

STORM WATER POLLUTION PREVENTION PLAN  
FOR

# The Reserve at Williamsburg On The River Plat One

WASHINGTON TOWNSHIP, WOOD COUNTY, OHIO

**INDEX OF SHEETS**

TITLE SHEET ..... 1  
 GENERAL NOTES AND DETAILS ..... 2-3  
 BASIN DETAILS ..... 4  
 SEDIMENT CONTROL PLAN ..... 5  
 DRAINAGE WATERSHEDS AND CONTOURS ..... 6  
 DRAINAGE AREA & DISTURBED AREA MAP ..... 7

**GENERAL SUMMARY**

ITEM	QTY.	UNIT	DESCRIPTION
<b>EROSION CONTROL</b>			
SPEC.	LUMP	LUMP	TEMPORARY CONSTRUCTION ENTRANCE, AS PER PLAN
SPEC.	LUMP	LUMP	CONCRETE WASHOUT AREA
	832	△(2850) FT.	PERIMETER FILTER SOCK
SPEC.	9	EACH	YARD INLET PROTECTION
	832	8032 SQ. YD.	CONSTRUCTION SEEDING AND MULCHING
	659	53160 SQ. YD.	PERMANENT SEEDING AND MULCHING
	659	0.72 TONS	COMMERCIAL FERTILIZER (12-12-12) (20 LBS./1,000 SQ. FT.)
	659	21.7 MGAL	WATERING (300 GAL/1,000 SQ. FT.)

**BENCH MARK DATA**

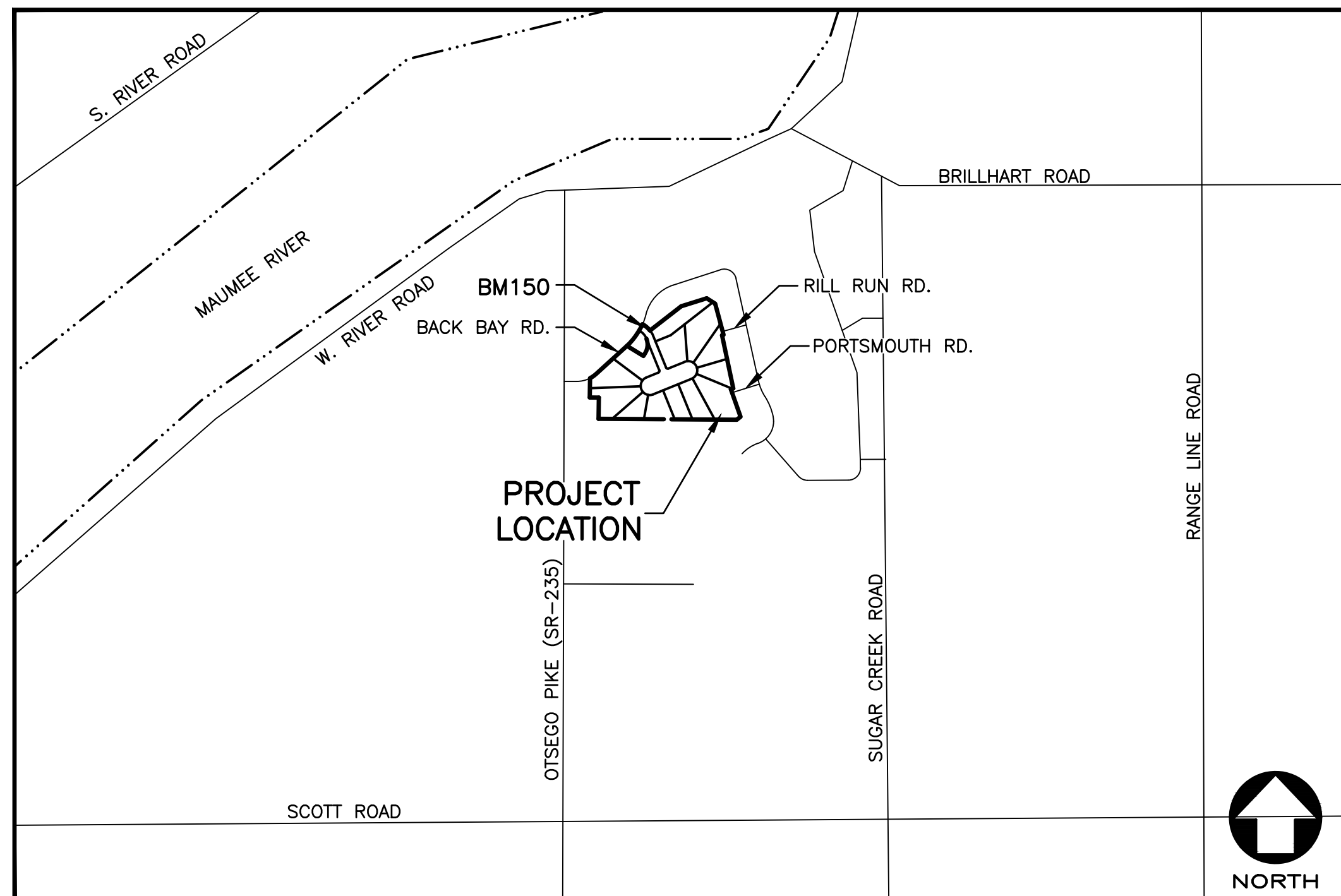
**SITE BENCH MARK No. 150**  
 MAG NAIL IN WEST FACE OF POWER POLE AT THE NORTHEAST CORNER OF INTERSECTION OF BACK BAY ROAD AND COACH HOUSE LOOP.

ELEVATION ..... 661.21

THE RESERVE AT WILLIAMSBURG ON THE RIVER PLAT ONE IS A PROPOSED DEVELOPMENT THAT INCLUDES INSTALLATION OF ALL INFRASTRUCTURE TO SERVE 13 SINGLE FAMILY LOTS.

**CONVENTIONAL SIGNS**

	PROPOSED	EXISTING
SANITARY SEWER	—S—	—S—
STORM SEWER	—ST—	—ST—
WATERLINE	—W—	—W—
SANITARY MANHOLE	●	⊙
STORM MANHOLE	●	⊙
CATCH BASIN	■	⊞
YARD BASIN	●	⊙
WATER VALVE IN MANHOLE	●	⊙
HYDRANT	▼	○
CENTERLINE	—	—
TYPE B MONUMENT	⊕	⊕



**LOCATION MAP**

SCALE: 1" = 1,000'

**SITE DESCRIPTION AND DATA:**

A.	TYPE OF CONSTRUCTION:	SINGLE FAMILY RESIDENTIAL
B.	SITE PLAT AREA (PLAT 1):	19.00 Ac.
B.	AREA DISTURBED (PLAT 1):	18.12 Ac.
* C.	PRE-CONSTRUCTION RUNOFF COEFFICIENT:	0.10
	POST-CONSTRUCTION RUNOFF COEFFICIENT:	0.30
D.	IMPERVIOUS AREA (PLAT 1):	3.80 Ac.
	% IMPERVIOUS AFTER CONSTRUCTION (PLAT 1):	20%
E.	SOIL TYPE:	NnB2 - NAPPANNE LOAM, HoA - HOYTVILLE CLAY LOAM
F.	PRIOR LAND USE:	AGRICULTURAL
H.	RECEIVING STREAM:	SISTER CREEK

\* RUNOFF COEFFICIENTS BASED ON STORM DRAINAGE DESIGN SECTION OF WOOD COUNTY SUBDIVISION AND SITE IMPROVEMENT MANUAL.

NO SURFACE WATER SHALL BE ALLOWED TO RUN OFF THE SITE. UNTIL FINAL GRADING IS COMPLETED, THE CONTRACTOR SHALL DIVERT ALL SURFACE WATER TO REMAIN ON SITE; AND MAINTAIN ALL TEMPORARY SEDIMENT AND EROSION CONTROL FEATURES.

OHIO UTILITIES PROTECTION SERVICE  
 CALL 1-800-362-2764  
 TWO WORKING DAYS BEFORE YOU DIG  
 NON-MEMBERS MUST BE CALLED DIRECTLY

IMPLEMENTATION SCHEDULE	FIELD DATE:
<b>PHASE I: SITE PREPARATION PHASE:</b>	
ESTIMATED START:	
INSTALL SILT FENCE:	
INSTALL CONSTRUCTION ENTRANCE:	
EXCAVATE SEDIMENT POND & STABILIZE BANKS	
CLEAR AND GRUB SITE:	
INSTALL SEDIMENT CONTROLS WITHIN 7 DAYS OF CLEARING AND GRUBBING:	
STABILIZATION REQUIRED IF AREAS BECOME INACTIVE FOR 14 DAYS OR LONGER:	
THE STORMWATER CONTROLS WILL REMAIN FOR THE DURATION OF THE CONSTRUCTION:	
<b>PHASE II: SITE UTILITY AND STREET PHASE:</b>	
ESTIMATED START:	
INSTALL UNDERGROUND UTILITIES:	
INSTALL INLET CONTROLS:	
INSTALL CONCRETE WASHOUT:	
EXCAVATE AND BUILD ROADWAY:	
GRADE BACK OF CURB AND SWALES:	
COMPLETE ROUGH GRADING:	
INSTALL TEMPORARY SEEDING:	
INSTALL BIORETENTION PONDS	
STABILIZATION WILL BE REQUIRED DURING THIS PHASE:	
STORMWATER CONTROLS WILL REMAIN FOR DURATION OF THE CONSTRUCTION:	
<b>PHASE III: HOME BUILDING AND SITE FINISHES:</b>	
ESTIMATED START:	
HOME BUILDER APPLY FOR INDIVIDUAL LOT NOTICE OF INTENT (NOI):	
BUILD HOUSES:	
COMPLETE FINAL GRADING:	
INSTALL PERMANENT SEEDING:	
HOME BUILDER SUBMIT INDIVIDUAL LOT NOTICE OF TERMINATION (NOT) AS LOTS ARE STABILIZED:	
CONVERT SEDIMENT BASIN STRUCTURE TO PERMANENT WATER QUALITY STRUCTURE:	
DEVELOPER SUBMIT ENTIRE SITE NOT	
STABILIZATION WILL BE REQUIRED DURING AND AFTER THIS PHASE:	

APPROVED BY

*John M. Musteric* 02 JUN 2022  
 JOHN M. MUSTERIC, P.E., P.S. DATE  
 WOOD COUNTY ENGINEER

THE ABOVE SIGNATURE CONSTITUTES ACKNOWLEDGEMENT THAT THOSE ITEMS OUTLINED IN THE CURRENT EDITION OF THE "WOOD COUNTY SUBDIVISION AND SITE IMPROVEMENT MANUAL" OR AS AMENDED BY THE WOOD COUNTY ENGINEER, HAVE BEEN UTILIZED. TECHNICAL CORRECTNESS AND INTERPRETATION OF THOSE ITEMS CONTAINED WITHIN THE MANUAL REMAIN THE RESPONSIBILITY OF THE ENGINEER PREPARING THE PLANS. THE ABOVE SIGNATURE IS VALID FOR 18 MONTHS FROM THE DATE OF SIGNING.

**OWNER CERTIFICATION:**  
 I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

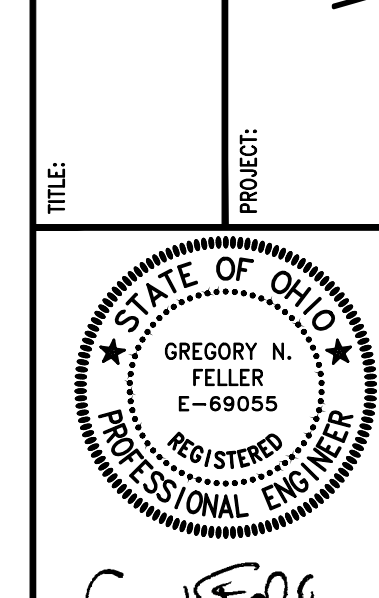
*Waide Smith*  
 WAIDE SMITH DATE 5/13/2022  
 OWNER/MEMBER

1683 Woodlands Drive, Maumee, Ohio 43537  
 Phone: (419) 893-3680  
 Fax: (419) 893-2982  
 www.fellerfinch.com

**FellerFinch**  
 & ASSOCIATES, INC.  
 Engineers • Surveyors

NO.	DATE	REVISION
	6/7/22	

TITLE SHEET  
 THE RESERVE AT WILLIAMSBURG ON THE RIVER



SIGNED	DATE
<i>Gregory N. Feller</i>	5/13/22
DESIGNED BY:	CMG
DRAWN BY:	RSP
CHECKED BY:	GNF
REVIEWED BY:	GNF
DATE:	3-16-22
PROJECT:	10E09360

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**Ⓐ CONSTRUCTION SEEDING & MULCHING**

Temporary Seeding Species Selection			
Seeding Dates	Species	Lb./1,000 ft. <sup>2</sup>	Per Ac.
March 1 to August 15	Oats	3	4 bushel
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.
August 16 to November 1	Perennial Ryegrass	1	40 lb.
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.
November 1 to Spring Seeding	Rye	3	2 bushel
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.
	Wheat	3	2 bushel
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.

