

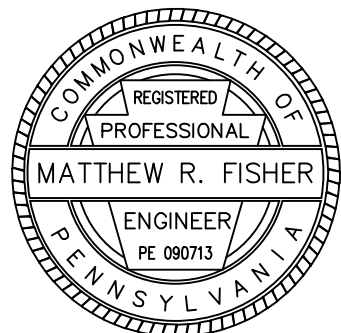
LOCATION MAP 1" = 2000'

Sheet List Table	
Sheet Number	Sheet Title
1	COVER SHEET
2	EXISTING CONDITIONS & DEMO PLAN
3	EXISTING CONDITIONS PLAN (AERIAL)
4	LAND DEVELOPMENT PLAN - SITE LAYOUT
5	GRADING & DRAINAGE PLAN
6	LANDSCAPE PLAN
7	E & S POLLUTION CONTROL PLAN
8	SITE LIGHTING PLAN
9	SANITARY SEWER PLAN & PROFILE
10	STORM SEWER PLAN & PROFILES
11	SITE DETAILS
12	SITE DETAILS
13	SWM DETAILS
14	SWM DETAILS
15	UTILITY DETAILS
16	UTILITY DETAILS
17	UTILITY DETAILS
18	UTILITY DETAILS
19	E&S CONTROL DETAILS
20	E&S CONTROL DETAILS
21	E&S CONTROL DETAILS

REQUESTED WAIVERS, MODIFICATIONS, DEFERRALS			
ORDINANCE SEC.	REQUIREMENT	DATE APPROVED	FULL WAIVER, MODIFICATION, OR DEFERRAL
220-5.10-A.1.	30' WIDE STORM DRAINAGE EASEMENTS TO ALLOW LESS THAN 30 FEET IN CERTAIN LOCATIONS THAT WON'T PERMIT 30' OF WIDTH. TO ALLOW 20' MIN. AS SUFFICIENT AND TO ALLOW TREES AND SHRUBS WITHIN EASEMENTS.		MODIFICATION

ENGINEER & SURVEYOR

R.J. FISHER & ASSOCIATES
ENGINEERING, PLANNING & SURVEYING
1546 BRIDGE STREET
NEW CUMBERLAND, PA 17070
(717) 774-7534



I, MATTHEW R. FISHER, P.E., P.L.S., HEREBY CERTIFY THAT I AM A REGISTERED LAND SURVEYOR, AND A REGISTERED ENGINEER IN COMPLIANCE WITH THE LAWS OF THE COMMONWEALTH OF PENNSYLVANIA; THAT THIS PLAN CORRECTLY REPRESENTS A SURVEY COMPLETED BY ME ON 11/30/2021; THAT ALL THE MONUMENTS SHOWN THEREON ACTUALLY EXIST; AND THAT THEIR LOCATION, SIZE, TYPE AND MATERIAL ARE ACCURATELY SHOWN. ALL ELEMENTS OF THE PLAN ARE IN CONFORMITY WITH TOWNSHIP CODE AND ANY APPLICABLE STATE REGULATIONS.

MATTHEW R. FISHER, P.L.S., P.E.

GEOLOGIST CERTIFICATION:

I, BLAIR C. KITUNSKI, P.E. OF F.T. KITUNSKI & ASSOCIATES, INC. (CONSULTING GEOTECHNICAL ENGINEERS) HEREBY CERTIFY THAT THE SITE IS NOT UNDERLAIN BY LIMESTONE BEDROCK OR OTHER CARBONATE GEOLOGIC FORMATION.

BY UPPER ALLEN TOWNSHIP, I, MIHAIL MALINOV, HEREBY ACKNOWLEDGE THAT THE STORMWATER MANAGEMENT FACILITIES AND BMP'S ARE TO BE PERMANENT FIXTURES THAT CAN BE ALTERED OR REMOVED ONLY AFTER APPROVAL OF A REVISED PLAN

PRELIMINARY / FINAL LAND DEVELOPMENT PLAN FOR 2509 MILL ROAD TOWNHOMES LOCATED IN UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA



PENNSYLVANIA ACT 38 (1991) AS AMENDED REQUIRES NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE COMMONWEALTH. SERIAL NO. 20233280299 IN UPPER ALLEN TOWNSHIP 11/24/2023

UTILITY CO. CONTACTS

COMPANY: VERIZON PENNSYLVANIA LLC ADDRESS: 1026 HAY ST PITTSBURGH, PA. 15221 CONTACT: DEBORAH BARUM deborah.d.delia@verizon.com	COMPANY: MESSIAH UNIVERSITY ADDRESS: 1 UNIVERSITY AVE SUITE 3001 MECHANICSBURG, PA. 17055 CONTACT: RUSS EHRICH REHRICH@MESSIAH.EDU	COMPANY: UPPER ALLEN TOWNSHIP PUBLIC WORKS DEPT ADDRESS: 100 GETTYSBURG PIKE MECHANICSBURG, PA. 17055 CONTACT: COLIN BARGE CBARGE@UATWP.ORG
COMPANY: VEOLIA WATER PENNSYLVANIA INC ADDRESS: 6310 ALLENTOWN BOULEVARD HARRISBURG, PA. 17112 CONTACT: CHRISTOPHER BRIDE CHRISTOPHER.BRIDE@VEOLIA.CO	COMPANY: PPL ELECTRIC UTILITIES CORPORATION ADDRESS: 437 BLUE CHURCH RD PAXINOS, PA. 17860 CONTACT: DOUG HALBERT dhalbert@pplweb.com	COMPANY: UPPER ALLEN TOWNSHIP ADDRESS: 100 GETTYSBURG PIKE MECHANICSBURG, PA. 17055 CONTACT: KODI HOCKENBERRY khockenberry@uatwp.org
COMPANY: FIRSTENERGY CORPORATION ADDRESS: 21 S MAIN ST AKRON, OH. 44308 CONTACT: MELLYSSA ADAMS madams@firstenergycorp.com	COMPANY: COMCAST ADDRESS: 4601 SMITH STREET HARRISBURG, PA. 17105 CONTACT: MICHAEL SWEIGARD mike_sweigard@comcast.com	COMPANY: UGI UTILITIES INC ADDRESS: 1301 AIP DR MIDDLETOWN, PA. 17057 CONTACT: STEPHEN BATEMAN sbateman@ugi.com

GENERAL NOTES:

- The purpose of this plan is to create a Preliminary / Final Land Development Plan depict the improvements required for 14 rental Townhouse-style Attached Dwellings.
- All existing buildings within the site will be removed prior to development.
- The site survey is on State Plane Coordinates ROAD 83 PA SOUTH ZONE GRID. Elevations are on NAVD 88 Datum referenced from Benchmark (Iron Pin Found at southern front property corner at 529.28). The existing ground topography shown on this plan is a combination of a field survey conducted from 7/22/2021 to 11/30/2021 by R.J. Fisher & Associates, Inc.
- Proposed gravity sanitary sewer system, low pressure force main sewer and duplex grinder pump station shall be privately owned and maintained. The system, pump station, and all infrastructure shall not be dedicated to the township.
- Within clear sight triangles shown, no structure or growing material shall exceed a height of 3 feet above the grade of the street, and no branch of a tree, or obstruction, shall be lower than 9 feet above the grade of the street, with the exception of traffic signs, public utility poles, and similar-type structures.
- All new utilities shall be placed underground.
- All stormwater drainage facilities located outside of dedicated and accepted public street rights-of-way shall be private, and shall be maintained by the developer. The developer shall maintain the drainage facilities to the design, dimensions and elevations indicated on these drawings, and such facilities shall be permanent unless and until a revised stormwater management plan is approved by Upper Allen Township, and/or PA D.E.P.
- All improvements within the property boundary will be privately owned and not dedicated to the Township. The private on-site improvements will be operated and maintained by the owner and owner's property management company representatives.
- The proposed water system shown hereon is schematic only, and shall be superseded by the water company design when Final Plans are approved.
- A minimum of 10-foot separation, or an 18" vertical separation, shall be maintained wherever possible between water lines and sanitary sewer lines.
- Approval by the Cumberland County Conservation District of a soil erosion and sedimentation control plan must be obtained prior to any earthmoving. Implementation of the erosion control plan is the responsibility of the lot owner.
- According to FEMA maps, there is no designated floodplain on this site.
- Concrete monuments will be set where indicated. All other property corners not already marked shall be marked with iron pins. Monuments and markers shall be of the proper size and material as outlined in section 220-5.11 of the Subdivision & Land Development Ordinance of Upper Allen Township.
- All public improvements shall comply with the applicable municipality's construction specifications, for the municipality in which the work is located.
- All work shall be in accordance with PennDOT Publication 408, Specifications and Publication 72, Roadway Construction Standards, unless otherwise noted.
- Signs shall be installed per PennDOT standards and specifications.
- Manhole covers for storm manholes shall be cast with the word "Storm Sewer" for identification purpose.
- Construction of all work within the public street right-of-way and work related to storm drainage facilities requires inspection by the Township.
- Contractor shall provide a minimum 48 hours notice to the township before starting work and schedule a pre-construction site meeting with the Upper Allen Township Engineer at least 48 hours prior to starting site construction activities.
- Nothing shall be placed, planted, set or put within the area of an easement or planting strip that would adversely affect the function of the easement or planting strip or conflict with an easement agreement. No structures shall be placed in any easement or planting strip unless otherwise noted in an agreement.
- Paper and digital Record Drawings shall be provided to Upper Allen Township.
- All sanitary sewer construction in public street rights-of-way shall be subject to backfill compaction testing at the developer's expense.
- Location of underground utilities is shown approximately hereon. Contractor shall contact PA One Call prior to any excavation or construction and filed verify utility locations and follow utility company requirements for protection, relocation, or removal.
- As-built Mylar plans (or approved alternative) and electronic data files shall be provided to the Township. All drawings must be signed and sealed by a professional engineer or land surveyor attesting to the correctness of the facility information shown, in accordance with Section 220-4.2.C(3) of the Codified Ordinances of Upper Allen Township.
- The average slope of entire lot is < 15%.
- Agricultural Nuisance Disclaimer: Lands, such as this site, that are within the Residential Districts are located within an area where land is used for commercial agricultural production. Owners, residents and other users of this property may be subjected to inconvenience, discomfort and the possibility of injury to property and health arising from normal and accepted agricultural practices and operations, including, but not limited to, noise, odors, dust, the operation of machinery of any kind, including aircraft, the storage and disposal of manure, the application of fertilizers and soil amendments. Owners, occupants and users of this property should be prepared to accept such inconveniences, discomfort and possibility of injury from normal agricultural operations and are hereby put on official notice that Section 4 of the Pennsylvania Act 133 of 1982, as amended, otherwise known as the "Right to Farm Law," [1] may bar them from obtaining legal judgment against such normal agricultural operations used in a prudent manner.
- A Wetland Investigation by Vortex Environmental, Inc. on December 20, 2021 revealed no wetlands at this site.
- A Recreation Fee in-lieu-of land dedication will be provided.
- Stormwater flow discharging at the southeast corner of site onto adjacent property, currently a farm field owned by Messiah College, will not be increased, relocated, or otherwise altered without approval of the affected owner. Stormwater flow will be collected, controlled, and discharged over a rock apron stilling discharge at same location as existing condition.
- Future water line abandonment and easement extinguishment shall be pursuant to agreement with water co. (Veolia Water Co.)
- Parking restrictions shall be stipulated in the Lease Agreement, identified by signage, and enforced by the property manager.
- All sanitary sewer construction methods and materials shall conform to the latest edition of the Standard Construction and Material Specifications for Sanitary Sewer Systems, Upper Allen Township, Cumberland County, Pennsylvania.
- Encroachment of any proposed improvements on existing utility easements shall be pursuant to the approval and agreement of the utility owner.

TAX PARCEL NUMBER:

42-30-2110-028

RECORDING:

THIS PLAN RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS IN AND FOR

CUMBERLAND COUNTY THIS ____ DAY OF _____, 20__.

PLAN BOOK _____, PAGE _____.

INSTRUMENT NUMBER _____.

OWNER & APPLICANT

MIHAIL MALINOV
2509 MILL RD.
MECHANICSBURG, PA 17055
(717) 713-3892

PLAN APPROVAL BLOCKS

REVIEWED THIS ____ DAY OF _____
20__ BY CUMBERLAND COUNTY PLANNING DEPARTMENT.

DIRECTOR OF PLANNING _____ DATE _____

APPROVED BY THE PLANNING COMMISSION OF UPPER ALLEN TOWNSHIP, THIS ____ DAY OF _____, 20__.

SECRETARY DATE _____

CHAIRMAN DATE _____

APPROVED BY THE BOARD OF COMMISSIONERS OF UPPER ALLEN TOWNSHIP, THIS ____ DAY OF _____, 20__.

THE CONDITIONS OF APPROVAL WERE SATISFIED THIS ____ DAY OF 20__.

ATTEST: _____ SECRETARY DATE _____

CHAIRMAN DATE _____

OWNER CERTIFICATION

I, _____, the undersigned, owner of the real estate shown and described herein, do hereby certify that we have laid off and platted and hereby lay off and plan, said real estate in accordance with the within plan.
The land development shall be known and designated as 2509 Mill Rd.
All streets and alleys shown and not heretofore dedicated are hereby dedicated to the public.
Building setback lines are hereby established as shown on this plan, between which lines and the property lines of the street there shall be erected or maintained no building or structure.
There are strips of ground 10-30 feet in width as shown on this plan and marked: "Easement, reserved for the use of public utilities for the installation of water and sewer mains, poles, ducts, lines and wires, subject at all times to the proper authorities and to the easement herein reserved." No buildings or other structures are to be erected or maintained upon said strips of land, but owner of lot in this land development shall take their titles subject to the rights of the utilities.
The foregoing covenants (or restrictions), as recorded at the Cumberland County Courthouse, are to run with the land and shall be binding on all parties and all persons claiming under them until January 1, 2048, at which time said covenants (or restrictions) shall be automatically extended for successive periods of 10 years and shall remain in full force and effect unless changed at the end of such period of 10 years by vote of a majority of the then owners of the building site covered by these covenants (or restrictions). The right to enforce these provisions by injunction, together with the right to cause the removal, by due process of law, of any structure or part thereof erected or maintained in violation hereof, is hereby dedicated to the public and reserved to the owner of this land development and to their heirs and assigns.

Witness our Hands and Seals this ____ day of _____, 20__.

Commonwealth of Pennsylvania: _____

County of Cumberland:
On this, the ____ day of _____, 20__ before me, _____, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

OWNER: x _____

IN WITNESS WHEREOF, I have hereunto set my hand and Official Seal.

Notary Public

My Commission expires: _____

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



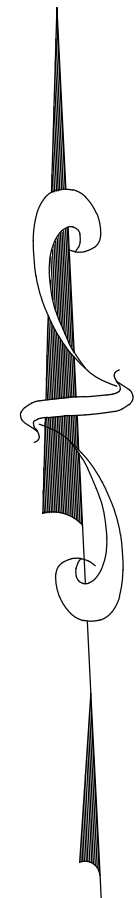
COVER SHEET FOR
2509 MILL ROAD TOWNHOMES
LOCATED IN
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

DRAWING ID: 221013-1-COV

PROJECT: 221013

DATE: 04/25/2022

SHEET: 1 OF 21


















FISHER
 & Associates, Inc.

DRAWING ID:	221013-EC
PROJECT:	221013
DATE:	04/25/2022
SHEET:	2 OF 21

NO.	REVISION	DATE
1	TMP PC REPORT #3 12/13/22	12/14/2022
2	TREE CHANGE	12/20/2022
3	TMP BOS REPORT	06/23/2023
4	TMP FIRE MARSHALL & STAFF MTG	08/14/2023
5	30' RADII, NO OFF ESMIT, VERT. CURB	11/28/23

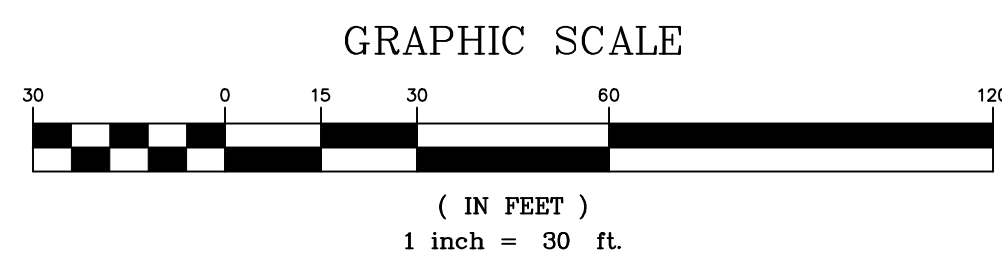
COPYRIGHT © 2021 BY R.J. FISHER & ASSOCIATES, INC.

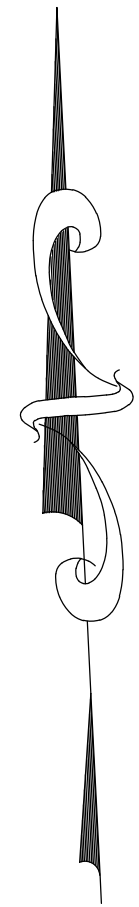
COPYRIGHT © 2021 BY R.J. FISHER & ASSOCIATES, INC.

	Existing Adjacent Property Line
	Existing Benchmark
	Existing Boundary Line
	Existing Right-Of-Way Line
	Existing Building Setback Line
	Existing Street Centerline
	Existing Edge Of Pavement
	Existing Curb
	Existing Paint Line
	Existing Drainage Area
	Existing Minor Contour
	Existing Major Contour
	Existing Fence
	Existing Mailbox
	Existing Property Line Marker
	Existing Concrete Monument
	Existing Sign
	Existing Soils Boundary
	Existing Treeline

NOTES:

1. ALL TREES WITHIN PROPERTY AND LIMIT OF DISTURBANCE TO BE REMOVED, EXCEPT AS NOTED.





FISHER
& Associates, Inc.

DRAWING ID:	221013-EC
PROJECT:	221013
DATE:	04/25/2022
SHEET:	3 OF 21

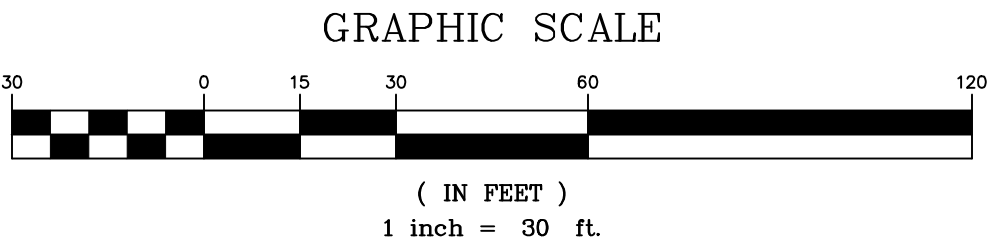
NO.	REVISION	DATE
1	TWMP PC REPORT #3 12/13/22	12/14/2022
2	TREE CHANGE	12/20/2022
3	TWMP BOS REPORT	06/23/2023
4	TWMP FIRE MARSHALL & STAFF MTG	08/14/2023
5	30 RADII, NO OFF ESMT, VERT. CURB	11/28/23

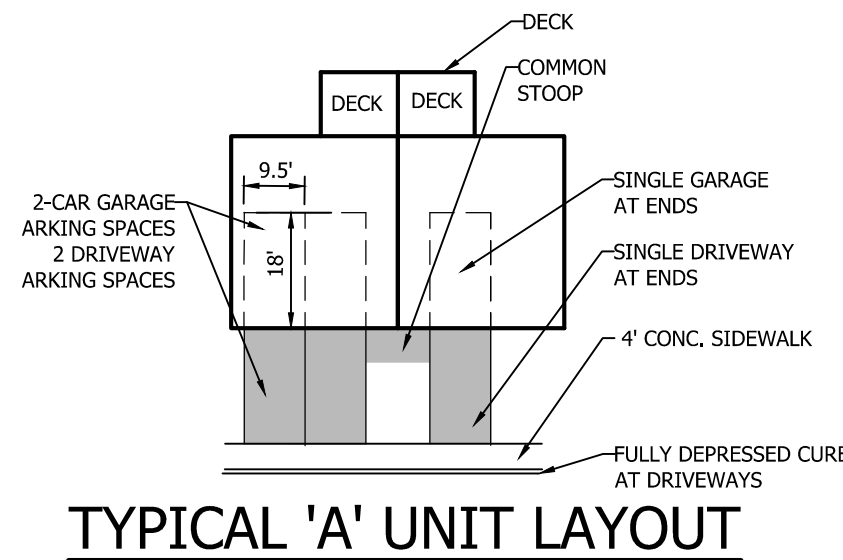
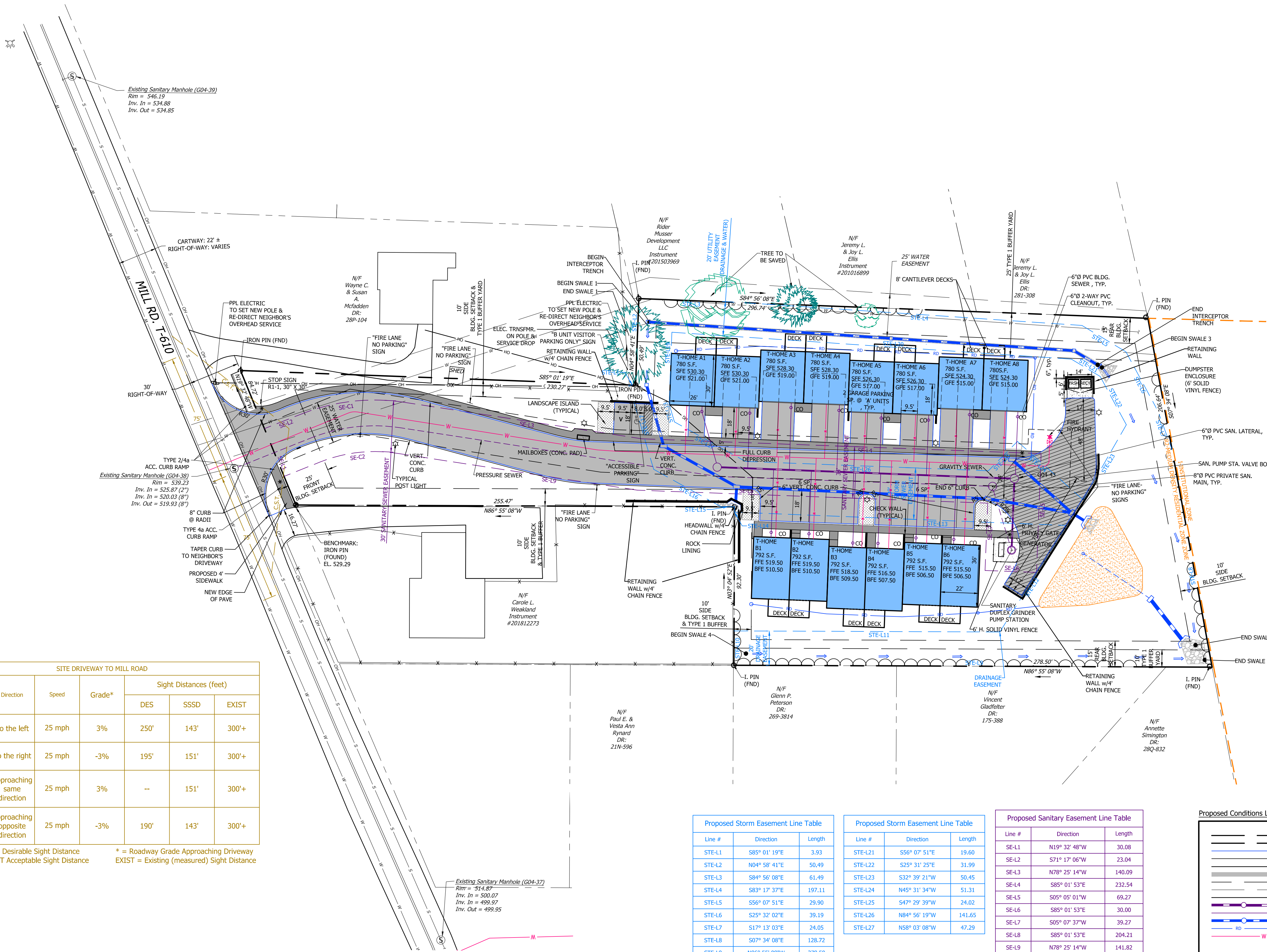
COPYRIGHT © 2021 BY R.J. FISHER & ASSOCIATES, INC.

Existing Adjacent Property Line
 Existing Benchmark
 Existing Boundary Line
 Existing Right-Of-Way Line
 Existing Building Setback Line
 Existing Street Centerline
 Existing Edge Of Pavement
 Existing Curb
 Existing Paint Line
 Existing Drainage Area
 Existing Minor Contour
 Existing Major Contour
 Existing Fence
 Existing Mailbox
 Existing Property Line Marker
 Existing Concrete Monument
 Existing Sign
 Existing Soils Boundary
 Existing Tree Line

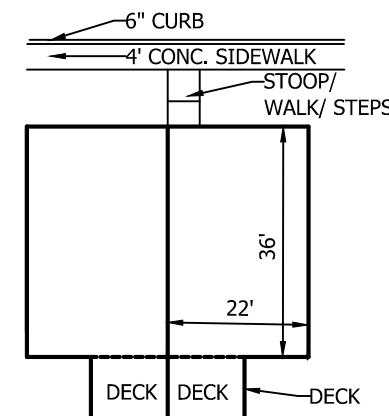
NOTES:

1. ALL TREES WITHIN PROPERTY AND LIMIT OF DISTURBANCE TO BE REMOVED, EXCEPT AS NOTED





TYPICAL 'A' UNIT LAYOUT



TYPICAL 'B' UNIT LAYOUT

SITE DRIVEWAY TO MILL ROAD						
	Direction	Speed	Grade*	Sight Distances (feet)		
				DES	SSSD	EXIST
Exiting Movements	To the left	25 mph	3%	250'	143'	300'+
	To the right	25 mph	-3%	195'	151'	300'+
Entering Left Turns	Approaching same direction	25 mph	3%	--	151'	300'+
	Approaching opposite direction	25 mph	-3%	190'	143'	300'+

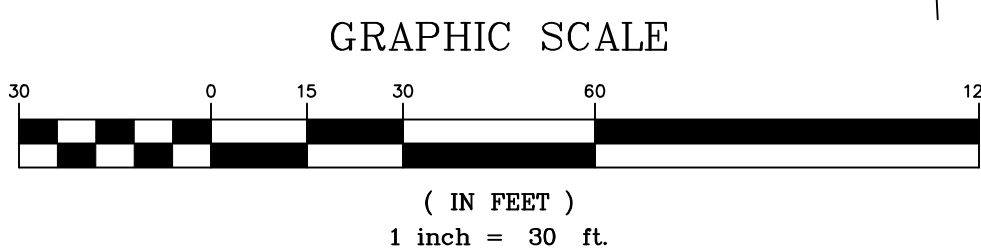
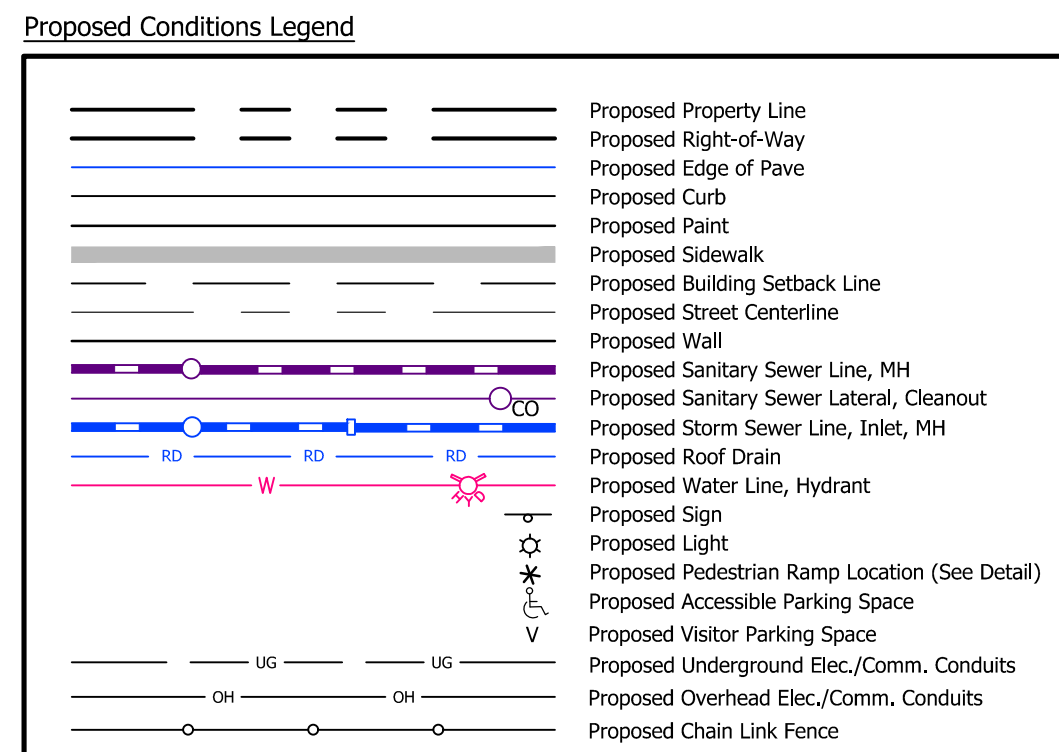
DES = PennDOT Desirable Sight Distance
SSSD = PennDOT Acceptable Sight Distance
* = Roadway Grade Approaching Driveway
EXIST = Existing (measured) Sight Distance

Proposed Storm Easement Line Table		
Line #	Direction	Length
STE-L1	S85° 01' 19"E	3.93
STE-L2	N04° 58' 41"E	50.49
STE-L3	S84° 56' 08"E	61.49
STE-L4	S83° 17' 37"E	197.11
STE-L5	S56° 07' 51"E	29.90
STE-L6	S25° 32' 02"E	39.19
STE-L7	S17° 13' 03"E	24.05
STE-L8	S07° 34' 08"E	128.72
STE-L9	N86° 55' 08"W	278.50
STE-L10	N03° 04' 52"E	20.00
STE-L11	S86° 55' 08"E	154.79
STE-L12	N35° 00' 31"E	73.33
STE-L13	N84° 51' 42"W	193.70
STE-L14	N03° 04' 52"E	3.11
STE-L15	N86° 54' 06"W	7.91
STE-L16	N58° 03' 08"W	44.85
STE-L17	S13° 33' 46"E	51.21
STE-L18	N13° 33' 46"W	10.70
STE-L19	N04° 58' 41"E	42.01
STE-L20	S83° 17' 37"E	233.18

Proposed Storm Easement Line Table		
Line #	Direction	Length
STE-L21	S56° 07' 51"E	19.60
STE-L22	S25° 31' 25"E	31.99
STE-L23	S32° 39' 21"W	50.45
STE-L24	N45° 31' 34"W	51.31
STE-L25	S47° 29' 39"W	24.02
STE-L26	N84° 56' 19"W	141.65
STE-L27	N58° 03' 08"W	47.29

Proposed Sanitary Easement Line Table		
Line #	Direction	Length
SE-L1	N19° 32' 48"W	30.08
SE-L2	S71° 17' 06"W	23.04
SE-L3	N78° 25' 14"W	140.09
SE-L4	S85° 01' 53"E	232.54
SE-L5	S05° 05' 01"W	69.27
SE-L6	S85° 01' 53"E	30.00
SE-L7	S05° 07' 37"W	39.27
SE-L8	S85° 01' 53"E	204.21
SE-L9	N78° 25' 14"W	141.82

Proposed Sanitary Easement Curve Table				
Curve #	Radius	Length	Chord Bearing	Chord
SE-C1	115.00	61.21	S86° 19' 57"W	60.49
SE-C2	85.00	45.24	S86° 19' 57"W	44.71



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



LAND DEVELOPMENT PLAN - SITE LAYOUT
FOR
2509 MILL ROAD TOWNHOMES
LOCATED IN
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

DRAWING ID: 221013-LD
PROJECT: 221013
DATE: 04/25/2022
SHEET: 4 OF 21

NO.	REVISION	DATE
1	TWP PC REPORT #3 12/13/22	12/14/2022
2	TREE CHANGE	12/20/2022
3	TWP BCS REPORT	06/29/2023
4	TWP FIRE MARSHALL & STAFF MTG	08/14/2023
5	30' RADII, NO OFF ESM, VERT. CURB	11/28/23

COPYRIGHT © 2021 BY R.J. FISHER & ASSOCIATES, INC.



(IN FEET)
inch = 30 ft

(IN FEET)
inch = 30 ft

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
 NPDES Boundary
 NPDES Boundary
 Proposed Sign
 Proposed Pedestrian Ramp Location (See Detail)
 Proposed Rip-Rap Area (See Detail)
 Proposed Spot Elevation
 Steep Slopes: 15% or Greater

1. FRAMES AND COVERS ON EXISTING SANITARY MANHOLE NOS. G04-39, G04-38 AND G04-37 IN MILL ROAD TO BE REPLACED WITH NEW FRAMES AND VENTED MANHOLE COVERS.
2. EXISTING MANHOLE NO. G04-38 IN MILL ROAD TO BE FULLY LINED WITH EPOXY COATING MATERIAL IN ACCORDANCE WITH TOWNSHIP REQUIREMENTS.
3. ALL BUILDING SEWER AND LATERAL PIPING TO BE 6" Ø PVC.

GRADING & DRAINAGE PLAN
FOR
2509 MILL ROAD TOWNHOMES
LOCATED IN
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

DRAWING ID: 221013-5-GD

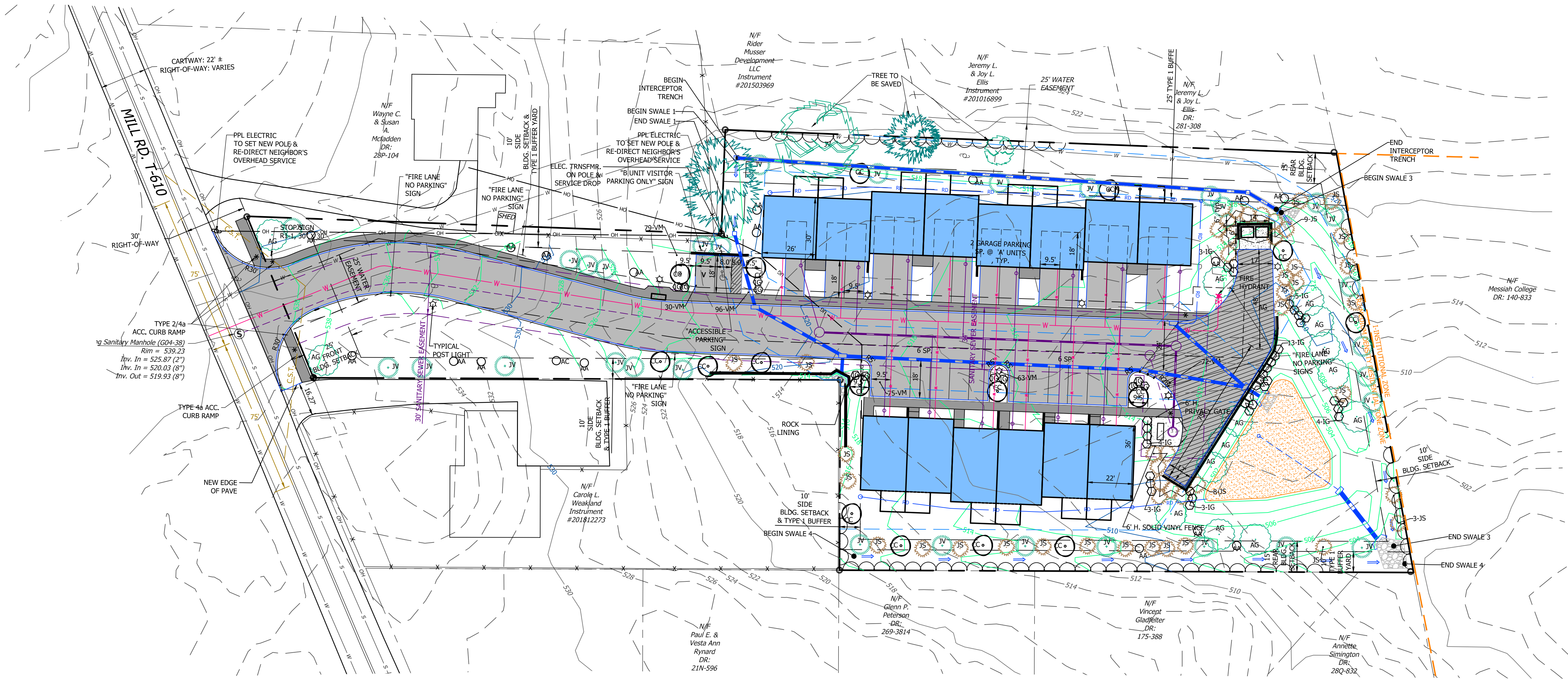
PROJECT: 221013

DATE: 04/25/2022

SHEET: 5 OF 21

NO.	REVISION	DATE
1	TWP PC REPORT #3 12/13/22	12/14/2022
2	TREE CHANGE	12/20/2022
3	TWP BOS REPORT	06/23/2023
4	TWP FIRE MARSHALL & STAFF MTG	08/14/2023
5	30' RADII, NO OFF ESMT, VERT. CURB	11/28/23

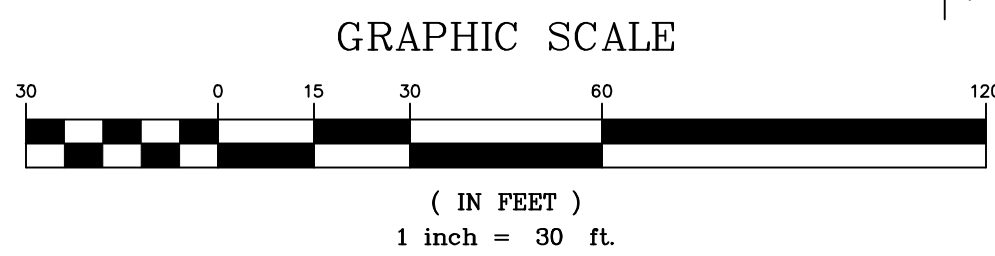
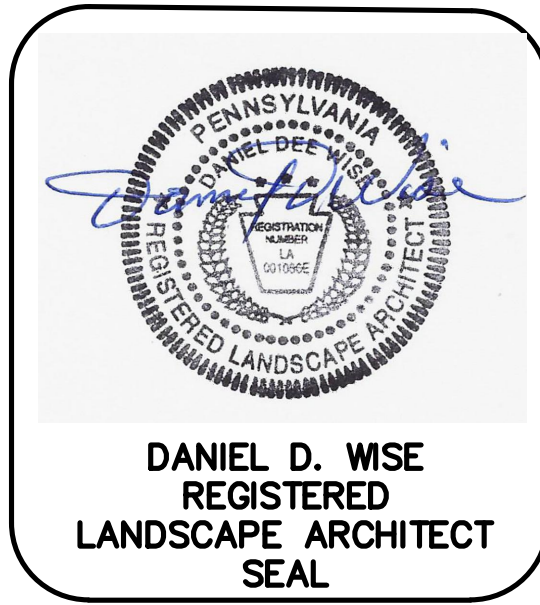
COPYRIGHT © 2021 BY J. FISHER & ASSOCIATES, INC.



