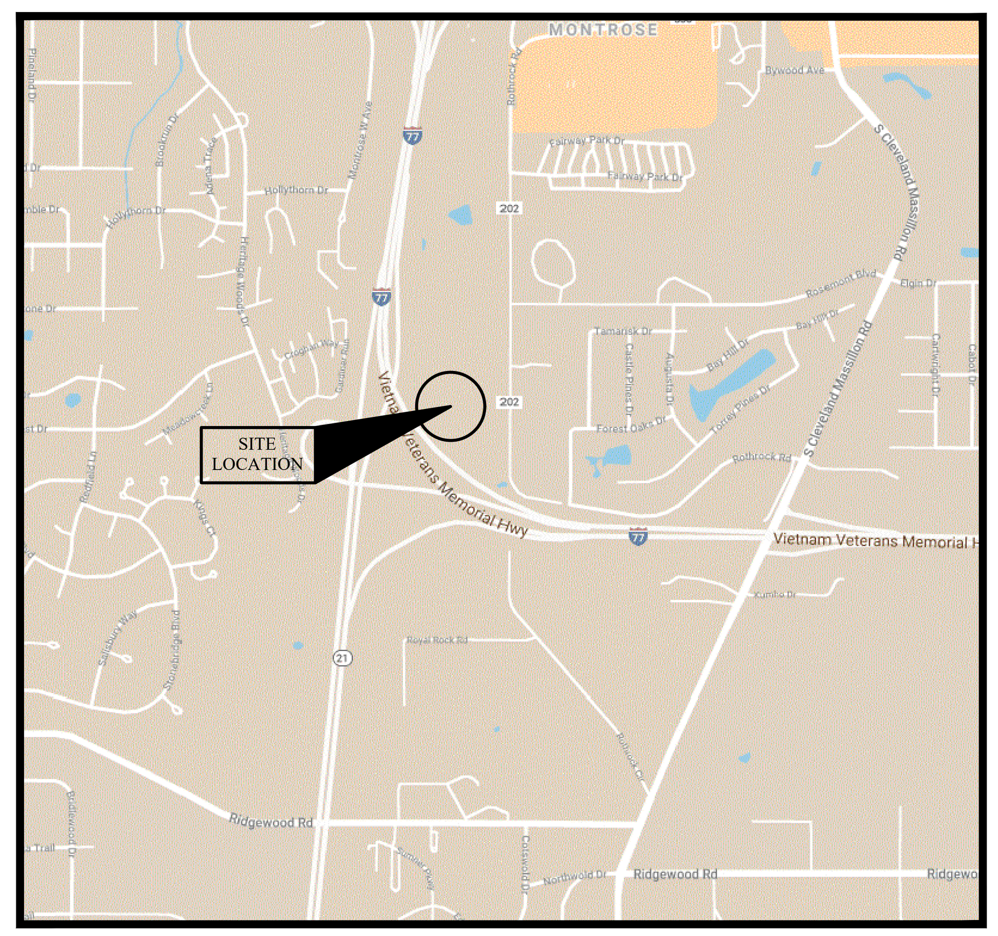
THE ROCK

COPLEY TOWNSHIP
COUNTY OF SUMMIT
STATE OF OHIO

GENERAL NOTES

1. ALL ROAD SURFACES, EASEMENTS OR RIGHT OF WAYS DISTURBED BY CONSTRUCTION OF ANY PART OF THIS IMPROVEMENT ARE TO BE RESTORED COMPLETELY TO THE EXISTING CONDITION OR BETTER, WHEN ORDERED BY THE ENGINEER. ALL ITEMS ARE INCLUDED IN THE PAY ITEMS.
2. PRICES BID PER FOOT FOR ALL PIPE IS COMPLETE IN PLACE REGARDLESS OF SOIL OR ROCK CONDITIONS.
3. THE LOCATIONS OF ALL GAS LINES AND GAS SERVICE LINES TO BE DETERMINED BY THE CONTRACTOR. EXISTING APPURTENANCES SUCH AS UTILITY POLES AND VALVE BOXES, ETC. ARE TO BE HELD BY THE CONTRACTOR DURING CONSTRUCTION.
4. THE CONSTRUCTION OF THIS PROJECT SHALL BE GOVERNED BY THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (CURRENT EDITION) SUPPLEMENTED WHERE APPLICABLE BY THE SUMMIT COUNTY RULES AND REGULATIONS FOR SUBDIVISIONS.
5. NOTIFY THE COPLEY TOWNSHIP ZONING INSPECTOR AT 330-666-0108 AND SUMMIT COUNTY ENGINEER AT 330-643-2850, 48 HOURS BEFORE ANY CONSTRUCTION ACTIVITY.
6. FERTILIZING, SEEDING AND MULCHING FOR RESTORATION OF DISTURBED AREAS SHALL CONFORM TO SECTIONS 659.08 AND 659.09 AS SPECIFIED IN O.D.O.T. CONSTRUCTION AND MATERIAL SPECIFICATIONS (CURRENT EDITION).
7. ALL DISTURBED SIGNS, DRIVES AND DRIVE CULVERTS SHALL BE REPAIRED AND/OR REPLACED DURING THE CONSTRUCTION AT NO ADDITIONAL COST UNLESS OTHERWISE INDICATED ON THE PLANS.
8. ALL DISTURBED AND/OR DAMAGED STORM SEWER PIPES, STORM SEWER APPURTENANCES, PAVEMENTS, BERMS AND DITCHES SHALL BE REPAIRED AND/OR REPLACED AS DIRECTED BY THE ENGINEER.
9. CALL THE OHIO UTILITIES PROTECTION 48 HOUR'S PRIOR TO START OF CONSTRUCTION AT 1-800-362-2764.
10. TEMPORARY WATER POLLUTION, SOIL EROSION AND SILTATION CONTROL MAY BE REQUIRED IN ACCORDANCE WITH THE O.D.O.T. CONSTRUCTION AND MATERIAL SPECIFICATIONS (CURRENT EDITION) AS DIRECTED BY THE ENGINEER AND SUMMIT SOIL AND WATER CONSERVATION DISTRICT.
11. STORM SEWER PIPE MATERIALS SHALL CONSIST OF PVC MEETING ASTM D-3034 OR HIGH DENSITY POLYETHYLENE (HDPE) PIPE MEETING AASHTO M294, TYPE S.
12. ALL SANITARY SHALL CONSIST OF PVC SDR-23.5 MEETING ASTM D-3034 WITH JOINTS CONFORMING TO ASTM D-3212 UNLESS OTHERWISE NOTED. BEDDING AND BACKFILL FOR SANITARY SEWERS SHALL CONFORM TO ASTM D-2321, CL. 1.
13. THE COUNTY ENGINEER IN APPROVING THESE PLANS AND DEDICATION PLAT THEREOF DOES NOT IN ANY WAY RELIEVE THE DEVELOPER'S ENGINEER OF THEIR RESPONSIBILITY FOR ACCURATE AND COMPLETE ENGINEERING DESIGN.
14. THE COUNTY ENGINEER SHALL NOT BE HELD LIABLE FOR DAMAGES OF ANY TYPE, WHICH OCCUR AS A RESULT OF ERROR AND/OR OMISSIONS IN THE ENGINEERING DESIGN DATA PRESENTED BY THE OWNER'S ENGINEER. NEITHER SHALL THE COUNTY ENGINEER BE LIABLE FOR DAMAGES RESULTING FROM THE DEVELOPER'S CONTRACTORS NOT COMPLYING WITH APPROVED PLANS OR BY USING CONSTRUCTION METHODS OR MATERIALS NOT APPROVED BY THE COUNTY ENGINEER.
15. ALL STORM WATER MANAGEMENT FACILITIES ARE TO BE PRIVATELY OWNED AND MAINTAINED.
16. A 18" MINIMUM VERTICAL CLEARANCE MUST BE MAINTAINED FROM THE EDGE OF ALL WATER MAINS TO THE EDGE OF ALL PROPOSED STORM SEWERS AND/OR INLET LEAD PIPE WHERE THEY CROSS.
17. A 10.0' MINIMUM HORIZONTAL CLEARANCE MUST BE MAINTAINED FROM THE EDGE OF THE WATER MAIN PIPE TO THE EDGE OF THE STORM SEWER PIPE.
18. A 10.0' MINIMUM HORIZONTAL CLEARANCE MUST BE MAINTAINED FROM THE EDGE OF THE WATER MAIN PIPE TO THE EDGE OF THE SANITARY SEWER AND/OR FORCE MAIN PIPE.
19. AN 18" MINIMUM VERTICAL CLEARANCE MUST BE MAINTAINED FROM THE EDGE OF ALL WATER MAIN PIPES TO THE EDGE OF ALL SANITARY SEWER PIPE WHERE THEY CROSS.
20. EARTHWORK AND SITE PREPARATION SHALL BE AS SPECIFIED IN THE SOILS REPORT.
21. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS IN THE ENGINEERING AND BUILDING DEPARTMENTS
22. THE CONTRACTOR IS RESPONSIBLE FOR ANY ADDITIONAL SILTATION CONTROL MEASURES NECESSARY TO PREVENT SILT FROM LEAVING THE SITE.
23. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF DEMOLITION MATERIAL AND DEBRIS.
24. PROOF ROLLING SHALL BE REQUIRED ON ALL AREAS TO BE PAVED PER SECTION SECTIONS 203.13 AND 203.14 OF THE O.D.O.T. CONSTRUCTION AND MATERIAL SPECIFICATIONS.
25. ROOF DRAINS, FOUNDATION DRAINS AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.
26. ALL CURB CUTS MUST BE PERFORMED WITH A HORIZONTAL CONCRETE CUTTING SAW.
27. ELECTRICAL CONDUIT SHALL BE AS REQUIRED BY THE OHIO EDISON.
28. TELEPHONE CONDUCT SHALL BE AS REQUIRED BY GTE.



VICINITY MAP
NO SCALE

N

SUBMITTED BY: ______________ DATE: 01-06-2022

MATTHEW L. WEBER REG. ENGINEER NO. 61709

CONTACT PERSONS:

ZONING
COPLEY TOWNSHIP
1540 S. CLEVELAND MASSILLON RD.
COPLEY, OHIO 44321
MATT SPRINGER
SHAWNA GFROERER - (330) 666-0108

ENGINEERING
SUMMIT COUNTY ENGINEER
538 E. SOUTH ST.
AKRON, OHIO 44311
TIM BOLEY (330) 643-2850

SANITARY SEWER
DEPARTMENT OF SANITARY SERVICES
1180 S. MAIN STREET
AKRON, OHIO 44301

ELECTRIC
FIRST ENERGY
1910 W. MARKET ST.
AKRON, OHIO 44313
(330) 384-4720

WATER
CITY OF AKRON
146 S. HIGH ST.
AKRON, OHIO 44308
JOE OKOLISH
(330) 375-2690

TELEPHONE
VERIZON
6223 NORWALK RD.
MEDINA, OH 44256
(330) 722-9506

GAS
DOMINION EAST OHIO GAS CO.
2100 EASTWOOD AVE.
AKRON, OHIO 44305
(330) 742-8124

CABLE TV
TIME WARNER CABLE
1200 BROWNSTONE RD.
AKRON, OHIO 44310
CHARLES TONEY - (330) 630-7950

EROSION CONTROL
SUMMIT SOIL AND WATER CONSERVATION DISTRICT
1180 S. MAIN STREET
AKRON, OHIO 44301
JULIE BERBARI (330) 929-2443

INDEX

WES No. 2019-332

STATE OF OHIO
MATTHEW L. WEBER
61709
REGISTERED
PROFESSIONAL ENGINEER

Reg. No.: 61709

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fax 330.666.8812
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mpg-architects.com

MPG
MANN • PARSONS • GRAY
ARCHITECTS

TITLE SHEET

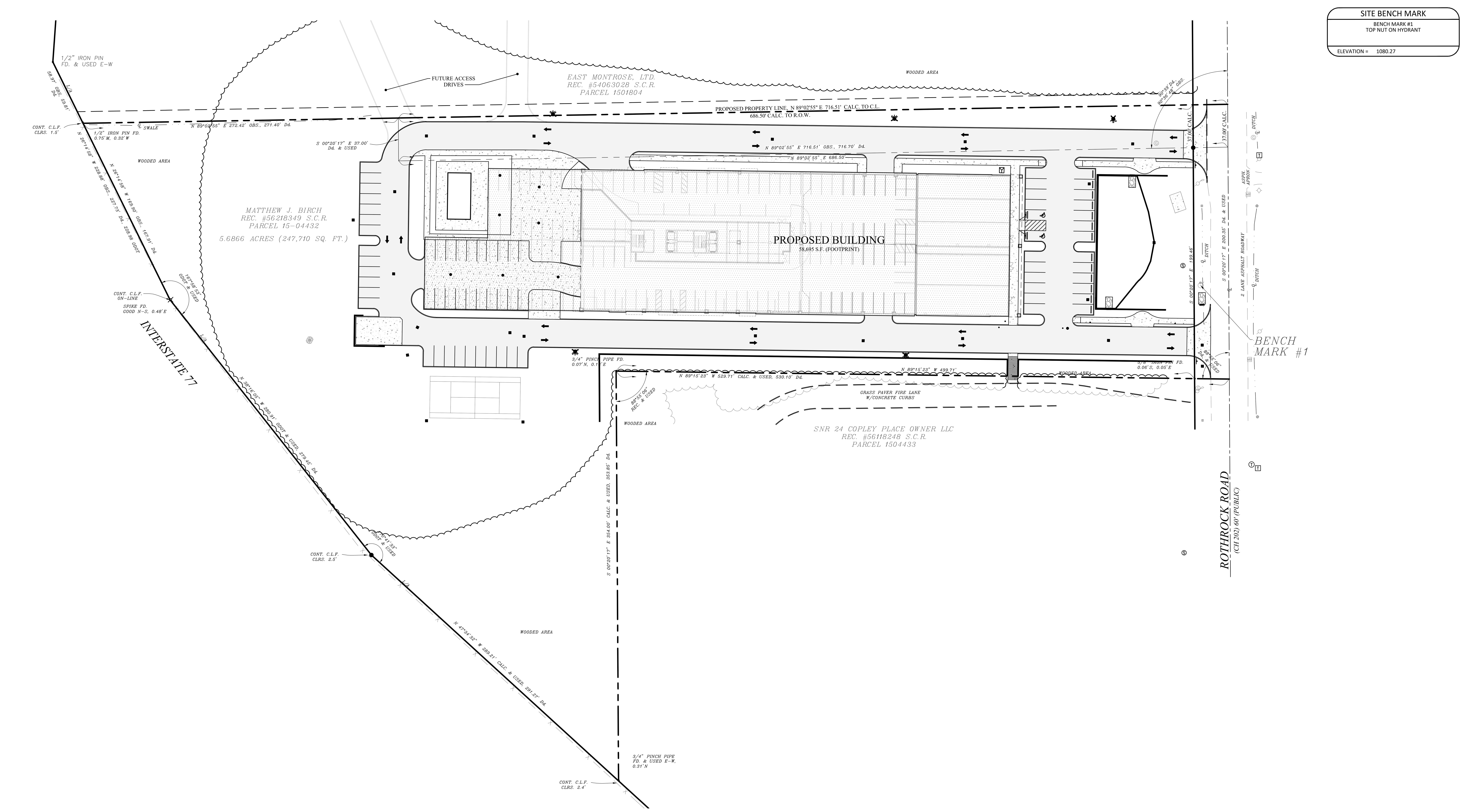
PROJECT #: XXXX

DATE: 01-06-2022

THE ROCK

ROTHROCK ROAD
COPLEY, OHIO 44321

C0.0



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Scale: 1" = 40'

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mpg-architects.com

OVERALL SITE PLAN

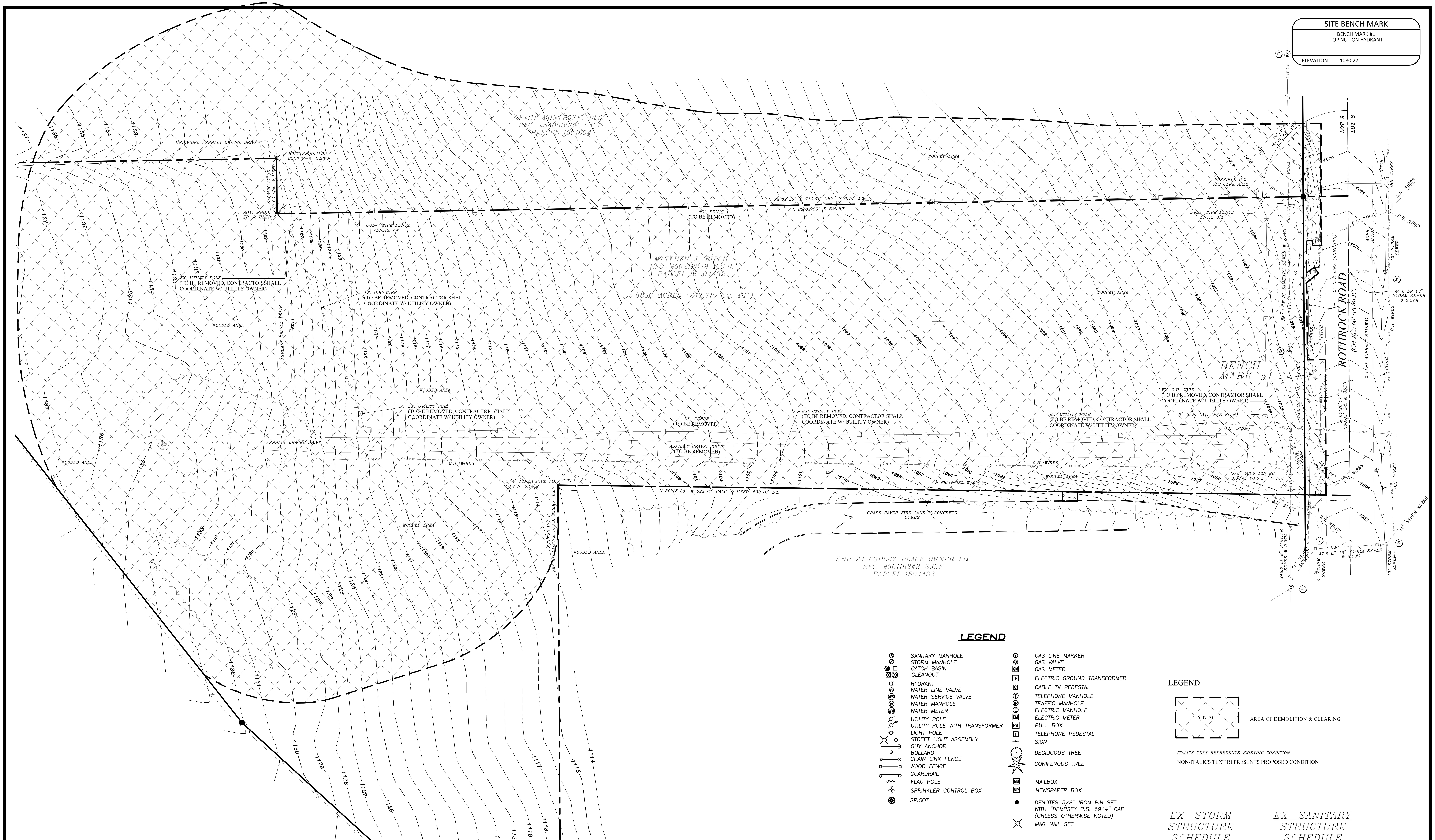
PROJECT #: XXXX

DATE: 01-06-2022

THE ROCK

ROTHROCK ROAD
COPLEY, OHIO 44321

C0.1



SITE BENCH MARK

BENCH MARK #1
TOP NUT ON HYDRANT

ELEVATION = 1080.27

LEGEND

SANITARY MANHOLE	GAS LINE MARKER
STORM MANHOLE	GAS VALVE
CATCH BASIN	GAS METER
CLEANOUT	ELECTRIC GROUND TRANSFORMER
HYDRANT	CABLE TV PEDESTAL
WATER LINE VALVE	TELEPHONE MANHOLE
WATER SERVICE VALVE	TRAFFIC MANHOLE
WATER MANHOLE	ELECTRIC MANHOLE
WATER METER	ELECTRIC METER
UTILITY POLE	PULL BOX
UTILITY POLE WITH TRANSFORMER	TELEPHONE PEDESTAL
LIGHT POLE	SIGN
STREET LIGHT ASSEMBLY	DECIDUOUS TREE
GUY ANCHOR	CONIFEROUS TREE
BOLLARD	MAILBOX
CHAIN LINK FENCE	NEWSPAPER BOX
WOOD FENCE	DENOTES 5/8" IRON PIN SET WITH "DEMPSEY P.S. 6914" CAP (UNLESS OTHERWISE NOTED)
GUARDRAIL	MAG NAIL SET
FLAG POLE	
SPRINKLER CONTROL BOX	
SPIGOT	

HORIZONTAL AND VERTICAL DATUM

HORIZONTAL BASIS OF BEARINGS:
BEARINGS ARE REFERENCED TO GRID NORTH OF THE OHIO STATE PLANE COORDINATE SYSTEM NORTH ZONE, NAD 83 DATUM.

VERTICAL DATUM:
ELEVATIONS ARE REFERENCED TO NAVD88 VERTICAL DATUM.

BOTH DATUMS WERE ESTABLISHED USING GPS EQUIPMENT CONNECTED TO THE ODOT VRS RTK NETWORK.

SURVEY NOTES

1). WE HAVE NOT BEEN AUTHORIZED TO PERFORM AN ALTA/ACSM SURVEY. THEREFORE, WE HAVE NOT BEEN PROVIDED A TITLE REPORT. THERE MAY BE EASEMENTS, SETBACKS AND RECORD RESTRICTIONS THAT AFFECT THE PROPERTY THAT WE ARE UNAWARE OF.

LEGEND

6.07 AC — AREA OF DEMOLITION & CLEARING

ITALICS TEXT REPRESENTS EXISTING CONDITION

NON-ITALICS TEXT REPRESENTS PROPOSED CONDITION

EX. STORM STRUCTURE SCHEDULE

1. CATCH BASIN (TO BE MODIFIED)
RIM=1073.47
WINDOW INV. S=1072.90
12" RCP INV. E=1069.52
12" ADS INV S=1070.32 (FILLED W/CONC.)
2. CATCH BASIN
RIM=1071.74
12" RCP INV. W=1066.39
12" ADS INV. N=1066.19
3. CATCH BASIN
RIM=1081.57
18" RCP INV. W=1077.22
12" VCP INV. S=1077.27
12" VCP INV. NE=1077.12
4. CATCH BASIN
RIM=1082.21
18" RCP INV. E=1078.71
15" ADS INV. SW=1080.21
6" ADS INV. S=1079.01

EX. SANITARY STRUCTURE SCHEDULE

A. SANITARY MANHOLE
RIM=1089.88
8" VCP INV. N&S=1077.63
8" PVC INV. SW=1078.03

B. SANITARY MANHOLE
RIM=1078.66
8" VCP INV. N&S=1067.78

C. SANITARY MANHOLE
RIM=1061.28
8" VCP INV. N&S=1050.05

N

Scale: 1" = 30'

www.dempseysurvey.com
DEMPSEY / SURVEYING / COMPANY
P 216/226/1130
F 216/226/1131
12815 DETROIT AVENUE
CLEVELAND, OH 44107-2835

WES No. 2019-332

STATE OF OHIO
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DEMOLITION PLAN

PROJECT #: XXXX

DATE: 01-06-2022

THE ROCK

ROTHROCK ROAD
COPLEY, OHIO 44321

C1.0

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MANN • PARSONS • GRAY
ARCHITECTS

DATE: 01-06-2022

SITE PLAN

PROJECT #: XXXX

THE ROCK

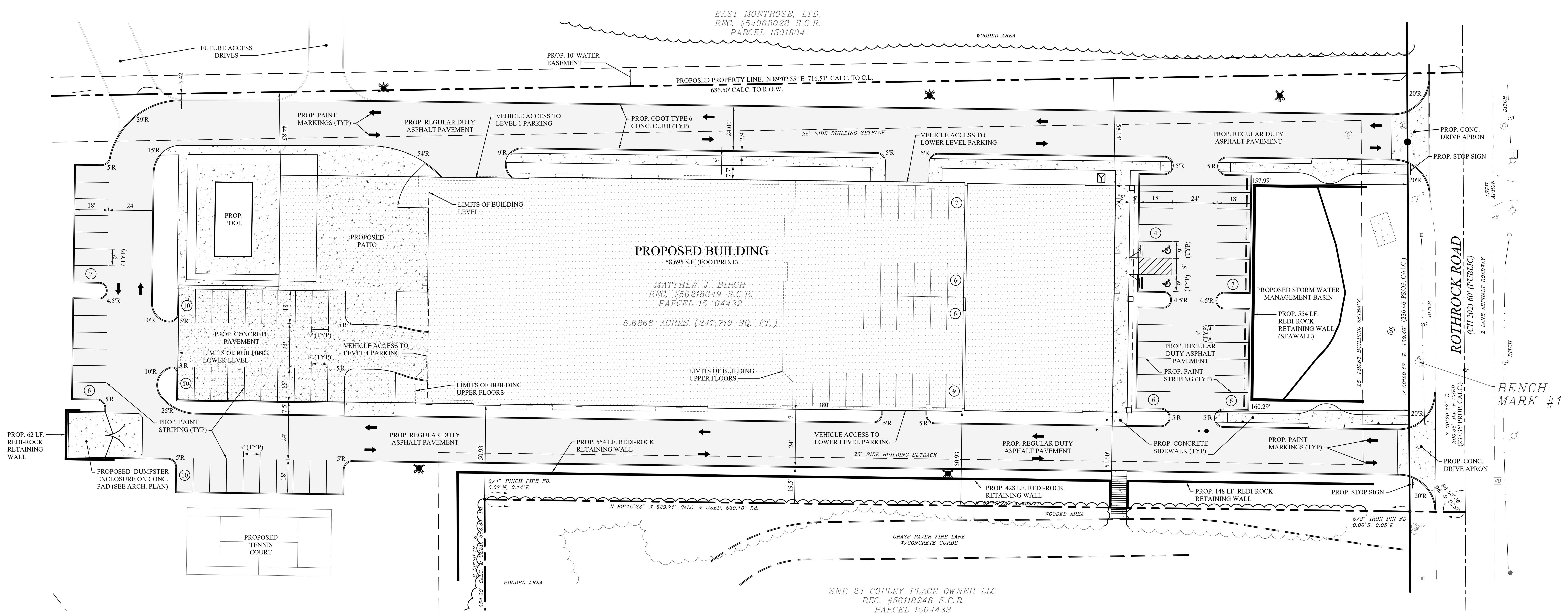
ROTHROCK ROAD
COPLEY, OHIO 44321

C2.0

SITE BENCH MARK

BENCH MARK #1
TOP NUT ON HYDRANT

ELEVATION = 1080.27



SITE DATA

USE DISTRICT	=	C-GR (COMMERCIAL GENERAL RETAIL)
SITE AREA	=	(5.6866 AC.)
PROP. BUILDING AREA	=	58,695 S.F. (FOOTPRINT)

BUILDING SETBACKS:

FRONT YARD	=	25'
SIDE YARD	=	25' (50' ADJ. TO RES.)
REAR YARD	=	50'

NUMBER OF PARKING SPACES:

REGULAR UNCOVERED PARKING SPACES	=	66
HANDICAP UNCOVERED PARKING SPACES	=	2
REGULAR COVERED PARKING SPACES	=	148
HANDICAP COVERED PARKING SPACES	=	8
TOTAL PARKING SPACES	=	224

LEGEND

REGULAR DUTY ASPHALT

HEAVY DUTY ASPHALT

CONCRETE PAVING

ITALICS TEXT REPRESENTS EXISTING CONDITION

NON-ITALICS TEXT REPRESENTS PROPOSED CONDITION

FLOOD ZONE

FLOOD ZONE "X" PER FLOOD INSURANCE
RATE MAP NUMBER 39153C 0157 F
COMMUNITY PANEL NUMBER 39153 0157 F
EFFECTIVE DATE APRIL 19, 2016

N

Scale: 1" = 30'

OHIO Utilities Protection SERVICE
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WES No. 2019-332

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SITE BENCH MARK
BENCH MARK #1
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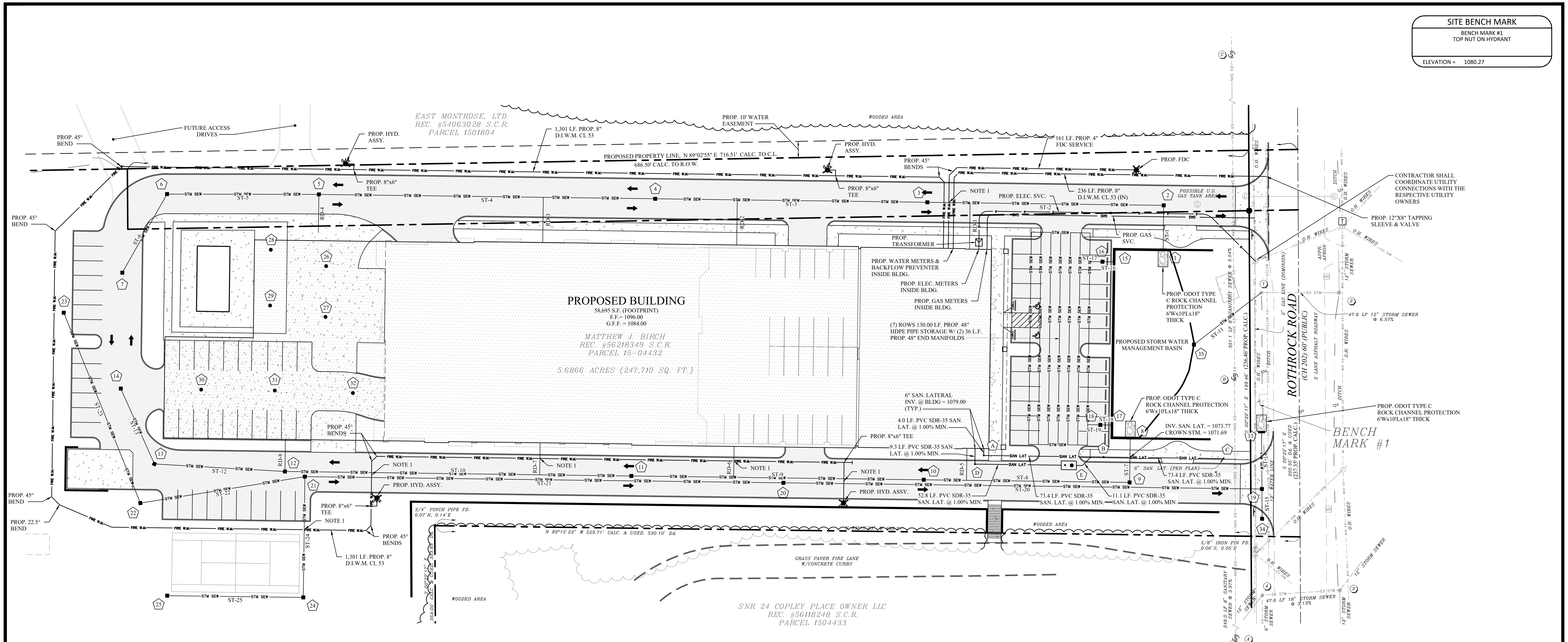
ELEVATION = 1080.27



STORM STRUCTURE TABLE	
STRUCTURE	DETAILS
1	END OF PIPE INV IN = 1070.00, 15" N
2	ODOT CB 2-2C RIM = 1075.50 INV IN = 1070.75, 15" W INV OUT = 1070.75, 15" S
3	ODOT CB 2-2C RIM = 1082.50 INV IN = 1074.65, 12" W INV OUT = 1074.40, 15" E
4	ODOT CB 2-2C RIM = 1088.15 INV IN = 1084.15, 12" W INV OUT = 1084.15, 12" E
5	ODOT CB 2-2C RIM = 1095.25 INV IN = 1089.83, 8" S INV IN = 1089.50, 12" W INV OUT = 1089.50, 12" E
6	ODOT CB 2-2C RIM = 1095.25 INV IN = 1090.45, 12" SW INV OUT = 1090.45, 12" E
7	ODOT CB 2-2C RIM = 1095.00 INV OUT = 1091.00, 12" NE
8	END OF PIPE INV IN = 1070.00, 15" S
9	ODOT CB 2-2C RIM = 1081.30 INV IN = 1071.00, 15" W INV OUT = 1071.00, 15" N
10	ODOT CB 2-2C RIM = 1082.60 INV IN = 1076.60, 12" W INV OUT = 1076.35, 15" E
11	ODOT CB 2-2C RIM = 1087.70 INV IN = 1083.50, 12" W INV OUT = 1083.50, 12" E
12	ODOT CB 2-2C RIM = 1095.20 INV IN = 1089.85, 12" W INV IN = 1090.18, 8" N INV OUT = 1089.85, 12" E

STORM STRUCTURE TABLE	
STRUCTURE	DETAILS
13	ODOT CB 2-2C RIM = 1095.00 INV IN = 1090.65, 12" NW INV OUT = 1090.65, 12" E
14	ODOT CB 2-2C RIM = 1095.15 INV OUT = 1091.15, 12" SE
15	END OF PIPE INV IN = 1072.00, 24" W
16	ODOT CB 2-2C RIM = 1081.50 INV OUT = 1072.00, 24" E INV OUT = 1072.00, 24" W
17	END OF PIPE INV OUT = 1072.00, 24" W
18	ODOT CB 2-3 RIM = 1081.50 INV IN = 1072.00, 24" E INV OUT = 1072.00, 24" W
19	ODOT CB 2-2C W/ WATERTIGHT LID RIM = 1080.00 INV IN = 1077.35, 12" S INV IN = 1077.10, 15" W INV OUT = 1077.10, 15" N
20	ODOT CB 2-2C W/ WATERTIGHT LID RIM = 1083.70 INV IN = 1079.70, 12" W INV OUT = 1079.45, 15" E
21	ODOT CB 2-2C W/ WATERTIGHT LID RIM = 1095.40 INV IN = 1088.75, 12" W INV IN = 1088.75, 12" S INV OUT = 1088.75, 12" E
22	ODOT CB 2-2B W/ BEEHIVE GRATE RIM = 1095.00 INV IN = 1089.75, 12" N INV OUT = 1089.75, 12" E
23	ODOT CB 2-2B W/ BEEHIVE GRATE RIM = 1095.00 INV OUT = 1091.00, 12" S
24	ODOT CB 2-2B W/ BEEHIVE GRATE RIM = 1097.00 INV IN = 1092.15, 12" W INV OUT = 1092.15, 12" N

STORM STRUCTURE TABLE	
STRUCTURE	DETAILS
25	ODOT CB 2-2B W/ BEEHIVE GRATE RIM = 1097.00 INV OUT = 1093.00, 12" E
26	AREA DRAIN RIM = 1096.00
27	AREA DRAIN RIM = 1096.00
28	YARD INLET RIM = 1096.00
29	YARD INLET RIM = 1096.00
30	AREA DRAIN RIM = 1095.60
31	AREA DRAIN RIM = 1095.60
32	AREA DRAIN RIM = 1095.60
33	ODOT HW 2.1 INV IN = 1076.75, 15" S
34	ODOT 2-2A RIM = 1080.00 INV OUT = 1077.55, 12" N
35	OUTLET STRUCTURE RIM = 1074.85 INV OUT = 1070.00, 12" NE

STORM PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	TYPE
RD-1	8"	28.37'	1.00% (MIN.)	PVC
RD-2	8"	27.68'	1.00% (MIN.)	PVC
RD-3	8"	27.60'	1.00% (MIN.)	PVC
RD-4	8"	23.38'	1.00% (MIN.)	PVC
RD-5	8"	19.30'	1.00% (MIN.)	PVC
RD-6	8"	18.93'	1.00% (MIN.)	PVC
RD-7	8"	19.62'	1.00% (MIN.)	PVC
RD-8	8"	19.62'	1.00% (MIN.)	PVC
ST-1	15"	27.63'	2.71%	HDPE
ST-2	15"	144.70'	2.52%	HDPE
ST-3	12"	166.59'	5.70%	HDPE
ST-4	12"	205.89'	2.60%	HDPE
ST-5	12"	92.93'	1.02%	HDPE
ST-6	12"	55.37'	0.99%	HDPE
ST-7	15"	27.56'	3.63%	HDPE
ST-8	15"	126.04'	4.24%	HDPE
ST-9	12"	179.00'	3.85%	HDPE
ST-10	12"	212.06'	2.99%	HDPE
ST-11	12"	52.06'	0.92%	HDPE
ST-12	12"	80.03'	1.00%	HDPE
ST-13	12"	50.57'	0.99%	HDPE
ST-14	15"	35.37'	0.99%	RCP
ST-15	12"	18.22'	1.10%	RCP
ST-16	24"	7.50'	0.00%	HDPE
ST-17	24"	7.74'	0.00%	HDPE
ST-18	24"	7.50'	0.00%	HDPE
ST-19	24"	7.74'	0.00%	HDPE
ST-20	15"	292.95'	0.80%	RCP
ST-21	12"	292.95'	3.09%	HDPE
ST-22	12"	101.99'	0.98%	HDPE
ST-23	12"	125.73'	0.99%	HDPE
ST-24	12"	74.00'	4.59%	HDPE
ST-25	12"	83.31'	1.02%	HDPE

EX. STORM STRUCTURE SCHEDULE

1 *CATCH BASIN*
RIM=1073.47
WINDOW INV. S=1072.90
12" RCP INV. E=1069.52
12" ADS INV S=1070.32 (FILLED W/CONC.)
12" ADS INV. SW=1069.52 (PROP.)

2 *CATCH BASIN*
RIM=1071.74
12" RCP INV. W=1066.39
12" ADS INV. N=1066.19

3 *CATCH BASIN*
RIM=1081.57
18" RCP INV. W=1077.22
12" VCP INV. S=1077.27
12" VCP INV. NE=1077.12

4 *CATCH BASIN*
RIM=1082.21
18" RCP INV. E=1078.71
15" ADS INV. SW=1080.21
6" ADS INV. S=1079.01

EX. SANITARY STRUCTURE SCHEDULE

A *SANITARY MANHOLE*
RIM=1089.88
8" VCP INV. N&S=1077.63
8" PVC INV. SW=1078.03

B *SANITARY MANHOLE*
RIM=1078.66
8" VCP INV. N&S=1067.78

C *SANITARY MANHOLE*
RIM=1061.28
8" VCP INV. N&S=1050.05

PROPOSED SANITARY STRUCTURE SCHEDULE

A PROP. SANITARY CLEANOUT
TOP 1084.00
INV. 1078.95, 6" N & E

B PROP. SANITARY CLEANOUT
TOP 1082.40
INV. 1074.85, 6" E & W

C PROP. SANITARY CLEANOUT
TOP 1080.60
INV. ±1069.92, 6" E & W
(CONTRACTOR SHALL FIELD VERIFY INVERT & CONDITION OF EX. SAN. LAT.)