Note: Other approved seed species may be substituted.

- Structural erosion- and sediment-control practices such as diversions and sediment traps shall be installed and stabilized with temporary seeding prior to grading the rest of the construction-site.
- Temporary seed shall be applied between construction operations on soil that will not be graded or reworked for 45 days or more. These idle areas should be seeded as soon as possible after grading or shall be seeded within 7 days. Several applications of temporary seeding are necessary on typical construction projects.
- The seedbed should be pulverized and loose to ensure the success of establishing vegetation. However, temporary seeding shall not be postponed if ideal seedbed preparation is not possible.
- Soil Amendments--Applications of temporary vegetation shall establish adequate stands of vegetation which may require the use of soil amendments. Soil tests should be taken on the site to predict the need for lime and fertilizer.
- Seeding Method--Seed shall be applied uniformly with a cyclone seeder, drill, cultipacker seeder, or hydroseeder. When feasible, seed that has been broadcast shall be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used, the seed and fertilizer will be mixed on-site and the seeding shall be done immediately and without interruption.

**Ⓑ PERMANENT SEEDING & MULCHING**

**SITE PREPARATION**

- A subsoiler, plow or other implement shall be used to reduce soil compaction and allow maximum infiltration. (Maximizing infiltration will help control both runoff rate and water quality.) Subsoiling should be done when the soil moisture is low enough to allow the soil to crack or fracture. Subsoiling shall not be done on slip-prone areas where soil preparation should be limited to what is necessary for establishing vegetation.
- The site shall be graded as needed to permit the use of conventional equipment for seedbed preparation and seeding.
- Resoil shall be applied where needed to establish vegetation.

**SEEDBED PREPARATION**

- Lime--Agricultural ground limestone shall be applied to acid soil as recommended by a soil test. In lieu of a soil test, lime shall be applied at the rate of 100 lb./1,000 sq. ft. or 2 tons/ac.
- Fertilizer--Fertilizer shall be applied as recommended by a soil test. In lieu of a soil test, fertilizer shall be applied at a rate of 12 lb./1,000 sq. ft. or 500 lb./ac. of 10-10-10 or 12-12-12 analysis.
- The lime and fertilizer shall be worked into the soil with a disk harrow, spring-tooth harrow, or other suitable field implement to a depth of 3 in. On sloping land the soil shall be worked on the contour.

**SEEDING DATES AND SOIL CONDITIONS**

Seeding should be done March 1 to May 31 or Aug 1 to September 30. These seeding dates are ideal but, with the use of additional mulch and irrigation, seedings may be made any time throughout the growing season. Tillage/seedbed preparation should be done when the soil is

**MULCHING**

- Mulch material shall be applied immediately after seeding. Seedings made during optimum seeding dates and with favorable soil conditions and on very flat areas may not need mulch to achieve adequate stabilization. Dormant seeding shall be mulched.
  - Straw--If straw is used it shall be unrotted small-grain straw applied at the rate of 2 tons/ac. or 90 lb./1,000 sq. ft. (two to three bales). The mulch shall be spread uniformly by hand or mechanically so the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000-sq.-ft. sections and spread two 45-lb. bales of straw in each section.
  - Hydroseeders--If wood cellulose fiber is used, it shall be used at 2,000 lb./ac. or 46 lb./1,000 sq. ft.
  - Other--Other acceptable mulches include mulch matting applied according to manufacturer's recommendations or wood chips applied at 6 tons/ac.
- Materials
  - Synthetic Binders--Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equal may be used at rates recommended by the manufacturer.
  - Wood Cellulose Fiber--Wood cellulose fiber binder shall be applied at a net dry weight of 750 lb./ac. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb./100 gal. of wood cellulose fiber.
- Straw Mulch Anchoring Methods
  - Mechanical--A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but, generally, be left longer than 6 in.

dry enough to crumble and not form ribbons when compressed by hand. For winter seeding, see the following section on dormant seeding.

**DORMANT SEEDINGS.**

- Seedings shall not be planted from October 1 through November 20. During this period the seeds are likely to germinate but probably will not be able to survive the winter.
- The following methods may be used for "Dormant Seeding":
  - From October 1 through November 20, prepare the seedbed, add the required amounts of lime and fertilizer, then mulch and anchor. After November 20, and before March 15, broadcast the selected seed mixture. Increase the seeding rates by 50% for this type of seeding.
  - From November 20 through March 15, when soil conditions permit, prepare the seedbed, lime and fertilize, apply the selected seed mixture, mulch and anchor. Increase the seeding rates by 50% for this type of seeding.
  - Apply seed uniformly with a cyclone seeder, drill, cultipacker seeder, or hydro-seeder (slurry may include seed and fertilizer) on a firm, moist seedbed.
  - Where feasible, except when a cultipacker type seeder is used, the seedbed should be firmed following seeding operations with a cultipacker, roller, or light drag. On sloping land, seeding operations should be on the contour where feasible.

**IRRIGATION**

- Permanent seeding shall include irrigation to establish vegetation during dry or hot weather or on adverse site conditions as needed for adequate moisture for seed germination and plant growth.
- Excessive irrigation rates shall be avoided and irrigation monitored to prevent erosion and damage from runoff.
- Irrigation shall be provided per ODOT 659.17

Permanent Seeding			
Seed Mix	Seeding Rate		Notes:
	lb./ac.	lb./1,000ft. <sup>2</sup>	
General Use			
Creeping Red Fescue	20-40	3	
Domestic Ryegrass	10-20	3	
Kentucky Bluegrass	10-20	3	
Tall Fescue	40	1	
Dwarf Fescue	40	1	
Steep Banks or Cut Slopes			
Tall Fescue	40	1	
Crown Vetch	10	¼	Do not seed later than August.
Tall Fescue	20	¼	
Flat Pea	20	¼	Do not seed later than August.
Tall Fescue	20	¼	
Road Ditches and Swales			
Tall Fescue	40	1	
Dwarf Fescue	90	2¼	
Kentucky Bluegrass	5		
Lawns			
Kentucky Bluegrass	60	5	
Perennial Ryegrass	60	5	
Kentucky Bluegrass	60	5	For shaded areas
Creeping Red Fescue	60	5	

Note: Other approved seed species may be substituted.

- Permanent seeding shall not be considered established for at least 1 full yr. from the time of planting. Seeded areas shall be inspected for failure and vegetation reestablished as needed. Depending on-site conditions, it may be necessary to irrigate, fertilize, overseed, or reestablish plantings in order to provide permanent vegetation for adequate erosion control.
- Maintenance fertilization rates shall be established by soil test recommendations or by using the rates shown in the following table.

Maintenance for Permanent Seedings Fertilization and Mowing					
Mixture	Formula	lb./ac.	lb./1,000 ft. <sup>2</sup>	Time	Mowing
Creeping Red Fescue Ryegrass Kentucky Bluegrass	10-10-10	500	12	Fall, yearly or as needed.	Not closer than 3"
Tall Fescue	10-10-10	500	12		Not closer than 4"
Dwarf Fescue	10-10-10	500	12		Not closer than 2"
Crown Vetch Fescue	0-20-20	400	10	Spring, yearly following establishment and every 4-7 yr. thereafter	Do not mow
Flat Pea Fescue	0-20-20	400	10		Do not mow

Note: Following soil test recommendations is preferred to fertilizer rates shown above.

**INSPECTION**

Procedures in this SWP3 shall provide that all controls on the site are inspected at least once every seven calendar days and within 24 hours after any storm event greater than one-half inch of rain per 24 hour period. The permittee shall assign qualified inspection personnel (those with knowledge and experience in the installation and maintenance of sediment and erosion controls) to conduct these inspections to ensure that the control practices are functional and to evaluate whether the SWP3 is adequate and properly implemented in accordance with the schedule proposed in Part III. G.1.g of this permit or whether additional control measures are required. This requirement shall continue during the home construction phase. Inspection reports shall be kept on-site and saved for three (3) years. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the SWP3 shall be observed to ensure that those are operating correctly. Discharge locations shall be inspected to ascertain whether erosion and sediment control measures are effective in preventing significant impacts to the receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site vehicle tracking.

The permittee shall maintain for three years following the submittal of a notice of termination form, a record summarizing the results of the inspections, names(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWP3 and a certification as to whether the facility is in compliance with the SWP3 and the permit and identify any incidents of non-compliance. The record and certification shall be signed in accordance with Part V.G. of the permit.

- When practices require repair or maintenance. If the inspection reveals that a control practice is in need of repair or maintenance, with the exception of a sediment settling pond, it must be repaired or maintained within three days of the inspection. Sediment settling ponds must be repaired or maintained within 10 days of the inspection.
- When practices fail to provide their intended function. If the inspection reveals that a control practice fails to perform its intended function and that another, more appropriate control practice is required, the SWP3 must be amended and the new control practice must be installed within 10 days of the inspection.
- When practices depicted on the SWP3 are not installed. If the inspection reveals that a control practice has not been implemented in accordance with the schedule contained in Part III.G.1.g of this permit, the control practice must be implemented within 10 days from the date of the inspection. If the inspection reveals that the planned control practice is not needed, the record must contain a statement of explanation as to why the control practice is not needed.

**MAINTENANCE**

All temporary and permanent control practice shall be maintained and repaired as needed to ensure continued performance of their intended function. All sediment control practices must be maintained in a functional condition until all up slope areas they control are permanently stabilized. The SWP3 shall be designed to minimize maintenance requirements. The applicant shall provide a description of maintenance procedures needed to ensure the continued performance of control practices.

**Table 1: Permanent Stabilization**

Area requiring permanent stabilization	Time frame to apply erosion controls
Any areas that will lie dormant for one year or more	Within seven days of the most recent disturbance
Any areas within 50 feet of a surface water of the state and at final grade	Within two days of reaching final grade
Any other areas at final grade	Within seven days of reaching final grade within that area

**Table 2: Temporary Stabilization**

Area requiring temporary stabilization	Time frame to apply erosion controls
Any disturbed areas within 50 feet of a surface water of the state and not at final grade	Within two days of the most recent disturbance if the area will remain idle for more than 14 days
For all construction activities, any disturbed areas that will be dormant for more than 14 days but less than one year, and not within 50 feet of a surface water of the state	Within seven days of the most recent disturbance within the area
Disturbed areas that will be idle over winter	For residential subdivisions, disturbed areas must be stabilized at least seven days prior to transfer of permit coverage for the individual lot(s). Prior to the onset of winter weather

Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed. Permanent and temporary stabilization are defined in Part VII.

