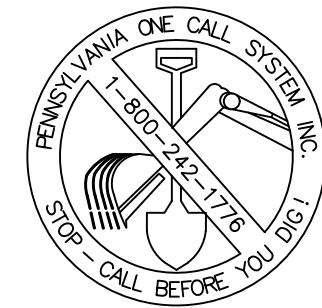


# SUBURBAN PARK - PHASE 1

## CONTRACT 2020-C4

### DECEMBER 20, 2022



BEFORE YOU DIG ANYWHERE IN  
PENNSYLVANIA CALL 1-800-242-1776  
NON-MEMBERS MUST BE CONTACTED DIRECTLY

**GENERAL UTILITY & ACT 38 INFORMATION:**

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

CONTRACTOR SHALL NOTIFY THE PA. ONE CALL SYSTEM NOT LESS THAN THREE (3) DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL PLACE THE CALL AND REFERENCE THE SERIAL NUMBER GIVEN AND PROVIDE AN APPROXIMATE DATE AND TIME THAT DIGGING WILL OCCUR. THE ONE CALL SYSTEM WILL AGAIN NOTIFY THE PUBLIC UTILITIES IN THE AREA. PUBLIC UTILITIES WILL THEN COORDINATE DIRECTLY WITH THE CONTRACTOR FOR ACTUAL FIELD LOCATIONS.  
PA. ONE CALL SYSTEM: PH: 1-800-242-1776  
SERIAL NO.: 2020302515

**SANITARY:** UNIVERSITY AREA JOINT AUTHORITY  
1576 SPRING VALLEY ROAD  
STATE COLLEGE, PA 16801  
PH: (814) 238-5361

**STORM:** FERGUSON TOWNSHIP  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
PH: (814) 238-4651

**WATER:** STATE COLLEGE BOROUGH WATER AUTHORITY  
1201 WEST BRANCH ROAD  
STATE COLLEGE, PA 16801  
PH: (814) 238-6766

**GAS:** COLUMBIA GAS OF PENNA. INC.  
2550 CAROLEAN INDUSTRIAL DRIVE  
STATE COLLEGE, PA 16801  
PH: (814) 278-5842; WEEKEND: (888) 460-4332

**ELECTRIC:** WEST PENN POWER COMPANY  
2800 EAST COLLEGE AVENUE  
STATE COLLEGE, PA 16801  
PH: (814) 231-5338/(800) 255-3443

**CABLE:** COMCAST  
250 REESE ROAD  
STATE COLLEGE, PA 16801  
PH: (814) 238-8510/(740) 773-4123

**PHONE:** VERIZON PENNSYLVANIA, INC.  
224 SOUTH ALLEN STREET  
STATE COLLEGE, PA 16801  
PH: (814) 231-6528; AFTER HOURS (800) 275-2355

WINDSTREAM  
441 SCIENCE PARK ROAD  
STATE COLLEGE, PA 16803  
PH: (814) 272-2685

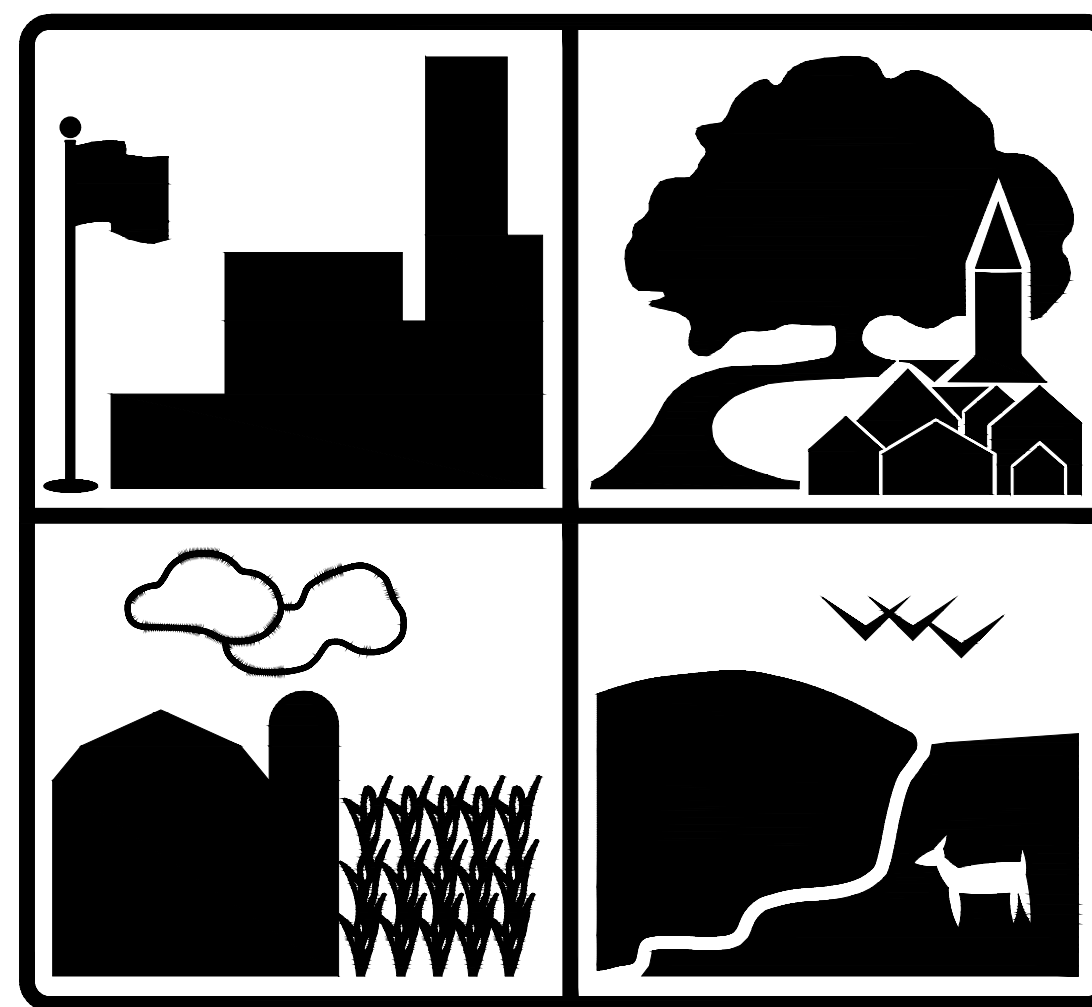
ALLEGHENY COMMUNICATIONS CONNECT (FIBER)  
100 BRUSH RUN ROAD  
GREENSBURG, PA 15601  
PH: (866) 463-8222

FIRST ENERGY TELECOM SERVICES, INC.  
2800 POTTSVILLE PIKE, P.O. BOX 15164  
READING, PA 19612-5164  
PH: (877) 611-2111

ALL TEL COMMUNICATIONS  
P.O. BOX 239  
WARRIORS MARK, PA 16877  
PH: (814) 632-3501

PENN STATE TELECOMMUNICATIONS AND NETWORKING SERVICES  
110 UNIVERSITY SUPPORT BUILDING 2  
UNIVERSITY PARK, PA 16802-1013  
PH: (814) 863-5419 (JIM REIGH)

## FERGUSON TOWNSHIP



## PUBLIC WORKS & ENGINEERING

3147 RESEARCH DRIVE, STATE COLLEGE, PA 16801  
PH: 814-238-4651  
FAX: 814-238-3454  
WWW.TWP.FERGUSON.PA.US

DRAWING INDEX

1	COVER
2	GENERAL NOTES & PROJECT LOCATION
3	SUMMARY OF QUANTITIES
4	PARCEL BOUNDARY MAP EXISTING CONDITIONS
5	PROPOSED PLAN
6	GRADING PLAN
7	PLANTING PLAN
8-10	DETAILS
11	BRIDGE DETAILS
12	EXISTING PROFILE
13	PROPOSED PROFILE
14-23	PROPOSED CROSS-SECTIONS

ALSO PLANS:

EROSION & SEDIMENTATION POLLUTION CONTROL PLANS

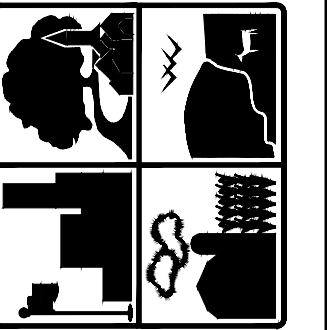
ES100	COVER
ES101	EROSION & SEDIMENTATION POLLUTION CONTROL NOTES
ES102	EXISTING CONDITIONS PLAN
ES103AES-103B	EROSION & SEDIMENTATION POLLUTION CONTROL PLAN
ES104-ES107	EROSION AND SEDIMENTATION POLLUTION CONTROL DETAILS

POST-CONSTRUCTION STORMWATER MANAGEMENT PLANS & STORMWATER MANAGEMENT SITE PLANS

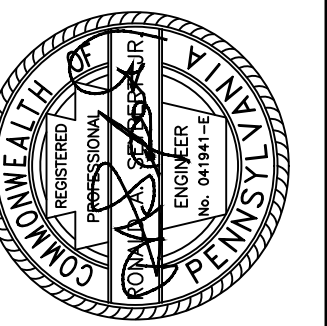
PCSM100A	COVER
PCSM100B	PROJECT PHASING PLAN
PCSM101	GENERAL NOTES
PCSM102	PROJECT BOUNDARY MAP
PCSM103	PCSM EXISTING CONDITIONS PLAN
PCSM104	PROPOSED CONDITIONS PLAN
PCSM105-PCSM106	PCSM DETAILS

FERGUSON TOWNSHIP BOARD OF SUPERVISORS

LISA STRICKLAND	CHAIR
PATRICIA STEPHENS	VICE CHAIR
LAURA DININNI	BOARD MEMBER
JEREMIE THOMPSON	BOARD MEMBER
COREY GRACIE-GRIFFIN	BOARD MEMBER
CENTRICE MARTIN	SECRETARY, TOWNSHIP MANAGER



**FERGUSON TOWNSHIP**  
DEPT. OF PUBLIC WORKS & ENGINEERING  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
PHONE: 814-238-4651  
FAX: 814-238-3454  
www.twp.ferguson.pa.us



REV.	DATE	REVISION DESCRIPTION

SUBURBAN PARK - PHASE 1  
CONTRACT 2020-C4

**COVER**

DESIGNED BY: RJS	1
DRAWN BY: LMS	
CHECKED BY: RAS	
DATE: 12-20-2022	

**PROJECT NOTES:**

- OWNER: FERGUSON TOWNSHIP  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
(814) 238-4651
- ACREAGE OF SITE: 12.16 ACRES  
PHASE 1 DEVELOPMENT: 4.13 ACRES
- THERE ARE NO KNOWN WETLANDS ONSITE.
- LATITUDE AND LONGITUDE: 40°48'38.87"N 77°53'13.38"W
- ELEVATIONS AND HORIZONTAL CONTROL ARE BASED ON NAD83 PENNSYLVANIA STATE PLANES, NORTH ZONE, US FOOT DATUM.  
CONTACT FERGUSON TOWNSHIP ENGINEERING DEPT. FOR PROJECT TRAVERSE POINT LOCATIONS/INFORMATION.
- SOURCE OF TITLE  
DB 781, PG 657  
DB 304, PG 744  
DB 2183, PG 521  
DB 2297, PG 649 (PSU EASEMENT)

**UTILITY NOTES:**

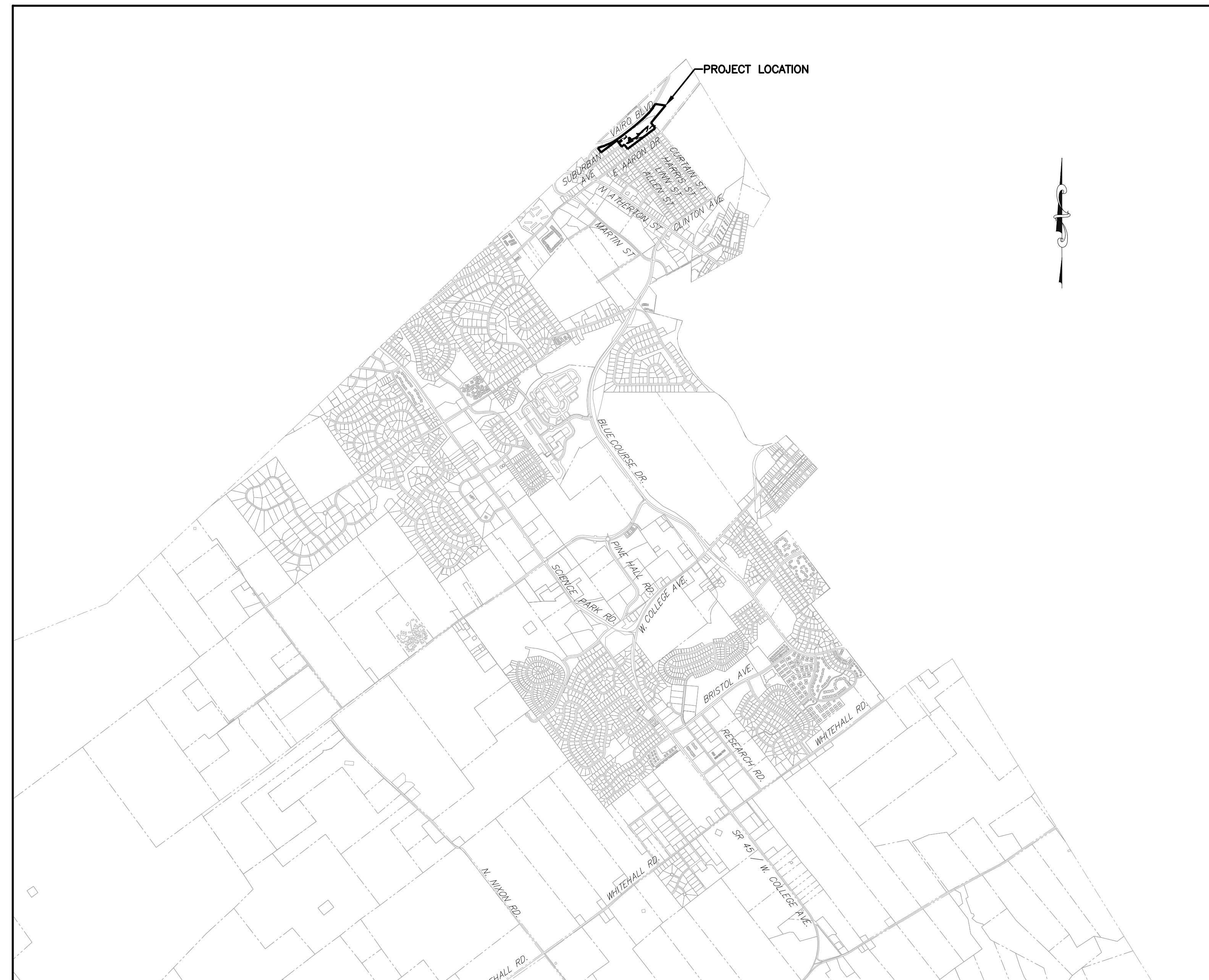
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY AND ARE BASED ON RECORDS OF THE VARIOUS FACILITY OWNERS AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE UTILITY INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST NOTIFY THE PA ONE-CALL SYSTEM AT LEAST 3 DAYS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
- THE CONTRACTOR SHALL DIG TEST PITS AT EXISTING CONFLICTS SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT PLAN REVISIONS AS REQUIRED.
- ALL EXISTING ON-SITE UTILITIES SHALL REMAIN FUNCTIONAL UNLESS DESIGNATED FOR REMOVAL OR ABANDONMENT.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE RELOCATION OF ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
- NO UTILITY SERVICE MAY BE DISCONNECTED WITHOUT PRIOR APPROVAL OF THE OWNERS REPRESENTATIVE.

**CONSTRUCTION NOTES:**

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING PUBLICATIONS:  
FERGUSON TOWNSHIP CHAPTER 21 – "STREETS AND SIDEWALKS"  
FERGUSON TOWNSHIP CHAPTER 26 – "WATER (STORMWATER MANAGEMENT)"  
PENNDOT PUBLICATION 408 / 2020 (CHANGE No. 4)  
PENNDOT PUBLICATIONS 34, 35, 37, AND 38 (APPROVED CONSTRUCTION MATERIALS)  
PENNDOT PUBLICATION 72M – STANDARDS FOR ROADWAY CONSTRUCTION  
PENNDOT PUBLICATION 213M – WORK ZONE TRAFFIC CONTROL  
PENNDOT PUBLICATION 70M – GUIDELINES FOR DESIGN OF LOCAL ROADS AND STREETS  
PENNDOT PUBLICATION 111M – TC 8700 TRAFFIC SIGNING STANDARDS  
PENNDOT PUBLICATION 236M – HANDBOOK OF APPROVED SIGNS  
PENNDOT PUBLICATION 13M – DESIGN MANUAL 2 – HIGHWAY DESIGN  
PENNDOT PUBLICATION 584 – PENNDOT DRAINAGE MANUAL  
PENNSYLVANIA CODE, TITLE 67, CHAPTERS 441 AND 459  
PENNDOT PUBLICATION 148 – TC 8800 TRAFFIC STANDARDS
- CONSTRUCTION STANDARDS:  
CONSTRUCTION DETAILS, OTHER THAN THOSE INDICATED ON THE PLAN, ARE ON THE FOLLOWING PENNDOT PUBLICATIONS 72M STANDARD DRAWINGS:  
RC-10M CLASSIFICATION OF EARTHWORK  
RC-13M PAY LIMIT OF SUBBASE  
RC-27M PLAIN CONCRETE PAVEMENT  
RC-28M OVERLAY TRANSITIONS AND PAVING NOTCHES  
RC-31M ENDWALLS  
RC-32M SLOPE PIPE FITTINGS, PIPE CONNECTORS AND CONCRETE COLLAR FOR PIPE EXTENSION  
RC-33M END SECTIONS FOR PIPE CULVERTS  
RC-40M SLOPE PROTECTION  
RC-45M INLET TOPS, GRATES AND FRAME  
RC-46M INLET BOXES  
RC-67M CURB RAMPS AND SIDEWALKS  
RC-72M INLET AND OUTLET PROTECTION  
RC-73M CHANNEL AND SLOPE PROTECTION  
RC-77M ROCK CONSTRUCTION ENTRANCE

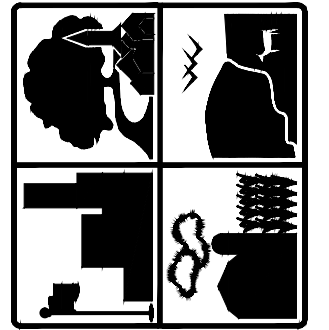
**TRAFFIC CONTROL NOTES:**

- MAINTAIN TRAFFIC IN ACCORDANCE WITH THE LATEST EDITION OF PENNDOT PUBLICATION 213M (67 PA CODE, CH. 212) WORK ZONE TRAFFIC CONTROL GUIDELINES.
- SHORT-TERM WORK ZONE TRAFFIC CONTROL SHALL BE REMOVED AT THE END OF EACH WORK DAY.
- DO NOT HAVE TRAVEL LANE DROP-OFFS/OPEN EXCAVATIONS DURING NON-WORKING HOURS.
- THE POSTED SPEED LIMIT ON SUBURBAN AVE IS 25 MPH.
- PROVIDE ORANGE REFLECTIVE FENCING WITH DELINEATION DEVICES AROUND AREAS OF OPEN EXCAVATION TO DELINEATE FOR PEDESTRIAN TRAFFIC.

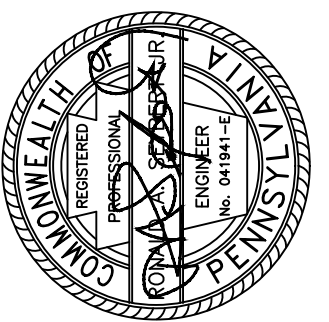


**PROJECT LOCATION MAP**

1"=2000'



**FERGUSON TOWNSHIP**  
DEPT. OF PUBLIC WORKS & ENGINEERING  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
PHONE: 814-238-4651  
FAX: 814-238-3454  
www.twp.ferguson.pa.us



REV.	DATE	REVISION DESCRIPTION

SUBURBAN PARK-PHASE 1  
CONTRACT 2020-C4  
**GENERAL NOTES &  
PROJECT LOCATION**

DESIGNED BY: RTS	<b>2</b>
DRAWN BY: LMS	
CHECKED BY: RAS DATE: 12-20-2022	

PATH:\PUBLIC\WORKS\PISTAFF\CAPITAL PROJECTS\2020 PROJECTS\2020-C4 SUBURBAN PARK PHASE 1.DWG\2020-C4 SUBURBAN PARK.DWG SHEET:3 QUANTITIES SAVED:1/19/2022 3:51 PM

ITEM No. UNIT	DESCRIPTION	QTY
0201 0001 LS	CLEARING AND GRUBBING	1
0203 0001 CY	CLASS 1 EXCAVATION	2033
0204 0150 CY	CLASS 4 EXCAVATION	19
0212 0014 SY	GEOTEXTILE, CLASS 4, TYPE A	237
0311 0424 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, WMA BASE COURSE, PG 64-22, 0.3 TO < 3 MILLION ESALS, 25 MM MIX, 5" DEPTH	20
0350 0104 SY	SUBBASE 4" DEPTH (NO. 2A) (FOR TRAIL, PLAY EQUIPMENT, KIOSK AREA, AND PAVILION)	1652
0411 0485 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, WMA WEARING COURSE, PG 64-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1-1/2" DEPTH, SRL-L	20
0413 0238 SY	SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64S-22, 0.3 TO < 3 MILLION ESALS, 12.5 MM MIX, 3" DEPTH, SRL-L	1358
0601 0355 LF	24" THERMOPLASTIC PIPE, GROUP III, 8'-2' FILL	35
0605 2620 EA	TYPE D-W END WALL	1
0605 1300 EA	CLEANING DRAINAGE STRUCTURES	1
0605 2401 EA	MANHOLE FRAME AND COVER	1
0608 0001 LS	MOBILIZATION	1
4676 0001 SY	CEMENT CONCRETE SIDEWALK, 4" DEPTH (MODIFIED)	241
4676 0002 SY	CEMENT CONCRETE SIDEWALK, 6" DEPTH (MODIFIED)	53
0686 0030 LS	CONSTRUCTION SURVEYING, TYPE B, MODIFIED	1
0703 0020 CY	NO. # 1 COARSE AGGREGATE	27
0703 0025 CY	NO. 57 COARSE AGGREGATE	48
0803 0001 CY	PLACING STOCKPILED TOPSOIL	2314
0804 0003 LB	SEEDING AND SOIL SUPPLEMENTS - FORMULA D, INCLUDING MULCH	405
0804 0004 LBS	SEEDING - FORMULA E, INCLUDING MULCH	110
0805 0044 SY	MULCHING - SPENT MUSHROOM SOIL COMPOST	2
0806 0140 SY	PERMANENT ROLLED EROSION CONTROL PRODUCT, TYPE 5A	1680
4808 3033 EA	SUGAR MAPLE - (2" CAL. B&B) (MODIFIED)	20
4808 3131 EA	RIVER BIRCH - (2" CAL. B&B) (MODIFIED)	5
4808 3230 EA	BLACK GUM - (6' HT. B&B) (MODIFIED)	6
4808 3332 EA	PIN OAK - (2" CAL. B&B) (MODIFIED)	3

ITEM No. UNIT	DESCRIPTION	QTY
4808 3451 EA	AMERICAN HORNBEAM - (1-1/4" CAL. B&B) (MODIFIED)	4
4808 3463 EA	AMERICAN REDBUD (6' HT. B&B) (MODIFIED)	4
4808 3469 EA	AUTUMN BRILLIANCE SERVICEBERRY- (2" CAL. B&B) (MODIFIED)	4
4808 3664 EA	SUGAR TYME CRAB - (2" CAL. B&B) (MODIFIED)	20
4808 3803 EA	WHITE SPRUCE - (6' HT. B&B) (MODIFIED)	2
4808 3843 EA	WHITE PINE - (6' HT. B&B) (MODIFIED)	10
4808 3871 EA	DOUGLAS FIR - (6' HT. B&B) (MODIFIED)	2
4808 3929 EA	DAWN REDWOOD - (2" CAL. B&B) (MODIFIED)	5
4809 0001 SY	SODDING (MODIFIED)	1373
4811 0003 LF	TEMPORARY PROTECTIVE FENCE (MODIFIED)	1907
0850 0031 CY	ROCK, CLASS R-3	54
0850 0032 CY	ROCK, CLASS R-4	22
0850 0033 CY	ROCK, CLASS R-5	36
0867 0012 LF	COMPOST FILTER SOCK, 12" DIAMETER	470
0867 0018 LF	COMPOST FILTER SOCK, 18" DIAMETER	596
0962 1000 LF	4" WHITE WATERBORNE PAVEMENT MARKINGS	18
0962 1030 EA	WHITE WATERBORNE PAVEMENT LEGEND, "HANDICAP SYMBOL", 3'-3" X 2'-11"	1
4931 0003 SF	POST MOUNTED SIGNS, TYPE B, STEEL SQUARE POST (MODIFIED)	10
9000 0001 LS	16'X20' RIGID PLY PAVILION	1
9000 0002 EA	6' PICNIC TABLE FOR PAVILION	1
9000 0003 EA	8' ADA PICNIC TABLE FOR PAVILION	1
9000 0004 EA	HORSESHOE PITS	2
9000 0005 EA	PARK BENCH	3
9000 0006 EA	BRIDGE (25' LONG X 8' WIDE) (INCLUDING INSTALLATION)	1
9000 0007 EA	BRIDGE (30' LONG X 8' WIDE) (INCLUDING INSTALLATION)	1

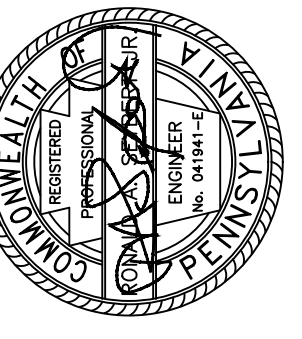
ITEM No. UNIT	DESCRIPTION	QTY
9000 0008 EA	BRIDGE (40' LONG X 8' WIDE) (INCLUDING INSTALLATION)	1
9000 0009 EA	BRIDGE (45' LONG X 8' WIDE) (INCLUDING INSTALLATION)	1
9000 0010 EA	BRIDGE ABUTMENT DESIGN AND P.E. STAMP	4
9000 0011 EA	BOLLARDS (BLACK, 6-5/8")	6
9000 0012 EA	INFORMATION KIOSK	1
9000 0013 EA	EXOFIT 2-PERSON LEG PRESS XO-133 (INCLUDES INSTALLATION)	1
9000 0014 EA	EXOFIT 4-PERSON COMBO XO-049 (INCLUDES INSTALLATION)	1
9000 0015 EA	EXOFIT CHEST PRESS-LAT PULL XO-035 (INCLUDES INSTALLATION)	1
9000 00016 EA	5' DUAL-SIDE ENTRY BIKE RACK (KIOSK AREA)	1
9000 0017 LF	4' HIGH FENCE FOR BASEBALL OUTFIELD, VINYL COATED BLACK W/ 2-42" WIDE GATES	500
9000 0018 LF	8' HIGH FENCE FOR BASEBALL DUGOUT FENCE, VINYL COATED BLACK	98
9000 0019 LF	12' HIGH BACKSTOP WITH HOOD, VINYL COATED BLACK	30
9000 0020 LF	CORRUGATED POLYPROPYLENE FENCE CAP PROTECTION	500
9000 0021 EA	FOUL POLE	2
9000 0022 LS	DEMOLITION (BASKETBALL COURT, CULVERT, PED. BRIDGE, PLAY EQUIP.)	1
9000 0023 EA	TRASH/RECYCLING RECEPTACLE	4
9000 0024 CY	SAND (3" THICKNESS)	20
9000 0025 EA	SWITCHGRASS PLUGS	2009
9000 0026 EA	RED PINE (6' MIN. HT.)	10
9000 0027 EA	HORSE CHESTNUT (2" CAL. B&B)	5
9000 0028 EA	BASSWOOD (2" CAL. B&B)	5
9000 0029 SY	SEEDING AND MULCHING, FORMULA B	6337
9000 0030 EA	RESET PLAYER BENCH	2
9000 0031 LF	FENCE WEED BARRIER	500



**FERGUSON TOWNSHIP**

DEPT. OF PUBLIC WORKS & ENGINEERING

3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
PHONE: 814-238-4651  
FAX: 814-238-3454  
www.twp.ferguson.pa.us



REV.	DESCRIPTION	DATE

SUBURBAN PARK—PHASE 1  
CONTRACT 2020—04

**SUMMARY OF  
QUANTITIES**

DESIGNED BY: RTS

DRAWN BY: LMS

CHECKED BY: RAS

DATE: 12-20-2022

EXISTING ADJOINERS

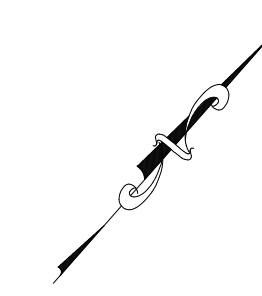
ADJOINER	OWNER	RECORD BOOK	TAX PARCEL	LAND USE
A	SCOTT L. LUCCHESI	RB 1227 PG 1000	24-011-001D	SINGLE FAMILY RESIDENTIAL
B	WILLIAM T. YOST	RB 1999 PG 293	24-011-001	SINGLE FAMILY RESIDENTIAL
C	VLADIMIR GETMAN LEONINA C. GETMAN	RB 929 PG 397	24-011-039	SINGLE FAMILY RESIDENTIAL
D	TAMMY G. DAVIS GRANT E. DAVIS	RB 673 PG 414	24-011-037	SINGLE FAMILY RESIDENTIAL
E	DAVE A. BERTOCCHI	RB 961 PG 831	24-011-040	SINGLE FAMILY RESIDENTIAL
F	THOMAS C. WAREHAM	RB 1498 PG 782	24-011-041	SINGLE FAMILY RESIDENTIAL
G	MARK BATDORF	RB 2189 PG 694	24-011-038	SINGLE FAMILY RESIDENTIAL
H	JAMSHID K. ASSADINA PATRICIA L. ASSADINA	RB 2192 PG 557	24-011-023	SINGLE FAMILY RESIDENTIAL
I	DALE E. BAKER DORIS L. BAKER	DB 378 PG 932	24-011-024	SINGLE FAMILY RESIDENTIAL
J	JONATHAN K. NELSON	RB 2176 PG 134	24-011-025	SINGLE FAMILY RESIDENTIAL
K	KEVIN J. HARTMAN THOMAS R. GATES	RB 2167 PG 961	24-011-026	SINGLE FAMILY RESIDENTIAL
L	MICHAEL J. KAUFFMAN DEBORAH M. KAUFFMAN	DB 378 PG 913	24-011-027	SINGLE FAMILY RESIDENTIAL
M	THOMAS C. WAREHAM	RB 2033 PG 400	24-011-028	SINGLE FAMILY RESIDENTIAL
N	DAVID C. ROTHROCK MICHELE D. ROTHROCK	RB 531 PG 64	24-011-029	SINGLE FAMILY RESIDENTIAL
O	JOSEPH J. GHERARDI	RB 2044 PG 154	24-011-030	SINGLE FAMILY RESIDENTIAL
P	KEITH R. FARWELL LYNETTE D. FARWELL	RB 1762 PG 1043	24-011-031	SINGLE FAMILY RESIDENTIAL
Q	MARK F. CHAPLIN DRENA S. CHAPLIN	RB 536 PG 1008	24-011-032	SINGLE FAMILY RESIDENTIAL
R	JAMES CAMPBELL PLOWDEN YURI PLOWDEN	RB 822 PG 633	24-011-033	SINGLE FAMILY RESIDENTIAL
S	SANDRA P. STOCKER	DB 296 PG 427	24-011-034	SINGLE FAMILY RESIDENTIAL
T	BRENDAN DERRICK TAFF	RB 2128 PG 595	24-011-035	SINGLE FAMILY RESIDENTIAL

EXISTING LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N 53° 03' 50" W	10.00
L2	S 53° 15' 40" W	90.00
L3	N 45° 20' 28" E	99.32

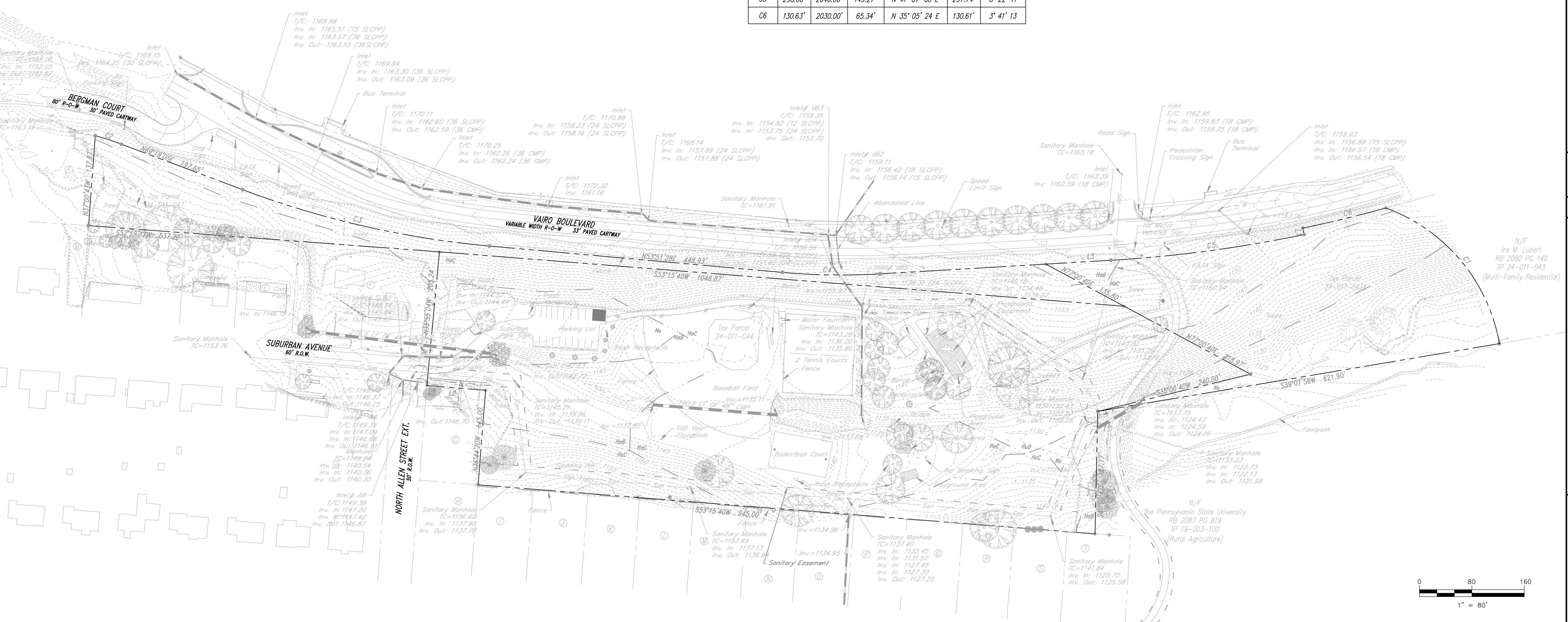
EXISTING CURVE TABLE						
CURVE	LENGTH	RADIUS	TANGENT	CHORD DIRECTION	CHORD	DELTA
C1	282.92'	270.00'	156.00'	S 81° 10' 45" E	270.15'	60° 02' 14"
C2	42.03'	480.00'	21.03'	N 66° 47' 35" E	42.02'	5° 01' 01"
C3	388.14'	1440.00'	195.25'	N 61° 34' 46" E	386.97'	15° 26' 37"
C4	148.64'	1000.00'	74.46'	N 49° 35' 58" E	148.51'	8° 31' 00"
C5	298.00'	2040.00'	149.27'	N 41° 07' 06" E	297.74'	8° 22' 11"
C6	130.63'	2030.00'	65.34'	N 35° 05' 24" E	130.61'	3° 41' 13"

LEGEND

- Existing Text
- Control Point
- Guy Wire
- Utility Pole
- Sign
- Manhole
- Water Valve
- Gas Valve
- Mailbox
- Fire Hydrant
- Evergreen Tree
- Deciduous Tree
- Bench
- Trash/Recycling Receptacle
- Bollards
- Fence
- Right-of-Way Line
- Easement Line
- Property Line
- Water Line
- Storm Sewer
- Sanitary Sewer
- Underground Electric
- Overhead Electric
- Underground Telecomm
- Gas Line
- Major Contour
- Minor Contour
- 100 Year (1%) Floodplain
- Soils
- Tree Drip Line



PATH:\PUBLIC WORKS\PISTAFF\CAPITAL PROJECTS\2020 PROJECTS\2020-C4 SUBURBAN PARK PHASE 1.DWG-2020-C4 SUBURBAN PARK SHEET 14 OF 2023 3:51 PM



DESIGNED BY: RJS  
DRAWN BY: LMS  
CHECKED BY: RAS  
DATE: 12-20-2022

SUBURBAN PARK-PHASE 1  
CONTRACT 2020-C4

## PARCEL BOUNDARY MAP EXISTING CONDITIONS

4

REVISION DESCRIPTION  
DATE  
REV.

Ira M. Lubert  
RB 2092 PG 140  
TP 24-011-043  
(Multi-Family Residential)

The Pennsylvania State University  
RB 2087 PG 819  
TP 19-003-100  
(Rural Agriculture)

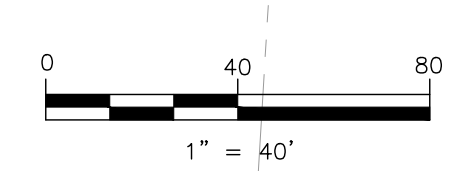
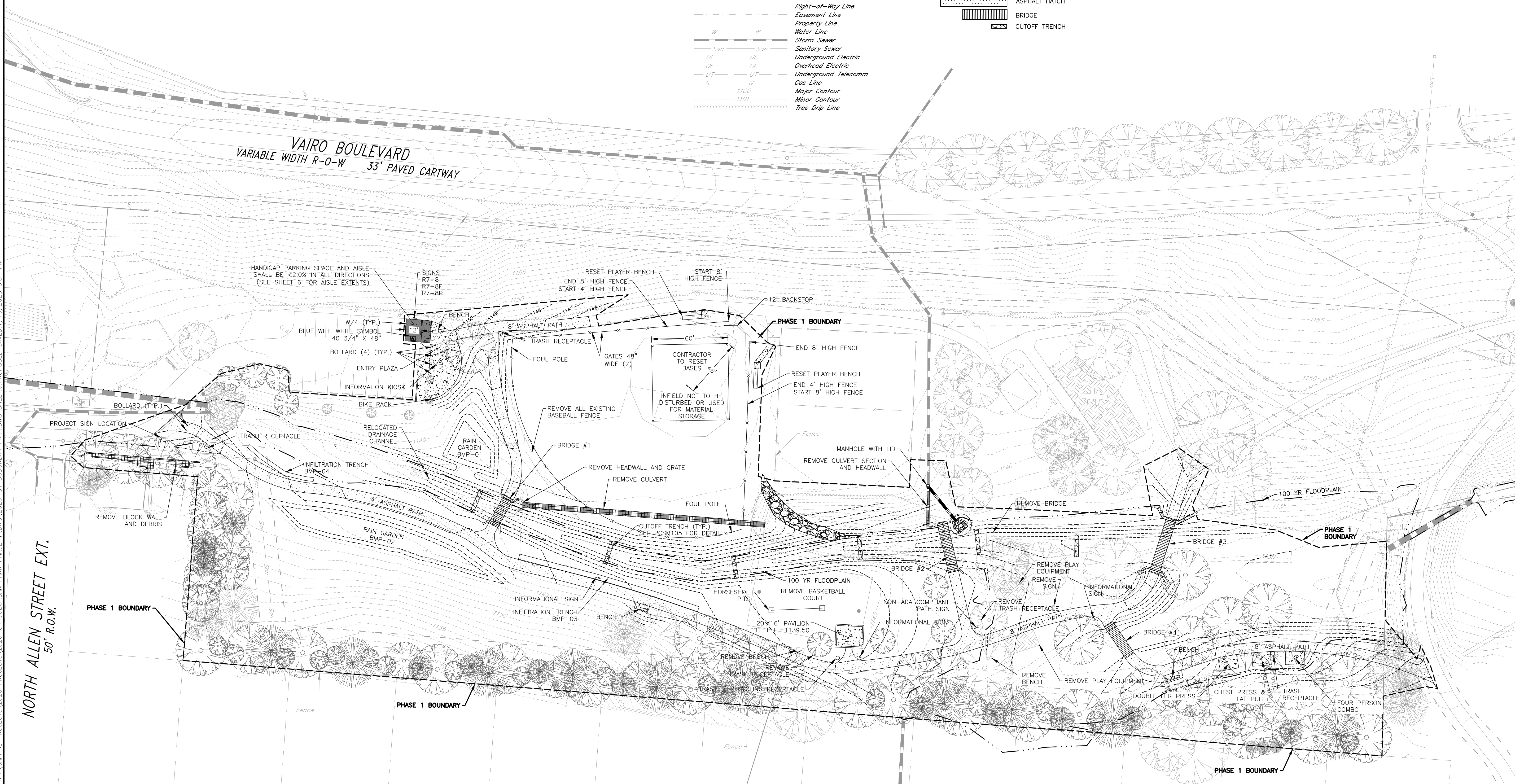
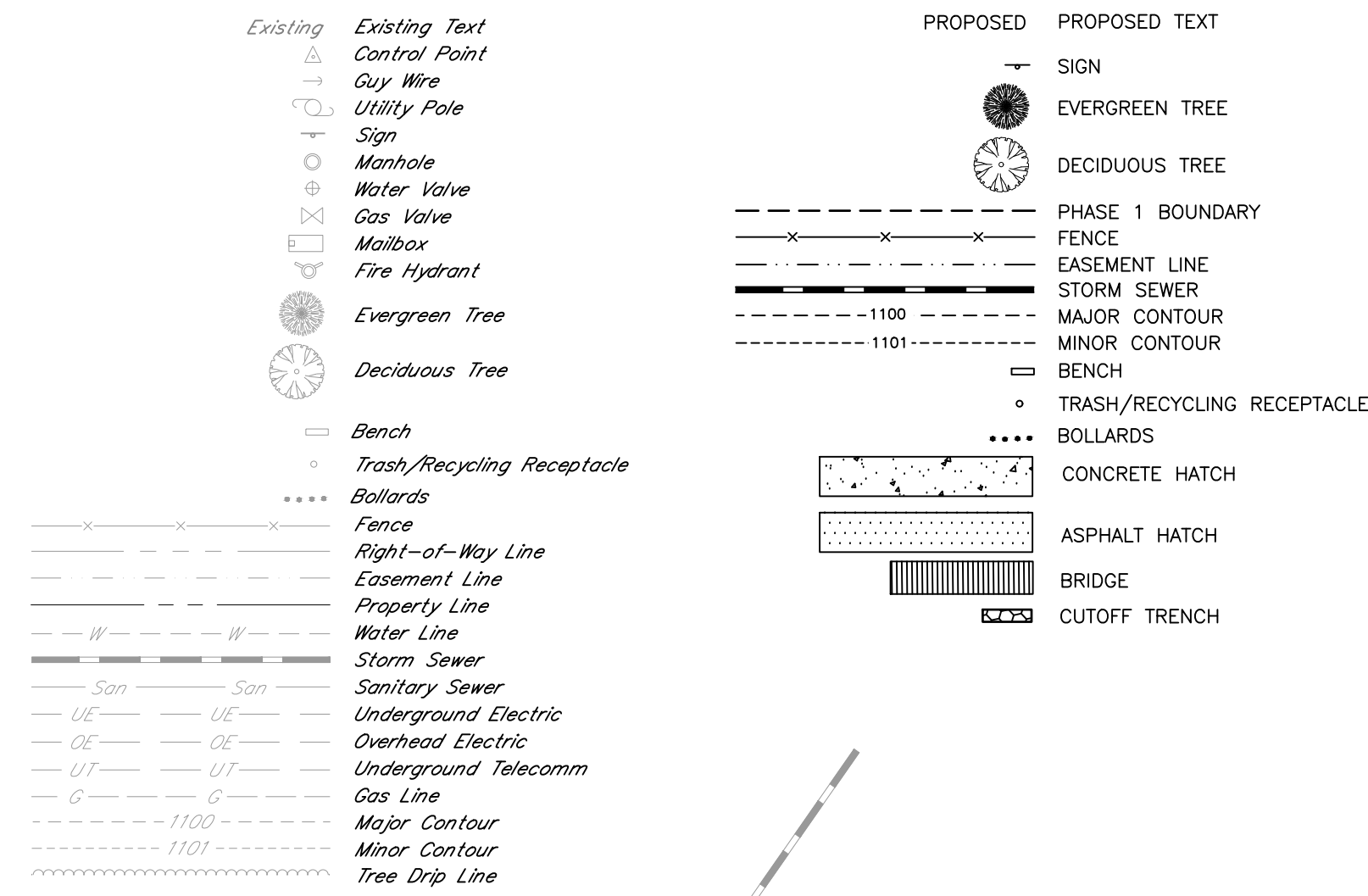
FERGUSON TOWNSHIP  
DEPT. OF PUBLIC WORKS & ENGINEERING  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
PHONE: 814-238-4651  
FAX: 814-238-3454  
www.twp.ferguson.pa.us

PATH:\PUBLIC WORKS\PISTAFF\CAPITAL PROJECTS\2020 PROJECTS\2020-C4 SUBURBAN PARK PHASE 1.DWG\2020-C4 SUBURBAN PARK.DWG SHEET:PROPOSED.SAVED:1/19/2023 3:51 PM

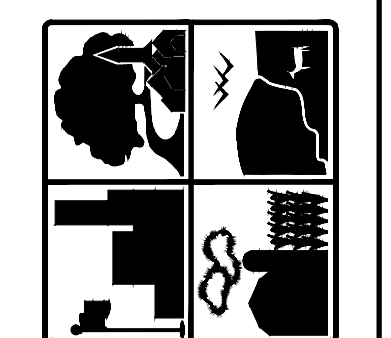
NORTH ALLEN STREET EXT.  
 50' R.O.W.

**VAIRO BOULEVARD**  
 VARIABLE WIDTH R-O-W 33' PAVED CARTWAY

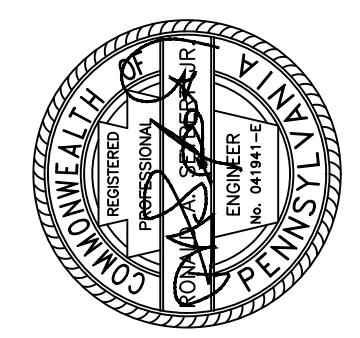
**LEGEND**



- NOTES:
- EXISTING PLAY PIT FALL SURFACE MATERIAL TO BE REMOVED DOWN TO SUBGRADE AND REPLACED WITH TOPSOIL
  - SEE LANDSCAPING PLAN FOR TREE SPECIES
  - ALL PROPOSED PATHS ARE ADA ACCESSIBLE AND MEET ADA REQUIREMENTS FOR LONGITUDINAL AND CROSS SLOPE.



