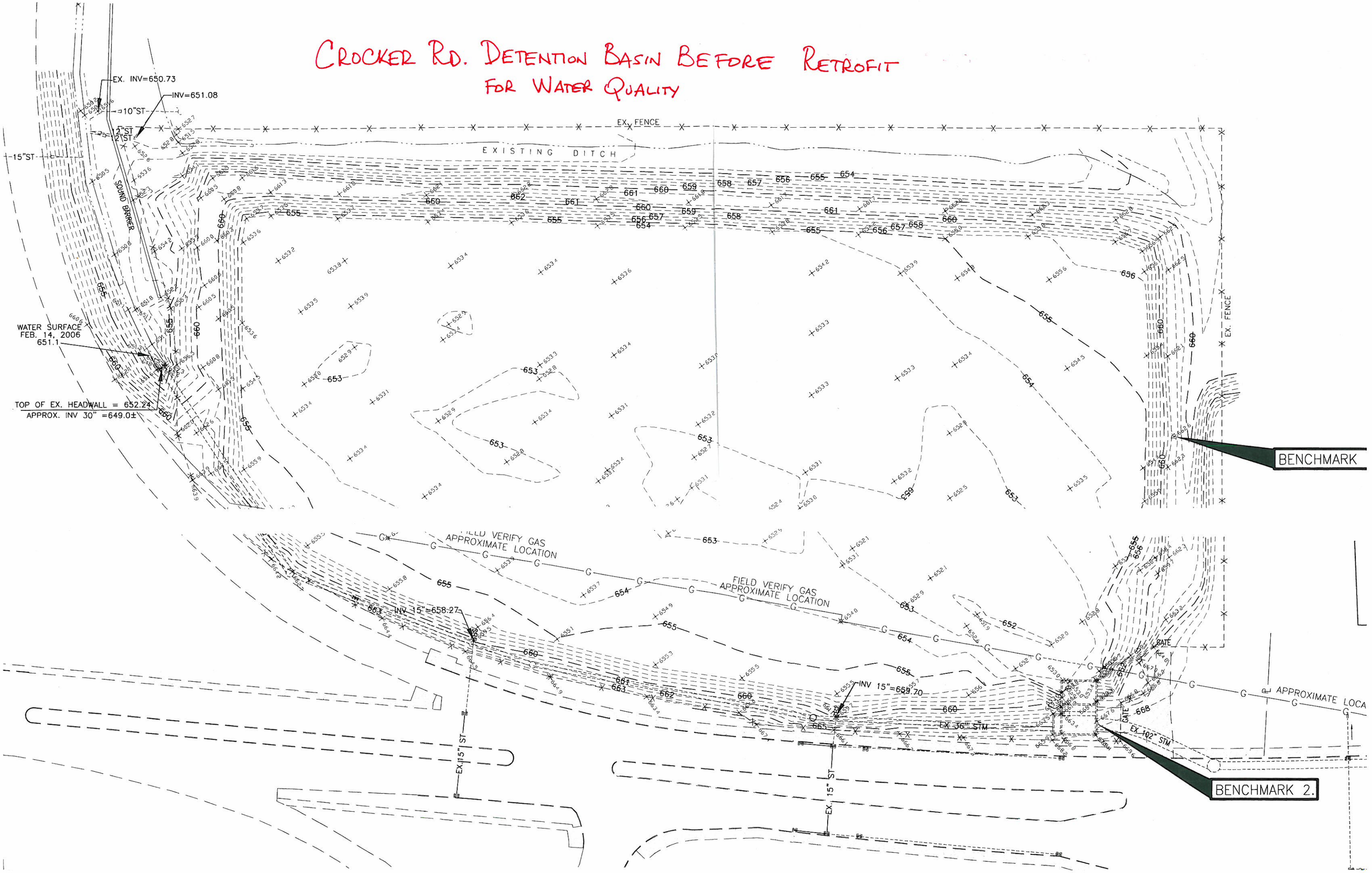
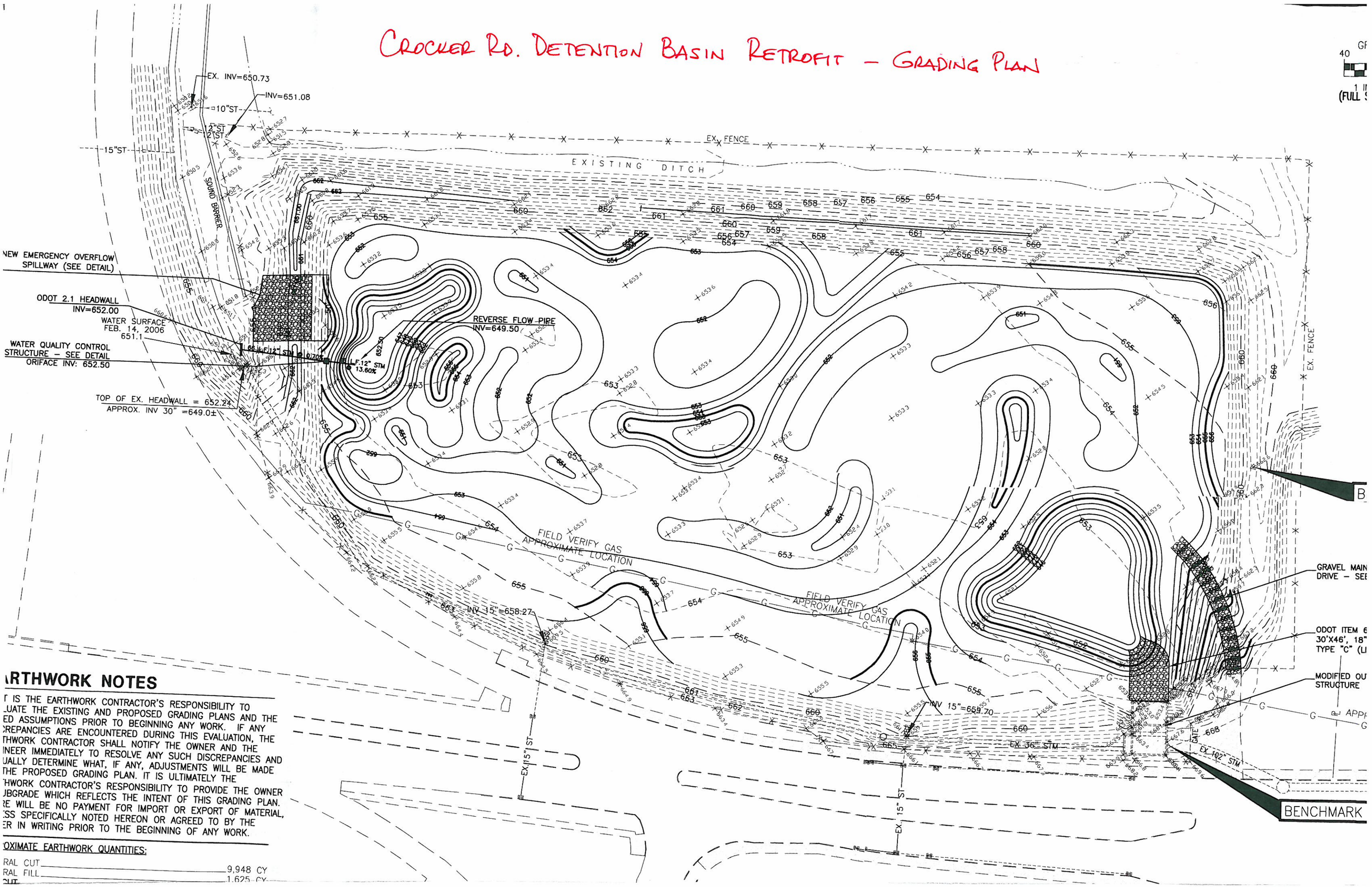
CROCKER RD. DETENTION BASIN BEFORE RETROFIT FOR WATER QUALITY



