

# ADAMS CIRCLE ROADWAY RECONSTRUCTION & UTILITY IMPROVEMENTS

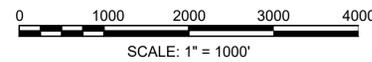
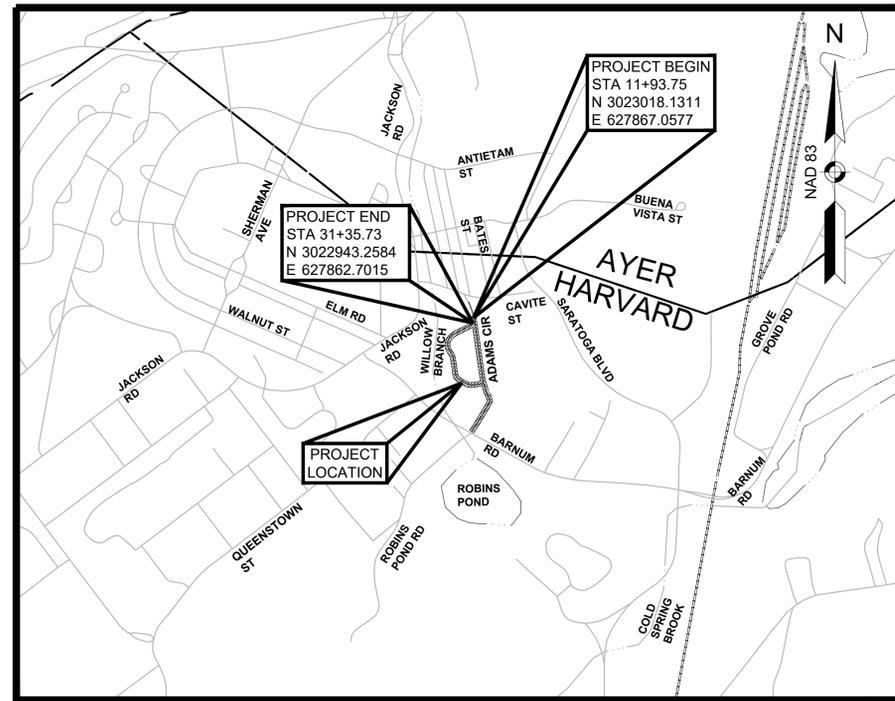
DEVENS (HARVARD), MA  
WORCESTER COUNTY

PREPARED FOR  
MASSACHUSETTS DEVELOPMENT FINANCE AGENCY  
PROJECT NO. 15812.15

THESE PLANS ARE SUPPLEMENTED BY THE LATEST EDITIONS OF THE FOLLOWING PUBLICATIONS, AS IDENTIFIED IN THE CONTRACT SPECIAL PROVISIONS: THE MASSDOT CONSTRUCTION STANDARD DETAILS, THE MASSDOT STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE MASSDOT STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, THE MASSDOT OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, THE MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, AND THE ANSI AMERICAN STANDARD FOR NURSERY STOCK.

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LENGTH OF PROJECT = 1942 FEET = 0.368 MILES

### DESIGN DESIGNATION (ADAMS CIRCLE)

DESIGN SPEED	30 MPH
FUNCTIONAL CLASSIFICATION	LOCAL

DATE	DESCRIPTION	REV #
2/13/2026	FINAL PLANS	2
1/13/2026	PRELIMINARY PLANS	1
11/21/2025	PRELIMINARY PLANS	0

OWNER:  
Mass Development Finance Agency  
33 Andrews Parkway  
Devens, MA 01434

ENGINEER:  
 **Vanasse Hangen Brustlin, Inc.**  
120 Front Street, Suite 500  
Worcester, MA 01608  
508.752.1001 FAX 508.752.1276

DESIGNED BY PJB	APPROVED BY GR	SHEET OF 1 39
DRAWN BY YKA	DFTG CHECKED BY SG	VHB CAD FILE NAME 15812.15_HD(TITLE).dwg
CHECKED BY CAC/ELT	DATE FEBRUARY 2026	JOB NO. 15812

**GENERAL SYMBOLS**

EXISTING	PROPOSED	DESCRIPTION
		JERSEY BARRIER
		CATCH BASIN
		CATCH BASIN CURB INLET
		FLAG POLE
		GAS PUMP
		MAIL BOX
		POST SQUARE
		POST CIRCULAR
		WELL
		ELECTRIC HANDHOLE
		FENCE GATE POST
		GAS GATE
		BORING HOLE
		MONITORING WELL
		TEST PIT
		HYDRANT
		LIGHT POLE
		COUNTY BOUND
		GPS POINT
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
		MASSACHUSETTS HIGHWAY BOUND
		MONUMENT
		STONE BOUND
		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
		TROLLEY POLE OR GUY POLE
		TRANSMISSION POLE
		UTILITY POLE W/ FIREBOX
		UTILITY POLE WITH DOUBLE LIGHT
		UTILITY POLE W / 1 LIGHT
		UTILITY POLE
		BUSH
		TREE
		STUMP
		SWAMP / MARSH
		WATER GATE
		PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
		CONTOURS (ON-THE-GROUND SURVEY DATA)
		CONTOURS (PHOTOGRAMMETRIC DATA)
		UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCED STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
		GUARD RAIL - DOUBLE FACE - STEEL POSTS
		GUARD RAIL - DOUBLE FACE - WOOD POSTS
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		SEDIMENT BARRIER
		COIR LOG SEDIMENT BARRIER
		TREE LINE
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT BUFFER
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT

**PAVEMENT MARKINGS SYMBOLS**

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT ARROW - WHITE
		LEGEND "ONLY" - WHITE
		STOP LINE - WHITE, 12" WIDTH
		CROSSWALK - WHITE, 12" WIDTH

**ABBREVIATIONS**

GENERAL	DESCRIPTION
AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADJ	ADJUST
APPROX.	APPROXIMATE
A.C.	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
BIT.	BITUMINOUS
BC	BOTTOM OF CURB
BD.	BOUND
BL	BASELINE
BLDG	BUILDING
BM	BENCHMARK
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR.	BRIDGE
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CIP	CAST IRON PIPE
CLF	CHAIN LINK FENCE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CSP	CORRUGATED STEEL PIPE
CO.	COUNTY
CONC	CONCRETE
CONT	CONTINUOUS
CONST	CONSTRUCTION
CR GR	CROWN GRADE
DHV	DESIGN HOURLY VOLUME
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DW	STEADY DON'T WALK - PORTLAND ORANGE
DWY	DRIVEWAY
ELEV (or EL.)	ELEVATION
EMB	EMBANKMENT
EOP	EDGE OF PAVEMENT
EXIST (or EX)	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN.	FOUNDATION
FLDSTN	FIELDSTONE
GAR	GARAGE
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HDW	HEADWALL
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HYD	HYDRANT
INV	INVERT
JCT	JUNCTION
L	LENGTH OF CURVE
LB	LEACH BASIN

**ABBREVIATIONS (cont.)**

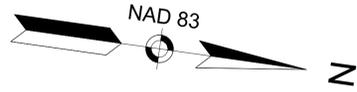
GENERAL	DESCRIPTION
LP	LIGHT POLE
LT	LEFT
MAX	MAXIMUM
MB	MAILBOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
M&O	MILL & OVERLAY
NIC	NOT IN CONTRACT
NO.	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PCR	PEDESTRIAN CURB RAMP
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATER WAY
R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT OF WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	STONE BOUND
SGC	SLOPED GRANITE CURB
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SW	SIDEWALK
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION

**TRAFFIC SYMBOLS**

EXISTING	PROPOSED	DESCRIPTION
		PULL BOX 12"x12" (OR AS NOTED)
		ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)
		TRAFFIC SIGNAL CONDUIT
		SIGN AND POST

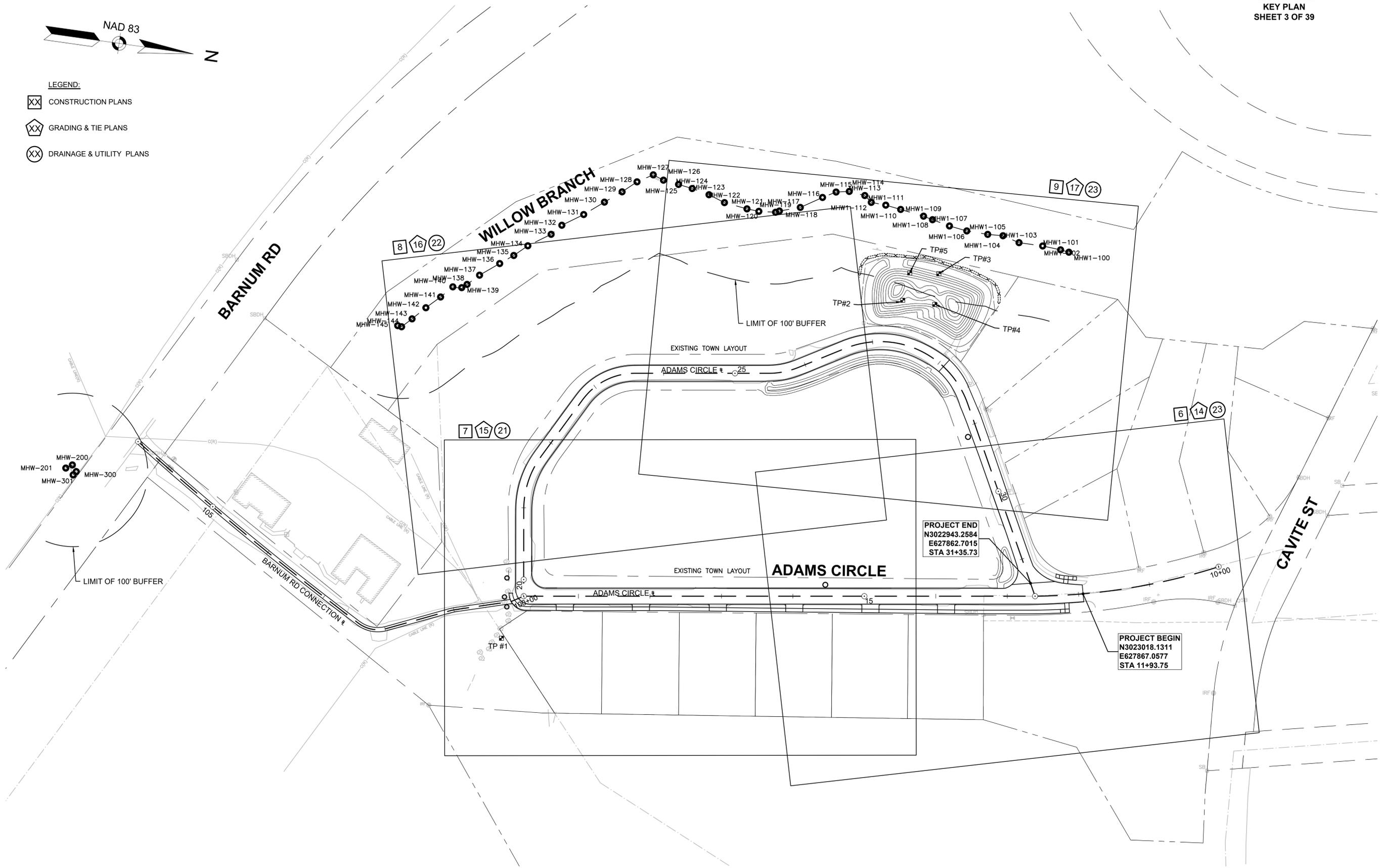
**GENERAL NOTES:**

- THE EXISTING CONDITIONS SHOWN ON THIS PLAN WERE COMPILED BASED UPON AN ACTUAL FIELD SURVEY CONDUCTED BY WILLIAMS SALE PARTNERSHIP BETWEEN MAY & JUNE, 2025.
- THE HORIZONTAL CONTROL IS BASED ON THE MASSACHUSETTS MAINLAND STATE PLANE COORDINATE SYSTEM AND THE NATIONAL GEODETIC SURVEY (NAD83). ALL ELEVATION IS US FEET, REFERENCED TO THE NORTH GEODETIC VERTICAL DATUM OF 1929 (NGVD29).
- ALL COORDINATES SHOWN HEREON ARE IN RELATIONSHIP TO THE DEVENS, MA CONTROL NETWORK AND GEOGRAPHIC INFORMATION SYSTEMS (GIS). REFERENCE IS MADE TO THE CONTROL SURVEY AND REPORT ENTITLED, "SURVEY CONTROL REPORT FOR DEVENS, MASSACHUSETTS" PREPARED FOR MASSACHUSETTS DEVELOPMENT FINANCE AGENCY, BY CHAS. H. SELLS, INC DATED APRIL 8, 2002 AND LAST REVISED OCTOBER 23, 2020. ALL COORDINATES ARE ON THE MASSACHUSETTS MAINLAND STATE PLANE SYSTEM (NAD 1983) HORIZONTALLY AND NGVD29 VERTICALLY.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND GRADES IN THE FIELD BEFORE COMMENCING WORK AND PROMPTLY NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- PROTECTION OF UNDERGROUND FACILITIES. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE NECESSITY OF MAKING HIS OWN INVESTIGATION IN ORDER TO ASSURE THAT NO DAMAGE TO EXISTING STRUCTURES, DRAINAGE LINES, TRAFFIC SIGNAL CONDUITS, ETCETRA, WILL OCCUR.
- DRAINAGE ELEVATIONS ARE PROVIDED FOR DESIGN PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS OF EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED DRAINAGE DESIGN. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER. ONLY AFTER THE CONTRACTOR VERIFIES ELEVATIONS FOR THE CONSTRUCTABILITY OF THE DRAINAGE SYSTEM SHALL ANY STRUCTURES BE ORDERED. ANY FIELD ADJUSTMENTS TO LINE & GRADE UP TO A DEPTH OF 5' SHALL BE INCLUDED IN THE COST OF THE PIPE. PIPE EXCAVATION GREATER THAN 5' WILL BE PAID UNDER CLASS B TRENCH EXCAVATION.
- THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS OF EXISTING UTILITIES WHICH MAY CONFLICT WITH PROPOSED CONDUIT AND SIGNAL EQUIPMENT. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER.
- WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
- THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL EXISTING DRAINAGE AND SEWER STRUCTURES AS NECESSARY FOR CHANGES IN GRADE, AND RESET ALL WATER AND DRAINAGE FRAMES, GRATES AND BOXES TO THE PROPOSED FINISH SURFACE GRADE. REQUIRED NEW MASONRY SHALL BE CLAY BRICK.
- THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.
- EXISTING UTILITY POLES WILL BE REMOVED OR RELOCATED BY OTHERS IF REQUIRED.
- TREES AND SHRUBS WITHIN THE LIMITS OF GRADING SHALL BE REMOVED ONLY UPON APPROVAL OF THE ENGINEER.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE OWNER.
- THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R).
- JOINTS BETWEEN NEW ASPHALT CONCRETE ROADWAY PAVEMENT AND SAWCUT EXISTING PAVEMENT SHALL BE THOROUGHLY COATED WITH A HOT APPLIED PAVEMENT JOINT ADHESIVE MEETING THE REQUIREMENTS OF SUBSECTION 450 OF 2024 STANDARD SPECIFICATIONS.
- EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
- PROPOSED BOUNDS SHALL BE PLACED BY A LICENSED PROFESSIONAL SURVEYOR. THE CONTRACTOR SHALL EXERCISE DUE CARE WHEN WORKING AROUND ALL PROPERTY BOUNDS WHICH ARE TO REMAIN. SHOULD ANY DAMAGE TO A BOUND RESULT FROM THE ACTIONS OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE THE BOUND REPLACED AND/OR REALIGNED BY A LICENSED PROFESSIONAL SURVEYOR AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST.
- DISPOSAL OF ALL SURPLUS MATERIAL SHALL BE AS APPROVED BY THE ENGINEER AND OWNER.
- IN INSTANCES WHERE AN EXISTING MANHOLE, HANDHOLE OR OTHER "SURFACE" TYPE STRUCTURE THAT CANNOT BE REMOVED OR RESET IS WITHIN THE PROPOSED OR EXISTING ACCESSIBLE SURFACE, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED SUCH THAT THE TOPMOST SURFACES OR THE STRUCTURE COVER SHALL BE FLUSH WITH THE CURB RAMP SURFACE.
- ALL PROPOSED PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.



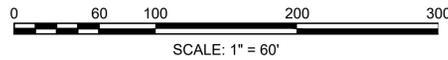
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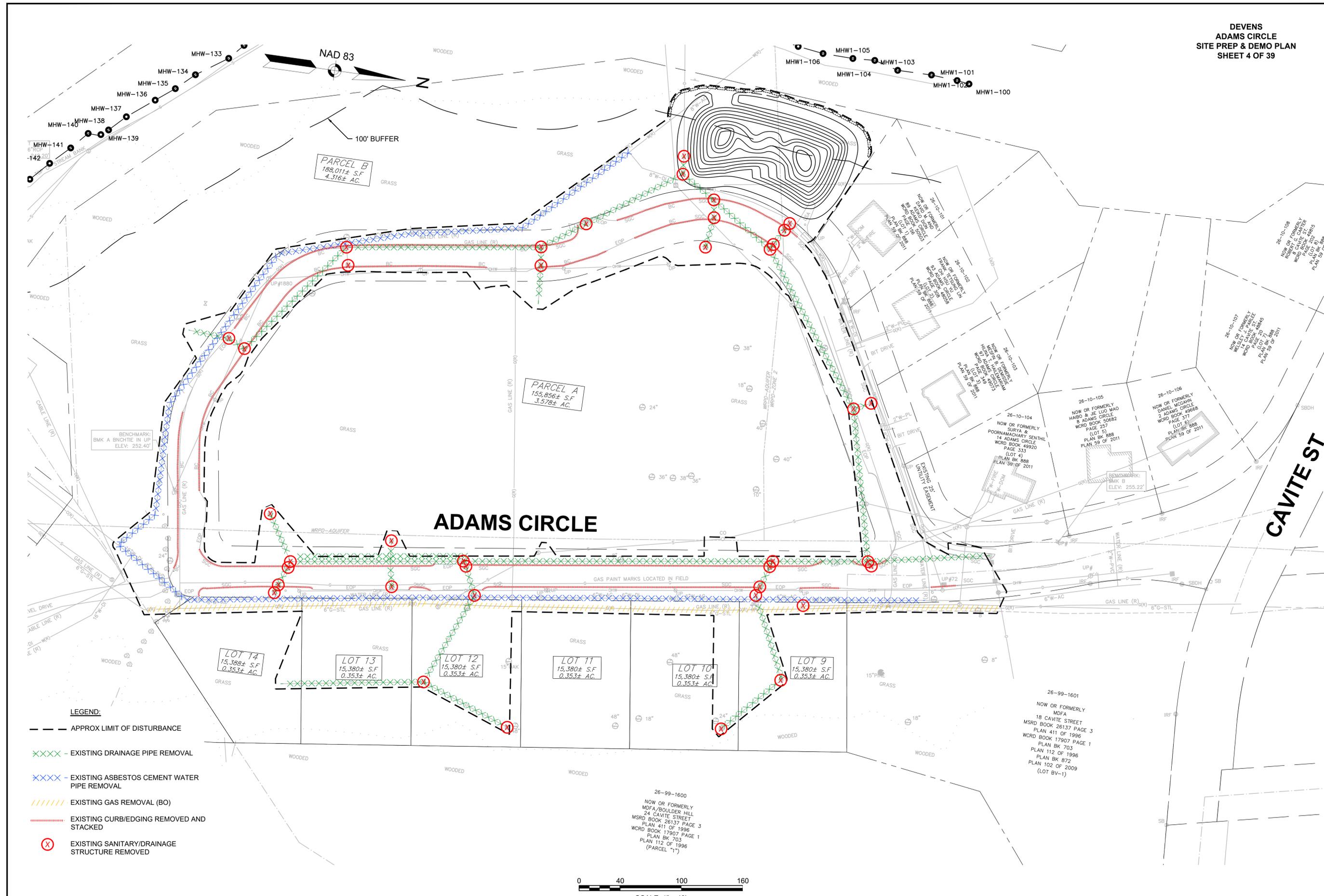
-  CONSTRUCTION PLANS
-  GRADING & TIE PLANS
-  DRAINAGE & UTILITY PLANS



PROJECT END  
N3022943.2584  
E627862.7015  
STA 31+35.73

PROJECT BEGIN  
N3023018.1311  
E627867.0577  
STA 11+93.75



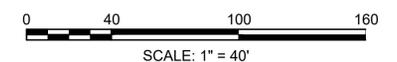


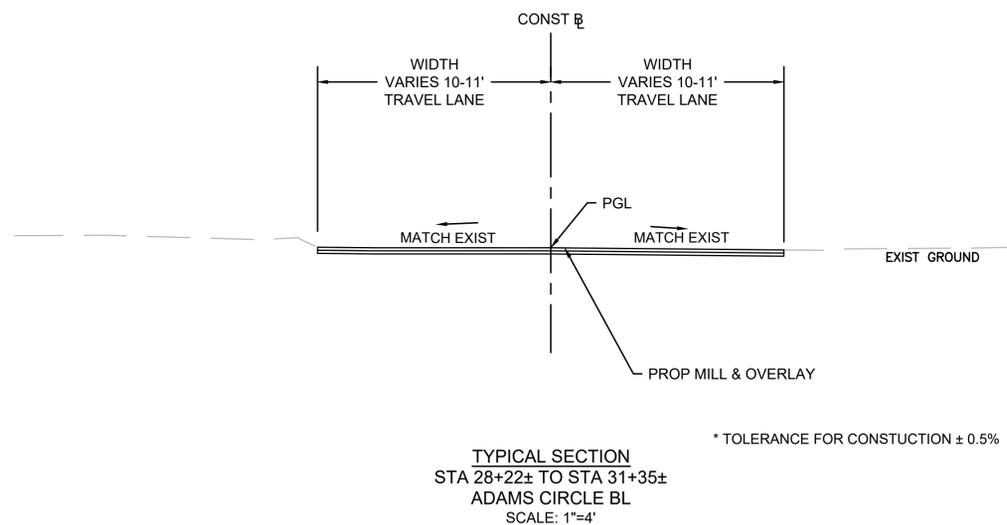
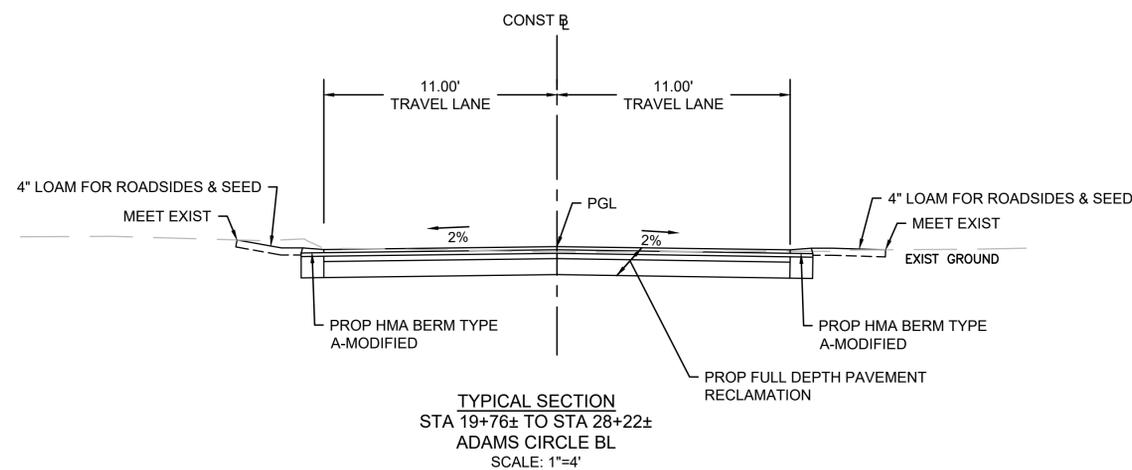
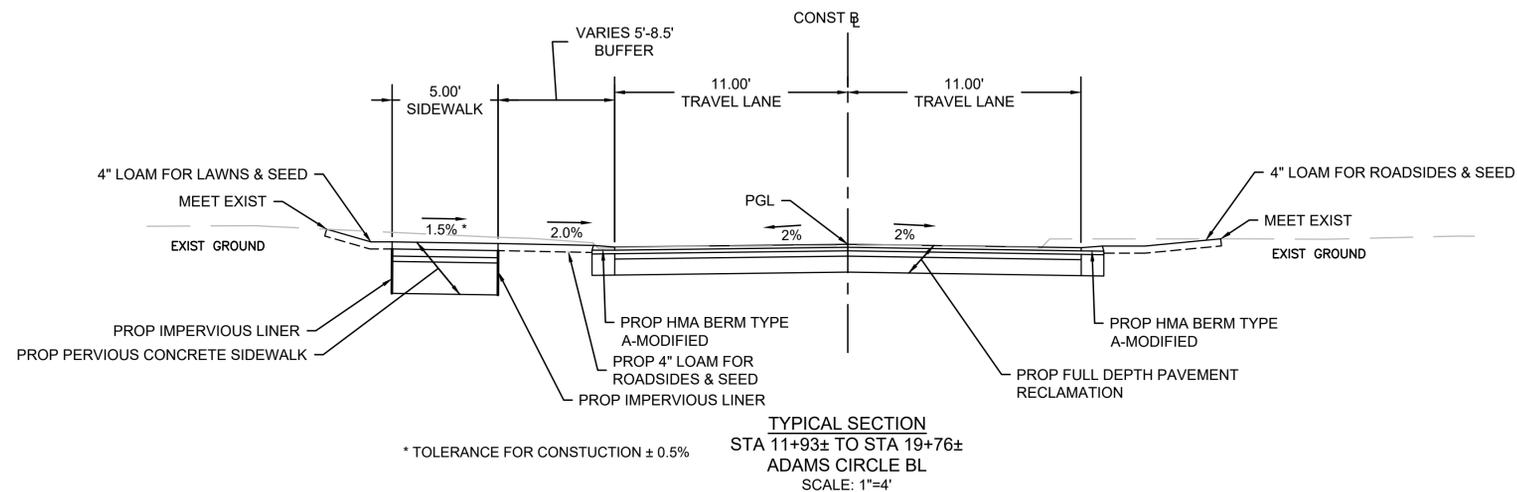
**CAVITE ST**

**ADAMS CIRCLE**

**LEGEND:**

- APPROX LIMIT OF DISTURBANCE
- XXXXX - EXISTING DRAINAGE PIPE REMOVAL
- XXXXX - EXISTING ASBESTOS CEMENT WATER PIPE REMOVAL
- ////// - EXISTING GAS REMOVAL (BO)
- |||||| - EXISTING CURB/EDGING REMOVED AND STACKED
- (X) - EXISTING SANITARY/DRAINAGE STRUCTURE REMOVED





### PAVEMENT NOTES

#### PROPOSED FULL DEPTH PAVEMENT RECLAMATION

SURFACE: 1.75" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER  
 INTERMEDIATE: 2" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5) OVER  
 3" SUPERPAVE INTERMEDIATE COURSE 19 (SIC-19.0) OVER  
 BASE: 9" RECLAIM PAVEMENT BORROW (M1.09.0)  
 SUBBASE: RECLAIM DEPTH 16"