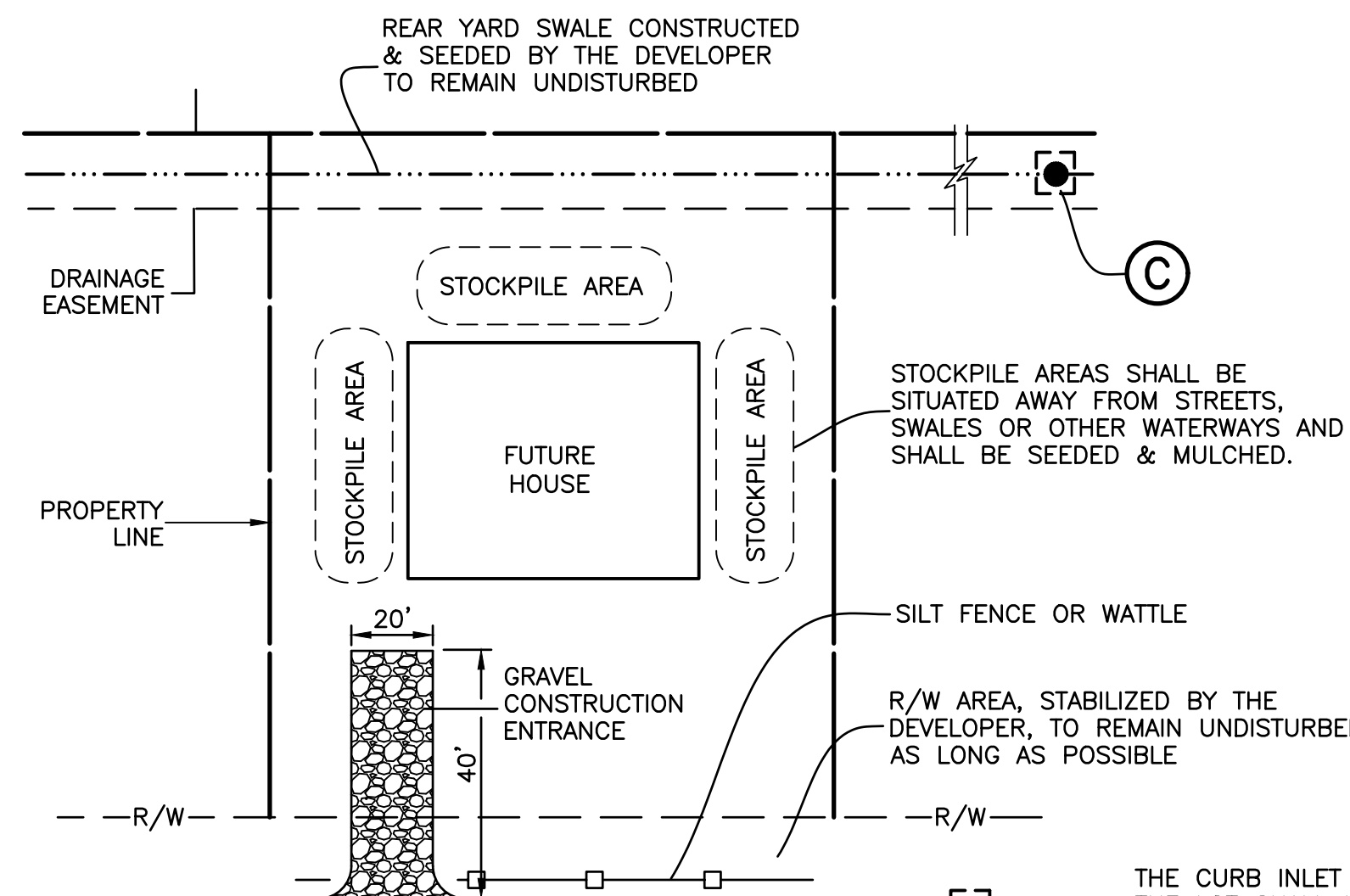
**Ⓒ TOPSOIL**

**Salvaging and Stockpiling**

- Determine the depth and suitability of topsoil at the site. (for help, contact your local SWCD office to obtain a county soil survey report)
- Prior to stripping topsoil, install appropriate downslope erosion and sedimentation controls such as sediment traps and basins.
- Remove the soil material no deeper than what the county soil survey describes as "surface soil" (ie. A or Ap horizon)
- Construct stockpiles in accessible location that do not interfere with natural drainage. Install appropriate sediment controls to trap sediment such as silt fence immediately adjacent to the stockpile or sediment traps or basins downstream of the stockpile. Stockpile side slopes shall not exceed a ratio of 2:1.
- If topsoil is stored for more than 21 days, it should be temporary seeded, or covered with a tarp

**Spreading the Topsoil**

- Prior to applying topsoil, the topsoil should be pulverized.
- To ensure bonding, grade the subsoil and roughen the top 3-4 in. by disking.
- Do not apply when site is wet, muddy, or frozen, because it makes spreading difficult, causes compaction problems, and inhibits bonding with subsoil.
- Apply topsoil evenly to a depth of at least 4 inches and compact slightly to improve contact with subsoil.
- After spreading, grade and stabilize with seeding or appropriate vegetation.



THE CURB INLET COLLECTING WATER FROM THE LOT SHALL HAVE PROPER INLET PROTECTION. IF NO INLET PROTECTION IS PRESENT, IT SHALL BE INSTALLED PER THE DETAIL ON SHEET 3.

**SPECIFICATIONS FOR SMALL LOT BUILDING SITES**

- Preexisting vegetation shall be retained on idle portions of the building lot for as long as construction operations allow. Clearing shall be done so only active working areas are bare.
- Temporary seed (annual rye, oats, etc.) and/or mulch shall be applied to areas, such as stockpiles, that are bare and not actively being worked. This shall apply to areas that will not be reworked for 14 days or more.
- Stockpiles excavated from basements shall be situated away from streets, swales, or other waterways and shall be seeded and/or mulched.
- Silt fence shall control sheet flow runoff from the building lot. It shall not be constructed in channels or areas of concentrated flow. Other sediment controls such as inlet protection and sediment traps shall also be used as needed to control sediment runoff.
- Construction vehicle access shall be limited to one route, to the greatest extent practical. The access shall be gravel or crushed rock applied to the driveway area.
- Mud tracked onto the street or sediment settled around curb inlet protection shall be removed daily or as needed to prevent it from accumulating. It shall be removed by shoveling and scraping and shall NOT be washed off paved surfaces or into storm drains.

FELLER, FINCH & ASSOCIATES, INC.		
REVISION	DATE	DESIGN BY: CMG
		DRAWN BY: RSP
		DATE: 3-16-22
		CHK'D BY: GNF
		DRAWING: 10E09360

**SedCatch® SedCage® - Yard Inlet Protection**

LEGEND	
SC	SedCage®

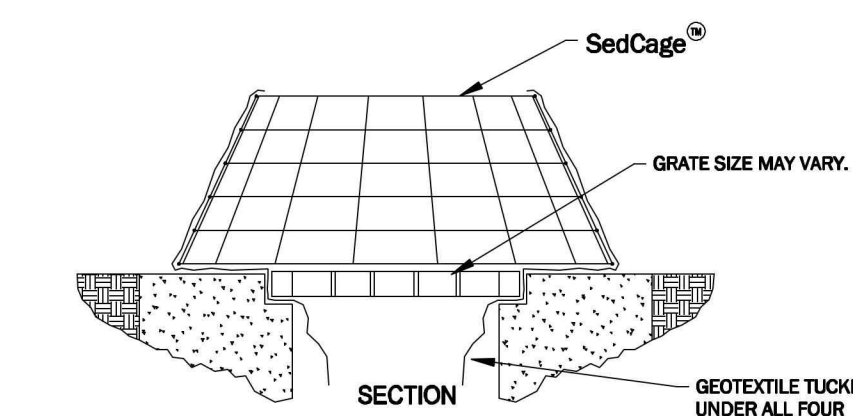
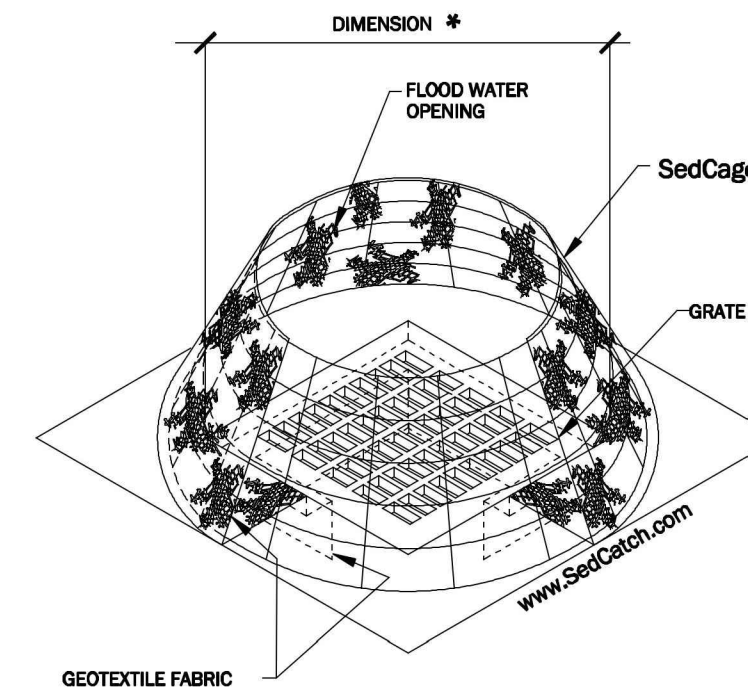
**SIZING INSTRUCTIONS:**  
MEASURE THE DIAGONAL DIMENSION OF THE GRATE. SELECT A CAGE THAT IS AT LEAST 1" LARGER.

**COMPATIBLE GRATES:**  
A SedCage® IS COMPATIBLE WITH ALL GRATES IN WHICH THE EDGES OF THE GRATE ARE SUPPORTED BY A LEDGE.

**SIZES:**

- 30" SedCage®  
FITS SQUARE GRATES FROM 12" X 12" THROUGH 22" X 22"  
FITS ROUND GRATES FROM 8" DIA. THROUGH 24" DIA.  
FITS RECTANGULAR GRATES WITH A DIAGONAL BETWEEN 17" AND 31" ( $c^2 = a^2 + b^2$ )
- 42" SedCage®  
FITS SQUARE GRATES FROM 19" X 19" THROUGH 29" X 29"  
FITS ROUND GRATES FROM 10" DIA. THROUGH 30" DIA.  
FITS RECTANGULAR GRATES WITH A DIAGONAL BETWEEN 28" AND 41" ( $c^2 = a^2 + b^2$ )
- 54" SedCage®  
FITS SQUARE GRATES FROM 24" X 24" THROUGH 36" X 36"  
FITS ROUND GRATES FROM 14" DIA. THROUGH 40" DIA.  
FITS RECTANGULAR GRATES WITH A DIAGONAL BETWEEN 32" AND 53" ( $c^2 = a^2 + b^2$ )
- 62" SedCage®  
FITS SQUARE GRATES FROM 27" X 27" THROUGH 42" X 42"  
FITS ROUND GRATES FROM 16" DIA. THROUGH 48" DIA.  
FITS RECTANGULAR GRATES WITH A DIAGONAL BETWEEN 44" AND 61" ( $c^2 = a^2 + b^2$ )

CUSTOM SIZES AVAILABLE



**FLOOD WATER CLEAR OPENING:**

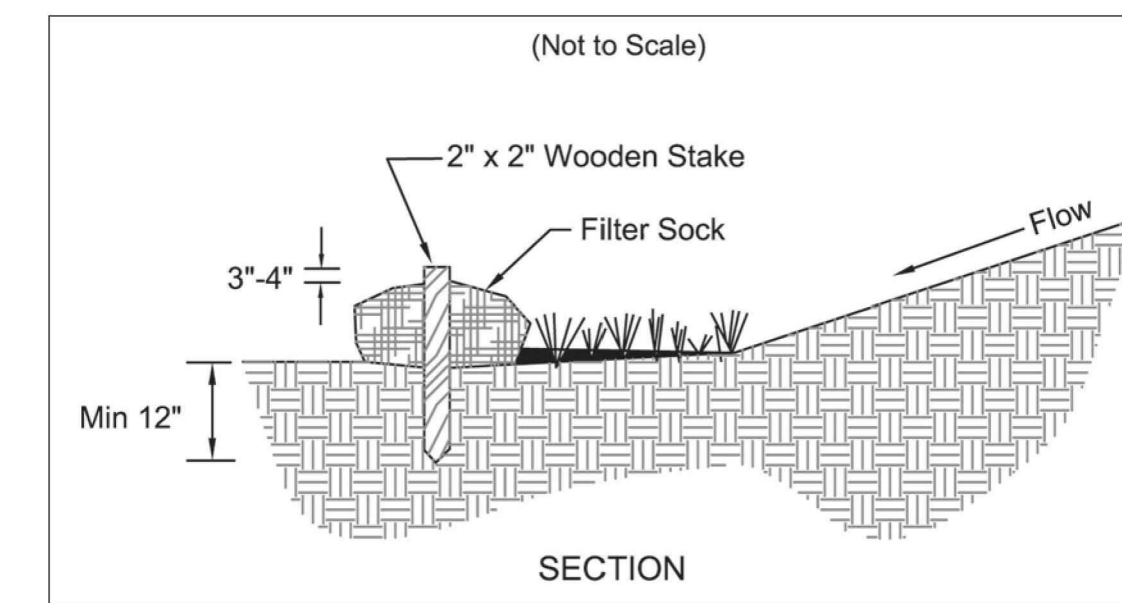
30" SedCage	230 sq.in.
42" SedCage	515 sq.in.
54" SedCage	1075 sq.in.
62" SedCage	1300 sq.in.

