

NO.	REVISION	DATE
1	TOWNSHIP COMMENTS	08/05/22
2		
3		
4		
5		

R. J. FISHER & ASSOCIATES, INC.
 SITE PLANNING & CIVIL ENGINEERING & LAND SURVEYS
 1546 BRIDGE STREET, NEW CUMBERLAND, PA. 17070
 PHONE: (717) 774-7534 & FAX: (717) 774-7190
 RJFISHERENGINEERING.COM



EXISTING CONDITIONS PLAN
 FOR THE
ESTATES AT MARGARET'S GROVE, PH. 2
 LOCATED IN
 SUSQUEHANNA TOWNSHIP, DAUPHIN COUNTY, PA

DRAWING ID:	220092-EXC
PROJECT:	220092
DATE:	06/10/22
SHEET:	2 OF 20

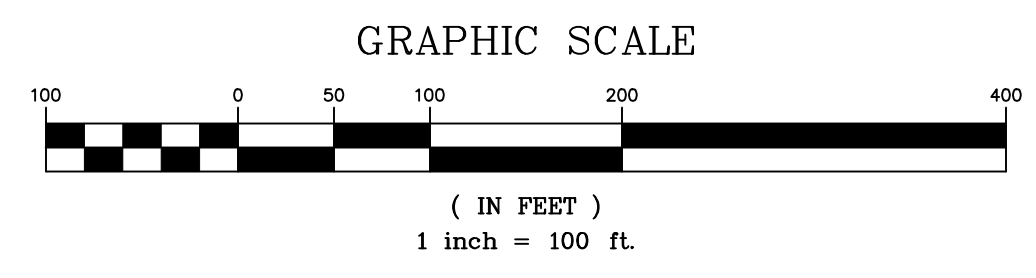
Existing Conditions Legend

	Existing Boundary Line
	Existing Right-Of-Way Line
	Existing Adjacent Property Line
	Existing Benchmark
	Existing Building Setback Line
	Existing Street Centerline
	Existing Edge Of Pavement
	Existing Curb
	Existing Paint Line
	Existing Minor Contour
	Existing Major Contour
	Existing Fence
	Existing Guideline
	Existing Mailbox
	Existing Property Line Marker
	Existing Concrete Monument
	Existing Sign
	Existing Light
	Existing Soil Boundary
	Existing Stream
	Existing Sidewalk
	Existing Treeline

	Existing Deciduous Tree
	Existing Coniferous Tree
	Existing Overhead Utility Wire, Utility Pole, Guy Pole, Guy Wire
	Existing Underground Utilities
	Existing Utility Easement
	Existing Communications Box
	Existing Underground Electric Transformer
	Existing Gas Main, Valve
	Existing Gas Easement
	Existing Gas Lateral, Service Shut-Off
	Existing Water Main, MH, Hydrant, Valve
	Existing Water Lateral, Meter, Service Shut-Off
	Existing Water Easement
	Existing Sanitary Sewer Line, MH
	Existing Sanitary Sewer Easement
	Existing Sanitary Lateral
	Existing Storm Sewer Line, Inlet, MH
	Existing Storm Sewer Easement

Existing Boundary Curve Table

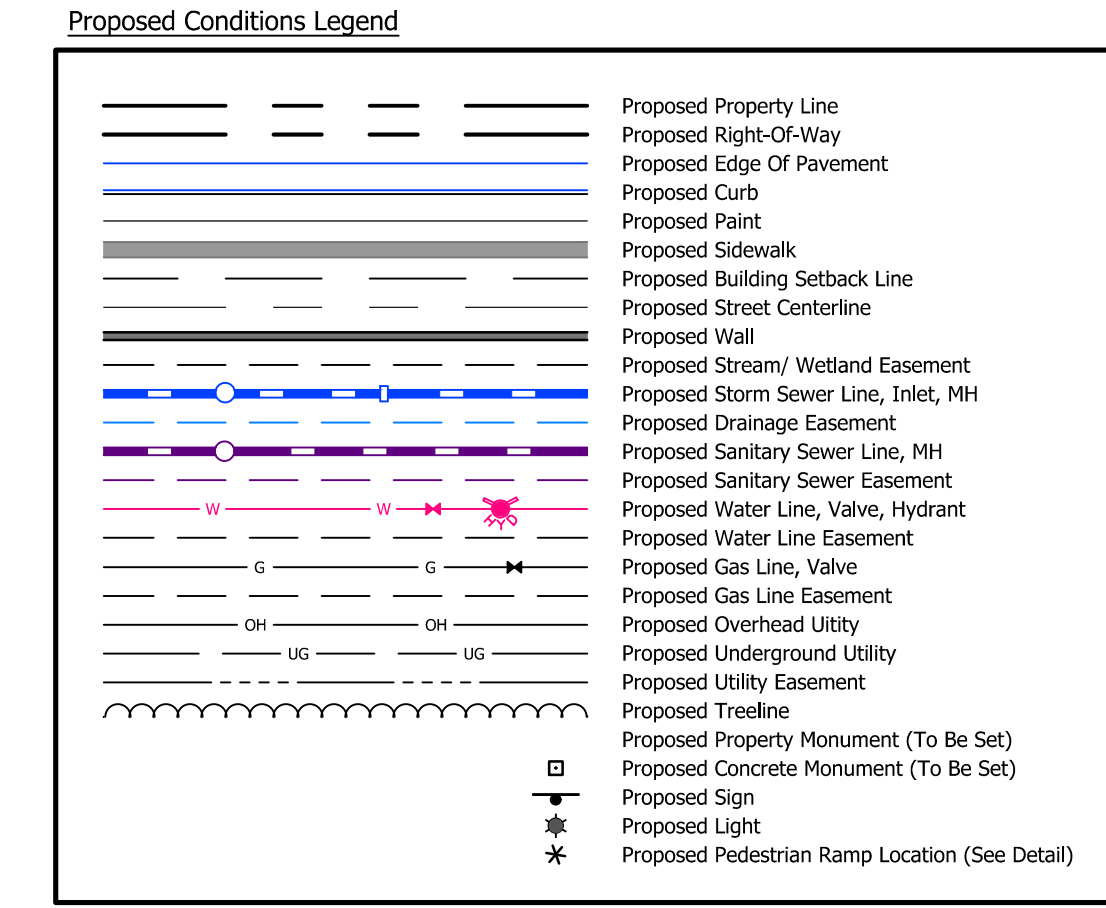
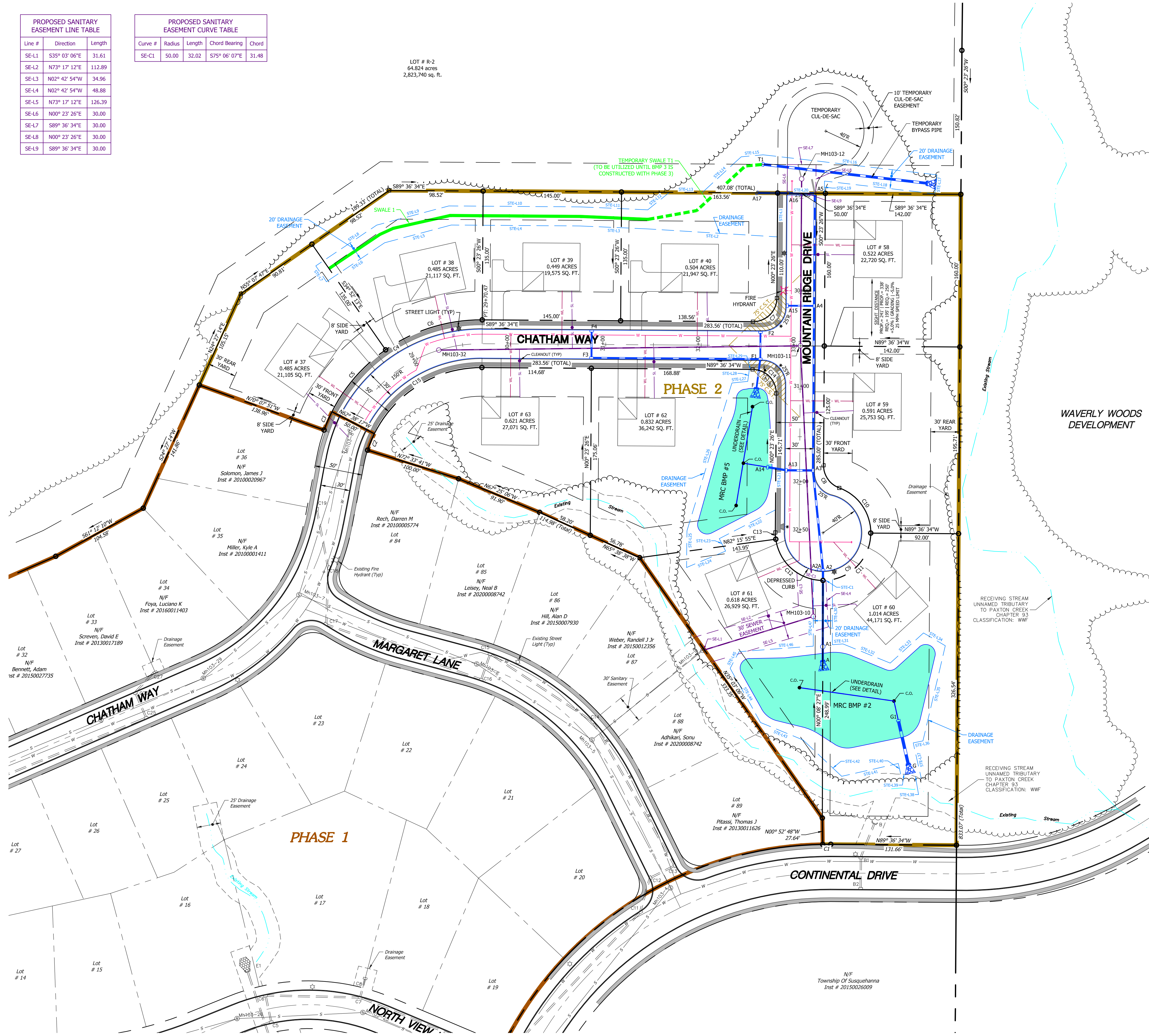
Curve #	Radius	Length	Chord Bearing	Chord
C1	380.00	8.43	S89° 45' 19"W	8.43
C2	125.00	18.65	S22° 10' 27"W	18.63
C3	175.00	20.89	S23° 17' 20"W	20.88



Line #	Direction	Length
SE-L1	S35° 03' 06"E	31.61
SE-L2	N73° 17' 12"E	112.89
SE-L3	N02° 42' 54"W	34.96
SE-L4	N02° 42' 54"W	48.88
SE-L5	N73° 17' 12"E	126.39
SE-L6	N00° 23' 26"E	30.00
SE-L7	S89° 36' 34"E	30.00
SE-L8	N00° 23' 26"E	30.00
SE-L9	S89° 36' 34"E	30.00

Curve #	Radius	Length	Chord Bearing	Chord
SE-C1	50.00	32.02	S75° 06' 07"E	31.48

LOT # R-2
64,824 acres
2,823,740 sq. ft.



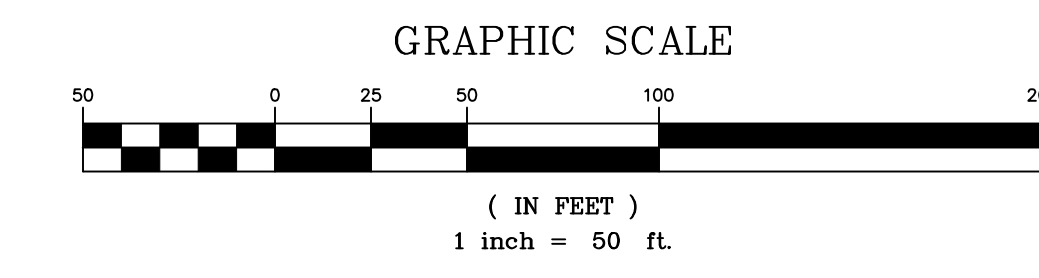
Curve #	Radius	Length	Chord Bearing	Chord
C1	380.00	8.43	S89° 45' 19"W	8.43
C2	125.00	18.65	S22° 10' 27"W	18.63
C3	175.00	20.89	S23° 17' 20"W	20.88

Curve #	Radius	Length	Chord Bearing	Chord
C4	175.00	107.70	S72° 45' 37"W	106.01
C5	175.00	86.61	S40° 55' 10"W	85.92
C6	175.00	107.70	S72° 45' 37"W	106.01
C7	25.00	39.27	N45° 23' 26"E	35.36
C8	25.00	30.77	S34° 52' 26"E	28.87
C9	50.00	78.32	N45° 15' 57"E	70.56
C10	50.00	61.55	N34° 52' 26"W	57.74
C11	50.00	78.32	N45° 15' 57"E	70.56
C12	50.00	71.67	S48° 47' 49"E	65.69
C13	50.00	7.09	S03° 40' 19"E	7.08
C14	25.00	39.27	N44° 36' 34"W	35.36
C15	125.00	139.50	S58° 25' 09"W	132.37

Line #	Direction	Length
STE-L1	N00° 23' 26"E	45.92
STE-L2	N86° 28' 59"W	136.08
STE-L3	N87° 28' 48"W	70.89
STE-L4	N89° 35' 41"W	135.01
STE-L5	S75° 07' 15"W	72.20
STE-L6	S56° 10' 26"W	73.44
STE-L7	N33° 49' 34"W	20.00
STE-L8	N56° 10' 26"E	76.78
STE-L9	N75° 07' 15"E	78.22
STE-L10	S89° 35' 41"E	138.06
STE-L11	S87° 28' 48"E	70.44
STE-L12	N51° 04' 09"E	29.16
STE-L13	S89° 36' 34"E	34.34
STE-L14	N47° 29' 13"E	55.43
STE-L15	N84° 42' 02"E	23.05
STE-L16	S83° 24' 51"E	183.32
STE-L17	S06° 35' 09"W	20.00
STE-L18	S83° 24' 51"E	116.25
STE-L19	S00° 23' 26"W	12.90
STE-L20	S89° 36' 34"E	49.00
STE-L21	S00° 23' 26"W	122.05
STE-L22	N62° 53' 08"E	66.15
STE-L23	N27° 06' 52"W	14.60
STE-L24	N67° 09' 38"E	44.46

Line #	Direction	Length
STE-L25	N00° 36' 40"E	38.42
STE-L26	S16° 54' 50"W	161.98
STE-L27	S84° 21' 33"W	16.66
STE-L28	S07° 27' 05"W	12.72
STE-L29	S89° 36' 34"E	3.44
STE-L30	N00° 08' 27"E	68.30
STE-L31	N89° 42' 31"E	11.16
STE-L32	N67° 52' 28"W	53.41
STE-L33	N47° 50' 32"E	47.12
STE-L34	S59° 28' 13"E	26.49
STE-L35	N13° 13' 01"E	102.41
STE-L36	S78° 25' 37"W	10.43
STE-L37	N12° 45' 04"W	37.78
STE-L38	N74° 49' 06"W	15.06
STE-L39	N88° 56' 29"W	6.90
STE-L40	N12° 45' 04"W	11.43
STE-L41	S77° 14' 56"W	60.81
STE-L42	S46° 45' 49"E	55.67
STE-L43	N67° 40' 25"W	48.07
STE-L44	S29° 18' 10"E	65.15
STE-L45	N28° 12' 11"E	19.76
STE-L46	N85° 42' 31"E	77.97
STE-L47	N00° 08' 27"E	69.85

Curve #	Radius	Length	Chord Bearing	Chord
STE-C1	50.00	20.14	S89° 51' 33"E	20.00



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SUBDIVISION PLAN
 FOR THE
ESTATES AT MARGARET'S GROVE, PH. 2
 LOCATED IN
 SUSQUEHANNA TOWNSHIP, DAUPHIN COUNTY, PA

DRAWING ID:	220092-SUB
PROJECT:	220092
DATE:	06/10/22
SHEET:	3 OF 20

DATE PLOTTED: 06/10/22 10:00 AM
 PLOTTER: HP DesignJet T1100PS

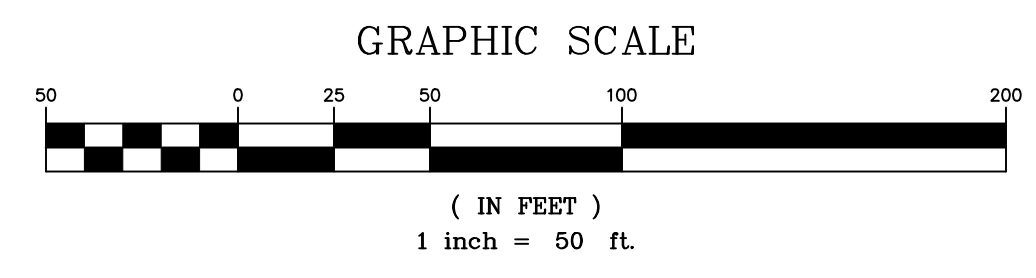


Proposed Conditions Legend

	Proposed Property Line
	Proposed Right-Of-Way
	Proposed Edge Of Pavement
	Proposed Curb
	Proposed Sidewalk
	Proposed Retaining Wall
	Proposed Sanitary Sewer Line, MH
	Proposed Storm Sewer Line, Inlet, MH
	Proposed Roof Drain
	Proposed Water Line, Hydrant
	Proposed Gas Line
	Proposed Overhead Utility
	Proposed Underground Utility
	Proposed Minor Contour
	Proposed Major Contour
	Limit of Disturbance/NPDES Boundary
	NPDES Boundary
	Permanent Matting
	Proposed Sign
	Proposed Light
	Proposed Pedestrian Ramp Location (See Detail)
	Proposed Rip-Rap Apron (See Detail)
	Proposed Spot Elevation

LOT IMPERVIOUS DATA

LOT NUMBER	IMPERVIOUS PROPOSED
37	4759
38	4771
39	4671
40	4671
58	4120
59	4120
60	4188
61	4128
62	4120
63	4120



NO.	REVISION	DATE
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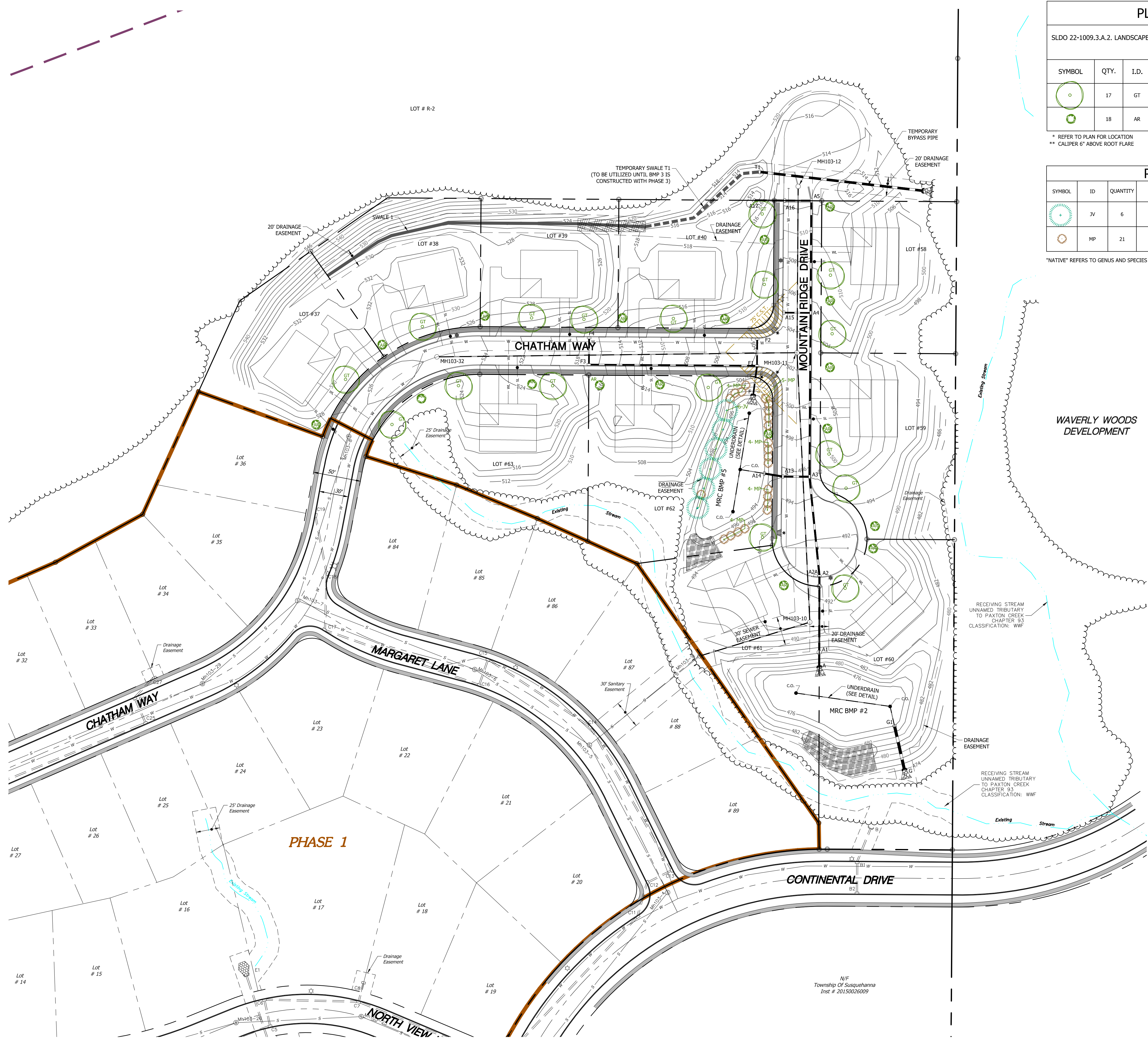
R. J. FISHER & ASSOCIATES, INC.
 SITE PLANNING & CIVIL ENGINEERING & LAND SURVEYS
 1546 BRIDGE STREET, NEW CUMBERLAND, PA. 17070
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GRADING & PCSM PLAN
 FOR THE
ESTATES AT MARGARET'S GROVE, PH. 2
 LOCATED IN
 SUSQUEHANNA TOWNSHIP, DAUPHIN COUNTY, PA

DRAWING ID:	220092-GRD
PROJECT:	220092
DATE:	06/10/22
SHEET:	4 OF 20

DATE PLOTTED: 06/10/22 10:00 AM
 PLOT FILE: \\SRV1\220092\220092.dwg
 4/9/20



PLANTING SCHEDULE FOR STREET TREES

SLDO 22-1009.3.A.2. LANDSCAPE CRITERIA: One street tree shall be provided for single-family residential uses every 50 linear feet. 855 L.F. OF PHASE 2 STREET THEREFOR REQUIRES 35 TREES (855/50' X 2 SIDES)

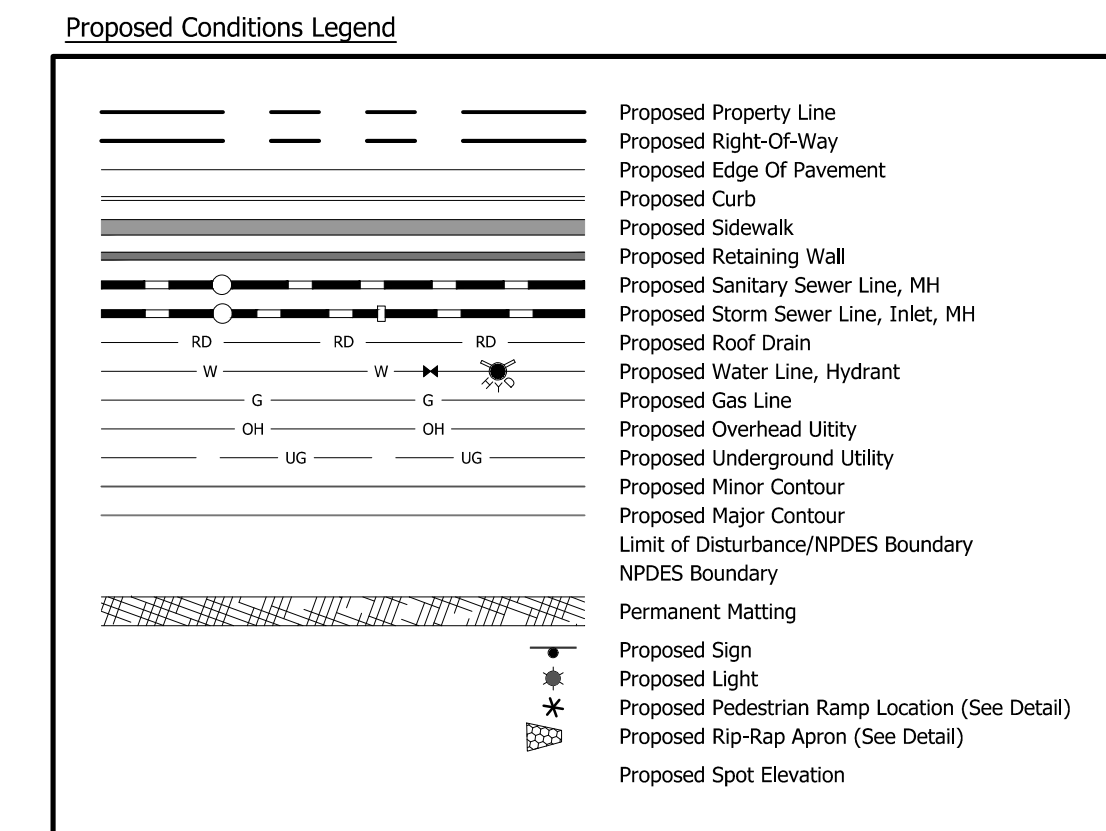
SYMBOL	QTY.	I.D.	COMMON NAME	BOTANICAL NAME	NATIVE (IF "X")	MIN. PLANTING SIZE AND CONDITIONS *	MATURE SIZE AND GENERAL TYPE	NATIVE (N)
	17	GT	IMPERIAL HONEYLOCUST	GLEDITSIA TRICANTHOS VAR. INERMIS 'IMPCOLE'	X	2.5" CALIPER **, 28" BALLED & BURLAPPED	30' W x 35' H DECIDUOUS TREE	N
	18	AR	SUPSZAM RED MAPLE	ACER RUBRUM 'SUPSZAM' OR SIMILAR NARROW PYRAMIDAL FORM	X	2.5" CALIPER **, 28" BALLED & BURLAPPED	10' W x 40' H DECIDUOUS TREE	N

* REFER TO PLAN FOR LOCATION
** CALIPER 6" ABOVE ROOT FLARE

PLANTING SCHEDULE FOR SCREEN PLANTING

SYMBOL	ID	QUANTITY	BOTANICAL NAME	COMMON NAME	PLANTING SIZE/ CONDITIONS	MATURE SIZE / GENERAL TYPE	NATIVE (N)
	JV	6	JUNIPERUS VIRGINIANA	EASTERN REDCEDAR	6H, B&B, 18" O.C.	20W, X 45H. EVERGREEN TREE	N
	MP	21	MYRICA PENNSYLVANICA	NORTHERN BAYBERRY	4H, #5 CONT.	10W, X 12H. EVERGREEN SHRUB	N

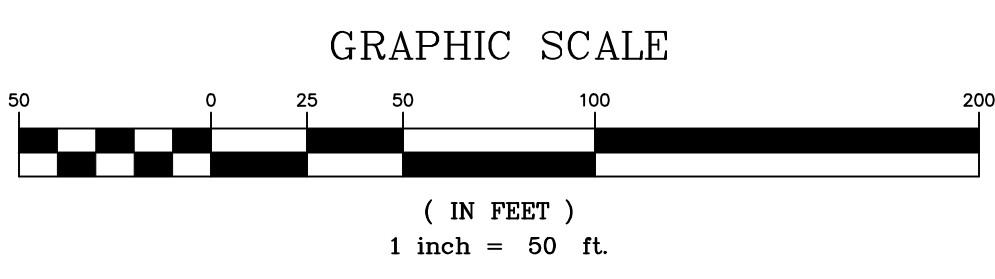
NATIVE REFERS TO GENUS AND SPECIES NOT CULTIVARS OR HYBRIDS



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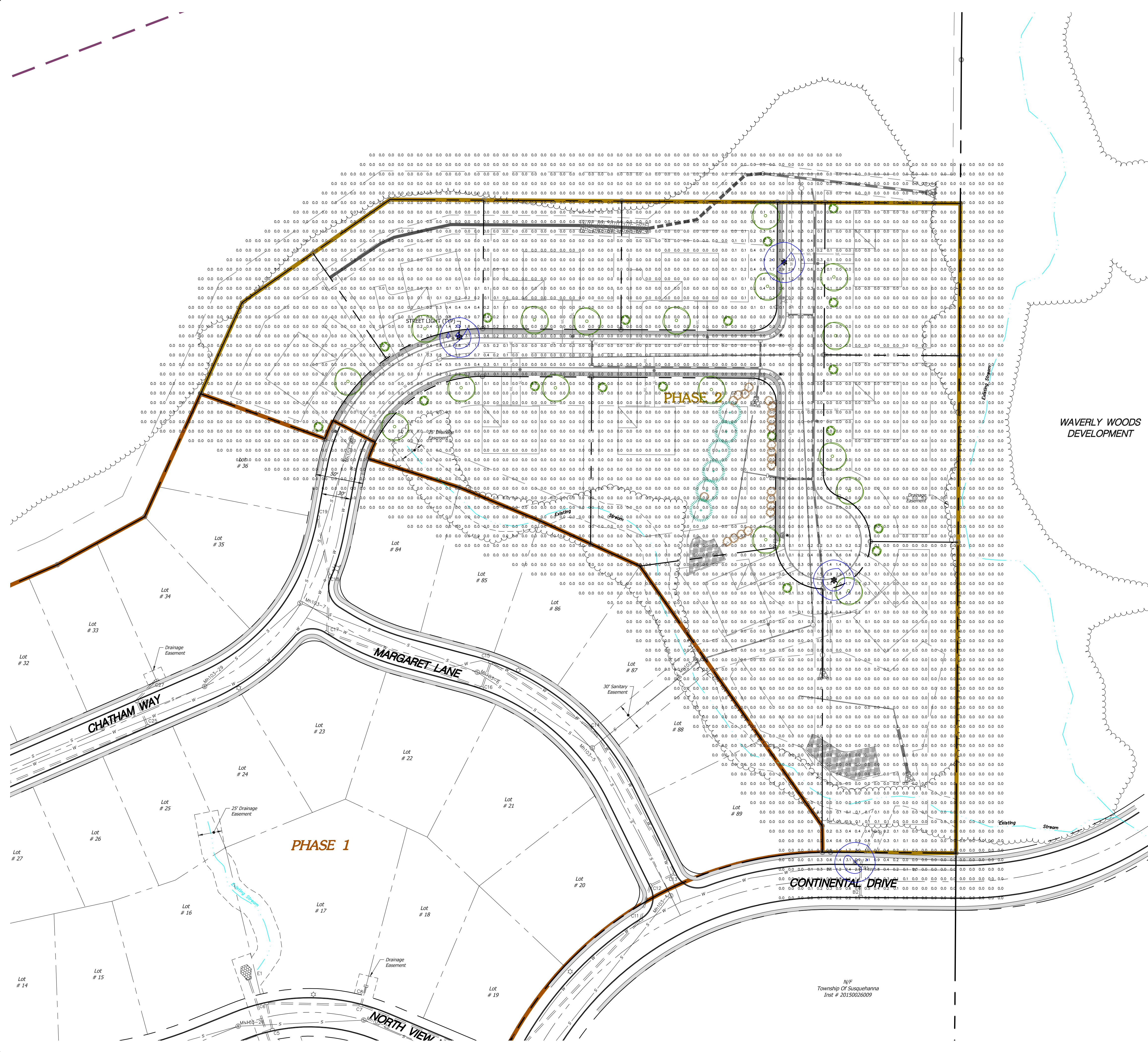
LANDSCAPE PLAN
 FOR THE
ESTATES AT MARGARET'S GROVE, PH. 2
 LOCATED IN
 TOWNSHIP OF SUSQUEHANNA, DAUPHIN COUNTY, PA



DRAWING ID:
220092-LND
 PROJECT: 220092
 DATE: 06/10/22
 SHEET:
5 OF 20

NO.	REVISION	DATE
1	TOWNSHIP COMMENTS	08/05/22
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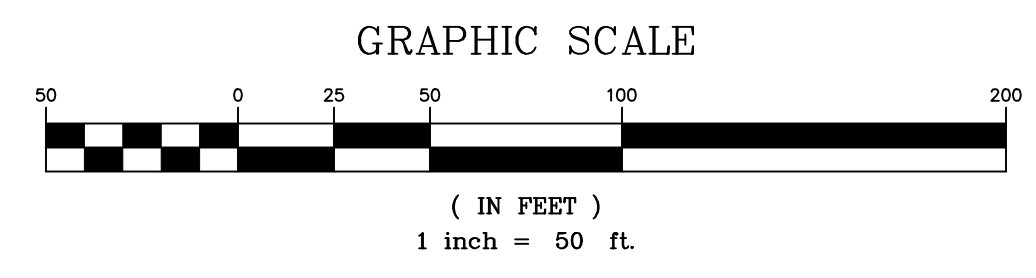


Proposed Conditions Legend

[Symbol]	Proposed Property Line
[Symbol]	Proposed Right-Of-Way
[Symbol]	Proposed Edge Of Pavement
[Symbol]	Proposed Curb
[Symbol]	Proposed Paint
[Symbol]	Proposed Sidewalk
[Symbol]	Proposed Building Setback Line
[Symbol]	Proposed Street Centerline
[Symbol]	Proposed Wall
[Symbol]	Proposed Stream/ Wetland Easement
[Symbol]	Proposed Storm Sewer Line, Inlet, MH
[Symbol]	Proposed Drainage Easement
[Symbol]	Proposed Sanitary Sewer Line, MH
[Symbol]	Proposed Sanitary Sewer Easement
[Symbol]	Proposed Water Line, Valve, Hydrant
[Symbol]	Proposed Water Line Easement
[Symbol]	Proposed Gas Line, Valve
[Symbol]	Proposed Gas Line Easement
[Symbol]	Proposed Overhead Utility
[Symbol]	Proposed Underground Utility
[Symbol]	Proposed Utility Easement
[Symbol]	Proposed Trestle
[Symbol]	Proposed Property Monument (To Be Set)
[Symbol]	Proposed Concrete Monument (To Be Set)
[Symbol]	Proposed Sign
[Symbol]	Proposed Light
[Symbol]	Proposed Pedestrian Ramp Location (See Detail)

GENERAL PHOTOMETRIC SCHEDULE

AVERAGE FOOT-CANDLES	0.05
MAXIMUM FOOT-CANDLES	3.1
MINIMUM FOOT-CANDLES	0.0
MINIMUM TO MAXIMUM FC RATIO	0.00
MAXIMUM TO MINIMUM FC RATIO	3.07 / 0.00
AVERAGE TO MINIMUM FC RATIO	0.05 / 0.00



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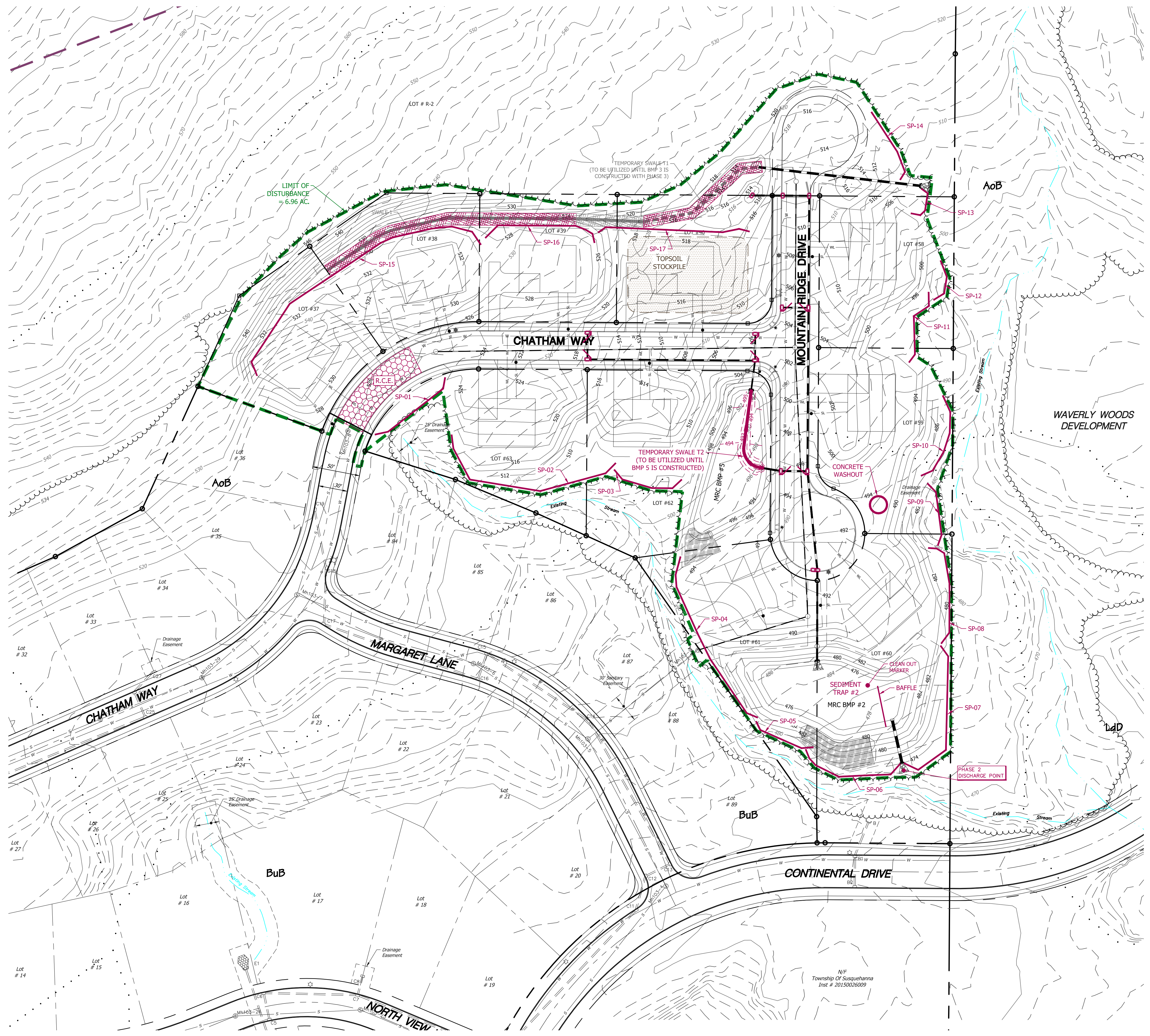


LIGHTING PLAN
 FOR THE
ESTATES AT MARGARET'S GROVE, PH. 2
 LOCATED IN
 SUSQUEHANNA TOWNSHIP, DAUPHIN COUNTY, PA

DRAWING ID:	220092-LIGHT
PROJECT:	220092
DATE:	06/10/22
SHEET:	6 OF 20

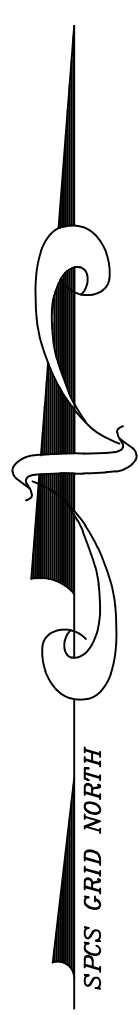
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 DATE: 06/10/22 09:20:24 AM
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SPCS GRID NORTH
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Proposed Conditions Legend

	Proposed Property Line
	Proposed Right-Of-Way
	Proposed Edge of Pavement
	Proposed Curb
	Proposed Sidewalk
	Proposed Retaining Wall
	Proposed Sanitary Sewer Line, MH
	Proposed Storm Sewer Line, Inlet, MH
	Proposed Roof Drain
	Proposed Water Line, Hydrant
	Proposed Gas Line
	Proposed Overhead Utility
	Proposed Underground Utility
	Proposed Minor Contour
	Proposed Major Contour
	Limit of Disturbance
	Drainage Area
	Permanent Matting
	Temporary Matting
	Proposed Inlet Protection, Waterbar, Inlet L.D.



