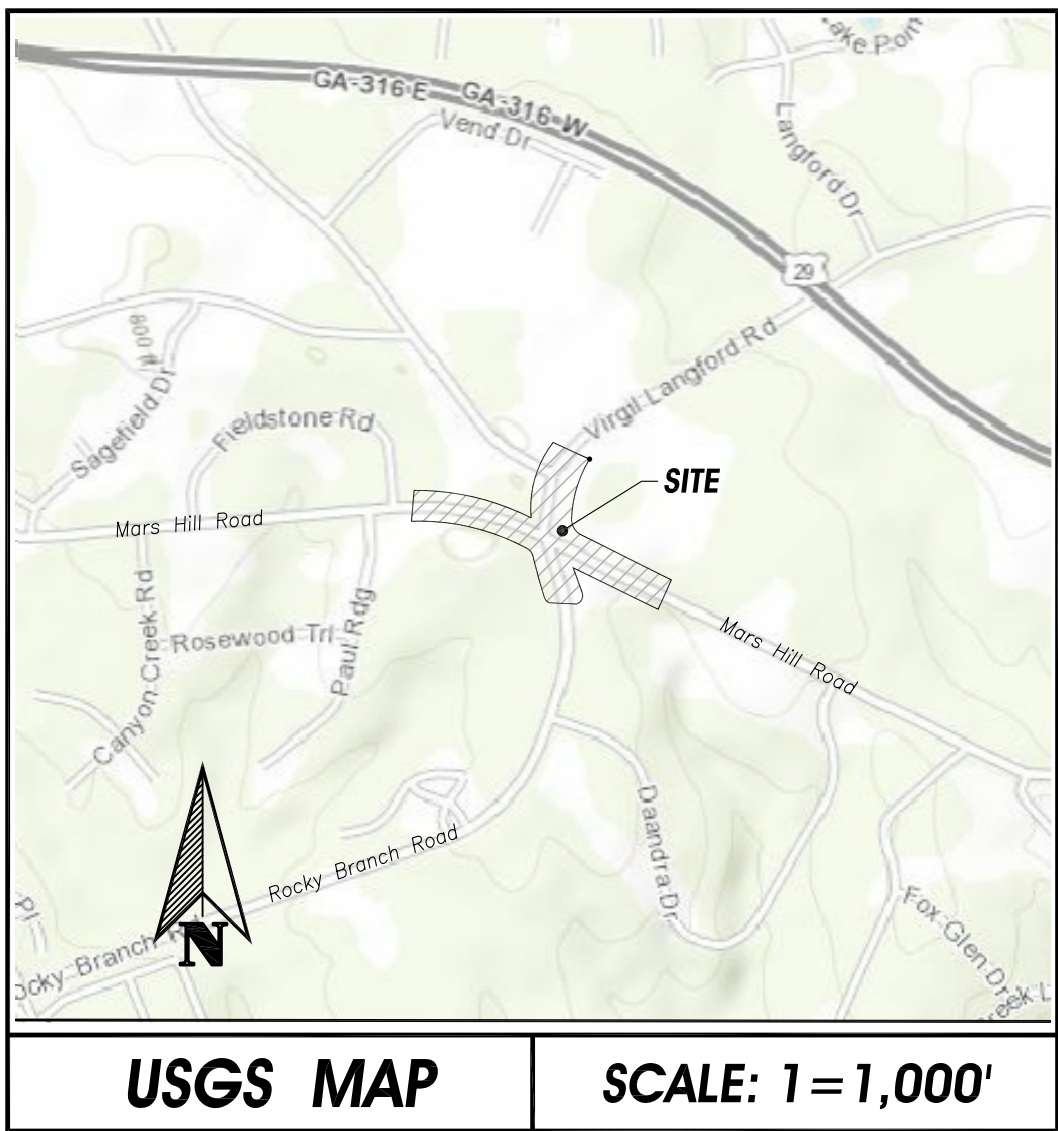


SITE CONSTRUCTION PLANS
FOR
**MARS HILL, VIRGIL LANGFORD &
ROCKY BRANCH ROADS INTERSECTION IMPROVEMENTS**

MARS HILL ROAD, VIRGIL LANGFORD ROAD & ROCKY BRANCH ROAD
OCONEE COUNTY, GA
TOTAL DISTURBED ACREAGE: 3.03 ACS



**OWNER / DEVELOPER /
PRIMARY PERMITTEE:**
OCONEE COUNTY PUBLIC WORKS DEPARTMENT
C/O MR. JODY WOODALL, PE
1291 GREENSBORO HWY.
WATKINSVILLE, GA 30677
EMAIL: jwoodall@oconee.ga.us
PHONE: 706-769-2937

24 HOUR CONTACT:
CONTACT: MR. JODY WOODALL, PE
ADDRESS: 1291 GREENSBORO HWY.
ADDRESS: WATKINSVILLE, GA 30677
CELL PHONE: 706-510-9555
FAX: 706-769-2939

UTILITY OWNERS:
-WATER/SANITARY SEWER: OCONEE COUNTY UTILITY DEPT.
-OVERHEAD POWER: WALTON EMC/GA. POWER
-GAS LINE: ATLANTA GAS LIGHT CO.
-TELECOM/DATA: AT&A
-TELECOM/DATA/CABLE: CHARTER COMMUNICATIONS
-TRAFFIC SIGNAL WIRING/DATA: OCONEE COUNTY

**ALL ADDITIONAL RIGHT-OF-WAYS &
CONSTRUCTION EASEMENTS MUST BE
LEGALLY OBTAINED BY OCONEE
COUNTY PRIOR TO START OF
CONSTRUCTION.**

**ALL TRAFFIC CONTROL SHALL BE INSTALLED &
MAINTAINED PER MUTCD LATEST REQUIREMENTS.**

**CALL ABE CONSULTING, INC. AT
706-613-8900 FOR CONSTRUCTION STAKING & LAYOUT.**

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I, ABE ABOUHAMMAN, HEREBY CERTIFY THAT I HAVE VISITED THE SITE PRIOR TO CREATION OF THE EROSION AND SEDIMENTATION CONTROL PLAN AND HAVE VERIFIED THE PRESENCE OR LACK THEREOF OF ALL STATE WATERS ON OR ADJACENT TO THE SITE.

SIGNATURE: Abe Abouhamman DATE SIGNED: 8-29-16

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

SIGNATURE: Abe Abouhamman DATE SIGNED: 8-29-16

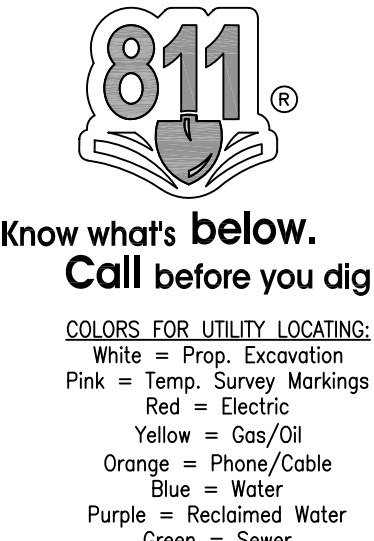
THESE PLANS WERE PREPARED BY A LEVEL TWO CERTIFIED PROFESSIONAL, NUMBER #0000010490

SIGNATURE: Abe Abouhamman DATE SIGNED: 8-29-16

PROJECT DATA

OWNER: OCONEE COUNTY PUBLIC WORKS DEPARTMENT
C/O: MR. EMIL BESHARA, PE
1291 GREENSBORO HIGHWAY
WATKINSVILLE, GA 30677
PHONE: (706) 769-2937

AUTHORIZED AGENT: ABE CONSULTING, INC.
CONTACT: ABE ABOUHAMMAN, PE
2410 HOG MOUNTAIN ROAD, SUITE 103
WATKINSVILLE, GA 30677
(706) 613-8900



- GENERAL NOTES:**
- ALL UNDERGROUND UTILITIES SHOULD BE CONSIDERED APPROXIMATE. "811" UTILITY LOCATES WERE NOTIFIED. HOWEVER THEY REFUSED TO MARK ANY UTILITIES AS THIS WAS A DESIGN TICKET. THEREFORE LOCATIONS WERE TAKEN FROM PLANS BY OTHERS AND FIELD OBSERVATIONS. UTILITIES WILL REQUIRE FURTHER VERIFICATION AND COORDINATION WITH UTILITY COMPANIES PRIOR TO CONSTRUCTION AS DISCUSSED WITH OCONEE COUNTY.
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 - COORDINATE ALL OVERHEAD POWER & UTILITIES AS REQUIRED FOR THE PROJECT & SIGNAL INSTALLATION.



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**MARS HILL, VIRGIL
LANGFORD &
ROCKY BRANCH
ROADS
IMPROVEMENTS**

**MARS HILL ROAD, VIRGIL
LANGFORD & ROCKY BRANCH
ROADS
OCONEE COUNTY, GEORGIA**

COVER



REVISIONS	DATE
ADDED TRAFFIC SIGNAL & SIGNAGE	2-22-17
ADDED LOOPS & PHASING	2-27-17
ADDED ROAD CROSS SECTIONS	6-21-18
ADDED UTILITIES PER PPI DESIGN PLANS	9-17-18
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DATE: 8-29-16

PROJECT #: 09-021-11

SHEET #

**1
15**



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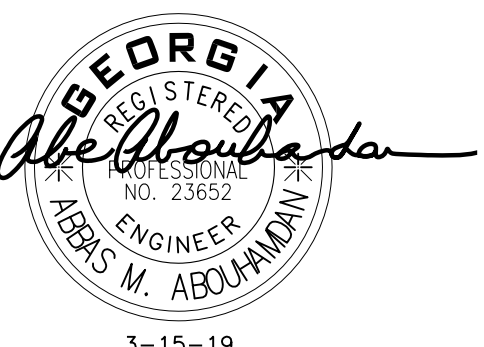
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OCONEE COUNTY, GEORGIA

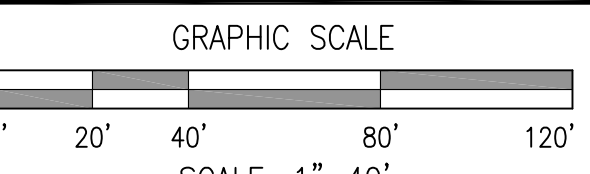
R/W & EASEMENT PLAN



REVISIONS	DATE
ADDED TRAFFIC SIGNAL & SIGNAGE	2-22-17
ADDED LOOPS & PHASING	2-27-17
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PROJECT #: 09-021-11



GRID=NAD83 GA WEST

SHEET #

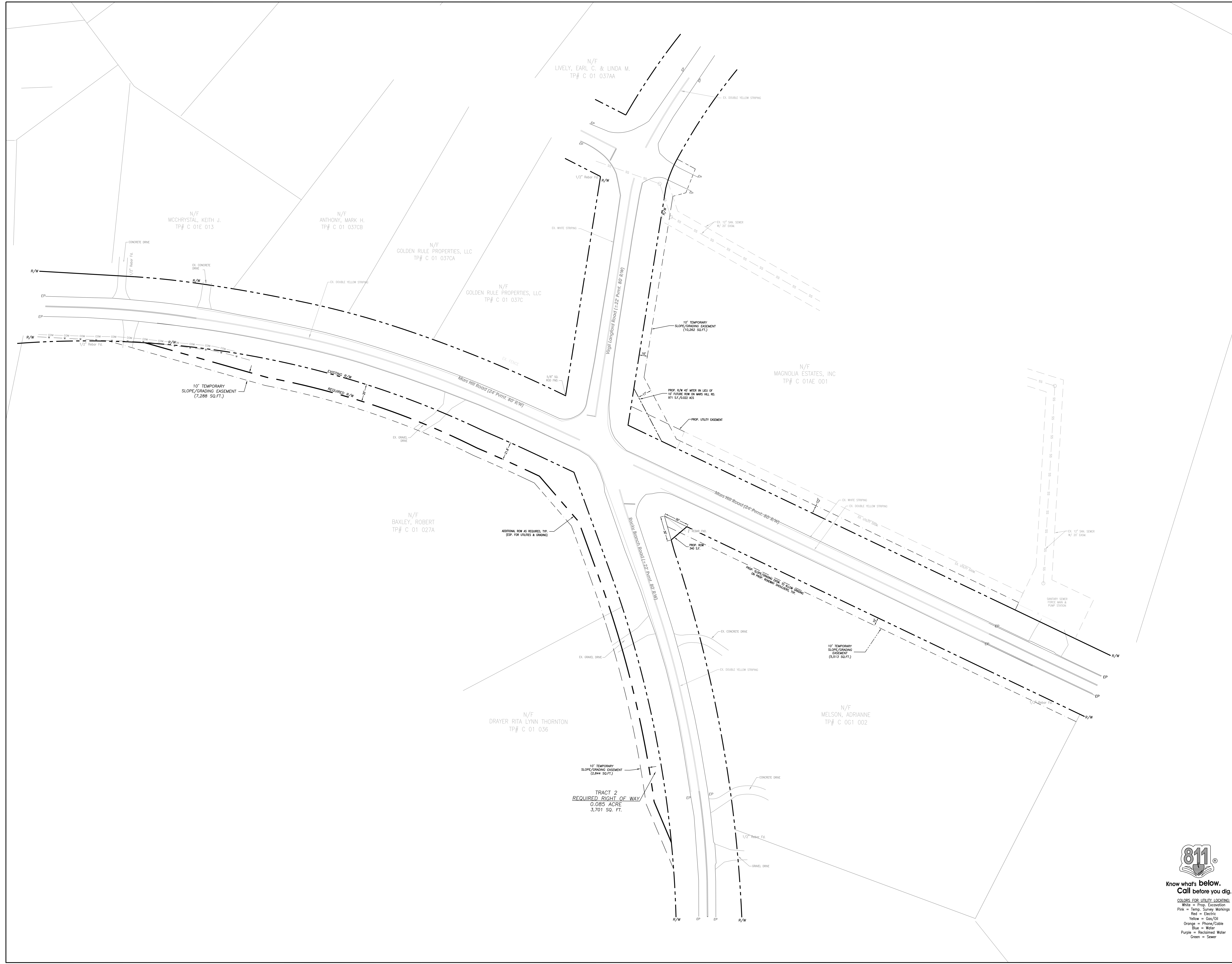
2

15



Know what's below.
Call before you dig.

COLORS FOR UTILITY LOCATING:
White = Prop. Excavation
Pink = Temp. Survey Markings
Red = Electric
Yellow = Gas/Oil
Orange = Phone/Cable
Blue = Water
Purple = Reclaimed Water
Green = Sewer





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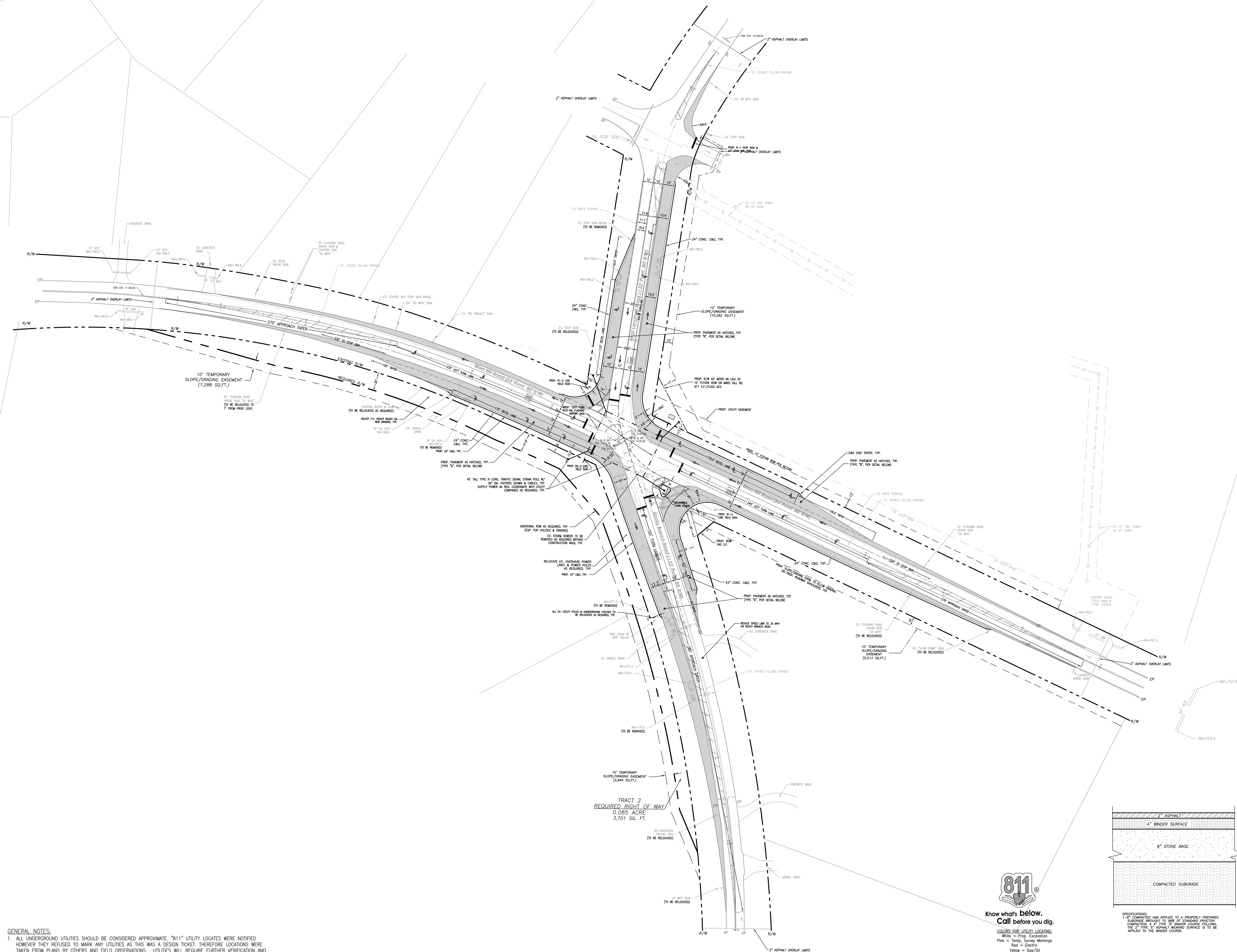
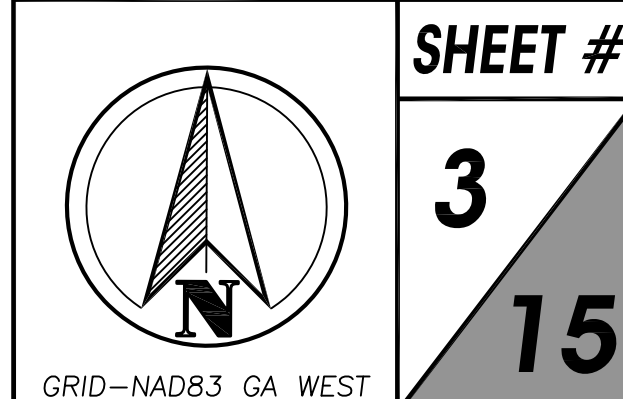
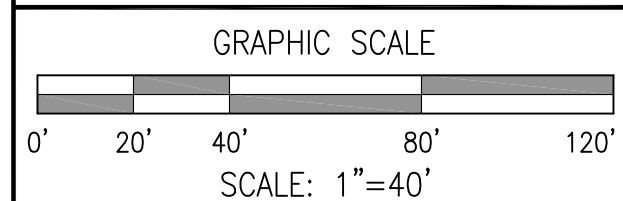
STRIPING & INTERSECTION PLAN



REVISIONS	DATE
ADDED TRAFFIC SIGNAL & SIGNAGE	2-22-17
ADDED LOOPS & PHASING	2-27-17
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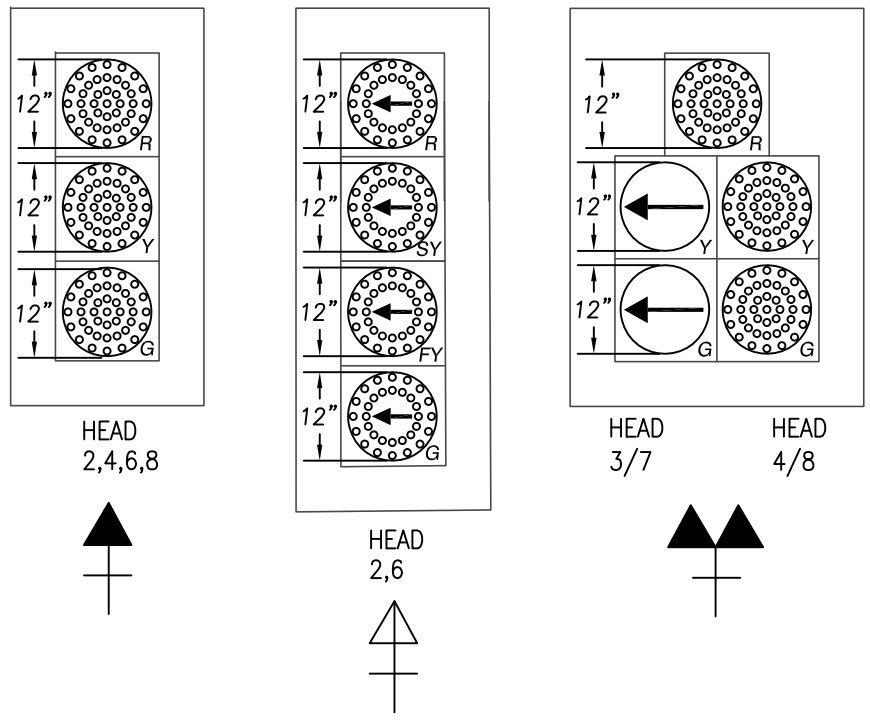


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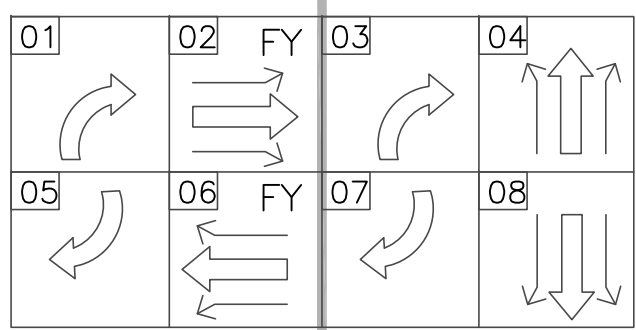
COLORS FOR UTILITY LOCATING:
White = Prop. Excavation
Pink = Temp. Survey Markings
Red = Electric
Yellow = Gas/Oil
Orange = Phone/Cable
Blue = Water
Purple = Reclaimed Water
Green = Sewer



SIGNAL HEADS

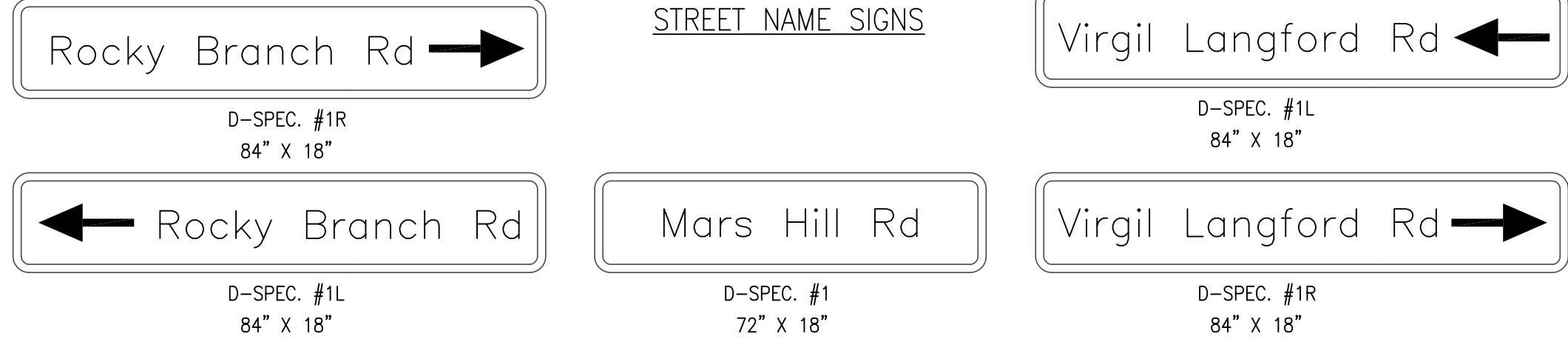


PHASING DIAGRAM

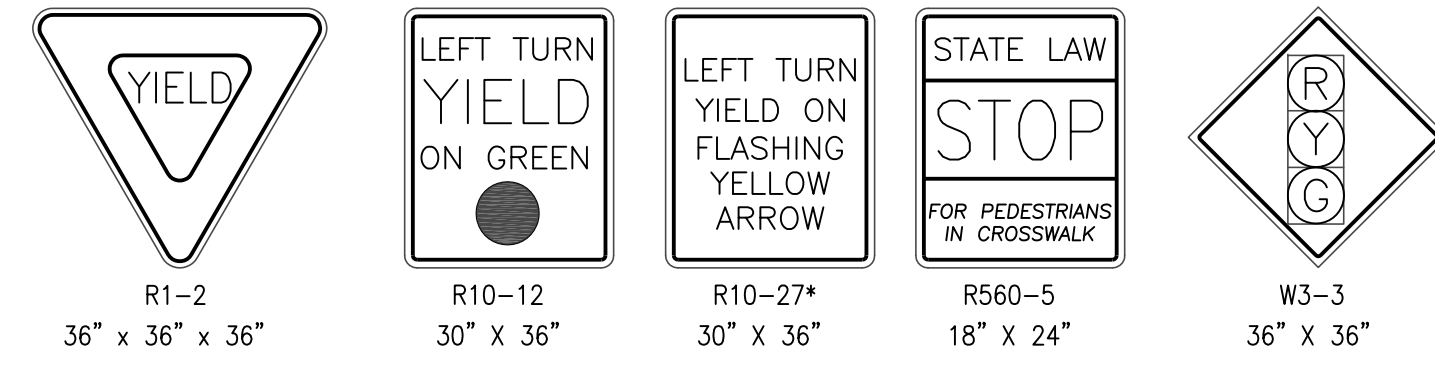


FY=FLASHING YELLOW PERMISSIVE

STREET NAME SIGNS



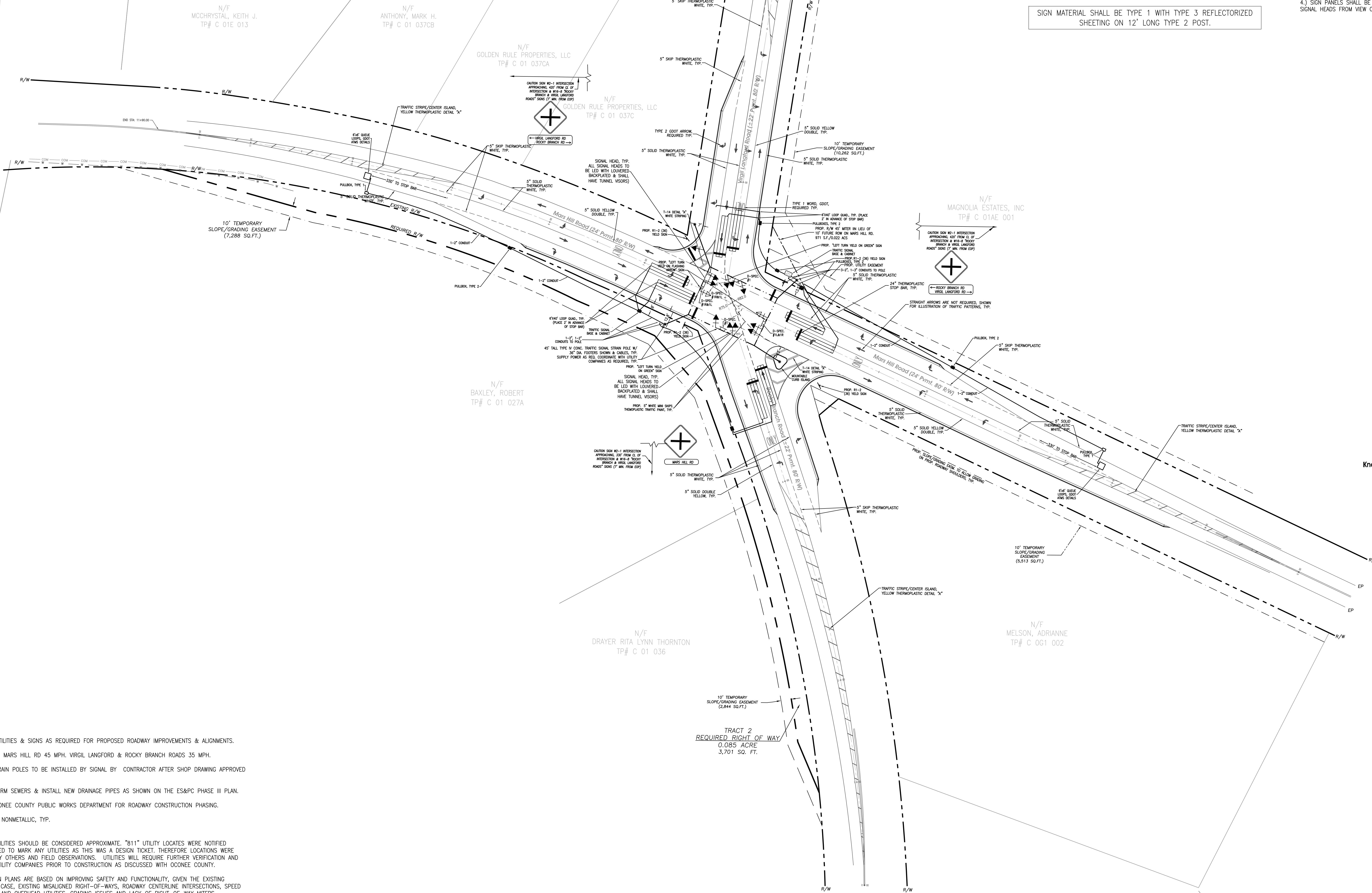
SIGNS



D-SPEC. SIGN NOTES:

- 1) D-SPECIAL SIGNS SHALL HAVE TYPE 3 DIAMOND GRADE REFLECTIVE SHEETING BACKGROUND WITH WHITE TYPE 3 DIAMOND GRADE REFLECTIVE SHEETING LEGEND AND BORDER.
- 2) ALL LETTERS SHALL BE 6" UPPERCASE & 4" LOWERCASE SERIES D. ALL ARROWS SHALL BE 6.75" LONG X 6" TALL. ALL BORDERS SHALL BE 3/4" ALL RADIUS SHALL BE 1 1/2".
- 3) SIGN PANELS SHALL BE FABRICATED OF ONE CONTINUOUS PIECE OF ALUMINUM SPlicing OF ALUMINUM PANELS SHALL NOT BE PERMITTED.
- 4) SIGN PANELS SHALL BE INSTALLED TO AVOID BLOCKING SIGNAL HEADS FROM VIEW OF APPROACHING TRAFFIC.

SIGN MATERIAL SHALL BE TYPE 1 WITH TYPE 3 REFLECTORIZED SHEETING ON 12' LONG TYPE 2 POST.



- GENERAL NOTES:
1. RELOCATE EXISTING UTILITIES & SIGNS AS REQUIRED FOR PROPOSED ROADWAY IMPROVEMENTS & ALIGNMENTS.
 2. DESIGN SPEED LIMITS: MARS HILL RD 45 MPH, VIRGIL LANGFORD & ROCKY BRANCH ROADS 35 MPH.
 3. SIGNAL DESIGN & STRAIN POLES TO BE INSTALLED BY SIGNAL BY CONTRACTOR AFTER SHOP DRAWING APPROVED BY ENGINEER.
 4. REMOVE EXISTING STORM SEWERS & INSTALL NEW DRAINAGE PIPES AS SHOWN ON THE ES&PC PHASE III PLAN.
 5. COORDINATE WITH OCONEE COUNTY PUBLIC WORKS DEPARTMENT FOR ROADWAY CONSTRUCTION PHASING.
 6. ALL CONDUITS TO BE NONMETALLIC, TYP.

- GENERAL NOTES:
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MARS HILL, VIRGIL LANGFORD & ROCKY BRANCH ROADS IMPROVEMENTS

MARS HILL ROAD, VIRGIL LANGFORD & ROCKY BRANCH ROADS
OCONEE COUNTY, GEORGIA

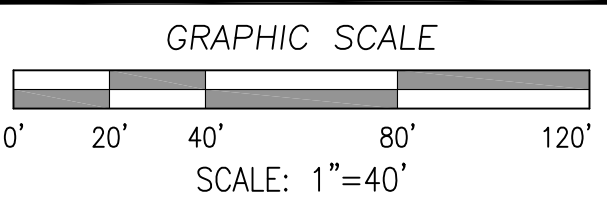
TRAFFIC SIGNAL PLAN & INTERSECTION SIGNAGE



REVISIONS	DATE
ADDED TRAFFIC SIGNAL & SIGNAGE	2-22-17
ADDED LOOPS & PHASING	2-27-17
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DATE: 8-29-16

PROJECT #: 09-021-11



GRID=NAD83 GA WEST

SHEET #
4
15

MARS HILL, VIRGIL LANGFORD & ROCKY BRANCH ROADS IMPROVEMENTS

MARS HILL ROAD, VIRGIL LANGFORD & ROCKY BRANCH ROADS
OCONEE COUNTY, GEORGIA

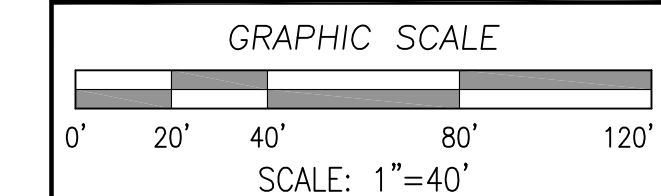
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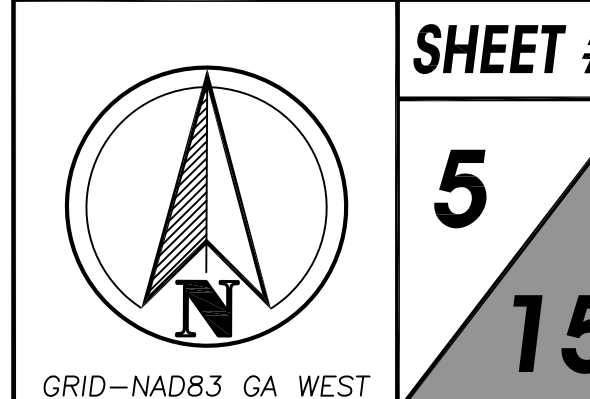


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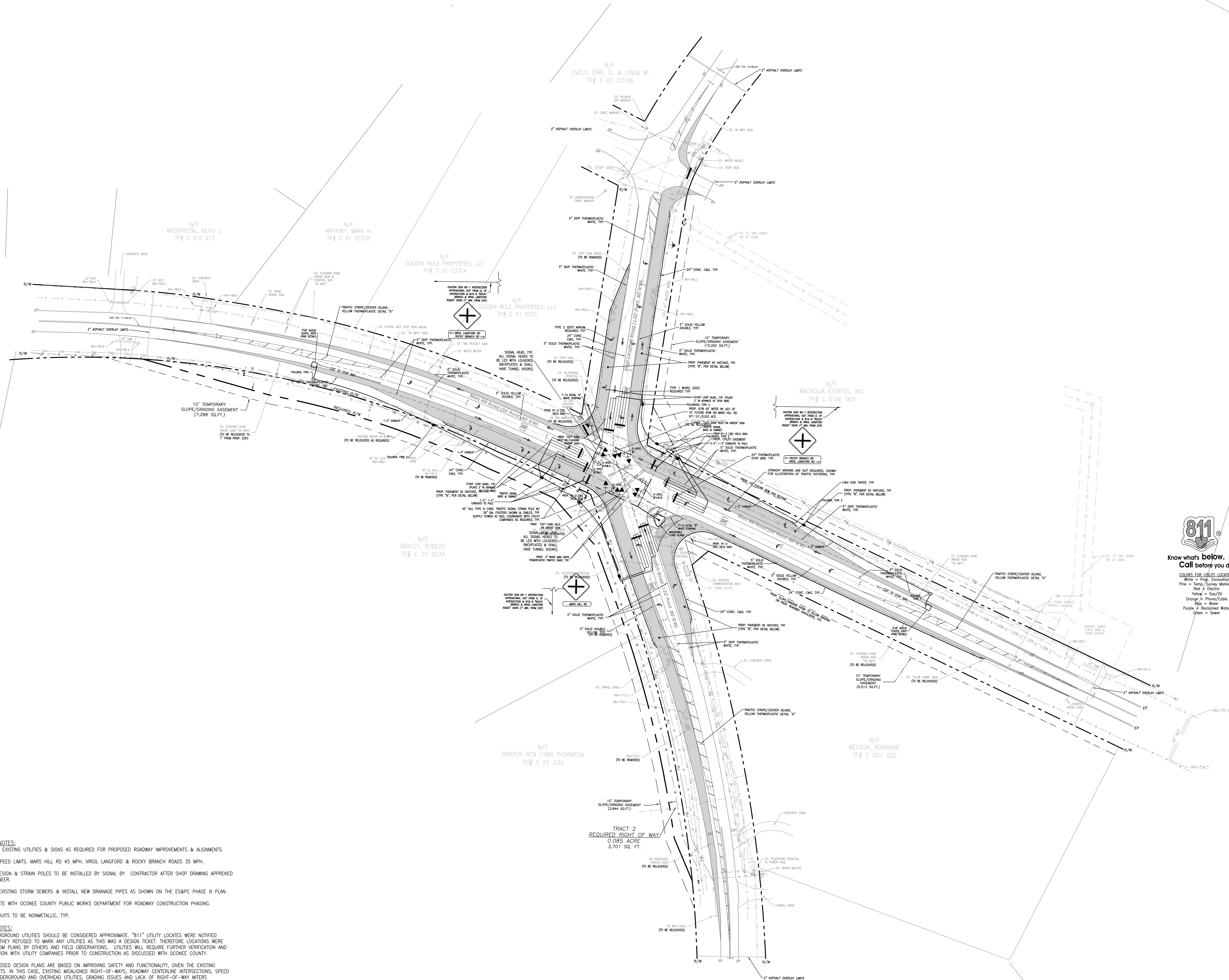


