PLEASANT STREET IMPROVEMENTS

IN THE CITY OF

NORTHAMPTON, MASSACHUSETTS

HAMPSHIRE COUNTY

THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 1988, AS AMENDED, THE SUPPLEMENTAL SPECIFICATIONS DATED JULY 1, 2015, THE 2014 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS WITH MASSACHUSETTS AMENDMENTS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, WILL GOVERN.

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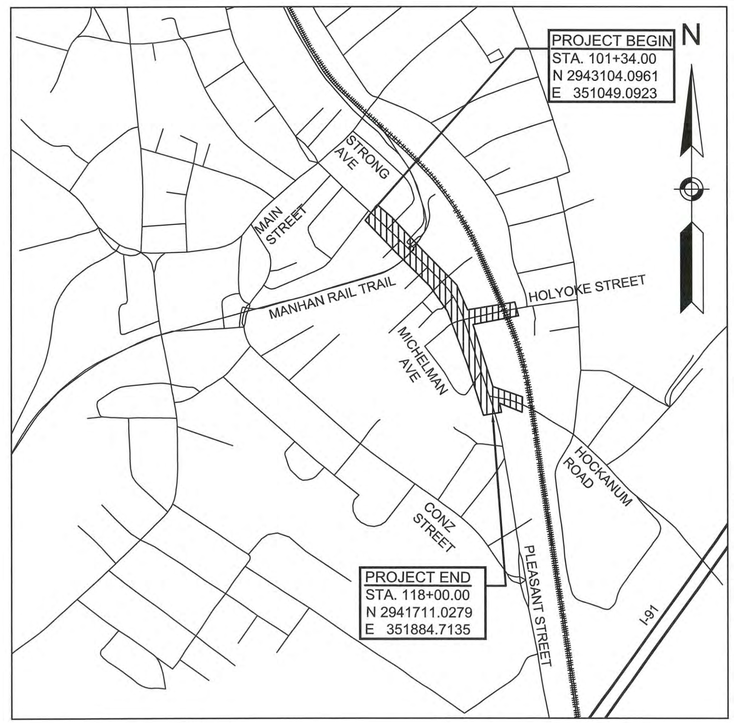

500 0 500 1000

SCALE 1" = 500'

LENGTH OF PROJECT = 1666 FEET = 0.32 MILES

DESIGN DESIGNATION

	PLEASANT ST (ROUTE 5)
DESIGN SPEED	25 MPH
ADT (2011)	20,225
ADT (2021)	21,260
K	9%
D	53%NB
T (PEAK HOUR)	3.2%
T (AVERAGE DAY)	3.8%
DHV	1915
DDHV	1015
FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL

COMMONWEALTH OF MASSACHUSETTS
STEPHEN D. FARR
CIVIL
No. 39783
REGISTERED PROFESSIONAL ENGINEER
3.2.17

SHEET: 1 OF 22

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www.nitscheng.com
2 Center Plaza, Suite 430
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T: (617) 338-0063
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TITLE SHEET

PLEASANT STREET IMPROVEMENTS

PREPARED FOR:
CITY OF NORTHAMPTON

NITSCH PROJECT #	10890
SCALE:	1"=500'
DATE:	MARCH 2017
PROJECT MANAGER:	SF
SURVEYOR:	NITSCH
DRAFTED BY:	CB
CHECKED BY:	SF

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LEGEND

GENERAL SYMBOLS

EXISTING	PROPOSED	
JB OR BRJB	JB OR BRJB	JERSEY BARRIER ON BRIDGE OR JERSEY BARRIER
CB	CB OR GI	CATCH BASIN OR GUTTER INTLET
CI	CI	CURB INLET
	BUOY	BUOY
		GUY POLE
	FPL	FLAG POLE
		GOLF COURSE
		GAS PUMP
		GRAVEL PIT
DI	DI	DROP INLET
MB	MB	MAIL BOX
GR	GRAN POST	GRANITE POST
PLN	PLANTER	PLANTER
PST	POST	POST
TBH	TBH	TELEPHONE BOOTH
VLT	VLT	VAULT
VLV	VLV	VALVE
WELL	WELL	WELL
EHH	EHH	ELECTRIC MANHOLE (HANDHOLE)
FCGA		GATE POST
FL	FL	FLOW LINE
		GAS GATE
BH	B-#	BORING HOLE
		MONITORING WELL
	TEP	TEST PIT
HC	CONC. HDWL	CONCRETE HEADWALL
HHL MASS DPW		PUBLIC WORKS HANDHOLE
HS	STONE HD	STONE HEADWALL
HYD	HYD	HYDRANT
LPL	LPL	LIGHT POLE
CO. BO.	CO. BD.	COUNTY BOUND
GPS		GPS POINT
CMH		CABLE MANHOLE
DMH	DMH	DRAINAGE MANHOLE
EMH		ELECTRIC MANHOLE
GMH		GAS MANHOLE
MMH		MISC MANHOLE
OMH		OTHER MANHOLE
SMH		SEWER MANHOLE
TMH		TELEPHONE MANHOLE
WMH		WATER MANHOLE
MHB	MHB	MHD BOUND
MON	MON	MONUMENT
SB	SB	STONE BOUND
TOWN OR CITY BD.	TOWN OR CITY BD.	TOWN OR CITY BOUND
	TSN	TRAVERSE OR TRIANGULATION STATION
TPL		TROLLEY POLE
TRNP		TRANS. POLE
UFB	UFB	UP W ITH FIREBOX
LPDL	LPDL	POLE WITH DOUBLE LIGHT
ULT	ULT	UP W ITH 1 LIGHT
UPL	UPL	UTILITY POLE
	BUSH	BUSH
	TREE	TREE
STUMP		STUMP
		SWAMP / MARSH
WG	WG	WATER GATE
FA	FA	FIRE ALARM BOX
PM	PM	PARKING METER
		ELECTRICAL GROUND
	GV	GATE VALVE
		RIP RAP
		OVERHEAD CABLE
		DIRECT BURIAL CABLE
		CURBING
185	185	CONTOURS
D	D	DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
E	E	ELECTRIC DUCT " "
G	G	GAS MAIN " "
S	S	SEWER MAIN " "
T	T	TELEPHONE DUCT " "
W	W	WATER MAIN " "

GENERAL SYMBOLS (CONT.)

EXISTING	PROPOSED	
		BALANCE STONE WALL
		CULVERT
		GUARD RAIL
		GUTTER LINE AT DRIVEWAYS
		CHAIN LINK FENCE
		STOCKADE FENCE
		BANK OF RIVER OR STREAM
WF-#		BORDER OF WETLAND
		100 FT WETLAND OR 200 FT RIVERFRONT BUFFER
DATE OF LAYOUT		STATE HIGHWAY LAYOUT
DATE OF LAYOUT		TOWN OR CITY LAYOUT
DATE OF LAYOUT		COUNTY LAYOUT
R.R S/L		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
L OR APPROX. P.L.		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT
		COMPOST FILTER TUBE
		RETAINING WALL
		TREE LINE OR LIMIT OF CLEARING AND GRUBBING
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR MILLING & OVERLAY

PAVEMENT MARKINGS AND SIGNING SYMBOLS

EXISTING	PROPOSED	
ONLY	ONLY	PAVEMENT ARROW - WHITE
		LEGEND "ONLY" - WHITE
	SL	STOP LINE - 12"
	CW	CROSSWALK
	SWLL	SOLID WHITE LANE LINE- 4"
	BWLL	BROKEN WHITE LANE LINE (10' LINE, 30' SPACE TYP.)- 4"
	SWEL	SOLID WHITE EDGE LINE - 4"
	YGL	YELLOW GORE LINE - 12"
	DYCL	DOUBLE YELLOW CENTER LINE - 2 X 4"
	SWCHL	SOLID WHITE CHANNELIZATION LINE - 8"
	WGL	WHITE GORE LINE - 12"
	SYEL	SOLID YELLOW EDGE LINE - 4"
	BYCL	BROKEN YELLOW CENTER LINE (10' LINE, 30' SPACE TYP.) - 4"
	SYCL	SOLID YELLOW CENTER LINE- 4"
	DWLL	DOTTED WHITE LANE LINE - 4" (2' LINE, 4' SPACE)
		DIRECTION OF TRAFFIC FLOW

ABBREVIATIONS

GENERAL

AAB	ARCHITECTURAL ACCESS BOARD
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	BENCH MARK
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
CIT	CHANGE IN TYPE
CI.	CLASS (CONCRETE, EXCAVATION, ETC.)
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
DWY	DRIVEWAY
ELEV (OR EL.)	ELEVATION
EMB	EMBANKMENT
EOP	EDGE OF PAVEMENT
EXIST (OR EX)	EXISTING
EXC	EXCAVATION

GENERAL (CONT.)

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
GWA	GUIDE WIRE
HDW	HEADWALL
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HYD	HYDRANT
INV	INVERT
JCT	JUNCTION
L	LENGTH OF CURVE
LB	LEACHING BASIN
LP	LIGHT POLE
LT	LEFT
MA	MAST ARM
MAX	MAXIMUM
MB	MAIL BOX
MGS	MASSACHUSETTS GEOGRAPHICAL SURVEY
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
M&M	MEET & MATCH
NIC	NOT IN CONTRACT
NO.	NUMBER
NTS	NOT TO SCALE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PGL	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
PM	PARKING METER
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
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SW	SIDEWALK
TANGENT	TANGENT DISTANCE OF CURVE
T	TRUCK PERCENTAGE
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
WCR	WHEELCHAIR RAMP
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION

