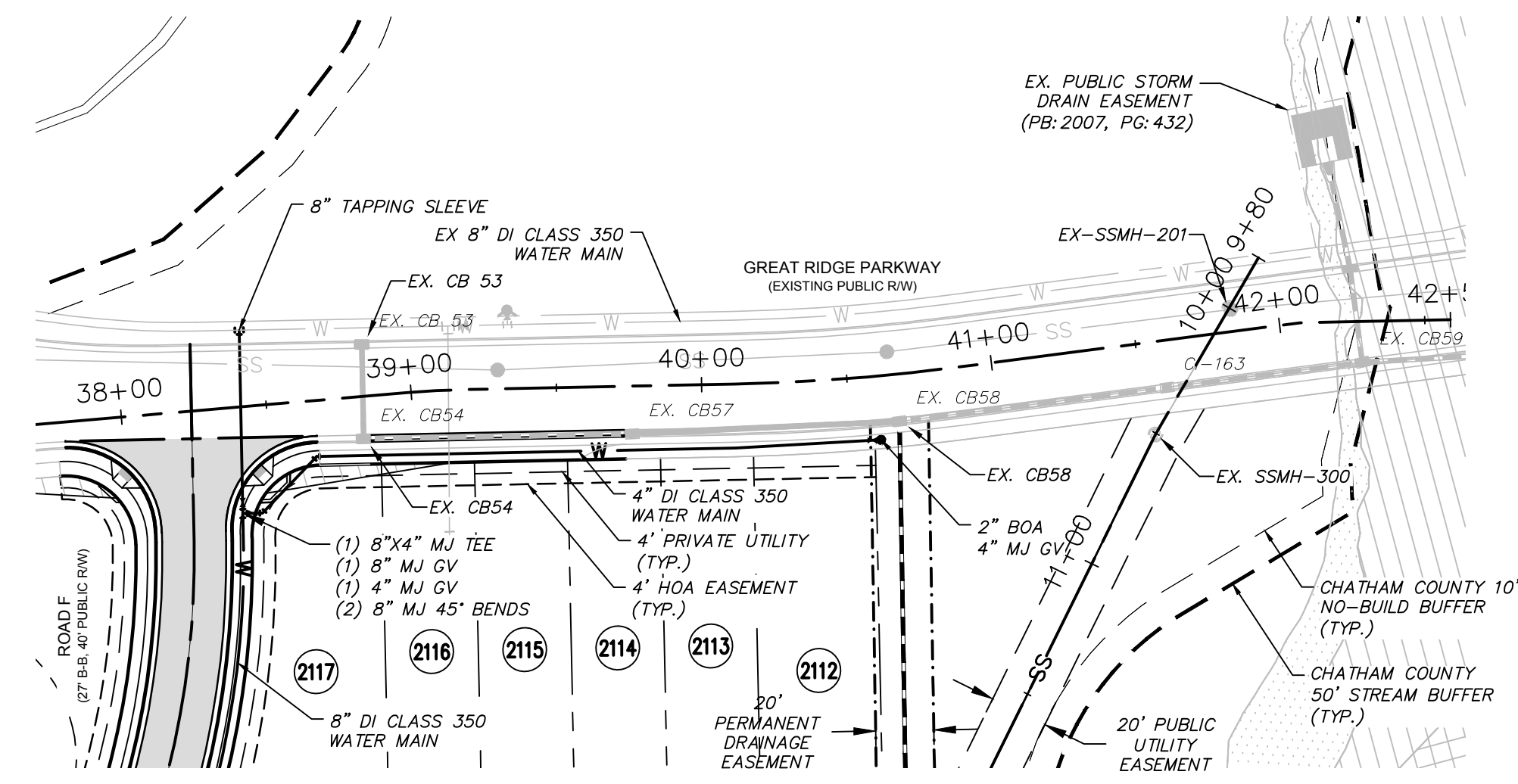
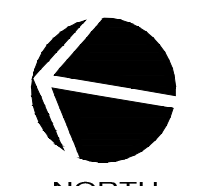
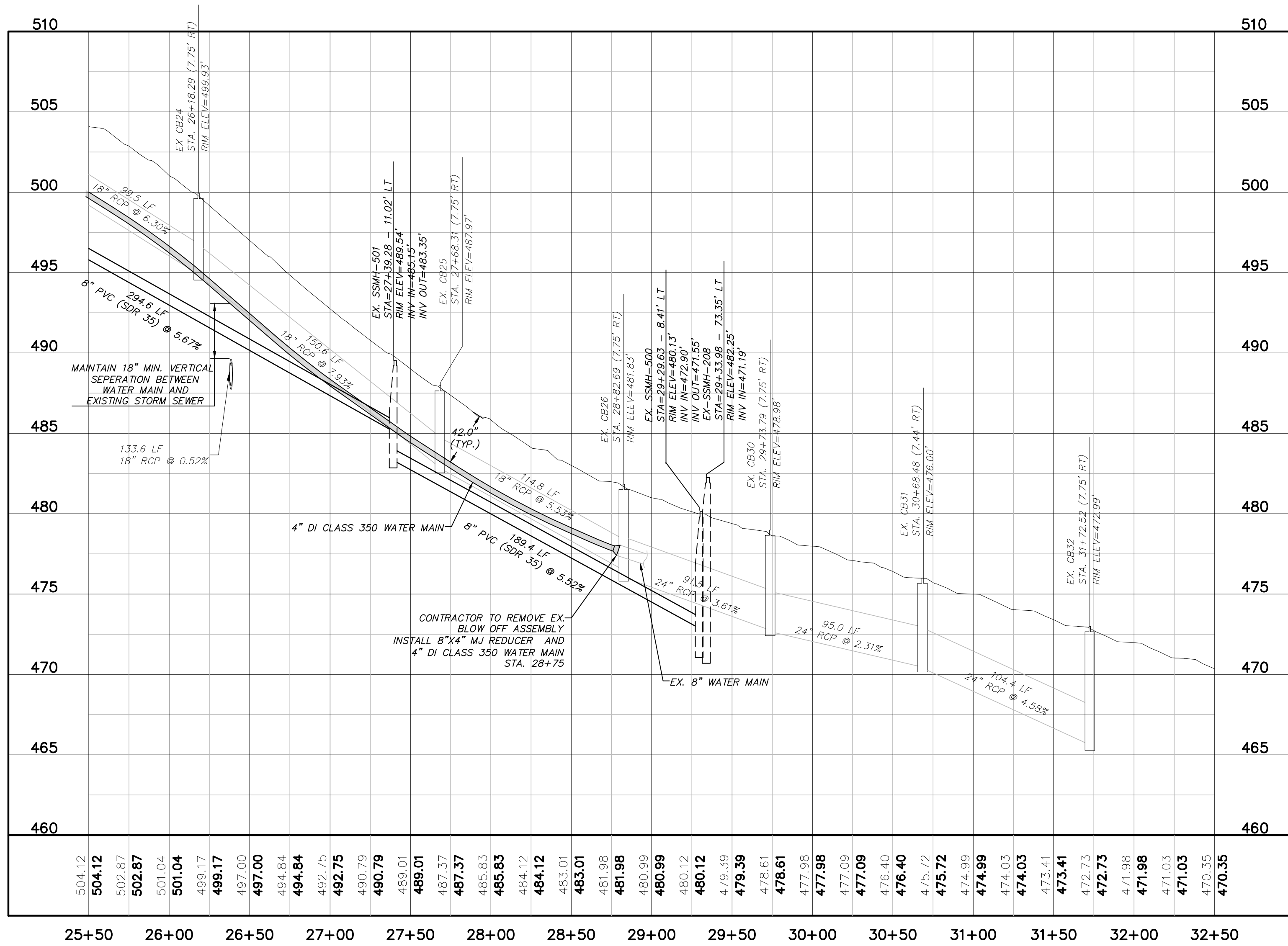


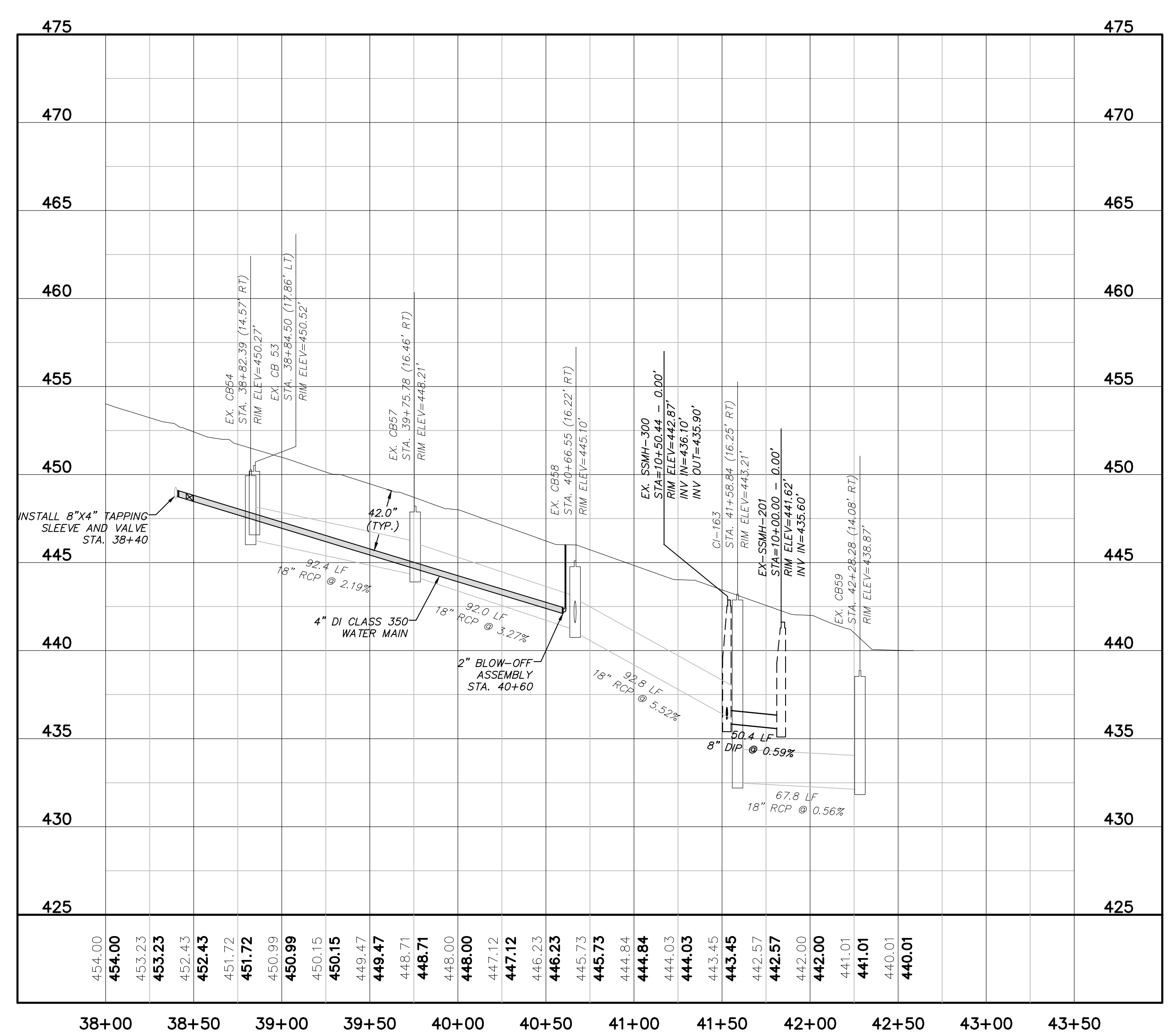
GREAT RIDGE PARKWAY PLAN
(VAR' B/B, VAR' R/W, STA. 25+50.00 TO 32+50.00)
SCALE: 1"=50'



GREAT RIDGE PARKWAY PLAN
(VAR' B/B, VAR' R/W, STA. 38+50.00 TO 42+50.00)
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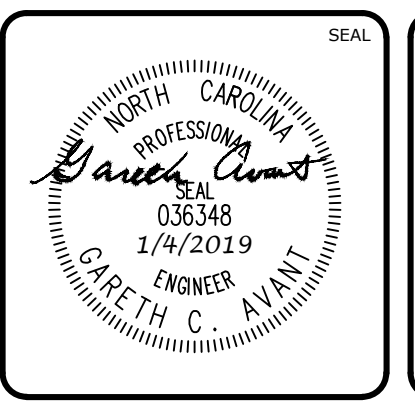
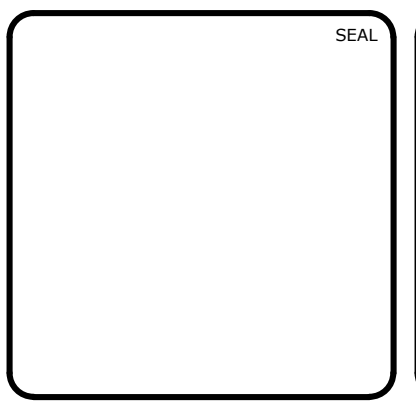


GREAT RIDGE PARKWAY PROFILE
(STA. 25+50.00 TO 32+50.00)
SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'



GREAT RIDGE PARKWAY PROFILE
(STA. 38+50.00 TO 42+50.00)
SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'

REV. NO.	DESCRIPTION	DATE
8	STORMWATER POND REVISIONS	2019.01.04
7	REVISIONS PER NCDOT COMMENTS	2018.12.18
6	REVISIONS PER NCDOT COMMENTS	2018.12.13
5	REVISIONS PER NCDOT COMMENTS	2018.12.05
4	REVISIONS PER NCDOT COMMENTS	2018.11.02
3	REVISIONS PER CHATHAM COUNTY EROSION CONTROL COMMENTS	2018.10.15
2	REVISIONS PER COUNTY WATER COMMENTS	2018.10.01
1	INITIAL SUBMITTAL	2018.09.18