Crocker Rd. Detention Basin Retrofit – Grading Plan



RTHWORK NOTES

T IS THE EARTHWORK CONTRACTOR'S RESPONSIBILITY TO
UATE THE EXISTING AND PROPOSED GRADING PLANS AND THE
ED ASSUMPTIONS PRIOR TO BEGINNING ANY WORK. IF ANY
REPANCIES ARE ENCOUNTERED DURING THIS EVALUATION, THE
THWORK CONTRACTOR SHALL NOTIFY THE OWNER AND THE
INEER IMMEDIATELY TO RESOLVE ANY SUCH DISCREPANCIES AND
UALLY DETERMINE WHAT, IF ANY, ADJUSTMENTS WILL BE MADE
THE PROPOSED GRADING PLAN. IT IS ULTIMATELY THE
HWORK CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE OWNER
UBGRADE WHICH REFLECTS THE INTENT OF THIS GRADING PLAN.
RE WILL BE NO PAYMENT FOR IMPORT OR EXPORT OF MATERIAL,
SS SPECIFICALLY NOTED HEREON OR AGREED TO BY THE
ER IN WRITING PRIOR TO THE BEGINNING OF ANY WORK.

OXIMATE EARTHWORK QUANTITIES:

RAL CUT _____ 9,948 CY
RAL FILL _____ 1,625 CY
CUT _____

SEMI-WET ZONE

SEED MIX
DEPTH: AREAS ABOVE NORMAL POOL THAT ARE OCCAIONALLY INUNDATED

Installation must include container grown plants or a seed mix containing at least 15 species below including two aggressive species marked with an asterisk (*). Species appropriate for shady locations are marked with a carrot (^)

Marsh Milkweed (*Asclepias incarnata*)
Shining Aster (*Aster firmus*)
New England Aster (*Aster novae-angliae*)
Swamp Aster (*Aster puniceus*)
Flat-Topped Aster (*Aster umbellatus*)
Tall Brome (*Bromus latiglumis*)^
Blue-Joint Grass (*Calamagrostis canadensis*)*
Marsh Marigold (*Caltha palustris*)^
Brome Hummock Sedge (*Carex bromoides*)^
Fringed Sedge (*Carex crinita*)^
Crested Sedge (*Carex cristatella*)
Riverbank Tussock Sedge (*Carex emoryi*)*
Frank's Sedge (*Carex frankii*)^
Meadow Sedge (*Carex granularis*)^
Burr Sedge (*Carex grayi*)^
Porcupine Sedge (*Carex hystericina*)
Bottlebrush Sedge (*Carex lurida*)
Palm Sedge (*Carex muskingumensis*)^
Spreading Oval Sedge (*Carex normalis*)^
Short's Sedge (*Carex shortiana*)
Narrow-Leaf Cattail Sedge (*Carex squarrosa*)^
Awl-Fruited Sedge (*Carex stipata*)^
Pointed Oval Sedge (*Carex tribuloides*)
Fox Sedge (*Carex vulpinoidea*)
White Turtlehead (*Chelone glabra*)^
Pink Turtlehead (*Chelone obliqua*)^
Hollow Joe-Pye Weed (*Eupatorium fistulosum*)
Spotted Joe-Pye Weed (*Eupatorium maculatum*)
Boneset (*Eupatorium perfoliatum*)
Queen of the Prairie (*Filipendula rubra*)
Fowl Manna Grass (*Glyceria striata*)^
Autumn Sneezeweed (*Helenium autumnale*)
Torrey's Rush (*Juncus torreyi*)*
Cardinal Flower (*Lobelia cardinalis*)^
Great Blue Lobelia (*Lobelia siphilitica*)^
Common Mint (*Mentha arvensis*)
Monkey Flower (*Mimulus ringens*)
Obedient Plant (*Physostegia virginiana*)
Golden Ragwort (*Senecio aureus*)^
Ohio Goldenrod (*Solidago ohiensis*)
Swamp Goldenrod (*Solidago patula*)
Riddell's Goldenrod (*Solidago riddellii*)
Prairie Cord Grass (*Spartina pectinata*)
Tall Ironweed (*Vernonia altissima*)
Smooth Ironweed (*Vernonia fasciculata*)