US PATENT D 620,999, OTHER PATENTS PENDING

SedCatch® Environmental Products  
www.SedCatch.com

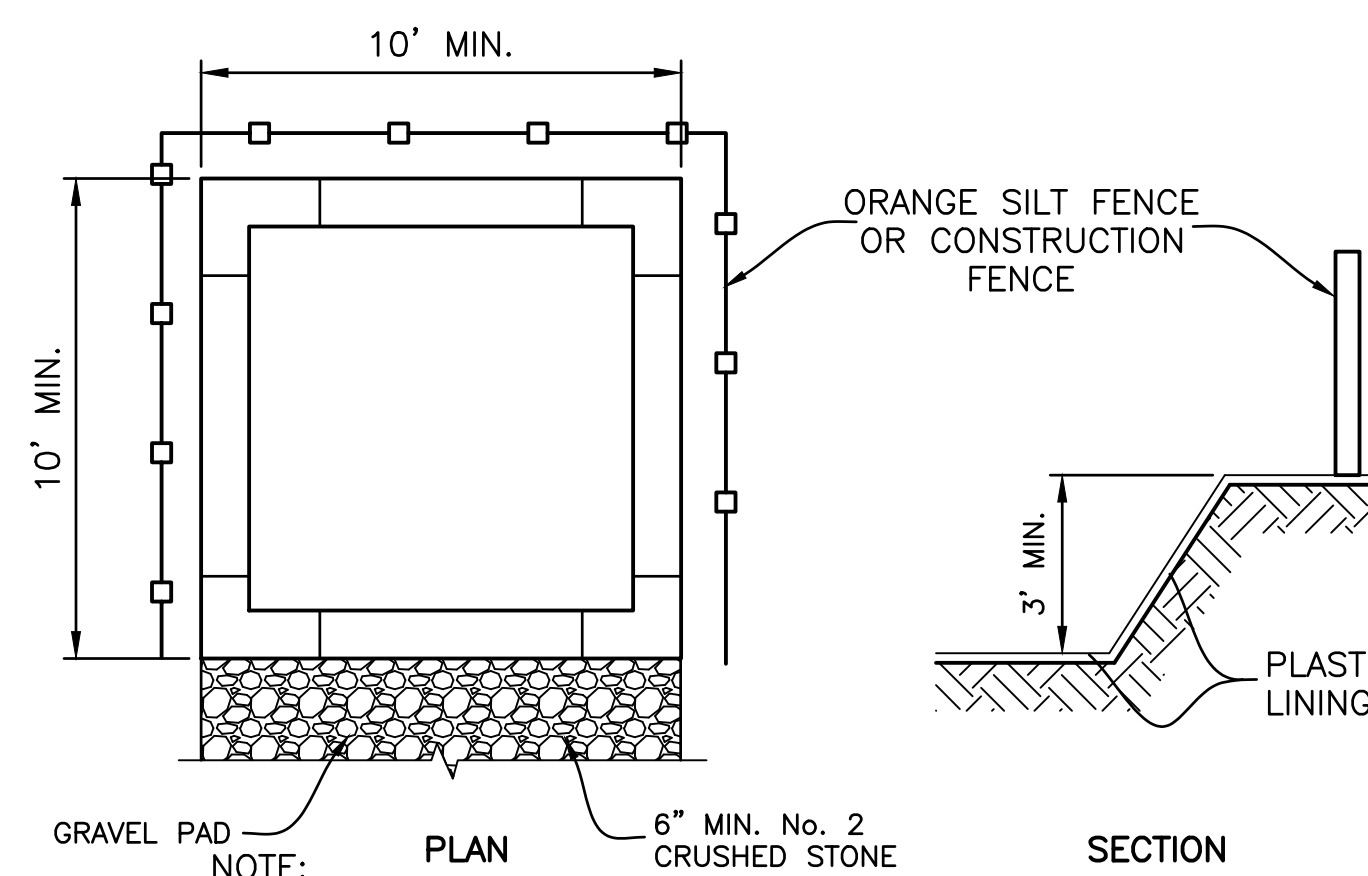
- INLET PROTECTION SHALL BE INSTALLED AT THE TIME THE STRUCTURE IS SET.
- TO INSTALL: TUCK FABRIC UNDER GRATE.
- REMOVE SEDIMENT IF IT ACCUMULATES TO ONE HALF THE HEIGHT OF THE SedCage®.
- THE AREA AROUND THE SedCage® SHOULD BE AS FLAT AS POSSIBLE TO INCREASE EFFECTIVENESS AND REDUCE MAINTENANCE REQUIREMENTS.
- AS WITH ALL INLET PROTECTION DEVICES, CHECK TO SEE HOW DEEP THE WATER COULD RISE IF THE INLET WERE BLOCKED ENTIRELY. DO NOT INSTALL IN LOCATIONS THAT COULD CAUSE PROPERTY DAMAGE OR POSE A SAFETY HAZARD TO TRAFFIC.

**(C) YARD INLET PROTECTION**



- Materials - Compost used for filter socks shall be weed, pathogen and insect free and free of any refuse, contaminants or other materials toxic to plant growth. They shall be derived from a well-decomposed source of organic matter and consist of a particles ranging from 3/8" to 2".
  - Filter Socks shall be 3 or 5 mil continuous, tubular, HDPE 3/8" knitted mesh netting material, filled with compost passing the above specifications for compost products.
  - Filter socks will be placed on a level line across slopes, generally parallel to the base of the slope or other affected area. On slopes approaching 2:1, additional socks shall be provided at the top and as needed mid-slope.
  - Filter socks intended to be left as a permanent filter or part of the natural landscape, shall be seeded at the time of installation for establishment of permanent vegetation.
  - Filter Socks are not to be used in concentrated flow situations or in runoff channels.
- MAINTENANCE:**
- Routinely inspect filter socks after each significant rain, maintaining filter socks in a functional condition at all times.
  - Remove sediments collected at the base of the filter socks when they reach 1/3 of the exposed height of the practice.
  - Where the filter sock deteriorates or fails, it will be repaired or replaced with a more effective alternative.
  - Removal - Filter socks will be dispersed on site when no longer required in such a way as to facilitate and not obstruct seedings.

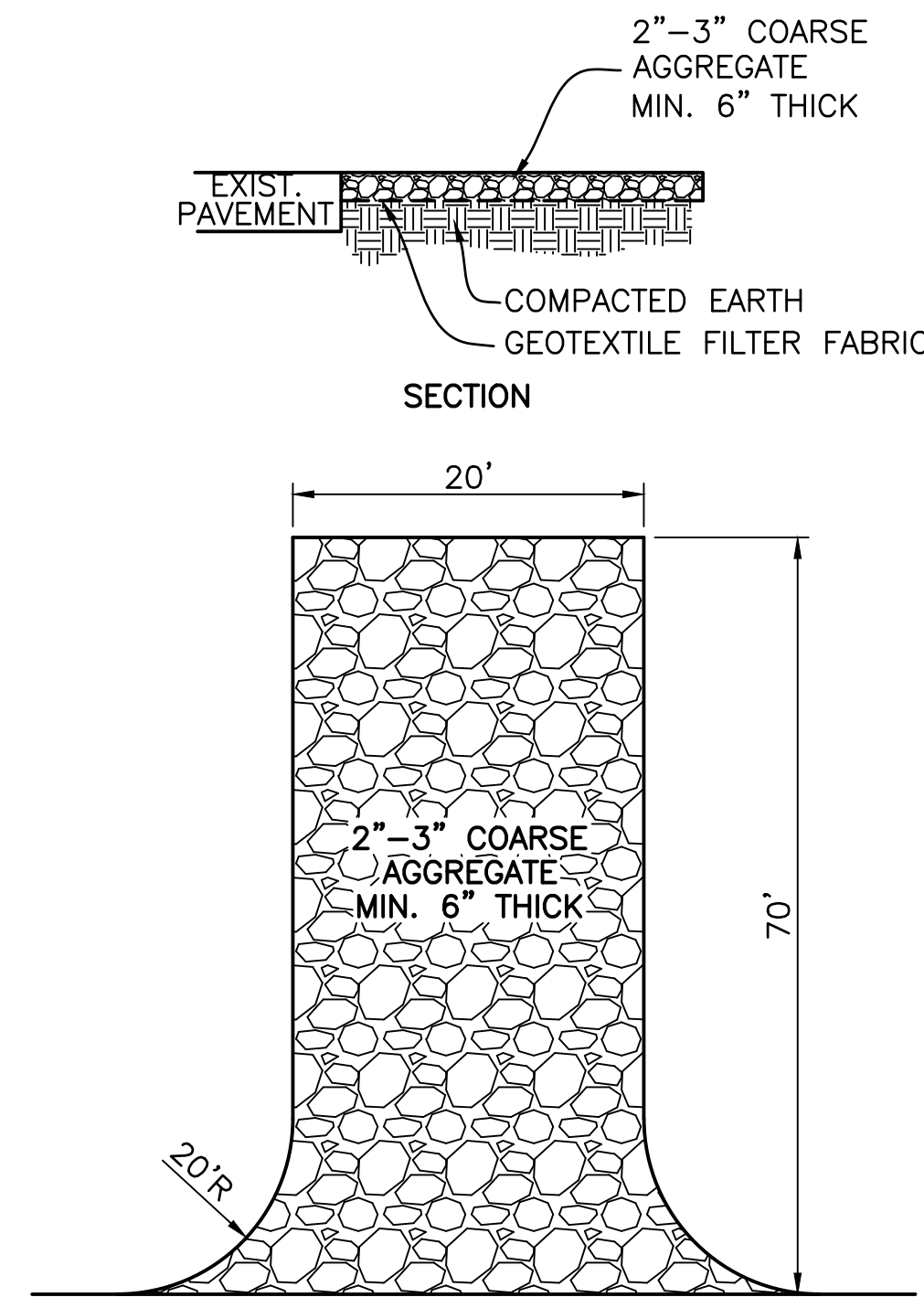
**(F) PERIMETER FILTER SOCK**



**NOTE:**  
CONTRACTOR CAN USE PORTABLE CONCRETE WASHOUT AREAS IN LIEU OF CONCRETE WASHOUT BASINS (RECOMMENDED).

WASHOUT AREAS MUST HAVE SOME FORM OF PLASTIC LINING.

**(D) CONCRETE WASHOUT AREA**  
NOT TO SCALE



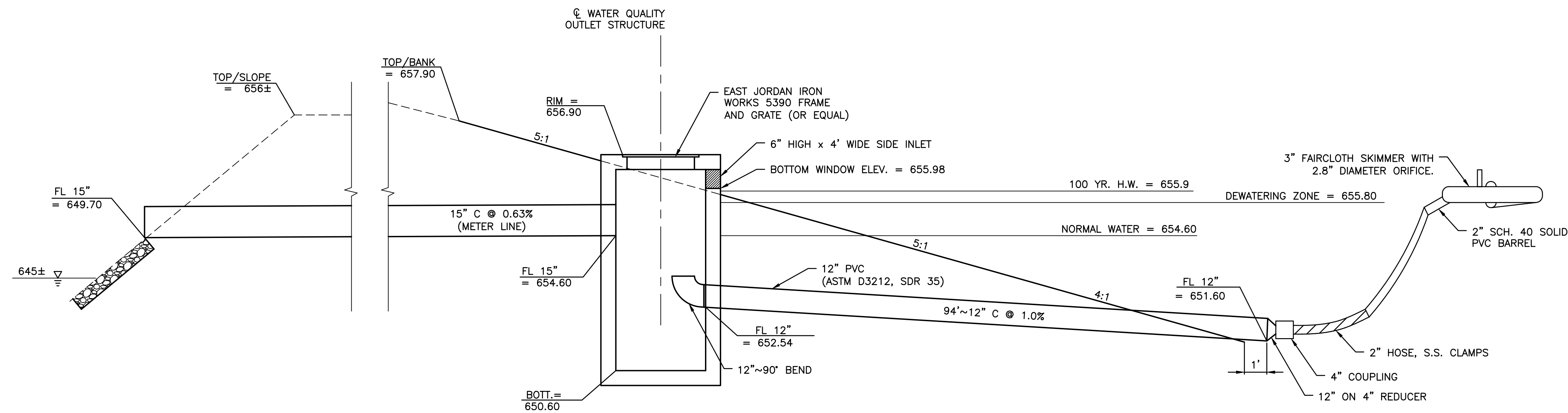
IF MUD MAT BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONE MUST BE CLEANED AND REPLACED.