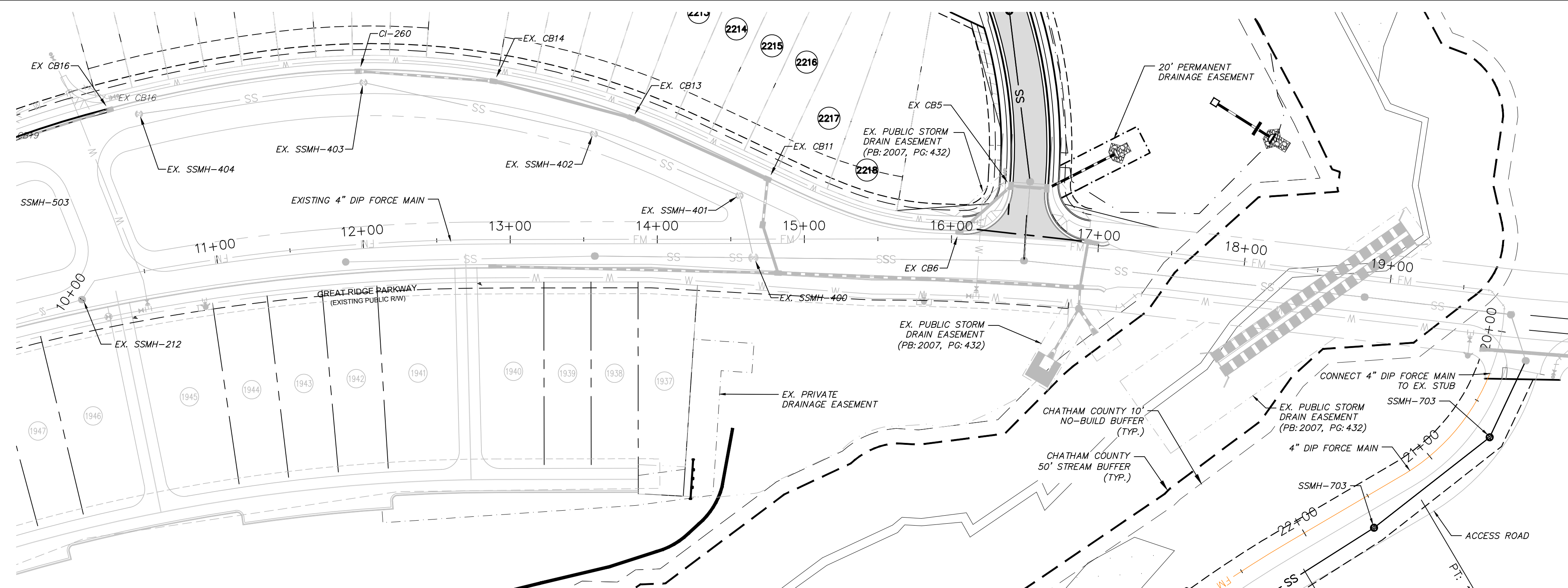


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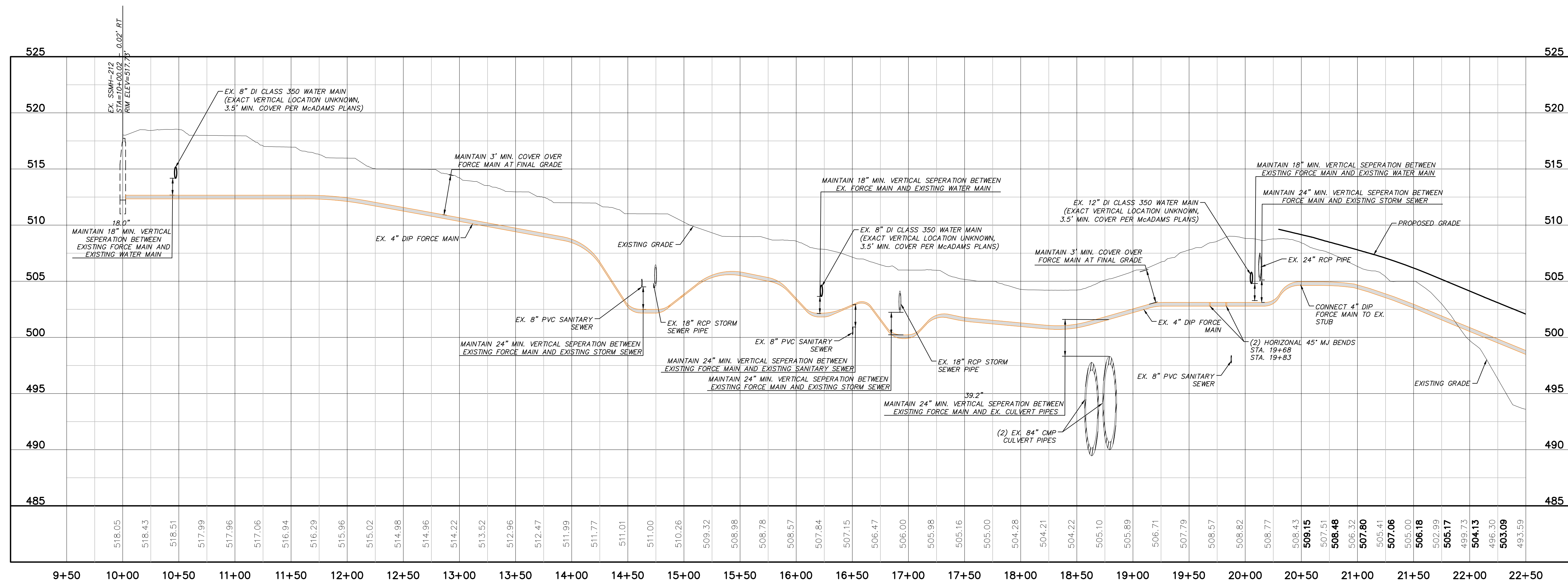
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Newland COMMUNITIES

BRIAR CHAPEL
BC PHASE 12
CHATHAM COUNTY, NORTH CAROLINA
PLAN & PROFILE
GREAT RIDGE PARKWAY (2 OF 2),
STA. 25+50.00 TO STA. 32+50.00
STA. 38+50.00 TO STA. 42+50.00

DATE: SEPTEMBER 18, 2018	SCALE: 1"=50'	M&C FILE NUMBER: C4.X
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CHECKED: GCA		
PROJ. MGR.: CHS		
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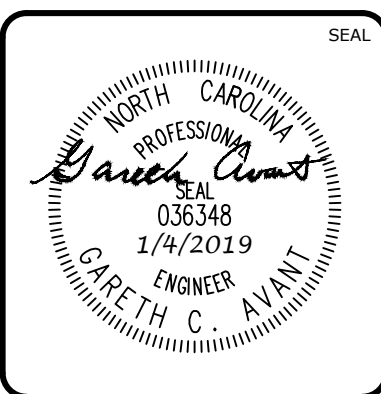
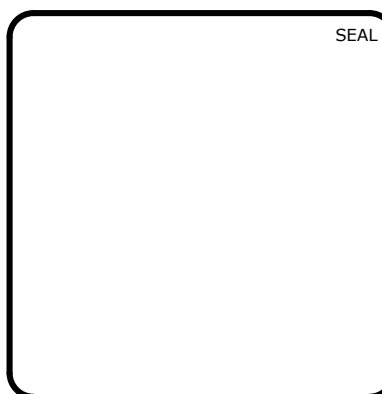


SANITARY SEWER FORCE MAIN PROFILE
 (VAR' B/B, VAR' R/W, STA. 10+00.00 TO 22+50.00)
 SCALE: 1"=50'



SANITARY SEWER FORCEMAIN PROFILE
 (STA. 10+00.00 TO 22+50.00)
 SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'

REV.	DESCRIPTION	DATE
8	STORMWATER POND REVISIONS	2019.01.04
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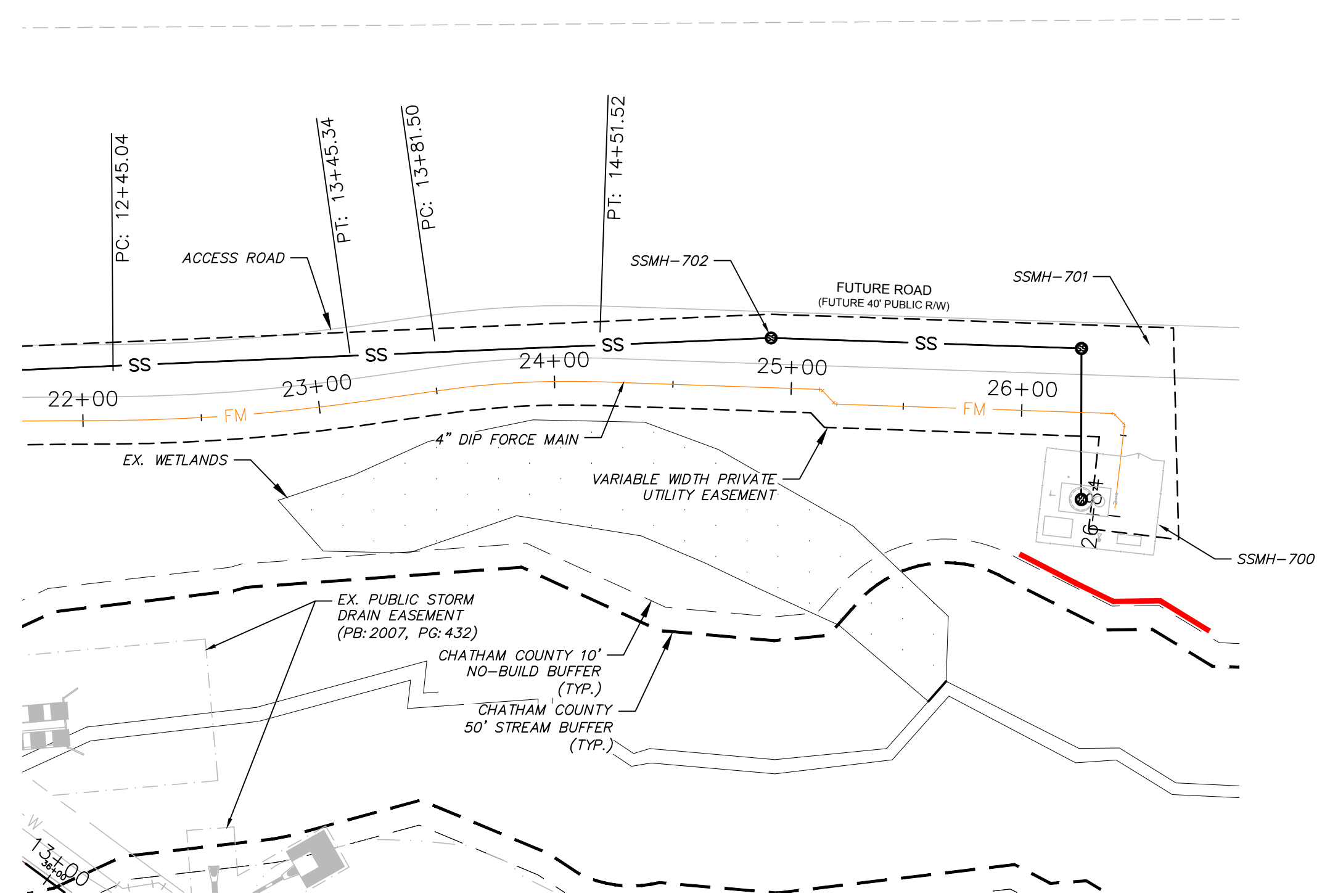
**BRIAR CHAPEL
 BC PHASE 12
 CHATHAM COUNTY, NORTH CAROLINA**

PLAN & PROFILE
 SANITARY SEWER FORCEMAIN (1 OF 2),
 STA. 10+00.00 TO STA. 22+00.00

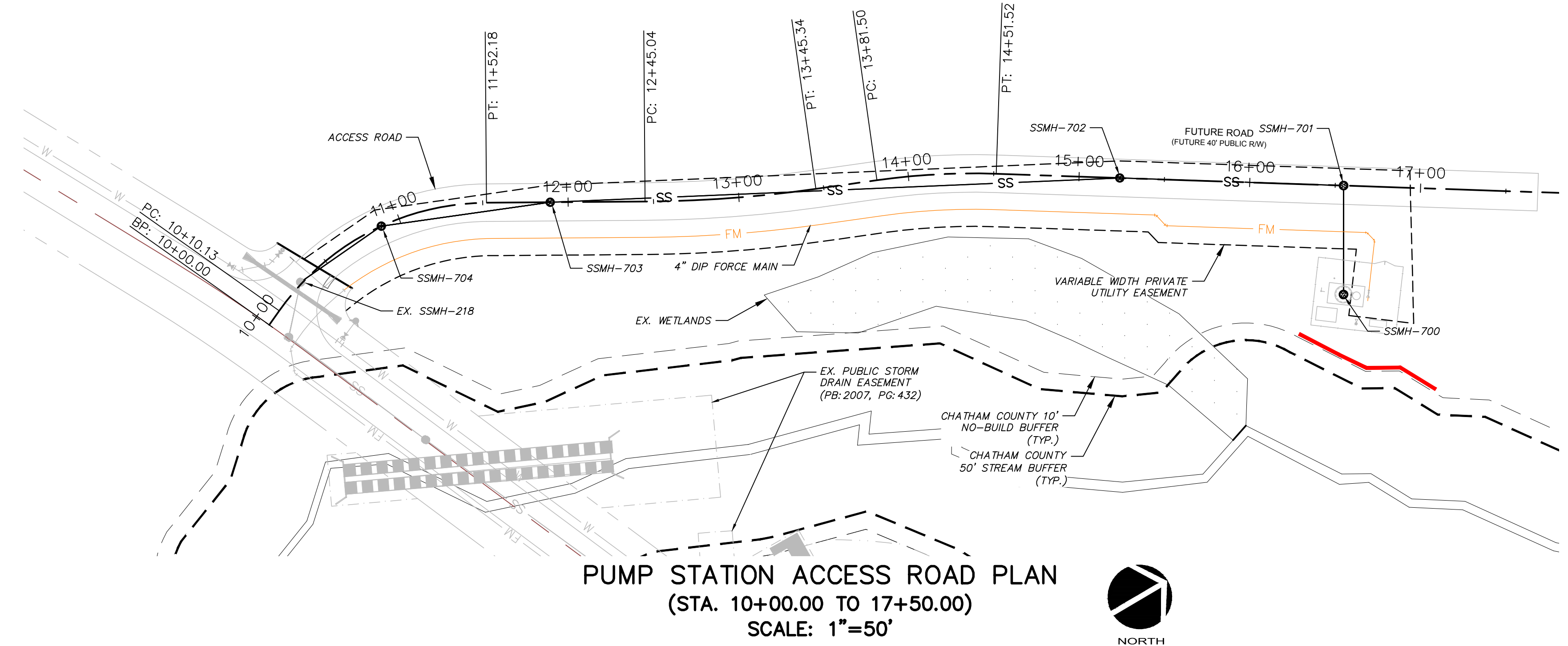
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CHECKED	GCA
PROJ. MGR.	CHS

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HORIZONTAL:	AS NOTED
VERTICAL:	C4.9
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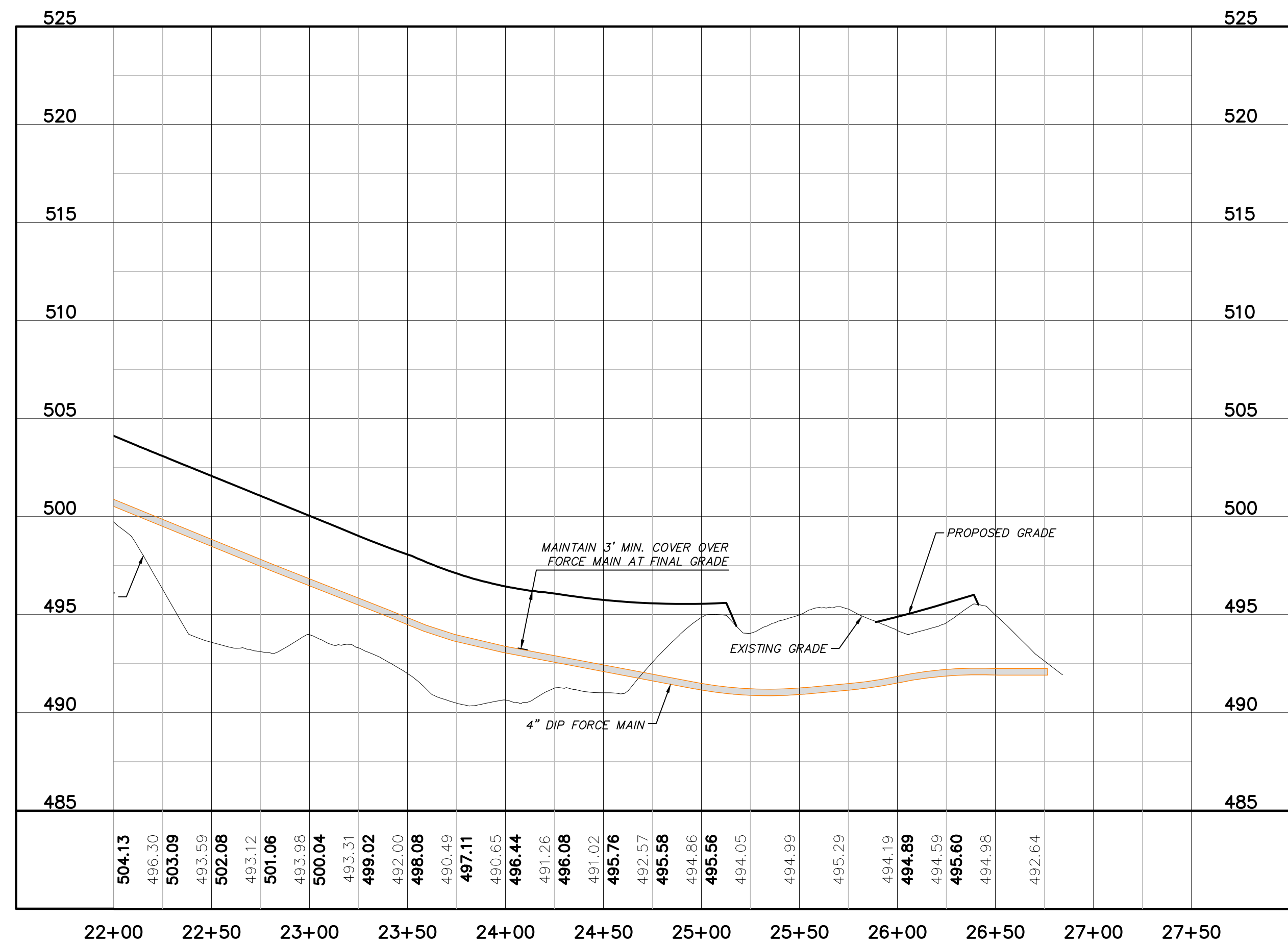
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REVISION	8



