   SA_{min} = 0.01 ac/cfs * Q_2
   SA_{min} = 0.01 ac/cfs * 9 cfs
   SA_{min} = 0.09 ac = 43560 sf/ac * 0.09 ac = 3,920 sf
9. Check available area at elevation of riser crest.
   Available area = 17,002 sf (determined by stage/storage relationship)
   Available area SA_r ? Yes X No
10. Compute required length to achieve 2:1 L:W ratio.
   Average width = 75 ft
   Required length = 2 * average width
   Required length = 2 * 75 ft
   Required length = 150 ft
   Available length = 150 ft
   2:1 L:W ratio satisfied? Yes X No
   If "no", refer to Figure 6-22.2 for baffle designs. Note any required baffles on E&SC plan and include calculations and details for baffle(s).

Principal Spillway (ps)
11. Determine maximum principal spillway capacity.
   Q_{ps} = Q_2 = 9 cfs
12. Compute the vertical distance between the centerline of the outlet pipe and the emergency spillway crest (H).
   H = 3.25 ft

TEMPORARY SEDIMENT BASIN DESIGN SHEET
Project Name Floyd County Rail Site
Page 2

13. Compute the total pipe length of the principal spillway, L, using Figure 6-22.3.
   L = [A - (B+C)/2] [D/(D+Z)] * T + E = [661 - (649 + 41)/2] [2 ÷ 2] + 10 = 1
   L = 32 ft
14. Determine diameter of principal spillway (D_p) and flow through the principal spillway (Q) from Table 6-22.1 using H and Q_{ps}.
   D_p = 18 in. Q = 9.48 cfs (value directly from table)
15. Compute actual flow through the principal spillway, using Table 6-22.1 to determine the correction factor for pipe length, L.
   Q_a = Q * correction factor = 9.48 cfs * 1.29
   Q_a = 12 cfs
16. Compute riser diameter (D_r).
   D_r = 1.5 * D_p
   D_r = 1.5 * 18 in.
   D_r = 27 in.
   D_r = 30 in.
17. Compute trash rack diameter (D_t).
   D_t = 1.4 * D_r
   D_t = 1.4* 30 in.
   D_t = 42 in.
   D_t = 42 in.
18. Determine the minimum distance between the riser crest and the emergency spillway crest, h, using Table 6-22.2 D_r and Q_a.
   h = 1.0 ft

Concrete Riser Base Design
19. Determine the volume of concrete per vertical foot of riser height needed, from Table 6-22.3 to prevent flotation.
   Required volume of concrete per vertical foot = 4.29 cf/v.f.
20. Compute total volume of concrete required.
   Total required volume of concrete = Required volume per vertical foot * Riser length
   Total required volume of concrete = 4.29 cf/v.f. * 3.25 ft
   Total volume of concrete required = 14 cf
21. Assume base thickness, B (usually 18").
   B = 18 in 1.5 ft
22. Compute required surface area.
   Required surface area = Total volume required / B
   Required surface area = 14 cf / 1.5 ft
   Required surface area = 9 sf
23. Compute riser base length (l) and width (w) (assume square base).
   l = w = (required surface area)^.5
   l = w = (9 sf)^.5
   l = w = 3 ft + 12in/ft* 3 ft = 36 in

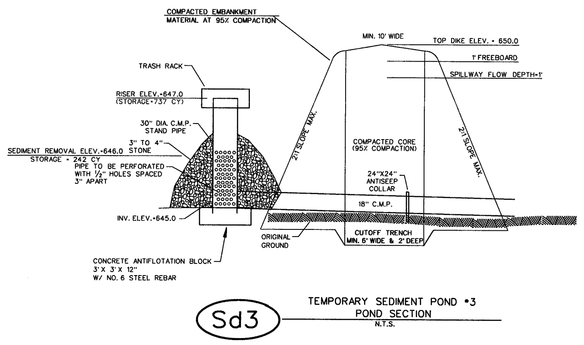
Anti-Seep Collar Design
24. Determine if anti-seep collar is required. If yes, to any of the following conditions, a collar is required:
   NO The settled height of the dam is greater than 15 feet.
   NO The principal spillway diameter (D_p) is smooth pipe larger than 8".
   YES The principal spillway diameter (D_p) is corrugated metal pipe larger than 12".
25. Determine size of anti-seep collar required.
   X **18-inch projection** (for heads (H) less than or equal to 10 feet).
   24-inch projection (for heads (H) greater than 10 feet).