D PROP. SANITARY CLEANOUT
TOP 1083.20
INV. 1078.90, 6" N & E

E PROP. GREASE INTERCEPTOR
TOP 1082.25
INV. 1076.25, 6" W (IN)
INV. 1076.00, 6" E (OUT)

NOTE 1:

CONTRACTOR SHALL DEFLECT W.M. AS NECESSARY TO MAINTAIN 18" MIN. VERTICAL CLEARANCE BETWEEN W.M. & SAN. SEW. AND/OR STM. SEW. AT ALL TIMES. (INSTALL BENDS WHERE NECESSARY)

ITALICS TEXT REPRESENTS EXISTING CONDITION

NON-ITALICS TEXT REPRESENTS PROPOSED CONDITION

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ARCHITECTS

UTILITY PLAN

PROJECT #: XXXX

DATE: 01-06-2022

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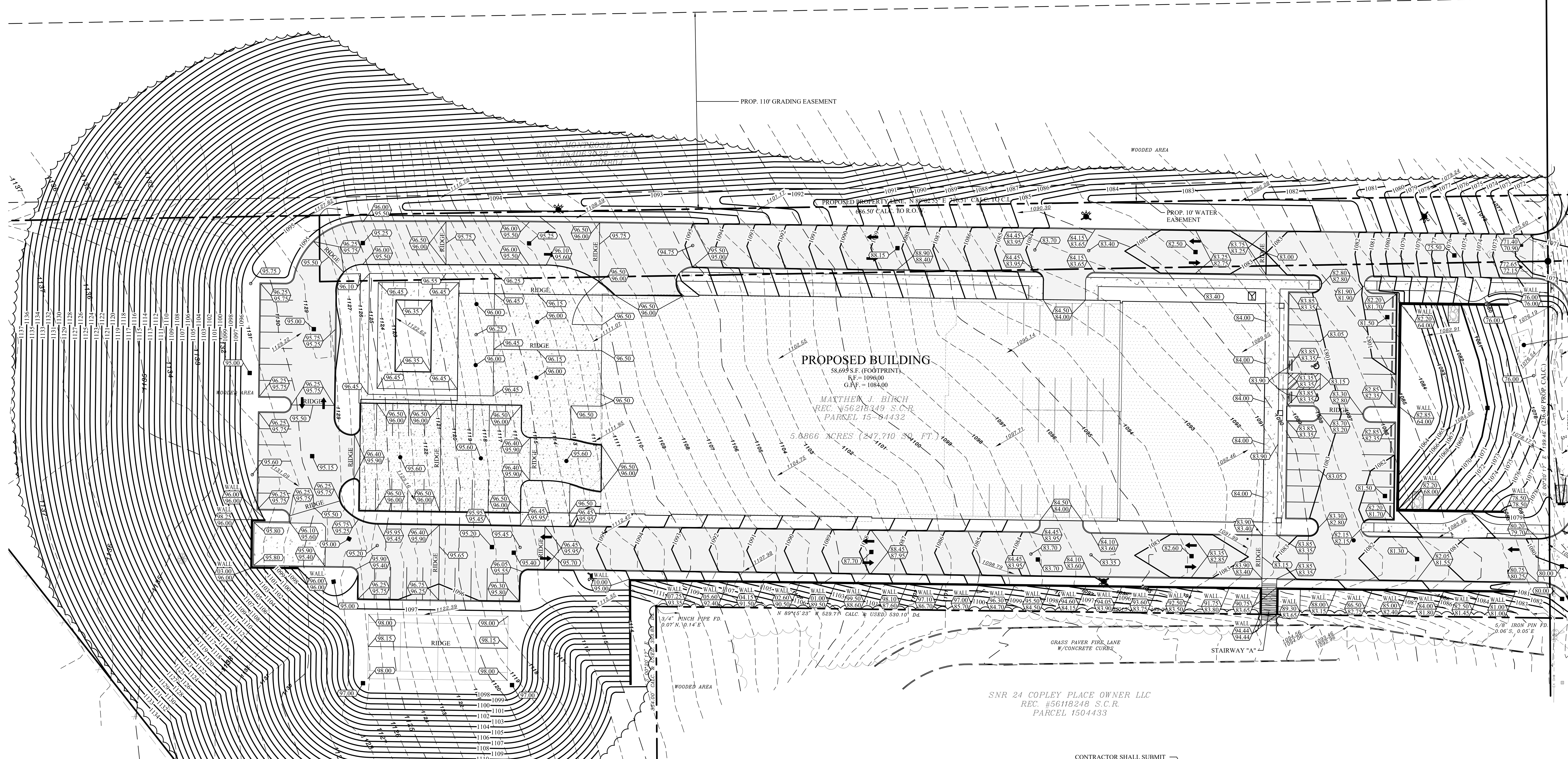
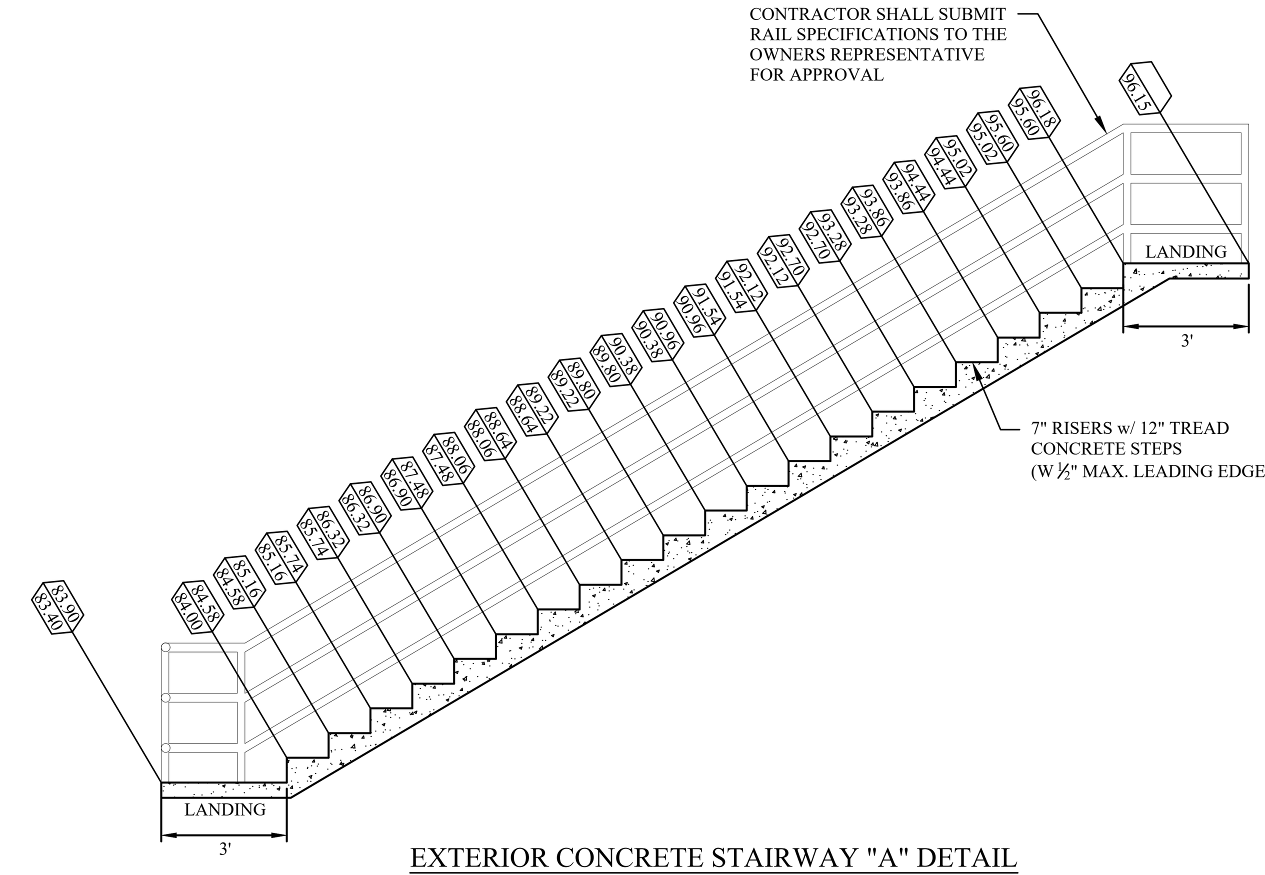
ROTHROCK ROAD
COPLEY, OHIO 44321

REVISIONS

C3.0

SITE BENCH MARK
BENCH MARK #1 TOP NUT ON HYDRANT
ELEVATION = 1080.27





EXTERIOR CONCRETE STAIRWAY "A" DETAIL
FOR GENERAL GRADING REFERENCE ONLY
(SEE ARCH. PLANS FOR DETAILS)

LEGEND

ITALICS TEXT REPRESENTS EXISTING CONDITION
NON-ITALICS TEXT REPRESENTS PROPOSED CONDITION

- 00.00 PROPOSED SPOT GRADE
- 00.00 / 00.00 PROPOSED GRADE AT CURB
- 0000.00 EXISTING SPOT GRADE

Scale: 1" = 30'

OHIO Utilities Protection SERVICE
Call Before You Dig
800-362-2764 or 8-1-1
www.oups.org

OGPUPS
Ohio Oil & Gas Producers Underground Protection Service
800-925-0988 or 8-1-1
www.ogpups.org

WES No. 2019-332

STATE OF OHIO
MATTHEW L. WEBER
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REGISTERED
PROFESSIONAL ENGINEER

Reg. No.: 61709

REVISIONS

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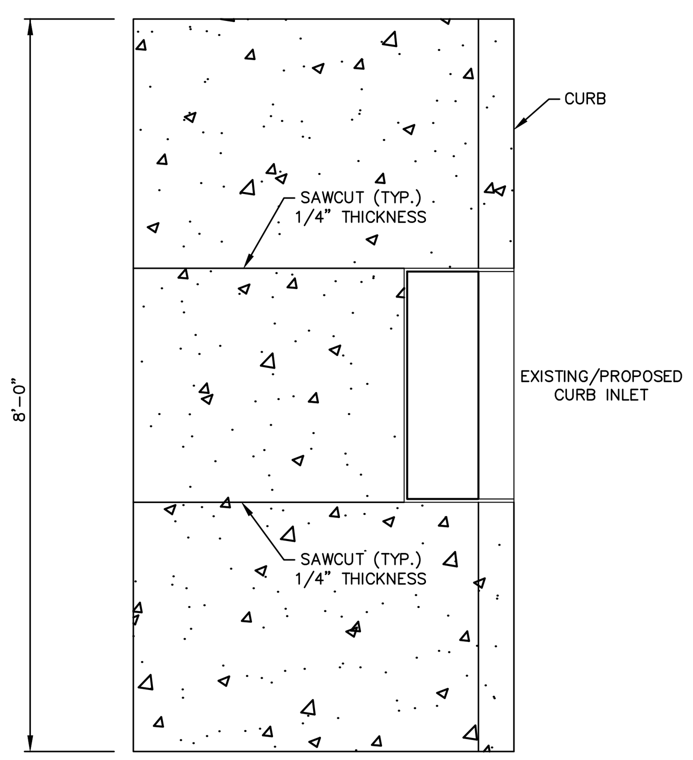
MPG
MANN • PARSONS • GRAY
ARCHITECTS

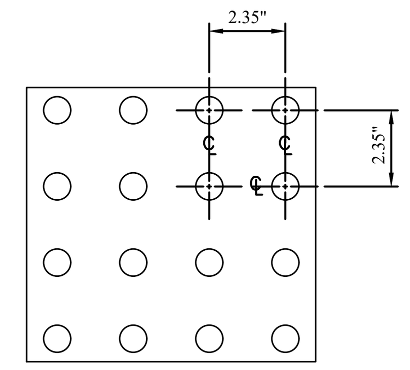
GRADING PLAN
PROJECT #: XXXX
DATE: 01-06-2022
THE ROCK
ROTHROCK ROAD
COPLEY, OHIO 44321

C4.0

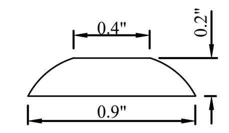


CONCRETE SLAB AT CURB INLET DETAIL

REFERENCE ONLY NOT TO SCALE



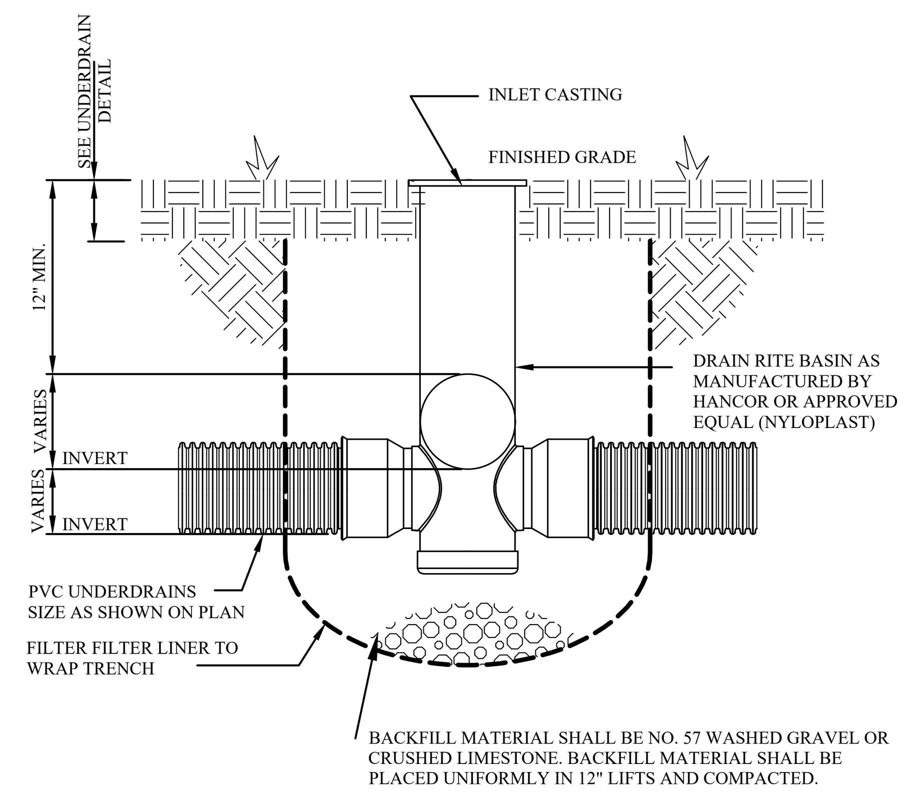
PLAN AND SECTION VIEWS OF DETECTABLE WARNING DOMES AND THEIR RELATIVE SPACING ON THE X AND Y AXIS



SECTION OF DOME FROM A DETECTABLE WARNING. DRAWING SHOWS HEIGHT, TOP AND BOTTOM DIMENSIONS

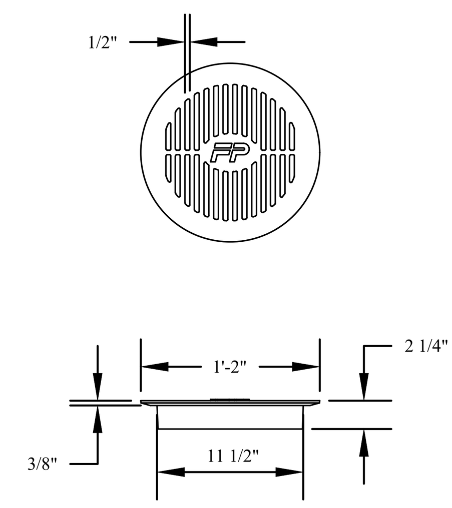
24" DETECTABLE WARNING STRIP DETAIL

REFERENCE ONLY NOT TO SCALE

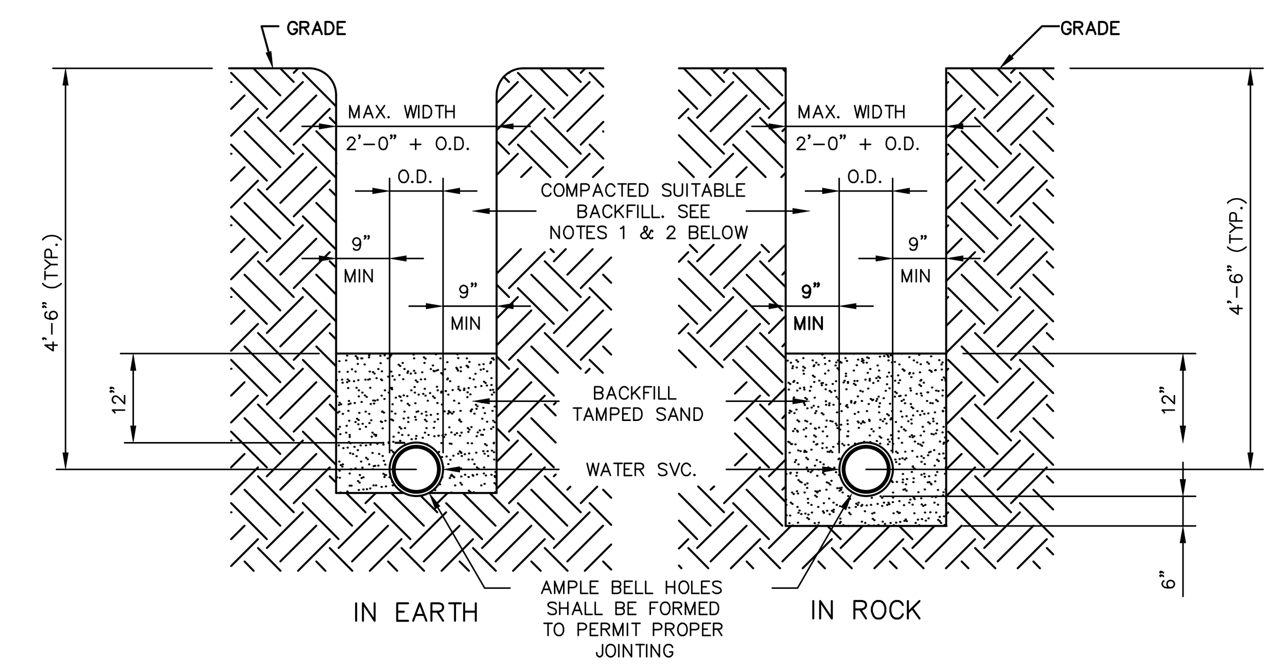


YARD INLET/AREA DRAIN DETAIL

REFERENCE ONLY NOT TO SCALE



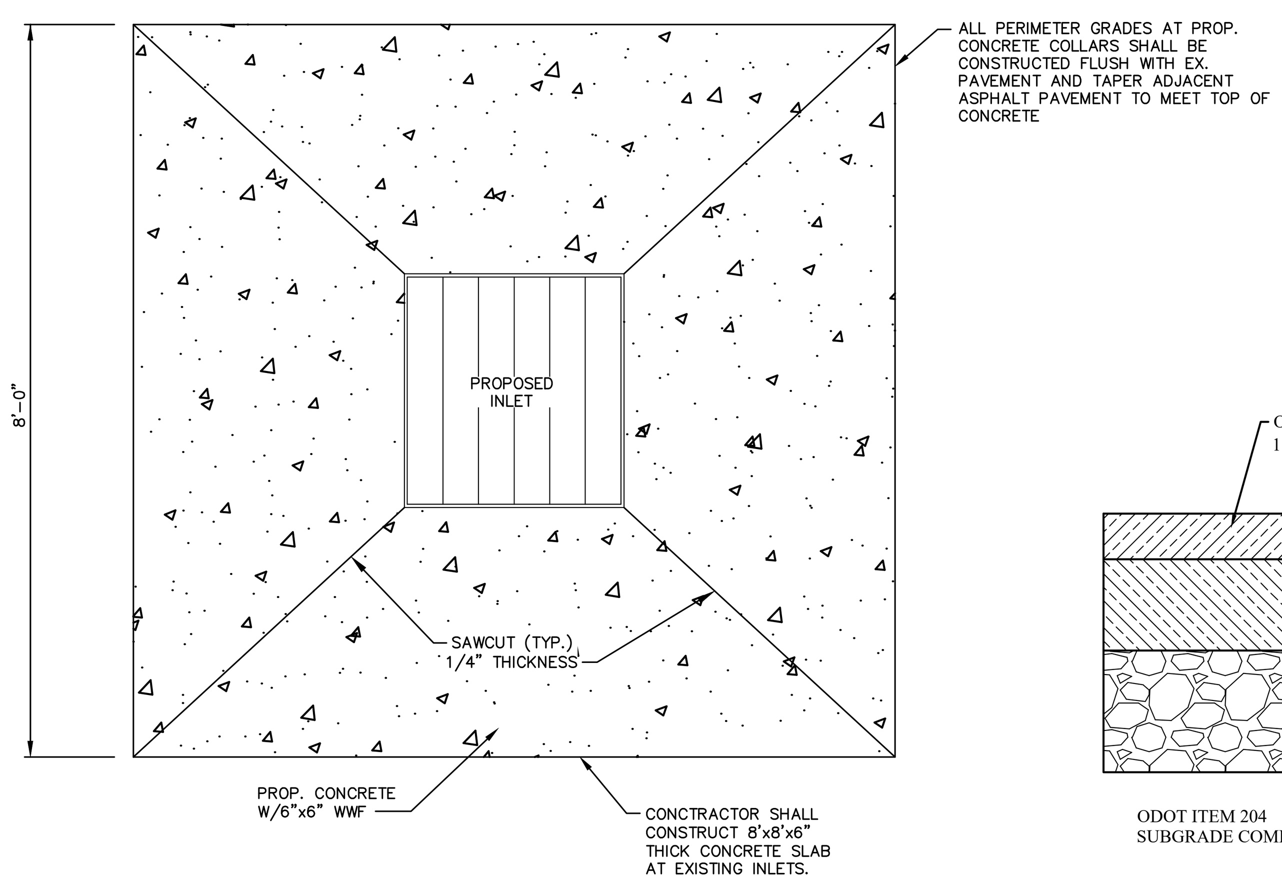
INLET CASTING PEDESTRIAN

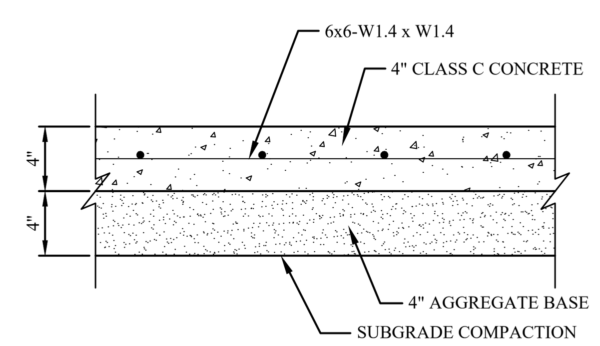


WATER SERVICE TRENCH DETAILS

– NOT TO SCALE –

NOTES:
1) PREMIUM BACKFILL REQUIRED UNDER EXISTING OR FUTURE PAVEMENTS, SIDEWALKS, AND/OR DRIVES OR WHEN REQUIRED BY LOCAL MUNICIPALITY.
2) PREMIUM BACKFILL SHALL BE LIMESTONE SCREENINGS GRADED PER ODOT 304.02 OR ODOT 411. NO SLAG IS PERMITTED.
3) CONTRACTOR SHALL USE SPECIAL CARE IN PLACING THE SAND BEDDING BACKFILL, SO AS TO AVOID SCRAPING OF THE EXTERIOR COATING, INJURING THE PIPE, DISTORTING OR MOVING THE PIPE WHEN COMPACTING THE SAME. THE SAND BEDDING BACKFILL SHALL BE TAMPED IN SIX (6) INCH LAYERS, SIMULTANEOUSLY ON EACH SIDE OF THE PIPE, AND THOROUGHLY COMPACTED SO AS TO PROVIDE A SOLID BACKING AGAINST THE EXTERNAL SURFACE OF THE PIPE.
4) MINIMUM COMPACTION FOR ALL SAND BEDDING BACKFILL, BACKFILL AND PREMIUM BACKFILL SHALL BE 95% STANDARD PROCTOR.
5) PAVEMENT, SIDEWALK OR DRIVES TO BE INSTALLED IN ACCORDANCE WITH LOCAL MUNICIPALITY'S SPECIFICATIONS.

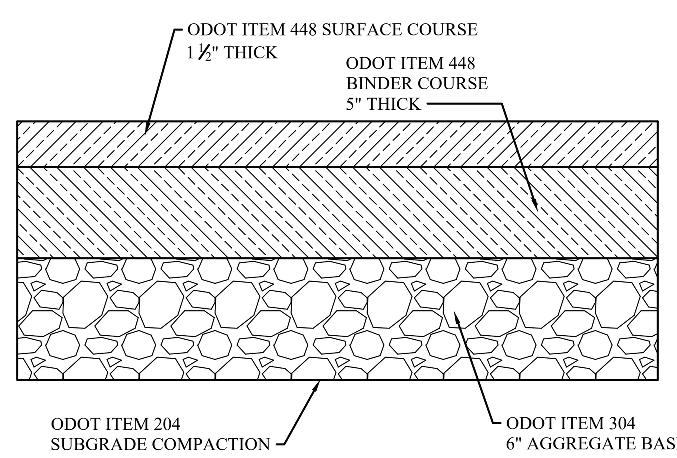




CONCRETE SIDEWALK

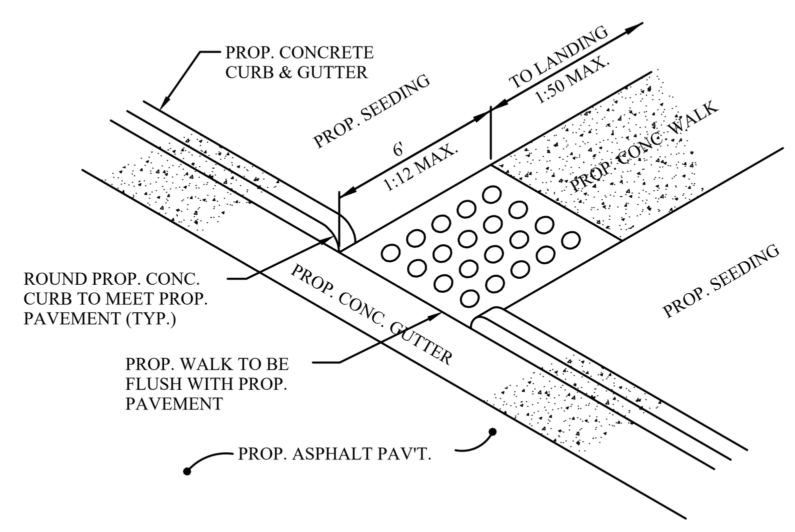
(PRIVATE ON-SITE WALK)

REFERENCE ONLY NOT TO SCALE



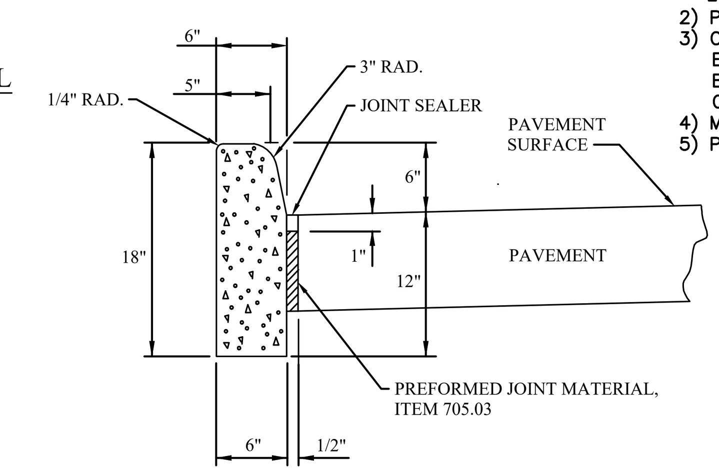
PROP. HEAVY DUTY ASPHALT PAVEMENT

REFERENCE ONLY NOT TO SCALE



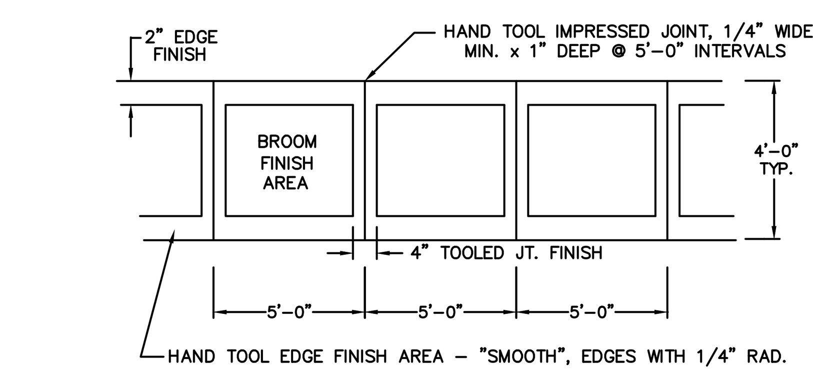
TYPICAL WALK AT CURB DETAIL

REFERENCE ONLY NOT TO SCALE



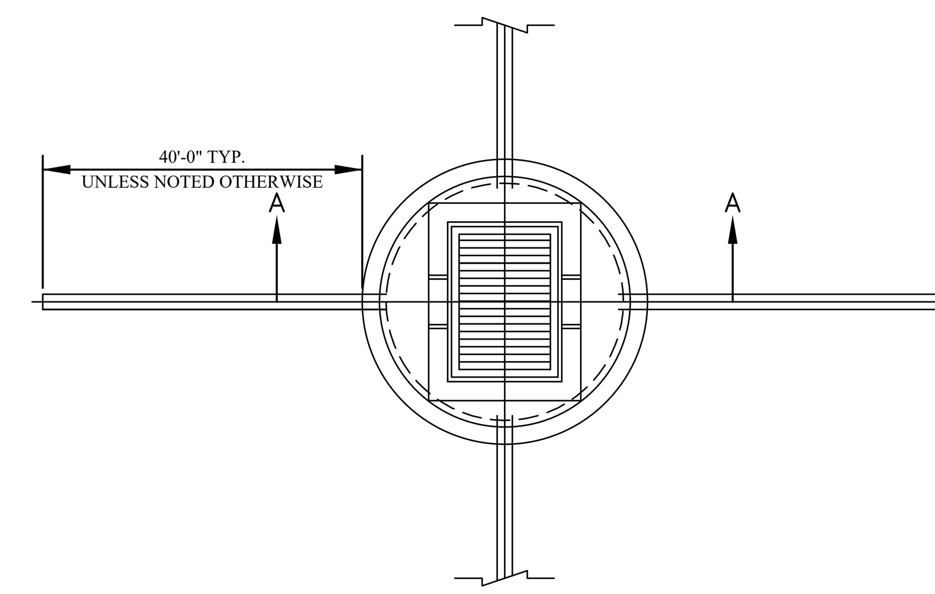
ODOT TYPE 6 CONCRETE CURB

REFERENCE ONLY NOT TO SCALE

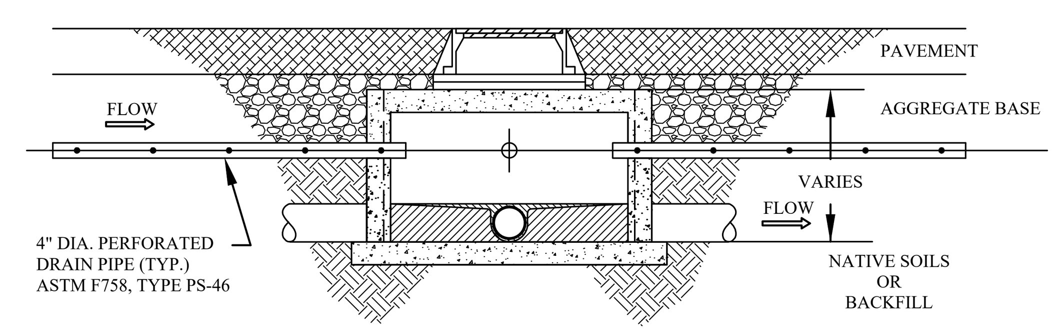


TYPICAL WALK FINISH & JOINTS

NOT TO SCALE



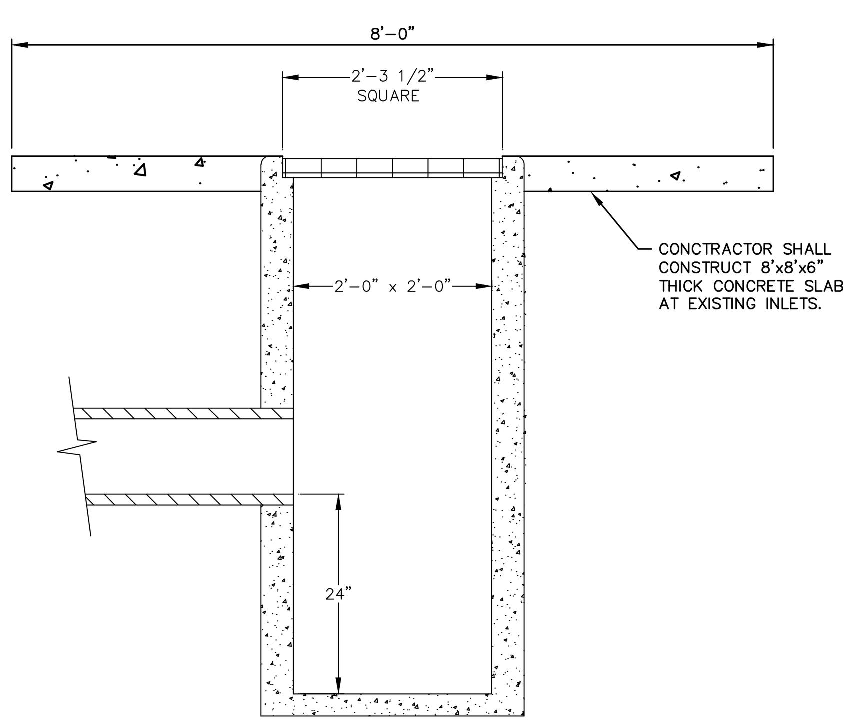
PLAN



SECTION A-A

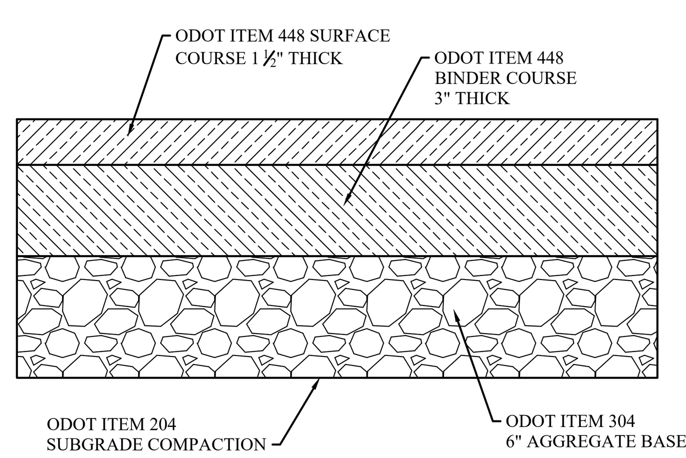
FINGER DRAIN DETAIL

REFERENCE ONLY NOT TO SCALE



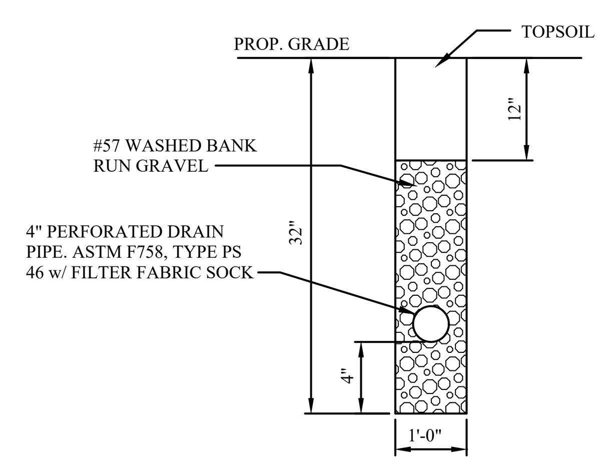
PROP. 8'x8' CONCRETE SLAB AT INLET DETAIL

REFERENCE ONLY NOT TO SCALE



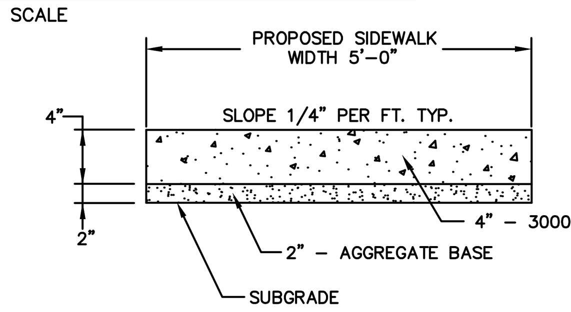
PROP. REGULAR DUTY ASPHALT PAVEMENT

REFERENCE ONLY NOT TO SCALE



UNDERDRAIN DETAIL

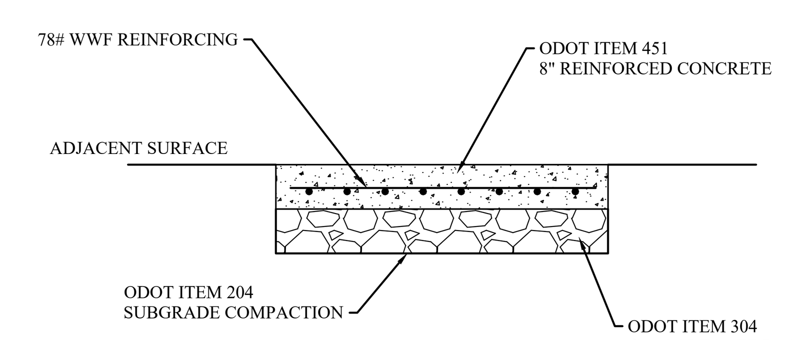
REFERENCE ONLY NOT TO SCALE



NOTE: CRACK CONTROL SHALL BE AT FIFTEEN FOOT ('15) INTERVALS AND SCORE MARKS SHALL BE AT FIVE FOOT ('5) INTERVALS. CONSTRUCTION SHALL BE IN ACCORDANCE WITH O.D.O.T. ITEM 608. PRIOR TO THE START OF SIDEWALK CONSTRUCTION THE SUBGRADE MUST BE INSPECTED AND APPROVED BY C.O.S.E. PERSONNEL. ANY SETTLEMENT OR DEFICIENT AREAS INDENTIFIED BY C.O.S.E. SHALL BE REPAIRED BY A A METHOD ACCEPTABLE TO C.O.S.E. THE REPAIRED AREAS WILL BE SUBJECT TO COMPACTION TESTING AND APPROVAL BY C.O.S.E. PRIOR TO THE START OF SIDEWALK CONSTRUCTION.

CONCRETE SIDEWALK

NOT TO SCALE



ALL EXTERIOR CONCRETE SHALL BE AIR-ENTRAINED 6% ± 1%.

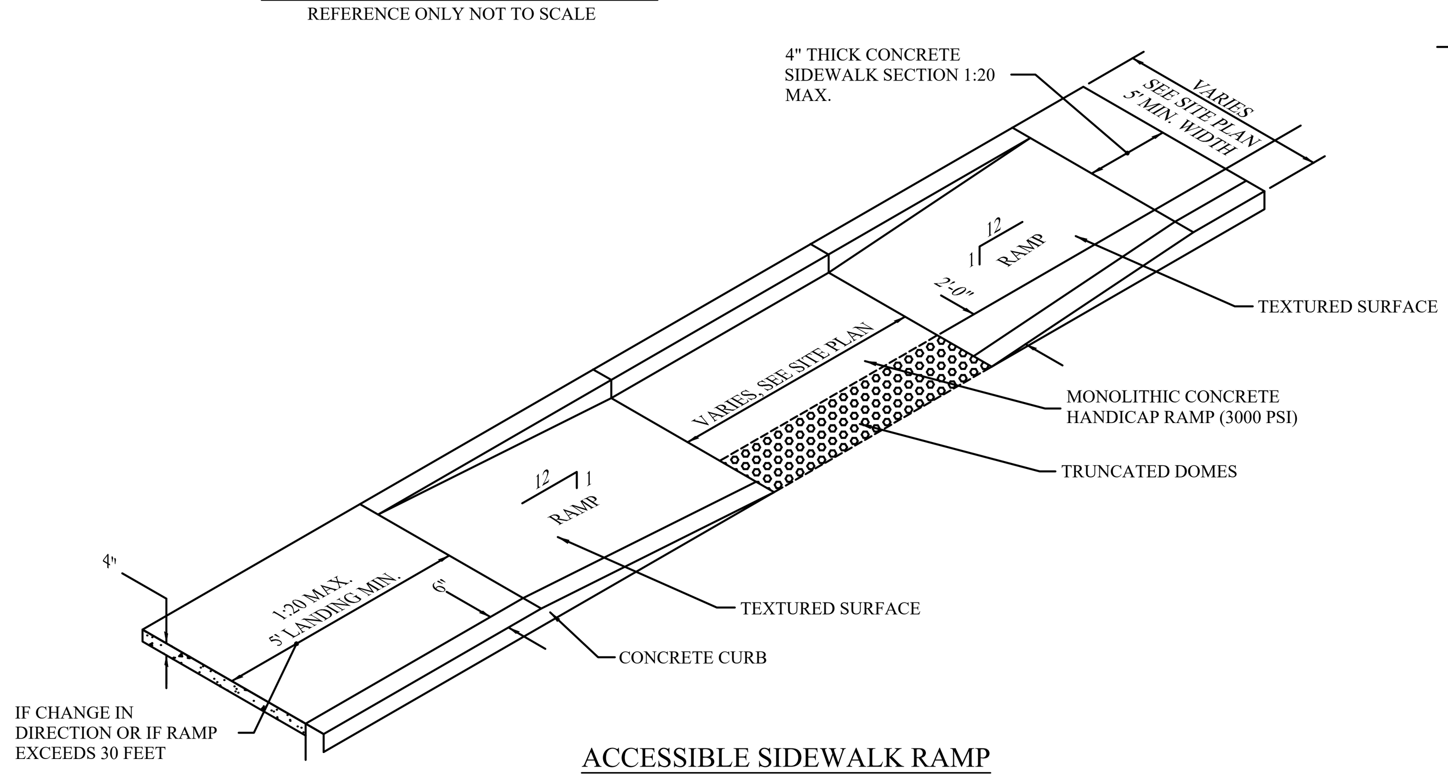
CONTROL JOINT/SAWCUTS

SOFF CUT SAW CUTS WITHIN 24 HOURS OF POUR TO BE T/4 (T=SLAB THICKNESS). MAX SPACING SHALL BE 12'-0" O.C. MAXIMUM EACH WAY.

CONTROL JOINTS SHALL NOT TERMINATE AT ANY INTERSECTION JOINT (EITHER CONSTRUCTION OR CONTROL) SO AS TO CREATE A "T" INTERSECTION. EXCEPTION: SAWCUTS MAY TERMINATE AT UNDOWELED CONSTRUCTION JOINTS.