#### PROPOSED MILL & OVERLAY

SURFACE: 1.75" SUPERPAVE SURFACE COURSE - 12.5 (SSC-12.5) OVER  
 MILLING: 1.75" PAVEMENT FINE MILLING

#### PROPOSED PERVIOUS CONCRETE SIDEWALK

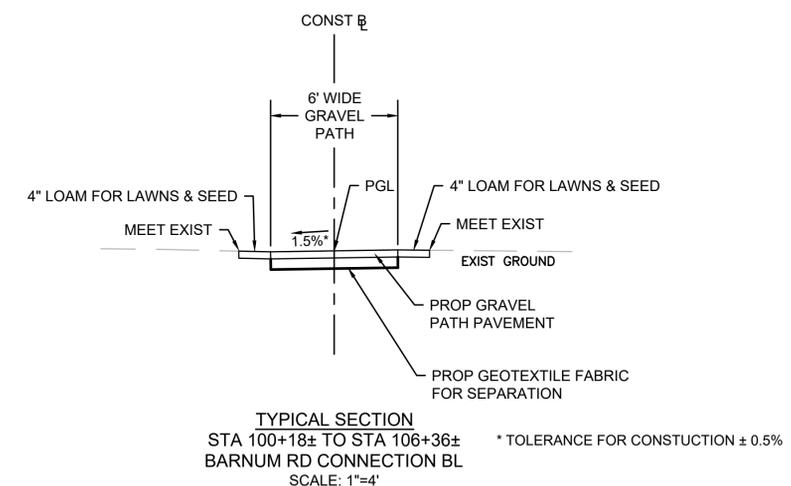
SURFACE: 4" PERVIOUS CONCRETE (PCP), 3/8" AGG.  
 INTERMEDIATE: 4" AASHTO NO. 57 OPEN-GRADED STONE  
 FILTER COURSE: 3" AASHTO NO. 8 OR EQUIVALENT FILTER COURSE  
 RESERVOIR COURSE: 18" AASHTO NO. 3 OPEN-GRADED STONE (≈40% VOID)

#### PROPOSED HOT MIX ASPHALT DRIVEWAY

SURFACE: 1.5" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER  
 INTERMEDIATE: 2.5" SUPERPAVE INTERMEDIATE COURSE 19 (SIC-19.0) OVER  
 SUBBASE: 8" GRAVEL BORROW, TYPE b

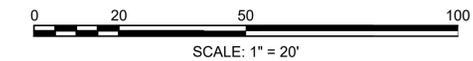
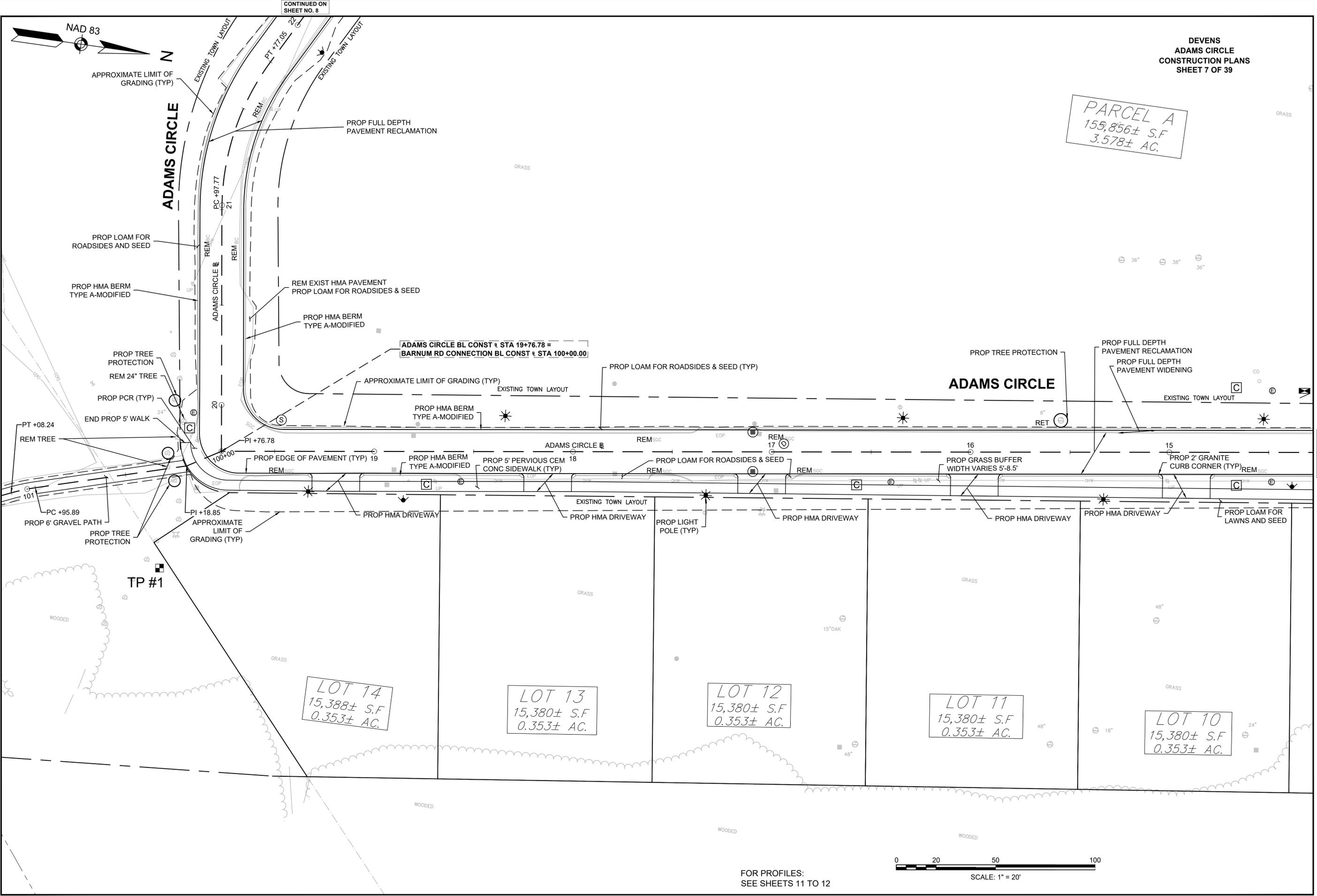
#### PROPOSED GRAVEL PATH PAVEMENT

SURFACE: 4" STONE DUST OVER  
 SUBBASE: 6" DENSE GRADED CRUSHED STONE FOR SUB-BASE OVER  
 SEPARATION: GEOTEXTILE FABRIC FOR SEPARATION





PARCEL A  
155,856± S.F.  
3.578± AC.



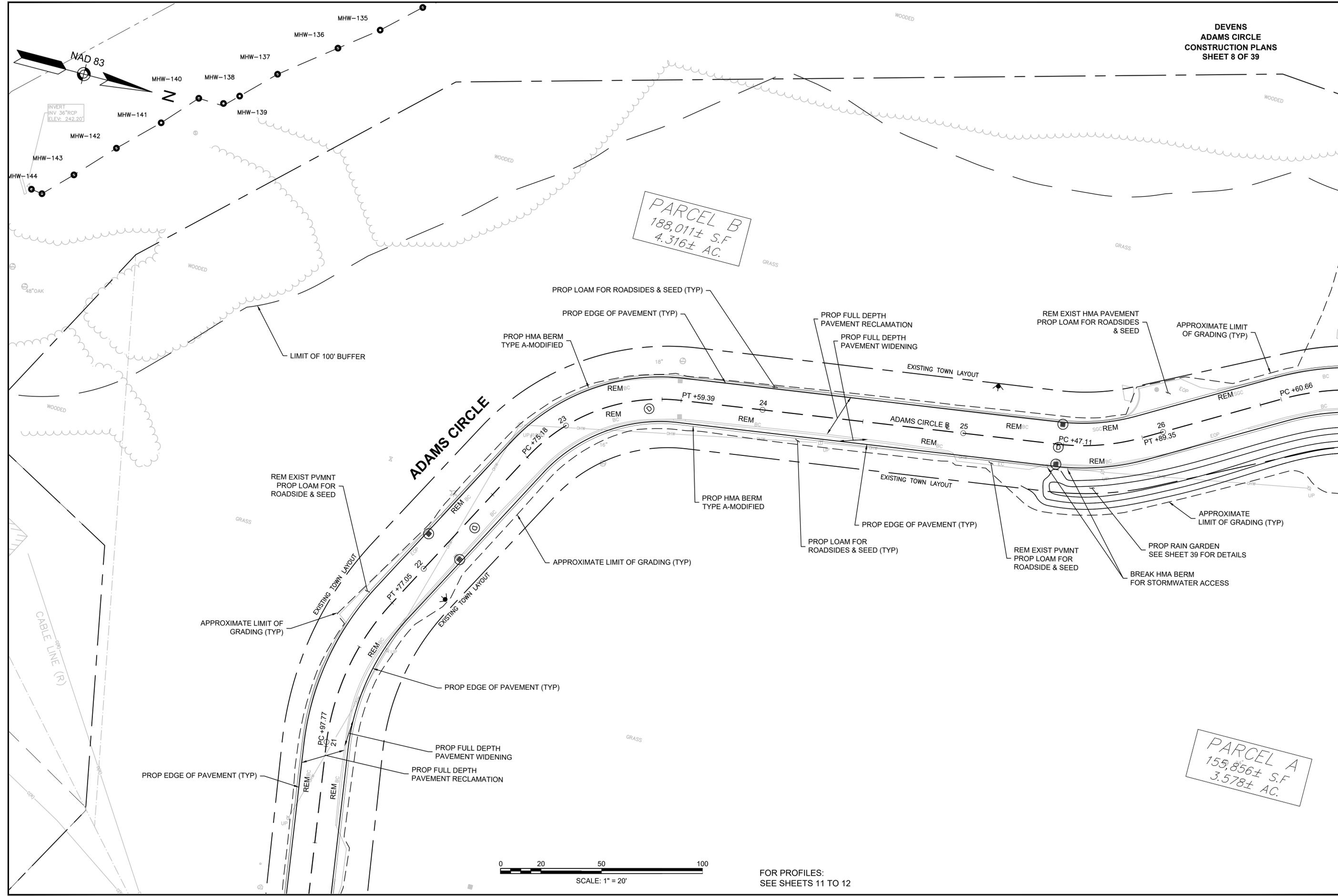
FOR PROFILES:  
SEE SHEETS 11 TO 12

SCALE: 1" = 20'

CONTINUED ON  
SHEET NO. 10

CONTINUED ON  
SHEET NO. 6

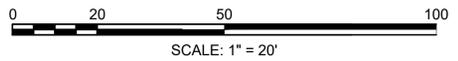
15812.15\_HD(GEN).DWG Plotted on 12-Feb-2026 2:52 PM



INVERT  
INV. 36" RCP  
ELEV. 242.20'

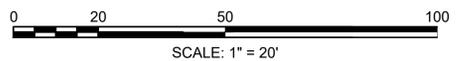
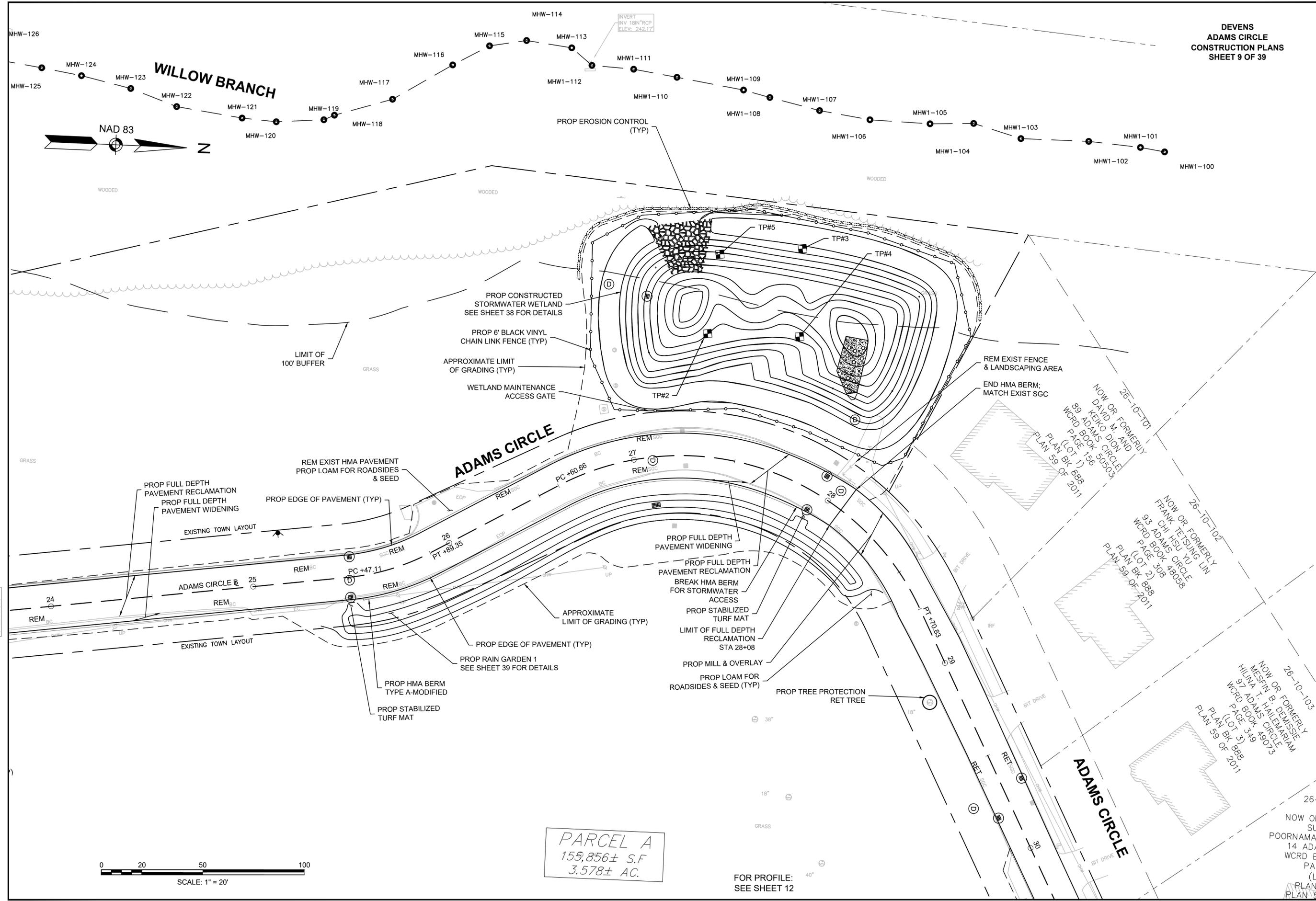
PARCEL B  
188,011± S.F.  
4.316± AC.

PARCEL A  
155,856± S.F.  
3.578± AC.



FOR PROFILES:  
SEE SHEETS 11 TO 12

CONTINUED ON  
SHEET NO. 7

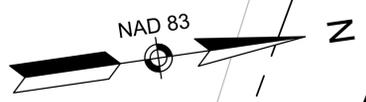


PARCEL A  
155,856± S.F.  
3.578± AC.

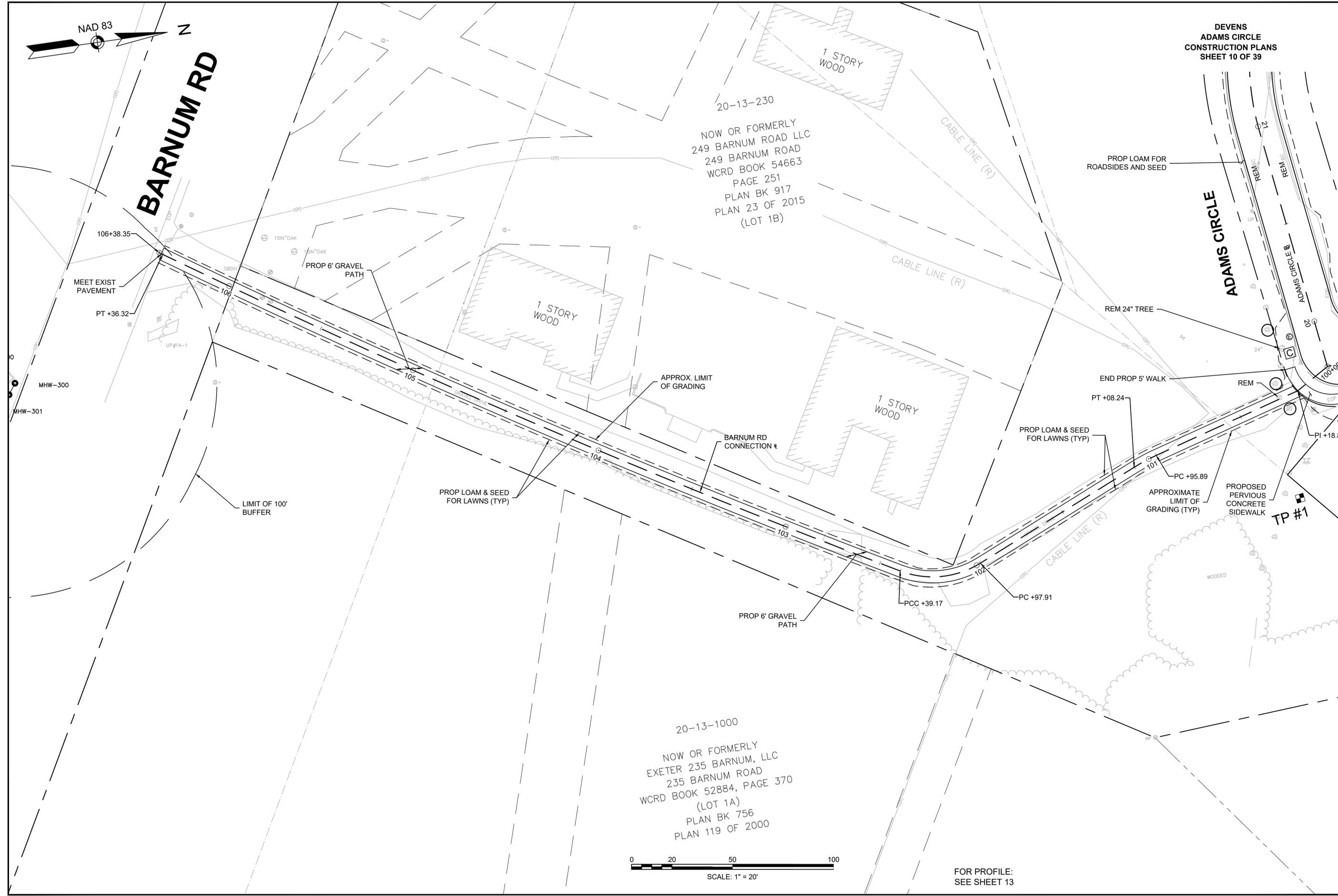
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SEE SHEET 12

CONTINUED ON  
SHEET NO. 8

CONTINUED ON  
SHEET NO. 6

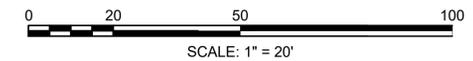


**BARNUM RD**



20-13-230  
NOW OR FORMERLY  
249 BARNUM ROAD LLC  
249 BARNUM ROAD  
WCRD BOOK 54663  
PAGE 251  
PLAN BK 917  
PLAN 23 OF 2015  
(LOT 1B)

20-13-1000  
NOW OR FORMERLY  
EXETER 235 BARNUM, LLC  
235 BARNUM ROAD  
WCRD BOOK 52884, PAGE 370  
(LOT 1A)  
PLAN BK 756  
PLAN 119 OF 2000



FOR PROFILE:  
SEE SHEET 13

TP #1

106+38.35

MEET EXIST  
PAVEMENT

PT +36.32

MHW-300

MHW-301

PROP 6' GRAVEL  
PATH

LIMIT OF 100'  
BUFFER

PROP LOAM & SEED  
FOR LAWNS (TYP)

APPROX. LIMIT  
OF GRADING

BARNUM RD  
CONNECTION

PROP 6' GRAVEL  
PATH

PCC +39.17

PC +97.91

PROP LOAM & SEED  
FOR LAWNS (TYP)

PT +08.24

END PROP 5' WALK

APPROXIMATE  
LIMIT OF  
GRADING (TYP)

PROPOSED  
PERVIOUS  
CONCRETE  
SIDEWALK

REM 24" TREE

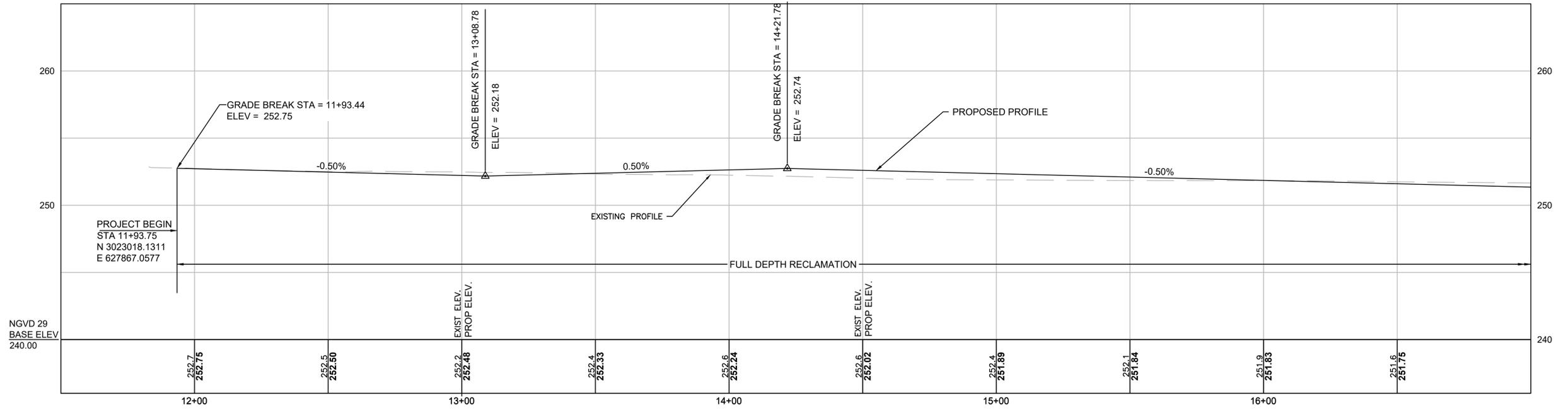
PROP LOAM FOR  
ROADSIDES AND SEED

**ADAMS CIRCLE**

PI +18.8

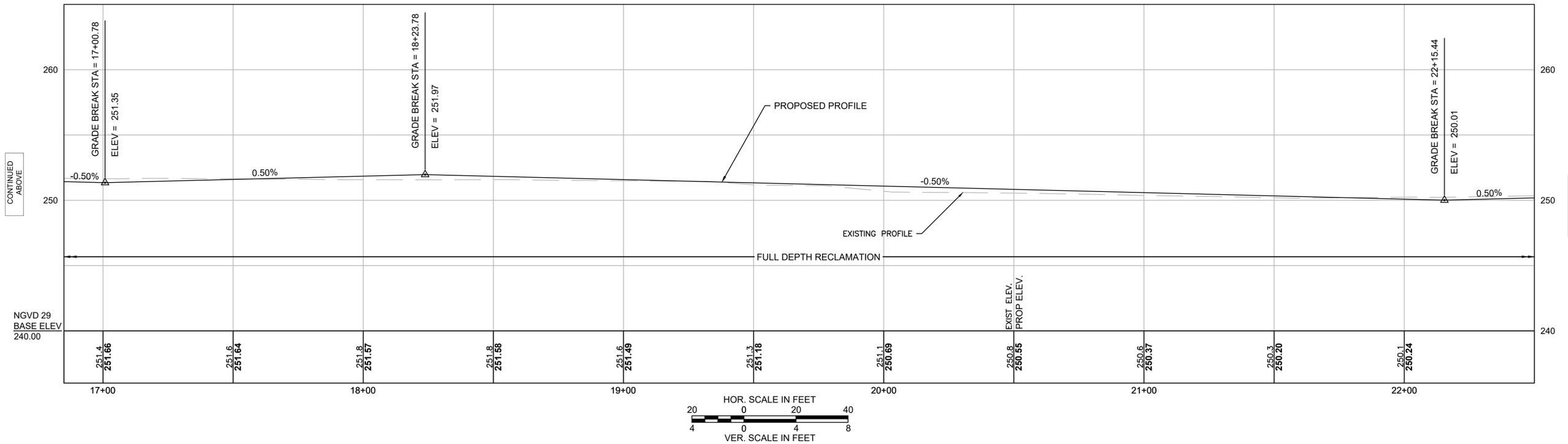
REM

ADAMS CIRCLE BL



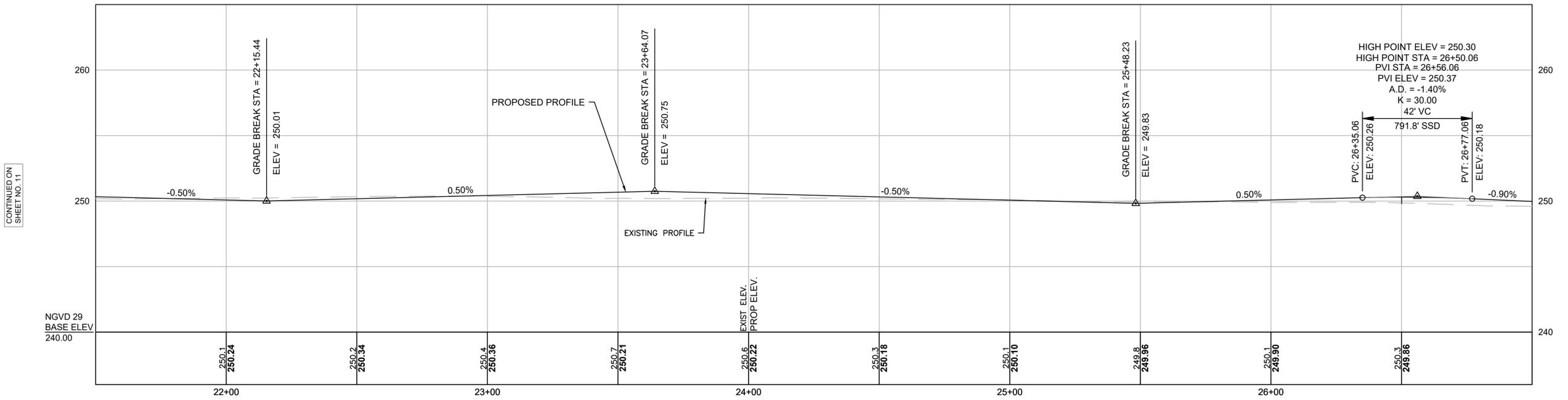
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BELOW

