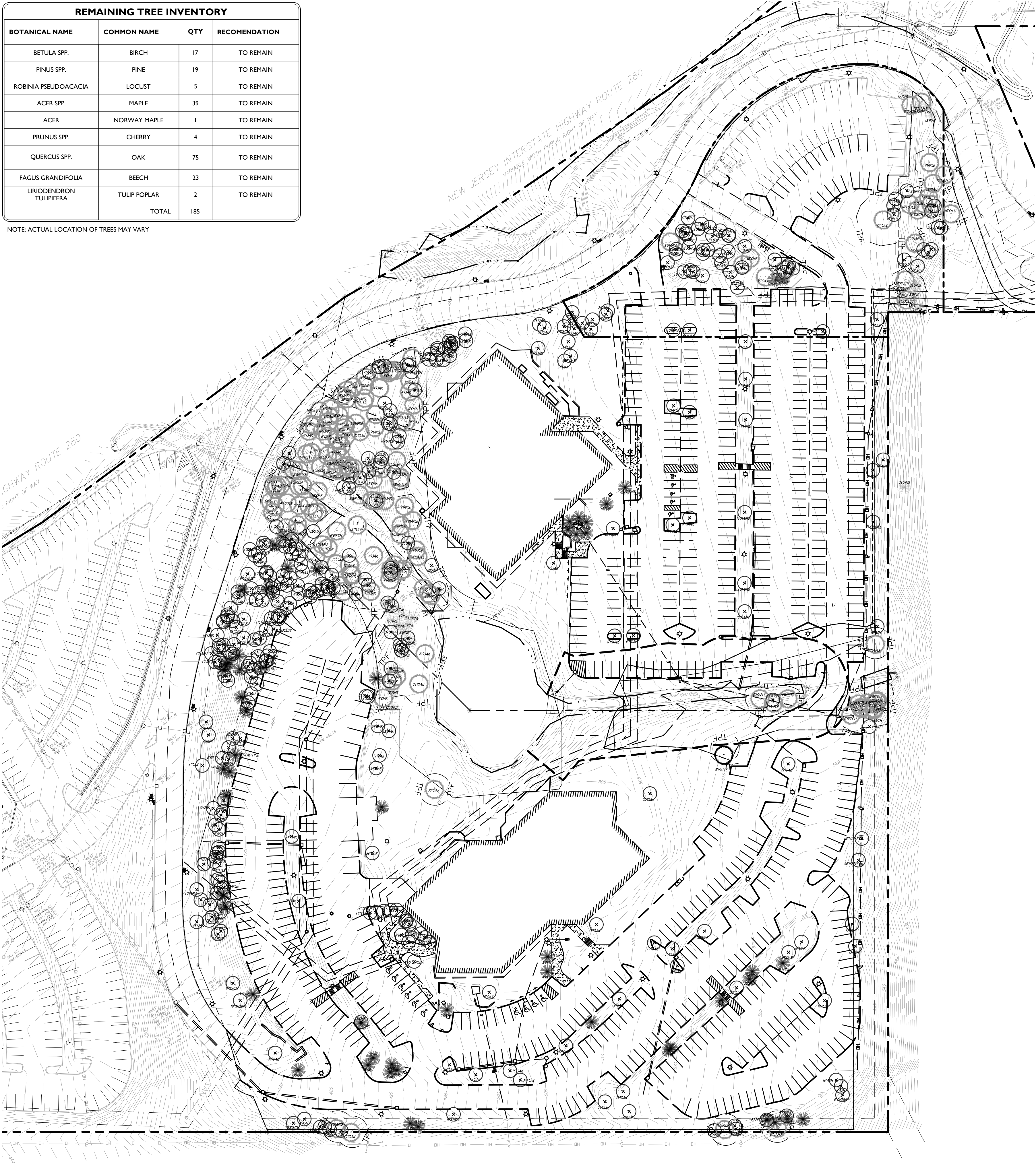


REMAINING TREE INVENTORY			
BOTANICAL NAME	COMMON NAME	QTY	RECOMMENDATION
BETULA SPP.	BIRCH	17	TO REMAIN
PINUS SPP.	PINE	19	TO REMAIN
ROBINIA PSEUDOACACIA	LOCUST	5	TO REMAIN
ACER SPP.	MAPLE	39	TO REMAIN
ACER	NORWAY MAPLE	1	TO REMAIN
PRUNUS SPP.	CHERRY	4	TO REMAIN
QUERCUS SPP.	OAK	75	TO REMAIN
FAGUS GRANDIFOLIA	BEECH	23	TO REMAIN
LIRIODENDRON TULIPIFERA	TULIP POPLAR	2	TO REMAIN
TOTAL		185	

NOTE: ACTUAL LOCATION OF TREES MAY VARY



EXISTING TREE INVENTORY (TO BE REMOVED)				
BOTANICAL NAME	COMMON NAME	QTY	REMARKS	RECOMENDATION
ALNUS SPP.	ALDER	1	DEER DAMAGED	TO BE REMOVED
FRAXINUS AMERICANA	ASH	142	DEAD/DYING DUE TO EMERALD ASH BORE DISEASE	CULL FROM SITE
TILIA AMERICANA	BASSWOOD	2	---	---
BETULA SPP.	BIRCH	20	---	---
POPULUS DELTOIDES	COTTONWOOD	3	---	---
CASTANEA DENTATA	CHESTNUT	3	---	---
PINUS SPP.	PINE	36	---	---
ULMUS AMERICANA	ELM	2	---	---
CARPINUS SPP.	HORNBEAM	2	---	---
ROBINIA PSEUDOACACIA	LOCUST	4	---	---
ACER SPP.	MAPLE	45	---	---
PRUNUS SPP.	CHERRY	19	DEER DAMAGE EVIDENT	---
QUERCUS SPP.	OAK	88	---	---
FAGUS GRANDIFOLIA	BEECH	12	---	---
CYPRESS SPP.	CYPRESS	11	---	---
CERCIS CANADENSIS	RED BUD	5	---	---
LIQUIDAMBAR STYRACIFLUA	SWEETGUM	1	---	---
PLATANUS OCCIDENTALIS	SYCAMORE	1	---	---
JUGLANS NIGRA	WALNUT	1	---	---
TOTAL		255		

NOTE: ACTUAL LOCATION OF TREES MAY VARY

NOTE:
*142 ASH TREES ARE TO BE CONSIDERED DEAD OR DYING DUE TO EMERALD ASH BORE DISEASE. THESE TREES SHOULD NOT BE COUNTED AGAINST THE TREE REPLACEMENT NUMBERS. EFFORTS WILL BE MADE IN THE PLANTING TO REPLACE THE HOLES CREATED IN THE CANOPY TO VOID THE TAKEOVER BY INVASIVES.

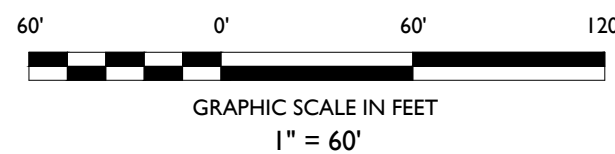
TREE PROTECTION, REMOVAL, AND MITIGATION		
CODE SECTION	REQUIRED	PROPOSED
§ 25-27.7 (c) PROCEDURES, FACTORS AND STANDARDS	TO THE GREATEST EXTENT POSSIBLE, SPECIMEN TREES AND OTHER LARGE TREES (TEN (10) INCH DBH AND GREATER) SHALL BE PRESERVED	COMPLIES
§ 25-27.8 (a) I TREE REPLACEMENT REQUIREMENT	AT LEAST THIRTY (30%) PERCENT OF THE TREES ON EACH PARTICULAR LOT OR DEVELOPMENT SITE SHALL BE PRESERVED [440 TOTAL TREES ON SITE * 30% = 132 TREES REMAIN] 185 TREES TO REMAIN = (42%)	COMPLIES 185 TREES TO REMAIN (42%)
§ 25-27.8 (a) I (i) TREE REPLACEMENT REQUIREMENT	FOR EACH TREE REMOVED DBH OF FOUR (4) INCHES TO NO MORE THAN SIX (6) INCHES, THE APPLICANT SHALL PLANT A MAJOR OR MINOR TREE [93 TOTAL TREE 4" TO < 6" DBH TO BE REMOVED] 93 TOTAL MAJOR OR MINOR TREES REQUIRED TO BE PLANTED	COMPLIES 153 TOTAL MINOR TREES PROPOSED REFER TO PLANTING PLAN FOR TREE LOCATION
§ 25-27.8 (a) I (ii) TREE REPLACEMENT REQUIREMENT	FOR EACH TREE REMOVED A DBH OF MORE THAN SIX (6) INCHES, THE APPLICANT SHALL PLANT A MAJOR TREE AS DERIVED IN THIS SECTION ON THE REMOVAL PROPERTY. [162 TOTAL TREES 6" > DBH TO BE REMOVED] 162 TOTAL MAJOR TREES REQUIRED TO BE PLANTED	COMPLIES 167 TOTAL MAJOR TREES PROPOSED REFER TO PLANTING PLAN FOR TREE LOCATION

PROTECTION OF EXISTING VEGETATION NOTES:

- BEFORE COMMENCING WORK, ALL EXISTING VEGETATION WHICH COULD BE IMPACTED AS A RESULT OF THE PROPOSED CONSTRUCTION ACTIVITIES MUST BE PROTECTED FROM DAMAGE BY THE INSTALLATION OF TREE PROTECTION FENCING. FENCING SHALL BE LOCATED AT THE DRIPLINE OR LIMIT OF DISTURBANCE AS DEPICTED WITHIN THE APPROVED OR FINAL PLAN SET, ESTABLISHING THE TREE PROTECTION ZONE. FENCE INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE PROTECTION FENCE DETAIL." NO WORK MAY BEGIN UNTIL THIS REQUIREMENT IS FILLED. THE FENCING SHALL BE INSPECTED REGULARLY BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
- IN ORDER TO AVOID DAMAGE TO ROOTS, BARK OR LOWER BRANCHES, NO VEHICLE, EQUIPMENT, DEBRIS, OR OTHER MATERIALS SHALL BE DRIVEN, PARKED OR PLACED WITHIN THE TREE PROTECTION ZONE. ALL ON-SITE CONTRACTORS SHALL USE ANY AND ALL PRECAUTIONARY MEASURES WHEN PERFORMING WORK AROUND TREES, WALKS, PAVEMENTS, UTILITIES, AND ANY OTHER FEATURES EITHER EXISTING OR PREVIOUSLY INSTALLED UNDER THIS CONTRACT.
- IN RARE INSTANCES WHERE EXCAVATING, FILL, OR GRADING IS REQUIRED WITHIN THE DRIPLINE OF TREES TO REMAIN, THE WORKER SHALL FOLLOW:
 - TRENCHING: WHEN TRENCHING OCCURS AROUND TREES TO REMAIN, THE TREE ROOTS SHALL NOT BE CUT, BUT THE TRENCH SHALL BE TUNNELED UNDER OR AROUND THE ROOTS BY CAREFUL HAND DIGGING AND WITHOUT INJURY TO THE ROOTS. NO ROOTS, LIMBS, OR WOODS ARE TO HAVE ANY PAINT OR MATERIAL APPLIED TO ANY SURFACE.
 - RAISING GRADES: WHEN THE GRADE AT AN EXISTING TREE IS BELOW THE NEW FINISHED GRADE, AND FILL NOT EXCEEDING 6 INCHES (6") IS REQUIRED, CLEAN, WASHED GRAVEL FROM ONE TO TWO INCHES (1" - 2") IN SIZE SHALL BE PLACED DIRECTLY AROUND THE TREE TRUNK. THE GRAVEL SHALL EXTEND OUT FROM THE TRUNK ON ALL SIDES A MINIMUM OF 18 INCHES (18") AND FINISH APPROXIMATELY TWO INCHES (2") ABOVE THE FINISH GRADE AT TREE. INSTALL GRAVEL BEFORE ANY EARTH FILL IS PLACED. NEW EARTH FILL SHALL NOT BE LEFT IN CONTACT WITH THE TRUNK OF ANY TREE REQUIRING FILL WHERE FILL EXCEEDING 6 INCHES (6") IS REQUIRED, A DRY LAID TREE WELL SHALL BE CONSTRUCTED. IF APPLICABLE, TREE WELL INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE WELL DETAIL."
 - LOWERING GRADES: EXISTING TREES LOCATED IN AREAS WHERE THE NEW FINISHED GRADE IS TO BE LOWERED, SHALL HAVE RE-GRADING WORK DONE BY HAND TO THE INDICATED ELEVATION. NO GREATER THAN SIX INCHES (6"). ROOTS SHALL BE CUT CLEANLY THREE INCHES (3") BELOW FINISHED GRADE UNDER THE DIRECTION OF A LICENSED ARBORIST. WHERE CUT EXCEEDING 6 INCHES (6") IS REQUIRED, A DRY LAID RETAINING WALL SHALL BE CONSTRUCTED. IF APPLICABLE, THE RETAINING WALL INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE RETAINING WALL DETAIL."

DEMOLITION NOTES

- THE WORK REFLECTED ON THE DEMOLITION PLAN IS TO PROVIDE GENERAL INFORMATION TOWARDS THE EXISTING ITEMS TO BE DEMOLISHED AND/OR REMOVED. THE CONTRACTOR IS RESPONSIBLE TO REVIEW THE ENTIRE PLAN SET AND ASSOCIATED REPORTS/REFERENCE DOCUMENTS INCLUDING ALL DEMOLITION ACTIVITIES AND INCIDENTAL TASKS NECESSARY TO COMPLETE THE SITE IMPROVEMENTS.
- THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND METHODS OF DEMOLITION ACTIVITIES.
- EXPLOSIVES SHALL NOT BE USED UNLESS WRITTEN CONSENT FROM BOTH THE OWNER AND ANY APPLICABLE GOVERNING AGENCY IS OBTAINED. BEFORE THE START OF ANY EXPLOSIVE PROGRAM, THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL LOCAL, STATE, AND FEDERAL PERMITS. ADDITIONALLY, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL SEISMIC TESTING AS REQUIRED AND ANY DAMAGES AS THE RESULT OF SAID DEMOLITION PRACTICES.
- ALL DEMOLITION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL CODES. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL UTILITIES ARE DISCONNECTED IN ACCORDANCE WITH THE UTILITY AUTHORITIES' REQUIREMENTS PRIOR TO STARTING THE DEMOLITION OF ANY STRUCTURE. ALL EXCAVATIONS ASSOCIATED WITH DEMOLISHED STRUCTURES OR REMOVED TANKS SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO SUPPORT SITE AND BUILDING IMPROVEMENTS. A GEOTECHNICAL ENGINEER SHOULD BE PRESENT DURING BACKFILLING ACTIVITIES TO OBSERVE AND CERTIFY THAT BACKFILL MATERIAL WAS COMPACTED TO A SUITABLE CONDITION.
- DEMOLISHED DEBRIS SHALL NOT BE BURIED ON SITE. ALL WASTE/DEBRIS GENERATED FROM DEMOLITION ACTIVITIES SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL RECORDS OF THE DISPOSAL TO DEMONSTRATE COMPLIANCE WITH THE ABOVE REGULATIONS.



REVISIONS				DESCRIPTION	
NO.	DATE	BY	ISSUE		
1	03/19/2020	DD	ISSUED FOR REVIEW		
2	05/07/2020	FT	REVISED PER TOWNSHIP COMMENTS		
3	05/22/2020	FT	REVISED PER CLIENT COMMENTS		
4	06/11/2020	NS	REVISED PER FORESTER COMMENTS		

NOT APPROVED FOR CONSTRUCTION

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PRELIMINARY & FINAL MAJOR SITE PLAN
**GREEN ESSEX PARTNERS URBAN
RENEWAL ENTITY, LLC**

**PROPOSED MULTI-FAMILY
RESIDENTIAL DEVELOPMENT**

TAX MAP SHEET 88 BLOCK 155, LOTS 40.02, 42.01, & 42.02
TOWNSHIP OF WEST ORANGE
ESSEX COUNTY, NEW JERSEY

ZACHARY E. CHAPLIN, P.E.
NEW JERSEY LICENSE No. 53605
LICENSED PROFESSIONAL ENGINEER

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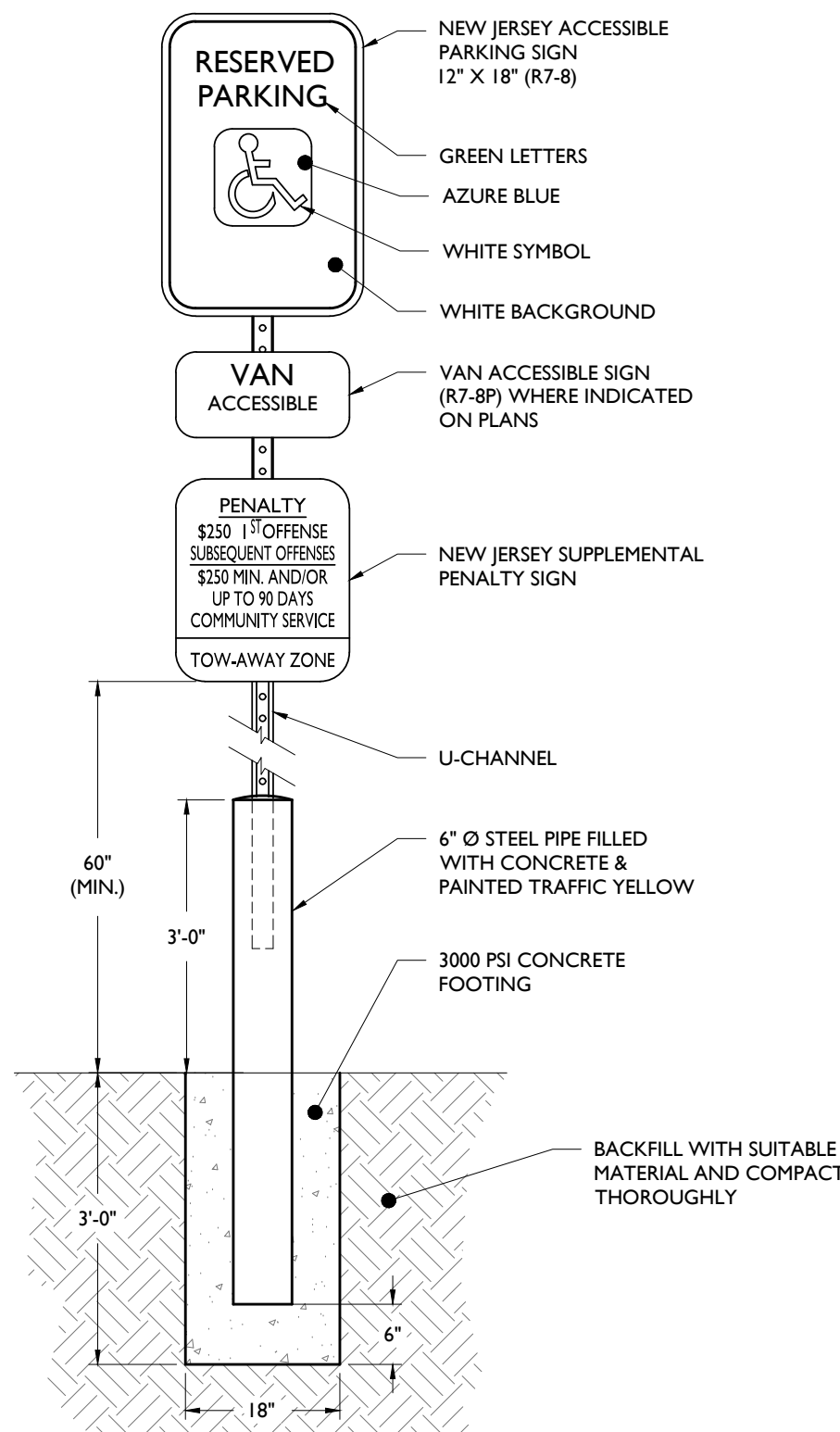
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TREE REMOVAL PLAN