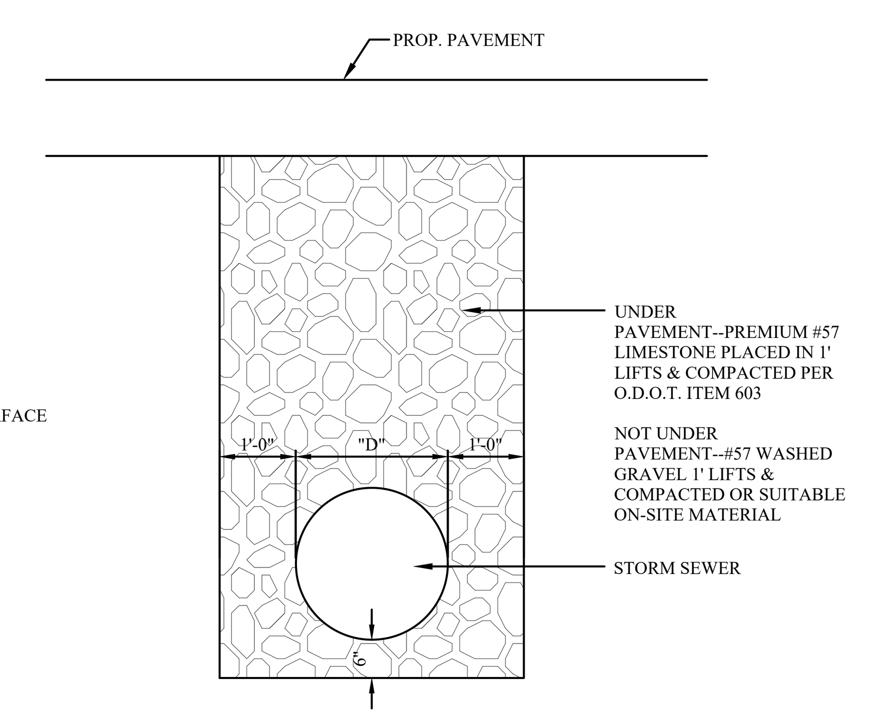
CONCRETE DUMPSTER PAD DETAIL

REFERENCE ONLY NOT TO SCALE



ACCESSIBLE SIDEWALK RAMP

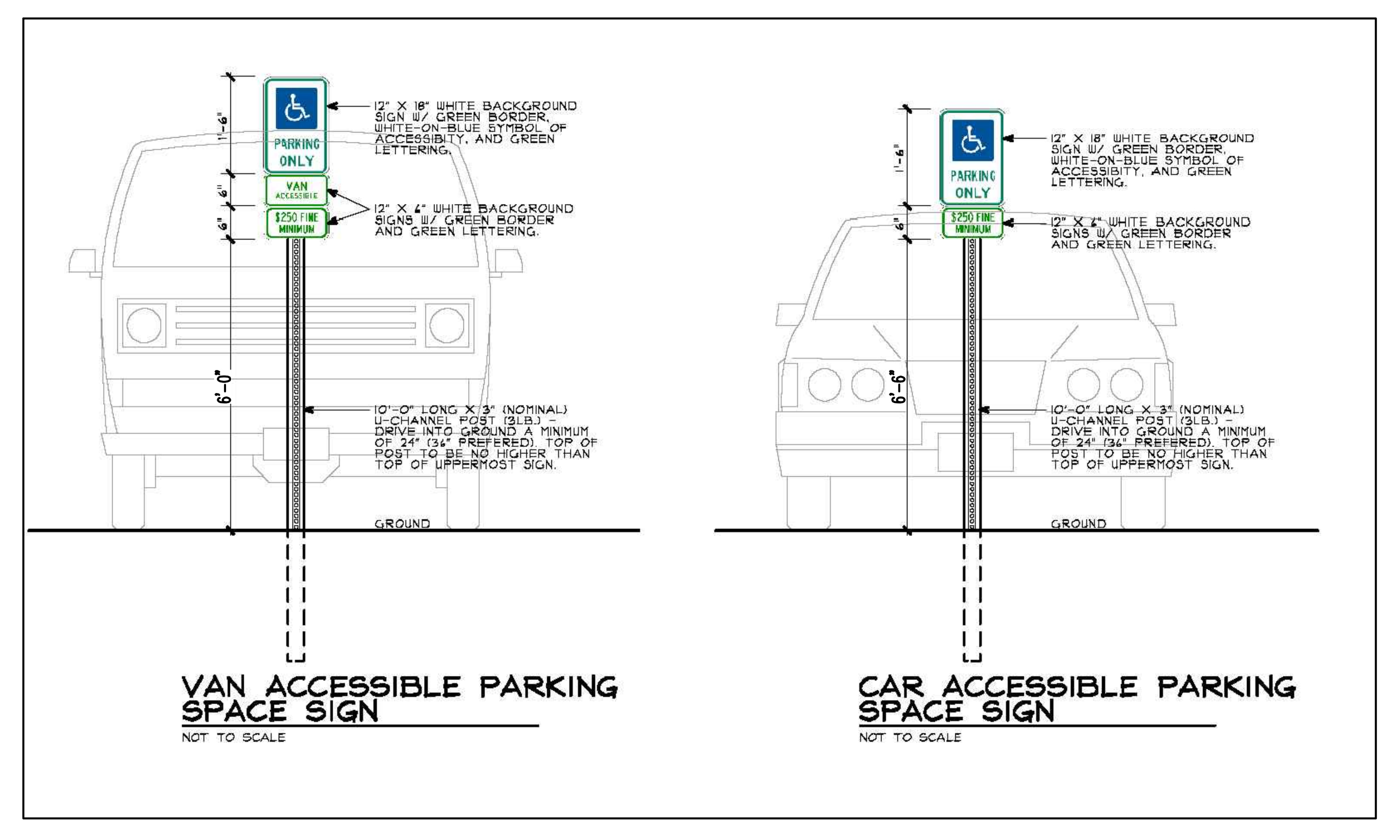
REFERENCE ONLY NOT TO SCALE



* ALL OSHA REQUIREMENTS ARE TO BE FOLLOWED THROUGHOUT CONSTRUCTION.

STORM SEWER TRENCH DETAIL

REFERENCE ONLY NOT TO SCALE



HANDICAPPED PARKING DETAIL

REFERENCE ONLY NOT TO SCALE

STATE OF OHIO
MATTHEW L. WEBER
61709
REGISTERED
PROFESSIONAL ENGINEER

Reg. No.: 61709

REVISIONS

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3660 Embassy Parkway
Fairlawn, OH 44333
mpg-architects.com
MANN • PARSONS • GRAY ARCHITECTS

DATE: 01-06-2022

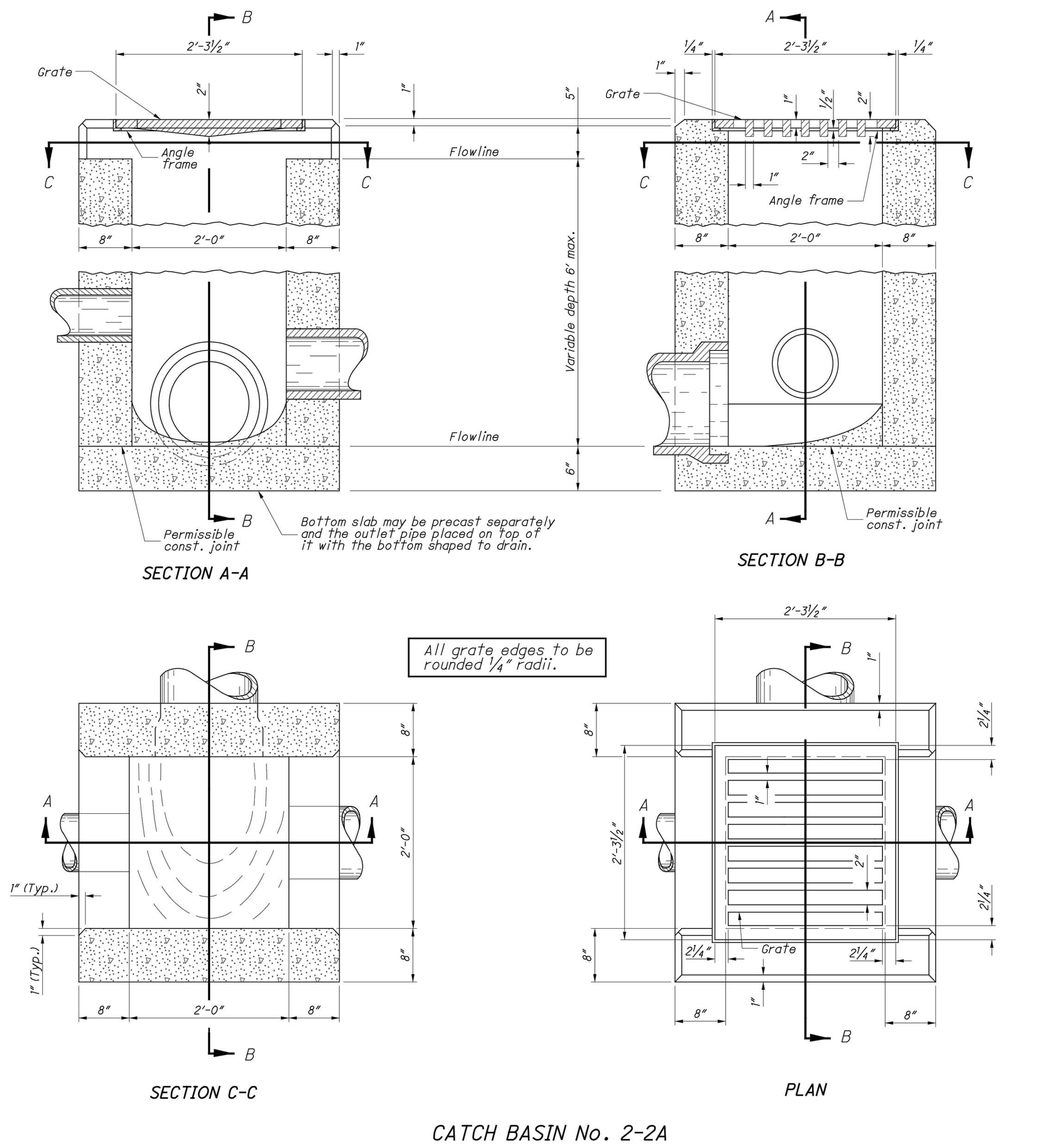
SITE DETAILS

PROJECT #: XXXX

THE ROCK

ROTHROCK ROAD
COPLEY, OHIO 44321

C5.0



NOTES

GENERAL: Catch Basins 2-2A and 2-2B are not intended for use in roadway applications. Catch Basin 2-2C is intended for parking lot use only.

CATCH BASINS 2-2A, 2-2B & 2-2C: This sheet depicts Catch Basin 2-2A. See Sheet 2 of 2 for Catch Basin 2-2B & 2-2C.

GRATE AND FRAME: Furnish a design essentially the same and equally as strong as the one shown (see Construction Information table), or meet the requirements of CMS 711.14. Provide grate openings and dimensions as shown here unless otherwise shown in the plans.

Cast the following text into the top of the grate:

"DUMP NO WASTE" and **"DRAINS TO WATERWAY"**

Print text in bold, capital letters at least ½" high. "WATERWAY" may be substituted with "STREAM", "RIVER", "LAKE", etc. Actual placement and logo may vary per manufacturer.

WALLS: Construct brick or cast-in-place walls with a nominal 8" thickness. Provide precast walls at least 6" thick with sufficient reinforcing to permit shipping and handling without damage. Do not use brick above the flow line of the side opening for Type 2-2A.

CONCRETE: Use 4000 psi compressive strength for cast-in-place concrete. Meet the requirements of CMS 706.13 for all precast concrete and mark with the catch basin number.

PRECAST BASE: If a precast base is used, set it deep enough so that the top can be placed on the base to provide the grate elevation specified in the plans. Do not use brick layers to adjust the top elevation.

LOCATION AND ELEVATION: When given on the plans, location and elevation are at the top center of the grate.

MINIMUM DEPTH: The minimum depth of CB No. 2-2A is the outside diameter (O.D.) of the outlet pipe plus 7".

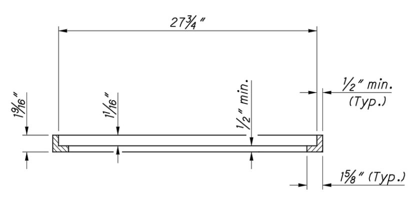
OPENINGS: Ensure pipe openings are the O.D. of the pipe being supplied plus 2" when fabricated or field cut. Fill any voids per C&MS 611.

2-2A SIDE INLETS: Provide inlets on both sides of the No. 2-2A catch basin in sags and on upstream side only where the ditch has a continuous down grade past the catch basin. Do not use CB 2-2A within the Clear Zone. The flow line should be 4" to 6" below normal ditch returning to normal 10' to 15' each side of the inlet.

PAYMENT: All materials and labor, including excavation and backfilling, are paid for under **Item 611 - Catch Basin, No. 2-2A.**

CONSTRUCTION INFORMATION
Minimum weight of grate, 120 lbs. Minimum weight of frame, 40 lbs.

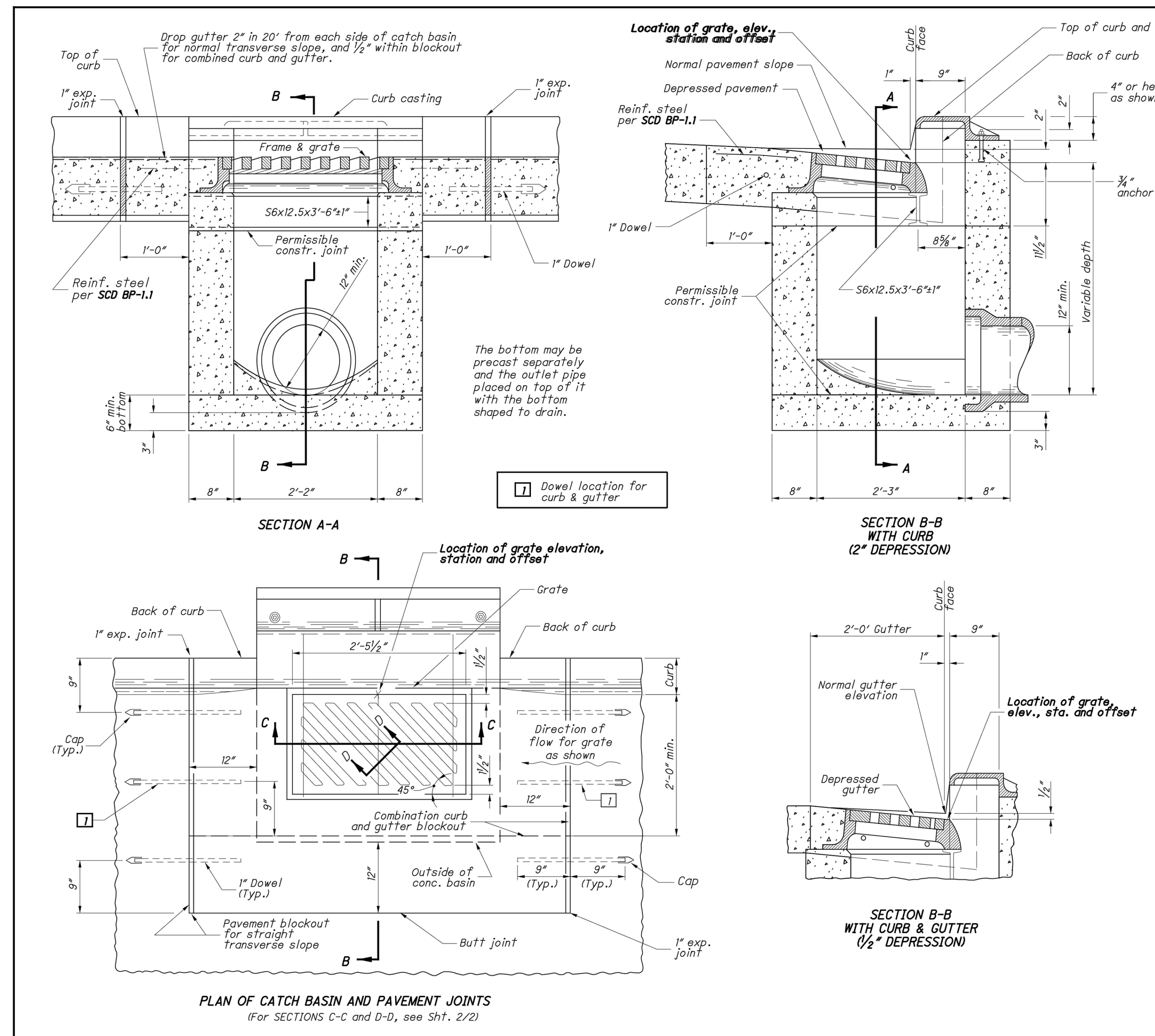
CATCH BASIN	OUTLET PIPE SIZE
2-2A, 2-2B, 2-2C	12" to 21"



SECTION THRU ANGLE FRAME FOR STANDARD No. 2-2A CATCH BASIN

CATCH BASIN No. 2-2A

STATE OF OHIO DEPARTMENT OF TRANSPORTATION HYDRAULIC ENGINEER Jeffery E. Syar
REVISIONS 7-19-02 7-15-05 7-20-12 1-18-13 1-15-16 7-20-18 7-19-19
ROADWAY HYDRAULIC ENGINEER M. Cozzoli
OFFICE OF HYDRAULICS ENGINEERING
STANDARD HYDRAULIC CONSTRUCTION DRAWING
CATCH BASINS No's 2-2A, 2-2B & 2-2C
SCD NUMBER CB-1.1
1/2



CATCH BASIN No. 3A

NOTES

GRATES: Provide Grate "V" unless the plans specifically require the diagonal grate. If the diagonal grate is specified, place it so that the diagonal bars direct the drainage toward the curb.

CASTINGS: Provide a design essentially the same and equally as strong as the one shown. Minimum weight:

Curb Casting . . . . . 170 lbs.
Standard Grate . . . . 127 lbs.
Frame . . . . 320 lbs.
Grate "V" . . . . 105 lbs.

Lighter weight frames and grates that meet the requirements of CMS 711.14 may also be provided. Provide grate openings and dimensions as shown here unless otherwise shown in the plans.

Cast the following text into the top of the curb casting:

"DUMP NO WASTE" and **"DRAINS TO WATERWAY"**

Print text in bold, capital letters at least ¾" high. See example on Plan & Section. "WATERWAY" may be substituted with "STREAM", "RIVER", "LAKE", etc. Actual placement and logo may vary per manufacturer.

BEARING AREAS: Fit and finish the frame and grate to provide a firm and even seat. No projections are permitted on bearing areas, and the grate must seat in its frame without rocking.

WALLS: When used in place of concrete, construct brick side walls with 8" nominal thickness.

PRECAST CONSTRUCTION: Permitted, except for the apron. Meet CMS 706.13 concrete requirements. Provide precast walls at least 6" thick with sufficient reinforcing to permit shipping and placement without damage. Reduce the wall thickness from the outside.

MINIMUM DEPTH: The minimum depth is per the cover requirements for that pipe type.

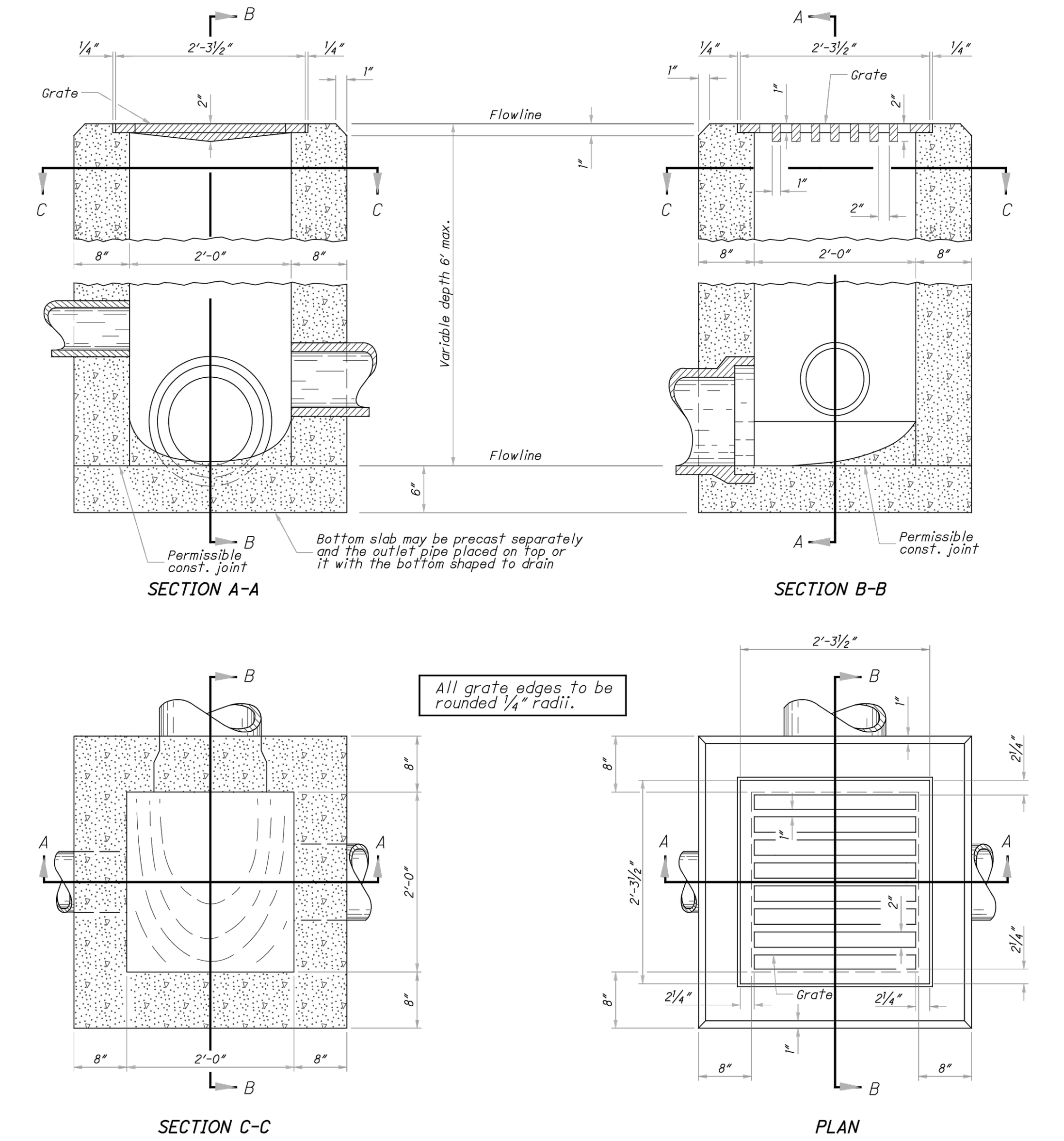
OPENINGS: Ensure pipe openings are the O.D. of the pipe being supplied plus 2" when fabricated or field cut. Fill any voids per C&MS 611.

DOWELS: Furnish four 1"x18" dowels for concrete pavement or gutter blockout. See **SCD BP-2.2** for dowel details.

BLOCKOUT: Pave blockouts with 4000 psi compressive strength concrete in PCC pavement or gutter. Blockouts are paid for as part of the pavement or gutter with no deduction in pavement, curb or gutter quantities because of the castings. Cast a 4000 psi compressive strength concrete apron, the size of the 2'-0" gutter blockout, in place in asphalt pavement (no dowels required) with the cost included in the catch basin bid price. No deduction is made in curb quantities.

PAYMENT: All materials and labor, including excavation and backfilling, are paid for under **Item 611 - Catch Basin, No. 3A.**

STATE OF OHIO DEPARTMENT OF TRANSPORTATION HYDRAULIC ENGINEER Jeffery E. Syar
REVISIONS 7-19-02 7-15-05 7-20-12 1-18-13 1-17-14 1-15-16 7-20-18
ROADWAY HYDRAULIC ENGINEER M. Cozzoli
OFFICE OF HYDRAULICS ENGINEERING
STANDARD HYDRAULIC CONSTRUCTION DRAWING
CATCH BASIN No. 3A
SCD NUMBER CB-2.2
1/2



NOTES

CATCH BASINS 2-2A, 2-2B & 2-2C: This sheet depicts Catch Basin 2-2B & 2-2C. See Sheet 1 of 2 for Catch Basin 2-2A.

CB-2-2B GRATE: Furnish a design essentially the same and equally as strong as the one shown (see Construction Information table), or meet the requirements of CMS 711.14. Provide grate openings and dimensions as shown here unless otherwise shown in the plans.

If necessary, bicycle safe grates will be specified in the plans. Furnish Neenah No. R-4859-S or EJ No. 5110M3 (00511043) grates or approved equals.

Place grate elevation 4" to 6" below normal ditch and return to normal 10' to 15' each side of inlet.

CB-2-2C FRAME & GRATE: Where the catch basin is specified for use in a parking lot, Furnish Neenah No. R-1878-A5G or EJ No. V-5622 (45622010) frame and V-5622 (45622030) grate or approved equals. If necessary, bicycle safe grates will be specified in the plans. Furnish Neenah No. R-3405 grate or EJ No. 5250M (00525031) grate or approved equals.

On cast-in-place and precast units, provide a level surface on the catch basin 4" below the plan grate elevation for setting the frame and grate assembly. Provide a concrete apron to encase and secure the frame of a width not less than the thickness of the catch basin walls that the frame was placed on or as shown in the plans. Slope apron to provide local depression.

GRATE TEXT: Cast the following text into the top of the grate:

"DRAINS TO WATERWAY" and **"DUMP NO WASTE"**

Print text in bold, capital letters at least 1/2" high. "WATERWAY" may be substituted with "STREAM", "RIVER", "LAKE", etc. Actual placement and logo may vary per manufacturer.

WALLS: Construct brick or cast-in-place walls with a nominal 8" thickness. Provide precast walls at least 6" thick with sufficient reinforcing to permit shipping and handling without damage.

CONCRETE: Use 4000 psi compressive strength for cast-in-place concrete. Meet the requirements of CMS 706.13 for all precast concrete and mark with the catch basin number.

PRECAST BASE: If a precast base is used, set it deep enough so that the top can be placed on the base to provide the grate elevation specified in the plans. Do not use brick layers to adjust the top elevation.

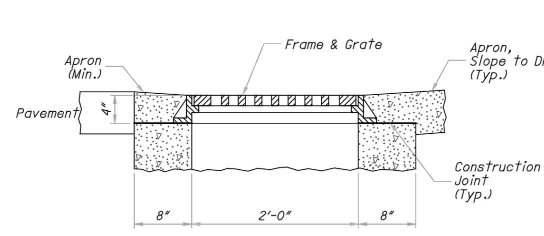
LOCATION AND ELEVATION: When given on the plans, location and elevation are at the top center of the grate.

MINIMUM DEPTH: The minimum depth of CB No. 2-2B is the outside diameter (O.D.) of the outlet pipe plus 4". The minimum depth of CB No. 2-2C is the outside diameter (O.D.) of the outlet pipe plus 8".

OPENINGS: Ensure pipe openings are the O.D. of the pipe being supplied plus 2" when fabricated or field cut. Fill any voids per C&MS 611.

PAYMENT: All materials and labor, including excavation and backfilling, are paid for under **Item 611 - Catch Basin, No. 2-(2B or 2C).**

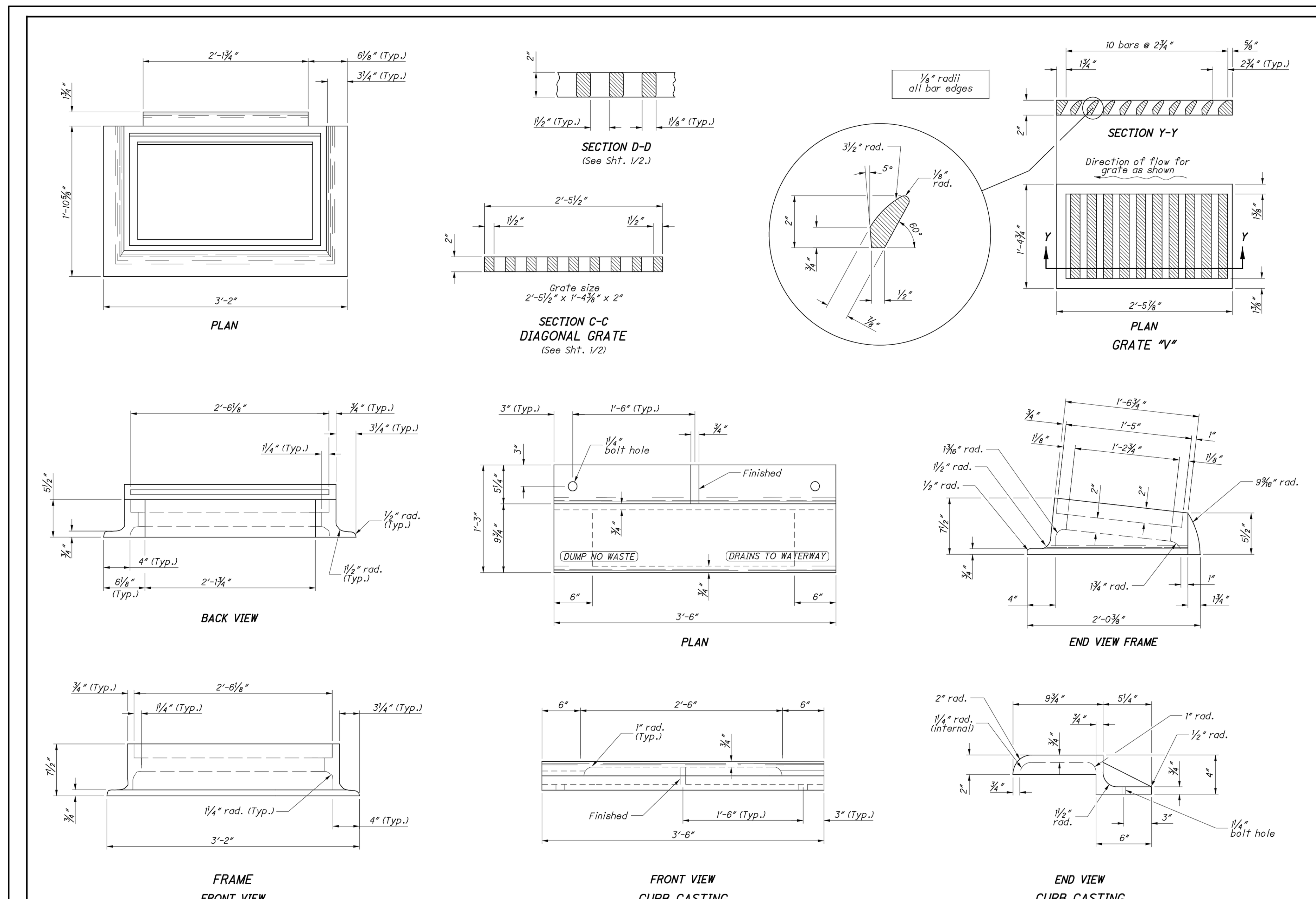
CONSTRUCTION INFORMATION
Minimum weight of grate, 120 lbs.



CATCH BASIN No. 2-2B

CATCH BASIN No. 2-2C

STATE OF OHIO DEPARTMENT OF TRANSPORTATION HYDRAULIC ENGINEER Jeffery E. Syar
REVISIONS 7-19-02 7-15-05 7-20-12 1-18-13 1-15-16 7-20-18 7-19-19
ROADWAY HYDRAULIC ENGINEER M. Cozzoli
OFFICE OF HYDRAULICS ENGINEERING
STANDARD HYDRAULIC CONSTRUCTION DRAWING
CATCH BASINS No's 2-2A, 2-2B & 2-2C
SCD NUMBER CB-1.1
2/2



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REVISIONS 7-19-02 7-15-05 7-20-12 1-18-13 1-17-14 1-15-16 7-20-18
ROADWAY HYDRAULIC ENGINEER M. Cozzoli
OFFICE OF HYDRAULICS ENGINEERING
STANDARD HYDRAULIC CONSTRUCTION DRAWING
CATCH BASIN No. 3A
SCD NUMBER CB-2.2
2/2

STATE OF OHIO
MATTHEW L. WEBER
61709
REGISTERED
PROFESSIONAL ENGINEER

Reg. No.: 61709

REVISIONS

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3660 Embassy Parkway
Fairlawn, OH 44333
mpg-architects.com

SITE DETAILS

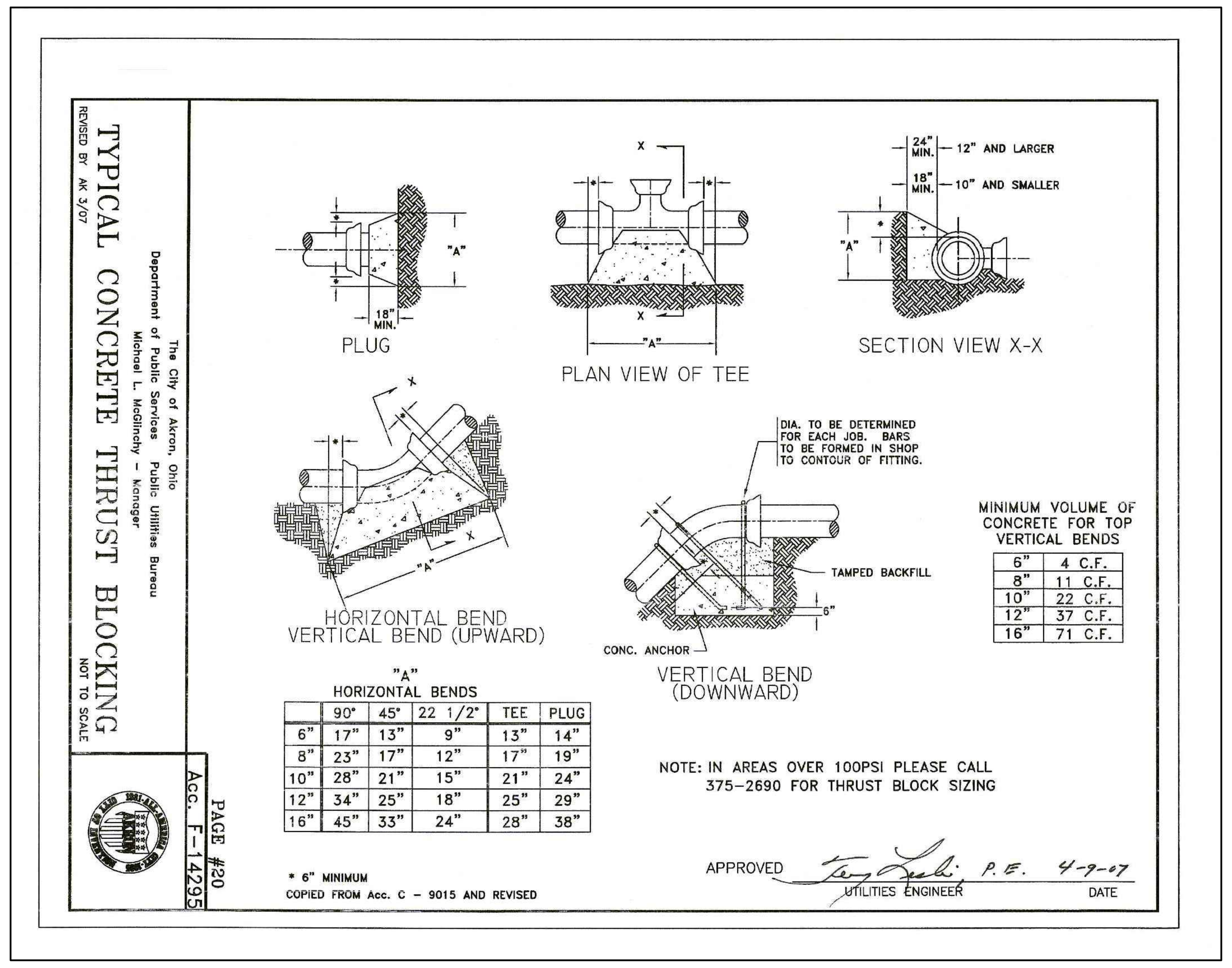
PROJECT #: XXXX

DATE: 01-06-2022

THE ROCK

ROTHROCK ROAD
COPLEY, OHIO 44321

C5.1



"A" HORIZONTAL BENDS

	90°	45°	22 1/2°	TEE	PLUG
6"	17"	13"	9"	13"	14"
8"	23"	17"	12"	17"	19"
10"	28"	21"	15"	21"	24"
12"	34"	25"	18"	25"	29"
16"	45"	33"	24"	28"	38"

MINIMUM VOLUME OF CONCRETE FOR TOP VERTICAL BENDS

6"	4 C.F.
8"	11 C.F.
10"	22 C.F.
12"	37 C.F.
16"	71 C.F.

CITY OF AKRON
PUBLIC SERVICE DEPARTMENT
WATER SUPPLY BUREAU

WATER SERVICE AND FIRELINE NOTES

No water service will be installed until all requirements of the Akron Water Works are met, including but not limited to the following:

1. Review and approval of all building plans.
2. Receipt of the applicable fees.
3. Approval of the houseline installation and appurtenances.
4. Approval of the fire system which includes review and approval of sprinkler plans.

All on-site water line piping and appurtenances shall be installed according to Water Department specifications and must be inspected and approved by the Water Distribution Division (375-2420) prior to backfilling.

All underground pipe 2 inches and smaller shall be Type "K" soft copper with flared fittings. Compression fittings may be used on 1 1/2 inch and 2 inch pipe. All brass fittings used shall be lead free per NSF61-G. Pipe shall be installed with 4 feet 6 inches of cover.

All underground straight lengths of pipe larger than 2 inches shall be Class 53 cement lined ductile iron with push-on joints. Pipe shall be installed with 4 feet 6 inches of cover. See detailed specifications for approved pipe, fittings, bolts, etc., for water line installation (Acc. #14908).

Maintain a 10 foot horizontal clearance from edge of water line to edge of sanitary and storm sewer pipes.

Maintain an 18 inch minimum vertical clearance from edge of water line to edge of sanitary and storm sewer pipes where the cross.

Maintain a 12 inch vertical clearance from edge of water line to edge of gas, electric, etc.

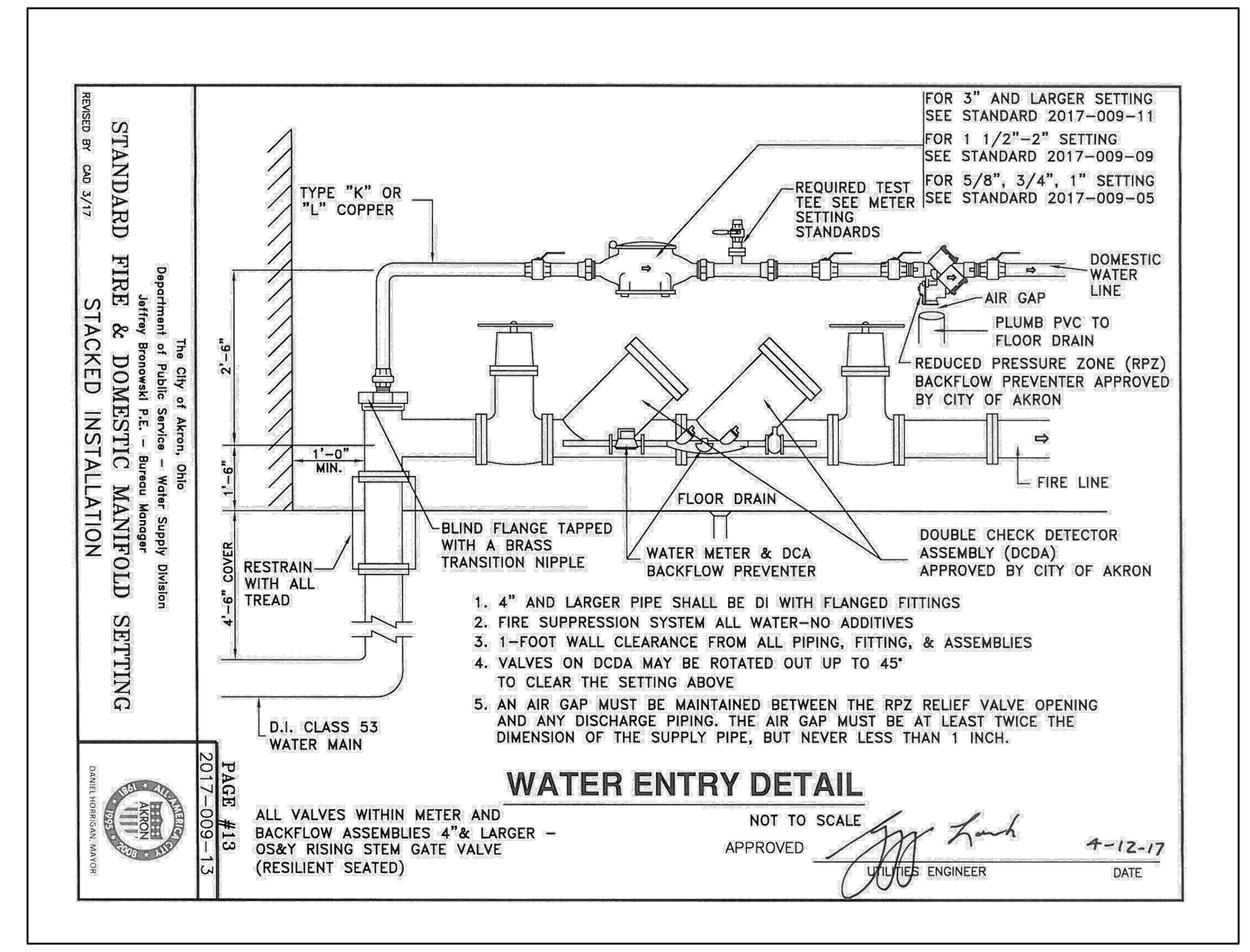
Maintain a 5 foot minimum horizontal clearance from edge of water line to edge of gas line(s), electric line(s), communication line(s), etc.

