

Date Received 8-31-18

Permit # BLD-CT18-03517

BUTLER COUNTY BLDG. DEPT.

DIXON BAYCO

7280 UNION CENTRE BLVD.
WEST CHESTER TOWNSHIP,
BUTLER COUNTY, OHIO 45014

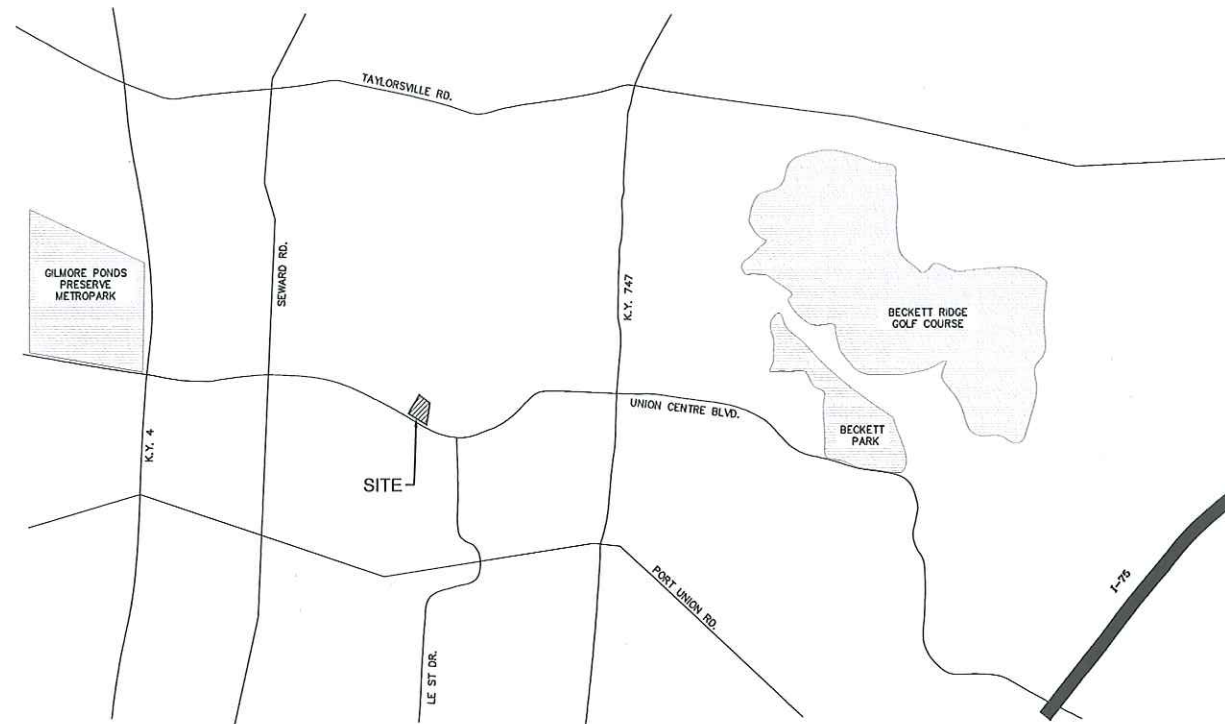
SITE INFORMATION

EXISTING USE: UNDEVELOPED
PROPOSED USE: OFFICE/INDUSTRIAL
EXISTING ZONING: A - AGRICULTURAL VACANT LAND

PARCEL ID = M5610008000021
LOT AREA = 217,756.44 SF (4.9990 AC.)

EXISTING IMPERVIOUS = 0 SF (0 AC.)
PROPOSED IMPERVIOUS = 148,828.77 SF (3.4108 AC.)

STANDARD PARKING = 55
ACCESSIBLE PARKING = 4
TOTAL PROPOSED PARKING = 51 (+39 FUTURE SPACES)



VICINITY MAP
N.T.S.

CONTACTS

TELECOMMUNICATIONS

CINCINNATI BELL
BILL SAVITZ
(513) 397-9848

FIBREOPTICS

CINCINNATI BELL
BILL SAVITZ
(513) 397-9848

ELECTRIC

DUKE ENERGY
139 E 4TH STREET
CINCINNATI, OH 45202
JOE ZUERNER
(513) 287-4718

GAS

DUKE ENERGY
139 E 4TH STREET
CINCINNATI, OH 45202
HEATHER STAMPER
(513) 287-4635

WATER

BUTLER COUNTY WATER AND SEWER
130 S. HIGH STREET #5
HAMILTON, OH 45011
CONSTANCE KEPNER
(513) 785-5134

SANITARY

BUTLER COUNTY WATER AND SEWER
130 S. HIGH STREET #5
HAMILTON, OH 45011
CONSTANCE KEPNER
(513) 785-5134

STORM

BUTLER COUNTY ENGINEER'S OFFICE
1921 FAIRGROVE AVENUE
HAMILTON, OH 45011
TERESA BARNES
(513) 785-4142

ZONING

WEST CHESTER TOWNSHIP
9577 BECKETT ROAD SUITE 100
WEST CHESTER, OH 45069
AARON WIEGAND
(513) 759-7226

OWNER

KRM DEVELOPMENT CORPORATION
165-J LOG CANOE CIRCLE
STEVENSVILLE, MD 21666
(410) 604-2622

CONTRACTOR

SCHUMACHER CONSTRUCTION
MANAGEMENT, INC.
6355 CENTRE PARK DR.
WEST CHESTER, OH 45069
(513) 777-9800

ENGINEER/SURVEYOR

THE KLEINGERS GROUP
6305 CENTRE PARK DR.
WEST CHESTER, OH 45069
DAVID WRIGHT
(513) 779-7851

SHEET INDEX	
SHEET	TITLE
C000	COVER SHEET
C001	GENERAL NOTES AND DETAILS
C002	UTILITY DETAILS
C100	EXISTING CONDITIONS
C200	DEMOLITION PLAN
C300	LOCATION PLAN
C400	UTILITY PLAN
C401	STORM PROFILES
C500	GRADING PLAN
C600	STORMWATER POLLUTION PREVENTION PLAN
C601	EROSION CONTROL NOTES
C602	EROSION CONTROL DETAILS



UTILITY NOTE
ALL UTILITIES ON THESE PLANS ARE APPROXIMATE. INDIVIDUAL SERVICE LINES ARE NOT SHOWN. THE CONTRACTOR OR SUBCONTRACTOR SHALL NOTIFY THE UTILITY PROTECTION CENTER OHIO 811 (TOLL FREE PHONE NO. 1-800-362-2764) TWO BUSINESS DAYS IN ADVANCE OF ANY CONSTRUCTION ON THIS PROJECT. THIS NUMBER WAS ESTABLISHED TO PROVIDE ACCURATE LOCATIONS OF EXISTING BELOW GROUND UTILITIES (I.E. CABLES, ELECTRIC WIRES, GAS & WATER LINES). WHEN CONTACTING THE OHIO 811 CALL CENTER, PLEASE STATE THE WORK TO BE DONE IS FOR A PROPOSED MSD SEWER OR DRAINAGE FACILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BECOMING FAMILIAR WITH ALL UTILITY REQUIREMENTS SET FORTH ON THE PLANS AND IN THE TECHNICAL SPECIFICATIONS & SPECIAL PROVISIONS.



NO. DATE DESCRIPTION

DIXON BAYCO
7280 UNION CENTRE BLVD.

SECTION 10 TOWN 2 RANGE 2 BTM
WEST CHESTER TOWNSHIP
BUTLER COUNTY, OH

PROJECT NO: 180242.001

DATE: 08/21/2018

SCALE:

SHEET NAME:

COVER SHEET

SHEET NO.

C000

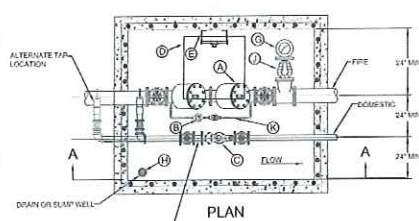
ASPHALT CONCRETE
ROADWAY PAVEMENT
REPLACEMENT DETAILBUTLER COUNTY
WATER AND SEWER
130 HIGH STREET
HAMILTON, OH 45011
TELEPHONE: 513-887-3000
FAX: 513-887-3777

4030

CATHETER INSTALLATION INSTRUCTIONS

1. WHEN INSTALLING CATHETERS WITH THE STRAINER, A MINIMUM OF 2" OF STRAIGHT RUN OF PIPE OR EQUIVALENT FULL OPEN COMPONENTS IS REQUIRED UPSTREAM AND DOWNSTREAM OF THE METER OR STRAINER PLACES. FULL OPEN FLOW COMPONENTS MAY CONSIST OF STRAIGHT PIPE, FULL OPEN GATE VALVES, BYPASS PIPES AND CONVEYING DEVICES (IF NORMAL PIPE SIZE REDUCTION ONLY). FOR ALL OTHER INSTALLATIONS (OTHER THAN A MINIMUM OF 5' PIPE DIAMETER OF STRAIGHT RUN IS REQUIRED UPSTREAM).
2. GATE VALVES (LOCATED IMMEDIATELY UPSTREAM OR DOWNSTREAM) ARE NOT TO BE USED TO THROTTLE FLOW RATES THROUGH THE METER.
3. INSTALL NONCONCENTRIC REDUCERS, CHECK VALVES, BACKFLOW PREVENTERS, PIV (PRESSURE REDUCING VALVES), THROTTLE DEVICES, ALTHOUGH VALVES NO CLOSER THAN 4" PIPE DIAMETERS DOWNSTREAM OF THE METER. ALWAYS AVOID PLACING ANY OF THESE DEVICES UPSTREAM OF ANY METER SINCE THIS PLACEMENT WILL PUT THE METER IN A LOW PRESSURE ZONE TO POSSIBLY CAUSING INCONSISTENT ACCURACY AND REDUCED LONGEVITY.