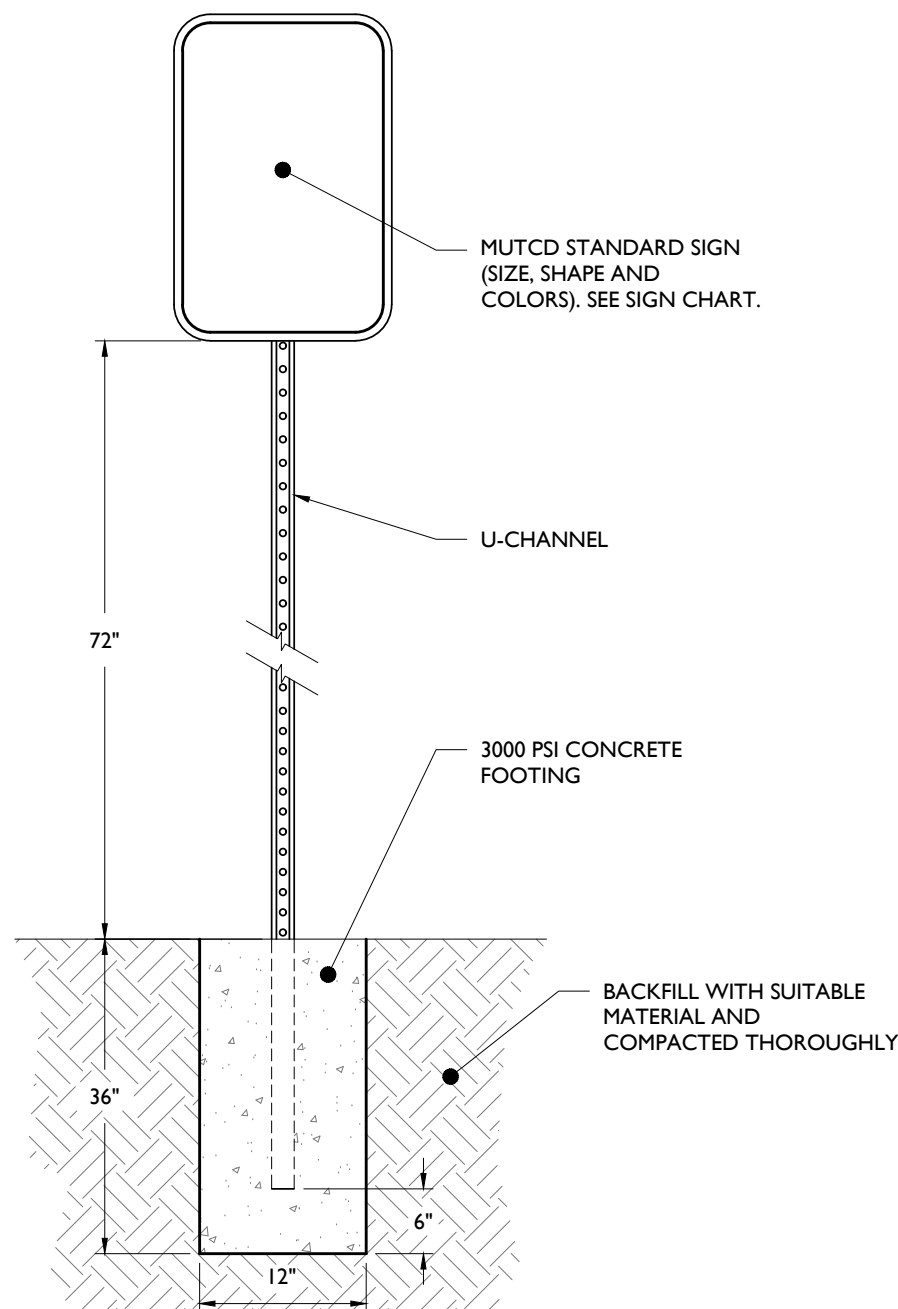
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C-20



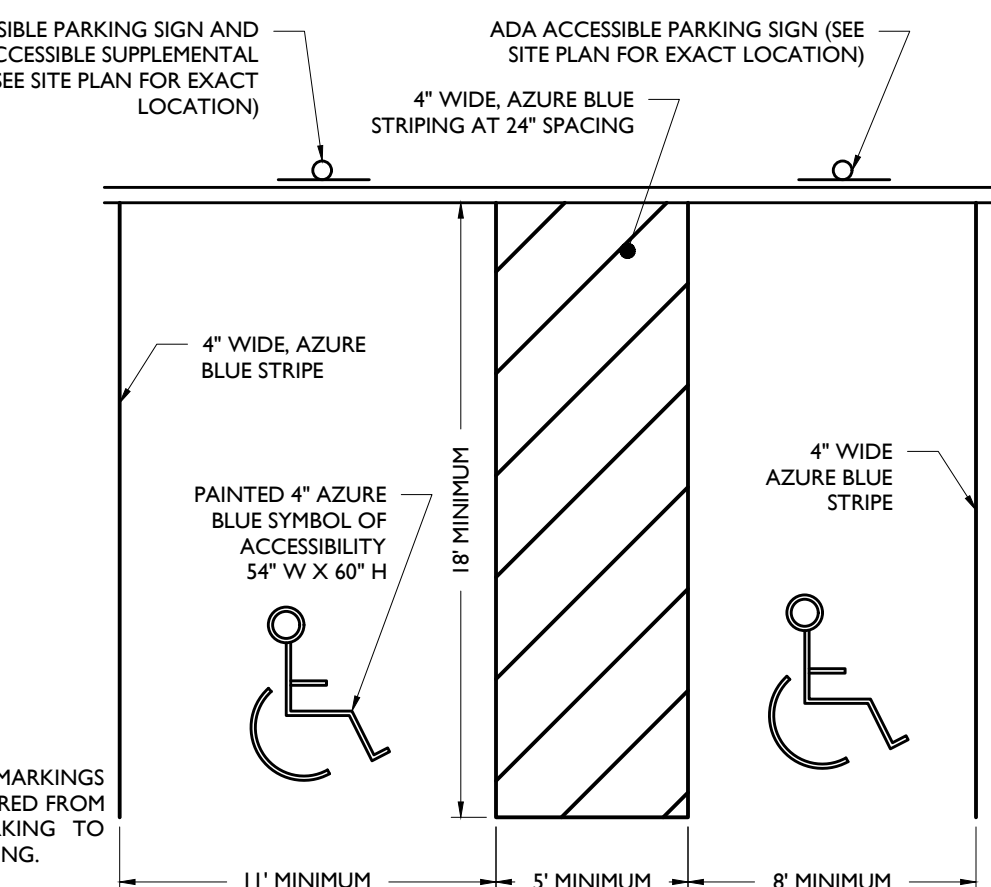
ACCESSIBLE PARKING SIGN WITH BOLLARD DETAIL

NOT TO SCALE



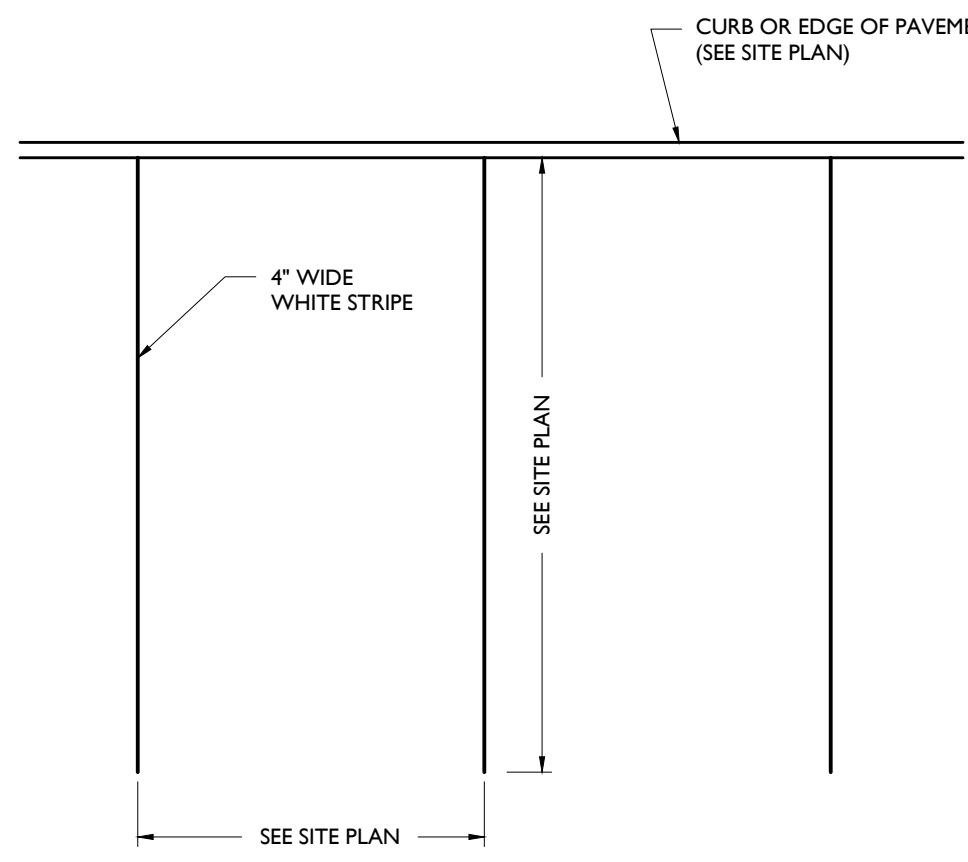
SIGN POST DETAIL

NOT TO SCALE



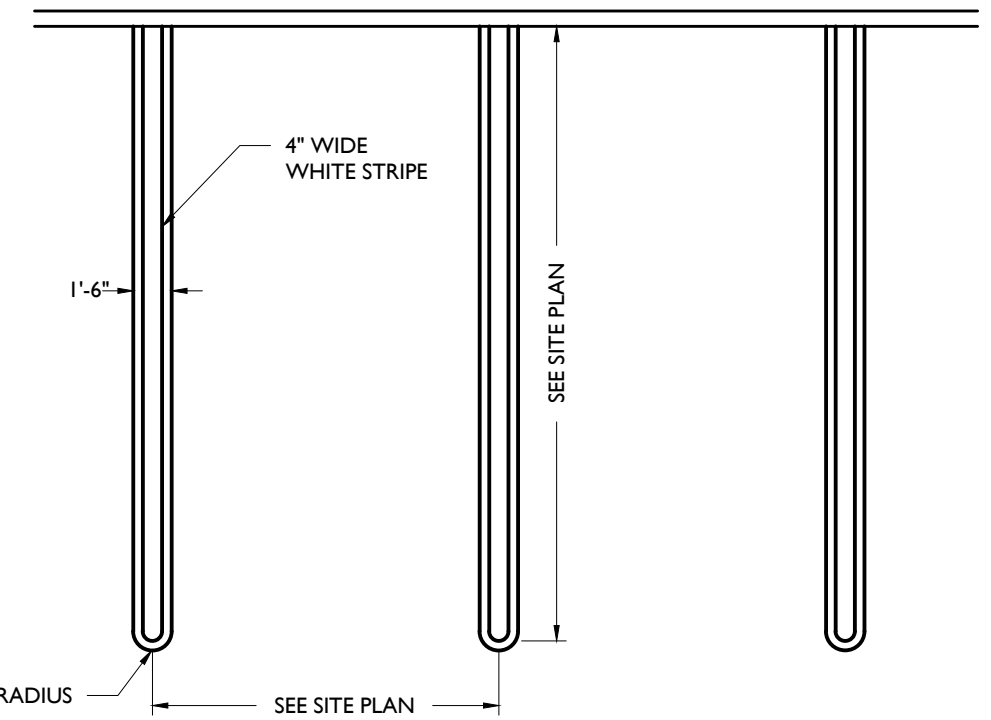
ACCESSIBLE PARKING STALL MARKINGS

NOT TO SCALE



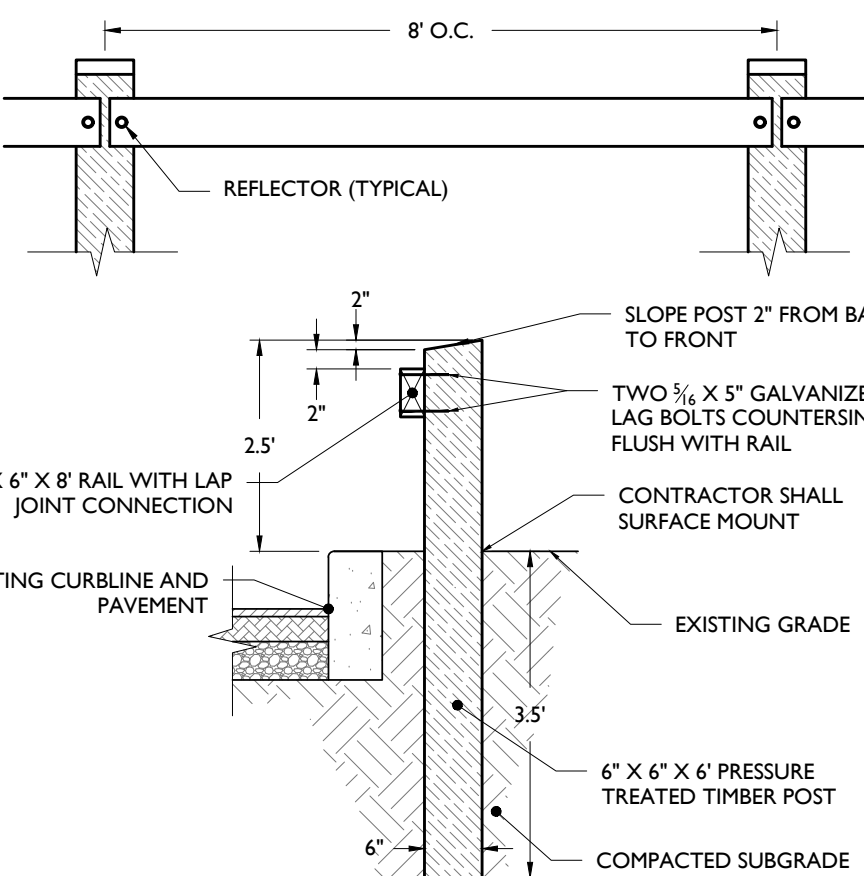
PARKING STALL MARKINGS

NOT TO SCALE



BUILDING B & C PARKING STALL MARKINGS

NOT TO SCALE



TIMBER POST GUIDE RAIL DETAIL

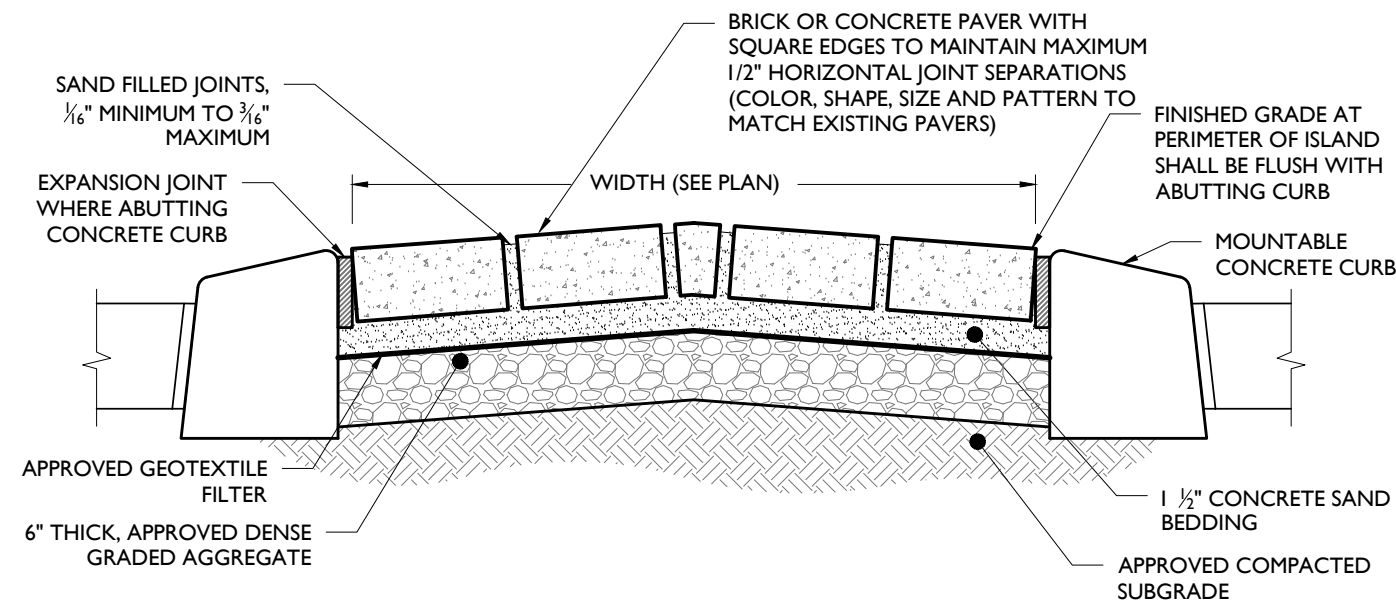
NOT TO SCALE

M.U.T.C.D. NUMBER	TEXT	COLOR		SIZE OF SIGN (WIDTH X HEIGHT)	TYPE OF MOUNT
		LEGEND	BACKGROUND		
STOP SIGN (R1-1)		RED	WHITE	36"x36"	GROUND

- NOTE:
- ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION (FHWA) MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), EXCEPT AS NOTED.
 - ALL SIGNS SHALL BE MOUNTED AS TO NOT OBSTRUCT THE SHAPE OF "STOP" (R1-1) AND "YIELD" (R1-2) SIGNS.