GENERAL NOTES

1. TOPOGRAPHICAL INFORMATION IS FROM A SURVEY PERFORMED BY NITSCH ENGINEERING, THAT OCCURRED DURING JUNE, 2015. HORIZONTAL DATUM IS BASED ON MASS GRID SYSTEM NAD 1983. ELEVATIONS SHOWN ON THIS PLAN REFER TO THE NAVD OF 1988.
2. LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY BASED ON RECORD INFORMATION AND SURFACE OBSERVATION. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES CAUSED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
3. WHERE AN EXISTING UTILITY IS FOUND IN 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.
4. THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL DRAINAGE STRUCTURES AS NECESSARY FOR CHANGES IN LINE AND GRADE, AND RESET ALL WATER, SEWER, AND DRAINAGE FRAMES, GRATES, AND BOXES TO THE PROPOSED FINISHED SURFACE GRADE. REQUIRED NEW MASONRY SHALL BE CLAY BRICK CONFORMING TO M4.05.2.
5. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.
6. EXISTING UTILITY POLES WILL BE RELOCATED BY OTHERS.
7. TREES AND SHRUBS WITHIN THE LIMITS OF GRADING SHALL BE REMOVED ONLY UPON APPROVAL OF THE ENGINEER.
8. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
9. THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IN SUITABLE CONDITION IDENTIFIED AS "REMOVE AND RESET" (R&R) OR "REMOVE AND STACK" (R&S).
10. ALL LATERAL DRAIN PIPES SHALL BE 12" REINFORCED CONCRETE PIPE INSTALLED WITH A PITCH OF 0.01 FOOT PER FOOT (MINIMUM) UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
11. ALL EXISTING GRANITE CURB, CURB CORNERS, & EDGING REMOVED WITHIN THE LIMITS OF WORK AND IN SUITABLE CONDITION AS DETERMINED BY THE ENGINEER, SHALL BE RE-USED IN THE PROPOSED WORK, EXCEPT CURVED STONES OF A DIFFERENT RADIUS THAN PROPOSED CURB. ALL CURB NOT USED SHALL BE TRANSPORTED & STACKED AT THE DPW YARD, 125 LOCUST STREET.
12. ALL EXISTING STATE, COUNTY, CITY, AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATIONS ARE NOT GUARANTEED.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING DIG SAFE BEFORE PERFORMING ANY EXCAVATION TO DETERMINE THE LOCATIONS OF ANY UNDERGROUND UTILITIES.
14. IN AREAS OF FULL DEPTH PAVEMENT AND SIDEWALK RECONSTRUCTION WHERE PROPOSED MEETS EXISTING PAVEMENT, THE EXISTING PAVEMENT SHALL BE SAWCUT TO OBTAIN A CLEAN VERTICAL FACE. ALL JOINTS BETWEEN EXISTING PAVEMENT TO REMAIN AND NEW PAVEMENT SHALL BE SEALED WITH HOT RUBBERIZED ASPHALT SEALER.
15. ANY EXISTING PAVEMENTS AND SOILS TO BE REMOVED WITHIN THE LIMITS OF CONSTRUCTION SHALL BE TRANSPORTED TO A LEGAL DISPOSAL LOCATION. NO STOCKPILING WILL BE ALLOWED WITHIN THE PROJECT LIMITS.
16. THE LAYOUT OF ALL PEDESTRIAN RAMPS SHALL CONFORM TO ADA/AAB STANDARDS AND CURRENT MASSDOT STANDARDS, AND DIRECTIVES.
17. ALL SOIL EROSION & SEDIMENT CONTROL DEVICES SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITY.
18. SILT SACKS SHALL BE INSTALLED AT ALL EXISTING AND PROPOSED CATCH BASINS WITHIN THE PROJECT LIMITS IN ACCORDANCE WITH THE PROVIDED DETAIL.
19. THE FRAMES AND COVERS/GRATES FROM EXISTING DRAINAGE STRUCTURES TO BE REMOVED OR ABANDONED SHALL BE REMOVED AND RESET ON PROPOSED STRUCTURES WHERE APPROPRIATE. ADDITIONAL FRAMES AND COVERS/GRATES REQUIRED SHALL BE PAID FOR UNDER ITEM 222.3.
20. DRAINAGE ELEVATIONS ARE SHOWN FOR DESIGN PURPOSE ONLY. THE CONTRACTOR SHALL VERIFY, BY TEST PIT LOCATIONS, ALL EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED DRAINAGE DESIGN. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE ONLY AFTER APPROVED BY THE ENGINEER. NO DRAINAGE STRUCTURE SHALL BE ORDERED UNTIL AFTER THE CONTRACTOR VERIFIES THE CONSTRUCTABILITY OF THE SYSTEM.
21. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC UNLESS OTHERWISE NOTED.

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www.nitscheng.com
2 Center Plaza, Suite 430
Boston, MA 02108
T: (617) 338-0063
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LEGEND AND ABBREVIATIONS

PLEASANT STREET IMPROVEMENTS

PREPARED FOR:
CITY OF NORTHAMPTON

NITSCH PROJECT #	10890
SCALE:	NTS
DATE:	MARCH 2017
PROJECT MANAGER:	SF
SURVEYOR:	NITSCH
DRAFTED BY:	CB
CHECKED BY:	SF

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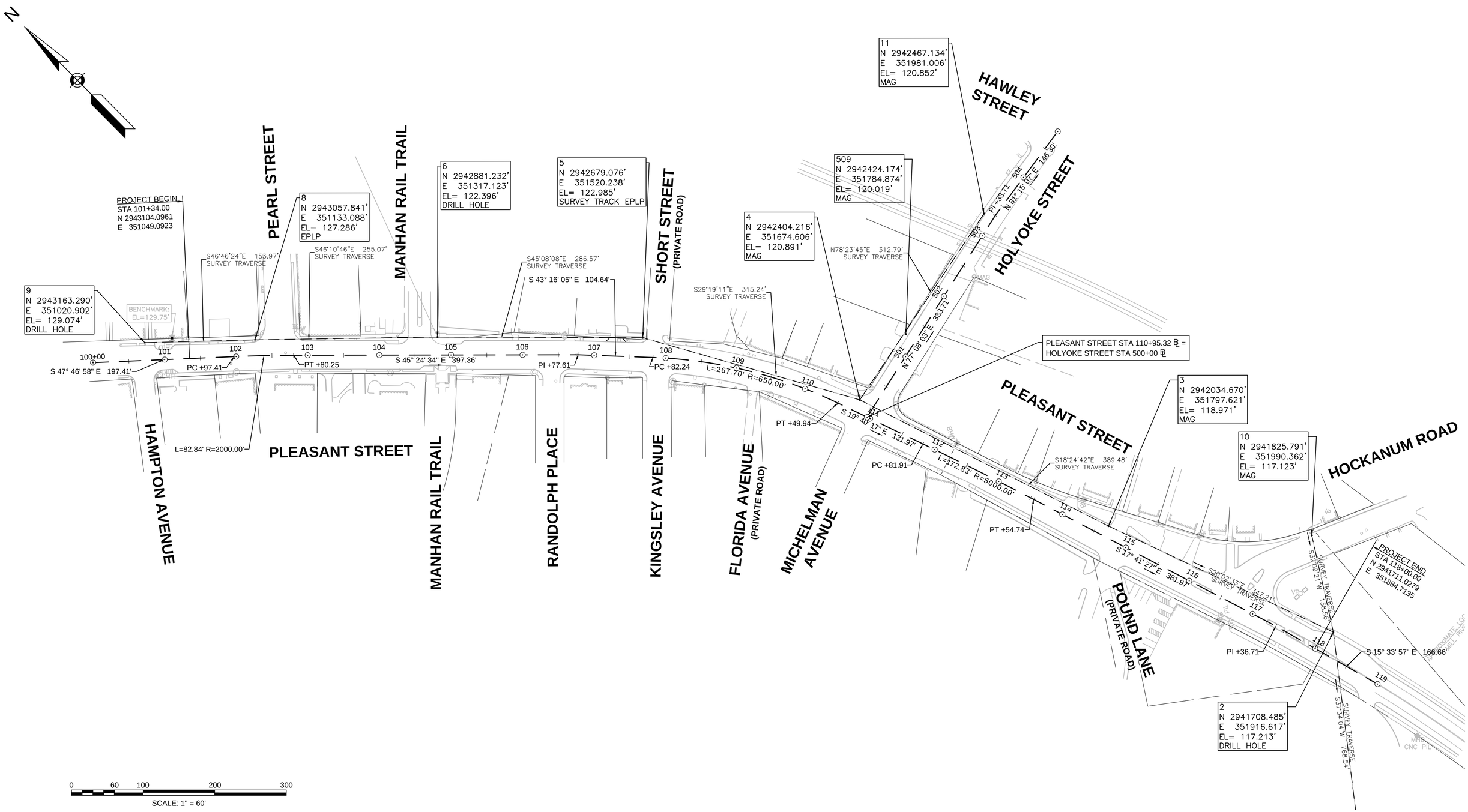

SHEET: 3 OF 22

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SURVEY TRAVERSE AND BASELINE PLAN

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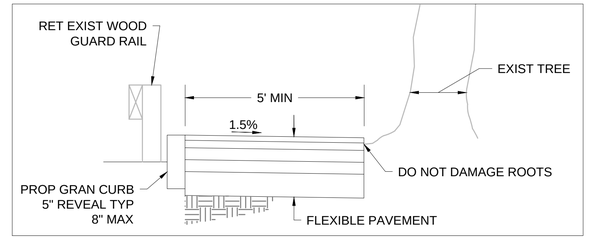
DRAINAGE STRUCTURE DATA						
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV IN	INV. ELEV. OUT	REMARKS
1	CB	104+11 LT	122.95		118.95 3	
2	CBCI	104+11 RT	122.87		118.87 3	
3	DMH	104+24	123.11	118.78 1 118.67 2	117.21	CONNECT TO EXIST DMH AT STA 104+98 RT, INV=116.50



