SECTION 17	n e a senare da carlador de la carlador da da esta construcción de la carlador de la carlador de la carlador d
PROJECT AREA	10.593 ACRES
AREA IN BUILDING LOTS	5.735 ACRES
AREA IN OPEN SPACE LOTS	2.789 ACRES
AREA IN R/W	2.069 ACRES

			SETBAC	CKS		
SECTION	LOTS	MINIMUM WIDTH	TYPICAL AREA	FRONT	SIDE	to Both
17	446-470	60'	8,000 S.F.	20'	alay anis	8

# GENERAL NOTES

OF FOUR FEET.

ALL WORK SHALL BE DONE UNDER THE SUPERVISION OF THE BUTLER COUNTY ENGINEER AND THE AUTHORITY HAVING RESPONSIBILITY FOR UTILITIES IN THE AREA AND IN ACCORDANCE WITH THE RULES AND REGULATIONS FOR SUBDIVISION.

STORM SEWERS SHALL BE A MATERIAL WITH A MANUFACTURER'S MANNINGS "N" OF 0.011 OR LOWER AND A MATERIAL AS NOTED IN APPENDIX D, TABLE D-6 IN THE BUTLER COUNTY SUBDIVISION REGULATIONS ADOPTED NOVEMBER 24, 1997. (NOTE - CORRUGATED METAL PIPE NOT INCLUDED) STEPS SHALL BE INSTALLED IN CATCH BASINS AND MANHOLES IN EXCESS

CONSTRUCTION WORK SHALL BE IN ACCORDANCE WITH THE OHIO DEPARTMENT OF TRANSPORTATION "CONSTRUCTION AND MATERIAL SPECIFICATIONS" ODOT 1997 STANDARDS OR BUTLER COUNTY REQUIREMENTS AND STANDARDS FOR SUBDIVISIONS. WHEN IN CONFLICT, THE COUNTY REQUIREMENTS SHALL PREVAIL.

SUMP COLLECTOR LINES SHALL BE CONSTRUCTED SDR 35 PVC, ARMCO 2000 OR APPROVED EQUAL.

A PRE-CONSTRUCTION MEETING IS REQUIRED WITH THE BUTLER COUNTY ENGINEER'S OFFICE PRIOR TO THE START OF CONSTRUCTION.

SANITARY SEWER MATERIALS AND INSTALLATION AS PER BUTLER COUNTY WATER & SEWER SPECIFICATIONS USING SECTION 3110 FOR PVC. SDR-35 & 26 PIPE; SECTION 3140 FOR ABS PVC COMPOSITE PIPE. SECTION 3410 FOR MANHOLES. SANITARY LATERALS SHALL BE EXTENDED TO AT LEAST TEN (10) FEET BEYOND

THE PROPERTY/ RIGHT-OF-WAY LINE OR TO THE EDGE OF THE EASEMENT, WHICHEVER IS GREATER.

THE UPSTREAM TERMINUS OF THE SANITARY SEWER LATERALS SHOWN HERE ON ARE TO BE 12 FEET BELOW OF THE ELEVATION OF THE BACK OF CURB.

WATER MAIN SHALL HAVE 4' MINIMUM DEPTH TO TOP OF PIPE. ALL WATER MAINS TO BE DUCTILE IRON PIPE, CL. 53 AWWA C-151. WATER MAIN MATERIALS, VALVES, FIRE HYDRANTS, FITTINGS, APPURTENANCES, AND INSTALLATION TO BE AS BUTLER COUNTY SPECIFICATIONS, AND SHALL HAVE RESTRAINED JOINTS. ALL WATER MAIN VALVES TO HAVE A MINIMUM DEPTH OF 2.5 AND A MAXIMUM OF 4.0' FROM PROPOSED GRADE TO THE TOP OF THE VALVE OPERATING NUT.

WATER MAIN SHALL HAVE 10' HORIZONTAL, & 18" VERTICAL SEPARATION (OUTSIDE EDGE TO EDGE) WITH ALL OTHER PIPE.

ALL DOWNSPOUT LINES SHALL BE ON SPLASHBLOCKS AND MAY NOT BE CONNECTED TO THE CURB.

ALL TRENCHES WITHIN THE RIGHT-OF-WAY AND UTILITY EASEMENTS SHALL BE COMPACTED AND BACKFILLED IN ACCORDANCE WITH ITEM 203 AND 603 IN THE CURRENT OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS MANUAL.

THE DEVELOPER SHALL BE RESPONSIBLE FOR THE INSTALLATION OF CONDUITS OF THE FULL WIDTH OF THE PUBLIC RIGHT-OF-WAY AS CALLED FOR ON THE TYPICAL SECTION FOR USE BY THE ELECTRIC, TELEPHONE, AND CABLE TELEVISION SERVICES. THE DEVELOPER SHALL COORDINATE THE LOCATION OF THE LINES WITH EACH UTILITY COMPANY.

ALL ELECTRICAL TRANSFORMERS SHALL BE LOCATED SO THAT THEY DO NOT INTERFERE WITH EXISTING MANHOLES OR WATER MAIN APPURTENANCES.

STORM SEWER PIPE SHALL BE TYPE "B" & "C" CONDUIT, 707.42 PVC, ALL DIA. (CONTECH A200 OR EQUAL), 707.33 PVC, UP TO & INCLUDING 24" DIA (HANCOR, ADS, OR EQUAL), 707.01 CMP, ALL DIA., 706.02, REINFORCED CONCRETE PIPE, ALL DIA.

BUTLER COUNTY WATER & SEWER DOES NOT ACCEPT ANY RESPONSIBILITY FOR THE RELOCATION, REPAIR OR REPLACEMENT OF ANY OTHER UTILITY INSTALLED WITHIN FIVE (5) FEET OF THE CENTERLINE OF ANY SANITARY MAIN SEWER OR WATER MAIN.

PRIVATE DRIVEWAYS, PARKING LOTS AND OTHER PAVED AREAS, EARTHEN BERMS OR STRUCTURES SHOULD NOT BE CONSTRUCTED OVER PRIVATE WATER OR SEWER SERVICE LINES WITHIN THE PUBLIC ROAD RIGHT OF WAY OR WITHIN EASEMENT AREAS FOR THE PUBLIC UTILITIES. SHOULD THIS OCCUR, THE PROPERTY OWNER WILL BE HELD RESPONSIBLE FOR THE PROTECTION AND REPAIR OF AND FOR PROVIDING ACCESS TO ANY CURB STOPS, METER PITS, MANHOLES, CLEANOUTS, ETC. INSTALLED IN CONJUNCTION WITH THESE PRIVATE SERVICE LINES AND FOR ANY DAMAGE OR RESTORATION OF THE PAVED SURFACES OR STRUCTURES THAT MAY RESULT FROM THE FUTURE OPERATION, MAINTENANCE, REPAIR OR REPLACEMENT OF SAID SERVICE LINES AND APPURTENANCES.

LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY GROUND CONDITIONS AND EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION.

THE EXISTING UTILITIES SHOWN ARE FOR CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE OWNER ASSUMES NO RESPONSIBILITY FOR THE LOCATION OF ALL UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. BUTLER COUNTY ASSUMES NO MAINTENANCE RESPONSIBILITY FOR PRIVATE DRIVES.

BUTLER COUNTY WILL NOT BE RESPONSIBLE FOR ANY PAVEMENT OR STORM SEWER REPAIRS RESULTING FROM WATER MAIN REPAIRS. BUTLER COUNTY ALSO WILL NOT BE RESPONSIBLE FOR ADJUSTING VALVES, FIRE HYDRANTS, METER PITS, ETC. AS A RESULT OF GRADE CHANGES, THE GRANTOR SHALL BE RESPONSIBLE FOR THE PROPER ADJUSTMENT OF VALVES, FIRE HYDRANTS, METER PITS, ETC., TO THE SATISFACTION OF BUTLER COUNTY, DUE TO GRADE CHANGES, PAVING, REPAVING, ETC., INITIATED BY THE GRANTOR.

ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.

ALL BUILDINGS TO BE SERVED BY THE PUBLIC SEWER SYSTEM SHALL BE CONSTRUCTED SO AS TO PROVIDE A MINIMUM OF FOUR FEET (4') OF VERTICAL SEPARATION BETWEEN THE PUBLIC SANITARY SEWER, AT THE POINT OF CONNECTION, AND THE LOWEST BUILDING LEVEL SERVED BY A GRAVITY SEWER CONNECTION. IN ADDITION, SAID BUILDING LEVEL SHALL BE AT LEAST ONE FOOT (1') ABOVE THE LOWEST POINT OF FREE-OVERFLOW (NON-SEALED MANHOLE COVER) UPSTREAM OF ANY TREATMENT FACILITY OR WASTEWATER PUMPING FACILITY THAT RECEIVES THE DISCHARGE FROM SAID BUILDING. SAID MINIMUM SERVICE LEVELS SHALL BE RECORDED ON THE "AS BUILT" PLANS FOR THE DEVELOPMENT WHICH WILL BE KEPT ON FILE IN THE OFFICE OF THE BUTLER COUNTY SANITARY ENGINEER.

SANITARY SEWER LATERALS, WHICH SHALL INCLUDE ALL PIPE AND APPURTENANCES FROM THE BUILDING TO THE PUBLIC SEWER MAIN, AND CONNECTION TO THE PUBLIC SEWER MAIN SHALL BE CONSIDERED PRIVATE AND THE RESPONSIBILITY OF THE PROPERTY OWNER TO MAINTAIN. THE CONNECTION TO THE SEWER WOULD BE ANY PIPING THAT EXTENDS OUT FROM THE MAIN BARREL OF THE SEWER MAIN.

ALL GROUND SURFACE AREAS THAT HAVE BEEN EXPOSED OR LEFT BARE AS A RESULT OF CONSTRUCTION AND ARE TO FINAL GRADE AND ARE TO REMAIN SO, SHALL BE SEEDED AND MULCHED AS SOON AS PRACTICAL IN

ACCORDANCE WITH STATE OF OHIO SPECIFICATIONS, ITEM 659. THE CONTRACTOR SHALL SEED AND MULCH DISTURBED GRASS AREAS WITH: 3 LBS. WHEAT OR RYE PER 1000 SQ. FT.

10 LBS. 12-12-12 FERTILIZER PER 1000 SQ. FT.

2 OR 3 BALES OF STRAW PER 1000 SQ. FT. THE CONTRACTOR SHALL ALSO PROVIDE OTHER EROSION CONTROL MEASURES AS MAY BE REQUIRED BY BUTLER COUNTY ENGINEER DURING THE CONSTRUCTION PHASE.