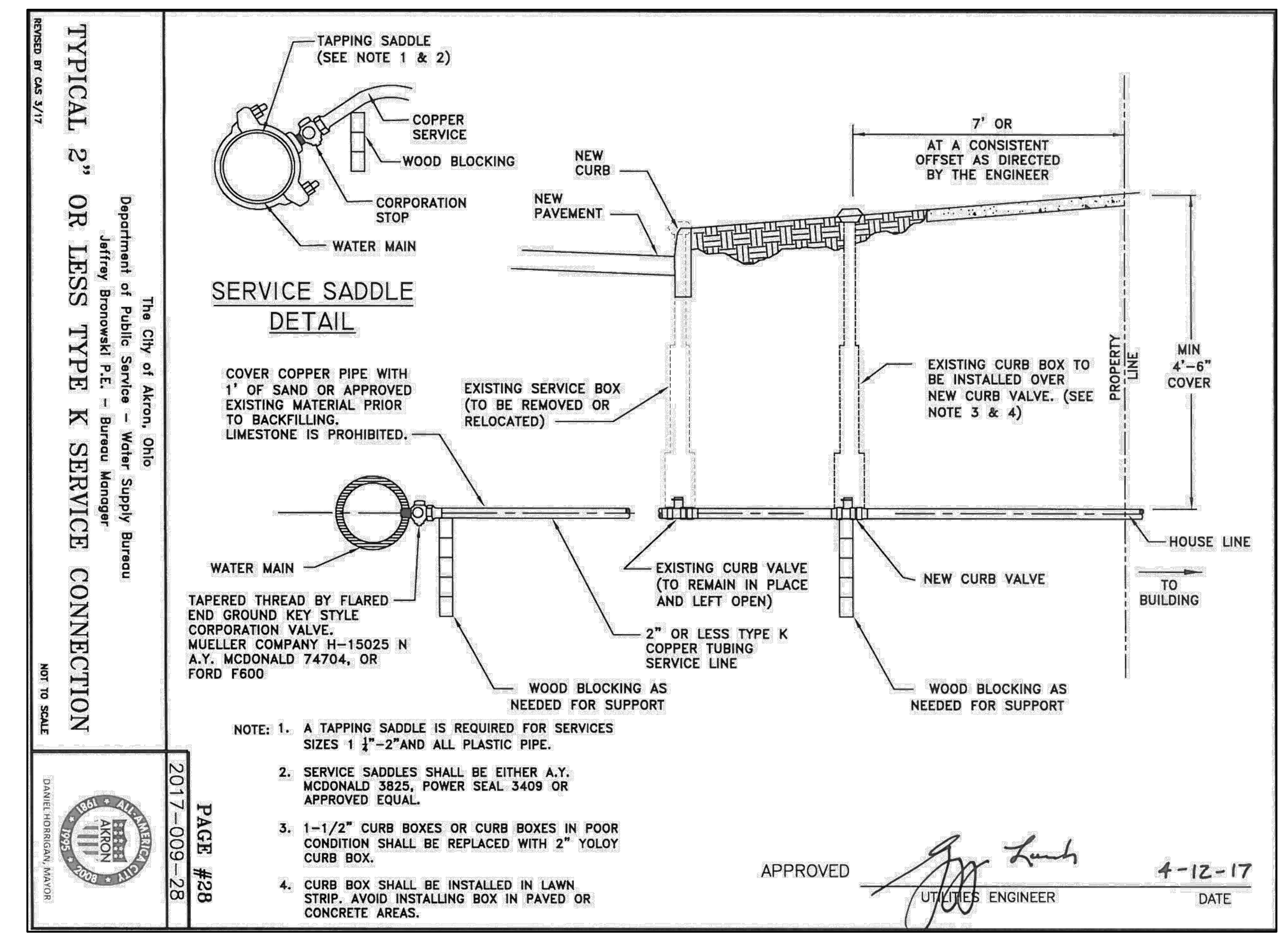
Requirements for an Inside Meter Setting:

1. Easily accessible
2. Adequate headroom
3. Properly heated
4. Floor drain within five feet of meter
5. Houseline not longer than 200 feet
6. Meter must be set within one foot of where line enters building.
7. In buildings with interior meter setting without basements, houseline must be installed in an AWW approved Schedule 40 conduit from a minimum of one foot outside footer to 1" above floor slab (houseline 2 inch and smaller).
8. Buildings with interior meter settings not on outside wall, the houseline must be installed in a continuous AWW approved Schedule 40 conduit from a minimum of 1 foot outside building footer up through floor slab 1 inch (houseline 2 inch and smaller).
9. Houseline installed under paved areas for inside meter setting must be in an AWW approved Schedule 40 casing.

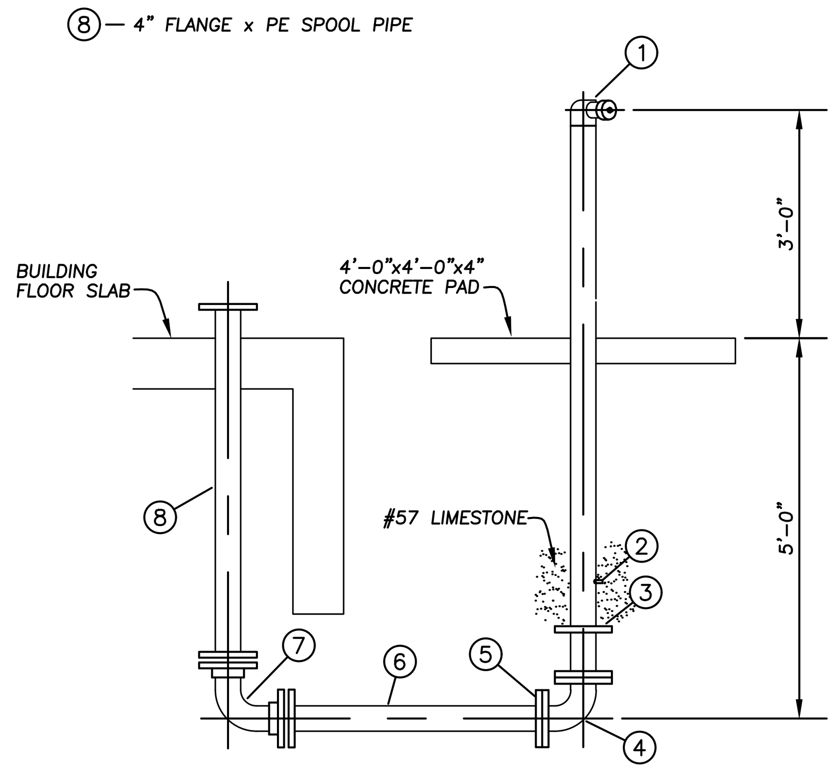
If the interior meter setting does not meet all the above requirements, then the meter must be installed at the street in a curb meter pit or an approved above ground heated enclosure.

Revised 03/17 Page #2 Acc. 2017-009-02





1 — 4"x2–2 1/2" NST 90° SIAMESE w/ CAPS (FDC) FIRE DEPT. CONNECTION
2 — 4"x8' GALV. THREADED NIPPLE TAPPED 6" FROM BOTTOM END w/ 1/2" BALL DRIP VALVE
3 — 4" COMPANION FLANGE AND GASKET SET SS BOLTS AND NUTS
4 — 4" FLANGED 90° ELBOW
5 — 4" EZ FLANGE (EBBA)
6 — 4" PIPE (RESTRAINED)
7 — 4" MJ 90° ELBOW w/ MEGALUGS
8 — 4" FLANGE x PE SPOOL PIPE



SECTION

FIRE DEPARTMENT CONNECTION (SIAMESE CONNECTION)

1/2" = 1'–0"

APPROVED PIPE, FITTINGS, BOLTS, ETC.

FOR AKRON SYSTEM WATER LINE INSTALLATIONS

Pipe:	Class 53 ductile iron per AWWA C151 specifications, with cement-lining per AWWA C104, labeled polyethylene encasement per AWWA C105 is required.
Pipe Joints:	Push-on joints (Tyton, Fastite, etc.), per AWWA C151 specifications with plain or restraining rubber gaskets per AWWA C111 specifications.
Fittings:	Class 350 ductile iron compact fittings per AWWA C153 or full thickness castings per AWWA C110 are acceptable, with mechanical joint ends and ductile iron follower glands. Anchor pipe is required on all hydrant runs between the tee and hydrant run valve. Anchor tee may be substituted provided there is no conflict with valve location Refer to Hydrant detail Page 23.
Restrained pipe systems:	Push-on joint with Field Lock (4 through 16 inch only), Sure Stop 350 (3 through 16 inch only), or Fast Grip gaskets (4 through 16 inch only), or mechanical joint with restrained follower glands, and 6 ounce zinc anode caps on every bolt thread. TR Flex or Flex-Ring required on all 16 inch or larger pipe diameters when specified on the plans.
Restrained fitting devices:	All valves, bends, offsets, hydrant inlets, caps, plugs, and branches of tees and wyes must be restrained using mechanical joint with restrained follower glands or restraining gaskets. All threads with ductile iron lugs are required on all vertical bends and /or as required by the engineer. Hardwood blocking is required for all diameters 4 through 8 inch, concrete blocking and strapping for all diameters 12 inches and larger. Concrete blocking is required on all fire lines and on all diameters in areas over 100 psi. Restrained joints for diameters 12 inches and under shall use Field-Lock or Fast-Grip restraining gaskets or mechanical joint with restrained follower glands. All ductile iron water mains shall be restrained for a length of 30 feet on each side of a valve, bend or offset using mechanical joint with restrained follower glands.
Mechanical Joint T-head Bolts:	All mechanical joints shall be made with Cor-Ten or construction-grade alloyed ductile iron T-head bolts. T-head bolts shall be ½ inch longer than standard length and must include a 6 oz. zinc anode cap on every bolt thread.
Hydrants:	Akron-style Mueller "Centurian" Model A423, Kennedy "Guardian" Model K-81A, East Jordan CD250, American Flow Control Model B62B with 6 inch inlet or American Flow Control Model B84B with 8 inch inlet. Threads shall be Akron style as shown on Akron Water Works Standard Construction Drawings F-3258 and F-3440. Hydrants must be lead free per NSF61-G.
Gate Valves:	Resilient-seat wedge (RSW) valves with restrained mechanical joints. Valves shall have non-rising stems and shall open to the right (clockwise).
Butterfly Valves, 16 Inch and up:	Restrained mechanical joint. Rubber seals in the valve must be replaceable. Flanged end or wafer-style valves are not acceptable.
Valve Boxes:	Only Bibby, Tyler, East Jordan, or Star (heavy duty only), brands acceptable for compatibility.
Curb Boxes:	Riser pipe must be of yoloy corrosion resistant material. Plug must be cast iron and threaded into a brass ring.

Revised - 3/16 Page #3 Acc. 2017-009-03

WES No. 2019-332

STATE OF OHIO
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61709
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SITE DETAILS

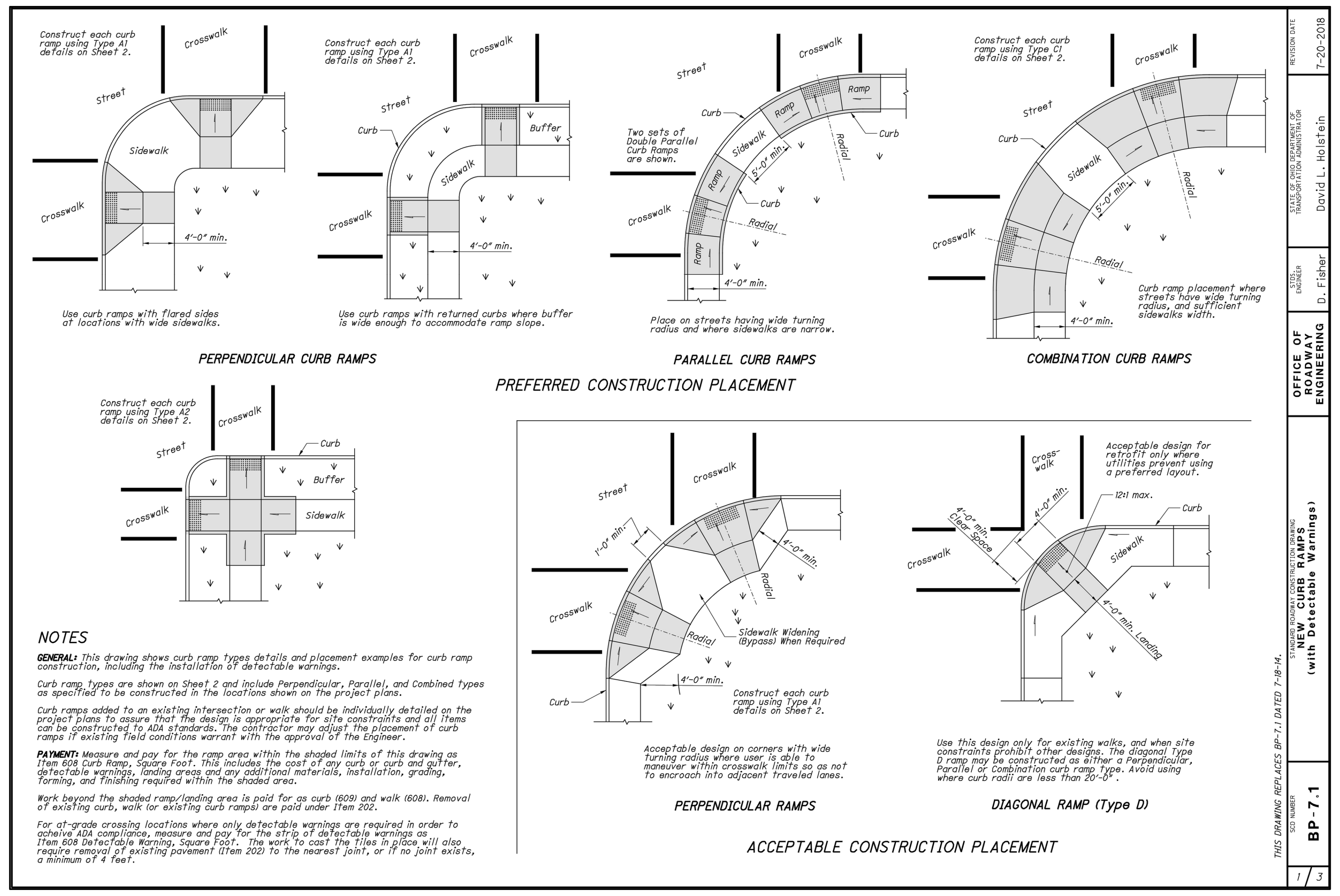
PROJECT #: XXXX

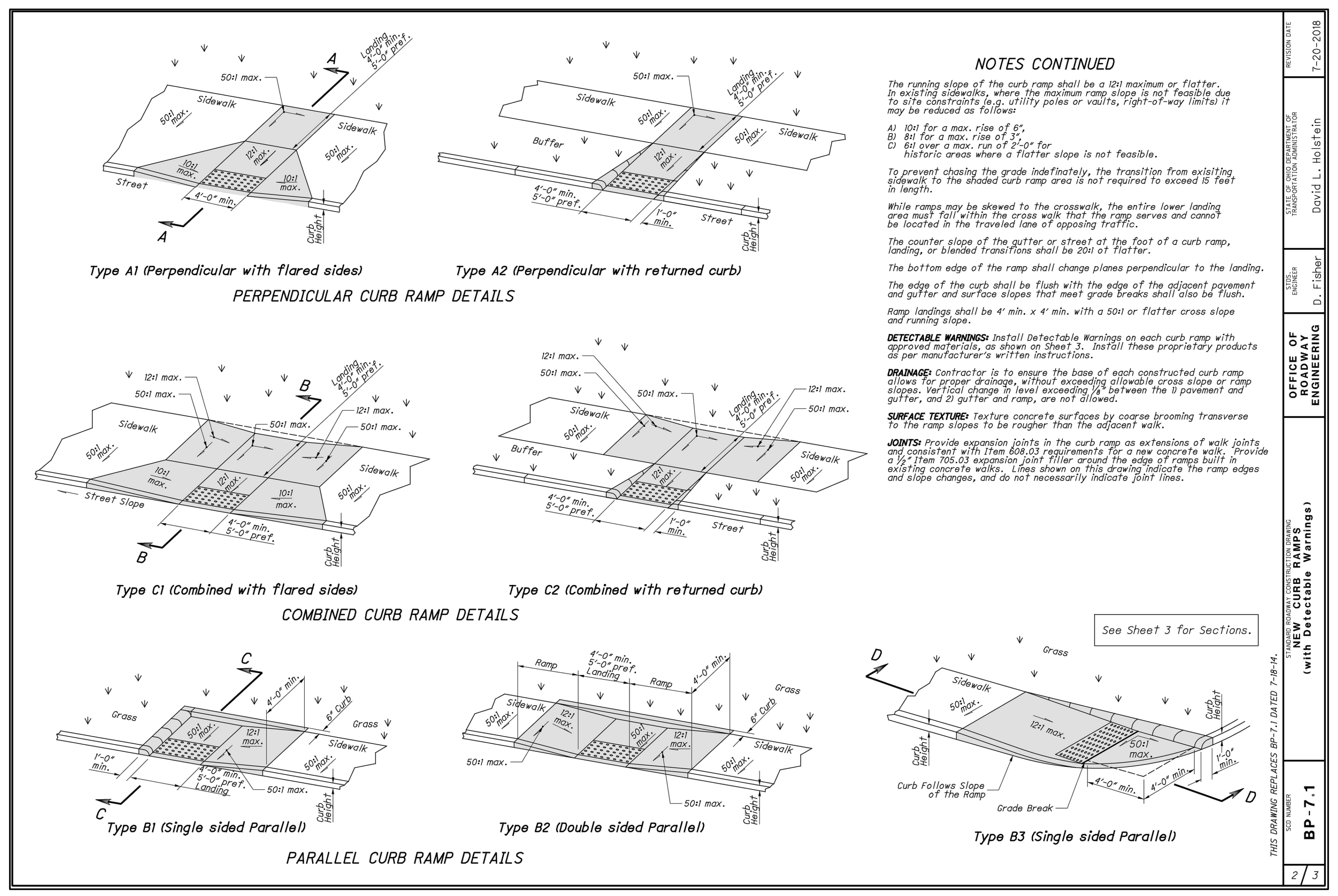
DATE: 01-06-2022

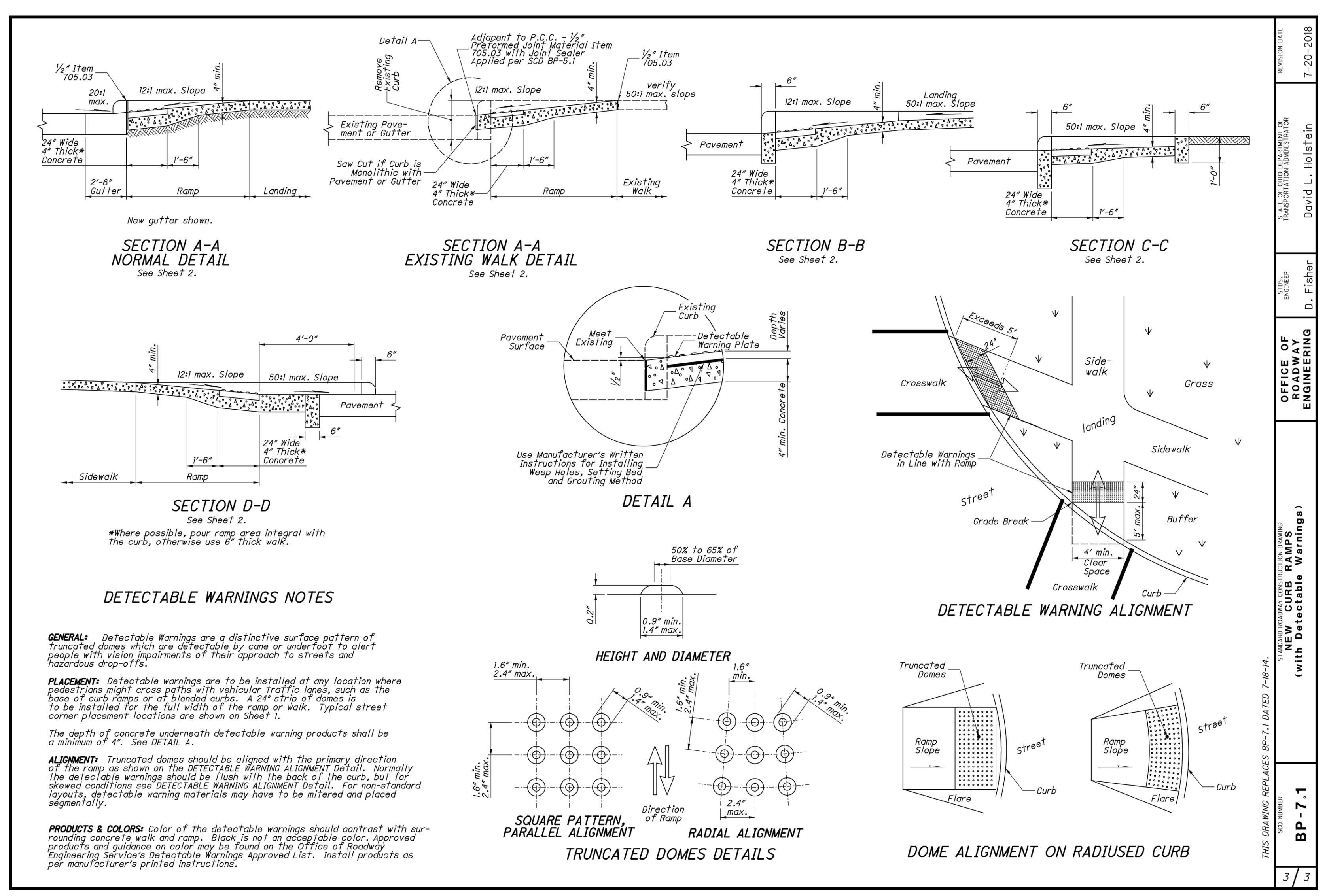
THE ROCK

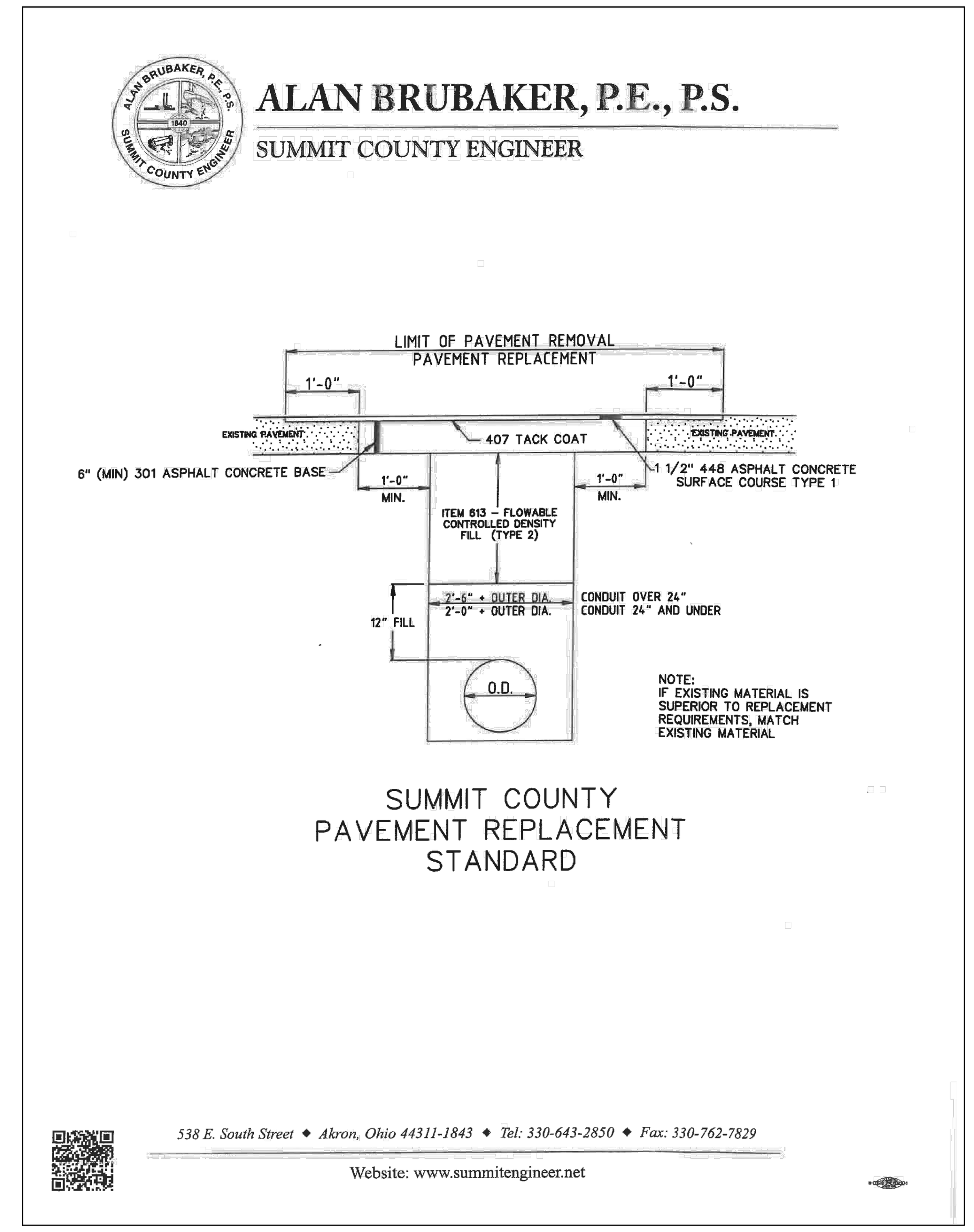
ROTHROCK ROAD
COPLEY, OHIO 44321

C5.2

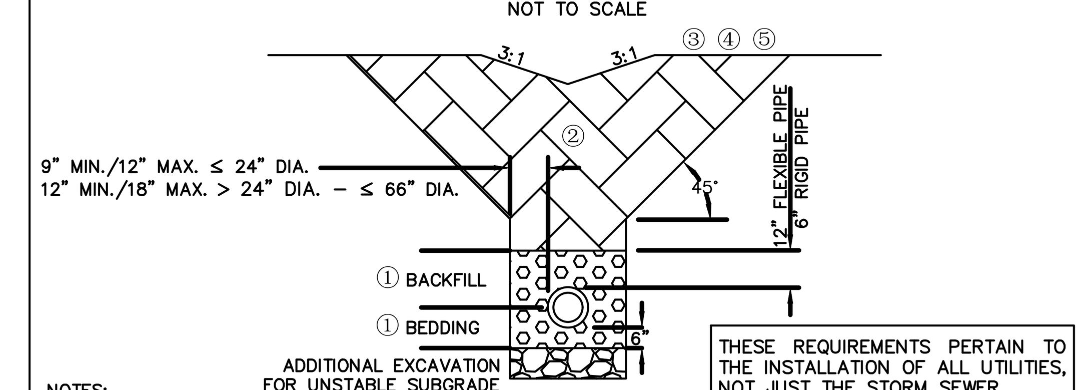








SCE TRENCH DETAIL
BACKFILL AND COMPACTION REQUIREMENTS
NOT TO SCALE



THESE REQUIREMENTS PERTAIN TO THE INSTALLATION OF ALL UTILITIES, NOT JUST THE STORM SEWER.

NOTES:

① CRUSHED STONE AGGREGATE No. 67, THROUGHLY COMPACTED (NO SLAG OR RECYCLED CONCRETE).

② TRENCH BACKFILL:

INSTALLATION UNDER PAVEMENT – SHALL BE INSTALLED IN ACCORDANCE WITH O.D.O.T. ITEM 304 AGGREGATE BASE. SLAG MATERIAL OR RECYCLED CONCRETE IS NOT PERMITTED.

INSTALLATION WITHIN A 45° (DEGREE) INFLUENCE LINE FROM THE PAVEMENT EDGE – SHALL BE INSTALLED IN ACCORDANCE WITH O.D.O.T. ITEM 304 AGGREGATE BASE. SLAG MATERIAL OR RECYCLED CONCRETE IS NOT PERMITTED.

THE COUNTY ENGINEER MAY CONSIDER THE USE OF OTHER MATERIALS UNDER SPECIAL CONDITIONS. A WRITTEN REQUEST, INCLUDING EVIDENCE THAT THE REPLACEMENT MATERIAL WILL BE SUITABLE FOR BACKFILL MUST BE SUBMITTED FOR APPROVAL.

COMPACTION REQUIREMENTS:

(a) UNDER PROPOSED PAVEMENT

BACKFILL MATERIAL SHALL BE O.D.O.T. ITEM 304 AGGREGATE BASE COMPACTED TO AT LEAST 98% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY WITH THE MATERIAL'S MOISTURE CONTENT ADJUSTED TO WITHIN ±1–2% OF THE OPTIMUM PRIOR TO COMPACTION.

(b) NOT UNDER PROPOSED PAVEMENT BUT WITHIN A 45° (DEGREE) INFLUENCE FROM THE EDGE OF PAVEMENT

BACKFILL MATERIAL SHALL BE O.D.O.T. ITEM 304 AGGREGATE BASE COMPACTED TO AT LEAST 95% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY WITH THE MATERIAL'S MOISTURE CONTENT ADJUSTED TO WITHIN ±1–2% OF THE OPTIMUM PRIOR TO COMPACTION.

(c) WITHIN THE R/W BUT NOT UNDER PAVEMENT OR WITHIN THE 45° (DEGREE) INFLUENCE LINE

BACKFILL OR FILL MATERIAL MUST BE COMPACTED TO AT LEAST 85% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY WITH THE MATERIAL'S MOISTURE CONTENT ADJUSTED TO WITHIN ±1–2% OF THE OPTIMUM PRIOR TO COMPACTION.

(d) IN DEPTHS OVER 8 FEET AND WHEN COMPACTING WITH A HOE–PAC OR EQUAL HYDRAULIC COMPACTOR, THE CONTRACTOR MAY INSTALL THE FIRST LIFT UP TO 3 FEET IN DEPTH BEFORE COMPACTING. SUBSEQUENT LIFTS SHALL BE COMPACTED AS PER THE ABOVE.