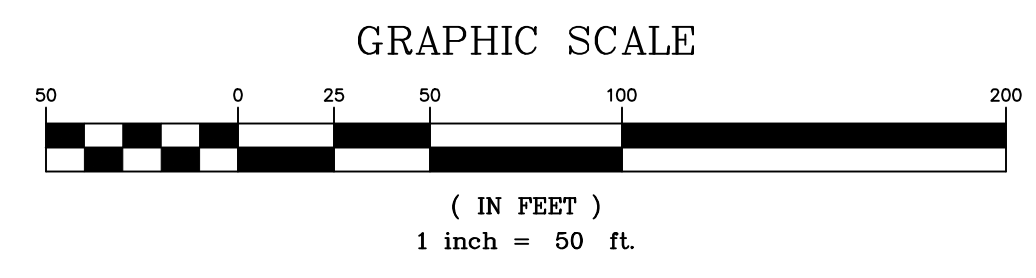
NO.	REVISION	DATE
1	TOWNSHIP COMMENTS	08/05/22
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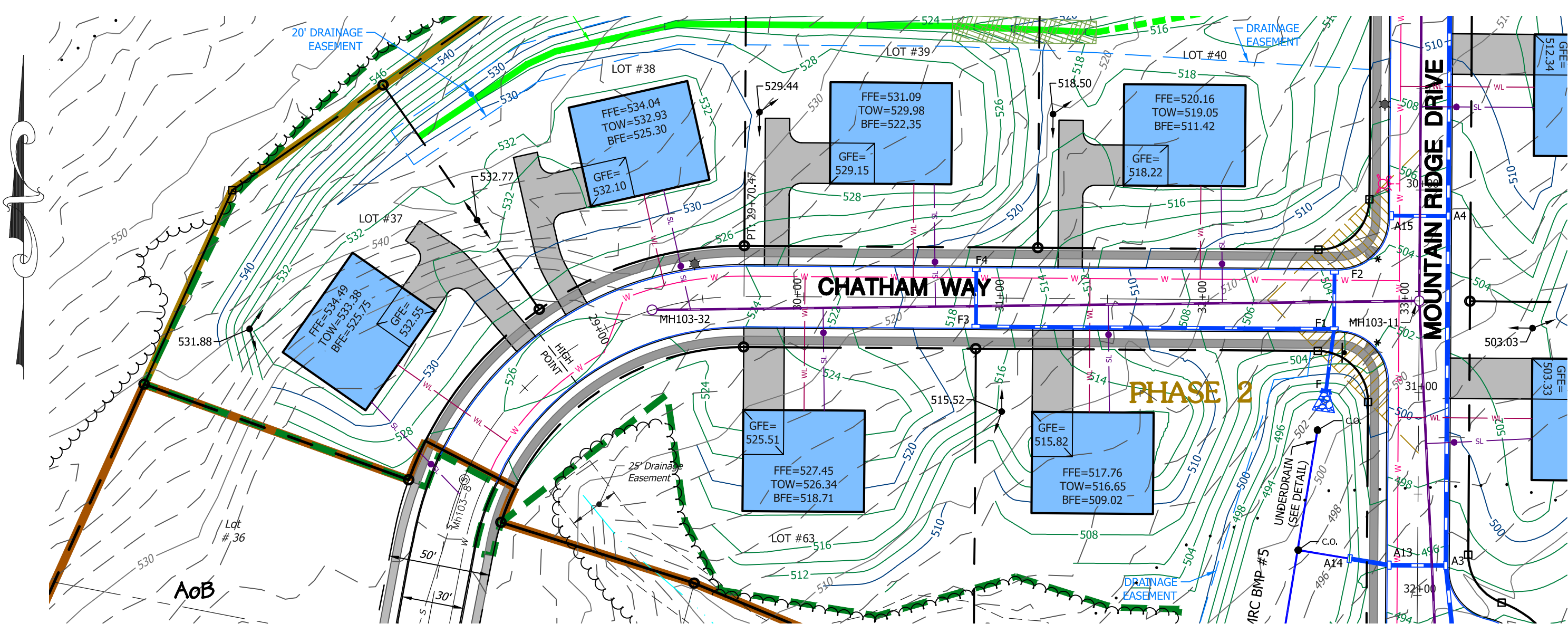


EROSION & SEDIMENT CONTROL PLAN
 FOR THE
ESTATES AT MARGARET'S GROVE, PH. 2
 LOCATED IN
 SUSQUEHANNA TOWNSHIP, DAUPHIN COUNTY, PA

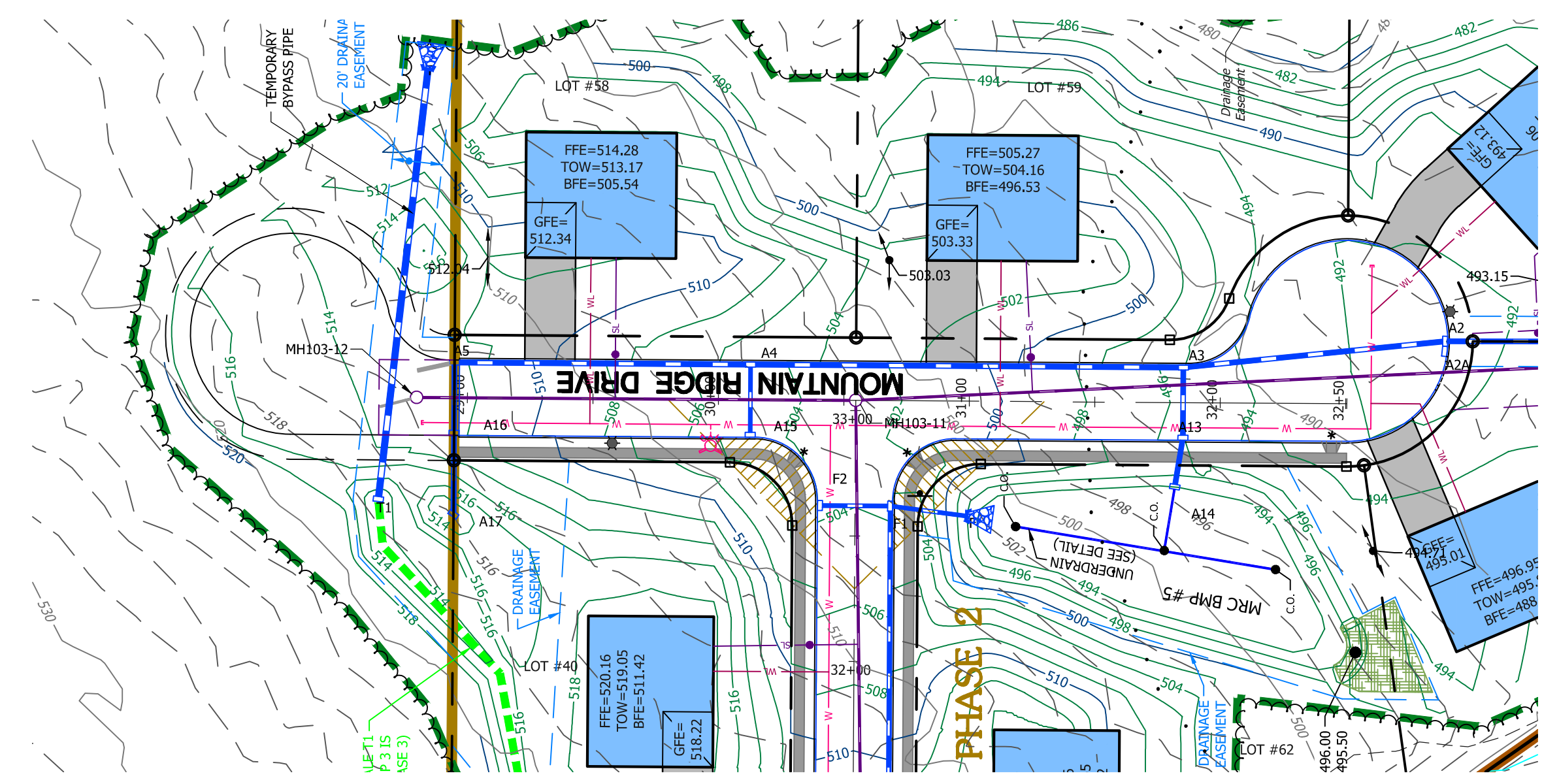
DRAWING ID:	220092-EnS
PROJECT:	220092
DATE:	06/10/22
SHEET:	7 OF 20



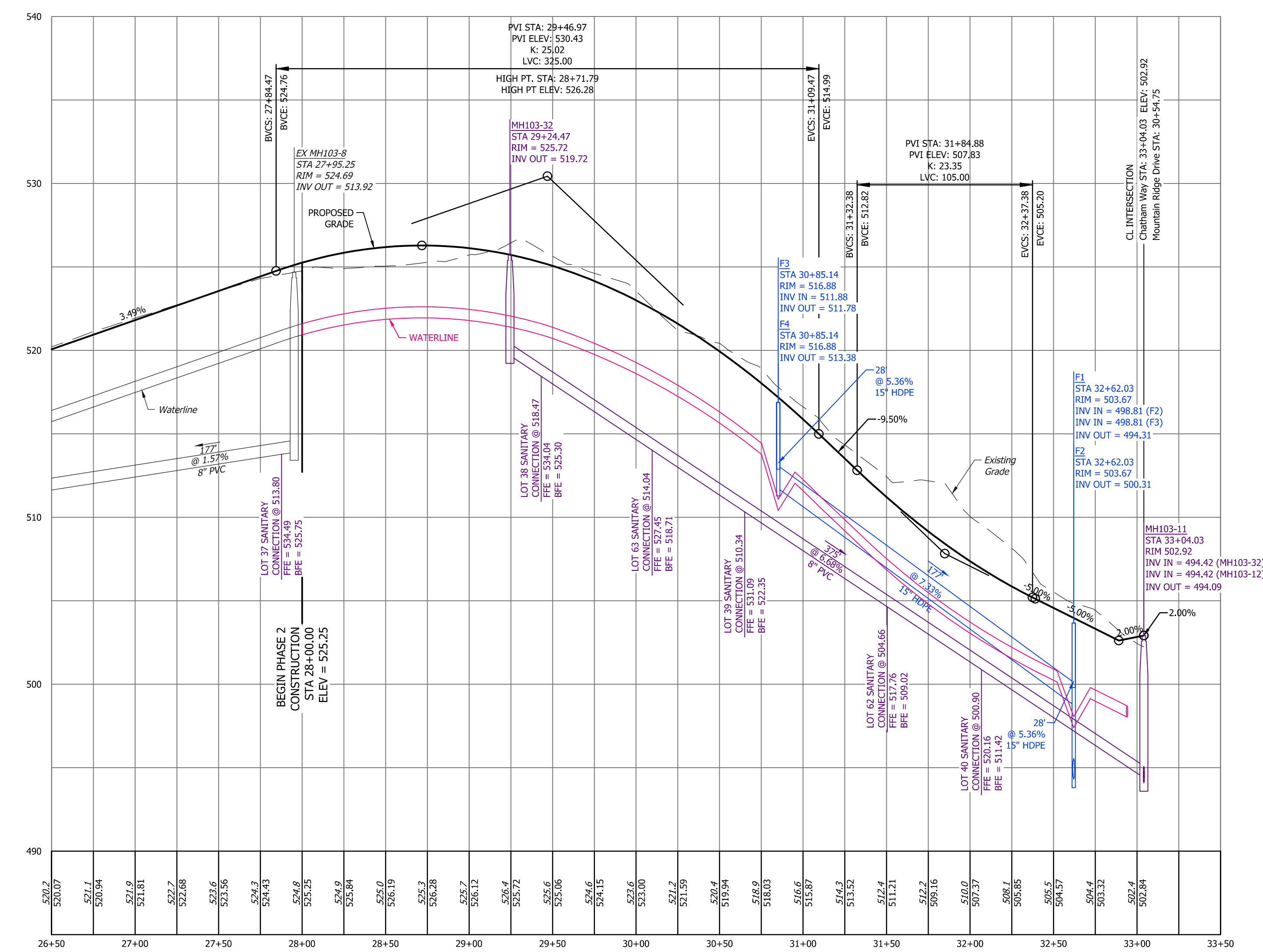
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 2: 1/4" = 100' (HORIZONTAL SCALE)
 3: 1/4" = 100' (VERTICAL SCALE)
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 5: 1/4" = 100' (VERTICAL SCALE)



Plan View Of Chatham Way
Scale: 1"=50'

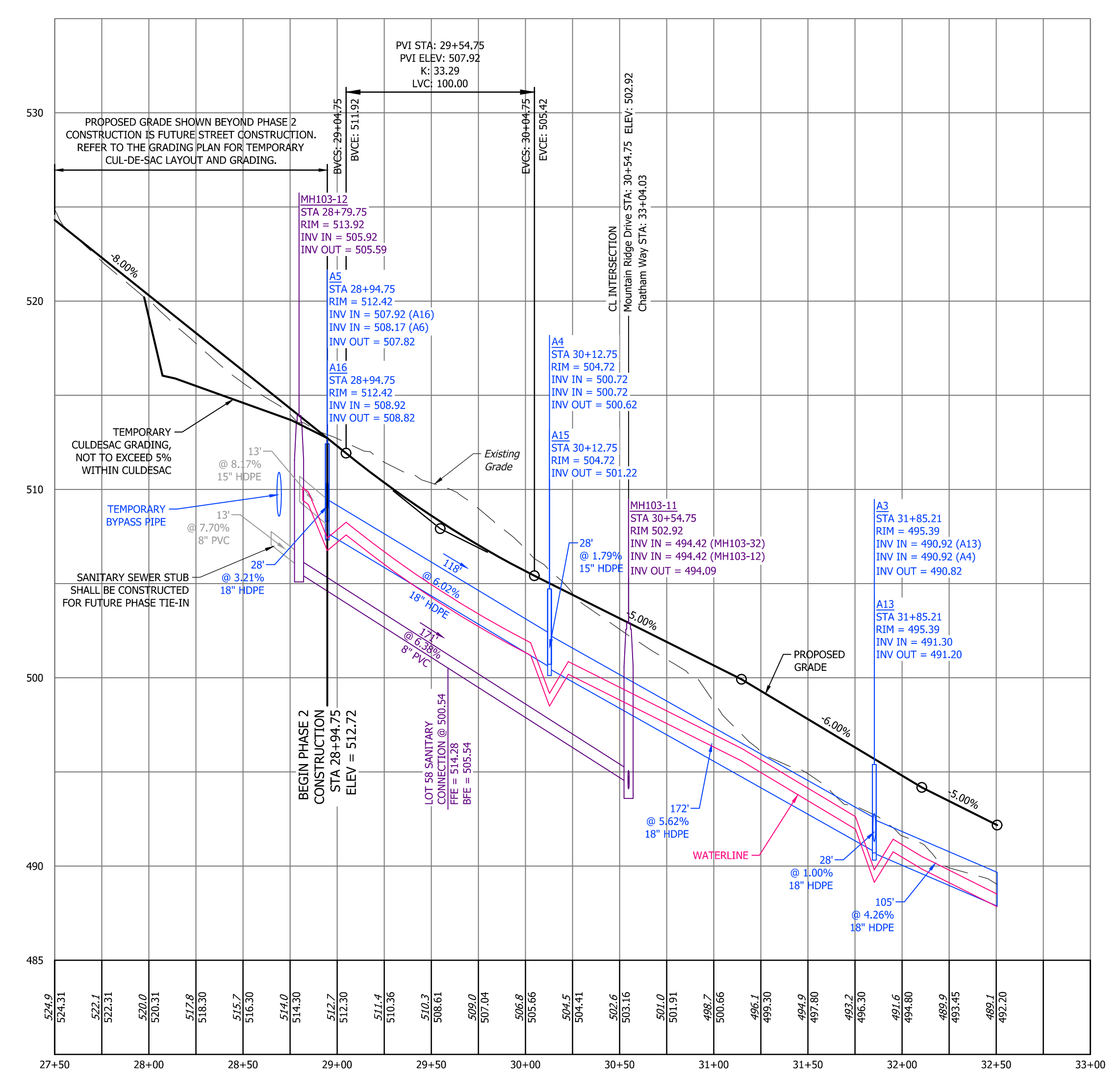
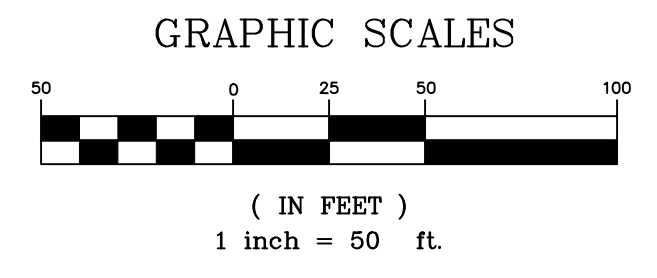


Plan View Of Mountain Ridge Drive
Scale: 1"=50'

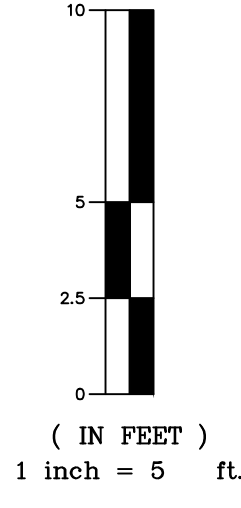


Profile View Of Chatham Way Sta: 26+50.00 - 33+50.00
Horizontal Scale: 1" = 50'
Vertical Scale: 1" = 5'

NOTE:
ALL INLETS ARE TYPE 'C' UNLESS
OTHERWISE NOTED.



Profile View Of Mountain Ridge Drive Sta: 27+50.00 - 33+00.00
Horizontal Scale: 1" = 50'
Vertical Scale: 1" = 5'



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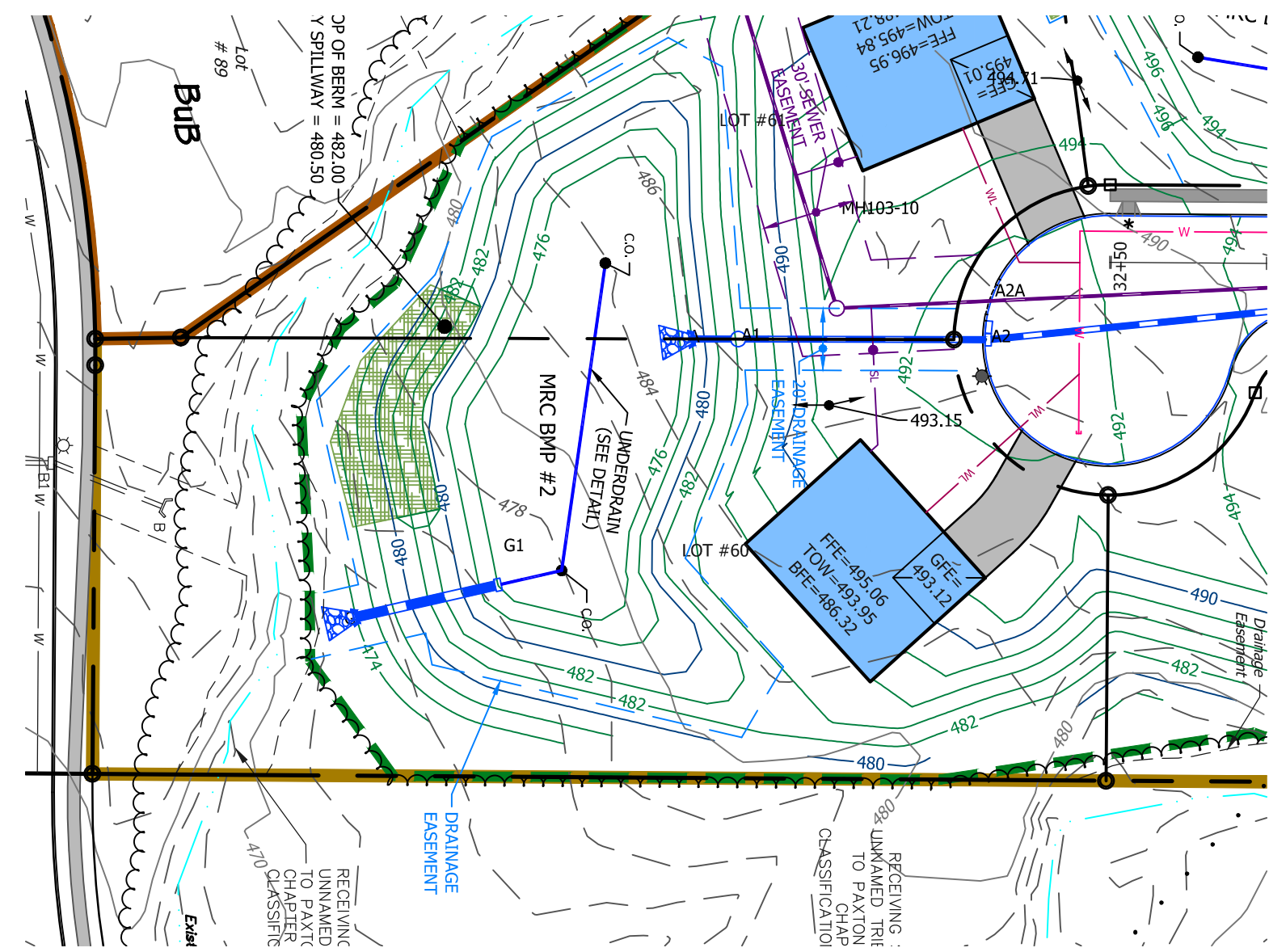
R. J. FISHER & ASSOCIATES, INC.
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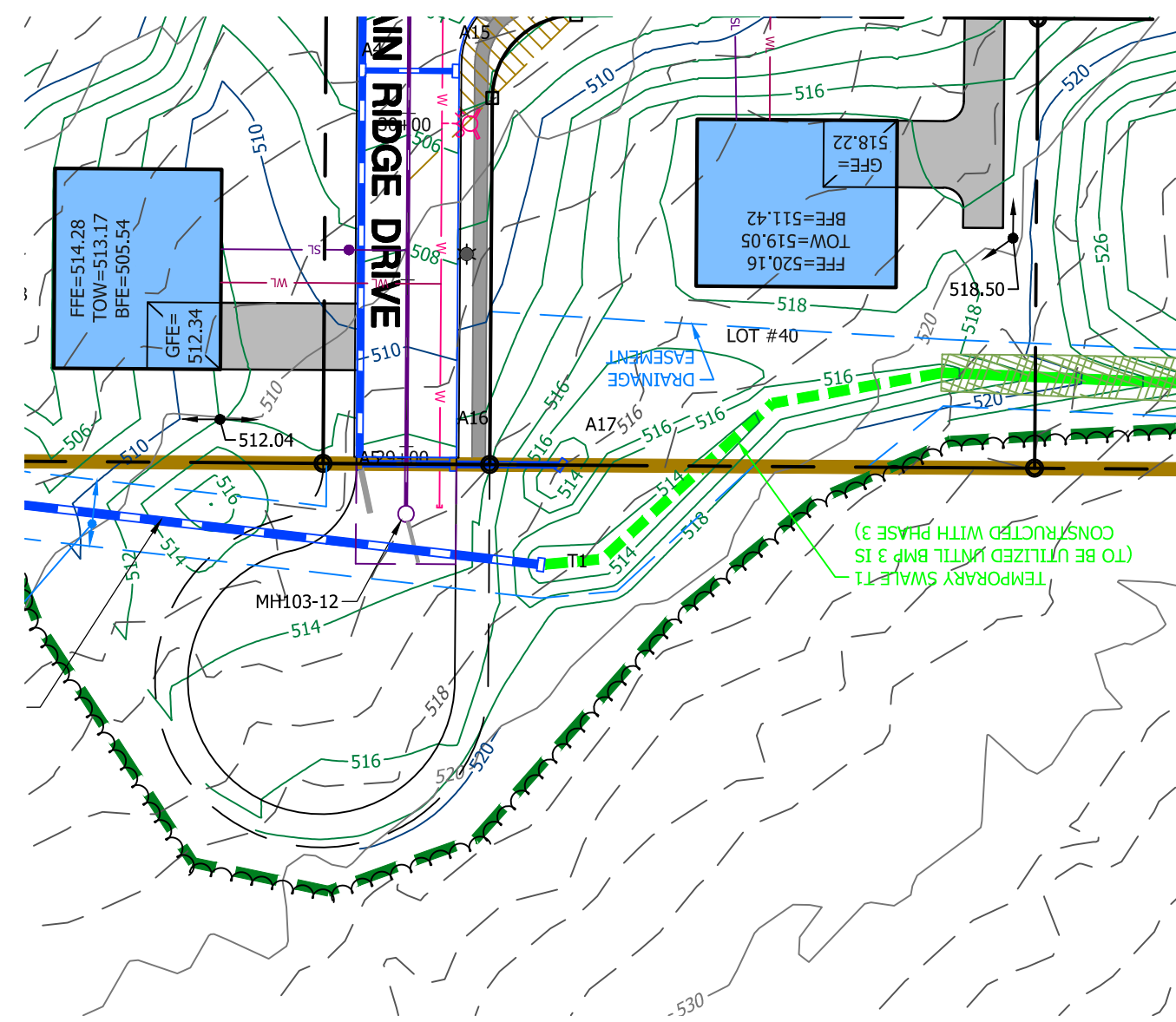
STREET PROFILES
FOR THE
ESTATES AT MARGARET'S GROVE, PH. 2
LOCATED IN
SUSQUEHANNA TOWNSHIP, DAUPHIN COUNTY, PA

DRAWING ID:	220092-PRO
PROJECT:	220092
DATE:	06/10/22
SHEET:	8 OF 20

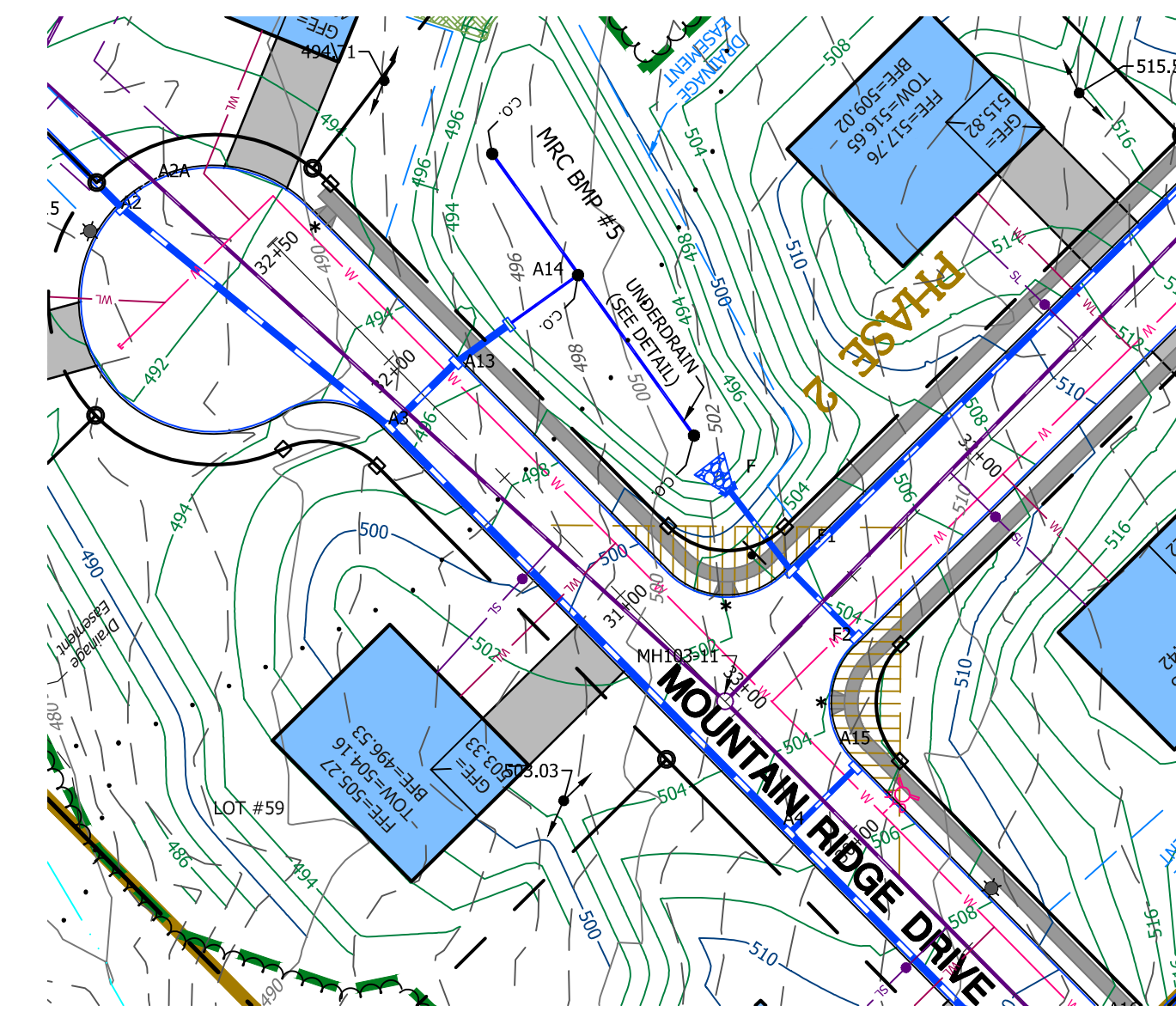
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 DATE: 06/10/22 10:48 AM
 USER: RJS



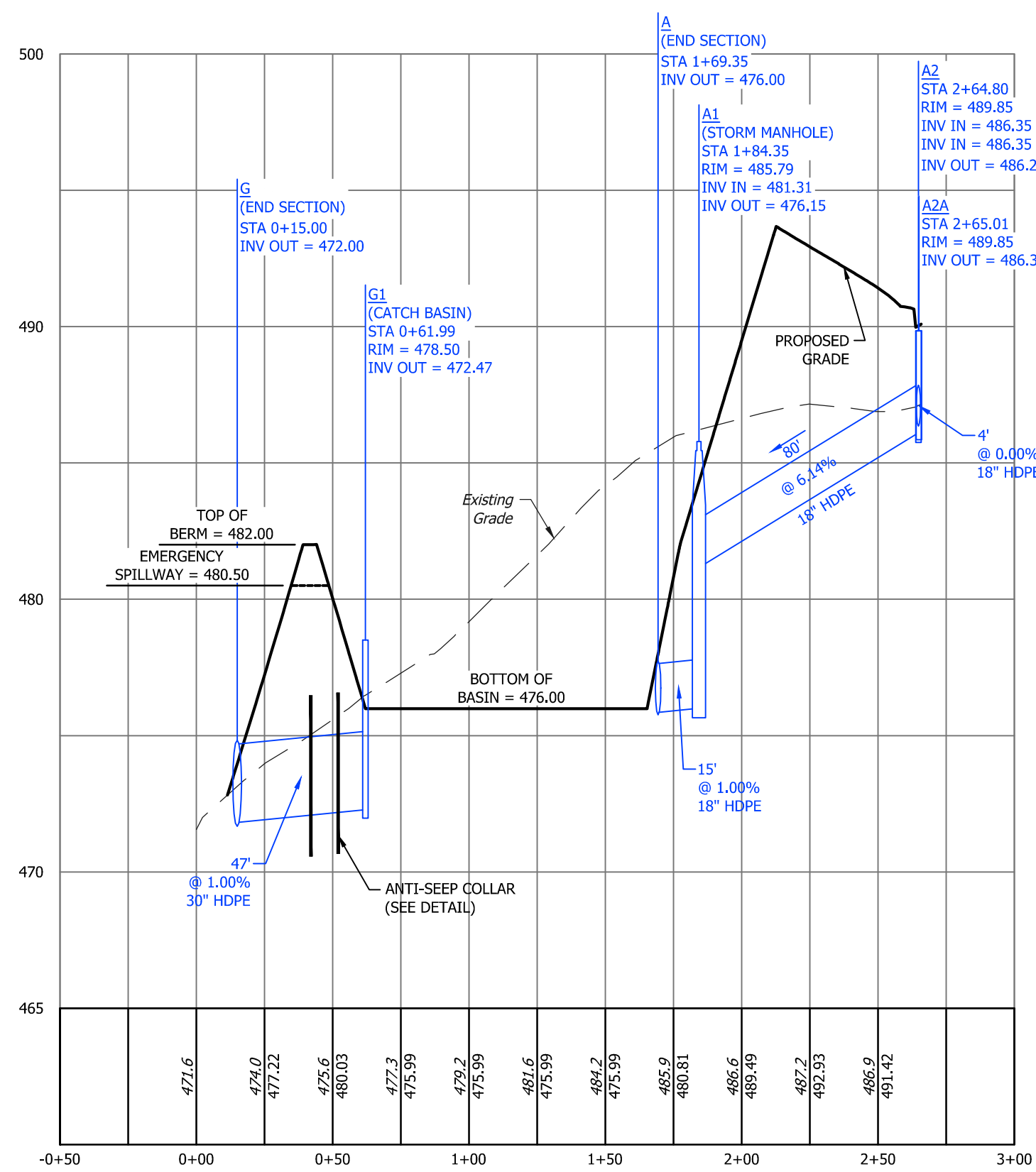
Plan View Of G To G1 & A To A2 (BMP 2)
Scale: 1"=50'



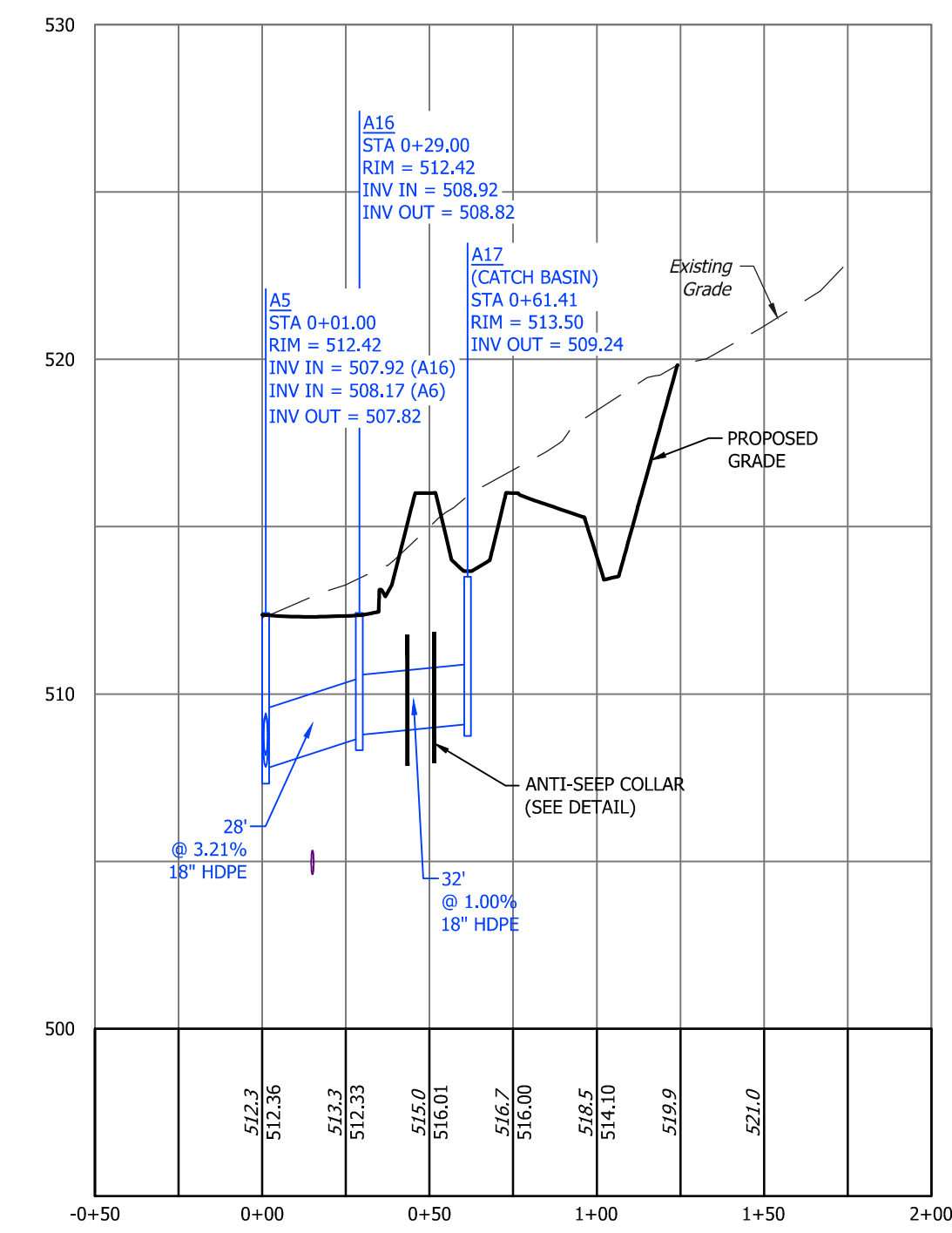
Plan View Of A5 To A17 (BMP 3)
Scale: 1"=50'



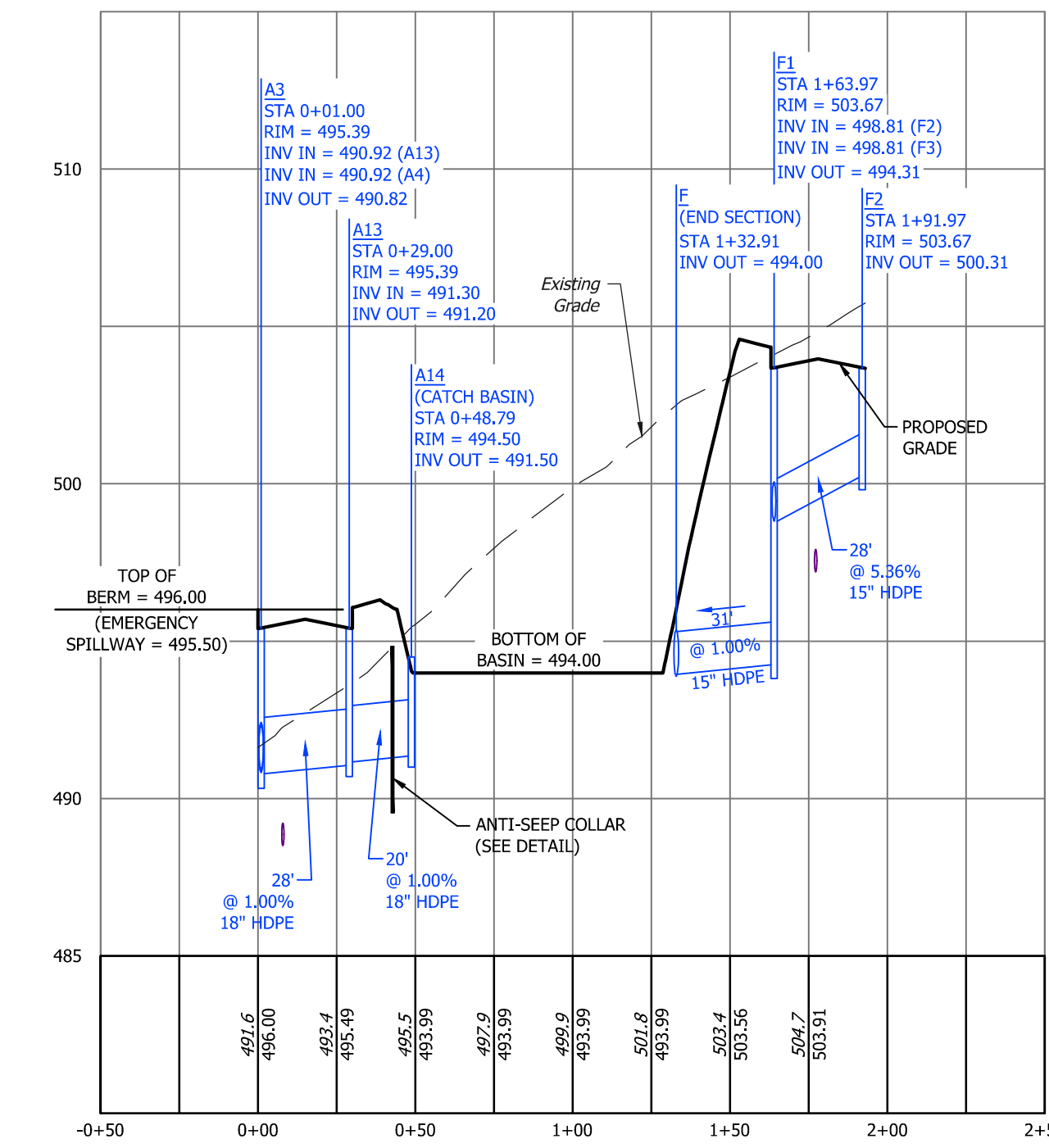
Plan View Of A3 To A14 & F To F2 (BMP 5)
Scale: 1"=50'



Profile View Of G To G1 & A To A2 (BMP 2) Sta: -0+50.00 - 3+00.00
Horizontal Scale: 1" = 50'
Vertical Scale: 1" = 5'

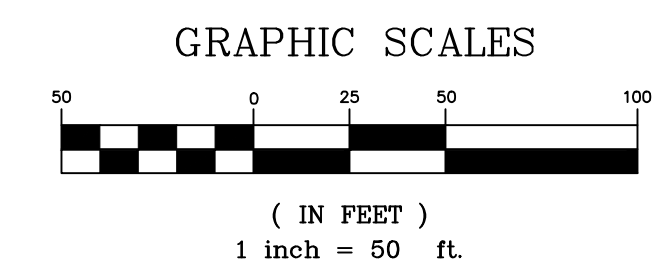


Profile View Of A5 To A17 (BMP 3) Sta: -0+50.00 - 2+00.00
Horizontal Scale: 1" = 50'
Vertical Scale: 1" = 5'



Profile View Of A3 To A14 & F To F2 (BMP 5) Sta: -0+50.00 - 2+50.00
Horizontal Scale: 1" = 50'
Vertical Scale: 1" = 5'

NOTE:
ALL INLETS ARE TYPE 'C' UNLESS
OTHERWISE NOTED.



