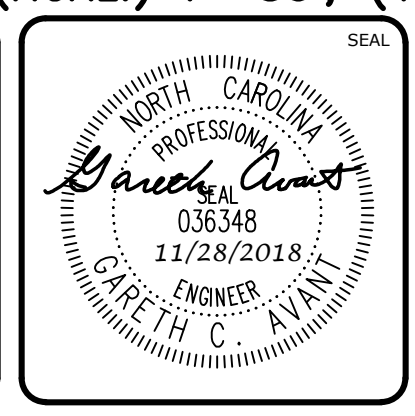
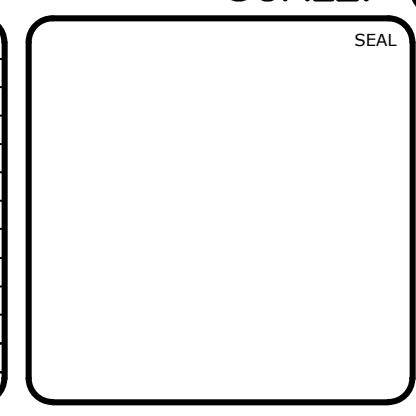


**AMELIA LANE PROFILE**  
 (STA. 23+25.00 TO 31+35.18)  
 SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'

**DELIA LANE PROFILE**  
 (STA. 10+00.00 TO 14+56.82)  
 SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'

REV. NO.	DESCRIPTION	DATE
4	REVISIONS PER NCDOT COMMENTS	2018.11.28
3	REVISIONS PER NCDOT COMMENTS	2018.11.27
2	REVISIONS PER NCDOT	2018.11.16
1	REVISIONS PER COUNTY EROSION CONTROL AND STORMWATER, NCDOT P155	2018.10.02
0	INITIAL SUBMITTAL	2018.08.17



**MCKIM & CREED**  
 ENGINEERS SURVEYORS PLANNERS

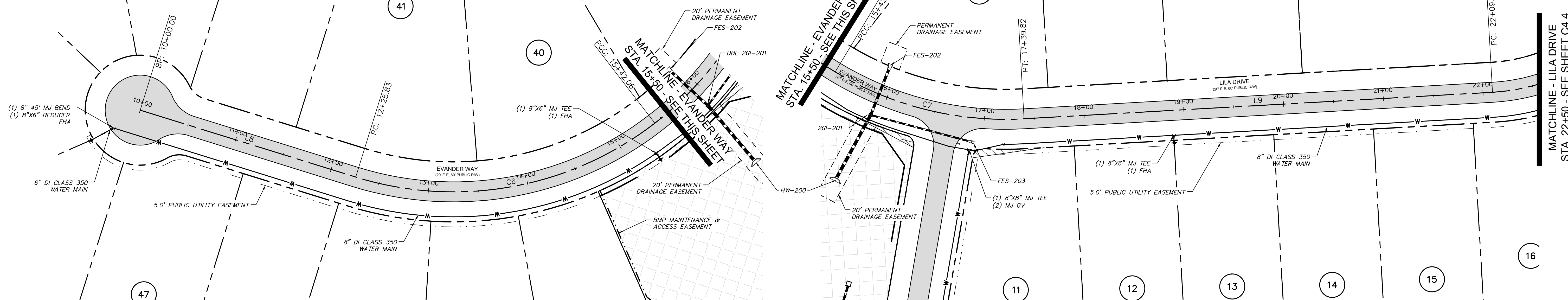
1730 VARSITY DRIVE, SUITE 500 FIRM LICENSE #: F-1222  
 RALEIGH, NORTH CAROLINA 27606 mckimcreed.com  
 T 919.233.8091 F 919.233.8031

**RYAN'S CROSSING**  
 Chatham County, North Carolina

**CONSTRUCTION PLAT**  
 PLAN & PROFILE  
 AMELIA LANE, STA. 23+25 TO STA. 31+35  
 DELIA LANE, STA. 10+00 TO STA. 14+56

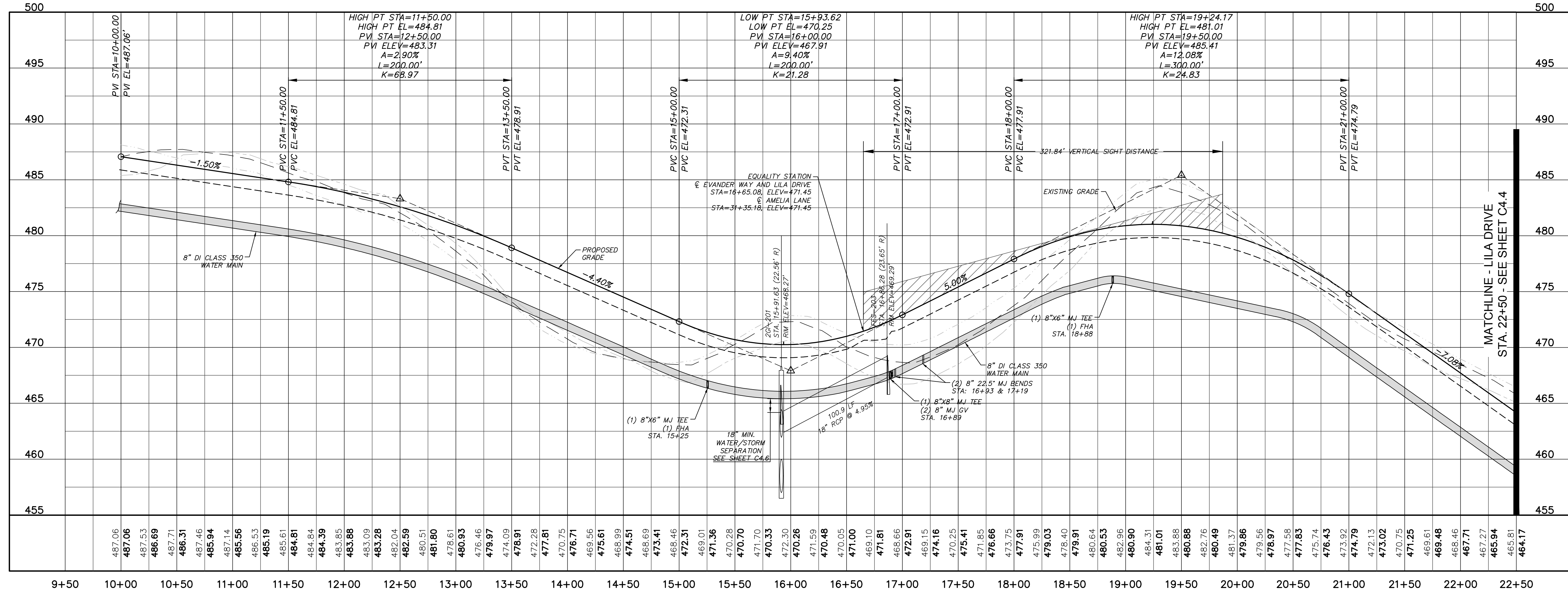
DATE: AUGUST 17, 2018	SCALE: 1"=50'	HMC FILE NUMBER: C4.0
MCE PROJ. # 07291-0002	HORIZONTAL: 1"=50'	DRAWING NUMBER: C4.2
DRAWN: BSS	VERTICAL: 1"=5'	REVISION: 4
DESIGNED: BSS		
CHECKED: GCA		
PROJ. MGR.: CHS		
STATUS: PRELIMINARY FOR CONSTRUCTION		





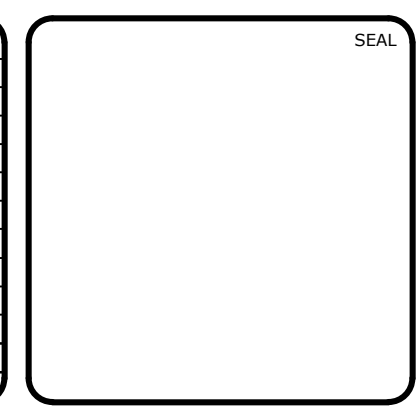
EVANDER WAY AND LILA DRIVE PLAN  
(60' R/W, STA. 10+00.00 TO 15+50.00)  
SCALE: 1"=50'

EVANDER WAY AND LILA DRIVE PLAN  
(60' R/W, STA. 15+50.00 TO 22+50.00)  
SCALE: 1"=50'



EVANDER WAY AND LILA DRIVE PROFILE  
(STA. 10+00.00 TO 22+50.00)  
SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'

REV. NO.	DESCRIPTION	DATE
4	REVISIONS PER NCDOT COMMENTS	2018.11.28
3	REVISIONS PER NCDOT COMMENTS	2018.11.27
2	REVISIONS PER NCDOT	2018.11.16
1	REVISIONS PER COUNTY EROSION CONTROL AND STORMWATER, NCDOT PMS	2018.10.02
0	INITIAL SUBMITTAL	2018.08.17



**MCKIM & CREED**  
ENGINEERS SURVEYORS PLANNERS

1730 VARSITY DRIVE, SUITE 500 FIRM LICENSE #: F-1222  
RALEIGH, NORTH CAROLINA 27606 mckimcreed.com  
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**RYAN'S CROSSING**  
Chatham County, North Carolina

**CONSTRUCTION PLAT**

PLAN & PROFILE  
EVANDER WAY AND LILA DRIVE  
STA. 10+00 TO STA. 22+50

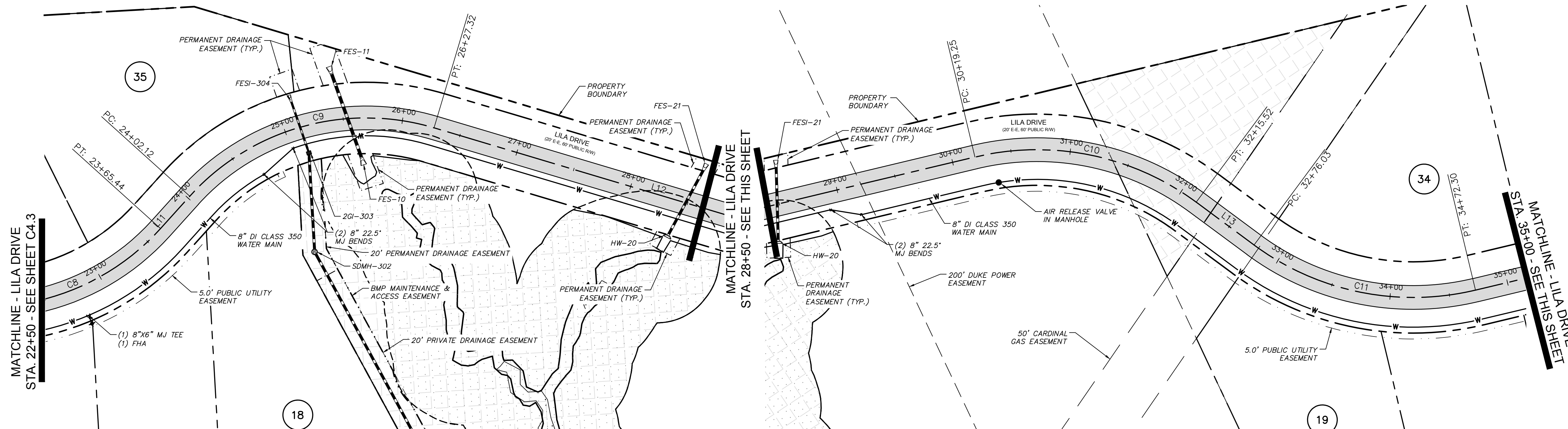
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DRAWN: BSS  
DESIGNED: BSS  
CHECKED: GCA  
PROJ. MGR.: CHS

SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'

H&C FILE NUMBER: C4.0  
DRAWING NUMBER: C4.3

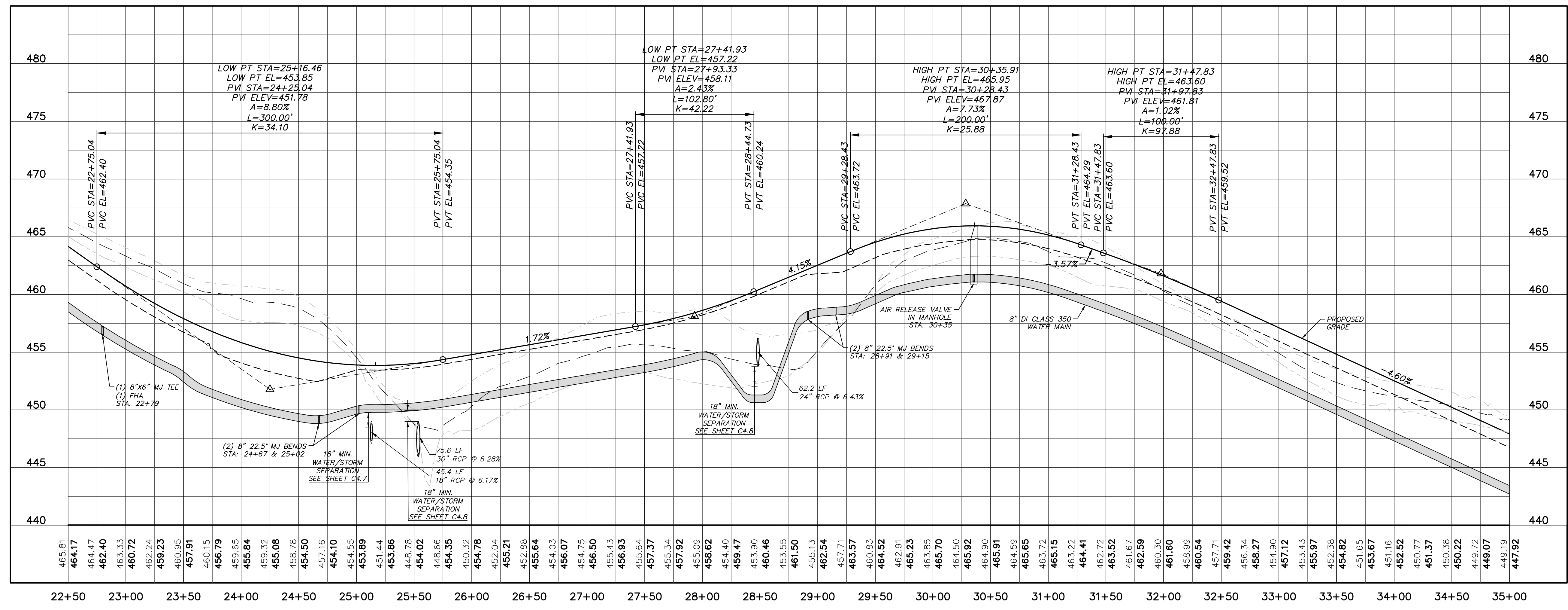
STATUS: PRELIMINARY FOR CONSTRUCTION  
REVISION: 4





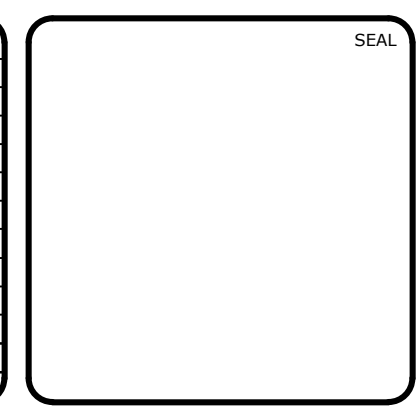
**LILA DRIVE PLAN**  
 (60' R/W, STA. 22+50.00 TO 28+50.00)  
 SCALE: 1"=50'

**LILA DRIVE PLAN**  
 (60' R/W, STA. 28+50.00 TO 35+00.00)  
 SCALE: 1"=50'



**LILA DRIVE PROFILE**  
 (STA. 22+50.00 TO 35+00.00)  
 SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'

REV. NO.	DESCRIPTIONS	DATE
4	REVISIONS PER NCDOT COMMENTS	2018.11.28
3	REVISIONS PER NCDOT COMMENTS	2018.11.27
2	REVISIONS PER NCDOT	2018.11.16
1	REVISIONS PER COUNTY EROSION CONTROL AND STORMWATER, NCDOT PWS	2018.10.02
0	INITIAL SUBMITTAL	2018.08.17



**MCKIM & CREED**  
 ENGINEERS SURVEYORS PLANNERS

1730 VARSITY DRIVE, SUITE 500 FIRM LICENSE #: F-1222  
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 T 919.233.8091 F 919.233.8031

**RYAN'S CROSSING**  
 Chatham County, North Carolina

**CONSTRUCTION PLAT**

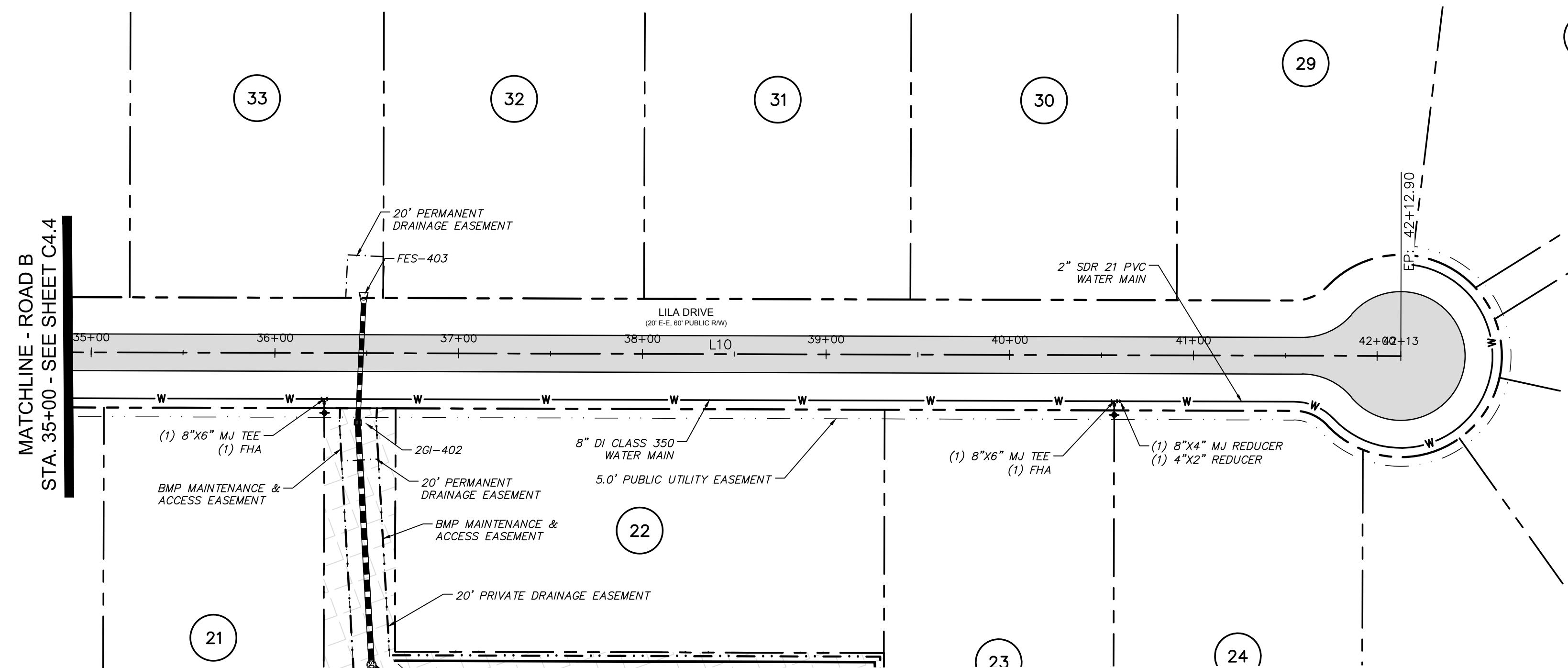
PLAN & PROFILE  
 LILA DRIVE  
 STA. 22+50 TO STA. 35+00