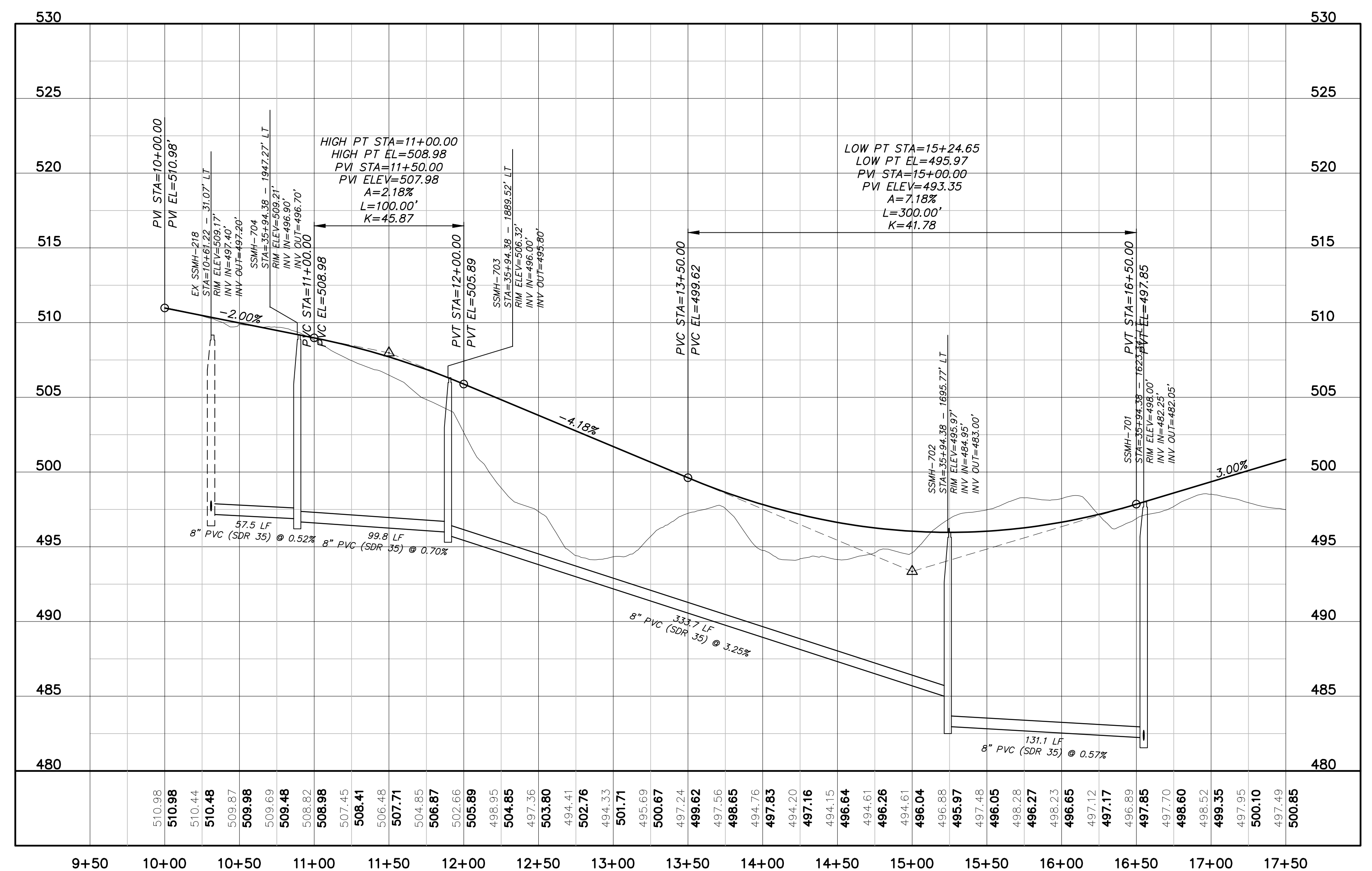
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 (VAR' B/B, VAR' R/W, STA. 22+00.00 TO 26+78.00)
 SCALE: 1"=50'



PUMP STATION ACCESS ROAD PLAN
 (STA. 10+00.00 TO 17+50.00)
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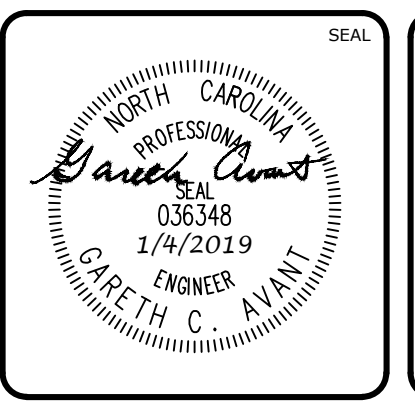
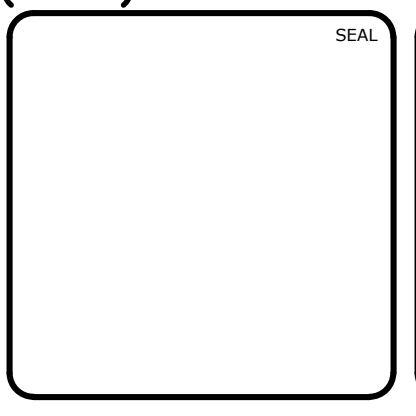


SANITARY SEWER FORCE MAIN PROFILE
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 SCALE: (Horiz.) 1"=50'; (Vert.) 1"=5'



PUMP STATION ACCESS ROAD PROFILE
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 PLAN & PROFILE
 SANITARY SEWER FORCE MAIN (2 OF 2),
 STA. 22+00.00 TO STA. 26+78.00
 PUMP STATION ACCESS ROAD
 STA. 10+00.00 TO STA. 17+50.00

DATE: SEPTEMBER 18, 2018	SCALE: 1"=50'	MFC FILE NUMBER: C4.X
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DESIGNED: LEG		
CHECKED: GCA		
PROJ. MGR.: CHS		
STATUS: FINAL DRAWINGS FOR CONSTRUCTION	REVISION: 8	

RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING

SEEDING MIXTURE SPECIES RATE (lb/acre)
 TALL FESCUE 60
 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: AUG. 20 - OCT. 25
 FALL: FEB. 15 - MAR. 21
 LATE WINTER: 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, REFERTILIZE 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.

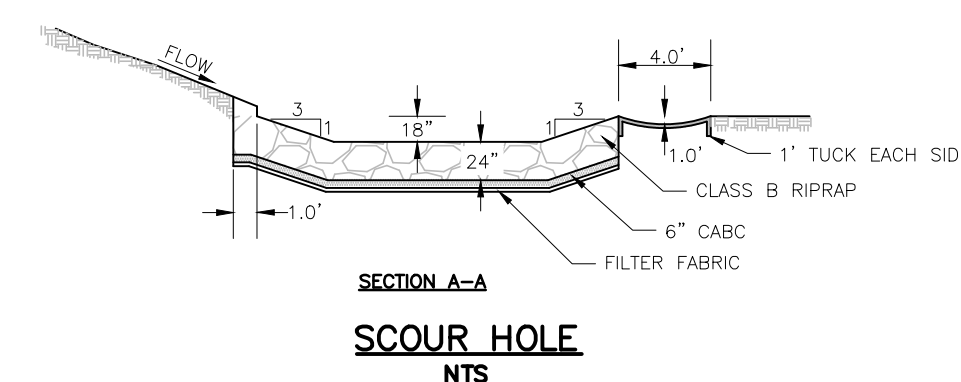
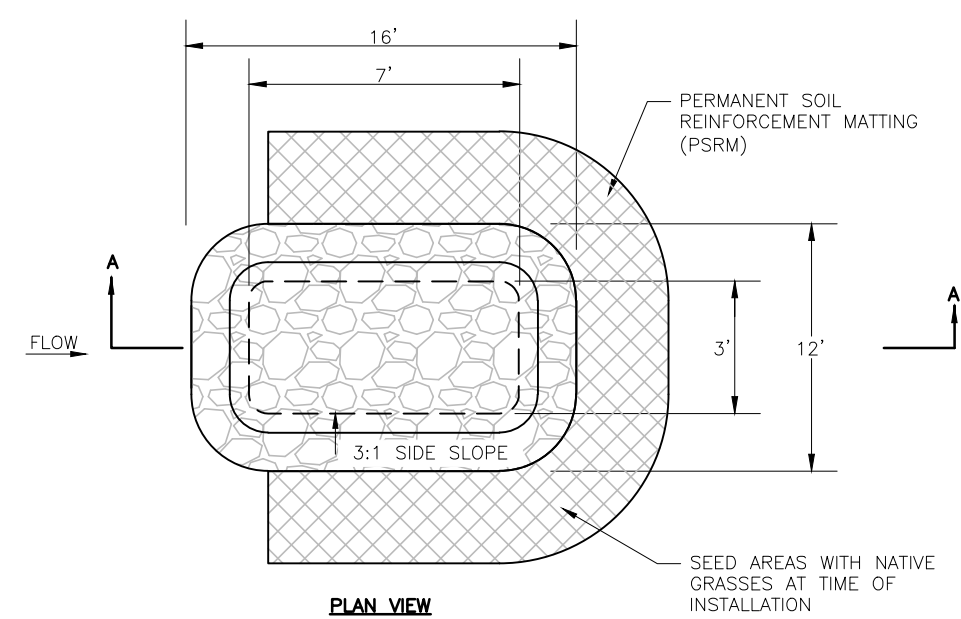
NOTE:
 SEE NCDENR'S EROSION AND SEDIMENT CONTROL PLANNING DESIGN MANUAL SECTION 6.11 FOR ADDITIONAL PERMANENT SEEDING OPTIONS.

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

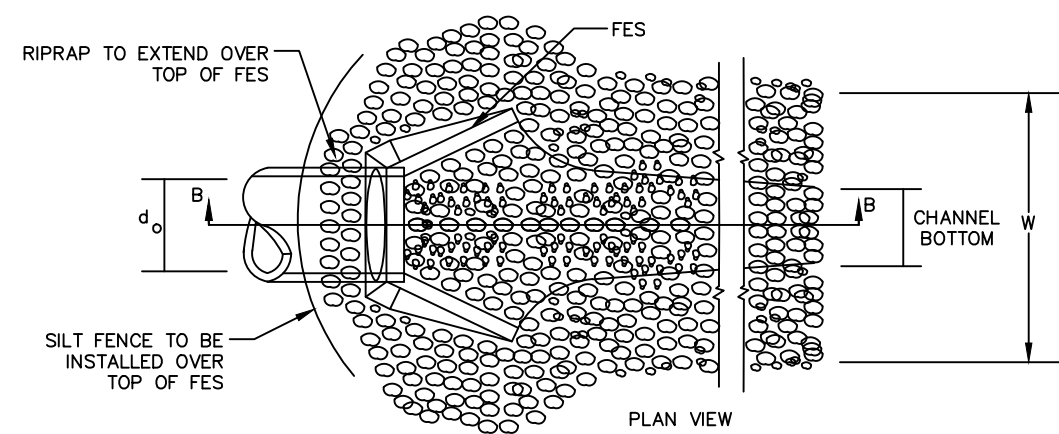
SEEDING DATES:
 MOUNTAINS: AUG. 15 - DEC. 15
 COASTAL PLAIN AND PIEDMONT: AUG. 15 - DEC. 30

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.

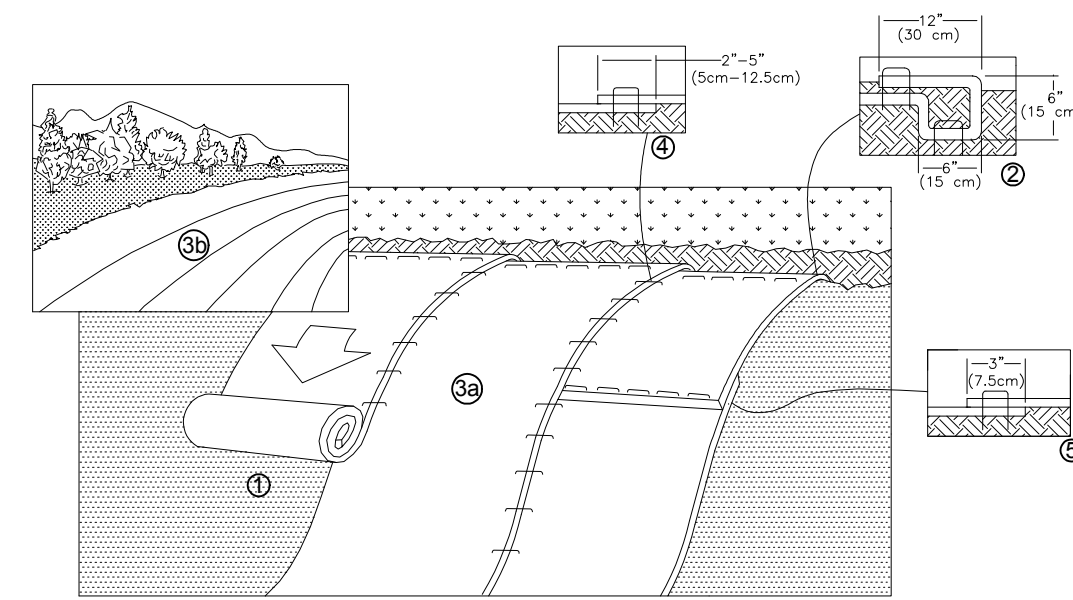
TEMPORARY SEEDING SCHEDULE
 NTS



OUTLET NO.	Do (IN.)	Lo (FT.)	W (FT.)	DEPTH (FT.)	CLASSIFICATION
HW-100	18	12.0	5.0	24	CLASS 1
HW-120	36	18.0	9.0	22	CLASS B
HW-200	30	20.0	8.0	24	CLASS 1
HW-300	18	9.0	5.0	22	CLASS B
HW-400	30	15.0	8.0	22	CLASS B

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

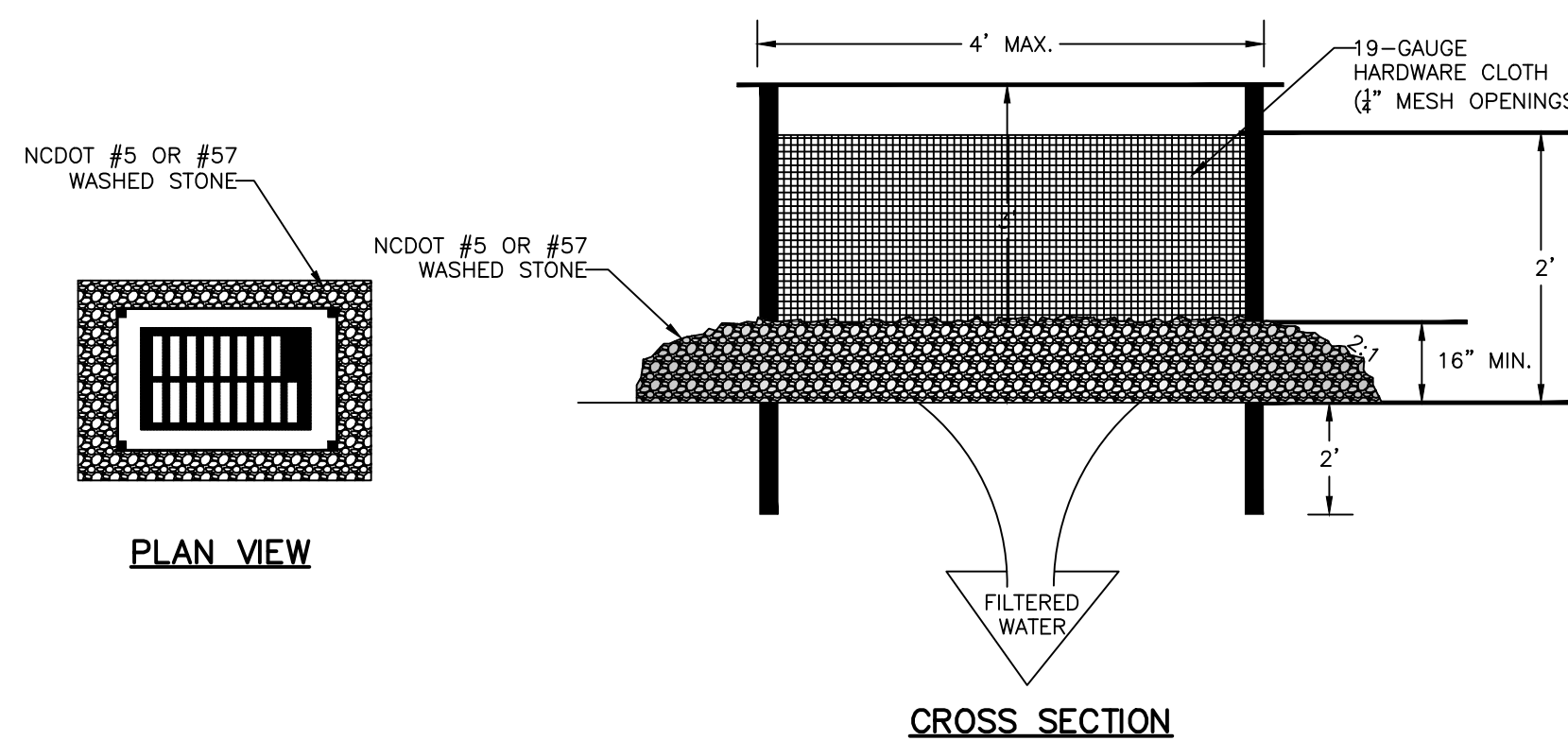
RIPRAP OUTLET PROTECTION
 NTS



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.