**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us



REV.	DATE	REVISION DESCRIPTION

SUBURBAN PARK-PHASE 1  
 CONTRACT 2020-C4

**PROPOSED PLAN**

DESIGNED BY: RIS  
 DRAWN BY: LMS  
 CHECKED BY: RAS  
 DATE: 12-20-2022

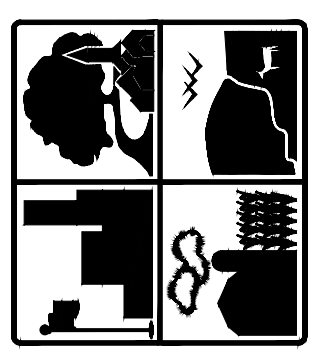
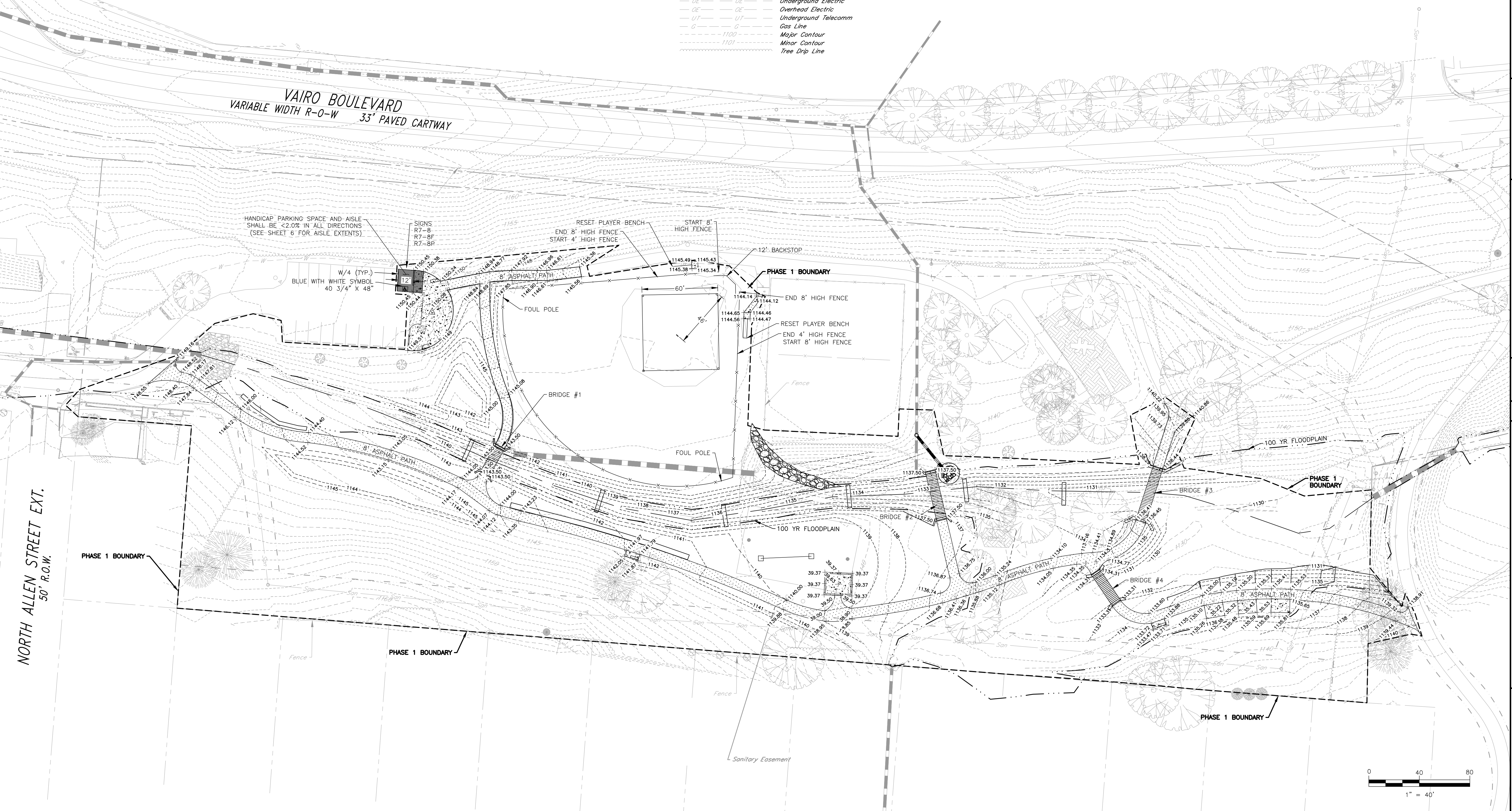
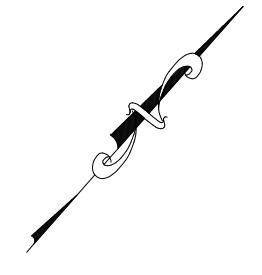
PATH:\PUBLIC WORKS\PISTAFF\CAPITAL PROJECTS\2020 PROJECTS\2020-C4 SUBURBAN PARK PHASE 1.DWG 2020-C4 SUBURBAN PARK PHASE 1.DWG SHEET16.GRADE PLAN.SAVED:1/19/2023 3:51 PM

**NORTH ALLEN STREET EXT.**  
50' R.O.W.

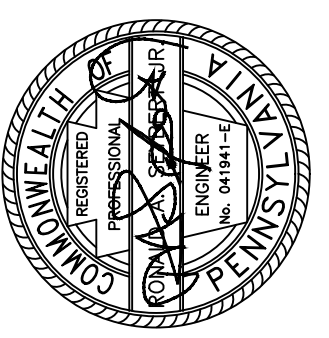
**VAIRO BOULEVARD**  
VARIABLE WIDTH R-O-W 33' PAVED CARTWAY

**LEGEND**

	Existing		PROPOSED
	Existing Text		PROPOSED TEXT
	Control Point		PHASE 1 BOUNDARY
	Guy Wire		FENCE
	Utility Pole		EASEMENT LINE
	Sign		STORM SEWER
	Manhole		MAJOR CONTOUR
	Water Valve		MINOR CONTOUR
	Gas Valve		SPOT ELEVATION
	Mailbox		BENCH
	Fire Hydrant		TRASH/RECYCLING RECEPTACLE
	Evergreen Tree		BOLLARDS
	Deciduous Tree		CONCRETE HATCH
	Bench		ASPHALT HATCH
	Trash/Recycling Receptacle		BRIDGE
	Bollards		CUTOFF TRENCH
	Fence		
	Right-of-Way Line		
	Easement Line		
	Property Line		
	Water Line		
	Storm Sewer		
	Sanitary Sewer		
	Underground Electric		
	Overhead Electric		
	Underground Telecomm		
	Gas Line		
	Major Contour		
	Minor Contour		
	Tree Drip Line		



**FERGUSON TOWNSHIP**  
DEPT. OF PUBLIC WORKS & ENGINEERING  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
PHONE: 814-238-4651  
FAX: 814-238-3454  
www.twp.ferguson.pa.us

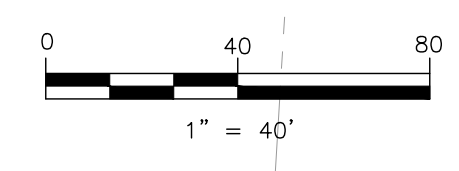


REV.	DATE	REVISION DESCRIPTION

SUBURBAN PARK-PHASE 1  
CONTRACT 2020-C4  
**GRADING PLAN**

DESIGNED BY: RTS  
DRAWN BY: LMS  
CHECKED BY: RAS  
DATE: 12-20-2022

**6**



TREE PLANTING SCHEDULE				
SCIENTIFIC NAME	COMMON NAME	SYMBOL	QUANTITY	SIZE
BETULA NIGRA	RIVER BIRCH	1	5	2" CALIPER
AMELANCHIER	SERVICE BERRY	2	4	2" CALIPER
NYSSA SYLVATICA	BLACK GUM	3	6	2" CALIPER
CARPINUS CAROLINIANA	AMERICAN HORNBEAM	4	4	2" CALIPER
PSEUDOTSUGA MENZIESII	DOUGLAS FIR	5	2	6-8FT TALL
PICEA GLAUCA	WHITE SPRUCE	6	2	6-8FT TALL
ACER SACCHARUM	SUGAR MAPLE	7	20	2" CALIPER
MALUS	CRAB APPLE	8	20	2" CALIPER
PINUS STROBUS	WHITE PINE	9	10	6-8FT TALL
PINUS RESINOSA	RED PINE	10	10	6-8FT TALL
AESCULUS HIPPOCASTANUM	HORSE CHESTNUT	11	5	2" CALIPER
TILIA AMERICANA	BASSWOOD	12	5	2" CALIPER
CERCIS CANADENSIS	REDBUD	13	4	2" CALIPER
METASEQUOIA	DAWN REDWOOD	14	5	2" CALIPER
QUERCUS PALUSTRIS	PIN OAK	15	3	2" CALIPER

LEGEND

**Existing**

- Existing Text
- Control Point
- Guy Wire
- Utility Pole
- Sign
- Manhole
- Water Valve
- Gas Valve
- Mailbox
- Fire Hydrant
- Evergreen Tree
- Deciduous Tree

**Proposed**

- Bench
- Trash/Recycling Receptacle
- Bollards
- Fence
- Right-of-Way Line
- Easement Line
- Property Line
- Water Line
- Storm Sewer
- Sanitary Sewer
- Underground Electric
- Overhead Electric
- Underground Telecomm
- Gas Line
- Major Contour
- Minor Contour
- Tree Drip Line

**PROPOSED TEXT**

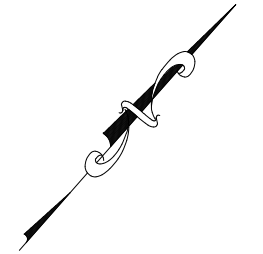
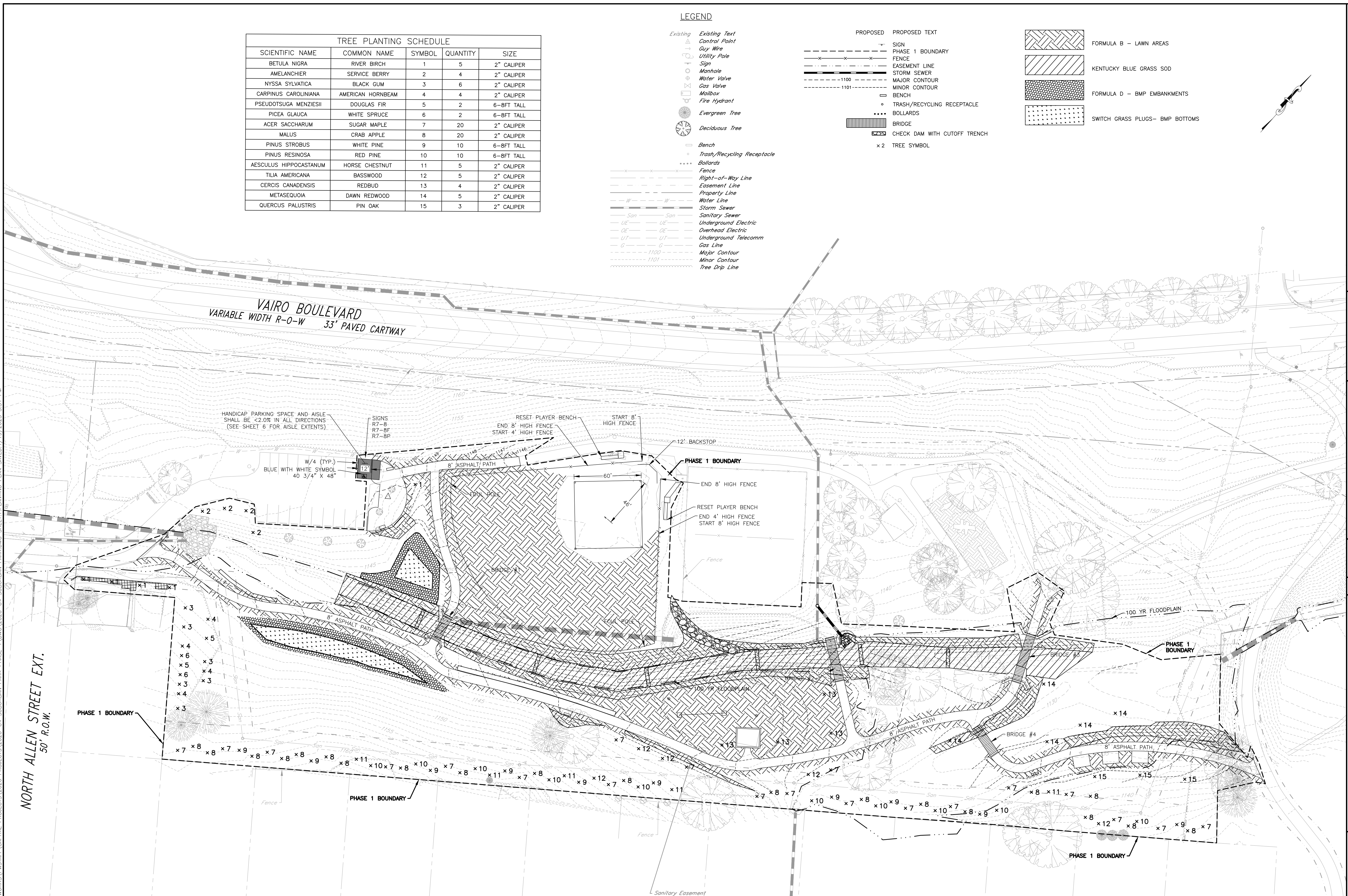
- SIGN
- PHASE 1 BOUNDARY
- FENCE
- EASEMENT LINE
- STORM SEWER
- MAJOR CONTOUR
- MINOR CONTOUR
- BENCH
- TRASH/RECYCLING RECEPTACLE
- BOLLARDS
- BRIDGE
- CHECK DAM WITH CUTOFF TRENCH
- x 2 TREE SYMBOL

**FORMULA B - LAWN AREAS**

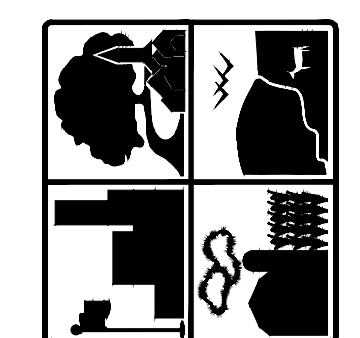
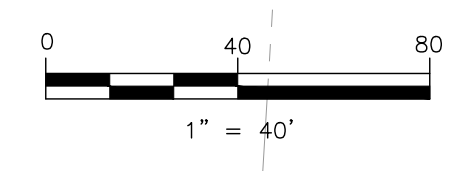
**KENTUCKY BLUE GRASS SOD**

**FORMULA D - BMP EMBANKMENTS**

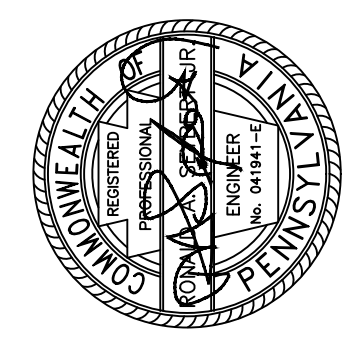
**SWITCH GRASS PLUGS- BMP BOTTOMS**



- NOTES:**
- 3 FOOT RADIUS, 3 INCHES DEEP, 3 INCHES AWAY FROM TREE TRUNK OF MULCH SHALL BE PLACED AT EACH TREE.
  - TREES SHALL BE PLANTED DURING THE MONTHS OF APRIL-MAY OR OCTOBER-NOVEMBER.
  - TREES SHALL BE WARRANTED FOR 1 YEAR FROM PLANTING DATE.
  - LAWN MIX TO BE USED ALONG ALL PATHS 6 FT WIDE.
  - ALL OTHER DISTURBED AREAS TO BE PLANTED IN FORMULA D.



**FERGUSON TOWNSHIP**  
DEPT. OF PUBLIC WORKS & ENGINEERING  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
PHONE: 814-238-4651  
FAX: 814-238-3454  
www.twp.ferguson.pa.us

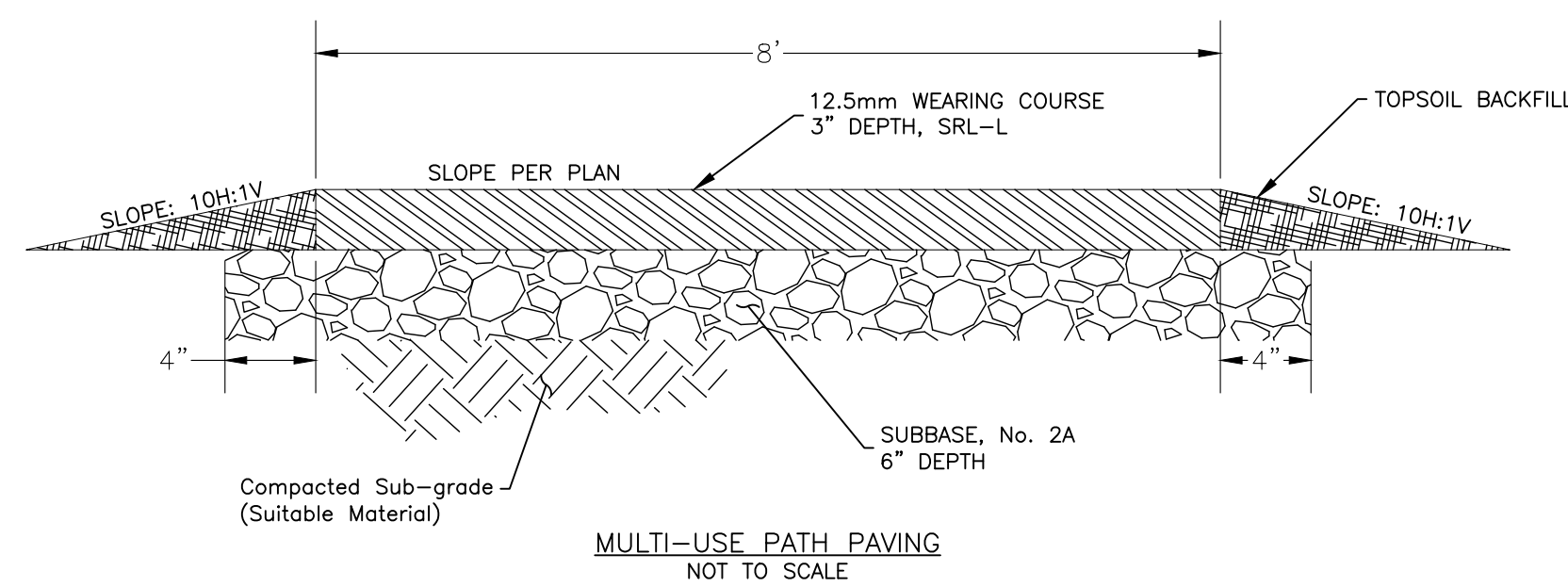


REV.	DATE	REVISION DESCRIPTION

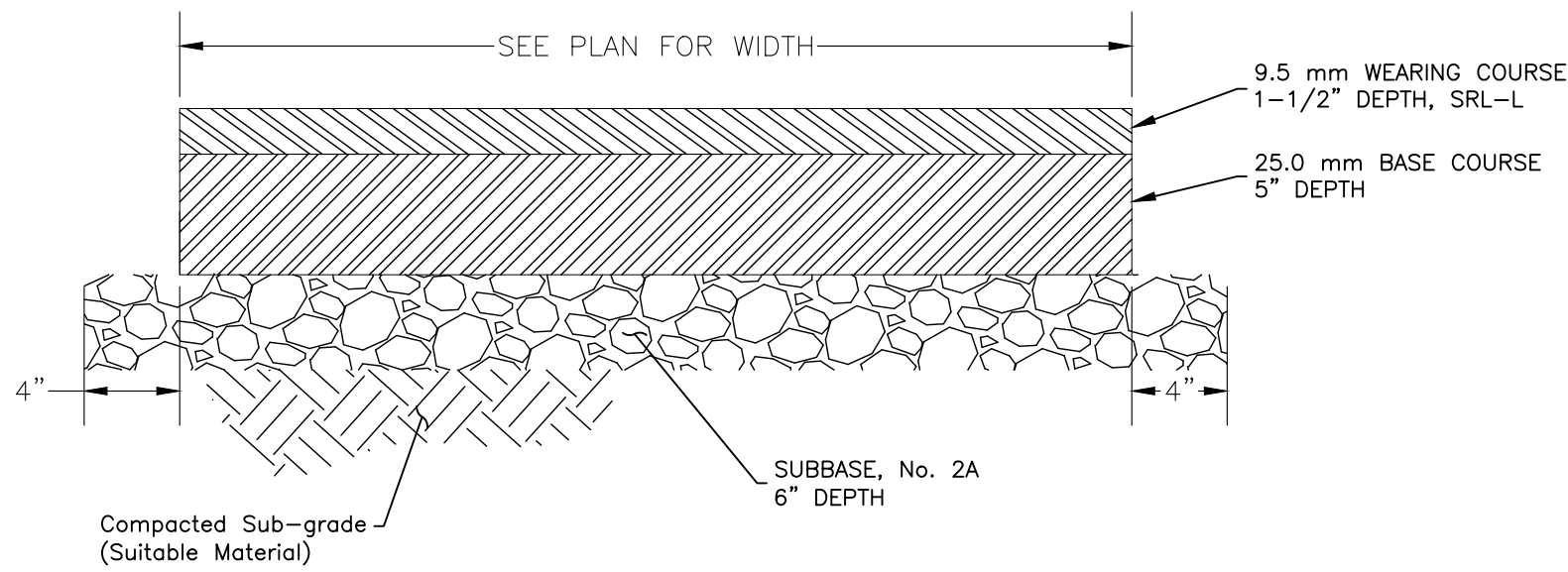
SUBURBAN PARK-PHASE 1  
CONTRACT 2020-04  
**PLANTING PLAN**

DESIGNED BY: RTS  
DRAWN BY: LMS  
CHECKED BY: RAS  
DATE: 12-20-2022

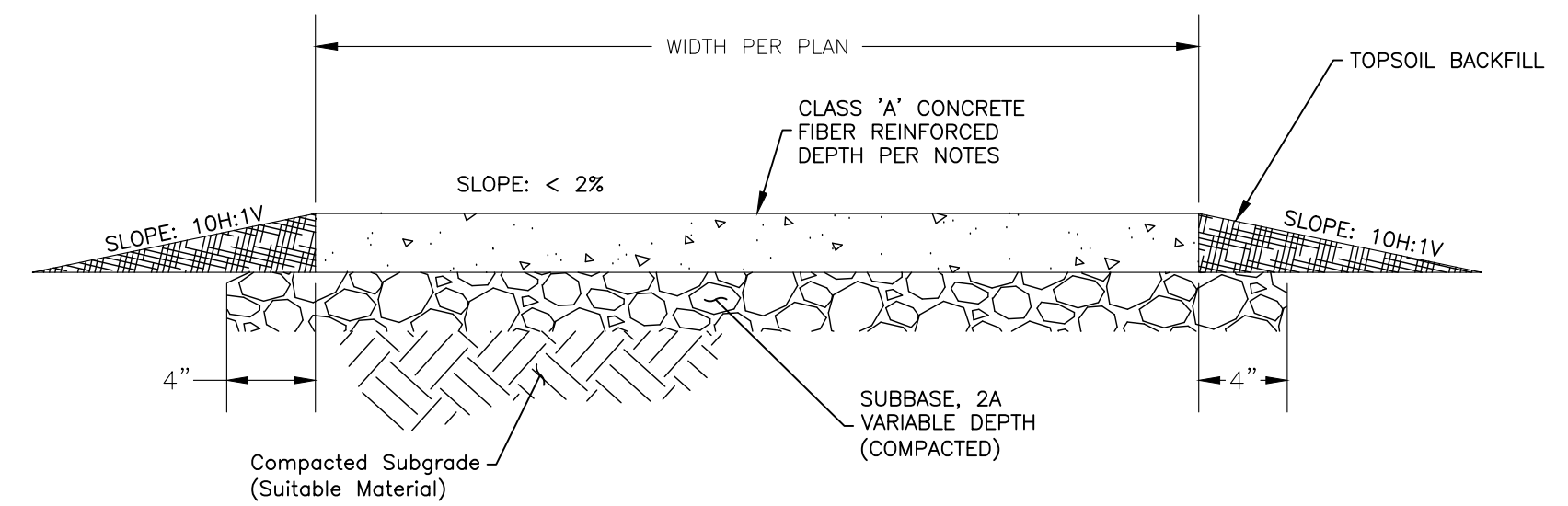
**7**



**MULTI-USE PATH PAVING**  
NOT TO SCALE



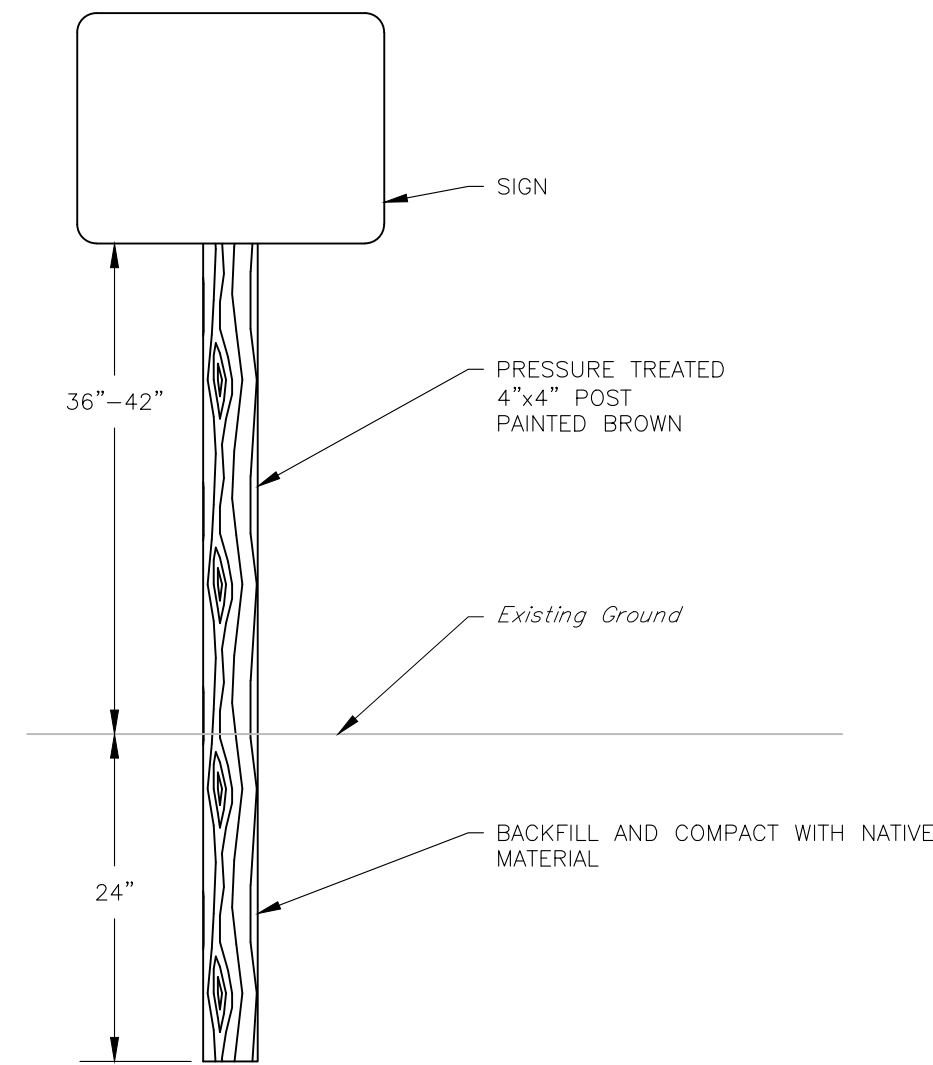
**PARKING LOT PAVING DETAIL**  
NOT TO SCALE



**CONCRETE PLAZA, PAVILION, BENCH AND EQUIPMENT PADS**  
NOT TO SCALE

- NOTES:  
 1. ADA LOADING/UNLOADING ZONE SHALL HAVE A CROSS SLOPE < 2.0% SLOPE IN ALL DIRECTIONS.  
 2. PAVING SHALL BE PERFORMED OVER EXISTING AGGREGATE. AREAS SHALL BE REGRADED AS NEEDED. HOWEVER, CARE SHOULD BE TAKEN TO LIMIT DISTURBANCE TO EXISTING DRIVEWAY, PARKING, SITING AREAS

- NOTES:  
 1. EXPANSION JOINT MATERIAL SHALL BE PLACED AT ALL SOLID STRUCTURES.  
 2. ALL CROSS-SLOPES SHALL BE LESS THAN 1V:50H (2%) AND LONGITUDINAL SLOPES LESS THAN 1V:20H (5%).  
 3. CONTROL JOINTS SHALL BE 3/16" WIDE AND 2" DEEP.  
 4. CONCRETE SHALL BE 4" THICK AT KIOSK AREA AND PAVILION.  
 5. CONCRETE SHALL BE 6" THICK UNDER BENCH AND EQUIPMENT PADS (3).



**POST MOUNTED SIGN (TYPE C)**  
NOT TO SCALE

- NOTES:  
 1. TO BE PROVIDED AND INSTALLED BY OWNER.



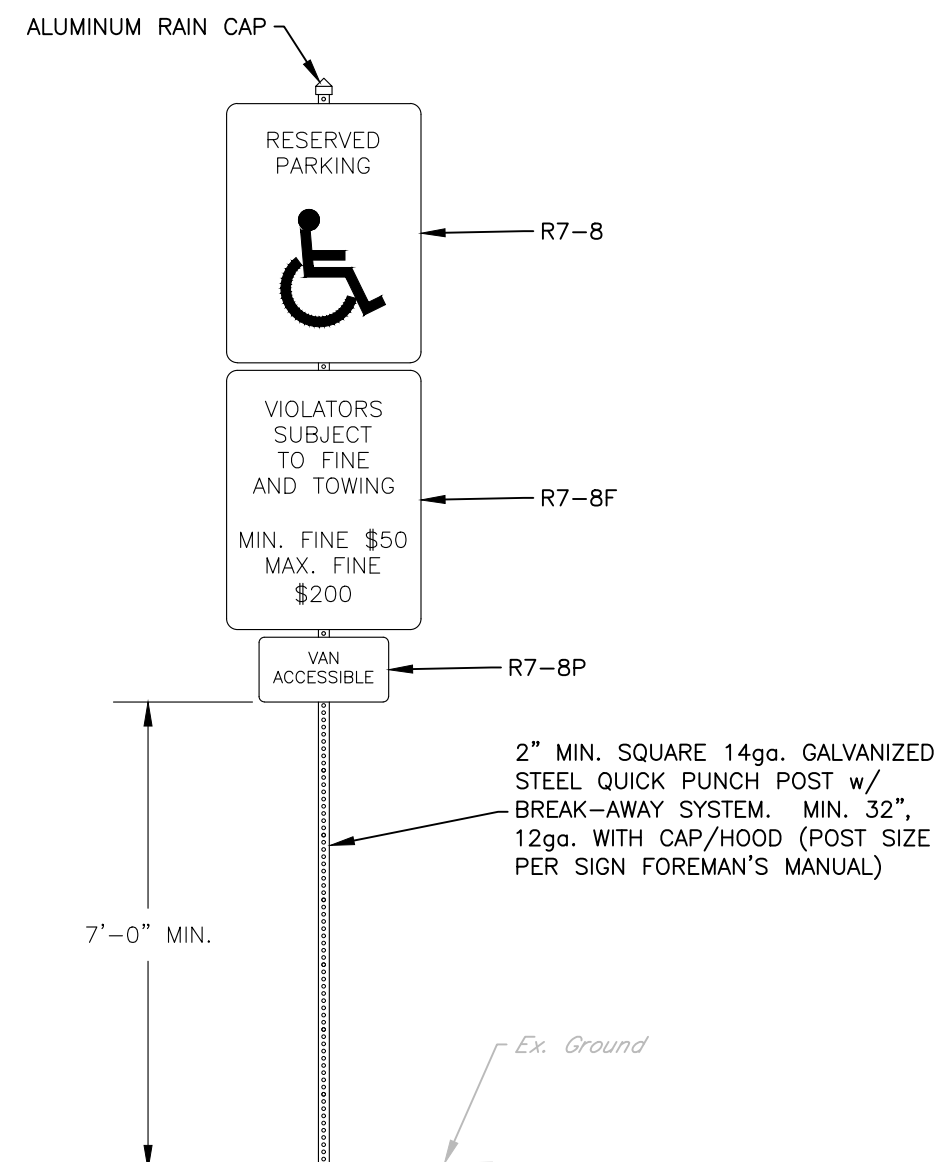
**TEMPORARY UNDER CONSTRUCTION SIGN**  
NOT TO SCALE

- NOTES:  
 1. SIGN TO BE PROVIDED BY OWNER  
 2. FONT/FONT SIZE: ARIAL/RANGE FROM .71" TO 1.75"  
 3. ORIENTATION: LANDSCAPE  
 4. BASE MATERIAL: FOAM CORE  
 5. CORNERS: SQUARED  
 6. BACKGROUND COLOR: WHITE  
 7. LEGEND COLOR: BLUE  
 8. BORDER: YES (BLUE)  
 9. MOUNTING: AT FUNDED PROJECT SITE (AS SHOWN ON PLAN)  
 10. MOUNTING HOLES: NO  
 11. POST: TYPE B  
 12. OVERLAY: EG VINYL

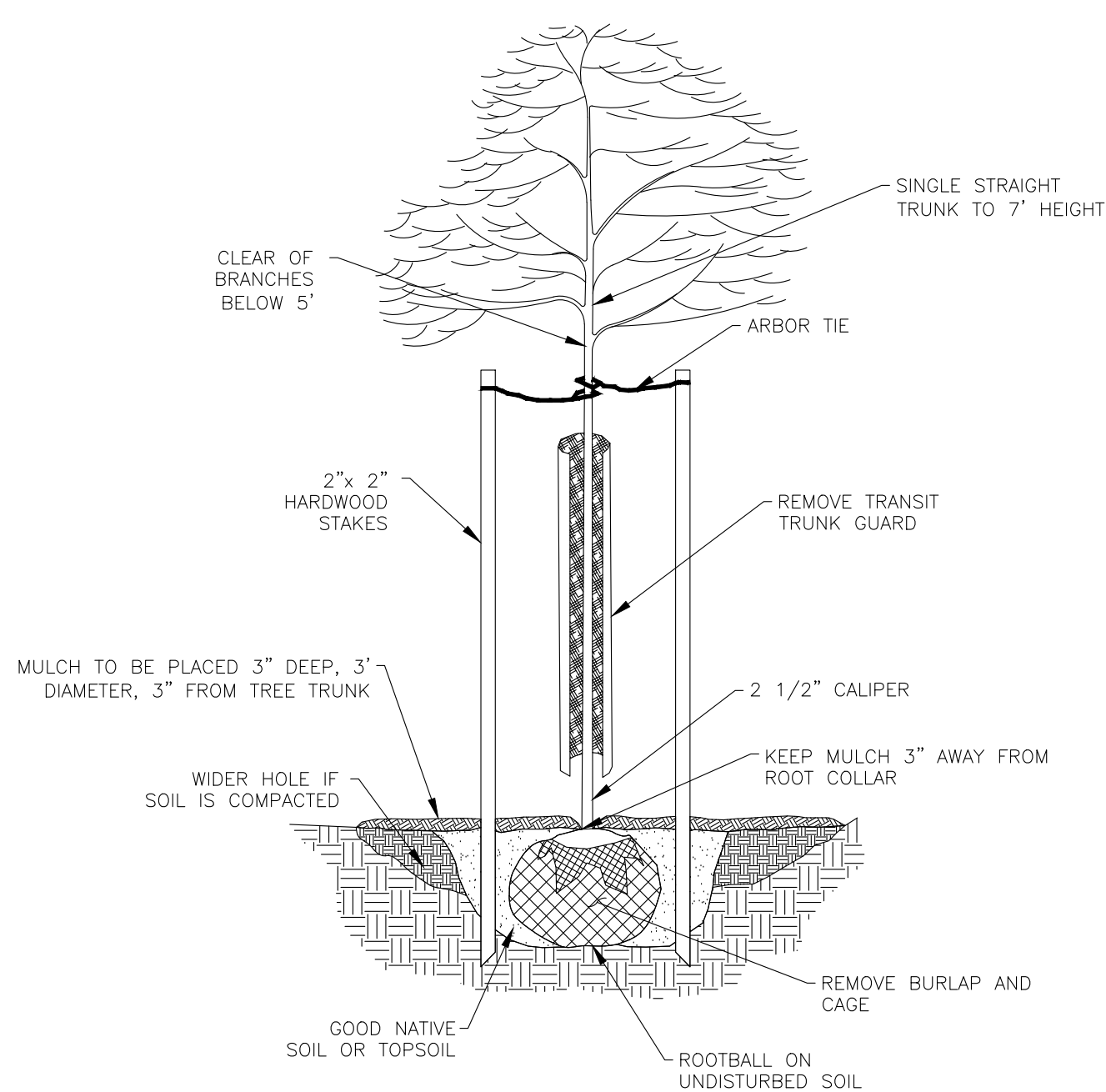


**PERMANENT PROJECT SIGN**  
NOT TO SCALE

- NOTES:  
 1. TO BE PROVIDED AND INSTALLED BY OWNER.

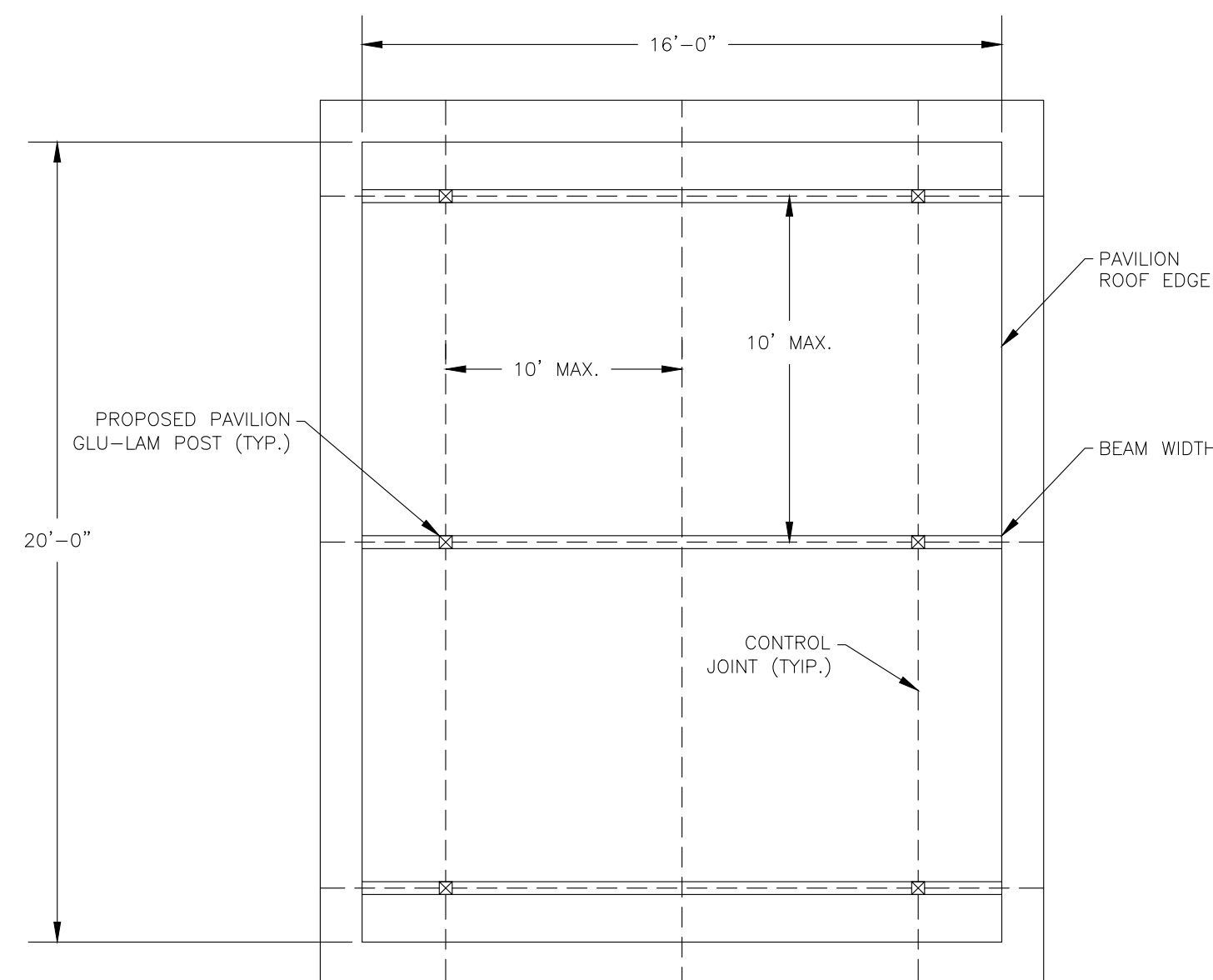


**POST MOUNTED SIGN**  
NOT TO SCALE



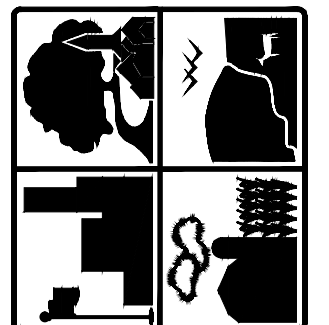
**TREE PLANTING**  
ELEVATION-NOT TO SCALE

- NOTES:  
 1. TREES SHALL BE WARRANTED FOR 1-YEAR AFTER PLANTING  
 2. SEE ATTACHMENT B IN SPECIFICATIONS FOR RESOLUTION NO. 2014-25



**PAVILION LAYOUT DETAIL**  
NOT TO SCALE

- NOTES:  
 1. INSTALL PER MANUFACTURERS PLANS.  
 2. CONCRETE PAD (4" DEPTH) SHALL OVERHANG EDGE OF ROOF BY 1 FEET AROUND ENTIRE PAVILION.  
 3. PAVILION SHALL HAVE P.E. SEALED DRAWINGS AND PROVIDED TO FERGUSON TOWNSHIP AS A SUBMITTAL.



**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us

REV.	DATE	REVISION DESCRIPTION

SUBURBAN PARK-PHASE 1  
 CONTRACT 2020-C4

**DETAILS**

DESIGNED BY: RIS  
 DRAWN BY: LMS  
 CHECKED BY: RAS  
 DATE: 12-20-2022

PATH:\PUBLIC WORKS\PISTAFF\CAPITAL PROJECTS\2020 PROJECTS\2020-C4 SUBURBAN PARK PHASE 1.DWG\2020-C4 SUBURBAN PARK.DWG SHEET:8.DETAILS.SAVED:1/19/2023 3:51 PM



PATHVA PUBLIC WORKS\PIWSTAFF\CAPITAL PROJECTS\2020 PROJECTS\2020-C4 SUBURBAN PARK PHASE 1.DWG\2020-C4 SUBURBAN PARK.DWG SHEET19.DETAILS (2) SAVED:1/19/2023 3:51 PM

**RECEPTACLE**

DATE DRAWN : 07/11/03  
 DRAWN BY : AH  
 DATE REV. : 10/25/11  
 REV. BY : ESS

REV. D DRAWING NUMBER 41-22PL W/ COVER 46-00 SHEET 1 OF 2

**NOTES:**  
 1.) ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ BLACK POLYESTER POWDER COATING.  
 2.) DUMOR, INC. TRASH RECEPTACLE 41-22PL, SURFACE MOUNT, AND DOMED LID, OR EQUAL.  
 3.) RECEPTACLE CAPACITY TO BE 32 GALLON

**SLAT OPTIONS**  
 "CEDAR" RECYCLED PLASTIC  
 "GREY" RECYCLED PLASTIC  
 "REDWOOD" RECYCLED PLASTIC  
 "WALNUT" RECYCLED PLASTIC  
 OTHER

**NOTES:**  
 1.) ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.  
 2.) 1/2" X 3 3/4" EXPANSION ANCHOR BOLTS PROVIDED FOR S-2 OPTION.

**BOLLARD**

DATE DRAWN : 10/27/05  
 DRAWN BY : AWH  
 DATE REV. : 01/18/07  
 REV. BY : ESS

REV. B DRAWING NUMBER 400-42 SHEET 1 OF 2

**NOTES:**  
 1.) DUMORE, INC. 400-42 BOLLARD, BLACK, EMBEDDED MOUNT, 42" HIGH, OR EQUAL.  
 2.) INSTALL PER MANUFACTURES SPECIFICATIONS.

**NOTES:**  
 1.) STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.  
 2.) 1/2" X 3 3/4" EXPANSION ANCHOR BOLTS PROVIDED FOR S-2 OPTION.

**BIKE RACK**

DATE DRAWN : 3/22/04  
 DRAWN BY : CCG  
 DATE REV. : 11/8/10  
 REV. BY : JB

REV. D DRAWING NUMBER 81 SERIES SHEET 1 OF 2

**LENGTH OPTIONS**  
 5' RACK  
 10' RACK

**NOTES:**  
 1.) ALL STL. MEMBERS GALVANIZED. WELDS COATED WITH ZINC-RICH FINISH.  
 2.) 1/2" X 5 1/2" EXPANSION ANCHOR BOLTS PROVIDED.

**BOLLARD**

DATE DRAWN : 10/27/05  
 DRAWN BY : AWH  
 DATE REV. : 01/10/07  
 REV. BY : ESS

REV. B DRAWING NUMBER 400-42/S-1SL SHEET 1 OF 2

**NOTES:**  
 1.) STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.  
 2.) LOCKING DEVICE PROVIDED BY OTHER.

**BENCH**

DATE DRAWN : 09/20/01  
 DRAWN BY : AWH  
 DATE REV. : 10/25/11  
 REV. BY : RSH

REV. C DRAWING NUMBER 138 SERIES PL SHEET 1 OF 2

**LENGTH OPTIONS**  
 6' BENCH  
 8' BENCH

**SLAT OPTIONS**  
 "CEDAR" RECYCLED PLASTIC  
 "GREY" RECYCLED PLASTIC  
 "REDWOOD" RECYCLED PLASTIC  
 "WALNUT" RECYCLED PLASTIC  
 OTHER

**NOTES:**  
 1.) ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.  
 2.) 1/2" X 3 3/4" EXPANSION ANCHOR BOLT PROVIDED FOR S-2 & S-4 OPTIONS.

**BRIDGE ABUTMENT RIPRAP PLACEMENT GUIDE**  
 NOT TO SCALE

**NOTES:**  
 1.) ABUTMENT IS SHOWN FOR REFERENCE ONLY. ABUTMENT TO BE DESIGNED, SEALED BY PROFESSIONAL ENGINEER, AND SUBMITTED TO TOWNSHIP FOR REVIEW PRIOR TO CONSTRUCTION.

FERGUSON TOWNSHIP  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us

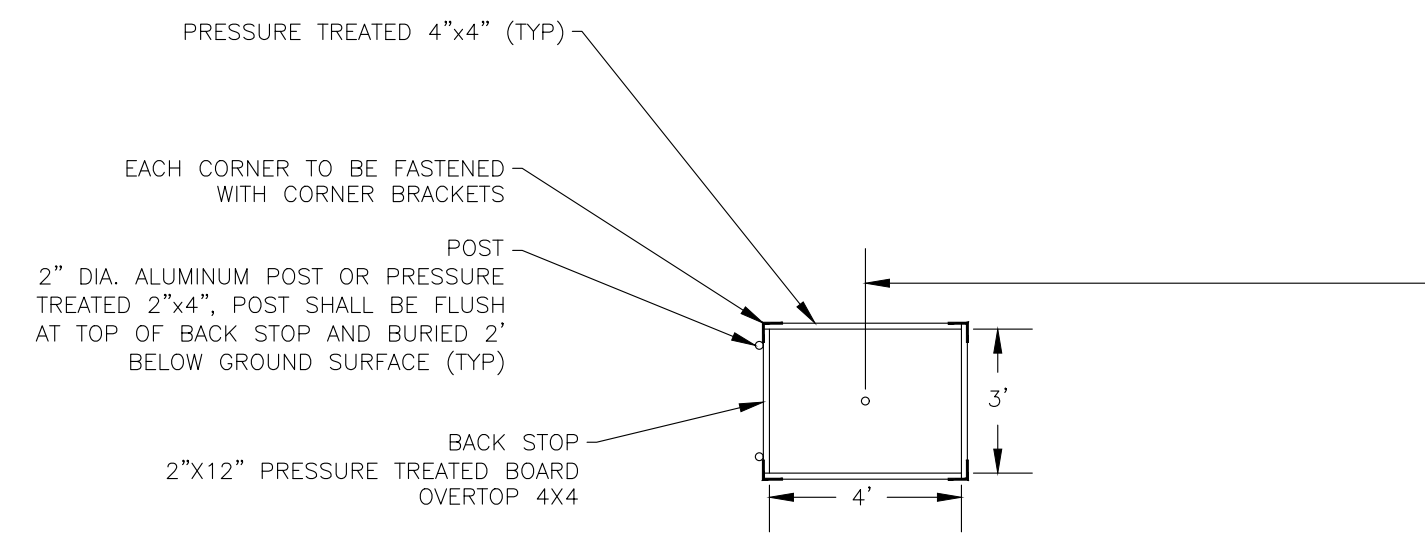
DESIGNED BY: RIS  
 DRAWN BY: LMS  
 CHECKED BY: RAS  
 DATE: 12-20-2022

SUBURBAN PARK-PHASE 1  
 CONTRACT 2020-04

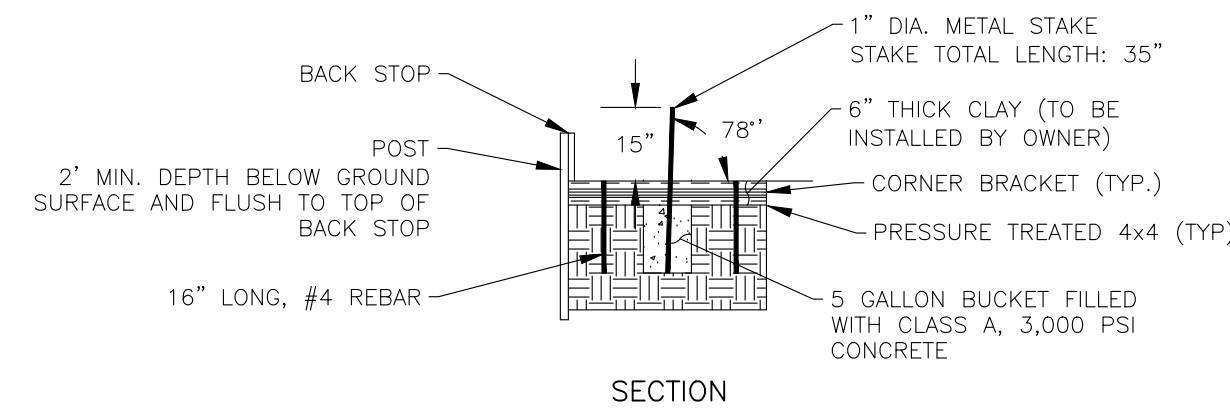
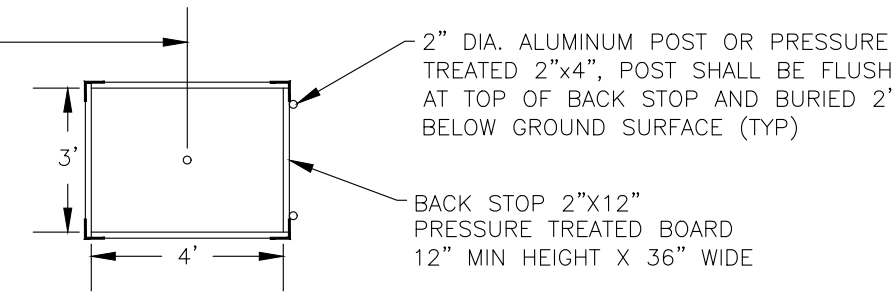
**DETAILS**

REV.	DATE	REVISION DESCRIPTION

9



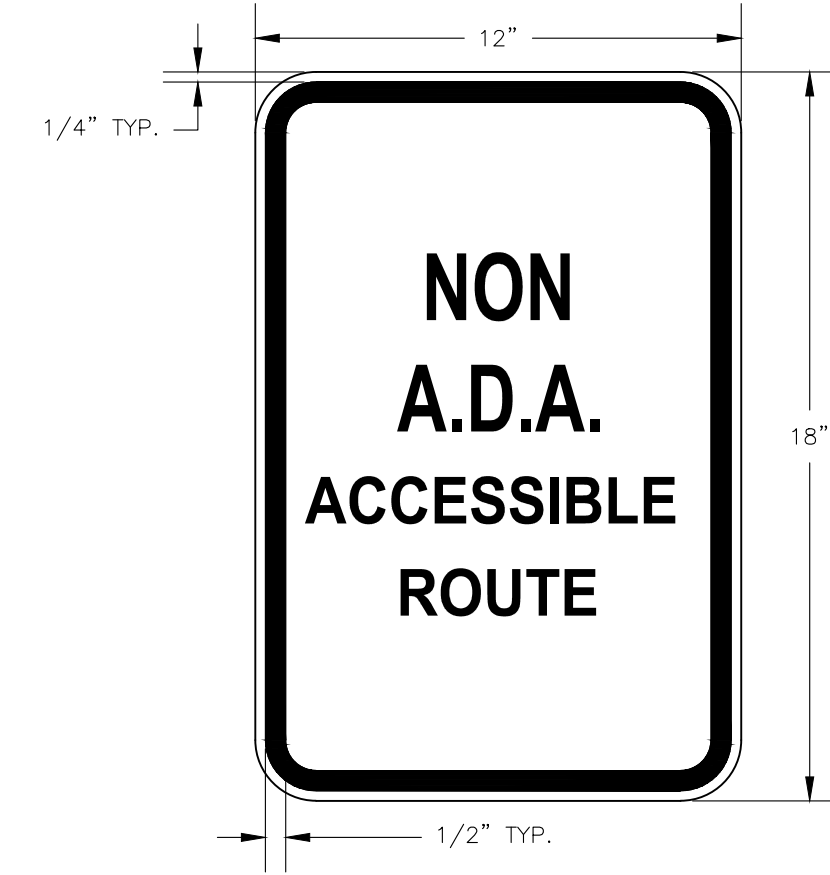
HORSESHOE PIT LAYOUT



SECTION

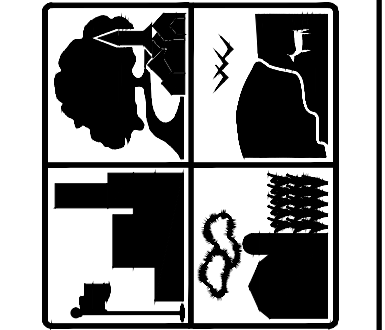
HORSESHOE PIT  
NOT TO SCALE

NOTE:  
1.) TOP OF HORSESHOE PIT TO BE LEVEL WITH GROUND.  
2.) ALL FASTENERS TO BE RATED FOR EXTERIOR APPLICATION.