TEMPORARY SEDIMENT BASIN DESIGN SHEET
Project Name Floyd County Rail Site
Page 3

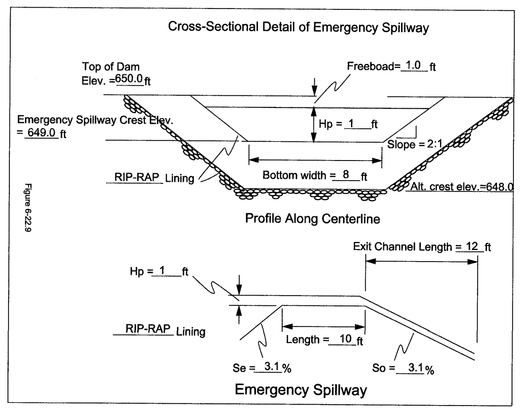
Emergency Spillway (es)
26. Compute minimum capacity of emergency spillway (Q_{es})
   Q_{es} = Q_a - Q_{ps} = 28 cfs - 18 cfs
   Q_{es} = 10 cfs
27. Determine stage (H.), bottom width (b), velocity (V) and minimum exit slope (S) using Table 6-22.4 and Q_{es}.
   H_e = 1.0 ft b= 8 ft V = 4 fps S = 3.1 %
28. Actual entrance channel slope, S_e = 3.1 %
   Note: if S_e is steeper than S (from Table 6-22.4), then the velocity in the exit channel will increase.
   a.) Calculate new exit velocity (V_e)
   V_e = V (S/S_e)^.5 = 4 fps * (3.1 / 3.1)^.5
   V_e = 4 fps
   Note: Refer to Channel Stabilization (Ch) to determine the proper lining for the emergency spillway.
   Grass ____ **Rip-rap** X **Concrete** ____

Design Elevations
30. **Riser crest elevation** = 661.0 ft
31. Compute minimum emergency spillway crest elevation.
   Minimum emergency spillway crest elevation = Riser crest elevation + h
   Minimum emergency spillway crest elevation = 661.0 ft + 1.0 ft
   Minimum emergency spillway crest elevation = 662.0 ft
32. Determine design high water elevation
   Design high water elevation = Minimum emergency spillway crest elevation + Stage elevation (Hp)
   Design high water elevation = 662.0 ft + 1.0 ft
   Design high water elevation = 663.0 ft
33. Determine elevation of top of dam
   Elevation of top of dam = Design high water elevation + 1 ft freeboard
   Elevation of top of dam = 663.0 ft + 1 ft
   Elevation of top of dam = 664.0 ft

PLEASE NOTE THAT DESIGN VALUES DETERMINED BY THIS SHEET REPRESENT THE MINIMUM REQUIREMENTS FOR A TEMPORARY SEDIMENT BASIN.



Sd3 TEMPORARY SEDIMENT POND #3 POND SECTION
N.T.S.



Sk FLOATING SURFACE SKIMMER

ALTERNATE POND OUTLET

CONTRACTOR MAY CHOOSE TO PROVIDE SKIMMER OUTLET AS AN ALTERNATE SEDIMENT POND OUTLET. REQUIRED SKIMMER SHALL BE AN 3" FAIRCLOTH SKIMMER CAPABLE OF DRAINING APPROX. 29,322 C.F. IN 3 DAYS.

EMERGENCY SPILLWAY MUST BE INSTALLED IN ACCORDANCE WITH DESIGN SHEETS AND DETAILS.

POND VOULUME WILL DRAW DOWN OVER A 72 HOUR TIME PERIOD.

TEMPORARY SEDIMENT BASIN DESIGN SHEET

Computed by CR Date 4/20/15
Checked by PO Date 4/20/15

Project Name Floyd County Rail Site
Basin No. 3
Total area draining to basin = 11 acres
Disturbed area draining to basin = 11 acres

Volume
1. Compute minimum required storage volume (V_r).
   V_r = 67 cy/ac * 11 acres = 737 cy
2. Compute volume of basin at clean-out (V_c).
   V_c = 22 cy/ac * 11 acres = 242 cy
3. Determine elevation corresponding to minimum required storage volume, V_r
   Minimum riser crest elevation = 649.0 ft (determined by stage/storage relationship)
4. Determine elevation corresponding to clean-out volume, V_c
   Clean-out elevation = 646.0 ft (determined by stage/storage relationship)
   Note: Clean-out elevation shall be clearly marked on the riser or marked by a post near the riser.
5. Compute length of riser.
   Riser length = Minimum elevation of riser crest - Lowest elevation of pipe at riser
   Riser length = 649.0 ft - 646.0 ft
   Riser length = 3 ft