③ O.D.O.T. ITEM 653 – 2" TOPSOIL FURNISHED AND PLACED

④ O.D.O.T. ITEM 659 – SEEDING & MULCHING, CLASS 1

⑤ O.D.O.T. ITEM 659 – FERTILIZER

WES No. 2019-332

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SITE DETAILS

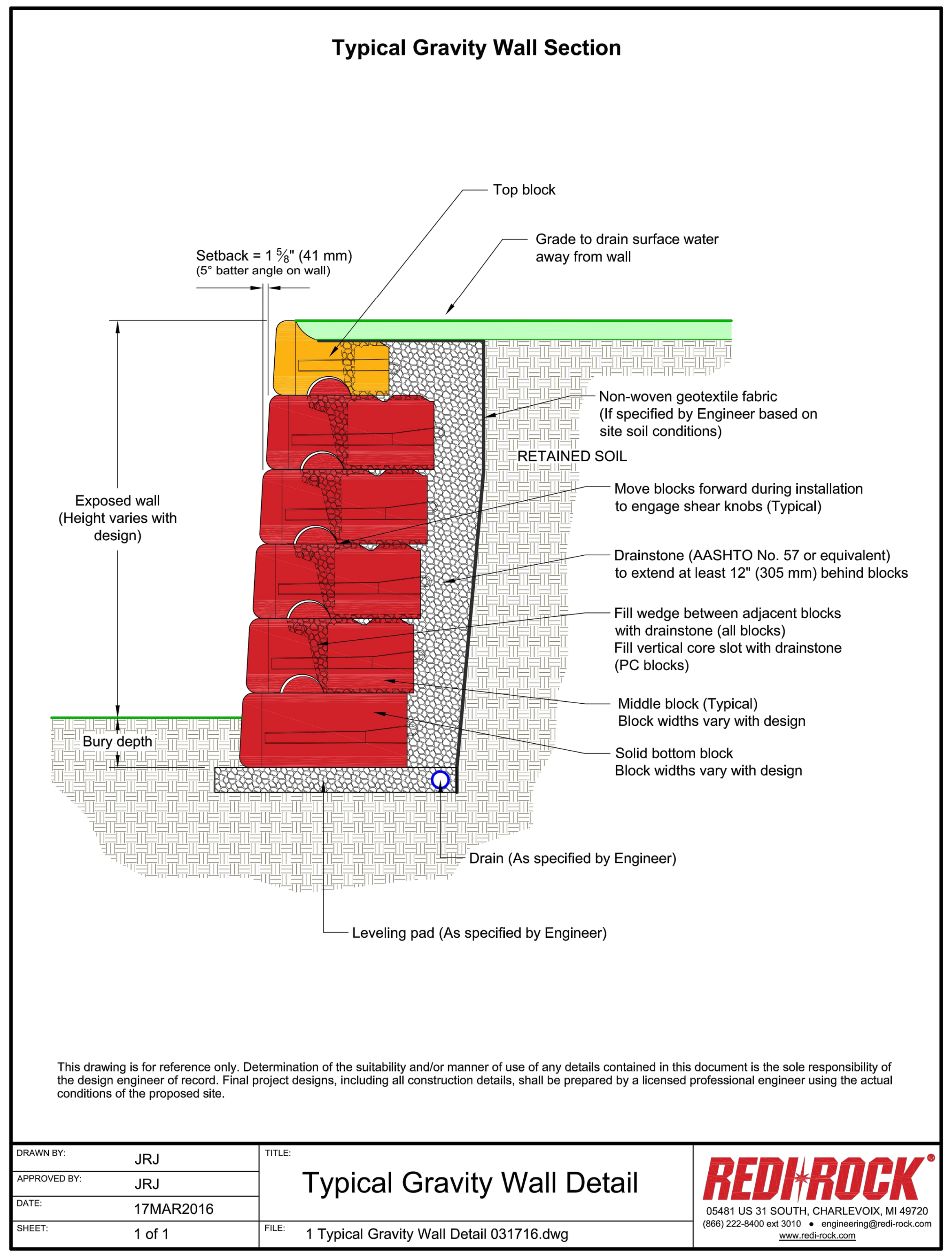
PROJECT #: XXXX

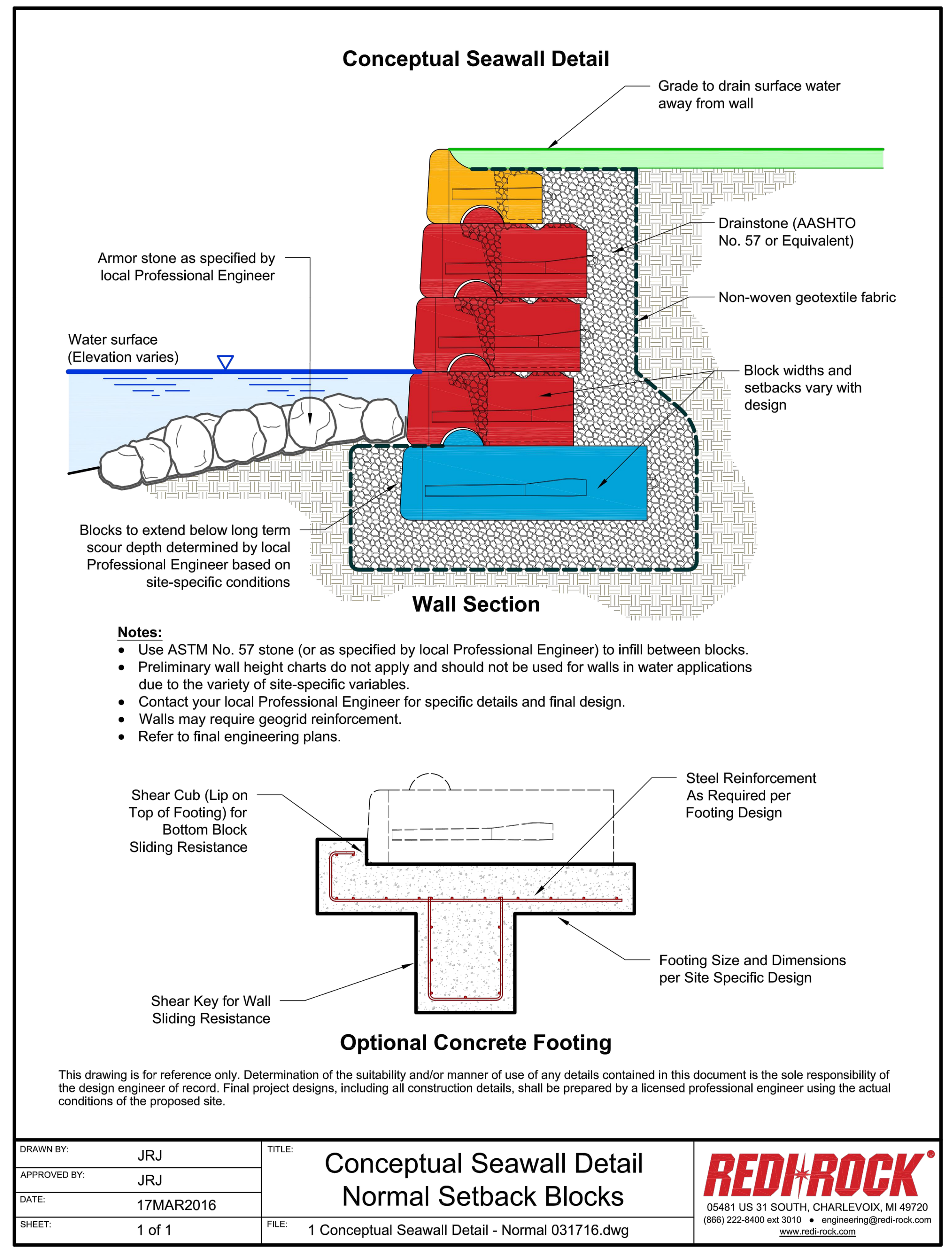
DATE: 01-06-2022

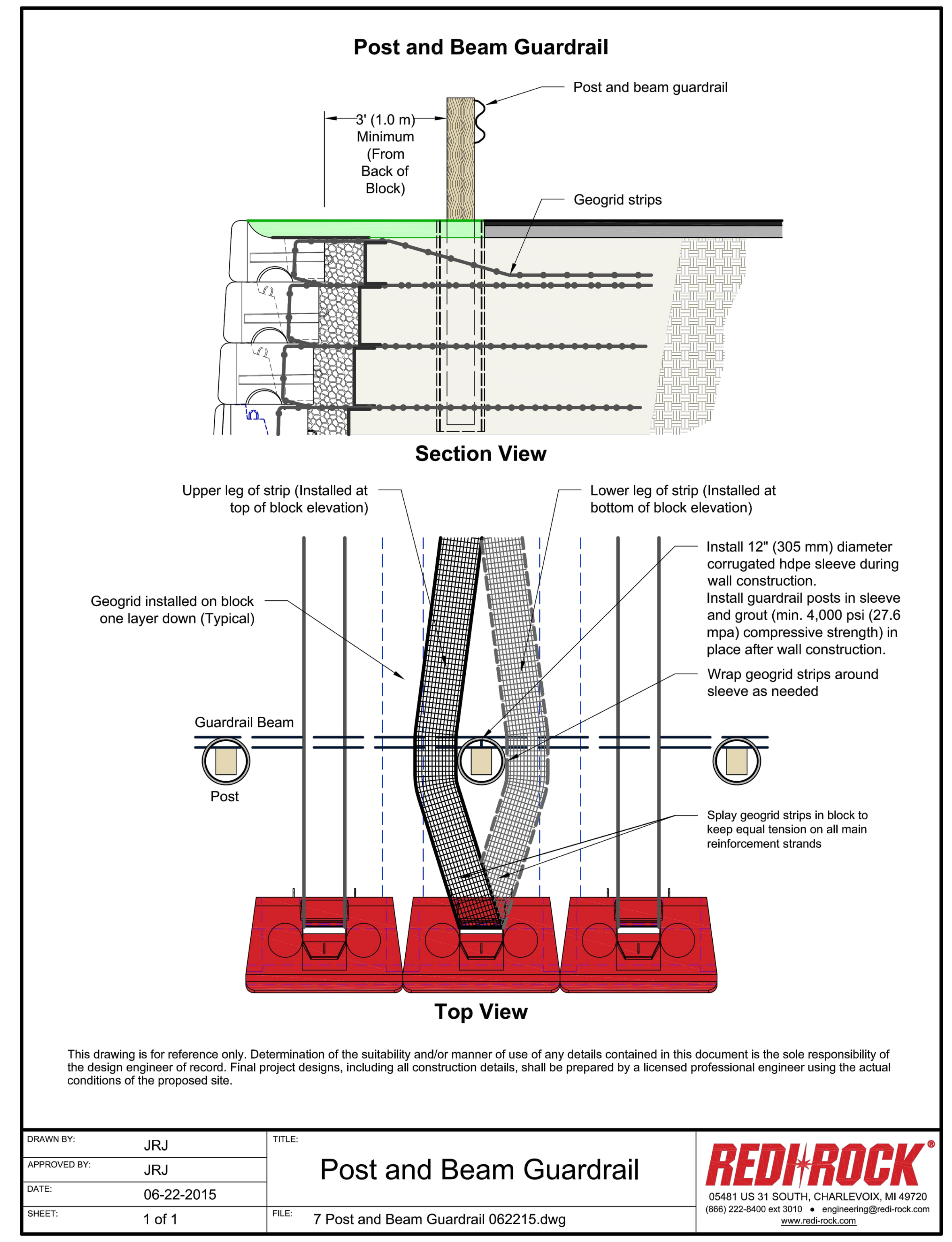
THE ROCK

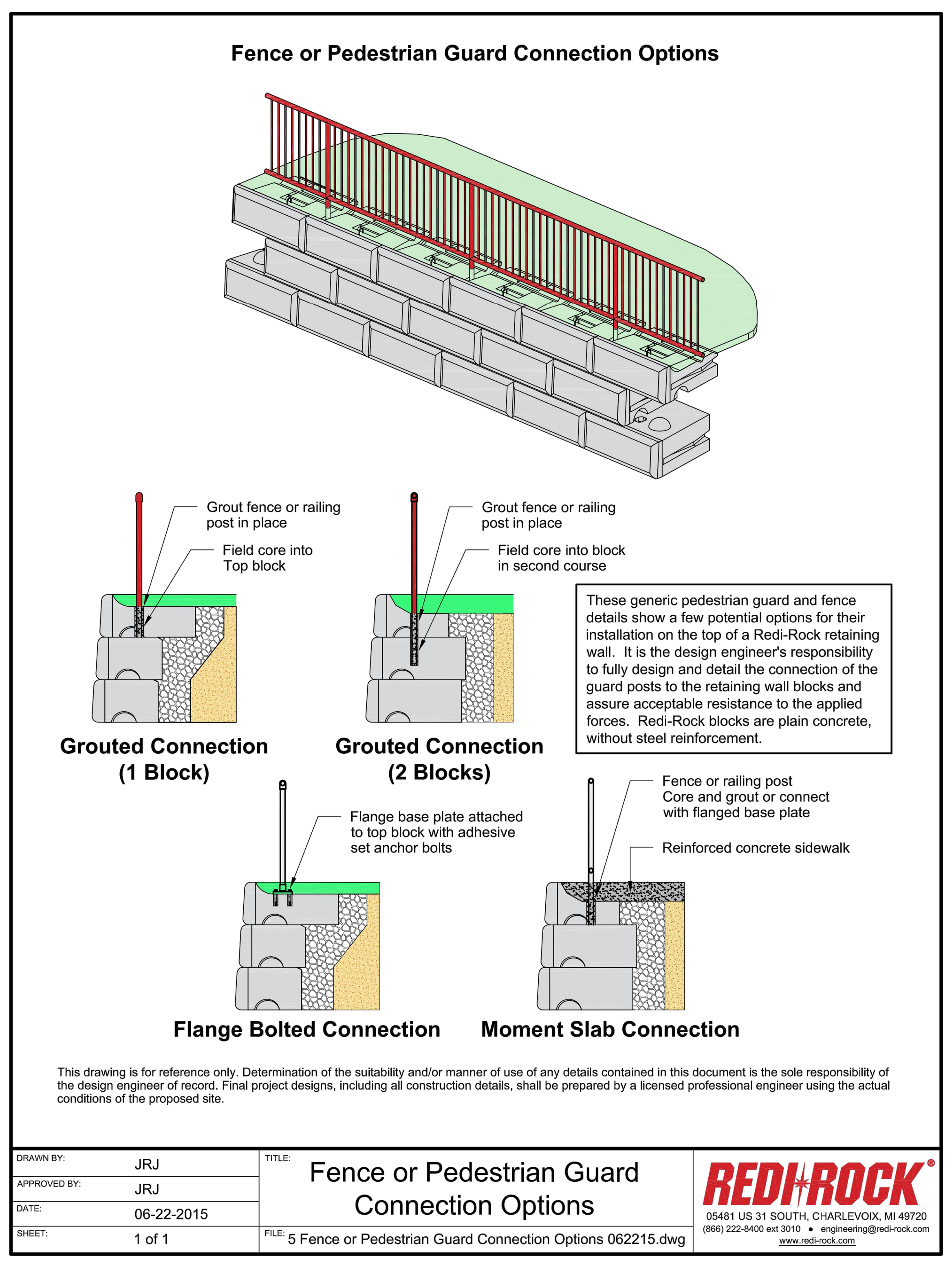
ROTHROCK ROAD
COPLEY, OHIO 44321

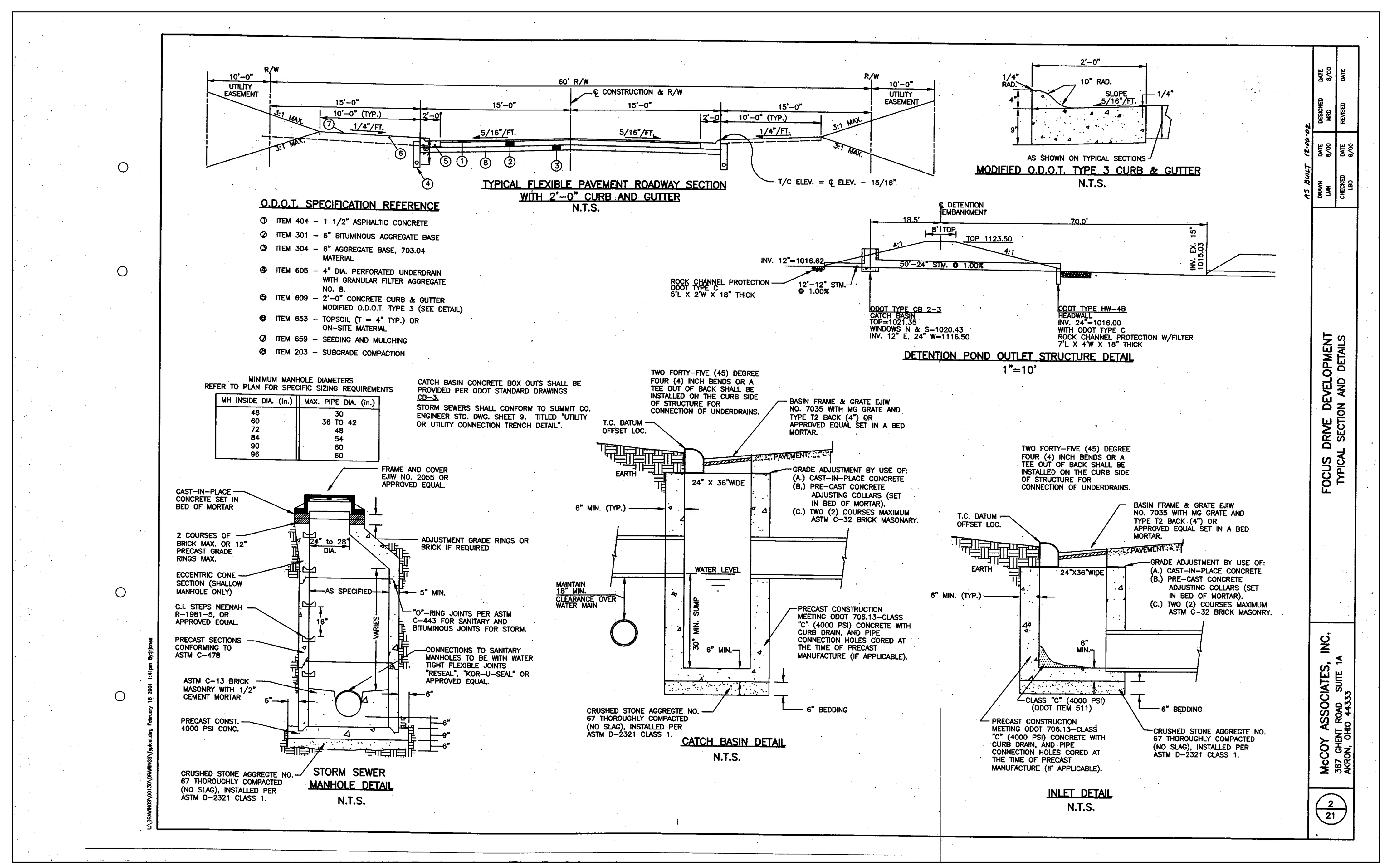
C5.3











WES No. 2019-332

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SITE DETAILS

DATE: 01-06-2022

PROJECT #: XXXX

THE ROCK

ROTHROCK ROAD
COPLEY, OHIO 44321

C5.4

STATE OF OHIO
MATTHEW L. WEBER
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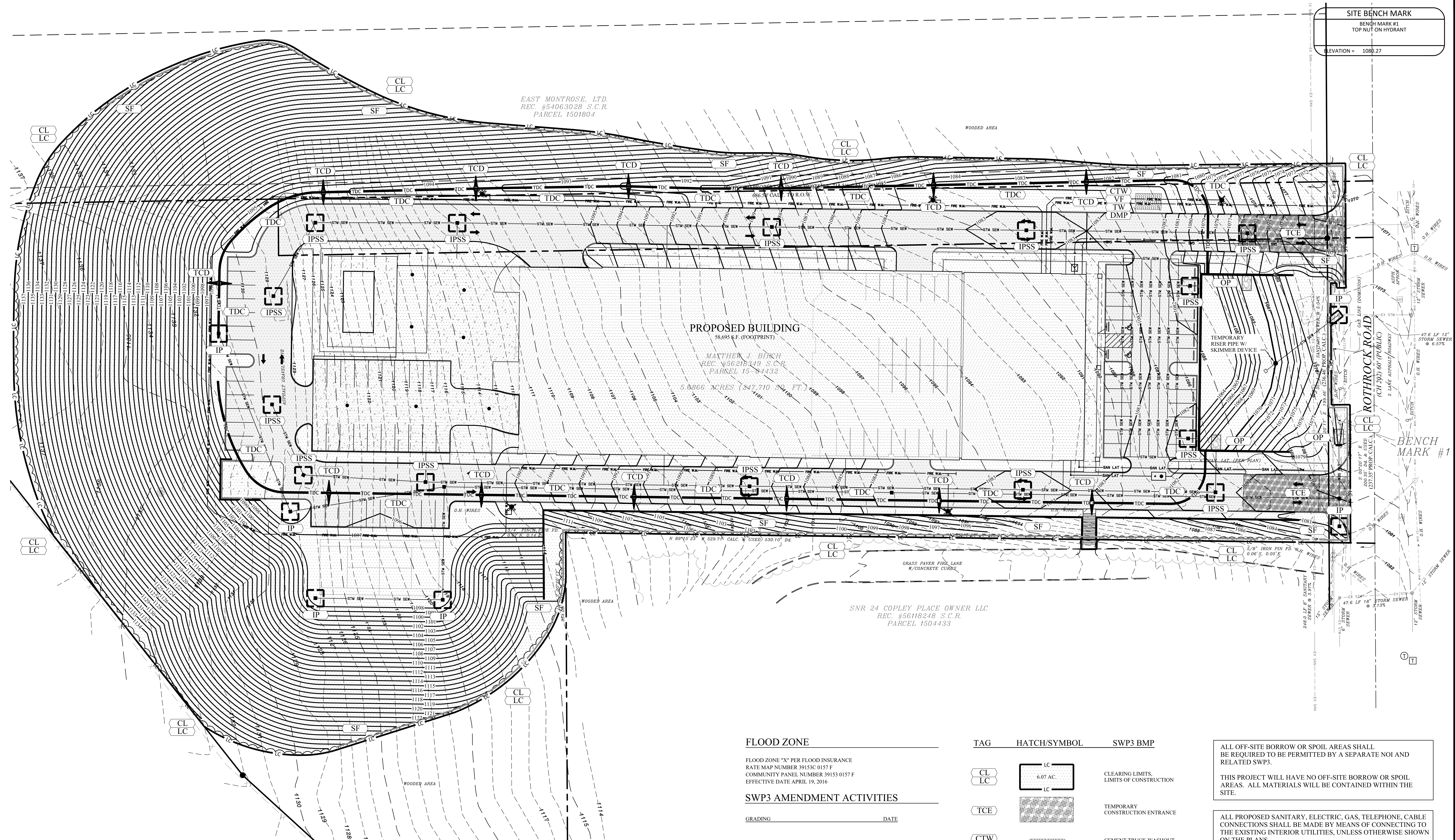

INSPECTION CHECKLIST

INSPECTIONS SHALL BE MADE ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVEN GREATER THAN ONE-HALF INCH OF RAIN PER 24 HOUR PERIOD

DATE	INSPECTOR	WEATHER CONDITIONS	RAINFALL AMOUNT	SEDIMENT DISCHARGE	DISCHARGE LOCATION	BMPS FAILED	ADDITIONAL BMPS NEEDED	CORRECTION MADE

FLOOD ZONE

FLOOD ZONE "X" PER FLOOD INSURANCE
RATE MAP NUMBER 39153C 0157 F
COMMUNITY PANEL NUMBER 39153 0157 F
EFFECTIVE DATE APRIL 19, 2016

SWP3 AMENDMENT ACTIVITIES

GRADING ______ DATE

SITE STABILIZATION ______ DATE

SWP3 AMENDMENT ______ DATE

SWP3 RESPONSIBLE PARTY

COMPANY NAME	TBD
CONTACT NAME	TBD
COMPANY STREET ADDRESS	TBD
CITY, STATE ZIP CODE	TBD
CONTACT PHONE NUMBER	TBD

ESTIMATED CONSTRUCTION DATES

START DATE	TBD
END DATE	TBD

SWP3 PREPARED

01-04-2022

TAG	HATCH/SYMBOL	SWP3 BMP
CL / LC	LC 6.07 AC. LC	CLEARING LIMITS, LIMITS OF CONSTRUCTION
TCE		TEMPORARY CONSTRUCTION ENTRANCE
CTW / VF / TW / DMP		CEMENT TRUCK WASHOUT, VEHICLE FUELING, TOXIC WASTE AND DUMPSTER LOCATION
IP		INLET PROTECTION (SEE DETAIL ON SHT. C10.0)
IPSS		INLET SILT SACK PROTECTION (SEE DETAIL ON SHT. C10.0)

TAG	LINE	SWP3 BMP
SF	SF	SILT FENCE
CFS	CFS	12" COMPOST FILTER SOCK MAY BE SUBSTITUTED FOR SILT FENCE AT CONTRACTORS DISCRETION
TCD		TEMPORARY CHECK DAM
OP		OUTLET PROTECTION
TDC	TDC	TEMPORARY DIVERSION CHANNEL

ALL OFF-SITE BORROW OR SPOIL AREAS SHALL BE REQUIRED TO BE PERMITTED BY A SEPARATE NOI AND RELATED SWP3.

THIS PROJECT WILL HAVE NO OFF-SITE BORROW OR SPOIL AREAS. ALL MATERIALS WILL BE CONTAINED WITHIN THE SITE.

ALL PROPOSED SANITARY, ELECTRIC, GAS, TELEPHONE, CABLE CONNECTIONS SHALL BE MADE BY MEANS OF CONNECTING TO THE EXISTING INTERIOR UTILITIES, UNLESS OTHERWISE SHOWN ON THE PLANS

N

Scale: 1" = 30'

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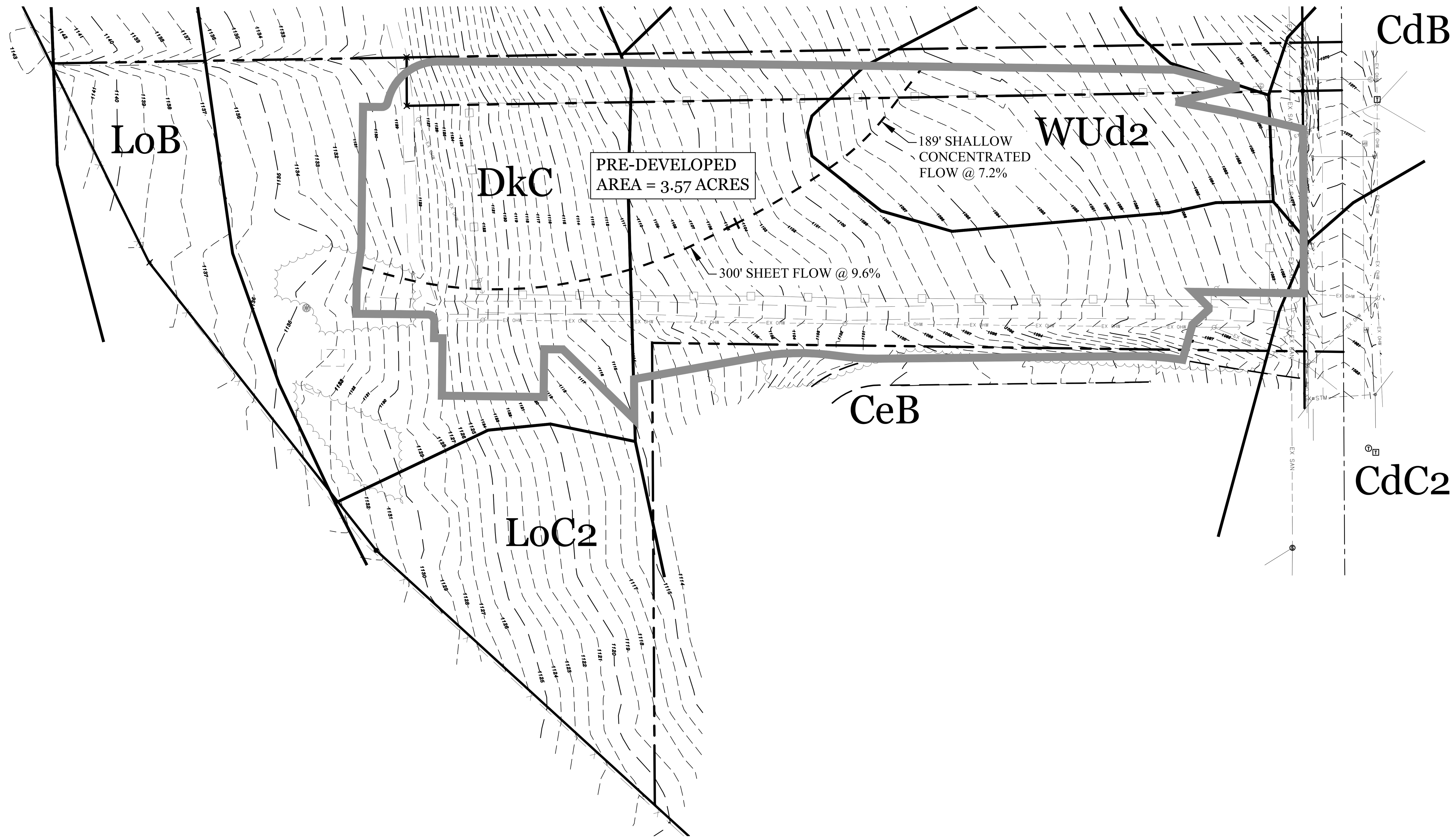
SWP3

PROJECT #: XXXX

DATE: 01-06-2022

THE ROCK
ROTHROCK ROAD
COPLEY, OHIO 44321

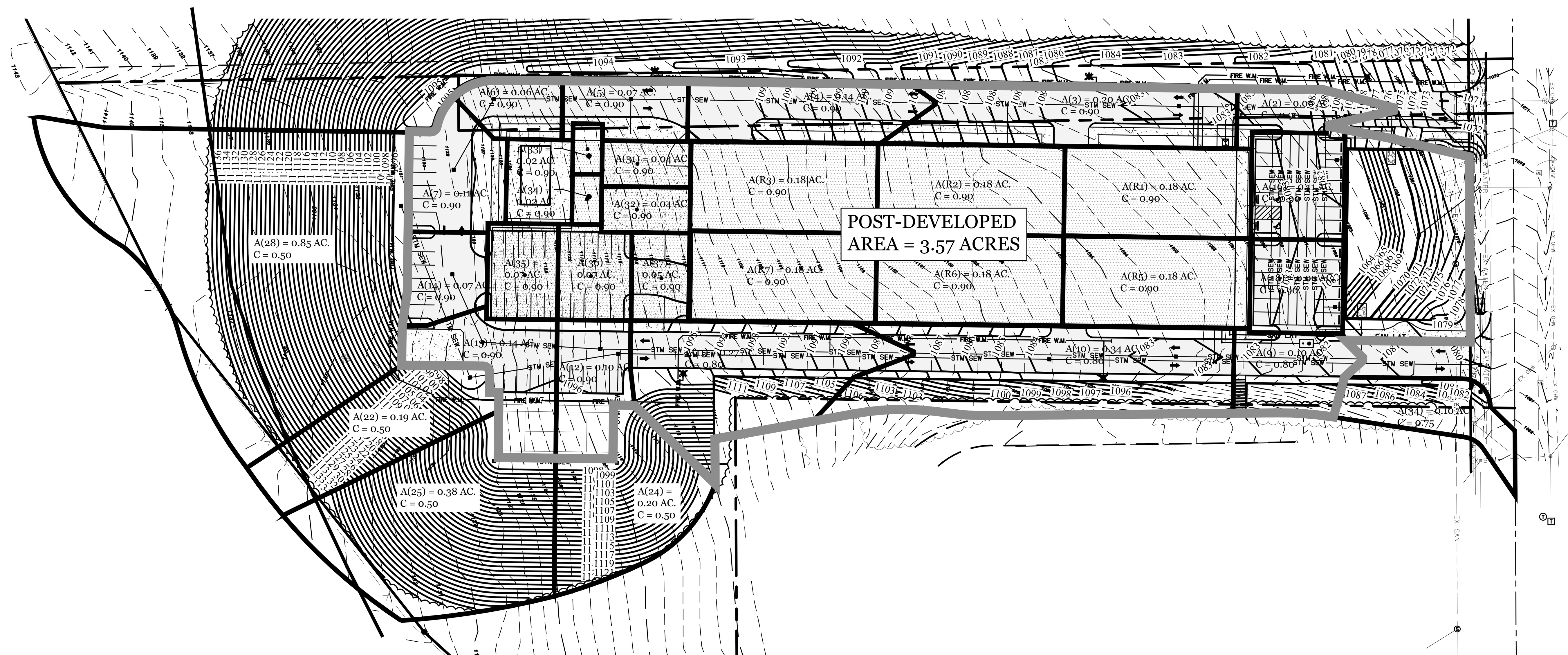
C6.0



PRE-DEVELOPED DRAINAGE MAP & SOILS MAP

PRE-DEVELOPED: AREA = 3.57 AC., CN = 72, TC = 32.3 MIN.

CdB	-	Canfield silt loam, 2 to 6 percent slopes
CdC2	-	Canfield silt loam, 6 to 12 percent slopes, eroded
CeB	-	Canfield silt loam, sandstone substratum, 2 to 6 percent slopes
DkC	-	Dekalb sandy loam, 6 to 12 percent slopes
LoB	-	Loudonville silt loam, 2 to 6 percent slopes
LoC2	-	Loudonville silt loam, 6 to 12 percent slopes, moderately eroded
WuD2	-	Wooster silt loam, 12 to 18 percent slopes, moderately eroded



STORM DRAINAGE MAP & POST DEVELOPED DRAINAGE

POST-DEVELOPED: AREA = 3.57 AC., CN = 95, TC = 12.0 MIN.

N

Scale: 1" = 60'

WES No. 2019-332

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SWP3 DETAILS

PROJECT #: XXXX

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THE ROCK

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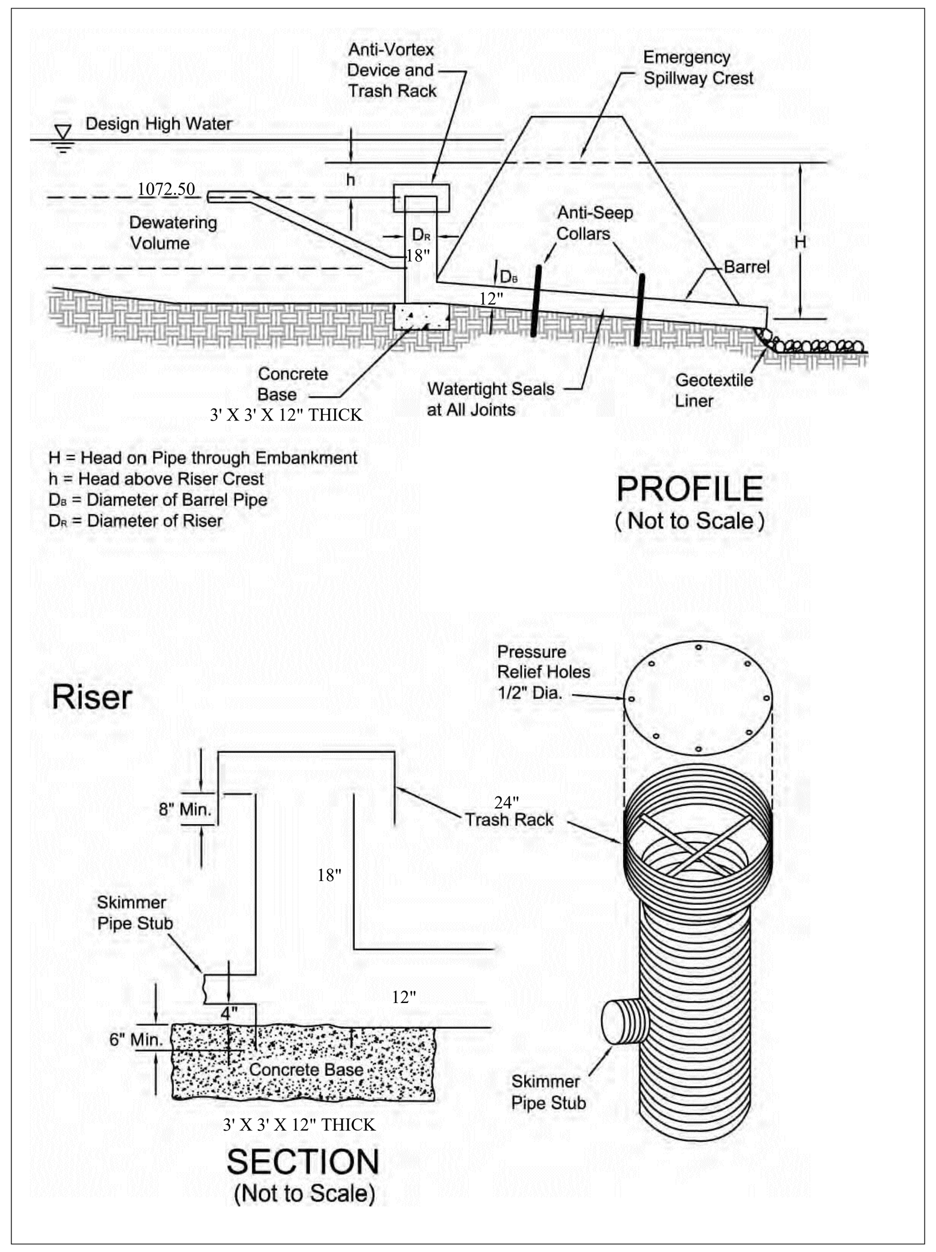
COPLEY, OHIO 44321

C7.0

Specifications
for
Sediment Basins



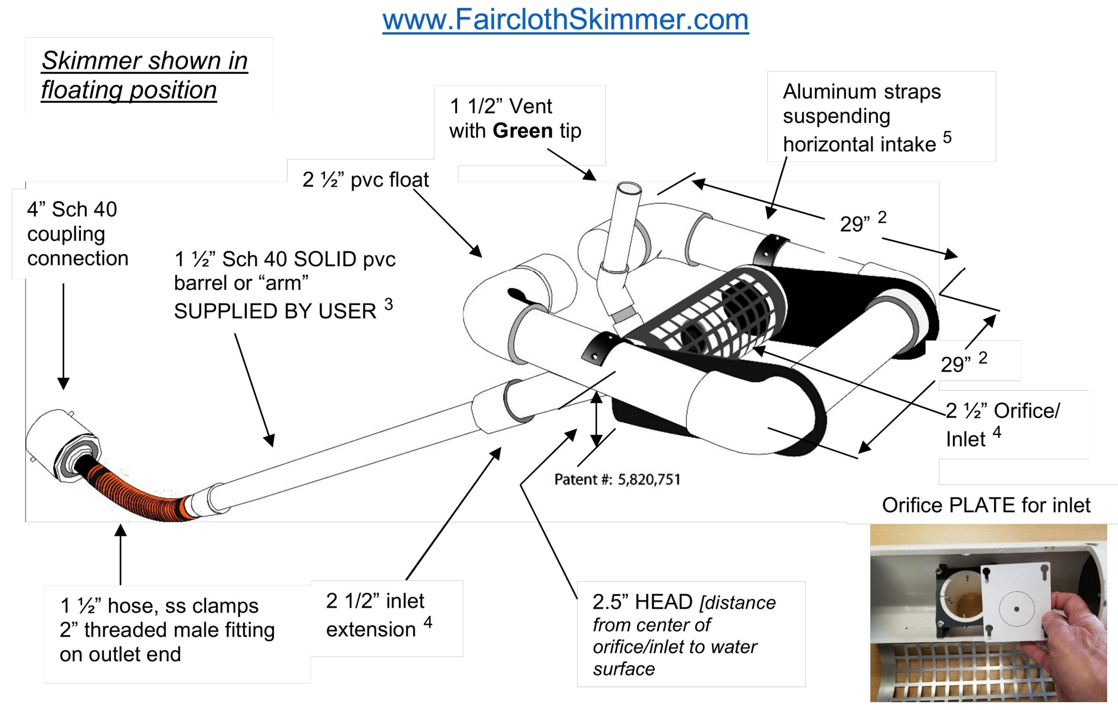
CHAPTER 6 Sediment Controls 19

REFERENCE ONLY

2.5" *Faircloth Skimmer®* Surface Drain Cut Sheet

J. W. Faircloth & Son, Inc.

www.FairclothSkimmer.com



1. Skimmer can be attached to a straight 4" sch 40 pipe through the dam but the pipe may need to be anchored to the bottom at the connection so it is secure. Coupling can be removed and hose attached to outlet using the threaded 2" fitting. Typical methods used: a) a metal structure with a steel stub out welded on the side at the bottom with a 2" threaded coupling or reducer(s); b) a concrete structure with a hole or orifice at the bottom - use a steel plate with a hole cut in it and coupling welded to it that will fit over the hole in the concrete and bolted to the structure with sealant; or c) grout a 4" pvc pipe in a hole in the concrete to connect the skimmer.
2. Dimensions are approximate, not intended as plans for construction.
3. Barrel (solid, not foam core pipe) should be 1.4 times the depth of water with a minimum length of 6' so the inlet can be pulled to the side for maintenance. If more than 8' long weight may have to be added to inlet to counter the increased buoyancy.
4. Orifice/inlet tapers down from 2 ½" maximum inlet to a 1½" barrel and hose. Barrel is smaller to reduce buoyancy and tendency to lift inlet but is sufficient for flow through inlet because of slope. The orifice/inlet can be reduced using the plate and cutter provided to control the outflow rate – see #6.
5. Horizontal intake is 5" pipe between the straps with aluminum screen door for access to the 2½" inlet and orifice inside.
6. **Capacity**: 6,234 cubic feet per day maximum with 2½" inlet and 2.5 head. Inlet can be reduced by installing a smaller orifice using the plate and cutter provided to adjust flow rate for the particular drawdown time required. Please use the sizing template at www.fairclothskimmer.com .
7. Ships assembled. User glues inlet extension and barrel, installs vent, cuts orifice in plate and attaches to outlet pipe or structure. Includes float, flexible hose, rope, and orifice plate and cutter. Does NOT include 1 ½" Sch 40 SOLID pvc barrel or "arm" SUPPLIED BY USER.

2-5inchCut 5-1-19

TEMPORARY SEDIMENT CONTROL CALCULATIONS

Use a Temporary Skimmer

Total Drainage Area:	6.37	Ac.
Disturbed Earth Area:	6.37	Ac.
Sediment Storage Volume Required (1,000 C.F./Ac.):	6,370	C.F.
Sediment Storage Volume Provided Below Skimmer Orifice:	15,694	C.F.
Dewatering Volume Required (1,800 C.F./Ac.)	11,466	C.F.
Dewatering Volume Provided Below Principal Spillway:	13,431	C.F.
Design Detention Volume:	37,127	C.F.
Bottom of Temporary Sediment Basin:	1064.00	
Invert of Skimmer device:	1070.00	
Normal Water Level:	1070.00	
Cleanout Elevation:	1066.40	
Set Crest of Principal Spillway at:	1072.50	
Set Crest of Emergency Spillway at:	1075.00	
Top of Bank:	1076.00	

TEMPORARY SEDIMENT CONTROL VOLUME CALCULATIONS

Retention Pond Information

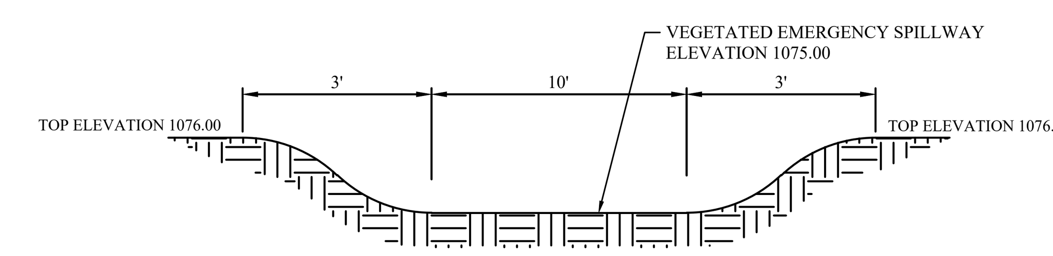
	Elevation	Area, S.F.	Volume (C.F.)	Volume Sum (C.F.)
BOT	1064.00	1,488	0	0
	1065.00	1,814	1,651	1,651
	1066.00	2,158	1,986	3,637
	1067.00	2,519	2,338	5,975
	1068.00	2,897	2,708	8,683
	1069.00	3,282	3,089	11,773
DEW	1070.00	4,560	3,921	15,694
	1071.00	5,067	4,813	20,507
	1072.00	5,572	5,319	25,827
	1073.00	6,075	5,823	31,650
	1074.00	6,577	6,326	37,976
	1075.00	7,185	6,881	44,857
TB	1076.00	7,843	7,514	52,371

Spillway Design	
22.37	100-yr Peak Flow, C.F.S.
1.00	Spillway Height, Ft.
10.00	Spillway Width, Ft.

TEMPORARY SKIMMER DEVICE

Calculate Skimmer Size					
Basin Volume in Cubic Feet	11,466	Cu.Ft	Skimmer Size	2.5	Inch
Days to Drain*	3	Days	Orifice Radius	1.0	Inch[es]
			Orifice Diameter	2.0	Inch[es]

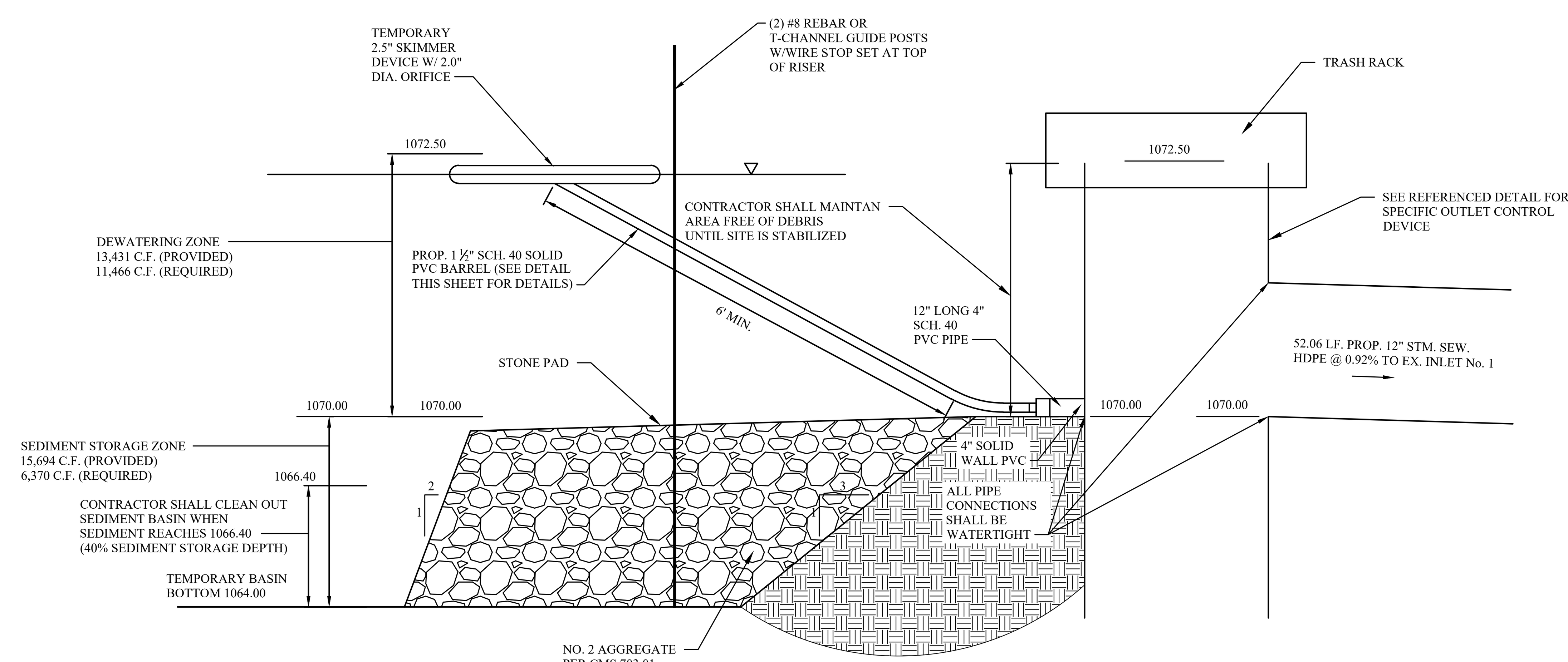
*In NC assume 3 days to drain



TEMPORARY EMERGENCY SPILLWAY

REFERENCE ONLY

Sediment Basin Data				
Basin Number				
A. Total Contributing Watershed (ac.)	6.37			
B. Disturbed Area (ac.)	6.37			
C. Req. Dewatering Volume (A x 1,800 cu. ft./ac.)	11,466			
D. Req. Sediment Storage Zone Vol. (B* 1000)	6,370			
E. Total Required Capacity (C+D in cu ft)	17,836			
F. Dewatering Volume Provided (cu. ft./ac.)	13,431			
G. Sediment Storage Provided (cu. ft./ac.)	15,694			
H. Total Storage Provided in Crest of Riser (cu. ft./ac.)	29,125			



TEMPORARY SKIMMER/OUTLET STRUCTURE DETAIL

NOT TO SCALE REFERENCE ONLY

WES No. 2019-332

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SWP3 DETAILS

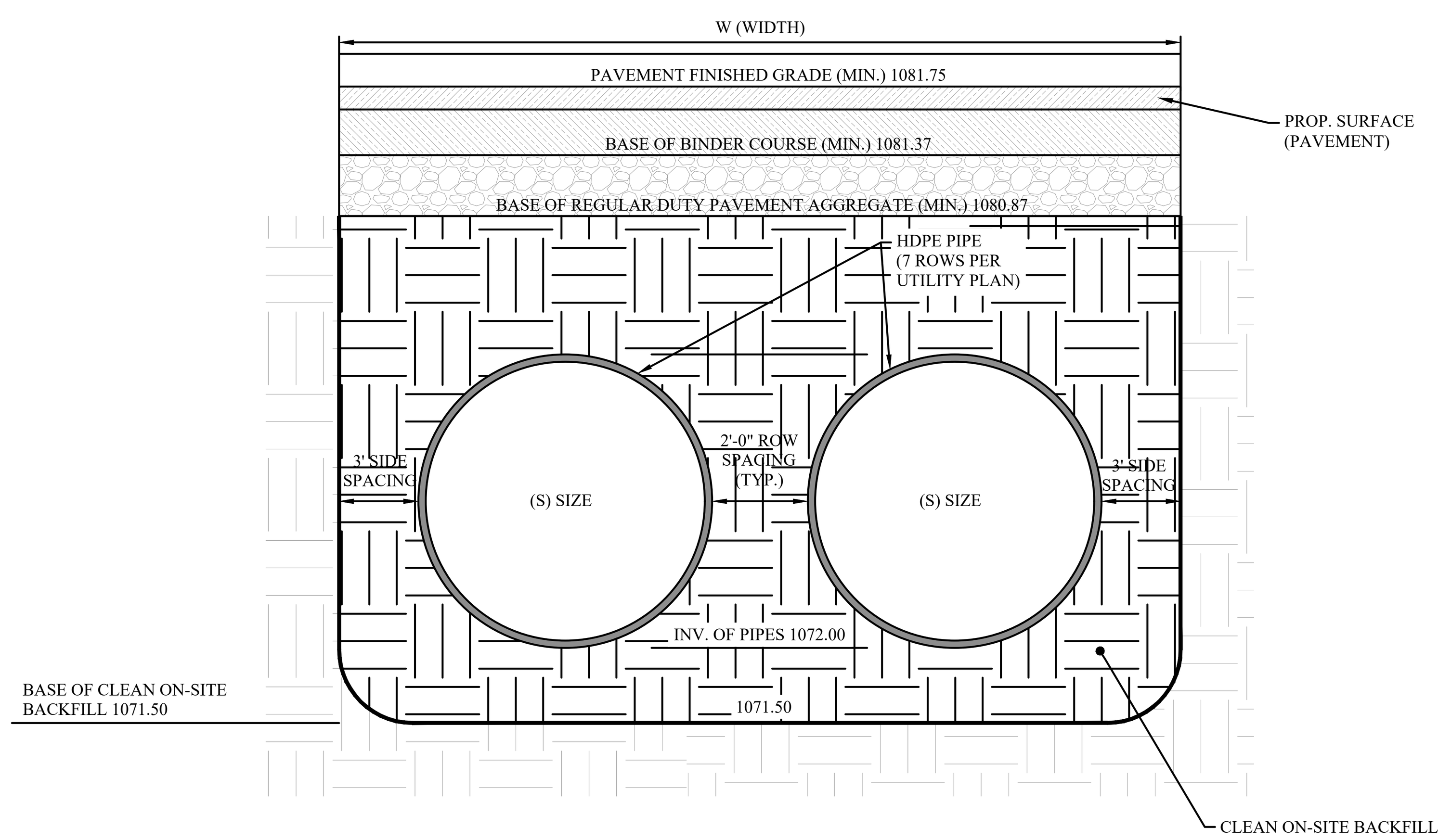
DATE: 01-06-2022

PROJECT #: XXXX

THE ROCK

ROTHROCK ROAD
COPLEY, OHIO 44321

C8.0



UNDERGROUND SYSTEM DETAIL
REFERENCE ONLY NOT TO SCALE
(SEE TABLE BELOW)

UNDERGROUND STORAGE	WIDTH	SIZE
	47.00'	48"

WATER-TIGHT CONNECTIONS SHALL BE PROVIDED WHERE INLET AND OUTLET PIPES PENETRATE THE OUTLET STRUCTURES OF PROPOSED INFILTRATION TRENCHES.