SEEDING- SPECIFICATIONS AT DETENTION BASIN: RED FESCUE

1 LB. PER 1000 SQ. FT 1/2 LB. PER 1000 SQ. FT. KENTUCKY BLUEGRASS 1/2 LB. PER 1000 SQ. FT. PERENNIAL RYEGRASS FERTILIZER: 12 - 12 - 12

MULCH - 3 BALES OF STRAW PER 1000 SQ. FT. MULCH TIE DOWN: LIQUID ASPHALT (R.C. 70, 25 OR 800) 40 GALS. PER 1000 SQ. YDS. OR PLASTIC MULCH NETTING, STAPLED IN PLACE.

SOD: TO BE STAKED IN PLACE. NOTES

- ITEM NUMBERS REFER TO THE OHIO DEPARTMENT OF HIGHWAYS CONSTRUCTION AND MATERIAL SPECIFICATIONS, AND ALL CONSTRUCTION WORK SHALL BE DONE ACCORDING TO SAID SPECIFICATIONS OR BUTLER COUNTY REQUIREMENTS AND TANDARDS FOR SUBDIVISIONS. WHEN IN CONFLICT, THE COUNTY REQUIREMENTS SHALL PREVAIL.
- ITEMS THAT PERTAIN TO UNDERGROUND UTILITIES SUCH AS WATERMAIN PIPE SANITARY SEWER PIPE, WATER VALVES AND MANHOLE FRAMES AND COVERS, ETC, WILL REMAIN UNDER SPECIFICATIONS OF THE UTILITY SERVING THE AREA. STORM SEWERS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUTLER COUNTY ENGINEER.
- ALL TRENCHES WITHIN THE RIGHT OF WAY AND 10'UTILITY EASEMENTS SHALL BE COMPACTED AND BACKFILLED IN ACCORDANCE WITH ITEMS 203 AND 603 IN THE STATE SPECIFICATIONS.
- 4. SURFACE COURSE (ITEM 448) AND TACK COAT (ITEM 407 ARE TO BE APPLIED NO SOONER THAN NINE (12) MONTHS AFTER THE LEVELING COURSE (ITEM 448), AND FIFTY (50)PERCENT OF THE HOMES ARE COMPLETED. IF AFTER TWO (2) YEARS, FIFTY (50) PERCENT OF THE HOMES HAVE NOT BEEN COMPLETED, THEN THE TOP COURSE MAY BE APPLIED.
- 5. A MINIMUM 10' UTILITY EASEMENT SHALL BE SHOWN ON THE RECORD PLAT PARALLEL AND IMMEDIATELY ADJACENT TO THE RIGHT OF WAY LINE ALLOWING FOR INSTALLATION, OPERATION AND MAINTENANCE OF SEWERS, WATER, ELECTRIC TELEPHONE CONDUIT AND ANY OTHER PUBLIC OR QUASI PUBLIC UTILITY.
- . DEVELOPER SHALL BE RESPONSIBLE FOR THE INSTALLATION OF CONDUITS FOR THE FULL WIDTH OF THE PUBLIC RIGHT OF WAY AT A DEPTH OF 38"FOR USE BY THE ELECTRIC, TELEPHONE AND CABLE TV SERVICES. THE LOCATION OF THESE LINES SHALL BE COORDINATED WITH UTILITY COMPANIES BY THE DEVELOPER.
- 7. SANITARY LATERALS SHALL BE EXTENDED BEYOND THE LIMITS OF THE UTILITY EASEMENTS, BUT NOT TO EXCEED 12' FROM THE RIGHT OF WAY LINE.
- 8. ALL ELECTRICAL TRANSFORMERS SHALL BE LOCATED SO THAT THEY DO NOT
- INTERFERE WITH THE EXISTING MANHOLES.
- 9. SUMP LINE CONDUITS ARE TO BE SDR 35. 10. THE SANITARY SEWER SHALL BE PLACED IN SUCH A MANNER THAT THE SANITARY MANHOLE COVER DOES NOT CONFLICT WITH THE SIDEWALK.

10'UTILITY       10'UTILITY       III' 10'UTILITY       III' 10'UTILITY       III' 10'UTILITY         EASEMENT       EASEMENT       EASEMENT       EASEMENT       EASEMENT         11'-0"       12'-0"       10'-0"       10'-0"       II'-0"       II'-0"         3'       12'-0"       10'-0"       II'-0"       II'-0"       II'-0"       II'-0"         3'       12'-0"       II'-0"       II'-0"       II'-0"       II'-0"       II'-0"         3'       II'-0"       II'-0"       II'-0"       II'-0"       II'-0"       II'-0"         3'       II'-0"       II'-0"       II'-0"       II'-0"       II'-0"       II'-0"         3'       III'-0"       III'-0"       II'-0"       II'-0"       II'-0"       II'-0"         3'       III'-0"       III'-0"       III'-0"       II'-0"       II'-0"       II'-0"         3'       III'-12"/FT       II'-0"       II'-0"       II'-0"       II'-0"       II'-0"         4''SUMP LINE       Acgreecate       Full DEPTH       Gas main       II'-0"       II'-0"       II'-0"         Stop       As NEEDED       Max 36"STORM SEWER       4''SUMP LINE       II'-0"       II'-0"       II'-0" <t< th=""><th>Sumplines 24 - 30 Gas 24" - 30" Water 48" - 54" Electric 36" - 40" Telephone 36" - 40" Cable TV 36" - 40" NOTE: 6' CONCRETE WALK TO BE ON ONE SIDE OF LOCAL STREET.</th><th><ol> <li>1"SURFACE COURSE OF ITEM 448 ASF</li> <li>1 1/2" LEVELING COURSE OF ITEM 44</li> <li>6" BASE COURSE OF ITEM 301 BITUM</li> <li>COMPACTED SUBGRADE, ITEM 203.13</li> <li>ROLL TYPE CURB &amp; GUTTER, ITEM 60</li> <li>4" THICK CLASS "C" CONCRETE WALK</li> </ol></th></t<>	Sumplines 24 - 30 Gas 24" - 30" Water 48" - 54" Electric 36" - 40" Telephone 36" - 40" Cable TV 36" - 40" NOTE: 6' CONCRETE WALK TO BE ON ONE SIDE OF LOCAL STREET.	<ol> <li>1"SURFACE COURSE OF ITEM 448 ASF</li> <li>1 1/2" LEVELING COURSE OF ITEM 44</li> <li>6" BASE COURSE OF ITEM 301 BITUM</li> <li>COMPACTED SUBGRADE, ITEM 203.13</li> <li>ROLL TYPE CURB &amp; GUTTER, ITEM 60</li> <li>4" THICK CLASS "C" CONCRETE WALK</li> </ol>
	6'-0"     17'-6"     25'-0"     9'-0"       12'-0"     10'-0"     10'-0"     6'MIN.       12"     7     2'-0"     5       3'     3'     7     1/2"/FT       3'     1/2"/FT     5     9       1/2"/FT     1/4"/FT     8     2       1/2"/FT     1/4"/FT     8     2       3'     1/2"/FT     1/4"/FT       3'     1/2"/FT     1/4"/FT       9'     0     1/2       9'     1/2"/FT       1/2"/FT     1/4"/FT       9'     0       1/2"/FT     1/4"/FT       9'     0       1/2"/FT     1/4"/FT       9'     0       3'     1       1/2"/FT     1/4"/FT       9'     0       10     1/4"/FT       9'     0       10     1/4"/FT       9'     0       10     1/4"/FT       10     0       10     1/4"/FT       10     1/4"/FT	<ul> <li>(8) TACK COAT, ITEM 407 - TO BE APPI SQ. YARD, SEE NOTE #4</li> <li>(9) TACK COAT SHALL BE APPLIED TO FF THE INSTALLATION OF THE 301 BITUM ALSO TO BE APPLIED TO THE CURB 448 LEVELING COURSE</li> <li>(10) 6" BASE COURSE OF ITEM 304 AGGR OP</li> <li>(11) 4" BASE COURSE OF ITEM 301 BITUM OP</li> </ul>

SERVICES

TOP OF PIPE

18"

