

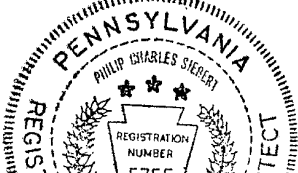
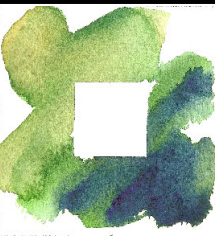
Map Unit Symbol	Map Unit Name
UoD	Urban land-Duffield complex, 8 to 25 percent slopes
UpD	Urban land-Gladstone complex, 8 to 25 percent slopes

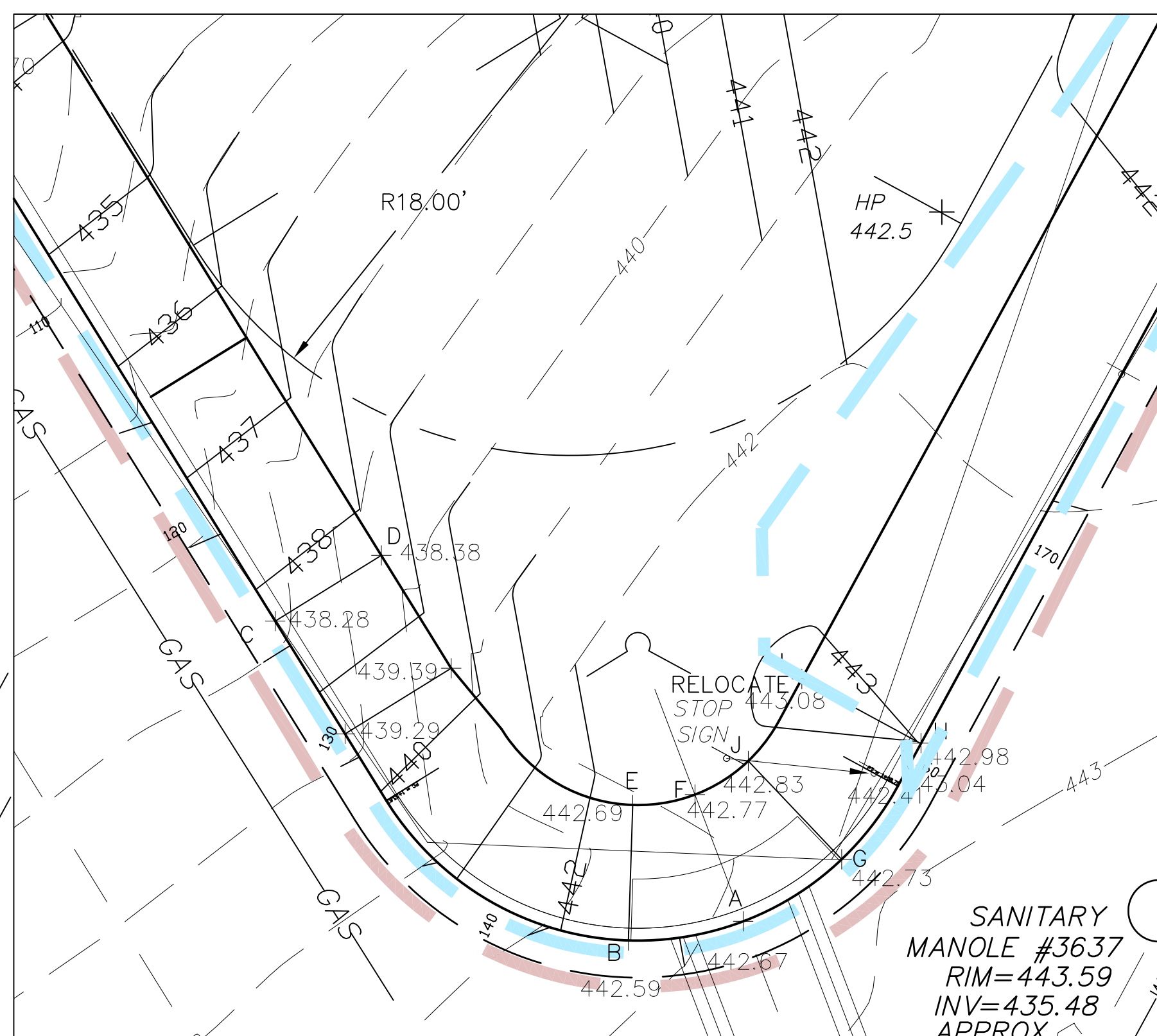
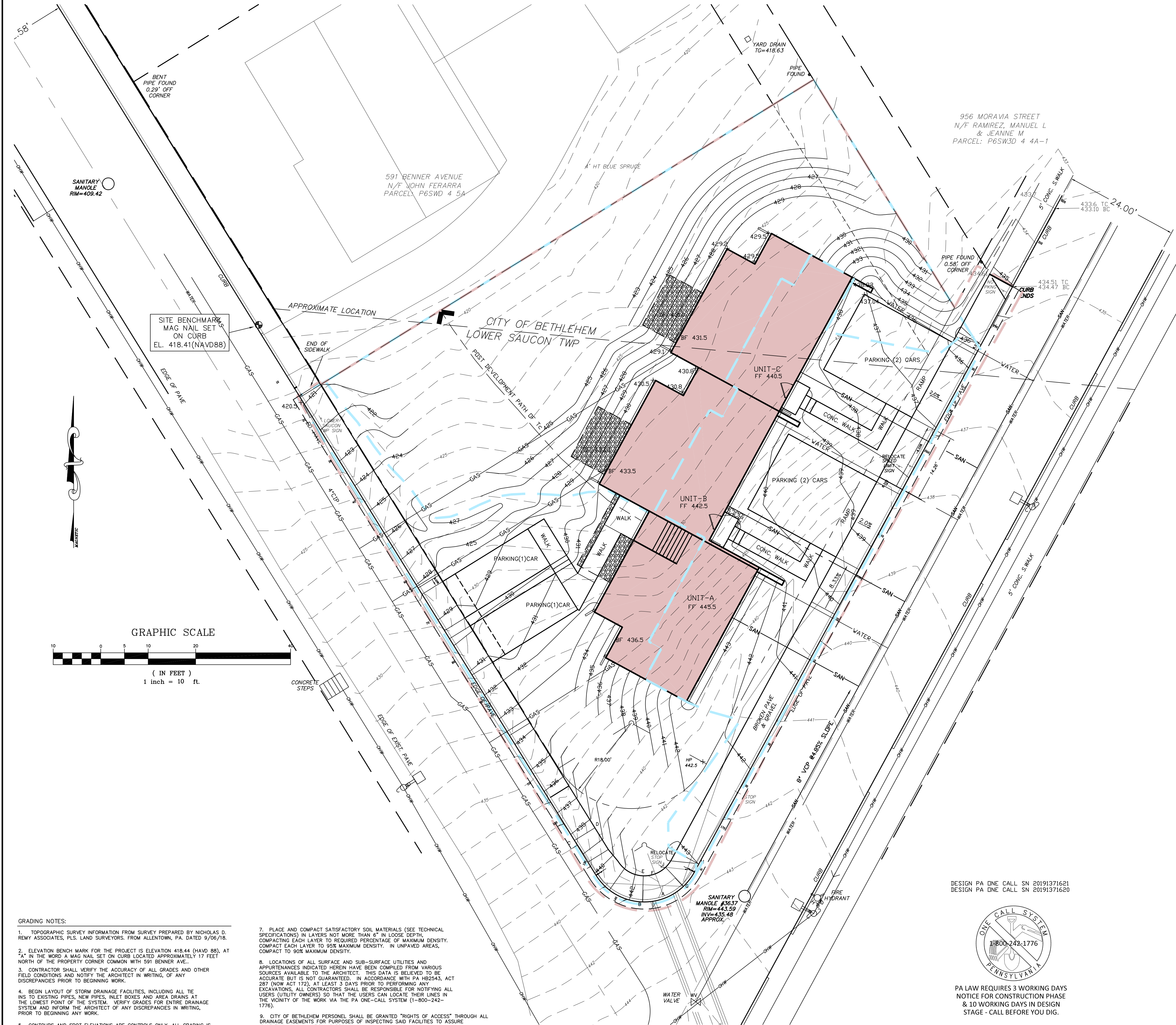
CITY OF BETHLEHEM

BETHLEHEM CITY DEPT OF WTR/SWR RESOURCES
BETHLEHEM TWP MUNI AUTH/BETHLEHEM TWP
CALPINE CORPORATION
COLUMBIA GAS TRANSMISSION EASTON
CROWN CASTLE
FIBERTRACK LLC
FRONTIER COMMUNICATIONS CTSI LLC
HIGH UNIVERSITY
LEVEL 3 NOW CENTURYLINK
LOWER SAUCON AUTHORITY
MORAVIAN COLLEGE
ORASURE TECHNOLOGIES INC
PPL ELECTRIC UTILITIES CORPORATION
RCN TELECOM SERVICES INC
SERVICE ELECTRIC CABLE TV INC
TERRADEIX INC
UGI UTILITIES-HAZLETTON
UNITI FIBER
VERIZON BUSINESS FORMERLY MCI
VERIZON PENNSYLVANIA LLC
ZAYO BANDWIDTH FORMERLY PPL TELCOM LLC

LOWER SAUCON TOWNSHIP

B&T LOCAL SERVICES
 BTELECOM CITY DEPT OF WTR/SWR RESOURCES
 COLUMBIA GAS TRANSMISSION EASTON
 CROWN CASTLE
 FIBERTRACK LLC
 HELLERTOWN BORO AUTH/HELLERTOWN BORO
 INTERSTATE ENERGY COMPANY
 LEHIGH UNIVERSITY
 LEVEL 3 NOW CENTURYLINK
 LOWER SAUCON AUTHORITY
 LOWER SAUCON TOWNSHIP
 METROLITAN EDISON CO/FIRSTENERGY
 NEON TRANSCOM
 PPL ELECTRIC UTILITIES CORPORATION
 RCN ELECTRIC SERVICES INC
 SERVICE ELECTRIC CABLE TV INC
 UGI UTIL LEHIGH- HAZLETON
 UNITI FIBER
 VERIZON PENNSYLVANIA LLC

SEALS AND SIGNATURES:						PLAN PREPARED BY: PHILIP SIEBERT - LANDSCAPE ARCHITECT 1025 LAWRENCE DRIVE EMMAUS, PA 18049 484-560-8208 siebert@rla.com DATE: 11/04/2018	
		OWNER NAME		ALLAN AND NANCY FINNEGAN			
		OWNER ADDRESS		220 WEST BROAD STREET, BETHLEHEM, PA 18018			
		PROJECT ADDRESS		968 BENNER AVENUE., THE CITY OF BETHLEHEM, PA			
		REVISION BLOCK		DESCRIPTION			
		1. NO. DATE:		PLANS REV. PER CITY OF BETHLEHEM REVIEW LETTER OF 9-19-2019			
		2. 6/19/2019					
		3.					
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		5.					
		6.					
		7.					
		SHEET TITLE:		EXISTING CONDITIONS PLAN			
				MORAVIA STREET CONDOMINIUMS			
		SHEET NUMBER		DATE:		SCALE:	
		SP-2		6/19/2019		AS NOTED	



grading plan detail of ADA curb ramp at Moravia and Benner (scale 1"= 5')

PLAN LEGEND:

WATER	WATER	PROPOSED WATER LATERAL
SAN	SAN	PROPOSED SANITARY SEWER LATERAL
GAS	GAS	PROPOSED UGI GAS SERVICE
OHW	OHW	EXISTING OVERHAED WIRES
WATER	WATER	EXISTING WATER MAIN
SAN	SAN	EXISTING SANITARY SEWER
GAS	GAS	EXISTING UGI GAS MAIN
431	431	PROPOSED SPOT ELEVATION
435	435	PROPOSED 1 FT CONTOUR
435	435	PROPOSED 5 FT CONTOUR
435	435	EXISTING 1 FT CONTOUR - FIELD SURVEYED AREA
435	435	EXISTING 5 FT CONTOUR - FIELD SURVEYED AREA
424.4	424.4	EXISTING PROPERTY LINE
424.4	424.4	EXISTING ADJACENT PROPERTY LINE
424.4	424.4	PROPOSED SPOT ELEVATION
424.4	424.4	EXISTING WATER SERVICE VALVE
424.4	424.4	POST DEVELOPMENT DRAINAGE AREA BOUNDARY
424.4	424.4	LIMIT OF DISTURBANCE LINE
424.4	424.4	ADA RAMP CALCULATION REFERENCE POINTS

GRADING NOTES:

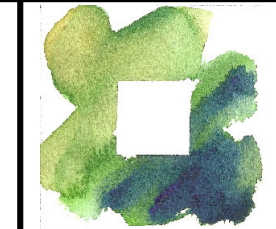
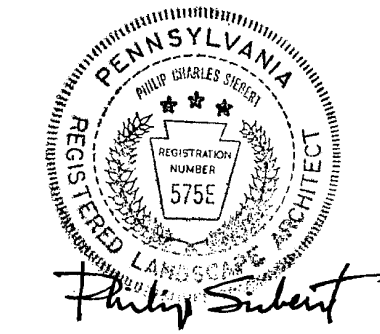
1. TOPOGRAPHIC SURVEY INFORMATION FROM SURVEY PREPARED BY NICHOLAS D. REMY ASSOCIATES, PLS. LAND SURVEYORS, FROM ALLENTOWN, PA. DATED 9/06/18.
2. ELEVATION BENCH MARK FOR THE PROJECT IS ELEVATION 418.44 (NAVD 88), AT "A" IN THE WORD A MAG NAIL SET ON CURB LOCATED APPROXIMATELY 17 FEET NORTH OF THE PROPERTY CORNER COMMON WITH 591 BENNER AVE..
3. CONTRACTOR SHALL VERIFY THE ACCURACY OF ALL GRADES AND OTHER FIELD CONDITIONS AND NOTIFY THE ARCHITECT IN WRITING, OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.
4. BEGIN LAYOUT OF STORM DRAINAGE FACILITIES, INCLUDING ALL TIE INS TO EXISTING PIPES, NEW PIPES, INLET BOXES AND AREA DRAINS AT THE LOWEST POINT OF THE SYSTEM. VERIFY GRADES FOR ENTIRE DRAINAGE SYSTEM AND INFORM THE ARCHITECT OF ANY DISCREPANCIES IN WRITING, PRIOR TO BEGINNING ANY WORK.
5. CONTOURS AND SPOT ELEVATIONS ARE CONTROLS ONLY, ALL GRADING IS TO BE SMOOTH AND CONTINUOUS.
6. PROPOSED ELEVATIONS ON SITE AREA AND OTHER PAVED SURFACES ARE FINISHED SURFACE GRADE. SEE DETAILS FOR DEPTH TO SUBGRADE.
7. PLACE AND COMPACT SATISFACTORY SOIL MATERIALS (SEE TECHNICAL SPECIFICATIONS) IN LAYERS NOT MORE THAN 6" IN LOOSE DEPTH, COMPACTING EACH LAYER TO REQUIRED PERCENTAGE OF MAXIMUM DENSITY. COMPACT EACH LAYER TO 95% MAXIMUM DENSITY. IN UNPAVED AREAS, COMPACT TO 90% MAXIMUM DENSITY.
8. LOCATIONS OF ALL SURFACE AND SUB-SURFACE UTILITIES AND APPURTENANCES INDICATED HEREIN HAVE BEEN COMPILED FROM VARIOUS SOURCES AVAILABLE TO THE ARCHITECT. THIS DATA IS BELIEVED TO BE ACCURATE BUT IS NOT GUARANTEED. IN ACCORDANCE WITH PA HB2543, ACT 287 (NOW ACT 172), AT LEAST 3 DAYS PRIOR TO PERFORMING ANY EXCAVATIONS, ALL CONTRACTORS SHALL BE RESPONSIBLE FOR NOTIFYING ALL USERS (UTILITY OWNERS) SO THAT THE USERS CAN LOCATE THEIR LINES IN THE VICINITY OF THE WORK VIA THE PA ONE-CALL SYSTEM (1-800-242-1776).
9. CITY OF BETHLEHEM PERSONNEL SHALL BE GRANTED "RIGHTS OF ACCESS" THROUGH ALL DRAINAGE EASEMENTS FOR PURPOSES OF INSPECTING SAID FACILITIES TO ASSURE THAT THEY ARE FUNCTIONING PROPERLY.
10. THE CONSTRUCTION OF ALL STORMWATER MANAGEMENT FACILITIES SHALL BE IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS FOUND IN PENNDOT PUBLICATION 408 AND R0 SERIES 0-100 STANDARDS.