ANTI-SEEP COLLARS SHALL BE PROVIDED ALONG THE OUTLET PIPES FOR ALL UNDERGROUND STORM WATER MANAGEMENT DETENTION SYSTEMS.

AN INSPECTION PORT SHALL BE PROVIDED ALONG EACH UNDERGROUND DETENTION ROW.

Project and Watershed Information; WQv Calculation

version 3.2 2020-07-07

Project Details

Project Name:	Rothrock Place
Project Location:	Copley, OH 44321
Project Latitude:	41.122764
Project Longitude:	-81.64886
NPDES Permit Applicant:	
Submitted by:	MLW
Date:	1/3/2021

Subwatershed Details

Subwatershed ID/Label: New Pond

Subwatershed Drainage Area, A_{total} =	3.57	acres	=	155,509	ft^2
Subwatershed Impervious Area, A_{imp} =	3.05	acres	=	132,858	ft^2
Imperviousness fraction, i =	0.85		=	85	%
Volumetric Runoff Coefficient, Rv =	0.82				
Water Quality Volume, WQv =	9,551	ft^3	=	0.219	ac-ft

Wet Extended Detention Basin WQv Compliance Tool

version 3.2 2020-07-07

Project Summary

Project Name: Rothrock Place
Subwatershed ID/Label: New Pond
Submitted by: MLW
Date: 1/3/2021

Subwatershed Drainage Area, A_{total} =	3.57	acres	=	155,509	ft2
Subwatershed Impervious Area, A_{imp} =	3.05	acres	=	132,858	ft2
Imperviousness fraction, i =	0.85			85	%
Water Quality Volume, WQv =	9,551	ft^3	=	0.22	ac-ft

Step 1 - Soil Suitability

Soil Series: Canfield HSG: D

Step 2 - Wet ED Basin Volume Requirements

Extended Detention Volume, EDv =	9551	ft^3
Minimum Sediment Storage Volume, $V_{sediment}$ =	1910	ft^3
Minimum Permanent Pool Volume, PPv =	11461	ft^3

Step 3 - Basin Stage-Storage Relationship

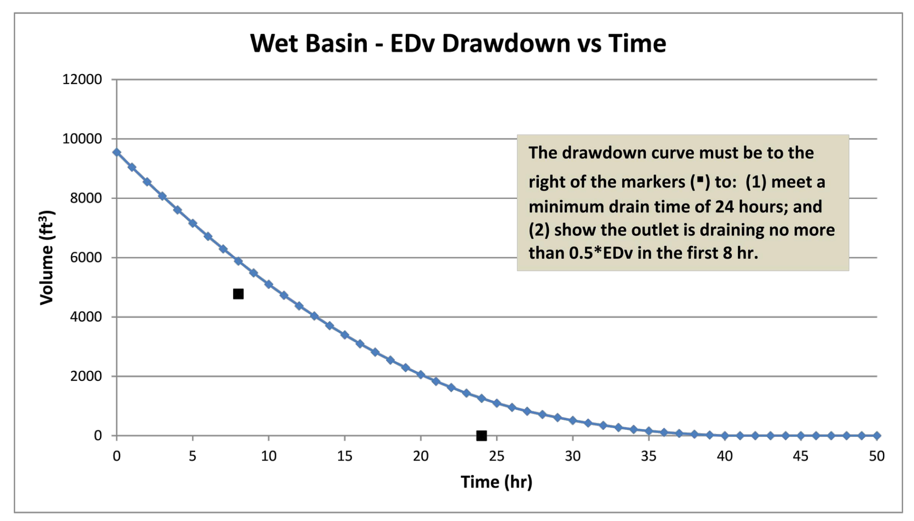
	Elevation ft	Area ft^2	Incremental Volume ft^3	Cumulative Volume ft^3
Bottom of Permanent Micropool =	1064.00	1488		
	1065.00	1814	1,648	1,648
	1066.00	2158	1,984	3,632
	1067.00	2519	2,336	5,968
	1068.00	2897	2,706	8,674
	1069.00	3282	3,087	11,761
	1070.00	4560	3,904	15,665
	1071.00	5067	4,811	20,476
	1072.00	5572	5,318	25,794
	1073.00	6075	5,822	31,615
	1074.00	6577	6,324	37,940
	1075.00	7185	6,879	44,818
	1076.00	7843	7,512	52,330

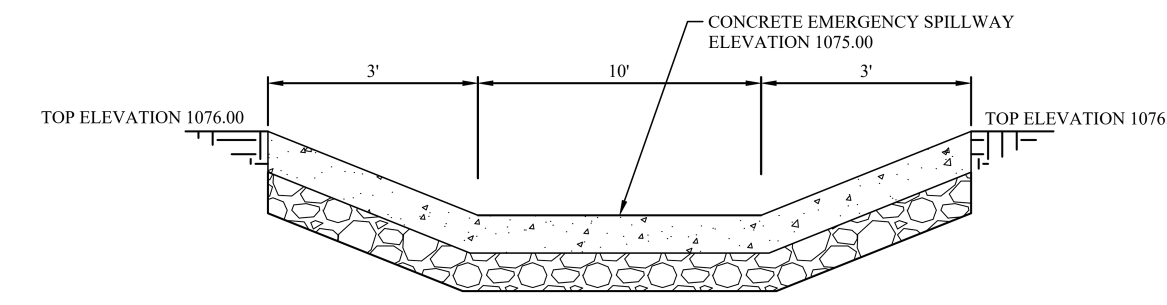
Step 4 - Outlet Elevations and Storage Volumes

WQ Orifice Invert Elevation =	1070.00				
Elevation of Top of EDv =	1071.90				
Secondary Outlet Invert Elevation =	1072.00				OKAY
WQ Treatment Volume Provided, $V_{treatment}$ =	10,129	ft^3			
Treatment Vol Provided Relative to EDv, $V_{treatment}$/EDv =	1.06		=	106%	OKAY
Permanent Pool Volume Provided, PPv =	15,665	ft^3			
Ratio PPv Provided to PPv Required =	1.37		=	137%	OKAY

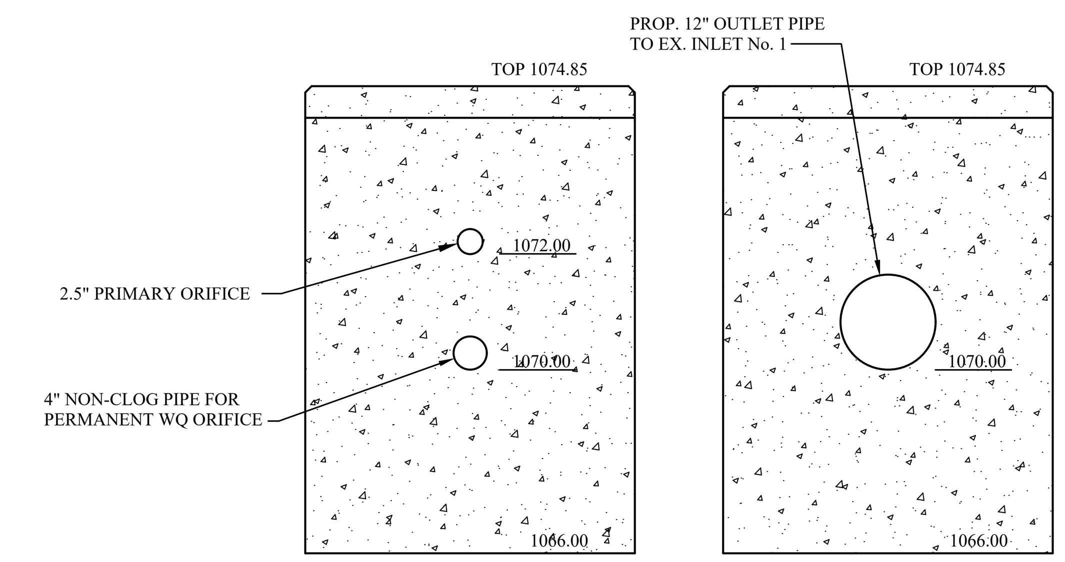
Step 5 - Outlet (Orifice) Sizing

Maximum Hydraulic Head, Hmax =	1.90	ft				
Orifice Coefficient, C =	0.6					
Target (Minimum) Draw-down Time, T_d =	24	hr				
Target Average Discharge, Q_{avg} =	0.11	cfs				
Average Hydraulic Head, H_{avg} =	0.95	ft				
Estimated Orifice Area, $A_{orifice}$ =	3.39	in^2	=	0.024	ft^2	
Estimated Orifice Diameter, $D_{orifice}$ =	2.08	in	=	0.17	ft	
Design Orifice Diameter, $D_{orifice}$ =	2.00	in	=	0.17	ft	
Design Orifice Area, $A_{orifice}$ =	3.12	in^2	=	0.022	ft^2	
Time to Completely Drain EDv, T_d =	40	hr		must be ≥ 24 hr		OKAY
Volume Drained in First 8 hr =	3,669	ft^3				
% of EDv =	38.4	%		must be ≤ 50%		OKAY



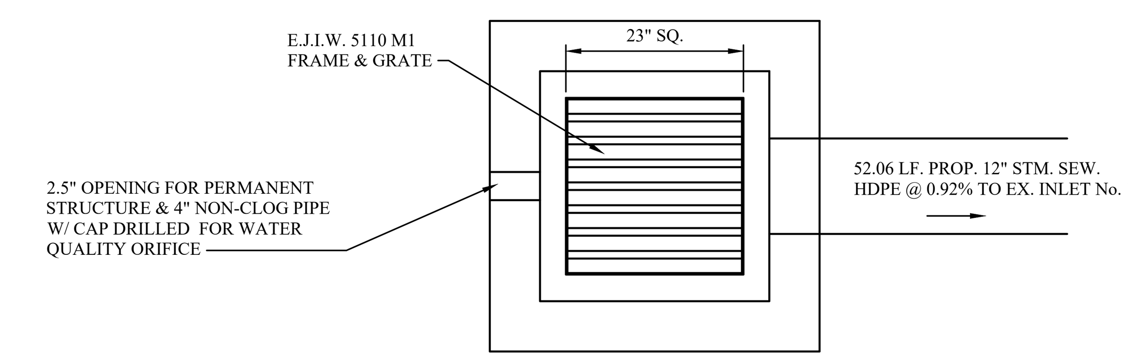


PERMANENT EMERGENCY SPILLWAY
REFERENCE ONLY

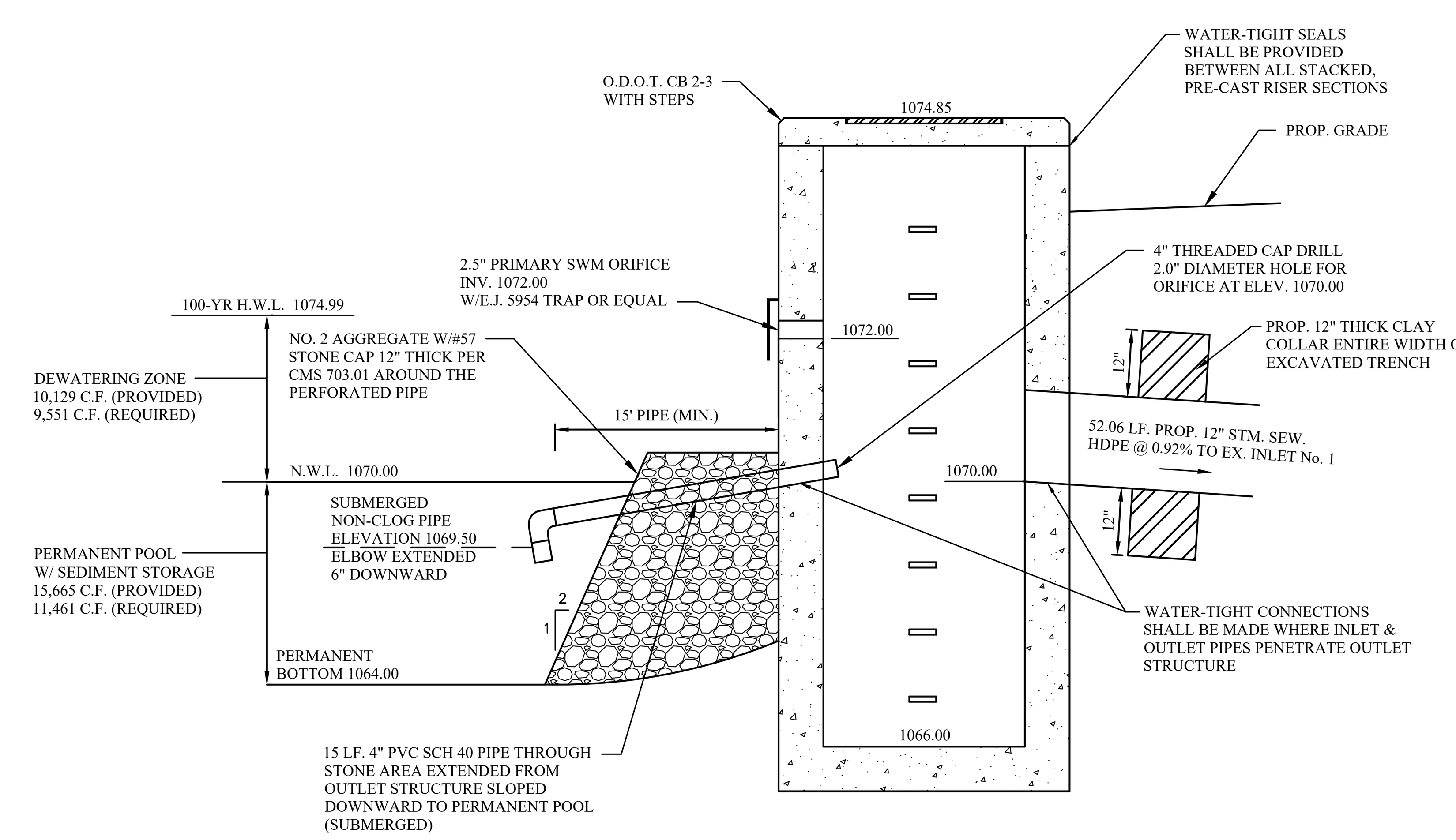


LEFT VIEW
NOT TO SCALE REFERENCE ONLY

RIGHT VIEW
NOT TO SCALE REFERENCE ONLY



TOP VIEW
NOT TO SCALE REFERENCE ONLY



PERMANENT OUTLET STRUCTURE
NON-CLOG FIGURE 2.6.3 OF OHIO RAINWATER AND LAND DEVELOPMENT MANUAL
REFERENCE ONLY

WES No. 2019-332

Reg. No.: 61709

REVISIONS

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SWP3 DETAILS

DATE: 01-06-2022

PROJECT #: XXXX

THE ROCK

ROTHROCK ROAD
COPLEY, OHIO 44321

C8.1

STORM SEWER CALCULATIONS (10-YR)

Storm Sewer Tabulation

Page 1

Station Line	Station To Line	Len (ft)	Drng Area Incr (ac)	Drng Area Total (ac)	Rnoff coeff (C)	Area x C Incr	Area x C Total	Tc Inlet (min)	Tc Syst (min)	Rain (I) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe Size (in)	Pipe Slope (%)	Invert Elev Dn (ft)	Invert Elev Up (ft)	HGL Elev Dn (ft)	HGL Elev Up (ft)	Grnd / Rim Elev Dn (ft)	Grnd / Rim Elev Up (ft)	Line ID
1	End	35.372	0.01	1.75	0.90	0.01	0.91	15.0	20.3	3.6	3.24	6.96	3.00	15	0.99	1076.75	1077.10	1078.00	1078.02	1078.55	1080.00	ST-14
2	1	292.947	0.01	1.64	0.90	0.01	0.83	15.0	18.4	3.7	3.10	6.27	3.52	15	0.80	1077.10	1079.45	1078.19	1080.16	1080.00	1083.70	ST-20
3	2	292.947	0.01	1.63	0.90	0.01	0.82	15.0	17.2	3.9	3.17	6.78	6.71	12	3.09	1079.70	1088.75	1080.18	1089.51	1083.70	1095.15	ST-21
4	3	74.000	0.20	0.58	0.50	0.10	0.29	15.0	16.4	4.0	1.15	8.27	2.57	12	4.59	1088.75	1092.15	1089.51	1092.60	1095.15	1097.00	ST-24
5	4	83.314	0.38	0.38	0.50	0.19	0.19	15.0	15.0	4.1	0.79	3.90	2.63	12	1.02	1092.15	1093.00	1092.60	1093.37	1097.00	1097.00	ST-25
6	End	27.561	0.10	1.75	0.80	0.08	1.47	10.0	15.2	4.1	6.04	13.33	4.92	15	3.63	1070.00	1071.00	1073.72	1073.93	1082.00	1081.30	ST-7
7	6	126.041	0.52	1.65	0.80	0.42	1.39	10.0	14.8	4.2	5.78	14.41	5.18	15	4.24	1071.00	1076.35	1074.30	1077.32	1081.30	1082.60	ST-8
8	7	178.999	0.45	1.13	0.80	0.36	0.97	10.0	14.2	4.2	4.12	7.57	6.26	12	3.85	1076.60	1083.50	1077.32	1084.36	1082.60	1087.50	ST-9
9	8	212.064	0.28	0.68	0.90	0.25	0.61	10.0	13.3	4.4	2.67	6.68	4.14	12	2.99	1083.50	1089.85	1084.36	1090.55	1087.50	1095.00	ST-10
10	9	80.033	0.14	0.21	0.90	0.13	0.19	10.0	12.1	4.5	0.86	3.86	2.26	12	1.00	1089.85	1090.65	1090.55	1091.04	1095.00	1095.00	ST-12
11	10	50.575	0.07	0.07	0.90	0.06	0.06	10.0	10.0	4.9	0.31	3.84	1.69	12	0.99	1090.65	1091.15	1091.04	1091.38	1095.00	1095.15	ST-13
12	3	101.987	0.19	1.04	0.50	0.10	0.52	15.0	15.9	4.0	2.09	3.82	3.68	12	0.98	1088.75	1089.75	1089.51	1090.37	1095.15	1095.00	ST-22
13	12	125.728	0.85	0.85	0.50	0.43	0.43	15.0	15.0	4.1	1.76	3.85	3.66	12	0.99	1089.75	1091.00	1090.37	1091.56	1095.00	1095.00	ST-23
14	End	27.633	0.06	1.30	0.90	0.05	1.17	10.0	15.5	4.1	4.76	11.52	3.88	15	2.71	1070.00	1070.75	1073.72	1073.85	1076.00	1075.50	ST-1
15	14	144.703	0.38	1.24	0.90	0.34	1.12	10.0	14.9	4.1	4.63	11.11	4.42	15	2.52	1070.75	1074.40	1074.08	1075.27	1075.50	1082.50	ST-2
16	15	166.588	0.32	0.86	0.90	0.29	0.77	10.0	14.3	4.2	3.27	9.21	5.70	12	5.70	1074.65	1084.15	1075.27	1084.92	1082.50	1088.15	ST-3
17	16	205.893	0.25	0.54	0.90	0.23	0.49	10.0	13.1	4.4	2.13	6.22	3.71	12	2.60	1084.15	1089.50	1084.92	1090.12	1088.15	1095.25	ST-4
18	17	92.934	0.06	0.17	0.90	0.05	0.15	10.0	11.5	4.6	0.71	3.90	2.13	12	1.02	1089.50	1090.45	1090.12	1090.80	1095.25	1095.25	ST-5
19	18	55.372	0.11	0.11	0.90	0.10	0.10	10.0	10.0	4.9	0.48	3.85	2.28	12	0.99	1090.45	1091.00	1090.80	1091.29	1095.25	1095.00	ST-6
20	9	19.620	0.19	0.19	0.90	0.17	0.17	10.0	10.0	4.9	0.84	1.31	3.73	8	1.00	1090.18	1090.38	1090.57	1090.81	1095.00	1096.00	RD-8
21	17	23.376	0.12	0.12	0.90	0.11	0.11	10.0	10.0	4.9	0.53	1.29	3.23	8	0.97	1089.83	1090.06	1090.13	1090.40	1095.25	1096.00	RD-4
22	End	27.595	0.18	0.18	0.90	0.16	0.16	10.0	10.0	4.9	0.79	1.32	2.75	8	1.01	1086.10	1086.38	1086.77	1086.82	1092.00	1092.00	RD-3

Project File: 2019-332 Storm 01A 10-YR.stm | Number of lines: 28 | Run Date: 1/3/2022

NOTES:Intensity = 139.19 / (Inlet time + 17.50) ^ 1.01; Return period =Yrs. 10 ; c = cir e = ellip b = box

Storm Sewers v2019.20

Storm Sewer Tabulation

Page 2

Station Line	Station To Line	Len (ft)	Drng Area Incr (ac)	Drng Area Total (ac)	Rnoff coeff (C)	Area x C Incr	Area x C Total	Tc Inlet (min)	Tc Syst (min)	Rain (I) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe Size (in)	Pipe Slope (%)	Invert Elev Dn (ft)	Invert Elev Up (ft)	HGL Elev Dn (ft)	HGL Elev Up (ft)	Grnd / Rim Elev Dn (ft)	Grnd / Rim Elev Up (ft)	Line ID
23	End	19.621	0.18	0.18	0.90	0.16	0.16	10.0	10.0	4.9	0.79	1.32	2.53	8	1.02	1085.34	1085.54	1086.01	1086.05	1091.00	1091.00	RD-7
24	End	27.681	0.18	0.18	0.90	0.16	0.16	10.0	10.0	4.9	0.79	1.32	2.75	8	1.01	1081.45	1081.73	1082.12	1082.17	1085.00	1085.00	RD-2
25	End	18.928	0.18	0.18	0.90	0.16	0.16	10.0	10.0	4.9	0.79	1.31	2.50	8	1.00	1081.24	1081.43	1081.91	1081.95	1085.00	1085.00	RD-6
26	1	18.221	0.10	0.10	0.75	0.08	0.08	10.0	10.0	4.9	0.37	4.04	1.46	12	1.10	1077.35	1077.55	1078.19	1077.80	1080.00	1080.00	ST-15
27	End	19.302	0.18	0.18	0.90	0.16	0.16	10.0	10.0	4.9	0.79	1.30	2.49	8	0.98	1075.64	1075.83	1076.31	1076.35	1084.00	1084.00	RD-5
28	End	28.374	0.18	0.18	0.90	0.16	0.16	10.0	10.0	4.9	0.79	1.30	2.73	8	0.99	1074.11	1074.39	1074.78	1074.84	1084.00	1084.00	RD-1

Project File: 2019-332 Storm 01A 10-YR.stm | Number of lines: 28 | Run Date: 1/3/2022

NOTES:Intensity = 139.19 / (Inlet time + 17.50) ^ 1.01; Return period =Yrs. 10 ; c = cir e = ellip b = box

Storm Sewers v2019.20

STORM SEWER CALCULATIONS (25-YR)

Storm Sewer Tabulation

Page 1

Station Line	Station To Line	Len (ft)	Drng Area Incr (ac)	Drng Area Total (ac)	Rnoff coeff (C)	Area x C Incr	Area x C Total	Tc Inlet (min)	Tc Syst (min)	Rain (I) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe Size (in)	Pipe Slope (%)	Invert Elev Dn (ft)	Invert Elev Up (ft)	HGL Elev Dn (ft)	HGL Elev Up (ft)	Grnd / Rim Elev Dn (ft)	Grnd / Rim Elev Up (ft)	Line ID
1	End	35.372	0.01	1.75	0.90	0.01	0.91	15.0	19.2	4.5	4.14	6.96	3.78	15	0.99	1076.75	1077.10	1078.00	1078.04	1078.55	1080.00	ST-14
2	1	292.947	0.01	1.64	0.90	0.01	0.83	15.0	17.7	4.8	3.94	6.27	3.99	15	0.80	1077.10	1079.45	1078.31	1080.25	1080.00	1083.70	ST-20
3	2	292.947	0.01	1.63	0.90	0.01	0.82	15.0	16.8	4.9	4.02	6.78	7.33	12	3.09	1079.70	1088.75	1080.25	1089.60	1083.70	1095.15	ST-21
4	3	74.000	0.20	0.58	0.50	0.10	0.29	15.0	16.1	5.0	1.46	8.27	2.83	12	4.59	1088.75	1092.15	1089.60	1092.66	1095.15	1097.00	ST-24
5	4	83.314	0.38	0.38	0.50	0.19	0.19	15.0	15.0	5.2	0.99	3.90	2.82	12	1.02	1092.15	1093.00	1092.66	1093.42	1097.00	1097.00	ST-25
6	End	27.561	0.10	1.75	0.80	0.08	1.47	10.0	14.0	5.4	7.92	13.33	6.45	15	3.63	1070.00	1071.00	1074.35	1074.70	1082.00	1081.30	ST-7
7	6	126.041	0.52	1.65	0.80	0.42	1.39	10.0	13.7	5.5	7.58	14.41	6.42	15	4.24	1071.00	1076.35	1075.35	1077.44	1081.30	1082.60	ST-8
8	7	178.999	0.45	1.13	0.80	0.36	0.97	10.0	13.3	5.5	5.39	7.57	7.34	12	3.85	1076.60	1083.50	1077.44	1084.43	1082.60	1087.50	ST-9
9	8	212.064	0.28	0.68	0.90	0.25	0.61	10.0	12.5	5.7	3.49	6.68	4.88	12	2.99	1083.50	1089.85	1084.43	1090.65	1087.50	1095.00	ST-10
10	9	80.033	0.14	0.21	0.90	0.13	0.19	10.0	11.7	5.9	1.12	3.86	2.49	12	1.00	1089.85	1090.65	1090.65	1091.09	1095.00	1095.00	ST-12
11	10	50.575	0.07	0.07	0.90	0.06	0.06	10.0	10.0	6.3	0.40	3.84	1.82	12	0.99	1090.65	1091.15	1091.09	1091.41	1095.00	1095.15	ST-13
12	3	101.987	0.19	1.04	0.50	0.10	0.52	15.0	15.7	5.1	2.64	3.82	4.12	12	0.98	1088.75	1089.75	1089.60	1090.45	1095.15	1095.00	ST-22
13	12	125.728	0.85	0.85	0.50	0.43	0.43	15.0	15.0	5.2	2.21	3.85	4.00	12	0.99	1089.75	1091.00	1090.45	1091.64	1095.00	1095.00	ST-23
14	End	27.633	0.06	1.30	0.90	0.05	1.17	10.0	14.3	5.3	6.25	11.52	5.09	15	2.71	1070.00	1070.75	1074.35	1074.57	1076.00	1075.50	ST-1
15	14	144.703	0.38	1.24	0.90	0.34	1.12	10.0	13.8	5.4	6.07	11.11	4.94	15	2.52	1070.75	1074.40	1074.97	1076.06	1075.50	1082.50	ST-2
16	15	166.588	0.32	0.86	0.90	0.29	0.77	10.0	13.3	5.5	4.28	9.21	5.68	12	5.70	1074.65	1084.15	1076.12	1085.02	1082.50	1088.15	ST-3
17	16	205.893	0.25	0.54	0.90	0.23	0.49	10.0	12.4	5.7	2.78	6.22	4.24	12	2.60	1084.15	1089.50	1085.02	1090.22	1088.15	1095.25	ST-4
18	17	92.934	0.06	0.17	0.90	0.05	0.15	10.0	11.2	6.0	0.92	3.90	2.33	12	1.02	1089.50	1090.45	1090.22	1090.85	1095.25	1095.25	ST-5
19	18	55.372	0.11	0.11	0.90	0.10	0.10	10.0	10.0	6.3	0.63	3.85	2.45	12	0.99	1090.45	1091.00	1090.85	1091.33	1095.25	1095.00	ST-6
20	9	19.620	0.19	0.19	0.90	0.17	0.17	10.0	10.0	6.3	1.08	1.31	4.04	8	1.00	1090.18	1090.38	1090.65	1090.87	1095.00	1096.00	RD-8
21	17	23.376	0.12	0.12	0.90	0.11	0.11	10.0	10.0	6.3	0.68	1.29	3.27	8	0.97	1089.83	1090.06	1090.22	1090.45	1095.25	1096.00	RD-4
22	End	27.595	0.18	0.18	0.90	0.16	0.16	10.0	10.0	6.3	1.02	1.32	3.27	8	1.01	1086.10	1086.38	1086.77	1086.89	1092.00	1092.00	RD-3

Project File: 2019-332 Storm 01A 25-YR.stm | Number of lines: 28 | Run Date: 1/3/2022

NOTES:Intensity = 106.96 / (Inlet time + 11.40) ^ 0.92; Return period =Yrs. 25 ; c = cir e = ellip b = box

Storm Sewers v2019.20

Storm Sewer Tabulation

Page 2

Station Line	Station To Line	Len (ft)	Drng Area Incr (ac)	Drng Area Total (ac)	Rnoff coeff (C)	Area x C Incr	Area x C Total	Tc Inlet (min)	Tc Syst (min)	Rain (I) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe Size (in)	Pipe Slope (%)	Invert Elev Dn (ft)	Invert Elev Up (ft)	HGL Elev Dn (ft)	HGL Elev Up (ft)	Grnd / Rim Elev Dn (ft)	Grnd / Rim Elev Up (ft)	Line ID
23	End	19.621	0.18	0.18	0.90	0.16	0.16	10.0	10.0	6.3	1.02	1.32	3.12	8	1.02	1085.34	1085.54	1086.01	1086.09	1091.00	1091.00	RD-7
24	End	27.681	0.18	0.18	0.90	0.16	0.16	10.0	10.0	6.3	1.02	1.32	3.27	8	1.01	1081.45	1081.73	1082.12	1082.24	1085.00	1085.00	RD-2
25	End	18.928	0.18	0.18	0.90	0.16	0.16	10.0	10.0	6.3	1.02	1.31	3.10	8	1.00	1081.24	1081.43	1081.91	1081.99	1085.00	1085.00	RD-6
26	1	18.221	0.10	0.10	0.75	0.08	0.08	10.0	10.0	6.3	0.47	4.04	1.59	12	1.10	1077.35	1077.55	1078.31	1077.84	1080.00	1080.00	ST-15
27	End	19.302	0.18	0.18	0.90	0.16	0.16	10.0	10.0	6.3	1.02	1.30	3.09	8	0.98	1075.64	1075.83	1076.31	1076.40	1084.00	1084.00	RD-5
28	End	28.374	0.18	0.18	0.90	0.16	0.16	10.0	10.0	6.3	1.02	1.30	3.24	8	0.99	1074.11	1074.39	1074.78	1074.90	1084.00	1084.00	RD-1

Project File: 2019-332 Storm 01A 25-YR.stm | Number of lines: 28 | Run Date: 1/3/2022

NOTES:Intensity = 106.96 / (Inlet time + 11.40) ^ 0.92; Return period =Yrs. 25 ; c = cir e = ellip b = box

Storm Sewers v2019.20

STORM SEWER CALCULATIONS (100-YR)

Storm Sewer Tabulation

Page 1

Station Line	Station To Line	Len (ft)	Drng Area Incr (ac)	Drng Area Total (ac)	Rnoff coeff (C)	Area x C Incr	Area x C Total	Tc Inlet (min)	Tc Syst (min)	Rain (I) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe Size (in)	Pipe Slope (%)	Invert Elev Dn (ft)	Invert Elev Up (ft)	HGL Elev Dn (ft)	HGL Elev Up (ft)	Grnd / Rim Elev Dn (ft)	Grnd / Rim Elev Up (ft)	Line ID
1	End	35.372	0.01	1.75	0.90	0.01	0.91	15.0	18.5	5.6	5.07	6.96	4.50	15	0.99	1076.75	1077.10	1078.00	1078.09	1078.55	1080.00	ST-14
2	1	292.947	0.01	1.64	0.90	0.01	0.83	15.0	17.2	5.8	4.79	6.27	4.52	15	0.80	1077.10	1079.45	1078.46	1080.34	1080.00	1083.70	ST-20
3	2	292.947	0.01	1.63	0.90	0.01	0.82	15.0	16.5	5.9	4.86	6.78	7.85	12	3.09	1079.70	1088.75	1080.34	1089.66	1083.70	1095.15	ST-21
4	3	74.000	0.20	0.58	0.50	0.10	0.29	15.0	15.9	6.0	1.75	8.27	3.09	12	4.59	1088.75	1092.15	1089.66	1092.71	1095.15	1097.00	ST-24
5	4	83.314	0.38	0.38	0.50	0.19	0.19	15.0	15.0	6.2	1.18	3.90	2.99	12	1.02	1092.15	1093.00	1092.71	1093.46	1097.00	1097.00	ST-25
6	End	27.561	0.10	1.75	0.80	0.08	1.47	10.0	13.4	6.6	9.70	13.33	8.10	15	3.63	1070.00	1071.00	1071.18	1072.18	1082.00	1081.30	ST-7
7	6	126.041	0.52	1.65	0.80	0.42	1.39	10.0	13.1	6.7	9.27	14.41	7.76	15	4.24	1071.00	1076.35	1072.18	1077.51	1081.30	1082.60	ST-8
8	7	178.999	0.45	1.13	0.80	0.36	0.97	10.0	12.7	6.8	6.58	7.57	8.60	12	3.85	1076.60	1083.50	1077.51	1084.47	1082.60	1087.50	ST-9
9	8	212.064	0.28	0.68	0.90	0.25	0.61	10.0	12.1	6.9	4.24	6.68	5.66	12	2.99	1083.50	1089.85	1084.47	1090.72	1087.50	1095.00	ST-10
10	9	80.033	0.14	0.21	0.90	0.13	0.19	10.0	11.4	7.1	1.35	3.86	2.69	12	1.00	1089.85	1090.65	1090.72	1091.14	1095.00	1095.00	ST-12
11	10	50.575	0.07	0.07	0.90	0.06	0.06	10.0	10.0	7.6	0.48	3.84	1.91	12	0.99	1090.65	1091.15	1091.14	1091.44	1095.00	1095.15	ST-13
12	3	101.987	0.19	1.04	0.50	0.10	0.52	15.0	15.6	6.1	3.17	3.82	4.59	12	0.98	1088.75	1089.75	1089.66	1090.51	1095.15	1095.00	ST-22
13	12	125.728	0.85	0.85	0.50	0.43	0.43	15.0	15.0	6.2	2.65	3.85	4.33	12	0.99	1089.75	1091.00	1090.51	1091.70	1095.00	1095.00	ST-23
14	End	27.633	0.06	1.30	0.90	0.05	1.17	10.0	13.6	6.6	7.67	11.52	6.72	15	2.71	1070.00	1070.75	1071.10	1071.85	1076.00	1075.50	ST-1
15	14	144.703	0.38	1.24	0.90	0.34	1.12	10.0	13.2	6.7	7.42	11.11	6.53	15	2.52	1070.75	1074.40	1071.85	1075.48	1075.50	1082.50	ST-2
16	15	166.588	0.32	0.86	0.90	0.29	0.77	10.0	12.8	6.8	5.23	9.21	7.17	12	5.70	1074.65	1084.15	1075.48	1085.08	1082.50	1088.15	ST-3
17	16	205.893	0.25	0.54	0.90	0.23	0.49	10.0	12.0	7.0	3.38	6.22	4.78	12	2.60	1084.15	1089.50	1085.08	1090.29	1088.15	1095.25	ST-4
18	17	92.934	0.06	0.17	0.90	0.05	0.15	10.0	11.0	7.3	1.11	3.90	2.49	12	1.02	1089.50	1090.45	1090.29	1090.89	1095.25	1095.25	ST-5
19	18	55.372	0.11	0.11	0.90	0.10	0.10	10.0	10.0	7.6	0.75	3.85	2.58	12	0.99	1090.45	1091.00	1090.89	1091.36	1095.25	1095.00	ST-6
20	9	19.620	0.19	0.19	0.90	0.17	0.17	10.0	10.0	7.6	1.29	1.31	4.28	8	1.00	1090.18	1090.38	1090.72	1090.92	1095.00	1096.00	RD-8
21	17	23.376	0.12	0.12	0.90	0.11	0.11	10.0	10.0	7.6	0.82	1.29	3.35	8	0.97	1089.83	1090.06	1090.29	1090.49	1095.25	1096.00	RD-4
22	End	27.595	0.18	0.18	0.90	0.16	0.16	10.0	10.0	7.6	1.23	1.32	3.64	8	1.01	1086.10	1086.38	1086.77	1086.97	1092.00	1092.00	RD-3

Project File: 2019-332 Storm 01A 100-YR.stm | Number of lines: 28 | Run Date: 1/3/2022

NOTES:Intensity = 105.39 / (Inlet time + 10.20) ^ 0.88; Return period =Yrs. 100 ; c = cir e = ellip b = box

Storm Sewers v2019.20

Storm Sewer Tabulation

Page 2

Station Line	Station To Line	Len (ft)	Drng Area Incr (ac)	Drng Area Total (ac)	Rnoff coeff (C)	Area x C Incr	Area x C Total	Tc Inlet (min)	Tc Syst (min)	Rain (I) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe Size (in)	Pipe Slope (%)	Invert Elev Dn (ft)	Invert Elev Up (ft)	HGL Elev Dn (ft)	HGL Elev Up (ft)	Grnd / Rim Elev Dn (ft)	Grnd / Rim Elev Up (ft)	Line ID
23	End	19.621	0.18	0.18	0.90	0.16	0.16	10.0	10.0	7.6	1.23	1.32	3.59	8	1.02	1085.34	1085.54	1086.01	1086.15	1091.00	1091.00	RD-7
24	End	27.681	0.18	0.18	0.90	0.16	0.16	10.0	10.0	7.6	1.23	1.32	3.64	8	1.01	1081.45	1081.73	1082.12	1082.32	1085.00	1085.00	RD-2
25	End	18.928	0.18	0.18	0.90	0.16	0.16	10.0	10.0	7.6	1.23	1.31	3.57	8	1.00	1081.24	1081.43	1081.91	1082.05	1085.00	1085.00	RD-6
26	1	18.221	0.10	0.10	0.75	0.08	0.08	10.0	10.0	7.6	0.57	4.04	0.74	12	1.10	1077.35	1077.55	1078.46	1078.46	1080.00	1080.00	ST-15
27	End	19.302	0.18	0.18	0.90	0.16	0.16	10.0	10.0	7.6	1.23	1.30	3.56	8	0.98	1075.64	1075.83	1076.31	1076.45	1084.00	1084.00	RD-5
28	End	28.374	0.18	0.18	0.90	0.16	0.16	10.0	10.0	7.6	1.23	1.30	3.61	8	0.99	1074.11	1074.39	1074.78	1074.99	1084.00	1084.00	RD-1

Project File: 2019-332 Storm 01A 100-YR.stm | Number of lines: 28 | Run Date: 1/3/2022

NOTES:Intensity = 105.39 / (Inlet time + 10.20) ^ 0.88; Return period =Yrs. 100 ; c = cir e = ellip b = box

Storm Sewers v2019.20

WES No. 2019-332

STATE OF OHIO
MATTHEW L. WEBER
61709
REGISTERED
PROFESSIONAL ENGINEER

Reg. No.: 61709

REVISIONS

MANN • PARSONS • GRAY
ARCHITECTS
phone 330.666.5770
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3660 Embassy Parkway
Fairlawn, OH 44333
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SWP3 DETAILS

PROJECT #: XXXX

DATE: 01-06-2022

THE ROCK

ROTHROCK ROAD
COPLEY, OHIO 44321

1. Construction personnel, including subcontractors who may use or handle hazardous or toxic materials. shall be made aware of the following general guidelines regarding disposal and handling of hazardous and construction wastes:

- Prevent spills
- Use products up
- Follow label directions for disposal
- Remove lids from empty bottles and cans when disposing in trash
- Recycle wastes whenever possible
- Don't pour into waterways, storm drains or onto the ground
- Don't pour down the sink, floor drain or septic tanks
- Don't bury chemicals or containers
- Don't bum chemicals or containers
- Don't mix chemicals together

2. **Containers shall be provided for the proper collection of all waste material including construction debris, trash, petroleum products and any hazardous materials used on-site.** Containers shall be covered and not leaking. All waste material shall be disposed of at facilities approved for that material. Construction Demolition and Debris (CD&D) waste must be disposed of at an Ohio EPA approved CD&D landfill.