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4		
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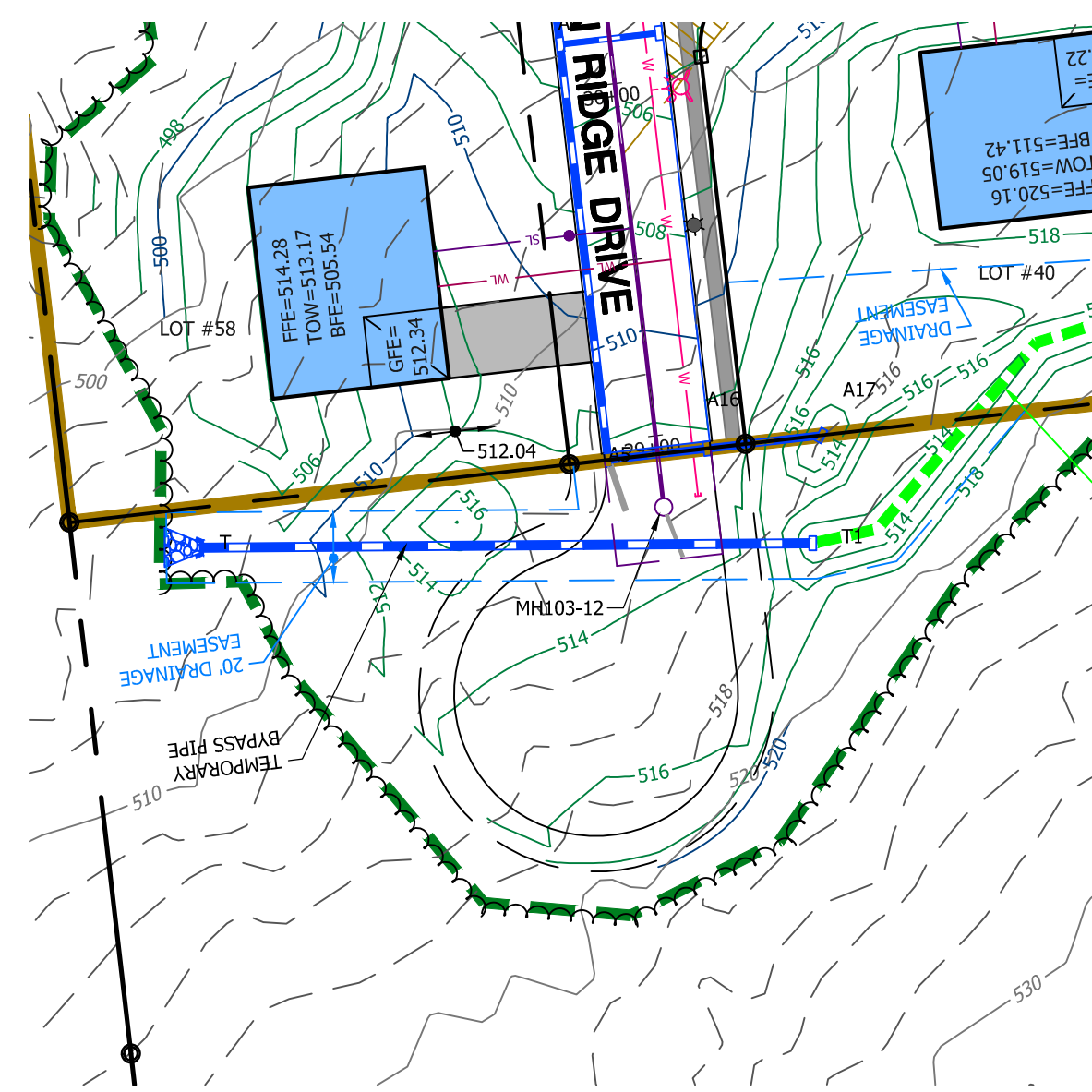
R. J. FISHER & ASSOCIATES, INC.
SITE PLANNING & CIVIL ENGINEERING & LAND SURVEYS
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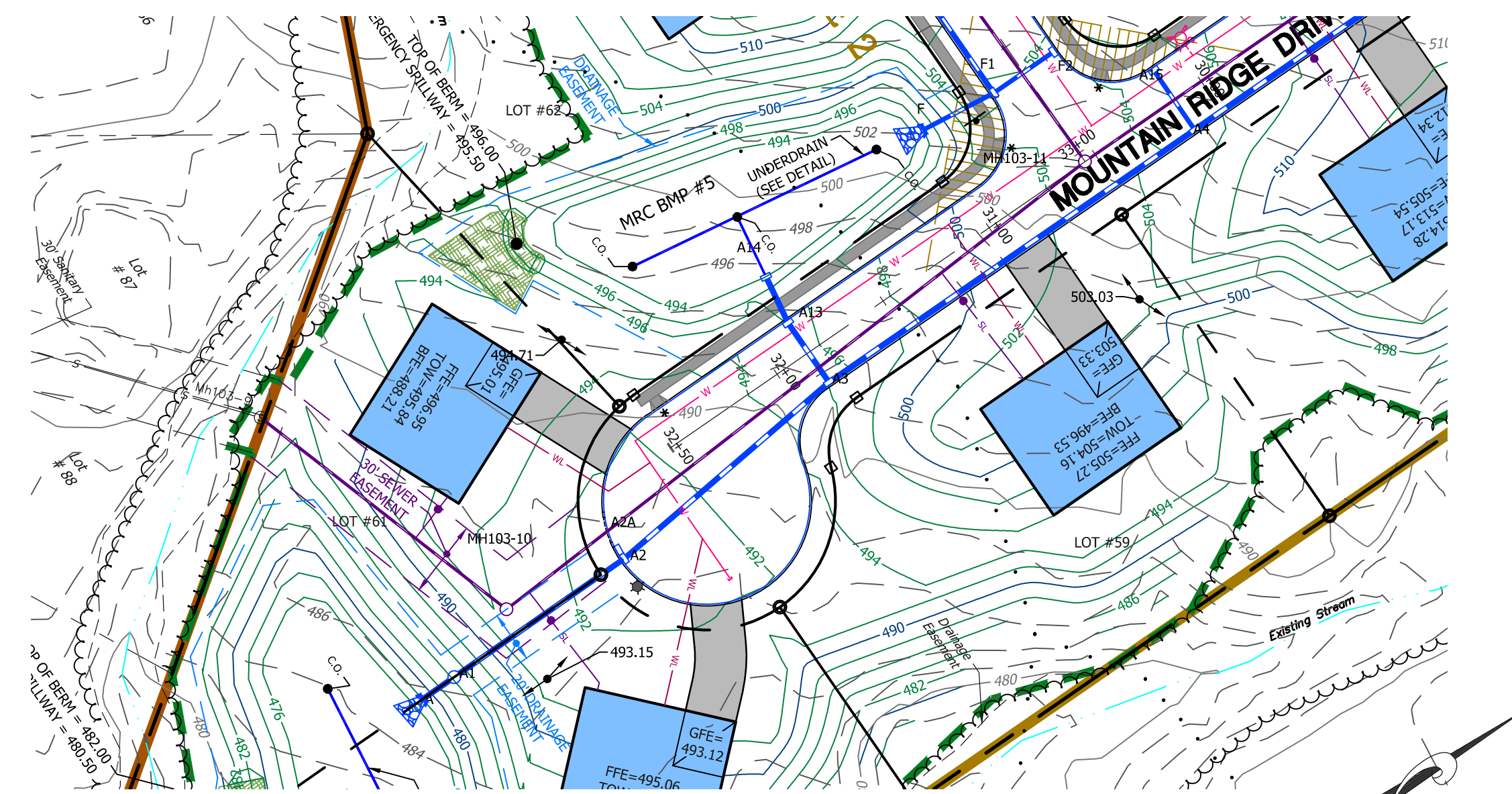
STORMWATER BMP PROFILES
FOR THE
ESTATES AT MARGARET'S GROVE, PH. 2
LOCATED IN
SUSQUEHANNA TOWNSHIP, DAUPHIN COUNTY, PA

DRAWING ID:	220092-PRO
PROJECT:	220092
DATE:	06/10/22
SHEET:	9 OF 20

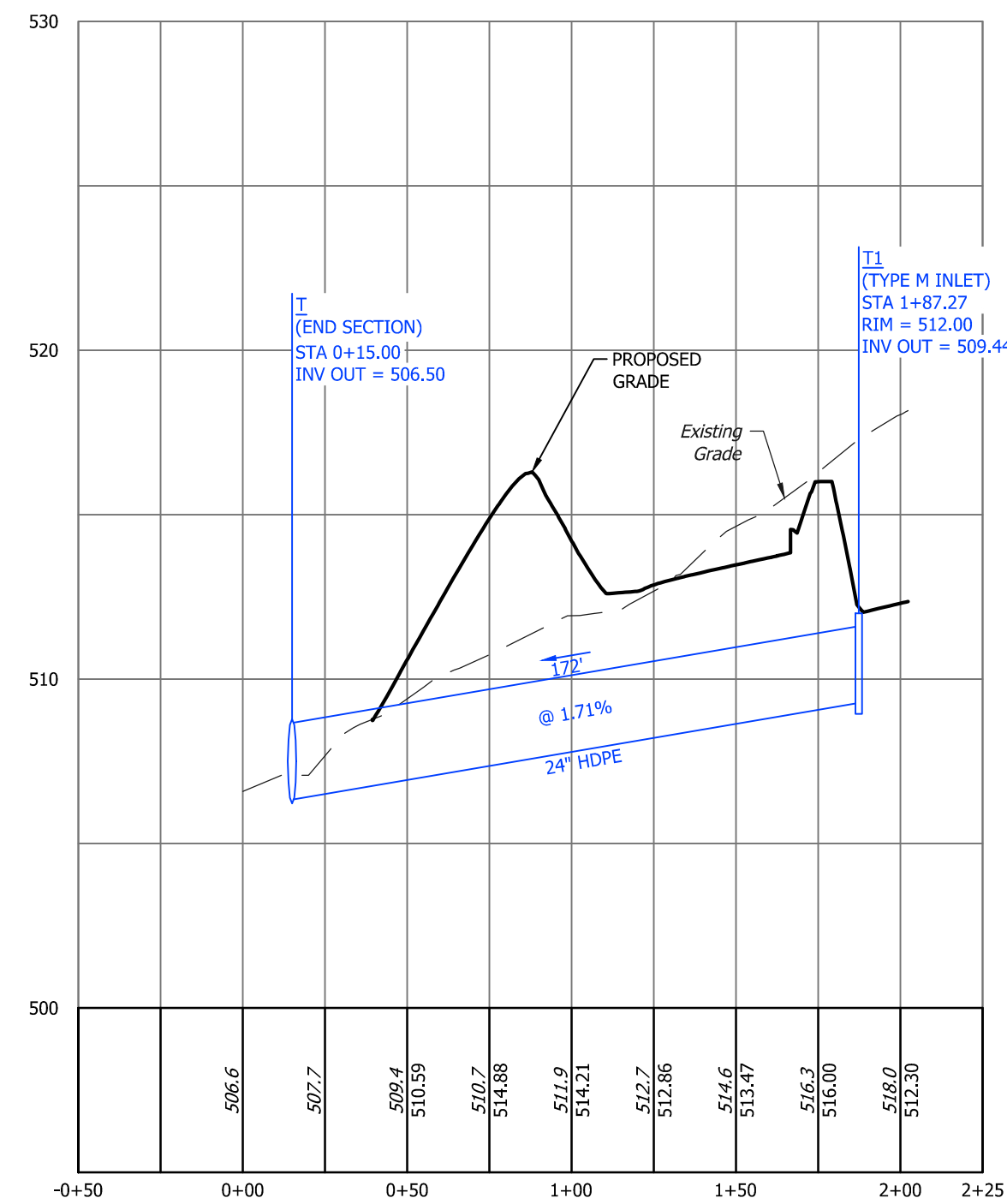
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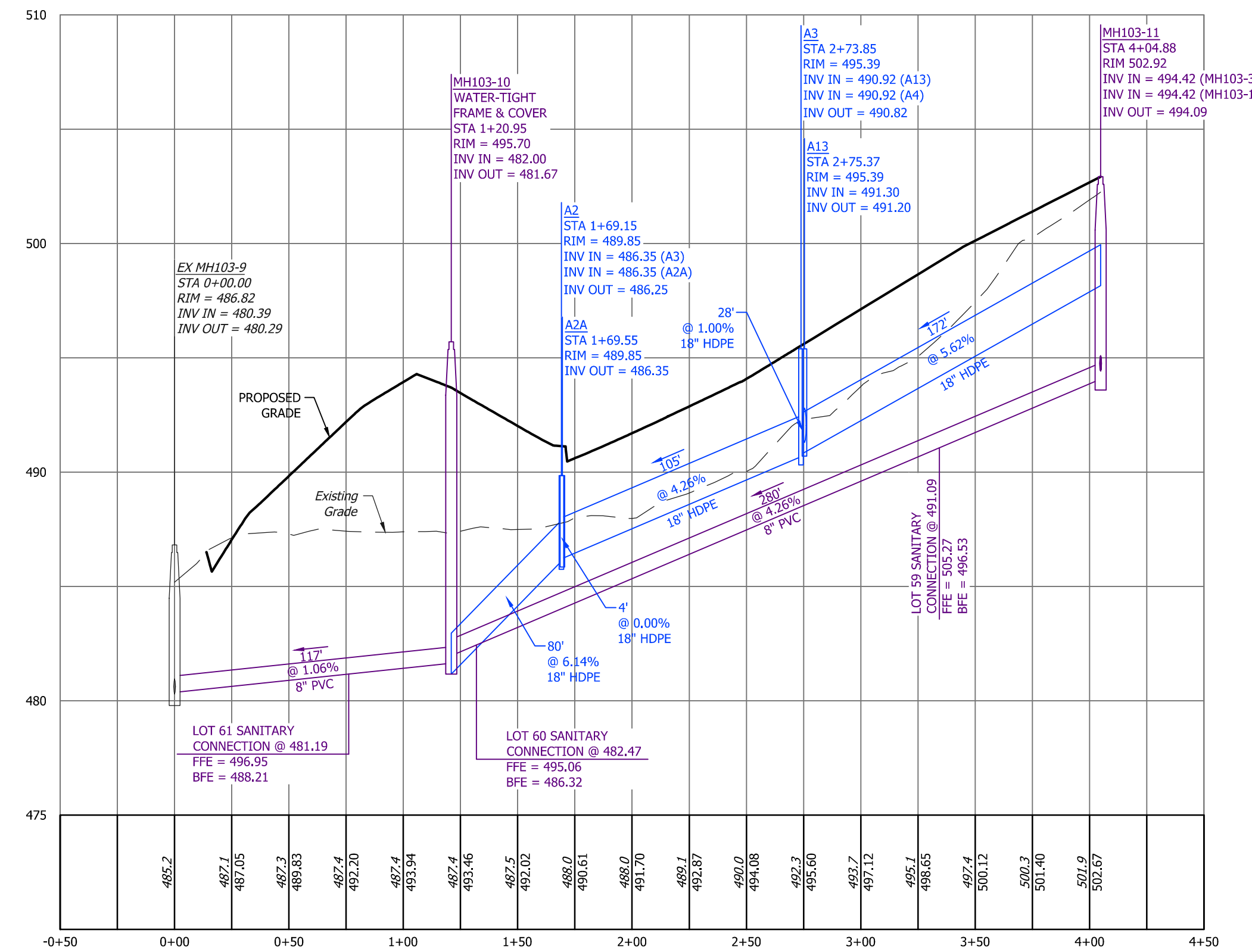
Plan View Of T To T1 (Temporary Bypass)
Scale: 1"=50'



Plan View Of Ex MH 103-9 To MH 103-11
Scale: 1"=50'

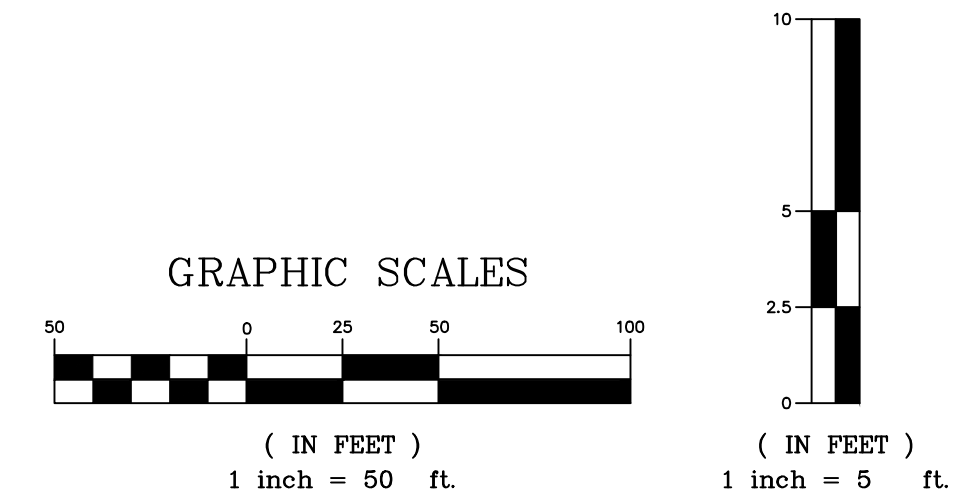


Profile View Of T To T1 (Temporary Bypass) Sta: -0+50.00 - 2+25.00
Horizontal Scale: 1" = 50'
Vertical Scale: 1" = 5'



Profile View Of Ex MH 103-9 To MH 103-11 Sta: -0+50.00 - 4+50.00
Horizontal Scale: 1" = 50'
Vertical Scale: 1" = 5'

NOTE:
ALL INLETS ARE TYPE 'C' UNLESS
OTHERWISE NOTED.



NO.	REVISION	DATE
1	TOWNSHIP COMMENTS	08/05/22
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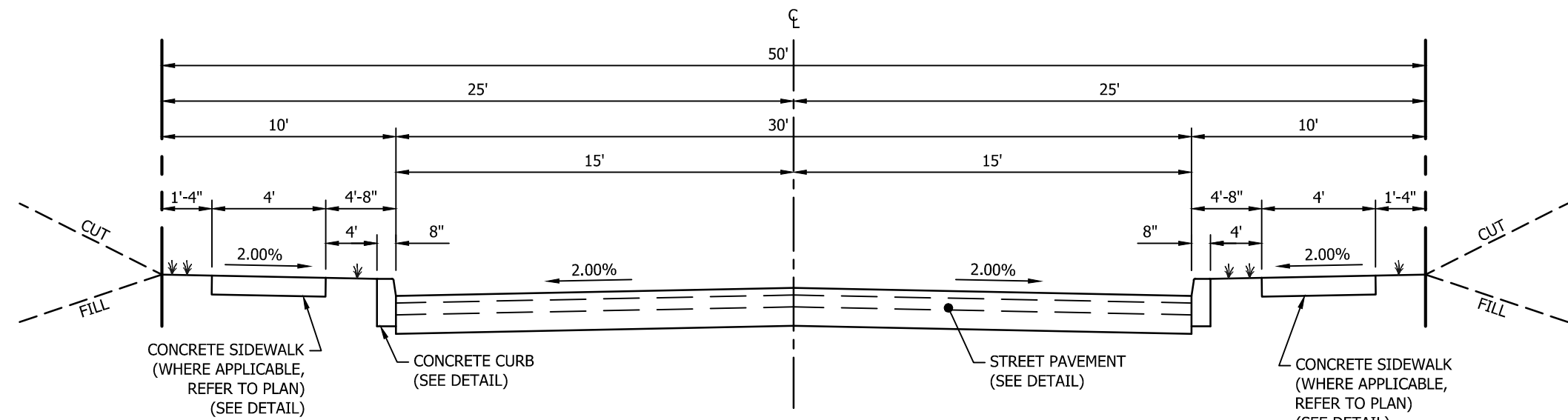
R. J. FISHER & ASSOCIATES, INC.
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STORM & SANITARY SEWER PROFILES
FOR THE
ESTATES AT MARGARET'S GROVE, PH. 2
LOCATED IN
SUSQUEHANNA TOWNSHIP, DAUPHIN COUNTY, PA

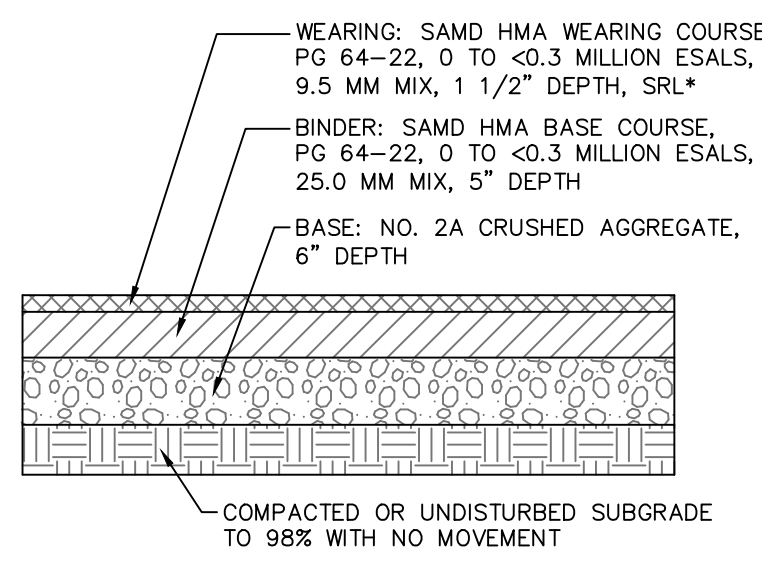
DRAWING ID:	220092-PRO
PROJECT:	220092
DATE:	06/10/22
SHEET:	10 OF 20

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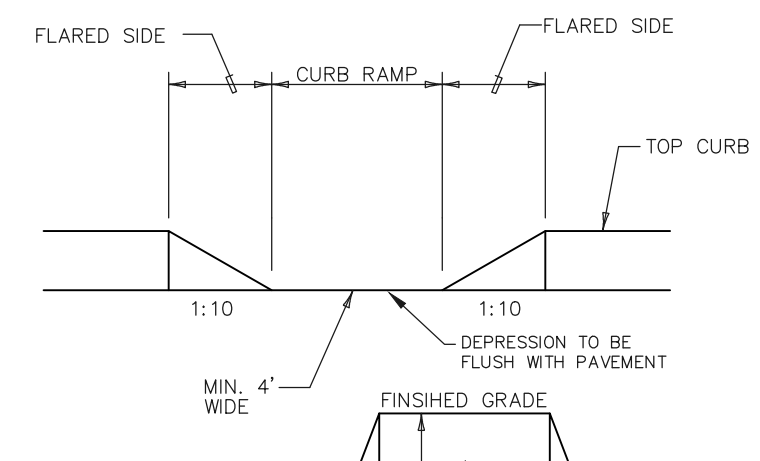
- NOTES:
1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE IN CONFORMANCE WITH SUSQUEHANNA TOWNSHIP STANDARDS.
 2. THE SLOPE OF BANKS ALONG STREETS MEASURED PERPENDICULAR TO THE STREET CENTERLINE SHALL BE NO STEEPER THAN 2 TO 1 FOR CUTS AND 3 TO 1 FOR FILLS. ALL SLOPES SHALL BE SUITABLY PLANTED WITH PERENNIAL GRASSES OR OTHER VEGETATION TO PREVENT EROSION.

(MOUNTAIN RIDGE DRIVE & CHATHAM WAY)
PROPOSED STREET SECTION
 NOT TO SCALE

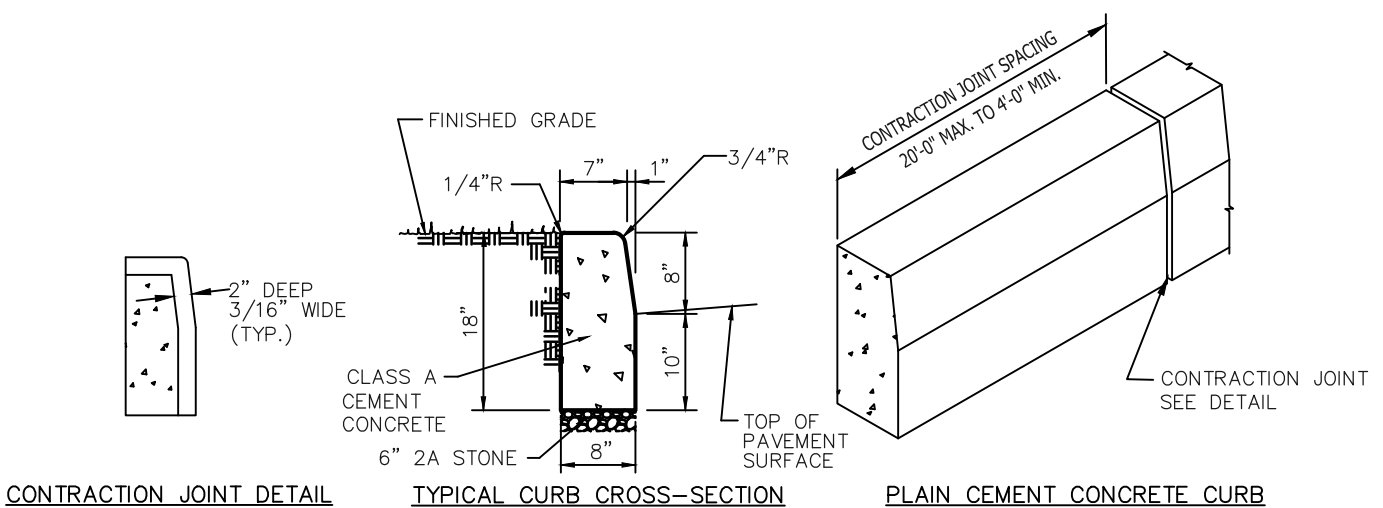


STREET / PARKING PAVING DETAIL
 NOT TO SCALE

* REFER TO TOWNSHIP ORDINANCES FOR INFORMATION ON REQUIREMENTS FOR "SKID RESISTANCE LEVEL"

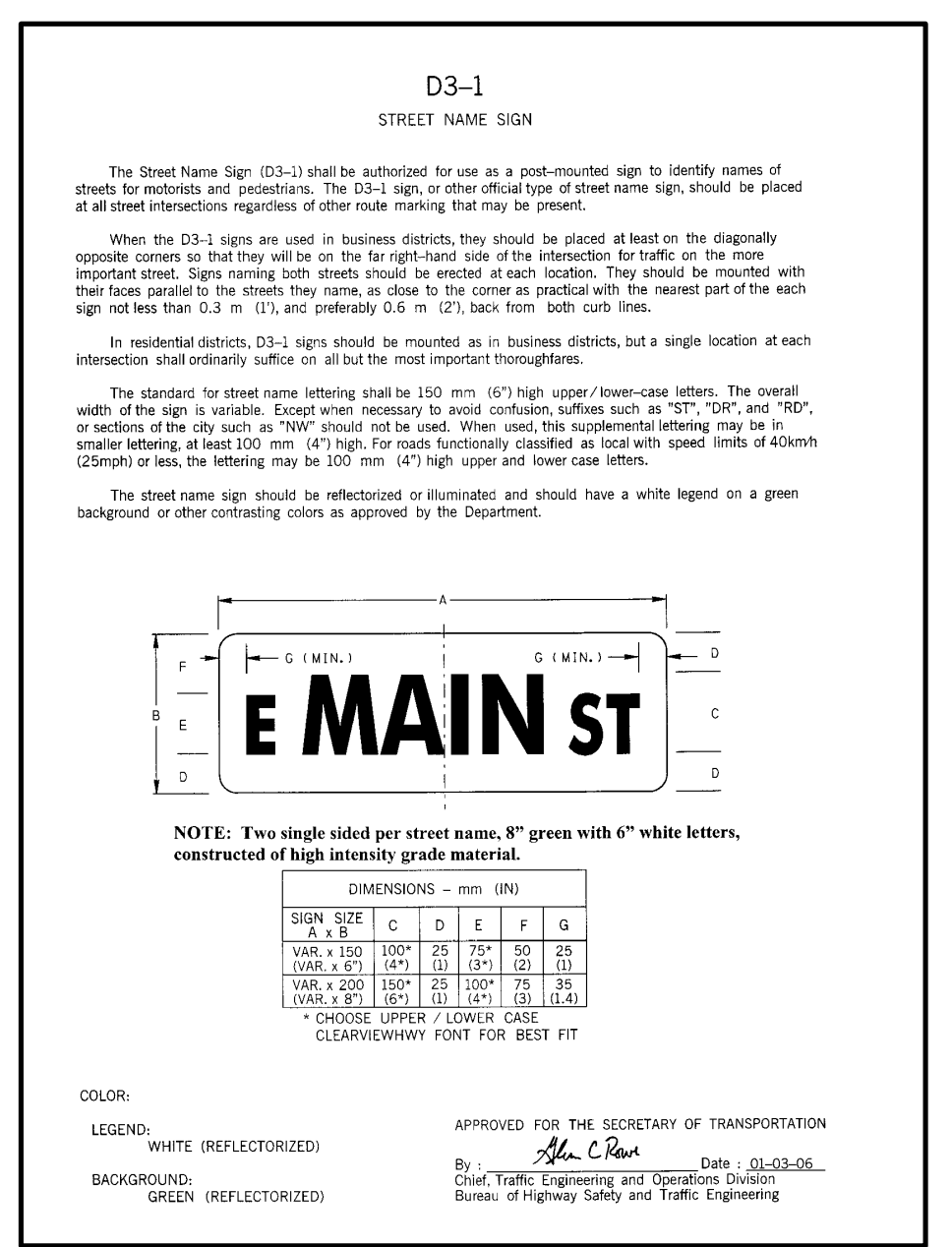


CONCRETE CURB RAMP FOR HANDICAP ACCESS
 N.T.S.

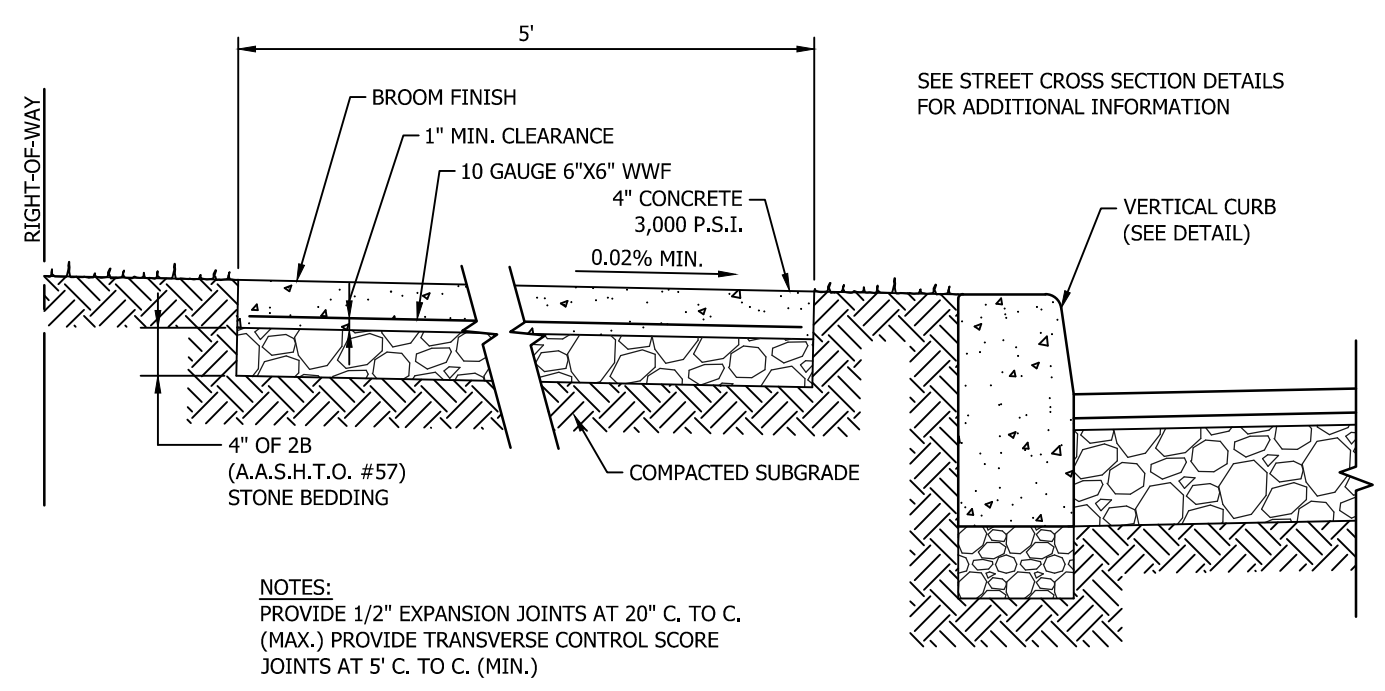


- NOTES:
1. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUB. 408, SECTION 630 FOR PLAIN CONCRETE CURB AND DEPRESSED CURB, SECTION 640 FOR PLAIN CONCRETE CURB AND PLAIN CONCRETE CURB CUTTER.
 2. SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS.
 3. PLACE 3/4-INCH PREMIXED EXPANSION JOINT FILLER MATERIAL AT STRUCTURES AND AT THE END OF THE WORK DAY CUT MATERIAL TO CONFORM TO AREA ADJACENT TO CURB OR TO CONFORM TO CROSS SECTIONAL AREA OF CURB.

8" VERTICAL CONCRETE CURB DETAIL
 NOT TO SCALE



D3-1 STREET SIGN DETAIL
 N.T.S.

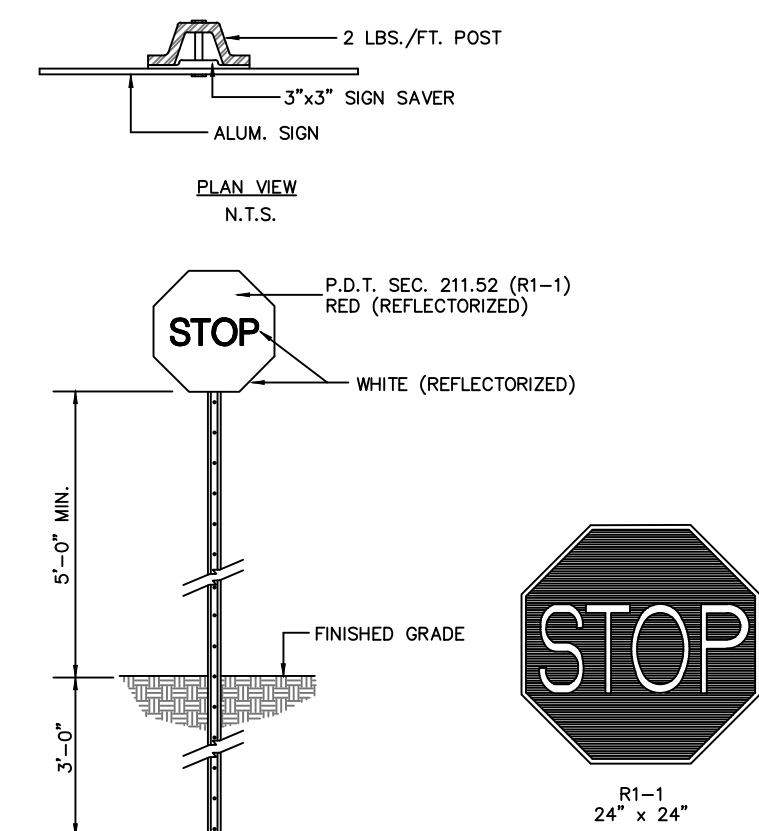


TYPICAL CONCRETE WALK DETAIL
 NOT TO SCALE

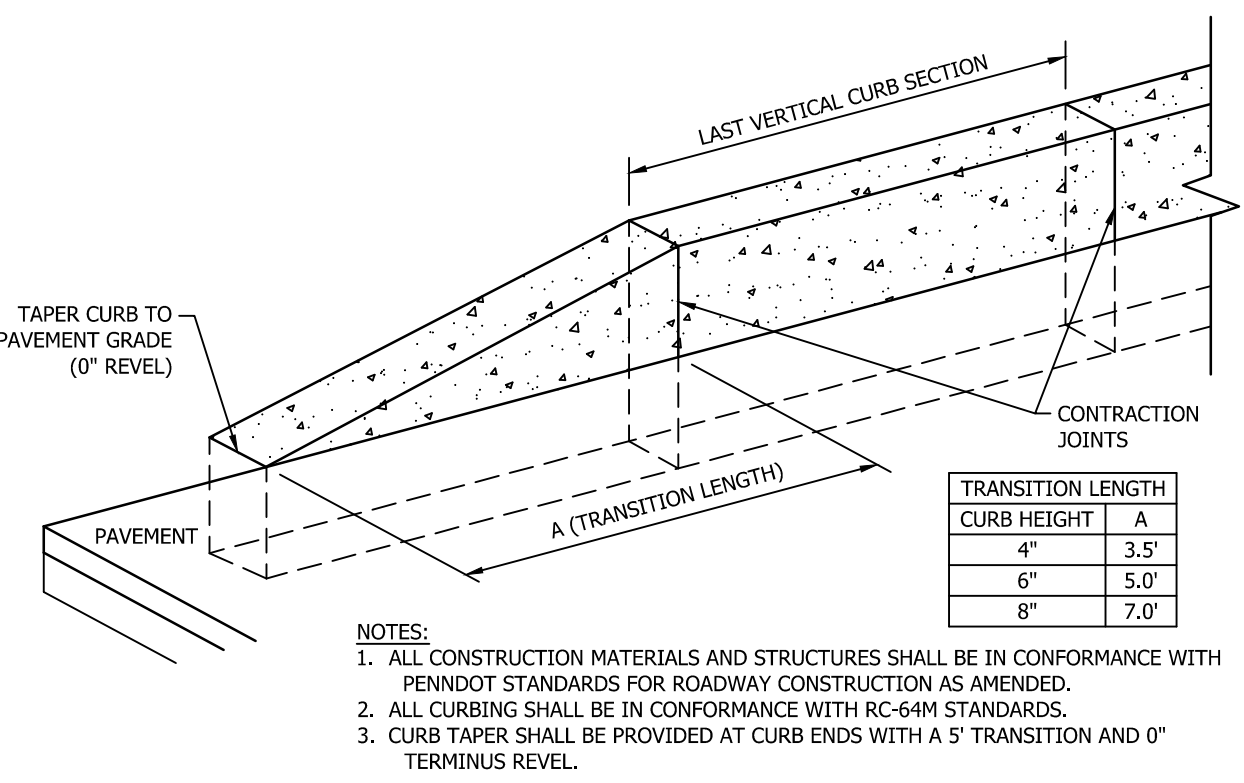


R2-1 SPEED LIMIT SIGN DETAIL
 N.T.S.

NOTE: SPEED LIMIT POST SIZE IS THE SAME AS THE ADJOINING STOP SIGN DETAIL.



R1-1 STOP SIGN DETAIL
 N.T.S.

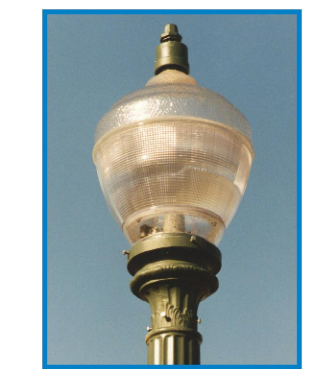


- NOTES:
1. ALL CONSTRUCTION MATERIALS AND STRUCTURES SHALL BE IN CONFORMANCE WITH PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION AS AMENDED.
 2. ALL CURBING SHALL BE IN CONFORMANCE WITH RC-64M STANDARDS.
 3. CURB TAPER SHALL BE PROVIDED AT CURB ENDS WITH A 5' TRANSITION AND 0" TERMINUS LEVEL.

END TRANSITION FOR STANDARD VERTICAL CURBING
 NOT TO SCALE



Acorn



- LUMINAIRE:** Acorn, black or green
- FIXTURE SIZE:** 2,600 lumen (36 watt) or 3,800 lumen (53 watt)
- FIXTURE TYPE:** Light-Emitting Diode (LED)
- POLE:** 11 or 13 foot black or green fiberglass, boulevard style, mounted on concrete foundation
- ALTERNATE POLE:** 14 foot round black steel or spun aluminum
- ELECTRIC SUPPLY:** Underground
- RATE:** Low-mount underground, Rate Schedule SLE
 Light-Emitting Diode (LED)

Want to know more about the PPL Electric Utilities Outdoor Lighting Program?
 Call your PPL Electric Utilities representative or PPL Electric Utilities Customer Service
 Business Accounts 1-888-220-9991, option 4 on IVR during business hours 8 a.m. to 5 p.m.

NO.	REVISION	DATE
1	TOWNSHIP COMMENTS	08/05/22
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SITE CONSTRUCTION DETAILS
 FOR THE
ESTATES AT MARGARET'S GROVE, PH. 2
 LOCATED IN
 SUSQUEHANNA TOWNSHIP, DAUPHIN COUNTY, PA

DRAWING ID: 220092-DTL

PROJECT: 220092

DATE: 06/10/22

SHEET: 11 OF 20

The stormwater Best Management Practices (BMPs) as shown on this plan shall be maintained to function as designed as per the procedures described below. Facilities located outside the public right-of-ways shall be owned and maintained by the owner(s) of the lot on which the facilities are located.

The facilities are to remain permanent and can only be removed or altered after approval by one or more of the following entities which may have jurisdiction: Susquehanna Township; Dauphin County Conservation District; and/or PA DEP.

The following facilities located outside the public rights-of-way shall be maintained to the original design and dimensions shown on the design plans, approved by Susquehanna Township, until such a time as an amended plan is approved by the Township.

- MRC BMPs, Emergency Spillways & Outlet Structures
- Stormwater Inlets, Manholes, Pipes & Swales
- Riprap Aprons

For any structure facility (pipe, inlet, manhole), it must be repaired or replaced if damaged more than superficially, in a way that is a safety hazard, if structurally unsound, or if not substantially performing as it is intended per the original design. The responsible owners shall keep a record of any repaired or replaced facility, including costs, dates, materials removed, materials placed, and the contractor(s) information.

Inspection and maintenance tasks for MRC BMPs, Emergency Spillways & Outlet Structures:

- Inspect annually at a minimum.
- The bottom of the stormwater infiltration basin can be maintained as mowed grass, maintained meadow, or natural brush succession, per the desires and budget of the lot owner. The basin berms shall be maintained as turf grass or meadow, being mowed at least several times per year. Removal of sediment / debris should take place when the basin bottom has dried, if possible. Man-made trash shall be disposed of properly in containers collected by a licensed commercial trash hauler.
- Remove grit, sand, soil or organic matter if it accumulates to a depth of 3" or more, so that storage volume is maintained.
- While vegetation is being established, pruning and weeding may be required. Weeds should be removed thereafter by hand.
- Detritus may also need to be removed approximately twice a year. Perennial plantings may be cut down at the end of the growing season.
- Mulch should be re-spread when erosion is evident and be replenished annually. Once every 2 to 3 years the entire area may require mulch replacement.
- Infiltration areas should be inspected at least two times per year for sediment buildup, erosion, vegetative conditions, etc.

Inspection and maintenance tasks for stormwater inlets, manholes, pipes & swales:

- Examine annually at a minimum. Remove man-made trash and dispose of properly.
- Examine inlet bottoms via grates, for accumulated debris. Remove accumulated grit and debris. Check for any obvious structural deterioration.
- The swales shall be maintained as turf grass or meadow, being mowed at least several times per year.
- Any erosion shall be re-stabilized with rock, or seeding (seed, mulch and matting), or sod that is watered until established; rock should be placed in non-growing seasons, even if temporary.
- All inlets, storm piping, swales and drainage structures shall be kept free of any

obstructions and foreign material that would cause disruption of water flow in a manner not designed for the facility such as sediment, vegetation, wood, sand, debris, or vegetative growth in excess of 12 inches if not part of the landscape design. Removal of sediment/debris shall take place when the area has dried, if possible. Man-made trash shall be disposed of properly in containers collected by a licensed commercial trash hauler.

Inspections and maintenance tasks for riprap aprons:

- Inspect annually at a minimum.
- Remove any accumulated debris and trash, and remove promptly. Dislodged rock should be reset in place. Any scouring of earth at or below the apron should be re-stabilized with rock, or seeding (seed, mulch and matting), or sod that is watered until established; rock should be placed in non-growing seasons, even if temporary.

General PCSM Notes

SITE PRESERVATION ANALYSIS:

Unnamed tributaries to Paxton Creek run along the eastern and southeastern sides of the site. The unnamed tributaries will not be impacted by the proposed development. The impervious areas were minimized to the best of our ability by reducing the number of proposed homes, narrowing the street cartway and proposing a layout that minimizes unnecessary impervious areas. The proposed layout was also designed in a way that will minimize the impacts to the steep slopes as much as possible. Drainage features have been protected on this site and the impact on the vegetation has been minimized as much as possible. Clearing and grading will be restricted to only the areas where necessary. The soil will experience some compaction in all the areas where grading will occur, however, compaction will be kept to a minimum in the areas of the MRC BMPs and swales. The MRC BMPs and swales are the main BMPs that will be utilized to minimize changes in stormwater runoff.

PCSM BMP INSTALLATION SEQUENCE:

- The Vegetated Swales shall be installed in concurrence with the storm sewers and/or basins to which they are connected. Permanent seeding shall be applied as soon as possible.
- The MRC BMPs shall be converted from their respective sediment traps/basins when the time comes to convert the site to the PCSM condition as approved by the Conservation District. MRC BMPs should not be converted to PCSM conditions until upstream grading is stabilized. Steps should be taken to protect infiltration areas from compaction during conversion.

INDIVIDUAL BMP INSTALLATION SEQUENCES:

MRC BMPs:

- Protect MRC basin area from compaction prior to installation.
- If possible, install MRC basin during later phases of site construction to prevent sedimentation and/or damage from construction activity. After installation, prevent sediment laden water from entering inlets and pipes.
- Install and maintain proper Erosion and Sediment Control Measures during construction.
- If necessary, excavate MRC basin bottom to an uncompacted subgrade free from rocks and debris. Do not compact subgrade.
- Install Outlet Structures.
- Seed and stabilize topsoil. (Vegetate if appropriate with native plantings.)
- Do not remove Inlet Protection or other Erosion and Sediment Control measures until site is fully stabilized.

Vegetated Swales:

- Begin vegetated swale construction only when the upgradient temporary erosion and sediment control measures are in place. Vegetated swales should be constructed and stabilized early in the construction schedule, preferably before mass earthwork and paving increase the rate and volume of runoff. (Erosion and sediment control measures shall adhere to the PADEP's "Erosion and Sediment Pollution Control Program Manual", March 200 or latest edition).
- Rough grade the vegetated swale. Equipment shall avoid excessive compaction and/or land disturbance. Excavating equipment should operate from the side of the swale and never on the bottom. If excavation leads to substantial compaction of the subgrade (where an infiltration trench is not proposed), 18 inches shall be removed and replaced with a blend of topsoil and sand to promote infiltration and biological growth. At the very least, topsoil shall be thoroughly deep plowed into the subgrade in order to penetrate the compacted zone and promote aeration and the formation of macropores. Following this, the area should be disked prior to final grading of topsoil.
- Construct check dams, if required.
- Fine grade the vegetated swale. Accurate grading is crucial for swales. Even the smallest non-conformities may compromise flow conditions.
- Seed, vegetate and install protective lining as per approved plans and according to final planting list. Plant the swale at a time of the year when successful establishment without irrigation is most likely. However, temporary irrigation may be needed in periods of little rain or drought. Vegetation should be established as soon as possible to prevent erosion and scour. If a vegetated swale is used for runoff conveyance during construction, it should be regraded and reseeded immediately after construction and stabilization has occurred. Any damaged areas should be fully restored to ensure future functionality of the swale.
- Once all tributary areas are sufficiently stabilized, remove temporary erosion and sediment controls. It is very important that the swale be stabilized before receiving upland stormwater flow.
- Follow maintenance guidelines.