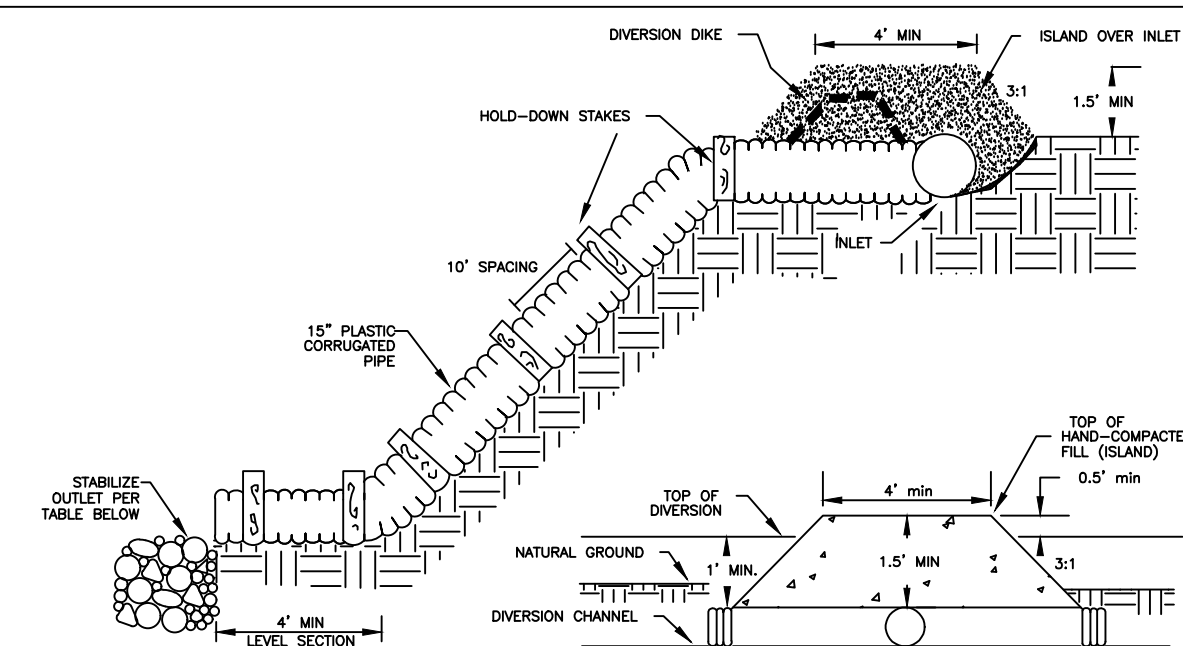
HARDWARE CLOTH & GRAVEL INLET PROTECTION
 NTS

STORM DRAINAGE NOTES:

- STORM DRAINAGE PIPES SHALL BE:
 - RCP/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.

TDD #	TOTAL LENGTH	SLOPE (%)	LINER	RECEIVING SLOPE DRAIN SIZE (IN.)
STAGE 1 DIVERSIONS				
1	294'	2.0	STRAW W/NET	18
2	810'	1.2	STRAW W/NET	24
3	728'	3.2	SYNTHETIC MAT	(2) 24
4	294'	5.8	SC250	(2) 24
5	830'	2.8	SYNTHETIC MAT	(2) 24
6	639'	5.5	SYNTHETIC MAT	15
7	120'	10.0	STRAW W/NET	15
8	101'	5.9	SYNTHETIC MAT	24
9	81'	7.4	SC250	24
10	134'	9.0	SC250	24
11	398'	7.0	SC250	24
12	432'	8.3	SC250	15
13	138'	9.4	SC250	18
14	116'	11.2	STRAW W/NET	12
15	510'	10.6	SC250	12
16	751'	3.6	STRAW W/ NET	24
17	78'	3.8	SYNTHETIC MAT	24
18	129'	3.9	SYNTHETIC MAT	18
19	114'	5.3	STRAW W/NET	18
20	982'	5.7	SC250	(2) 24
21	237'	9.7	P550	(2) 24
22	110'	0.9	STRAW W/NET	18
23	835'	3.7	SYNTHETIC MAT	18
24	755'	3.2	SYNTHETIC MAT	24
CWD 1	431'	3.5	SYNTHETIC MAT	(3) 24
CWD 2	343'	4.4	P550	(3) 24
CWD 3	408'	5.4	SYNTHETIC MAT	18
CWD 4	1190'	2.5	SC250	SCOUR HOLE
STAGE 2 DIVERSIONS				
25	831'	2.6	SYNTHETIC MAT	(2) 24

TEMPORARY DIVERSION DITCHES

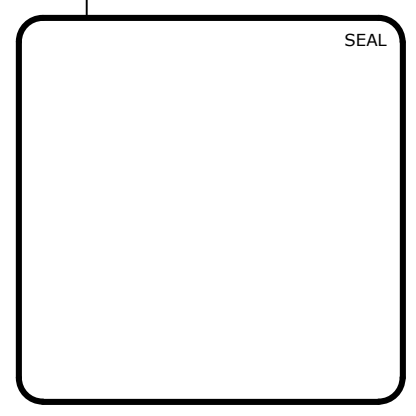


OUTLET PROTECTION SIZING

OUTLET SIZE (FT.)	Lo (FT.)	W (FT.)	DEPTH (FT.)	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

TEMPORARY SLOPE DRAIN
 NTS

REV. NO.	DESCRIPTIONS	DATE
8	STORMWATER POND REVISIONS	2019.01.04
7	REVISIONS PER NCDOT COMMENTS	2018.12.18
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5	REVISIONS PER NCDOT COMMENTS	2018.12.05
4	REVISIONS PER NCDOT COMMENTS	2018.11.02
3	REVISIONS PER CHATHAM COUNTY EROSION CONTROL COMMENTS	2018.10.15
2	REVISIONS PER COUNTY WATER COMMENTS	2018.10.01
1	INITIAL SUBMITTAL	2018.09.18



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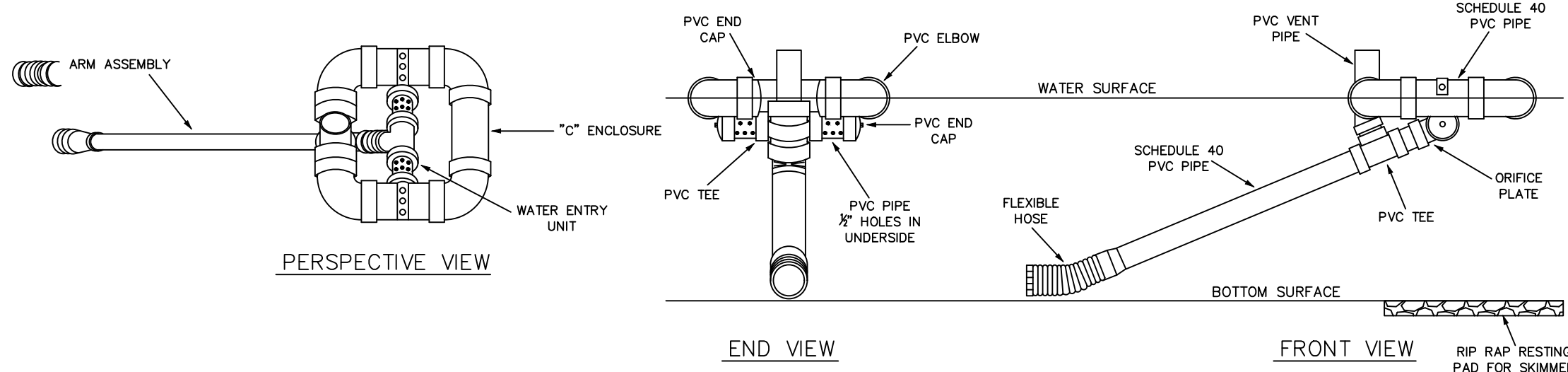
**EROSION AND SEDIMENTATION CONTROL
 DETAILS**

DATE: SEPTEMBER 18, 2018
 MCE PROJ. # 02735-0231
 DRAWN: LEG
 DESIGNED: LEG
 CHECKED: GCA
 PROJ. MGR: CHS

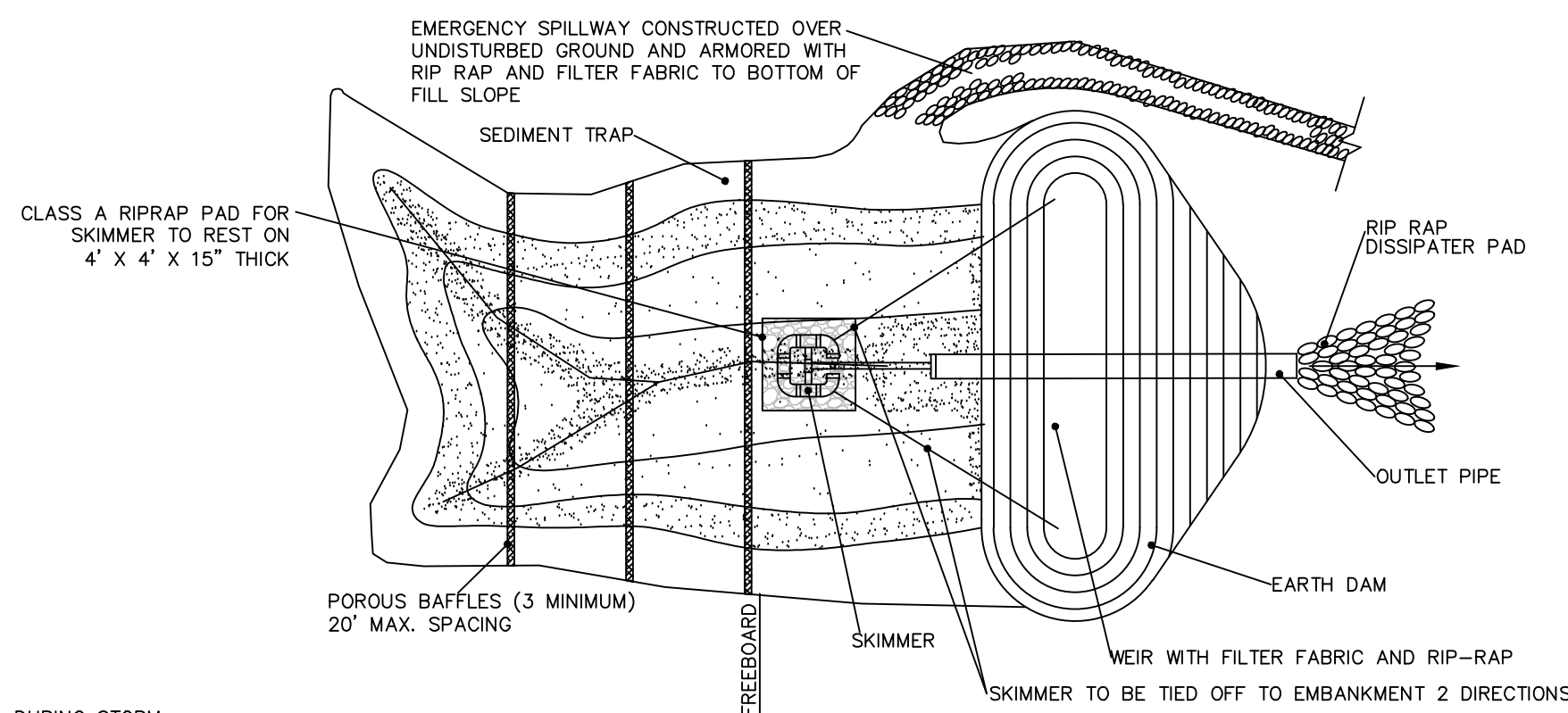
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 VERTICAL: N/A

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

STATUS: FINAL DRAWINGS FOR CONSTRUCTION
 REVISION: 8



SKIMMER DETAIL
PLAN VIEW



NOTES:

1. ANY EXISTING SKIMMER SEDIMENT BASINS PREVIOUSLY APPROVED SHALL MAINTAINED PER THEIR ORIGINAL DIMENSIONS AND IN ACCORDANCE WITH THIS DETAIL.

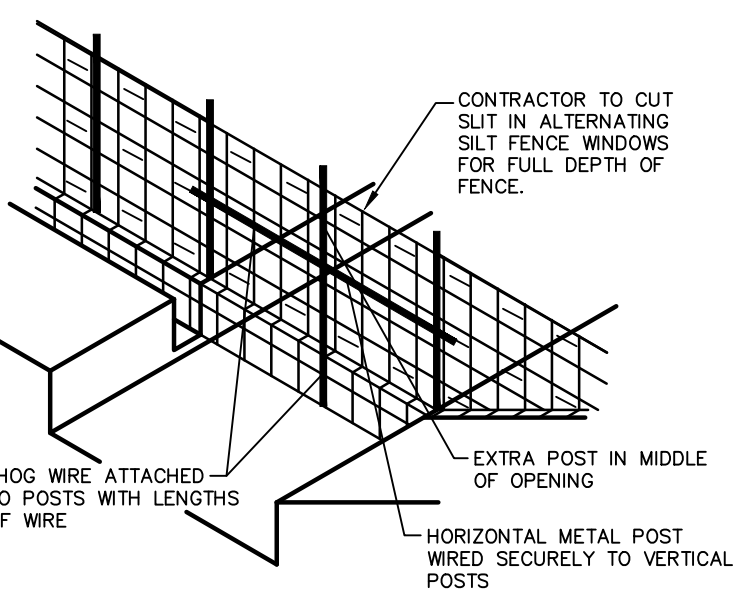
CROSS SECTION

TEMPORARY SKIMMER SEDIMENT BASIN
NTS

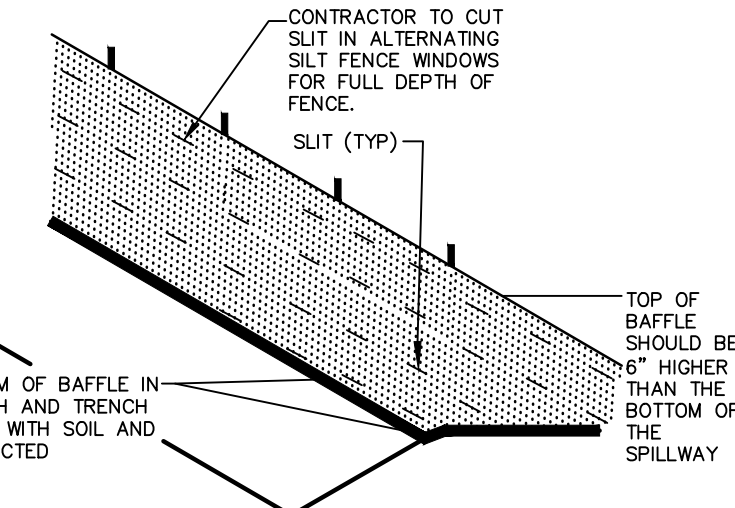
BASIN #	DISTURBED AREA (ac)	TOTAL DRAINAGE AREA (ac)	REQUIRED STORAGE	REQUIRED SURFACE AREA	MINIMUM DEPTH	BOTTOM ELEVATION	TOP WIDTH	TOP LENGTH	PROVIDED STORAGE	PROVIDED SURFACE AREA	STORAGE/SPILLWAY ELEVATION	SPILLWAY WIDTH	TOP OF DAM ELEVATION	SKIMMER SIZE	SKIMMER ORIFICE DIAMETER
STAGE 1 & 2															
SB #1	3.62	3.62	13,030 CF	6,440 SF	3.0'	434.0'	56'	122'	14,520 CF	6,832 SF	437.0'	15.0'	439.0'	2.5"	2.2"
BMP #39	10.06	10.06	36,220 CF	17,900 SF	3.0'	451.5'	PER PLAN	PER PLAN	97,509 CF	21,545 SF	456.5'	13.0'	458.0'	5.0"	5.0"
SB #3	5.24	5.24	18,860 CF	9,320 SF	3.0'	475.0'	66'	142'	21,060 CF	9,372 SF	478.0'	22.0'	480.0'	3.0"	2.5"
SB #4	2.09	2.09	7,520 CF	3,720 SF	3.0'	500.0'	45'	95'	8,217 CF	4,275 SF	503.0'	10.0'	505.0'	2.0"	1.8"
SB #5	3.70	3.70	13,320 CF	6,580 SF	3.0'	518.0'	55'	120'	13,932 CF	6,600 SF	521.0'	16.0'	523.0'	2.5"	2.2"
BMP #40	6.24	6.24	22,460 CF	11,100 SF	3.0'	503.5'	PER PLAN	PER PLAN	36,168 CF	20,564 SF	506.5'	20.0'	508.5'	4.0"	3.1"
SB #7	5.03	5.03	18,110 CF	8,950 SF	3.0'	482.0'	56'	160'	19,536 CF	8,960 SF	485.0'	21.0'	487.0'	3.0"	2.5"
STAGE 2															
BMP #38	1.81	1.81	6,150 CF	3,220 SF	3.0'	435.75'	PER PLAN	PER PLAN	9,900 CF	5,465 SF	439.0'	15.0'	440.0'	2.5"	1.8"

*SKIMMER SHALL ATTACH TO PERMANENT RISER AT THE EMERGENCY DRAWDOWN DEVICE.