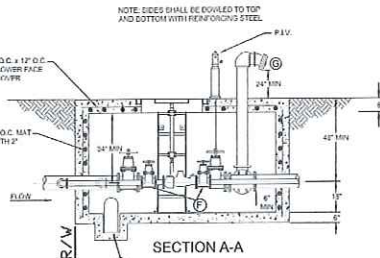
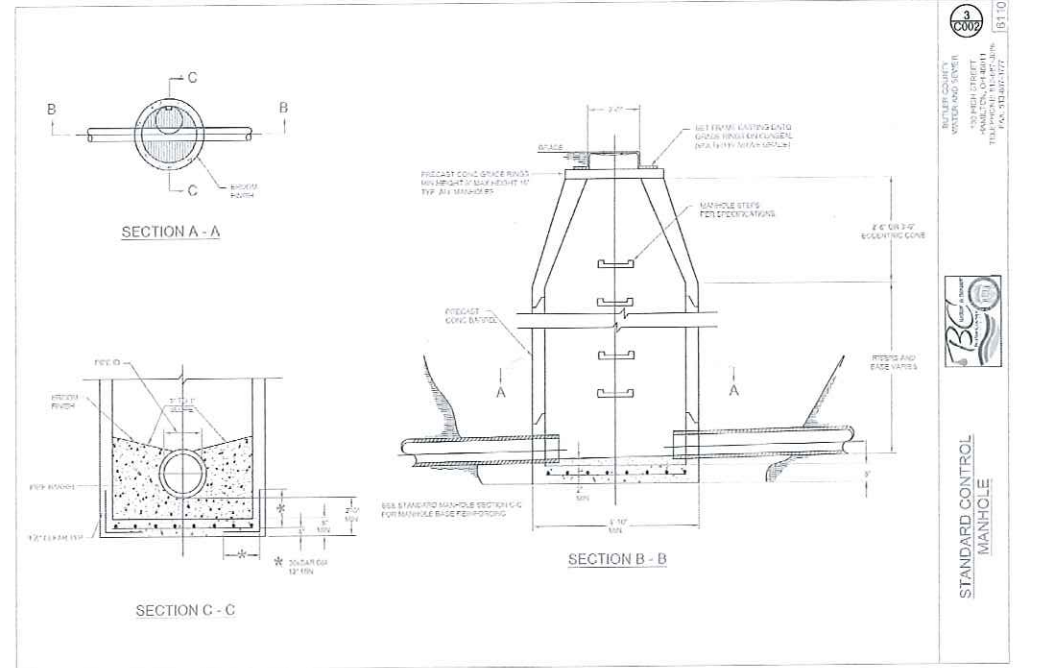
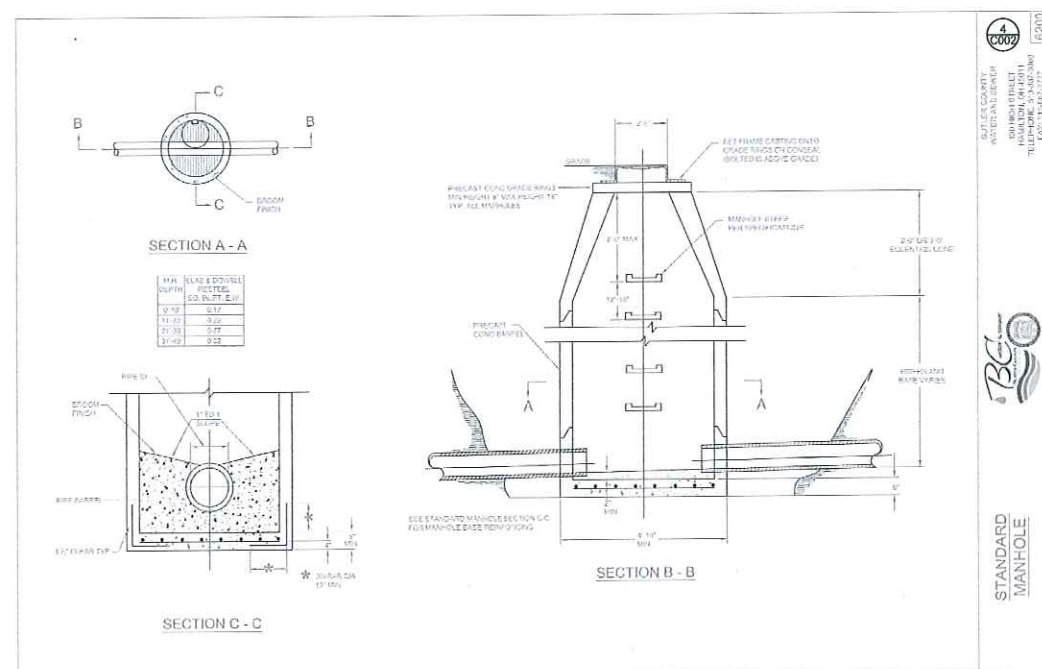
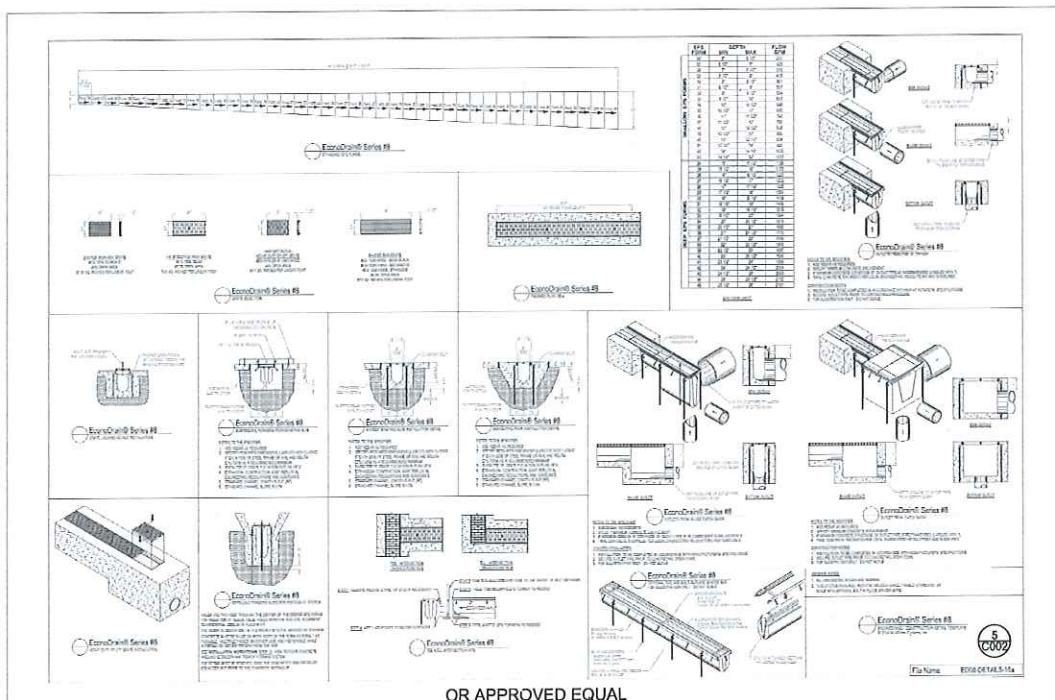
NOTE: CATHETERS CAN BE INSTALLED VERTICALLY OR ROTATED ON THE SOLT PATTERNS IN ANY ORIENTATION.



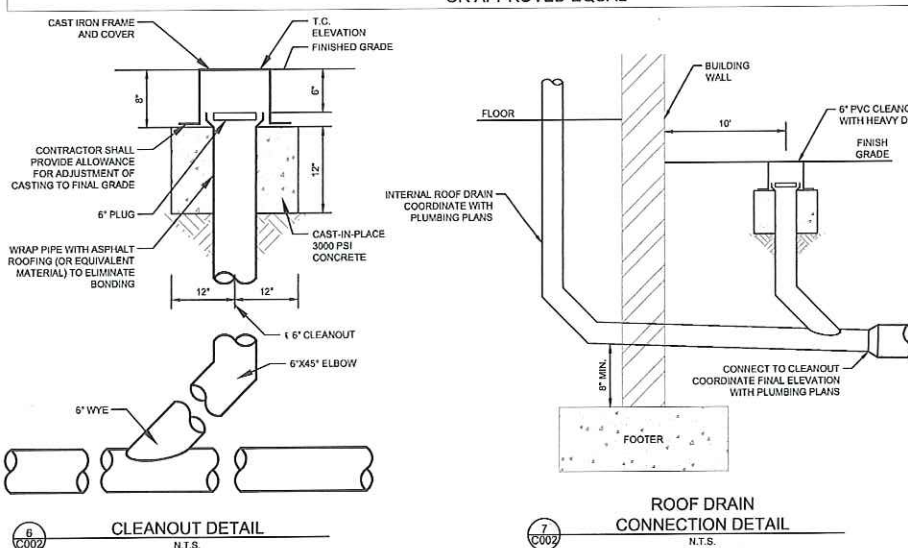
METER SIZE & TYPE	MIN. C
1 1/2" TO 2" CATH	12"
1 1/2" C3 CATH	12"
2" TO 2 1/2" CATH	12"
2" C3 CATH	12 1/4"
2 1/2" CATH	12"
2 1/2" C3 CATH	12"
3" CATH	24"
3" C3 CATH	24"

- A) FIRE SERVICE BACKFLOW PREVENTION DEVICE, VALVES #1000, ANES #0000, OR EQUAL.
- B) 6" FAS METER (1/2" OR 1" PURCHASED FROM BUTLER CO.) MAY BE USED IF IT IS PURCHASED FROM BUTLER CO. AND IS USED IN A BACKFLOW PREVENTION DEVICE.
- C) DOMESTIC METER PURCHASED BY BUTLER CO. NOTE: 2" AND LARGER METERS SHALL BE INSTALLED WITH PLUMBER CLASS 3 DUCTILE IRON PIPE 2" AND LESS SHALL BE 1/2" COVER.
- D) 1/2" BICO MODEL #2-4AL OR HALLDAY MODEL #W1530L OR APPROVED EQUAL.
- E) ALUMINUM LADDER: GMA APPROVED HALLDAY SERIES L-18 WITH SERIES L-18 SAFETY POST, OR APPROVED EQUAL.
- F) DOMESTIC INLET AND OUTLET CONNECTIONS SEE CHART ABOVE.
- G) 2" LOCKING NUTS ON 3/4" BOW TIED DOWN SECURED NON INDICATING "FIRE DEPT. CONNECTION" (FDC) WITH ADDRESS IT PROTECTS FDC TO THE FDC FACING STREET.
- H) SUMP PUMP REQUIRED IF GRAVITY DRAIN IS NOT POSSIBLE, EXTEND DISCHARGE PIPING AWAY FROM TOP OF VAULT.
- I) CHECK VALVE WITH AUTOMATIC BALL DROP.
- J) CONTRACTOR PLUMBER TO VERIFY LAYING LENGTH OF BACKFLOW DEVICE, VALVES, METERS ETC.

NOTE: SIDES SHALL BE DOUBLED TO TOP AND BOTTOM WITH REINFORCING STEEL.