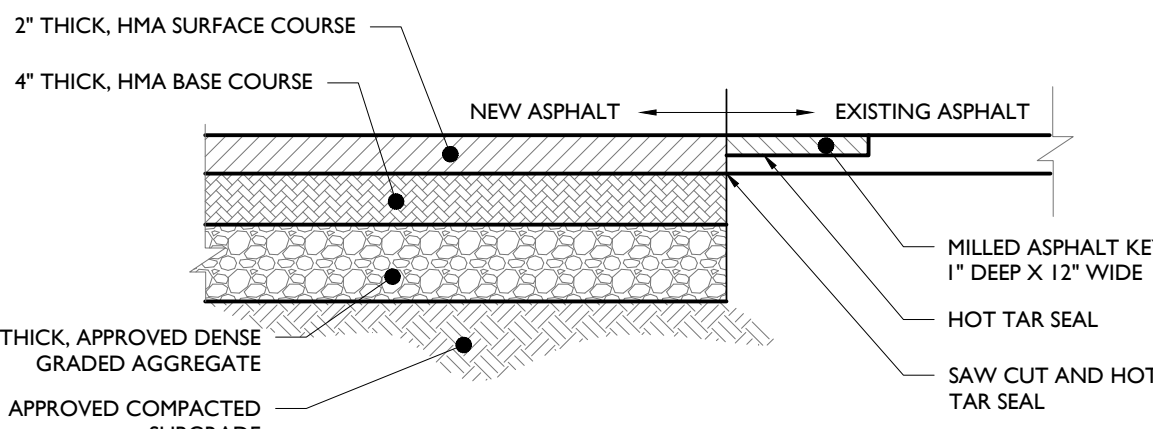
SIGN DATA TABLE

NOT TO SCALE



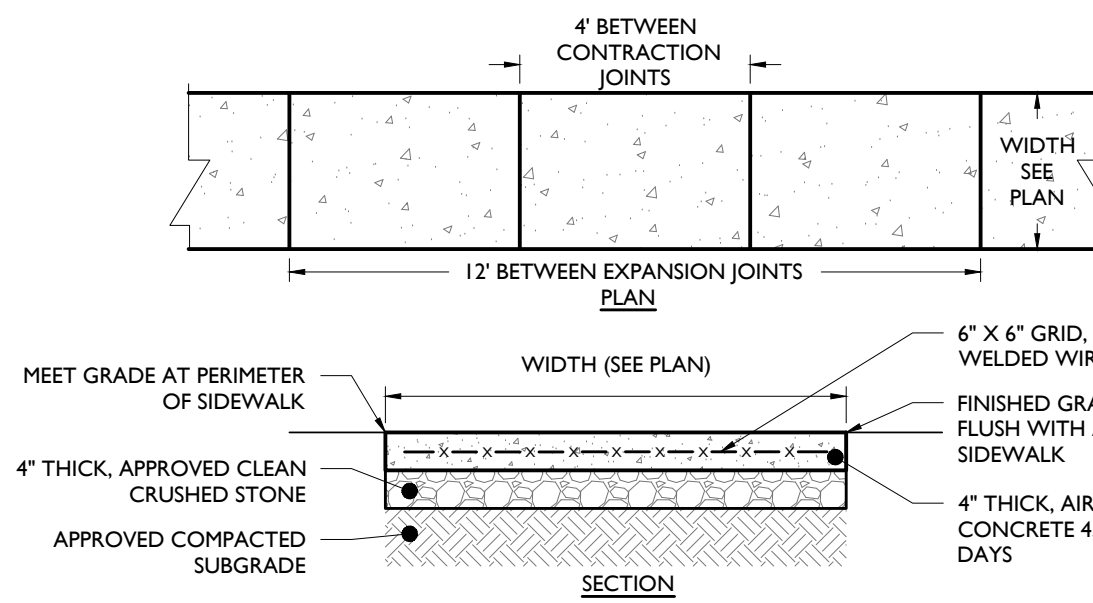
MOUNTABLE BRICK PAVER ISLAND

NOT TO SCALE



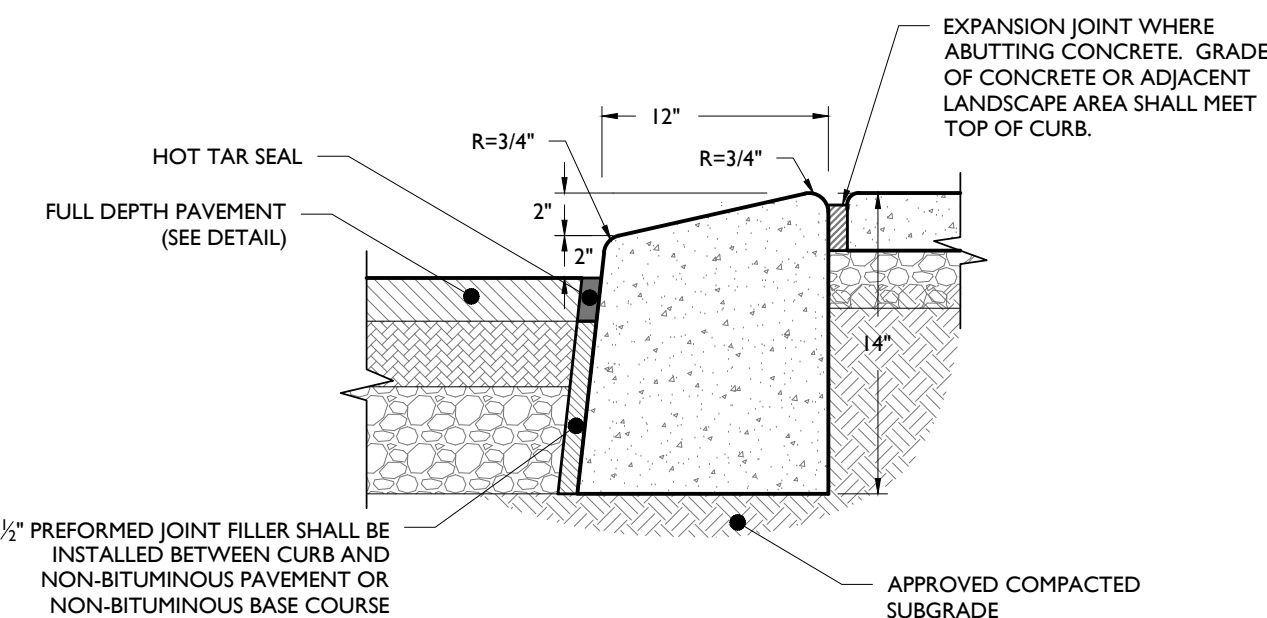
FULL DEPTH ASPHALT PAVEMENT DETAIL

NOT TO SCALE



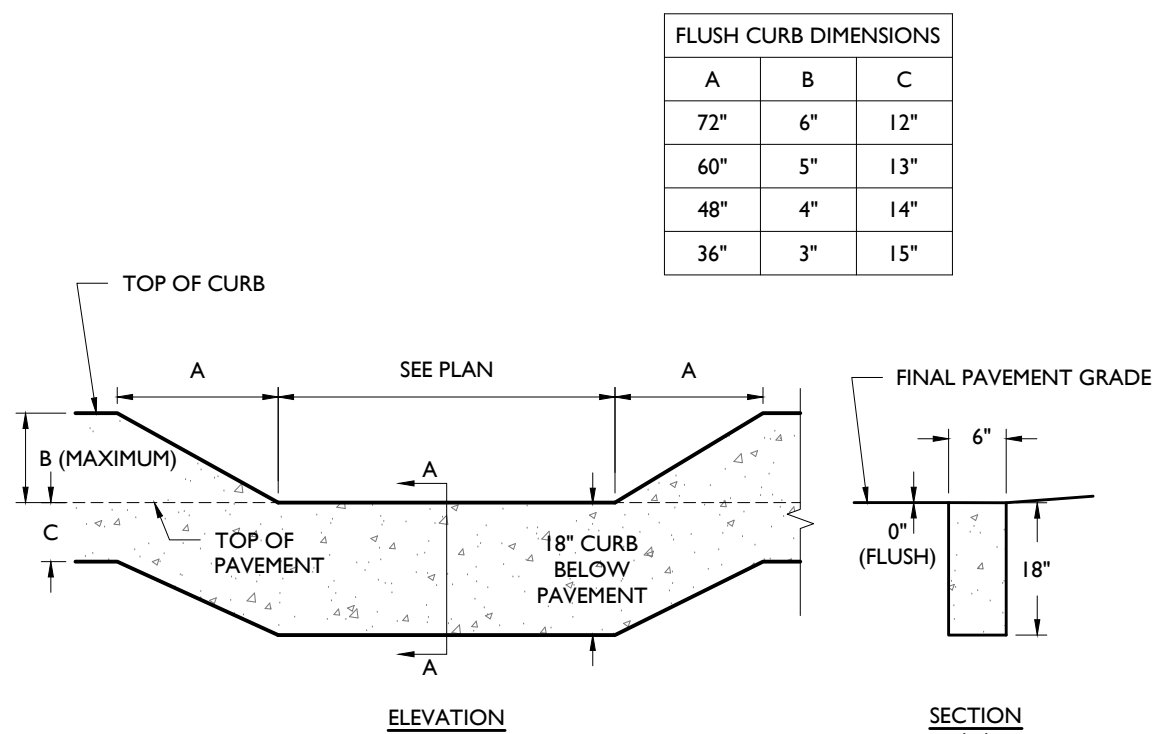
REINFORCED CONCRETE WALKWAY DETAIL

NOT TO SCALE



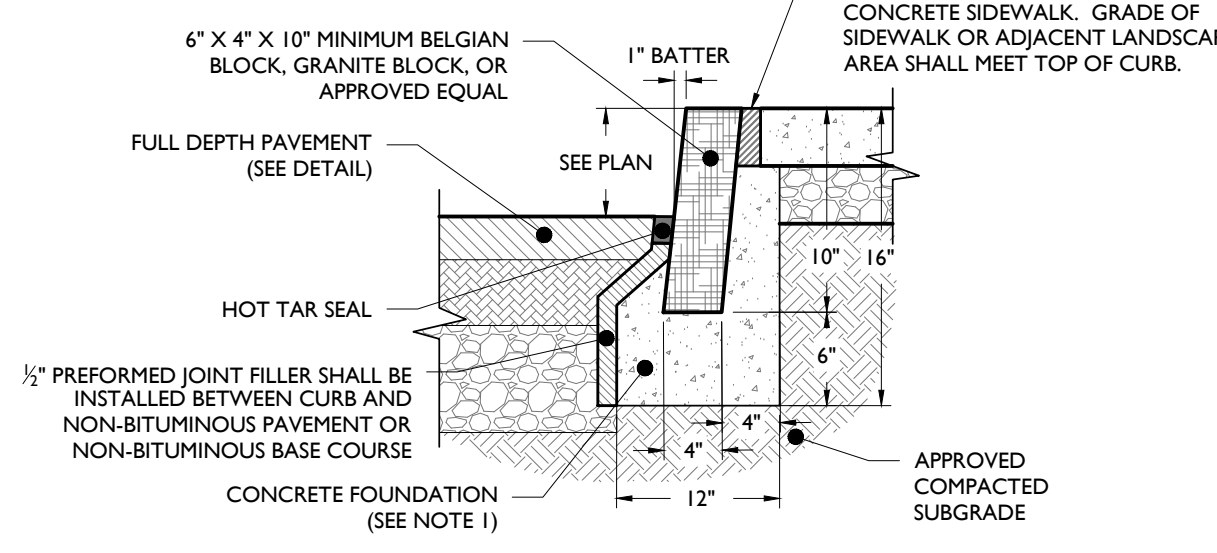
MOUNTABLE CONCRETE CURB DETAIL

NOT TO SCALE



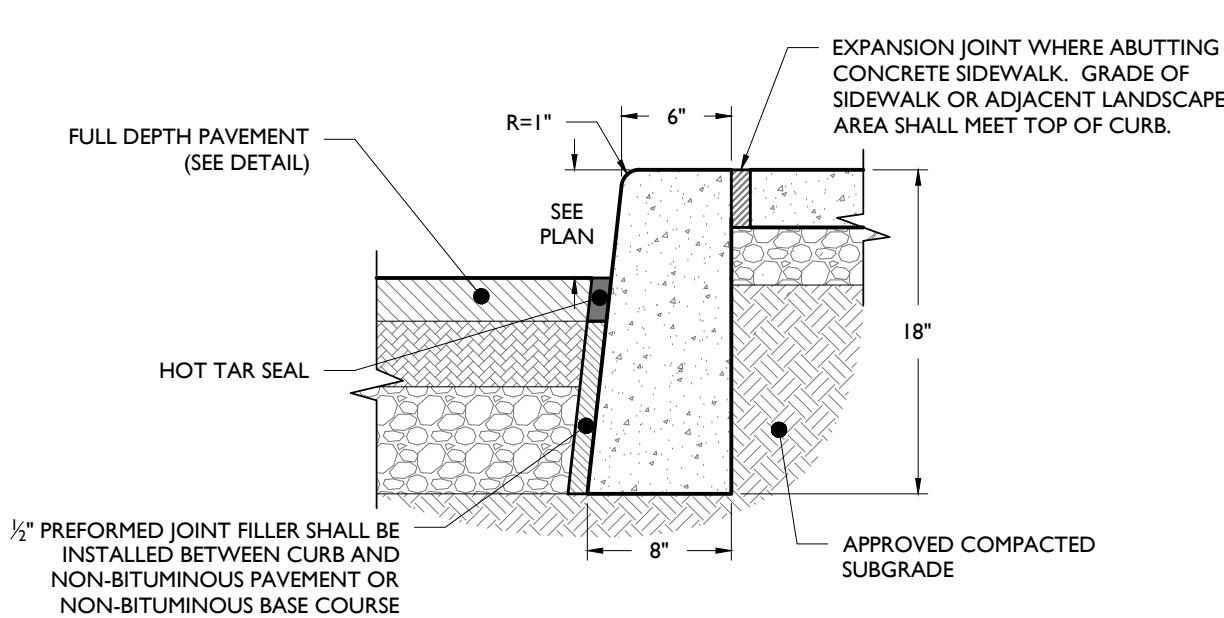
FLUSH CURB DETAIL

NOT TO SCALE



BELGIAN BLOCK CURB DETAIL

NOT TO SCALE



CONCRETE CURB DETAIL

NOT TO SCALE

- NOTES:
- CONCRETE SHALL BE 3500 PSI AT 28 DAYS, AIR-ENTRAINED.
 - TRANSVERSE EXPANSION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED 1/2" FROM SURFACE.
 - HALF DEPTH CONTRACTION JOINTS SHALL BE PROVIDED AT 10 FOOT INTERVALS.
 - 18" CURB DEPTH SHALL BE MAINTAINED AT DEPRESSED OR FLUSH CURBED AREAS.

- NOTES:
- CONCRETE SHALL BE 3500 PSI AT 28 DAYS, AIR-ENTRAINED.
 - 1/2" EXPANSION JOINTS WITH WATER SEAL SHALL BE PROVIDED AT 50 FOOT INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED 1/2" FROM SURFACE. LONGITUDINAL REBAR TO BE CUT AT EXPANSION JOINTS.
 - 1" DEEP AND 1/2" WIDE TOOLED CONTRACTION JOINTS SHALL BE PROVIDED AT MID-POINT BETWEEN EXPANSION JOINTS, OR 30 FOOT MAX.
 - 16" CURB DEPTH SHALL BE MAINTAINED AT DEPRESSED OR FLUSH CURBED AREAS.

- NOTES:
- CONCRETE SHALL BE 3500 PSI AT 28 DAYS, AIR-ENTRAINED.
 - TRANSVERSE EXPANSION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED 1/2" FROM SURFACE.
 - HALF DEPTH CONTRACTION JOINTS SHALL BE PROVIDED AT 10 FOOT INTERVALS.
 - 18" CURB DEPTH SHALL BE MAINTAINED AT DEPRESSED OR FLUSH CURBED AREAS.

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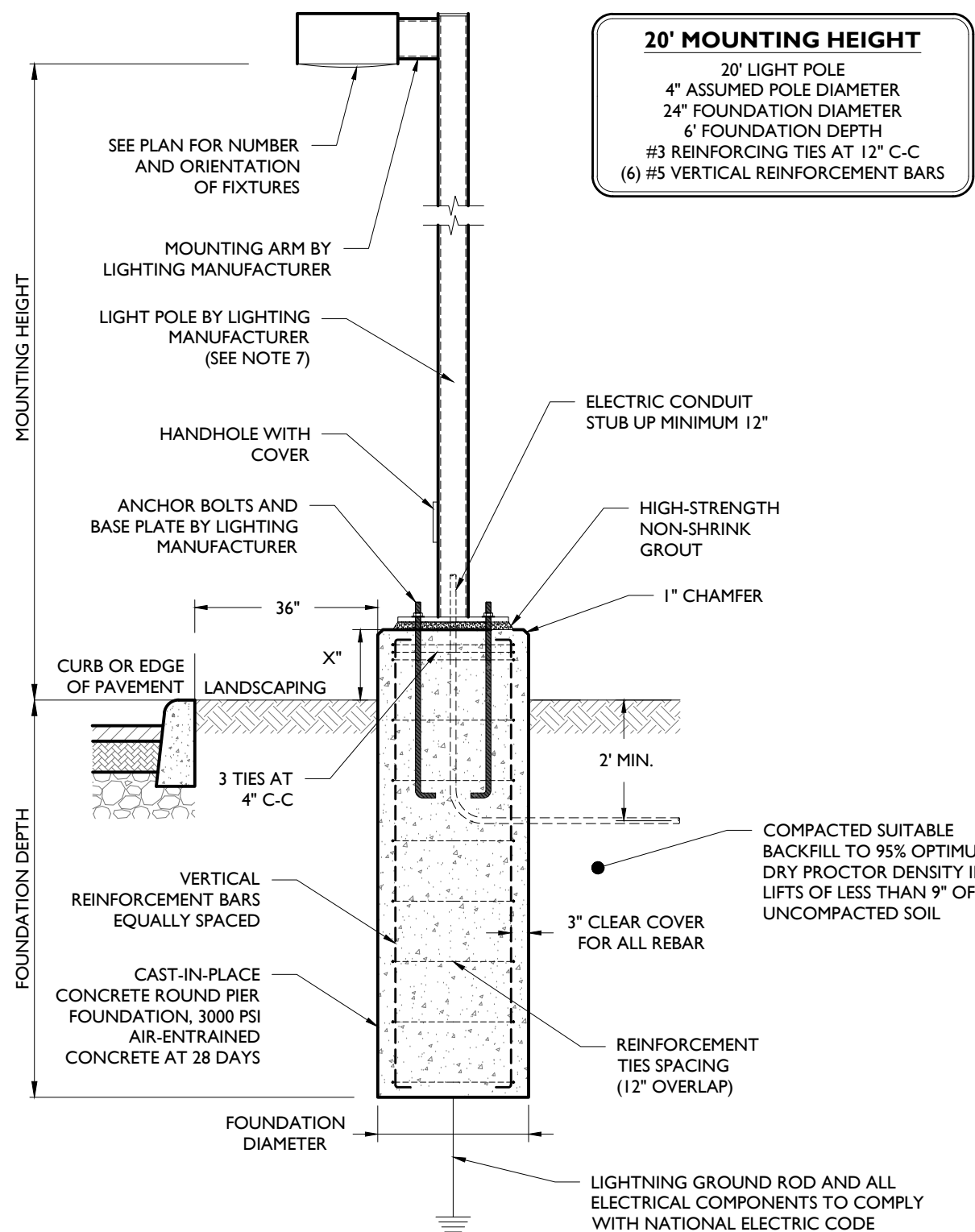
SCALE: AS SHOWN PROJECT ID: T-17354

TITLE:

CONSTRUCTION DETAILS

DRAWING:

C-21



LIGHT POLE INSTALLATION DETAIL

- NOTES:
1. MINIMUM SOIL BEARING PRESSURE OF 1500 PSF. SOIL FRICTION ANGLE OF 30 DEGREES, AND SOIL DRY UNIT WEIGHT OF 120 PCF SHALL BE CONFIRMED IN THE FIELD BY A QUALIFIED PROFESSIONAL.
 2. CAST-IN-PLACE CONCRETE SHALL BE CONSOLIDATED USING VIBRATOR.
 3. ALL REBAR TO BE NEW GRADE 60 STEEL.
 4. PRE-CAST PIERS ACCEPTABLE UPON WRITTEN APPROVAL OF SHOP DRAWING BY ENGINEER.
 5. CONCRETE TO BE INSTALLED A MINIMUM OF 7 DAYS PRIOR TO INSTALLING LIGHT POLE. POURED CONCRETE MIX REQUIRED TO OBTAIN 80% OF DESIGN STRENGTH PRIOR TO INSTALLING LIGHT POLE.
 6. CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 4" (WITHIN 1" TOLERANCE).
 7. POLE SHALL BE RATED FOR 10 MPH HIGHER THAN MAXIMUM WIND SPEED 33FT ABOVE GROUND FOR THE AREA BASED ON ANSIS/ASCE 7-93.
 8. POUR TO BE TERMINATED AT A FORM.
 9. WORK SHALL CONFORM TO ACI BEST PRACTICES FOR APPROPRIATE TEMPERATURE AND WEATHER CONDITIONS.
 10. CONTRACTOR TO TEMPORARILY SUPPORT ADJACENT SOIL AND STRUCTURES DURING EXCAVATION IF REQUIRED.

1

Pendant CN55P1A/CN55P1B

Ordering Template

MODEL	LENS	DIST.	WATT	CCT	VOLT	ADAPTOR	OPTIONS	COLOR	TEXTURE	OP.FIN.
CN55P1A	FGC	2	20W	3K	120	NONE	NONE	BK	TX	MG
CN55P1B	FGF	3	40W	4K	208	ADV	PC	MT	SM	
		3M	60W		240		PT1	MA		
		4	80W		277		PTL	MA		
		5	100W		347		PTDR	SI		
		2HS			480		PK	BZ		
		3HS					PROG	BG		
		3MHS					SD	GM		
		4HS						PG		
								WH		

*ONLY ONE OF THESE OPTION CAN BE CHOSEN

ORDERING CODE

CN55P1A	FGC	2	20W	3K	120	NONE	NONE	BK	TX	MG
---------	-----	---	-----	----	-----	------	------	----	----	----

References

LENS

FGC FLAT GLASS CLEAR

FGF FLAT GLASS FROST

DISTRIBUTION

HS INTERNAL HOUSE SHIELD

SEE PHOTOMETRIC PAGE FOR DETAILS

CCT

3K 3000K

4K 4000K

WATT

SEE PHOTOMETRIC PAGE FOR LUMEN OUTPUT

ADAPTOR

NONE FITS INTO 82" I.D. X MIN 4" LONG TENON

ADV SELF-LEVELING, SIDE MOUNT ADAPTOR FITS ONTO 82 3/8" O.D. X MIN 6" LONG TENON

OPTIONS

NONE BUTON-TYPE PHOTOCELL

PC PHOTOCELL W/7-PIN RECEPTACLE (ANSI C136.41)

PTL LONG-LIFE PHOTOCELL W/7-PIN RECEPTACLE (ANSI C136.41)

PTDR* 7-PIN RECEPTACLE (ANSI C136.41)

PK SHORTING CAP W/7-PIN RECEPTACLE (ANSI C136.41)

PROG* PROGRAMMABLE DRIVER

SD* FIELD ADJUSTABLE 10% INCREMENT STEP-DIMMING SWITCH

*CONTACT FACTORY FOR WIRELESS CONTROLS AND MORE INFORMATION REGARDING PROGS AND SD OPTIONS

Color

BK BLACK RAL9005

MT METALLIC GRAPHITE TEXTURED ONLY (PROPRIETARY FORMULA)

DG DARK GREEN RAL6012

MA MARINE BLUE RAL5013

SI METALLIC SILVER RAL9006 (SMOOTH ONLY)

BZ DARK BRONZE RAL8019

BG BURGUNDY RAL3005

GM MOSS GREEN RAL3005

PG PALE GREY RAL7040

WH WHITE RAL9003

Texture

TX TEXTURED

SM SMOOTH

OP.FIN. (OPTIONAL FINISH)

MG MARINE GRADE PRE-FINISH

Luminaire

27 1/2" (70cm)

23 1/2" (60cm)

CN55P1A

27 1/2" (70cm)

23 1/2" (60cm)

CN55P1B

Adaptors

ADV (Self-Leveler)

Dark Sky Compliant

cyclone

REV. 11/2016

PROPOSED LED AREA LIGHT (LUMINAIRES A, B, C, D, E, & F)

2

Pendant MINI CNM11P1

Ordering Template

MODEL	LENS	DIST.	WATT	CCT	VOLT	OPTIONS	COLOR	TEXTURE	OP.FIN.
CNM11P1	GCPD	5	15W	3K	120	NONE	BK	TX	MG
			25W		208		DG		
			30W		240		MA		
					277		SI		
					347		BZ		
					480		BG		
							GM		
							PG		
							WH		

*AVAILABLE ONLY WITH TYPE 5 ONLY

*NOT AVAILABLE FOR 480V

ORDERING CODE

CNM11P1	GCPD	5							
---------	------	---	--	--	--	--	--	--	--

References

LENS

GCPD GLOBE CYLINDER POLYCARBONATE OPALINE

*PHOTOMETRIC WILL BE AFFECTED DUE TO FINISH

DISTRIBUTION

HS INTERNAL HOUSE SHIELD

SEE PHOTOMETRIC PAGE FOR DETAILS

CCT

3K 3000K

4K 4000K

WATT

SEE PHOTOMETRIC PAGE FOR LUMEN OUTPUT

OPTIONS

NONE NONE

PC BUTON-TYPE PHOTOCELL

Color

BK BLACK RAL9005

DG DARK GREEN RAL6012

MA MARINE BLUE RAL5013

SI METALLIC SILVER RAL9006 (SMOOTH ONLY)

BZ DARK BRONZE RAL8019

BG BURGUNDY RAL3005

GM MOSS GREEN RAL3005

PG PALE GREY RAL7040

WH WHITE RAL9003

Texture

TX TEXTURED

SM SMOOTH

OP.FIN. (OPTIONAL FINISH)

MG MARINE GRADE PRE-FINISH

Luminaire

16 1/4" (41cm)

19 1/2" (50cm)