DESIGN PA ONE CALL SN 20191371621
DESIGN PA ONE CALL SN 20191371620



PA LAW REQUIRES 3 WORKING DAYS
NOTICE FOR CONSTRUCTION PHASE
& 10 WORKING DAYS IN DESIGN
STAGE - CALL BEFORE YOU DIG.

SEALS AND SIGNATURES:



PLAN PREPARED BY:
PHILIP SIEBERT - LANDSCAPE ARCHITECT
1025 LAWRENCE DRIVE
EMMAUS, PA 18049

484-560-8208
siebertrla.com
DATE: 11/04/2018

OWNER NAME
OWNER ADDRESS

ALLAN AND NANCY FINNENAG
220 WEST BROAD STREET, BETHLEHEM, PA 18018

PROJECT ADDRESS

968 BENNER AVENUE, THE CITY OF BETHLEHEM, PA

REVISION BLOCK
NO. DATE:

DESCRIPTION
PLANS REV. PER CITY OF BETHLEHEM REVIEW LETTER OF 9-19-2019

1 8/21/2023
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SHEET TITLE:

SITE GRADING AND DRAINAGE PLAN
MORAVIA STREET CONDOMINIUMS

SHEET NUMBER
SP-3

DATE: 6/19/2019
SCALE: AS NOTED

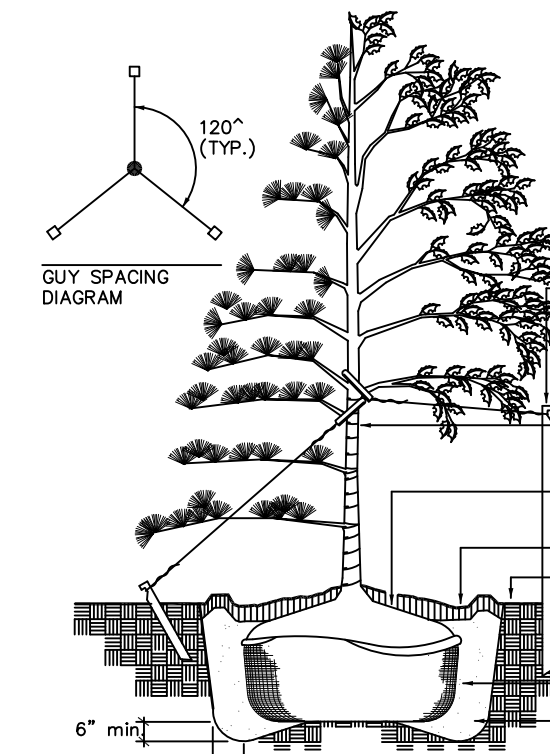


The diagram illustrates a 1000m water column with various layers and properties. The layers are labeled from top to bottom: WATER, SAN, GAS, WATER, SAN, GAS, and WATER. The salinity profile is shown as a dashed line with values 299, 300, 435, and 431. The density profile is shown as a solid line with values 1020, 1025, 1030, and 1035. The temperature profile is shown as a solid line with values 10, 20, 30, and 40. The pressure profile is shown as a solid line with values 10, 20, 30, and 40. The diagram also includes a scale for depth in meters (0 to 1000) and a scale for salinity (299 to 300).

EXISTING 5 FT CONTOUR - FIELD SURVEYED AREA

EXISTING WATER SERVICE VALVE

PROPOSED STREET LIGHT TO BE MOUNTED
ON EXISTING UTILITY POLE AND TO BE
DEDICATED TO THE CITY OF BETHLEHEM.
THE CITY WILL THEN HAVE THE LIGHTING
ON THEIR METER AFTER DEDICATION.



ANY NYLON ROPE USED
IN BALLING THE TREE
SHALL BE CUT AND
REMOVED FROM ROOT BALL

TREE AND SHRUB MASSING SHALL BE ENCOMPASSED BY ONE LARGER MULCHED BED

EVERGREEN PLANTINGS TO BE SPRAYED WITH WILT-PROOF WHEN PLANTED IN THE FALL

EVERGREEN PLANTINGS TO BE
SPRAYED WITH WILT-PROOF
WHEN PLANTED IN THE FALL

FOLIAGE OF DECIDUOUS TREES TO BE
PRUNED BACK BY ONE-FOURTH, CUTTING OFF
WHOLE BRANCHES, NOT TIPS. RETAIN
NATURAL SHAPE, DO NOT CUT LEADER.

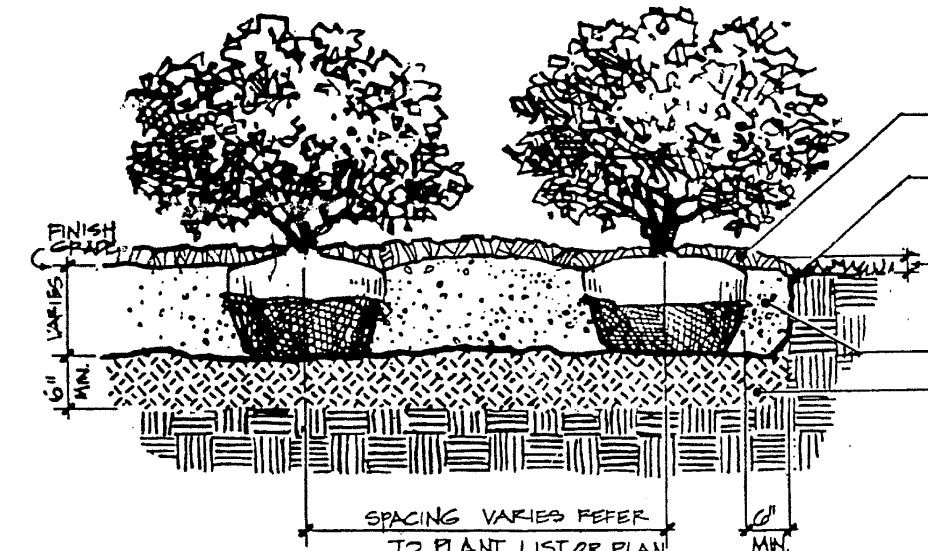
- 6"x2"x2" WOOD STAKE, WITH 2 STRAND, #12 GALV. WIRE AND RUBBER HOSE LOOPS, 2 PER TREE, FOR CONIFERS, USE THREE 24"x2"x2" STAKES DRIVEN FLUSH TO GROUND SEE GUY SPACING DIAGRAM ABOVE
- 4" WIDE CRINKLE WATERPROOF SPIRAL TREE WRAP (DECIDUOUS TREE ONLY) SECURE WITH HEMP CORD TOP & BOTTOM
- SET TOP OF BALL 15 TO 20% ABOVE FINISHED GRADE ELEVATION
- 4" OF APPROVED MULCH MIXTURE
- 6" EARTH SAUCER

- CUT & REMOVE BURLAP FROM TOP
- THIRD OF BALL
- APPROVED BACKFILL MIX

TREE PLANTING

NO SCAL

- FOR CONTAINER SHRUBS, COMPLETELY REMOVE ALL NON-BIODEGRADABLE CONTAINERS: SAKIY ROOT BALL
- FOR EXB SHRUBS, CUT & REMOVE BURLAP FROM TOP $\frac{1}{3}$ OF ROOT BALL



- 2-3" MULCH. SEE SPECS; FORM SAUCER ONLY WHEN PLANTING AN INDIVIDUAL SHRUB
- SEE PLANS FOR EDGE TREATMENT

- SET FOOTBALL 2-3" ABOVE FINISH GRADE UNLESS OTHERWISE REQUIRED BY SOIL CONDITIONS, OR IRRIGATION SYSTEM
- TOPSOIL MIX, SEE SPECS
- SCARIFY SUBSOIL TO 6" MIN. DEPTH

NOTE: GRADE IS SLIGHTLY CROWNED
TO DRAIN WATER OFF BED, AND/OR
AWAY FROM BUILDINGS, WALLS, ETC.

SHRUB PLANTING:

NO SCALE

CITY OF BETHLEHEM SALDO REQUIRED LANDSCAPING:

SECTION 1349.08 (F) (2) MULTI-FAMILY, TOWNHOUSE AND PUD DEVELOPMENT SHALL HAVE A MINIMUM OF TEN (10%) PERCENT OF THE "LOT" AREA REPRESENTED BY APPROVED PLANTINGS IN ADDITION TO FRONT AND SIDE FOUNDATION SHRUBS AND ANY BUFFER PLANTING WHICH MAY BE NECESSARY TO SCREEN GARBAGE COLLECTION OR PARKING AREAS.

SITE AREA IS 10,919 SF X 10% = 1,092 SF OF PLANTING CREDITS

PROPOSED PLANTINGS CREDITED TO REQUIRED PLANTING CREDITS:

GROUND COVER BEDS ON STEEPLY SLOPED AREAS TOTALING 1,371 SF OF BED AREA WITH PLANTS PROPOSED AT 10" OC.

TOTAL PLANTING SF EQUIVALENT IS 1,1371 SF, EXCEEDING THE REQUIRED MINIMUM OF 1,092 SF

OTHER PLANTING, NOT ALLOWED TO BE CREDITED TOWARD THE MIN. REQUIREMENT:

OTHER PLANTING, NOT ALLOWED TO BE CREDITED TOWARD THE MIN. REQUIREMENT:


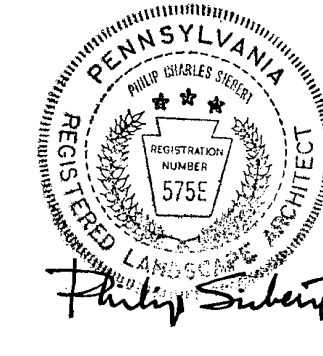
(7) 2.5 INCH CALIPER STREET TREES, (30) 2-2.5 FT. WIDE OR HIGH EVERGREEN AND FLOWERING DECIDUOUS SHRUBS AS FOUNDATION PLANTINGS AND (2) NARROW BEDS OF PERENNIAL BLUE LILYTURF GRASSES IN THE NARROW STRIPS PARALLEL TO THE ENTRANCE WALKS, COVERING A TOTAL OF 80 SF OF BED SURFACE.

PER CITY OF BETHLEHEM ZONING ORD. SECTION 1313.28, PROVIDE 1 NEW DECIDUOUS REPLACEMENT TREE FOR ONE EXISTING TREE TO BE REMOVED FROM THE PROPERTY.

