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REV	DATE	DESCRIPTION

REV	DATE	DESCRIPTION

MFG

Michael F. Gallagher
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE8719
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A.#. 2462796800

PRELIMINARY AND FINAL MAJOR SITE PLAN
FOR
AMARANTH AT NORTH BRUNSWICK PHASE 2
BLOCK 148.11 LOT 1.01
TOWNSHIP OF NORTH BRUNSWICK MIDDLESEX COUNTY NEW JERSEY

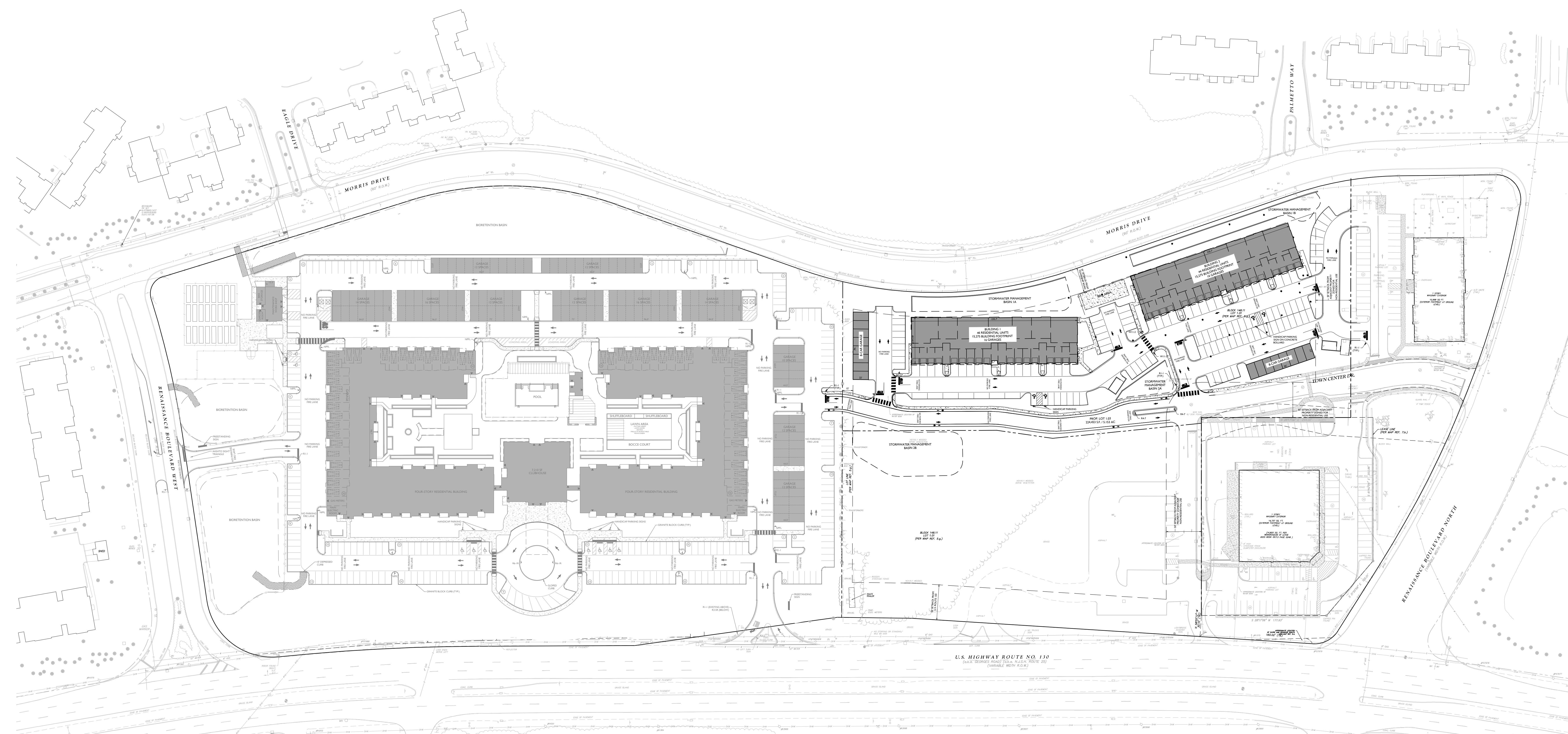
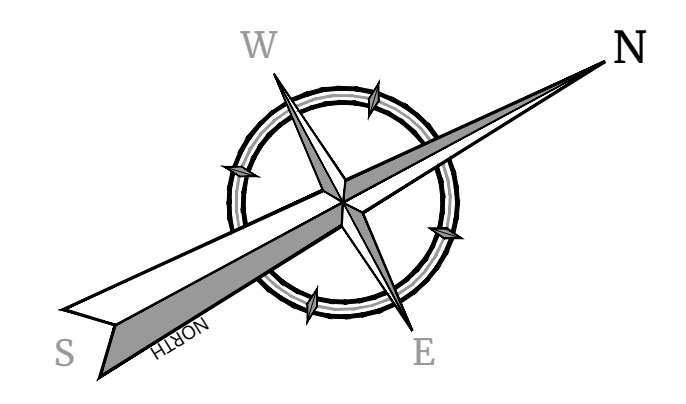
Colliers
Engineering & Design

HOLMDEL (Headquarters)
101 Cranford Center Road, Suite 3400
Holmdel, NJ 07733
Phone: 732.983.1950
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CONSULTANTS

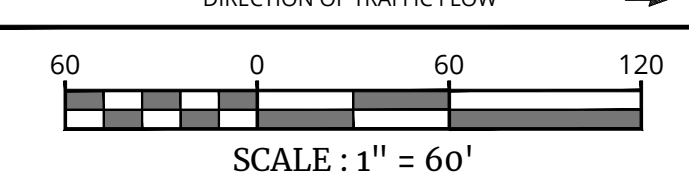
SCALE: 1" = 30'

2 of 21

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



EXISTING	LEGEND	PROPOSED
- - -	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	- - -
-----	RIGHT OF WAY LINE	-----
---	PROPERTY LINE	---
- - -	EDGE OF PAVEMENT	- - -
-----	CURB	-----
-----	DEPRESSED CURB	-----
-----	SIDEWALK	-----
-----	FENCES	-----
-----	TREELINE	-----
-----	ROADWAY SIGNS	-----
-----	WETLAND LINE	-----
-----	MUNICIPAL BOUNDARY LINE	-----
-----	STALL COUNT	(10)
-----	ADA ACCESSIBLE STALL	♿
-----	DEPRESSED CURB AND ADA RAMP	HC
-----	DIRECTION OF TRAFFIC FLOW	→



REV	DATE	DRAWN BY	DESCRIPTION

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MFG
Michael F. Gallagher
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 6648719
COLLIERS ENGINEERING & DESIGN, INC.
NJ, C.O.A. # 3462779690

PRELIMINARY AND FINAL
MAJOR SITE PLAN
FOR
AMARANTH AT NORTH BRUNSWICK
PHASE 2
BLOCK 14.8.11 LOT 1.01
TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY
NEW JERSEY

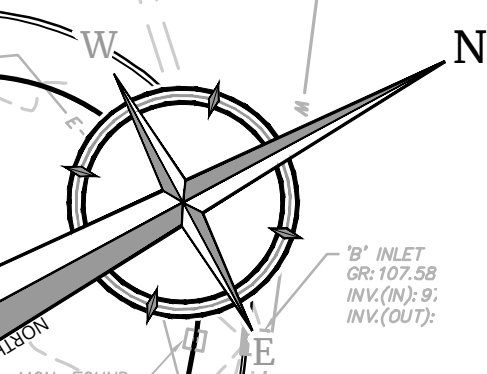
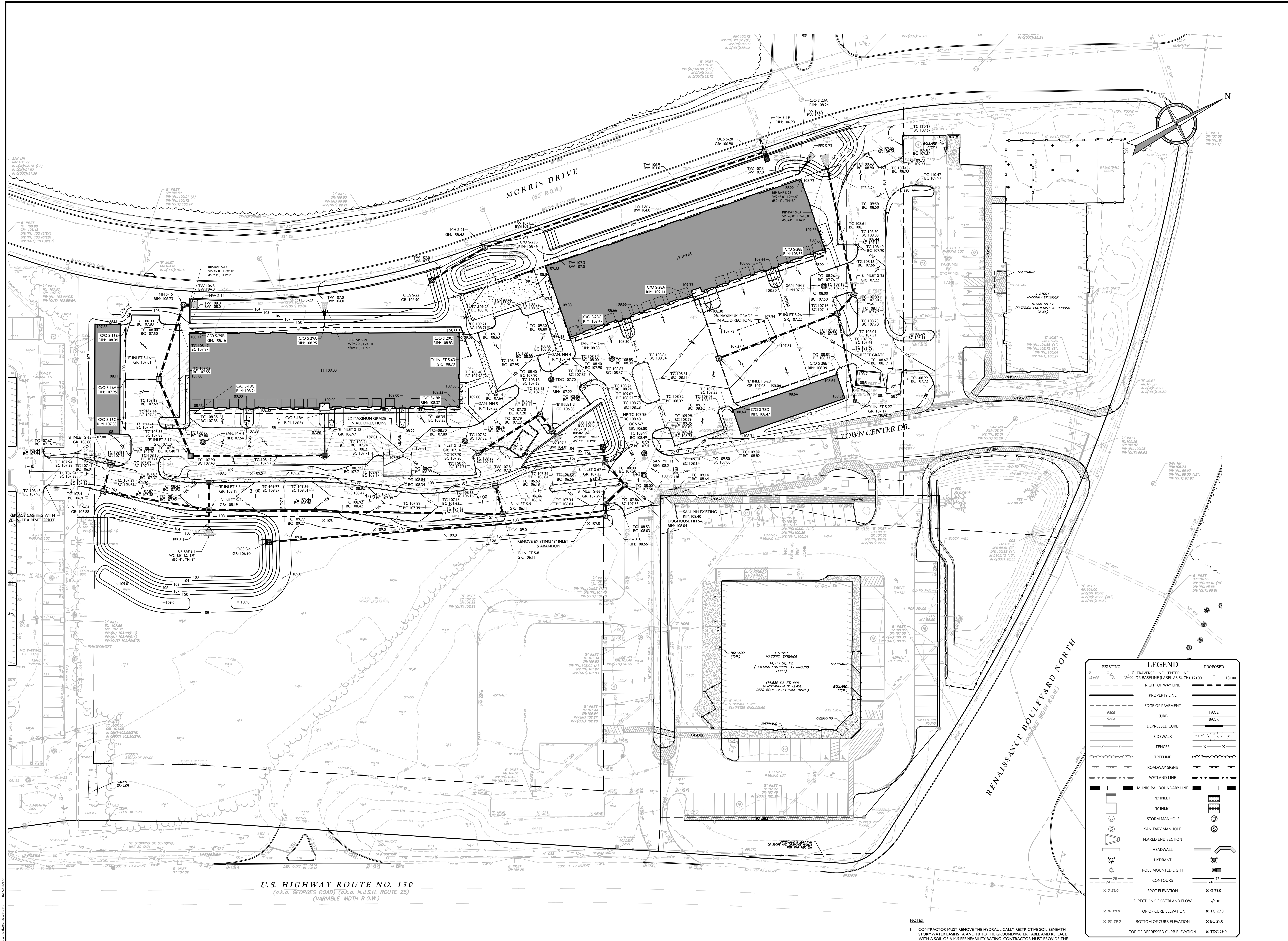
Colliers
Engineering & Design
HOLMDEL (Headquarters)
101 Crawford Corner Road,
Suite 3400
Holmdel, NJ 07733
Phone: 732.983.1950
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CORP. (USA)

SCALE	DATE	DRAWN BY	CHECKED BY
AS SHOWN	8/7/2023	PCS	MFG

OVERALL LAYOUT PLAN

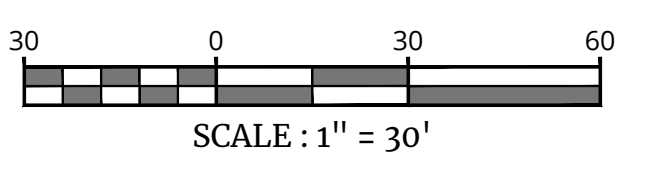
SHEET NUMBER:
3 of **21**

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



EXISTING	LEGEND	PROPOSED
	TRAVERSE LINE, CENTER LINE	
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
	FACE	
	BACK	
	DEPRESSED CURB	
	SIDEWALK	
	FENCES	
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	"B" INLET	
	"E" INLET	
	STORM MANHOLE	
	SANITARY MANHOLE	
	FLARED END SECTION	
	HEADWALL	
	HYDRANT	
	POLE MOUNTED LIGHT	
	CONTOURS	
	SPOT ELEVATION	
	DIRECTION OF OVERLAND FLOW	
	TOP OF CURB ELEVATION	
	BOTTOM OF CURB ELEVATION	
	TOP OF DEPRESSED CURB ELEVATION	
	TDC 29.0	

- NOTES
- CONTRACTOR MUST REMOVE THE HYDRAULICALLY RESTRICTIVE SOIL BENEATH STORMWATER BASINS 1A AND 1B TO THE GROUNDWATER TABLE AND REPLACE WITH A SOIL OF A K-5 PERMEABILITY RATING. CONTRACTOR MUST PROVIDE THE DESIGN ENGINEER WITH SOIL GRADATION SHEETS AND PERMEABILITY TESTS ON THE REPLACEMENT SOILS FOR REVIEW AND APPROVAL.



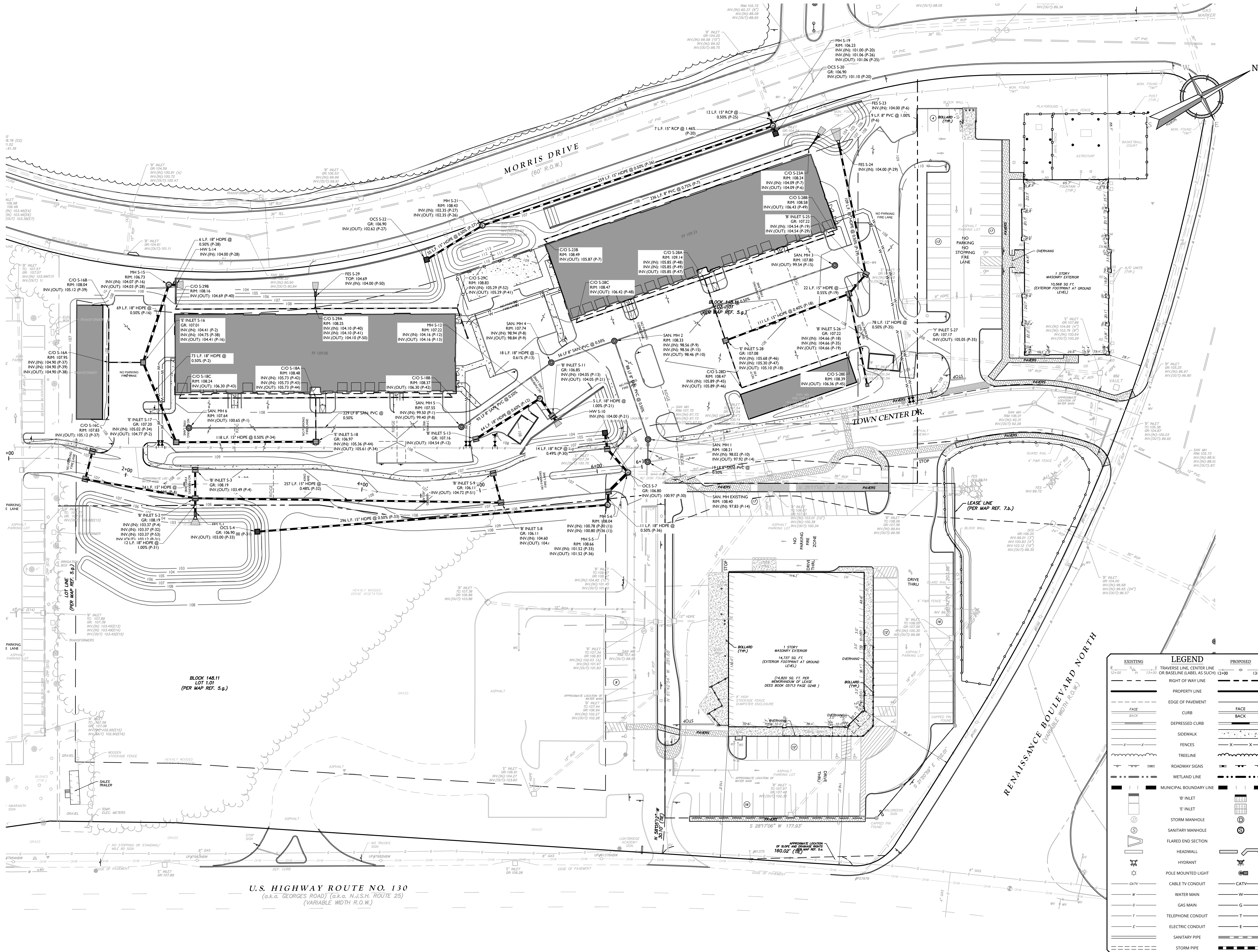
U.S. HIGHWAY ROUTE NO. 130
(a.k.a. GEORGES ROAD) (a.k.a. N.J.S.H. ROUTE 25)
(VARIABLE WIDTH R.O.W.)

NO.	DATE	DRAWN BY	DESCRIPTION

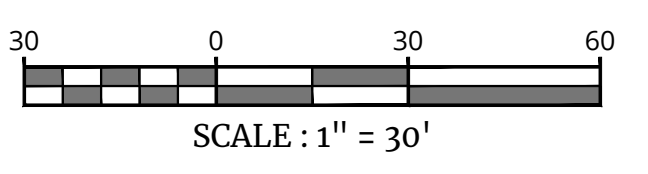
Michael F. Gallagher
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE4879
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A.# 24629796509

PRELIMINARY AND FINAL
MAJOR SITE PLAN
FOR
AMARANTH AT
NORTH BRUNSWICK
PHASE 2
BLOCK 14.8.1 LOT 1.01
TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY
NEW JERSEY

COLLIERS Engineering & Design
101 Crawford Corner Road,
Suite 3400
Hightstown, NJ 07733
Phone: 732-983-1950
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CORP. (NY)



EXISTING	LEGEND	PROPOSED
	TRAVERSE LINE, CENTER LINE	
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
	FACE	
	BACK	
	DEPRESSED CURB	
	SIDEWALK	
	FENCES	
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	B' INLET	
	E' INLET	
	STORM MANHOLE	
	SANITARY MANHOLE	
	FLARED END SECTION	
	HEADWALL	
	HYDRANT	
	POLE MOUNTED LIGHT	
	CABLE TV CONDUIT	
	WATER MAIN	
	GAS MAIN	
	TELEPHONE CONDUIT	
	ELECTRIC CONDUIT	
	SANITARY PIPE	
	STORM PIPE	



U.S. HIGHWAY ROUTE NO. 130
(a.k.a. GEORGES ROAD) (a.k.a. N.J.S.H. ROUTE 25)
(VARIABLE WIDTH R.O.W.)

Michael F. Gallagher
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 64877
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A.#. 3462798690

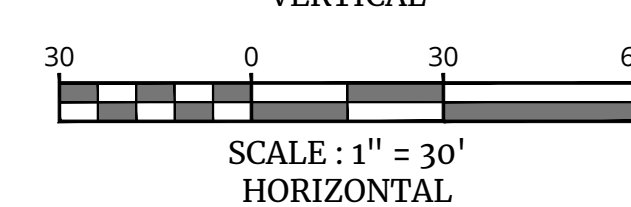
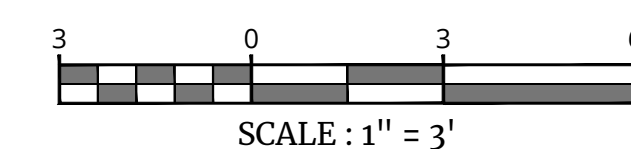
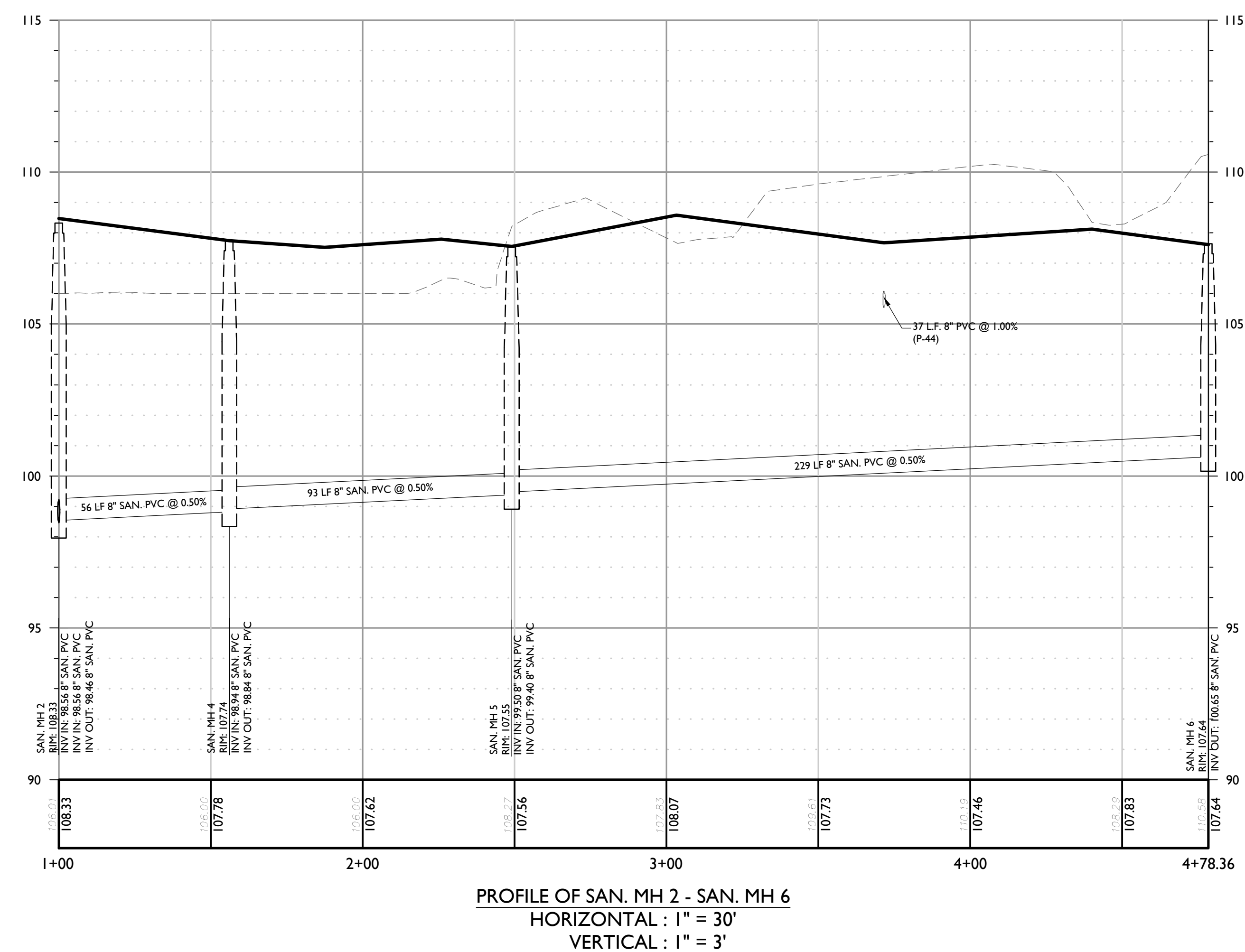
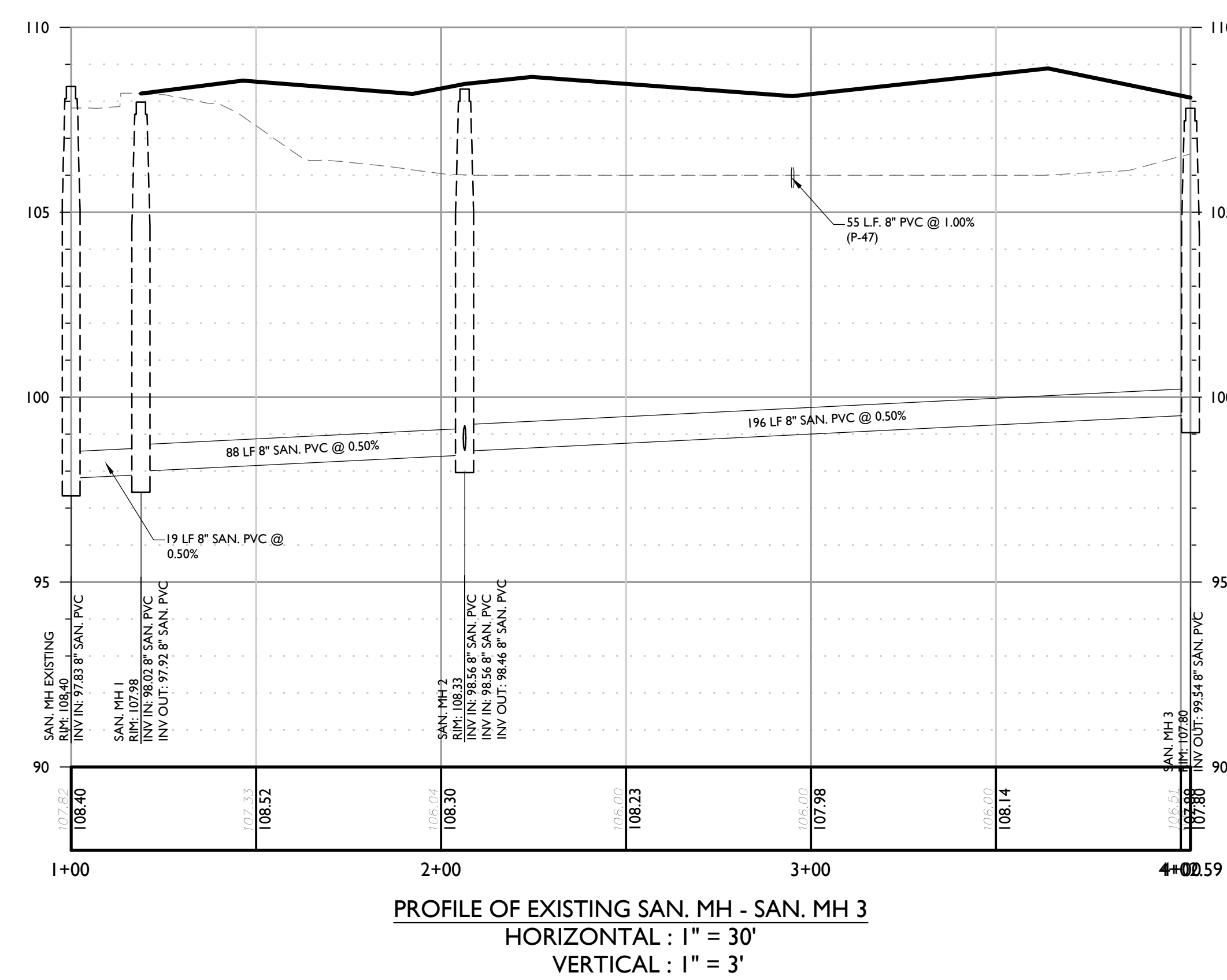
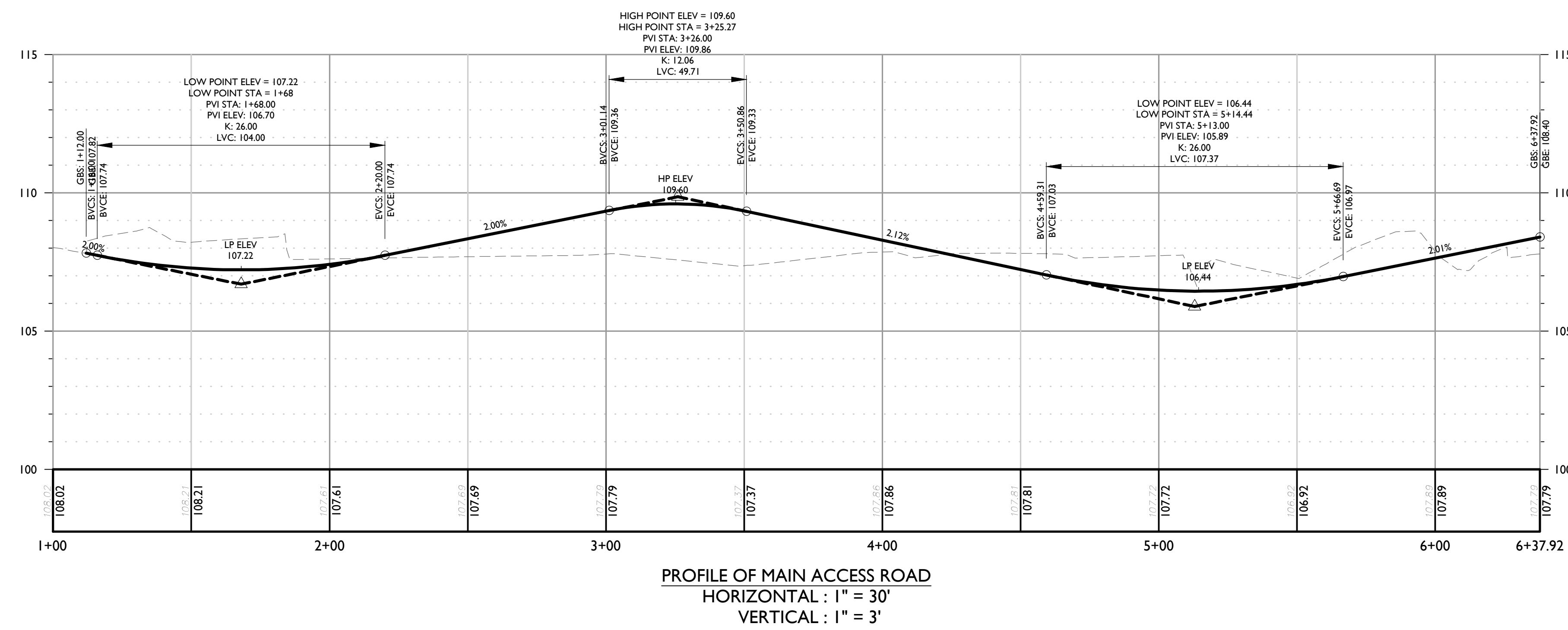
PRELIMINARY AND FINAL
MAJOR SITE PLAN
FOR
AMARANTH AT
NORTH BRUNSWICK
PHASE 2

BLOCK 148.11 LOT 1.01
TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY
NEW JERSEY

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101 Crawford Corner Road,
Suite 3400
Hightstown, NJ 07733
Phone: 732.983.1950
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CORP. (NY)

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PROJECT NUMBER: 170019498 DRAWING NAME: C-UTILS

SHEET TITLE: UTILITIES PLAN



REV	DATE	DRAWN BY	DESCRIPTION

REV	DATE	DRAWN BY	DESCRIPTION

Michael F. Gallagher
Michael F. Gallagher
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE48719
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. # 2462796600

PRELIMINARY AND FINAL
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NORTH BRUNSWICK
PHASE 2**
BLOCK 14.8.11 LOT 1.01
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MIDDLESEX COUNTY
NEW JERSEY

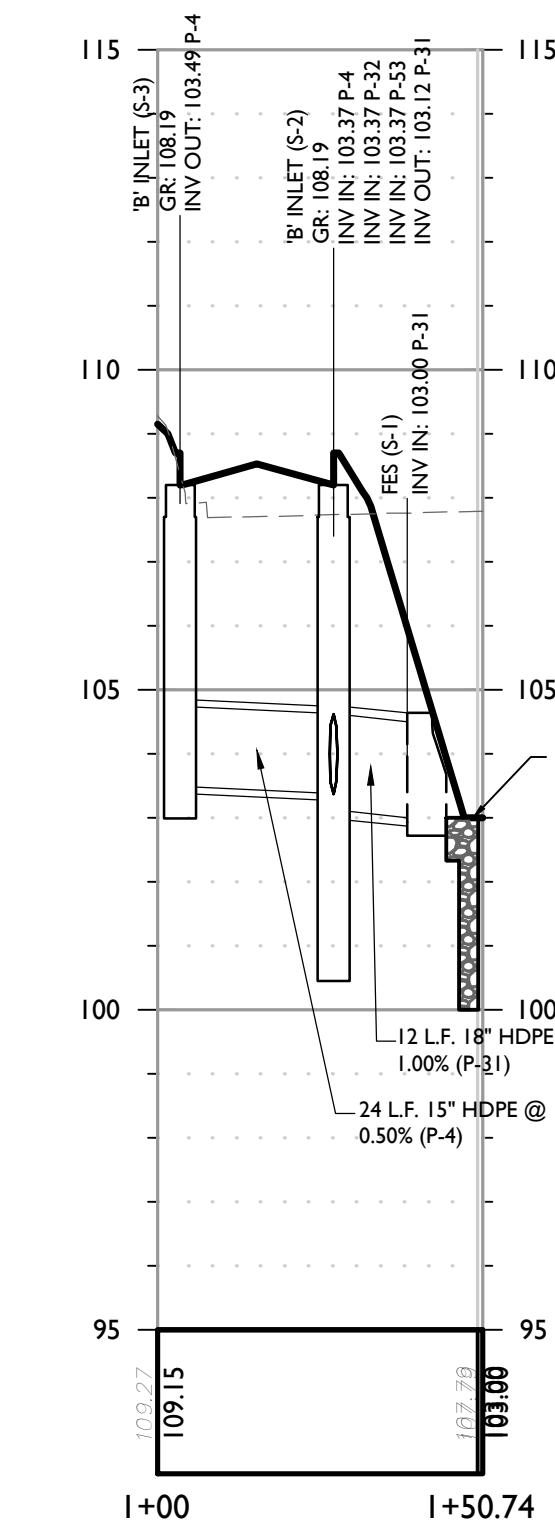
Colliers HOLMDEL (Headquarters)
101 Crawford Corner Road,
Suite 3400
Holmdel, NJ 07733
Phone: 732.983.1950
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CONSULTING

SCALE: AS SHOWN DATE: 8/7/2023 DRAWN BY: PCS CHECKED BY: MFG
PROJECT NUMBER: 170019498 DRAWING NAME: C-PROF

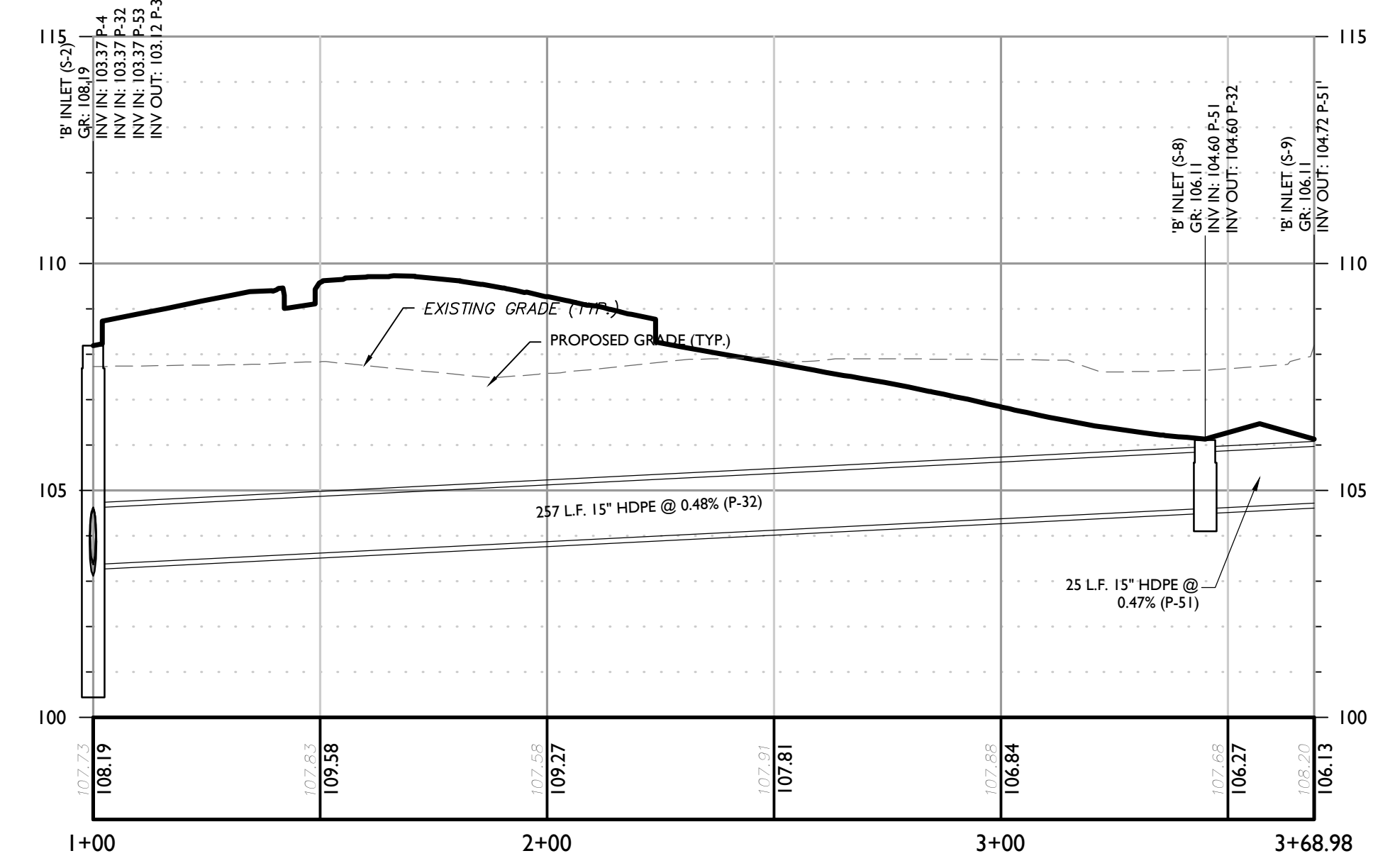
SHEET TITLE: PROFILES

SHEET NUMBER: 7 of 21

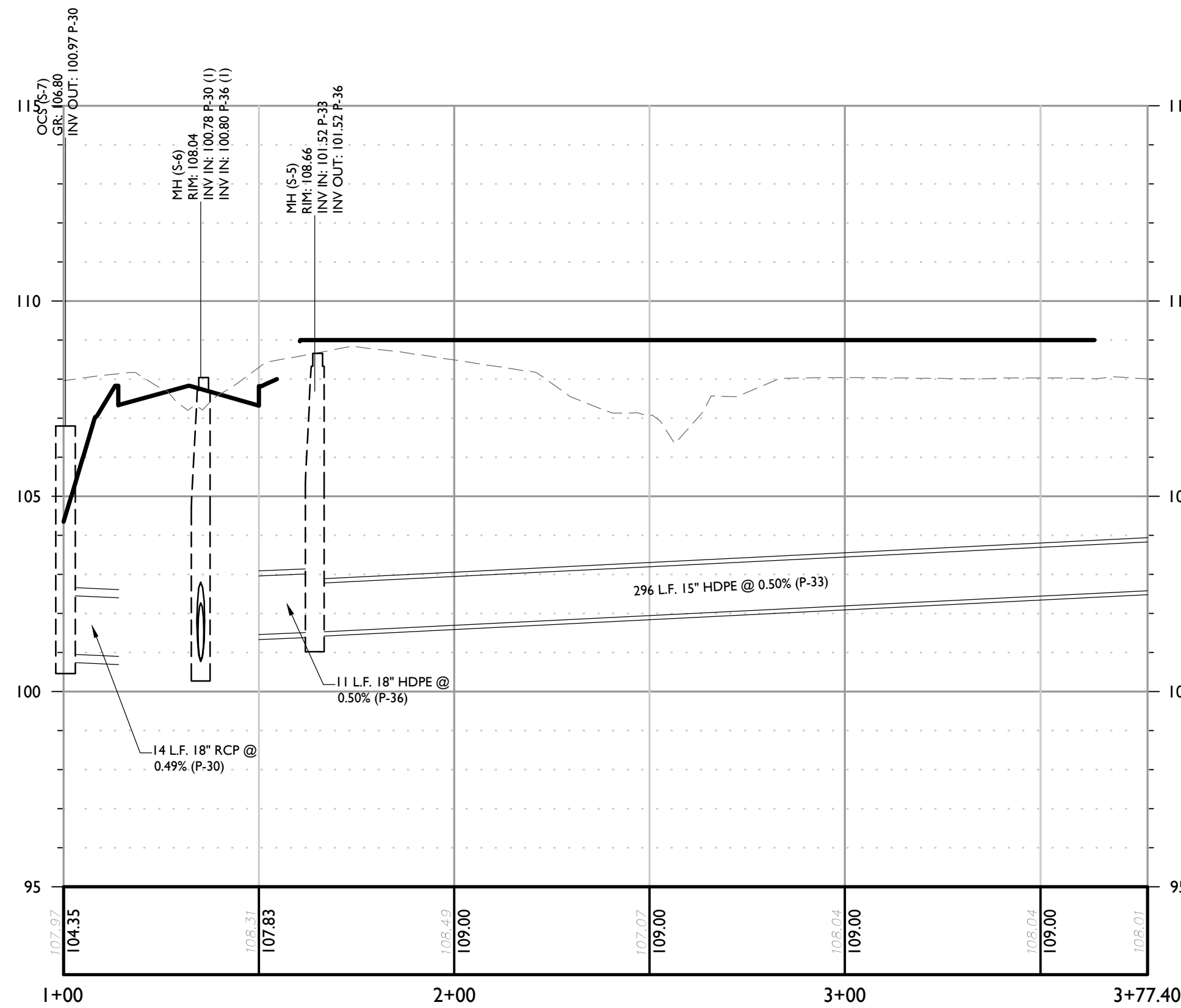
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



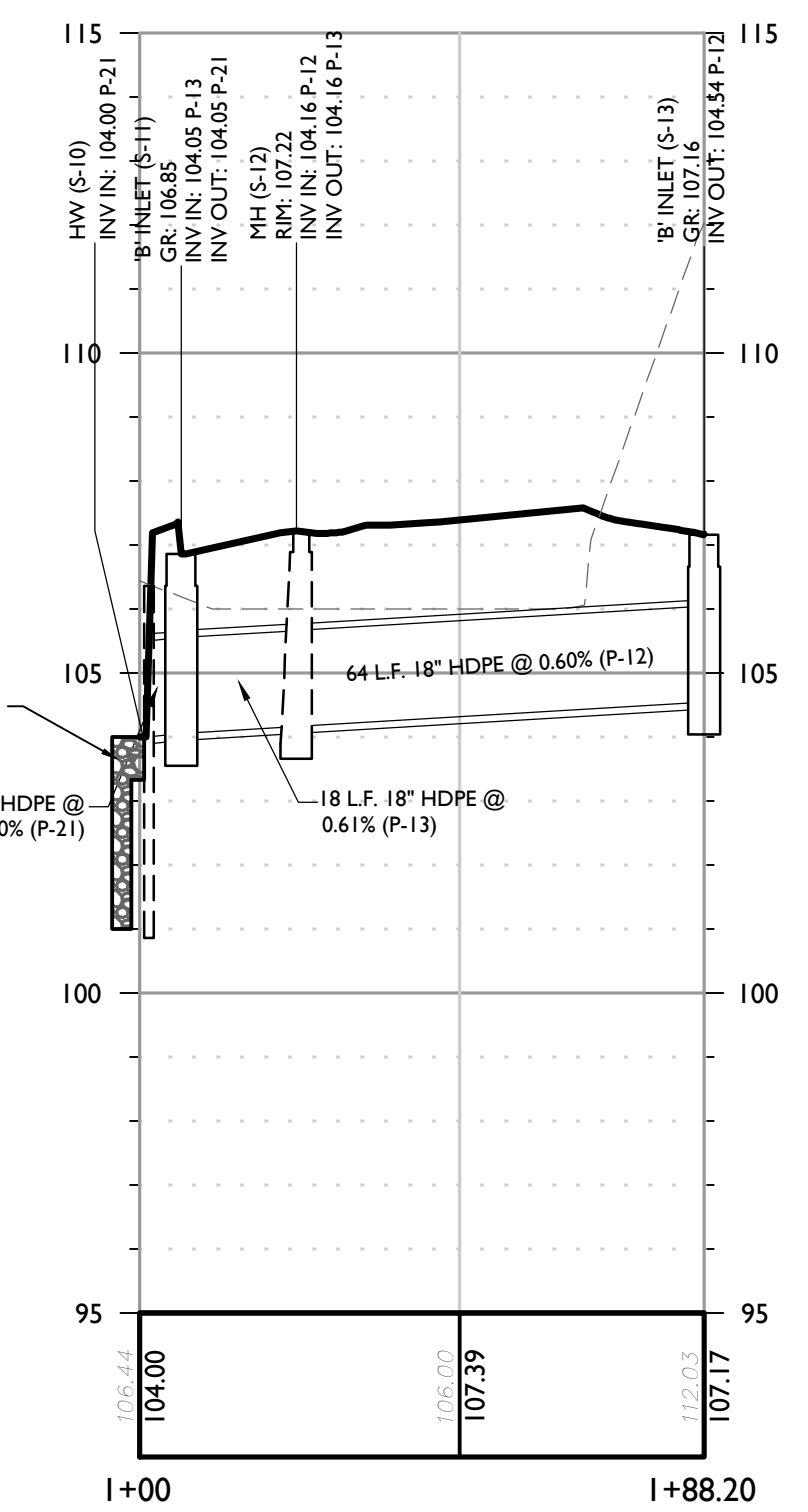
PROFILE OF FES S-1 - 'B' INLET S-3
HORIZONTAL : 1" = 30'
VERTICAL : 1" = 3'