DUAL SERVICE SETTING
W/ BACKFLOW DEVICEBUTLER COUNTY
WATER AND SEWER
130 HIGH STREET
HAMILTON, OH 45011
TELEPHONE: 513-887-3000
FAX: 513-887-3777BUTLER COUNTY
WATER AND SEWER
130 HIGH STREET
HAMILTON, OH 45011
TELEPHONE: 513-887-3000
FAX: 513-887-3777STANDARD CONTROL
MANHOLEBUTLER COUNTY
WATER AND SEWER
130 HIGH STREET
HAMILTON, OH 45011
TELEPHONE: 513-887-3000
FAX: 513-887-3777STANDARD CONTROL
MANHOLE

OR APPROVED EQUAL

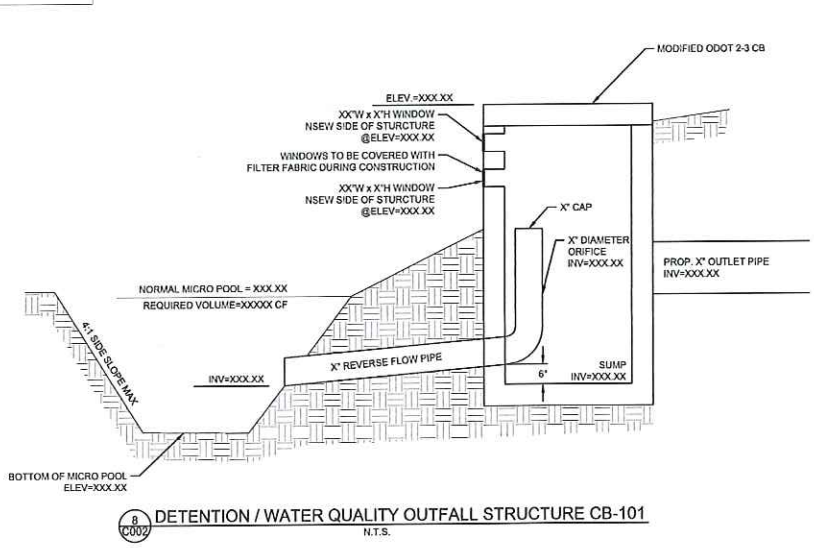


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C002

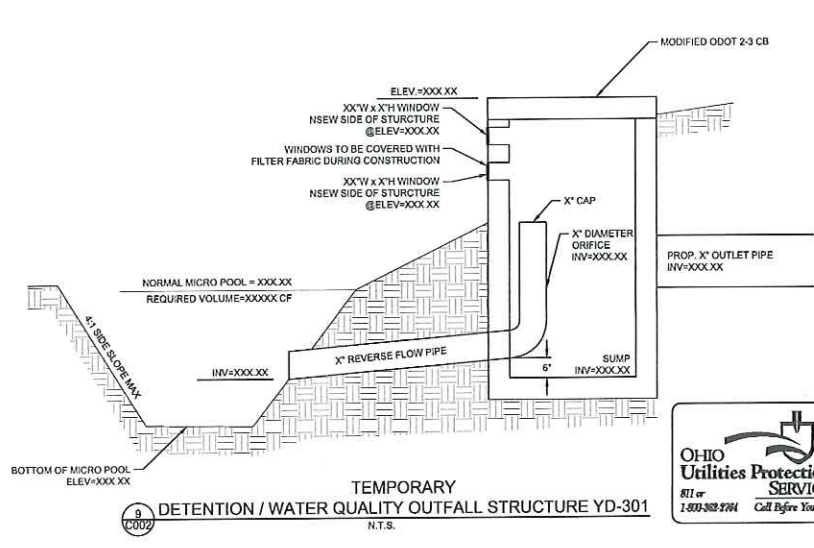
7

C002



8

C002



9

C002

CIVIL ENGINEERING | www.kleingers.com
SURVEYING | 6305 Conroy Park Dr.
LANDSCAPE ARCHITECTURE | West Chester, OH 45069
513.779.7851

SEAL:

DAVID V. WRIGHT, III
E-68774
REGISTERED PROFESSIONAL ENGINEER

NO. DATE DESCRIPTION

DIXON BAYCO
7280 UNION CENTRE BLVD.
SECTION 10 TOWN 2 RANGE 2 BTM
WEST CHESTER TOWNSHIP
BUTLER COUNTY, OH

PROJECT NO. 180242.001
DATE: 08/21/2018
SCALE:

SHEET NAME:

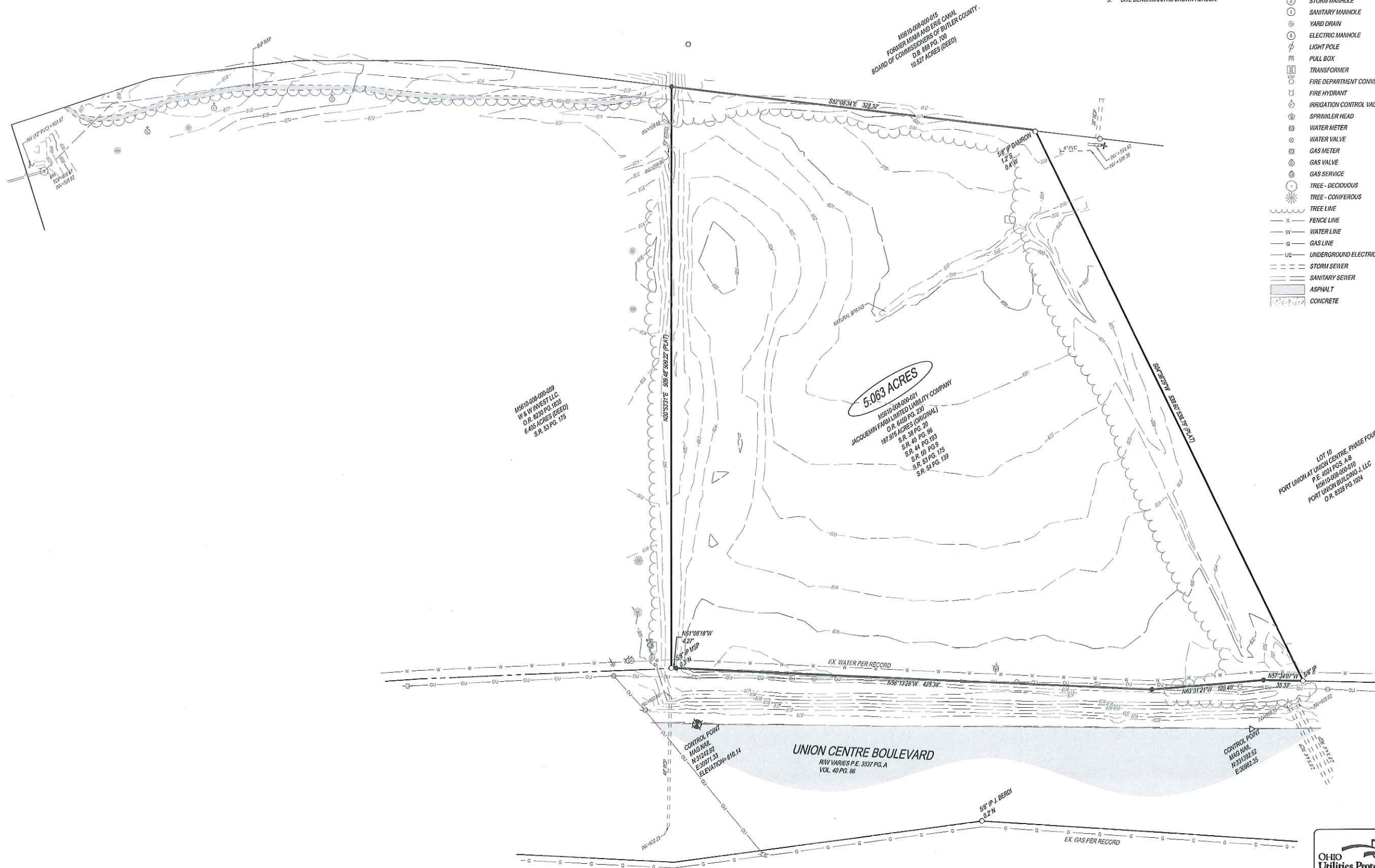
UTILITY DETAILS

SHEET NO.

C002



Call Before You Dig



- NOTES:**
1. SOURCE DOCUMENTS AS NOTED.
 2. OCCUPATION IN GENERAL FITS SURVEY.
 3. MONUMENTATION IS IN GOOD CONDITION UNLESS OTHERWISE NOTED.
 4. HORIZONTAL AND VERTICAL DATUM ARE BASED ON THE KENTUCKY STATE PLANE COORDINATE SYSTEM, NORTH ZONE, (NAD 83)/(NAD 88).
 5. SITE BENCHMARK AS SHOWN HEREON.

LEGEND

- 5/8" IRON PIN SET
- IRON PIN FOUND (SIZE AS NOTED)
- ⊙ GUARD POST
- ⊙ HANDICAP PARKING SPACE
- ⊙ SOIL BORING
- ⊙ SIGN - SINGLE POST
- CATCH BASIN
- ⊙ CLEANOUT
- INLET
- ⊙ STORM MANHOLE
- ⊙ SANITARY MANHOLE
- ⊙ YARD DRAIN
- ⊙ ELECTRIC MANHOLE
- ⊙ LIGHT POLE
- ⊙ PULL BOX
- ⊙ TRANSFORMER
- ⊙ FIRE DEPARTMENT CONNECTOR
- ⊙ FIRE HYDRANT
- ⊙ IRRIGATION CONTROL VALVE
- ⊙ SPRINKLER HEAD
- ⊙ WATER METER
- ⊙ WATER VALVE
- ⊙ GAS METER
- ⊙ GAS VALVE
- ⊙ GAS SERVICE
- ⊙ TREE - DECIDUOUS
- ⊙ TREE - CONIFEROUS
- TREE LINE
- FENCE LINE
- WATER LINE
- GAS LINE
- UNDERGROUND ELECTRIC
- STORM SEWER
- SANITARY SEWER
- ASPHALT
- CONCRETE

THE KLEINGERS GROUP

CIVIL ENGINEERING SURVEYING LANDSCAPE ARCHITECTURE

www.kleingers.com

6363 Centre Park Dr. West Chester, OH 45069 513.779.7851

SEAL:

STATE OF OHIO

DAVID V. WRIGHT, III

E-68774

REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	DESCRIPTION

DIXON BAYCO

7280 UNION CENTRE BLVD.

SECTION 10 TOWN 2 RANGE 2 BTM

WEST CHESTER TOWNSHIP

BUTLER COUNTY, OH

PROJECT NO: 180242.001

DATE: 08/21/2018

SCALE:

0 20 40 80

SHEET NAME:

EXISTING CONDITIONS

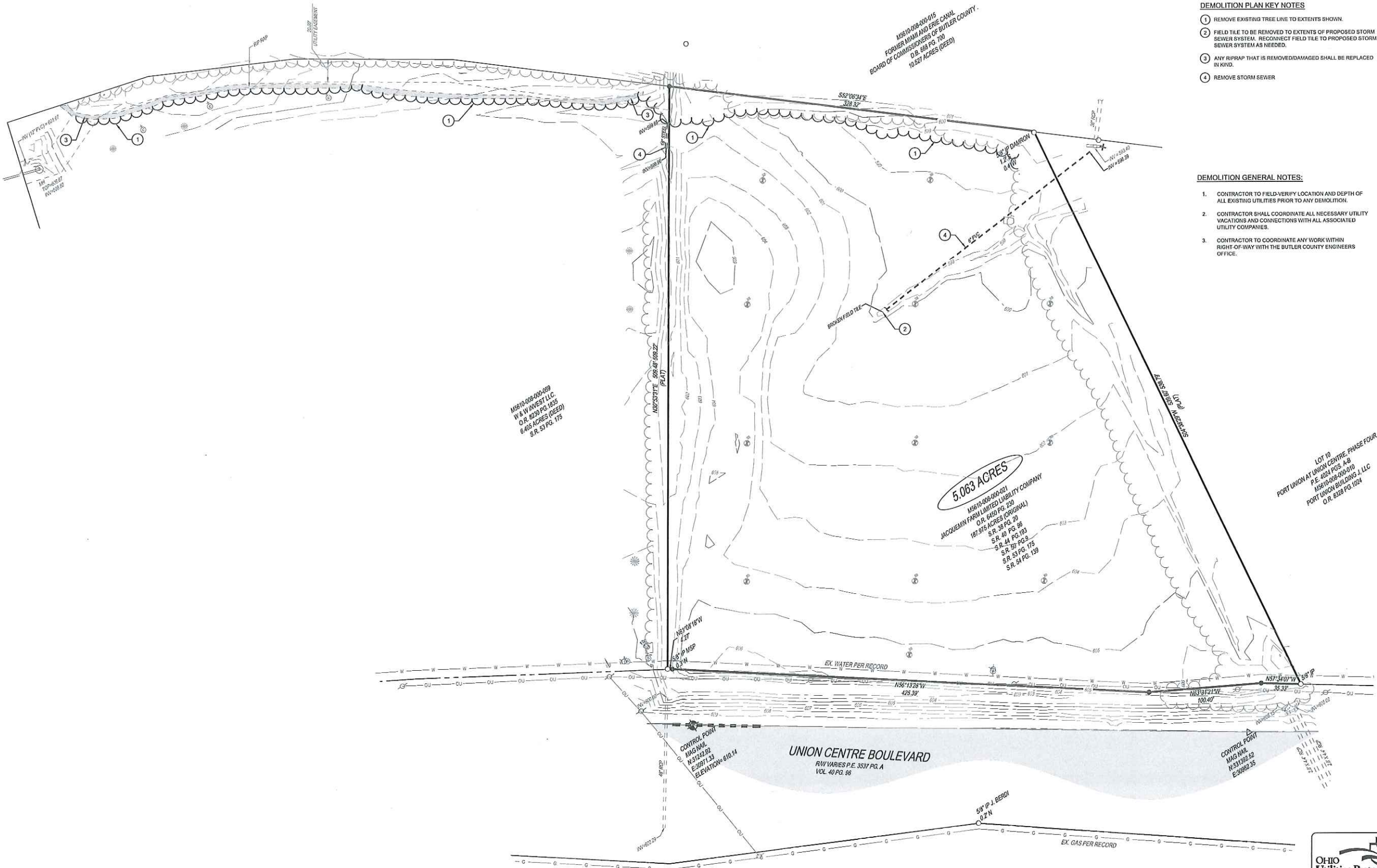
SHEET NO.

C100

OHIO

Utilities Protection SERVICE

811 or 1-800-388-5744 Call Before You Dig



DEMOLITION KEY

--- SAWCUT PAVEMENT/CONCRETE EDGE.
WHERE PROPOSED ASPHALT PAVEMENT IS TO MATCH EX. ASPHALT PAVEMENT, SAWCUT CRACKED OR DAMAGED EX. PAVEMENT IN NEAT, STRAIGHT LINES TO CREATE A CLEAN BUTT JOINT AND REMOVE DAMAGED PAVEMENT. COAT EDGE OF EX. PAVEMENT WITH ASPHALT PRIOR TO PLACING AND COVER JOINT WITH SEALANT.

- DEMOLITION PLAN KEY NOTES**
- 1 REMOVE EXISTING TREE LINE TO EXTENTS SHOWN.
 - 2 FIELD TILE TO BE REMOVED TO EXTENTS OF PROPOSED STORM SEWER SYSTEM. RECONNECT FIELD TILE TO PROPOSED STORM SEWER SYSTEM AS NEEDED.
 - 3 ANY RIPRAP THAT IS REMOVED/DAMAGED SHALL BE REPLACED IN KIND.
 - 4 REMOVE STORM SEWER.

- DEMOLITION GENERAL NOTES:**
- 1. CONTRACTOR TO FIELD-VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO ANY DEMOLITION.
 - 2. CONTRACTOR SHALL COORDINATE ALL NECESSARY UTILITY VACATIONS AND CONNECTIONS WITH ALL ASSOCIATED UTILITY COMPANIES.
 - 3. CONTRACTOR TO COORDINATE ANY WORK WITHIN RIGHT-OF-WAY WITH THE BUTLER COUNTY ENGINEERS OFFICE.

THE KLEINGERS GROUP

CIVIL ENGINEERING SURVEYING LANDSCAPE ARCHITECTURE

www.kleingers.com

6305 Centre Park Dr.
West Chester, OH 45069
913.779.7651

SEAL:

STATE OF OHIO

DAVID V. WRIGHT, III
E-68774
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	DESCRIPTION

DIXON BAYCO
7280 UNION CENTRE BLVD.

SECTION 10 TOWN 2 RANGE 2 BTM
WEST CHESTER TOWNSHIP
BUTLER COUNTY, OH

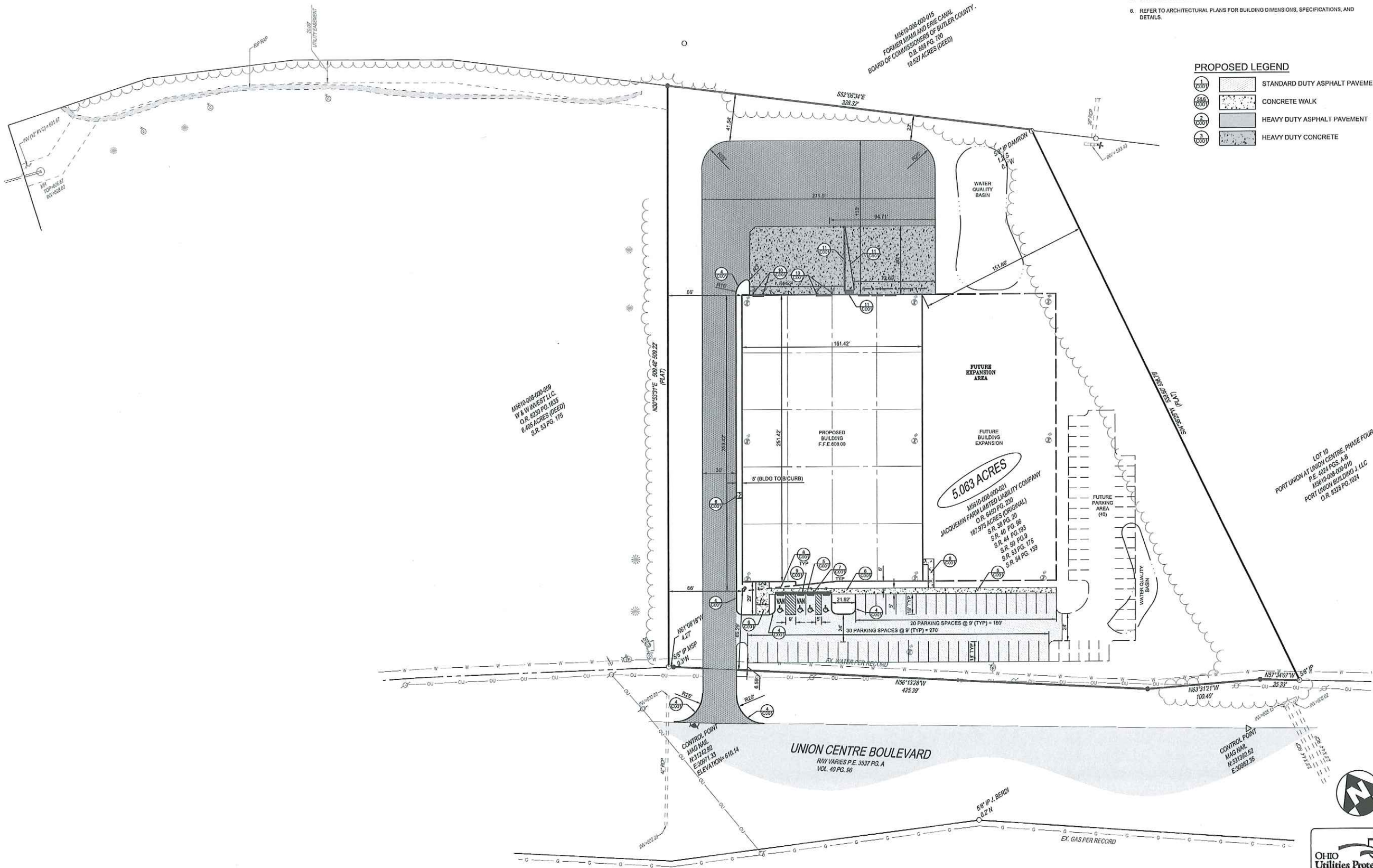
PROJECT NO. 180242.001
DATE: 08/21/2018
SCALE:
0 20 40 80

SHEET NAME:
DEMOLITION PLAN

SHEET NO.
C200

OHIO
Utilities Protection
SERVICE

811 or
1-800-368-5764 Call Before You Dig



- LOCATION NOTES
1. ALL DIMENSIONS ARE TO THE EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED.
 2. UNLESS OTHERWISE NOTED, ALL PARKING PLACES ARE 9' 0" x 18' 0".
 3. ALL RADII ARE 5' TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
 4. PARKING LOT STRIPING SHALL BE 4" WIDE WHITE HIGHWAY-TYPE STRIPING APPLIED IN ACCORDANCE WITH THE PLAN.
 5. REFER TO LANDSCAPE PLAN FOR PROPOSED LANDSCAPING LOCATION AND DETAILS.
 6. REFER TO ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS, SPECIFICATIONS, AND DETAILS.

