

PLAN - SWM BMP NO. 755, WET POND

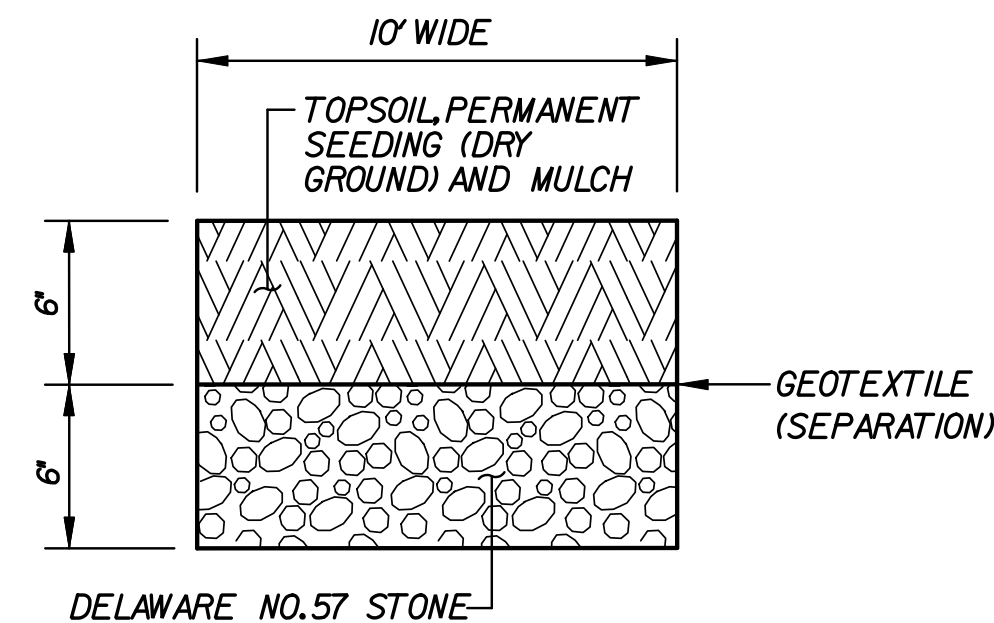
SCALE: 1" = 30'

BMP NO. 755 - DESIGN SUMMARY				
DESIGN STORM	FACILITY INFLOW (CFS)	FACILITY DISCHARGE (CFS)	WATER SURFACE ELEVATION	STORAGE VOLUME (ACRE-FT)
PERM. POOL	N. A.	N. A.	22.00	2.65
1-YEAR	44.0	43.90	23.12	1.27
10-YEAR	121.7	121.0	23.41	1.63
100-YEAR	254.8	254.0	23.89	2.21

HAZARD CLASSIFICATION "A" AS PER POND CODE 378

DRAINAGE AREA TO FACILITY: 105.73 ACRES

MANAGEMENT PROVIDED BY FACILITY: WATER QUALITY CONTROL VIA EXTENDED DETENTION FOR 1-YEAR RESOURCE PROTECTION STORM. QUANTITY CONTROL FOR THE 10 AND 100-YEAR EVENTS WAIVED DUE TO TIDAL OUTFALL INTO SCOTT RUN.



**POND MAINTENANCE ACCESS ROAD
TYPICAL SECTION**

SCALE: NONE

GENERAL NOTES:

1. THE CONTRACTOR SHALL PROVIDE "AS-BUILT" DRAWINGS OF ALL STORMWATER MANAGEMENT FACILITIES, SUCH AS PONDS, BIOFILTRATION SWALES, BIO-RETENTION AREAS, ETC. THE "AS-BUILT" DRAWINGS SHALL SHOW THE ACTUAL FINISHED GROUND CONTOURS, OUTLET STRUCTURE DIMENSIONS AND ELEVATIONS, ETC., AS THEY EXIST AT THE COMPLETION OF THE PROJECT. THESE DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER OR LAND SURVEYOR REGISTERED IN THE STATE OF DELAWARE. ALL "AS-BUILT" DRAWINGS SHALL BE SENT TO THE DELDOT STORMWATER ENGINEER. ALL COSTS FOR THIS WORK SHALL BE INCLUDED UNDER ITEM 763501 - CONSTRUCTION ENGINEERING.
2. STORMWATER MANAGEMENT PONDS SERVING AS TEMPORARY SEDIMENT BASINS DURING CONSTRUCTION SHALL HAVE SEDIMENT REMOVED AT TIMES DETERMINED BY THE ENGINEER AND AT THE CONCLUSION OF THE PROJECT AFTER ALL AREAS DRAINING TO THE POND HAVE BEEN VEGETATIVELY STABILIZED. COST FOR SEDIMENT REMOVAL SHALL BE PAID FOR UNDER ITEM 250000 - SEDIMENT REMOVAL. ACCESS SHALL BE MAINTAINED TO ALL SEDIMENT REMOVAL CONTROL DEVICES REQUIRING MAINTENANCE UNTIL CONSTRUCTION PHASING AND VEGETATIVE STABILIZATION ALLOW THE REMOVAL OF THOSE CONTROLS, WHICH ARE NO LONGER REQUIRED.

- POND CONSTRUCTION SEQUENCE AND NOTES:**
THE STORMWATER MANAGEMENT POND SHALL FUNCTION AS A SEDIMENT BASIN DURING ROADWAY CONSTRUCTION AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF THE STANDARD SPECIFICATIONS:
SECTION 271 - STORMWATER MANAGEMENT POND
SECTION 272 - POND OUTLET STRUCTURE, CONCRETE
1. INSTALL STABILIZED CONSTRUCTION ENTRANCE PER CONSTRUCTION PHASING, MOT AND EROSION AND SEDIMENT CONTROL PLANS.
 2. CLEAR AND GRUB FOR INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS.
 3. INSTALL PERIMETER SEDIMENT CONTROLS AS SHOWN ON THE CONSTRUCTION PHASING PLANS, MOT AND EROSION AND SEDIMENT CONTROL PLANS.
 4. CLEAR AND GRUB REMAINING AREA FOR POND CONSTRUCTION.
 5. CONSTRUCT PRINCIPAL SPILLWAY AND CONNECT DOWNSTREAM END TO EXISTING STORM DRAIN AS SHOWN. BULKHEAD PRINCIPAL SPILLWAY WITH BRICK MASONRY LEAVING OPENINGS FOR THE SKIMMER OUTLETS AT THE PIPE INVERT (ELEV. 19.28). INSTALL SKIMMER DEWATERING DEVICES AND VARY PVC PIPE LENGTHS TO ENSURE ALL SKIMMERS WILL FLOAT FREELY. DE-WATER FOUNDATION AS NEEDED IN ACCORDANCE WITH SECTION 111 AND USE SUMP PITS FOR PUMPING. LOCATION OF SUMP PITS TO BE DETERMINED IN FIELD.
 6. EXCAVATE THE POND AND COMPLETE THE BASIN TO LINES, GRADES, AND DETAILS SHOWN IN THE CONSTRUCTION PLANS. OVEREXCAVATE THE BOTTOM OF THE POOL 3 FEET FOR SEDIMENT STORAGE. DURING EXCAVATION, THE CONTRACTOR SHALL SALVAGE AND STOCKPILE ANY SOILS CLASSIFIED AS CH, CL, CH, AND GM PER THE UNIFIED SOIL CLASSIFICATION SYSTEM TO BE USED TO CONSTRUCT EMBANKMENT. THE ABOVE CLASSIFIED SOILS MAY BE OBTAINED FROM ELSEWHERE WITHIN THE PROJECT LIMITS.
 7. STABILIZE ALL BARE AREAS UP TO ELEV. 23.00, EXCLUDING THE POND BOTTOM, WITH WET SEED MIX AND ABOVE ELEV. 23.00 WITH DRY SEED MIX. PLACE 6" TOPSOIL ON THE LOWER BENCH (EL. 21') AND ABOVE.