DATE: AUGUST 17, 2018  
 MCE PROJ. # 07291-0002  
 DRAWN: BSS  
 DESIGNED: BSS  
 CHECKED: GCA  
 PROJ. MGR.: CHS

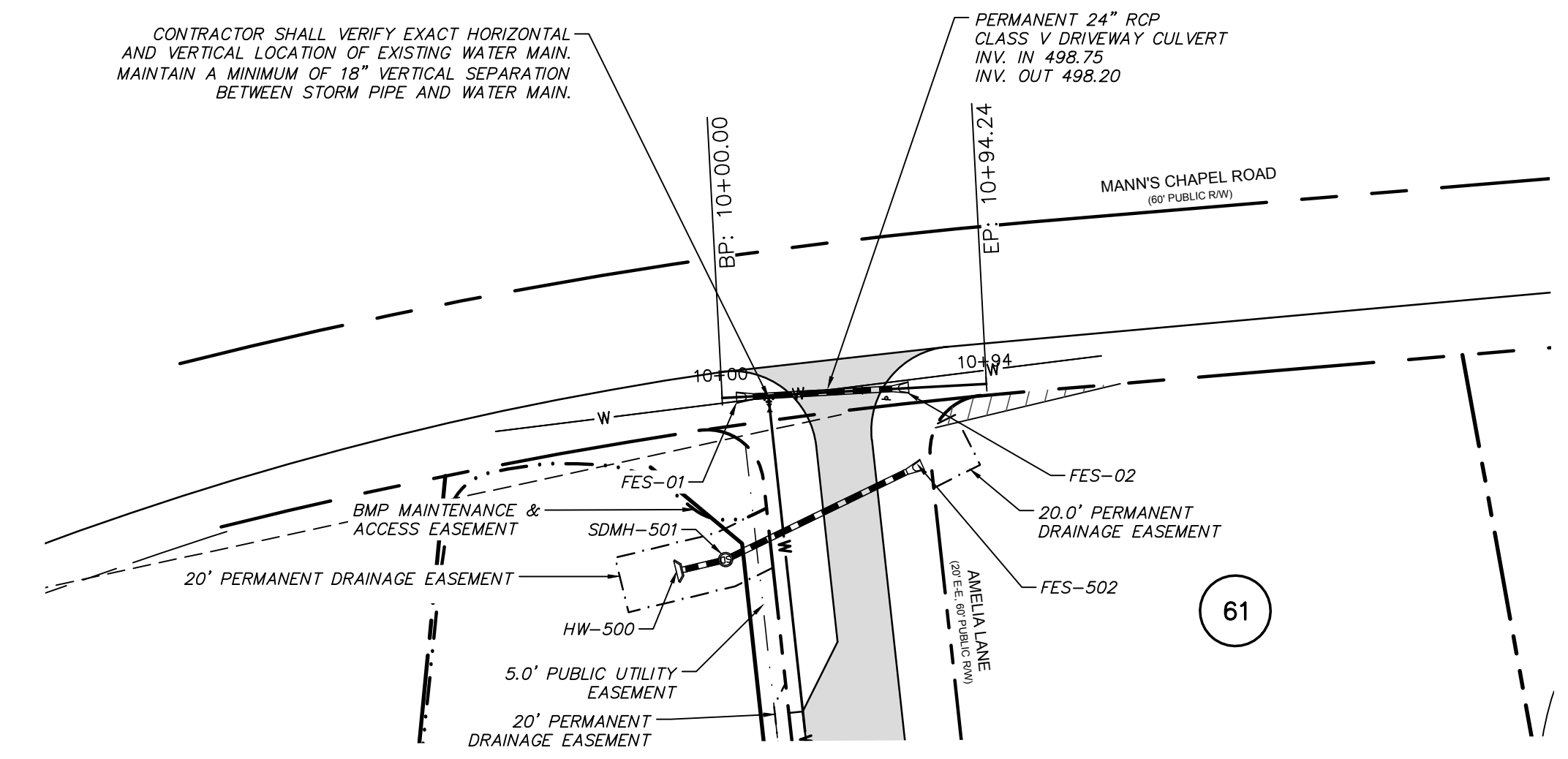
SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'

H&C FILE NUMBER: C4.0  
 DRAWING NUMBER: C4.4  
 REVISION: 4  
 STATUS: PRELIMINARY FOR CONSTRUCTION

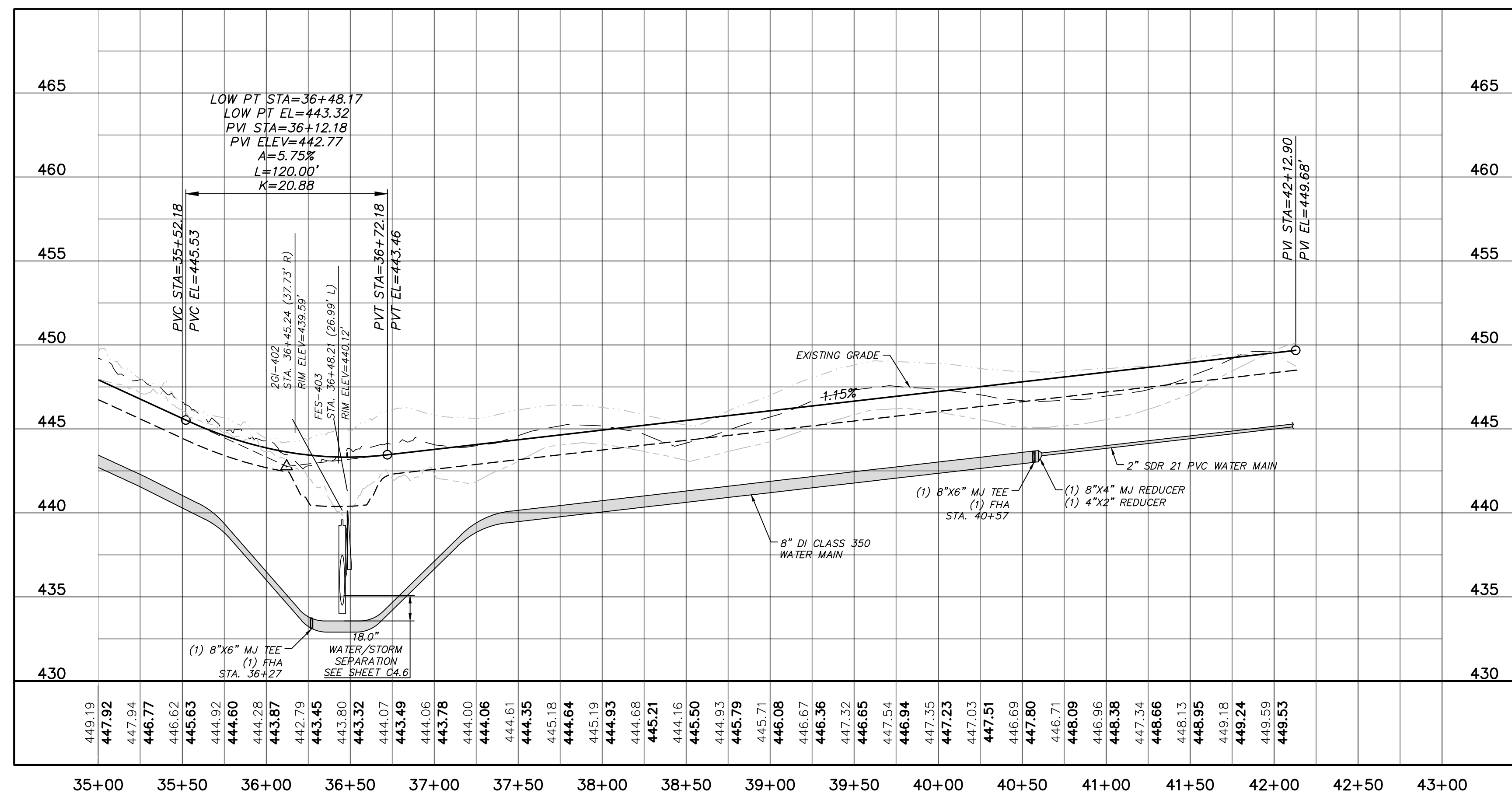




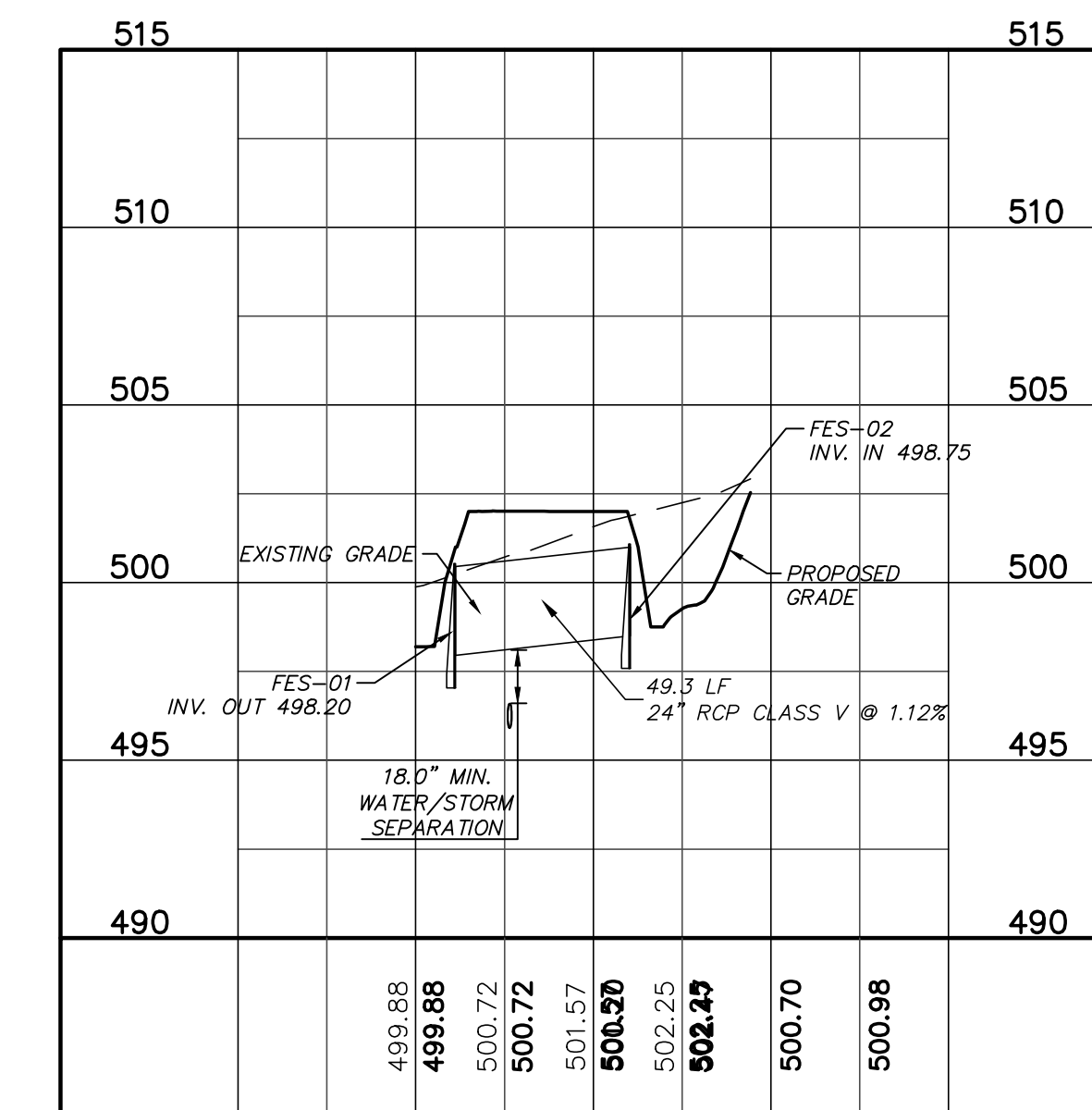
LILA DRIVE PLAN  
(60' R/W, STA. 35+00.00 TO 42+12.90)  
SCALE: 1"=50'



ENTRANCE CULVERT PLAN  
(60' R/W, STA. 10+00.00 TO 11+34.40)  
SCALE: 1"=50'

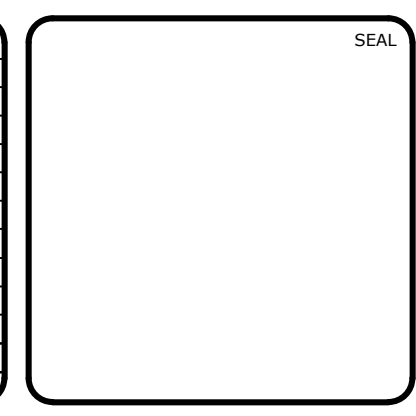


LILA DRIVE PROFILE  
(STA. 35+00.00 TO 42+12.90)  
SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'



ENTRANCE CULVERT PROFILE  
(STA. 10+00.00 TO 11+34.40)  
SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'

REV. NO.	DESCRIPTION	DATE
4	REVISIONS PER NCDOT COMMENTS	2018.11.28
3	REVISIONS PER NCDOT COMMENTS	2018.11.27
2	REVISIONS PER NCDOT	2018.11.16
1	REVISIONS PER COUNTY EROSION CONTROL AND STORMWATER, NCDOT P155	2018.10.02
0	INITIAL SUBMITTAL	2018.08.17