ADAMS CIRCLE BL



CONTINUED ON  
SHEET NO. 12

ADAMS CIRCLE BL

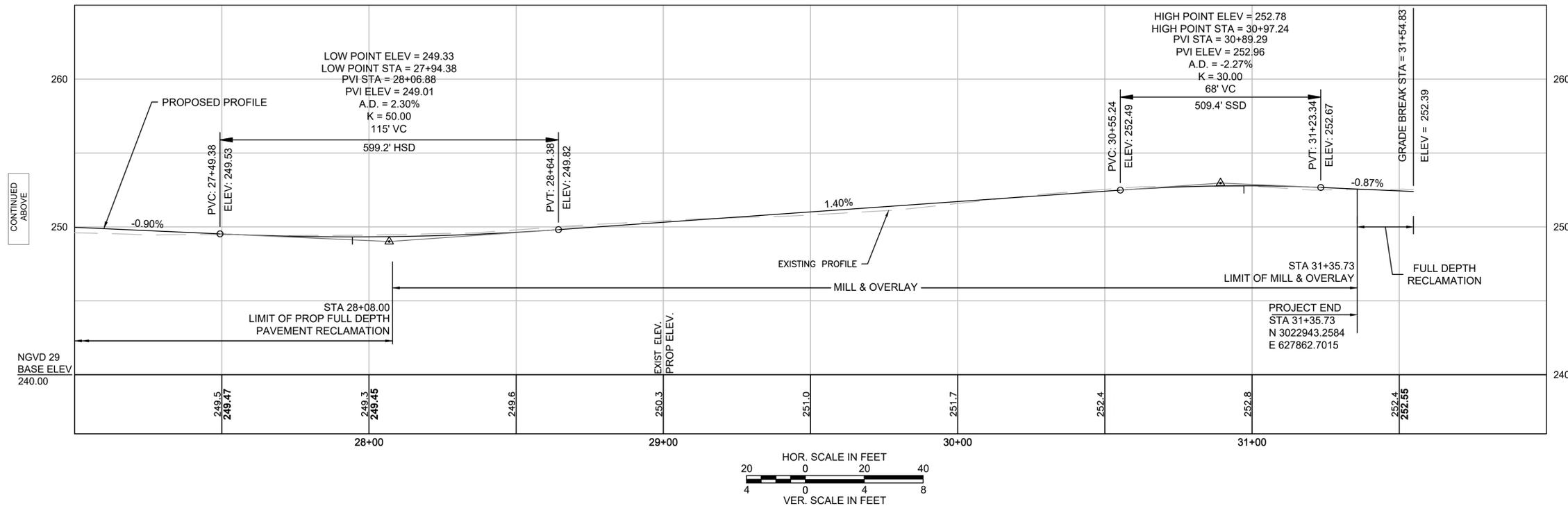


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SHEET NO. 11

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BELOW

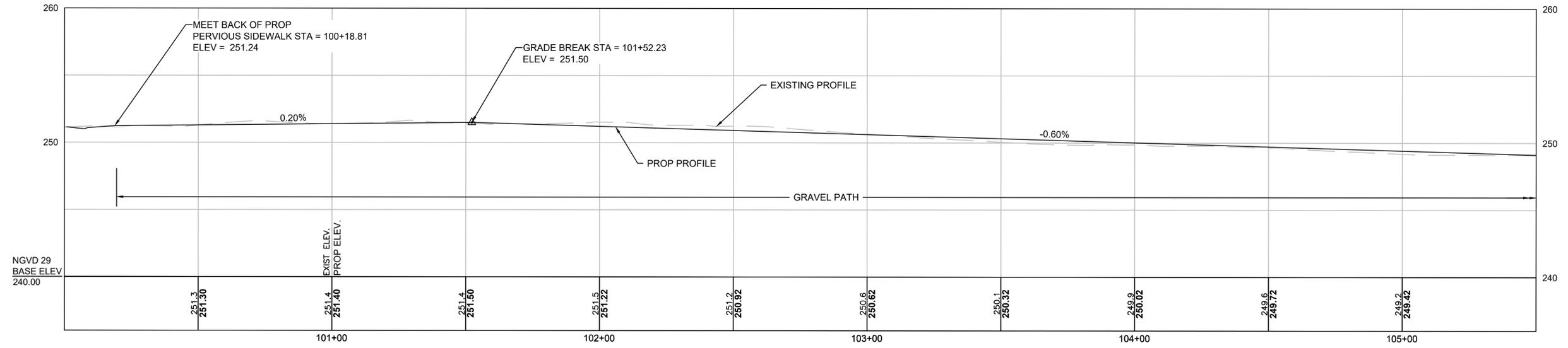
ADAMS CIRCLE BL

NO VERTICAL GEOMETRIC DESIGN IS PROPOSED WITHIN THE MILL & OVERLAY LIMITS.  
PROPOSED PROFILE IS SHOWN FOR INFORMATIONAL PURPOSES ONLY TO PROVIDE  
CONTINUITY WITH ADJACENT RECLAMATION WORK.



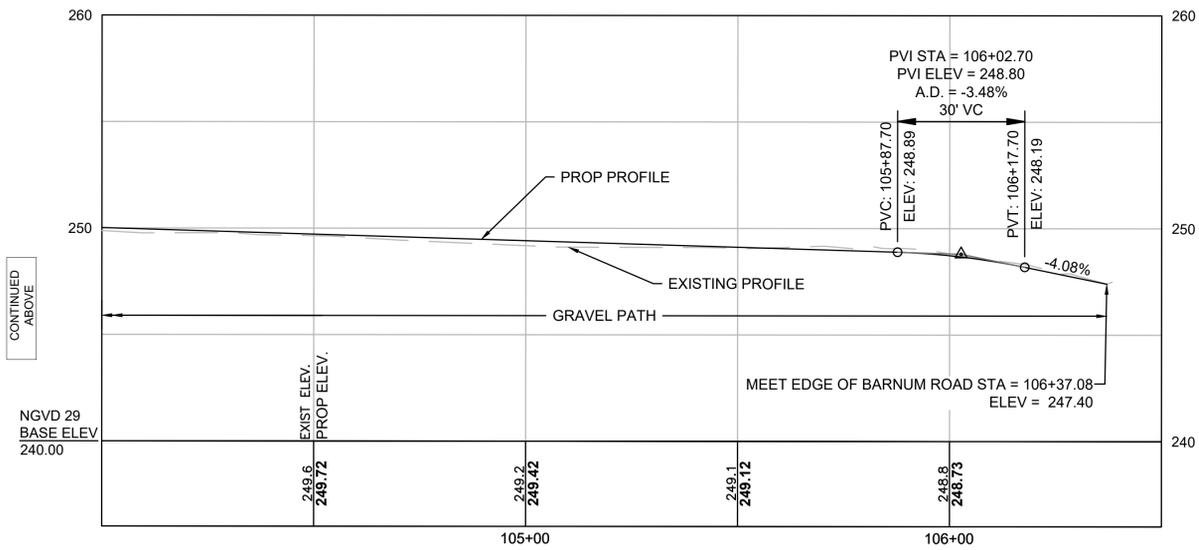
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BARNUM RD CONNECTION BL

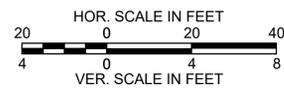


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BELOW

BARNUM RD CONNECTION BL



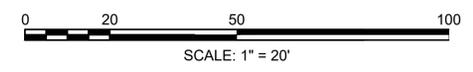
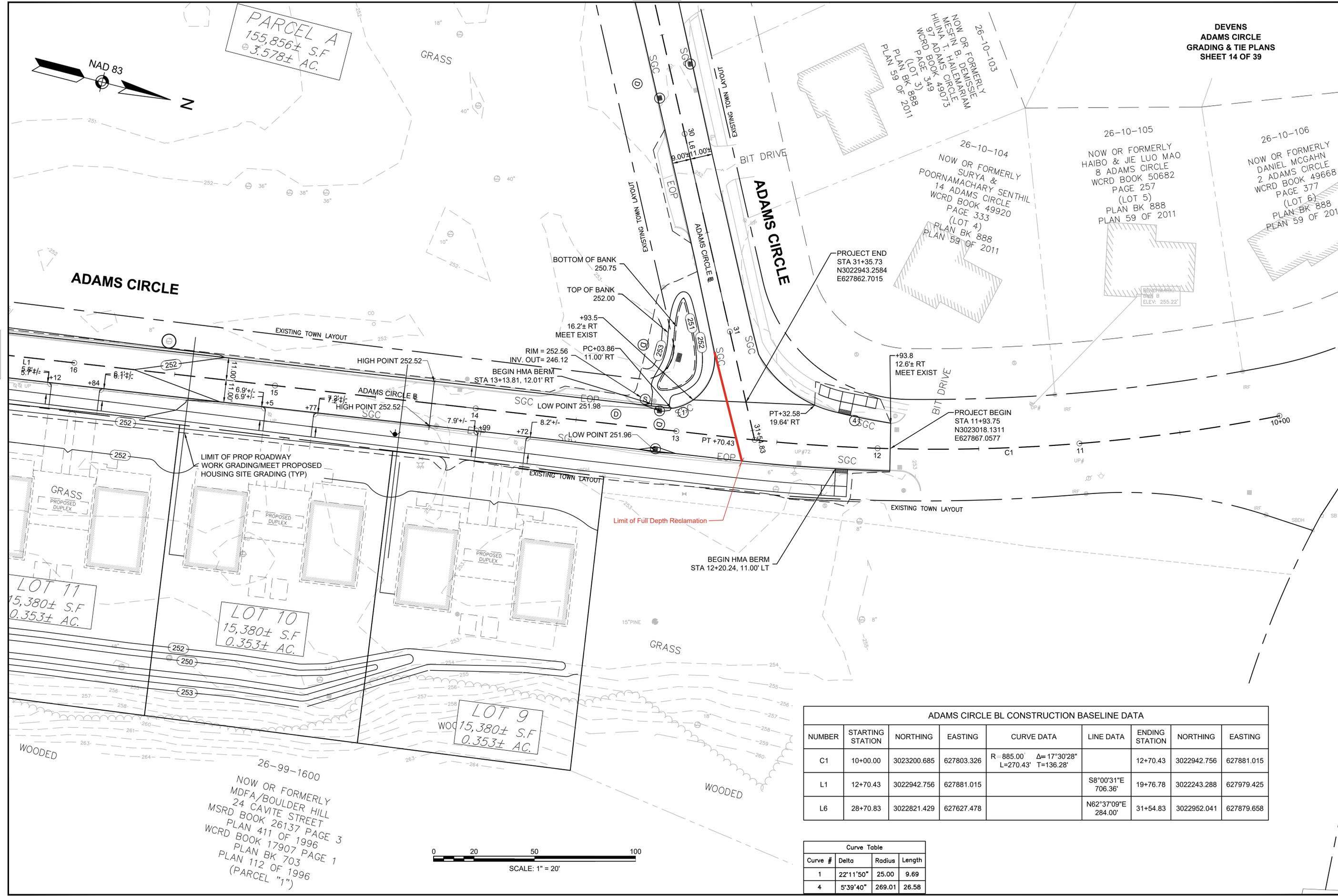
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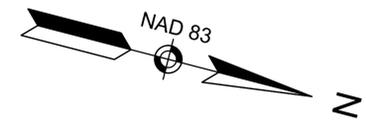
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**DEVENS  
ADAMS CIRCLE  
GRADING & TIE PLANS  
SHEET 14 OF 39**

15812.15\_HQ(GRAD).DWG Plotted on 12-Feb-2026 2:56 PM



26-99-1600  
NOW OR FORMERLY  
MDFA/BOULDER HILL  
24 CAVITE STREET  
MSRD BOOK 26137 PAGE 3  
PLAN 411 OF 1996  
WCRD BOOK 17907 PAGE 1  
PLAN BK 703  
PLAN 112 OF 1996  
(PARCEL "1")



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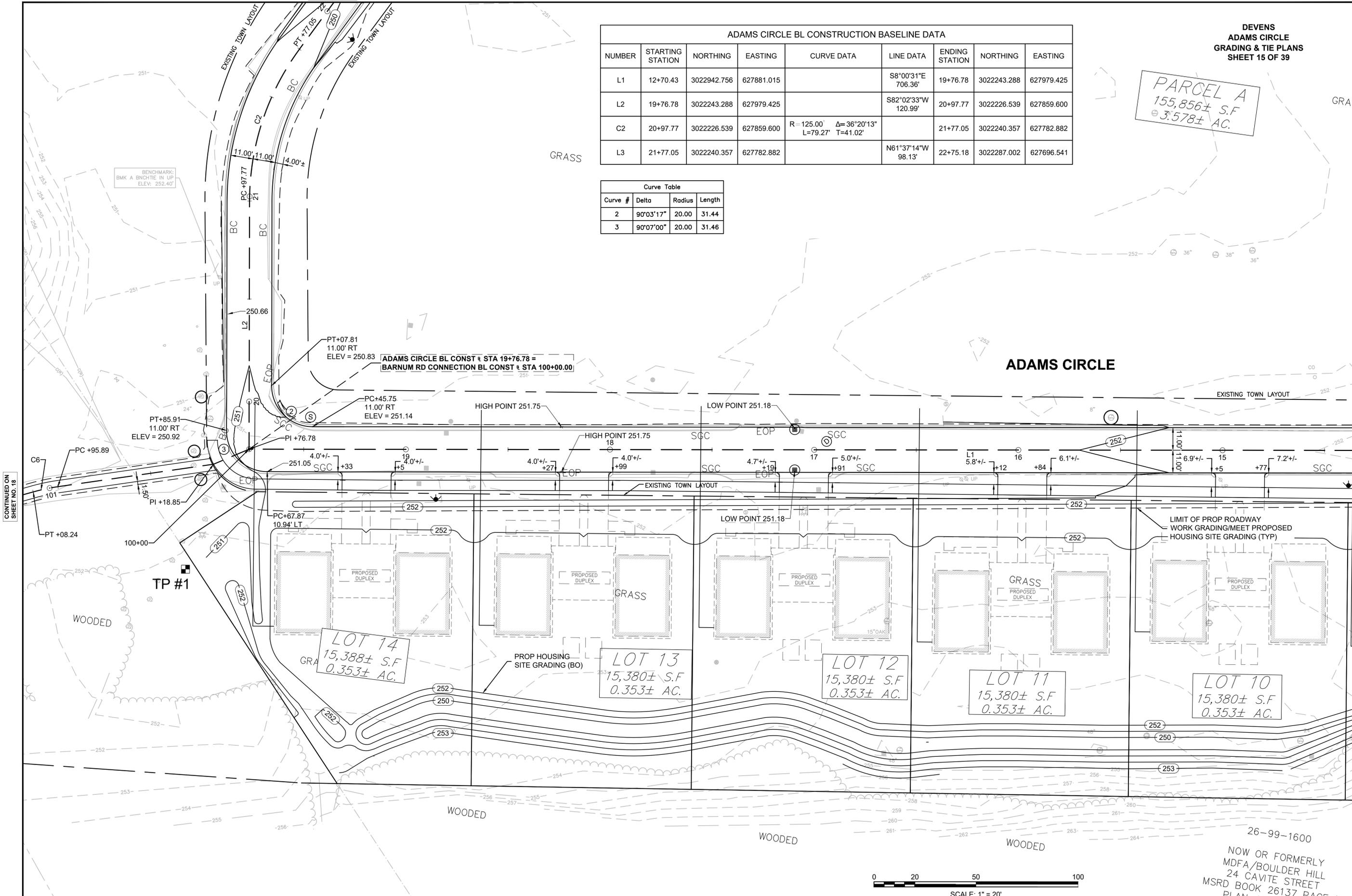
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ADAMS CIRCLE BL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	12+70.43	3022942.756	627881.015		S8°00'31"E 706.36'	19+76.78	3022243.288	627979.425
L2	19+76.78	3022243.288	627979.425		S82°02'33"W 120.99'	20+97.77	3022226.539	627859.600
C2	20+97.77	3022226.539	627859.600	R = 125.00' Δ = 36°20'13" L = 79.27' T = 41.02'		21+77.05	3022240.357	627782.882
L3	21+77.05	3022240.357	627782.882		N61°37'14"W 98.13'	22+75.18	3022287.002	627696.541

Curve Table			
Curve #	Delta	Radius	Length
2	90°03'17"	20.00	31.44
3	90°07'00"	20.00	31.46

DEVENS  
ADAMS CIRCLE  
GRADING & TIE PLANS  
SHEET 15 OF 39

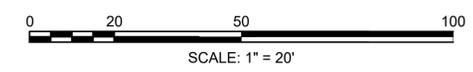
PARCEL A  
155,856± S.F  
@ 3.578± AC.



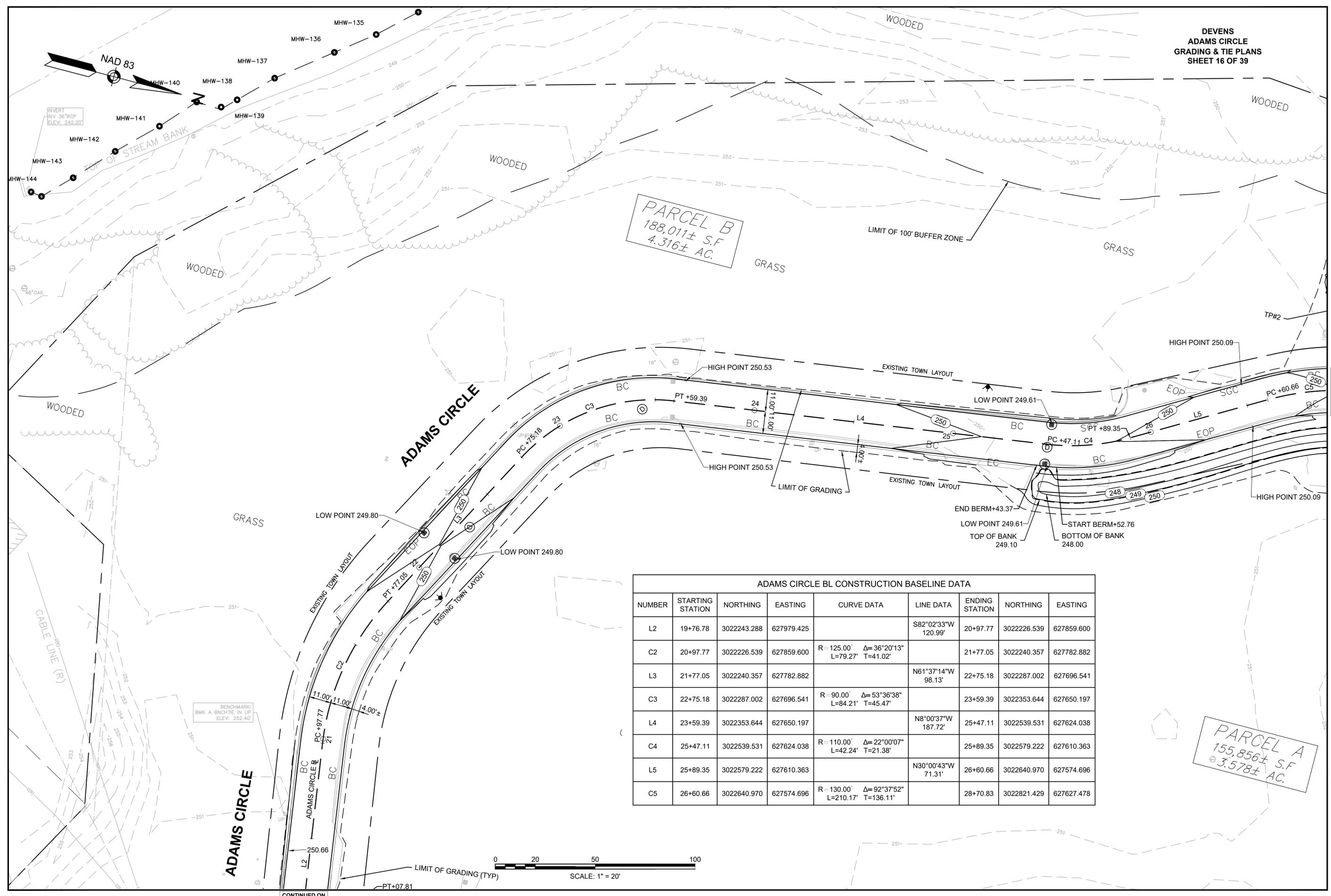
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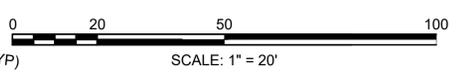


26-99-1600  
NOW OR FORMERLY  
MDFA/BOULDER HILL  
24 CAVITE STREET  
MSRD BOOK 26137 PAGE 3  
PLAN 411 OF 1000



**ADAMS CIRCLE BL CONSTRUCTION BASELINE DATA**

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L2	19+76.78	3022243.288	627979.425		S82°02'33"W 120.99'	20+97.77	3022226.539	627859.600
C2	20+97.77	3022226.539	627859.600	R=125.00' Δ=36°20'13" L=79.27' T=41.02'		21+77.05	3022240.357	627782.882
L3	21+77.05	3022240.357	627782.882		N61°37'14"W 98.13'	22+75.18	3022287.002	627696.541
C3	22+75.18	3022287.002	627696.541	R=90.00' Δ=53°36'38" L=84.21' T=45.47'		23+59.39	3022353.644	627650.197
L4	23+59.39	3022353.644	627650.197		N8°00'37"W 187.72'	25+47.11	3022539.531	627624.038
C4	25+47.11	3022539.531	627624.038	R=110.00' Δ=22°00'07" L=42.24' T=21.38'		25+89.35	3022579.222	627610.363
L5	25+89.35	3022579.222	627610.363		N30°00'43"W 71.31'	26+60.66	3022640.970	627574.696
C5	26+60.66	3022640.970	627574.696	R=130.00' Δ=92°37'52" L=210.17' T=136.11'		28+70.83	3022821.429	627627.478



CONTINUED ON  
SHEET NO. 15

PARCEL A  
155,856± S.F.  
3.578± AC.

PARCEL B  
188,011± S.F.  
4.316± AC.

ADAMS CIRCLE

ADAMS CIRCLE

NAD 83

TOP OF STREAM BANK

LIMIT OF 100' BUFFER ZONE

GRASS

GRASS

WOODED

WOODED

WOODED

WOODED

WOODED

HIGH POINT 250.09

HIGH POINT 250.53

HIGH POINT 250.09

LOW POINT 249.80

LOW POINT 249.80

END BERM+43.37

LOW POINT 249.61

START BERM+52.76

TOP OF BANK 249.10

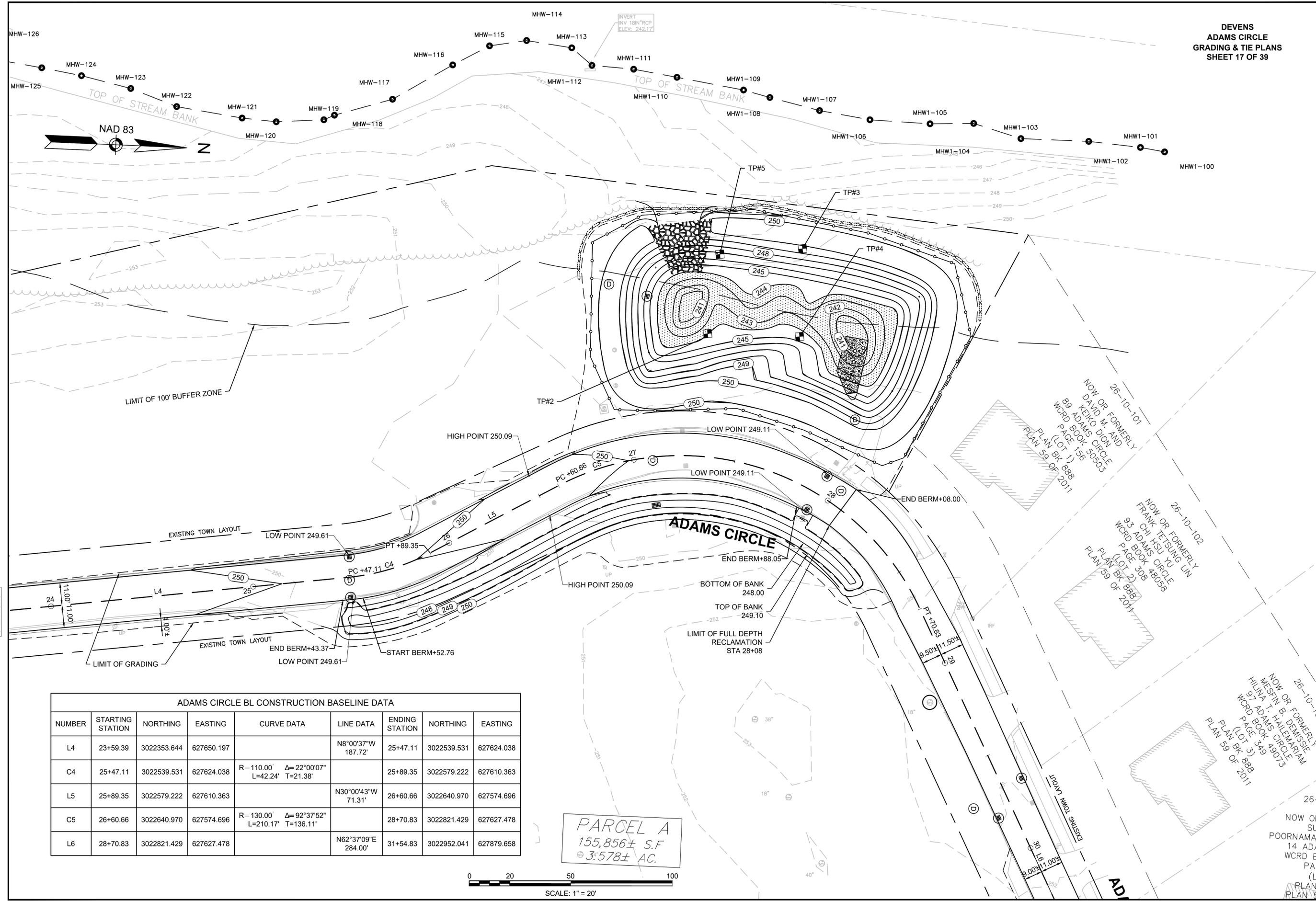
BOTTOM OF BANK 248.00

BENCHMARK:  
BMK A BNCHTIE IN UP  
ELEV: 252.40'

LIMIT OF GRADING (TYP)

PT+07.81

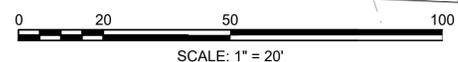
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SHEET NO. 15



ADAMS CIRCLE BL CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L4	23+59.39	3022353.644	627650.197		N8°00'37"W 187.72'	25+47.11	3022539.531	627624.038
C4	25+47.11	3022539.531	627624.038	R=110.00' Δ=22°00'07" L=42.24' T=21.38'		25+89.35	3022579.222	627610.363
L5	25+89.35	3022579.222	627610.363		N30°00'43"W 71.31'	26+60.66	3022640.970	627574.696
C5	26+60.66	3022640.970	627574.696	R=130.00' Δ=92°37'52" L=210.17' T=136.11'		28+70.83	3022821.429	627627.478
L6	28+70.83	3022821.429	627627.478		N62°37'09"E 284.00'	31+54.83	3022952.041	627879.658

PARCEL A  
155,856± S.F  
3:578± AC.