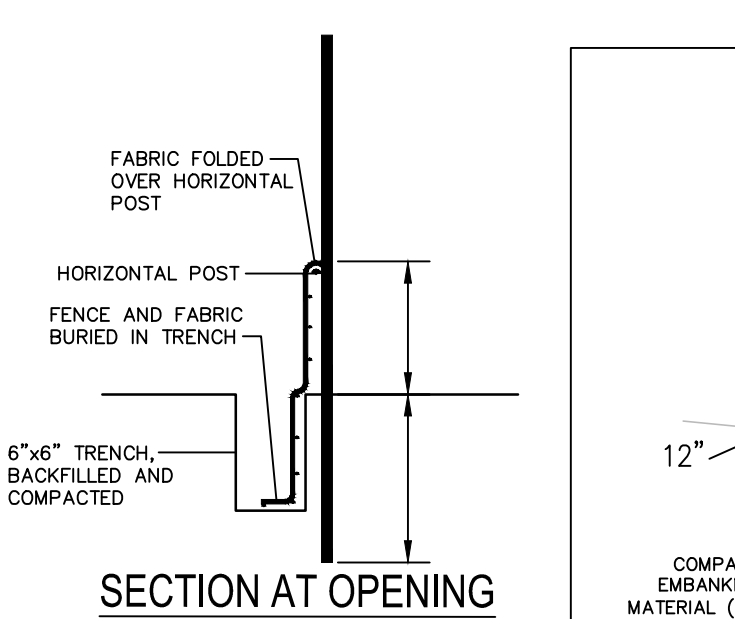
BAFFLE INSTALLATION DETAIL



BAFFLE INSTALLATION - STEP 1



BAFFLE INSTALLATION - STEP 2



- NOTES:
1. DRIVE STEEL FENCE POST AT LEAST 18" INTO SOLID GROUND.
 2. WOOD POSTS ARE NOT ACCEPTABLE.
 - USE STAPLES 1" APART TO ATTACH FABRIC TO "HOG WIRE".
 - BAFFLE SPACED AS PER APPROVED PLAN.

- CONCRETE WASHOUT AREA INSTALLATION NOTES:
1. SEE PLAN FOR LOCATION OF CONCRETE WASHOUT AREA. (TO BE PLACED A MINIMUM OF 50 FT FROM INLETS, BODIES OF WATER, AND DRAINAGEWAYS.)
 2. THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
 3. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP TRUCKS.
 4. EXCAVATED MATERIAL SHALL BE USED IN PERIMETER BERM CONSTRUCTION.

- CONCRETE WASHOUT AREA MAINTENANCE NOTES:
1. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASHED CONCRETE.
 2. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED AND DISPOSED OF AT APPROVED WASTE SITE.
 3. AFTER REMOVAL OF CONCRETE WASHOUT AREA, SEDIMENT DISTURBED AREA.
 4. INSPECT WEEKLY, DURING AND AFTER ANY STORM EVENT.

CONCRETE WASHOUT AREA
NTS

NOTES:

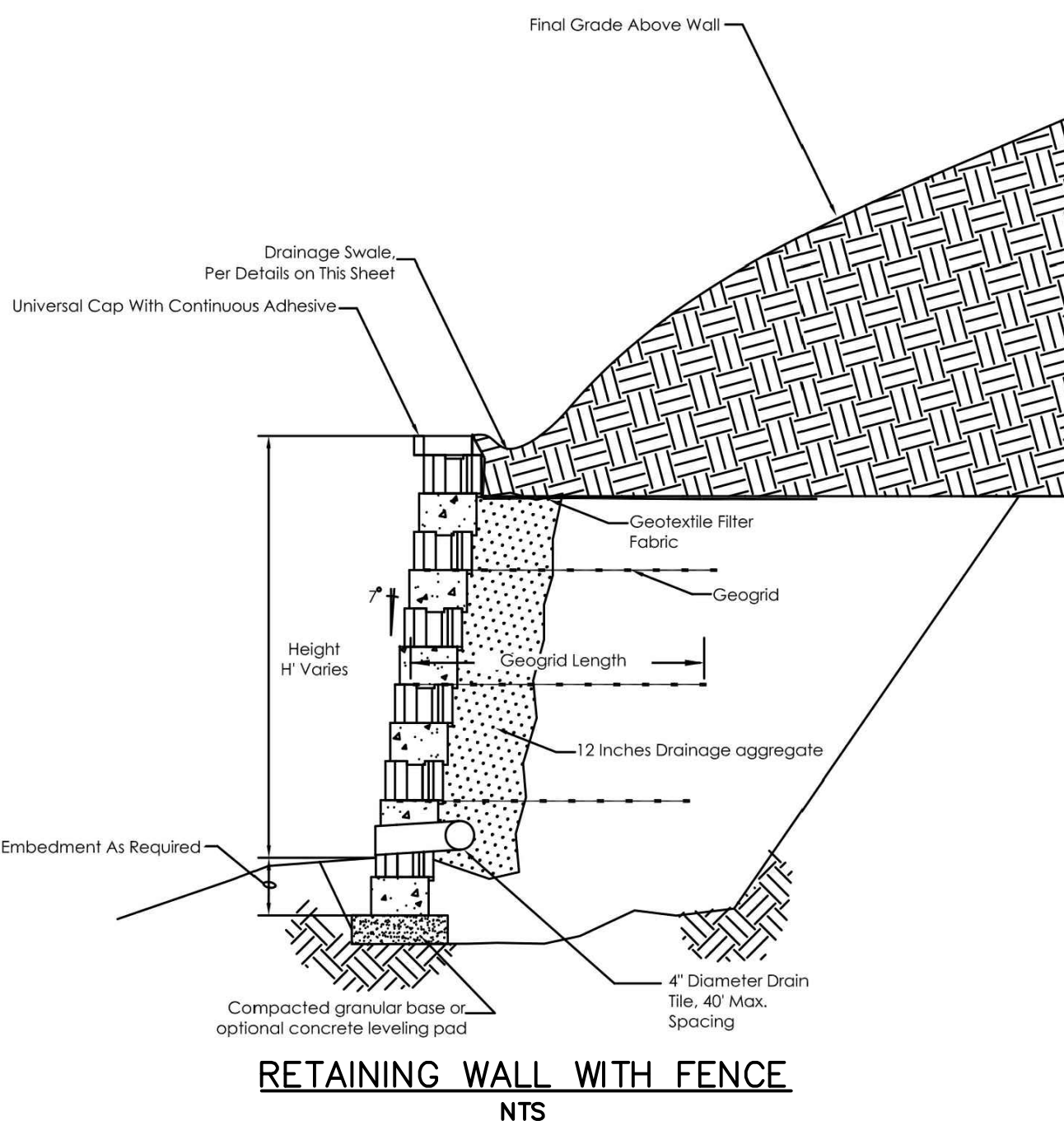
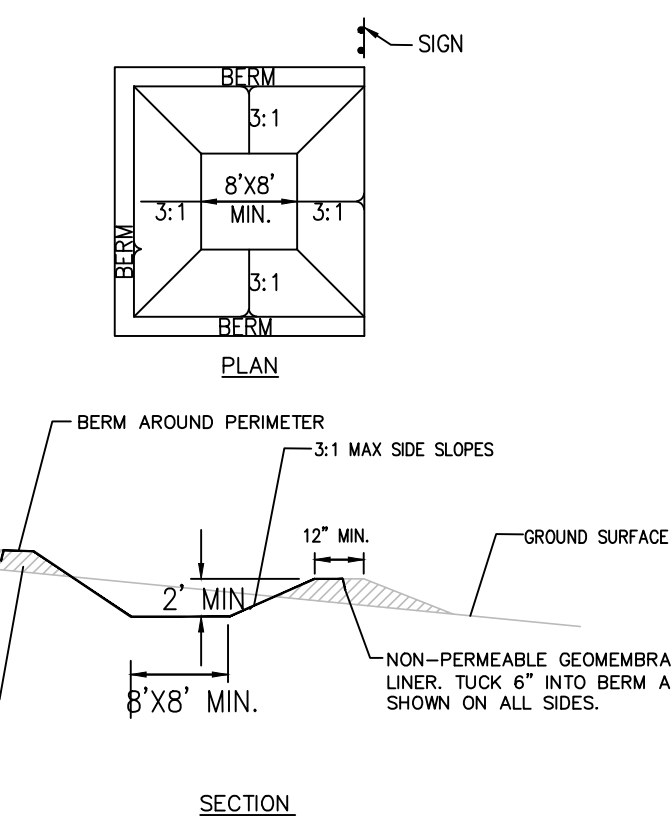
POSITIVE GRADE MUST BE PROVIDED TO ASSURE DRAINAGE. IF SLOPE EXCEEDS 2% SEED AND MULCH DIVERSION. TRY NOT TO EXCEED 5% MAXIMUM D.A. = 5 ACRES WITHOUT SUPPORTING CALCS. DIVERSIONS AT THE TOP OF SLOPES MUST BE FULLY INSTALLED. APPROVED SLOPE DRAIN. BERM/DITCH IS MOST COMMONLY USED.

- MACHINE COMPACTION OF ALL FILL IS REQUIRED. DIVERSIONS SUFFICIENT TO DIRECT ALL SEDIMENT-LADEN STORMWATER INTO A SEDIMENT CONTROL DEVICE MUST BE INSTALLED PRIOR TO CLEARING AND GRUBBING OF THE AREA (OR IN CONJUNCTION WITH THIS OPERATION) IF SEDIMENT CONTROLS AND DIVERSIONS ARE INSTALLED AS EACH CRITICAL POINT IS REACHED).
- DIVERSIONS SHOULD BE LOCATED TO MINIMIZE DAMAGES BY CONSTRUCTION OPERATIONS.
- DIVERSIONS SHOULD BE SEEDED AND MULCHED IF THEY ARE TO REMAIN IN PLACE OVER 30 DAYS.
- CHECK DEVICE AFTER EACH RAIN, BUT ONCE A WEEK REGARDLESS. REPAIR AS NECESSARY.

MAINTENANCE:

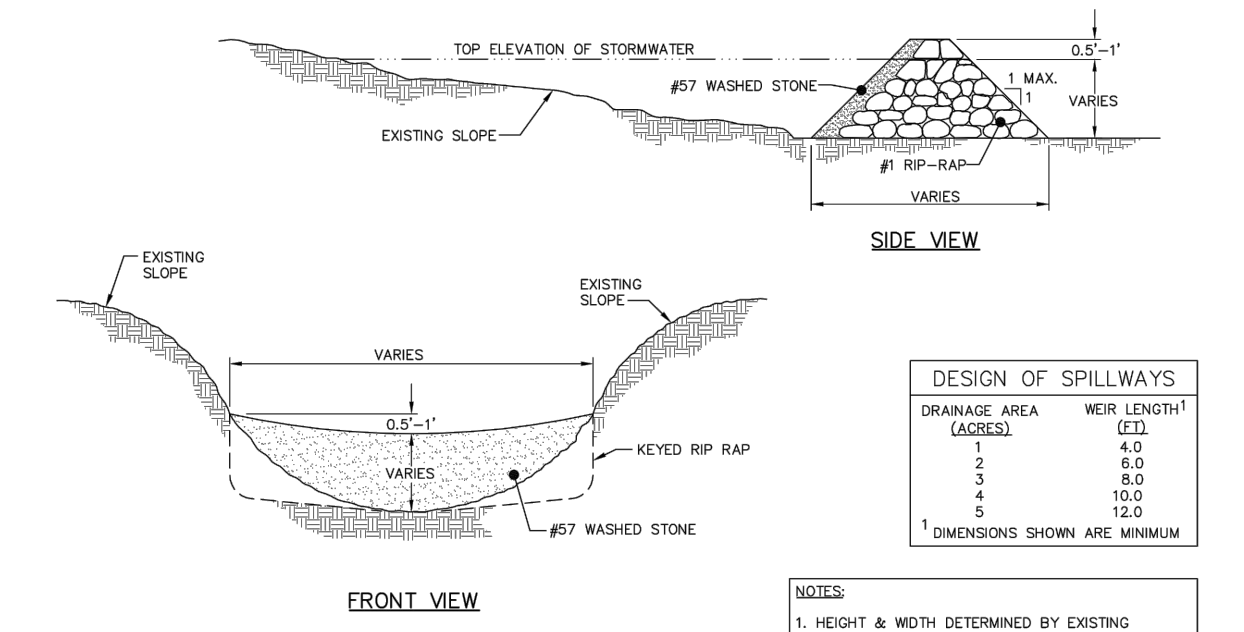
1. INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.
2. ALL TEMPORARY DIVERSION AND CLEAN WATER DITCHES SHALL BE MAINTAINED PER THEIR ORIGINAL DESIGN DIMENSIONS DURING CONSTRUCTION ACTIVITIES. ANY DITCHES THAT REQUIRE REMOVAL OR RELOCATION SHALL RECEIVE APPROVAL FROM CHATHAM COUNTY EROSION CONTROL INSPECTOR.

TEMPORARY DIVERSION/CLEAN WATER DIVERSION DITCH
NTS



THIS RETAINING WALL DETAIL IS SHOWN FOR REFERENCE ONLY AS AN EXAMPLE OF AN ACCEPTABLE WALL DESIGN. THE OWNER SHALL OBTAIN A DESIGN SEALED BY A LICENSED PROFESSIONAL PRIOR TO CONSTRUCTION.