SHALLOW WATER

SEED MIX
DEPTH: 6" ABOVE TO 6" BELOW NORMAL WATER POOL ELEVATIONS

Specific Name	Common Name	Plant Indicator	Percent of Mix
Agrostis alba	Redtop	FACW	10%
Bidens cernua	Nodding Bur-Margold	OBL	5%
Carex crinita	Fringed Sedge	OBL	10%
Carex lurida	Shallow Sedge	OBL	10%
Eupatoriadelphus maculatus	Spotted Joe-Pye Weed	FACW	5%
Iris versicolor	Blue Flag	OBL	10%
Leersia oryzoides	Rice Cut Grass	OBL	5%
Poa trivialis	Rough Bluegrass	FACW	10%
Sagittaria latifolia	Arrow Head	OBL	5%
Scirpus validus	Soft-Stem Bulrush	OBL	5%
Sparganium eurycarpum	Giant Burreed	OBL	25%
			100%

VEGETATIVE SWALE

SEED MIX
PROVIDE SAME PLANT VARIETIES AS SHALLOW WATER WITH THE INCLUSION OF OTHER RHIZOMOTIOUS SPECIES, SUCH AS TUSSOCK SEDGE (CARYX STRICTA)

HIGH MARSH

PLANT PLUGS
DEPTH: 6" OR LESS BELOW NORMAL POOL ELEVATIONS

Installation must include at least 6 of the species below, including two aggressive species marked with an asterisk(*).

Sweet Flag (*Acorus calamus*)
Water Plantain (*Alisma subcordatum*)
Bristly Sedge (*Carex comosa*)
Lake Sedge (*Carex lacustris*)*
Tussock Sedge (*Carex stricta*)
Hairy-Fruited Lake Sedge (*Carex trichocarpa*)*
Buttonbush (*Cephalanthus occidentalis*)
Creeping Spike Rush (*Eleocharis erythropoda*)*
Swamp Rose Mallow (*Hibiscus palustris*)
Soft Rush (*Juncus effusus*)
Wild Iris (*Iris versicolor*)
Blue Flag (*Iris virginica shrevei*)
Rice Cut Grass (*Leersia oryzoides*)*
Arrowhead (*Sagittaria latifolia*)*
Lizard's Tail (*Saururus cernuus*)
Dark Green Bulrush (*Scirpus atrovirens*)
Woolgrass (*Scirpus cyperinus*)
Three-Square Bulrush (*Scirpus pungens*)*

LOW MARSH

PLANT PLUGS
DEPTH: 6"–18"

Installation must include at least three of the species below, including two aggressive species marked with an asterisk(*). Species noted by the number sign (#) may be installed bare-root. Others must be installed from container grown plants