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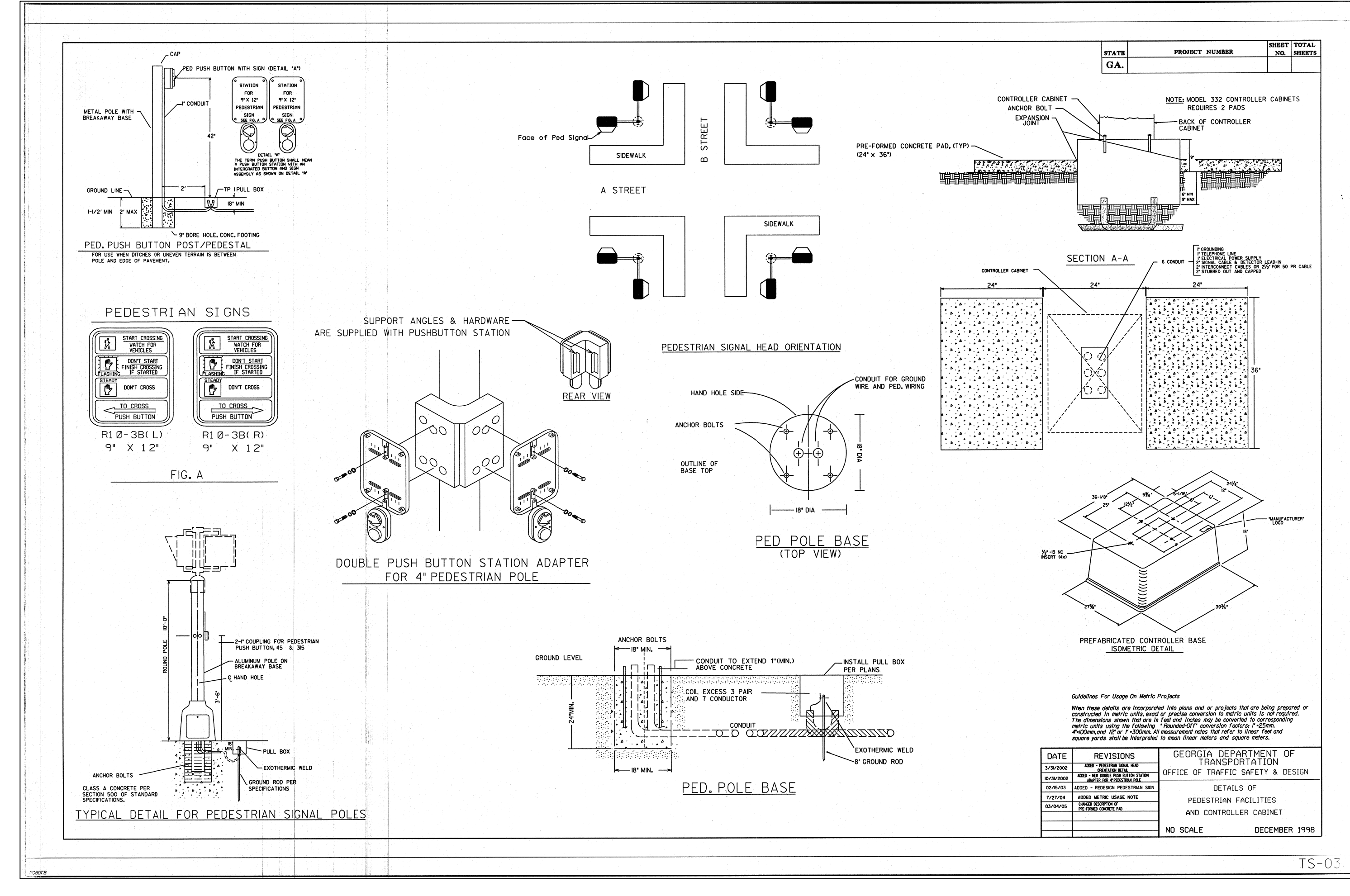
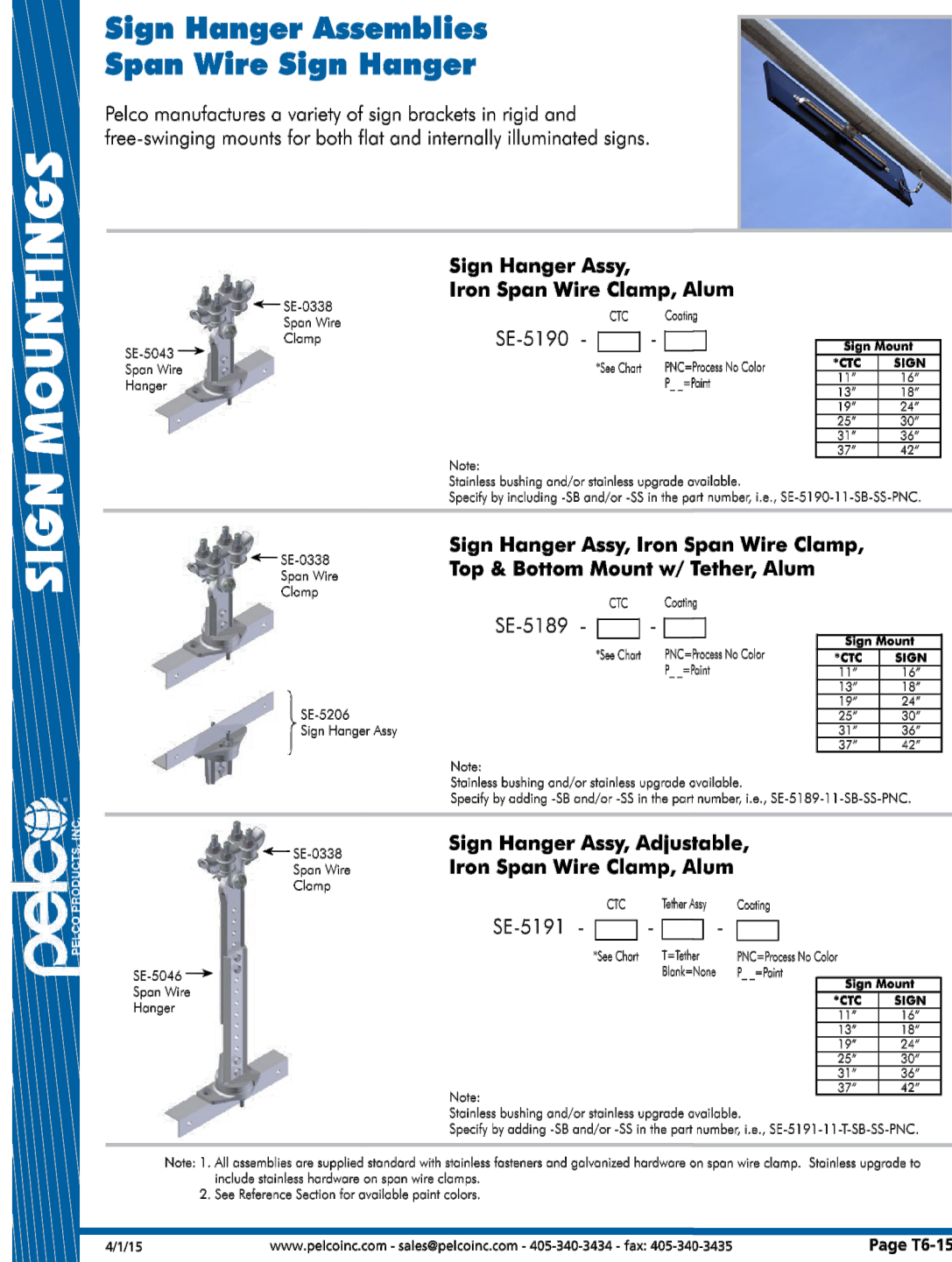
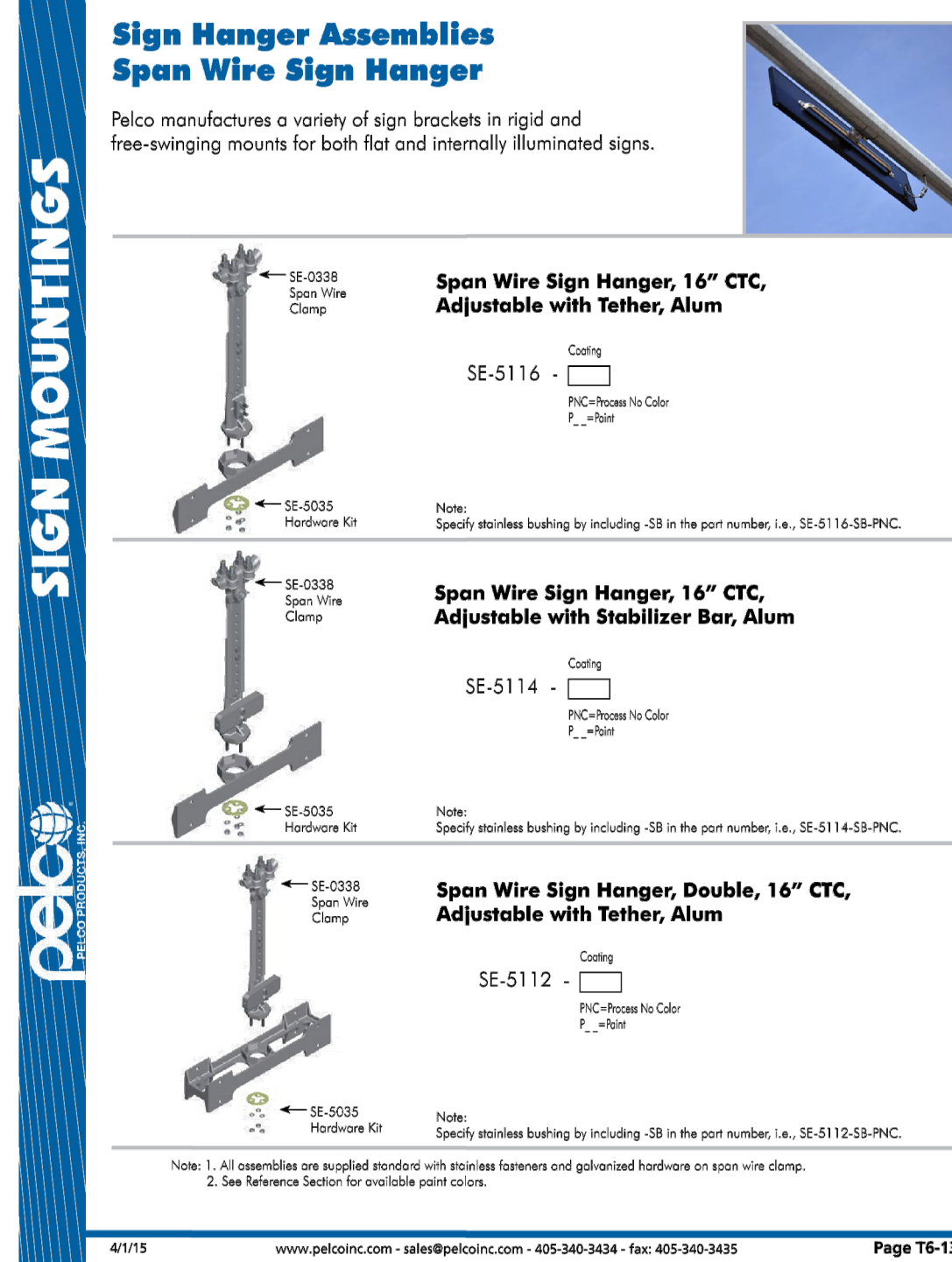
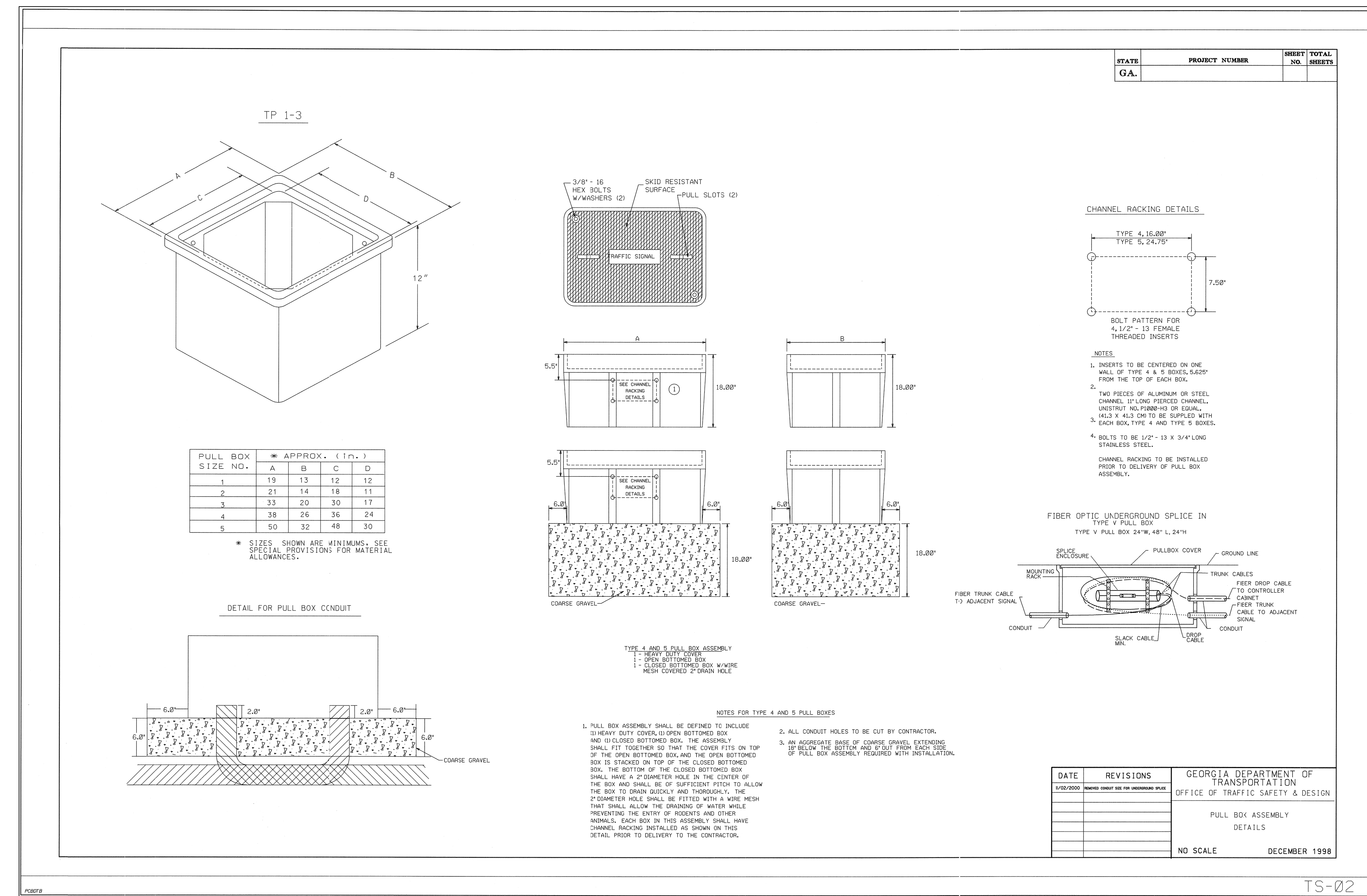
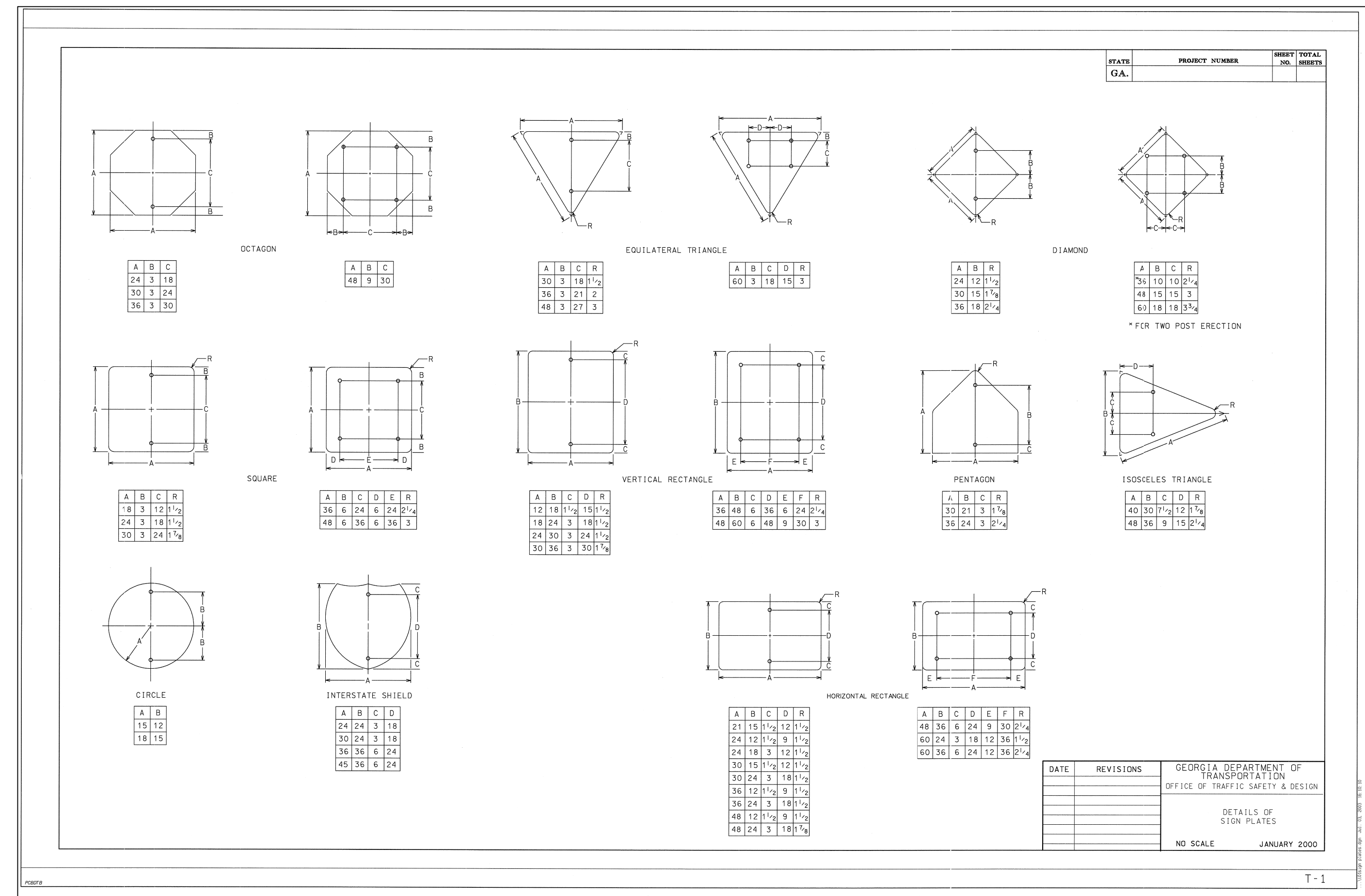
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15



- GENERAL NOTES:**
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ROCKY BRANCH
ROADS
IMPROVEMENTS**

**MARS HILL ROAD, VIRGIL
LANGFORD & ROCKY BRANCH
ROADS
OCONEE COUNTY, GEORGIA**

**TRAFFIC SIGNAL
DETAILS**

3-15-19

REVISIONS	DATE
ADDED TRAFFIC SIGNAL & SIGNAGE	2-22-17
ADDED LOOPS & PHASING	2-27-17
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DATE: 8-29-16

PROJECT #: 09-021-11

GRAPHIC SCALE

0' 1/2" 1" 2" 3"

SCALE: AS NOTED

SHEET #

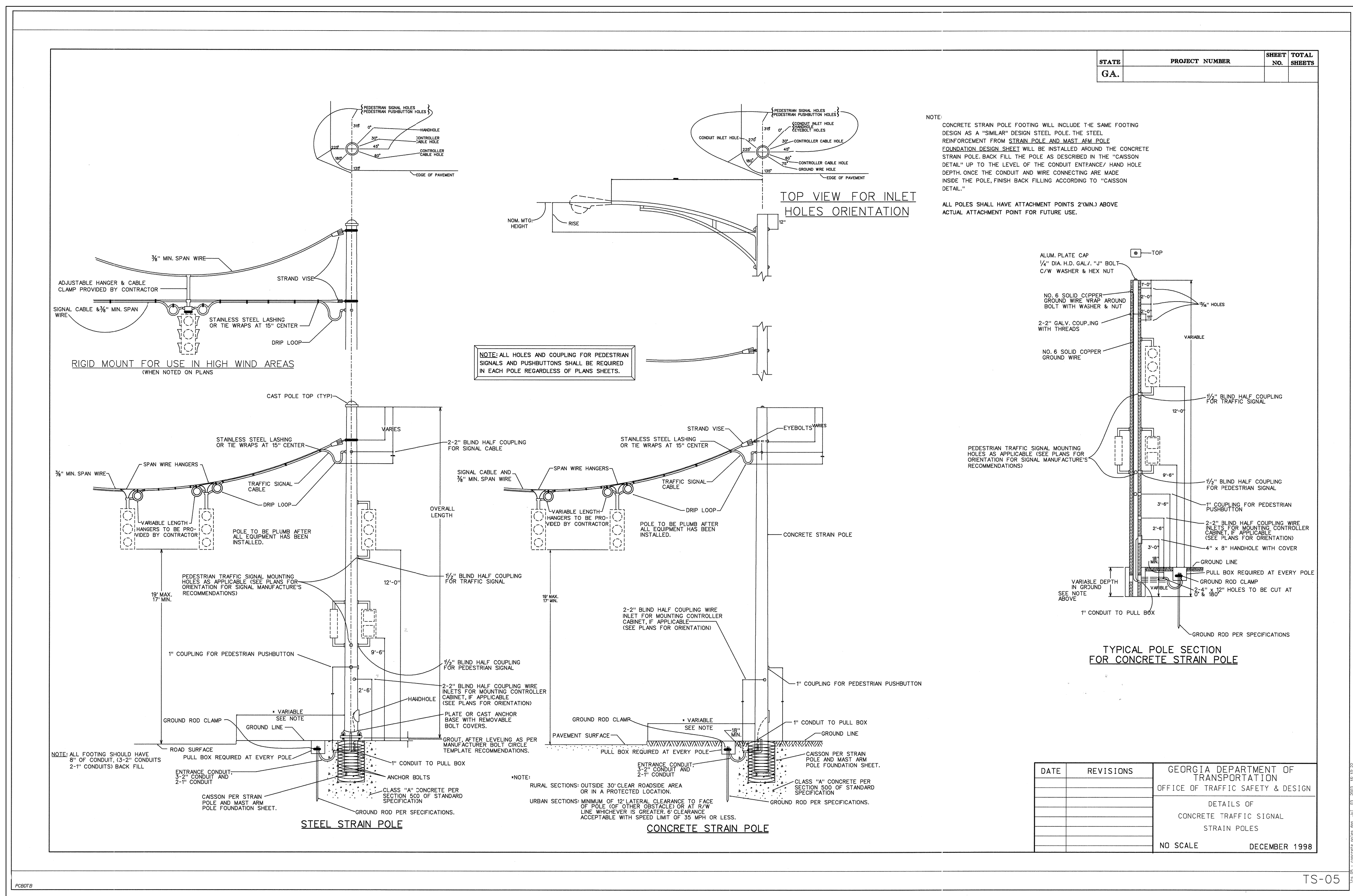
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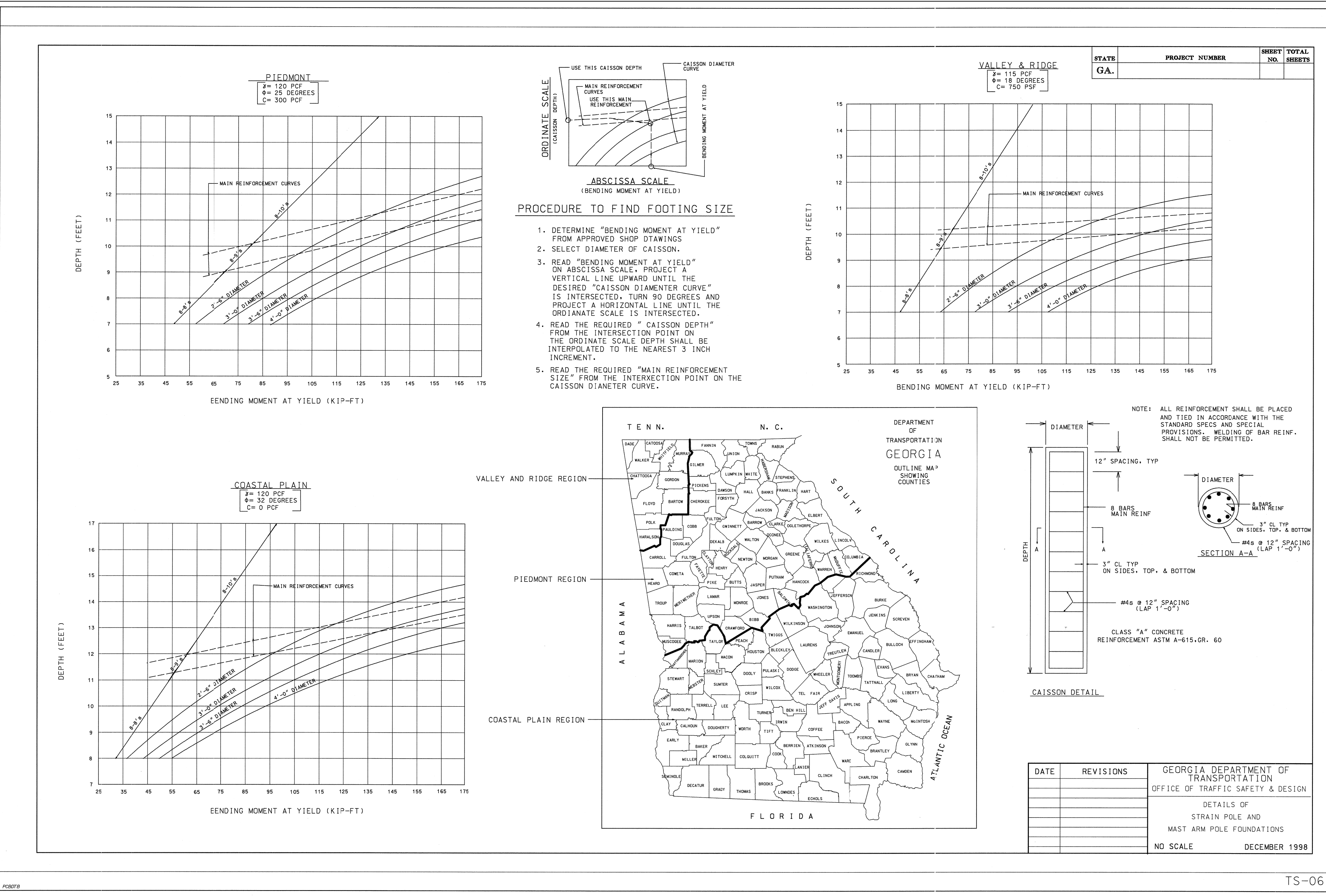
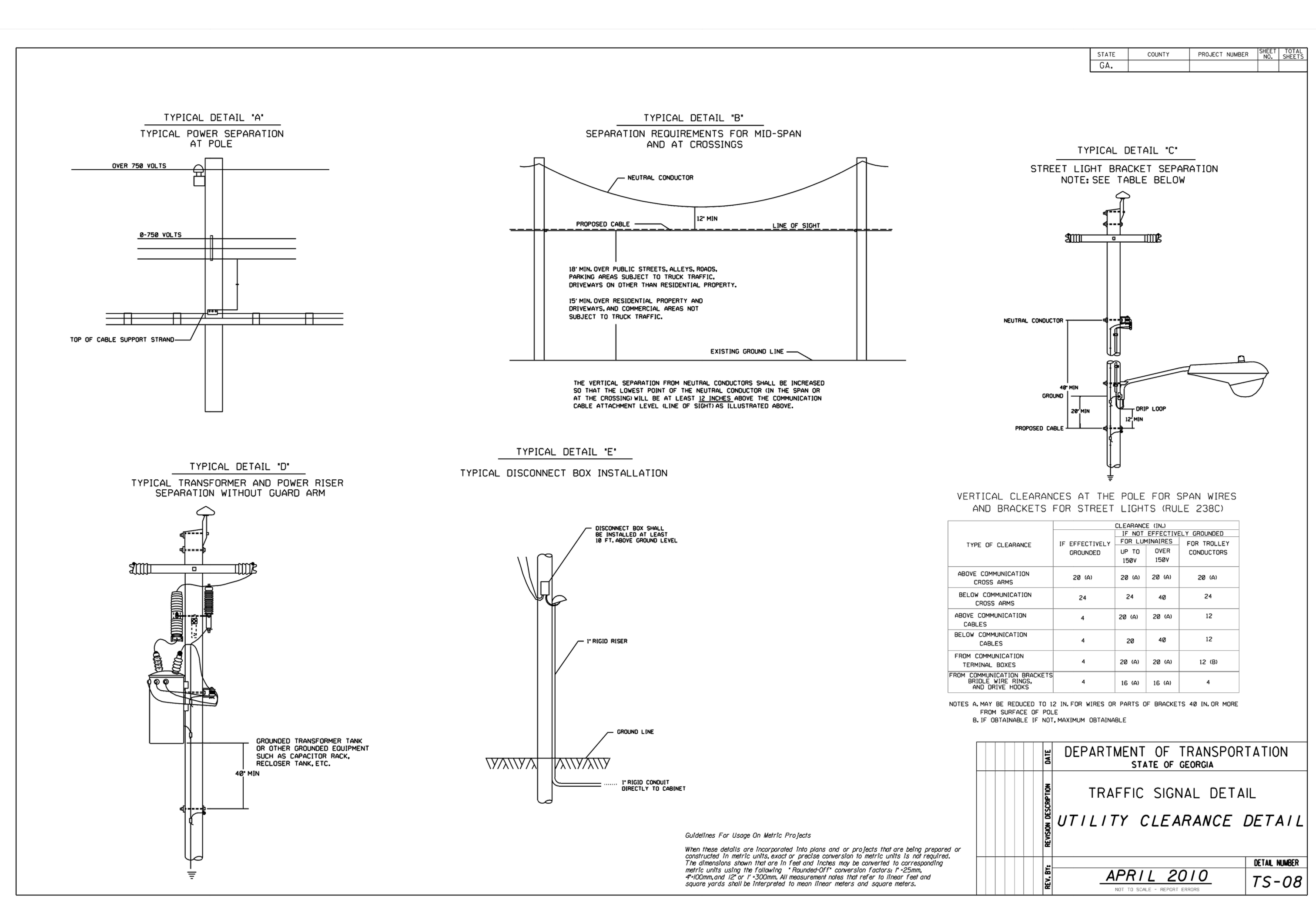
811

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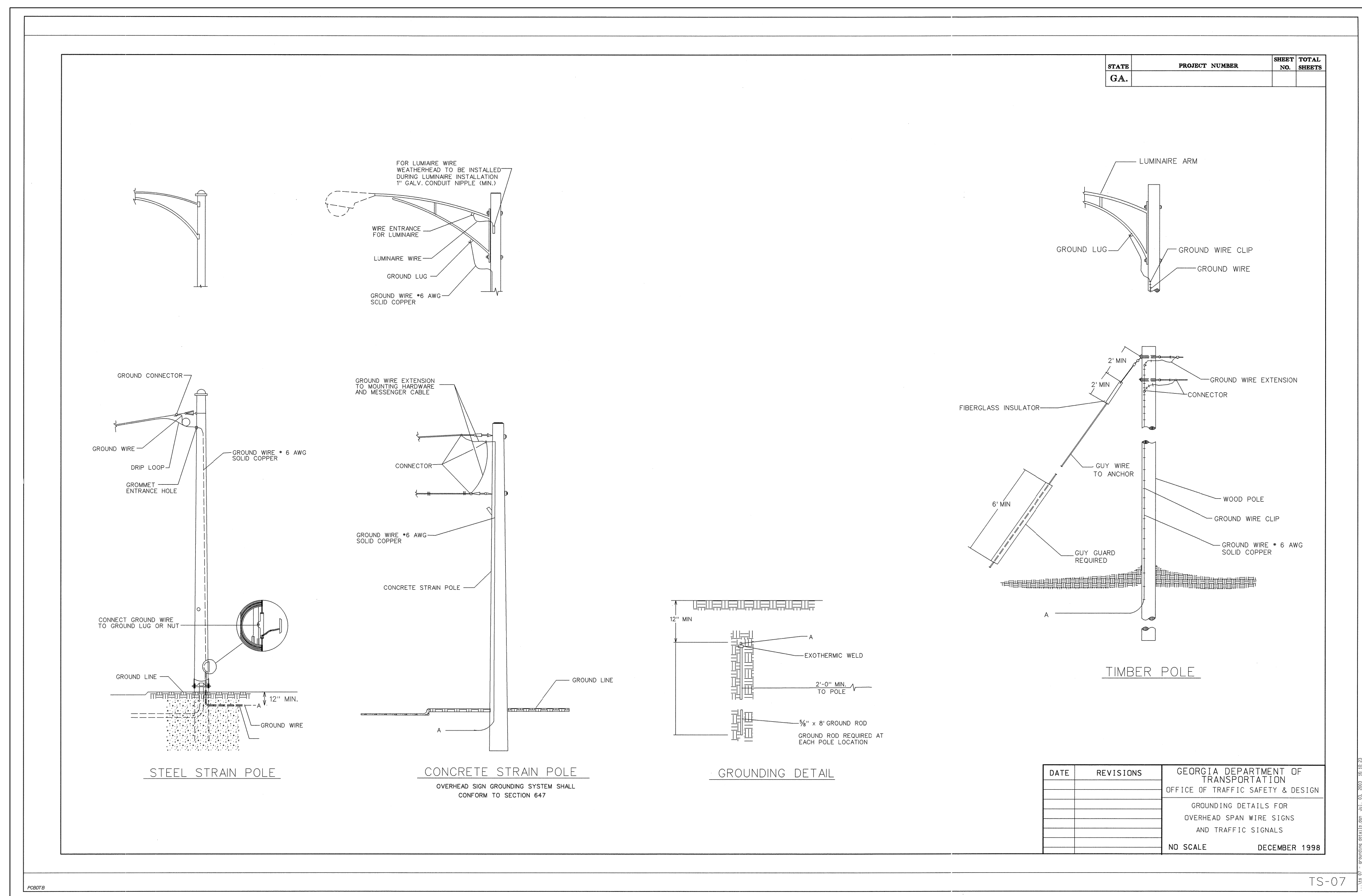
COLORS FOR UTILITY LOCATING:
White = Prop. Excavation
Pink = Temp. Survey Markings
Red = Electric
Yellow = Gas/Oil
Orange = Phone/Cable
Blue = Water
Purple = Reclaimed Water
Green = Sewer



TS-05



TS-06



TS-07



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MARS HILL, VIRGIL LANGFORD & ROCKY BRANCH ROADS IMPROVEMENTS

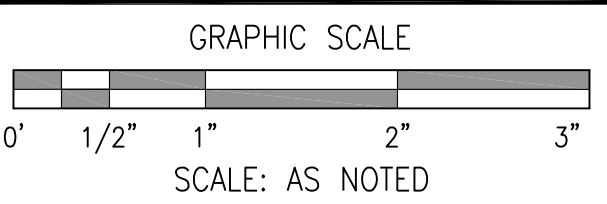
MARS HILL ROAD, VIRGIL LANGFORD & ROCKY BRANCH ROADS
OCONEE COUNTY, GEORGIA

TRAFFIC SIGNAL DETAILS



REVISIONS	DATE
ADDED TRAFFIC SIGNAL & SIGNAGE	2-22-17
ADDED LOOPS & PHASING	2-27-17
ADDED ROAD CROSS SECTIONS	6-21-18
ADDED UTILITIES PER PPI DESIGN PLANS	9-17-18
ADDED REVISED UTILITIES PER PPI PLANS	3-15-19

DATE: 8-29-16
PROJECT #: 09-021-11



SHEET #
7
15

811
Know what's below.
Call before you dig.

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GRAPHIC SCALE
0' 1/2" 1" 2" 3"
SCALE: AS NOTED