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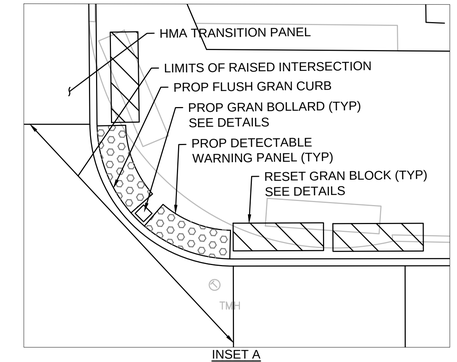
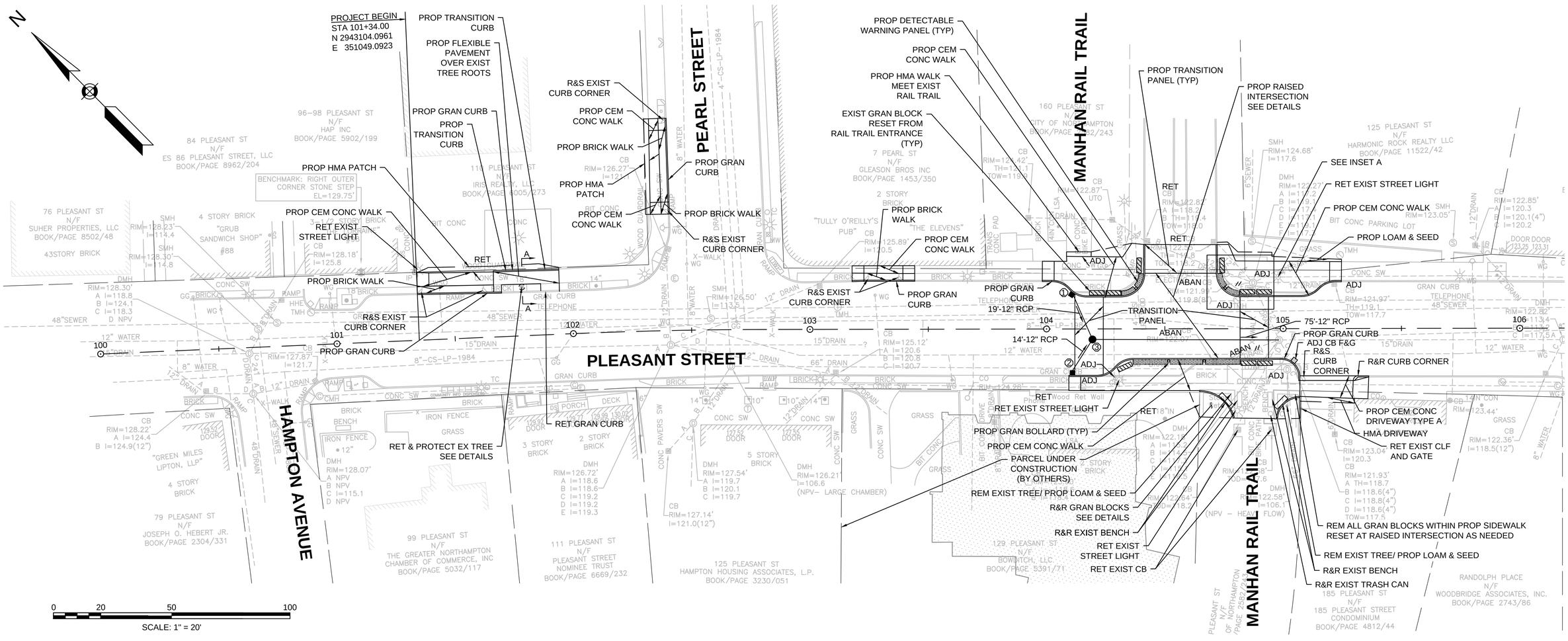


INSET A



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CONSTRUCTION PLAN

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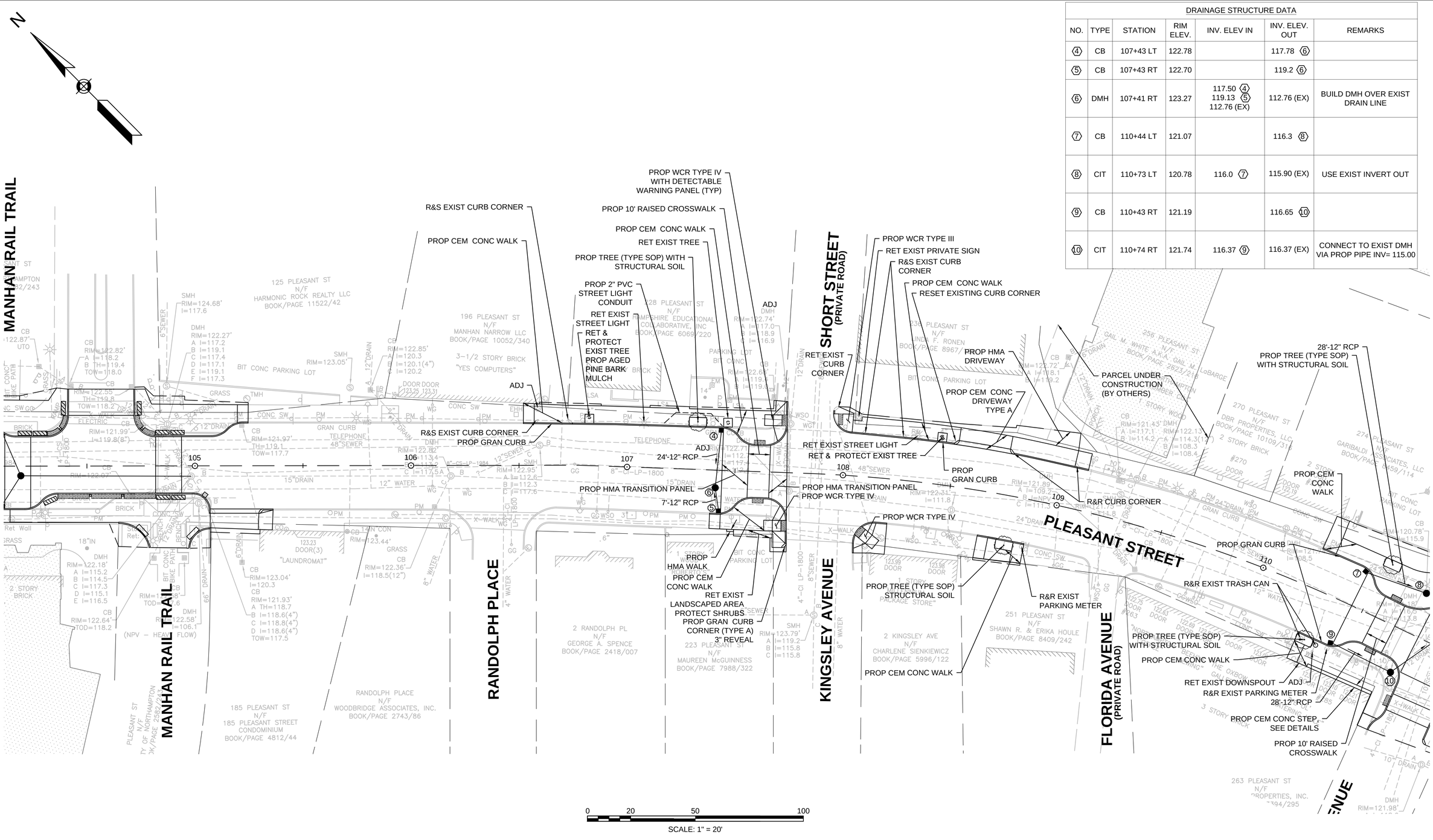
DRAINAGE STRUCTURE DATA						
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV IN	INV. ELEV. OUT	REMARKS
4	CB	107+43 LT	122.78		117.78 6	
5	CB	107+43 RT	122.70		119.2 6	
6	DMH	107+41 RT	123.27	117.50 4 119.13 5 112.76 (EX)	112.76 (EX)	BUILD DMH OVER EXIST DRAIN LINE
7	CB	110+44 LT	121.07		116.3 8	
8	CIT	110+73 LT	120.78	116.0 7	115.90 (EX)	USE EXIST INVERT OUT
9	CB	110+43 RT	121.19		116.65 10	
10	CIT	110+74 RT	121.74	116.37 9	116.37 (EX)	CONNECT TO EXIST DMH VIA PROP PIPE INV= 115.00



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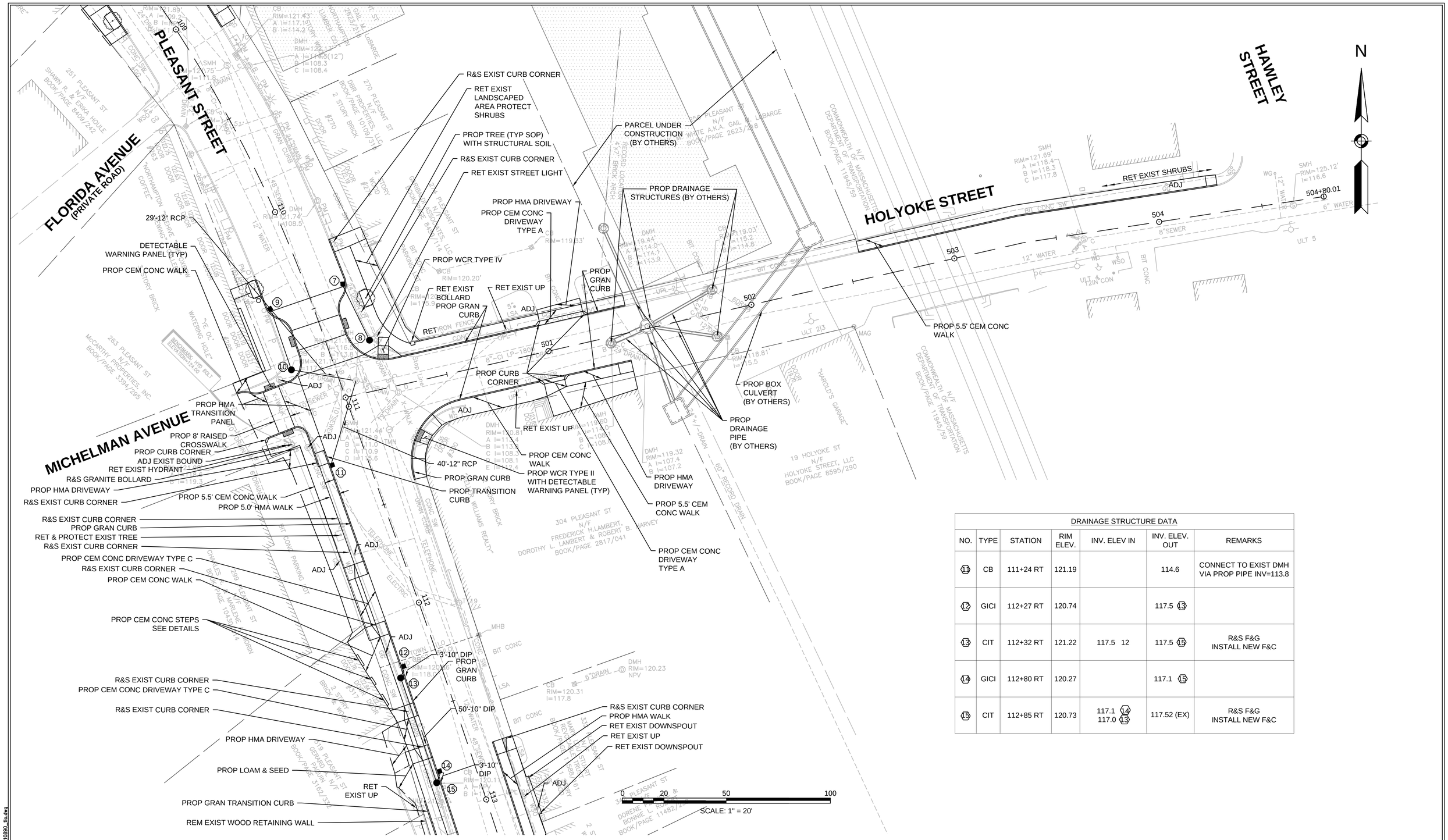

