

MULTI-LOCATION STORM WATER INFRASTRUCTURE

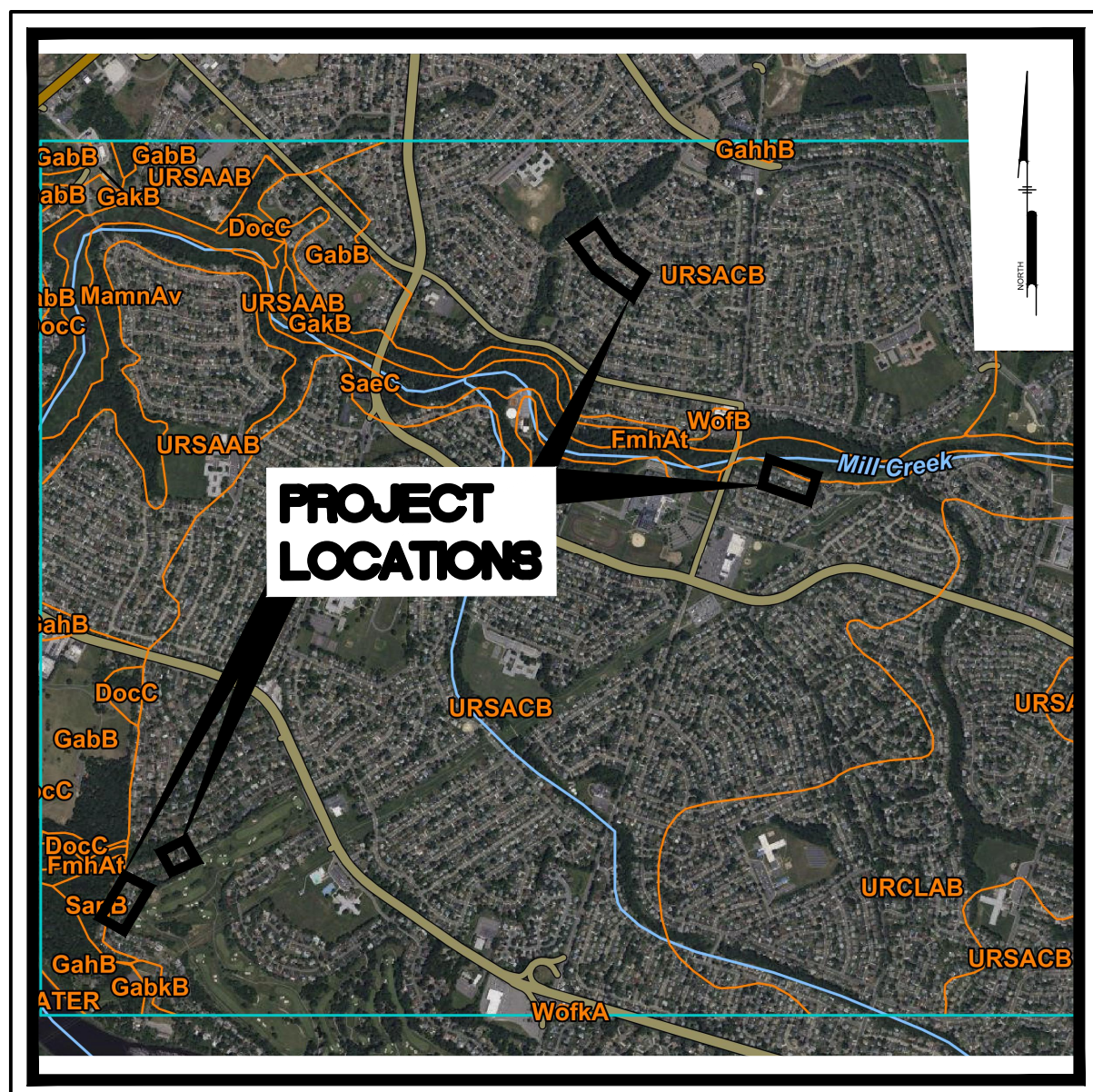
TOWNSHIP OF WILLINGBORO, BURLINGTON COUNTY, NEW JERSEY

BERKSHIRE LANE, CLUBHOUSE DRIVE, HOLSTONE LANE

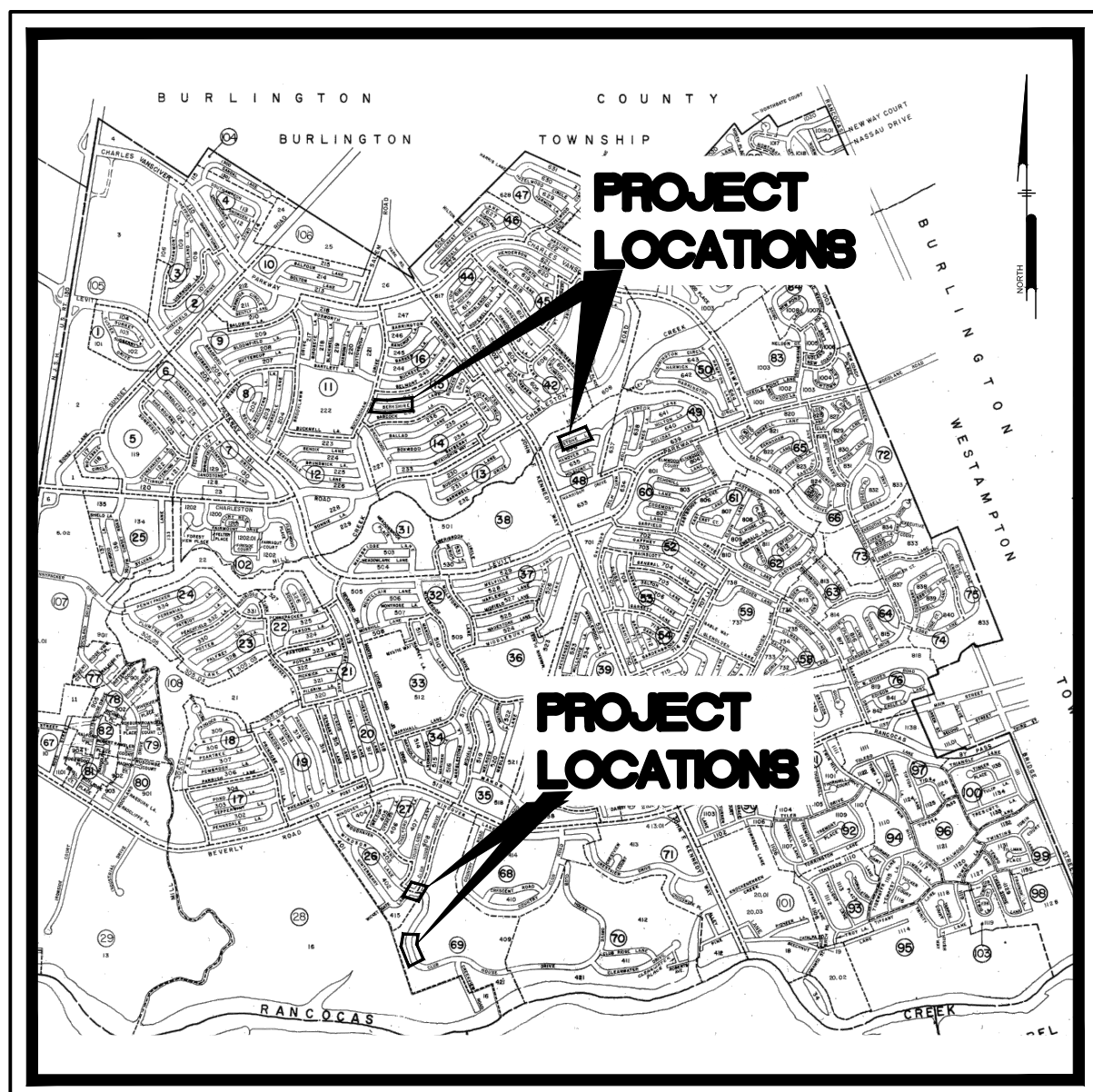
PREPARED FOR:
OWNER

TOWNSHIP OF WILLINGBORO

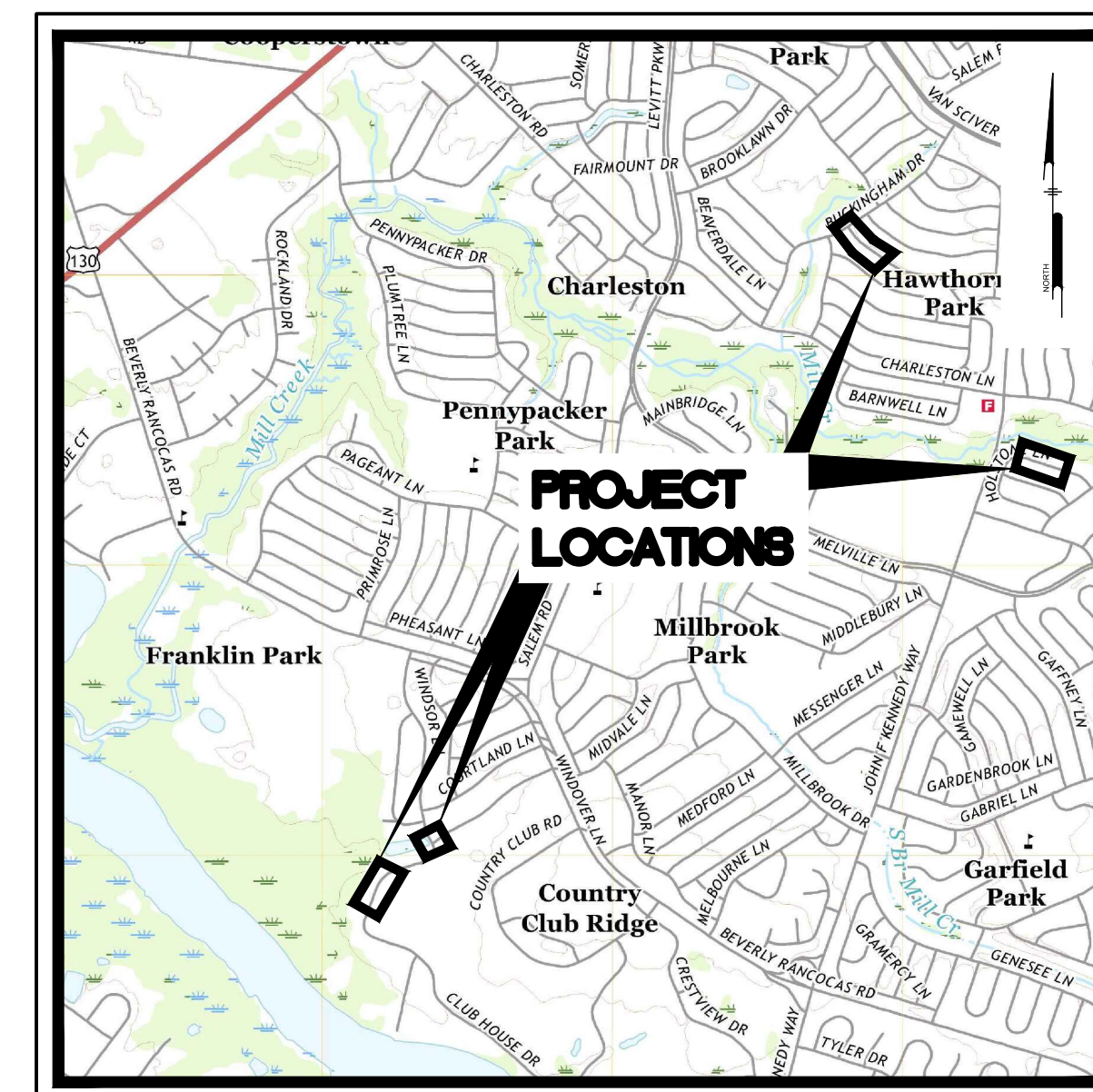
1 REV DR MARTIN LUTHER KING JR DRIVE
WILLINGBORO, NJ 08046



SOILS MAP
Scale: NTS



LOCATION MAP
Scale: NTS



USGS MAP
Scale: 1" = 2000'

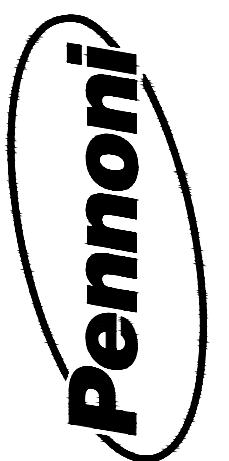
U:\Admin\WTCE\WTCX22025 - 2023 Multi Locations Storm Water Infrastructure\DWG_SHEETS\CM001.dwg PLOTTED: 8/14/2023 10:47 AM BY: Gordan Platten PROJECT STATUS: PLOTTING

PREPARED BY:

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ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

HUGH J. DOUGHERTY
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. GE34634

06/01/2023

MULTI-LOCATION STORM WATER INFRASTRUCTURE

WILLINGBORO TOWNSHIP, BURLINGTON COUNTY, NEW JERSEY

COVER SHEET

WILLINGBORO TOWNSHIP
1 REV DR MARTIN LUTHER KING JR RD
WILLINGBORO, NJ 08046

NO.	DATE	REVISIONS	BY

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATE, AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	WTCEX22025
DATE	JUNE 01, 2023
DRAWING SCALE	AS NOTED
DRAWN BY	GP
APPROVED BY	HJD

CM001

SHEET 1 OF 5

NEW JERSEY



CALL BEFORE YOU DIG
1-800-272-1000

CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH THE REQUIREMENTS OF THE NEW JERSEY ONE-CALL DAMAGE PREVENTION SYSTEM AS STATED IN THE "UNDERGROUND FACILITY PROTECTION ACT".

U:\Information\TC\WV\20250205 - 2025 Multi Location Storm Water Infrastructure\Drawings\GENERAL NOTES.dwg PLOT DATE: 06/11/2023 10:07 AM BY: Garen Pomeroy PLOT STYLE: PROJECT STYLES

GENERAL NOTES:

- CURB RAMPS AND SIDEWALKS THAT ARE CONSTRUCTED NOT IN COMPLIANCE WITH ADA ACCESSIBILITY REQUIREMENTS INCLUDING MAXIMUM RUNNING SLOPES, MAXIMUM CROSS SLOPES, LANDING AREA LOCATION AND SIZE, DIVERGING SIDEWALK DROP OFF PROTECTION, BLENDED TRANSITIONS, BLENDED TRANSITION RUNNING SLOPES AND CROSS SLOPES, FLARE WIDTHS, GRADE BREAKS AND GRADE BREAK DIRECTIONS, CLEAR SPACE SIZE AND LOCATION, WILL NOT BE ACCEPTED.
- NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2019 AND CURRENT AND SUPPLEMENTARY SPECIFICATIONS THERETO GOVERN.
- SUPPLEMENTARY SPECIFICATIONS FOR STATE AID PROJECTS APPLY.
- REFER TO CURRENT "NJDOT STANDARD ROADWAY CONSTRUCTION--TRAFFIC CONTROL--BRIDGE CONSTRUCTION DETAILS 2019" FOR ADDITIONAL GUIDANCE.
- ALL DIMENSIONS, QUANTITIES AND EXISTING PHYSICAL CHARACTERISTICS OF THE WORK AREA SHALL BE REVIEWED AND FIELD VERIFIED BY THE CONTRACTOR PRIOR TO SUBMITTING A BID, MATERIAL ORDERING OR FABRICATION OF ANY PART OF THE WORK. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
- PRIOR TO THE START OF ANY OF THE CONSTRUCTION THE CONTRACTOR SHALL CALL THE "ONE CALL" NUMBER (1-800-272-1000) FOR UTILITY MARKOUT LOCATION AND NOTIFICATION. THE CONFIRMATION NUMBER SHALL BE GIVEN TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF THE CONSTRUCTION.
- IT IS THE OBLIGATION AND COST OF THE CONTRACTOR TO CONDUCT HIS OWN SUBSURFACE INVESTIGATIONS AS HE MAY DEEM NECESSARY. THIS INVESTIGATION SHALL BE COMPLETED PRIOR TO BID SUBMITTAL TO DETERMINE ANY UNIQUE CONDITIONS OR MATERIALS THAT MAY EXIST WHICH COULD EFFECT THE CONSTRUCTION OR COST. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY SUCH FINDINGS.