ALL EQUIPMENT LEAVING SITE MUST USE MUD MATT AND HAVE LOADS STABILIZED AND TIGHT WITH ALL LOOSE DEBRIS AND MATTER REMOVED PRIOR TO TRAVELING ON PUBLIC ROADWAYS.

ANY TRACK-OUT NOT CONTAINED BY THE MUD MAT MUST BE CLEANED UP BY THE CONTRACTOR IMMEDIATELY AFTER OCCURRENCE NO LATTER.

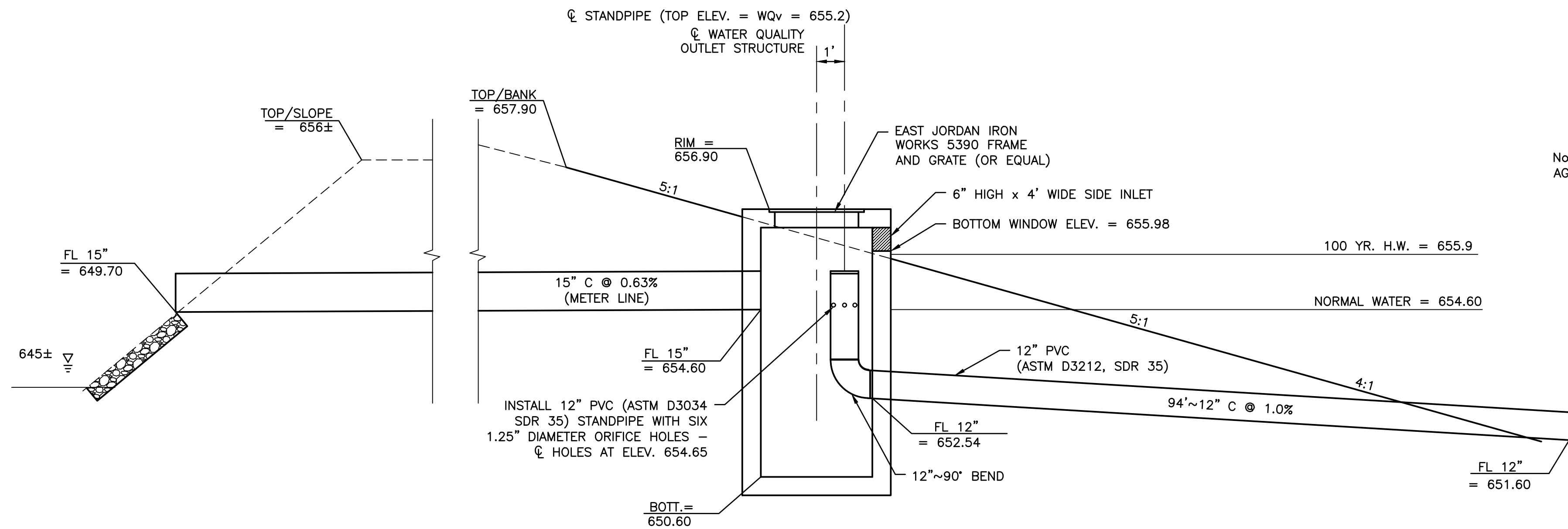
**(E) CONSTRUCTION ENTRANCE "MUD MAT" DETAIL**  
NOT TO SCALE

FELLER, FINCH & ASSOCIATES, INC.			
REVISION	DATE	DESIGN BY:	CMG
		DRAWN BY:	RSP
		DATE:	3-16-22
		CHK'D BY:	GNF
		DRAWING:	10E09360SWP001



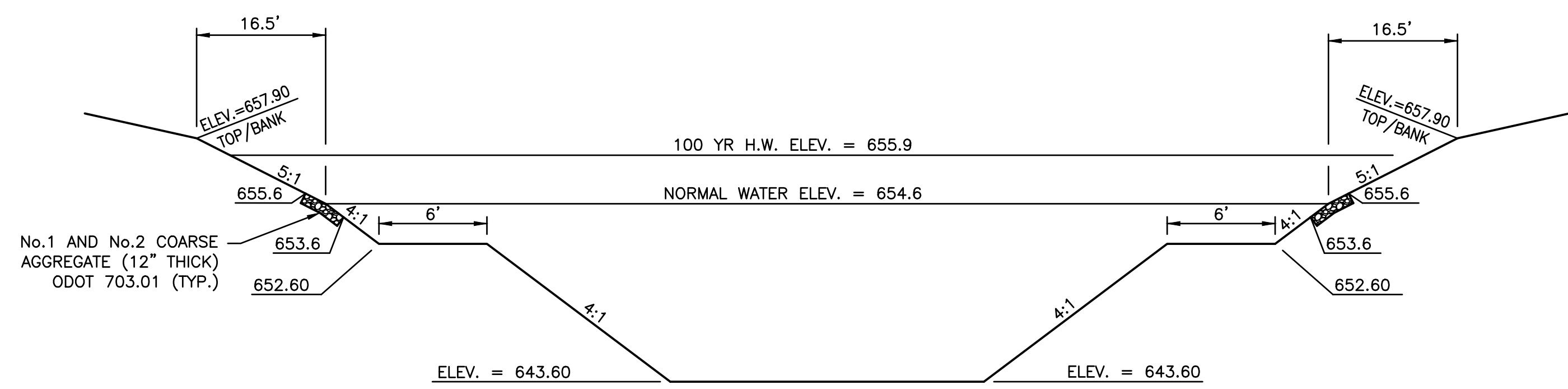
**BASIN OUTLET STRUCTURE (DURING CONSTRUCTION)  
ODOT 2-4 CATCH BASIN, MODIFIED**

N.T.S.



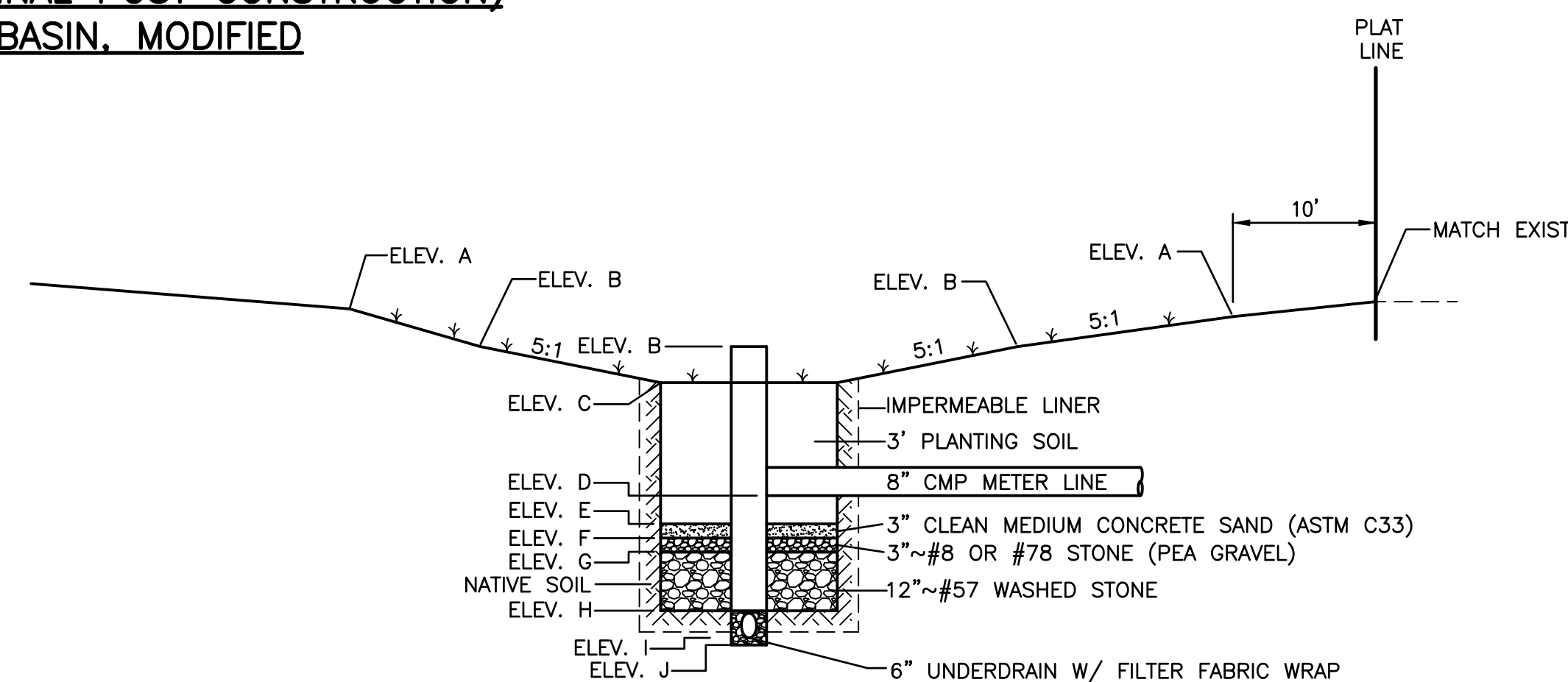
**BASIN OUTLET STRUCTURE (FINAL POST CONSTRUCTION)  
ODOT 2-4 CATCH BASIN, MODIFIED**

N.T.S.



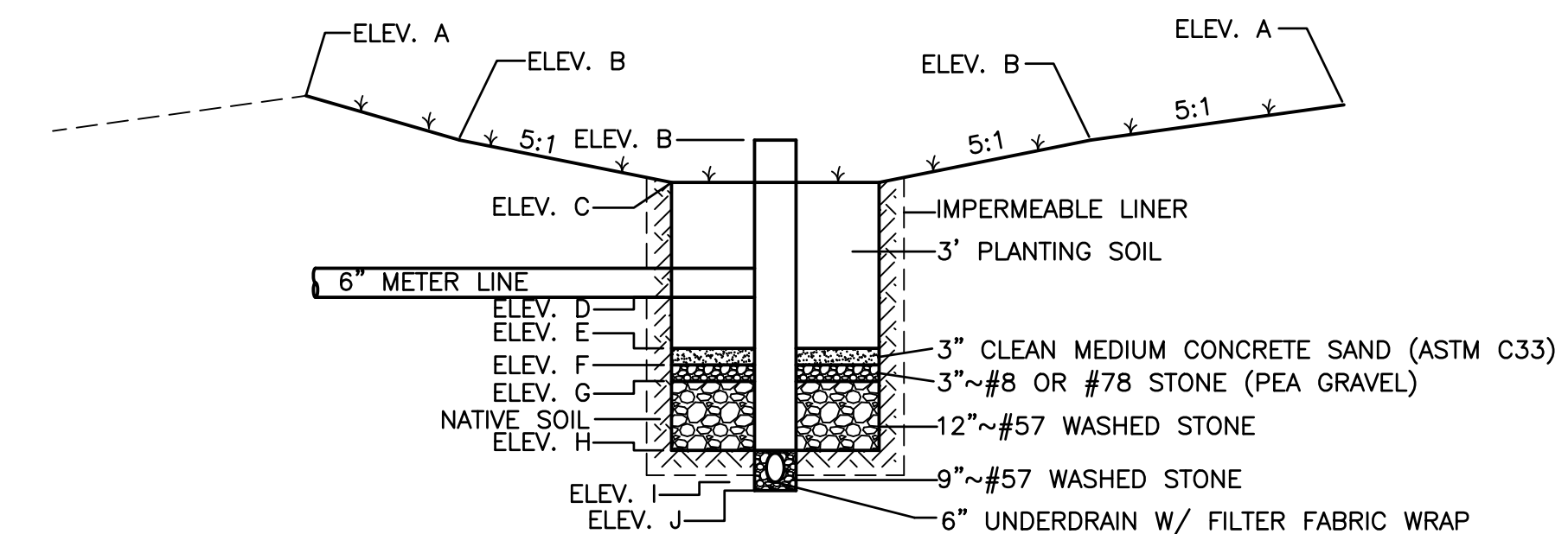
**RETENTION BASIN SECTION**

N.T.S.