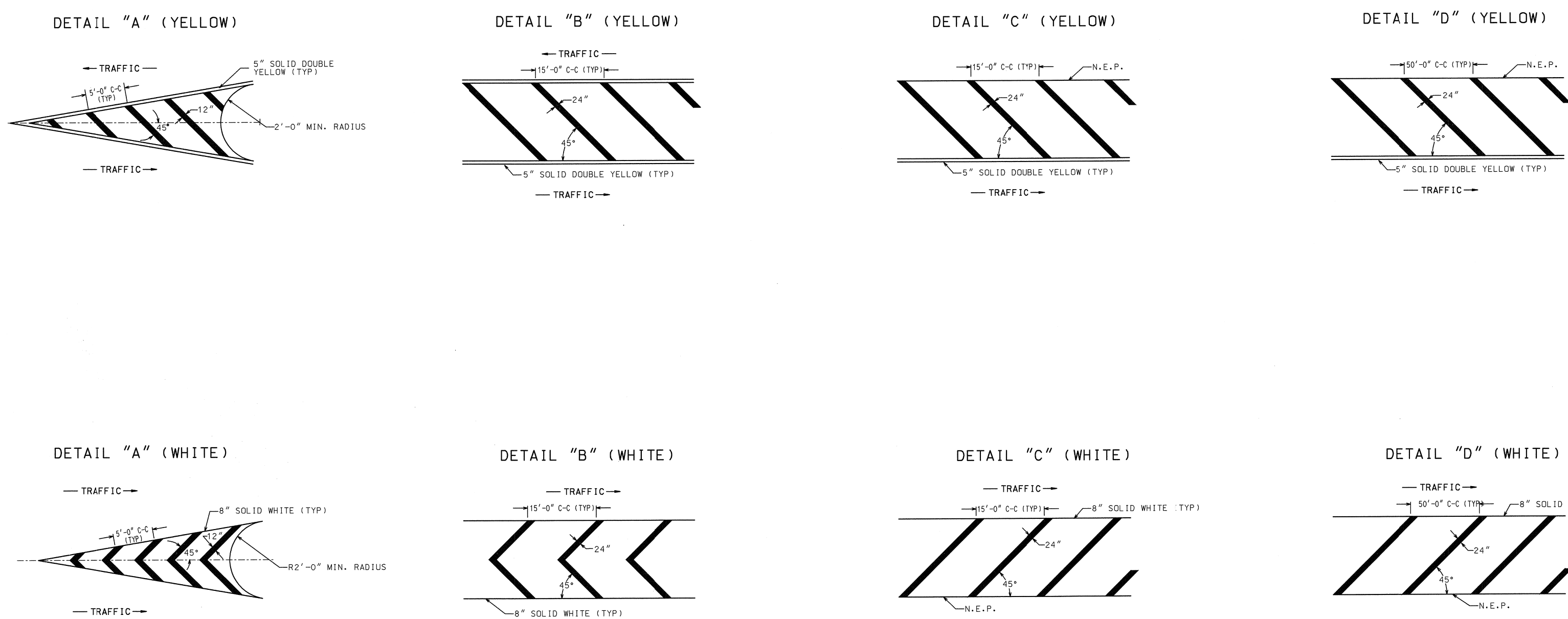
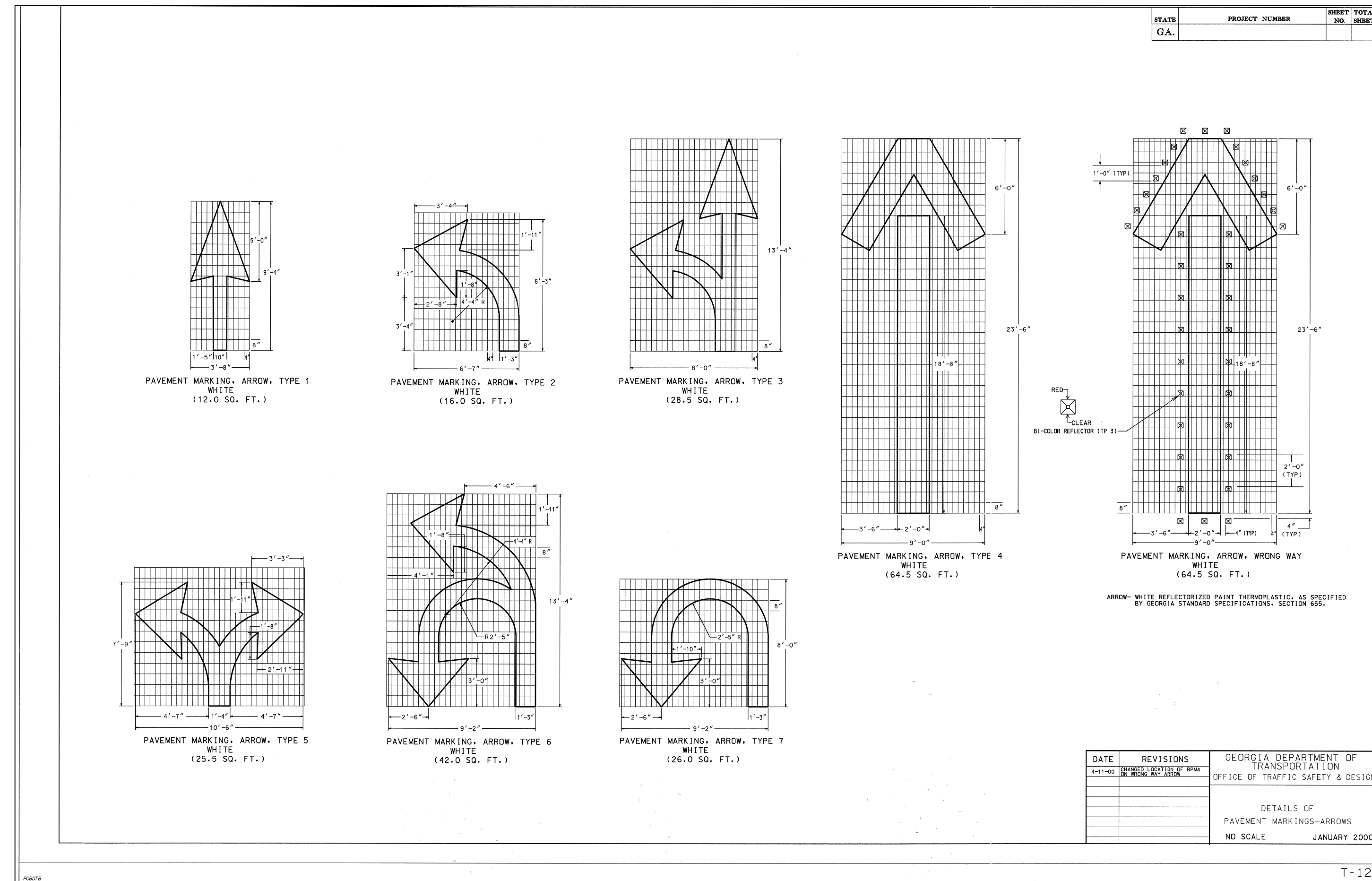
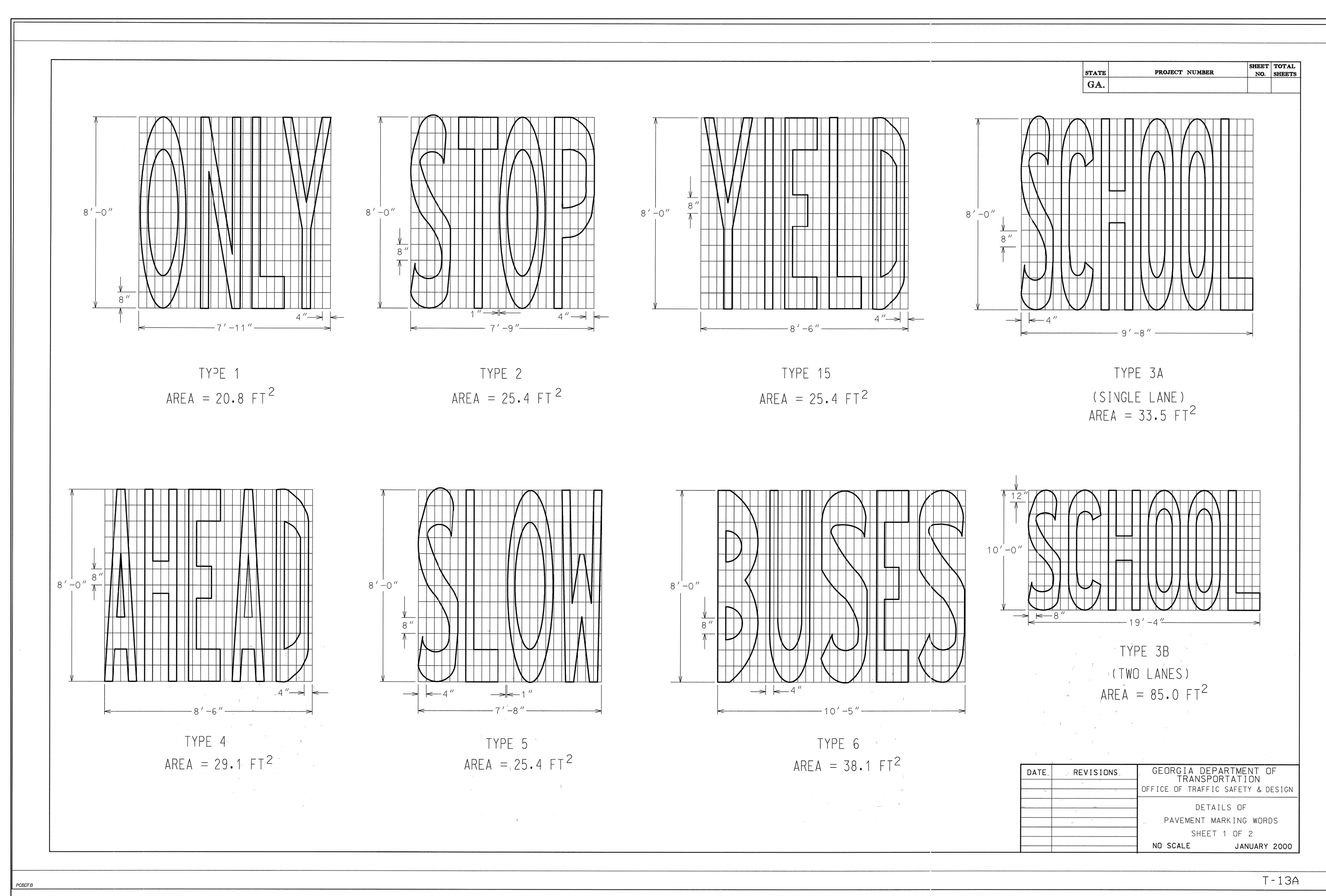
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DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
STANDARD CONCRETE CURB & GUTTER CONCRETE CURBS, CONCRETE MEDIANS	
DATE: 8-29-16	REVISION: 09-021-11
DESIGNED BY: [Signature]	CHECKED BY: [Signature]
APPROVED BY: [Signature]	DATE: 09-021-11



DATE	REVISIONS	GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE OF TRAFFIC SAFETY & DESIGN
		DETAILS OF PAVEMENT MARKING HATCHING
		NO SCALE JANUARY 2000



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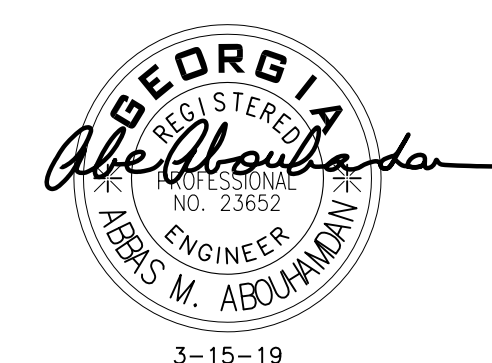
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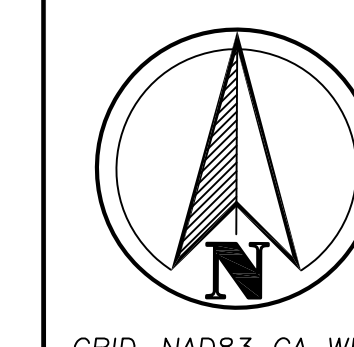
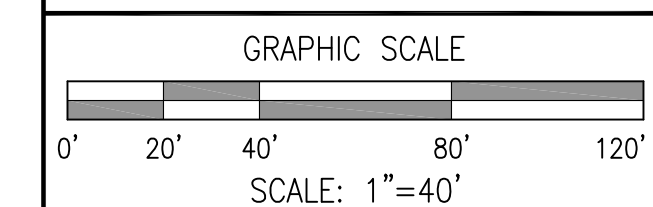
ESPC PLAN PHASE I



REVISIONS	DATE
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ADDED LOOPS & PHASING	2-27-17
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PROJECT #: 09-021-11



SHEET #

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 - COORDINATE ALL OVERHEAD POWER & UTILITIES AS REQUIRED FOR THE PROJECT & SIGNAL INSTALLATION.



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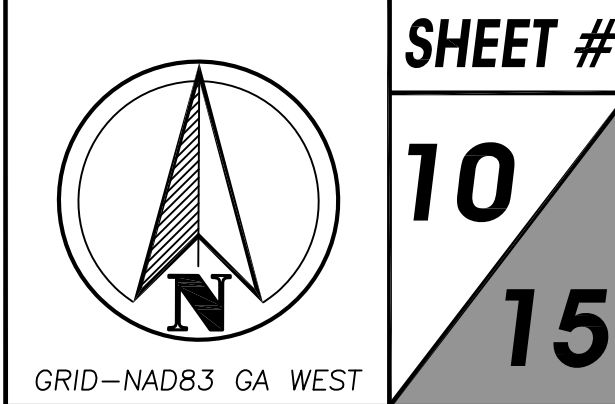
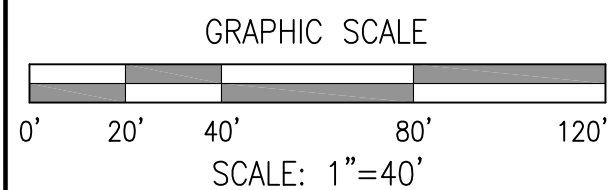
ESPC PLAN PHASE II



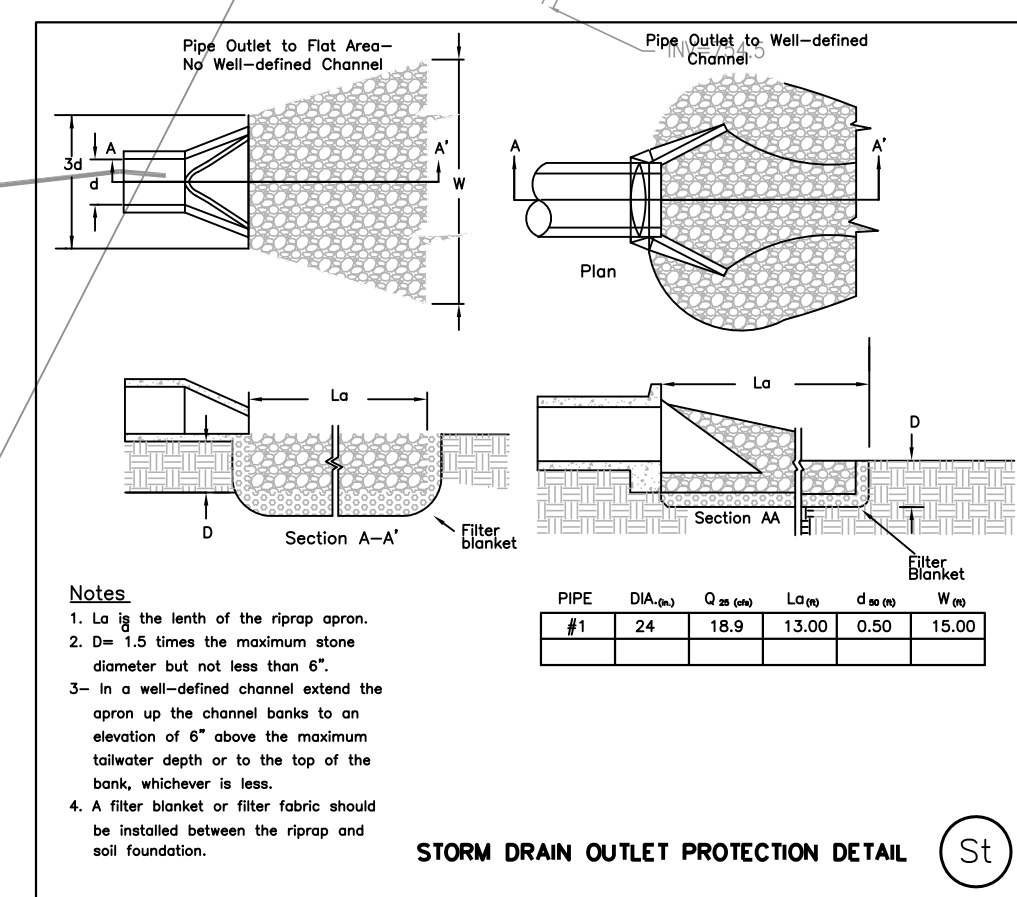
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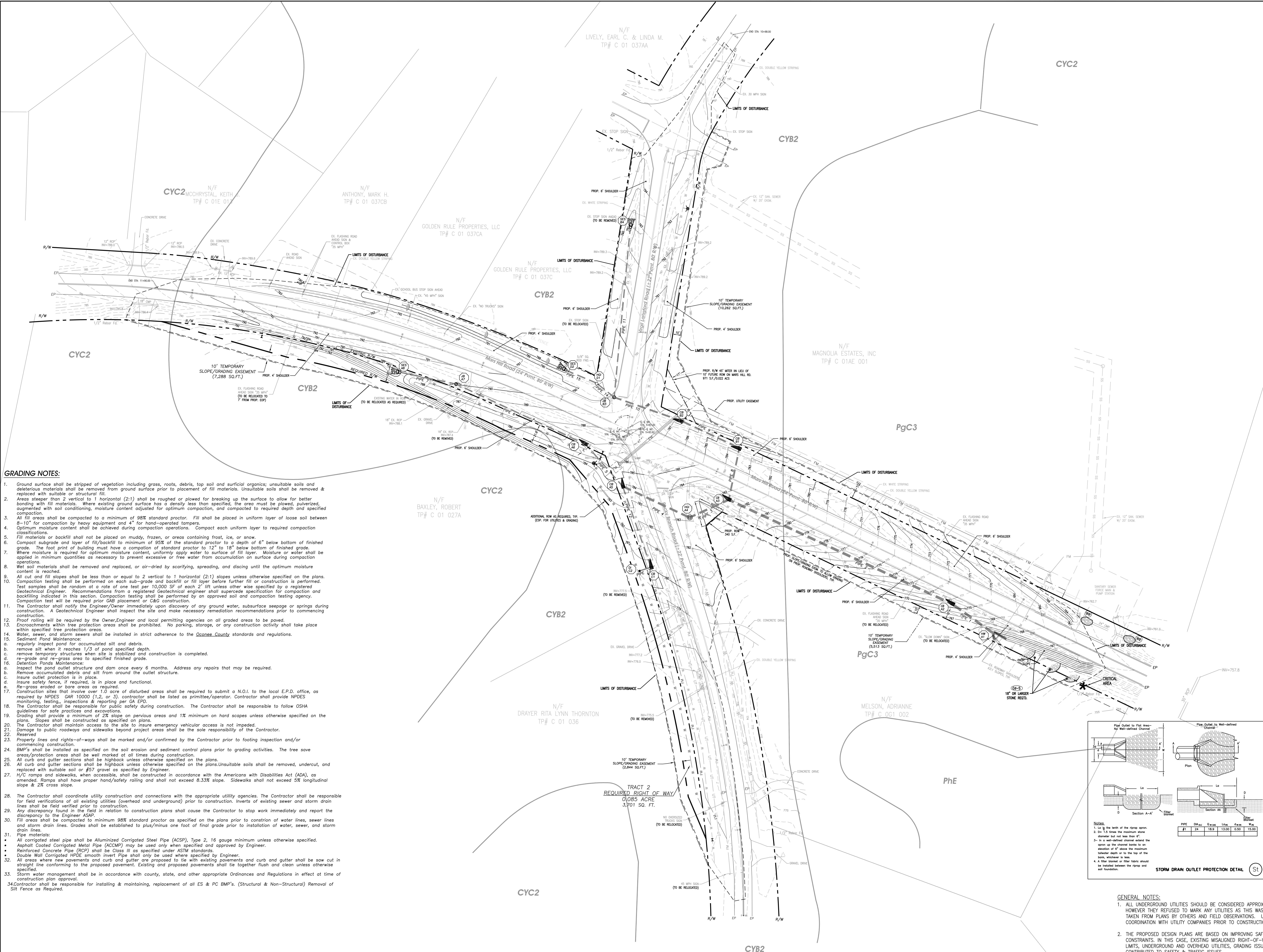


SHEET #
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GRADING NOTES:

- Ground surface shall be stripped of vegetation including grass, roots, debris, top soil and surficial organics; unsuitable soils and deleterious materials shall be removed from ground surface prior to placement of fill materials. Unsuitable soils shall be removed & replaced with suitable or structural fill.
- Areas steeper than 2 vertical to 1 horizontal (2:1) shall be roughed or plowed for breaking up the surface to allow for better bonding with fill materials. Where existing ground surface has a density less than specified, the area must be plowed, pulverized, augmented with soil conditioning, moisture content adjusted for optimum compaction, and compacted to required depth and specified compaction.
- All fill areas shall be compacted to a minimum of 98% standard proctor. Fill shall be placed in uniform layer of loose soil between 8-10" for compaction by heavy equipment and 4" for hand-operated tampers.
- Optimum moisture content shall be achieved during compaction operations. Compact each uniform layer to required compaction classifications.
- Fill materials or backfill shall not be placed on muddy, frozen, or areas containing frost, ice, or snow.
- Compact subgrade and layer of fill/backfill to minimum of 95% of the standard proctor to a depth of 6" below bottom of finished grade. The foot print of building must have a compaction of standard proctor to 12" to 18" below bottom of finished grade.
- Where moisture is required for optimum moisture content, uniformly apply water to surface of fill layer. Moisture or water shall be applied in minimum quantities as necessary to prevent excessive or free water from accumulation on surface during compaction operations.
- Wet soil materials shall be removed and replaced, or air-dried by scarifying, spreading, and dicing until the optimum moisture content is reached.
- All cut and fill slopes shall be less than or equal to 2 vertical to 1 horizontal (2:1) slopes unless otherwise specified on the plans.
- Compaction testing shall be performed on each sub-grade and backfill or fill layer before further fill or construction is performed. Test samples shall be random at a rate of one test per 10,000 SF of each 2' lift unless other wise specified by a registered Geotechnical Engineer. Recommendations from a registered geotechnical engineer shall supersede specification for compaction and backfilling indicated in this section. Compaction testing shall be performed by an approved soil and compaction testing agency. Compaction test will be required prior GAB placement or C&S construction.
- The Contractor shall notify the Engineer/Owner immediately upon discovery of any ground water, subsurface seepage or springs during construction. A Geotechnical Engineer shall inspect the site and make necessary remediation recommendations prior to commencing construction.
- Proof rolling will be required by the Owner/Engineer and local permitting agencies on all graded areas to be paved.
- Encroachments within tree protection areas shall be prohibited. No parking, storage, or any construction activity shall take place within specified tree protection areas.
- Water, sewer, and storm sewers shall be installed in strict adherence to the Oconee County standards and regulations.
- Sediment Pond Maintenance:
 - regularly inspect pond for accumulated silt and debris.
 - remove silt when it reaches 1/3 of pond specified depth.
 - remove temporary structures when site is stabilized and construction is completed.
 - re-grade and re-grass area to specified finished grade.
- Detention Ponds Maintenance:
 - inspect the pond outlet structure and dam once every 6 months. Address any repairs that may be required.
 - Remove accumulated debris and silt from around the outlet structure.
 - insure outlet protection is in place.
 - insure safety fence, if required, is in place and functional.
 - Re-grass eroded or bare areas as required.
- Construction sites that involve over 1.0 acre of disturbed areas shall be required to submit a N.O.I. to the local E.P.D. office, as required by NPDES (GAR 10000 (1,2, or 3), contractor shall be listed as prime/contractor. Contractor shall provide NPDES monitoring, testing, inspections & reporting per GA EPD.
- The Contractor shall be responsible for public safety during construction. The Contractor shall be responsible to follow OSHA guidelines for safe practices and excavations.
- Grading shall provide a minimum of 2% slope on pervious areas and 1% minimum on hard scopes unless otherwise specified on the plans. Slopes shall be constructed as specified on plans.
- The Contractor shall maintain access to the site to insure emergency vehicular access is not impeded.
- Damage to public roadways and sidewalks beyond project areas shall be the sole responsibility of the Contractor.
- Reserved
- Property lines and rights-of-ways shall be marked and/or confirmed by the Contractor prior to footing inspection and/or commencing construction.
- BMP's shall be installed as specified on the soil erosion and sediment control plans prior to grading activities. The tree save areas/protection areas shall be well marked at all times during construction.
- All curb and gutter sections shall be highback unless otherwise specified on the plans.
- All curb and gutter sections shall be highback unless otherwise specified on the plans. Unsuitable soils shall be removed, undercut, and replaced with suitable soil or #57 gravel as specified by Engineer.
- H/C ramps and sidewalks, when accessible, shall be constructed in accordance with the Americans with Disabilities Act (ADA), as amended. Ramps shall have proper hand/safety railing and shall not exceed 8.33% slope. Sidewalks shall not exceed 5% longitudinal slope & 2% cross slope.
- The Contractor shall coordinate utility construction and connections with the appropriate utility agencies. The Contractor shall be responsible for field verifications of all existing utilities (overhead and underground) prior to construction. Inverts of existing sewer and storm drain lines shall be field verified prior to construction.
- Any discrepancy found in the field in relation to construction plans shall cause the Contractor to stop work immediately and report the discrepancy to the Engineer ASAP.
- Fill areas shall be compacted to minimum 98% standard proctor as specified on the plans prior to constriction of water lines, sewer lines and storm drain lines. Grades shall be established to plus/minus one foot of final grade prior to installation of water, sewer, and storm drain lines.
- Pipe materials:
 - All corrugated steel pipe shall be Aluminum Coated Steel Pipe (ACSP), Type 2, 16 gauge minimum unless otherwise specified.
 - Asphalt Coated Corrugated Metal Pipe (ACCMP) may be used only when specified and approved by Engineer.
 - Reinforced Concrete Pipe (RCP) shall be Class III as specified under ASTM standards.
 - Double Wall Corrugated HDPE smooth invert Pipe shall only be used where specified by Engineer.
- All areas where new pavements and curb and gutter are proposed to tie with existing pavements and curb and gutter shall be saw cut in straight line conforming to the proposed pavement. Existing and proposed pavements shall tie together flush and clean unless otherwise specified.
- Storm water management shall be in accordance with county, state, and other appropriate Ordinances and Regulations in effect at time of construction plan approval.
- Contractor shall be responsible for installing & maintaining, replacement of all ES & PC BMP's. (Structural & Non-Structural) Removal of Silt Fence as Required.



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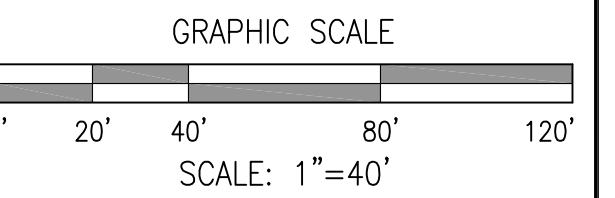
ESPC PLAN PHASE III



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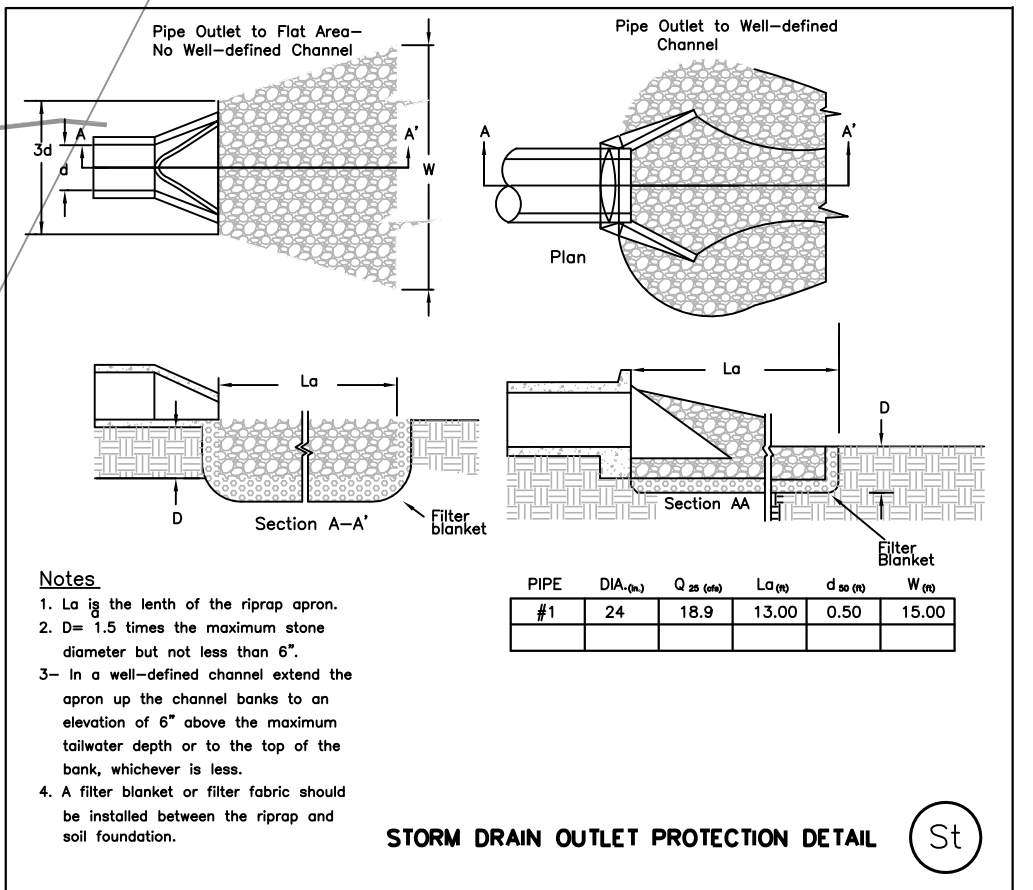
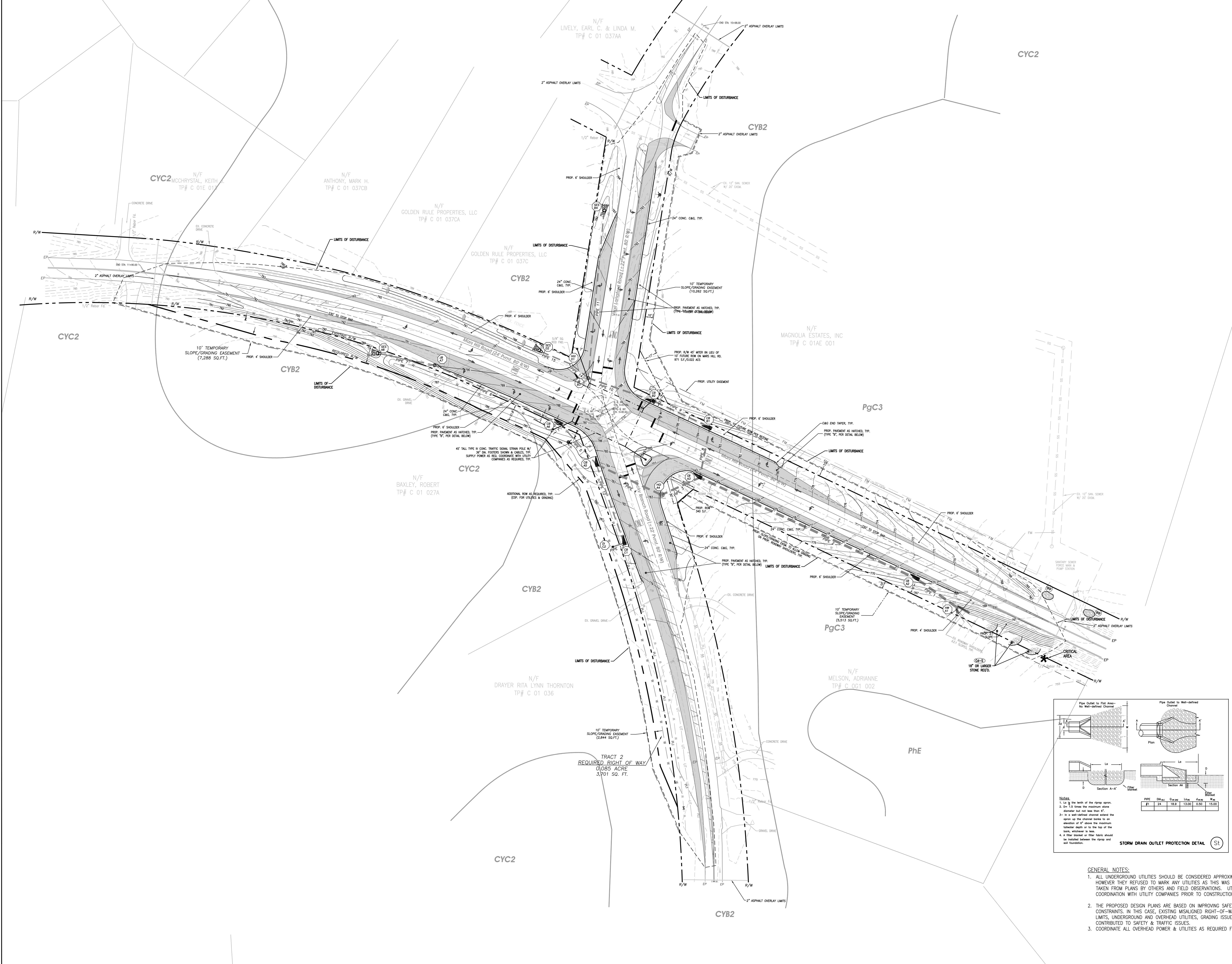
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PROJECT #: 09-021-11



GRID-NADB3 GA WEST

SHEET #
11
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SOIL EROSION AND SEDIMENT CONTROL NOTES

PROJECT DESCRIPTION
THIS PROJECT INVOLVES CONSTRUCTING A LINEAR TRANSPORTATION PROJECT. THE CONSTRUCTION WILL INCLUDE UTILITIES, INFRASTRUCTURE, LANDSCAPING AND OTHER RELATED ITEMS. CLEARING, GRUBBING, GRADING AND PAVING ACTIVITIES WILL BE PHASED IN AS SHOWN ON THE PLANS. BMPs WILL BE INSTALLED AS SPECIFIED ON THE APPROVED PLANS.

EXISTING SITE CONDITIONS
THIS SITE IS AN EXISTING INTERSECTION. THE SITE HAS SLOPES OF 2%-50%. THERE ARE NO STATE WATERS WITHIN 200' OF SITE BOUNDARY. DRAINAGE PATTERNS FOLLOW LAND TOPOGRAPHY BY SHEET FLOW AND NATURAL DRAINAGE SWALES LEADING TO THE INITIAL RECEIVING WATERS, UNNAMED TRIBUTARIES OF BARBER CREEK. BARBER CREEK IS NOT LISTED AS AN IMPAIRED STREAM.

SURROUNDING LAND USE: RESIDENTIAL AND UNDEVELOPED.

SOIL SERIES:
CVC2-Cecil Sandy Loam, 6.0 to 10.0 % Slopes, Absorption -45 min./in., Depth to Bedrock - >72", Depth to Water Table - >72", Erodiability: K = 28 T = 4
CVC2-Cecil Sandy Loam, 2.0 to 10.0 % Slopes, Absorption -40 min./in., Depth to Bedrock - >72", Depth to Water Table - >72", Erodiability: K = 28 T = 4
PHE - Paoletti - Gallied land complex, 10.0 to 25.0 % Slopes, Absorption - 35-40 min./in., Depth to Bedrock - >72", Depth to Water Table - >72", Erodiability: K = 24 T = 2
PgC3 - Paoletti Sandy Clay Loam, 6.0 to 10.0 % Slopes, Absorption - 30 min./in., Depth to Bedrock - >72", Depth to Water Table - >72", Erodiability: K = 24 T = 3

PROPOSED USE: Improved Roadway
CURRENT USE: Existing Roadway

7. EROSION AND SEDIMENT CONTROL MEASURES
DISTURBED AREAS WILL BE KEPT TO A MINIMUM. TEMPORARY MULCHING AND GRASSING WILL BE APPLIED TO DISTURBED AREAS DURING CONSTRUCTION. BMPs, SUCH AS SILT FENCE, C&C, TEMPORARY AND PERMANENT GRASSING, OUTLET PROTECTION, ETC., WILL BE UTILIZED THROUGHOUT CONSTRUCTION TO CONTROL EROSION. (SEE PLANS FOR BMPs)

8. PERMANENT STABILIZATION
DISTURBED AREAS MUST BE STABILIZED WITHIN 14 DAYS OF DISTURBANCE.
ALL AREAS THAT HAVE BEEN DISTURBED DURING CONSTRUCTION SHALL BE SEEDED AND MULCHED AS SPECIFIED. AREAS TO BE GRASSED SHALL BE FREE OF CONSTRUCTION DEBRIS, BRANCHES, STUMPS, OR STONES. A TOPSOIL LAYER SHALL BE APPLIED AND RAKED PRIOR TO SEEDING OR GRASSING.
LIME SHALL BE DISTRIBUTED UNIFORMLY IF NEEDED, AT A MINIMUM RATE OF 2,600 LBS. TO 3,000 LBS. PER ACRE. LIME SHALL BE GROUND LIMESTONE (CALCITE OR DOLOMITE), WITH 90% PASSING THROUGH A 10-MESH SIEVE, NOT LESS THAN 50% PASSING THROUGH A 50-MESH SIEVE, AND NOT LESS THAN 25% PASSING THROUGH A 100-MESH SIEVE.
WEED SEED SHALL NOT BE MORE THAN 1.5% OF TOTAL SEED. ALL SEED SHALL BE FACTORY PACKED AND TESTED.
A 10-10-10 FERTILIZER SHALL BE APPLIED UNIFORMLY, AS REQUIRED, OVER DISTURBED AREAS AT THE RATE OF 600 LBS. PER ACRE MINIMUM.
HAY OR STRAW OF GOOD QUALITY AND FREE OF DEBRIS SHALL BE APPLIED AS MULCH OVER DISTURBED AREAS. OTHER ACCEPTABLE MULCH MATERIAL MAY BE USED AS SPECIFIED OR APPROVED BY THE ENGINEER. MULCH MAY BE APPLIED BY HAND OR BY MECHANICAL BLOWERS TO OBTAIN A UNIFORM COVERAGE. DEPTH OF HAY SHALL NOT BE LESS THAN 1.5" BUT NO GREATER THAN 2.5". MULCH SHALL BE APPLIED AT 2.0 TO 2.5 TONS PER ACRE. MULCH APPLIED TO SEEDED AREAS SHALL ACHIEVE 75% SOIL COVERAGE. MULCH SHALL BE STABILIZED IN PLACE BY VARIOUS MEANS SUCH AS TACKING, NETTING, PINS, STAKES, OR OTHER APPROVED METHODS.

9. STORMWATER MANAGEMENT CONSIDERATION
STORM WATER RUNOFF IS COLLECTED THROUGH A SERIES OF CONVEYANCES & SWALES AND TREATED BY BMPs PRIOR TO REACHING THE LOWER PORTIONS OF THE PROPERTY. OUTLET PROTECTION WILL BE PROVIDED AT ALL OUTFALLS. WITH FULL IMPLEMENTATION OF THE CONSTRUCTION PLANS, THERE WILL MINIMAL IMPACT OR CHANNEL DEGRADATION DOWNSTREAM.

10. MAINTENANCE PROGRAM
A. "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. PRACTICES WILL BE CHECKED DAILY."
B. EROSION CONTROL MEASURES SHALL BE INSPECTED DAILY AND AFTER RAINFALL EVENTS. BMPs THAT REQUIRE REPLACEMENT, REPAIR, OR MAINTENANCE SHALL BE ADDRESSED DURING THE SAME DAY, OR THE FOLLOWING DAY BY A RESPONSIBLE CONTRACTOR.
C. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE DEEMED NECESSARY BY AN ON-SITE INSPECTION.
D. ACCUMULATED SEDIMENTS SHALL BE REMOVED FROM SEDIMENT BASINS AND SILT FENCES PRIOR TO REACHING 1/3 OF CAPACITY. COLLECTED SEDIMENTS SHALL BE SPREAD EVENLY OVER DISTURBED AREAS.
E. PERMANENT VEGETATION SHALL BE ESTABLISHED AS SOON AS POSSIBLE TO MINIMIZE EROSION.
F. EVERY POSSIBLE MEASURE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING STORM INLETS, ADJACENT STREAMS, AND DOWNSTREAM WATER.

11. CALCULATIONS
DISTURBED AREA: 3.03 ACRES
TOTAL AREA DRAINED: 4.21 ACRES
SEDIMENT VOLUME GENERATED: 3.03 ACRES x 67 C.Y./ACRE = 203 C.Y.
STORAGE PROVIDED:
SEDIMENT STORAGE WILL BE PROVIDED BY SD1'S ALONG THE SITE PERIMETER.

***SD1 IS BEING USED FOR SEDIMENT STORAGE SINCE THE SITE GRADING IS RELATIVELY MINOR. CONSTRUCTING A SEDIMENT POND WILL GENERATE MORE IMPACT TO THE ENVIRONMENT. CONSTRUCTING A SEDIMENT POND WILL DEFEAT THE PURPOSE OF TRYING TO MINIMIZE GRADING AND SEDIMENT MOVEMENTS.

12. THERE ARE NO WETLAND AREAS ON SITE.

13. SPECIFIC PROJECT DATA
TOTAL PROJECT AREA: 4.21 ACRES
ANTICIPATED DISTURBED AREA: 3.03 ACRES
PER APPENDIX B, 75 IS THE ALLOWABLE NTU VALUE FOR THE SITE BASED ON A DISTURBED AREA OF LESS THAN 10 ACRES AND SURFACE WATER DRAINAGE AREA OF LESS THAN 5 SQUARE MILES.

14. FIRM MAP: 13219C00650, DATED SEPT. 2, 2009.

15. THIS SITE DOES NOT LIE WITHIN THE 100-YEAR FLOOD LIMITS.

16. SOIL EROSION PROGRAM IMPLEMENTATION
A. "STANDARD AND SPECIFICATIONS: ALL DESIGNS WILL CONFORM TO AND ALL WORK WILL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE PUBLICATION ENTITLED "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA."
B. INSTALLATION OF BMPs AS SPECIFIED AND PHASED ON THE APPROVED DRAWINGS SHALL BE INSTALLED PRIOR TO, OR AS SOON AS FEASIBLY POSSIBLE, DURING CLEARING ACTIVITIES. GRADING SHALL NOT COMMENCE UNTIL BMPs HAVE BEEN CONSTRUCTED ON SITE.
-BMPs INCLUDE, BUT ARE NOT LIMITED TO, SILT FENCE, CONSTRUCTION EXIT/ENTS, TEMPORARY SEDIMENT POND, TEMPORARY AND PERMANENT GRASSING, MULCHING, OUTLET PROTECTIONS, SLOPE STABILIZING, JUTE MATTING, CHECK DAMS, SURFACE ROUGHENING, DIVERSION DITCHES, DOWNDRAINS, ETC.
C. BMPs SHALL BE INSTALLED IN STRICT ADHERENCE TO THE APPROVED SOIL EROSION AND SEDIMENT CONTROL PLANS. CONSTRUCTION MAY IN SOME CASES BE STOPPED DUE TO IMPROPER INSTALLATION AND MAINTENANCE OF BMPs.
D. EROSION CONTROL MEASURES SHALL BE ADAPTED TO CONSTRUCTION AND SITE CONDITIONS AS RECOMMENDED BY ENGINEER OR QUALIFIED INSPECTORS.
E. SLOPES WITH 2 HORIZONTAL TO 1 VERTICAL (2:1) THAT CREATE OVER 8 FEET IN ELEVATION DIFFERENCE SHALL BE STABILIZED WITH JUTE MATTING OR EQUIVALENT PRODUCT.
F. A "NOTICE OF INTENT" (NOI) SHALL BE SUBMITTED TO THE PROPER AGENCY AS REQUIRED BY N.P.D.E.S. FOR ALL PROJECTS WITH OVER 1.0 ACRES OF DISTURBED AREA.
G. BMPs ARE CONSIDERED TEMPORARY AND SHALL BE REMOVED AFTER PROJECT COMPLETION, UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS.
H. DISTURBED AREAS THAT ARE NOT UNDER CONSTRUCTION MUST BE STABILIZED WITHIN 14 DAYS OF DISTURBANCE.
I. TOPSOIL SHALL BE COLLECTED AND STOCKPILED ON SITE. A UNIFORM LAYER OF DEBRIS-FREE TOPSOIL SHALL BE UNIFORMLY SPREAD OVER DISTURBED AREAS TO ENHANCE VEGETATION GROWTH.
J. PRIOR TO ANY LAND DISTURBANCE, TREE-SAVE AREAS SHALL BE OUTLINED AND WELL-PROTECTED BY ORANGE FENCING AS SPECIFIED ON DRAWINGS.