NON A.D.A. ACCESSIBLE ROUTE SIGN  
NOT TO SCALE

- NOTES:
1. FONT: ARIAL
  2. ORIENTATION: PORTRAIT
  3. BASE MATERIAL: ALUMINUM
  4. CORNERS: ROUNDED (1.5" RADIUS)
  5. BACKGROUND COLOR: WHITE
  6. LEGEND COLOR: BLUE
  7. BORDER: YES (BLUE)
  8. MOUNTING: AS SHOWN ON PLAN
  9. MOUNTING HOLES: NO
  10. POST: TYPE C
  11. OVERLAY: EG VINYL



**FERGUSON TOWNSHIP**  
DEPT. OF PUBLIC WORKS & ENGINEERING  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
PHONE: 814-238-4651  
FAX: 814-238-3454  
www.twp.ferguson.pa.us

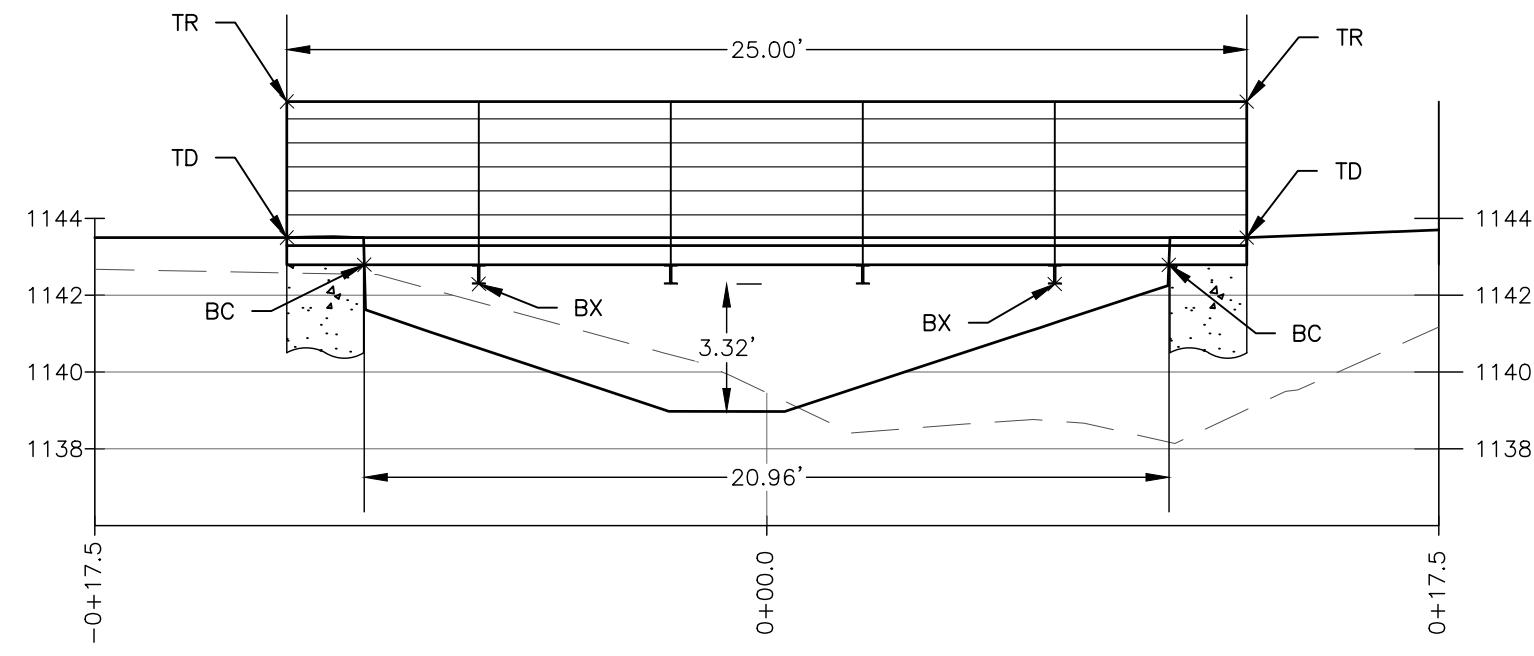
REV.	DATE	REVISION DESCRIPTION

SUBURBAN PARK-PHASE 1  
CONTRACT 2020-C4  
**DETAILS**

DESIGNED BY: RTS  
DRAWN BY: LMS  
CHECKED BY: RAS  
DATE: 12-20-2022

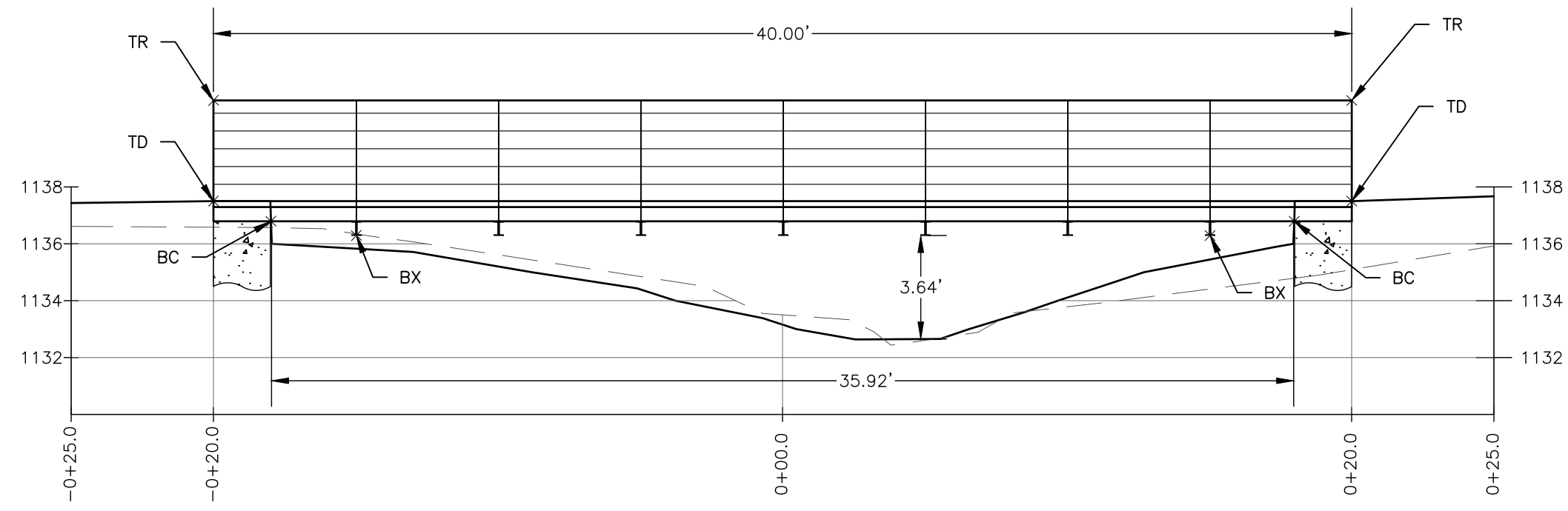
**10**

PATH:\PUBLIC WORKS\STAFF\CAPITAL PROJECTS\2020 PROJECTS\2020-C4 SUBURBAN PARK PHASE 1.DWG\2020-C4 SUBURBAN PARK PHASE 1.DWG\2020-C4 SUBURBAN PARK.DWG SHEET:11 BRIDGE DETAILS  
 17/19/2023 3:51 PM



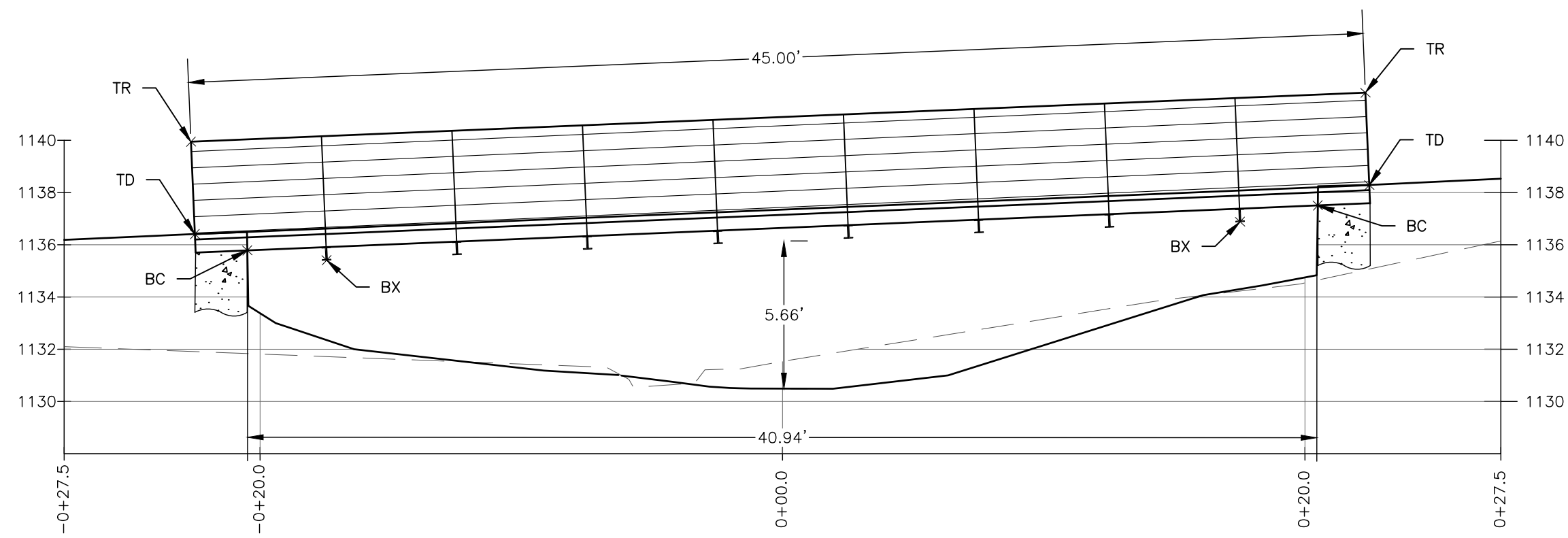
**BRIDGE#1 - STA (0+17.50) TO STA 0+17.50**  
 HORIZONTAL SCALE: 1" = 40'  
 VERTICAL SCALE: 1" = 40'  
 DATUM ELEVATION: 1136.00

BRIDGE #1		
	LEFT SIDE	RIGHT SIDE
TR	1147.04	1147.04
TD	1143.50	1143.50
BC	1142.79	1142.79
BX	1142.29	1142.29



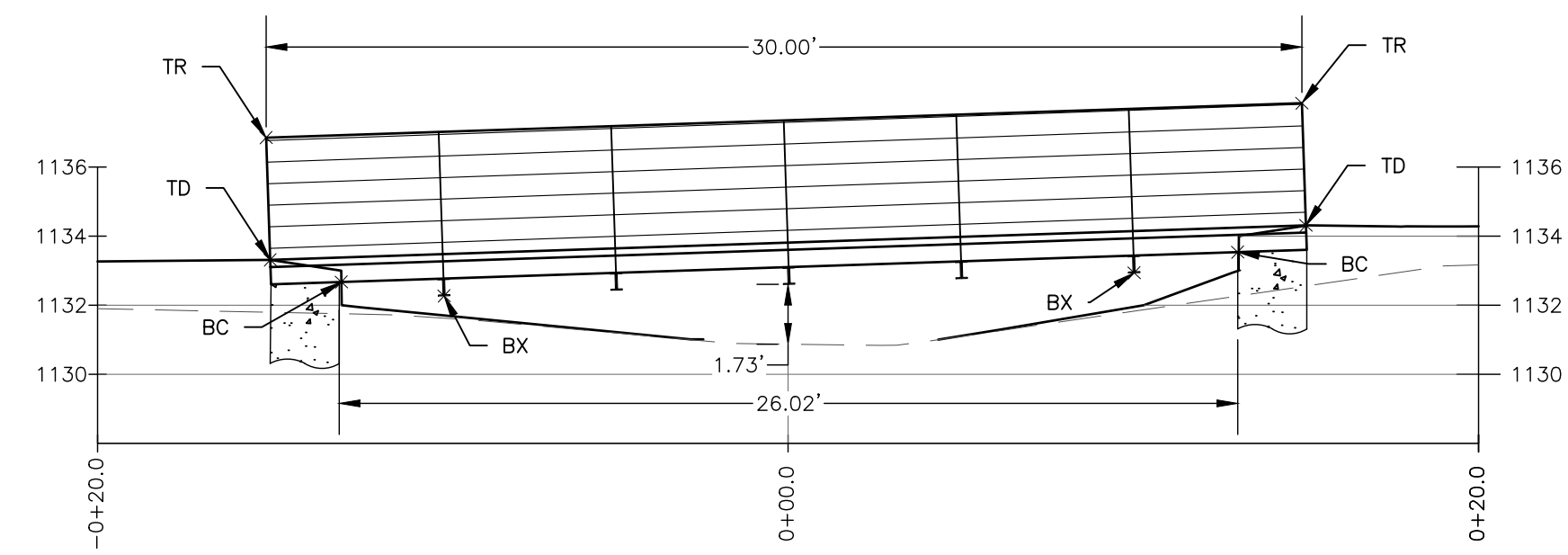
**BRIDGE#2 - STA (0+25) TO STA 0+25**  
 HORIZONTAL SCALE: 1" = 40'  
 VERTICAL SCALE: 1" = 40'  
 DATUM ELEVATION: 1130.00

BRIDGE #2		
	LEFT SIDE	RIGHT SIDE
TR	1141.04	1141.04
TD	1137.50	1137.50
BC	1136.79	1136.79
BX	1136.29	1136.29



**BRIDGE#3 - STA (0+27.50) TO STA 0+27.50**  
 HORIZONTAL SCALE: 1" = 40'  
 VERTICAL SCALE: 1" = 40'  
 DATUM ELEVATION: 1128.00

BRIDGE #3		
	LEFT SIDE	RIGHT SIDE
TR	1139.95	1141.83
TD	1136.41	1138.29
BC	1135.78	1137.50
BX	1135.41	1136.88

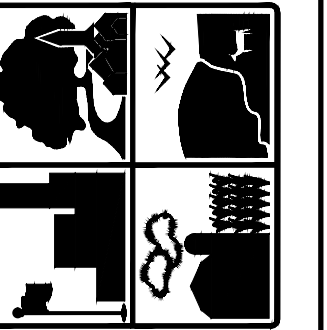


**BRIDGE#4 - STA (0+20) TO STA 0+20**  
 HORIZONTAL SCALE: 1" = 40'  
 VERTICAL SCALE: 1" = 40'  
 DATUM ELEVATION: 1128.00

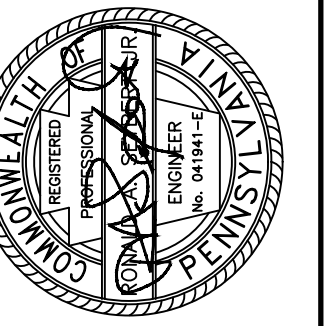
BRIDGE #4		
	LEFT SIDE	RIGHT SIDE
TR	1136.85	1137.85
TD	1133.31	1134.31
BC	1132.67	1133.54
BX	1132.27	1132.94

LEGEND  
 TR - TOP OF RAIL  
 TD - TOP OF DECK  
 BC - BOTTOM CHORD  
 BX - BOTTOM OF CROSS BRACE

NOTES:  
 - FOOTINGS TO BE ENGINEERED. (SHOWN FOR REFERENCE ONLY)  
 - ALL BRIDGE DECKS TO BE 8 FT WIDE.



**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us



REV.	DATE	REVISION DESCRIPTION

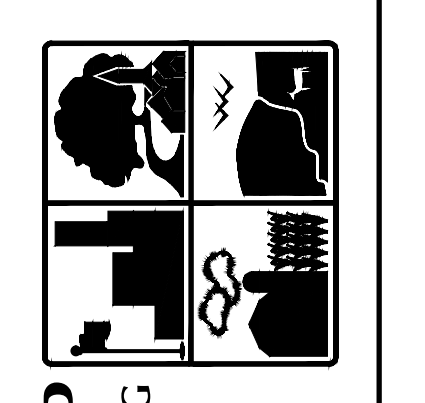
SUBURBAN PARK-PHASE 1  
 CONTRACT 2020-C4  
**BRIDGE DETAILS**

DESIGNED BY: RIS  
 DRAWN BY: LMS  
 CHECKED BY: RAS  
 DATE: 12-20-2022

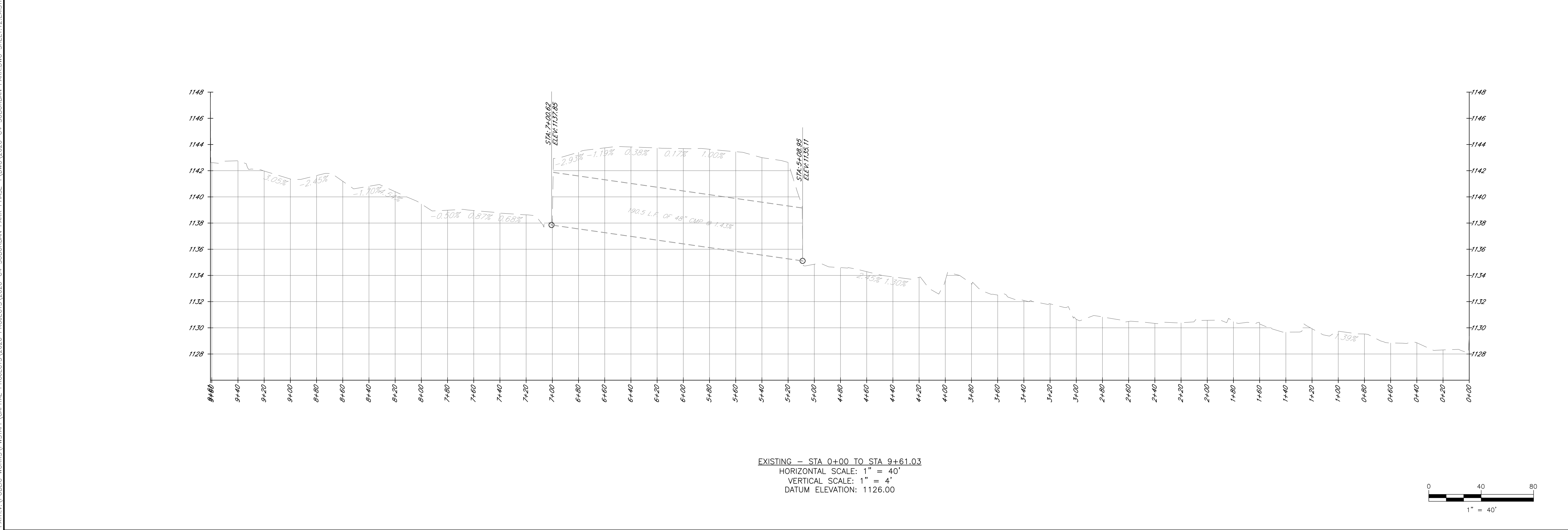
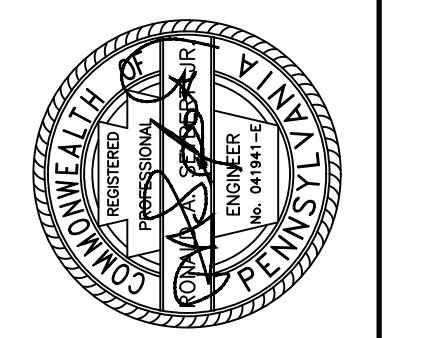
PATH:\PUBLIC WORKS\PISTRAFA\CAPITAL PROJECTS\2020 PROJECTS\2020-C4 SUBURBAN PARK PHASE 1\DWG\2020-C4 SUBURBAN PARK.DWG SHEET12\EXISTING PROFILE.SAVED:1/19/2023 3:51 PM



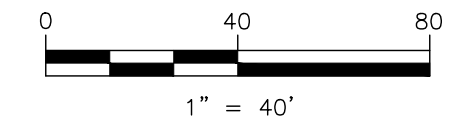
- LEGEND**
- Existing Existing Text
  - Control Point
  - Guy Wire
  - Utility Pole
  - Sign
  - Manhole
  - Water Valve
  - Gas Valve
  - Mailbox
  - Fire Hydrant
  - Evergreen Tree
  - Deciduous Tree
  - Bench
  - Trash/Recycling Receptacle
  - Bollards
  - Fence
  - Right-of-Way Line
  - Easement Line
  - Property Line
  - Water Line
  - Storm Sewer
  - Sanitary Sewer
  - Underground Electric
  - Overhead Electric
  - Underground Telecomm
  - Gas Line
  - Major Contour
  - Minor Contour
  - 100 Year (1%) Floodplain
  - Soils
  - HoB
  - HoC
  - Tree Drip Line



**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us



EXISTING - STA 0+00 TO STA 9+61.03  
 HORIZONTAL SCALE: 1" = 40'  
 VERTICAL SCALE: 1" = 4'  
 DATUM ELEVATION: 1126.00



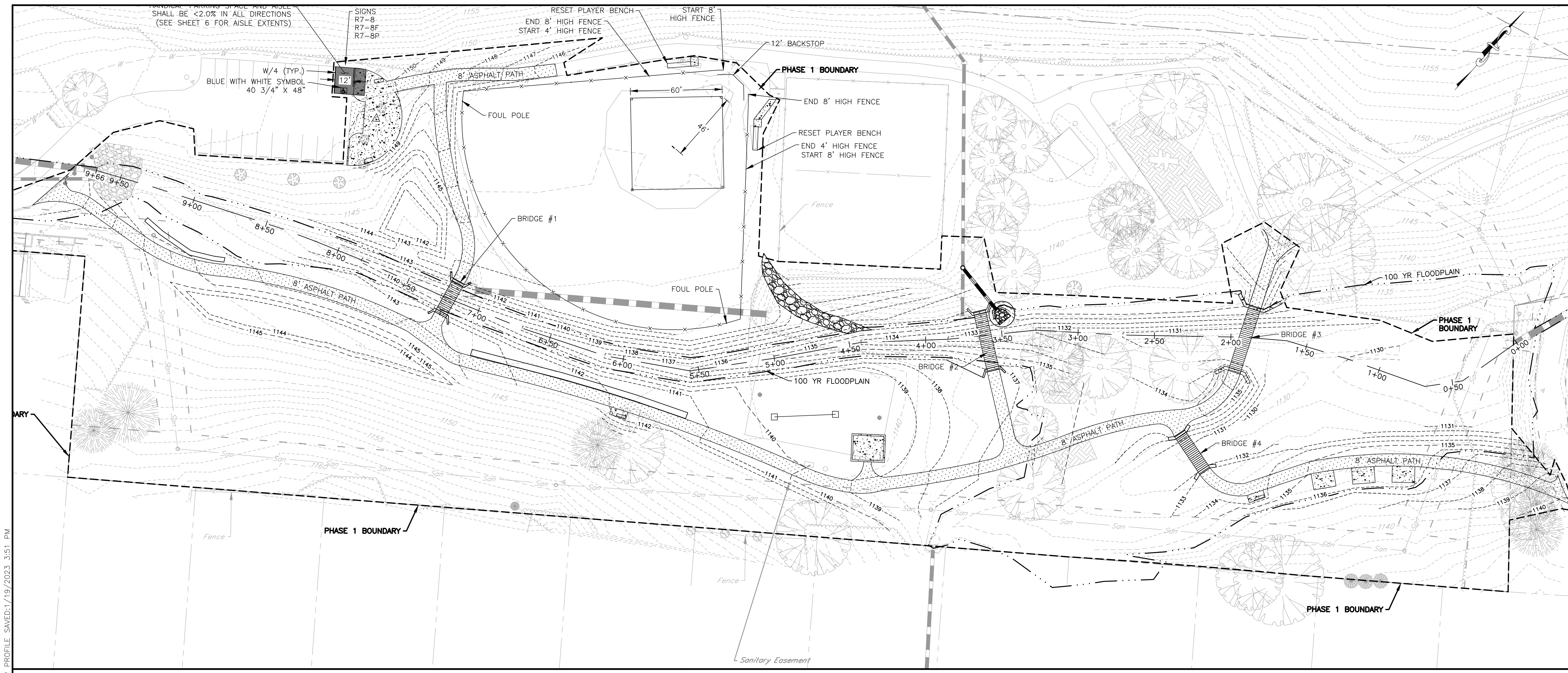
REV.	DATE	REVISION DESCRIPTION

SUBURBAN PARK - PHASE 1  
 CONTRACT 2020-C4

**EXISTING PROFILE**

DESIGNED BY: RTS  
 DRAWN BY: LMS  
 CHECKED BY: RAS  
 DATE: 12-20-2022

12



**LEGEND**

*Existing*

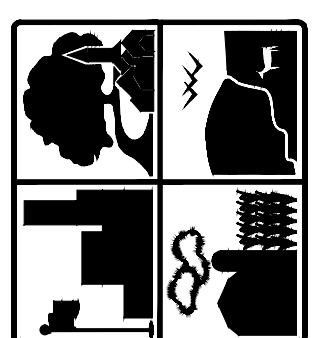
- Existing Text
- Control Point
- Guy Wire
- Utility Pole
- Sign
- Manhole
- Water Valve
- Gas Valve
- Mailbox
- Fire Hydrant
- Evergreen Tree
- Deciduous Tree
- Bench
- Trash/Recycling Receptacle
- Bollards
- Fence
- Right-of-Way Line
- Easement Line
- Property Line
- Water Line
- Storm Sewer
- Sanitary Sewer
- Underground Electric
- Overhead Electric
- Underground Telecomm
- Gas Line
- Major Contour
- Minor Contour
- 100 Year (1%R) Floodplain
- Soils
- Tree Drip Line

*PROPOSED*

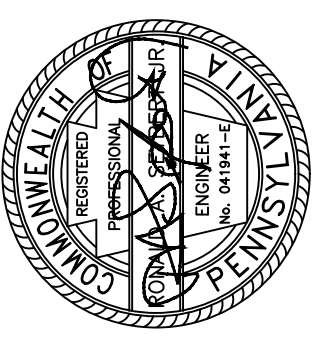
*PROPOSED TEXT*

- PHASE 1 BOUNDARY
- FENCE
- EASEMENT LINE
- STORM SEWER
- MAJOR CONTOUR
- MINOR CONTOUR
- SPOT ELEVATION
- BENCH
- TRASH/RECYCLING RECEPTACLE
- BOLLARDS
- CONCRETE HATCH
- ASPHALT HATCH
- BRIDGE
- CHECK DAM WITH CUTOFF TRENCH
- 100 YEAR FLOODPLAIN

I:\PATH\PUBLIC WORKS\PWSTAFF\CAPITAL PROJECTS\2020 PROJECTS\2020-C4 SUBURBAN PARK PHASE 1.DWG\2020-C4 SUBURBAN PARK.DWG SHEET13.PROP PROFILE SAVED:1/19/2023 3:51 PM



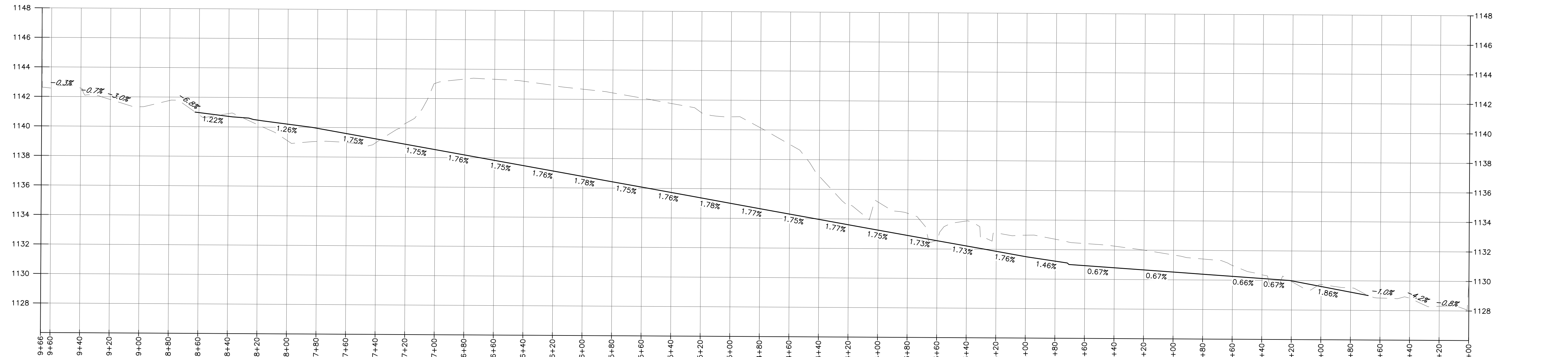
**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us



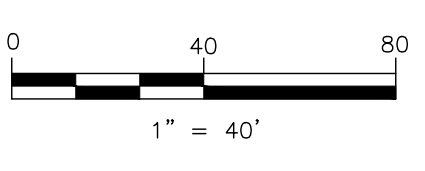
REV.	DATE	REVISION DESCRIPTION

SUBURBAN PARK-PHASE 1  
 CONTRACT 2020-C4

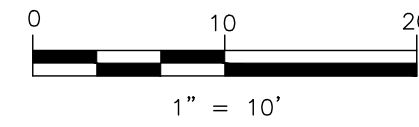
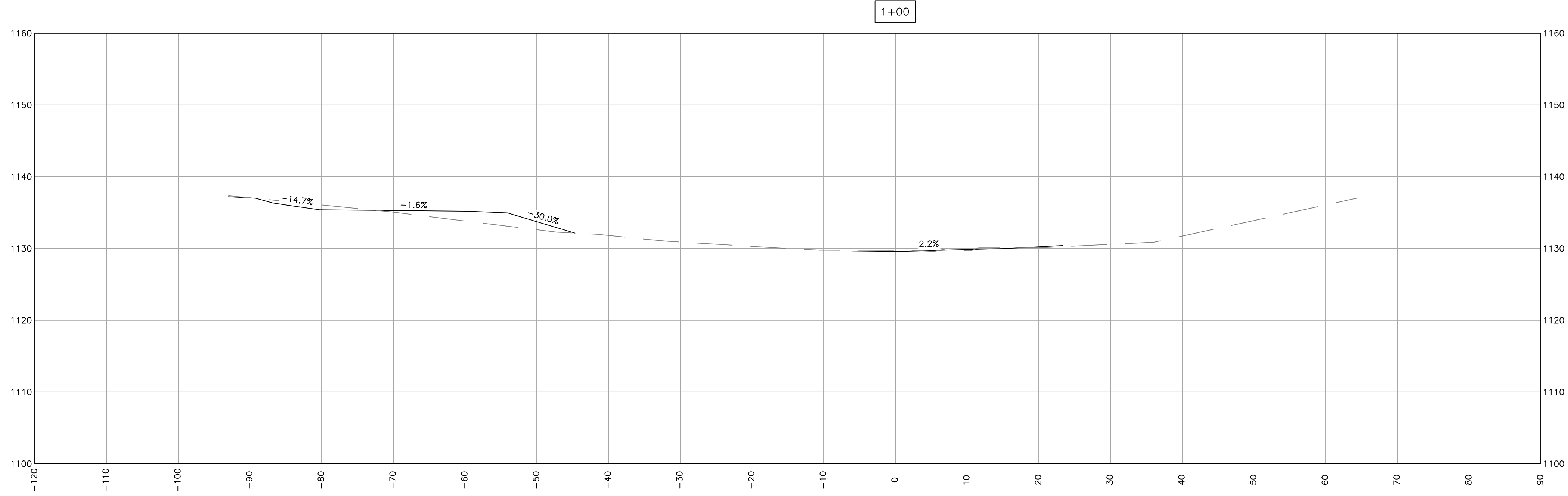
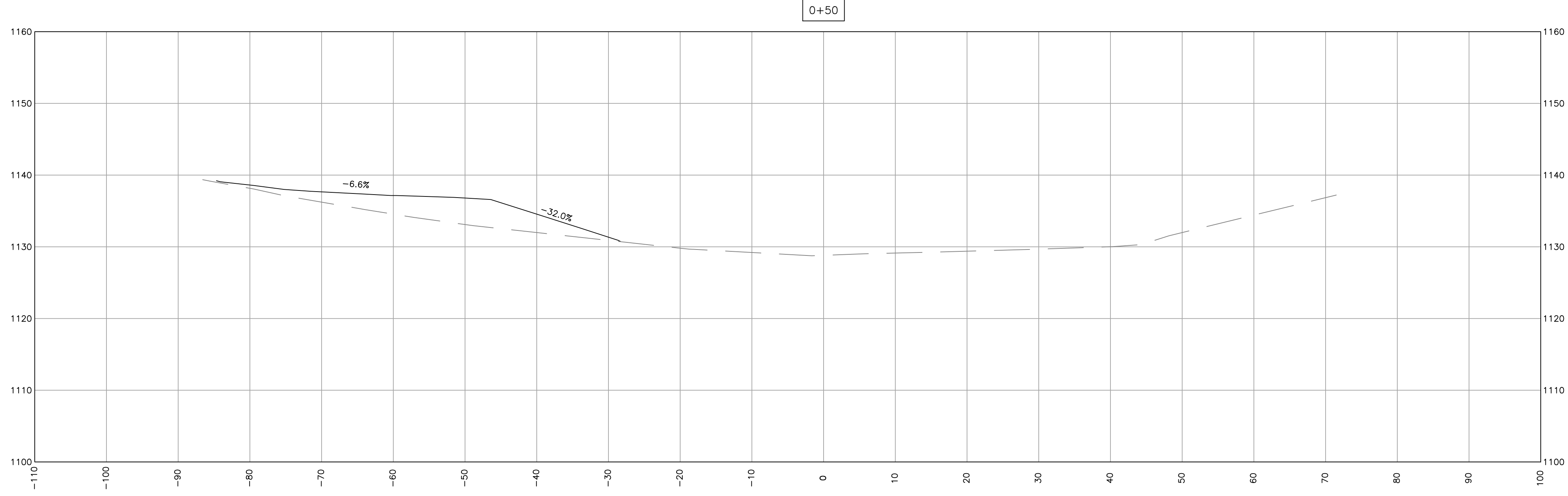
**PROPOSED PROFILE**



PROPOSED - STA 0+00 TO STA 9+66.46  
 HORIZONTAL SCALE: 1" = 10'  
 VERTICAL SCALE: 1" = 1'  
 DATUM ELEVATION: 1126.00



DESIGNED BY: RIS  
 DRAWN BY: LMS  
 CHECKED BY: RAS  
 DATE: 12-20-2022



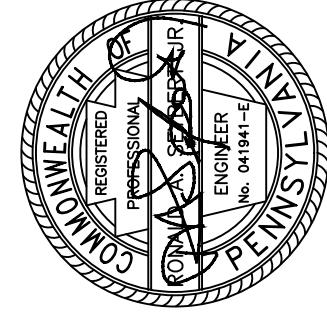
DESIGNED BY: RTS  
 DRAWN BY: LMS  
 CHECKED BY: RAS  
 DATE: 12-20-2022

14

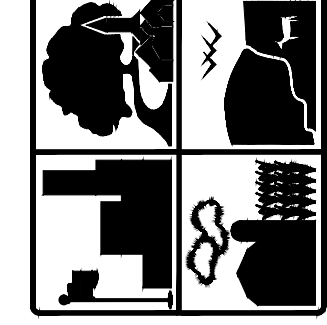
SUBURBAN PARK—PHASE 1  
 CONTRACT 2020—C4

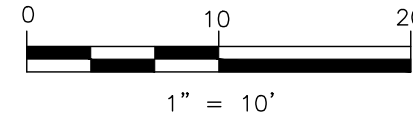
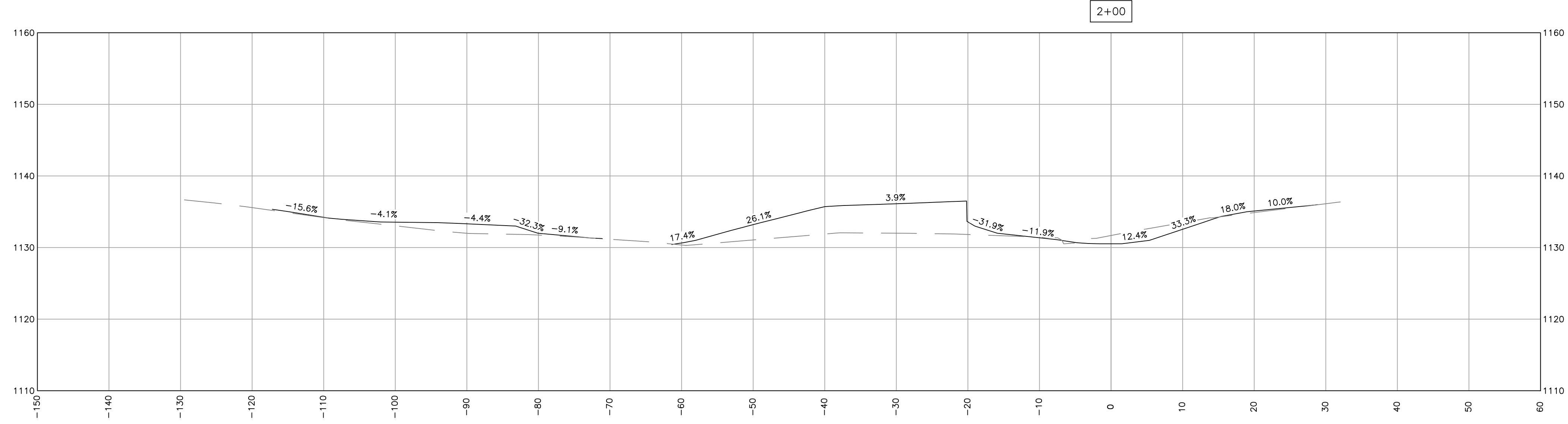
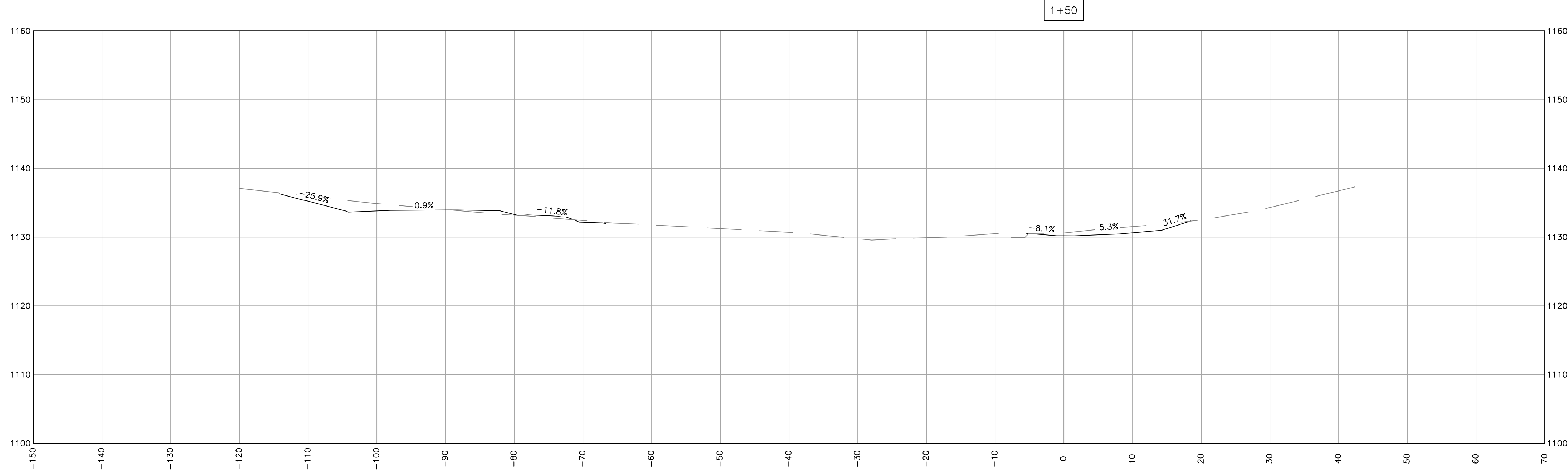
### PROPOSED CROSS SECTIONS

REV.	DATE	REVISION DESCRIPTION



**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us





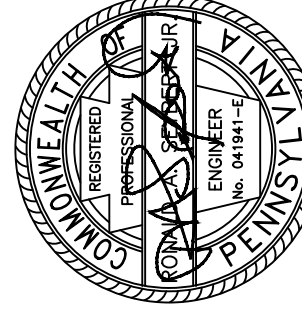
DESIGNED BY: RTS  
 DRAWN BY: LMS  
 CHECKED BY: RAS  
 DATE: 12-20-2022

**PROPOSED CROSS SECTIONS**

**15**

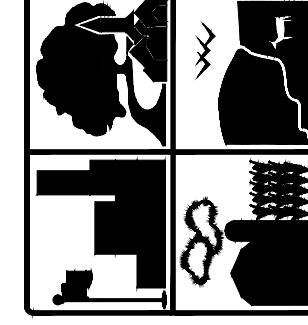
SUBURBAN PARK-PHASE 1  
 CONTRACT 2020-C4

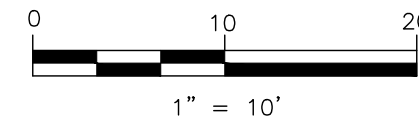
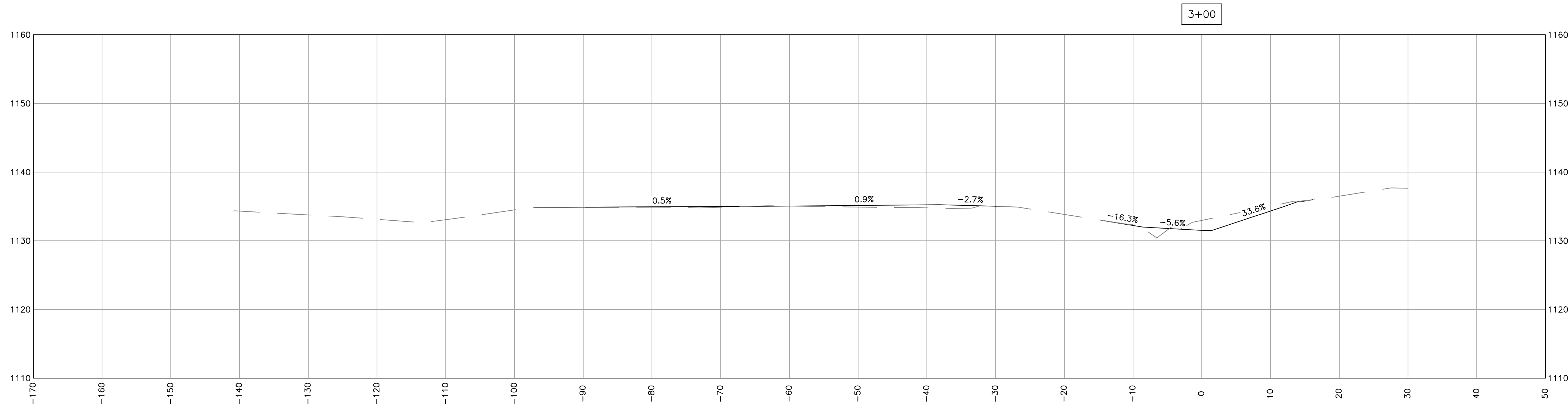
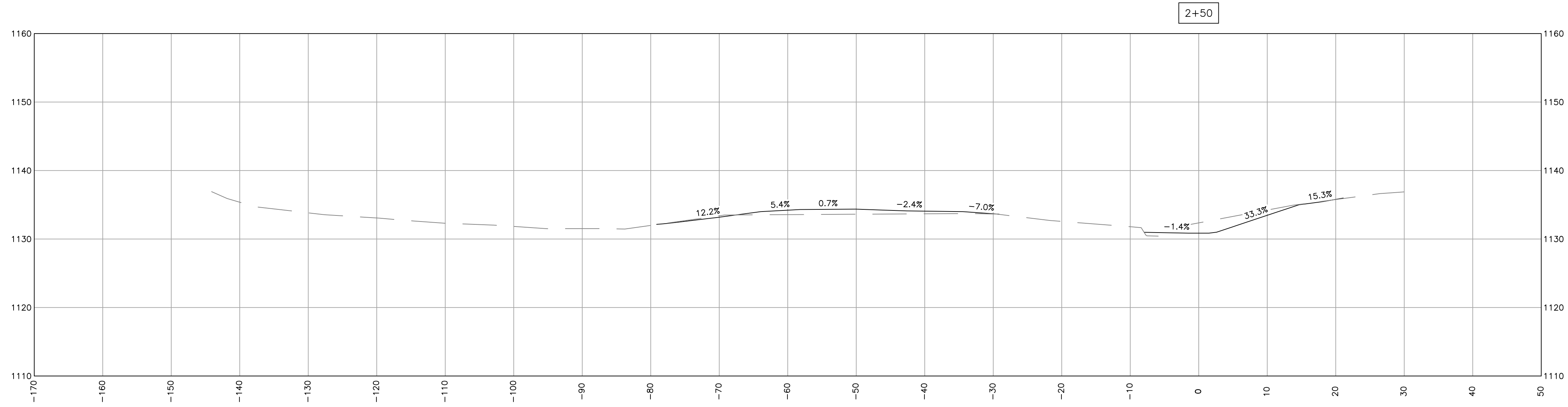
REV.	DATE	REVISION DESCRIPTION



**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING

3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us





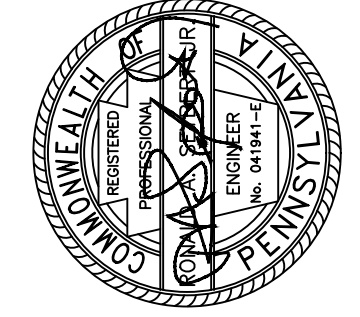
DESIGNED BY: RTS  
 DRAWN BY: LMS  
 CHECKED BY: RAS  
 DATE: 12-20-2022

SUBURBAN PARK-PHASE 1  
 CONTRACT 2020-C4

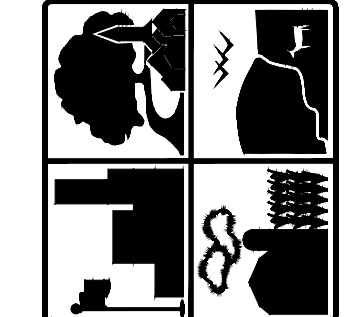
### PROPOSED CROSS SECTIONS

16

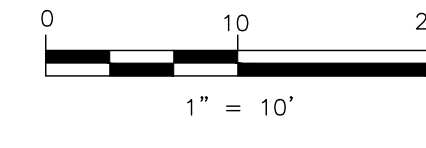
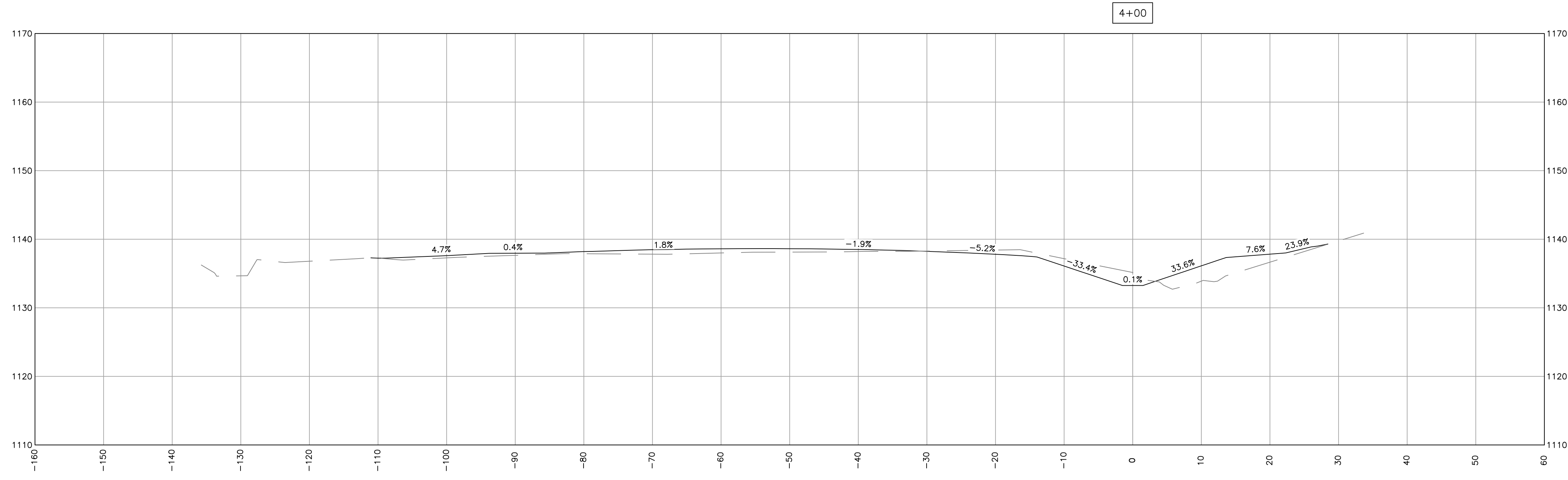
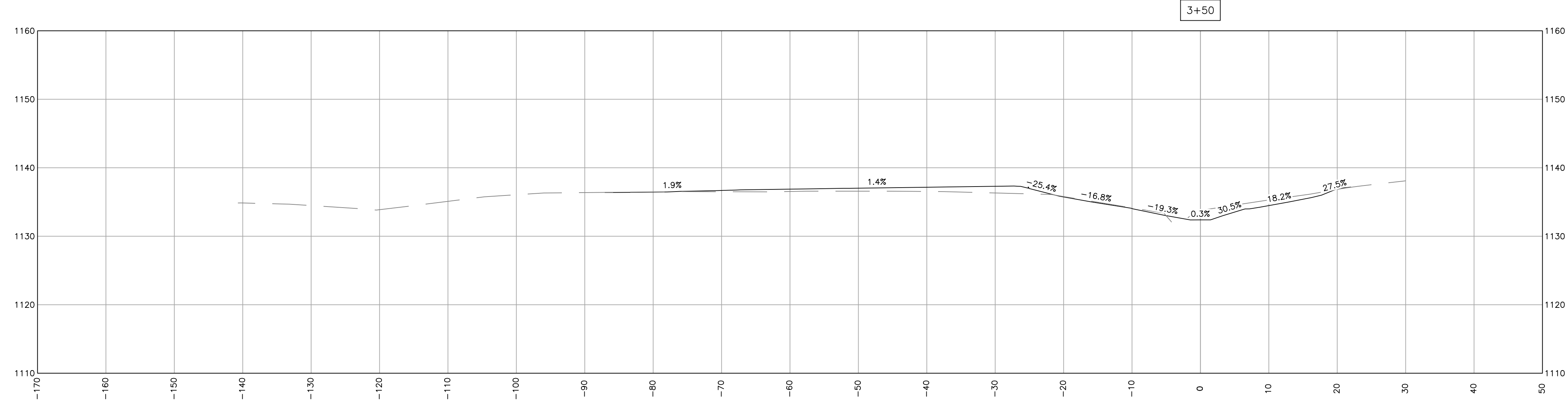
REV.	DATE	REVISION DESCRIPTION



**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us







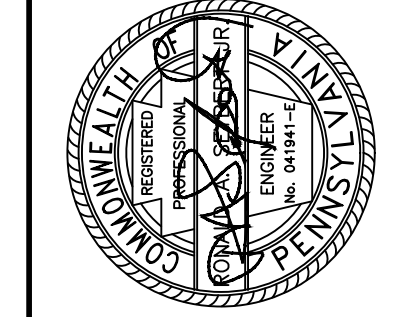
DESIGNED BY: RTS  
 DRAWN BY: LMS  
 CHECKED BY: RAS  
 DATE: 12-20-2022

SUBURBAN PARK—PHASE 1  
 CONTRACT 2020—C4

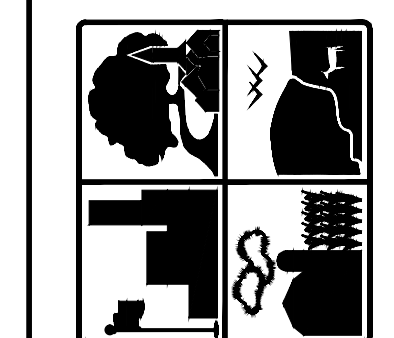
## PROPOSED CROSS SECTIONS

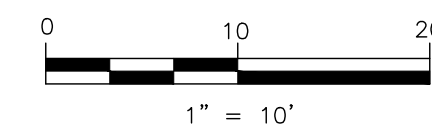
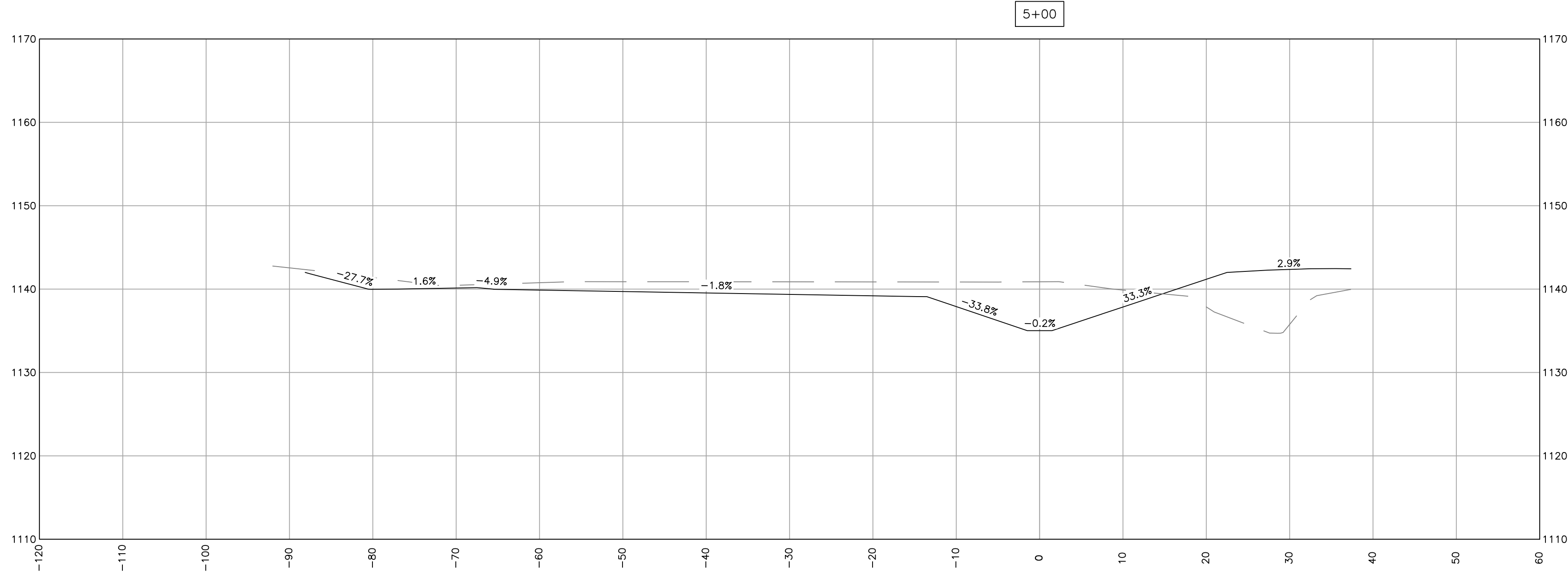
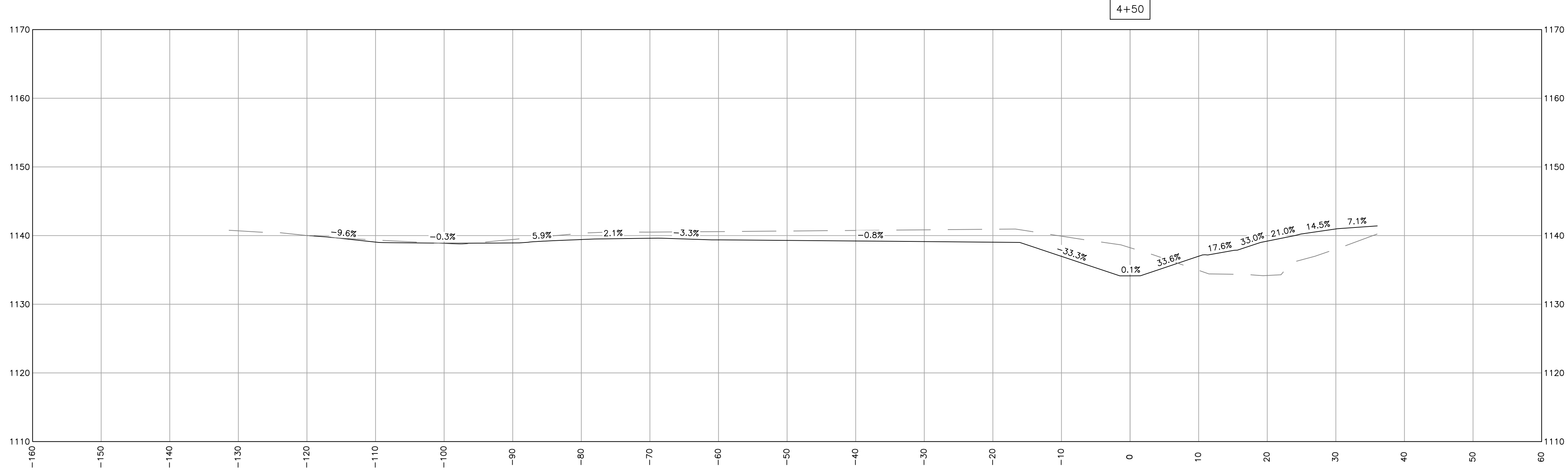
**18**

REV.	DATE	REVISION DESCRIPTION



**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us



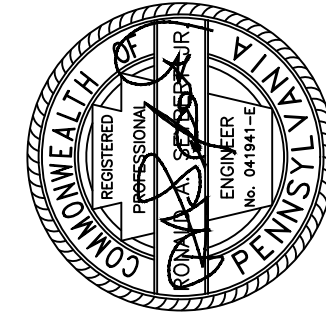


DESIGNED BY: RTS  
 DRAWN BY: LMS  
 CHECKED BY: RAS  
 DATE: 12-20-2022

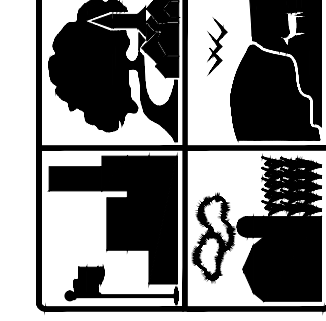
SUBURBAN PARK—PHASE 1  
 CONTRACT 2020—C4