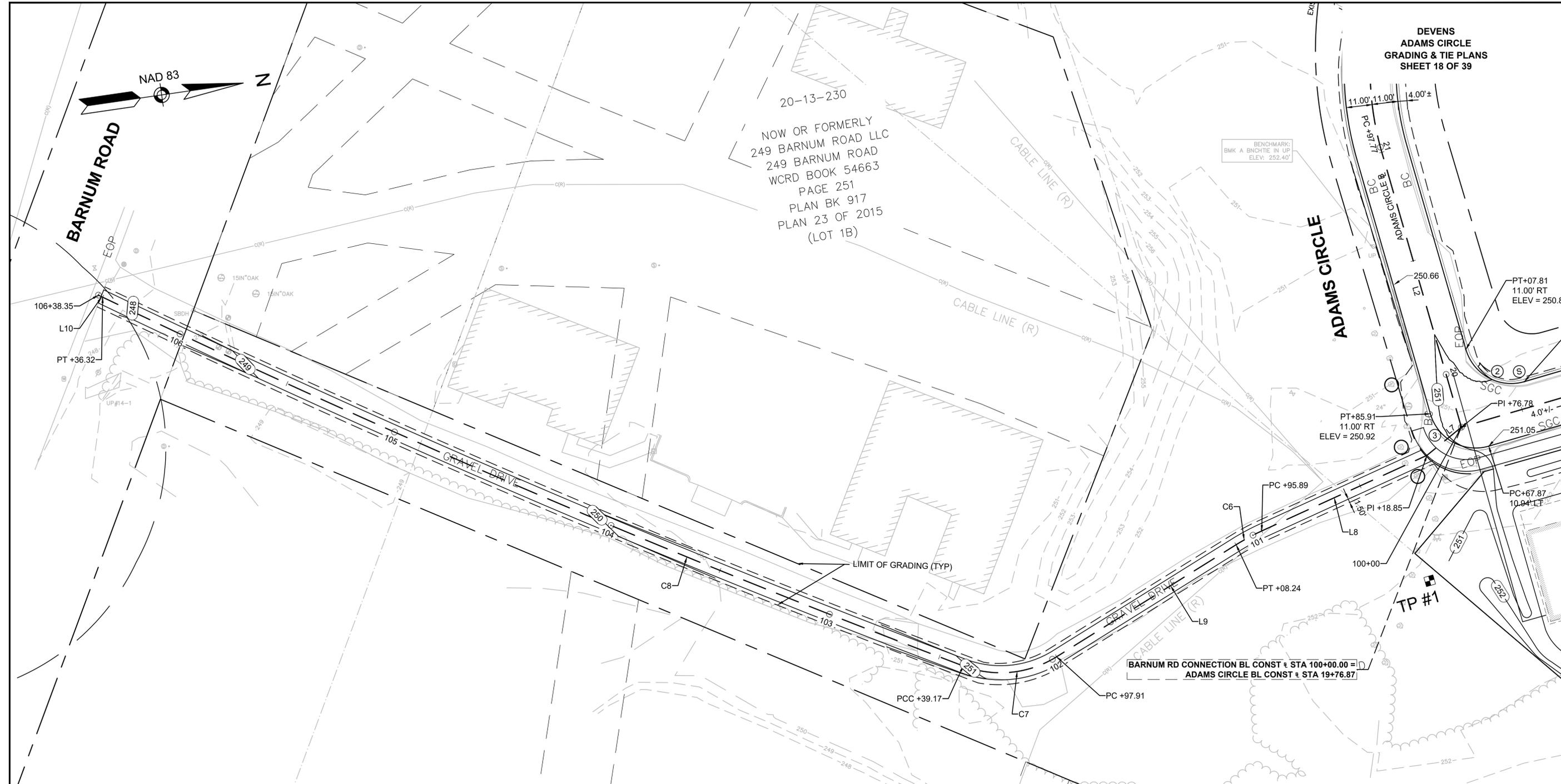


26-10-101  
NOW OR FORMERLY  
DAVID M. AND  
89 ADAMS CIRCLE  
WCRD BOOK 888  
PAGE 156  
PLAN BK 888  
PLAN 59 OF 2011

26-10-102  
NOW OR FORMERLY  
FRANK TETSUNG LIN  
93 ADAMS CIRCLE  
WCRD BOOK 888  
PAGE 308  
PLAN BK 888  
PLAN 59 OF 2011

26-10-103  
NOW OR FORMERLY  
MESTIN B. DEMISSIE  
HILINA T. HAILEMARIAM  
97 ADAMS CIRCLE  
WCRD BOOK 888  
PAGE 349  
PLAN BK 888  
PLAN 59 OF 2011

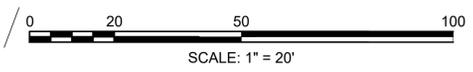
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SURYA &  
POORNAMACHARY  
14 ADAMS CIR  
WCRD BOOK 4  
PAGE 333  
(LOT 4)  
PLAN BK 88  
PLAN 59 OF 2

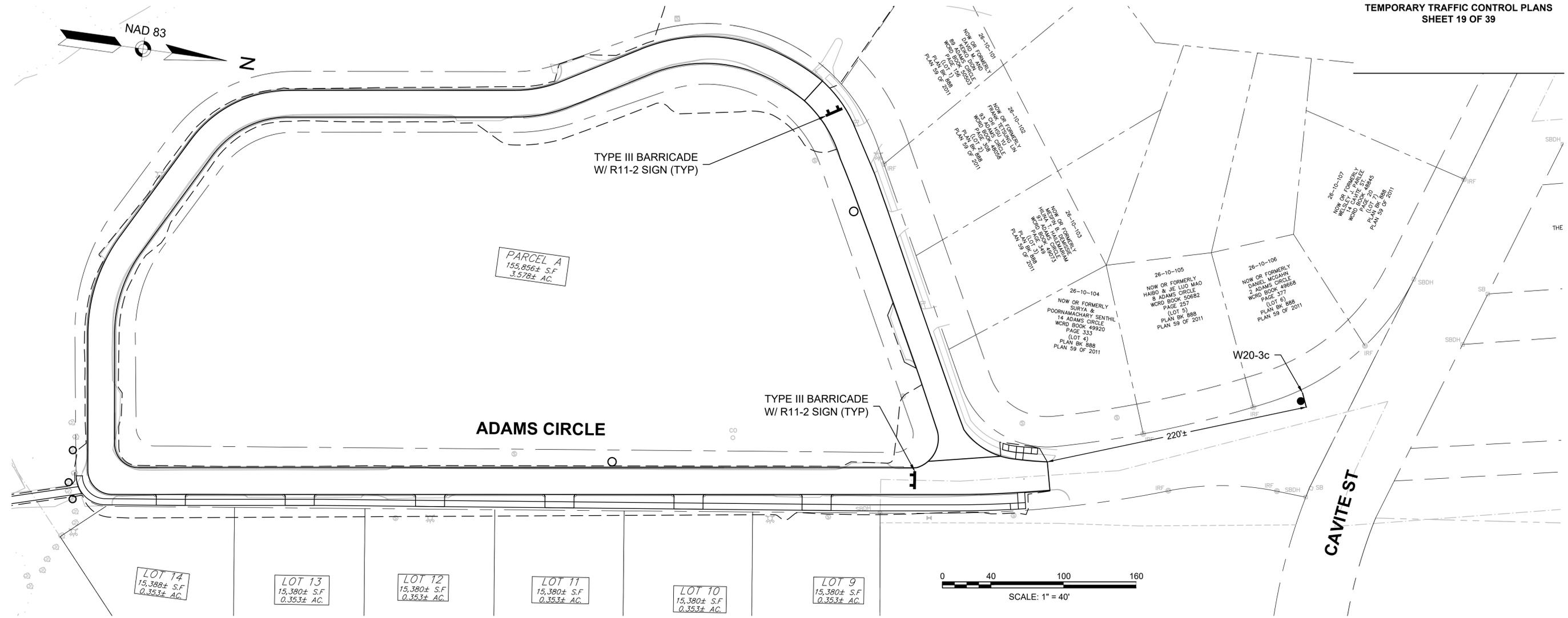


BARNUM RD CONNECTION BL CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L7	100+00.00	3022243.288	627979.425		S30°55'08"E 18.85'	100+18.85	3022227.118	627989.110
L8	100+18.85	3022227.118	627989.110		S16°14'45"E 77.04'	100+95.89	3022153.156	628010.662
C6	100+95.89	3022153.156	628010.662	R = 96.00' Δ = 7°22'13" L = 12.35' T = 6.18'		101+08.24	3022141.555	628014.869
L9	101+08.24	3022141.555	628014.869		S23°36'58"E 89.67'	101+97.91	3022059.391	628050.792
C7	101+97.91	3022059.391	628050.792	R = 45.00' Δ = 52°32'24" L = 41.26' T = 22.21'		102+39.17	3022019.600	628048.948
C8	102+39.17	3022019.600	628048.948	R = 4675.00' Δ = 4°52'03" L = 397.15' T = 198.69'		106+36.32	3021680.561	627842.342
L10	106+36.32	3021680.561	627842.342		S33°47'29"W 2.03'	106+38.35	3021678.877	627841.214

20-13-1000  
NOW OR FORMERLY  
EXETER 235 BARNUM, LLC  
235 BARNUM ROAD  
WCRD BOOK 52884, PAGE 370  
(LOT 1A)  
PLAN BK 756  
PLAN 119 OF 2000

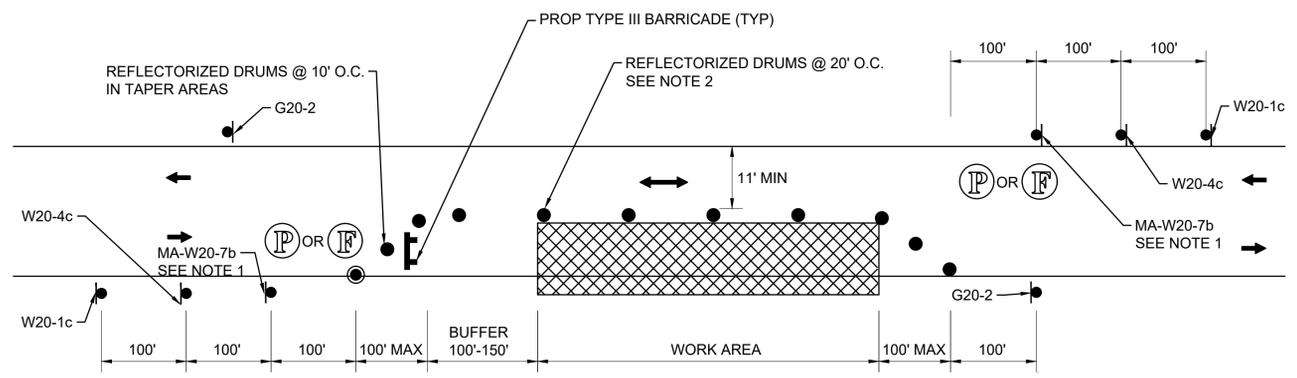




TEMPORARY TRAFFIC CONTROL SIGN SUMMARY

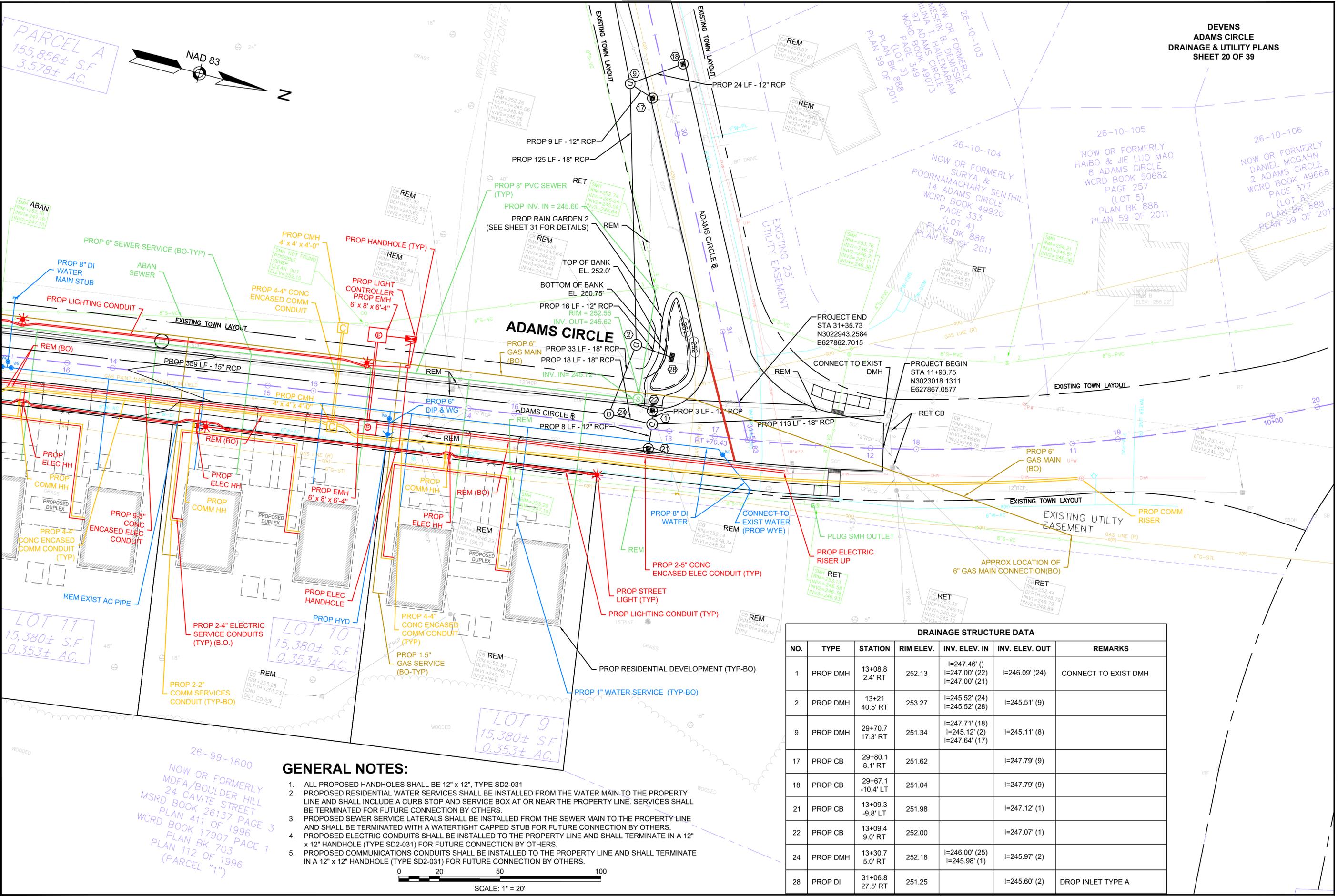
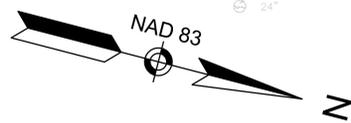
IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	COLOR			UNIT AREA (S.F.)
	WIDTH	HEIGHT		BACK-GROUND	LEGEND	BORDER	
MA-W20-7b	36"	36"		FLUORESCENT ORANGE	BLACK	BLACK	9.00
G20-2	36"	18"		FLUORESCENT ORANGE WHITE	BLACK	BLACK	4.50
R11-2	48"	30"		WHITE	BLACK	BLACK	10.00
W20-1c	36"	36"		FLUORESCENT ORANGE	BLACK	BLACK	9.00
W20-3c	36"	36"		FLUORESCENT ORANGE	BLACK	BLACK	9.00
W20-4c	36"	36"		FLUORESCENT ORANGE	BLACK	BLACK	9.00

NOTES:  
1. SEE FHWA "STANDARD HIGHWAY SIGNS 2004 EDITION" AS AMENDED, AND MASSDOT SIGN BOOK FOR TEXT DIMENSIONS



- NOTES:
1. W20-7 SIGN TO BE USED WHEN FLAGGERS ARE USED INSTEAD OF POLICE DETAILS
  2. CONES MAY BE USED IN LIEU OF DRUMS OUTSIDE OF TAPER AREAS
  3. CONTRACTOR TO MAINTAIN ABUTTER ACCESS UNLESS OTHERWISE COORDINATED AT LEAST 24 HOURS IN ADVANCE

PARCEL A  
155,856± S.F.  
3.578± AC.

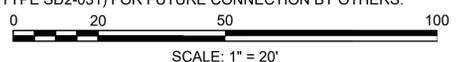


CONTINUED ON SHEET NO. 21

15812.15\_HDU(UTIL).DWG  
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**GENERAL NOTES:**

1. ALL PROPOSED HANDHOLES SHALL BE 12" x 12", TYPE SD2-031
2. PROPOSED RESIDENTIAL WATER SERVICES SHALL BE INSTALLED FROM THE WATER MAIN TO THE PROPERTY LINE AND SHALL INCLUDE A CURB STOP AND SERVICE BOX AT OR NEAR THE PROPERTY LINE. SERVICES SHALL BE TERMINATED FOR FUTURE CONNECTION BY OTHERS.
3. PROPOSED SEWER SERVICE LATERALS SHALL BE INSTALLED FROM THE SEWER MAIN TO THE PROPERTY LINE AND SHALL BE TERMINATED WITH A WATERTIGHT CAPPED STUB FOR FUTURE CONNECTION BY OTHERS.
4. PROPOSED ELECTRIC CONDUITS SHALL BE INSTALLED TO THE PROPERTY LINE AND SHALL TERMINATE IN A 12" x 12" HANDHOLE (TYPE SD2-031) FOR FUTURE CONNECTION BY OTHERS.
5. PROPOSED COMMUNICATIONS CONDUITS SHALL BE INSTALLED TO THE PROPERTY LINE AND SHALL TERMINATE IN A 12" x 12" HANDHOLE (TYPE SD2-031) FOR FUTURE CONNECTION BY OTHERS.



**DRAINAGE STRUCTURE DATA**

NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
1	PROP DMH	13+08.8 2.4' RT	252.13	I=247.46' ( ) I=247.00' (22) I=247.00' (21)	I=246.09' (24)	CONNECT TO EXIST DMH
2	PROP DMH	13+21 40.5' RT	253.27	I=245.52' (24) I=245.52' (28)	I=245.51' (9)	
9	PROP DMH	29+70.7 17.3' RT	251.34	I=247.71' (18) I=245.12' (2) I=247.64' (17)	I=245.11' (8)	
17	PROP CB	29+80.1 8.1' RT	251.62		I=247.79' (9)	
18	PROP CB	29+67.1 -10.4' LT	251.04		I=247.79' (9)	
21	PROP CB	13+09.3 -9.8' LT	251.98		I=247.12' (1)	
22	PROP CB	13+09.4 9.0' RT	252.00		I=247.07' (1)	
24	PROP DMH	13+30.7 5.0' RT	252.18	I=246.00' (25) I=245.98' (1)	I=245.97' (2)	
28	PROP DI	31+06.8 27.5' RT	251.25		I=245.60' (2)	DROP INLET TYPE A

LOT 11  
15,380± S.F.  
0.353± AC.

LOT 10  
15,380± S.F.  
0.353± AC.

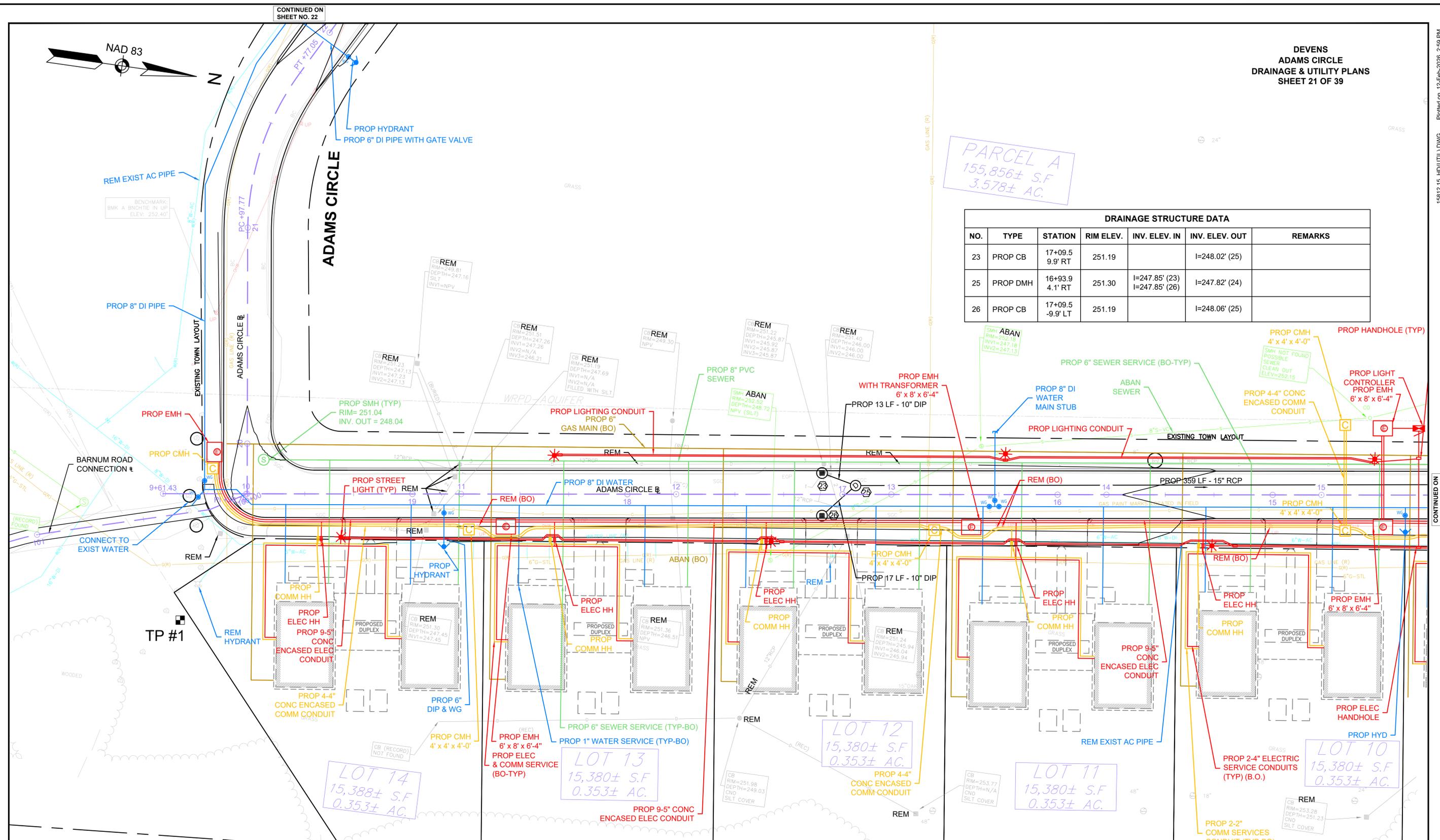
LOT 9  
15,380± S.F.  
0.353± AC.

26-99-1600  
NOW OR FORMERLY  
MDFA/BOULDER HILL  
24 CAVITE STREET  
MSRD BOOK 26137 PAGE 3  
PLAN 411 OF 1996  
WRD BOOK 17907 PAGE 1  
PLAN BK 703  
PLAN 112 OF 1996  
(PARCEL "1")



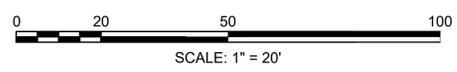
PARCEL A  
155,856± S.F.  
3.578± AC.

DRAINAGE STRUCTURE DATA						
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
23	PROP CB	17+09.5 9.9' RT	251.19		I=248.02' (25)	
25	PROP DMH	16+93.9 4.1' RT	251.30	I=247.85' (23) I=247.85' (26)	I=247.82' (24)	
26	PROP CB	17+09.5 -9.9' LT	251.19		I=248.06' (25)	



**GENERAL NOTES:**

1. ALL PROPOSED HANDHOLES SHALL BE 12" x 12", TYPE SD2-031
2. PROPOSED RESIDENTIAL WATER SERVICES SHALL BE INSTALLED FROM THE WATER MAIN TO THE PROPERTY LINE AND SHALL INCLUDE A CURB STOP AND SERVICE BOX AT OR NEAR THE PROPERTY LINE. SERVICES SHALL BE TERMINATED FOR FUTURE CONNECTION BY OTHERS.
3. PROPOSED SEWER SERVICE LATERALS SHALL BE INSTALLED FROM THE SEWER MAIN TO THE PROPERTY LINE AND SHALL BE TERMINATED WITH A WATERTIGHT CAPPED STUB FOR FUTURE CONNECTION BY OTHERS.
4. PROPOSED ELECTRIC CONDUITS SHALL BE INSTALLED TO THE PROPERTY LINE AND SHALL TERMINATE IN A 12" x 12" HANDHOLE (TYPE SD2-031) FOR FUTURE CONNECTION BY OTHERS.
5. PROPOSED COMMUNICATIONS CONDUITS SHALL BE INSTALLED TO THE PROPERTY LINE AND SHALL TERMINATE IN A 12" x 12" HANDHOLE (TYPE SD2-031) FOR FUTURE CONNECTION BY OTHERS.