- EXPANSION JOINT MATERIAL SHALL BE 1/2" THICK PREMOLDED BITUMINOUS IMPREGNATED MATERIAL FOR THE FULL DEPTH OF THE THINNER MATERIAL. COST FOR THIS ITEM SHALL BE INCLUDED IN THE UNIT COST OF EITHER SIDEWALK, CURB, OR APRON, WHICHEVER APPROPRIATE, IN THE BID PROPOSAL.
- WHERE NEW SIDEWALK IS TO BE INSTALLED ADJACENT TO EXISTING SIDEWALK, DRIVEWAY, POLE, ETC., AN EXPANSION JOINT SHALL BE PLACED BETWEEN EACH AND THE NEW SIDEWALK ELEVATION SHALL MATCH THAT OF THE EXISTING IMPROVEMENT.
- EXISTING ITEMS NOTED ON THE PLANS FOR REMOVAL ARE INTENDED TO BEGIN AND TERMINATE AT EXISTING JOINTS HOWEVER, WHERE A JOINT DOES NOT EXIST THEN THE CONTRACTOR WILL BE REQUIRED TO "SAW CUT" TO MAKE AN EVEN, STRAIGHT LINE SEPARATION. THE COST OF THIS ITEM SHALL BE INCLUDED IN THE COST FOR EACH UNIT LISTED IN THE APPROPRIATE BID PROPOSAL ITEM.
- EXTREME CARE SHALL BE EXERCISED BY THE CONTRACTOR WHEN REMOVING EXISTING SIDEWALK, CURB OR DRIVEWAY MATERIAL SO AS NOT TO DISTURB ADJACENT IMPROVEMENTS. ADJACENT IMPROVEMENTS DISTURBED DURING REMOVAL OF THE NOTED ITEMS SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.
- ALL CONCRETE SHALL BE 28 DAY AIR ENTRAINED (3% TO 5%) CONCRETE. CONCRETE COMPRESSIVE STRENGTH OF (F'C) 4000 PSI MINIMUM SHALL BE DEVELOPED UNLESS NOTED OTHERWISE.
- ALL EDGES (VERTICAL/HORIZONTAL) BETWEEN EXISTING PAVEMENT OR NEW/EXISTING CURB AND NEW PAVEMENT SHALL HAVE TACKCOAT APPLIED. COST FOR THIS ITEM SHALL BE INCLUDED IN THE UNIT COST FOR HMA SURFACE COURSE LISTED IN THE BID PROPOSAL.
- MAINTENANCE AND PROTECTION OF TRAFFIC (MPT) AS DEFINED AND DESCRIBED IN THE SPECIFICATION'S SHALL BE STRICTLY FOLLOWED. A DETOUR PLAN SHALL NOT BE PERMITTED. COST FOR THIS ITEM SHALL BE INCLUDED IN THE COST FOR EACH UNIT LISTED IN THE BID PROPOSAL.
- SANITARY SEWER CLEANOUTS IN CONCRETE REPLACEMENT/INSTALLATION AREAS SHALL RECEIVE A CAST IRON STREET BOX WITH "SEWER" LETTERED IN THE LID.
- EXISTING UTILITIES INCLUDING PRIVATE LAWN SPRINKLER HEADS, WATER METER(S), VALVE BOXES, CLEAN OUTS, CURB STOPS, ETC. SHALL BE ADJUSTED TO MATCH THE FINISHED GRADE BY THE CONTRACTOR; COST FOR THIS ITEM SHALL BE INCLUDED IN AND DISTRIBUTED AMONG THE ITEMS IN THE BID PROPOSAL. WHERE UTILITIES OCCUR IN THE CONCRETE AREAS, THE ITEM SHALL BE EITHER "BOXED OUT" AND GROUTED WITH NON-SHRINK GROUT OR RAISED TO FINISHED GRADE THEN THE CONCRETE POURED. THE END RESULT REQUIRED IS THAT NO CHANGE IN ELEVATION SHALL REMAIN AFTER THE CONSTRUCTION IS COMPLETED.
- SIDEWALK AREAS THAT SHALL BE REMOVED AND REPLACED ARE GENERALLY NOTED PHYSICALLY WITH A PAINT SPOCH. PRIOR TO THE REMOVAL OF ANY SIDEWALK THE CONTRACTOR SHALL VERIFY WITH THE ENGINEER OR HIS REPRESENTATIVE THE EXACT EXTENT AND QUANTITY.
- CONCRETE SIDEWALK ADJACENT TO PROPOSED HANDICAP RAMPS SHALL BE REPLACED AS NEEDED TO PROVIDE AN ADA-COMPLIANT RAMP.
- ALL MONUMENTS TO BE RESET BY A PROFESSIONAL LAND SURVEYOR LICENSED IN NEW JERSEY.
- CONTRACTOR IS RESPONSIBLE FOR SAW CUTTING ANY EXISTING CONCRETE (EX: FACE FORM POURS) THAT PROTRUDES INTO NEW ROADWAY.
- CONTRACTOR SHALL ENSURE THAT STORMWATER WILL NOT BECOME TRAPPED AT EXISTING DRIVEWAY APRONS.
- STANDARD CONSTRUCTION DETAILS SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE DEPARTMENT OF TRANSPORTATION
- CONTRACTOR SHALL POST AND MAINTAIN ALL EEO AND LABOR NOTICES IN A PROMINENT AND ACCESSIBLE LOCATION WITHIN THE PROJECT LIMITS WHERE THE NOTICES CAN BE EASILY VISIBLE BY THOSE STAFFING THE PROJECT (ATT. 2 D.2.A., STATE AID SPECIFICATIONS). ALL POSTED INFORMATION SHALL BE PRESENTED IN A CLEAR MANNER AND PROTECTED FROM THE WEATHER