MAINTENANCE OF POND AS A SEDIMENT BASIN

1. CONTRACTOR SHALL INSPECT THE BASIN IMMEDIATELY AFTER EVERY RAIN AND MAKE REPAIRS AS NEEDED.
2. CONTRACTOR SHALL CLEARLY MARK THE CLEANOUT ELEVATION, 22.21, ON A STAKE DRIVEN INTO THE GROUND AT A LOCATION CLEARLY VISIBLE FROM THE EMBANKMENT. SEDIMENT SHALL BE REMOVED WHEN CLEANOUT ELEVATION IS REACHED AND DISPOSED OF AT A LOCATION APPROVED BY THE ENGINEER.

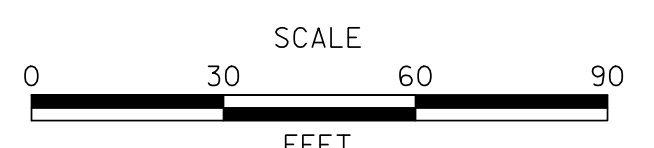
CONVERSION TO PERMANENT STORMWATER MANAGEMENT POND

1. CONVERT THE BASIN INTO THE PERMANENT STORMWATER MANAGEMENT POND AFTER ALL AREAS DRAINING TO THE POND HAVE BEEN PERMANENTLY STABILIZED AND THE ENGINEER HAS APPROVED THE CONVERSION.
2. REMOVE EXCESS ACCUMULATED SEDIMENT ON THE POND BOTTOM AND BENCHES, IF ANY, TO THE SPECIFIED FINISHED LINES AND GRADES SHOWN IN THE PLAN AND DISPOSE SEDIMENT AT A LOCATION APPROVED BY THE ENGINEER. IF ELEVATION OF ACCUMULATED SEDIMENT IN POOL BOTTOMS IS BELOW THE PROPOSED FINISHED ELEVATION, ADDITIONAL FILL MATERIAL SHALL NOT BE PLACED IN POND.
3. PUMP DOWN STANDING WATER IN THE POND AS NECESSARY. REMOVE BRICK MASONRY FROM PRINCIPAL SPILLWAY AND CONSTRUCT POND OUTLET STRUCTURE PER PLANS. CONCURRENTLY, COMPLETE STABILIZATION OF ALL BARE AREAS, REMOVE EROSION AND SEDIMENT CONTROL MEASURES, AND REMOVE SKIMMER DEWATERING DEVICES.

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ADDENDUMS / REVISIONS	

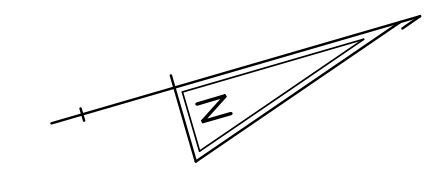


**US 301 &
SR 1 INTERCHANGE**

CONTRACT	BRIDGE NO.
T200911302	
COUNTY	DESIGNED BY: C.R.H.
NEW CASTLE	CHECKED BY: D.L.H.

**STORMWATER
MANAGEMENT PLAN
BMP 755**

SW-01
SHEET NO.
362
TOTAL SHTS.
491

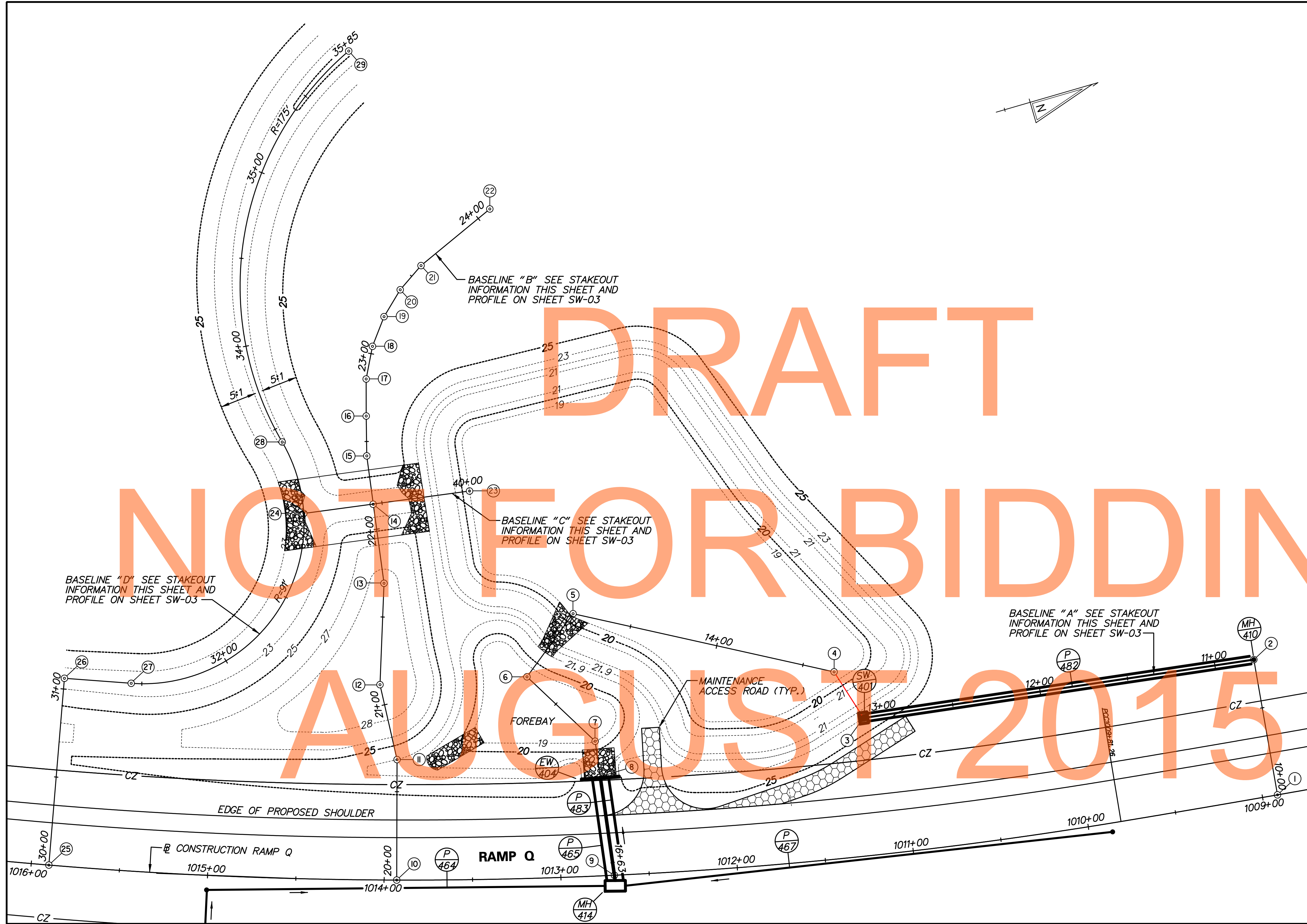


BASELINE "A" STAKEOUT INFORMATION			
POINT NO.	STATION	NORTHING	EASTING
1	POB STA.10+00.00	558169.09	590369.89
2	PI STA.10+77.71	558177.09	590292.59
3	PI STA.13+01.03	557955.60	590264.13
4	PI STA.13+31.96	557946.67	590234.51
5	PI STA.14+83.29	557813.55	590162.56
6	PI STA.15+27.51	557778.72	590189.81
7	PI STA.15+80.59	557805.89	590235.40
8	PI STA.16+00.94	557803.18	590255.57
9	PI STA.16+57.23	557795.69	590311.36