ITEM

Underdrain



EM 448 ASPHALTIC CONCRETE, SEE NOTE #4 OF ITEM 448 ASPHALTIC CONCRETE 301 BITUMINOUS AGGREGATE BASE

R, ITEM 609 (BUTLER CO. STANDARD C-1) RETE WALK, 6' WIDE, ITEM 608

TO BE APPLIED AT A RATE OF 0.05 GAL. PER

LIED TO FRONT FACE OF CURB PRIOR TO 301 BITUMINOUS AGGREGATE BASE. HE CURB JOINT AFTER THE INSTALLATION OF

304 AGGREGATE BASE 301 BITUMINOUS AGGREGATE BASE

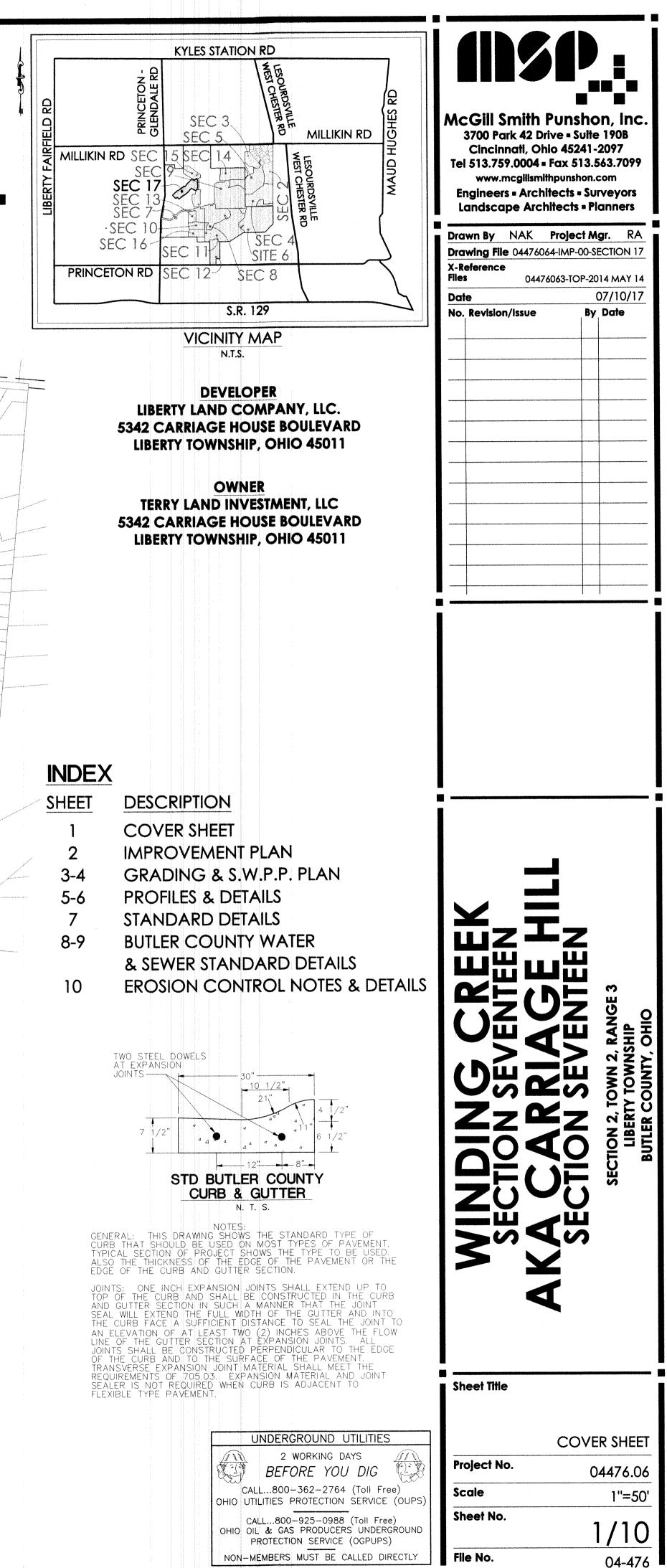
FRONT FACE OF NEAREST CATCH BASIN

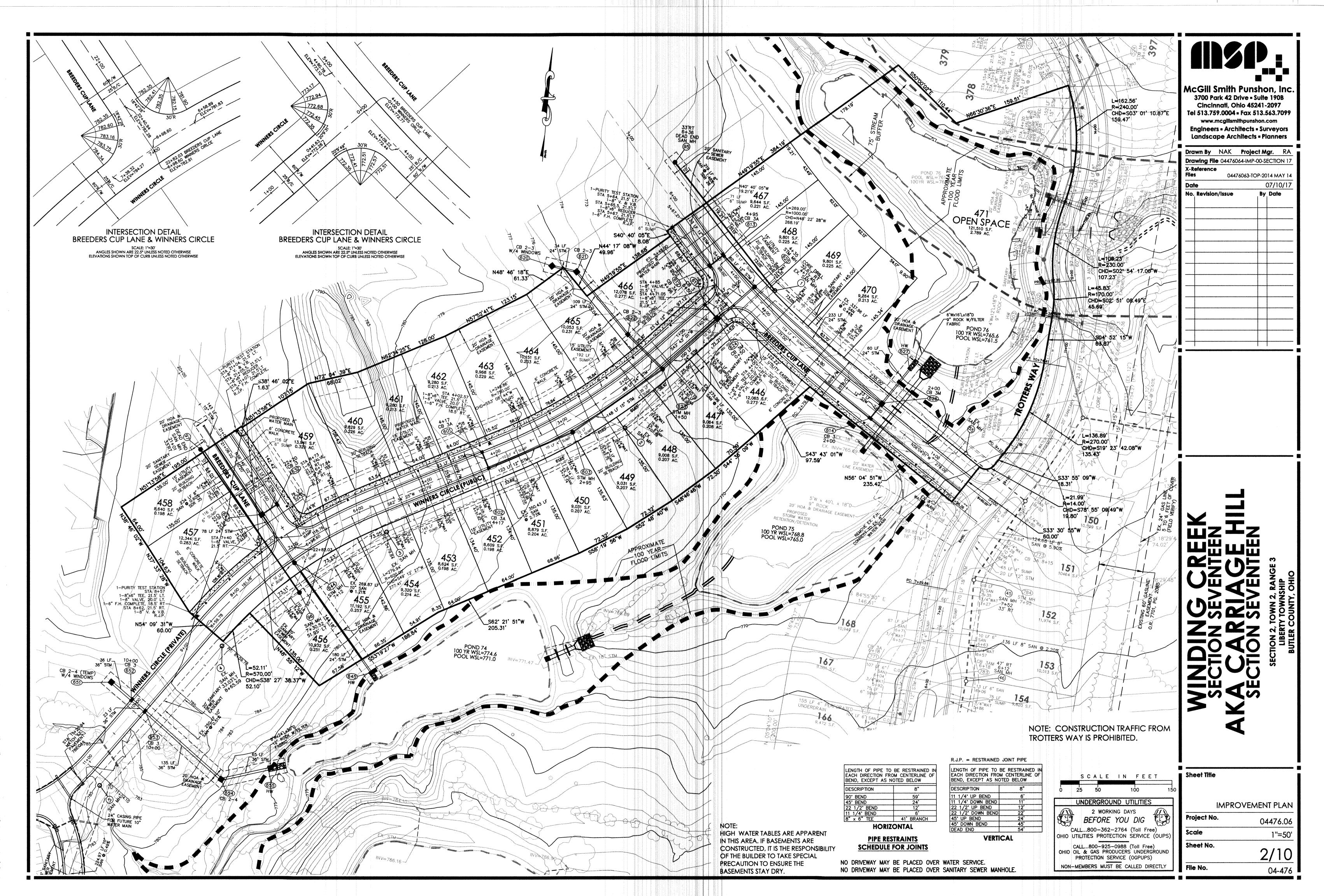
ALL LOTS SHALL BE SERVED BY SANITARY SEWER AND PUBLIC WATER SYSTEMS.

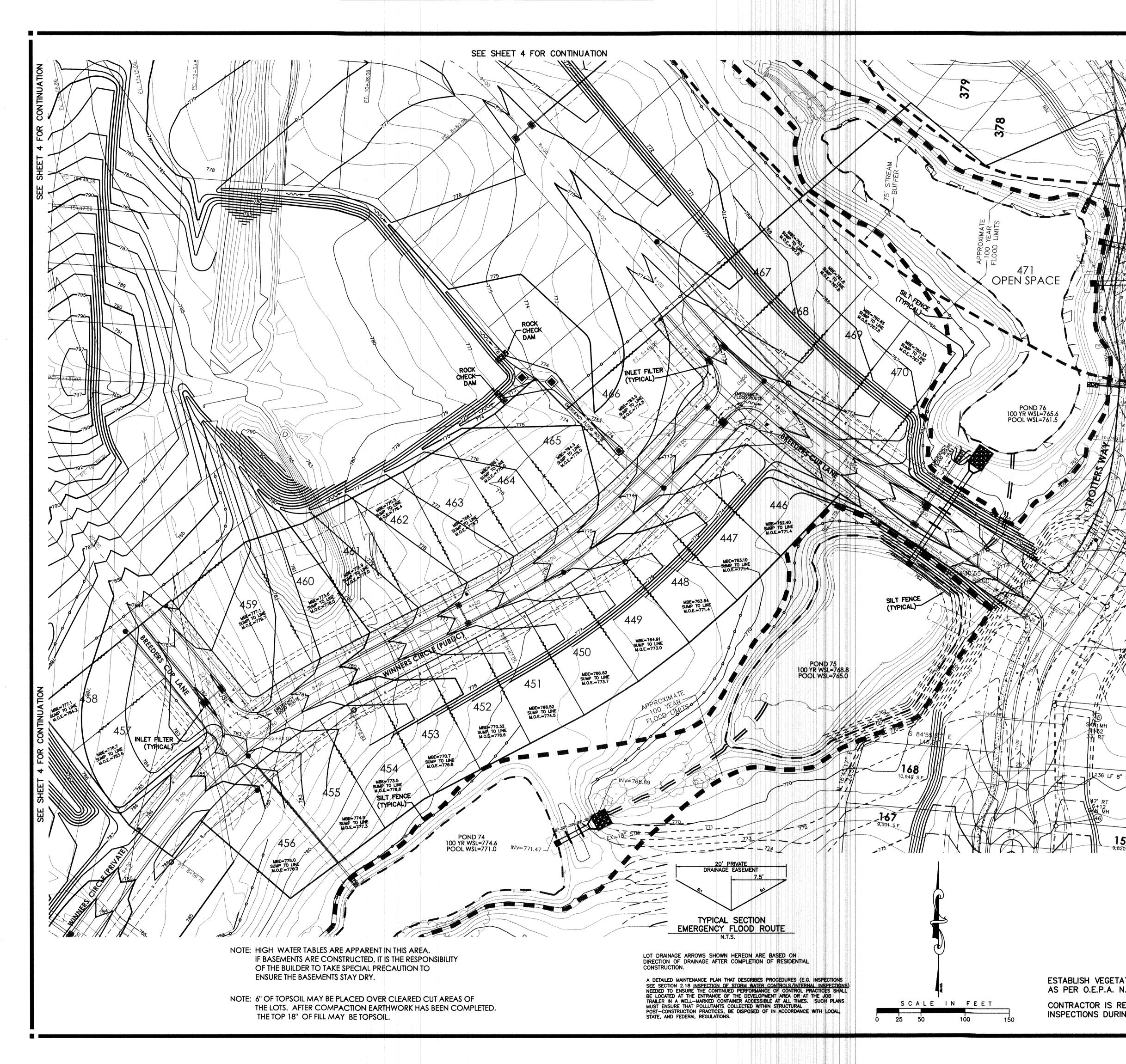
OVERALL PROJECT MAP

1"=500'

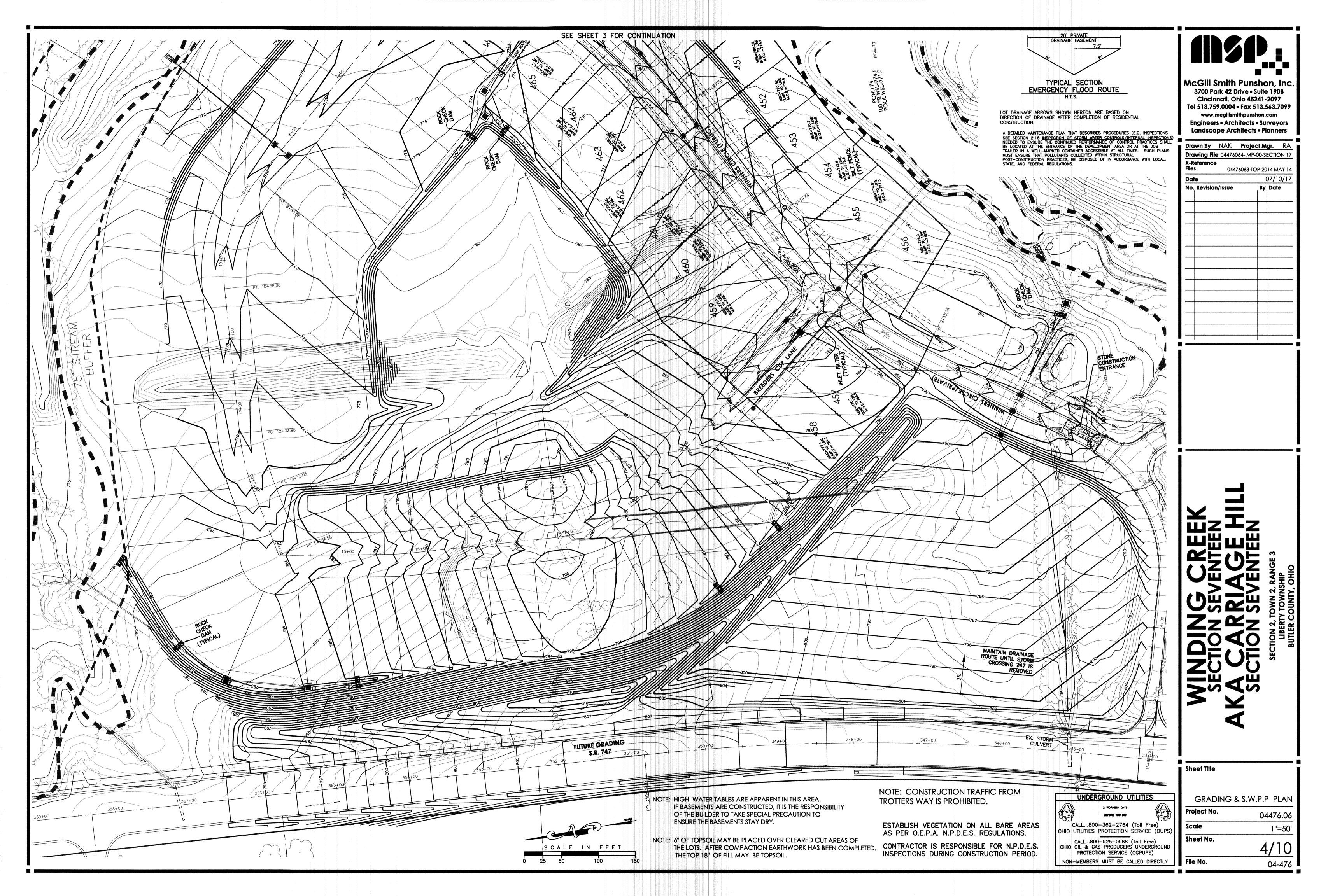
PROJECT BENCHMARK = CENTERLINE NAIL LOCATED AT THE INTERSECTION OF CARRIAGE HOUSE BOULEVARD AND STAGECOACH WAY. ELEVATION = 790.52