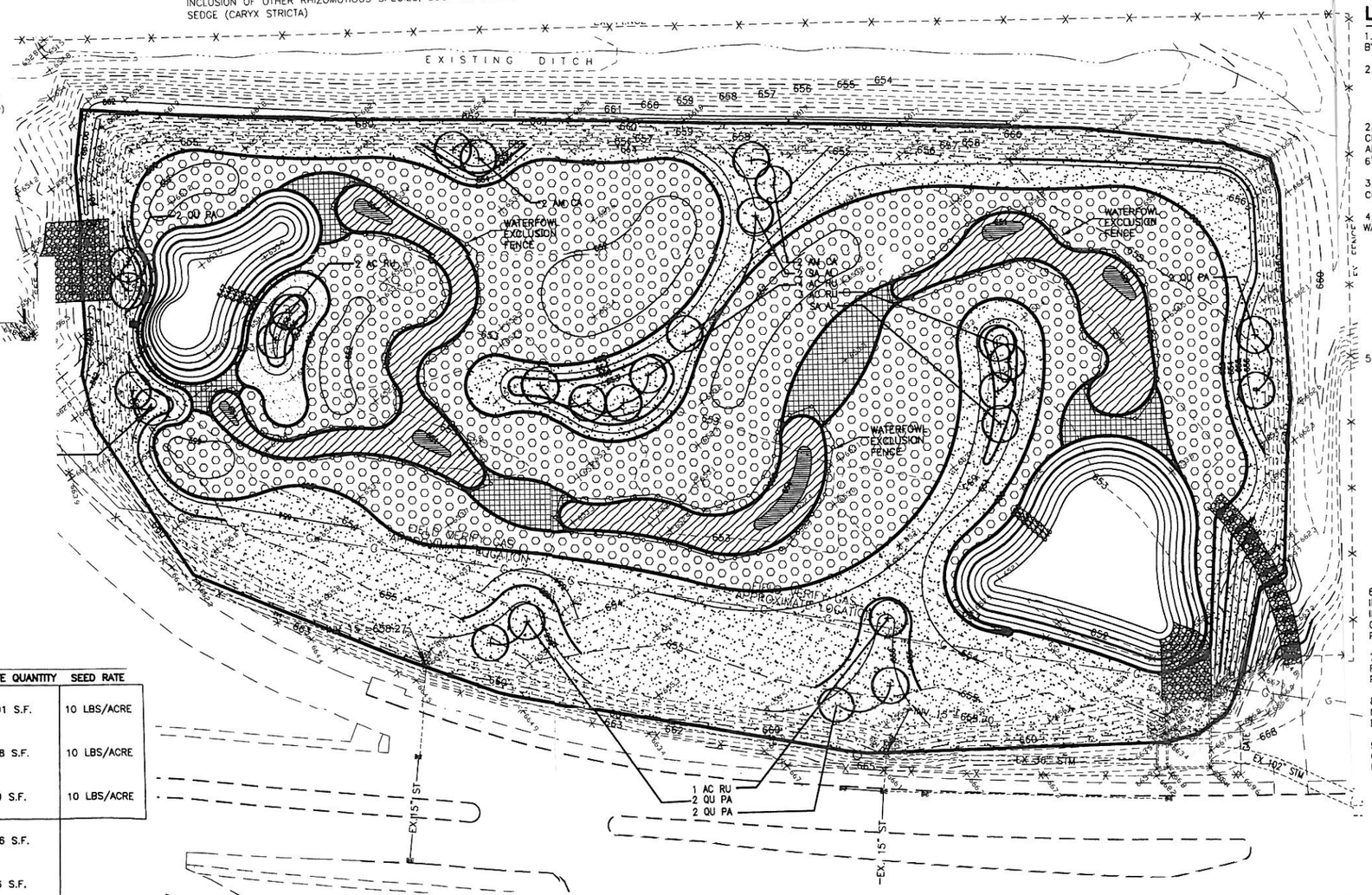
Pickerel Weed (*Pontederia cordata*)#
Hard-Stemmed Bulrush (*Scirpus acutus*)
River Bulrush (*Scirpus fluviatilus*)#*
Soft-Stem Bulrush (*Scirpus validus*)*
Giant Burreed (*Sparganium eurycarpum*)*

NORTH

GRAPHIC SCALE
40 0 20 40
1 INCH = 40 FT.
(FULL SIZE DRAWINGS ONLY)

PLANT LIST

KEY	QUAN.	BOTANICAL NAME	COMMON NAME	SIZE
AC RU	10	ACER RUBRUM 'RED SUNSET'	RED SUNSET MAPLE	1" cal.
AM CA	06	AMELANCHER CANADENSIS	SHADBLOW SERVICEBERRY	4' HT B&B
QU PA	08	QUERCUS PALUSTRIS	PIN OAK	1" cal.
SA AL	03	SALIX ALBA 'TRISTIS'	GOLDEN WEEPING WILLOW	1" cal.



LANDSCAPE NOTES

1. ANY PLANT MATERIAL SUBSTITUTIONS TO BE VERIFIED AND APPR BY OWNER OR LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

2. WATERFOWL EXCLUSION FENCE TO BE INSTALLED WITH:
   A. 6' LIGHTWEIGHT POSTS
   B. 4' WIDE FENCE OF PLASTIC FILAMENTS WITH 1" SQUARE OPENINGS

2. BIODEGRADABLE TWINE SHALL BE USED WITHIN THE ENTIRE WETL CREATION AREA AS A GEESE DETERRENT. THE TWINE SHALL BE ARRANGED IN A TRIANGULAR PATTERN AT VARYING HEIGHTS BETWEE 6"–36".

3. ALL WASHOUTS AND EROSION TO BE REPAIRED AND STABILIZED CONTRACTOR'S EXPENSE

4. ALL AQUATIC PLANTS MUST BE INSTALLED IN THE APPROPRIATE WATER DEPTHS.
   A. LOW MARSH PLANTS SHALL BE INSTALLED 6–18" BELOW NORMAL POOL ELEVATION. INSTALL PLANTS ON 2' CENTERS. EVENLY DISTRIBUTE EACH SPECIES AROUND THE POND, PLANTING IN GROUPS OF 3 TO 5 PLANTS OF EACH SPECIES
   B. HIGH MARSH SPECIES SHALL BE INSTALLED 6" OR LESS BELOW THE NORMAL POOL ELEVATION. INSTALL PLANTS ON 18" CENTERS. EVENLY DISTRIBUTE EACH SPECIES AROUND THE POND, PLANTING IN GROUPS OF 3 TO 5 PLANTS OF EACH SPECIES