Item #	Description	Quantity
Base Bid		
1	Mobilization	1 LS
2	Excavation, Unclassified (If & Where Directed)	100 SY
3	HMA 9.5M64 Surface Course, 2" Thick	96 SY
4	HMA 19M64 Base Course, 4" Thick	96 SY
5	DGA 6" Thick	96 SY
6	Concrete Rolled Curb (If & Where Directed)	120 LF
7	Concrete Vertical Curb (If & Where Directed)	40 LF
8	Concrete Sidewalk, 4" Thick (If & Where Directed)	50 SY
9	Jet Clean and TV 15" RCP	25 LF
10	Jet Clean and TV 18" RCP	455 LF
11	Jet Clean and TV 24" RCP	719 LF
12	Jet Clean and TV 36" CMP (If & Where Directed)	100 LF
13	Jet Clean and TV 48" CMP (If & Where Directed)	100 LF
14	Heavy Root Clearing, 18" RCP	430 LF
15	Install 15" CIPP Liner (If & Where Directed)	25 LF
16	Install 18" CIPP Liner (If & Where Directed)	455 LF
17	Install 24" CIPP Liner (If & Where Directed)	719 LF
18	Install 36" CIPP Liner (If & Where Directed)	100 LF
19	Install 48" CIPP Liner (If & Where Directed)	100 LF
20	Install 18" HDPE	85 LF
21	Install 48" HDPE	61 LF
22	Install End Cap, 18" CMP	1 UN
23	Repair & Parge Existing Inlet, 2' Depth	3 UN
24	Manhole Modifications for 48" HDPE	1 UN
25	Install New Type-B Inlet with New Frame, "ECO" Head, and Bicycle-Safe Grate	3 UN
26	Install Type-B Inlet Frame, "ECO" Head, and Bicycle-Safe Grate	5 UN
27	Install New Flared End Section	1 UN
28	Rip Rap Stone, 4" Thick	10 SY
29	Tree Removal - 6" to 24" Dia	4 UN

EXISTING	PROPOSED	EXISTING	PROPOSED

SHEET #	CM	TITLE	DATE	LAST REVISED
1	CM0001	COVER SHEET	6/1/2023	
2	CM0002	GENERAL NOTES	6/1/2023	
3	CM1001	BERKSHIRE LANE- SITE PLAN 1	6/1/2023	
4	CM1002	HOLDSTONE, WINDSOR, AND CLUB HOUSE - SITE PLAN 2	6/1/2023	
5	CM1003	DETAILS SHEET	6/1/2023	