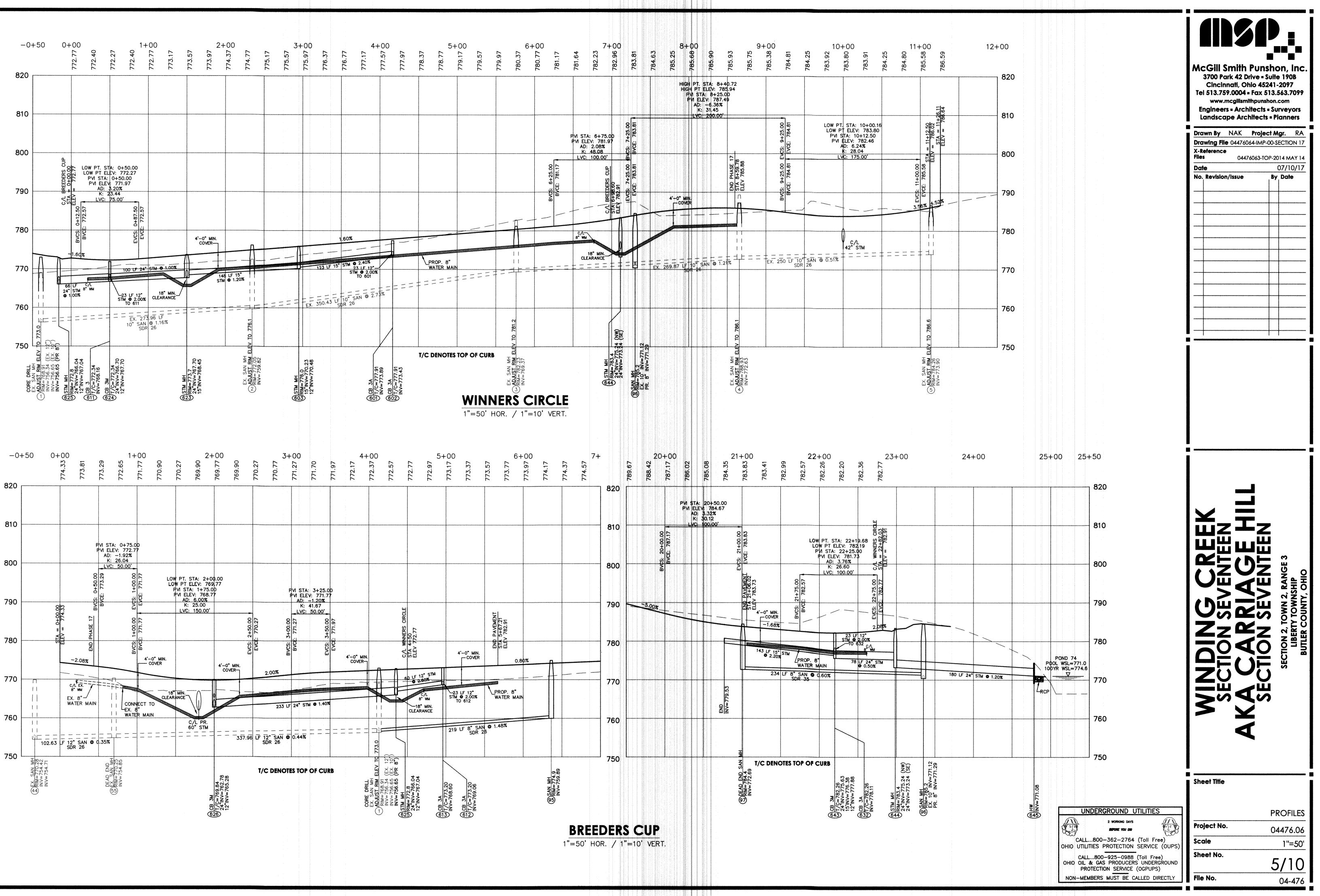




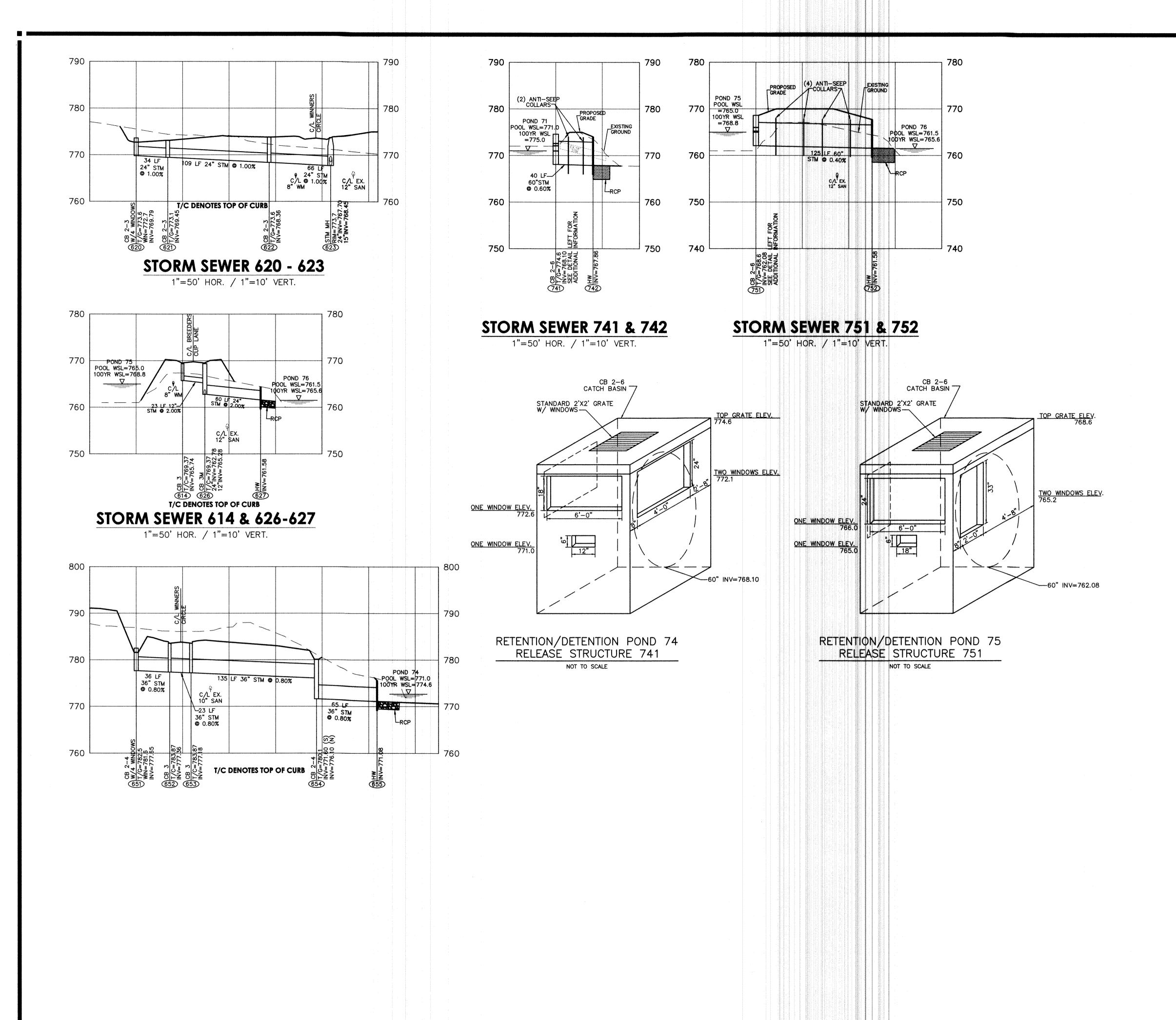


	1. 2. 3. 4. 5.	NERAL NPDES NOTES PROJECT INVOLVES THE CONSTRUCTION AND ASSOCIATED INFRASTRUCTURE FOR A LOW DENSITY SINGLE FAMILY SUBDIVISION. AREA TO BE DISTURBED IS APPROXIMATELY 27 ACRES. APPROXIMATELY 11.3 OF IMPERVIOUS SURFACE IS PROPOSED RESULTING IN 42 PERCENT OF IMPERVIOUSNESS. PRE-CONSTRUCTION RUNOFF COEFFICIENT IS 0.30. POST-CONSTRUCTION RUNOFF COEFFICIENT IS 0.55. THE PRIMARY SOIL TYPE IS RUSSELL – MIAMIAN SILT LOAM. THE PRIOR LAND USE IS FARM CROPS.	McGill Smith Punshon, Inc. 3700 Park 42 Drive = Suite 190B Cincinnati, Ohio 45241-2097 Tel 513.759.0004 = Fax 513.563.7099 www.mcgillsmithpunshon.com Engineers = Architects = Surveyors Landscape Architects = Planners
		STONY RUN IS THE FIRST NAMED STREAM RECEIVING RUNOFF FROM THIS SITE. RUNOFF IS ULTIMATELY RECEIVED BY GREGORY	Drawn By NAK Project Mgr. RA Drawing File 04476064-IMP-00-SECTION 17
	8.	CREEK. NPDES STORM WATER GENERAL PERMIT NUMBER: 1GC05766*AG.	X-Reference Files 04476063-TOP-2014 MAY 14
	9.		Date07/10/17No. Revision/issueBy Date
	10.	SITE OPERATOR: 5342 CARRIAGE HOUSE BOULEVARD LIBERTY TOWNSHIP, OH 45011 (513) 894-4455	
	11.	SWPPP CONTACT: LIBERTY LAND COMPANY, LLC. 5342 CARRIAGE HOUSE BOULEVARD LIBERTY TOWNSHIP, OH 45011 (513) 894-4455	
Det of	12.	UNLESS OTHERWISE NOTED, STANDARDS AND SPECIFICATIONS ESTABLISHED IN THE LATEST EDITION OF THE OHIO DEPARTMENT OF NATURAL RESOURCES "RAINWATER AND LAND DEVELOPMENT" MANUAL, CURRENT EDITION, SHALL GOVERN THE EROSION AND SEDIMENT CONTROL INSTALLATIONS SPECIFIED ON THIS PLAN.	
	13.	THE DEVELOPER AND CONTRACTOR SHALL ABIDE BY THE RULES AND REGULATIONS SET FOURTH IN THE OHIO EPA PERMIT NO. OHCOODOO4- "AUTHORIZATION FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY" UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES).	
	14.	PRIOR TO COMMENCEMENT OF CONSTRUCTION OPERATIONS, ALL SEDIMENTATION AND EROSION CONTROL FEATURES SHALL BE IN	
	15.	PLACE. SEDIMENT CONTROL STRUCTURES SHALL BE FUNCTIONAL THROUGHOUT THE COURSE OF EARTH DISTURBING ACTIVITY. AND SHALL CONTINUE TO FUNCTION UNTIL THE UP SLOPE DEVELOPMENT AREA IS RESTABLISHED. AS CONSTRUCTION PROGRESSES AND THE TOPOGRAPHY IS ALTERED, APPROPRIATE CONTROLS MUST BE CONSTRUCTED OR EXISTING CONTROLS ALTERED TO ADDRESS THE CHANGING DRAINAGE PATTERNS.	
the the	16.	ALL GROUND SURFACE AREAS THAT HAVE BEEN EXPOSED OR LEFT BARE AS A RESULT OF DEMOLITION AND ARE TO FINAL GRADE AND TO REMAIN SO, SHALL BE SEEDED AND MULCHED AS SOON AS PRACTICAL IN ACCORDANCE WITH STATE OF OHIO SPECIFICATION ITEM 659, AND IN ACCORDANCE WITH THE CONDITIONS OF THE NPDES STORM WATER GENERAL PERMIT.	
	M	AINTENANCE OF CONTROLS:	
	1.	SILT FENCE AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND DAILY DURING A PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.	
	2.	SHOULD THE FABRIC ON A FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.	
X	3.	SEDIMENT DEPOSITS SHALL BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.	
© 5.9	4.	ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE AND PREPARED FOR SEEDING.	
1. 2. 3. 4. 155	. INST AND . GRAI PRO . INST . TEMF MEAS . GRAI	RUCTION SEQUENCE ALL EROSION AND SEDIMENT CONTROL MEASURES BEFORE UPSLOPE CLEARING GRADING. DING AND STRIPPING OF THE REMAINING AREAS OF THE DEVELOPMENT SITE OR JECT AREA. ALL STORMWATER MANAGEMENT SYSTEM. PORARY VEGETATIVE STABILIZATION OF EROSION AND SEDIMENT CONTROL SURES. DING OF SUBDIVISION STREET. ALLATION OF ALL UTILITIES.	N SEVEL N SEVEL N SEVEL N 2. TOWN 2. RAN SERTY TOWN 2. RAN SERTY TOWN 2. RAN
7.	. SITE	CONSTRUCTION. L GRADING, STABILIZATION, AND LANDSCAPING.	
SAN @ - [	* DUE	TO THE DYNAMICS AND STAGING OF EARTH MOVEMENT. CONTRACTOR MAY	
<b>1</b> 4 10,5 <sup>,</sup>	TO A RUNC	TO ALTER THE EROSION CONTROL MEASURES AS SHOWN HEREON. CONTRACTOR PPLY (B.M.P.) BEST MANAGEMENT PRACTICES IN ORDER TO CONTROL THE OFF OF SILT AND SEDIMENT.	
	IF A	TIONAL SILT FENCE MAY BE REQUIRED AS SITE CONDITIONS DETERMINE. TEMPORARY STOCKPILE IS CREATED, SILT FENCE SHALL BE PLACED AT THE TOE LOPE	22d2
S.F.			× ×
		NOTE: CONSTRUCTION TRAFFIC FROM TROTTERS WAY IS PROHIBITED.	Sheet Title
		UNDERGROUND UTILITIES	GRADING & S.W.P.P PLAN
		2 WORKING DAYS	Project No. 04476.06
		L BARE AREAS GULATIONS. CALL800-362-2764 (Toll Free) OHIO UTILITIES PROTECTION SERVICE (OUPS)	Scale 1''=50'
SPONSI	BLE	FOR N.P.D.E.S. CALL800-925-0988 (Toll Free) OHIO OIL & GAS PRODUCERS UNDERGROUND	Sheet No. 3/10
G CONS	STRU	CTION PERIOD. PROTECTION SERVICE (OGPUPS) NON-MEMBERS MUST BE CALLED DIRECTLY	<b>File No.</b> 04-476