PLANT LIST:

KEY	BOTANIC NAME / COMMON NAME	SIZE	QUANTITY	ROOT CONDITION	COMMENT
STREET TREES					
AB	ACER BUERGERIANUM / TRIDENT MAPLE	2-2.5 IN. CAL.	3	B&B	LIMBED UP TO 6 FT
PP	PARROTTIA PERSICA / PERSIAN PARROTTIA	2-2.5 IN. CAL.	4	B&B	LIMBED UP TO 6 FT
REPLACEMENT TREE PER ZONING REQUIREMENT					
AT	ACER TATARICUM / TITARIAN MAPLE	2-2.5 IN CAL	1	B&B	
EVERGREEN SPREADING SHRUBS – FOUNDATION PLANTINGS					
IGC	ILEX GLABRA COMPACTA 'NIGRA' / DWARF INKBERRY HOLLY	2-2.5 FT. HT.	18	POTS OR B&B	MATCHED IN VARIETY
DECIDUOUS FLOWERING TALL SHRUBS – FOUNDATION PLANTINGS					
ADV	AZALEA "DOW" DELAWARE VALLEY WHITE AZALEA	2-2.5 FT. HT.	3	POTS OR B&B	MATCHED IN VARIETY
HY	HYDRANGEAQUERCIFOLIA / OAKLEAF HYDRANGEA	2-2.5 FT. HT.	8	POTS OR B&B	MATCHED IN VARIETY
HO	HAMAMELIS VIRGINICA – AMERICAN WITCHHAZEL	2-2.5 FT. HT.	1	POTS OR B&B	MATCHED IN VARIETY
PERENNIAL GRASS PARTIALLY IN FOUNDATION BED PLANTINGS					
LM	LIRIOPE MISCARII 'MONROES WHITE' / MONROES WHITE LILLYTURF	4" POTS	36	4" POTS	CLUMPING ONLY
GROUNDCOVER IN STEEP SLOPE BEDS – CREDITED TOWARD REQUIRED PLANT SF EQUIVALENT					
PT	PACHYSANDRA TERMINALIS 'GREEN SHEEN' / GREEN SHEEN PACHY	FROM FLATS	995 SF	ROOTED PLANTS	2-YR PLANTS
VM	VINCA MINOR / PERIWINKLE	FROM FLATS	376 SF	ROOTED PLANTS	2-YR PLANTS
NOTE: STEEP SLOPE GROUNDCOVER BEDS TO BE COVERED WITH JUTE MAT PRIOR TO PLANTING					

SEALS AND SIGNATURES:



PLAN PREPARED BY:
PHILIP SIEBERT - LANDSCAPE ARCHITECT
1025 LAWRENCE DRIVE
EMMAUS, PA 18049

OWNER NAME	ALLAN AND NANCY FINNEGAN
OWNER ADDRESS	220 WEST BROAD STREET, BETHLEHEM, PA 18018

PROJECT ADDRESS	968 BENNER AVENUE, THE CITY OF BETHLEHEM, PA
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REVISION BLOCK	
NO. DATE:	DESCRIPTION
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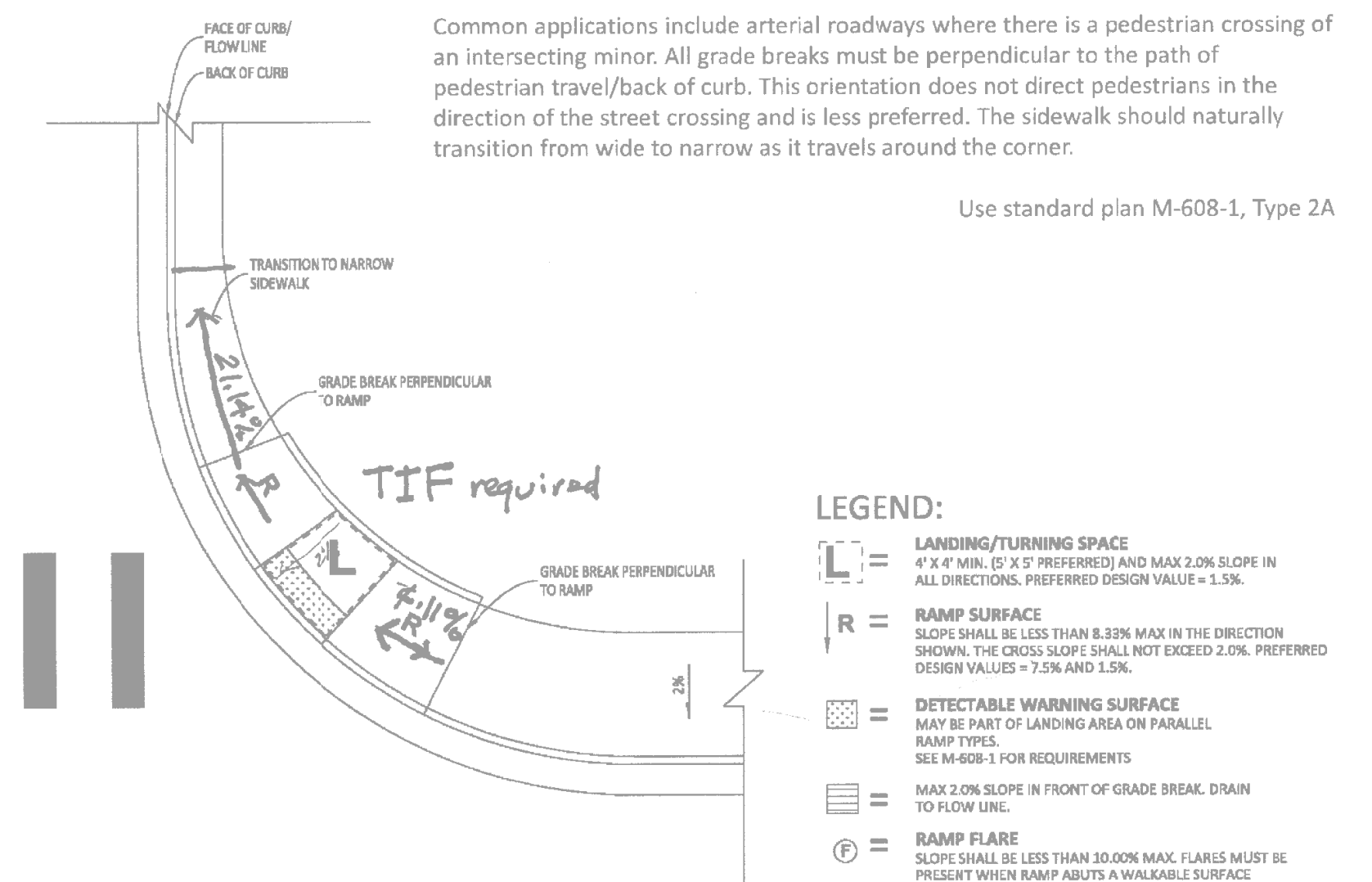
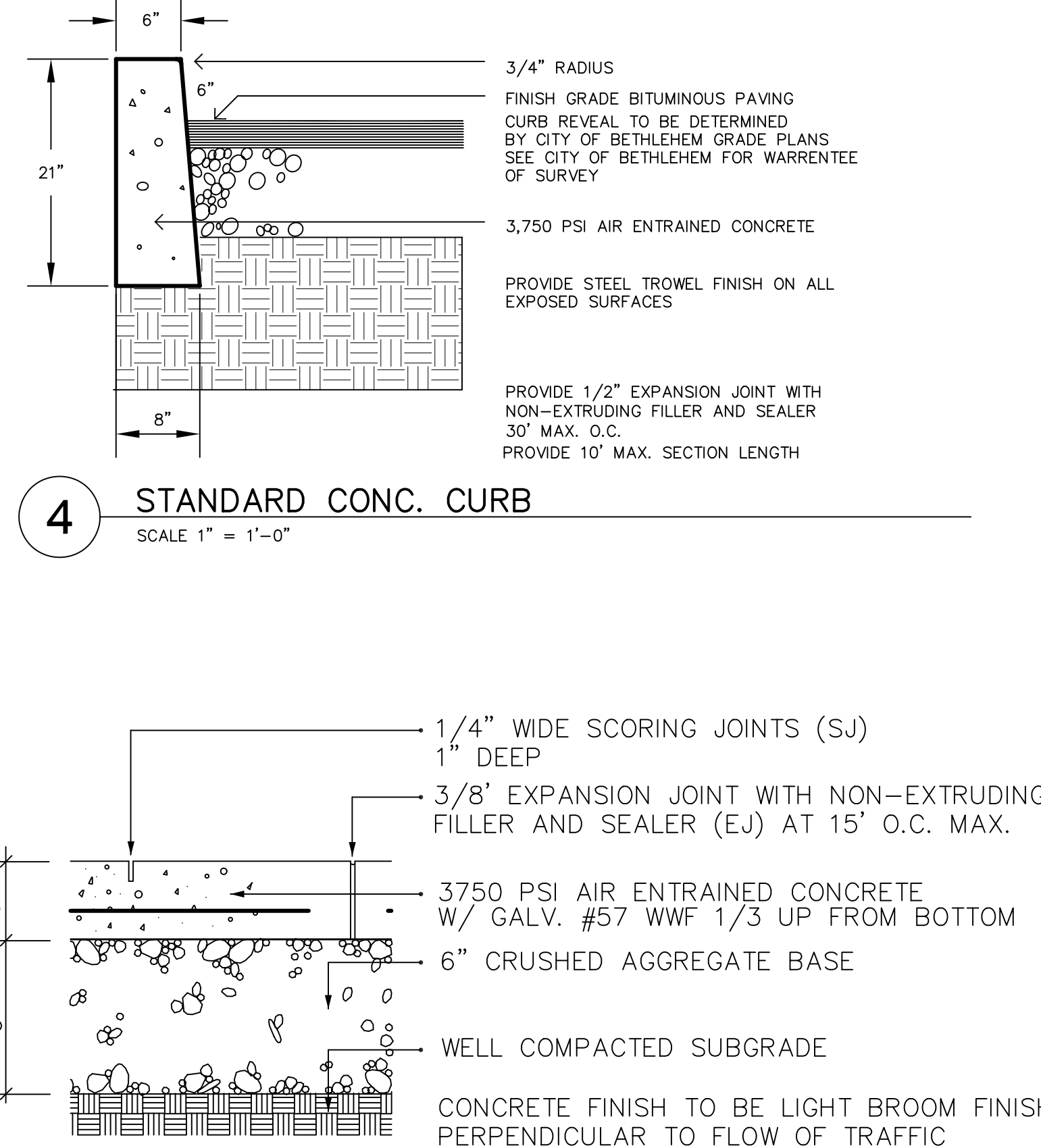
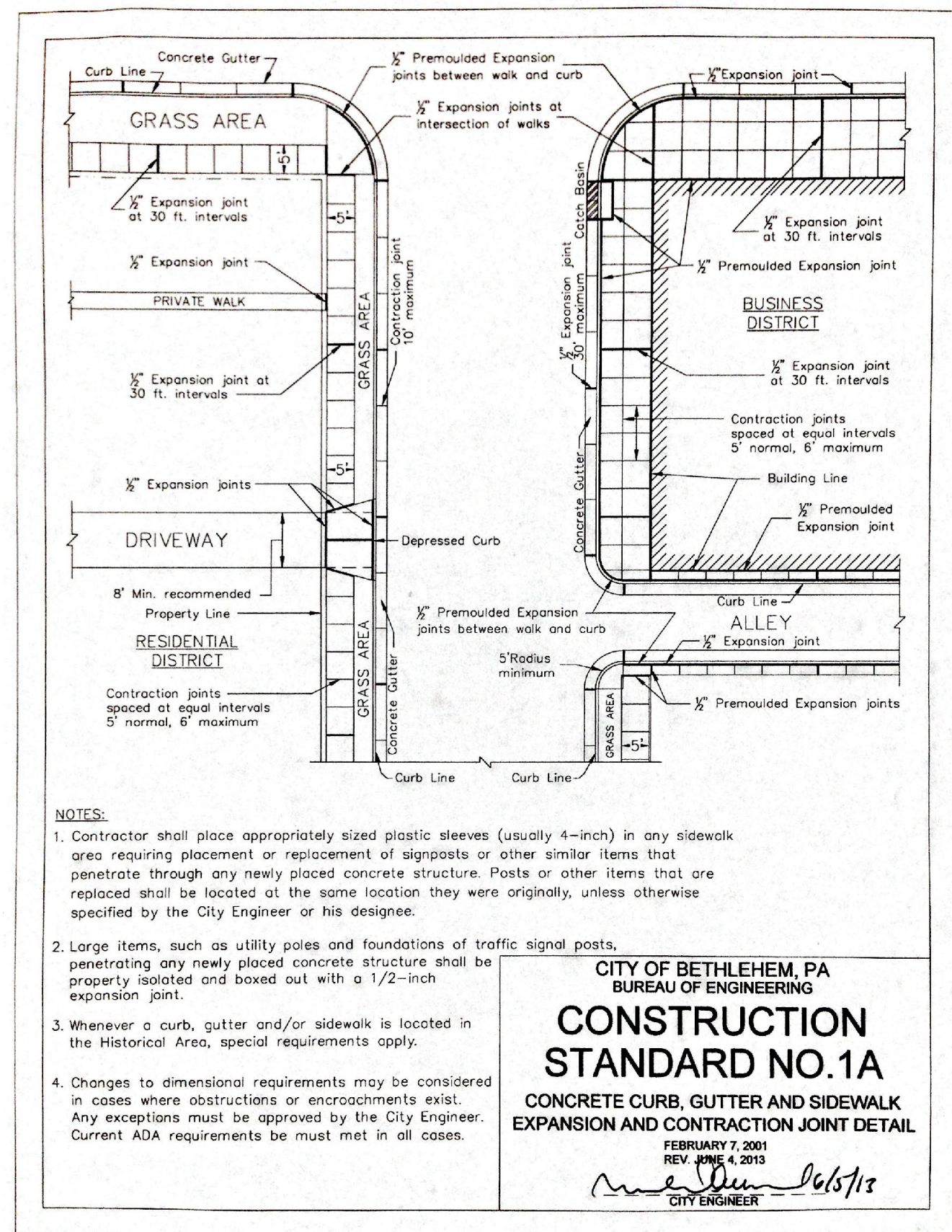
SHEET TITLE:	LANDSCAPE PLANTING & LIGHTING PLAN MORAVIA STREET CONDOMINIUMS
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SHEET NUMBER SP-4	DATE: 6/19/2019	SCALE: AS NOTED
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General Landscaping Notes

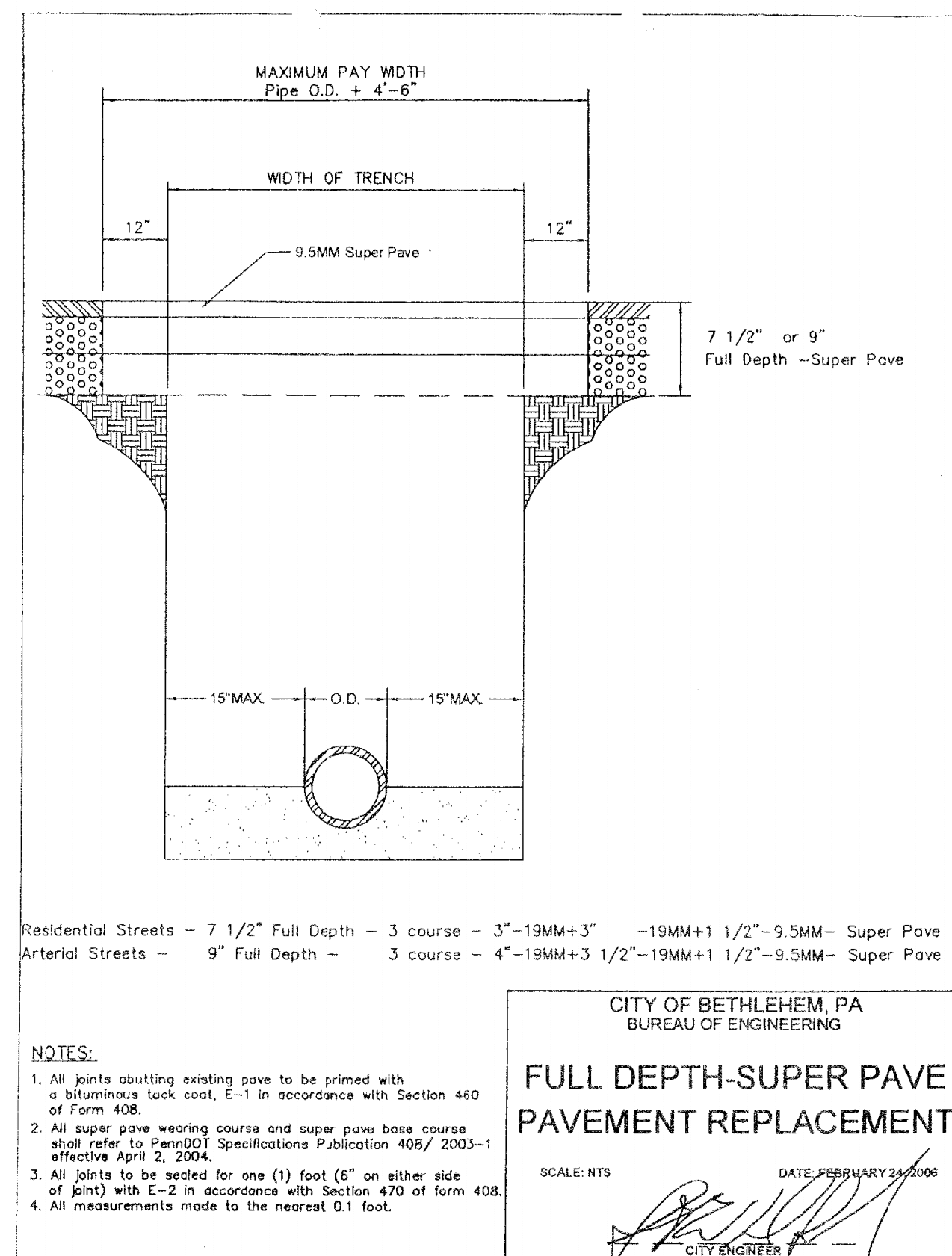
Include the following notes on the site or grading plan in addition to the landscape plan when applicable:

1. No soil disturbance or compaction, construction materials, traffic, burial pits, trenching or other land disturbance is allowed in the tree protection zone unless indicated on the plan.
2. Tree protection barricades must be installed prior to any destruction and/or construction activity.
3. The root protection zone shall be the area encompassed by a circle with a radius extending 1.25 ft. from the trunk of the tree for every inch DBH (diameter at breast height) of the tree.
4. Violations of tree protection requirements are subject to penalty per City ordinance
5. All trees on public property are protected by ordinance: no pruning, root pruning of roots over one inch in diameter, and/or tree removal is to be performed without a permit and work must be performed by a City licensed tree contractor.
6. All plant materials are to conform to the American Standard for Nursery Stock, Latest Edition, American Nursery and Landscape Association.
7. Street and parking lot trees should be a minimum of 14' in height and have a single straight trunk with the first lateral branch at 7' above the root ball. Trees with an upright branching habit, such as zelkova, may have the first lateral branch at 6' above the root ball.
8. All landscaping shall conform to the current edition of the Arboricultural Specifications and Standards of Practice of the City of Bethlehem.
9. A root control system is required when installing street trees. The root barrier shall be of the bio-barrier type and a minimum of eighteen (18") inches wide. Any substitution shall be approved by the City Forester. The root-control system is to be installed per manufacturer's recommendations. Tree openings in the sidewalk shall have the bio-barrier installed along the face of the tree opening which is parallel to the street and closest to the property line, overlapping the nearest two corners by approximately four (4") inches. Where trees are to be planted in a parkway or planting strip between curb and sidewalk, the barrier shall be installed along the sidewalk edge closest to the curb and centered on the root source. The length of the barrier shall be a minimum length equal to the spread of the tree canopy at maturity plus ten (10') feet.'

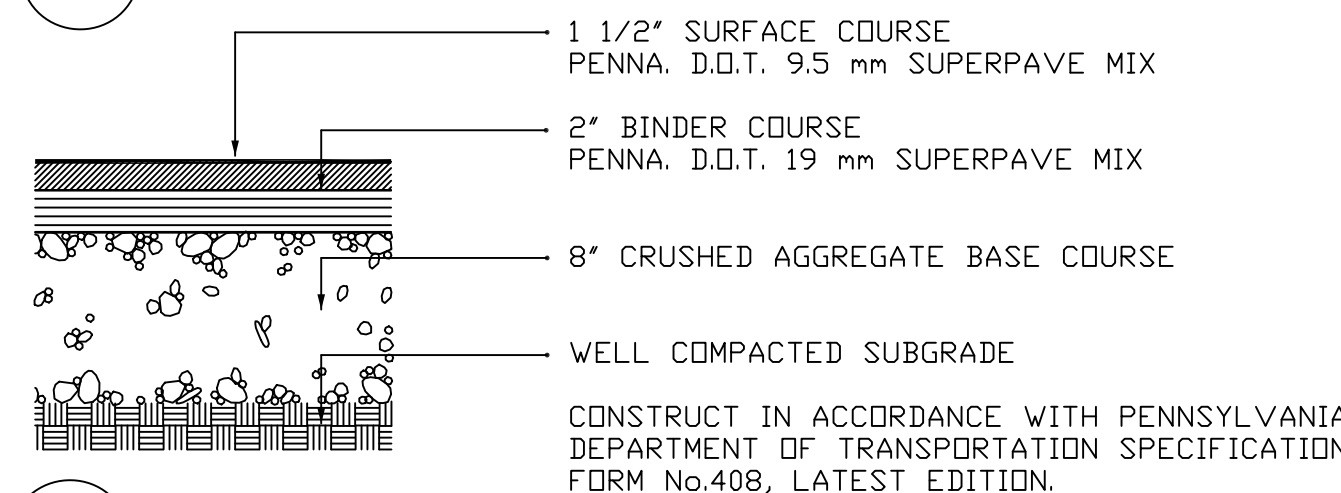


10 ADA ACCESSIBLE CURB RAMP AT INTERSECTION
SCALE 1/2" = 1'-0"

GLOBAL INDUSTRIAL U-RACK BIKE RACK, BLACK, FLANGE
MOUNT, 2-BIKE CAPACITY. AS DISTRIBUTED BY GLOBAL INDUSTRIAL.
MATERIAL 12-GAUGE STEEL, ITEM DIMENSIONS 14 1/2" W X 34"H
ITEM MODEL NO. 442804MBK, POWDER COATED.