5. SEEDING:
   A. PLACE A PORTION OF THE SEED IN A CLEAN, DRY 5 GALLON BUCKET. MIX 2 PARTS COARSE SAND WITH 1 PART SEED . THOROUGHLY MIX SEED AND SAND
   B. HAND BROADCAST SEED/ SAND MIXTURE ACROSS THE SPECIFIED TILLED AREA. APPLY HALF THE SEED/ SAND MIXTURE OVER THE ENTIRE AREA. APPLY THE SECOND HALF OVER THE SAME AREA UTILIZING THE SAME PROCEDURE. THIS METHOD PREVENTS USING ALL OF THE SEED BEFORE THE ENTIRE AREA IS COVERED
   C. LIGHTLY FIRM SEEDBED WITH A ROLLER WHERE SOIL MOISTURE PERMITS. DO NOT ROLL AREAS WHERE SOIL IS MOIST ENOUGH TO STICK TO ROLLER
   D. ALL NATIVE SEED TO BE REFRIGERATED FOR AT LEAST 90 DAYS PRIOR TO INSTALLATION
   E. SEMI–WET ZONE SPECIES SHALL BE INSTALLED IN AREAS ABOVE NORMAL POOL ELEVATION THAT ARE INUNDATED BY LARGER STORM EVENTS. THESE SPECIES SHALL BE INSTALLED AS SEED MIX CONTAINING SPECIES FROM THE ABOVE LIST

6. PLACEMENT OF PLANTING MATERIALS SHALL NOT AFFECT THE INTENDED DRAINAGE PATTERN OF THE FINAL GRADING PLAN. THIS INCLUDES BUT IS NOT LIMITED TO PLACING PLANT MATERIALS IN SWALES OR CREATING MOUNDS THAT BLOCK THE INTENDED SURFACE DRAINAGE PATTERN.

7. PLANT LISTS ARE PROVIDED FOR REFERENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL PLANT MATERIALS INDICATED ON THE PLANS.

8. ENTIRE BASIN TO RECEIVE EROSION CONTROL MATTING SUCH AS NORTH AMERICAN GREEN S75BN OR APPROVED EQUAL. MATTING SHALL BE INSTALLED AND STAPLES AS SPECIFIED BY MANUFACTURER.

9. CONTRACTOR TO SEED ALL OTHER DISTURBED AREAS, NOT OTHERWISE INDICATED ON THESE PLANS. SEEDING TYPES AND PERCENTAGES ARE AS FOLLOWS:

SEED SCHEDULE (OR APPROVED SIMILAR)

LAWN	SEED TYPE	PERCENTAGE
A	KENTUCKY BLUEGRASS	45%
	PENNLAWN RED FESCUE	15%
	PERENNIAL RYEGRASS	40%

LEGEND

PLANTING TYPE	HATCH	APPROXIMATE QUANTITY	SEED RATE
SEMI–WET ZONE		112,801 S.F.	10 LBS/ACRE
SHALLOW WATER		89,618 S.F.	10 LBS/ACRE
VEGETATIVE SWALE		7,069 S.F.	10 LBS/ACRE
HIGH MARSH		15,986 S.F.	
LOW MARSH		1,386 S.F.	

ORKING DAYS
RE YOU DIG
E 800–362–2764
ES PROTECTION SERVICE

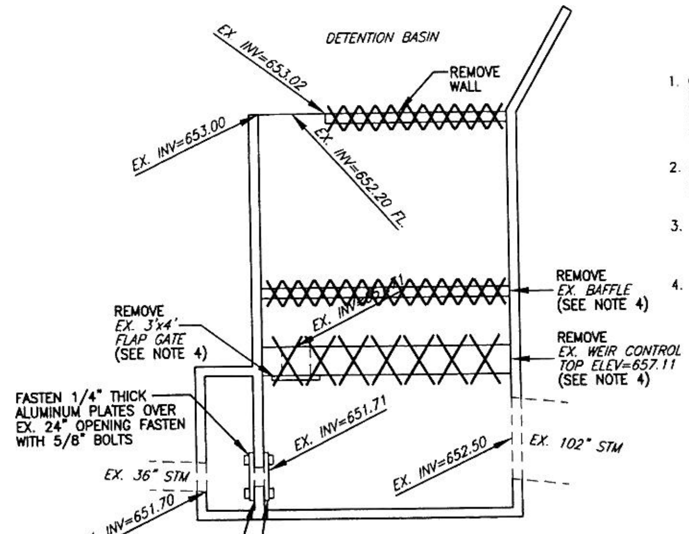
JOB NO 11584G	SCALE 1"=40'
DRAWN BY MRM	CHK'D BY
DWG NAME 115R4-G	DATE MAY. 2006

CROCKER ROAD DETENTION BASIN
LANDSCAPE PLAN
CITY OF WESTLAKE, CUYAHOGA COUNTY, OHIO

NEFF & ASSOCIATES
A PROFESSIONAL CORPORATION
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS
SURVEYORS
6405 York Road Parma Heights, Ohio 44130
(440) 884-3100 FAX (440) 884-6443

REV NO	DATE	DESCRIPTION	BY

SHEET NO.
C3.0

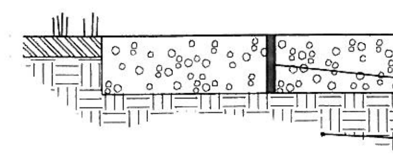


PLAN VIEW

1. CONTRACTOR SHALL REMOVE VEGETATION, SEDIMENT, AND DEBRIS WITHIN THE CONTROL STRUCTURE. THE CONTRACTOR SHALL ALSO CLEAN OUT ALL VEGETATION, SEDIMENT, AND DEBRIS IN THE ADJOINING SEWER PIPES UP TO THE NEXT MANHOLE.
2. CONTRACTOR SHALL REPAIR ALL CRACKS AS DIRECTED, ROUT-OUT CRACKS AS DIRECTED, AND SEAL WITH HYDRAULIC CEMENT.
3. UPON COMPLETION OF REHABING THE CONTROL STRUCTURE, THE CONTRACTOR SHALL SEAL ALL EXPOSED CONCRETE SURFACES WITH SODIUM SILICATE SEAL.
4. EXISTING 24" OPENING, WEIR CONTROL AND BAFFLE TO REMAIN AS IS UNTIL PLANTINGS HAVE BEEN ESTABLISHED. (2-3 MONTHS AFTER PLANTING)