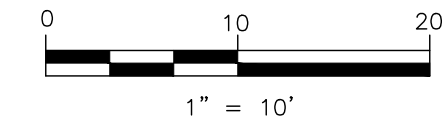
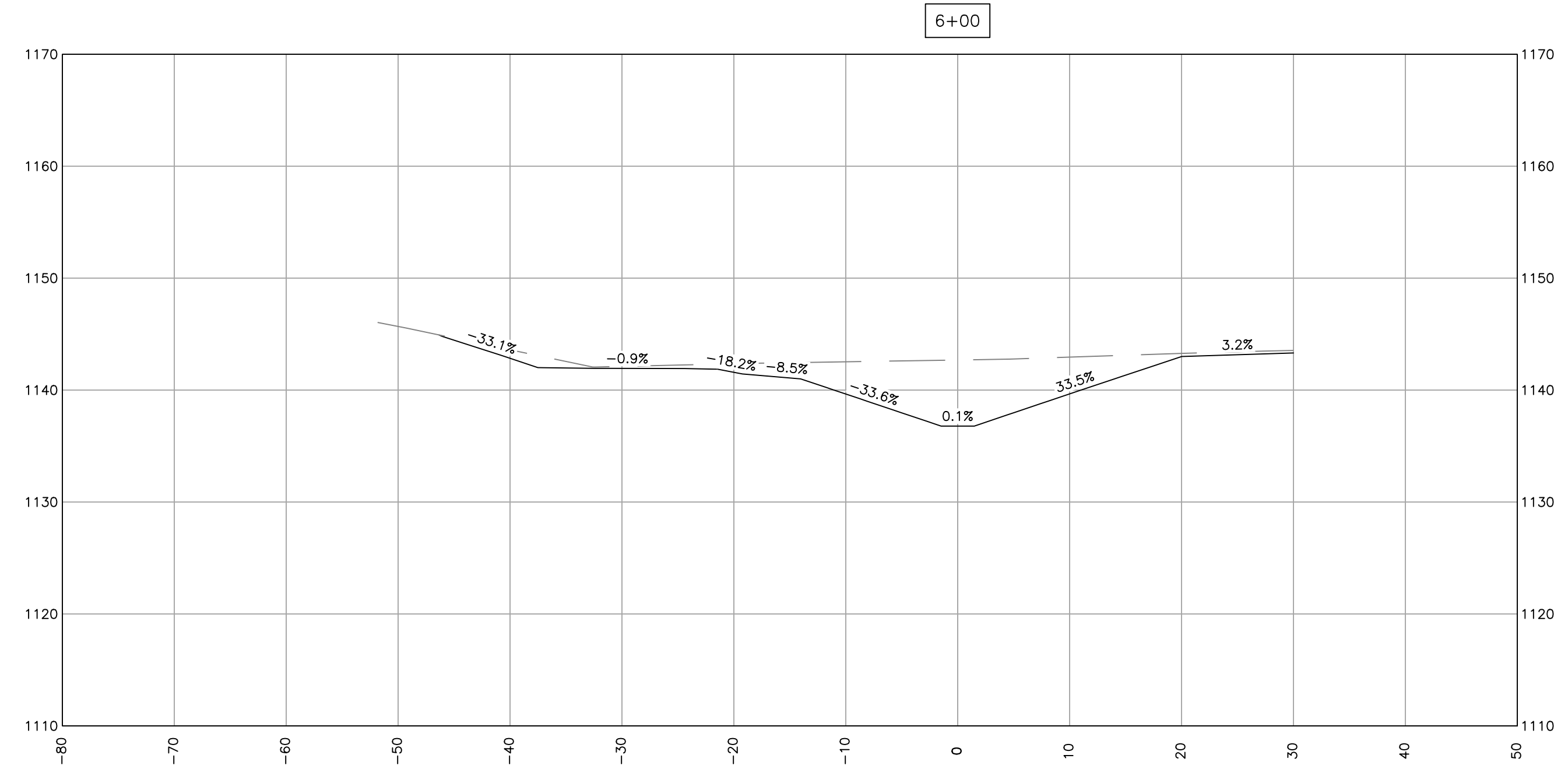
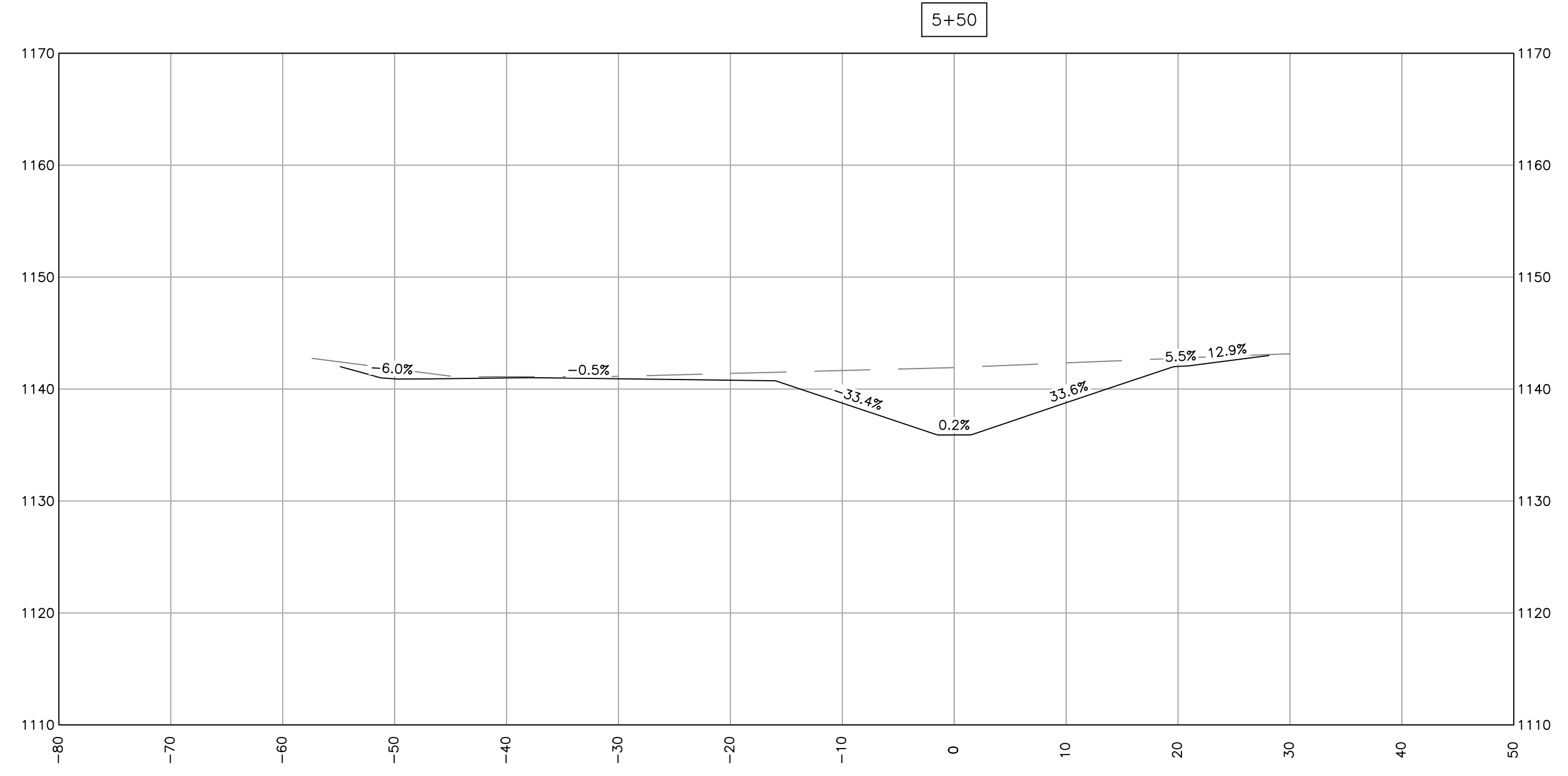
## PROPOSED CROSS SECTIONS

REV.	DATE	REVISION DESCRIPTION



**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us





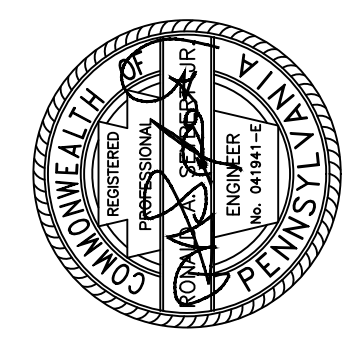
DESIGNED BY: RTS  
 DRAWN BY: LMS  
 CHECKED BY: RAS  
 DATE: 12-20-2022

SUBURBAN PARK—PHASE 1  
 CONTRACT 2020—C4

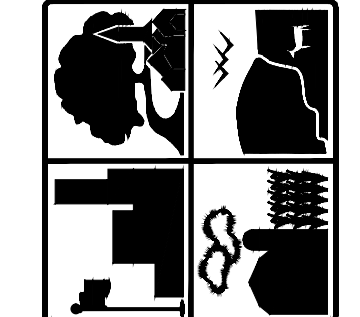
**PROPOSED CROSS SECTIONS**

**19**

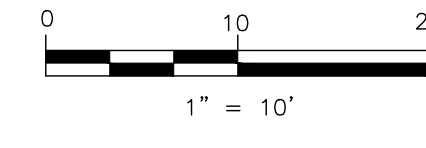
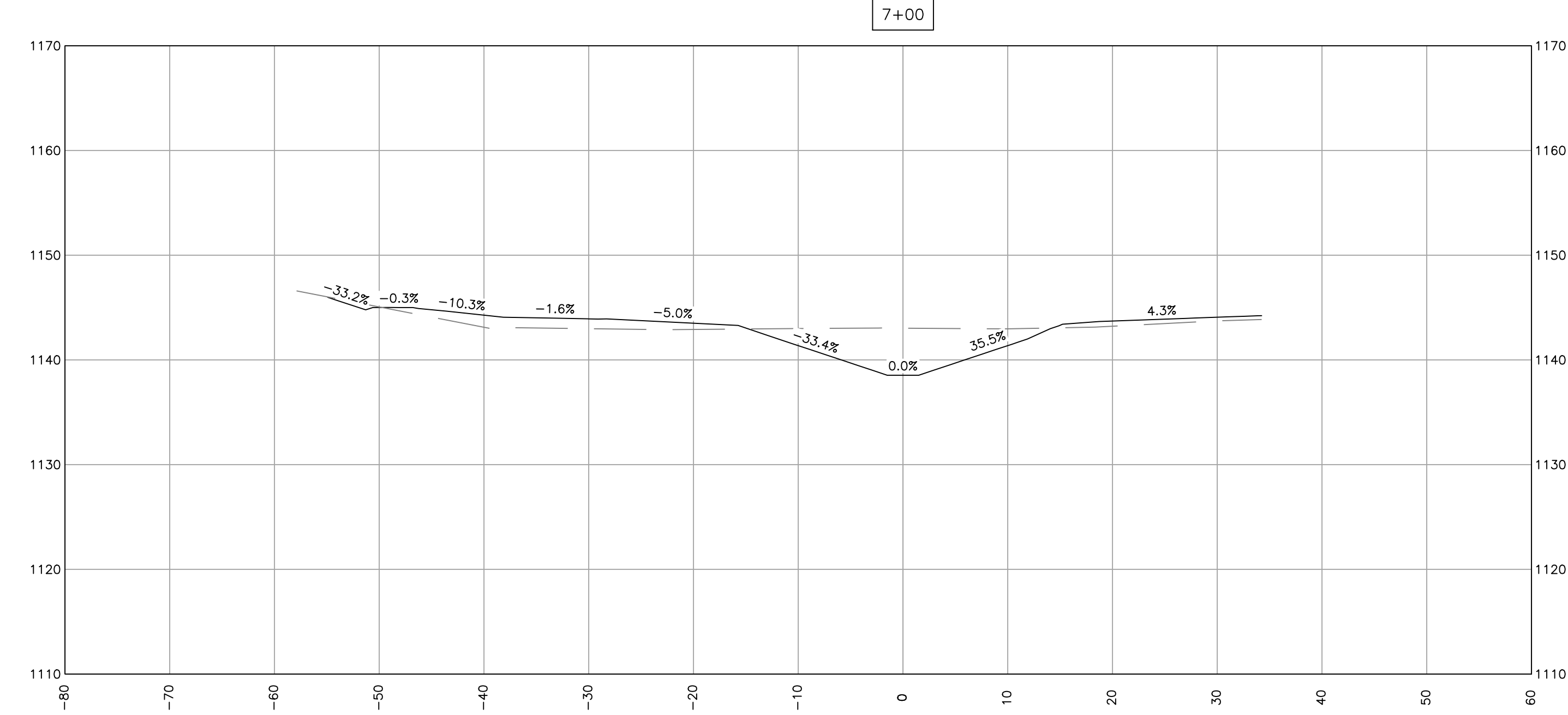
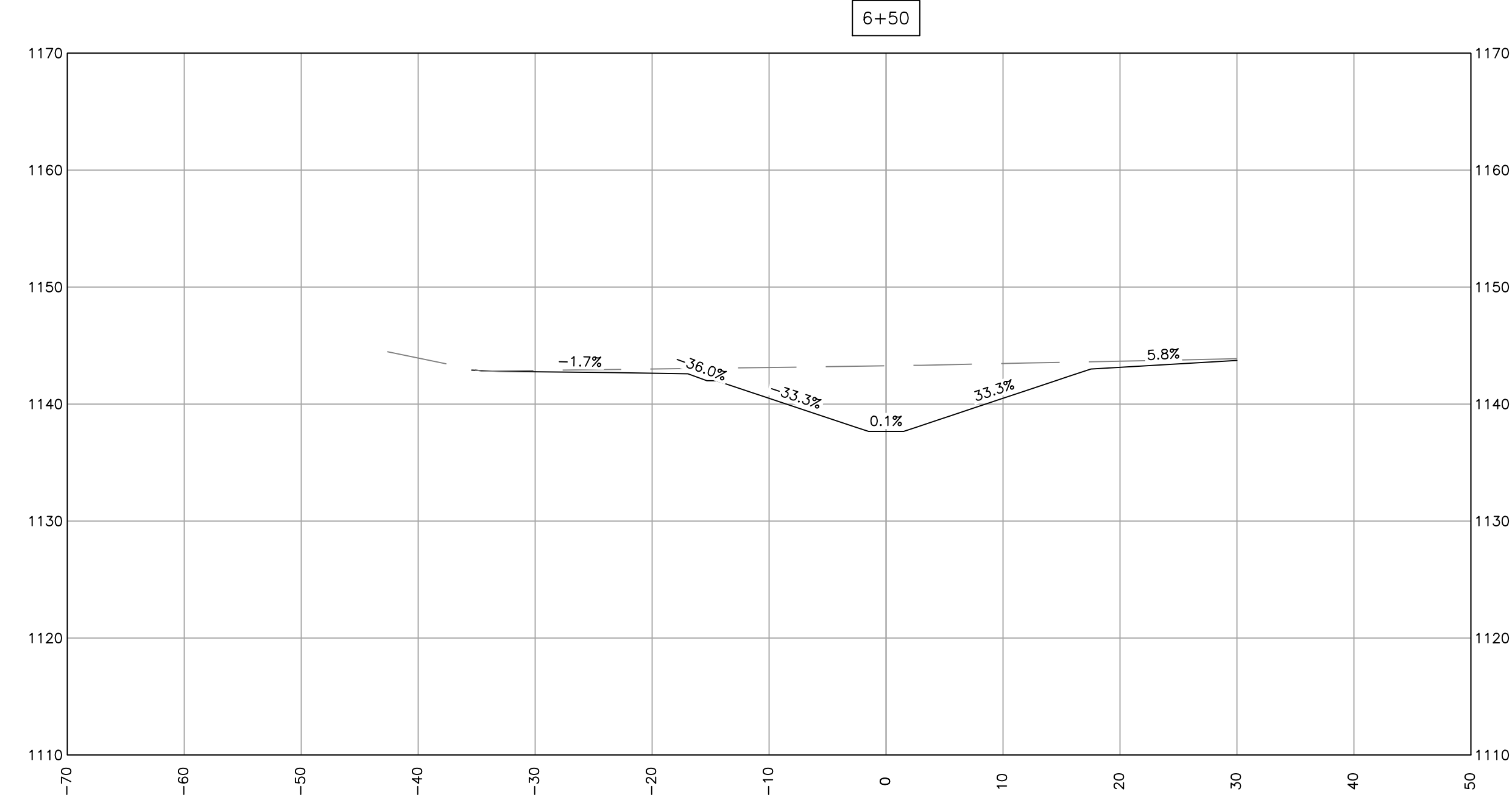
REV.	DATE	REVISION DESCRIPTION



**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us



PATH:\PUBLIC WORKS\PWSTAFF\CAPITAL PROJECTS\2020 PROJECTS\2020-C4 SUBURBAN PARK PHASE 1\DWG\2020-C4 SUBURBAN PARK.DWG SHEET20.CROSS SECTION 7+00.SAVED:1/19/2023 3:51 PM

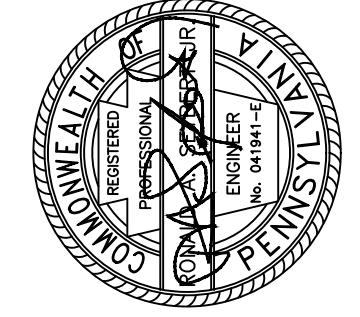


DESIGNED BY: RTS  
 DRAWN BY: LMS  
 CHECKED BY: RAS  
 DATE: 12-20-2022

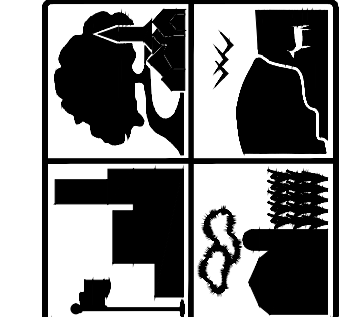
20

SUBURBAN PARK—PHASE 1  
 CONTRACT 2020—C4  
**PROPOSED CROSS  
 SECTIONS**

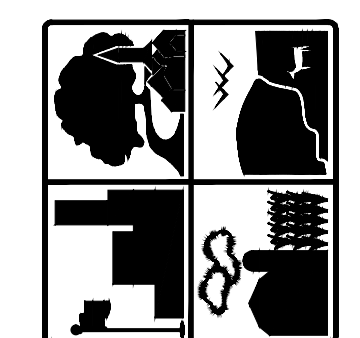
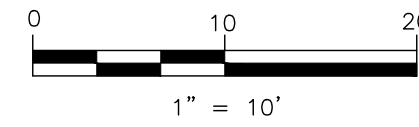
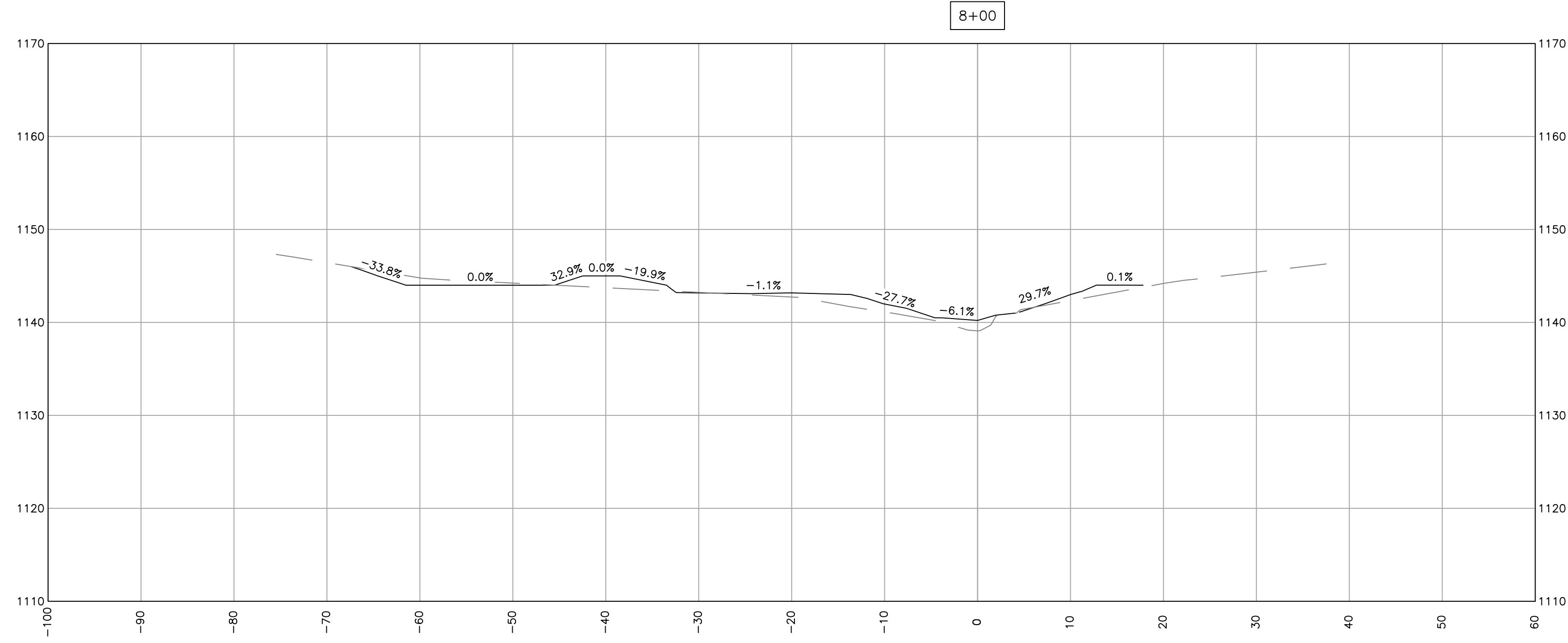
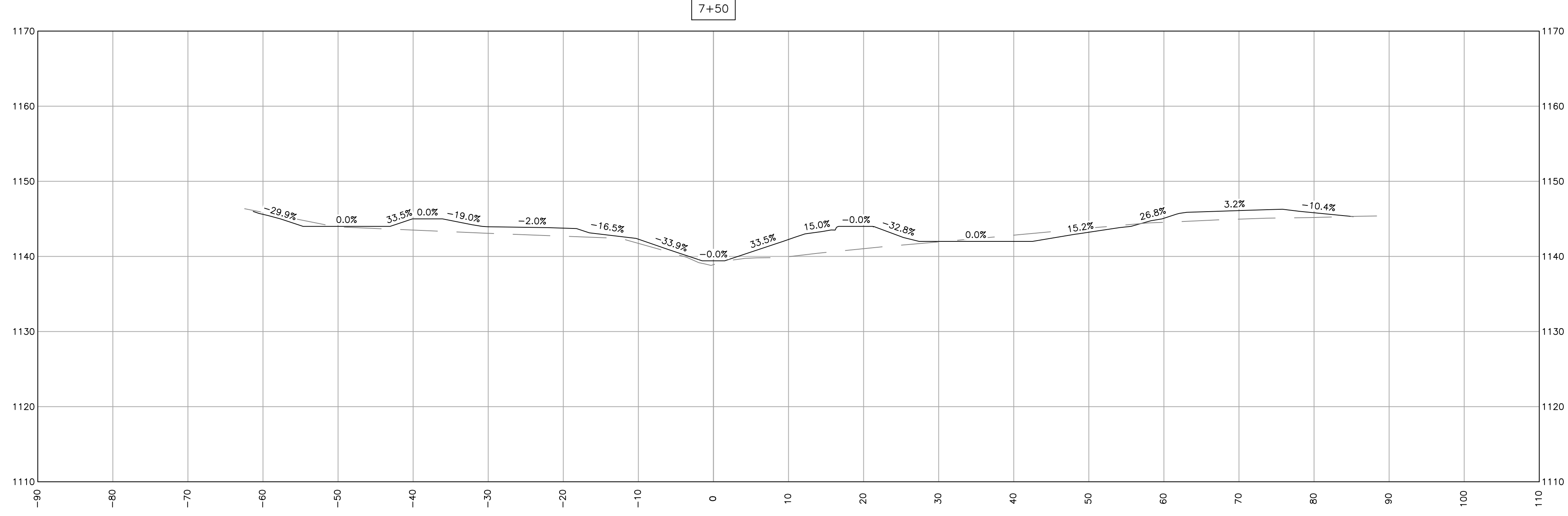
REV.	DATE	REVISION DESCRIPTION



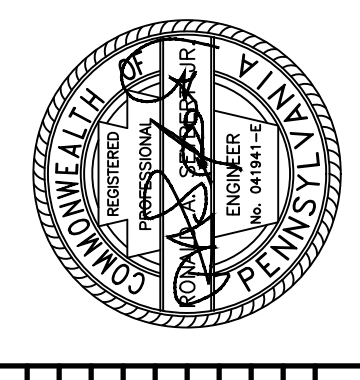
**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us



PATH:\PUBLIC WORKS\PWSTAFF\CAPITAL PROJECTS\2020 PROJECTS\2020-C4 SUBURBAN PARK PHASE 1.DWG\2020-C4 SUBURBAN PARK.DWG SHEET21.CROSS SECTION 8+00 SAVED:1/19/2023 3:51 PM



**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us



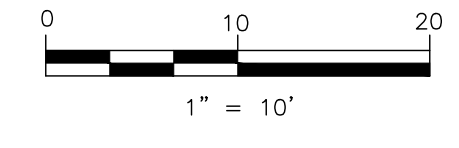
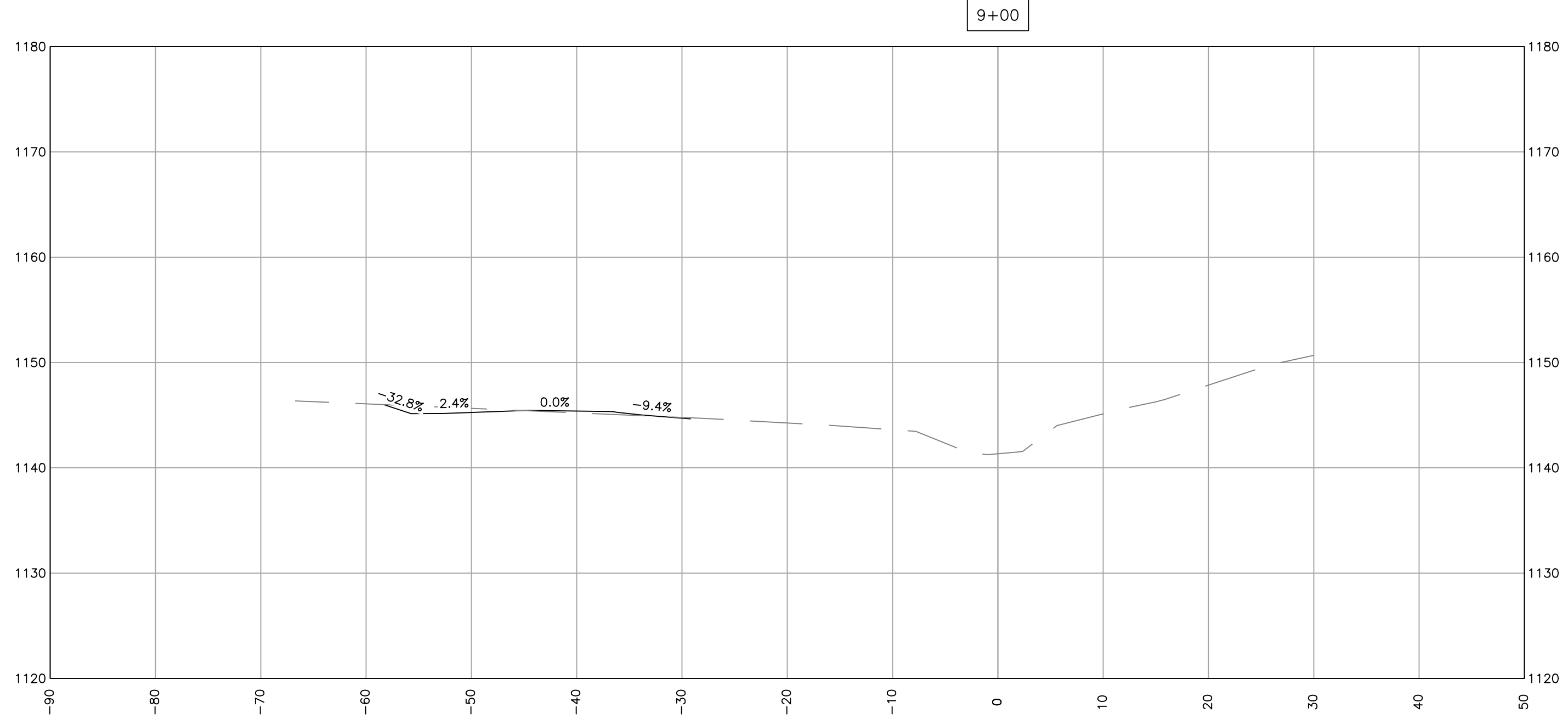
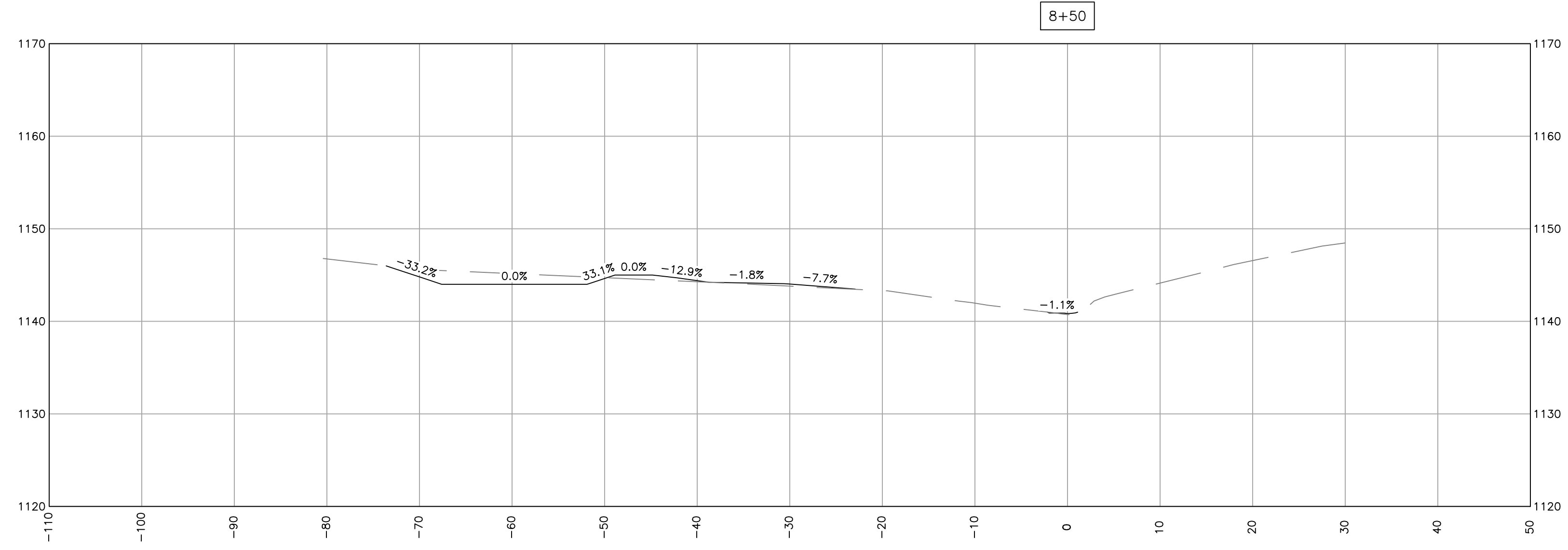
REV.	DATE	REVISION DESCRIPTION

SUBURBAN PARK—PHASE 1  
 CONTRACT 2020—C4  
**PROPOSED CROSS SECTIONS**

DESIGNED BY: RIS  
 DRAWN BY: LMS  
 CHECKED BY: RAS  
 DATE: 12-20-2022

**21**

PATH:\PUBLIC WORKS\PISTAFF\CAPITAL PROJECTS\2020 PROJECTS\2020-C4 SUBURBAN PARK PHASE 1\DWG\2020-C4 SUBURBAN PARK.DWG SHEET22.CROSS SECTION 9+00.SAVED:1/19/2023 3:51 PM

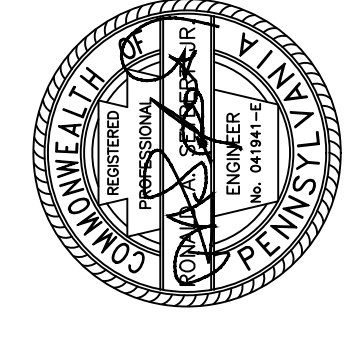


DESIGNED BY: RTS  
DRAWN BY: LMS  
CHECKED BY: RAS  
DATE: 12-20-2022

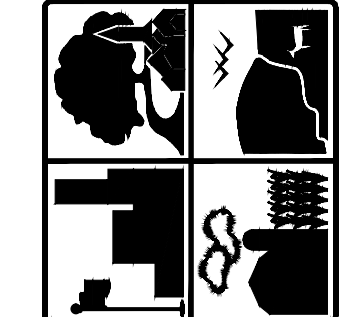
SUBURBAN PARK-PHASE 1  
CONTRACT 2020-C4

**PROPOSED CROSS SECTIONS**

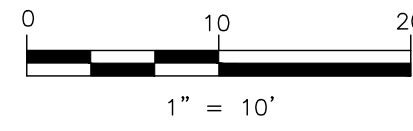
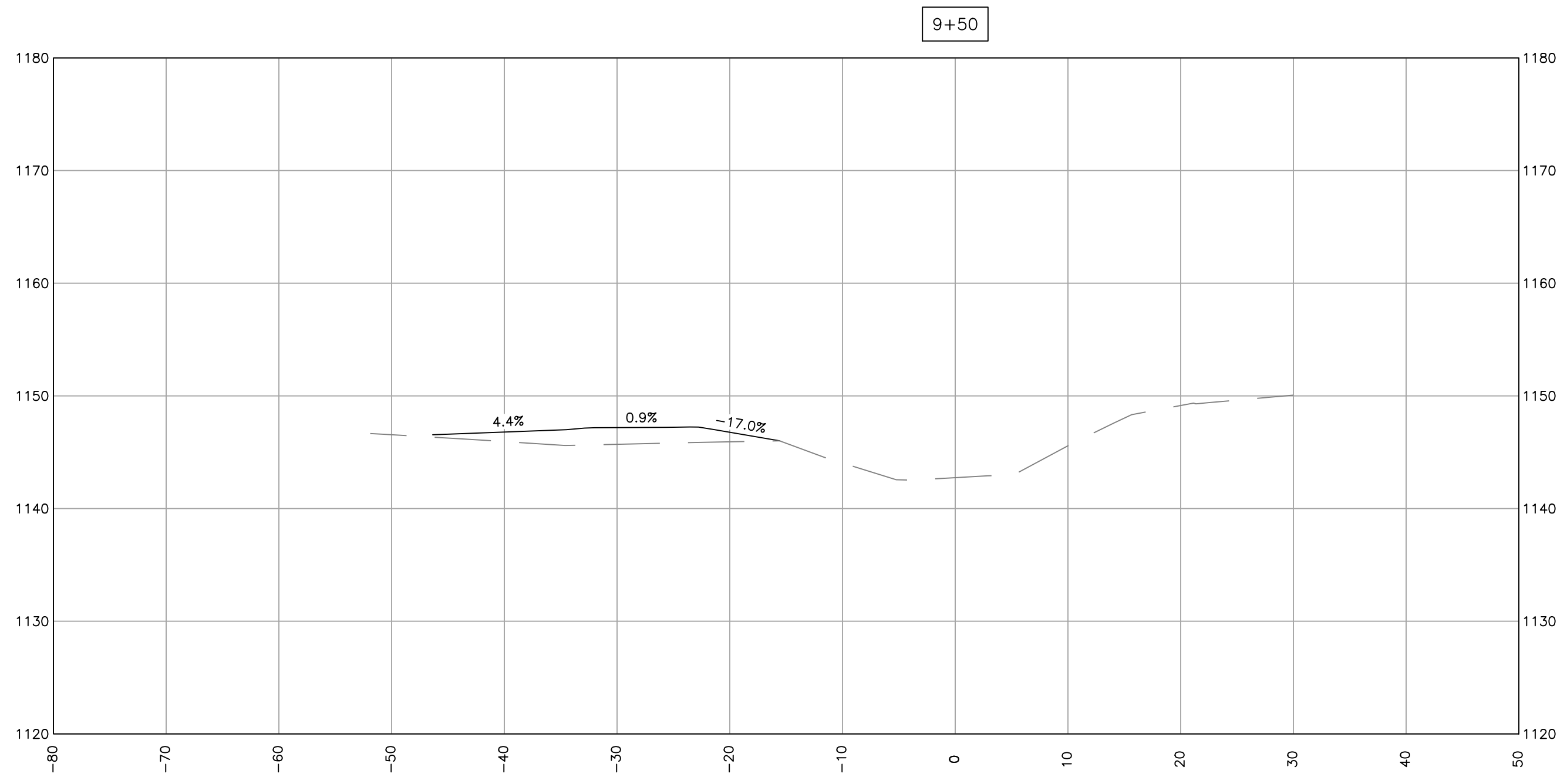
REV.	DATE	REVISION DESCRIPTION



**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us



PATH:\PUBLIC\WORKSP\STAFF\CAPITAL\PROJECTS\2020\PROJECTS\2020-C4-SUBURBAN PARK\PHASE 1\DWG\2020-C4-SUBURBAN PARK.DWG SHEET23.CROSS SECTION 9+50.SAVED:1/19/2023 3:51 PM

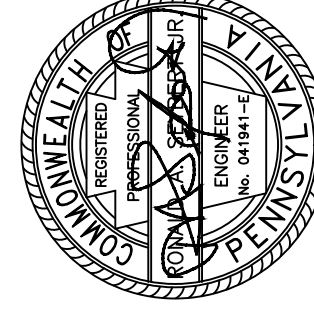


DESIGNED BY: RTS  
 DRAWN BY: LMS  
 CHECKED BY: RAS  
 DATE: 12-20-2022

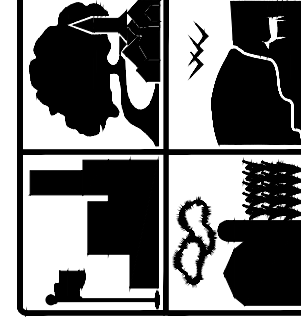
**23**

SUBURBAN PARK—PHASE 1  
 CONTRACT 2020—C4  
**PROPOSED CROSS  
 SECTIONS**

REV.	DATE	REVISION DESCRIPTION



**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
[www.twp.ferguson.pa.us](http://www.twp.ferguson.pa.us)



# EROSION & SEDIMENTATION POLLUTION CONTROL PLANS

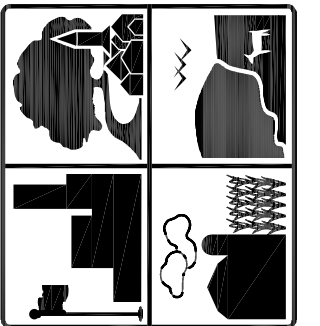
## FOR

# FERGUSON TOWNSHIP

# SUBURBAN PARK - PHASE 1

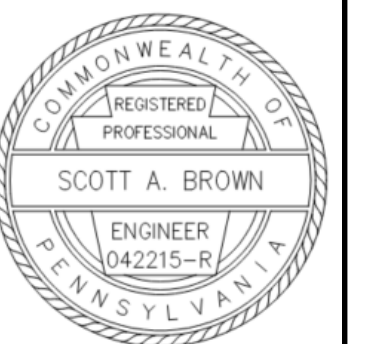
---

## STATE COLLEGE, CENTRE COUNTY, PENNSYLVANIA



FERGUSON TOWNSHIP  
DEPT. OF PUBLIC WORKS & ENGINEERING  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
PHONE: 814-238-4651  
FAX: 814-238-3454  
www.twp.ferguson.pa.us

**NEWELL  
TERESKA &  
MACKAY**  
ENGINEERING  
341 SCIENCE PARK ROAD  
SUITE 203  
STATE COLLEGE, PA 16803

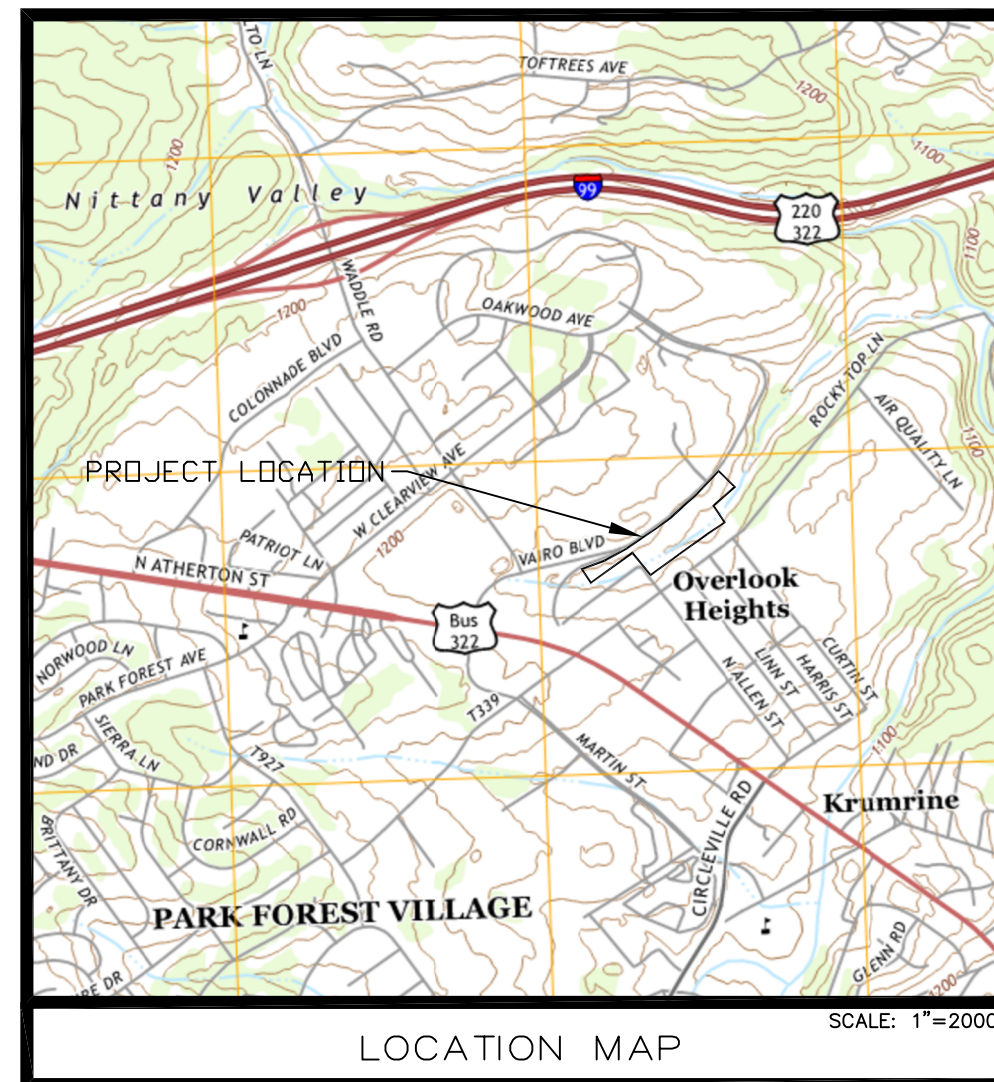


**PROJECT NOTES:**

- OWNER: FERGUSON TOWNSHIP  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
(814) 238-4651
- ELEVATIONS AND HORIZONTAL CONTROL ARE BASED ON NAD83 Pennsylvania State Planes, North Zone, US Foot DATUM. CONTACT FERGUSON TOWNSHIP ENGINEERING DEPT. FOR PROJECT TRAVERSE POINT LOCATIONS/INFORMATION.
- THE LEGAL RIGHT OF WAY ON SUBURBAN AVENUE IS SIXTY (60) FEET.

**UTILITY NOTES:**

- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY AND ARE BASED ON RECORDS OF THE VARIOUS FACILITY OWNERS AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE UTILITY INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST NOTIFY THE PA ONE-CALL SYSTEM AT LEAST 3 DAYS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
- THE CONTRACTOR SHALL DIG TEST PITS AT EXISTING CONFLICTS SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT PLAN REVISIONS AS REQUIRED.
- ALL EXISTING ON-SITE UTILITIES SHALL REMAIN FUNCTIONAL UNLESS DESIGNATED FOR REMOVAL OR ABANDONMENT.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE RELOCATION OF ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
- NO UTILITY SERVICE MAY BE DISCONNECTED WITHOUT PRIOR APPROVAL OF THE OWNERS REPRESENTATIVE.



USGS JULIAN QUADRANGLE, PENNSYLVANIA - CENTRE COUNTY, 7.5 MINUTE SERIES

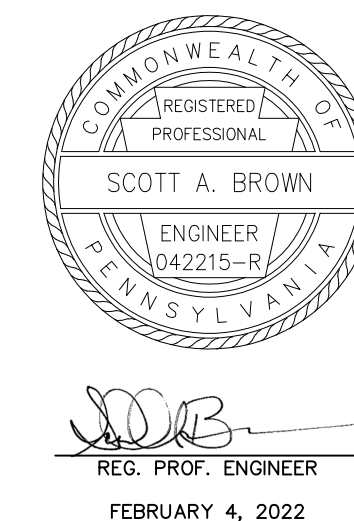
SHEET INDEX	
SHEET	DESCRIPTION
ES100	COVER SHEET
ES101	E&S NOTES
ES102	E&S EXISTING CONDITIONS PLAN
ES103A	E&S PLAN
ES103B	E&S PLAN
ES104	E&S DETAILS
ES105	E&S DETAILS

**EXISTING FEATURES LEGEND**

- Existing Building
- Existing Curbing & Edge of Pavement
- Existing Concrete Sidewalk
- Existing Bituminous Paved Areas
- Existing Gravel Areas
- Existing Retaining Wall
- Existing Fence / Type
- Existing Guide Rail
- Existing Contours w/ Elevation (1's & 2's)
- Existing Contours w/ Elevation (5's & 10's)
- Existing Sanitary Sewer w/ Manhole
- Existing Water Line w/ Valve
- Existing Storm Sewer Line w/ Inlet
- Existing Gas Line
- Existing Underground Electric
- Existing Underground Telephone
- Existing Overhead Utility Line w/ Pole
- Existing Fire Hydrant
- Existing Manhole
- Existing Utility Pole
- Existing Guy Wire
- Existing Storm Sewer Inlet Type-M
- Existing Storm Sewer Inlet Type-C
- Existing Utility Main Valve
- Existing Bollard
- Existing Sign
- Existing Deciduous Tree
- Existing Evergreen Tree
- Existing Shrub

**APPLICANT/OWNER:**  
FERGUSON TOWNSHIP  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801

**SITE GRADING, NPDES & WATERWAY  
PERMIT ENGINEER:**  
NTM ENGINEERING, INC.  
341 SCIENCE PARK ROAD, SUITE 203  
STATE COLLEGE, PA 16803



DESIGNED BY: JTN  
DRAWN BY: JTN  
CHECKED BY: SAB  
DATE: 09/17/2021



ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR ABOVE-GROUND INSPECTION OF THE SITE COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2008, CONTRACTORS MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK.

ONE-CALL SERIAL NO. 20203002515

REV.	DATE	DESCRIPTION
1	02-04-22	PER DEP AND CCOD COMMENTS

SUBURBAN PARK - PHASE 1  
CONTRACT 2020-C4

**COVER**

DESIGNED BY: JTN  
DRAWN BY: JTN  
CHECKED BY: SAB  
DATE: 09/17/2021

**ES100**



EROSION AND SEDIMENTATION CONTROL PLAN NOTES:

- 1. VEHICLES AND EQUIPMENT MAY ONLY ENTER AND EXIT THE CONSTRUCTION SITE VIA A STABILIZED ROCK CONSTRUCTION ENTRANCE.
- 2. ALL DISTURBED AREAS NOT BEING GRADED TO BE MINIMALLY COMPACTED AND RESTORED TO EXISTING CONDITION OR BETTER.
- 3. IN THE EVENT OF SINKHOLE DISCOVERY A PROFESSIONAL GEOLOGIST OR ENGINEER SHALL BE CONTACTED CONCERNING MITIGATION. ADDITIONALLY, THE COUNTY CONSERVATION DISTRICT WILL BE MADE AWARE OF THE SINKHOLE DISCOVERY IMMEDIATELY.
- 4. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.
- 5. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
- 6. FAILURE TO CORRECTLY INSTALL SEDIMENT CONTROL FACILITIES OR FAILURE TO PREVENT SEDIMENT LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE OR FAILURE TO TAKE CORRECTIVE ACTIONS TO IMMEDIATELY RESOLVE FAILURES OF SEDIMENT CONTROL FACILITIES MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION AS DEFINED IN SECTION 602 OF THE CLEAN STREAMS LAW OF PENNSYLVANIA.
- 7. UNTIL THE SITE ACHIEVES FINAL STABILIZATION, THE OPERATOR SHALL ASSURE THAT THE BEST MANAGEMENT PRACTICES ARE IMPLEMENTED, OPERATED, AND MAINTAINED PROPERLY AND COMPLETELY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL BEST MANAGEMENT PRACTICE FACILITIES. THE OPERATOR WILL MAINTAIN AND MAKE AVAILABLE TO COUNTY CONSERVATION DISTRICT COMPLETE, WRITTEN INSPECTION LOGS OF ALL THOSE INSPECTIONS. ALL MAINTENANCE WORK, INCLUDING CLEANING, REPAIR, REPLACEMENT, REGRADING, AND RESTABILIZATION SHALL BE PERFORMED IMMEDIATELY.
- 8. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
- 9. BEFORE INITIATING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE COUNTY CONSERVATION DISTRICT.
- 10. THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE COUNTY CONSERVATION DISTRICT, AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS, REGARDLESS OF THEIR LOCATIONS.
- 11. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON-DISTURBED AREAS.
- 12. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF THE APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, CHAPTER 102, EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT.
- 13. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.
- 14. EROSION AND SEDIMENT BMPs MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPs.
- 15. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMPs MUST BE STABILIZED IMMEDIATELY.
- 16. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN PREPARER, AND THE COUNTY CONSERVATION DISTRICT TO AN ON-SITE MEETING. ALSO, AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR BURIED UTILITIES LOCATIONS.
- 17. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE APPROVED SEQUENCE.
- 18. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINISHED GRADE WHICH WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
- 19. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
- 20. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.
- 21. RESPONSIBILITY FOR FILL MATERIAL:

IF THE PROJECT WILL NEED TO IMPORT OR EXPORT MATERIAL FROM THE SITE, THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND DETERMINATION OF CLEAN FILL WILL REST WITH THE DESIGN BUILD CONTRACTOR.

CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREGGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT THAT BE PROCESSED FOR RE-USE).

CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE: FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS IN TABLES FP-1A AND FP-1B FOUND IN THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".

ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN UP. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING FILL. A COPY OF FORM FP-001 CAN BE FOUND AT THE END OF THESE INSTRUCTIONS.

ENVIRONMENTAL DUE DILIGENCE: THE APPLICANT MUST PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATABASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".

FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE DEPARTMENT'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA. CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT WHICHEVER IS APPLICABLE. THESE REGULATIONS ARE AVAILABLE ON-LINE AT WWW.PACODE.COM.

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

REFER TO THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN TITLED "POST CONSTRUCTION STORMWATER MANAGEMENT PLAN & STORMWATER MANAGEMENT SITE PLAN FOR SUBURBAN PARK - PHASE 1" DATED 09/17/2021.

EROSION AND SEDIMENTATION CONTROL MAINTENANCE NOTES:

GENERAL

- 1. DURING THE LIFE OF THE PROJECT, ALL EROSION AND SEDIMENTATION CONTROL DEVICES MUST BE PROPERLY MAINTAINED. MAINTENANCE SHALL INCLUDE THE INSPECTION OF EROSION CONTROL FACILITIES AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE. THE COMPLIANCE ACTIONS AND THE DATE, TIME, AND NAME OF THE PERSON CONDUCTING THE INSPECTION. THE INSPECTION LOG WILL BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE DISTRICT UPON REQUEST.

WHERE BMPs ARE FOUND TO FAIL TO ALLEVIATE EROSION OR SEDIMENT POLLUTION THE PERMITEE OR CO-PERMITEE SHALL CONTACT THE PERMIT ISSUING AGENCY IMMEDIATELY. THIS CONTACT SHALL BE FOLLOWED BY A WRITTEN REPORT WITHIN 5 DAYS. THE WRITTEN REPORT SHALL INCLUDE THE FOLLOWING INFORMATION:

- A. THE LOCATION AND SEVERITY OF THE BMPs FAILURE AND ANY POLLUTION EVENTS.
- B. ALL STEPS TAKEN TO, REDUCE, ELIMINATE AND PREVENT THE RECURRENCE OF THE NON-COMPLIANCE.
- C. THE TIME FRAME TO CORRECT THE NONCOMPLIANCE, INCLUDING EXACT DATES WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE.

- 2. SEEDED AREAS THAT HAVE WASHED AWAY SHALL BE FILL AND GRADED, AS NECESSARY, AND THEN RESEDED. A STRAW COVER SHALL BE APPLIED TO RETAIN THE SEED ALONG WITH AN ANCHORING METHOD DESCRIBED ON THE MULCH ANCHORING GUIDE, UNTIL IS HAS A CHANCE TO ROOT PROPERLY.

- 3. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENTATION BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs OR MODIFICATIONS OF THOSE INSTALLED WILL BE NEEDED.

- 4. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.

- 5. SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS, OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES, OR TRANSPORTED OFF-SITE TO AN APPROVED DISPOSAL SITE.

ROCK CONSTRUCTION ENTRANCE

- 1. SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE. NOTE: WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO DITCHES, SEWERS, CULVERTS OR OTHER DRAINAGEWAY IS NOT ACCEPTABLE.
- 2. ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK.
- 3. INSPECT AFTER EACH STORM EVENT AND ON A WEEKLY BASIS. NEEDED REPAIRS SHOULD BE INITIATED IMMEDIATELY AFTER THE INSPECTION.

COMPOST FILTER SOCK

- 1. INSPECT AFTER EACH STORM EVENT ON A WEEKLY BASIS. NEEDED REPAIRS SHOULD BE INITIATED IMMEDIATELY AFTER THE INSPECTION.
- 2. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF THE SOCK.
- 3. ANY SECTION OF SOCK WHICH HAS BEEN UNDERMINED OR OVERTOPPED MUST BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET PER CENTRE COUNTY CONSERVATION DISTRICT REQUIREMENTS.

PUMPED WATER FILTER BAG

- 1. PUMPED WATER FILTER BAG SHALL BE INSPECTED WEEKLY AND BEFORE EACH USE.
- 2. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL.
- 3. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED.

RIPRAP APRON

- 1. RIPRAP APRONS SHOULD BE INSPECTED AFTER EACH STORM EVENT.
- 2. APRON THICKNESS SHALL BE MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK.
- 3. REMOVE ANY ACCUMULATED SEDIMENT ONCE HALF OF THE STONE THICKNESS IS COVERED.

RIPRAP LINED CHANNEL

- 1. CHANNELS SHOULD BE INSPECTED AFTER EACH STORM EVENT.
- 2. RIPRAP LINING THICKNESS AND GEOMETRY SHALL BE MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK.
- 3. REMOVE ANY ACCUMULATED SEDIMENT ONCE HALF OF THE STONE THICKNESS IS COVERED.

EROSION CONTROL BLANKETS

- 1. REFER TO SHEET ES104 FOR O&M NOTES.

VEGETATIVE STABILIZATION

- 1. STABILIZED AREAS SHOULD BE INSPECTED AFTER EACH STORM EVENT.
- 2. SEEDED AREAS THAT HAVE WASHED AWAY SHALL BE FILLED AND GRADED, AS NECESSARY, AND THEN RESEDED. A STRAW COVER SHALL BE APPLIED TO RETAIN THE SEED ALONG WITH AN ANCHORING METHOD DESCRIBED ON THE MULCH ANCHORING GUIDE, UNTIL IS HAS A CHANCE TO ROOT PROPERLY.

CONSTRUCTION SEQUENCE FOR BULK GRADING ACTIVITY NOTES:

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. ALL WORK SHALL BE COMPLETED IN COMPLIANCE WITH CHAPTER 102 REGULATIONS BEFORE ANY FOLLOWING STAGE IS INITIATED.

AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LAND OWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN PREPARER, AND A REPRESENTATIVE FROM THE CENTRE COUNTY CONSERVATION DISTRICT TO A PRE-CONSTRUCTION MEETING.

AT LEAST 3 WORKING DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM, INC. AT 1-800-242-1776 FOR BURIED UTILITY LOCATIONS.

BEFORE IMPLEMENTING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE WRITTEN APPROVAL OF THE REVISIONS FROM THE CENTRE COUNTY CONSERVATION DISTRICT.