17. LOCAL AGENCY NOTIFICATION
OCONEE COUNTY BUILDING DEPARTMENT SHALL BE NOTIFIED PRIOR TO STARTING CONSTRUCTION AT 706-769-3907.

OCONEE COUNTY CODE ENFORCEMENT SHALL BE NOTIFIED 24 HOURS PRIOR TO STARTING CONSTRUCTION

18. PROJECT LOCATION
THE PROJECT IS LOCATED AT THE INTERSECTION OF MARS HILL ROAD AND ROCKY BRANCH ROAD.

19. SOIL SURVEY SHEET NO: OCONEE

20. 24-HOUR CONTACT: MR. EMIL BESHARA P.E., ENGINEERING DIRECTOR
OCONEE COUNTY PUBLIC WORK DEPARTMENT

ADDRESS: 1291 GREENSBORO HIGHWAY
WATKINSVILLE, GA. 30677
706-769-2937
FAX: 706-769-2939

24-HOUR PHONE: CELL# 706-540-1725

NPDES PERMIT NO. GAR 100002 - NOTES AND REQUIRED PROCEDURES.

I CERTIFY THAT THE PERMITTEES EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY 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 WATERS) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR_100002.

Abel Abouda
SIGNATURE

PERMITTEE SHALL PROVIDE ES & PC PLAN COPIES TO ALL SECONDARY PERMITTEES PRIOR TO THE SECONDARY PERMITTEES CONDUCTING ANY CONSTRUCTION ACTIVITIES.

EVIDENCE SHALL BE OBTAINED BY THE PRIMARY PERMITTEE FROM ALL SECONDARY PERMITTEES THAT THEY EACH RECEIVED A COPY OF THE ES & PC PLANS.

PRIMARY PERMITTEES SHALL PROVIDE A LIST OF ALL SECONDARY PERMITTEES TO EPD. SECONDARY PERMITTEES SHALL BE RESPONSIBLE FOR SUBMITTING THE REQUIRED NOTICE OF INTENT (NOI).

DESIGN PROFESSIONAL WHO PREPARED THE ES & PC PLANS SHALL CONDUCT A SITE VISIT TO INSPECT THE INSTALLATION OF BEST MANAGEMENT PRACTICES (BMPs) WITHIN 7 DAYS AFTER THE INITIAL CONSTRUCTION ACTIVITIES STARTS.

REFER TO THE PROJECT STORM WATER MANAGEMENT REPORT FOR DETAILED INFORMATION REGARDING THE SITE MAP INDICATING DRAINAGE PATTERNS, DISCHARGE POINTS AND PEAK RUNOFF FLOWS.

CONSTRUCTION WASTE MATERIALS INCLUDING BUT NOT LIMITED TO BUILDING MATERIALS, CONSTRUCTION DEBRIS, OLD SOIL, EROSION FENCING AND POST, AND OTHER SOLID WASTE SHALL NOT BE DISCHARGED TO STATE WATERS UNLESS AS AUTHORIZED BY SECTION 404 PERMIT. ALL CONSTRUCTION WASTE MATERIAL SHALL BE REMOVED FROM SITE AND DISPOSED OF AT A PERMITTED SOLID WASTE MANAGEMENT FACILITY.

DUST CONTROL SHALL BE PROVIDED DURING CONSTRUCTION BY THE CONTRACTOR, AS REQUIRED DURING DRY WEATHER SEASON AND DRY CONDITIONS ON SITE. THE CONTRACTOR SHALL APPLY WATER BY SPRAYING OVER DISTURBED AREAS THAT ARE POTENTIAL FOR CREATING DUST DURING CONSTRUCTION. OTHER METHOD OF CONTROLLING DUST MAY BE IMPLEMENTED INCLUDING BUT NOT LIMITED TO PLACING A TEMPORARY GRAVEL OR CRUISER RUN LAYER OVER DISTURBED AREAS THAT HAVE POTENTIAL DUST PROBLEM.

THE ES & PC PLAN SHALL BE IN COMPLIANCE WITH APPLICABLE STATE AND LOCAL WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS, TO THE BEST OF OUR ABILITIES AND KNOWLEDGE, THE ES & PC HAS BEEN PREPARED IN COMPLIANCE WITH THE COUNTY HEALTH DEPARTMENT REGULATIONS.

FUELING OF CONSTRUCTION EQUIPMENT SHALL BE DONE BY MOBILE FUELING TRANSPORT UNITS. HOWEVER, FUELING OF CONSTRUCTION EQUIPMENT SHALL BE CONDUCTED AT THE LOCATIONS SPECIFIED ON THE ES & PC PLANS. THE DESIGNATED FUELING LOCATIONS) SHALL BE CONSTRUCTED TO CONTROL ANY SPILL OR LEAK IN A CONTAINMENT AREA. THESE AREA SHALL HAVE SECONDARY CONTAINMENT BY MEANS OR CLAY LINER AND BERM AS REQUIRED. REFER TO THE DETAIL PROVIDED ON THE PLANS FOR THE REMEDIATION OF ALL PETROLEUM SPILLS AND LEAKS.

NON-EXEMPT LAND DISTURBING ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25' OR 50' UNDISTURBED STREAM BUFFERS, AS MEASURED FROM WRESTED VEGETATION, UNLESS ALL VARIANCES AND PERMITS HAVE BEEN APPROVED OR AUTHORIZED BY EPD AND OTHER PERMITTING AGENCIES, AS REQUIRED.

ES&PC PLAN AMENDMENTS OR REVISIONS DURING CONSTRUCTION THAT HAVE A SIGNIFICANT EFFECT ON BMPs WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.

SAMPLING RATIONAL
OUTFALL SAMPLING WILL BE USED. A SINGLE OUTFALL DRAINS THE SITE AT THE R/W AND WILL SERVE AS THE SAMPLING LOCATION.
-THE OVERALL PROJECT AREA: 4.21 ACRES
-SURFACE WATER DRAINAGE AREA: 0.02 SQ. MILES
-TYPE OF RECEIVING WATERS: SUPPORTING WARM WATER FISHERIES. MAX. NTU MEASUREMENT SHALL NOT EXCEED 75 NTUS. DRAINAGE AREA IS LESS THAN 5 mi2 AND DISTURBED AREA IS LESS THAN 10 ACRES.

NOTICE OF INTENT (NOI)
1. COMPLETE AND SUBMIT NOI AND ALL REQUIRED FEES TO EPD, MINIMUM 14 DAYS PRIOR TO START OF CONSTRUCTION

QUALIFIED PERSONNEL REQUIREMENTS
1. WEEKLY INSPECTIONS
2. SAMPLING IS REQUIRED BY PERMIT
3. MONTHLY REPORTS, COMPLETIONS, AND SUBMITTAL TO EPD
7 DAY INSPECTION AFTER START OF CONSTRUCTION BY DESIGNER OR ENGINEER

FINAL STABILIZATION
1. SITE MUST BE 75% STABILIZED, MINIMUM
2. EROSION AND PERMANENT BMP PROBLEMS ARE SOLVED
3. FINAL INSPECTION COMPLETED
4. PROJECT CLOSE OUT

NOTICE OF TERMINATION (NOT)
1. FINAL STABILIZATION COMPLETED
2. NO T. FORM FILLED OUT AND SUBMITTED TO EPD

INSPECTIONS:

NOTICE OF INTENT (NOI)
1. COMPLETE AND SUBMIT NOI TO EPD
2. PAY ALL REQUIRED FEES TO EPD

3. SUBMIT NOI AND FEE TO EPD A MINIMUM OF 14 DAYS PRIOR TO START OF CONSTRUCTION.

A. PRIMARY PERMITTEE
- INSPECTIONS SHALL BE CONDUCTED UNTIL A NOT IS SUBMITTED
- ALL INSPECTIONS SHALL BE PERFORMED BY QUALIFIED PERSONNEL

1. DAILY
- ALL AREAS AT THE PRIMARY PERMITTEES SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT; (B) ALL LOCATIONS AT THE PRIMARY PERMITTEES SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING; AND (C) MEASURE RAINFALL ONCE EACH TWENTY-FOUR HOUR PERIOD AT THE SITE.
2. WEEKLY AND WITHIN 24-HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER
- (A) DISTURBED AREAS OF THE PRIMARY PERMITTEES CONSTRUCTION SITE THAT HAVE NOT UNDERGONE FINAL STABILIZATION; (B) AREAS USED BY THE PRIMARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION THAT HAVE NOT UNDERGONE FINAL STABILIZATION; AND (C) STRUCTURAL CONTROL MEASURES.

3. MONTHLY
- THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION - THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATERS. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY.
4. ES AND PC PLAN CHANGES
- BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE ES AND PC PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. THIS PRIMARY PERMITTEE MUST AMEND THE PLAN IN ACCORDANCE WITH PART IV.D.3.B.(4). WHEN A SECONDARY PERMITTEE NOTIFIES THE PRIMARY PERMITTEE OF ANY PLAN DEFICIENCIES.
5. REPORTS
- A REPORT SUMMARIZING THE SCOPE OF EACH INSPECTION AND THE NAMES) OF PERSONNEL MAKING EACH INSPECTION, THE DATES) OF EACH INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN AND ACTIONS TAKEN IN ACCORDANCE WITH PART V.A.6.A.(4). OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION PROJECT THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL 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 THIS PERMIT.

B. SECONDARY PERMITTEE
- INSPECTIONS SHALL BE CONDUCTED UNTIL A NOT IS SUBMITTED
- ALL INSPECTIONS SHALL BE PERFORMED BY QUALIFIED PERSONNEL
1. DAILY
- (A) ALL AREAS AT THE SECONDARY PERMITTEES SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT; (B) ALL LOCATIONS AT THE SECONDARY PERMITTEES SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS IF THEY ARE SECONDARY PERMITTEES.
2. WEEKLY AND WITHIN 24-HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER
- (A) DISTURBED AREAS OF THE SECONDARY PERMITTEES CONSTRUCTION SITE THAT HAVE NOT UNDERGONE FINAL STABILIZATION; (B) AREAS USED BY THE SECONDARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION THAT HAVE NOT UNDERGONE FINAL STABILIZATION; AND (C) STRUCTURAL CONTROL MEASURES. FOR AREAS OF A SITE THAT HAVE 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 THIS PERMIT. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS IF THEY ARE SECONDARY PERMITTEES PERFORMING ONLY SERVICE LINE INSTALLATIONS.

3. MONTHLY
- THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION - THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATERS. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS). FOR AREAS OF A SITE THAT HAVE 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 ES AND PC PLAN AND THIS PERMIT. THIS REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G. OF THIS PERMIT. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS IF THEY ARE SECONDARY PERMITTEES PERFORMING ONLY SERVICE LINE INSTALLATIONS.

C. TERTIARY PERMITTEE
- INSPECTIONS SHALL BE CONDUCTED UNTIL A NOT IS SUBMITTED
- ALL INSPECTIONS SHALL BE PERFORMED BY QUALIFIED PERSONNEL
1. DAILY
- (A) ALL AREAS USED BY THE TERTIARY PERMITTEE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT; (B) ALL LOCATIONS AT THE TERTIARY PERMITTEE SITE WHERE THE PERMITTEES VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS PERFORMING ONLY SERVICE LINE INSTALLATIONS.
2. WEEKLY AND WITHIN 24-HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER
- (A) DISTURBED AREAS OF THE TERTIARY PERMITTEES CONSTRUCTION SITE THAT HAVE NOT UNDERGONE FINAL STABILIZATION; (B) AREAS USED BY THE TERTIARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION THAT HAVE NOT UNDERGONE FINAL STABILIZATION; AND (C) STRUCTURAL CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS). FOR AREAS OF A SITE THAT HAVE 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 ES AND PC PLAN AND THIS PERMIT. THIS REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G. OF THIS PERMIT. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS IF THEY ARE SECONDARY PERMITTEES PERFORMING ONLY SERVICE LINE INSTALLATIONS.

A. SAMPLING METHODS:
1. CLEAN RUBBER GLOVES SHALL BE USED DURING SAMPLING.
2. CLEAN GLASS CONTAINERS WITH LARGE OPENING SHALL BE USED TO GRAB SAMPLES. CONTAINERS SHALL BE CLEARED WITH CLEAN WATER AND THEN RINSED WITH DISTILLED WATER PRIOR TO USE. LABEL SAMPLE CONTAINERS BEFORE SAMPLING.
3. DO NOT DILUTE SAMPLE.
4. TURBIDIMETER SHALL BE CALIBRATED.
5. SAMPLING METHOD SHALL BE "GRAB SAMPLES" IN ACCORDANCE WITH PROCEDURES ESTABLISHED BY 40 CFR PART 136, THE GUIDANCE DOCUMENT EPA 833-B-92-001 AND GUIDANCE DOCUMENTS THAT MAY BE PREPARED BY EPD.
6. SAMPLES MUST BE ANALYZED NO LATER THAN 48 HOURS AFTER GRAB USING A DIRECT READ, PROPERLY CALIBRATED TURBIDIMETER.
7. USE SAFETY PRECAUTIONS DURING SAMPLING.
8. COLLECT SAMPLES WHERE STREAM OR FLOW IS WELL MIXED.
9. SAMPLE FROM HORIZONTAL AND VERTICAL CENTER OF FLOW.
10. DO NOT SITE SEDIMENT AT BOTTOM OF STREAM OR DISCHARGE CHANNEL.
11. FACE SAMPLING CONTAINERS UPSTREAM.
12. KEEP SAMPLES FREE OF FLOATING DEBRIS.
13. DO NOT TOUCH INSIDE OF SAMPLING CONTAINERS.
14. RESULTS OF SAMPLES ANALYZED MUST BE REPORTED IN NTUS (NEPHLOMETRIC TURBIDITY UNITS)
15. SAMPLES MUST BE TAKEN BY QUALIFIED PERSONNEL.
16. SAMPLES MUST BE TAKEN WITHIN 2 HOURS AFTER THE BEGINNING OF A STORM.
17. CHAIN OF CUSTODY SHALL BE MAINTAINED FOR SAMPLES TO BE ANALYZED BY A THIRD PARTY LABORATORY. THIRD PARTY LABORATORY SHALL BE APPROVED BY THE STATE TO PERFORM NECESSARY TESTING FOR TURBIDITY.

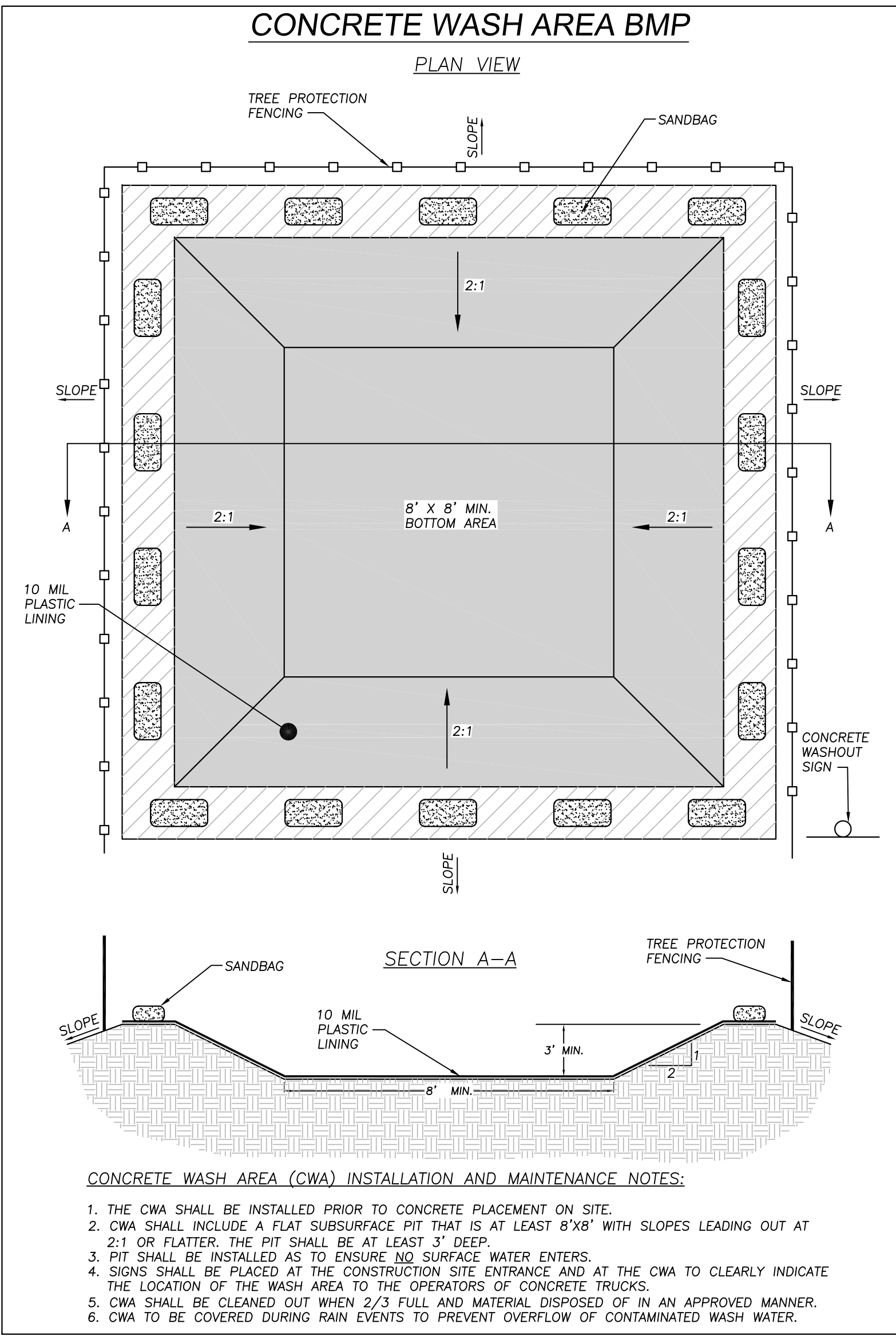
B. SAMPLING FREQUENCY:
A. ONE SAMPLE AT EACH MONITORING LOCATION AFTER 45' OR GREATER RAINFALL EVENT AFTER ALL CLEARING AND GRUBBING ACTIVITIES HAVE BEEN COMPLETED. SAMPLING SHALL BE DONE DURING NORMAL BUSINESS HOURS (MONDAY THRU FRIDAY, 8:00 AM TO 5:00 PM AND SATURDAY 8:00 AM TO 5:00 PM WHEN CONSTRUCTION ACTIVITY IS BEING CONDUCTED BY PRIMARY PERMITTEE)
B. ONE SAMPLE AT EACH MONITORING LOCATION AFTER 45' OR GREATER RAINFALL EVENT THAT OCCURS EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED WITHIN THE DRAINAGE BASIN, WHICHEVER COMES FIRST.
C. ADDITIONAL SAMPLES WILL BE REQUIRED IF BMPs IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM ARE NOT PROPERLY DESIGNED, INSTALL AND MAINTAINED. CORRECTIVE ACTION SHALL BE DETERMINED AND IMPLEMENTED WITHIN 2 BUSINESS DAYS AND TURBIDITY SAMPLES SHALL BE TAKEN FROM DISCHARGES FROM THAT AREA OF THE SITE FOR THE SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS A 50 INCH DURING NORMAL BUSINESS HOURS UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST STORM EVENT INSPECTIONS DETERMINE THAT BMPs ARE PROPERLY DESIGNED, INSTALLED AND MAINTAINED.
NOTE: UPSTREAM SAMPLE MAY BE TAKEN AT ANY TIME DURING OR BEFORE CONSTRUCTION. IT IS HIGHLY RECOMMENDED THAT A SAMPLE BE TAKEN UPSTREAM PRIOR TO CONSTRUCTION.

C. REPORTING:
A. MONITORING RESULTS SHALL BE SUBMITTED TO EPD AT THE ADDRESS DESIGNATED FOR THE NOI SUBMITTAL OR THE LOCAL EPD OFFICE BY THE FIFTEENTH OF THE MONTH FOLLOWING THE REPORTING PERIOD. REPORTING PERIODS ARE MONTHS DURING WHICH SAMPLES ARE TAKEN. SAMPLING RESULTS SHALL BE SUBMITTED TO EPD UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART IV OF THE PERMIT.
B. COPIES OF ALL MONITORING RESULTS REPORTED SHALL BE MAINTAINED BY THE PERMITTEE.
C. MONITORING INFORMATION SHALL INCLUDE:
- DATE AND EXACT PLACE AND TIME OF SAMPLING.
- NAME OF INDIVIDUAL WHO PERFORMED THE SAMPLING.
- DATE ANALYSIS WERE PERFORMED.
- TIME ANALYSIS WERE INITIATED.
- THE NAME OF THE INDIVIDUAL WHO PERFORMED THE ANALYSES.
- REFER WRITTEN PROCEDURE WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED.
- THE RESULTS OF SUCH ANALYSES, INCLUDING SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS, ETC. USED TO DETERMINE THESE RESULTS.
- RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDING 1000 NTU".

D. RETENTION OF RECORDS:
A. A COPY OF ES AND PC PLAN SHALL BE RETAINED BY THE PRIMARY PERMITTEE ON SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL DATE OF FINAL STABILIZATION.
B. A COPY OF APPLICABLE ES AND PC PLAN PORTIONS SHALL BE RETAINED BY THE SECONDARY PERMITTEE FOR THEIR ACTIVITIES AT THE CONSTRUCTION SITE OR HAVE THE PLAN READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL DATE OF FINAL STABILIZATION.
C. COPIES OF NOIS, NOTIS, REPORTS, PLANS, MONITORING REPORTS, MONITORING INFORMATION, RECORDING AND CALIBRATION RECORDS, ES AND PC PLANS TERTIARY ECP, DATE USED FOR NOI AND ALL OTHER RECORDS REQUIRED BY PERMIT NO. GAR 100003 SHALL BE RETAINED BY THE PRIMARY PERMITTEE FOR A PERIOD OF NO LESS THAN THREE YEARS FROM THE DATE THE SITE IS FINALLY STABILIZED. THESE RECORDS SHALL BE MAINTAINED AT THE PRIMARY PERMITTEES PLACE OF BUSINESS ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE.

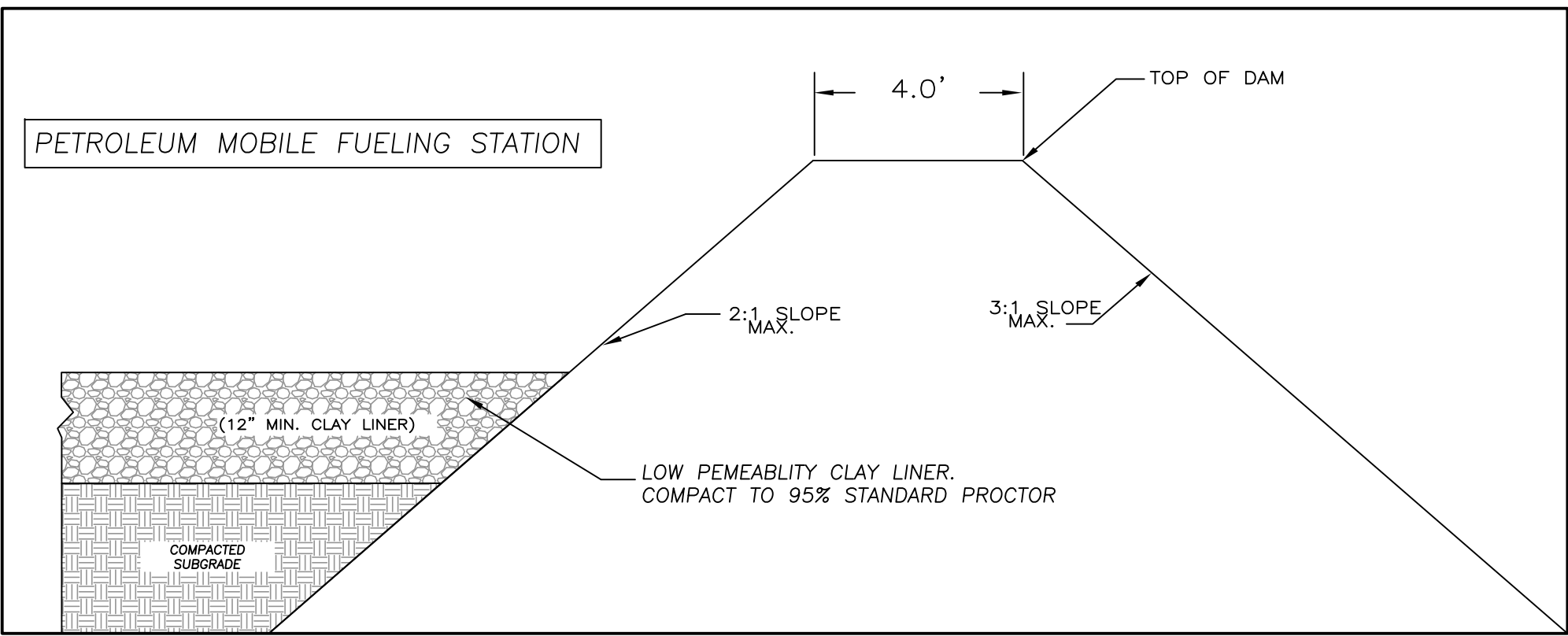
PETROLEUM SPILL NOTES:

1. IN THE EVENT THAT A FUEL SPILL OCCURS
APPROPRIATE ACTIONS MUST IMMEDIATELY BE TAKEN TO REDUCE THE POSSIBILITY OF LAND OR WATER CONTAMINATION.
2. THE GEORGIA OIL AND HAZARDOUS MATERIAL SPILL OR RELEASES ACT (O.C.G.A. 12-14-1 et seq.) REQUIRES THAT ALL REPORTABLE SPILLS IN THE STATE OF GEORGIA ARE IMMEDIATELY REPORTED TO THE STATE OPERATIONS CENTER AT (404) 656-4300 AND TO THE FEDERAL NATIONAL RESPONSE CENTER (NRC) AT 1-800-424-8802.
(a) A SPILL IS CONSIDERED REPORTABLE IF IT IS:
I. A SPILL OF A HAZARDOUS SUBSTANCE ABOVE THE REPORTABLE QUANTITY LISTED IN 40 CFR 302.4.
II. A SPILL OF A PETROLEUM PRODUCT WHICH REACHES THE WATERS OF THE STATE (INCLUDING STREAMS, RIVERS, STORM SEWERS, AND DRAINAGE DITCHES) AND CAUSES A SHEEN.
3. APPROPRIATE SPILL RESPONSE EQUIPMENT MUST BE AVAILABLE ON-SITE AT ALL TIMES.
4. CLEAN UP AND REMEDIATION OF ANY CONTAMINATION RESULTING FROM A SPILL IS THE RESPONSIBILITY OF THE GENERATOR OF THE WASTE.
5. IN THE EVENT OF A SPILL, THE CONTAMINATED SOIL SHOULD BE IMMEDIATELY EXCAVATED TO A DEPTH WHERE THE SOIL APPEARS VISUALLY CLEAN.
CONTAMINATED SOIL SHOULD THEN BE PLACED INTO AN ADEQUATELY SEALED AND SECURED CONTAINER AND DISPOSED OF AT AN APPROVED FACILITY.



CONCRETE WASH AREA (CWA) INSTALLATION AND MAINTENANCE NOTES:

1. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
2. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8"X8" WITH SLOPES LEADING OUT AT 2:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
3. PIT SHALL BE INSTALLED AS TO ENSURE NO SURFACE WATER ENTERS.
4. SIGNS SHALL BE PLACED AT THE CONSTRUCTION SITE ENTRANCE AND AT THE CWA TO CLEARLY INDICATE THE LOCATION OF THE OPERATORS OF CONCRETE TRUCKS.
5. CWA SHALL BE CLEARED OUT WHEN 2/3 FULL AND MATERIAL DISPOSED OF IN AN APPROVED MANNER.
6. CWA TO BE COVERED DURING RAIN EVENTS TO PREVENT OVERFLOW OF CONTAMINATED WASH WATER.



ABE CONSULTING INC.
COMPREHENSIVE ENGINEERING SERVICES
CIVIL ENGINEERING
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MARS HILL, VIRGIL
LANGFORD &
ROCKY BRANCH
ROADS
IMPROVEMENTS

MARS HILL ROAD, VIRGIL
LANGFORD & ROCKY BRANCH
ROADS
OCONEE COUNTY, GEORGIA

ES&PC DETAILS

ABE CONSULTING INC.
REGISTERED PROFESSIONAL ENGINEER
1980
ABDOLRAHMAN
3-15-19

REVISIONS	DATE
ADDED TRAFFIC SIGNAL & SIGNAGE	2-22-17
ADDED LOOPS & PHASING	2-27-17
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ADDED REVISED UTILITIES PER PPI PLANS	3-15-19