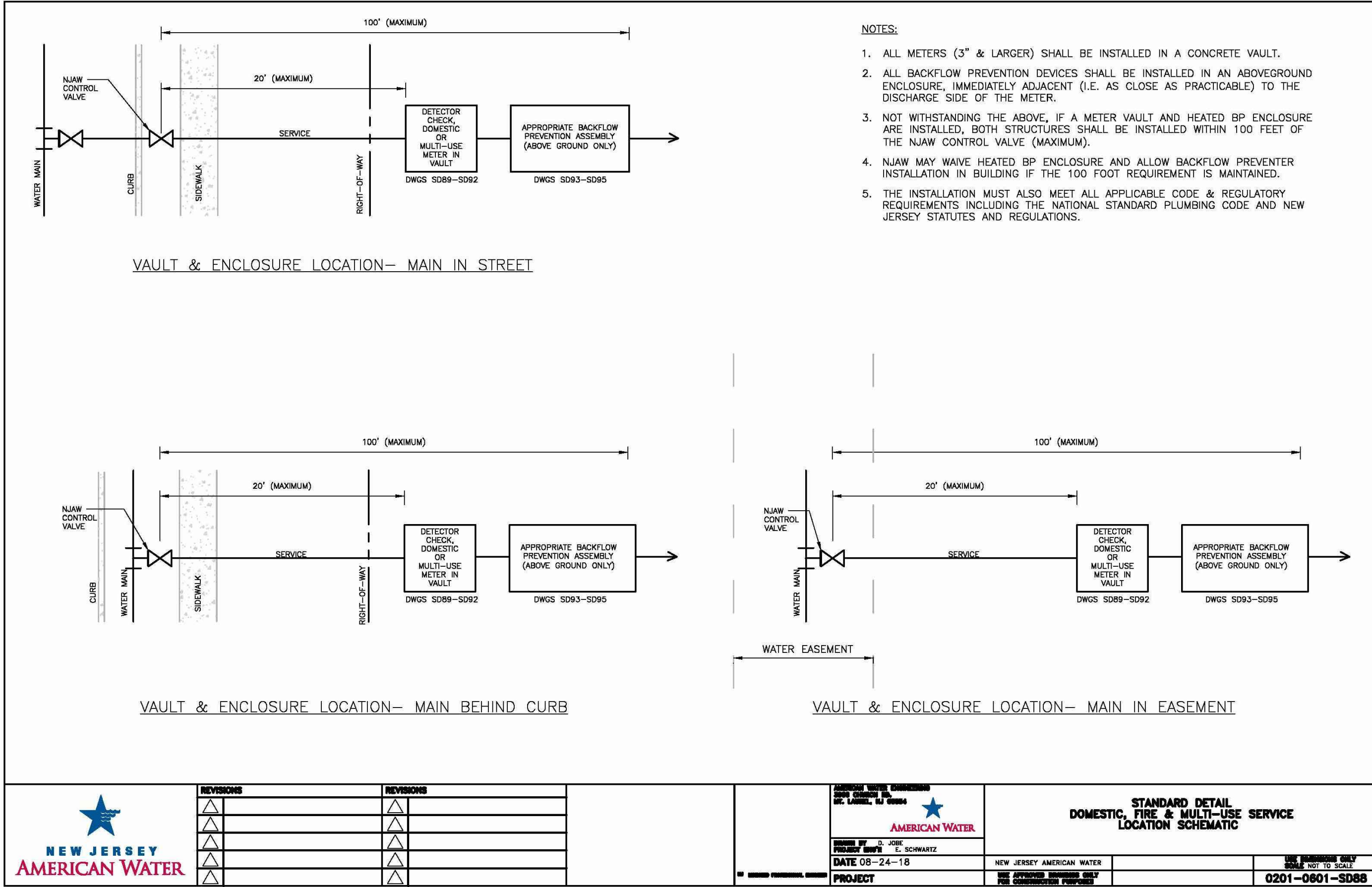
CNM11P1

cyclone

REV. 4/2018

PROPOSED LED AREA LIGHT (LUMINAIRES G)

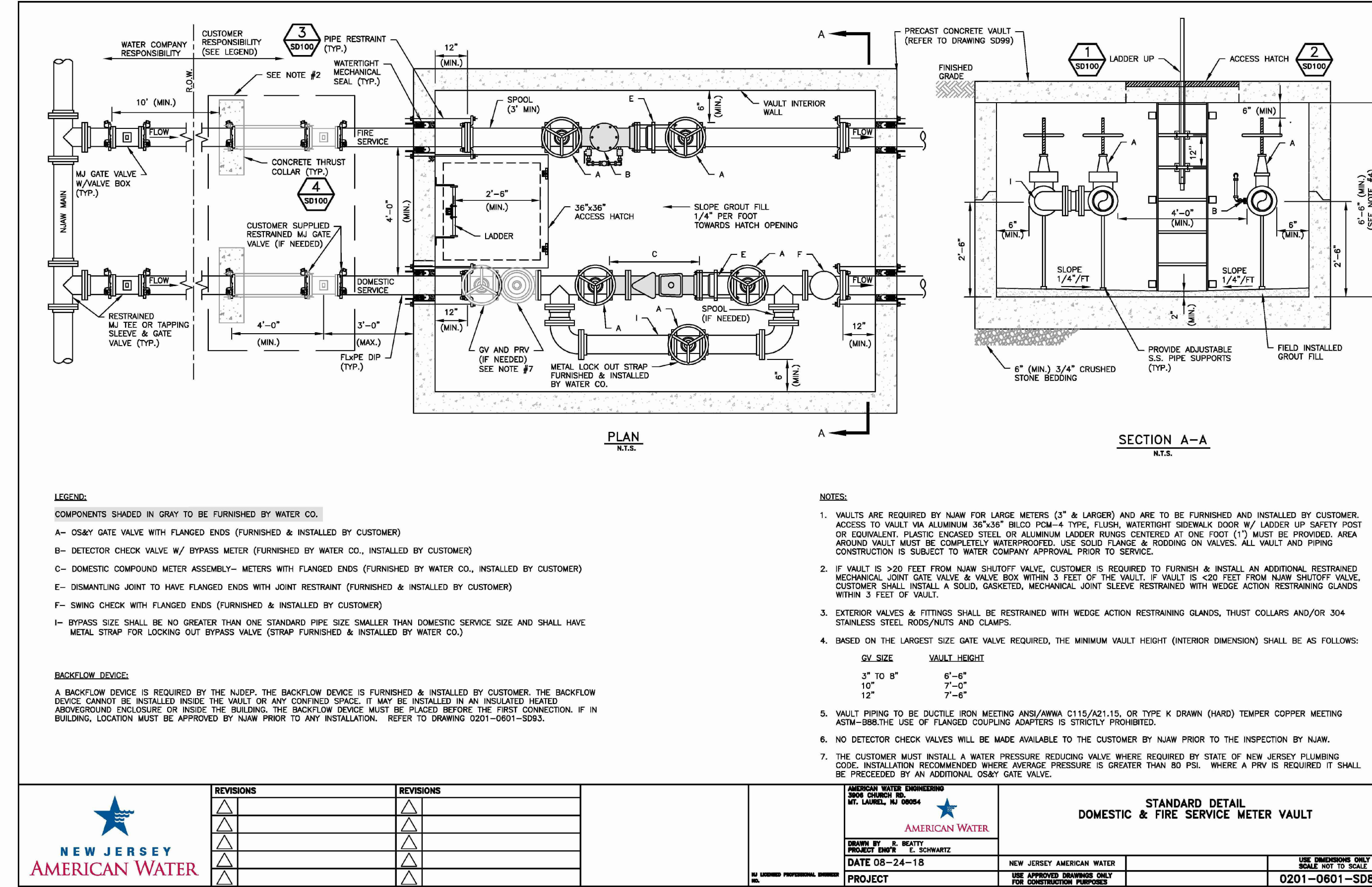
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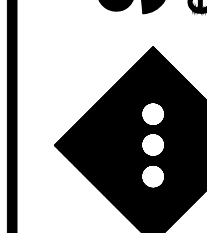
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**GREEN ESSEX PARTNERS URBAN
RENEWAL ENTITY, LLC**
**PROPOSED MULTI-FAMILY
RESIDENTIAL DEVELOPMENT**
TAX MAP SHEET 88 BLOCK 155, LOTS 40.02, 42.01, & 42.02
TOWNSHIP OF WEST ORANGE
ESSEX COUNTY, NEW JERSEY

ZACHARY E. CHAPLIN, P.E.
NEW JERSEY LICENSE No. 53605
LICENSED PROFESSIONAL ENGINEER

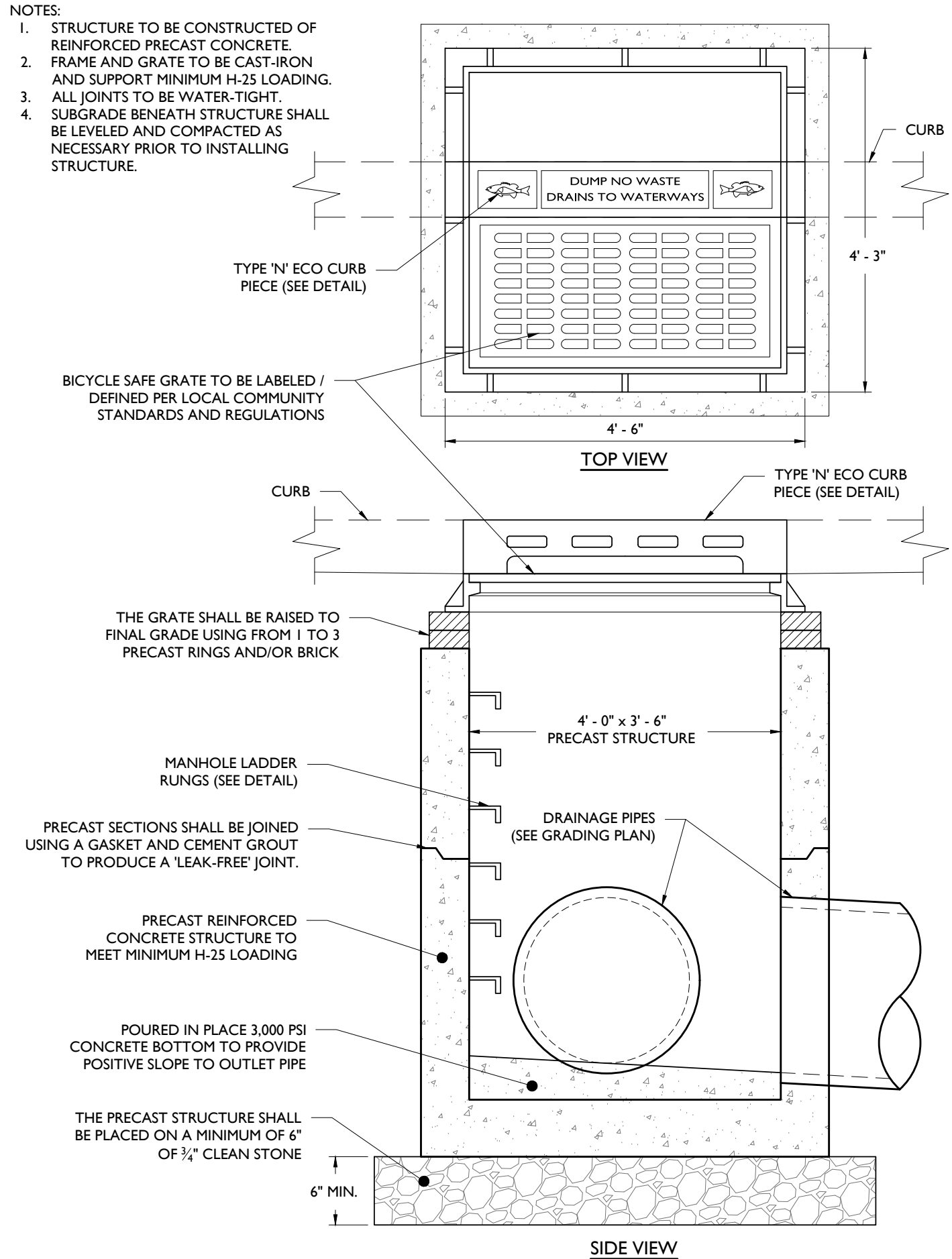
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SCALE: AS SHOWN PROJECT ID: T-17354

TITLE:
**CONSTRUCTION
DETAILS**

DRAWING:

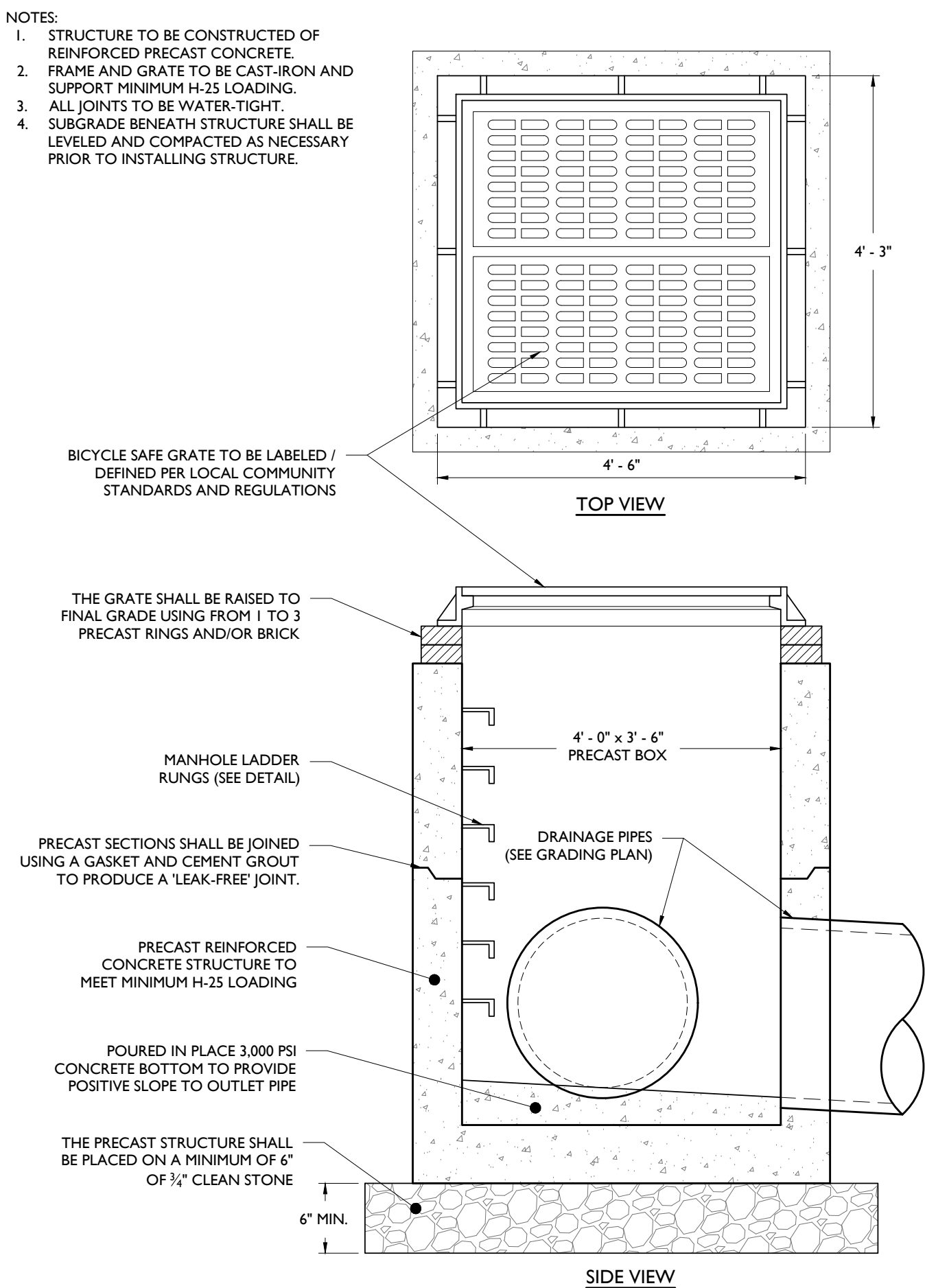
C-23



TYPE 'B' STORM INLET DETAIL

NOT TO SCALE

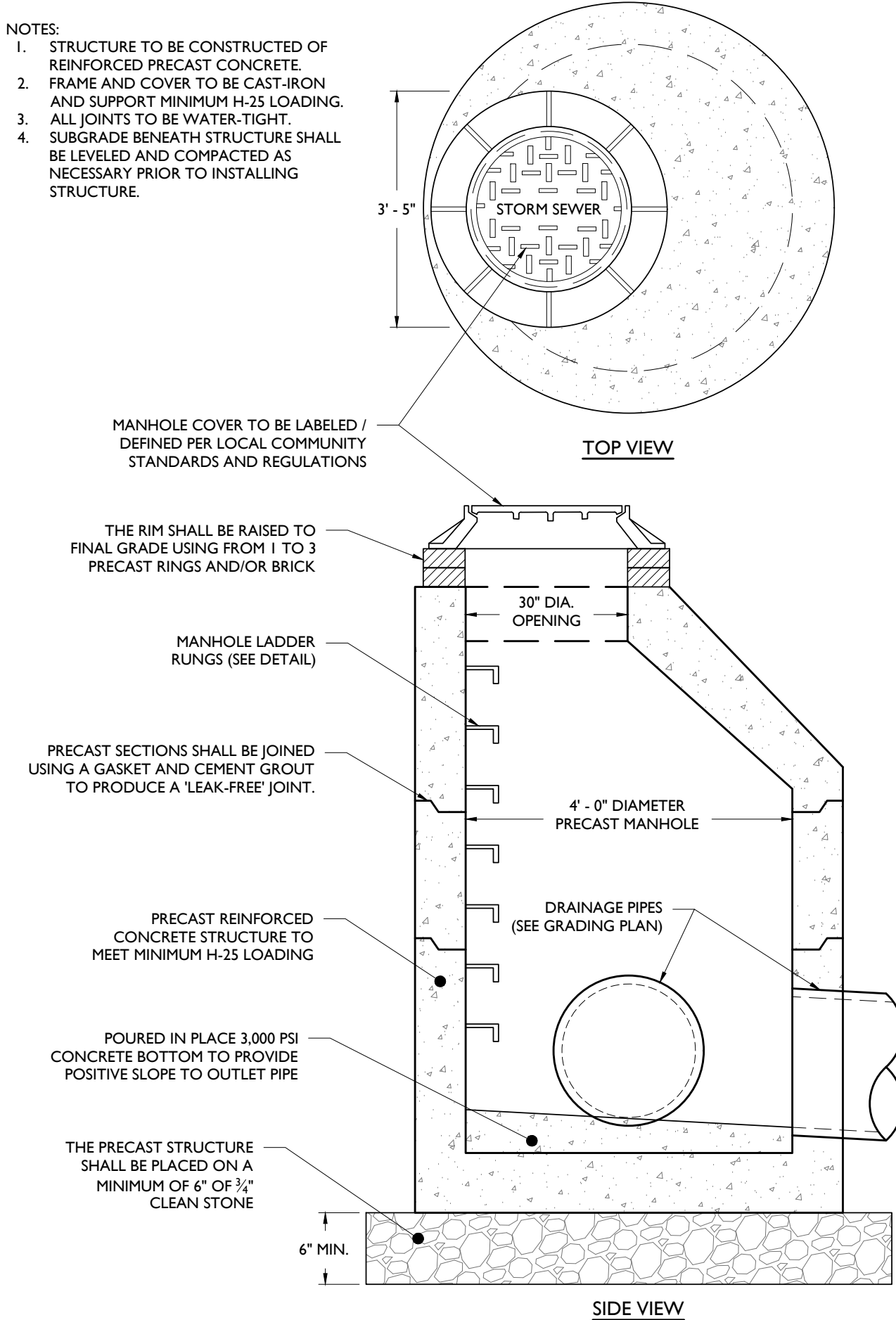
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TYPE 'E' STORM INLET DETAIL

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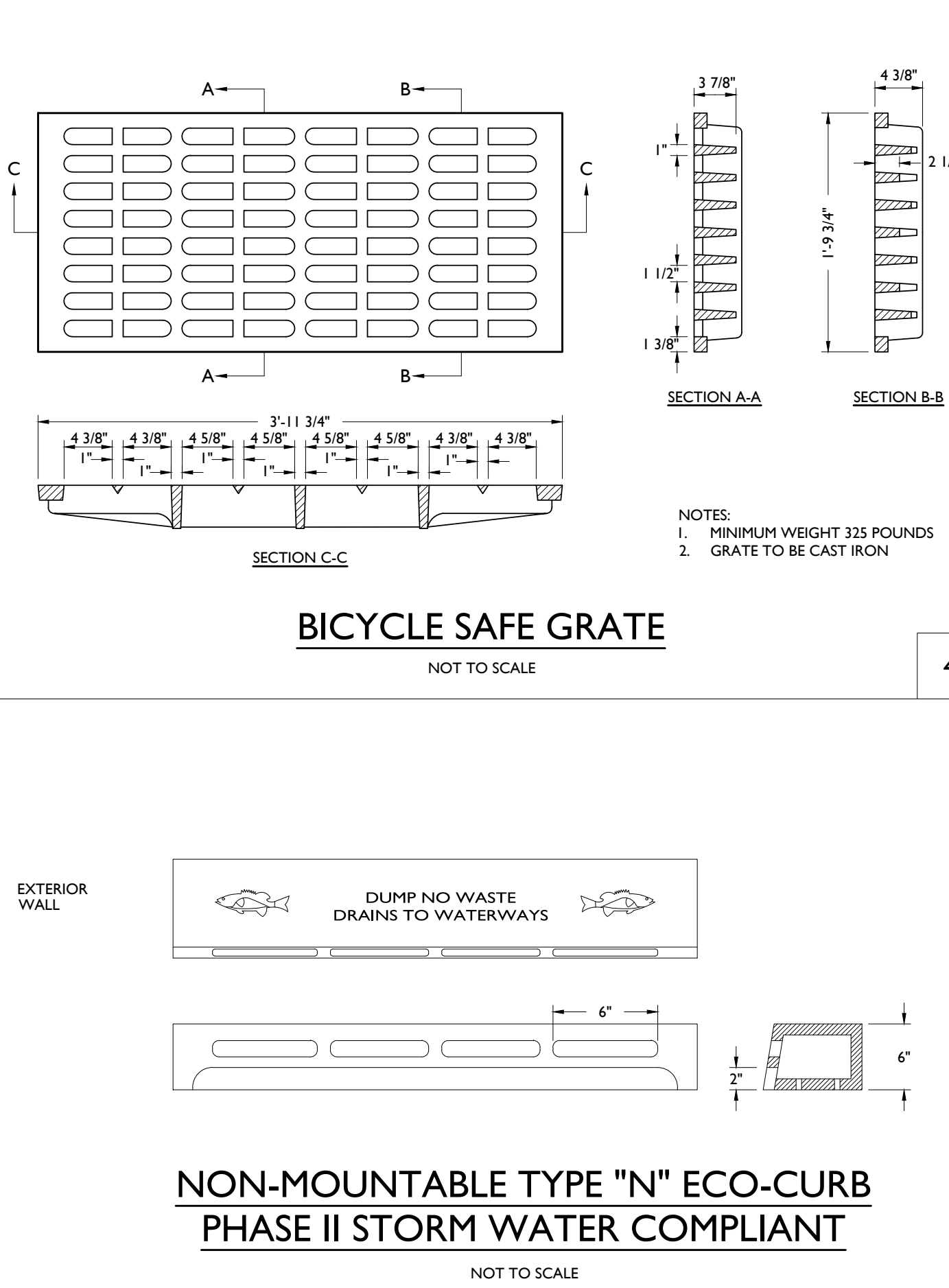
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STORM MANHOLE DETAIL