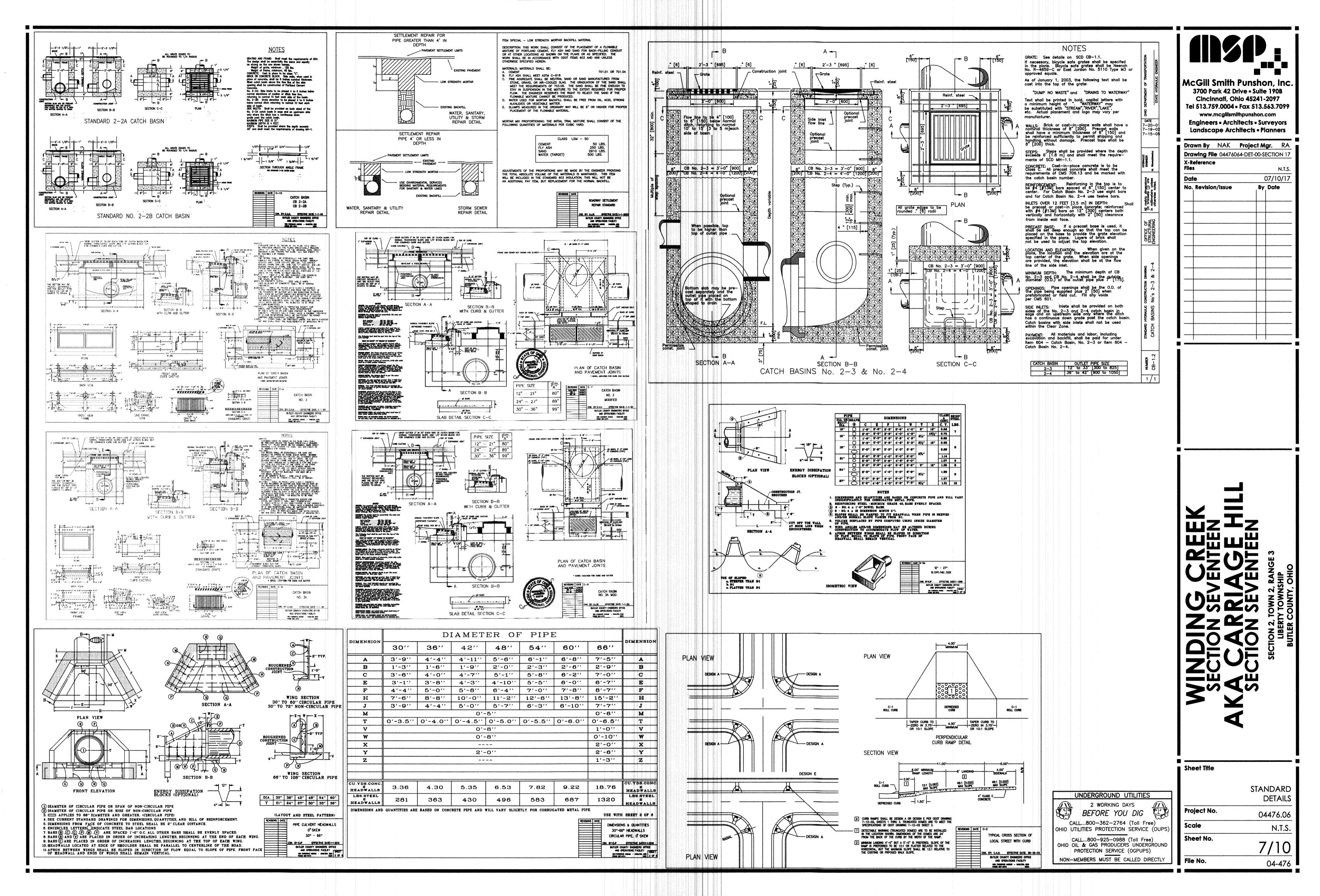


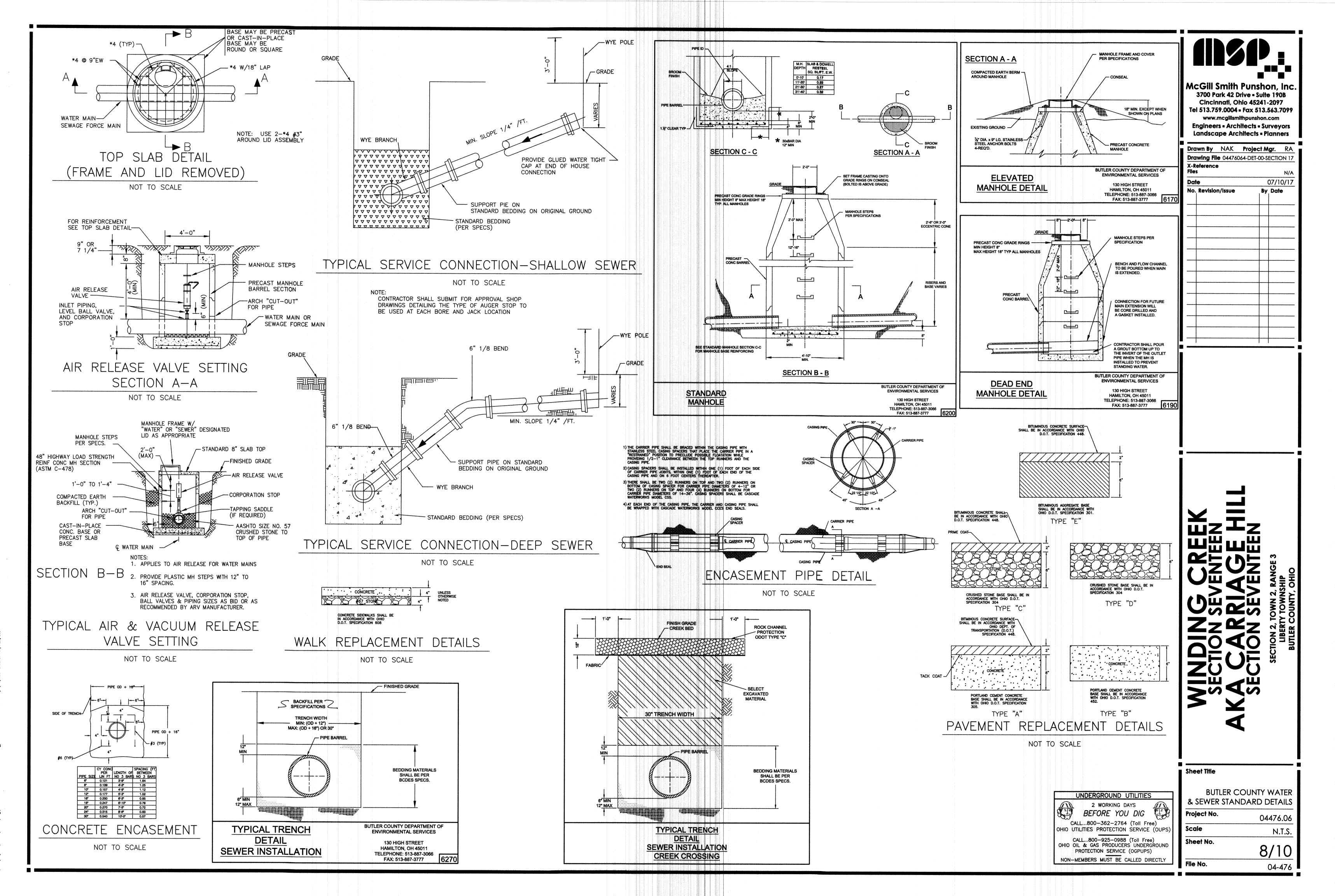


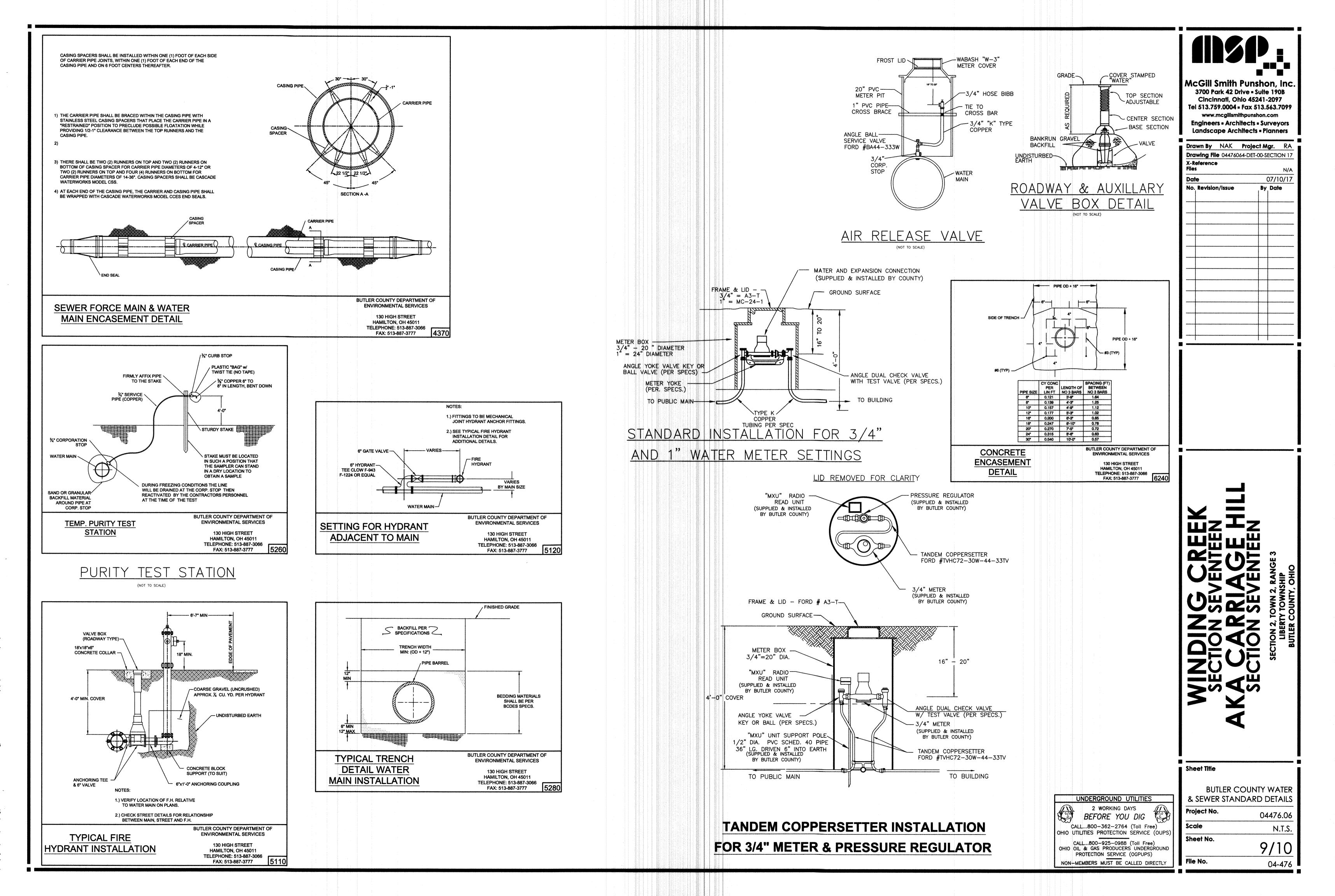
			0.00'		ц
	810	BVCS: 20+00.00 BVCE: 787.17	CS: 21+00.00 +	LOW PT. LOW P PVI S	STA: 22+19.68 STA: 22+19.68 LEEV: 782.19 TA: 22+25.00 TA: 22+25.00 LEEV: 781.73 D: 3.76%
	800	BACS	EV 6.02 73		<: 26.60 ひた C: 100.00'
PAVEMENT 5+67.21 782.91	790	<u>-5.00</u> z	EB 201-1-1-6 201-1-6 201-1-	ER m	EVCE: 22
4'-0" MIN. COVER 0.80%	780			15" STM 207 PROP. 8" WATER MAIN	2.08% 23 LF 12° STM ● 2.00% TO 632 C/L 8° WM 78 LF 24" STM ● 0.50%
M				34 LF 8" SAN @ 0.609	
23 LF 12" STM © 2.00% TO 612 PROP. 8" WATER MAIN	770		END INV=779.53		
219 LF 8" SAN @ 1.48% SDR 26	760		I		
CB 3A (1/C=773.20 INV=768.60 (1/C=773.20 INV=769.06 INV=769.06 (0, SAN MH (0, RIM=774.9 INV=759.89	<b>750</b>		© DEAD END SAN M UN=772.69	NOTES TOP OF CUR	(4) CB 3M (4) T/C=782.26 24"INV=775.63 15'INV=777.88 9 CB 3A (5) CB 3A
	BREEDERS C				643) (632) (64



	N	CGill Smith Pu 3700 Park 42 Drive Cincinnati, Ohio	e = Suite 190B
		Tel 513.759.0004 = Fo www.mcgillsmithp Engineers = Archite Landscape Archite	ix 513.563.7099 unshon.com cts = Surveyors
	D X Fi	rawing File 04476064-1 -Reference les 0447606	3-TOP-2014 MAY 14
		ate o. Revision/Issue	07/10/17 By Date
	-		
	   - 		
		$\mathbf{X} =$	
		A G E E NIEL	
		G CREE SEVENTEEN RIAGE H	<b>SEVENT</b> TOWN 2, RANGE 3 Y TOWNSHIP SOUNTY, OHIO
		A G E E NIEL	<b>SEVENT</b> WWN 2, RANGE 3 TOWNSHIP OUNTY, OHIO
		G CREE SEVENTEEN RIAGE H	<b>SEVENT</b> TOWN 2, RANGE 3 Y TOWNSHIP SOUNTY, OHIO
		INDING CREE ECTION SEVENTEEN CARRIAGE H	<b>SEVENT</b> TOWN 2, RANGE 3 Y TOWNSHIP SOUNTY, OHIO
		WINDING CREE SECTION SEVENTEEN A CARRIAGE H	<b>SEVENT</b> TOWN 2, RANGE 3 Y TOWNSHIP SOUNTY, OHIO
	UTILITIES	AKA CARRIAGE H Heet Title	<b>SEVENT</b> TOWN 2, RANGE 3 Y TOWNSHIP SOUNTY, OHIO







# SITE PREPARATION

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.

2. The site shall be graded as needed to permit the use of conventional equipment for seedbed preparation and seeding.

3. Resoil shall be applied where needed to establish vegetation.

## SEEDBED PREPARATION

1. 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 lbs./1,000 sq. ft. or 2 tons/ac.