Stormwater Runoff
6. Compute peak discharge from a 2-yr, 24-hr storm event.
   Q_2 = 5 cfs (Attach runoff computation sheet.)
7. Compute peak discharge from a 25-yr, 24-hr storm event.
   Q_{25} = 17 cfs (Attach runoff computation sheet.)

Surface Area/Configuration Design
8. Compute minimum basin surface area (SA_{min}).
   SA_{min} = 0.01 ac/cfs * Q_2
   SA_{min} = 0.01 ac/cfs * 5 cfs
   SA_{min} = 0.05 ac = 43560 sf/ac * 0.05 ac = 2,178 sf
9. Check available area at elevation of riser crest.
   Available area = 13,564 sf (determined by stage/storage relationship)
   Available area SA_r ? Yes X No
10. Compute required length to achieve 2:1 L:W ratio.
   Average width = 75 ft
   Required length = 2 * average width
   Required length = 2 * 75 ft
   Required length = 150 ft
   Available length = 150 ft
   2:1 L:W ratio satisfied? Yes X No
   If "no", refer to Figure 6-22.2 for baffle designs. Note any required baffles on E&SC plan and include calculations and details for baffle(s).

Principal Spillway (ps)
11. Determine maximum principal spillway capacity.
   Q_{ps} = Q_2 = 5 cfs
12. Compute the vertical distance between the centerline of the outlet pipe and the emergency spillway crest (H).
   H = 3.25 ft

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13. Compute the total pipe length of the principal spillway, L, using Figure 6-22.3.
   L = [A - (B+C)/2] [D/(D+Z)] * T + E = [649 - (646 + 44)/2] [2 ÷ 2] + 10 = 1
   L = 33 ft
14. Determine diameter of principal spillway (D_p) and flow through the principal spillway (Q) from Table 6-22.1 using H and Q_{ps}.
   D_p = 18 in. Q = 9.48 cfs (value directly from table)
15. Compute actual flow through the principal spillway, using Table 6-22.1 to determine the correction factor for pipe length, L.
   Q_a = Q * correction factor = 9.48 cfs * 1.29
   Q_a = 12 cfs
16. Compute riser diameter (D_r).
   D_r = 1.5 * D_p
   D_r = 1.5 * 18 in.
   D_r = 27 in.
   D_r = 30 in.
17. Compute trash rack diameter (D_t).
   D_t = 1.4 * D_r
   D_t = 1.4* 30 in.
   D_t = 42 in.
   D_t = 42 in.
18. Determine the minimum distance between the riser crest and the emergency spillway crest, h, using Table 6-22.2 D_r and Q_a.
   h = 1.0 ft

Concrete Riser Base Design
19. Determine the volume of concrete per vertical foot of riser height needed, from Table 6-22.3 to prevent flotation.
   Required volume of concrete per vertical foot = 1.54 cf/v.f.
20. Compute total volume of concrete required.
   Total required volume of concrete = Required volume per vertical foot * Riser length
   Total required volume of concrete = 1.54 cf/v.f. * 3 ft
   Total volume of concrete required = 5 cf
21. Assume base thickness, B (usually 18").
   B = 18 in 1.5 ft
22. Compute required surface area.
   Required surface area = Total volume required / B
   Required surface area = 5 cf / 1.5 ft
   Required surface area = 3 sf
23. Compute riser base length (l) and width (w) (assume square base).
   l = w = (required surface area)^.5
   l = w = (3 sf)^.5
   l = w = 1.7 ft + 12in/ft* 1.7 ft = 36 in

Anti-Seep Collar Design
24. Determine if anti-seep collar is required. If yes, to any of the following conditions, a collar is required:
   NO The settled height of the dam is greater than 15 feet.
   NO The principal spillway diameter (D_p) is smooth pipe larger than 8".
   YES The principal spillway diameter (D_p) is corrugated metal pipe larger than 12".
25. Determine size of anti-seep collar required.
   X **18-inch projection** (for heads (H) less than or equal to 10 feet).
   24-inch projection (for heads (H) greater than 10 feet).