DRAINAGE STRUCTURE DATA						
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV IN	INV. ELEV. OUT	REMARKS
11	CB	111+24 RT	121.19		114.6	CONNECT TO EXIST DMH VIA PROP PIPE INV=113.8
12	GICI	112+27 RT	120.74		117.5 13	
13	CIT	112+32 RT	121.22	117.5 12	117.5 15	R&S F&G INSTALL NEW F&C
14	GICI	112+80 RT	120.27		117.1 15	
15	CIT	112+85 RT	120.73	117.1 14 117.0 13	117.52 (EX)	R&S F&G INSTALL NEW F&C

SHEET: 6 OF 22

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CONSTRUCTION PLAN

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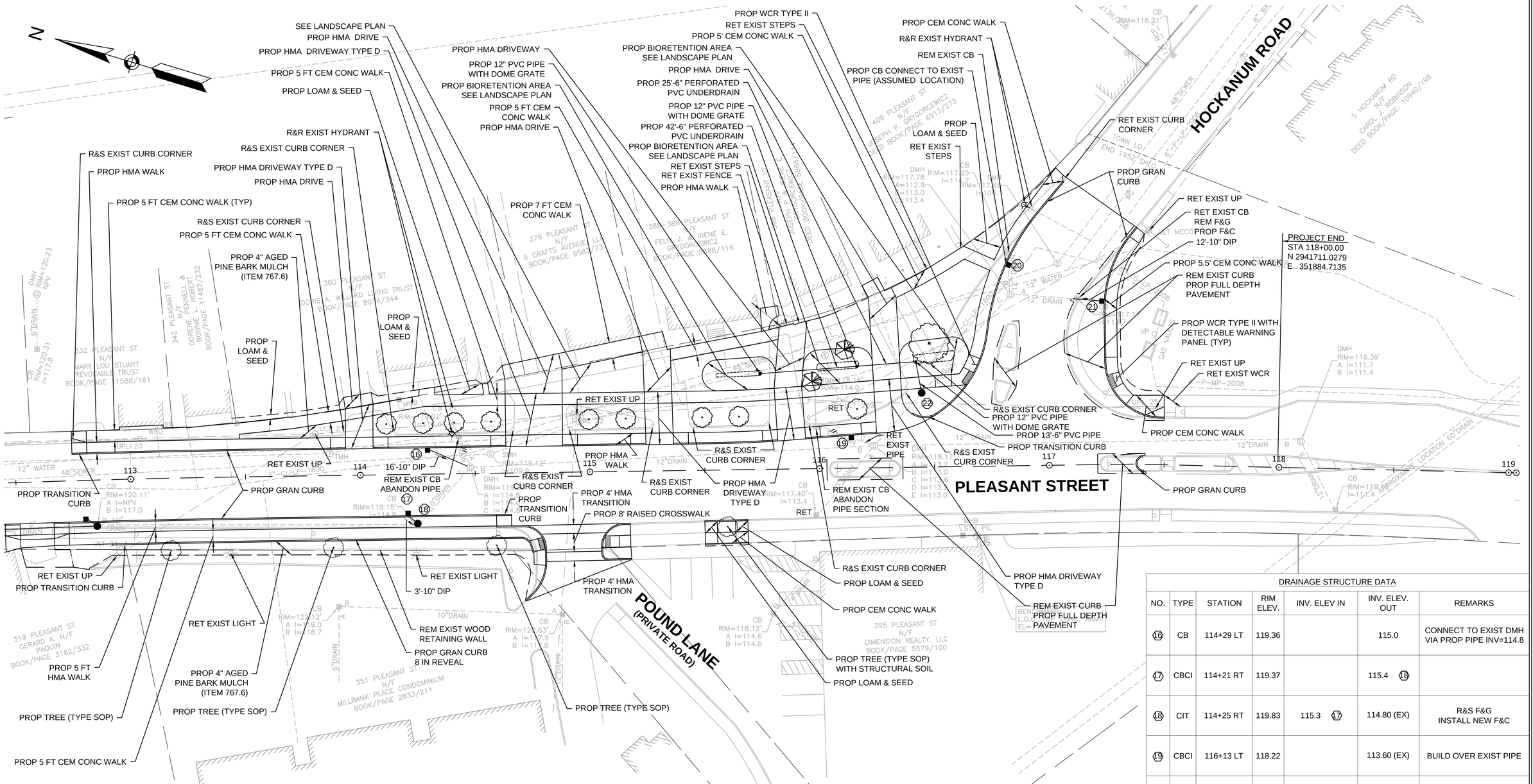

DRAINAGE STRUCTURE DATA

NO.	TYPE	STATION	RIM ELEV.	INV. ELEV IN	INV. ELEV. OUT	REMARKS
16	CB	114+29 LT	119.36		115.0	CONNECT TO EXIST DMH VIA PROP PIPE INV=114.8
17	CBCI	114+21 RT	119.37		115.4 18	
18	CIT	114+25 RT	119.83	115.3 17	114.80 (EX)	R&S F&G INSTALL NEW F&C
19	CBCI	116+13 LT	118.22		113.60 (EX)	BUILD OVER EXIST PIPE
20	CBCI	116+83 LT	117.38		114.50 (EX)	BUILD OVER EXIST PIPE
21	GICI	117+25 LT	116.8		114.3	
22	DMH	116+45 LT	118.40	114.0 (6 IN PERF PIPE)	113.3 (EX)	BUILD OVER EXIST PIPE

SHEET: 7 OF 22

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CONSTRUCTION PLAN

PLEASANT STREET IMPROVEMENTS

PREPARED FOR:
CITY OF NORTHAMPTON

NITSCH PROJECT #	10890
SCALE:	
DATE:	MARCH 2017
PROJECT MANAGER:	SF
SURVEYOR:	NITSCH
DRAFTED BY:	CB
CHECKED BY:	SF

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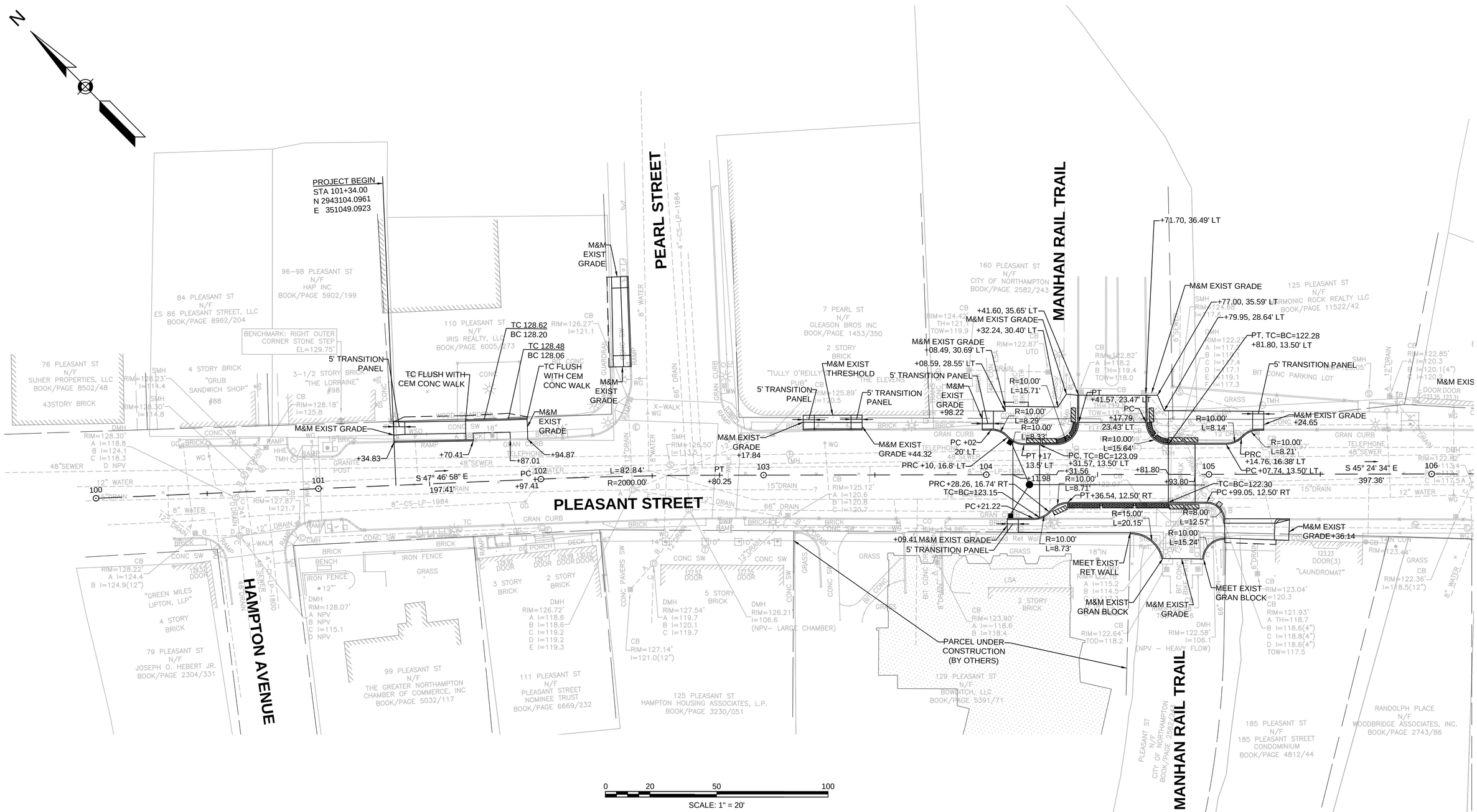