NOT TO SCALE

3



BICYCLE SAFE GRATE

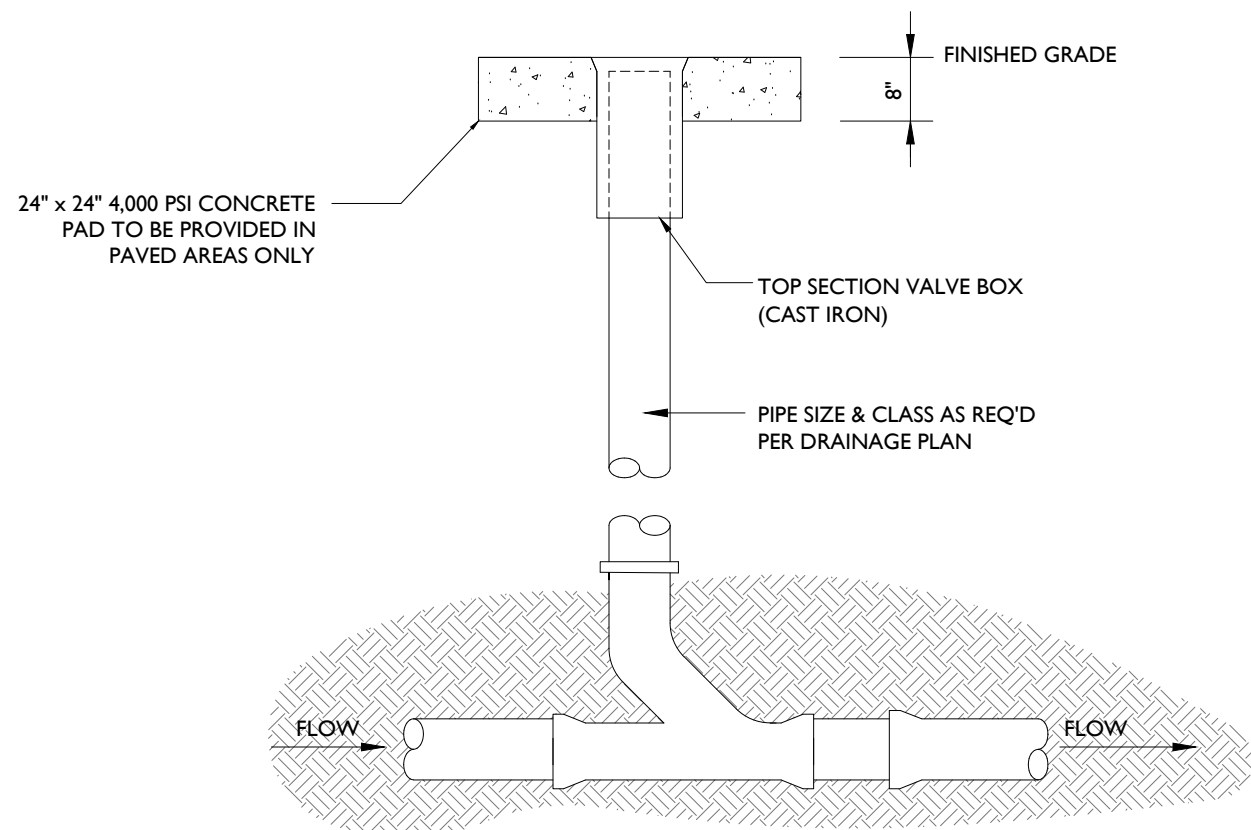
NOT TO SCALE

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NON-MOUNTABLE TYPE "N" ECO-CURB
PHASE II STORM WATER COMPLIANT

NOT TO SCALE

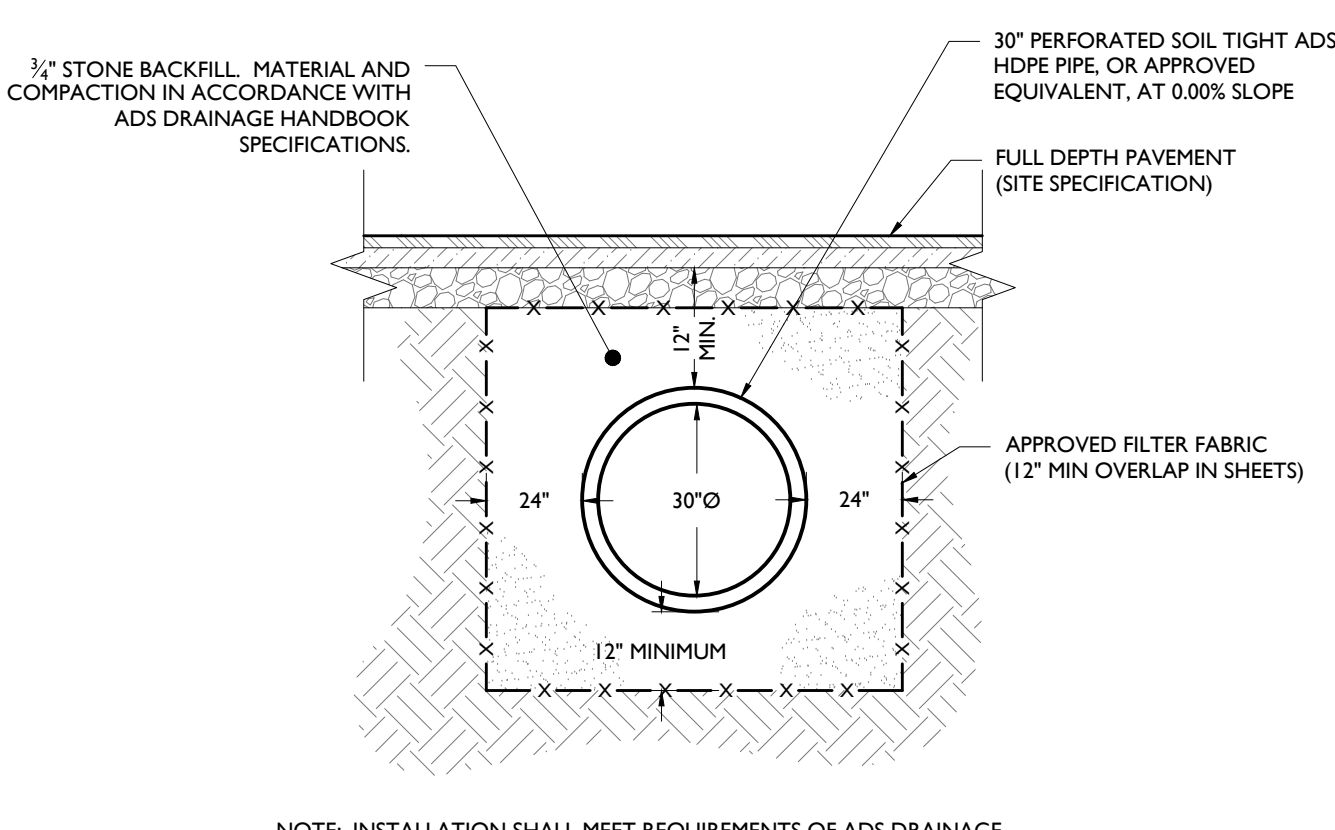
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CLEAN-OUT

NOT TO SCALE

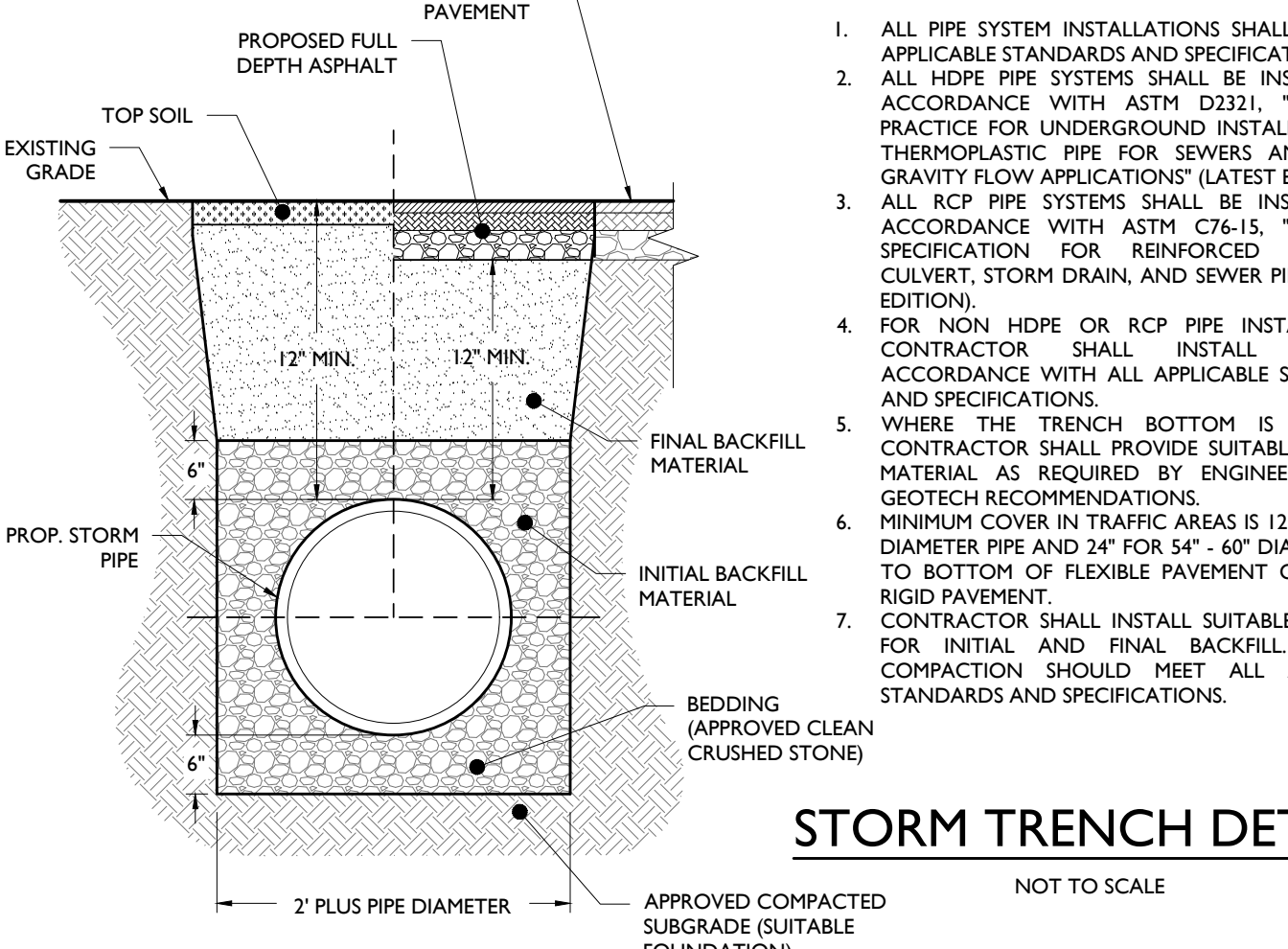
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UNDERGROUND INFILTRATION PIPE DETAIL

NOT TO SCALE

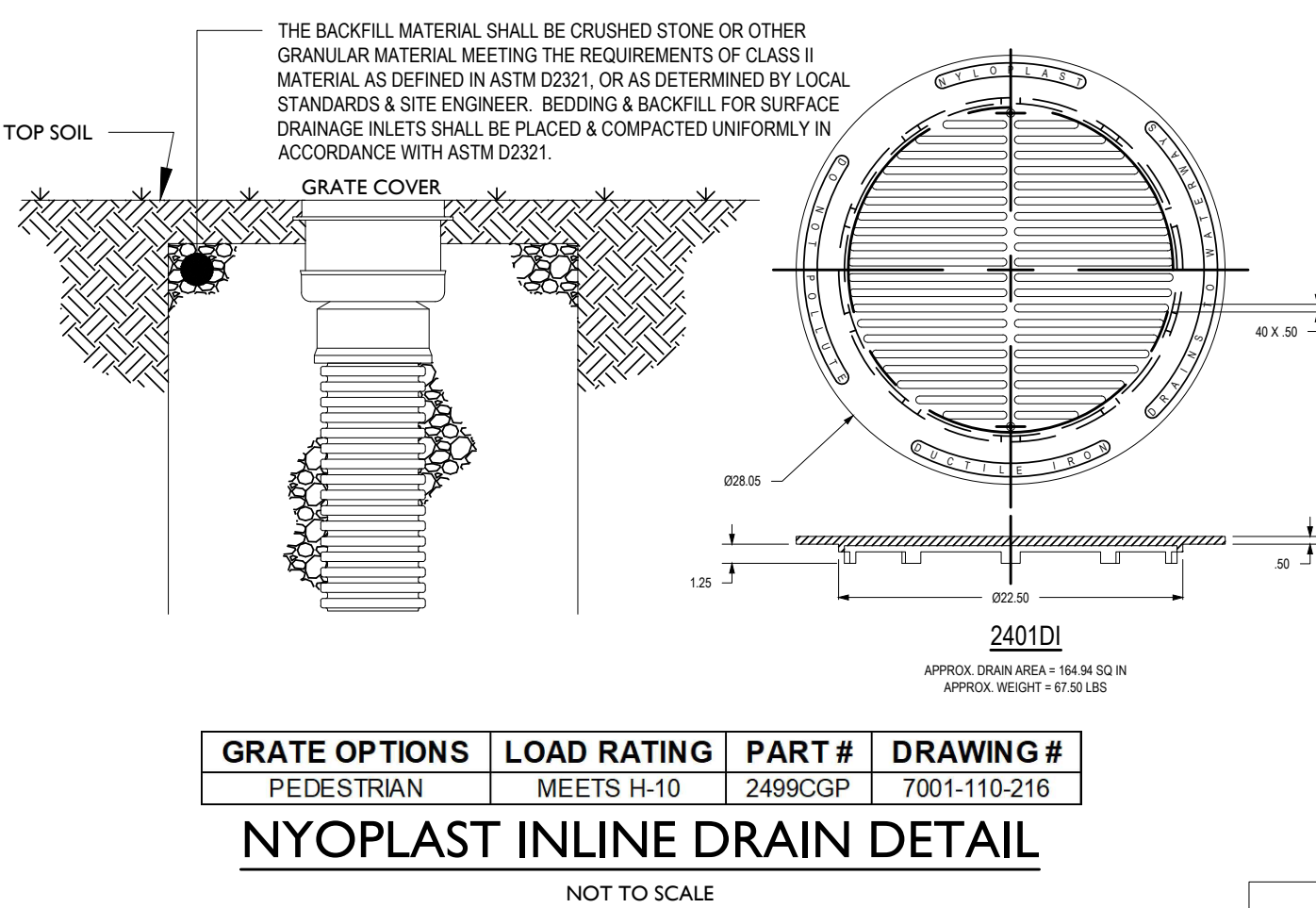
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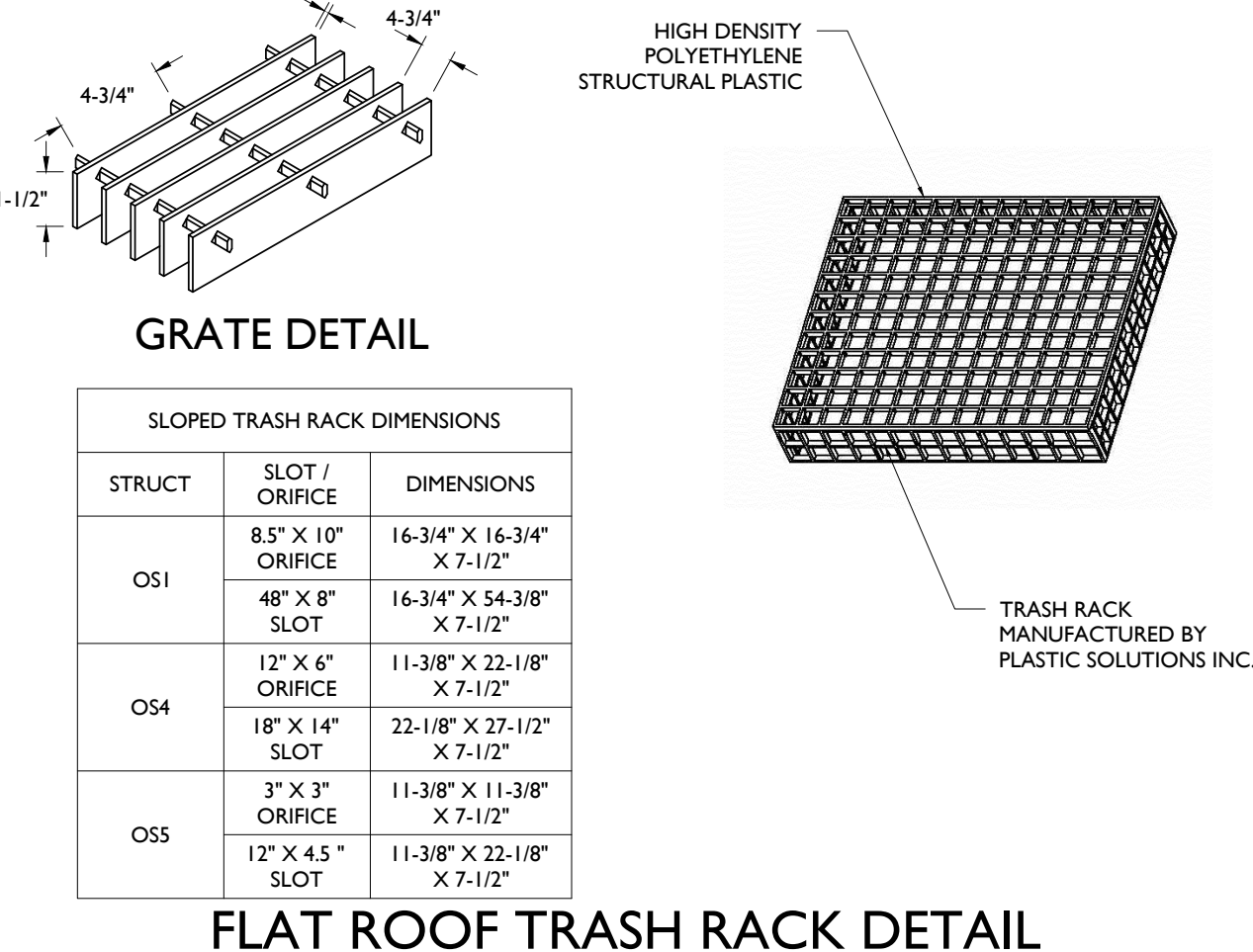
STORM TRENCH DETAIL