THE CONTRACTOR SHALL ENSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE CONSERVATION DISTRICT AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL PROPOSED SOIL/ROCK SPOIL AND BORROW AREAS ON OR OFFSITE.

THE FOLLOWING SEQUENCE OF CONSTRUCTION SHALL BE FOLLOWED UNLESS AN ALTERNATIVE APPROACH HAS BEEN APPROVED BY THE CENTRE COUNTY CONSERVATION DISTRICT.

- 1. INSTALL SIGNAGE THAT INDICATES THE PARK WILL REMAIN CLOSED DURING THE DURATION OF CONSTRUCTION IN THE LOCATIONS SHOWN ON THE PLAN.
- 2. INSTALL THE ROCK CONSTRUCTION ENTRANCES IN THE LOCATIONS SHOWN ON THE PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT SEDIMENT IS NOT TRACKED ONTO PUBLIC STREETS OR PRIVATE DRIVEWAYS AND SHALL IMMEDIATELY PERFORM STREET SWEEPING IF NECESSARY. THE CONSTRUCTION ENTRANCES SHALL BE THE ONLY MEANS OF INGRESS AND EGRESS FOR CONSTRUCTION VEHICLES.
- 3. INSTALL TREE PROTECTION IN LOCATIONS SHOWN ON THE PLAN.

- 4. INSTALL FLAGGING OR FENCING TO DELINEATE THE LOCATIONS OF STORMWATER BMP-01 AND BMP-02 (RAIN GARDENS) TO RESTRICT VEHICULAR OR HEAVY EQUIPMENT TRAFFIC TO PREVENT SOIL COMPACTION. THERE SHALL BE NO EXCAVATION OR LOWERING OF GRADES IN THE VICINITY OF STORMWATER BMP-03 OR BMP-04 (INFILTRATION TRENCHES) PRIOR TO CONSTRUCTION OF THESE BMPs.
- 5. INSTALL COMPOST FILTER SOCKS NUMBERED 1 THROUGH 6 IN THE LOCATIONS SHOWN ON THE PLAN AND AROUND TEMPORARY SOIL STOCKPILE AREAS.
- 6. VERIFY AND CONFIRM THAT ALL E&S MEASURES HAVE BEEN INSTALLED AND FUNCTIONING PRIOR TO CONTINUING ONTO STEP 7.
- 7. FOLLOWING COMPLETION OF STEPS 1 THROUGH 6, BEGIN CHANNEL WORK. ALL CHANNEL WORK TO BE PERFORMED DURING A DRY PERIOD. CHANNEL WORK INCLUDES CULVERT REMOVAL, CHANNEL AREA TOPSOIL REMOVAL AND GRADING, INSTALLATION OF CUT-OFF TRENCHES, INSTALLATIONS OF ALL EROSION CONTROL MEASURES, AND SEEDING AND MULCHING ASSOCIATED WITH THE CHANNEL.

- A. STRIP TOPSOIL FROM THE EXISTING CHANNEL AND PROPOSED CHANNEL LOCATIONS AND STOCKPILE ALL TOPSOIL MATERIAL IN THE LOCATION SHOWN ON THE PLAN.
- B. REMOVE THE EXISTING CMP CULVERT AND PIPE SECTION AS SHOWN ON THE PLAN.

- C. INSTALL TYPE "M" INLET, STORMSEWER PIPING, ENDWALL, AND ASSOCIATED RIPRAP APRON. STORMSEWER CONSTRUCTION SHALL PROCEED FROM DOWNSTREAM TO UPSTREAM, AND CONTRACTOR SHALL ONLY EXCAVATE TRENCH FOR THAT AMOUNT OF PIPE THAT CAN BE INSTALLED, BACKFILLED, AND STABILIZED WITH SEEDING AND STRAW MULCH WITHIN ONE WORKING DAY. PUMP WATER FROM TRENCHES AFTER STORM EVENTS INTO A PUMPED WATER SEDIMENT FILTER BAG AS ILLUSTRATED IN THE DETAILS.

- D. ROUGH GRADE CHANNEL AREA AND INSTALL CUTOFF TRENCHES.

CUTOFF TRENCHES

- i. EXCAVATE THE CUTOFF TRENCHES TO THE DIMENSIONS LISTED ON SHEET PCSM105 OF THE POST STORMWATER MANAGEMENT PLANS.
- ii. FILL THE TRENCH WITH R-5 RIPRAP. TAMP TO CONSOLIDATE STONE. WRAP TOP OF TRENCH WITH GEOTEXTILE FABRIC. TOP TRENCH WITH A MINIMUM OF 4" OF TOPSOIL (COMPACTED) TO MATCH PROPOSED GRADES.

- 8. CONSTRUCT THE RIPRAP LINED CHANNEL PER THE DETAIL ON SHEET ES105.

- 9. INSTALL BRIDGES, RIPRAP SCOUR PROTECTION, WALKING PATHS, AND ALL PROPOSED PARK HARDSCAPING.

- 10. PERFORM FINISH GRADING THROUGHOUT THE SITE. INSTALL CHANNEL SOD AND PERMANENT SEEDING.

- 11. RESTORE ALL OTHER DISTURBED AREAS TO DESIGN CONTOUR AND STABILIZE WITH PERMANENT SEED.

- 12. UNTIL THE SITE HAS ACHIEVED A MINIMUM 70% UNIFORM PERENNIAL VEGETATIVE COVER, RETURN TO THE SITE AFTER ALL RAIN EVENTS AND INSPECT THE SITE FOR EROSION DAMAGE. ANY DAMAGE SHALL BE REPAIRED AND STABILIZED.

- 13. CONSTRUCT THE STORMWATER BMPs - BMP-01 THROUGH BMP-04 IN ACCORDANCE WITH THE SEQUENCE BELOW. THESE BMPs INCLUDE THE TWO RAIN GARDENS AND TWO INFILTRATION TRENCHES. DO NOT BEGIN CONSTRUCTION OF INFILTRATION TRENCHES OR RAIN GARDENS UNTIL ALL UPSTREAM TRIBUTARY AREAS ARE STABILIZED WITH PERMANENT COVER.

RAIN GARDENS BMP-01 AND BMP-02

- A. BEGIN EXCAVATION AND ROUGH GRADING OF RAIN GARDENS AFTER ALL UPSLOPE TRIBUTARY AREAS HAVE BEEN STABILIZED.

- i. ALL EXCAVATION SHOULD BE DONE FROM OUTSIDE THE RAIN GARDEN FOOTPRINT. NO EQUIPMENT SHALL BE IN THE RAIN GARDEN BOTTOM.

- B. BRING THE BASIN EMBANKMENT AND CUT AND FILL SLOPES TO THEIR FINAL LINE AND GRADE USING SUBSOIL WITH HIGH CLAY CONTENT TOPPED WITH A 4" LAYER OF TOPSOIL.

- C. CONSTRUCT THE EMERGENCY SPILLWAY AS SPECIFIED ON THE DETAIL ON SHEET PCSM105 OF THE STORMWATER MANAGEMENT PLANS.

- D. BRING THE BASIN BOTTOM TO ITS FINAL GRADE. IF NECESSARY, ADD TOPSOIL FROM THE SITE TO REACH FINAL GRADE.

- E. IMMEDIATELY OR BEFORE ANY RAINFALL, INSTALL A 12 INCH COMPOST FILTER SOCK (NUMBERED 7 AND 8) AT THE TOE OF ALL CUT AND FILL SLOPES (INSIDE AND OUTSIDE OF BASIN AS APPLICABLE).

- F. APPLY PERMANENT SEEDING AND MULCH TO ALL EMBANKMENT AREAS PER THE PERMANENT SEEDING SPECIFICATION ON SHEET ES105.

- G. SPREAD SAND AND PLANT SWITCHGRASS PLUGS IN BASIN FLOOR AREAS AS SPECIFIED IN THE DETAIL ON SHEET PCSM105 OF THE STORMWATER MANAGEMENT PLANS.

- H. MAINTAIN PROTECTION OF RAIN GARDEN FLOOR UNTIL EMBANKMENTS AND ALL TRIBUTARY AREAS ARE STABILIZED.

- I. RE-SEED OR REPLANT BASIN FLOOR AND EMBANKMENTS AS NECESSARY UNTIL VEGETATION IS FULLY ESTABLISHED.

INFILTRATION TRENCHES BMP-03 AND BMP-04

- A. BEGIN EXCAVATION OF INFILTRATION TRENCHES AFTER ALL UPSLOPE TRIBUTARY AREAS HAVE BEEN STABILIZED. EXCAVATE THE INFILTRATION TRENCHES TO THE DIMENSIONS LISTED IN THE DETAIL ON SHEET PCSM105 OF THE STORMWATER MANAGEMENT PLANS.

- i. CARE SHOULD BE TAKEN TO NOT OVER COMPACT THE TRENCH BOTTOM TO MAINTAIN SOIL INFILTRATION CHARACTERISTICS.

- B. INSTALL GEOTEXTILE FABRIC.

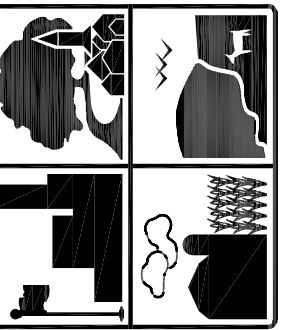
- C. INSTALL FILTER SAND AND STONE UP TO THE TOP OF THE TRENCH AS ILLUSTRATED IN THE TRENCH DETAIL.

- D. APPLY PERMANENT SEEDING AND MULCH TO ALL AREAS OUTSIDE OF THE INFILTRATION TRENCH THAT WERE DISTURBED DURING TRENCH CONSTRUCTION.

- E. SEED AMENDED SOIL AS SPECIFIED IN THE SEEDING SPECIFICATIONS AND REPAIR ANY EMBANKMENT AREAS NEEDING ADDITIONAL SEEDING.

- F. RE-SEED ANY AREAS AS NECESSARY UNTIL VEGETATION IS FULLY ESTABLISHED.

- 14. ONCE THE ENTIRE PROJECT AREA HAS ACHIEVED A MINIMUM 70% UNIFORM PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION, REMOVE THE CONSTRUCTION ENTRANCE, TREE PROTECTION, AND COMPOST FILTER SOCKS. ANY AREAS DISTURBED DURING THE REMOVAL OF THE E&S CONTROLS SHALL BE IMMEDIATELY STABILIZED WITH SEEDING AND STRAW MULCH.



FERGUSON TOWNSHIP DEPT. OF PUBLIC WORKS & ENGINEERING 3147 RESEARCH DRIVE STATE COLLEGE, PA 16801 PHONE: 814-238-4651 FAX: 814-238-3454 www.twp.ferguson.pa.us

NEWELL TERESKA & MACKAY ENGINEERING 341 SCIENCE PARK ROAD SUITE 203 STATE COLLEGE, PA 16803



REV.	DATE	DESCRIPTION
1	02-04-22	PER DEP AND CCOD COMMENTS

EROSION & SEDIMENTATION POLLUTION CONTROL NOTES

SUBURBAN PARK - PHASE 1 CONTRACT 2020-C4

DESIGNED BY: JTN DRAWN BY: JTN CHECKED BY: SAB DATE: 09/17/2021

ES101



ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR ABOVE-GROUND INSPECTION OF THE SITE COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2008, CONTRACTORS MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK.

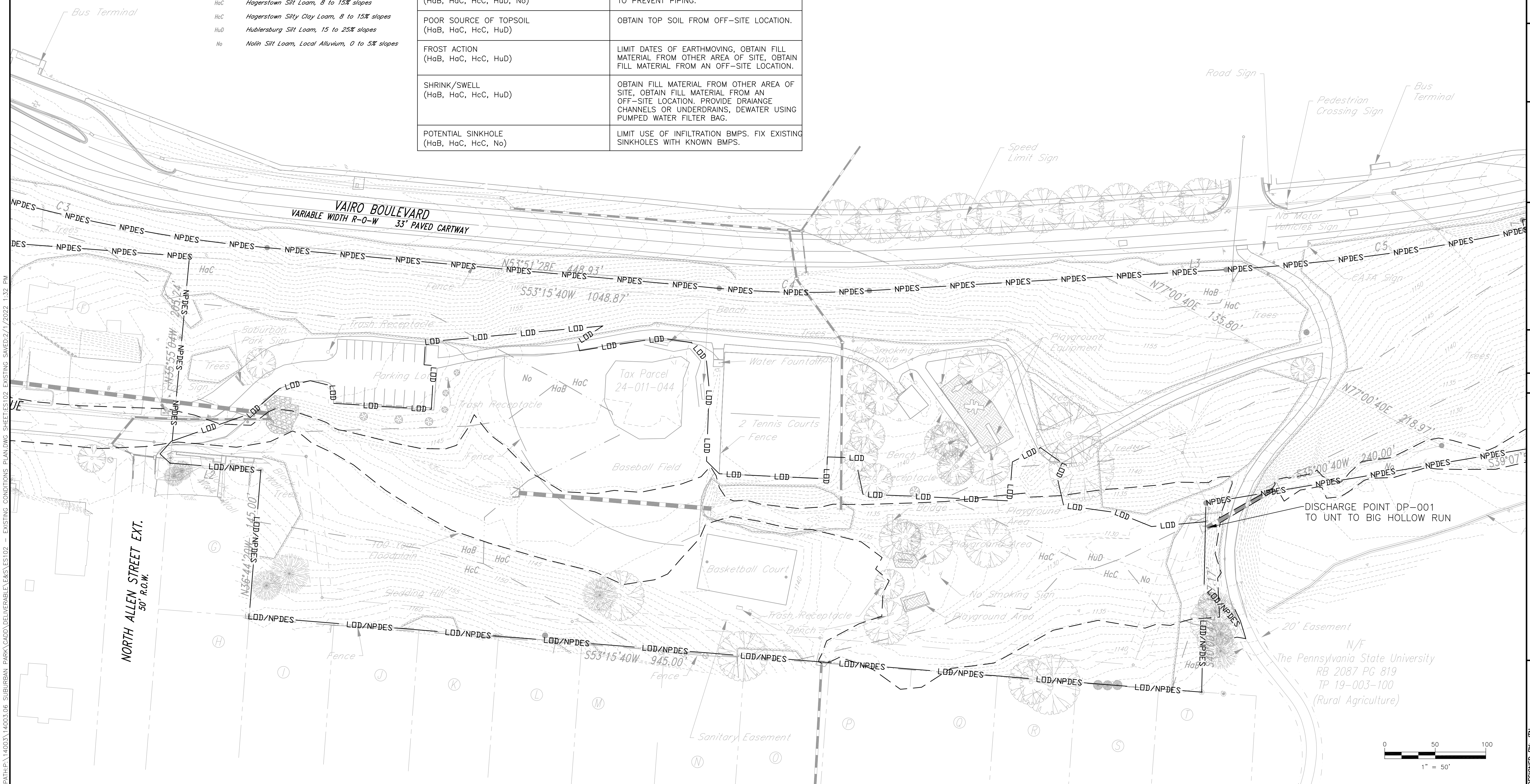
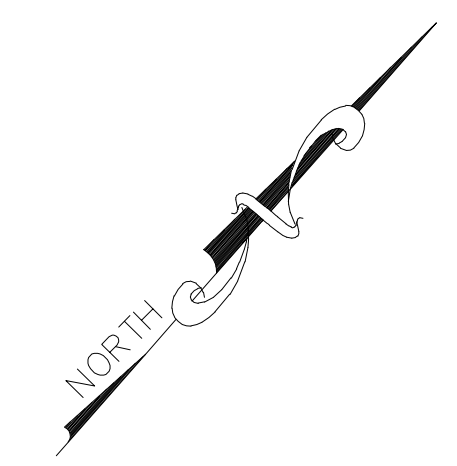
ONE-CALL SERIAL NO. 20203002515

**LEGEND**

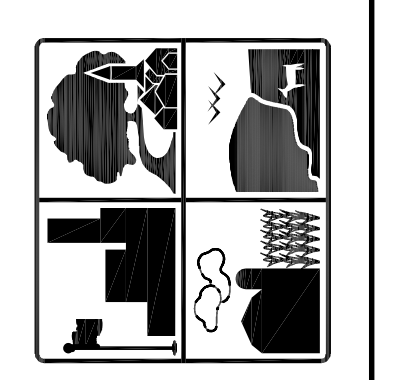
	Existing Control Point		Overhead Electric
	Existing Text		Underground Telecomm
	Existing Utility Pole		Gas Line
	Existing Sign		Major Contour
	Existing Manhole		Minor Contour
	Existing Water Valve		100 Year (1%) Floodplain
	Existing Gas Valve		Soils
	Existing Mailbox		Tree Row
	Existing Fire Hydrant		
	Existing Shrub		
	Existing Evergreen Tree		
	Existing Deciduous Tree		
	Existing Trash Receptacle		
	Existing Bollards		
	Existing Fence		
	Existing Right-of-Way Line		
	Existing Easement Line		
	Existing Property Line		
	Existing Water Line		
	Existing Storm Sewer		
	Existing Sanitary Sewer		
	Existing Underground Electric		
	PROPOSED SIGN		PROPOSED STORM SEWER
	PROPOSED TRASH RECEPTACLE		PROPOSED MAJOR CONTOUR
	PROPOSED BOLLARDS		PROPOSED MINOR CONTOUR
	PROPOSED DECIDUOUS TREE		PROPOSED NPDES BOUNDARY
	PROPOSED FENCE		PROPOSED LIMIT OF DISTURBANCE
	PROPOSED STORM SEWER		
	PROPOSED MAJOR CONTOUR		
	PROPOSED MINOR CONTOUR		
	PROPOSED NPDES BOUNDARY		
	PROPOSED LIMIT OF DISTURBANCE		

**SOIL LIMITATIONS AND RESOLUTIONS**

SOIL LIMITATION	RESOLUTION
CUTBANKS/CAVE LOW STRENGTH LANDSLIDE PRONE (HaB, HaC, HcC, HuD, No)	UTILIZE APPLICABLE OSHA STANDARDS REGULATIONS FOR EXCAVATION AND PIPE TRENCHING OPERATIONS. EMBANKMENT CONSTRUCTION WILL UTILIZE COMPACTION TECHNIQUES AND STABILIZATION TO PREVENT EROSION AND SLOPE FAILURES.
CORROSIVE TO CONCRETE/STEEL (HaB, HaC, HcC, HuD, No)	INSTALL PROPER COATINGS ON SURFACES EXPOSED TO SOILS.
EASILY ERODIBLE (HaB, HaC, HcC)	IMMEDIATE STABILIZATION AND INSTALL PERIMETER CONTROLS.
DEPTH TO SATURATED ZONE/SEASONAL HIGH WATER TABLE, FLOODING (HaB, HaC, HcC, No)	OBTAIN FILL MATERIAL FROM OTHER AREA OF SITE, OBTAIN FILL MATERIAL FROM AN OFF-SITE LOCATION. SELECT APPROPRIATE SEED MIXTURE. PROVIDE DRAINAGE CHANNELS OR UNDERDRAINS, DEWATER USING PUMPED WATER FILTER BAG.
HYDRIC/HYDRIC INCLUSIONS (HaB, HaC, HcC, No)	DELINEATE AND PROTECT WETLANDS.
SLOW PERCOLATION (HaB, HaC, HcC, HuD, No)	LIMIT USE OF INFILTRATION BMPs IN AREAS WITH SLOW PERCOLATION.
PIPING (HaB, HaC, HcC, HuD, No)	UTILIZE SOIL ADDITIVES AND/OR USE COLLARS TO PREVENT PIPING.
POOR SOURCE OF TOPSOIL (HaB, HaC, HcC, HuD)	OBTAIN TOP SOIL FROM OFF-SITE LOCATION.
FROST ACTION (HaB, HaC, HcC, HuD)	LIMIT DATES OF EARTHMOVING, OBTAIN FILL MATERIAL FROM OTHER AREA OF SITE, OBTAIN FILL MATERIAL FROM AN OFF-SITE LOCATION.
SHRINK/SWELL (HaB, HaC, HcC, HuD)	OBTAIN FILL MATERIAL FROM OTHER AREA OF SITE, OBTAIN FILL MATERIAL FROM AN OFF-SITE LOCATION. PROVIDE DRAINAGE CHANNELS OR UNDERDRAINS, DEWATER USING PUMPED WATER FILTER BAG.
POTENTIAL SINKHOLE (HaB, HaC, HcC, No)	LIMIT USE OF INFILTRATION BMPs. FIX EXISTING SINKHOLES WITH KNOWN BMPs.



PATH:\14003\14003\SUBURBAN PARK\CADD\DELIVERABLE\ES102 - EXISTING CONDITIONS PLANNING SHEETS\02 - EXISTING CONDITIONS PLANNING SHEETS\27/2022 11:32 PM



**FERGUSON TOWNSHIP**  
DEPT. OF PUBLIC WORKS & ENGINEERING  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
PHONE: 814-238-4651  
FAX: 814-238-3454  
www.twp.ferguson.pa.us

**NEWELL TERESKA & MACKAY**  
ENGINEERING  
341 SCIENCE PARK ROAD  
SUITE 203  
STATE COLLEGE, PA 16803



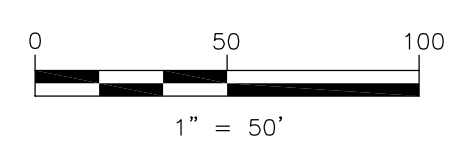
REV.	DATE	DESCRIPTION
1	02-04-22	PER DEP AND CCOD COMMENTS

**EXISTING CONDITIONS PLAN**

SUBURBAN PARK - PHASE 1  
CONTRACT 2020-C4

DESIGNED BY: JTN  
DRAWN BY: JTN  
CHECKED BY: SAB  
DATE: 09/17/2021

**ES102**



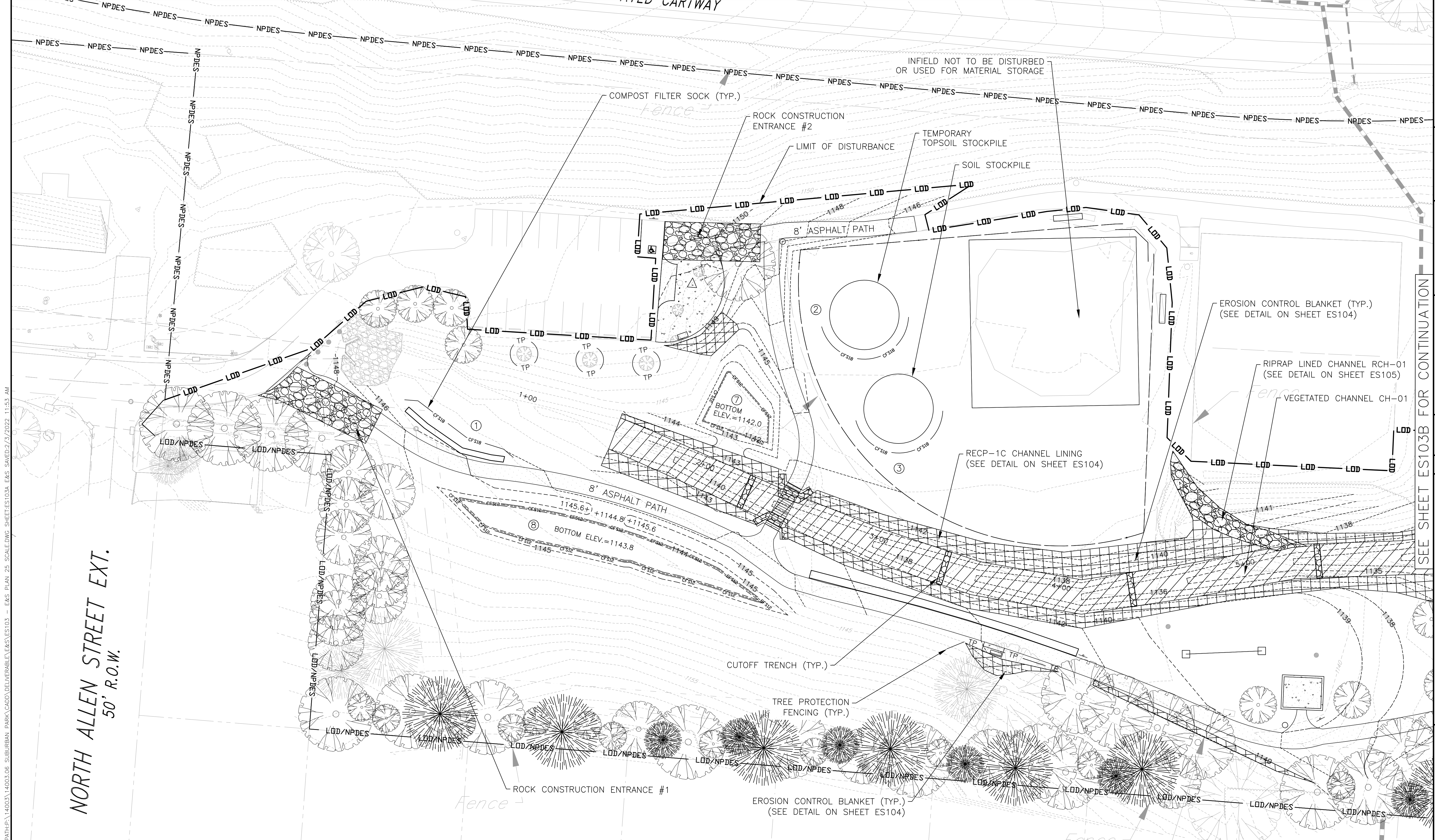
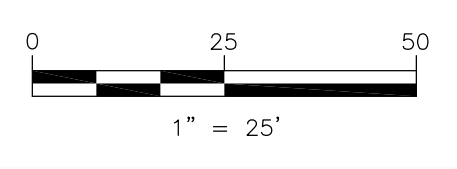
**LEGEND**

- |                        |                      |                      |                          |
|------------------------|----------------------|----------------------|--------------------------|
| Existing Control Point | Existing Text        | Trash Receptacle     | 100 Year (1%) Floodplain |
| Utility Pole           | Right-of-Way Line    | Fence                | Soils                    |
| Sign                   | Easement Line        | Property Line        | Tree Row                 |
| Manhole                | Water Line           | Storm Sewer          |                          |
| Water Valve            | Underground Electric | Sanitary Sewer       |                          |
| Gas Valve              | Overhead Electric    | Underground Telecomm |                          |
| Mailbox                | Gas Line             | Major Contour        |                          |
| Fire Hydrant           | Minor Contour        |                      |                          |
| Shrub                  |                      |                      |                          |
| Evergreen Tree         |                      |                      |                          |
| Deciduous Tree         |                      |                      |                          |

- |                  |                                       |
|------------------|---------------------------------------|
| PROPOSED SIGN    | PROPOSED TEXT                         |
| TRASH RECEPTACLE | BOLLARDS                              |
| DECIDUOUS TREE   | FENCE                                 |
| STORM SEWER      | MAJOR CONTOUR                         |
| MINOR CONTOUR    | NPDES                                 |
| NPDES            | LIMIT OF DISTURBANCE                  |
| LOD              | PROPOSED 100-YEAR FLOODPLAIN BOUNDARY |

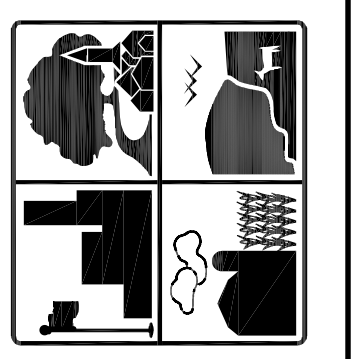
- |      |                                    |
|------|------------------------------------|
| ⑦    | 12" COMPOST FILTER SOCK            |
| ①    | 18" COMPOST FILTER SOCK            |
| TP   | TREE PROTECTION FENCING            |
| CFSD | ROCK FILTER/CHECK DAM              |
|      | SOD CHANNEL LINING                 |
|      | EROSION CONTROL BLANKET - RECP 1.C |
|      | RIPRAP CHANNEL LINING              |

NOTE:  
ANY DISTURBANCE OF THE NATURAL GRASS SURFACE IN THE DRAINAGE SWALE THROUGH THE SITE OUTSIDE THE LIMITS OF SOD PLACEMENT IDENTIFIED ON THE PLANS SHALL BE REPAIRED USING KENTUCKY BLUEGRASS SOD IN ACCORDANCE WITH THE VEGETATED SWALE DETAIL AND MATERIAL AND INSTALLATION SPECIFICATIONS IN PENNDOT PUBLICATION 408 SECTION 809.



**NORTH ALLEN STREET EXT.**  
50' R.O.W.

SEE SHEET ES103B FOR CONTINUATION



**FERGUSON TOWNSHIP**  
DEPT. OF PUBLIC WORKS & ENGINEERING  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
PHONE: 814-238-4651  
FAX: 814-238-3454  
www.twp.ferguson.pa.us

**NEWELL TERESKA & MACKAY**  
ENGINEERING  
341 SCIENCE PARK ROAD  
SUITE 203  
STATE COLLEGE, PA 16803



REV.	DATE	REVISION DESCRIPTION
1	02-04-22	PER DEP AND CCGD COMMENTS

SUBURBAN PARK-PHASE 1  
CONTRACT 2020-04  
**EROSION & SEDIMENTATION  
POLLUTION CONTROL PLAN**

**ES103A**  
DESIGNED BY: JIN  
DRAWN BY: JIN  
CHECKED BY: SAB  
DATE: 09/17/2021

PATH:\14003\14003.06 SUBURBAN PARK\CADD\DELIVERABLE\E&S\ES103 - E&S PLAN 25 SCALE.DWG SHEET:ES103A E&S SAVED:2/3/2022 11:53 AM

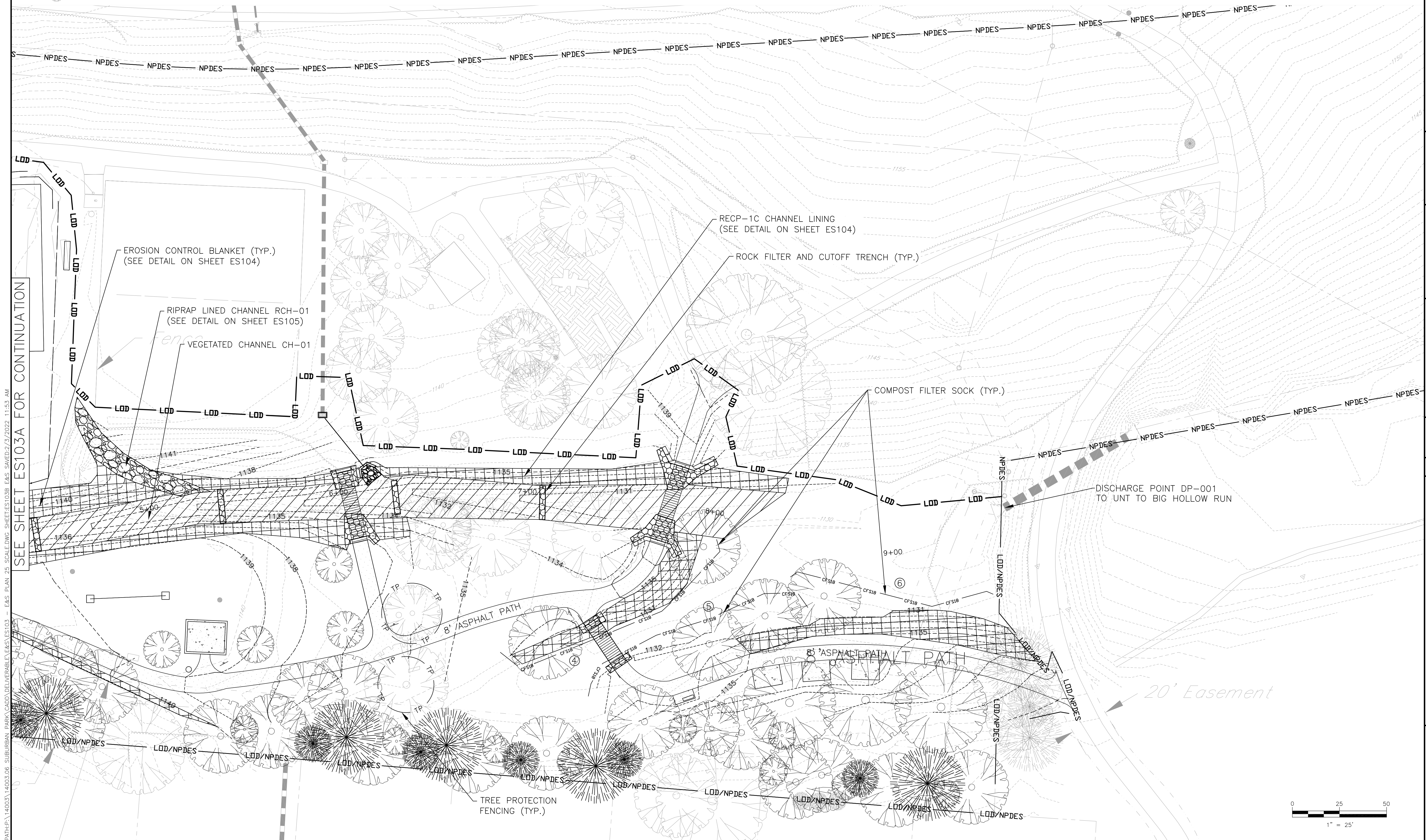
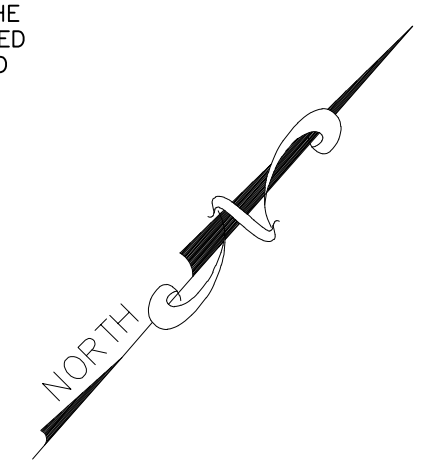
**LEGEND**

- |                          |                        |                   |               |               |             |             |                |                      |                   |                      |                |
|--------------------------|------------------------|-------------------|---------------|---------------|-------------|-------------|----------------|----------------------|-------------------|----------------------|----------------|
| Existing Text            | Existing Control Point | Utility Pole      | Sign          | Manhole       | Water Valve | Gas Valve   | Mailbox        | Fire Hydrant         | Shrub             | Evergreen Tree       | Deciduous Tree |
| Ballards                 | Fence                  | Right-of-Way Line | Easement Line | Property Line | Water Line  | Storm Sewer | Sanitary Sewer | Underground Electric | Overhead Electric | Underground Telecomm | Gas Line       |
| 100 Year (1%) Floodplain | Soils                  | Tree Row          |               |               |             |             |                |                      |                   |                      |                |

- |               |                           |                   |                         |                |                      |                        |                        |                |                               |                                       |
|---------------|---------------------------|-------------------|-------------------------|----------------|----------------------|------------------------|------------------------|----------------|-------------------------------|---------------------------------------|
| PROPOSED SIGN | PROPOSED TRASH RECEPTACLE | PROPOSED BOLLARDS | PROPOSED DECIDUOUS TREE | PROPOSED FENCE | PROPOSED STORM SEWER | PROPOSED MAJOR CONTOUR | PROPOSED MINOR CONTOUR | PROPOSED NPDES | PROPOSED LIMIT OF DISTURBANCE | PROPOSED 100-YEAR FLOODPLAIN BOUNDARY |
|---------------|---------------------------|-------------------|-------------------------|----------------|----------------------|------------------------|------------------------|----------------|-------------------------------|---------------------------------------|

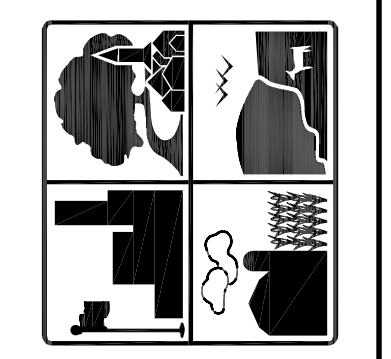
- |                   |                                    |
|-------------------|------------------------------------|
| ⑦                 | 12" COMPOST FILTER SOCK            |
| ①                 | 18" COMPOST FILTER SOCK            |
| TP                | TREE PROTECTION FENCING            |
| CFSD              | ROCK FILTER/CHECK DAM              |
| Diagonal Hatching | SOD CHANNEL LINING                 |
| X Hatching        | EROSION CONTROL BLANKET - RECP 1.C |
| Stippled          | RIPRAP CHANNEL LINING              |

NOTE:  
 ANY DISTURBANCE OF THE NATURAL GRASS SURFACE IN THE DRAINAGE SWALE THROUGH THE SITE OUTSIDE THE LIMITS OF SOD PLACEMENT IDENTIFIED ON THE PLANS SHALL BE REPAIRED USING KENTUCKY BLUEGRASS SOD IN ACCORDANCE WITH THE VEGETATED SWALE DETAIL AND MATERIAL AND INSTALLATION SPECIFICATIONS IN PENNDOT PUBLICATION 408 SECTION 809.



SEE SHEET ES103A FOR CONTINUATION

PATH:\14003\14003.06 SUBURBAN PARK\CADD\DELIVERABLE\ES103 - E&S PLAN 25 SCALE.DWG SHEETS\ES103B E&S SAVED\23/2022 11:53 AM



**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us

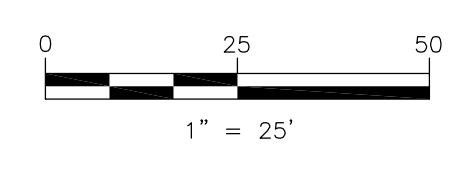
**NEWELL TERESKA & MACKAY**  
 ENGINEERING  
 341 SCIENCE PARK ROAD  
 SUITE 203  
 STATE COLLEGE, PA 16803

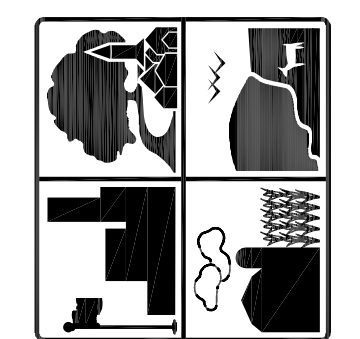


REV.	DATE	REVISION DESCRIPTION
1	02-04-22	PER DEP. AND CCGD COMMENTS

SUBURBAN PARK-PHASE 1  
 CONTRACT 2020-C4  
**EROSION & SEDIMENTATION  
 POLLUTION CONTROL PLAN**

**ES103B**  
 DESIGNED BY: JIN  
 DRAWN BY: JIN  
 CHECKED BY: SAB  
 DATE: 09/17/2021





**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us

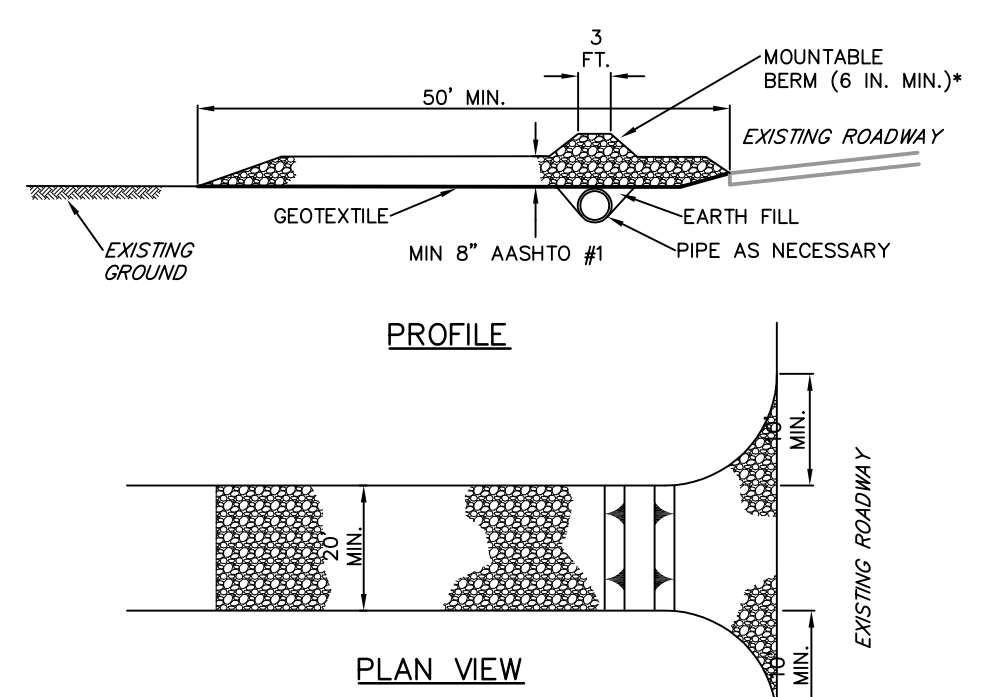
**NEWELL TERESKA & MACKAY**  
 ENGINEERING  
 341 SCIENCE PARK ROAD  
 SUITE 203  
 STATE COLLEGE, PA 16803



REV.	DATE	DESCRIPTION
1	02-04-22	PER DEP AND CCOD COMMENTS

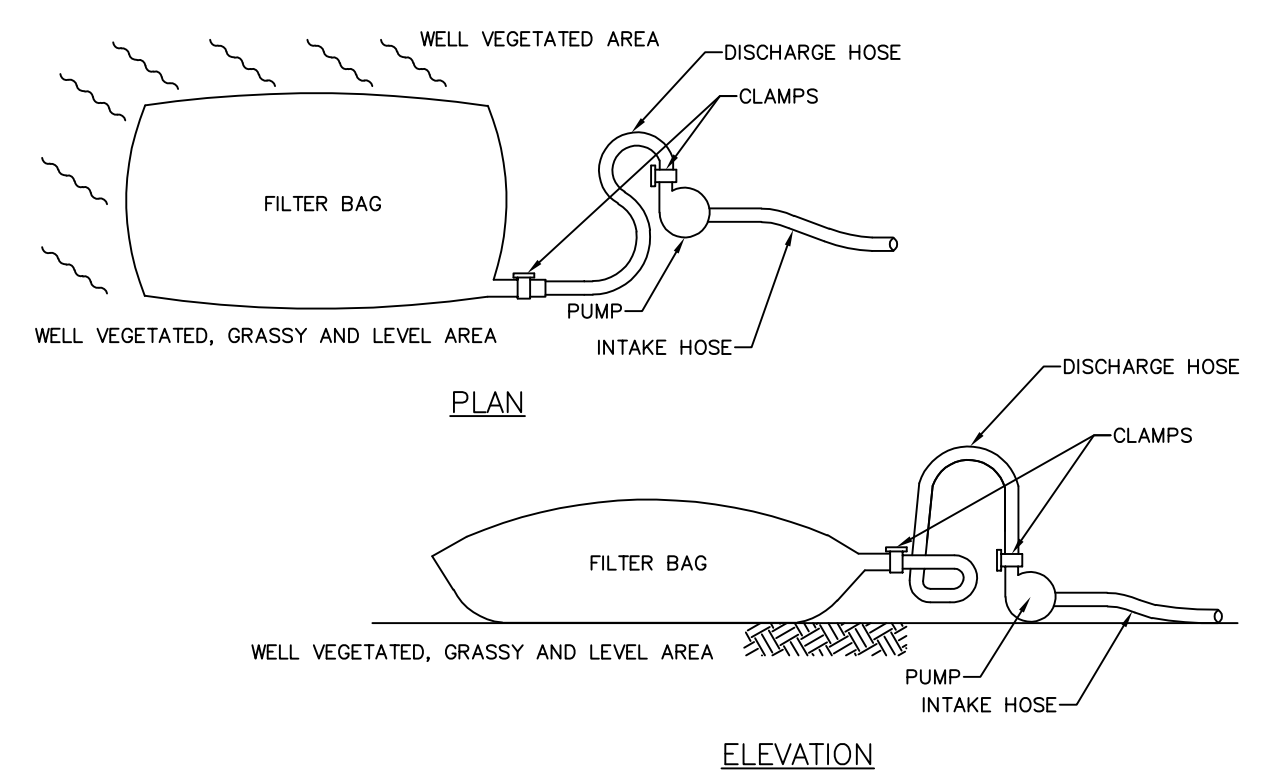
SUBURBAN PARK - PHASE 1  
 CONTRACT 2020-C4  
**EROSION AND SEDIMENTATION POLLUTION CONTROL DETAILS**

DESIGNED BY: JTN  
 DRAWN BY: JTN  
 CHECKED BY: SAB  
 DATE: 09/17/2021  
**ES104**



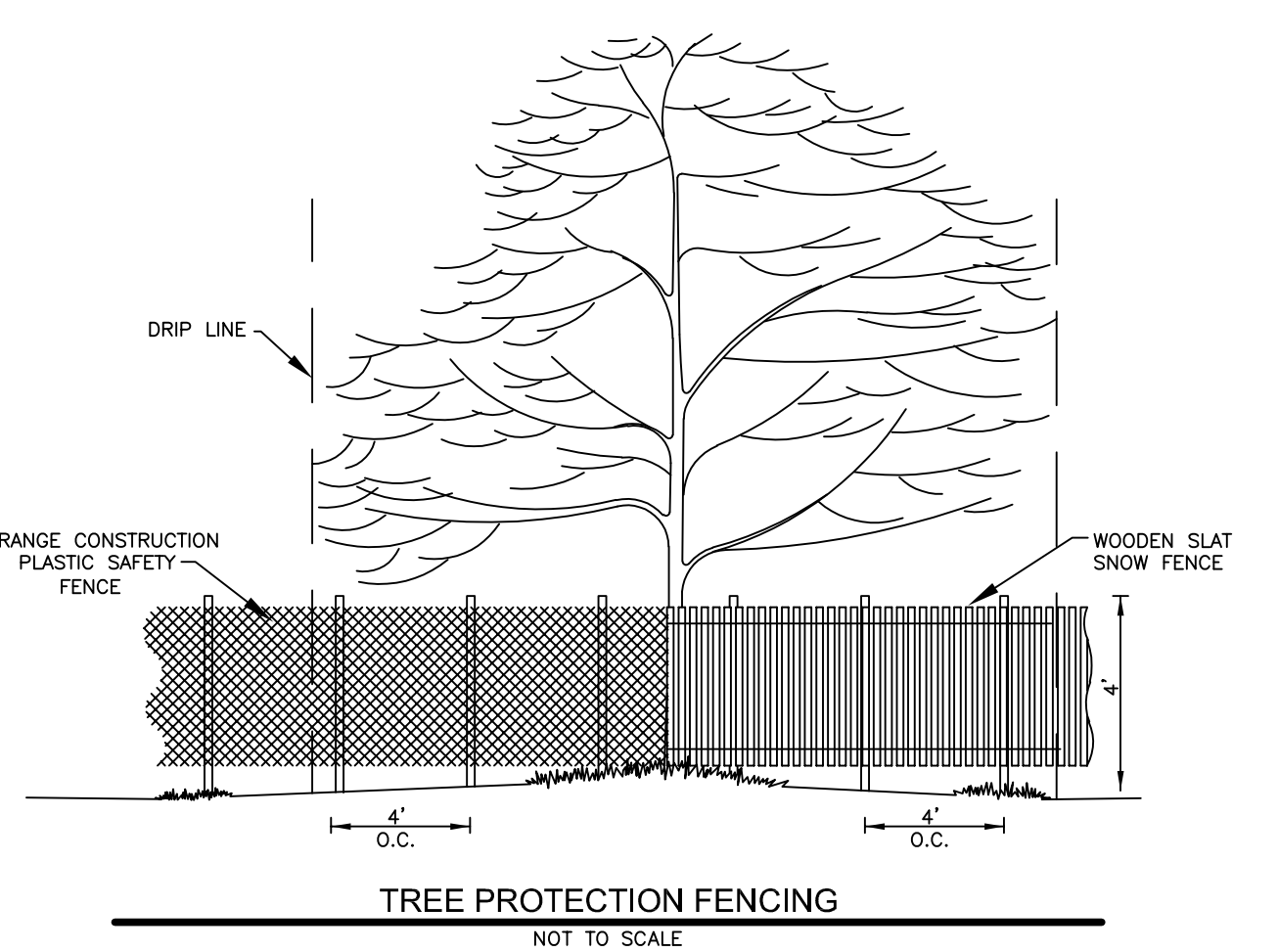
**STANDARD CONSTRUCTION DETAIL #3-1**  
**ROCK CONSTRUCTION ENTRANCE**  
 NOT TO SCALE

NOTES:  
 \* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE  
 REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.  
 RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.  
 MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.  
 MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

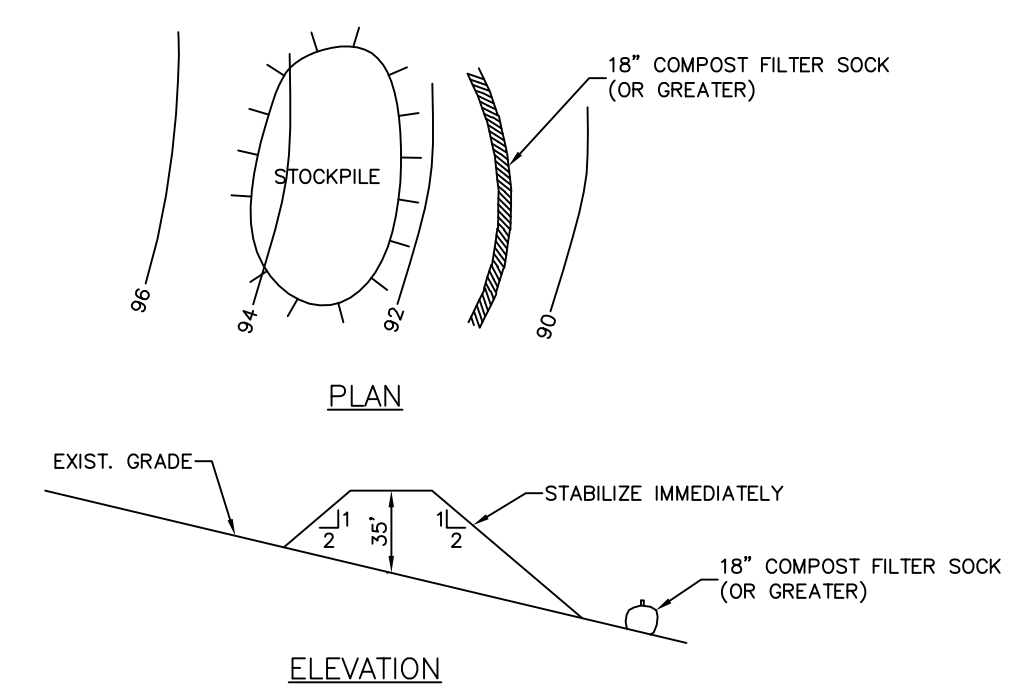


**STANDARD CONSTRUCTION DETAIL #3-16**  
**PUMPED WATER FILTER BAG**  
 NOT TO SCALE

NOTES:  
 1. FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS.  
 2. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED.  
 3. BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS, WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE FLOW PATH SHALL BE PROVIDED. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%.  
 4. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED.  
 5. THE PUMPING RATE SHALL BE NO GREATER THAN 750 G.P.M. OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKE SHOULD BE FLOATING AND SCREENED.  
 6. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.  
 7. SHOULD ADEQUATE VEGETATION NOT EXIST, BAG SHALL BE PLACED ON A BED OF 6" OF AASHTO #57 STONE, OR AS DIRECTED BY THE COUNTY CONSERVATION DISTRICT.

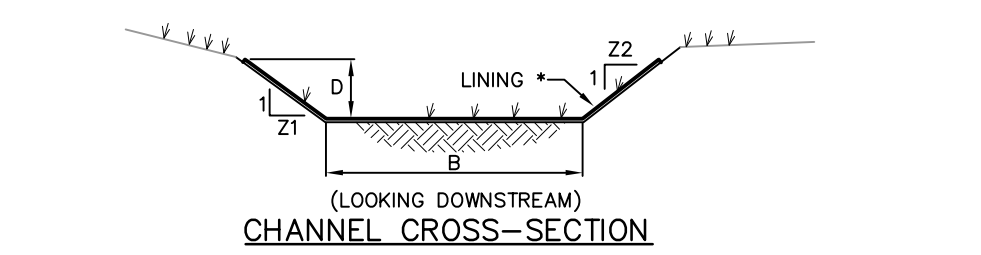


**STANDARD CONSTRUCTION DETAIL #3-16**  
**TREE PROTECTION FENCING**  
 NOT TO SCALE



**STANDARD CONSTRUCTION DETAIL #3-16**  
**TOPSOIL STOCKPILE AND MAINTENANCE**  
 NOT TO SCALE

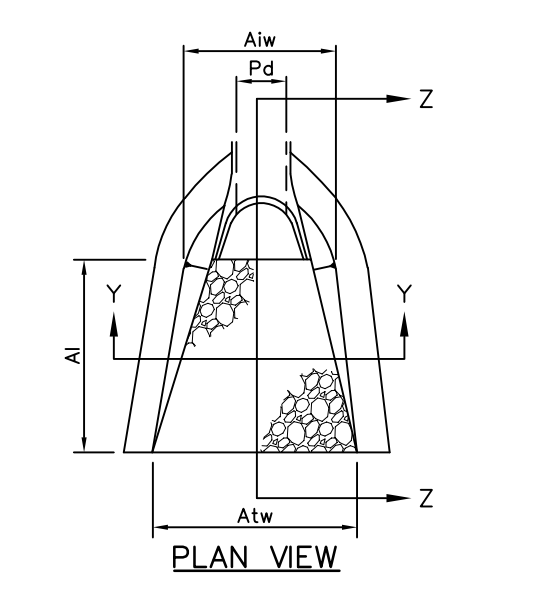
NOTES:  
 1. INSTALL COMPOST FILTER SOCK DOWNSLOPE OF AREA OF STOCKPILE.  
 2. PLACE STOCKPILE IN AREAS SHOWN ON EROSION CONTROL PLAN WITHOUT BLOCKING NATURAL DRAINAGE PATTERNS.  
 3. FOLLOW DIMENSIONS SHOWN ABOVE. HEIGHT SHOULD NOT EXCEED 35 FT. SIDE SLOPES SHOULD NOT BE STEEPER THAN 2(H):1(V).  
 4. STABILIZE IMMEDIATELY PER THE "SEEDING SPECIFICATIONS."  
 5. LOCATION(S) AND SIZE(S) OF SOIL STOCKPILES ARE APPROXIMATE AND SHALL BE ADJUSTED PER FIELD AND CONSTRUCTION SEQUENCE CONDITIONS. CONTRACTOR SHALL VERIFY REQUIRED SIZE(S). REQUIREMENTS FROM THE STANDARDS DETAIL MUST BE FOLLOWED FOR STOCKPILES.