PLANTING SCHEDULE							
245-16.5.C., 220-5.13.B1, TYPE 1 BUFFER REQUIRES 1 SHADE TREE PER 50 LF BUFFER AND 1 EVERGREEN TREE PER 40 LF 40' OF BUFFER YARD; 1288 LF OF TYPE 1 BUFFER (at SFD or SD Residential)= 26 SHADE TREES REQUIRED, (28 PROPOSED); 33 EVERGREENS REQ'D., (33 PROPOSED.)							
220-5.13 DUMPSTER SCREENING: 1 SHADE TREE PER 40 LF AND 1 EVERGREEN PER 5 LF OF VISIBILITY (40/40= 1 SHADE TREES REQ'D., 40/5=8 EVERGREEN TREES REQ'D.); 10 EVERGREENS & 1 SHADE TREE @ 40' OF DUMPSTER ENCLOSURE PERIMETER PROPOSED							
SYMBOL	ID	QUANTITY	BOTANICAL NAME	COMMON NAME	PLANTING SIZE/ CONDITIONS	MATURE SIZE / GENERAL TYPE	NATIVE (N)
	AA	18	AMELANCHIER ALNIFOLIA 'STANDING OVATION'	STANDING OVATION SERVICEBERRY	2 to 2-1/2" CAL. B&B, 6' H. MIN., 40' O.C. MAX	4'W. X 15'H. DECIDUOUS TREE	N
	CC	11 (1+10)	CERCIS CANADENSIS 'SUMMERS TOWER'	SUMMERS TOWER REDBUD	2 to 2-1/2" CAL. B&B, 6' H. MIN.	10'W. X 20'H. DECIDUOUS TREE	N
	JV	31	JUNIPERUS VIRGINIANA 'BRODIE'	BRODIE EASTERN REDCEDAR	5'H. MIN., B&B	10'W. X 35'H. EVERGREEN TREE	N
	JS	12 (10+2)	JUNIPERUS SCOPULORUM 'MOONGLOW'	MOONGLOW JUNIPER	5' H. MIN., #10 CONTAINER	8' W. X 20' H. EVERGREEN TREE	
220-5.13.D.7 STREET TREES REQUIRED 2 PER 100 LF OF RIGHT-OF-WAY, 84/100 = 2 REQUIRED, 2 PROPOSED							
	AG	2	AMELANCHIER X GRANDIFLORA	AUTUMN BRILLIANCE APPLE SERVICEBERRY	2" CALIPER (CAL.), 6' H. MIN. BALLED & BURLAPPED (B&B) ROOT	20' W. X 20' H. ORNAMENTAL SMALL ST. TREE	N
205-5.13.g.5 TYPE 3 BUFFER REQUIRED FOR STORMWATER FACILITY, 1 SHADE TREE PER 30 LF AND 1 EVERGREEN TREE PER 10 LF AND 1 SHRUB PER 10 LF OF BERM PERIMETER REQUIRED PERIMETER = 340', 340/30 = 12 SHADE TREES REQUIRED, 12 PROPOSED; 340/10 = 34 EVERGREEN TREES REQ'D., 34 PROPOSED; 34 SHRUBS REQUIRED, 34 SHRUBS PROPOSED							
	AG	12	AMELANCHIER X GRANDIFLORA	AUTUMN BRILLIANCE APPLE SERVICEBERRY	2" CALIPER (CAL.), 6' H. MIN. BALLED & BURLAPPED (B&B) ROOT	20' W. X 20' H. ORNAMENTAL SMALL ST. TREE	N
	JS	34	JUNIPERUS SCOPULORUM 'MOONGLOW'	MOONGLOW JUNIPER	5' H. MIN., #10 CONTAINER	8' W. X 20' H. EVERGREEN TREE	
	IG	36	ILEX GLABRA 'INKBERRY'	COMPACT INKBERRY HOLLY	15" SPREAD, MIN., #3 CONTAINER	4' W. X 4' H. EVERGREEN SHRUB	N
205-5.13.B.2.b 1 SHADE TREE FOR EACH LANDSCAPE ISLAND REQUIRED (5 REQ'D.) 220-5.13.B.2(c) ADDITIONAL LANDSCAPING - COMBO - OF 3 ELEMENTS (GROUND COVER, SHRUBS, MULCH)							
	CC	5	CERCIS CANADENSIS 'SUMMERS TOWER'	SUMMERS TOWER REDBUD	2 to 2-1/2" CAL. B&B, 6' MIN. HEIGHT	10'W. X 20'H. DECIDUOUS TREE	N
	IG	10	ILEX GLABRA 'INKBERRY'	COMPACT INKBERRY HOLLY	15" SPREAD MIN., #3 CONTAINER	4' W. X 4' H. EVERGREEN SHRUB	N
	VM	385	VINCA MINOR	COMMON PERIWINKLE	2.5" PLUGS, 18" O.C. STAGGERED, IN 3" SHREDDED TAN BARK MULCH	EVERGREEN GROUND COVER	

GENERAL LANDSCAPE NOTES:

- ALL LANDSCAPE MATERIALS SHALL BE PLACED AND PLANTED IN ACCORDANCE WITH THIS PLAN AND ALL APPLICABLE STANDARDS AND REQUIREMENTS OF THE UPPER ALLEN TOWNSHIP ZONING AND SUBDIVISION/ LAND DEVELOPMENT ORDINANCES.
- THE OWNER WILL BE RESPONSIBLE FOR THE PROPER MAINTENANCE OF ALL PLANT MATERIALS. ALL PLANTINGS WILL BE INSTALLED, MAINTAINED AND REPLACED BY THE OWNER, IF DEAD OR DISEASED, IN LOCATIONS AS SHOWN ON THIS APPROVED LANDSCAPE PLAN.
- ALL PLANT MATERIALS SHALL BE PLANTED IN ACCORDANCE WITH GOOD NURSERY AND LANDSCAPING PRACTICES WITH ADEQUATE UNPAVED SURFACE AROUND EACH FOR WATER AND AIR AND SHALL BE PROPERLY PROTECTED BY CURBS, CURB STOPS, DISTANCE OR OTHER PROTECTIVE DEVICES TO PREVENT DAMAGE FROM VEHICLES. ANY AND ALL OTHER APPLICABLE STANDARDS ESTABLISHED BY THE TOWNSHIP SHALL ALSO APPLY. INDIVIDUAL PLANTS SHOULD BE MULCHED IN A CIRCLE OF MINIMUM DIAMETER OF 3 FT.. GROUPS OF SHRUBS SHOULD BE IN A CONTINUOUS ORGANICALLY-SHAPED MULCH BED.
- ALL PLANT MATERIALS SHALL BE NURSERY GROWN IN A CLIMATE SIMILAR TO THAT OF THE LOCALITY OF THE SUBJECT TRACT.
- ALL PLANT MATERIALS SHALL HAVE A NORMAL, SYMMETRICAL GROWTH HABIT AND SHALL BE SOUND, HEALTHY AND VIGOROUS AND SHALL BE FREE FROM DISEASE, INSECTS, INSECT EGGS AND LARVAE.
- REQUIREMENTS FOR THE MEASUREMENT, BRANCHING, GRADING, QUALITY, BALLING AND BURLAPPING OF PLANT MATERIALS SHALL FOLLOW THE CODE OF STANDARDS RECOMMENDED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION IN THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z.60, CURRENT EDITION. PLANTS SHALL BE SO TRAINED IN DEVELOPMENT AND APPEARANCE TO BE PROPER IN FORM, COMPACTNESS AND SYMMETRY. THEY SHALL BE SOUND, HEALTHY, VIGOROUS, WELL BRANCHED, DENSELY FOLIATED WHEN IN LEAF AND FREE OF DISEASE AND INSECTS OF ANY KIND.
- LAYOUT OF PLANTS PRIOR TO PLANTING SHALL BE VERIFIED BY THE OWNER/DEVELOPER AND/OR THEIR REPRESENTATIVE.
- PRIOR TO PLANTING, TREES SHALL BE INSPECTED BY THE OWNER/DEVELOPER AND/OR THEIR REPRESENTATIVE FOR INJURY TO TRUNKS, EVIDENCE OF INSECT INFESTATION, OR IMPROPER PRUNING.
- ALL ROPES, STAVES, TAGS OR OTHER BINDINGS SHALL BE CUT OFF THE TOPS AND SIDES OF THE BALLS AND REMOVED FROM PITS. ALL ROT-PROOF, ROT-RESISTANT, PLASTIC BURLAP AND TOP HALF OF WIRE BASKET (MINIMUM) BALL COVERINGS SHALL BE REMOVED BEFORE PLANTING.
- DIAMETER OF PITS FOR TREES AND B+B SHRUBS SHALL BE AT LEAST 2 FEET GREATER THAN THE DIAMETER OF THE BALL OR SPREAD OF ROOTS. DIAMETER OF PITS FOR BARE-ROOTED TREES AND SHRUBS SHALL BE AT LEAST 1 FOOT GREATER THAN THE SPREAD OF ROOTS. NEVER CUT LEADER, PRUNE TOP OF BARE-ROOTED SHRUBS AND LATERAL BRANCHES OF TREE TO BALANCE LOSS OF ROOTS RESULTING FROM DIGGING. REFER TO DETAIL SHEET FOR PLANTING DETAILS.
- PLANT SUBSTITUTIONS MAY BE PERMITTED IF APPROVED BY THE OWNER/DEVELOPER AND LEMOYNE BOROUGH. ANY APPROVED SUBSTITUTION SHALL BE MADE IN LIKE KIND, SUITABLE FOR MICRO-CLIMATE AND SOIL CONDITIONS OF PLANTING SITE AND BE EQUIVALENT IN MATURE HEIGHT & WIDTH, GENERAL TYPE, HARDINESS.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR IDENTIFYING AND AVOIDING DISRUPTION OR DAMAGE OF ANY AND ALL UNDERGROUND UTILITY LOCATIONS, PRIOR TO DIGGING, PERFORMING A PA ONE CALL, AND PERFORMING EXPLORATORY TESTING AS MAY OTHERWISE BE REQUIRED. ANY AND ALL DAMAGE TO UNDERGROUND UTILITIES, WHETHER KNOWN OR UNKNOWN, IS AND WILL BE THE SOLE RESPONSIBILITY AND LIABILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL SPRAY PAINT OR OTHERWISE MARK ALL PROPOSED PLANTING BED LINES FOR OWNER APPROVAL PRIOR TO CUTTING IN PROPOSED BEDS.
- IF ANY DISCREPANCIES BETWEEN QUANTITIES IN PLANTING SCHEDULES AND THOSE SHOWN ON THE PLAN, THE PLAN SHALL GOVERN.
- ALL TREES SHALL BE GUYED OR STAKED FOR ONE YEAR FOLLOWING PLANTING. ALL GUYS OR STAKES SHOULD BE REMOVED ONE YEAR FROM INSTALLATION.
- TREE CANOPIES WILL BE MAINTAINED TO BE CLEAR OF BRANCHES AND LEAVES FROM GROUND TO 8 FT HEIGHT ABOVE CLEAR SIGHT TRIANGLE, SIDEWALKS, STREETS, PARKING AREAS AND OTHER AREAS OF PEDESTRIAN / VEHICLE CIRCULATION AREAS.
- PLANT BACKFILL MIX SHALL BE 75% TOPSOIL AND 25% PEAT (TOPSOIL & PEAT CONFORMING TO PENNDOT PUB. 408, SECTION 802 SPECIFICATIONS).



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

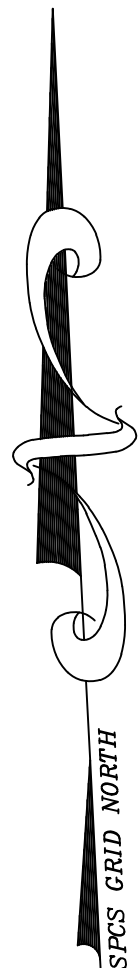
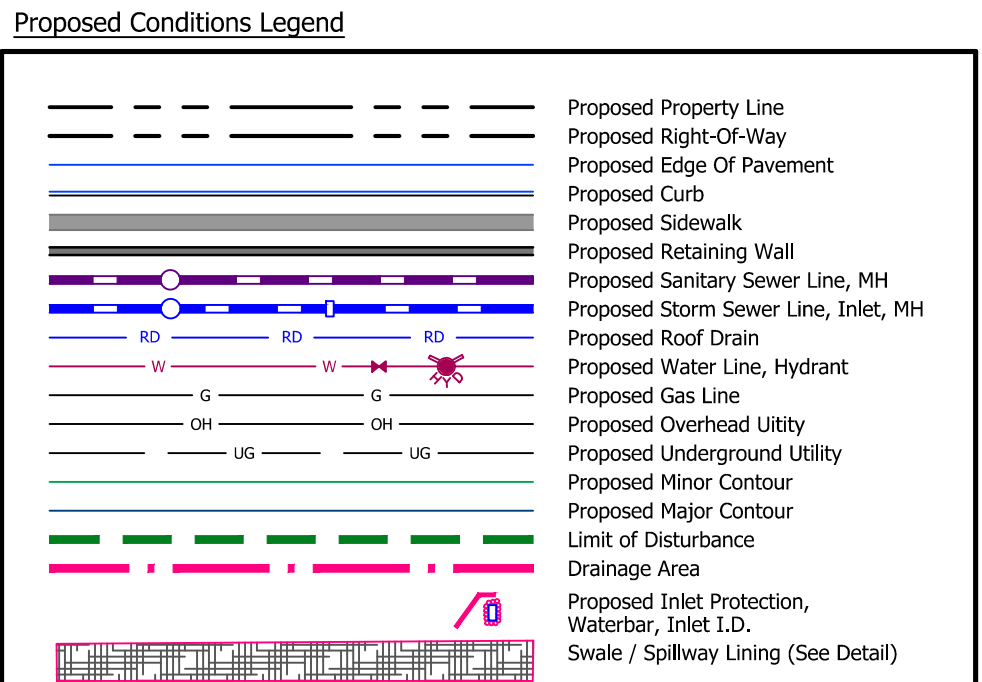


LANDSCAPE PLAN
FOR
2509 MILL ROAD TOWNHOMES
LOCATED IN
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

DRAWING ID: 221013-6-LSP
PROJECT: 221013
DATE: 04/25/2022
SHEET: 6 OF 21

NO.	REVISION	DATE
1	TWP PC REPORT #3 12/13/22	12/14/2022
2	TREE CHANGE	12/20/2022
3	TWP BOS REPORT	06/29/2023
4	TWP FIRE MARSHALL & STAFF MTG	08/14/2023
5	30' RADII, NO OFF ESMT. VERT. CURB	11/28/23

COPYRIGHT © 2021 BY R.J. FISHER & ASSOCIATES, INC.




FISHER
& Associates, Inc.

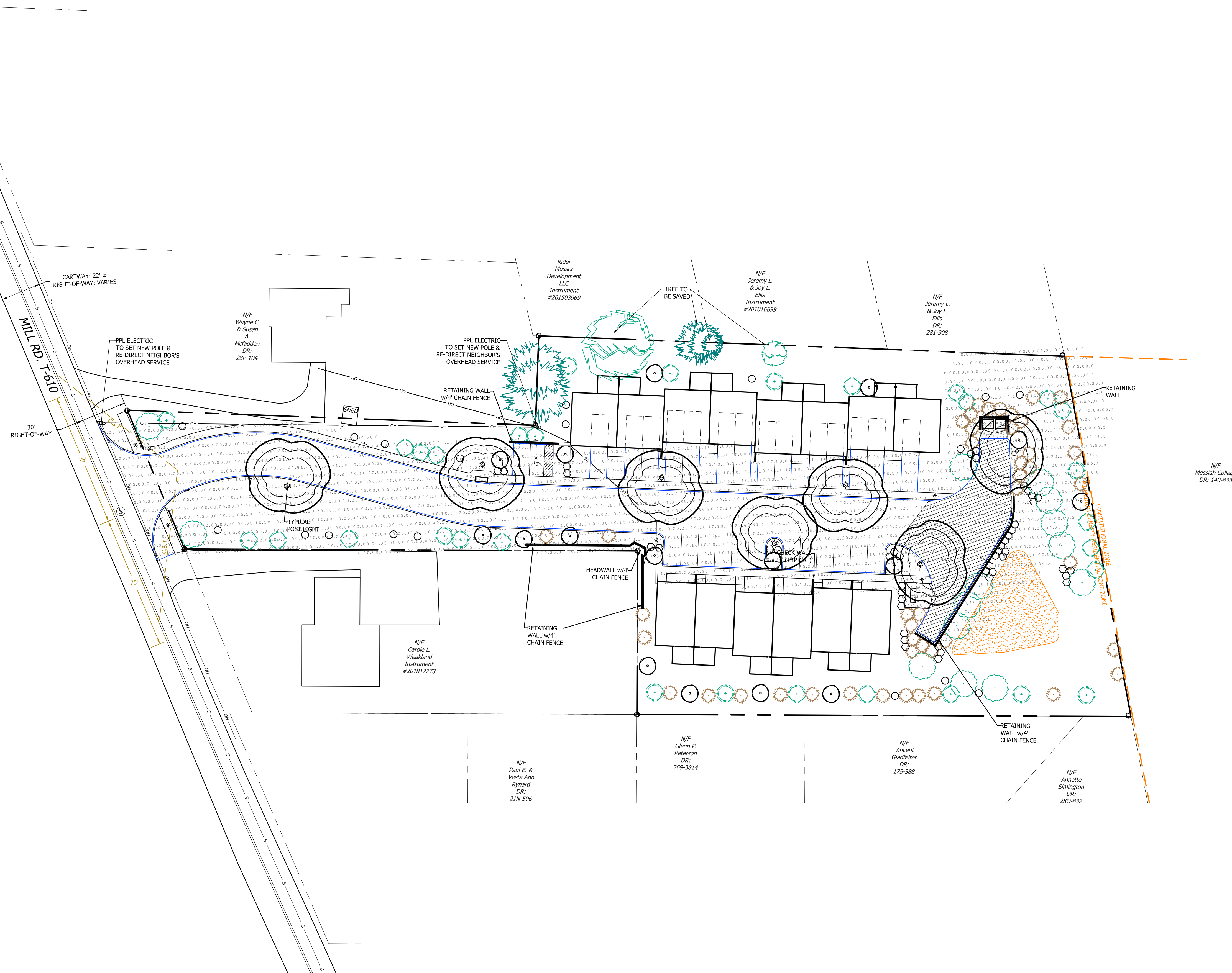
DRAWING ID:	221013-3-LD
PROJECT:	221013
DATE:	04/25/2022
SHEET:	7 OF 21

NO.	REVISION	DATE
1	TWMP PC REPORT #3 12/13/22	12/14/2022
2	TREE CHANGE	12/20/2022
3	TWMP BOS REPORT	06/23/2023
4	TWMP FIRE MARSHALL & STAFF MTG	08/14/2023
5	30 RADII, NO OFF ESMT, VERT. CURE	11/28/23

COPYRIGHT © 2021 BY R.J. FISHER & ASSOCIATES, INC.

LUMINAIRE SCHEDULE								
SYMBOL	QTY.	LAMP	LUMINAIRE	MANUFACTURER	CATALOG NUMBER	LUMENS	WATTAGE	POLE
	7	LED, FULL CUTOFF	AP201, TYPE III DISTRIBUTION	LANDSCAPE FORMS	Part #: AP201-SO-35K-T3-FRS // AP-12-A-BC-XXXX	2313	39.5	AP-12-A 9' H. X 4" POLE W/ 12' FIXTURE HGT., BLACK

DESIGN AREA MEETS ILLUMINATION ENGINEERING SOCIETY'S RECOMMENDED PRACTICE FOR PARKING AREAS PER RP-20-2011
FULL CUTOFF CLASSIFICATION
LCS TABLE BUG RATING B1-U1-G1
+0.0 3' FOOT CANDLE VALUE

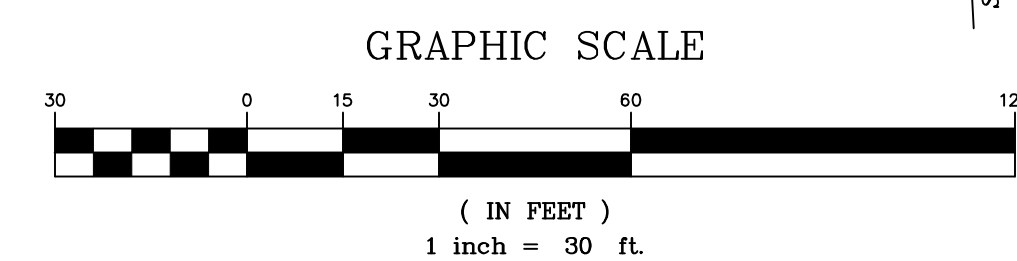


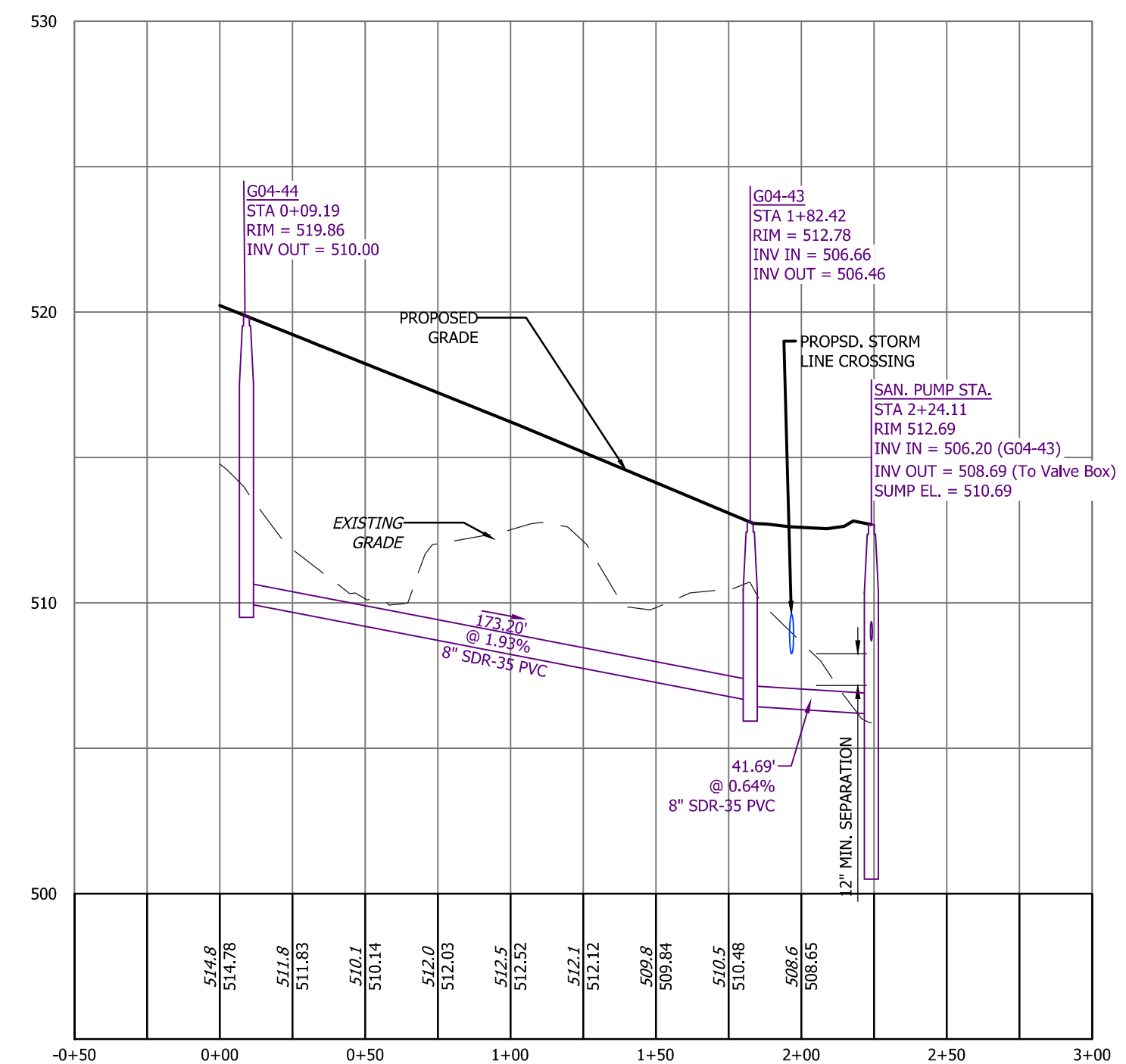
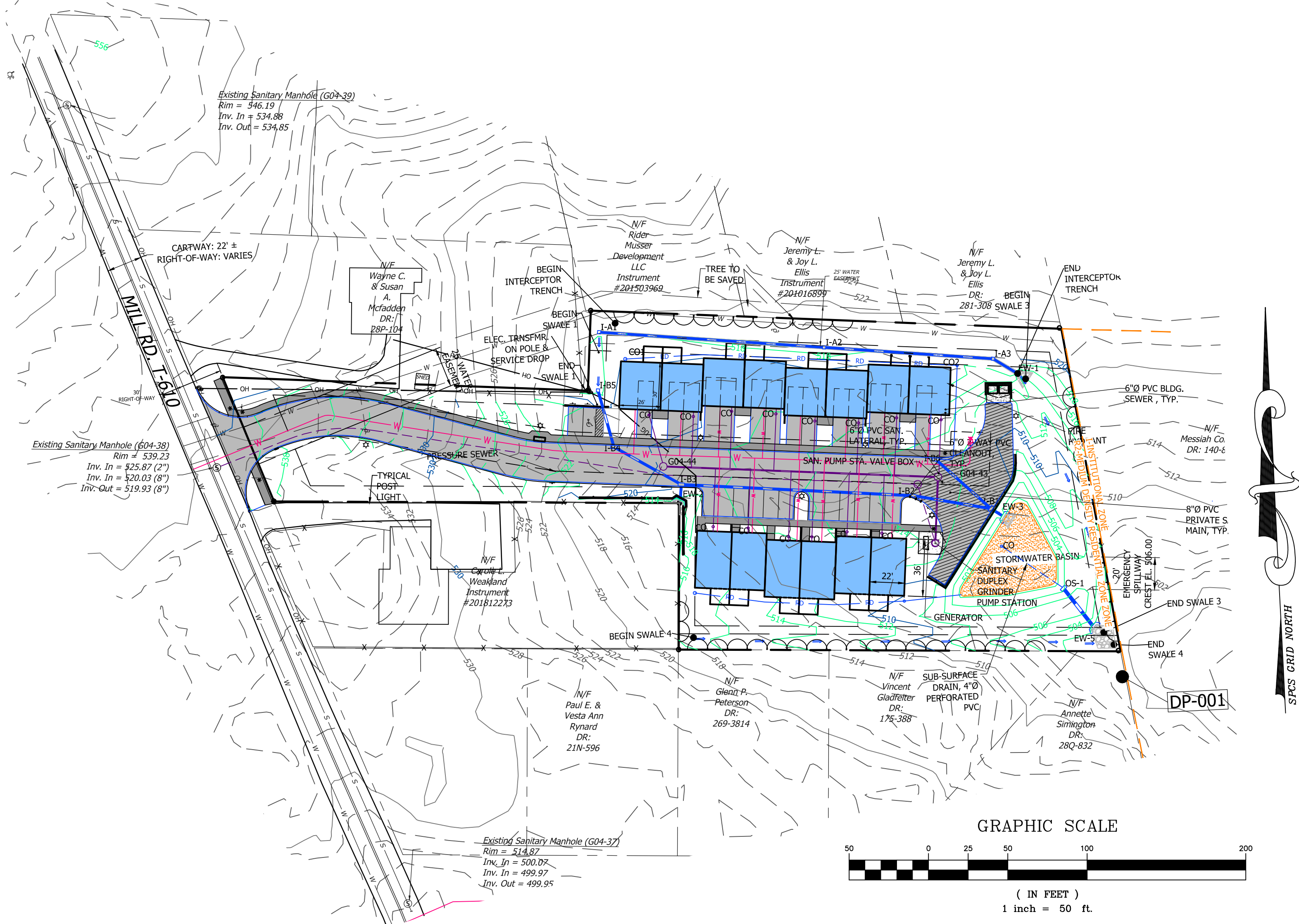
R. J. FISHER & ASSOCIATES, INC.
SITE PLANNING ■ CIVIL ENGINEERING ■ LAND SURVEYS
1546 BRIDGE STREET, NEW CUMBERLAND, PA. 17070
PHONE: (717) 774-7534 ■ FAX: (717) 774-7190
RJFISHERENGINEERING.COM



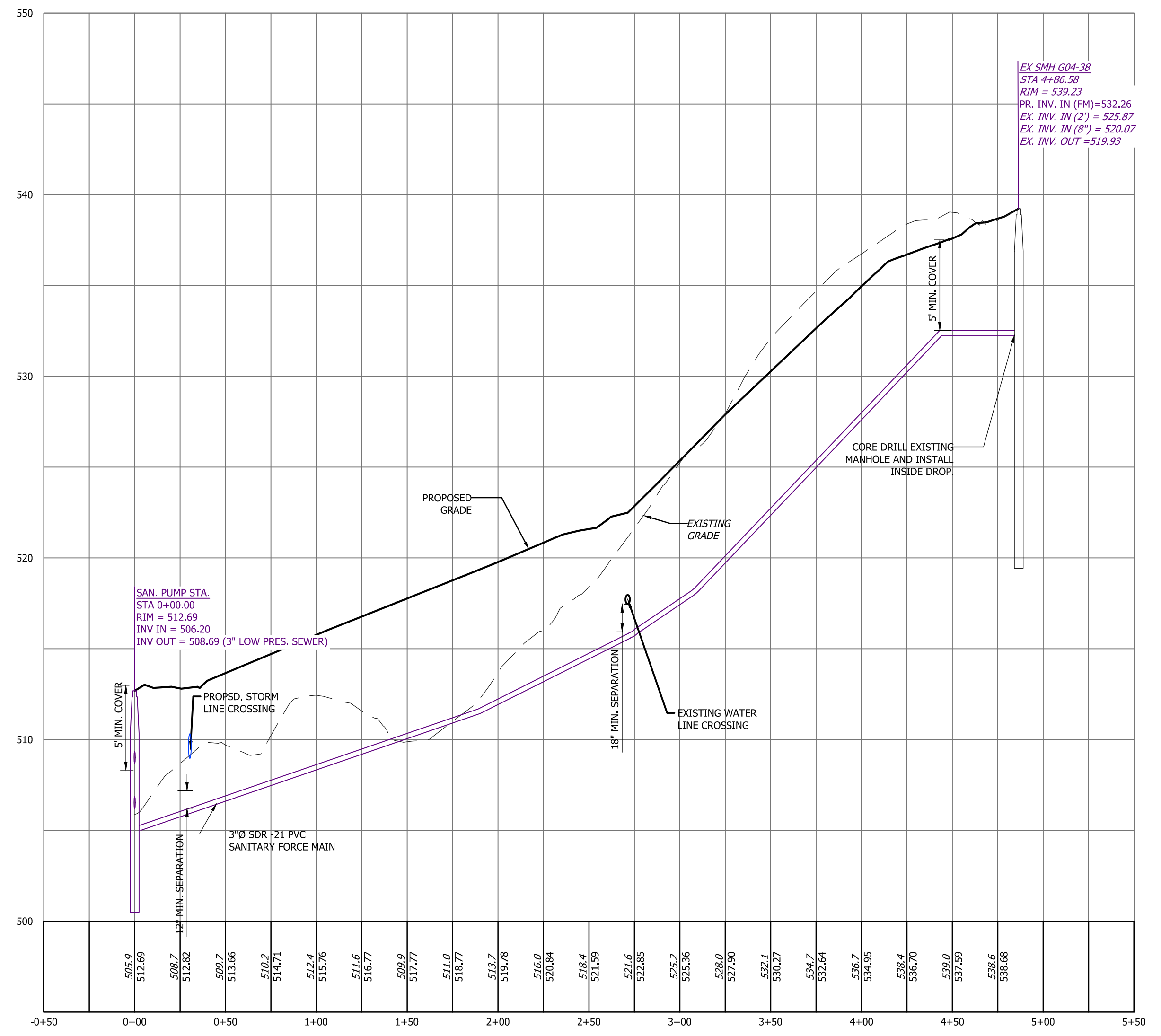
SITE LIGHTING PLAN
FOR
2509 MILL ROAD TOWNHOMES
LOCATED IN
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

DRAWING ID:	221013-3-LD
PROJECT:	221013
DATE:	04/25/2022
SHEET:	8 OF 21





Profile View of G04-44 to SPS
Sta: -0+50.00 - 3+00.00
Horizontal Scale: 1" = 30'
Vertical Scale: 1" = 3'



Profile View of Sanitary Force Main
Sta: -0+50.00 - 5+50.00
Horizontal Scale: 1" = 30'
Vertical Scale: 1" = 3'

- NOTES:
1. Frames and covers on existing sanitary manhole nos. G04-39, G04-38 and G04-37 in Mill Road to be replaced with new frames and vented manhole covers.
 2. Existing manhole no. G04-38 in Mill Road to be fully lined with epoxy coating material in accordance with Township requirements.
 3. Pipe length labels shown on profiles represent distance center of center of structure to center of structure. Pipe slope labels shown on the profile represent inside face of structure to inside face of structure.