CRITICAL STAGES OF BMP INSTALLATION:

- MRC BMPs 2, 3 & 5 Clay Cores and Key Trenches
- MRC BMPs 2, 3 & 5 Anti-Seep Collars
- MRC BMPs 2 & 5 Underdrains
- MRC BMPs 2 & 5 Amended Soil Media

BMP REPLACEMENT GUIDELINES:

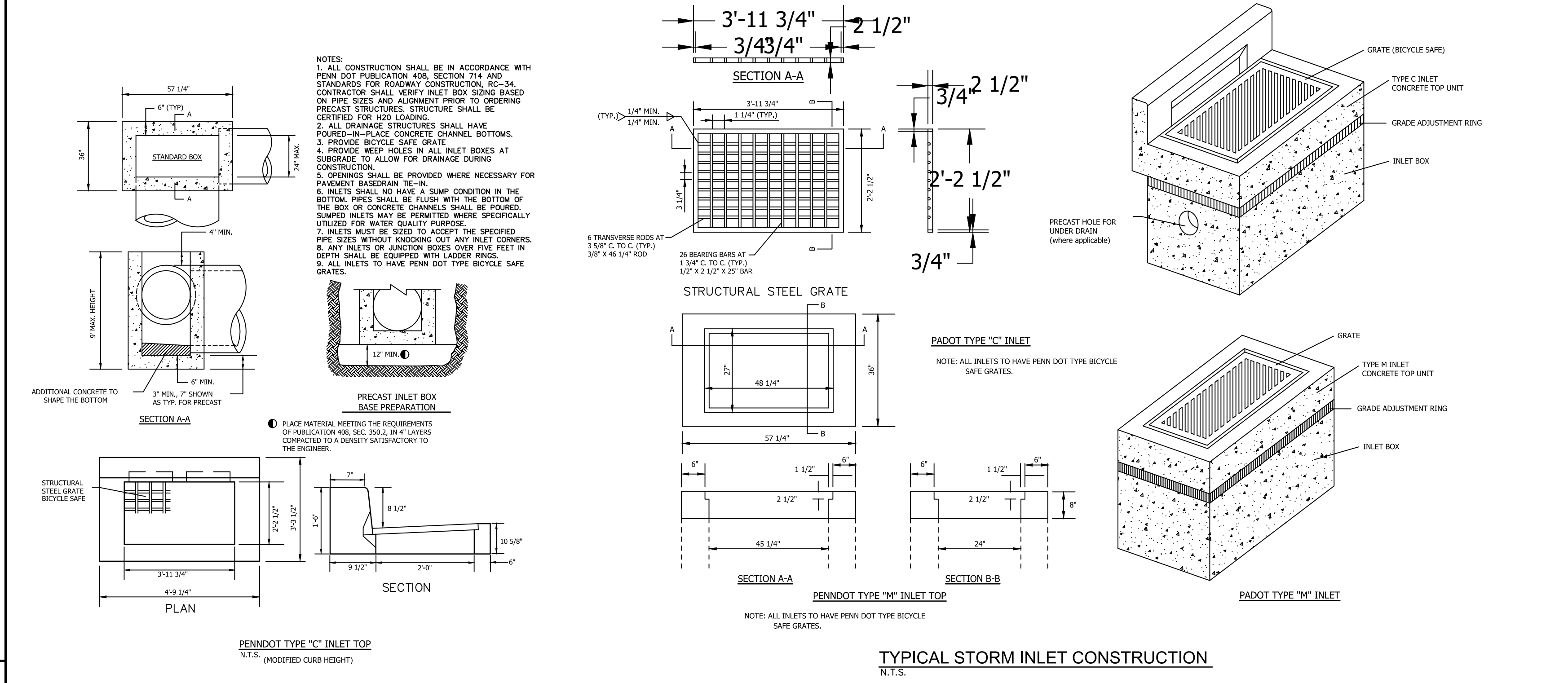
- All proposed vegetation within the BMPs must maintain at least an 85 percent cover. If the vegetative cover falls below 85 percent, it should be re-established as soon as possible.
- If the MRC BMPs fail to dewater the proposed amount of stormwater within 72 hours, the underdrain shall be inspected for damage or clogging. If that does not resolve the issue, the amended soils must be replaced, and vegetation re-established in order to promote dewatering.
- Any stormwater BMP that is damaged in a way that keeps it from functioning as designed must be repaired or replaced as soon as possible.

RECYCLING OR DISPOSAL OF MATERIALS:

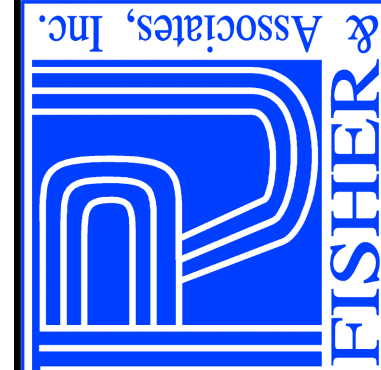
Disposal of removed material is dependant on the nature of the drainage area and the intent and function of the BMP. BMPs that primarily catch sediment and detritus from areas such as lawns may reuse the waste on the site. Pollutants such as man made trash and other non-reusable materials must be removed and deposited in an approved recycling facility or landfill.

LONG-TERM OPERATION & MAINTENANCE SCHEDULE:

All wastes and materials deposited in and removed from post-construction stormwater management (PCSM) BMP facilities and from impervious areas (ex. sweeping of streets & parking lots) during operation and maintenance shall be removed from the site and properly disposed of in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code 260.1 et. seq., 271.1, and 287.1 et. seq. No waste materials shall be burned, buried, dumped, or discharged at the site.



NO.	REVISION	DATE
1	TOWNSHIP COMMENTS	08/05/22
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220092
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06/10/22
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12 OF 20

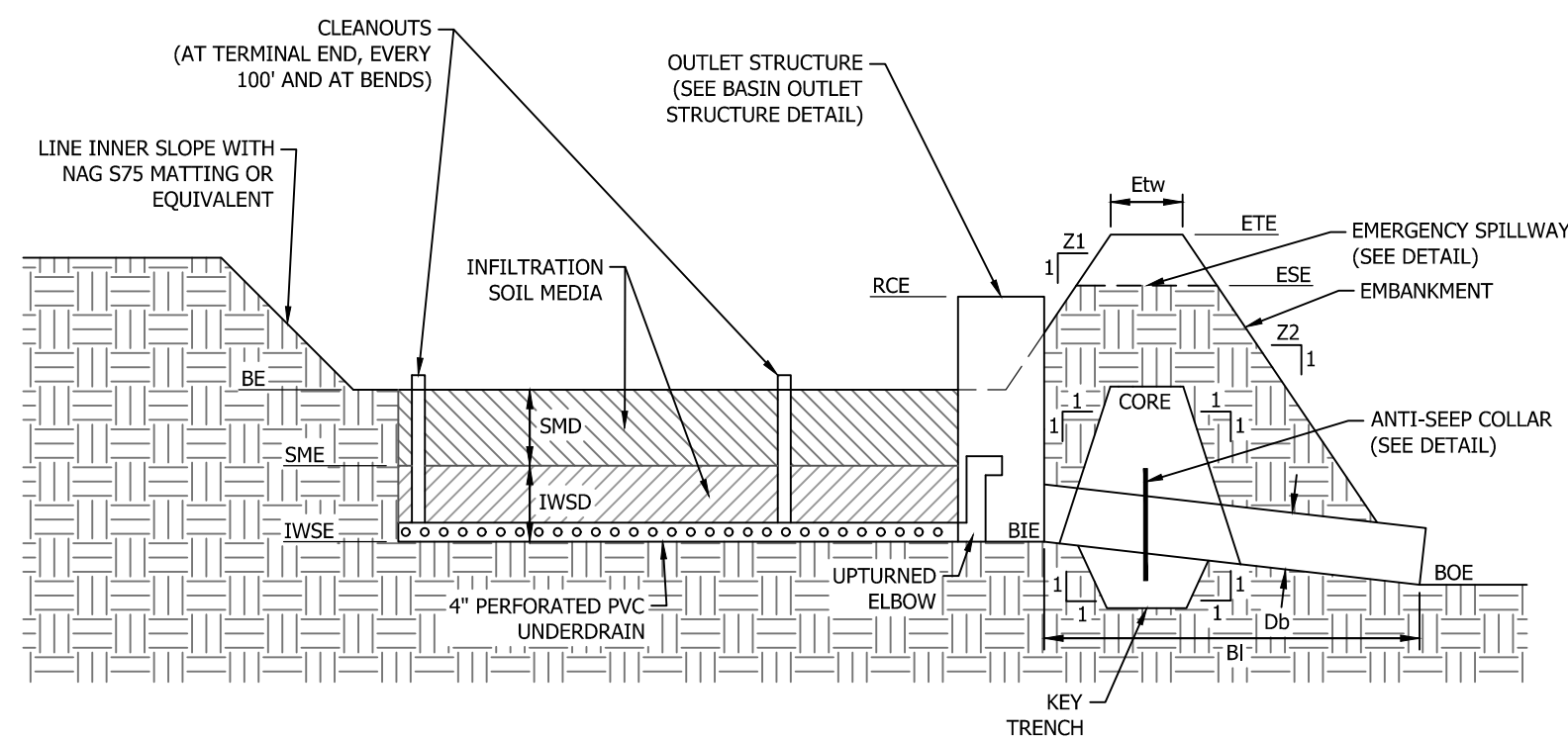
OUTLET NO.	PIPE DIA (IN)	RIPRAP			APRON	
		SIZE R ₂₅	THICK. RT (IN)	LENGTH AL (FT)	INITIAL WIDTH A _{1w} (FT)	TERMINAL WIDTH A _{2w} (FT)
A	18	4	18	11	4.5	15.5
F	15	4	18	10	3.75	13.75
G	30	4	18	16	7.5	23.5
T	24	4	18	13	6.0	19.0

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.

RIPRAP APRON AT PIPE OUTLET WITH FLARED END SECTION OR ENDWALL
 N.T.S.

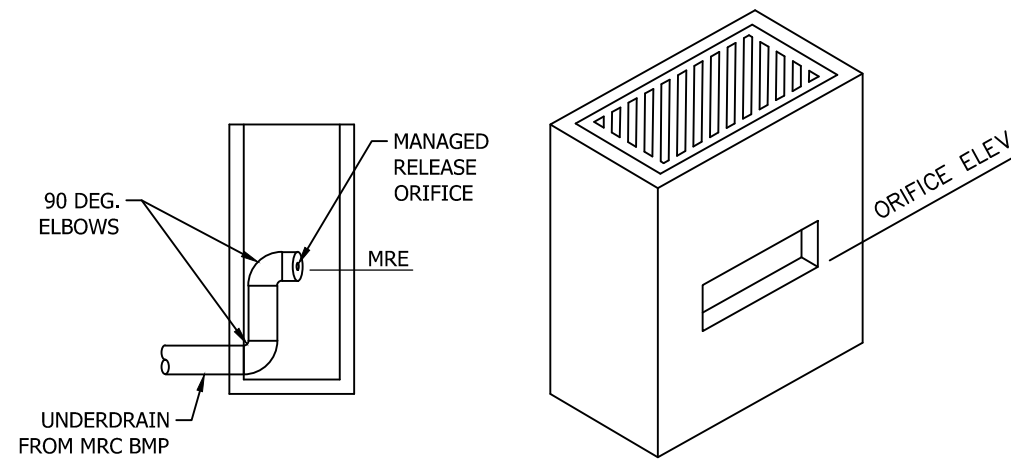


MRC BASIN NO.	BASIN BOTTOM					EMBANKMENT			
	BOTTOM ELEV. BE (FT)	SOIL FILTER MEDIA DEPTH SMD (FT)	SOIL FILTER MEDIA ELEV. SME (FT)	INTERNAL WATER STORAGE DEPTH IWSO (FT)	INTERNAL WATER STORAGE ELEV. IWSE (FT)	TOP ELEV. ETE (FT)	TOP WIDTH Etw (FT)	KEY TRENCH DEPTH (FT)	KEY TRENCH WIDTH (FT)
2	476.00	1.0	475.00	1.0	474.00	482.00	5.0	3.0	5.0
3	512.00	1.0	511.00	1.0	510.00	516.00	5.0	3.0	5.0
5	494.00	1.0	493.00	1.0	492.00	496.00	5.0	1.5	3.0

BASIN NO.	Z1	Z2	RISER TOP ELEV. RCE (FT)	BARREL				
				MAT'L	DIA. DI (IN)	INLET ELEV. BIE (FT)	LENGTH BI (FT)	OUTLET ELEV. BOE (FT)
2	3	3	478.50	HDPE	30	472.47	46.99	473.00
3	3	3	513.50	HDPE	18	509.24	32.41	508.92
5	3	3	494.50	HDPE	18	491.50	20.00	491.30

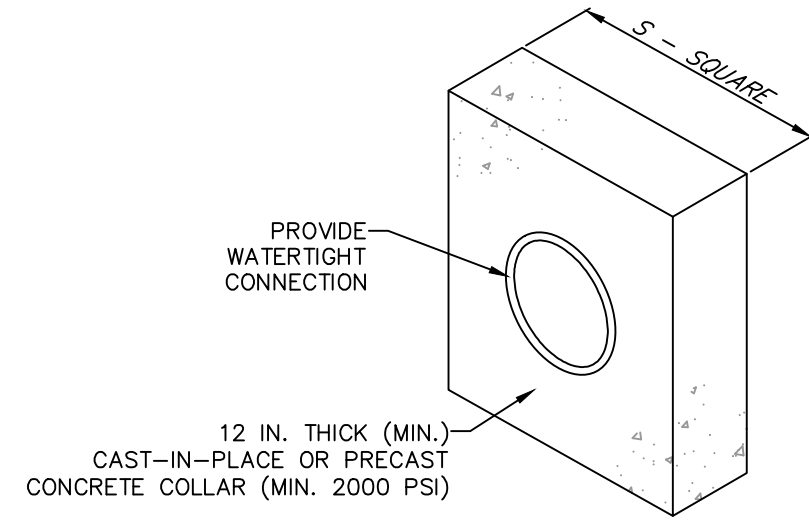
- NOTES:**
- PROTECT BASIN AREA FROM COMPACTION PRIOR TO INSTALLATION.
 - IF POSSIBLE, INSTALL BASIN DURING LATER PHASES OF SITE CONSTRUCTION TO PREVENT SEDIMENTATION AND/OR DAMAGE FROM CONSTRUCTION ACTIVITY. AFTER INSTALLATION, PREVENT SEDIMENT-ADEN WATER FROM ENTERING INLETS AND PIPES.
 - INSTALL AND MAINTAIN PROPER EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION.
 - IF NECESSARY, EXCAVATE BASIN BOTTOM TO AN UNCOMPACTED SUBGRADE FREE FROM ROCKS AND DEBRIS. DO NOT COMPACT SUBGRADE.
 - INSTALL OUTLET CONTROL STRUCTURES.
 - SEED AND STABILIZE TOPSOIL. (VEGETATE IF APPROPRIATE WITH NATIVE PLANTINGS.)
 - DO NOT REMOVE INLET PROTECTION OR OTHER EROSION AND SEDIMENT CONTROL MEASURES UNTIL SITE IS FULLY STABILIZED.

MRC BASIN DETAIL
N.T.S.



BMP NO.	RISER TYPE	TOP ELEV. (FT)	ORIFICE ELEV. (FT)	ORIFICE DIMS	MANAGED RELEASE OUTLET	
					ORIFICE ELEV. MRE (FT)	ORIFICE DIA. (IN)
2	24" X 48" CATCH BASIN	478.50	477.00	12" W x 6" H	475.00	0.7
3	24" X 48" CATCH BASIN	513.50	512.75	12" W x 6" H	511.00	0.5
5	24" X 48" CATCH BASIN	494.50	N/A	N/A	493.00	0.5

MRC BMP OUTLET STRUCTURE DETAIL
NOT TO SCALE

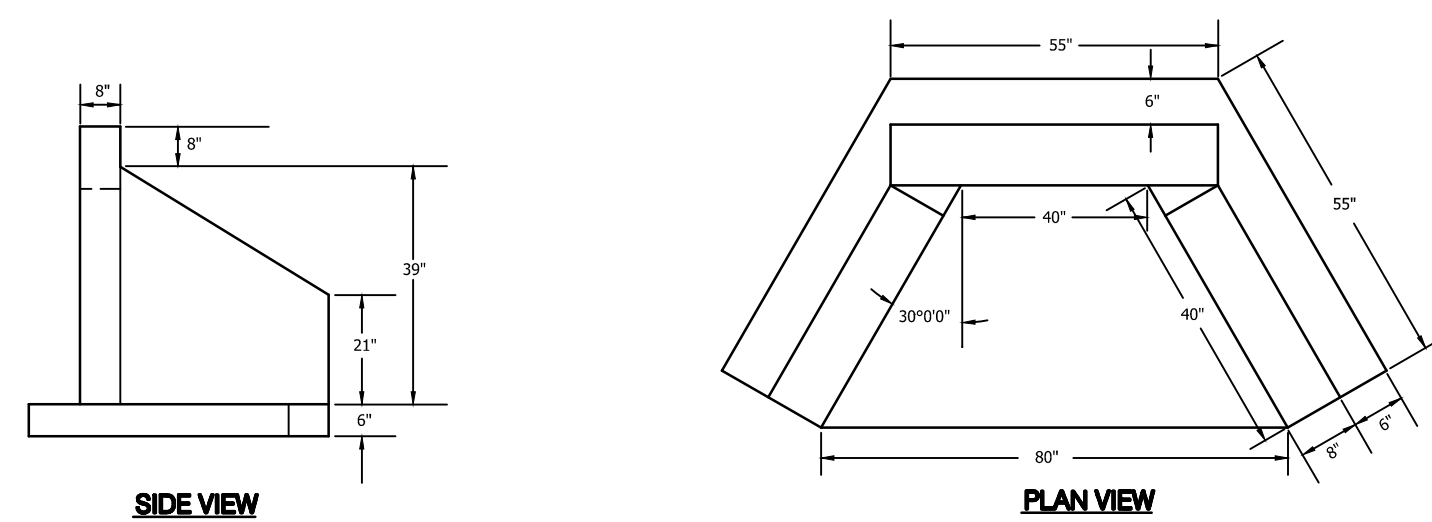


BMP NO.	PIPE SIZE (IN)	S (FT)	NO. OF COLLARS	RISER TO FIRST COLLAR (FT)	COLLAR SPACING (FT)
2	30	5.8	2	10	10
3	18	3.8	2	10	8
5	18	4.8	1	10	N/A

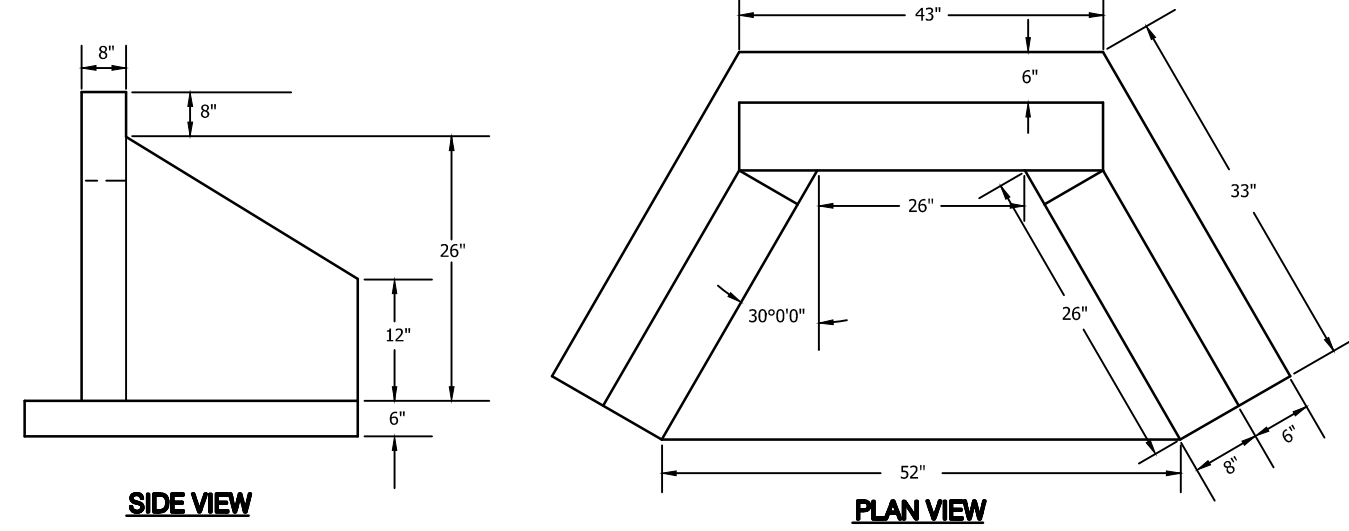
- NOTES:**
- ALL COLLARS SHALL BE INSTALLED SO AS TO BE WATERTIGHT.
 - COLLAR SIZE AND SPACING SHALL BE AS INDICATED WITHIN TABLE.

STANDARD CONSTRUCTION DETAIL #7-16
CONCRETE ANTI-SEEP COLLAR FOR PERMANENT BASINS OR TRAPS
N.T.S.

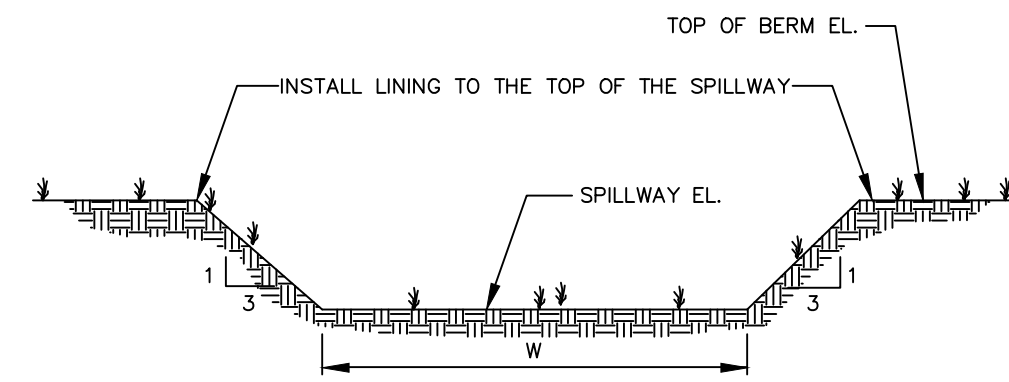
BMP PLANTING SPECIFICATIONS			
BMP NUMBER	ERNST SEED MIX	SEED TYPE	APPLICATION RATE
MRC BMP 2	Detention Area Mix Seed Mix (ERNMX-183)	36% Deertongue 20% Fox Sedge 20% Virginia Wildrye 20% Switchgrass 2% Path Rush 1% Soft Rush 1% Redtop Panicgrass	20 Pounds Per Acre
MRC BMP 5	Rain Garden Seed Mix (ERNMX-180-1)	46% River Oats 25% Fox Sedge 20% Virginia Wildrye 4% Autumn Bentgrass 3% Blunt Broom Sedge 1% Path Rush 1% Soft Rush	15 Pounds Per Acre



TYPE D-W ENDWALL (MAX. PIPE SIZE 36" CMP) DETAIL
N.T.S.

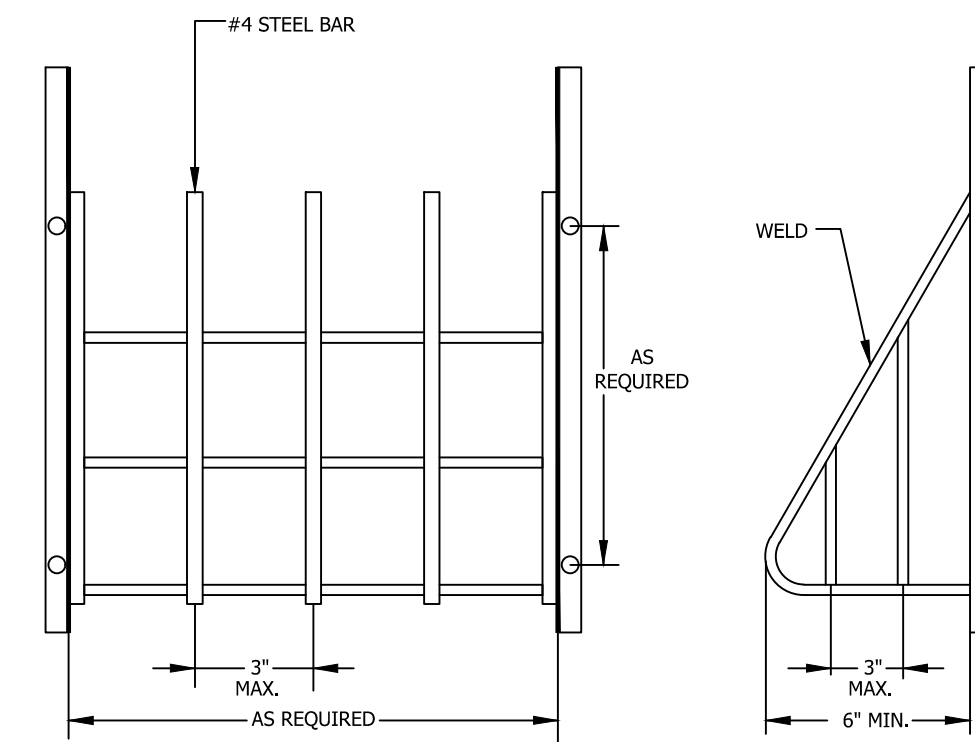


TYPE D-W ENDWALL (MAX. PIPE SIZE 21" CMP) DETAIL
N.T.S.



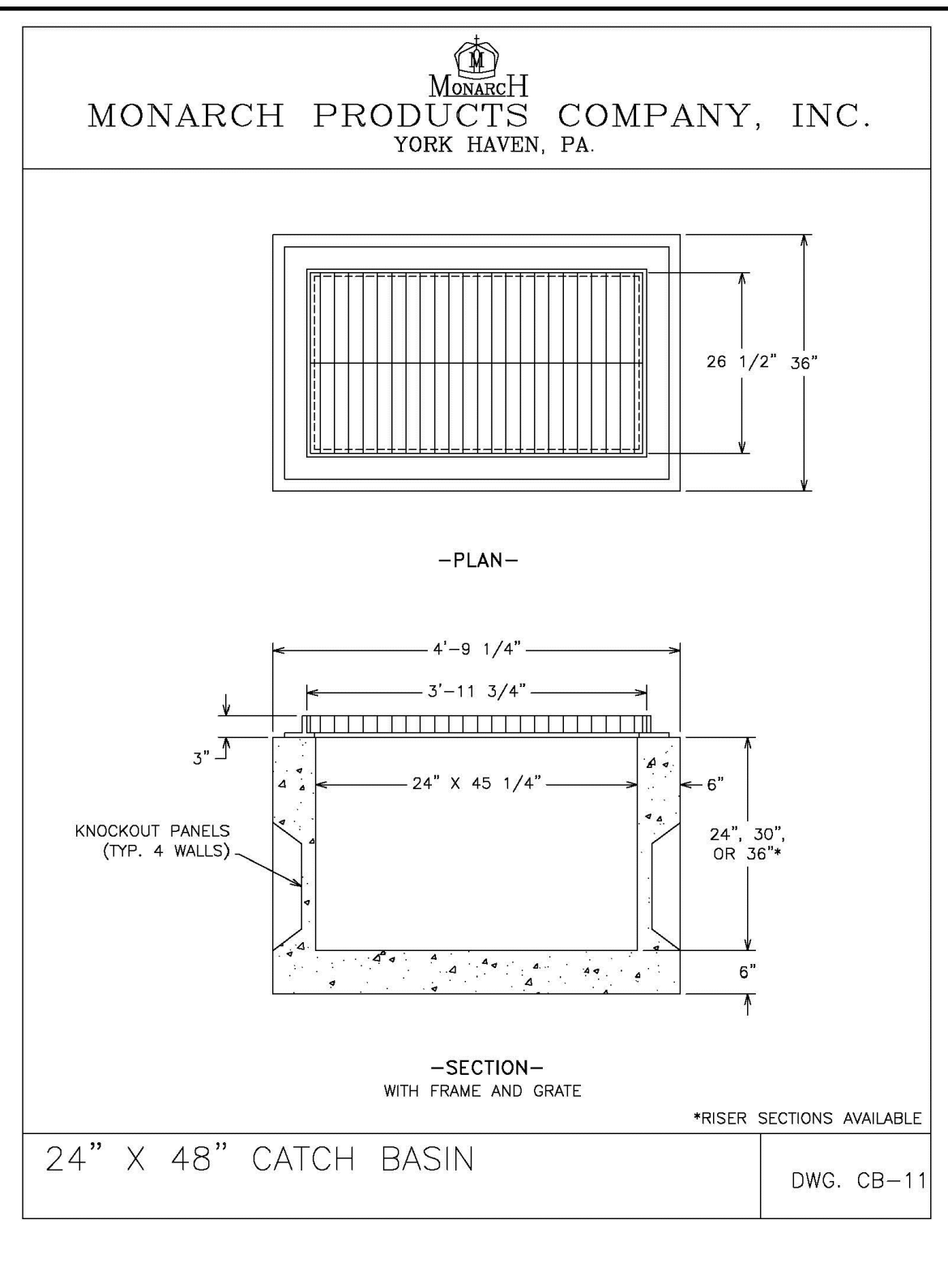
BASIN DESIGNATION	TOP OF BERM ELEVATION (FT)	SPILLWAY ELEVATION (FT)	WIDTH (W) (FT)	TEMPORARY LINING	PERMANENT LINING
BASIN 2	482.00	480.50	75.0	N/A	N.A.G. C350
BASIN 5	496.00	495.50	20.0	N.A.G. S75	N/A

PERMANENT EMERGENCY SPILLWAY DETAIL
N.T.S.

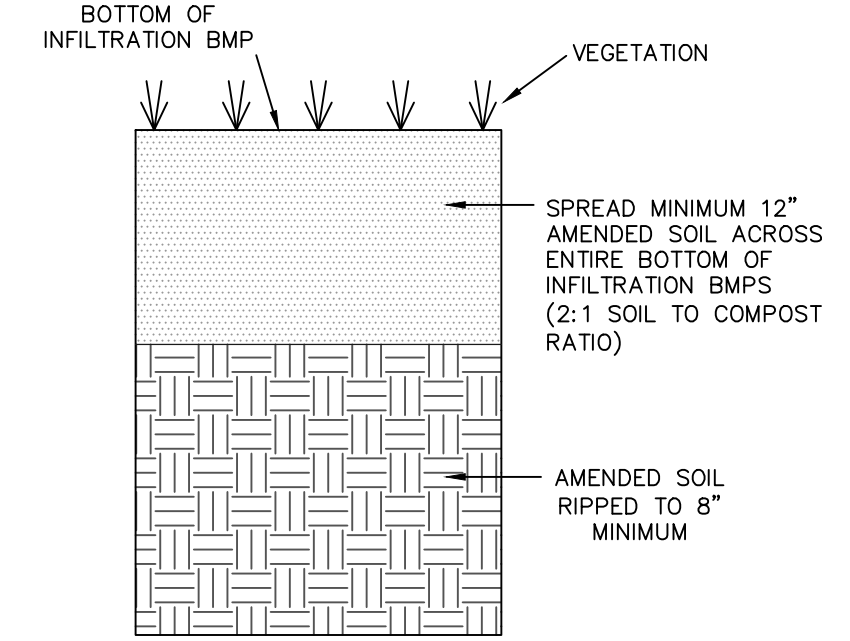


- NOTES:**
- CONSTRUCT TRASH RACK OF STEEL.
 - INSTALL / CENTER TRASH RACK OVER THE ORIFICE. ATTACH TO ENDWALL / INLET BOX.
 - INSTALL ONLY WHEN INDICATED ON OUTLET STRUCTURE DETAIL.

ORIFICE TRASH RACK DETAIL
N.T.S.



24" X 48" CATCH BASIN
DWG. CB-11

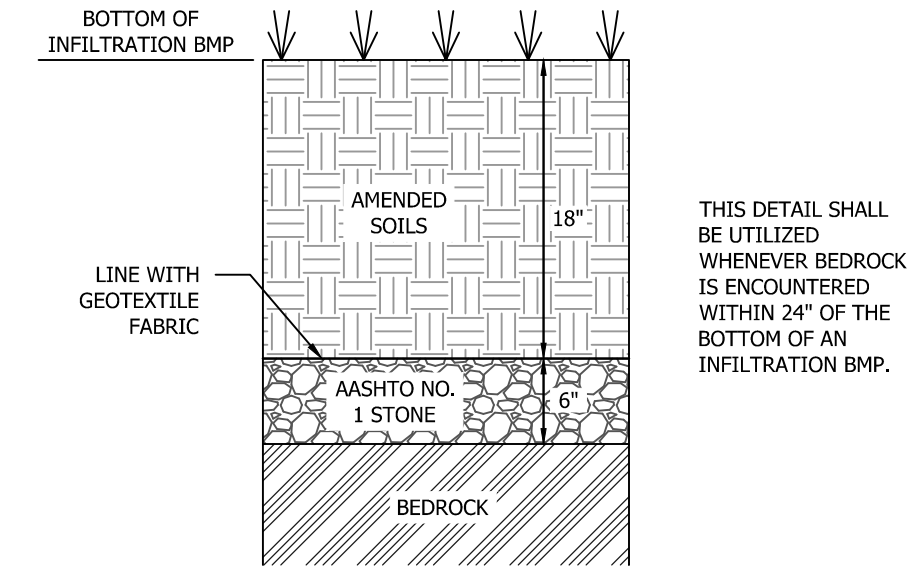


- SOIL AMENDMENTS:**
- SUBSOILING (RIPPING) SHALL BE PERFORMED USING A SOLID SHANKED RIPPER TO A DEPTH OF 8 INCHES. IN LIEU OF A SOLID SHANKED RIPPER, A LOADER SHALL BE USED TO TOOTH THE SOIL TO A DEPTH OF 8 INCHES.
 - SUBSOILING (RIPPING) SHALL BE PERFORMED PRIOR TO PLACEMENT OF TOPSOIL IN AREAS WHERE IT WAS STRIPPED BUT AFTER ALL CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED ON THE LOT TO MINIMIZE COMPACTION.
 - SUBSOILING (RIPPING) SHALL ONLY BE PERFORMED ON DRY SOILS.
 - AFTER RIPPING, SPREAD 12" MIN. AMENDED TOPSOIL IF STRIPPED DURING CONSTRUCTION. STABILIZE PER PERMANENT SEEDING SPECIFICATIONS.

- SEQUENCE OF CONSTRUCTION FOR SOIL AMENDMENTS:**
- INSTALL ALL REQUIRED EROSION & SEDIMENTATION CONTROL MEASURES REQUIRED BY E&S PLAN.
 - STRIP & STOCKPILE TOPSOIL ON THE LOT PER E&S PLAN.
 - UPON COMPLETION OF ALL IMPROVEMENTS, SUBSOIL (RIP) SOIL IN LOCATIONS SHOWN ON THIS PLAN. SEE DETAIL ABOVE FOR INFORMATION.
 - AFTER RIPPING, SPREAD 12" MIN. AMENDED TOPSOIL ON THOSE AREAS THAT HAVE BEEN STRIPPED FOR THE INFILTRATION BMP'S.
 - SEED AND MULCH ALL DISTURBED AREAS PER PERMANENT SEEDING & MULCHING SPECIFICATIONS.

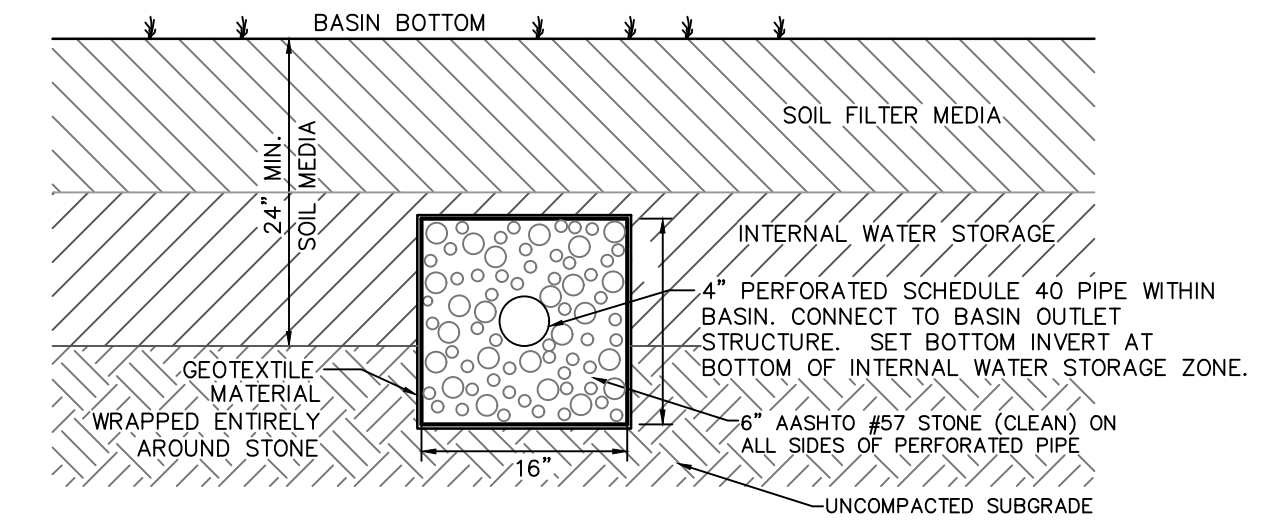
- SOIL AMENDMENT SPECIFICATIONS:**
- SOIL AMENDMENT MEDIA MAY CONSIST OF COMPOST (CHOPPED STRAW, LEAVES, GRASS CLIPPINGS AND OTHER PLANT REFUSE), COMPOSTED OR DRIED MANURES, WOOD PRODUCTS (SAWDUST, WOOD SHAVINGS, SHREDDED WOOD PULVERIZED BARK AND WOOD CHIPS), PEAT MOSS, MUSHROOM SOIL, OR SAND.
 - COMPOST SHOULD BE ADDED AT A RATE OF 2:1 (SOIL:COMPOST).
 - ON-SITE TOPSOILS CAN BE PROPERLY STOCKPILED AND REUSED FOR SOIL PORTION OF THE 2:1 SOIL:COMPOST MIX.

INFILTRATION BMP SOIL AMENDMENT DETAIL
N.T.S.



- NOTES:**
- IF BEDROCK IS ENCOUNTERED DURING CONSTRUCTION OF THE INFILTRATION BMP'S, IT SHOULD BE EXCAVATED TO A DEPTH OF 24" BELOW THE BOTTOM OF THE INFILTRATION BMP AND FILLED ACCORDING TO THE ABOVE DETAILS.
 - GEOTEXTILE FABRIC SHALL NOT BE PLACED BETWEEN THE BEDROCK AND THE STONE LAYER ABOVE IT.
 - THE STONE LAYER BELOW THE INFILTRATION BASINS AND INFILTRATION BEDS SHALL NOT BE USED WITHIN THE STORMWATER PEAK RATE AND VOLUME ANALYSES.

BEDROCK REMEDIATION DETAIL
N.T.S.

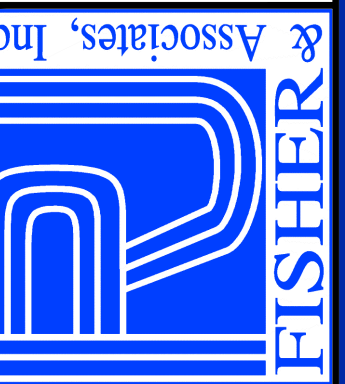


- NOTES:**
- TERMINATE UNDERDRAIN IN BASIN OUTLET BOX; SEE OUTLET STRUCTURE DETAIL.
 - SEE GRADING PLANS FOR UNDERDRAIN LOCATIONS.

MRC BMP UNDERDRAIN DETAIL
N.T.S.