**MCKIM & CREED**  
ENGINEERS SURVEYORS PLANNERS

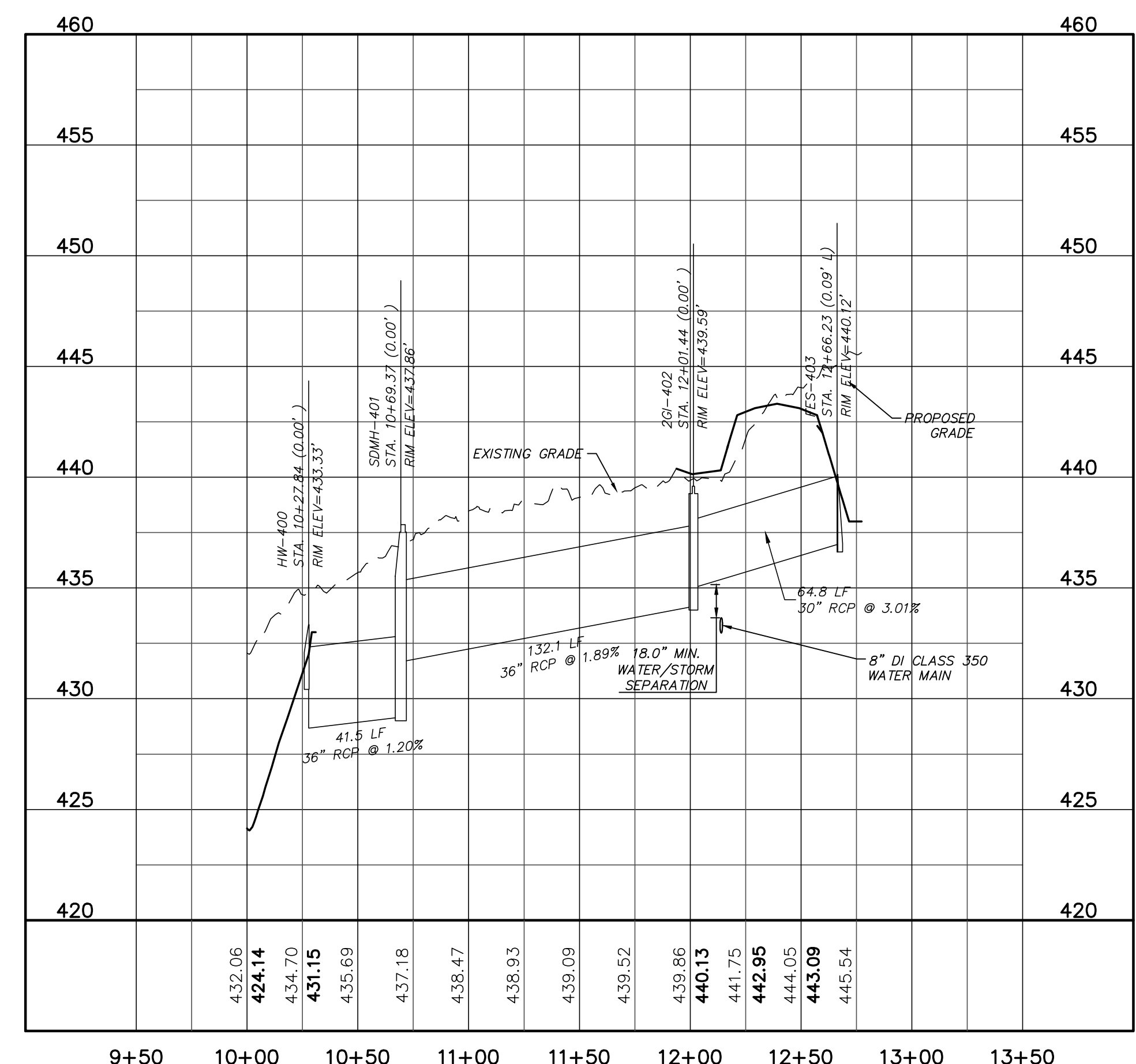
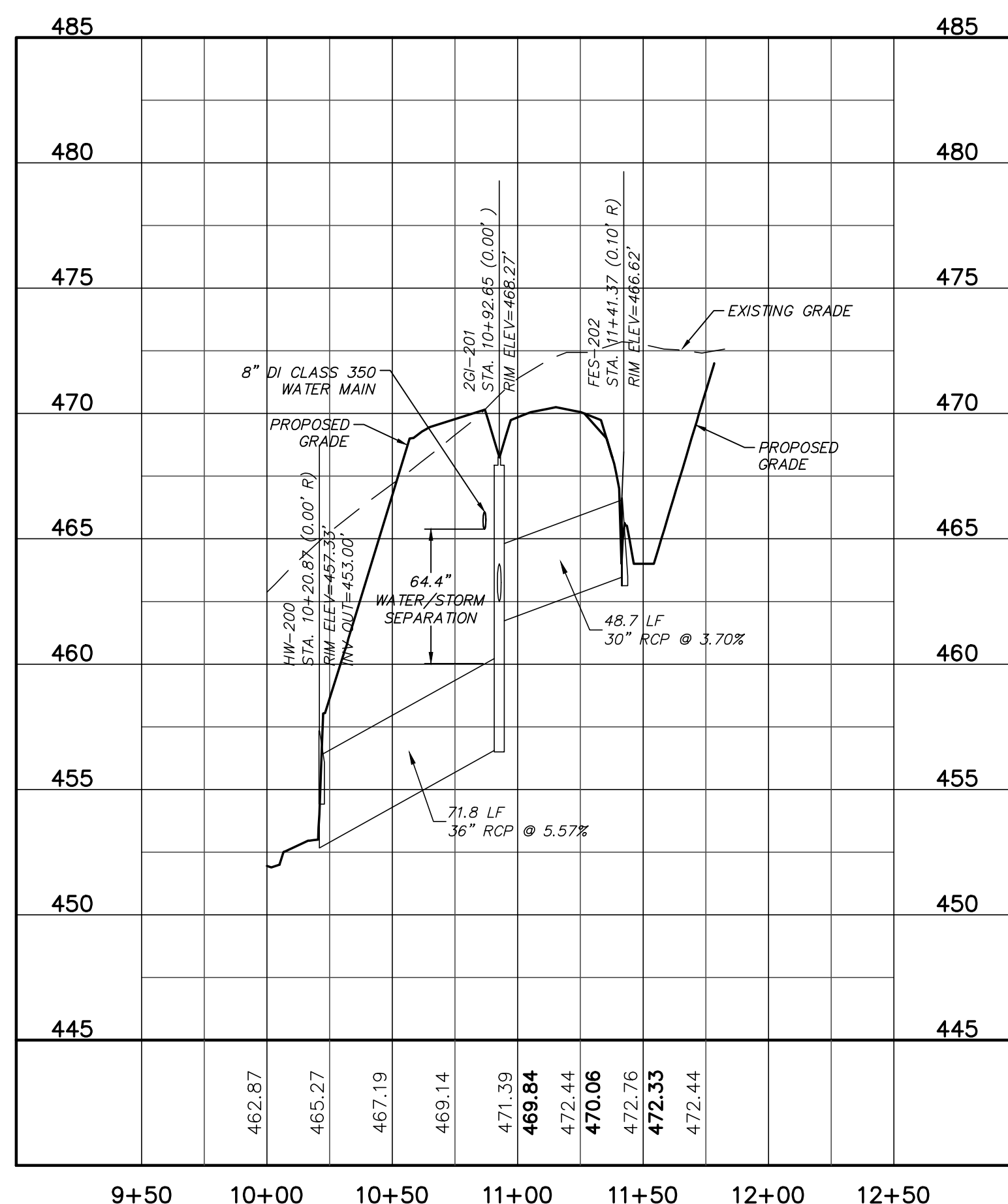
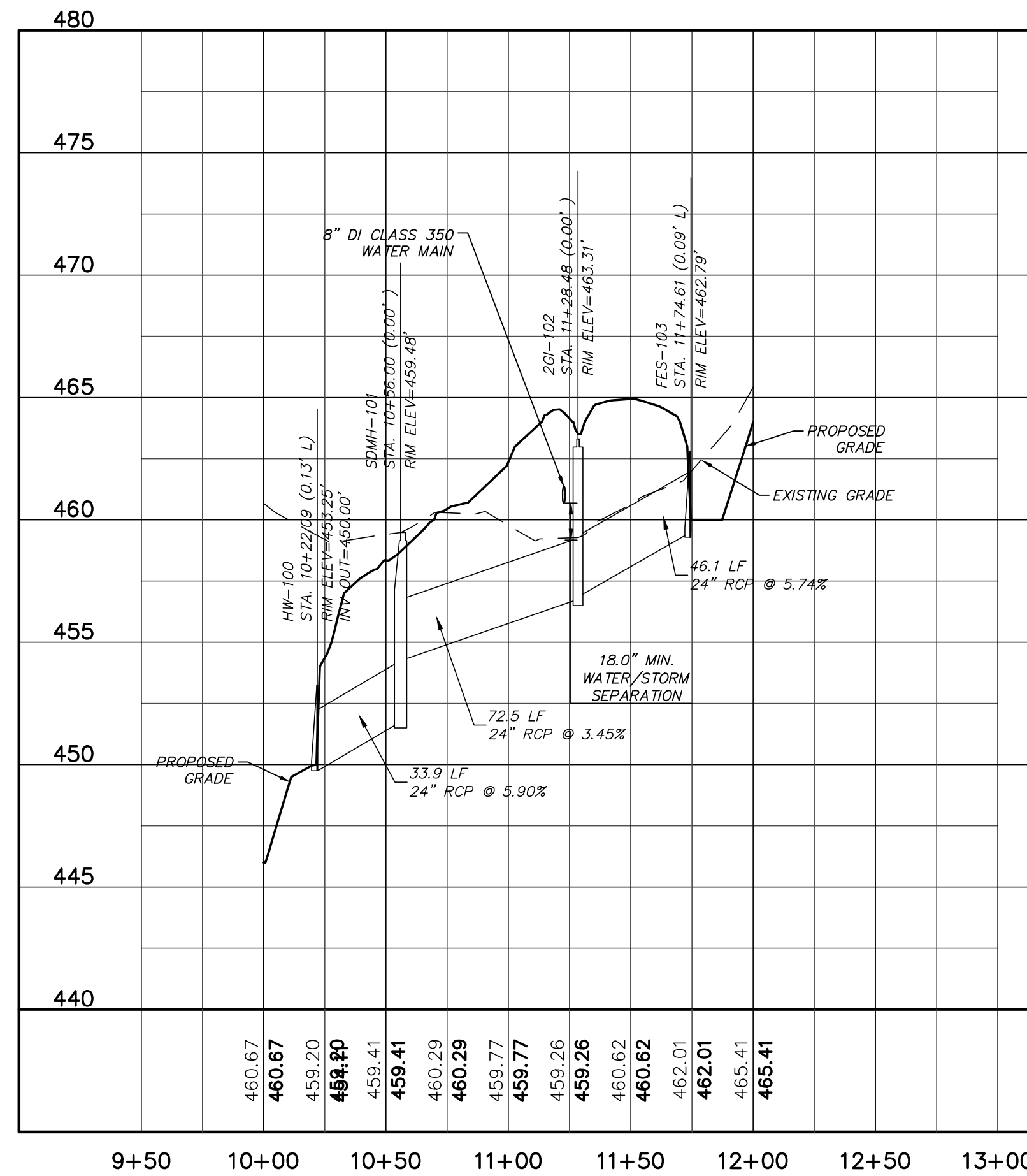
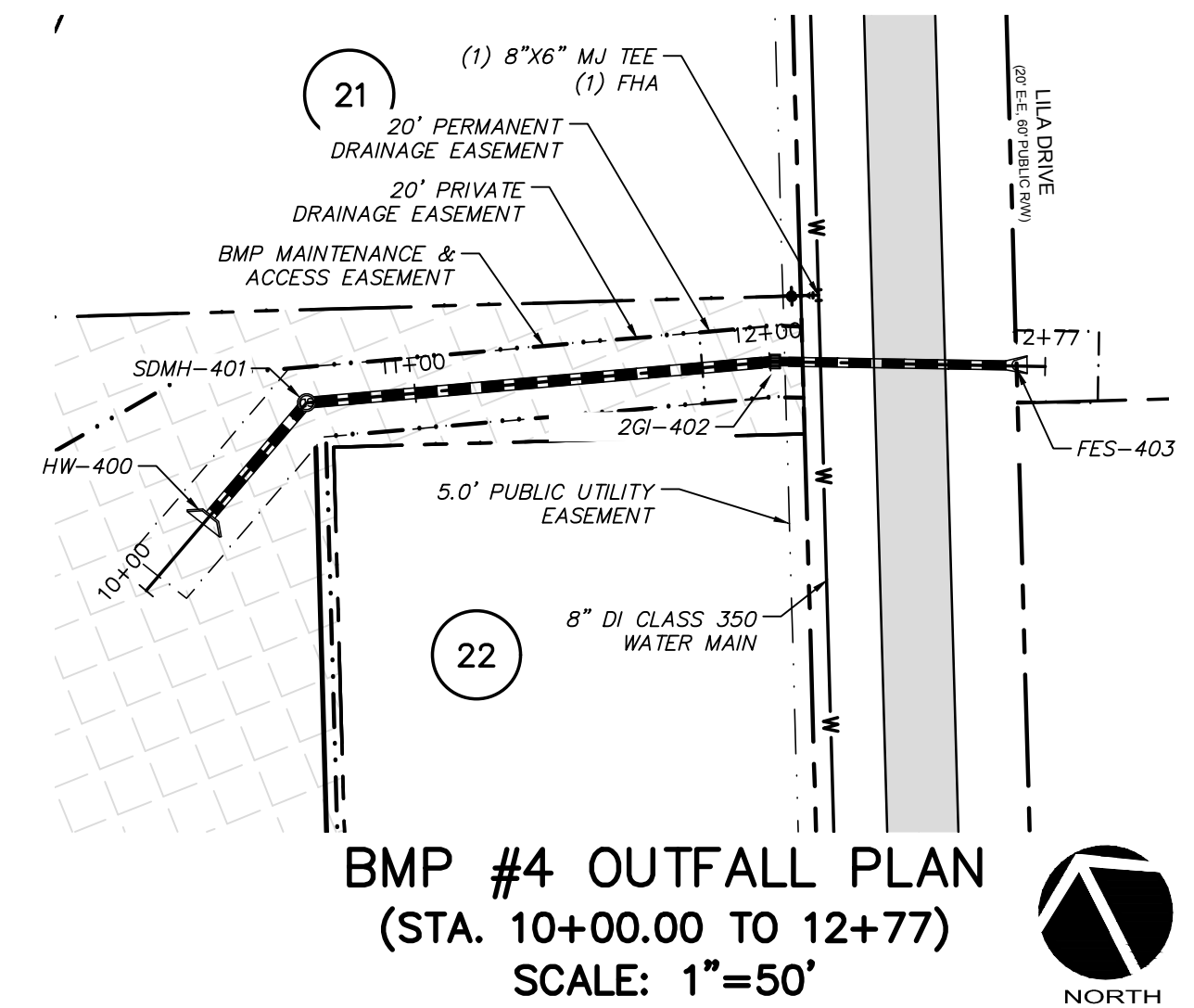
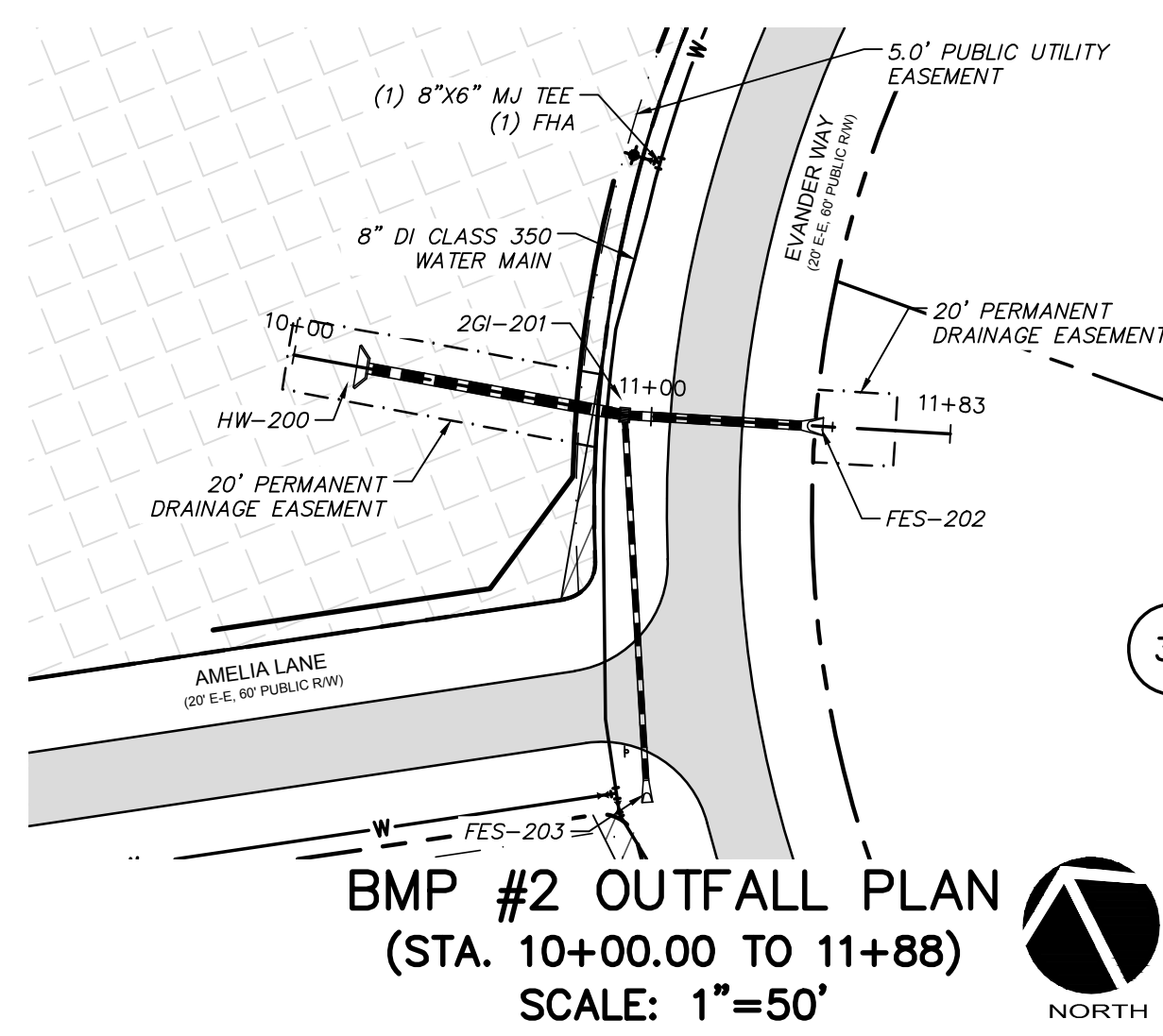
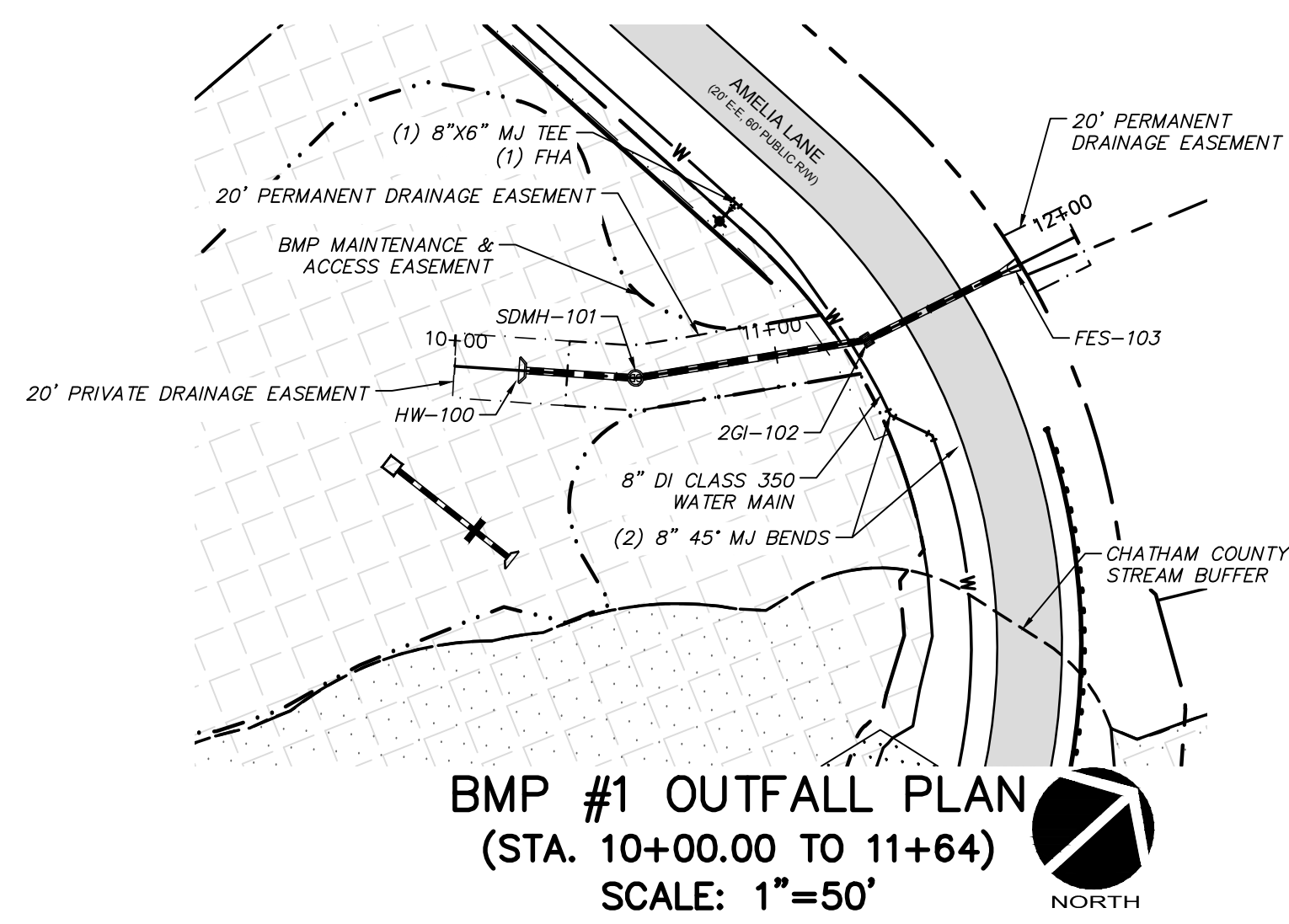
1730 VARSITY DRIVE, SUITE 500 FIRM LICENSE #: F-1222  
RALEIGH, NORTH CAROLINA 27606 mckimcreed.com  
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**RYAN'S CROSSING**  
Chatham County, North Carolina

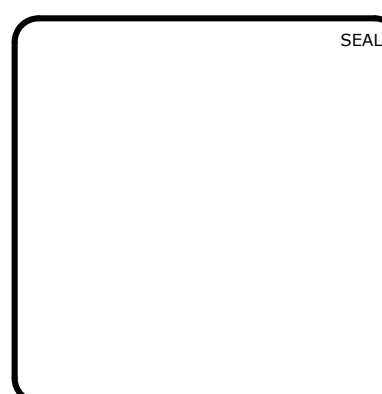
**CONSTRUCTION PLAT**  
PLAN & PROFILE  
LILA DRIVE, STA. 35+00 TO STA. 42+12  
ENTRANCE CULVERT, STA. 10+00 TO STA. 11+34

DATE: AUGUST 17, 2018	SCALE: 1"=50'	HMC FILE NUMBER: C4.0
MCE PROJ. # 07291-0002	HORIZONTAL: 1"=50'	DRAWING NUMBER: C4.5
DRAWN: BSS	VERTICAL: 1"=5'	REVISION: 4
DESIGNED: BSS		
CHECKED: GCA		
PROJ. MGR.: CHS		
STATUS: PRELIMINARY FOR CONSTRUCTION		





REV. NO.	DESCRIPTIONS	DATE
4	REVISIONS PER NCDOT COMMENTS	2018.11.28
3	REVISIONS PER NCDOT COMMENTS	2018.11.27
2	REVISIONS PER NCDOT	2018.11.16
1	REVISIONS PER COUNTY EROSION CONTROL AND STORMWATER, NCDOT PWS	2018.10.02
0	INITIAL SUBMITTAL	2018.08.17



**MCKIM & CREED**  
ENGINEERS SURVEYORS PLANNERS

1730 VARSITY DRIVE, SUITE 500 FIRM LICENSE #: F-1222  
RALEIGH, NORTH CAROLINA 27606 mckimcreed.com  
T 919.233.8091 F 919.233.8031