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

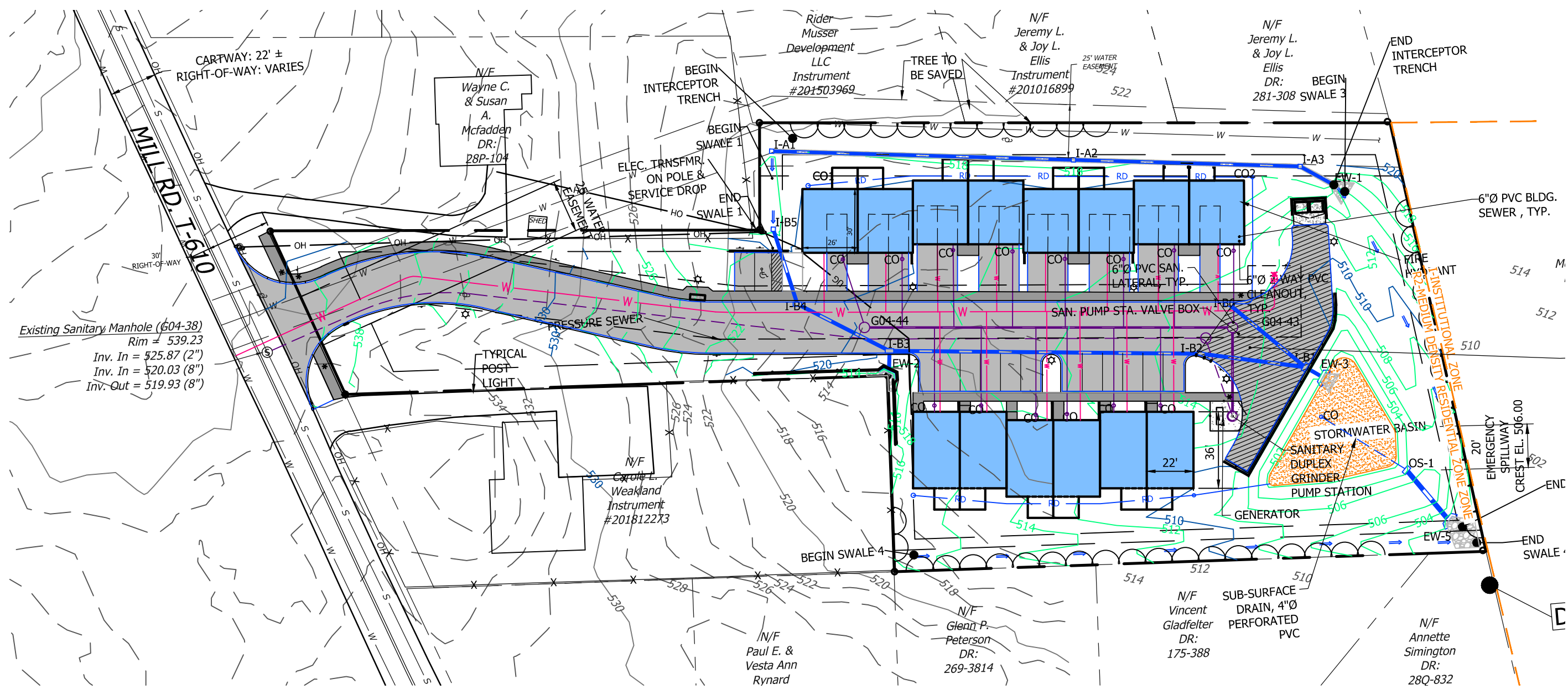


SANITARY SEWER PLAN & PROFILE
FOR
2509 MILL ROAD TOWNHOMES
LOCATED IN
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

DRAWING ID:	221013-6-SAN PR
PROJECT:	221013
DATE:	04/25/2022
SHEET:	9 OF 21

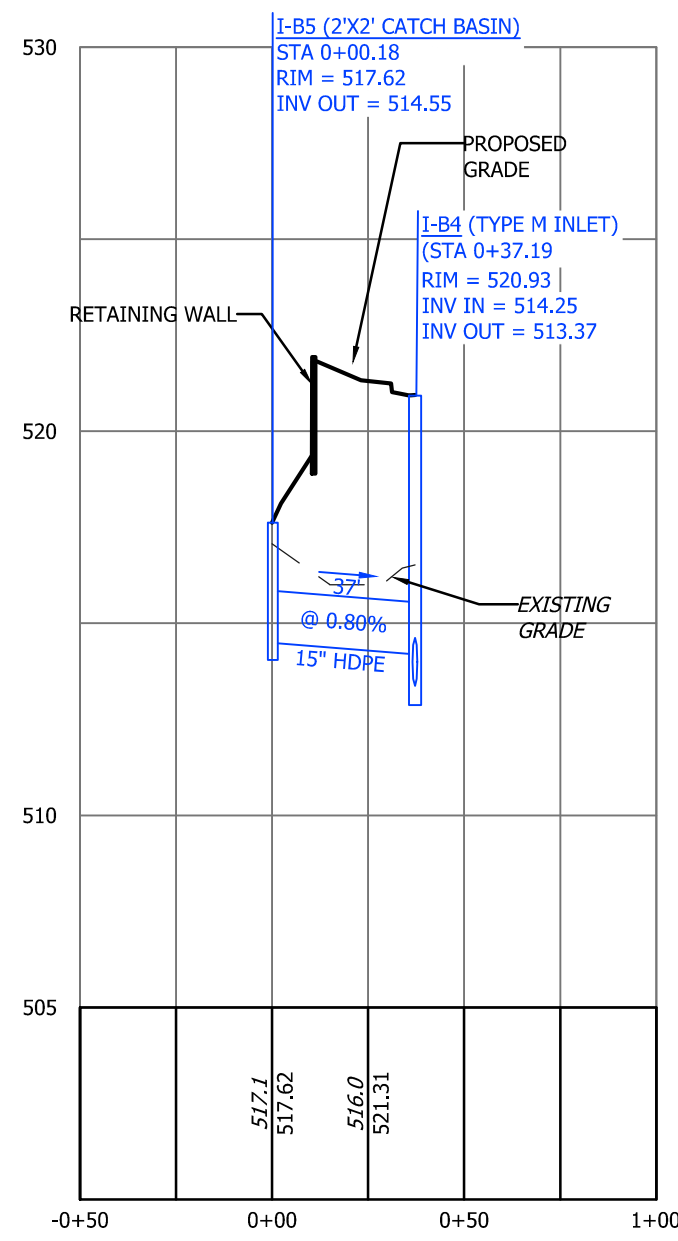
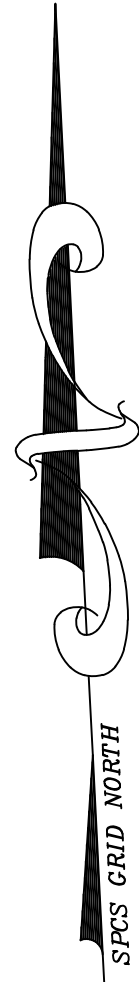
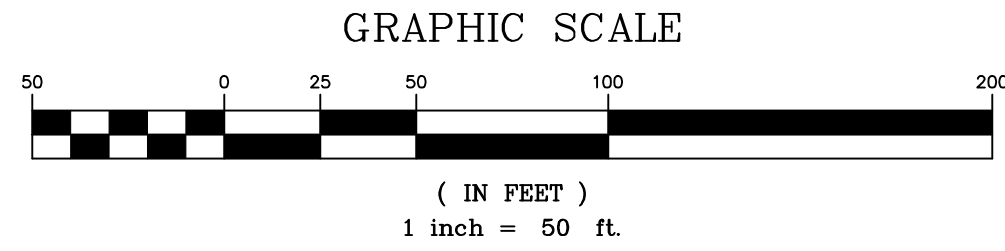
NO.	REVISION	DATE
1	TWP PC REPORT #3 12/13/22	12/14/2022
2	TREE CHANGE	12/20/2022
3	TWP BOS REPORT	06/23/2023
4	TWP FIRE MARSHALL & STAFF MTG	08/14/2023
5	30' RADII, NO OFF ESM, VERT. CURB	11/28/23

COPYRIGHT © 2021 BY R.J. FISHER & ASSOCIATES, INC.

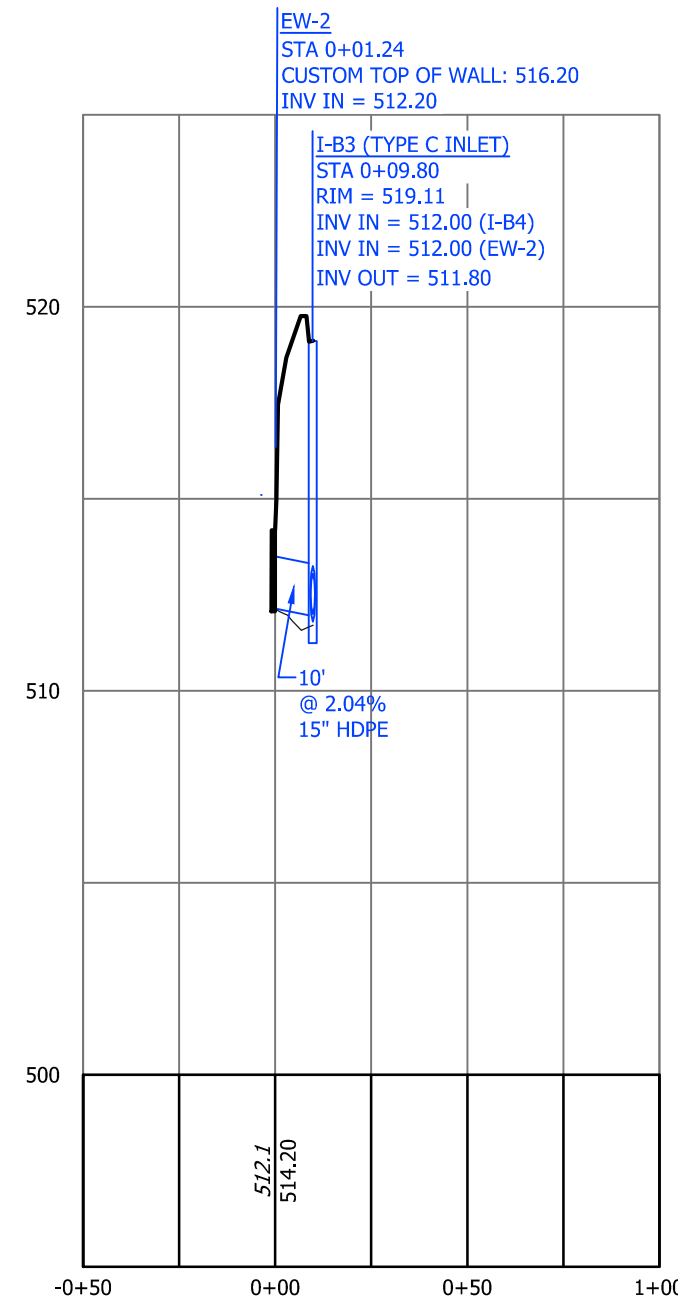


NOTES:

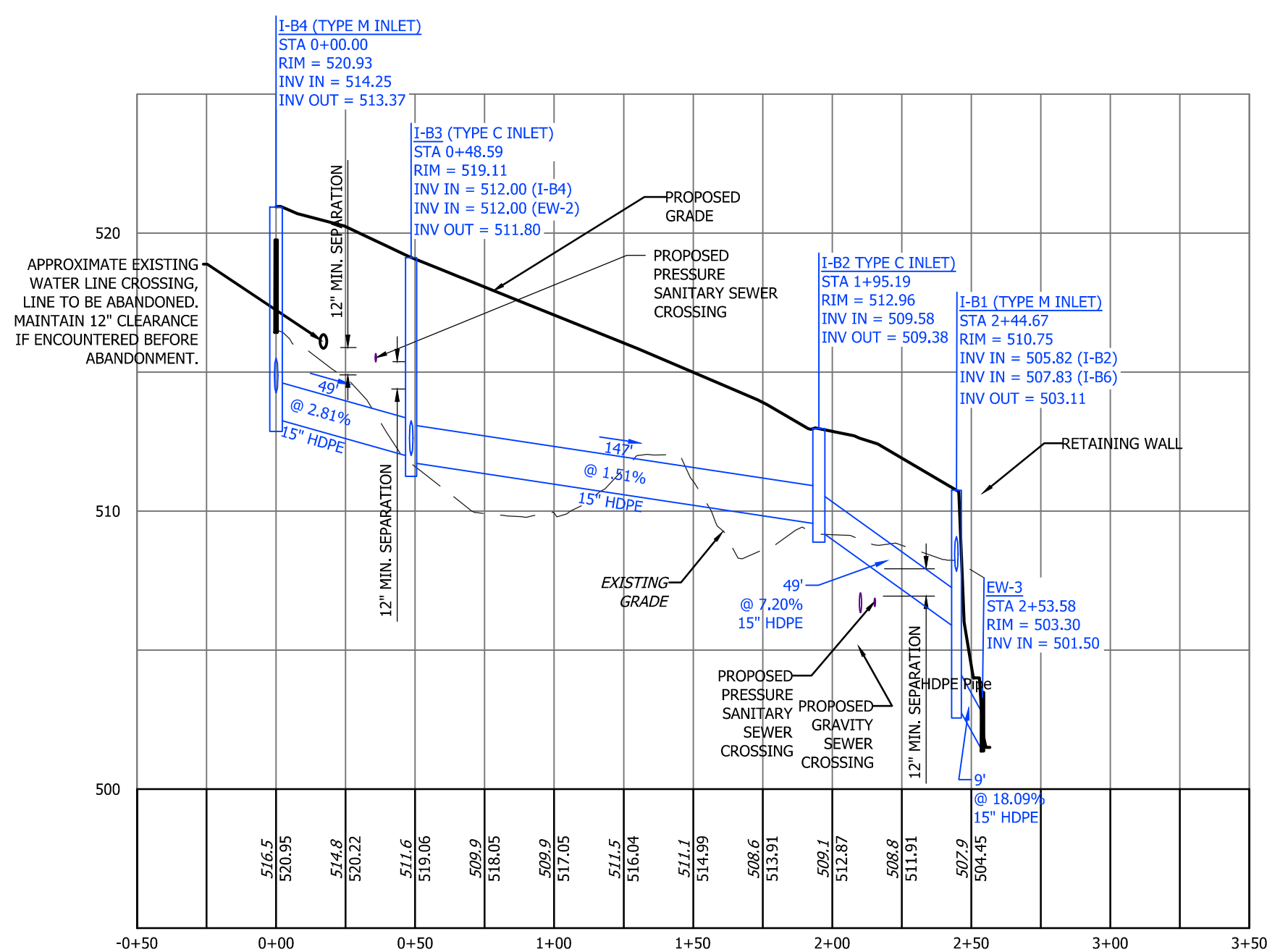
1. Pipe length labels shown on profiles represent distance center of center of structure to center of structure. Pipe slope labels shown on the profile represent inside face of structure to inside face of structure.



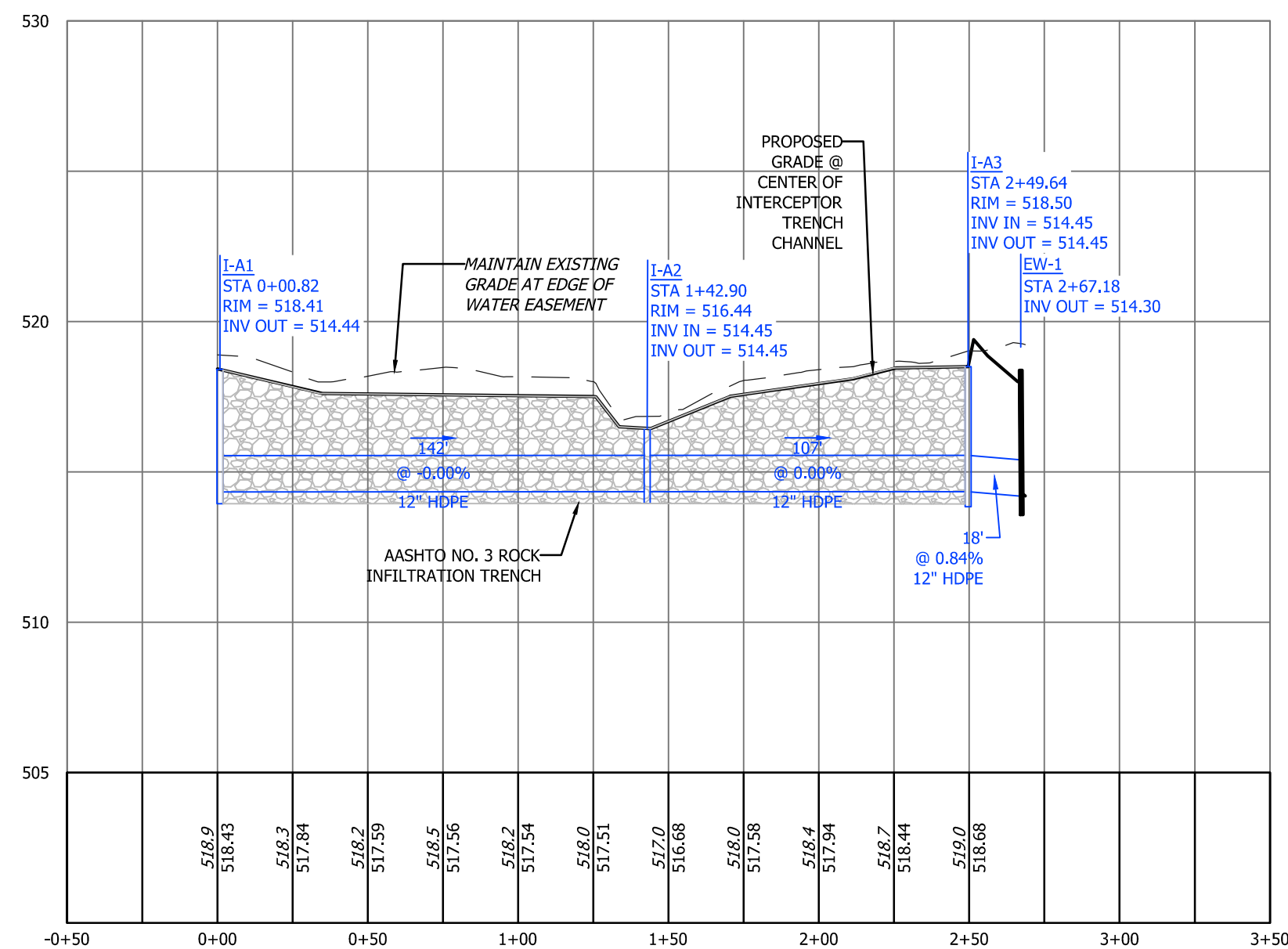
Profile View of I-B4 TO I-B3
Sta: -0+50.00 - 1+00.00
Horizontal Scale: 1" = 30'
Vertical Scale: 1" = 3'



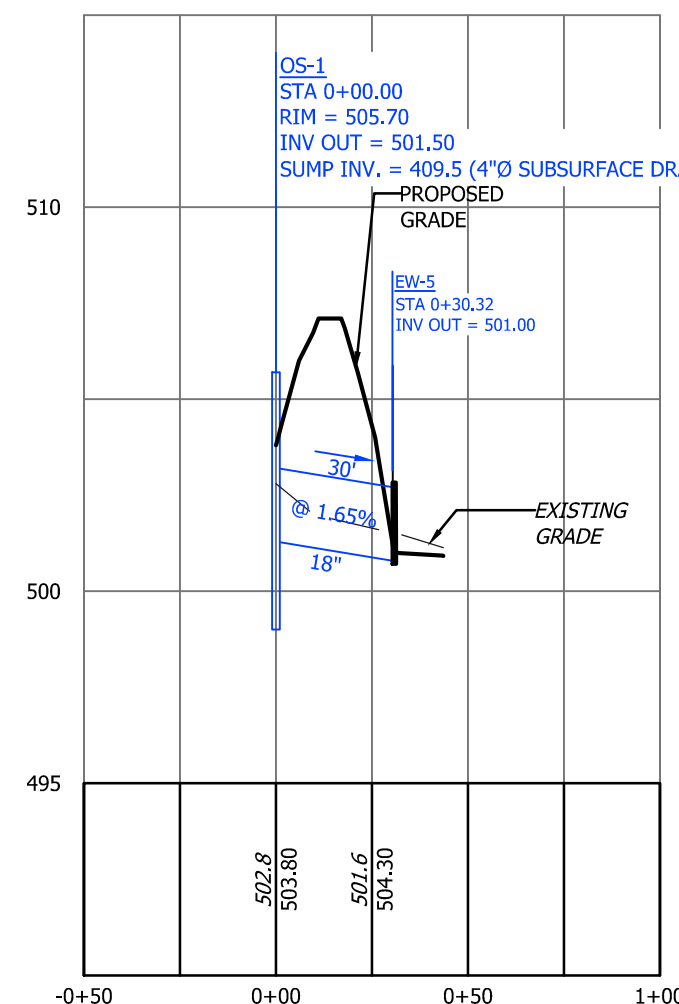
Profile View of EW-2 TO I-B2
Sta: -0+50.00 - 1+00.00
Horizontal Scale: 1" = 30'
Vertical Scale: 1" = 3'



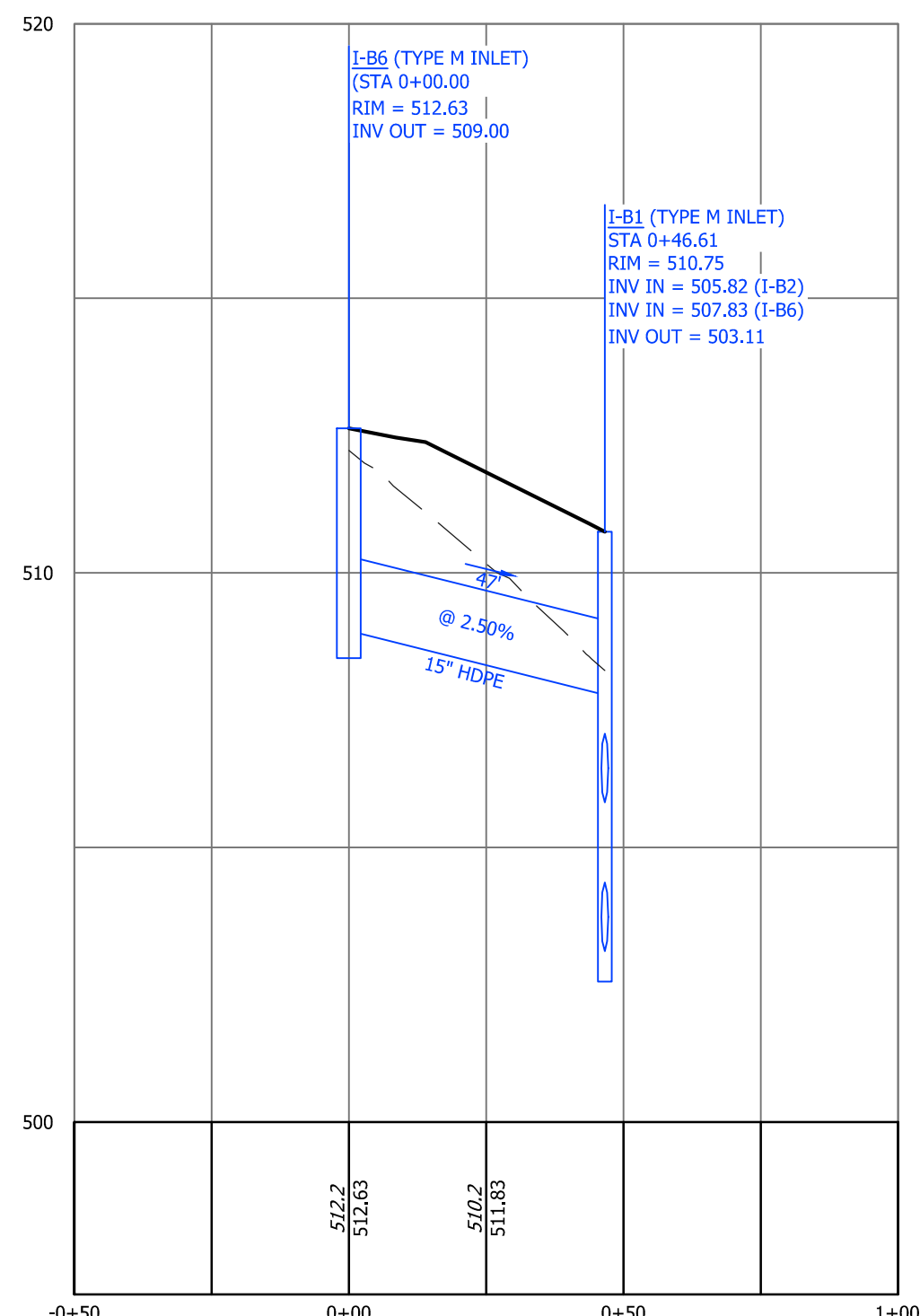
Profile View of I-B4 TO EW-3
Sta: -0+50.00 - 3+50.00
Horizontal Scale: 1" = 30'
Vertical Scale: 1" = 3'



Profile View of INTERCEPTOR CHANNEL TRENCH
Sta: -0+50.00 - 3+50.00
Horizontal Scale: 1" = 30'
Vertical Scale: 1" = 3'



Profile View of OS-1- EW5
Sta: -0+50.00 - 1+00.00
Horizontal Scale: 1" = 30'
Vertical Scale: 1" = 3'



Profile View of I-B6 TO I-B1
Sta: -0+50.00 - 1+00.00
Horizontal Scale: 1" = 30'
Vertical Scale: 1" = 3'

R. J. FISHER & ASSOCIATES, INC.



STORM SEWER PLAN & PROFILES

FOR
2509 MILL ROAD TOWNHOMES

LOCATED IN
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

DRAWING ID:	221013-7-STM-PR
PROJECT:	221013
DATE:	04/25/2022
SHEET:	10 OF 21

R. J. FISHER & ASSOCIATES, INC.

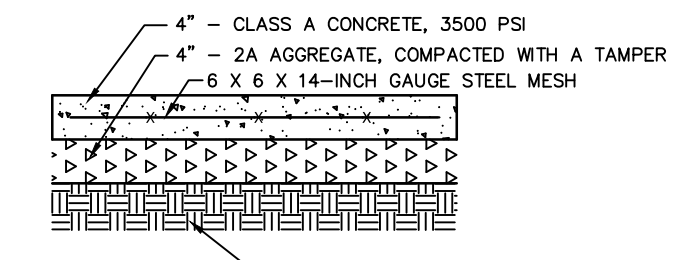


STORM SEWER PLAN & PROFILES

FOR
2509 MILL ROAD TOWNHOMES

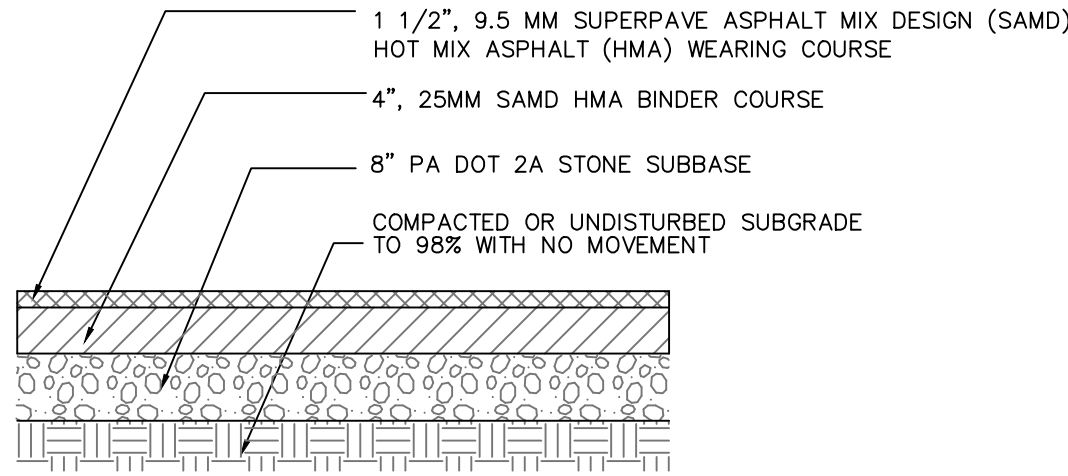
LOCATED IN
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

DRAWING ID:	221013-7-STM-PR
PROJECT:	221013
DATE:	04/25/2022
SHEET:	10 OF 21

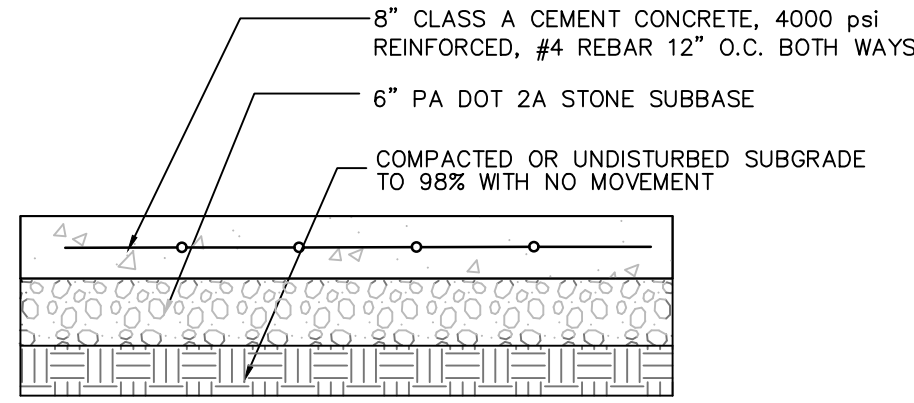


- NOTE: 1. PROVIDE TRANSVERSE ASPHALT TYPE EXPANSION JOINTS SPACED 30' MAX.
2. PROVIDE CONSTRUCTION JOINTS @ 4' INTERVALS OR AS SPECIFIED.
3. A TOOLED EDGE SHALL BE PROVIDED ON ALL EDGES INCLUDING EXPANSION JOINTS.
4. IN THE CASE WHERE SIDEWALKS ARE PROPOSED DIRECTLY AGAINST CURB OR BUILDING, EXPANSION MATERIAL SHALL BE INSTALLED CONTINUOUSLY ALONG THE COMMON EDGE.
5. PROVIDE A BROOM FINISH.
6. WHERE PROPOSED SIDEWALKS CROSS A DRIVEWAY, A CONCRETE APRON SHALL BE PROVIDED FROM THE EDGE OF THE STREET CARRYWAY TO THE FAR EDGE OF THE SIDEWALK. CONCRETE DRIVEWAY APRONS SHALL HAVE A MINIMUM DEPTH OF SIX INCHES AND CONSTRUCTED WITH REINFORCED WIRE OF FIBERGLASS SUBSTITUTE FOR STRENGTHENING PURPOSES.
7. JOINTS SHALL BE SEALED IN ACCORDANCE WITH PENNDOT SECTION 705.4.

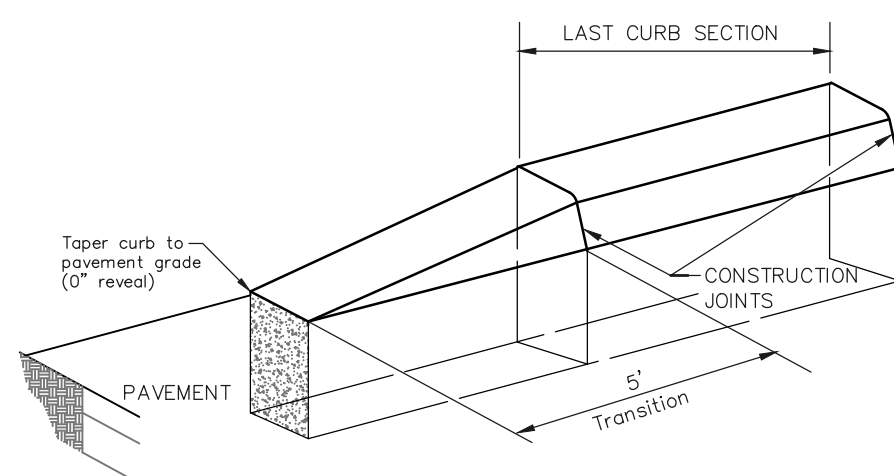
CONCRETE SIDEWALK DETAIL
N.T.S.



PAVING DETAIL
N.T.S.

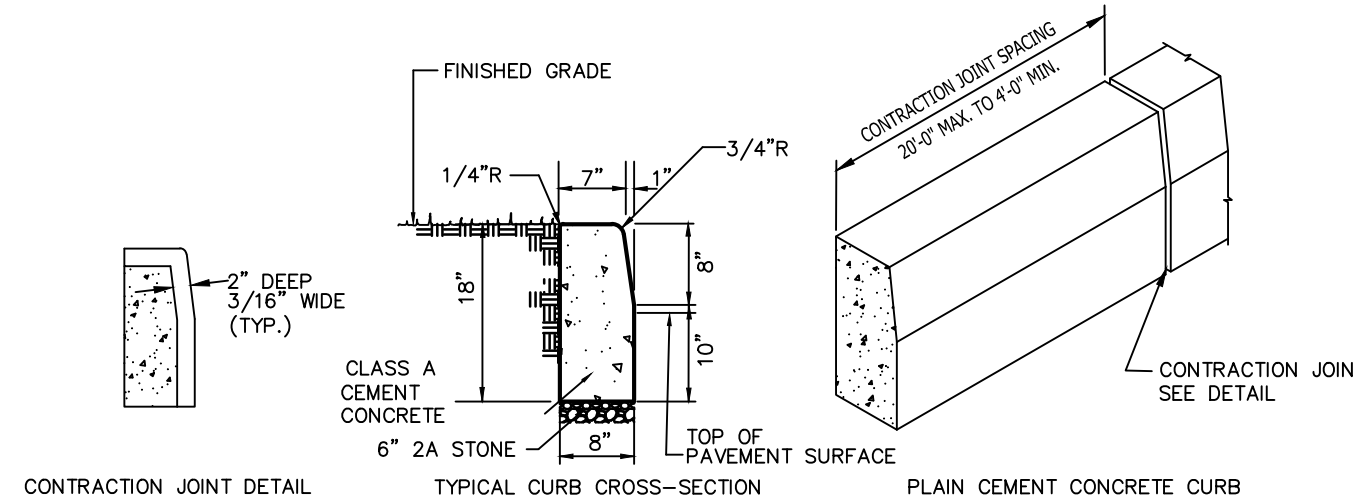


DUMPSTER & SEWAGE PUMP STATION
PAD PAVING DETAIL
N.T.S.



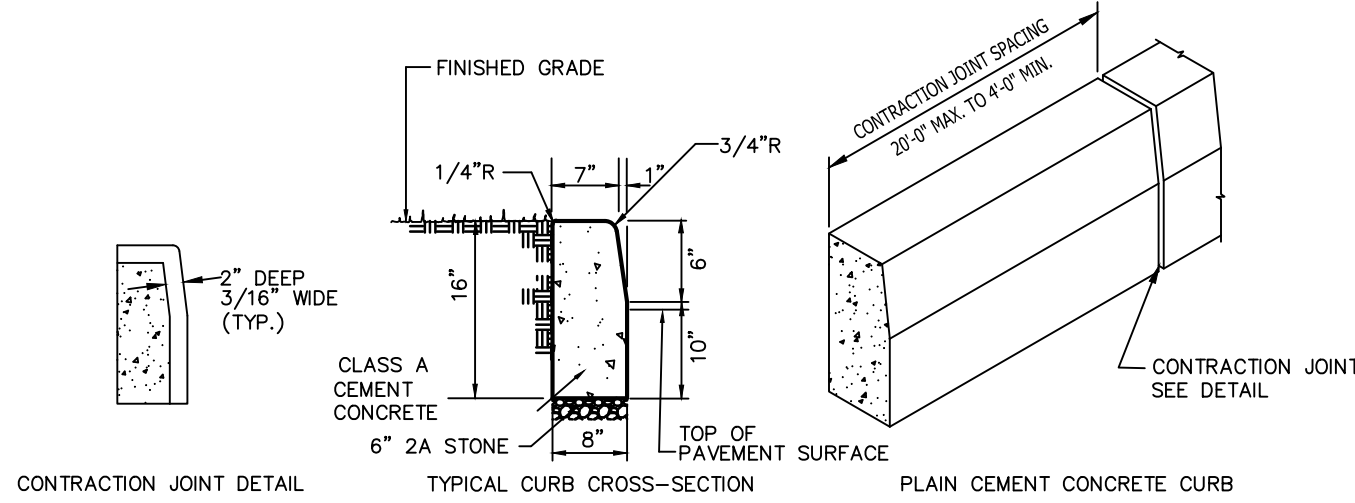
- NOTES:
1. ALL CONSTRUCTION MATERIALS AND STRUCTURES SHALL BE IN CONFORMANCE WITH PENN DOT STANDARDS FOR ROADWAY CONSTRUCTION AS AMENDED AUGUST 28, 2000.
2. ALL CURBING SHALL BE IN CONFORMANCE WITH RC-64M STANDARDS.
3. SEE PLAN FOR LIMITS OF VERTICAL CURB INSTALLATION.
4. CURB TAPERS SHALL BE PROVIDED AT CURB ENDS WITH A 5' TRANSITION AND A 0" TERMINUS REVEAL.

CURB TAPER DETAIL
N.T.S.



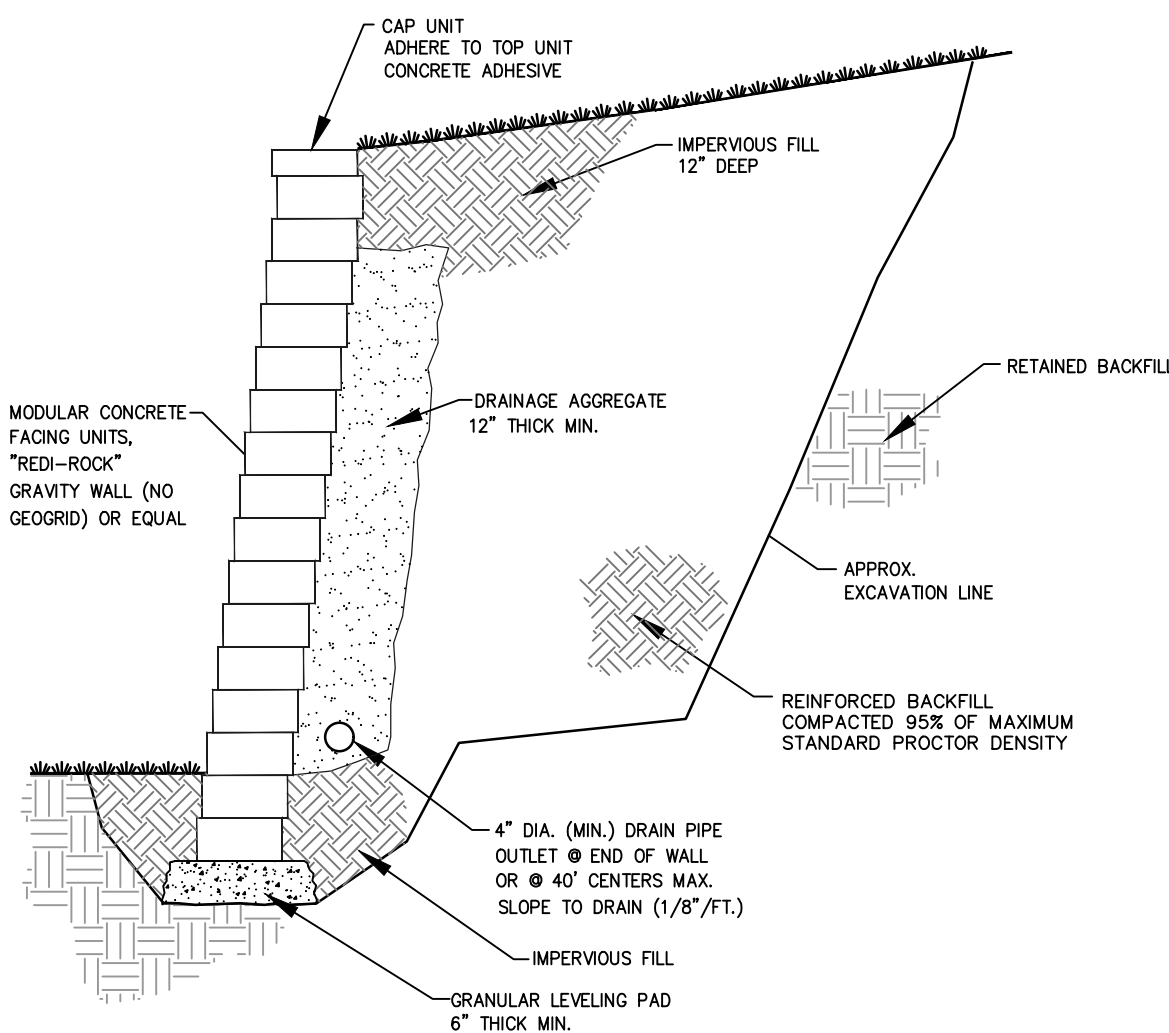
- NOTES:
1. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUB. 408, SECTION 630 FOR PLAIN CONCRETE CURB AND DEPRESSED CURB, SECTION 640 FOR PLAIN CONCRETE CURB AND PLAIN CONCRETE CURB CUTTER.
2. SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS.
3. PLACE 3/4-INCH PREMOULDED EXPANSION 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
(ALL CURB EXCEPT WHERE FULLY DEPRESSED AT UNIT DRIVEWAYS & 6" AT PARKING SPACES)



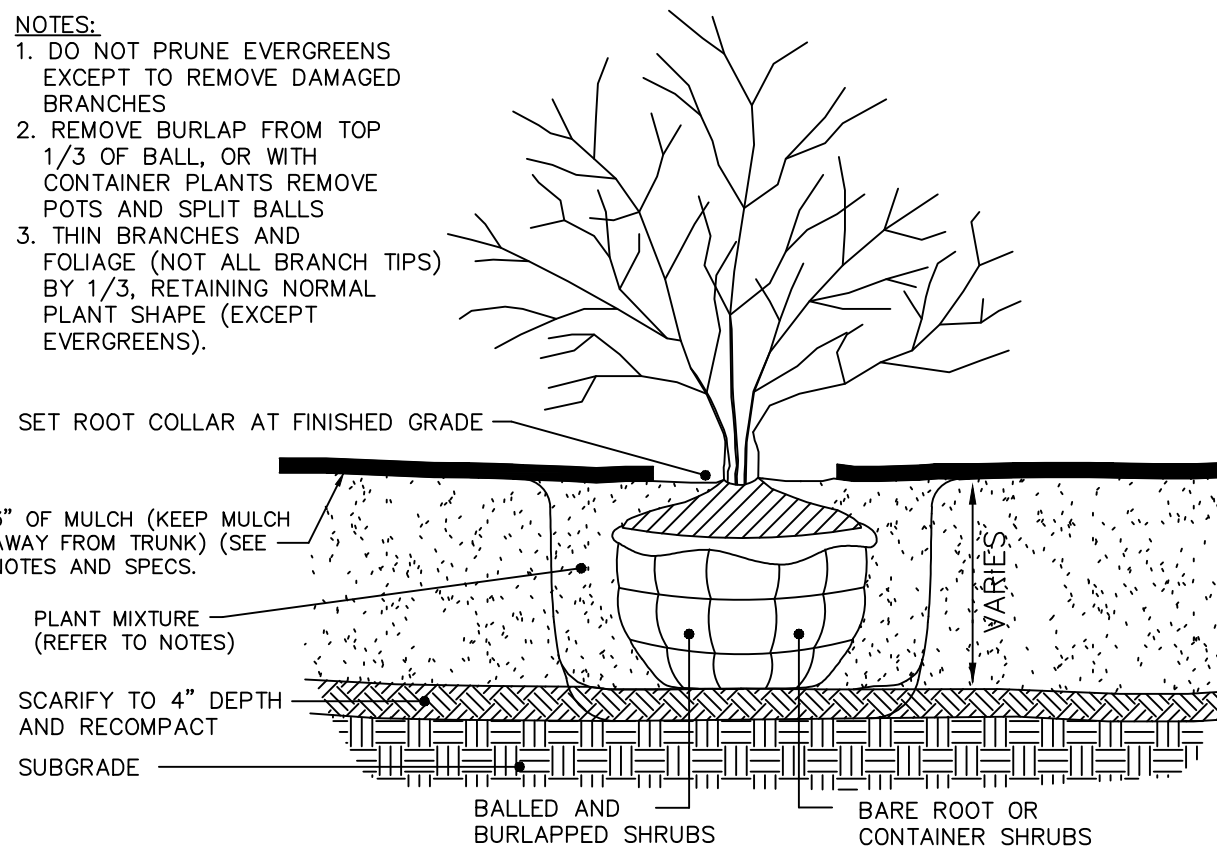
- NOTES:
1. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUB. 408, SECTION 630 FOR PLAIN CONCRETE CURB AND DEPRESSED CURB, SECTION 640 FOR PLAIN CONCRETE CURB AND PLAIN CONCRETE CURB CUTTER.
2. SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS.
3. PLACE 3/4-INCH PREMOULDED EXPANSION 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.