PROPOSED LEGEND

	STANDARD DUTY ASPHALT PAVEMENT
	CONCRETE WALK
	HEAVY DUTY ASPHALT PAVEMENT
	HEAVY DUTY CONCRETE

THE KLEINGERS GROUP

CIVIL ENGINEERING SURVEYING LANDSCAPE ARCHITECTURE

www.kleingers.com

6305 Conroe Park Dr. West Chester, OH 45069 513.779.7551

SEAL:

STATE OF OHIO

DAVID V. WRIGHT, III

E-68774

REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	DESCRIPTION

DIXON BAYCO

7280 UNION CENTRE BLVD.

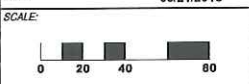
SECTION 10 TOWN 2 RANGE 2 BTM

WEST CHESTER TOWNSHIP

BUTLER COUNTY, OH

PROJECT NO: 180242.001

DATE: 08/21/2018



SHEET NAME:

LOCATION PLAN

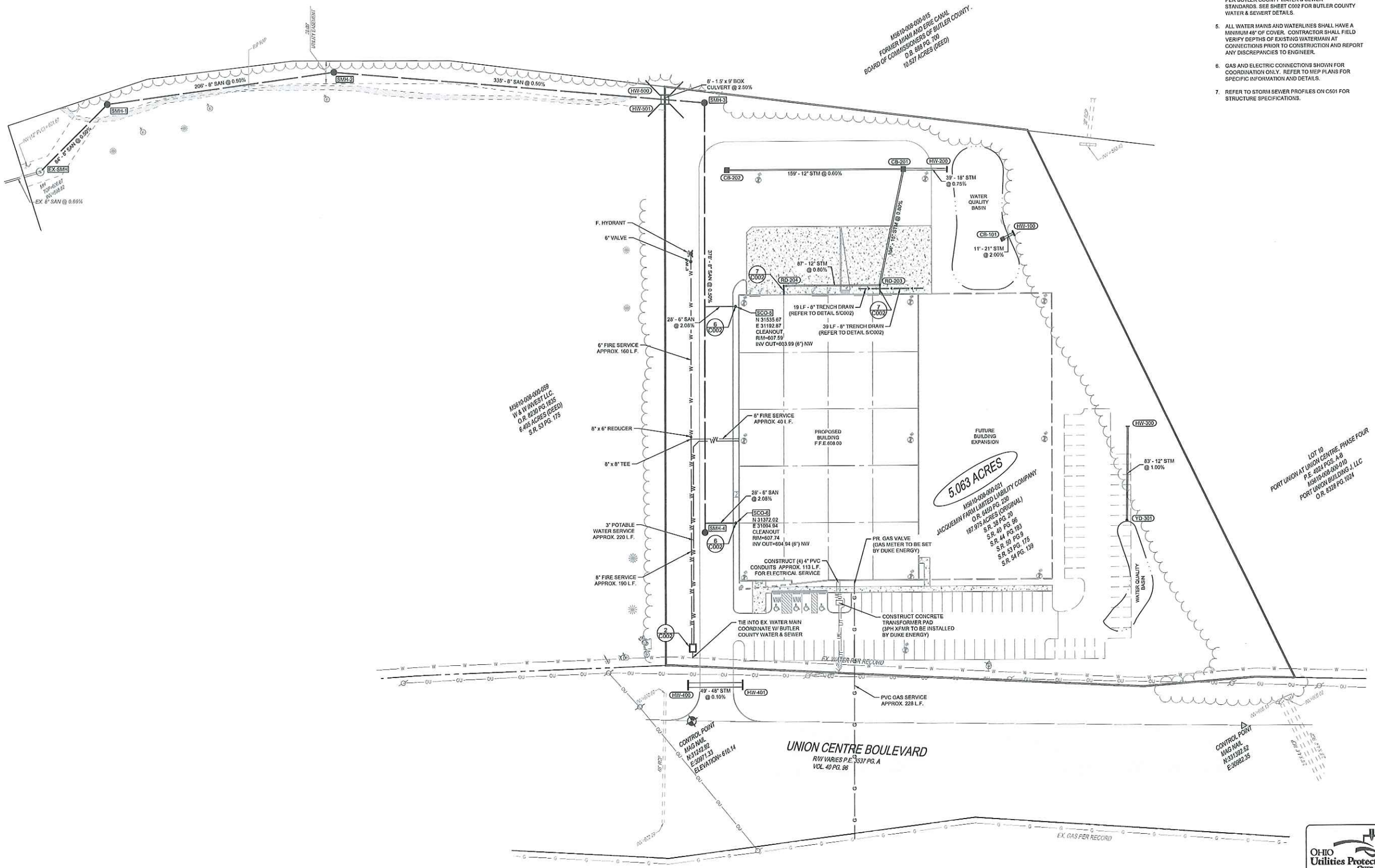
SHEET NO.

C300

OHIO

Utilities Protection SERVICE

811 or 1-800-883-8744 Call Before You Dig



- UTILITY NOTES**
1. SANITARY GRAVITY SEWER AND FORCEMAIN SHALL BE INSTALLED PER BUTLER COUNTY WATER & SEWER SPECIFICATIONS.
 2. SANITARY PROPERTY SERVICE CONNECTIONS MUST BE INSTALLED AT NO LESS THAN 1.00% OR BUTLER COUNTY WATER & SEWER SPECIFICATIONS.
 3. ALL CLEANOUTS AND MANHOLE CONNECTIONS SHALL BE INSTALLED PER BUTLER COUNTY WATER & SEWER SPECIFICATIONS.
 4. SEE SHEET C002 FOR STORMWATER DETAILS FROM BUTLER COUNTY WATER & SEWER.
 5. WATER MAINS AND WATERLINES MUST BE INSTALLED PER BUTLER COUNTY WATER & SEWER STANDARDS. SEE SHEET C002 FOR BUTLER COUNTY WATER & SEWER DETAILS.
 6. ALL WATER MAINS AND WATERLINES SHALL HAVE A MINIMUM 48" OF COVER. CONTRACTOR SHALL FIELD VERIFY DEPTHS OF EXISTING WATERMAIN AT CONNECTIONS PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO ENGINEER.
 7. GAS AND ELECTRIC CONNECTIONS SHOWN FOR COORDINATION ONLY. REFER TO MEP PLANS FOR SPECIFIC INFORMATION AND DETAILS.
 8. REFER TO STORM SEWER PROFILES ON C501 FOR STRUCTURE SPECIFICATIONS.




THE KLEINGERS GROUP

CIVIL ENGINEERING SURVEYING LANDSCAPE ARCHITECTURE

www.kleingers.com
6305 Corda Park Dr.
West Chester, OH 45390
513.779.7551

SEAL:



NO. DATE DESCRIPTION

DIXON BAYCO
7280 UNION CENTRE BLVD.

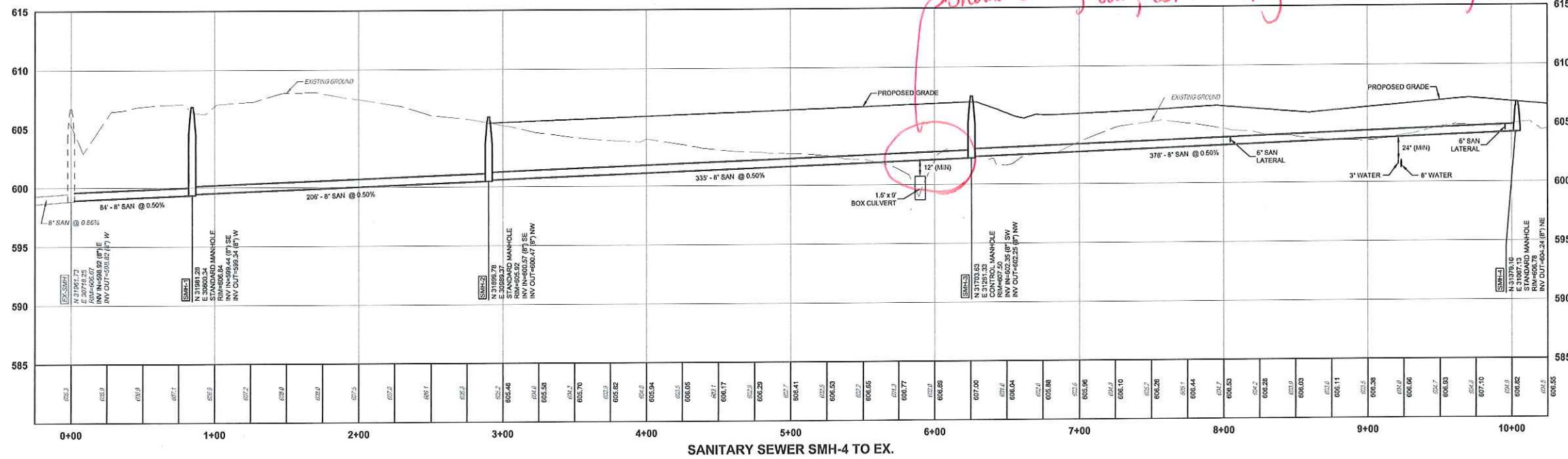
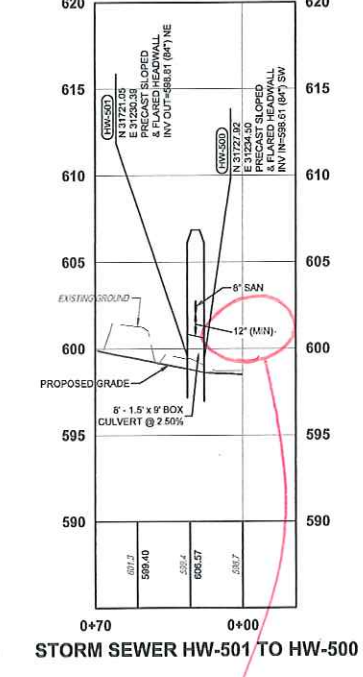
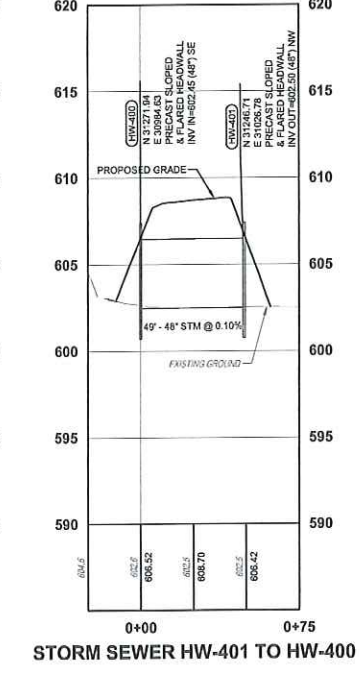
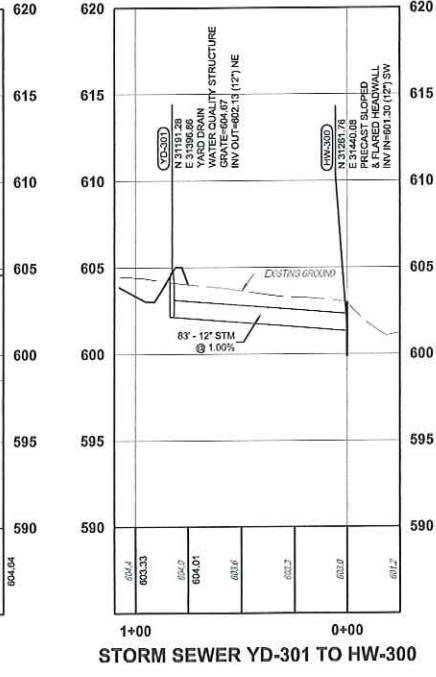
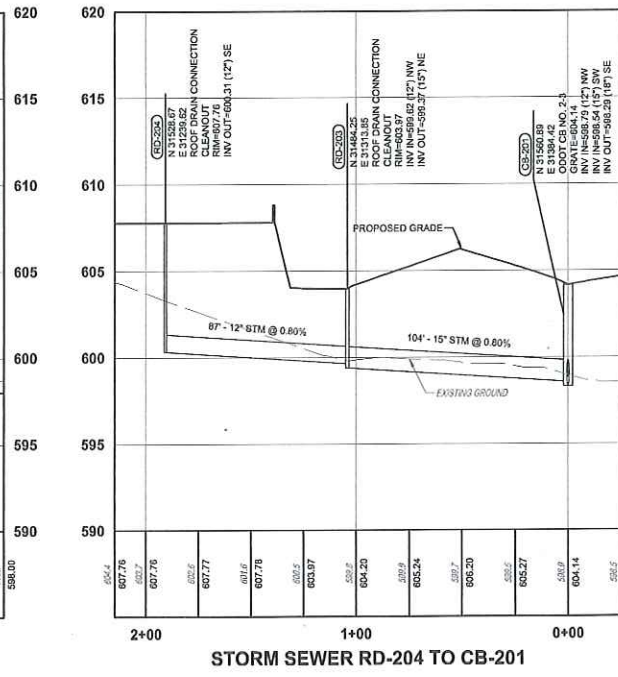
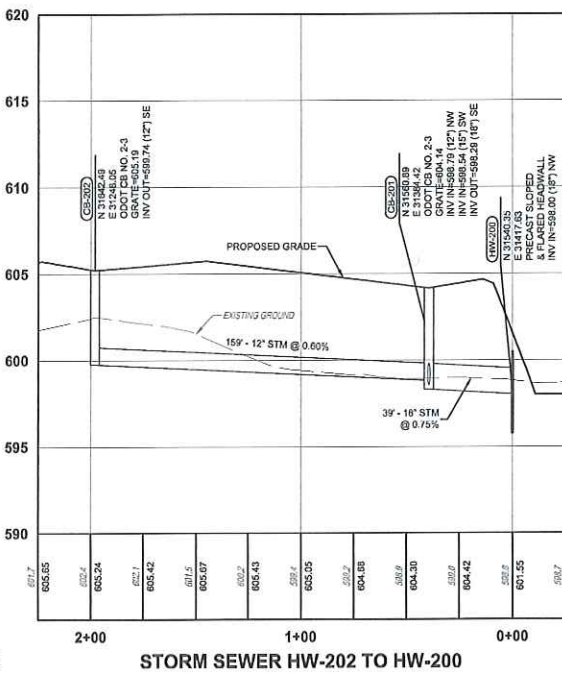
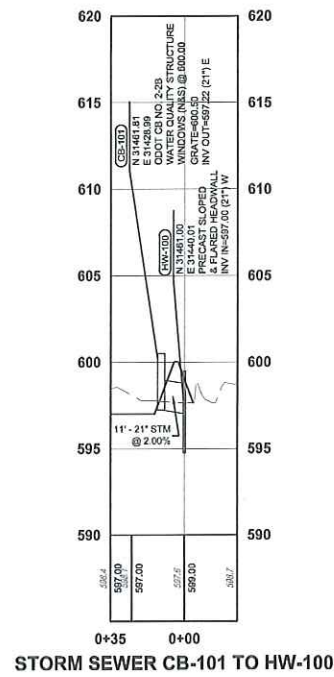
SECTION 10 TOWN 2 RANGE 2 BTM
WEST CHESTER TOWNSHIP
BUTLER COUNTY, OH