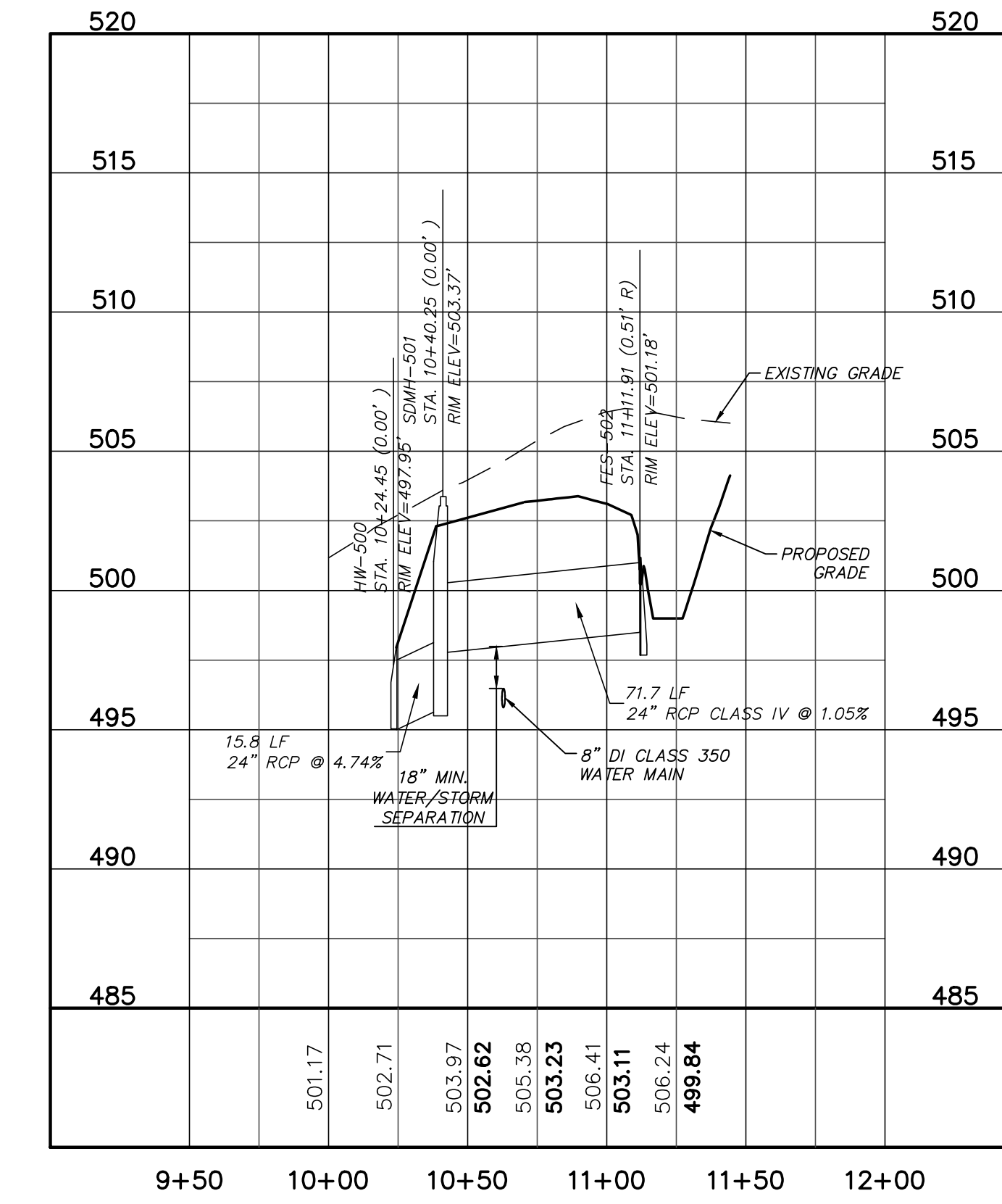
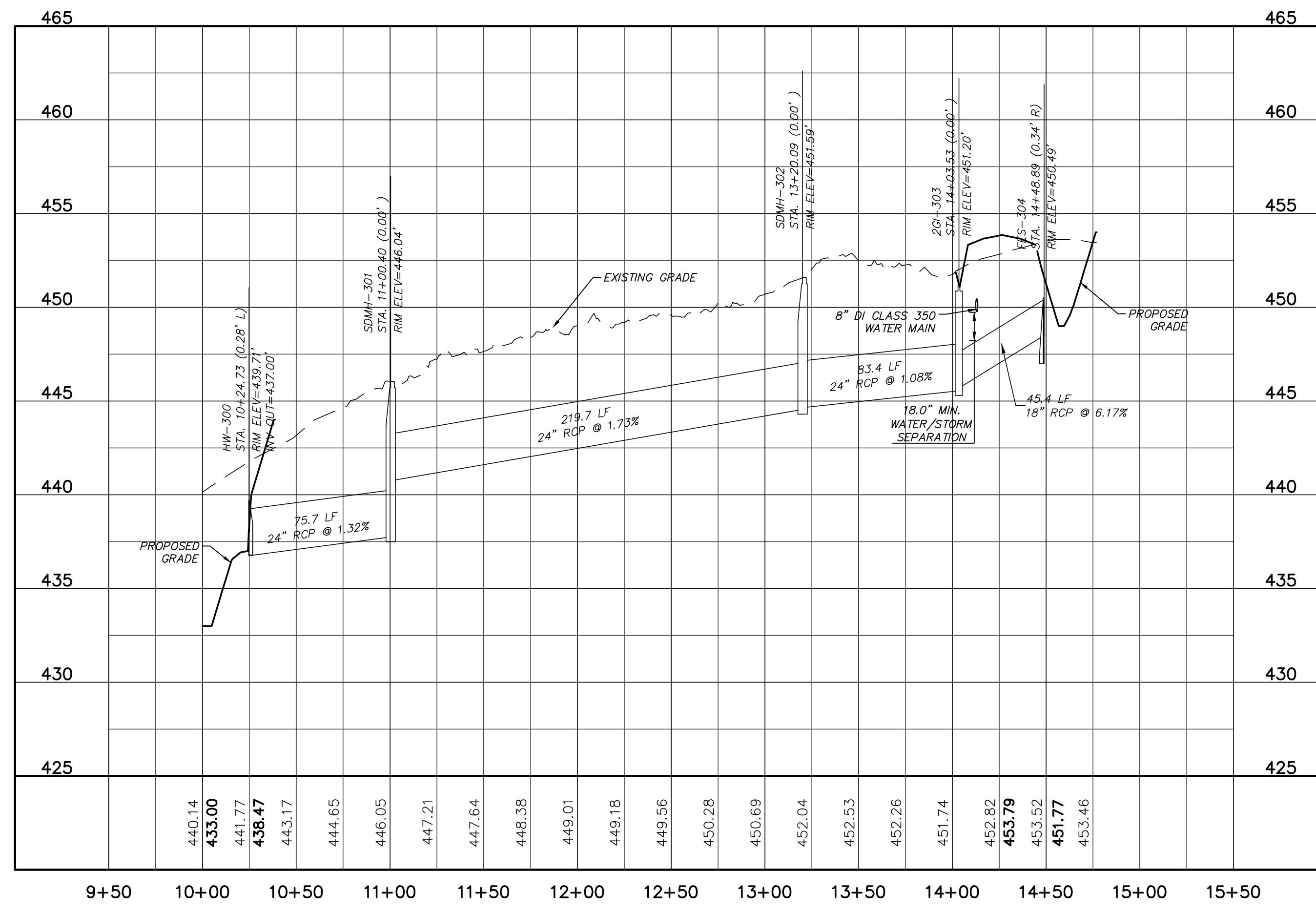
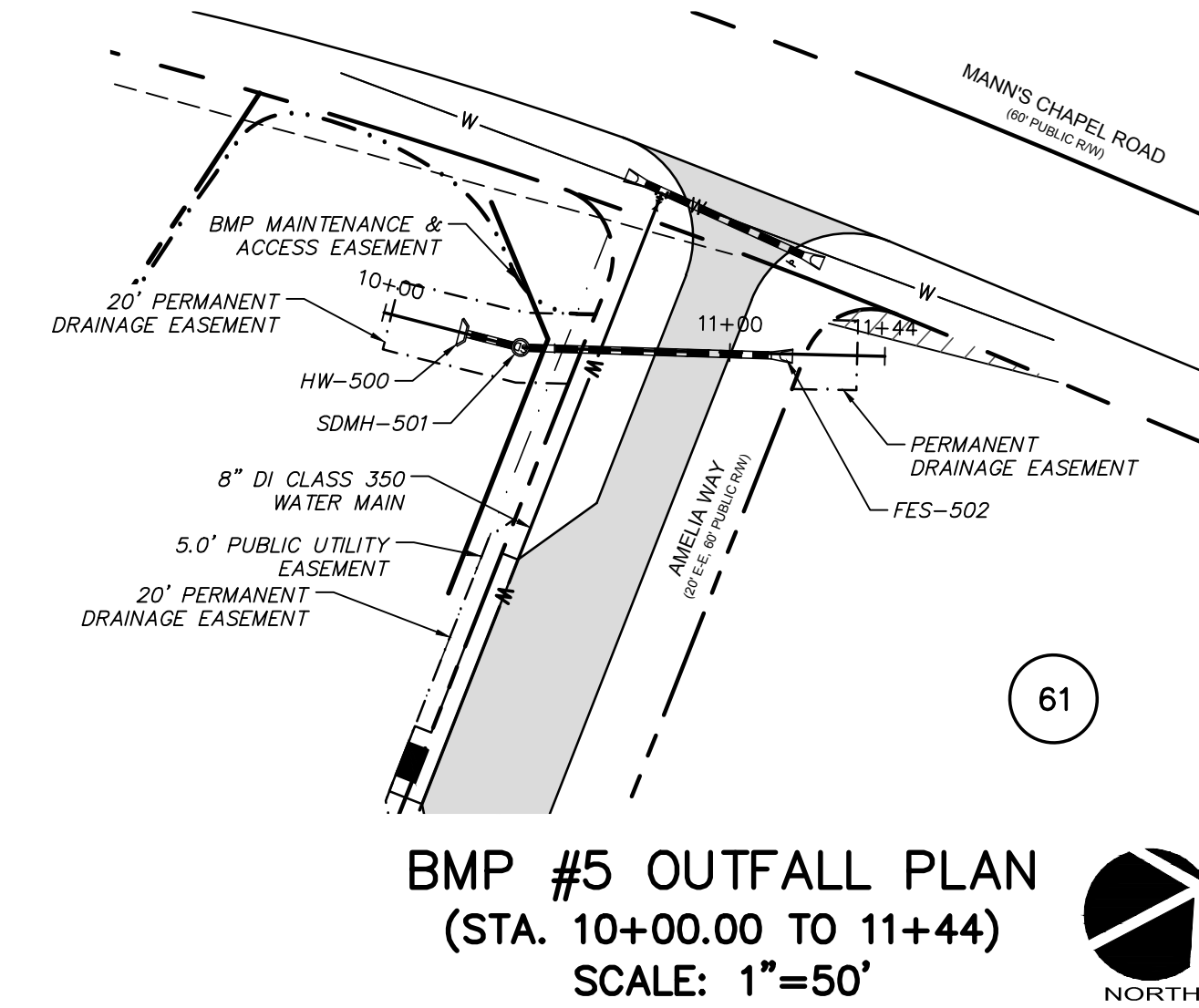
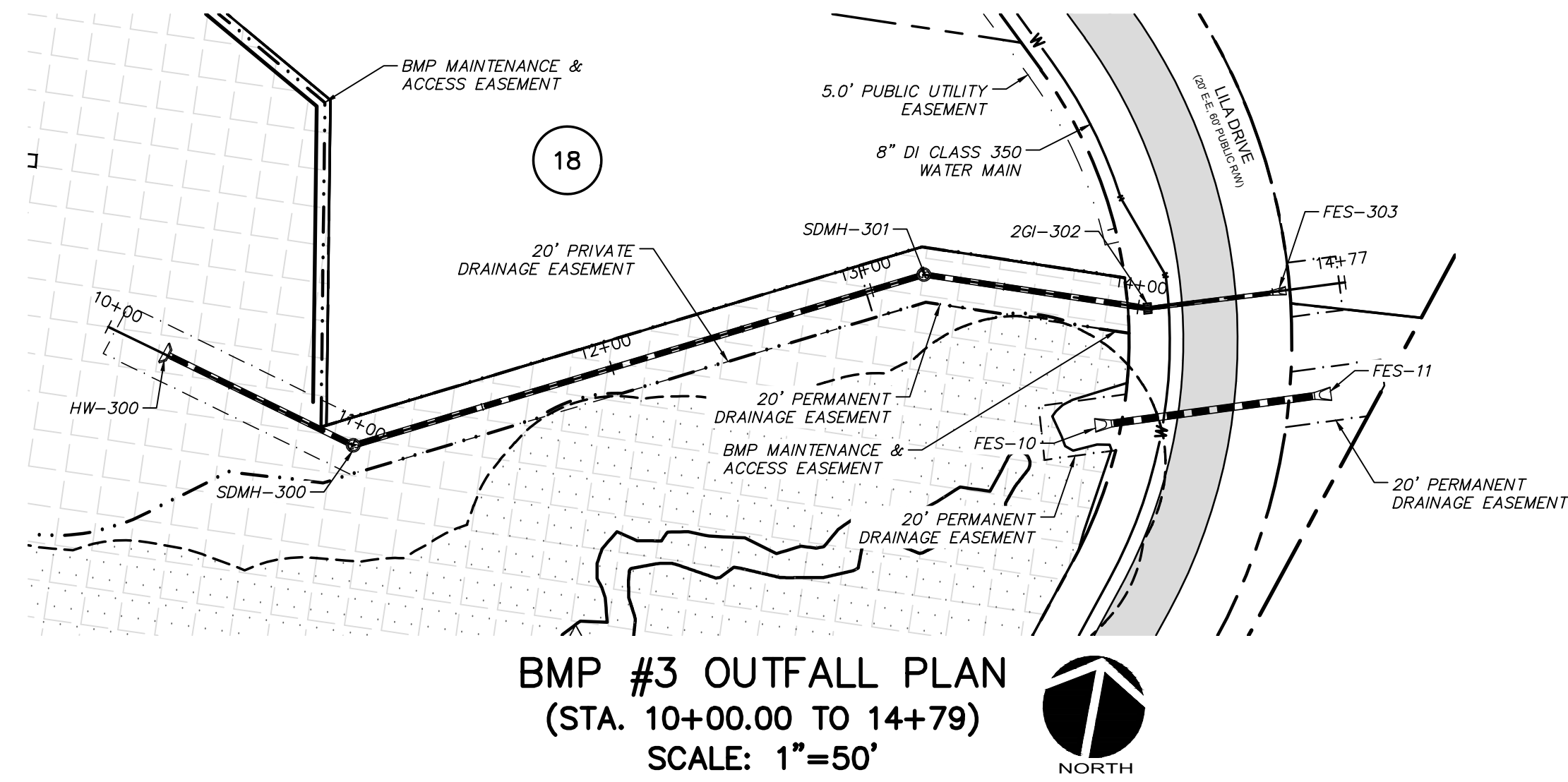
**RYAN'S CROSSING**  
Chatham County, North Carolina

**CONSTRUCTION PLAT**

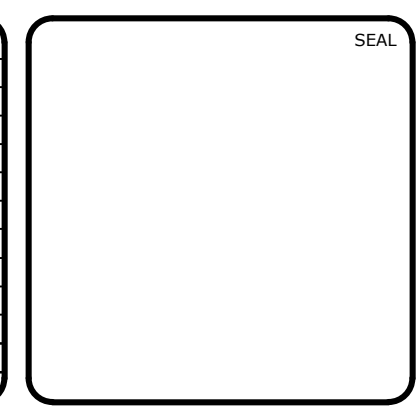
PLAN & PROFILE  
BMP #1, STA. 10+00 TO STA. 11+64  
BMP #2, STA. 10+00 TO STA. 11+88  
BMP #4, STA. 10+00 TO STA. 12+77

DATE: AUGUST 17, 2018	SCALE: 1"=50'	HMC FILE NUMBER: C4.0
MCE PROJ. # 07291-0002	HORIZONTAL: 1"=50'	DRAWING NUMBER: C4.6
DRAWN: BSS	VERTICAL: 1"=5'	REVISION: 4
DESIGNED: BSS		
CHECKED: GCA		
PROJ. MGR.: CHS		
STATUS: PRELIMINARY FOR CONSTRUCTION		





REV. NO.	DESCRIPTIONS	DATE
4	REVISIONS PER NCDOT COMMENTS	2018.11.28
3	REVISIONS PER NCDOT COMMENTS	2018.11.27
2	REVISIONS PER NCDOT	2018.11.16
1	REVISIONS PER COUNTY EROSION CONTROL AND STORMWATER, NCDEQ PHWS	2018.10.02
0	INITIAL SUBMITTAL	2018.08.17



**MCKIM & CREED**  
ENGINEERS SURVEYORS PLANNERS

1730 VARSITY DRIVE, SUITE 500 FIRM LICENSE #: F-1222  
RALEIGH, NORTH CAROLINA 27606 mckimcreed.com  
T 919.233.8091 F 919.233.8031

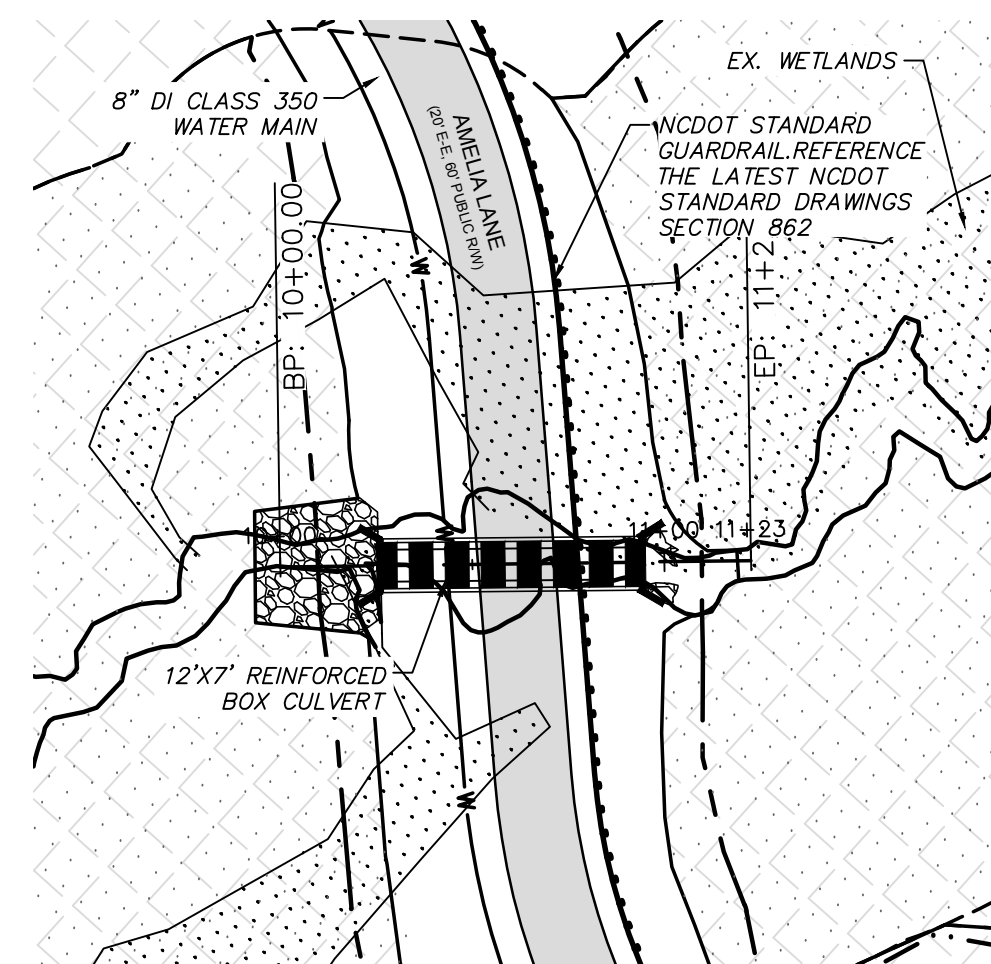
**RYAN'S CROSSING**  
Chatham County, North Carolina