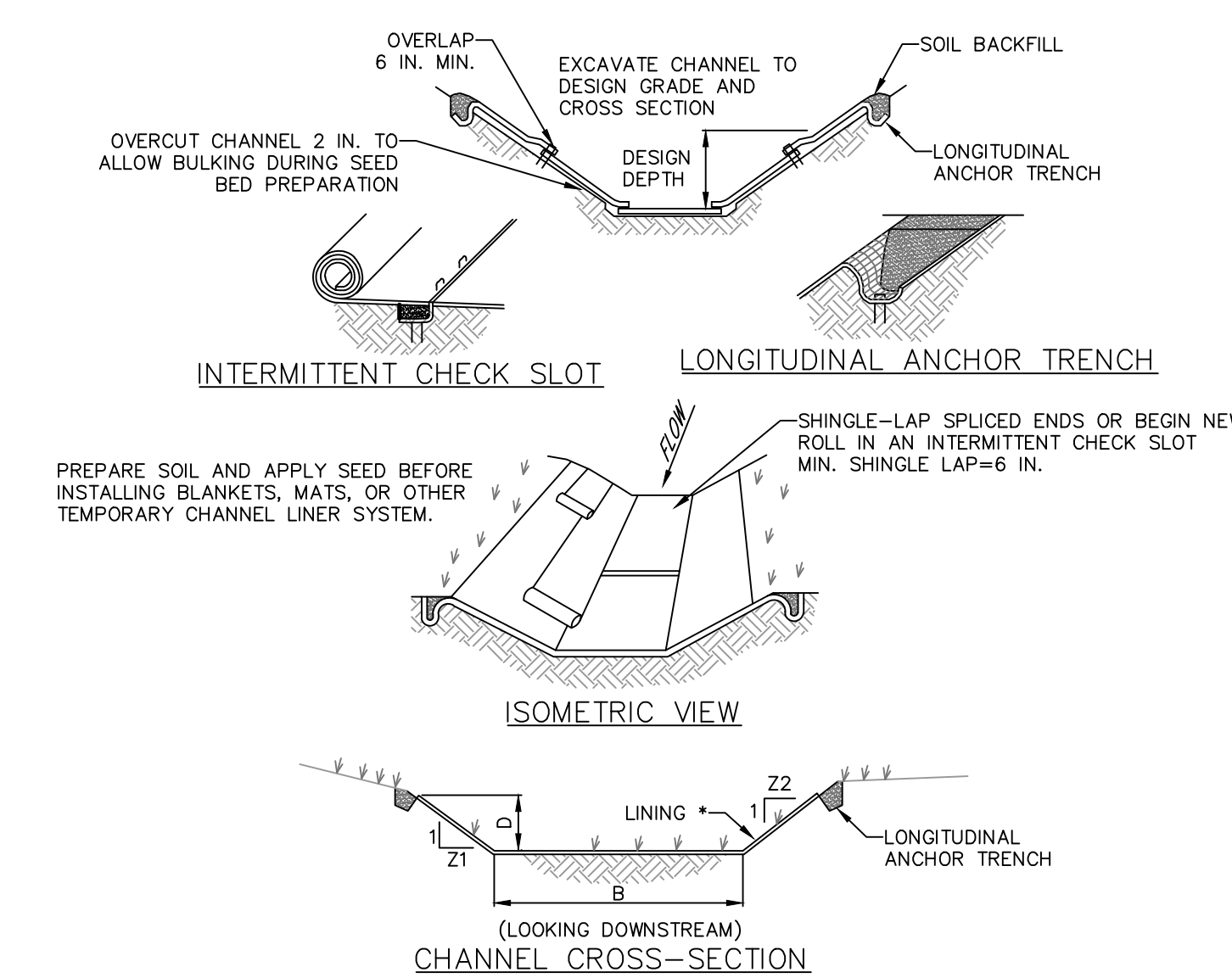
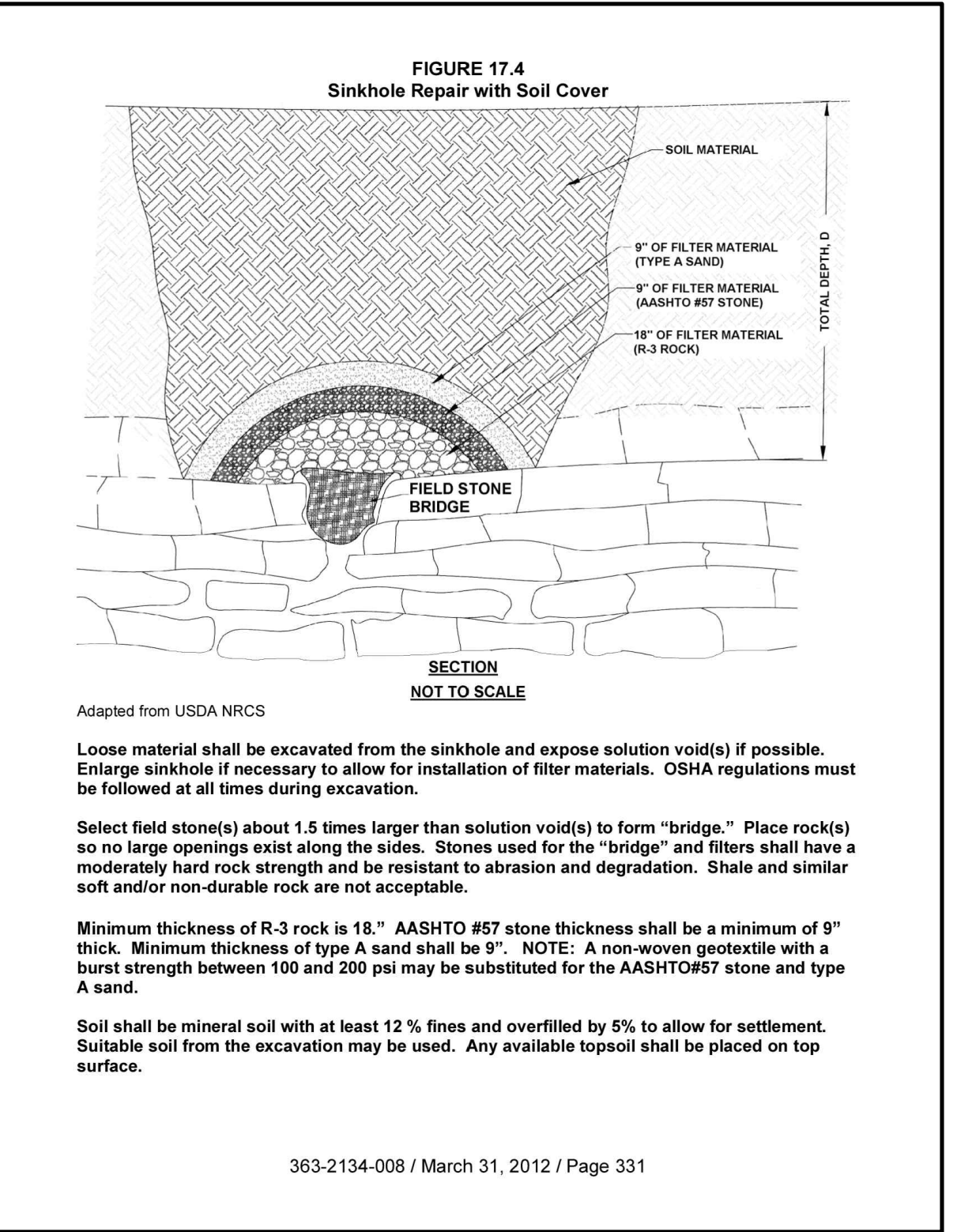
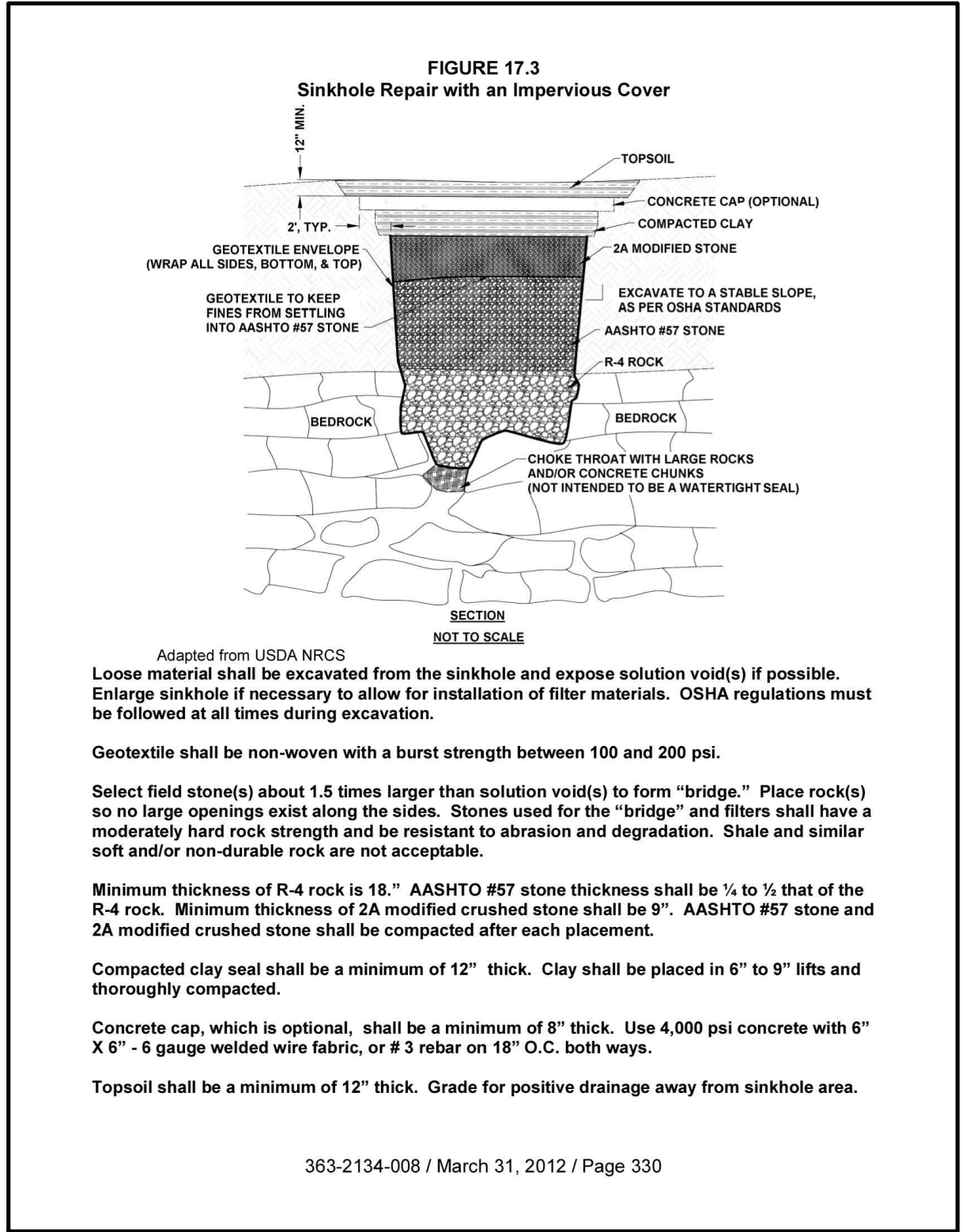
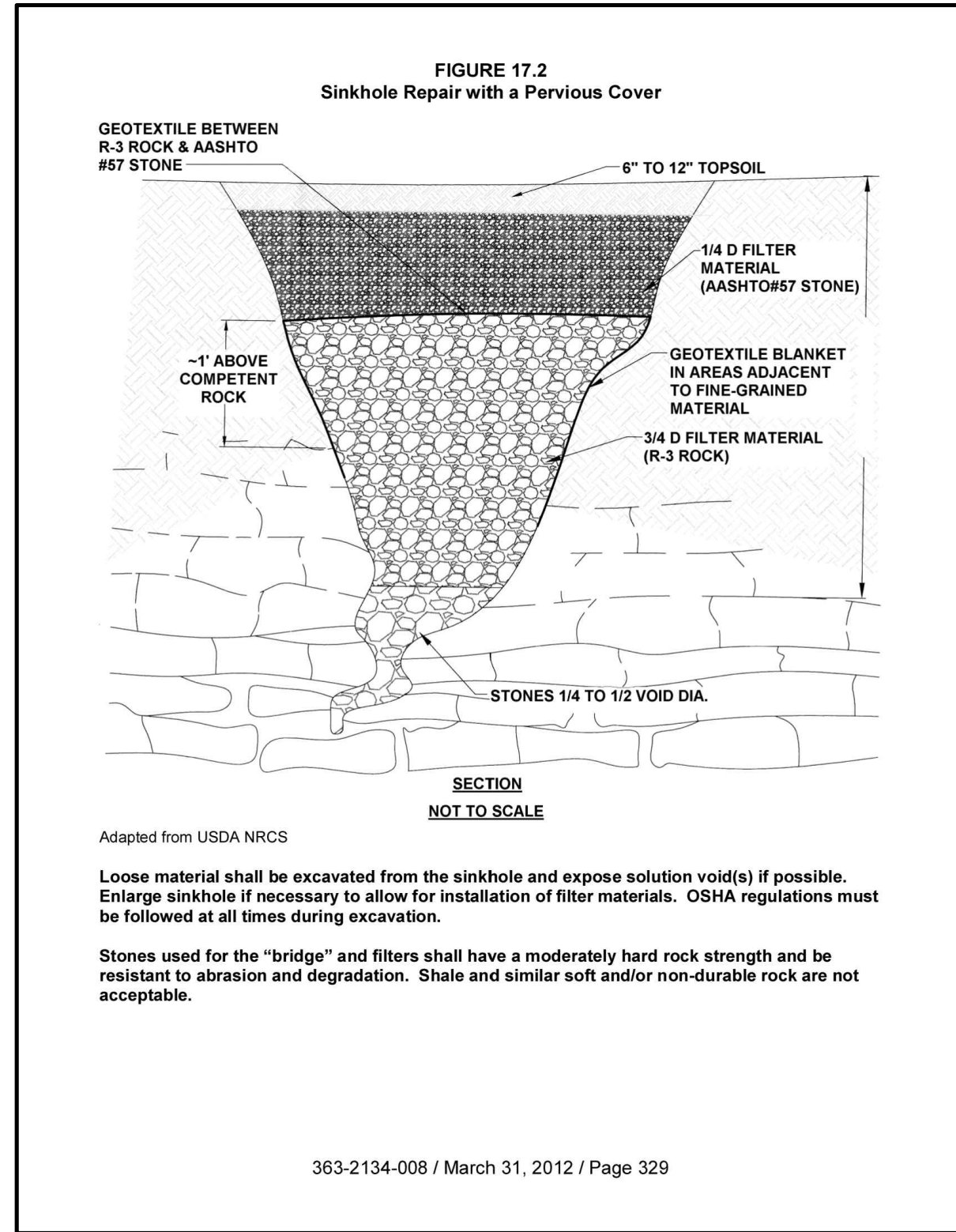
NO.	REVISION	DATE
1	TOWNSHIP COMMENTS	08/05/22
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PCSM DETAILS
FOR THE
ESTATES AT MARGARET'S GROVE, PH. 2
LOCATED IN
SUSQUEHANNA TOWNSHIP, DAUPHIN COUNTY, PA

DRAWING ID:	220092-DTL
PROJECT:	220092
DATE:	06/10/22
SHEET:	13 OF 20



* SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, VEGETATIVE STABILIZATION FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION

CHANNEL NO.	SLOPE (%)	BOTTOM WIDTH B (FT)	DEPTH D (FT)	TOP WIDTH W (FT)	Z1 (FT)	Z2 (FT)	LINING *
SWALE 1 MIN	2.00	3.0	2.0	11.0	2	2	NAG S75
SWALE 1 MAX	10.86	5.0	2.0	13.0	2	2	NAG C350
TEMP SWALE T1	2.46	5.0	2.0	13.0	2	2	NAG S75
TEMP SWALE T2	2.63	3.0	1.5	12.0	3	3	NAG S75

NOTES:
ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL ANCHOR TRENCHES.
CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.
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.

GENERAL SINKHOLE REPAIR POLICIES:

1. THE AREA OF THE SINKHOLE SHOULD BE EXCAVATED UNTIL THE "THROAT" OF THE SINKHOLE IS DISCOVERED.
2. ALL LOOSE SOIL OR MATERIAL SHOULD BE REMOVED.
3. THE THROAT OF THE SINKHOLE SHOULD BE EVALUATED FOR STABILITY AND/OR THE PRESENCE OF ADDITIONAL FRACTURES.
4. THE SINKHOLE SHOULD THEN BE BACKFILLED USING A GEOTEXTILE FILTER FABRIC FIRST, NO.6 GEOTEXTILE CLASS 1 TYPE B. THEN USE R-5 STONE UP TO ABOUT 36" FROM FINISHED GRADE.
5. FOLD THE GEOTEXTILE FILTER FABRIC OVER ITSELF TO CREATE A "BAG."
6. ADD ABOUT 24" OF 2A MODIFIED STONE TO AROUND A FOOT BELOW FINAL GRADE DEPENDING ON WHERE THE SINKHOLE IS AND WHAT MATERIAL IS NEEDED TO FINISH BACKFILLING.

SINKHOLE AND SINKHOLE AREA TREATMENT

N.T.S.

GENERAL LANDSCAPE NOTES:

1. All disturbed soil areas not indicated to be covered with buildings, paving or planting beds shall be permanently seeded and maintained with turfgrass.
2. If there is a planting conflict with adjacent improvements (buildings, pavements, lights, etc.) utilities, bedrock, existing tree roots, poor drainage area, or other obstacle to planting, the contractor shall adjust the tree spacing and/or arrangement to complete the planting in accordance with the landscape design intent.
3. All planting areas, including turfgrass areas, shall receive a minimum of 4" topsoil before planting.
4. No trees shall be planted within 10 feet of any sanitary sewer main.
5. During construction, no clearing should be permitted on a site beyond the minimal necessary for the specific construction activity to be undertaken.
6. No construction activity, grading or disturbance shall be permitted beyond the limit of disturbance line.
7. Limit of disturbance lines shall be clearly noted in the field prior to the start of construction activities. The lines may be indicated by use of snow fencing, flagged stakes or other means acceptable to the Township for the specific condition or feature to be protected. The lines shall be maintained throughout the period of construction activity.

CONSTRUCTION NOTES:

1. During construction, no clearing shall be permitted beyond that minimally necessary for the specific construction activity to be undertaken.
2. No construction activity, grading or disturbance shall be permitted beyond the limit of the disturbance line. The limit of disturbance lines shall be clearly marked in the field prior to the start of construction activities, by use of snow fencing, silt fence, or plastic orange construction fence. The limit of disturbance fence lines shall be maintained throughout the period of construction activity.
3. All new plants shall be healthy, free of disease and pest infestation, sized and rooted in accordance with the American Standard for Nursery Stock, ANSI Z60.1, latest edition.
4. If quantities of trees or shrubs shown on the plan differ from those listed in planting schedule, quantities shown on the plan shall govern.

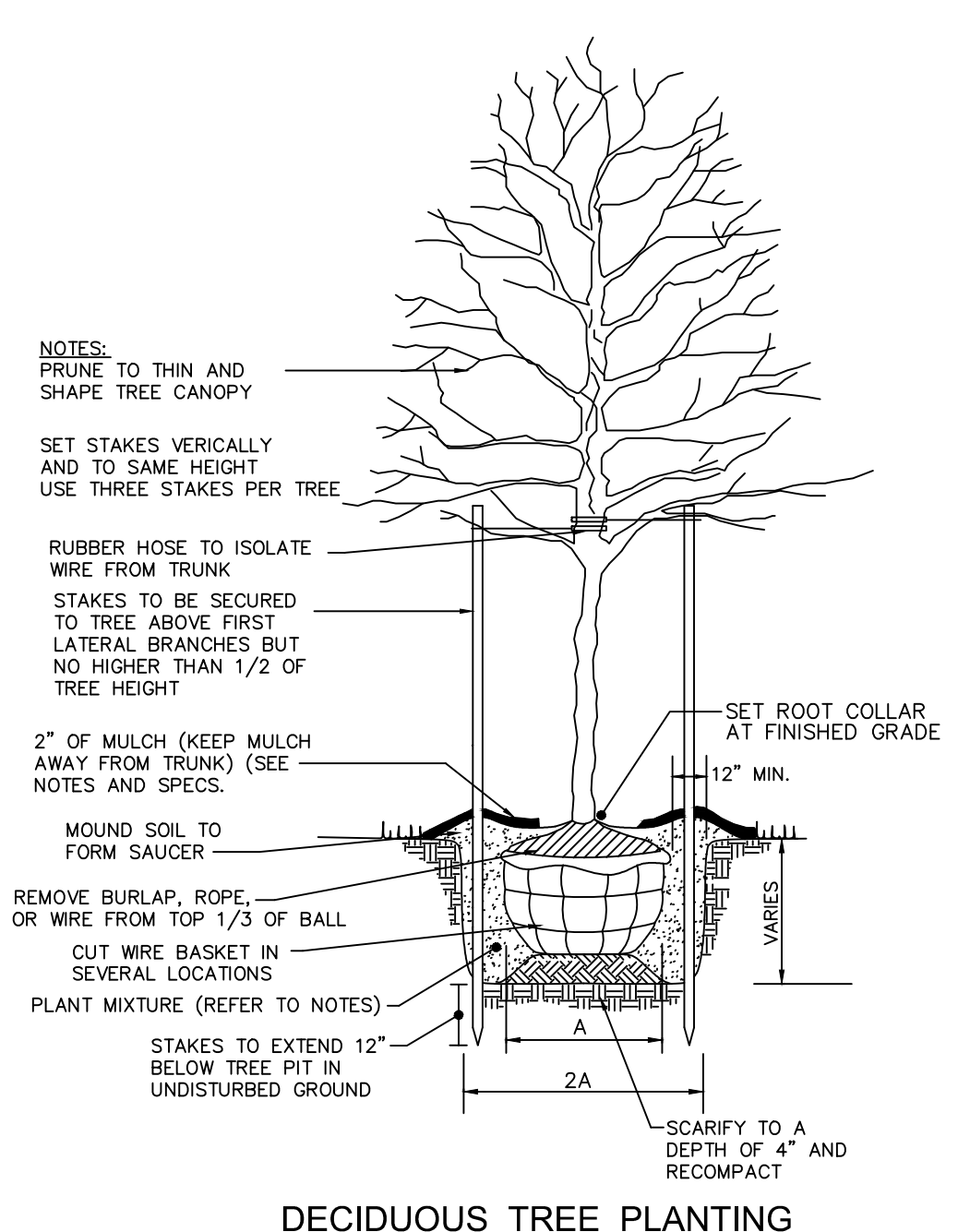
SHORT TERM LANDSCAPE MAINTENANCE PLAN:

(FOR 18 MONTHS FOLLOWING INSTALLATION OR MAINTENANCE BOND ISSUANCE WHICHEVER IS LONGER)

1. The landscape contractor and/or lot owner shall be responsible for watering plant material and lawn areas before, during and after installation for the duration of the warranty period.
2. Lawn areas shall be watered once weekly during dry periods of the first growing season to establish a healthy turfgrass. Watering should occur during the early part of the day and shall provide to an even saturation depth of one inch per week by rain event or irrigation.
3. Newly planted trees and shrubs shall be watered regularly during the dry periods to completely dampen the root ball during the first growing season.
4. Disease, insect and weed control and prevention should be performed in accordance with manufacturers recommendations for newly planted landscapes during the first season.
5. Newly installed plantings shall be selectively pruned if necessary to provide a neat, uniform appearance. Any dead or broken branches shall be removed. All noticeably diseased or damaged plant material shall be removed and replaced prior to final acceptance.
6. All guying and staking shall be maintained regularly to assure plant stabilization and straight, uniform growth for at least the first 18 months following the date of planting.
7. All plant material shall be true to species and variety and shall conform to measurements and minimum standards as set forth in the plant schedule.
8. All plant materials and lawn areas are to be warranted by the contractor for a period of 18 months from date when Maintenance Bond is issued/ effective. Any plants found dead, dying, or diseased during said period should be replaced in-kind during that period.
9. Tree branches overhanging vehicular and pedestrian routes (drives, walks, etc.) shall be maintained at a height 8 ft. min. from adjacent grade.

LONG TERM MAINTENANCE PLAN FOR LANDSCAPING:

1. Maintenance of trees, shrubs and turfgrass shall be the responsibility of the homeowners association.
2. The lot owner shall be responsible for regular mowing, clean-up, and grooming of all lawn and planted areas.
3. Any specific plant material shown on this approved landscape plan which does not survive or is damaged shall be replaced in kind by the lot owner within a six month period, in perpetuity.
4. Trash and tree debris shall be removed and disposed of properly.
5. Patrol natural areas and remove man-made debris and dispose of properly.



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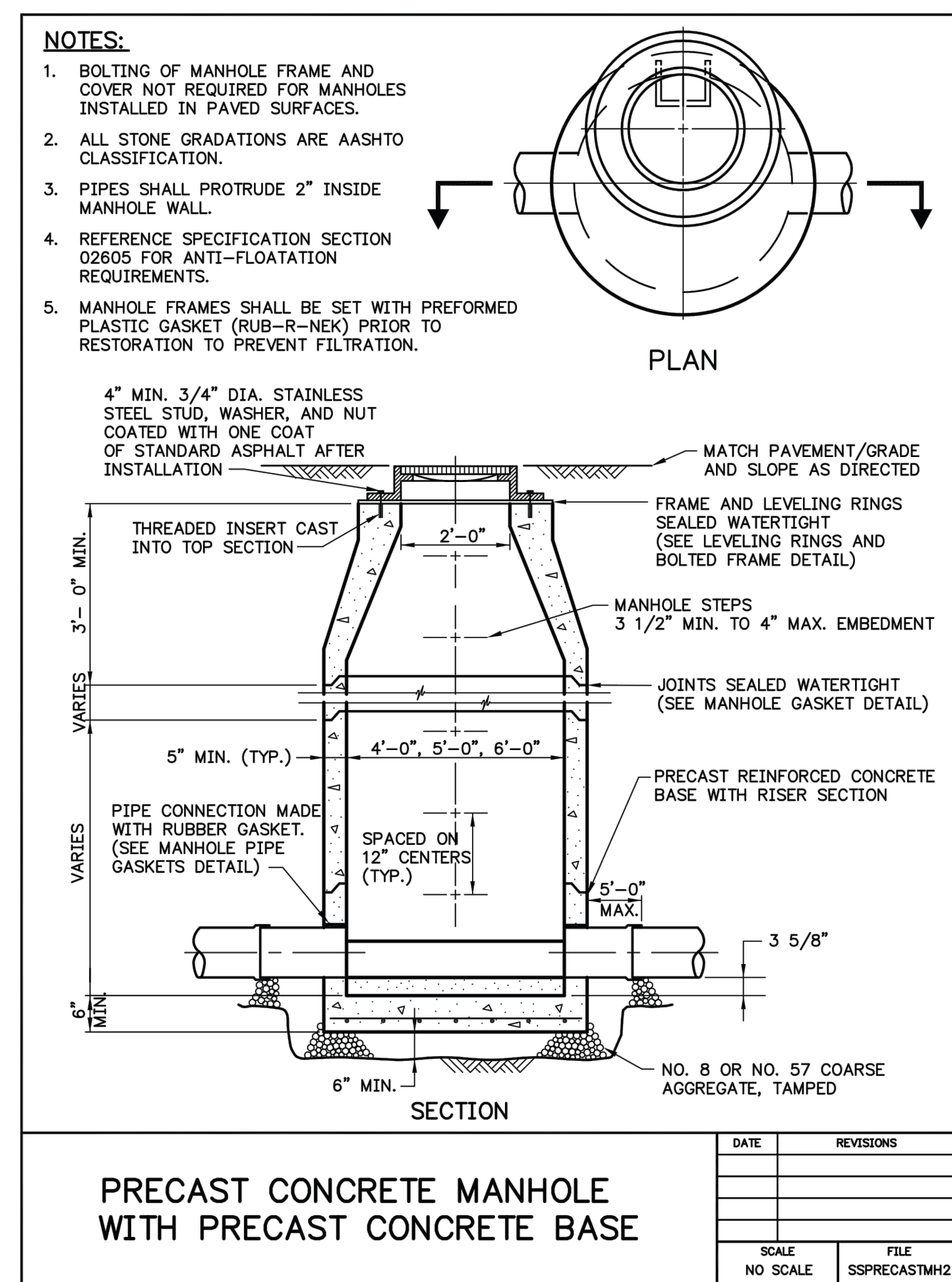
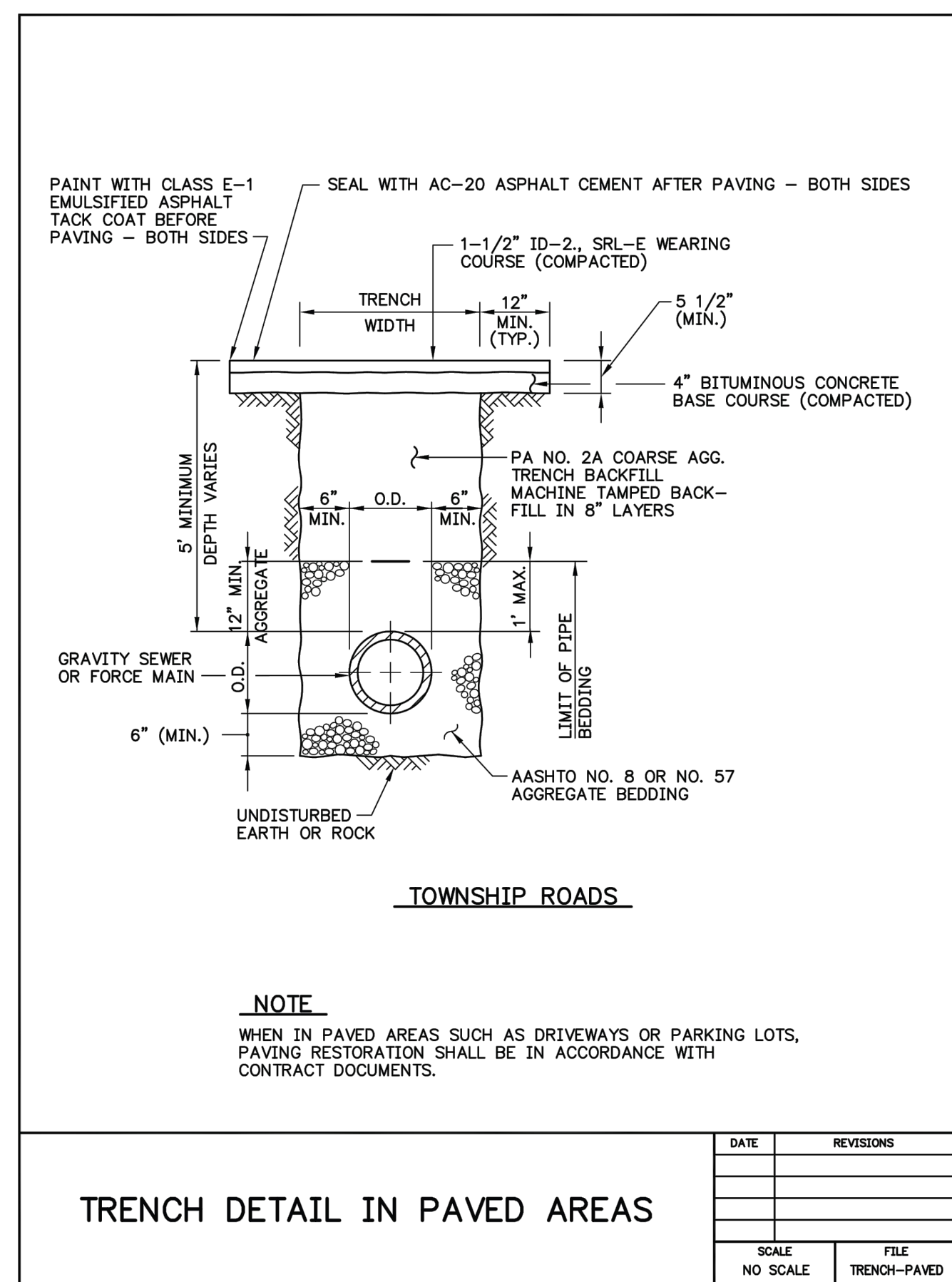
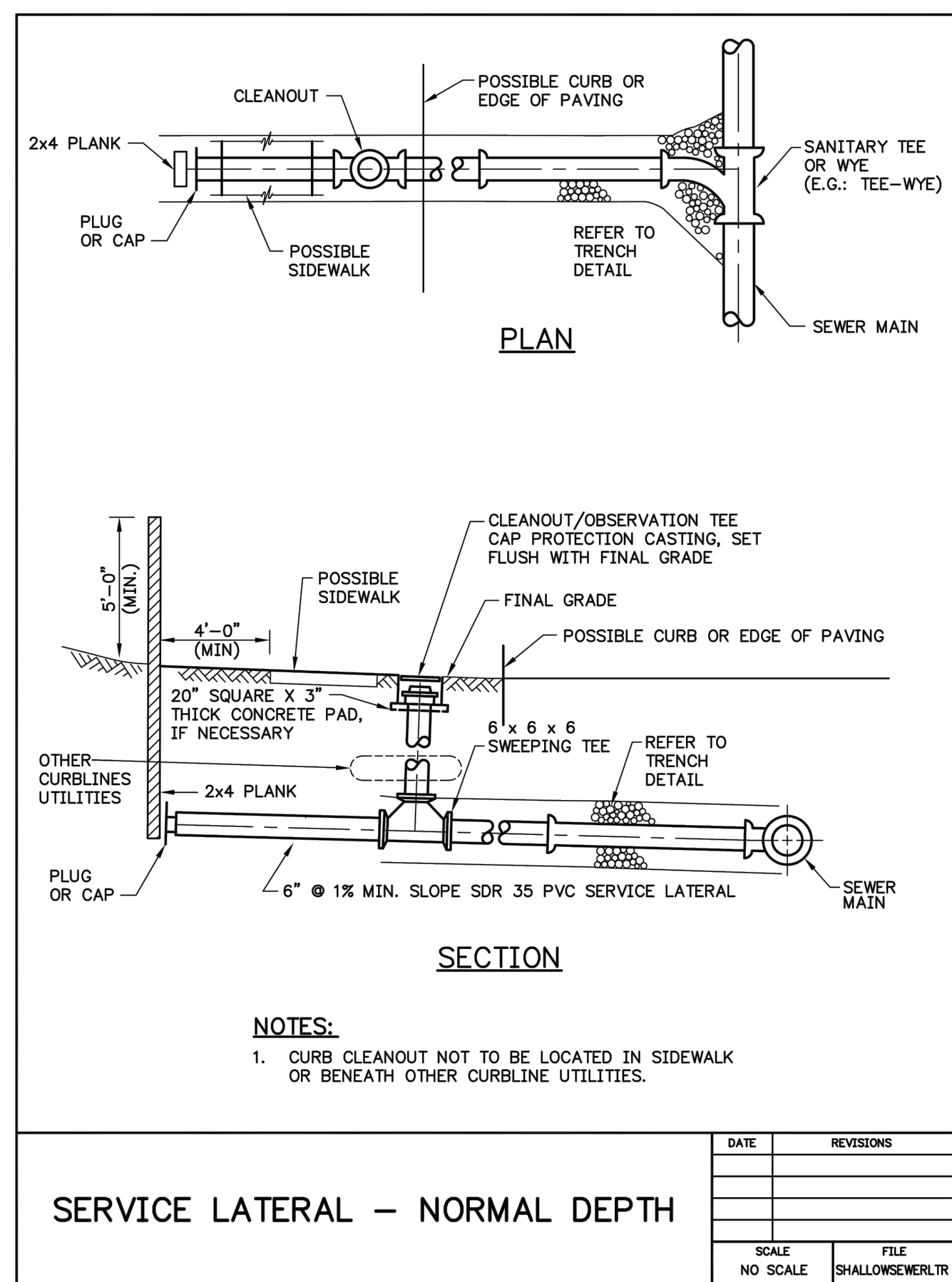
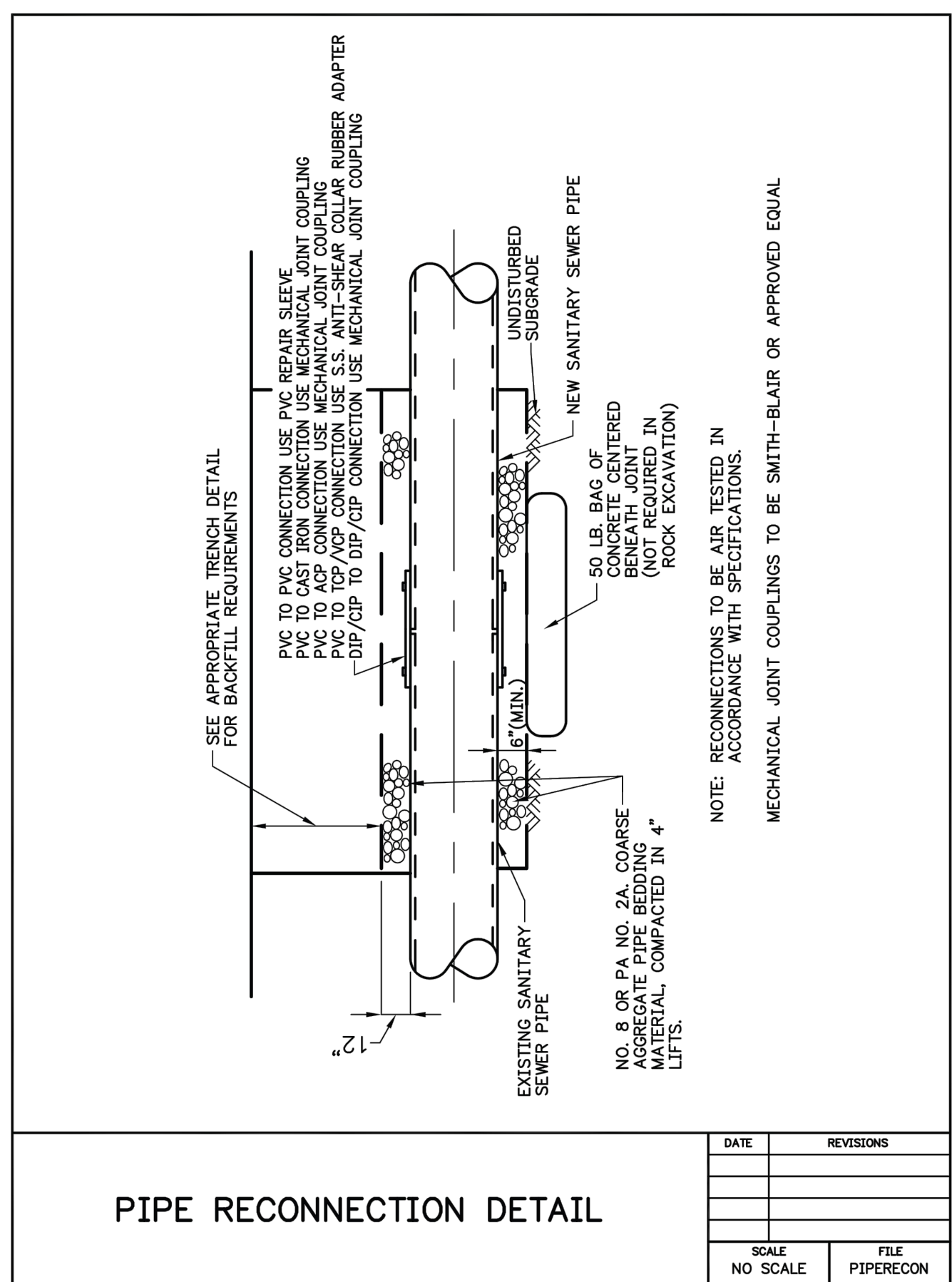
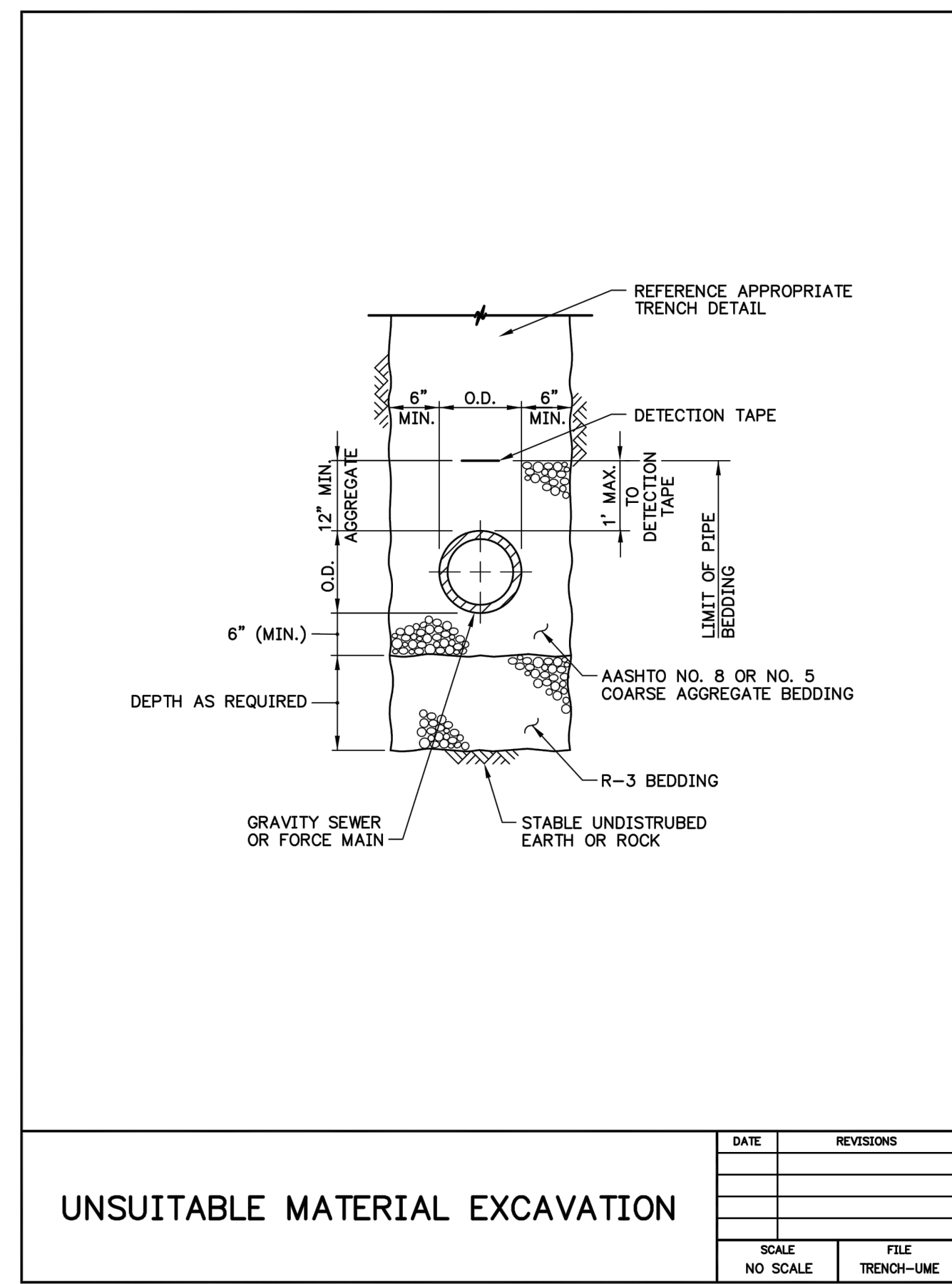
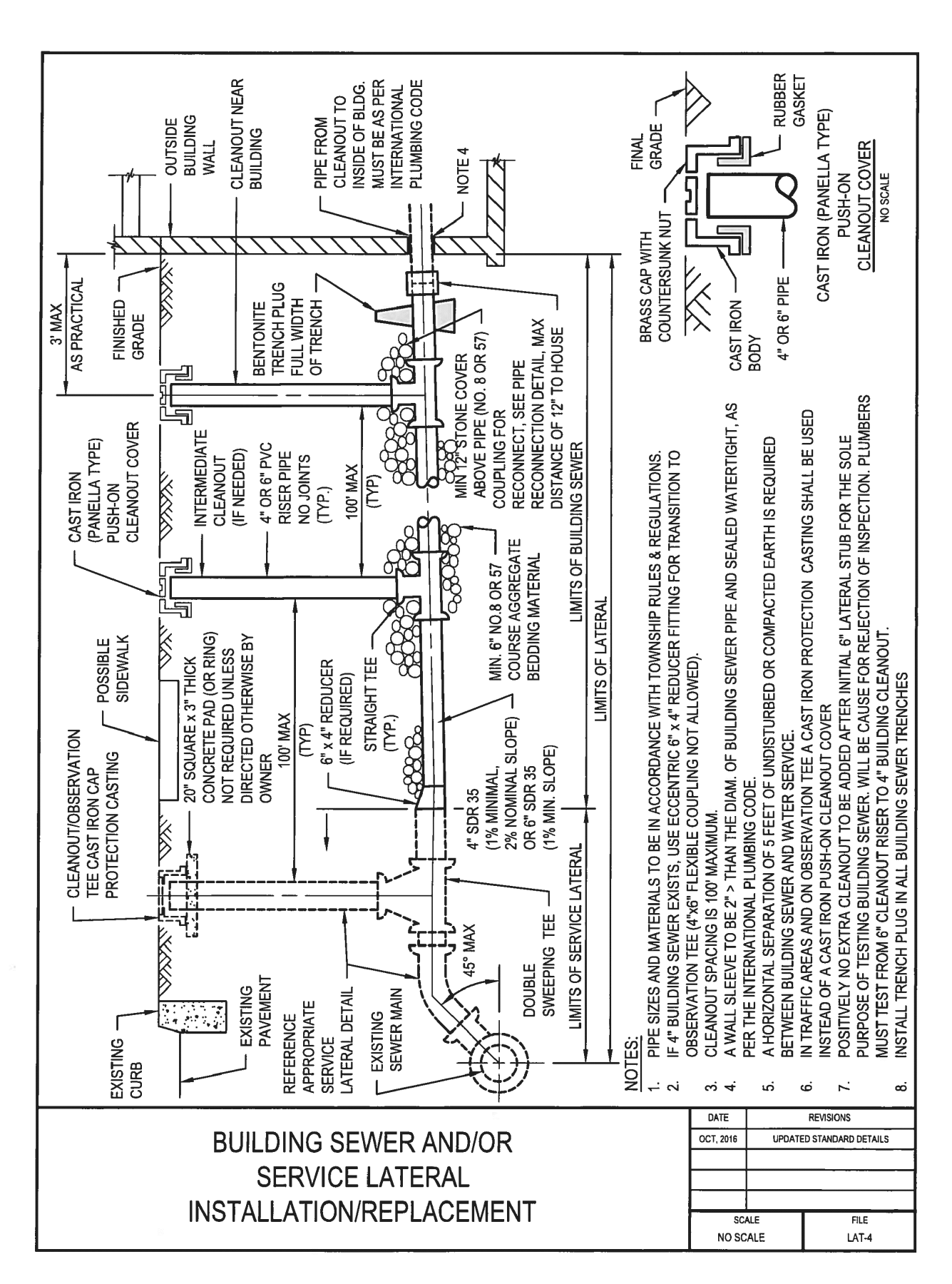
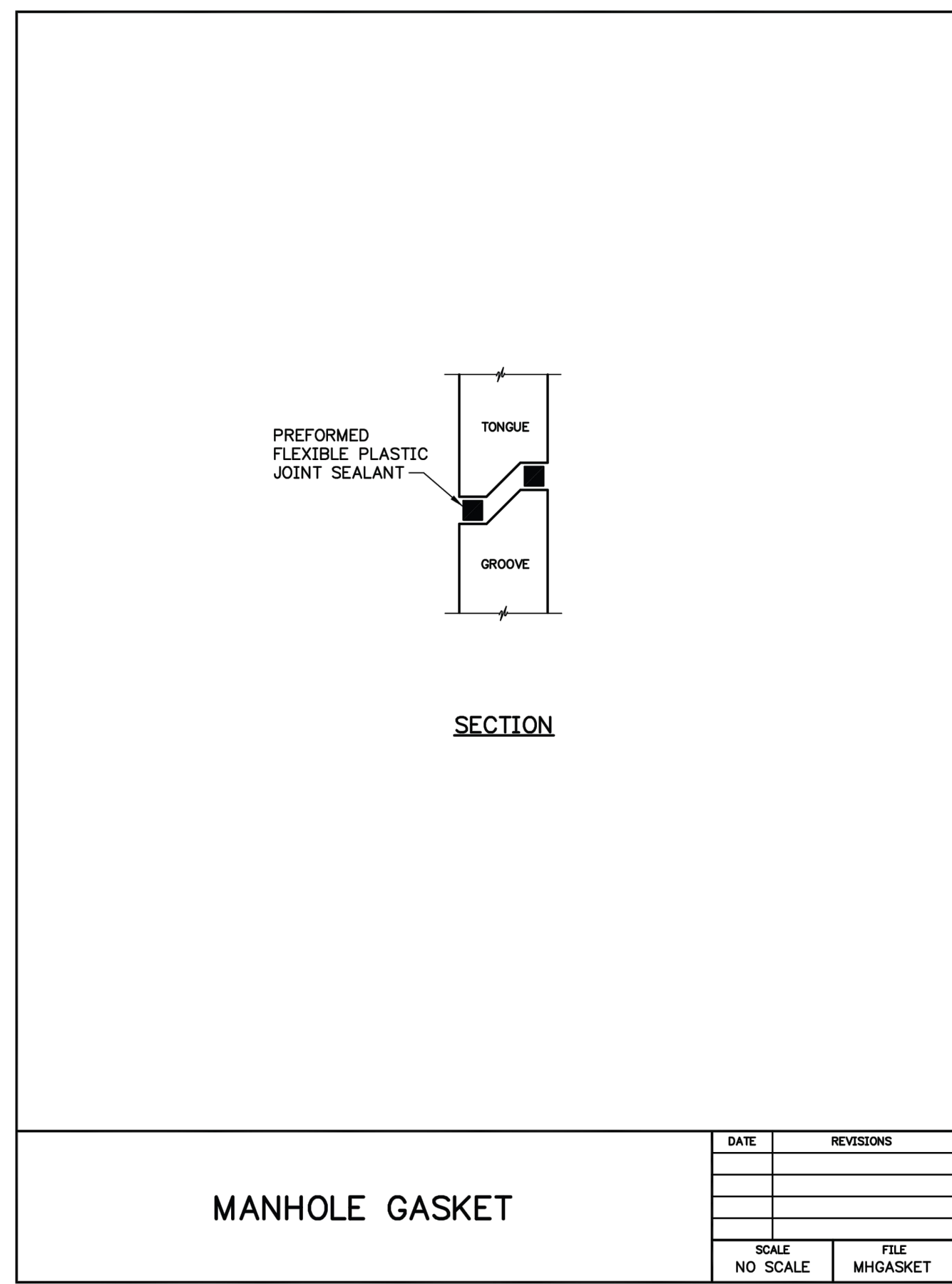
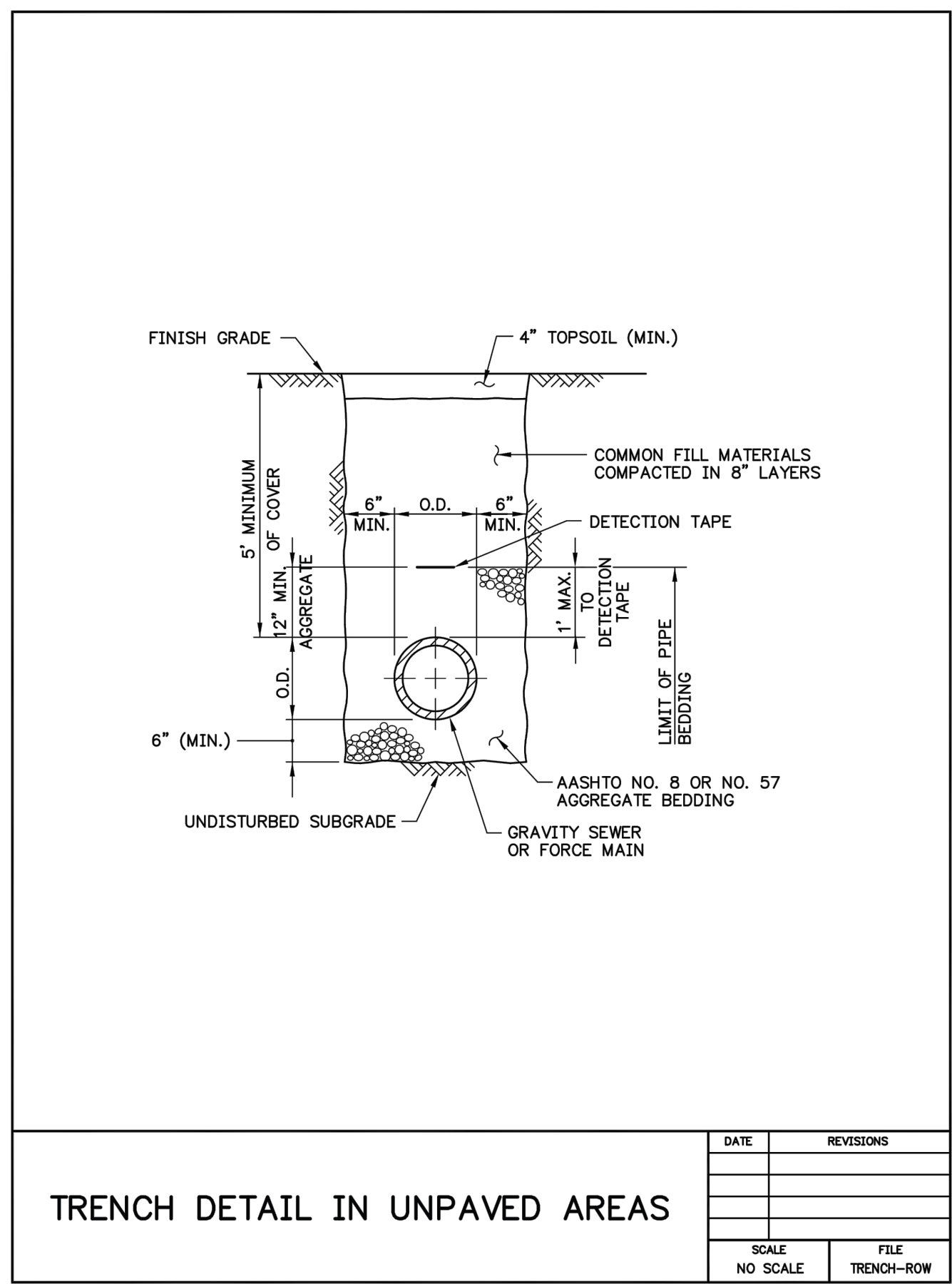
PCSM & LANDSCAPE DETAILS
FOR THE
ESTATES AT MARGARET'S GROVE, PH. 2
LOCATED IN
SUSQUEHANNA TOWNSHIP, DAUPHIN COUNTY, PA