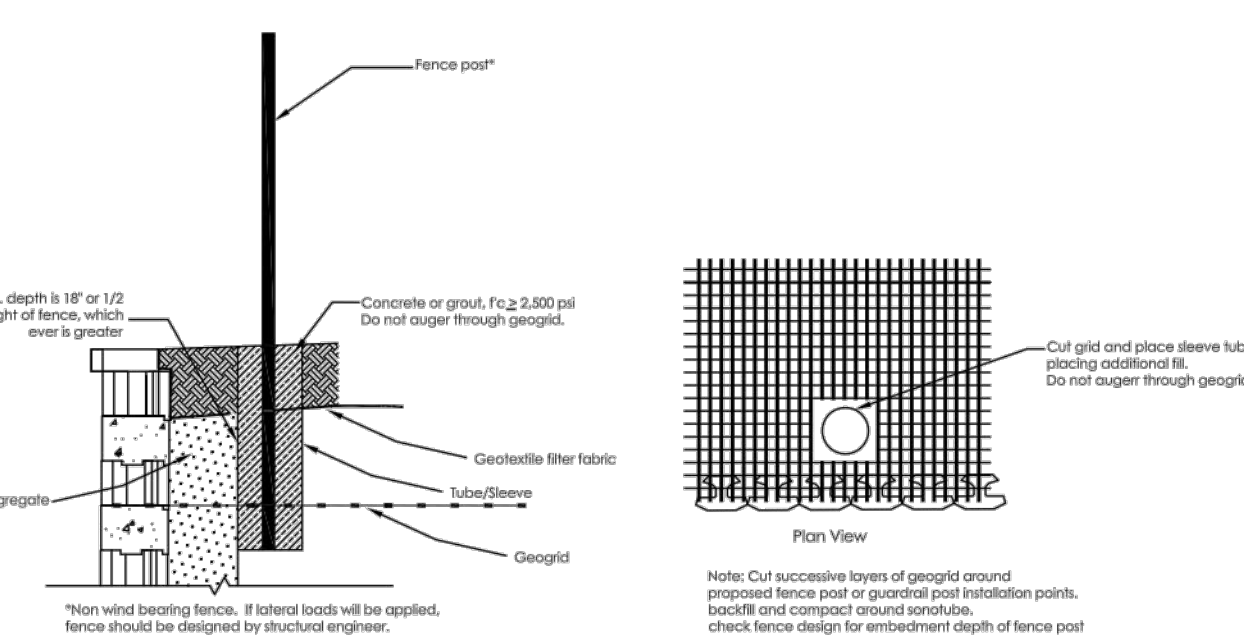
RETAINING WALL WITH FENCE
NTS



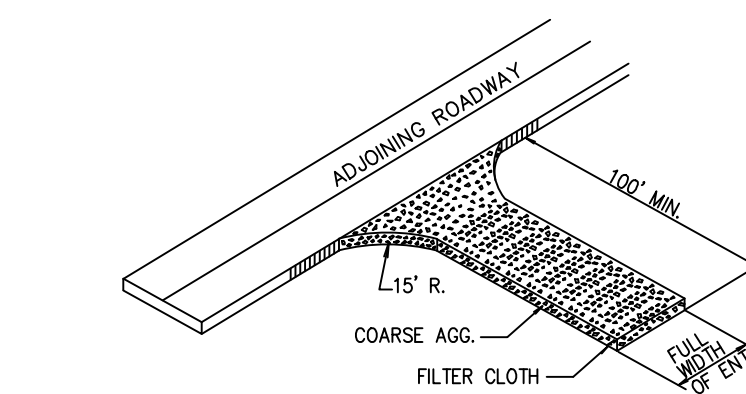
STANDARD ROCK CHECK DAM

RETAINING WALL NOTES:

1. CONTRACTOR SHALL PROCURE A QUALIFIED SEGMENTAL BLOCK RETAINING WALL DESIGNER FOR THE PROJECT. SEGMENTAL BLOCK RETAINING WALL INFORMATION SHOWN ON THESE PLANS IS FOR LOCATION AND GRADE INFORMATION ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING NECESSARY INFORMATION TO WALL DESIGNER AS REQUIRED FOR PROPER DESIGN OF RETAINING WALLS.
2. CONTRACTOR SHALL PROVIDE DETAILED SHOP DRAWINGS SEALED BY A LICENSED PROFESSIONAL ENGINEER SPECIALIZING IN SEGMENTAL BLOCK RETAINING WALL DESIGN FOR THE WALL FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION AS PART OF THE SHOP DRAWING SUBMITTAL PROCESS.
3. TOP GRADE OF WALL AND BOTTOM GRADE OF WALL SPECIFIED IN PLANS ARE INTENDED TO BE THE FINISHED PAVEMENT OR EARTH GRADE. THE WALL DESIGNER SHALL ADJUST SHOP DRAWING WALL ELEVATIONS FOR THE TOP AND BOTTOM OF WALL TO MEET SPECIFIC PRODUCT DESIGN CRITERIA AND WALL GEOMETRY AS NECESSARY TO ACHIEVE DESIRED FINISHED GRADES. THE HORIZONTAL WALL LOCATION AS SHOWN IS THE FINISHED LOCATION OF THE BOTTOM OF WALL. THE WALL DESIGNER SHALL COORDINATE WITH THE ENGINEER TO VERIFY WHETHER CONFLICTS EXIST. THE WALL DESIGNER SHALL NOTIFY THE ENGINEER IN CASE OF ANY CONFLICTS, INCLUDING BUT NOT LIMITED TO EXISTING OR PROPOSED UTILITIES, WALL, BATTER, GEGRID PLACEMENT, ETC., OR IF ANY ASPECT OF WALL PLACEMENT CAN NOT BE ACCOMPLISHED. ALL WORK RELATED TO THE RETAINING WALL CONSTRUCTION SHALL BE ACCOMPLISHED WITHIN THE BOUNDARIES OF THE PROJECT PROPERTY, WITHOUT IMPACTING BUFFERS.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND WALL DESIGNER TO ASSURE THAT THE REQUIRED SOIL BEARING PRESSURE, SUBSURFACE DRAINAGE AND SURFACE DRAINAGE ARE ACHIEVED AS RELATED TO THE RETAINING WALL DESIGN. THIS SHOULD BE VERIFIED BY A GEOTECHNICAL ENGINEER. SPECIAL ATTENTION IS REQUIRED TO ENSURE BEARING CAPACITY HAS BEEN ACHIEVED AT LOCATIONS WHERE PIPE PENETRATIONS ARE TO OCCUR. IT SHALL BE THE RESPONSIBILITY OF BOTH THE OWNER AND THE CONTRACTOR TO PROVIDE QUALITY CONTROL / QUALITY ASSURANCE TESTING ASSOCIATED WITH THE WALL CONSTRUCTION. THE WALL DESIGNER SHALL PROVIDE ANY CERTIFICATIONS AS MAY BE REQUIRED TO SHOW COMPLIANCE WITH ORIGINAL DESIGN DOCUMENTS AS RELATED TO THE WALL DESIGN AND CONSTRUCTION.

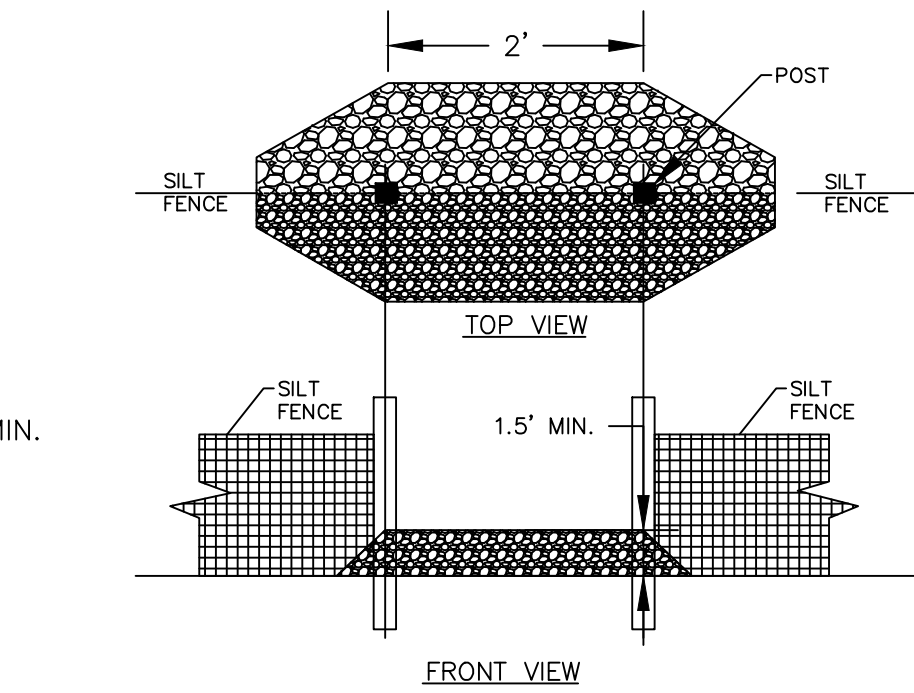
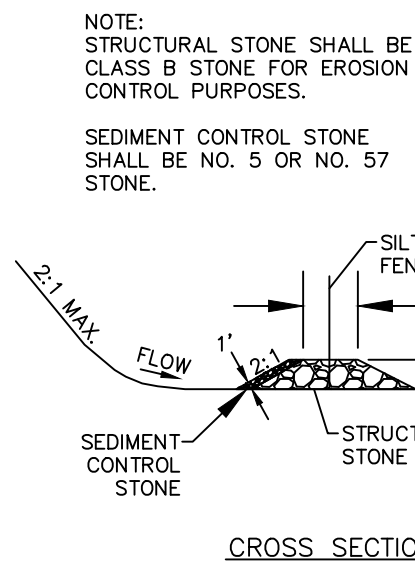


RETAINING WALL WITH FENCE
NTS

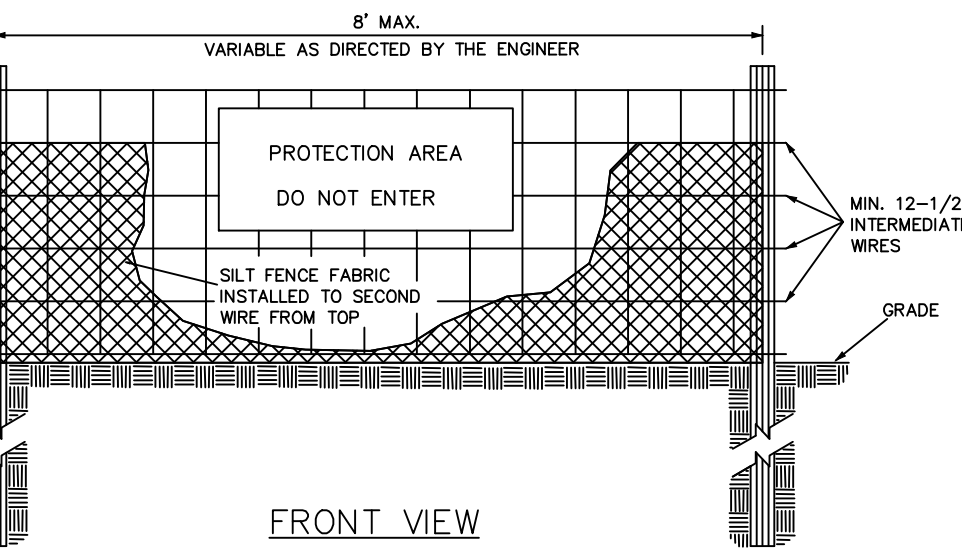
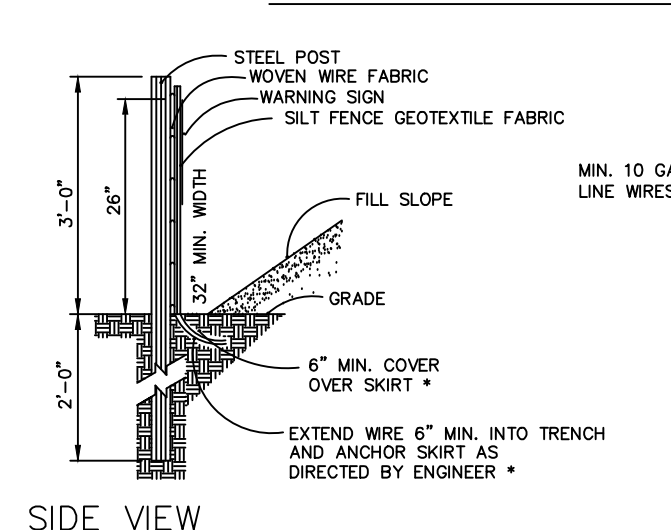
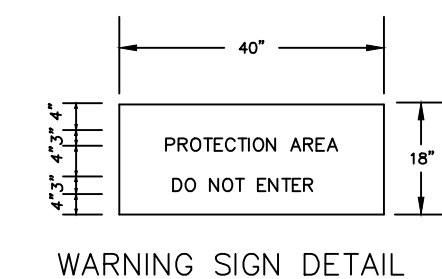


- COARSE AGGREGATE (2"-3" STONE) SHALL BE USED. PAD TO BE 100' L X 25' W X 6" MIN. PLACE A MINIMUM OF 3" OF STONE IN A CUT SECTION TO HELP SECURE FILTER CLOTH.
- TURNING RADIUS SUFFICIENT TO ACCOMMODATE LARGE TRUCKS IS TO BE PROVIDED.
- ENTRANCES SHOULD BE LOCATED TO PROVIDE FOR MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES.
- MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS. PERIODIC TOP DRESSING MAY BE NECESSARY. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.
- TEMPORARY PADS MUST BE LOCATED ON EACH SIDE OF ADJOINING ROADWAY.

TEMPORARY CONSTRUCTION ENTRANCE
NTS



SILT FENCE OUTLET
NTS



COMBINATION SILT/TREE PROTECTION FENCE
NTS

NOTES:

1. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL.
2. LETTERS TO BE 3" HIGH MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
3. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS.
4. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER.
5. FOR TREE PROTECTION AREAS LESS THAN 200' IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER PROTECTION AREA.
6. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC.
7. MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT.
8. ADDITIONAL SIGNS MAY BE REQUIRED BY CHATHAM COUNTY BASED ON ACTUAL FIELD CONDITIONS.
9. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER.
10. FLOW SHALL NOT RUN PARALLEL WITH THE FENCE.
11. END OF SILT FENCE NEEDS TO BE TURNED UPHILL.
12. SEE NCDENR PRACTICE & SPECIFICATIONS MANUAL SEDIMENTS FENCE SECTION FOR CONDITIONS WHERE PRACTICE APPLIES AND DESIGN CRITERIA.

DOUBLE ROW SILT FENCE:

1. DOUBLE ROW SILT FENCE LOCATIONS CALLED OUT ON PLANS.
2. ALL DOUBLE ROW SILT FENCE SHALL BE PLACED A MINIMUM OF 6 FEET APART AND SHALL BE STABILIZED WITHIN THE TWO ROWS.
3. ALL DOUBLE ROW SILT FENCE MUST START AT THE BOTTOM OF THE SLOPE AND MUST NOT CONTINUE UP SLOPE.
4. DOUBLE ROW SILT FENCE AT STREAM CROSSING MAY BE PLACED AT 2'-3' APART IN WHERE SPACE IS LIMITED DUE TO LIMITING STREAM IMPACTS. AREA WITHIN ROWS MUST BE STABILIZED.

REV. NO.	DESCRIPTIONS	DATE
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Professional Engineer Seal for David Adams, License No. 036348, State of North Carolina, dated 1/9/2019.