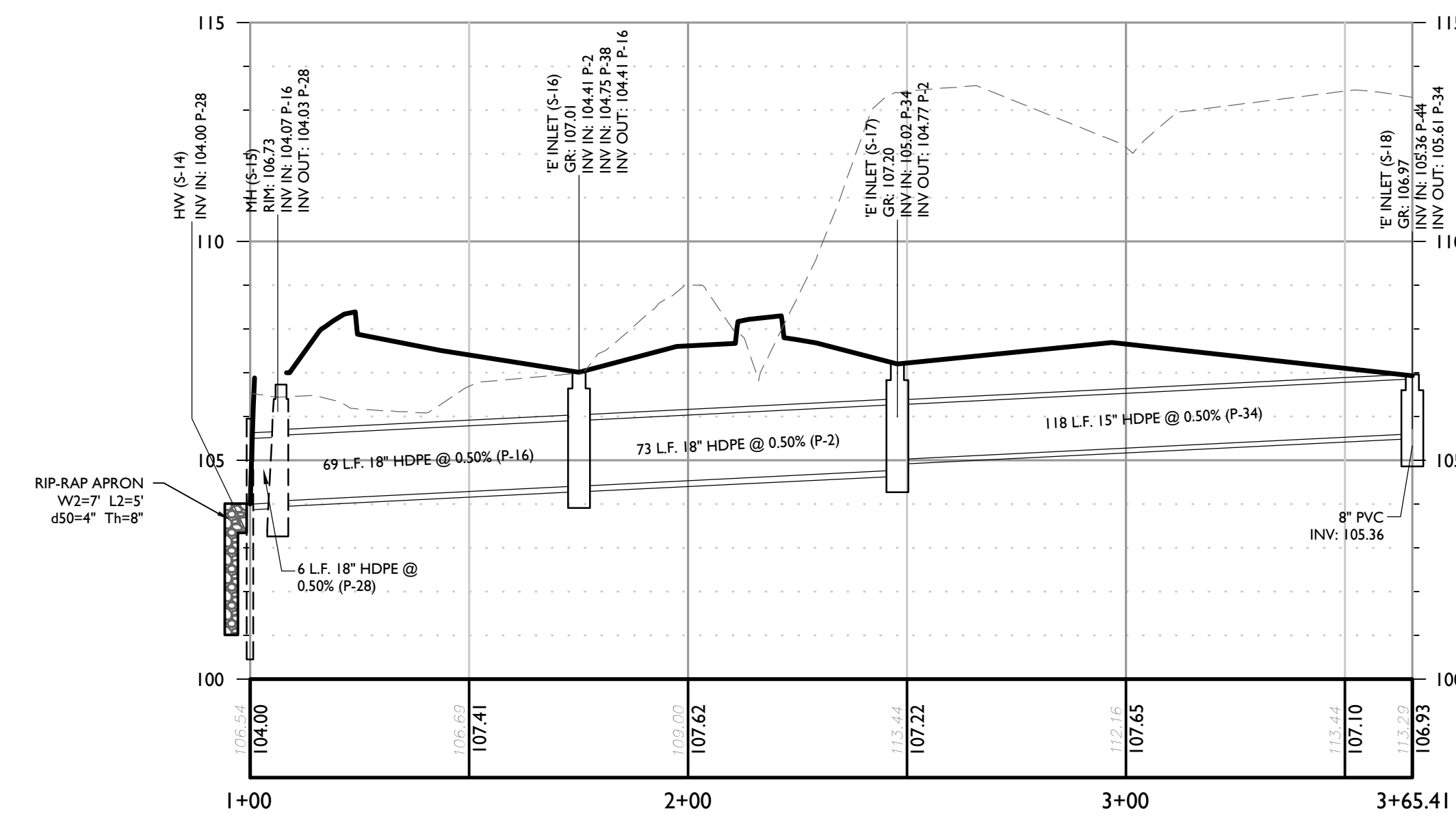
PROFILE OF 'B' INLET S-2 - 'B' INLET S-9
HORIZONTAL : 1" = 30'
VERTICAL : 1" = 3'



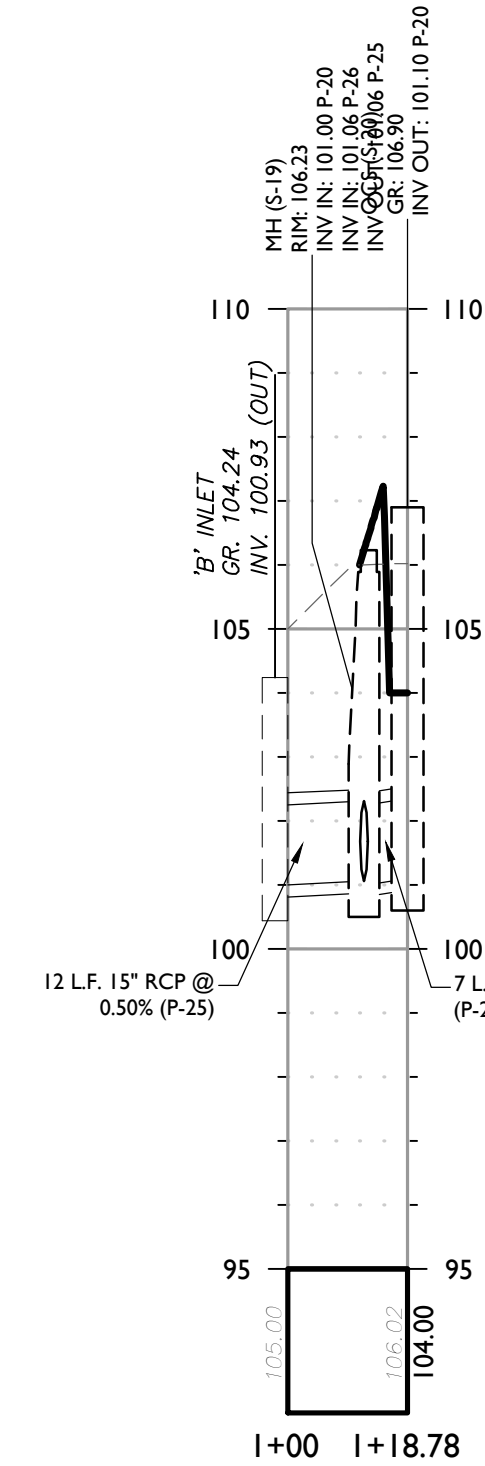
PROFILE OF OCS S-7 - OCS S-4
HORIZONTAL : 1" = 30'
VERTICAL : 1" = 3'



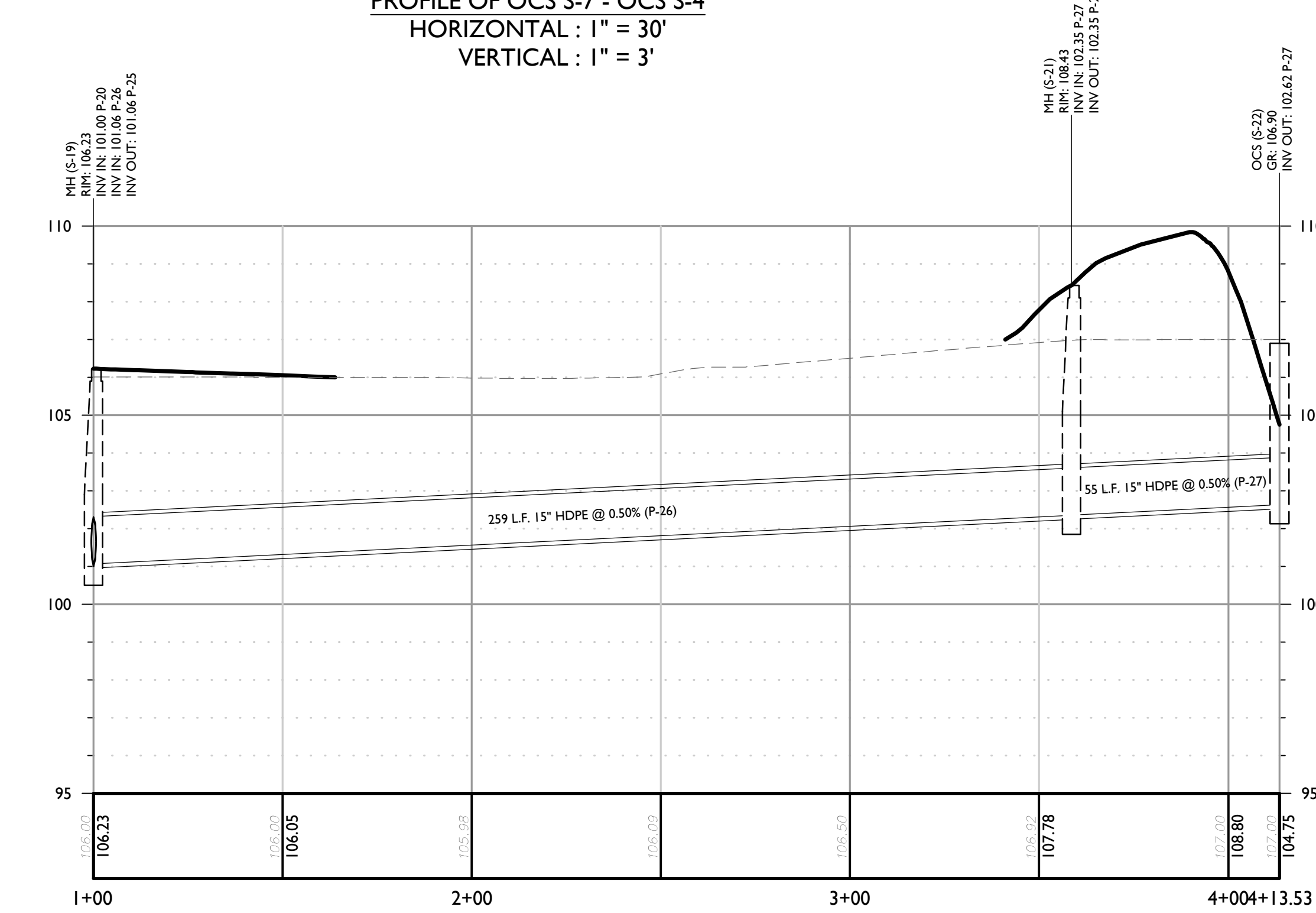
PROFILE OF HW S-10 - 'B' INLET S-13
HORIZONTAL : 1" = 30'
VERTICAL : 1" = 3'



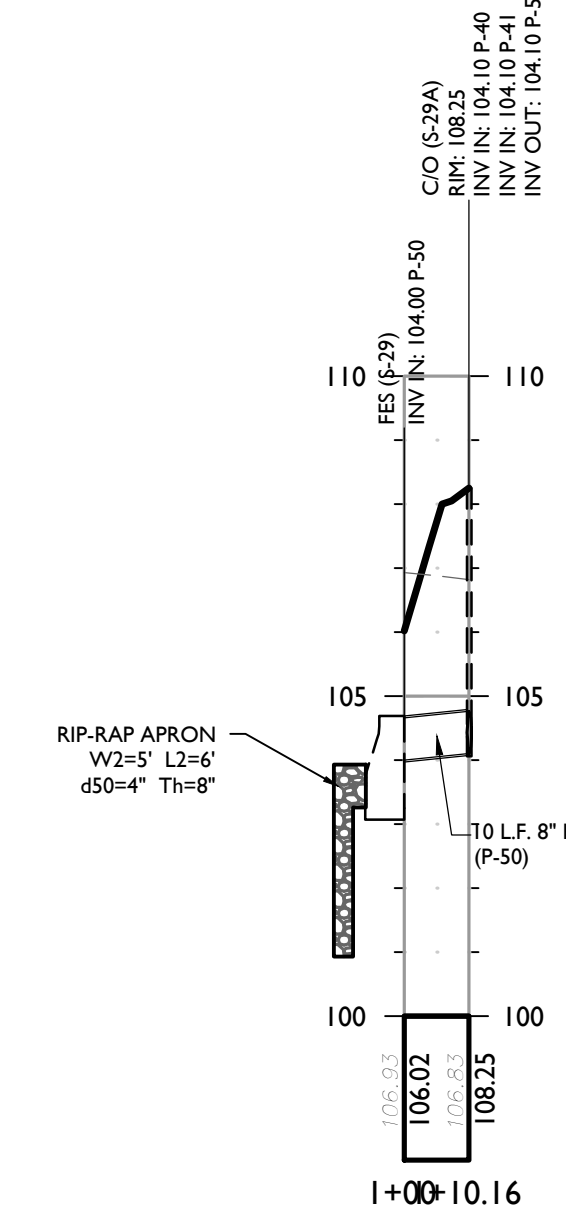
PROFILE OF HW S-15 - 'E' INLET S-18
HORIZONTAL : 1" = 30'
VERTICAL : 1" = 3'



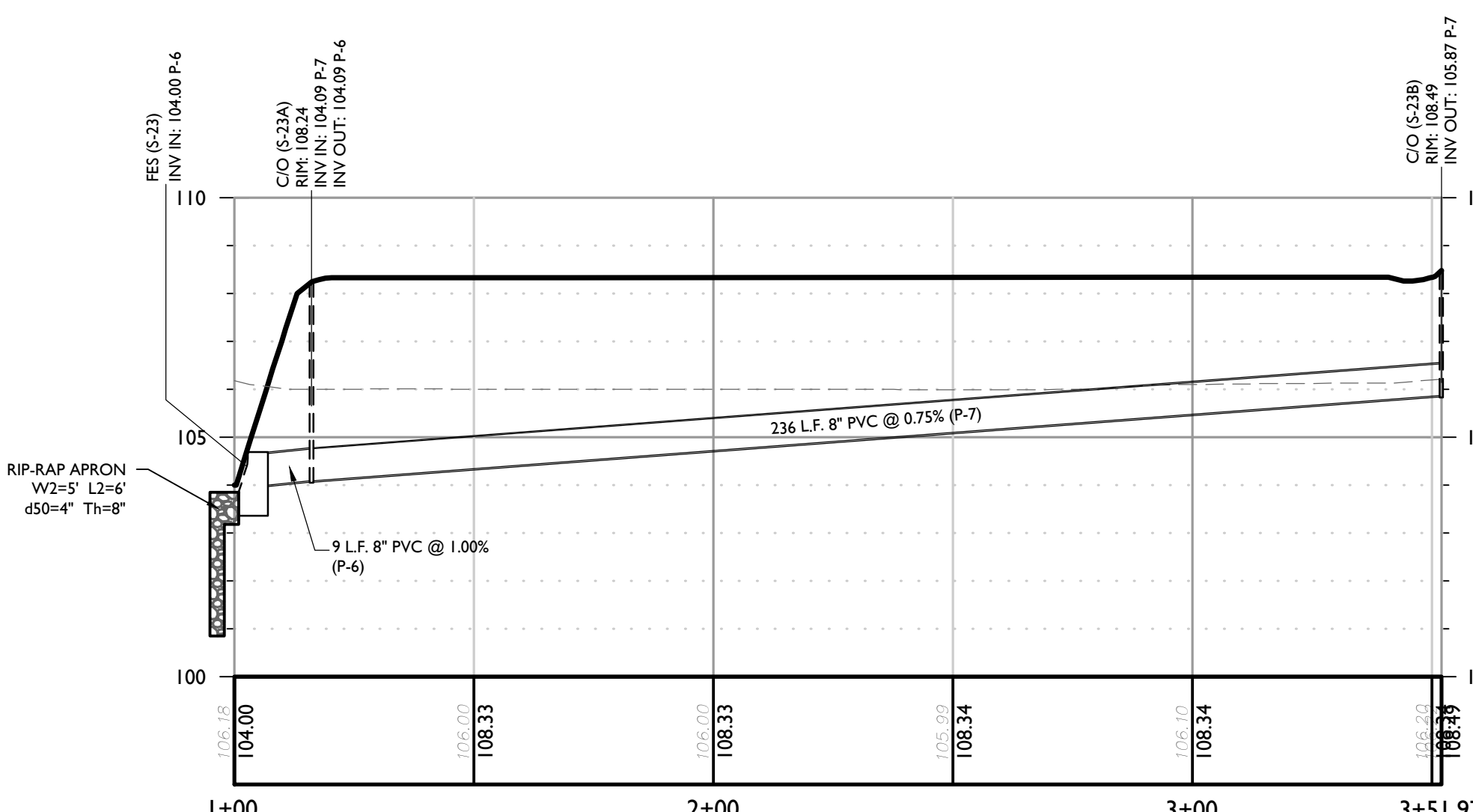
PROFILE OF EXISTING 'B' STRUCTURE - OCS S-20
HORIZONTAL : 1" = 30'
VERTICAL : 1" = 3'



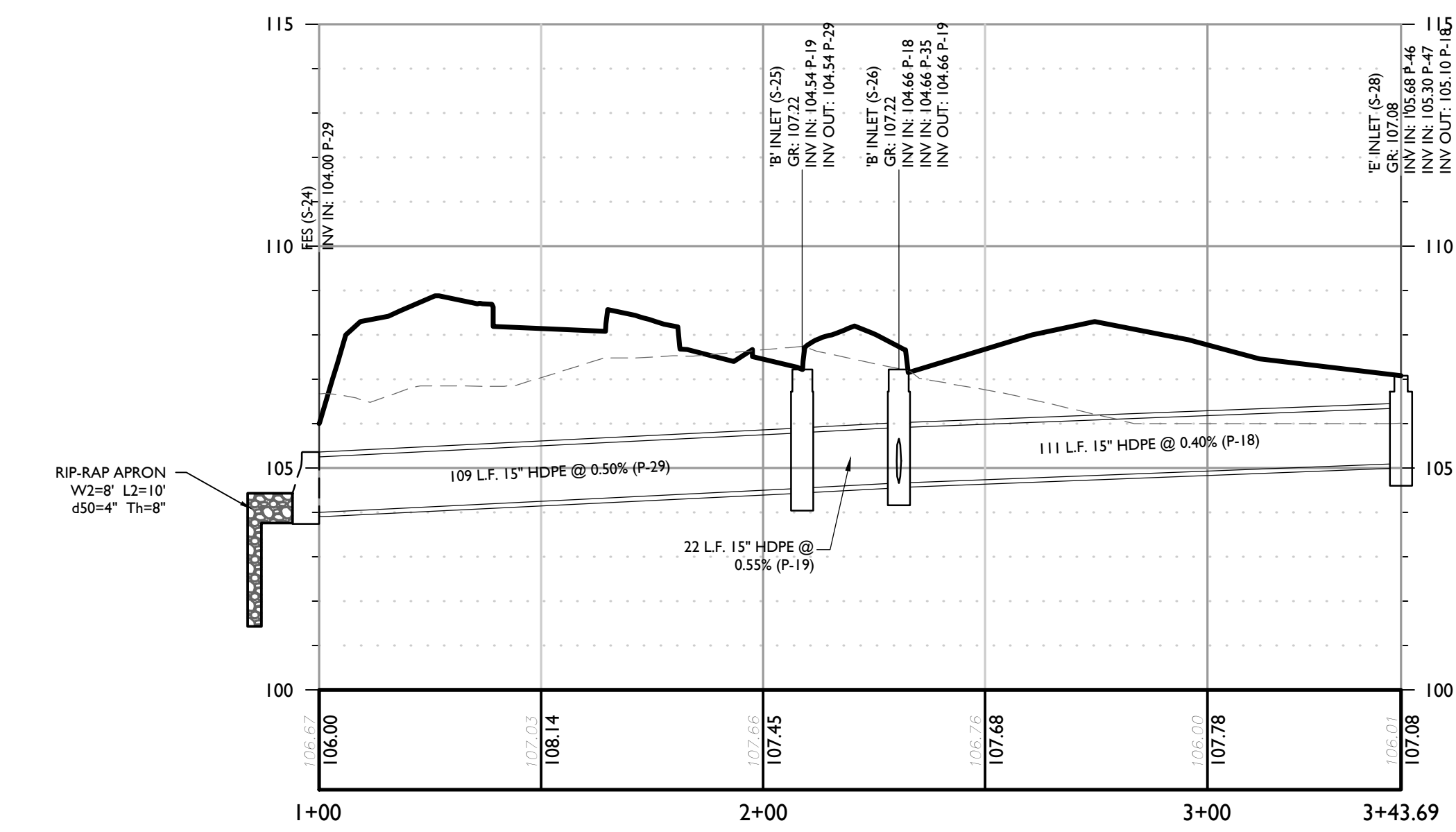
PROFILE OF MH S-19 - OCS S-22
HORIZONTAL : 1" = 30'
VERTICAL : 1" = 3'



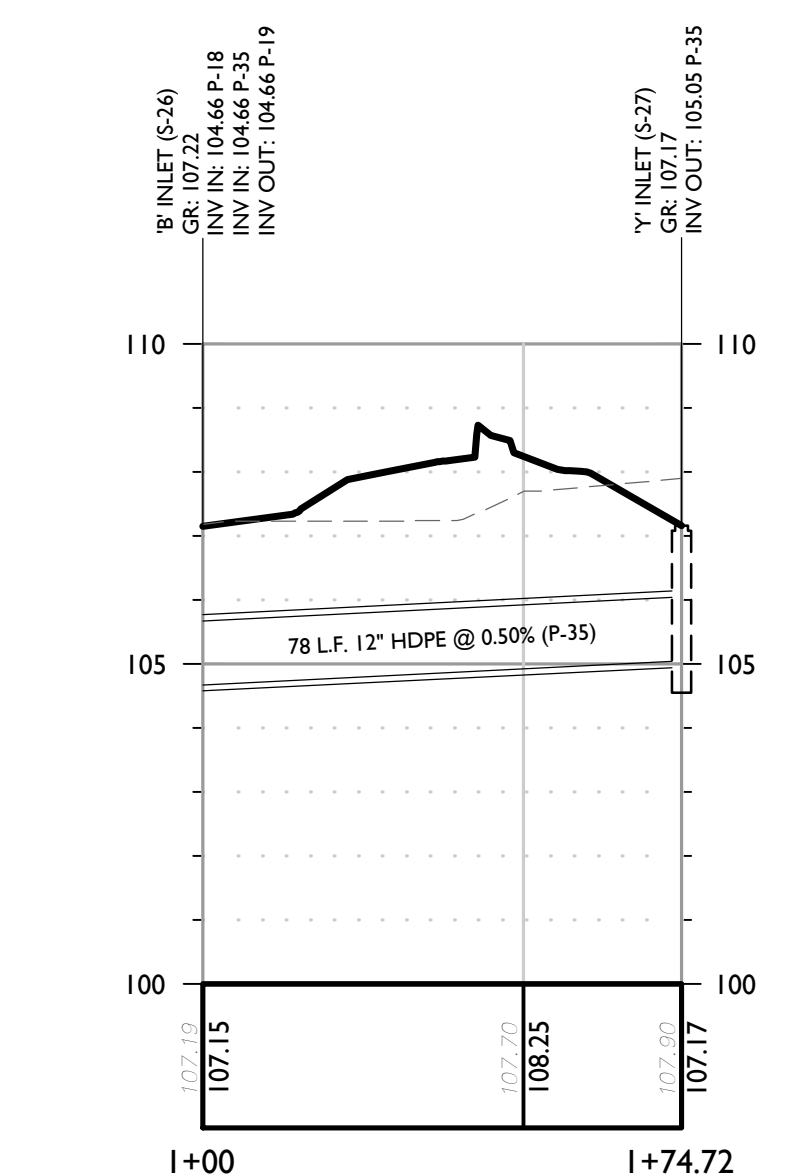
PROFILE OF FES S-29 - CO S-29A
HORIZONTAL : 1" = 30'
VERTICAL : 1" = 3'



PROFILE OF FES S-23 - CO S-23B
HORIZONTAL : 1" = 30'
VERTICAL : 1" = 3'



PROFILE OF FES S-24 - 'E' INLET S-28
HORIZONTAL : 1" = 30'
VERTICAL : 1" = 3'



PROFILE OF 'B' INLET S-26 - 'Y' INLET S-27
HORIZONTAL : 1" = 30'
VERTICAL : 1" = 3'

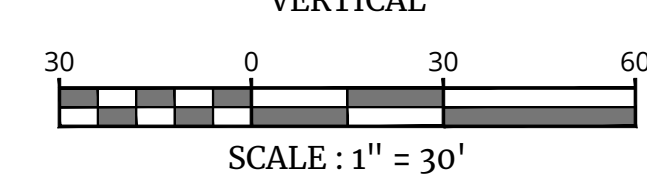
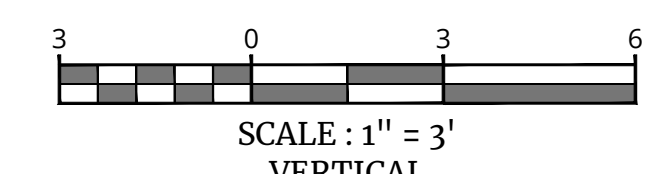


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Michael F. Gallagher
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 648719
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A.#. 24627986600

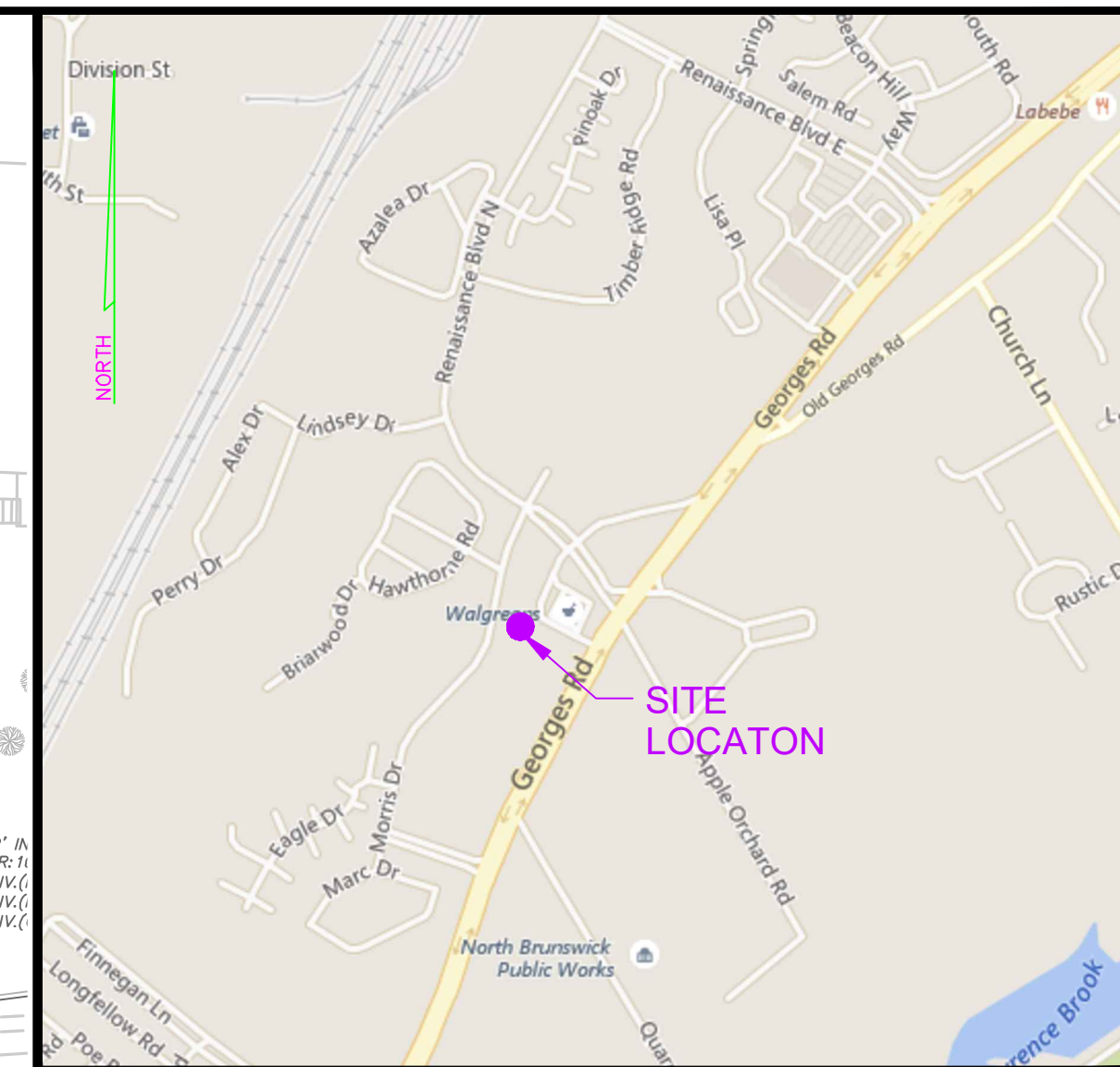
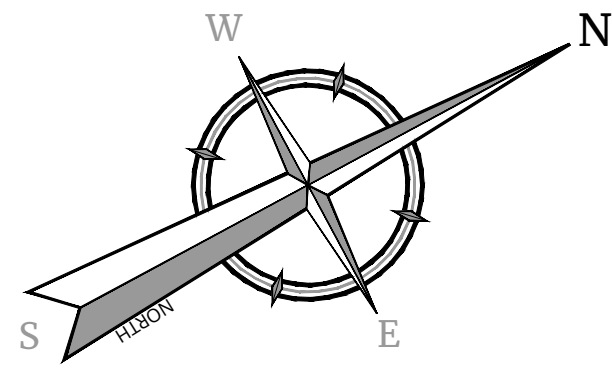
PRELIMINARY AND FINAL
MAJOR SITE PLAN
FOR
AMARANTH AT
NORTH BRUNSWICK
PHASE 2
BLOCK 14.8.11 LOT 1.01
TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY
NEW JERSEY

Colliers Engineering & Design
101 Crawford Corner Road,
Suite 3400
Holmdel, NJ 07733
Phone: 732.983.1950
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CORP. (TWO)

Table with columns: SCALE, DATE, DRAWN BY, CHECKED BY, PROJECT NUMBER, DRAWING NAME

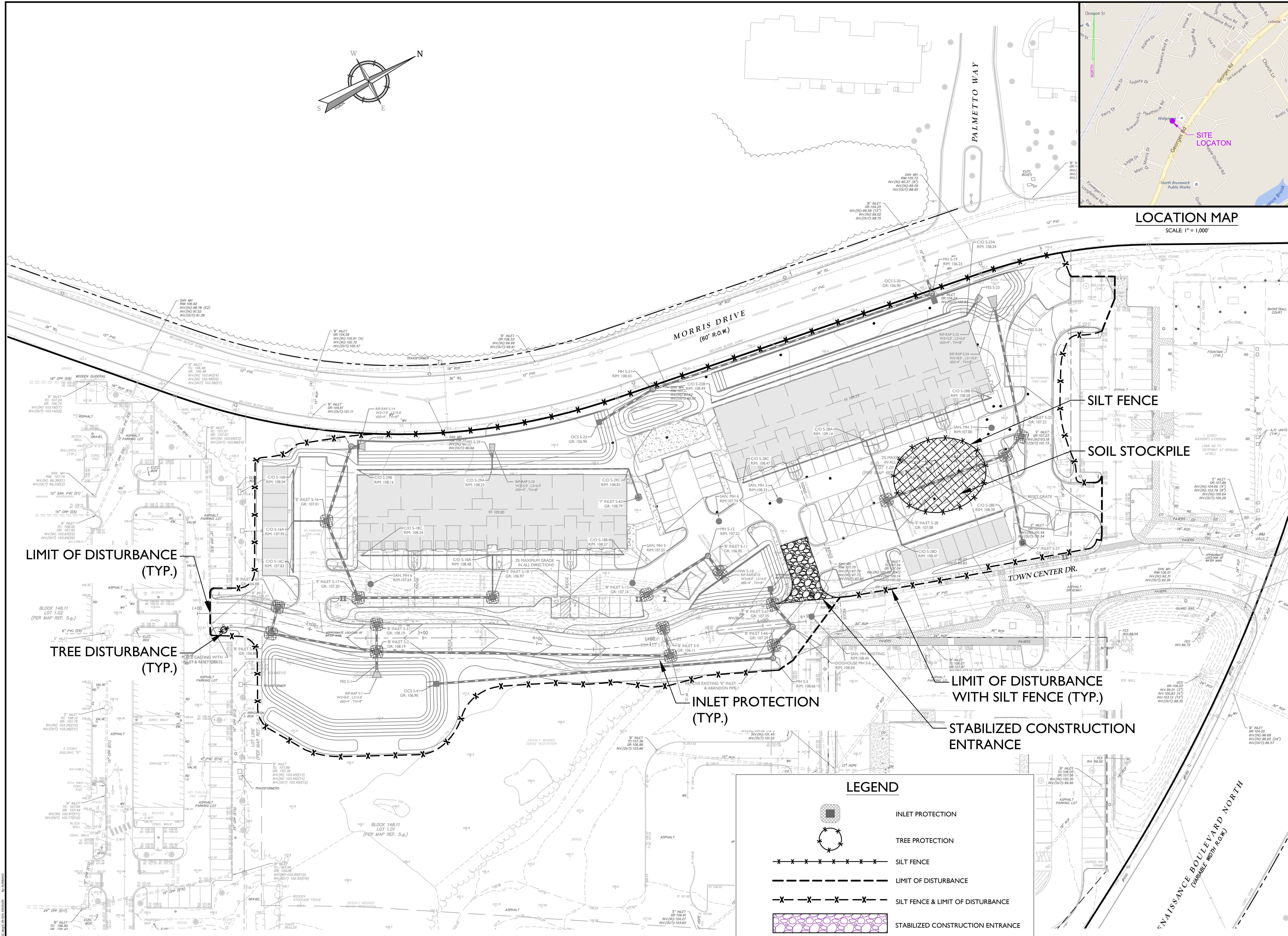
SHEET TITLE: PROFILES

SHEET NUMBER: 8 of 21



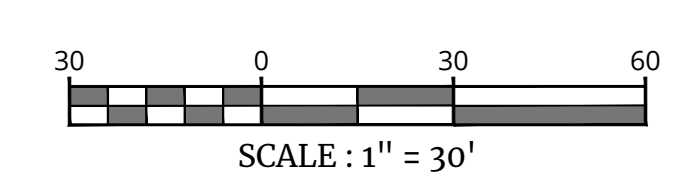
LOCATION MAP
SCALE: 1" = 1,000'

REV	DATE	DESCRIPTION



LEGEND

- INLET PROTECTION
- TREE PROTECTION
- SILT FENCE
- LIMIT OF DISTURBANCE
- SILT FENCE & LIMIT OF DISTURBANCE
- STABILIZED CONSTRUCTION ENTRANCE
- TOPSOIL STOCKPILE



TOTAL LIMIT OF DISTURBANCE = 189,320 ± SF (4.346 ± AC.)
THIS PLAN SHALL BE USED FOR SOIL EROSION AND SEDIMENT CONTROL PURPOSES ONLY.

MFG

Michael F. Gallagher
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE48719
COLLIERS ENGINEERING & DESIGN, INC.
NJ, C.O.A.#: 3046279660

PRELIMINARY AND FINAL
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FOR
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NORTH BRUNSWICK
PHASE 2**

BLOCK 148.11 LOT 1.01
TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY
NEW JERSEY

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DOING BUSINESS AS MASER CORP. (NY)

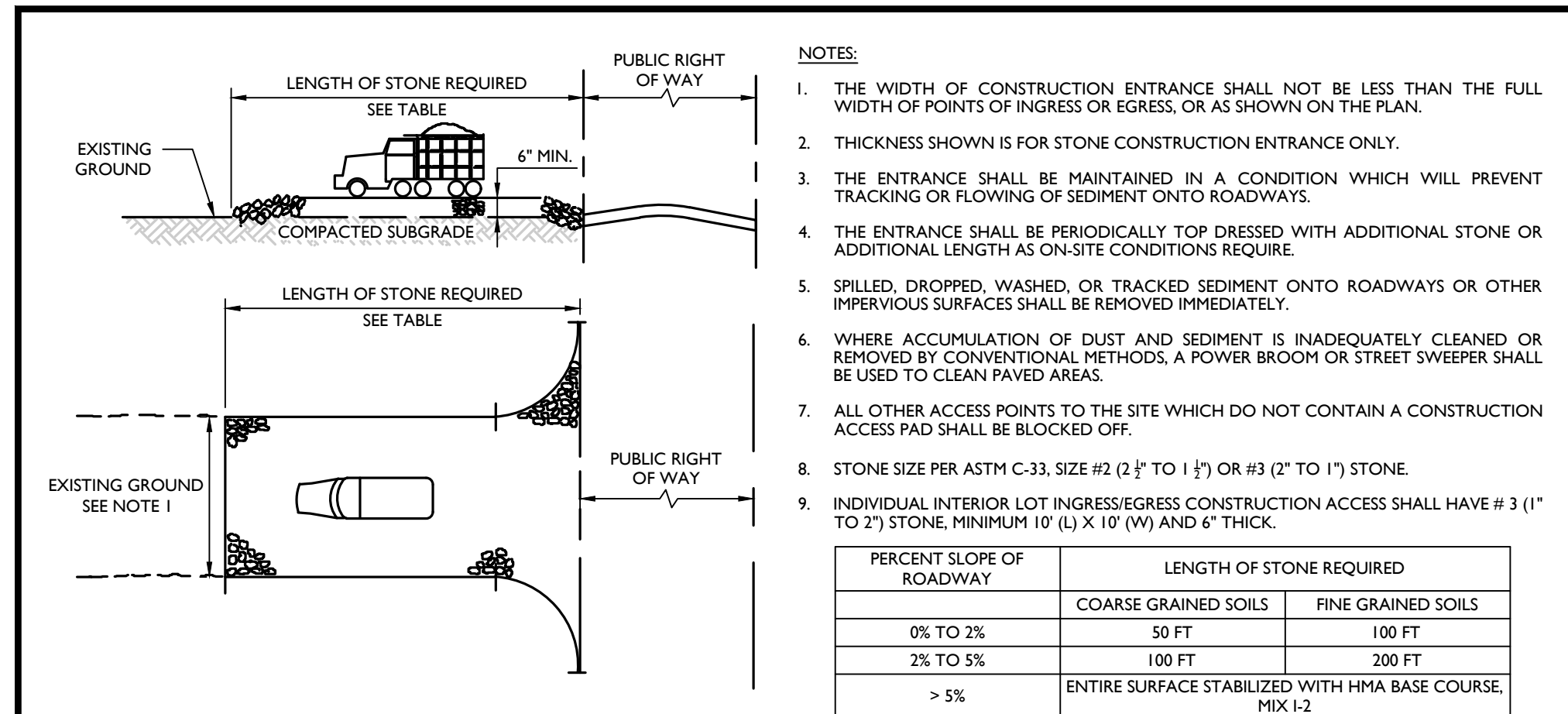
SHEET NUMBER	DATE	DRAWN BY	CHECKED BY
AS SHOWN	8/7/2023	PCS	MFG

PROJECT NUMBER: 170019498
DRAWING NAME: C-SECC

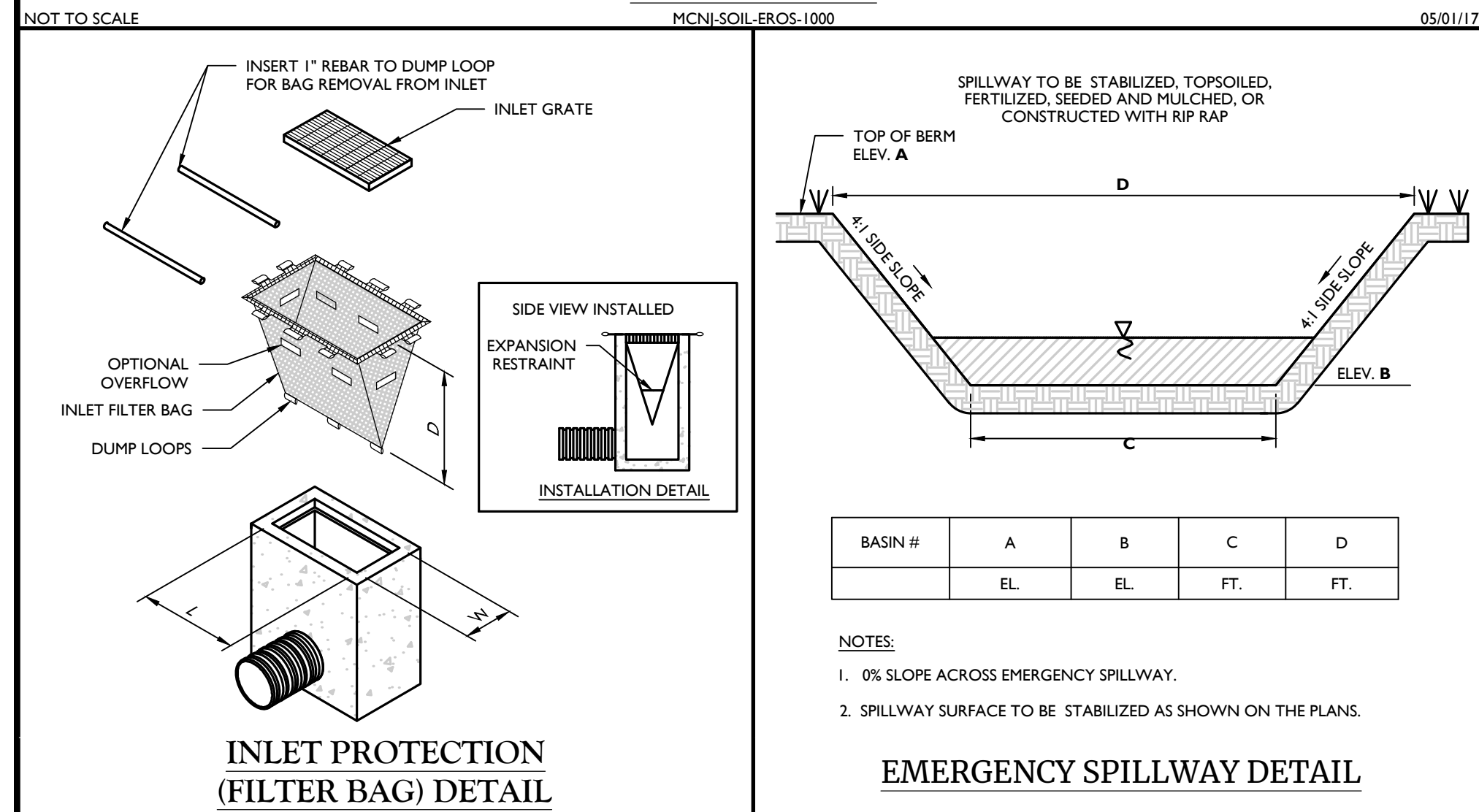
SHEET TITLE: **SOIL EROSION & SEDIMENT CONTROL PLAN**

SHEET NUMBER: **9 of 21**

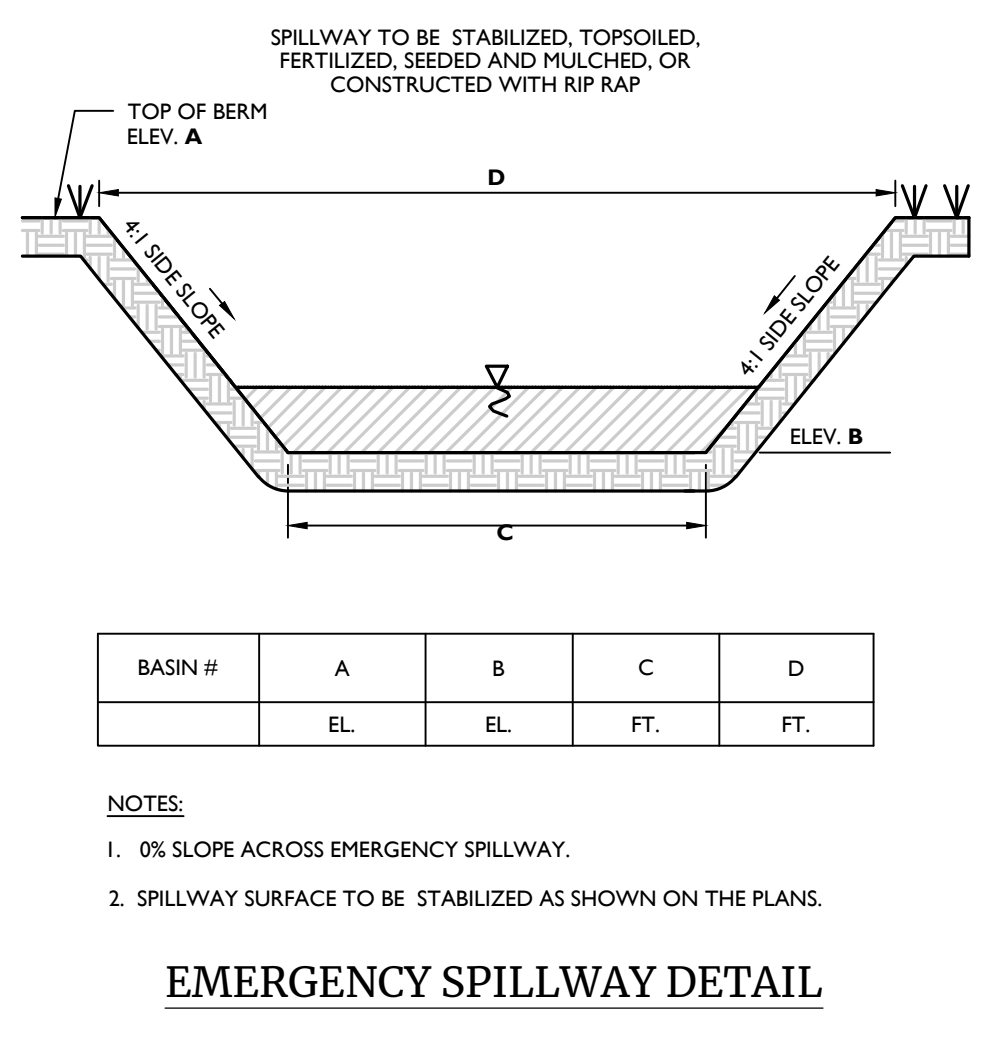
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