BASELINE "B" STAKEOUT INFORMATION			
POINT NO.	STATION	NORTHING	EASTING
10	POB STA.20+00.00	557676.43	590280.39
11	PI STA.20+68.18	557695.21	590214.85
12	PI STA.21+11.67	557697.49	590171.41
13	PI STA.21+69.10	557715.31	590116.82
14	PI STA.22+14.26	557721.62	590072.11
15	PI STA.22+41.86	557725.59	590044.79
16	PI STA.22+64.43	557731.44	590022.99
17	PI STA.22+85.39	557737.13	590002.82
18	PI STA.23+04.22	557745.61	589986.01
19	PI STA.23+22.23	557756.48	589971.64
20	PI STA.23+40.00	557769.44	589959.48
21	PI STA.23+58.05	557784.50	589949.53
22	POE STA.24+08.48	557830.69	589929.31

BASELINE "C" STAKEOUT INFORMATION			
POINT NO.	STATION	NORTHING	EASTING
23	POB STA.40+00.00	557776.11	590079.78
24	PI STA.40+94.64	557682.42	590066.41

BASELINE "D" STAKEOUT INFORMATION			
POINT NO.	STATION	NORTHING	EASTING
25	POB STA.30+00.00	557489.37	590218.56
26	PI STA.31+06.09	557526.66	590119.24
27	PC STA.31+43.99	557562.25	590132.28
28	PRC STA.33+41.78	557681.69	590024.17
29	PT STA.35+85.48	557778.24	589821.52

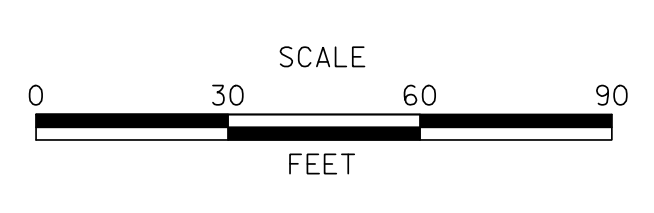


STAKEOUT PLAN - SWM BMP NO. 755, WET POND
SCALE: 1" = 30'