PROJECT NO: 180242.001
DATE: 08/21/2018
SCALE: 1" = 40' (Horizontal)
1" = 8' (Vertical)

SHEET NAME:
UTILITY PLAN

SHEET NO:
C400





Should be 18"; but; constraining circumstances; 12" ok here

THE KLEINGERS GROUP

CIVIL ENGINEERING SURVEYING LANDSCAPE ARCHITECTURE

www.kleingers.com

6305 Centra Park Dr. West Chester, OH 45069 513.779.7651

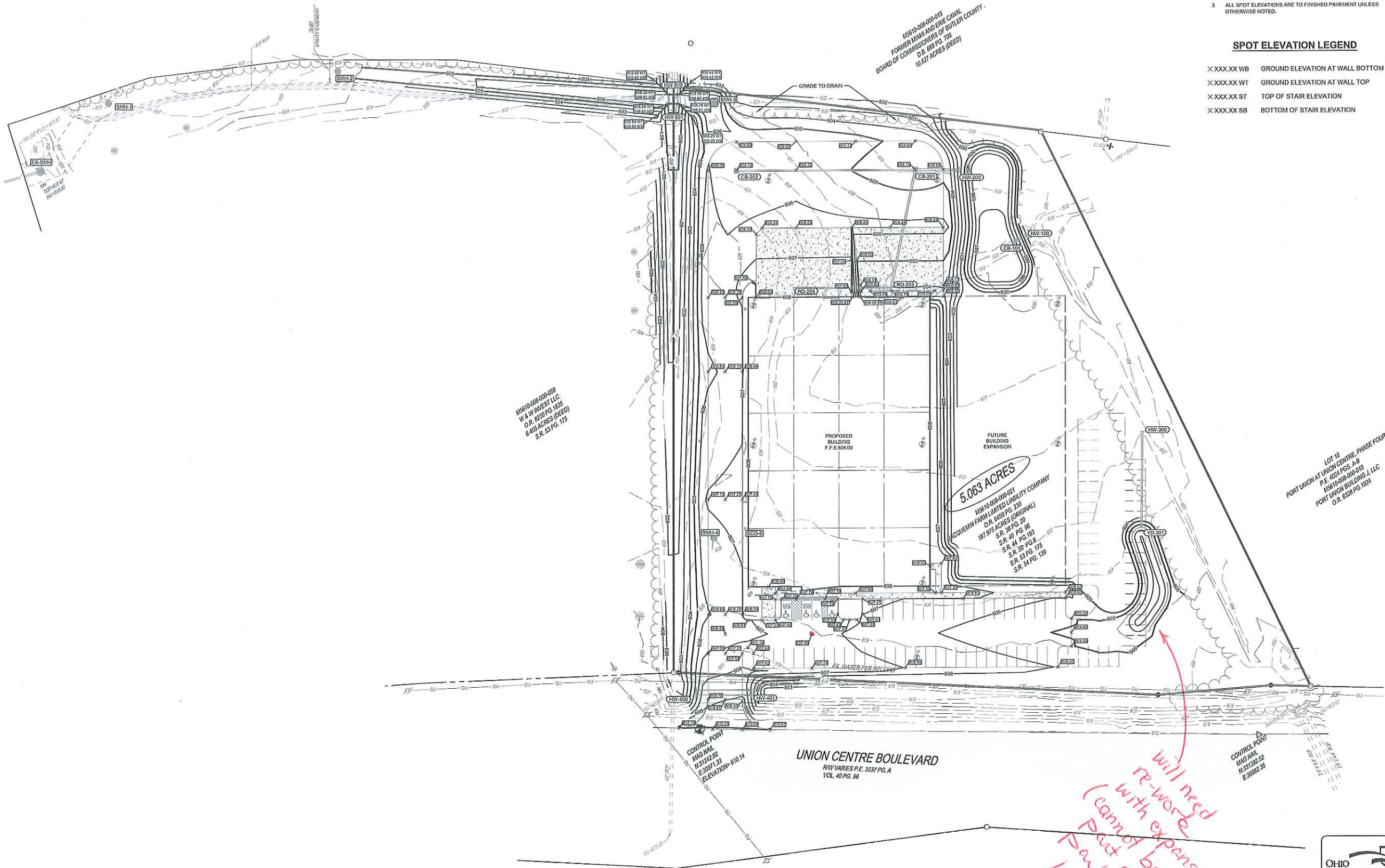
SEAL: DAVID V. WRIGHT, III E-68774 REGISTERED PROFESSIONAL ENGINEER

NO. DATE DESCRIPTION

DIXON BAYCO
7280 UNION CENTRE BLVD.
SECTION 10 TOWN 2 RANGE 2 BTM
WEST CHESTER TOWNSHIP
BUTLER COUNTY, OH

PROJECT NO: 180242.001
DATE: 08/21/2018
SCALE: 1" = 20' (H) 1" = 2' (V)
SHEET NAME: UTILITY PROFILES
SHEET NO. C401

OHIO Utilities Protection SERVICE
811 or 1-800-382-8764 Call Before You Dig



- GRADING PLAN NOTES:**
1. EXISTING UTILITIES TO BE PROTECTED DURING EARTHWORK OPERATIONS.
 2. EXISTING UTILITIES TO BE ADJUSTED TO FINISHED GRADE.
 3. ALL SPOT ELEVATIONS ARE TO FINISHED PAVEMENT UNLESS OTHERWISE NOTED.

- SPOT ELEVATION LEGEND**
- X XXX.XX WB GROUND ELEVATION AT WALL BOTTOM
 - X XXX.XX WT GROUND ELEVATION AT WALL TOP
 - X XXX.XX ST TOP OF STAIR ELEVATION
 - X XXX.XX SB BOTTOM OF STAIR ELEVATION

THE KLEINGERS GROUP

CIVIL ENGINEERING SURVEYING LANDSCAPE ARCHITECTURE

www.kleingers.com

6305 Contra Park Dr. West Chester, OH 45669 513.779.7551

SEAL:

STATE OF OHIO

DAVID V. WRIGHT, III

E-68774

REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	DESCRIPTION

DIXON BAYCO

7280 UNION CENTRE BLVD.

SECTION 10 TOWN 2 RANGE 2 BTM

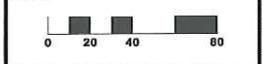
WEST CHESTER TOWNSHIP

BUTLER COUNTY, OH

PROJECT NO: 180242.001

DATE: 08/21/2018

SCALE:



SHEET NAME:

GRADING PLAN

SHEET NO.