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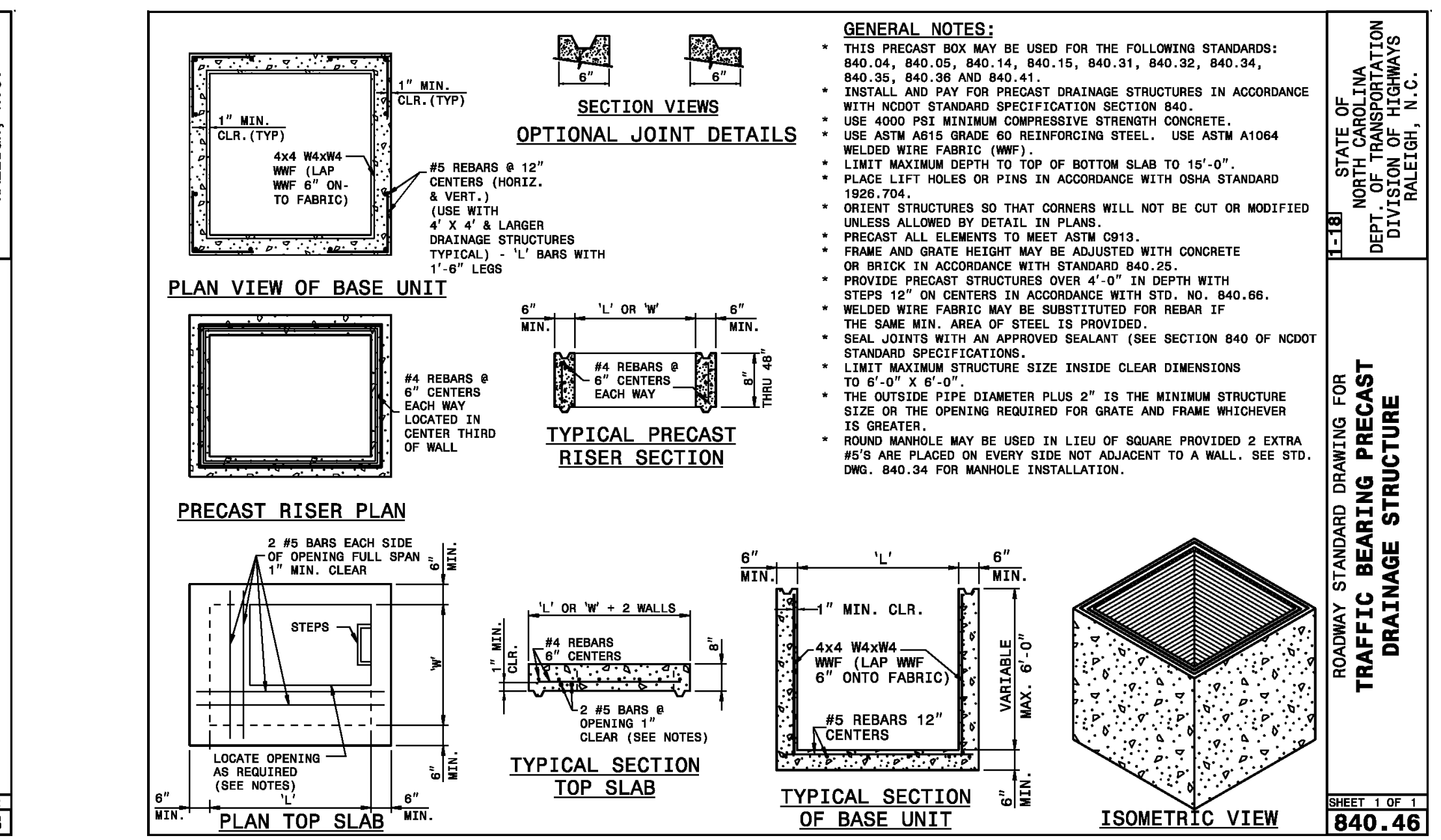
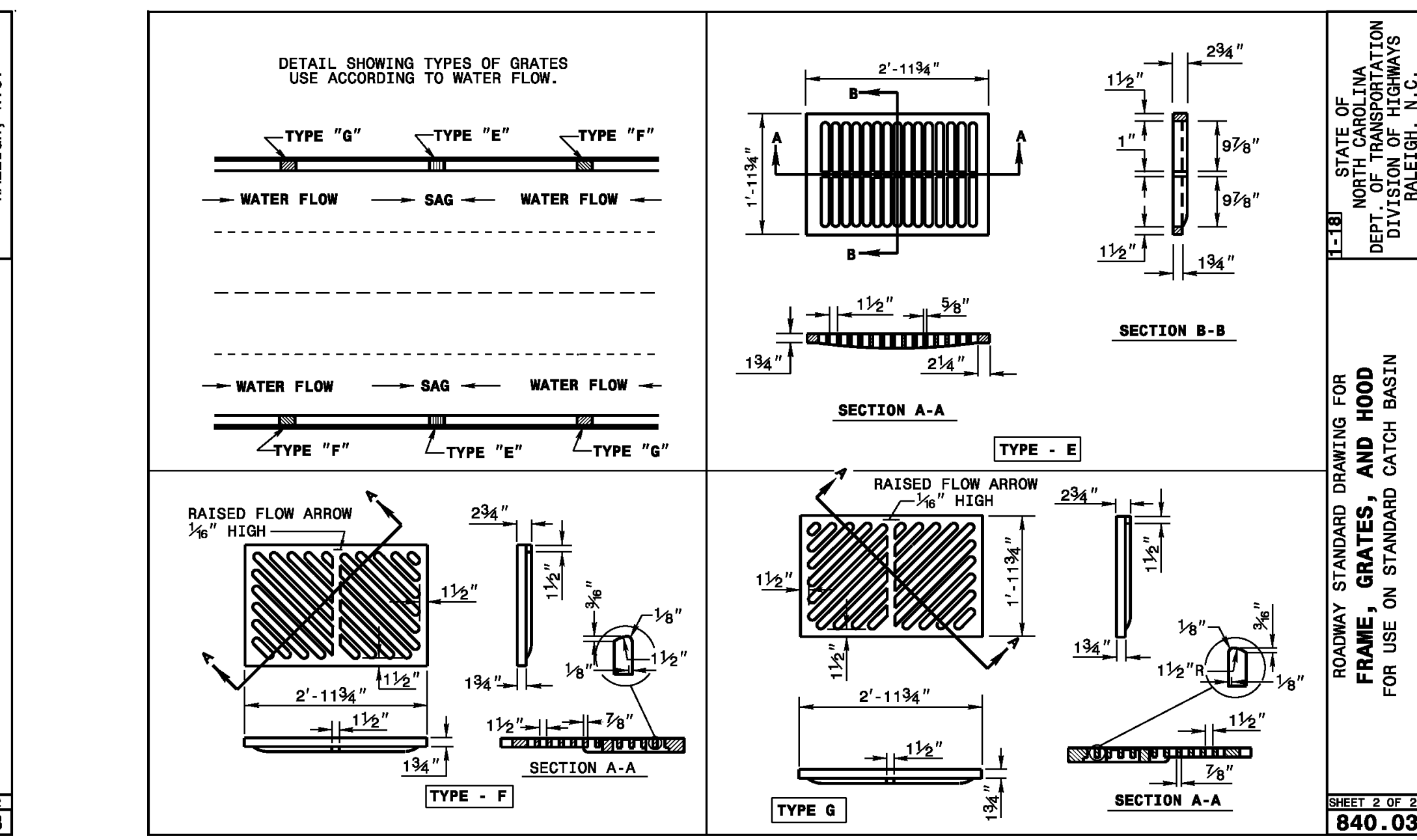
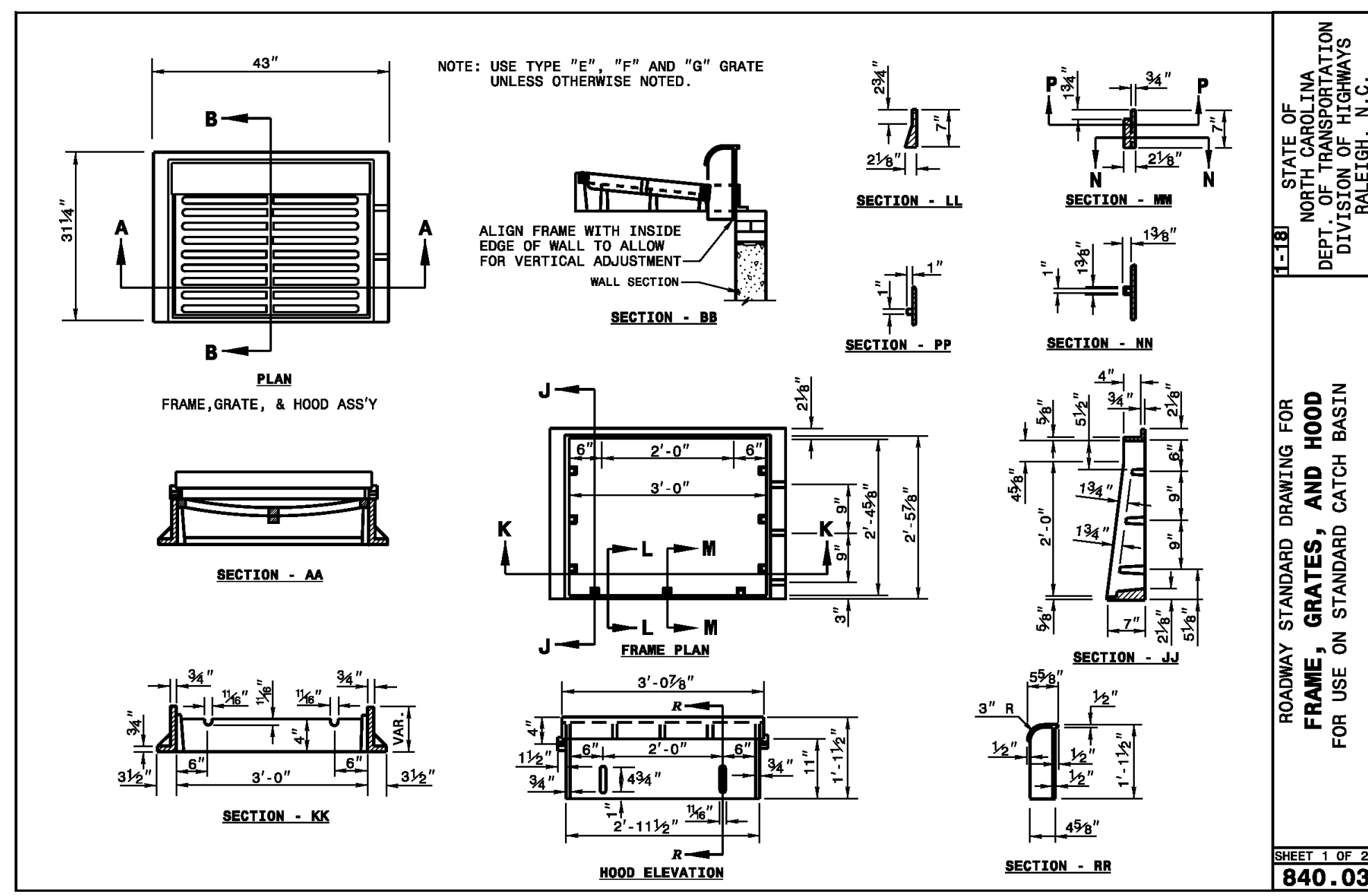
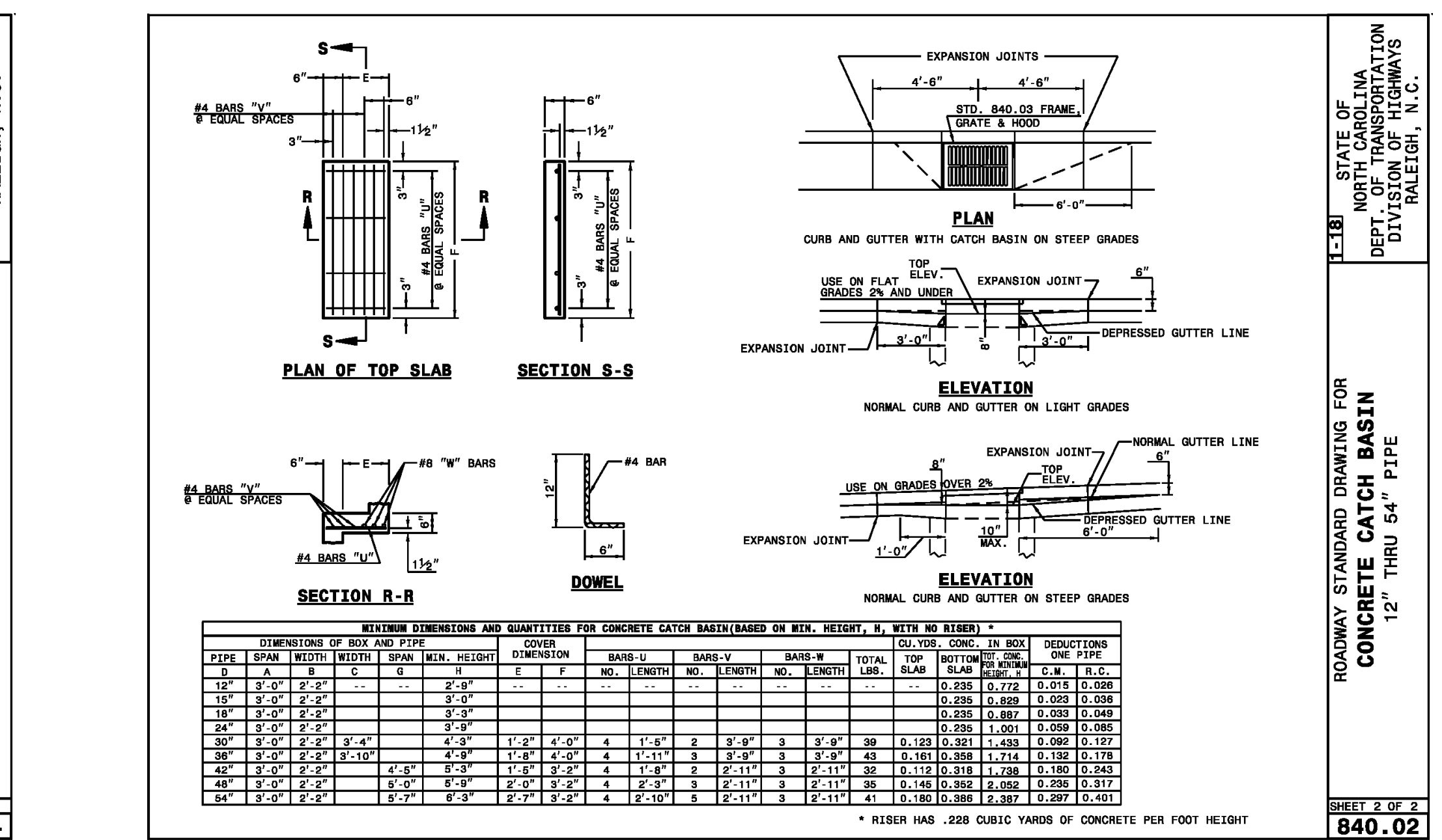
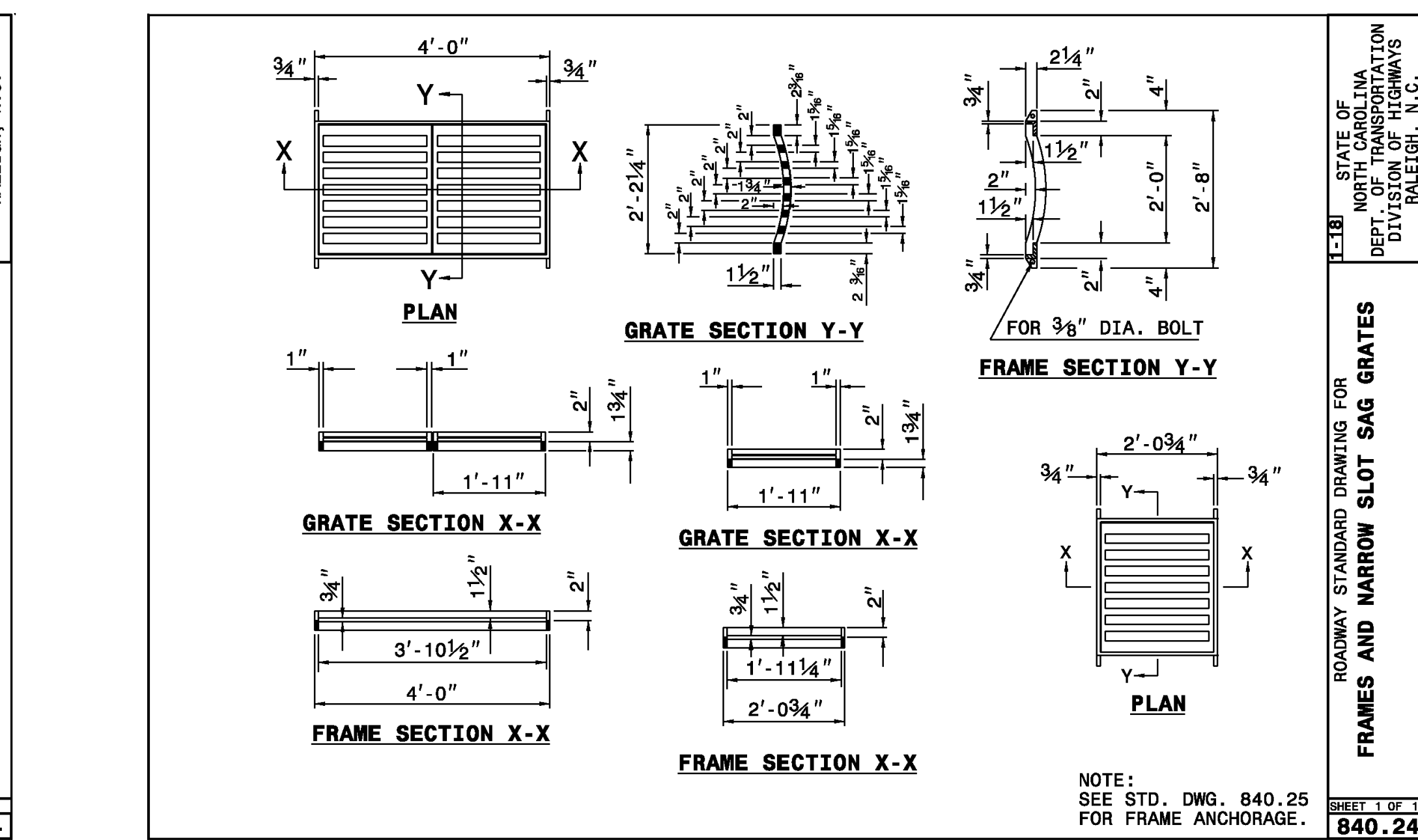
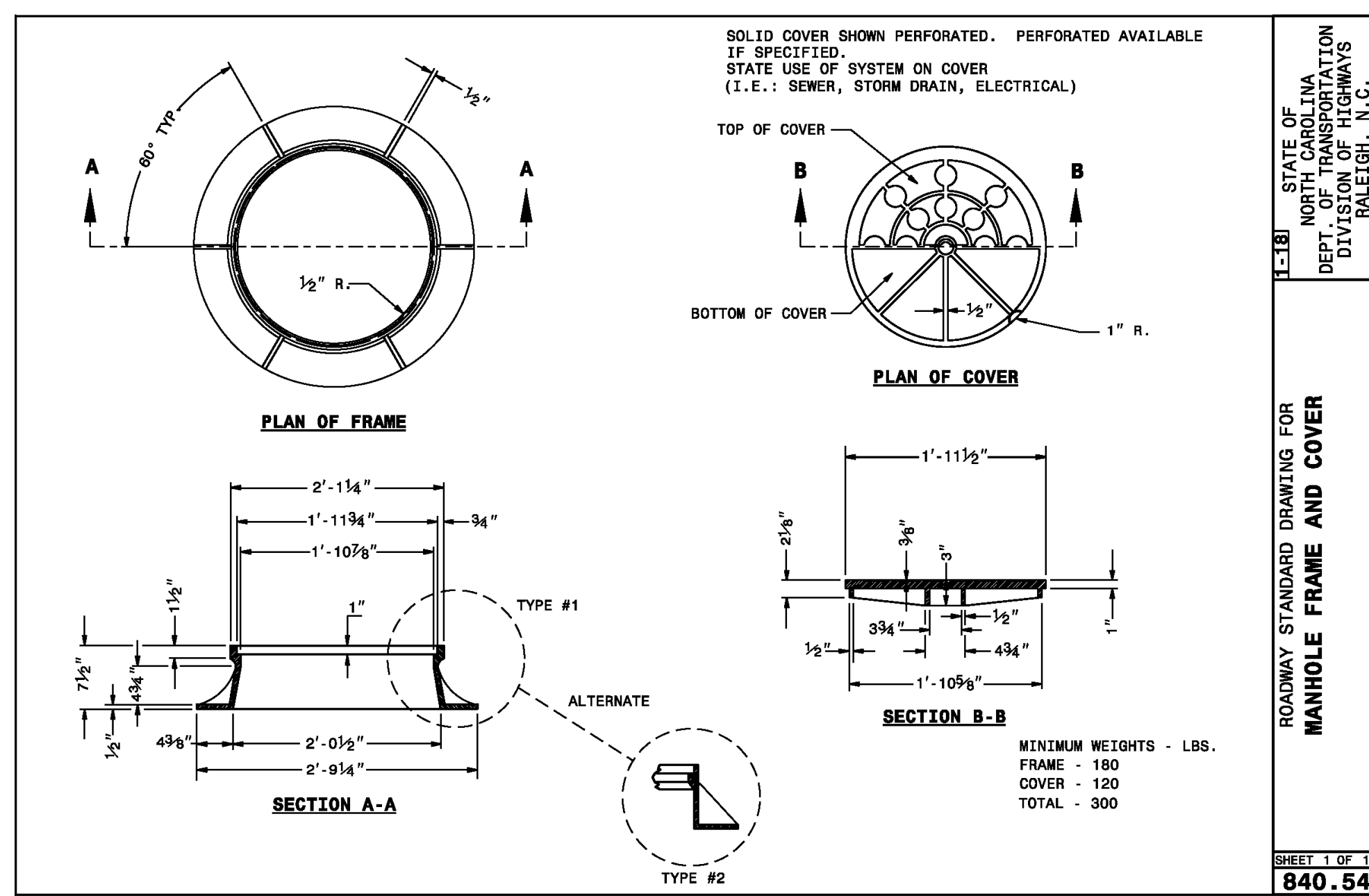
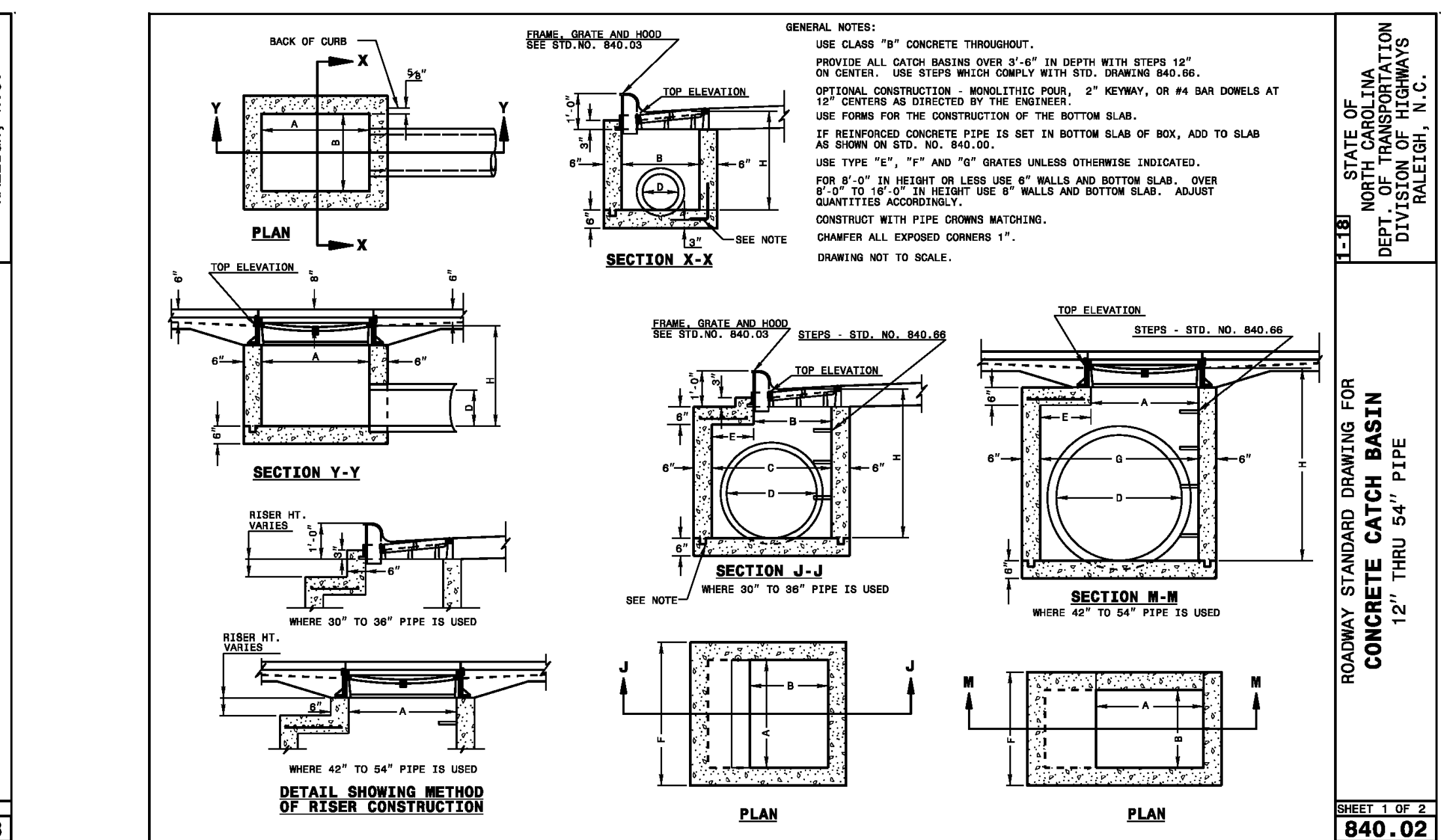
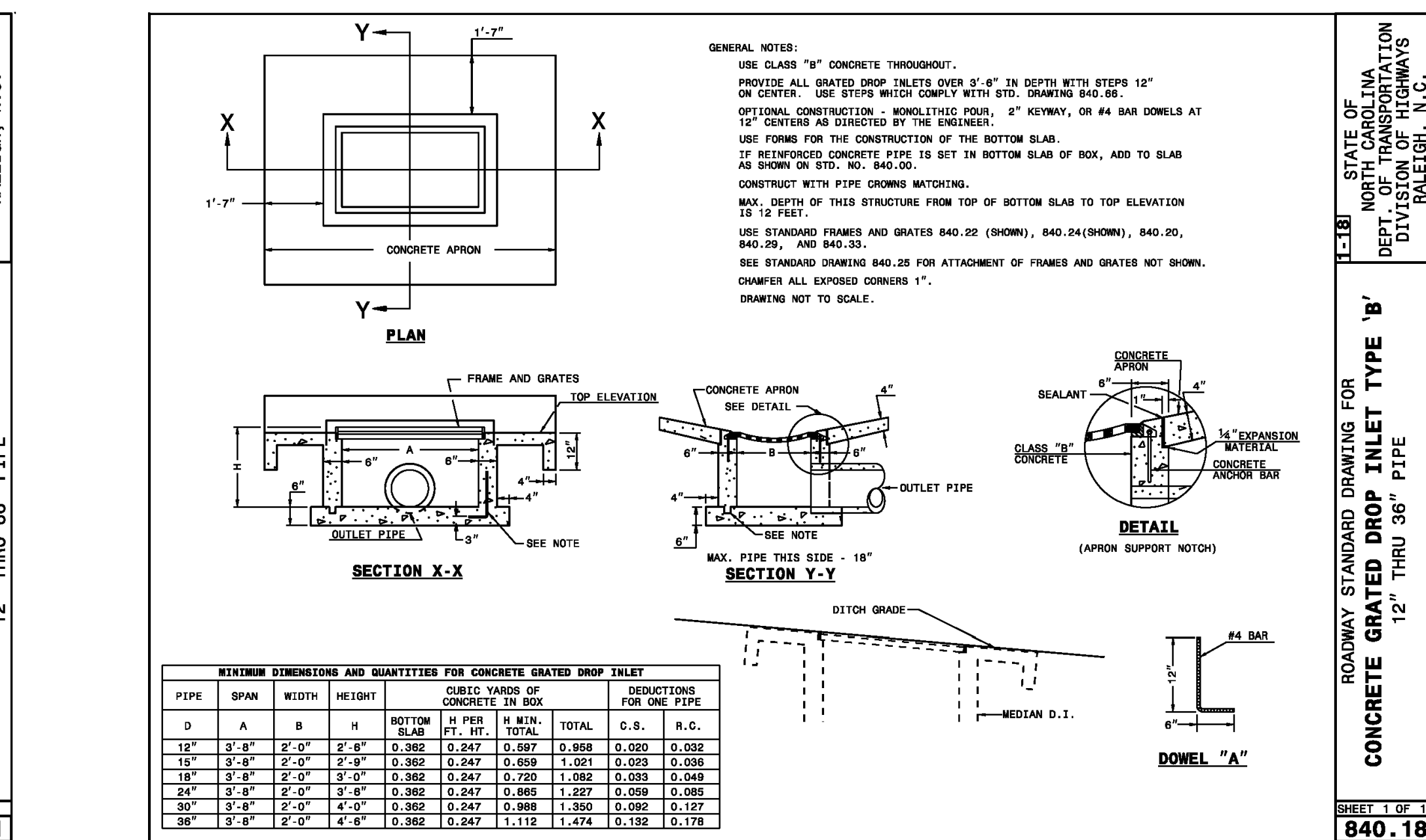
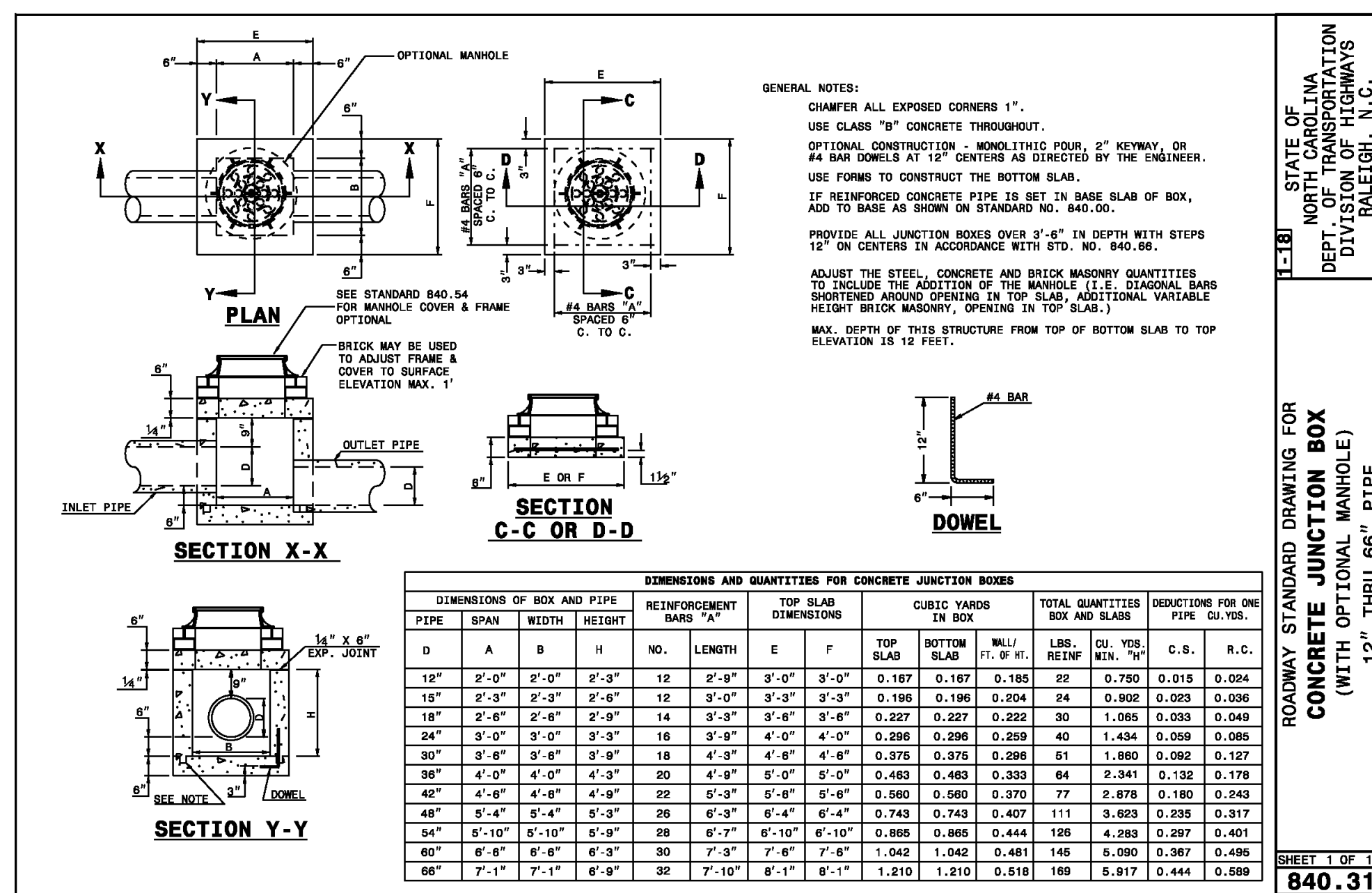
**BRIAR CHAPEL
BC PHASE 12
CHATHAM COUNTY, NORTH CAROLINA**
EROSION AND SEDIMENTATION CONTROL
DETAILS

DATE: SEPTEMBER 18, 2018
MCE PROJ. # 02735-0231
DRAWN: LEG
DESIGNED: LEG
CHECKED: GCA
PROJ. MGR. CHS

SCALE: HORIZONTAL: N/A
VERTICAL: N/A

HBC FILE NUMBER: D1.X
DRAWING NUMBER: D1.2

STATUS: FINAL DRAWINGS FOR CONSTRUCTION
REVISION: 8



REV. NO.	DESCRIPTIONS/REVISIONS	DATE
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BRIAR CHAPEL BC PHASE 12 CHATHAM COUNTY, NORTH CAROLINA

NCDOT DRAINAGE DETAILS

DATE: SEPTEMBER 18, 2018	SCALE: HORIZONTAL: N/A	DWG. NO.: D2.X
MCE PROJ. # 02735-0231	VERTICAL: N/A	DRAWING NUMBER: D2.2
DRAWN: LEG	STATUS: FINAL DRAWINGS FOR CONSTRUCTION	REVISION: 8
DESIGNED: LEG		
CHECKED: GCA		
PROJ. MGR. CHS		