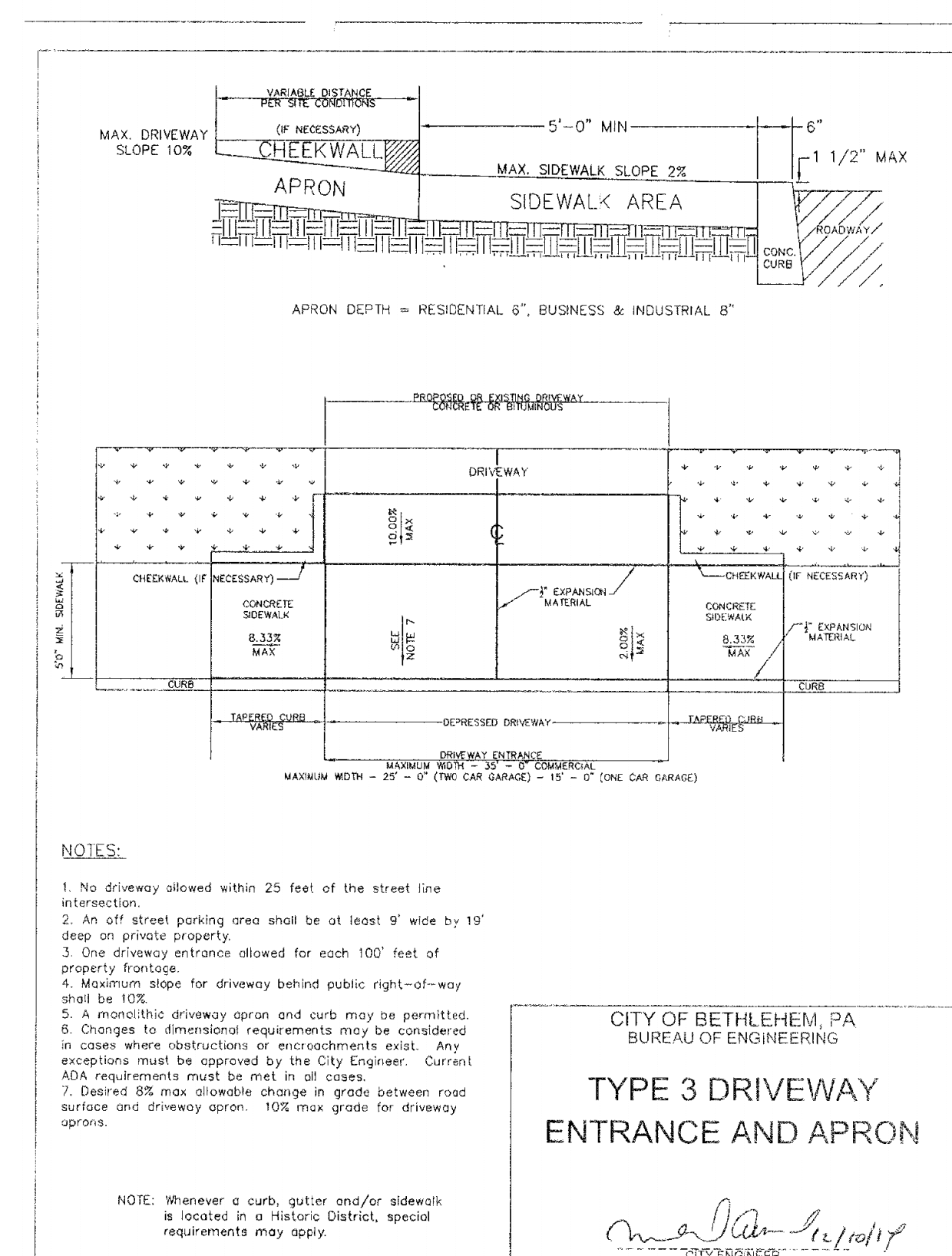


1 CONCRETE CURB, GUTTER AND SIDEWALK JOINTS

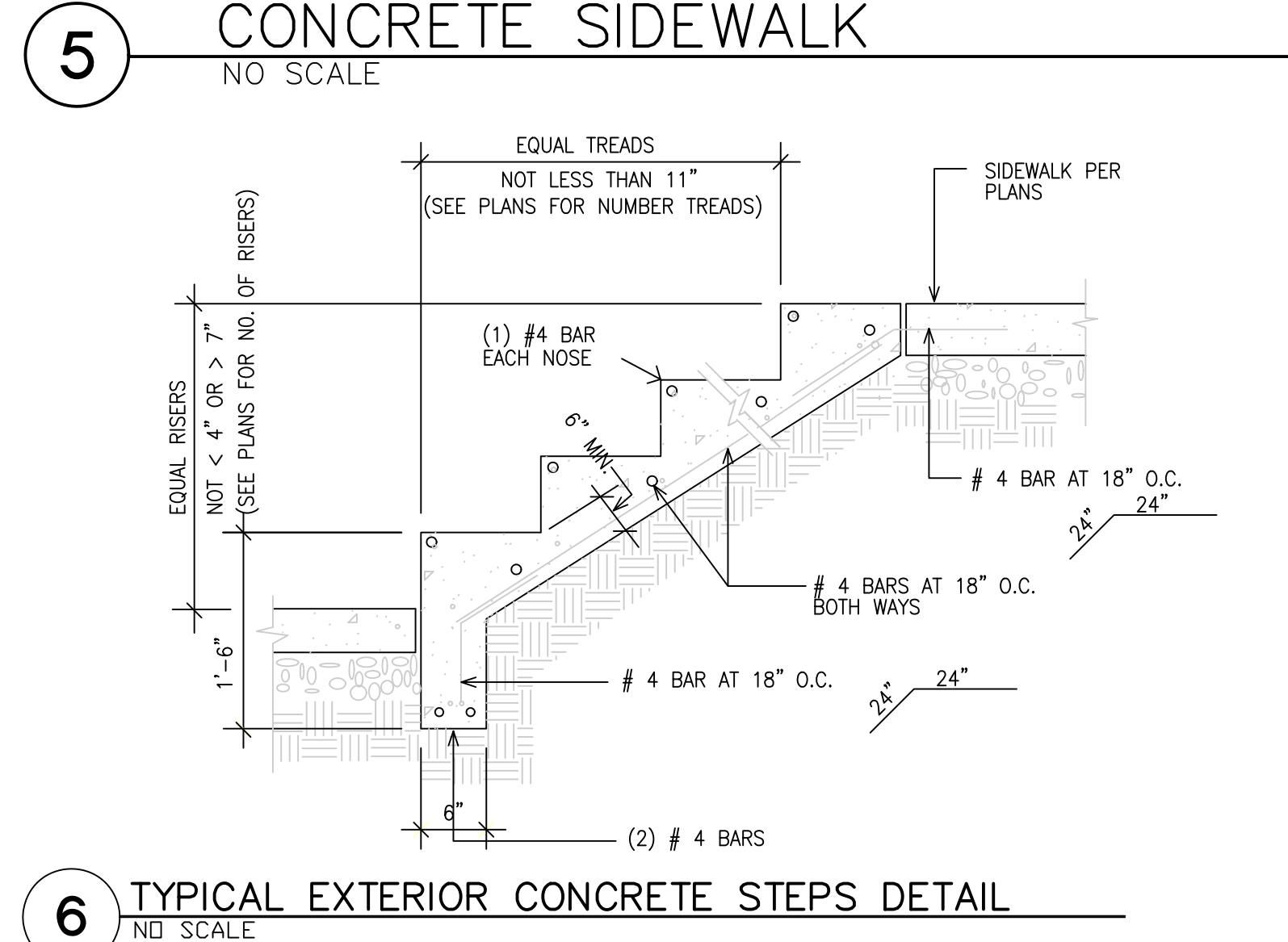


3 BITUMINOUS PAVING
NO SCALE

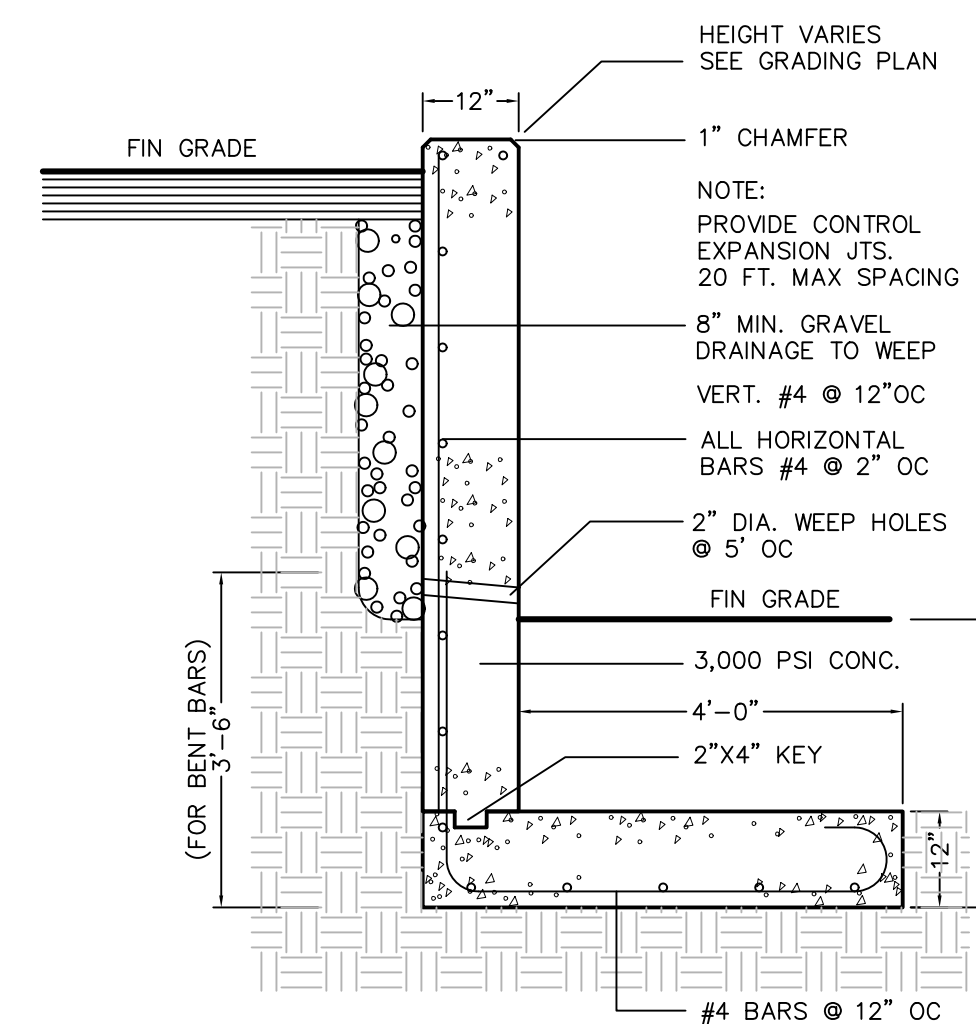
9 CONCRETE CURB, GUTTER AND SIDEWALK JOINTS
NO SCALE



2 BETHLEHEM STANDARD TYPE 3 DRIVEWAY ENTRANCE AND APRON
SCALE 1" = 1'-0"



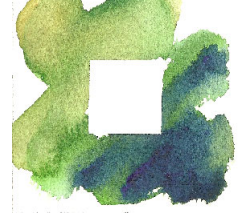
6 TYPICAL EXTERIOR CONCRETE STEPS DETAIL
NO SCALE



7 LOW CONCRETE RETAINING WALL
SCALE 1/2" = 1'-0"

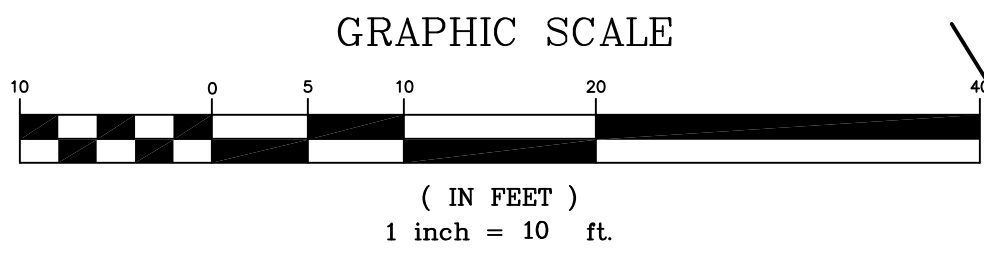
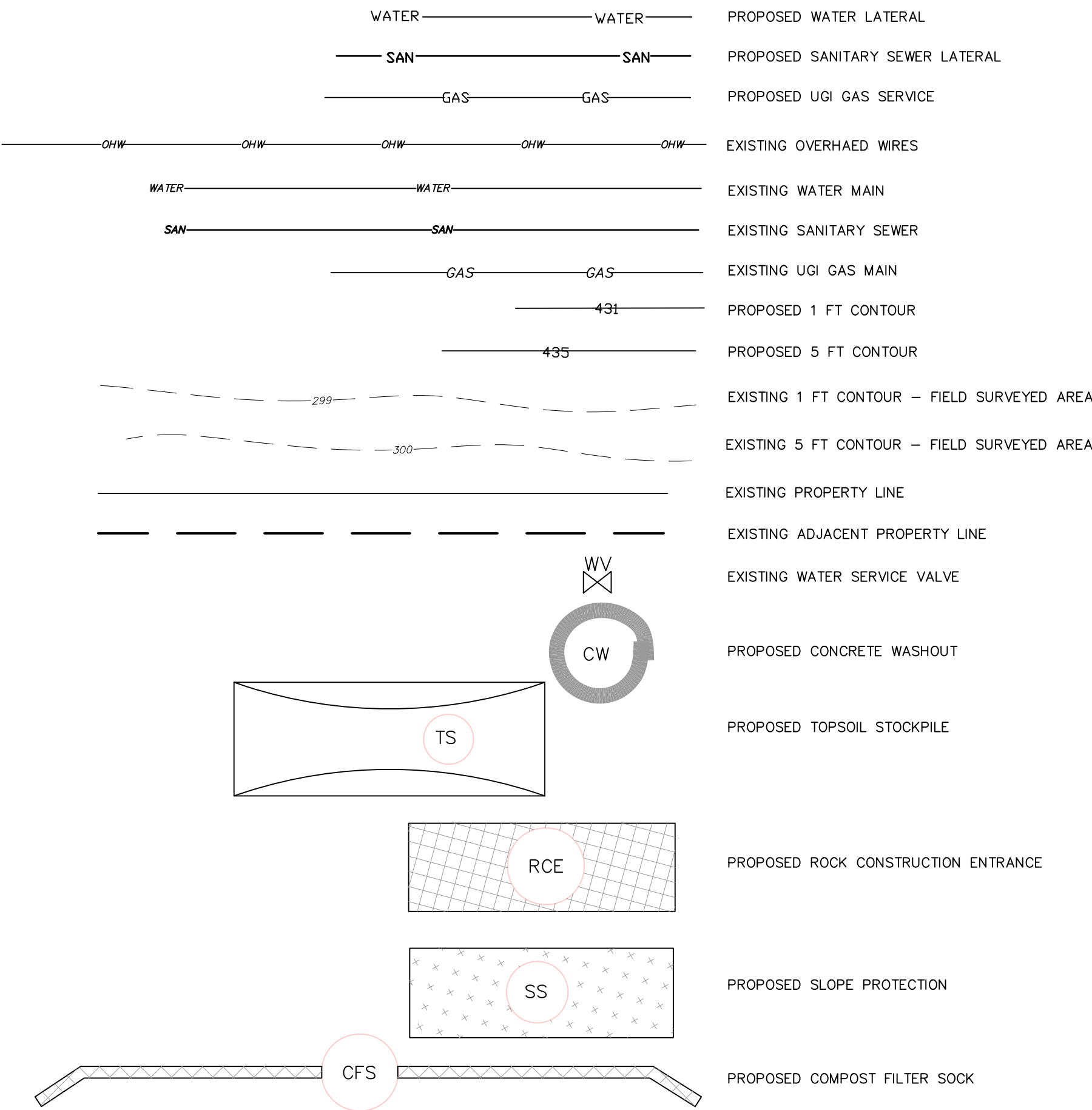


11 INDIVIDUAL UNIT BICYCLE RACK (2-BIKE CAPACITY)
NOT TO SCALE

	<p>PLAN PREPARED BY: PHILIP SIEBERT - LANDSCAPE ARCHITECT 1025 LAWRENCE DRIVE EMMAUS, PA 18049</p> <p>484-560-8208 siebert@rla.com DATE: 11/04/2018</p>
<p>OWNER/DEVELOPER NAMES</p>	<p>ALLAN AND NANCY FINNEGAN</p>
<p>OWNER ADDRESS PROJECT ADDRESS</p>	<p>220 WEST BROAD STREET, BETHLEHEM, PA 18018 968 BENNER AVENUE, THE CITY OF BETHLEHEM, PA</p>
<p>REVISION BLOCK NO. DATE:</p>	<p>DESCRIPTION</p>
<p>1 8/21/2023</p>	<p>PLANS REV. PER CITY OF BETHLEHEM REVIEW LETTER OF 9-19-2019</p>
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<p>6</p>	
<p>7</p>	
<p>SHEET TITLE:</p>	<p>NOTES AND DETAILS MORAVIA STREET CONDOMINIUMS</p>
<p>SHEET NUMBER SP-5</p>	<p>DATE: SCALE:</p> <p>6/19/2019 AS NOTED</p>



PLAN LEGEND:



PA LAW REQUIRES 3 WORKING DAYS
NOTICE FOR CONSTRUCTION PHASE
& 10 WORKING DAYS IN DESIGN
STAGE - CALL BEFORE YOU DIG.

<div>SE</div> <div></div> <div>Philip Siebert</div>		PLAN PREPARED BY: PHILIP SIEBERT - LANDSCAPE ARCHITECT 1025 LAWRENCE DRIVE EMMAUS, PA 18049 484-560-8208 siebertlrta.com DATE: 11/04/2018
	OWNER NAME OWNER ADDRESS	ALLAN AND NANCY FINNENAG 220 WEST BROAD STREET, BETHLEHEM, PA 18018
	PROJECT ADDRESS	968 BENNER AVENUE, THE CITY OF BETHLEHEM, PA
	REVISION BLOCK NO. DATE:	DESCRIPTION
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SHEET TITLE:		EROSION & SEDIMENTATION CONTROL PLAN MORAVIA STREET CONDOMINIUMS
SHEET NUMBER SP-6		DATE: 6/19/2019 SCALE: AS NOTED

STANDARD E&S WORKSHEET # 21

Temporary and Permanent Vegetative Stabilization Specifications

PROJECT NAME: MORAVIA STREET CONDOMINIUMS

LOCATION: CITY OF BETHLEHEM

PREPARED BY: PCS

CHECKED BY: DATE: 8-21-2023

SPECIFICATIONS: The Department recommends the use of the Penn State publication, "Erosion Control and Conservation Plantings on Noncropland," as the standard to use for the selection of species, seed specifications, mixtures, liming and fertilizing, time of seeding, and seeding methods. Specifications for these items may also be obtained from PennDOT's Publication # 408, Section 804 or by contacting the applicable county conservation district. Upon selection of a reference, that reference should be used to provide all specifications for seeding, mulching, and soil amendments. The following specification will be used for this project:

(TEMPORARY)

*SPECIES: ANNUAL RYEGRASS

% PURE LIVE SEED: 80%

APPLICATION RATE: 40 LB./ACRE

FERTILIZER TYPE: 10-20-20 (X-X-X)

FERTILIZER APPL. RATE: 150 LB./ACRE

LIMING RATE: 1 T./ACRE

MULCH TYPE: STRAW

MULCHING RATE: 3 T./ACRE

(PERMANENT)

TOPSOIL PLACEMENT DEPTH: 6 IN.

*SPECIES: KEN. BLUE PER. RYE, FINE FESCUE

% PURE LIVE SEED: 72 80 75%

APPLICATION RATE: 121 33 80 LB./ACRE

FERTILIZER TYPE: 10-20-20 (X-X-X)

FERTILIZER APPL. RATE: 780 LB./ACRE

LIMING RATE: 3 T./ACRE

MULCH TYPE: STRAW

MULCHING RATE: 3 T./ACRE

ANCHOR MATERIAL: CELLULOSE FIBER

ANCHORING METHOD: SPRAY

RATE OF ANCHOR MATERIAL APPL.: 1.000 LB./ACRE

SEEDING SEASON DATES: MAR. 15 TO OCT. 15

KENTUCKY BLUEGRASS SHALL BE COMPOSED OF EQUAL PARTS, BY WEIGHT, OF NO LESS THAN (3) PATENTED VARIETIES, SUITED TO THIS LOCATION.

SEED AT A RATE OF 5.4 POUNDS PER 1,000 SF OR 234 POUNDS PER ACRE.

102.4(b)(5)(x)

MAINTENANCE PROGRAM (INCLUDING INSPECTION SCHEDULE)

Until the site achieves final stabilization, the operator shall assure that the BMPs are implemented, operated, and maintained properly and completely. Maintenance shall include inspections of all BMP facilities. The operator will maintain and make available to the City of Bethlehem complete, written inspection logs of all those inspections. A report must be made of the inspections and kept on site. All maintenance work, including cleaning, repair, replacement, re-grading, and re-stabilization shall be performed immediately and noted as completed by the next inspection date.

Until the site is stabilized, all erosion and sediment BMPs must be maintained properly. Maintenance must include inspections of all erosion and sediment control BMPs after each runoff event and on a weekly basis, unless there has been no rainfall. Inspections may be done on two-week intervals in the dry season, if there has been no rain since the last inspection. All preventative and remedial maintenance work, including clean out, repair, replacement, regarding, reseedling, re-mulching, and re-netting, must be performed immediately. If erosion and sediment control BMPs fail to perform as expected, replacement BMPs, or modifications of those installed will be required.

See individual E&S BMP standard details on sheet SP-2 for required frequency.

Traffic shall not be permitted to cross compost filter socks.

Rock Construction Entrance thickness shall be constantly maintained to the specified dimensions by adding rock. 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, install wash rack. Washing the roadway or sweeping the deposits into roadway ditches, sewer, culverts, or other drainage ways is not acceptable. Sediment removed from BMPs shall be disposed of in landscaped areas outside of steep slopes, or drainage swales and immediately stabilized.

Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the operator shall implement appropriate BMPs to eliminate potential for accelerated erosion and/or sediment pollution.

NOTES :

1. ALL SEDIMENT CONTROL MEASURES AND FACILITIES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PA D.E.P. EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL, TECHNICAL GUIDANCE NUMBER 363-2134-008, DATED MARCH 2012.