6" VERTICAL CONCRETE CURB DETAIL
(AT PARKING SPACES)
N.T.S.



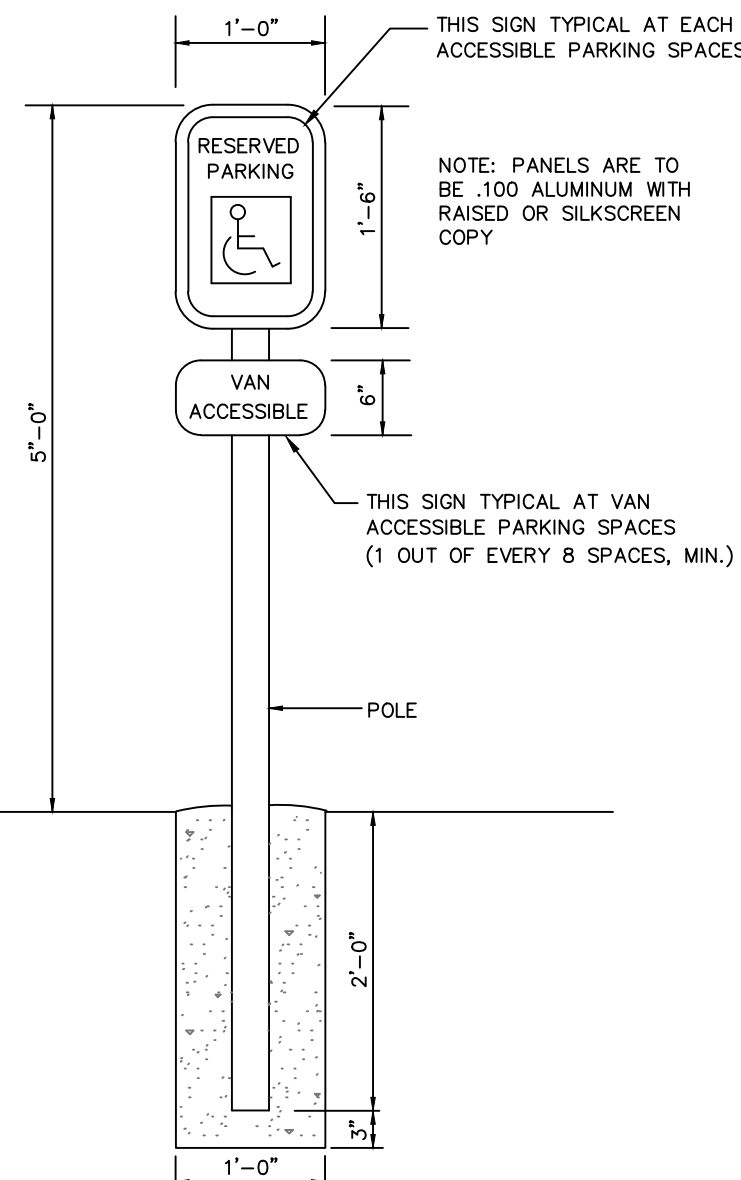
- NOTE: THIS DETAIL IS A REPRESENTATION ONLY. ACTUAL DESIGN OF THE RETAINING WALL SHALL BE AS CERTIFIED BY A PROFESSIONAL ENGINEER IN ACCORDANCE WITH MANUFACTURER'S DESIGN REQUIREMENTS AND PROVIDED TO TOWNSHIP FOR REVIEW PRIOR TO RECORDING PLAN.

TYPICAL SECTION - RETAINING WALL
NOT TO SCALE

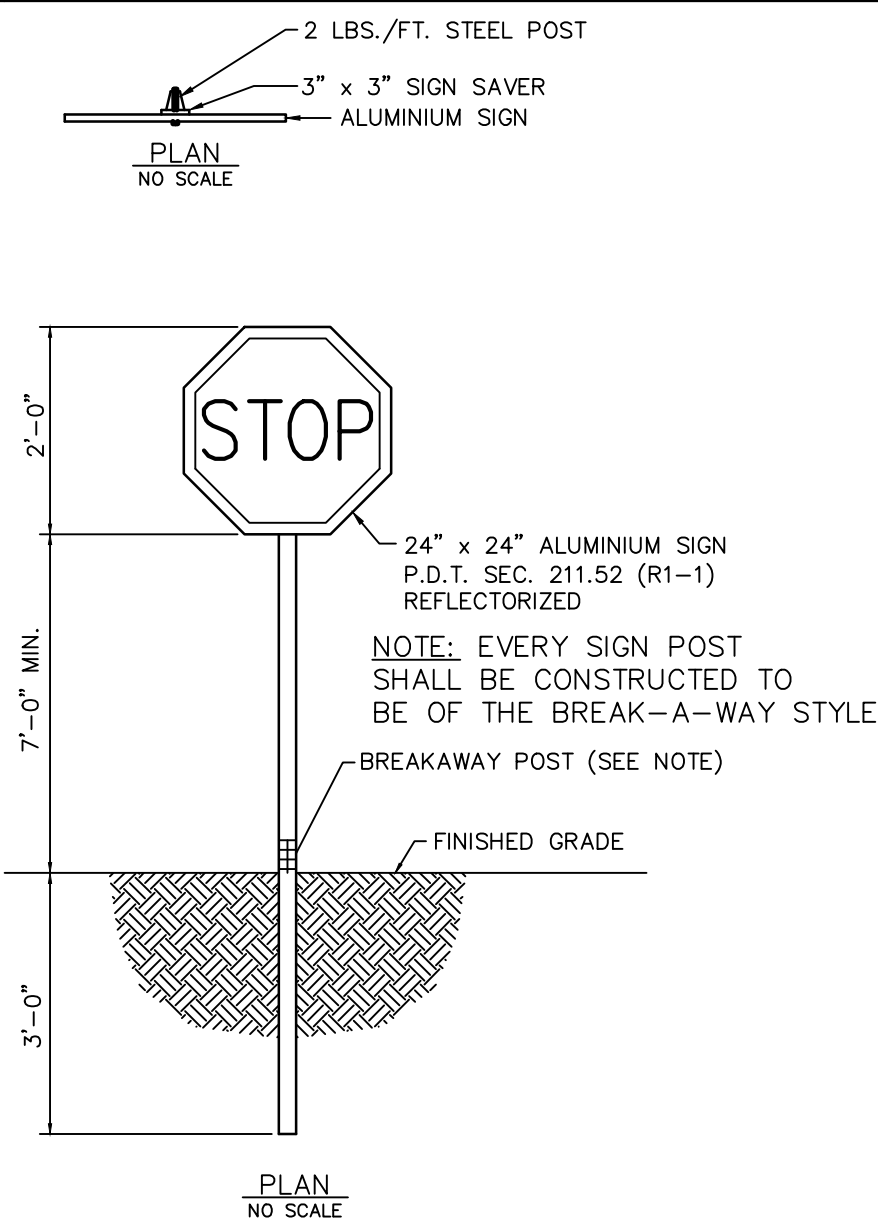


- NOTES:
1. DO NOT PRUNE EVERGREENS EXCEPT TO REMOVE DAMAGED BRANCHES.
2. REMOVE BURLAP FROM TOP 1/3 OF BALL, OR WITH CONTAINER PLANTS REMOVE POTS AND SPLIT BALLS.
3. THIN BRANCHES AND FOLIAGE (NOT ALL BRANCH TIPS) BY 1/3, RETAINING NORMAL PLANT SHAPE (EXCEPT EVERGREENS).

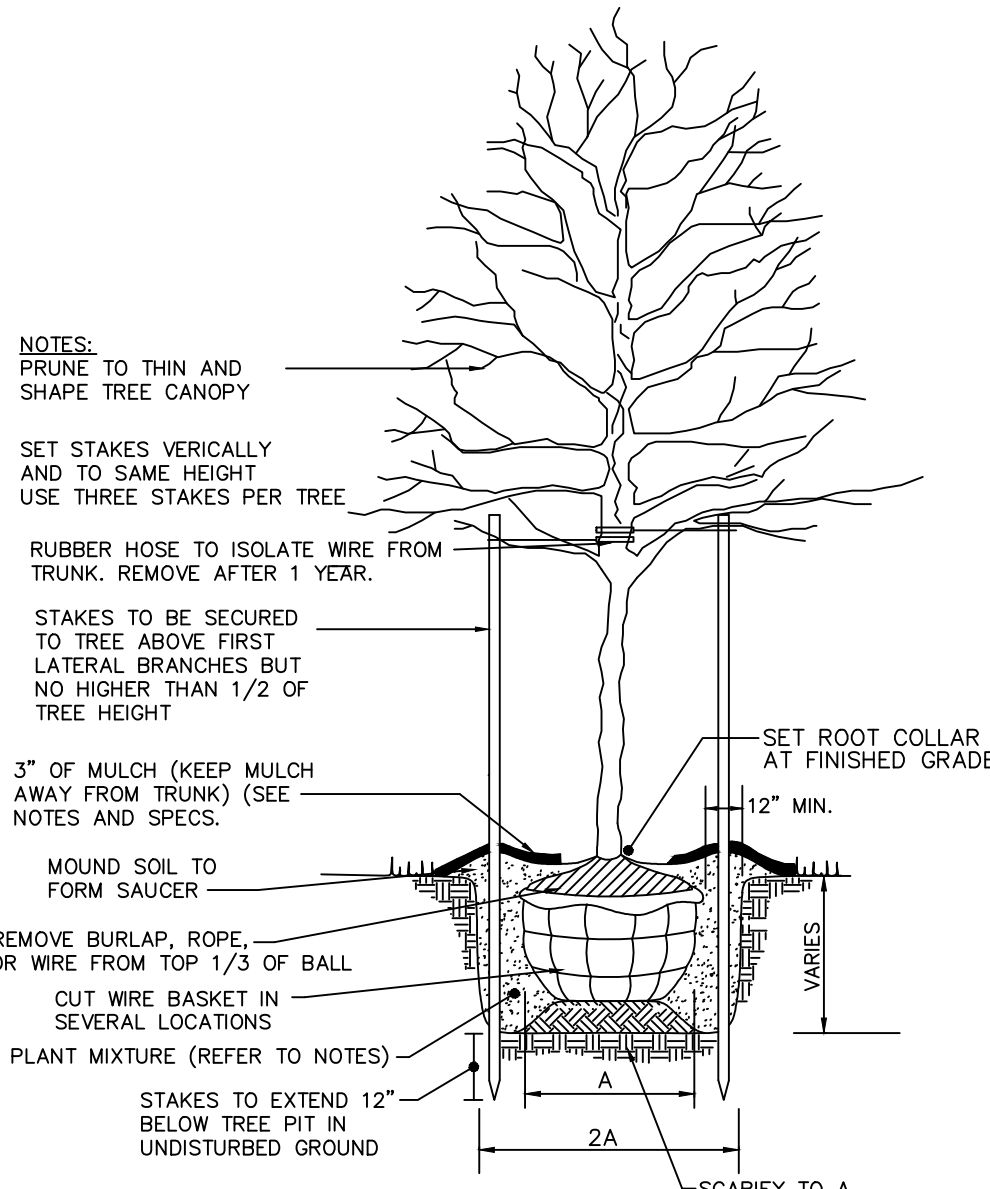
SHRUB PLANTING



TYPICAL ACCESSIBLE PARKING SIGN DETAIL
N.T.S.

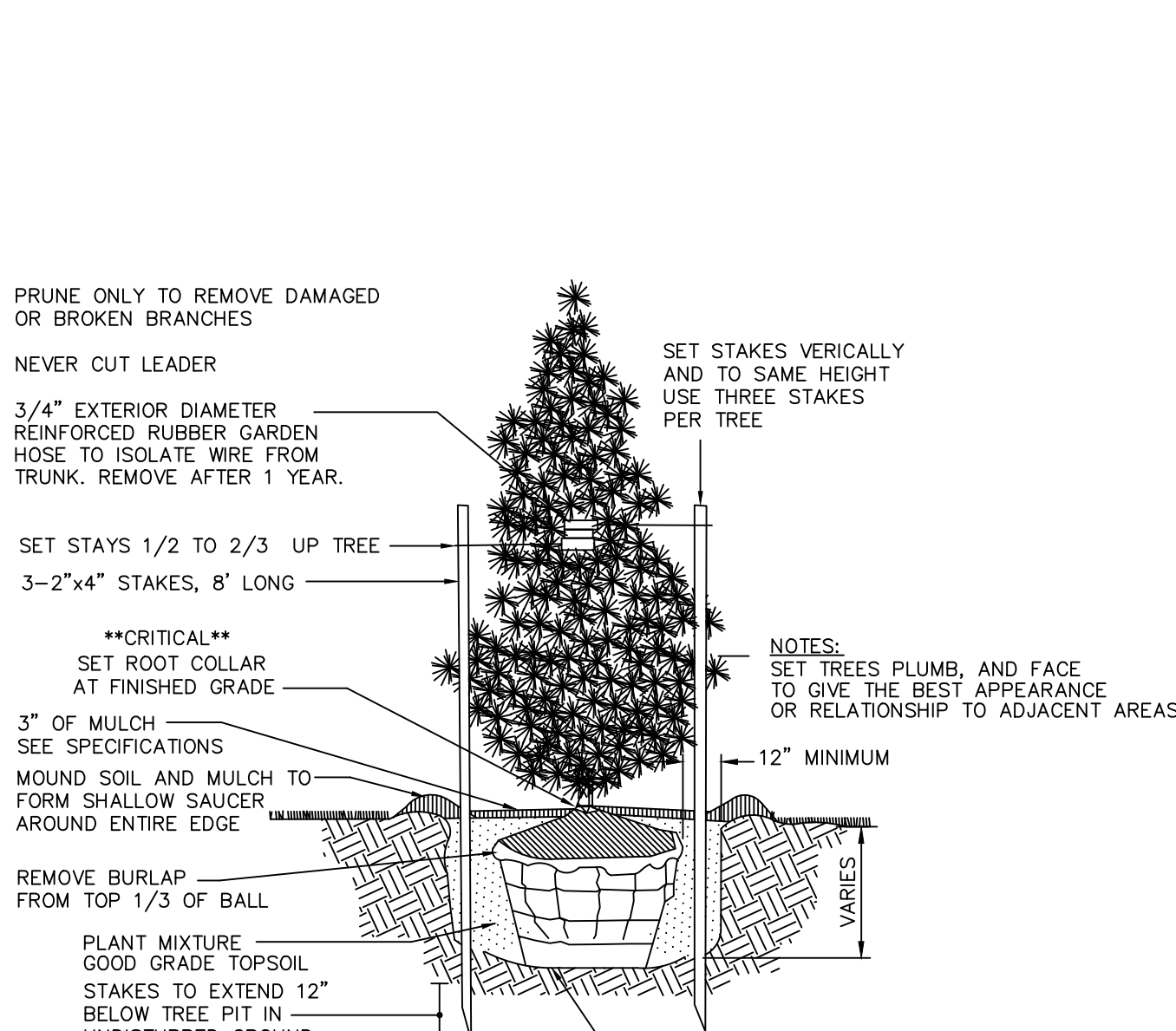


24" STOP SIGN
Pa.D.O.T. SIGN, R1-1
NTS



- NOTES:
PRUNE TO THIN AND SHAPE TREE CANOPY
SET STAKES VERTICALLY AND TO SAME HEIGHT USE THREE STAKES PER TREE
RUBBER HOSE TO ISOLATE WIRE FROM TRUNK. REMOVE AFTER 1 YEAR.
STAKES TO BE SECURED TO TREE ABOVE FIRST LATERAL BRANCHES BUT NO HIGHER THAN 1/2 OF TREE HEIGHT
3" OF MULCH (KEEP MULCH AWAY FROM TRUNK) (SEE NOTES AND SPECS.)
MOUND SOIL TO FORM SAUCER
REMOVE BURLAP, ROPE, OR WIRE FROM TOP 1/3 OF BALL
CUT WIRE BASKET IN SEVERAL LOCATIONS
PLANT MIXTURE (REFER TO NOTES)
STAKES TO EXTEND 12" BELOW TREE PIT IN UNDISTURBED GROUND
SET ROOT COLLAR AT FINISHED GRADE
12" MIN.
VARIES
SCARIFY TO A DEPTH OF 4" AND RECOMPACT

DECIDUOUS TREE PLANTING
NTS



- PRUNE ONLY TO REMOVE DAMAGED OR BROKEN BRANCHES
NEVER CUT LEADER
3/4" EXTERIOR DIAMETER REINFORCED RUBBER GARDEN HOSE TO ISOLATE WIRE FROM TRUNK. REMOVE AFTER 1 YEAR.
SET STAYS 1/2 TO 2/3 UP TREE
3-2"x4" STAKES, 8' LONG
CRITICAL
SET ROOT COLLAR AT FINISHED GRADE
3" OF MULCH
SEE SPECIFICATIONS
MOUND SOIL AND MULCH TO FORM SHALLOW SAUCER AROUND ENTIRE EDGE
REMOVE BURLAP FROM TOP 1/3 OF BALL
PLANT MIXTURE
GOOD GRADE TOPSOIL
STAKES TO EXTEND 12" BELOW TREE PIT IN UNDISTURBED GROUND
SET STAKES VERTICALLY AND TO SAME HEIGHT USE THREE STAKES PER TREE
12" MINIMUM
VARIES
PLANT TO BE PLACED ON UNDISTURBED SUBGRADE

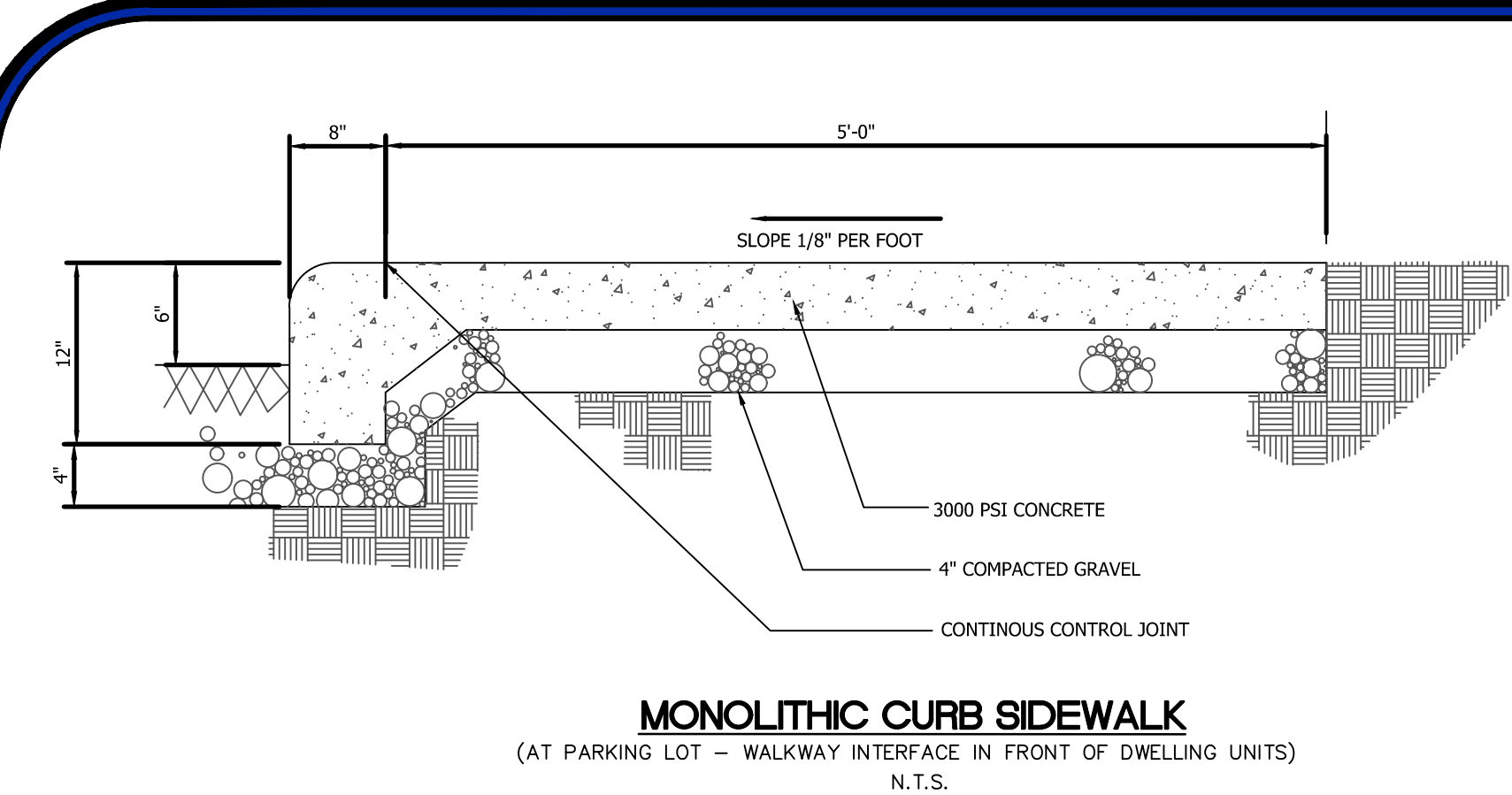
CONIFEROUS TREE PLANTING
NTS

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

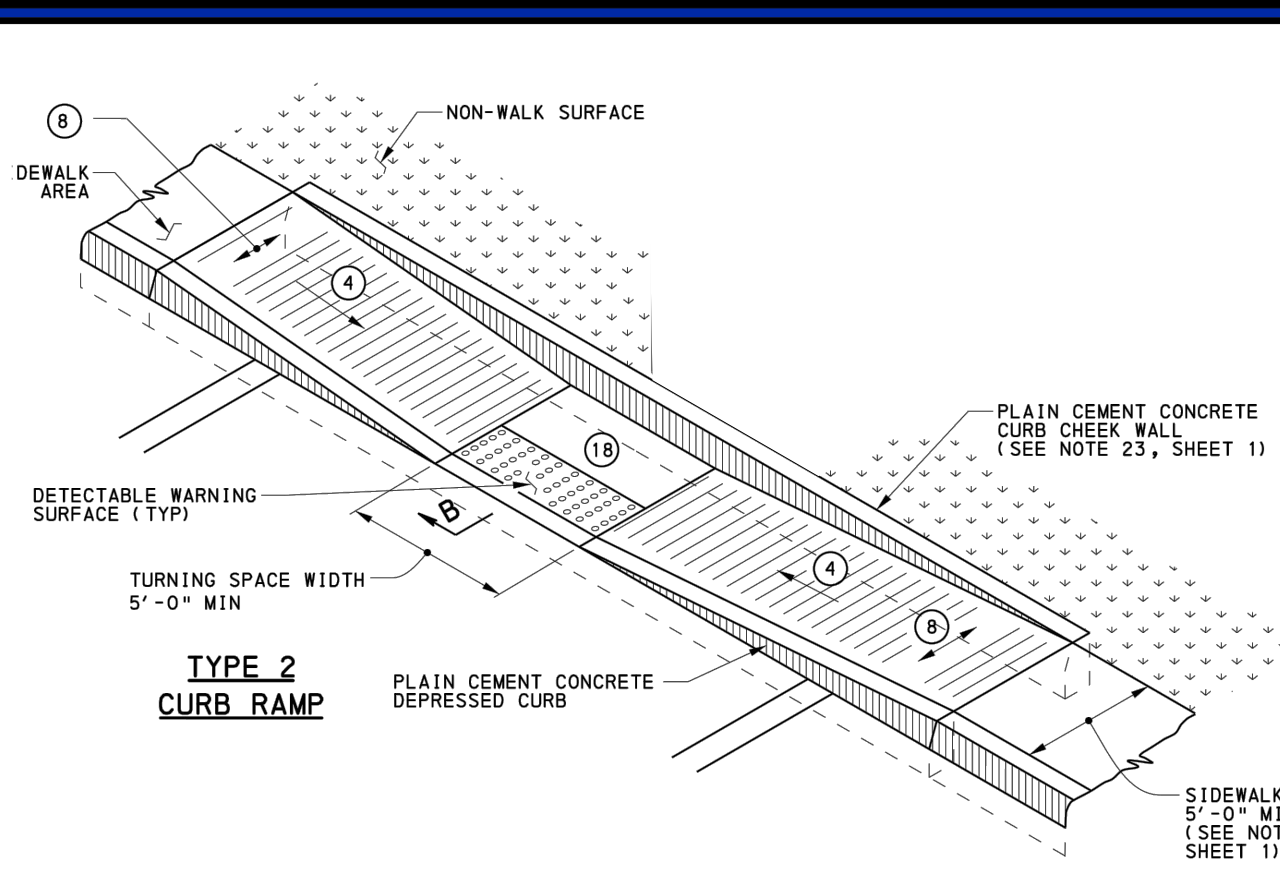


SITE DETAILS
FOR
2509 MILL ROAD TOWNHOMES
LOCATED IN
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

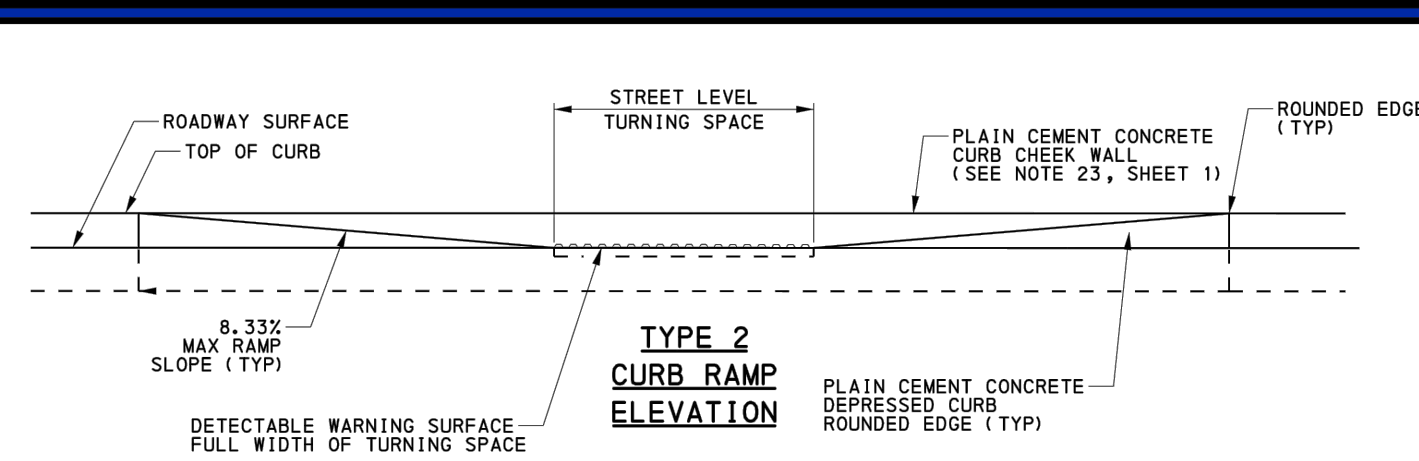
DRAWING ID: 221013-3-LD
PROJECT: 221013
DATE: 04/25/2022
SHEET: 11 OF 21



MONOLITHIC CURB SIDEWALK
(AT PARKING LOT - WALKWAY INTERFACE IN FRONT OF DWELLING UNITS)
N.T.S.



TYPE 2 CURB RAMP AT ACCESSIBLE PARKING & ENTRY
NOT TO SCALE

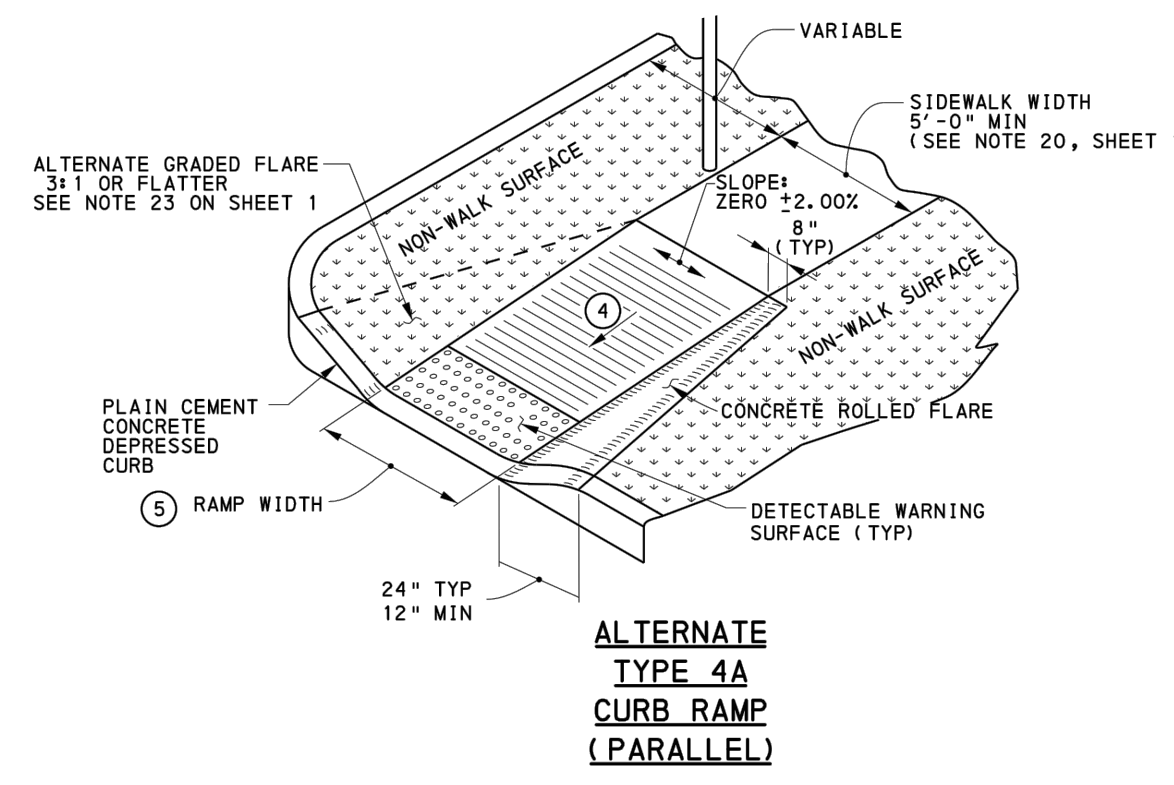


- 3) OPTIONAL CONCRETE ROLLED FLARE OR REGRADE SLOPE CAN BE USED TO MEET THE ADJACENT SURFACES IN LIEU OF PLAIN CEMENT CONCRETE CURB CHEEK WALL. SEE SHEET 4.
- 4) 8.33% MAX RAMP SLOPE, SEE NOTE 8 SHEET 1
- 8) SLOPE: ZERO ±2.00%
- 18) CURB RAMPS REQUIRE A TURNING SPACE WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY
CURB RAMPS AND SIDEWALKS

NEW CONSTRUCTION OR
ALTERATION DETAILS
TYPE 1A AND TYPE 2 CURB RAMPS

RECOMMENDED JUN.10, 2013	RECOMMENDED JUN.10, 2013	SHT 3 OF 14
CHIEF, INT. DELIVERY DIVISION	ACTING DIR. BUREAU OF PROJECT DELIVERY	RC-67M



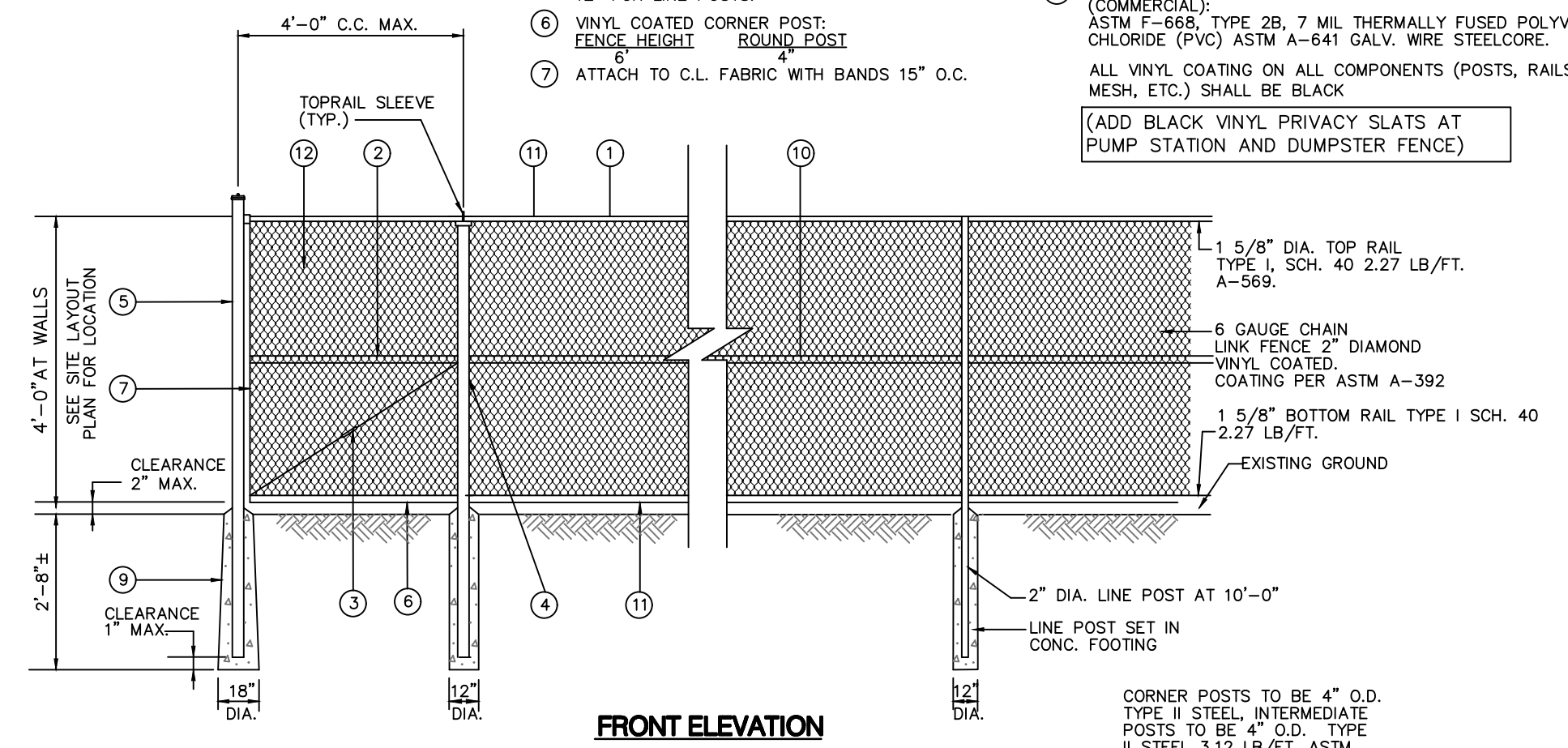
TYPE 4a CURB RAMP AT ENTRY
NOT TO SCALE

CHAIN LINK FENCE NOTES:

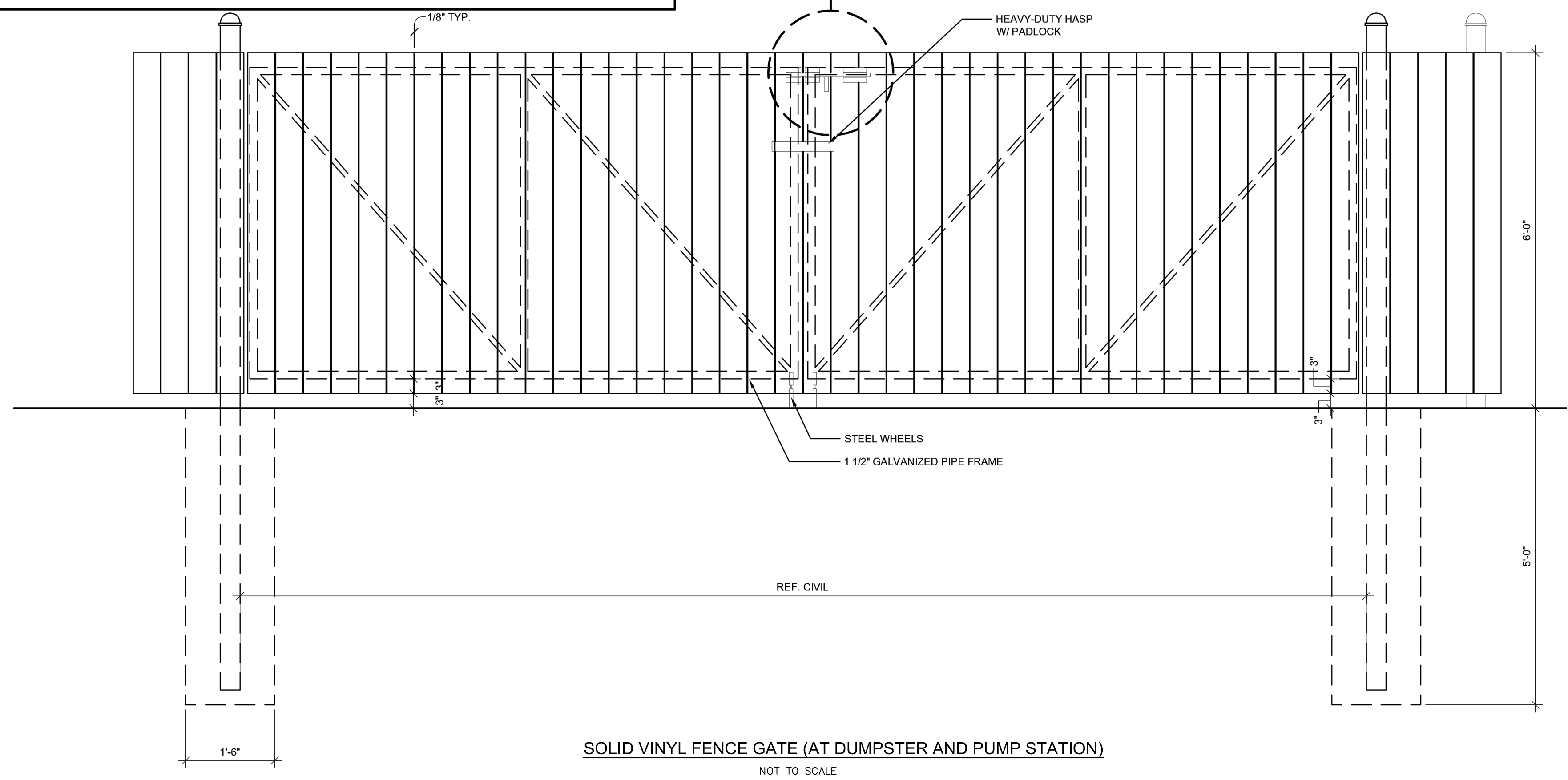
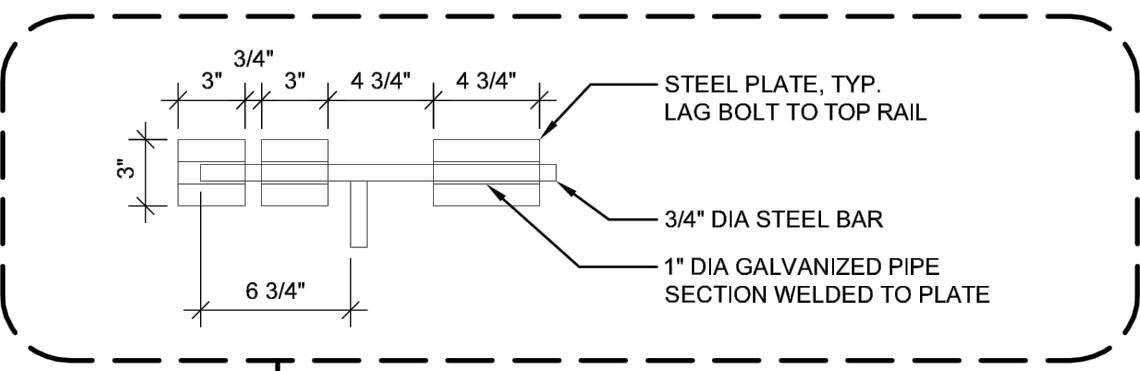
- FOOTING DESIGN TO BE CHECKED BY AN ENGINEER FOR WIND LOADS IF SLATS ARE USED.
- FENCE DETAILS ARE INTENDED AS A GUIDE ONLY. ALL FENCE MATERIALS AND CONSTRUCTION METHODS SHALL BE APPROVED BY THE ENGINEER AND FENCE MANUFACTURER.
- ALL POSTS, RAILS, AND HARDWARE TO BE BLACK POLYMER-COATED STEEL. ALL FABRIC TO BE BLACK VINYL-COATED.

CHAIN LINK FENCE LEGEND:

- VINYL COATED 1 5/8" O.D. TOP RAIL: ATTACH TO C.L. FABRIC WITH 9 GAUGE WIRE CLIP EVERY 24"
- VINYL COATED 1 5/8" O.D. BRACE RAIL FENCES 6 FEET HIGH AT CORNERS AND ANGLE SECTIONS. MID RAIL NOT NEEDED ON 4TH. FENCE
- VINYL COATED TRUSS ROD AND TURNBUCKLE AT CORNERS AND ANGLE SECTIONS
- VINYL COATED INTERMEDIATE POST: FENCE HEIGHT
- ATTACH TO C.L. FABRIC WITH GAUGE CLIPS EVERY 12" FOR LINE POSTS.
- VINYL COATED CORNER POST: ROUND POST
- ATTACH TO C.L. FABRIC WITH BANDS 15" O.C.
- 1 5/8" O.D. BOTTOM RAIL: ATTACH TO C.L. FABRIC WITH GAUGE WIRE CLIPS.
- VINYL COATED TENSION ROD ATTACHED TO END OR CORNER POST.
- CONCRETE FOOTING 3'-6" DEEP WITH 18" DIA. AT END POST AND 18" DIA. AT INTERMEDIATE POST. HOLE CORE IN UNDISTURBED OR COMPACTED SOIL. (SEE FOOTING DESIGN NOTE)
- 1 5/8" O.D. INTERMEDIATE RAIL: ATTACH TO C.L. FABRIC WITH GAUGE WIRE CLIP EVERY 24"
- FABRIC SELVAGE SHALL BE KNUCKLED TOP AND BOTTOM.
- 6 GAUGE 2" VINYL COATED WIRE MESH FABRIC (COMMERCIAL): ASTM F-668, TYPE 2B, 7 MIL THERMALLY FUSED POLYVINYL CHLORIDE (PVC) ASTM A-441 GALV. WIRE STEELCORE. ALL VINYL COATING ON ALL COMPONENTS (POSTS, RAILS, MESH, ETC.) SHALL BE BLACK (ADD BLACK VINYL PRIVACY SLATS AT PUMP STATION AND DUMPSTER FENCE)



CHAIN LINK FENCE DETAIL
(above retaining walls)
N.T.S.

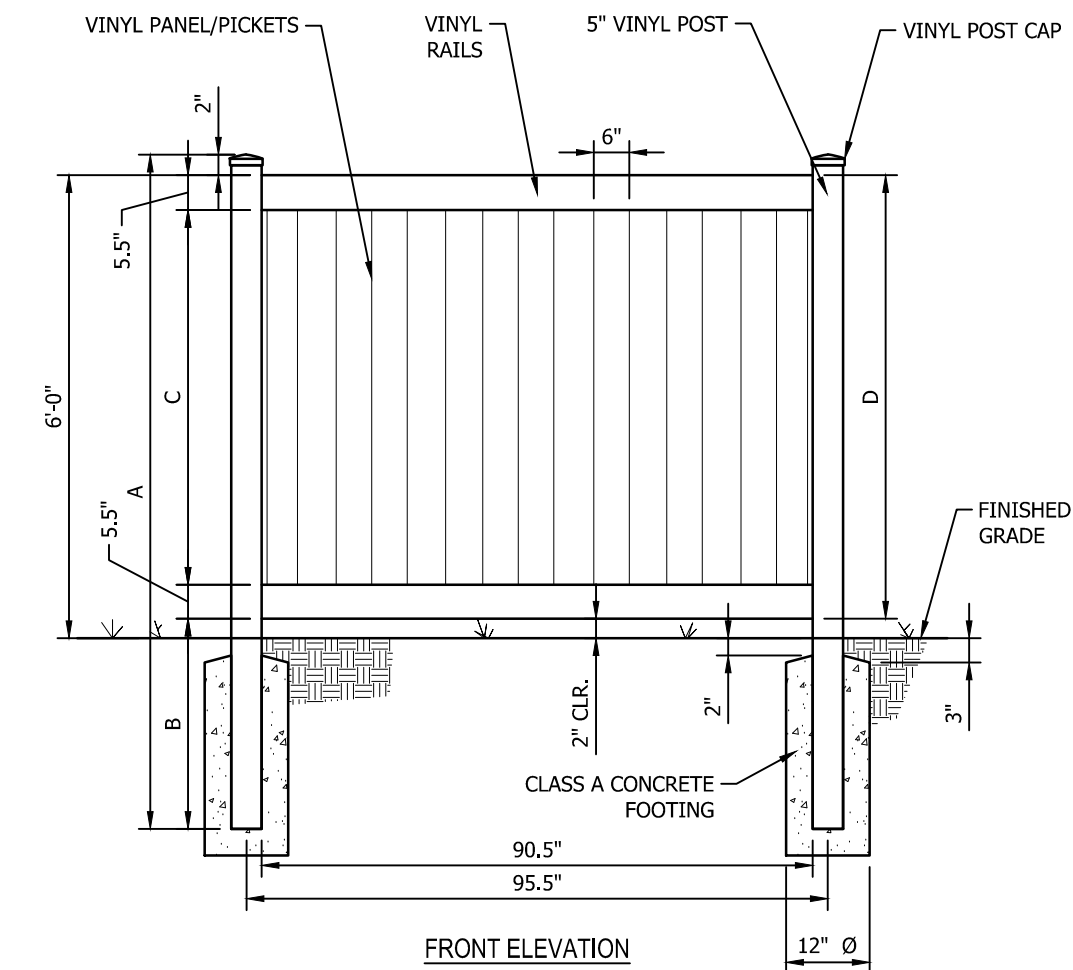


SOLID VINYL FENCE GATE (AT DUMPSTER AND PUMP STATION)
NOT TO SCALE

- NOTES
- PROVIDE MATERIALS AND CONSTRUCT AS SPECIFIED IN PUBLICATION 408, SECTIONS 350, 413, 630, 676 AND 699.
 - PROVIDE EXPANSION JOINT MATERIAL 3/4" THICK WHERE CURB RAMP ADJOINS ANY RIGID PAVEMENT, SIDEWALK OR STRUCTURE WITH THE TOP OF JOINT FILLER FLUSH WITH ADJACENT CONCRETE SURFACE.
 - CONSTRUCT CURB RAMPS WITH A MINIMUM 4'-0" X 4'-0" CLEAR SPACE BEYOND THE CURB FACE, WITHIN THE WIDTH OF THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE. SEE SHEET 7 FOR CROSSWALK DETAILS.
 - SEAL JOINTS WITH AN APPROVED SEALING MATERIAL.
 - PROVIDE SLIP RESISTANT TEXTURE ON CURB RAMP BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP. EXTEND TEXTURE THE FULL WIDTH AND LENGTH OF THE CURB RAMP INCLUDING SIDE FLARES.
 - MODIFY CONSTRUCTION DETAILS TO ADAPT DIMENSIONS TO NEW OR EXISTING CURB HEIGHTS WHERE THE CURB IS LESS THAN THE STANDARD 8" HEIGHT.
 - CURB RAMP AND SIDE FLARE LENGTHS ARE VARIABLE AND BASED ON CURB HEIGHT AND THE SIDEWALK SLOPE.
 - TO AVOID CHASING GRADE INDEFINITELY WHEN TRAVERSING THE HEIGHT OF CURB, RAMP LENGTH NOT TO EXCEED 15'-0". ADJUST RAMP SLOPE AS NEEDED TO PROVIDE ACCESS TO THE MAXIMUM EXTENT FEASIBLE.
 - NON-WALK AREA IS AN OBSTRUCTED OR GRASS/NO-PAVED AREA ADJACENT TO THE PEDESTRIAN ACCESS ROUTE THAT IS NOT USED BY THE PEDESTRIAN FOR ACCESS.
 - CONSTRUCT CURB RAMPS WITH A MINIMUM 4'-0" X 4'-0" CLEAR SPACE BEYOND THE CURB FACE, WITHIN THE WIDTH OF THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE. SEE SHEET 7 FOR CROSSWALK DETAILS.
 - THE DETAILS DEPICT PEDESTRIAN PUSHBUTTON POLES TO ILLUSTRATE THE RECOMMENDED PLACEMENT OF PEDESTRIAN PUSHBUTTONS. FOR ALTERNATE PROJECTS, PROVIDE ACCESS TO EXISTING PEDESTRIAN PUSHBUTTONS TO THE MAXIMUM EXTENT FEASIBLE. INSTALL PEDESTRIAN PUSHBUTTON STUB POLES, WHERE APPLICABLE, SO AS NOT TO CREATE PEDESTRIAN OBSTRUCTIONS.
 - SEE TC-8803 FOR ADDITIONAL PEDESTRIAN PUSHBUTTON DETAILS NOT SHOWN.
 - ALIGN DETECTABLE WARNING SURFACE TRUNCATED DOMES ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF THE RAMP, PERPENDICULAR TO CURB. SEE SHEET 8 FOR INSTALLATION DETAILS ALONG CURVED SURFACES.
 - PROVIDE DETECTABLE WARNING SURFACES (DWS) 24" MINIMUM IN THE DIRECTION OF PEDESTRIAN TRAVEL ACROSS FULL WIDTH OF RAMP AT THE ROADWAY NEAR STREET EDGE. PROVIDE ONE THAT CONTRAST VISUALLY WITH ADJACENT WALKWAY SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT FOR THE FULL WIDTH OF RAMP.
 - FOR NEW CONSTRUCTION, DO NOT EXCEED 2.00% CROSS SLOPE ON THE CURB RAMP OR PEDESTRIAN ACCESS ROUTE.
 - FOR NEW CONSTRUCTION AND ALTERATIONS, CONSTRUCT CURB RAMP AND FLARE SLOPES WITH THE FLATTEST SLOPE POSSIBLE. THE SLOPES INDICATED IN THE DETAILS SHOW THE MAX SLOPE ALLOWABLE. SLOPES THAT EXCEED THOSE SHOWN IN THE DETAILS, OR CONTRACT DOCUMENTS OR LITIGABLE, WILL NOT BE ACCEPTED AND WILL BE RECONSTRUCTED.
 - CONSTRUCT SIDEWALKS AT A LONGITUDINAL SLOPE NOT TO EXCEED 5.00% FOR ROADWAY PROFILE SLOPES THAT EXCEED 5.00%, CONSTRUCT PARALLEL SIDEWALKS ADJACENT TO ROADWAY AT A LONGITUDINAL SLOPE NOT TO EXCEED ROADWAY PROFILE SLOPE.
 - THE CHANGE IN GRADE AT THE BOTTOM OF THE CURB RAMP AND ADJOINING ROAD SURFACE IS NOT TO EXCEED 5.00% ALGEBRAIC DIFFERENCE OF THE COUNTER SLOPE OF THE CUTTER OR ROAD AT THE FOOT OF A CURB RAMP. TURNING SPACE OR BLENDED TRANSITION IS NOT TO EXCEED 5.00%. SEE SHEET 8 FOR DETAILS.
 - THE CONSTRUCTION STANDARDS DEPICTED ARE MOST APPROPRIATE FOR NEW CONSTRUCTION. ALL CONSTRUCTION MUST MEET THE STANDARDS CONTAINED HEREIN UNLESS OTHERWISE NOTED OR DIRECTED.
 - ALL SLOPES ARE MEASURED WITH RESPECT TO A LEVEL PLANE; THEREFORE, THE LENGTH OF RAMP IS NOT LENGTH OF 8'-0" FOR A 12% SLOPE.
 - SIDEWALK WIDTH MAY BE REDUCED TO 4'-0", WHEN PASSING AREAS 5'-0" X 5'-0" ARE PROVIDED EVERY 200'.
 - THE TRAVEL LANE IS DEFINED BY THE OUTSIDE EDGE OF THE WHITE PAVEMENT MARKING LINE. IF A WHITE PAVEMENT MARKING LINE DOES NOT EXIST, THE TRAVEL LANE IS DEFINED BY THE CONTRAST DOCUMENTS.
 - CONSTRUCT DEPRESSIONED CURB FOR CURB RAMPS. FLUSH TO ADJACENT ROADWAY. GRADE EDGE OF ROAD ELEVATIONS AT THE FLOW LINE TO ENSURE POSITIVE DRAINAGE AND PREVENT PONDING. FOR LEVEL TURNING SPACES, CONSTRUCT DEPRESSIONED CURB WITH A MINIMUM 1/4" DEPRESSION. FOR TURNING SPACES, CONSTRUCT DEPRESSIONED CURB WITH A MINIMUM 1/4" DEPRESSION. REMOVE EXCESS JOINT SEALER AND COVER THE SEALED AREA WITH A LIGHT APPLICATION OF ROAD AND SAND.
 - CURB WALLS ARE PERMITTED WHEN ADJACENT TO NON-WALK AREAS OR ELEVATION DIFFERENCES CANNOT BE ACCOMMODATED BY FLARES OR GRADING. GRASS AREAS OR OTHER NON-WALK AREAS 5' X 5' OR FLATTER, DO NOT INSTALL CURB WALLS THAT INTERSECT THE PEDESTRIAN PATH.
 - CONSTRUCT TOP OF PLAIN CEMENT CONCRETE DEPRESSIONED CURB TO BE FLUSH WITH ADJACENT SURFACES.
 - FOR CURB RAMPS THAT LEAD TO A SINGLE CROSSWALK, THE RAMP (EXCLUDING FLARES) TO BE FULLY INSIDE OF MARKED CROSSWALK LINES. SEE SHEET 7 FOR DETAILS.
 - A 4'-0" MAXIMUM DIGITAL DISPLAY LEVEL WILL BE USED TO VERIFY THE SLOPES OF CURB RAMPS AND SIDEWALKS.
 - INSTALL DUMMY JOINTS WHERE RAMPS, TURNING SPACES, FLARES, AND SIDEWALKS ABUT.
 - CONSTRUCT DEPRESSIONED CURB SLOPE TO MATCH ROADWAY PROFILE AND HAVE A FLUSH CONNECTION. TRANSITION 1'-0" CROSS SLOPE RATE OF CHANGE WHEN TRANSITIONING TO ROADWAY PROFILE.
 - DO NOT SCORE OR MAKE GROOVES ON SLOPED SURFACES. LINES SHOWN ON DETAILS ARE FOR ILLUSTRATION ONLY. SEE NOTE 5.
 - THE DEPRESSIONED CURB MAY BE PLACED MONOLITHICALLY WITH CURB RAMP, SIDE FLARES, OR BOTH. DO NOT PLACE DEPRESSIONED CURB MONOLITHICALLY WITH OTHER CEMENT CONCRETE SIDEWALK.

- 1) SIDE FLARES 10.00% MAX SLOPE.
- 2) IF THE TURNING SPACE IS INDICATED TO BE LESS THAN 4'-0", CONSTRUCT SIDE FLARES 8.33% MAX SLOPE.
- 3) OPTIONAL ROLLED CONCRETE SURFACE OR REGRADE SLOPE CAN BE USED TO MEET THE ADJACENT SURFACES IN LIEU OF A RETURN CURB CHEEK WALL.
- 4) 8.33% MAX RAMP SLOPE, SEE NOTE 8 SHEET 1.
- 8) CURB RAMPS REQUIRE A TURNING SPACE WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.

CURB RAMP NOTES
N.T.S.



A	B	C	D
INCHES	INCHES	INCHES	INCHES
108	34	59	72

- NOTES:
- ALL ILLUSIONS VINYL FENCES ARE ASTM F964-05 COMPLIANT.
 - AVAILABLE IN GRAND ILLUSIONS COLOR SPECTRUM (35 COLORS) AND GRAND ILLUSIONS VINYL WOODBOND (5 AUTHENTIC WOODGRAINS), CHOSEN BY OWNER.
 - INCLUDES METAL REINFORCEMENT BOTTOM RAIL.
 - PROVIDE DBL-LEAF MATCHING GATE WITH LATCH.

V300-4 ILLUSIONS FENCE PRODUCT AS MANUFACTURED BY: ILLUSIONS VINYL FENCE MEDFORD, NY 11763 WWW.ILLUSIONSFENCE.COM TOLL FREE: 1-800-339-3362

POST CAP MODEL: FLAT - V55FO POST OPTIONS: 5' X 5' H.D. .250 WALL

(SOLID TONGUE AND GROOVE)
6" H. VINYL PRIVACY FENCE
NOT TO SCALE

SOLID VINYL FENCE (AT DUMPSTER AND PUMP STATION)
NOT TO SCALE

R. J. FISHER & ASSOCIATES, INC.
SITE PLANNING & CIVIL ENGINEERING & LAND SURVEYS

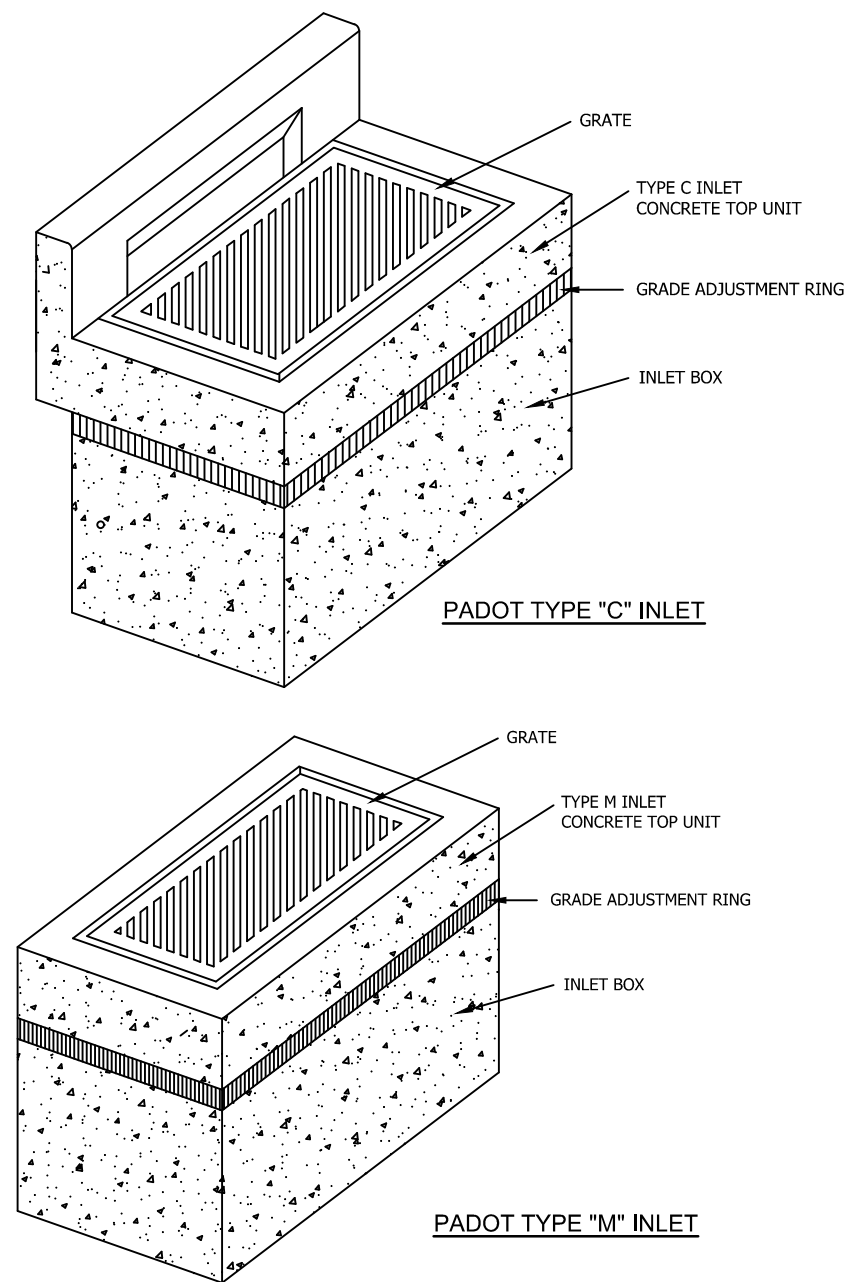
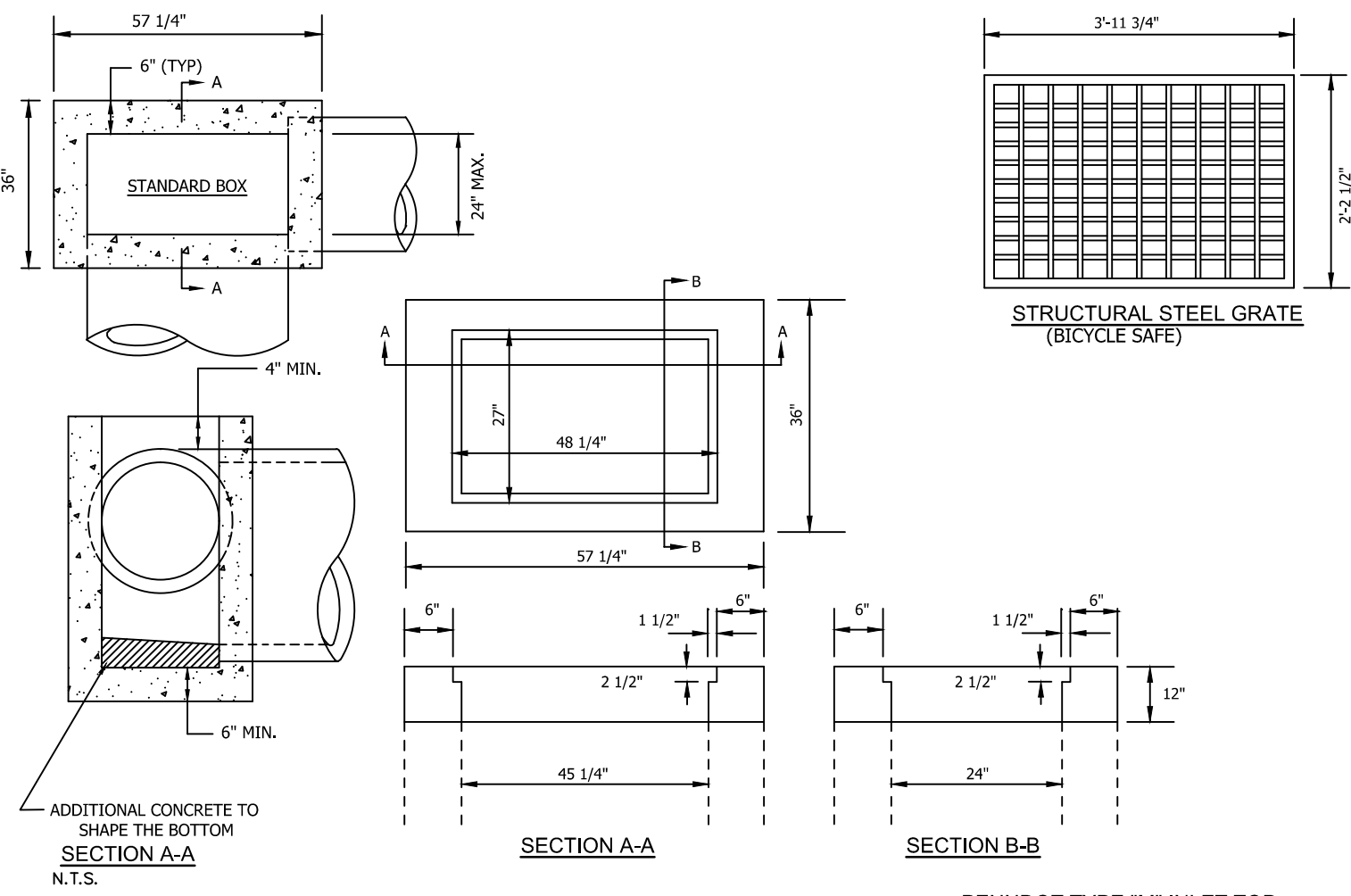


SITE DETAILS
FOR
2509 MILL ROAD TOWNHOMES
LOCATED IN
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

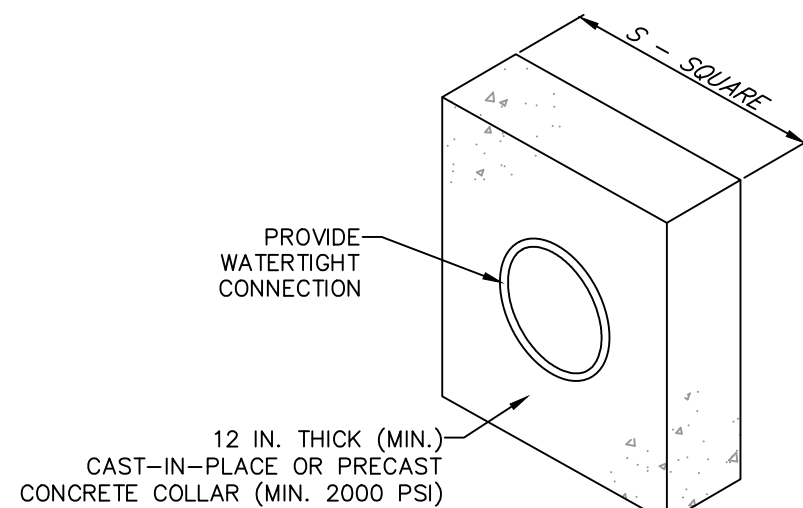
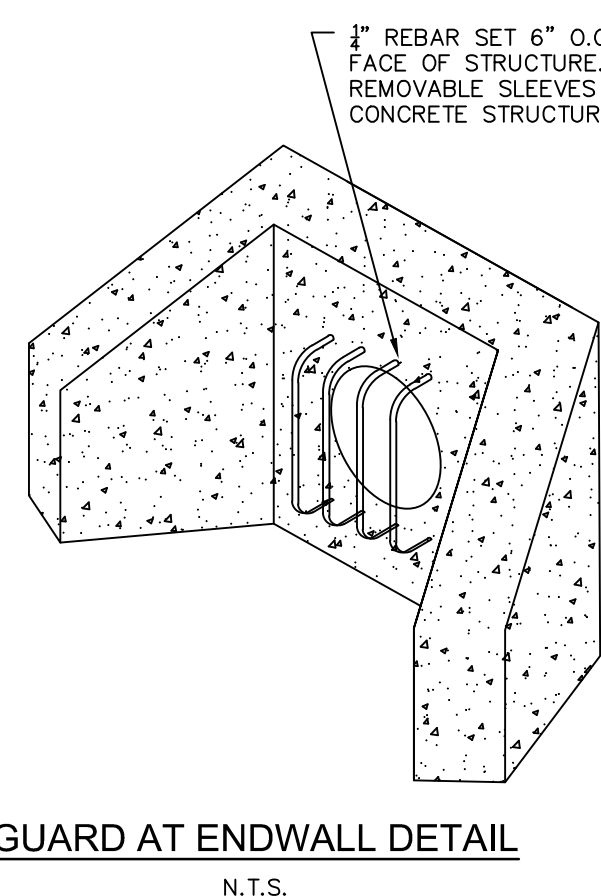
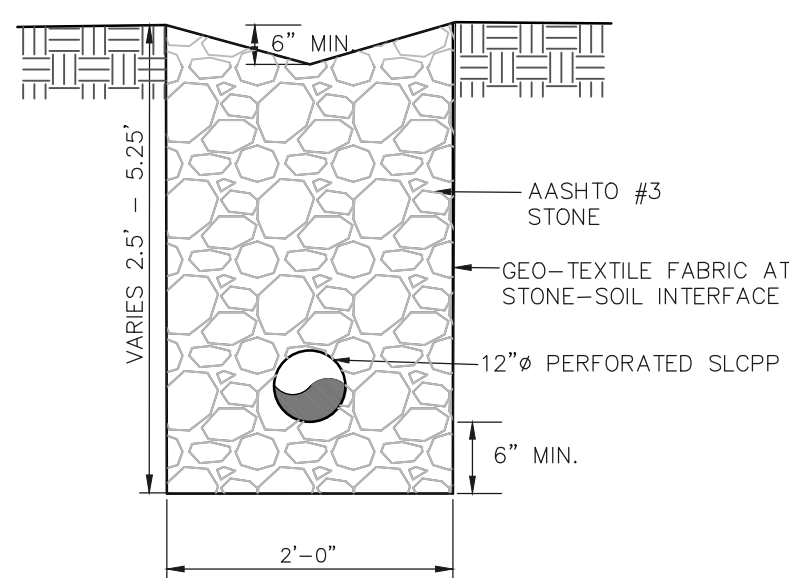
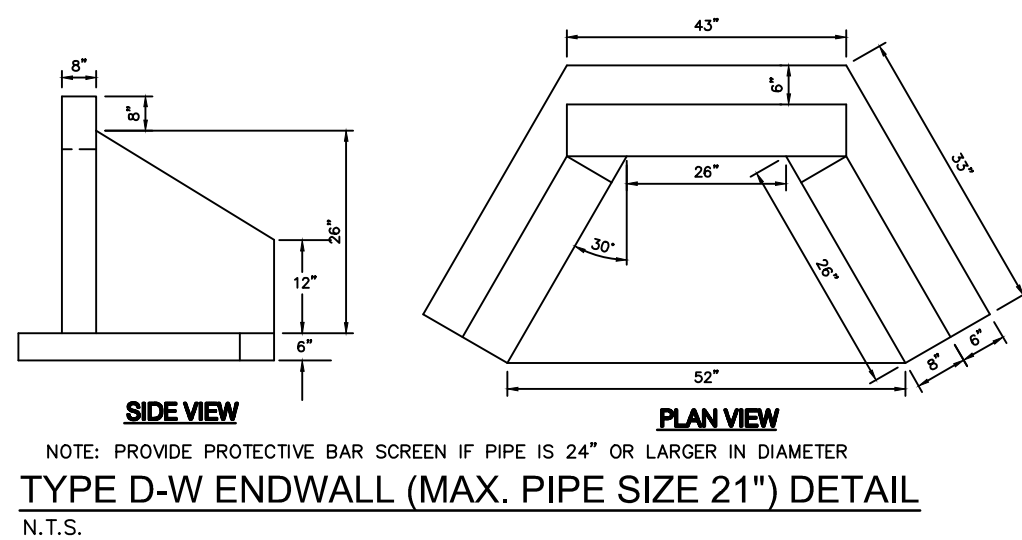
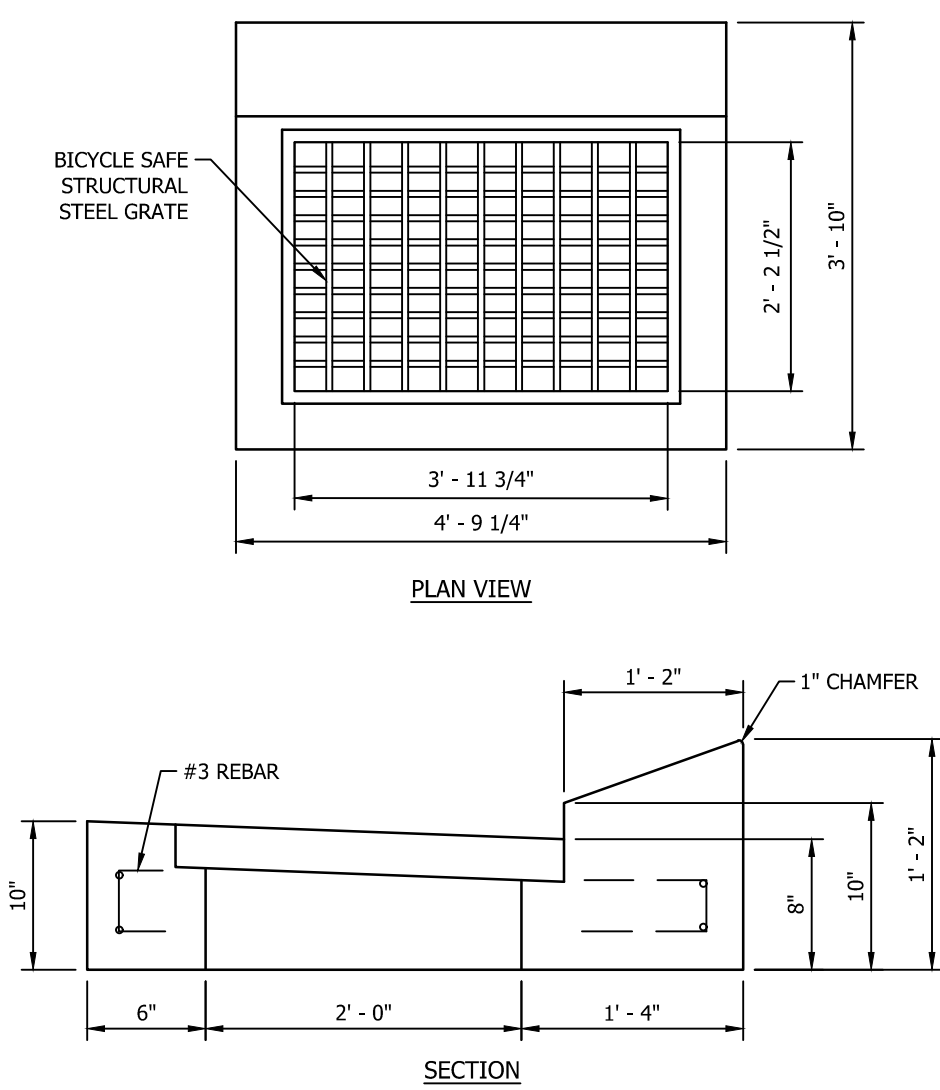
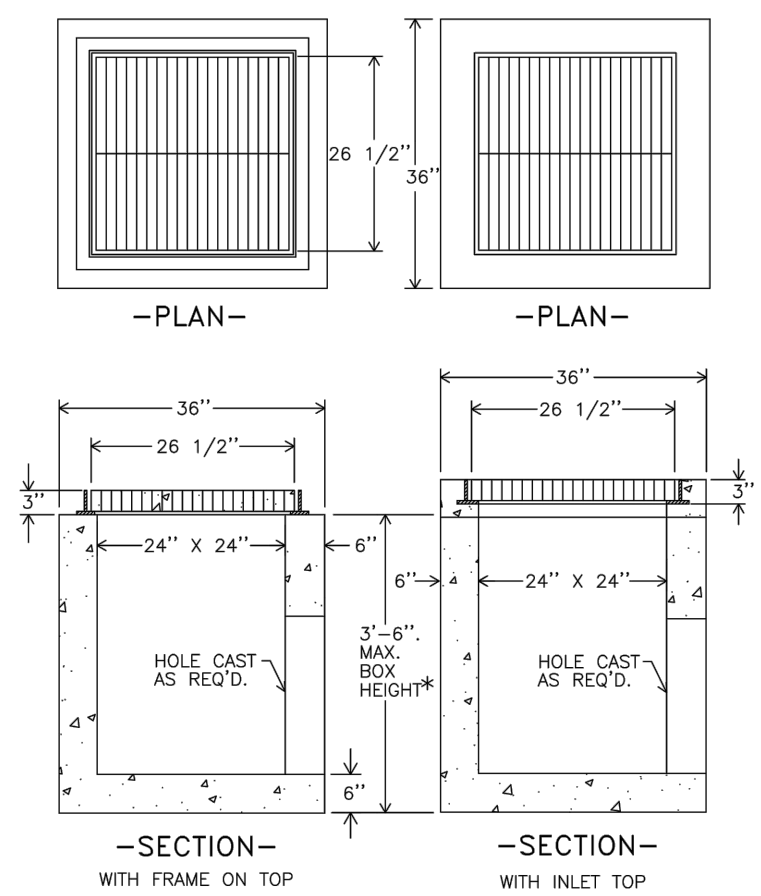
DRAWING ID:	221013-3-LD
PROJECT:	221013
DATE:	04/25/2022
SHEET:	12 OF 21

NO.	REVISION	DATE
1	TWP PC REPORT #3	12/14/2022
2	TREE CHANGE	12/20/2022
3	TWP BOS REPORT	06/29/2023
4	TWP FIRE MARSHAL & STAFF MTG	08/14/2023
5	BC RADII, NO OFF ESM, VERT. CURB	11/28/2023

COPYRIGHT © 2021 BY R.J. FISHER & ASSOCIATES, INC.