3. **No construction related waste materials are to be buried on-site.** By exception, clean fill (bricks, hardened concrete, soil) may be utilized in a way which does not encroach upon natural wetlands, streams or floodplains or result in the contamination of waters of the state.

4. **Handling Construction Chemicals.** Mixing. pumping. transferring or other handling of construction chemicals such as fertilizer. lime. asphalt. concrete drying compounds. and all other potentially hazardous materials shall be performed in an area away from any watercourse. ditch or storm drain.

5. **Equipment Fueling and Maintenance,** oil changing. etc .. shall be performed away from watercourses. ditches or storm drains. in an area designated for that purpose. The designated area shall be equipped for recycling oil and catching spills. Secondary containment shall be provided for all fuel oil storage tanks. These areas must be inspected every seven days and within 24 hrs. of a 0.5 inch or greater rain event to ensure there are no exposed materials which would contaminate storm water. Site operators must be aware that Spill Prevention Control and Countermeasures (SPCC) requirements may apply. An SPCC plan is required for sites with one single above ground tank of 660 gallons or more, accumulative above ground storage of 1330 gallons or more, or 42,000 gallons of underground storage. Contaminated soils must be disposed of in accordance with Item 8.

6. **Concrete Wash Water** shall not be allowed to flow to streams, ditches, storm drains, or any other water conveyance. A sump or pit with no potential for discharge shall be constructed if needed to contain concrete wash water. Field tile or other subsurface drainage structures within 10 ft. of the sump shall be cut and plugged.

7. **Spill Reporting Requirements:** Spills on pavement shall be absorbed with sawdust or kitty litter and disposed of with the trash at a licensed sanitary landfill. Hazardous or industrial wastes such as most solvents, gasoline, oil-based paints, and cement curing compounds require special handling. Spills shall be reported to Ohio EPA (1-800-282-9378). Spills of 25 gallons or more of petroleum products shall be reported to Ohio EPA, the local fire department, and the Local Emergency Planning Committee within 30 min. of the discovery of the release. All spills which contact waters of the state must be reported to Ohio EPA.

8. **Contaminated Soils.** If substances such as oil, diesel fuel, hydraulic fluid, antifreeze, etc. are spilled, leaked, or released onto the soil, the soil should be dug up and disposed of at licensed sanitary landfill or other approved petroleum contaminated soil remediation facility. (not a construction/demolition debris landfill). Note that storm water runoff associated with contaminated soils are not be authorized under Ohio EPA's General Storm Water Permit associated with Construction Activities.

9. **Open Burning.** No materials containing rubber, grease, asphalt, or petroleum products, such as tires, autoparts, plastics or plastic coated wire may be burned (OAC 3745-19). Open burning is not allowed in restricted areas, which are defined as: 1) within corporation limits; 2) within 1000 feet outside a municipal corporation having a population of 1000 to 10,000; and 3) a one mile zone outside of a corporation of 10, 000 or more. Outside of restricted areas, no open burning is allowed within a 1000 feet of an inhabited building on another property. Open burning is permissible in a restricted area for: heating tar, welding, smudge pots and similar occupational needs, and heating for warmth or outdoor barbeques. Outside of restricted areas, open burning is permissible for landscape or land-clearing wastes (plant material, with prior written permission from Ohio EPA) , and agricultural wastes, excluding buildings.

10. **Dust Control or dust suppressants** shall be used to prevent nuisance conditions, in accordance with the manufacturer's specifications and in a manner, which prevent a discharge to waters of the state. Sufficient distance must be provided between applications and nearby bridges, catch basins, and other waterways. Application (excluding water) may not occur when rain is imminent as noted in the short term forecast. Used oil may not be applied for dust control.

11. **Other Air Permitting Requirements:** Certain activities associated with construction will require air permits including but not limited to: mobile concrete batch plants, mobile asphalt plants, concrete crushers, large generators, etc. These activities will require specific Ohio EPA Air Permits for installation and operation. Operators must seek authorization from the corresponding district of Ohio EPA. For demolition of all commercial sites, a Notification for Restoration and Demolition must be submitted to Ohio EPA to determine if asbestos corrective actions are required.

12. **Process Waste Water/Leachate Management.** Ohio EPA's Construction General Permit only allows the discharge of storm water and does not include other waste streams/discharges such as vehicle and/or equipment washing, on-site septic leachate concrete wash outs, which are considered process wastewaters. All process wastewaters must be collected and properly disposed at an approved disposal facility. In the event, leachate or septage is discharged; it must be isolated for collection and proper disposal and corrective actions taken to eliminate the source of waste water.

13. **A Permit To Install (PTn** is required prior to the construction of all centralized sanitary systems, including sewer extensions, and sewerage systems (except those serving one, two, and three family dwellings) and potable water lines. Plans must be submitted and approved by Ohio EPA. Issuance of an Ohio EPA Construction General Storm Water Permit does not authorize the installation of any sewerage system where Ohio EPA has not approved a PTI.

OHIO EPA PERMIT NO. OHC000005

PART III G. SWP3 REQUIREMENTS

a. APARTMENT/RETAIL BUILDING

b. TOTAL SITE AREA - 5.6866 AC. - DISTURBED AREA = 6.07 AC.

c. PRE-CONSTRUCTION CURVE NUMBER - CN = 72;
POST-CONSTRUCTION CURVE NUMBER - CN = 95

d. IMPERVIOUS AREA = 3.05 AC. (ENTIRE SITE), PERCENT IMPERVIOUS = 53.6%.

e. SOIL TYPES:

CdB	-	Canfield silt loam, 2 to 6 percent slopes
CdC2	-	Canfield silt loam, 6 to 12 percent slopes, eroded
CeB	-	Canfield silt loam, sandstone substratum, 2 to 6 percent slopes
DkC	-	Dekalb sandy loam, 6 to 12 percent slopes
LoB	-	Loudonville silt loam, 2 to 6 percent slopes
LoC2	-	Loudonville silt loam, 6 to 12 percent slopes, eroded
WuD2	-	Wooster silt loam, 12 to 18 percent slopes, moderately eroded

f. PRIOR LAND USE: DEVELOPED COMMERCIAL

g. CONSTRUCTION SEQUENCE - SEE IMPROVEMENT PLANS

h. UNNAMED TRIBUTARY TO SCHOCALOG RUN

- NO WETLANDS

i. NOT SUBDIVIDED (MEASURES IDENTIFIED ON PLANS)

j. NOT APPLICABLE

k. PERMIT REQUIREMENTS ATTACHED. (FIELD COPY)

l. IDENTIFIED ON SHEET C106

m. IDENTIFIED ON SHEET C106

n. SITE MAP SHOWN ON PLANS

(i) LIMITS OF CONSTRUCTION IDENTIFIED ON THE PLANS (LC).

(ii) SOIL TYPES IDENTIFIED ON THE PLANS

(iii) DRAINAGE WATER SHEDS IDENTIFIED ON THE PLANS.

(iv) THERE ARE NO WETLANDS ON THE SITE. NO SPRINGS, LAKES OR WATER WELLS WITHIN 200 FEET OF THE SITE.

(v) EXISTING & PLANNED LOCATIONS OF BUILDINGS, ROADS, PARKING FACILITIES AND UTILITIES ARE IDENTIFIED ON THE PLANS.

(vi) EROSION AND SEDIMENT CONTROL PRACTICES ARE IDENTIFIED ON THE PLANS.

(vii) SEDIMENT & STORM WATER MANAGEMENT DATA IS IDENTIFIED ON THE PLANS.

(viii) PERMANENT STORM WATER MANAGEMENT PRACTICES ARE IDENTIFIED ON THE PLANS.

(ix) CEMENT TRUCK WASHOUT, DUMPSTER & VEHICLE FUELING AREA ARE IDENTIFIED ON THE PLANS.

(x) CONSTRUCTION ENTRANCE IS IDENTIFIED ON THE PLANS.

(xi) NOT APPLICABLE.

2. A. NOT APPLICABLE.

B. TEMPORARY SEEDING AND PERMANENT SEEDING MEASURES ARE IDENTIFIED ON THE PLANS.

(I) TABLE 1 & TABLE 2 HAVE BEEN IDENTIFIED ON THE PLANS.

(II)NOT APPLICABLE.

C. SHEET FLOW RUNOFF HAS BEEN CONTROLLED BY MEANS OF SILT FENCE AND DIRECTED TOWARDS UNDISTURBED SOILS. POINT DISCHARGES HAVE BEEN CONTAINED WITHIN STORM SEWERS.

D. SEDIMENT CONTROL HAS BEEN MANAGED BY MEANS OF SILT FENCE.

(I) NOTED THROUGHOUT THE PLANS.

(II) SILT FENCE UTILIZED.

(III) SILT FENCE IS IDENTIFIED ON THE PLANS.

(IV) INLET PROTECTION IS IDENTIFIED ON THE PLANS.

(V) NOT APPLICABLE.

(VI) NOTED ON THE IMPROVEMENT PLANS.

E. POST-CONSTRUCTION MAINTENANCE AND INSPECTION IS IDENTIFIED ON THE PLANS.

LARGE CONSTRUCTION ACTIVITIES - NOT APPLICABLE

SMALL CONSTRUCTION ACTIVITIES - RATIONALE IDENTIFIED ON PLANS

F. SURFACE WATER PROTECTION - NOT APPLICABLE

G. OTHER CONTROLS

(I) CEMENT TRUCK WASHOUT AREA IS IDENTIFIED ON THE PLANS.

(II)DUST CONTROL MEASURES AND VEHICLE TRACKING ARE IDENTIFIED ON THE PLANS.

(III) ADDITIONAL NOTES ARE IDENTIFIED ON THE PLANS.

(IV) NOTED ON THE PLANS.

(V) NOTED ON THE PLANS.

H. NOTED THROUGHOUT THE PLANS.

I. INSPECTION FREQUENCY AND INSPECTION CHECKLIST IS NOTED ON THE PLANS.

(I) NOTED ON THE PLANS.

(II) NOTED ON THE PLANS.

(III) STATEMENT NOTED.

3. APPROVED STATE OR LOCAL PLANS

STATEMENT NOTED.

4. EXCEPTIONS

STATEMENT NOTED.

CONSTRUCTION SEQUENCE

(ALL ITEMS ARE TO BE THE RESPONSIBILITY OF THE GENERAL SITE CONTRACTOR)

SITE PREPARATION

NOTE:

PROVIDE SAFE AND SECURE PEDESTRIAN AND VEHICULAR TRAFFIC CIRCULATION THROUGHOUT THE ENTIRETY OF THE CONSTRUCTION SEQUENCE WITH WELL DEFINED CONSTRUCTION BOUNDARIES TO BE ACCESSED BY CONSTRUCTION PERSONNEL ONLY. ALL EROSION CONTROLS ARE TO BE THOROUGHLY INSPECTED BY THE CONTRACTOR UPON THE COMPLETION OF EACH WORK DAY AND MAINTAINED THROUGHOUT THE REQUIRED LIFE OF THE CONTROL, AS SPECIFIED BY THE APPROVED EROSION AND SEDIMENTATION CONTROL PLANS AND NARRATIVE. THE CONTRACTOR MUST REVIEW THE APPROVED EROSION AND SEDIMENTATION CONTROL PLANS AND NARRATIVE. THE CONTRACTOR MUST REVIEW THE APPROVED NPDES PERMIT AND SIGN THE PERMIT TO ACCEPT RESPONSIBILITIES AS THE CO-PERMITEE.

INITIAL PHASE (WITHIN 7 DAYS OF START OF GRUBBING)

1. INSTALL A TEMPORARY CONSTRUCTION ENTRANCE FOR ACCESS TO CONSTRUCTION AREAS OF SITE.
2. SETUP CONSTRUCTION TRAILER ON SITE AND ESTABLISH TEMPORARY POWER AND TELEPHONE SERVICE AS NECESSARY.
3. ALL TEMPORARY UTILITY SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. STAKEOUT LIMITS OF DISTURBANCE.
5. INSTALL TEMPORARY INLET PROTECTION ON ALL EXISTING CATCH BASINS WITHIN LIMITS OF CONSTRUCTION. REMOVE SILT PROTECTION FROM DESIGNATED INLETS ONLY WHEN INLET STRUCTURE IS TO BE REMOVED AS REQUIRED BY PROGRESSION OF CONSTRUCTION. REFER TO PLANS FOR IDENTIFICATION OF INLET STRUCTURES TO BE REMOVED.
6. INSTALL ALL FILTER FABRIC FENCE WHERE SHOWN ON PLANS.
7. BEGIN SITE CLEARING.
8. REMOVE TOPSOIL FROM AREAS OF BUILDING AND PAVEMENT.
9. BEGIN EARTHWORK OPERATIONS.
10. CONSTRUCT STORM WATER BASIN.
11. IN THE EVENT OF RAIN, ALLOW STANDING WATER TO SETTLE PRIOR TO PUMPING. UTILIZE THE PUMPING SYSTEMS TO PUMP POLLUTED WATER PER E.P.A. REQUIREMENTS. ALLOW ONLY CLEAN WATER TO BE DISCHARGED TO THE EXISTING DRAINAGE SYSTEM. REMOVE SILT FROM BASINS AS NECESSARY PRIOR TO CONTINUING EARTHWORK. MATERIAL SHOULD BE MECHANICALLY SPREAD AND DRIED PRIOR TO INCORPORATION INTO THE EARTHWORK PROCEDURES. ADEQUACY OF THE DRIED MATERIAL IS TO BE DETERMINED BY A GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE AND ENSURE THAT PROPER MECHANISMS ARE IN PLACE TO CONTROL WASTE MATERIALS. CONSTRUCTION WASTES INCLUDES, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, ETC., THAT COULD ADVERSELY IMPACT WATER QUALITY. MEASURES SHALL BE PLANNED AND IMPLEMENTED FOR HOUSEKEEPING, MATERIALS MANAGEMENT, AND LITTER CONTROL. WHEREVER POSSIBLE, RECYCLING OF EXCESS MATERIALS IS PREFERRED, RATHER THAN DISPOSAL.

INTERIM PHASE GENERAL CONSTRUCTION

1. MAINTAIN TEMPORARY CONTROLS UNTIL REMOVAL IS WARRANTED DUE TO PROGRESSION OF WORK.
2. BEGIN EARTHMOVING OPERATIONS. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE COUNTY CONSERVATION DISTRICT OF LOCATION AND EROSION AND SEDIMENTATION CONTROL MEASURES IMPLEMENTED AT BORROW OR SPOIL SITE OF IMPORT/EXPORT MATERIAL. THE CONTRACTOR IS TO COORDINATE WITH THE OWNER THE PLACEMENT OF SUCH MEASURES.
3. STORM SEWER, SANITARY SEWER, WATER LINE AND UTILITY LINE CONSTRUCTION MAY BEGIN IMMEDIATELY FOLLOWING ESTABLISHMENT OF GRADE AND WITH THE PERMISSION OF THE OWNER.
4. STABILIZE ALL UTILITY TRENCHES AT THE END OF EACH WORKDAY BY MEANS OF GRAVEL BACKFILL TO SURFACE, REPAVING OR MULCHING.
5. REPLACE TOPSOIL, FINE GRADE AND SEED AS REQUIRED.
6. STABILIZE ALL DISTURBED AREAS WITH PERMANENT SEED AND MULCHING OR CROWNVETCH SEEDING IMMEDIATELY UPON REACHING FINAL GRADE.
7. INSTALL PAVEMENT SUBBASE.
8. BEGIN BITUMINOUS PAVING, REMOVING TEMPORARY CONSTRUCTION ENTRANCE ONLY WHEN NECESSARY.
9. RESEED AND REDRESS ANY AREAS THAT MAY REQUIRE ATTENTION IMMEDIATELY. NOTE THAT LAWN AREAS WILL NOT BE DEEMED STABLE UNTIL A UNIFORM 80% COVERAGE IS ACHIEVED.
10. ALL EROSION MEASURES SHALL REMAIN IN PLACE UNTIL THE SITE IS STABILIZED. ALL AREAS OF VEGETATIVE SURFACE STABILIZATION, WHETHER TEMPORARY OR PERMANENT, SHALL BE CONSIDERED TO BE IN PLACE AND FUNCTIONAL WHEN THE REQUIRED UNIFORM RATE OF COVERAGE (80%) IS OBTAINED.

FINAL PHASE POST-PAVING BASIN CONVERSION

1. IF, FOR ANY REASON, THE PROJECT IS SUSPENDED, THE CONTRACTOR SHALL INSURE THAT ALL INSTALLED EROSION MEASURES ARE FUNCTIONING AND PROPERLY MAINTAINED DURING THIS PERIOD, AND THAT ALL BARED SOILS ARE SEEDED AND MULCHED WITH TEMPORARY SEED MIXTURE.
2. THE FOLLOWING ITEMS MUST BE COMPLETED BY THE CONTRACTOR, IN ORDER, ONCE THE SITE HAS BEEN DEEMED STABLE:
   A. REMOVE SEDIMENT CONTROL DEVICES AND ESTABLISH WATER QUALITY CONTROL ORIFICE.
   B. REMOVE TEMPORARY CONSTRUCTION ENTRANCE PRIOR TO COMPLETION OF PAVING.
   C. SITE CLEAN UP.
   D. RESEED ANY AREAS THAT REQUIRE ADDITIONAL SEED
   E. FILTER FENCES ARE TO BE CLEANED, REMOVED, BACKFILLED AND SEEDED WITH PERMANENT SEEDING.
   F. VERIFY POSITIVE CONVEYANCE FLOW IN ALL DRAINAGE STRUCTURES.

SPECIFICATIONS FOR TEMPORARY SEEDING

TEMPORARY SEEDING SPECIES SELECTION

SEEDING DATES	SPECIES	LB/100 FT^2	LB/ACRE
MARCH 1 TO AUGUST 15	OATS TALL FESCUE ANNUAL RYEGRASS	3 1 1	128 (4 BUSHEL) 40 40
	PERENNIAL RYEGRASS TALL FESCUE ANNUAL RYEGRASS	1 1 1	40 40 40
	ANNUAL RYEGRASS PERENNIAL RYEGRASS CREEPING RED FESCUE KENTUCKY BLUEGRASS	1.25 3.25 0.4 0.4	55 142 17 17
	OATS TALL FESCUE ANNUAL RYEGRASS	3 1 1	128 (3 BUSHELS) 40 40
AUGUST 16TH TO NOVEMBER	RYE TALL FESCUE ANNUAL RYEGRASS	3 1 1	112 (2 BUSHEL) 40 40
	WHEAT TALL FESCUE ANNUAL RYEGRASS	3 1 1	120 (BUSHEL) 40 40
	PERENNIAL RYE TALL FESCUE ANNUAL RYEGRASS	1 1 1	40 40 40
	ANNUAL RYEGRASS PERENNIAL RYEGRASS CREEPING RED FESCUE KENTUCKY BLUEGRASS	1.25 3.25 0.4 0.4	40 40 40
NOVEMBER 1 TO FEB. 29	USE MULCH ONLY FOR DORMANT SEEDING		

NOTE: OTHER APPROVED 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 14 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 SHALL 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 ESTABLISHED 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.
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 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.

MULCHING TEMPORARY SEEDING

1. APPLICATIONS OF TEMPORARY SEEDING SHALL INCLUDE MULCH WHICH SHALL BE APPLIED DURING OR IMMEDIATELY AFTER SEEDING. SEEDINGS MADE DURING OPTIMUM SEEDING DATES AND WITH FAVORABLE SOIL CONDITIONS AND ON VERY FLAT SOIL CONDITIONS MAY NOT NEED MULCH TO ACHIEVE ADEQUATE STABILIZATION.
2. MATERIALS: STRAW--IF STRAW IS USED, IT SHALL BE UNROTTED SMALL-GRAIN APPLIED AT 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 MATTINGS 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. 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--NETTINGS 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. 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 FIBRE--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.

BMP INSPECTION CHECKLIST

BMP	FREQUENCY	NOTES
GENERAL INSPECTION	EVERY 6 MO.	
STORM WATER BASIN	MONTHLY	
VEGETATION	MONTHLY	FIRST 2 GROWING SEASONS THEN TWICE A YEAR
SILT FENCE	MONTHLY	FIRST GROWING SEASON

REGULAR INSPECTION AND MAINTENANCE WILL BE PROVIDED FOR ALL EROSION AND SEDIMENT CONTROL PRACTICES. PERMANENT RECORDS OF MAINTENANCE AND INSPECTIONS MUST BE KEPT THROUGHOUT THE CONSTRUCTION PERIOD. INSPECTIONS MUST BE MADE A MINIMUM OF ONCE EVERY 7 DAYS AND IMMEDIATELY AFTER STORM EVENTS GREATER THAN 0.5 INCHES OF RAIN IN A 24 HOUR PERIOD. PROVIDED WILL BE NAME OF INSPECTOR, MAJOR OBSERVATIONS, DATE OF INSPECTION AND CORRECTIVE MEASURES TAKEN. RECORDS SHALL BE SUBMITTED TO THE SUMMIT COUNTY ENGINEERING DEPARTMENT FOR REVIEW BY MAY 1st OF EACH YEAR.

ALL CONTROL PRACTICES THAT REQUIRE REPAIR SHALL BE REPAIRED WITHIN THREE (3) DAYS OF THE INSPECTION.

ADDITIONAL SWP3 CONSIDERATIONS

NO OPEN BURNING

DUST CONTROL SHALL BE ACHIEVED BY USE OF WATERING TRUCKS. USE OF OIL IS STRICTLY PROHIBITED. INLET PROTECTION MUST BE IMPLEMENTED PRIOR TO DUST CONTROL MEASURES.

IN THE EVENT OF A PETROLEUM SPILL (>25 GALLONS) OR THE PRESENCE OF OIL SHEEN, THE CONTRACTOR SHALL CONTACT THE OHIO E.P.A. AT 800-282-9378, THE LOCAL FIRE DEPARTMENT.

SMALL SPILLS (<25 GALLONS) SHALL BE CLEANED UP USING AN ABSORBING AGENT, THE ABSORBING AGENT REMOVED AND DISPOSED OF ACCORDING TO FEDERAL REGULATIONS.

ALL TRENCH DEWATERING MEASURES SHALL BE DISCHARGED INTO SETTLING BASINS PRIOR TO DISCHARGE FROM SITE. BMP'S THAT REQUIRE REPAIR SHALL BE REPAIRED WITHIN 3 DAYS OF INSPECTION. SETTLING PONDS MUST BE REPAIRED WITHIN 10 DAYS OF INSPECTION.

STREETS ADJACENT TO SITE SHALL BE CLEANED AT THE END OF EACH WORK DAY.

POST-CONSTRUCTION BMP RATIONALE

STORM WATER MANAGEMENT AND POST CONSTRUCTION WATER QUALITY BMP'S HAVE BEEN ADDRESSED BY MEANS OF AN ON-SITE STORM WATER MANAGEMENT/WATER QUALITY BASIN.

MAINTENANCE FOR PERMANENT SEEDINGS FERTILIZATION AND MOWING

MIXTURE	FORMULA	LBS./ACRE	LBS./1,000 SQ. FT	TIME	MOWING
CREEPING RE FESCUE RYEGRASS KEENTCKY BLUEGRASS	10-10-10	500	12	FALL, YEARLY AS NEEDED	NOT CLOSER THAN 3"
TALL FESCUE	10-10-10	500	12		NOT CLOSER THAN 4"
TURF-TYPE FESCUE	10-10-10	500	12		
CROWN VETCH FESCUE	0-20-20	400	10	SPRING, YEARLY FOLLOWING ESTABLISHMENT AND EVERY 4-7 YEARS 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.

SPECIFICATIONS FOR PERMANENT SEEDING

SITE PREPARATION

1. 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.
2. THE SITE SHALL BE GRADED AS NEEDED TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION AND SEEDING.
3. TOPSOIL SHALL BE APPLIED WHERE NEEDED TO ESTABLISH VEGETATION. SEEDBED PREPARATION
   a. 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/ACRE.
   b. 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 25 LB./1,000 SQ. FT. OR 1000 LB./ACRE OF 10-10-10 OR 12-12-12 ANALYSES.
   c. 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 INCHES. ON SLOPING LAND, THE SOIL SHALL BE WORKED ON THE CONTOUR.

EROSION PREVENTION PRACTICES

SEEDING DATES AND SOIL CONDITIONS

SEEDING SHOULD BE DONE MARCH 1 TO MAY 31 OR AUG 1 TO SEPTEMBER 30. IF SEEDING OCCURS OUTSIDE OF THE ABOVE SPECIFIED DATES, ADDITIONAL MULCH AND IRRIGATION MAY BE REQUIRED TO ENSURE A MINIMUM OF 80% GERMINATION. TILLAGE FOR SEEDBED PREPARATION SHOULD BE DONE WHEN 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 SEEDING

1. SEEDINGS SHOULD NOT BE MADE 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.
2. 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, BROADCAST THE SELECTED SEED MIXTURE AT A 50% INCREASE IN THE SEEDING RATE.
- 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 FOLLOW THE CONTOUR WHERE FEASIBLE.

MULCHING

1. MULCH MATERIAL SHALL BE APPLIED IMMEDIATELY AFTER SEEDING. DORMANT SEEDING SHALL BE MULCHED. 100% OF THE GROUND SURFACE SHALL BE COVERED WITH AN APPROVED MATERIAL.
2. MATERIALS

   STRAW--IF STRAW IS USED IT SHALL BE UNROTTED SMALL-GRAIN STRAW APPLIED AT THE RATE OF 2 TONS/ACRE 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 DIVIDE AREA INTO APPROXIMATELY 1,000-SQ.-FT. HAND-SPREAD MULCH, 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./ACRE. OR 46 LB./1,000 SQ. FT.

   OTHER--OTHER ACCEPTABLE MULCHES INCLUDE ROLLED EROSION CONTROL MATTINGS OR BLANKETS APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS OR WOOD CHIPS APPLIED AT 6 TONS/ACRE.
3. STRAW AND 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 LEFT LONGER THAN 6 IN.

   MULCH NETTINGS-NETTINGS 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.

   SYNTHETIC BINDERS-SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70, PETROSET, TERRA TACK OR EQUIVALENT MAY BE USED AT RATES SPECIFIED BY THE MANUFACTURER.

EROSION PREVENTION PRACTICES

WOOD CELLULOSE FIBER--WOOD CELLULOSE FIBER BINDER SHALL BE APPLIED AT A NET DRY WEIGHT OF 750 LBS./ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER WITH THE MIXTURE CONTAINING A MAXIMUM OF 50 LBS. CELLULOSE/100 GALLONS OF WATER.

IRRIGATION

1. PERMANENT SEEDING SHALL INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY WEATHER OR ON ADVERSE SITE CONDITIONS, WHICH REQUIRE ADEQUATE MOISTURE FOR SEED GERMINATION AND PLANT GROWTH.
2. IRRIGATION RATES SHALL BE MONITORED TO PREVENT EROSION AND DAMAGE TO SEEDED AREAS FROM EXCESSIVE RUNOFF.

PERMANENT SEEDING

SEED MIX	SEEDING RATE		NOTES
	LBS./ACRE	LBS./1,000 SQ. FEET	
GENERAL USE			
CREEPING RED FESCUE DOMESTIC RYEGRASS KENTUCKY BLUEGRASS	20-40 10-20 20-40	1/2-1 1/4-1/2 1/2-1	FOR CLOSE MOWING & FOR WATERWAYS WITH<2.0 FT/SEC VELOCITY
TALL FESCUE	40-50	1-1 1/4	
TURF- TYPE (DWARF) FESCUE	90	2 1/4	
STEEP BANKS OR CUT SLOPES			
TALL FESCUE	40-50	1-1/4	
CROWN VETCH TALL FESCUE	10-20 20-30	1/4-1/2 1/2-3/4	DO NOT SEED LATER THAN AUGUST
FLAT PEA TALL FESCUE	20-25 20-30	1/2-3/4 1/2-3/4	DO NOT SEED LATER THAN AUGUST
ROAD DITCHES AND SWALES			
TALL FESCUE	40-50	1-1 1/4	
TURF-TYPE (DWARF) FESCUE KENTUCKY BLUEGRASS	90 5	2 1/4 0.1	
LAWNS			
KENTUCKY BLUEGRASS PERENNIAL RYEGRASS	100-120	2 2	
KENTUCKY BLUEGRASS CREEPING RED FESCUE	100-120	2 1-1/2	FOR SHADED AREAS

NOTE: OTHER APPROVAL SEED SPECIES MAY BE SUBSTITUTED.

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 AREAS

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, AND 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 FOR RESIDENTIAL SUBDIVISIONS, DISTURBED AREAS MUST BE STABILIZED AT LEAST SEVEN DAYS PRIOR TO TRANSFER OF PERMIT COVERAGE FOR THE INDIVIDUAL LOT(S).
DISTURBED AREAS THAT WILL BE IDLE OVER WINTER	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.

WES No. 2019-332

STATE OF OHIO
MATTHEW L WEBER
61709
REGISTERED
PROFESSIONAL ENGINEER

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DATE: 01-06-2022

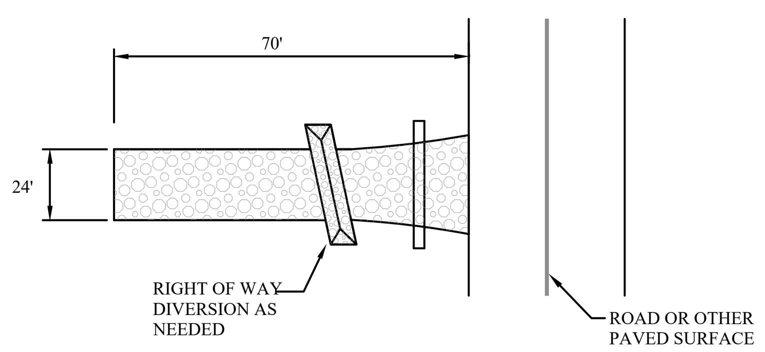
SWP3 DETAILS

PROJECT #: XXXX

THE ROCK

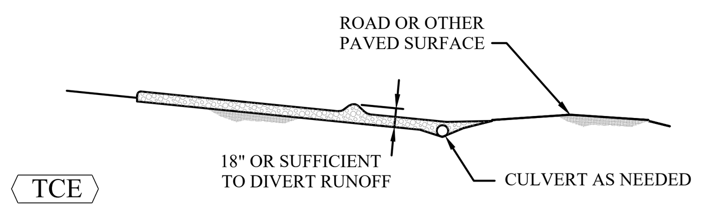
ROTHROCK ROAD
COPLEY, OHIO 44321

C9.0



CONSTRUCTION ENTRANCE PLAN

REFERENCE ONLY NOT TO SCALE



TCE — CONSTRUCTION ENTRANCE PROFILE

REFERENCE ONLY NOT TO SCALE

1. STONE SIZE - ODOT #2 (1.5-2.5 INCH) STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH- THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABALIZE HIGH TRAFFIC AREAS BUT NOT LESS THAN 70 FT. (EXCEPTION: APPLY 30 FT. MINIMUM TO SINGLE RESIDENCE LOTS.)
3. THICKNESS- THE STONE LAYER SHALL BE AT LEAST 6 INCHES THICK FOR LIGHT DUTY ENTRANCES OR AT LEAST 10 INCHES FOR HEAVY DUTY USE.
4. WIDTH- THE ENTRANCE SHALL BE AT LEAST 14 FEET WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. 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.

GEOTEXTILE SPECIFICATION FOR CONSTRUCTION ENTRANCE	
MINIMUM TENSILE STRENGTH	200 LBS.
MINIIMUM PUNCTURE STRENGTH	80 PSI.
MINIMUM TEAR STRENGTH	50 LBS.
MINIMUM BURST STENGTH	320 PSI.
MINIMUM ELONGATION	20%
EQUIVALENT OPENIING SIZE	EOS<0.6MM.
PERMITTIVITY	1X10^3 CM/SEC.

6. TIMING- THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS SOON AS IS PRACTICABLE BEFORE MAJOR GRADING ACTIVITIES.
7. 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 DIRECT OUT ONTO PAVED SURFACES.
8. 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
9. SURFACES.

MAINTENANCE- 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,
10. 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
11. 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.

TCE — SPECIFICATIONS FOR CONSTRUCTION ENTRANCE

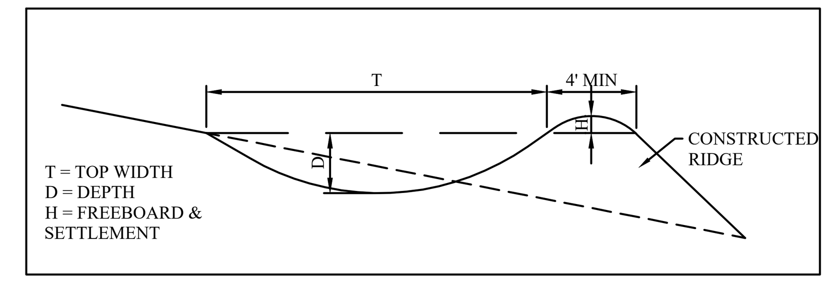
REQUIREMENTS FOR GEOTEXTILES

PROPERTY	TEST METHOD	WOVEN- CLASS I	NONWOVEN-I
TENSILE STRENGTH (POUNDS) 1/	ASTM C 4632 GRAB TEST	200 MINIMUM IN ANY PRINCIPAL DIRECTION	180 MINIMUM
ELONGATION AT FAILURE (PERCENT) 1/	ASTM D 4632 GRAB TEST	<50	> 50
PUNCTURE (POUNDS) 1/	ASTM D 4833	90 MINIMUM	80 MINIMUM
ULTRAVIOLET LIGHT (% RESIDUAL TENSILE STRENGTH)	ASTM D 4355 150-HR EXPOSURE	70 MINIMUM	70 MINIMUM
APPARENT OPENING SIZE (AOS)	ASTM D 4751	AS SPECIFIED, BUT NO SMALLER THAN .212 (#70) 2/	AS SPECIFIED MAX. #40 2/
PERCENT OPEN AREA (PERCENT)	CWO-02215-86	4.0 MINIMUM	------
PERMITIVITY SEC-1	ASTM D 4491	0.10 MINIMUM	0.70 MINIMUM

1. MINIMUM AVERAGE ROLL VALUE (WEAKEST PRINCIPAL DIRECTION).
2. U.S. STANDARD SIEVE SIZE
NOTE: CWO IS A USACE REFERENCE

RIPRAP SIZE CHART

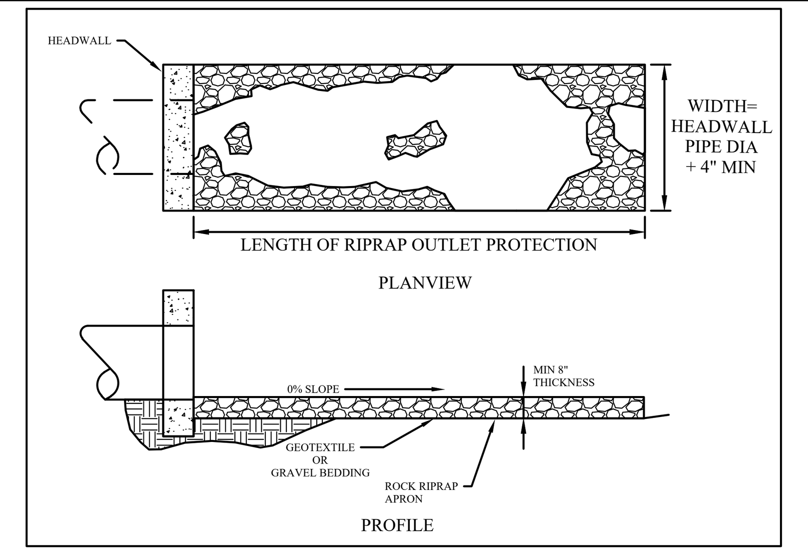
TYPE OF ROCK OR RIPRAP (ODOT)	"N" VALUE	SIZE OF ROCK	
		50%	85%
TYPE D	.036	>6 IN.	3-12 IN.
TYPE C	.04	>12 IN.	6-18 IN.
TYPE B	.043	>18 IN.	12-24 IN.
TYPE A	.045	>24 IN.	18-30 IN.



1. ALL TREES, BRUSH, STUMPS, AND OTHER UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE WORK SITE.
2. THE DIVERSION SHALL BE EXCAVATED AND SHAPED TO THE PROPER GRADE AND CROSS SECTION.
3. FILL MATERIAL USED IN THE CONSTRUCTION OF THE CHANNEL SHALL BE WELL COMPACTED IN UNIFORM LAYERS NOT EXCEEDING 9 INCHES USING THE WHEEL TREADS OR TRACKS OF THE CONSTRUCTION EQUIPMENT TO PREVENT UNEQUAL SETTLEMENT.
4. EXCESS EARTH SHALL BE GRADED OR DISPOSED OF SO THAT IT WILL NOT RESTRICT FLOW TO THE CHANNEL OR INTERFERE WITH ITS FUNCTIONING.
5. FERTILIZING, SEEDING, AND MULCHING SHALL CONFORM TO THE RECOMMENDATION IN THE APPLICABLE VEGETATIVE SPECIFICATIONS.
6. CONSTRUCTION SHALL BE SEQUENCED SO THAT THE NEWLY CONSTRUCTED CHANNEL IS STABILIZED PRIOR TO BECOMING OPERATIONAL. TO AID IN THE ESTABLISHMENT OF VEGETATION, SURFACE WATER MAY BE PREVENTED FROM ENTERING THE NEWLY CONSTRUCTED CHANNEL THROUGH THE ESTABLISHMENT PERIOD.
7. GULLIES THAT MAY FORM IN THE CHANNEL OR OTHER EROSION DAMAGE THAT OCCURS BEFORE THE GRASS LINING BECOMES ESTABLISHED SHALL BE REPAIRED WITHOUT DELAY.

TDC — SPECIFICATIONS FOR TEMPORARY DIVERSION

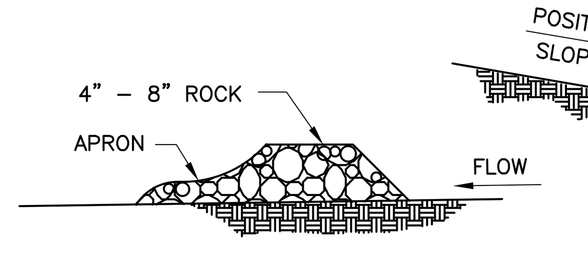
REFERENCE ONLY NOT TO SCALE



1. 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.
2. RIPRAP SHALL CONFORM TO THE GRADING LIMITS AS SHOWN ON THE PLAN.
3. GEOTEXTILE SHALL BE SECURELY ANCHORED ACCORDING TO MANUFACTURERS' RECOMMENDATIONS.
4. GEOTEXTILE SHALL BE LAID WITH THE LONG DIMENSION PARALLEL TO THE DIRECTION OF FLOW AND SHALL BE LAID 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.
5. GRAVEL BEDDING SHALL BE ODOT NO. 67'S OR 57'S UNLESS SHOWN DIFFERENTLY ON THE DRAWINGS.
6. RIPRAP MAY BE PLACED BY EQUIPMENT BUT SHALL BE PLACED IN A MANNER TO PREVENT SLIPPAGE OR DAMAGE TO THE GEOTEXTILE.
7. 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.
8. CONSTRUCTION SHALL BE SEQUENCED SO THAT OUTLET PROTECTION IS PLACED AND FUNCTIONAL WHEN THE STORM DRAIN, CULVERT, OR OPEN CHANNEL ABOVE IT BECOMES OPERATIONAL.
9. ALL DISTURBED AREAS WILL BE VEGETATED AS SOON AS PRACTICAL.