MODIFIED CONTROL STRUCTURE AND REHABILITATION

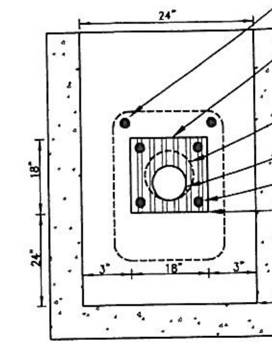
SCALE: 1"=10'



* ALL #57 STONE SHALL BE COMPLETELY COVERED WITH LIMESTONE SCREENINGS

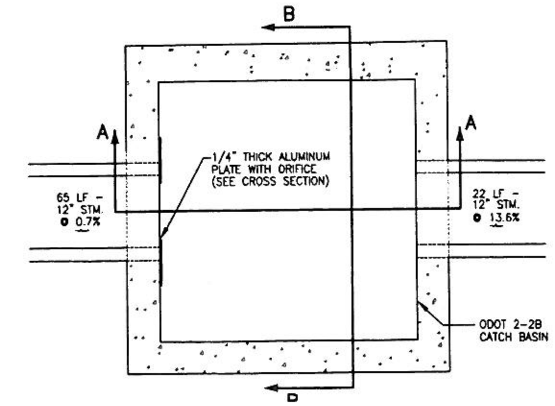
GRAVEL DRIVE

NOT TO SCALE



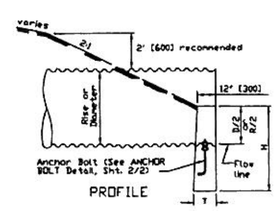
SECTION B - B

ORIFICE PLATE DETAIL

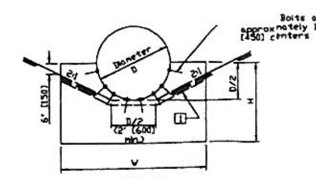


HEADWALL FOR CORRUGATED METAL PIPE & PLASTIC PIPE (English)																
CIRCULAR					PIPE ARCH						PIPE ARCH					
D	V	H	T	CONC. cu. yds.	SPAN	RISE	V	H	T	CONC. cu. yds.	SPAN	RISE	V	H	T	CONC. cu. yds.
12"	2'-0"	3'-0"	12"	0.21	2.67"x1/2" Corrugations						*81"	59"	12'-4"	5'-5"	15"	2.14
15"	2'-6"	3'-2"	12"	0.27	17"	13"	3'-0"	3'-0"	12"	0.31	87"	63"	13'-0"	5'-7"	17"	2.50
18"	3'-0"	3'-3"	12"	0.33	21"	15"	3'-6"	3'-0"	12"	0.35	95"	67"	14'-0"	5'-9"	20"	3.14
21"	3'-6"	3'-4"	12"	0.39	24"	18"	4'-0"	3'-2"	12"	0.43	103"	71"	15'-0"	5'-11"	22"	3.54
24"	4'-0"	3'-6"	12"	0.46	28"	20"	4'-6"	3'-3"	12"	0.48	112"	75"	16'-0"	6'-1"	24"	3.96
27"	4'-6"	3'-8"	12"	0.53	35"	24"	5'-6"	3'-5"	12"	0.61	117"	79"	17'-9"	6'-3"	25"	4.89
30"	5'-0"	3'-9"	12"	0.60	42"	29"	6'-6"	3'-7"	12"	0.73	128"	83"	18'-0"	6'-5"	26"	5.01
33"	5'-6"	3'-10"	12"	0.68	49"	33"	7'-8"	3'-9"	12"	0.90	137"	87"	19'-0"	6'-7"	27"	5.45
36"	6'-0"	4'-0"	12"	0.76	57"	38"	9'-0"	4'-0"	12"	1.10	142"	91"	20'-9"	6'-9"	27"	6.31
39"	6'-6"	4'-2"	12"	0.84	64"	43"	10'-0"	4'-4"	12"	1.31	6"x2" Corrugations (18" Corner Radius)					
42"	7'-0"	4'-3"	12"	0.92	71"	47"	11'-0"	4'-8"	12"	1.54						
48"	8'-0"	4'-6"	12"	1.10	*77"	52"	11'-8"	5'-3"	12"	1.84	*6'-1"	4'-7"	11'-8"	5'-7"	12"	1.89
54"	9'-3"	4'-9"	12"	1.33	*83"	57"	12'-4"	5'-5"	15"	2.46	*6'-4"	4'-9"	12'-0"	5'-8"	14"	2.12
60"	10'-6"	5'-6"	12"	1.78	6"x2" Corrugations (31" Corner Radius)						*6'-9"	4'-11"	12'-4"	5'-9"	15"	2.42
66"	11'-9"	5'-9"	12"	2.06							*7'-0"	5'-1"	12'-8"	5'-10"	16"	2.44
72"	13'-0"	6'-0"	12"	2.37	13'-3"	9'-4"	23'-11"	7'-11"	32"	9.63	7'-3"	5'-3"	12'-11"	5'-11"	17"	2.69
78"	14'-3"	6'-3"	14"	2.94	13'-6"	9'-6"	24'-9"	8'-0"	32"	10.12	7'-8"	5'-5"	13'-2"	6'-0"	18"	2.77
84"	15'-6"	6'-6"	14"	3.30	14'-0"	9'-8"	24'-10"	8'-1"	33"	10.33	7'-11"	5'-7"	14'-0"	6'-1"	20"	3.15
90"	16'-9"	6'-9"	16"	4.00	14'-2"	9'-10"	25'-9"	8'-2"	33"	10.87	8'-2"	5'-9"	14'-8"	6'-2"	21"	3.45
96"	18'-0"	7'-0"	16"	4.40	14'-5"	10'-0"	26'-7"	8'-3"	33"	11.39	8'-7"	5'-11"	15'-0"	6'-3"	22"	3.75
102"	19'-3"	7'-3"	18"	5.28	14'-11"	10'-2"	26'-9"	8'-4"	34"	11.68	8'-10"	6'-1"	15'-10"	6'-4"	23"	4.15