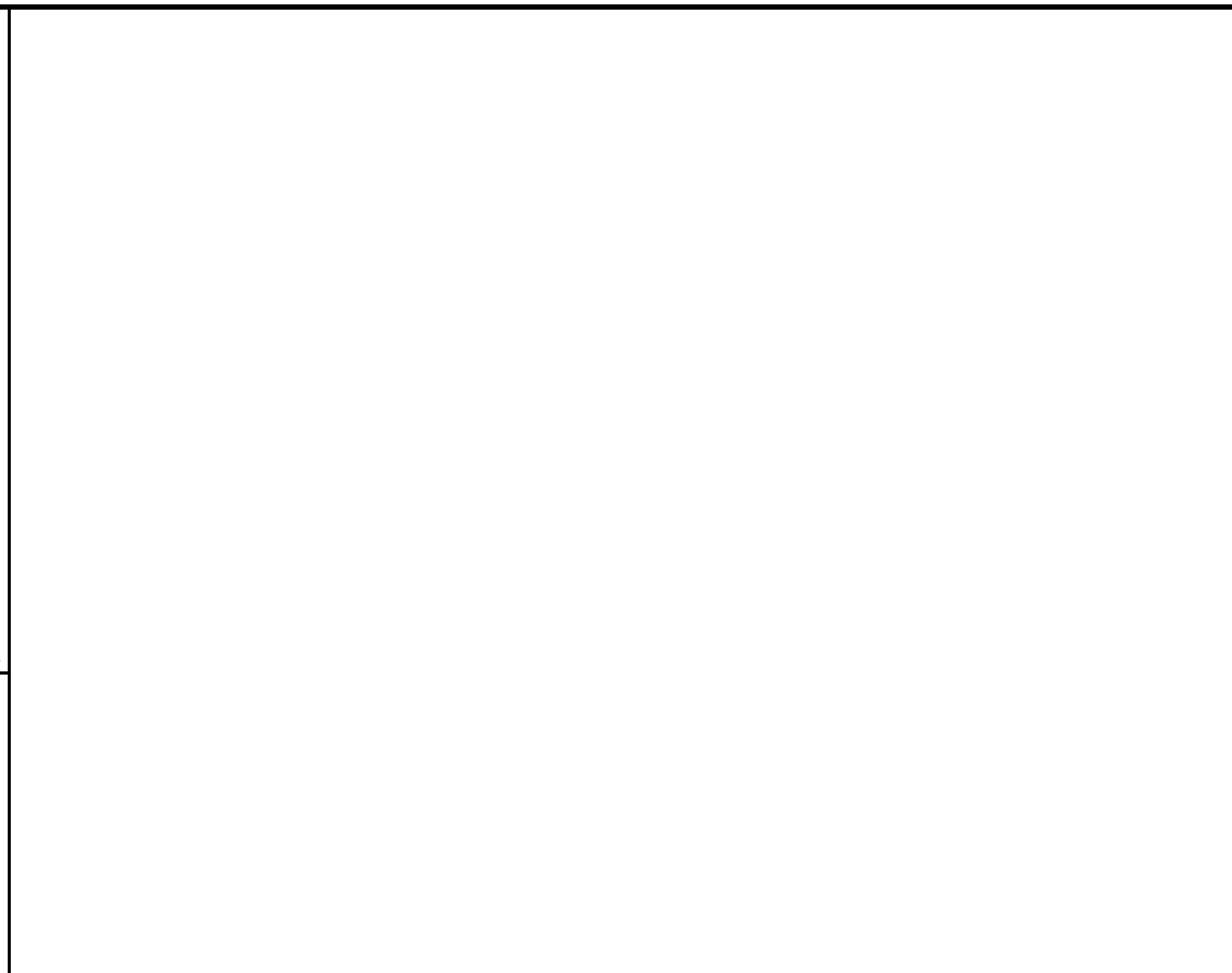
STABILIZED CONSTRUCTION ACCESS DETAIL
MCNJ-SOIL-EROS-1000



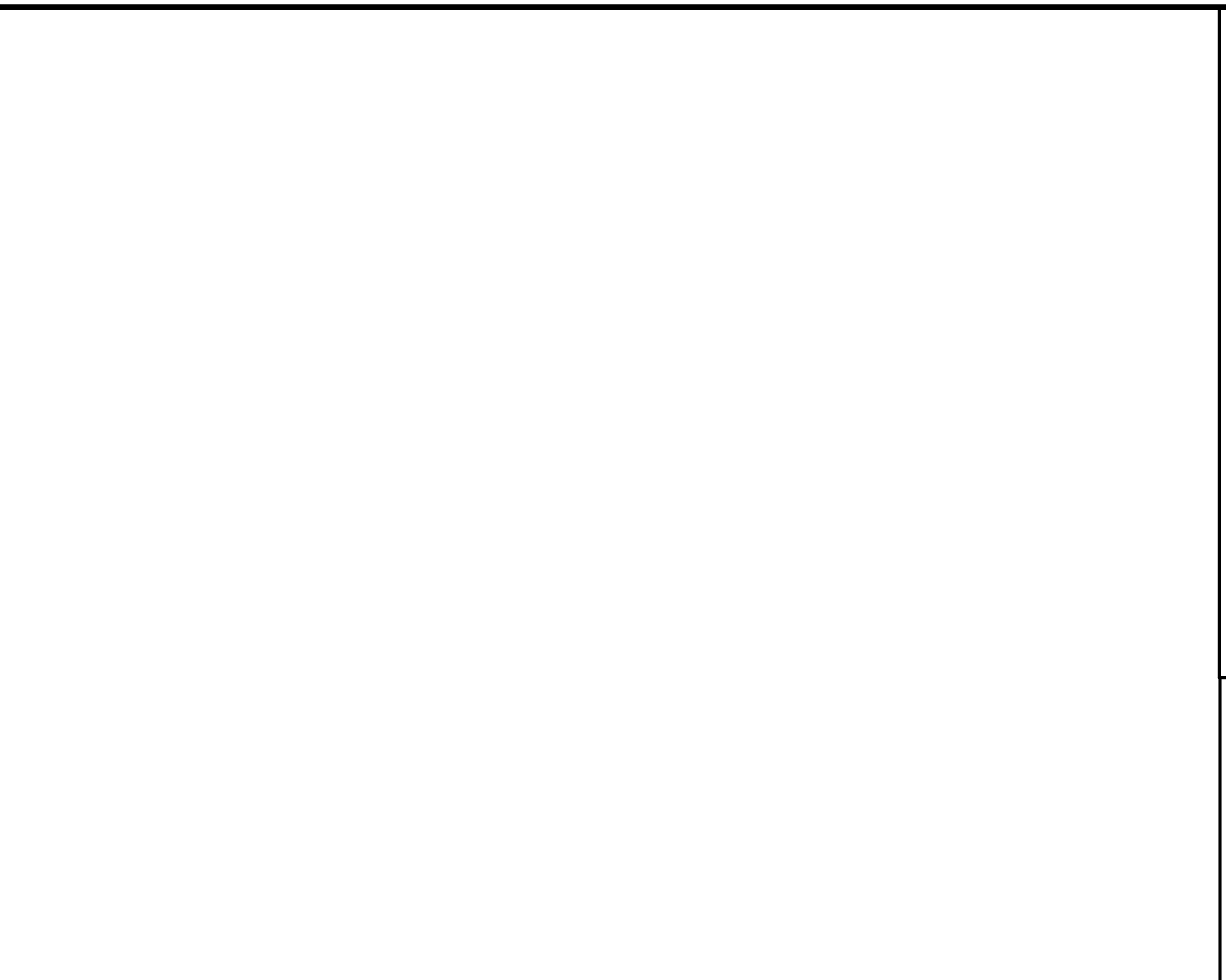
INLET PROTECTION (FILTER BAG) DETAIL
MCNJ-SOIL-EROS-1500



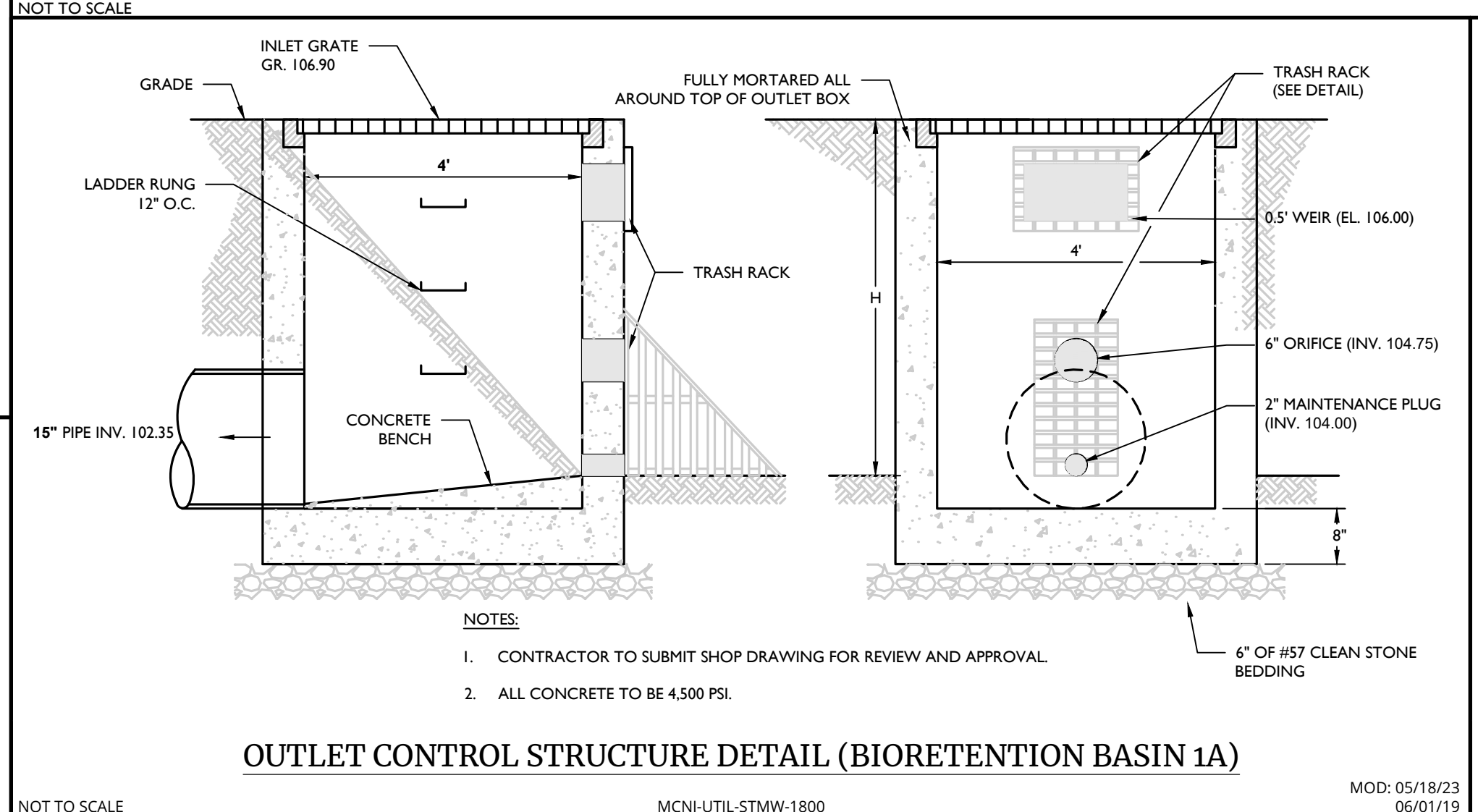
EMERGENCY SPILLWAY DETAIL
MCNJ-UTIL-STMW-2300



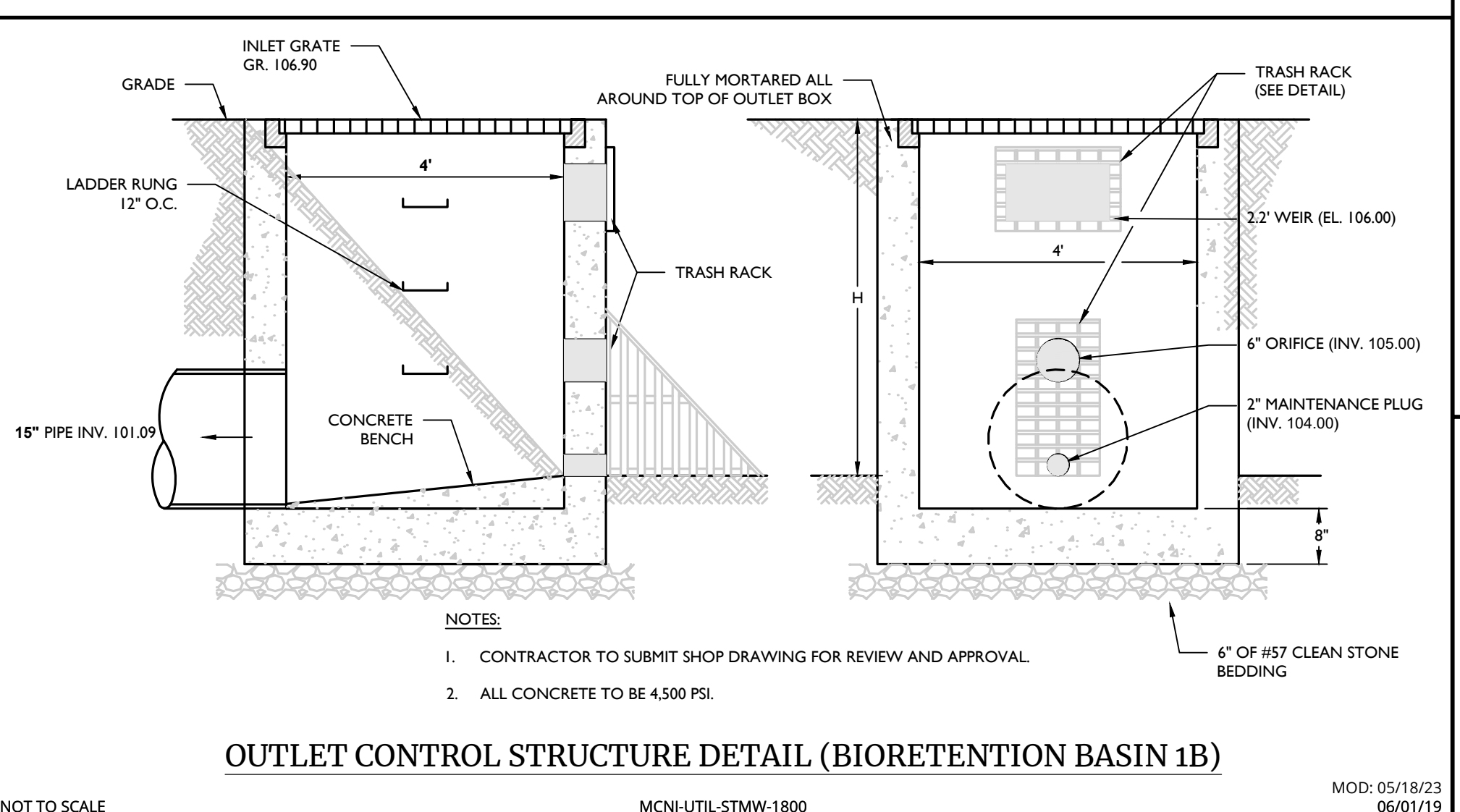
OUTLET CONTROL STRUCTURE DETAIL (BIORETENTION BASIN 1A)
MCNJ-UTIL-STMW-1800



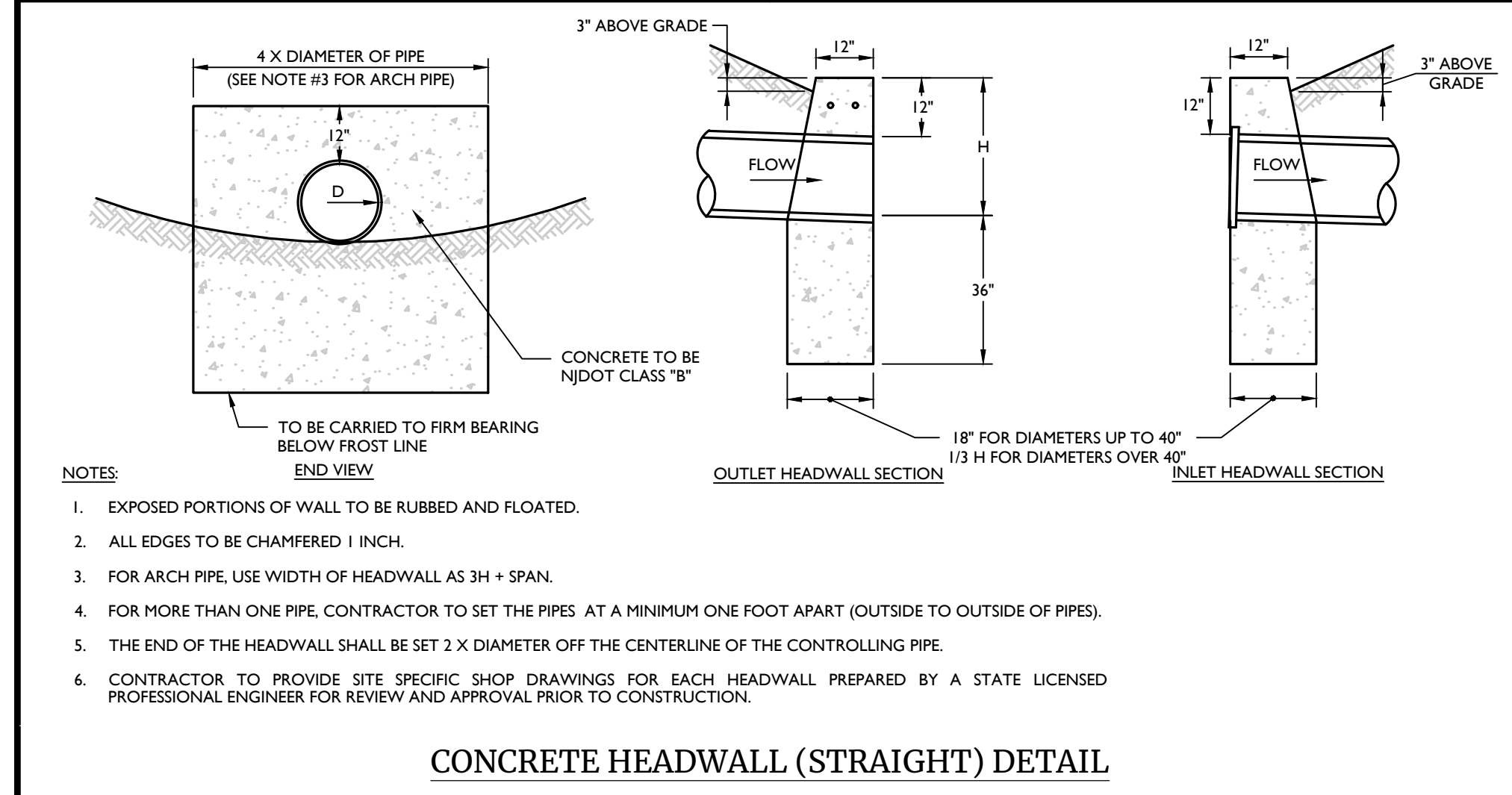
OUTLET CONTROL STRUCTURE DETAIL (BIORETENTION BASIN 1B)
MCNJ-UTIL-STMW-1800



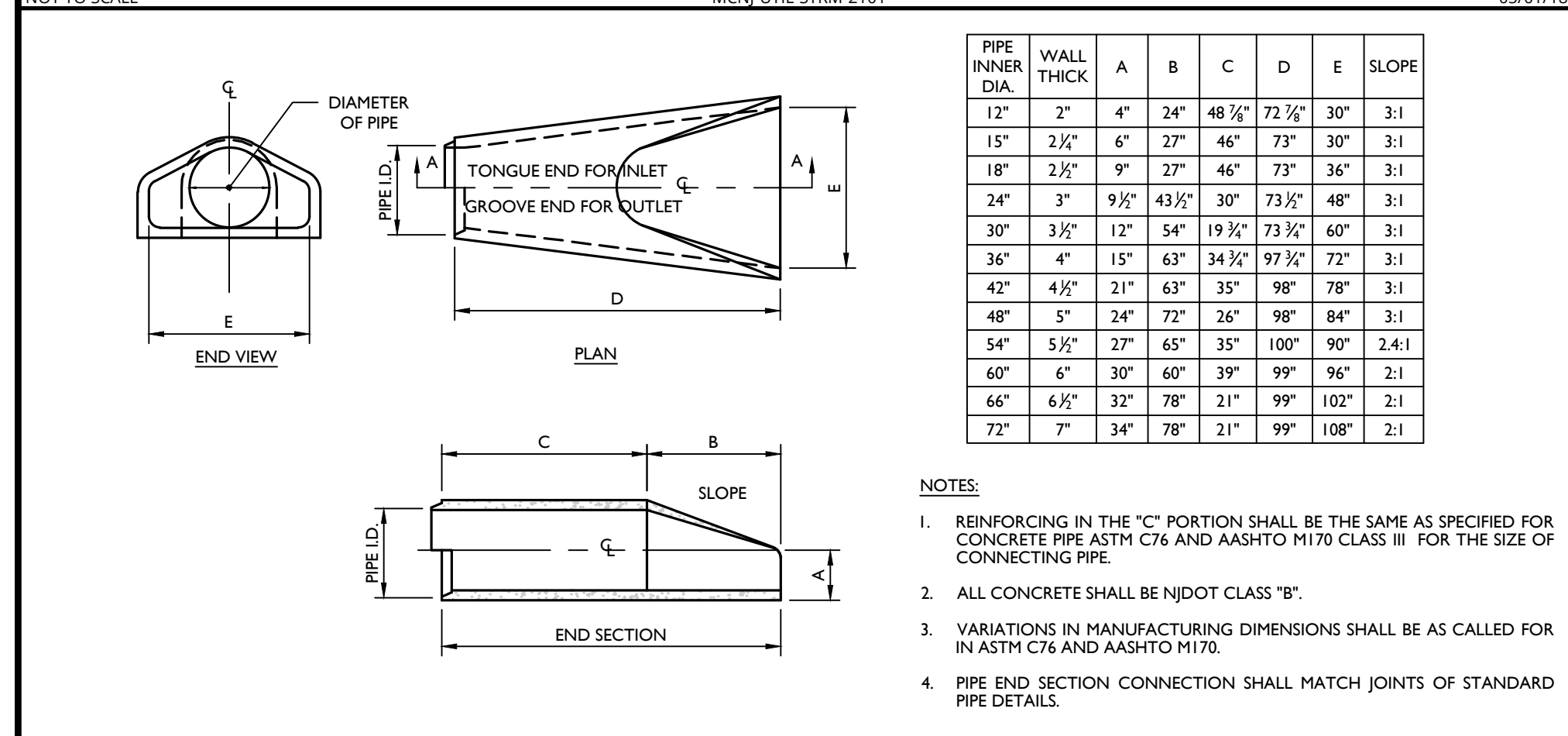
OUTLET CONTROL STRUCTURE DETAIL (BIORETENTION BASIN 2A)
MCNJ-UTIL-STMW-1800



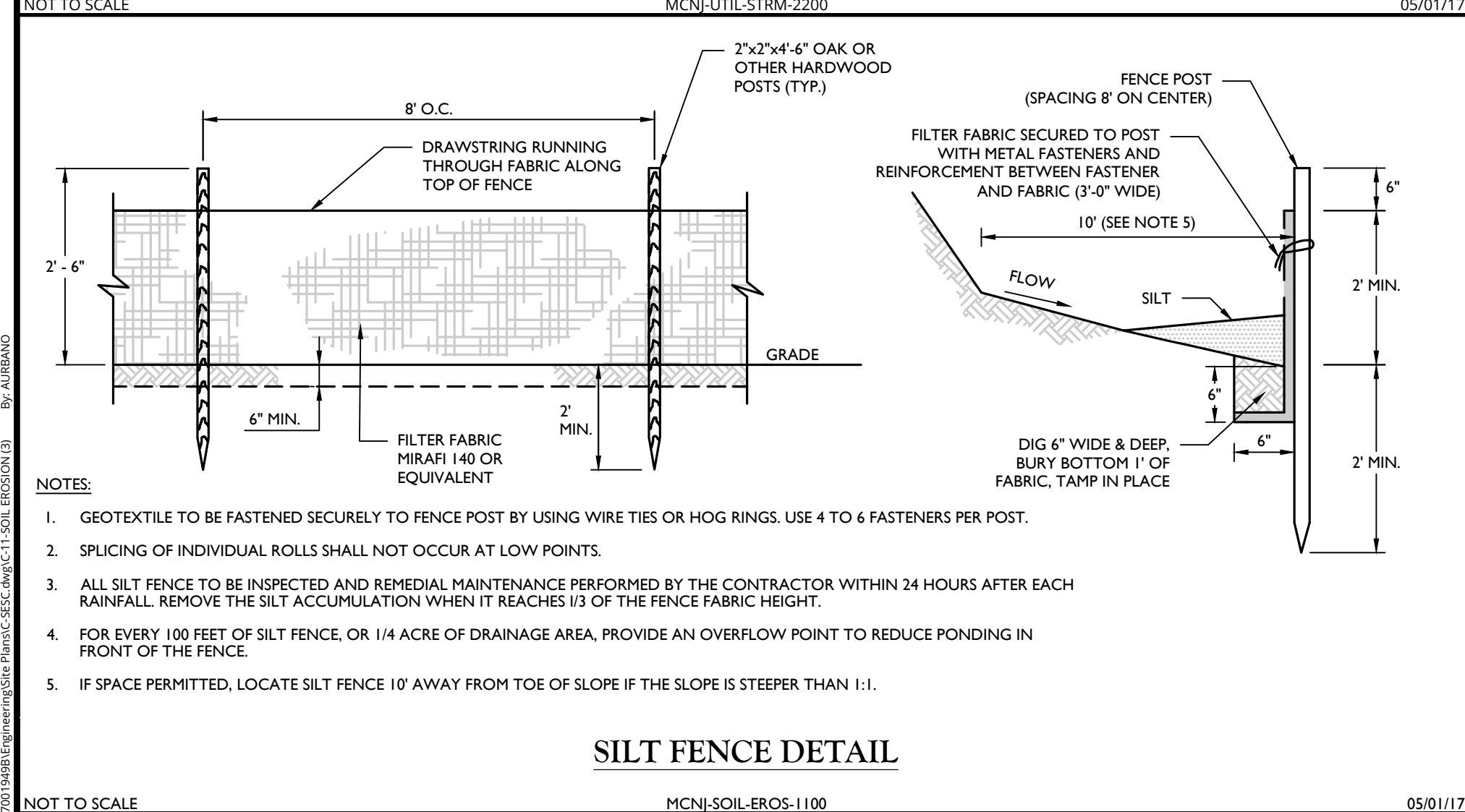
OUTLET CONTROL STRUCTURE DETAIL (BIORETENTION BASIN 2B)
MCNJ-UTIL-STMW-1800



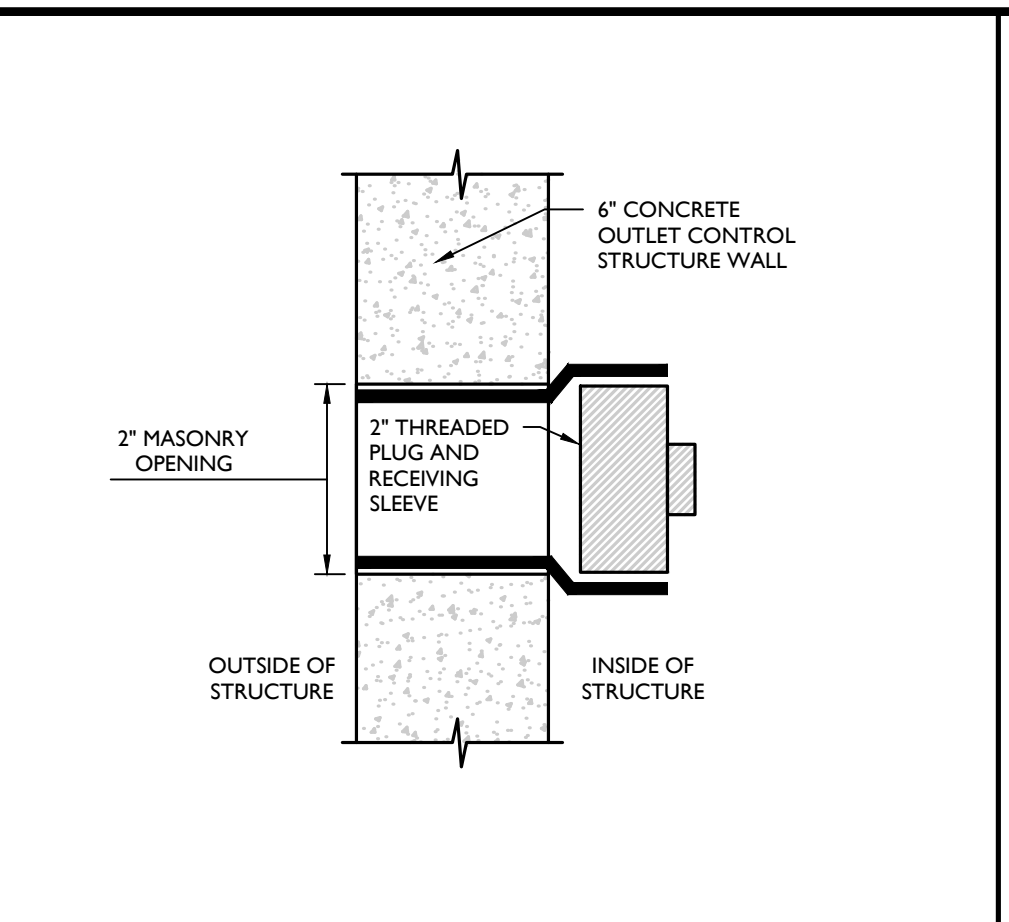
CONCRETE HEADWALL (STRAIGHT) DETAIL
MCNJ-UTIL-STM-2101



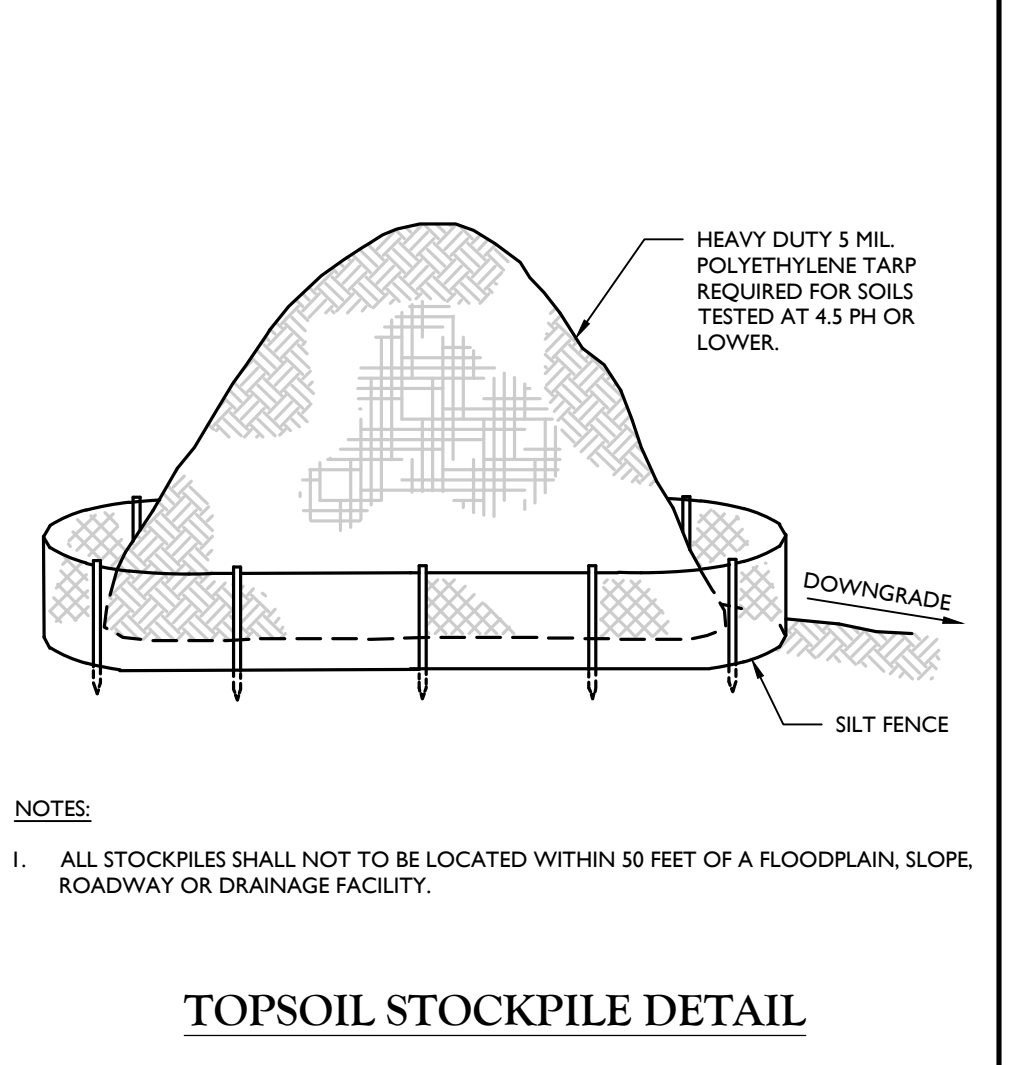
CONCRETE FLARED END SECTION DETAIL
MCNJ-UTIL-STM-2200



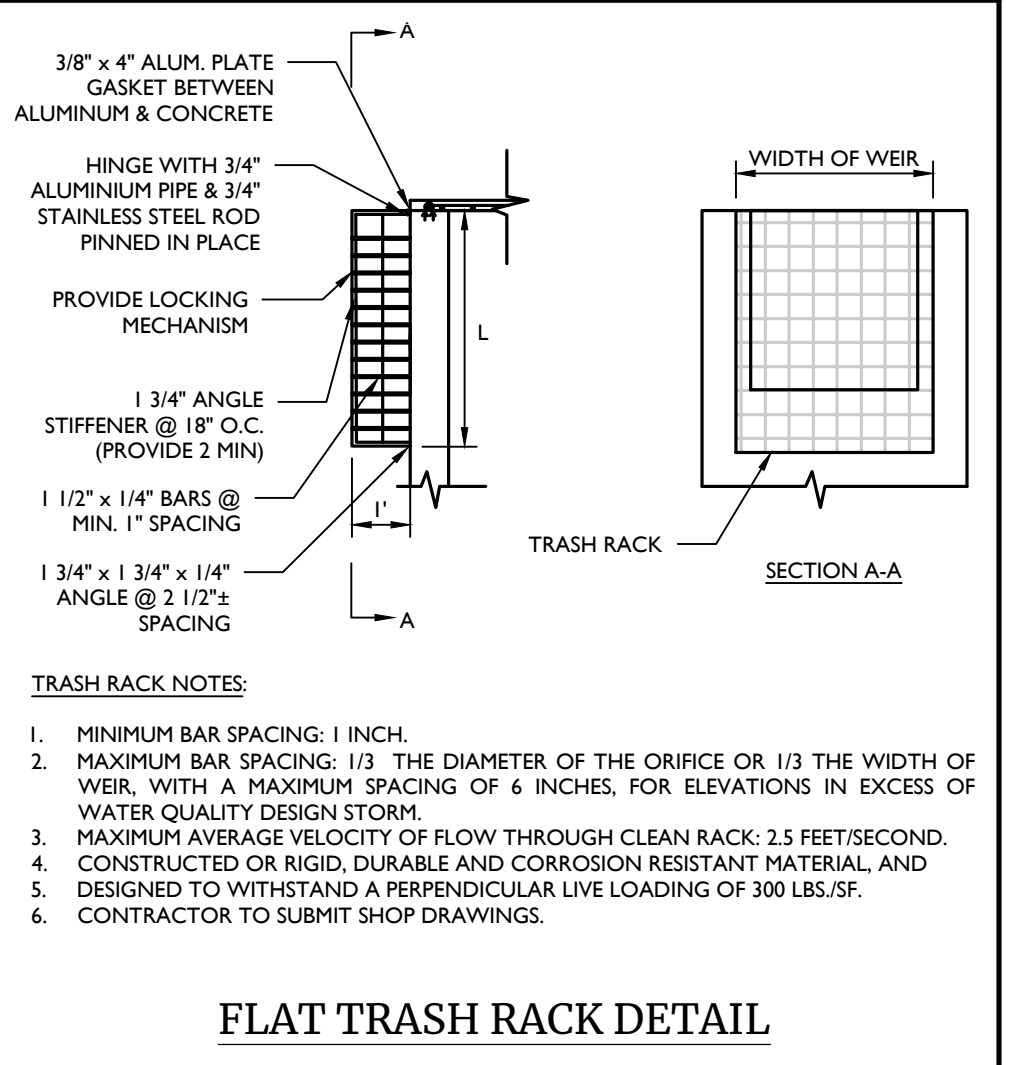
SILT FENCE DETAIL
MCNJ-SOIL-EROS-1100



OUTLET CONTROL STRUCTURE MAINTENANCE CLEANOUT PLUG
MCNJ-UTIL-STMW-4000



TOPSOIL STOCKPILE DETAIL
MCNJ-SOIL-EROS-2500



FLAT TRASH RACK DETAIL
MCNJ-UTIL-STMW-2000

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Doing Business as **MASER CONSULTANTS**

811
Call before you dig.
PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF DCAVATORS, SPOILERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

NO.	DATE	DESCRIPTION

NO.	DATE	DESCRIPTION

Michael F. Gallager

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NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE48719
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. # 24642796950

PRELIMINARY AND FINAL MAJOR SITE PLAN
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MIDDLESEX COUNTY
NEW JERSEY

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SCALE: AS SHOWN DATE: 8/7/2023 DRAWN BY: PCS CHECKED BY: MFG
PROJECT NUMBER: 170019498 DRAWING NAME: C-5152

SHEET TITLE: **SOIL EROSION & SEDIMENT CONTROL PLAN**
SHEET NUMBER: 11 of 21

SOIL DECOMPACTION AND TESTING REQUIREMENTS

MCNJ-SOIL-NOTE-2000 05/01/18

A. SOIL COMPACTION TESTING REQUIREMENTS

- SUBGRADE SOILS PRIOR TO THE APPLICATION OF TOPSOIL "STANDARD FOR VEGETATIVE COVER" NOTES SHALL BE FREE OF EXCESSIVE COMPACTION TO A DEPTH OF 4.8 INCHES TO ENHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER (SEE "STANDARD FOR VEGETATIVE COVER" NOTES FOR TOPSOIL REQUIREMENTS).
- AREAS OF THE SITE WHICH ARE SUBJECT TO COMPACTION TESTING AND/OR MITIGATION ARE GRAPHICALLY DENOTED ON THE SOIL EROSION CONTROL PLAN. MINIMUM 2 TESTS FOR LIMIT OF DISTURBANCE UP TO 1 ACRE, PLUS 2 TESTS PER ACRE OF LIMIT OF DISTURBANCE THEREAFTER, SPACED EVENLY THROUGHOUT THE SITE.
- COMPACTION TESTING LOCATIONS ARE DENOTED ON THE PLAN. A COPY OF THE PLAN SHALL BE USED TO MARK THE LOCATIONS OF TESTS AND ATTACHED TO THE **COMPACTION REMEDIATION FORM**, AVAILABLE FROM THE LOCAL SOIL CONSERVATION DISTRICT. THIS FORM MUST BE FILLED OUT AND SUBMITTED PRIOR TO RECEIVING A CERTIFICATE OF COMPLIANCE FROM THE DISTRICT.
- IN THE EVENT THAT TESTING INDICATES COMPACTION IN EXCESS OF THE MAXIMUM THRESHOLDS INDICATED FOR THE PROBING OR PENETRATION METHODS (SEE DETAILS), THE CONTRACTOR/OWNER SHALL HAVE THE OPTION TO PERFORM EITHER (1) COMPACTION MITIGATION OVER THE ENTIRE MITIGATION AREA DENOTED ON THE PLAN (EXCLUDING EXEMPT AREAS), OR (2) PERFORM ADDITIONAL DENSITY TESTING TO ESTABLISH THE LIMITS OF EXCESSIVE COMPACTION WHEREUPON ONLY THE EXCESSIVELY COMPACTIONED AREAS WOULD REQUIRE COMPACTION MITIGATION. ADDITIONAL DENSITY TESTING SHALL BE PERFORMED BY A TRAINED, LICENSED PROFESSIONAL.

B. COMPACTION TESTING METHODS

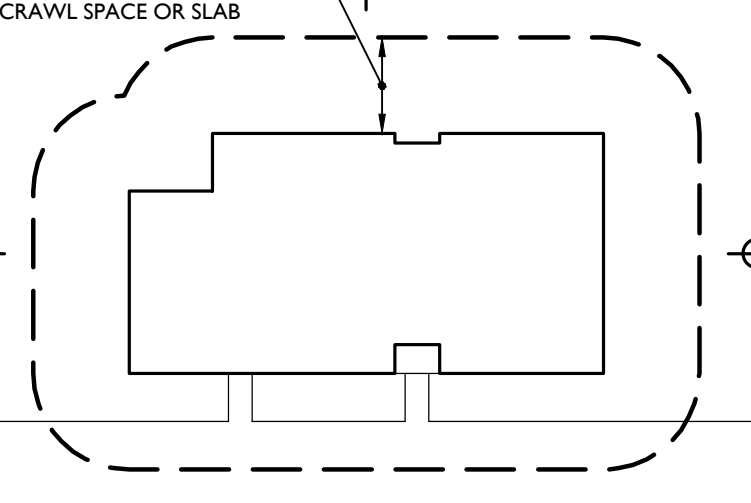
- PROBING WIRE TEST (SEE DETAIL).
- HANDHELD PENETROMETER TEST (SEE DETAIL).
- TUBE BULK DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED).
- NUCLEAR DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED).
- ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND SPECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULK DENSITY MEASUREMENT MAY BE ALLOWED SUBJECT TO DISTRICT APPROVAL.

NOTE: SOIL COMPACTION TESTING IS NOT REQUIRED IF WHEN SUBSOIL COMPACTION MITIGATION IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION FOR ADDITIONAL REQUIREMENTS AND EXEMPTIONS SEE SECTION 19 "STANDARDS FOR LAND GRADING" OF THE STANDARD.

C. PROCEDURES FOR SOIL COMPACTION MITIGATION

- PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
- RESTORATION OF COMPACTIONED SOILS SHALL BE THROUGH DEEP SCARIFICATION DEPTHS (4" MINIMUM DEPTH) WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).
- IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER MAY BE SUBSTITUTED SUBJECT TO DISTRICT APPROVAL.

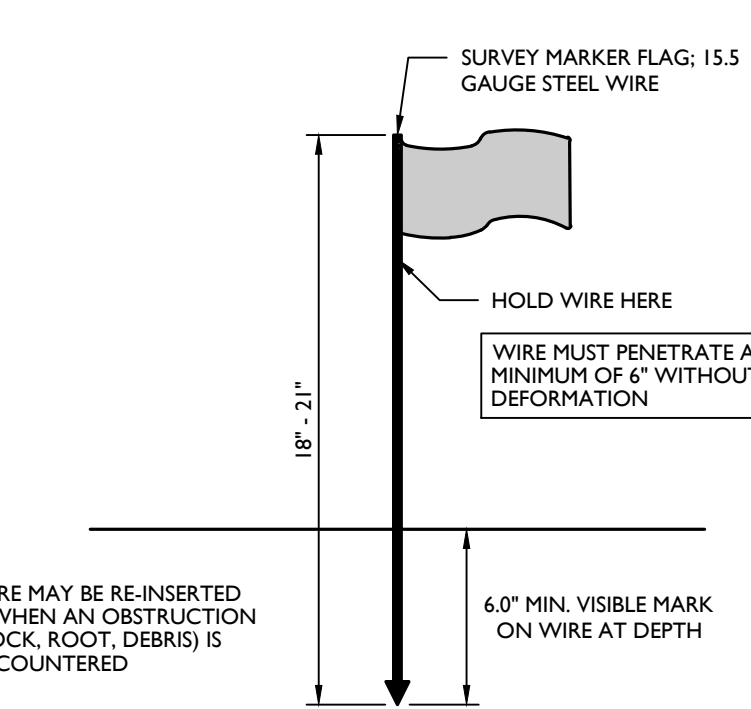
TESTING NOT REQUIRED WITHIN 20' AREA AROUND FOUNDATION WITHIN OR 12' AREA AROUND FOUNDATION WITH CRAWL SPACE OR SLAB



- NOTES:**
- SOIL COMPACTION TESTING LOCATIONS IDENTIFIED ARE RECOMMENDED LOCATIONS FOR GRADED/DISTURBED AREAS WITHIN THE VICINITY OF BUILDINGS AND STRUCTURES OR ON INDIVIDUAL LOTS. MINIMUM TWO (2) TEST PITS PER LOT UP TO 1 ACRE OF DISTURBANCE.
 - FOR GRADED/DISTURBED AREAS WITHIN OPEN OR COMMON SPACES, SOIL COMPACTION TESTING SHALL BE PERFORMED AT TWO (2) TEST PITS PER ACRE OF OVERALL LIMIT OF DISTURBANCE, EVENLY DISTRIBUTED.

TYPICAL SOIL COMPACTION TESTING LOCATIONS DETAIL

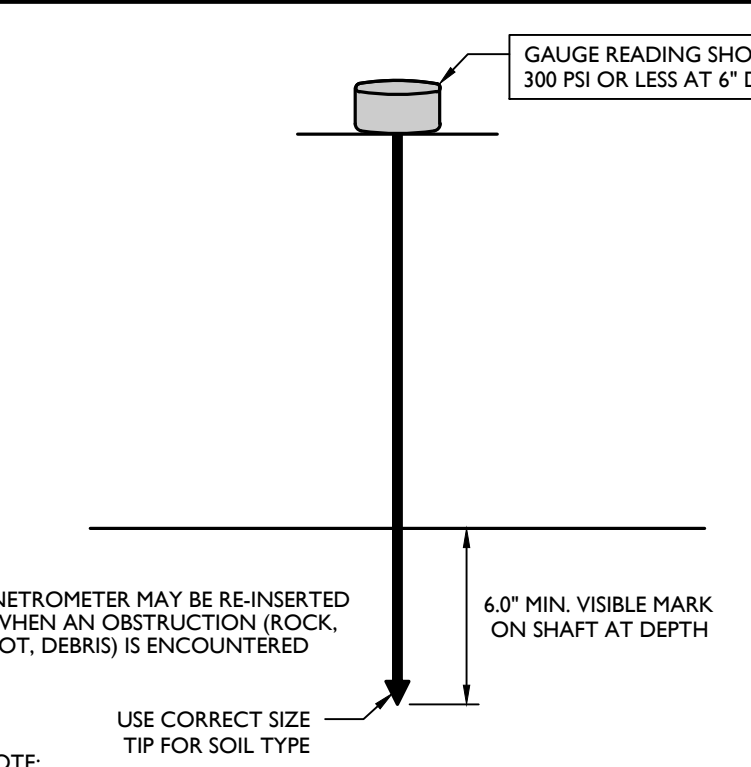
NOT TO SCALE MCNJ-SOIL-ERIC-2002 12/01/17



- NOTES:**
- SOIL SHOULD BE MOIST BUT NOT SATURATED. DO NOT TEST WHEN SOIL IS EXCESSIVELY DRY OR SUBJECT TO FREEZING TEMPERATURES. SLOW, STEADY DOWNWARD PRESSURE USED TO ADVANCE THE WIRE.
 - RECORD THE DEPTH OF PENETRATION WHEN WIRE IS DEFORMED.