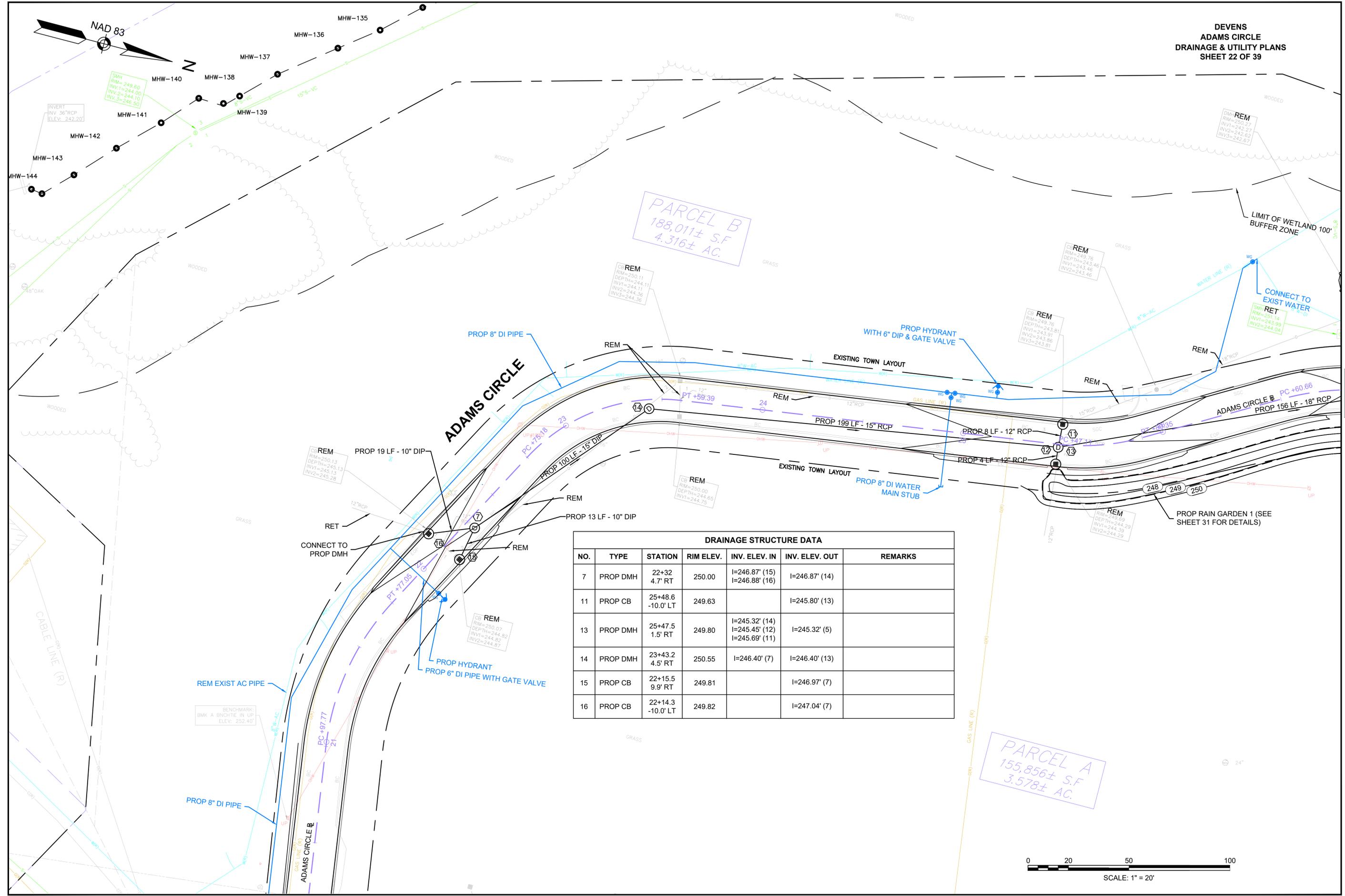


26-99-1600  
NOW OR FORMERLY  
MDFA/BOULDER HILL  
24 CAVITE STREET  
MSRD BOOK 26137 PAGE 3  
PLAN 411 OF 1996  
WORD BOOK

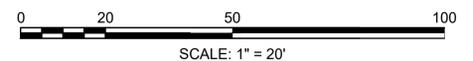
15812.15\_HDU(UTIL).DWG Plotted on 12-Feb-2026 2:59 PM

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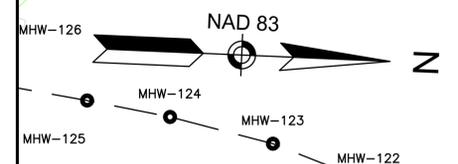
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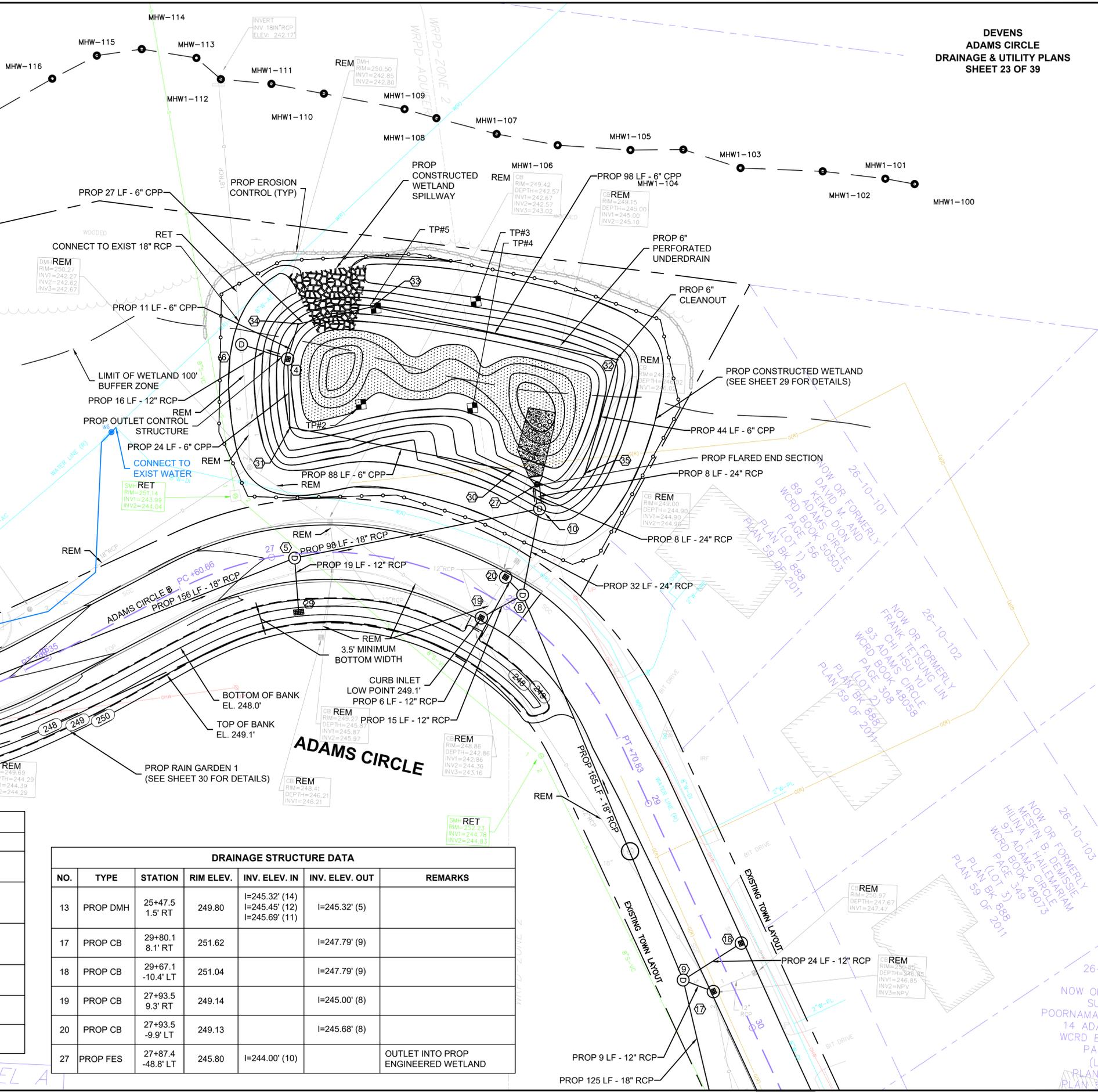
DRAINAGE STRUCTURE DATA						
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
7	PROP DMH	22+32 4.7' RT	250.00	I=246.87' (15) I=246.88' (16)	I=246.87' (14)	
11	PROP CB	25+48.6 -10.0' LT	249.63		I=245.80' (13)	
13	PROP DMH	25+47.5 1.5' RT	249.80	I=245.32' (14) I=245.45' (12) I=245.69' (11)	I=245.32' (5)	
14	PROP DMH	23+43.2 4.5' RT	250.55	I=246.40' (7)	I=246.40' (13)	
15	PROP CB	22+15.5 9.9' RT	249.81		I=246.97' (7)	
16	PROP CB	22+14.3 -10.0' LT	249.82		I=247.04' (7)	



CONTINUED ON  
SHEET NO. 21



DRAINAGE STRUCTURE DATA						
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
4	PROP CB	27+12.9 -78.8' LT	244.87	I=243.50' (31) I=243.50' (34)	I=243.20' (6)	OVERFLOW FROM CONSTRUCTED WETLAND
6	PROP DMH	27+01.9 -86.9' LT	250.08	I=243.00' (4)		CONNECT TO EXIST 18" RCP
29	PROP CO	27+08.5 23.6' RT	248.50		I=245.00' (5)	DROP INLET TYPE A
30	PROP CO	27+79.2 -49.3' LT	246.00		I=243.50' (31)	UNDERDRAIN CLEANOUT
31	PROP CO	27+12 -51.2' LT	246.00	I=243.50' (30)	I=243.50' (4)	UNDERDRAIN CLEANOUT
32	PROP CO	27+90.1 -108.8' LT	247.47	I=243.50' (35)	I=243.50' (33)	UNDERDRAIN CLEANOUT
33	PROP CO	27+33.3 -100.0' LT	246.91	I=243.50' (32)	I=243.50' (34)	UNDERDRAIN CLEANOUT
34	PROP CO	27+16 -92.5' LT	246.52	I=243.50' (33)	I=243.50' (4)	UNDERDRAIN CLEANOUT
35	PROP CO	27+97.6 -62.3' LT	247.01		I=243.50' (32)	UNDERDRAIN CLEANOUT



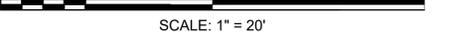
DRAINAGE STRUCTURE DATA						
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
5	PROP DMH	27+09.3 1.7' RT	249.86	I=244.58' (13) I=244.58' (29)	I=244.58' (10)	
8	PROP DMH	28+02.7 -7.6' LT	249.18	I=245.53' (20) I=244.91' (19) I=244.27' (9)	I=244.25' (10)	
9	PROP DMH	29+70.7 17.3' RT	251.34	I=247.71' (18) I=245.12' (2) I=247.64' (17)	I=245.11' (8)	
10	PROP DMH	27+91.7 -40.7' LT	249.76	I=244.07' (8) I=244.07' (5)	I=244.07' (27)	
11	PROP CB	25+48.6 -10.0' LT	249.63		I=245.80' (13)	
12	PROP CB	25+47.3 9.9' RT	249.64		I=245.49' (13)	

DRAINAGE STRUCTURE DATA						
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
13	PROP DMH	25+47.5 1.5' RT	249.80	I=245.32' (14) I=245.45' (12) I=245.69' (11)	I=245.32' (5)	
17	PROP CB	29+80.1 8.1' RT	251.62		I=247.79' (9)	
18	PROP CB	29+67.1 -10.4' LT	251.04		I=247.79' (9)	
19	PROP CB	27+93.5 9.3' RT	249.14		I=245.00' (8)	
20	PROP CB	27+93.5 -9.9' LT	249.13		I=245.68' (8)	
27	PROP FES	27+87.4 -48.8' LT	245.80	I=244.00' (10)		OUTLET INTO PROP ENGINEERED WETLAND

CONTINUED ON  
SHEET NO. 22

CONTINUED ON  
SHEET NO. 20

15812.15\_HDU(UTIL).DWG  
Plotted on 12-Feb-2026 2:59 PM



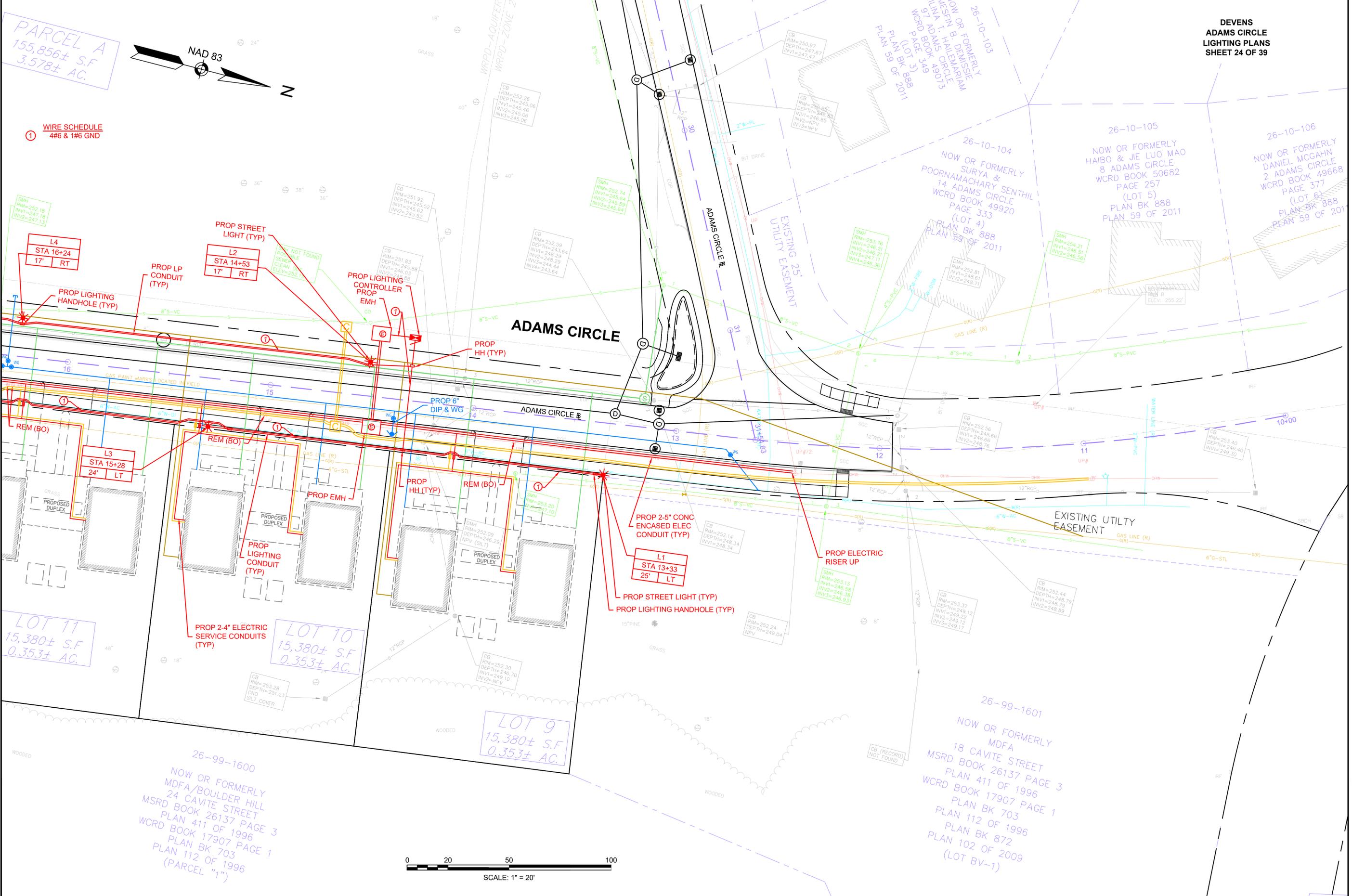
PARCEL A

26-10-101  
NOW OR FORMERLY  
DAVID M. AND  
DAVID M. DION  
WCRD BOOK 888  
PAGE 156  
PLAN 59 OF 2011

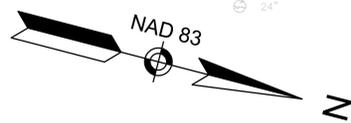
26-10-102  
NOW OR FORMERLY  
FRANK H. AND  
FRANK H. LIN  
WCRD BOOK 48058  
PAGE 308  
PLAN 59 OF 2011

26-10-103  
NOW OR FORMERLY  
HILINA T. DEMISSIE  
HILINA T. HAILEMARIAM  
WCRD BOOK 888  
PAGE 349  
PLAN 59 OF 2011

26-10-104  
NOW OR FORMERLY  
SURYA &  
POORNAMACHARY  
14 ADAMS CIRCLE  
WCRD BOOK 4  
PAGE 333  
(LOT 4)  
PLAN BK 888  
PAGE 333



PARCEL A  
155,856± S.F.  
3.578± AC.



① WIRE SCHEDULE  
4#6 & 1#6 GND

CONTINUED ON  
SHEET NO. 23

REM (BO)

L3  
STA 15+28  
24' LT

REM (BO)

LOT 11  
15,380± S.F.  
0.353± AC.

PROP 2.4" ELECTRIC  
SERVICE CONDUITS  
(TYP)

LOT 10  
15,380± S.F.  
0.353± AC.

LOT 9  
15,380± S.F.  
0.353± AC.

0 20 50 100  
SCALE: 1" = 20'

26-99-1601  
NOW OR FORMERLY  
MDFA  
18 CAVITE STREET  
MSRD BOOK 26137 PAGE 3  
PLAN 411 OF 1996  
WCRD BOOK 17907 PAGE 1  
PLAN BK 703  
PLAN 112 OF 1996  
PLAN BK 872  
PLAN 102 OF 2009  
(LOT BV-1)

26-10-104  
NOW OR FORMERLY  
SURYA &  
POORNAMACHARY SENTHIL  
14 ADAMS CIRCLE  
WCRD BOOK 49920  
PAGE 333  
(LOT 4)  
PLAN BK 888  
PLAN 59 OF 2011

26-10-105  
NOW OR FORMERLY  
HAIBO & JIE LUO MAO  
8 ADAMS CIRCLE  
WCRD BOOK 50682  
PAGE 257  
(LOT 5)  
PLAN BK 888  
PLAN 59 OF 2011

26-10-106  
NOW OR FORMERLY  
DANIEL MCGAHN  
2 ADAMS CIRCLE  
WCRD BOOK 49668  
PAGE 377  
(LOT 6)  
PLAN BK 888  
PLAN 59 OF 2011



① WIRE SCHEDULE  
4#6 & 1#6 GND

PARCEL A  
155,856± S.F.  
3.578± AC.

ADAMS CIRCLE

L7  
STA 19+33  
20' LT

L6  
STA 18+34  
18' RT

L5  
STA 17+33  
22' LT

L4  
STA 16+24  
17' RT

L3  
STA 15+28  
24' LT

L2  
STA 14+53  
17' RT

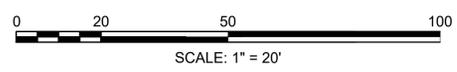
LOT 14  
15,388± S.F.  
0.353± AC.

LOT 13  
15,380± S.F.  
0.353± AC.

LOT 12  
15,380± S.F.  
0.353± AC.

LOT 11  
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0.353± AC.

LOT 10  
15,380± S.F.  
0.353± AC.



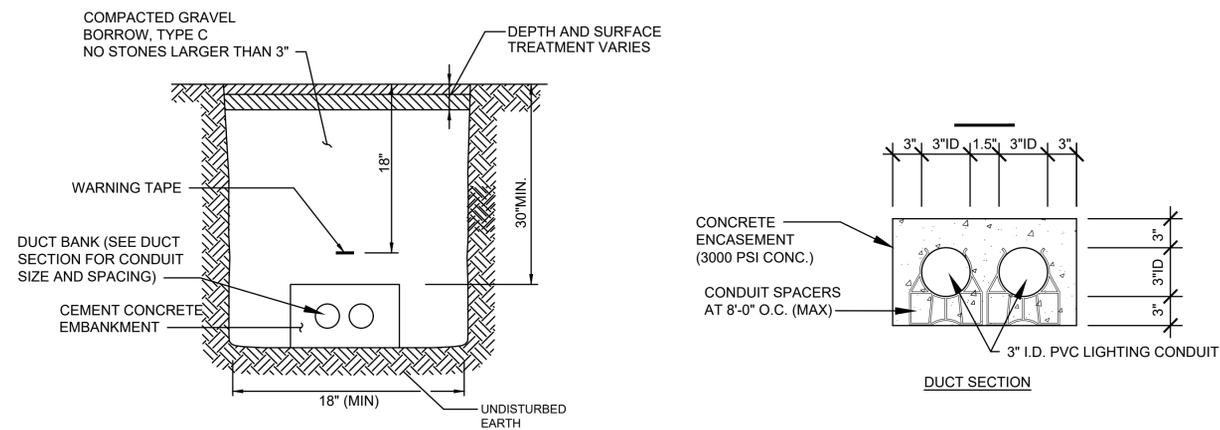
26-99-1600  
NOW OR FORMERLY  
MDFA/BOULDER HILL  
24 CAVITE STREET  
MSRD BOOK 26137 PAGE 3  
PLAN 411 OF 1996  
WORD BOOK

### GENERAL NOTES

- ALL WORK SHALL BE IN ACCORDANCE WITH THE MASSACHUSETTS STATE ELECTRICAL CODE 12.00 CMR, DEVENS INSPECTIONAL STANDARDS AND LOCAL CODES. PAY FOR AND OBTAIN ALL PERMITS.
- ALL MATERIALS AND INSTALLATION FOR ELECTRICAL SERVICE SHALL CONFORM TO THE REQUIREMENTS OF THE SERVING UTILITY. PAY FOR AND OBTAIN ALL PERMITS/FEEES.
- ALL MATERIAL SHALL BE NEW. ALL LIGHTING WORK SHALL CONFORM WITH SECTION 800 OF THE STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, MASSACHUSETTS HIGHWAY DEPARTMENT, EXCEPT WHERE OTHERWISE INDICATED
- LIGHT POLE FOUNDATIONS SHALL CONFORM TO THE RELEVANT PROVISIONS OF SECTION 800 OF THE MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES EXCEPT AS INDICATED. PROVIDE 1/2" BOND BREAKER BETWEEN FOUNDATION AND CONCRETE WALK. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO CONSTRUCTION.
- HANDHOLES SHALL CONFORM TO THE RELEVANT PROVISIONS OF SECTION 800 OF THE MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO CONSTRUCTION.
- UNDERGROUND RACEWAY INSTALLATION SHALL CONFORM TO SECTION 800. ROADWAY CROSSING SHALL BE GALVANIZED RIGID STEEL (RM) BURIED 36" BELOW TOP OF ROADWAY AND TERMINATE IN A HANDHOLE ON EACH SIDE OF CROSSING. ALL OTHER RACEWAYS SHALL BE NON-METALLIC (NM) AND BURIED A MINIMUM OF 30" BELOW TOP OF SIDEWALK.
- ALL LIGHT POLES SHALL BE ANCHOR TYPE WITHOUT BREAKAWAY COUPLINGS.
- ALL SPARE RACEWAYS SHALL BE FURNISHED WITH A PULL ROPE.
- THE TOP POLE BRACKET AND ARM SHALL BE ORIENTED 90 DEGREES TO THE BASELINE OF ROADWAY. THE MID POLE BRACKET SHALL BE ORIENTED 180 DEGREES OPPOSITE THE TOP POLE BRACKET. THE CONTRACTOR SHALL COORDINATE POLE BASE PLATE, ANCHOR BOLT PATTERN CONDUIT ENTRY AND FOUNDATION PLACEMENT TO OBTAIN THE REQUIRED ORIENTATION.
- SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL FOR ALL ELECTRICAL AND LIGHTING MATERIALS, EQUIPMENT, COMPONENTS AND TEST RESULTS AND SHALL INCLUDE MANUFACTURER'S PRODUCT CATALOG DATA.
- FINAL POSITION OF LIGHT POLES AND HANDHOLES SHALL NOT BE LOCATED WITHIN THE SIDEWALK TRIM BAND OR TREE PLANTING AREAS. HANDHOLES SHALL NOT BE PLACED IN ROADWAYS, SIDEWALK ACCESSIBILITY RAMPS OR DRIVEWAYS.
- WHERE REQUIRED TO AVOID EXISTING UTILITIES, THE CONTRACTOR SHALL BE PERMITTED IN THE FIELD TO ADJUST THE LOCATION OF LIGHT POLES UP TO 1'-6" IN ANY DIRECTION EXCEPT TOWARD THE CURB. ADJUSTMENTS BEYOND THESE LIMITS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- WHERE REQUIRED TO AVOID EXISTING UTILITIES, THE CONTRACTOR SHALL BE PERMITTED IN THE FIELD TO ADJUST THE LOCATION OF HANDHOLES UP TO 5'-0" IN ANY DIRECTION FROM THAT INDICATED. ADJUSTMENTS BEYOND THESE LIMITS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- WHERE CONDUIT INSTALLATION, ADJUSTED FOR EXISTING UTILITIES CANNOT BE SO INSTALLED TO MAINTAIN A MAXIMUM OF 270 DEGREES OF BENDS BETWEEN PULL POINTS (HANDHOLES OR POLE BASES), THE CONTRACTOR SHALL INSTALL AN INTERMEDIATE HANDHOLE.

### ABBREVIATIONS (LIGHTING PLANS)

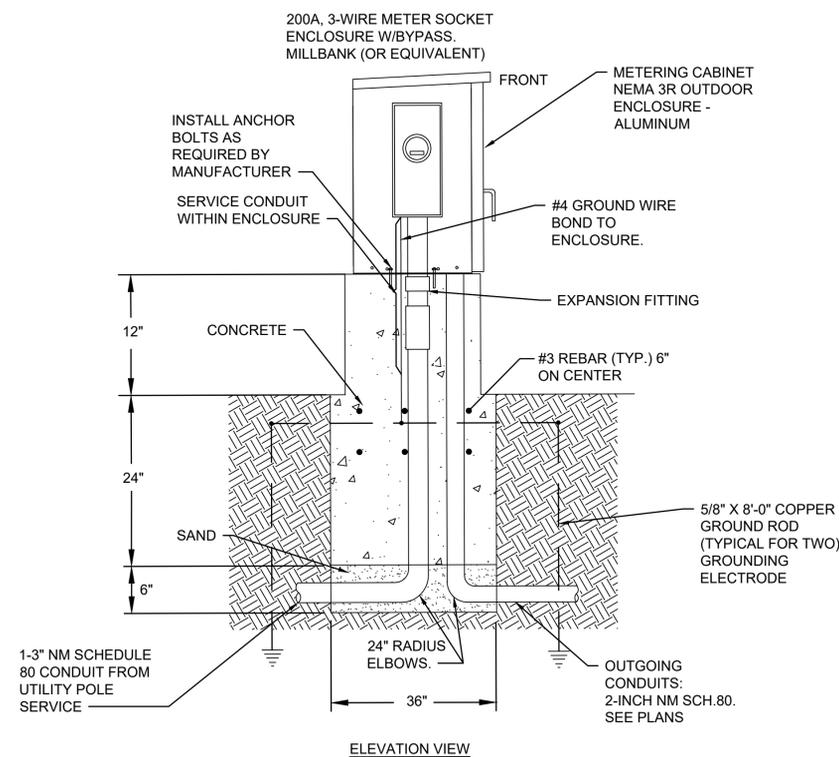
C	CONDUIT
CU	COPPER
EX	EXISTING
HH	HANDHOLE
LED	LIGHT EMITTING DIODE
LP	LIGHT POLE
MH	MOUNTING HEIGHT
PB	PULLBOX
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED



- NOTES:**
- BURIAL DEPTHS FOR CONDUIT SHALL BE MAINTAINED NOT LESS THAN 30" FROM THE TOP OF THE CONCRETE ENCASEMENT TO GRADE DURING ALL PHASES OF CONSTRUCTION.
  - USE METALLIC TRACING/WARNING TAPE OVER ALL DUCTS.
  - MULTIPLE DUCT BANKS LAID WITHIN THE SAME TRENCH SHALL BE SEPARATED BY AT LEAST A SHEET OF PLYWOOD.

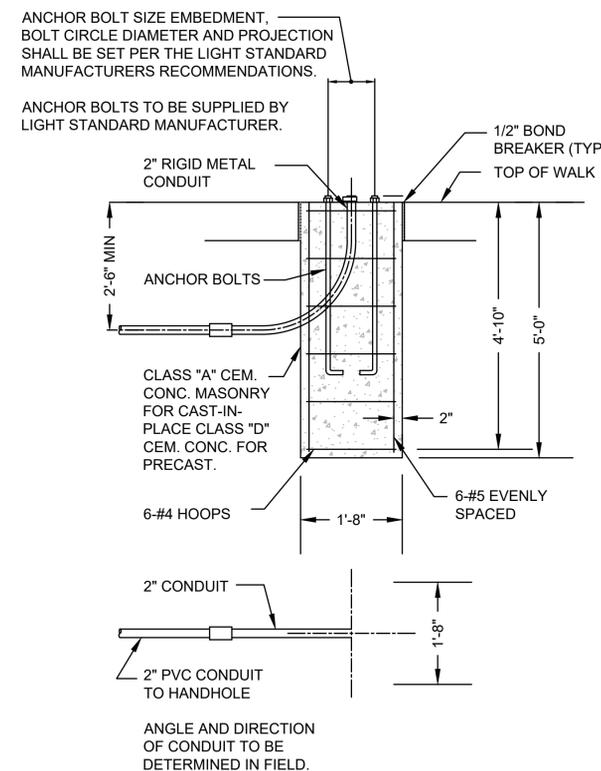
### TYPICAL LIGHTING DUCT BANK TRENCH SECTION

SCALE: NTS



### STREET LIGHT CONTROLLER INSTALLATION DETAIL

SCALE: N.T.S.