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 NJ COA. NO. GA28033300

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 PROFESSIONAL ENGINEER
 NEW JERSEY LICENSE NO. GE34634

06/11/2023

MULTI-LOCATION STORM WATER INFRASTRUCTURE
 WILLINGBORO TOWNSHIP, BURLINGTON COUNTY, NEW JERSEY

GENERAL NOTES

WILLINGBORO TOWNSHIP
 1 REV DR MARTIN LUTHER KING JR RD
 WILLINGBORO, NJ 08046

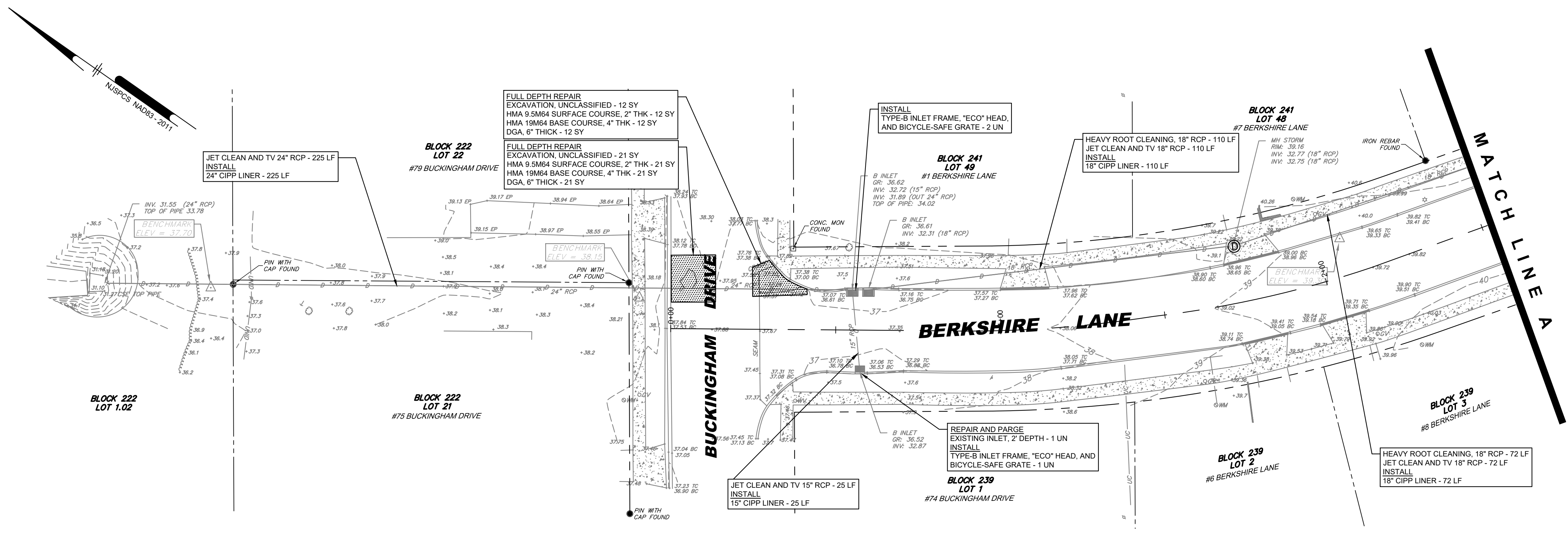
NO.	DATE	REVISIONS	BY

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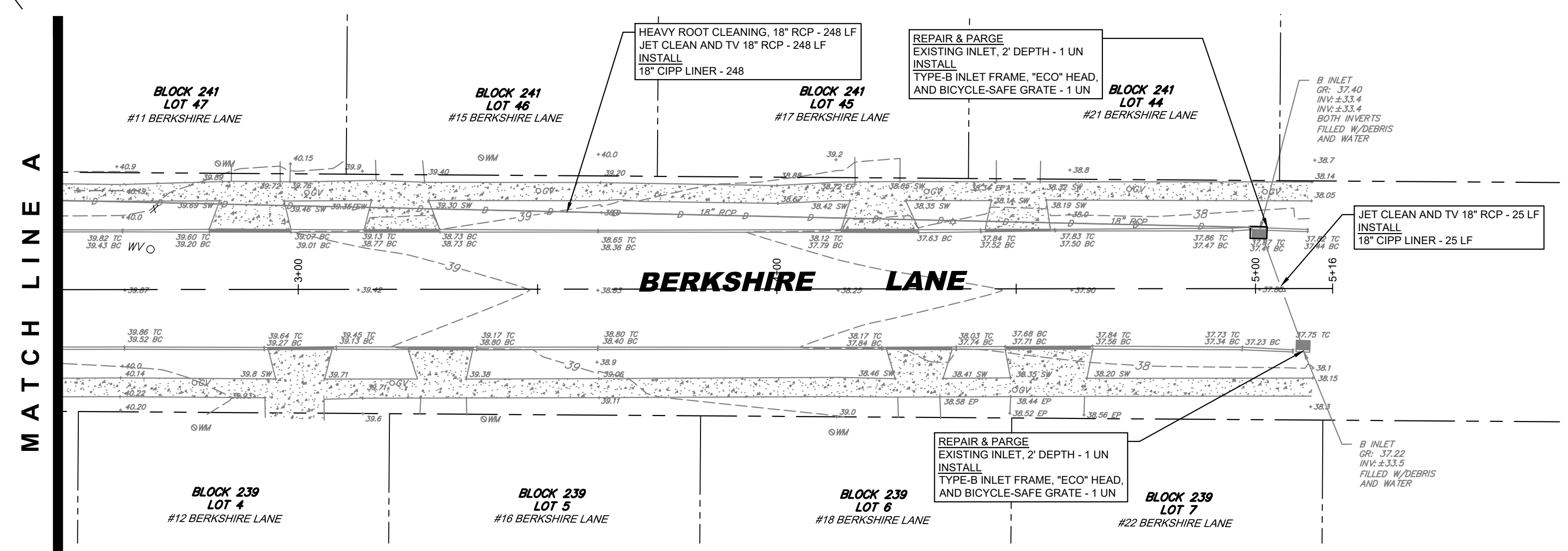
PROJECT	WTCEX22025
DATE	JUNE 01, 2023
DRAWING SCALE	AS NOTED
DRAWN BY	GP
APPROVED BY	HJD

CM0002

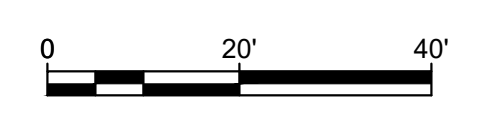
SHEET 2 OF 5



BERKSHIRE LANE STA 0+00 TO STA 2+51
SCALE: 1" = 20'



BERKSHIRE LANE STA 2+51 TO STA 5+16
SCALE: 1" = 20'