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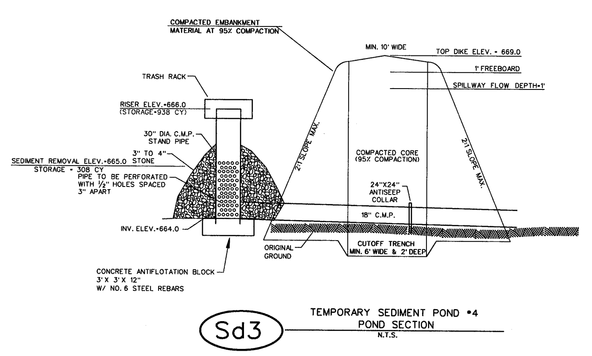
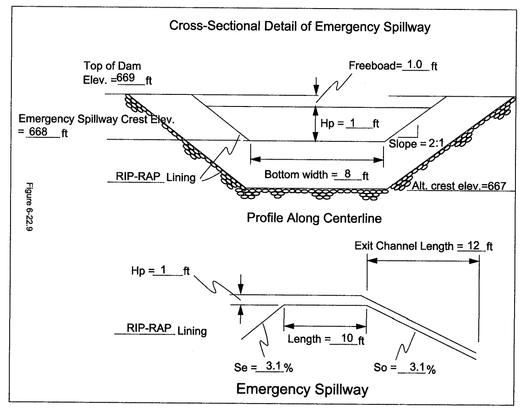
Emergency Spillway (es)
26. Compute minimum capacity of emergency spillway (Q_{es})
   Q_{es} = Q_a - Q_{ps} = 28 cfs - 18 cfs
   Q_{es} = 10 cfs
27. Determine stage (H.), bottom width (b), velocity (V) and minimum exit slope (S) using Table 6-22.4 and Q_{es}.
   H_e = 1.0 ft b= 8 ft V = 4 fps S = 3.1 %
28. Actual entrance channel slope, S_e = 3.1 %
   Note: if S_e is steeper than S (from Table 6-22.4), then the velocity in the exit channel will increase.
   a.) Calculate new exit velocity (V_e)
   V_e = V (S/S_e)^.5 = 4 fps * (3.1 / 3.1)^.5
   V_e = 4 fps
   Note: Refer to Channel Stabilization (Ch) to determine the proper lining for the emergency spillway.
   Grass ____ **Rip-rap** X **Concrete** ____

Design Elevations
30. **Riser crest elevation** = 656.0 ft
31. Compute minimum emergency spillway crest elevation.
   Minimum emergency spillway crest elevation = Riser crest elevation + h
   Minimum emergency spillway crest elevation = 656.0 ft + 1.0 ft
   Minimum emergency spillway crest elevation = 657.0 ft
32. Determine design high water elevation
   Design high water elevation = Minimum emergency spillway crest elevation + Stage elevation (Hp)
   Design high water elevation = 657.0 ft + 1.0 ft
   Design high water elevation = 658.0 ft
33. Determine elevation of top of dam
   Elevation of top of dam = Design high water elevation + 1 ft freeboard
   Elevation of top of dam = 658.0 ft + 1 ft
   Elevation of top of dam = 659.0 ft

PLEASE NOTE THAT DESIGN VALUES DETERMINED BY THIS SHEET REPRESENT THE MINIMUM REQUIREMENTS FOR A TEMPORARY SEDIMENT BASIN.



Sd3 TEMPORARY SEDIMENT POND #4 POND SECTION
N.T.S.



Sk FLOATING SURFACE SKIMMER

ALTERNATE POND OUTLET

CONTRACTOR MAY CHOOSE TO PROVIDE SKIMMER OUTLET AS AN ALTERNATE SEDIMENT POND OUTLET. REQUIRED SKIMMER SHALL BE AN 3" FAIRCLOTH SKIMMER CAPABLE OF DRAINING APPROX. 29,322 C.F. IN 3 DAYS.

EMERGENCY SPILLWAY MUST BE INSTALLED IN ACCORDANCE WITH DESIGN SHEETS AND DETAILS.

POND VOULUME WILL DRAW DOWN OVER A 72 HOUR TIME PERIOD.