NOT TO SCALE

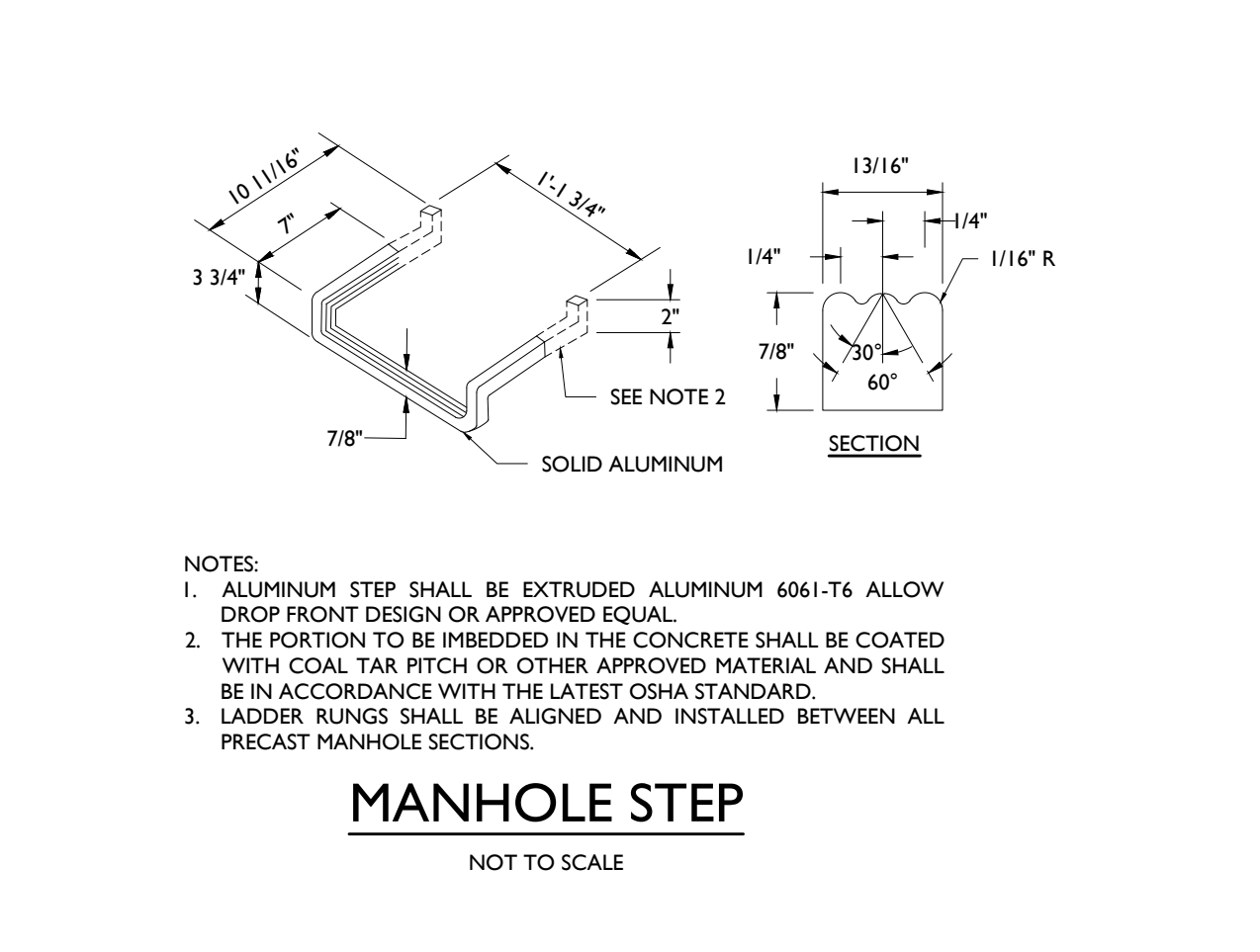
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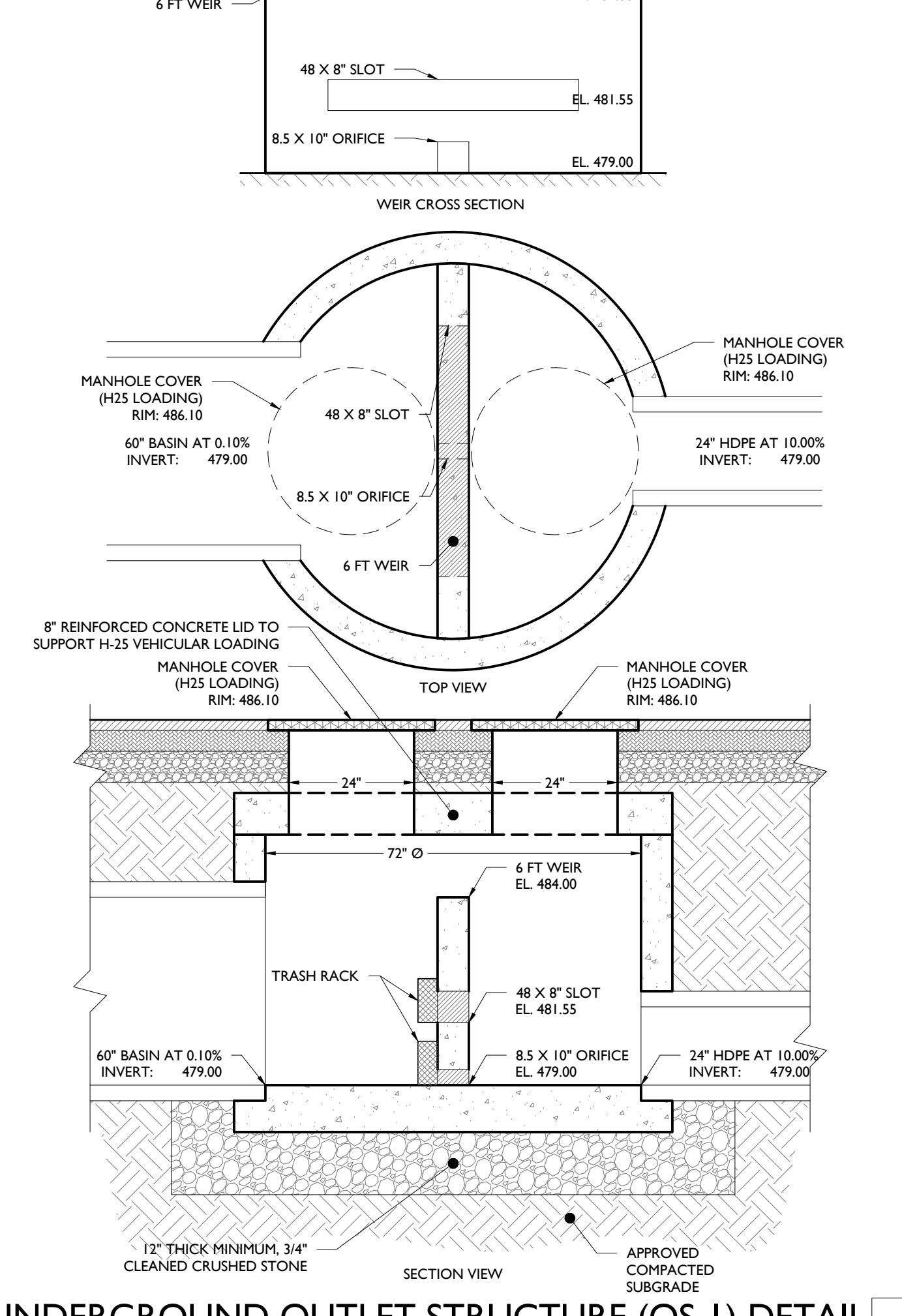
9



10



11



12

T:\2017\1754-BINE REAL ESTATE GROUP - 100-100 EXECUTIVE DRIVE, WEST ORANGE, NJ\0409P0701-02.DWG

REVISIONS				DESCRIPTION	
NO.	DATE	BY	ISSUE	REVISION	DESCRIPTION
1	03/19/2020	NS	1	ISSUED FOR REVIEW	
2	05/07/2020	FT	2	REVISED PER TOWNSHIP COMMENTS	
3	05/22/2020	FT	3	REVISED PER CLIENT COMMENTS	
4	06/11/2020	NS	4	REVISED PER FORESTER COMMENTS	

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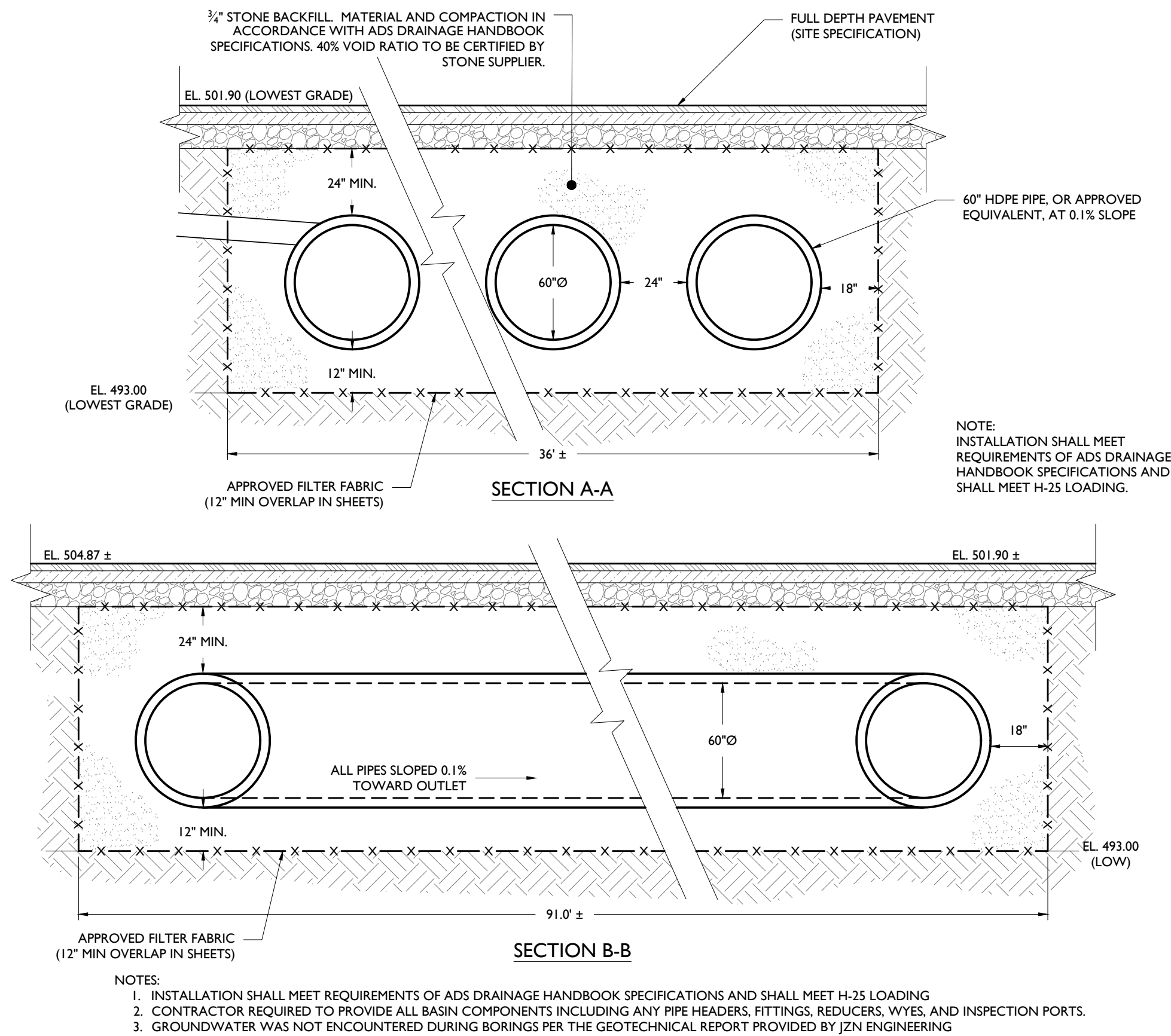
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SCALE: AS SHOWN PROJECT ID: T-17554

TITLE:
**CONSTRUCTION
DETAILS**

DRAWING:
C-25

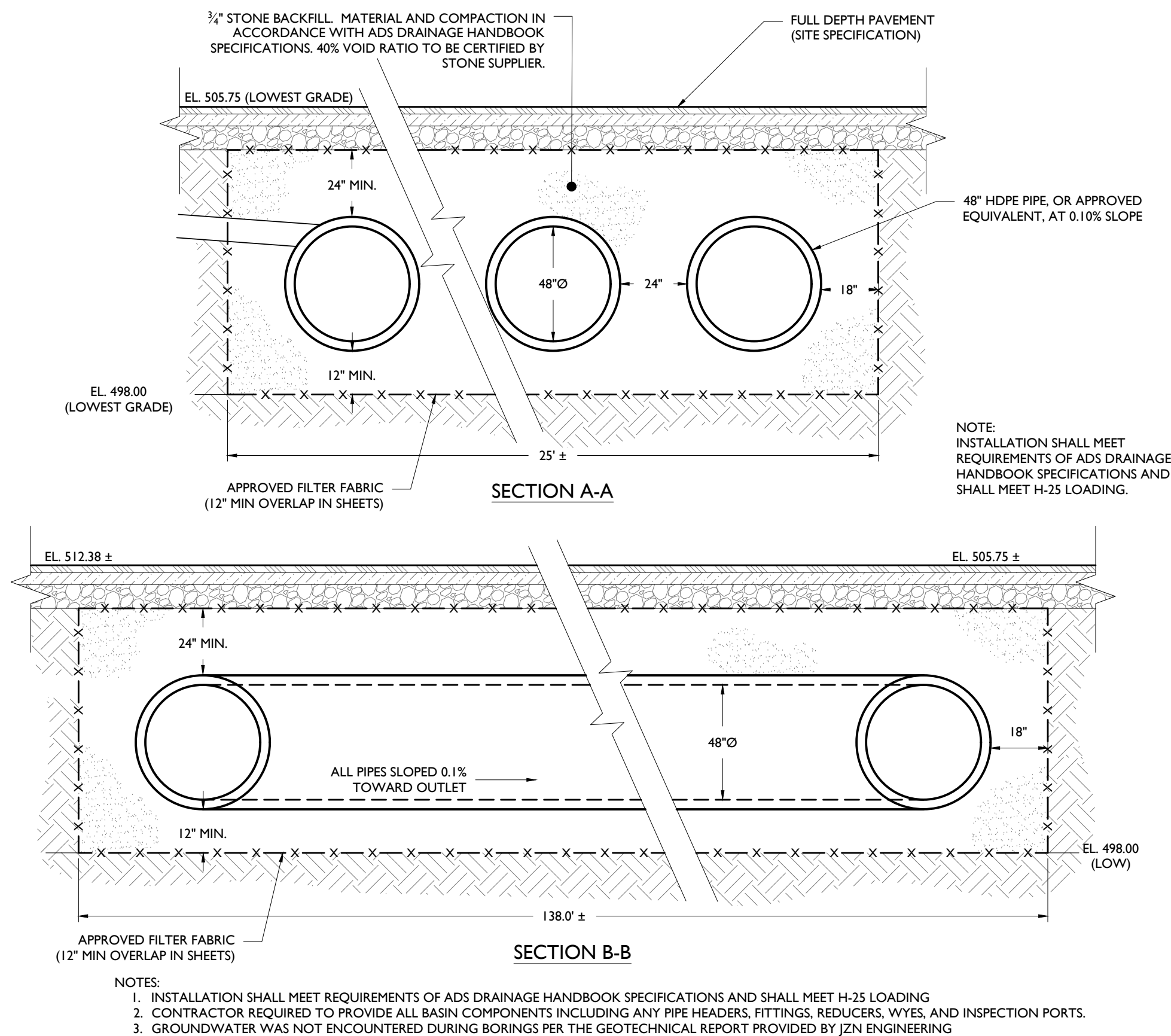
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UNDERGROUND BASIN (B-1A) DETAIL

NOT TO SCALE

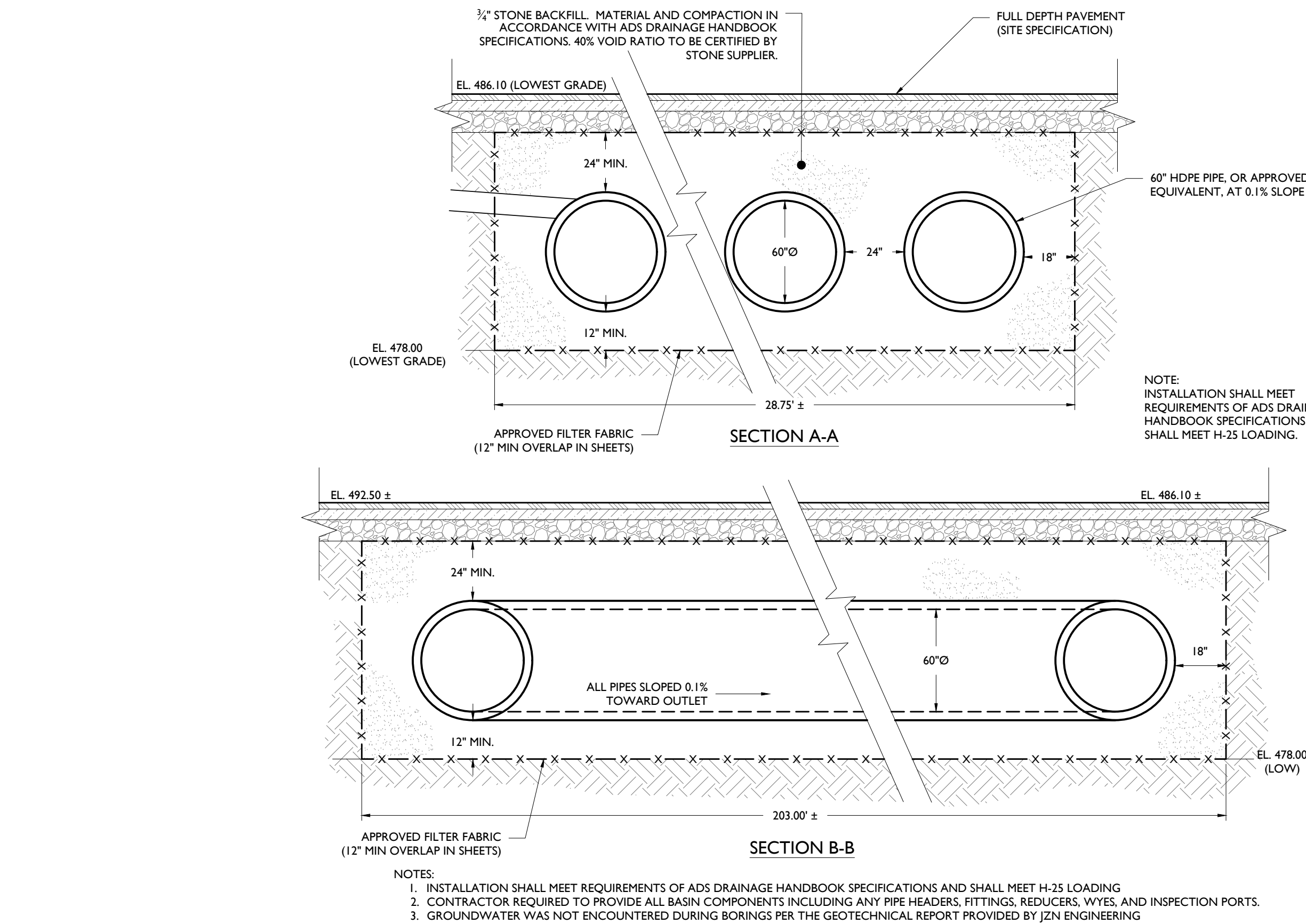
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UNDERGROUND BASIN (B-2A) DETAIL

NOT TO SCALE

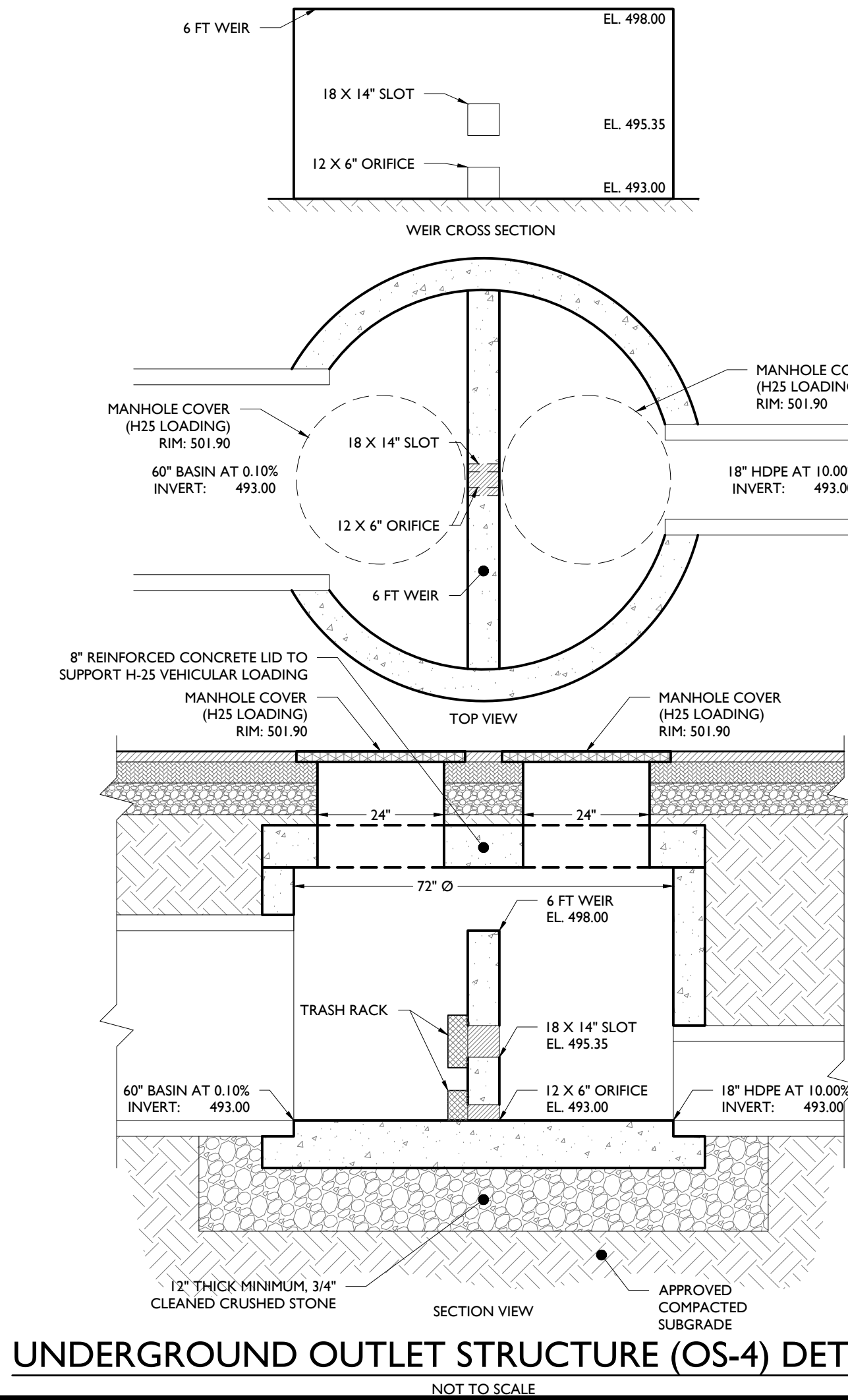
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UNDERGROUND BASIN (B-1B) DETAIL