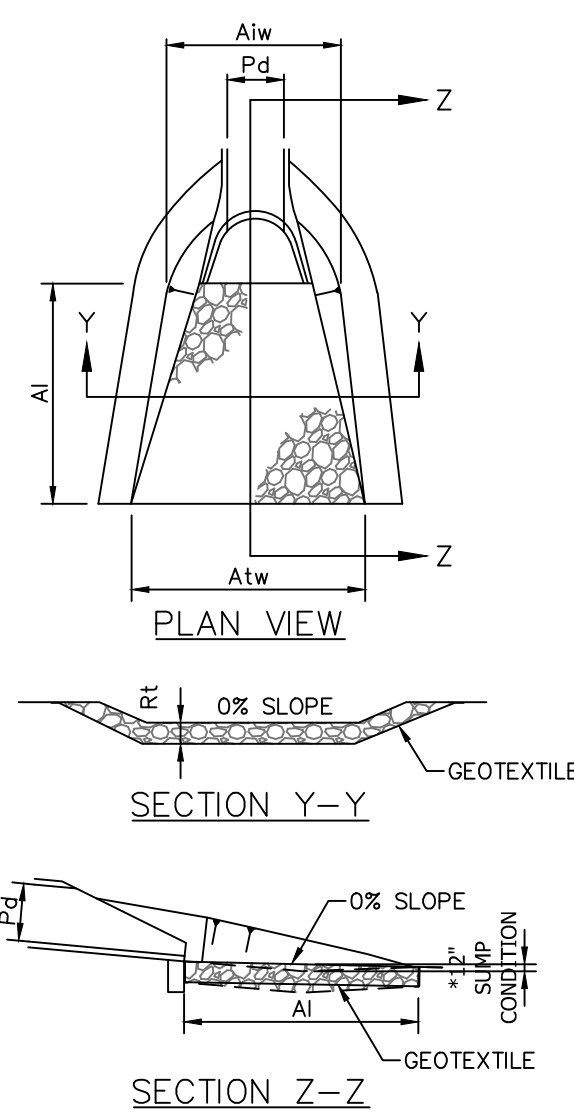


MONARCH PRODUCTS COMPANY, INC.
YORK HAVEN, PA.



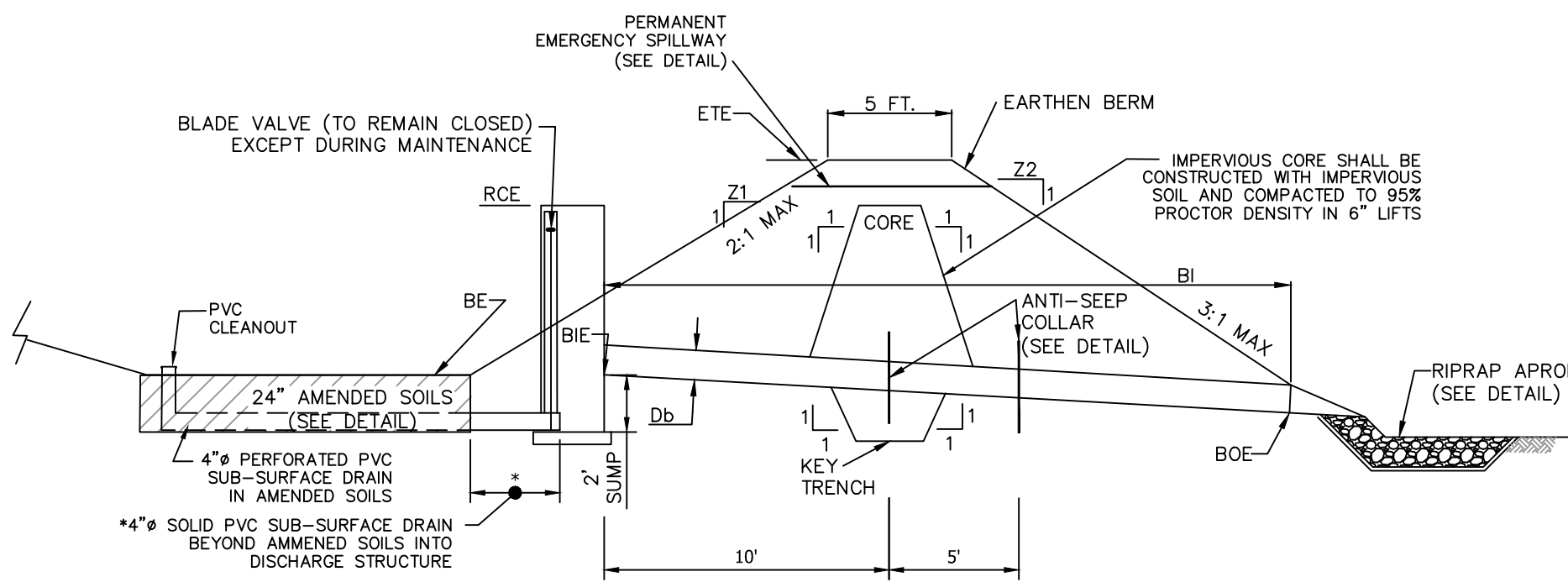
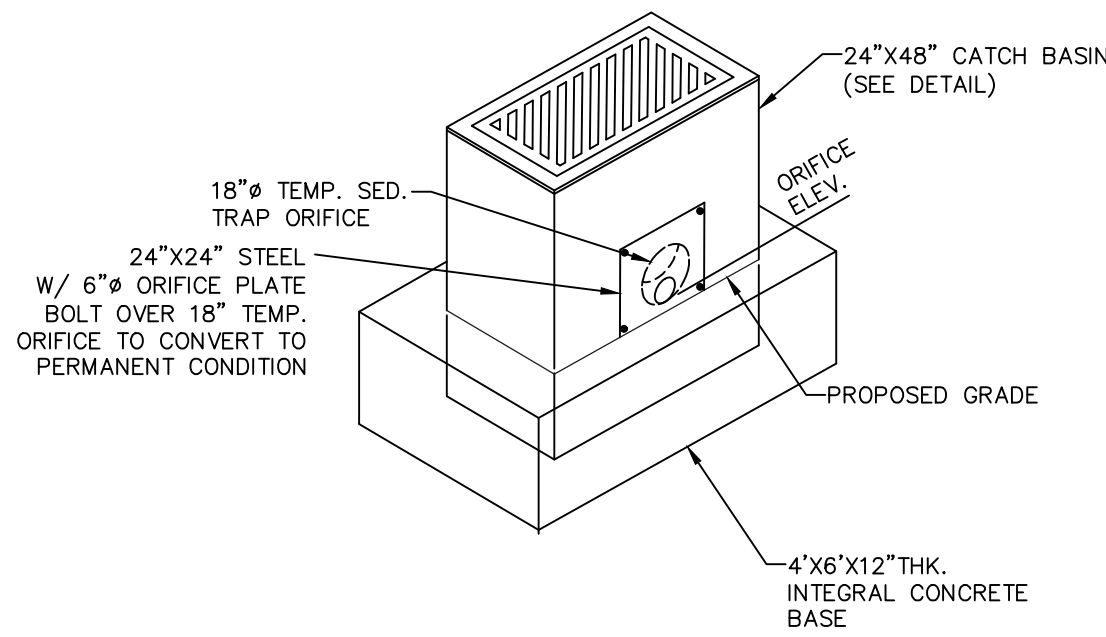
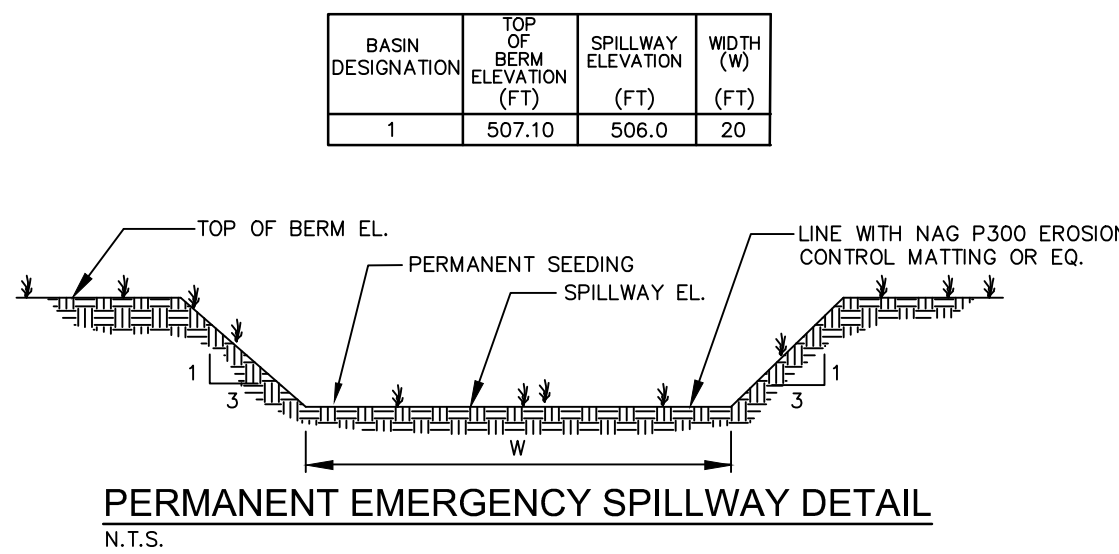
BASIN OR TRAP NO.	PIPE SIZE (IN)	S (IN)	NO. OF COLLARS	RISER TO COLLAR (FT)	COLLAR SPACING (FT)
1	18	48	2	10'	5'

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



OUTLET NO.	PIPE DIAMETER	RIP-RAP SIZE	RIP RAP THICKNESS	APRON LENGTH	INITIAL APRON WIDTH	TERMINAL APRON WIDTH
E-1	12"	R-3	9"	8'	3'	11.75'
E-3	15"	R-3	9"	6'	3.75'	10'
E-5	18"	R-6	36"	20"	4.5'	24.5"

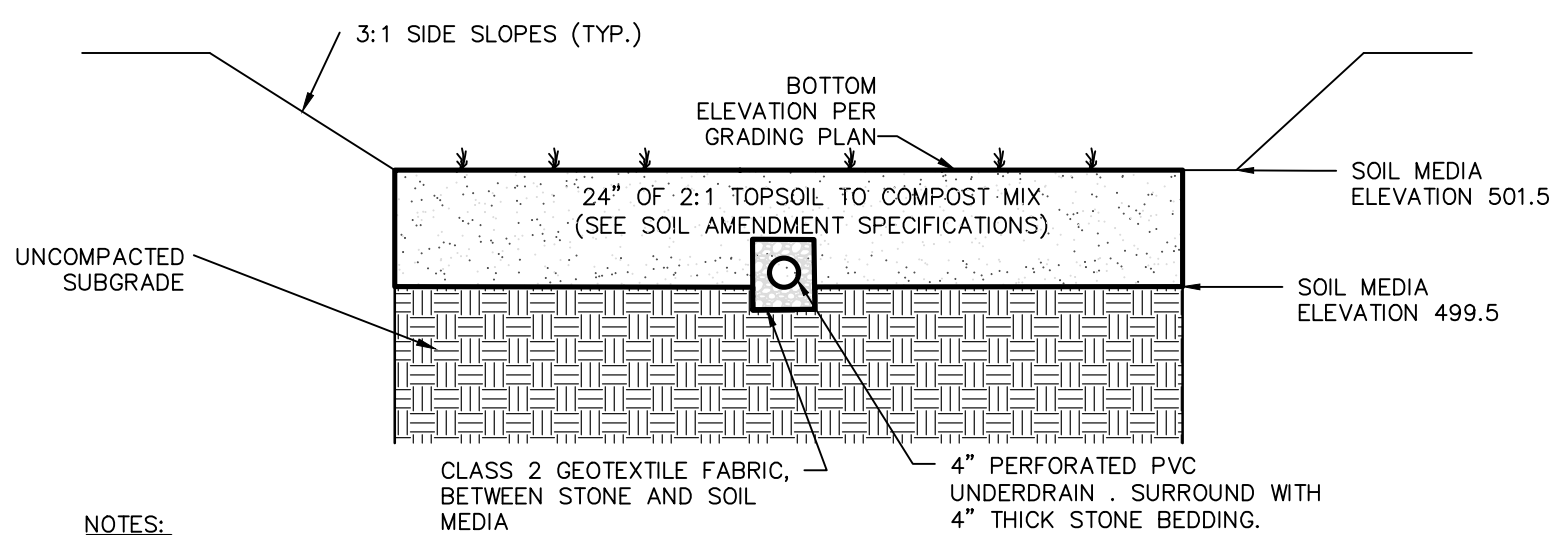
NOTES:
ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.
ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.
*IF WIDTH & LENGTH DIMENSION CANNOT BE ATTAINED ON-SITE, INSTEAD CONSTRUCT AS SHOWN ON PLAN AND SUMP THE CENTER OF THE APRON DOWN 12" TO DISSIPATE FLOW ENERGY.



BASIN/ BMP NO.	RISER			BARREL					
	TOP ELEV RCE (FT)	ORIFICE		U. D. ELEV UDE (FT)	MAT'L	Dia Db (In)	INLET ELEV BIE (FT)	LENGTH BI (FT)	OUTLET ELEV BOE (FT)
		SIZE (IN)	ELEV (FT)						
1	505.83	16"	503.5	---	RCP	18	501.5	30	501.0

BASIN NO.	Z1 (FT)	Z2 (FT)	EMBANKMENT				BOTTOM ELEV BE (FT)
			TOP ELEV ETE (FT)	TOP WIDTH Etw (FT)	KEY TRENCH DEPTH (FT)	KEY TRENCH WIDTH (FT)	
1	2-3	2-3	507.10	5.0	3.0	5.0	501.5

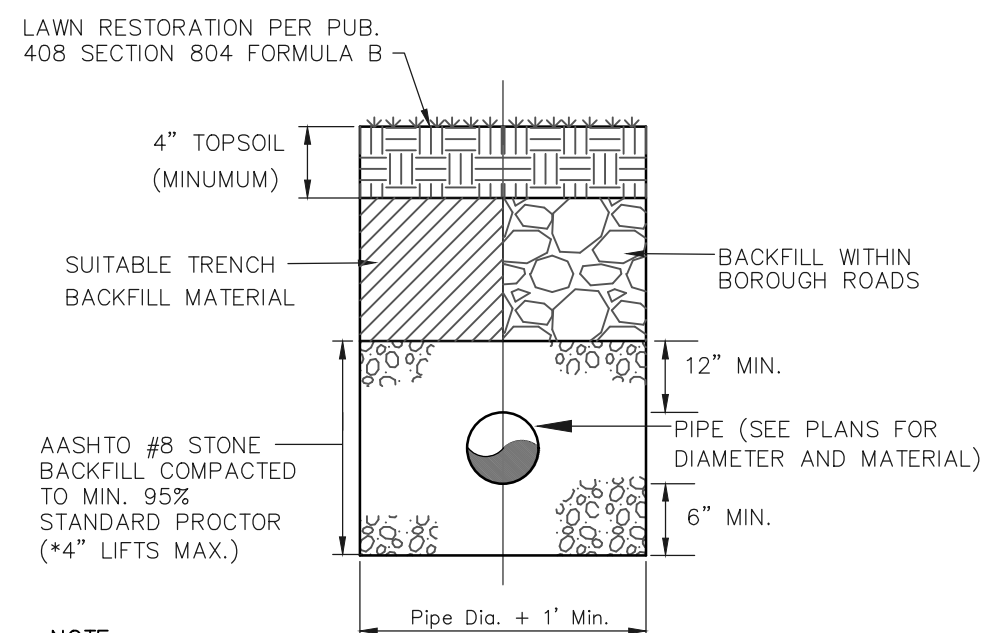
NOTES:
1. PROTECT INFILTRATION BASIN AREA FROM COMPACTION PRIOR TO INSTALLATION.
2. IF POSSIBLE, INSTALL INFILTRATION BASIN DURING LATER PHASES OF SITE CONSTRUCTION TO PREVENT SEDIMENTATION AND/OR DAMAGE FROM CONSTRUCTION ACTIVITY. AFTER INSTALLATION, PREVENT SEDIMENT-LADEN WATER FROM ENTERING INLETS AND PIPES.
3. INSTALL AND MAINTAIN PROPER EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION.
4. IF NECESSARY, EXCAVATE INFILTRATION BASIN BOTTOM TO AN UNCOMPACTED SUBGRADE FREE FROM ROCKS AND DEBRIS. DO NOT COMPACT SUBGRADE.
5. INSTALL OUTLET CONTROL STRUCTURES. OUTLET STRUCTURES SHOULD PROVIDE MEANS TO MODIFY THE ORIFICES THROUGH THE USE OF REMOVABLE PLATES UNDER THE DIRECTION OF THE TOWNSHIP.
6. SEED, INSTALL LIVE SHRUB STAKES AND STABILIZE WITH TOPSOIL. SEED WITH SPECIALTY SEEDING PER NATIVE SLOPE MIX AND RETENTION BASIN MIX HEREON. INSTALL LIVE STAKES PER SCHEDULE ON SHEET 6.
7. DO NOT REMOVE INLET PROTECTION OR OTHER EROSION AND SEDIMENT CONTROL MEASURES UNTIL SITE IS FULLY STABILIZED.
8. PLAT IS TO BE IN PLACE DURING CONSTRUCTION AND TO BE REMOVED FOR THE PERMANENT CONDITION



NOTES:
1. EVACUATE FOR SOIL MEDIA TO PROPOSED INVERT DEPTH AND SCARIFY THE EXISTING SOIL SURFACES. DO NOT COMPACT IN-SITU SOILS.
2. BACKFILL INFILTRATION AREA / BASIN WITH AMENDED SOIL AS SHOWN ON THE PLANS AND SPECIFICATIONS. OVERFILLING IS RECOMMENDED TO ACCOUNT FOR SETTLEMENT. LIGHT HAND TAMPING IS ACCEPTABLE IF NECESSARY.
3. PRESOAK THE PLANTING SOIL PRIOR TO PLANTING VEGETATION TO AID IN SETTLEMENT.
4. COMPLETE THE FINAL GRADING TO ACHIEVE PROPOSED DESIGN ELEVATIONS, LEAVING SPACE FOR UPPER LAYER OF COMPOST, MULCH OR TOPSOIL AS SPECIFIED ON PLANS.
5. SEED WITH ERNMX-181 RETENTION BASIN FLOOR MIX. SEE SPECIALTY SEEDING SCHEDULE ON EROSION CONTROL DETAILS SHEET.
6. MULCH AND INSTALL EROSION PROTECTION AT SURFACE FLOW ENTRANCES WHERE NECESSARY.

SOIL AMENDMENT SPECIFICATIONS:

- SOIL AMENDMENT MEDIA MAY CONSIST OF COMPOST (CHOPPED STRAW, LEAVES, GRASS CLIPPINGS AD 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. WELL-BLENDED AND AGED.
- 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.



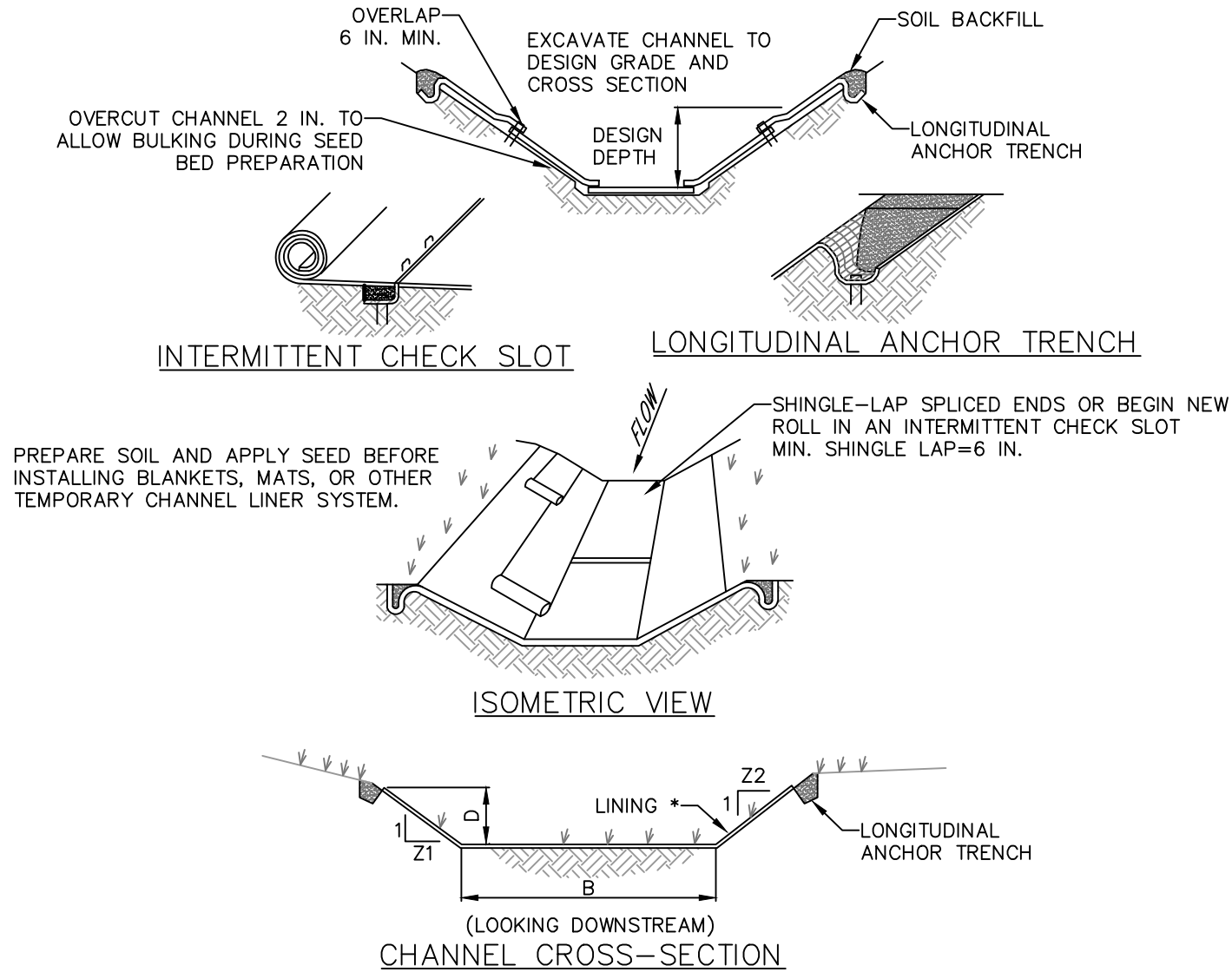
NOTES:
1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO PENN DOT PUBLICATION 408 AND ROAD CONSTRUCTION DRAWING RC-30, MOST RECENT AMENDMENT.
*2. BACKFILL MAY COMPACTED IN 8" LIFTS IF VIBRATORY EQUIPMENT IS USED.

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



SWM DETAILS
FOR
2509 MILL ROAD TOWNHOMES
LOCATED IN
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

DRAWING ID: 221013-3-LD
PROJECT: 221013
DATE: 04/25/2022
SHEET: 13 OF 21



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

CHANNEL NO.	AVG. SLOPE (%)	BOTTOM WIDTH B (FT)	DEPTH D (FT)	TOP WIDTH W (FT)	Z1 (FT)	Z2 (FT)	LINING *	COVER
Swale 1	1.82	2	1	8	3	3	NAG S7S	CLASS D VEG.
Swale 3	8.00	2	1	8	3	3	NAG S7S	CLASS D VEG.
Swale 4 (Min Slope)	3.63	2	1	8	3	3	NAG C125BN	CLASS D VEG.
Swale 4 (Max Slope)	8.91	2	1	8	3	3	NAG C125BN	CLASS D VEG.

* NOTE:
N.A.G. INDICATES NORTH AMERICAN GREEN PRODUCT, WITH PRODUCT #.

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.

STANDARD CONSTRUCTION DETAIL #6-1
VEGETATED CHANNEL

NOT TO SCALE

STORMWATER BMP OPERATION AND MAINTENANCE PLAN

OPERATION AND MAINTENANCE SCHEDULE

The storm water volume and quality control Best Management Practices (BMPs) constructed for this project will be maintained to function as designed, and shall implement the procedures described below. The owner of the lot on which facilities are located shall own and maintain the facilities as shown on the drawings.

Excess materials will be properly recycled or disposed of.

The approved facilities are to be permanent, and can only be removed or altered after approval by one or more of the following entities which may have jurisdiction: Upper Allen Township; and/or PA D.E.P. The tasks outlined herein shall be accomplished by the lot owner.

The following physical facilities shall be maintained to the original design and dimensions shown on the design plans approved by Upper Allen Township, until such time as an amended plan is approved by the Township:

- stormwater pipes;
- riprap aprons at pipe outlets;
- drain inlets, manholes and open pipe ends;
- stormwater infiltration basin
- drainage easements associated with all of the above.

For any structural 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 lot owner shall keep a record of any repaired or replaced facility, including costs, dates, materials removed, materials placed, and the contractor(s) information.

Swales

--Inspect annually at a minimum and after significant rain events of greater than 1" rainfall. Remove any accumulated sediment, debris and trash, promptly. Any scoured or bare earth should be re-stabilized with swale lining, or seeding or sod that is watered until established. Repair any torn or displaced matting.

Riprap Aprons Inspection and maintenance tasks--

--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.

Storm Pipes and Inlets Inspection and maintenance tasks--

--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 other debris. Check for any obvious structural deterioration.

--Examine swales for obstructions and erosion. Any scouring of earth 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.

--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 Man-made trash shall be disposed of properly in containers collected by a licensed commercial trash hauler.

--All impervious surfaces shall be maintained clean of oil, fuel or other toxic spills, in accordance with State, Federal or local regulations.

Drainage Easements Inspection and maintenance tasks--

--Inspect annually at a minimum.

--Notify the landowner if any obstructions or alteration of the ground surface interfere with the purpose and use of the easement, and request removal / correction of the problem.

--Examine any swales for obstructions and erosion. Any scouring of earth 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.

Stormwater Infiltration Basin

--Inspect annually at a minimum.

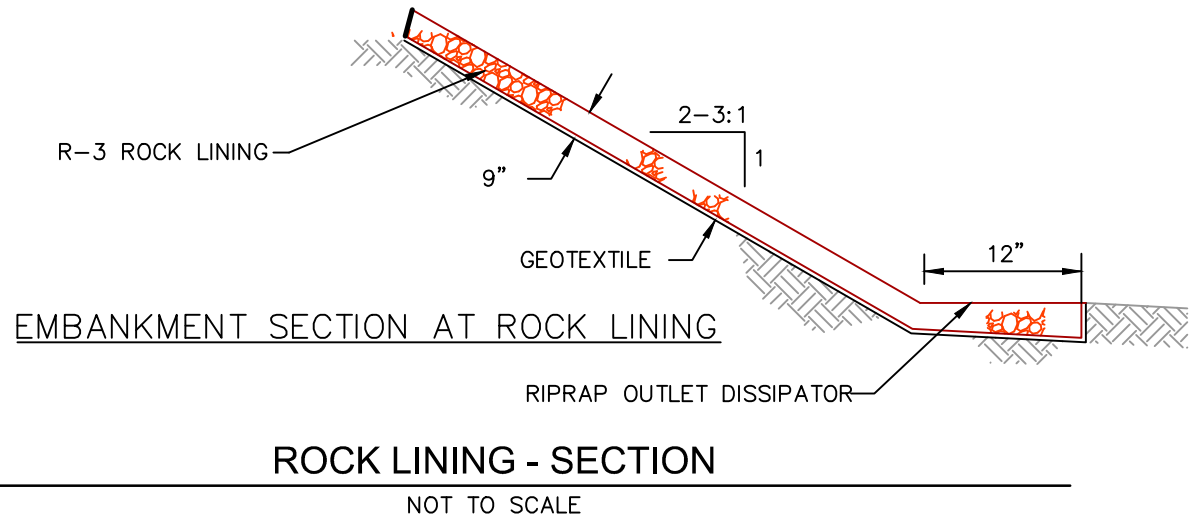
--The bottom of the stormwater infiltration basin can be maintained as maintained meadow, or natural brush succession, per the desires and budget of the lot owner. The basin berms shall be maintained as meadow, being mowed once per year in the fall. Removal of sediment / debris shall take place when the basin bottom has dried, if possible. Man-made trash shall be disposed of properly in containers collected by a licensed commercial trash hauler.

--Examine for and clean out the outlet structure and trash rack, of accumulated trash, grit and the like.

--Remove grit, sand, soil or organic matter if it accumulates to a depth of 3" or more, so that storage volume is maintained.

--Infiltration Basin. If standing water is present for greater than 72 hours after the last rainfall pump out the basin to perform the following remediation:

- Remove 10" below the proposed basin bottom, replace with a 2:1 soil to compost mix and till up to 20".
- If further problems persist contact Cumberland County Conservation District and/or Upper Allen for a suitable solution.



SWM DETAILS

FOR
2509 MILL ROAD TOWNHOMES
LOCATED IN
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA



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

DRAWING ID:
221013-3-LD

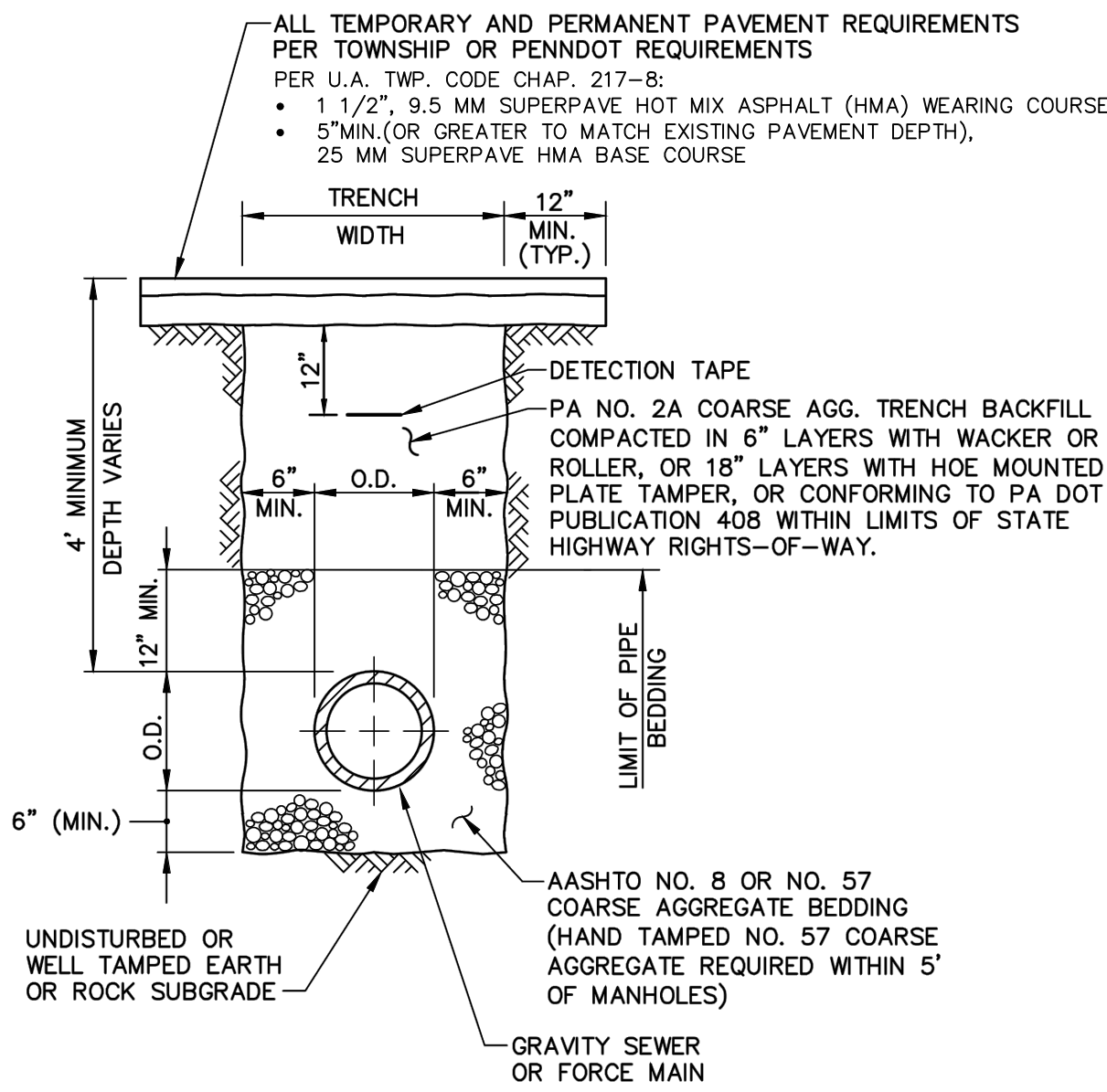
PROJECT: 221013

DATE: 04/25/2022

SHEET:
14 OF 21

NO.	REVISION	DATE
1	TWP PC REPORT #3	12/13/22
2	TREE CHANGE	12/14/2022
3	TWP BOS REPORT	06/23/2023
4	TWP FIRE MARSHALL & STAFF MTG	08/14/2023
5	BC RADIL NO OFF ESMI. VERT. CURB	11/28/23

COPYRIGHT © 2021 BY R.J. FISHER & ASSOCIATES, INC.