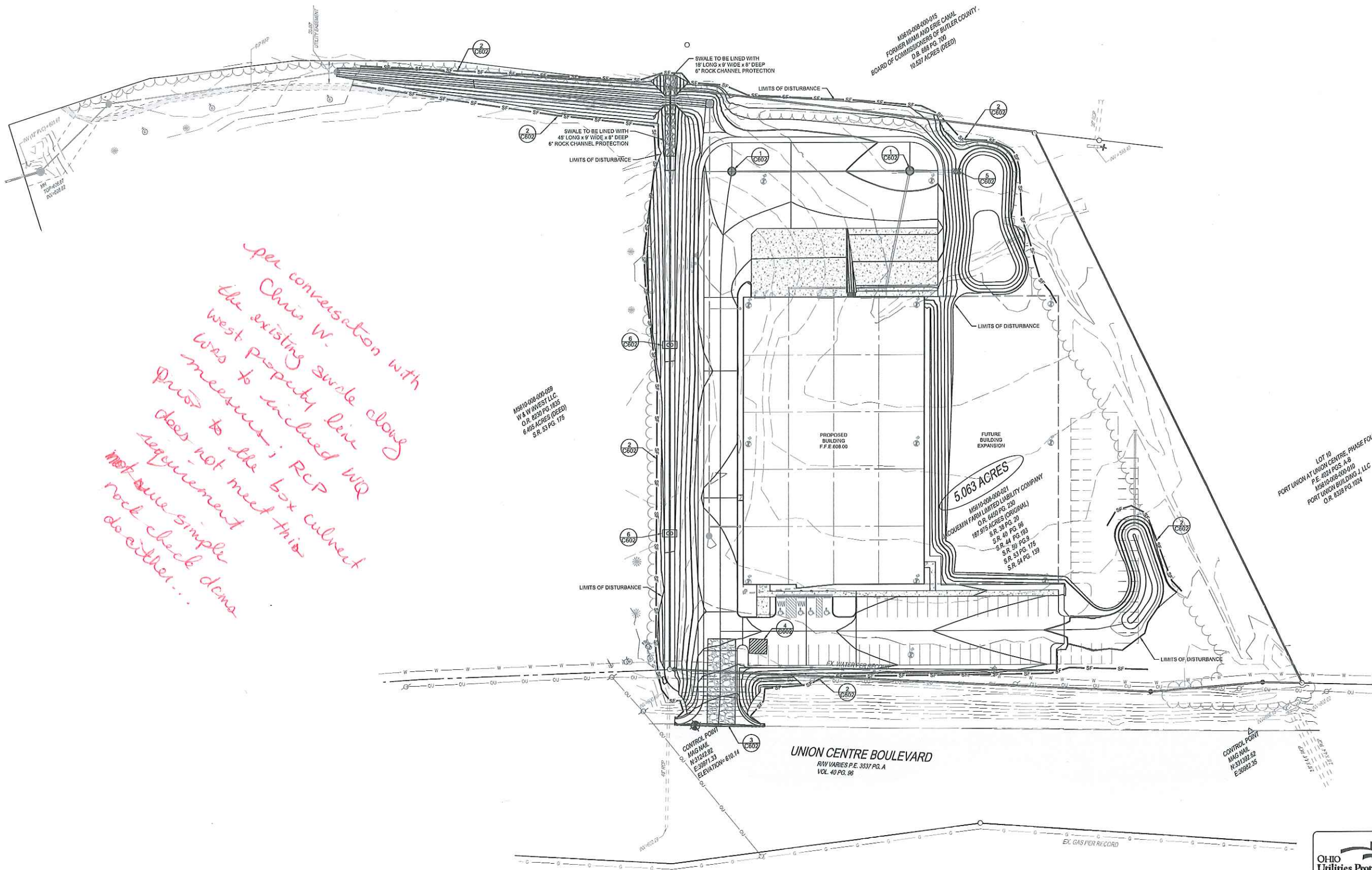
C500

OHIO

Utilities Protection SERVICE

811 or 1-800-382-5741 Call Before You Dig

will need re-work (cannot be part of expansion parking lot)




per conversation with
Chris W.
the existing curb along
west property line
was to include WR
measures; RCP
prior to the box culvert
does not meet this
requirement
simple
~~not sure~~ check dema
not either...

- NOTES:**
1. ALL EXISTING TREES WITHIN LIMITS OF DISTURBANCE SHALL BE REMOVED.
 2. EARTH MOVING ACTIVITY SHALL NOT COMMENCE UNTIL A GRADING PERMIT IS ISSUED BY BUTLER COUNTY WATER & SEWER.
 3. BUTLER COUNTY WATER & SEWER SHALL BE NOTIFIED 72 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY. BUTLER COUNTY WATER & SEWER CAN BE CONTACTED AT 513-785-8134.

[illegible]

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7280 UNION CENTRE BLVD.
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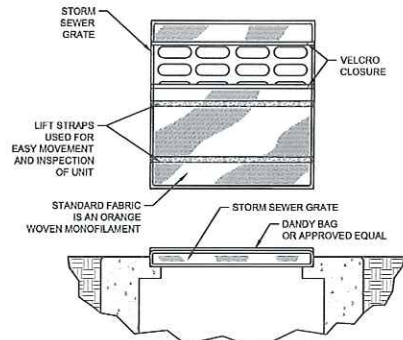


STORMWATER POLLUTION PREVENTION PLAN

SHEET NO.

C600





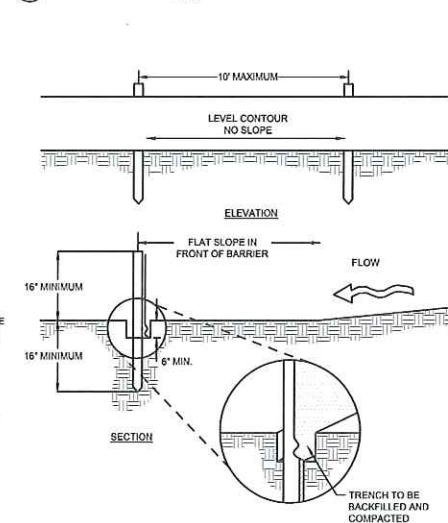
SPECIFICATIONS

MECHANICAL PROPERTIES	TEST METHOD	UNITS	MARV
GRAB TENSILE STRENGTH	ASTM D 4632	KN (LBS)	1.62 (365) X 0.69 (200)
GRAB TENSILE ELONGATION	ASTM D 4632	%	24 X 10
PUNCTURE STRENGTH	ASTM D 4633	KN (LBS)	0.40 (90)
MULLEN BURST STRENGTH	ASTM D 3768	KPA (PSI)	3097 (450)
TRAPEZOID TEAR STRENGTH	ASTM D 4533	KN (LBS)	0.51 (115) X 0.33 (75)
UV RESISTANCE	ASTM D 4355	%	60
APPARENT OPENING SIZE	ASTM D 4751	MM (US STD SIEVE)	0.425 (40)
FLOW RATE	ASTM D 4491	L/MIN (GAL/MIN-FT)	5907 (145)
PERMITTIVITY	ASTM D 4491	SEC	2.1

INSTALLATION: THE EMPTY DANDY BAG SHOULD BE PLACED OVER THE GRATE AS THE GRATE STANDS ON END. IF USING OPTIONAL OIL ABSORBENTS, PLACE ABSORBENT PILLOW IN POUCH, ON THE BOTTOM (BELOW-GRADE SIDE) OF THE UNIT. ATTACH ABSORBENT PILLOW TO TETHER LOOP. TUCK THE ENCLOSURE FLAP INSIDE TO COMPLETELY ENCLOSE THE GRATE. HOLDING THE LIFTING DEVICES (DO NOT RELY ON LIFTING DEVICES TO SUPPORT THE ENTIRE WEIGHT OF THE GRATE), PLACE THE GRATE INTO ITS FRAME.

MAINTENANCE: REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM SURFACE AND VICINITY OF UNIT AFTER EACH STORM EVENT. REMOVE SEDIMENT THAT HAS ACCUMULATED WITHIN THE CONTAINMENT AREA OF THE DANDY BAG AS NEEDED. IF USING OPTIONAL OIL ABSORBENTS, REMOVE AND REPLACE ABSORBENT PILLOW WHEN NEAR SATURATION.

DANDY BAG DETAIL



NOTES:

- SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS.
- ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SWALES OR DEPRESSIONS THAT MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.
- ENDS OF THE SILT FENCES SHALL BE BROUGHT UPSLOPE SLIGHTLY SO THAT WATER PONDED BY THE SILT FENCE WILL BE PREVENTED FROM FLOWING AROUND THE ENDS.
- SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.
- WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5 FEET (OR AS MUCH AS POSSIBLE) UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE REESTABLISHED WITHIN 7 DAYS FROM THE INSTALLATION OF THE SILT FENCE.
- THE HEIGHT OF THE SILT FENCE SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
- THE SILT FENCE SHALL BE PLACED IN AN EXCAVATED OR SLICED TRENCH OUT A MINIMUM OF 6 INCHES DEEP. THE TRENCH SHALL BE MADE WITH A TRENCHER, CABLE LAYING MACHINE, SLICING MACHINE, OR OTHER SUITABLE DEVICE THAT WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.
- THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE. A MINIMUM OF 8 INCHES OF GEOTEXTILE MUST BE BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6-INCH DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED ON BOTH SIDES OF THE FABRIC.
- SEAMS BETWEEN SECTIONS OF SILT FENCE SHALL BE SPICED TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 6-IN. OVERLAP PRIOR TO DRIVING INTO THE GROUND.

- MAINTENANCE - SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER THE FABRIC OR AROUND THE FENCE ENDS, OR IN ANY OTHER WAY ALLOWS A CONCENTRATED FLOW DISCHARGE, ONE 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.

SEDIMENT DEPOSITS SHALL BE ROUTINELY REMOVED WHEN THE DEPOSIT REACHES APPROXIMATELY ONE-HALF OF THE HEIGHT OF THE SILT FENCE.

SILT FENCES SHALL BE INSPECTED AFTER EACH RAINFALL AND AT LEAST DAILY DURING A PROLONGED RAINFALL. THE LOCATION OF EXISTING SILT FENCE SHALL BE REVIEWED DAILY TO ENSURE ITS PROPER LOCATION AND EFFECTIVENESS. IF DAMAGED, THE SILT FENCE SHALL BE REPAIRED IMMEDIATELY.

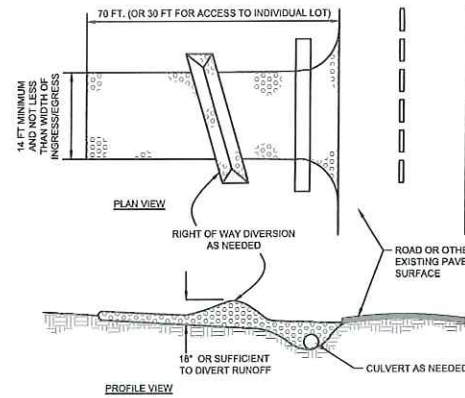
CRITERIA FOR SILT FENCE MATERIALS

- FENCE POST - THE LENGTH SHALL BE A MINIMUM OF 32 INCHES. WOOD POSTS WILL BE 2-IN-2-IN. NOMINAL DIMENSIONED HARDWOOD OF SOUND QUALITY. THEY SHALL BE FREE OF KNOTS, SPLITS AND OTHER VISIBLE IMPERFECTIONS, THAT WILL WEAKEN THE POSTS. THE MAXIMUM SPACING BETWEEN POSTS SHALL BE 10 FT. POSTS SHALL BE DRIVEN A MINIMUM 16 INCHES INTO THE GROUND, WHERE POSSIBLE. IF NOT POSSIBLE, THE POSTS SHALL BE ADEQUATELY SECURED TO PREVENT OVERTURNING OF THE FENCE DUE TO SEDIMENT/WATER LOADING.