PROBING WIRE TEST DETAIL

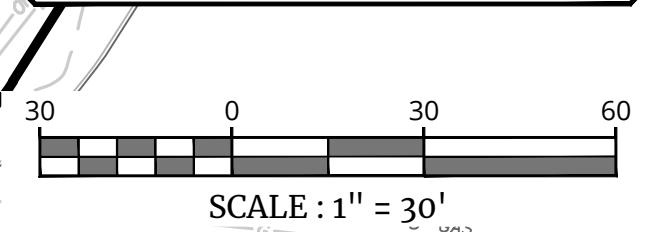
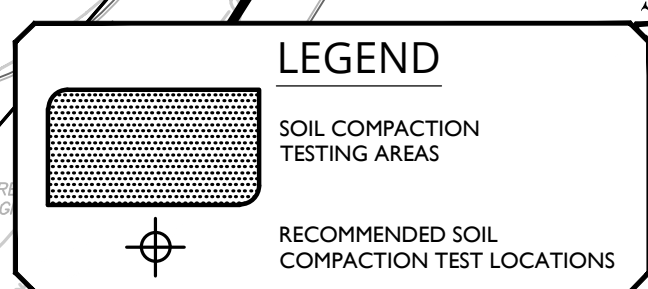
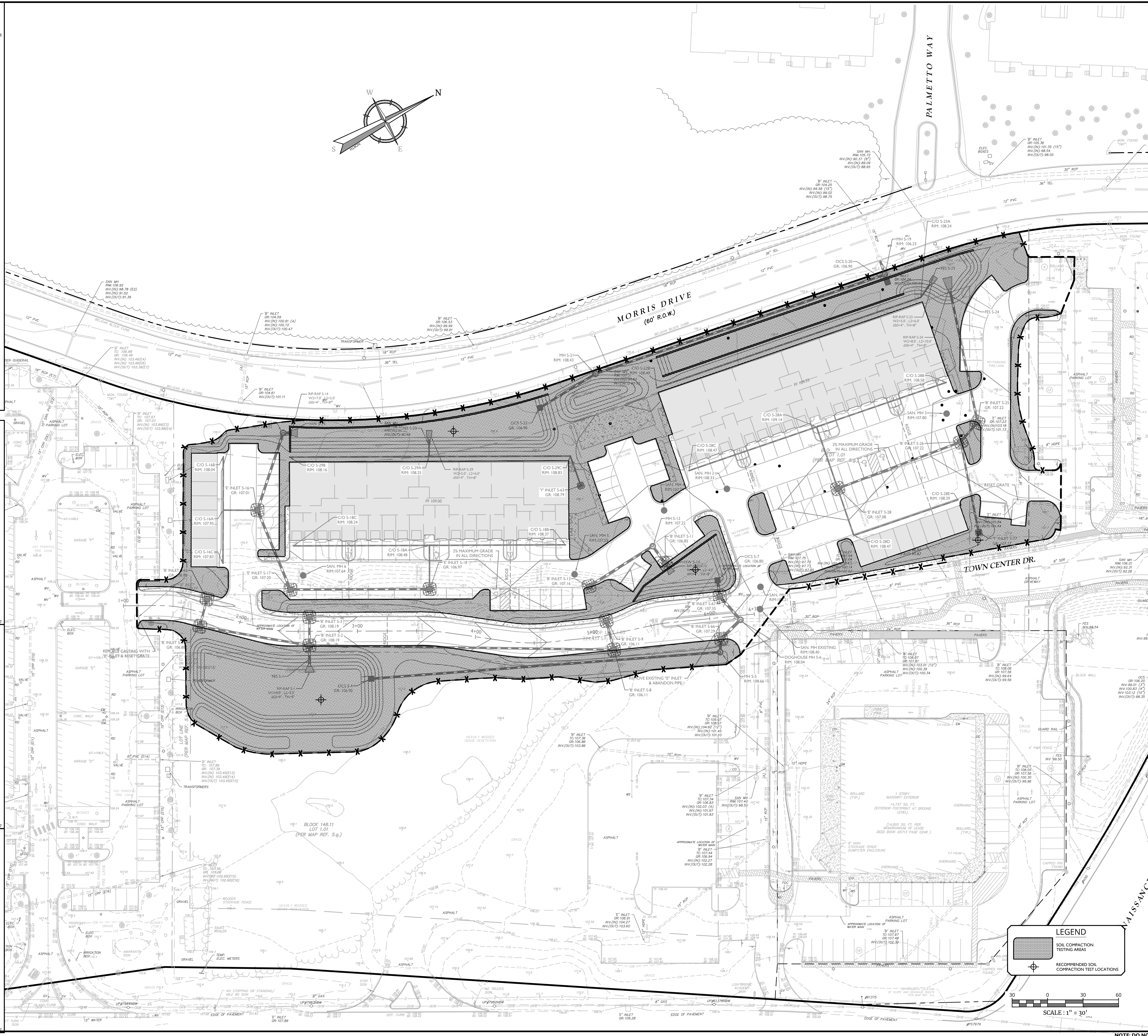
NOT TO SCALE MCNJ-SOIL-ERIC-2000 12/01/17



- NOTE:**
- SOIL SHOULD BE MOIST BUT NOT SATURATED. DO NOT TEST WHEN SOIL IS EXCESSIVELY DRY OR SUBJECT TO FREEZING TEMPERATURES. SLOW, STEADY DOWNWARD PRESSURE USED TO ADVANCE THE PROBE. PROBE MUST PENETRATE AT LEAST 4" WITH LESS THAN 300 PS READING ON THE GAUGE.
 - USE 1/2" TIP FOR FIRM SOIL, 3/4" TIP FOR SOFT SOIL.

HANDHELD SOIL PENETROMETER TEST DETAIL

NOT TO SCALE MCNJ-SOIL-ERIC-2000 12/01/17



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REV.	DATE	DRAWN BY	DESCRIPTION

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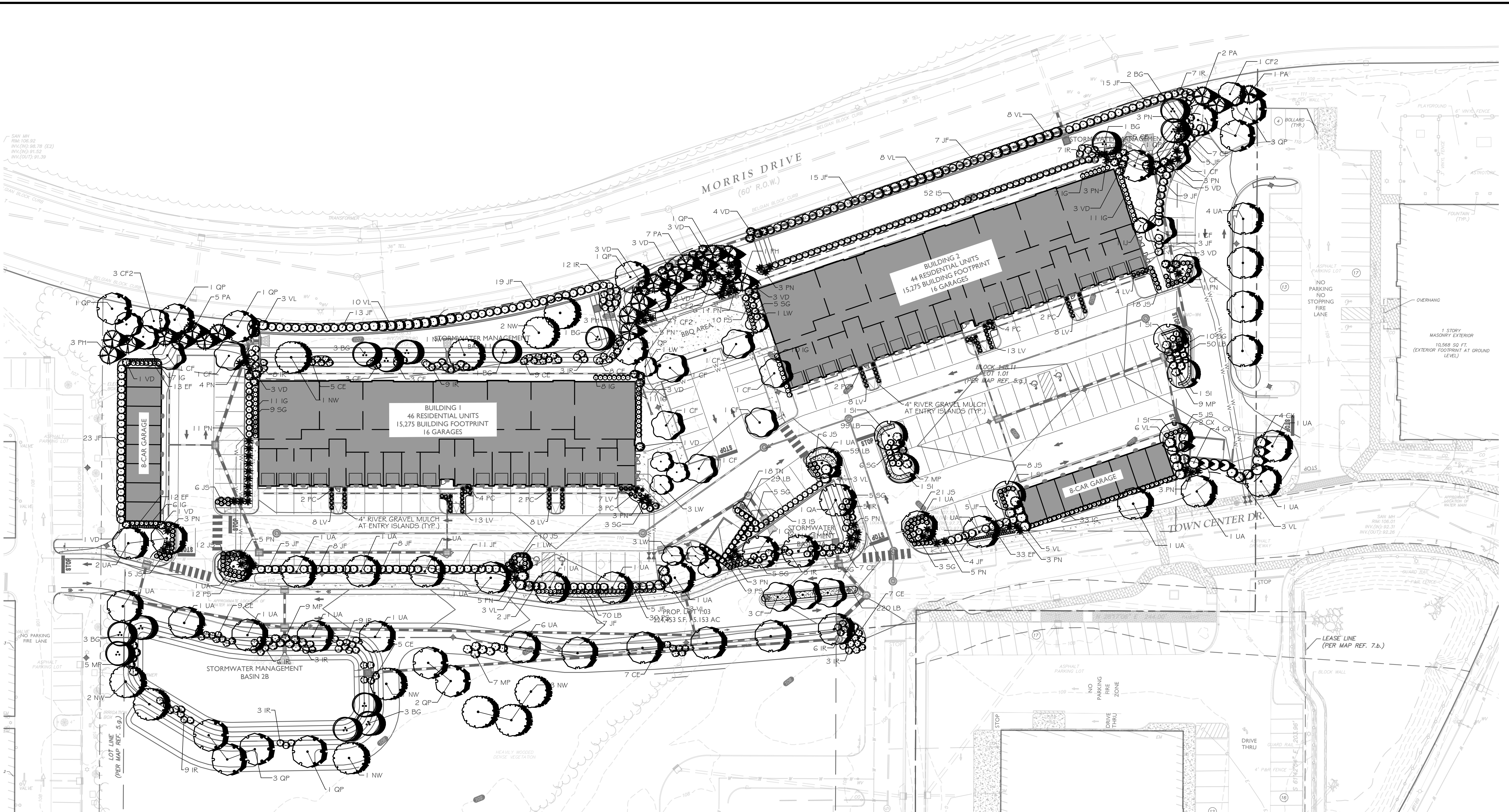
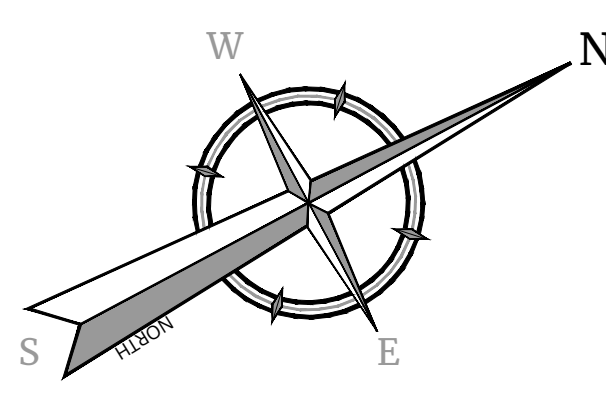
PRELIMINARY AND FINAL MAJOR SITE PLAN
FOR
AMARANTH AT NORTH BRUNSWICK
PHASE 2
BLOCK 14.8.1 LOT 1.01
TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY
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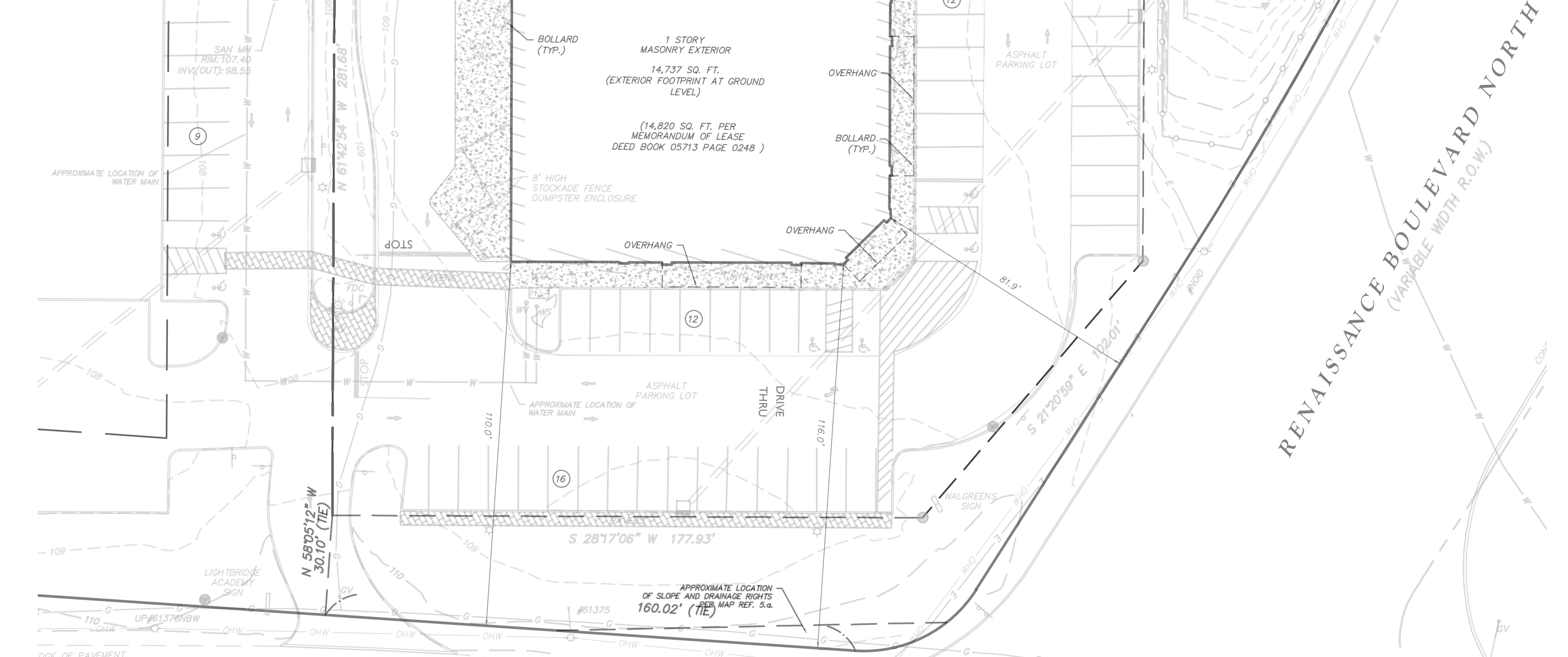
DATE: 8/7/2023
PROJECT NUMBER: 170019498
CHECKED BY: PCS
DRAWING NAME: SOIL MANAGEMENT & PREPARATION PLAN
SHEET NUMBER: 12 of 21

SCALE: 1" = 30'

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



PLANT SCHEDULE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	REMARKS
DECIDUOUS TREES						
BG	14	Betula nigra 'Heritage'	Heritage River Birch	B # B	8'-10" HT.	Multi Trunk
CF	14	Carpinus betulus 'Fastigiata'	Pyramidal European Hornbeam	B # B	2.5' Gal	Fall Digging Hazard
CF2	7	Cercis canadensis 'Forest Pansy'	Forest Pansy Eastern Redbud	B # B	2.5' Gal	
LV	4	Lagerstroemia indica x fauriei 'Natchez'	Natchez Crape Myrtle	B # B	8'-10" HT.	
NW	11	Nyssa sylvatica 'Wildfire'	Wildfire Tupelo	B # B	2.5' Gal	
QA	3	Quercus alba	White Oak	B # B	2.5' Gal	Fall Digging Hazard
QP	16	Quercus palustris	Pin Oak	B # B	2.5' Gal	Fall Digging Hazard
SI	6	Syringa reticulata 'Ivory Silk'	Ivory Silk Japanese Tree Lilac	B # B	2.5' Gal	
UA	32	Ulmus parvifolia 'Allee'	Allee Lacebark Elm	B # B	2.5' Gal	
EVERGREEN TREES						
CX	10	Cupressus x leylandii	Leyland Cypress	CONT.	6-7' HT.	REMARKS
IJ	1	Ilex opaca 'Jersey Knight'	Jersey Knight American Holly	B # B	6'-8" HT.	
PA	15	Picea abies	Norway Spruce	B # B	7'-8" HT.	
PH	7	Picea pungens 'Hoopsii'	Hoopsii Colorado Spruce	B # B	7'-8" HT.	
TN	18	Thuja occidentalis 'Nigra'	Dark American Arborvitae	B # B	6-7' HT.	
SHRUBS						
CE	75	Cornus alba 'Elegantissima'	Silvertedge Tatarian Dogwood	CONT.	2'-2.5' HT.	
IG	104	Ilex crenata 'Green Lustre'	Green Lustre Japanese Holly	Cont.	18"-24" HT.	
IS	65	Ilex glabra 'Shamrock'	Shamrock Inkberry Holly	Cont.	18"-24" HT.	
IR	45	Ilex verticillata 'Red Sprite'	Red Sprite Winterberry	Cont.	2'-2.5' HT.	
JS	101	Juniperus chinensis 'Sargentii'	Sargent Juniper	Cont.	18"-24" SPD.	
JF	164	Juniperus chinensis 'Sea Green'	Sea Green Juniper	B # B	2.5'-3' HT.	
MP	37	Myrica pensylvanica	Northern Bayberry	B # B	2.5'-3' HT.	
SS	56	Spiraea x bumalda 'Goldflame'	Goldflame Spiraea	Cont.	18"-24" HT.	
VD	40	Viburnum dentatum 'Arrowwood'	Arrowwood Viburnum	B # B	3'-4" HT.	
VL	52	Viburnum rhytidophyllum	Leatherleaf Viburnum	B # B	4'-5" HT.	
GRASSES						
FN	74	Panicum virgatum 'Northwind'	Northwind Switch Grass	Cont.	3 GAL.	
FC	19	Panicum virgatum 'Cloud Nine'	Tall Switch Grass	Cont.	2 GAL.	DO NOT CUT DOWN IN FALL
PERENNIALS						
EF	50	Echinacea purpurea 'Fox Non Wildberry'	Coneflower	Cont.	1 GAL.	
FS	61	Perovskia atriplicifolia 'Blue Spire'	Blue Spire Russian Sage	Cont.	1 GAL.	
GROUND COVERS						
LB	527	Liriope muscari 'Big Blue'	Big Blue Lilyturf	Cont.	4' pot	12" o.c.
LV	69	Liriope muscari 'Variegata'	Variegated Lilyturf	Cont.	2 GAL.	12" o.c.



GENERAL NOTES

- THIS SHEET IS TO BE USED FOR LANDSCAPE PURPOSES ONLY.
- REFER TO SHEET 1 FOR GENERAL NOTES.

LANDSCAPE PLAN NOTES

- REFER TO SHEET 34 AND 35 FOR PLANT SCHEDULES.
- REFER TO SHEET 34 AND 35 FOR PLANT SCHEDULES.
- PLANT LOCATIONS INDICATED ON THE LANDSCAPE PLAN ARE APPROXIMATE. ACTUAL LOCATION OF PLANT MATERIAL IS SUBJECT TO SITE CONDITIONS.
- THE LANDSCAPE PLAN SHALL TAKE PRECEDENCE OVER THE PLANT SCHEDULE SHOULD ANY PLANT MATERIAL DISCREPANCIES OCCUR.
- LAWN AREAS SHALL BE STABILIZED WITH SEED UNLESS OTHERWISE INDICATED ON THE PLAN. REFER TO THE LAWN SEED MIX NOTES ON THE LANDSCAPE DETAILS SHEET AND THE SOIL EROSION AND SEDIMENT CONTROL PLAN FOR APPROVED MIXTURES.
- ALL SHADE TREES PLANTED ADJACENT TO PEDESTRIAN WALKWAYS, VEHICLE ACCESSES, OR WITHIN A SIGHT TRIANGLE OR SIGHT EASEMENT SHALL BE BRANCHED A MINIMUM OF 7'-0" ABOVE GRADE AND/OR APPROPRIATELY PRUNED TO BE 7'-0" ABOVE GRADE. ALL SHRUBS WITHIN A SIGHT TRIANGLE OR SIGHT EASEMENT SHALL NOT EXCEED 3' ABOVE THE ELEVATION OF THE ADJACENT CURB AND ARE TO BE APPROPRIATELY PRUNED.

LANDSCAPE LEGEND

- DECIDUOUS TREE
- EVERGREEN TREE
- ORNAMENTAL OR UNDERSTORY TREE
- SHRUB
- PERENNIAL / ANNUAL / ORNAMENTAL GRASS
- MULCH BED LINE

NOTES:

- LANDSCAPE SYMBOLS ON THE PLAN VARY AND MAY DEVIATE FROM THE LANDSCAPE LEGEND SYMBOLS SHOWN ABOVE.

SCALE: 1" = 30'

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PRELIMINARY AND FINAL MAJOR SITE PLAN
FOR
AMARANTH AT NORTH BRUNSWICK PHASE 2
BLOCK 14,8.11 LOT 1.01
TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY
NEW JERSEY

GENERAL PLANTING NOTES

LAND-GEN-PLANT-NOTE

MOD: 05/05/22

10/16/2021

A. GENERAL

- 1. THIS PLAN SHALL BE USED FOR LANDSCAPE PLANTING PURPOSES ONLY. EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR SPECIFIC LOCATIONS OF UTILITIES AND STRUCTURES. NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR LOCATION CONFLICTS PRIOR TO PLANTING INSTALLATION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITIES MARKOUTS AND COMPLIANCE WITH ALL FEDERAL, STATE, OR LOCAL CODES, LAWFUL ORDERS OR REGULATIONS GOVERNING UPON THIS WORK.
3. OWNER OR HISHER REPRESENTATIVE SHALL BE NOTIFIED PRIOR TO BEGINNING PLANTING OPERATIONS.

B. PLANT MATERIAL

- 1. PLANT MATERIAL SHALL CONFORM WITH THE ANSI Z60.1-2014 AMERICAN STANDARD FOR NURSERY STOCK AS PUBLISHED BY AMERICANHORT IN REGARD TO QUALITY, SIZE OF PLANTING, SPREAD OF ROOTS, SIZE OF ROOTBALL AND BRANCHING PATTERN.
2. PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY. HAVE NORMAL GROWTH HABITS, WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS, AND FREE FROM DEFECTS, INJURY, DISEASE, AND/OR INFESTATION. WITH ROOT BALLS INTACT.
3. ALL PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS THE NURSERY. THE PLANT MATERIAL SHALL BE PLANTED AT THE SAME LEVEL WHEN PLANTED.
4. PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY TO THE SITE. IN THE EVENT THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO PROTECT THE PLANT MATERIAL FROM DAMAGE PRIOR TO INSTALLATION.
5. THE LANDSCAPE ARCHITECT OR OWNER SHALL HAVE THE RIGHT, AT ANY STAGE OF THE OPERATION, TO REJECT ANY AND ALL PLANT MATERIAL WHICH IN THEIR OPINION DOES NOT MEET THE REQUIREMENTS OF THESE PLANS.

C. TOPSOIL REQUIREMENTS

- 1. TOPSOIL REQUIREMENTS: SEE NIDOT SECTION 917 FOR REFERENCE AND SOIL ADJUSTIVES.
1.1. UNACCEPTABLE TOPSOIL SOURCES: DO NOT OBTAIN TOPSOIL FROM THE FOLLOWING SOURCES: AREAS CONTAINING CHEMICALLY CONTAMINATED SOILS, AREAS FROM WHICH THE ORIGINAL SURFACE HAS BEEN STRIPPED OR COVERED OVER, SUCH AS BOROHOV PITS, OPEN MINES, DEPOSITION SITES, DUMPS, LANDFILLS, NO TOPSOIL FROM WET EXCAVATION OR ACID PRODUCING SOILS.
1.2. TOPSOIL SHALL BE UNIFORM QUALITY, FREE FROM HARD CLODS, STIFF CLAY, HARD PAN, SODS, LARGE STONE, CEMENT, ASH, SLAG, CONCRETE, TAR, BOARDS, CHIPS, MULCH, OR ANY OTHER UNDESIRABLE MATERIALS. NO TOPSOIL SHALL BE DELIVERED IN A PROVEN OR HIDDY CONDITION.
1.3. TOPSOIL PH REQUIREMENTS ARE AS FOLLOWS: PH < 4.1: TOPSOIL IS UNACCEPTABLE. 4.1 < PH < 5.8: ADD PULVERIZED LIME TO INCREASE THE PH TO 6.5 BEFORE USE. 5.8 < PH < 7.0: TOPSOIL IS ACCEPTABLE. NO REPAIRS NEEDED. 7.0 < PH < 7.2: DECREASE PH TO AT LEAST 6.8 BEFORE USE. PH > 7.2: TOPSOIL IS UNACCEPTABLE.

D. PLANTING PROCEDURES

- 1. PLANTING BEDS:
1.1. PROVIDE PLANTING PITS AS INDICATED ON PLANTING DETAILS. BACKFILL PLANTING PITS WITH SOILS AS OUTLINED IN SECTION C PRIOR. BACKFILL SOIL TO BE AT MINIMUM ONE PART EACH OF TOPSOIL, HOISTED PEAT MOSS, AND PARENT MATERIAL.
1.2. PLANTING BEDS SHALL RECEIVE FOUR (4) INCHES OF DIRECT SHREDDED HARDWOOD MULCH AND TREATED WITH A PRE-HERBICIDE MULCH. NO MULCH SHALL COME IN CONTACT WITH ROOT FLARE/COLLAR. UNDER NO CIRCUMSTANCES SHALL THE ROOT CROWN BE BURIED.
1.3. SHRUB PASSES SHALL BE PLANTED IN CONTINUOUS MULCHED BEDS.
2. PLANT LOCATIONS: THE LOCATION OF ALL PLANT MATERIAL INDICATED ON THE LANDSCAPE PLANS ARE APPROXIMATE. THE PLANT LOCATION OF ALL PLANT MATERIAL AND PLANTING BEDLINES SHALL BE DETERMINED IN THE FIELD AT THE TIME OF INSTALLATION FOLLOWING THE BASIC INTENT OF THE APPROVED PLANS, UNLESS THERE IS A SPECIFIC DIMENSION OR LOCATION SHOWN.
3. PLANTING DATES: PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICES. PLANTING SEASONS ARE DEFINED AS MARCH 15 THROUGH MAY 15 AND SEPT 15 THROUGH NOV 15. PLANTING IS ACCEPTABLE DURING THE WINTER MONTHS IF WEATHER PERMITS AND THE GROUND IS NOT FROZEN, AND IN THE SUMMER IF SUPPLEMENTAL WATERING IS PROVIDED. SOIL MUST BE SOIL FRESH, FRIABLE AND NOT MUDDY AT TIME OF PLANTING.

E. MAINTENANCE

- 1. PRUNING:
1.1. EACH TREE AND SHRUB SHALL BE PRUNED IN ACCORDANCE WITH AMERICAN STANDARD FOR NURSERY STOCK, TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. ALL DEAD WOOD OR SUCKERS AND ALL BROKEN OR BADLY BRUISED BRANCHES SHALL BE REMOVED. PRUNING SHALL BE DONE WITH CLEAN, SHARP TOOLS.
1.2. SHADE TREES PLANTED NEAR PEDESTRIAN OR VEHICULAR ACCESS SHOULD NOT BE BRANCHED LOWER THAN 7'-0" ABOVE GRADE. PLANT MATERIAL LOCATED WITHIN SIGHT TRIANGLE EASEMENTS SHALL NOT EXCEED A MATURE HEIGHT OF 30' ABOVE THE ELEVATION OF THE ADJACENT CURB. STREET TREES PLANTED IN SIGHT TRIANGLE EASEMENTS SHALL BE PRUNED TO NOT TO HAVE BRANCHES BELOW 7'-0".
1.3. THE CENTRAL LEADER SHALL NOT BE CUT OR DAMAGED.
2. LAWN AREAS:
2.1. THE LANDSCAPE CONTRACTOR SHALL TEST THE SOIL TO CONFIRM SUITABILITY FOR THE PROPOSED SEED MIX AND SUPPLEMENT AS REQUIRED TO MEET THE REQUIRED PH & NUTRIENT LEVELS.
2.2. ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEED UNLESS OTHERWISE INDICATED ON THE LANDSCAPE PLANS. SEED SHALL BE IN ACCORDANCE WITH THE LAWN SEED MIX NOTES AND THE SOIL EROSION AND SEDIMENT CONTROL DISTRICTS SEED SPECIFICATIONS AS NOTED ON THE SOIL EROSION AND SEDIMENT CONTROL DETAILS SHEET.
2.3. SOIL, IF SPECIFIED, SHALL CONSIST OF A STATE CERTIFIED MIXTURE. ALL DISTURBED AREAS INDICATED AS LAWN OR SOD SHALL BE TOPSOILED, LIMED, AND FERTILIZED & FINE GRADED PRIOR TO LAWN INSTALLATION.
3. EXISTING VEGETATION: EXISTING TREES AND SHRUBS TO BE PRESERVED ON SITE SHALL BE PROTECTED AGAINST CONSTRUCTION DAMAGE BY SNOW FENCING. FENCING SHALL BE PLACED OUTSIDE THE INDIVIDUAL TREE CANOPY. TREES TO REMAIN SHALL BE IDENTIFIED IN THE FIELD PRIOR TO COMMENCEMENT OF CONSTRUCTION. TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION, GRADING, OR CLEARING. EXISTING VEGETATION BEING PRESERVED AND LOCATED AT THE EDGE OF THE NEW TREELINE SHALL BE PRUNED AND TRIMMED TO REMOVE ALL DEAD, DAMAGED OR DISEASED BRANCHES.
4. SITE CLEANUP: PLANTING DEBRIS (WIRE, TWINE, RUBBERHOSE, BACKFILL, ETC.) SHALL BE REMOVED FROM THE SITE AFTER PLANTING IS COMPLETE. THE PROPERTY IS TO BE LEFT IN A NEAT, ORDERLY CONDITION IN ACCORDANCE WITH ACCEPTED PLANTING PRACTICES.

LAWN SEED MIX NOTES

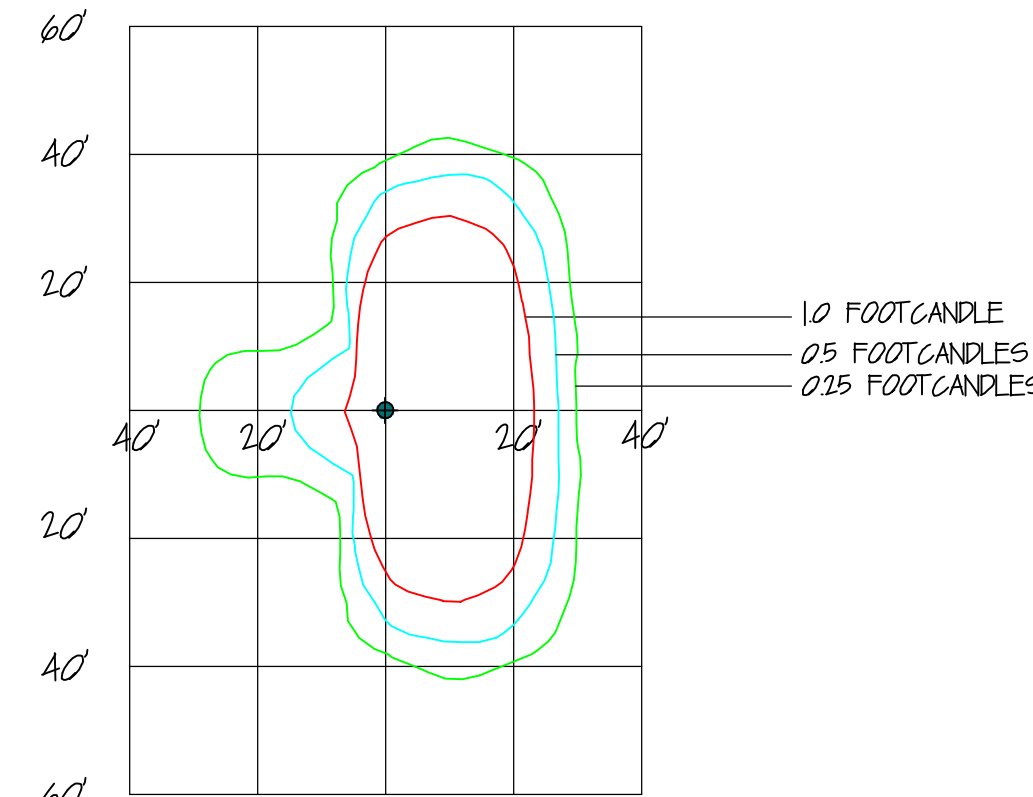
MIX #13 (WELL TO MODERATELY DRAINED SOIL): HARD FESCUE AND/OR CHEWING FESCUE AND/OR STRONG CREEPING RED FESCUE PERENNIAL RYEGRASS KENTUCKY BLUE GRASS (BLEND) 175 LBS/ACRE 45 LBS/ACRE 45 LBS/ACRE

MIX #14 (EXCESSIVELY TO MODERATELY DRAINED SOIL): TALL FESCUE 265 LBS/ACRE KENTUCKY BLUE GRASS (BLEND) 20 LBS/ACRE PERENNIAL RYE GRASS (BLEND) 20 LBS/ACRE

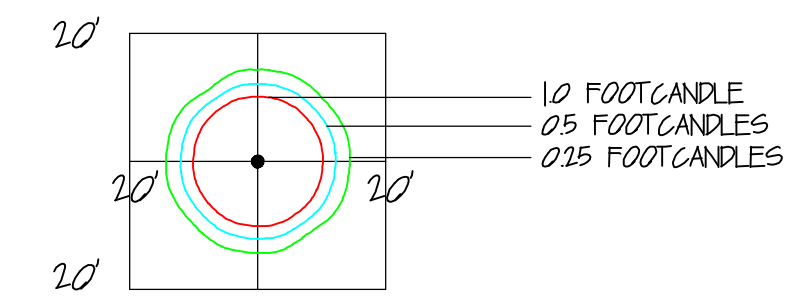
OPTIMUM SEEDING DATES: 8/1 - 10/1 (ZONE 5b, 6a); 8/15 - 10/15 (ZONE 6b); 8/15 - 10/30 (ZONE 7a, 7b)
SUMMER SEEDING DATES * : 6/1 - 7/31 (ZONE 5b, 6a); 7/1 - 8/31 (ZONE 6a, 7a, 7b)

ACCEPTABLE SEEDING DATES: 3/15 - 5/31 (ZONE 5b, 6a); 3/1 - 4/30 (ZONE 6a); 2/1 - 4/30 (ZONE 7a, 7b)
6/1 - 7/31 (ZONE 5b, 6a); 5/1 - 8/14 (ZONE 6a, 7a, 7b)

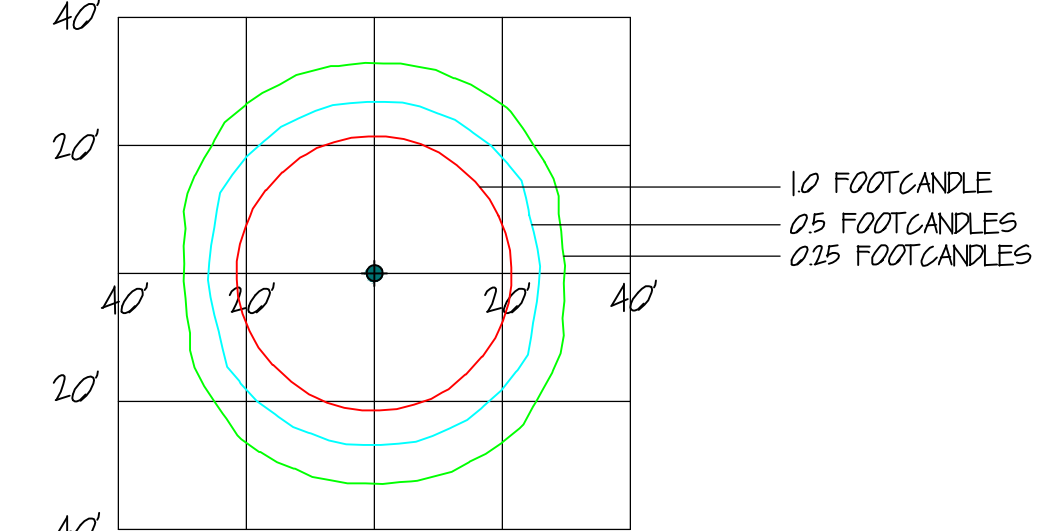
* NOTE: SUMMER SEEDING SHOULD ONLY BE CONDUCTED WHEN THE SITE IS IRRIGATED, MIXES INCLUDING WHITE CLOVER REQUIRE THAT AT LEAST SIX WEEKS OF GROWING SEASON REMAIN AFTER SEEDING TO ENSURE ESTABLISHMENT BEFORE FREEZING CONDITIONS.



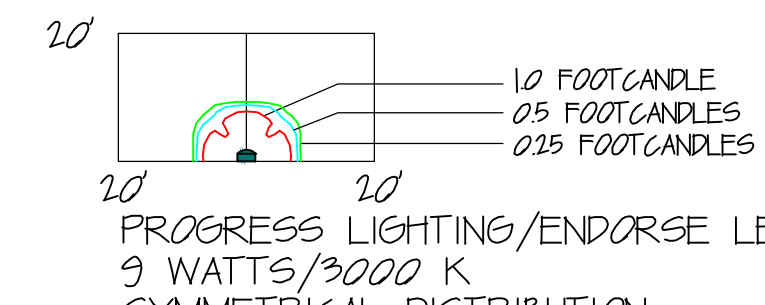
PACIFIC LIGHTING/NSM POST TOP LED 63 WATTS/4000 K TYPE 3 DISTRIBUTION 16'-0" TO LIGHT SOURCE



PACIFIC LIGHTING/NSM POST TOP LED 63 WATTS/4000 K TYPE 3 DISTRIBUTION 16'-0" TO LIGHT SOURCE

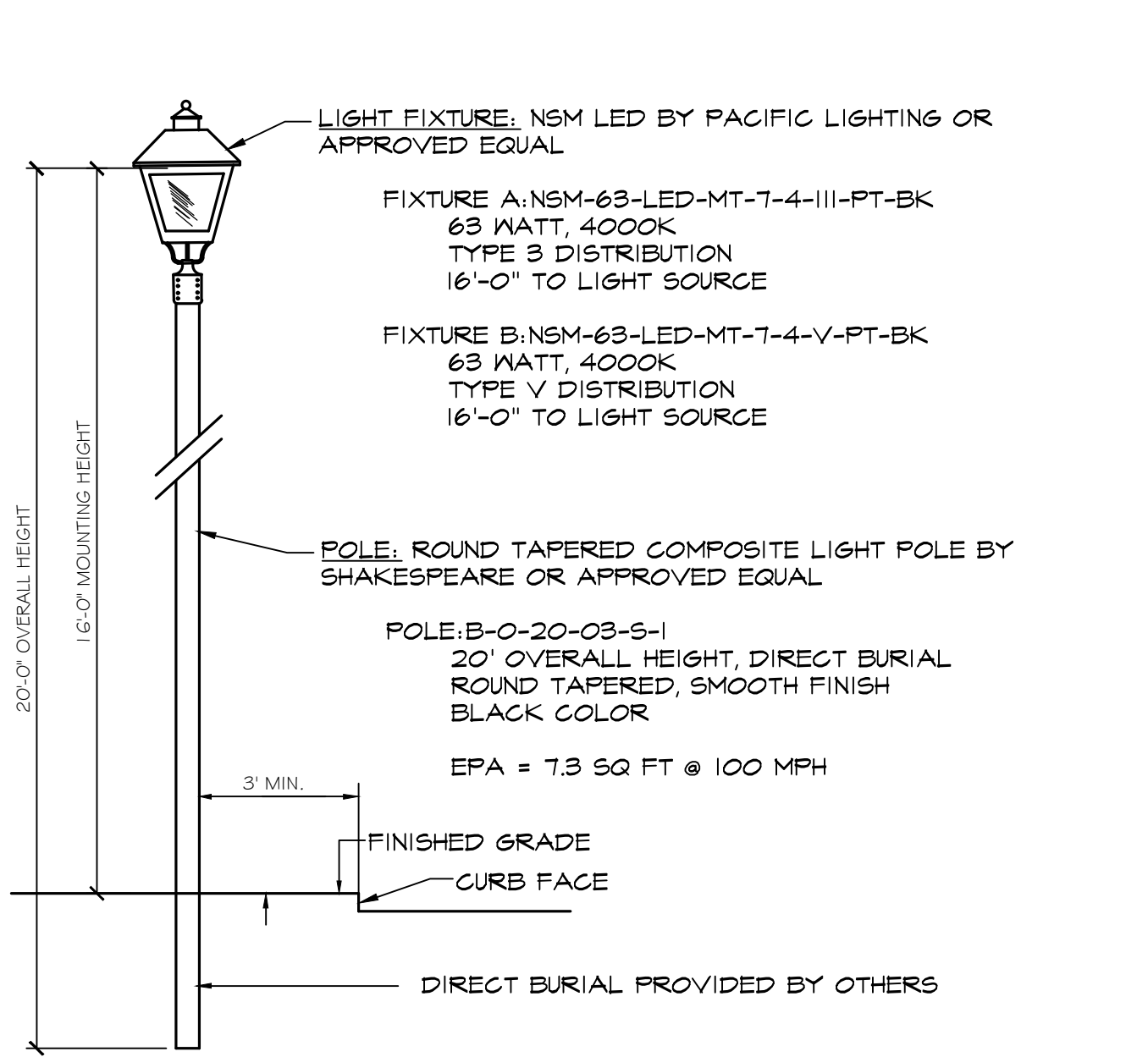


PACIFIC LIGHTING/NSM POST TOP LED 63 WATTS/4000 K TYPE 5 DISTRIBUTION 16'-0" TO LIGHT SOURCE



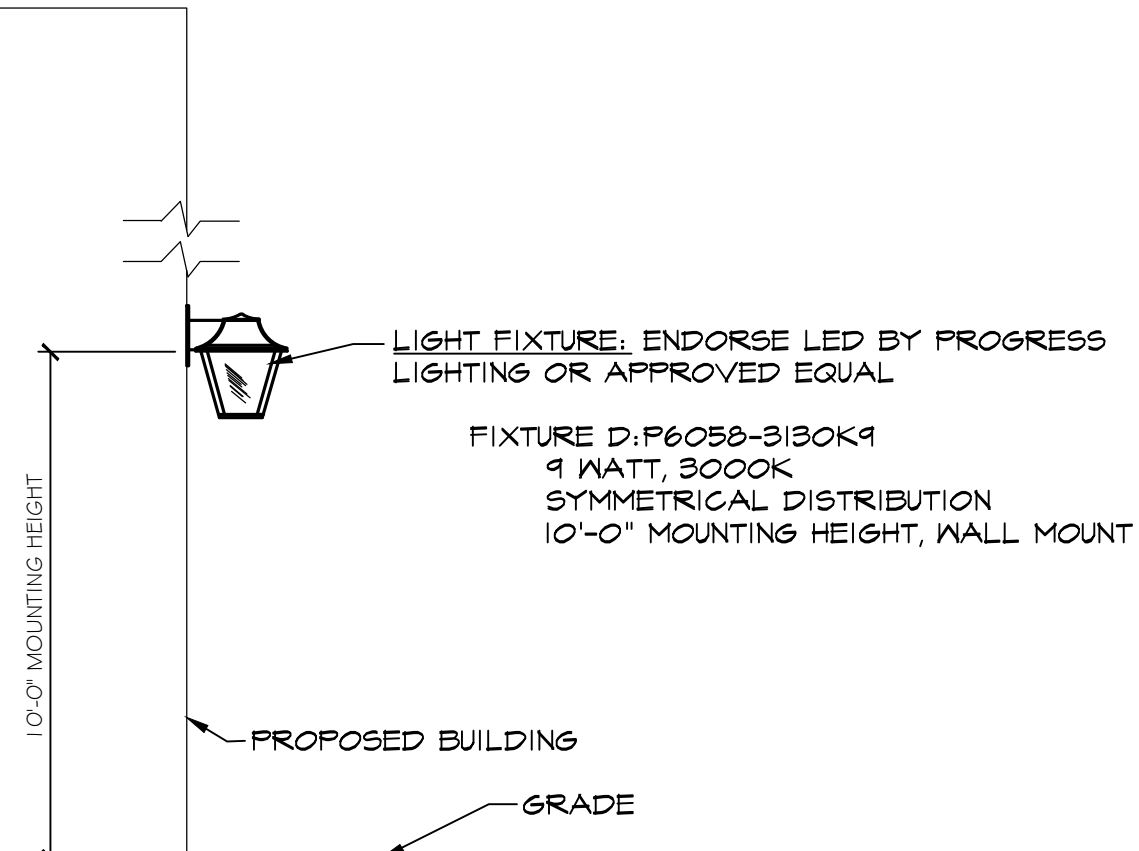
PROGRESS LIGHTING/ENDORSE LED 9 WATTS/3000 K SYMMETRICAL DISTRIBUTION 10'-0" MOUNTING HEIGHT, WALL MOUNT

PHOTOMETRIC DETAILS



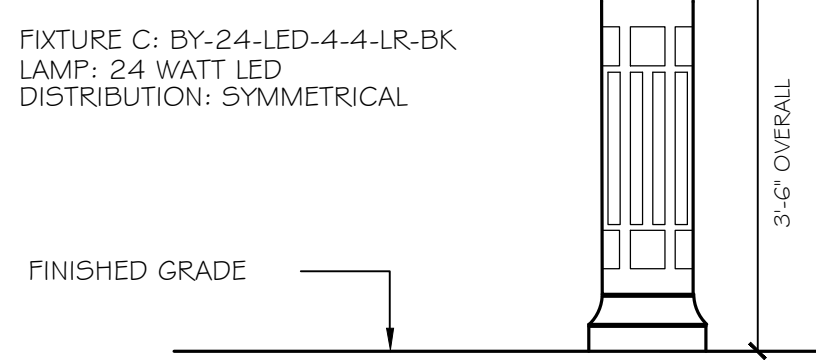
PROPOSED POST TOP LUMINAIRE DETAIL

- NOT TO SCALE
NOTES:
1. LUMINAIRES AND POLES TO BE MANUFACTURED BY PACIFIC LIGHTING OR APPROVED EQUAL.
2. FIXTURE TO BE EQUIPPED WITH PHOTOCELL SENSOR SYSTEM FOR DUSK TO DAWN OPERATION.



PROPOSED WALL MOUNT LUMINAIRE DETAIL

- NOT TO SCALE
NOTES:
1. LUMINAIRES TO BE MANUFACTURED BY PROGRESS LIGHTING OR APPROVED EQUAL.
2. FIXTURE TO BE EQUIPPED WITH PHOTOCELL SENSOR SYSTEM FOR DUSK TO DAWN OPERATION.



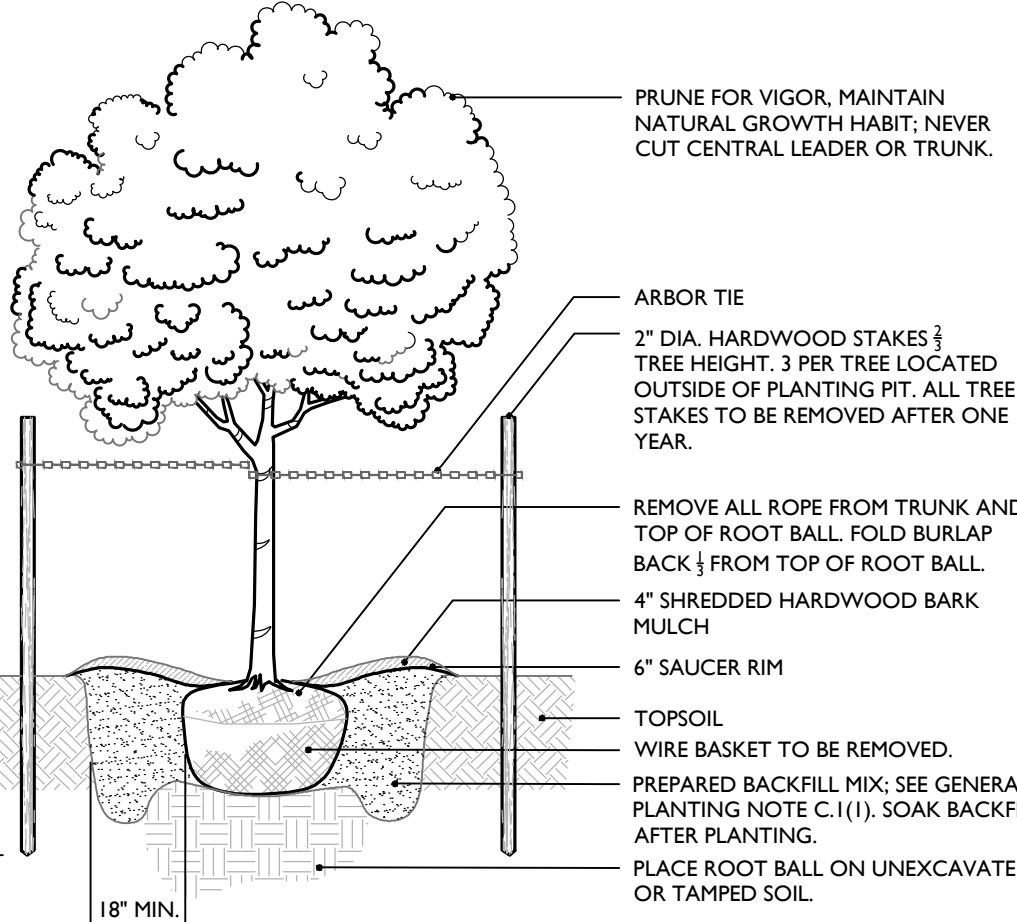
PROPOSED BOLLARD DETAIL

- NOT TO SCALE
NOTES:
1. BOLLARD TO BE MANUFACTURED BY PACIFIC LIGHTING OR APPROVED EQUAL.
2. BOLLARD TO BE MOUNTED PER MANUFACTURER SPECIFICATIONS.