SHEET: 8 OF 22

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- Planning
- GIS

CURB TIE & GRADING PLAN

PLEASANT STREET
IMPROVEMENTS

PREPARED FOR:
CITY OF NORTHAMPTON

NITSCH PROJECT #	I0890
SCALE:	
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PROJECT MANAGER:	SF
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DRAFTED BY:	CB
CHECKED BY:	SF

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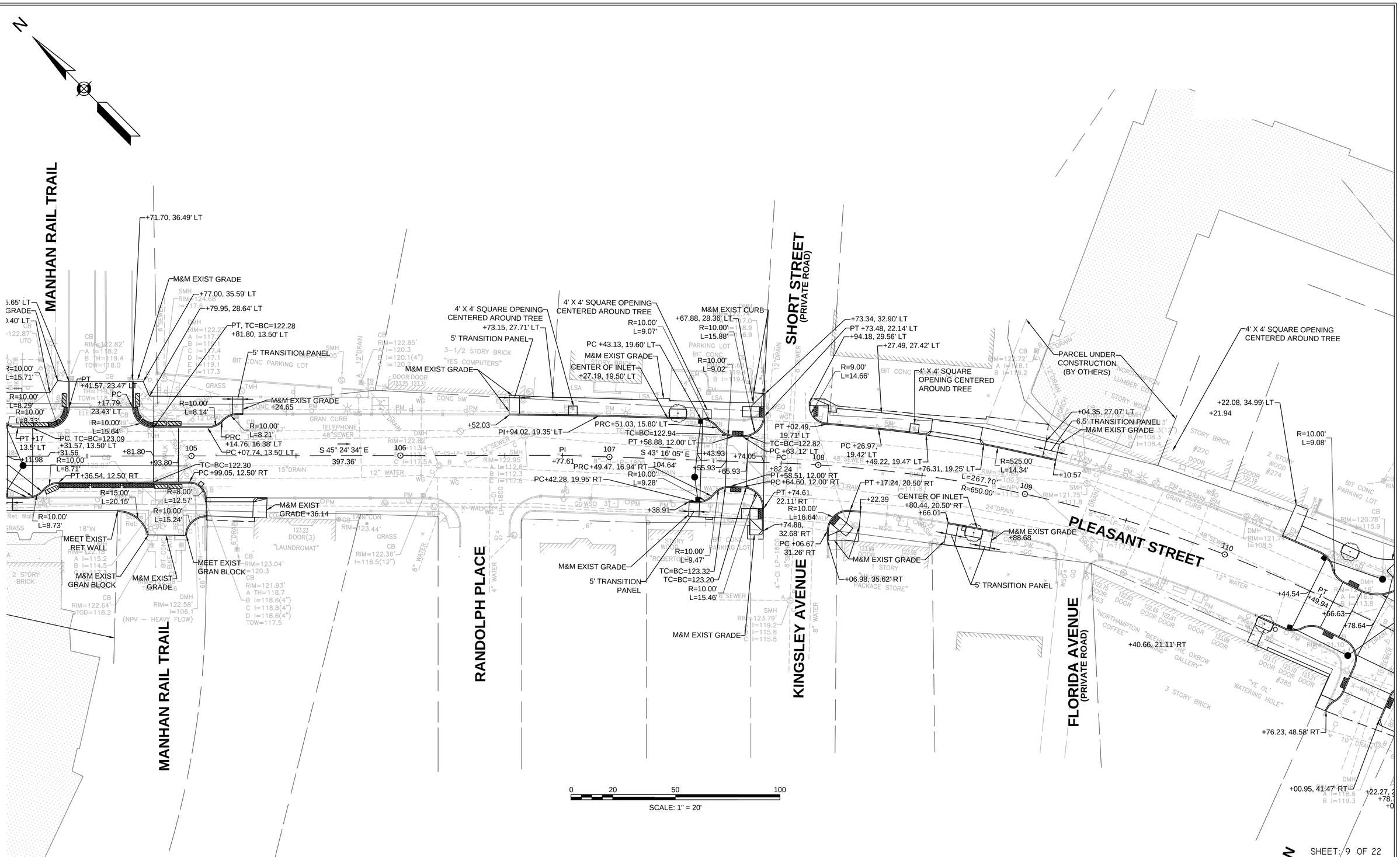

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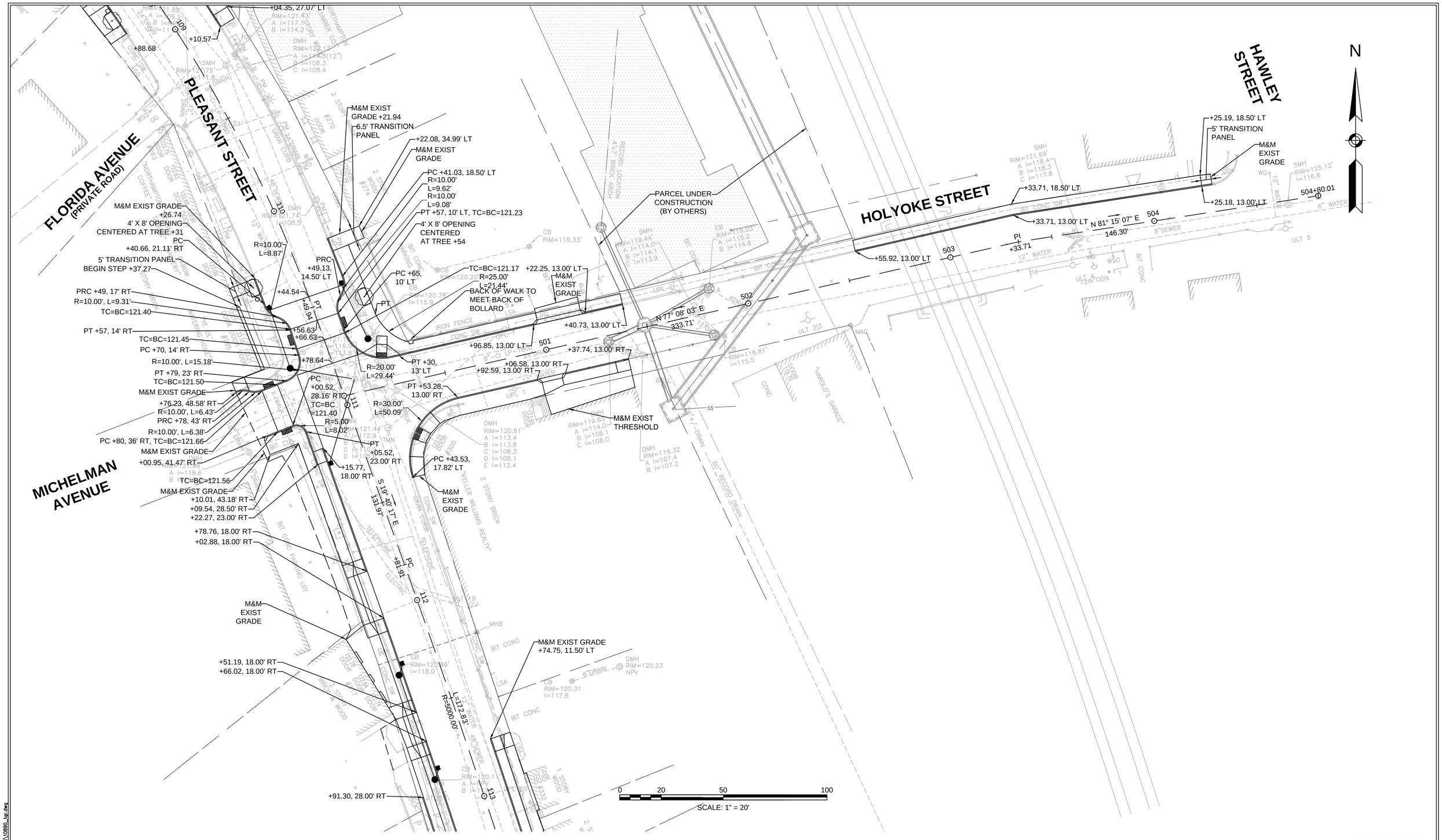

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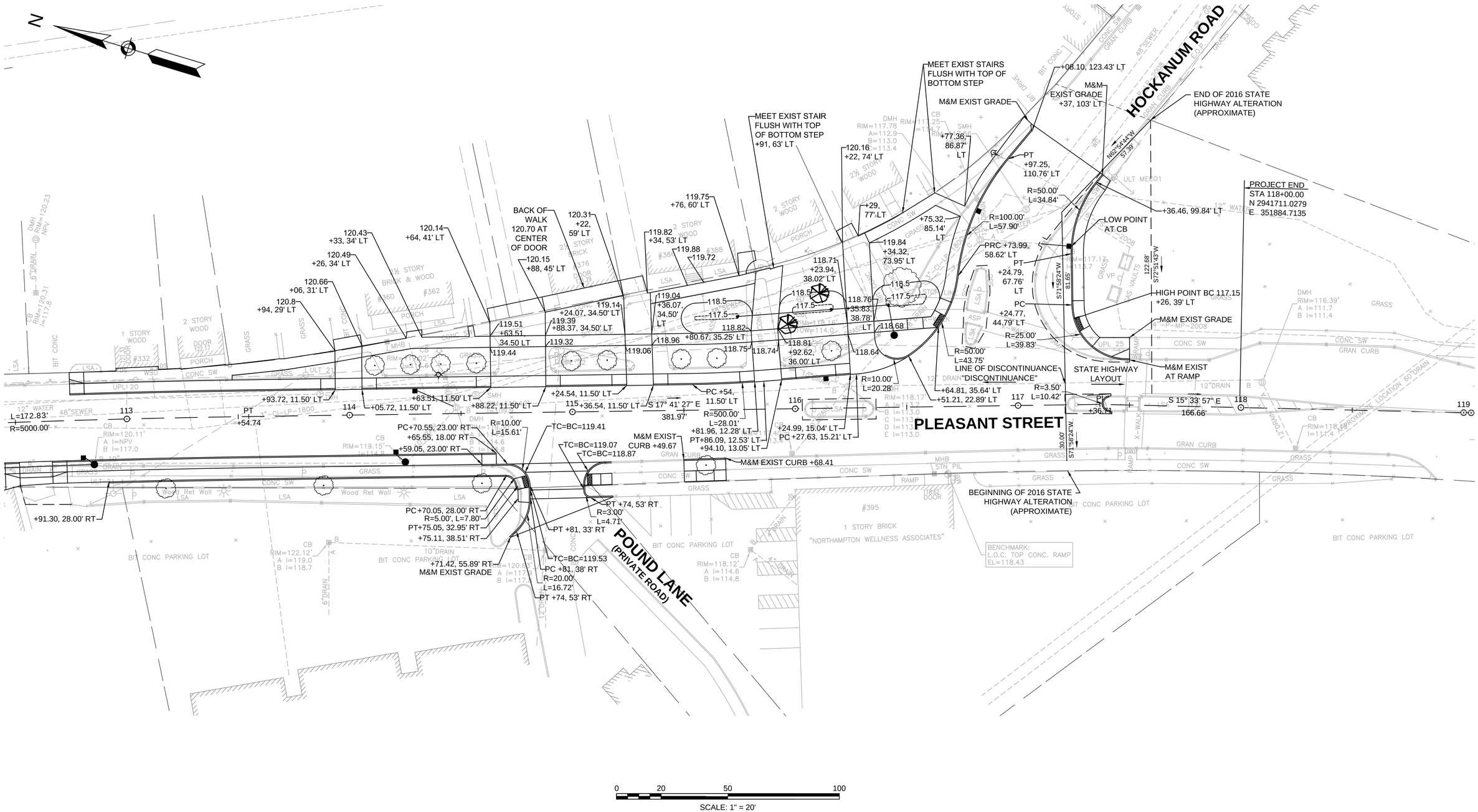