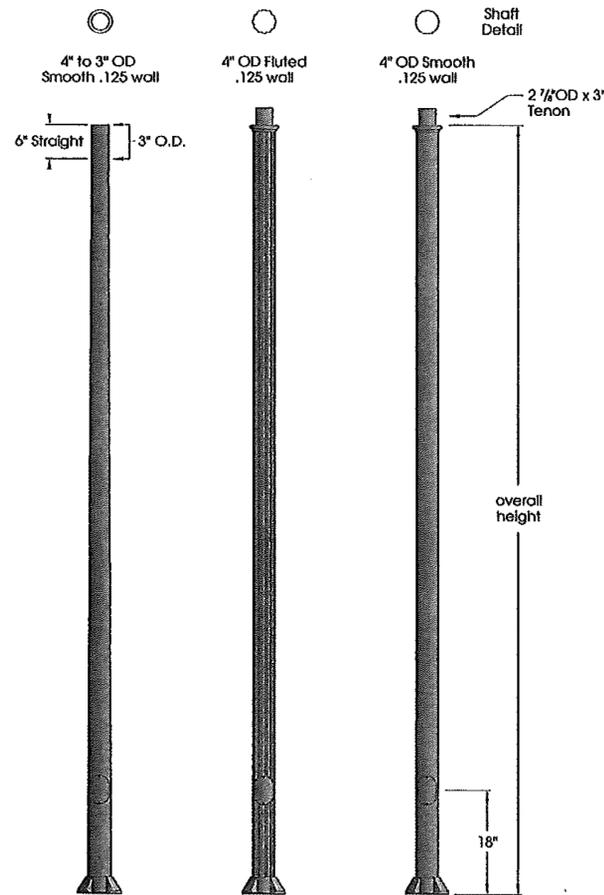


### STREET LIGHT STANDARD FOUNDATION

SCALE: N.T.S.

# 4" Extruded Series

U.1.11.16



APRT4	APFS4	APRS4	Overall Height	Finish	Accessories
APRT4-08	APFS4-08	APRS4-08	8'-0"	BLK	4-COV
APRT4-10	APFS4-10	APRS4-10	10'-0"	CLB	BA18
APRT4-12	APFS4-12	APRS4-12	12'-0"	GBZ	BA24
APRT4-14	APFS4-14	APRS4-14	14'-0"	GRN	FPH-4
APRT4-16	APFS4-16	APRS4-16	16'-0"	GTB	FPH-5
				TBK	GFC1
				TGR	

See next page for more complete accessory options

800 364 0098 • Fax: 281 997 5441 • www.amerlux.com

Amerlux reserves the right to change details that do not affect overall function and performance.

**Features:**  
7 1/2" square cast aluminum base flange

Choice of extruded shafts (.125 wall)  
• 4" to 3" tapered smooth  
• 4" OD fluted (12 flutes)  
• 4" OD smooth round

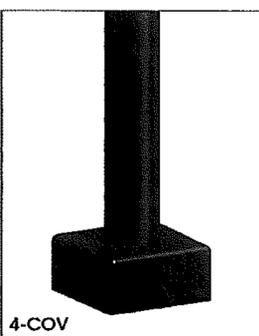
Extruded shaft is circumferentially welded to the base

A 2x4" handhole with curved lap style aluminum door and two stainless steel self-lapping screws is standard. A grounding provision incorporating a tapped 1/4" 20NC hole is provided opposite the handhole.

Ground lug provided inside base

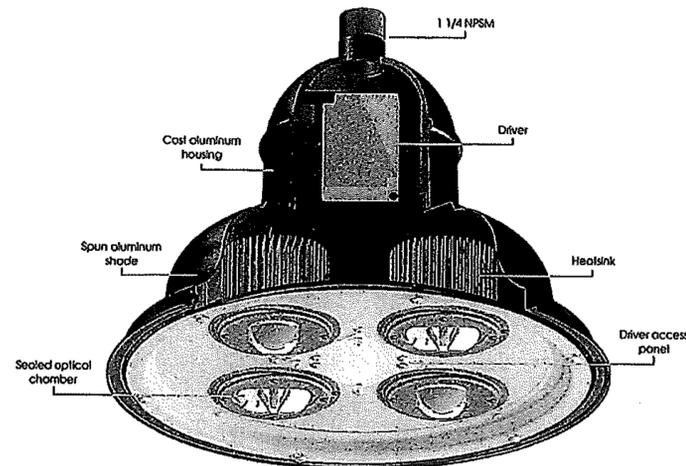
**Materials:**  
Base - Cast aluminum (356-T6)  
Shaft - Extruded Aluminum (6063-T6)  
- Tapered Aluminum (6063-T6)  
Anchor Bolts - Hot dipped galvanized steel

**Finish:**  
Premium quality thermoset polyester powdercoat for a durable finish.

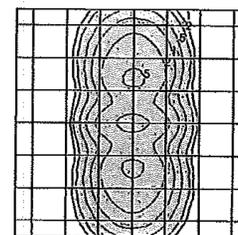


4-COV

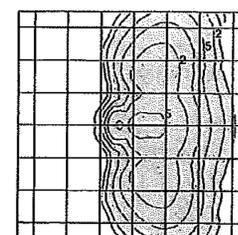
Part String



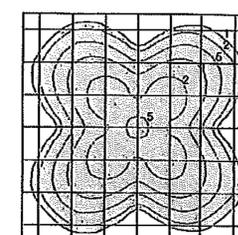
### Typical Photometry



DPS-X/12/3H  
Scale: 1 Unit = 12 Ft.  
Mounting Height = 12.00 Ft

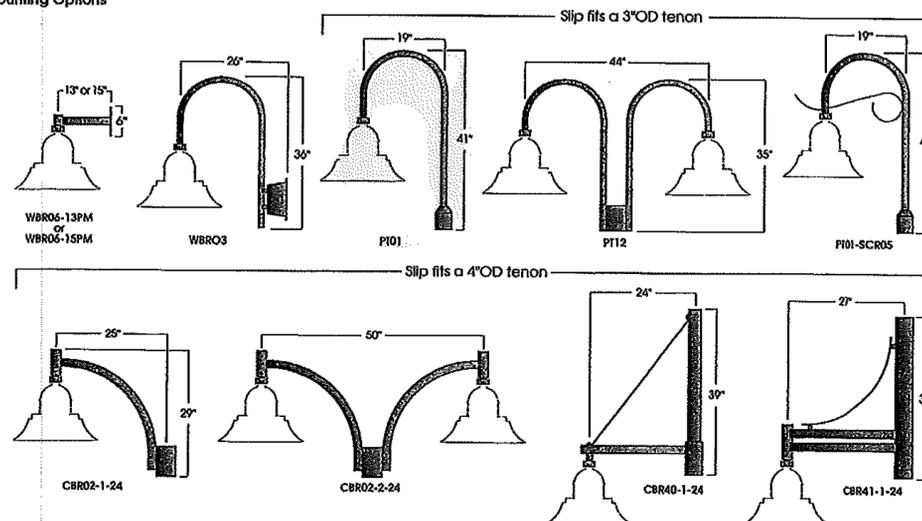


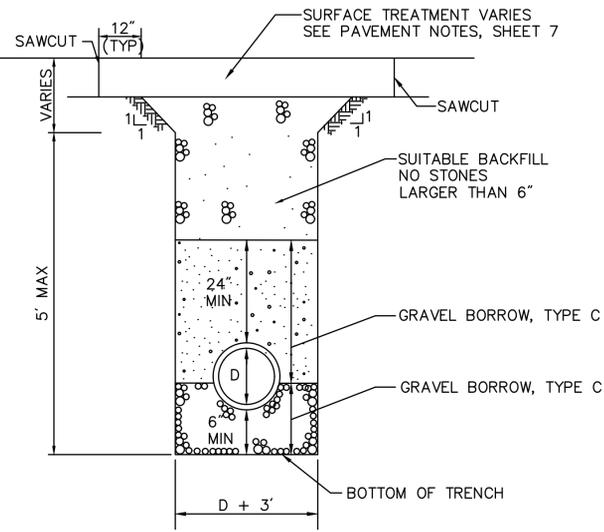
DPS-X/13/3H  
Scale: 1 Unit = 12 Ft.  
Mounting Height = 12.00 Ft



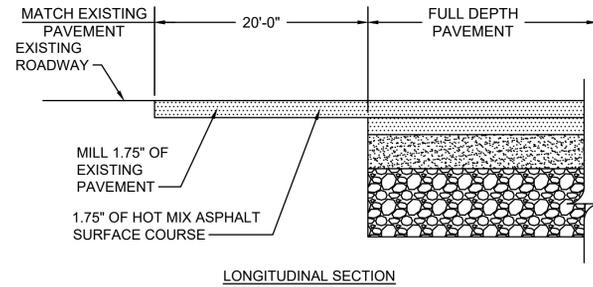
DPS-X/15/3H  
Scale: 1 Unit = 12 Ft.  
Mounting Height = 12.00 Ft

### Mounting Options

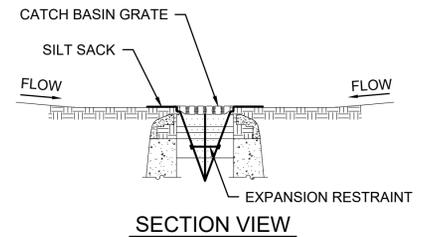
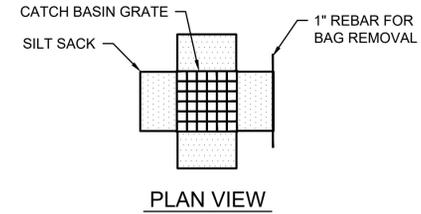




**DRAINAGE/SEWER TRENCH DETAIL - FULL DEPTH PAVEMENT**  
SCALE: N.T.S.

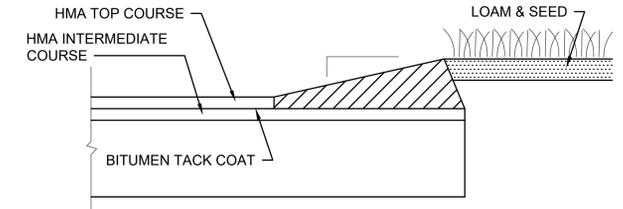


**FULL DEPTH PAVEMENT TRANSITION**  
SCALE: N.T.S. DWG: PVMT-03 DATE: OCT. 2012



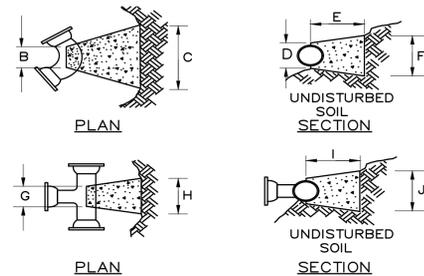
- NOTES:**
1. INSTALL SILT SACK IN EXISTING CATCH BASINS, BEFORE COMMENCING WORK, AND IN NEW CATCH BASINS IMMEDIATELY AFTER INSTALLATION OF STRUCTURE. MAINTAIN UNTIL BINDER COURSE PAVING IS COMPLETE OR A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.
  2. GRATE TO BE PLACED OVER SILT SACK.
  3. SILT SACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED

**INLET PROTECTION - SILT SACK IN CATCH BASIN**  
SCALE: N.T.S.



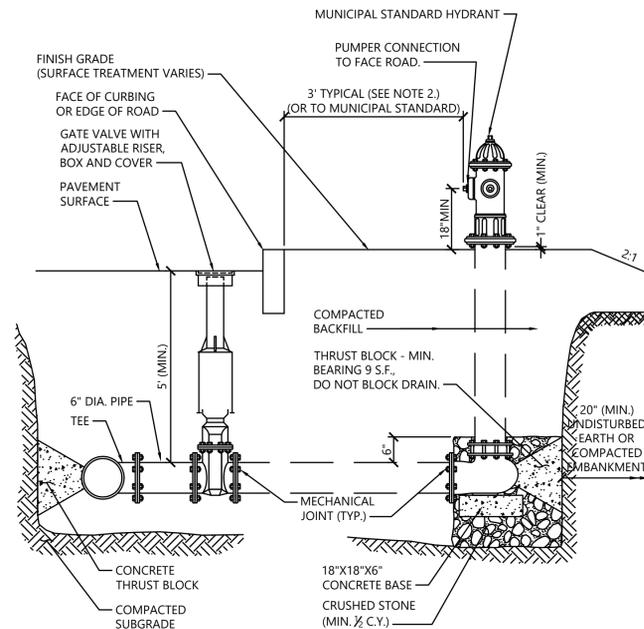
**HMA BERM TYPE A-MODIFIED (USED WITH RECLAIM)**  
SCALE: N.T.S.

BENDS						BENDS					
	B	C	D	E	F		B	C	D	E	F
6"	11-1/4"	8"	15"	12"	24"	6"	45"	8"	30"	12"	14"
8"	22-1/2"	"	19"	"	13"	8"	90"	"	30"	"	27"
10"	11-1/4"	"	20"	"	12"	8"	45"	"	38"	"	36"
12"	22-1/2"	"	22"	"	17"	12"	90"	"	40"	"	40"
12"	11-1/4"	"	35"	"	15"	12"	45"	"	60"	"	52"
12"	22-1/2"	"	35"	"	25"	12"	90"	"	60"	"	52"
TEES						TEES					
	G	H	I	J		G	H	I	J		
6" x 6" x 6"	12"	24"	24"	18"		12" x 12" x 6"	12"	24"	24"	12"	
8" x 8" x 6"	"	"	"	24"		12" x 12" x 8"	"	"	"	24"	
8" x 8" x 8"	"	"	"	24"		12" x 12" x 12"	"	36"	"	36"	



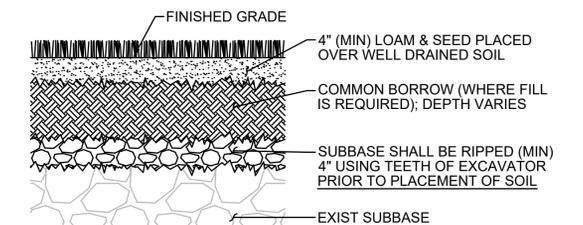
- NOTES:**
1. PROVIDE BLOCKS FOR TAPPING SLEEVES, DEAD ENDS, GATE VALVES AND VERTICAL BENDS, SAME SIZE AS REQUIRED FOR TEES.
  2. PROVIDE ANCHOR RODS AT VERTICAL BENDS AND GATE VALVES
  3. CONCRETE SHALL NOT BE PLACED AGAINST PIPE BEYOND FITTING.

**CONCRETE THRUST BLOCK**  
SCALE: N.T.S.



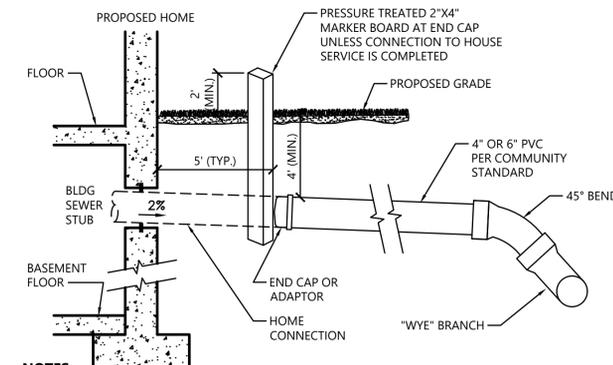
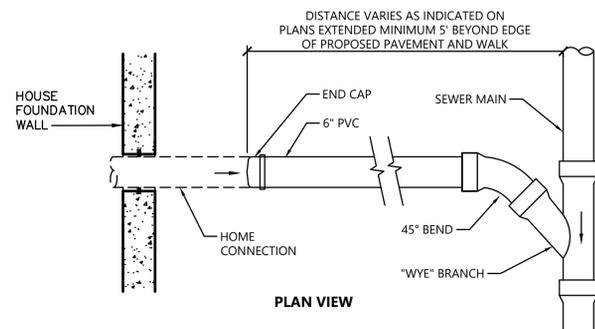
- NOTES:**
1. CONCRETE THRUST BLOCKS TO BE USED ONLY WHERE THEY CAN BEAR ON UNDISTURBED EARTH AS SHOWN. USE CLAMPS AND TIE RODS OR OTHER ACCEPTABLE METHOD OF JOINT RESTRAINT WHERE SOIL CONDITIONS PROHIBIT THE USE OF THRUST BLOCKS.
  2. HYDRANT IN SIDEWALK AREAS TO BE LOCATED TO PROVIDE MINIMUM CLEAR SIDEWALK PASSAGE WIDTH OF 4 FEET AT HYDRANT.
  3. A 36-INCH CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT UNLESS OTHERWISE APPROVED BY DEVENS WATER DEPARTMENT.

**Hydrant Construction**  
N.T.S. Source: VHB REV 12/19 LD\_250



- NOTE:**
- ALL EXISTING ASPHALT SHALL BE STRIPPED AND REMOVED PROPT TO TILLING. ASPHALT SHALL NOT BE MIXED WITH THE SUBBASE.

**LAWN IN FORMER PAVED AREAS**  
SCALE: N.T.S.



**NOTES**

1. PIPE AND FITTING MATERIALS TO BE PVC SDR35, MEETING ASTM 3034 FOR USE WITH SANITARY SEWER SYSTEMS.
2. ADAPTOR TO BE PREMANUFACTURED UNIT FOR CONNECTION OF PIPE TYPES

**Typical Sewer Wye Connection (Residential)**

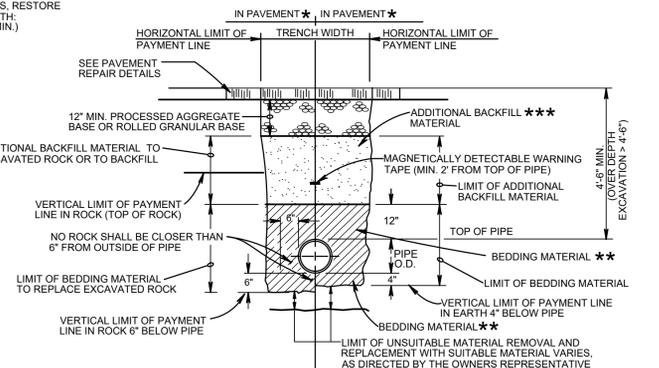
N.T.S. Source: VHB 1/16 LD\_223

\* IN DISTURBED GRASS AREAS, RESTORE TO ORIGINAL CONDITION WITH: 4" LOAM FOR ROADSIDES (MIN.) AND SEEDING

REFER TO THE STANDARD DETAILS FOR TEMPORARY AND PERMANENT PAVEMENT REPAIR

PIPE SIZE	TRENCH WIDTH
6"	4'-0"
8"	4'-0"
12"	4'-0"
16"	4'-0"
20"	5'-0"
24"	5'-0"
30"	6'-0"
36"	6'-0"

NOTE: IF TRENCH BOXES ARE USED ADD 2" TO ALL TRENCH WIDTHS

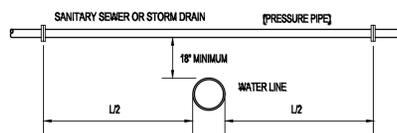


\*\* FOR DIP: NO STONES LARGER THAN 4", NO STONES WITHIN 4" OF PIPE, THOROUGHLY COMPACTED  
FOR HDPE: NO STONES LARGER THAN 3/4", NO STONES WITHIN 4" OF PIPE, THOROUGHLY COMPACTED

\*\*\* (NO STONES LARGER THAN 12") (COMPACTED IN 12" LIFTS)

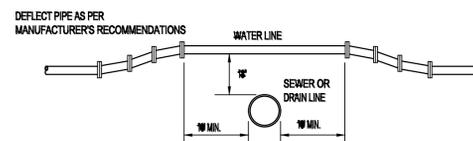
**Water Trench**

N.T.S. Source: VHB



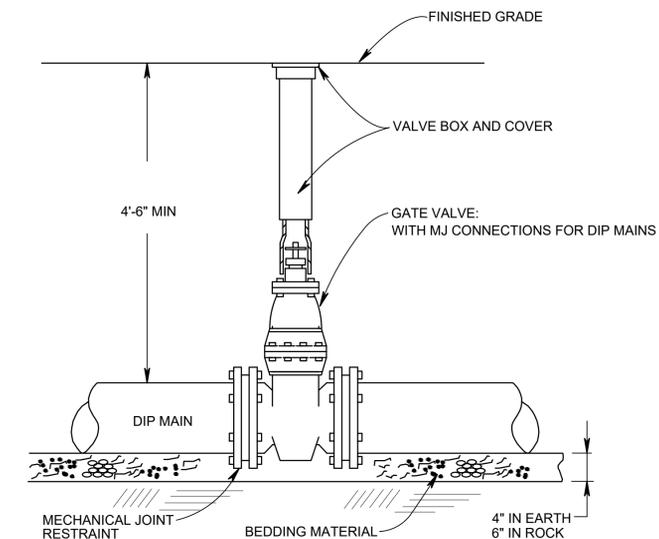
NOTE:  
WHERE WATER LINE PASSES BENEATH SEWER LINE OR STORM DRAIN, THE JOINTS OF THE PIPE SHALL BE A MIN. OF 10' FROM THE POINT OF CROSSING.

**CROSSING OF WATER LINE UNDER SANITARY SEWER OR STORM DRAIN**



NOTE:  
FOR ANY CONDITIONS OTHER THAN SHOWN ABOVE THE FOLLOWING REQUIREMENTS SHALL BE MET. THE JOINTS OF THE SANITARY SEWER OR STORM DRAIN SHALL BE A MINIMUM OF 10' FROM THE POINT OF CROSSING.

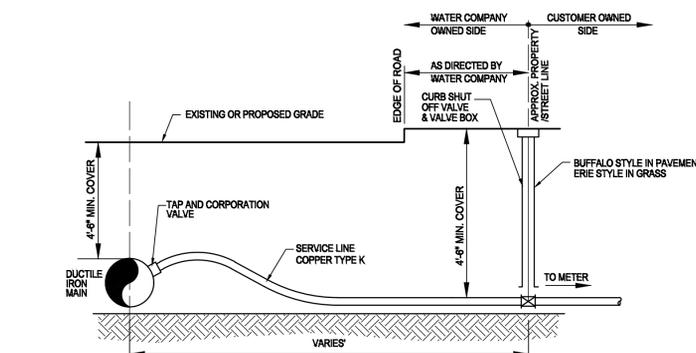
**CROSSING OF WATER LINE OVER SANITARY SEWER OR STORM DRAIN**



NOTE: ONLY INSTALLED ON MAINS 8" AND SMALLER

**Gate Valve & Gate Box**

N.T.S. Source: VHB

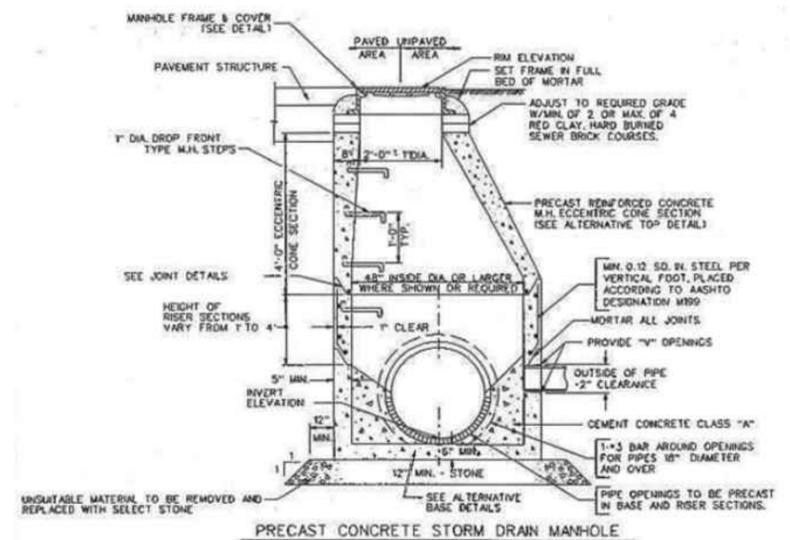


**Residential Water Service Connection**

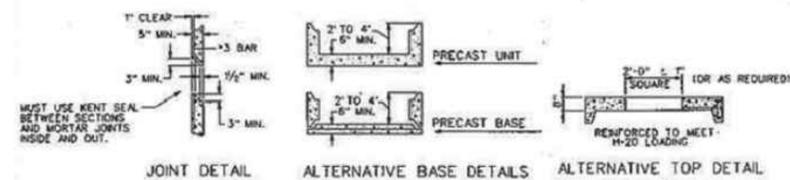
N.T.S. Source: VHB

**Utility Crossing**

N.T.S. Source: VHB

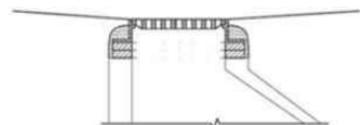


PRECAST CONCRETE STORM DRAIN MANHOLE

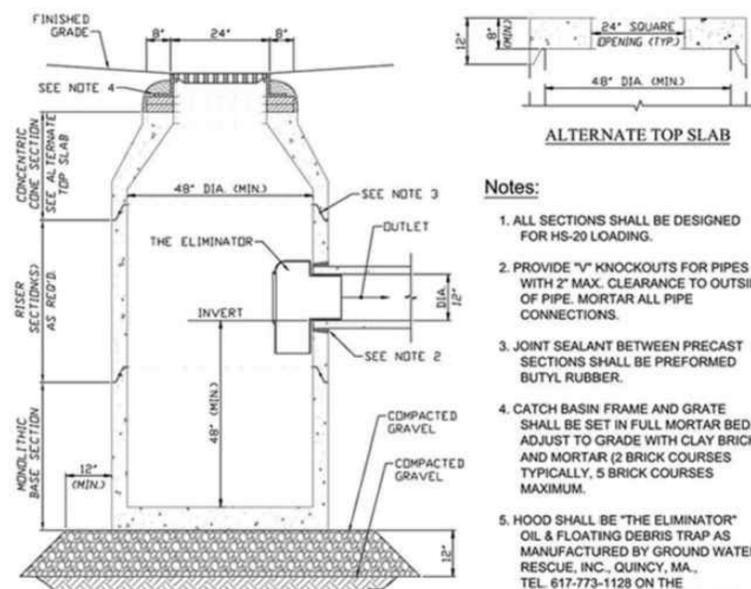


NOTE: THIS DETAIL CAN BE FOUND IN THE DEVENS ENTERPRISE COMMISSION 974 CMR 2.00 SUBDIVISION 2.09: APPENDIX B FIGURE I

PRECAST CONCRETE MANHOLE  
N.T.S.