Table with technical specifications for the luminaire, including catalog number NSM-63-LED-MT-7-4-B-PF-BK, fixture specifications, and manufacturer information.

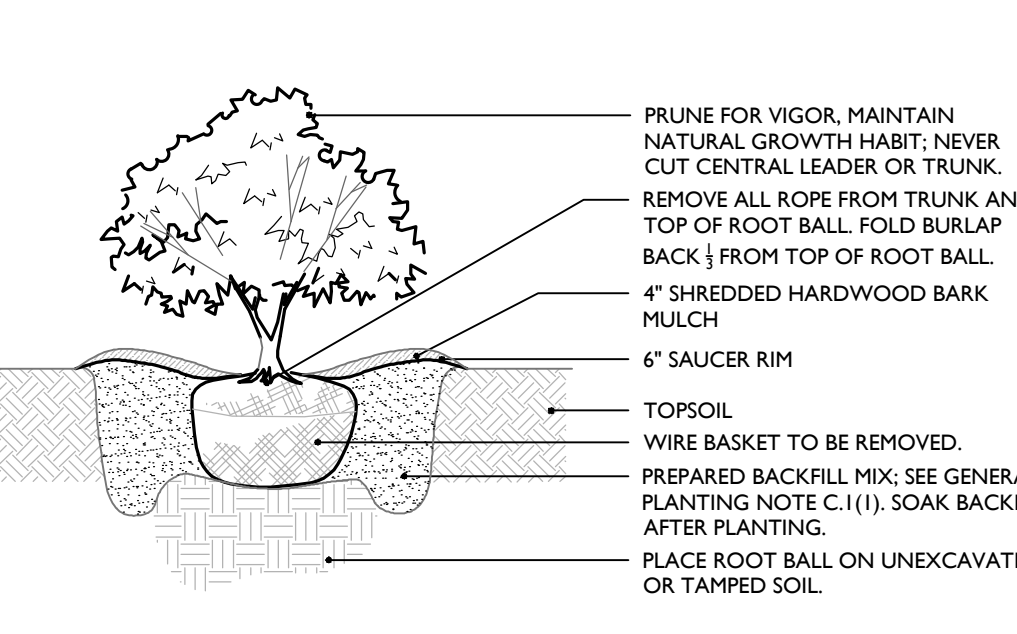
Product information for Endorse luminaire, including specifications, description, construction details, performance data, and catalog number P6058-3130K9.

Product information for Shakespeare O-Series luminaire, including direct burial installation details, mounting height, and ordering information.



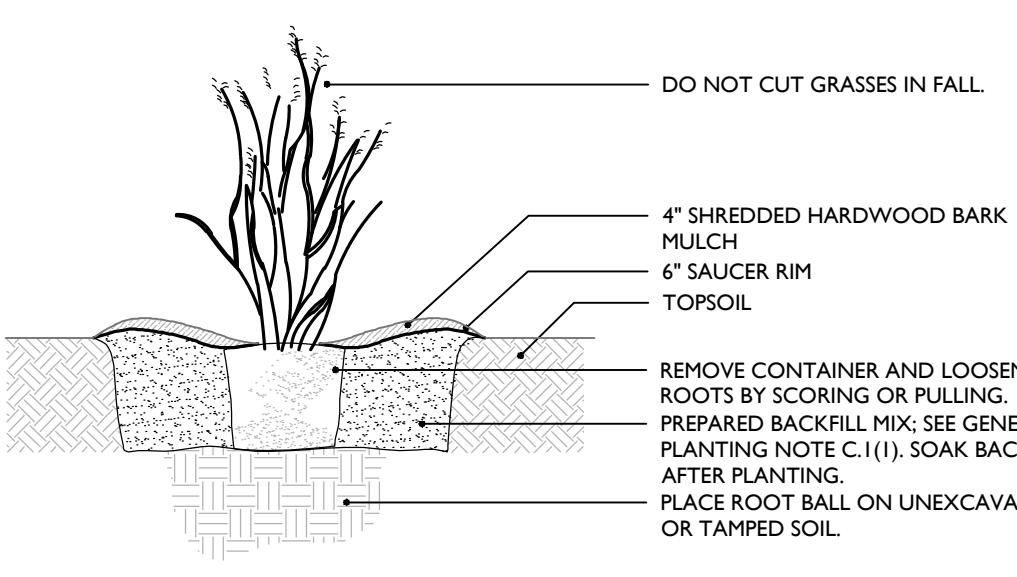
- NOTES:
1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.

DECIDUOUS TREE PLANTING DETAIL



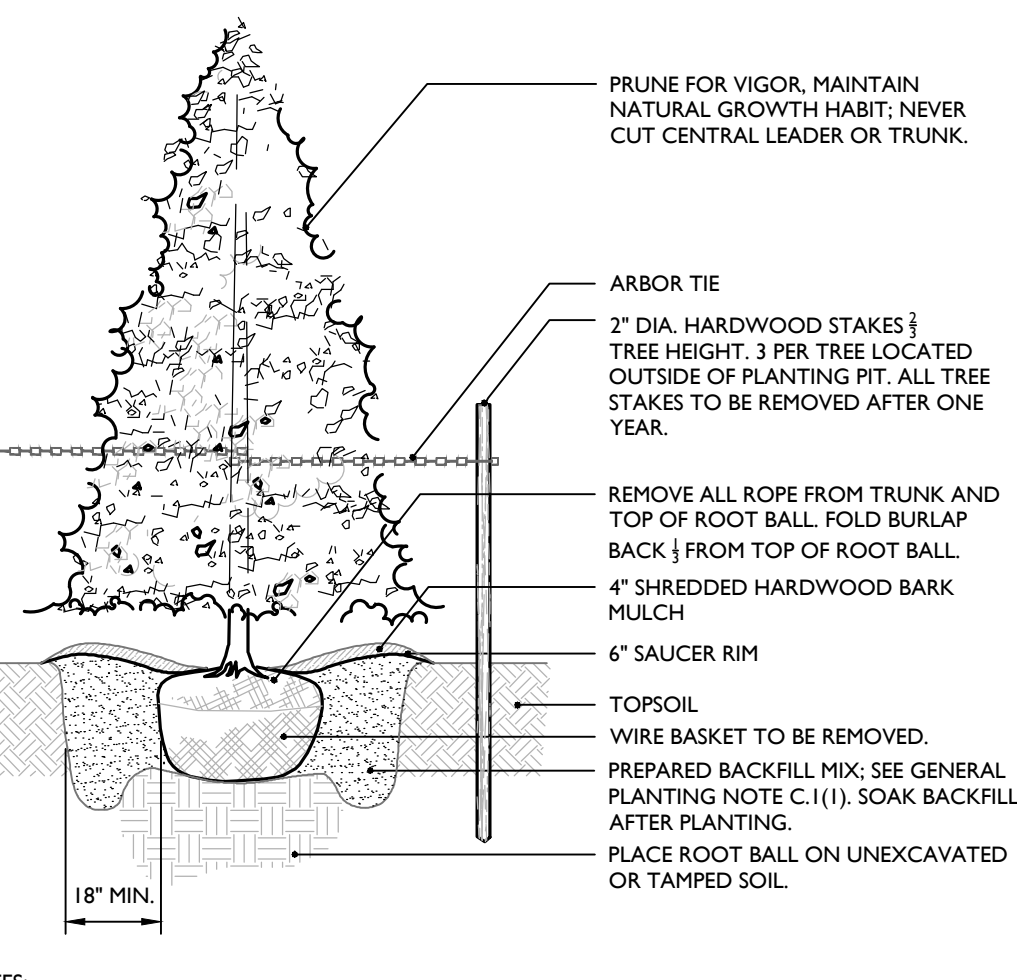
- NOTES:
1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.

SHRUB PLANTING DETAIL



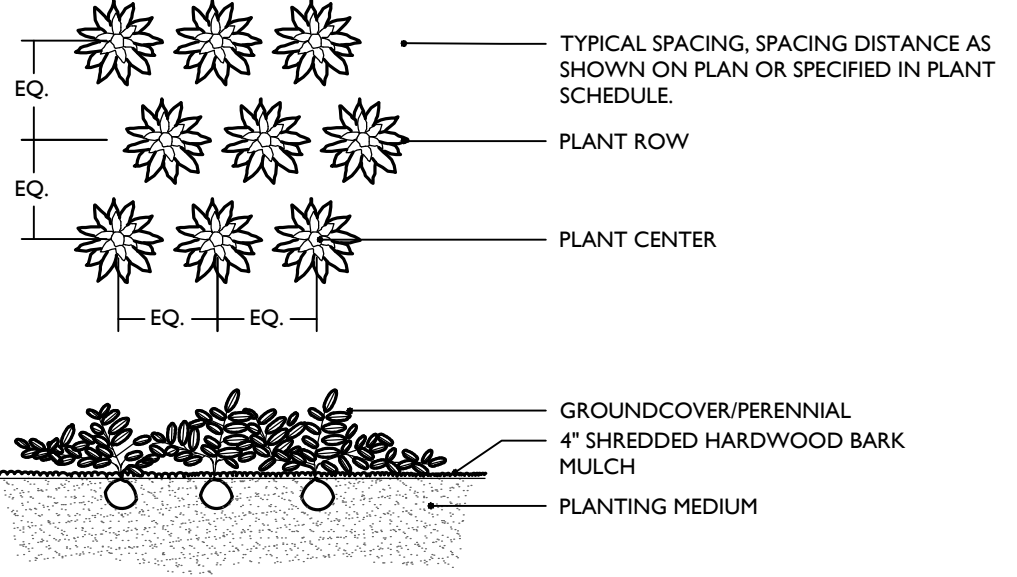
- NOTES:
1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.

ORNAMENTAL GRASS PLANTING DETAIL



- NOTES:
1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.

EVERGREEN TREE PLANTING DETAIL



- NOTES:
1. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.

GROUNDCOVER/PERENNIAL PLANTING DETAIL

Catalog number and technical specifications for the Shakespeare luminaire, including return specifications, LED luminaire information, and manufacturer details.

Colliers Engineering & Design logo and contact information, including website and phone number.

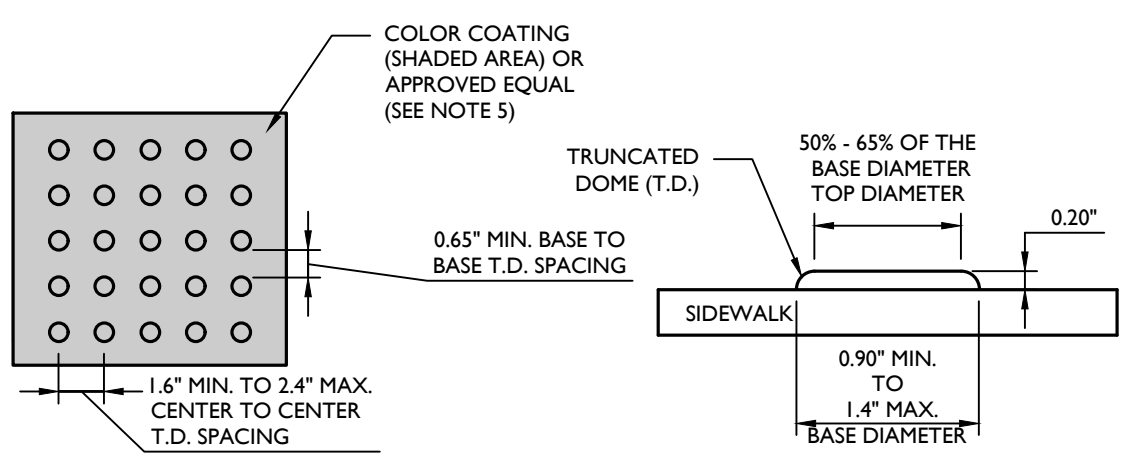
811 logo and text regarding utility marking services and contact information.

Revision table with columns for date, description, and revision number.

Signature of Michael F. Gallagher and professional credentials as a Licensed Professional Engineer.

Project title block: PRELIMINARY AND FINAL MAJOR SITE PLAN FOR AMARANTH AT NORTH BRUNSWICK PHASE 2.

Project location and contact information: BLOCK 148.11 LOT 1.01, TOWNSHIP OF NORTH BRUNSWICK MIDDLESEX COUNTY NEW JERSEY.

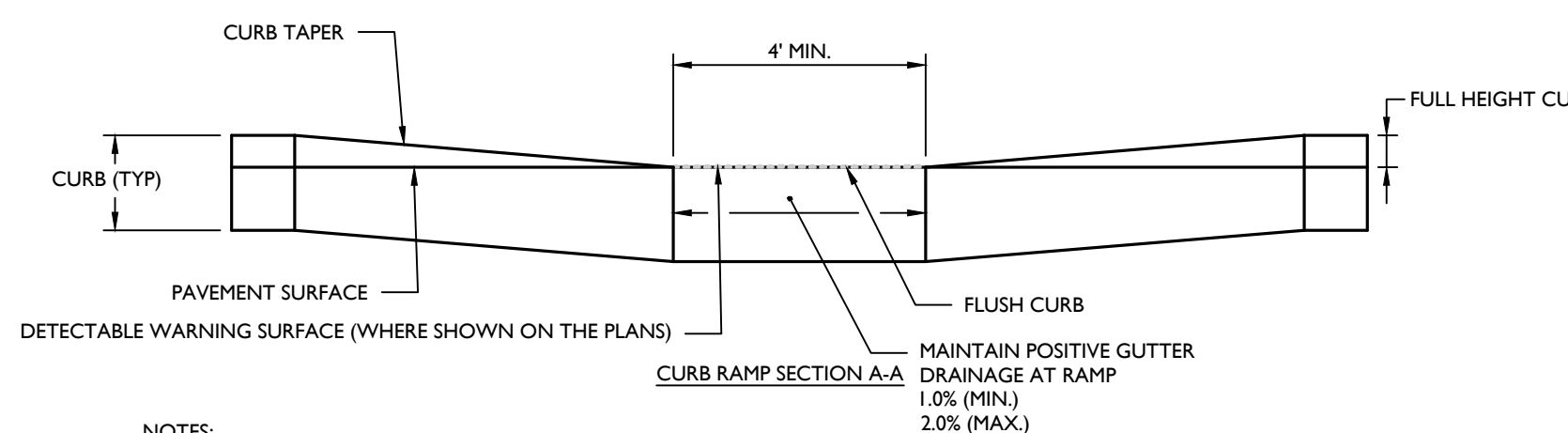
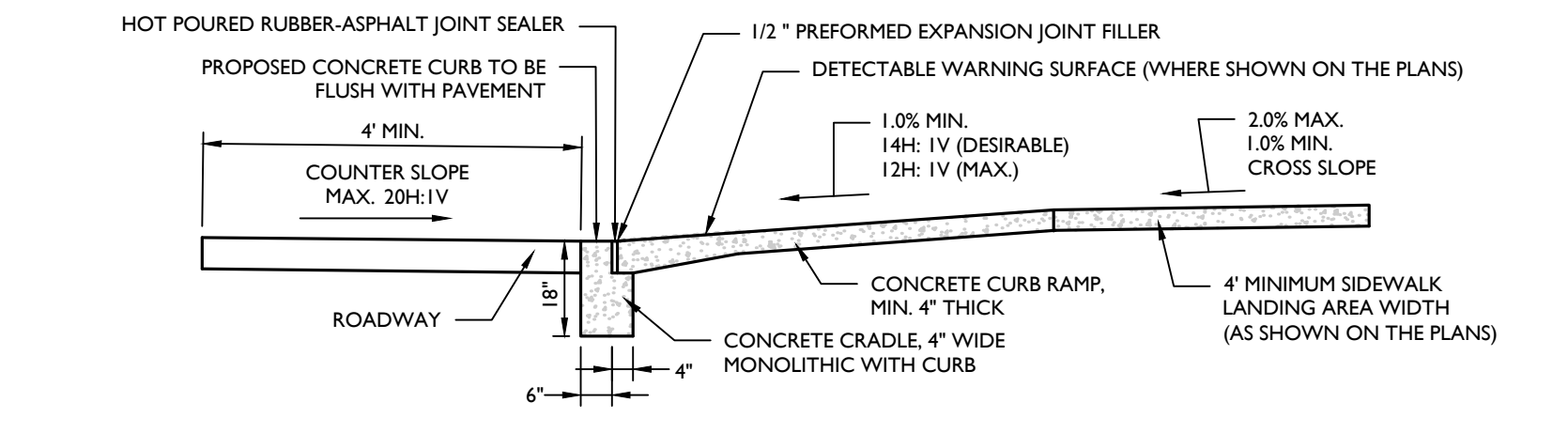


NOTES:

- THE DETECTABLE WARNING SURFACE IS TO BE MANUFACTURED WAYS THAT ARE EMBEDDED AND CAST-IN-PLACE IN THE CONCRETE.
- IN LIEU OF A CAST-IN PLACE DETECTABLE WARNING SURFACE, THE CONTRACTOR MAY UTILIZE A SURFACE APPLIED DETECTABLE WARNING SURFACE WITH PRIOR APPROVAL OF THE UNDERSIGNED ENGINEER AND PRIOR TO POURING OF THE CONCRETE RAMP.
- THE CONTRACTOR MUST SUBMIT TO THE ENGINEER FOR APPROVAL A SHOP DRAWING OF THE DETECTABLE WARNING SURFACE PRIOR TO CONSTRUCTION.
- THE CONTRACTOR MUST PROVIDE A MANUFACTURER CERTIFICATION THAT THE DETECTABLE WARNING SURFACE COMPLIES WITH THE CURRENT ADA STANDARDS FOR ACCESSIBLE DESIGN AS PUBLISHED BY THE DEPARTMENT OF JUSTICE AND THE ADA STANDARDS AS SUPPORTED BY THE UNITED STATES ACCESS BOARD, AND THE STATE AND/OR LOCAL ADA STANDARDS.
- SAFETY RED** AS APPROVED BY THE LOCAL JURISDICTION PRIOR TO INSTALLATION. DETECTABLE WARNING SURFACES MUST CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES EITHER LIGHT/DARK OR DARK/ON-LIGHT. ALTERNATIVE COLOR MAY BE USED PROVIDED SUCH COLOR COMPLIES WITH CURRENT ADA STANDARDS.
- DETECTABLE WARNING ARE TO CONSIST OF A SURFACE OF TRUNCATED DOMES.
- TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE MUST HAVE A BASE DIAMETER OF 0.9 INCH (23 mm) MINIMUM AND 1.4 INCHES (36 mm) MAXIMUM, A TOP DIAMETER OF 50 PERCENT OF THE BASE DIAMETER MINIMUM TO 65 PERCENT OF THE BASE DIAMETER MAXIMUM, AND A HEIGHT OF 0.2 INCH (5.1 mm).
- ON BLENDED TRANSITIONS, DETECTABLE WARNING SURFACE MUST HAVE A CENTER-TO-CENTER SPACING OF 1.5 INCHES (41 mm) MINIMUM AND 2.4 INCHES (61 mm) MAXIMUM, AND A BASE-TO-BASE SPACING OF 0.65 INCH (17 mm) MINIMUM, MEASURED BETWEEN THE MOST ADJACENT DOMES ON A SQUARE GRID.
- SOME DETECTABLE WARNING PRODUCTS REQUIRE A CONCRETE BORDER FOR PROPER INSTALLATION, WHERE REQUIRED BY THE MANUFACTURER. THE CONCRETE BORDER MUST NOT EXCEED 2 INCHES (51 mm).
- DETECTABLE WARNING SURFACES ARE NOT TO BE PLACED ON PAVING OR EXPANSION JOINTS AT CURB RAMPS. THE ROWS OF TRUNCATED DOMES IN DETECTABLE WARNING SURFACES ARE TO BE ALIGNED PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP RUN AND THE STREET SO PEDESTRIANS WHO USE WHEELCHAIRS CAN TRACK BETWEEN THE DOMES.
- ON PERPENDICULAR CURB RAMPS, DETECTABLE WARNING SURFACES ARE TO BE PLACED AS FOLLOWS:
 - WHERE THE ENDS OF THE BOTTOM GRADE BREAK ARE BEHIND THE BACK OF CURB AND THE DISTANCE FROM EITHER END OF THE BOTTOM GRADE BREAK TO THE BACK OF CURB IS 5.0 FT OR LESS, DETECTABLE WARNING SURFACES ARE TO BE PLACED AT THE BACK OF CURB.
 - WHERE THE ENDS OF THE BOTTOM GRADE BREAK ARE BEHIND THE BACK OF CURB AND THE DISTANCE FROM EITHER END OF THE BOTTOM GRADE BREAK TO THE BACK OF CURB IS MORE THAN 5.0 FT, DETECTABLE WARNING SURFACES ARE TO BE PLACED ON THE LOWER LANDING AT THE BACK OF CURB.
- ON PARALLEL CURB RAMPS, DETECTABLE WARNING SURFACES ARE TO BE PLACED ON THE TURNING SPACE AT THE FLUSH TRANSITION BETWEEN THE STREET AND SIDEWALKS.
- ON BLENDED TRANSITIONS, DETECTABLE WARNING SURFACES ARE TO BE PLACED AT THE FLUSH TRANSITION BETWEEN THE STREET AND THE SIDEWALK.

DETECTABLE WARNING SURFACE DETAIL

NOT TO SCALE MCNJ-SITE-HADA-2100 07/01/20

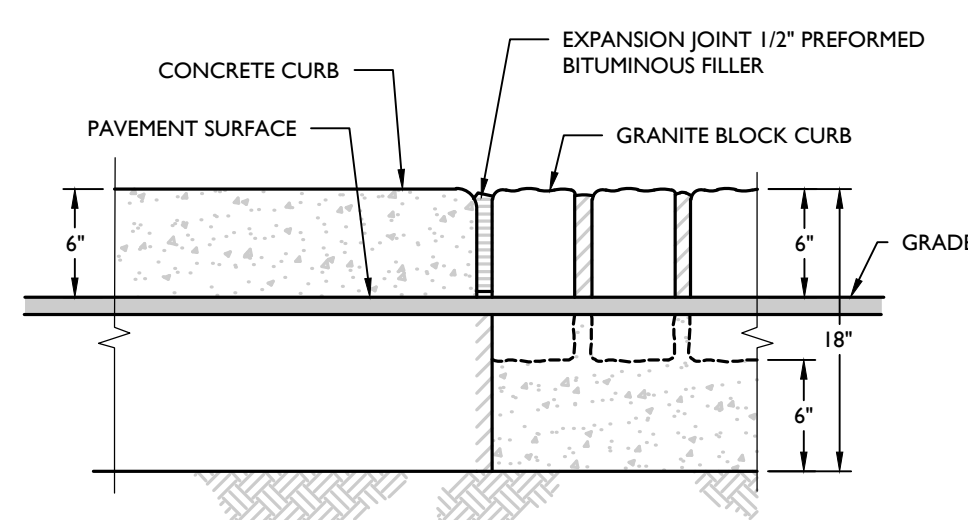


NOTES:

- FLUSH CURB AT DETECTABLE WARNING SURFACE (WHERE SHOWN ON PLANS) IS TO BE A SMOOTH LEVEL SURFACE THAT IS FLUSH WITH THE ADJOINING PAVEMENT. NO BUMPS OR ROUGH SURFACES ARE ALLOWED. SUCH UNEVENNESS MUST BE FILLED OR GRINDED SMOOTH.
- CURB TO BE FLUSH WITH ROADWAY PAVEMENT AND CONSTRUCTED WITH CONCRETE REGARDLESS OF THE CURB MATERIAL, WHERE AS 1.0% USED THROUGHOUT THE SITE.
- POSITIVE DRAINAGE IS TO BE MAINTAINED AT RAMP. RAMP IS TO SLOPE TOWARDS PAVEMENT NO PONDING OF WATER IS PERMITTED AT CURB RAMP. PAVEMENT GRADES TO BE ADJUSTED AS NECESSARY TO PROVIDE POSITIVE GUTTER DRAINAGE.
- AS CONSTRUCTED GUTTER DRAINAGE GRADE ALONG FLUSH CURB AND WITHIN THE CROSSWALK AREA TO BE 1.0% MINIMUM, 2.00% MAXIMUM, WHERE AS 0.5% ABSOLUTE MINIMUM IF DUE TO SITE CONSTRAINTS.
- DEVIATION FROM THIS DETAIL REQUIRES THE WRITTEN APPROVAL OF THE UNDERSIGNED PROFESSIONAL.

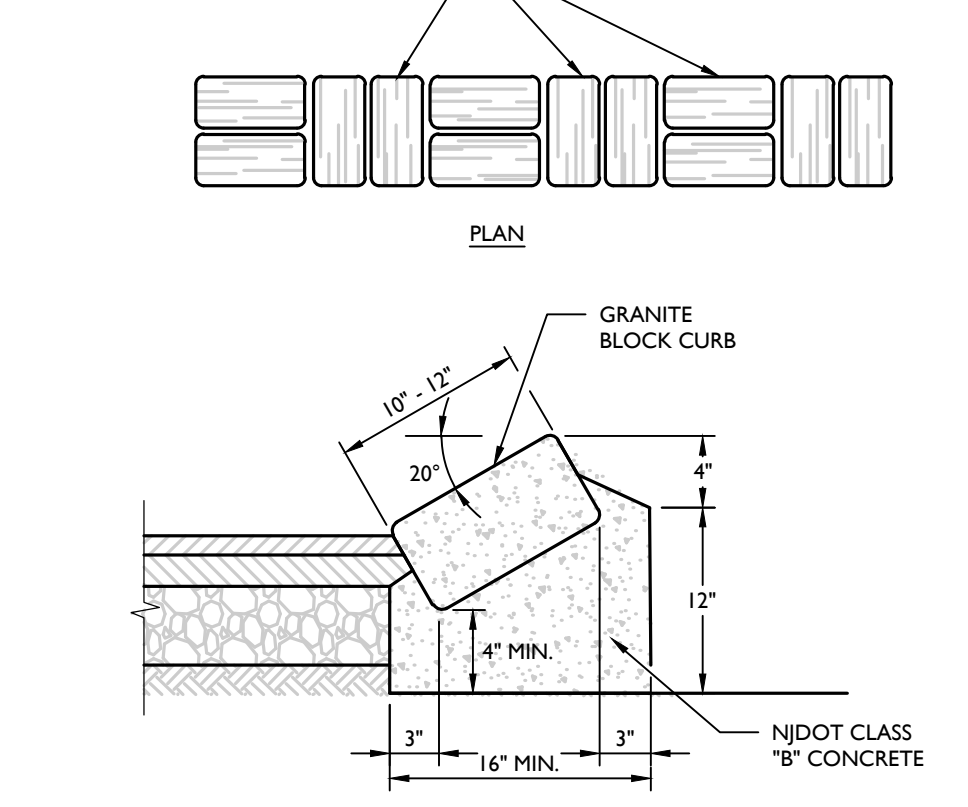
CURB RAMP SECTIONS DETAIL

NOT TO SCALE MCNJ-SITE-HADA-2000 07/01/20



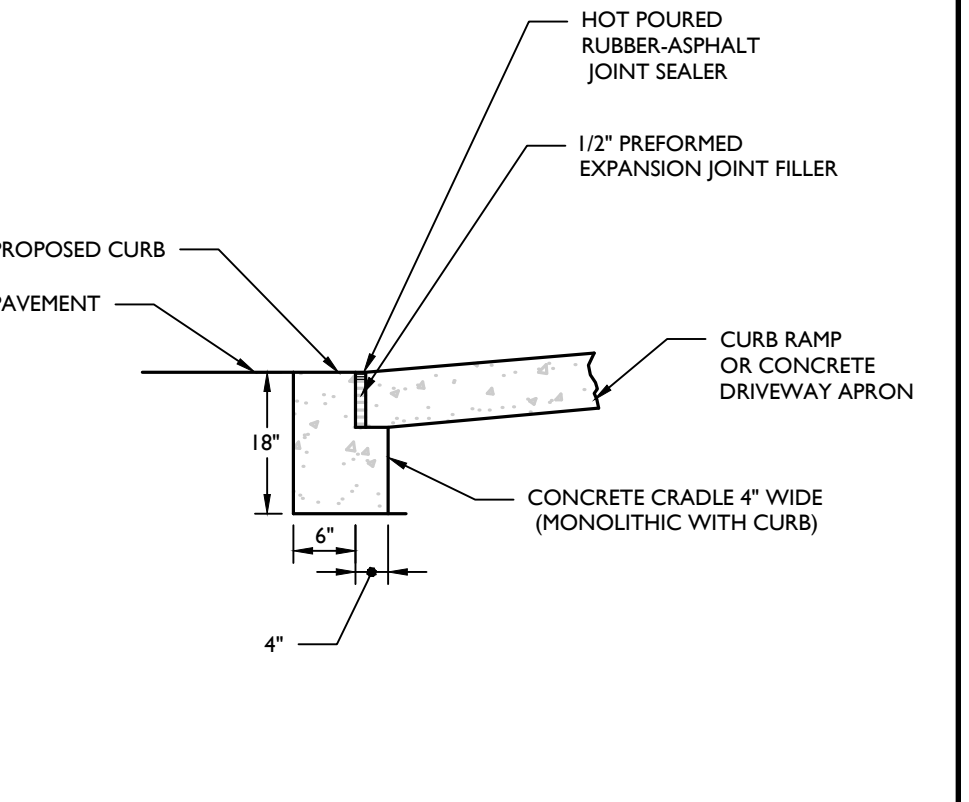
TRANSITION BETWEEN GRANITE BLOCK & CONCRETE DETAIL

NOT TO SCALE MCNJ-SITE-CURB-1600 05/01/17



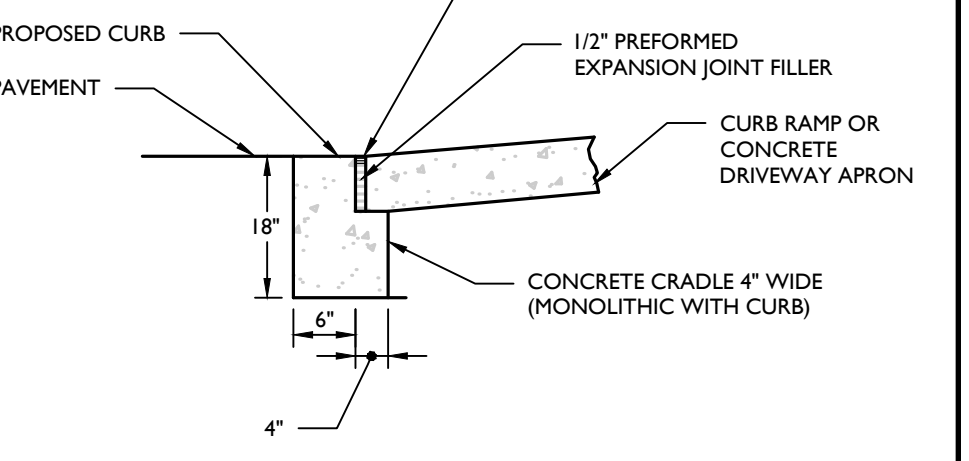
MOUNTABLE GRANITE BLOCK CURB (RSIS) DETAIL

NOT TO SCALE MCNJ-SITE-CURB-1300 05/01/17



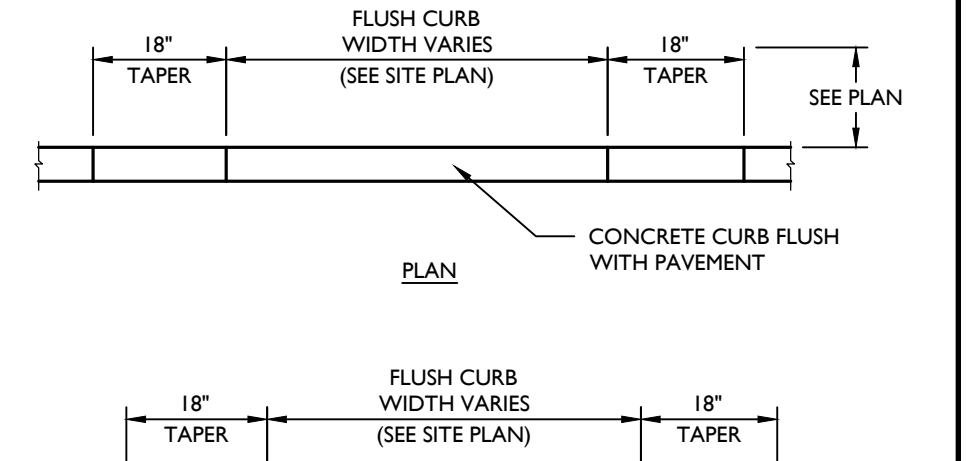
FLUSH CURB AND CRADLE DETAIL

NOT TO SCALE MCNJ-SITE-HADA-2300 05/01/17



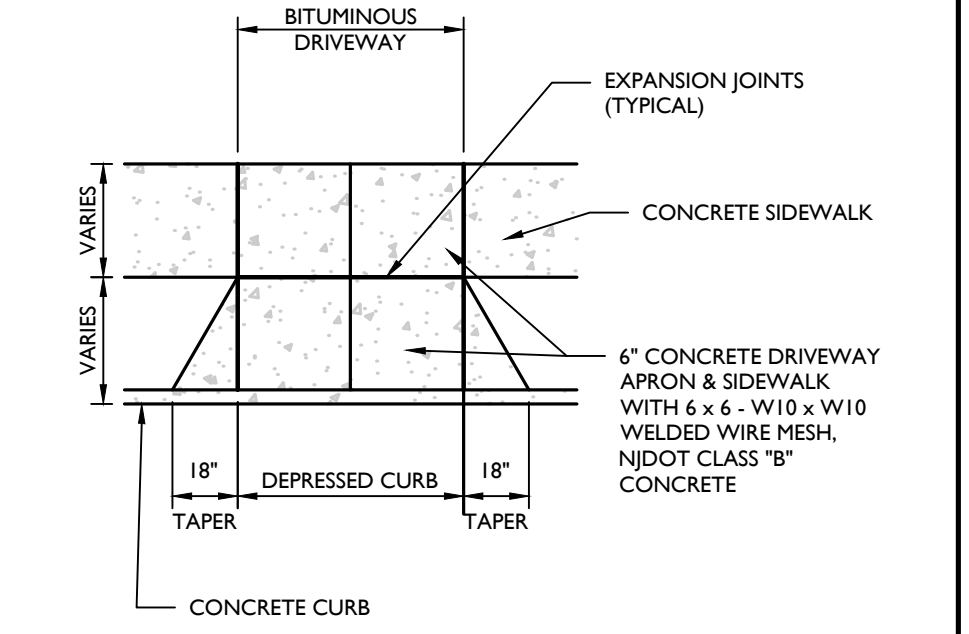
DROPPED CURB AND CRADLE DETAIL

NOT TO SCALE MCNJ-SITE-CURB-2100 05/01/17



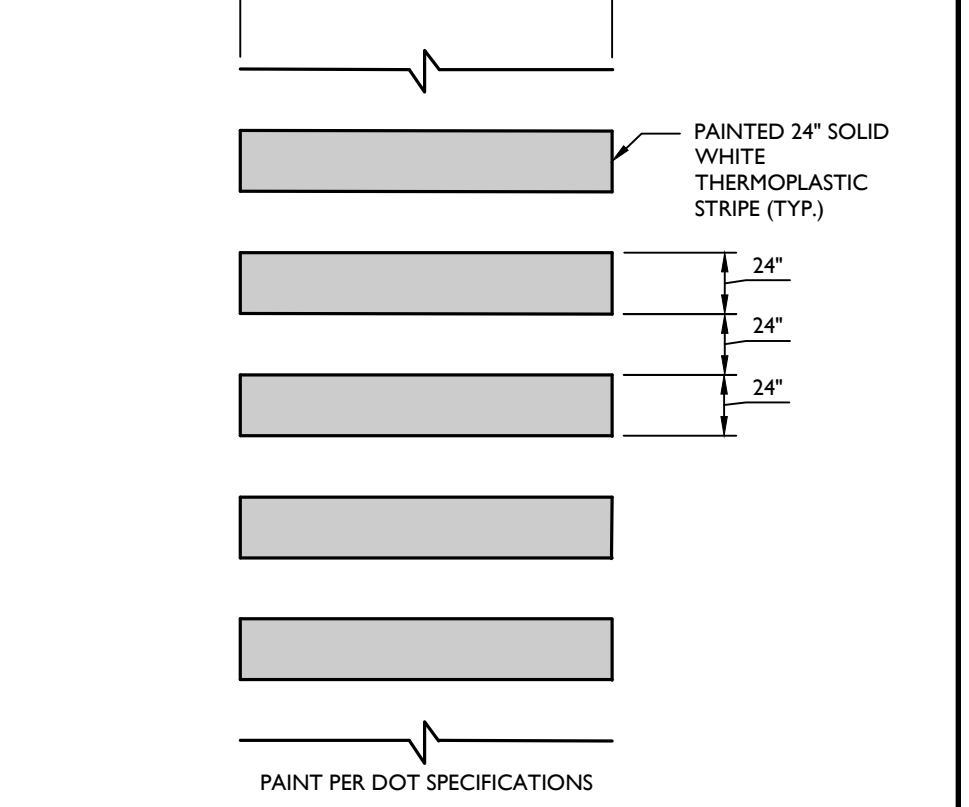
CONCRETE FLUSH CURB DETAIL

NOT TO SCALE MCNJ-SITE-CURB-1400 05/01/17



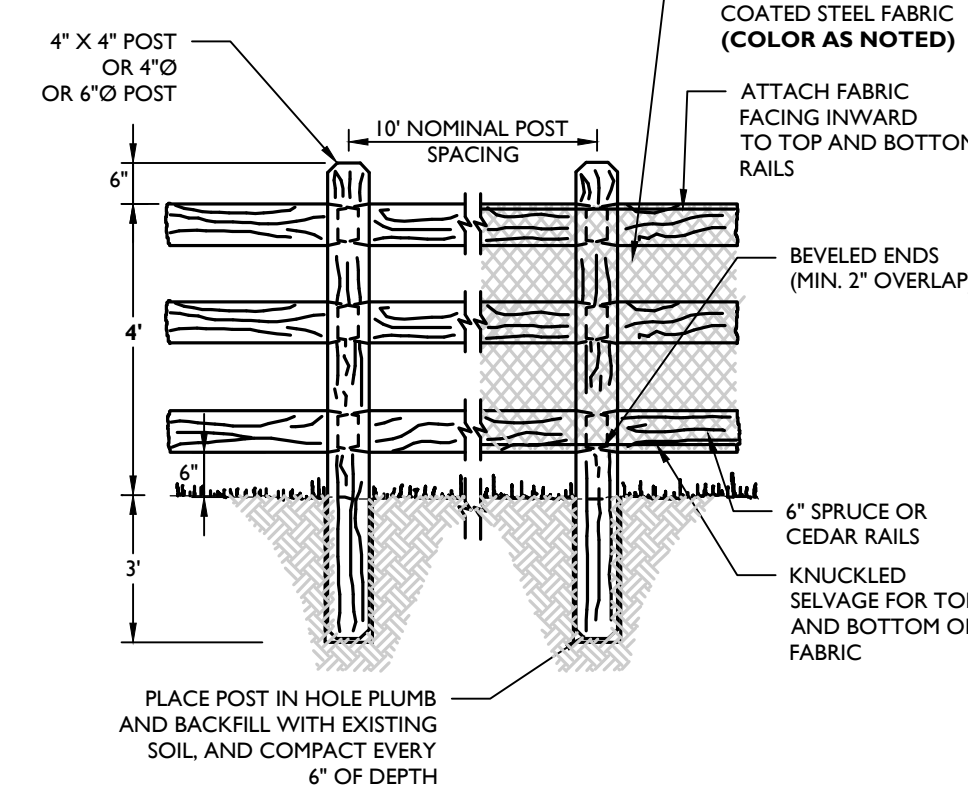
CONCRETE DRIVEWAY APRON DETAIL

NOT TO SCALE MCNJ-SITE-PMVT-1600 05/01/17



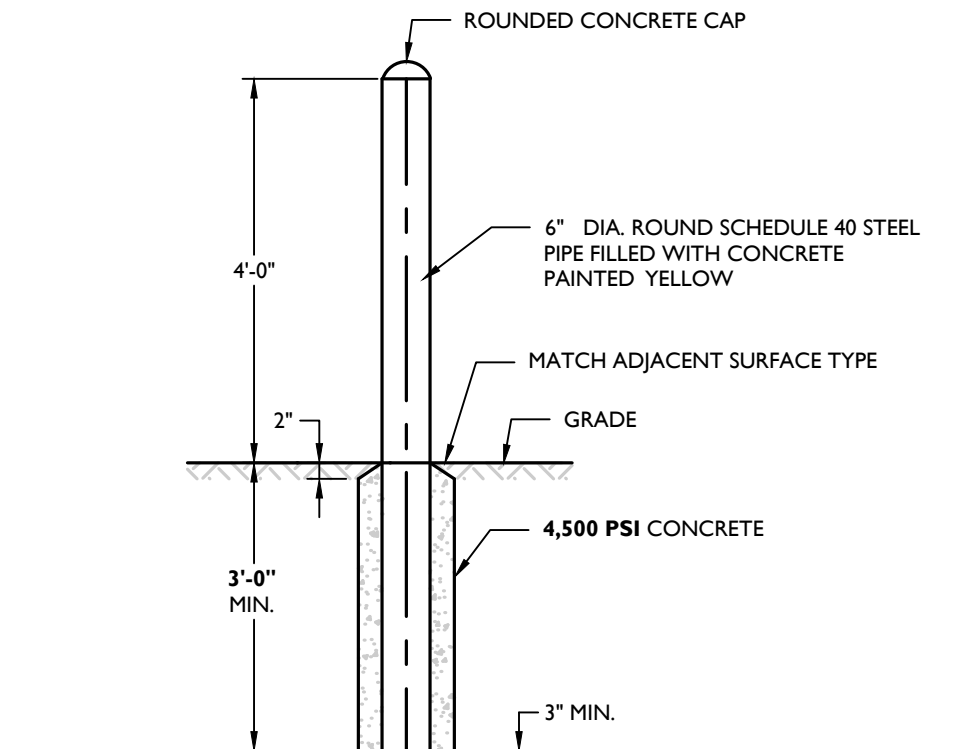
PEDESTRIAN CROSSWALK DETAIL

NOT TO SCALE MCNJ-SITE-MRKG-1401 05/01/17



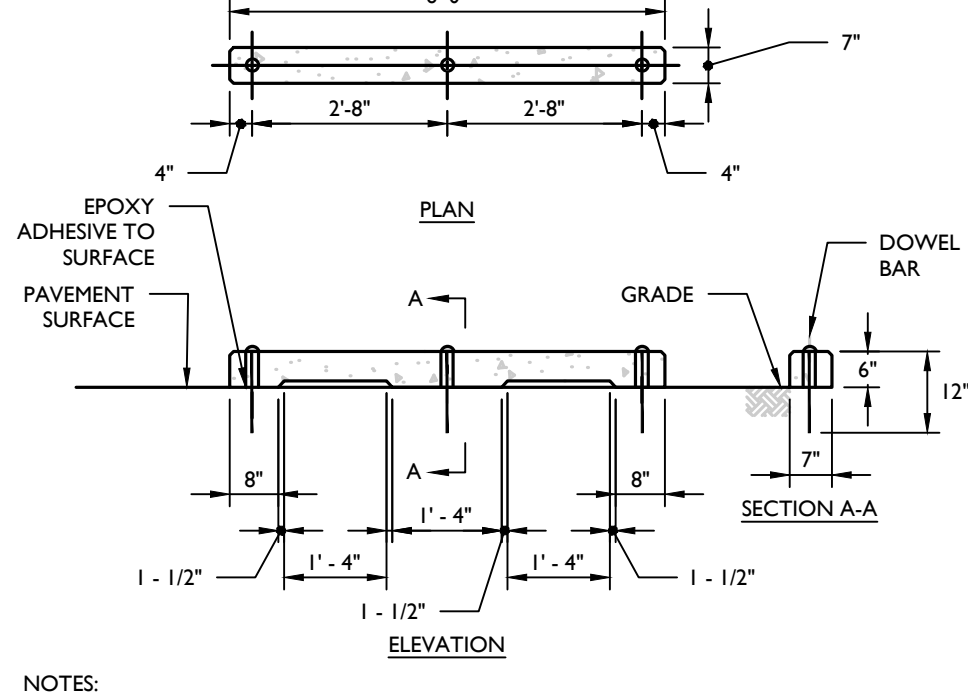
SPLIT RAIL FENCE (3 - RAIL) WITH FABRIC DETAIL