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SURVEYOR:	NITSCH
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CHECKED BY:	SF

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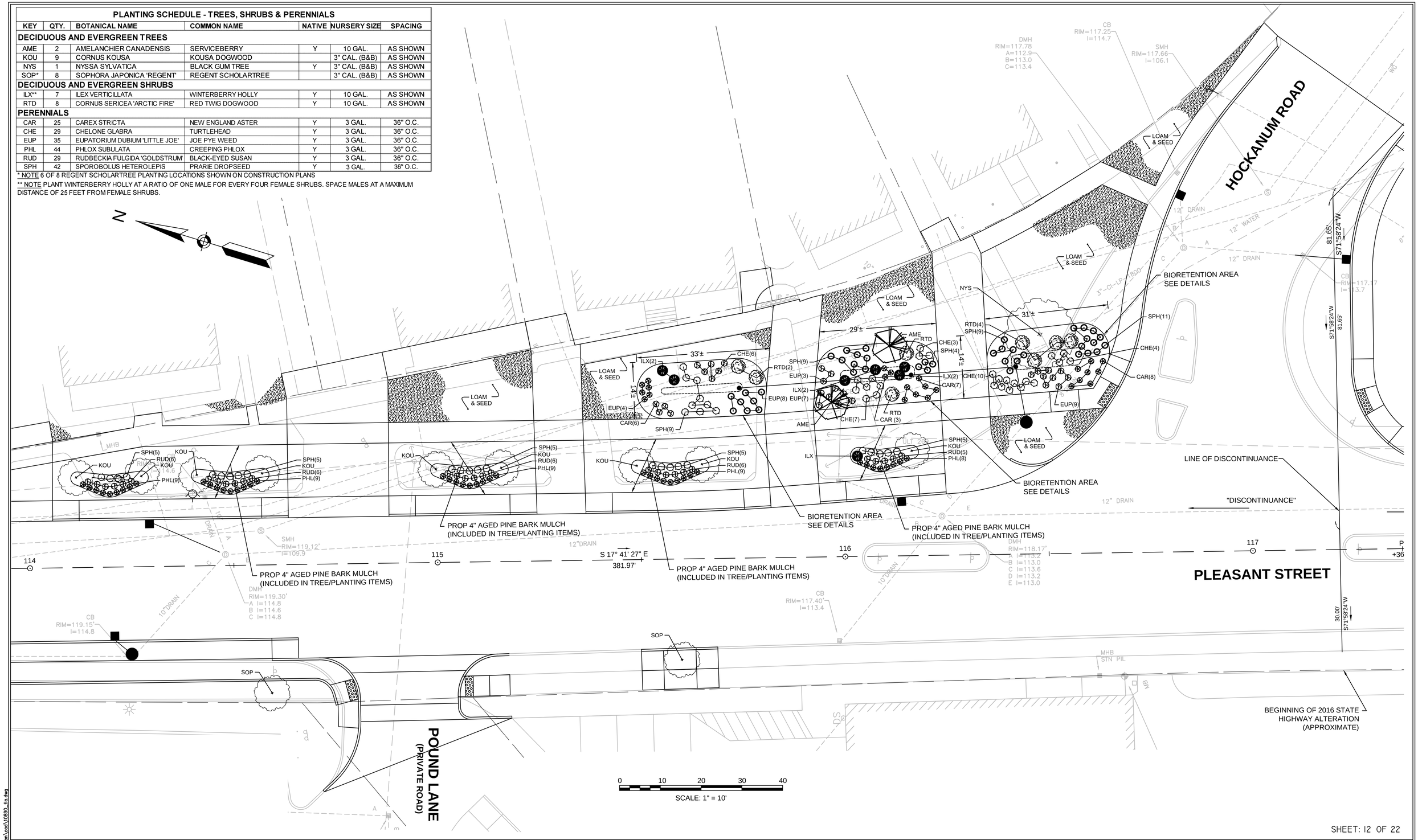
PLANTING SCHEDULE - TREES, SHRUBS & PERENNIALS						
KEY	QTY.	BOTANICAL NAME	COMMON NAME	NATIVE	NURSERY SIZE	SPACING
DECIDUOUS AND EVERGREEN TREES						
AME	2	AMELANCHIER CANADENSIS	SERVICEBERRY	Y	10 GAL.	AS SHOWN
KOU	9	CORNUS KOUSA	KOUSA DOGWOOD		3" CAL. (B&B)	AS SHOWN
NYS	1	NYSSA SYLVATICA	BLACK GUM TREE	Y	3" CAL. (B&B)	AS SHOWN
SOP*	8	SOPHORA JAPONICA 'REGENT'	REGENT SCHOLARTREE		3" CAL. (B&B)	AS SHOWN
DECIDUOUS AND EVERGREEN SHRUBS						
ILX**	7	ILEX VERTICILLATA	WINTERBERRY HOLLY	Y	10 GAL.	AS SHOWN
RTD	8	CORNUS SERICEA 'ARCTIC FIRE'	RED TWIG DOGWOOD	Y	10 GAL.	AS SHOWN
PERENNIALS						
CAR	25	CAREX STRICTA	NEW ENGLAND ASTER	Y	3 GAL.	36" O.C.
CHE	29	CHELONE GLABRA	TURTLEHEAD	Y	3 GAL.	36" O.C.
EUP	35	EUPATORIUM DUBIUM 'LITTLE JOE'	JOE PYE WEED	Y	3 GAL.	36" O.C.
PHL	44	PHLOX SUBULATA	CREEPING PHLOX	Y	3 GAL.	36" O.C.
RUD	29	RUDBECKIA FULGIDA 'GOLDSTRUM'	BLACK-EYED SUSAN	Y	3 GAL.	36" O.C.
SPH	42	SPOROBOLUS HETEROLEPIS	PRARIE DROPSEED	Y	3 GAL.	36" O.C.

* NOTE 6 OF 8 REGENT SCHOLARTREE PLANTING LOCATIONS SHOWN ON CONSTRUCTION PLANS

** NOTE PLANT WINTERBERRY HOLLY AT A RATIO OF ONE MALE FOR EVERY FOUR FEMALE SHRUBS. SPACE MALES AT A MAXIMUM DISTANCE OF 25 FEET FROM FEMALE SHRUBS.



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LANDSCAPE PLAN

PLEASANT STREET IMPROVEMENTS

PREPARED FOR:
CITY OF NORTHAMPTON

NITSCH PROJECT #	10890
SCALE:	1"=10'
DATE:	MARCH 2017
PROJECT MANAGER:	SF
SURVEYOR:	NITSCH
DRAFTED BY:	BFC
CHECKED BY:	SF

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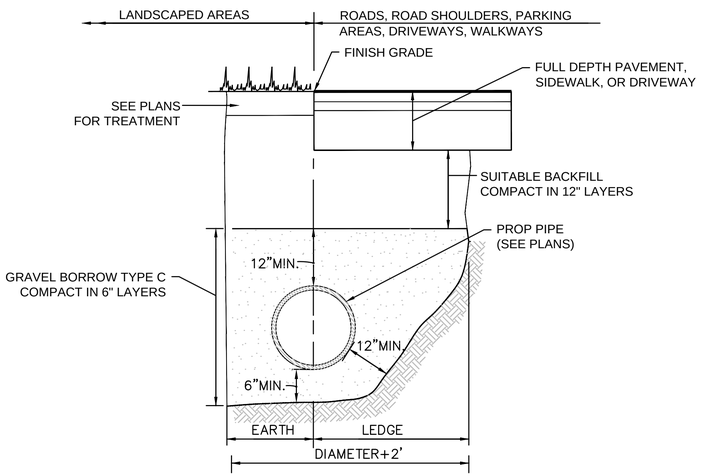
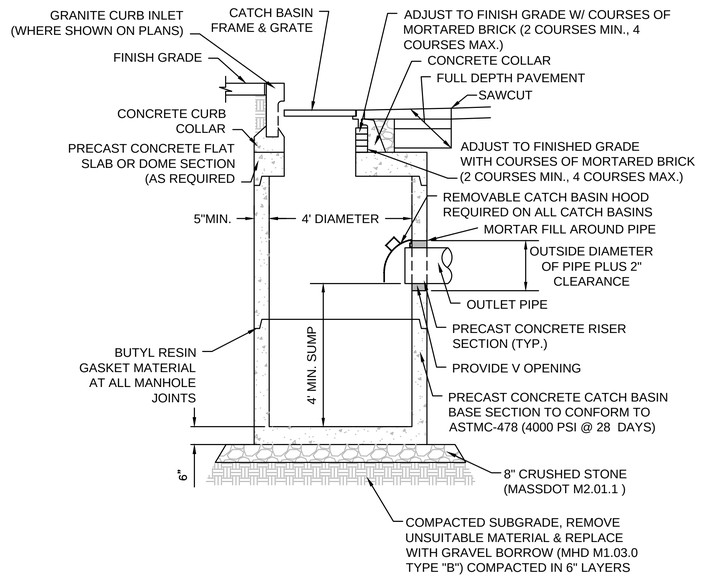
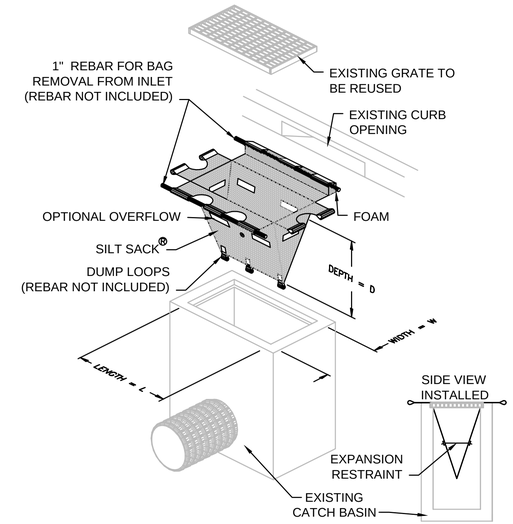