ALTERNATE ECCENTRIC CONE SECTION

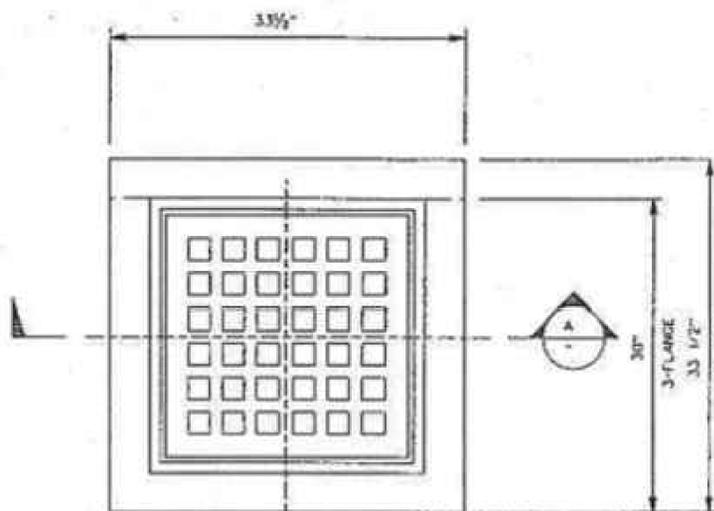


CATCH BASIN (CB) WITH TRAP

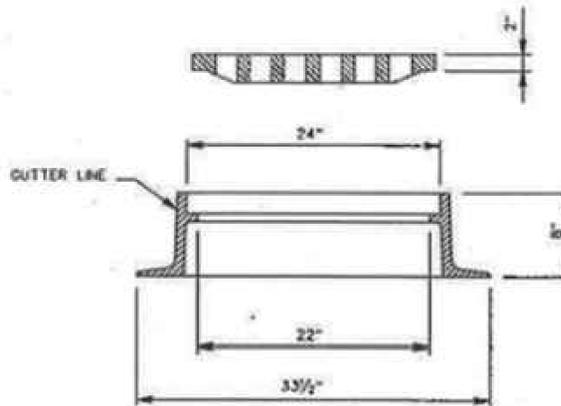
NOTE: THIS DETAIL CAN BE FOUND IN THE DEVENS ENTERPRISE COMMISSION 974 CMR 2.00 SUBDIVISION 2.09: APPENDIX B FIGURE H

Notes:

1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
2. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).
5. HOOD SHALL BE "THE ELIMINATOR" OIL & FLOATING DEBRIS TRAP AS MANUFACTURED BY GROUND WATER RESCUE, INC., QUINCY, MA., TEL. 617-773-1128 ON THE WEB @ WWW.KLEANSTREAM.COM or APPROVED EQUAL



PLAN

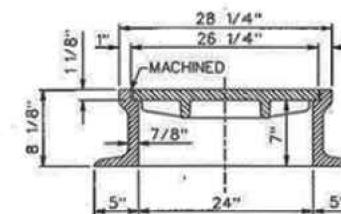
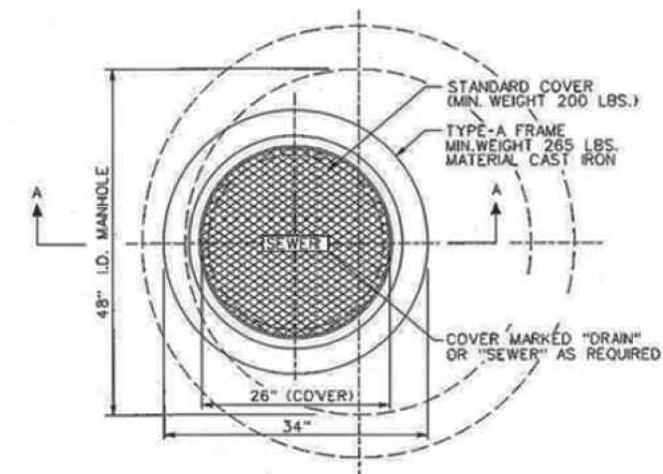


SECTION A-A

LEBARON FOUNDRY CAT. NO. LF248-2 OR APPROVED EQUAL (FOUR OR THREE FLANGE DEPENDANT UPON CONSTRUCTION)

CATCH BASIN FRAME AND GRATE DETAIL  
N.T.S.

NOTE: THIS DETAIL CAN BE FOUND IN THE DEVENS ENTERPRISE COMMISSION 974 CMR 2.00 SUBDIVISION 2.09: APPENDIX B FIGURE F



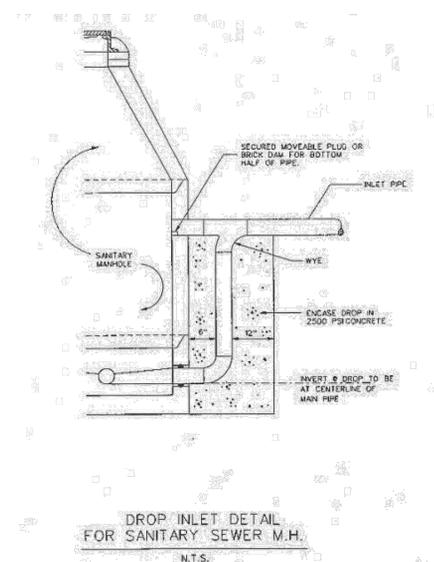
SECTION A-A

STANDARD MANHOLE FRAME & COVER  
N.T.S.

NOTE: THIS DETAIL CAN BE FOUND IN THE DEVENS ENTERPRISE COMMISSION 974 CMR 2.00 SUBDIVISION 2.09: APPENDIX B FIGURE J

974 CMR: DEVENS ENTERPRISE COMMISSION

2.09: Appendix B - Figure K-1

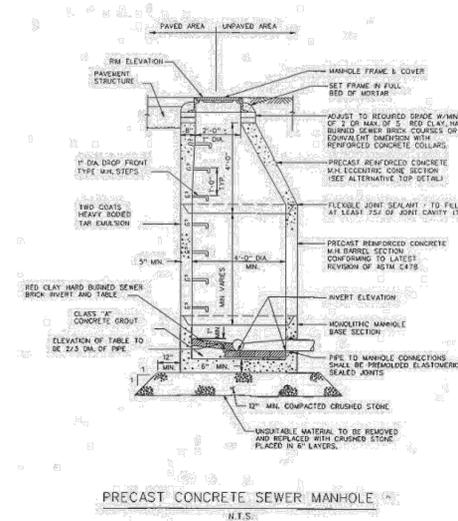


Note: Contact Devens Utilities Department for additional details/requirements.

NOTE: THIS DETAIL CAN BE FOUND IN THE DEVENS ENTERPRISE COMMISSION 974 CMR 2.00 SUBDIVISION 2.09: APPENDIX B FIGURE K-1

974 CMR: DEVENS ENTERPRISE COMMISSION

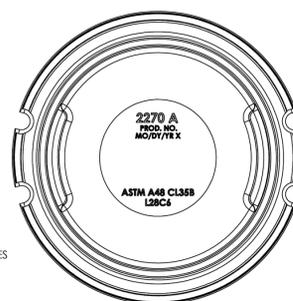
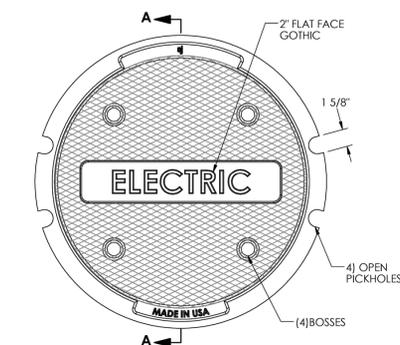
2.09: Appendix B - Figure K-2



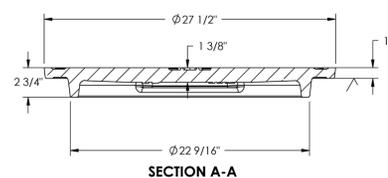
Note: Contact Devens Utilities Department for additional details/requirements.

NOTE: THIS DETAIL CAN BE FOUND IN THE DEVENS ENTERPRISE COMMISSION 974 CMR 2.00 SUBDIVISION 2.09: APPENDIX B FIGURE K-2

2270 Cover



BOTTOM VIEW



SECTION A-A



**Product Number**  
00227029

**Design Features**

- Materials  
Gray Iron (CL35B)
- Design Load  
Extra Heavy Duty
- Open Area  
n/a
- Coating  
Undipped
- √ Designates Machined Surface

**Certification**

- ASTM A48
- Country of Origin: USA

**Drawing Revision**

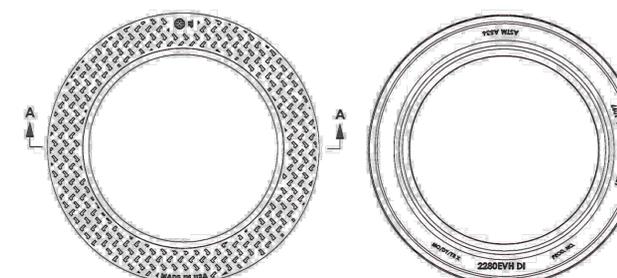
3/9/2010 Designer: JJJ  
9/10/2013 Revised By: DAE

**Disclaimer**  
Weights (Bskg), dimensions (inch/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

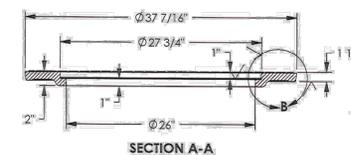
CONFIDENTIAL: This drawing is the property of EJ Group, Inc. and embodies confidential information, registered marks, patents, trade secret information, and/or know-how that is the property of EJ Group, Inc. All rights reserved.

**Contact**  
800 626 4653  
ejco.com

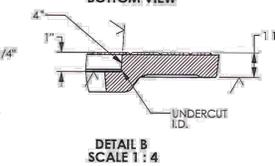
2280EVH Cover



BOTTOM VIEW



SECTION A-A



DETAIL B  
SCALE 1 : 4



**Product Number**  
00228061

**Design Features**

- Materials  
Ductile Iron (70-60-05)
- Design Load  
Heavy Duty
- Open Area  
n/a
- Coating  
Undipped
- √ Designates Machined Surface

**EST WT:**  
165 LBS

**Certification**

- ASTM A536
- Country of Origin: USA

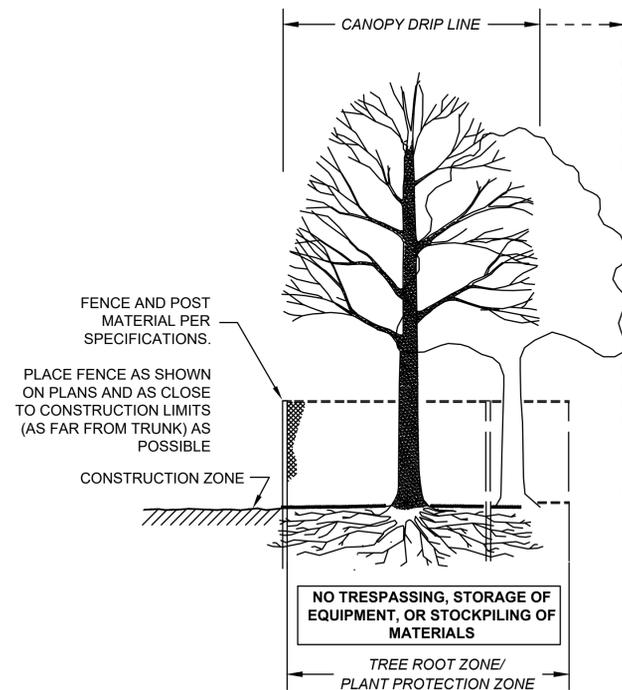
**Drawing Revision**

10/29/2009 Designer: DEW  
05/24/2012 Revised By: DEF

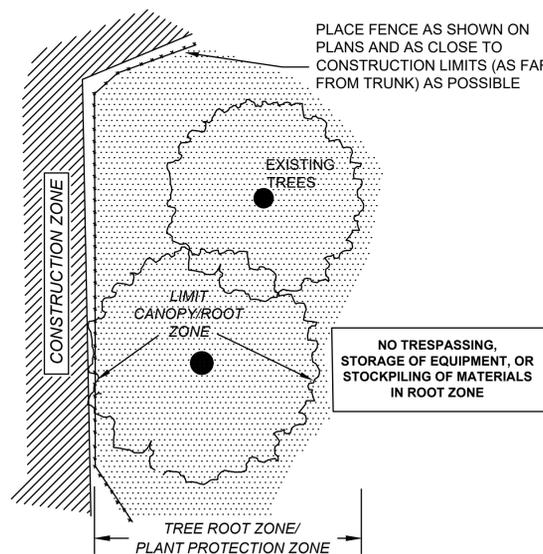
**Disclaimer**  
Weights (Bskg), dimensions (inch/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

CONFIDENTIAL: This drawing is the property of EJ Group, Inc. and embodies confidential information, registered marks, patents, trade secret information, and/or know-how that is the property of EJ Group, Inc. All rights reserved.

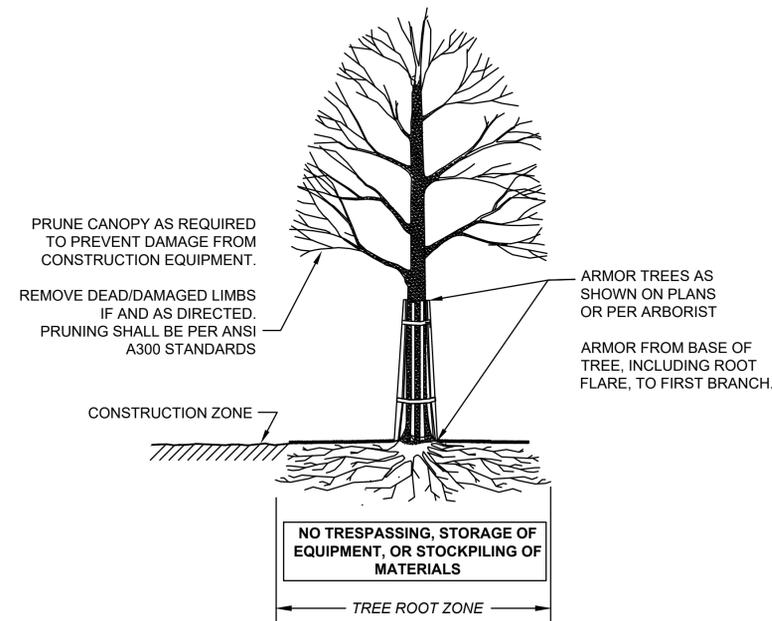
**Contact**  
800 626 4653  
ejco.com



SECTION - FENCE PROTECTION OF ROOT ZONE



PLAN VIEW - FENCE PROTECTION OF ROOT ZONE

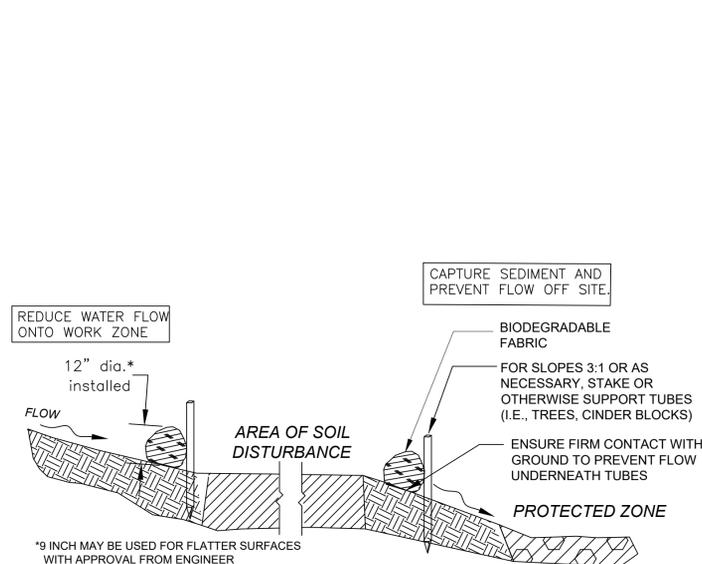


SECTION - TRUNK ARMORING & PRUNING

TREE PROTECTION TRUNK

TREE PROTECTION ROOT ZONE

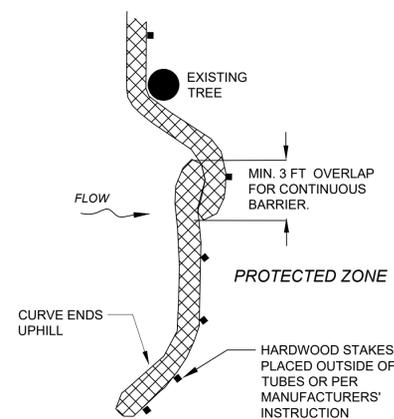
NOT TO SCALE



SECTION

SEDIMENT BARRIERS - COMPOST FILTER TUBES

NOT TO SCALE



PLACE TUBE ALONG CONTOURS AND PERPENDICULAR TO FLOW.

PLACE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE

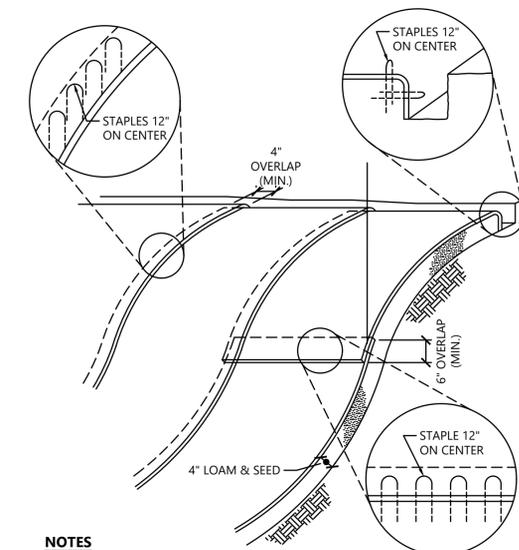
ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

PLACE STAKES AS NEEDED TO SECURE TUBES IN PLACE.

PLAN VIEW

SEDIMENT BARRIERS

NOT TO SCALE



NOTES

- BEGIN AT THE TOP OF BLANKET INSTALLATION AREA BY ANCHORING BLANKET IN A 6" DEEP TRENCH BACKFILL AND COMPACT TRENCH AFTER STAPLING.
- THE EDGES OF BLANKETS MUST BE FASTENED WITH APPROX. 6 INCH OVERLAP WHERE 2 OR MORE STRIP WIDTHS ARE REQUIRED.
- WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE UPPER BLANKET END OVER LOWER END WITH 6 INCH (MIN.) OVERLAP AND STAPLE BOTH TOGETHER.
- METHOD OF INSTALLATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS.
- EROSION CONTROL BLANKETS SHALL BE 100% BIODEGRADABLE WITH MINIMUM 1/4" OPENINGS.
- ANCHORING DEVICES SHALL CONSIST OF MINIMUM 8" BIO-DEGRADABLE STAKES.
- EROSION CONTROL BLANKETS SHALL BE USED IN ALL AREAS WHERE SLOPES EXCEED 3:1.

Stabilized Turf Mat

N.T.S.

Source: VHB

REV

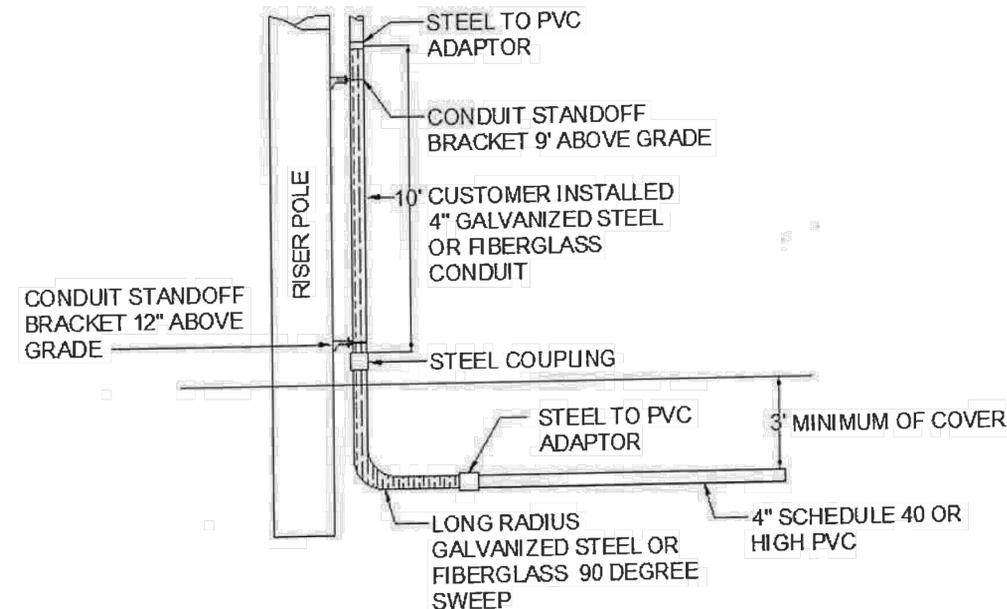
10/20

LD\_680



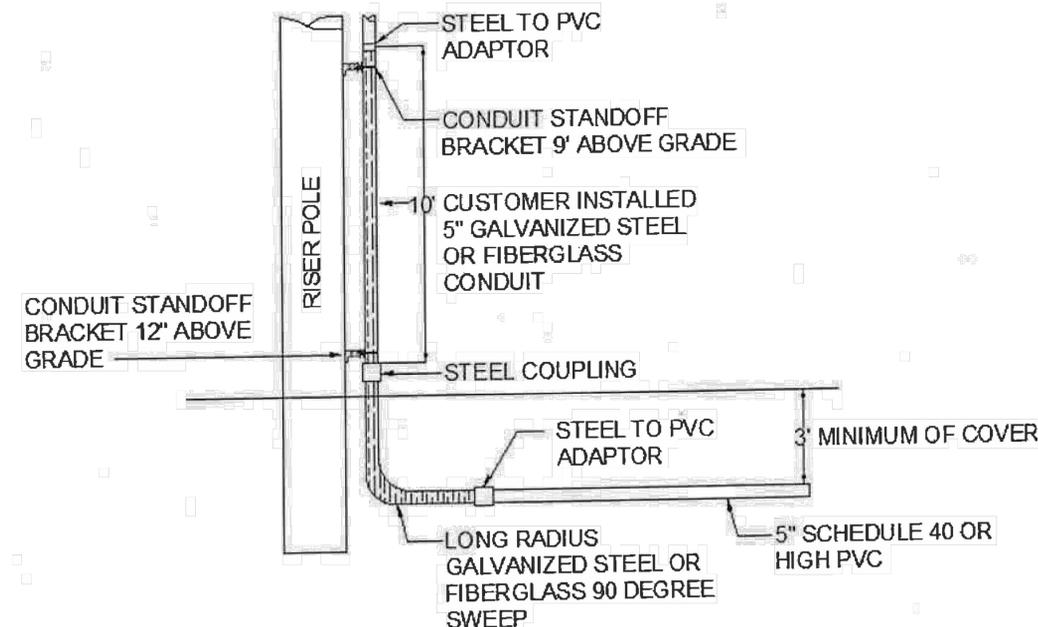
**Appendix O- Riser Pole Specification (continued)**

**SINGLE PHASE PRIMARY RISER  
- 4" CONDUIT**



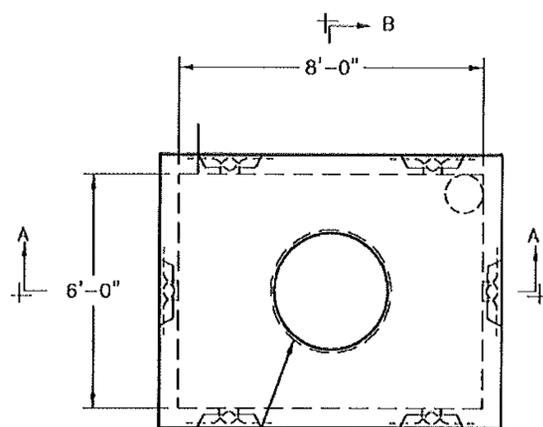
**Appendix O- Riser Pole Specification**

**THREE PHASE PRIMARY RISER -  
5" CONDUIT**

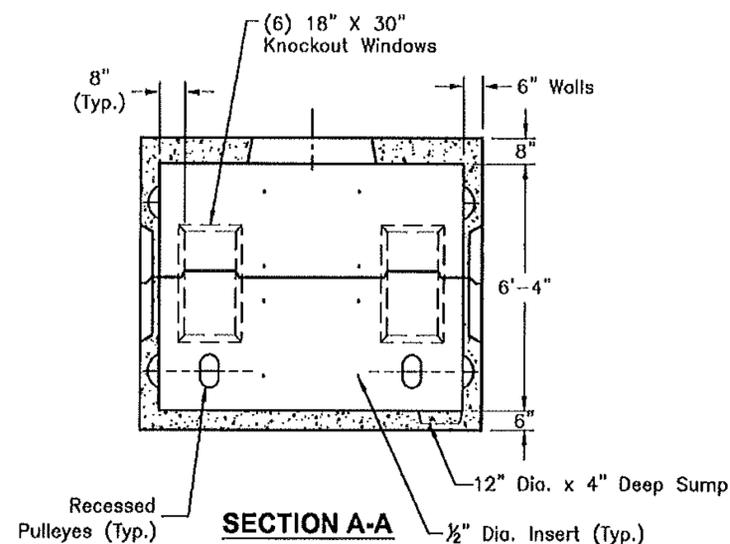


**NOTES:**

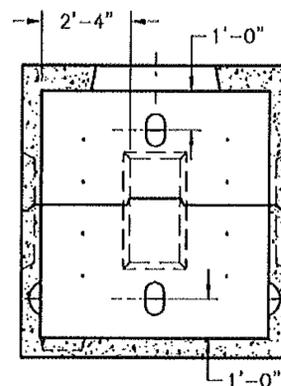
1. Concrete : 5,000 P.S.I  
Minimum Strength @ 28 Days
2. Steel Reinforcing- ASTM A-615,  
Grade 60.
3. Cover to Steel-1" Minimum
4. Vault are Designed to Meet ASTM  
C858 and ACI 318 with AASHTO  
HS-20 Loading
5. Construction Joint-Sealed with  
Butyl Rubber Resin or Equivalent
6. Approx. Wt. Top Pc. = 6.7 Tons  
Approx. Wt. Bottom Pc. = 5.9 Tons



**PLAN VIEW**



**SECTION A-A**



**SECTION B-B**



**MH6X8X64**

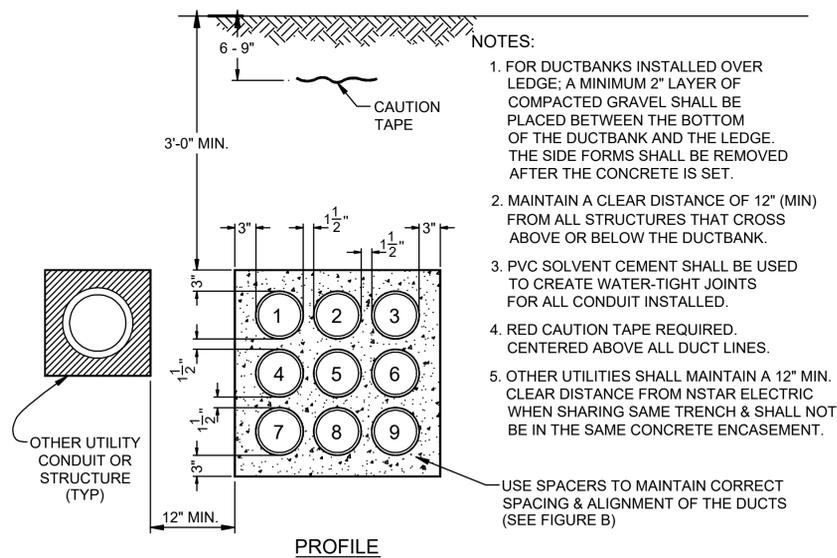
**6'-0" x 8'-0" x 6'-4" I.D.  
Utility Vault**

FILE NAME: 324UEEMH6X8X64\_DET.DWG

ISSUE DATE: January, 2008

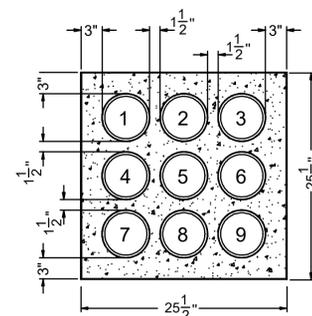
www.oldcastleprecast.com

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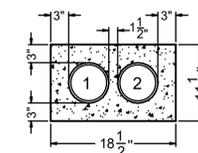
**STANDARD UNREINFORCED CONCRETE DUCTBANK CONSTRUCTION DETAILS**

SCALE: N.T.S.