**BIORETENTION POND #1 SECTION**

POND	ELEV. A	ELEV. B	ELEV. C	ELEV. D	ELEV. E	ELEV. F	ELEV. G	ELEV. H	ELEV. I	ELEV. J
1	657.8	657.1	656.1	653.60	653.1	652.85	652.60	651.60	651.10	650.85



**BIORETENTION POND #2 SECTION**

POND	ELEV. A	ELEV. B	ELEV. C	ELEV. D	ELEV. E	ELEV. F	ELEV. G	ELEV. H	ELEV. I	ELEV. J
2	658.5	658.0	657.0	654.50	654.0	653.75	653.50	652.50	652.00	651.75

**BENCH MARK DATA**  
SITE BENCH MARK No. 150

MAG NAIL IN WEST FACE OF POWER POLE AT THE NORTHEAST CORNER OF INTERSECTION OF BACK BAY ROAD AND COACH HOUSE LOOP.

ELEVATION . . . . . 661.21

**EASEMENT ABBREVIATIONS**

- S.E. . . . . . SANITARY SEWER EASEMENT
- U.T.E. . . . . . UTILITY & TOLEDO EDISON EASEMENT
- D.E. . . . . . DRAINAGE EASEMENT
- A.V.A.E. . . . . . ANTI-VEHICULAR ACCESS EASEMENT

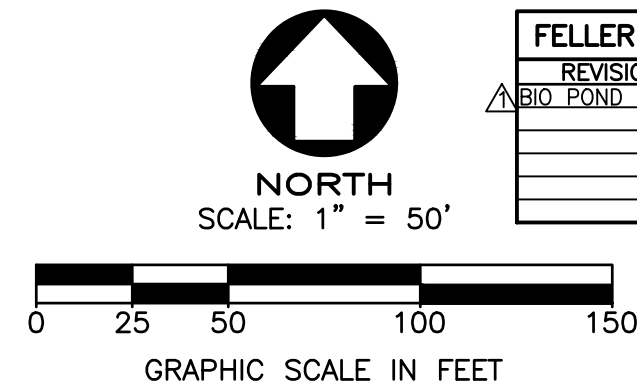
AS PER FEMA COMMUNITY PANEL NUMBER 39173C0108D EFFECTIVE DATE SEPT. 2, 2011, THIS PROJECT IS NOT WITHIN THE 100 YEAR FLOOD HAZARD AREA.

CURVE DATA					
CURVE	ARC LENGTH	RADIUS	CENTRAL ANGLE	CHORD BEARING	CHORD LENGTH
C1	112.10'	160.00'	40°08'38"	S 42°11'24" E	109.82'
C2	141.3717'	45.0000'	180°00'00"	N 22°07'05" W	90.0000'
C3	141.3717'	45.0000'	180°00'00"	S 22°07'05" E	90.0000'

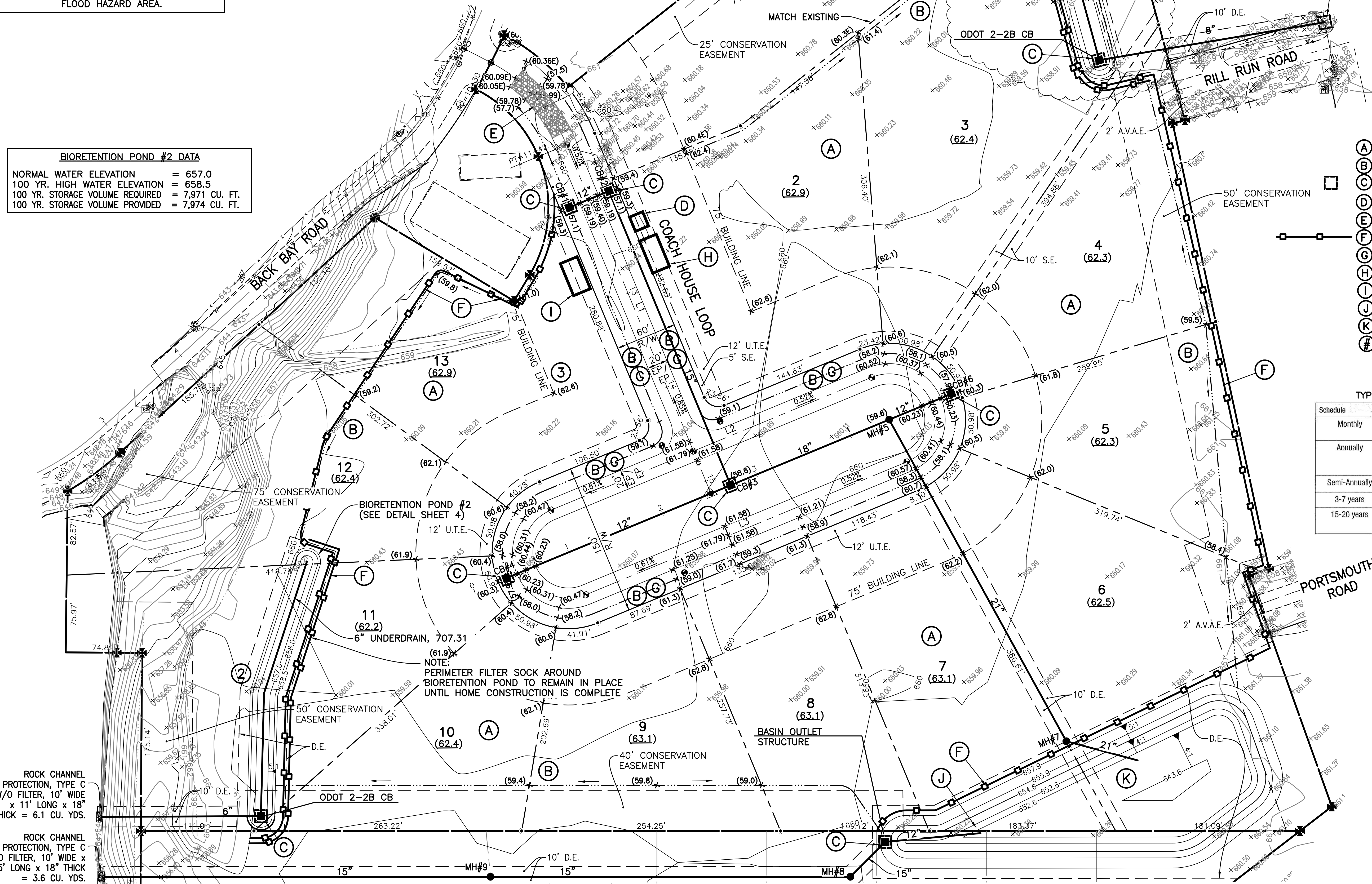
LINE DATA		
LINE	BEARING	DISTANCE
L1	S 22°07'05" E	370.88'
L2	N 67°52'55" E	341.12'
L3	N 67°52'55" E	341.12'

NOTE:  
PERIMETER FILTER SOCK AROUND BIORETENTION POND TO REMAIN IN PLACE UNTIL HOME CONSTRUCTION IS COMPLETE

BIORETENTION POND #1 DATA	
NORMAL WATER ELEVATION	= 656.1
100 YR. HIGH WATER ELEVATION	= 657.8
100 YR. STORAGE VOLUME REQUIRED	= 8,882 CU. FT.
100 YR. STORAGE VOLUME PROVIDED	= 9,170 CU. FT.



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REVISION	DATE	DESIGN BY:	CMG
1	6/27/22	DRAWN BY:	RSP
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		DRAWING:	10E09360SWP001



**NON-SEDIMENT POLLUTANTS**

No discharge of pollutants associated with dedicated asphalt and concrete plants are permitted on site. This includes, but is not limited to, the discharge of concrete or vehicle wash water.

No solid (other than sediment) or liquid waste, including building materials, shall be discharged in storm water runoff. All wastes must be disposed of in a proper manner in accordance with local, state & federal regulations.

It is prohibited to burn, bury or pour onto the ground or into a storm water conveyance system any solvent, paints, stains, gasoline, diesel fuel, hydraulic fluid, used motor oil, anti-freeze, cement curing compounds and other such solids or hazardous wastes. Any rinse waters containing such materials are prohibited from being placed where they may enter drainageways.

- (A) CONSTRUCTION SEEDING AND MULCHING
- (B) PERMANENT SEEDING AND MULCHING
- (C) YARD INLET PROTECTION
- (D) CONCRETE WASHOUT AREA
- (E) CONSTRUCTION ENTRANCE
- (F) PERIMETER FILTER SOCK
- (G) TOPSOIL
- (H) DUMPSTER AREA
- (I) VEHICLE REFUELING AREA
- (J) FAIRCLOTH SKIMMER
- (K) SEDIMENT BASIN
- (#) TESTHOLE LOCATIONS

**TYPICAL MAINTENANCE ACTIVITIES FOR WATER QUALITY PONDS**

Schedule	Activity
Monthly	Mow embankment and clean trash and debris from outlet structure. Address any accumulation of hydrocarbons.
Annually	Inspect embankment and outlet structure for damage and proper flow. Remove woody vegetation and fix any eroding areas. Monitor sediment accumulations in forebay and main pool.
Semi-Annually	Inspect wetland areas for invasive plants.
3-7 years	Remove Sediment from forebays.
15-20 years	Monitor sediment accumulations in the main pool and clean as pond becomes eutrophic or pool volume is reduced significantly.

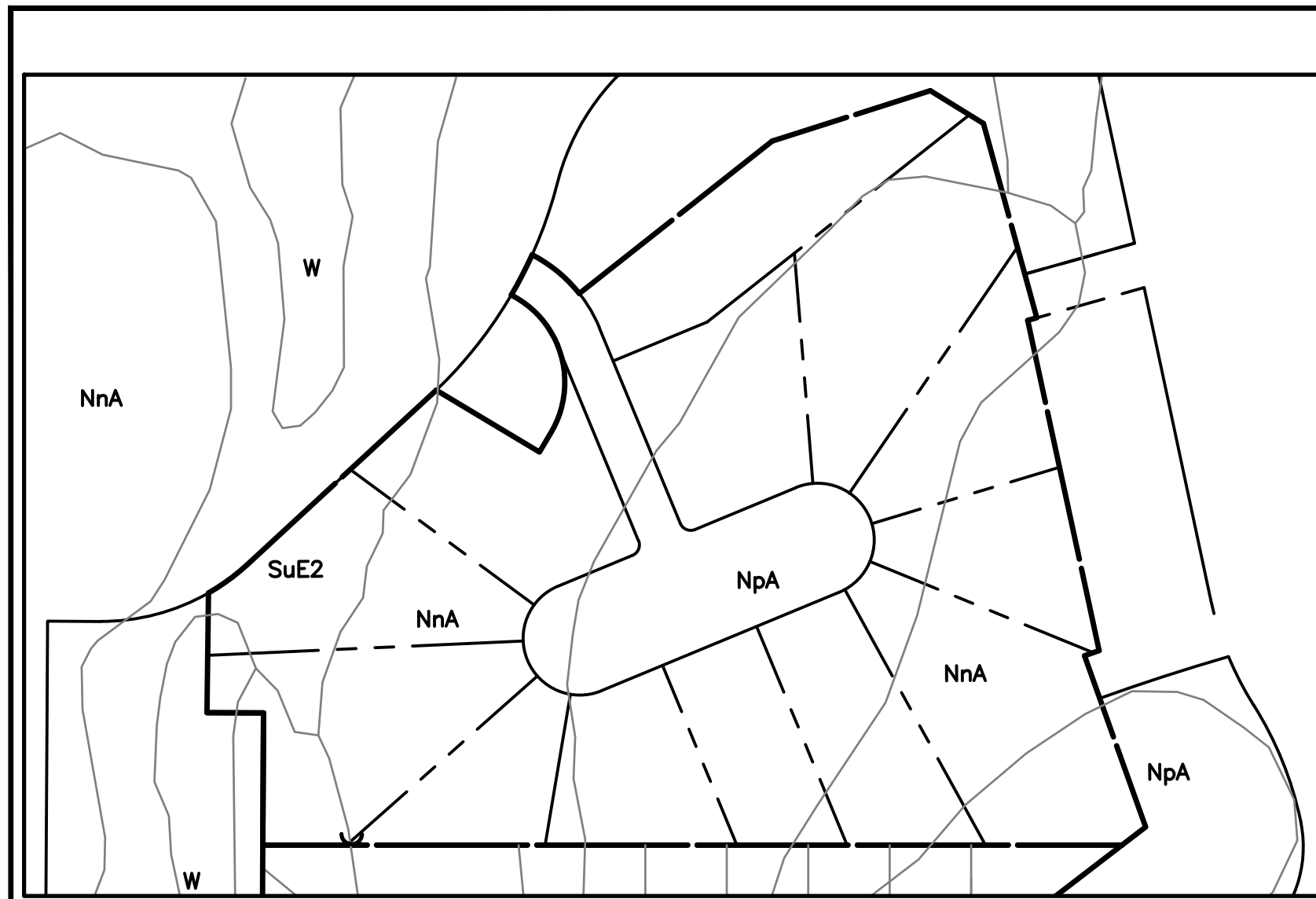
NOTE:  
SEDIMENT BASIN SHALL BE CLEANED WHEN THE SEDIMENT STORAGE AREA BECOMES 40% FULL.