2. SHOULD ANY MEASURES CONTAINED WITHIN THIS PLAN AND NARRATIVE PROVE INCAPABLE OF ADEQUATELY REMOVING SEDIMENT FROM ON-SITE STORM WATER RUNOFF PRIOR TO DISCHARGE FROM THE SITE OR OF STABILIZING THE SURFACES INVOLVED, ADDITIONAL MEASURES MUST BE IMMEDIATELY IMPLEMENTED BY THE CONTRACTOR TO ELIMINATE ALL SUCH PROBLEMS. CONTACT THE CITY OF BETHLEHEM FOR GUIDANCE AND RECOMMENDATIONS PRIOR TO THE INSTALLATION OF ANY ADDITIONAL MEASURES.

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

4. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE CONTRACTOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENTATION CONTROL PLAN PREPARER, AND A REPRESENTATIVE OF THE CITY OF BETHLEHEM, TO AN ON-SITE PRE-CONSTRUCTION MEETING. ALSO, AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INC. AT 1-800-242-1776 FOR BURIED UTILITIES LOCATION.

5. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE CONSTRUCTION SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.

6. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

7. BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS, WHICH MAY ALTER THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE CITY OF BETHLEHEM.

8. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.

9. THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN APPROVED BY THE CITY OF BETHLEHEM. AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS, REGARDLESS OF THEIR LOCATIONS.

10. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM 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 OR OTHER MOVEMENTS.

11. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.

12. UNTIL THE SITE ACHIEVES FINAL STABILIZATION, THE OPERATOR SHALL ASSURE THAT THE BEST MANAGEMENT PRACTICES ARE IMPLEMENTED, OPERATED, AND MAINTAINED PROPERLY AND COMPLETELY.

13. MULCH WITH MULCH CONTROL NETTING OR EROSION BLANKETS MUST BE INSTALLED ON ALL SLOPES 3:1 OR STEEPER.

14. WHERE NOT DELINEATED OTHERWISE, THE LIMITS OF CONSTRUCTION SHALL BE THE PROPOSED COMPOST FILTER SOCK LINE.

15. MONROVIA ST. & BENNER AVE. ARE PUBLIC ACCESS WAYS. THEY SHALL BE KEPT CLEAR OF ALL MUD, STONES AND OTHER CONSTRUCTION DEBRIS. CLEANING, BROOMING AND/OR SWEEPING MAY BE REQUIRED ON A DAILY BASIS, OR EVEN MORE FREQUENTLY. ACCESS TO THE SITE SHALL BE LIMITED TO THE STONE TIRE CLEANING AREA AT THE PROPOSED ROCK CONSTRUCTION ENTRANCE ONLY. ADDITIONAL SNOW FENCE OR BERMS MAY BE REQUIRED TO LIMIT CONSTRUCTION VEHICLE MOVEMENT.

16. SOME SOILS MAY BE PRONE TO THE FORMATION OF SINKHOLES. SHOULD A SINKHOLE BE ENCOUNTERED DURING GRADING/BACKFILL OPERATIONS, NOTIFY THE ARCHITECT AND THE CITY OF BETHLEHEM IMMEDIATELY FOR SUGGESTED REPAIR PROCEDURES.

17. THE OWNER WILL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION, AND MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROLS AND RELATED ITEMS INCLUDED WITHIN THESE PLANS.

18. EROSION AND SEDIMENT BMPS MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPs.

19. EROSION AND SEDIMENT CONTROL PLAN PREPARED BY: PHILIP SIEBERT (RLA #675 E) PHILIP SIEBERT- LANDSCAPE ARCHITECT 1025 LAWRENCE DRIVE, EMMAUS, PA 18049 PHONE: 484-560-8208

20. ALL CONSTRUCTION WASTE MATERIAL AND DEBRIS SHALL BE REMOVED FROM THE SITE AND RECYCLED/DISPOSED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THOSE AGENCIES AND AUTHORITIES HAVING JURISDICTION.

21. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART-1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.

22. STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.

23. SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED.

24. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, RE-GRADING, RE-SEEDING, RE-MULCHING, AND RE-NETTING, MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.

25. FAILURE TO CORRECTLY INSTALL SEDIMENT CONTROL FACILITIES OR FAILURE TO PREVENT SEDIMENT LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE OR FAILURE TO TAKE CORRECTIVE ACTIONS TO IMMEDIATELY RESOLVE FAILURES OF SEDIMENT CONTROL FACILITIES MAY RESULT IN ADMINISTRATIVE, CIVIL AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION AS DEFINED IN SECTION 602 OF THE CLEAN STREAMS LAW OF PENNSYLVANIA. THE CLEAN STREAMS LAW PROVIDES FOR UP TO \$10,000 PER DAY IN CIVIL PENALTIES, \$10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO \$25,000 IN MISDEMEANOR CRIMINAL PENALTIES PER EACH VIOLATION.

26. CONSTRUCTION VEHICLES AND EQUIPMENT MAY NEITHER ENTER DIRECTLY ONTO, NOR EXIT DIRECTLY FROM THE PROJECT SITE ONTO MONROVIA ST. OR BENNER AVE. WITHOUT FIRST PASSING THROUGH THE ROCK CONSTRUCTION ENTRANCE.

27. NO DISTURBANCE WILL BE PERMITTED PROVIDING ACCESS TO THIS SITE FOR GRADING AND/OR ACQUIRING BORROW TO CONSTRUCT ANY BMPs.

28. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.

E&S CONTROL STANDARD NOTES RELATING TO SEQUENCE OF CONSTRUCTION

1. AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES (INCLUDING CLEARING AND GRUBBING), THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, TO AN ON-SITE PRECONSTRUCTION MEETING. CITY OF BETHLEHEM PLANNING DEPT.-CRAIG PEIFFER PHONE 610-997-7637 CITY OF BETHLEHEM ENGINEER -BASEL YANDEM, CHIEF ENGINEER PHONE 610-865-7051.

PLAN DESIGNER PHILIP SIEBERT, RLA - EMAIL phil@siebertrla.com PHONE 484-560-8208

2. UPON INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPs AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE SHALL PROVIDE NOTIFICATION TO THE CITY.

3. AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.

4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED BY THE CITY ENGINEER PRIOR TO IMPLEMENTATION. EACH STEP OF THE SEQUENCE SHALL BE COMPLETED BEFORE PROCEEDING TO THE NEXT STEP, EXCEPT WHERE NOTED.

EROSION AND SEDIMENTATION CONTROL STAGING OF OPERATIONS AND EARTHMOVING ACTIVITIES CONSTRUCTION OF A 3 UNIT CONDOMINIUM BUILDING

NO SOIL DISTURBANCE SHALL TAKE PLACE UNTIL THE LOT IS ISOLATED FROM OFF SITE RUNOFF BY THE PLACEMENT OF THE COMPOST FILTER SOCKS ON THE DOWNSLOPE SIDE OF THE DISTURBANCE, PER THE SIZING TABLE LOCATED ON SHEET SP-8. THE TEMPORARY E&S CONTROL BMPs ARE SIZED WITH THE UNDERSTANDING THAT THE SITE WILL RECEIVE NO SIGNIFICANT RUNOFF FROM AREAS BEYOND THE LOT PERIMETER.

NO CLEARING AND/OR GRUBBING OF THIS SITE MAY TAKE PLACE UNTIL ALL POSSIBLE EROSION AND SEDIMENTATION CONTROLS, AS OUTLINED, HAVE BEEN INSTALLED AND ARE FUNCTIONAL. MULCHING, WITHOUT SEEDING, CAN BE USED AS AN INTERIM STABILIZATION CONTROL DURING NON-GROWING SEASONS OF THE YEAR. DISTURB ONLY AREAS THAT REQUIRE INSTALLATION OF E&S CONTROLS UNTIL CONTROLS ARE STABILIZED AND FUNCTIONAL. ENSURE THAT E&S CONTROLS ARE FUNCTIONAL PRIOR TO DISTURBING TRIBUTARY AREAS. WEEKLY AND AFTER EACH RUNOFF EVENT, ALL TEMPORARY EROSION CONTROL FACILITIES SHALL BE CHECKED AND CLEANED. ALL SILT REMOVED DURING THE CLEANING OPERATIONS, IF SUITABLE, SHALL BE INCORPORATED INTO THE EARTHWORK AS FILL WASTED ON THE SITE, AS DIRECTED BY THE ENGINEER. AT THE END OF EACH DAY ANY SEDIMENT DEPOSITED ON THE ADJACENT ROADWAY SYSTEM IS TO BE REMOVED, RETURNED TO THE SITE, AND STABILIZED. PRIOR TO STABILIZATION, ANY E&S PROBLEMS WHICH OCCUR AND REQUIRE ADDITIONAL MEASURES, SHOULD HAVE IMMEDIATE ACTION TAKEN TO CORRECT THE PROBLEM.

THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPING AND HAVING AN APPROVED EROSION AND SEDIMENTATION CONTROL PLAN FOR ANY OFFSITE WASTE OR BORROW AREAS.

BEFORE DISPOSING OF SOIL OR RECEIVING BORROW FOR THE SITE, THE OPERATOR MUST ASSURE THAT EACH SPOIL OR BORROW AREA HAS AN EROSION AND SEDIMENT CONTROL PLAN APPROVED BY THE CITY OF BETHLEHEM, AND WHICH IS BEING ARCHITECTED AND THE CITY OF BETHLEHEM IMMEDIATELY FOR SUGGESTED REPAIR PROCEDURES.

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

11. INSPECT & REPAIR THE EXISTING STABILIZED ROCK CONSTRUCTION ENTRANCE AS SHOWN ON THESE PLANS. STABILIZE ANY DISTURBED AREAS.

12. INSPECT ALL PREVIOUSLY INSTALLED COMPOST FILTER SOCKS, WHERE INDICATED THROUGHOUT THE ENTIRE PROJECT AREA.

13. AFTER ALL TREE REMOVAL HAS BEEN ACCOMPLISHED PER ORIGINAL APPROVED PERMIT, CLEARING AND GRUBBING OF CONSTRUCTION AREA HAS BEEN COMPLETED, SPOILS HAVE BEEN DISPOSED OF OFF-SITE, TOPSOIL IS STOCKPILED ON SITE IN THE DESIGNATED AREA FOR LATER USE, PROCEED AS FOLLOWS.

14. ROUGH GRADE THE PROJECT SITE FOR THE CONCRETE WORK AND DRIVEWAY PAVEMENT. ALL SLOPES OF 3:1 OR GREATER ARE TO BE IMMEDIATELY PROTECTED WITH EROSION CONTROL MATTING. THE MINOR INTERCEPTION SWALE WILL ALSO BE COMPLETED AT THIS TIME AND ITS DISCHARGE POINT PROTECTED WITH A STONE FILTER BERM. INSTALLED PER THE DETAILS ON SP-8. ALL STORMWATER FROM THESE AREAS WILL CONTINUE AS SHEET FLOW TOWARD THE COMPOST FILTER SOCK AT THE NORTHERN PROPERTY LINE, AND TO THE MINOR INTERCEPTION SWALE NEAR BENNER AVENUE. THERE IS NO IMPERVIOUS SURFACE CONTRIBUTING RUNOFF TO THIS DRAINAGE PATH, AND MINIMAL CONCENTRATED FLOWS ARE ANTICIPATED DURING THIS PERIOD. SHOULD CONDITIONS DIFFER, ADDITIONAL TEMPORARY EROSION CONTROL MEASURES, SUCH AS A ROCK FILTER, OR WEIGHTED SEDIMENT FILTER TUBES ARE TO BE PLACED IN THE AREAS OF CONCENTRATED FLOW, AT THE DIRECTION OF THE PLAN PREPARER.

15. INSPECT & IF NECESSARY, REPAIR THE COMPOST SOCK CONCRETE WASHOUT WHERE INDICATED ON THESE PLANS. IMPERVIOUS LINER IS TO BE INSTALLED BENEATH THIS CONCRETE WASHOUT AREA.

16. CONCRETE SIDEWALKS AND STEPS WILL BE FORMED, BASE MATERIAL PLACED & COMPACTED, REINFORCING WIRE MESH INSTALLED, AND CONCRETE POURED. ONCE THE CONCRETE HAS CURED, THE AREA SURROUNDING THE HOUSE MAY BE BACKFILLED AND BROUGHT TO FINAL GRADE.

17. HOME CONSTRUCTION, AND ANY REMAINING EXTERIOR UTILITY INSTALLATIONS WILL CONTINUE SIMULTANEOUSLY.

18. THE INTERCEPTION SWALE TO BENNER AVE. WILL BE COMPLETED. A ROCK FILTER BERM MUST BE INSTALLED, AS SHOWN, IMMEDIATELY AFTER THE SWALES ARE CONSTRUCTED. THE SWALE WILL BE FINISH GRADED, TOPSOIL SPREAD, SEEDDED AND IMMEDIATELY PROTECTED WITH EROSION CONTROL MATTING FOR BOTH SLOPE AND SWALE STABILIZATION.

19. THE MINOR INFILTRATION SWALE IS NOT TO RECEIVE RUNOFF UNTIL THE AREA TRIBUTARY TO THE SWALE IS COMPLETELY STABILIZED. EROSION CONTROL MATTING IS TO BE INSTALLED ON ANY REMAINING STEEP BANKS GREATER THAN 2:1 SLOPE. ROCK FILTER OUTLET MUST BE INSTALLED IN THE SWALE, AS SHOWN. UPON SUITABLE VEGETATIVE STABILIZATION OF THE SWALES, THE ROCK GUTTERS AND DOWNSPOUTS CAN BE INSTALLED.

20. WHEN FINAL PAVING OF THE DRIVEWAY IS COMPLETED, THE ENTIRE AREA WILL BE SEEDDED PER THE PERMANENT SEEDING INSTRUCTIONS.

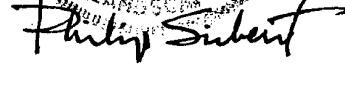
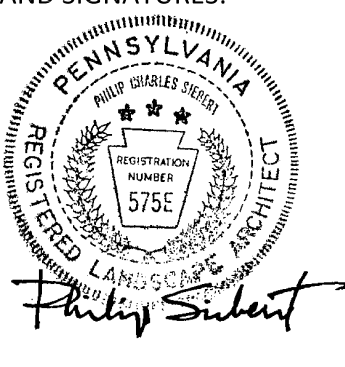
21. THE SITE WILL BE CLEARED OF CONSTRUCTION EQUIPMENT AND DEBRIS. ONCE THE SITE HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION, ALL TEMPORARY BMP'S CAN BE REMOVED. THE TEMPORARY BMP'S INCLUDE THE ROCK CONSTRUCTION ENTRANCE, SILT SOCK, AND 48 INCH CONSTRUCTION FENCING. ONCE REMOVED THE AREAS WHERE BMP'S ARE REMOVED FROM WILL BE SEEDDED, MULCHED, AND STABILIZED.