DATE: 8-29-16
PROJECT #: 09-021-11

GRAPHIC SCALE
0' 1/2" 1' 2' 3'
SCALE: AS NOTED

SHEET #
12
15

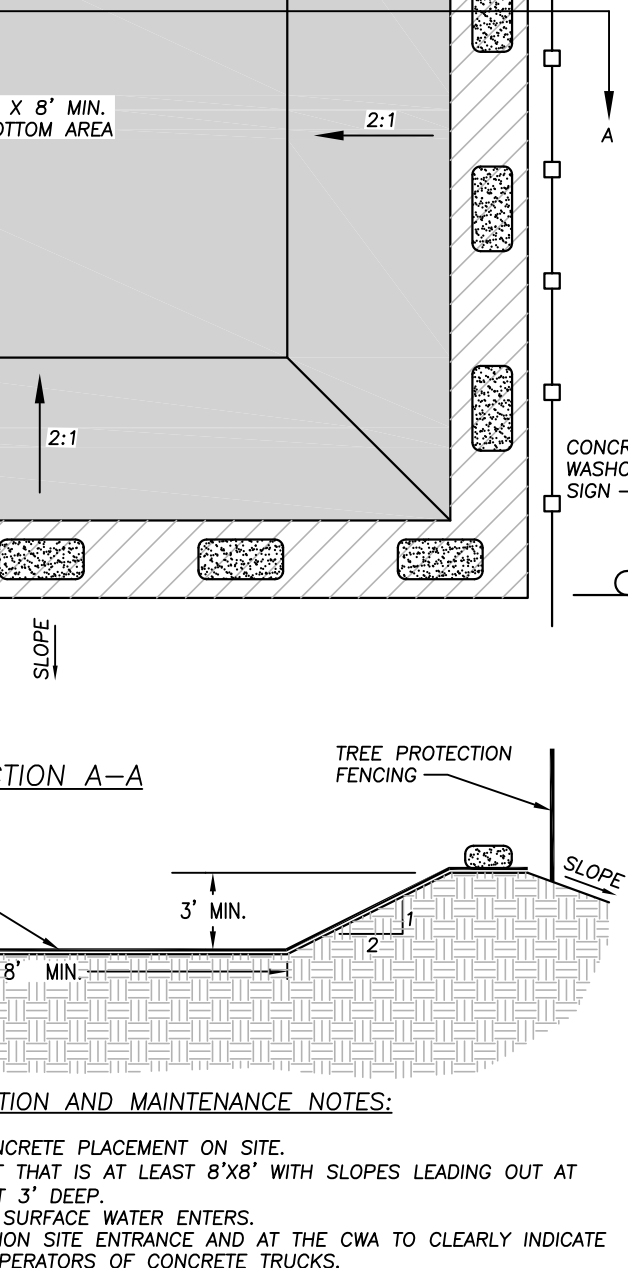
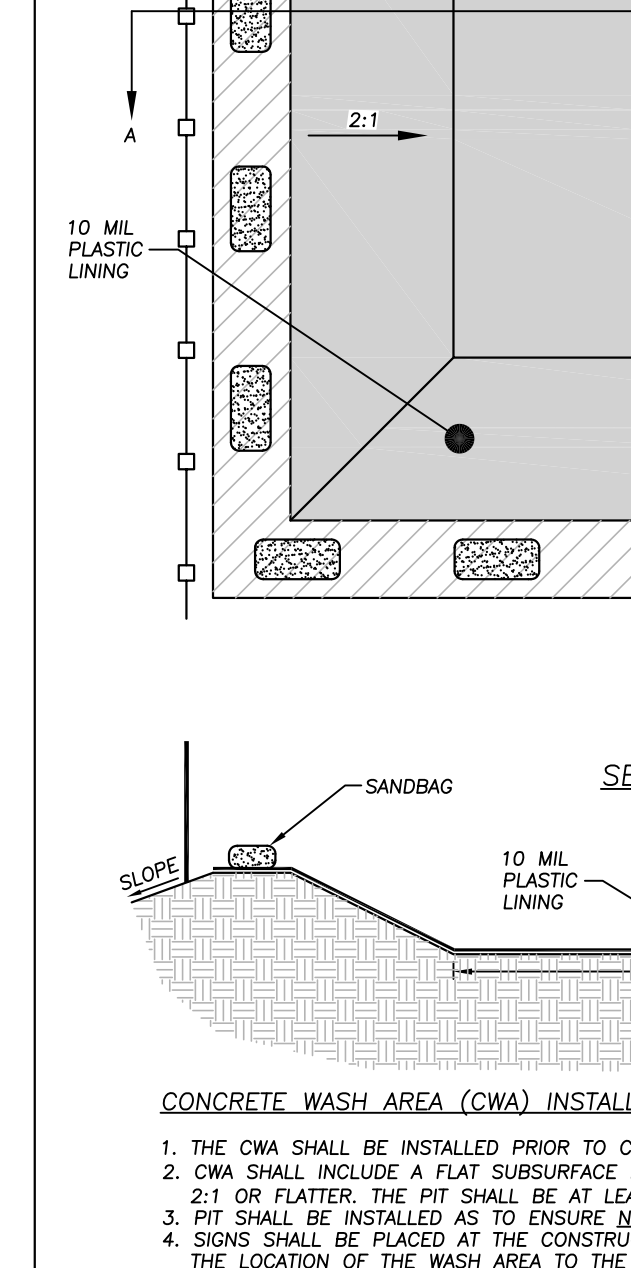
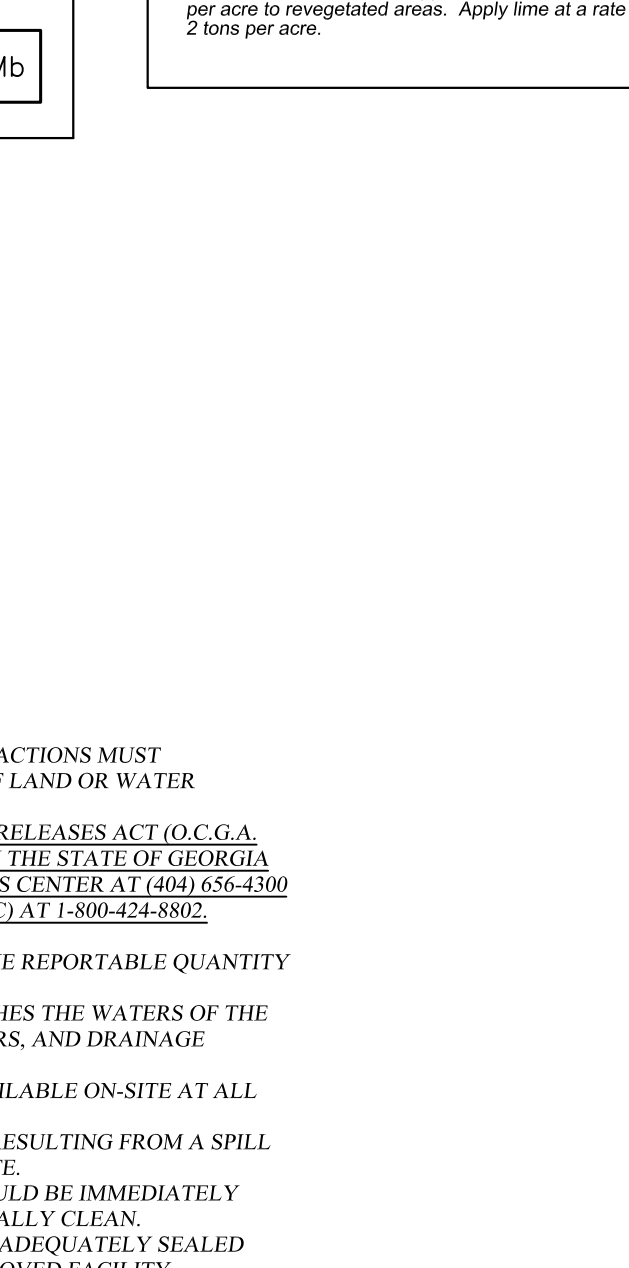
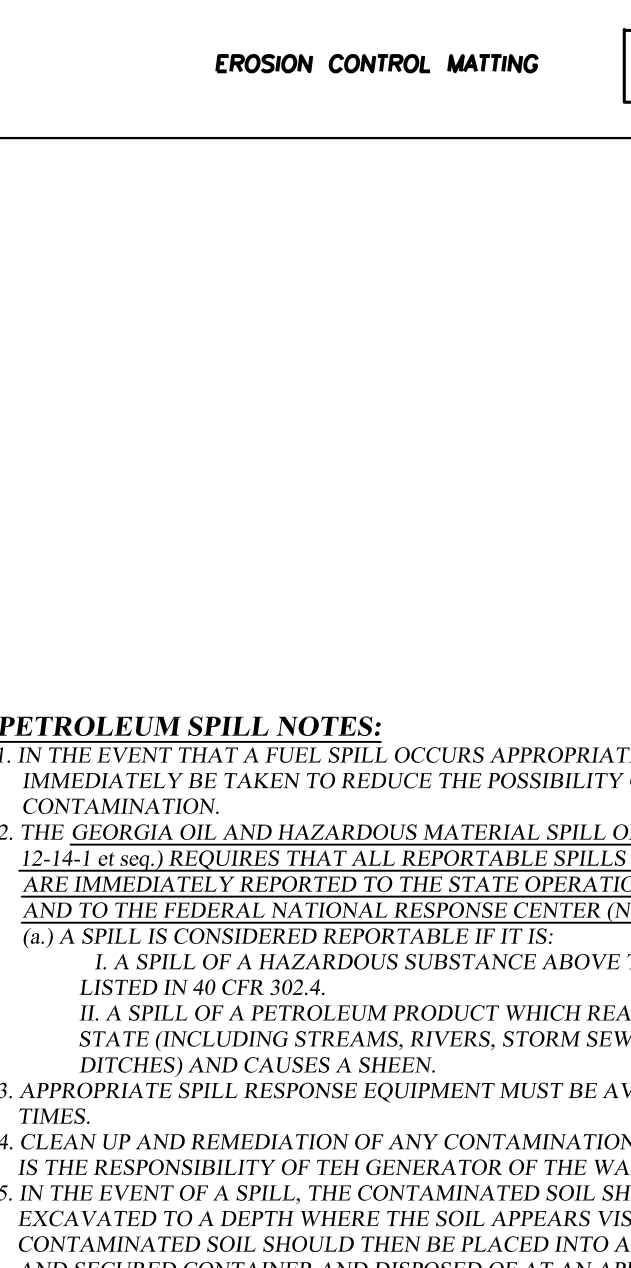
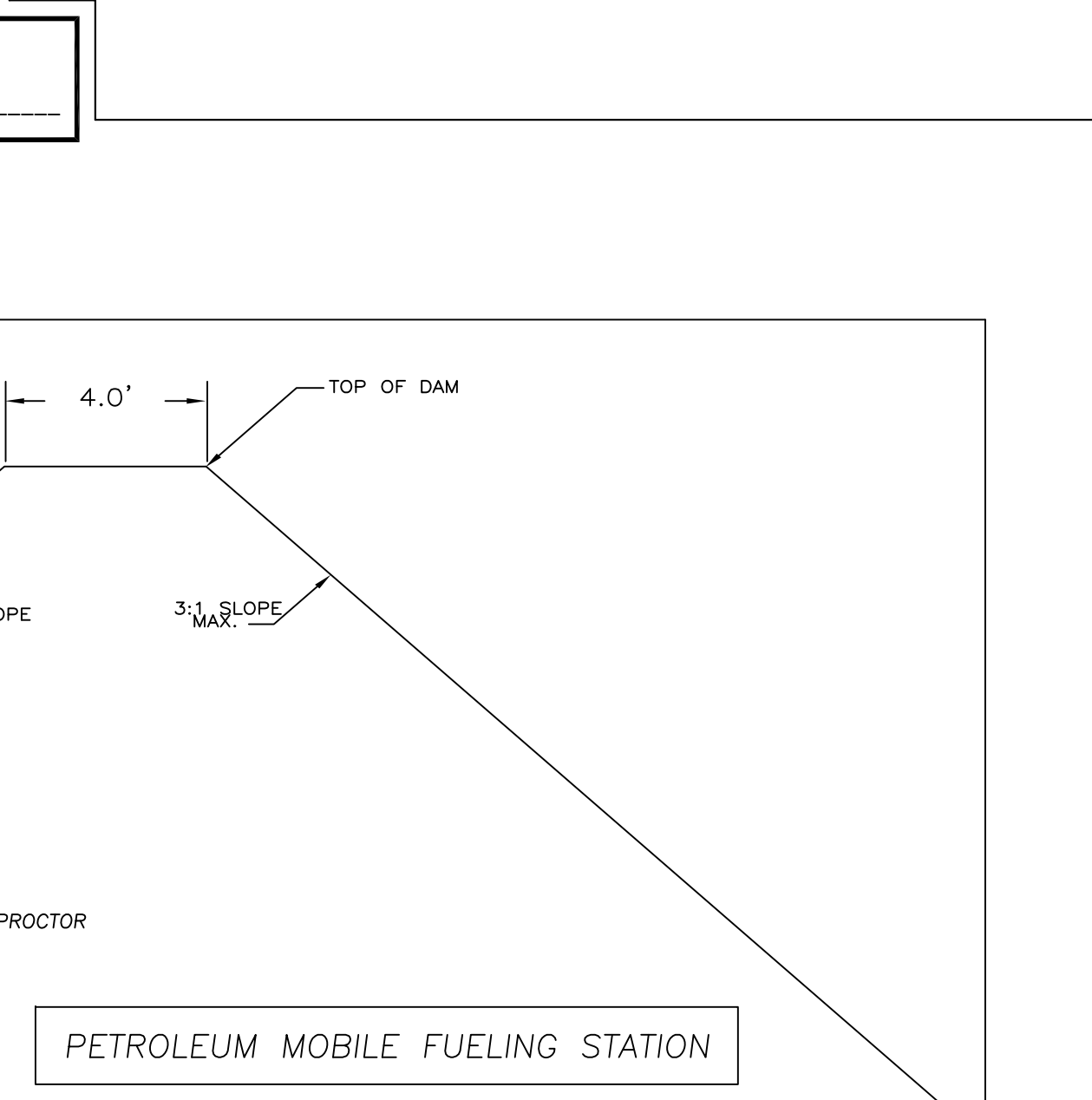
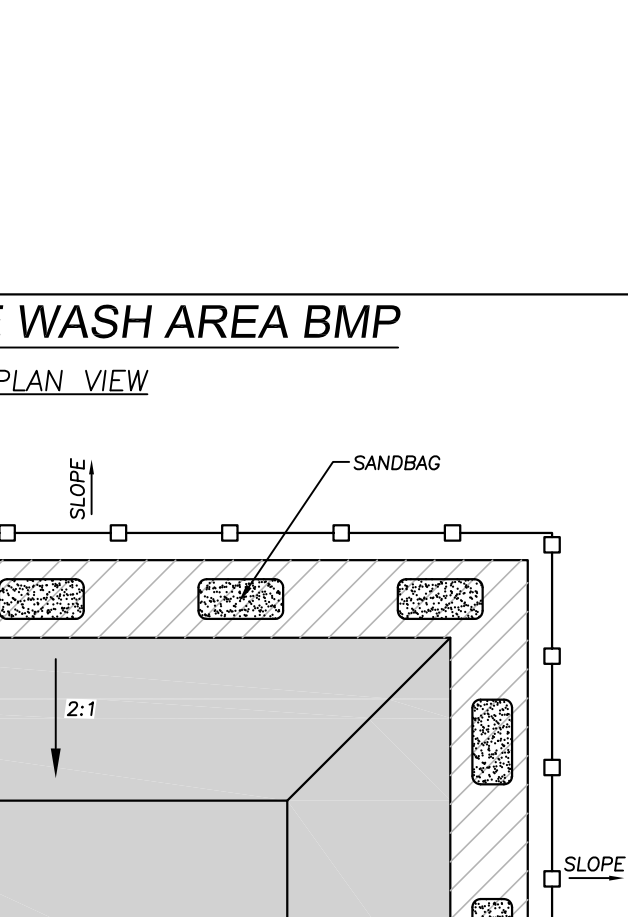
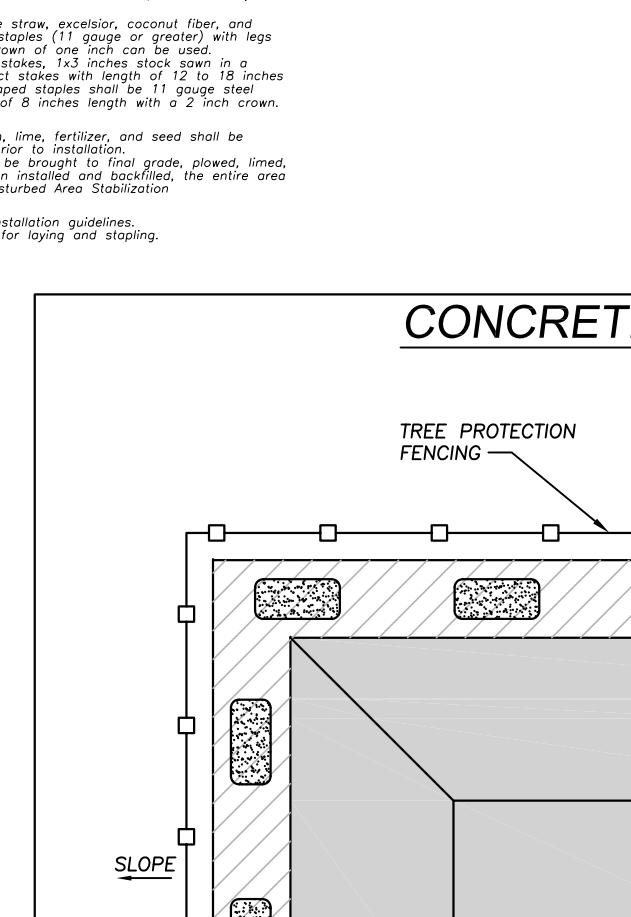
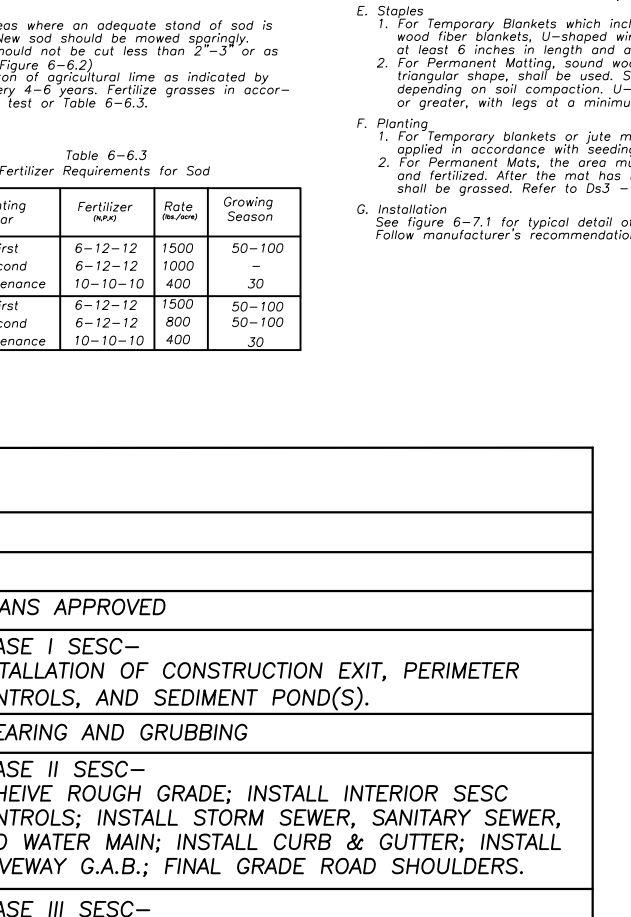
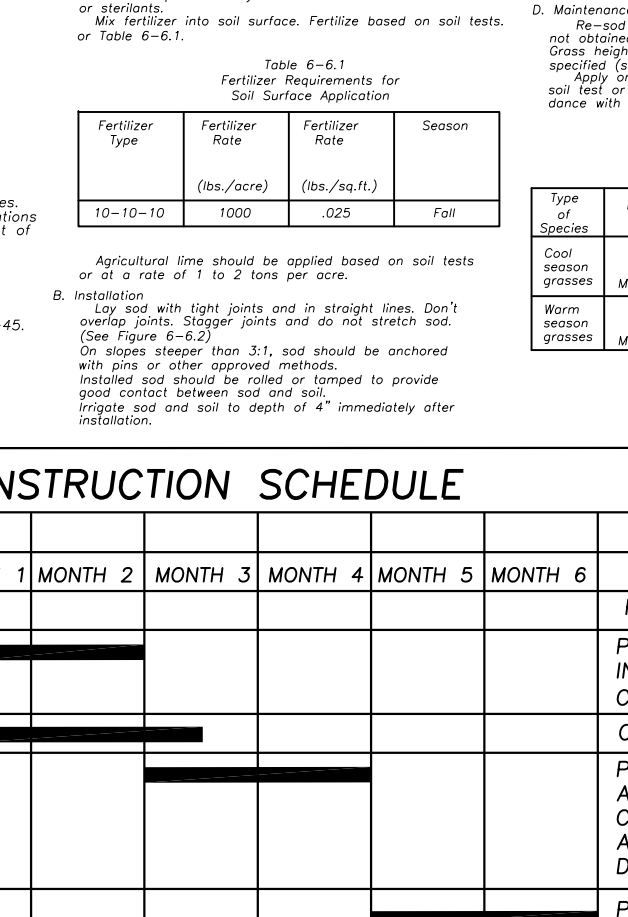
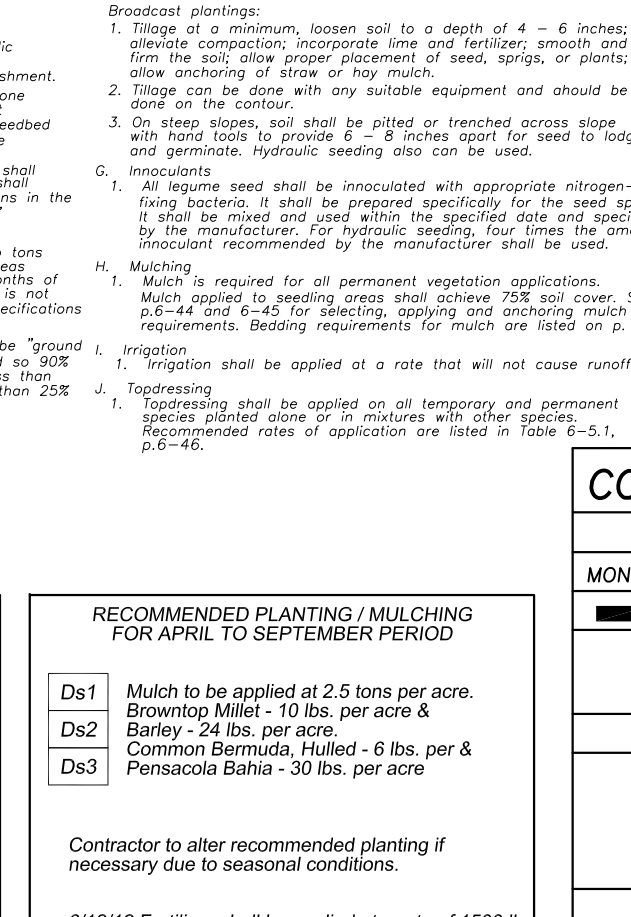
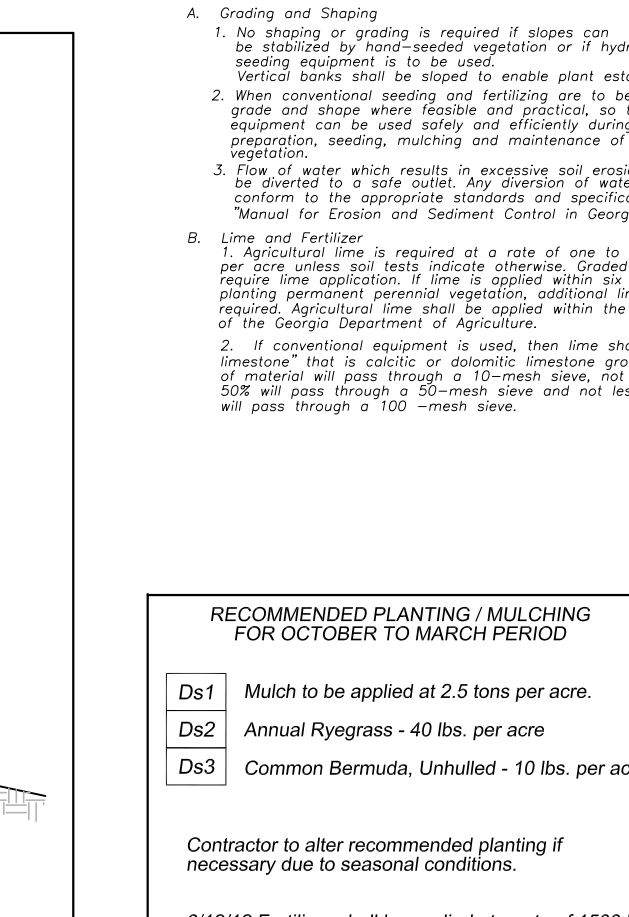
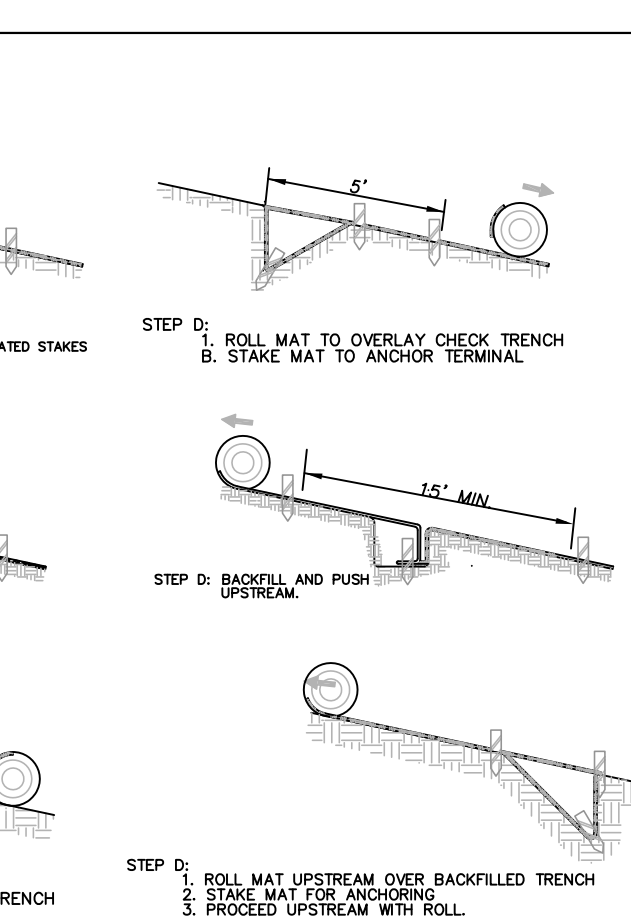
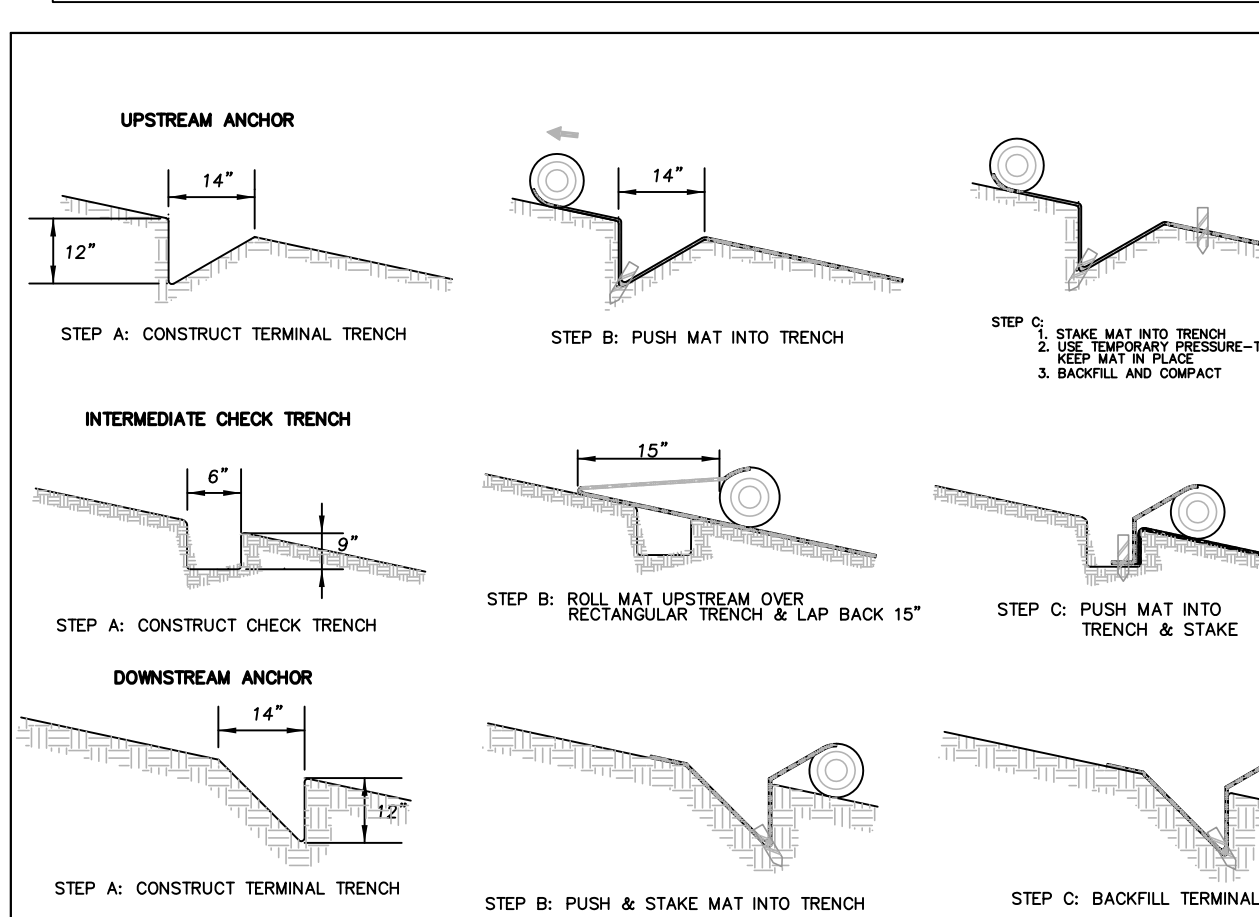
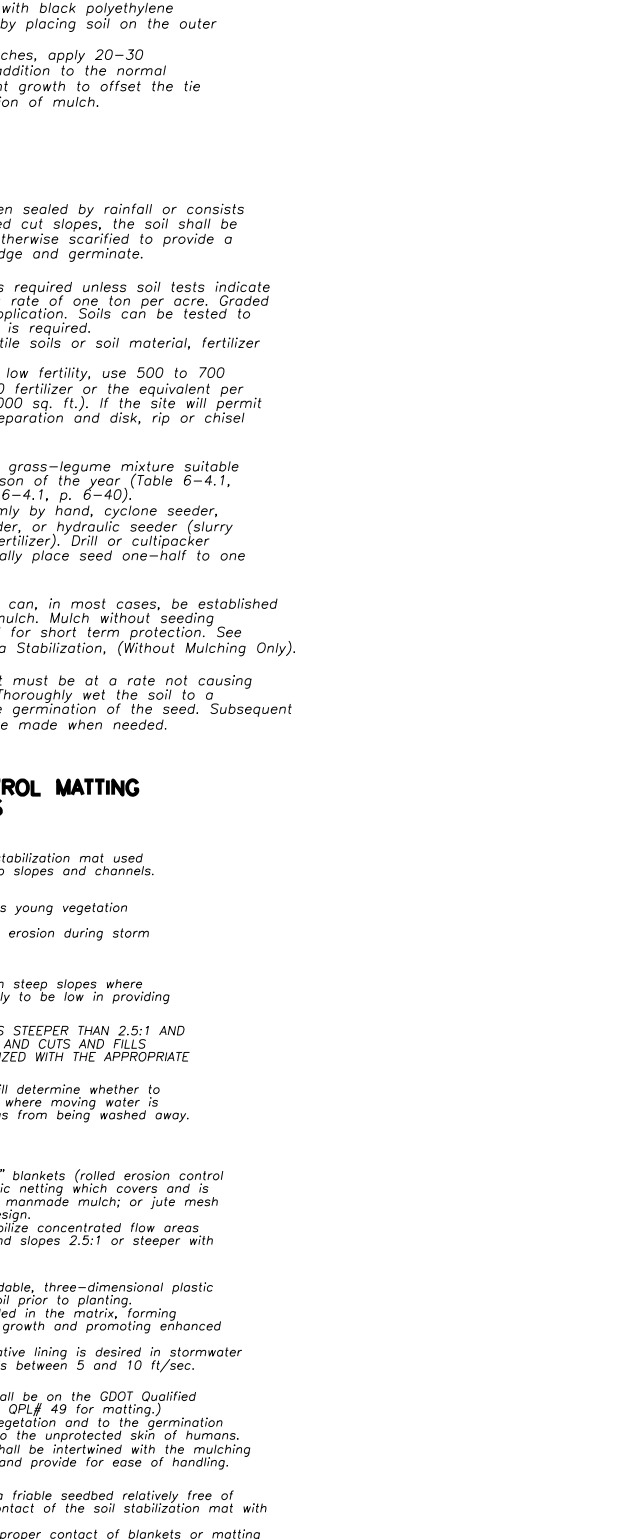
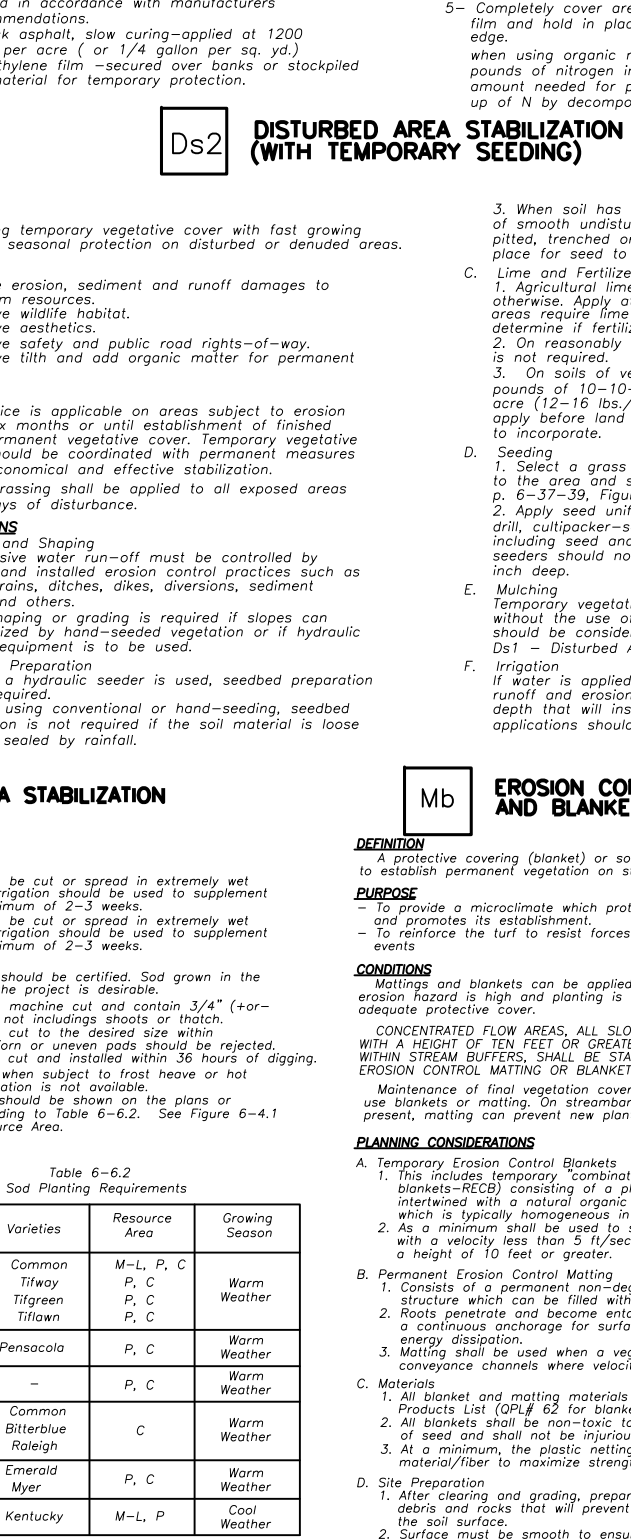
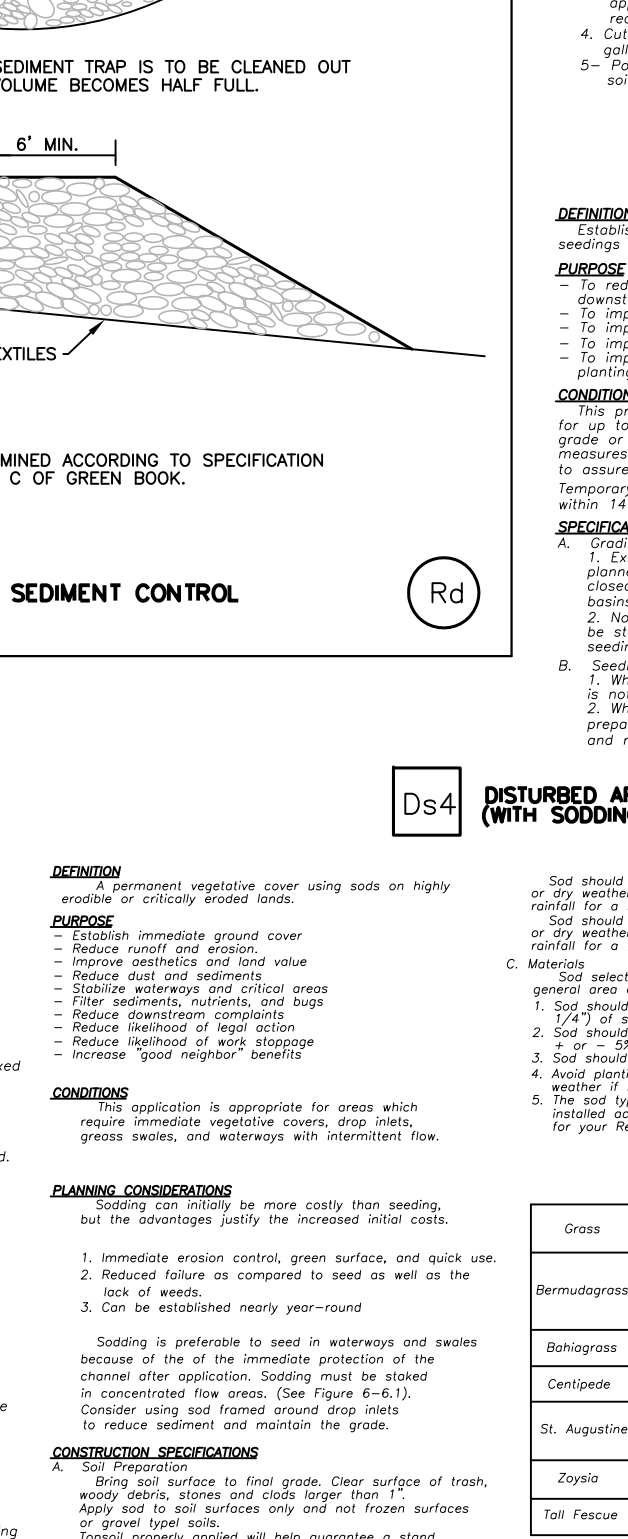
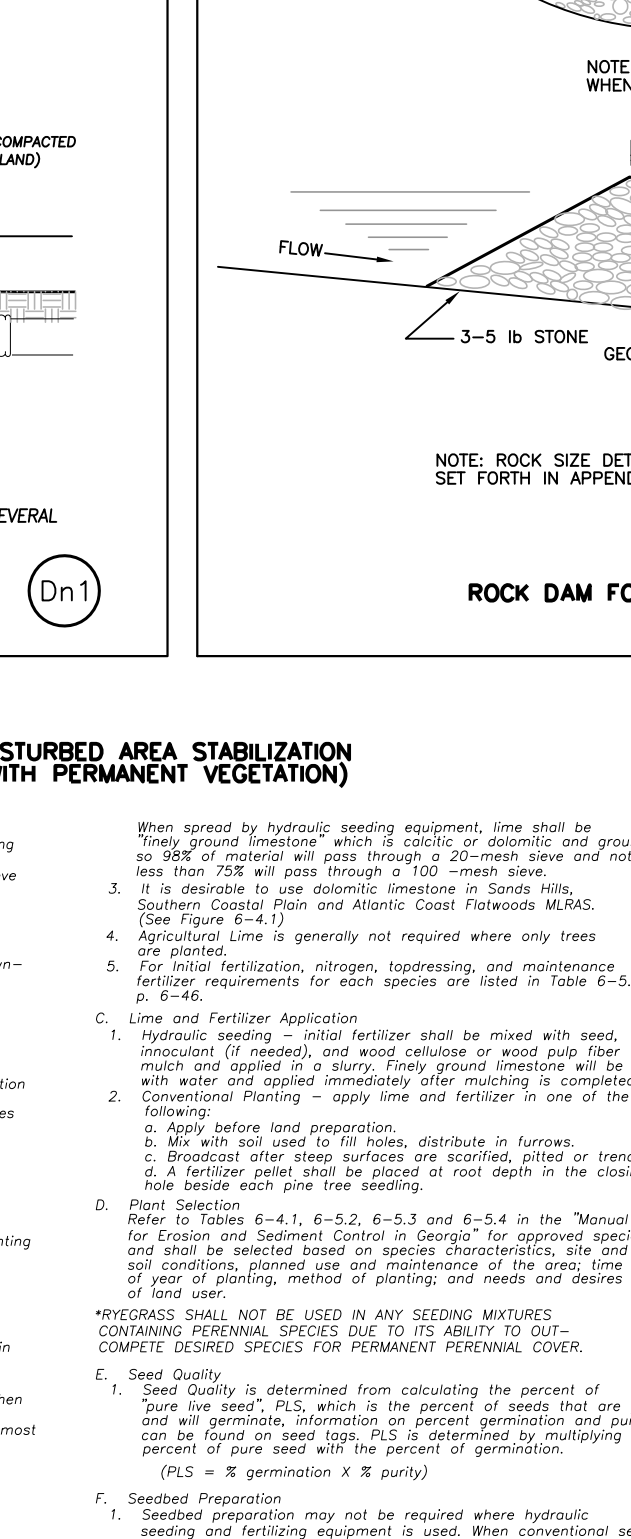
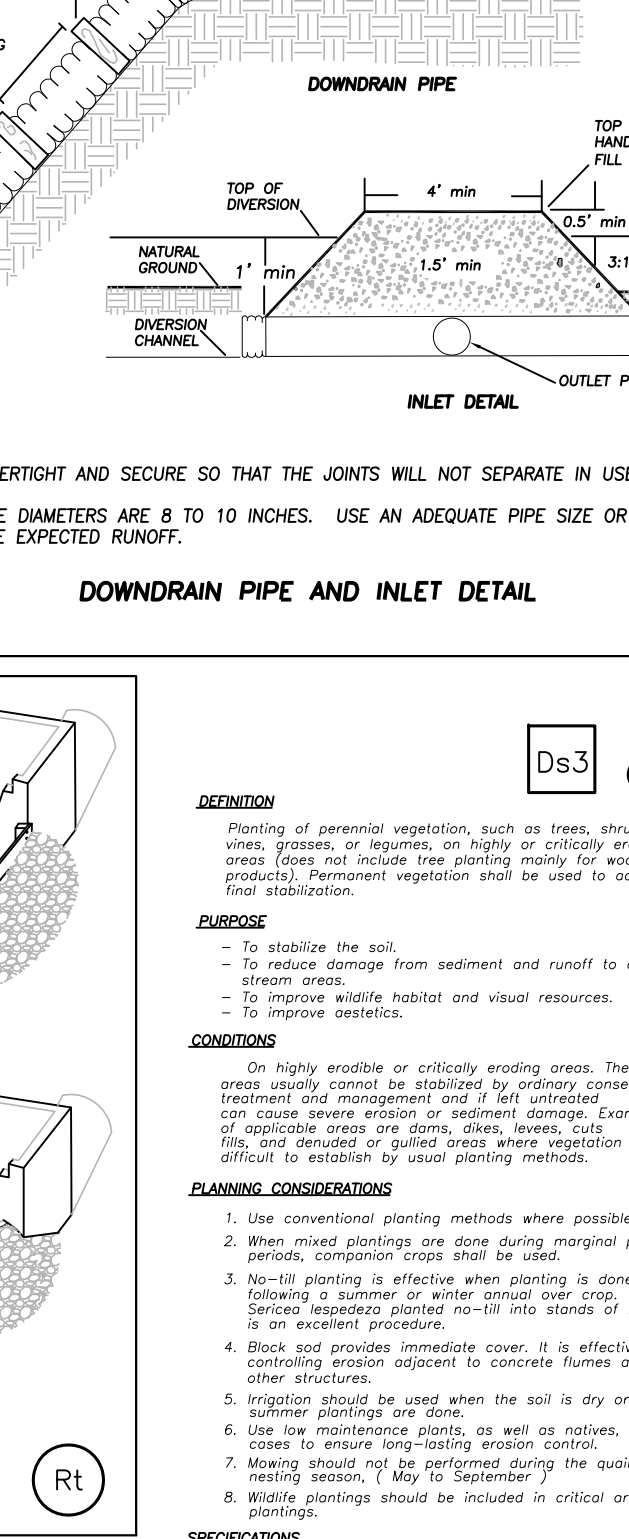
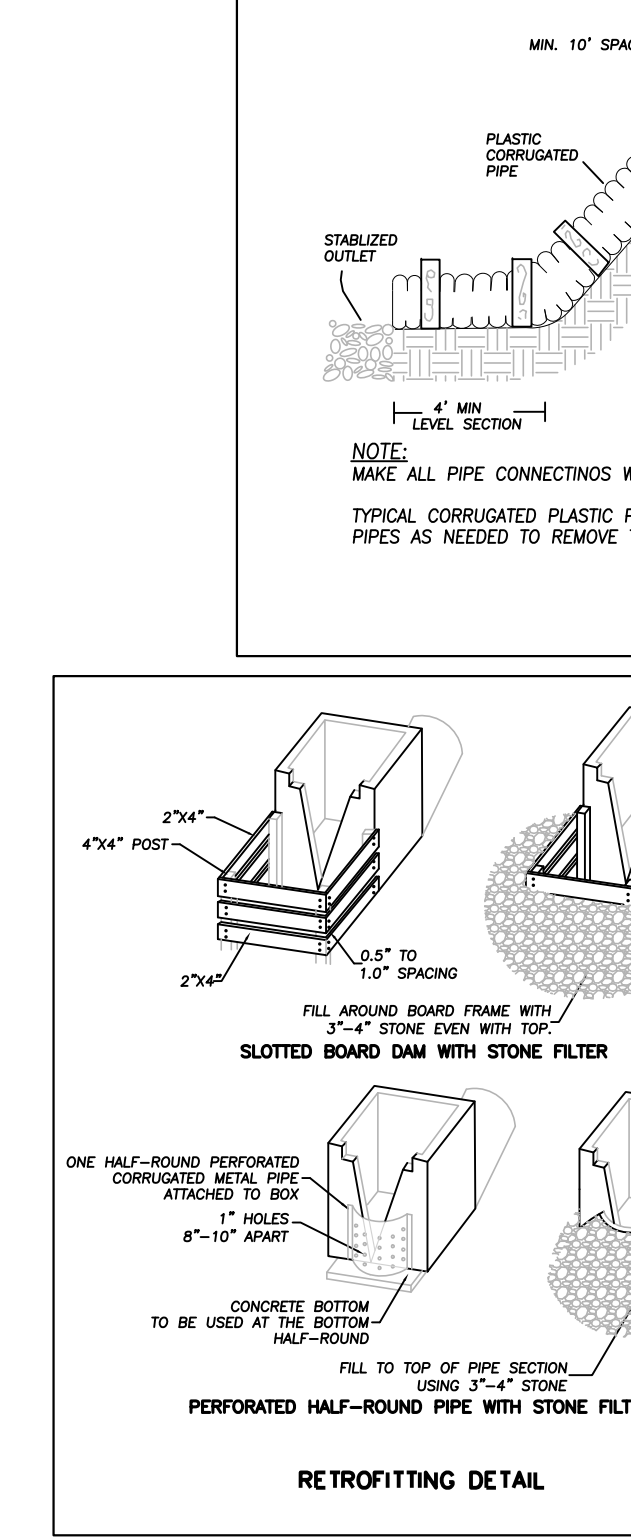
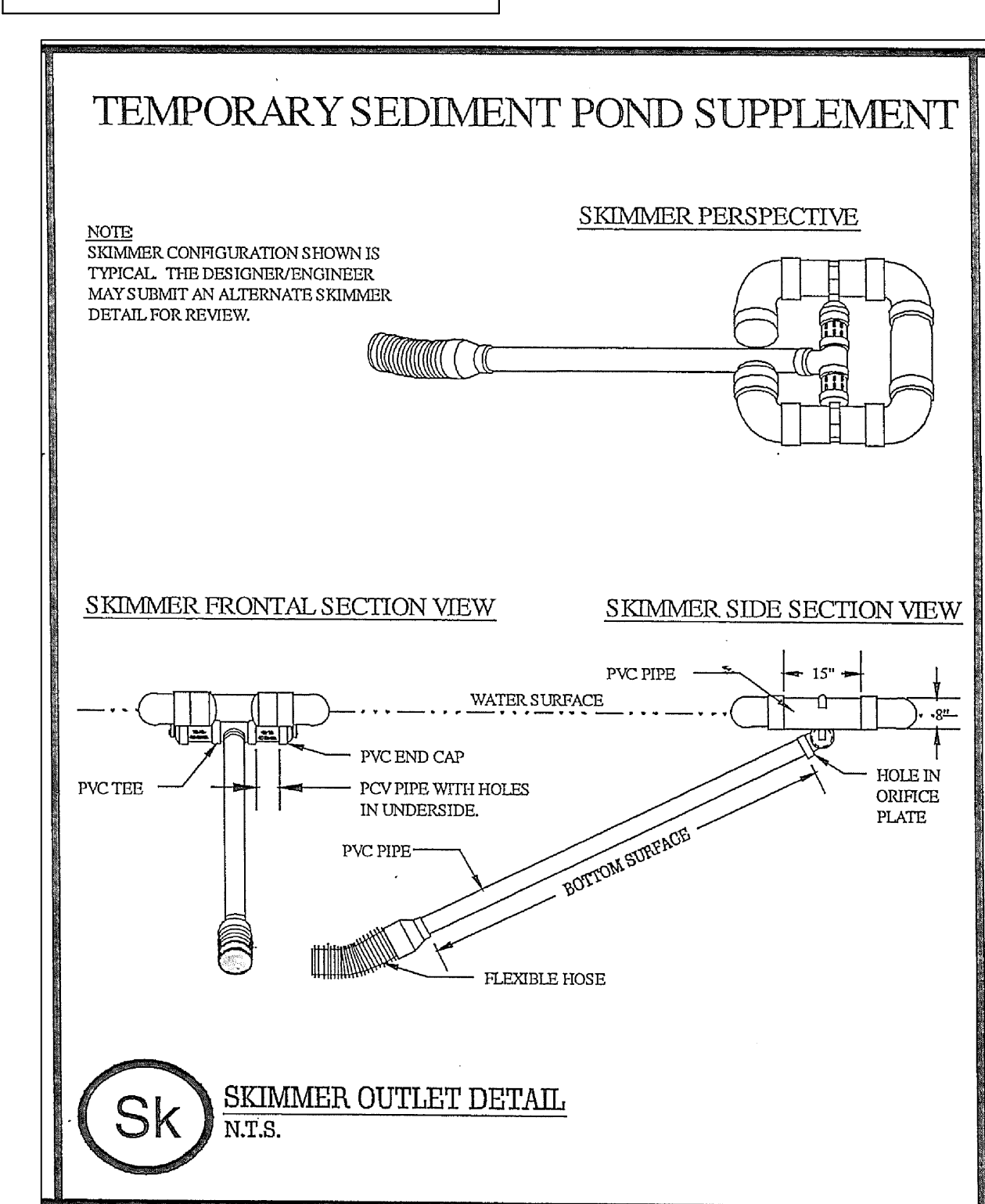
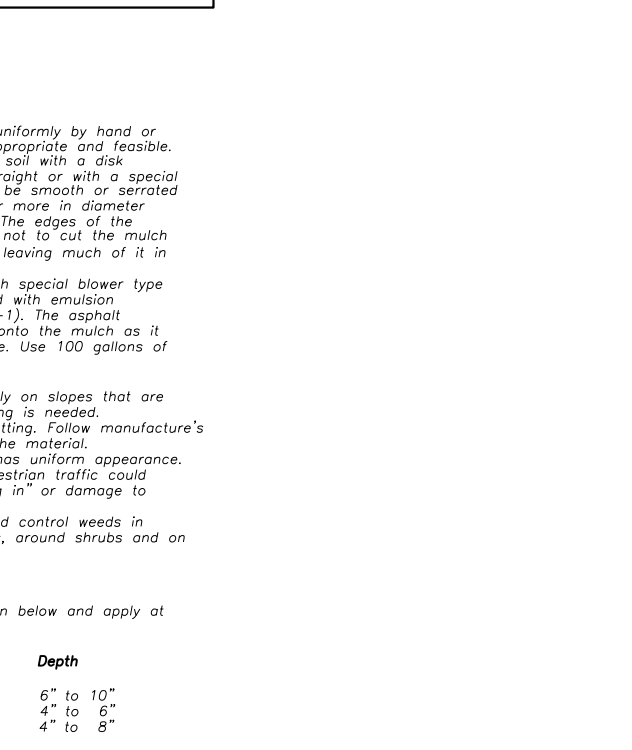
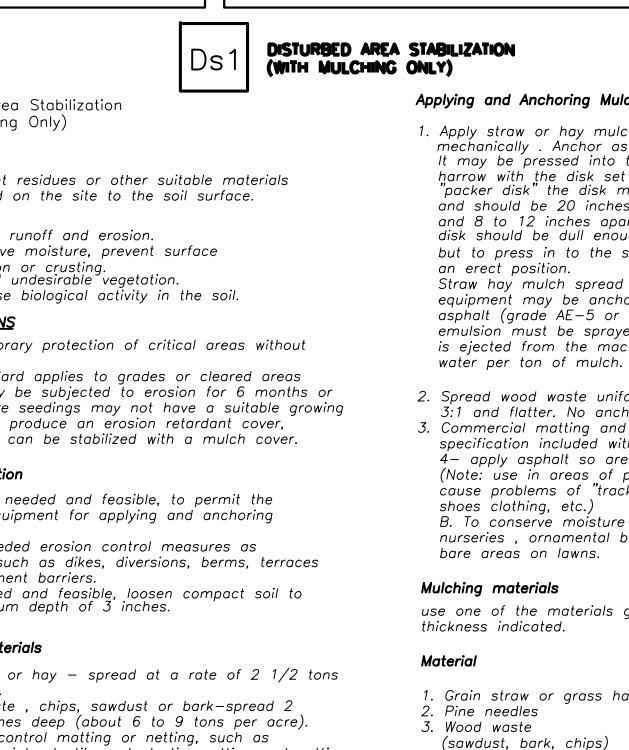
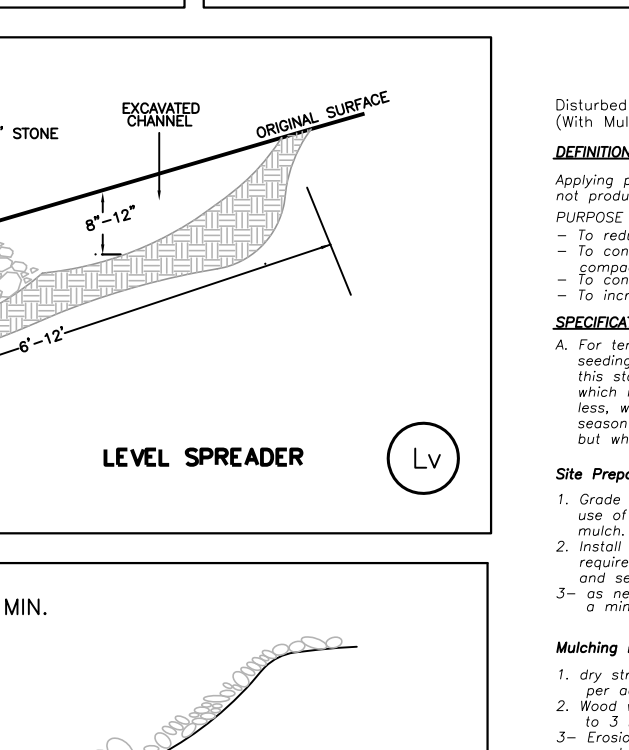
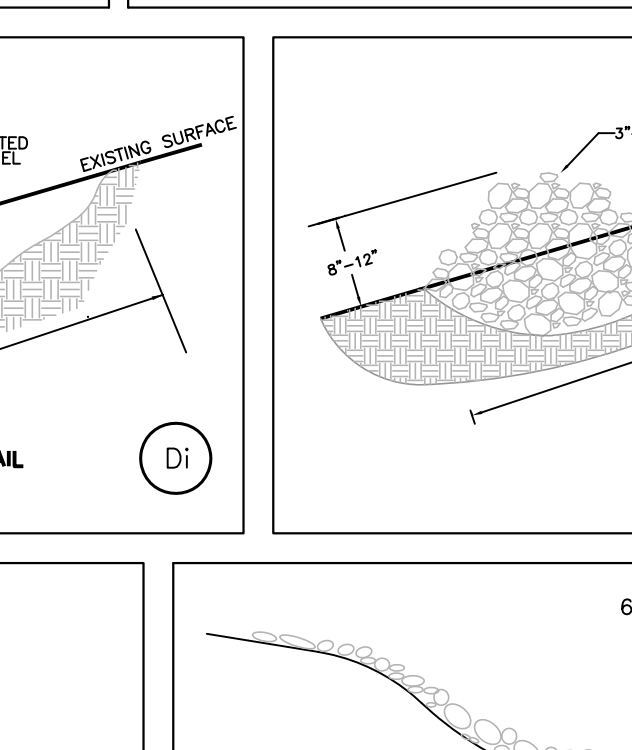
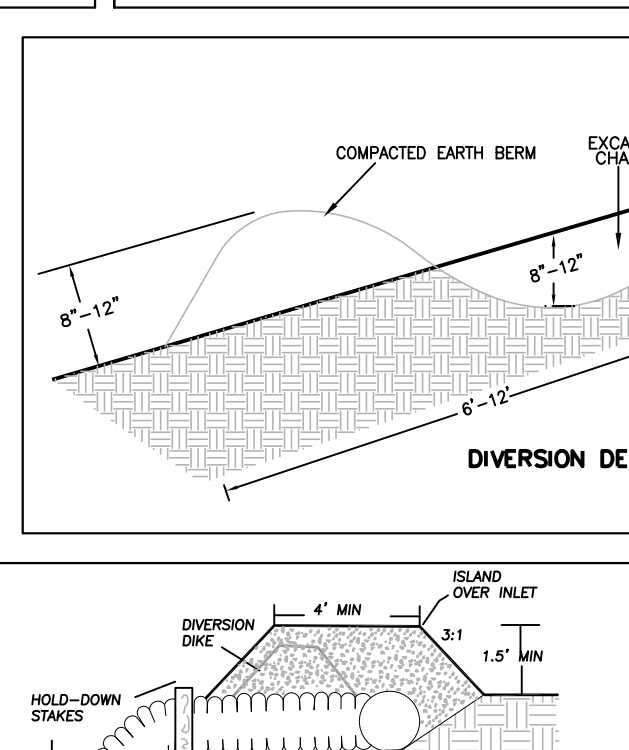
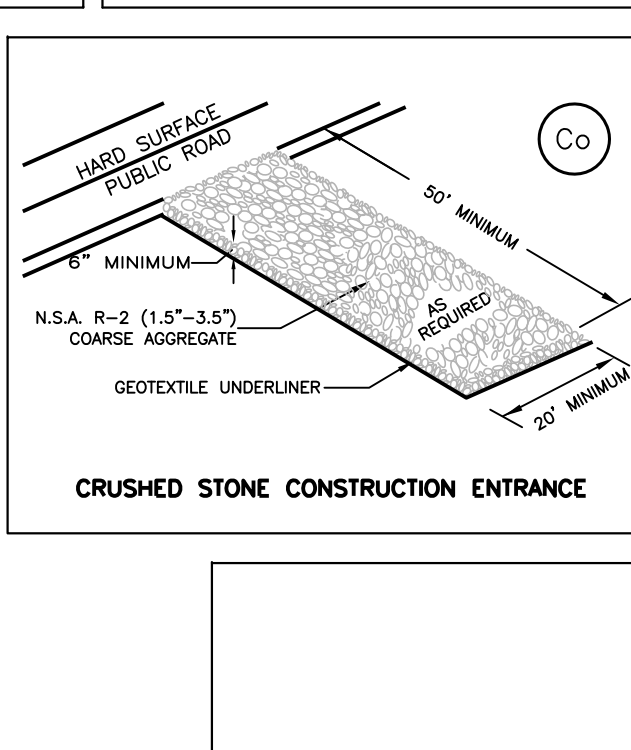
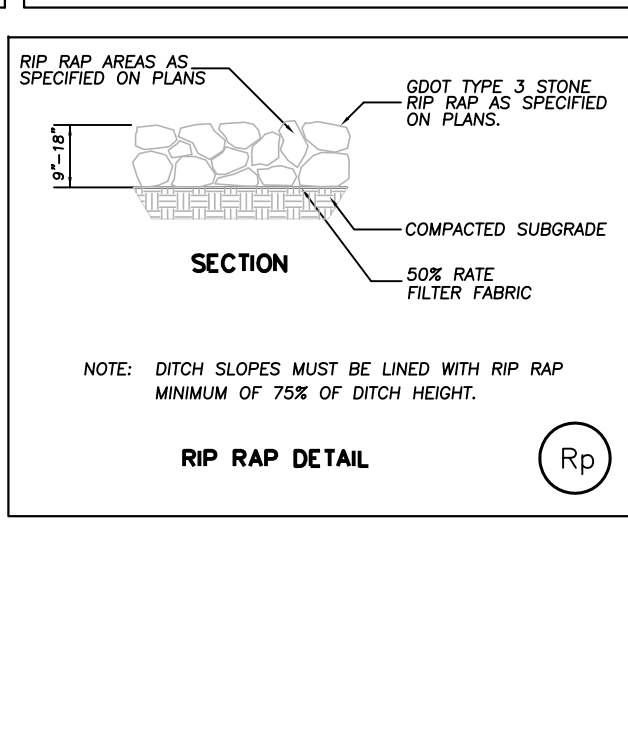
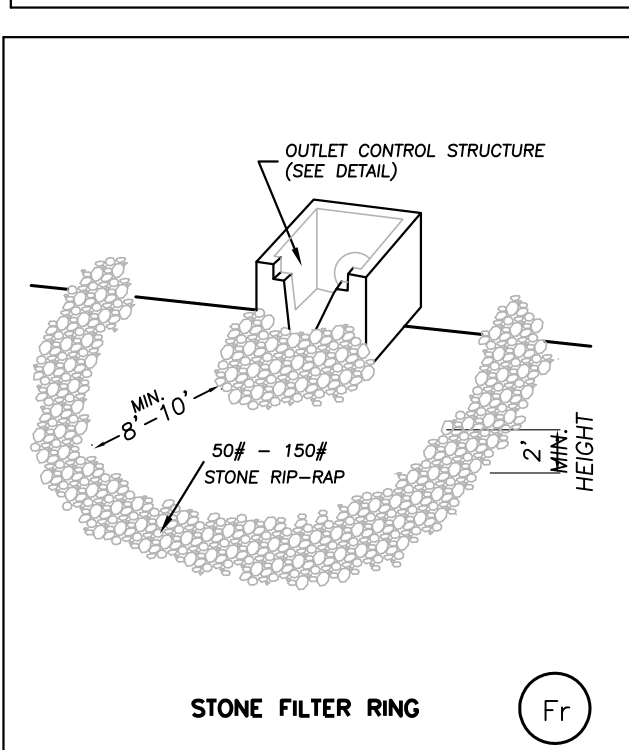
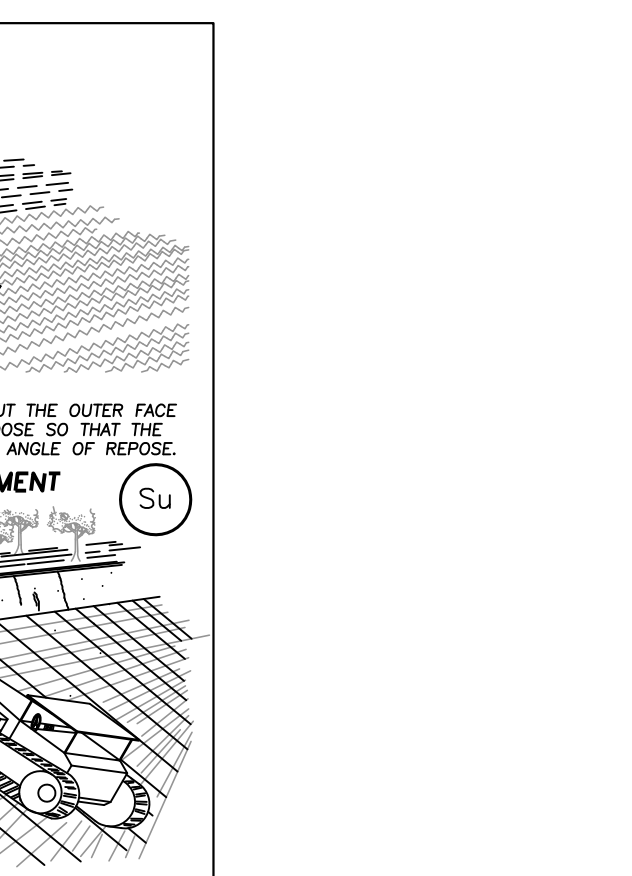
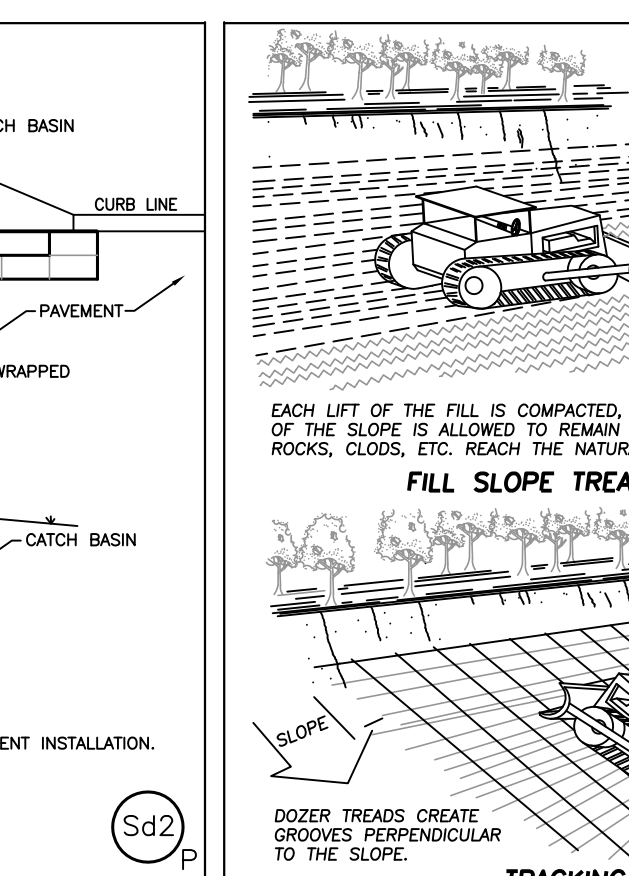
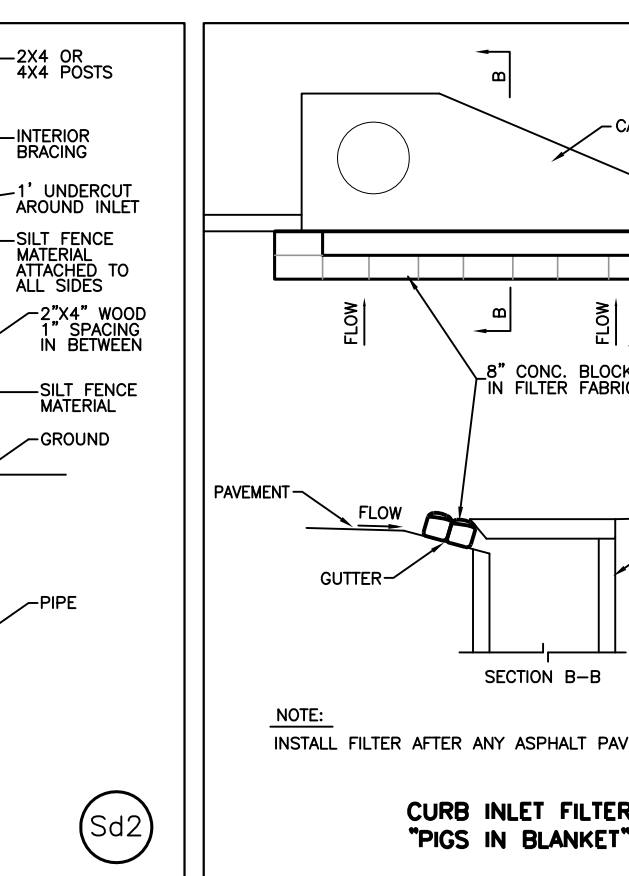
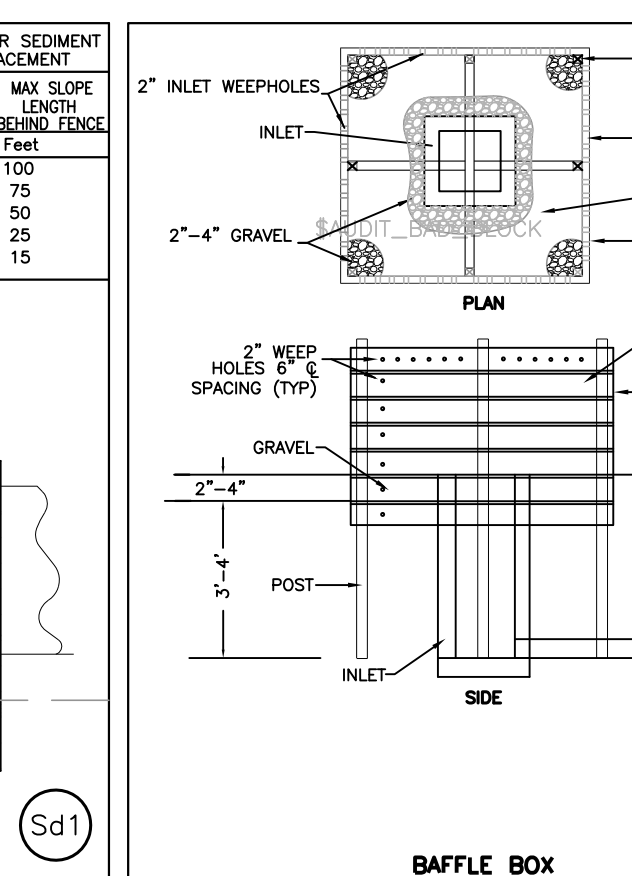
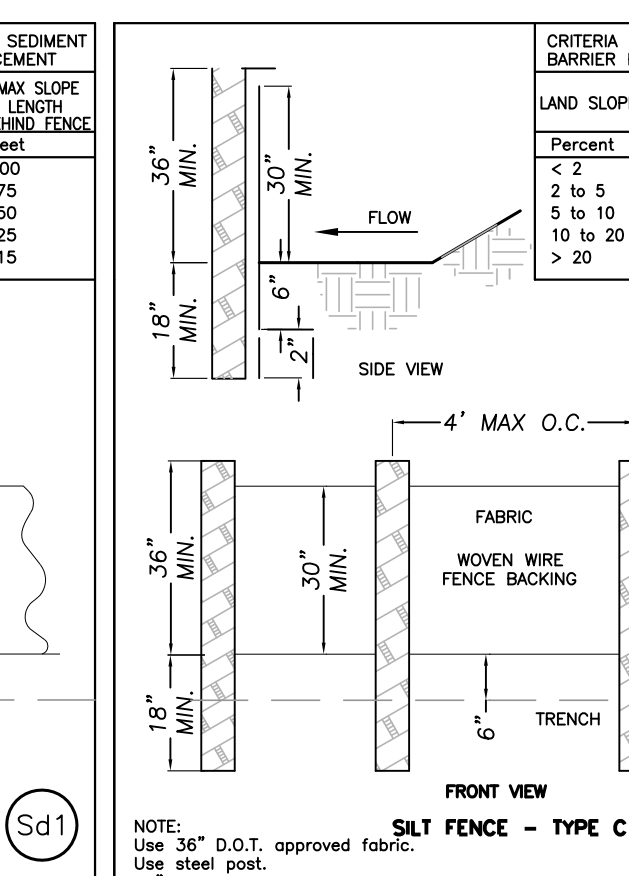
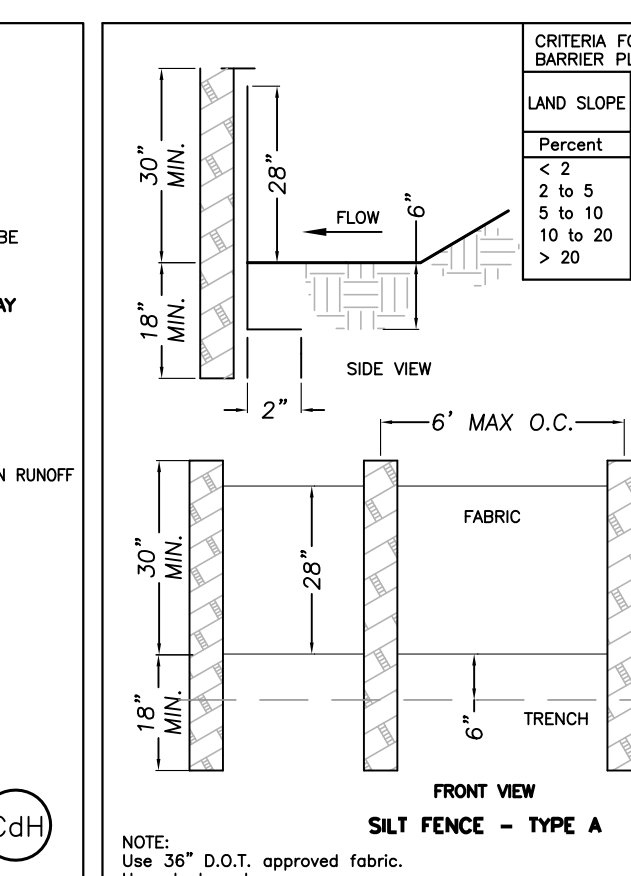
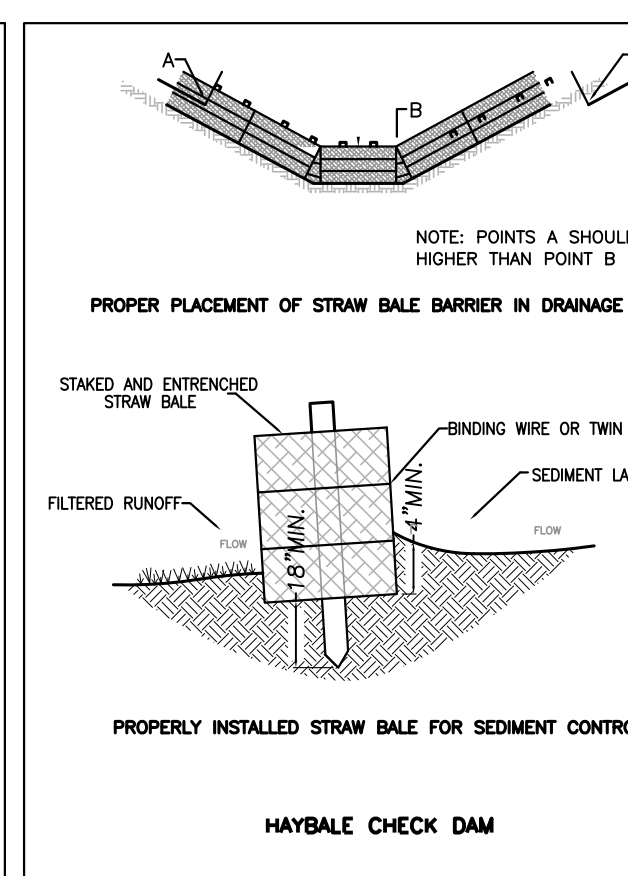
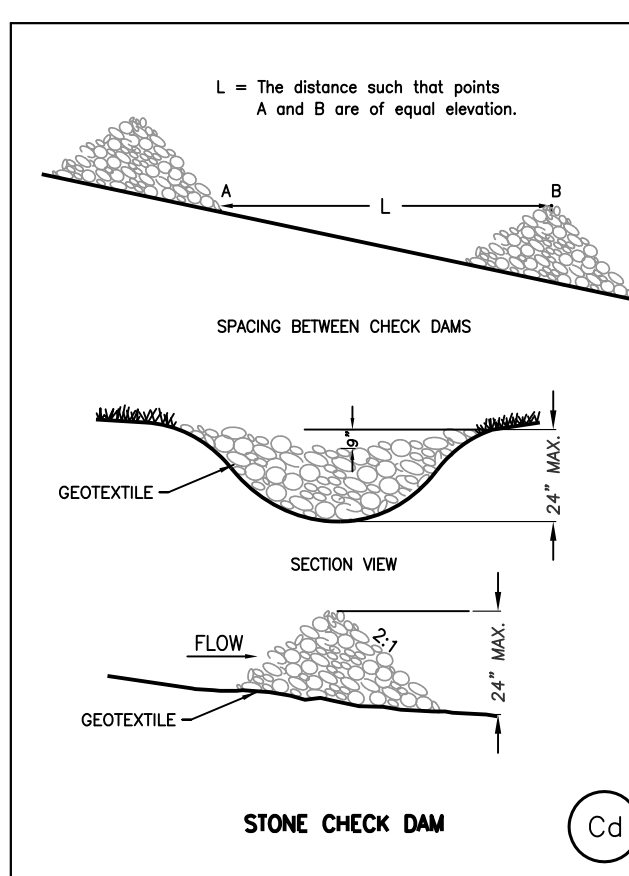
PROTECTIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
CdH	HAYBALE CHECKDAM			A SMALL TEMPORARY BARRIER OR DAM CONSTRUCTED ACROSS A DRAIN, DRAINAGE DITCH, OR AREA OF CONCENTRATED FLOW.
CdS	STONE CHECKDAM			A SMALL TEMPORARY BARRIER OR DAM CONSTRUCTED ACROSS A DRAIN, DRAINAGE DITCH, OR AREA OF CONCENTRATED FLOW.
Ch	CHANNEL STABILIZATION			IMPROVING, CONSTRUCTING OR STABILIZING AN OPEN CHANNEL, EXISTING STREAM OR DITCH.
Co	CONSTRUCTION EXIT			A CRUSHED STONE PAD LOCATED AT THE END OF A CONSTRUCTION SITE TO PROVIDE A PLACE FOR REMOVING MUD FROM TIRES BEFORE ENTERING PUBLIC STREETS.
Di	DIVERSION			AN EARTH CHANNEL OR ONE OR MORE DIVERSIONS TO DIVERT FLOW FROM A SLOPE TO DOWN SLOPE, TO BE USED AS A TEMPORARY OR PERMANENT STRUCTURE.
Dn1	TEMPORARY DOWN-DRAIN STRUCTURE, FLEXIBLE			A FLEXIBLE CONDUIT OF HEAVY-DUTY FABRIC OR OTHER MATERIAL, DESIGNED TO SAFELY CONDUIT SURFACE RUNOFF DOWN A SLOPE. THIS IS TEMPORARY AND NON-REPERATIVE.
Dn2	PERMANENT DOWN-DRAIN STRUCTURE, FLEXIBLE			A PAVED CHUTE, PIPE, SECTIONAL CONDUIT, OR SIMILAR MATERIAL, DESIGNED TO SAFELY CONDUIT SURFACE RUNOFF DOWN A SLOPE.
Fr	FILTER RING			A TEMPORARY STONE BARRIER CONSTRUCTED AT STORM DRAIN INLETS AND POND OUTLETS.
Rp	RIP RAP			STONE, TYPE 3 GOOT LINED IN DITCH OR AREA.
Rt	RETROFITTING			A DEVICE OR STRUCTURE PLACED IN FRONT OF A PERMANENT STORMWATER DRAINAGE STRUCTURE TO PREVENT IT FROM BEING A TEMPORARY SEDIMENT TRAP.
Sd1	SEDIMENT BARRIER			A BARRIER TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE IF MAY BE SANDBAGS, BALES OF STRAW OR HAY, LOGS, LOGS & POLES, CHAINS, OR A SALT FENCE.
Sd2	TEMPORARY SEDIMENT TRAP			AN IMPROVING AREA CREATED BY EXCAVATING AROUND A STORM DRAIN DRAIN INLET. THE EXCAVATED AREA WILL BE FILLED AND THE DRAINAGE STRUCTURE TO BE USED AS A TEMPORARY SEDIMENT TRAP.
Sd2P	TEMPORARY SEDIMENT TRAP, "CURB INLET PROTECTION"			AN IMPROVING AREA CREATED BY EXCAVATING AROUND A STORM DRAIN DRAIN INLET. THE EXCAVATED AREA WILL BE FILLED AND THE DRAINAGE STRUCTURE TO BE USED AS A TEMPORARY SEDIMENT TRAP.
Sr	TEMPORARY STREAM CROSSING			A TEMPORARY BRIDGE OF CULVERT-TYPE STRUCTURE PROVIDING A STREAM OR DRAINAGE STRUCTURE FROM SHAKING OR CROSSING.
St	STORM DRAIN OUTLET PROTECTION			A PAVED OR SHORT SECTION OF RIP RAP DRAIN SYSTEM PREVENTING FLOW FROM THE EXCAVATED RUNOFF.
Su	SURFACE ROUGHENING			A ROUGH SOIL SURFACE WITH HORIZONTAL FURROWS OR A CURB OR LOGS SET AT A SUFFICIENT ANGLE TO PROVIDE A SUFFICIENT CONDITION AGAINST FLOW.
Lv	LEVEL SPREADER			A STRUCTURE TO CONVERT CONCENTRATED FLOW OF WATER INTO LESS SEVERE SHEET FLOW. THIS SHOULD BE CONSTRUCTED ONLY ON UNDISTURBED SOILS.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			A STRIP OF UNDISTURBED ORIGINAL VEGETATION, UNIMPAIRED OR RESTORED, SURROUNDING AN AREA OF DISTURBANCE OR RESTORATION.
Ds1	DISTURBED AREA STABILIZATION (W/ MULCHING ONLY)			ESTABLISHING TEMPORARY PROTECTION FOR DISTURBED AREAS WHERE SEEDING MAY NOT HAVE A SUFFICIENT GROWING SEASON TO PRODUCE AN EROSION RETARDING COVER.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP. SEEDING)			ESTABLISHING TEMPORARY PROTECTION FOR DISTURBED AREAS WHERE SEEDING MAY NOT HAVE A SUFFICIENT GROWING SEASON TO PRODUCE AN EROSION RETARDING COVER.
Ds3	DISTURBED AREA STABILIZATION (W/ PERM. VEGETATION)			ESTABLISHING A PERMANENT VEGETATIVE COVER (W/ PERM. VEGETATION) ON DISTURBED AREAS.
Ds4	DISTURBED AREA STABILIZATION (W/ SEEDING)			A PERMANENT VEGETATIVE COVER USING SEEDS ON MOIST, FERTILE OR CRITICALLY ERODED LANDS.
Du	DUST CONTROL ON DISTURBED AREAS			CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITE, ROADWAYS, AND SIMILAR SITES.
Mb	EROSION CONTROL MATTING AND BLANKETS			THE INSTALLATION OF A PROTECTIVE COVERING (BLANKET OR SOIL STABILIZATION MAT) ON A SLOPE TO PREVENT EROSION, AND TO PROTECT THE SOIL FROM EXPOSURE TO THE SUN.