2. 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.

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

# DORMANT SEEDINGS

1. Seedings shall not be planted from October 1 through November 20. During this period the seeds are likely o germinate, but probably will not be able to survive the winter.

#### 2. The following methods may be used for "Dormant Seeding"

\* From October 1 through November 20, prepare the seedbed, and the required amounts of lime and fertilizer, then mulch and anchor After November 20, and before March 15. broadcast the selected seed mixture, mulch and anchor. 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.

### MULCHING

1. Mulch material shall be applied immediately after seeding. Seedings made during optimum seeding dates and with favorable soil conditions and on verv flat areas may not need mulch to achieve adequate stabilization. Dormant seeding shall be mulched.

Tall Fescue

Dwarf Fescue

Kentucky Bluegrass

Kentucky Bluegrass

Perennial Ryegrass

Kentucky Bluearass

Creeping Red Fescue

Note: Other approved seed species may be substituted.

# 1. A subsoiler, plow or other 2. Materials

\* 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). he 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

\* 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 mattings applied according to manufacturer's recommendations or wood chips applied at 6 tons/ac.

3. Straw Mulch Anchoring Methods

Straw mulch shall be anchored immediately to minimize loss by wind or water

\* 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.

\* Mulch Nettings-Netting shall be used according to the manufacturer's recommendations. Netting may be necessary to hold mulch in place in areas of concentrated runoff and on critical slopes.

\* Asphalt Emulsion-Asphalt shall be applied as recommended by the manufacturer or at the rate of 160 gal. /ac.

\* Synthetic Binders-Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equivalent may be used at rates recommended by 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 lbs./100 gal.