**CONSTRUCTION PLAT**

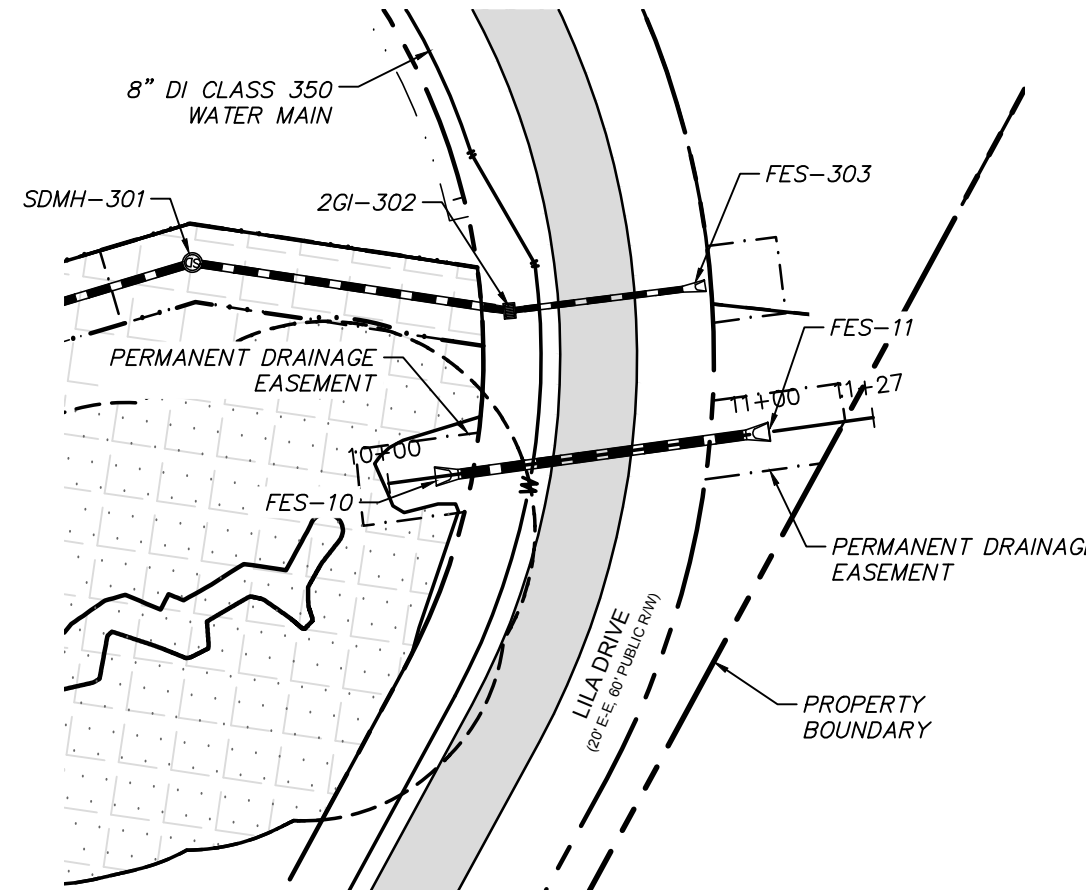
PLAN & PROFILE  
BMP #3, STA. 10+00 TO STA. 14+79  
BMP #5, STA. 10+00 TO STA. 11+44

DATE: AUGUST 17, 2018	SCALE: 1"=50'	HMC FILE NUMBER: C4.0
MCE PROJ. # 07291-0002	HORIZONTAL: 1"=50'	DRAWING NUMBER: C4.7
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DESIGNED: BSS	STATUS: PRELIMINARY FOR CONSTRUCTION	
CHECKED: GCA		
PROJ. MGR.: CHS		

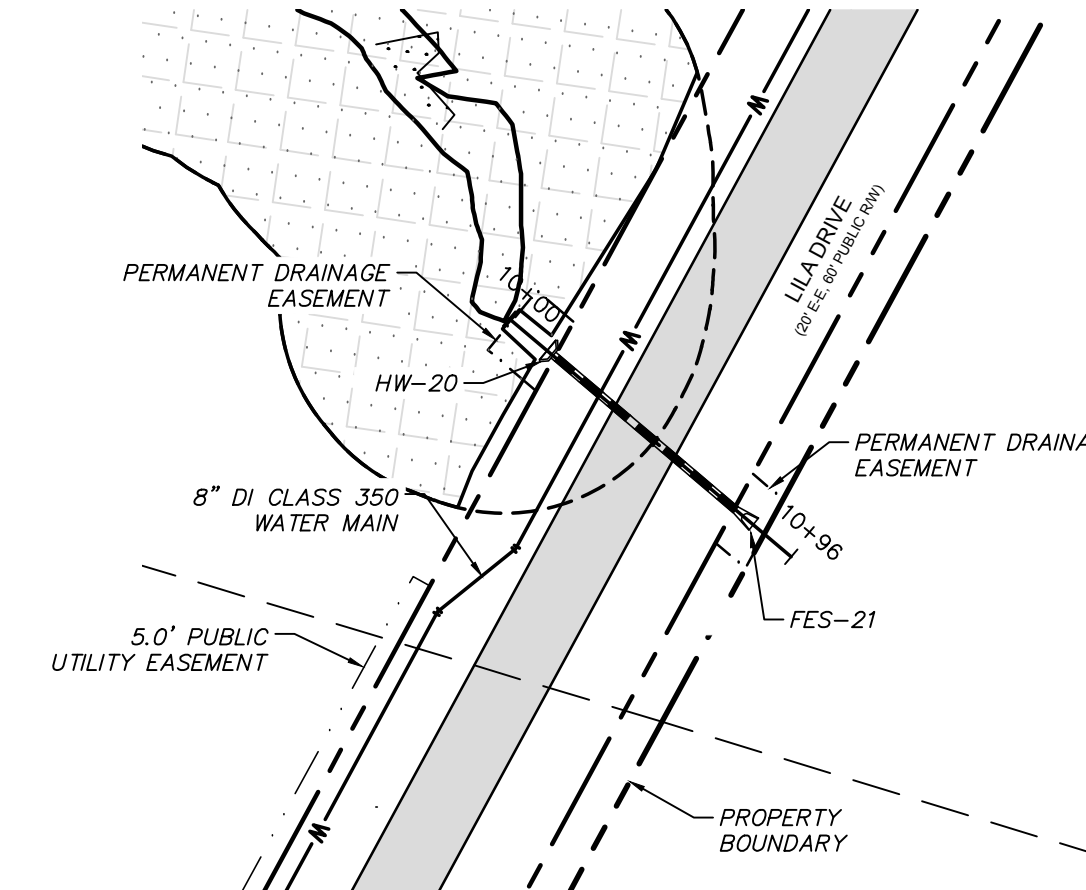




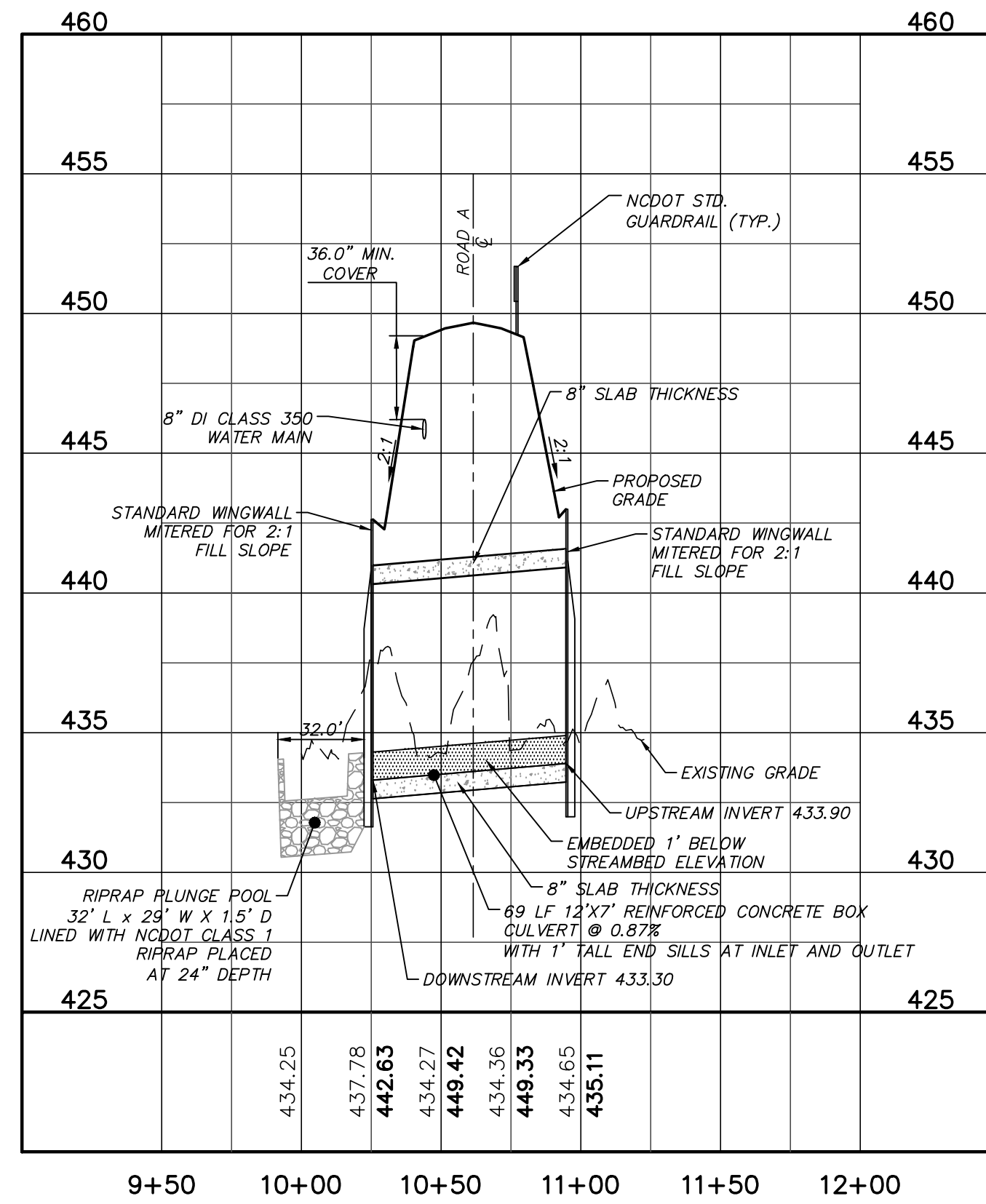
**STREAM CULVERT #1 PLAN**  
(STA. 10+00.00 TO 11+22)  
SCALE: 1"=50'



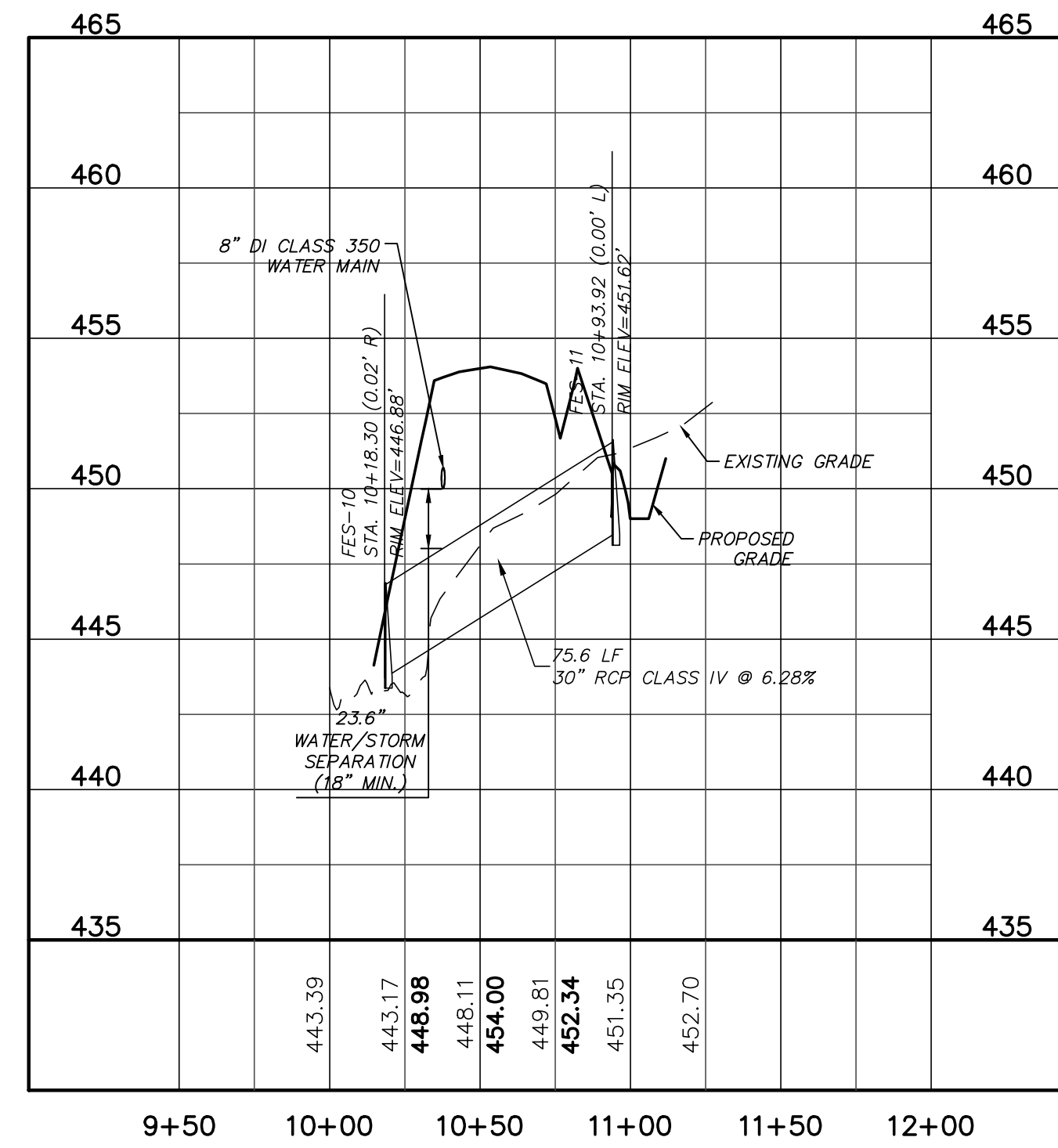
**STREAM CULVERT #2 PLAN**  
(STA. 10+00.00 TO 11+27)  
SCALE: 1"=50'



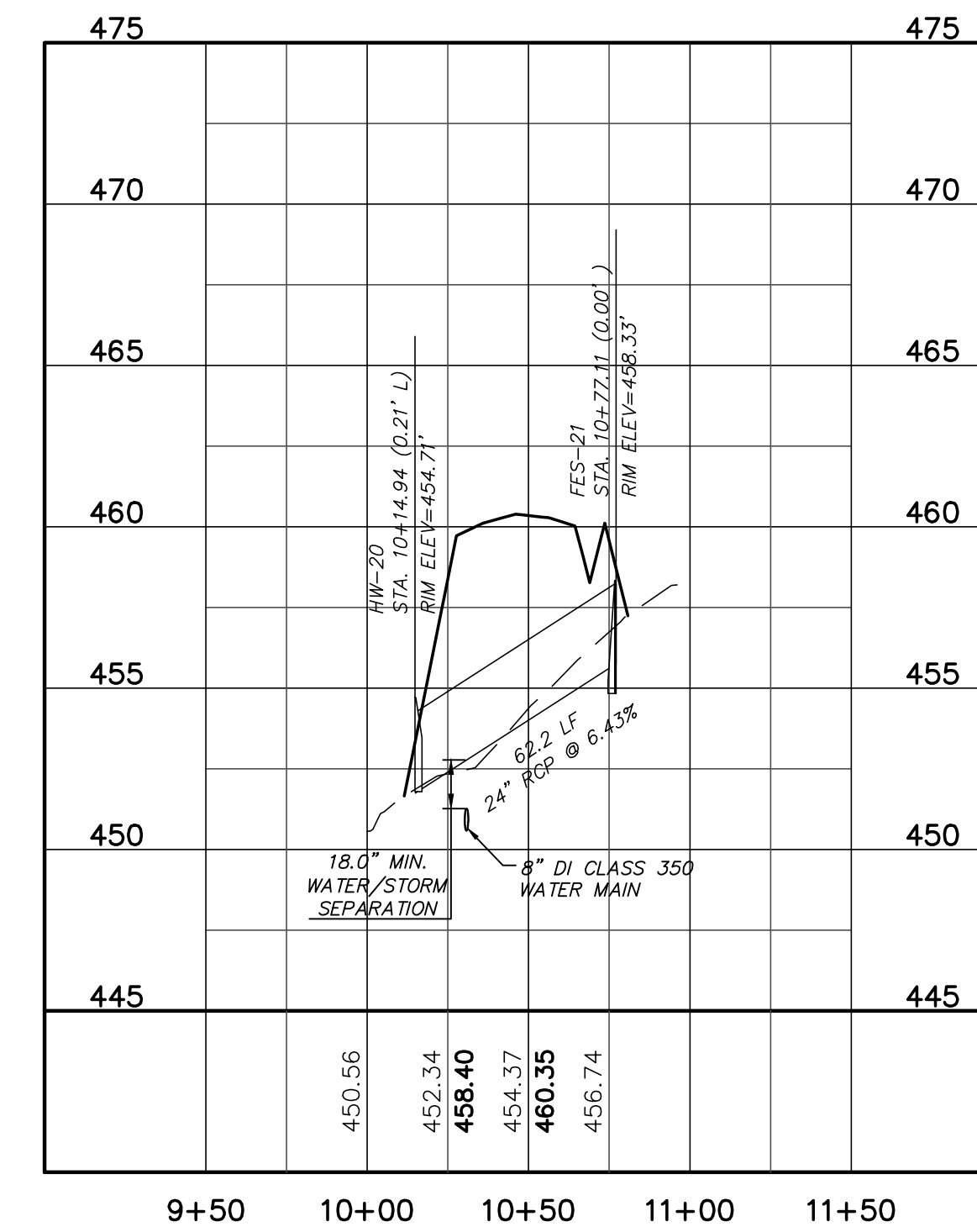
**STREAM CULVERT #3 PLAN**  
(STA. 10+00.00 TO 10+96)  
SCALE: 1"=50'