NOT TO SCALE MCM-SITE-FENCE-1901 07/01/19



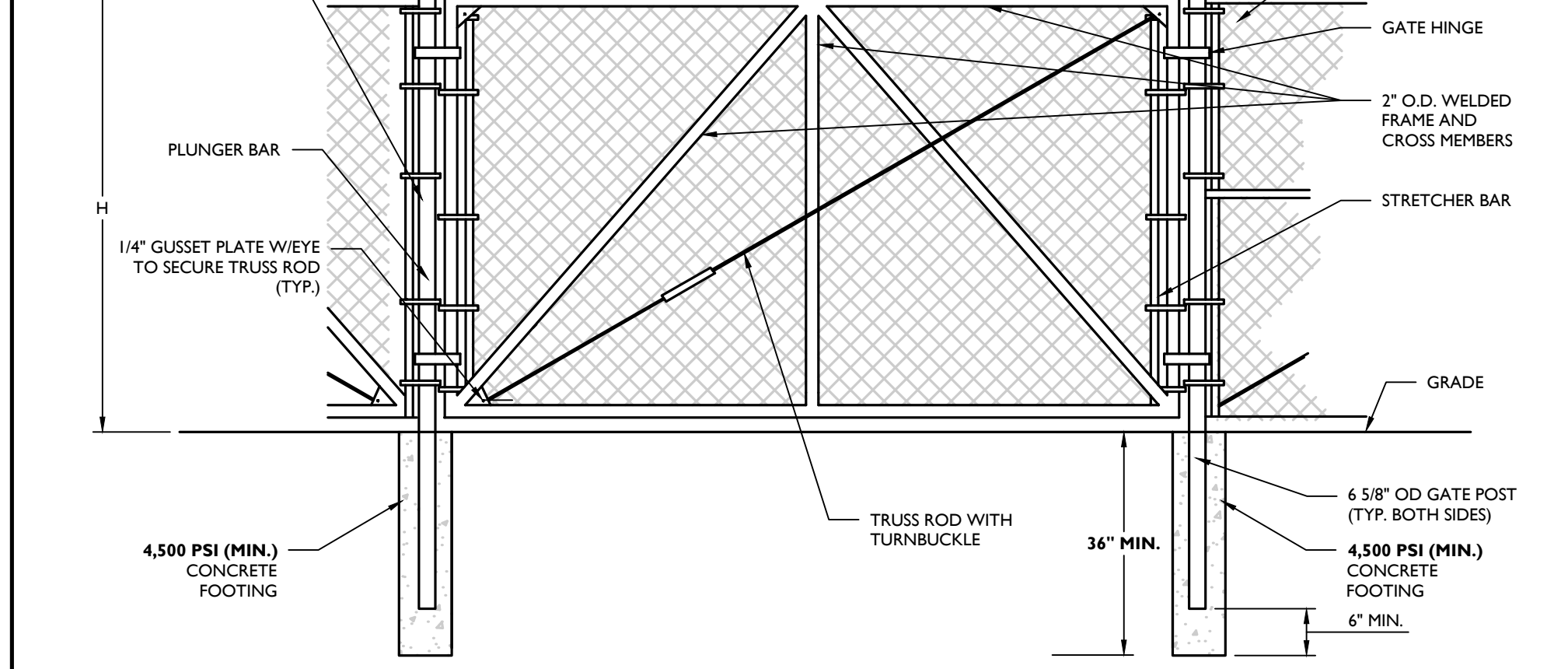
BOLLARD DETAIL

NOT TO SCALE MCM-SITE-FENCE-2300 07/01/19



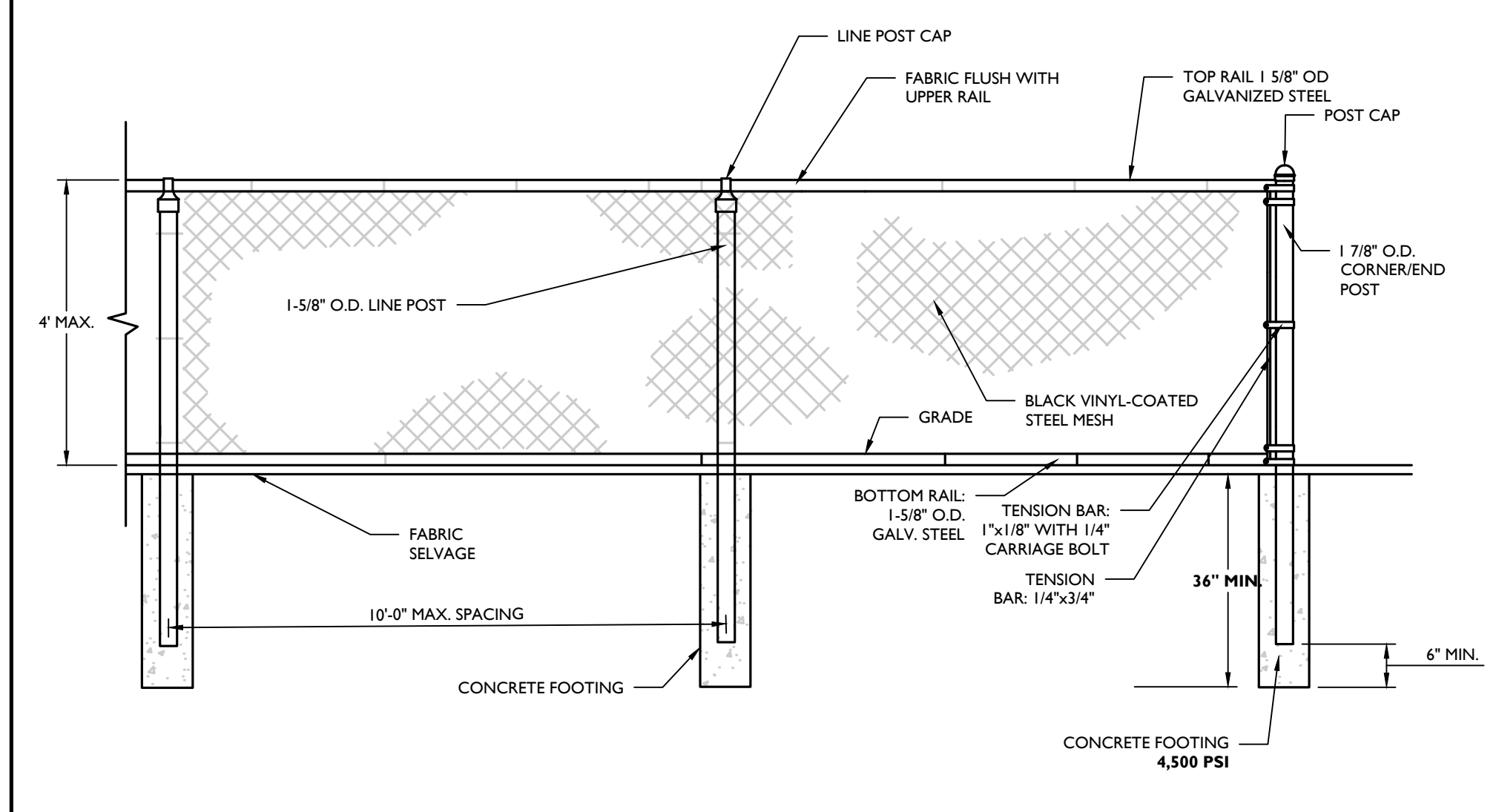
PRECAST CONCRETE BUMPER CURB WHEEL STOP (FOR CARS) DETAIL

NOT TO SCALE MCNJ-SITE-CURB-2301 05/01/17



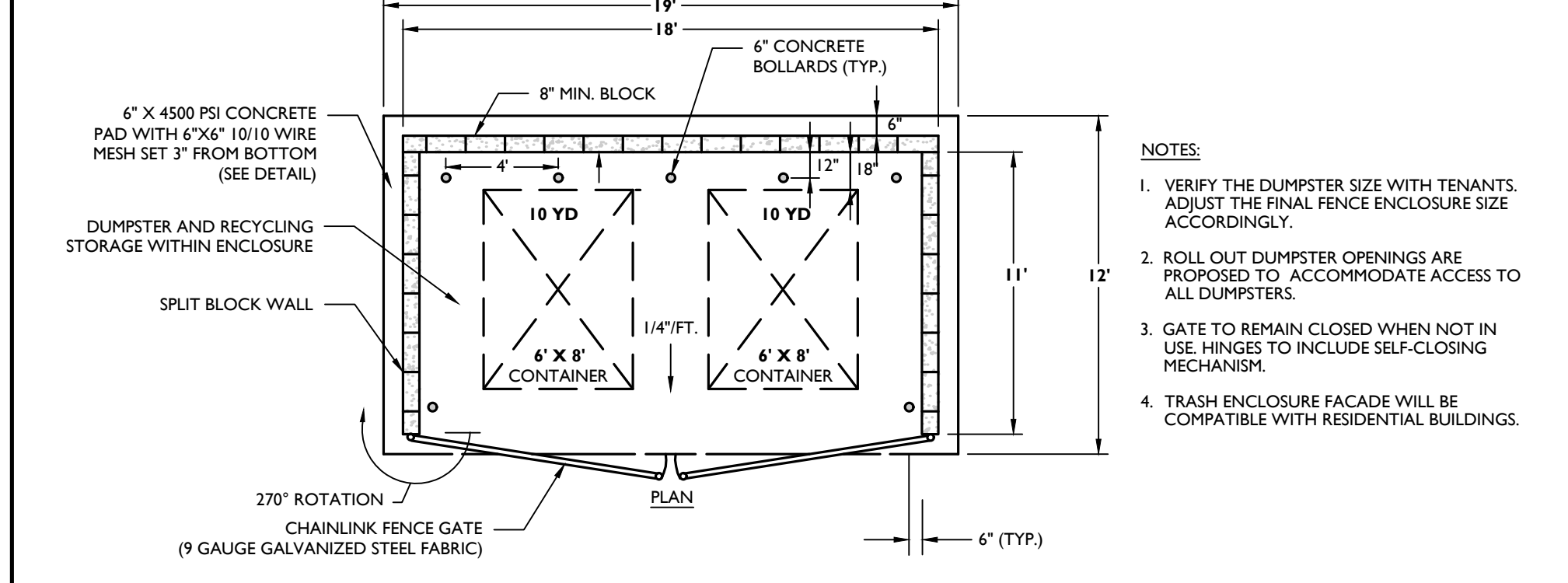
CHAIN LINK FENCE SINGLE GATE DETAIL

NOT TO SCALE MCM-SITE-FENCE-1300 07/01/19



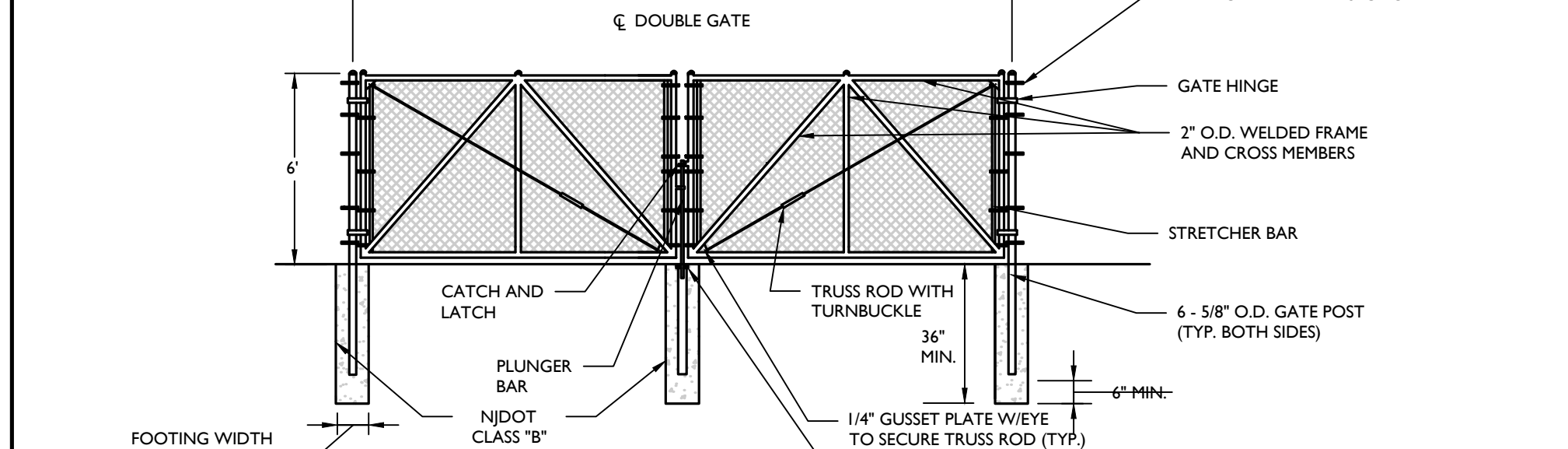
4' HIGH CHAIN LINK FENCE DETAIL

NOT TO SCALE MCM-SITE-FENCE-1201 07/01/19



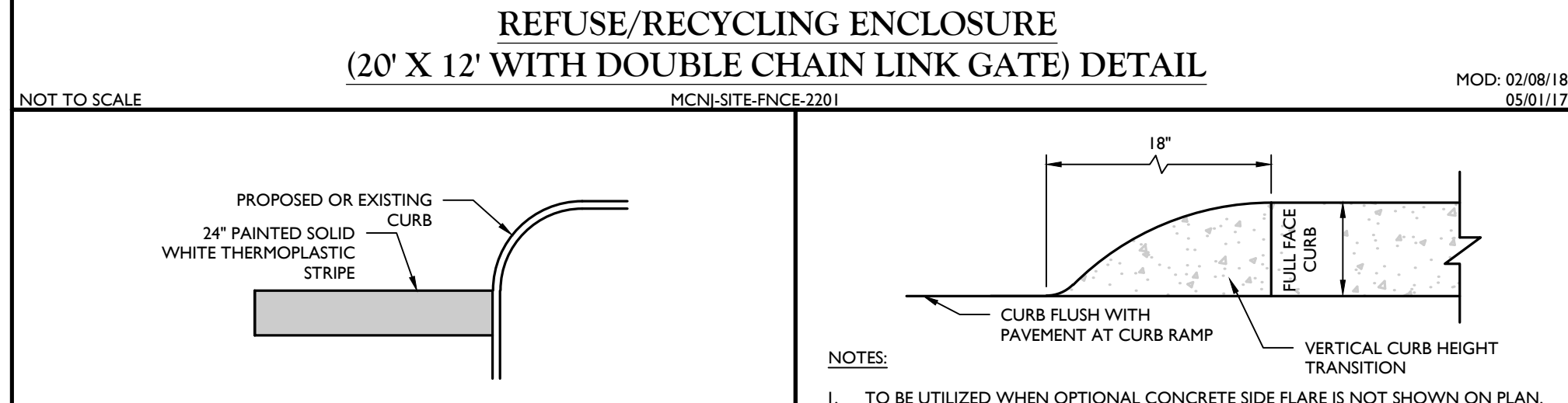
REFUSE/RECYCLING ENCLOSURE (20' X 12' WITH DOUBLE CHAIN LINK GATE) DETAIL

NOT TO SCALE MCNJ-SITE-MRKG-2201 05/01/17



TYPICAL STOP BAR DETAIL

NOT TO SCALE MCNJ-SITE-MRKG-1100 05/01/17



CURB RAMP CURB TAPER DETAIL

NOT TO SCALE MCNJ-SITE-HADA-2301 05/01/17

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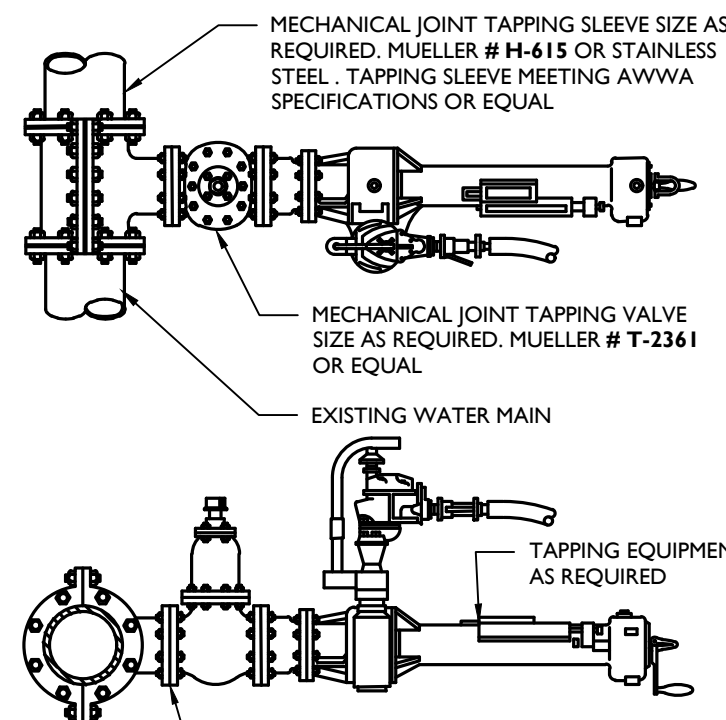
REV.	DATE	DESCRIPTION

Michael F. Gallagher
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE4873
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A.#. 2842798650

PRELIMINARY AND FINAL MAJOR SITE PLAN FOR AMARANTH AT NORTH BRUNSWICK PHASE 2 BLOCK 14,8.11 LOT 1.01 TOWNSHIP OF NORTH BRUNSWICK MIDDLESEX COUNTY NEW JERSEY

COLLIERS Engineering & Design
101 Crawford Corner Road, Suite 3400, Harrison, NJ 07033
Phone: 732.983.1950
COLLIERS ENGINEERING & DESIGN, INC. ONE BUSINESS CENTER DRIVE

SCALE	DATE	DRAWN BY	CHECKED BY
AS SHOWN	8/7/2023	PCS	MFG
PROJECT NUMBER	170019498	DRAWING NAME	C-0115



NOTES:
1. WET TAP VALVE CAN BE INSTALLED IN EITHER VERTICAL OR HORIZONTAL POSITION.
2. CONTRACTOR SHALL VERIFY DEPTH OF BURY, MATERIAL DIAMETER (O.D.) AND OPERATING PRESSURE OF EXISTING WATER MAIN PRIOR TO ORDERING OF WET TAP UNIT.

WET TAP DETAIL

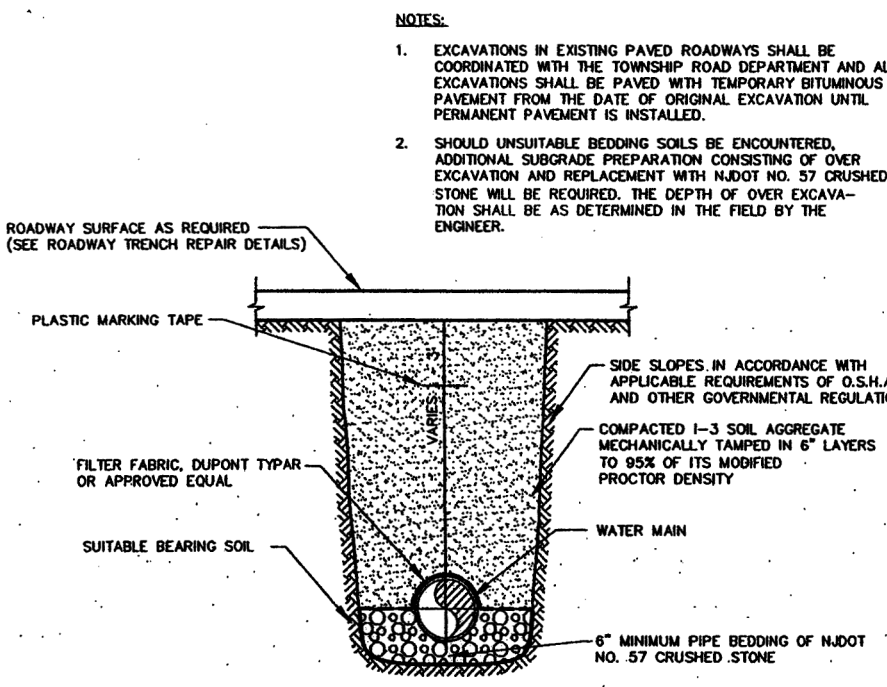
NOT TO SCALE MCNJ-LUTIL-WATR-1200 05/01/20

MINIMUM SIZE OF CONCRETE THRUST BLOCKS															
d	A	B	C	d	A	B	C	d	A	B	C	d x e	A	B	
6"	2'-0"	8"	1'-3"	6"	2'-6"	8"	1'-3"	6"	1'-6"	6"	1'-3"	6"	1'-6"	1'-0"	
8"	2'-6"	8"	1'-6"	8"	3'-0"	8"	1'-6"	8"	1'-6"	8"	1'-9"	8"	1'-6"	1'-0"	
10"	3'-0"	10"	2'-0"	10"	3'-6"	10"	2'-0"	10"	2'-3"	10"	2'-0"	10"	2'-6"	1'-3"	
12"	3'-6"	10"	2'-6"	12"	3'-9"	10"	2'-9"	12"	2'-6"	10"	2'-6"	10"	2'-6"	1'-6"	
TEES & CROSSSES															
				90° BENDS								45° BENDS			
				22.5° & 11.25° BENDS								REDUCERS			

NOTES:
1. ALL HORIZONTAL BENDS SHALL HAVE CONCRETE THRUST BLOCKS WITH MINIMUM BEARING AREAS AGAINST UNDISTURBED SOIL AND NO JOINT SHALL BE COVERED WITH CONCRETE.
2. BEARING AREAS ARE BASED UPON UNDISTURBED SOIL WITH A MINIMUM BEARING CAPACITY OF 0.5 TONS PER SQUARE FOOT. FOR A LESSER SOIL BEARING CAPACITY THESE AREAS SHALL BE INCREASED ACCORDINGLY.
3. THRUST BLOCKS SHALL BE POURED DIRECTLY AGAINST TRENCH WALLS AND SHALL BE NJDOT CLASS "B" CONCRETE.
4. DETAILS FOR SUPPORTS AND BRACINGS FOR VERTICAL BENDS FOR 12" DIAMETER OR LARGER SHALL BE APPROVED BY THE AUTHORITY PRIOR TO CONSTRUCTION.

THRUST BLOCKS DETAIL

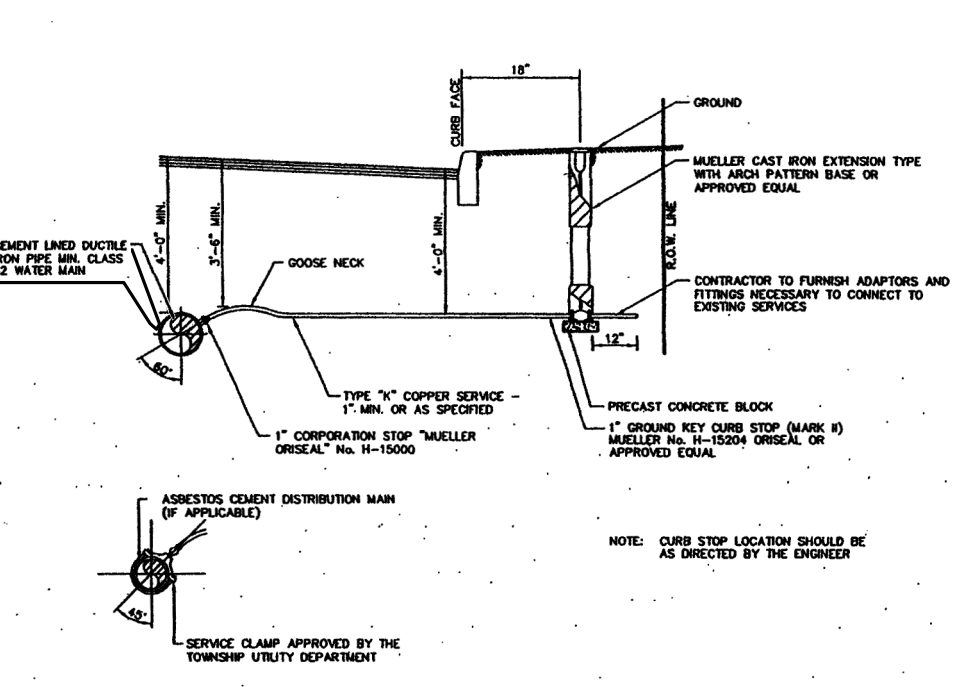
NOT TO SCALE MCNJ-LUTIL-WATR-1400 05/01/20



TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY, NEW JERSEY
STANDARD DETAILS
MAY 2004

TYPICAL BEDDING DETAIL
WATER MAIN

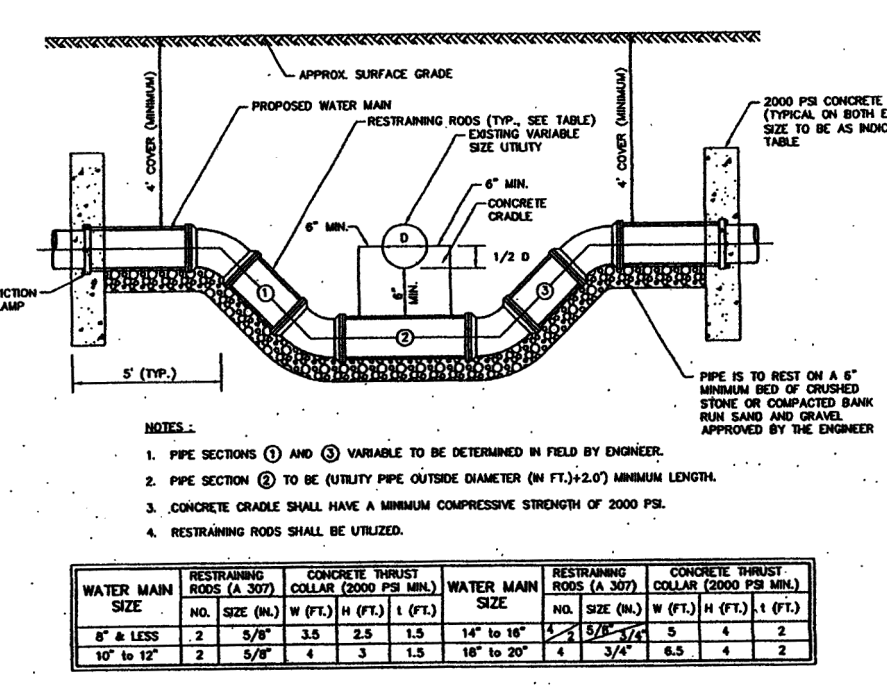
NOT TO SCALE GNRL-DTLS-STND-GRID 06/06/22



TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY, NEW JERSEY
STANDARD DETAILS
MAY 2004

WATER SERVICE CONNECTION DETAIL

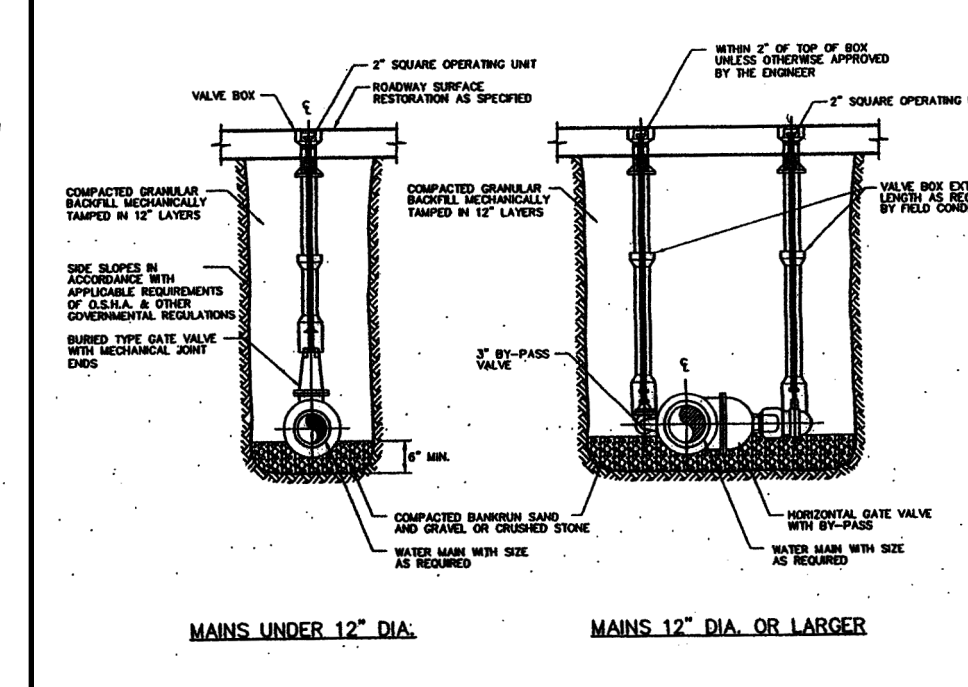
NOT TO SCALE GNRL-DTLS-STND-GRID 06/06/22



TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY, NEW JERSEY
STANDARD DETAILS
MAY 2004

UTILITY CROSSING DETAIL

NOT TO SCALE GNRL-DTLS-STND-GRID 06/06/22



TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY, NEW JERSEY
STANDARD DETAILS
MAY 2004

UNDERGROUND GATE VALVE DETAILS

NOT TO SCALE GNRL-DTLS-STND-GRID 06/06/22

CAMPBELL FOUNDRY COMPANY
Middletown, N.J. 07939
Phone 878-463-8889 FAX 878-463-6543
NT 216.732.8714 CT 203.288.7584

Easy Order Form

- Select Catch Basin Type: TYPE D (2'x4'), TYPE B (2'x8')
- Select Curb Design: TYPE H, TYPE F, TYPE J (12')
- Select Curb Height: 6", 8", 10", 12"
- Select Curb Markings: BRAINS TO RAY, BRAINS TO LAKE, BRAINS TO WAVE, BRAINS TO SWAMP, BRAINS TO STRIPES, BRAINS TO WATERFALL

TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY, NEW JERSEY
STANDARD DETAILS
MAY 2004

CAMPBELL FOUNDRY ORDERING FORM

3" WHITE LETTERS ON RED BACKGROUND
12"

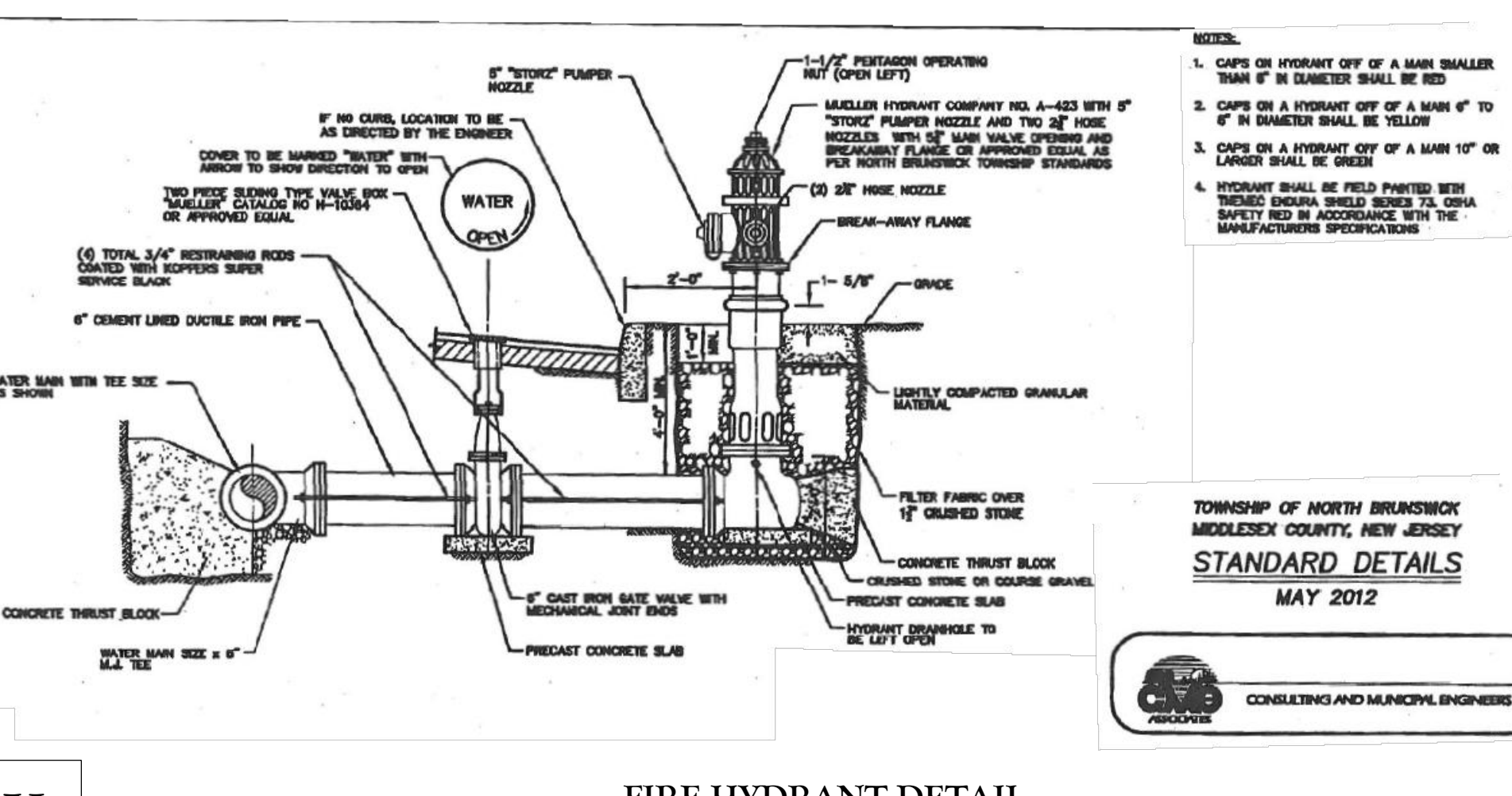
FDC/SPRINKLER SYSTEM STANDPIPE WITH 30 DEGREE BEND AND 5' STORIZ CONNECTION
PROPOSED IDENTIFICATION SIGN TO READ "FDC" WITH RED IDENTIFICATION LIGHT

NOTE:
1. THE FIRE DEPARTMENT CONNECTION IS INTENDED TO SUPPLEMENT THE TOWNSHIP ORDINANCE FOR STANDARD FIRE HYDRANT SPACING.
2. THE FIRE DEPARTMENT CONNECTION WILL BE REQUIRED WHERE AN INTERNAL BUILDING SPRINKLER SYSTEM IS PROVIDED.

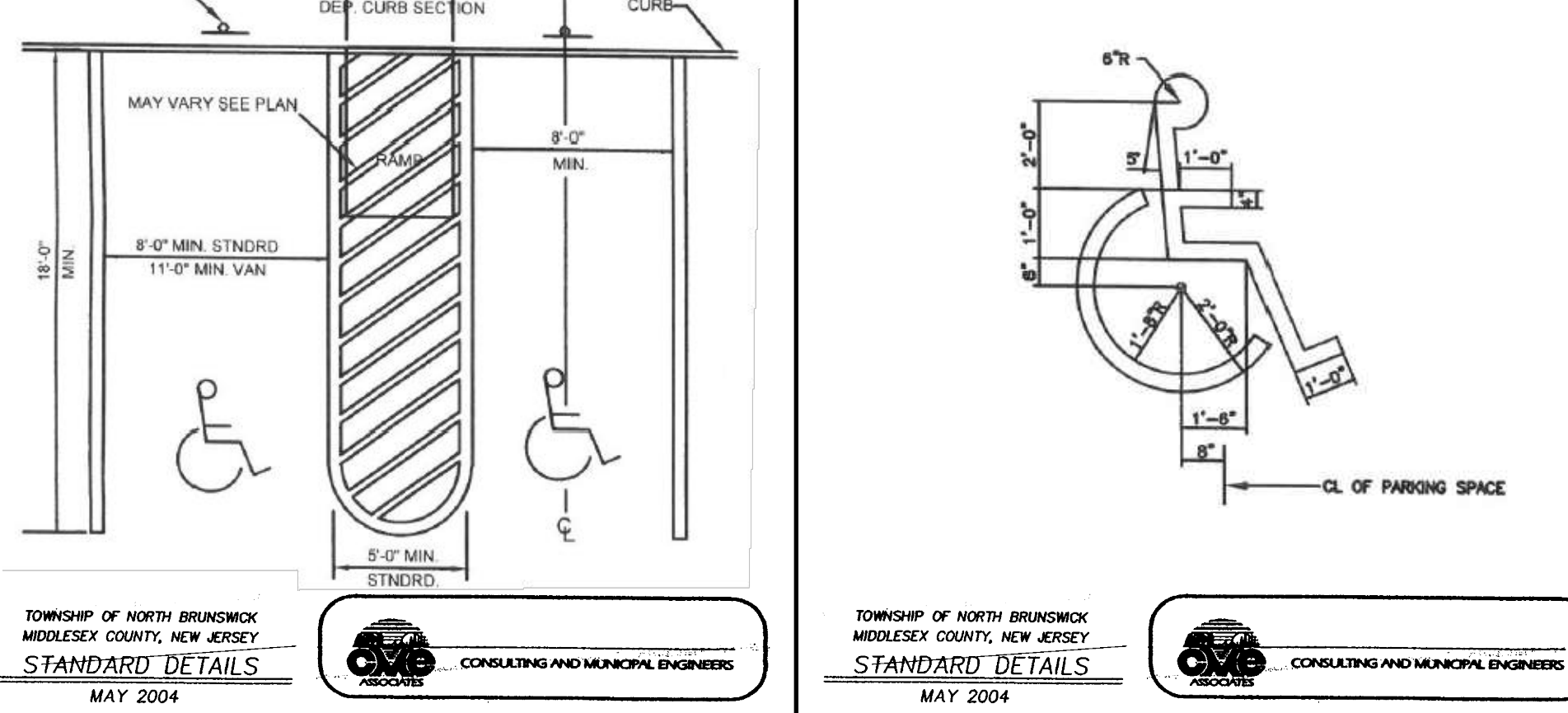
TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY, NEW JERSEY
STANDARD DETAILS
MAY 2004

FIRE DEPARTMENT CONNECTION (FDC) DETAIL

NOT TO SCALE GNRL-DTLS-STND-GRID 06/06/22



FIRE HYDRANT DETAIL



HANDICAPPED PERSON (HP) PARKING DETAIL



ACCESSIBLE PARKING SYMBOL

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REV	DATE	DESCRIPTION

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[Signature]
Michael F. Gallagher
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE48719
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. # 34642798650

PRELIMINARY AND FINAL
MAJOR SITE PLAN
FOR
AMARANTH AT NORTH BRUNSWICK PHASE 2
BLOCK 14.8.11 LOT 1.01
TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY
NEW JERSEY

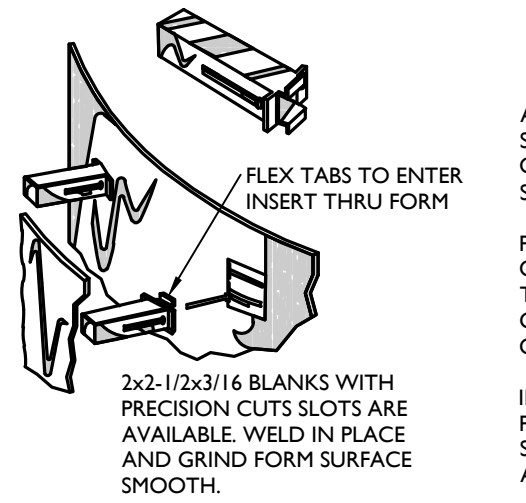
Colliers Engineering & Design
HQ/MD/EL (Headquarters)
101 Crawford Corner Road,
Suite 3400
Hightstown, NJ 07733
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CONSULTANTS

SCALE: AS SHOWN
DATE: 8/7/2023
PROJECT NUMBER: 170019498
DRAWING NAME: C-0115

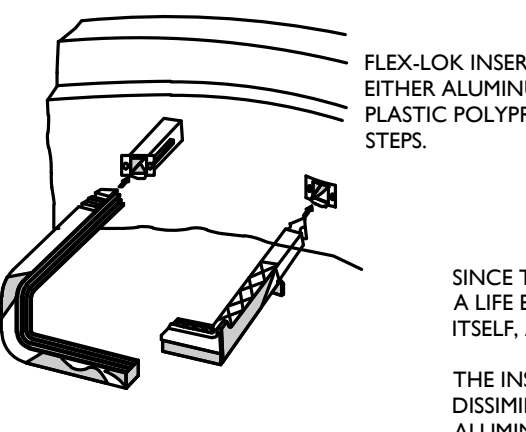
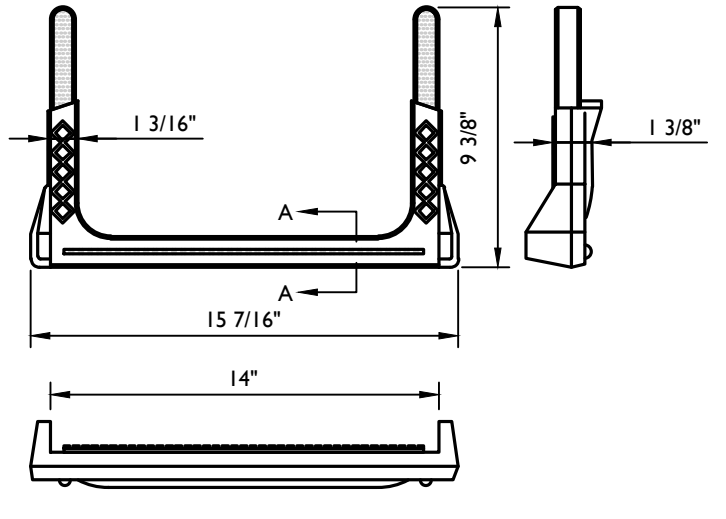
DRAWN BY: PCS
CHECKED BY: MFG

SHEET TITLE: CONSTRUCTION DETAILS
SHEET NUMBER: 17 of 21

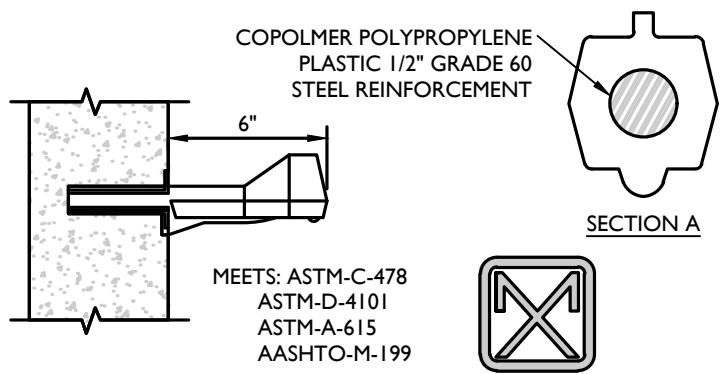
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



A POLYPROPYLENE INSERT FOR THE PURPOSE OF SECURING STEPS IN THE WALL OF A PRECAST CONCRETE MANHOLE OR OTHER CONCRETE STRUCTURE.

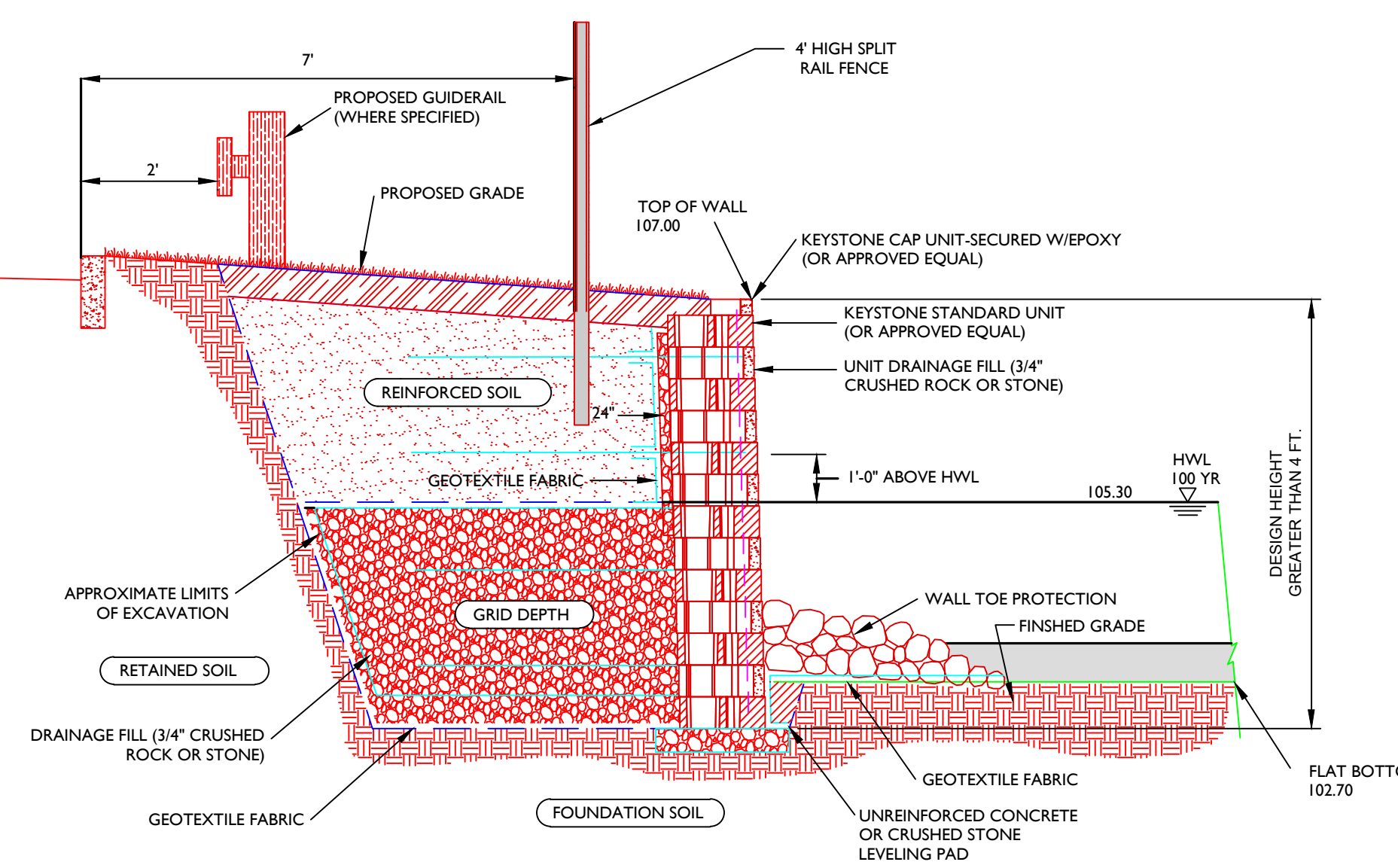


SINCE THE INSERT IS MADE OF POLYPROPYLENE, IT HAS A LIFE EXPECTANCY WHICH EXCEEDS THE CONCRETE ITSELF, AND HAS EXCELLENT CHEMICAL RESISTANCE.



NOTES: 1. STEP INSERTS TO BE AS MANUFACTURED BY A-LOK PRODUCTS OR APPROVED EQUAL.