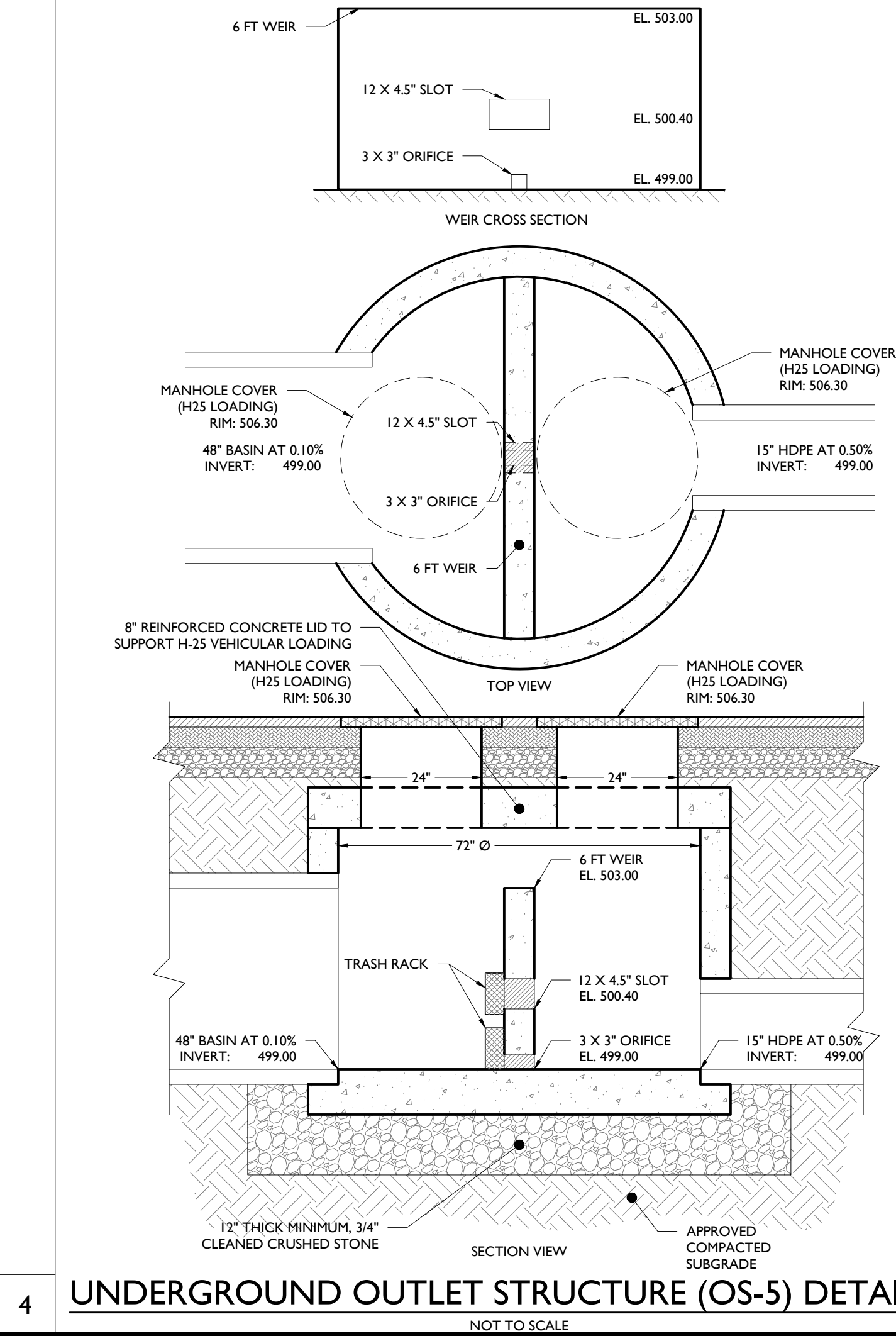
NOT TO SCALE

2



UNDERGROUND OUTLET STRUCTURE (OS-4) DETAIL

NOT TO SCALE



UNDERGROUND OUTLET STRUCTURE (OS-5) DETAIL

NOT TO SCALE

5

REVISIONS				ISSUE		DESCRIPTION	
NO.	DATE	BY	REVISION	NO.	DATE	BY	REVISION
1	03/19/2020	DD	ISSUED FOR REVIEW	4	06/11/2020	NS	REVISED PER FORESTER COMMENTS
2	05/07/2020	FT	REVISED PER TOWNSHIP COMMENTS	3	05/22/2020	FT	REVISED PER CLIENT COMMENTS

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ESSEX COUNTY, NEW JERSEY

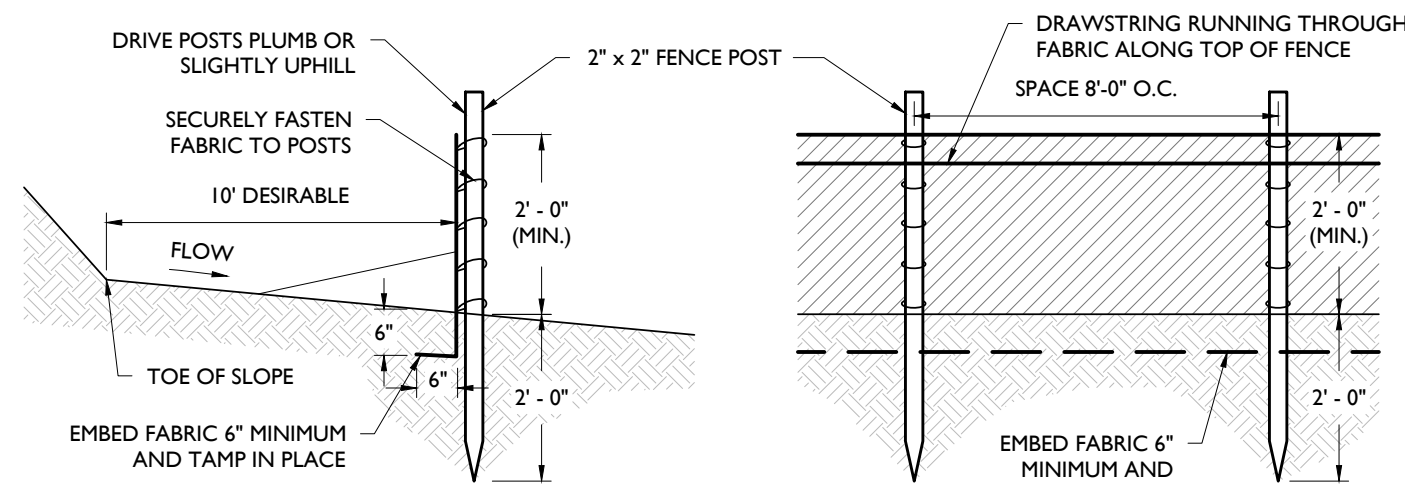
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NEW JERSEY LICENSE No. 53605
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SCALE: AS SHOWN PROJECT ID: T-1754

TITLE: CONSTRUCTION DETAILS

DRAWING: C-26



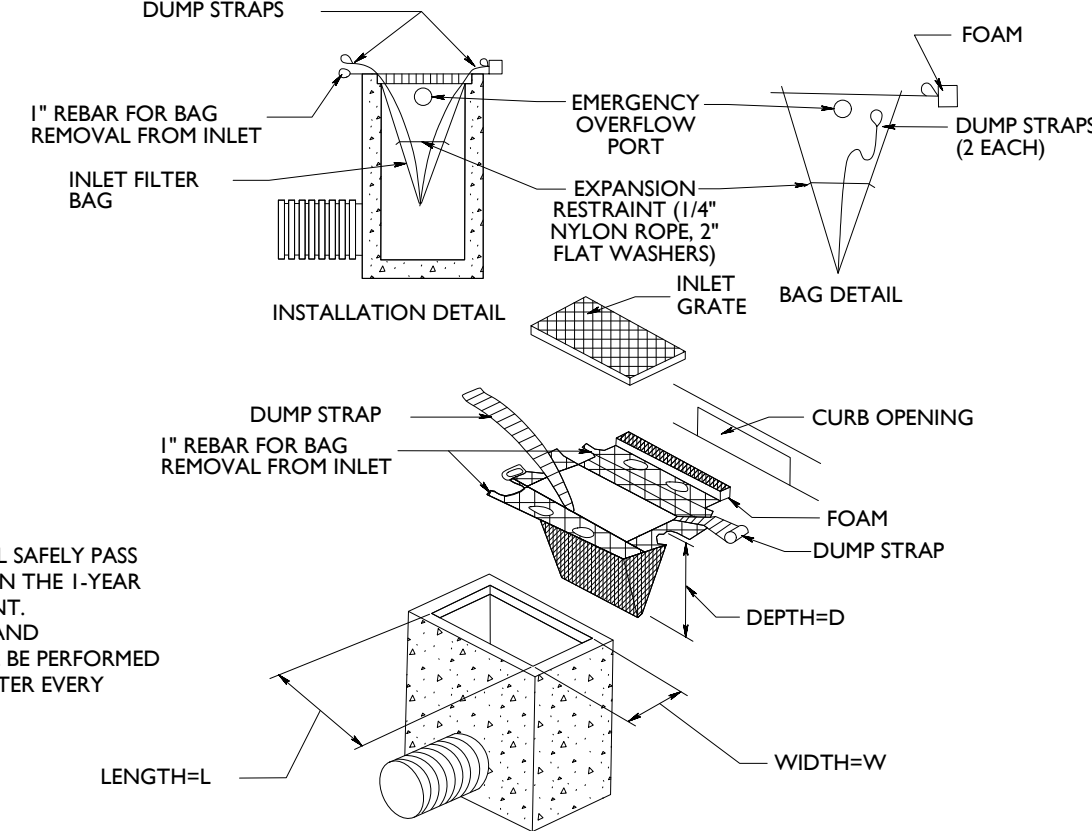
- NOTES:
1. SECURELY FASTEN GEOTEXTILE TO FENCE POST BY USE OF WIRE TIES, HOG RINGS, STAPLES OR POCKETS. FOUR TO SIX FASTENERS PER POST.
 2. GEOTEXTILE FABRIC TO BE EMBEDDED 6" (MIN.) AND TAMP IN PLACE.
 3. SECURELY FASTEN ENDS OF INDIVIDUAL ROLLS OF GEOTEXTILE TO A POST BY WRAPPING EACH END OF THE GEOTEXTILE AROUND THE POST TWICE AND ATTACHING AS SPECIFIED IN NOTE 1. ABOVE. SPLICING OF INDIVIDUAL ROLLS SHALL NOT OCCUR AT LOW POINTS.
 4. SET SILT FENCE WITHIN PROJECT LIMITS. 10'-0" IS DESIRABLE.

SILT FENCE DETAIL

NOT TO SCALE

1

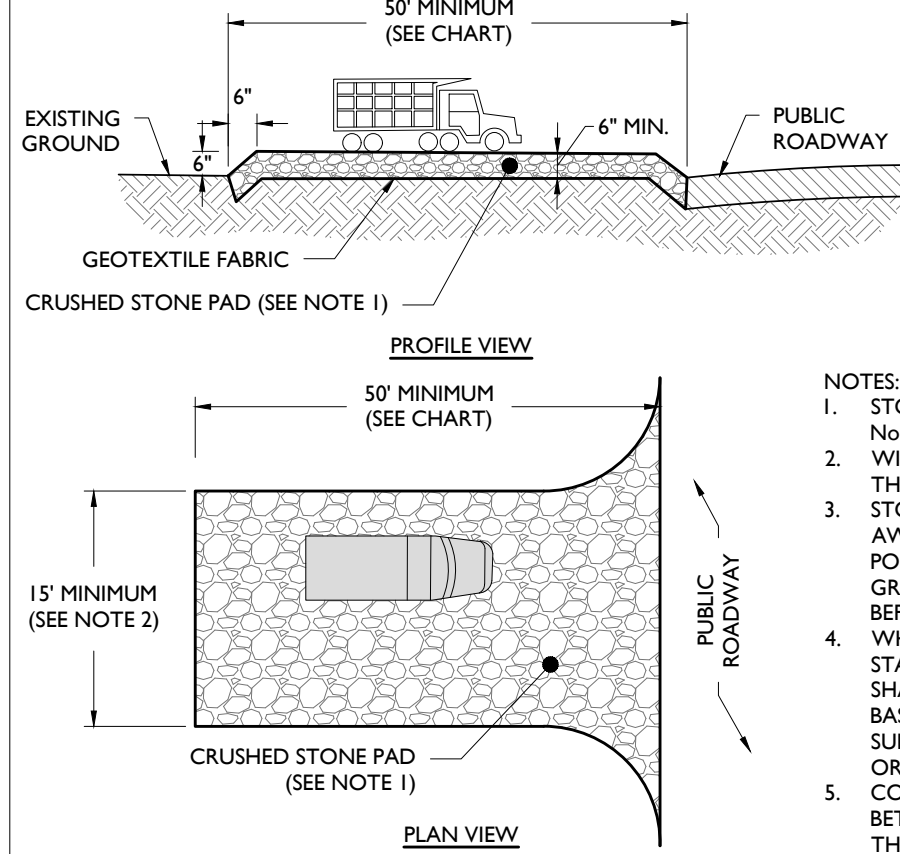
- NOTES:
1. THE FILTER BAG SHALL SAFELY PASS FLOWS GREATER THAN THE 1-YEAR 24-HOUR STORM EVENT.
 2. SEDIMENT REMOVAL AND MAINTENANCE SHALL BE PERFORMED FREQUENTLY AND AFTER EVERY STORM EVENT.



INLET FILTER BAG DETAIL

NOT TO SCALE

2



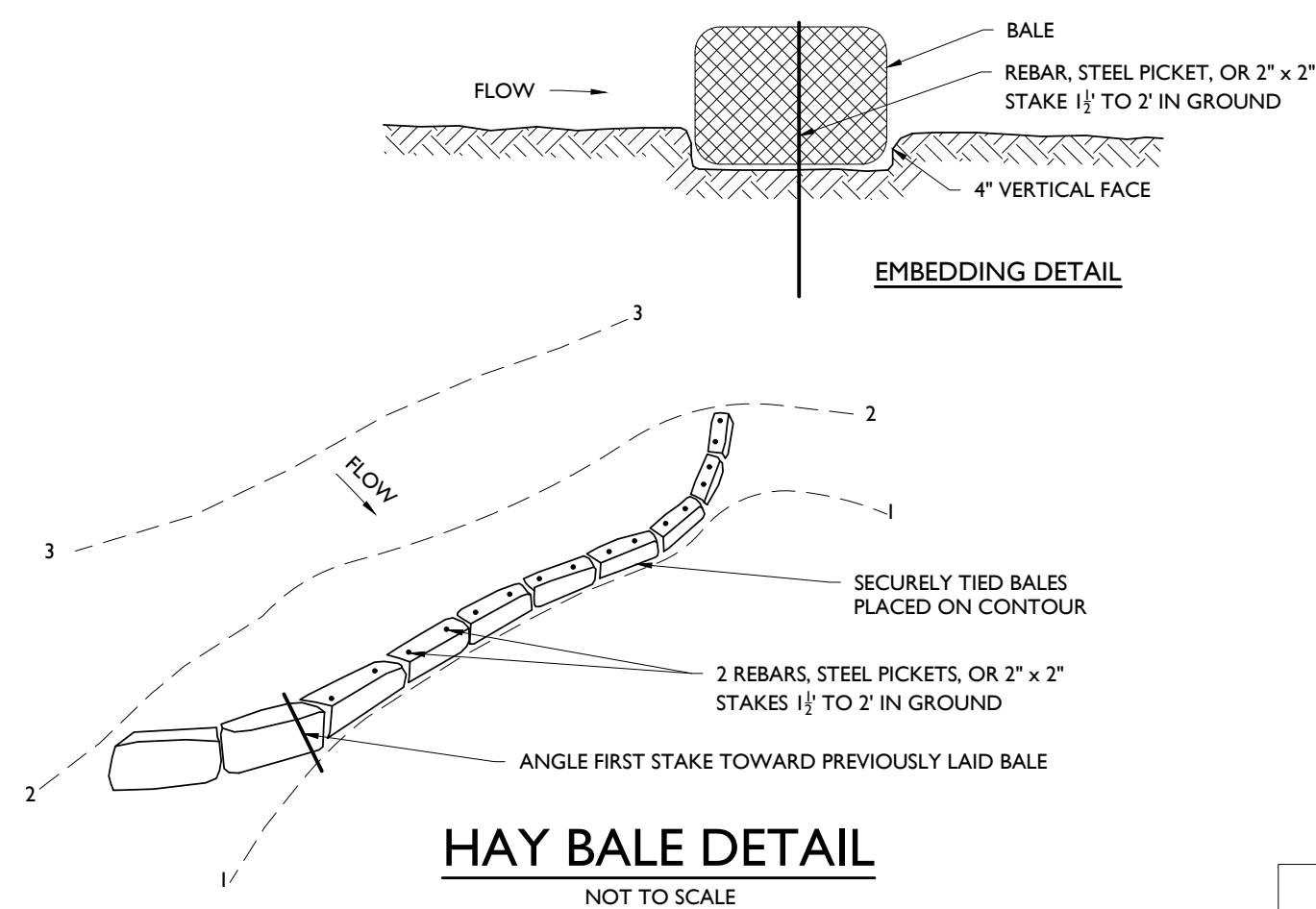
STABILIZED CONSTRUCTION ACCESS DETAIL

NOT TO SCALE

3

- NOTES:
1. STONE SHALL BE ASTM C-33, SIZE No. 2 (2.5" TO 1.5") OR No. 3 (2" TO 1") CLEAN CRUSHED ANGULAR STONE.
 2. WIDTH SHALL BE 15' MINIMUM OR THE FULL WIDTH OF THE ACCESS POINT, WHICHEVER IS GREATER.
 3. STORMWATER FROM UP-SLOPE AREAS SHALL BE DIVERTED AWAY FROM THE STABILIZED PAD, WHERE POSSIBLE. AT POORLY DRAINED LOCATIONS, SUBSURFACE DRAINAGE GRAVEL FILTER OR GEOTEXTILE SHALL BE INSTALLED BEFORE THE STABILIZED CONSTRUCTION ENTRANCE.
 4. WHERE THE SLOPE OF THE ROADWAY EXCEEDS 5%, A STABILIZED BASE OF HOT MIX ASPHALT BASE COURSE SHALL BE INSTALLED. THE TYPE AND THICKNESS OF THE BASE COURSE AND USE OF DENSE GRADED AGGREGATE SUB-BASE SHALL BE AS PRESCRIBED BY LOCAL MUNICIPAL ORDINANCE OR GOVERNING AUTHORITY.
 5. CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN THE STABILIZED CONSTRUCTION ACCESS AND THE PUBLIC ROADWAY.

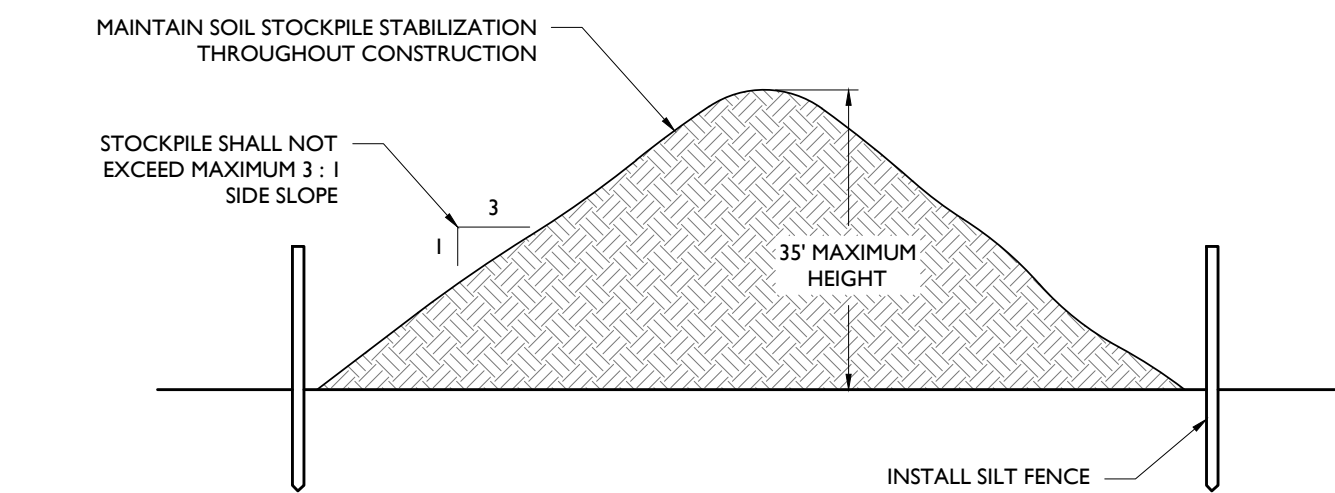
SLOPE OF PUBLIC ROADWAY	LENGTH OF STONE REQ'D	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0% TO 2%	50 FEET	100 FEET
2% TO 5%	100 FEET	200 FEET
> 5%	SEE NOTE 4	



HAY BALE DETAIL

NOT TO SCALE

4

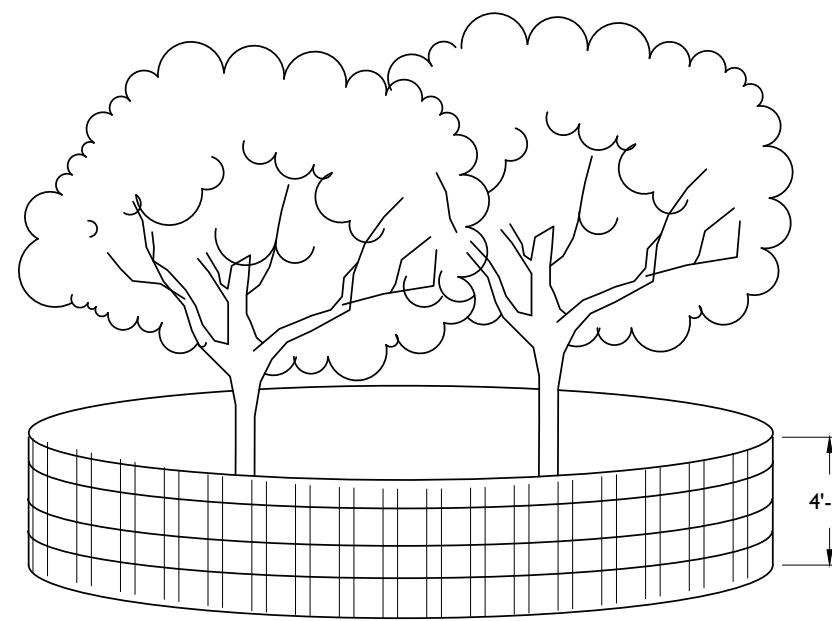


- NOTES:
1. STOCKPILES SHALL BE SITUATED SO AS NOT TO OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF-SITE ENVIRONMENTAL DAMAGE.
 2. STOCKPILES SHALL BE STABILIZED IN ACCORDANCE WITH THE STANDARDS FOR PERMANENT OR TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION, AS APPROPRIATE (SEE SOIL EROSION NOTES).