**STREAM CULVERT #1 PROFILE**  
(STA. 10+00.00 TO 11+22)  
SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'

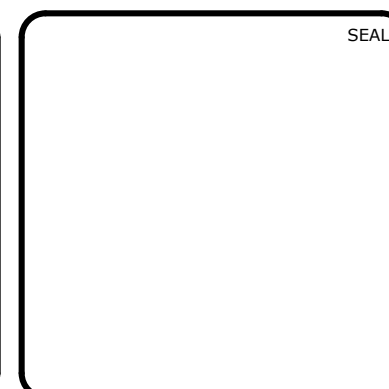


**STREAM CULVERT #2 PROFILE**  
(STA. 10+00.00 TO 11+27)  
SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'



**STREAM CULVERT #3 PROFILE**  
(STA. 10+00.00 TO 10+96)  
SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'

REV. NO.	DESCRIPTIONS	DATE
4	REVISIONS PER NCDOT COMMENTS	2018.11.28
3	REVISIONS PER NCDOT COMMENTS	2018.11.27
2	REVISIONS PER NCDOT	2018.11.16
1	REVISIONS PER COUNTY EROSION CONTROL AND STORMWATER, NCDEQ PHWS	2018.10.02
0	INITIAL SUBMITTAL	2018.08.17



**MCKIM & CREED**  
ENGINEERS SURVEYORS PLANNERS

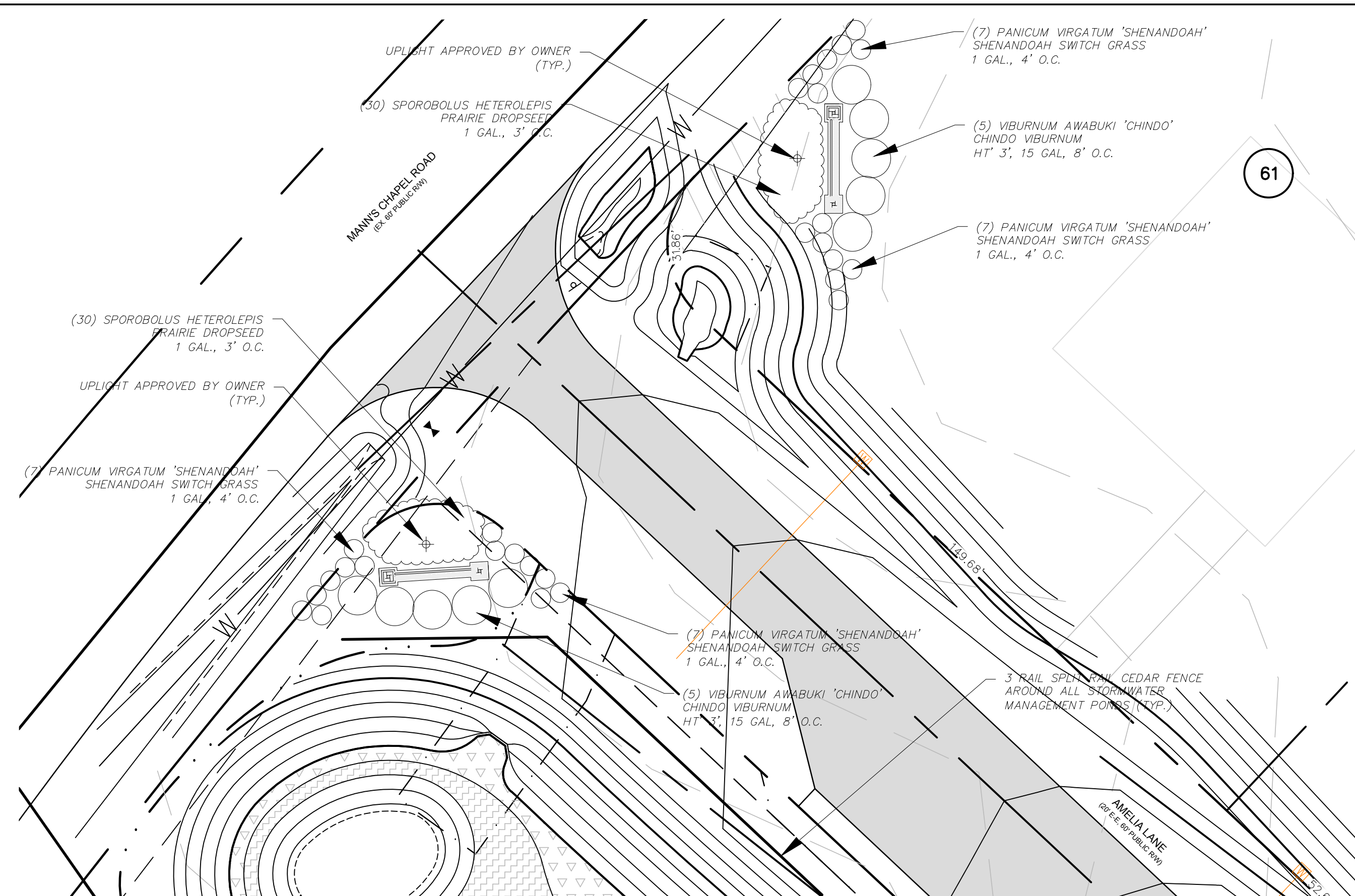
1730 VARSITY DRIVE, SUITE 500 FIRM LICENSE #: F-1222  
RALEIGH, NORTH CAROLINA 27606 mckimcreed.com  
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**RYAN'S CROSSING**  
Chatham County, North Carolina

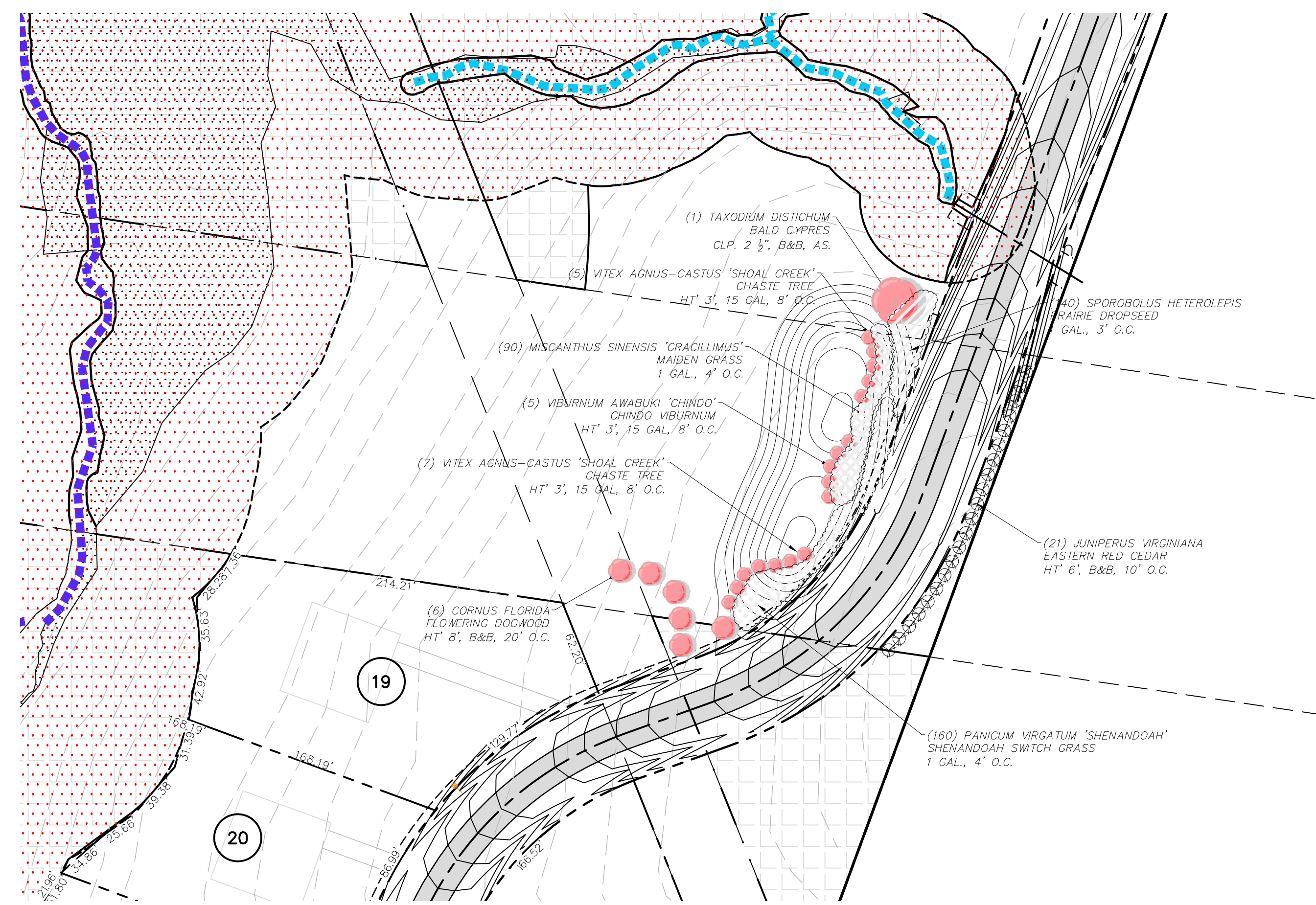
**CONSTRUCTION PLAT**  
PLAN & PROFILE  
STREAM CULVERT #1, STA. 10+00 TO STA. 11+22  
STREAM CULVERT #2, STA. 10+00 TO STA. 11+27  
STREAM CULVERT #3, STA. 10+00 TO STA. 10+96

DATE: AUGUST 17, 2018	SCALE: 1"=50'	HMC FILE NUMBER: C4.0
MCE PROJ. # 07291-0002	HORIZONTAL: 1"=50'	DRAWING NUMBER: C4.8
DRAWN: BSS	VERTICAL: 1"=5'	REVISION: 4
DESIGNED: BSS		
CHECKED: GCA		
PROJ. MGR.: CHS		
STATUS: PRELIMINARY FOR CONSTRUCTION		





MONUMENT SIGN DETAIL - SITE PLAN  
Scale 1" = 20'



MONUMENT SIGN DETAIL - SITE PLAN  
Scale 1" = 60'

SPLIT RAIL FENCE NOTES:

SPLIT RAIL FENCE DETAIL TO BE APPROVED BY OWNER. FENCE TO BE CONSTRUCTED WITH CEDAR.

PROVIDE 3 RAIL FENCE AROUND 5 STORM WATER MANAGEMENT PONDS (1,105 L.F.). LOCATION TO BE VERIFIED BY OWNER.



3 - RAIL CEDAR SPLIT RAIL FENCE  
Not to Scale

CBU NOTES:

MAILBOX KIOSK TO BE APPROVED BY OWNER. 61 MINIMUM POSTAL UNITS. IMAGE IS FLORENCE VITAL CBU MAILBOX AND PEDESTAL. 4 - 1570-16 PEDESTAL UNITS WOULD BE REQUIRED.

vital™ 1570 Series (F)

vital™ 1570-16

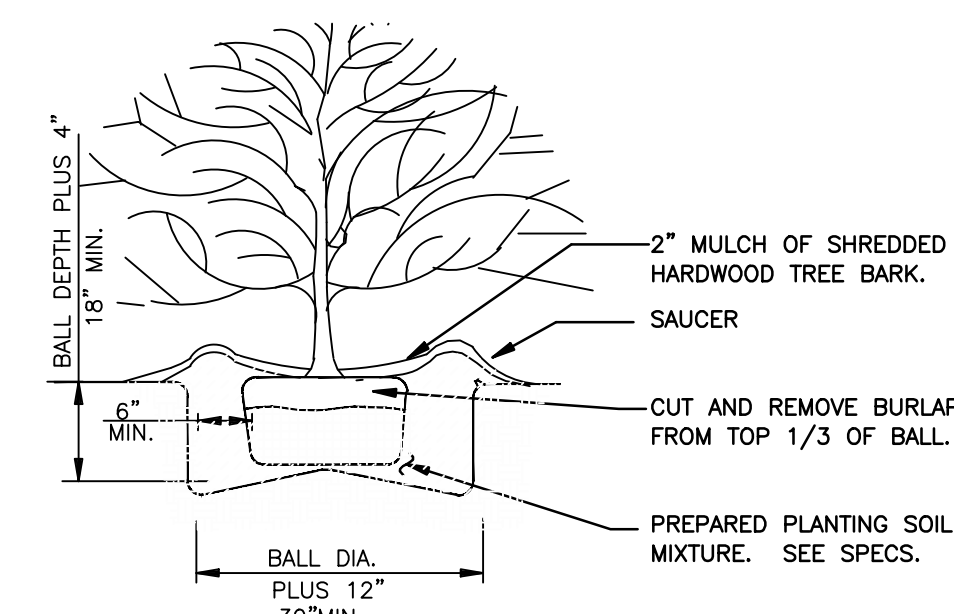
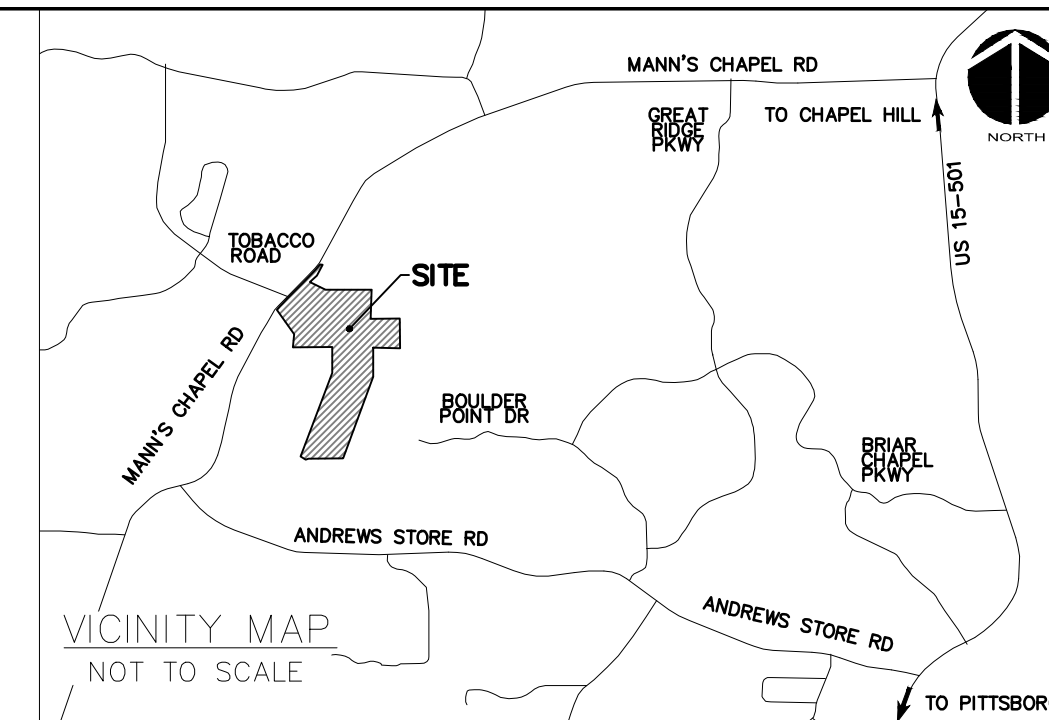
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MAILBOX KIOSK  
Not to Scale

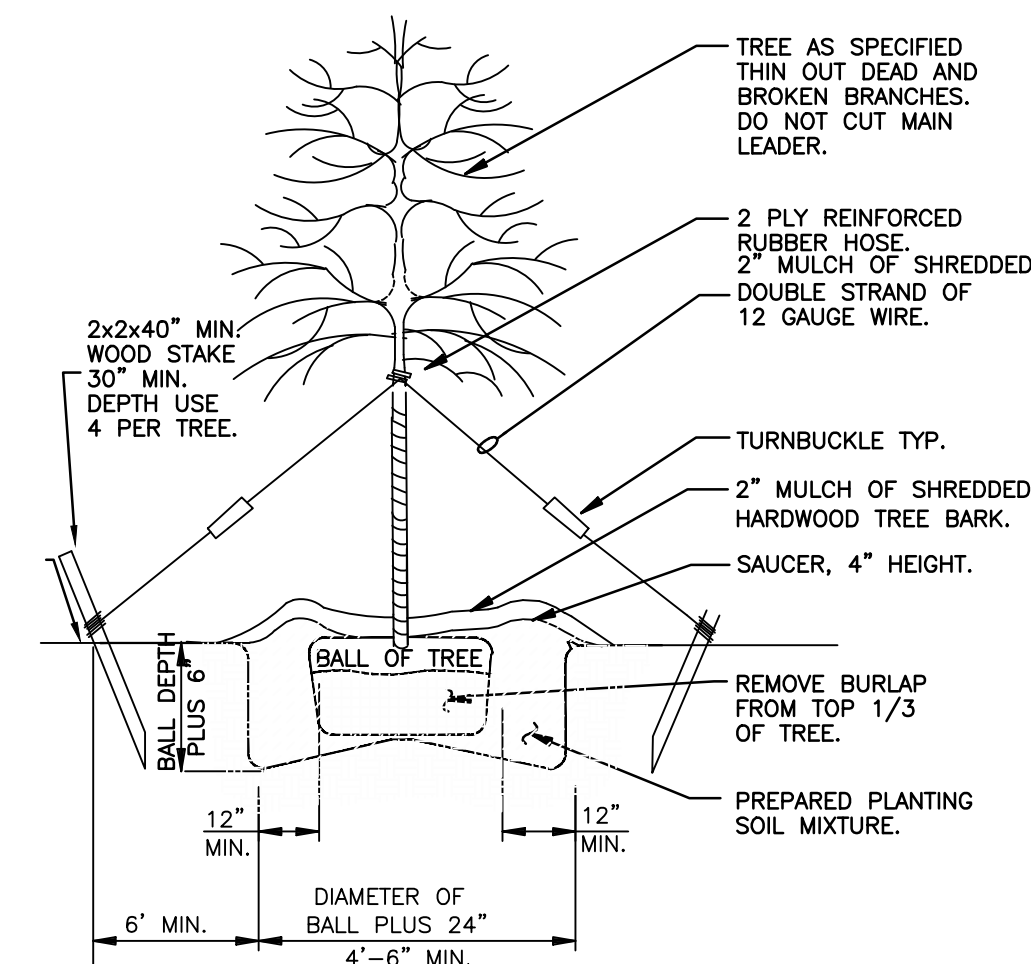
PLANT LIST

Botanical Name	Common Name	Qty.	Caliper	Height	Spread	Comments
<b>TREES</b>						
Cornus florida	Flowering Dogwood	6	---	8'	---	BB, Full, Matched, 20" O.C.
Juniperus virginiana	Eastern Red Cedar	21	---	6'	---	BB, Full, Matched, 10" O.C.
Taxodium distichum	Bald Cypress	1	2.5-3"	12-14'	---	BB, Specimen
Vitex agnus-castus 'Shoal Creek'	Chaste Tree	12	---	---	---	15 Gal. cont., 8" O.C.
<b>SHRUBS AND ORNAMENTAL GRASSES</b>						
Miscanthus sinensis 'Gracillimus'	Maiden Grass	90	---	---	---	1 gal. container, 48" O.C.
Panicum virgatum 'Shenandoah'	Shenandoah Switch Grass	188	---	---	---	1 gal. container, 48" O.C.
Sporobolus heterolepis	Prairie dropseed	200	---	---	---	1 gal. container, 36" O.C.
Viburnum awabuki 'Chindo'	Chindo Viburnum	15	---	3'	---	15 gal. container, 8" O.C.