NO.	REVISION	COMMENTS	DATE
1	TOWNSHIP COMMENTS		08/05/22
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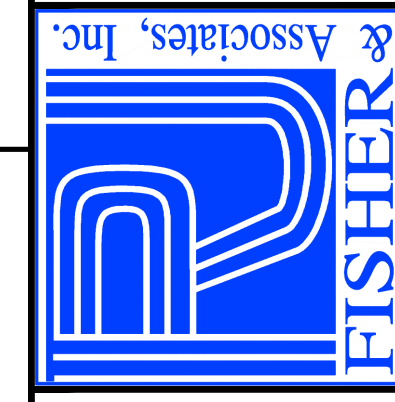
DRAWING ID: 220092-DTL
PROJECT: 220092
DATE: 06/10/22
SHEET: 14 OF 20

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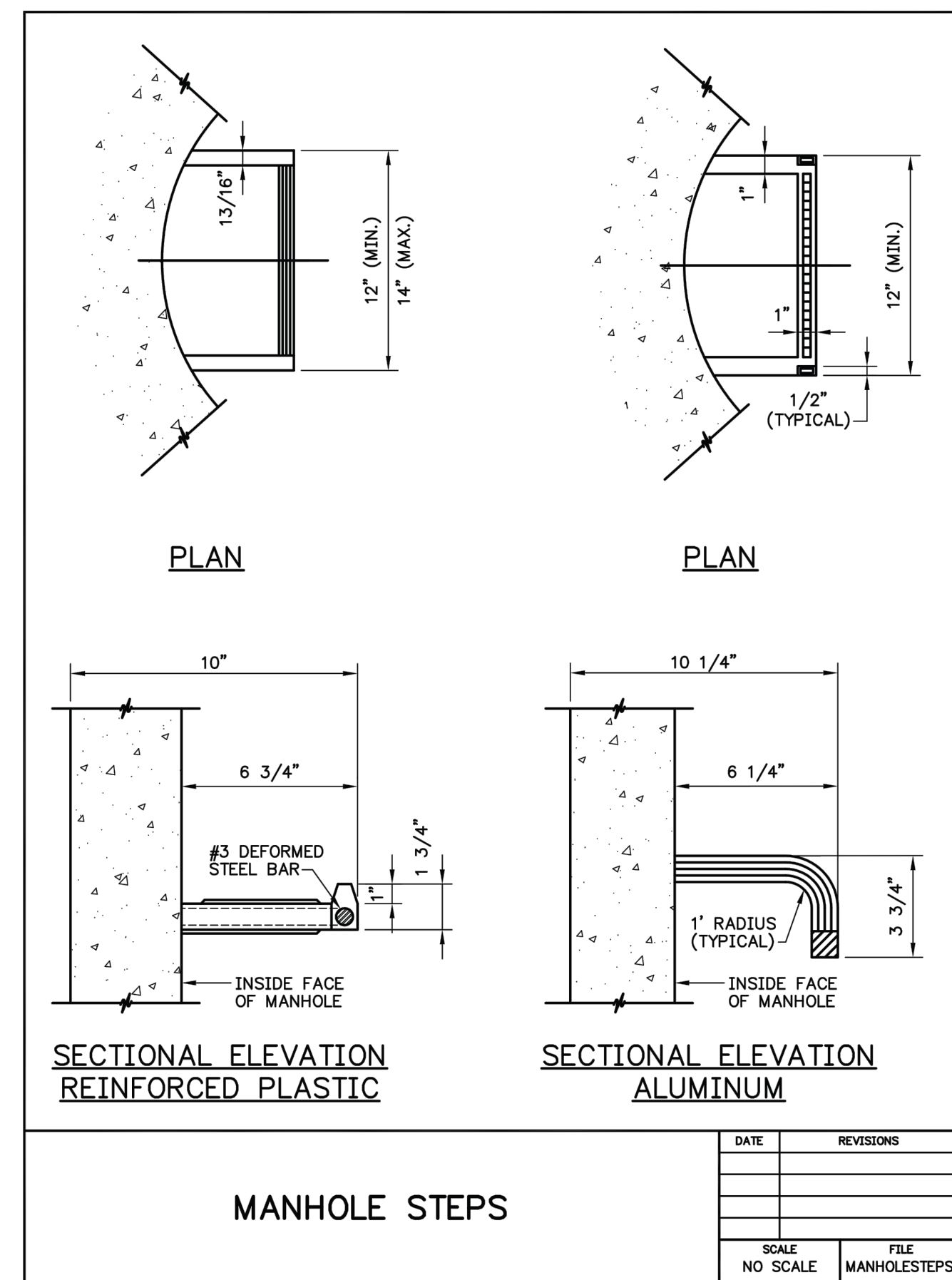
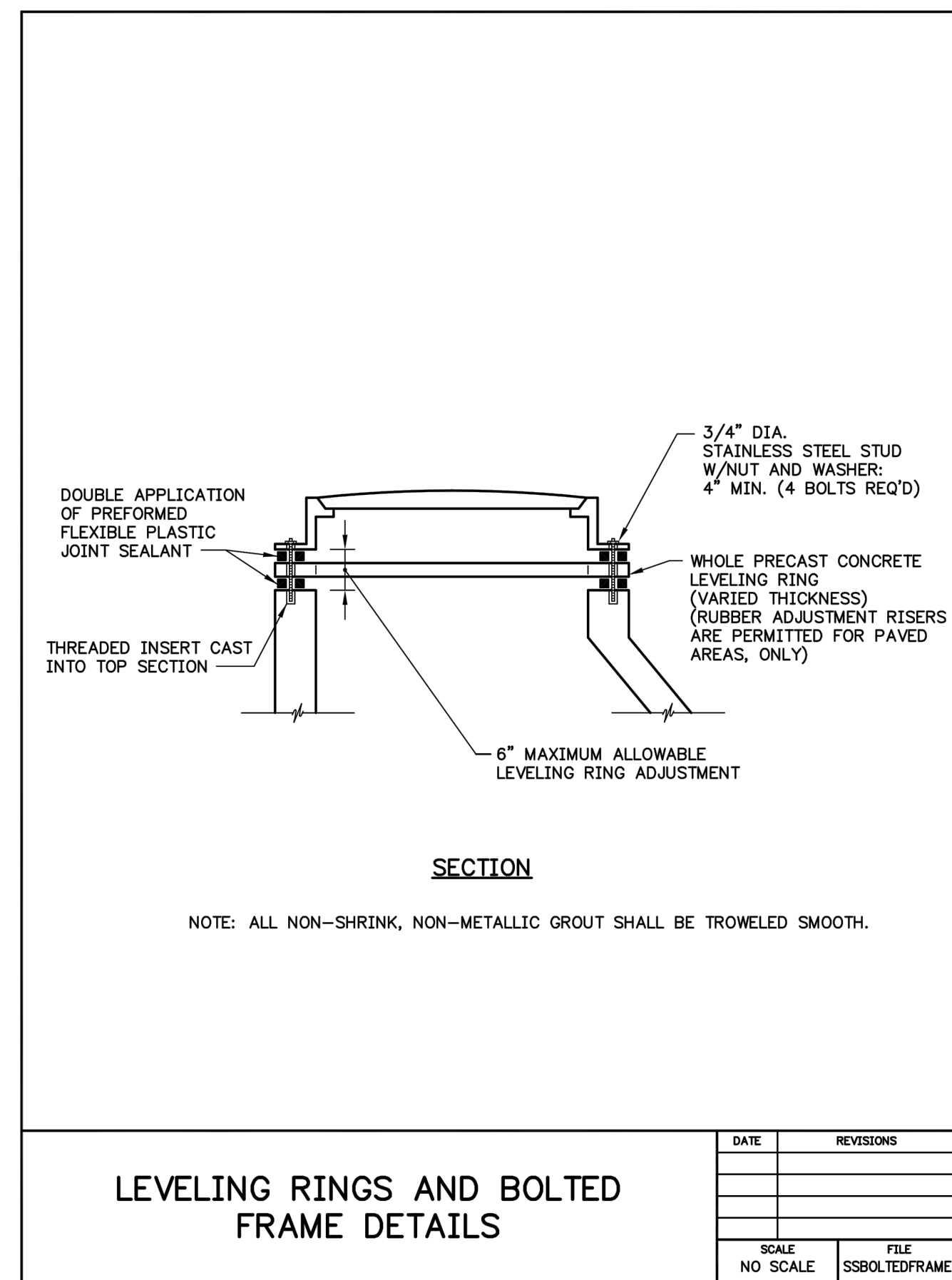
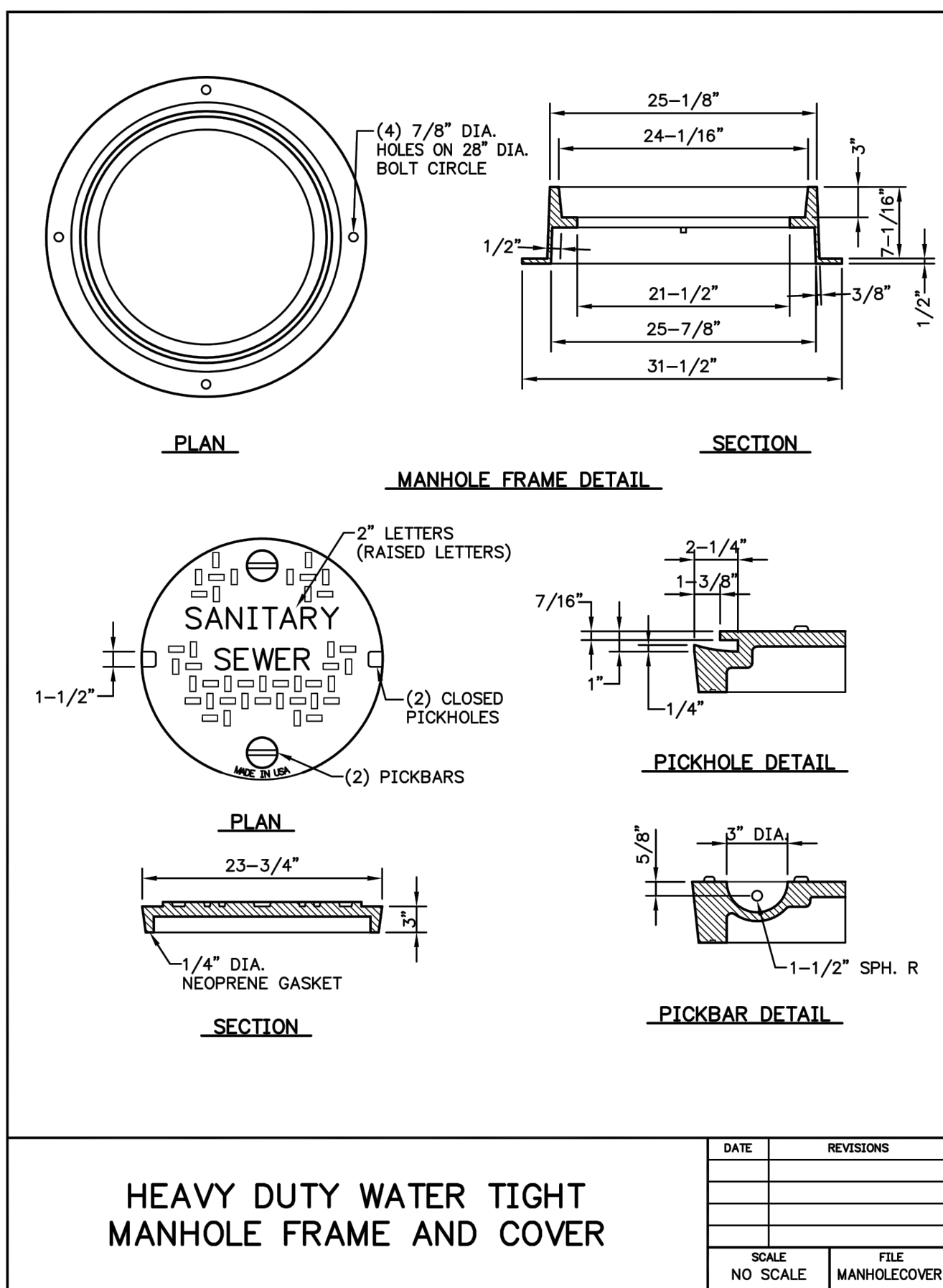
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SANITARY SEWER DETAILS
FOR THE
ESTATES AT MARGARET'S GROVE, PH. 2
LOCATED IN
SUSQUEHANNA TOWNSHIP, DAUPHIN COUNTY, PA

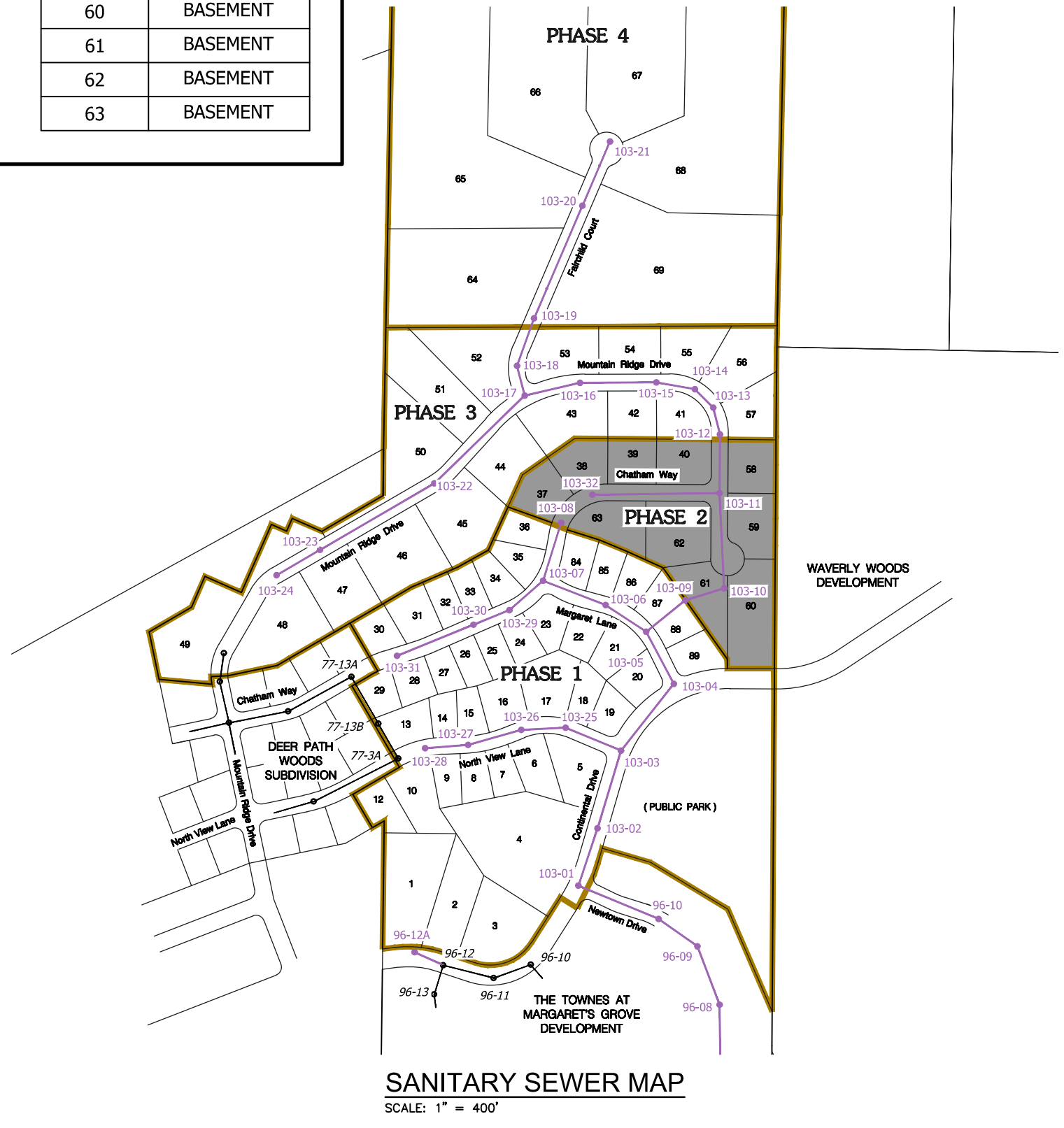
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LEVEL OF SANITARY SERVICE

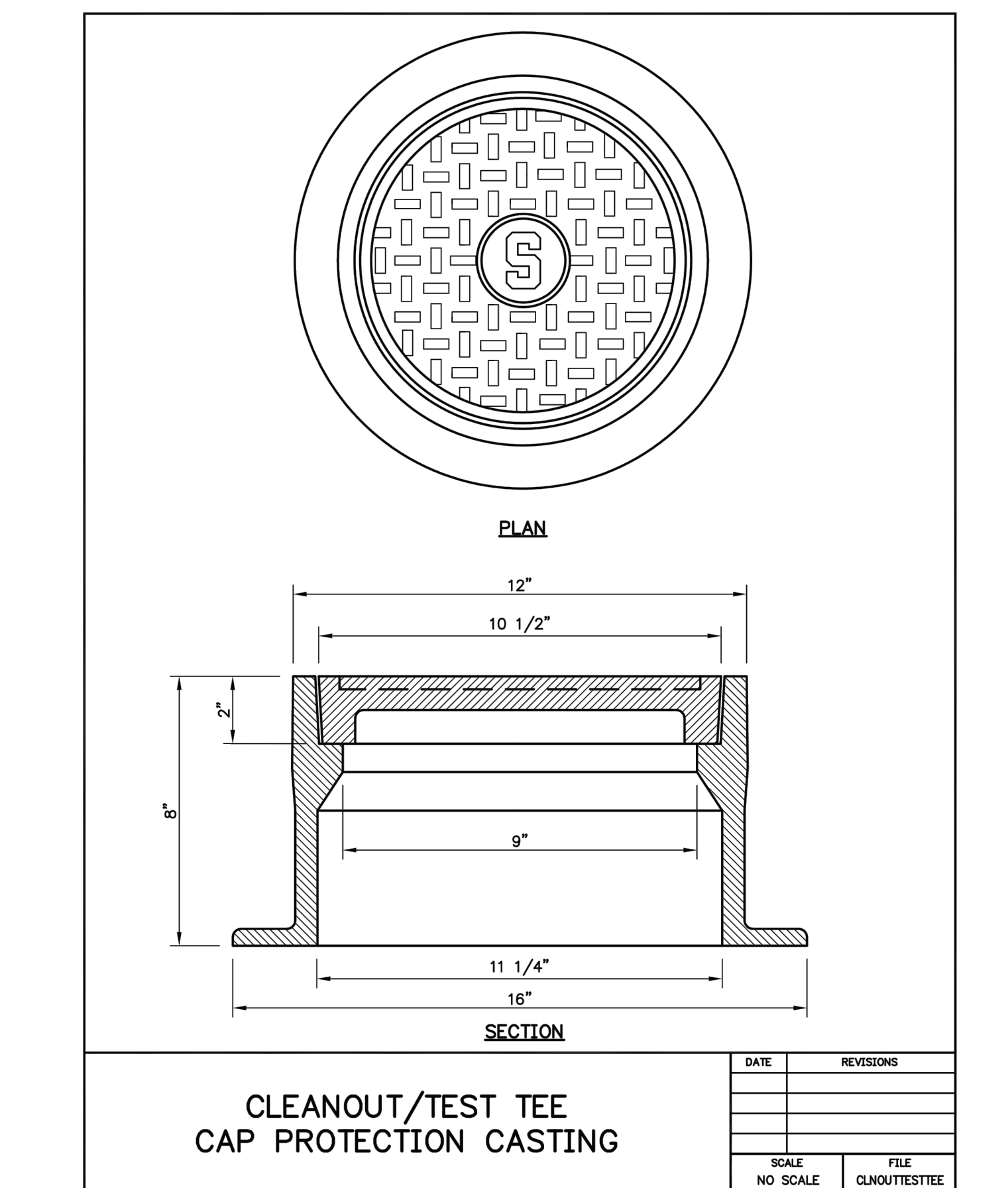
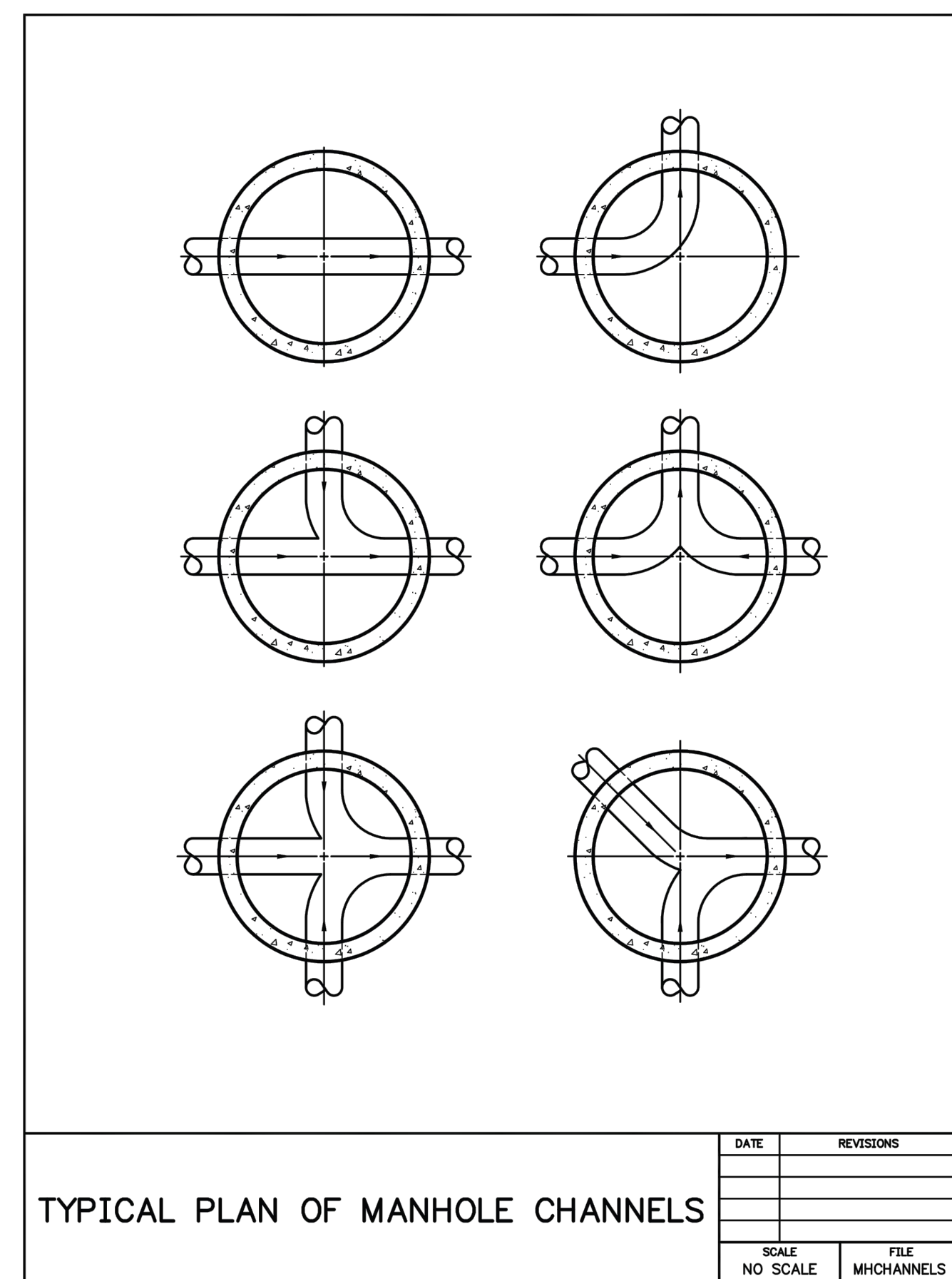
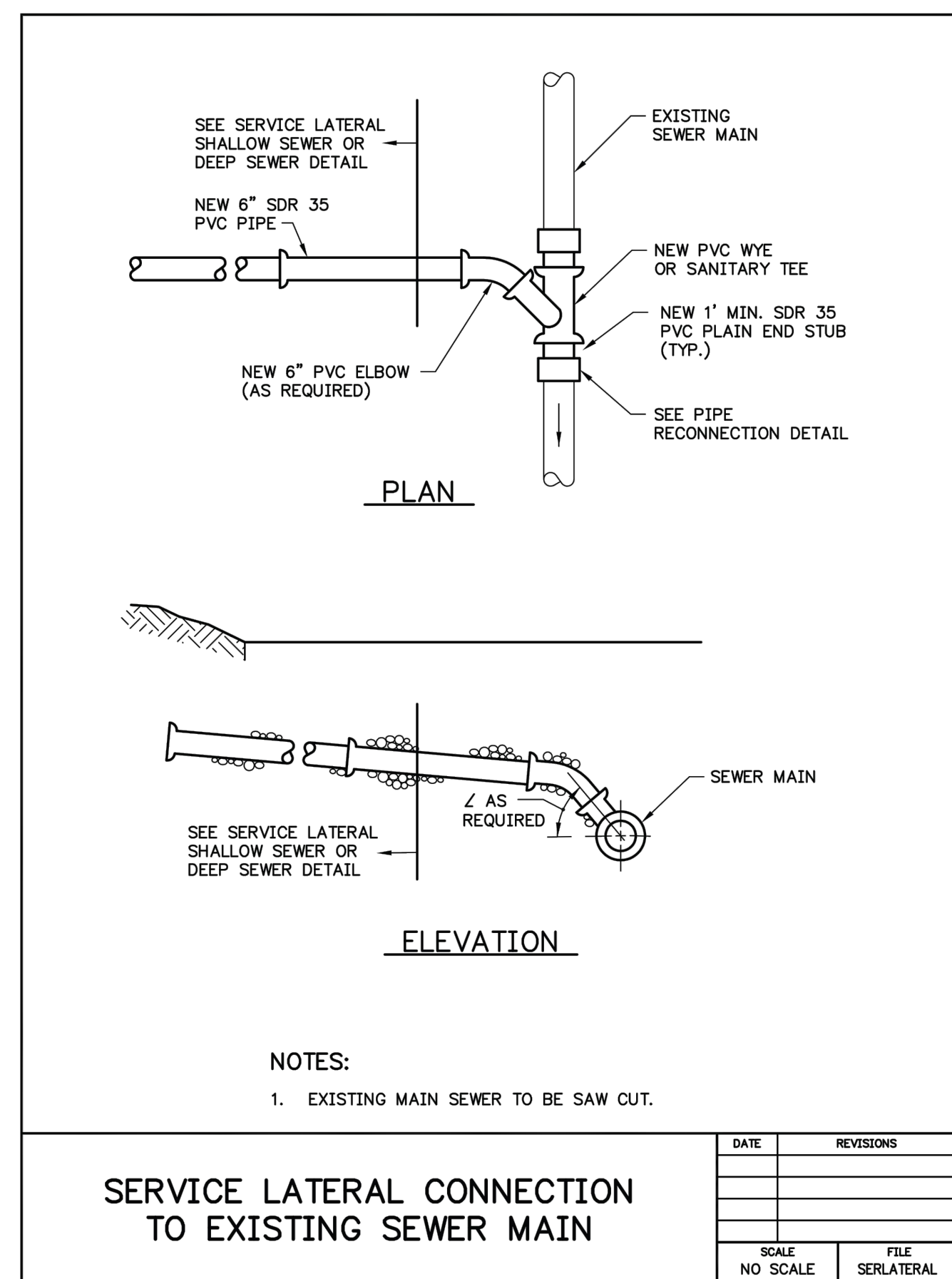
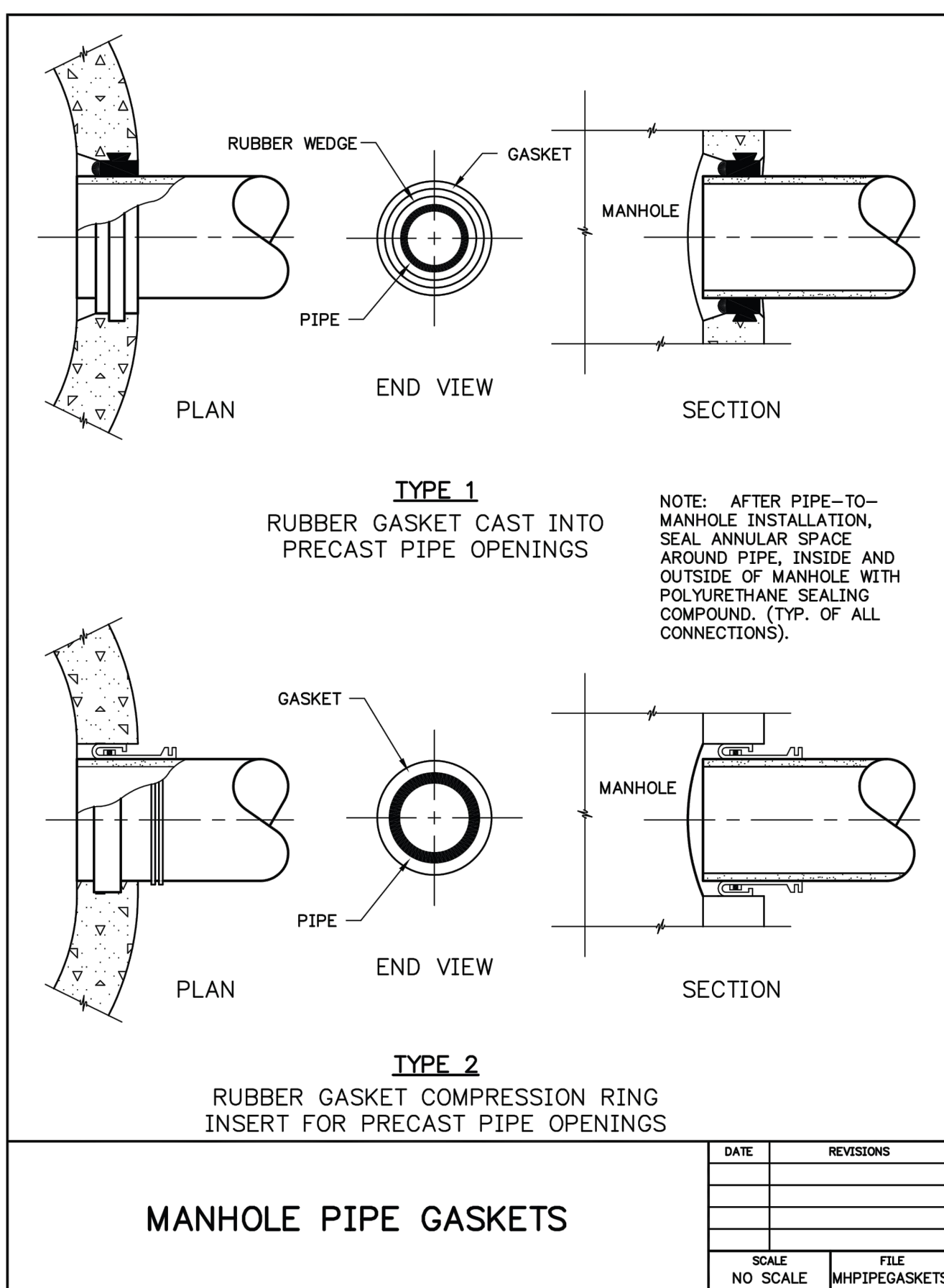
LOT NO.	LEVEL OF SERVICE
37	BASEMENT
38	BASEMENT
39	BASEMENT
40	BASEMENT
58	BASEMENT
59	BASEMENT
60	BASEMENT
61	BASEMENT
62	BASEMENT
63	BASEMENT

- SANITARY SEWER NOTES:**
1. ALL MATERIALS USED AND CONSTRUCTION METHODS EMPLOYED ARE TO BE IN ACCORDANCE WITH THE LATEST STANDARDS OF THE SUSQUEHANNA TOWNSHIP AUTHORITY.
 2. FOR SEWER DETAIL DRAWINGS REFERENCE STANDARD CONSTRUCTION AND MATERIAL SPECIFICATIONS, SUSQUEHANNA TOWNSHIP AUTHORITY.
 3. CONTRACTOR SHALL TEST PIT ALL EXISTING UTILITY CROSSINGS PRIOR TO INSTALLING ANY SANITARY SEWER PIPE TO VERIFY EXISTING HORIZONTAL AND VERTICAL ELEVATIONS TO ASSURE NO CONFLICT WITH NEW SEWER.
 4. NO TREES, LANDSCAPE WALLS, ETC. SHALL BE INSTALLED WITHIN LIMITS EASEMENT IN ACCORDANCE WITH THE AUTHORITY'S STANDARD DEED OF DEDICATION.
 5. LATERALS ARE TO BE 6" IN DIAMETER.