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Hugh Dougherty
 06/01/2023

MULTI-LOCATION STORM WATER INFRASTRUCTURE
 WILLINGBORO TOWNSHIP, BURLINGTON COUNTY, NEW JERSEY

SITE PLANS - BERKSHIRE LANE

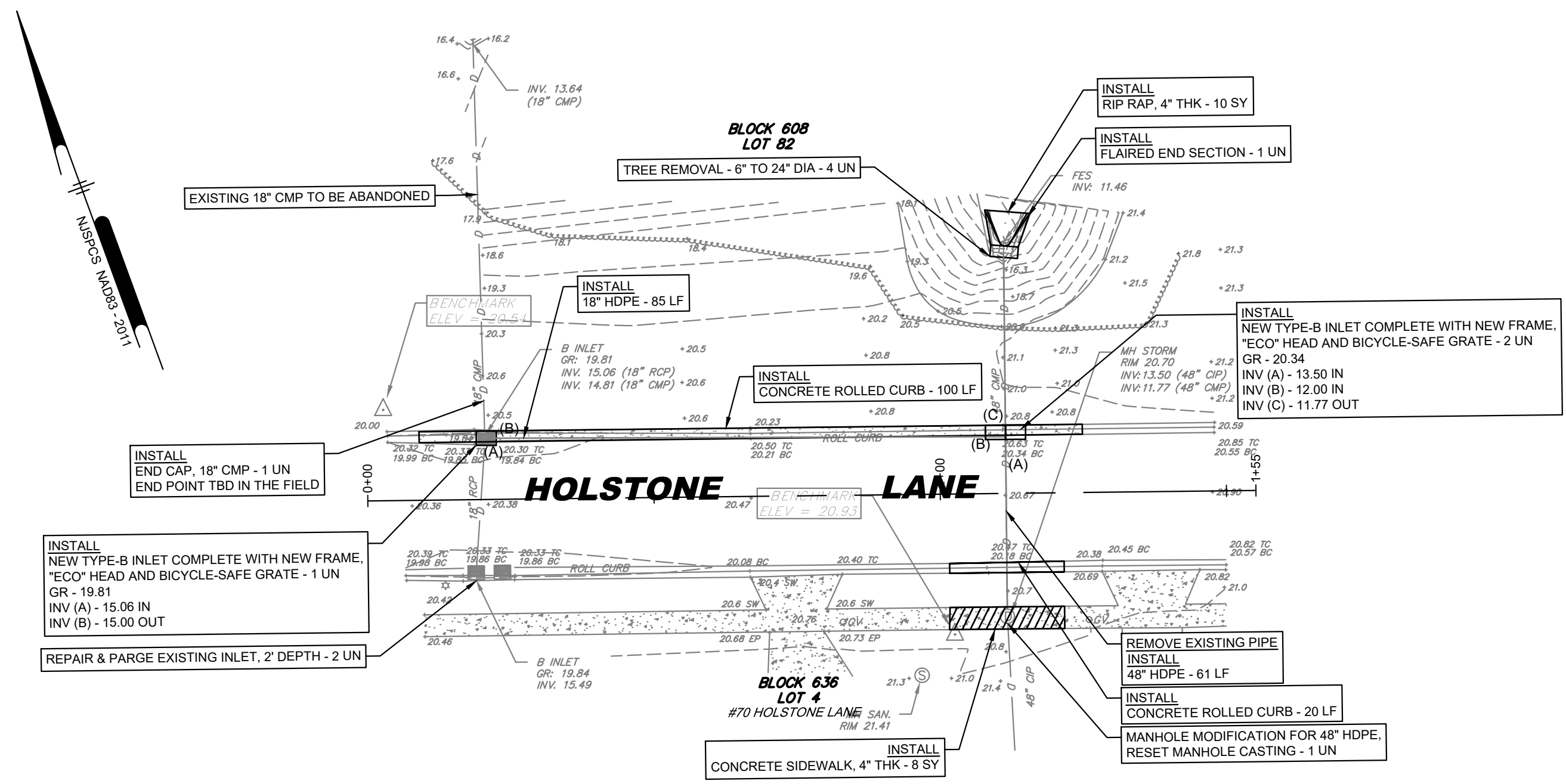
WILLINGBORO TOWNSHIP
 1 REV DR MARTIN LUTHER KING JR RD
 WILLINGBORO, NJ 08046

NO.	DATE	REVISIONS	BY

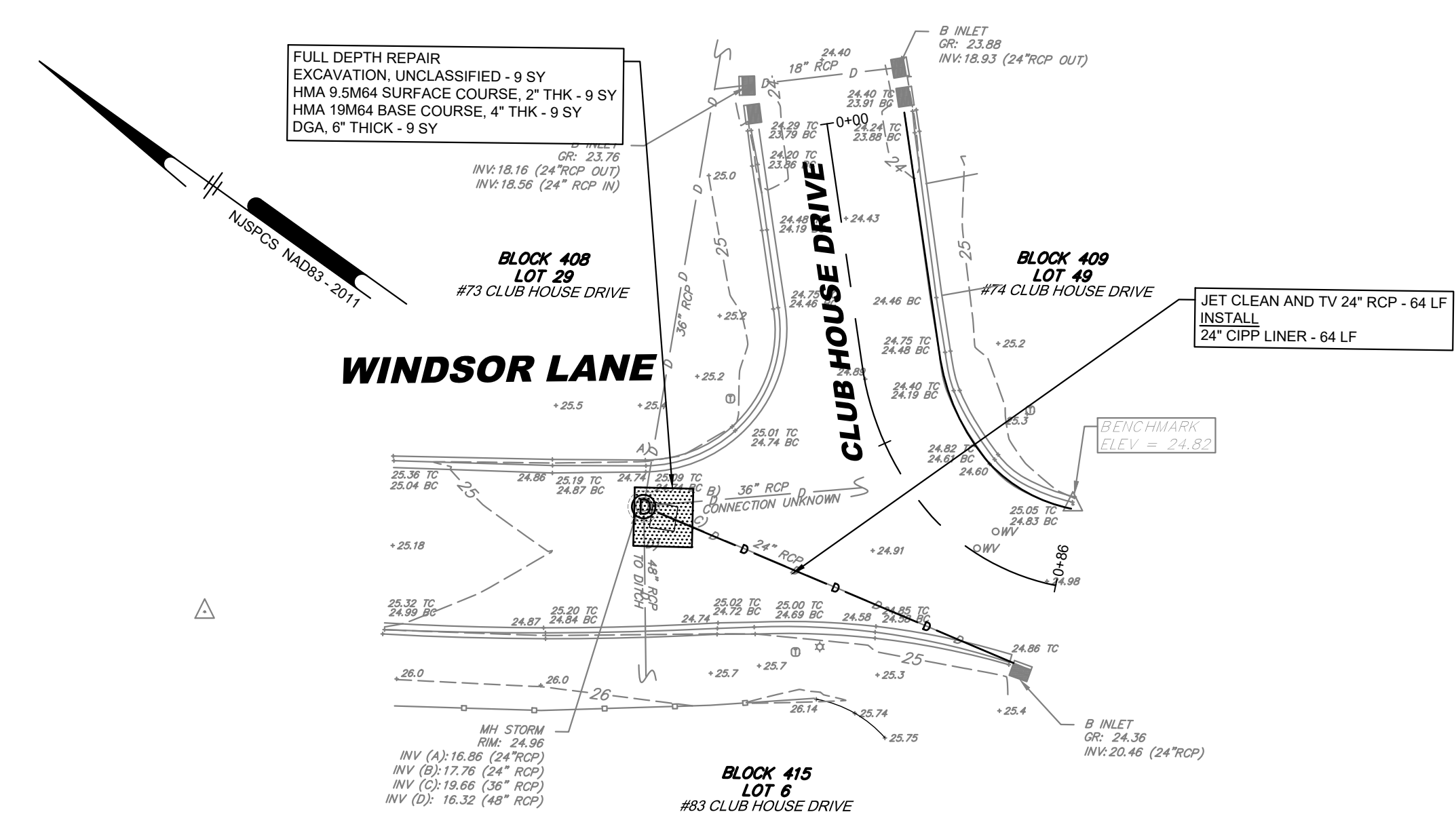
PROJECT: WTCEX22025
 DATE: JUNE 01, 2023
 DRAWING SCALE: 1"=20'
 DRAWN BY: GP
 APPROVED BY: HJD

CM1001
 SHEET 3 OF 5

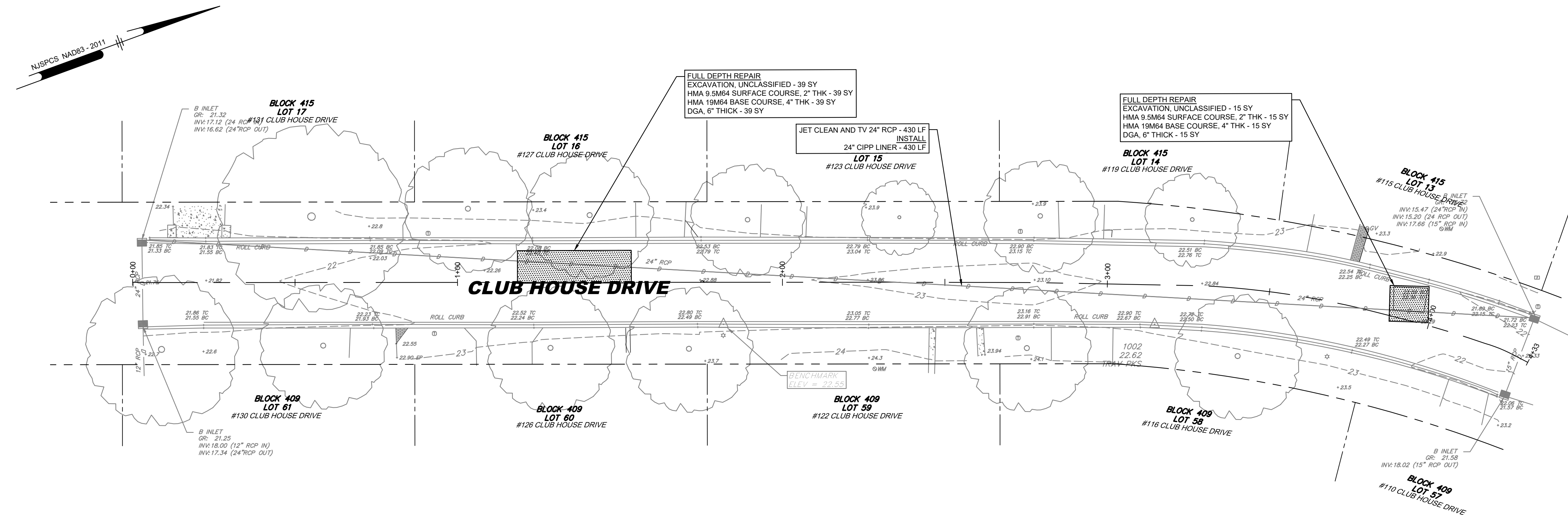
PLOTTED: 2/12/2023 10:07 AM BY: Garen Peeters FOOTSTYLE: Pennoni V03-24b PROJECT STATUS: U:\Automation\TCEN\WTCEX22025 - 2023\MLA Location - Storm Water Infrastructure\DWG_SHEETS\CM1001_Site Plans.dwg



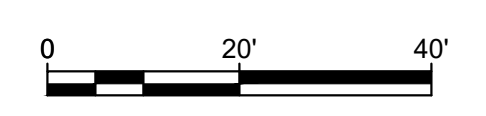
HOLSTONE LANE STA 0+00 TO STA 1+15
SCALE: 1" = 20'



CLUB HOUSE DRIVE STA 0+00 TO STA 0+86
SCALE: 1" = 20'



CLUB HOUSE DRIVE STA 0+00 TO STA 4+33
SCALE: 1" = 20'



PLOTTED: 01/23/2023 10:08 AM BY: Garen Peeters PROJECT STATUS: PLOTTED: 01/23/2023 10:08 AM BY: Garen Peeters PROJECT STATUS: PLOTTED: 01/23/2023 10:08 AM BY: Garen Peeters PROJECT STATUS:

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Hugh Dougherty
 06/01/2023

MULTI-LOCATION STORM WATER INFRASTRUCTURE
 WILLINGBORO TOWNSHIP, BURLINGTON COUNTY, NEW JERSEY

SITE PLANS - CLUBHOUSE DRIVE & HOLSTONE LANE

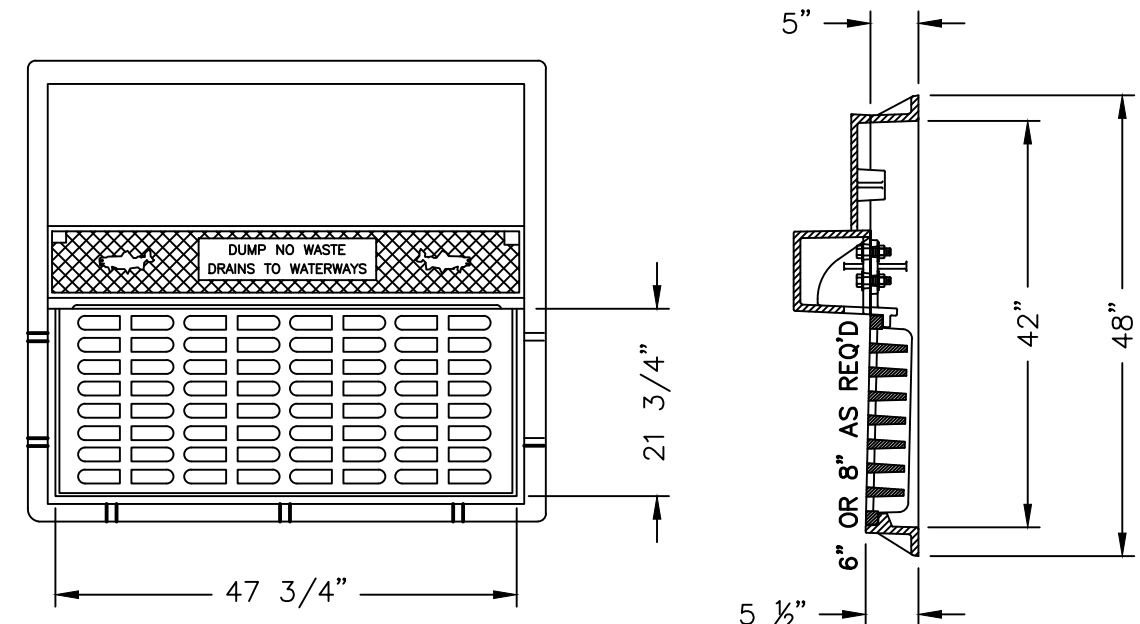
WILLINGBORO TOWNSHIP
 1 REV DR MARTIN LUTHER KING JR RD
 WILLINGBORO, NJ 08046

NO.	DATE	REVISIONS	BY

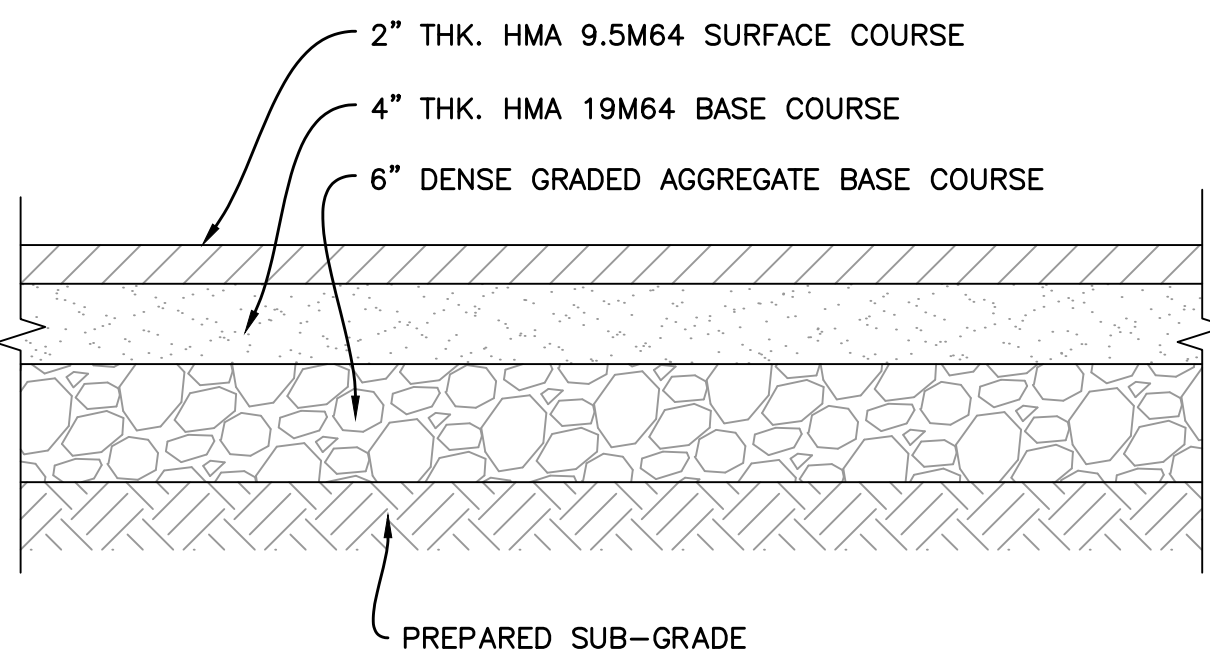
PROJECT: WTCEX22025
 DATE: JUNE 01, 2023
 DRAWING SCALE: 1"=20'
 DRAWN BY: GP
 APPROVED BY: HUD

CM1002

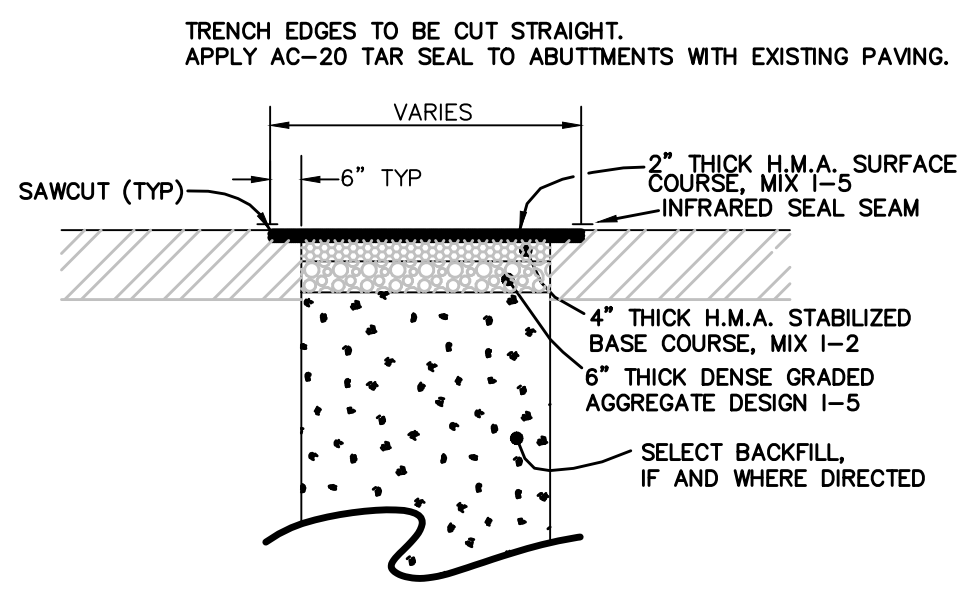
SHEET 4 OF 5



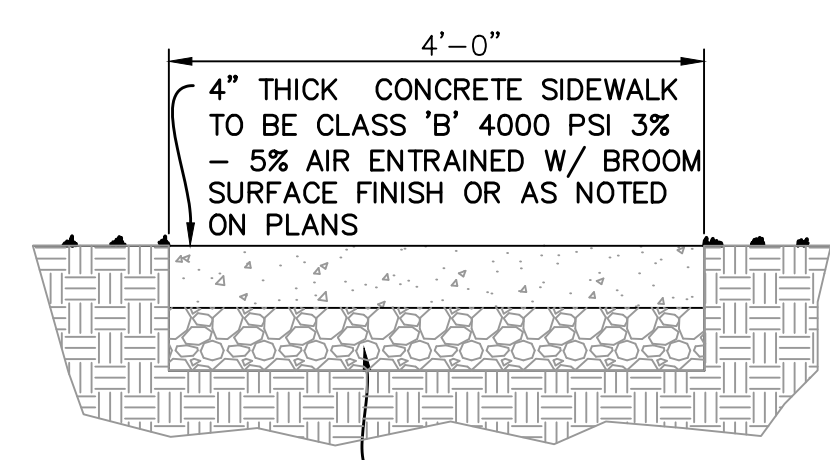
PATTERN No. 2618 AS MANUFACTURED BY CAMPBELL BRIDGESTATE FOUNDRY COMPANY (TYPE "N" - ECO CURB PIECE)
TYPE "B" CURB INLET WITH BICYCLE SAFE GRATE
 N.T.S.



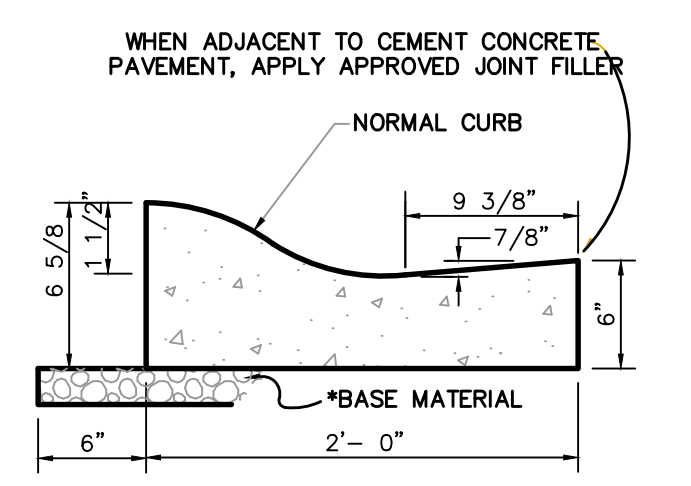
FULL DEPTH PAVEMENT DETAIL
 N.T.S.



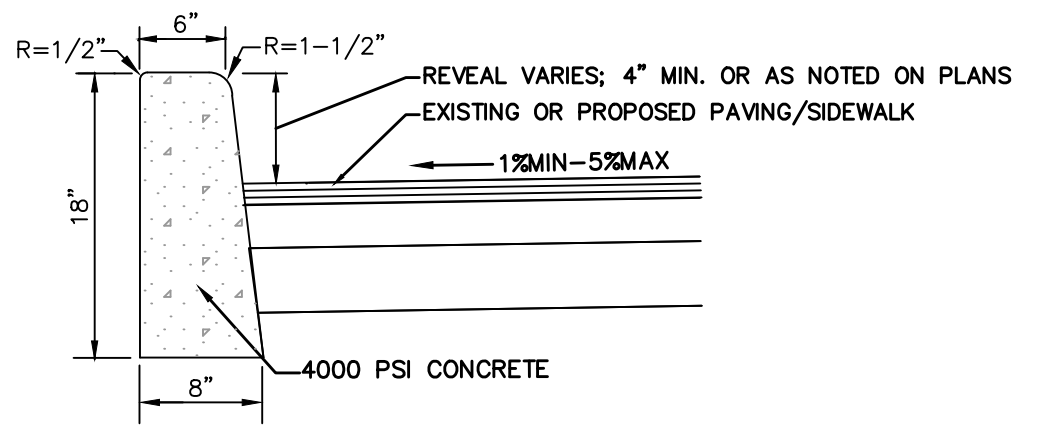
PAVED TRENCH RESTORATION
 N.T.S.