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ADDENDUMS / REVISIONS	

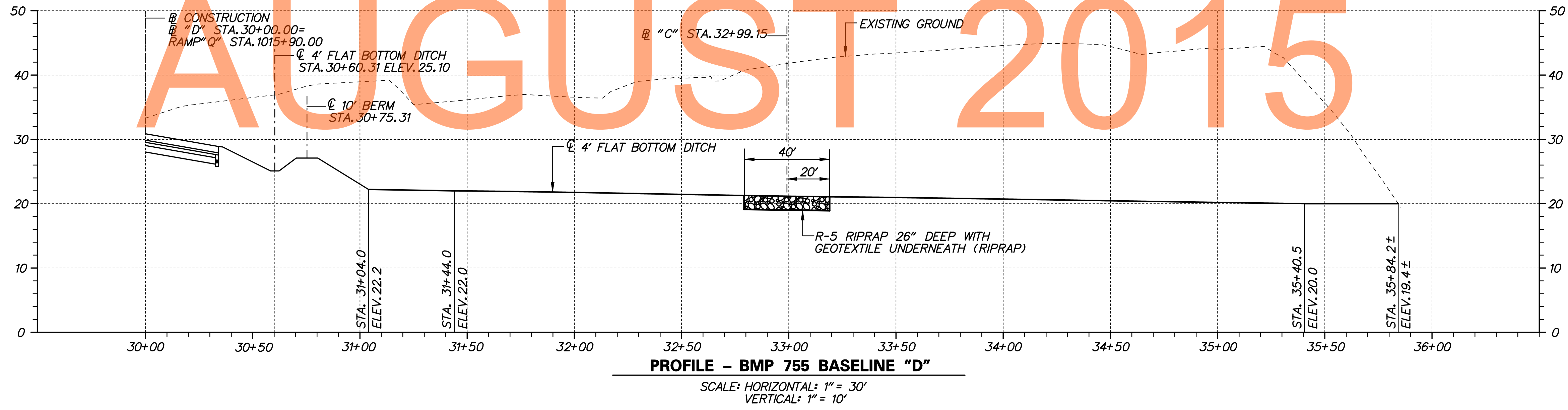
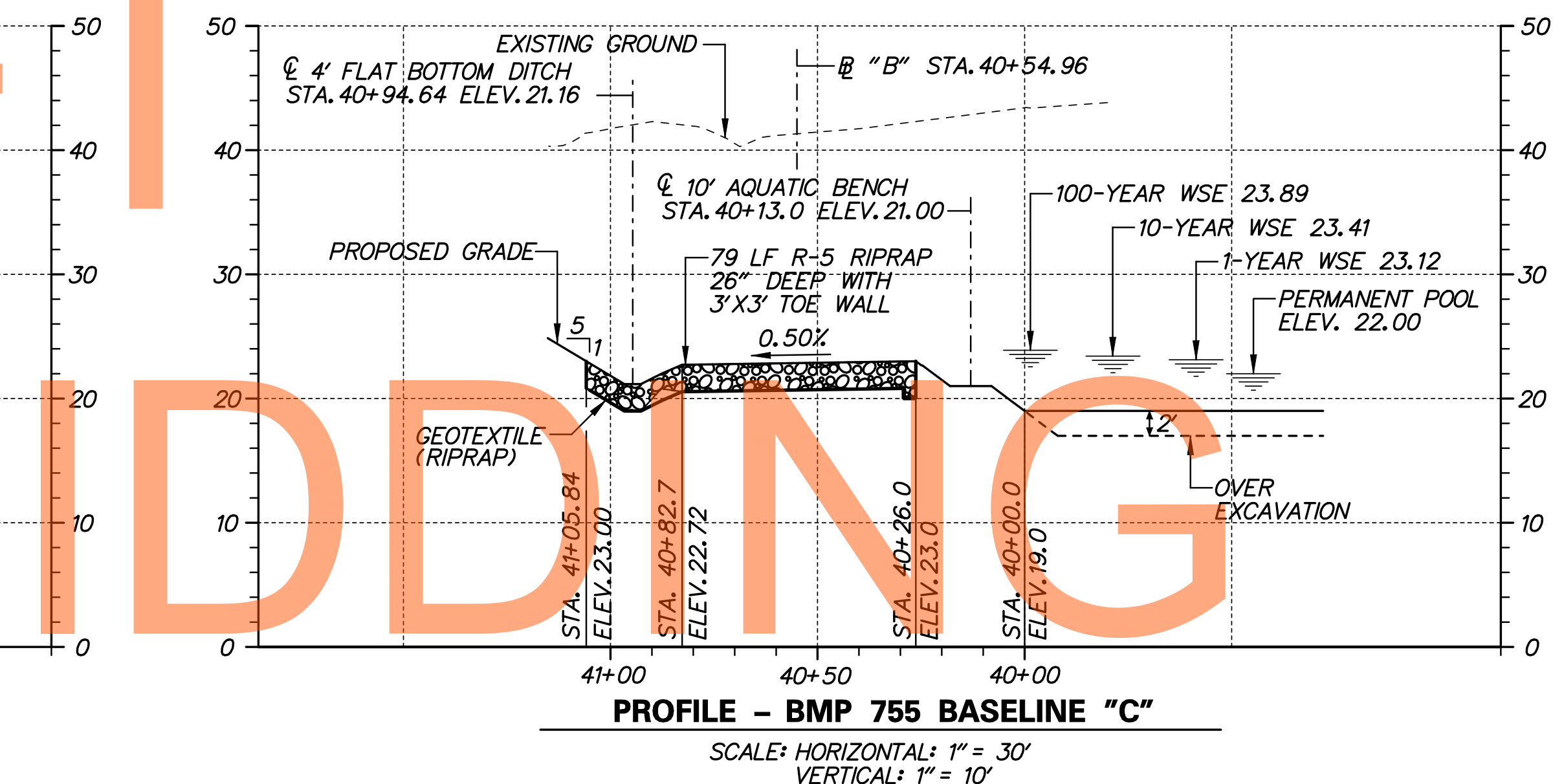
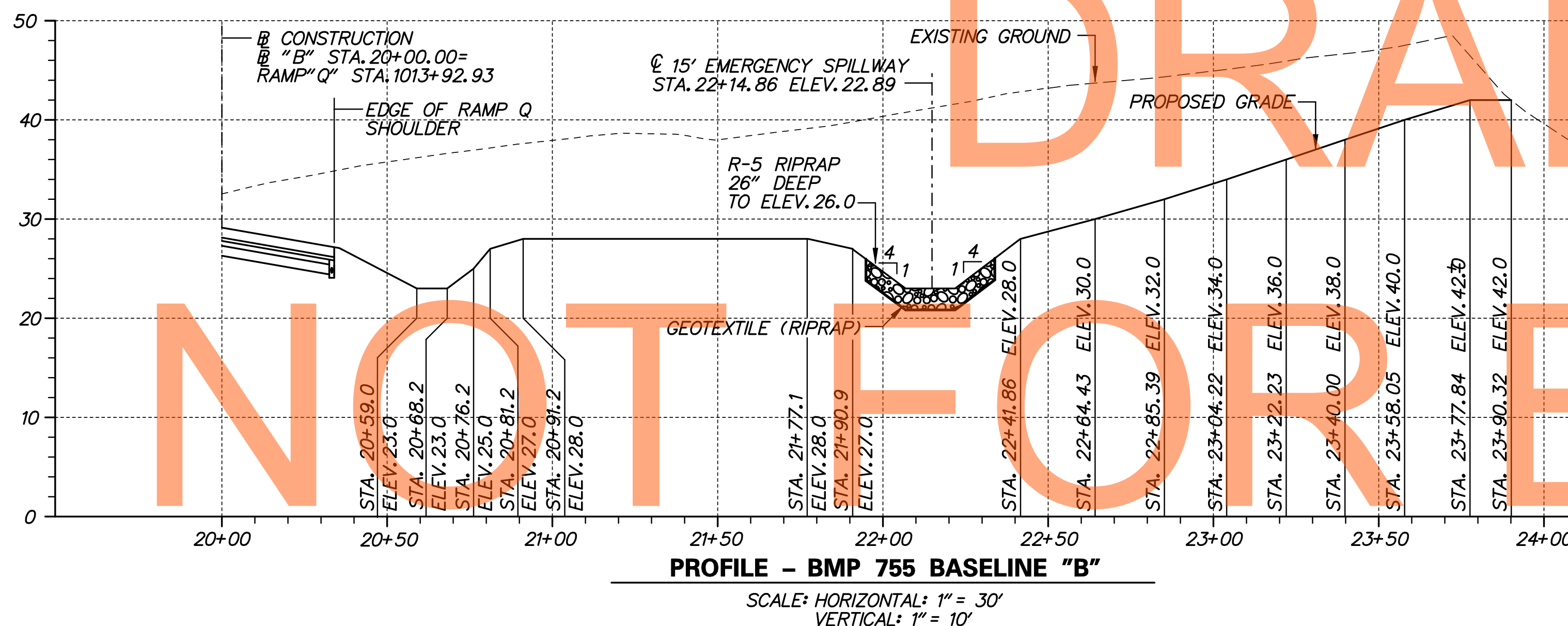
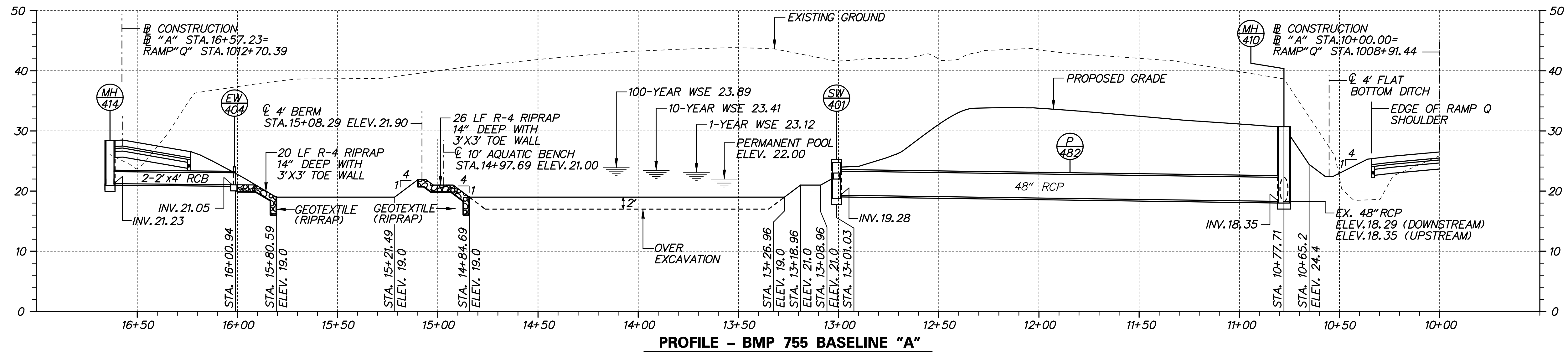


**US 301 &
SR 1 INTERCHANGE**

CONTRACT T200911302	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: C.R.H.
	CHECKED BY: D.L.H.