108"	20'-6"	7'-6"	20"	6.21	15'-4"	10'-4"	26'-11"	8'-5"	34"	11.96	9'-4"	6'-3"	16'-0"	6'-5"	24"	4.65
114"	21'-9"	7'-9"	22"	7.25	15'-7"	10'-6"	27'-9"	8'-6"	34"	12.51	9'-6"	6'-5"	16'-10"	6'-6"	26"	4.93
120"	23'-0"	8'-0"	24"	8.38	15'-10"	10'-8"	28'-7"	8'-7"	35"	13.06	9'-9"	6'-7"	17'-9"	6'-7"	27"	5.41
*126"	23'-0"	8'-3"	26"	8.64	16'-3"	10'-10"	28'-8"	8'-8"	35"	13.34	10'-3"	6'-9"	17'-10"	6'-8"	27"	5.45
132"	23'-0"	8'-6"	28"	9.23	16'-6"	11'-0"	29'-7"	8'-9"	35"	13.94	10'-8"	6'-11"	17'-11"	6'-9"	27"	5.59
138"	24'-1"	8'-9"	30"	10.50	17'-0"	11'-2"	29'-8"	8'-10"	36"	14.24	10'-11"	7'-1"	18'-10"	6'-10"	28"	5.97
144"	25'-2"	9'-0"	32"	11.89	17'-2"	11'-4"	30'-7"	8'-11"	36"	14.84	11'-5"	7'-3"	18'-11"	6'-11"	28"	6.12
150"	26'-4"	9'-3"	34"	13.38	17'-5"	11'-6"	31'-5"	9'-0"	36"	15.42	11'-7"	7'-5"	19'-9"	7'-0"	28"	6.52
156"	27'-5"	9'-6"	36"	15.01	17'-11"	11'-8"	31'-7"	9'-1"	37"	15.83	11'-10"	7'-7"	20'-9"	7'-1"	29"	6.94
162"	28'-7"	9'-9"	38"	16.75	18'-1"	11'-10"	32'-5"	9'-2"	37"	16.43	12'-4"	7'-9"	20'-10"	7'-2"	29"	7.12
168"	29'-8"	10'-0"	40"	18.61	18'-7"	12'-0"	32'-6"	9'-3"	37"	16.78	12'-6"	7'-11"	21'-8"	7'-3"	29"	7.53
174"	30'-9"	10'-3"	42"	20.28	18'-9"	12'-2"	33'-4"	9'-4"	38"	17.43	12'-8"	8'-1"	22'-7"	7'-4"	30"	7.95
180"	31'-11"	10'-6"	43"	21.87	19'-3"	12'-4"	33'-5"	9'-5"	38"	17.78	12'-10"	8'-4"	23'-7"	7'-5"	30"	8.48
186"	33'-0"	10'-9"	44"	23.54	19'-6"	12'-6"	34'-5"	9'-6"	38"	18.49	13'-5"	8'-5"	23'-7"	7'-6"	30"	8.63
192"	34'-2"	11'-0"	45"	25.30	19'-8"	12'-8"	35'-3"	9'-7"	39"	19.19	13'-11"	8'-7"	23'-7"	7'-7"	31"	8.81
198"	35'-3"	11'-3"	46"	27.12	19'-11"	12'-10"	36'-3"	9'-8"	39"	19.95	14'-1"	8'-9"	25'-1"	7'-8"	31"	9.29
204"	36'-4"	11'-6"	47"	29.15	20'-5"	13'-0"	36'-3"	9'-9"	39"	20.30	14'-3"	8'-11"	25'-6"	7'-9"	31"	9.78
210"	37'-6"	11'-9"	48"	31.03	20'-7"	13'-2"	37'-2"	9'-10"	40"	21.05	14'-10"	9'-1"	25'-6"	7'-10"	32"	10.25
216"	38'-7"	12'-0"	49"	33.43	3"x1" Corrugations						15'-4"	9'-3"	25'-6"	7'-11"	32"	10.25
222"	39'-9"	12'-3"	50"	36.26	40"	31"	6'-6"	3'-7"	12"	0.70	15'-6"	9'-5"	26'-3"	8'-0"	32"	10.74
228"	40'-10"	12'-6"	51"	37.52	46"	36"	7'-8"	3'-9"	12"	0.85	15'-8"	9'-7"	27'-5"	8'-1"	33"	11.28
234"	42'-0"	12'-9"	52"	39.86	53"	41"	9'-0"	4'-0"	12"	1.06	15'-10"	9'-10"	28'-5"	8'-2"	33"	12.00
240"	43'-1"	13'-0"	53"	42.28	60"	46"	10'-0"	4'-4"	12"	1.27	16'-5"	9'-11"	28'-5"	8'-3"	33"	12.09
246"	44'-2"	13'-3"	54"	44.83	66"	51"	11'-0"	4'-8"	12"	1.54	16'-7"	10'-1"	29'-4"	8'-4"	34"	12.64
252"	45'-4"	13'-6"	55"	47.44	*73"	55"	11'-8"	5'-3"	12"	1.81	--	--	--	--	--	--