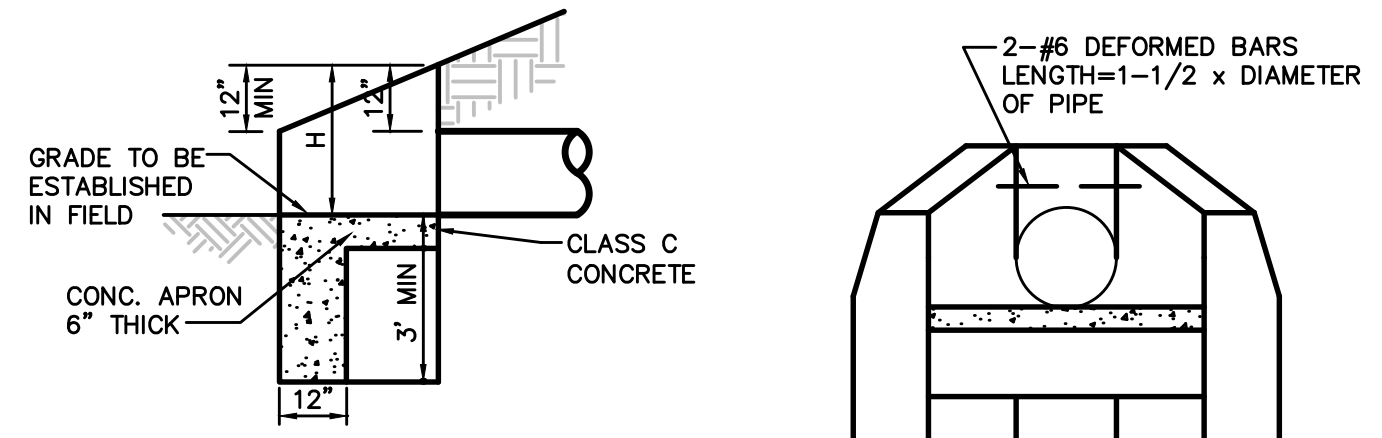
CONCRETE SIDEWALK DETAIL
 N.T.S.



ROLLED CURB DETAIL
 N.T.S.



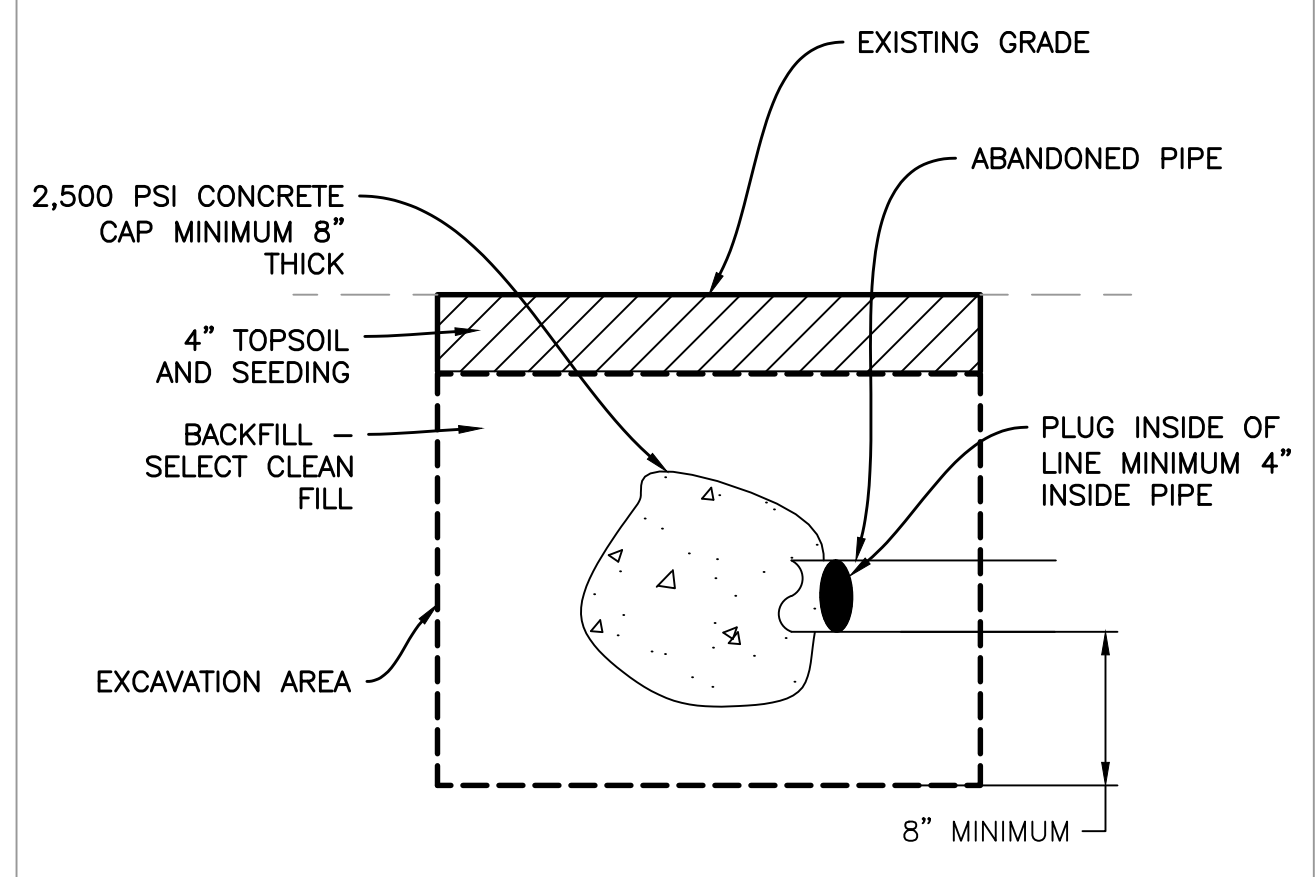
VERTICAL CURB DETAIL
 N.T.S.



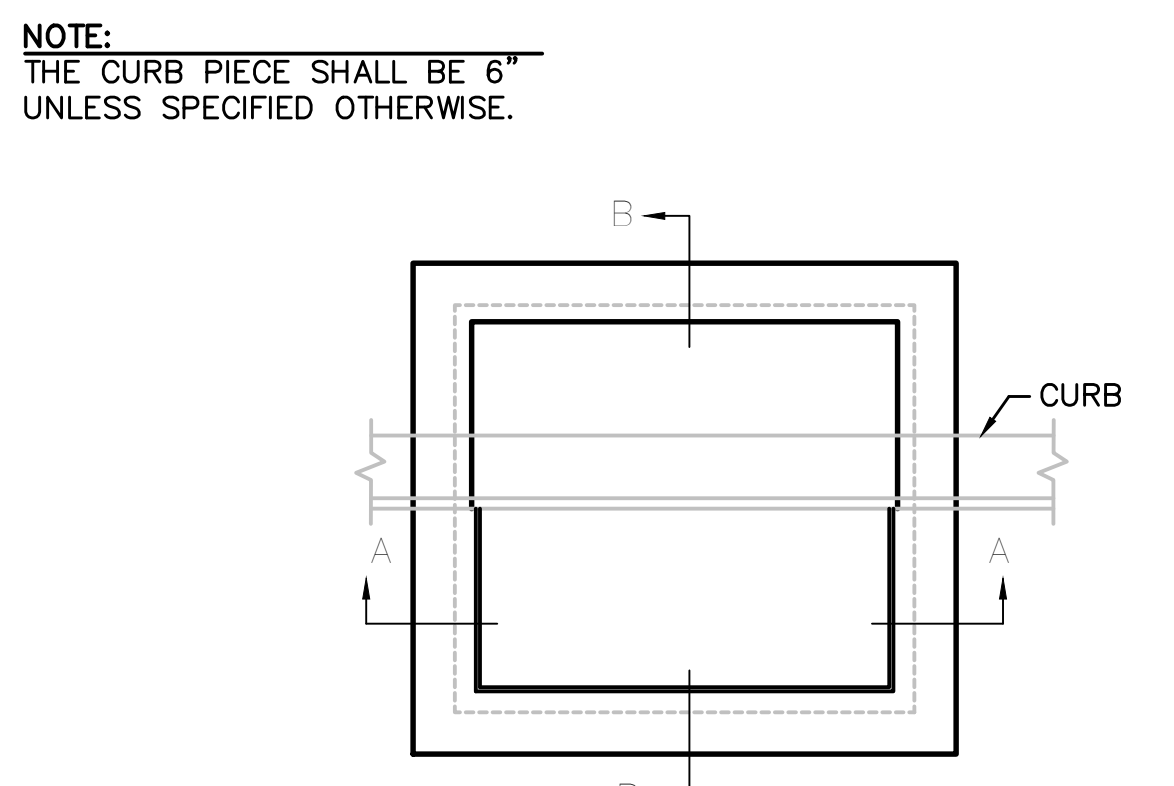
- NOTE:
1. ALL EDGES TO BE CHAMFERED 1".
 2. FOR MORE THAN ONE PIPE, SET THE PIPES A MIN. OF ONE FOOT APART (OUTSIDE BARREL TO OUTSIDE BARREL). THERE SHALL BE 12" ABOVE THE TOP OF A PIPE IN A WINGWALL, WHERE PIPE IS THROUGH THE WINGWALL THE END OF THE WING WALL. THE END OF THE WINGWALL SHALL BE 2x D FROM THE C OF THE PIPE IN THE WINGWALL.
 3. THE GRADE FOR THE END OF THE APRON SHALL BE SET BY EXTENDING THE PIPE GRADE.
 4. FOR ARCH PIPE, THE SPAN SHALL BE SUBSTITUTED FOR D.