SEE SHEETS 2 & 3 FOR SWP3 NOTES AND DETAILS.

NOTE:  
IF SEASONAL CONDITIONS PROHIBIT THE ESTABLISHMENT OF VEGETATIVE COVER, OTHER METHODS OF STABILIZATION SUCH AS MULCHING WITH A TACKIFIER OR MATTING, MUST BE EMPLOYED AND MAINTAINED UNTIL A MORE PERMANENT METHOD CAN BE IMPLEMENTED.

**RETENTION BASIN DATA**

NORMAL WATER ELEVATION	= 654.6
100 YR. HIGH WATER ELEVATION	= 655.9
100 YR. STORAGE VOLUME REQUIRED	= 36,905 CU. FT.
100 YR. STORAGE VOLUME PROVIDED	= 39,618 CU. FT.



**SOILS MAP**  
 NnA NAPPANEE LOAM  
 NpA NAPPANEE SILTY CLAY LOAM  
 SuE2 ST CLAIR SILTY CLAY LOAM  
 W WATER

CURVE DATA					
CURVE	ARC LENGTH	RADIUS	CENTRAL ANGLE	CHORD BEARING	CHORD LENGTH
C1	112.10'	160.00'	40°08'38"	S 42°11'24" E	109.82'
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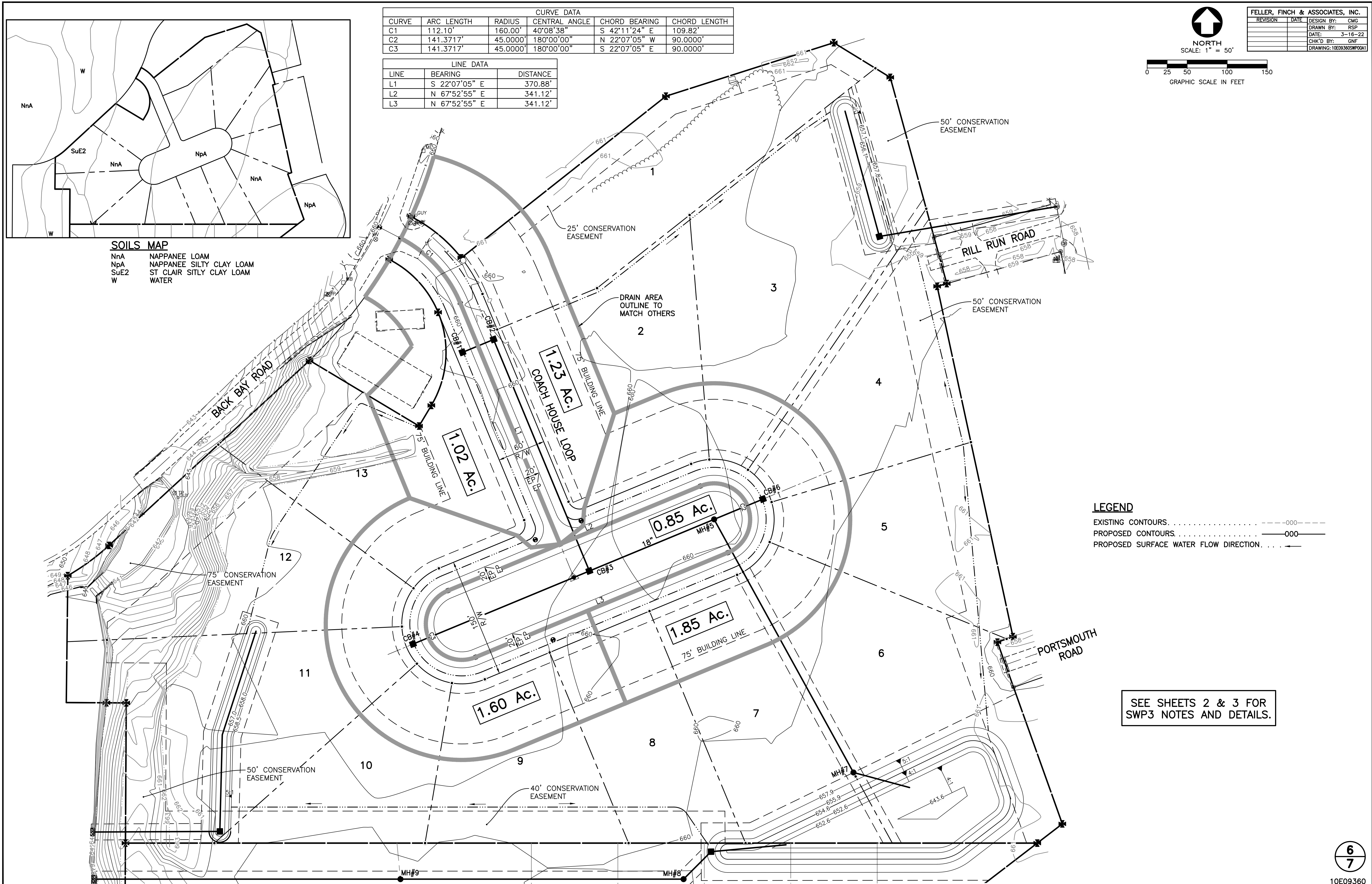
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FELLER, FINCH & ASSOCIATES, INC.

REVISION	DATE	DESIGN BY: CMG
		DRAWN BY: RSP
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NORTH  
SCALE: 1" = 50'

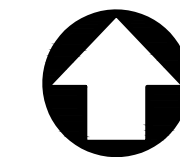
0 25 50 100 150  
GRAPHIC SCALE IN FEET



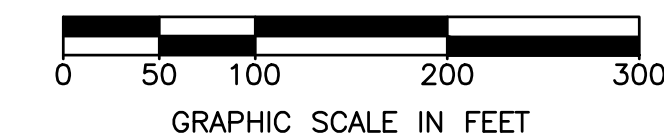
**LEGEND**  
 EXISTING CONTOURS: .....-000-  
 PROPOSED CONTOURS: .....-000-  
 PROPOSED SURFACE WATER FLOW DIRECTION: . . . . .

SEE SHEETS 2 & 3 FOR SWP3 NOTES AND DETAILS.

P:\Projects\10E09360\_Dwg\10E09360SWP001.dwg, 6/8/2022 7:49:34 AM, rpwilicki



NORTH  
SCALE: 1" = 100'



FELLER, FINCH & ASSOCIATES, INC.			
REVISION	DATE	DESIGN BY:	CMG
		DRAWN BY:	RSP
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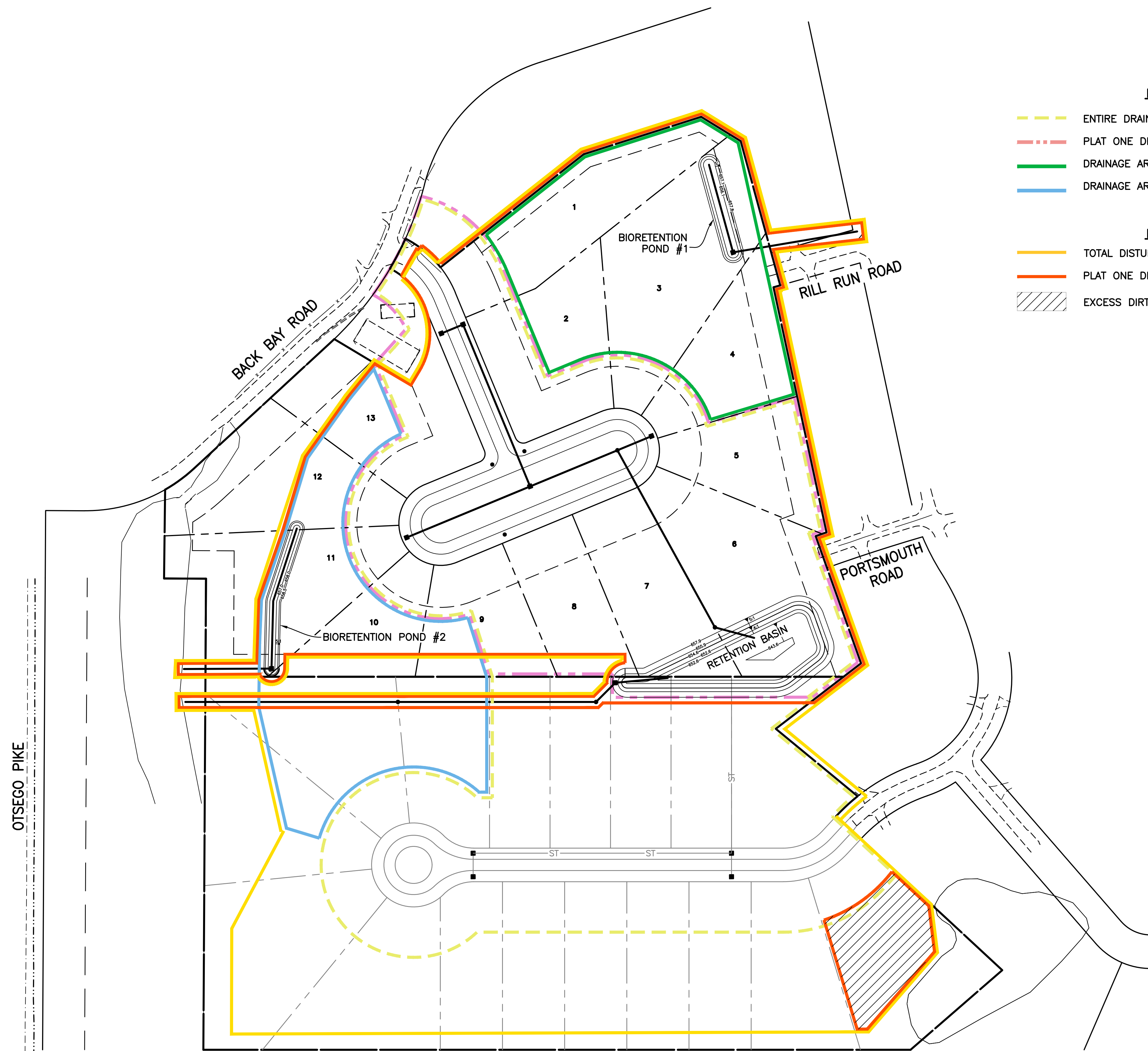
**LEGEND**

**DRAINAGE AREAS**

- ENTIRE DRAINAGE AREA TO RETENTION BASIN = 19.42 Ac.
- PLAT ONE DRAINAGE AREA TO RETENTION BASIN = 11.14 Ac.
- DRAINAGE AREA TO BIORETENTION POND #1 = 4.34 Ac.
- DRAINAGE AREA TO BIORETENTION POND #2 = 4.21 Ac.