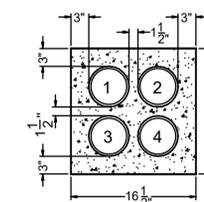
**9-5" CONCRETE ENCASED ELECTRIC CONDUITS**

SCALE: N.T.S.



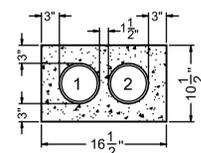
**2-5" CONCRETE ENCASED ELECTRIC CONDUITS**

SCALE: N.T.S.



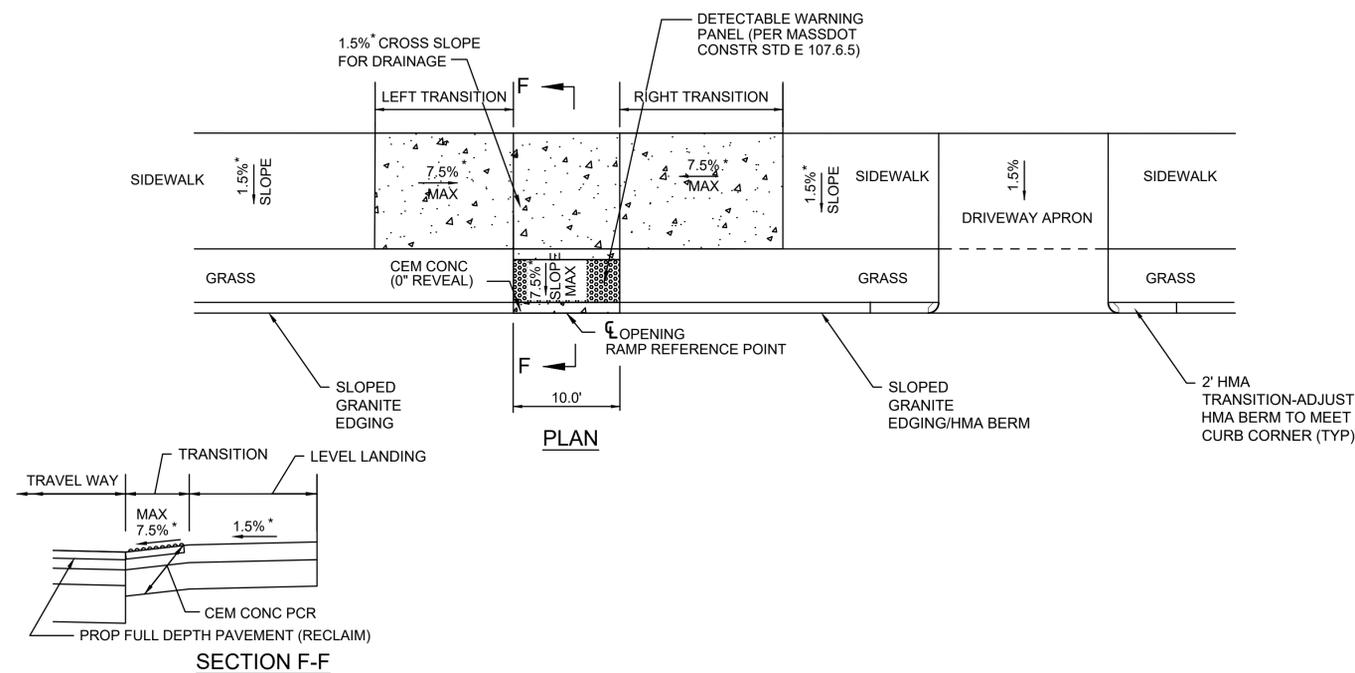
**4-4" CONCRETE ENCASE COMMUNICATION CONDUITS**

SCALE: N.T.S.

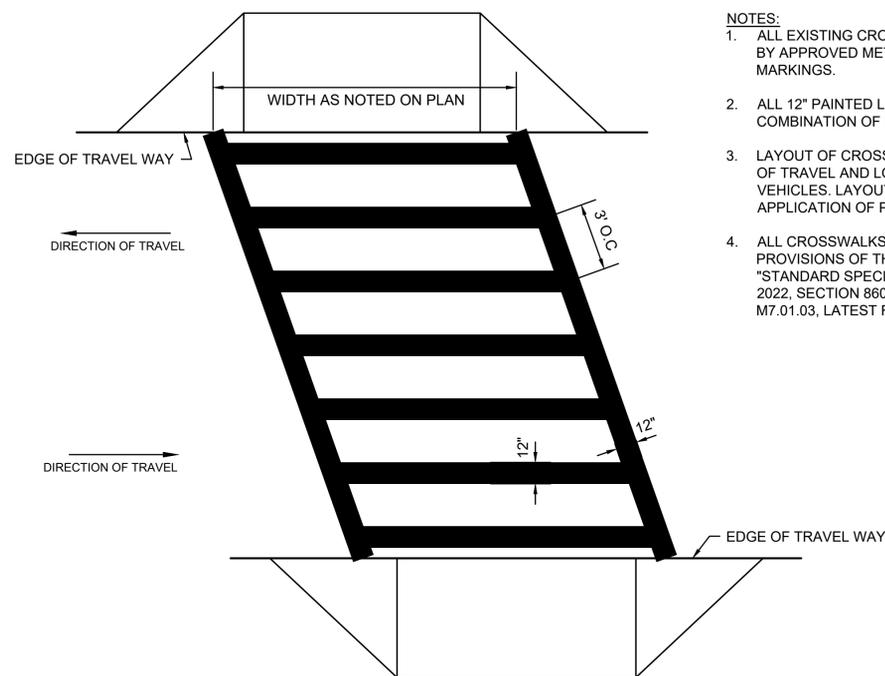
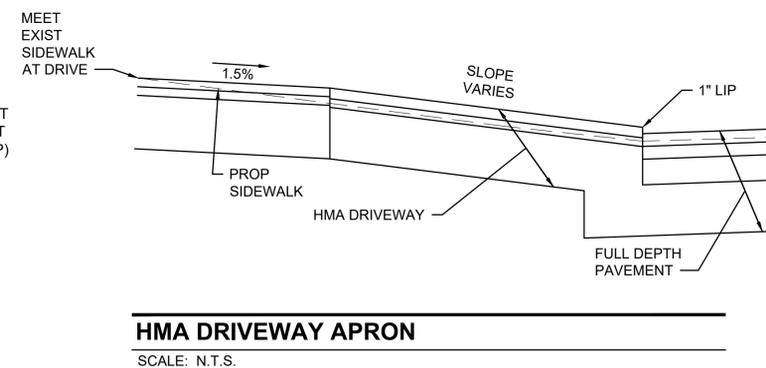


**2-4" ELECTRIC SERVICE CONDUITS**

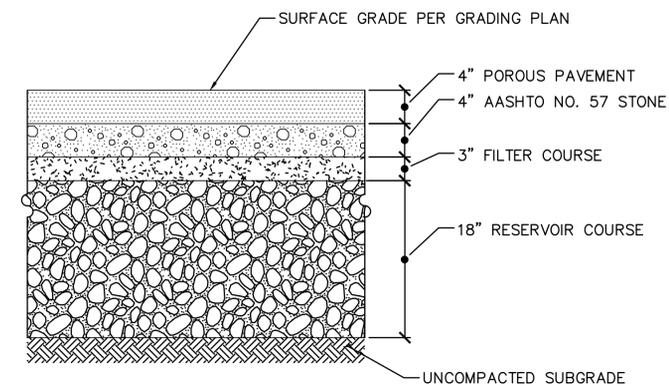
SCALE: N.T.S.



**PEDESTRIAN CURB RAMP WITH GRASS STRIP**



- NOTES:**
1. ALL EXISTING CROSSWALK MARKINGS SHALL BE FULLY ERADICATED BY APPROVED METHOD PRIOR TO THE APPLICATION OF PROPOSED MARKINGS.
  2. ALL 12" PAINTED LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (e.g., TWO - 6" LINES) WILL BE ACCEPTED.
  3. LAYOUT OF CROSSWALKS SHALL BE ORIENTATED IN THE DIRECTION OF TRAVEL AND LOCATED OUTSIDE OF THE WHEEL PATH OF VEHICLES. LAYOUT SHALL BE APPROVED BY THE TOWN PRIOR TO APPLICATION OF PAINT.
  4. ALL CROSSWALKS INSTALLED SHALL CONFORM TO THE RELEVANT PROVISIONS OF THE MASSACHUSETTS HIGHWAY DEPARTMENT "STANDARD SPECIFICATION FOR HIGHWAY AND BRIDGES" DATED 2022, SECTION 860 FOR REFLECTORIZED LINE (PAINTED) & MATERIAL M7.01.03, LATEST REVISIONS.



- NOTES**
1. PROVIDE IMPERMEABLE LINER ON VERTICAL SIDES OF EXCAVATION AS INDICATED ON GRADING AND UTILITY PLAN AND IN DETAILS.
  2. UNLESS OTHERWISE INDICATED, INSTALL ALL UTILITY PIPES, CONDUIT, AND DUCT BANKS BELOW POROUS PAVEMENT SECTION.

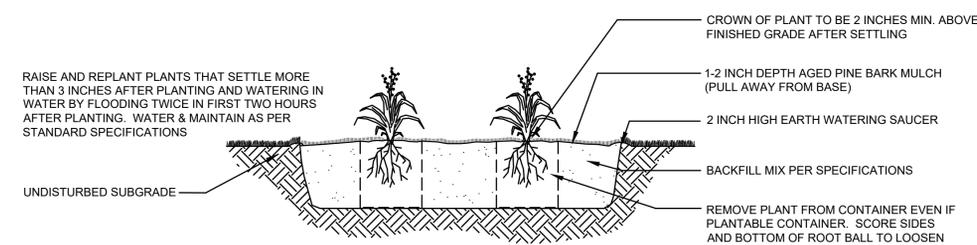
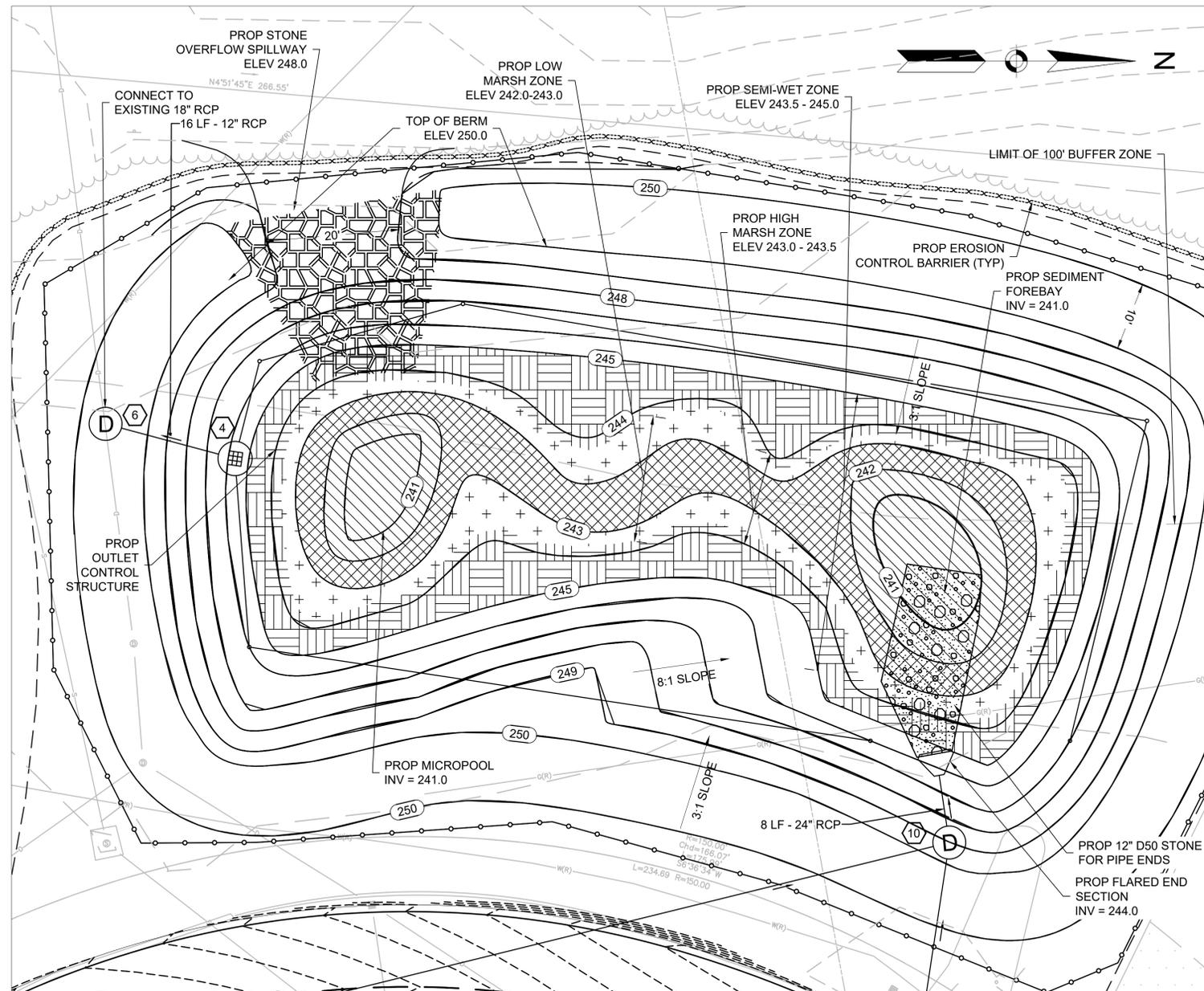
**POROUS SIDEWALK PAVEMENT SECTION**  
SCALE NTS

**CONTINENTAL-STYLE CROSSWALK - 12" WIDE LINES**

SCALE: N.T.S.

DWG: PM-27

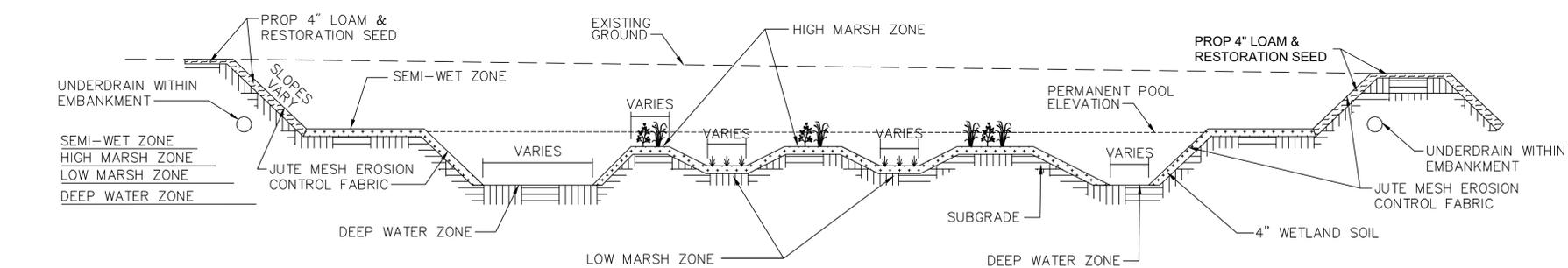
DATE: NOVEMBER 2022



**PLANTING/SEEDING SCHEDULE - "F"**

QTY.	COMMON NAME	BOTANICAL NAME	PLANT MATERIAL
<b>LOW MARSH ZONE (PLANT 24-INCHES ON CENTER)</b>			
281	ARROW ARUM	PELTANDRA VIRGINICA	BARE ROOT
281	ARROWHEAD DUCK POTATO	SAGITTARIA LATIFOLIA	BARE ROOT
281	WATER PLANTAIN	ALISMA TRIVIALE	BARE ROOT
281	PICKEREL WEED	PONTERDERIA CORDATA	BARE ROOT
<b>HIGH MARSH ZONE (PLANT 24-INCHES ON CENTER)</b>			
83	BLUE FLAG IRIS	IRIS VERSICOLOR	BARE ROOT
83	THREE SQUARE RUSH	SCIRPUS AMERICANUM	BARE ROOT
83	SOFT-STEM BULRUSH	SCIRPUS VALIDUS	BARE ROOT
83	BUR-REED	SPARGANIUM EURYCARPUM	BARE ROOT
<b>SEMI-WET ZONE</b>			
SEED WITH WET MEADOW AND DETENTION BASIN MIX AT A RATE OF 20 POUNDS PER ACRE (1 POUND PER 2,200 SQ FT)			

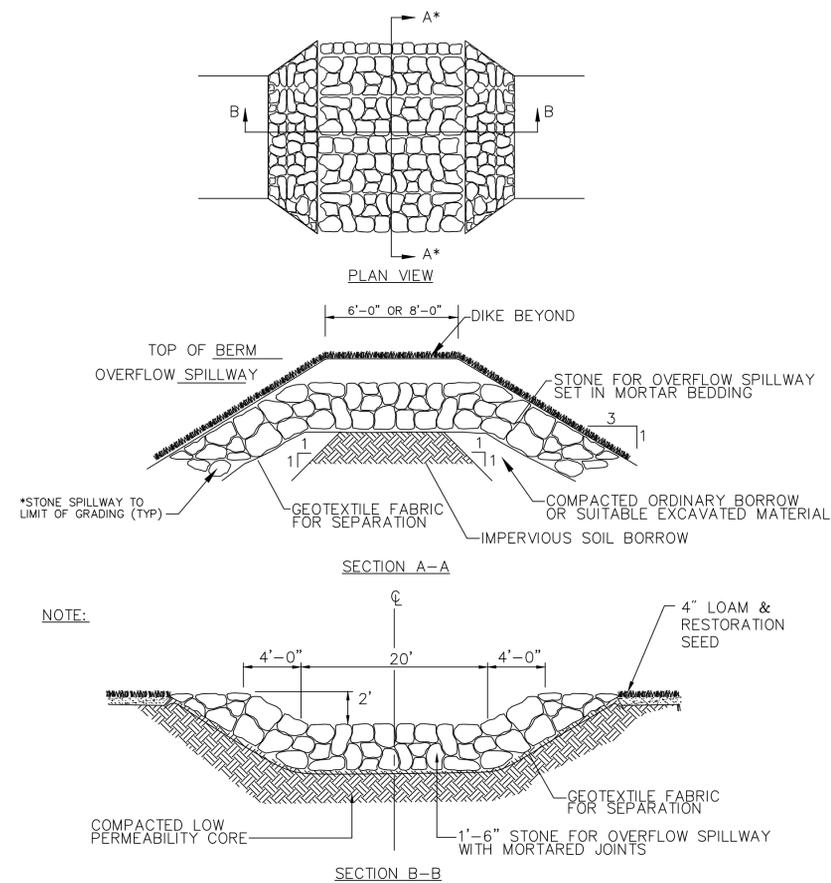
**PROP CONSTRUCTED STORMWATER WETLAND**  
SCALE 1" = 10'



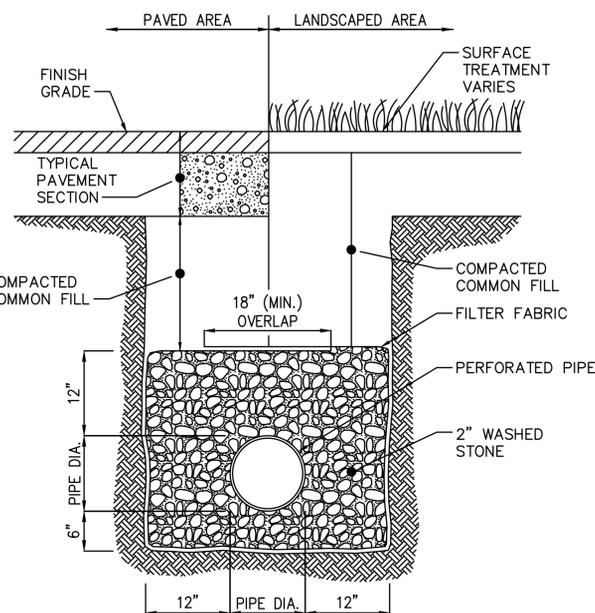
**PROP CONSTRUCTED STORMWATER WETLAND CROSS-SECTION**  
SCALE NTS

**WETLAND AREA ALLOCATION**

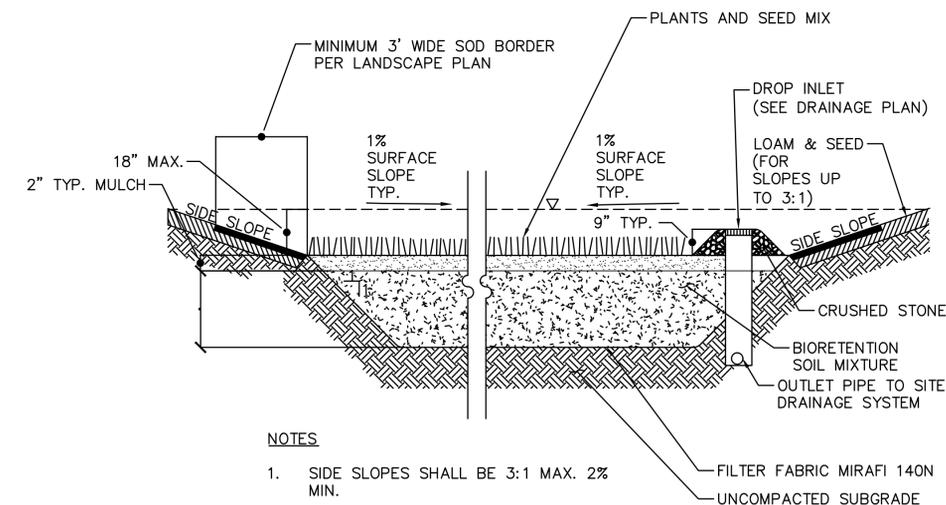
SYMBOL	DEPTH ZONE	ELEVATION	SURFACE AREA	% ALLOCATION
[Symbol]	SEMI-WET ZONE	243.50-245.00	1,949 SF	40%
[Symbol]	HIGH MARSH ZONE	243.50-243.00	896 SF	19%
[Symbol]	LOW MARSH ZONE	243.00-242.00	1,141 SF	24%
[Symbol]	DEEP WATER ZONE	<242.00	794 SF	17%



**PROP STONE OVERFLOW SPILLWAY  
SCALE NTS**



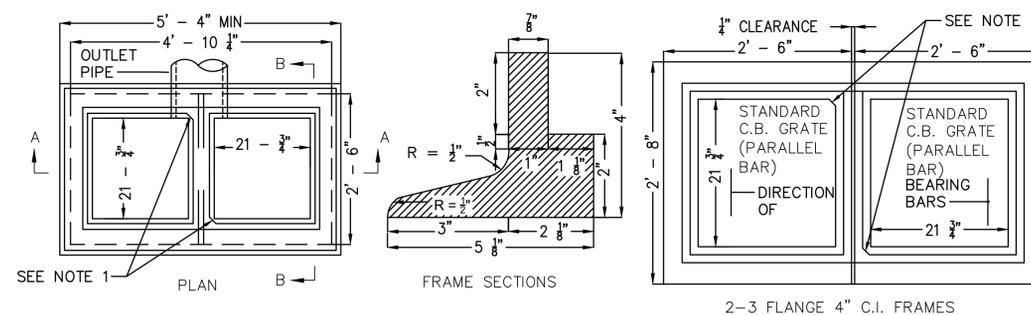
**UNDERDRAIN  
SCALE NTS**



**NOTES**

- SIDE SLOPES SHALL BE 3:1 MAX. 2% MIN.

**RAIN GARDEN  
SCALE NTS**



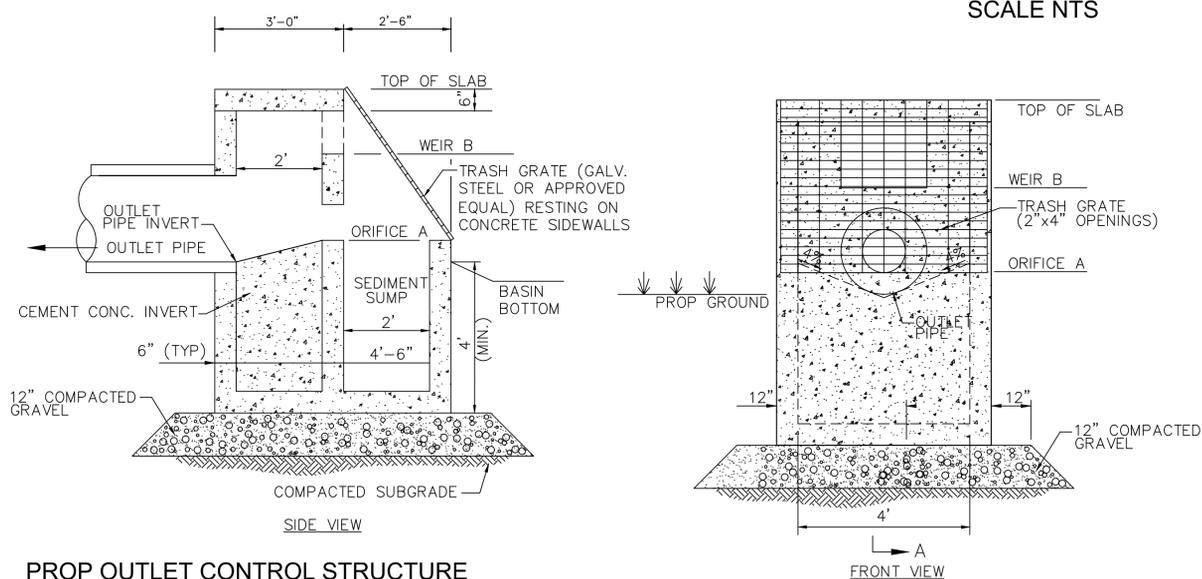
**NOTES:**

- STANDARD PARALLEL BAR GRATES TO BE USED. SEE DETAILS ON MASSDOT CONSTRUCTION STANDARDS 222.2.1.
- MINIMUM C.I. FRAME MASS - 205 LBS. EACH
- FOR DESCRIPTIONS, MATERIALS, AND CONSTRUCTION METHODS SEE LATEST STANDARD SPECIFICATIONS

Concrete shall be

- 4000 PSI - 1 1/2\"/>
- THIS DROP INLET IS NOT TO BE USED AT ANY LOCATION WHERE IT MAY PRESENT A HAZARD TO VEHICLES THAT RUN OFF THE ROAD.

**DROP INLET TYPE A: PRECAST CONCRETE  
SCALE NTS**



**PROP OUTLET CONTROL STRUCTURE  
SCALE NTS**