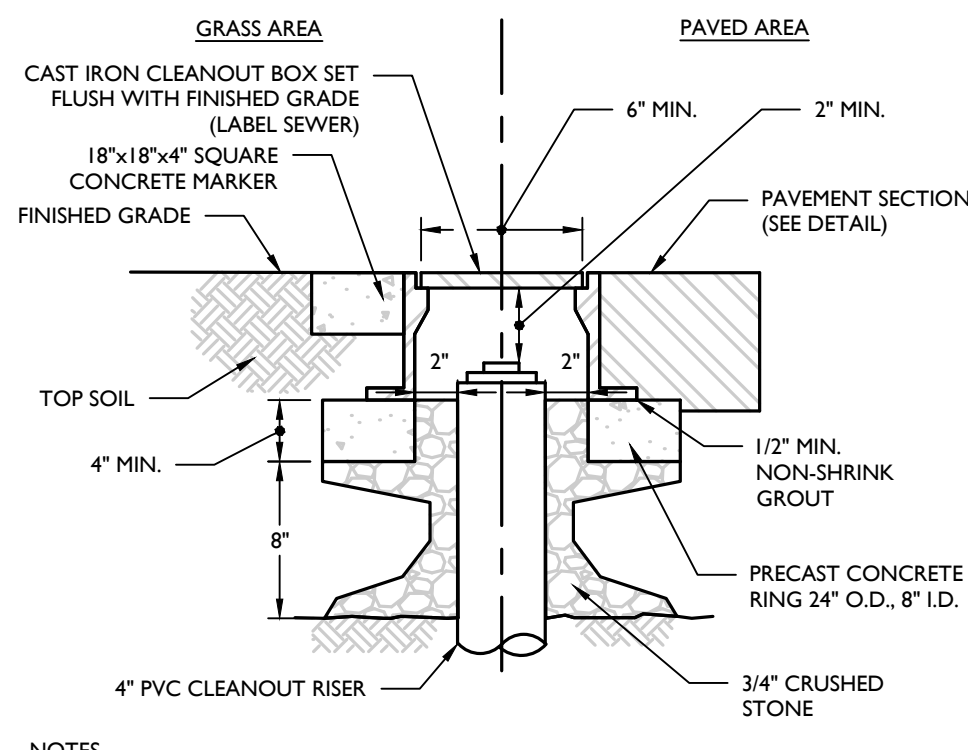
LADDER RUNG (COPOLYMER) DETAIL



NOTES: 1. MODULAR CONCRETE BLOCK WALL TO BE INSTALLED IN FIELD IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. 2. CONTRACTOR TO PROVIDE SITE SPECIFIC SHOP DRAWINGS AND STRUCTURAL DESIGN CALCULATIONS FOR EACH RETAINING WALL PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW JERSEY FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

TYPICAL REINFORCED WATER WALL SECTION (STANDARD UNIT - NEAR VERTICAL SETBACK)

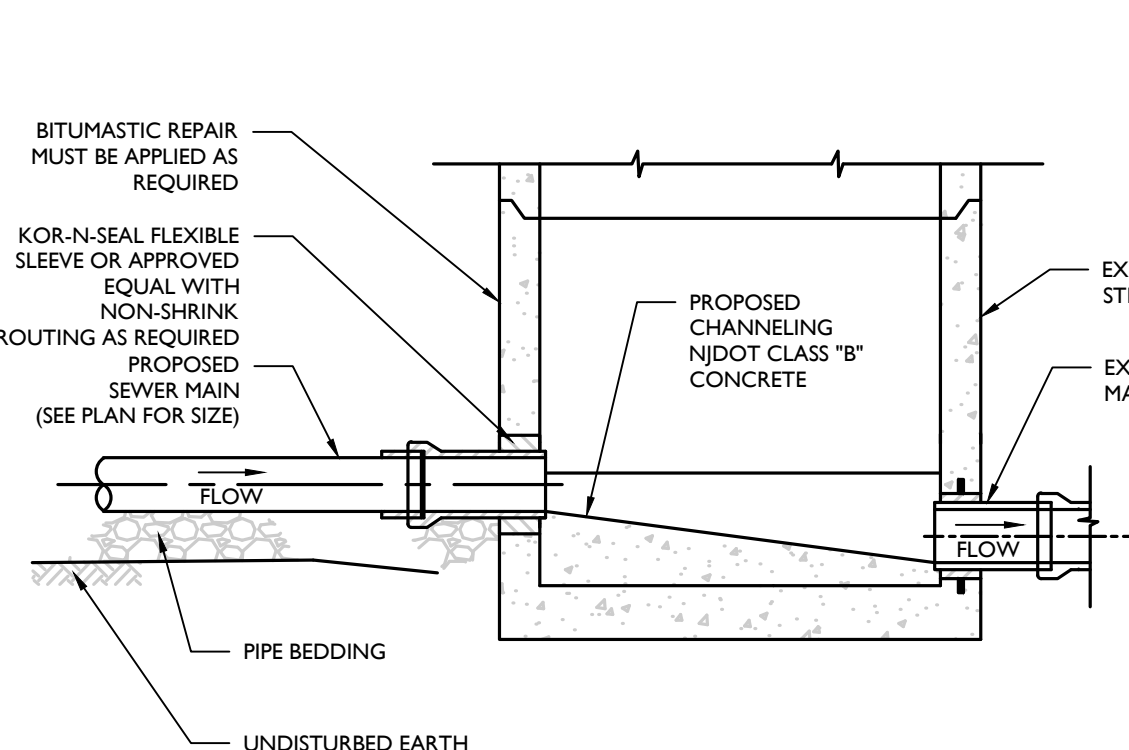
NOT TO SCALE



NOTES: 1. ALL PVC CLEANOUTS TO HAVE CAST IRON FRAME AND COVER PROTECTION BOX. DESIGN FOR 150 LBS. LOADS.

CLEANOUT PROTECTION BOX DETAIL

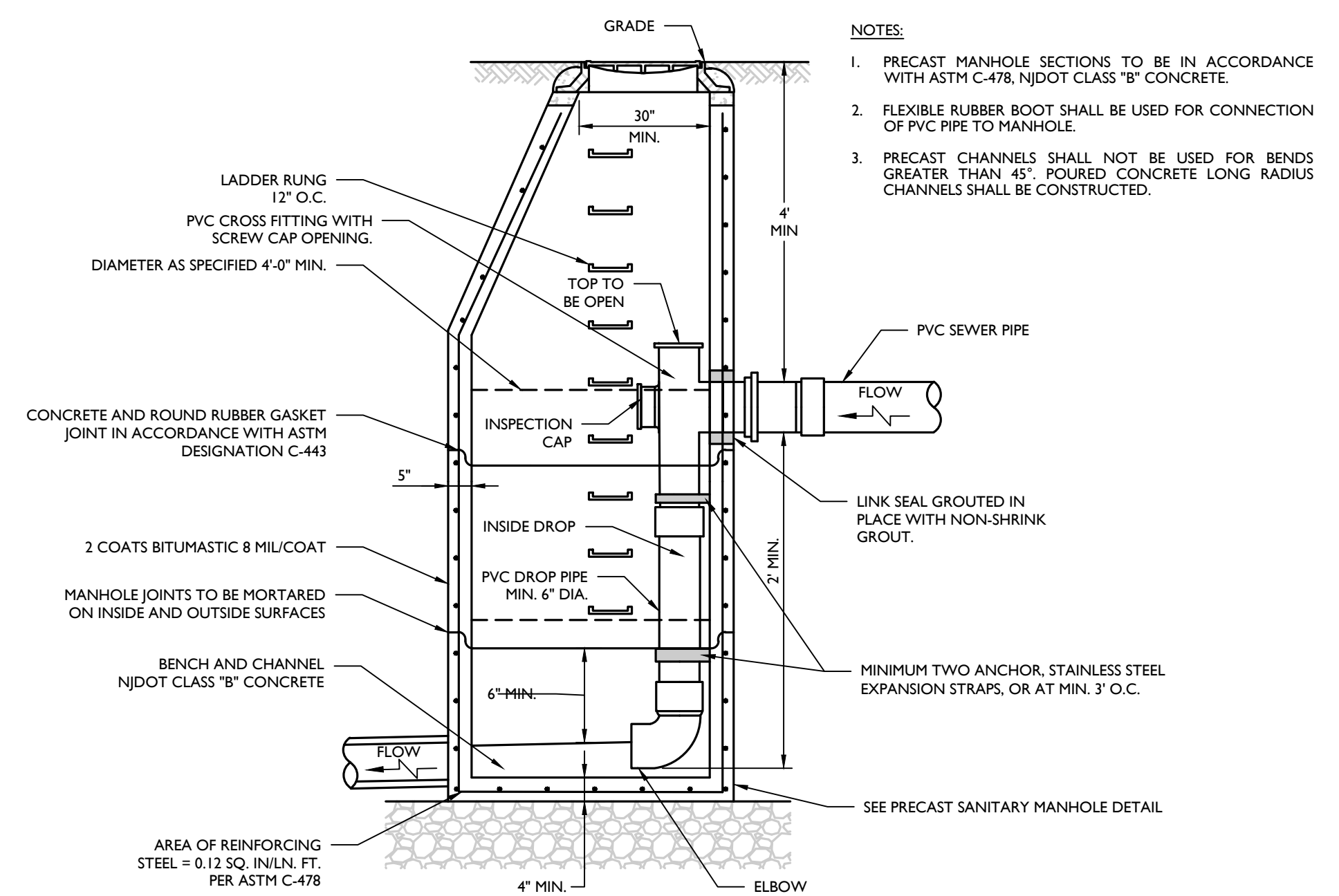
NOT TO SCALE



NOTES: 1. CONSTRUCTION OF THE NEW SEWER MAIN SHALL NOT IMPED THE OPERATION OF THE EXISTING SEWER. 2. WHERE NEW PIPE IS TO BE CONNECTED INTO AN EXISTING MANHOLE THE CONTRACTOR SHALL CORE DRILL ALL HOLES INTO MANHOLE AND SHALL PERFORM ALL CUTTING AND PATCHING NECESSARY FOR CHANNEL AND BENCH RECONSTRUCTION TO CHANNEL FLOW INTO EXISTING SEWER. 3. PIPE SHALL BE SEALED USING KOR-N-SEAL MANHOLE ADAPTERS OR APPROVED EQUAL AND NON-SHRINK GROUT. 4. EXISTING BENCH SHALL BE CHIPPED AND CUT AWAY TO ALLOW FOR NEW CHANNEL TO BE CONSTRUCTED AND TO PROVIDE GOOD SOUND SURFACE FOR BONDING WITH NEW CONCRETE CHANNEL AND BENCH. REMOVE ALL LOOSE MATERIALS AND CLEAN INSIDE OF THE STRUCTURE. 5. THE CONCRETE USED TO CONSTRUCT BENCHES AND CHANNELS SHALL BE 'B' CLASS 'B' CONCRETE APPLY EPOXY BONDING AGENT PRIOR TO POURING CONCRETE. 6. ANY DAMAGE TO THE EXISTING MANHOLES CAUSED BY THE CONSTRUCTION OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR.

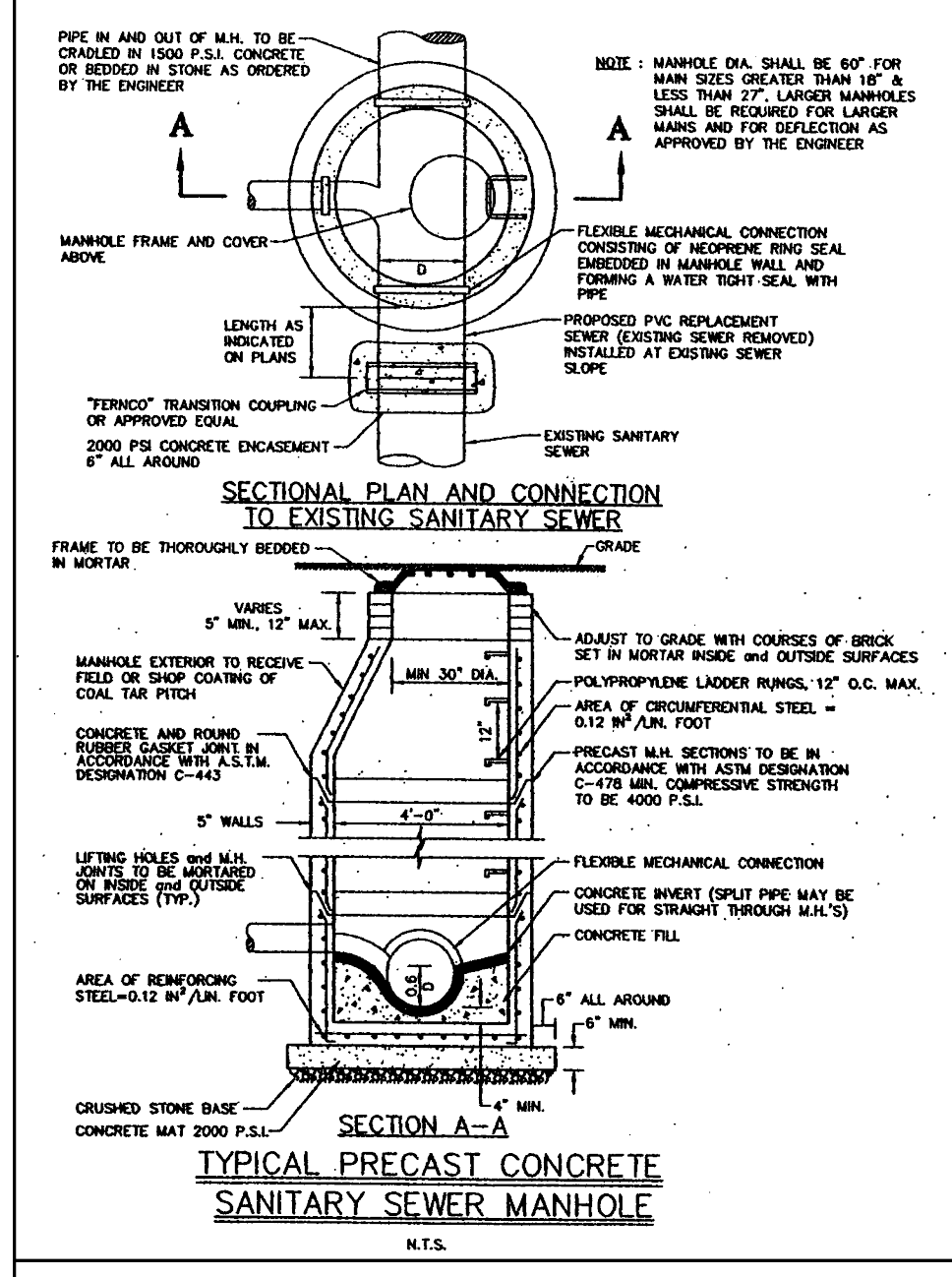
CONNECTION TO EXISTING MANHOLE DETAIL

NOT TO SCALE



SANITARY DROP MANHOLE CONNECTION (INTERNAL) DETAIL

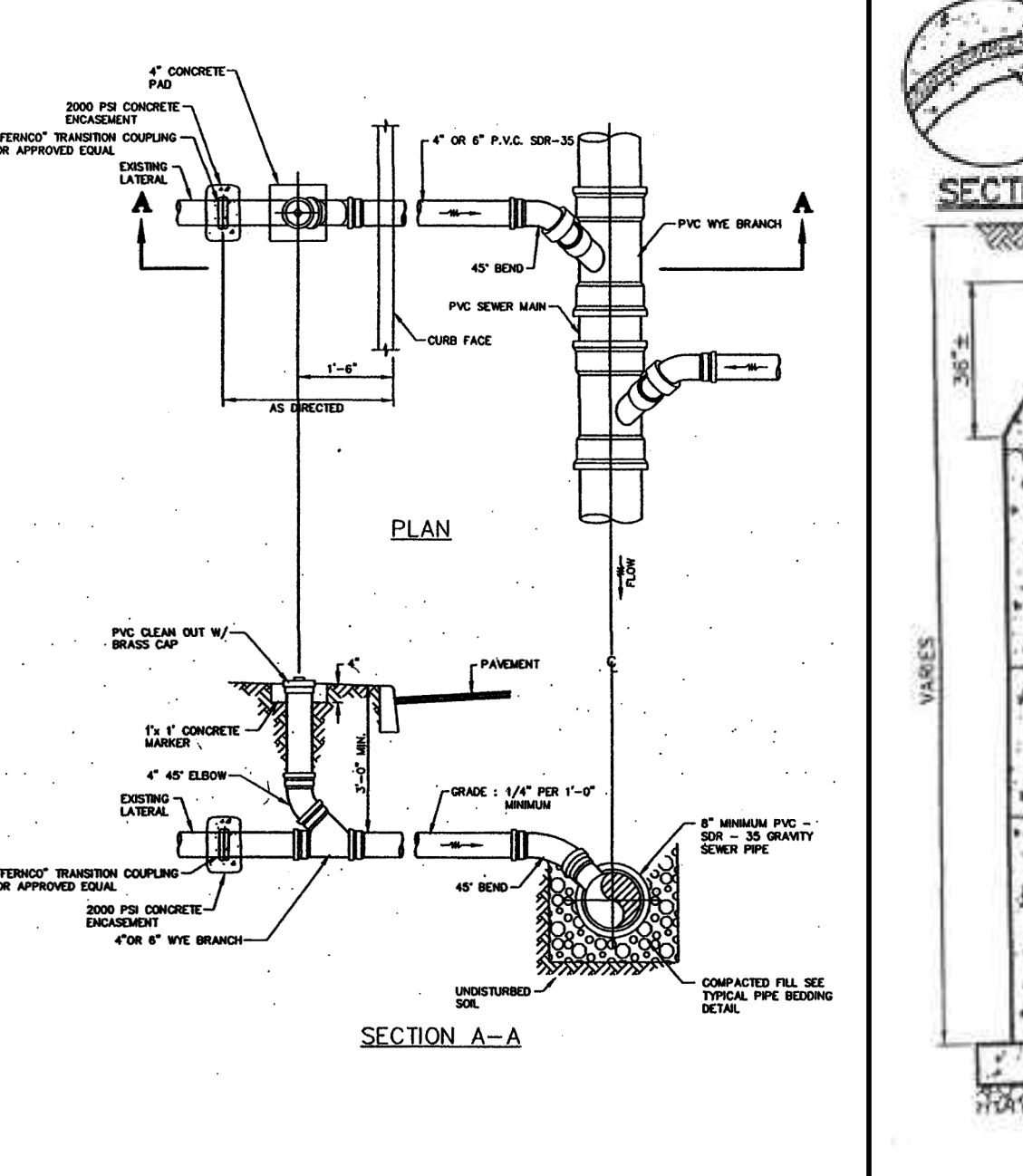
NOT TO SCALE



TOWNSHIP OF NORTH BRUNSWICK, MIDDLESEX COUNTY, NEW JERSEY. STANDARD DETAILS, MAY 2004.

TYPICAL PRECAST CONCRETE SANITARY SEWER MANHOLE

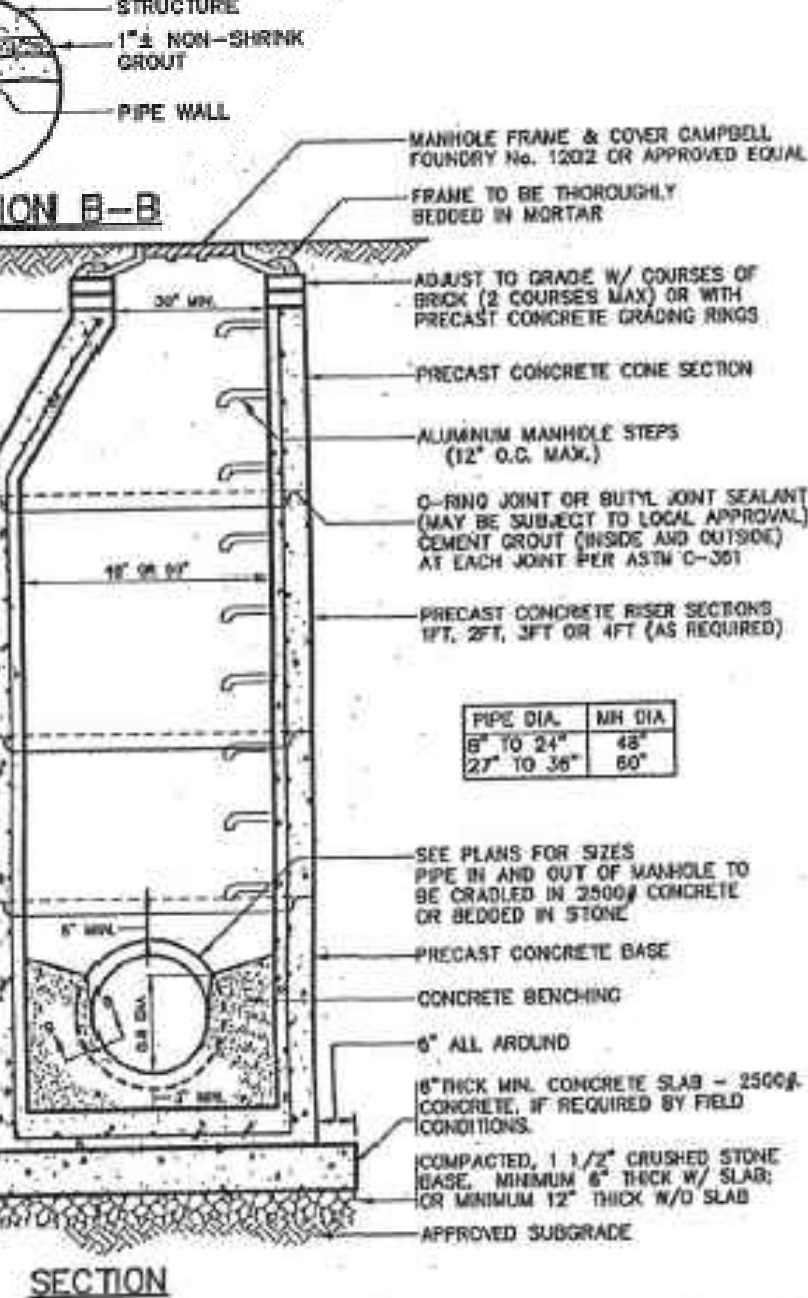
NOT TO SCALE



TOWNSHIP OF NORTH BRUNSWICK, MIDDLESEX COUNTY, NEW JERSEY. STANDARD DETAILS, MAY 2004.

PVC SANITARY SEWER LATERAL AND CLEANOUT

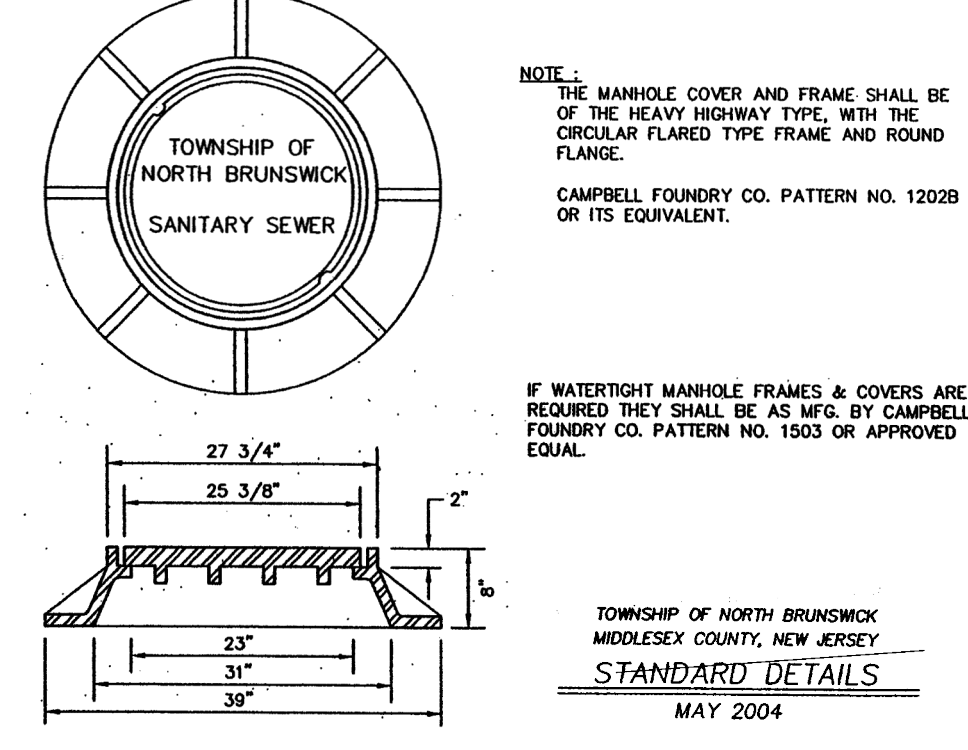
NOT TO SCALE



TOWNSHIP OF NORTH BRUNSWICK, MIDDLESEX COUNTY, NEW JERSEY. STANDARD DETAILS, MAY 2004.

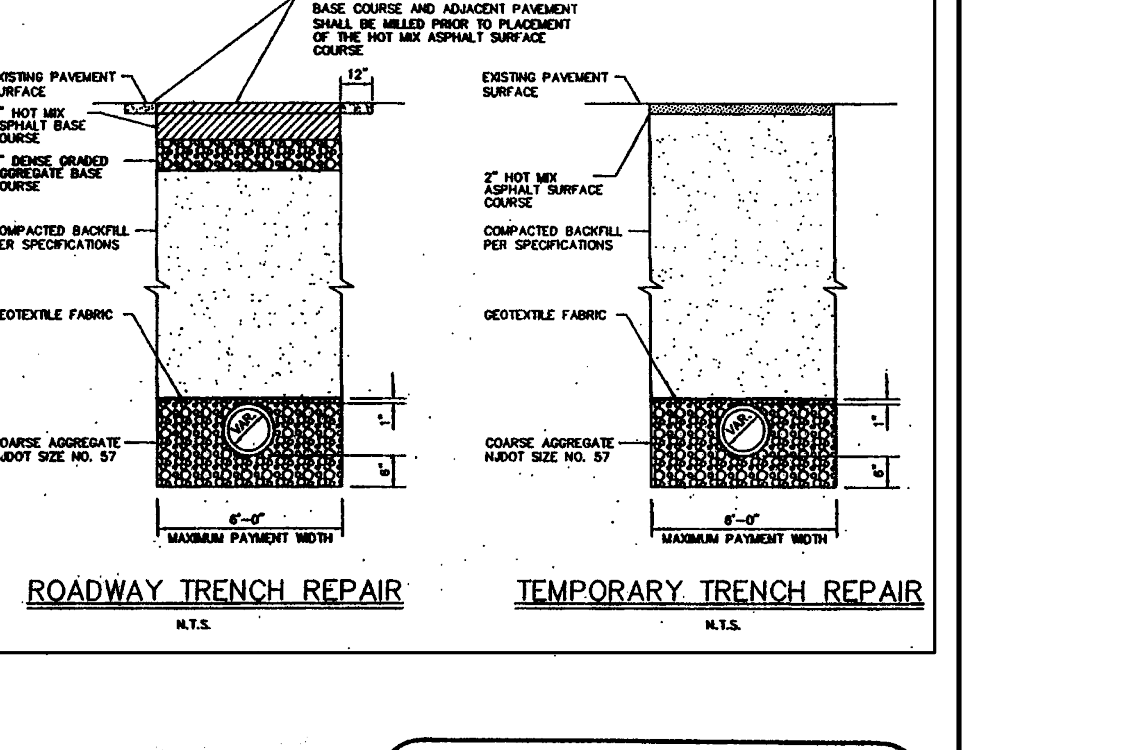
CONCRETE MANHOLE (4'0" 5'0" STORM)

NOT TO SCALE



TYPICAL SANITARY SEWER MANHOLE FRAME & COVER

NOT TO SCALE



TYPICAL BEDDING AND TRENCH DETAILS FOR SANITARY SEWER MAINS AND LATERALS

NOT TO SCALE

Colliers Engineering & Design logo and contact information.

MASER logo and contact information.

Table with columns: REV, DATE, DRAWN BY, DESCRIPTION.

Table with columns: REV, DATE, DRAWN BY, DESCRIPTION.

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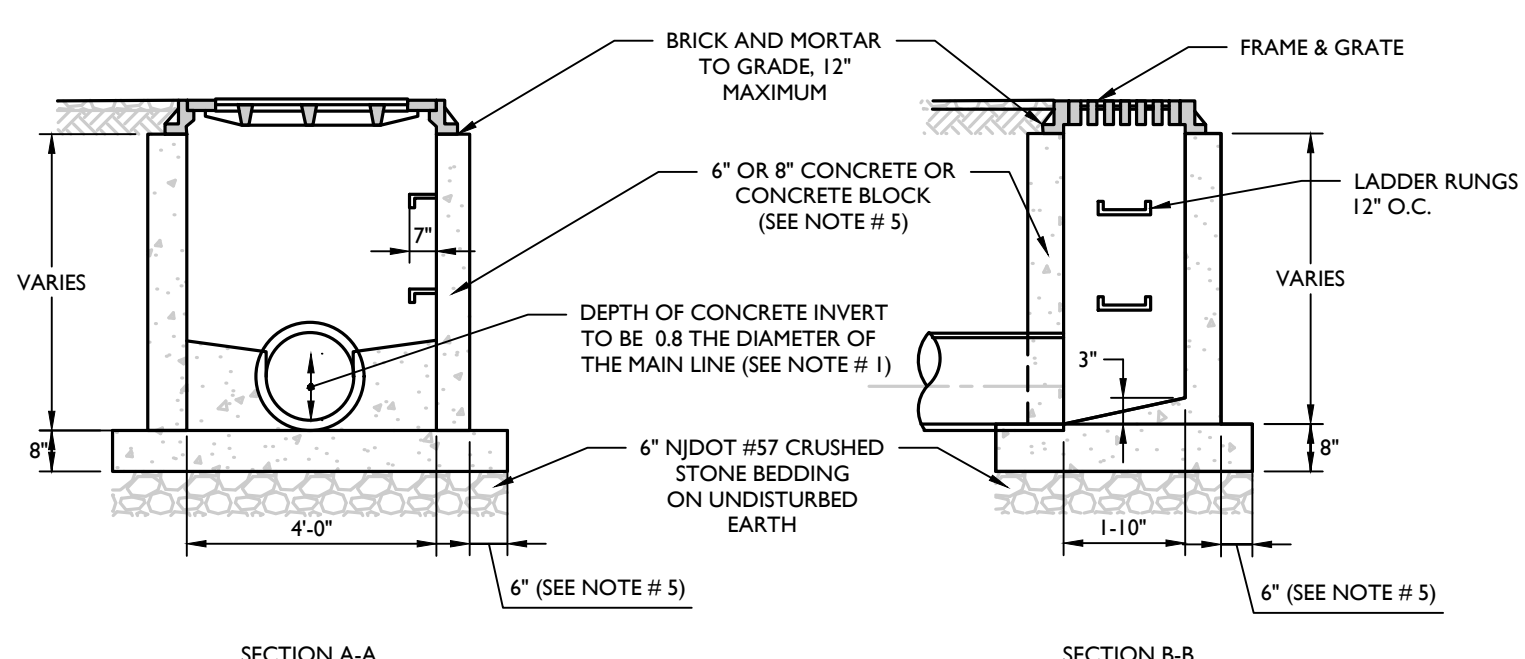
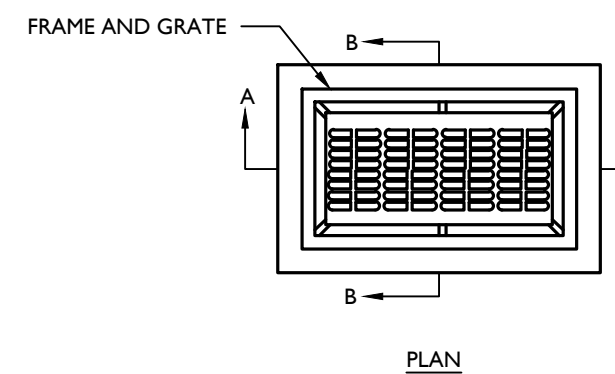
Signature of Michael F. Gallagher and professional engineer information.

PRELIMINARY AND FINAL MAJOR SITE PLAN FOR AMARANTH AT NORTH BRUNSWICK PHASE 2, BLOCK 14.8.11 LOT 1.01, TOWNSHIP OF NORTH BRUNSWICK, MIDDLESEX COUNTY, NEW JERSEY.

Colliers Engineering & Design logo and contact information.

Table with columns: SCALE, DATE, DRAWN BY, CHECKED BY, PROJECT NUMBER, DRAWING NAME, SHEET TITLE, SHEET NUMBER.

- NOTES:**
- INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS. BOTTOMS SHALL BE DISHED AND SLOPED TOWARDS THE OUTLET PIPE AT A RATE OF GRADE OF 2 INCHES PER FOOT.
 - THIS INLET SHALL BE CONSTRUCTED OF CONCRETE OR PRECAST CONCRETE. IF CONCRETE BLOCK IS USED, THE BOTTOM SHALL BE AS SHOWN FOR CONCRETE & THE OUTSIDE OF THE WALLS SHALL BE PLASTERED WITH 1/2" COAT OF 1/2 CEMENT SAND MORTAR. THE INSIDE WALLS JOINTS SHALL BE STRUCK AND POINTED.
 - PROVIDE 7/8" DIA. X 7' X 12" 1/2" O.C. COPOLYMER POLYPROPYLENE PLASTIC STEPS WITH 1/2" DIA. GRADE 60 STEEL REINFORCEMENT P52-PF OR P52-B WITH PRECAST PRESS FIT INSERTS.
 - INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY # 3405 OR APPROVED EQUAL.
 - WHEN DEPTH IS GREATER THEN 12' THE WALLS SHOULD BE EITHER 8" THICK CONCRETE OR 8" SOLID CONCRETE BLOCK AND THE FOOTING SHALL BE EXTENDED TO 12' BEYOND THE OUTSIDE WALLS.
 - ALL CONCRETE TO BE NJDOT CLASS "B".
 - IN ACID SOILS, TWO COATS OF BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION.
 - INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH H-30 LOADING REQUIREMENTS.



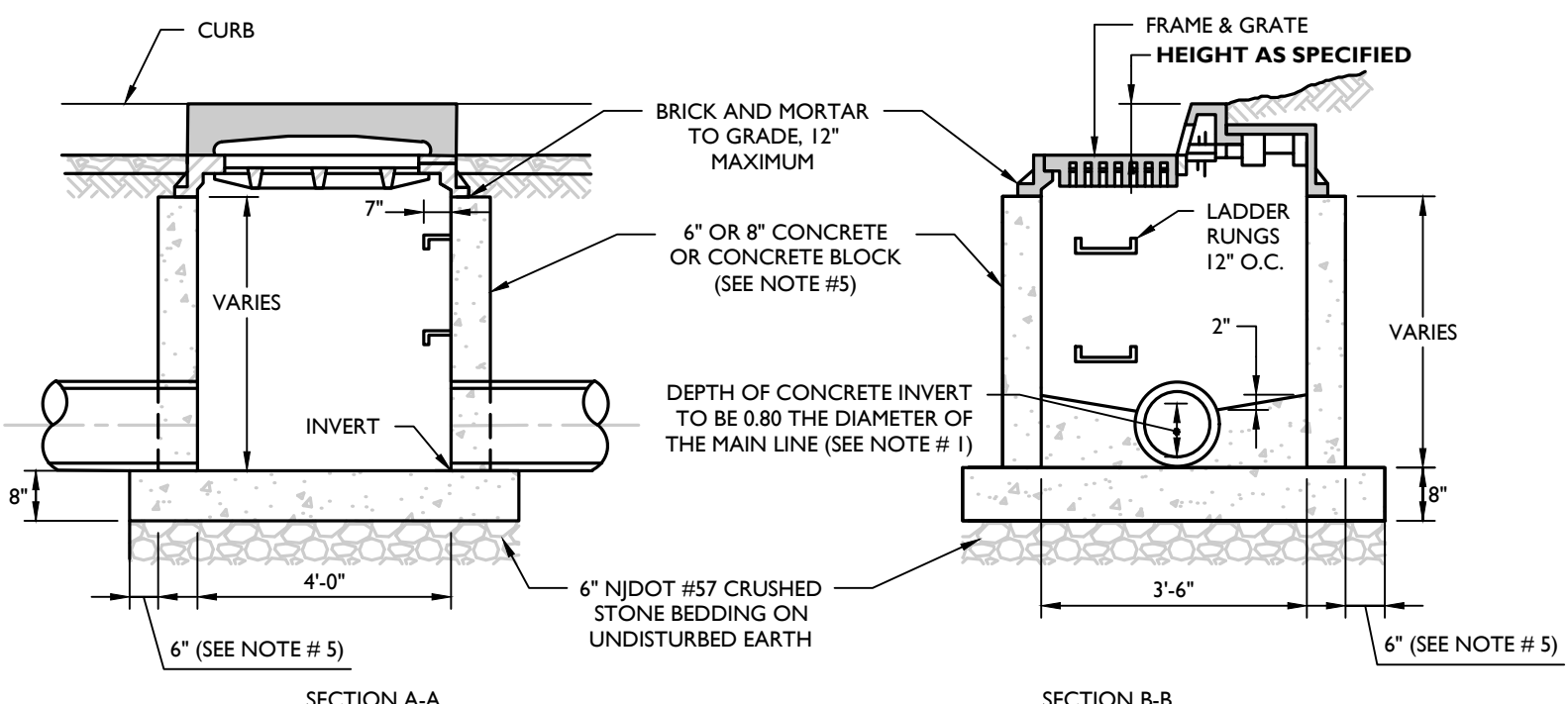
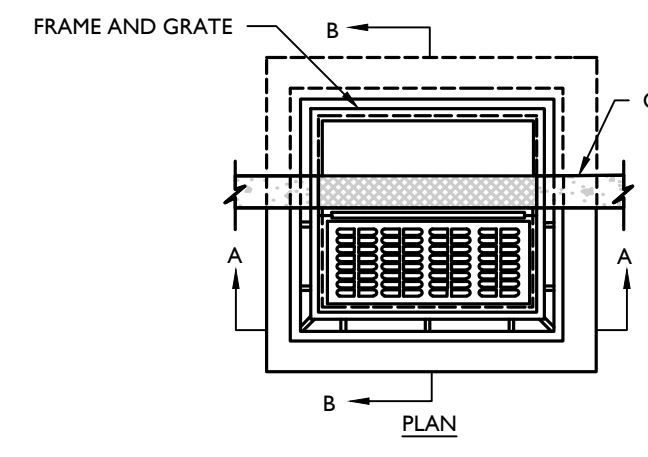
TYPE 'A' INLET DETAIL

NOT TO SCALE

MCNJ-UTIL-STRM-1000

02/01/19

- NOTES:**
- INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS. BOTTOMS SHALL BE DISHED AND SLOPED TOWARDS THE OUTLET PIPE AT A RATE OF GRADE OF 2 INCHES PER FOOT.
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 - PROVIDE 7/8" DIA. X 7' X 12" 1/2" O.C. COPOLYMER POLYPROPYLENE PLASTIC STEPS WITH 1/2" DIA. GRADE 60 STEEL REINFORCEMENT, P52-PF OR P52-B WITH PRECAST PRESS FIT INSERTS, OR APPROVED EQUAL.
 - INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY # 2618 WITH 4" OR 8" TYPE "B" ECO CURB PIECE OR APPROVED EQUAL.
 - WHEN DEPTH IS GREATER THEN 12' THE WALLS SHOULD BE EITHER 8" THICK CONCRETE OR SOLID CONCRETE BLOCK AND THE FOOTING SHALL BE EXTENDED TO 12' BEYOND THE OUTSIDE WALLS.
 - ALL CONCRETE TO BE NJDOT CLASS "B".
 - IN ACID SOILS, TWO COATS OF BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION.
 - INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH H-30 LOADING REQUIREMENTS.



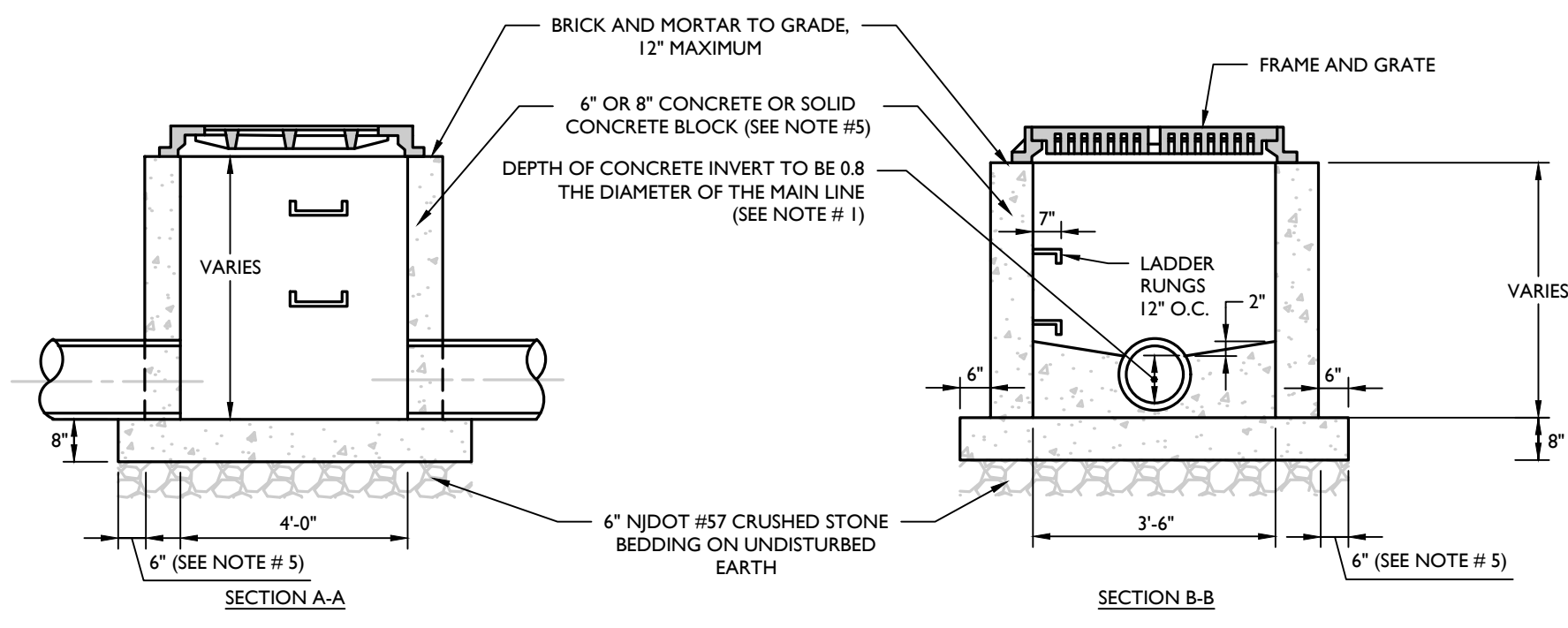
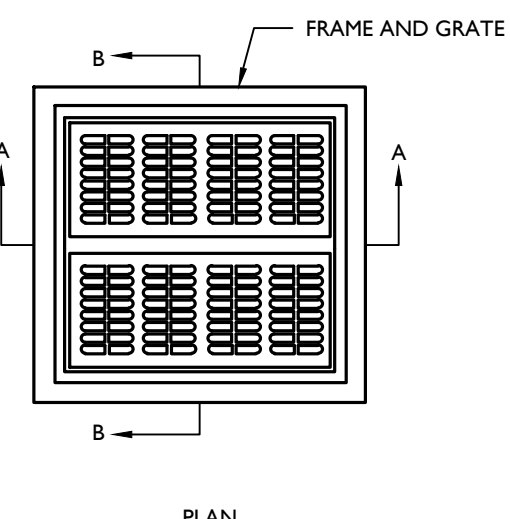
TYPE 'B' INLET DETAIL

NOT TO SCALE

MCNJ-UTIL-STRM-1100

02/01/19

- NOTES:**
- INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS. BOTTOMS SHALL BE DISHED AND SLOPED TOWARDS THE OUTLET PIPE AT A RATE OF GRADE OF 2 INCHES PER FOOT.
 - THIS INLET SHALL BE CONSTRUCTED OF CONCRETE OR PRECAST CONCRETE. IF CONCRETE BLOCK IS USED, THE BOTTOM SHALL BE AS SHOWN FOR CONCRETE & THE OUTSIDE OF THE WALLS SHALL BE PLASTERED WITH 1/2" COAT OF 1/2 CEMENT SAND MORTAR. THE INSIDE WALLS JOINTS SHALL BE STRUCK AND POINTED.
 - PROVIDE 7/8" DIA. X 7' X 12" 1/2" O.C. COPOLYMER POLYPROPYLENE PLASTIC STEPS WITH 1/2" DIA. GRADE 60 STEEL REINFORCEMENT, P52-PF OR P52-B WITH PRECAST PRESS FIT INSERTS, OR APPROVED EQUAL.
 - INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY PATTERN # 3425 OR APPROVED EQUAL.
 - WHEN DEPTH IS GREATER THEN 12' THE WALLS SHOULD BE EITHER 8" THICK CONCRETE OR 8" SOLID CONCRETE BLOCK AND THE FOOTING SHALL BE EXTENDED TO 12' BEYOND THE OUTSIDE WALLS.
 - ALL CONCRETE TO BE NJDOT CLASS "B".
 - IN ACID SOILS, TWO COATS OF BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION.
 - INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH H-30 LOADING REQUIREMENTS.