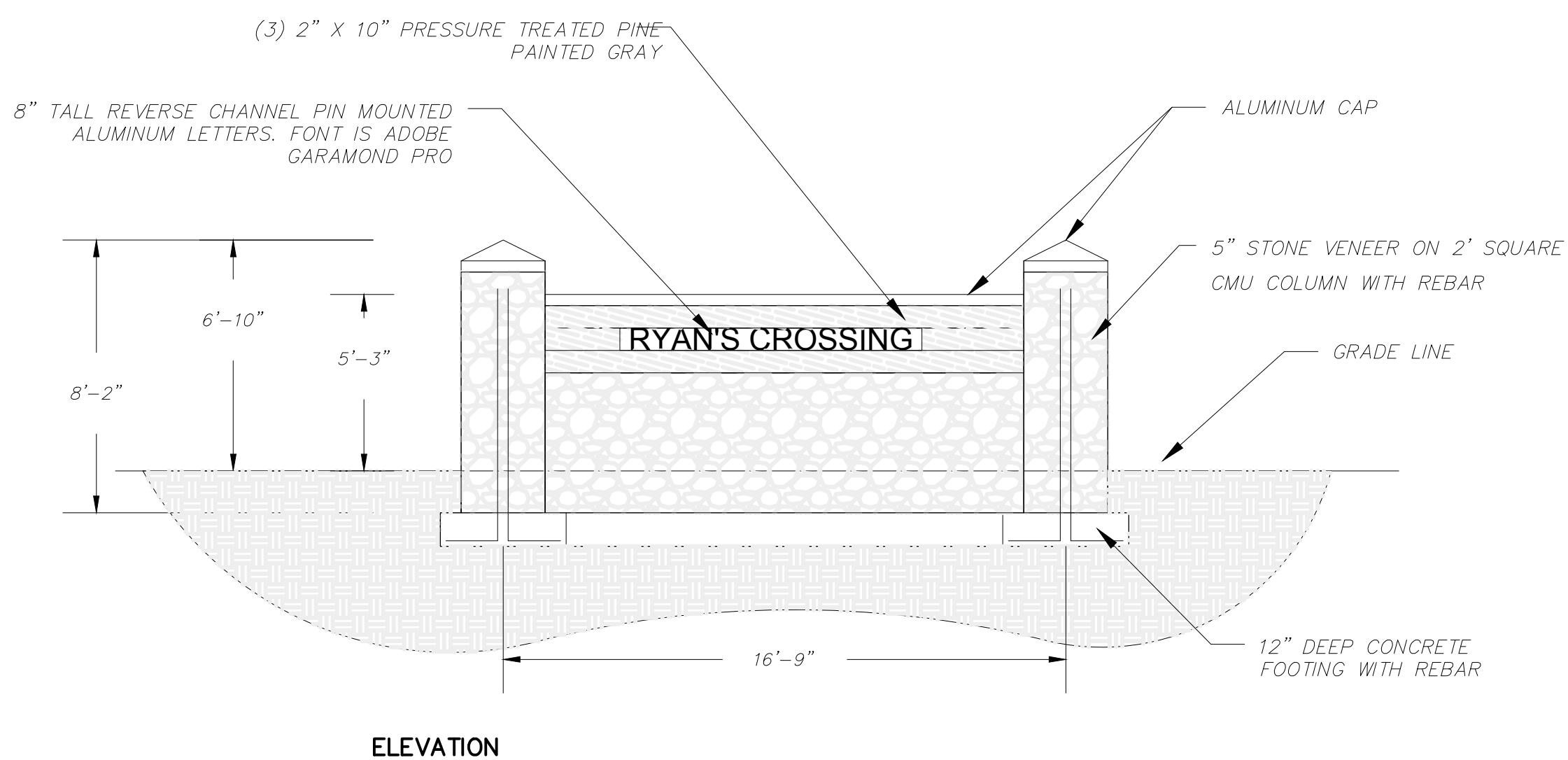
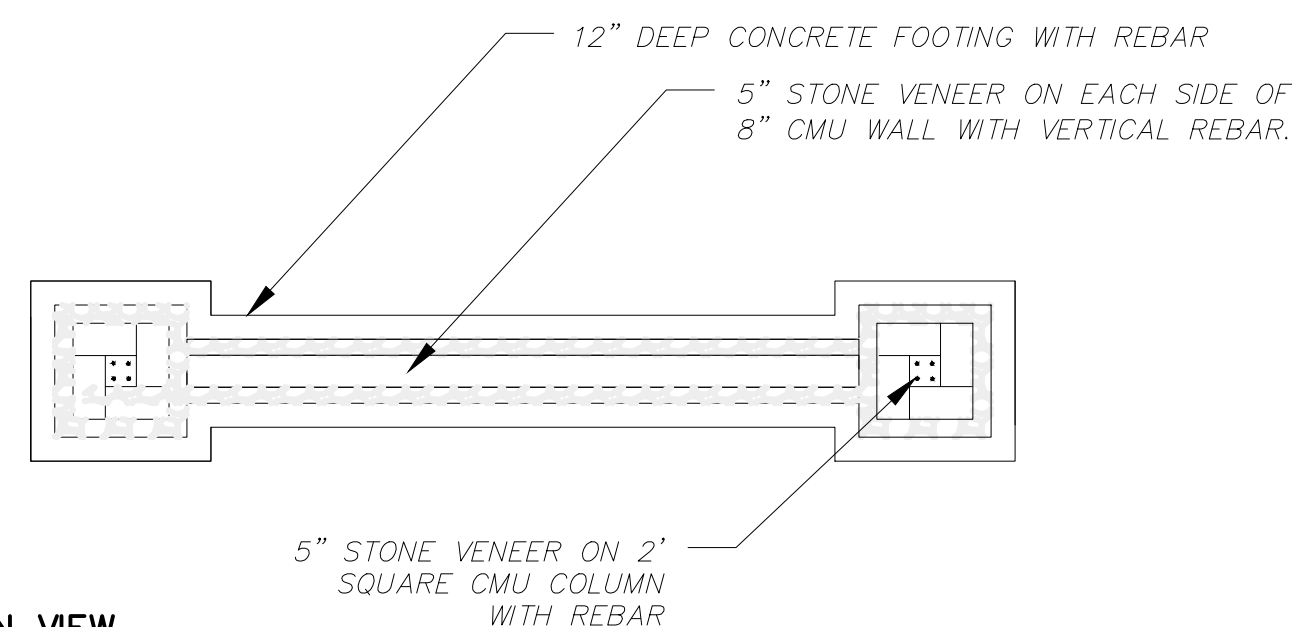
SHRUB PLANTING DETAIL

NOT TO SCALE



TREE PLANTING DETAIL-LARGE TREE

NOT TO SCALE



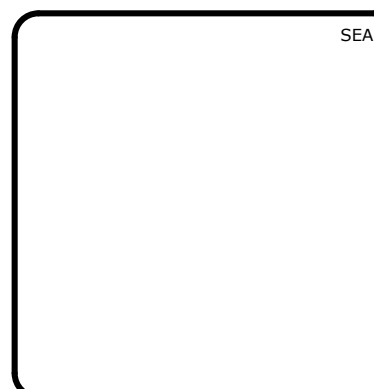
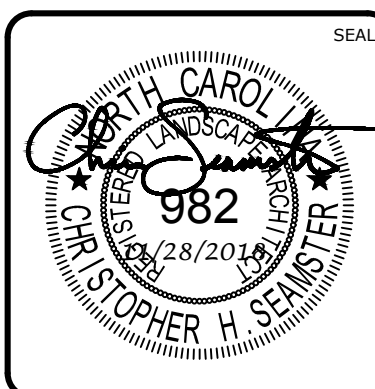
MONUMENT SIGN DETAIL - PLAN / ELEVATION  
Scale 1/4" = 1'-0"

LEGEND:

- R/W LINE
- FUTURE R/W LINE
- EXISTING R/W LINE
- HOA EASEMENT LINE
- PUBLIC UTILITY EASEMENT LINE
- PRIVATE UTILITY EASEMENT LINE
- PUBLIC DRAINAGE EASEMENT
- PRIVATE DRAINAGE EASEMENT
- RIPARIAN BUFFER LINE
- EX. WETLANDS
- BMP MAINTENANCE & ACCESS EASEMENT
- ROADWAY CENTERLINE
- SIGN
- 10'x70' SIGHT TRIANGLE
- NEW ROADWAY PAVEMENT
- PROPOSED CONSERVATION AREA



REV. NO.	DESCRIPTION	DATE
4	REVISIONS PER NCDOT COMMENTS	2018.11.28
3	REVISIONS PER NCDOT COMMENTS	2018.11.27
2	REVISIONS PER NCDOT	2018.11.16
1	REVISIONS PER COUNTY EROSION CONTROL AND STORMWATER, NCDOT PAVS	2018.10.02
0	INITIAL SUBMITTAL	2018.08.17



**MCKIM & CREED**  
ENGINEERS SURVEYORS PLANNERS

1730 VARSITY DRIVE, SUITE 500 RALEIGH, NORTH CAROLINA 27606  
T 919.233.8091 F 919.233.8031

FIRM LICENSE #: F-1222  
mckimcreed.com

**RYAN'S CROSSING**  
Chatham County, North Carolina

**CONSTRUCTION PLAT**  
MONUMENT SIGN

DATE: AUGUST 17, 2018	SCALE: HORIZONTAL: 1" = 20' VERTICAL: N/A	H&C FILE NUMBER: C5.0
MCE PROJ. #: 07291-0002	DESIGNED: BSS	DRAWING NUMBER: C5.3
DRAWN: BSS	CHECKED: GCA	
PROJ. MGR.: CHS		
STATUS: PRELIMINARY FOR CONSTRUCTION	REVISION: 4	



**RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING**

SEEDING MIXTURE  
SPECIES RATE (lb./acre)  
TALL FESCUE 80  
KOBE LESPEDEZA 40

NURSE PLANTS:  
BETWEEN MAY 1 AND AUG. 15, ADD 10 lb/acre GERMAN MILLET OR 15 lb/acre SUDANGRASS. PRIOR TO MAY 1 OR AFTER AUG. 15, ADD 40 lb/ac RYE (GRAIN)

SEEDING DATES:  
BEST AUG. 15 - SEPT. 15 POSSIBLE  
FALL AUG. 20 - OCT. 25  
LATE WINTER: FEB. 15 - MAR. 21 FEB. 1 - APR. 15.

FALL IS BEST FOR TALL FESCUE AND LATER WINTER FOR LESPEDEZAS. OVERSEEDING OF KOBE LESPEDEZA OVER FALL-SEEDED TALL FESCUE IS VERY EFFECTIVE.

SOIL AMENDMENTS:  
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 lb/acre GROUND AGRICULTURAL LIMESTONE AND 750 lb/acre 10-10-10 FERTILIZER

MULCH:  
APPLY 4,000 lb/acre STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE:  
REFERTILIZE IN THE SECOND YEAR UNLESS GROWTH IS FULLY ADEQUATE. MAY BE MOWED ONCE OR TWICE A YEAR, BUT MOWING IS NOT NECESSARY. RESEED, FERTILIZE AND MULCH DAMAGED AREAS IMMEDIATELY.

**RECOMMENDATIONS FOR GRASS-LINED CHANNELS**

SEEDING MIXTURE  
SPECIES RATE (lb./acre)  
TALL FESCUE 200

NURSE PLANTS:  
BETWEEN MAY 1 AND AUG. 15, ADD 10 lb/acre SUDANGRASS OR 15 lb/acre GERMAN MILLET. PRIOR TO MAY 1 OR AFTER AUG. 15, ADD 40 lb/ac RYE (GRAIN)

SEEDING DATES:  
BEST AUG. 25 - OCT.  
POSSIBLE: FEB. - APR. 15

AVOID SEEDING FROM NOV. TO JAN. IF SEEDING MUST BE DONE AT THIS TIME, ADD 40 lb/acre RYE GRAIN AND USE A CHANNEL LINING THAT OFFERS MAXIMUM PROTECTION

SOIL AMENDMENTS:  
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 4,000 lb/acre GROUND AGRICULTURAL LIMESTONE AND 1,000 lb/acre 10-10-10 FERTILIZER

MULCH:  
USE ROLLED EROSION CONTROL PRODUCT TO COVER THE BOTTOM OF THE CHANNELS AND DITCHES, AND STAPLE SECURELY. THE LINING SHOULD EXTEND ABOVE THE HIGHEST CALCULATED DEPTH OF FLOW. ON CHANNEL SIDE SLOPES ABOVE THIS HEIGHT, AND IN DRAINAGES NOT REQUIRING TEMPORARY LININGS, APPLY 4,000 lb/acre GRAIN STRAW, AND ANCHOR STRAW BY STAPLING NETTING OVER THE TOP.

MULCH AND ANCHORING MATERIALS MUST NOT BE ALLOWED TO WASH DOWN SLOPES WHERE THEY CAN CLOG DRAINAGE DEVICES.

MAINTENANCE:  
INSPECT AND REPAIR MULCH FREQUENTLY. REFERTILIZE IN LATE WINTER OF THE FOLLOWING YEAR; USE SOIL TESTS OR APPLY 150 lb/acre 10-10-10. MOW REGULARLY TO A HEIGHT OF 2-4 INCHES.

NOTE:  
SEE NCDENR'S EROSION AND SEDIMENT CONTROL PLANNING DESIGN MANUAL SECTION 6.11 FOR ADDITIONAL PERMANENT SEEDING OPTIONS.

**PERMANENT SEEDING SCHEDULE**  
NTS

- CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
  - RIP THE ENTIRE AREA TO 6 INCHES DEPTH.
  - REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
  - APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE BELOW\*).
  - CONTINUE TILLAGE UNTIL A WELL - PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED 4 TO 6 INCHES DEEP.
  - SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
  - MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
  - INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE OVER 60% DAMAGED REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
  - CONSULT CONSERVATION INSPECTOR ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.
- \* APPLY: AGRICULTURAL LIMESTONE - 2 TONS/ACRE OR 3 TONS/ACRE IN CLAY SOILS  
FERTILIZER - 1000 LBS/ACRE (10-10-10)  
SUPERPHOSPHATE - 500 LBS/ACRE (20%)  
MULCH - 2 TONS/ACRE (SMALL GRAIN STRAW)ANCHOR - ASPHALT EMULSION AT 450 GAL./ACRE

**SEEDBED PREPARATION**  
NTS

**RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING**

SEEDING MIXTURE  
SPECIES RATE (lb./acre)  
RYE (GRAIN) 120  
ANNUAL LESPEDEZA (KOBE IN  
PIEDMONT & COASTAL PLAIN,  
KOREAN IN MOUNTAINS) 50

OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXTEND BEYOND JUNE

SEEDING DATES:  
MOUNTAINS (ABOVE 2,500'): FEB. 15 - MAY 15  
(BELOW 2,500'): FEB. 1 - MAY 1  
PIEDMONT: JAN. 1 - MAY 1  
COASTAL PLAIN: DEC. 1 - APR. 15

SOIL AMENDMENTS:  
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 lb/acre GROUND AGRICULTURAL LIMESTONE AND 750 lb/acre 10-10-10 FERTILIZER

MULCH:  
APPLY 4,000 lb/acre STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE:  
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

**RECOMMENDATIONS FOR SUMMER**

SEEDING MIXTURE  
SPECIES RATE (lb./acre)  
GERMAN MILLET 40

IN THE PIEDMONT AND MOUNTAINS, A SMALL-STEMMED SUDANGRASS MAY BE SUBSTITUTED AT A RATE OF 50 lb/acre.

SEEDING DATES:  
MOUNTAINS MAY 15 - AUG. 15  
PIEDMONT: MAY 1 - AUG. 15  
COASTAL PLAIN: APR. 15 - AUG. 15

SOIL AMENDMENTS:  
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 lb/acre GROUND AGRICULTURAL LIMESTONE AND 750 lb/acre 10-10-10 FERTILIZER

MULCH:  
APPLY 4,000 lb/acre STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE:  
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

**RECOMMENDATIONS FOR FALL**

SEEDING MIXTURE  
SPECIES RATE (lb./acre)  
RYE (GRAIN) 120

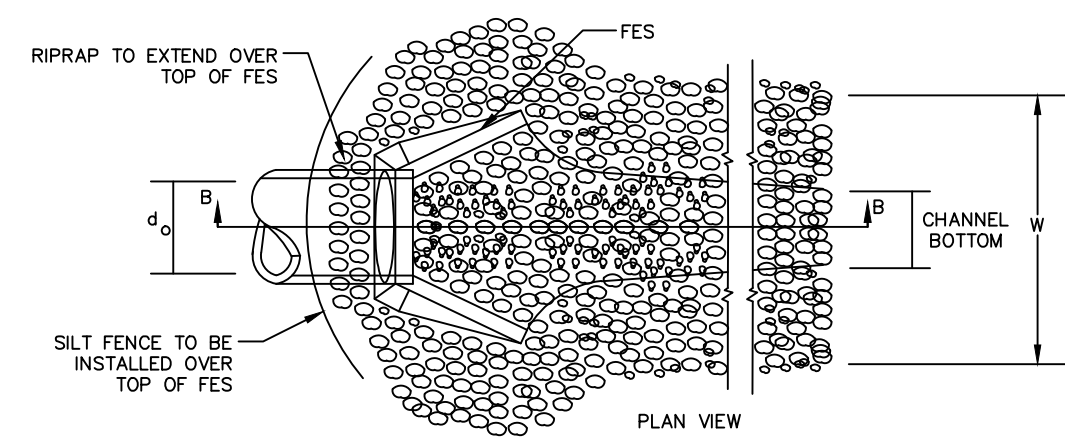
SEEDING DATES:  
MOUNTAINS: AUG. 15 - DEC. 15  
COASTAL PLAIN AND PIEDMONT: AUG. 15 - DEC. 30

SOIL AMENDMENTS:  
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 lb/acre GROUND AGRICULTURAL LIMESTONE AND 750 lb/acre 10-10-10 FERTILIZER

MULCH:  
APPLY 4,000 lb/acre STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE:  
REPAIR AND REFERTILIZE DAMAGED AREAS IMMEDIATELY. TOPDRESS WITH 50 lb/acre OF NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 lb/acre KOBE (PIEDMONT AND COASTAL PLAIN) OR KOREAN (MOUNTAINS) LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

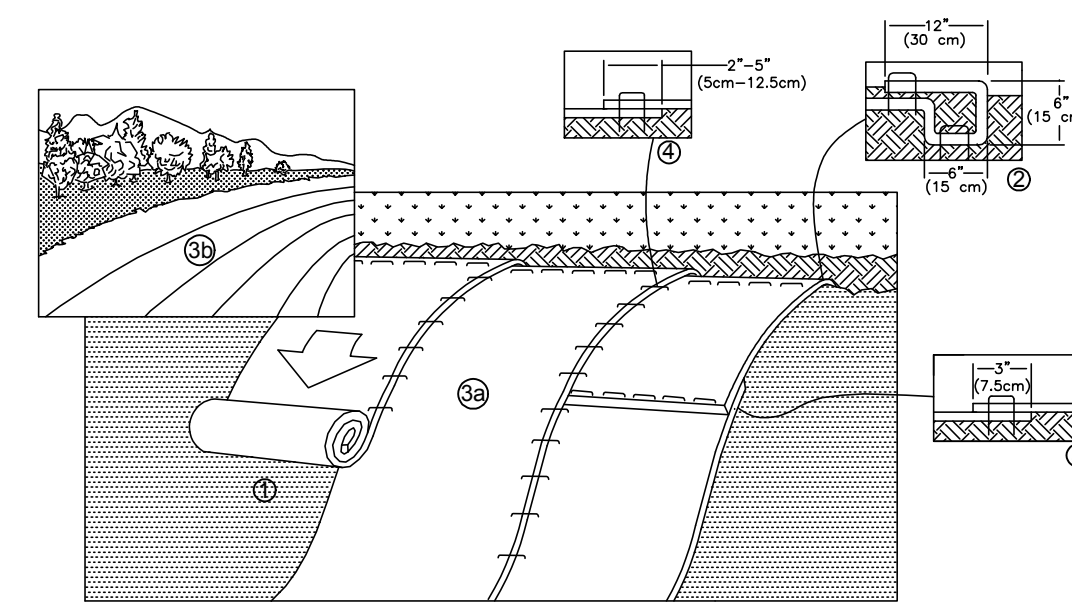
**TEMPORARY SEEDING SCHEDULE**  
NTS



OUTLET NO.	Do (IN)	Lo (FT.)	W (FT.)	DEPTH (IN)	LINING CLASSIFICATION
HW-100	24	16.0	6.0	24	CLASS 1
HW-200	36	24.0	9.0	36	CLASS 2
HW-300	24	16.0	6.0	24	CLASS 1
HW-400	36	24.0	9.0	24	CLASS 1
HW-500	24	16.0	6.0	24	CLASS 1
FES-503B	15	7.5	4.0	22	CLASS B
HW-20	24	16.0	6.0	24	CLASS 1
FES-10	30	24.0	8.0	24	CLASS 1
FES-01	24	16.0	6.0	24	CLASS 1

STONE CLASSIFICATIONS OF CLASS B REQUIRE A SUBLAYER OF FILTER FABRIC OR FS-2 FILTER STONE WITH A BEDDING THICKNESS OF 6".