22. THE PERMITTEE SHALL BE REQUIRED TO SUBMIT AN AS-BUILT PLAN TO THE CITY OF BETHLEHEM FOR FINAL REVIEW & INSPECTION.

PLAN REFERENCE INFORMATION:

FIELD WORK AND BOUNDARY ARE BASED ON A SURVEY DONE BY N.D. REMY ASSOCIATES, LLC. DATED 9/06/2018.

SEALS AND SIGNATURES:



PLAN PREPARED BY:
PHILIP SIEBERT - LANDSCAPE ARCHITECT
1025 LAWRENCE DRIVE
EMMAUS, PA 18049

484-560-8208
siebertrla.com
DATE: 11/04/2018

OWNER NAME
OWNER ADDRESS

PROJECT ADDRESS

ALLAN AND NANCY FINNEGAN
220 WEST BROAD STREET, BETHLEHEM, PA 18018

968 BENNER AVENUE, THE CITY OF BETHLEHEM, PA

REVISION BLOCK
NO. DATE DESCRIPTION

1 8/21/2023 PLANS REV. PER CITY OF BETHLEHEM REVIEW LETTER OF 9-19-2019

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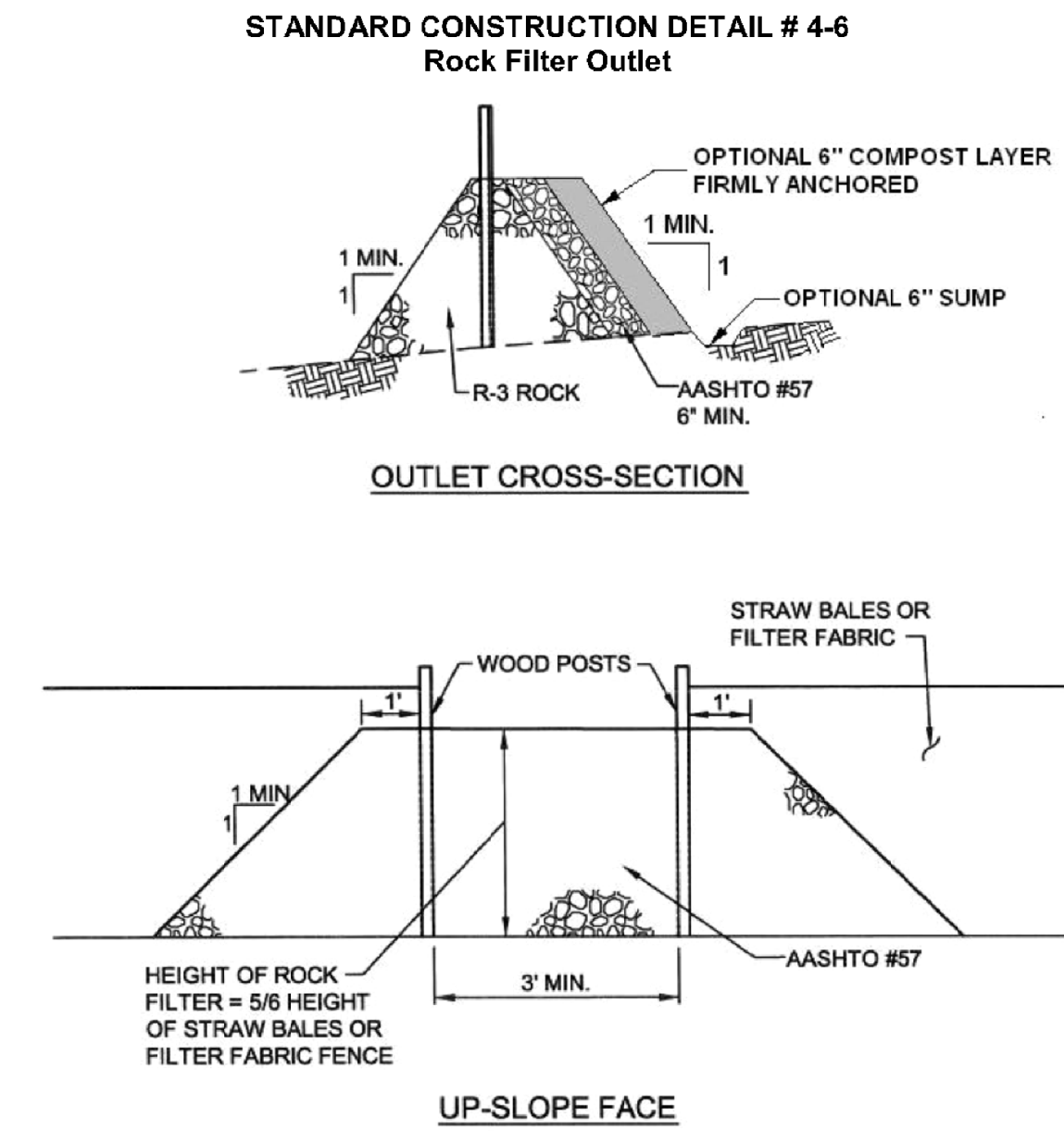
SHEET TITLE:

E&S CONTROL DETAILS AND NOTES
MORAVIA STREET CONDOMINIUMS

SHEET NUMBER
SP-7

DATE:
6/19/2019

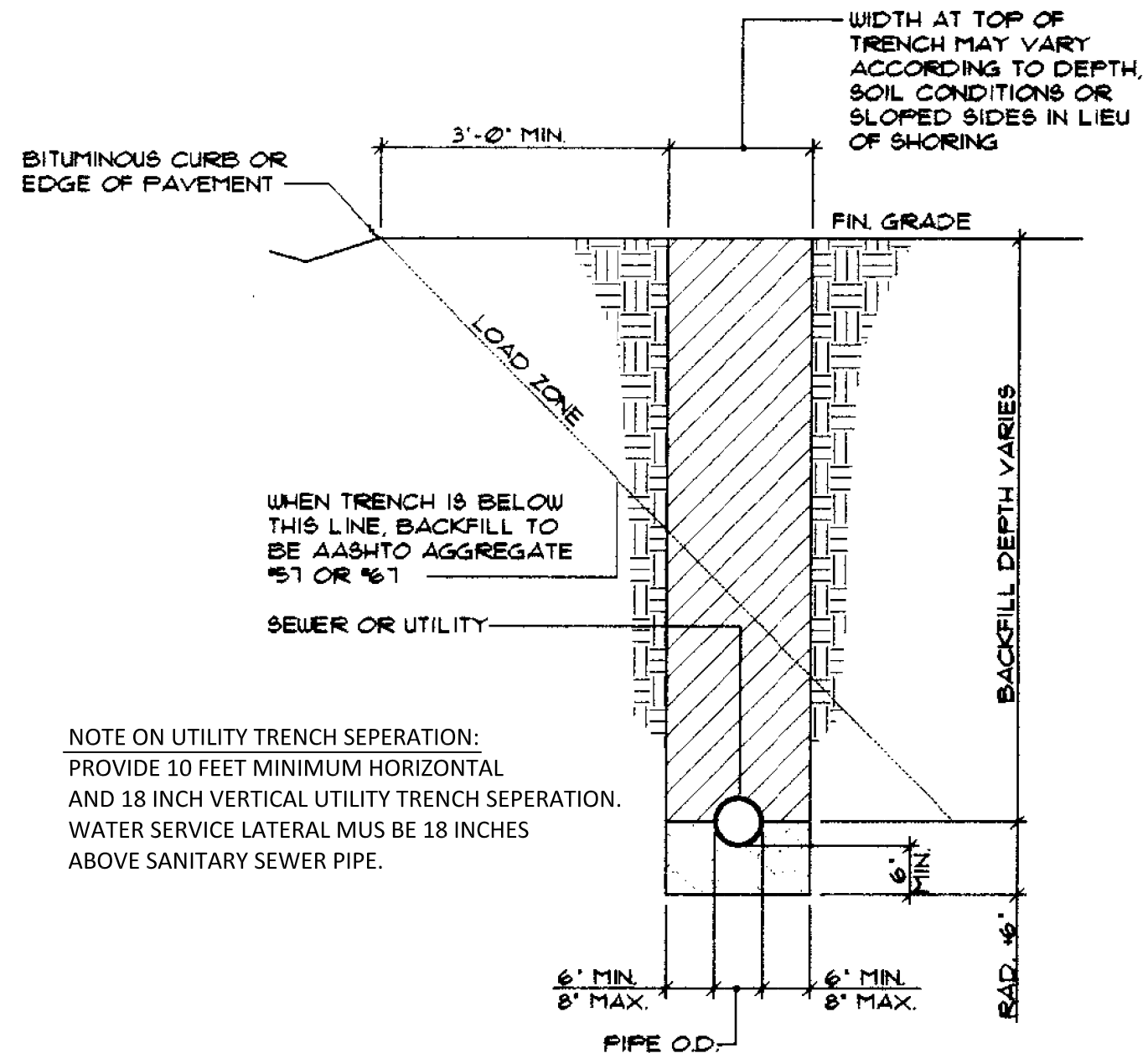
SCALE:
AS NOTED



PA DEP

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.

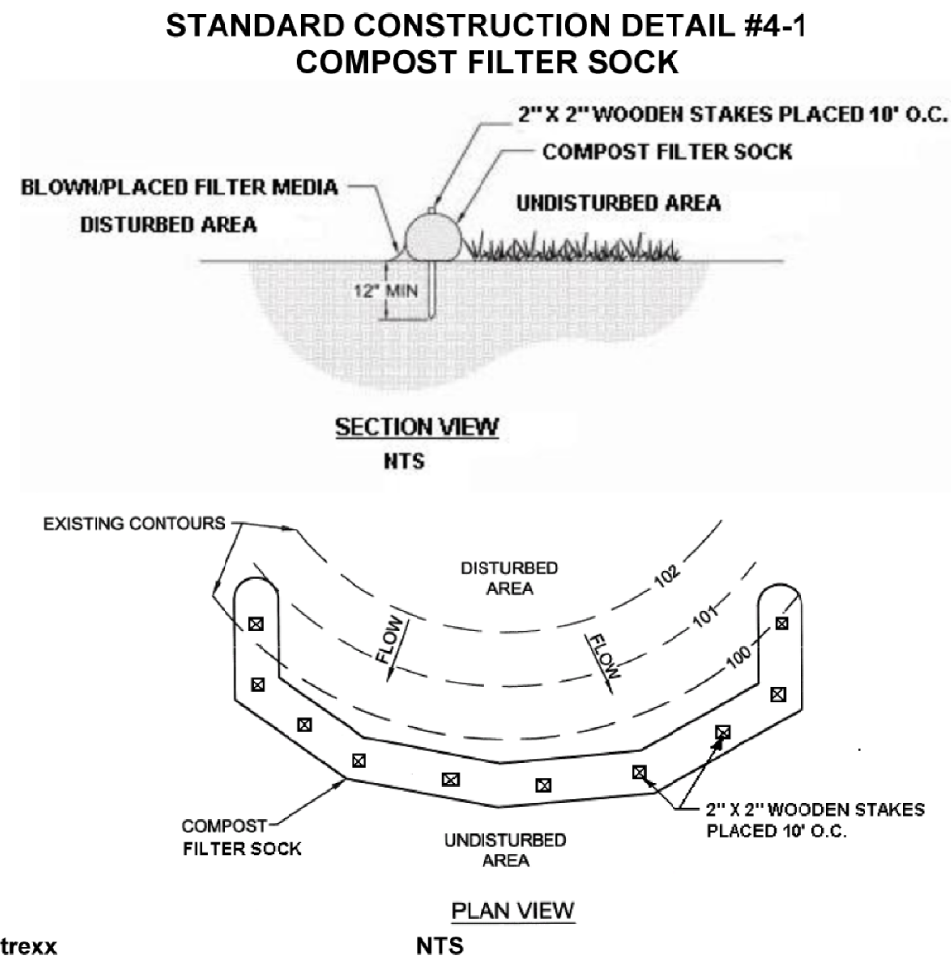


BEDDING:
THE BEDDING SHALL HAVE A MINIMUM DEPTH OF (6") SIX INCHES BELOW ALL PIPE AND SHALL BE BACKFILLED WITH AASHTO #51 OR #57. (12") TWELVE INCHES BELOW ALL PIPE IN ROCK THEN EXTENDED UP THE HAUNCHES TO THE SPRINGLINE OF THE PIPE.

BACKFILL:
ALL STREET AND PARKING AREA CROSSING SHALL BE BACKFILLED TO SUBGRADE WITH AASHTO AGGREGATE #51 OR #57. IN ALL OTHER TRENCH AREAS BACKFILL FROM THE SPRINGLINE TO (1) ONE FOOT ABOVE THE TOP OF PIPE TO BE SELECTED MATERIAL (SELECTED MATERIAL IS FINELY DIVIDED MATERIAL FREE OF DEBRIS, ORGANIC MATERIAL, AND STONES) TAPPED IN (4) FOUR INCH LAYERS; THEN THE REMAINING BACKFILL FROM THE TRENCH MAY BE PLACED.

4 UTILITY PIPE TRENCHING, BEDDING AND BACKFILLING

NTS



Filtrex

Sock fabric shall meet standards of Table 4.1. Compost shall meet the standards of Table 4.2.

Compost filter sock shall be placed at existing level grade. Both ends of the sock shall be extended at least 8 feet up slope at 45 degrees to the main sock alignment (Figure 4.1). Maximum slope length above any sock shall not exceed that shown on Figure 4.2. Stakes may be installed immediately downslope of the sock if so specified by the manufacturer.