CHANNEL NO.	STATIONS	BOTTOM WIDTH B (FT)	DEPTH D (FT)	TOP WIDTH W (FT)	Z1 (FT)	Z2 (FT)	LINING *
001	0+00 TO END	3	2.5	12	3	3	KENTUCKY BLUEGRASS SOD

**STANDARD CONSTRUCTION DETAIL #3-16**  
**VEGETATED CHANNEL**  
 NOT TO SCALE

NOTES:  
 SOD SHALL MEET THE MATERIAL AND INSTALLATION SPECIFICATIONS PER PENNDOT PUBLICATION 408, SECTION 809.  
 SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED SOD SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.  
 CHANNEL SIDESLOPES:  
 NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.  
 CHANNEL BOTTOM:  
 CHANNEL BOTTOM SHALL NOT BE MOVED DURING CONSTRUCTION. ALLOW FOR UNMAINTAINED GROWTH UNTIL PROJECT CONSTRUCTION IS COMPLETED.  
 WOOD STAKE:  
 STAKE EACH STRIP OF SOD SECURELY USING AT LEAST ONE WOOD STAKE FOR EACH 2 SQUARE FEET OF SOD. STAKES SHALL BE 1/2" BY 1" AND WITH A LENGTH OF 8 INCHES TO 12 INCHES. DRIVE STAKES FLUSH WITH THE TOP OF THE SOD, WITH THE WIDE FACE PARALLEL TO THE SLOPE CONTOUR.



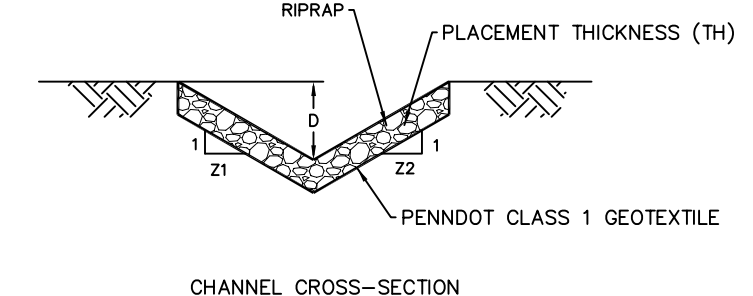
OUTLET NO.	PIPE DIA Pd (IN)	RIPRAP			APRON	
		SIZE R-	THICK. (IN)	LENGTH AL (FT)	INITIAL WIDTH Aiw (FT)	TERMINAL WIDTH Atw (FT)
001	24	3	9	9	6	9.6

CHANNEL NO.	MIN. DEPTH D (FT)	Z1 (FT)	Z2 (FT)	R--	THICKNESS TH (IN)

**STANDARD CONSTRUCTION DETAIL #3-16**  
**RIPRAP LINED CHANNEL**  
 NOT TO SCALE

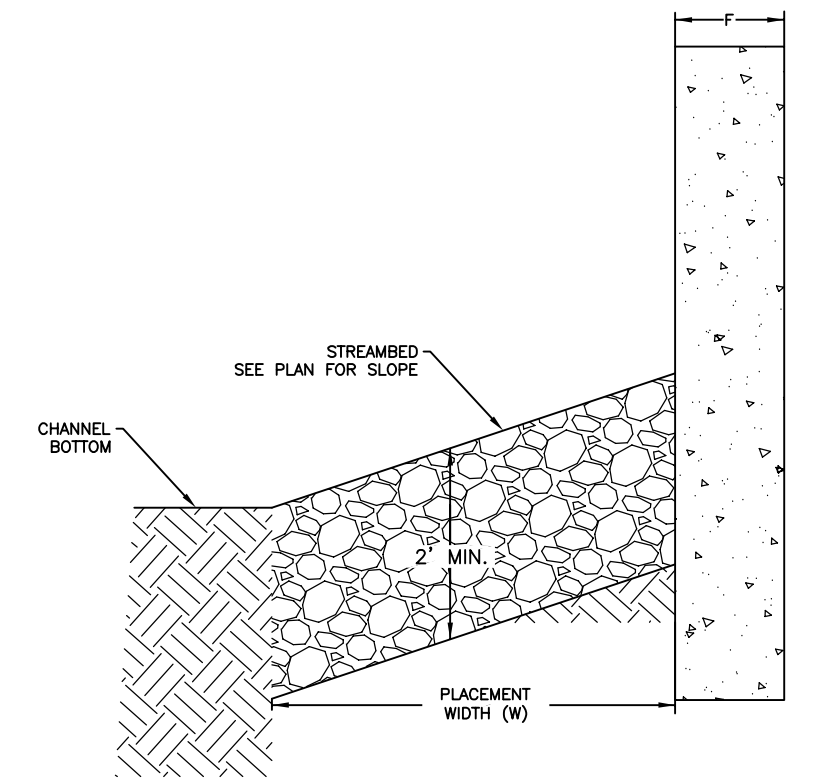
NOTES:  
 ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.  
 ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

**STANDARD CONSTRUCTION DETAIL #9-1**  
**RIPRAP APRON AT PIPE OUTLET WITH FLARED END SECTION OR ENDWALL**  
 NOT TO SCALE



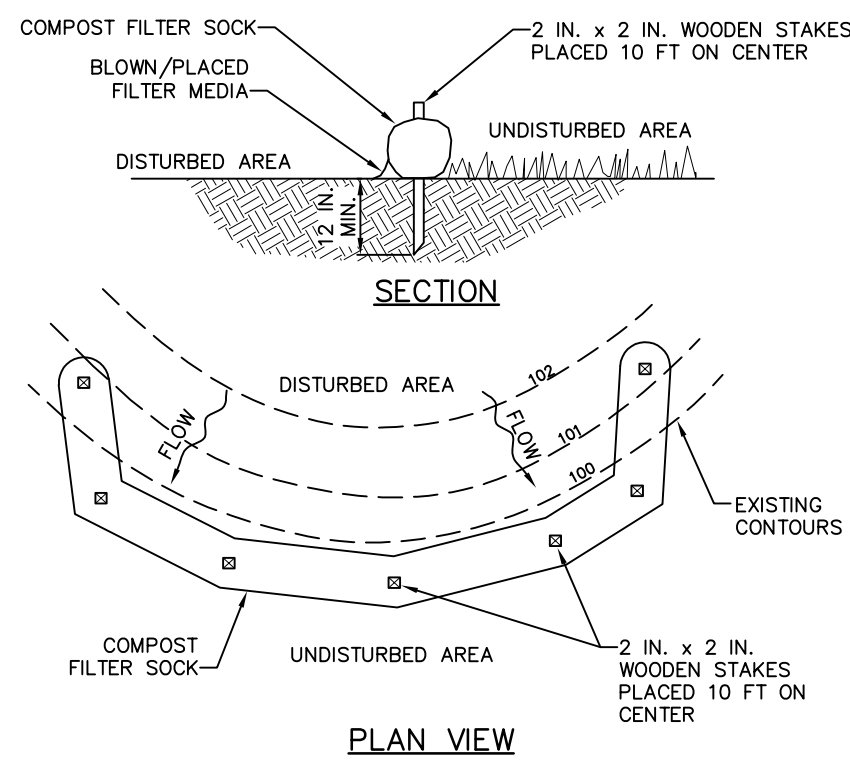
**STANDARD CONSTRUCTION DETAIL #3-16**  
**BRIDGE ABUTMENT RIPRAP PLACEMENT GUIDE**  
 NOT TO SCALE

BRIDGE NO.	RIPRAP SIZE R--	PLACEMENT WIDTH (W)	
		LEFT	RIGHT
1	R-5	6'	5'
2	R-4	8.5'	13'
3	R-4	12'	13'
4	R-4	5'	4'



**STANDARD CONSTRUCTION DETAIL #3-16**  
**RIPRAP LINED CHANNEL**  
 NOT TO SCALE

NOTES:  
 D. NOMINAL PLACEMENT THICKNESS IN ACCORDANCE WITH PENNDOT PUBLICATION 408, SECTION 850 FOR ROCK LINING SIZE. SEE PLAN FOR ROCK SIZE.  
 F. FOOTING WIDTH (FT)



**NOTES:**  
 SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.  
 COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.  
 TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.  
 ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.  
 COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.  
 BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.  
 UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

**TABLE 4.1**  
COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS

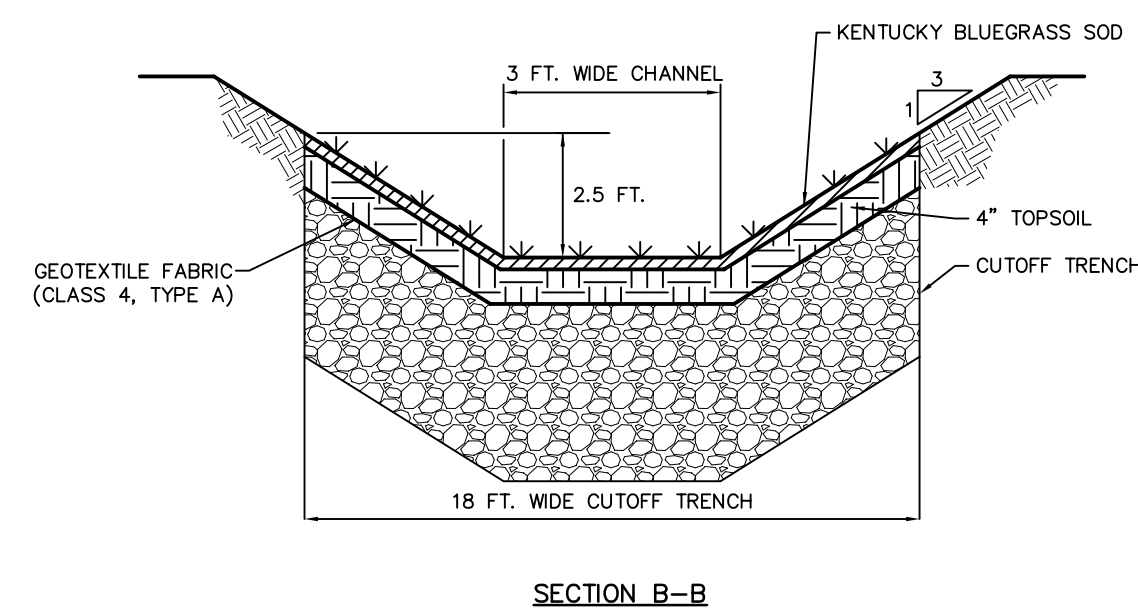
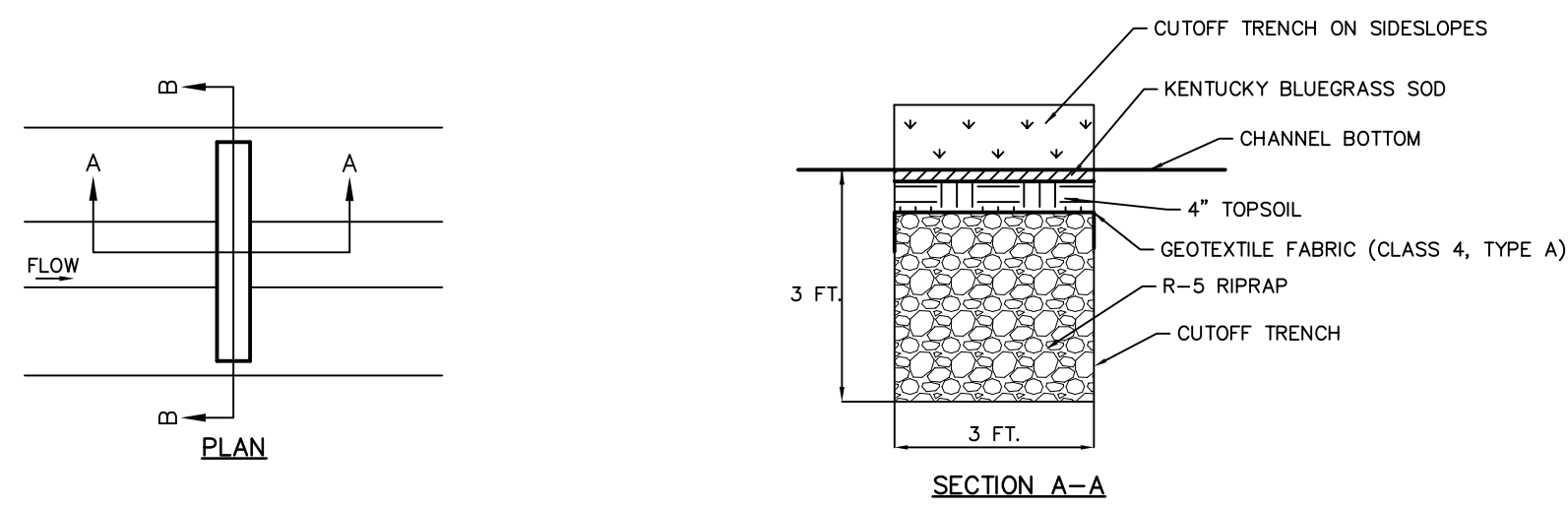
MATERIAL TYPE	3 MIL HDPE	5 MIL HDPE	5 MIL HDPE	MULTI-FILAMENT POLYPROPYLENE (MFPP)	HEAVY DUTY MULTI-FILAMENT POLYPROPYLENE (HMFPP)
MATERIAL CHARACTERISTICS	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE
MESH OPENING	3/8"	3/8"	3/8"	3/8"	1/8"
TENSILE STRENGTH		26 PSI	26 PSI	44 PSI	202 PSI
ULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM G-155)	23% AT 1000 HR.	23% AT 1000 HR.		100% AT 1000 HR.	100% AT 1000 HR.
MINIMUM FUNCTIONAL LONGEVITY	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	2 YEARS

**TWO-PLY SYSTEMS**

INNER CONTAINMENT NETTING	HDPE BIAXIAL NET	
	CONTINUOUSLY WOUND	FUSION-WELDED JUNCTURES
OUTER FILTRATION MESH	COMPOSITE POLYPROPYLENE FABRIC (WOVEN LAYER AND NON-WOVEN FLEECE MECHANICALLY FUSED VIA NEEDLE PUNCH)	
	3/16" MAX. APERTURE SIZE	

SOCK FABRICS COMPOSED OF BURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS.  
 FILTREX & JMD

**STANDARD CONSTRUCTION DETAIL #4-1**  
COMPOST FILTER SOCK  
NOT TO SCALE



**CUTOFF TRENCH DETAIL**  
NOT TO SCALE

TYPE OF COVER AND SPECIES OR MIXTURES	PERCENT BY WEIGHT	SEEDING RATES IN LBS PER		RECOMMENDED SEEDING DATES	ADAPTATION TO SOIL-SITE CONDITIONS				
		1,000 SQ.FT	ACRE		SHALLOW WELL-DRAINED	MOD. DEEP WELL DRAINED	DEEP WELL DRAINED	MOD. WELL DRAINED	SOMEWHAT POORLY TO POORLY DRAINED
<b>TEMPORARY COVER</b>									
ANNUAL RYEGRASS	100%	1	20 TO 40	MAR. 1 TO JUNE 15	X	X	X	X	X
FIELD BROMEGRASS	100%	1	20 TO 40	-	X	X	X	X	
SPRING OATS	100%	2.5	96	MAR. 1 TO JUNE 15	X	X	X	X	X
SUNDANGRASS	100%	1	30 TO 40	MAY 15 TO AUG. 15	X	X	X	X	
WINTER RYE	100%	3.5	140	AUG. 15 TO OCT. 15	X	X	X	X	X
ANNUAL RYEGRASS	25%	2	85	MAR. 1 TO JUNE 15	X	X	X	X	X
SPRING OATS	75%								
<b>THE FOLLOWING AREA SUPPLEMENTS REQUIRED WITH ALL TEMPORARY SEEDING</b>									
AGRICULTURAL LIMESTONE	N/A	46	2,000	MAR. 1 TO JUNE 15	X	X	X	X	X
10-10-10 FERTILIZER	N/A	11.5	500	MAR. 1 TO JUNE 15	X	X	X	X	
TEMPORARY MULCHING	N/A	138	6,000	MAR. 1 TO JUNE 15	X	X	X	X	X

**TEMPORARY SEEDING NOTES:**

- IN ORDER TO ESTABLISH A QUICK GRASS COVER OVER DISTURBED AREAS, A TEMPORARY MULCH MIXTURE SHALL BE USED.
- STABILIZATION EFFORTS DURING THE NON-GERMINATING PERIOD AS SPECIFIED IN THE TABLE ABOVE SHOULD BE APPLIED AT A RATE OF 3 TONS PER ACRE.
- MULCH SHALL BE HAY OR STRAW REQUIRED AND INSTALLED AT A RATE OF 3 TONS PER ACRE. PREFERRED MATERIAL IS STRAW BUT HYDROMULCH MAY BE USED.
- STRAW OR MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.
- APPLY SOIL SUPPLEMENTS AS SPECIFIED.

**TEMPORARY SEEDING FORMULAS**

NOT TO SCALE

FORMULA AND SPECIES	% BY WEIGHT	MINIMUM %		MAX. % WEED SEED	SEEDING RATE LBS. PER 1000 SY
		PURITY	GERMINATION		
<b>FORMULA B (LAWN AREAS)</b>					80.0 TOTAL
PERENNIAL RYEGRASS MIXTURE (LOLIUM PERENNE). A COMBINATION OF IMPROVED CERTIFIED VARIETIES WITH NO ONE VARIETY EXCEEDING 50% OF THE TOTAL RYEGRASS COMPONENT.	20	97	90	0.10	16.0
CREeping RED FESCUE OR CHEWINGS FESCUE (FESTUCA RUBRA OR SSP COMMUTATE) (IMPROVED AND CERTIFIED)	30	97	85	0.10	24.0
KENTUCKY BLUEGRASS MIXTURE (POA PRATENSIS). A COMBINATION OF IMPROVED CERTIFIED VARIETIES WITH NO ONE VARIETY EXCEEDING 50% OF THE TOTAL BLUEGRASS COMPONENT.	50	97	80	0.15	40.0
<b>FORMULA D (BMP-01 AND BMP-02 EMBANKMENTS)</b>					50.0 TOTAL
TALL FESCUE (FESTUCA ARUNDINACEA VAR. KENTUCKY 31)	60	96	85	0.10	30.0
CREeping RED FESCUE OR CHEWINGS FESCUE (FESTUCA RUBRA OR SSP COMMUTATE) (IMPROVED AND CERTIFIED)	30	97	85	0.10	15.0
ANNUAL RYEGRASS (LOLIUM MULTIFLORUM)	5	95	90	0.10	5.0

PER PUBLICATION 408, SECTION 805.3 (E), APPLY SEED AT TWICE THE RATE SPECIFIED WHEN USING BONDED FIBER MATRIX

**SOIL SUPPLEMENTS FOR 1000 SY**

PULVERIZED AGRICULTURAL LIMESTONE	800 LBS
10-20-20 ANALYSIS COMMERCIAL FERTILIZER	140 LBS
38-0-0 UREAFORM FERTILIZER	50 LBS
OR	
32-0-0 TO 38-0-0 SULFUR COATED UREA FERTILIZER, AS DIRECTED	50-59 LBS
OR	
31-0-0 IBDU FERTILIZER	61 LBS

**SEEDING SCHEDULE**

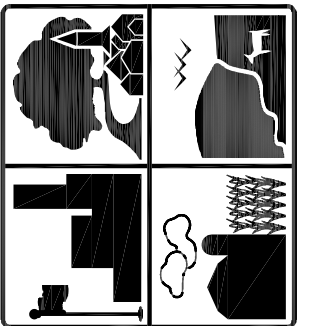
SPREAD SEEDS WHERE INDICATED AND AT THE RATES SPECIFIED IN ABOVE TABLE, OR AS OTHERWISE INDICATED. SPREAD SEEDS WITHIN THE FOLLOWING DATES, OR AS OTHERWISE INDICATED OR DIRECTED.  
 FORMULA B - MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 15  
 FORMULA D - MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 15  
 SUPPLY MULCH OR PROTECTIVE BLANKETING WHEN SEEDING CANNOT BE ACCOMPLISHED IN THESE TIME FRAMES.

**MULCHING PER 1000 SY**

STRAW (FORMULA B)	1200 LBS
HAY (FORMULA D)	1200 LBS
(BINDERS AND NETTING)	
BINDER OR NETTING	160 LBS OR MANUFACTURER'S RECOMMENDATION 1000 SY

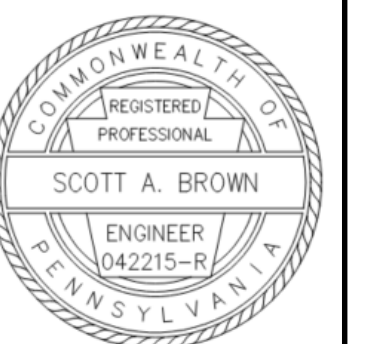
**PERMANENT SEEDING FORMULAS**

NOT TO SCALE



**FERGUSON TOWNSHIP**  
DEPT. OF PUBLIC WORKS & ENGINEERING  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
PHONE: 814-238-4651  
FAX: 814-238-3454  
www.twp.ferguson.pa.us

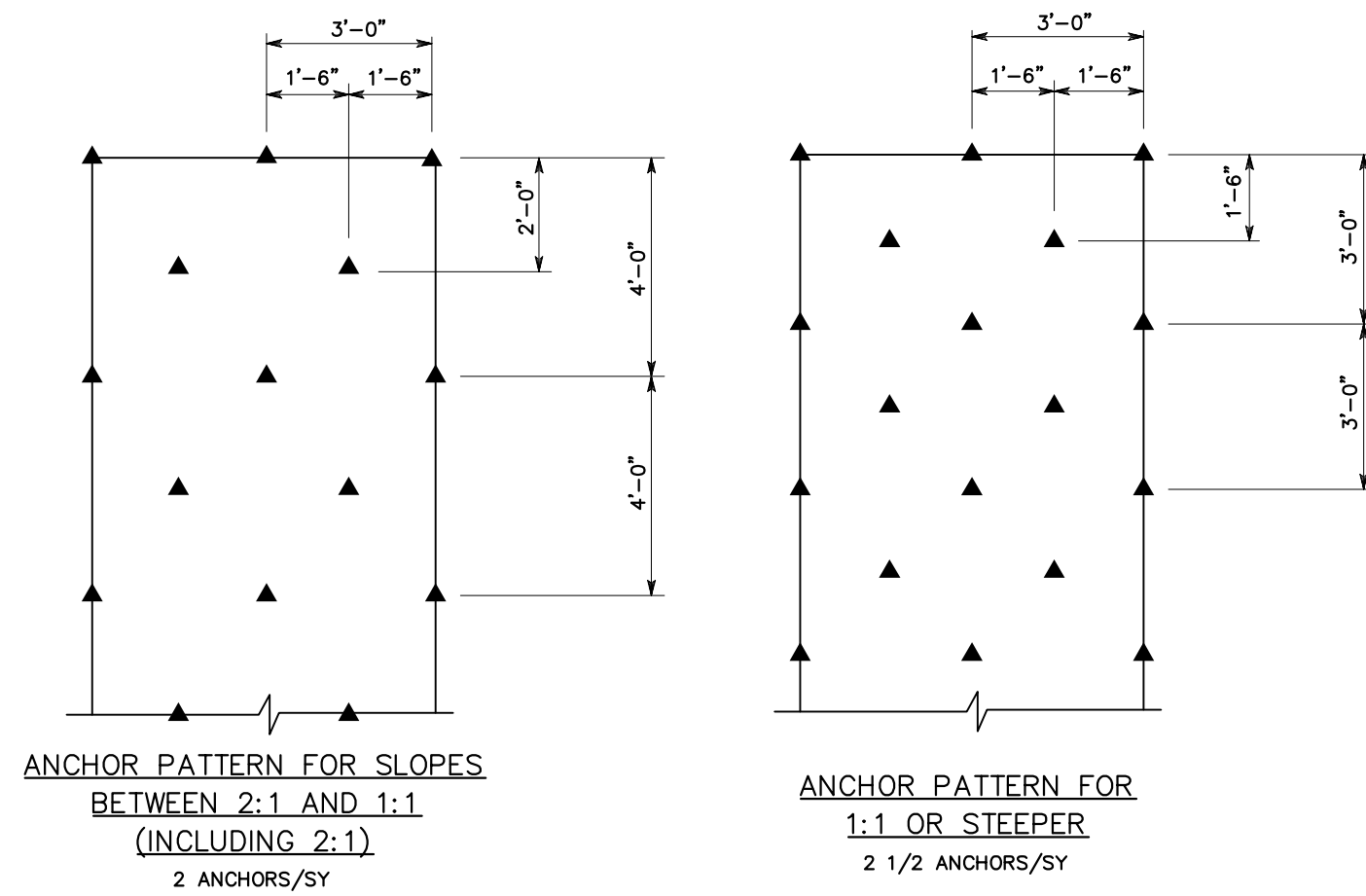
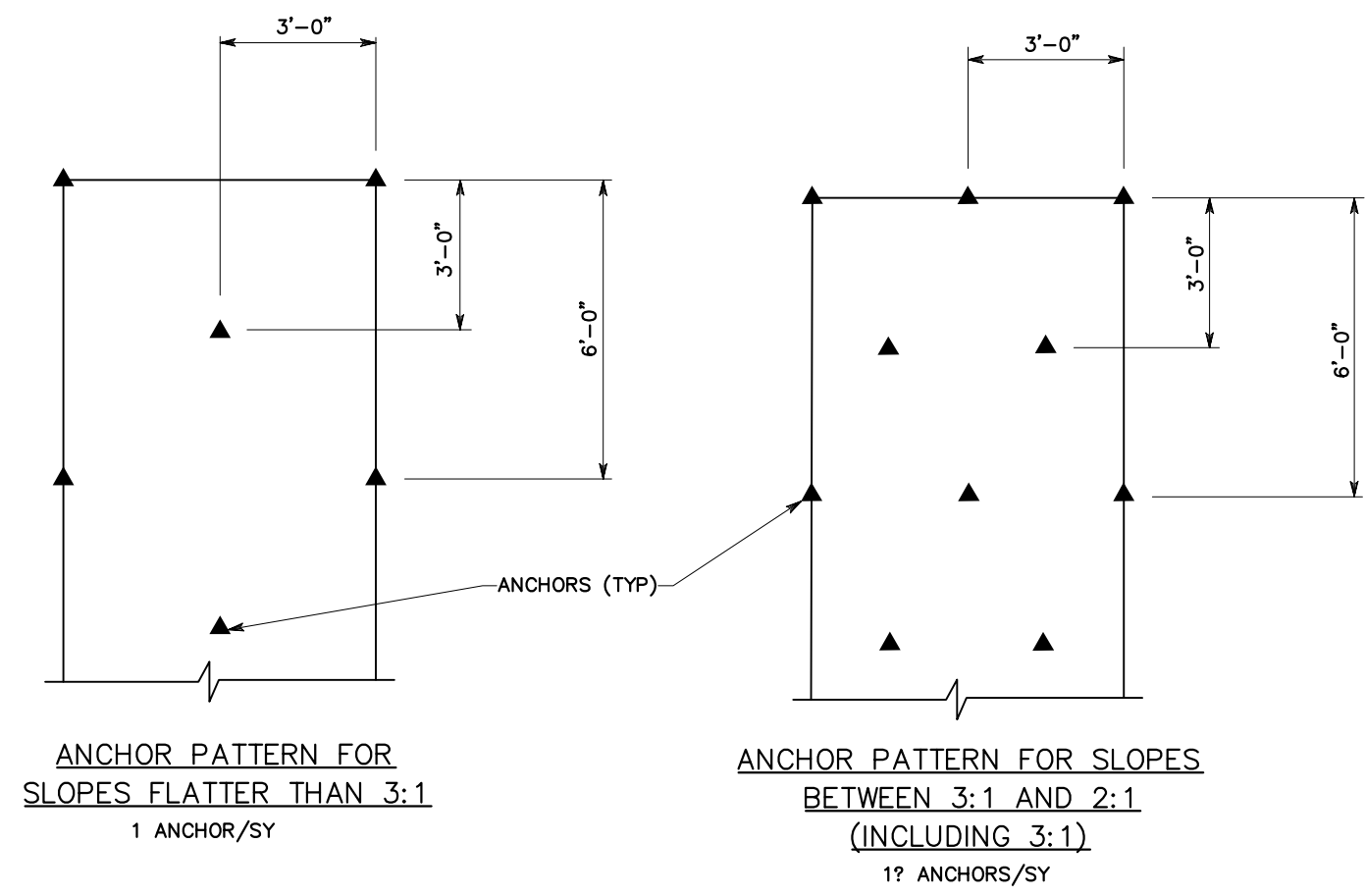
**NEWELL TERESKA & MACKAY**  
ENGINEERING  
341 SCIENCE PARK ROAD  
SUITE 203  
STATE COLLEGE, PA 16803



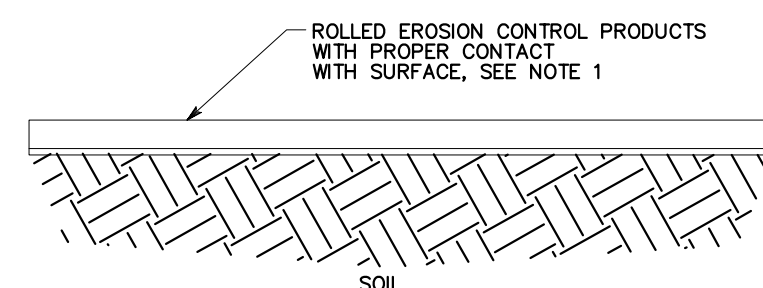
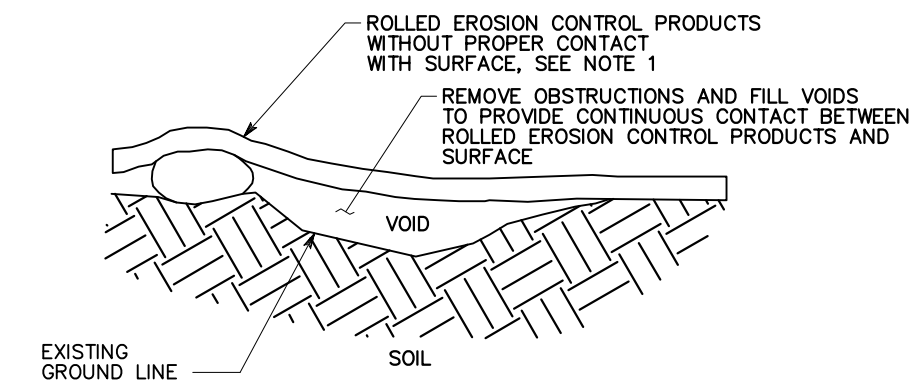
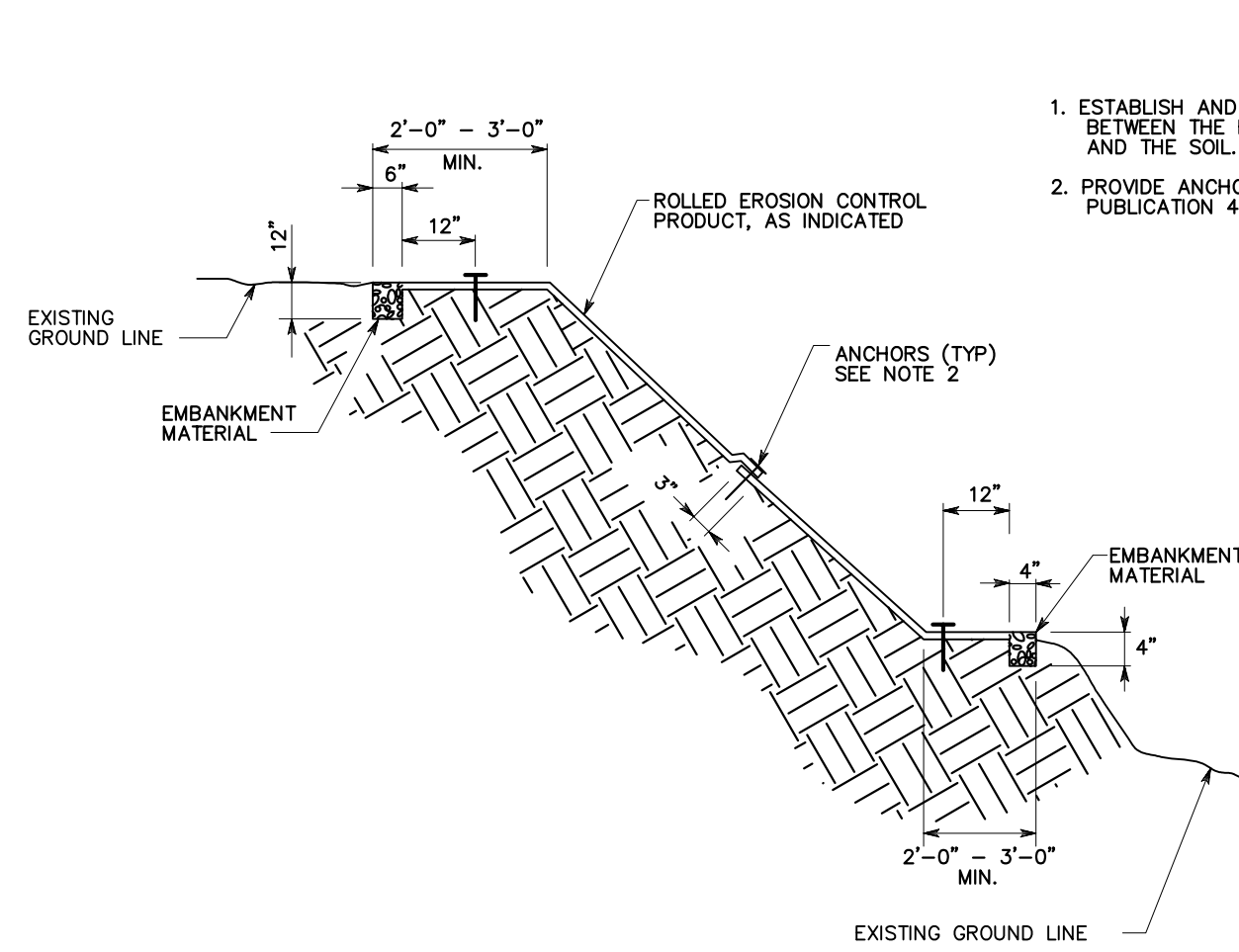
REV.	DATE	REVISION DESCRIPTION
1	02-04-22	PER DEP AND CCOD COMMENTS

SUBURBAN PARK-PHASE 1  
CONTRACT 2020-C4  
**EROSION AND SEDIMENTATION POLLUTION CONTROL DETAILS**

DESIGNED BY: JTN  
DRAWN BY: JTN  
CHECKED BY: SAB  
DATE: 09/17/2021  
**ES105**

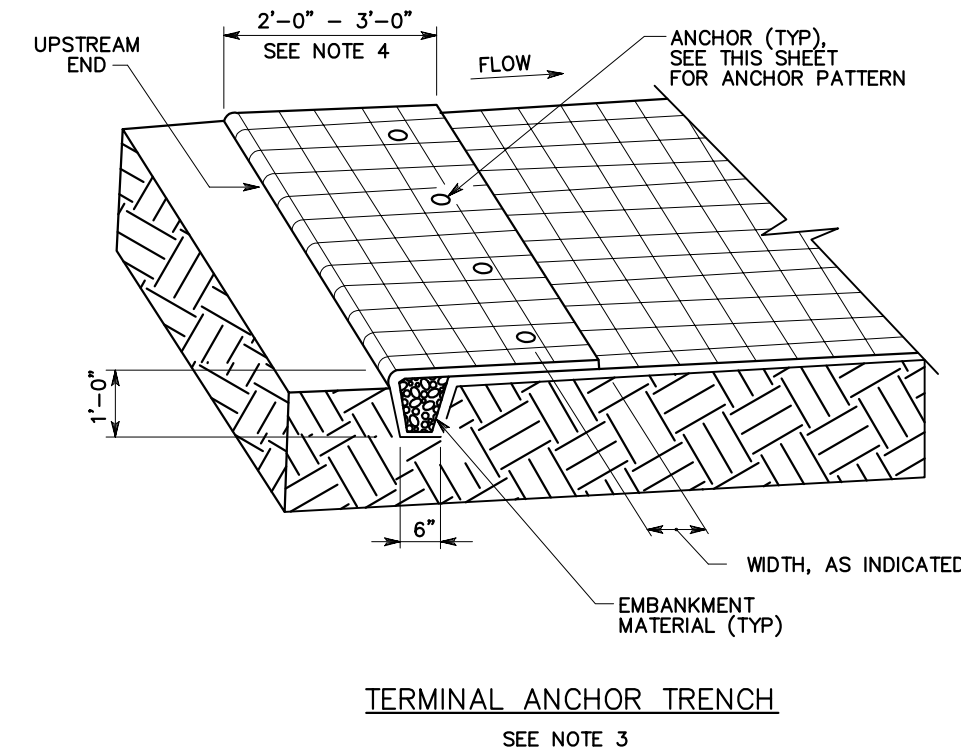
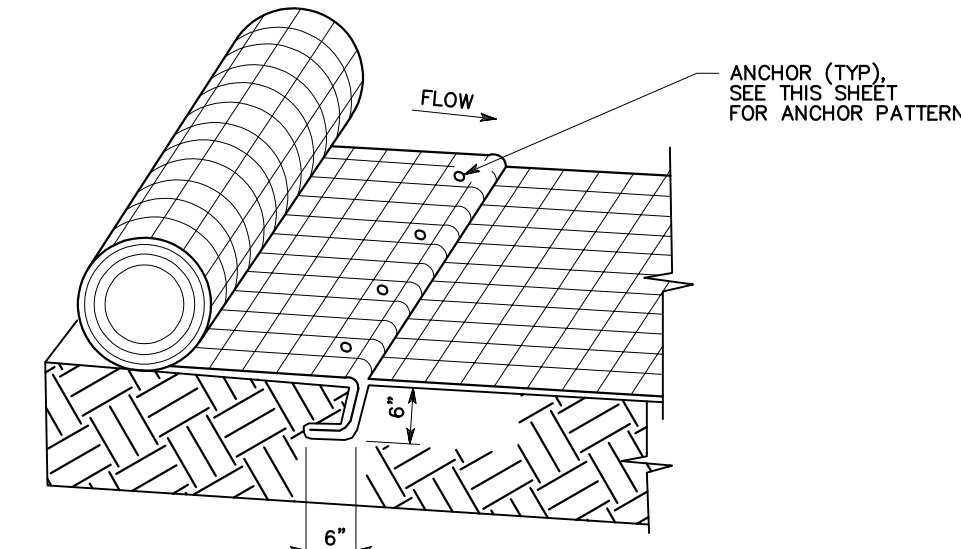
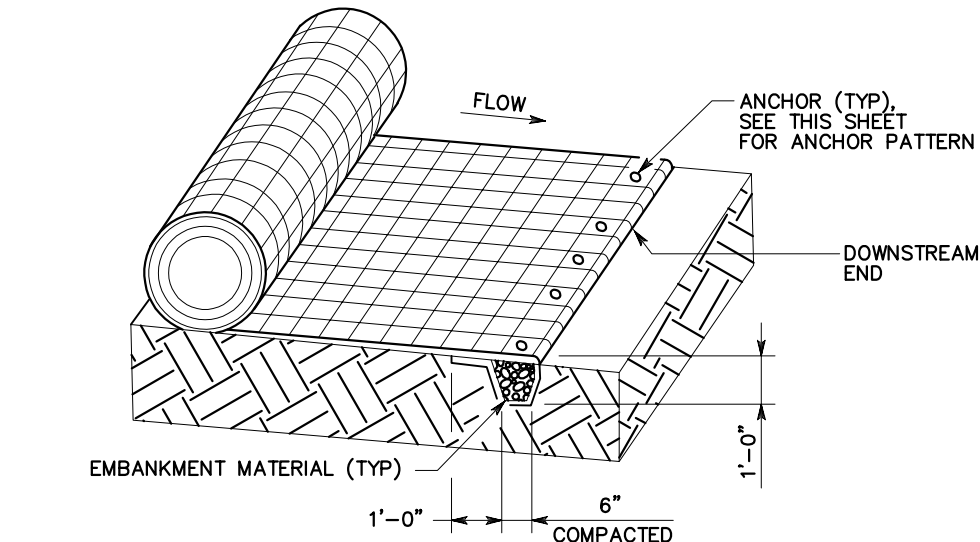


**ANCHOR PATTERNS FOR SLOPES**

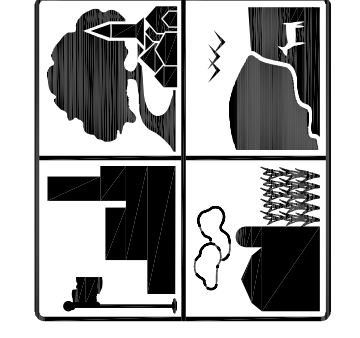


**ROLLED EROSION CONTROL BLANKET INSTALLATION**  
NOT TO SCALE

- NOTES**
1. ESTABLISH AND MAINTAIN CONTINUOUS CONTACT BETWEEN THE ROLLED EROSION CONTROL PRODUCTS AND THE SOIL.
  2. PROVIDE ANCHORING DEVICES IN ACCORDANCE WITH PUBLICATION 408, SECTION 806.2(d).



- NOTES**
1. EXCAVATE INITIAL ANCHOR TRENCH 1'-0" DEEP AND 6" WIDE ACROSS THE WIDTH OF THE CHANNEL TO PREVENT UNDERMINING OF THE ROLLED EROSION CONTROL PRODUCTS.
  2. EXCAVATE INTERMITTENT CHECK SLOT 6" DEEP AND 6" WIDE ACROSS THE WIDTH OF THE CHANNEL AT 25'-0" TO 30'-0" ALONG THE LENGTH OF THE ROLLED EROSION CONTROL PRODUCTS TO PREVENT LOOSE SOIL FROM BEING TRANSPORTED DOWNSTREAM BENEATH THE ROLLED EROSION CONTROL PRODUCTS.
  3. EXCAVATE TERMINAL ANCHOR TRENCH 1'-0" DEEP AND 6" WIDE ACROSS THE WIDTH OF THE CHANNEL TO ENSURE WATER FLOW TRANSITIONS SMOOTHLY ONTO THE ROLLED EROSION CONTROL PRODUCTS WITHOUT SEPARATION FROM THE SOIL.
  4. EXTEND ROLLED EROSION CONTROL PRODUCTS 2'-0" - 3'-0" ABOVE THE CREST OF CHANNEL SIDE WHENEVER POSSIBLE.
  5. PLACE 2 ANCHORS/SY.
  6. PROVIDE ANCHORING DEVICES IN ACCORDANCE WITH SECTION 806.2(d) OF PUBLICATION 408.



**FERGUSON TOWNSHIP**  
DEPT. OF PUBLIC WORKS & ENGINEERING  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
PHONE: 814-238-4651  
FAX: 814-238-3454  
www.twp.ferguson.pa.us

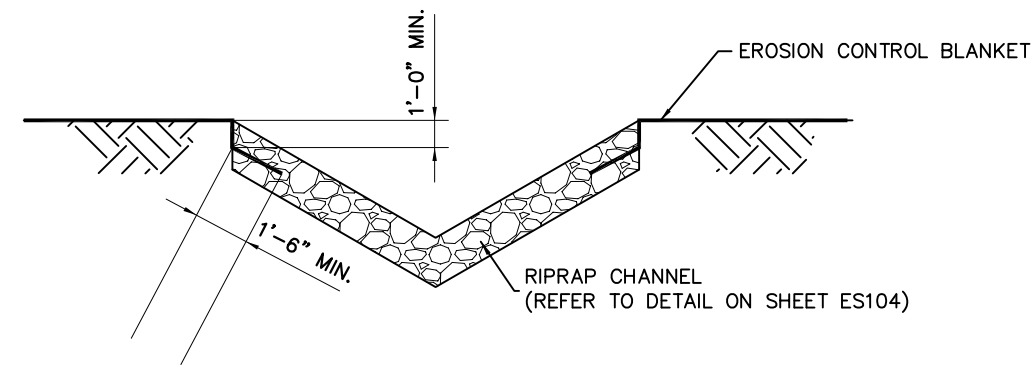
**NEWELL TERESKA & MACKAY**  
ENGINEERING  
341 SCIENCE PARK ROAD  
SUITE 203  
STATE COLLEGE, PA 16803



REV.	DATE	DESCRIPTION
1	02-04-22	PER DEP AND CCOD COMMENTS

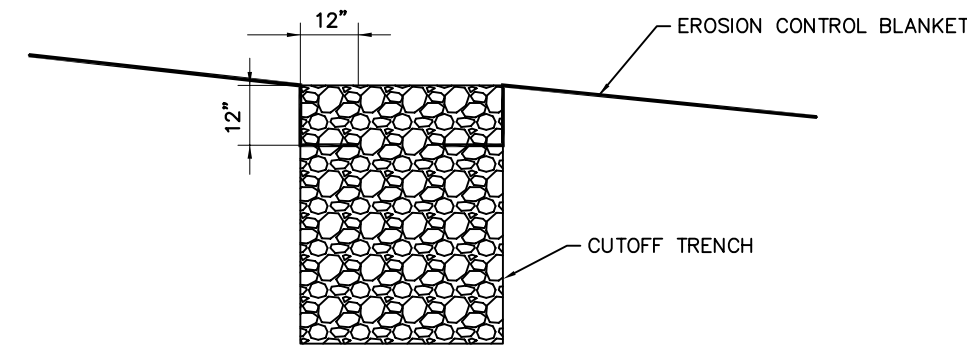
SUBURBAN PARK - PHASE 1  
CONTRACT 2020-C4  
**EROSION AND  
SEDIMENTATION POLLUTION  
CONTROL DETAILS**

DESIGNED BY: JTN  
DRAWN BY: JTN  
CHECKED BY: SAB  
DATE: 09/17/2021  
**ES106**



ROLLED EROSION CONTROL BLANKET TO RIPRAP CHANNEL  
TRANSITION INSTALLATION

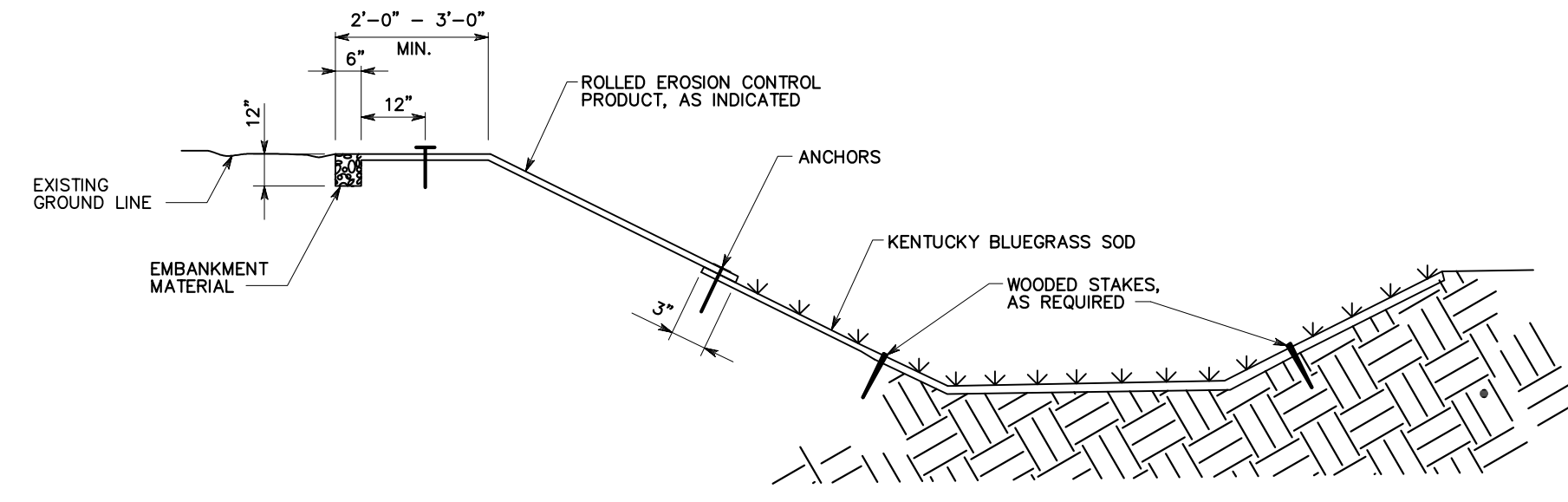
NOT TO SCALE



SECTION A-A

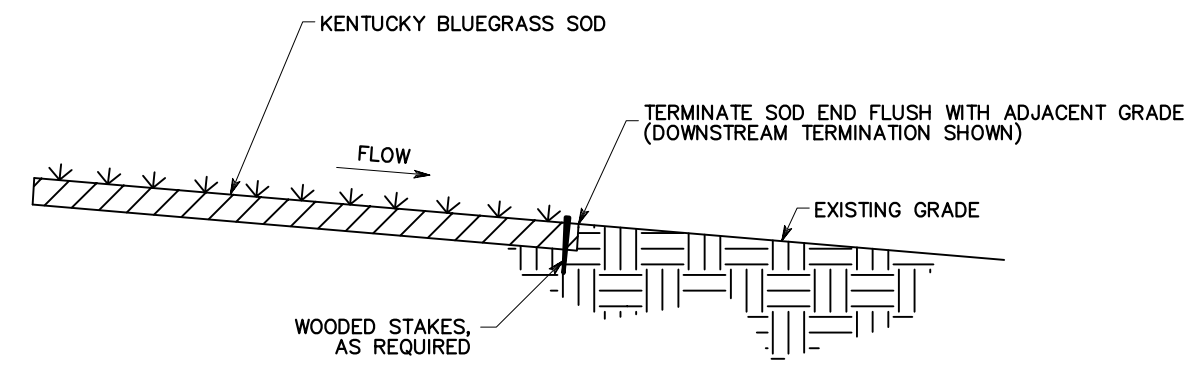
ROLLED EROSION CONTROL BLANKET TO BRIDGE ABUTMENT  
RIPRAP TRANSITION INSTALLATION

NOT TO SCALE



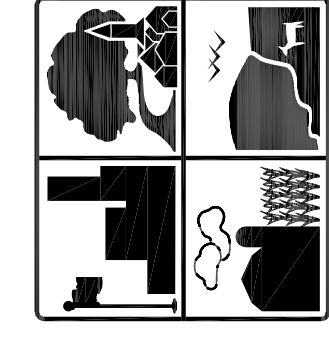
ROLLED EROSION CONTROL PRODUCT TO SOD CHANNEL  
LINING TRANSITION DETAIL

NOT TO SCALE



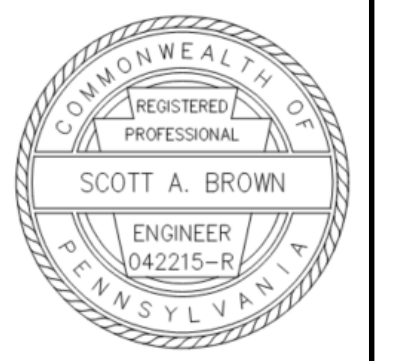
SOD CHANNEL LINING TERMINATION DETAIL

NOT TO SCALE



FERGUSON TOWNSHIP  
DEPT. OF PUBLIC WORKS & ENGINEERING  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
PHONE: 814-238-4651  
FAX: 814-238-3454  
www.twp.ferguson.pa.us

**NEWELL  
TERESKA &  
MACKAY**  
ENGINEERING  
341 SCIENCE PARK ROAD  
SUITE 203  
STATE COLLEGE, PA 16803



REV.	DATE	REVISION DESCRIPTION
1	02-04-22	PER DEP AND CCOD COMMENTS

SUBURBAN PARK - PHASE 1  
CONTRACT 2020-C4  
**EROSION AND  
SEDIMENTATION POLLUTION  
CONTROL DETAILS**

DESIGNED BY: JTN  
DRAWN BY: JTN  
CHECKED BY: SAB  
DATE: 09/17/2021  
**ES107**



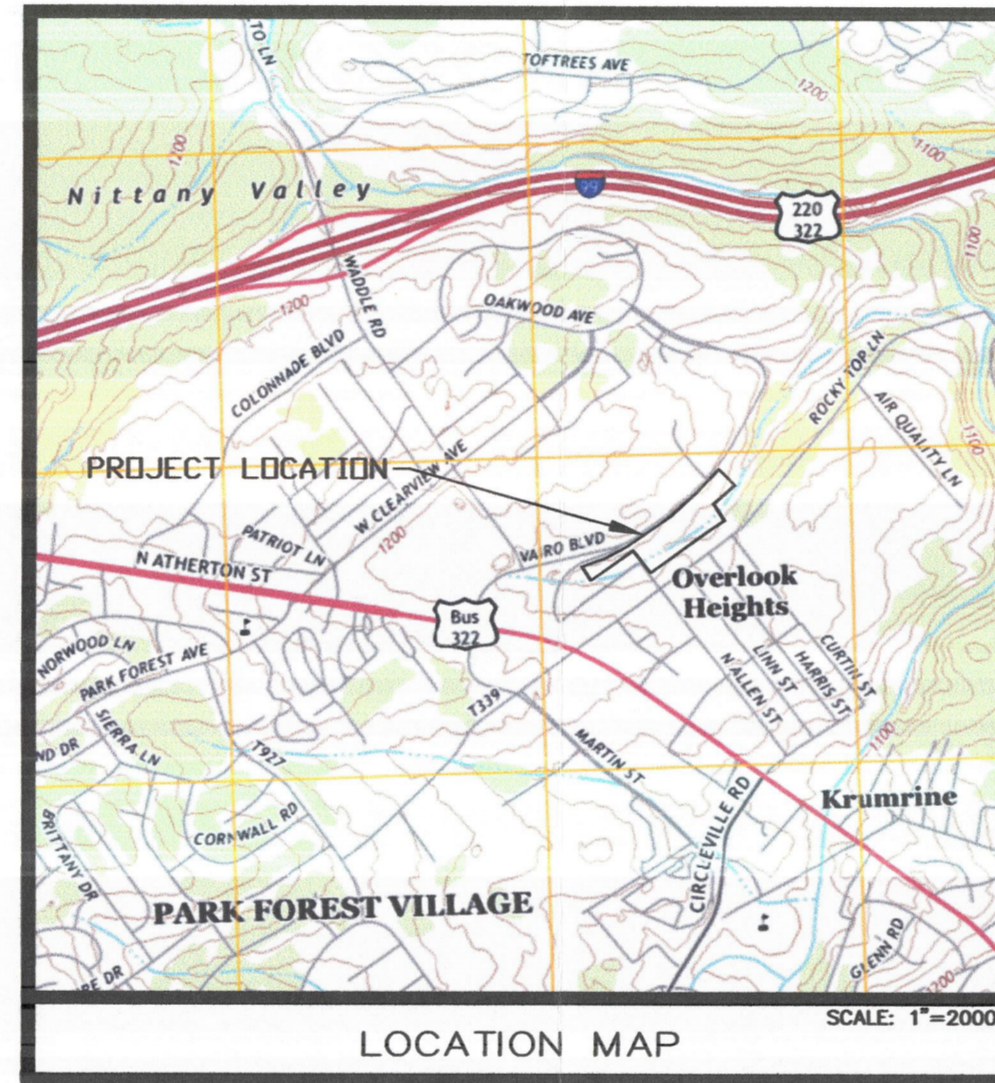
# POST-CONSTRUCTION STORMWATER MANAGEMENT PLANS & STORMWATER MANAGEMENT SITE PLANS FOR FERGUSON TOWNSHIP SUBURBAN PARK - PHASE 1 STATE COLLEGE, CENTRE COUNTY, PENNSYLVANIA

**PROJECT NOTES:**

1. OWNER: FERGUSON TOWNSHIP  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
(814) 238-4651
2. ELEVATIONS AND HORIZONTAL CONTROL ARE BASED ON NAD83 Pennsylvania State Planes, North Zone, US Foot DATUM. CONTACT FERGUSON TOWNSHIP ENGINEERING DEPT. FOR PROJECT TRAVERSE POINT LOCATIONS/INFORMATION.
3. THE LEGAL RIGHT OF WAY ON SUBURBAN AVENUE IS SIXTY (60) FEET.