THESE PLANS WERE PREPARED BY A LEVEL TWO CERTIFIED PROFESSIONAL, NUMBER #0000010490
SIGNATURE: *Abel Blouhada* DATE SIGNED: 8-29-18



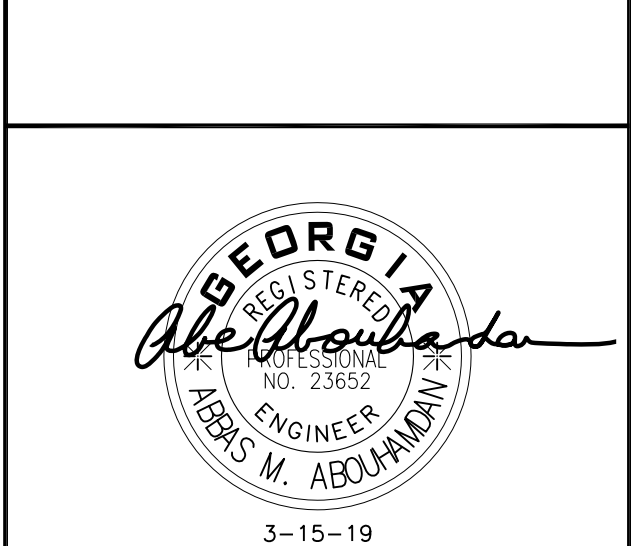
2410 HOG MOUNTAIN ROAD
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OCONEE COUNTY, GEORGIA

ES&PC DETAILS



3-15-19

REVISIONS	DATE
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GRAPHIC SCALE
0' 1/2" 1' 2' 3'
SCALE: AS NOTED

SHEET #

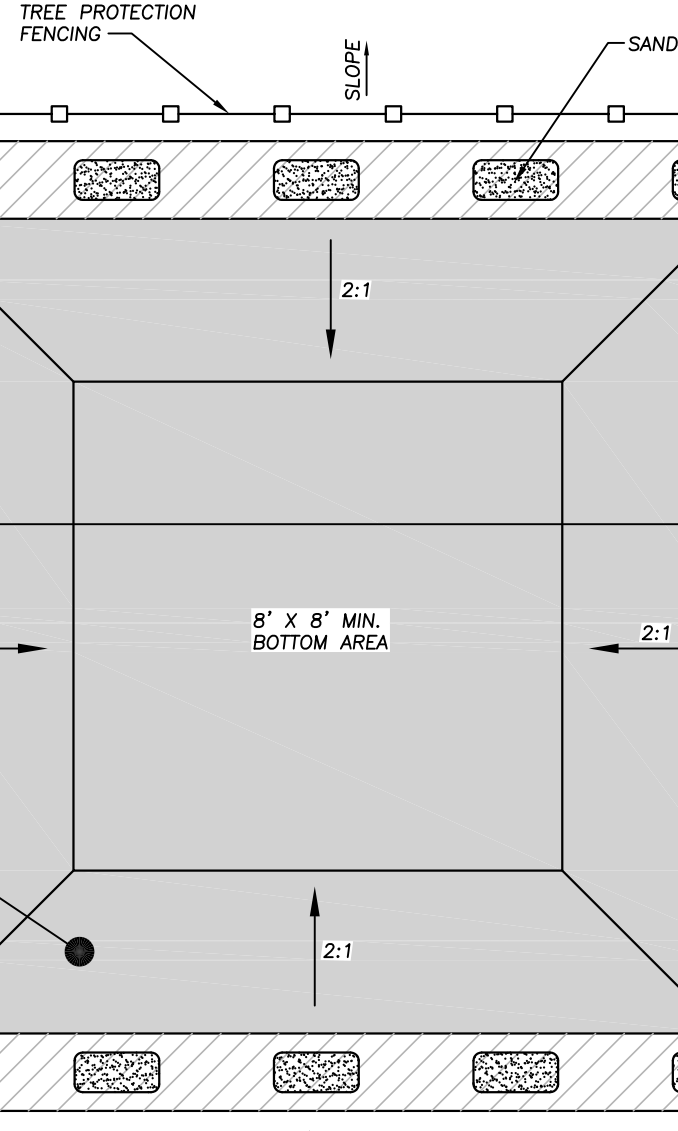
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CONSTRUCTION SCHEDULE

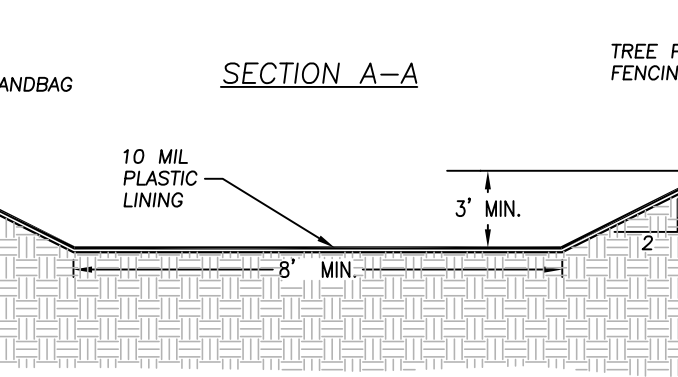
MONTH	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6
PLANS APPROVED						
PHASE I SECC- INSTALLATION OF CONSTRUCTION EIT, PERMETER CONTROLS, AND SEDIMENT POND(S).						
PHASE II SECC- CONSTRUCT BUILDINGS, INSTALL INTERIOR SECC CONTROLS, INSTALL STORM SEWER, SANITARY SEWER, AND WATER MAIN, INSTALL CURB & GUTTER, INSTALL DRIVEWAY G.A.B., FINAL GRADE ROAD SHOULDERS.						
PHASE III SECC- CONSTRUCT BUILDINGS, INSTALL ROADWAY PAVEMENT, INSTALL SIDEWALK, INSTALL UTILITIES (ELECTRIC, TELEPHONE, GAS, AND CABLE), ESTABLISH PERMANENT VEGETATION/LANDSCAPING.						
MAINTENANCE OF EROSION CONTROL STRUCTURES						

CONCRETE WASH AREA BMP

PLAN VIEW



SECTION A-A



CONCRETE WASH AREA (CWA) INSTALLATION AND MAINTENANCE NOTES:

1. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
2. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8'X8' WITH SLOPES LEADING OUT AT 2:1 ON FLAT. THE PIT SHALL BE AT LEAST 1' DEEP.
3. PIT SHALL BE INSTALLED AS TO ENSURE NO SURFACE WATER ENTERS.
4. SIGNS SHALL BE PLACED AT THE CONSTRUCTION SITE ENTRANCE AND AT THE CWA TO CLEARLY INDICATE THE LOCATION OF THE WASH AREA TO THE OPERATORS OF CONCRETE TRUCKS.
5. CWA SHALL BE CLEANED OUT WHEN 2/3 FULL AND MATERIAL DISPOSED OF IN AN APPROVED MANNER.
6. CWA TO BE COVERED DURING RAIN EVENTS TO PREVENT OVERFLOW OF CONTAMINATED WASH WATER.