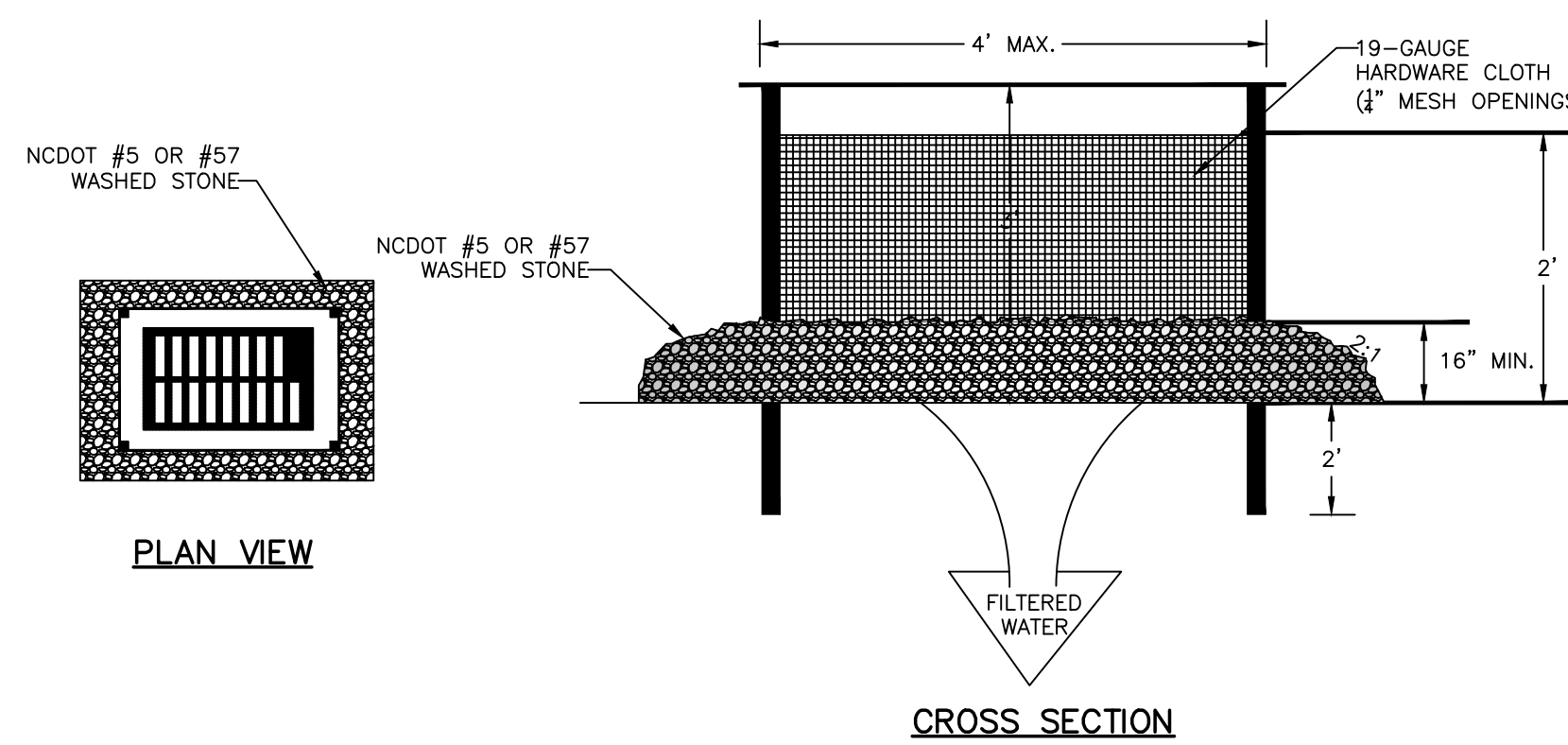
**RIPRAP OUTLET PROTECTION**  
NTS



**TEMPORARY STABILIZATION FOR SLOPES GREATER THAN 10 FEET**  
NTS

**NOTES:**

- UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.
- DRIVE 5-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.
- SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM. PLACING A 2-FOOT FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
- PLACE CLEAN GRAVEL (NC DOT #5 OR #57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16 INCHES AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.
- ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT, AND ESTABLISH FINAL GRADING ELEVATIONS.
- COMPACT THE AREA PROPERLY AND STABILIZED IT WITH GROUND COVER.

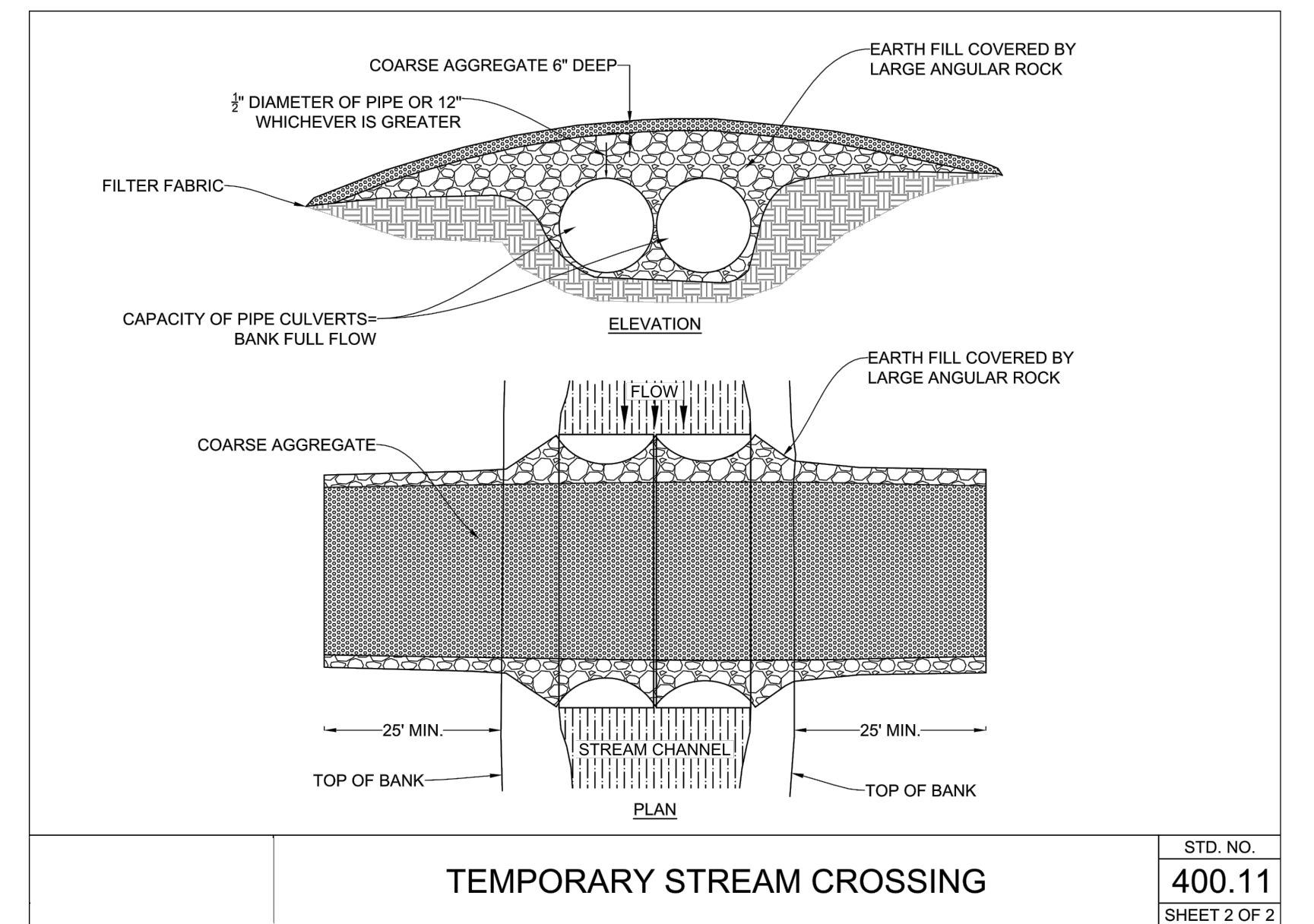


**HARDWARE CLOTH & GRAVEL INLET PROTECTION**  
NTS

**STORM DRAINAGE NOTES:**

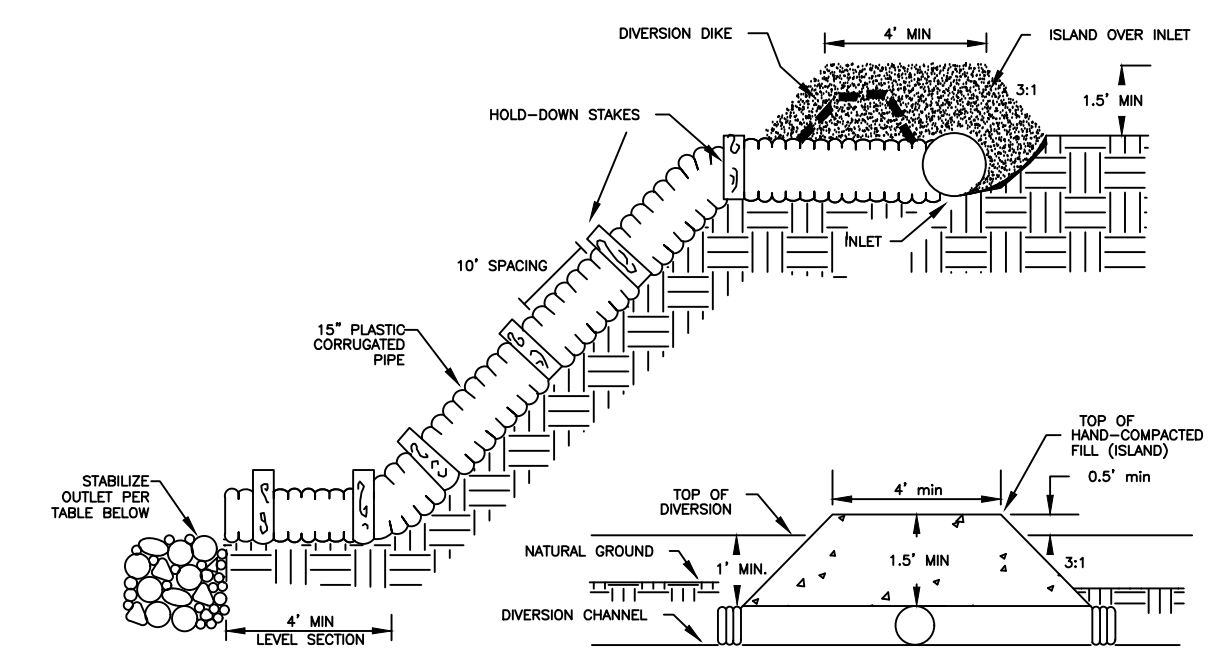
- STORM DRAINAGE PIPES SHALL BE:
  - ROP/CLASS III UNLESS OTHERWISE NOTED IN THESE PLANS. ALL PIPES INSIDE THE PUBLIC RIGHT-OF-WAY SHALL ADHERE TO PIPE DEPTH, COVER AND MATERIAL REQUIREMENTS IN ACCORDANCE WITH THE NCDOT PIPE MATERIAL SELECTION GUIDE AS LOCATED ON THE NCDOT HYDRAULICS WEBSITE.
- ALL CONCRETE SHALL MEET A MINIMUM 3,000 PSI COMPRESSIVE STRENGTH.
- ALL PIPE IN STORM DRAIN STRUCTURES SHALL BE STRUCK EVEN WITH INSIDE WALL.
- THE INTERIOR SURFACES OF ALL STORM DRAINAGE STRUCTURES SHALL BE POINTED UP AND SMOOTHED TO AN ACCEPTABLE STANDARD USING MORTAR MIXED TO MANUFACTURER'S SPECIFICATIONS.
- ALL BACKFILL SHALL BE NON-PLASTIC IN NATURE, FREE FROM ROOTS, VEGETATION MATTER, WASTE CONSTRUCTION MATERIAL OR OTHER OBJECTIONABLE MATERIAL. UTILIZED MATERIAL SHALL BE CAPABLE OF BEING COMPACTED BY MECHANICAL MEANS AND SHALL HAVE NO TENDENCY TO FLOW OR BEHAVE IN A PLASTIC MANNER UNDER THE TAMPING BLOWS OR PROOF ROLLING.
- MATERIALS DEEMED AS UNSUITABLE FOR BACKFILL PURPOSES BY THE OWNER'S REPRESENTATIVE SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL.
- BACKFILLING OF TRENCHES SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PIPE IS LAID. THE FILL AROUND THE PIPE SHALL BE THOROUGHLY COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY OBTAINABLE WITH THE STANDARD PROCTOR TEST. THE TOP EIGHT (8) INCHES SHALL BE COMPACTED TO 100% STANDARD PROCTOR.
- UNDER NO CIRCUMSTANCES SHALL WATER BE ALLOWED TO RISE IN UNBACKFILLED TRENCHES AFTER PIPE HAS BEEN PLACED.
- ALL FLARED END SECTIONS DISCHARGING INTO WATER QUALITY PONDS WILL HAVE A CONCRETE PAD POURED UNDERNEATH THE FLARED END SECTION IN ACCORDANCE WITH PROVIDED CONSTRUCTION DETAILS.
- RIM ELEVATIONS OF STORM DRAIN STRUCTURES SHALL BE FIELD VERIFIED.
- STORM DRAINAGE WITHIN PRIVATE EASEMENTS TO BE OWNED, OPERATED AND MAINTAINED BY HOME OWNER'S ASSOCIATION OR AGENT THEREOF.
- LENGTHS SHOWN FOR STORM DRAINAGE PIPES ARE MEASURED FROM CENTER OF STORM STRUCTURES AND TO ENDS OF FLARED END SECTIONS. SLOPES CALCULATED ARE BASED ON THIS LENGTH.
- CB DENOTES CATCH BASINS TO BE INSTALLED NON-PAVED AREAS. REFER TO NCDOT DETAILS 840.18 AND 840.24 ON SHEET D-2.2.
- CI DENOTES CURB INLETS TO BE INSTALLED IN THE CURB LINES OF ROADWAYS. REFER TO NCDOT DETAILS 840.02 AND 840.03 ON SHEET D-2.2.

- PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECPs), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
  - BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECPs IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF RECPs EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECPs WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECPs BACK OVER SEED AND COMPACTED SOIL. SECURE RECPs OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECPs.
  - ROLL THE RECPs (A) DOWN (FOR SLOPES 3:1 OR GREATER) OR (B) HORIZONTALLY (FOR SLOPES LESS THAN 3:1) ACROSS THE SLOPE. RECPs WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECPs MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM™, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
  - THE EDGES OF PARALLEL RECPs MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM -12.5 CM) OVERLAP DEPENDING ON RECPs TYPE.
  - CONSECUTIVE RECPs SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECPs WIDTH.
- NOTE: \*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECPs.



**TEMPORARY STREAM CROSSING**

STD. NO.  
**400.11**  
SHEET 2 OF 2

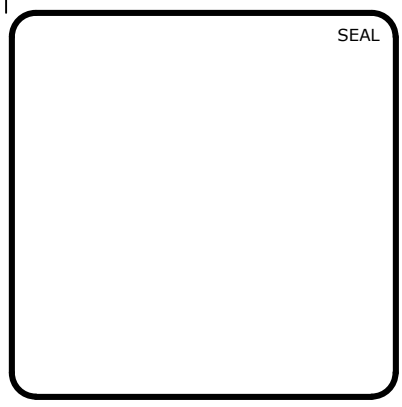


**OUTLET PROTECTION SIZING**

OUTLET SIZE (FT.)	Lo (FT.)	W (FT.)	DEPTH (IN.)	LINING CLASSIFICATION
12"	6.0	3.0	22	CLASS B
15"	7.5	3.75	22	CLASS B
18"	9.0	4.5	22	CLASS B
24"	12.0	6.0	22	CLASS B
30"	15.0	7.5	22	CLASS B

**TEMPORARY SLOPE DRAIN**  
NTS

REV. NO.	DESCRIPTIONS	DATE
4	REVISIONS PER NCDOT COMMENTS	2018.11.28
3	REVISIONS PER NCDOT COMMENTS	2018.11.27
2	REVISIONS PER NCDOT	2018.11.16
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**RYAN'S CROSSING**  
Chatham County, North Carolina

**CONSTRUCTION PLAT**  
EROSION AND SEDIMENTATION CONTROL  
DETAILS

DATE: AUGUST 17, 2018  
MCE PROJ. # 07291-0002  
DRAWN: BSS  
DESIGNED: BSS  
CHECKED: GCA  
PROJ. MGR.: CHS

SCALE: HORIZONTAL: 1"=40'  
VERTICAL: N/A

HBC FILE NUMBER: D1.X  
DRAWING NUMBER: D1.1

STATUS: PRELIMINARY FOR CONSTRUCTION  
REVISION: 4