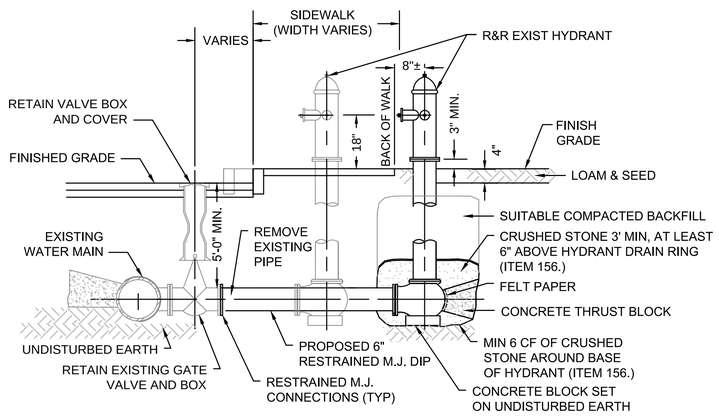
STANDARD TRENCH DETAIL
NOT TO SCALE



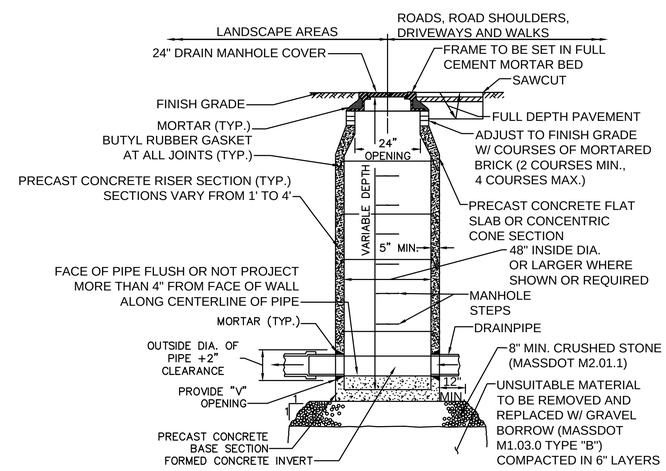
TYPICAL CATCH BASIN DETAIL
(W/ GRANITE CURB INLET)
NOT TO SCALE



CATCH BASIN W/ SILTSACK
INLET PROTECTION DETAIL
NOT TO SCALE



HYDRANT DETAIL
NOT TO SCALE



PRECAST CONCRETE
DRAIN MANHOLE DETAIL
NOT TO SCALE

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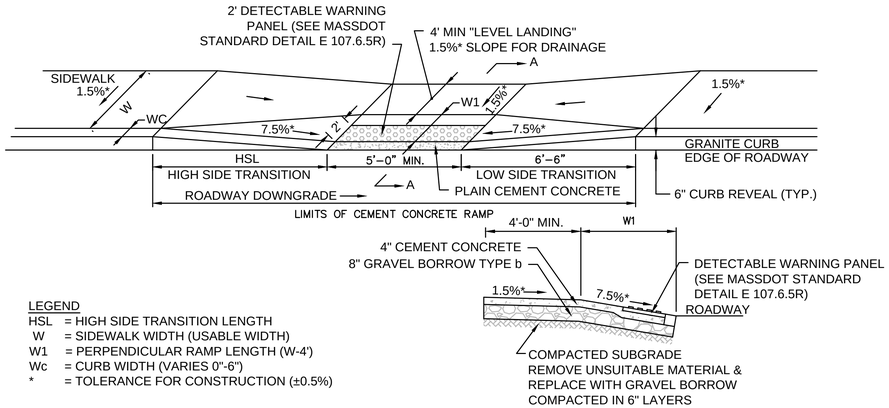
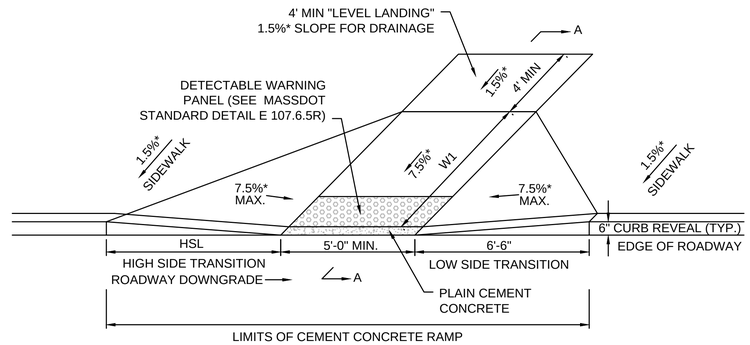


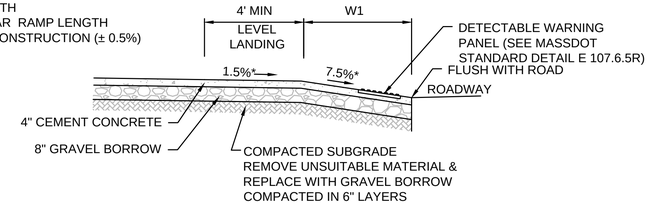
LEGEND
HSL = HIGH SIDE TRANSITION LENGTH
W = SIDEWALK WIDTH (USABLE WIDTH)
W1 = PERPENDICULAR RAMP LENGTH (W-4')
Wc = CURB WIDTH (VARIES 0"-6")
* = TOLERANCE FOR CONSTRUCTION (±0.5%)

WHEELCHAIR RAMP TYPE I

NOT TO SCALE



LEGEND
HSL = HIGH SIDE TRANSITION LENGTH
W = SIDEWALK WIDTH
W1 = PERPENDICULAR RAMP LENGTH
* = TOLERANCE FOR CONSTRUCTION (± 0.5%)



WHEELCHAIR RAMP TYPE IV

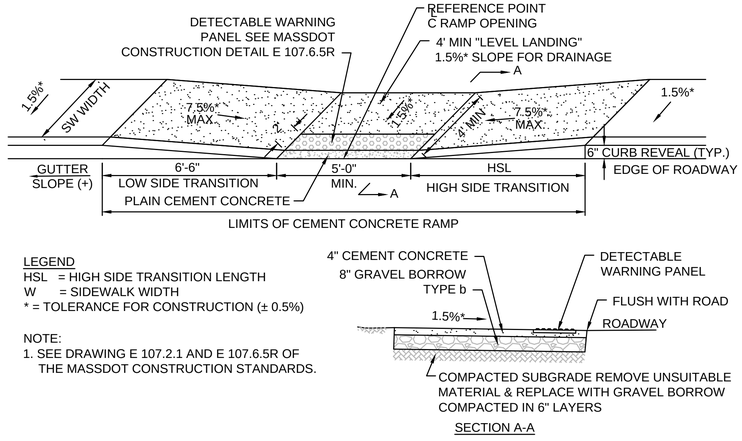
NOT TO SCALE

ROADWAY PROFILE GRADE	* HIGH SIDE TRANSITION LENGTH
%	ENGLISH UNITS
=0%	6'-6"
>0% TO 1%	7'-8"
>1% TO 2%	9'-0"
>2% TO 3%	11'-0"
>3% TO 4%	14'-0"
>4% TO 5%	15'-0" Max

NOTE:

* BASED ON A DESIGN SLOPE OF 7.5% AND A REVEAL OF 6".

TRANSITION LENGTH TABLE

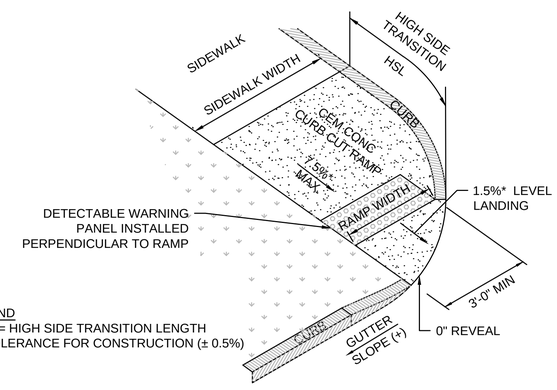


LEGEND
HSL = HIGH SIDE TRANSITION LENGTH
W = SIDEWALK WIDTH
* = TOLERANCE FOR CONSTRUCTION (± 0.5%)

NOTE:
1. SEE DRAWING E 107.2.1 AND E 107.6.5R OF THE MASSDOT CONSTRUCTION STANDARDS.