**UTILITY NOTES:**

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY AND ARE BASED ON RECORDS OF THE VARIOUS FACILITY OWNERS AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE UTILITY INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST NOTIFY THE PA ONE-CALL SYSTEM AT LEAST 3 DAYS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
2. THE CONTRACTOR SHALL DIG TEST PITS AT EXISTING CONFLICTS SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT PLAN REVISIONS AS REQUIRED.
3. ALL EXISTING ON-SITE UTILITIES SHALL REMAIN FUNCTIONAL UNLESS DESIGNATED FOR REMOVAL OR ABANDONMENT.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE RELOCATION OF ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
5. NO UTILITY SERVICE MAY BE DISCONNECTED WITHOUT PRIOR APPROVAL OF THE OWNERS REPRESENTATIVE.



USGS JULIAN QUADRANGLE, PENNSYLVANIA - CENTRE COUNTY, 7.5 MINUTE SERIES

SHEET INDEX	
SHEET	DESCRIPTION
PCSM100A	COVER SHEET
PCSM100B	PROJECT PHASING PLAN
PCSM101	GENERAL NOTES
PCSM102	PHASE 1 PROJECT BOUNDARY MAP
PCSM103	PCSM EXISTING CONDITIONS PLAN
PCSM104	PROPOSED CONDITIONS PLAN
PCSM105	PCSM DETAILS
PCSM106	PCSM DETAILS

**EXISTING FEATURES LEGEND**

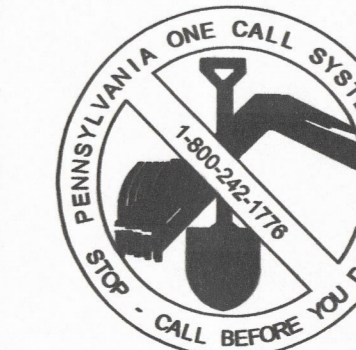
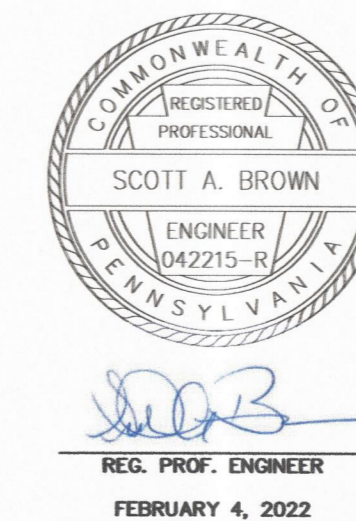
	Existing Building
	Existing Curbing & Edge of Pavement
	Existing Concrete Sidewalk
	Existing Bituminous Paved Areas
	Existing Gravel Areas
	Existing Retaining Wall
	Existing Fence / Type
	Existing Guide Rail
	Existing Contours w/ Elevation (1's & 2's)
	Existing Contours w/ Elevation (5's & 10's)
	Existing Sanitary Sewer w/ Manhole
	Existing Water Line w/ Valve
	Existing Storm Sewer Line w/ Inlet
	Existing Gas Line
	Existing Underground Electric
	Existing Underground Telephone
	Existing Overhead Utility Line w/ Pole
	Existing Fire Hydrant
	Existing Manhole
	Existing Utility Pole
	Existing Guy Wire
	Existing Storm Sewer Inlet Type-M
	Existing Storm Sewer Inlet Type-C
	Existing Utility Main Valve
	Existing Ballard
	Existing Sign
	Existing Deciduous Tree
	Existing Evergreen Tree
	Existing Shrub

**APPLICANT/OWNER:**

FERGUSON TOWNSHIP  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801

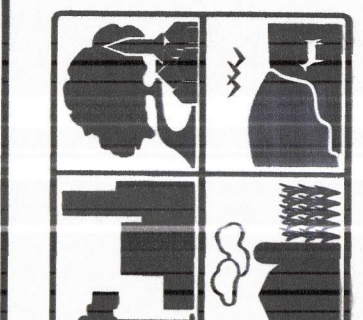
**SITE GRADING, NPDES & WATERWAY PERMIT ENGINEER:**

NTM ENGINEERING, INC.  
341 SCIENCE PARK ROAD, SUITE 203  
STATE COLLEGE, PA 16803



ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR ABOVE-GROUND INSPECTION OF THE SITE. COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 287 OF 1974 AS AMENDED BY ACT 121 OF 2008, CONTRACTORS MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK.

ONE-CALL SERIAL NO. 20203002515



FERGUSON TOWNSHIP  
DEPT. OF PUBLIC WORKS & ENGINEERING  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
PHONE: 814-238-4651  
FAX: 814-238-3454  
www.twp.ferguson.pa.us

NEWELL  
TERESKA &  
MACKAY  
ENGINEERING  
341 SCIENCE PARK ROAD  
SUITE 203  
STATE COLLEGE, PA 16803



REV.	DATE	REVISION DESCRIPTION
1	10-04-22	PER DEP AND CCD COMMENTS

SUBURBAN PARK-PHASE 1  
CONTRACT 2020-C4

**COVER**

DESIGNED BY: JTN  
DRAWN BY: JTN  
CHECKED BY: SGB  
DATE: 09/17/2021

**PCSM100A**

PATH: P:\14003\14003.06 SUBURBAN PARK\CADD\DELIVERABLE\STORMWATER\PCSM100A - COVER.DWG SHEET: PCSM100A COVER SAVED: 2/3/2022 11:01 AM

**OWNER'S CERTIFICATION**

STATE OF PENNSYLVANIA  
COUNTY OF CENTRE  
ON THIS 18<sup>th</sup> DAY OF October, 2022,  
Laura Diminini  
PERSONALLY APPEARED BEFORE ME AND CERTIFIED THAT THEY WERE THE OWNERS OF PROPERTIES SHOWN ON THIS PLAN AND ACKNOWLEDGE THE SAME TO BE THEIR ACT AND PLAN AND DESIGNS, THE SAME TO BE RECORDED AS SUCH, ACCORDING TO THE LAW.

[Signature]  
WITNESS MY HAND AND SEAL, THIS DATE October 13, 2022

Commonwealth of Pennsylvania - Notary Seal  
Summer B. Krage, Notary Public  
Centre County  
My commission expires November 13, 2024  
Commission number 1375708  
Member, Pennsylvania Association of Notaries

Summer B. Krage November 13, 2024  
NOTARY PUBLIC COMMISSION EXPIRES

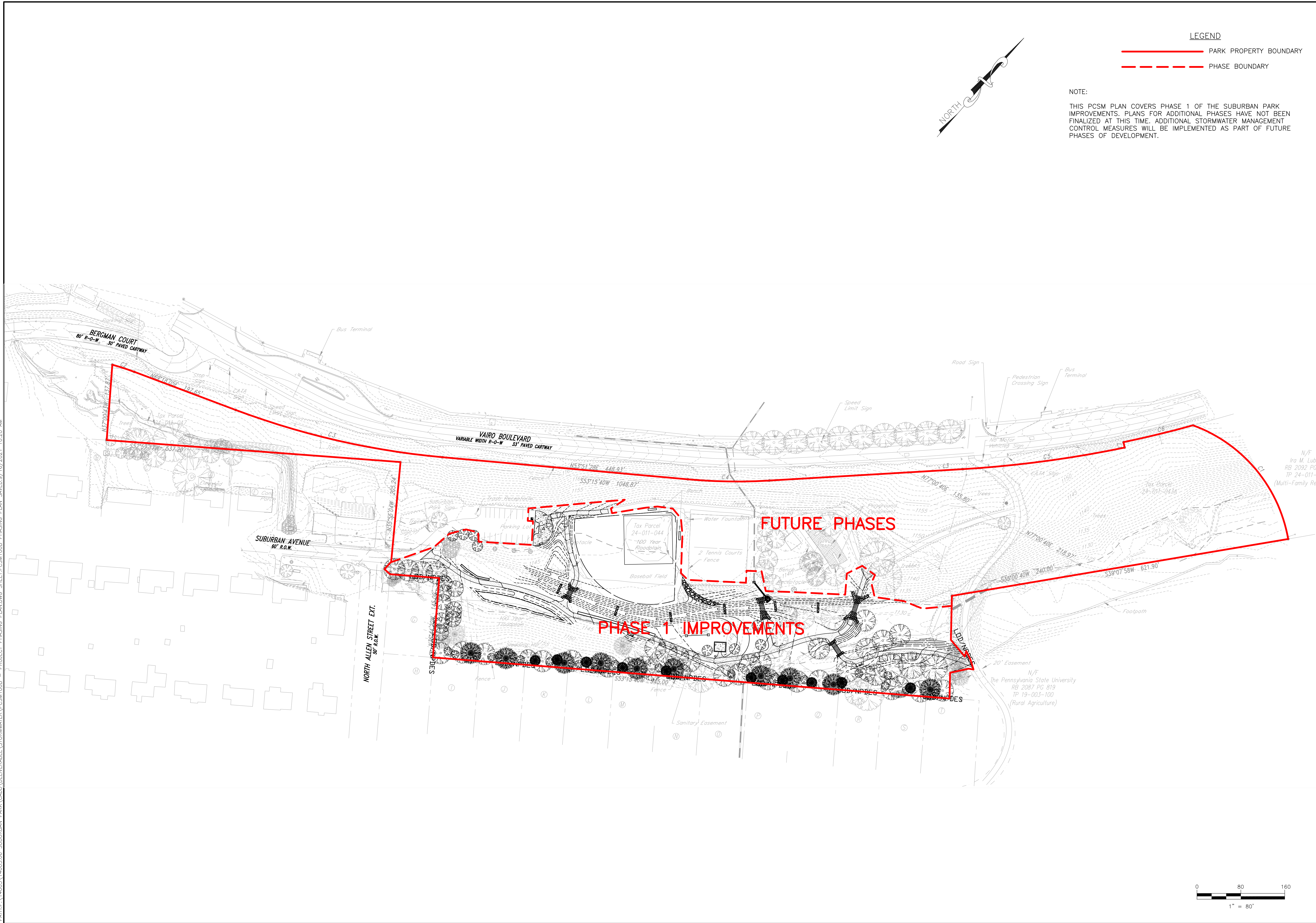
**STORMWATER FACILITIES ACKNOWLEDGEMENT**

I/WE, [Signature] THE LANDOWNER(S), MY/OUR HEIRS AND ASSIGNS, ACKNOWLEDGE THE STORMWATER MANAGEMENT SYSTEM TO BE A PERMANENT FACILITY WHICH CAN BE ALTERED OR REMOVED ONLY AFTER APPROVAL OF A REVISED PLAN BY THE FERGUSON TOWNSHIP BOARD OF SUPERVISORS. THE STORMWATER MANAGEMENT SYSTEM IS TO BE MAINTAINED IN ACCORDANCE WITH THE APPROVED OWNERSHIP AND MAINTENANCE PROGRAM.

**MUNICIPAL STORMWATER CERTIFICATION**  
I, Ronald A. Seybert, Jr., PE, HAVE REVIEWED AND HEREBY CERTIFY THAT THE PLAN MEETS ALL ENGINEERING DESIGN STANDARDS AND CRITERIA OF THE FERGUSON TOWNSHIP CODE OF ORDINANCES.  
[Signature] 10-11-22  
SIGNATURE DATE

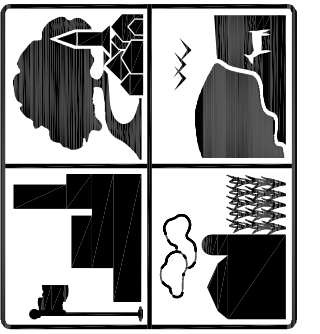
**ENGINEER'S STORMWATER CERTIFICATION**  
I, Scott A. Brown, PE, HEREBY CERTIFY THAT THE STORMWATER MANAGEMENT PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE FERGUSON TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.  
[Signature] February 4, 2022  
SIGNATURE DATE

PATH:\14003\14003.06 SUBURBAN PARK\CADD\DELIVERABLE\STORMWATER\PCSMM100B - PROJECT PHASING PLAN.DWG SHEET\PCSMM100B PHASING PLAN.SAVED:9/16/2021 10:20 AM



**LEGEND**  
 ——— PARK PROPERTY BOUNDARY  
 - - - PHASE BOUNDARY

**NOTE:**  
 THIS PCSM PLAN COVERS PHASE 1 OF THE SUBURBAN PARK IMPROVEMENTS. PLANS FOR ADDITIONAL PHASES HAVE NOT BEEN FINALIZED AT THIS TIME. ADDITIONAL STORMWATER MANAGEMENT CONTROL MEASURES WILL BE IMPLEMENTED AS PART OF FUTURE PHASES OF DEVELOPMENT.



**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us

**NEWELL TERESKA & MACKAY**  
 ENGINEERING  
 341 SCIENCE PARK ROAD  
 SUITE 203  
 STATE COLLEGE, PA 16803



REV.	DATE	REVISION DESCRIPTION
1	02-04-22	PER DEP AND CCOD COMMENTS

SUBURBAN PARK - PHASE 1  
 CONTRACT 2020-C4  
**PROJECT PHASING PLAN**

DESIGNED BY: JTN  
 DRAWN BY: JTN  
 CHECKED BY: SAB  
 DATE: 09/17/2021  
**PCSMM100B**

**POST CONSTRUCTION STORMWATER MANAGEMENT (PCSM) NOTES:**

**GENERAL**

1. REFERENCES TO PADOT SPECIFICATIONS SHALL MEET STANDARDS IN THE CURRENT VERSION OF PADOT PUBLICATION 408 AND APPLICABLE CHANGES.

**BUILDING AND DEMOLITION MATERIALS**

ALL EXCESS BUILDING MATERIALS AND WASTE SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES (DEPARTMENT) SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 260.1 ET SEQ.,271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THIS SITE.

ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.

THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ALL FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.

**PERMIT TERMINATION**

UPON PERMANENT STABILIZATION OF THE EARTH DISTURBANCE ACTIVITY UNDER § 102.22(A)(2) (RELATING TO PERMANENT STABILIZATION), AND INSTALLATION OF BMPS IN ACCORDANCE WITH AN APPROVED PLAN PREPARED AND IMPLEMENTED IN ACCORDANCE WITH §§ 102.4 AND 102.8 (RELATING TO EROSION AND SEDIMENT CONTROL REQUIREMENTS; AND PCSM REQUIREMENTS), THE PERMITTEE OR CO-PERMITTEE SHALL SUBMIT A NOTICE OF TERMINATION TO THE DEPARTMENT OR CONSERVATION DISTRICT.

THE NOTICE OF TERMINATION MUST INCLUDE:

1. THE FACILITY NAME, ADDRESS AND LOCATION.
2. THE OPERATOR NAME AND ADDRESS.
3. THE PERMIT NUMBER.
4. THE REASON FOR PERMIT TERMINATION.
5. IDENTIFICATION OF THE PERSONS WHO HAVE AGREED TO AND WILL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPS IN ACCORDANCE WITH § 102.8(M) AND PROOF OF COMPLIANCE WITH § 102.8(M)(2).

**PCSM REQUIREMENTS**

PCSM REPORTING AND RECORDKEEPING: THE PCSM PLAN, INSPECTION REPORTS AND MONITORING RECORDS SHALL BE AVAILABLE FOR REVIEW AND INSPECTION BY THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEPARTMENT) OR THE LOCAL CONSERVATION DISTRICT.

**LICENSED PROFESSIONAL OVERSIGHT OF CRITICAL STAGES OF CONSTRUCTION**

A LICENSED STORMWATER PROFESSIONAL OR HIS/HER QUALIFIED DESIGNEE SHALL BE PRESENT ONSITE AND BE RESPONSIBLE DURING CRITICAL STAGES OF IMPLEMENTATION OF THE APPROVED PCSM PLAN. CRITICAL STAGES REQUIRING OVERSIGHT AND REVIEW INCLUDE:

1. DURING THE CONSTRUCTION OF THE RAIN GARDENS, INFILTRATION TRENCHES, AND CUTOFF TRENCHES.
2. REVIEW AND APPROVAL OF SEED MIX CONTENT CERTIFICATIONS.

**FINAL CERTIFICATION:**

THE PERMITTEE SHALL INCLUDE WITH THE NOTICE OF TERMINATION "RECORD DRAWINGS" WITH A FINAL CERTIFICATION STATEMENT FROM A LICENSED PROFESSIONAL, WHICH READS AS FOLLOWS:

"I (NAME) DO HEREBY CERTIFY PURSUANT TO THE PENALTIES OF 18 P.A.C.S.A. § 4904 TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE ACCOMPANYING RECORD DRAWINGS ACCURATELY REFLECT THE AS-BUILT CONDITIONS, ARE TRUE AND CORRECT, AND ARE IN CONFORMANCE WITH CHAPTER 102 OF THE RULES AND REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THAT THE PROJECT SITE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PCSM PLAN, ALL APPROVED PLAN CHANGES AND ACCEPTED CONSTRUCTION PRACTICES."

**DISTRIBUTION OF RECORD DRAWINGS:**

1. THE PERMITTEE SHALL RETAIN A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN.
2. THE PERMITTEE SHALL PROVIDE A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN TO THE PERSON IDENTIFIED IN THIS SECTION AS BEING RESPONSIBLE FOR THE LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPS.

**PERMITEE AND CO-PERMITTEE RESPONSIBILITIES:**

UNTIL THE PERMITTEE OR CO-PERMITTEE HAS RECEIVED WRITTEN APPROVAL OF A NOTICE OF TERMINATION, THE PERMITTEE OR CO-PERMITTEE WILL REMAIN RESPONSIBLE FOR COMPLIANCE WITH THE PERMIT TERMS AND CONDITIONS INCLUDING LONG-TERM OPERATION AND MAINTENANCE OF ALL PCSM BMPS ON THE PROJECT SITE AND IS RESPONSIBLE FOR VIOLATIONS OCCURRING ON THE PROJECT SITE. THE DEPARTMENT OR CONSERVATION DISTRICT WILL CONDUCT A FINAL INSPECTION AND APPROVE OR DENY THE NOTICE OF TERMINATION WITHIN 30 DAYS.

THE PERMITTEE OR CO-PERMITTEE SHALL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF PCSM BMPS UNLESS A DIFFERENT PERSON IS IDENTIFIED IN THE NOTICE OF TERMINATION AND HAS AGREED TO LONG-TERM OPERATION AND MAINTENANCE OF PCSM BMPS.

FOR ANY PROPERTY CONTAINING A PCSM BMP, THE PERMITTEE OR CO-PERMITTEE SHALL RECORD AN INSTRUMENT WITH THE RECORDER OF DEEDS WHICH WILL ASSURE DISCLOSURE OF THE PCSM BMP AND THE RELATED OBLIGATIONS IN THE ORDINARY COURSE OF A TITLE SEARCH OF THE SUBJECT PROPERTY. THE RECORDED INSTRUMENT MUST IDENTIFY THE PCSM BMP, PROVIDE FOR NECESSARY ACCESS RELATED TO LONG-TERM OPERATION AND MAINTENANCE FOR PCSM BMPS AND PROVIDE NOTICE THAT THE RESPONSIBILITY FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP IS A COVENANT THAT RUNS WITH THE LAND THAT IS BINDING UPON AND ENFORCEABLE BY SUBSEQUENT GRANTEEES, AND PROVIDE PROOF OF FILING WITH THE NOTICE OF TERMINATION UNDER § 102.7(B)(5) (RELATING TO PERMIT TERMINATION).

THE PERSON RESPONSIBLE FOR PERFORMING LONG-TERM OPERATION AND MAINTENANCE MAY ENTER INTO AN AGREEMENT WITH ANOTHER PERSON INCLUDING A CONSERVATION DISTRICT, NON-PROFIT ORGANIZATION, MUNICIPALITY, AUTHORITY, PRIVATE CORPORATION OR OTHER PERSON, TO TRANSFER THE RESPONSIBILITY FOR PCSM BMPS OR TO PERFORM LONG-TERM OPERATION AND MAINTENANCE AND PROVIDE NOTICE THEREOF TO THE DEPARTMENT.

A PERMITTEE OR CO-PERMITTEE THAT FAILS TO TRANSFER LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP OR OTHERWISE FAILS TO COMPLY WITH THIS REQUIREMENT SHALL REMAIN JOINTLY AND SEVERALLY RESPONSIBLE WITH THE LANDOWNER FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPS LOCATED ON THE PROPERTY.

**POST-CONSTRUCTION STORMWATER MANAGEMENT OPERATION AND MAINTENANCE**

**GENERAL OPERATION AND MAINTENANCE NOTES**

1. ALL STORMWATER MANAGEMENT CONVEYANCES AND BEST MANAGEMENT PRACTICES SHOWN ON THE PLAN SHALL BE CONSTRUCTED BY THE CONTRACTOR IN ACCORDANCE WITH THE DESIGN CONDITIONS, AND SPECIFICATIONS IDENTIFIED ON THIS PLAN. OWNERSHIP, OPERATION AND MAINTENANCE OF THE STORMWATER FACILITIES SHALL BE THE RESPONSIBILITY OF THE LANDOWNER OR OTHER ENTITY. HIS SUCCESSORS AND ASSIGNS IN PERPETUITY, UNLESS SPECIFICALLY IDENTIFIED OTHERWISE HEREIN.
2. STORMWATER MANAGEMENT CONVEYANCES AND BEST MANAGEMENT PRACTICES SHALL BE OPERATED AND MAINTAINED IN GOOD WORKING CONDITION TO ENSURE THAT THEY PERFORM THEIR DESIGN FUNCTION, IN A MANNER ACCEPTABLE TO THE DEPARTMENT OR CONSERVATION DISTRICT.
3. STORMWATER FACILITIES SHALL BE INSPECTED BY THE LAND OWNER OR OTHER RESPONSIBLE ENTITY ON THE FOLLOWING BASIS UNLESS SPECIFIED DIFFERENTLY IN THE FOLLOWING SECTIONS.
  - A. ANNUALLY
  - B. AFTER EVERY STORM EVENT PRODUCING 2 OR MORE INCHES OF RAIN IN A 24 HOUR PERIOD.
4. DOCUMENTATION OF INSPECTIONS MUST BE MAINTAINED BY THE OWNER AND SUBMITTED TO THE DEPARTMENT OR CONSERVATION DISTRICT UPON REQUEST.

**POST-CONSTRUCTION STORMWATER MANAGEMENT OPERATION AND MAINTENANCE**

**VEGETATED CHANNEL O&M NOTES**

THE VEGETATED CHANNEL SHALL BE MAINTAINED AND STABILIZED WITH PERMANENT VEGETATIVE COVER. ANY DAMAGED AREAS SHOULD BE FULLY RESTORED TO ENSURE FUTURE FUNCTIONALITY OF THE CHANNEL.

**INSPECTION AND MAINTENANCE ISSUES:**

MAINTENANCE ACTIVITIES TO BE PERFORMED ANNUALLY AND WITHIN 48 HOURS AFTER EVERY SIGNIFICANT RAINFALL EVENT (2 INCHES OF RAINFALL IN A 24 HOUR PERIOD).

1. INSPECT AND CORRECT EROSION PROBLEMS, DAMAGE TO VEGETATION, AND SEDIMENT AND DEBRIS ACCUMULATION (ADDRESS WHEN >6 INCHES AT ANY SPOT OR COVERING VEGETATION).
2. INSPECT VEGETATION ON SIDE SLOPES FOR EROSION AND FORMATION OF GULLIES, CORRECT AS NEEDED.
3. INSPECT FOR POOLS OF STANDING WATER; DEWATER AND DISCHARGE TO AN APPROVED LOCATION AND RESTORE TO DESIGN GRADE.
4. MOW AND TRIM VEGETATION TO EDGE OF CHANNEL TO ENSURE SAFETY, AESTHETICS, PROPER CHANNEL OPERATION, OR TO SUPPRESS WEEDS AND INVASIVE VEGETATION. MOW ONLY WHEN CHANNEL IS DRY TO AVOID RUTTING.
5. INSPECT FOR LITTER AND DEBRIS; REMOVE PRIOR TO MOWING.

**MAINTENANCE ACTIVITIES TO BE PERFORMED AS NEEDED:**

1. PLANT ALTERNATIVE GRASS SPECIES IN THE EVENT OF UNSUCCESSFUL ESTABLISHMENT.
2. RE-SEED BARE AREAS; INSTALL APPROPRIATE EROSION CONTROL MEASURES WHEN NATIVE SOIL IS EXPOSED OR EROSION CHANNELS ARE FORMING.
3. WATER DURING DRY PERIODS, FERTILIZE, AND APPLY PESTICIDE ONLY WHEN ABSOLUTELY NECESSARY.
4. REMOVE DEBRIS AND/OR SEDIMENT FROM DRAINAGEWAY.
5. IF PERMANENT VEGETATIVE COVER FALLS BELOW 70% OF THE SOIL SURFACE OF THE CHANNEL, RE-SEED OR OVER-SEED IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS.
6. MOW VEGETATION IN CHANNEL BOTTOM TWICE ANNUALLY. ALL MOWED VEGETATION TO BE REMOVED AND DISPOSED OF APPROPRIATELY. MOWING SHOULD BE DONE ONLY WHEN THE SOIL IS DRY IN ORDER TO PREVENT TRACKING DAMAGE TO VEGETATION, SOIL COMPACTION, AND FLOW CONCENTRATIONS.

**RIPRAP LINED CHANNEL O&M NOTES**

THE RIPRAP LINED CHANNEL SHALL BE MAINTAINED TO THE ORIGINAL DESIGN SPECIFICATIONS AND TO PREVENT EROSION.

INSPECTION ACTIVITIES TO BE PERFORMED WITHIN 48 HOURS AFTER EVERY SIGNIFICANT RAINFALL EVENT (2 INCHES OF RAINFALL IN A 24 HOUR PERIOD).

**INSPECTION:**

1. INSPECT FOR EROSION ALONG ENTIRE CHANNEL.
2. INSPECT FOR LOSS OF ROCK.

**MAINTENANCE:**

1. IF THE SPECIFIED ROCK SIZE IS NOT ADEQUATE TO PREVENT EROSION, INSTALL ROCK OF A LARGER SIZE.
2. REPLACE ROCK TO MAINTAIN THE ORIGINAL DESIGN SPECIFICATIONS.

**VEGETATED AREA O&M NOTES**

VEGETATED AREAS ARE INSTALLED TO PROMOTE STORMWATER INFILTRATION. VEGETATED AREAS SHALL BE MAINTAINED AND STABILIZED WITH PERMANENT VEGETATIVE COVER.

**INSPECTION:**

1. INSPECT THE AMOUNT OF PERMANENT VEGETATIVE COVER ON THE SOIL SURFACE.
2. BIWEEKLY INSPECTIONS ARE RECOMMENDED FOR AT LEAST THE FIRST GROWING SEASON, OR UNTIL THE VEGETATION IS PERMANENTLY ESTABLISHED.

**MAINTENANCE:**

1. IF PERMANENT VEGETATIVE COVER FALLS BELOW 70% OF THE SOIL SURFACE AREA, RE-SEED OR OVER-SEED IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS.
2. APPLY LIME AND FERTILIZER IN ACCORDANCE WITH RECOMMENDATIONS BASED ON SOIL TESTING.
3. MOW LAWN AREAS ON A REGULAR BASIS OR AS NEEDED TO MAINTAIN A LOW CUT GRASS. MOWING SHOULD BE DONE ONLY WHEN THE SOIL IS DRY IN ORDER TO PREVENT TRACKING DAMAGE TO VEGETATION, SOIL COMPACTION, AND FLOW CONCENTRATIONS.

**STORMWATER PIPES AND APPURTENANCES O&M NOTES**

STORMWATER PIPES AND APPURTENANCES SHALL BE MAINTAINED TO ENSURE STRUCTURAL INTEGRITY, DESIGN FLOW CAPACITY AND THE UNIMPEDED CONVEYANCE OF STORMWATER. APPURTENANCES INCLUDE FLARED END SECTIONS.

**INSPECTION:**

1. INSPECT STORMWATER PIPES AND APPURTENANCES FOR DEBRIS AND/OR SEDIMENT.
2. INSPECT THE STRUCTURAL INTEGRITY OF STORMWATER PIPES AND APPURTENANCES.

**MAINTENANCE:**

1. REMOVE AND/OR FLUSH DEBRIS AND/OR SEDIMENT FROM STORMWATER PIPES AND APPURTENANCES.
2. REPAIR OR REPLACE DAMAGED STORMWATER PIPES AND APPURTENANCES.

**RIPRAP OUTLET PROTECTION O&M NOTES**

ROCK OUTLET PROTECTION SHALL BE MAINTAINED TO THE ORIGINAL DESIGN SPECIFICATIONS AND TO PREVENT EROSION.

**INSPECTION:**

1. INSPECT FOR EROSION AT OUTLETS.
2. INSPECT FOR LOSS OF ROCK.

**MAINTENANCE:**

1. IF THE SPECIFIED ROCK SIZE IS NOT ADEQUATE TO PREVENT EROSION, INSTALL ROCK OF A LARGER SIZE.
2. REPLACE ROCK TO MAINTAIN THE ORIGINAL DESIGN SPECIFICATIONS.

**RAIN GARDEN O&M NOTES**

RAIN GARDENS FUNCTION TO MAINTAIN A SITE'S PRE-DEVELOPMENT HYDROLOGY AND MINIMIZE DOWNSTREAM FLOODING, EROSION, AND SEDIMENTATION. THE BASINS SHALL BE MAINTAINED AND STABILIZED WITH PERMANENT VEGETATIVE COVER.

THE BASIN HAS AN EMERGENCY SPILLWAY. THE EMERGENCY SPILLWAY IS A VEGETATED, BROAD-CRESTED WEIR. THE CREST AND EXIT SLOPE OF THE EMERGENCY SPILLWAY SHALL BE MAINTAINED AND STABILIZED WITH PERMANENT VEGETATIVE COVER AND PERMANENT EROSION CONTROL MATTING.

**INSPECTION:**

1. INSPECT THE BASIN FOR DEBRIS AND/OR EROSION.
2. INSPECT THE PERMANENT EROSION CONTROL MATTING ON THE CREST AND EXIT SLOPE OF THE EMERGENCY SPILLWAY FOR DAMAGE.
3. INSPECT THE AMOUNT OF PERMANENT VEGETATIVE COVER ON THE SOIL SURFACE OF THE BASIN AND ITS EMERGENCY SPILLWAY.
4. INSPECT FOR STANDING WATER.

**MAINTENANCE ISSUES:**

1. REMOVE DEBRIS AND/OR SEDIMENT FROM THE BASIN AND EMERGENCY SPILLWAY.
2. REPLACE DAMAGED PERMANENT EROSION CONTROL MATTING ON THE CREST AND/OR EXIT SLOPE OF THE EMERGENCY SPILLWAY.
3. IF PERMANENT VEGETATIVE COVER FALLS BELOW 70% OF THE SOIL SURFACE OF THE BASIN AND/OR ITS EMERGENCY SPILLWAY, REPLANT OR RESEED IN ACCORDANCE WITH THE ORIGINAL PLANTING SPECIFICATIONS.
4. APPLY LIME AND FERTILIZER IN ACCORDANCE WITH THE RECOMMENDATIONS BASED ON SOIL TESTING.
5. IF STANDING WATER IS OBSERVED IN THE BASIN FOR A PERIOD GREATER THAN 3 DAYS AFTER A RAIN EVENT. TAKE EFFORTS AS NECESSARY TO RESTORE THE BASIN'S INFILTRATION CAPACITY. EFFORTS SHOULD INCLUDE REMOVING BASIN BOTTOM VEGETATION, SCARIFYING OR ROTOTILLING THE TOP 12 INCHES OF SOIL AND REPLANTING WITH SWITCHGRASS PLUGS AT 1 PLUG PER SQUARE FOOT DENSITY. IF THE PROBLEM PERSISTS CONTACT AN APPROPRIATE DESIGN PROFESSIONAL FOR FURTHER REVIEW.
6. MOW SWITCHGRASS ONCE A YEAR IN THE LATE FALL OR EARLY SPRING. REMOVE CUTTINGS AND DISPOSE OF IN AN APPROPRIATE LOCATION.

**SEQUENCE OF PERMANENT PCSM BMP INSTALLATION - CRITICAL STAGES OF CONSTRUCTION**

ALL PCSM BMPS SHALL BE INSTALLED IN ACCORDANCE WITH THE OVERALL STAGING AND SEQUENCE OF CONSTRUCTION IDENTIFIED ON THE EROSION AND SEDIMENTATION POLLUTION CONTROL PLANS. PCSM BMP INSTALLATION SEQUENCING IS OUTLINED BELOW.

DO NOT BEGIN CONSTRUCTION OF INFILTRATION TRENCHES OR RAIN GARDENS UNTIL ALL UPSTREAM TRIBUTARY AREAS HAVE BEEN STABILIZED WITH PERMANENT COVER. ALL BMP AREAS SHALL BE FENCED OFF OR MARKED TO RESTRICT VEHICULAR OR HEAVY EQUIPMENT TRAFFIC TO PREVENT SOIL OVER-COMPACTION.

A LICENSED STORMWATER PROFESSIONAL OR HIS/HER QUALIFIED DESIGNEE SHALL BE PRESENT ONSITE AND BE RESPONSIBLE DURING CRITICAL STAGES OF IMPLEMENTATION OF THE APPROVED PCSM PLAN. CRITICAL STAGES REQUIRING OVERSIGHT AND REVIEW INCLUDE THE FOLLOWING:

**RAIN GARDENS BMP-01 AND BMP-02**

1. BEGIN EXCAVATION AND ROUGH GRADING OF RAIN GARDENS AFTER ALL UPSLOPE TRIBUTARY AREAS HAVE BEEN STABILIZED.

- 1.1. ALL EXCAVATION SHOULD BE DONE FROM OUTSIDE THE RAIN GARDEN FOOTPRINT. NO EQUIPMENT SHALL BE IN THE RAIN GARDEN BOTTOM.
2. BRING THE BASIN EMBANKMENT AND CUT AND FILL SLOPES TO THEIR FINAL LINE AND GRADE USING SUBSOIL WITH HIGH CLAY CONTENT TOPPED WITH A 4" LAYER OF TOPSOIL.
3. CONSTRUCT THE EMERGENCY SPILLWAY AS SPECIFIED ON THE DETAIL ON SHEET PCSM105.
4. BRING THE BASIN BOTTOM TO ITS FINAL GRADE. IF NECESSARY, ADD TOPSOIL FROM THE SITE TO REACH FINAL GRADE.
5. IMMEDIATELY OR BEFORE ANY RAINFALL, INSTALL A 12 INCH COMPOST FILTER SOCK AT THE TOE OF ALL CUT AND FILL SLOPES (INSIDE AND OUTSIDE OF BASIN AS APPLICABLE).
6. APPLY PERMANENT SEEDING AND MULCH TO ALL EMBANKMENT AREAS PER THE PERMANENT SEEDING SPECIFICATION ON SHEET PCSM106.
7. SPREAD SAND AND PLANT SWITCHGRASS PLUGS IN BASIN FLOOR AREAS AS SPECIFIED IN THE DETAIL ON SHEET PCSM105.
8. MAINTAIN PROTECTION OF RAIN GARDEN FLOOR UNTIL EMBANKMENTS AND ALL TRIBUTARY AREAS ARE STABILIZED.
9. RE-SEED OR REPLANT BASIN FLOOR AND EMBANKMENTS AS NECESSARY UNTIL VEGETATION IS FULLY ESTABLISHED.

**INFILTRATION TRENCHES BMP-03 AND BMP-04**

1. BEGIN EXCAVATION OF INFILTRATION TRENCHES AFTER ALL UPSLOPE TRIBUTARY AREAS HAVE BEEN STABILIZED. EXCAVATE THE INFILTRATION TRENCHES TO THE DIMENSIONS LISTED IN THE DETAIL ON SHEET PCSM105.

- 1.1. CARE SHOULD BE TAKEN TO NOT OVER COMPACT THE TRENCH BOTTOM TO MAINTAIN SOIL INFILTRATION CHARACTERISTICS.
2. INSTALL GEOTEXTILE FABRIC.
3. INSTALL FILTER SAND AND STONE UP TO THE TOP OF THE TRENCH AS ILLUSTRATED IN THE TRENCH DETAIL.
4. APPLY PERMANENT SEEDING AND MULCH TO ALL AREAS OUTSIDE OF THE INFILTRATION TRENCH THAT WERE DISTURBED DURING TRENCH CONSTRUCTION.
5. SEED AMENDED SOIL AS SPECIFIED IN THE SEEDING SPECIFICATIONS AND REPAIR ANY EMBANKMENT AREAS NEEDING ADDITIONAL SEEDING.
6. RE-SEED ANY AREAS AS NECESSARY UNTIL VEGETATION IS FULLY ESTABLISHED.

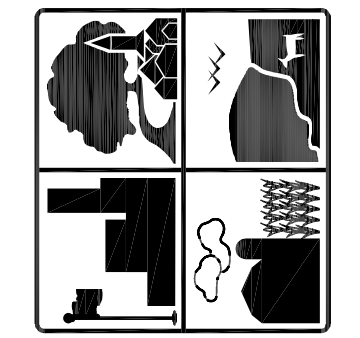
**CUTOFF TRENCHES**

1. EXCAVATE THE CUTOFF TRENCHES TO THE DIMENSIONS LISTED IN THE DETAIL ON SHEET PCSM105.
2. FILL THE TRENCH WITH R-5 RIPRAP. TAMP SLIGHTLY TO CONSOLIDATE STONE. WRAP TOP OF TRENCH WITH GEOTEXTILE FABRIC. TOP TRENCH WITH A MINIMUM OF 4" OF TOPSOIL (COMPACTED) TO MATCH PROPOSED GRADES.

**EROSION AND SEDIMENTATION POLLUTION CONTROL PLAN**

REFER TO THE EROSION AND SEDIMENTATION POLLUTION CONTROL PLAN TITLED "EROSION & SEDIMENTATION POLLUTION CONTROL PLAN FOR SUBURBAN PARK - PHASE 1" DATED 09/17/2021.

PATH:\14003\14003.06 SUBURBAN PARK\CAADD\DELIVERABLE\STORMWATER\PCSM101 - GENERAL NOTES.DWG SHEET:PCSM101 - GENERAL NOTES\_SAVED:2/17/2022 2:13 PM



**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us

**NEWELL TERESKA & MACKAY**  
 ENGINEERING  
 341 SCIENCE PARK ROAD  
 SUITE 203  
 STATE COLLEGE, PA 16803



REV.	DATE	DESCRIPTION
1	02-04-22	PER DEP AND CCD COMMENTS

SUBURBAN PARK - PHASE 1  
 CONTRACT 2020 - C4

**GENERAL NOTES**

DESIGNED BY: JTN  
 DRAWN BY: JTN  
 CHECKED BY: SAB  
 DATE: 09/17/2021

**PCSM101**

PATH:\14003\14003.06 SUBURBAN PARK CAD\DELIVERABLE\STORMWATER\PCSM102 - PROJECT BOUNDARY MAP.DWG SHEET:PCSM102 BOUNDARY MAP SAVED:9/16/2021 10:20 AM

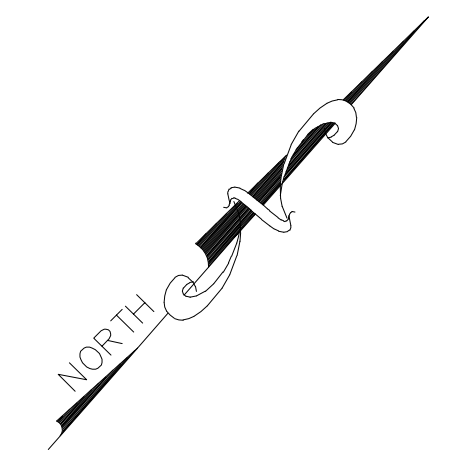
EXISTING ADJOINERS				
ADJOINER	OWNER	RECORD BOOK	TAX PARCEL	LAND USE
A	SCOTT L. LUCCHESI	RB 1227 PG 1000	24-011-0010	SINGLE FAMILY RESIDENTIAL
B	WILLIAM T. YOST	RB 1999 PG 293	24-011-001	SINGLE FAMILY RESIDENTIAL
C	VLADIMIR GETMAN LEONINA C. GETMAN	RB 929 PG 397	24-011-039	SINGLE FAMILY RESIDENTIAL
D	TAMMY G. DAVIS GRANT E. DAVIS	RB 673 PG 414	24-011-037	SINGLE FAMILY RESIDENTIAL
E	DAVE A. BERTOCCHI	RB 961 PG 831	24-011-040	SINGLE FAMILY RESIDENTIAL
F	THOMAS C. WAREHAM	RB 1498 PG 782	24-011-041	SINGLE FAMILY RESIDENTIAL
G	MARK BATDORF	RB 2189 PG 694	24-011-038	SINGLE FAMILY RESIDENTIAL
H	JAMSHID K. ASSADINIA PATRICIA L. ASSADINIA	RB 2192 PG 557	24-011-023	SINGLE FAMILY RESIDENTIAL
I	DALE E. BAKER DORIS L. BAKER	DB 378 PG 932	24-011-024	SINGLE FAMILY RESIDENTIAL
J	JONATHAN K. NELSON	RB 2176 PG 134	24-011-025	SINGLE FAMILY RESIDENTIAL
K	KEVIN J. HARTMAN THOMAS R. GATES	RB 2167 PG 961	24-011-026	SINGLE FAMILY RESIDENTIAL
L	MICHAEL J. KAUFFMAN DEBORAH M. KAUFFMAN	DB 378 PG 913	24-011-027	SINGLE FAMILY RESIDENTIAL
M	THOMAS C. WAREHAM	RB 2033 PG 400	24-011-028	SINGLE FAMILY RESIDENTIAL
N	DAVID C. ROTHROCK MICHELE D. ROTHROCK	RB 531 PG 64	24-011-029	SINGLE FAMILY RESIDENTIAL
O	JOSEPH J. GHERARDI	RB 2044 PG 154	24-011-030	SINGLE FAMILY RESIDENTIAL
P	KEITH R. FARWELL LYNETTE D. FARWELL	RB 1762 PG 1043	24-011-031	SINGLE FAMILY RESIDENTIAL
Q	MARK F. CHAPLIN DRENA S. CHAPLIN	RB 536 PG 1008	24-011-032	SINGLE FAMILY RESIDENTIAL
R	JAMES CAMPBELL PLOWDEN YURI PLOWDEN	RB 822 PG 633	24-011-033	SINGLE FAMILY RESIDENTIAL
S	SANDRA P. STOCKER	DB 296 PG 427	24-011-034	SINGLE FAMILY RESIDENTIAL
T	BRENDAN DERRICK TAFF	RB 2128 PG 595	24-011-035	SINGLE FAMILY RESIDENTIAL

**PROJECT NOTES:**

- OWNER: FERGUSON TOWNSHIP  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
(814) 238-4651
- ELEVATIONS AND HORIZONTAL CONTROL ARE BASED ON NAD83 PENNSYLVANIA STATE PLANES, NORTH ZONE, US FOOT DATUM. CONTACT FERGUSON TOWNSHIP ENGINEERING DEPT. FOR PROJECT TRAVERSE POINT LOCATIONS/INFORMATION.
- ACREAGE OF SITE: 12.16 ACRES  
PHASE 1 DEVELOPMENT: 4.90 ACRES
- THERE ARE NO KNOWN WETLANDS ONSITE.

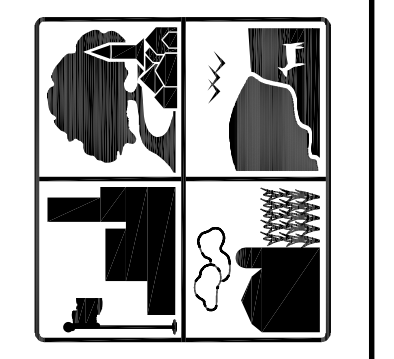
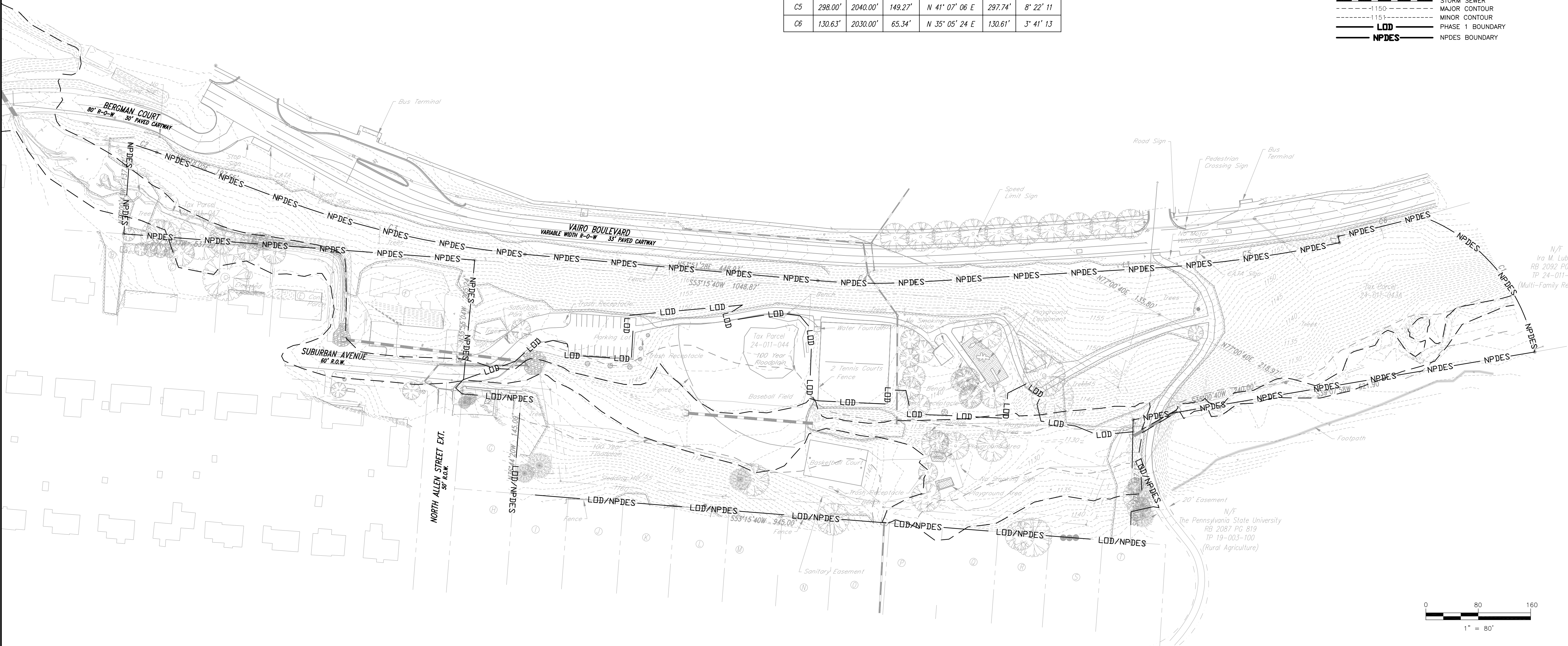
EXISTING LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N 53° 03' 50" W	10.00
L2	S 53° 15' 40" W	90.00
L3	N 45° 20' 28" E	99.32

EXISTING CURVE TABLE						
CURVE	LENGTH	RADIUS	TANGENT	CHORD DIRECTION	CHORD	DELTA
C1	282.92'	270.00'	156.00'	S 81° 10' 45" E	270.15'	60° 02' 14"
C2	42.03'	480.00'	21.03'	N 66° 47' 35" E	42.02'	5° 01' 01"
C3	388.14'	1440.00'	195.25'	N 61° 34' 46" E	386.97'	15° 26' 37"
C4	148.64'	1000.00'	74.46'	N 49° 35' 58" E	148.51'	8° 31' 00"
C5	298.00'	2040.00'	149.27'	N 41° 07' 06" E	297.74'	8° 22' 11"
C6	130.63'	2030.00'	65.34'	N 35° 05' 24" E	130.61'	3° 41' 13"



**LEGEND**

- Existing**
- Existing Text
  - Control Point
  - Guy Wire
  - Utility Pole
  - Sign
  - Manhole
  - Water Valve
  - Gas Valve
  - Mailbox
  - Fire Hydrant
  - Shrub
  - Evergreen Tree
  - Deciduous Tree
  - Trash Receptacle
  - Bollards
  - Right-of-Way Line
  - Easement Line
  - Property Line
  - Water Line
  - Storm Sewer
  - Sanitary Sewer
  - Underground Electric
  - Overhead Electric
  - Underground Telecomm
  - Gas Line
  - Major Contour
  - Minor Contour
  - 100 Year (1%) Floodplain
  - Soils
  - Tree Row
- PROPOSED**
- PROPOSED TEXT
  - SIGN
  - TRASH RECEPTACLE
  - BOLLARDS
  - DECIDUOUS TREE
  - FENCE
  - STORM SEWER
  - MAJOR CONTOUR
  - MINOR CONTOUR
  - PHASE 1 BOUNDARY
  - NPDES BOUNDARY



**FERGUSON TOWNSHIP**  
DEPT. OF PUBLIC WORKS & ENGINEERING  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
PHONE: 814-238-4651  
FAX: 814-238-3454  
www.twp.ferguson.pa.us

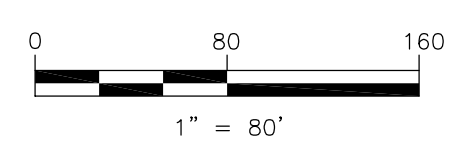
**NEWELL TERESKA & MACKAY**  
ENGINEERING  
341 SCIENCE PARK ROAD  
SUITE 203  
STATE COLLEGE, PA 16803

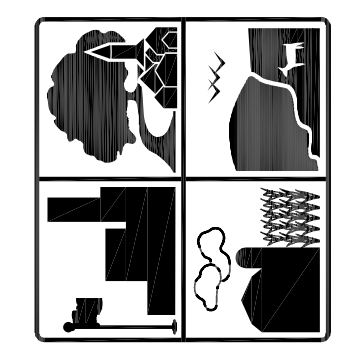


REV.	DATE	REVISION DESCRIPTION
1	02-04-22	PER DEP AND CCOD COMMENTS

SUBURBAN PARK - PHASE 1  
CONTRACT 2020-C4  
**PROJECT BOUNDARY MAP**

DESIGNED BY: JTN  
DRAWN BY: JTN  
CHECKED BY: SAB  
DATE: 09/17/2021  
**PCSM102**





**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us

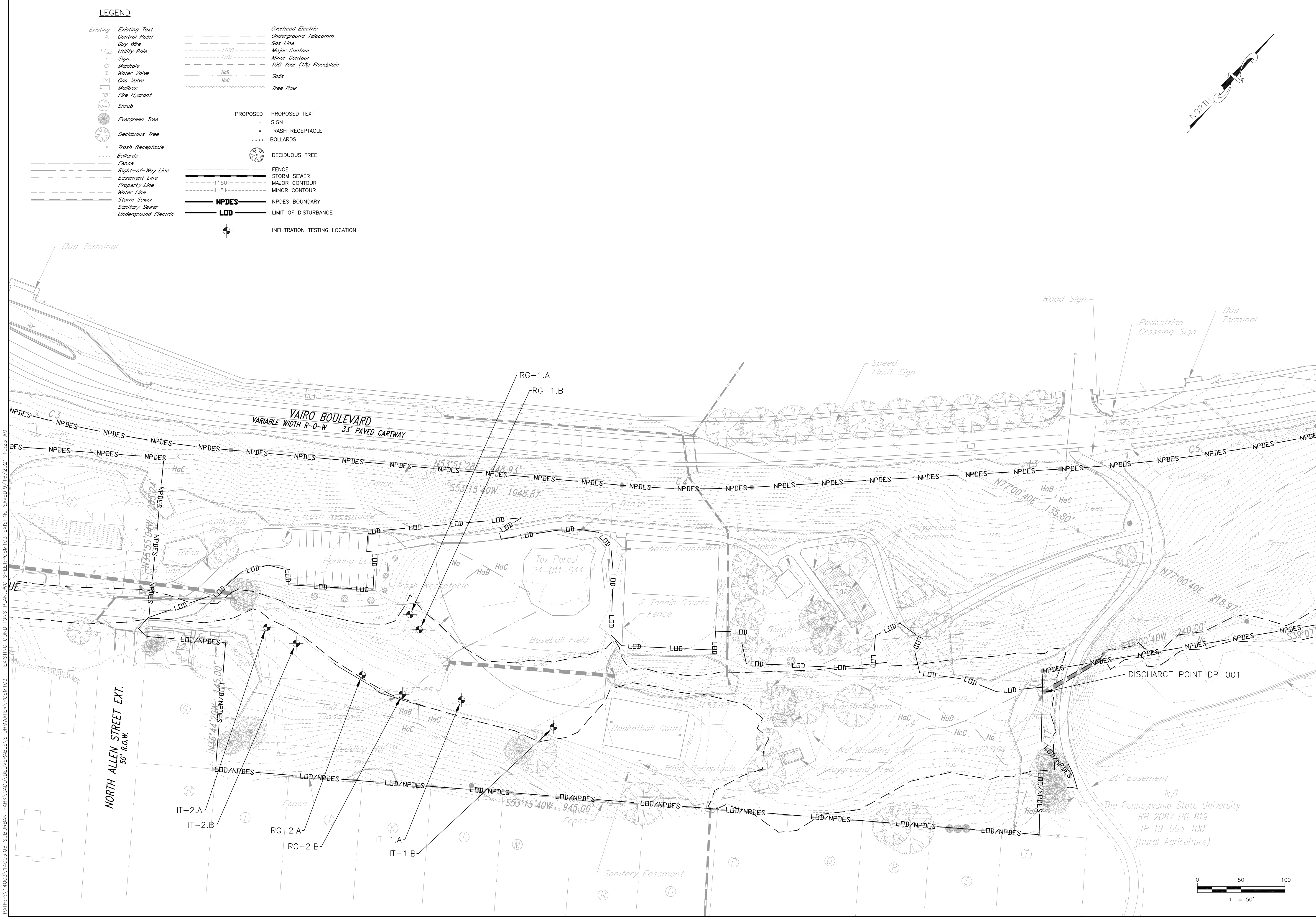
**NEWELL TERESKA & MACKAY**  
 ENGINEERING  
 341 SCIENCE PARK ROAD  
 SUITE 203  
 STATE COLLEGE, PA 16803