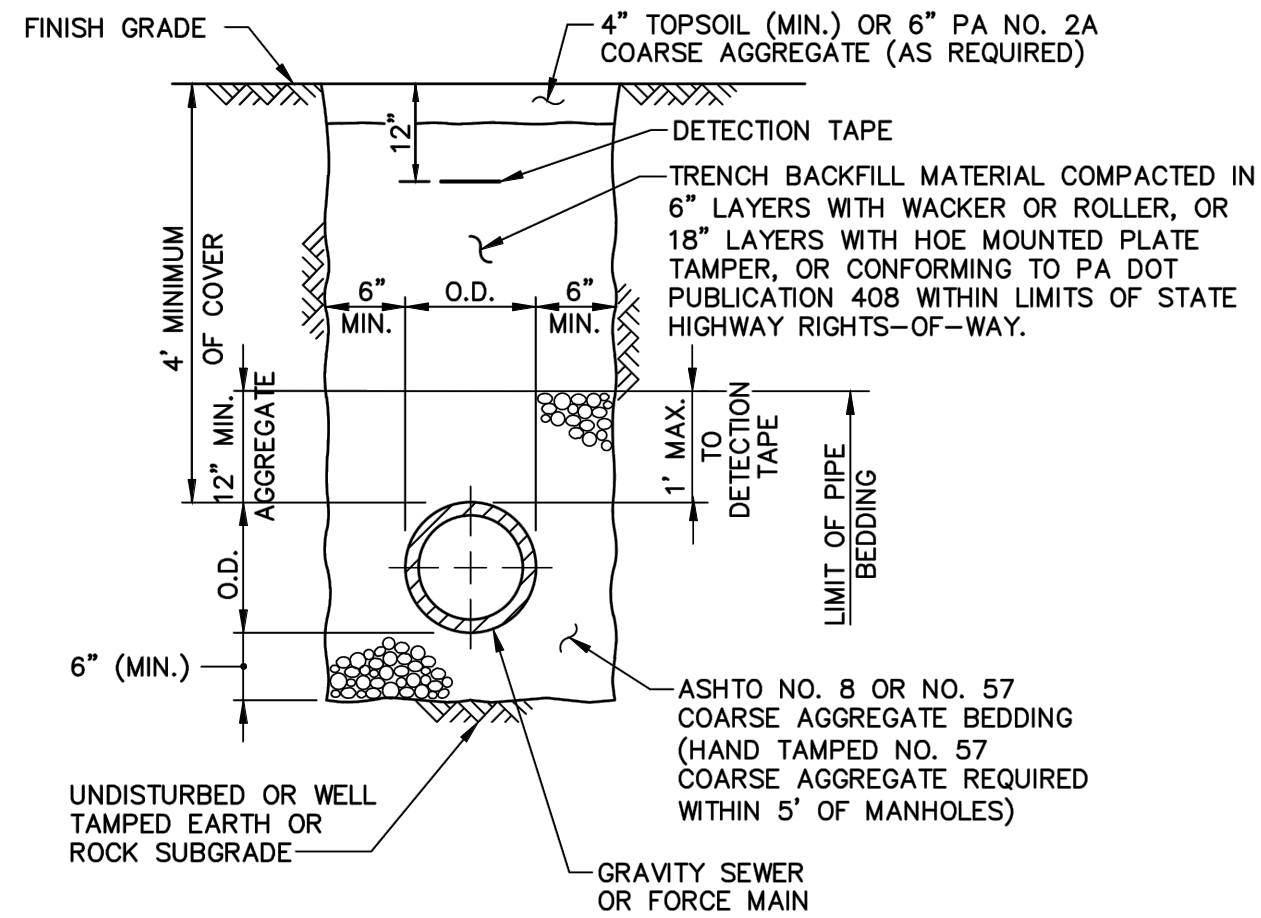


NOTE:

- BACKFILL AND COMPACTION REQUIREMENT APPLIES TO PAVED ROADWAYS AND SHOULDERS OF PROPOSED AND EXISTING STREETS (OTHER THAN STATE HIGHWAYS), PAVED DRIVEWAYS, AND SIDEWALKS.
- CONSTRUCTION REQUIREMENTS PER UPPER ALLEN TWP. CODE CHAPTER 217-8

STANDARD DETAILS TRENCH BACKFILL DETAIL IN PAVED AREAS UPPER ALLEN TOWNSHIP

DATE	REVISIONS
3/08	DWG. CREATED
12/13	DWG. UPDATED
1/17	NOTE REVISIONS
SCALE	DWG. NO.
NO SCALE	TR-1

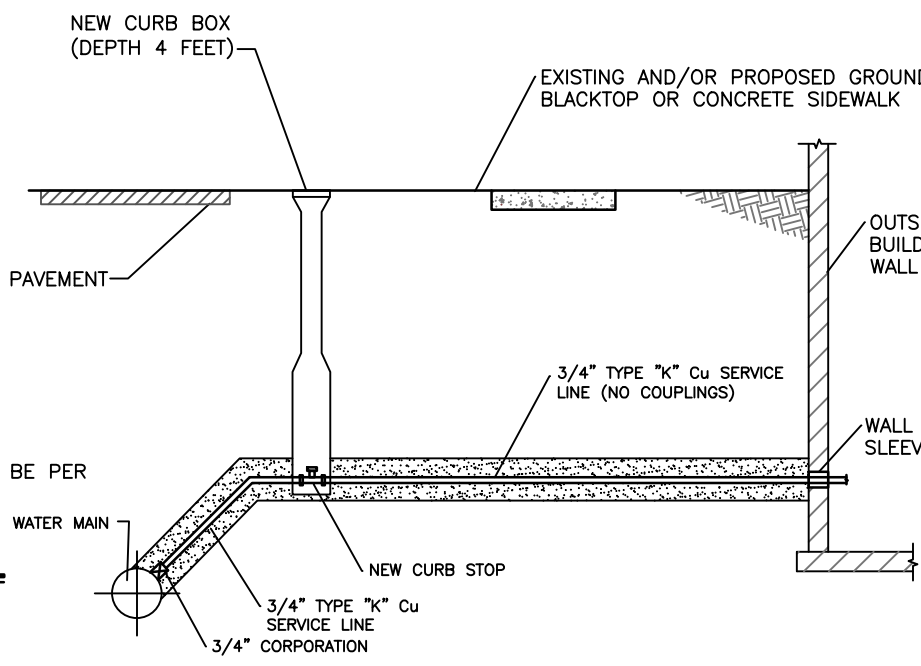


BACKFILLING REQUIREMENTS:

- UNPAVED AREAS OUTSIDE ROADWAYS - SUITABLE ON-SITE BACKFILL COMPACTED AS INDICATED ABOVE TO BOTTOM OF TOPSOIL. REPLACE TOPSOIL TO APPROXIMATE DEPTH OF EXISTING OR MIN. 4".
- UNPAVED AREAS WITHIN R/W LIMITS OF STATE HIGHWAYS - CONFORMING TO REQUIREMENTS OF PA DOT PUBLICATION 408.
- UNPAVED SHOULDERS OF PROPOSED AND EXISTING STREETS OTHER THAN STATE HIGHWAYS - AGGREGATE BACKFILL COMPACTED AS INDICATED ABOVE.
- STONE DRIVEWAYS AND PARKING AREAS - PA NO. 2A COARSE AGGREGATE BACKFILL COMPACTED AS INDICATED ABOVE.
- UNIMPROVED STREETS - AGGREGATE BACKFILL COMPACTED AS INDICATED ABOVE.

STANDARD DETAILS TRENCH BACKFILL DETAIL IN UNPAVED AREAS UPPER ALLEN TOWNSHIP

DATE	REVISIONS
3/08	DWG. CREATED
12/13	DWG. UPDATED
1/17	NOTE REVISIONS
SCALE	DWG. NO.
NO SCALE	TR-2

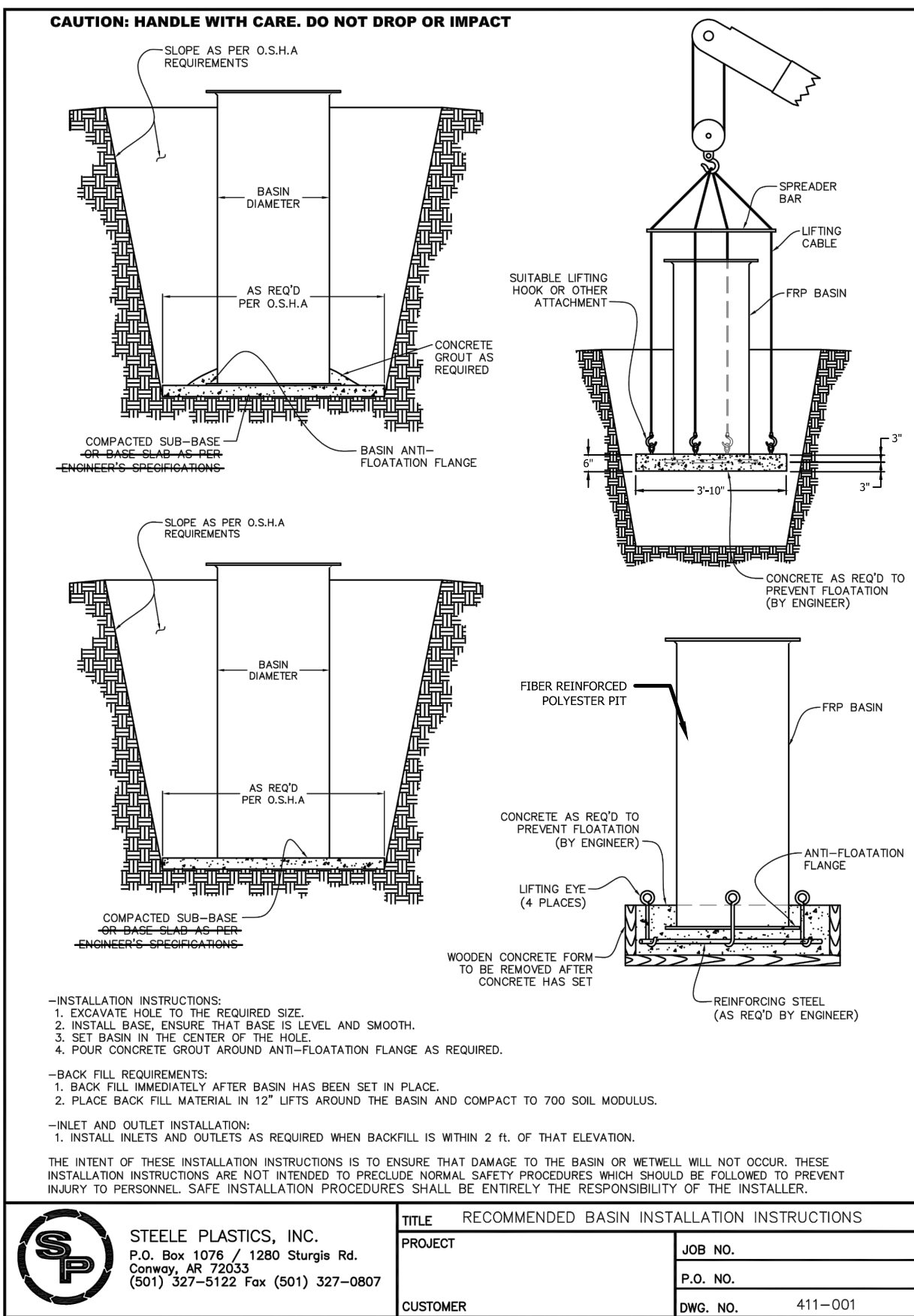


NOTES:

- DESIGN AND REQUIREMENTS SHALL BE PER THE WATER SUPPLY COMPANY.

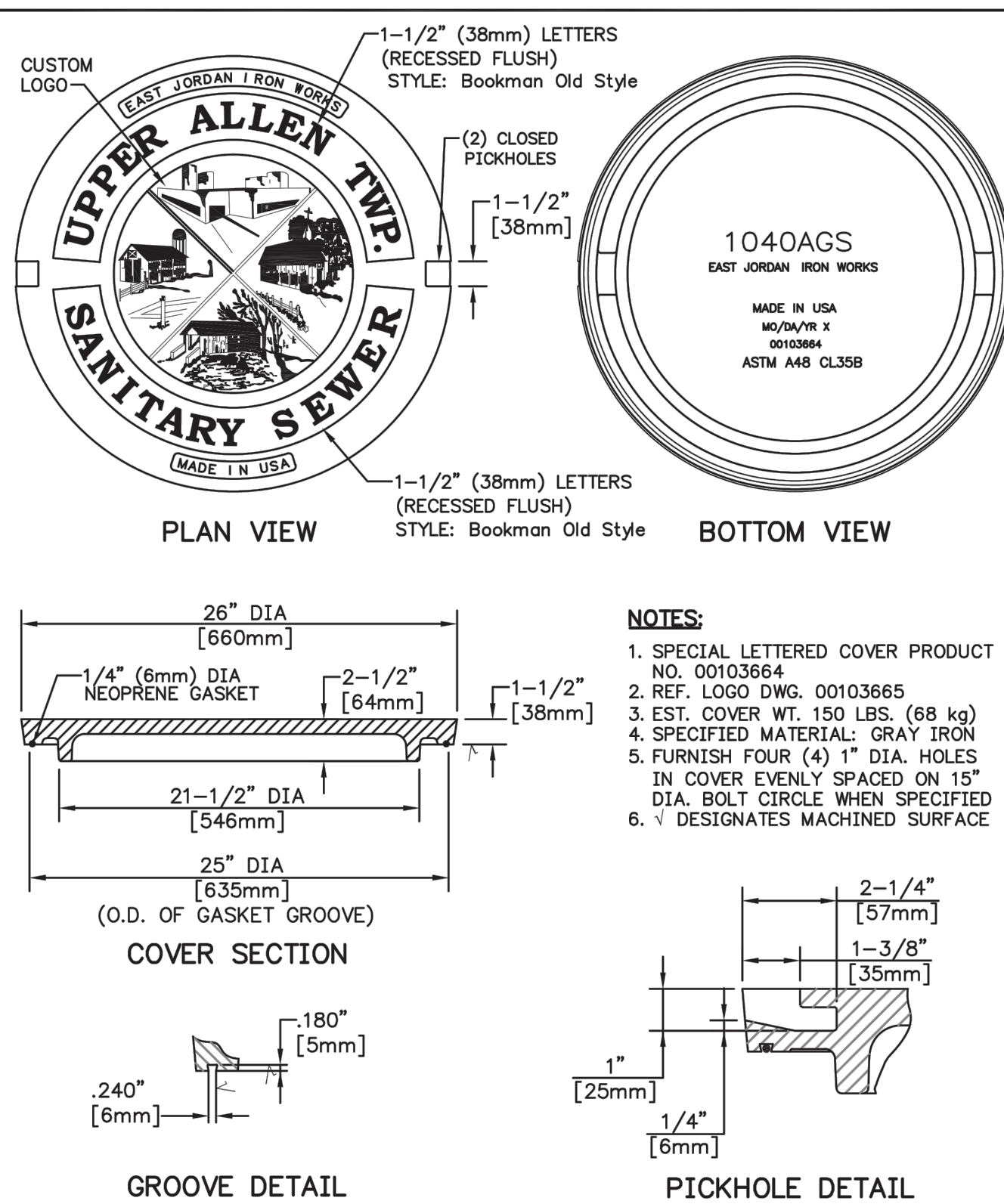
WATER SERVICE DETAIL

N.T.S.



STEEL PLASTICS, INC.
P.O. Box 1078 / 1880 Sprague Rd.
Conway, AR 72033
(501) 327-5122 Fax (501) 327-0807

TITLE	PROJECT	JOB NO.
RECOMMENDED BASIN INSTALLATION INSTRUCTIONS		
P.O. NO.	CUSTOMER	DWG. NO.
		411-001

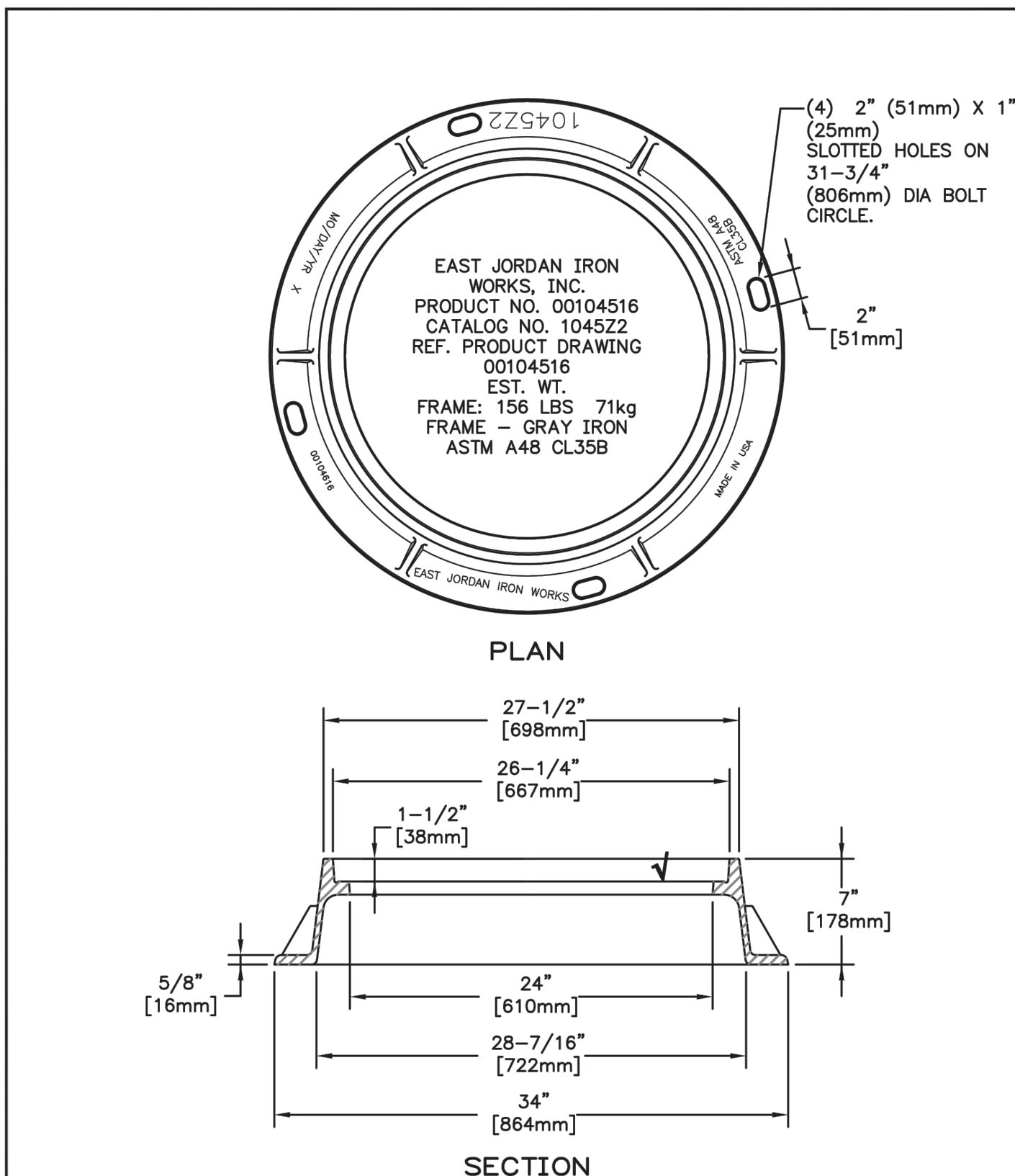


NOTES:

- SPECIAL LETTERED COVER PRODUCT NO. 00103664
- REF. LOGO DWG. 00103665
- EST. COVER WT. 150 LBS. (68 kg)
- SPECIFIED MATERIAL: GRAY IRON
- FURNISH FOUR (4) 1" DIA. HOLES IN COVER EVENLY SPACED ON 15" DIA. BOLT CIRCLE WHEN SPECIFIED
- ✓ DESIGNATES MACHINED SURFACE

STANDARD DETAILS HEAVY DUTY MANHOLE SELF-SEALING COVER UPPER ALLEN TOWNSHIP

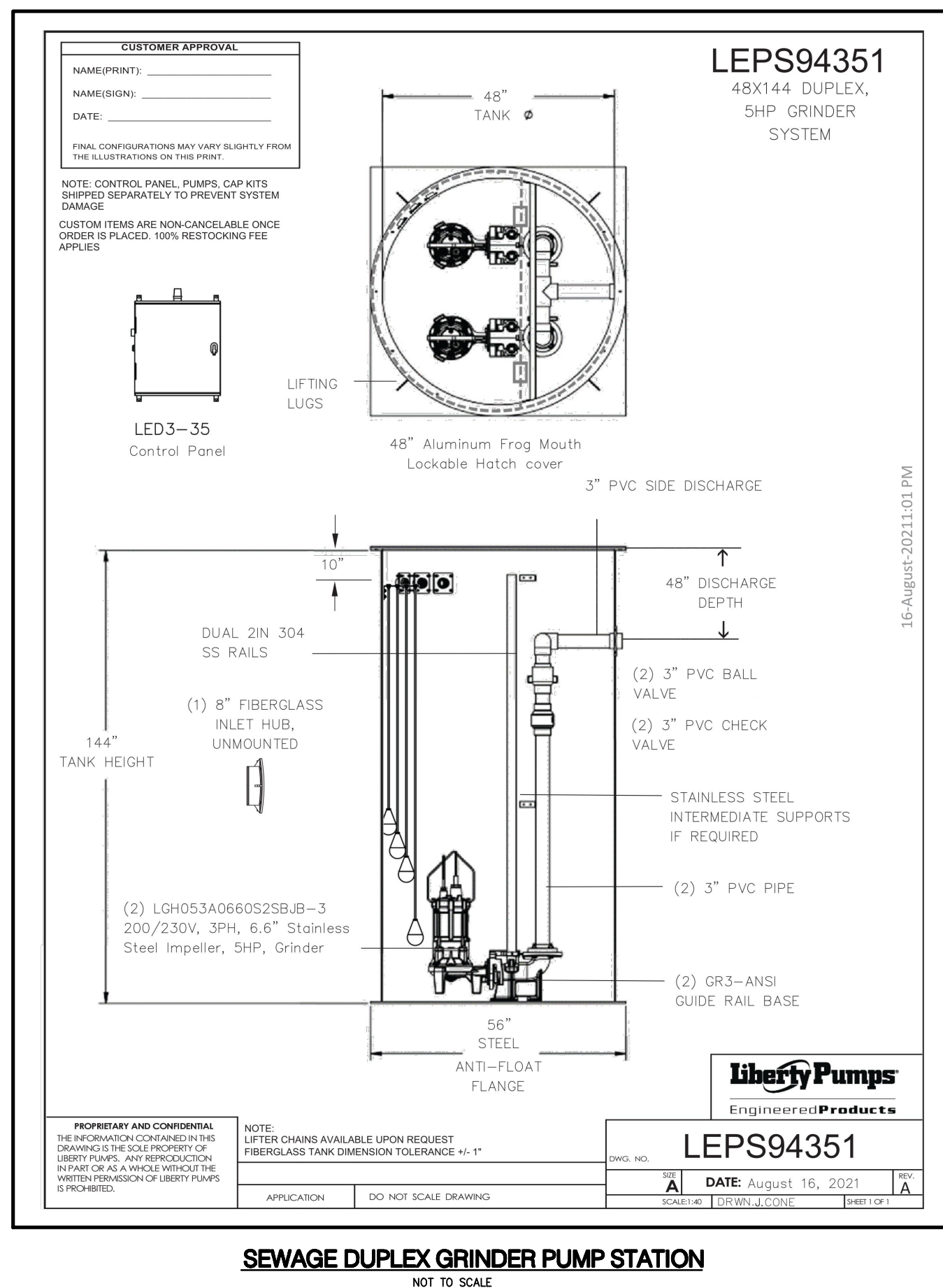
DATE	REVISIONS
3/08	DWG. CREATED
12/14	DWG. UPDATED
SCALE	DWG. NO.
NO SCALE	MH-1



MACHINED SURFACE

STANDARD DETAILS HEAVY DUTY MANHOLE FRAME (H-25) UPPER ALLEN TOWNSHIP

DATE	REVISIONS
3/08	DWG. CREATED
SCALE	DWG. NO.
NO SCALE	MH-2



SEWAGE DUPLEX GRINDER PUMP STATION

NOT TO SCALE



LES-Series Simplex Controls LED-Series Duplex Controls Control Panels

Available in fiberglass or stainless steel enclosures
Wide array of options and custom builds available

- Hand-Off-Auto switches
- Pump run lights
- Inner panel door
- Elapsed time meters
- Auxiliary contacts
- Seal test and fail indicators
- Lockable door
- Adjustable motor overloads
- Thermal overloads
- Alarm beacon
- NEMA@ 4X enclosure
- Intrinsically safe panels available

3 Phase					
Fiberglass Enclosure			Stainless Steel Enclosure		
Voltage	Overload	Breaker	Duplex I.S.	Duplex	Simplex I.S.
45-18	20	LEDK3-20	LEDK3-20	LEDK3-20	LEDK3-20
8-32	35	LEDK3-35	LEDK3-35	LEDK3-35	LEDK3-35
30-40	40	LEDK3-40	LEDK3-40	LEDK3-40	LEDK3-40
37-50	50	LEDK3-50	LEDK3-50	LEDK3-50	LEDK3-50
48-65	65	LEDK3-65	LEDK3-65	LEDK3-65	LEDK3-65

UTILITY DETAILS

FOR
2509 MILL ROAD TOWNHOMES
LOCATED IN
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

DRAWING ID:
221013-3-LD

PROJECT: 221013

DATE: 04/25/2022

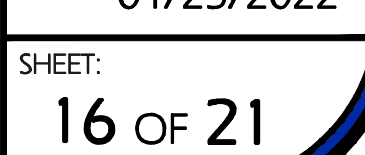
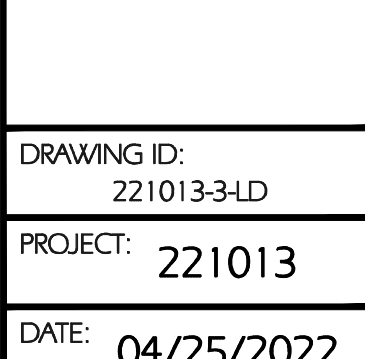
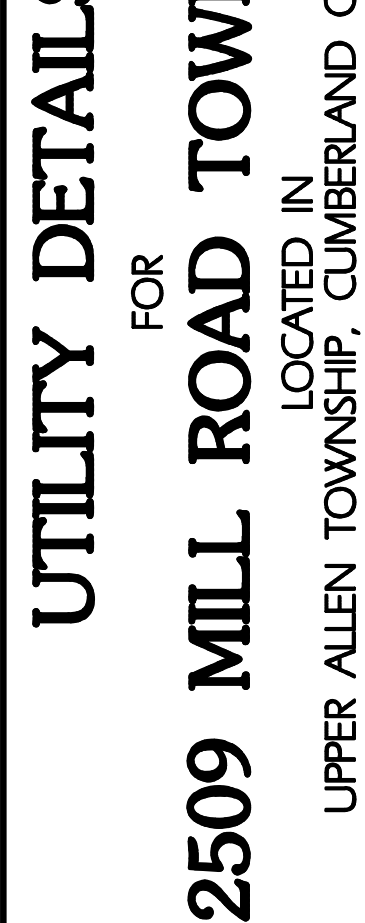
SHEET:
16 OF 21

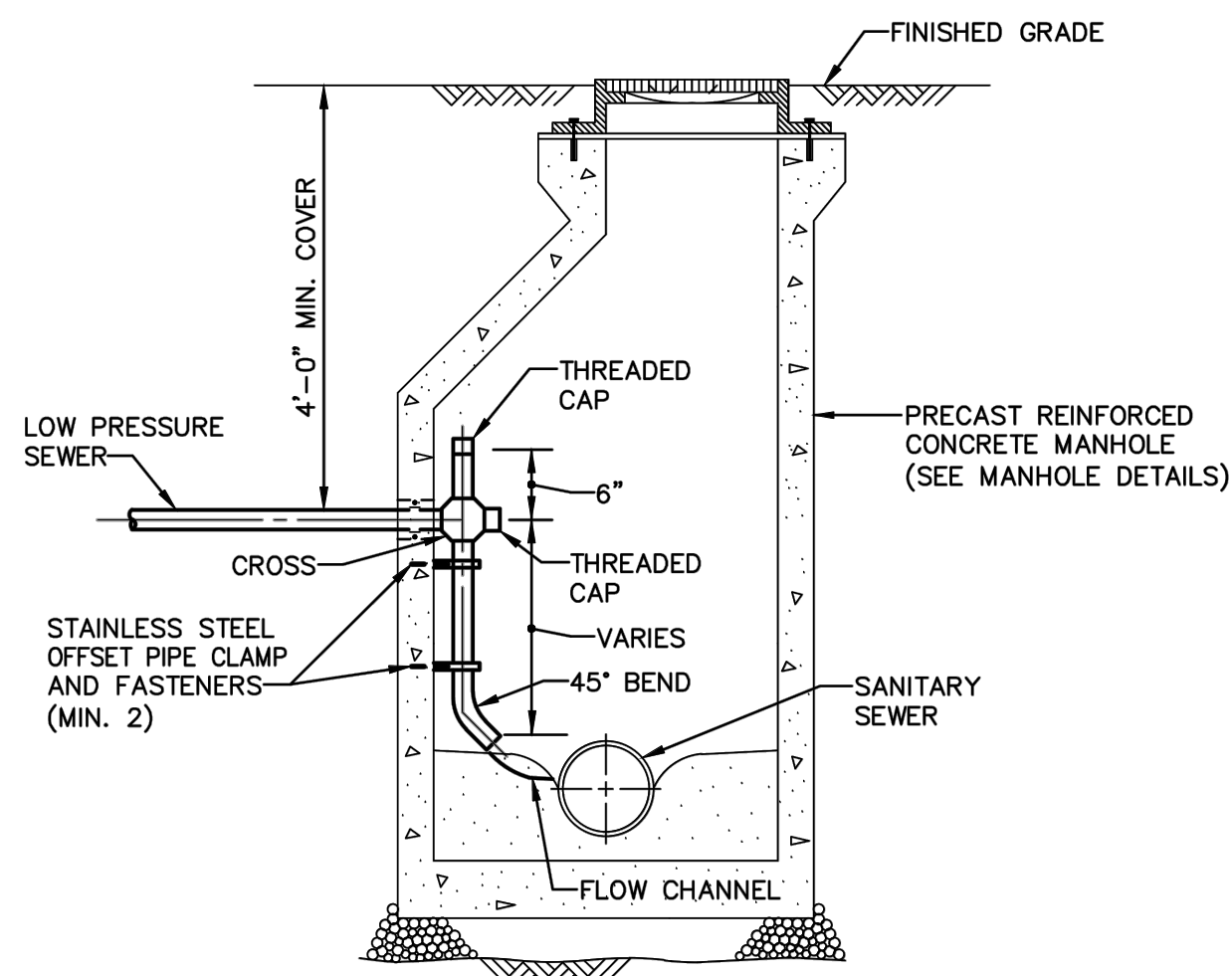
R. J. FISHER & ASSOCIATES, INC.

SITE PLANNING • CIVIL ENGINEERING • LAND SURVEYS

1546 BRIDGE STREET, NEW CUMBERLAND, PA. 17070
PHONE: (717) 774-7534 • FAX: (717) 774-7190

RJFISHERENGINEERING.COM





NOTES:

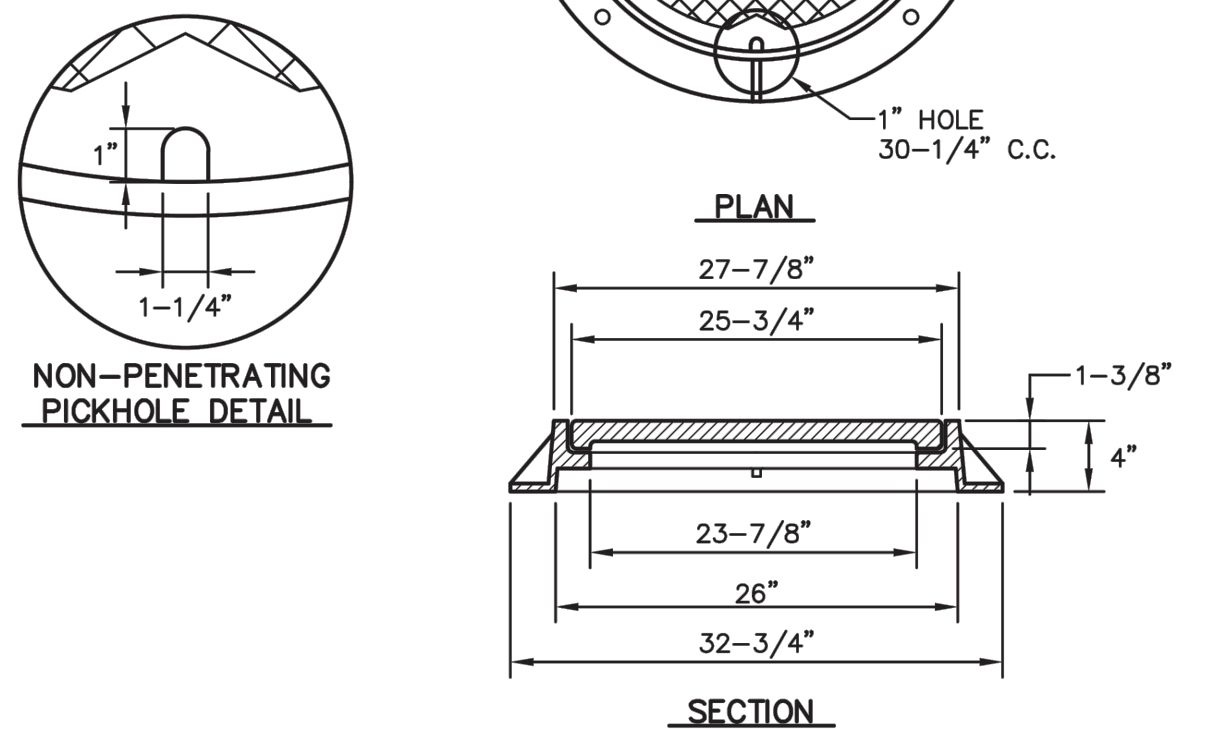
- MANHOLE WALL PENETRATION TO BE CORE DRILLED AND SEALED WITH APPROPRIATE SIZED TRELLEBORG KOR-N-SEAL PIPE-TO-MANHOLE BOOT CONNECTOR.

STANDARD DETAILS
LOW PRESSURE SEWER
DISCHARGE TO MANHOLE
UPPER ALLEN TOWNSHIP

FILE NAME: LP-6-LWP-PRES-DISCHG.dwg

DATE	REVISIONS
3/08	DWG. CREATED
12/13	DWG. UPDATED
1/17	NOTE REVISION

SCALE	DWG. NO.
NO SCALE	LP-6



NOTES:

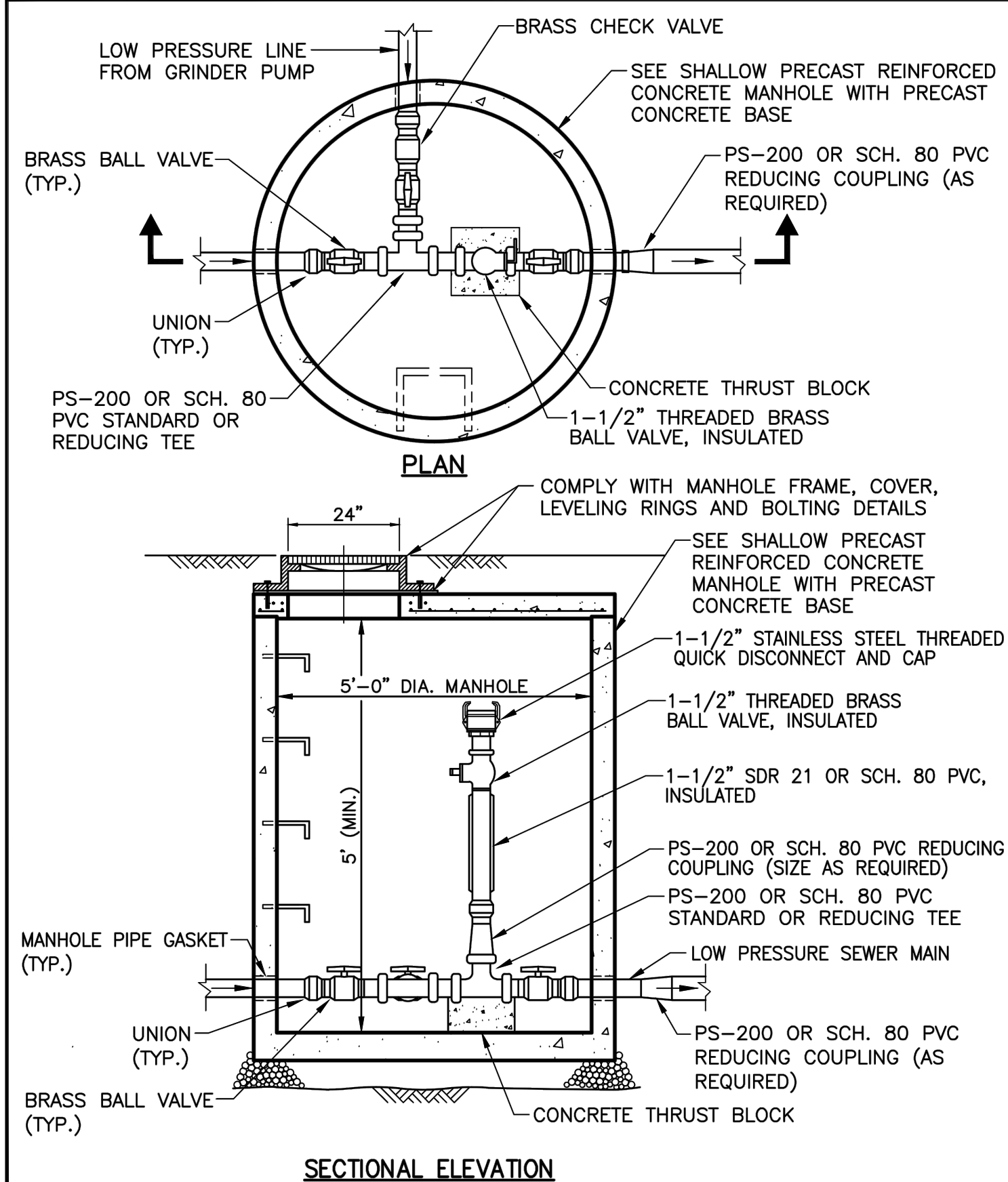
- MATERIAL SHALL BE GRAY CAST IRON CONFORMING TO ASTM A48 (LATEST REVISION)
- UNITS TO BE DESIGNED HEAVY DUTY FOR AASHTO HS20-44 WHEEL LOADS IN VEHICULAR TRAFFIC AREAS.
- EACH FRAME AND COVER SHALL HAVE MACHINED HORIZONTAL BEARING SURFACES.
- PROPERLY SIZED/DESIGNED POLYETHYLENE COVERS MAY BE SUBSTITUTED FOR CAST IRON COVERS IN NON-VEHICULAR TRAFFIC AREAS.
- ALL COVERS MUST BE GASKETED AND WATERTIGHT.