**STORMWATER
STAKEOUT PLAN
BMP 755**

SW-02
SHEET NO. 363
TOTAL SHTS. 491



- RIPRAP NOTES:**
- RIPRAP CUTOFF AND TOE WALLS SHALL BE MEASURED BELOW THE NORMAL RIPRAP PAD DEPTH AND PAID PER TON (ITEMS 712020 AND 712021).
 - THE 26" DEPTH FOR R-5 RIPRAP SHALL CONSIST OF 20" R-5 RIPRAP AND 6" OF DE NO. 57 STONE.

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ADDENDUMS / REVISIONS	

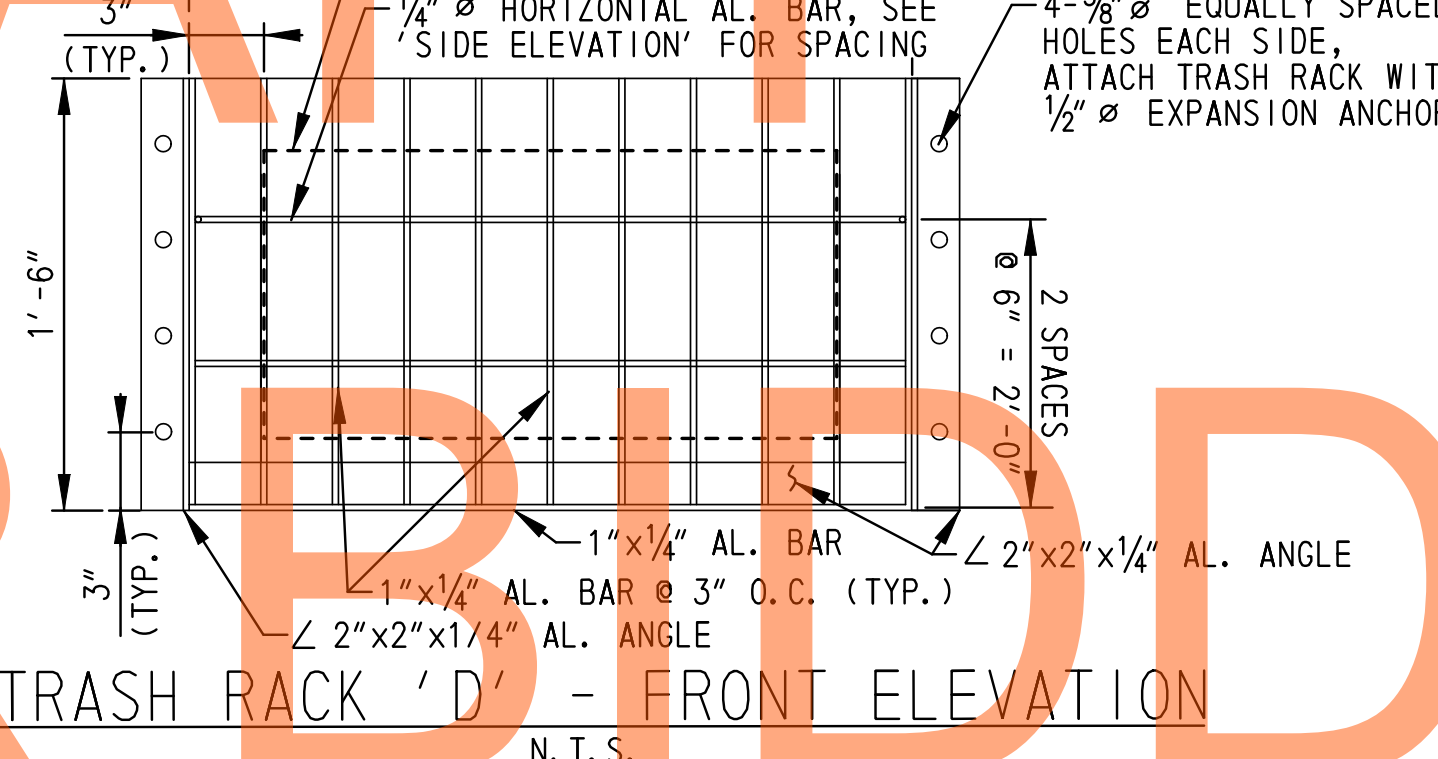
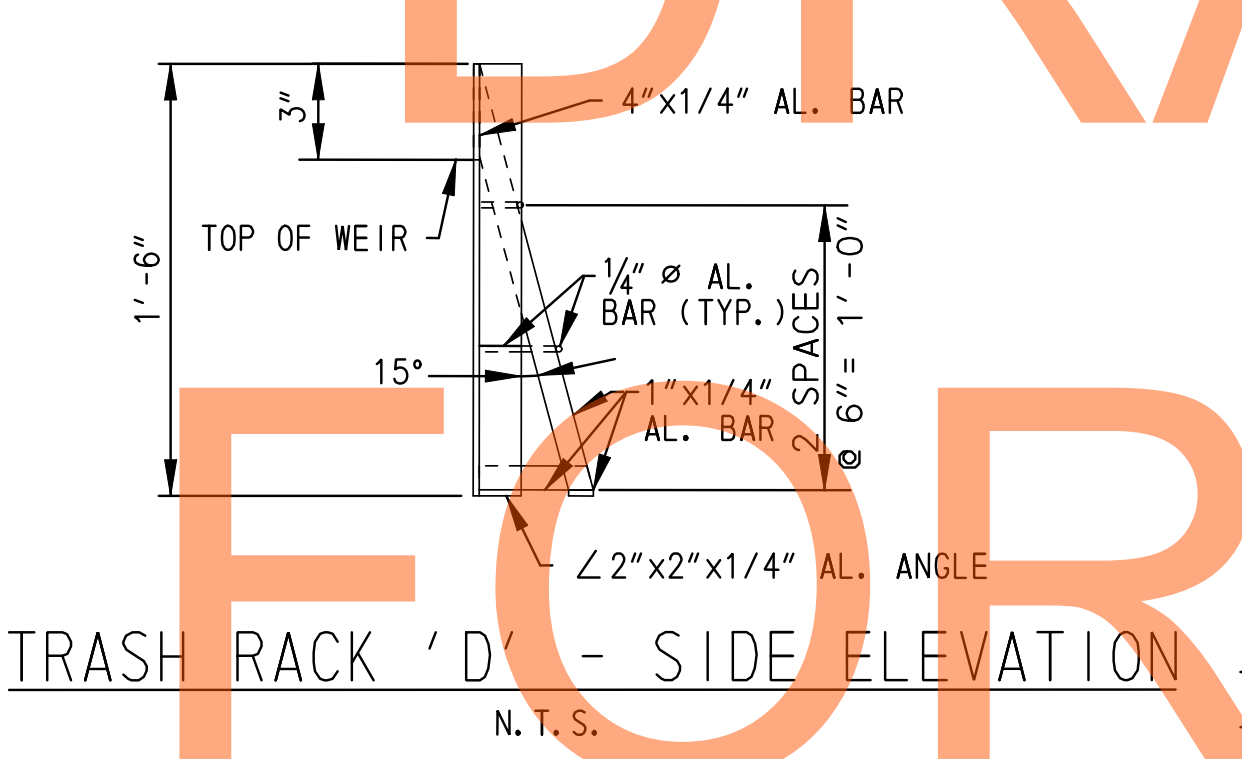