REV.	DATE	REVISION DESCRIPTION
1	02-04-22	PER DEP AND CCOD COMMENTS

SUBURBAN PARK - PHASE 1  
 CONTRACT 2020-C4  
**PCSM EXISTING  
 CONDITIONS PLAN**

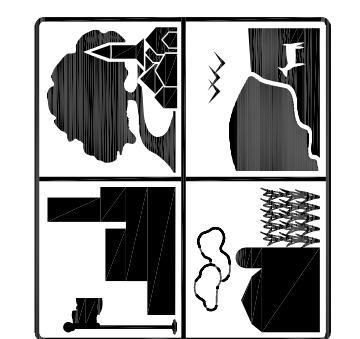
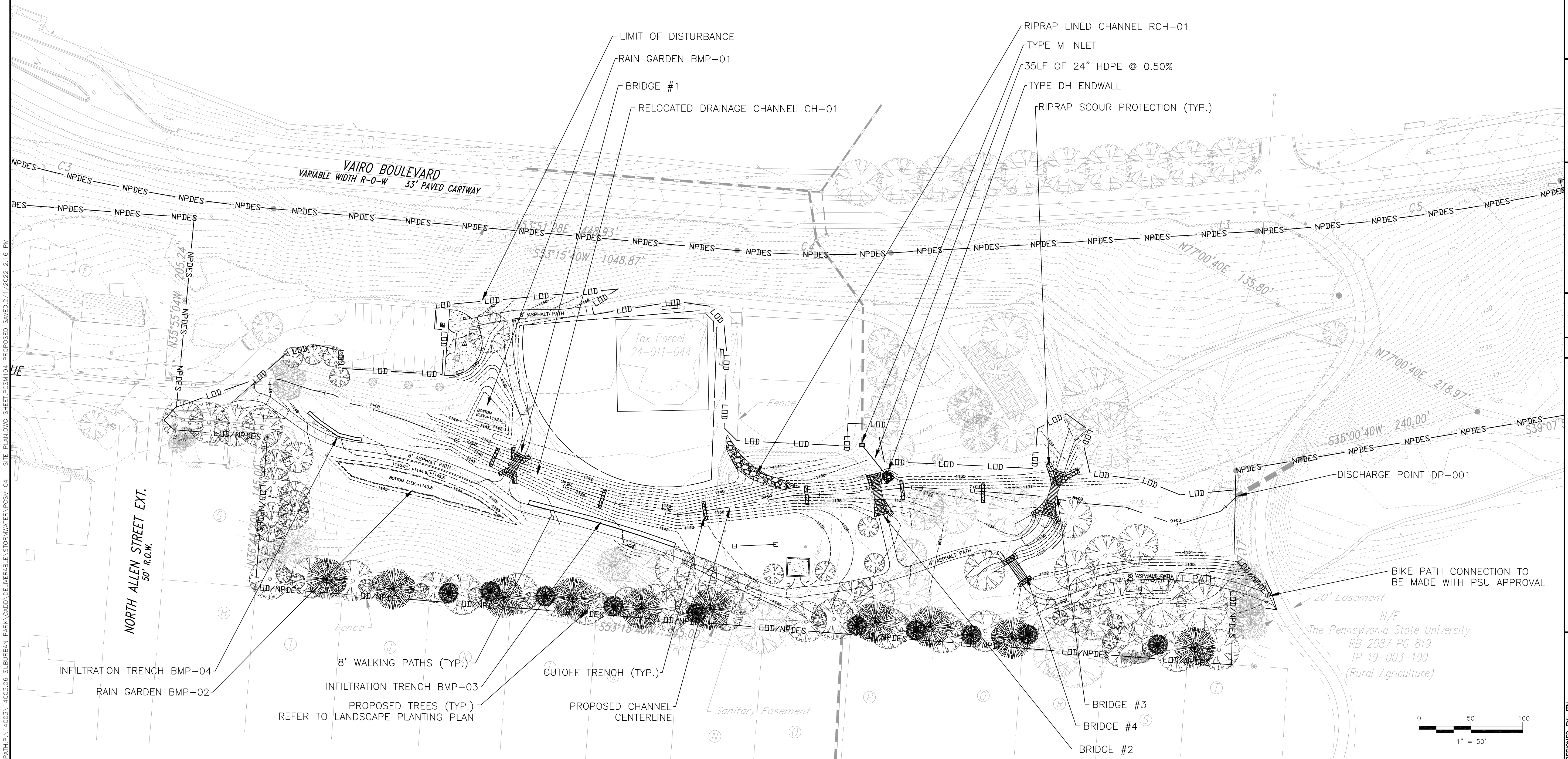
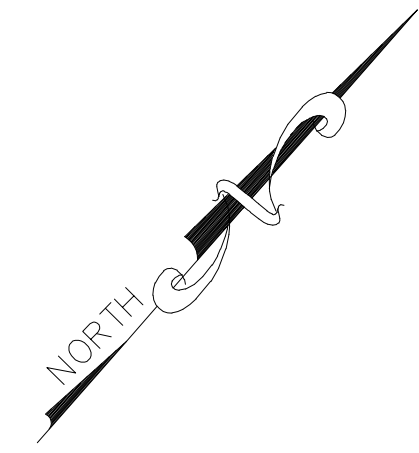
**PCSM103**  
 DESIGNED BY: JTN  
 DRAWN BY: JTN  
 CHECKED BY: SAB  
 DATE: 09/17/2021



PATH:\14003\14003\06 SUBURBAN PARK CAD\DELIVERABLE\STORMWATER\PCSM103 - EXISTING CONDITIONS PLAN.DWG SHEET\PCSM103 - EXISTING CONDITIONS PLAN.DWG 16/2021 10:23 AM

**LEGEND**

Existing	Existing Text	Overhead Electric
Control Point	Underground Telecomm	Gas Line
Guy Wire	Major Contour	Minor Contour
Utility Pole	1100	1101
Sign	100 Year (1%) Floodplain	Soils
Manhole	HaB	HaC
Water Valve	HaC	Tree Row
Gas Valve		
Mailbox		
Fire Hydrant		
Shrub		
Evergreen Tree	PROPOSED	PROPOSED TEXT
Deciduous Tree	SIGN	TRASH RECEPTACLE
Trash Receptacle	BOLLARDS	DECIDUOUS TREE
Bollards	FENCE	STORM SEWER
Fence	Right-of-Way Line	MAJOR CONTOUR
Right-of-Way Line	Easement Line	MINOR CONTOUR
Easement Line	Property Line	NPDES
Property Line	Water Line	LOD
Water Line	Storm Sewer	LIMIT OF DISTURBANCE
Storm Sewer	Sanitary Sewer	
Sanitary Sewer	Underground Electric	
Underground Electric		



**FERGUSON TOWNSHIP**  
 DEPT. OF PUBLIC WORKS & ENGINEERING  
 3147 RESEARCH DRIVE  
 STATE COLLEGE, PA 16801  
 PHONE: 814-238-4651  
 FAX: 814-238-3454  
 www.twp.ferguson.pa.us

**NEWELL TERESKA & MACKAY**  
 ENGINEERING  
 341 SCIENCE PARK ROAD  
 SUITE 203  
 STATE COLLEGE, PA 16803



REV.	DATE	REVISION DESCRIPTION
1	02-04-22	PER DEP AND CCOD COMMENTS

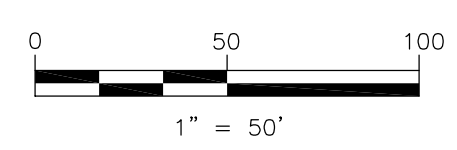
**PROPOSED CONDITIONS PLAN**

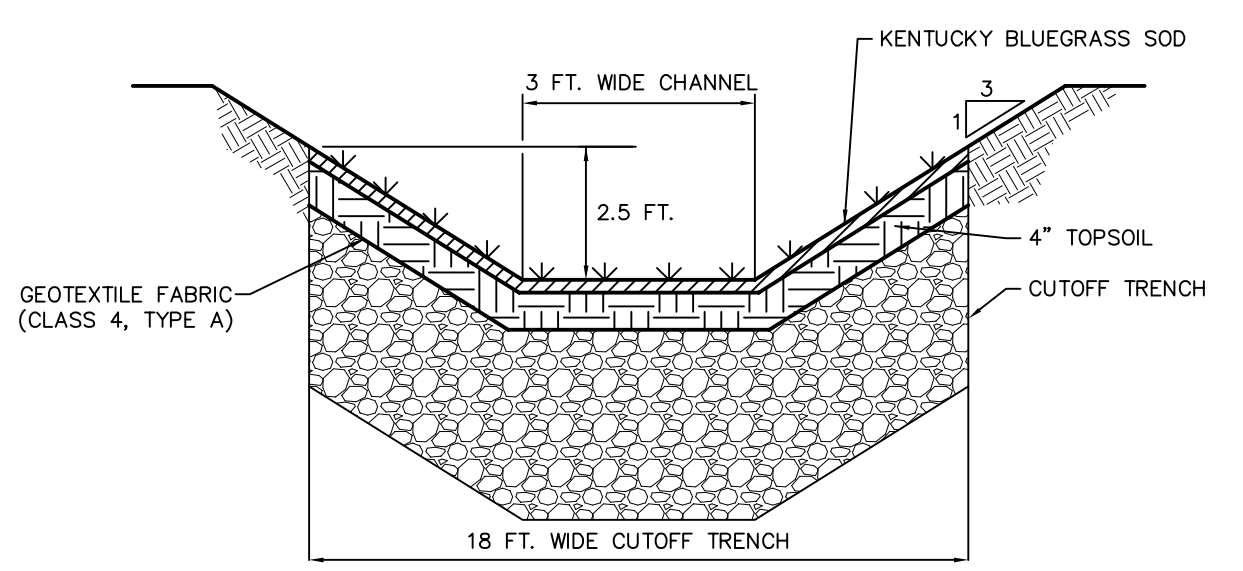
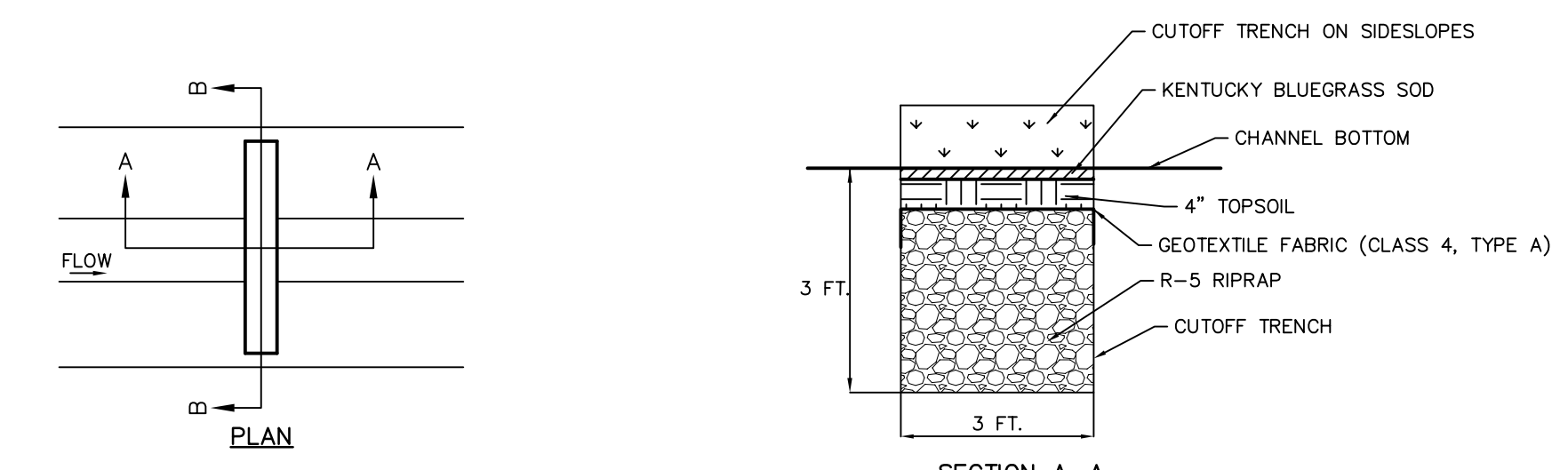
SUBURBAN PARK - PHASE 1  
 CONTRACT 2020-C4

**PCSM104**

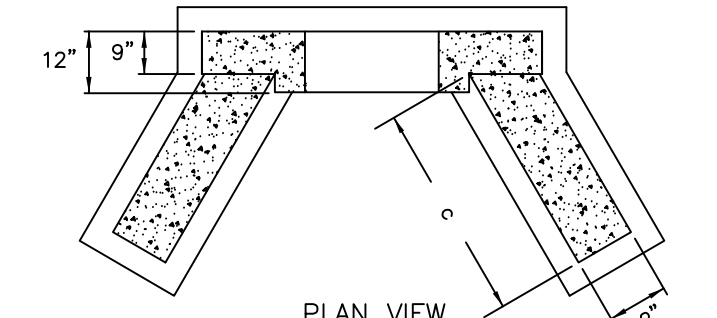
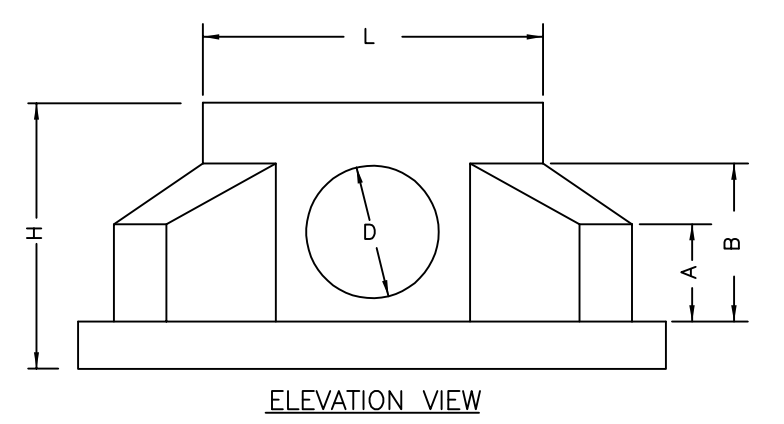
DESIGNED BY: JTN  
 DRAWN BY: JTN  
 CHECKED BY: SAB  
 DATE: 09/17/2021

PATH:\14003\14003\06 SUBURBAN PARK CAD\DELIVERABLE\STORMWATER\PCSM104 - SITE PLAN.DWG SHEET:PCSM104 - PROPOSED SAVED:2/17/2022 2:16 PM





**SECTION B-B**  
CUTOFF TRENCH DETAIL  
NOT TO SCALE



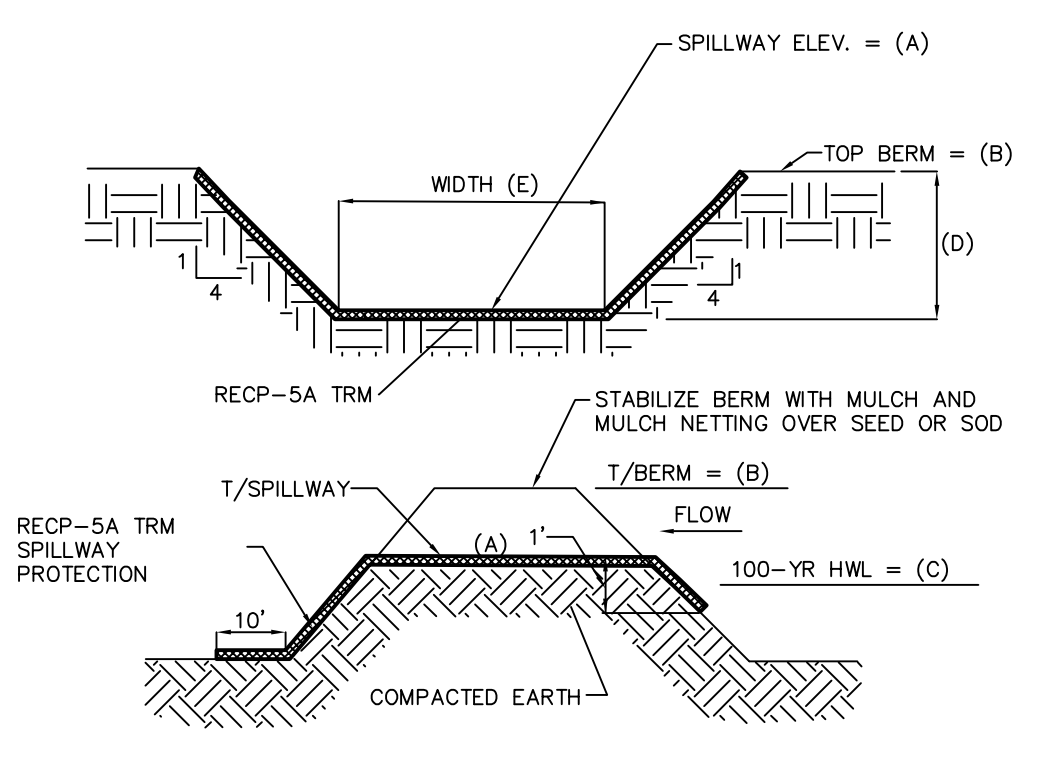
**PRECAST HEADWALL DIMENSION GUIDE**

PIPE DIAMETER	D	H	L	A	B	C
12"	18"	3'-0"	4'-4"	1'-3"	2'-0"	2'-5"
15"	21"	3'-3"	4'-4"	1'-5"	2'-3"	2'-7"
18"	27"	3'-9"	5'-4"	1'-8"	2'-9"	3'-2"
21"	30"	4'-0"	5'-4"	1'-9"	3'-0"	3'-7"
24"	34"	4'-4"	5'-4"	1'-11"	3'-4"	3'-11"
27"	38"	4'-8"	5'-10"	2'-1"	3'-8"	4'-4"
30"	38"	4'-8"	5'-10"	2'-1"	3'-8"	4'-4"
36"	48"	5'-6"	6'-4"	2'-6"	4'-6"	5'-3"

NOTE: AS MANUFACTURED BY "MODERN" PRECAST CONCRETE PRODUCTS IN OTTSVILLE, PA OR EQUIVALENT

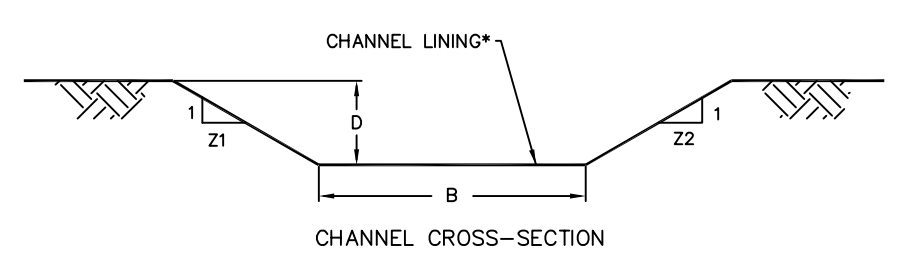
**TYPE D-W ENDWALL**  
NOT TO SCALE

\* REFER TO PENNDOT RC-45M AND RC-46M.  
**STANDARD TYPE "M" INLET**  
NOT TO SCALE



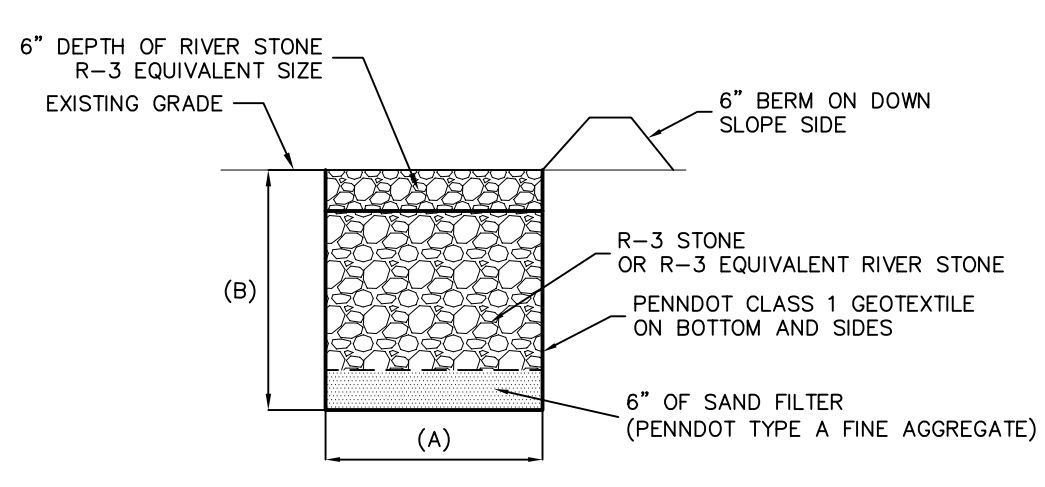
RAIN GARDEN	(A)	(B)	(C)	(D)	(E)
BMP-01	1143.0	1144.0	1143.2	1.0	10
BMP-02	1144.8	1145.6	1145.1	0.8	20

**PERMANENT EMERGENCY SPILLWAY BMP-01**  
NOT TO SCALE



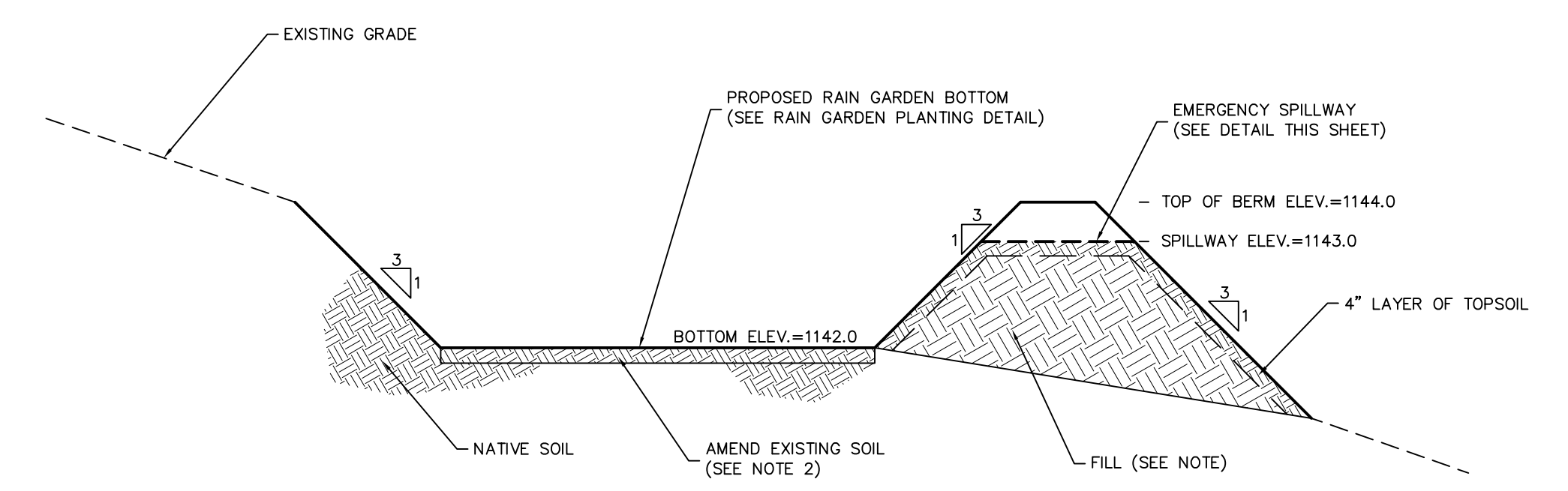
CHANNEL NO.	STATION	BOTTOM WIDTH B (FT)	MIN. DEPTH D (FT)	Z1 (FT)	Z2 (FT)	LINING*
CH-01	0+00 TO END	3.0	2.5	3.0	3.0	KENTUCKY BLUEGRASS SOD

**VEGETATED CHANNELS**  
NOT TO SCALE



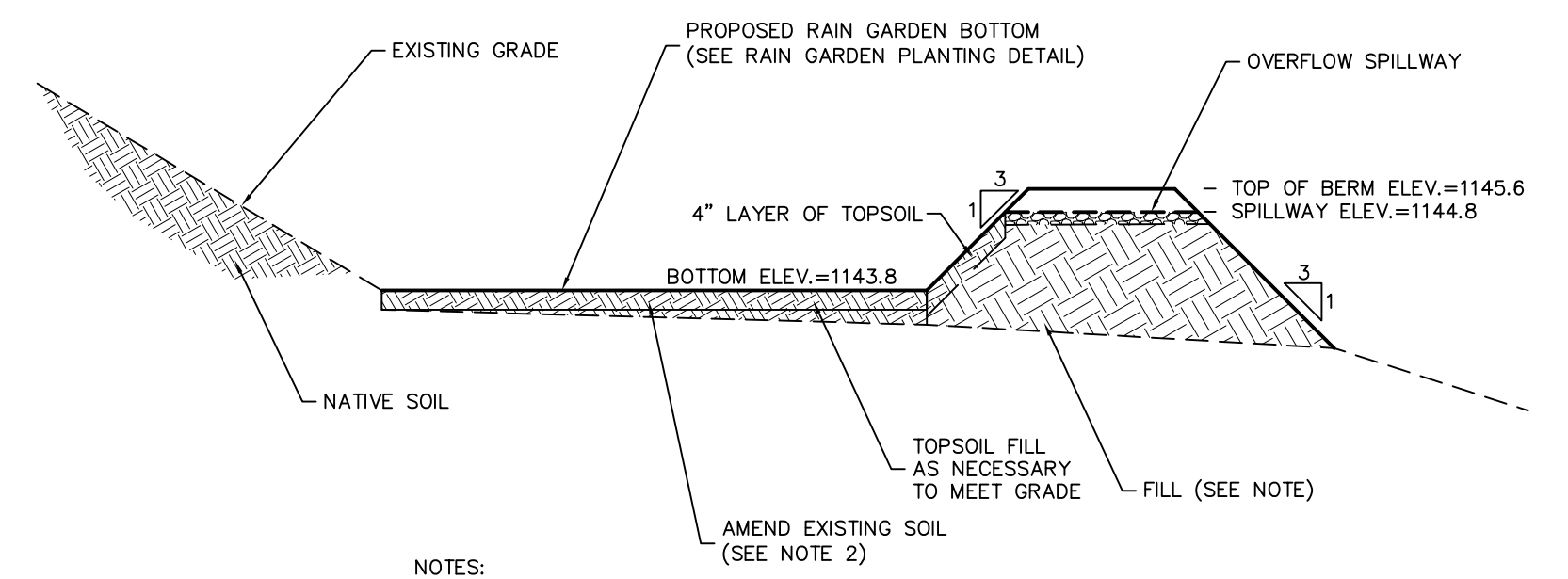
INFILTRATION TRENCH	(A)	(B)	LENGTH
BMP-03	4'	2'	150'
BMP-04	4'	2'	60'

**INFILTRATION TRENCH**  
NOT TO SCALE



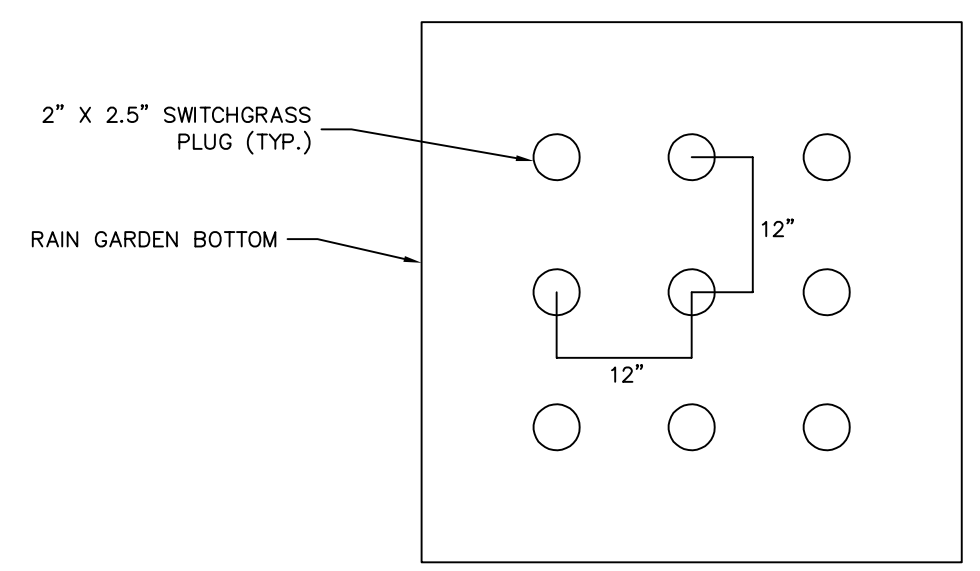
- NOTES:**
- ALL FILL SHALL CONSIST OF EXISTING SOIL STRIPPED FROM THE SITE. ALL EMBANKMENT FILL SHALL CONSIST OF A HIGH CLAY CONTENT FILL MATERIAL TOPPED WITH A 4" LAYER OF TOPSOIL.
  - TILL 2 INCHES OF WELL AGED COMPOST INTO THE TOP 6 INCHES OF THE INSITU SOIL.

**BMP-01 RAIN GARDEN**  
NOT TO SCALE



- NOTES:**
- ALL FILL SHALL CONSIST OF EXISTING SOIL STRIPPED FROM THE SITE. ANY FILL REQUIRED FOR CONSTRUCTION OF THE RAIN GARDEN BOTTOM SHALL CONSIST OF TOPSOIL. ALL EMBANKMENT FILL SHALL CONSIST OF A HIGH CLAY CONTENT FILL MATERIAL TOPPED WITH A 4" LAYER OF TOPSOIL.
  - TILL 2 INCHES OF WELL AGED COMPOST INTO THE TOP 6 INCHES OF NATURAL OR PLACED TOPSOIL.

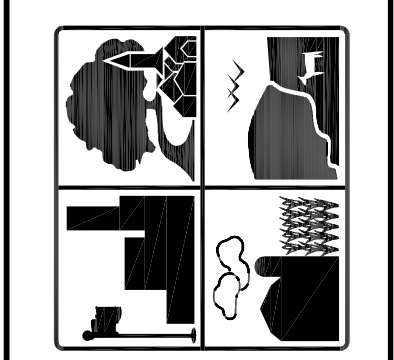
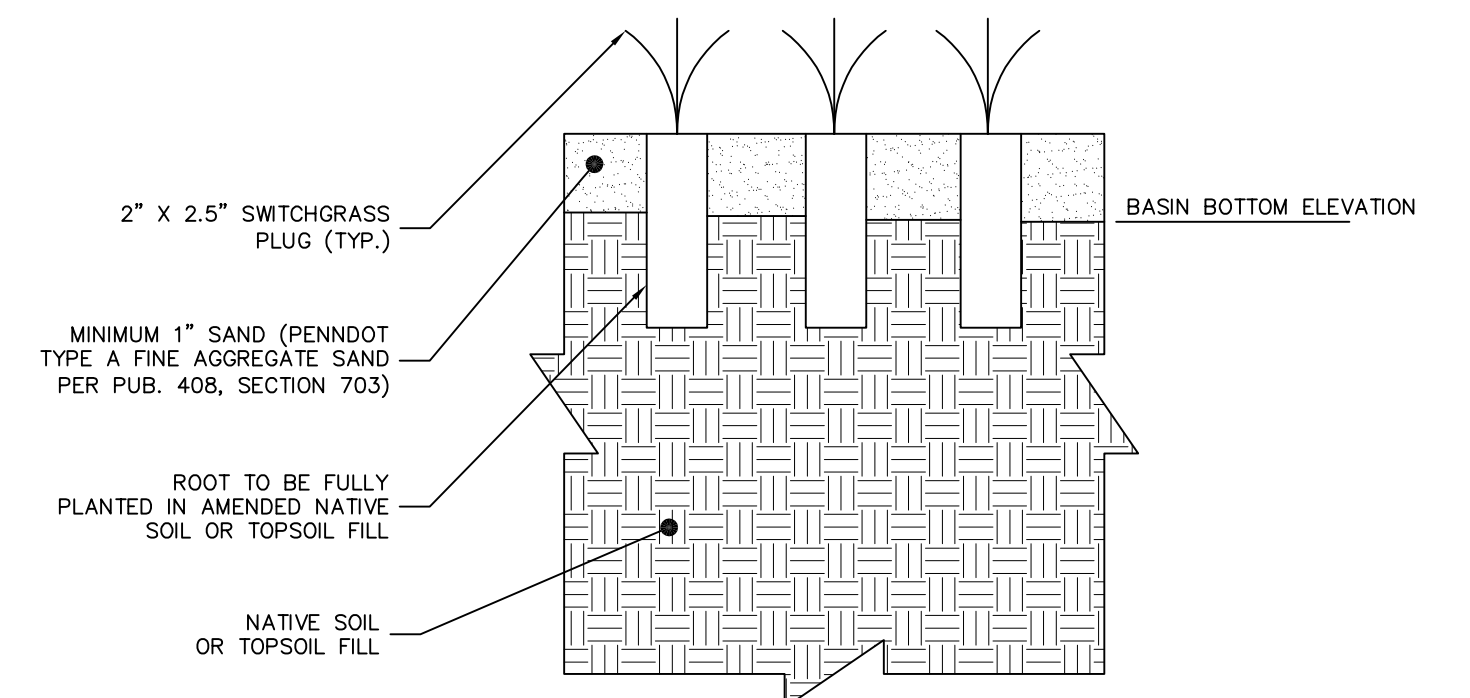
**BMP-02 RAIN GARDEN**  
NOT TO SCALE



**NOTE:**

- PANISUM VIRGATUM (SWITCHGRASS) 2" X 2.5" PLUGS PLANTED IN A SQUARE GRID PATTERN SPACED 12" ON CENTER.

**RAIN GARDEN PLANTING DETAIL**  
NOT TO SCALE



**FERGUSON TOWNSHIP**  
DEPT. OF PUBLIC WORKS & ENGINEERING  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
PHONE: 814-238-4651  
FAX: 814-238-3454  
www.twp.ferguson.pa.us

**NEWELL TERESKA & MACKAY ENGINEERING**  
341 SCIENCE PARK ROAD  
SUITE 203  
STATE COLLEGE, PA 16803



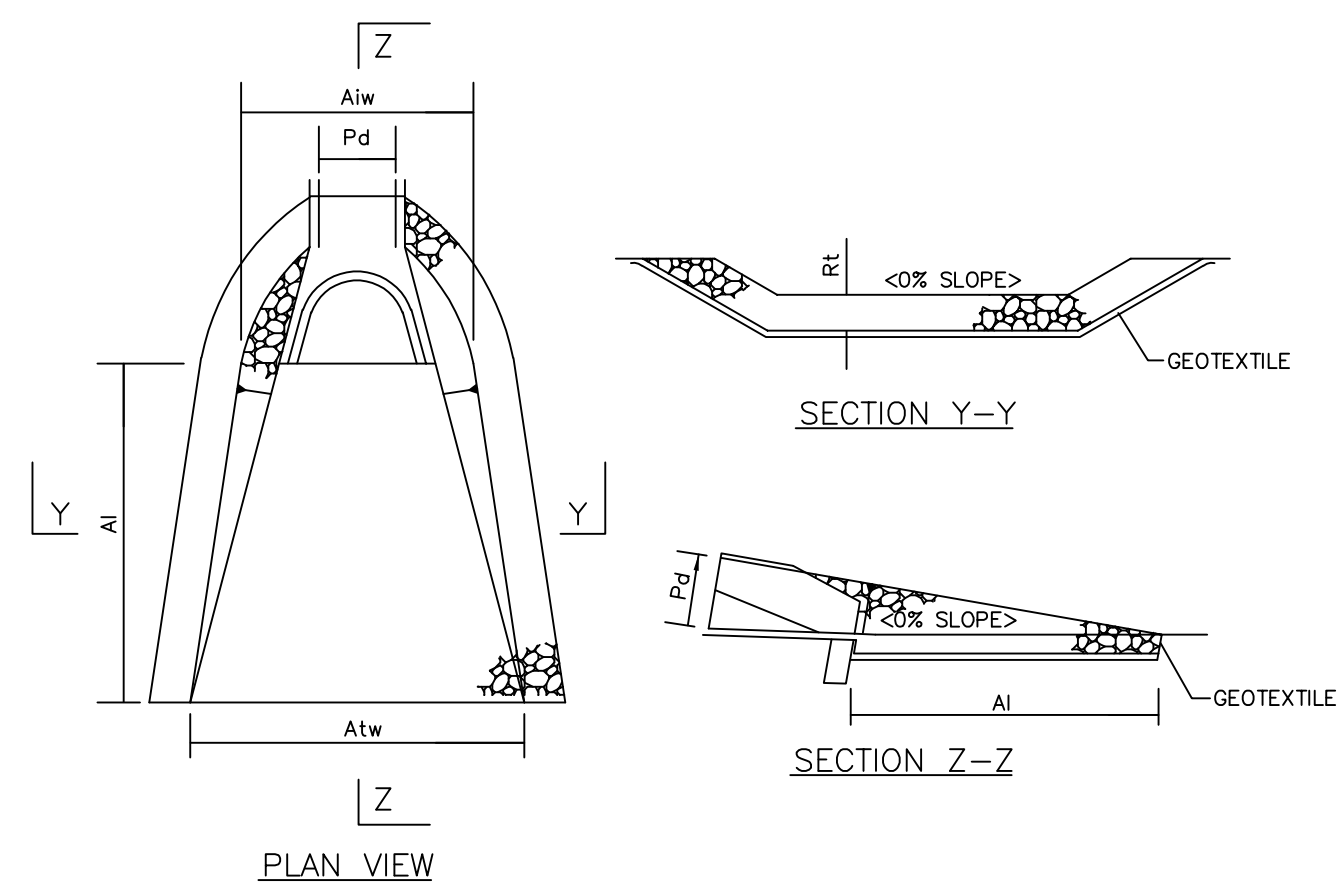
REV.	DATE	REVISION DESCRIPTION
1	02-04-22	PER DEP. AND CCOD COMMENTS

SUBURBAN PARK-PHASE 1  
CONTRACT 2020-C4

**PCSM DETAILS**

DESIGNED BY: JTN  
DRAWN BY: JTN  
CHECKED BY: SAS  
DATE: 09/17/2021

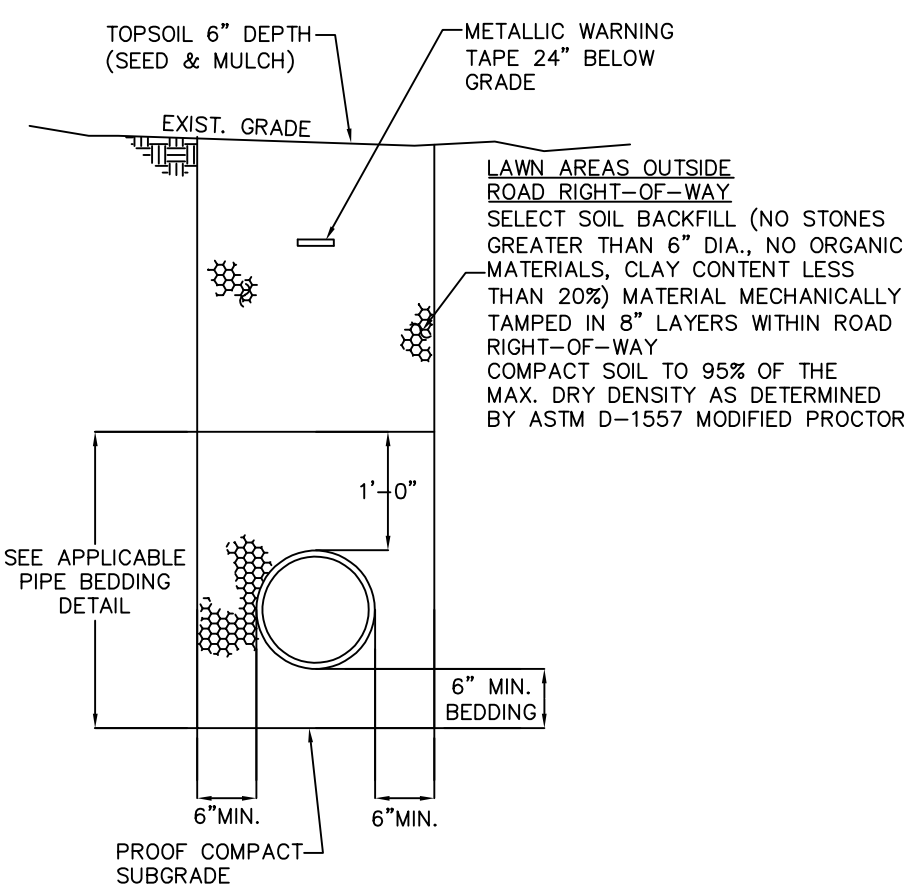
**PCSM105**



OUTLET NO.	PIPE DIA Pd (IN)	RIPRAP		APRON		TERMINAL WIDTH Atw (FT)
		SIZE R-	THICK. Rt (IN)	LENGTH Ai (FT)	INITIAL WIDTH Atw (FT)	
001	24	R-3	9	9	6	9.6

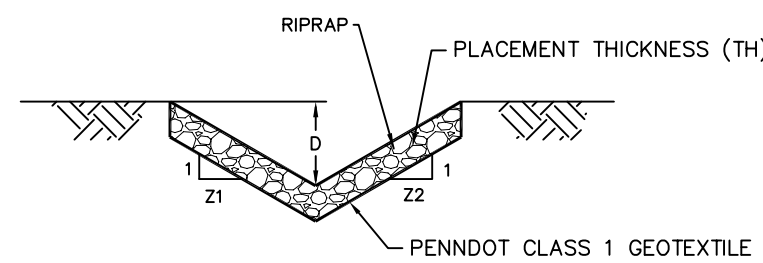
### RIPRAP APRON AT PIPE OUTLETS WITH FLARED END SECTIONS

NOT TO SCALE



### TRENCH RESTORATION FOR LAWN AREAS

NOT TO SCALE



CHANNEL CROSS-SECTION

CHANNEL NO.	MIN. DEPTH D (FT)	Z1 (FT)	Z2 (FT)	R-	THICKNESS TH (IN)
RCH-01	1.0	3.0	3.0	R-5	27

### RIPRAP LINED CHANNEL

NOT TO SCALE

FORMULA AND SPECIES	% BY WEIGHT	MINIMUM %		MAX. % WEED SEED	SEEDING RATE LBS. PER 1000 SY
		PURITY	GERMINATION		
<b>FORMULA B (LAWN AREAS)</b>					80.0 TOTAL
PERENNIAL RYEGRASS MIXTURE (LOLIUM PERENNE). A COMBINATION OF IMPROVED CERTIFIED VARIETIES WITH NO ONE VARIETY EXCEEDING 50% OF THE TOTAL RYEGRASS COMPONENT.	20	97	90	0.10	16.0
CREeping RED FESCUE OR CHEWINGS FESCUE (FESTUCA RUBRA OR SSP COMMUTATE) (IMPROVED AND CERTIFIED)	30	97	85	0.10	24.0
KENTUCKY BLUEGRASS MIXTURE (POA PRATENSIS). A COMBINATION OF IMPROVED CERTIFIED VARIETIES WITH NO ONE VARIETY EXCEEDING 50% OF THE TOTAL BLUEGRASS COMPONENT.	50	97	80	0.15	40.0
<b>FORMULA D (BMP-01 AND BMP-02 EMBANKMENTS)</b>					50.0 TOTAL
TALL FESCUE (FESTUCA ARUNDINACEA VAR. KENTUKY 31)	60	96	85	0.10	30.0
CREeping RED FESCUE OR CHEWINGS FESCUE (FESTUCA RUBRA OR SSP COMMUTATE) (IMPROVED AND CERTIFIED)	30	97	85	0.10	15.0
ANNUAL RYEGRASS (LOLIUM MULTIFLORUM)	5	95	90	0.10	5.0

PER PUBLICATION 408, SECTION 805.3 (E), APPLY SEED AT TWICE THE RATE SPECIFIED WHEN USING BONDED FIBER MATRIX

### SOIL SUPPLEMENTS FOR 1000 SY

PULVERIZED AGRICULTURAL LIMESTONE	800 LBS
10-20-20 ANALYSIS COMMERCIAL FERTILIZER	140 LBS
38-0-0 UREAFORM FERTILIZER	50 LBS
OR 32-0-0 TO 38-0-0 SULFUR COATED UREA FERTILIZER, AS DIRECTED	50-59 LBS
OR 31-0-0 IBDU FERTILIZER	61 LBS

### SEEDING SCHEDULE

SPREAD SEEDS WHERE INDICATED AND AT THE RATES SPECIFIED IN ABOVE TABLE, OR AS OTHERWISE INDICATED. SPREAD SEEDS WITHIN THE FOLLOWING DATES, OR AS OTHERWISE INDICATED OR DIRECTED.

FORMULA B - MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 15  
FORMULA D - MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 15

SUPPLY MULCH OR PROTECTIVE BLANKETING WHEN SEEDING CANNOT BE ACCOMPLISHED IN THESE TIME FRAMES.

### MULCHING PER 1000 SY

STRAW (FORMULA B)	1200 LBS
HAY (FORMULA D)	1200 LBS
(BINDERS AND NETTING)	
BINDER OR NETTING	160 LBS OR MANUFACTURER'S RECOMMENDATION 1000 SY

### PERMANENT SEEDING FORMULAS

NOT TO SCALE

PROVIDE SUITABLE COMPOST THAT IS WELL-DECOMPOSED, STABLE, WEED-FREE, ORGANIC LEAF COMPOST. MATERIAL SHALL BE AEROBICALLY COMPOSTED AT A PADER, BUREAU OF WASTE MANAGEMENT PERMITTED SITE TEST IN ACCORDANCE WITH U.S. COMPOSTING COUNCIL TEST METHODS FOR EXAMINING OF COMPOSTING AND COMPOST (TMECC). PROVIDE COMPOST WITH THE U.S. COMPOSTING COUNCIL'S SEAL OF TESTING ASSURANCE PROGRAM (STA) CERTIFICATION AND STA PRODUCT LABEL.

FURNISH A TEST REPORT FROM A SAMPLE OF THE COMPOST TO BE PROVIDED. THE SAMPLE SHALL BE COLLECTED IN ACCORDANCE WITH THE US COMPOST COUNCIL'S TEST METHOD FOR THE EXAMINATION OF COMPOSTING AND COMPOST (TMECC). THE TESTING AND TEST REPORT SHALL BE PREPARED BY A LABORATORY MEETING THE US COMPOST COUNCIL'S SEAL OF TESTING ASSURANCE PROGRAM (STA).

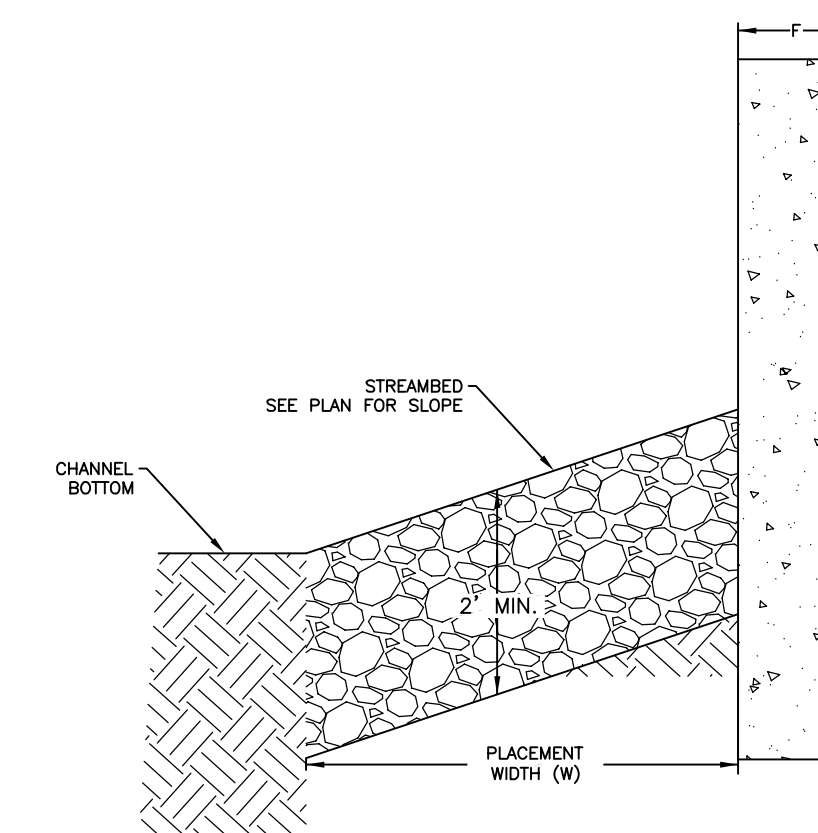
PROVIDE COMPOST MATERIAL WITH THE FOLLOWING PHYSICAL PROPERTIES (TMECC TEST METHODOLOGIES). ACCEPTANCE SHALL BE BASED UPON A SATISFACTORY TEST REPORT FROM A CERTIFIED LABORATORY, AND THE TEST REPORTS SUBMITTED TO THE TOWNSHIP ENGINEER FOR APPROVAL. ACCEPTANCE SHALL BE BASED UPON A SATISFACTORY TEST REPORT MEETING THE FOLLOWING STANDARDS:

- A. MOISTURE CONTENT, DRY MASS (WEIGHT) BASIS: 30% - 60%
- B. PH: 5.5 TO 8.0
- C. SOLUBLE SALT CONCENTRATION (ELECTRICAL CONDUCTIVITY) MAXIMUM: 1.5 DS/M
- D. MAN-MADE INERT CONTAMINANTS, DRY MASS, (WEIGHT) BASIS: LESS THAN 1%
- E. ORGANIC MATTER CONTENT, DRY-MASS (WEIGHT) BASIS: 30% TO 70%
- F. CO<sub>2</sub> EVOLUTION: < 2 MG CO<sub>2</sub>/G SOLIDS/DAY
- G. C:N RATIO: 20 TO 30
- H. SEEDING EMERGENCE: 80% - 90%
- I. METALS LESS THAN CEILING LIMITS IN EPA 503 RULE AS AMENDED. CONCENTRATIONS BELOW ARE IN MG PER KG, DRY WEIGHT MEASURE.

- ARSENIC < 75
- CADMIUM < 85
- CHROMIUM < 3,000
- COPPER < 4,300
- LEAD < 840
- MERCURY < 57
- NICKEL < 420
- SELENIUM < 100
- ZINC < 7,500

### COMPOST SPECIFICATION

NOT TO SCALE



D: NOMINAL PLACEMENT THICKNESS IN ACCORDANCE WITH PENNDOT PUBLICATION 408, SECTION 850 FOR ROCK LINING SIZE. SEE PLAN FOR ROCK SIZE.

F: FOOTING WIDTH (FT)

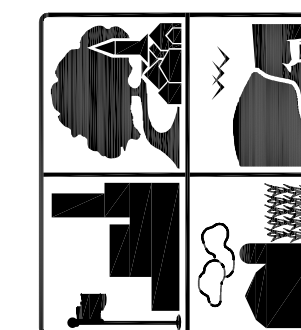
NOTES:

1. ABUTMENT IS SHOWN FOR REFERENCE ONLY. ABUTMENT TO BE DESIGNED, SEALED BY PROFESSIONAL ENGINEER, AND SUBMITTED TO TOWNSHIP FOR REVIEW PRIOR TO CONSTRUCTION.

BRIDGE NO.	RIPRAP SIZE R-	PLACEMENT WIDTH (W)	
		LEFT	RIGHT
1	R-5	6'	5'
2	R-4	8.5'	13'
3	R-4	12'	13'
4	R-4	5'	4'

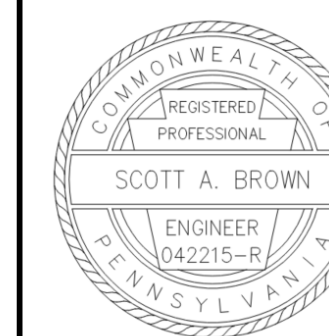
### BRIDGE ABUTMENT RIPRAP PLACEMENT GUIDE

NOT TO SCALE



**FERGUSON TOWNSHIP**  
DEPT. OF PUBLIC WORKS & ENGINEERING  
3147 RESEARCH DRIVE  
STATE COLLEGE, PA 16801  
PHONE: 814-238-4651  
FAX: 814-238-3454  
www.twp.ferguson.pa.us

**NEWELL TERESKA & MACKAY**  
ENGINEERING  
341 SCIENCE PARK ROAD  
SUITE 203  
STATE COLLEGE, PA 16803



REV.	DATE	REVISION DESCRIPTION
1	02-04-22	PER DEP. AND CCOD COMMENTS

SUBURBAN PARK-PHASE 1  
CONTRACT 2020-C4

### PCSM DETAILS

DESIGNED BY: JTN  
DRAWN BY: BC/SAB  
CHECKED BY: SAB  
DATE: 09/17/2021

### PCSM106