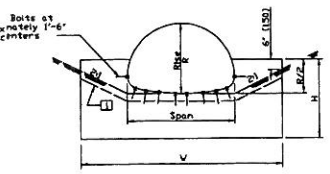
* Channel configuration for pipe sizes between end treatment 'A' and end treatment 'B' is determined by 2:1 slopes passing through a point 6" [150] below the top and at each side of the headwall. For end treatment 'B', 2:1 slopes are tangent to pipe.



PROFILE



CIRCULAR



PIPE-ARCH

END TREATMENT 'A'

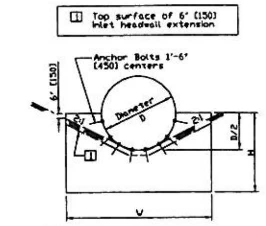
NOTES

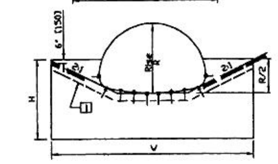
GENERAL: IF THE PIPE IS DEPRESSED, A RIPRAP REINFORCED CONCRETE SLAB SHALL SLOPE UP TO THE CHANNEL BOTTOM AT A SLOPE OF 6 TO 1 AND TERMINATE WITH A CUTOFF WALL THAT HAS A DEPTH OF 6" [150] BELOW THE DEPRESSION DEPTH. PAYMENT FOR THE SLAB SHALL BE MADE PER SQUARE YARD OF ITEM 601 RIPRAP USING 6" REINFORCED CONCRETE SLAB AND SHALL INCLUDE THE COST OF THE CUTOFF WALL. REINFORCING FOR THE 6" REINFORCED CONCRETE SLAB AND CUTOFF WALL SHALL BE AS SHOWN ON STANDARD HYDRAULIC CONSTRUCTION DRAWING CB-3.1.

CONCRETE: CONCRETE FOR HEADWALLS SHALL BE CLASS C.

CONCRETE QUANTITIES ARE BASED ON HEADWALLS WITHOUT THE 6" [150] EXTENSION UNDER THE CHANNEL PROTECTION.

[1] Top surface of 6" [150] inlet headwall extension

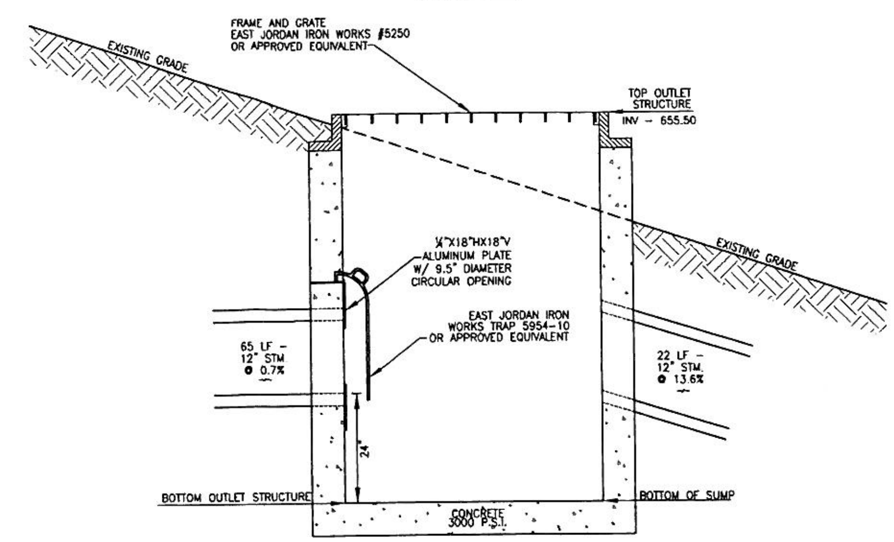




END TREATMENT 'B'

(O.D.O.T.) HALF-HEIGHT HEADWALLS FOR PLASTIC PIPE

(HW 2.1)
NOT SCALE



SECTION A - A

WATER QUALITY CONTROL STRUCTURE

2 X 2 STRUCTURE
NOT TO SCALE

2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE 800-362-2764
OHIO UTILITIES PROTECTION SERVICE
1013-077-062

JOB NO	SCALE
11584G	AS NOTED
DRAWN BY: SPR	CHK'D BY:
DWG NAME: 11584-DET	DATE: MAY, 2006

CROCKER ROAD DETENTION BASIN
SITE DETAILS
CITY OF WESTLAKE, CUYAHOGA COUNTY, OHIO

NEFF & ASSOCIATES
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ENGINEERS • PLANNERS
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SURVEYORS
6405 York Road Parma Heights, Ohio 44130
(440) 884-3100 FAX: (440) 884-6443

REV NO	DATE	DESCRIPTION	BY
	05/05/06	PRELIMINARY SUBMITTAL	BMU

SHEET NO
C4.0

\Land Development\Proj\11584G\dwg\11584-det.dwg, C4.0, 5/8/2006 5:00:10 PM