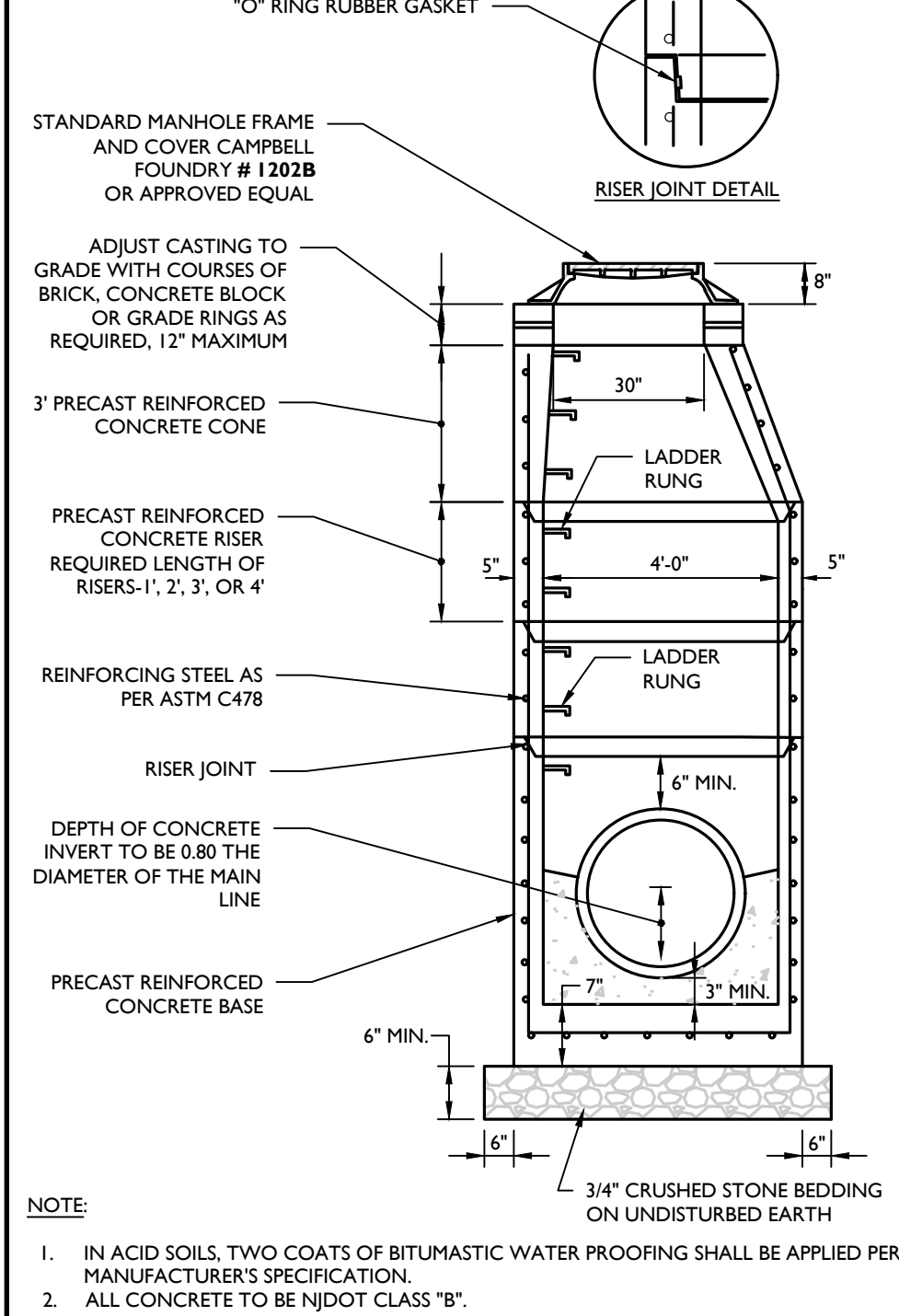


TYPE 'E' INLET DETAIL

NOT TO SCALE

MCNJ-UTIL-STRM-1200

02/01/19

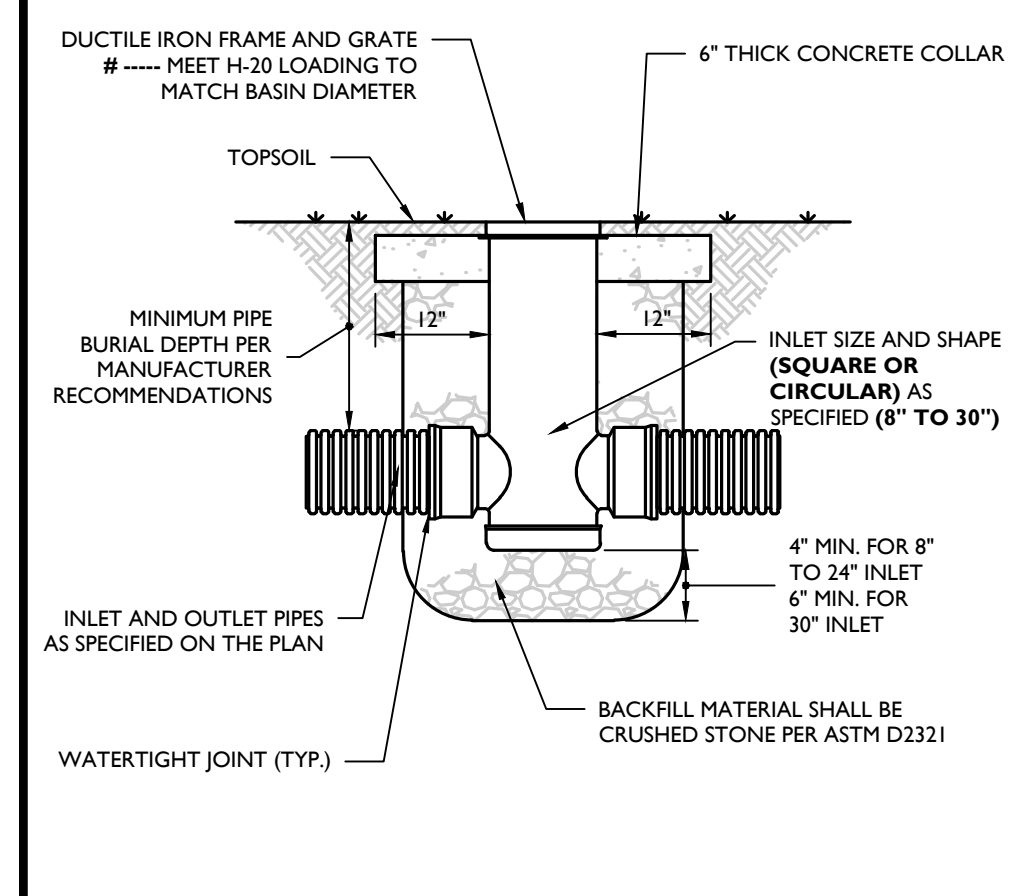


PRECAST CONCRETE STORM MANHOLE 4' DIA. DETAIL

NOT TO SCALE

MCNJ-UTIL-STRM-1500

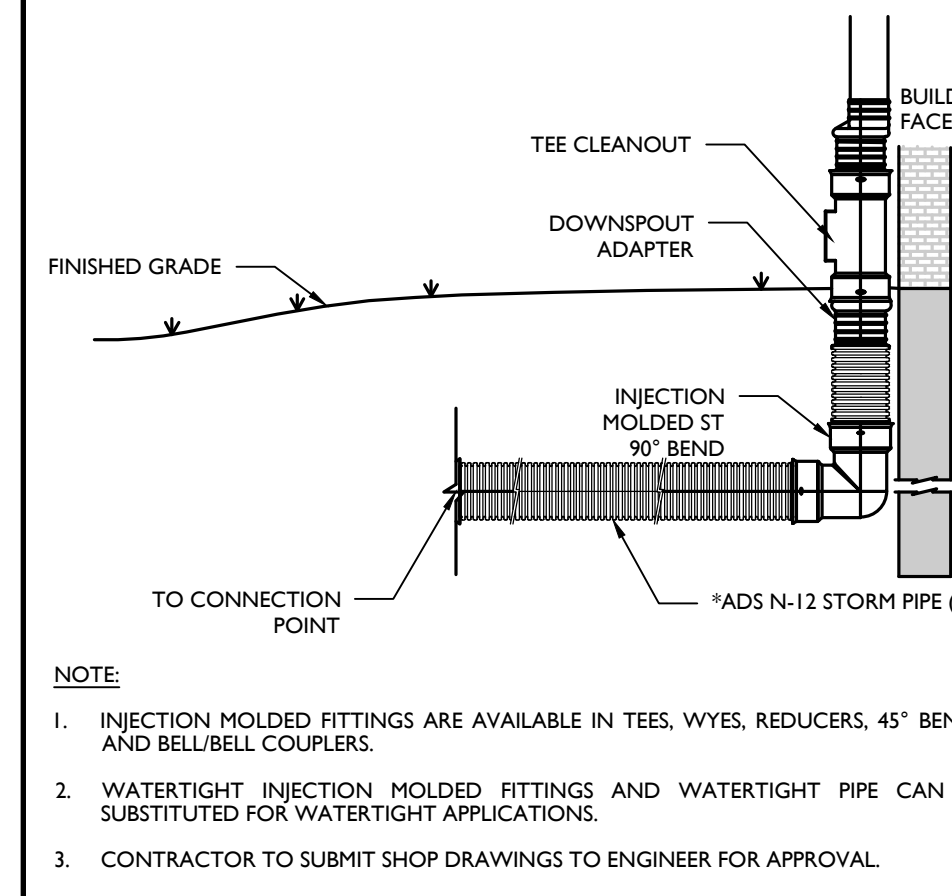
07/01/21



YARD DRAIN (NYLOPLAST) DETAIL

NOT TO SCALE

MCNJ-UTIL-STRM-1800

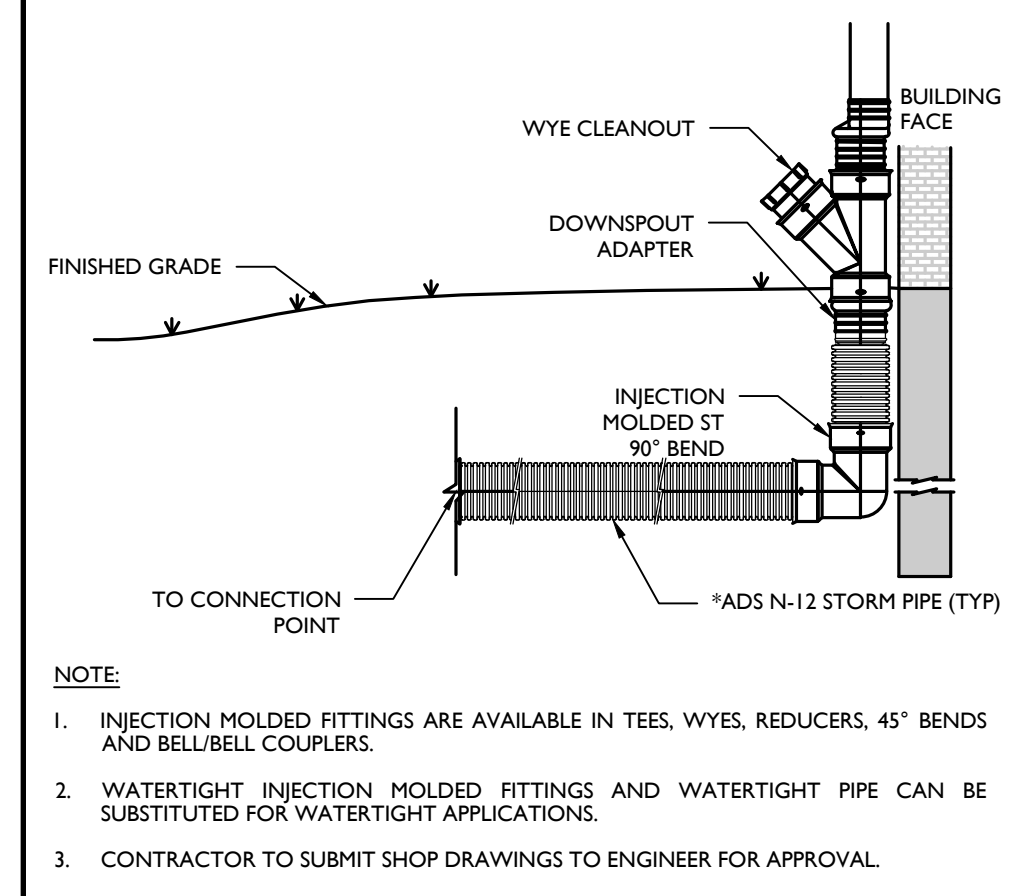


ADS ROOF DOWNSPOUT WITH TEE CLEANOUT DETAIL

NOT TO SCALE

MCNJ-UTIL-STRM-1901

05/01/17

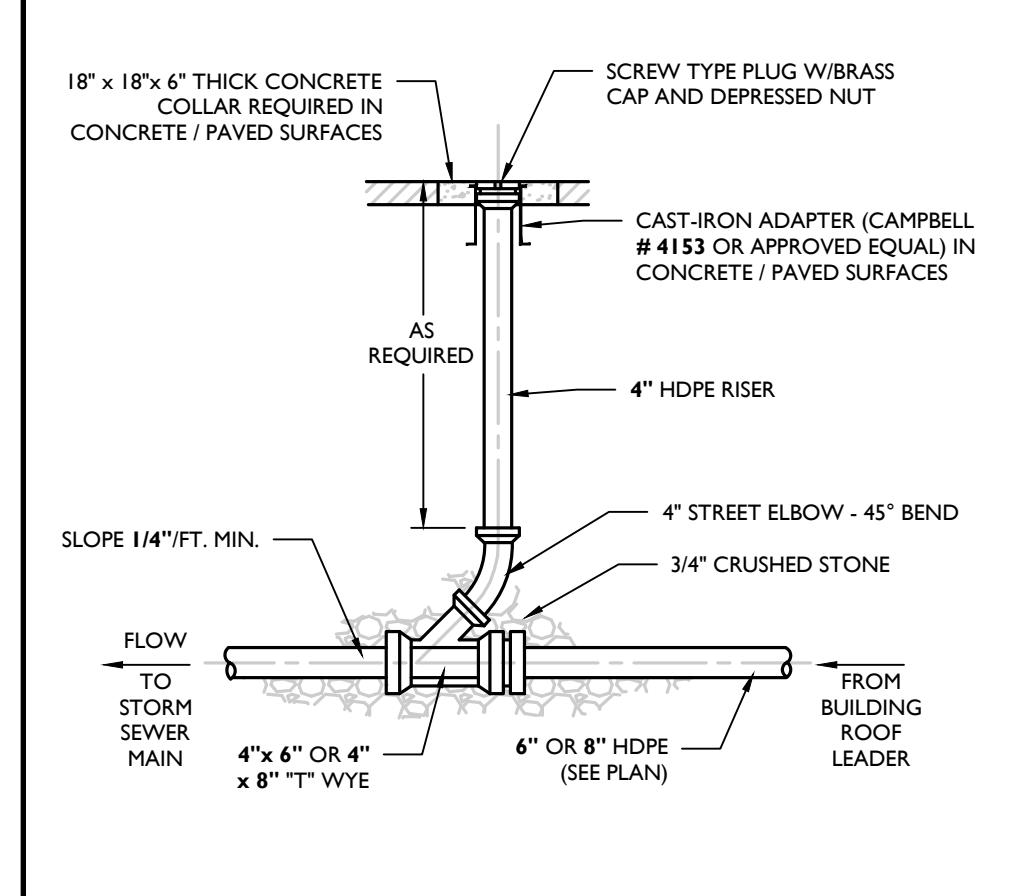


ADS ROOF DOWNSPOUT WITH WYE CLEANOUT DETAIL

NOT TO SCALE

MCNJ-UTIL-STRM-1902

05/01/17

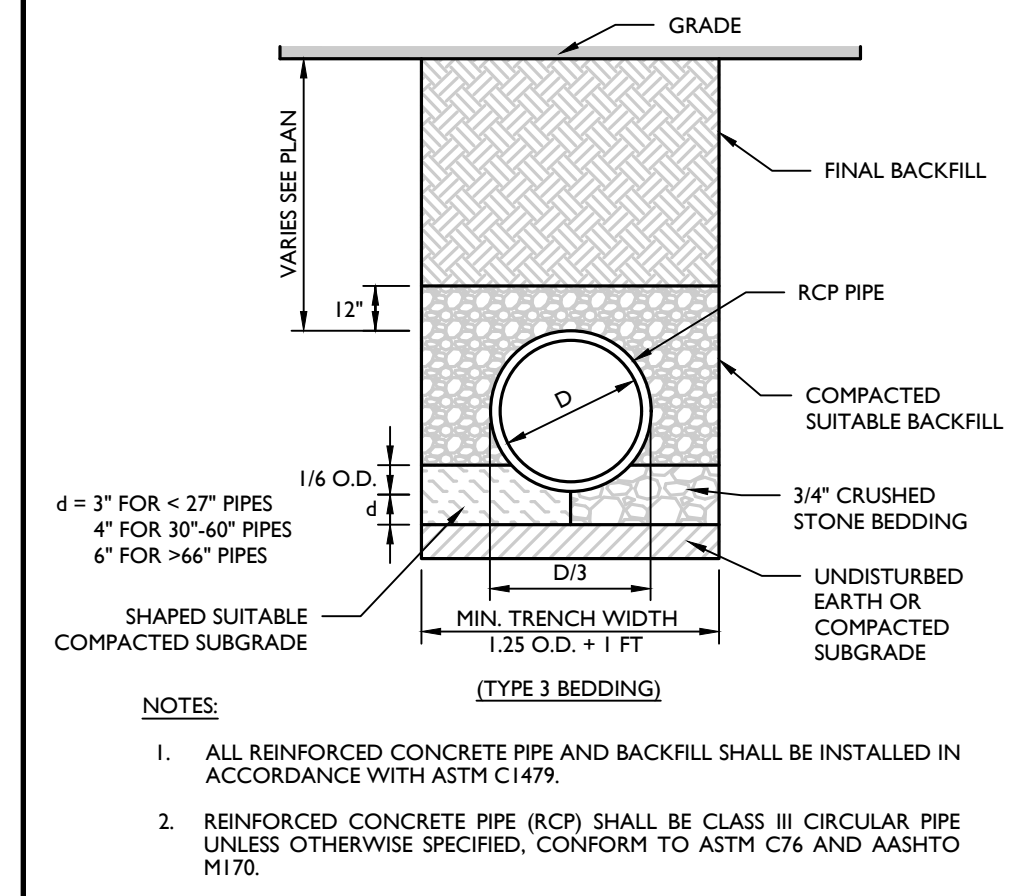


ROOF LEADER CLEANOUT DETAIL

NOT TO SCALE

MCNJ-UTIL-STRM-1900

05/01/17

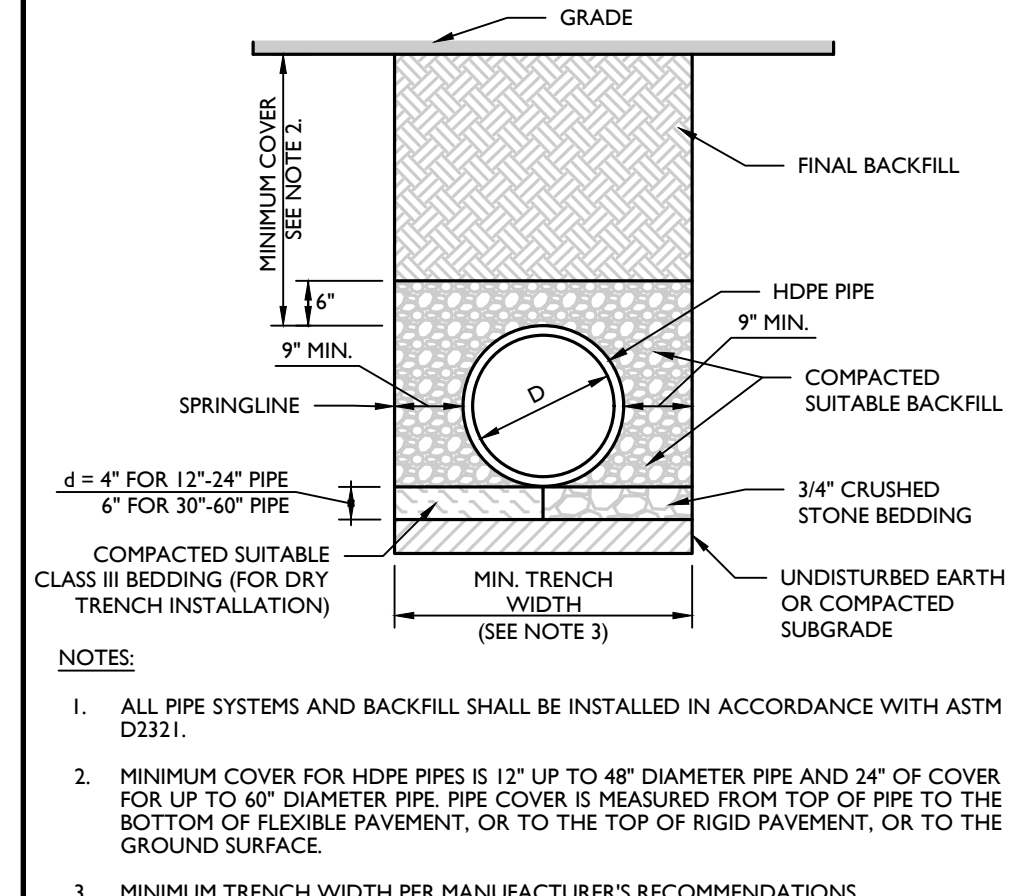


RCP PIPE BEDDING DETAIL

NOT TO SCALE

MCNJ-UTIL-STRM-2301

02/01/19

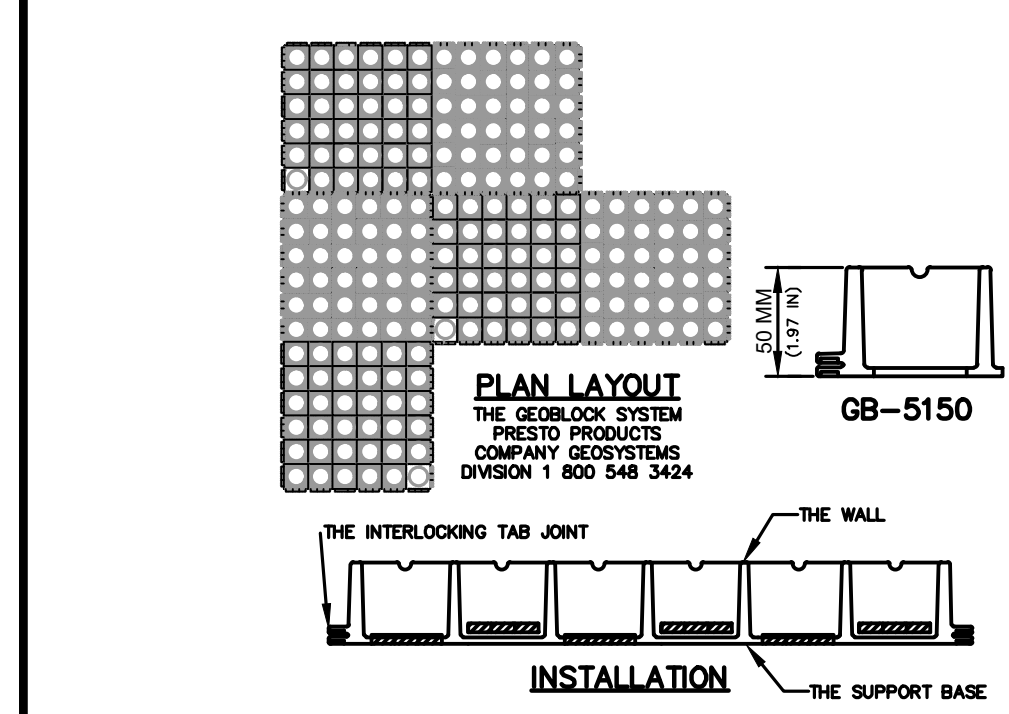


HDPE STORM PIPE BEDDING DETAIL

NOT TO SCALE

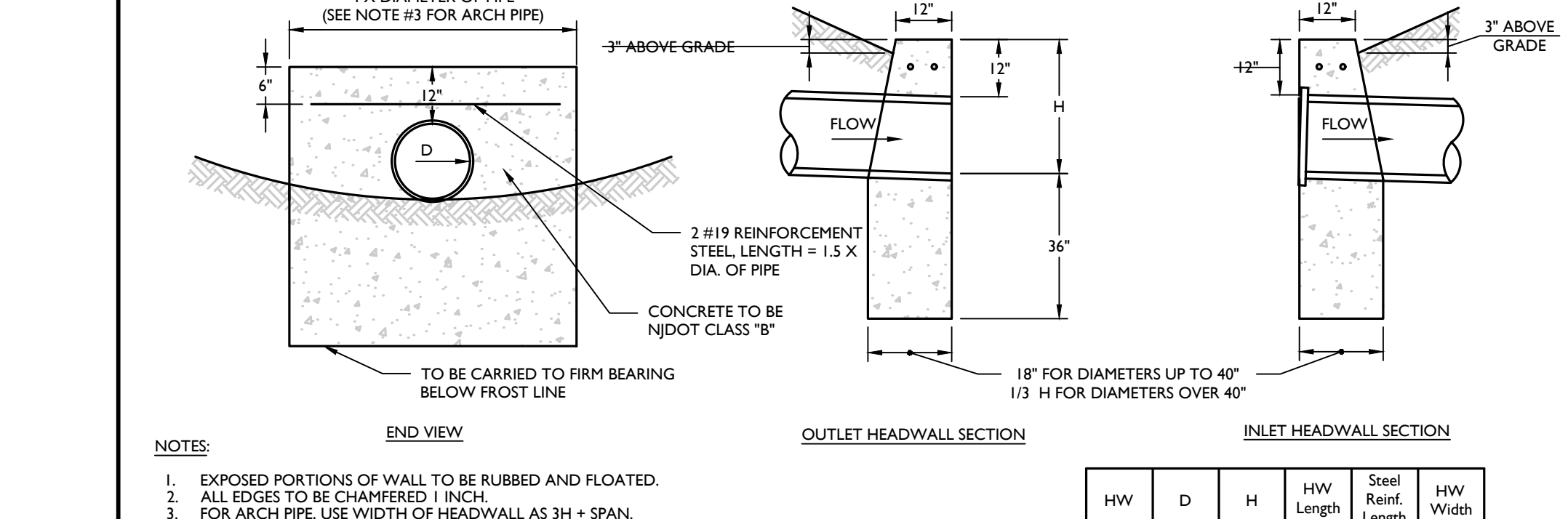
MCNJ-UTIL-STRM-2302

05/01/17



GRASS PAVERS FOR STABILIZED BASIN ACCESS WITH GEO-BLOCK (OR EQUIVALENT)

NOT TO SCALE



CONCRETE HEADWALL (STRAIGHT) DETAIL

NOT TO SCALE

MCNJ-UTIL-STRM-2101

MOD. 05/15/18

05/01/17



CONCRETE FLARED END SECTION DETAIL

NOT TO SCALE

MCNJ-UTIL-STRM-2200

MOD. 05/15/18

05/01/17

05/01/17

NOT TO SCALE

MCNJ-UTIL-STRM-2101

MOD. 05/15/18

05/01/17

9

13

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DATE	DESCRIPTION

Michael F. Gallagher
Michael F. Gallagher
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE48719
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. # 326427986500

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR
AMARANTH AT NORTH BRUNSWICK PHASE 2

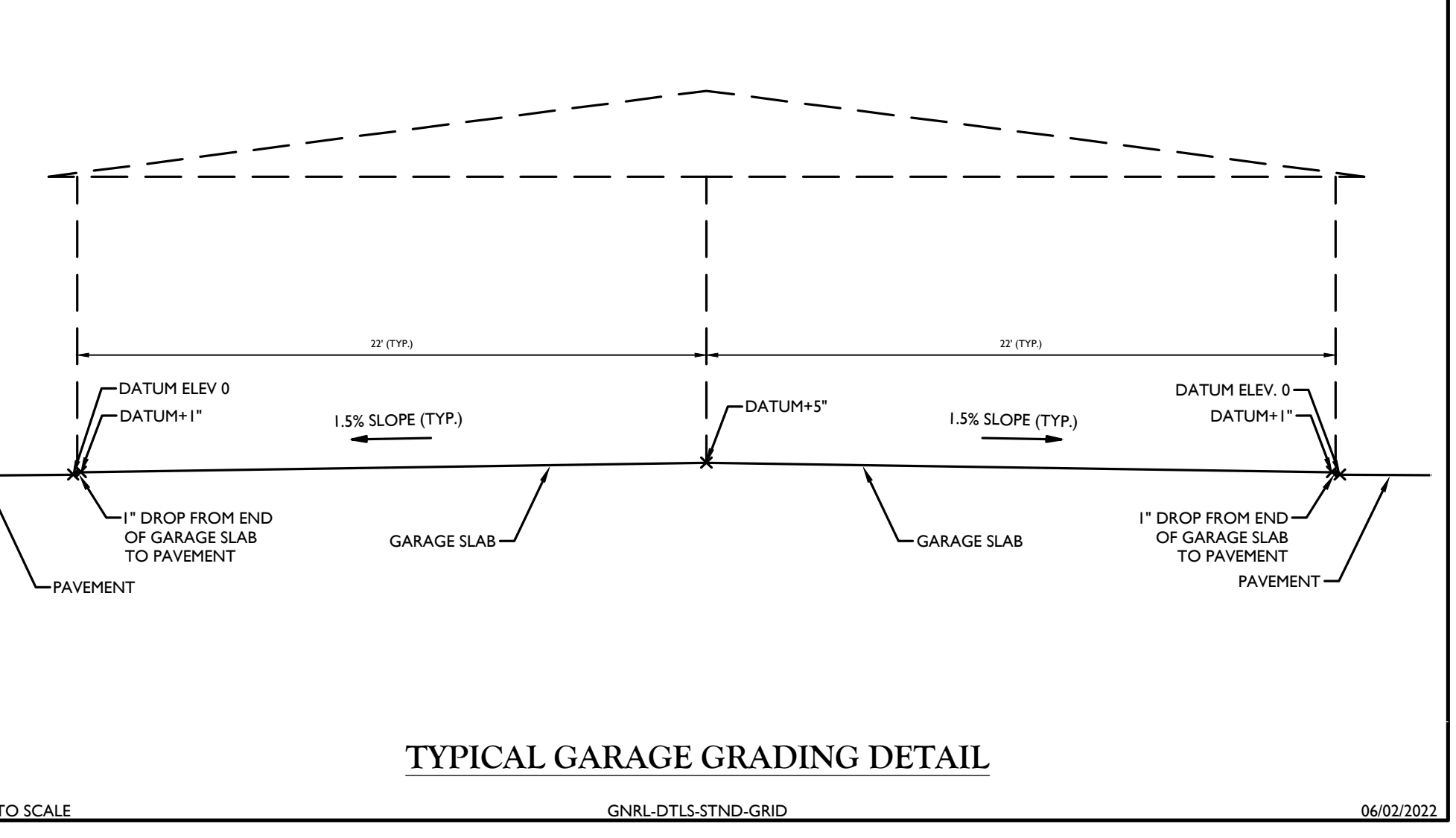
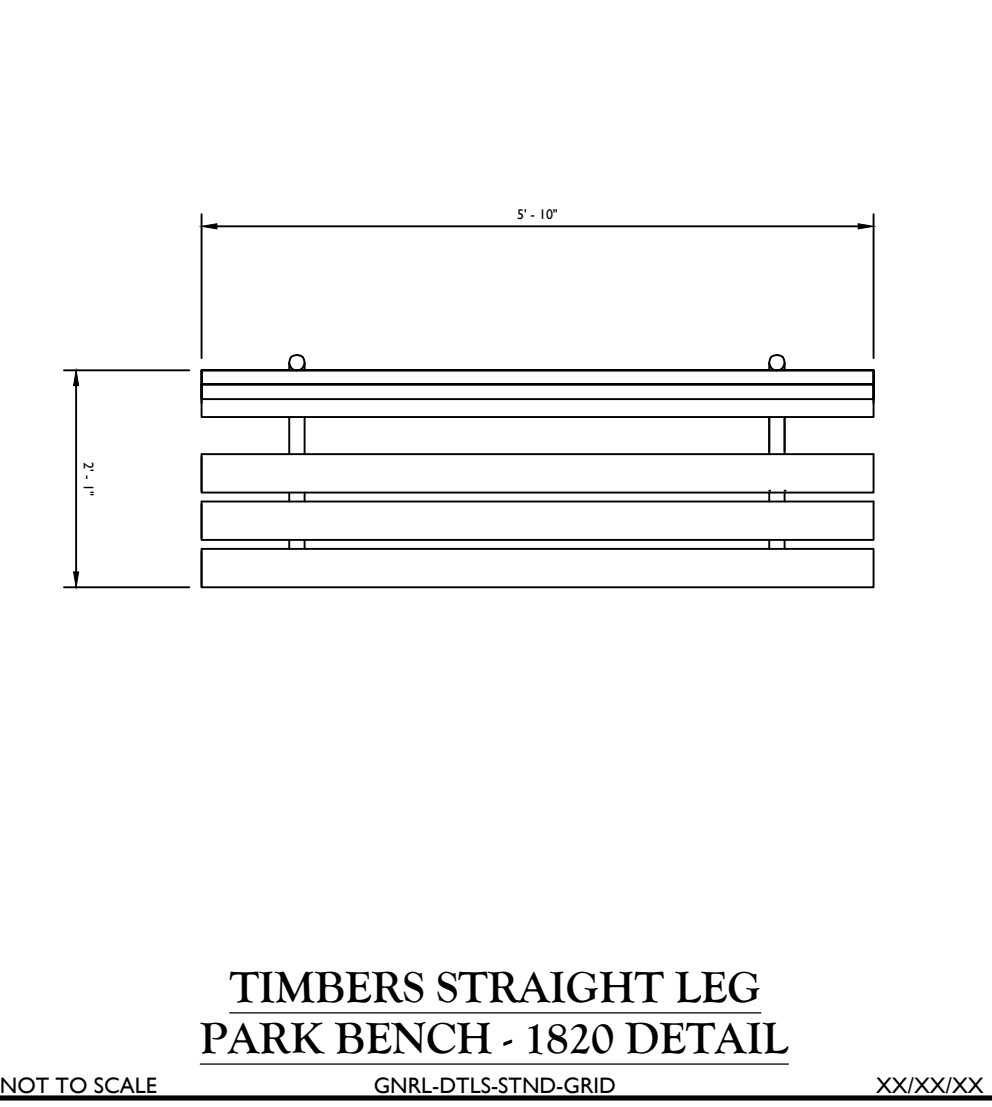
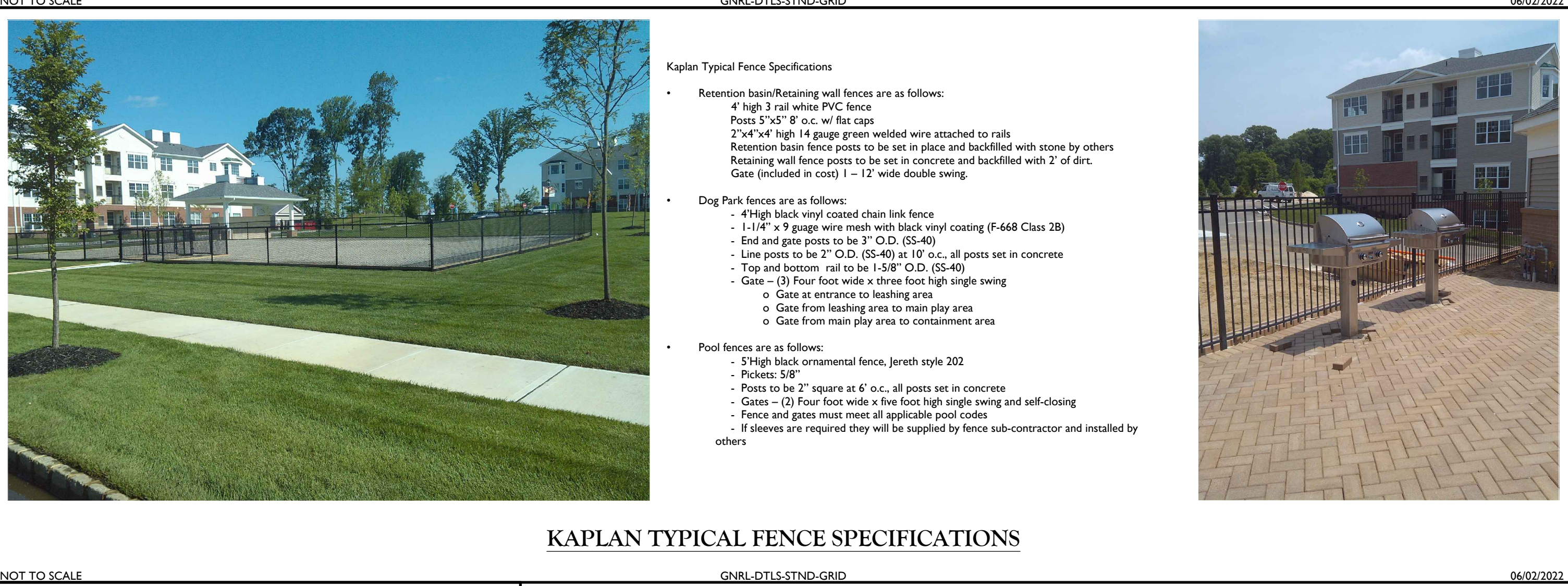
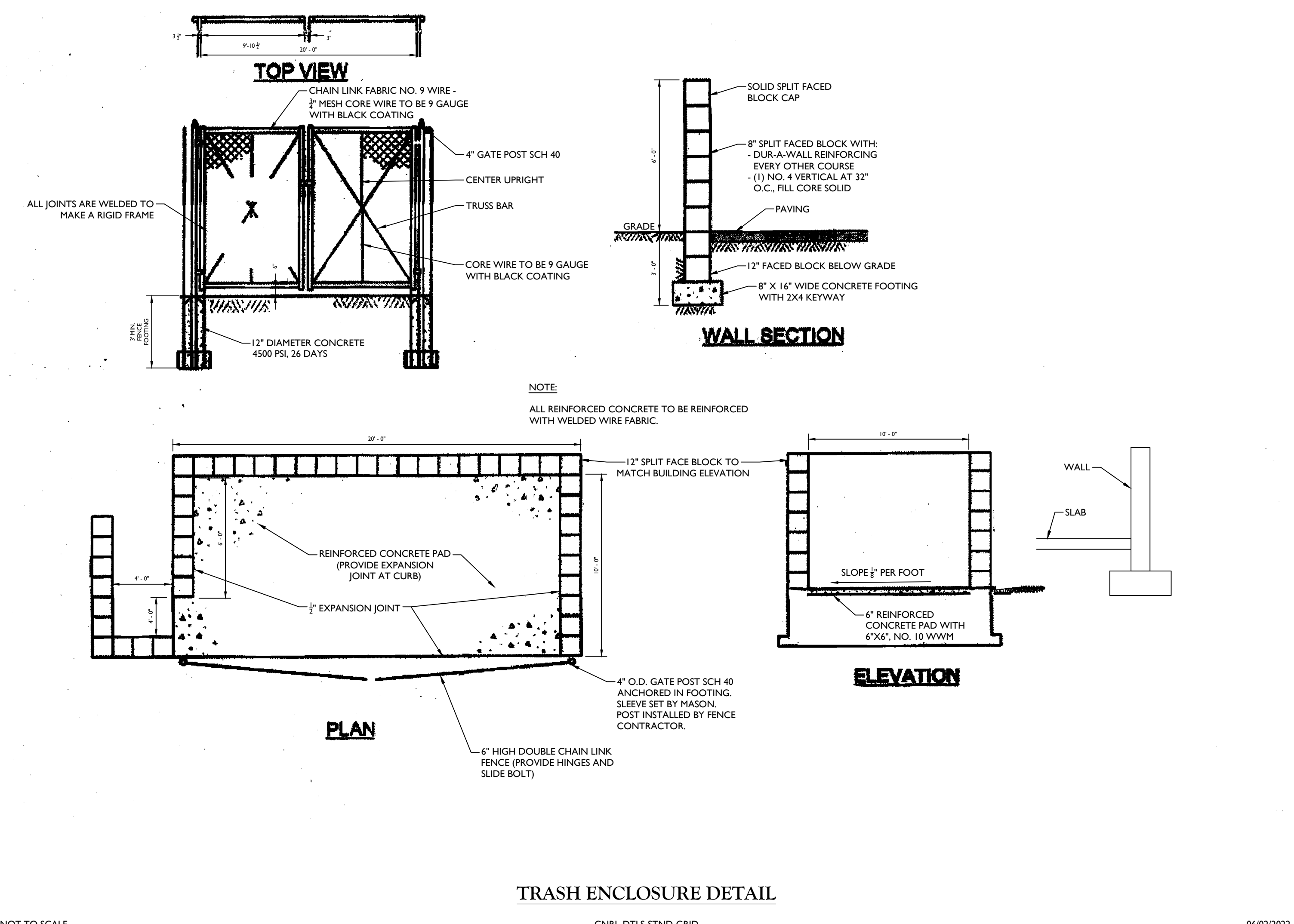
BLOCK 14.8.11 LOT 1.01

TOWNSHIP OF NORTH BRUNSWICK MIDDLESEX COUNTY NEW JERSEY

Colliers
Engineering & Design
HOLMDEL (Headquarters)
101 Crawford Corner Road, Suite 3400
Holmdel, NJ 07733
Phone: 732.983.1950
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	8/7/2023	PCS	MGF
PROJECT NUMBER:	170019498	DRAWING NAME:	C-0115

SHEET TITLE:
CONSTRUCTION DETAILS
SHEET NUMBER:
19 of 21



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Michael F. Gallagher
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: G648719
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. # 34642798650

PRELIMINARY AND FINAL MAJOR SITE PLAN
FOR
AMARANTH AT NORTH BRUNSWICK PHASE 2
BLOCK 14,8.11 LOT 1.01
TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY
NEW JERSEY

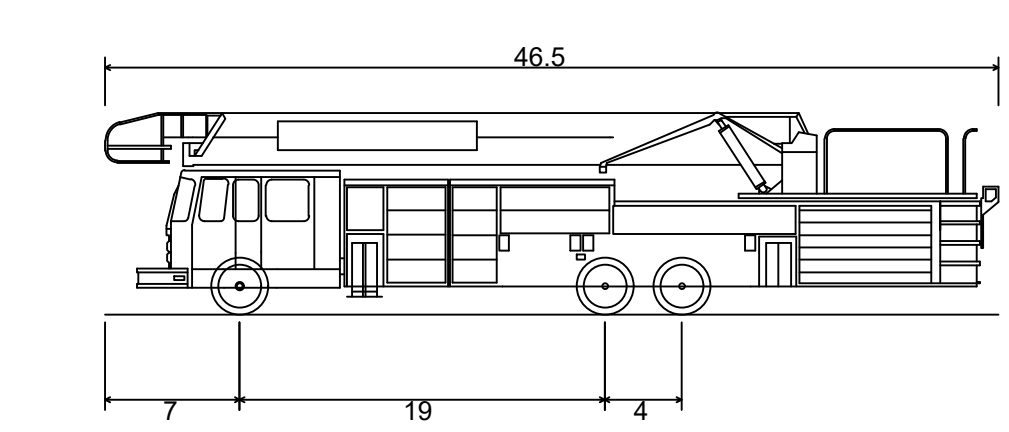
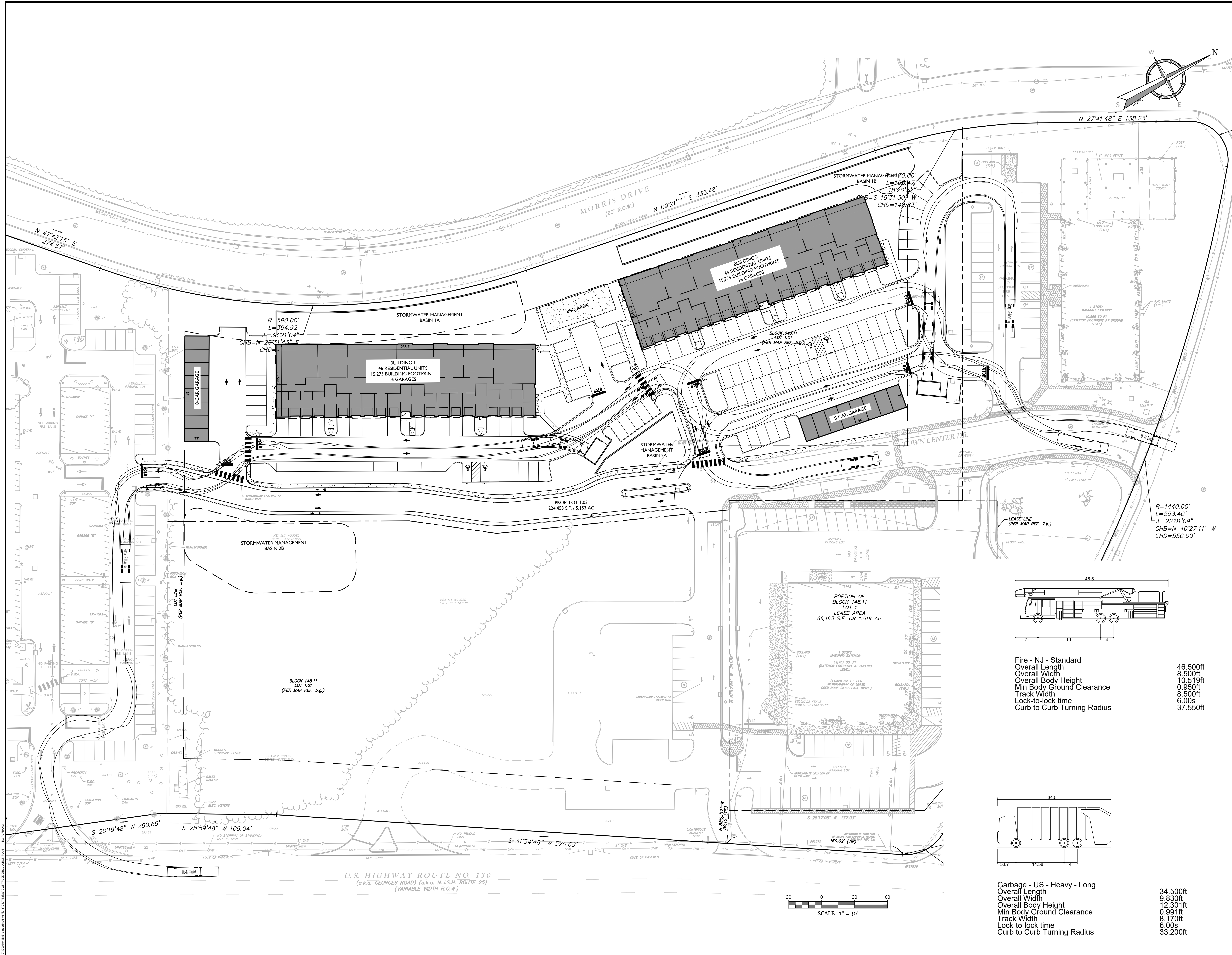
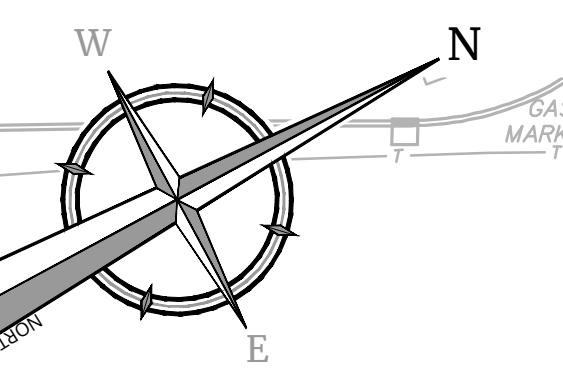
Colliers Engineering & Design
HQ/MD/EL (Headquarters)
101 Crawford Corner Road,
Suite 3400
Hightstown, NJ 07933
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CONSULTANTS

SCALE	DATE	DRAWN BY	CHECKED BY
AS SHOWN	8/7/2023	PCS	MGF

PROJECT NUMBER	DRAWING NAME
170019498	C-DTLLS

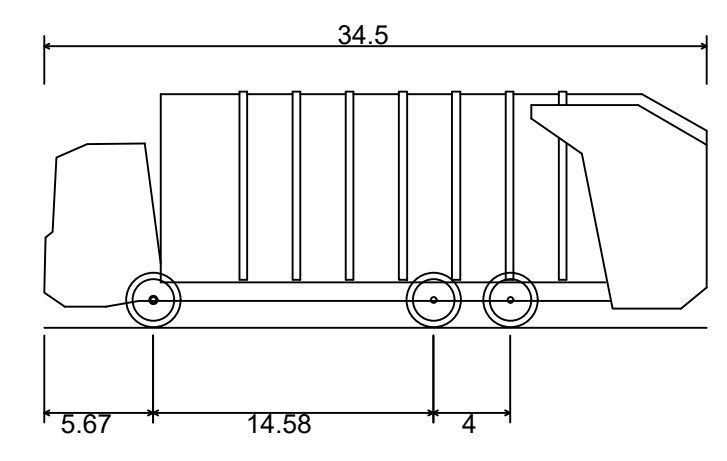
SHEET TITLE:
CONSTRUCTION DETAILS

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



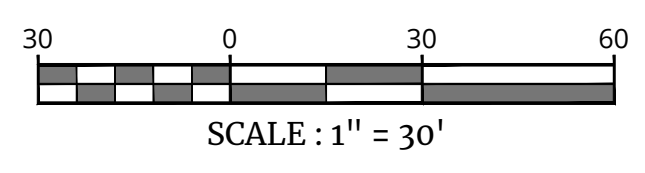
Fire - NJ - Standard
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock-to-lock time
Curb to Curb Turning Radius

46.500ft
8.500ft
10.519ft
0.950ft
8.500ft
6.00s
37.550ft



Garbage - US - Heavy - Long
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock-to-lock time
Curb to Curb Turning Radius

34.500ft
9.830ft
12.301ft
0.991ft
8.170ft
6.00s
33.200ft



U.S. HIGHWAY ROUTE NO. 130
(a.k.a. GEORGES ROAD) (a.k.a. N.J.S.H. ROUTE 25)
(VARIABLE WIDTH R.O.W.)

REV	DATE	DESCRIPTION

Michael F. Gallagher
Michael F. Gallagher
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE4879
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A.#. 3464279660

PRELIMINARY AND FINAL
MAJOR SITE PLAN
FOR
**AMARANTH AT
NORTH BRUNSWICK
PHASE 2**
BLOCK 148.11 LOT 1.01
TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY
NEW JERSEY

Colliers
Engineering & Design

HOLMDEL (Headquarters)
101 Crawford Corner Road,
Suite 3400
Holmdel, NJ 07733
Phone: 732.983.1950
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CORP. (NY)

SHEET TITLE:
TRUCK CIRCULATION PLAN

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.