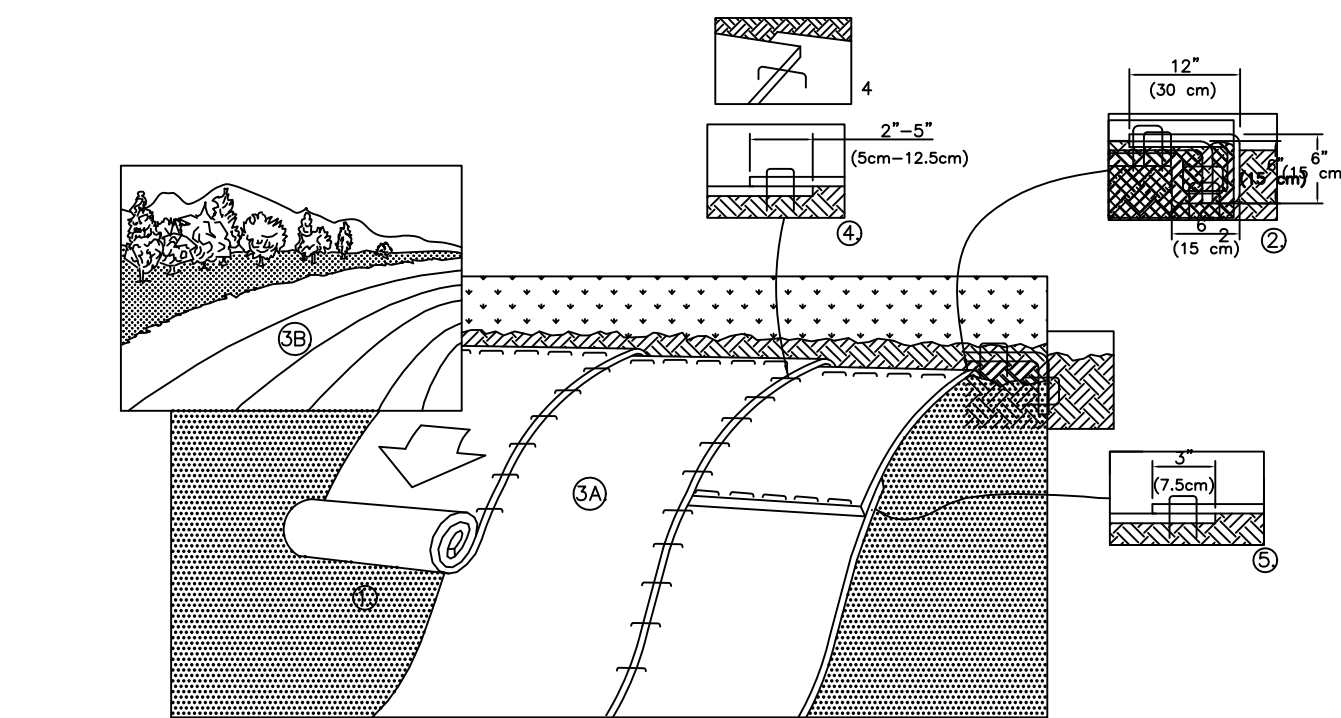
Traffic shall not be permitted to cross filter socks.

Accumulated sediment shall be removed when it reaches half the aboveground height of the sock and disposed in the manner described elsewhere in the plan.

Socks shall be inspected weekly and after each runoff event. Damaged socks shall be repaired according to manufacturer's specifications or replaced within 24 hours of inspection.

Biodegradable filter socks shall be replaced after 6 months; photodegradable socks after 1 year. Polypropylene socks shall be replaced according to manufacturer's recommendations.

Upon stabilization of the area tributary to the sock, stakes shall be removed. The sock may be left in place and vegetated or removed. In the latter case, the mesh shall be cut open and the mulch spread as a soil supplement.



USE NAG ERONET S75 EROSION CONTROL BLANKET WITH STAPLE PATTERN "C" FOR ALL SLOPE AREAS INDICATED ON THE E&S CONTROL PLAN SHEET S&S-2.

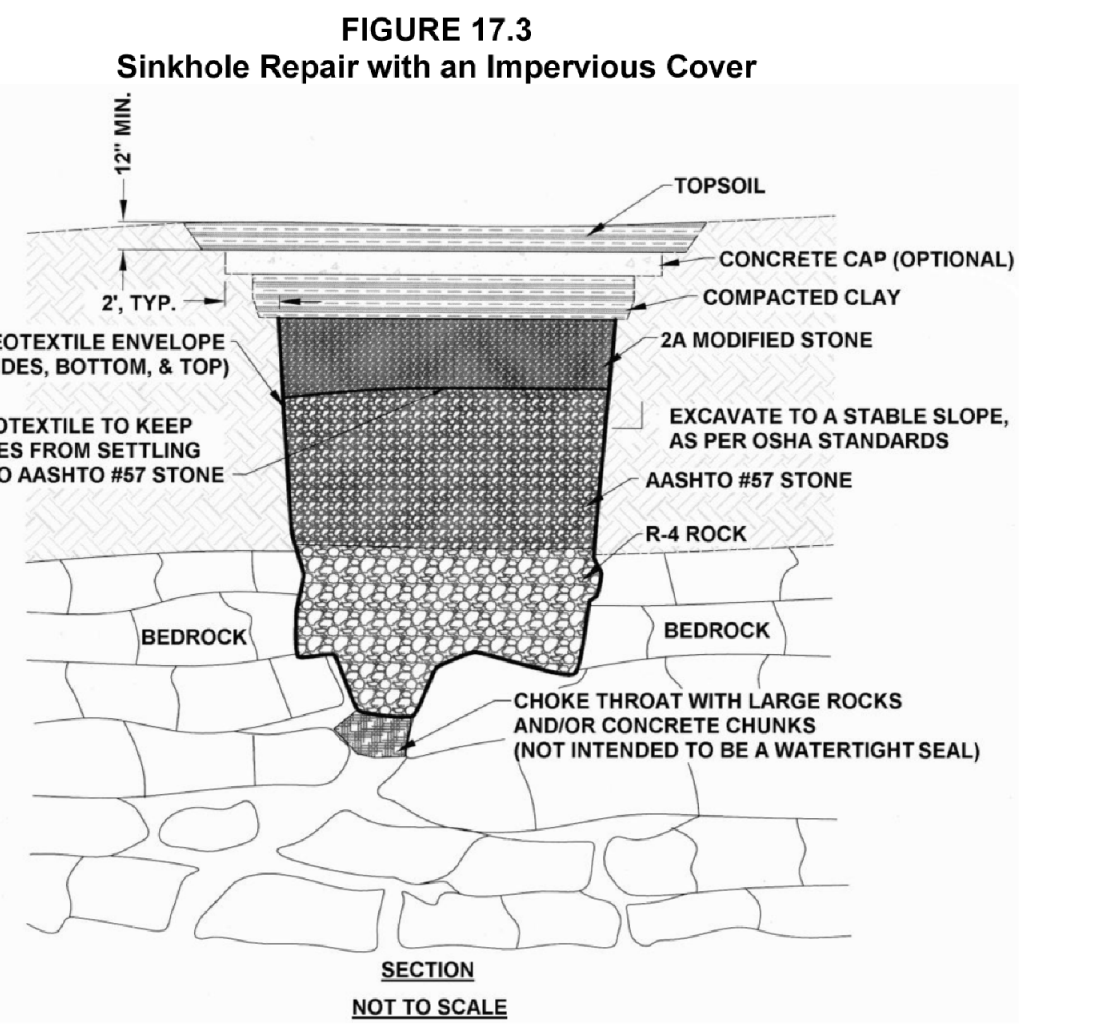
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (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 2" (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 DEPENDING 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 SITTING ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPICED 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.

NOTE:
*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

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1 SLOPE STABILIZATION

NTS



Adapted from USDA NRCS

Loose material shall be excavated from the sinkhole and expose solution void(s) if possible. Enlarge sinkhole if necessary to allow for installation of filter materials. OSHA regulations must be followed at all times during excavation.

Geotextile shall be non-woven with a burst strength between 100 and 200 psi.

Select field stone(s) about 1.5 times larger than solution void(s) to form "bridge." Place rock(s) so no large openings exist along the sides. Stones used for the "bridge" and filters shall have a moderately hard rock strength and be resistant to abrasion and degradation. Shale and similar soft and/or non-durable rock are not acceptable.

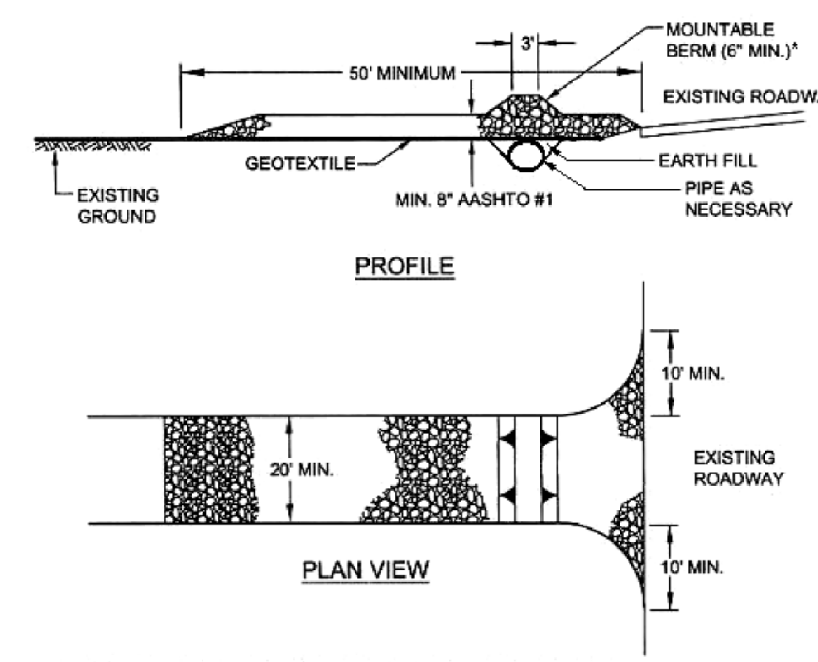
Minimum thickness of R-4 rock is 18." AASHTO #57 stone thickness shall be ¼ to ½ that of the R-4 rock. Minimum thickness of 2A modified crushed stone shall be 9". AASHTO #57 stone and 2A modified crushed stone shall be compacted after each placement.

Compacted clay seal shall be a minimum of 12" thick. Clay shall be placed in 6" to 9" lifts and thoroughly compacted.

Concrete cap, which is optional, shall be a minimum of 8" thick. Use 4,000 psi concrete with 6" X 6" - 6 gauge welded wire fabric, or # 3 rebar on 18" O.C. both ways.

Topsoil shall be a minimum of 12" thick. Grade for positive drainage away from sinkhole area.

STANDARD CONSTRUCTION DETAIL # 3-1 Rock Construction Entrance



* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

Modified from Maryland DOE

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.

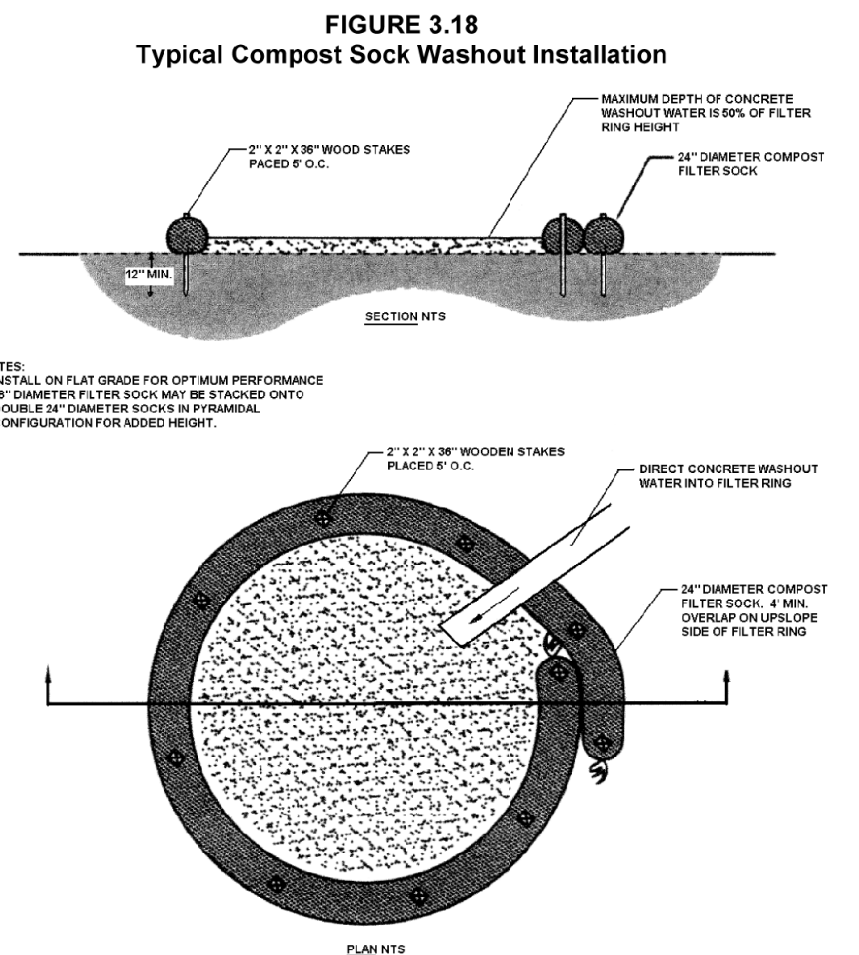
MAINTENANCE: Rock construction entrance thickness shall be constantly maintained to the specified dimensions by adding rock. A stockpile shall be maintained on site for this purpose. All sediment deposited on paved roadways shall be removed and returned to the construction site immediately. If excessive 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.

PLAN REFERENCE INFORMATION:
FIELD WORK AND BOUNDARY ARE BASED ON A SURVEY DONE BY N.D. REMY ASSOCIATES, LLC. DATED 9/06/2018.

	<p>PLAN PREPARED BY: PHILIP SIEBERT - LANDSCAPE ARCHITECT 1025 LAWRENCE DRIVE EMMAUS, PA 18049 484-560-8208 siebert@rla.com DATE: 11/04/2018</p> <p>OWNER NAME OWNER ADDRESS PROJECT ADDRESS REVISION BLOCK NO. DATE 1 8/21/2023 2 3 4 5 6 7</p> <p>SHEET TITLE: SHEET NUMBER SP-8</p> <p>ALLAN AND NANCY FINNEGAN 220 WEST BROAD STREET, BETHLEHEM, PA 18018 968 BENNER AVENUE, THE CITY OF BETHLEHEM, PA DESCRIPTION PLANS REV. PER CITY OF BETHLEHEM REVIEW LETTER OF 9-19-2019</p> <p>E&S CONTROL DETAILS AND NOTES MORAVIA STREET CONDOMINIUMS DATE: 6/19/2019 SCALE: AS NOTED</p>
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3 CONCRETE WASHOUT FACILITY

SCALE 1" = 1'-0"



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