SOIL STOCKPILE DETAIL

NOT TO SCALE

5

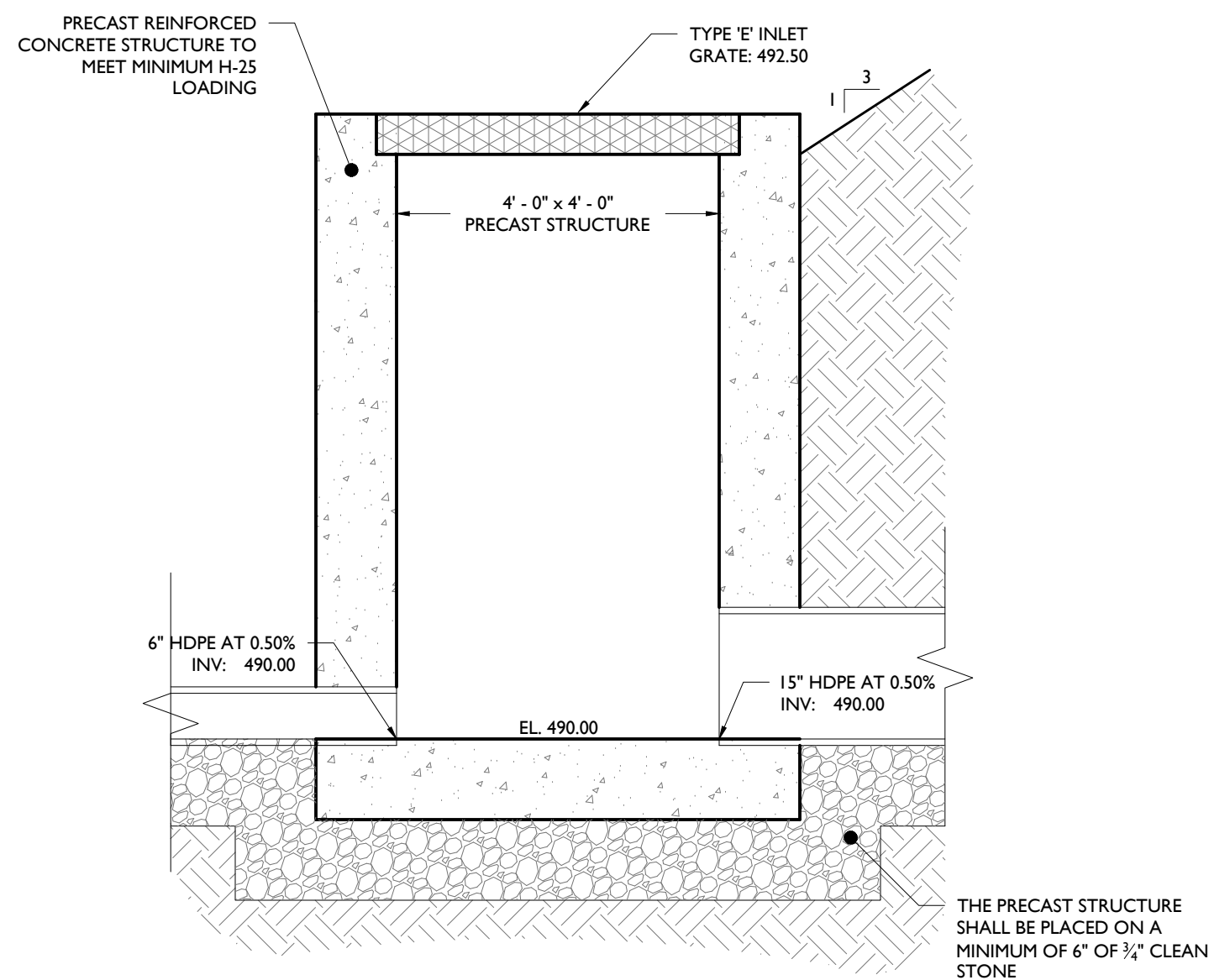


- NOTES:
1. SNOW FENCING IS TO BE 4'-0" HIGH AND SELF SUPPORTED.
 2. DO NOT STOCKPILE MATERIALS OR STORE EQUIPMENT WITHIN THE TREE PROTECTION FENCING.
 3. SNOW FENCE TO BE INSTALLED AT DRIP LINE OF EXISTING TREE OR TREE CLUSTER TO BE PROTECTED OR NO CLOSER THAN 6' FROM TREE TRUNK IF NECESSARY.
 4. IF THE PROJECT AREA ENCOMPASSES A PORTION OF THE DRIP LINE OF THE TREE, NO MORE THAN ONE THIRD OF THE OF THE TOTAL AREA OF WITHIN THE DRIP LINE SHOULD BE DISTURBED BY CONSTRUCTION OR REGRADING AND A 3" THICK LAYER OF MULCH SHALL BE INSTALLED OVER THE AREA OF THE DRIP LINE WHICH IS NOT PROTECTED BY FENCING TO PROVIDE A CUSHION.

TREE PROTECTION DETAIL

NOT TO SCALE

6

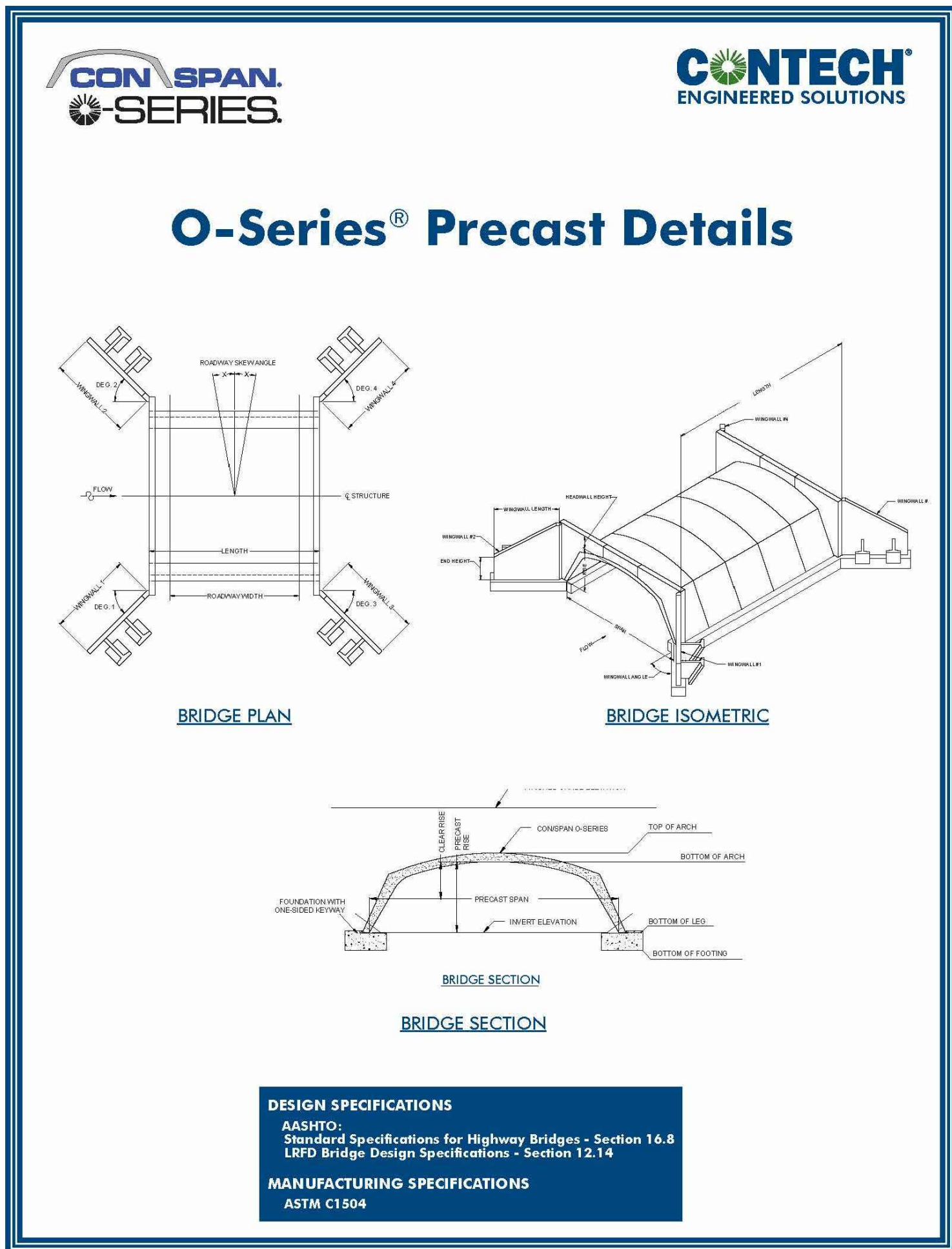


ABOVEGROUND OUTLET STRUCTURE (OS-2 & OS-3) DETAIL

NOT TO SCALE

7

- NOTES:
1. STRUCTURE TO BE CONSTRUCTED OF REINFORCED PRECAST CONCRETE.
 2. FRAME AND GRATE TO BE CAST-IRON AND SUPPORT MINIMUM H-25 LOADING.
 3. ALL JOINTS TO BE WATER-TIGHT.
 4. SUBGRADE BENEATH STRUCTURE SHALL BE LEVELED AND COMPACTED AS NECESSARY PRIOR TO INSTALLING STRUCTURE.

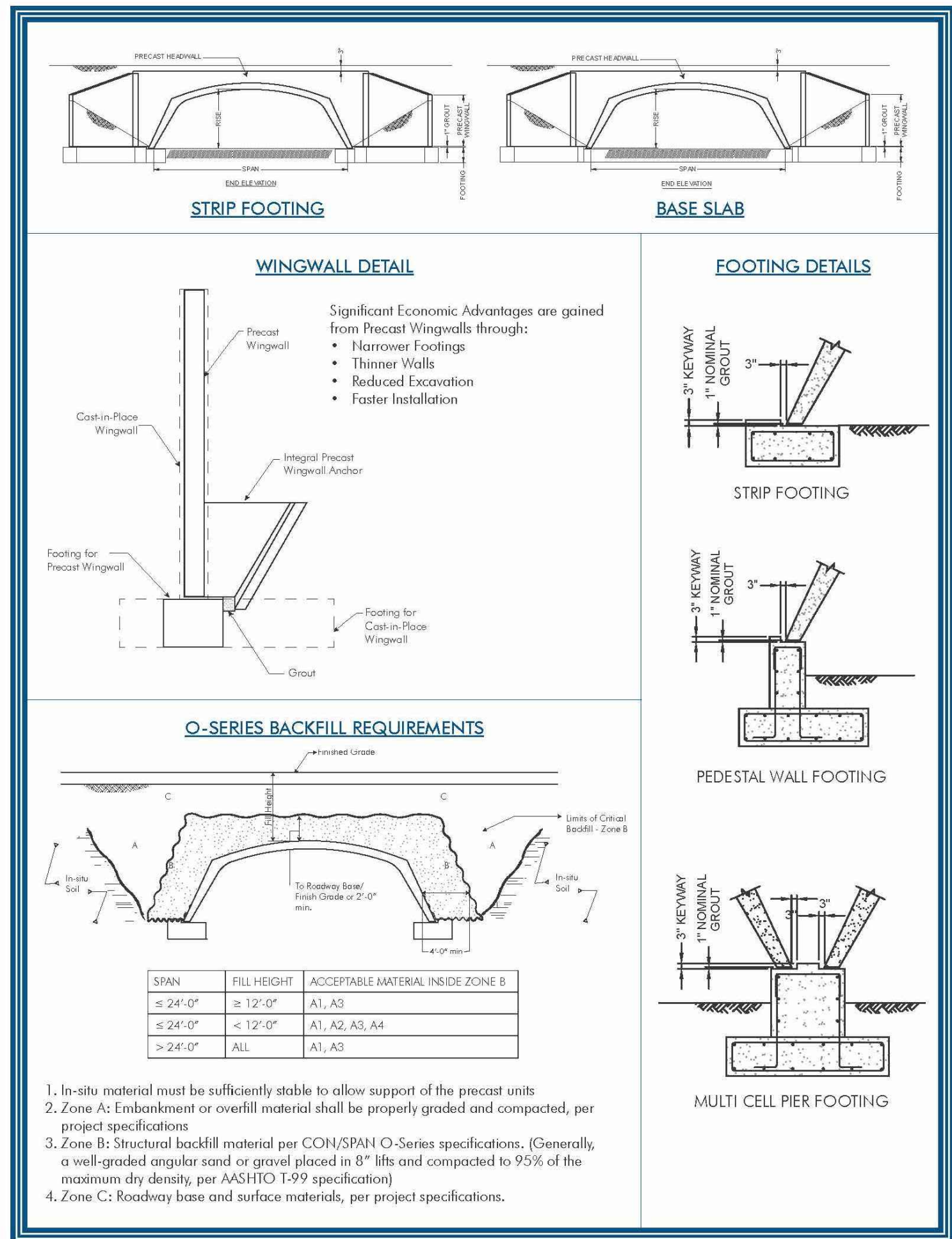


DESIGN SPECIFICATIONS

AASHTO:
Standard Specifications for Highway Bridges - Section 16.8
LRFD Bridge Design Specifications - Section 12.14

MANUFACTURING SPECIFICATIONS

ASTM C1504



STORMWATER CULVERT DETAIL

NOT TO SCALE

8

REVISED PER FORESTER COMMENTS	REVISED PER CLIENT COMMENTS	REVISED PER TOWNSHIP COMMENTS	ISSUED FOR REVIEW	DATE	BY	DESCRIPTION
4	3	2	1			
06/11/2020	05/22/2020	05/07/2020	03/19/2020			
NS	FT	FT	DD			

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PRELIMINARY & FINAL MAJOR SITE PLAN

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PROPOSED MULTI-FAMILY RESIDENTIAL DEVELOPMENT

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ESSEX COUNTY, NEW JERSEY

ZACHARY E. CHAPLIN, P.E.
NEW JERSEY LICENSE No. 53605
LICENSED PROFESSIONAL ENGINEER

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SCALE: AS SHOWN PROJECT ID: T-17354

TITLE:
CONSTRUCTION DETAILS

DRAWING:

C-27

T:\2017\T-17354 BINE REAL ESTATE GROUP - 100-200 EXECUTIVE DRIVE, WEST ORANGE, NJ\CAD\PROJECT\2017\2017.DWG



SYMBOL

--- PROPERTY LINE

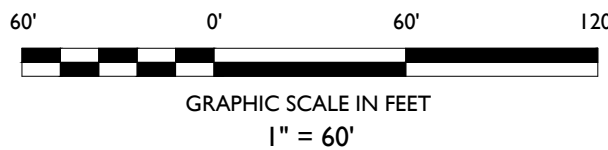
WETLANDS / WETLANDS TRANSITION AREA / STATE OPEN WATERWAY / RIPARIAN BUFFER

TREE TO BE REMOVED

TREE TO REMAIN AND BE PROTECTED

DESCRIPTION

STEEP SLOPE AREAS TO BE DISTURBED		
SLOPE RANGE	SYMBOL	AREA
10% - 15% SLOPES		57,140 SF (1.31 AC)
15% - 20% SLOPES		34,958 SF (0.80 AC)
20% - 25% SLOPES		18,483 SF (0.42 AC)
> 25% SLOPES		69,027 SF (1.58 AC)
TOTAL		179,608 SF (4.12 AC)



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SCALE: 1" = 60' PROJECT ID: T-17354

TITLE: **EXISTING ENVIRONMENTAL CONSTRAINTS PLAN**

DRAWING: **C-28**

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REVISION	DATE	BY	DESCRIPTION
4	06/11/2020	NS	REVISED PER FORESTER COMMENTS
3	05/22/2020	FT	REVISED PER CLIENT COMMENTS
2	05/07/2020	FT	REVISED PER TOWNSHIP COMMENTS
1	03/19/2020	DD	ISSUED FOR REVIEW

NOT APPROVED FOR CONSTRUCTION

T:\2021\T154 BINE REAL ESTATE GROUP - 100-200 EXECUTIVE DRIVE, WEST ORANGE, NJ\CAD\PROJECT\2154\TOP.DWG

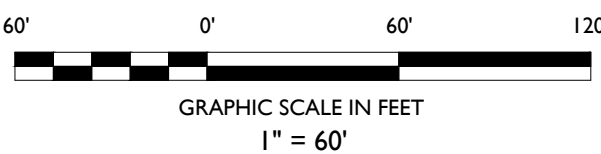


SYMBOL	DESCRIPTION
---	PROPERTY LINE
Wetlands symbol	WETLANDS / WETLANDS TRANSITION AREA / STATE OPEN WATERWAY / RIPARIAN BUFFER

STEEP SLOPE AREAS TO BE DISTURBED		
SLOPE RANGE	SYMBOL	AREA
10% - 15% SLOPES	Green	57,140 SF (1.31 AC)
15% - 20% SLOPES	Yellow	34,958 SF (0.80 AC)
20% - 25% SLOPES	Orange	18,483 SF (0.42 AC)
> 25% SLOPES	Red	69,027 SF (1.58 AC)
TOTAL		179,608 SF (4.12 AC)

SOIL CHARACTERISTICS CHART	
TYPE OF SOIL	BOONTON LOAM (BoGbc)
PERCENT OF SITE COVERAGE	21.0%
HYDROLOGIC SOIL GROUP	C
DEPTH TO RESTRICTIVE LAYER	20 TO 36 INCHES
SOIL PERMEABILITY	0.06 TO 0.20 IN / HR
DEPTH TO WATER TABLE	> 80 INCHES
TYPE OF SOIL	URBAN LAND, BOONTON SUBSTRATUM (URBONB)
PERCENT OF SITE COVERAGE	70.5%
HYDROLOGIC SOIL GROUP	UNRANKED
TYPE OF SOIL	YALEVILLE - HOLYOKE COMPLEX (YaoEh)
PERCENT OF SITE COVERAGE	8.5%
HYDROLOGIC SOIL GROUP	C
SOIL PERMEABILITY	0.57 TO 1.98 IN / HR
DEPTH TO WATER TABLE	> 80 INCHES

\$25-28.7 STEEP SLOPE AND NATURAL FEATURES - INFORMATION REQUIRED	
REQUIREMENT	
IDENTIFICATION OF SOIL TYPES ON THE PROPERTY, WITH SPECIFIC REFERENCE TO HIGHLY ERODIBLE SOILS AS IDENTIFIED BY THE USDA SOIL CONSERVATION SERVICE OR OTHER RECOGNIZED AUTHORITY	SOIL TYPES HAVE BEEN IDENTIFIED PER USDA NATURAL RESOURCES CONSERVATION SERVICES (NRCS). NONE OF THE IDENTIFIED SOIL TYPES HAVE BEEN CLASSIFIED AS HIGHLY ERODIBLE.
EROSION POTENTIAL OF EXPOSED SOILS	NO EXPOSED SOILS ARE PROPOSED UNDER THESE PLANS. DURING CONSTRUCTION, EXPOSED SOILS WILL BE MAINTAINED IN ACCORDANCE WITH NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL AS SHOWN ON THE SOIL EROSION & SEDIMENT CONTROL PLAN (SHEETS C-15 & C-16). ADDITIONALLY, PLANS WILL BE SUBMITTED TO AND REVIEWED BY THE HEPSCD PRIOR TO CONSTRUCTION.
LENGTH, STEEPNESS AND SURFACE ROUGHNESS OF EXPOSED SLOPES	NO SLOPES ARE PROPOSED TO BE LEFT EXPOSED. STEEP SLOPES WILL BE PLANTED AND FORTIFIED TO PREVENT EROSION. WHERE SLOPES WILL BE EXPOSED DURING CONSTRUCTION, THE NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL WILL BE IMPLEMENTED TO PREVENT EROSION.
RESISTANCE OF SOIL TO COMPACTION AND STABILITY OF SOIL AGGREGATES	PER THE SOIL EROSION & SEDIMENT CONTROL PLAN (SHEETS C-15 & C-16), SOIL COMPACTION WILL BE MITIGATED AND STABILIZED IN ACCORDANCE WITH NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL.
HIGH WATER TABLE, WATER INFILTRATION CAPACITY AND CAPACITY OF SOIL PROFILE	PER THE SUBMITTED GEOTECHNICAL REPORT, NO HIGH WATER TABLE IS PRESENT ON THE SITE. ADDITIONALLY, NO INFILTRATION MEASURES ARE PROPOSED.



REVISION	DATE	BY	DESCRIPTION
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3	05/22/2020	FT	REVISED PER CLIENT COMMENTS
2	05/07/2020	FT	REVISED PER TOWNSHIP COMMENTS
1	03/19/2020	DD	ISSUED FOR REVIEW

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SCALE: 1" = 60' PROJECT ID: T-17354

TITLE: PROPOSED ENVIRONMENTAL CONSTRAINTS PLAN

DRAWING:

C-29