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SANITARY SEWER DETAILS
 FOR THE
ESTATES AT MARGARET'S GROVE, PH. 2
 LOCATED IN
 SUSQUEHANNA TOWNSHIP, DAUPHIN COUNTY, PA

DRAWING ID: 220092-DTL
 PROJECT: 220092
 DATE: 06/10/22
 SHEET: 16 OF 20

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EROSION CONTROL PLAN

GENERAL NOTES

- The site contractor and their designees shall familiarize themselves with this Erosion Control Plan. The site contractor shall be responsible for implementation of this Erosion Control Plan.
- The site contractor shall not disturb more area than is necessary for the task to be done, so that potential for erosion is minimized.
- The site contractor shall ensure that earth disturbance activities are planned and implemented to the extent practicable in accordance with the following:
 - Minimize the extent and duration of the earth disturbance.
 - Maximize protection of existing drainage features and vegetation.
 - Minimize soil compaction.
 - Utilize other measures or controls that prevent or minimize the generation of increased stormwater runoff.
- Erosion and sedimentation controls must be constructed, stabilized, and functional before site disturbance within the tributary areas to the controls.
- A copy of the approved Erosion and Sediment Control Plan / Drawings (stamped, signed and dated by the reviewing agency) must be available at the project site at all times.
- Areas to be filled are to be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots and other objectionable material.
- Clearing, grubbing, and topsoil stripping shall be limited to those areas described in each stage of the construction sequence. General site clearing, grubbing and topsoil stripping may not commence in any stage or phase of the project until the E & S BMPs specified by the Construction Sequence for that stage or phase have been installed and are functioning as described in this document.
- At no time shall construction vehicles be allowed to enter areas outside the limit of disturbance boundaries shown on the plan maps. These areas must be clearly marked and fenced off before clearing and grubbing operation begin.
- Topsoil stockpile heights shall not exceed 35 feet. Stockpile side slopes must be 2:1 or flatter.
- Solids, trash and other pollutants shall be disposed in accordance with federal and state regulations in order to prevent any pollutant in such materials from adversely affecting the environment. All building materials and wastes must be removed from the site and recycled or disposed in accordance with the Department of Environmental Protection's Solid Waste Management regulations at 25 Pa. Code 260.261 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 the site.
- All off-site waste and borrow areas must have an E & S Plan approved by the Conservation District or DEP, and fully implemented prior to being activated.
- The contractor will be responsible for the removal of any excess material and make sure the site(s) receiving the excess has an approved and fully implemented erosion and sediment control plan that meets the conditions of Chapter 102 and/or other State or Federal regulations.
- The contractor is responsible for ensuring that any material brought onto the site is Clean Fill. Form FP-001 must be retained by the property owner for any fill material affected by a spill or release of a regulated substance but qualifying as Clean Fill due to analytical testing.
- Areas which are to be topsoiled shall be scarified to a minimum depth of 4 inches prior to placement of topsoil. Areas to be vegetated shall have a minimum 4 inches of topsoil in place prior to seeding and mulching. Fill outcrops shall have a minimum of 2 inches of topsoil.
- All graded areas shall be permanently stabilized immediately upon reaching finished grade. Cut slopes in competent bedrock and rock fills need not be vegetated.
- Cut and fill slopes shall be capable of resisting failure due to slumping, sliding, or other movements.
- All E & S BMPs must remain functional as such until all areas tributary to them are permanently stabilized or until they are replaced by another BMP approved by the Conservation District or PA DEP.
- After final site stabilization has been achieved, temporary E & S BMPs must be removed or converted to permanent post construction stormwater management BMPs. Areas disturbed during removal or conversion of the BMPs must be stabilized immediately. In order to ensure rapid revegetation of disturbed areas, such removal / conversions should be done only during the germinating season.
- Failure to correctly install E & S BMPs, failure to prevent sediment-laden runoff from leaving the construction site, or failure to take immediate corrective action to resolve failure of E & S BMPs 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 Pennsylvania Clean Streams law. The Clean Streams law provides for up to \$10,000 per day in civil penalties, up to \$10,000 in summary criminal penalties, and up to \$25,000 in misdemeanor criminal penalties for each violation.
- Only limited disturbance will be permitted to initially access and acquire borrow to construct control facilities, before general site alteration begins.
 - If fuel or other dangerous chemicals are stored on site, then a Preparedness, Prevention and Contingency (PPC) Plan must be developed and kept on site.
- Underground utilities cutting through any active channel shall be immediately backfilled and the channel restored to its original cross-section and protective lining. Any base flow within the channel shall be conveyed past the work in the manner described in this plan until such restoration is complete.
- All channels must be kept free of obstructions such as fill ground, fallen leaves & woody debris, accumulated sediment, and construction materials/wastes. Channels shall be kept mowed and/or free of all weeds, brushy or woody growth. Any underground utilities running across/through the channel(s) shall be immediately backfilled and the channel(s) repaired and stabilized per the channel cross-section detail.
- Vegetated channels shall be constructed free of rocks, tree roots, stumps or other projections that will impede normal channel flow and/or prevent good lining to soil contact. The channel shall be initially over-excavated to allow for the placement of topsoil.
- Sediment basins/traps shall be kept free of all trash, concrete wash water and other debris that pose the potential for clogging the basin/trap outlet structures and/or pose the potential for pollution to waters of the Commonwealth.
- All building materials and wastes shall be removed from the site and recycled or disposed of in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code 260.261 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 the site.
- Fill Materials:
 - The NPDES Permit covers the "moving, depositing, stockpiling, or storing of soil rock or earth materials." If the site will import the project materials to the project site, the responsibility for performing environmental due diligence and the determination of clean fill will in most cases reside with the Operator. If the site will have excess fill that will need to be exported to an off site location, the responsibility of clean fill determination and the environmental due diligence rests on the applicant. If all cut and fill materials will be used on the site, a clean fill determination is not required by the operator unless there is a belief that a spill or release of a regulated substance occurred on site. The contractor is responsible for ensuring that any material brought onto the site is Clean Fill. Form FP-001 must be retained by the property owner for any fill material affected by a spill or release of a regulated substance but qualifying as Clean Fill due to analytical testing.
 - Applicants and/or operators must use environmental due diligence to ensure that the fill material associated with this project qualifies as Clean Fill. Definitions of Clean Fill and Environmental Due Diligence are provided below. All fill material must be used in accordance with the Department's policy "Management of Fill", document number 258-2182-773. A copy of this policy is available online at www.depweb.state.pa.us. Under the heading "Quick Access on the left side of the screen, click on "Forms and Publications." On the left side of the screen click on "Technical Guidance Documents-- Final." Then type the document number 258-2182-773 into the search window and conduct the search. Click on "Management of Fill."
 - Clean Fill is defined as: Uncontaminated, non-water soluble, non-decomposable, inert, solid material. The term includes soil, rock, stone, dredged 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 or asphalt that has been 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."
 - Environmental due diligence: Investigative techniques, including, but not limited to, visual property inspections, electronic data base 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.
 - All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures and conduits, etc. shall be compacted in accordance with local requirements or codes.
 - All earthen fills shall be placed in compacted layers not to exceed 9 inches in thickness.
 - Fill materials shall be free of frozen particles, brush, roots, sod, or other foreign or objectionable materials that would interfere with or prevent construction of satisfactory fills.
 - Frozen materials or soft, mucky, or highly compressible materials shall not be incorporated into fills.
 - Fill shall not be placed on saturated or frozen surfaces.
 - Seeps or springs encountered during construction shall be handled in accordance with the standard and specification for subsurface drain or other approved methods.
 - The potential for thermal impacts exists in the temporary condition as the existing vegetation on the site is disturbed, and un-shaded water will sit in the sediment trap. The thermal impacts will be minimized through the use of vegetated swales, by infiltrating a portion of the runoff and temporary and permanent seeding of the disturbed areas as soon as possible.

SOIL LIMITATIONS & RESOLUTIONS

As are most soils in PA, the soils on this site tend to be moderately erodible and may be susceptible to landslides and piping. A solution to this limitation is to grade the site at acceptable slopes (2:1 cut, 3:1 fill), and to stabilize the slopes as soon as they've been graded. The soils on this site can also be moderately corrosive to concrete and steel, which the use of plastic pipes will help to alleviate. Additionally, all of the water and sanitary lines will be constructed at an appropriate depth to avoid issues with the frost action limitation found in these soils. As are most soils in PA, the soils on this site can lead to cut banks that may cave. Proper stabilization will be utilized when digging pipe trenches and home basements. Most of the soils on this site have both a moderate rate of infiltration and water transmission, although some areas of the site are being protected through infiltration tests were performed in the area of the infiltration basins to ensure that these moderate rates are suitable.

STABILIZATION SPECIFICATIONS

- Upon temporary cessation of an earth disturbance activity or any stage or phase of an activity where a cessation of earth disturbance activities will exceed 4 days, the site shall be immediately seeded, mulched, or otherwise protected from accelerated erosion and sedimentation pending future earth disturbance activities.
- Permanent stabilization is defined as 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.
- Topsoil required for the establishment of vegetation shall be stockpiled at the location(s) shown on the plan drawings in the amount necessary to complete the finish grading of all exposed areas that are to be stabilized by vegetation. Each stockpile shall be protected in the manner shown on the plan drawings. Topsoil stockpile heights shall not exceed 35 feet. Stockpile side slopes must be 2:1 or flatter.
- Areas which are to be topsoiled shall be scarified to a minimum depth of 3 to 5 inches (6 to 12 inches on compacted soils) prior to placement of topsoil. Areas to be vegetated shall have a minimum 4 inches of topsoil in place prior to seeding and mulching. Fill outcrops shall have a minimum of 2 inches of topsoil.
- Topsoil should not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet, or in a condition that may otherwise be detrimental to proper grading and seeded preparation. Compacted soils should be scarified 6 to 12 inches along contour whenever possible prior to seeding.
- An erosion control blanket will be installed on all disturbed slopes 3:1 or steeper, all areas of concentrated flows, and disturbed areas within 50' of a surface water.

TEMPORARY SEEDING SCHEDULE

The contractor shall immediately temporarily stabilize any rough graded area, topsoil stockpile or unused excavated fill material that will be left idle for more than 1 year. The grass will provide interim protection against the impact of precipitation, running water and wind. Permanently seed any area that will be idle for more than 1 year.

Temporary seeding schedule is as follows:

- Species: annual rye grass
% Live Seed: 98%
Application rate: 10 lbs./1,000 sq. yds.
Fertilizer type: general purpose granular, 10-20-20
Fertilizer application rate: 11 lbs./1,000 sq. yds.
Powdered Liming rate: per soil test; minimum of 4 tons per acre.
Strawble mulch rate: 1,200 lbs./1,000 sq. yds.
Seeding dates: no seeding between 11/1 and 3/15
Mulch anchoring: Asphalt, either emulsified or cut-back, containing no solvents or other diluting agents toxic to plant or animal life, uniformly applied at the rate of 31 gallons per 1,000 square yards.
Synthetic binders (chemical binders) may be used per manufacturer's recommendation provided they are non-toxic to plant and animal species.

When seeding is not possible due to the time of year or other limitations, disturbed area shall be mulched with strawblows at the rate above. An erosion control blanket must be installed on all disturbed slopes steeper than 3:1, and all areas with concentrated flows. Matting can be North American Green 'S75' or approved equal.

PERMANENT SEEDING SCHEDULE--

All disturbed soil not to be covered with impervious surfaces, riprap or landscaping mulch shall be permanently seeded to provide protection against the impact of precipitation, running water and wind. Permanent seeding schedule for the general project area is as follows:
Species:
30% Kentucky bluegrass
40% Pennlawn Creeping Red Fescue
20% Norfolk Perennial ryegrass
10% annual ryegrass
% Pure live seed: 98%
Application rate: 6 lbs./1,000 sq. ft.
Fertilizer type: general purpose granular, 10-20-20
Fertilizer application rate: 11 lbs./1,000 sq. yds.
Powdered Liming rate: per soil test; minimum of 6 tons per acre
Seeding dates: between 4/1 and 10/15
Strawble mulching rate: 3 tons per acre
Mulch anchoring: Asphalt, either emulsified or cut-back, containing no solvents or other diluting agents toxic to plant or animal life, uniformly applied at the rate of 31 gallons per 1,000 square yards.
Synthetic binders (chemical binders) may be used per manufacturer's recommendation provided they are non-toxic to plant and animal species.

An erosion control blanket must be installed on all disturbed slopes steeper than 3:1, and all areas with concentrated flows. Matting can be North American Green 'S75' or approved equivalent.

A minimum of 6" of topsoil shall be placed prior to seeding.

MAINTENANCE PLAN

- Until the site is stabilized, all erosion and sediment control BMPs must be maintained properly. Responsibility for implementing and maintaining erosion and sedimentation control measures shall be designated to a minimum of one individual who will be present at the project site each working day. Maintenance must include inspections of all erosion and sediment control BMPs after each runoff event and on a weekly basis, to ensure that they are in place, stable, and functioning properly. All preventative and remedial maintenance work, including clean out, repair, replacement, re-grading, re-seeding, re-mulching, and re-netting must be performed immediately, to restore the control measure to the original design. If erosion and sediment control BMPs fail to perform as expected, replacement BMPs, or modifications of those installed, will be required.
- A log showing dates that E & S BMPs were inspected as well as any deficiencies found and the date they were corrected shall be maintained on the site and be made available to regulatory agency officials at the time of inspection.
- Any sediment removed from BMPs during construction shall be returned to upland areas within the project area, and incorporated into the site grading, or in the manner described on the plan drawings.
- See the construction details and seeding specifications for maintenance procedures for the various control measures.
- Mud must be removed from vehicle tires before they exit the site. Sediment tracked onto any public roadway or sidewalk shall be returned to the construction site by the end of each work day and disposed in the manner described in this plan. In no case shall the sediment be washed, shoveled, or swept into any roadside ditch, storm sewer or surface water.

STAGING OF EARTH MOVING ACTIVITIES

- A licensed professional or a designee shall be present on site during construction of the following critical stages of implementation of the approved PCSM plan:
 - MRC BMPs 2, 3 & 5 Clay Core and Key Trench
 - MRC BMPs 2, 3 & 5 Anti-Seed Collars
 - MRC BMPs 2 & 5 Underdrains
 - Amended Soils for MRC BMPs 2 & 5
- 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 the location of existing underground utilities.
- All earth disturbance activities shall proceed in accordance with the following specific sequencing. Each stage shall be completed and immediately stabilized before any following stage is initiated. Clearing, grubbing and topsoil stripping shall be limited only to those areas described in each stage. Any deviation from the following sequence must be approved in writing from the County Conservation District.
 - Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the operator shall implement appropriate best management practices to minimize the potential for accelerated erosion and sediment pollution and notify the local conservation district and/or the regional office of the Department.
- At least 7 days before starting any earth disturbance activities, the owner and/or operator shall invite all contractors involved in those activities, the landowner, all appropriate municipal officials, and a representative of the County Conservation District to an on-site pre-construction meeting.
- Immediately after earth disturbance activities cease in any area or subarea of the project, the operator shall stabilize all disturbed areas. During non-germinating months, mulch or protective blanketing shall be applied as described in the plan. Areas not at finished grade, which will be reactivated within 1 year, may be stabilized in accordance with the temporary stabilization specifications. Those areas which will not be reactivated within 1 year shall be stabilized in accordance with the permanent stabilization specifications.
- All pumping of sediment laden water shall be through a sediment control BMP, such as a pumped water filter bag or equivalent sediment removal facility, over undisturbed vegetated areas.

SPECIFIC STAGING OF EARTHMOVING ACTIVITIES FOR MASS GRADING AND INSTALLATION OF COMMON IMPROVEMENTS

- No earth disturbance should be started until the E&S BMP's treating the disturbed area are installed and functioning.
- Clearly field mark the limits of disturbance. Install the rock construction entrance. The rock construction entrance shall be continually maintained to the specified dimensions. A stockpile of AASHTO #1 coarse aggregate shall be on the site for this purpose. At the end of each workday, any sediment deposited on paved roadways shall be removed and returned to the construction site. Field mark the topsoil stockpile locations. Topsoil stockpiles shall be stabilized utilizing the temporary seeding schedule and shall have sediment barriers located downstream to capture any sediment laden runoff. Stockpiles shall not exceed 35' in height and side slopes must be 2:1 or flatter. Field mark the locations of the Waters of the Commonwealth located within the NPDES boundary including wetland boundaries and streams. Field mark the location of the infiltration facilities.
- Install Sediment Barriers 1 through 14 at the locations shown on the E&S Plan. Disturbance shall be restricted to that which is only necessary to access and install the designated sediment barriers.
- Strip the topsoil in the area of Sediment Trap 2. Clear and grub as necessary. Construct the Sediment Trap including the outlet network and riprap apron, as well as the associated clay core, key trench and anti-seep collars. Minimize compaction within the sediment trap during construction. Install the flow diversion baffles and cleanout marker. Stabilize the sediment trap immediately once the facility is constructed. Monitor the sediment trap throughout the duration of the construction activity to ensure trapped sediment does not exceed the cleanout marker elevation. A licensed professional must be present during the installation of the clay core, key trench and anti-seep collars.
- Strip the topsoil within the remaining areas that will be graded. Clear and grub as necessary.
- Complete the mass grading. Minimize soil compaction within the undisturbed areas. Stabilize soil immediately and install temporary seeding as soon as possible. Permanent slopes of 3:1 or greater require temporary N.A.G. S75 matting as equivalent. Install Temporary Bypass Pipe T to T1 and Swales 1 & T1 to convey clean water away from the disturbed area, stabilizing the swales with matting as soon as possible. Install Sediment Barriers 15 through 17 as soon as Swales 1 & T1 are constructed.
- Install the sanitary sewer system. Backfill trenches as soon as possible. Work shall be limited to that which can be excavated, installed and backfilled in one working day.
- Install storm networks, constructing network A followed by network F. Backfill pipe trenches as soon as possible. Install the appropriate inlet protection according to the details provided as soon as possible. Inlet berms are required at every inlet within the roadway after rough grading of the roads during each stage of road construction, transitioning from earthen, to stone, to asphalt berms until the final wearing course is installed. Install Swale T2 as soon as network F is constructed to convey stormwater directly to inlet A14, stabilizing the swale with matting as soon as possible.
- Install water line and services. Install underground electric, gas, telephone, cable and any other necessary utilities.
- Install street subbase and binder course. Construction entrance may be removed with approval from the County Conservation District.
- Permanently seed and mulch as required.
- Complete construction of buildings and site improvements as necessary.
- Final pave streets.

CONVERSION TO PCSM

- Temporary control measures can only be removed when the watershed draining to the measure is permanently stabilized and removal is authorized by the County Conservation District. Permanently stabilized is defined as a minimum uniform 70% perennial vegetative cover or other permanent non-vegetative cover with a density capable to resist accelerated surface erosion, and subsurface characteristics sufficient to resist sliding and other movements. The location of the control measure must be immediately permanently stabilized upon its removal. All areas to be permanently seeded shall have a minimum depth of 6" of topsoil before seeding.
- Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and/or operators shall contact the County Conservation District for an inspection prior to the removal/conversion of the E&S BMP's.
- Any areas disturbed during the removal of the temporary BMPs shall be immediately repaired and permanently stabilized.
- Upon approval from the County Conservation District, Swale T2 shall be removed and MRC BMP 5 shall be constructed, including the installation of the Amended Soils and Underdrain. Once MRC BMP 5 is installed and stabilized, Sediment Trap 2 shall be converted to MRC BMP 2, including the installation of the Amended Soils and Underdrain. The sediment trap shall be dewatered and the cleanout stacks shall be removed. The temporary orifices in the permanent outlet structure shall be capped. All sediment deposited within the storm sewers shall be removed prior to converting the sediment trap. A temporary erosion control blanket shall be installed with the permanent seed and mulch over the entire interior of the MRC BMPs. A licensed professional must be present when the amended soils and underdrains are installed for the MRC BMPs.
- Upon approval from the County Conservation District, all appropriate silt barriers shall be properly removed.
- Upon completion of all earth disturbance activities, removal of all temporary BMPs, installation of all permanent PCSM BMPs and permanent stabilization of all disturbed areas, the owner/operators shall contact the County Conservation District for a final inspection.

SITE PRESERVATION ANALYSIS

Unnamed tributaries to Paxton Creek run along the eastern and southeastern sides of the site. The unnamed tributaries will not be impacted by the proposed development. The impervious areas were minimized to the best of our ability by reducing the number of proposed homes, narrowing the street carway and proposing a layout that minimizes unnecessary impervious areas. The proposed layout was also designed in a way that will minimize the impacts to the steep slopes as much as possible. Drainage features have been protected on this site and the impact on the vegetation has been minimized as much as possible. Clearing and grading will be restricted to only the areas where necessary. The soil will experience some compaction in all the areas where grading will occur, however compaction will be kept to a minimum in the areas of the MRC BMPs and swales. The MRC BMPs and swales are the main BMPs that will be utilized to minimize changes in stormwater runoff.

NO.	REVISION	DATE
1	TOWNSHIP COMMENTS	08/05/22
2		
3		
4		
5		

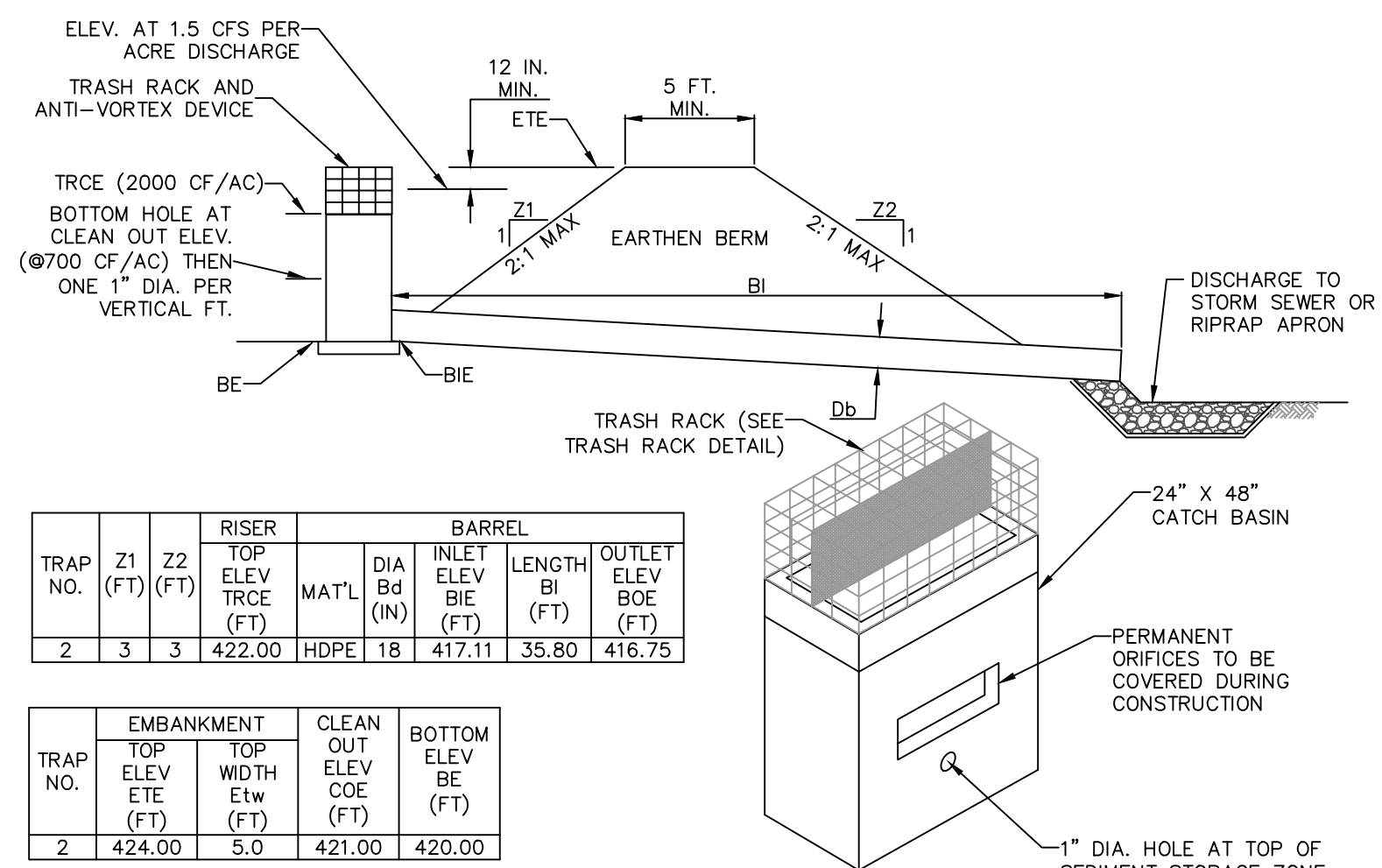
R. J. FISHER & ASSOCIATES, INC.
SITE PLANNING & CIVIL ENGINEERING & LAND SURVEYS
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PHONE: (717) 774-7534 & FAX: (717) 774-7190
RJFISHEREENGINEERING.COM



E&S POLLUTION CONTROL DETAILS
FOR
ESTATES AT MARGARET'S GROVE, PH. 2
LOCATED IN
SUSQUEHANNA TOWNSHIP, DAUPHIN COUNTY, PA

DRAWING ID:	220092-DTL
PROJECT:	220092
DATE:	06/10/22
SHEET:	17 OF 20

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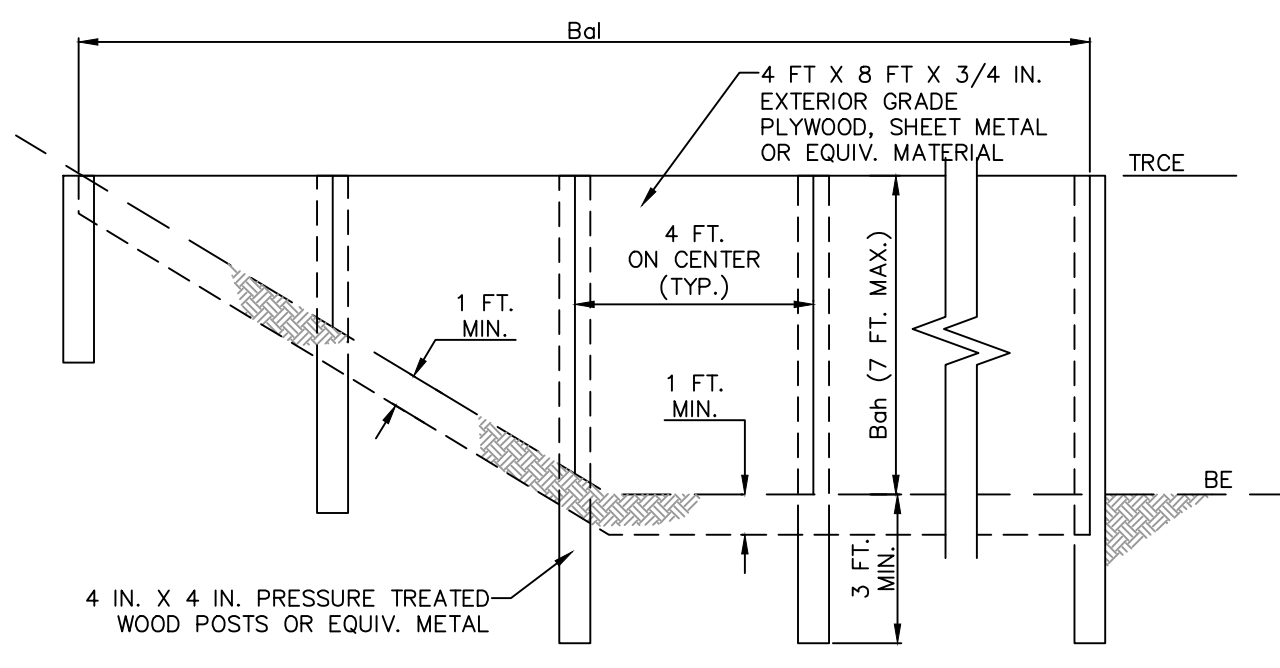


TRAP NO.	Z1 (FT)	Z2 (FT)	TOP ELEV TRCE (FT)	MATL	DIA. (IN)	INLET ELEV (FT)	LENGTH (FT)	OUTLET ELEV (FT)
2	3	3	422.00	HDPE	18	417.11	35.80	416.75

TRAP NO.	EMBANKMENT TOP ELEV ETE (FT)	CLEAN OUT TOP WIDTH Etw (FT)	BOTTOM ELEV BE (FT)
2	424.00	5.0	420.00

NOTES:
 1. FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 6 TO 9 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS.
 2. UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS.
 3. ALL SEDIMENT TRAPS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT.
 4. ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES SHALL BE PROVIDED.
 5. A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH TRAP. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE TRAP IN THE MANNER DESCRIBED IN THE E&S PLAN.
 6. CHECK EMBANKMENTS, SPILLWAYS, AND OUTLETS FOR EROSION, PIPING AND SETTLEMENT. CLOGGED OR DAMAGED SPILLWAYS AND/OR EMBANKMENTS SHALL BE IMMEDIATELY RESTORED TO THE DESIGN SPECIFICATIONS. DISPLACED RIPRAP WITHIN THE OUTLET PROTECTION SHALL BE REPLACED IMMEDIATELY.

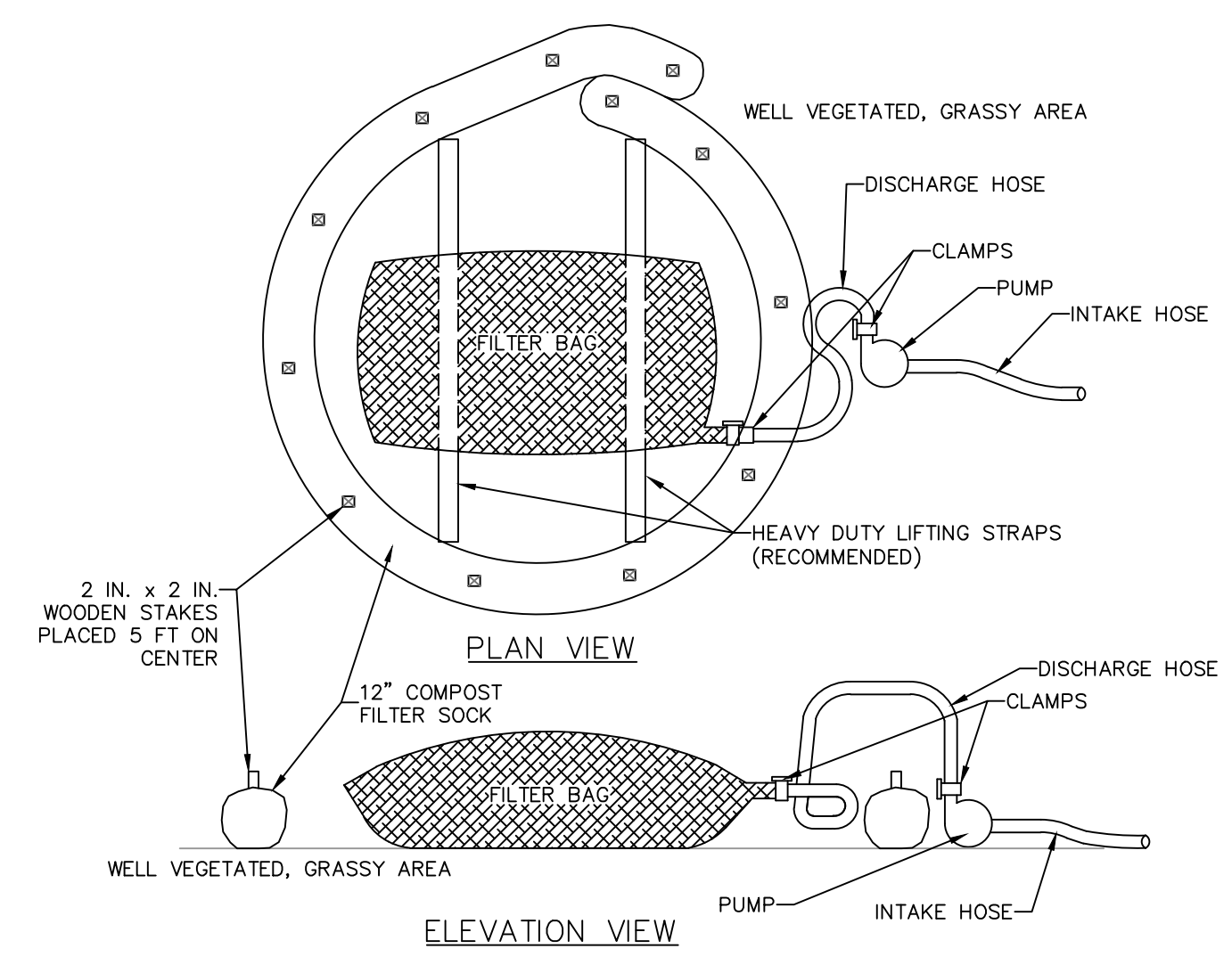
**STANDARD CONSTRUCTION DETAIL #8-8
 CONCRETE RISER WITH TEMPORARY DEWATERING HOLES**
 N.T.S.



BASIN OR TRAP NO.	BAFFLE LENGTH (Bal) (FT)	HEIGHT (Bah) (FT)	TEMPORARY RISER CREST ELEV. TRCE (FT)	BOTTOM ELEV BE (FT)
TRAP 2	44	2.5	478.50	476.00

NOTES:
 1. SEE APPROPRIATE BASIN DETAIL FOR PROPER LOCATION AND ORIENTATION.
 2. AN ACCEPTABLE ALTERNATIVE IS TO INSTALL A SUPER SILT FENCE AT THE BAFFLE LOCATION.
 3. IN POOLS WITH DEPTHS EXCEEDING 7', THE TOP OF THE PLYWOOD BAFFLE DOES NOT NEED TO EXTEND TO THE TEMPORARY RISER CREST. SUPER SILT FENCE BAFFLES NEED NOT EXTEND TO TRCE ELEVATION.
 4. BAFFLES SHALL BE TIED INTO ONE SIDE OF THE BASIN UNLESS OTHERWISE SHOWN ON THE PLAN DRAWINGS.
 5. SUBSTITUTION OF MATERIALS NOT SPECIFIED IN THIS DETAIL SHALL BE APPROVED BY THE DEPARTMENT OR THE LOCAL CONSERVATION DISTRICT BEFORE INSTALLATION.
 6. DAMAGED OR WARPED BAFFLES SHALL BE REPLACED WITHIN 7 DAYS OF INSPECTION.
 7. BAFFLES REQUIRING SUPPORT POSTS SHALL NOT BE INSTALLED IN BASINS REQUIRING IMPERVIOUS LINERS.

**STANDARD CONSTRUCTION DETAIL #7-14
 BAFFLE**
 NOT TO SCALE

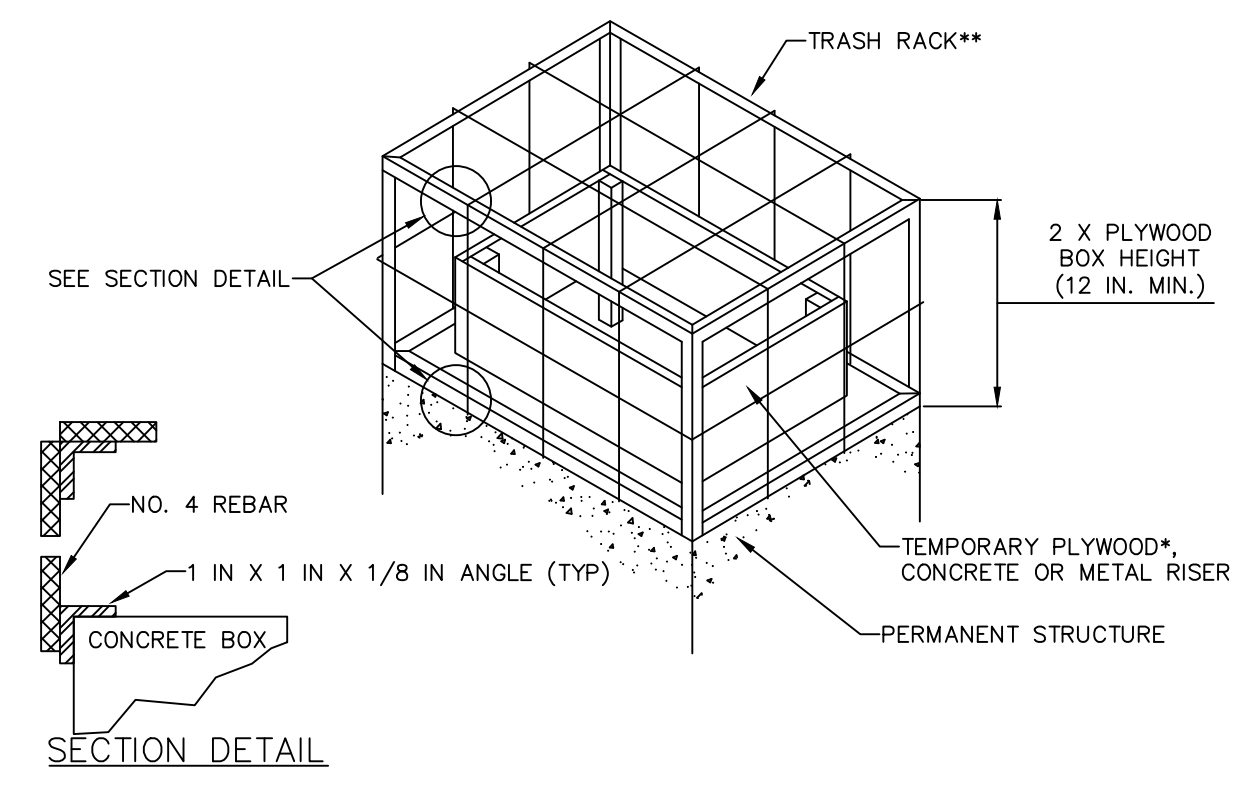


NOTES:
 1. LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE COMMERICAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

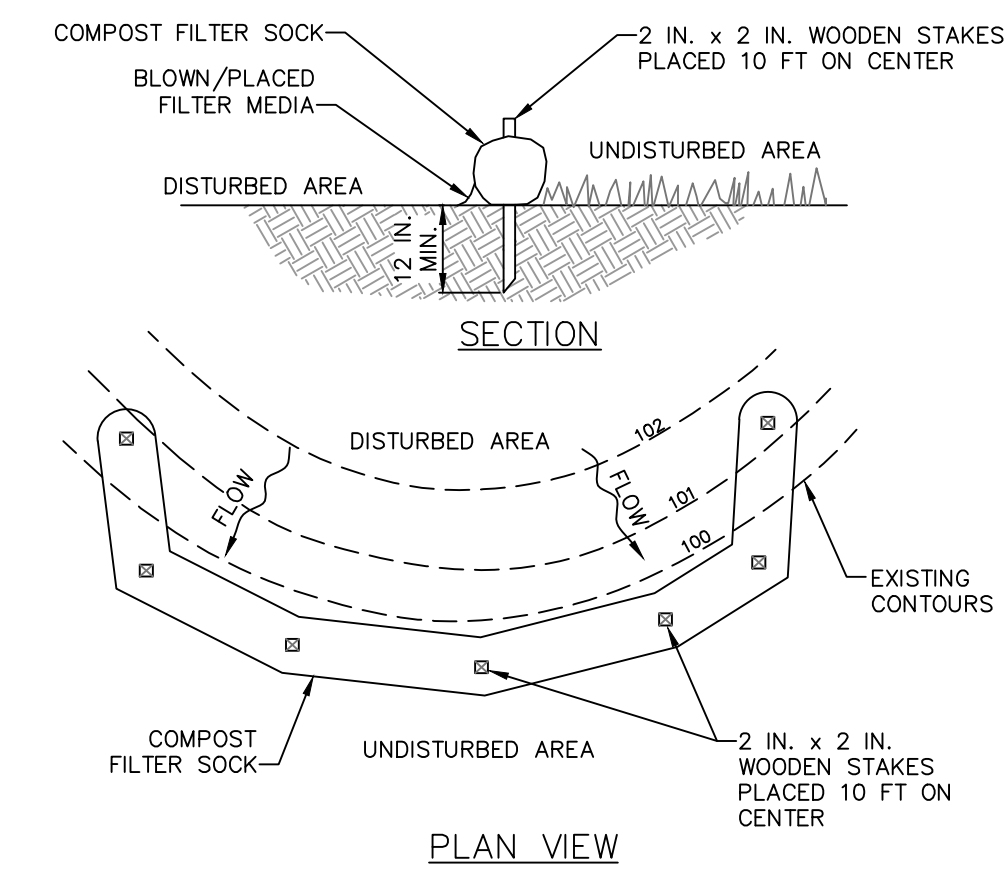
 2. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE TAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.
 3. BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5% FOR SLOPES EXCEEDING 5%. CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.
 4. NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HD OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.
 5. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.
 6. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.
 7. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

PUMPED WATER FILTER BAG
 N.T.S.



* 3/4 IN. PRESSURE TREATED PLYWOOD BOX WITH 2 IN. X 2 IN. PRESSURE TREATED CORNER SUPPORTS, SET INTO 1-1/2 IN. GRATE OFFSETS, CAULK ALL SEAMS TO FORM WATERTIGHT SEALS.
 ** TRASH RACK COMPOSED OF 1 IN. X 1 IN. X 1/8 IN. L (TYP.) AND #4 BARS (TYP.) WELDED TO THE ANGLES AND AT EACH INTERSECTION OF THE BARS; #4 BARS SPACED AT HALF THE DIAMETER OF THE BARREL MAX.
NOTES:
 1. BOX SHALL BE BOLTED, STRAPPED, OR OTHERWISE SECURED TO THE PERMANENT RISER.
 2. TOP OF TEMPORARY RISER EXTENSION SHALL BE AT LEAST AS HIGH AS SEDIMENT BASIN TEMPORARY RISER AND SHALL BE 6 IN. (MINIMUM) BELOW CREST OF EMERGENCY SPILLWAY.
 3. ALL JOINTS SHALL BE WATER TIGHT.
 4. CLOGGED OR DAMAGED SPILLWAYS SHALL BE REPAIRED IMMEDIATELY. TRASH AND OTHER DEBRIS SHALL BE REMOVED FROM THE BASIN AND RISER.

**STANDARD CONSTRUCTION DETAIL #7-10
 TEMPORARY RISER EXTENSION AND
 TRASH RACK FOR PERMANENT STRUCTURE**
 NOT TO SCALE



NOTES:
 1. 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.
 2. 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.
 3. TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.
 4. 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.
 5. 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.
 6. 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.
 7. 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.

COMPOST FILTER SOCK
 NOT TO SCALE

Material Type	COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS				
	3 mil HDPE	5 mil HDPE	5 mil HDPE	Multi-Filament Polypropylene (MFPP)	Heavy Duty Multi-Filament Polypropylene (HDMFPP)
Material Characteristics	Photo-degradable	Photo-degradable	Bio-degradable	Photo-degradable	Photo-degradable
Sock Diameters	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
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				
Outer Filtration Mesh	Fusion-welded junctures				
	3/4" X 3/4" Max. aperture size				
	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.					