**DISTURBED AREAS**

- TOTAL DISTURBED AREA = 32.13 Ac.
- PLAT ONE DISTURBED AREA = 18.12 Ac.
- EXCESS DIRT FILL AREA



STORM WATER POLLUTION PREVENTION PLAN  
FOR

# The Reserve at Williamsburg On The River Plat One

WASHINGTON TOWNSHIP, WOOD COUNTY, OHIO

**INDEX OF SHEETS**

TITLE SHEET ..... 1  
 GENERAL NOTES AND DETAILS ..... 2-3  
 BASIN DETAILS ..... 4  
 SEDIMENT CONTROL PLAN ..... 5  
 DRAINAGE WATERSHEDS AND CONTOURS ..... 6  
 DRAINAGE AREA & DISTURBED AREA MAP ..... 7

**GENERAL SUMMARY**

ITEM	QTY.	UNIT	DESCRIPTION
<b>EROSION CONTROL</b>			
SPEC.	LUMP	LUMP	TEMPORARY CONSTRUCTION ENTRANCE, AS PER PLAN
SPEC.	LUMP	LUMP	CONCRETE WASHOUT AREA
	832	△(2850) FT.	PERIMETER FILTER SOCK
SPEC.	9	EACH	YARD INLET PROTECTION
	832	8032 SQ. YD.	CONSTRUCTION SEEDING AND MULCHING
	659	53160 SQ. YD.	PERMANENT SEEDING AND MULCHING
	659	0.72 TONS	COMMERCIAL FERTILIZER (12-12-12) (20 LBS./1,000 SQ. FT.)
	659	21.7 MGAL	WATERING (300 GAL/1,000 SQ. FT.)

**BENCH MARK DATA**

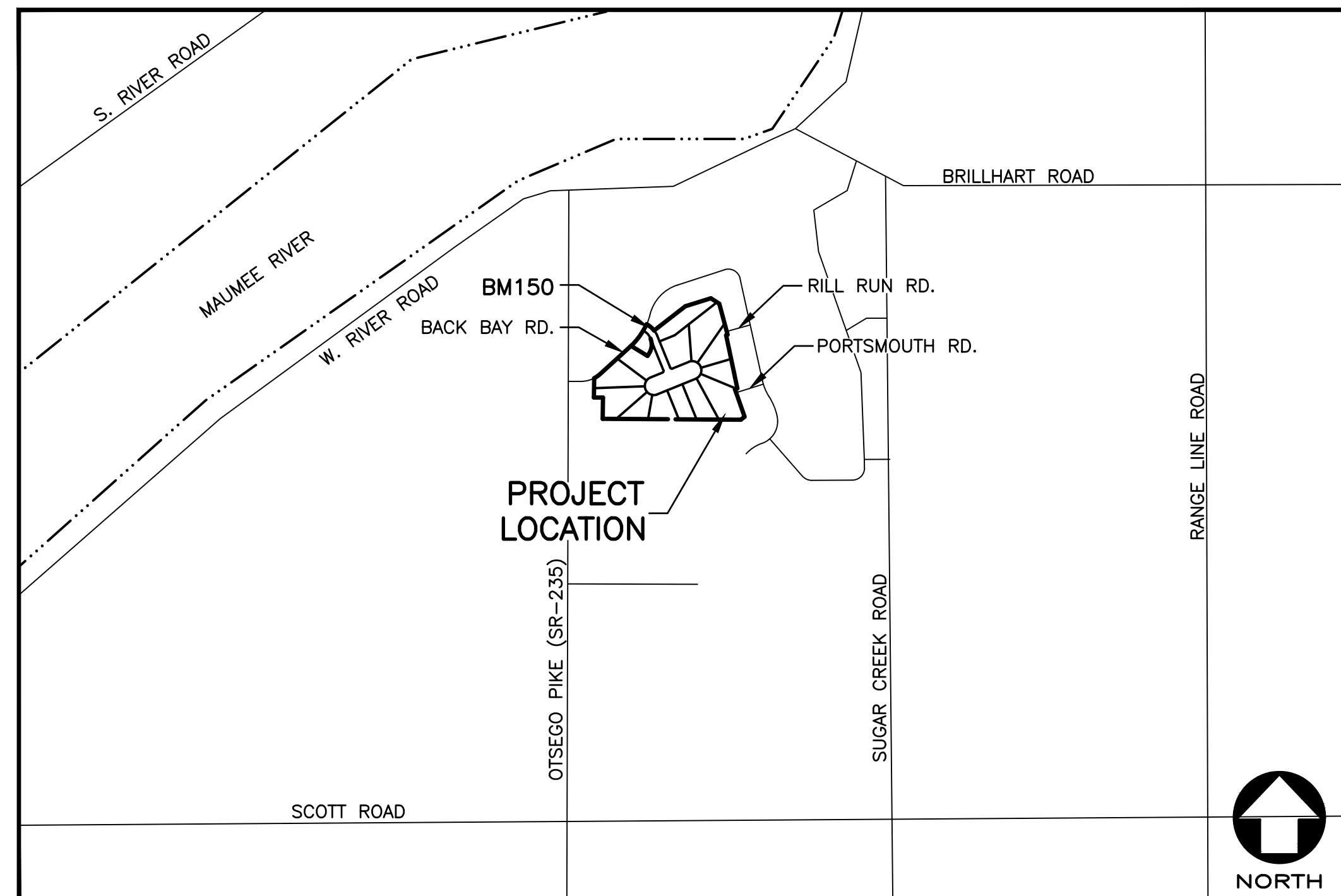
**SITE BENCH MARK No. 150**  
 MAG NAIL IN WEST FACE OF POWER POLE AT THE NORTHEAST CORNER OF INTERSECTION OF BACK BAY ROAD AND COACH HOUSE LOOP.

ELEVATION ..... 661.21

THE RESERVE AT WILLIAMSBURG ON THE RIVER PLAT ONE IS A PROPOSED DEVELOPMENT THAT INCLUDES INSTALLATION OF ALL INFRASTRUCTURE TO SERVE 13 SINGLE FAMILY LOTS.

**CONVENTIONAL SIGNS**

	PROPOSED	EXISTING
SANITARY SEWER	—S—	—S—
STORM SEWER	—ST—	—ST—
WATERLINE	—W—	—W—
SANITARY MANHOLE	●	⊙
STORM MANHOLE	●	⊙
CATCH BASIN	■	⊞
YARD BASIN	●	⊙
WATER VALVE IN MANHOLE	●	⊙
HYDRANT	▼	⊙
CENTERLINE	—	—
TYPE B MONUMENT	⊕	⊕



**LOCATION MAP**

SCALE: 1" = 1,000'

**SITE DESCRIPTION AND DATA:**

A.	TYPE OF CONSTRUCTION:	SINGLE FAMILY RESIDENTIAL
B.	SITE PLAT AREA (PLAT 1):	19.00 Ac.
B.	AREA DISTURBED (PLAT 1):	18.12 Ac.
* C.	PRE-CONSTRUCTION RUNOFF COEFFICIENT:	0.10
	POST-CONSTRUCTION RUNOFF COEFFICIENT:	0.30
D.	IMPERVIOUS AREA (PLAT 1):	3.80 Ac.
	% IMPERVIOUS AFTER CONSTRUCTION (PLAT 1):	20%
E.	SOIL TYPE:	NnB2 - NAPPANNE LOAM, HoA - HOYVILLE CLAY LOAM
F.	PRIOR LAND USE:	AGRICULTURAL
H.	RECEIVING STREAM:	SISTER CREEK

\* RUNOFF COEFFICIENTS BASED ON STORM DRAINAGE DESIGN SECTION OF WOOD COUNTY SUBDIVISION AND SITE IMPROVEMENT MANUAL.

NO SURFACE WATER SHALL BE ALLOWED TO RUN OFF THE SITE. UNTIL FINAL GRADING IS COMPLETED, THE CONTRACTOR SHALL DIVERT ALL SURFACE WATER TO REMAIN ON SITE; AND MAINTAIN ALL TEMPORARY SEDIMENT AND EROSION CONTROL FEATURES.

OHIO UTILITIES PROTECTION SERVICE  
 CALL 1-800-362-2764  
 TWO WORKING DAYS BEFORE YOU DIG  
 NON-MEMBERS MUST BE CALLED DIRECTLY

IMPLEMENTATION SCHEDULE	FIELD DATE:
<b>PHASE I: SITE PREPARATION PHASE:</b>	
ESTIMATED START:	
INSTALL SILT FENCE:	
INSTALL CONSTRUCTION ENTRANCE:	
EXCAVATE SEDIMENT POND & STABILIZE BANKS	
CLEAR AND GRUB SITE:	
INSTALL SEDIMENT CONTROLS WITHIN 7 DAYS OF CLEARING AND GRUBBING:	
STABILIZATION REQUIRED IF AREAS BECOME INACTIVE FOR 14 DAYS OR LONGER:	
THE STORMWATER CONTROLS WILL REMAIN FOR THE DURATION OF THE CONSTRUCTION:	
<b>PHASE II: SITE UTILITY AND STREET PHASE:</b>	
ESTIMATED START:	
INSTALL UNDERGROUND UTILITIES:	
INSTALL INLET CONTROLS:	
INSTALL CONCRETE WASHOUT:	
EXCAVATE AND BUILD ROADWAY:	
GRADE BACK OF CURB AND SWALES:	
COMPLETE ROUGH GRADING:	
INSTALL TEMPORARY SEEDING:	
INSTALL BIORETENTION PONDS	
STABILIZATION WILL BE REQUIRED DURING THIS PHASE:	
STORMWATER CONTROLS WILL REMAIN FOR DURATION OF THE CONSTRUCTION:	
<b>PHASE III: HOME BUILDING AND SITE FINISHES:</b>	
ESTIMATED START:	
HOME BUILDER APPLY FOR INDIVIDUAL LOT NOTICE OF INTENT (NOI):	
BUILD HOUSES:	
COMPLETE FINAL GRADING:	
INSTALL PERMANENT SEEDING:	
HOME BUILDER SUBMIT INDIVIDUAL LOT NOTICE OF TERMINATION (NOT) AS LOTS ARE STABILIZED:	
CONVERT SEDIMENT BASIN STRUCTURE TO PERMANENT WATER QUALITY STRUCTURE:	
DEVELOPER SUBMIT ENTIRE SITE NOT	
STABILIZATION WILL BE REQUIRED DURING AND AFTER THIS PHASE:	

**APPROVED BY**

JOHN M. MUSTERIC, P.E., P.S. DATE  
 WOOD COUNTY ENGINEER

THE ABOVE SIGNATURE CONSTITUTES ACKNOWLEDGEMENT THAT THOSE ITEMS OUTLINED IN THE CURRENT EDITION OF THE "WOOD COUNTY SUBDIVISION AND SITE IMPROVEMENT MANUAL" OR AS AMENDED BY THE WOOD COUNTY ENGINEER, HAVE BEEN UTILIZED. TECHNICAL CORRECTNESS AND INTERPRETATION OF THOSE ITEMS CONTAINED WITHIN THE MANUAL REMAIN THE RESPONSIBILITY OF THE ENGINEER PREPARING THE PLANS. THE ABOVE SIGNATURE IS VALID FOR 18 MONTHS FROM THE DATE OF SIGNING.

**OWNER CERTIFICATION:**  
 I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

WADE SMITH DATE  
 OWNER/MEMBER

1683 Woodlands Drive, Maumee, Ohio 43537  
 Phone: (419) 893-3680  
 Fax: (419) 893-2982  
 www.fellerfinch.com

**FellerFinch**  
 & ASSOCIATES, INC.  
 Engineers • Surveyors

NO.	DATE	REVISION
	6/7/22	

TITLE SHEET  
 THE RESERVE AT WILLIAMSBURG ON THE RIVER

SIGNED	DESIGNED BY: CMG
DATE	DRAWN BY: RSP
	CHECKED BY: GNF
	REVIEWED BY: GNF
DATE: 3-16-22	1 (2) 7
PROJECT: 10E09360	