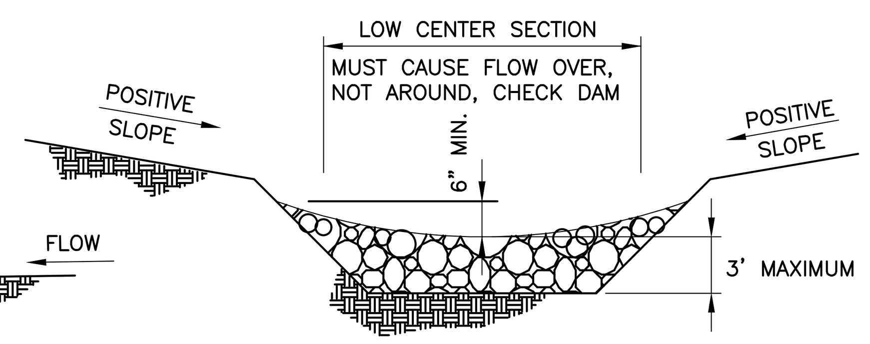
OP — SPECIFICATIONS FOR ROCK OUTLET PROTECTION

REFERENCE ONLY NOT TO SCALE



CHECK DAM PROFILE

NO SCALE



CHECK DAM CROSS SECTION

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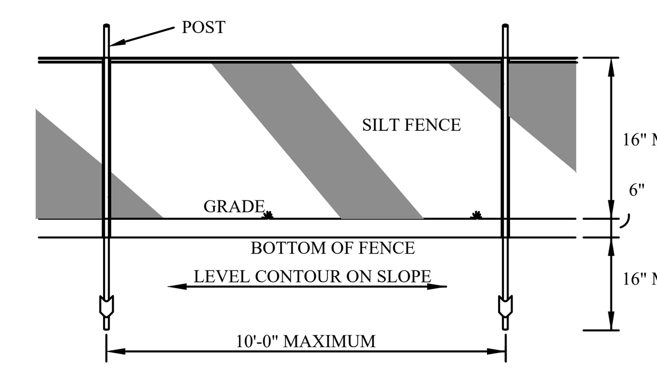
1. THE CHECK DAM SHALL BE CONSTRUCTED OF 4-8 INCH DIAMETER STONE, PLACED SO THAT IT COMPLETELY COVER THE WIDTH OF THE CHANNEL. ODOT TYPE D STONE IS ACCEPTABLE, BUT SHOULD BE UNDERLAIN WITH A GRAVEL FILTER CONSISTING OF ODOT NO. 3 OR 4 OR SUITABLE FILTER FABRIC.
2. MAXIMUM HEIGHT OF CHECK DAM SHALL NOT EXCEED 3.0 FEET.
3. 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.
4. THE BASE OF THE CHECK DAM SHALL BE ENTRENCHED APPROXIMATELY 6 INCHES.
5. 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.
6. 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.
7. STONE PLACEMENT SHALL BE PERFORMED EITHER BY HAND OR MECHANICALLY AS LONG AS THE CENTER OF CHECK DAM IS LOWER THAN THE SIDES AND EXTNEDS ACROSS ENTIRE CHANNEL.
8. SIDE SLOPES SHALL BE MINIMUM OF 2:1

CHECK DAM SPACING				
DAM HEIGHT (FT)	CHANNEL SLOPE			
	<5%	5 – 10%	10 – 15%	15 – 20%
1	65 FT.	30 FT.	20 FT.	15 FT.
2	130 FT.	65 FT.	40 FT.	30 FT.
3	200 FT.	100 FT.	65 FT.	50 FT.

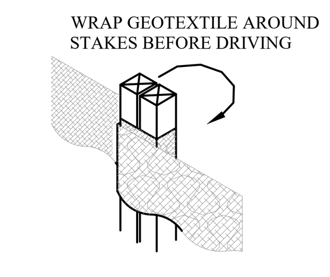
TCD — ROCK CHECK DAMS

REFERENCE ONLY NOT TO SCALE



SF — SILT FENCE DETAIL

REFERENCE ONLY NOT TO SCALE



JOINING SECTIONS OF SILT FENCE DETAIL — SF

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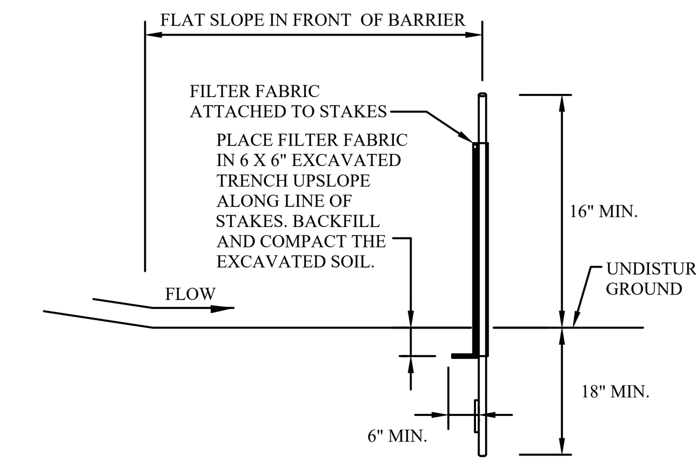

SF — SILT FENCE SECTION

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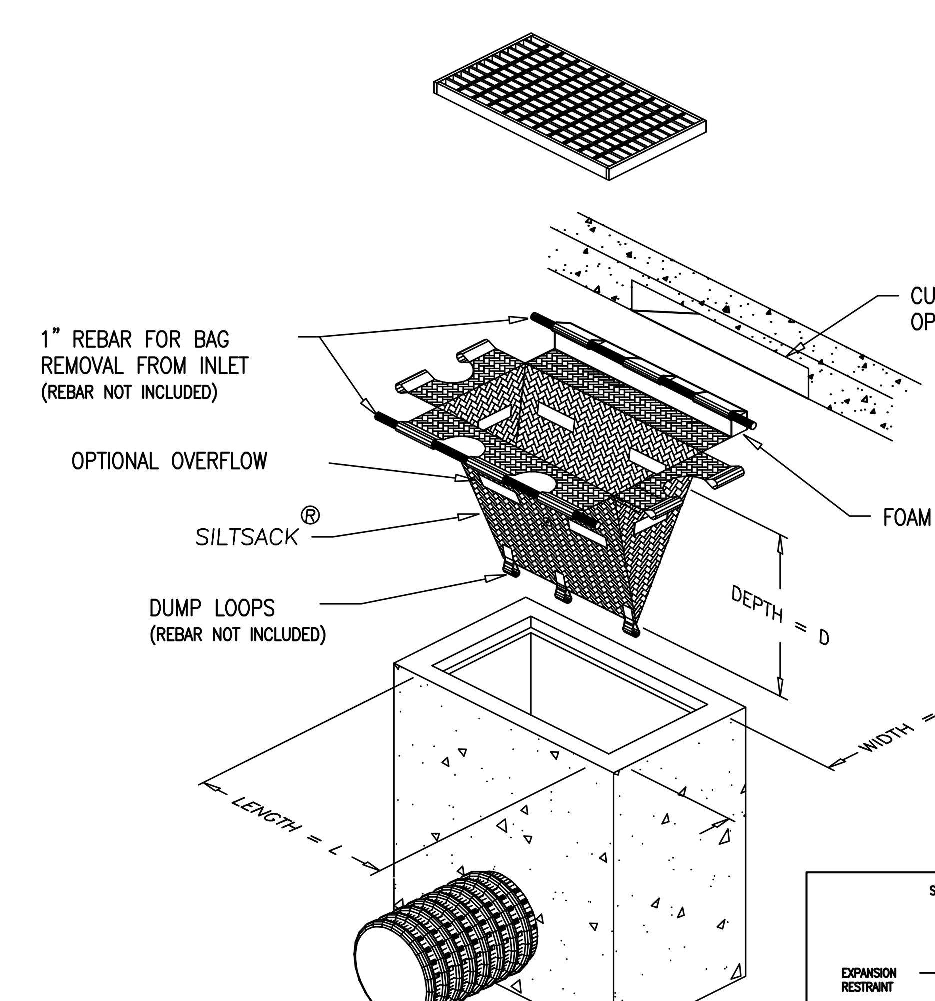
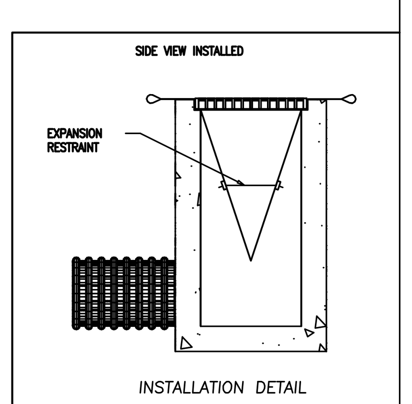




INLET PROTECTION NOTE

1. THE TYPICAL INLET SILT FENCE DETAIL SHALL REMAIN IN PLACE UNTIL PAVEMENT IS ESTABLISHED.
2. ONCE PAVEMENT HAS BEEN INSTALLED, THE INLETS WITHIN THE PAVING LIMITS MUST BE FITTED WITH THE "SILTSACK" SEDIMENT CONTROL DEVICE AS MANUFACTURED BY ACF ENVIROMENTAL CONTROL INC., OR APPROVED EQUAL.
3. SILT SACK MUST REMAIN IN PLACE UNTIL THE SITE HAS BEEN SEEDED & STABILIZED.

DETAIL OF INLET SEDIMENT CONTROL DEVICE WITH CURB DEFLECTOR

IPSS — SILTSACK DETAIL

1. SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS.
2. 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 WHICH MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.
3. 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.
4. WHERE POSSIBLE, SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.
5. WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5 FT. (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.
6. THE HEIGHT OF THE SILT FENCE SHALL BE A MIN. OF 16 IN. ABOVE THE ORIGINAL GROUND SURFACE.
7. THE SILT FENCE SHALL BE PLACED IN A TRENCH CUT A MIN. OF 6 IN. DEEP. THE TRENCH SHALL BE CUT WITH A TRENCHER, CABLE LAYING MACHINE, OR OTHER SUITABLE DEVICE WHICH WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.
8. THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWN SLOPE SIDE OF THE GEOTEXTILE AND SO THAT 8 IN. OF CLOTH ARE BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6 IN. DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED ON BOTH SIDES OF THE FABRIC.
9. SEAMS BETWEEN SECTIONS OF SILT FENCE SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 6-IN. OVERLAP PRIOR TO DRIVING INTO THE GROUND.
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 THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW, 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 APPROXIMATELYONE-HALF OF THE HEIGHT OF THE SILT FENCE.

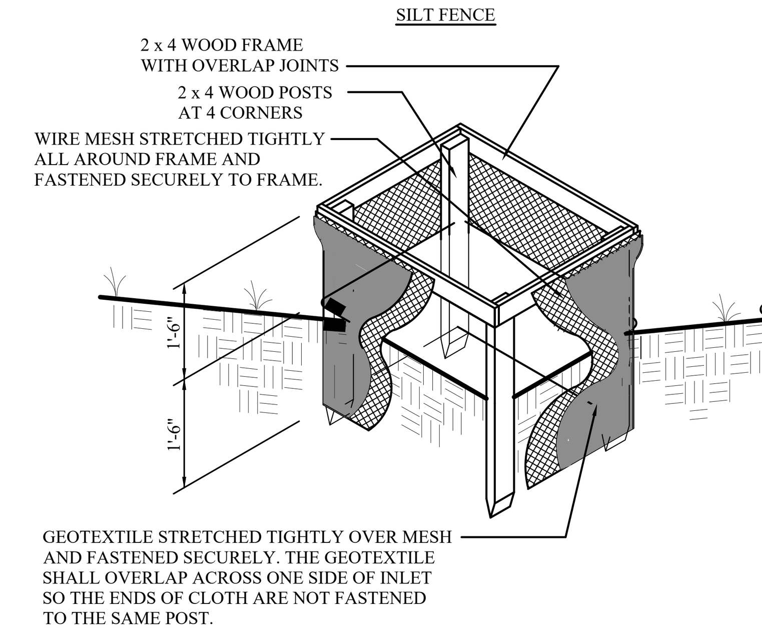
SILT FENCES SHALL BE INSPECTED AFTER EACH RAINFALL AND AT LEAST DAILY DURING A PROLONGED RAINFALL. THE LOCATION OF EXISTING SILT FENCE SHALL BE REVIEWED DAILY TO ENSURE ITS PROPER LOCATION AND EFFECTIVENESS. IF DAMAGED, THE SILT FENCE SHALL BE REPAIRED IMMEDIATELY.

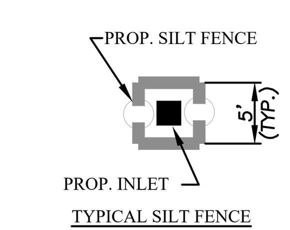
CRITERIA FOR SILT FENCE MATERIALS

1. FENCE POSTS-- THE LENGTH SHALL BE A MINIMUM OF 32 IN. LONG. WOOD POSTS WILL BE 2-BY-2 IN. HARDWOOD OF SOUND QUALITY. THE MAXIMUM SPACING BETWEEN POSTS SHALL BE 10 FT.
2. SILT FENCE FABRIC (SEE CHART BELOW):

MINIMUM CRITERIA FOR SILT FENCE FABRIC (ODOT, 2002)		
FABRIC PROPERTIES	VALUES	TEST METHOD
MINIMUM TENSILE STRENGTH	120 LBS. (535 N)	ASTM D 4362
MAXIMUM ELONGATION AT 60 LBS	50%	ASTM D 4632
MINIMUM PUNCTURE STRENGTH	50 LBS (220 N)	ASTM D 4833
MINIMUM TEAR STRENGTH	40 LBS (180 N)	ASTM D 4533
APPARENT OPENING SIZE	<.84 MM	ASTM D 4751
MINIMUM PERMITTIVITY	1X10^2 SEC^-1	ASTM D 4491
UV EXPOSURE STRNEGTH RETENTION	70%	ASTM D 4355

SF — SPECIFICATIONS FOR SILT FENCE





TYPICAL SILT FENCE INSTALLATION AT ALL INLETS

1. THE TYPICAL INLET SILT FENCE DETAIL SHALL REMAIN IN PLACE UNTIL PAVEMENT IS ESTABLISHED.
2. ONCE PAVEMENT HAS BEEN INSTALLED, THE INLETS WITHIN THE PAVING LIMITS MUST BE FITTED WITH THE "SILTSACK" SEDIMENT CONTROL DEVICE AS MANUFACTURED BY ACF ENVIROMENTAL CONTROL INC., OR APPROVED EQUAL.
3. SILT SACK MUST REMAIN IN PLACE UNTIL THE SITE HAS BEEN SEEDED & STABILIZED.

1. INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE STORM INLET BECOMES FUNCTIONAL
2. THE EARTH AROUND THE INLET SHALL BE EXCAVATED COMPLETELY TO A DEPTH AT LEAST 18 INCHES.
3. THE WOODEN FRAME SHALL BE CONSTRUCTED OF 2-BY-4-IN. CONSTRUCTION-GRADE LUMBER. THE 2-BY-4-IN. POSTS SHALL BE DRIVEN 1 FT. INTO THE GROUND AT FOUR CORNERS OF THE INLET AND THE TOP PORTION OF 2-BY-4-IN. FRAME ASSEMBLED USING THE OVERLAP JOINT SHOWN. THE TOP OF THE FRAME SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADS IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC.
4. WIRE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIC WITH WATER FULLY IMPOUNDED AGAINST IT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY TO THE FRAME.
5. GEOTEXTILE MATERIAL SHALL HAVE AN EQUIVALENT OPENING SIZE OF 20-40- SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY. IT SHALL EXTEND FROM TOP OF THE FRAME TO 18 INCHES BELOW THE INLET NOTCH ELEVATION. THE GEOTEXTILE SHALL OVERLAP ACROSS ON SIDE OF THE INLET SO THE ENDS OF THE CLOTH ARE NOT FASTENED TO THE SAME POST.
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 EARTH DIKES SHALL BE AT LEAST 6 INCHES HIGHER THAN THE TOP OF THE FRAME.

MAINTENANCE

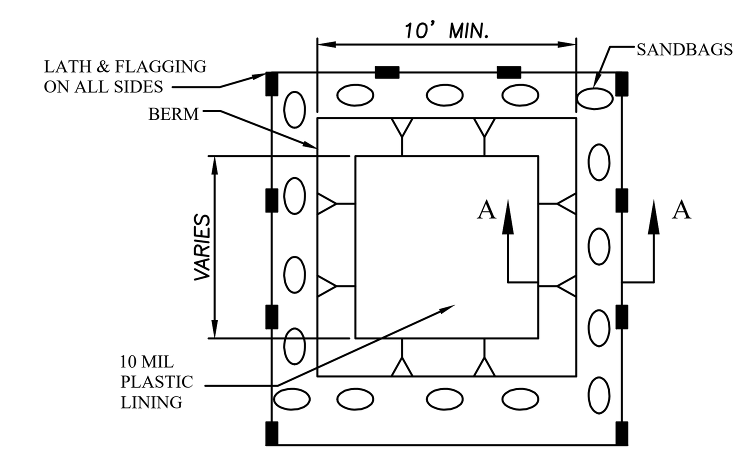
EFFECTIVE STORM DRAIN INLET PROTECTION COLLECTS SEDIMENT AND THEREFORE MUST BE CLEANED REGULARLY TO PREVENT CLOGGING AND SUBSEQUENT FLOODING CONDITIONS, PIPING, OR OVERTOPPING OF THE CONTROL STRUCTURES. SEDIMENT BARRIERS THAT SAG, FALL OVER, OR ARE NOT PROPERLY SECURED, MUST BE PROMPTLY REPAIRED OR REPLACED.

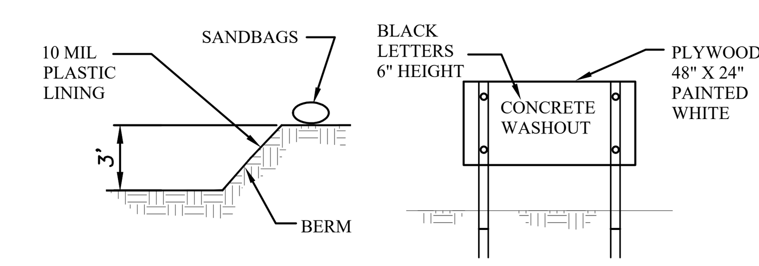
INLET PROTECTION SHALL BE INSPECTED WEEKLY AND AFTER EACH RAINFALL EVENT. AREAS WHERE THERE IS ACTIVE TRAFFIC SHALL BE INSPECTED DAILY. REPAIRS SHALL BE MADE AS NEEDED TO ASSURE THE PRACTICE IS PERFORMING AS INTENDED. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION IS ONE-HALF THE HEIGHT OF THE TRAP. SEDIMENT SHALL NOT BE WASHED INTO THE INLET. SEDIMENT SHALL BE REMOVED AND PLACED IN A LOCATION WHERE IT IS STABLE AND NOT SUBJECT TO EROSION.

ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, ALL FILTER MATERIAL AND COLLECTED SEDIMENT SHALL BE REMOVED AND PROPERLY DISPOSED.

IP — SPECIFICATIONS FOR GEOTEXTILE INLET PROTECTION

REFERENCE ONLY NOT TO SCALE





1. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE LOCATED A MINIMUM OF 50 FT FROM STORM DRAIN INLETS, OPEN DRAINAGE FACILITIES, AND WATERCOURSES. FACILITY SHALL BE LOCATED AWAY FROM CONSTRUCTION TRAFFIC OR ACCESS AREAS TO PREVENT DISTURBANCE OR TRACKING.
2. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED AS SHOWN ON THE DETAIL WITH A MINIMUM LENGTH AND MINIMUM WIDTH OF 10'.
3. LATH AND FLAGGING SHALL BE COMMERCIAL TYPE.
4. PLASTIC LINING MATERIAL SHALL BE A MINIMUM OF 10 MIL POLYETHYLENE SHEETING AND SHALL BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.
5. A SIGN SHALL BE INSTALLED ADJACENT TO WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES.
6. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL HAVE A TEMPORARY PIT OR BERMED AREAS OF SUFFICIENT VOLUME TO COMPLETELY CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT PROCEDURES.
7. WASHOUT OF CONCRETE TRUCKS SHALL BE PERFORMED IN DESIGNATED AREAS ONLY.
8. ONLY CONCRETE FROM MIXER TRUCK CHUTES SHOULD BE WASHED INTO CONCRETE WASHOUT.
9. CONCRETE WASHOUT FROM CONCRETE PUMPER BINS CAN BE WASHED INTO CONCRETE PUMPER TRUCKS AND DISCHARGED INTO DESIGNATED WASHOUT AREA OR PROPERLY DISPOSED OF OFFSITE.
10. CONCRETE WASTES SHALL BE ALLOWED TO HARDEN THEN BROKEN UP, REMOVED, AND PROPERLY DISPOSED OF IN ACCORDANCE WITH LOCAL REGULATION ON A REGULAR BASIS.
11. WHEN TEMPORARY WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHALL BE REMOVED AND DISPOSED OF. MATERIALS USED TO CONSTRUCT THE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF.

TCW — TEMP. CONCRETE WASHOUT FACILITY

STATE OF OHIO — MATTHEW L. WEBER — 61709 — REGISTERED — PROFESSIONAL ENGINEER

Reg. No.: 61709

REVISIONS

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Fairlawn, OH 44333
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MANN • PARSONS • GRAY ARCHITECTS

DATE: 01-06-2022

SWP3 DETAILS

PROJECT #: XXXX

THE ROCK

ROTHROCK ROAD
COPLEY, OHIO 44321

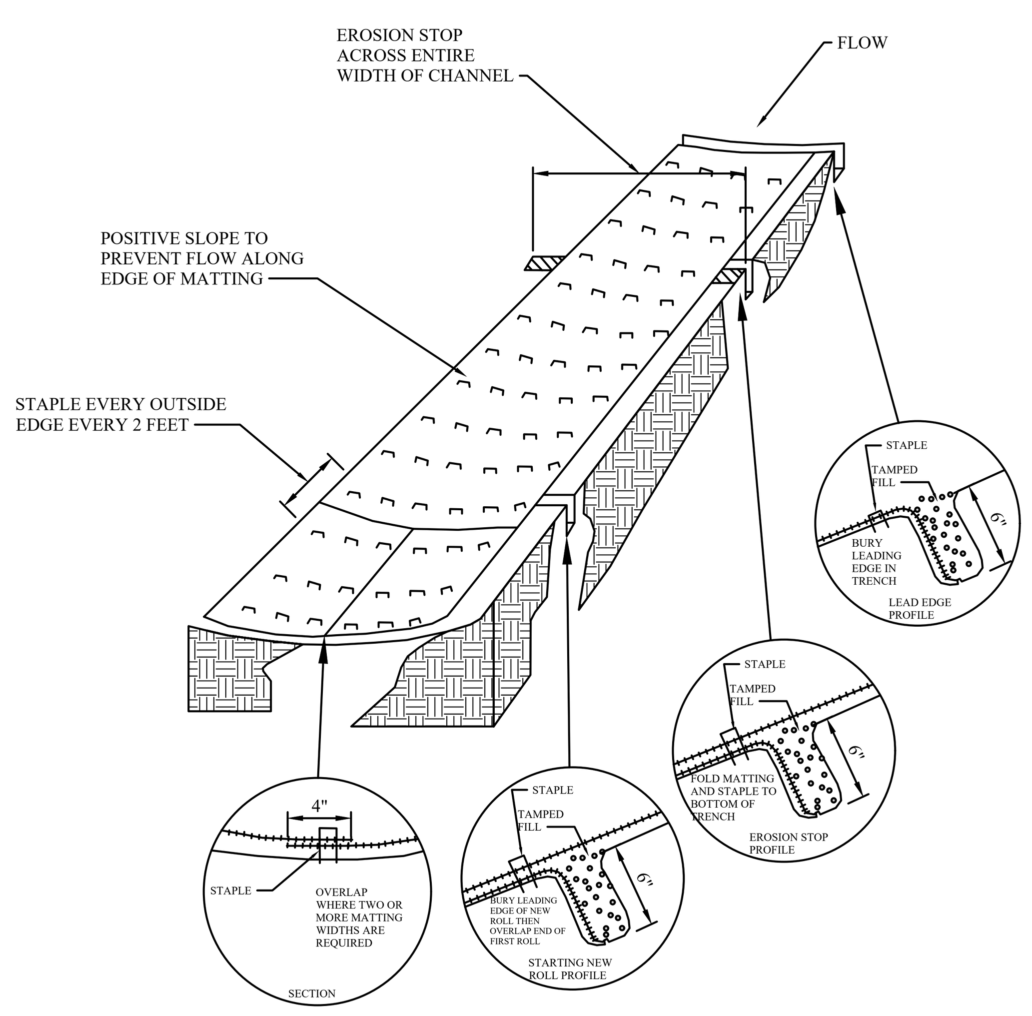
C10.0

WES No. 2019-332

STATE OF OHIO
MATTHEW L. WEBER
61709
REGISTERED
PROFESSIONAL ENGINEER

Reg. No.: 61709

REVISIONS



ECM

TEMPORARY ROLLED EROSION CONTROL PRODUCT DETAIL

REFERENCE ONLY NOT TO SCALE

SPECIFICATIONS FOR TEMPORARY ROLLED EROSION CONTROL PRODUCT

1. CHANNEL/SLOPE SOIL PREPARATION GRADE AND COMPACT AREA OF INSTALLATION, PREPARING SEEDBED BY LOOSENING 2"-3" OF TOPSOIL ABOVE FINAL GRADE. INCORPORATE AMENDMENTS SUCH AS LIME AND FERTILIZER INTO SOIL. REMOVE ALL ROCKS, CLODS, VEGETATION OR OTHER DEBRIS SO THAT INSTALLED RECP WILL HAVE DIRECT CONTACT WITH THE SOIL SURFACE.

2. CHANNEL/SLOPE SEEDING APPLY SEED TO SOIL SURFACE PRIOR TO INSTALLATION. ALL CHECK SLOTS, ANCHOR TRENCHES, AND OTHER DISTURBED AREAS MUST BE RESEEDED. REFER TO THE PERMANENT SEEDING SPECIFICATION FOR SEEDING RECOMMENDATIONS.

SLOPE INSTALLATION

3. EXCAVATE TOP AND BOTTOM TRENCHES (12"X6"). INTERMITTENT EROSION CHECK SLOTS (6"X6") MAY BE REQUIRED BASED ON SLOPE LENGTH. EXCAVATE TOP ANCHOR TRENCH 2'X3' OVER CREST OF THE SLOPE

4. IF INTERMITTENT EROSION CHECK SLOTS ARE REQUIRED, INSTALL RECP IN 6"X6" SLOT AT A MAXIMUM OF 30' CENTERS OR THE MID POINT OF THE SLOPE. RECP SHOULD BE STAPLED INTO TRENCH ON 12" CENTERS.

5. INSTALL RECP IN TOP ANCHOR TRENCH, ANCHOR ON 12" SPACING, BACKFILL AND COMPACT SOIL.

6. UNROLL RECP DOWN SLOPE WITH ADJACENT ROLLS OVERLAPPED A MINIMUM OF 3". ANCHOR THE SEAM EVERY 18". LAY THE RECP LOOSE TO MAINTAIN DIRECT SOIL CONTACT, DO NOT PULL TAUGHT.

7. OVERLAP ROLL ENDS A MINIMUM OF 12" WITH UPSLOPE RECP ON TOP FOR A SHINGLE EFFECT. BEGIN ALL NEW ROLLS IN AN EROSION CHECK SLOT IF REQUIRED; DOUBLE ANCHOR ACROSS ROLL EVERY 12".

8. INSTALL RECP IN BOTTOM ANCHOR TRENCH (12"X6"), ANCHOR EVERY 12". PLACE ALL OTHER STAPLES THROUGHOUT SLOPE AT 1 TO 2.5 PER SQUARE YARD DEPENDANT ON SLOPE. REFER TO MANUFACTURES ANCHOR GUIDE.

CHANNEL INSTALLATION

9. EXCAVATE INITIAL ANCHOR TRENCH (12"X6") ACROSS THE LOWER END OF THE PROJECT AREA.

10. EXCAVATE INTERMITTENT CHECK SLOTS (6"X6") ACROSS THE CHANNEL AT 30' INTERVALS ALONG THE CHANNEL.

11. EXCAVATE LONGITUDINAL CHANNEL ANCHOR SLOTS (4"X4") ALONG BOTH SIDES OF THE CHANNEL TO BURY THE EDGES. WHENEVER POSSIBLE EXTEND THE RECP 2'-3' ABOVE THE CREST OF CHANNEL SIDE SLOPES.

12. INSTALL RECP IN INITIAL ANCHOR TRENCH (DOWNSTREAM) ANCHOR EVERY 12", BACKFILL AND COMPACT SOIL.

13. ROLL OUT RECP BEGINNING IN THE CENTER OF THE CHANNEL TOWARD THE INTERMITTENT CHECK SLOT. DO NOT PULL TAUGHT. UNROLL ADJACENT ROLLS UPSTREAM WITH A 3" MINIMUM OVERLAP (ANCHOR EVERY 18") AND UP EACH CHANNEL SIDE SLOPE.

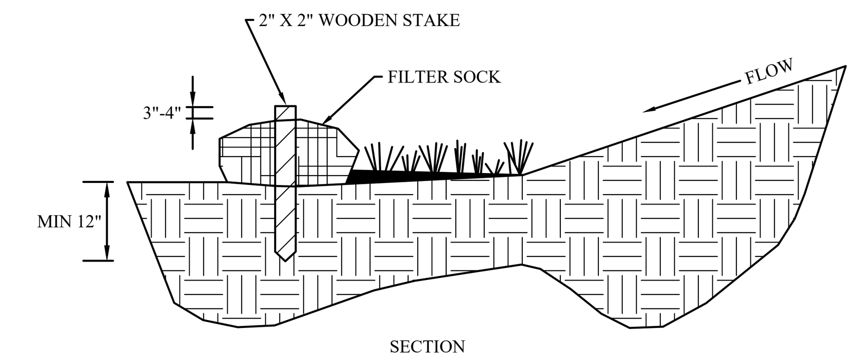
14. AT TOP OF CHANNEL SIDE SLOPES INSTALL RECP IN THE LONGITUDINAL ANCHOR SLOTS, ANCHOR EVERY 18".

15. INSTALL RECP IN INTERMITTENT CHECK SLOTS. LAY INTO TRENCH AND SECURE WITH ANCHORS EVERY 12", BACKFILL WITH SOIL AND COMPACT.

16. OVERLAP ROLL ENDS A MINIMUM OF 12" WITH UPSTREAM RECP ON TOP FOR A SHINGLING EFFECT. BEGIN ALL NEW ROLLS IN AN INTERMITTENT CHECK SLOT, DOUBLE ANCHOR EVERY 12".

17. INSTALL UPSTREAM END IN A TERMINAL ANCHOR TRENCH (12"X6"); ANCHOR EVERY 12", BACKFILL AND COMPACT.

18. COMPLETE ANCHORING THROUGHOUT CHANNEL AT 2.5 PER SQUARE YARD USING SUITABLE GROUND ANCHORING DEVICES (U SHAPED WIRE STAPLES, METAL GEOTEXTILE PINS, PLASTIC STAKES, AND TRIANGULAR WOODEN STAKES). ANCHORS SHOULD BE OF SUFFICIENT LENGTH TO RESIST PULLOUT. LONGER ANCHORS MAY BE REQUIRED IN LOOSE SAND OR GRAVELLY SOILS.



SECTION

1. 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 PARTICLES RANGING FROM $\frac{3}{8}$" TO 2"

2. FILTER SOCKS SHALL BE 3 OR 5 MIL CONTINUOUS, TUBULAR, HDPE $\frac{3}{8}$" KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST PASSING THE ABOVE SPECIFICATIONS FOR COMPOST PRODUCTS.

INSTALLATION:

3. 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.

4. 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.

5. FILTER SOCKS ARE NOT TO BE USED IN CONCENTRATE FLOW SITUATIONS OR IN RUNOFF CHANNELS.

MAINTENANCE:

6. ROUTINELY INSPECT FILER SOCKS AFTER EACH SIGNIFICANT RAIN. MAINTAINING FILTER SOCKS IN A FUNCTIONAL CONDITION AT ALL TIMES.

7. REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE FILTER SOCKS IN A FUNCTIONAL CONDITION AT ALL TIMES.

8. WHERE THE FILTER SOCK DETERIORATES OR FAILS, IT WILL BE REPAIRED OR REPLACED WITH A MORE EFFECTIVE ALTERNATIVE.

9. REMOVAL-FILTER SOCKS WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED IN SUCH A WAY AS TO FACILITATE AN NO OBSTRUCT SEEDINGS.

CFS

COMPOST FILTER SOCK DETAIL

REFERENCE ONLY NOT TO SCALE

SPECIFICATIONS FOR DUST CONTROL

ADHESIVES FOR DUST CONTROL			
ADHESIVE	WATER DILUTION (ADHESIVE WATER)	NOZZLE TYPE	APPLICATION RATE GAL./AC.
LATEX EMULSION	12.5:1	FINE	235
TESIN IN WATER ACRYLIC EMULSION (NO-TRAFFIC)	4:1	FINE	300
ACRYLIC EMULSION (NO-TRAFFIC)	7:1	COARSE	450
ACRYLIC EMULSION (TRAFFIC)	3.5:1	COARSE	350

1. VEGETATIVE COVER AND/MULCH- APPLY TEMPORARY OR PERMANENT SEEDING AND MULCH TO AREAS THAT WILL REMAIN IDLE FOR OVER 21 DAYS. SAVING EXISTING TREES AND LARGE SHRUBS WILL ALSO REDUCE SOIL AND AIR MOVEMENT ACROSS DISTURBED AREAS. SEE TEMPORARY SEEDING; PERMANENT SEEDING; MULCHING PRACTICES; AND TREE AND NATURAL AREA PROTECTION PRACTICES.

2. WATERING- SPRAY SITE WITH WATER UNTIL THE SURFACE IS WET BEFORE AND DURING GRADING AND REPEAT AS NEED, ESPECIALLY ON HAUL ROADS AND OTHER HEAVY TRAFFIC ROUTES. WATERING SHALL BE DONE AT A RATE THAT PREVENTS DUST BUT DOES NOT CAUSE SOIL EROSION. WETTING AGENTS SHALL BE UTILIZED ACCORDING TO MANUFACTURERS INSTRUCTIONS.

3. SPRAY-ON ADHESIVES-APPLY ADHESIVE ACCORDING TO THE FOLLOWING TABLE OR MANUFACTURERS' INSTRUCTIONS
4. STONE - GRADED ROADWAYS AND OTHER SUITABLE AREAS WILL BE STABILIZED USING CRUSHED STONE OR COARSE GRAVEL AS SOON AS PRACTICABLE AFTER REACHING AN INTERIM OR FINAL GRADE. CRUSHED STONE OR COARSE GRAVEL CAN BE USED AS A PERMANENT COVER TO PROVIDE CONTROL OF SOIL EMISSIONS.
5. BARRIERS- EXISTING WINDBREAK VEGETATION SHALL BE MARKED AND PRESERVED. SNOW FENCING OR OTHER SUITABLE BARRIER MAY BE PLACED PERPENDICULAR TO PREVAILING AIR CURRENTS AT INTERVALS OF ABOUT 15 TIMES THE BARRIER HEIGHT TO CONTROL AIR CURRENTS AND BLOWING SOIL
6. CALCIUM CHLORIDE - THIS CHEMICAL MAY BE APPLIED BY MECHANICAL SPREADER AS LOOSE, DRY GRANULES OR FLAKES AT A RATE THAT KEEPS THE SURFACE MOIST BUT NOT SO HIGH AS TO CAUSE WATER POLLUTION OR PLANT DAMAGE. APPLICATION RATES SHOULD BE STRICTLY IN ACCORDANCE WITH SUPPLIERS' SPECIFIED RATES.
7. OPERATION AND MAINTENANCE - WHEN TEMPORARY DUST CONTROL MEASURES ARE USED; REPETITIVE TREATMENT SHOULD BE APPLIED AS NEEDED TO ACCOMPLISH CONTROLS.

STREET CLEANING- PAVED ARES THAT HAVE ACCUMULATED SEDIMENT FROM CONSTRUCTION SHOULD BE CLEANED DAILY, OR AS NEED, UTILIZING A STREET SWEEPER OR BUCKET-TYPE ENDLOADER OR SCRAPER.

SPECIFICATIONS FOR MULCHING

1. MULCH AND OTHER APPROPRIATE VEGETATIVE PRACTICES SHALL BE APPLIED TO DISTURBED AREAS WITHIN 7 DAYS OF GRADING IF THE AREA IS TO REMAIN DORMANT (UNDISTURBED) FOR MORE THAN 21 DAYS OR ON AREAS AND PORTIONS OF THE SITE WHICH CAN BE BROUGHT TO FINAL GRADE.

2. MULCH SHALL CONSIST OF ONE OF THE FOLLOWING:
   - STRAW - 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 STRAW 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 PLACE TWO 45-LB. BALES OF STRAW IN EACH SECTION.
   - HYDROSEEDERS - WOOD CELLULOSE FIBER SHOULD BE USED AT 2,000 LB./AC. OR 46 LB./1,000 SQ. FT.
   - OTHER - ACCEPTABLE MULCHES INCLUDE MULCH MATTINGS AND ROLLED EROSION CONTROL PRODUCTS APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS OR WOOD MULCH/CHIPS APPLIED AT 10-20 TONS/AC.

3. MULCH ANCHORING - MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR RUNOFF. THE FOLLOWING ARE ACCEPTABLE METHODS FOR ANCHORING MULCH:
   - MECHANICAL - USE A DISK, CRIMPER, 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 BE LEFT GENERALLY LONGER THAN 6 INCHES.
   - MULCH NETTINGS - USE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, FOLLOWING ALL PLACEMENT AND ANCHORING REQUIREMENTS. USE IN AREAS OF WATER CONCENTRATION AND STEEP SLOPES TO HOLD MULCH IN PLACE.
   - SYNTHETIC BINDERS - FOR STRAW MULCH, SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70, PETROSET, TERRA TACK, OR EQUAL MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER. ALL APPLICATIONS OF SYNTHETIC BINDERS MUST BE CONDUCTED IN SUCH A MANNER WHERE THERE IS NO CONTACT WITH WATER OF THE STATE.
   - 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 LBS./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.

SPECIFICATIONS FOR SODDING

MATERIALS
1. SOD SHALL BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 48 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD SHALL BE INSPECTED AND APPROVED PRIOR TO INSTALLATION.

2. THE SOD SHALL BE KEPT MOIST AN COVERED DURING HAULING AND PREPARATION FOR PLACEMENT.

3. SOD SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 0.75 INCHES, PLUS OR MINUS 0.25 INCHES, AT THE TIME OF CUTTING. MEASUREMENTS FOR THICKNESS SHALL EXCLUDE TOP GROWTH AND THATCH.

SITE PREPARATION
1. 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 SHALL NOT BE CONDUCTED ON SLIP-PRONE AREAS WHERE SOIL PREPARATION SHOULD BE LIMITED ONLY TO WHAT IS NECESSARY FOR ESTABLISHING VEGETATION.

2. THE AREA SHALL BE GRADED AND TOPSOIL SPREAD WHERE NEEDED.

3. SOIL AMENDMENTS

   LIME- AGRICULTURAL GROUND LIMESTONE SHALL BE APPLIED TO ACIDIC SOILS 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 2 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 INCHES.

4. BEFORE LAYING SOD, THE SURFACE SHALL BE UNIFORMLY GRADED AND CLEARED OF ALL DEBRIS, STONES AND CLODS LARGER THAN 3-IN. DIAMETER.

SOD INSTALLATION
1. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURES, THE SOIL SHALL BE LIGHTLY IRRIGATED IMMEDIATELY BEFORE LAYING THE SOD.

2. SOD SHALL NOT BE PLACED ON FROZEN SOIL.

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 THAT WOULD DRY THE ROOTS.

4. ON SLOPING AREAS WHERE EROSION MAY BE A PROBLEM, SOD SHALL BE LAID WITH THE LONG EDGE PARALLEL TO THE CONTOUR AND STAGGERED JOINTS. THE SOD SHALL BE SECURED WITH PEGS 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 ARE THOROUGHLY WET. THE OPERATIONS OF LAYING TAMPING AND IRRIGATING FOR ANY PIECE OF SOD SHALL BE COMPLETED WITHIN 8 HOURS.

MAINTENANCE
1. IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHALL BE PERFORMED DAILY OR AS OFTEN AS NECESSARY DURING THE FIRST WEEK WITH SUFFICIENT QUANTITIES TO MAINTAIN MOIST SOIL TO A DEPTH OF 4-6 INCHES.

2. AFTER THE FIRST WEEK, SOD SHALL BE WATERED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE AND ENSURE ESTABLISHMENT.

3. THE FIRST MOWING SHALL NOT BE ATTEMPTED UNTIL SOD IS FIRMLY ROOTED.

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