COMPOST STANDARDS	
Organic Matter Content	25%-100% (dry weight basis)
Organic Portion	Fibrous and elongated
pH	5.5-8.5
Moisture Content	30%-60%
Particle Size	30%-50% pass through 3/8" sieve
Soluble Salt Concentration	5.0 ds/m (mmhos/cm) Maximum

COMPOST FILTER SOCK TABLE				
SOCK NO.	DIA. (IN)	LOCATION	SLOPE PERCENT	SLOPE LENGTH ABOVE BARRIER (FT)
1	18	AS LABELED ON E&S PLAN	11.8	136
2	24	AS LABELED ON E&S PLAN	11.6	275
3	24	AS LABELED ON E&S PLAN	8.7	277
4	12	AS LABELED ON E&S PLAN	4.7	128
5	12	AS LABELED ON E&S PLAN	8.4	95
6	24	AS LABELED ON E&S PLAN	7.7	304
7	12	AS LABELED ON E&S PLAN	8.7	150
8	18	AS LABELED ON E&S PLAN	5.9	222
9	24	AS LABELED ON E&S PLAN	9.4	310
10	24	AS LABELED ON E&S PLAN	11.6	242
11	18	AS LABELED ON E&S PLAN	17.5	103
12	24	AS LABELED ON E&S PLAN	10.7	261
13	12	AS LABELED ON E&S PLAN	9.4	53
14	12	AS LABELED ON E&S PLAN	8.7	104
15	12	AS LABELED ON E&S PLAN	9.2	43
16	12	AS LABELED ON E&S PLAN	8.5	47
17	18	AS LABELED ON E&S PLAN	33.3	36

E&S POLLUTION CONTROL DETAILS
 FOR
ESTATES AT MARGARET'S GROVE, PH. 2
 LOCATED IN
 SUSQUEHANNA TOWNSHIP, DAUPHIN COUNTY, PA

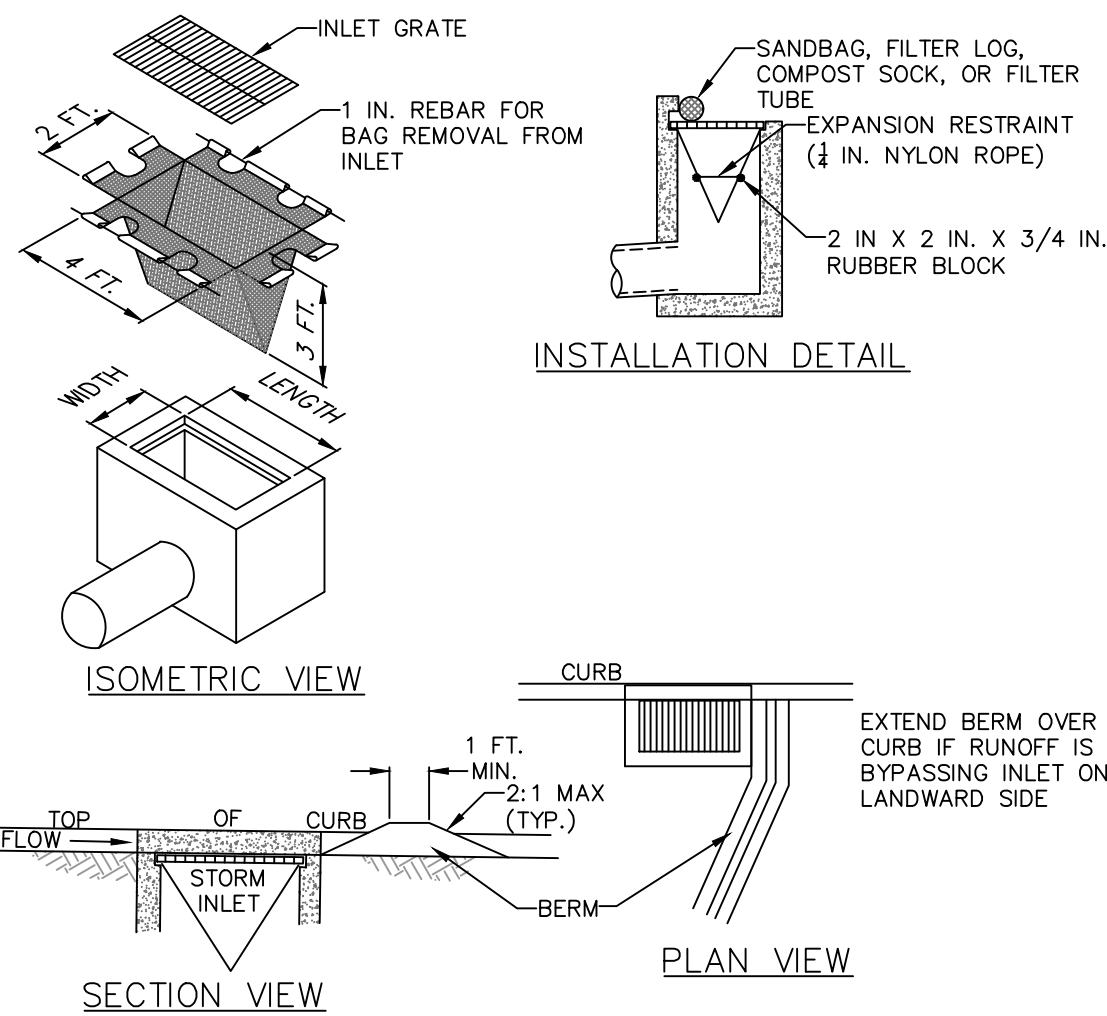
DRAWING ID: 220092-DTL
 PROJECT: 220092
 DATE: 06/10/22
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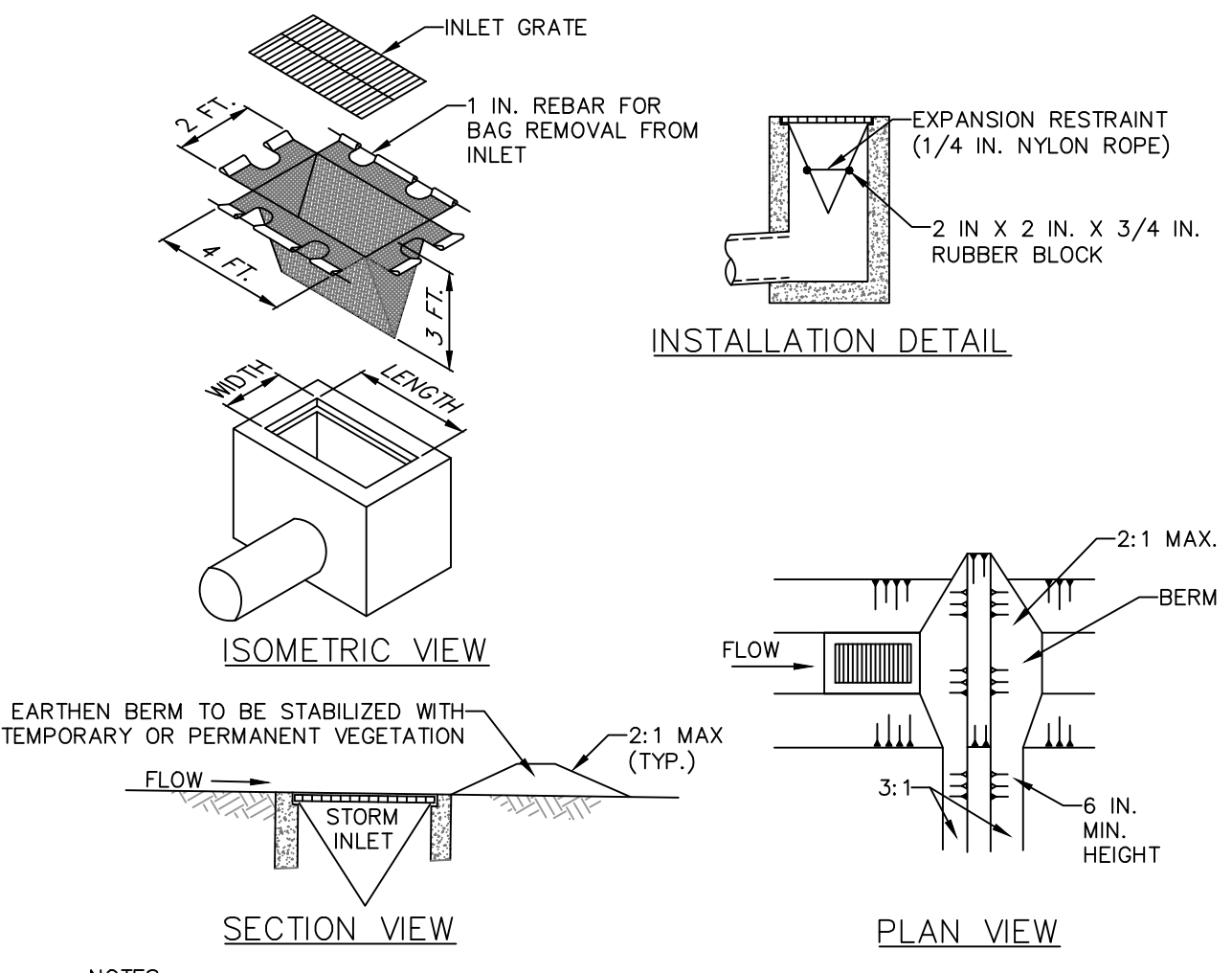
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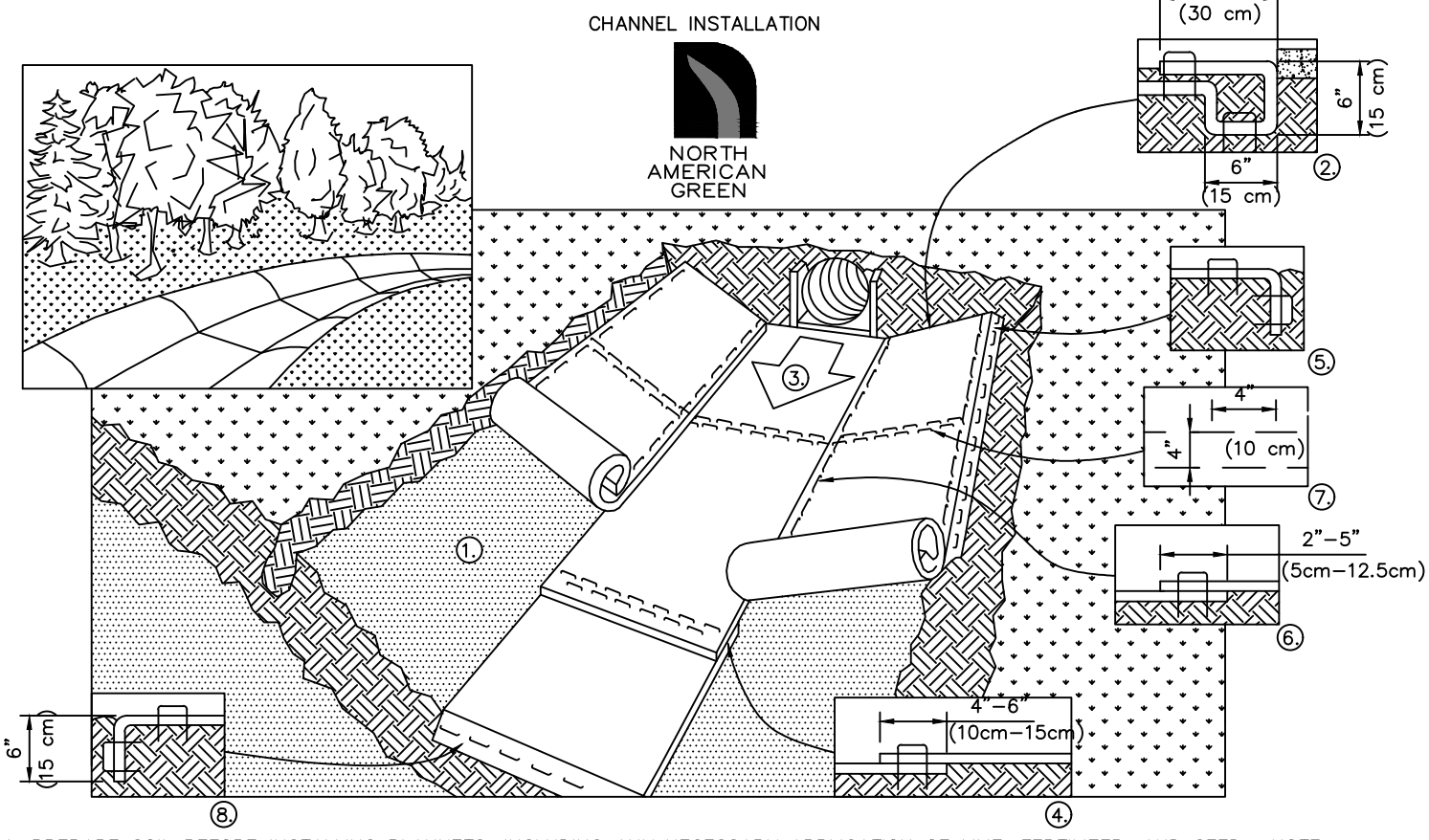
NOTES:
 MAXIMUM DRAINAGE AREA = 1/2 ACRE.
 INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.
 ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.
 AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.
 INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE OF ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.
 DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

FILTER BAG INLET PROTECTION - TYPE C INLET
 N.T.S.

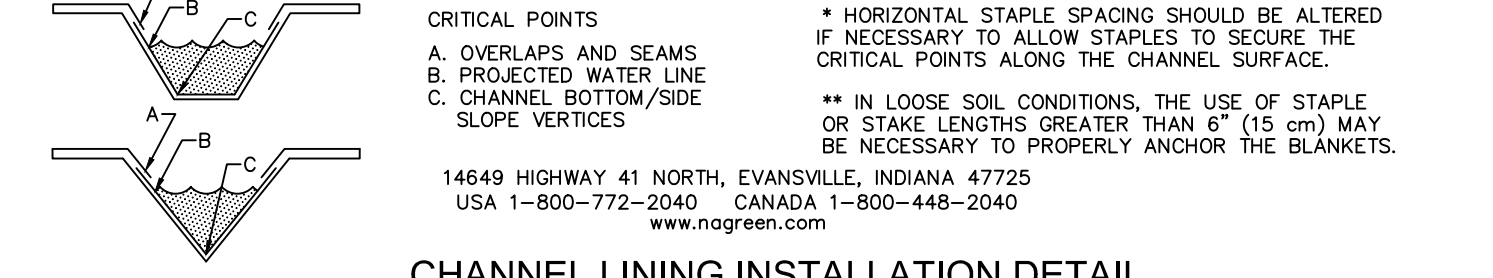


NOTES:
 MAXIMUM DRAINAGE AREA = 1/2 ACRE.
 INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.
 ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY.
 AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.
 INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.
 DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

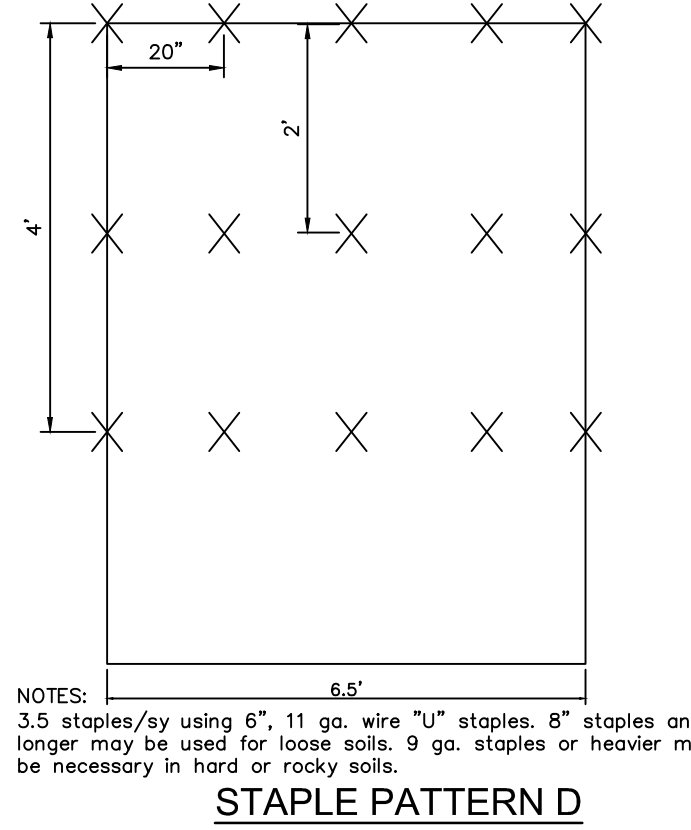
FILTER BAG INLET PROTECTION - TYPE M INLET
 N.T.S.



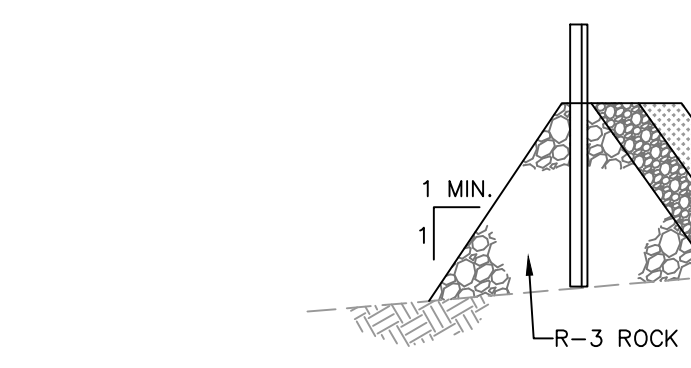
- PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
- BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
- ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4"-6" (10cm-15cm) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER TO SECURE BLANKETS.
- FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2"-5" (5cm-12.5cm) (DEPENDENT ON BLANKET TYPE) AND STAPLED. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE BLANKET BEING OVERLAPPED.
- IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9m-12m) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
- THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.



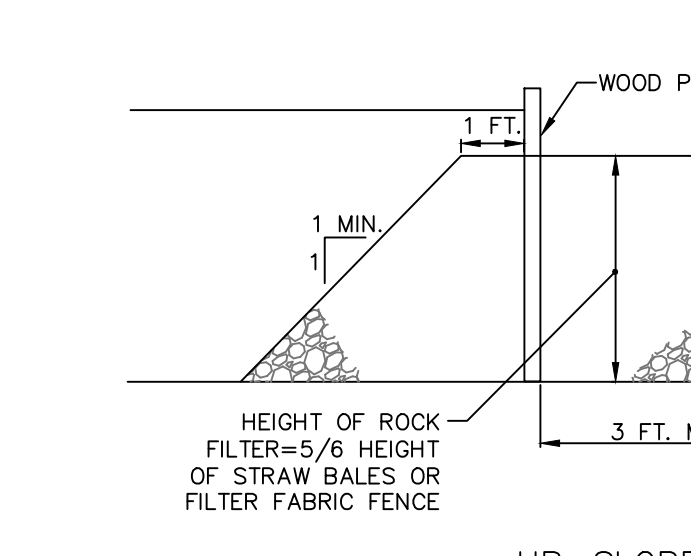
CHANNEL LINING INSTALLATION DETAIL
 N.T.S.



STAPLE PATTERN D



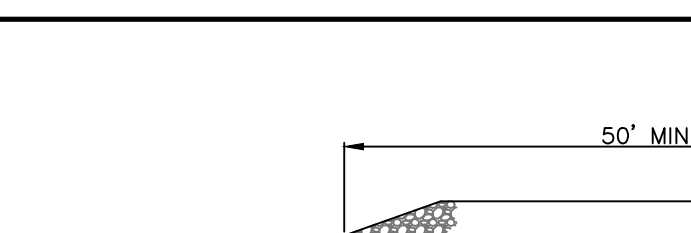
OUTLET CROSS-SECTION



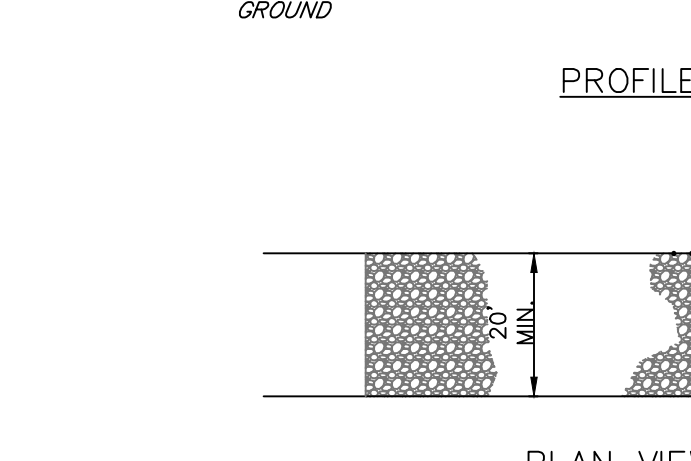
UP-SLOPE FACE

NOTES:
 A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SHALL BE USED ON UPSLOPE FACE IN HQ AND EV WATERSHEDS.
 SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

ROCK FILTER OUTLET
 NOT TO SCALE



PROFILE

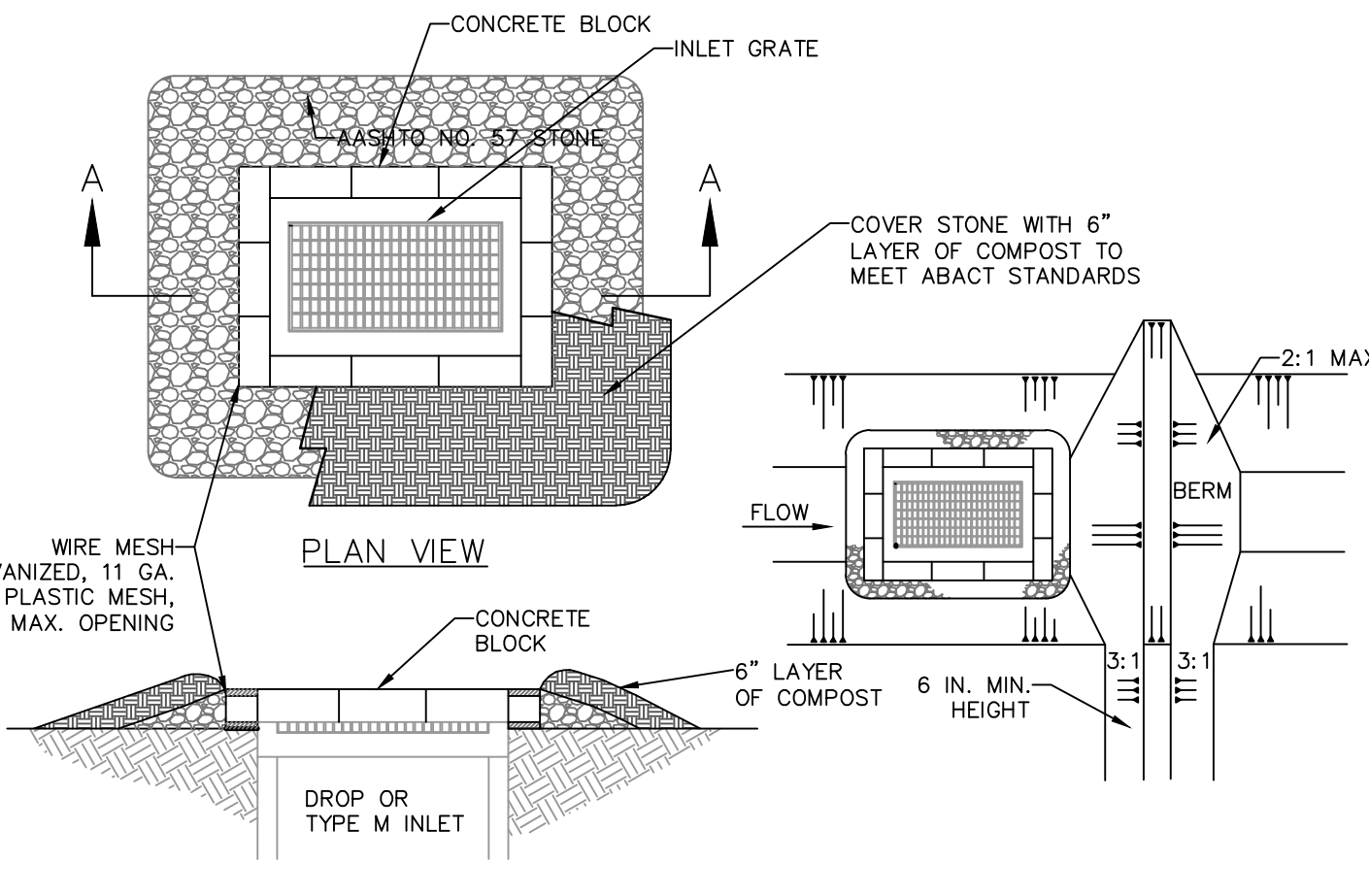


PLAN VIEW

* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

NOTES:
 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.

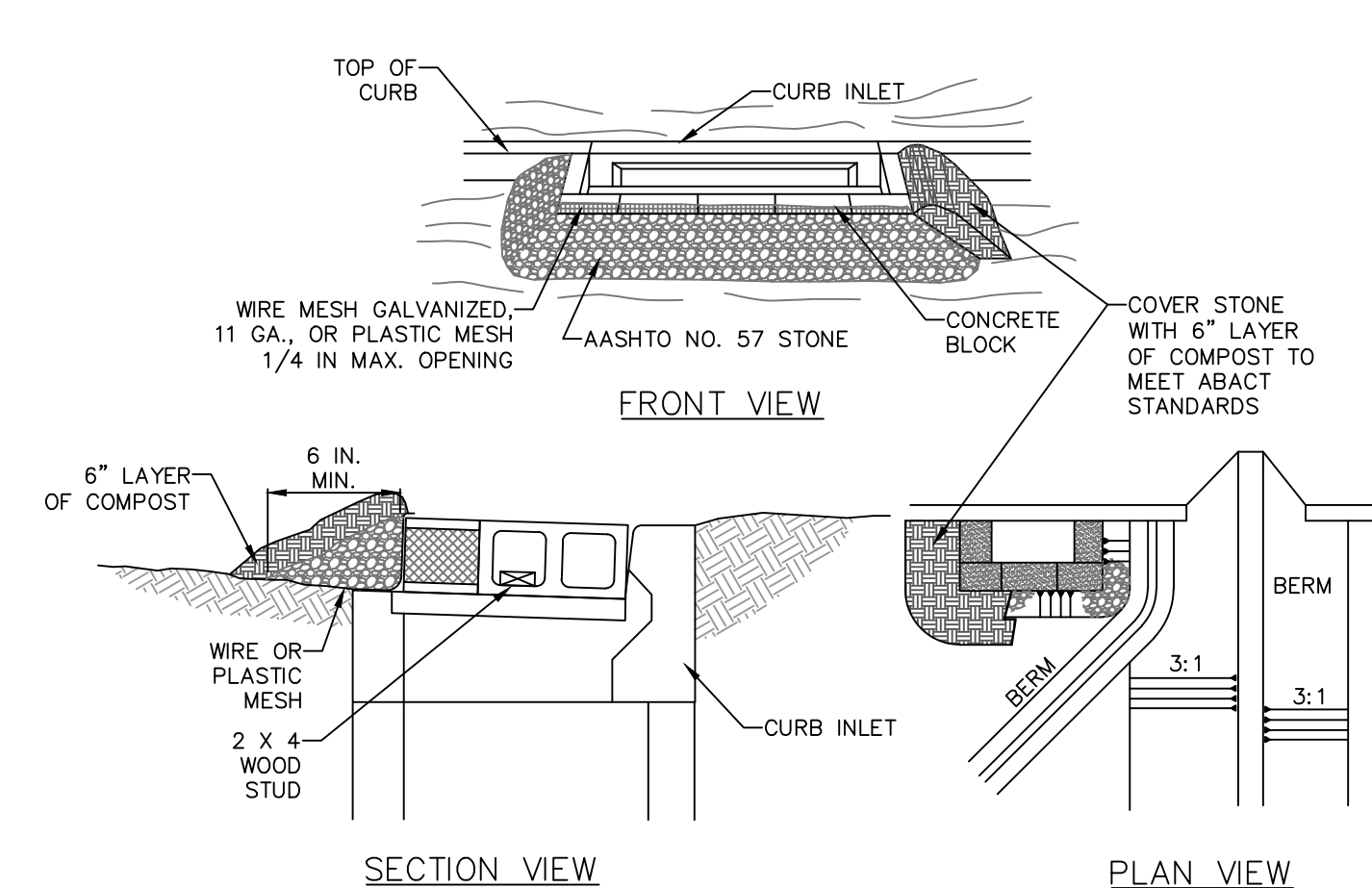
ROCK CONSTRUCTION ENTRANCE
 NOT TO SCALE



SECTION A-A

NOTES:
 MAXIMUM DRAINAGE AREA = 1 ACRE.
 INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS NOT LOCATED AT A LOW POINT.
 ROLLED EARTHEN BERM IN ROADWAY SHALL BE PROVIDED AND MAINTAINED IMMEDIATELY DOWN GRADIENT OF THE PROTECTED INLET UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR TO REMAIN PERMANENTLY.
 TOP OF BLOCK SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADS IF PONDING WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC.
 SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.
 FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 INCH THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE. COMPOST SHALL MEET THE STANDARDS IN TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

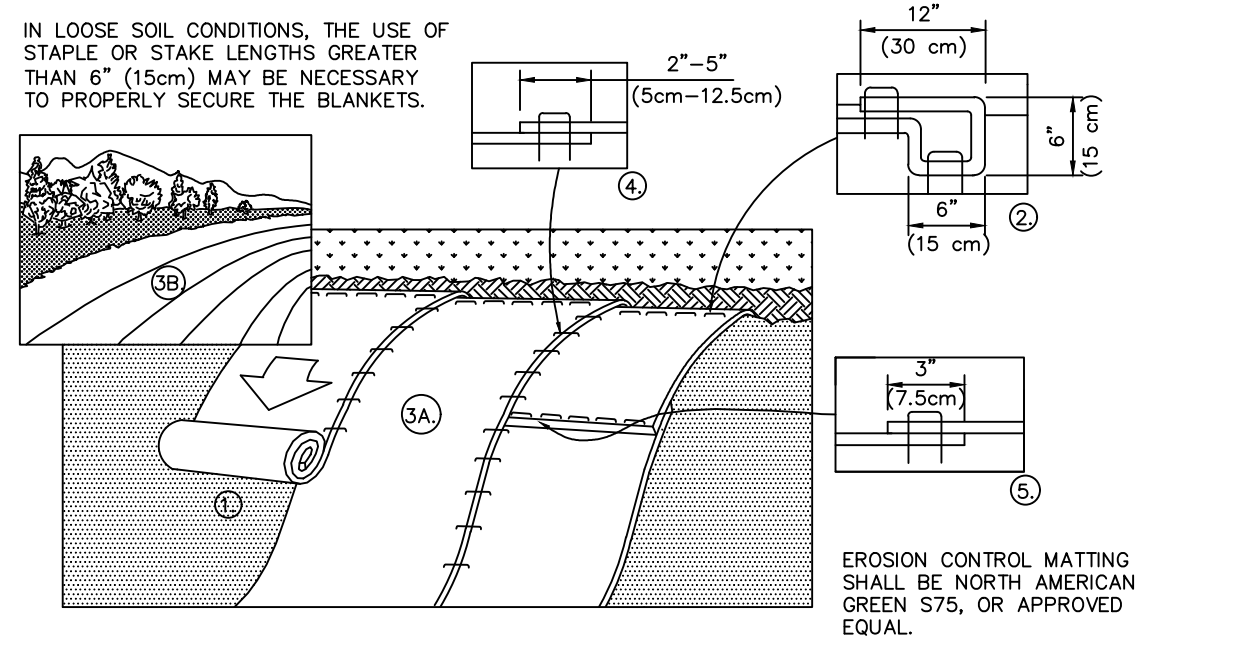
STONE AND CONCRETE BLOCK INLET PROTECTION - TYPE M INLET
 NOT TO SCALE



SECTION VIEW

NOTES:
 MAXIMUM DRAINAGE AREA = 1 ACRE.
 INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.
 ROLLED EARTHEN BERM SHALL BE PROVIDED AND MAINTAINED IMMEDIATELY DOWN GRADIENT OF THE PROTECTED INLET UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.
 SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.
 FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 INCH THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE.
 DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STONE AND CONCRETE BLOCK INLET PROTECTION - TYPE C INLET
 N.T.S.

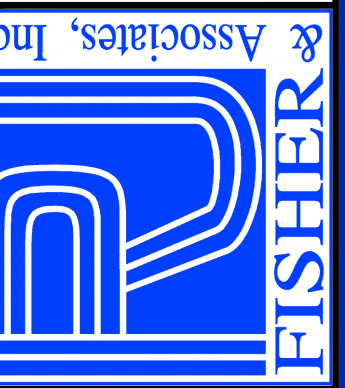


EROSION CONTROL MATTING ON SLOPE
 N.T.S.

NOTES:
 1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. (NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.)
 2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
 3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
 4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5cm-12.5cm) OVERLAP DEPENDENT ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
 5. CONSECUTIVE BLANKETS STAPLED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE BLANKET WIDTH.

NO.	REVISION	DATE
1	TOWNSHIP COMMENTS	08/05/22
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3		
4		
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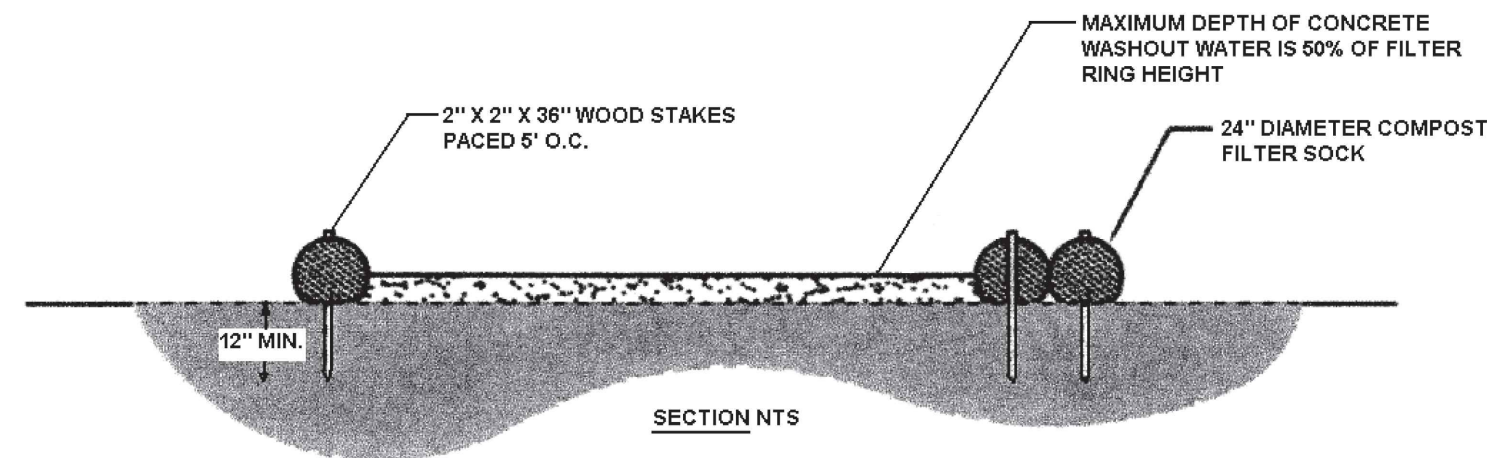
E&S POLLUTION CONTROL DETAILS
 FOR
ESTATES AT MARGARET'S GROVE, PH. 2
 LOCATED IN
 SUSQUEHANNA TOWNSHIP, DAUPHIN COUNTY, PA

DRAWING ID:	220092-DTL
PROJECT:	220092
DATE:	06/10/22
SHEET:	19 OF 20

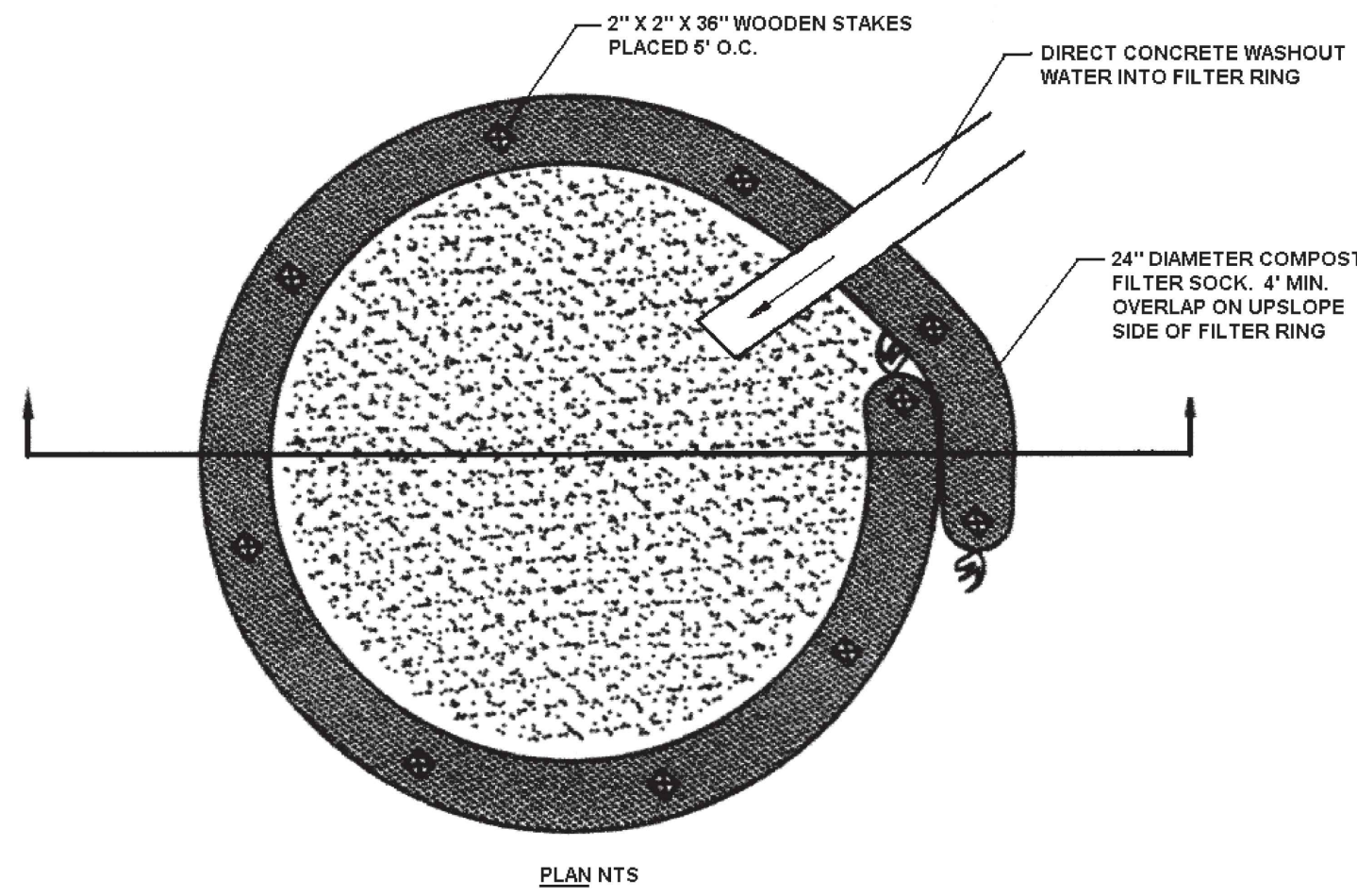


Filtrexx

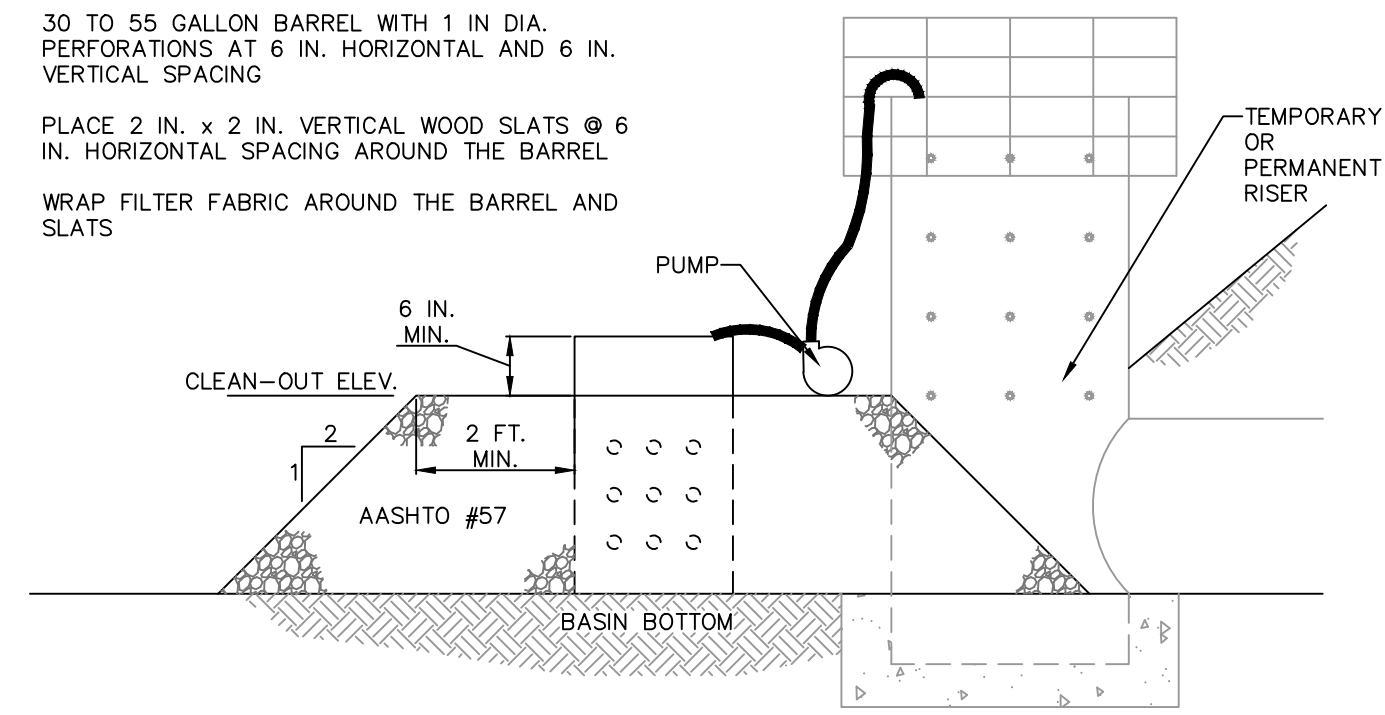
FIGURE 3.18
Typical Compost Sock Washout Installation



NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
2. 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.



A suitable impervious geomembrane shall be placed at the location of the washout prior to installing the socks.
Adapted from Filtrexx



NOTES:

DEWATERING FACILITY SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF BASIN/TRAP.
PRIOR TO INITIATING OPERATION OF DEWATERING FACILITY, ALL ACCUMULATED SEDIMENT SHALL BE CLEANED FROM THE INSIDE OF THE BARREL.

DEWATERING FACILITY SHALL BE CONTINUOUSLY MONITORED DURING OPERATION. IF FOR ANY REASON THE DEWATERING FACILITY CEASES TO FUNCTION PROPERLY, IT SHALL BE IMMEDIATELY SHUT DOWN AND NOT RESTARTED UNTIL THE PROBLEM HAS BEEN CORRECTED.

STANDARD CONSTRUCTION DETAIL #7-18
SEDIMENT BASIN OR SEDIMENT TRAP
SEDIMENT STORAGE DEWATERING FACILITY
NOT TO SCALE

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E&S POLLUTION CONTROL DETAILS
FOR
ESTATES AT MARGARET'S GROVE, PH. 2
LOCATED IN
SUSQUEHANNA TOWNSHIP, DAUPHIN COUNTY, PA

DRAWING ID:	220092-DTL
PROJECT:	220092
DATE:	06/10/22
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