FABRIC PROPERTIES	VALUES	TEST METHOD
MINIMUM TENSILE STRENGTH	120 LBS. (535 N)	ASTM D 4632
MAXIMUM ELONGATION AT 60 LBS	50%	ASTM D 4632
MINIMUM PUNCTURE STRENGTH	50 LBS. (220 N)	ASTM D 4633
MINIMUM TEAR STRENGTH	40 LBS. (180 N)	ASTM D 4533
APPARENT OPENING SIZE	48.44 MM	ASTM D 4751
MINIMUM PERMITTIVITY	1X10-2 SEC-1	ASTM D 4491
UV EXPOSURE STRENGTH RETENTION	70%	ASTM D 4355

SILT FENCE DETAIL

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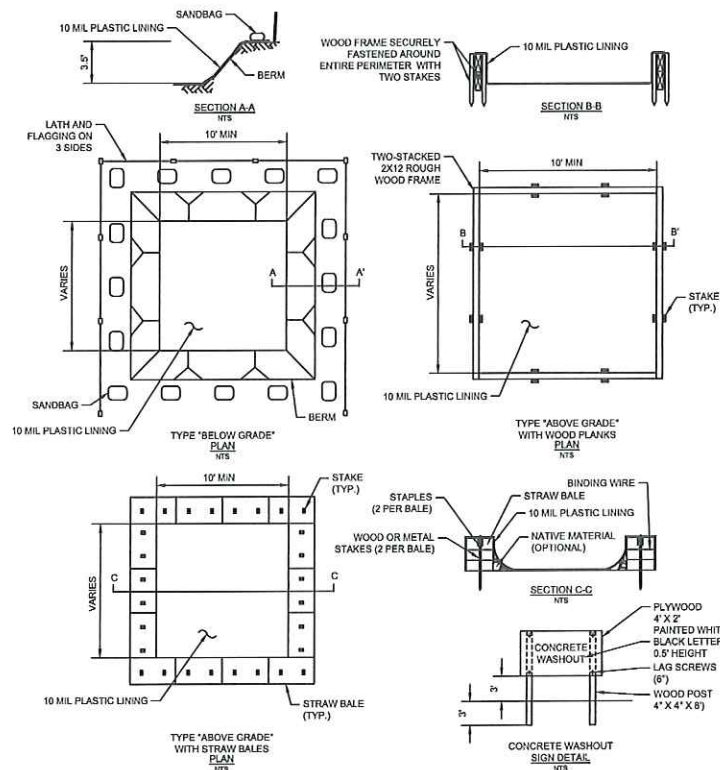


NOTES

- STONE SIZE - ODOT #2 (1.5-2.5 INCH) STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH - THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS BUT NOT LESS THAN 70 FT. (EXCEPTION: APPLY 30 FT. MINIMUM TO SINGLE RESIDENCE LOTS).
- THICKNESS - THE STONE LAYER SHALL BE AT LEAST 6 INCHES THICK FOR LIGHT DUTY ENTRANCES OR AT LEAST 10 INCHES FOR HEAVY DUTY USE.
- WIDTH - THE ENTRANCE SHALL BE AT LEAST 14 FEET WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- GEOTEXTILE - A GEOTEXTILE SHALL BE LAID OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL BE COMPOSED OF STRONG ROT-PROOF POLYMERIC FIBERS AND MEET THE FOLLOWING SPECIFICATIONS:
 MINIMUM TENSILE STRENGTH..... 200 LBS
 MINIMUM PUNCTURE STRENGTH..... 60 LBS
 MINIMUM TEAR STRENGTH..... 50 LBS
 MINIMUM BURST STRENGTH..... 320 PSI
 MINIMUM ELONGATION..... 20%
 EQUIVALENT OPENING SIZE..... E054 0.8MM
 PERMITTIVITY..... 1X10-2 CM/SEC
- TIMING - THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS SOON AS IS PRACTICABLE BEFORE MAJOR GRADING ACTIVITIES.
- CULVERT - A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FROM FLOWING ACROSS THE ENTRANCE OR TO PREVENT RUNOFF FROM BEING DIRECTED OUT ONTO PAVED SURFACES.
- WATER BAR - A WATER BAR SHALL BE 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.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR THE WASHING AND REWORKING OF EXISTING STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY. THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED ONTO ROADWAYS SHALL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES. TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS 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.
- 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.
- REMOVAL - THE ENTRANCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ROADWAY OR ENTRANCE.

CONSTRUCTION ENTRANCE DETAIL

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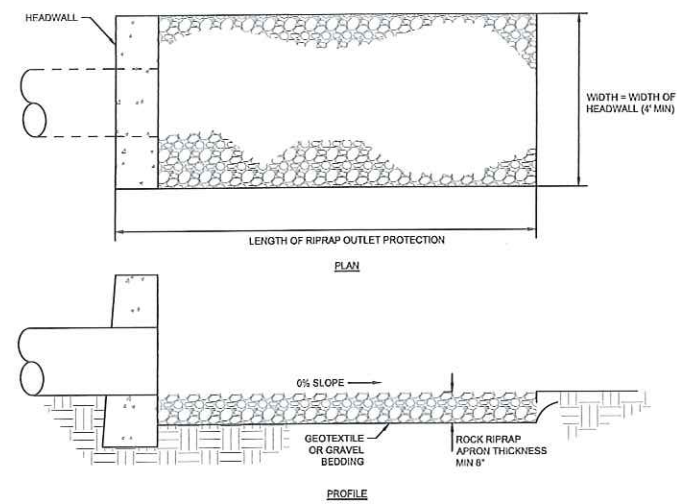


NOTES:

- ACTUAL LAYOUT DETERMINED IN THE FIELD.
- THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

CONCRETE WASHOUT DETAIL

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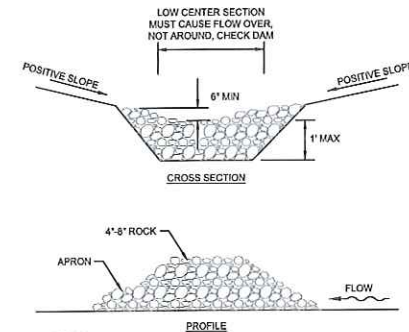


NOTES:

- SUBGRADE FOR THE FILTER OR BEDDING AND RIPRAP SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES AS SHOWN ON THE PLAN. THE SUBGRADE SHALL BE CLEARED OF ALL TREES, STUMPS, ROOTS, SOD, LOOSE ROCK, OR OTHER MATERIAL.
- RIPRAP SHALL CONFORM TO THE GRADING LIMITS AS SHOWN ON THE PLAN.
- GEOTEXTILE SHALL BE SECURELY ANCHORED ACCORDING TO MANUFACTURERS' RECOMMENDATIONS.
- GEOTEXTILE SHALL BE LAID WITH THE LONG DIMENSION PARALLEL TO THE DIRECTION OF FLOW AND SHALL BE LAD LOOSELY BUT WITHOUT WRINKLES AND CREASES. WHERE JOINTS ARE NECESSARY, STRIPS SHALL BE PLACED TO PROVIDE A 12-IN. MINIMUM OVERLAP, WITH THE UPSTREAM STRIP OVERLAPPING THE DOWNSTREAM STRIP.
- GRAVEL BEDDING SHALL BE ODOT NO. 67'S OR 67'S UNLESS SHOWN DIFFERENTLY ON THE DRAWINGS.
- RIPRAP MAY BE PLACED BY EQUIPMENT BUT SHALL BE PLACED IN A MANNER TO PREVENT SLIPPAGE OR DAMAGE TO THE GEOTEXTILE.
- RIPRAP SHALL BE PLACED BY A METHOD THAT DOES NOT CAUSE SEGREGATION OF SIZES. EXTENSIVE PUSHING WITH A DOZER CAUSES SEGREGATION AND SHALL BE AVOIDED BY DELIVERING RIPRAP NEAR ITS FINAL LOCATION WITHIN THE CHANNEL.
- CONSTRUCTION SHALL BE SEQUENCED SO THAT OUTLET PROTECTION IS PLACED AND FUNCTIONAL WHEN THE STORM DRAIN, CULVERT, OR OPEN CHANNEL ABOVE IT BECOMES OPERATIONAL.
- ALL DISTURBED AREAS WILL BE VEGETATED AS SOON AS PRACTICAL.

ROCK OUTLET PROTECTION DETAIL

N.T.S.



NOTES:

- THE CHECK DAM SHALL BE CONSTRUCTED OF 4-8 INCH DIAMETER STONE, PLACED SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL. ODOT TYPE D STONE IS ACCEPTABLE, BUT SHOULD BE UNDERLAIN WITH A GRAVEL FILTER CONSISTING OF ODOT NO. 3 OR 4 OR SUITABLE FILTER FABRIC.
- MAXIMUM HEIGHT OF CHECK DAM SHALL NOT EXCEED 1.0 FEET.
- THE MIDPOINT OF THE ROCK CHECK DAM SHALL BE A MINIMUM OF 6 INCHES LOWER THAN THE SIDES IN ORDER TO DIRECT ACROSS THE CENTER AND AWAY FROM THE CHANNEL SIDES.
- THE BASE OF THE CHECK DAM SHALL BE ENTRENCHED APPROXIMATELY 6 INCHES.
- SPACING OF CHECK DAMS SHALL BE IN A MANNER SUCH THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME ELEVATION AS THE TOP OF THE DOWNSTREAM DAM.
- A SPLASH APRON SHALL BE CONSTRUCTED WHERE CHECK DAMS ARE EXPECTED TO BE IN USE FOR AN EXTENDED PERIOD OF TIME. A STONE APRON SHALL BE CONSTRUCTED IMMEDIATELY DOWNSTREAM OF THE CHECK DAM TO PREVENT FLOWS FROM UNDERCUTTING THE STRUCTURE. THE APRON SHOULD BE 6 IN. THICK AND ITS LENGTH TWO TIMES THE HEIGHT OF THE DAM.
- STONE PLACEMENT SHALL BE PERFORMED EITHER BY HAND OR MECHANICALLY AS LONG AS THE CENTER OF CHECK DAM IS LOWER THAN THE SIDES AND EXTENDS ACROSS ENTIRE CHANNEL.
- SIDE SLOPES SHALL BE A MINIMUM OF 2:1.

MAINTENANCE

- SEDIMENT SHALL BE REMOVED FROM BEHIND CHECK DAM ONCE IT ACCUMULATES TO ONE-HALF THE ORIGINAL HEIGHT OF THE CHECK DAM.

ROCK CHECK DAM DETAIL

N.T.S.



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SECTION 10 TOWN 2 RANGE 2 BTM

WEST CHESTER TOWNSHIP

BUTLER COUNTY, OH

PROJECT NO. 180242.001

DATE: 08/21/2018

SCALE:

SHEET NAME:

EROSION CONTROL DETAILS

SHEET NO.

C602