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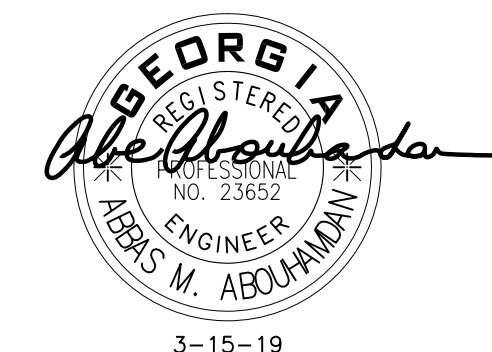
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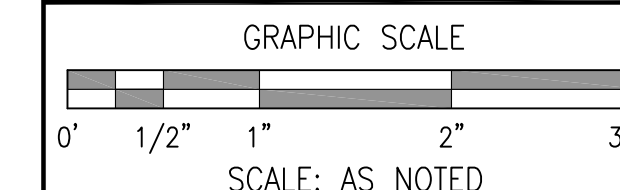
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REVISIONS	DATE
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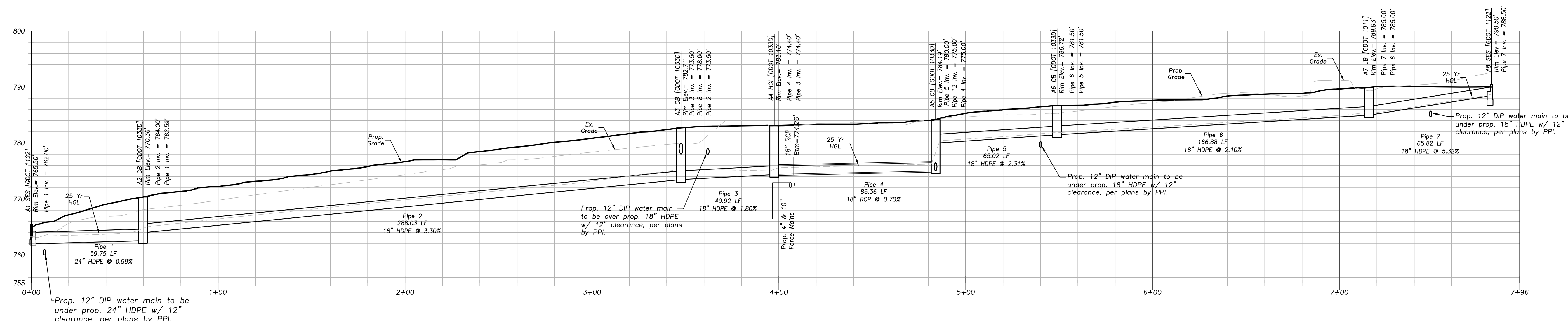
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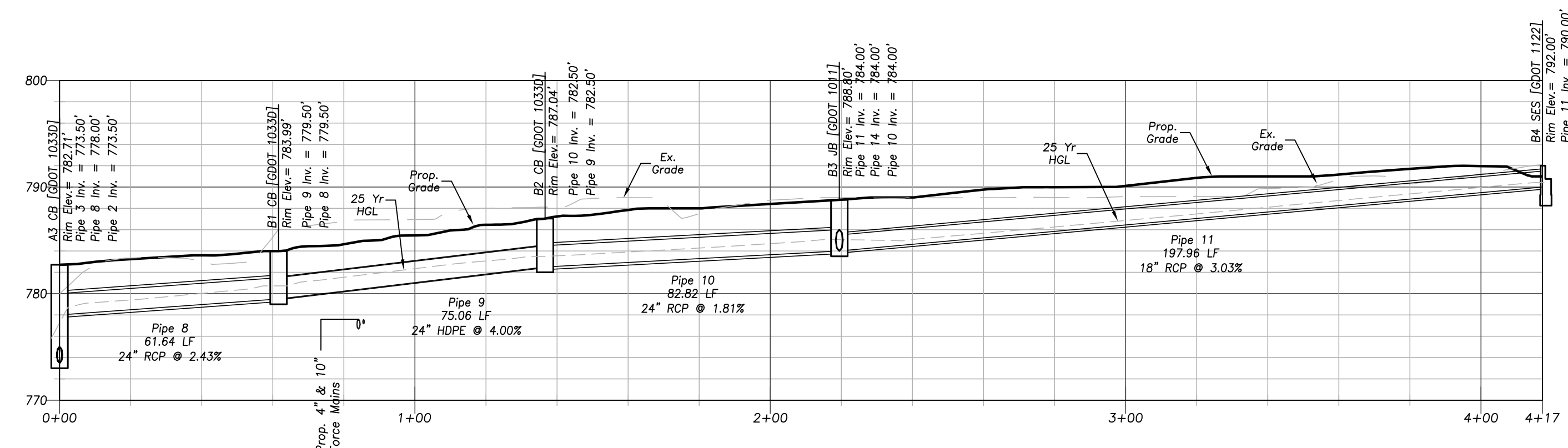


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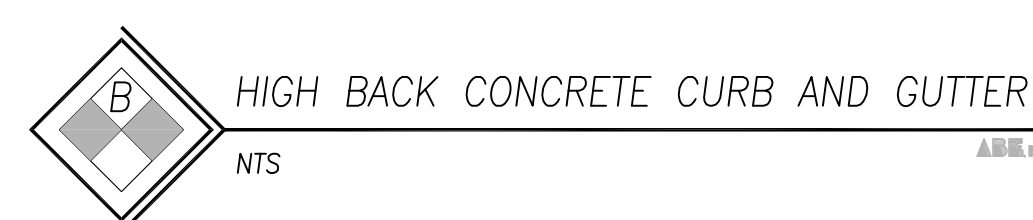
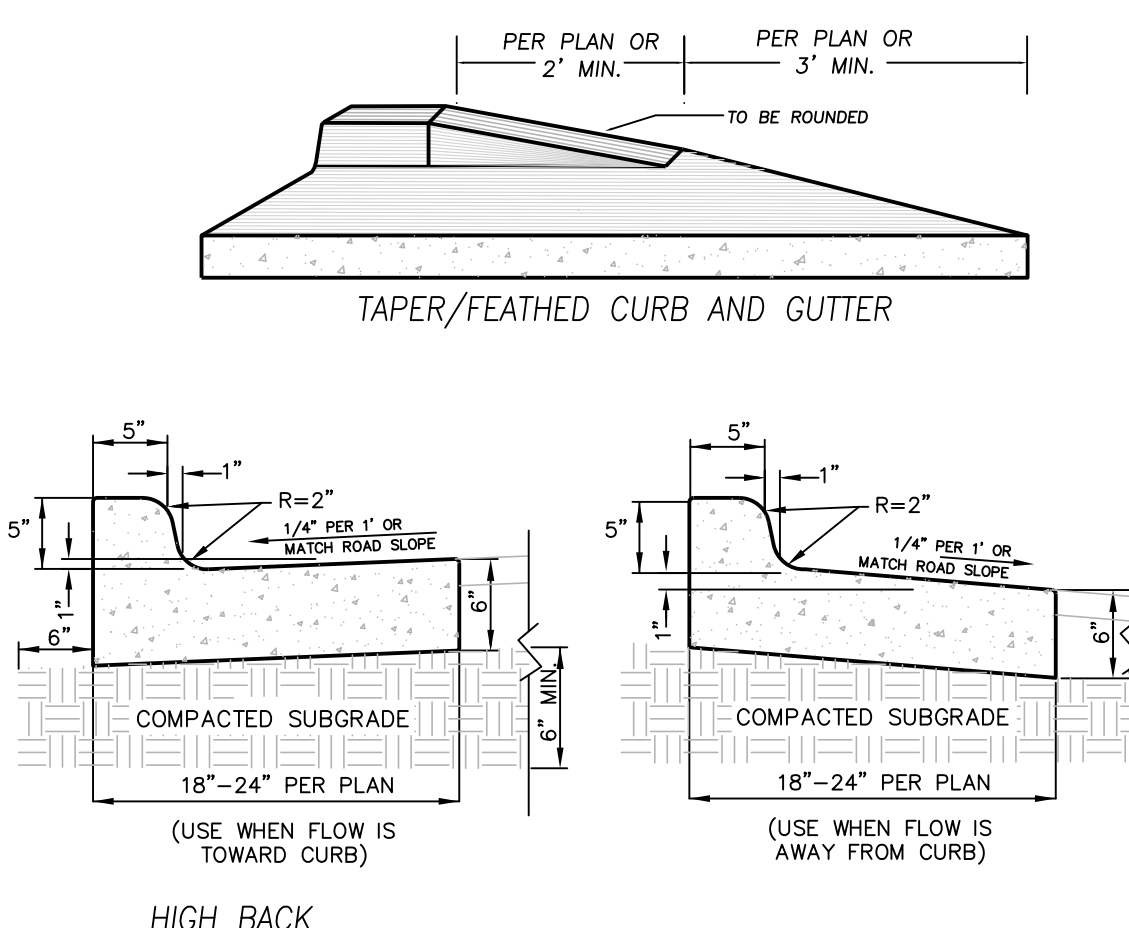
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- PROPOSED WATER LINE AND FORCE MAINS PER PLANS BY PPI.



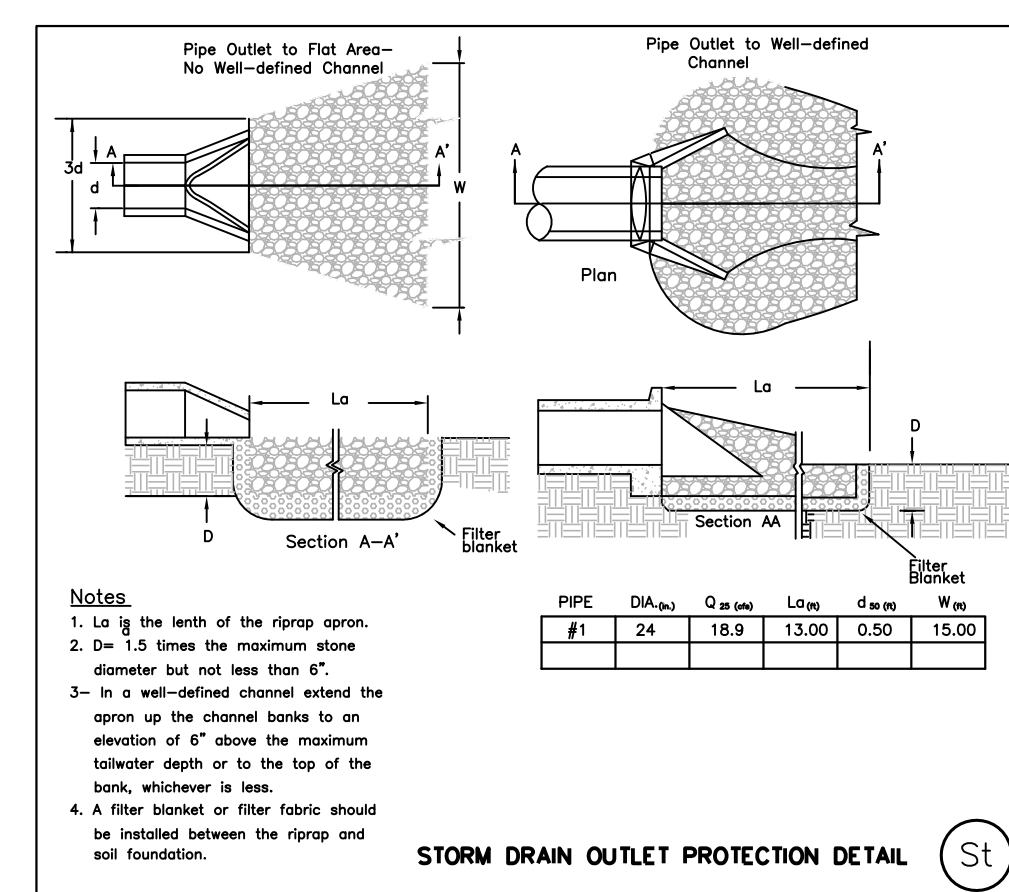
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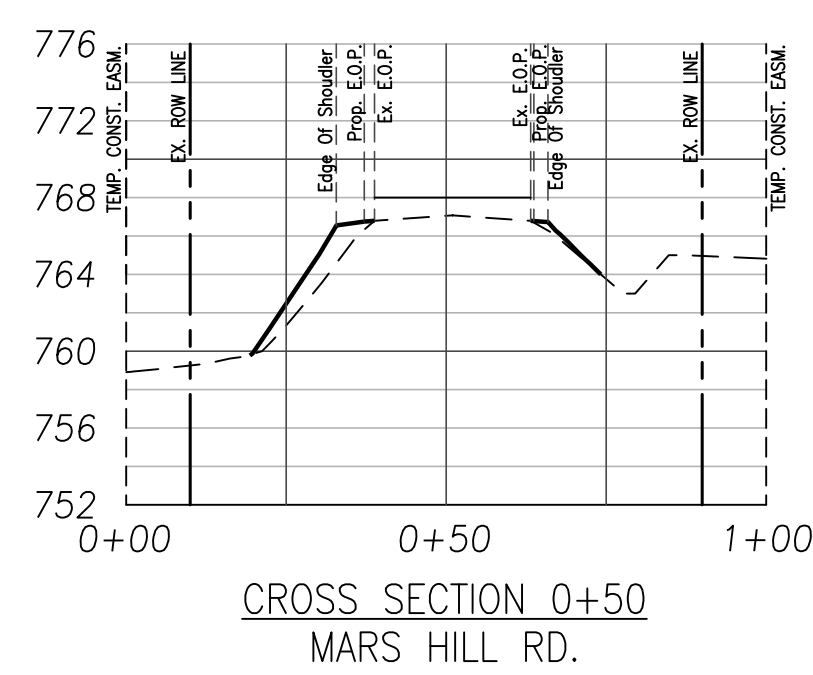
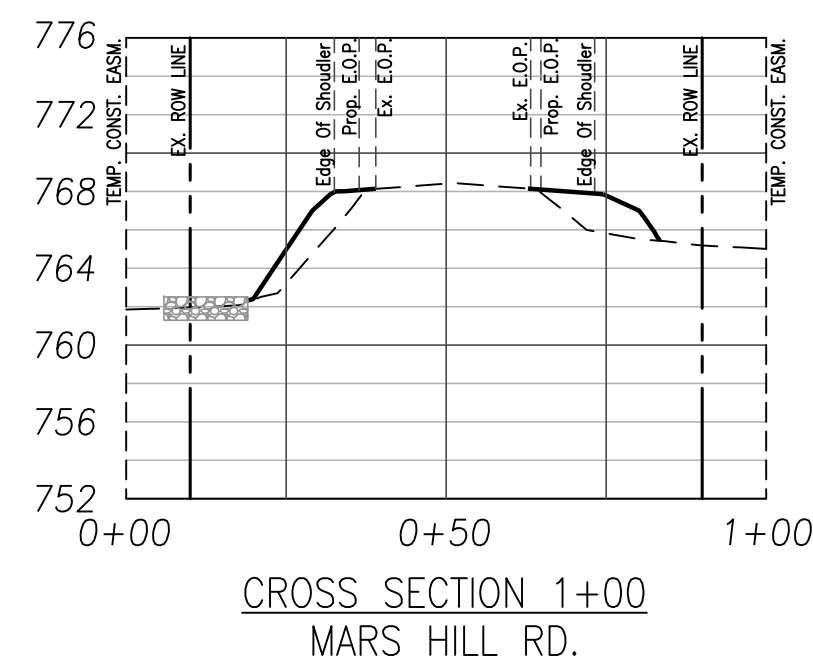
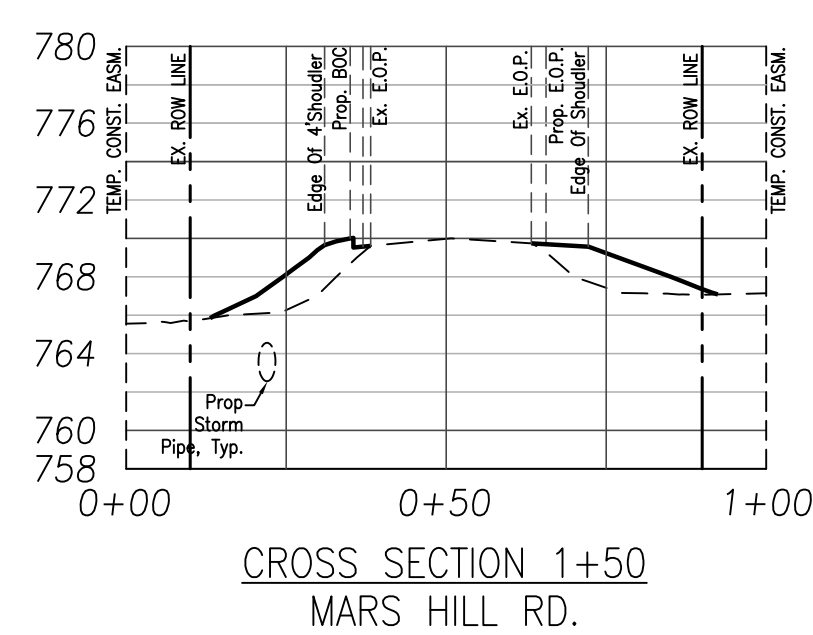
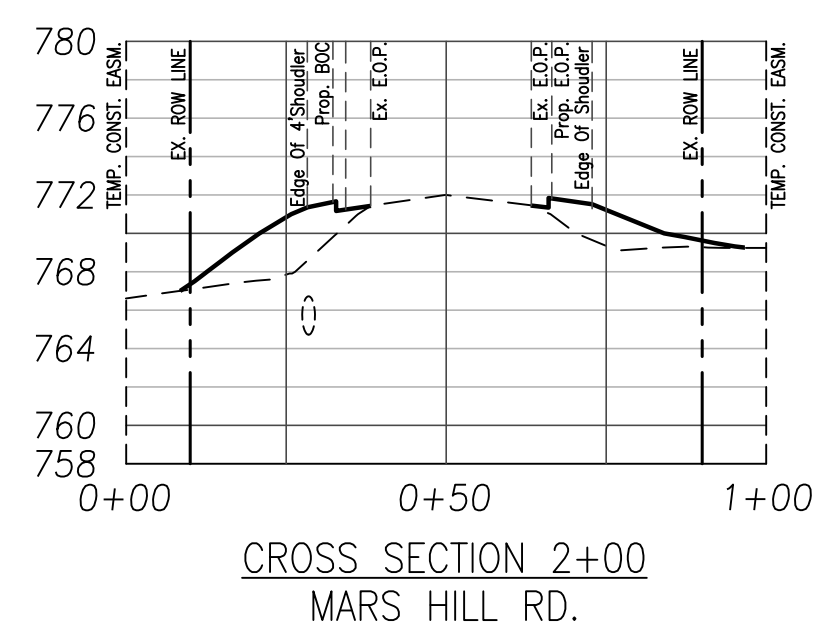
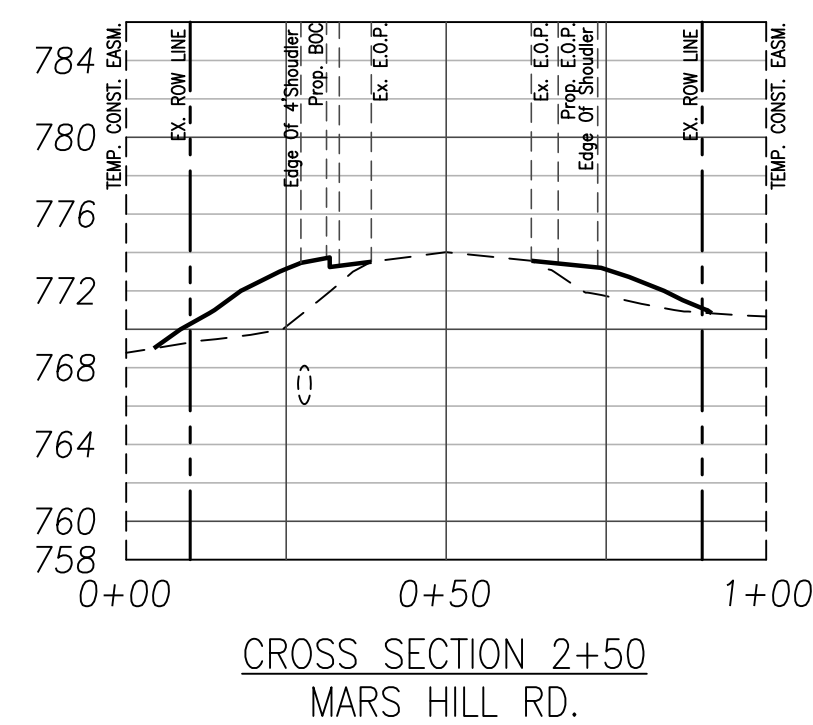
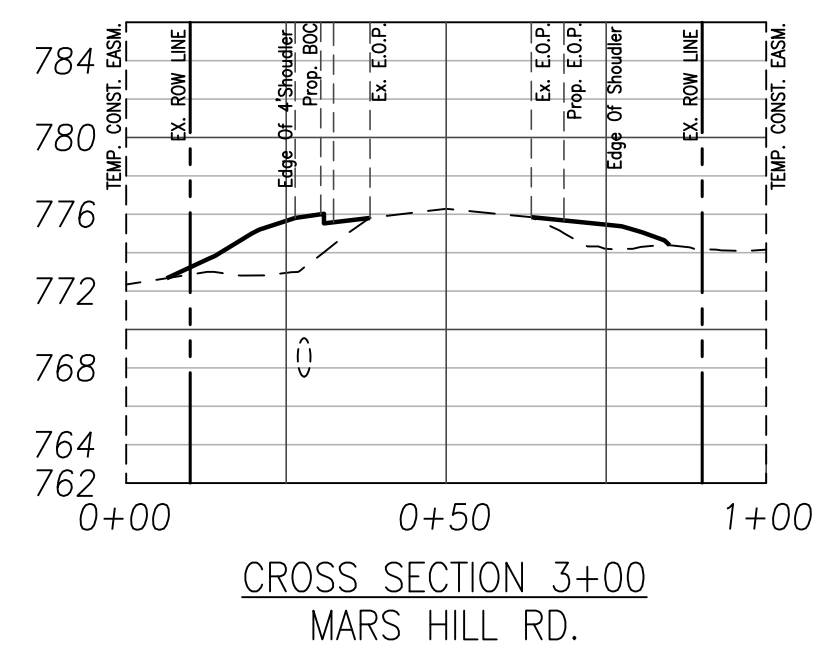
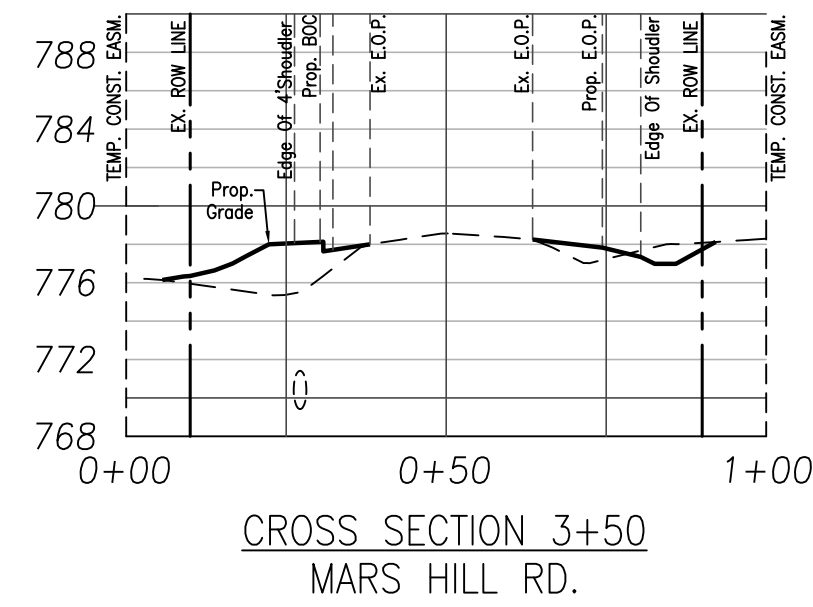