# IRRIGATION

	Pern	nanent Seeding	
Seed Mix	See	eding Rate	Notes:
Seed Mix	lb./ac.	lb./1.000 ft. <sup>2</sup>	Notes:
	(	General Use	
Creeping Red Fescue Domestic Ryegrass Kentucky Bluegrass	20-40 10-20 10-20	1/2-1 1/4-1/2 1/4-1/2	
Tall Fescue	40	1	
Dwarf Fescue	40	1	
	Steep Bo	inks or Cut SI	opes
Tall Fescue	40	1	
Crown Vetch Tall Fescue	10 20	1/4 1/2	Do not seed later than Augu
Elat Dea	20	1/0	

Road Ditches and Swales

1

2 1/4

Lawns

1 1/2 1 1/2

1 1/2 1 1/2

For shaded areas

1. 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.
<ol> <li>Excessive irrigation rates shall be avoided and irrigation monitored to prevent erosion and damage from runoff.</li> </ol>

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

Temporary Seeding Species Select	ion	
Seeding Dates	Species	lb./1.000 ft.
March 1 to August 15	Oats Tall Fescus Annual Ryegrass	3 1 1
	Perennial Ryegrass Tall Fescus Annual Ryegrass	1
August 16 to November 1	Rye Tall Fescus Annual Ryegrass	3 1 1
	Wheat Tall Fescus Annual Ryegrass	3 1 1
	Perennial Ryegrass Tall Fescus Annual Ryegrass	1 1 1

Note: Other approved seed species may be substituted.

1. 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

2. Temporary seed shall be applied between construction operations on soil that will not be graded or reworked for 21 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.

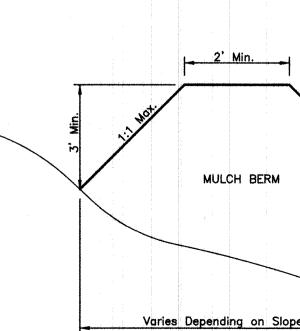
3. The seedbed should be pulverized and loose to ensure the success of establishing vegetation. However, temporary seeding shall not be postponed if ideal seedbed preparation is not possible.

4. Soil Amendments-Applications of temporary vegetation shall establish adequate stands of vegetation that may require the use of soil amendments. Soil tests should be taken on the site to predict the need for lime and fertilizer.

5. 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 and 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

# MULCHING TEMPORARY SEEDING

Applications of temporary seeding shall include mulch that shall be applied during or immediately after seeding. Seedings made during optimum seeding dates and with avorable soil conditions and on very flat areas may not need mulch to achieve adequate stabilization.



2. Maintenance fertilization rates shall

recommendations or by using the

be established by soil test

Seeded areas shall be inspected for	rates	shown	in	the	following	ť
failure and reestablished as needed.					•	
Depending on site conditions, it may						
be necessary to irrigate, fertilize,						
overseed, or reestablish plantings in						
order to provide permanent vegetation						
fan melanische andere austant						

Fertilization and Mow	ing	,90	-		
Mixture	Formula	lb./ac.	lb./1.000 ft. <sup>2</sup>	Time	
C <b>ree</b> ping Red Fescue Ryegrass Kentucky Bluegrass	10-10-10	500	12		
Tall Fescue	10-10-10	500	12	Fall, yearly or as needed.	
Dwarf Fescue	10-10-10	500	12		
Crown Verch Fescue	0-20-20	400	10	Spring, yearly following establish-	
Flat Pea Fescue	0-20-20	400	10	ment and every 4–7 yr. thereafter.	
	11				

Specifications

for

Permanent Seeding

1. Permanent seeding shall not be

considered established for at least 1

full year from the time of planting.

for adequate erosion control.

Maintenance for Permanent Seedings

# Specifications for

Temporary Seeding

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.

3. Straw mulch shall be anchored immediately to minimize loss by wind or water.

4. Anchoring Methods:

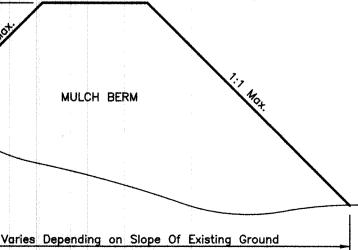
\* Mechanical—A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but generally, be left longer than 6 in.

\* Mulch Nettings-Netting shall be used according to the manufacturer's recommendations. Netting may be necessary to hold mulch in place in areas of concentrated runoff and on critical slopes.

\* Asphalt Emulsion-Asphalt shall be applied as recommended by the manufacturer or at the rate of 160 gal. /ac.

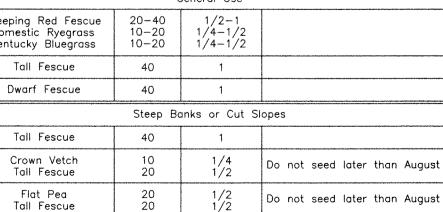
\* Synthetic Binders-Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equivalent may be used at rates recommended by manufacturer.

\* 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 lbs./100 gal.



MULCH BERM DETAIL

N.T.S.



40

Mowing \_\_\_\_\_ Not closer than 3 Not closer than 4 -----Not closer than 2 ..... Do not mow -----Do not

mow

Per Ac. 4 bushel 40 lb. 40 lb. 40 lb. 40 lb. 40 lb. 2 bushel 40 lb. 40 lb. 2 bushel 40 lb. 40 lb. 40 lb. 40 lb. 40 lb.

1,000 sq. ft. sections and spread two

1. Stone Size-Two-inch stone shall be used, or recycled concrete equivalent.

PLAN VIEW

PROFILE

2. Length-The construction entrance shall be 70' long. 3. Thickness-The stone layer shall be

18" or Sufficient to Divert Runoff

at least 6 in. thick. 4. Width-The entrance shall be 25'wide.

5. Bedding-A geotextile shall be placed over the entire area prior to placing stone. It shall have a Grab Tensile Strength of at least 200 lb. and a Mullen Burst Strength of at least 190 lbs.

6. Culvert-A pipe or culvert shall be constructed under the entrance if needed to prevent surface water flowing across the entrance from being directed out onto paved surfaces.

constructed as part of the construction entrance if needed to prevent surface runoff from flowing the length of the construction entrance and out onto paved surfaces. 8. Maintenance-Top dressing of

7. Water Bar-A water bar shall be

Road or Other Existing Paved Surface.

additional stone shall be applied a conditions demand. Mud spilled dropped, washed or tracked onto public roads, or any surface where runoff is not checked by sediment controls, shall be removed immediately. Removal shall be accomplished by scraping or sweeping.

9. Construction entrances shall not be relied upon to remove mud from vehicles and prevent off-site tracking Vehicles that enter and leave the construction site shall be restricted from muddy areas.

or similar type tool 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. \* Mulch Nettings-Use according to the manufacturer's

\* Mechanical-Use a disk. crimper.

recommendations, following all placement and anchoring suggestions. Use in areas of water concentration and steep slopes to hold mulch in place.

\* Asphalt Emulsion—For straw mulch, apply at the rate of 160 gal /ac. (0.1 gal. /sy) into the mulch as it is being applied or as recommended by the manufacturer

\* Synthetic Binders-For strow mulch, synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70. Petroset, Terra Tack or equivalent may be used at rates recommended by manufacturer.

\* Wood Cellulose Fiber-Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 lb./acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lbs./100 gal.



Specifications

Specifications

Mulching

1. Mulch and/or other appropriate

vegetative practices shall be applied

to disturbed areas within 7 days of

aradina if the area is to remain

dormant (undisturbed) for more

portions of the site which can be

2. Mulch shall consist of one of the

rate of 2 tons/ac. or 90 lbs./1,000

\* Straw-Straw shall be unrotted

small-arain straw applied at the

sa. ft. (two to three bales). The

hand or mechanically so the soil

surface is covered. For uniform

distribution of hand-spread mulch,

sq. ft. sections and spread two 45

Ib. bales of straw in each section.

\* Hydroseeders-Wood cellulose fiber

should be used at 2,000 lb./ac. or

\* Other-Other acceptable mulches

include mulch matting applied

recommendations or wood chips

3. Mulch Anchoring-Mulch shall be

following are accepted methods for

1. Sod shall be harvested, delivered

and installed within a period of 48

hrs. Sod not transplanted within

approved prior to installation.

covered during hauling and

this period shall be inspected and

2. The sod shall be kept moist and

preparation for placement on the

3. Sod shall be machine cut at a

uniform soil thickness of 0.75 in.,

of cutting. Measurements for

1. A subsoiler, plow or other

plus or minus 0.25 in., at the time

thickness shall exclude top growth

implement shall be used to reduce

soil compaction and allow maximum

infiltration. (Maximizing infiltration

and water auality.) Subsoiling shall

not be done on slip-prone areas

where soil preparation should be

limited to what is necessary for

2. The area shall be graded and

\* Lime-Agricultural ground limestone

recommended by a soil test. In lieu

of a soil test, lime shall be applied

at the rate of 100 lbs./1,000 sq. ft.

\* Fertilizer-Fertilizer shall be applied

as recommended by a soil test. In

lieu of a soil test, fertilizer shall be

t. or 500 lb./ac. of 10-10-10 or

\* The lime and fertilizer shall be

worked into the soil with a disk

applied at a rate of 12 lb./1,000 sq.

harrow, spring-tooth harrow, or other

shall be uniformly graded and cleared

of all debris, stones and clods larger

Specifications

for

Construction Entrance

suitable field implement to a depth

4. Before laying sod, the surface

than 3 in. in diameter.

shall be applied to acid soil as

resoiling shall be done where

establishing vegetation.

3. Soil Amendments:

12-12-12 analysis

or 2 tons/ac

of 3 in.

will help control both runoff rate

anchored immediately to minimize

loss by wind or runoff. The

anchoring mulch:

MATERIALS

sod bed.

and thatch.

needed.

SITE PREPARATION

according to manufacturer's

applied at 10-20 tons/ac.

46 lbs./1,000 sq. ft.

divide area into approximately 1,000

mulch shall be spread uniformly by

than 45 days or on areas and

brought to final grade.

followina:

for

1. During periods of excessively high temperatures, the soil shall be lightly irrigated immediately prior to laying the sod.

SOD INSTALLATION

2. Sod shall not be placed on frozen

3. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to and tightly wedged against each other. Lateral joints shall be staggered in a brick—like pattern. Ensure that sod is not stretched or overlapped and

that all joints are butted tight in order to prevent voids which would dry the roots. 4. On sloping greas where erosion may be a problem, sod shall be laid

with the long edge parallel to the contour and with staggered joints. The sod shall be secured with peas or staples.