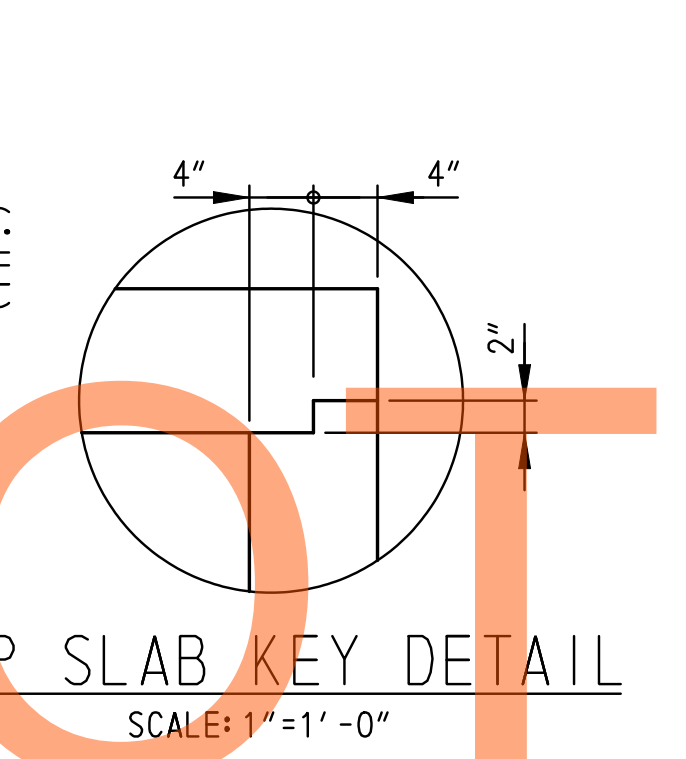
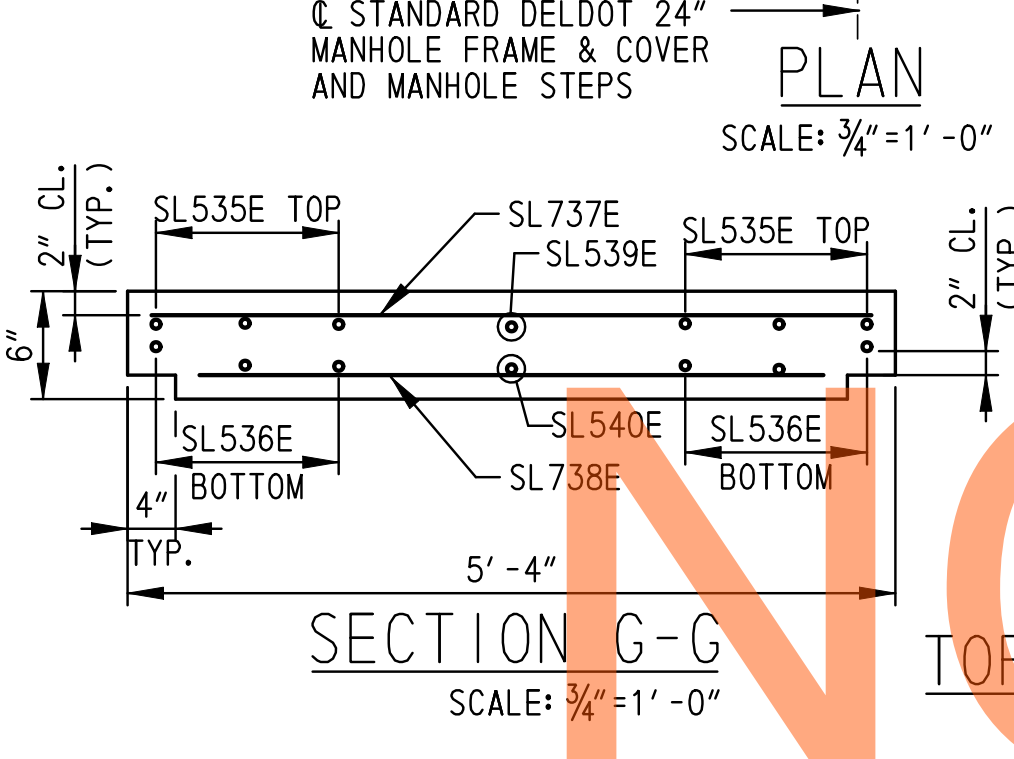
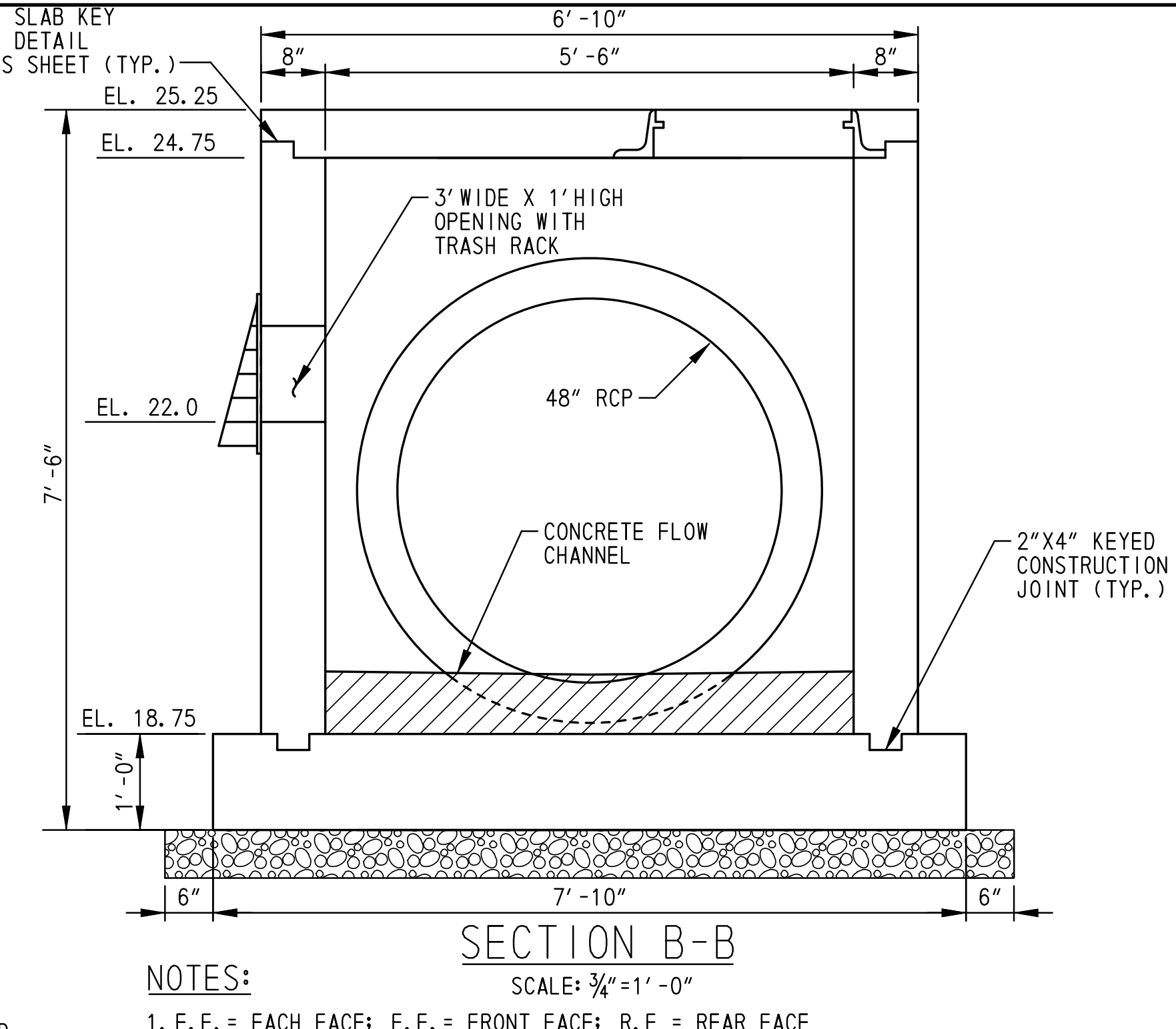
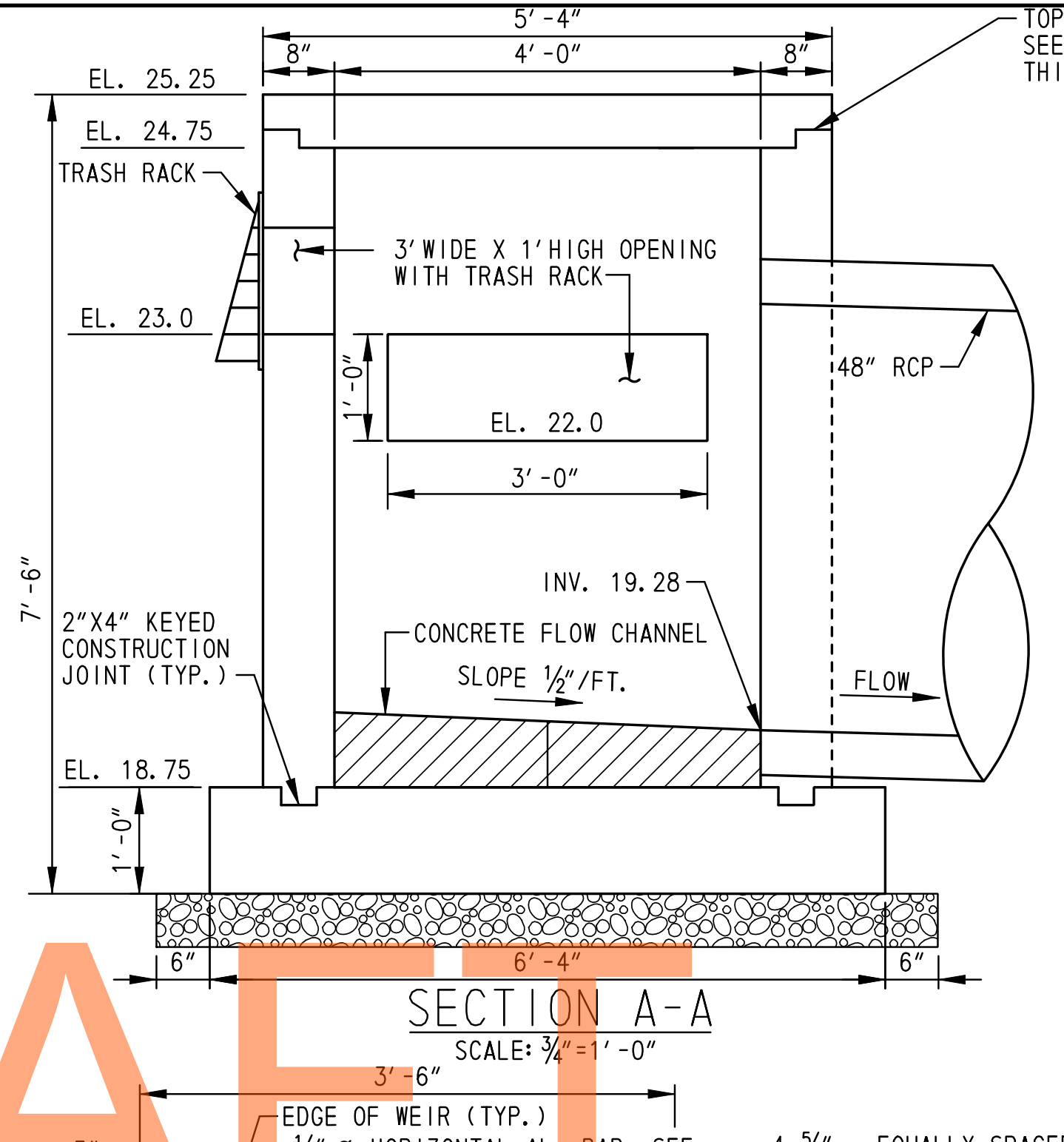
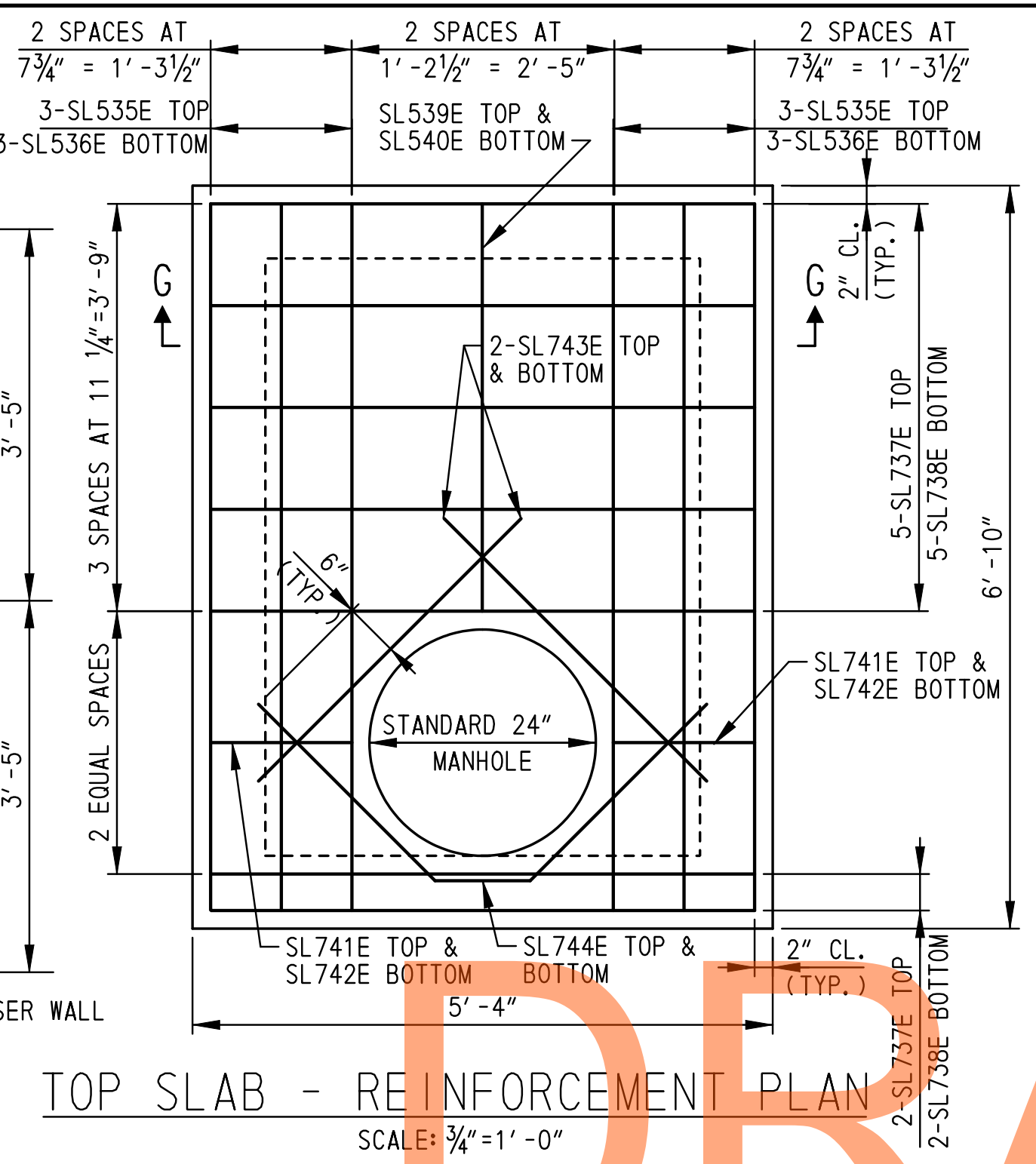
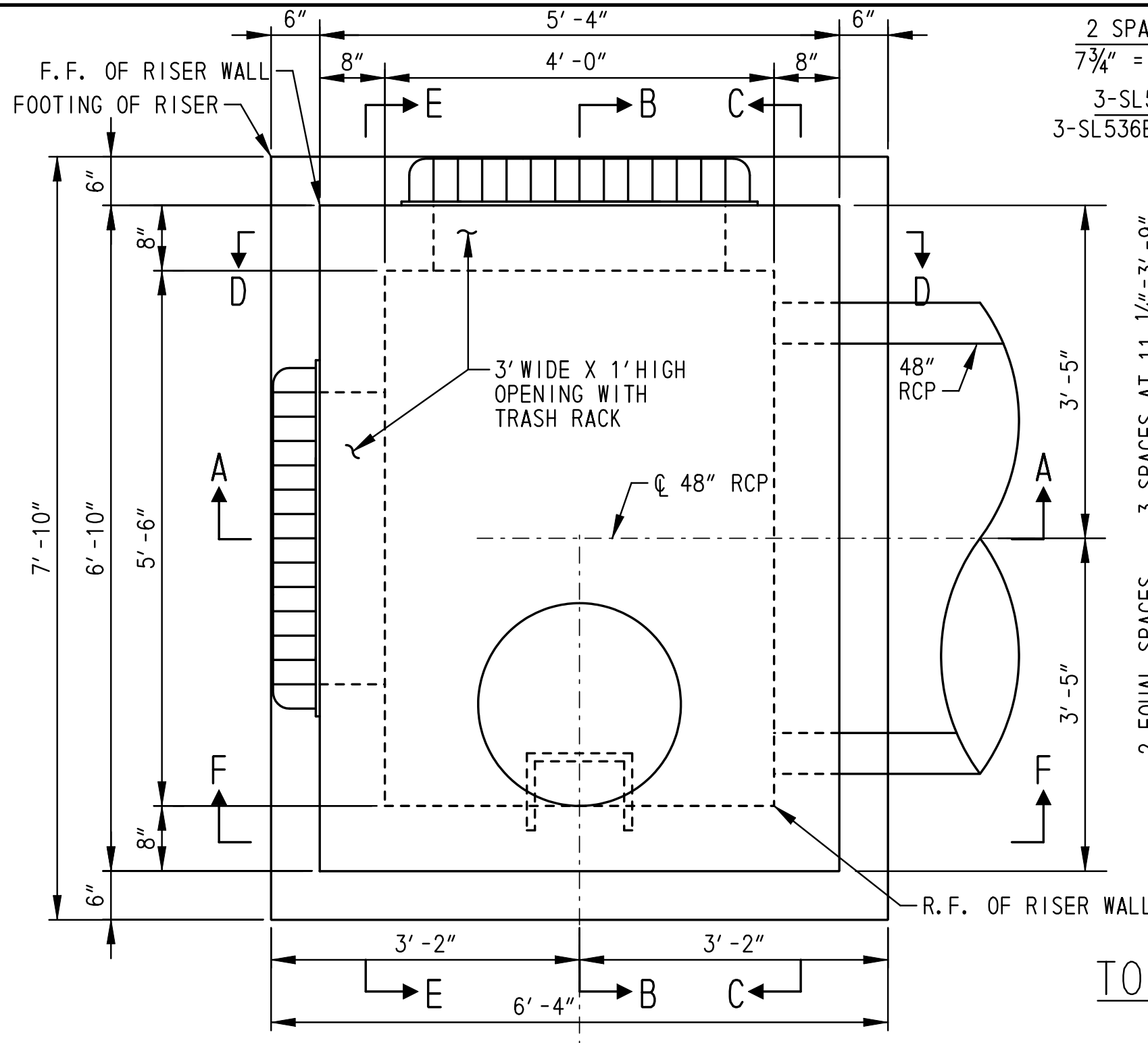