PIPE CHART

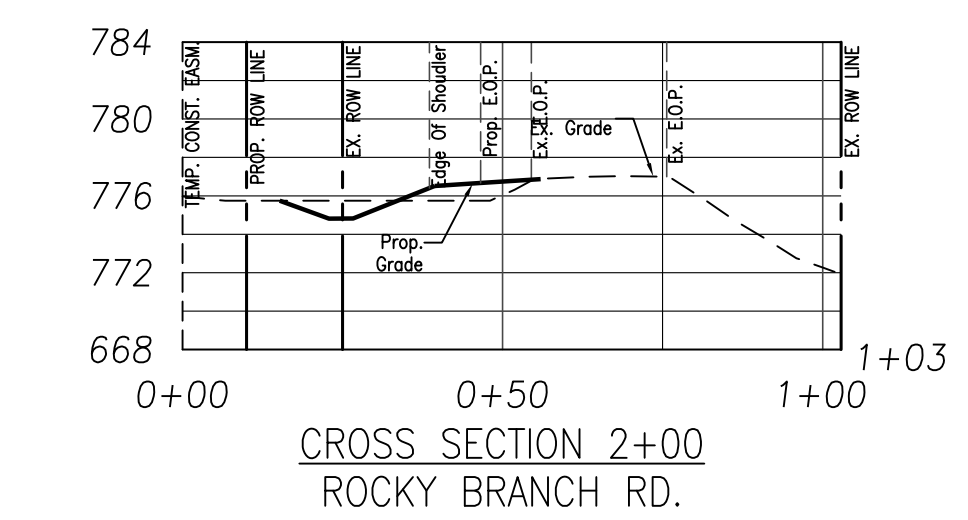
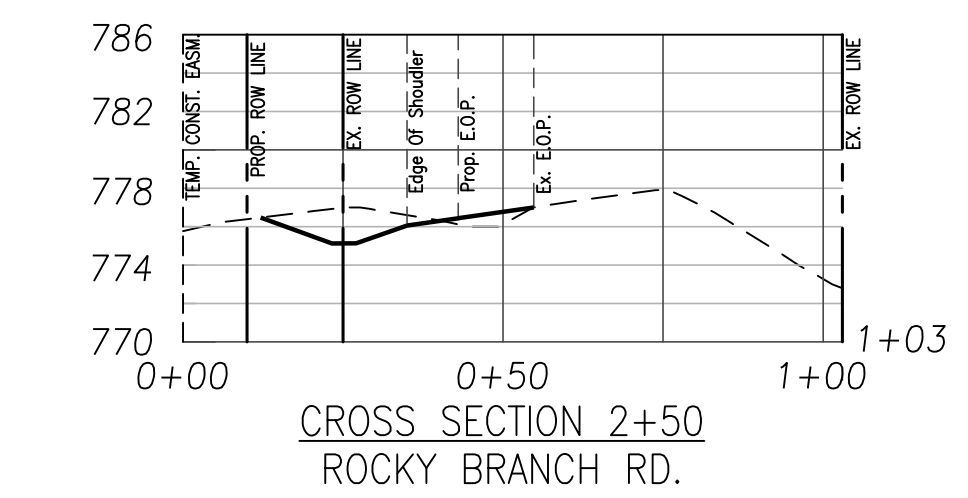
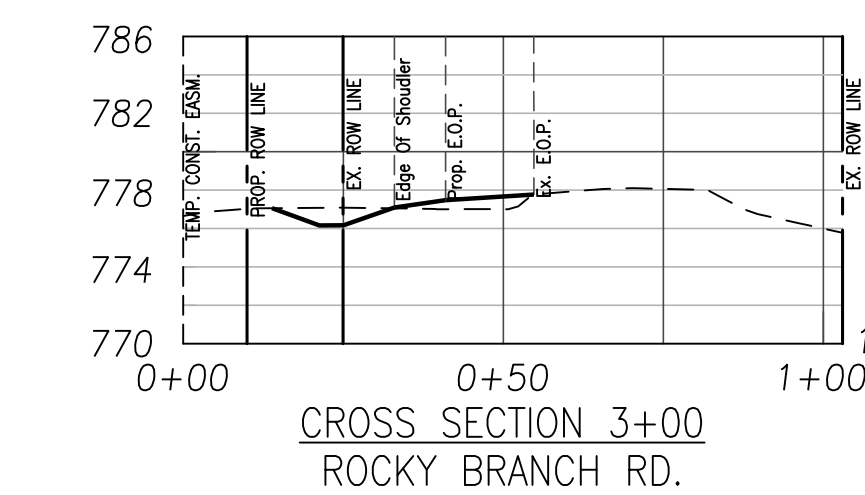
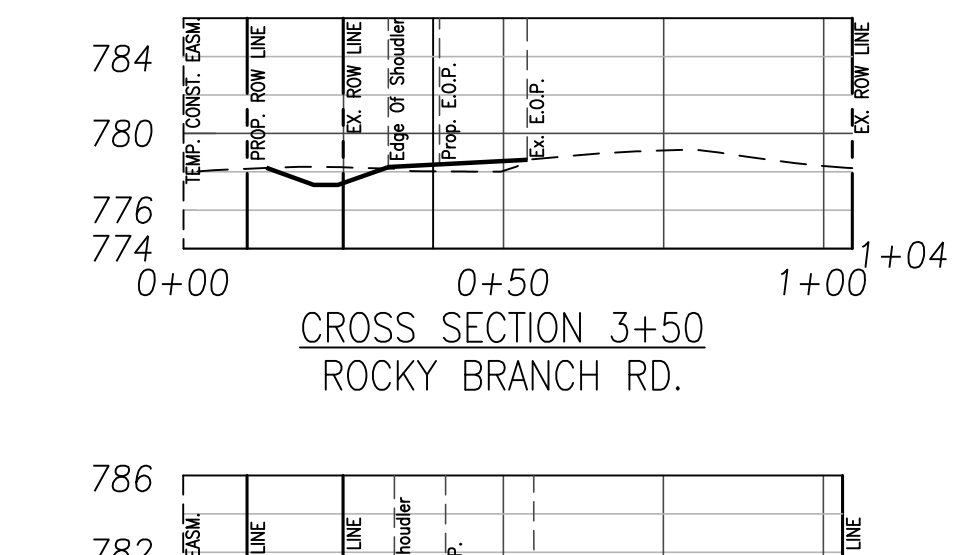
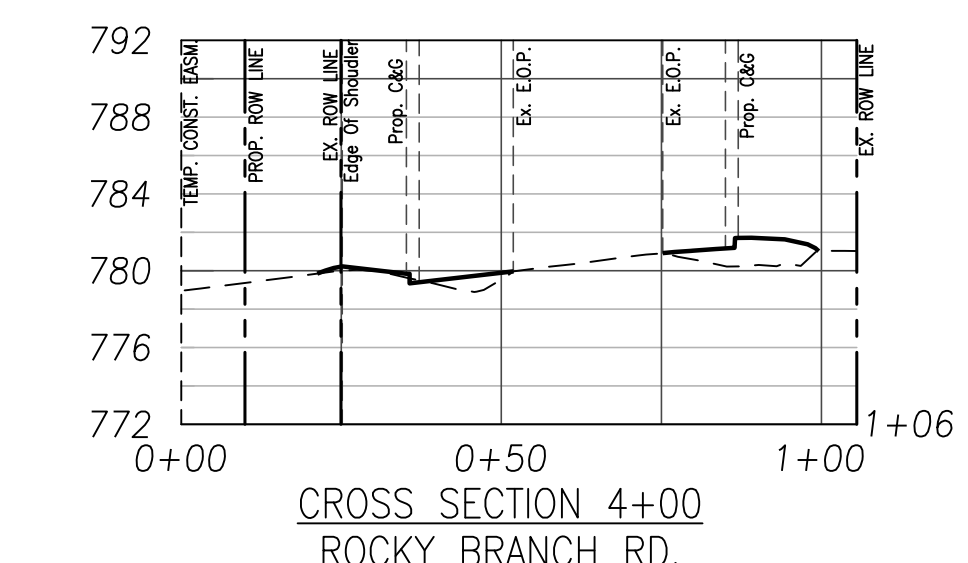
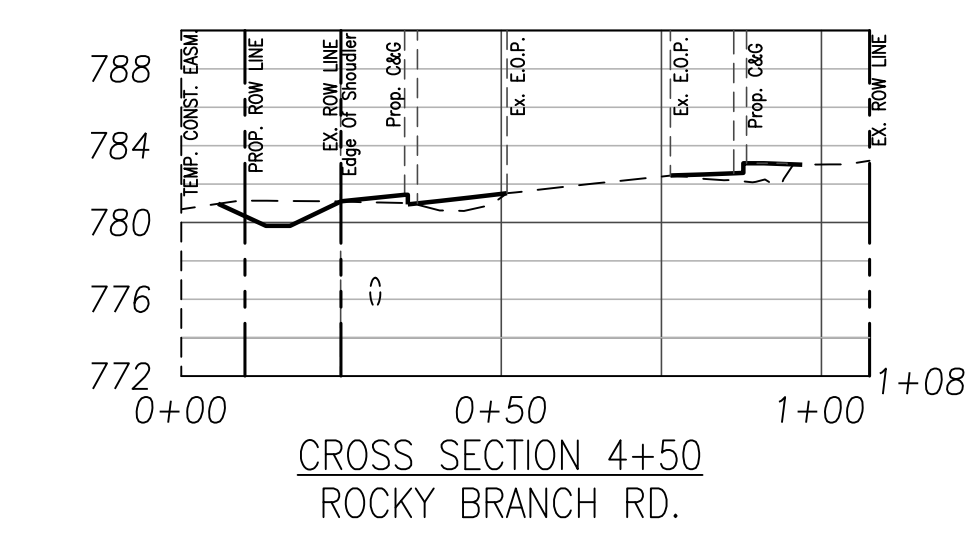
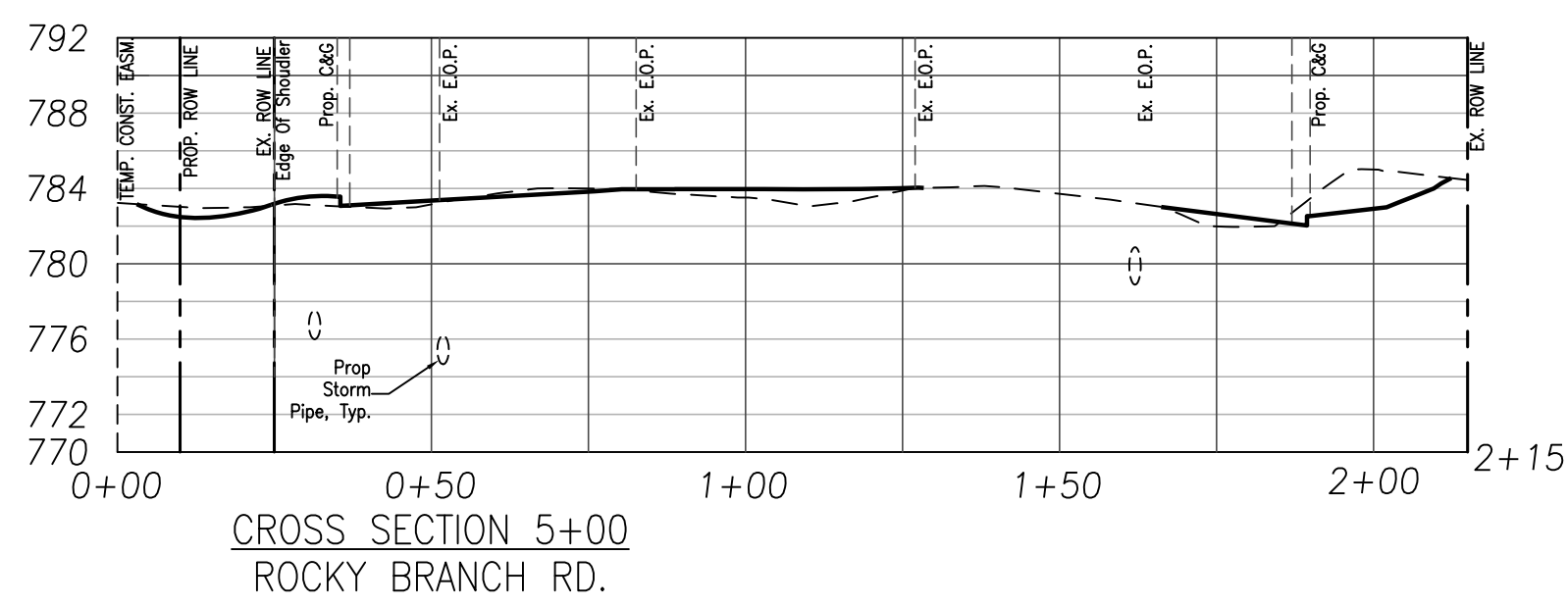
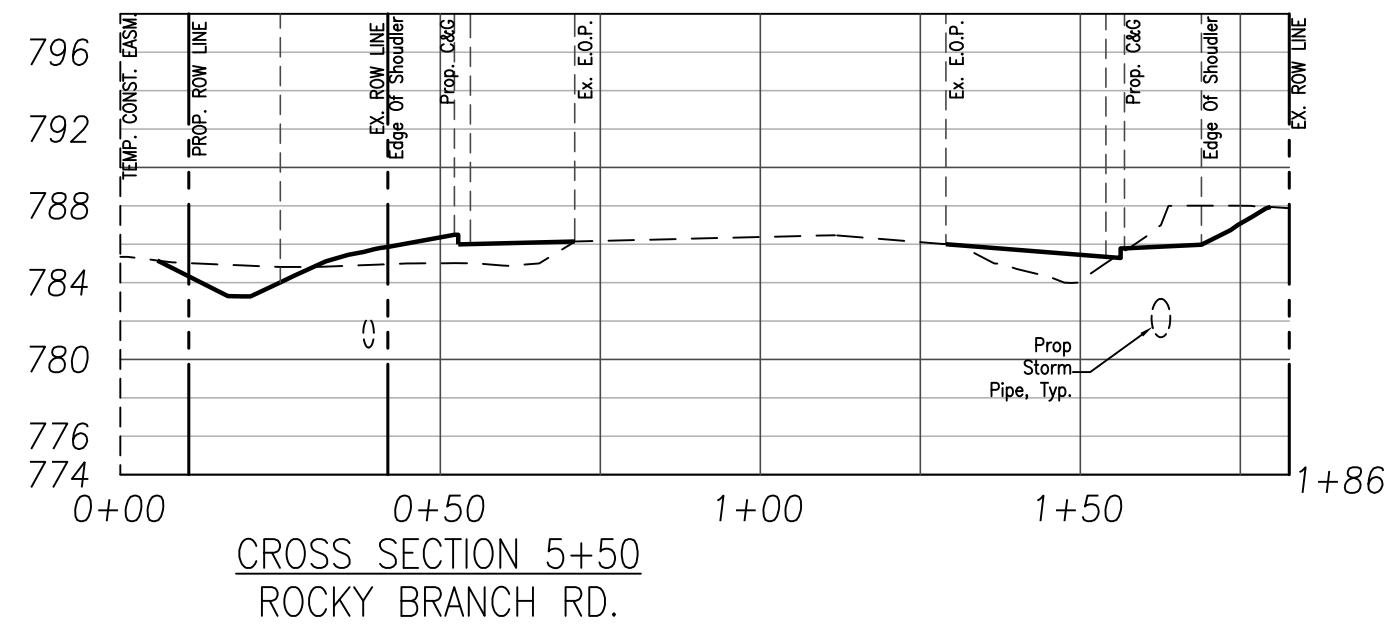
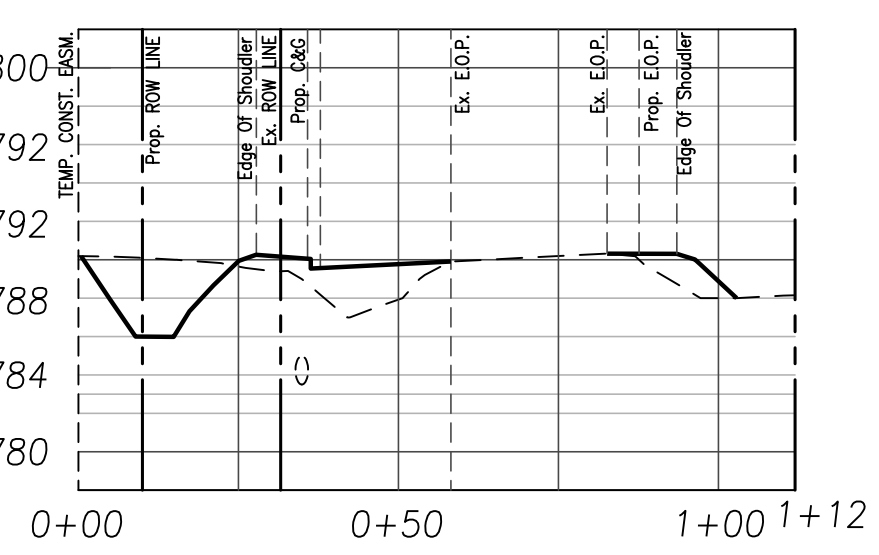
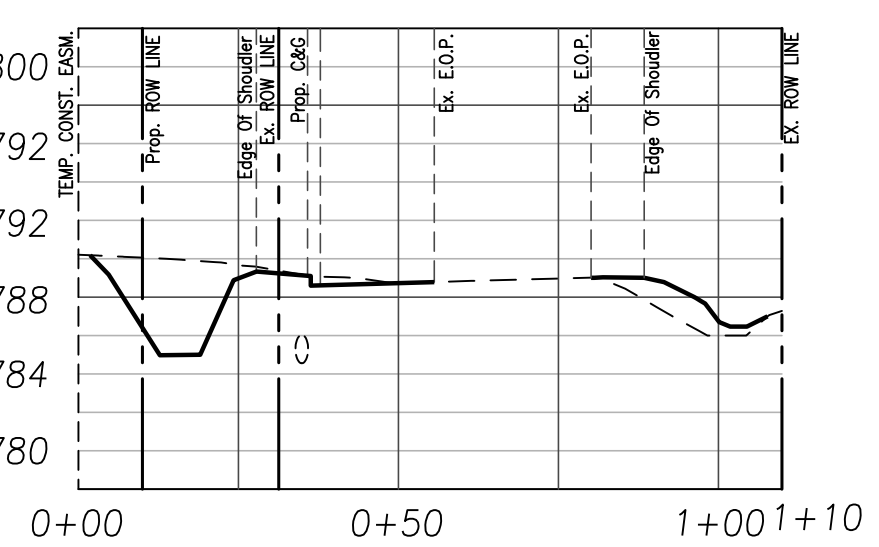
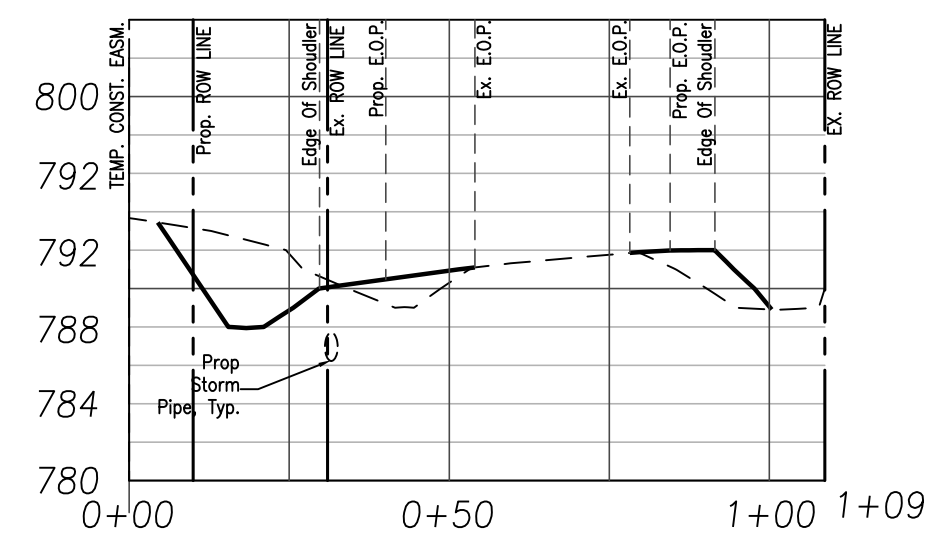
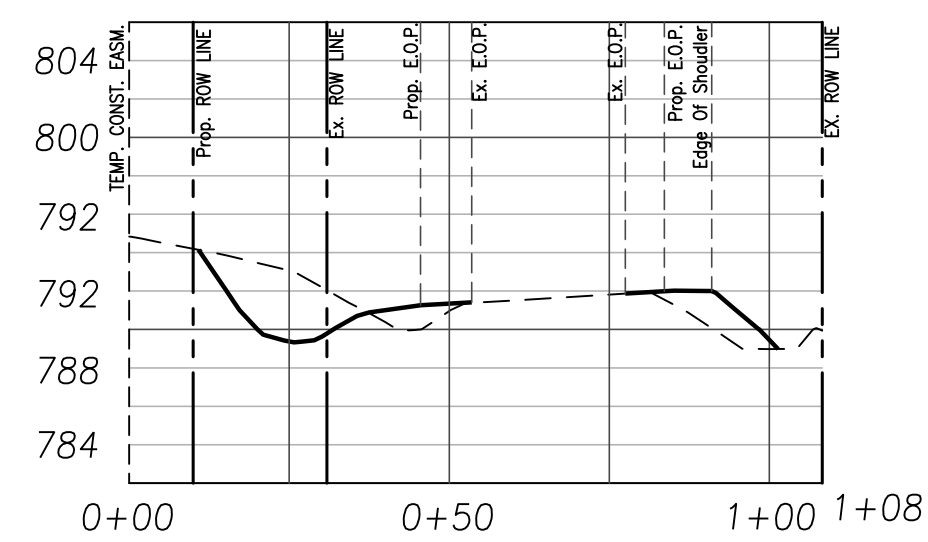
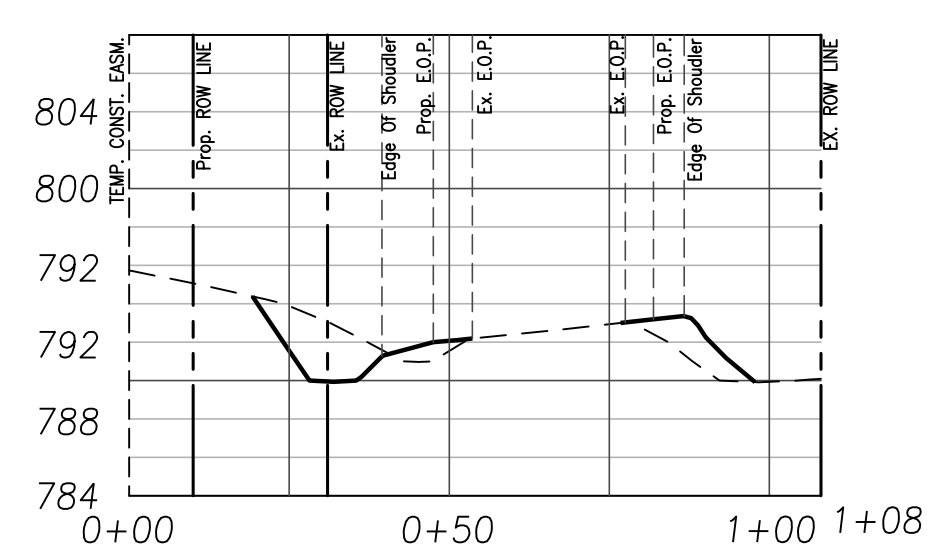
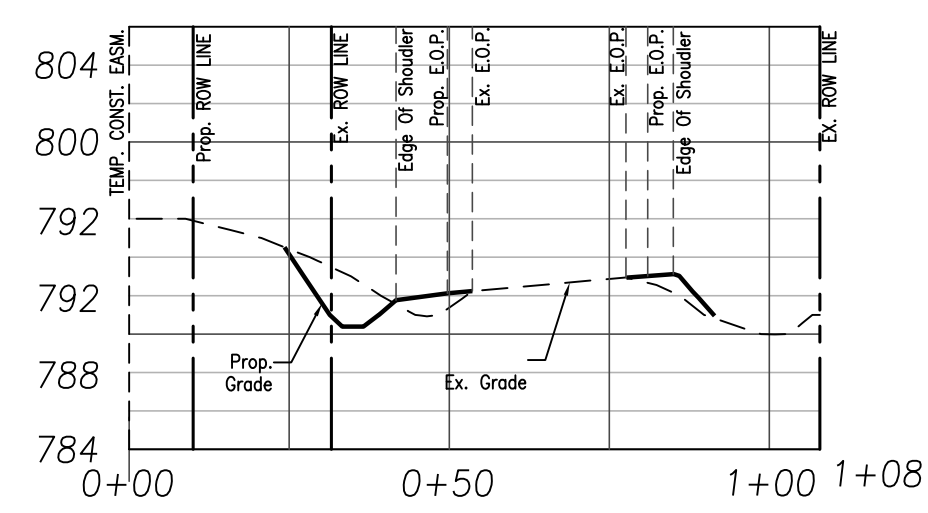
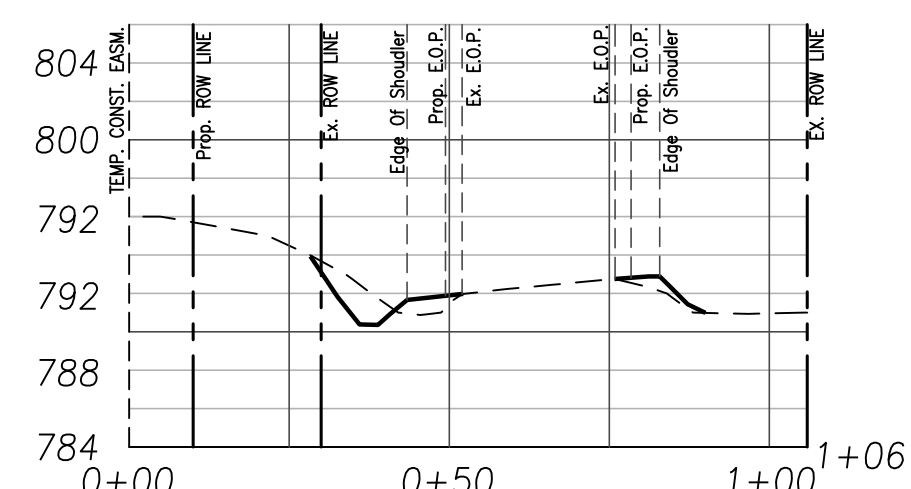
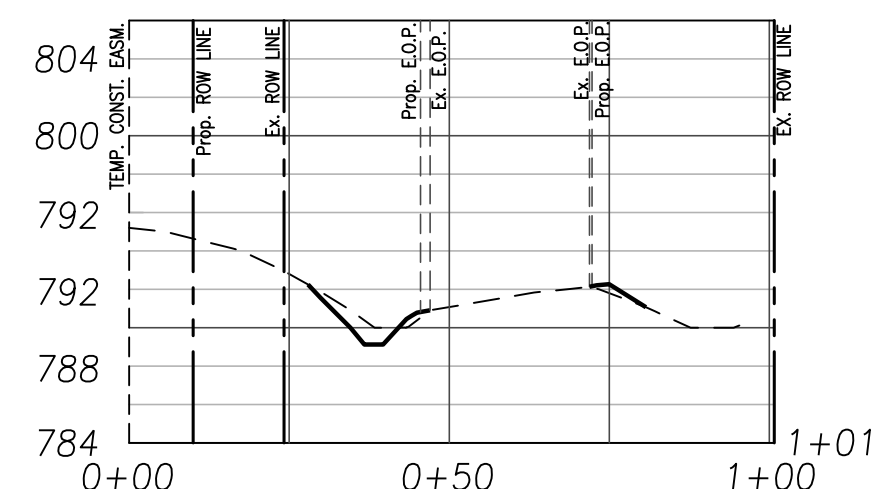
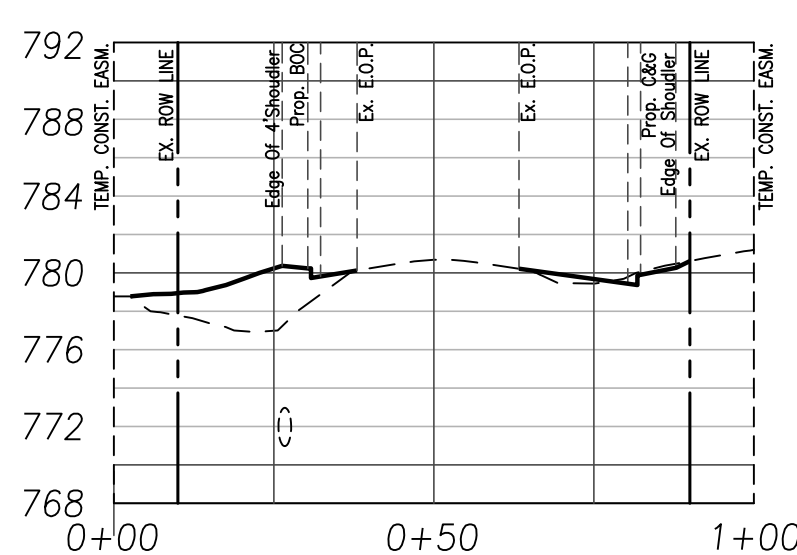
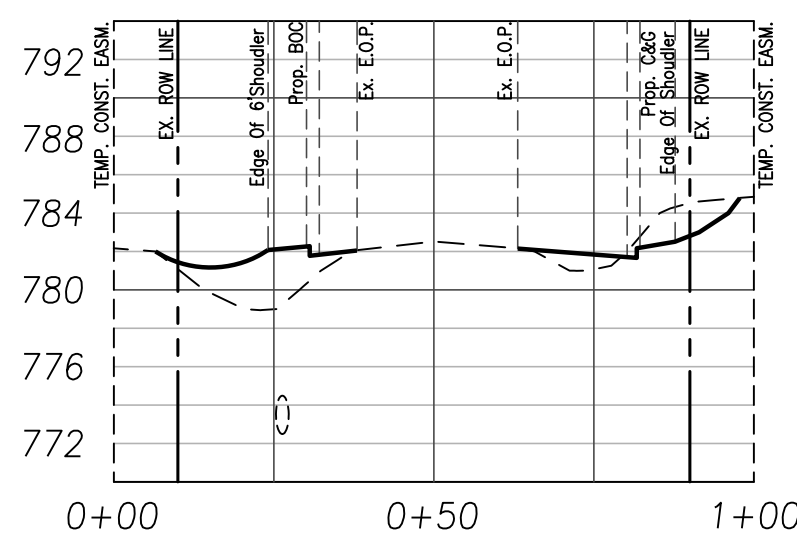
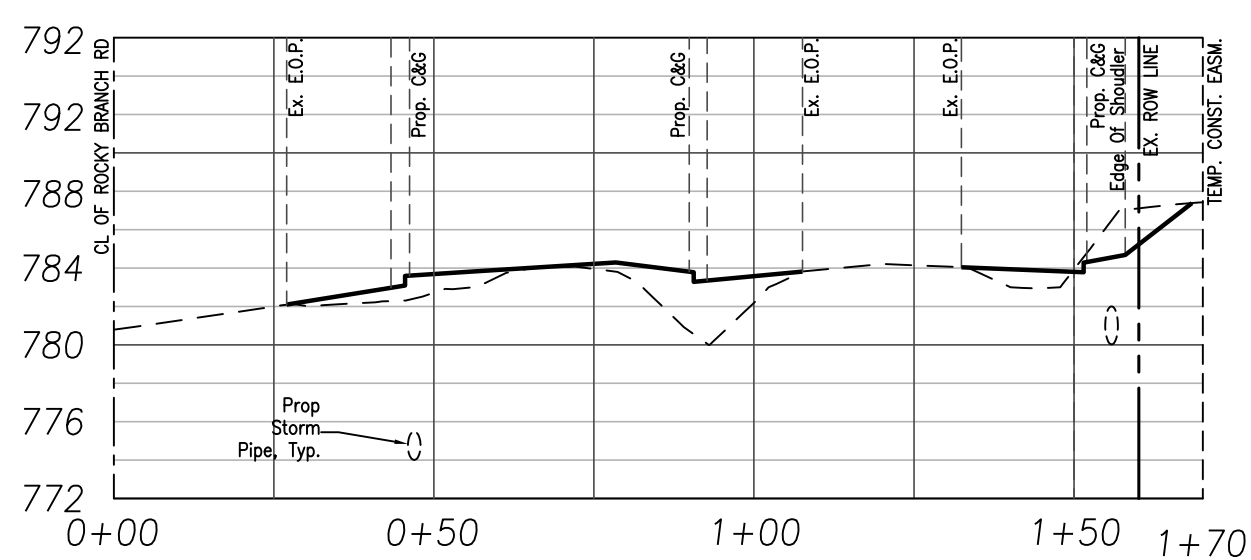
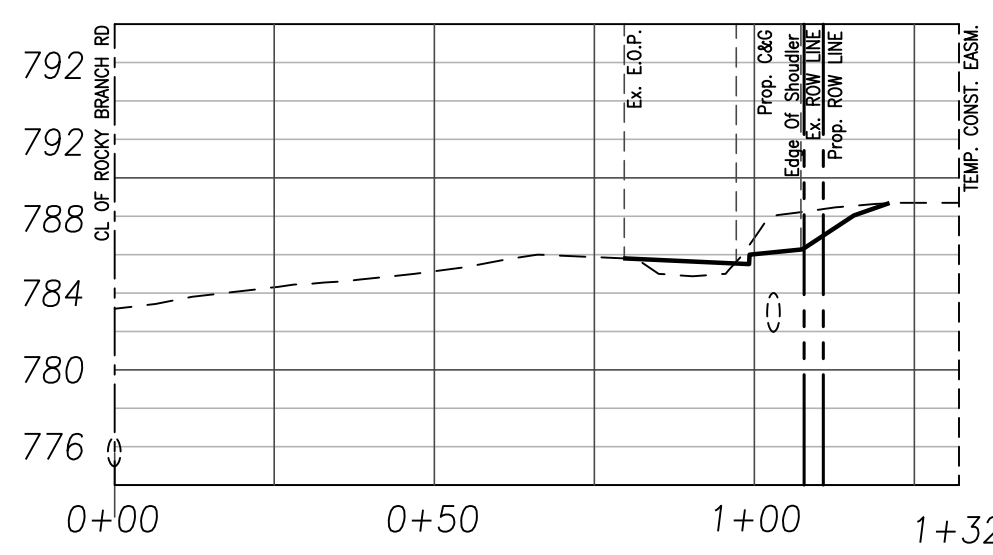
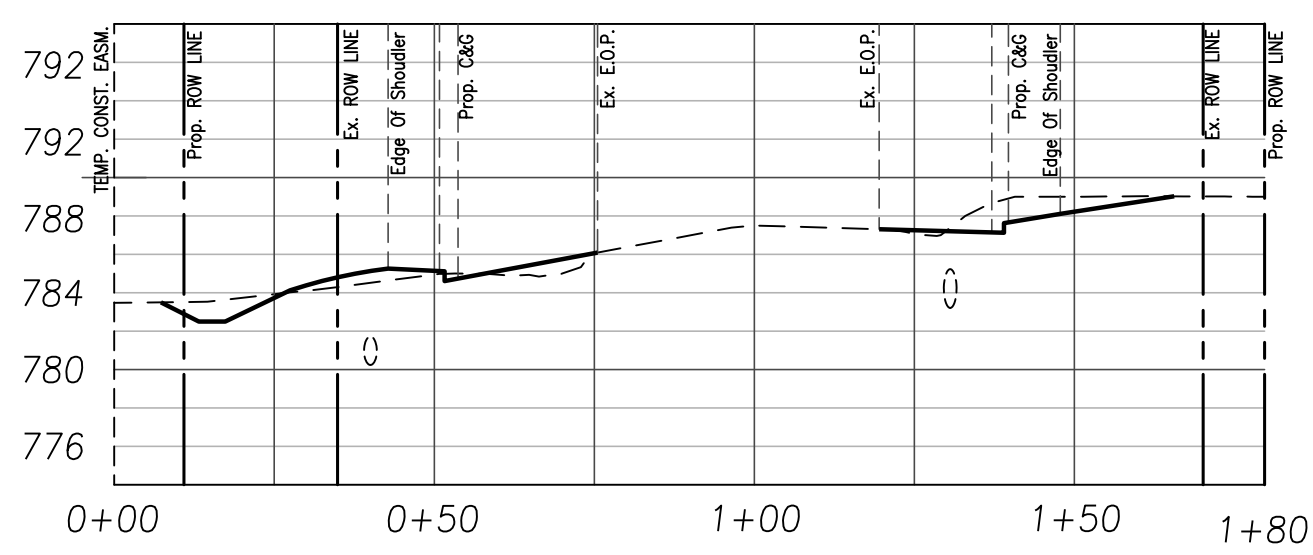
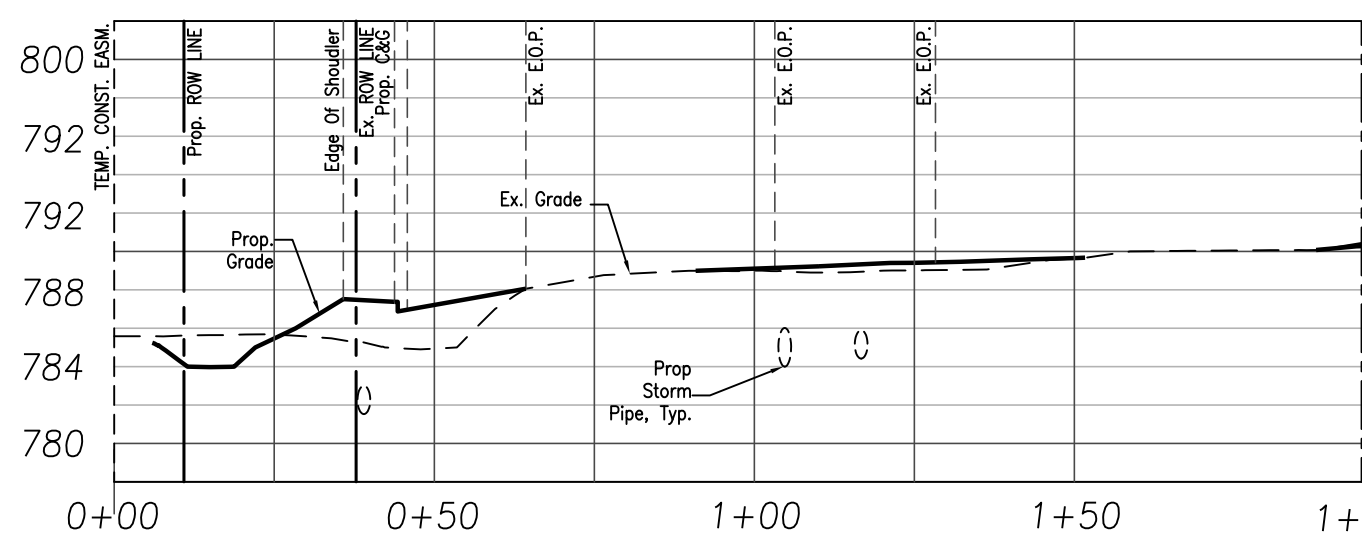
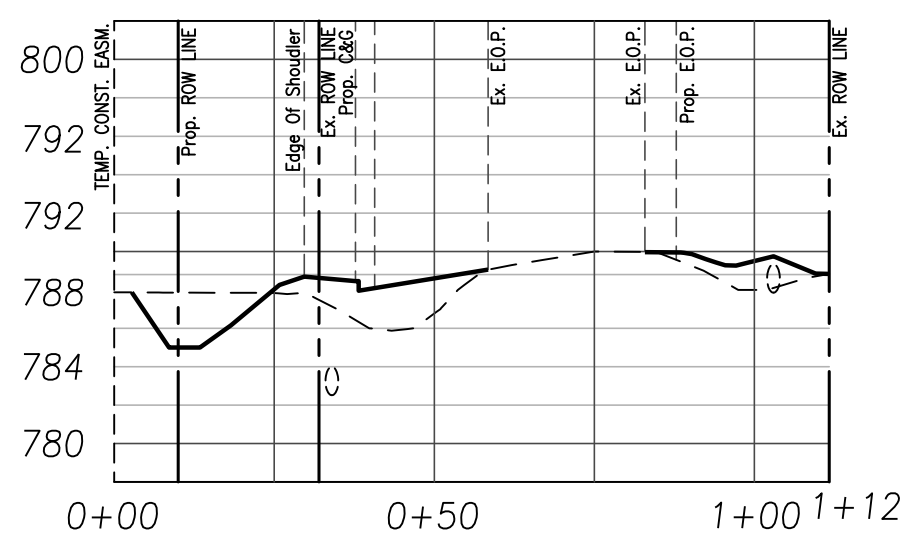
Pipe #	Diameter (in)	Downstream Structure	Upstream Structure	Upstream Rim Elevation	Inlet Invert Elevation	Outlet Invert Elevation	Pipe Slope %	Pipe Length (ft)	Material	Manning 'n'	Peak Inflow (cfs)	Peak Flow Velocity (fps)	Max HGL (ft)	Max. Flow Depth (ft)
1	24	A1	A2	770.35	762.59	762.00	0.99	59.75	HDPE	0.013	18.87	6.84	764.64	1.70
2	18	A2	A3	782.71	773.50	764.00	3.30	288.03	HDPE	0.013	18.04	11.66	775.15	1.32
3	18	A3	A4	783.10	774.40	773.50	1.90	49.92	HDPE	0.013	6.95	4.60	775.54	1.32
4	18	A4	A5	784.19	775.00	774.40	0.70	86.36	RCP	0.013	5.14	4.30	776.21	1.13
5	18	A5	A6	786.72	781.50	780.00	2.31	65.00	HDPE	0.013	2.92	6.10	782.01	0.47
6	18	A6	A7	789.93	785.00	781.50	2.10	166.88	HDPE	0.013	1.28	3.34	785.29	0.40
7	18	A7	A8	790.50	788.50	785.00	5.32	65.82	HDPE	0.013	1.32	6.28	788.74	0.26
8	24	A3	B1	783.99	779.50	778.00	2.43	61.64	RCP	0.013	12.68	8.20	780.65	0.99
9	24	B1	B2	787.04	782.50	779.50	4.30	75.00	HDPE	0.013	11.98	7.68	783.34	0.99
10	24	B2	B3	788.80	784.00	782.50	1.81	82.81	RCP	0.013	10.16	7.40	784.96	0.90
11	18	B3	B4	792.03	790.00	784.00	3.03	197.87	RCP	0.013	0.84	1.77	790.22	0.59
12	18	A5	C1	790.44	776.00	775.00	1.30	100.00	HDPE	0.013	2.85	3.15	776.53	0.77
13	18	C1	C2	779.03	776.14	776.00	0.39	14.16	HDPE	0.013	2.09	3.21	776.80	0.59
14	24	B3	D1	789.00	784.31	784.00	1.17	26.55	RCP	0.013	9.52	5.27	785.59	1.12
15	18	D1	D2	789.50	787.50	784.31	8.53	37.38	HDPE	0.013	8.71	7.33	788.14	0.95

- ALL HDPE PIPE SHALL BE DOUBLE WALL SMOOTH INVERT
- ALL CATCH BASINS SHALL BE SET WITH 18" OFFSET FROM FACE OF CURB.

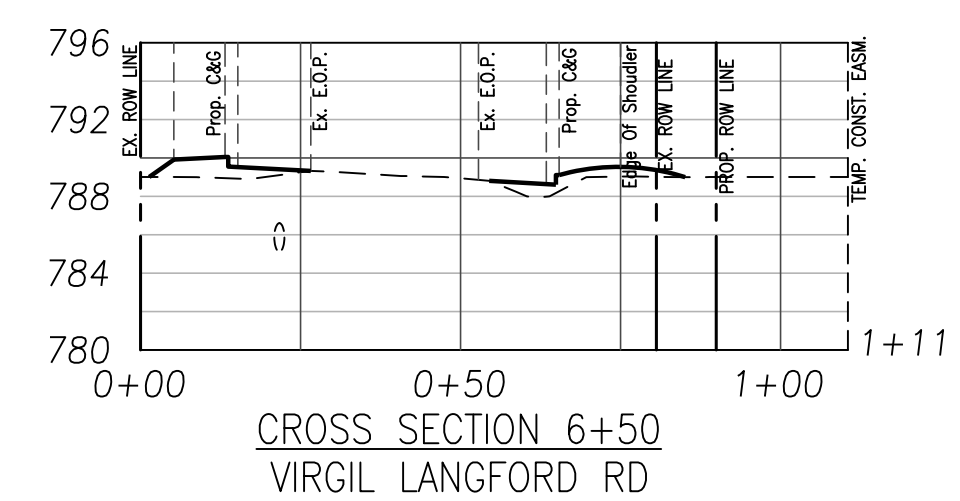
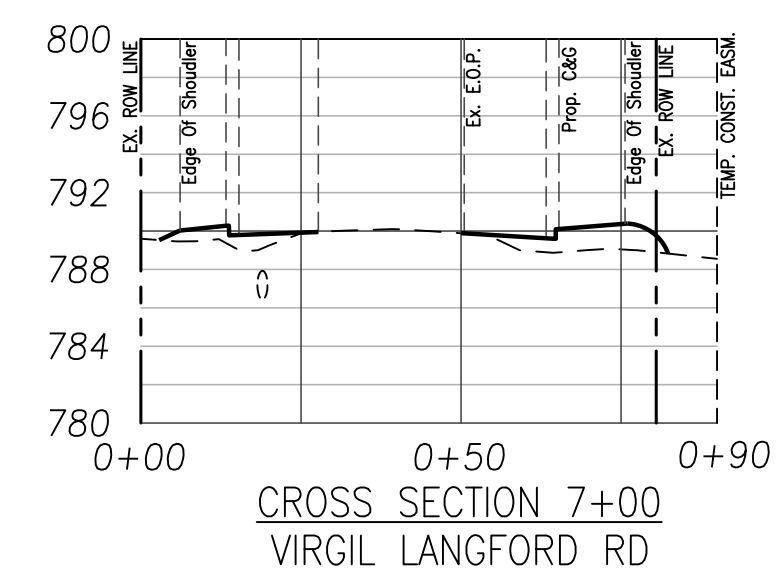
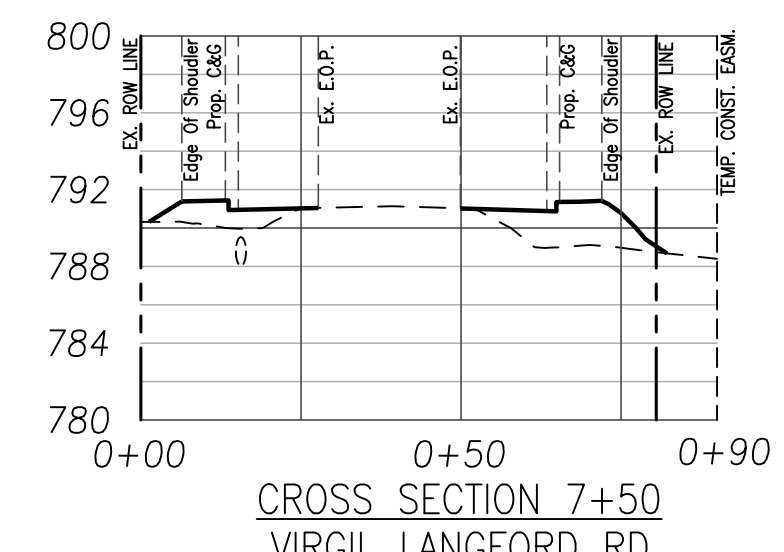
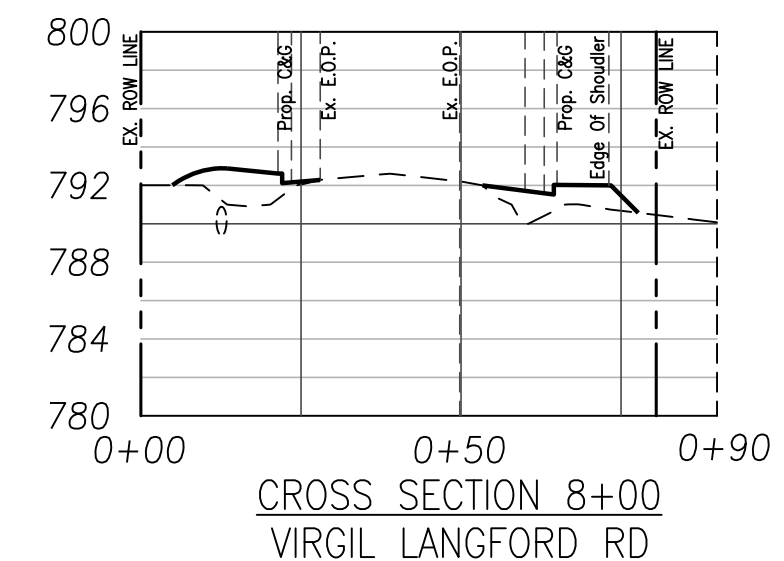
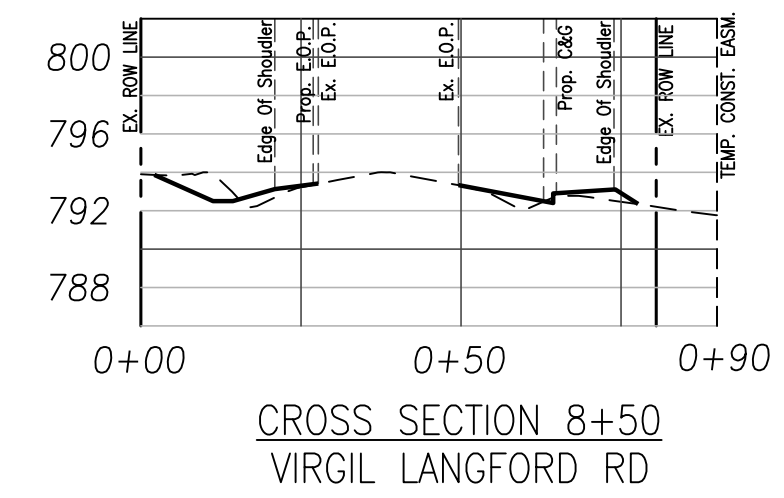
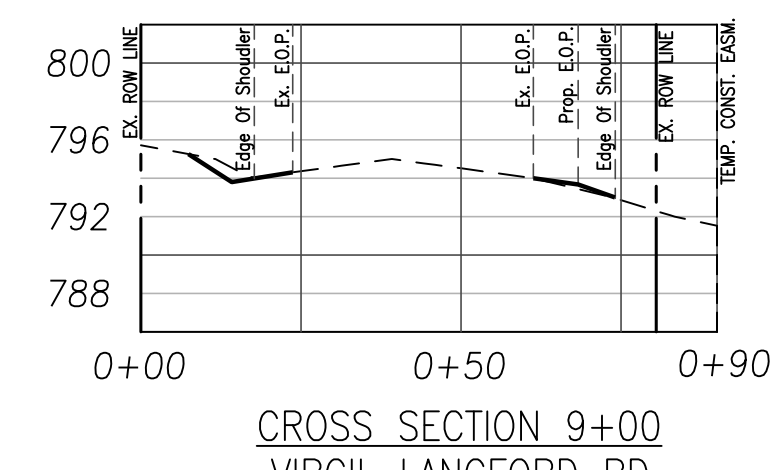




SCALE
HORIZONTAL: 1"=30'
VERTICAL: 1"=10'



SCALE
HORIZONTAL: 1"=30'
VERTICAL: 1"=10'



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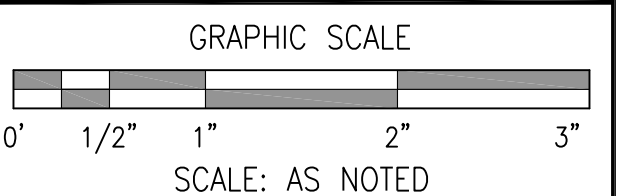
ROAD CROSS
SECTIONS



REVISIONS	DATE
ADDED TRAFFIC SIGNAL & SIGNAGE	2-22-17
ADDED LOOPS & PHASING	2-27-17
ADDED ROAD CROSS SECTIONS	6-21-18
ADDED UTILITIES PER PPI DESIGN PLANS	9-17-18
ADDED REVISED UTILITIES PER PPI PLANS	3-15-19

DATE: 8-29-16

PROJECT #: 09-021-11



SHEET #

15
15