STANDARD DETAILS
PRESSURE LATERAL VALVE PIT
COVER DETAIL
UPPER ALLEN TOWNSHIP

FILE NAME: LP-10-VLV-PIT-COV.dwg

DATE	REVISIONS
3/08	DWG. CREATED
12/13	DWG. UPDATED
1/17	NOTE REVISIONS

SCALE	DWG. NO.
NO SCALE	LP-10

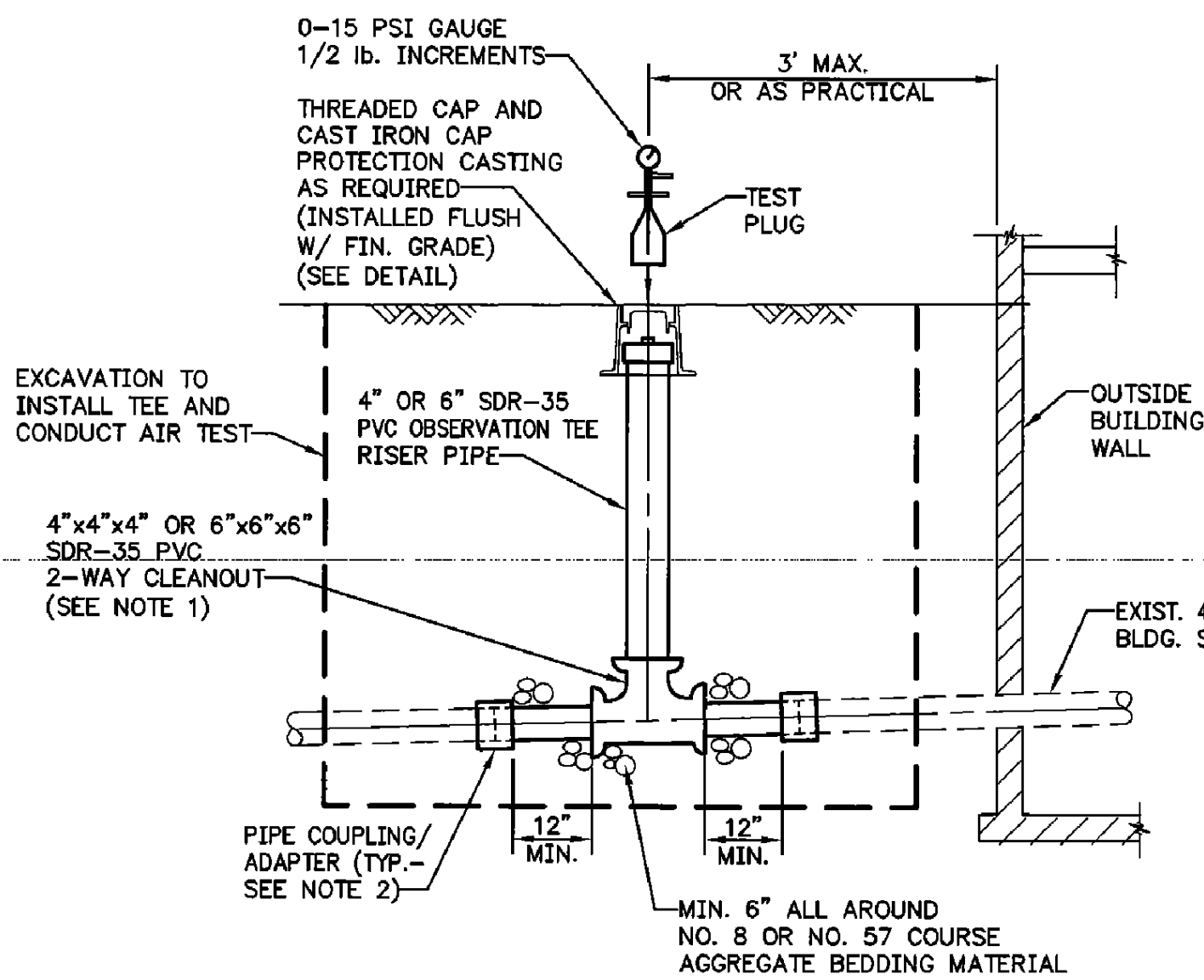


STANDARD DETAILS
2-WAY IN-LINE CLEANOUT/VALVE PIT AND
GRINDER PUMP SERVICE LINE CONNECTION
UPPER ALLEN TOWNSHIP

FILE NAME: LP-13A-2-WAY IN-LINE CO-VALVE-CHK. VALVE.DWG

DATE	REVISIONS
2/17	DWG. CREATED
4/18	LABELING MODIFIED

SCALE	DWG. NO.
NO SCALE	LP-13A



NOTES:

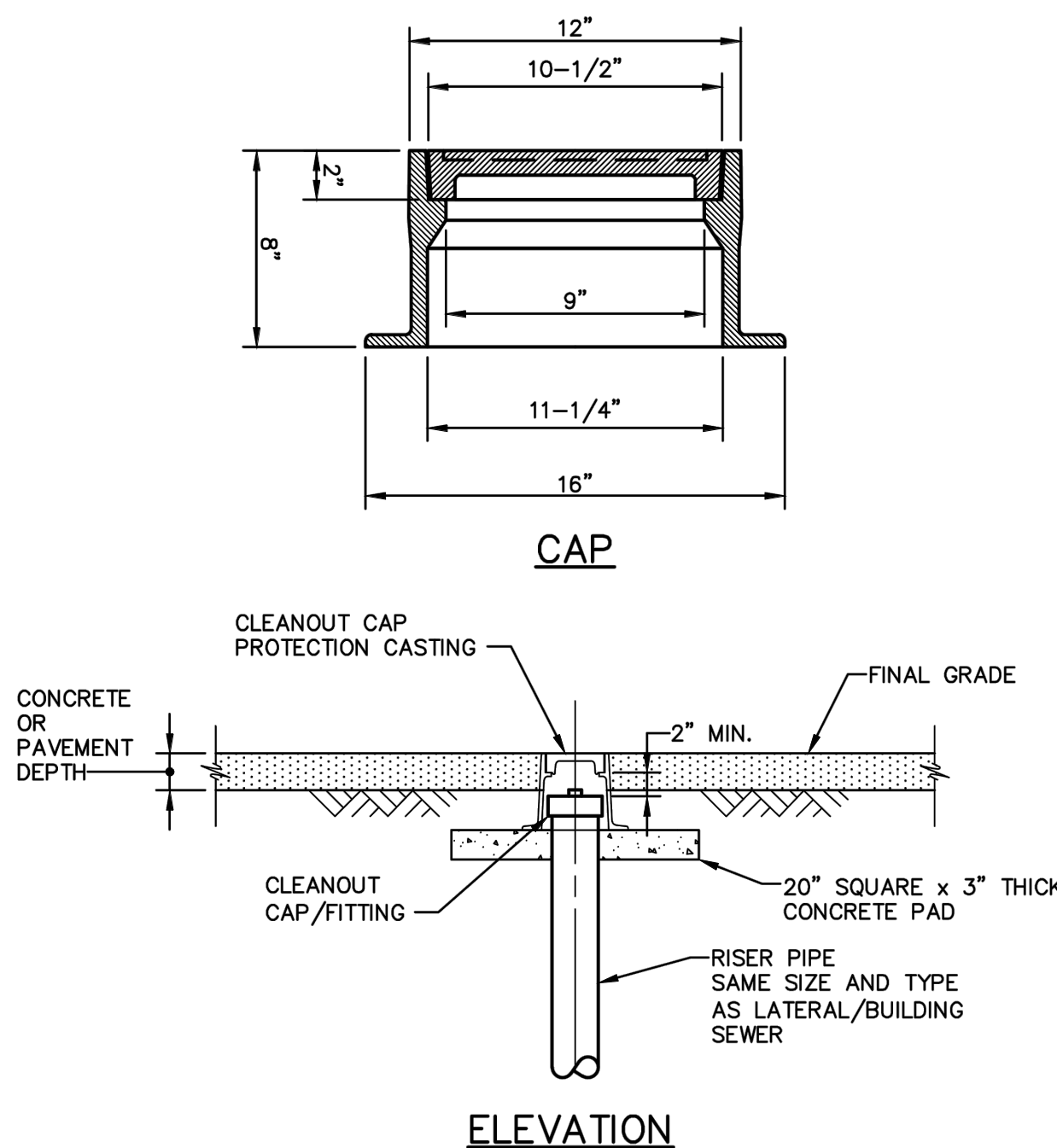
- 2-WAY CLEANOUT SHALL BE THE SAME SIZE AS BUILDING SEWER.
- REFER TO PIPE REPAIR/RECONNECTION DETAIL FOR PROPER FITTINGS/COUPLINGS/ADAPTERS.
- FITTINGS/COUPLINGS/ADAPTERS FOR CONNECTIONS TO EXISTING SEWERS MUST BE IN ACCORDANCE WITH TOWNSHIP SPECIFICATIONS AND ARE SUBJECT TO TOWNSHIP REVIEW AND APPROVAL.

STANDARD DETAILS
2-WAY CLEANOUT (NEAR BLDG.)
(AS NECESSARY FOR AIR TESTING LATERAL
WHEN THERE IS NO CLEANOUT IN BUILDING)
UPPER ALLEN TOWNSHIP

FILE NAME: LAT-6-2-WAY-CO-BLDG.DWG

DATE	REVISIONS
3/08	DWG. CREATED

SCALE	DWG. NO.
NO SCALE	LAT-6



NOTES:

- CASTING FRAME AND COVER SHALL BE HEAVY DUTY WITH "S" MARKING ON COVER. (EAST JORDAN IRON WORKS CATALOG No. 1565, OR APPROVED EQUAL.)

STANDARD DETAILS
CAP PROTECTION CASTING FOR
CLEANOUT COVER IN VEHICULAR TRAFFIC AREAS
UPPER ALLEN TOWNSHIP

FILE NAME: LAT-8-CO-CAP.DWG

DATE	REVISIONS
3/08	DWG. CREATED
1/17	NOTE/TITLE REVISIONS

SCALE	DWG. NO.
NO SCALE	LAT-8

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



UTILITY DETAILS

FOR

2509 MILL ROAD TOWNHOMES

LOCATED IN
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

DRAWING ID:
221013-3-LD

PROJECT: 221013

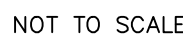
DATE: 04/25/2022

SHEET:
17 OF 21



EMBANKMENT				CLEANOUT ELEV COE (FT)	BOTTOM ELEV BE (FT)
TOP ELEV ETE (FT)	TOP WIDTH ETw (FT)	KEY TRENCH DEPTH (FT)	KEY TRENCH WIDTH (FT)		
507.10	5	2	4	502.20	499.5

NOT TO SCALE

Filtrex & JME

N.T.S.

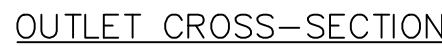
PLAN VIEW



N.T.S.

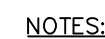


NOT TO SCALE



STANDARD CONSTRUCTION DETAIL #4-6 ROCK FILTER OUTLET

NOT TO SCALE



SEDIMENT BASIN OR SEDIMENT TRAP
SEDIMENT STORAGE DEWATERING FACILITY

NOT TO SCALE



THE TISHMAN COMPANIES, INC.

FOR

LOCATED IN
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

DRAWING ID:
221013-3-LD

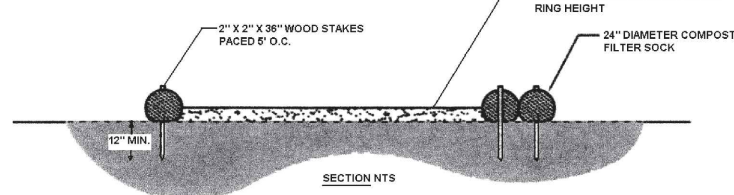
PROJECT: 221013

DATE: 04/25/2022

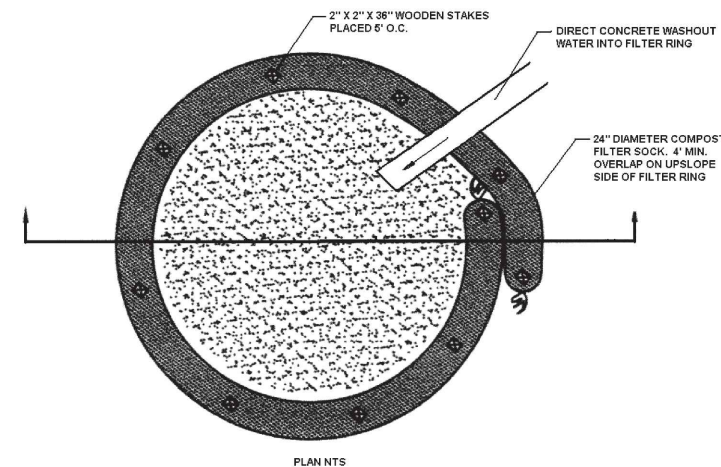
SHEET:
19 OF 21



FIGURE 3.18
Typical Compost Sock Washout Installation

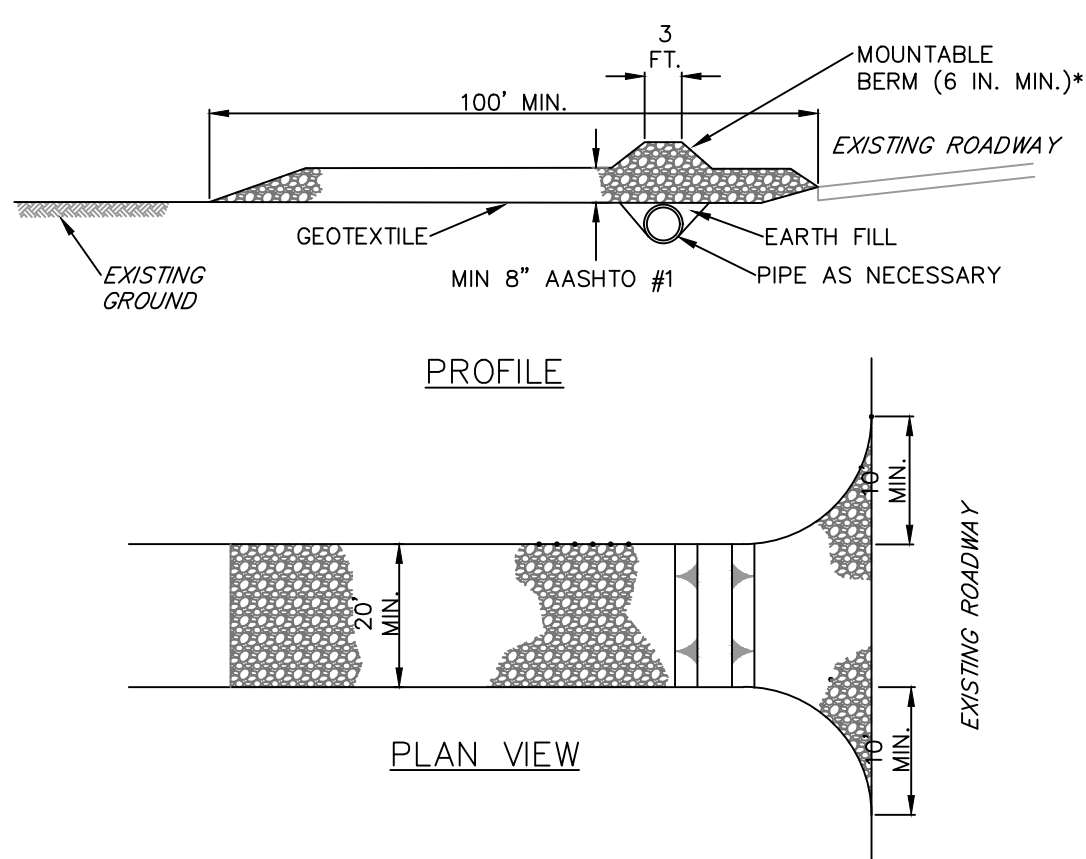


NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
2. 18" COMPOST FILTER SOCK MAY BE EXCHANGED WITH
DOUBLE 24" COMPOST SOCKS IN PARALLEL
CONFIGURATION FOR THE SAME HEIGHT.



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

363-2134-008 / March 31, 2012 / Page 58



* 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.

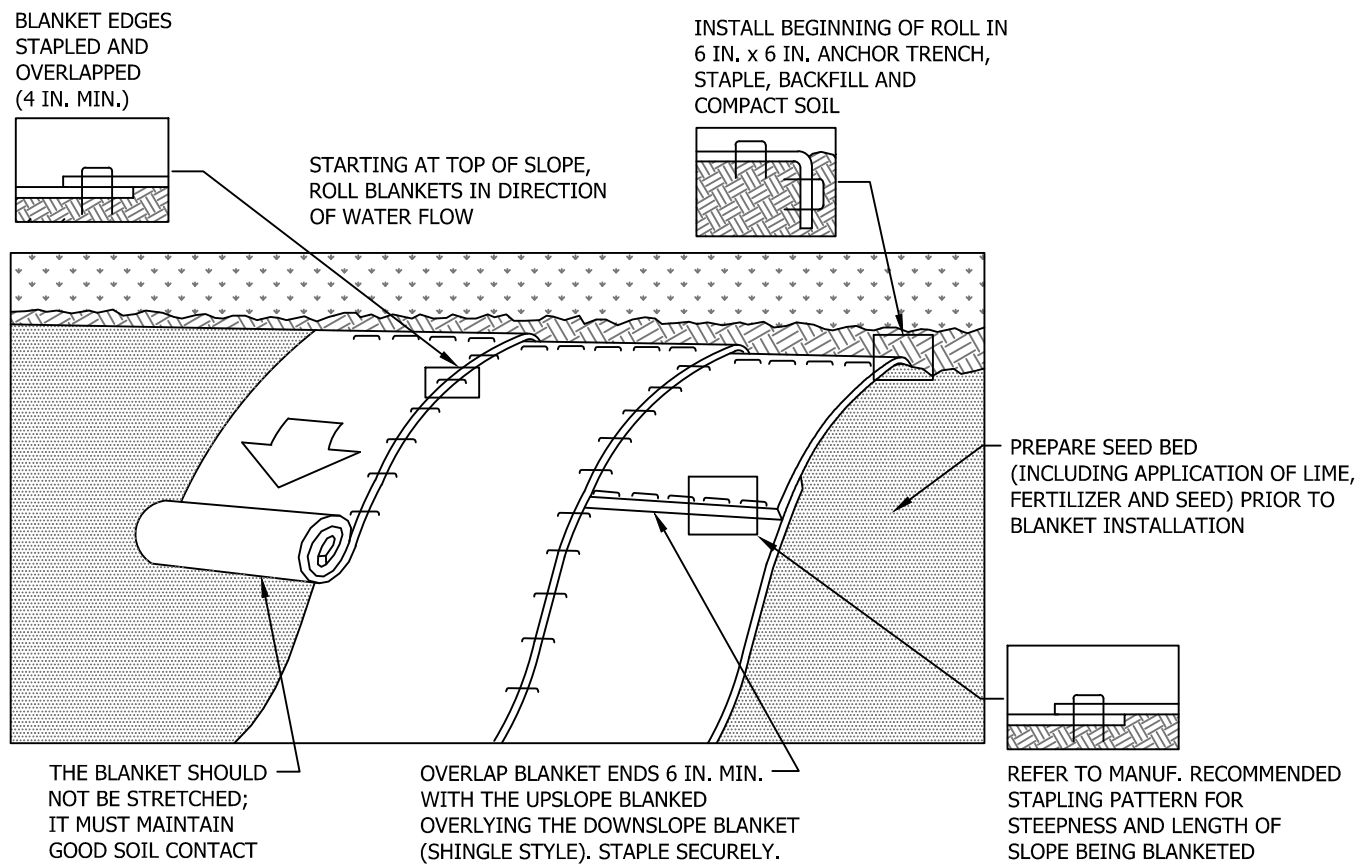
RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

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



NOTES:

SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.

PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.

SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.

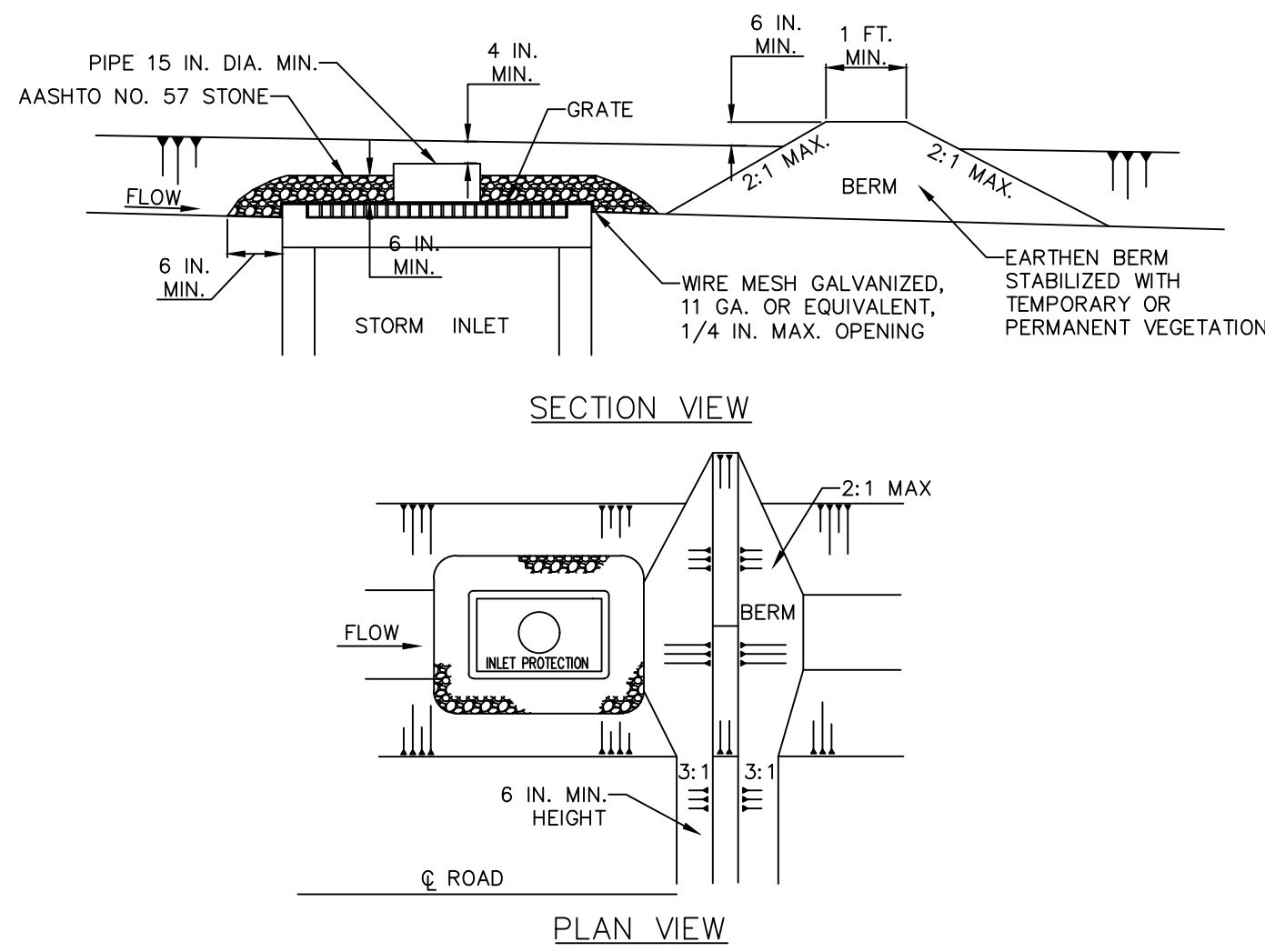
BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.

THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

STANDARD CONSTRUCTION DETAIL #11-1
EROSION CONTROL BLANKET INSTALLATION

NOT TO SCALE



NOTES:

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.

STONE INLET PROTECTION AND BERM FOR A TYPE M INLET CAN BE USED IN ONE ACRE MAXIMUM DRAINAGE AREA WITH 15 IN. OVERFLOW PIPE AND 4 IN. HEAD. A PERFORATED PLATE WELDED TO A METAL RISER MAY NOT BE SUBSTITUTED FOR THE WIRE MESH. A SLOTTED PLATE WELDED TO THE RISER MAY BE USED IN CONJUNCTION WITH THE WIRE MESH IF CALCULATIONS ARE PROVIDED TO SHOW SUFFICIENT CAPACITY OF THE INLET TO ACCEPT THE PEAK RUNOFF FOR A 2-YEAR STORM EVENT FROM THE TRIBUTARY DRAINAGE AREA. TOP OF PIPE SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADWAY IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC. EARTHEN BERM SHALL BE ROLLED.

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 IN. 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.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-20
STONE INLET PROTECTION AND BERM - TYPE M INLET

NOT TO SCALE

E&S CONTROL DETAILS
FOR
2509 MILL ROAD TOWNHOMES
LOCATED IN
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

DRAWING ID:
221013-3-LD
PROJECT: 221013
DATE: 04/25/2022
SHEET:
20 OF 21

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



NO.	REVISION	DATE
1	TWP PC REPORT #3	12/13/22
2	TREE CHANGE	12/14/2022
3	TWP BOS REPORT	06/29/2023
4	TWP FIRE MARSHAL & STAFF MTG	08/14/2023
5	30' RADII, NO OFF ESMI, VERT. CURB	11/28/23

COPYRIGHT © 2021 BY R.J. FISHER & ASSOCIATES, INC.

GENERAL NOTES

1. 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.
2. The site contractor shall not disturb more area than is necessary for the task to be done, so that potential for erosion is minimized.
3. The site contractor shall ensure that earth disturbance activities are planned and implemented to the extent practicable in accordance with the following:
- a. Minimize the extent and duration of the earth disturbance.
- b. Maximize protection of existing drainage features and vegetation.
- c. Minimize soil compaction.
- d. Utilize other measures or controls that prevent or minimize the generation of increased stormwater runoff.
4. Erosion and sedimentation controls must be constructed, stabilized, and functional before site disturbance within the tributary areas to the controls.
5. 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.
6. At least 7 days prior to starting any earth disturbance activities, or expanding into an area previously unmarked, the owner and/or operator shall invite all contractors involved in those activities, the landowner, appropriate municipal officials, the erosion control plan preparer, the post construction plan preparer, and a representative of the County Conservation District to an on-site pre-construction meeting.
7. At least 3 days before starting any earth disturbance activities, or expanding into an area previously unmarked, 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.
8. All earth disturbance activities shall proceed in accordance with the sequence provided on the plan drawings. Deviation from that sequence must be approved in writing from the County Conservation District prior to implementation.
9. 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.
10. 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.
11. Topsoil stockpile heights shall not exceed 35 feet. Stockpile side slopes must be 2:1 or flatter.
12. Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the operator shall implement appropriate best management practices (BMPs) to minimize the potential for erosion and sediment pollution, and notify the local Conservation District and/or the regional office of PA DEP.
13. 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, 260.1 et seq., 271.1, and 287.1 et seq. No building materials or wastes or unused building materials shall be burned, buried, dumped, or discharged at the site.
14. 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.
15. 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.
16. All pumping of water from any work area shall be done according to the procedure described in this plan, over undisturbed vegetated areas.
17. 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.
18. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures, conduits, etc. shall be compacted in accordance with local requirements or codes. All 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.
19. Seeps or springs encountered during construction shall be handled in accordance with the standard and specification for subsurface drain or other approved method.
20. All graded areas shall be permanently stabilized immediately upon reaching finished grade. Cut slopes in competent bedrock and rock fills need not be vegetated.
21. 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.
22. Permanent stabilization is defined as a minimum uniform, perennial 70% vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated erosion. Cut and fill slopes shall be capable of resisting failure due to slumping, sliding, or other movements.
23. 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.
24. Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and / or operator shall contact the Conservation District for an inspection prior to removal / conversion of the E & S BMPs.
25. 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.
26. Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and / or operator shall contact the Conservation District to schedule a final inspection.
27. 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.
28. Only limited disturbance will be permitted to initially access and acquire borrow to construct control facilities, before general site alteration begins.
29. 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.
30. During dry and windy conditions Dust Control measures shall be implemented to suppress air-borne dust and may include sprinkling/irrigation, vegetative cover establishment, mulching, matting, tillage, stone, and spray-on chemical treatments. Refer to the PADEP Erosion & Sediment Control Manual, Appendix H, Dust Control for further information.
31. An erosion control blanket must be installed on all disturbed slopes steeper than 3:1 in all areas with concentrated flows as noted on the drawings.

31. 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.
32. Fill Materials:
- a. The NPDES Permit covers the "moving, depositing, stockpiling, or storing of soil, rock, or earth materials." If the site will need to have fill imported from an off site location, 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.
- b. 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."
- c. 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.)
- d. 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."
- e. Environmental due diligence: Investigative techniques, including, but not limited to, visual property inspection, 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."
- f. 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.

TEMPORARY SEEDING SCHEDULE

The contractor shall immediately temporarily stabilize any rough graded area, topsoil stockpile, unused excavated area, or excavated fill material that will be left idle for less 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:	95%
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.
Liming rate:	per soil test; minimum of 4 tons per acre.
Strawdale 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 strawbales 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:	45% Kentucky bluegrass (50/50 variety mix)
% Live Seed:	95%
Application rate:	6 lbs./1000 sq. ft.
Fertilizer type:	general purpose granular, 10-20-20
Fertilizer application rate:	11 lbs./1000 sq. yds.
Liming rate:	per soil test; minimum of 6 tons per acre
Seeding dates:	between 3/15-6/1 and 8/1-10/15

Apply all permanent seed at rates equivalent with above broadcast rates in accordance with PENNDOT 408 Sec. 805.3 in a potable water-based slurry with a Bonded Fiber Matrix hydromulch material. Care shall be taken to not spray areas unintended for seeding.

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.

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

MAINTENANCE OF TEMPORARY EROSION & SEDIMENT CONTROL FACILITIES

1. 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, reseeding, 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.
2. 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.
3. Any sediment removed from BMPs during construction will be returned to upland areas within the project area, and incorporated into the site grading, or in the manner described on the plan drawings.
4. See the construction details and seeding specifications for maintenance procedures for the various control measures.
5. 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

General Notes:

1. 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:
- A. Storm Basin #1 Soil Amendments
2. 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.
3. 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 Cumberland County Conservation District.
4. 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.
5. 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 Cumberland County Conservation District to an on-site pre-construction meeting.
6. Immediately after earth disturbance activities cease, the operator shall stabilize the disturbed areas. 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 seeding vegetative stabilization specifications. Disturbed areas which are not at final grade or which will not be re-disturbed within 1 year must be stabilized in accordance with the permanent seeding vegetative stabilization specifications.
7. 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.
8. 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.

Specific Staging of Earthmoving Activities.

1. Field mark the limits of disturbance.
2. Bring site to final sub-grade elevation in the area of the Stabilized Construction Entrance and install Stabilized Construction Entrance.
3. Install Sediment Barriers #1 and #2.
4. Bring site to subgrade, constructing Sediment Basin as first priority. Use lightest equipment as practical during the construction of the Sediment Trap as this will be used as an infiltration basin during the Post Construction Stormwater Management state. Permanent slopes of 3:1 or greater require temporary N.A.G. S75 matting or equivalent. Permanently seed and mulch slopes as soon as they are to final grade. Delay Amended Soils and basin sub-drain until rest of site is complete and stabilize and ready for final PCSM conversion.
5. Install cleanout marker stake in Sediment Basin.
6. Install basin discharge pipe, rock apron, and level spreader. Delay permanent Stormwater Basin Discharge Structure until site is stabilized and ready for conversion to final PCSM condition.
7. Install Temporary Riser for Sediment Trap and associated dewatering facility and trash rack.
8. Install Sediment Barriers 3, 4, 5, 6, 7 & 8.
9. Install stormwater structures, rock aprons, storm sewers, and associated inlet protection.
10. Install perforated pipe and stone Underground Interceptor Channel and install inlet protection. Maintain Sediment barriers and inlet protection to prevent sediment-laden runoff from entering and clogging stone.
11. Begin Building Construction.
12. Install water service. Install sanitary sewer pump station lateral, & force main.
13. Install curb
14. Install stone base at parking lot, access drive, walkways concrete pads.
15. Complete construction of buildings, and concrete/ asphalt paving.
16. Permanently seed and mulch remaining lawn areas.
17. Install proposed landscaping.
- Conversion to PCSM
- *- Item requires on-site observation by designated professional during installation.

1. Temporary control measures can only be removed when the watershed draining to the measure is permanently stabilized and removal is authorized by the Cumberland 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.
2. *Install Amended Soils
3. Convert Discharge structure to permanent condition.
4. Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and/or operators shall contact the Cumberland County Conservation District for an inspection prior to the removal/conversion of the E&S BMP's.
5. Upon approval from the Cumberland County Conservation District, Sediment Basin 1 shall be converted to the permanent condition as indicated on the PCSM plan. Sediment Basin shall be dewatered and any baffles and cleanout stakes shall be removed. The permanent emergency spillway associated with Storm Basin 1 shall be modified and outlet structure converted to permanent condition. All sediment deposited within storm sewers shall be removed prior to converting the sediment basin. Remove an additional 24" below the proposed basin bottom, replace with a 2:1 soil to compost mix and till up to 20". Install underdrain as shown on PCSM Plan and Profile. Permanently seed and mulch as required.
6. Upon approval from the Cumberland County Conservation District, all silt barriers shall be properly removed.
7. 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 and/or operators shall contact the Cumberland County Conservation District for a final inspection.

SPECIALTY SEEDING SCHEDULES:

NATIVE STEEP SLOPE MIX W/ANNUAL RYEGRASS

(APPLY TO ALL 3:1 OR STEEPER SLOPES including 2:1 STORM BASIN SLOPES)

Mix Composition
31.1% Sorghastrum nutans, New England 2 Ecotype (Indiangrass, New England 2 Ecotype)
20.0% Lolium multiflorum (Annual Ryegrass)
14.0% Andropogon gerardii, 'Niagara' (Big Bluestem, 'Niagara')
10.0% Elymus virginicus, 'Madison' (Virginia Wildrye, 'Madison')
7.0% Elymus canadensis (Canada Wildrye)
4.0% Agrostis perennans, Albany Pine Bush-NY Ecotype (Autumn Bentgrass, Albany Pine Bush-NY Ecotype)
4.0% Panicum virgatum, 'Carthage', NC Ecotype (Switchgrass, 'Carthage', NC Ecotype)
3.0% Panicum clandestinum, Tioga (Deertongue, Tioga)
1.5% Echinacea purpurea (Purple Coneflower)
1.3% Chamaeneris fasciculata, PA Ecotype (Partridge Pea, PA Ecotype)
1.2% Helopsis helianthoides, PA Ecotype (Oxeye Sunflower, PA Ecotype)
1.0% Coreopsis lanceolata (Lanceleaf Coreopsis)
1.0% Rudbeckia hirta (Blackeyed Susan)
0.3% Monarda fistulosa, Fort Indiantown Gap-PA Ecotype (Wild Bergamot, Fort Indiantown Gap-PA Ecotype)
0.2% Achillea millefolium (Common Milkweed)
0.2% Solidago rugosa, PA Ecotype (Wrinkleleaf Goldenrod, PA Ecotype)
0.1% Aster lateriflorus (Calico Aster)
0.1% Aster pilosus, PA Ecotype (Heath Aster, PA Ecotype)

Item Number: ERNMX-181

Height: 1.0 - 6.3 Ft

Seeding Rate: 60 lb per acre, or 1.5 lb per 1,000 sq ft

RETENTION BASIN FLOOR MIX - LOW MAINTENANCE

(APPLY TO BOTTOM OF STORMWATER BASIN)

Mix Composition
20.0% Panicum clandestinum, Tioga (Deertongue, Tioga)
20.0% Puccinellia distans, Fults (Alkaligrass, Fults)
18.0% Elymus virginicus, 'Madison' (Virginia Wildrye, 'Madison')
15.0% Agrostis stolonifera (Creeping Bentgrass)
15.0% Poa palustris (Fowl Bluegrass)
10.0% Carex vulpinoidea, PA Ecotype (Fox Sedge, PA Ecotype)
1.0% Carex scoparia, PA Ecotype (Blunt Broom Sedge, PA Ecotype)
1.0% Juncus effusus (Soft Rush)

Item Number: ERNMX-126

Seeding Rate: 20-40 lbs per acre, or 0.5-1 lb/1,000 sq ft with a cover crop. For a cover crop use one of the following: grain rye (1 Sep to 30 Apr; 30 lbs/acre), Japanese millet (1 May to 31 Aug; 10 lbs/acre), or barnyard grass (1 May to 31 Aug; 10 lbs/acre).

E&S CONTROL DETAILS

FOR

2509 MILL ROAD TOWNHOMES

LOCATED IN UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

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



DRAWING ID: 221013-3-LD

PROJECT: 221013

DATE: 04/25/2022

SHEET: 21 OF 21