TEMPORARY SEDIMENT BASIN DESIGN SHEET

Computed by CR Date 4/20/15
Checked by PO Date 4/20/15

Project Name Floyd County Rail Site
Basin No. 4
Total area draining to basin = 14 acres
Disturbed area draining to basin = 14 acres

Volume
1. Compute minimum required storage volume (V_r).
   V_r = 67 cy/ac * 14 acres = 938 cy
2. Compute volume of basin at clean-out (V_c).
   V_c = 22 cy/ac * 14 acres = 308 cy
3. Determine elevation corresponding to minimum required storage volume, V_r
   Minimum riser crest elevation = 666.0 ft (determined by stage/storage relationship)
4. Determine elevation corresponding to clean-out volume, V_c
   Clean-out elevation = 660.0 ft (determined by stage/storage relationship)
   Note: Clean-out elevation shall be clearly marked on the riser or marked by a post near the riser.
5. Compute length of riser.
   Riser length = Minimum elevation of riser crest - Lowest elevation of pipe at riser
   Riser length = 666.0 ft - 660.0 ft
   Riser length = 6 ft

Stormwater Runoff
6. Compute peak discharge from a 2-yr, 24-hr storm event.
   Q_2 = 18 cfs (Attach runoff computation sheet.)
7. Compute peak discharge from a 25-yr, 24-hr storm event.
   Q_{25} = 28 cfs (Attach runoff computation sheet.)

Surface Area/Configuration Design
8. Compute minimum basin surface area (SA_{min}).
   SA_{min} = 0.01 ac/cfs * Q_2
   SA_{min} = 0.01 ac/cfs * 18 cfs
   SA_{min} = 0.18 ac = 43560 sf/ac * 0.18 ac = 7,841 sf
9. Check available area at elevation of riser crest.
   Available area = 22,165 sf (determined by stage/storage relationship)
   Available area SA_r ? Yes X No
10. Compute required length to achieve 2:1 L:W ratio.
   Average width = 150 ft
   Required length = 2 * average width
   Required length = 2 * 150 ft
   Required length = 300 ft
   Available length = 300 ft
   2:1 L:W ratio satisfied? Yes X No
   If "no", refer to Figure 6-22.2 for baffle designs. Note any required baffles on E&SC plan and include calculations and details for baffle(s).

Principal Spillway (ps)
11. Determine maximum principal spillway capacity.
   Q_{ps} = Q_2 = 18 cfs
12. Compute the vertical distance between the centerline of the outlet pipe and the emergency spillway crest (H).
   H = 3.25 ft

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13. Compute the total pipe length of the principal spillway, L, using Figure 6-22.3.
   L = [A - (B+C)/2] [D/(D+Z)] * T + E = [666 - (664 + 41)/2] [2 ÷ 2] + 10 = 1
   L = 32 ft
14. Determine diameter of principal spillway (D_p) and flow through the principal spillway (Q) from Table 6-22.1 using H and Q_{ps}.
   D_p = 18 in. Q = 9.48 cfs (value directly from table)
15. Compute actual flow through the principal spillway, using Table 6-22.1 to determine the correction factor for pipe length, L.
   Q_a = Q * correction factor = 9.48 cfs * 1.29
   Q_a = 12 cfs
16. Compute riser diameter (D_r).
   D_r = 1.5 * D_p
   D_r = 1.5 * 18 in.
   D_r = 27 in.
   D_r = 30 in.
17. Compute trash rack diameter (D_t).
   D_t = 1.4 * D_r
   D_t = 1.4* 30 in.
   D_t = 42 in.
   D_t = 42 in.
18. Determine the minimum distance between the riser crest and the emergency spillway crest, h, using Table 6-22.2 D_r and Q_a.
   h = 1.0 ft

Concrete Riser Base Design
19. Determine the volume of concrete per vertical foot of riser height needed, from Table 6-22.3 to prevent flotation.
   Required volume of concrete per vertical foot = 4.29 cf/v.f.
20. Compute total volume of concrete required.
   Total required volume of concrete = Required volume per vertical foot * Riser length
   Total required volume of concrete = 4.29 cf/v.f. * 6 ft
   Total volume of concrete required = 26 cf
21. Assume base thickness, B (usually 18").
   B = 18 in 1.5 ft
22. Compute required surface area.
   Required surface area = Total volume required / B
   Required surface area = 26 cf / 1.5 ft
   Required surface area = 17 sf
23. Compute riser base length (l) and width