CONCRETE HEADWALL DETAIL
 N.T.S.

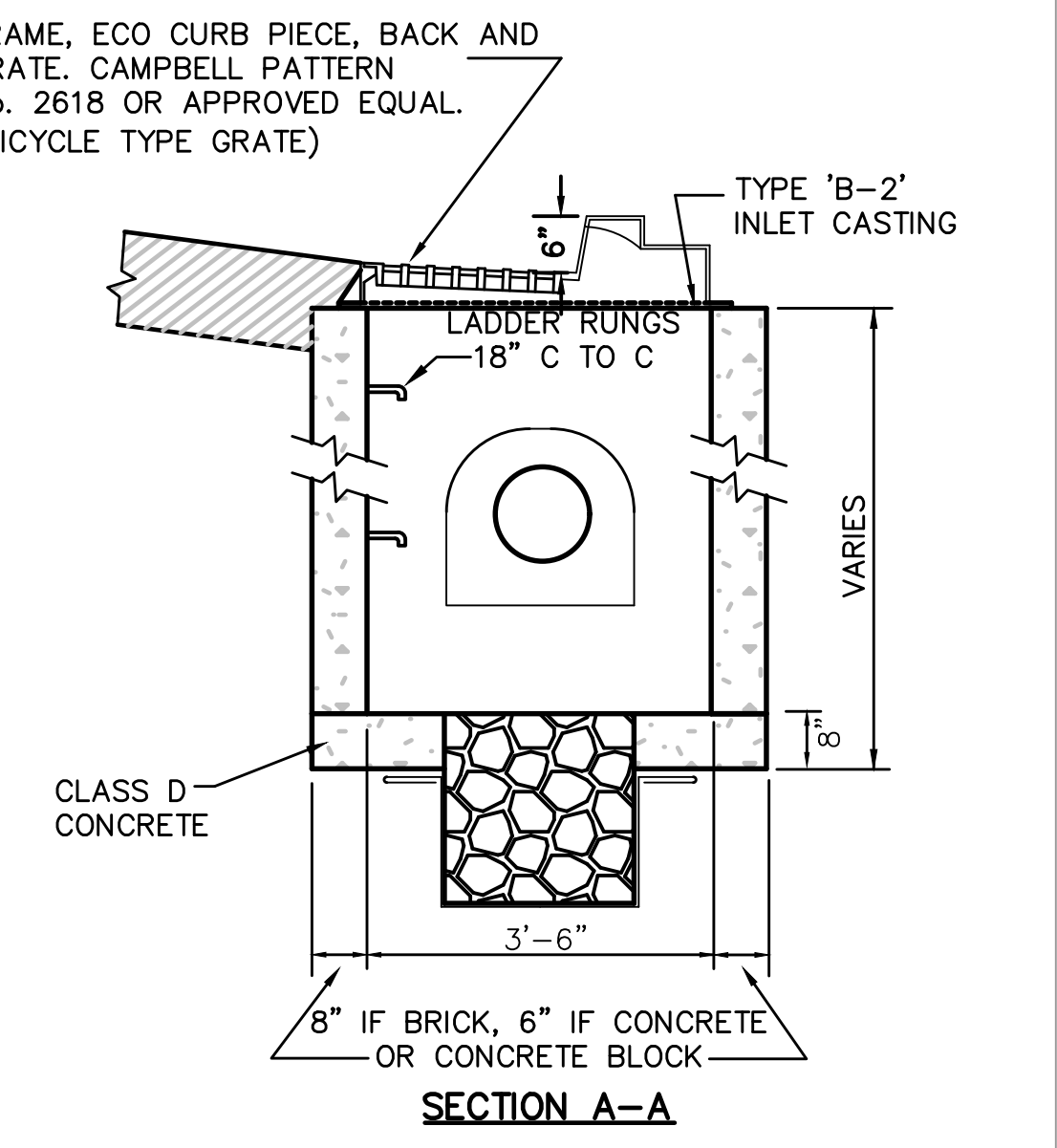
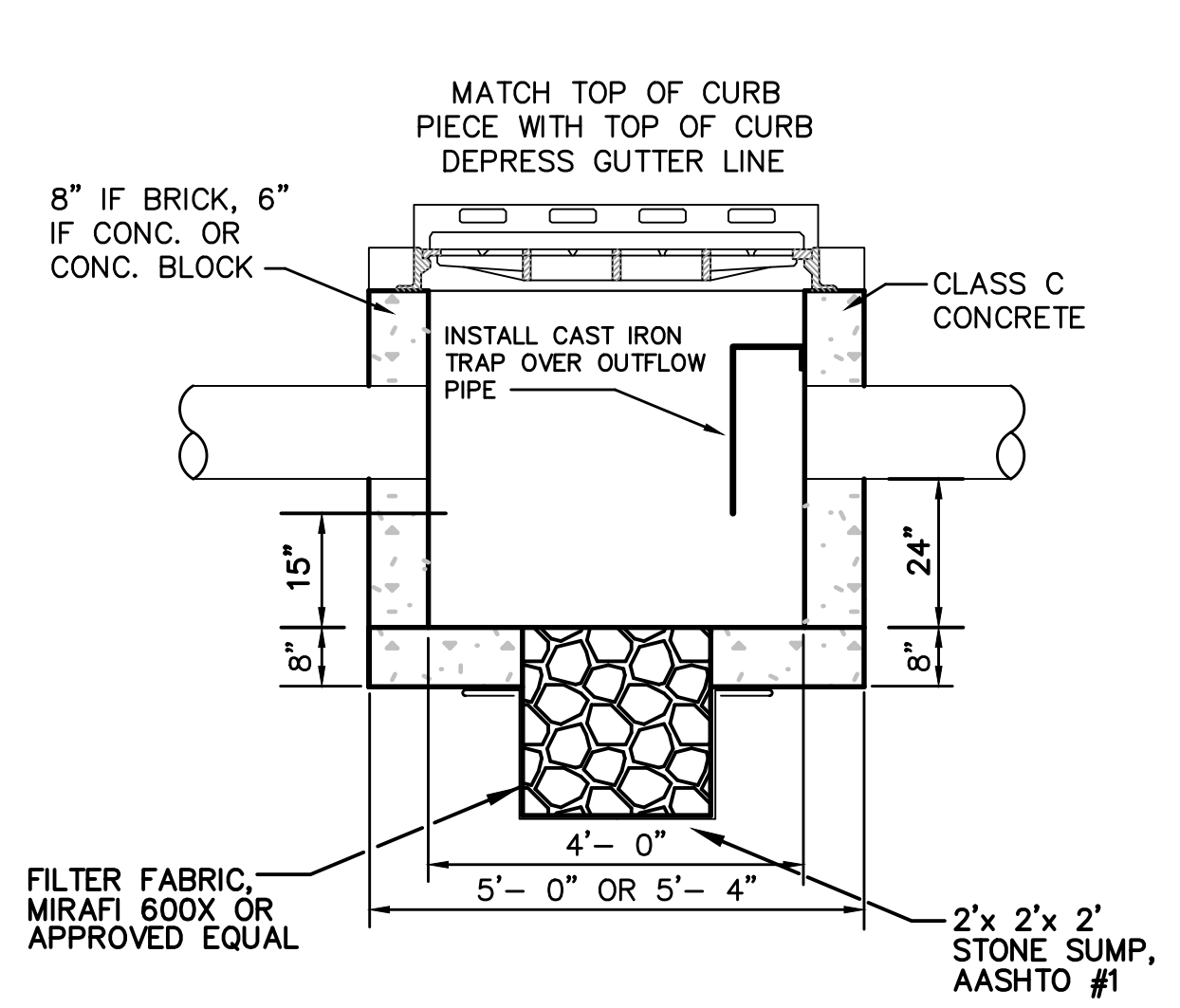
PIPE SIZE	CORR. METAL PIPE	REIN. CONC. PIPE	APRONS IN CUBIC YARDS
12"	1.4	1.4	0.2
15"	1.7	1.7	0.2
18"	2.1	2.1	0.3
21"	2.5	2.5	0.4
24"	2.9	2.9	0.5
27"	3.3	3.4	0.6
30"	3.7	3.8	0.7
36"	4.7	4.8	0.9
42"	5.8	6.3	1.2
48"	7.6	8.4	1.5
54"	9.7	10.7	1.8
60"	12.2	13.4	2.1
66"	15.0	16.4	2.5
72"	18.1	19.9	3.0



ABANDONED PIPE END CAP DETAIL
 N.T.S.



SECTION A-A
TYPE "B" CATCH BASIN W/ SUMP
 DETAIL
 N.T.S.



NO.	DATE	REVISIONS	BY

PROJECT	WTCEX22025
DATE	JUNE 01, 2023
DRAWING SCALE	N.T.S.
DRAWN BY	GP
APPROVED BY	HJD

PROJECT STATUS: PLOTTED: 8/17/2023 10:05 AM BY: Garen Pomeroy PLOTSTYLE: Pennoni NCS.ctb
 U:\Automation\TCEN\W\220205 - 2023 Multi Location Storm Water Infrastructure\DRAWING\SETUP\CM6001.dwg