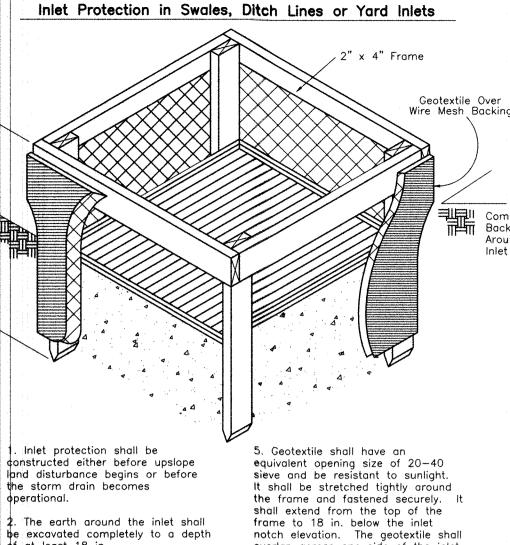
5. As sodding is completed in any one section, the entire area shall be rolled or tamped to ensure solid contact of roots with the soil surface. Sod shall be watered immediately after rolling or tamping until the sod and soil surface below the sod is thoroughly wet. The operations of laying, tamping and irrigating for any place of sod shall be completed within 8 hrs.

## SOD MAINTENANCE

1. In the absence of adequate aintall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain moist soil to a depth of 4 in.

2. After the first week, sod shall be watered as necessary to maintain adequate moisture and to ensure establishment.

3. The first mowing shall not be attempted until sod is firmly rooted



Specifications

of at least 18 in.

. The wooden frame shall be constructed of 2-by-4 in. construction grade lumber. The 2-by-4 in posts shall be driven ft. into the ground at four corners of the inlet and the top portion of 2-bv-4 in frame assembled using the overlap joint shown. The top o the frame shall be at least 6 in. below adjacent roads if ponded water would pose a safety hazard to traffic.

. Wire mesh shall be of sufficient strength to support fabric with water fully impounded against it. shall be stretched tightly around the frame and fastened securely to the

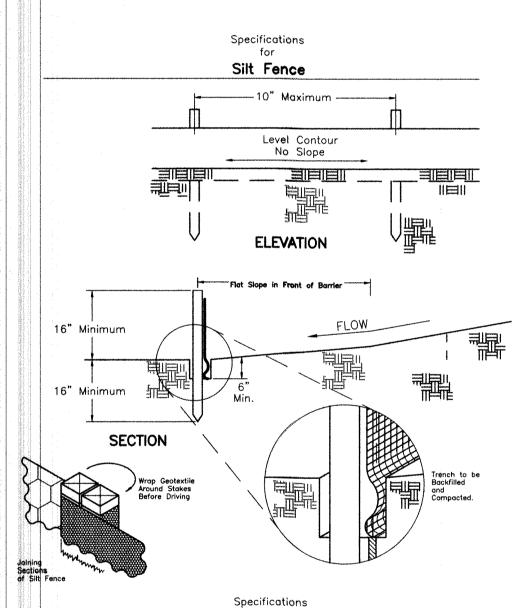
equivalent opening size of 20-40 sieve and be resistant to sunlight It shall be stretched tightly around the frame and fastened securely. shall extend from the top of the frame to 18 in. below the inlet notch elevation. The geotextile shall overlap across one side of the inlet so the ends of the cloth are not fastened to the same post.

Compact Backfill

Around

6. Backfill shall be placed around the inlet in compacted 6-in. layers until the earth is even with notch elevation on ends and top elevation on sides.

7. A compacted earth dike or a check dam shall be constructed in the ditch line below the inlet if the inlet is not in a depression and if runoff bypassing the inlet will not flow to a settling pond. The top of the earth dikes shall be at least 6 in, higher than the top of the frame.



#### for Silt Fence

. Silt fence shall be constructed before upslope land disturbance

. All silt fences shall be placed as dose to the contour as possible so that water will not concentrate at low points in the fence and so that small swales or depressions, which may darry small concentrated flows to the silt fence, are dissipated along its ength.

. To prevent water ponded by the silt fence from flowing around the ends, each end shall be constructed upslope so that the ends are at a higher elevation.

Where possible, silt fence shall be placed on the flattest area available.

. Where possible, vegetation shall be preserved for 5 ft. (or as much as bossible) upslope from the silt fence. f vegetation is removed, it shall be eestablished within 7 days from the nstallation of the silt fence.

The height of the silt fence shall be a minimum of 16 in. above the original ground surface.

The silt fence shall be placed in a rench cut a minimum of 6 in. deep. The trench shall be cut with a rencher, cable laying machine, or other suitable device that will ensure n adequately uniform trench depth

. The silt fence shall be placed with he stakes on the downslope side o the geotextile and so that 8-in. of loth are below the ground surface. Excess material shall lie on the ottom of the 6-in. deep trench. he trench shall be backfilled and ompacted.

. Seams between section of silt ence shall be overlapped with the

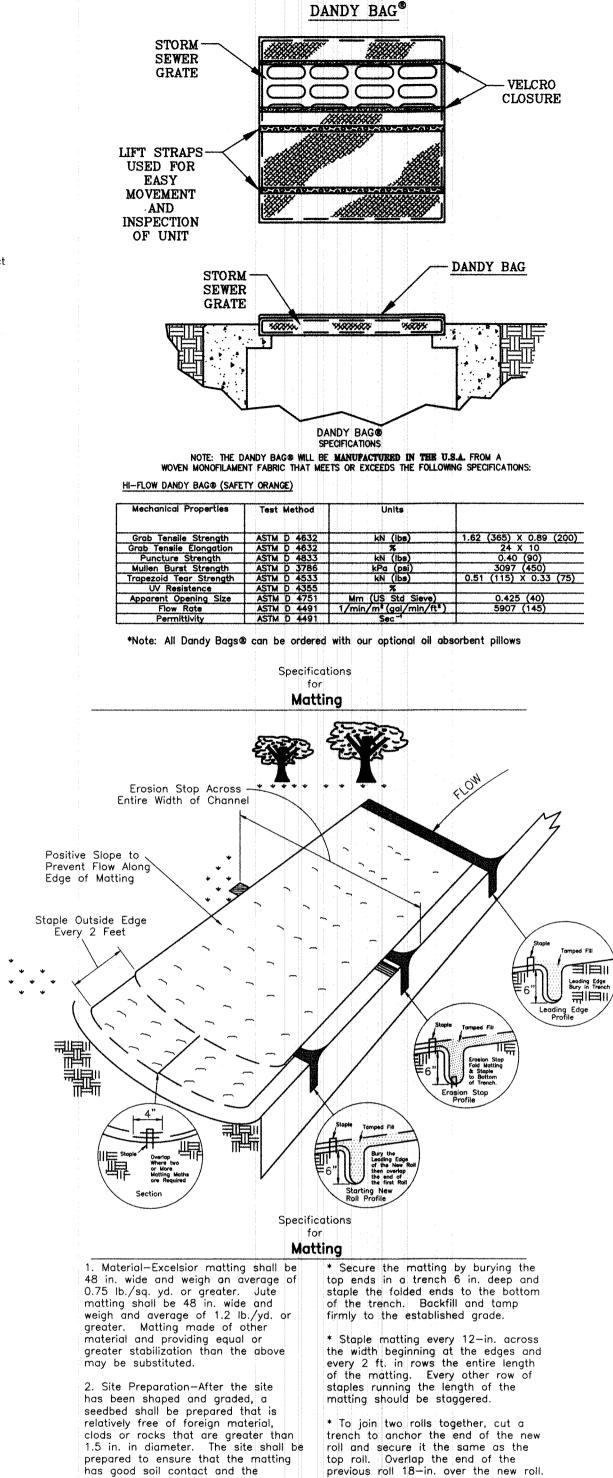
10. Maintenance-Silt fence shall allow runoff to pass only as diffuse flow through the geotextile. If runoff overtops the silt fence, flows under or around ends, or in any other way becomes a concentrated flow, on of the following shall be performed, as appropriate: 1) The layout of the silt fence shall be changed, 2) Accumulated sediment shall be removed, or 3) Other practices shall be installed.

Criteria for Silt Fence Materials

1. Fence Posts-The length shall be a minimum of 32 in. long. Wood posts will be 2-by-2 in. of hardwood of sound quality. The maximum spacing between posts shall be 10 ft.

Silt Fence Fabric shall be ODOT Type C Geotextile Fabric or as described by the chart below:

Fabric Properties	
Mimimum Tensile Strength       120 I         Maximum Elongation at 60 lbs       50%         Minimum Puncture Strength       50 lb         Minimum Burst Strength       40 lb         Minimum Burst Strength       200 p         Apparent Opening Size       ≤ 0.84         Mimimum Permittivity       1 x 10 <sup>4</sup>	s s. xsi mm



matting will not "bridge" or "tent" over obstructions. 3. Matting shall be held in place as recommended by the manufacturer as adequate for the site conditions or with sod staples. Sod staples are U-shaped wire staples used for fastening sod, jute or excelsion

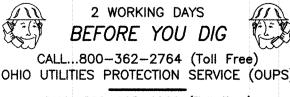
matting and other erosion-control materials to the soil surface. Sod staples shall be No. 11 gauge or heavier and be 6-10 in. in length. In loose or sandy soils, longer staples shall be used. 4. Planting-Lime and fertilizer shall

be used according to the recommendation of a soil test or the seeding plan. Seed according to the manufacturer's recommendations; or, for excelsior matting, seed area to be protected before installation; or when using jute matting, apply half the seed before and half the seed after installation.

5. Matting shall be installed as specified by the manufacturer as appropriate for the site conditions or the following procedure may be used:

\* After the site is prepared and erosion stops are installed, start laving the mat from the top of the slope or channel and unroll the matting allowing 4 in. overlaps at the edges.

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Continue to staple as described above.

\* When using excelsior matting, the plastic netting shall be on top of the wood fiber

6. Erosion stops shall be used where recommended by the matting manufacturer and on areas specified where high-erosion potential may cause undermining and gullies to form beneath the matting.

\* Erosion stops shall be made of strips of matting placed in narrow trenches 6-12 in. deep that cover the full cross section of the channel They shall be spaced according to the manufacturer's recommendations or by the following: \* 3 ft. down the channel from each point of entry of concentrated flow, \* at points where change in gradient or direction of channel occurs, and on long slopes at spacing from 20-100 ft. depending on the erodibility of the soil, velocity and volume of flow.

\* Erosion stops shall extend beyond the channel liner to the full design width of the channel. This will check any rills that might form outside or along the edge of the channel lining.

\* Erosion stops shall be constructed with a 6 in. deep trench, backfilled and tamped firmly to conform to the cross section of the channel.

\* If seeding has been done prior to installation of erosion stops, reseed disturbed areas prior to placement of channel liner.

3700 Park 42 Drive = Suite 1908 Cincinnati, Ohio 45241-2097 Tel 513.759.0004 = Fax 513.563.709 www.mcgillsmithpunshon.com Engineers = Architects = Surveyors Landscape Architects = Planners Drawn By NAK Project Mgr. R/				
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