US 301 & SR 1 INTERCHANGE

CONTRACT T200911302	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: DLH
	CHECKED BY: JDC

STORMWATER MANAGEMENT PROFILES BMP 755

SW-03	SHEET NO. 364
	TOTAL SHTS. 491



NOTES:

- E.F. = EACH FACE; F.F. = FRONT FACE; R.F. = REAR FACE
- MANHOLE STEPS NOT SHOWN IN SECTION VIEWS FOR CLARITY, SEE STANDARD CONSTRUCTION DETAILS FOR MANHOLE STEP DETAILS.
- REINFORCEMENT NOT SHOWN IN SECTIONS A-A AND B-B FOR CLARITY.
- TOP SLAB NOT SHOWN IN SECTIONS C-C THROUGH F-F FOR CLARITY.
- TOP SLAB SHALL BE PRECAST. A WATERSTOP SHALL BE PLACED BETWEEN THE PRECAST TOP SLAB AND THE CAST-IN-PLACE RISER STRUCTURE.
- PAYMENT FOR EXCAVATION, CONCRETE, REINFORCING STEEL, HOOD, WATERSTOP, TRASH RACK, AND ALL WORK ASSOCIATED WITH CONSTRUCTION OF STORMWATER MANAGEMENT RISER STRUCTURE WILL BE MADE UNDER ITEM 272000 - POND OUTLET STRUCTURE, CONCRETE NO. 1.

TRASH RACK NOTES:

- EXPANSION ANCHORS SHALL CONFORM TO ASTM A510 AND SHALL HAVE A MINIMUM EMBEDMENT DEPTH OF 4" UNLESS NOTED OTHERWISE.
- EXPANSION ANCHORS SHALL BE ZINC PLATED IN CONFORMANCE WITH ASTM B633, TYPE 111 FE/ZN 5.
- ALUMINUM ANGLES SHALL CONFORM TO ASTM B308 ALLOY 6061-T6. REMAINING ALUMINUM SHALL CONFORM TO ASTM B211 ALLOY 6061-T6.