WHEELCHAIR RAMP TYPE II

NOT TO SCALE



LEGEND
HSL = HIGH SIDE TRANSITION LENGTH
* = TOLERANCE FOR CONSTRUCTION (± 0.5%)

WHEELCHAIR RAMP TYPE III

NOT TO SCALE

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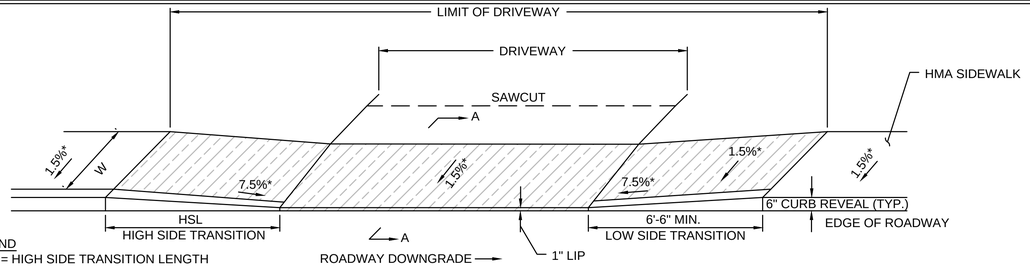
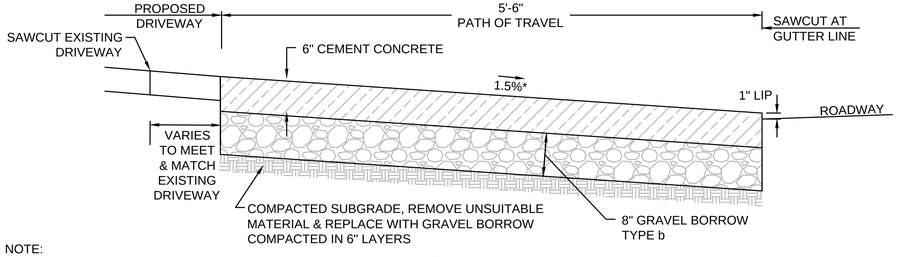


LEGEND
HSL = HIGH SIDE TRANSITION LENGTH (SEE MASSDOT STANDARD DETAIL E 107.9.0R)
W = SIDEWALK WIDTH (USABLE WIDTH)
* = TOLERANCE FOR CONSTRUCTION (±0.5%)

PLAN

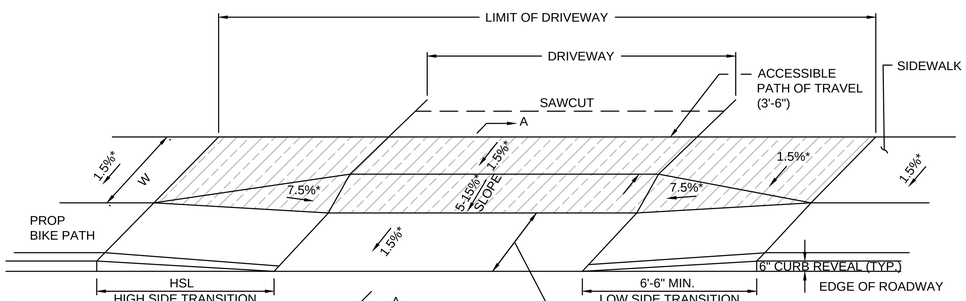


NOTE:
1. SEE DRAWING E107.7.0 OF THE MASSDOT CONSTRUCTION STANDARDS.

SECTION A-A

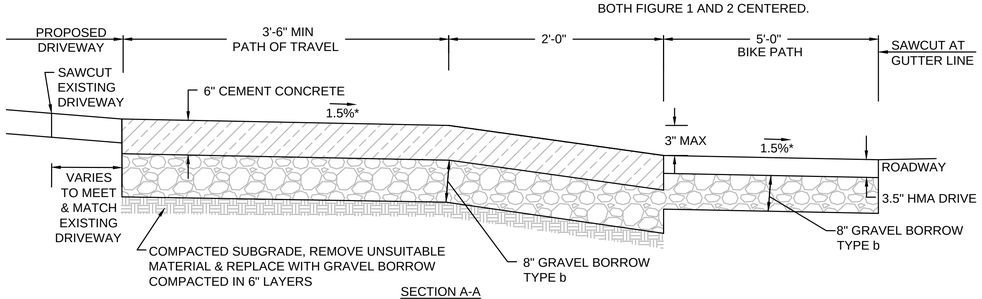
CEMENT CONCRETE DRIVEWAY- TYPE B

NOT TO SCALE



LEGEND
HSL = HIGH SIDE TRANSITION LENGTH
W = SIDEWALK WIDTH (USABLE WIDTH)
* = TOLERANCE FOR CONSTRUCTION (±0.5%)

PLAN



SECTION A-A

CEMENT CONCRETE DRIVEWAY - TYPE C

NOT TO SCALE

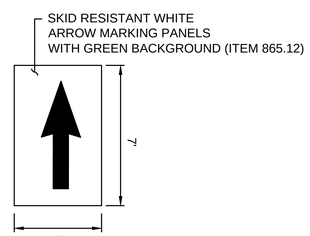


FIGURE 1

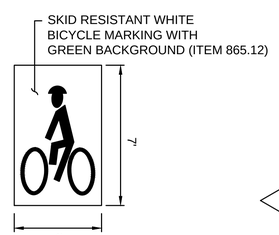
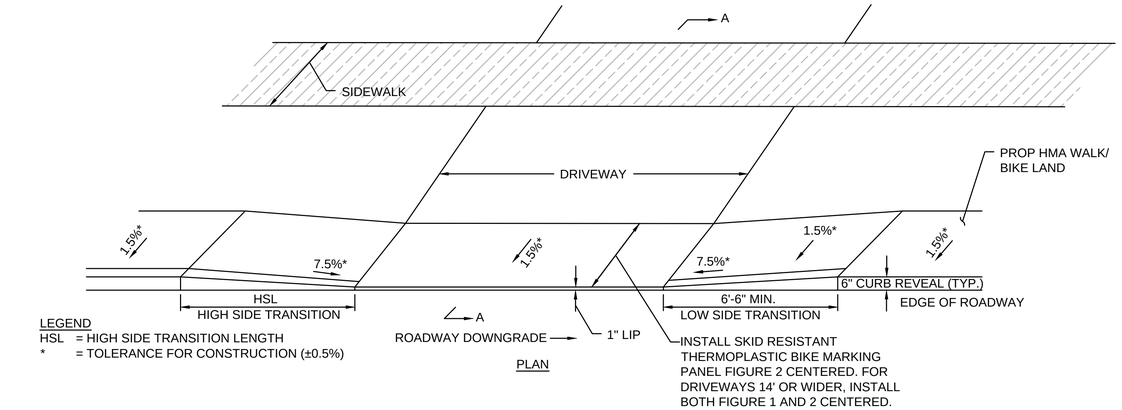
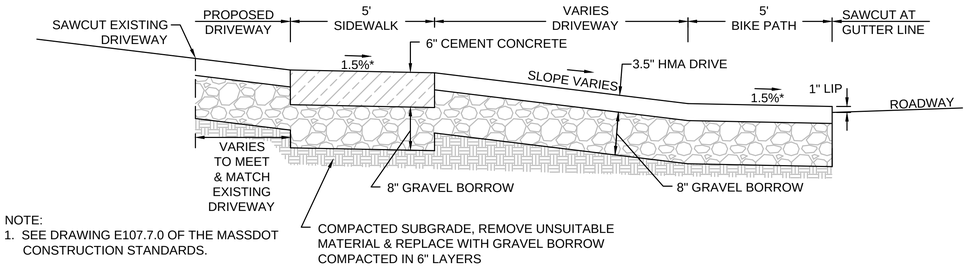


FIGURE 2



LEGEND
HSL = HIGH SIDE TRANSITION LENGTH
* = TOLERANCE FOR CONSTRUCTION (±0.5%)

PLAN

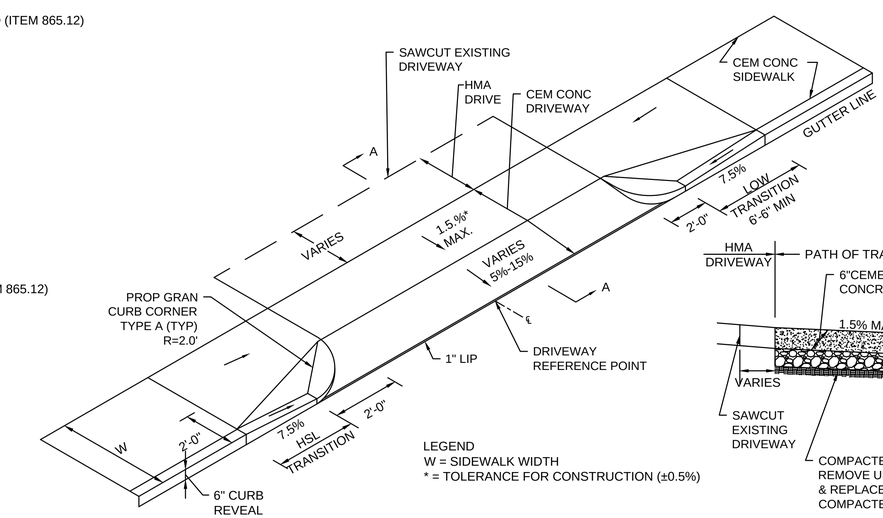


NOTE:
1. SEE DRAWING E107.7.0 OF THE MASSDOT CONSTRUCTION STANDARDS.

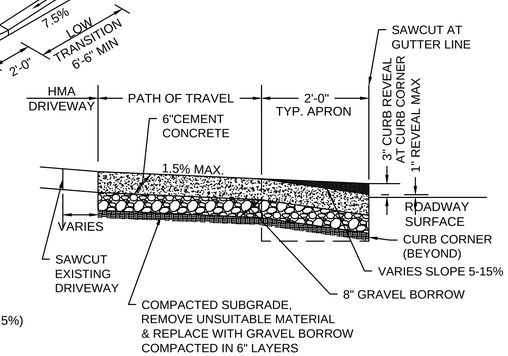
SECTION A-A

HMA DRIVEWAY- TYPE D

NOT TO SCALE



LEGEND
W = SIDEWALK WIDTH
* = TOLERANCE FOR CONSTRUCTION (±0.5%)



SECTION A-A

CEMENT CONCRETE DRIVEWAY- TYPE A

NOT TO SCALE

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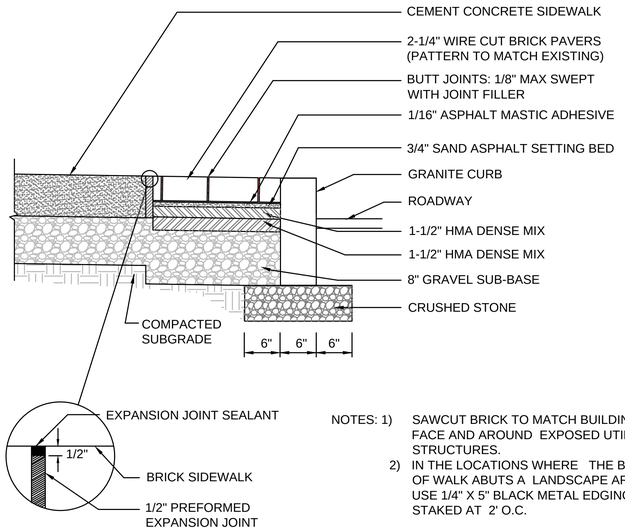
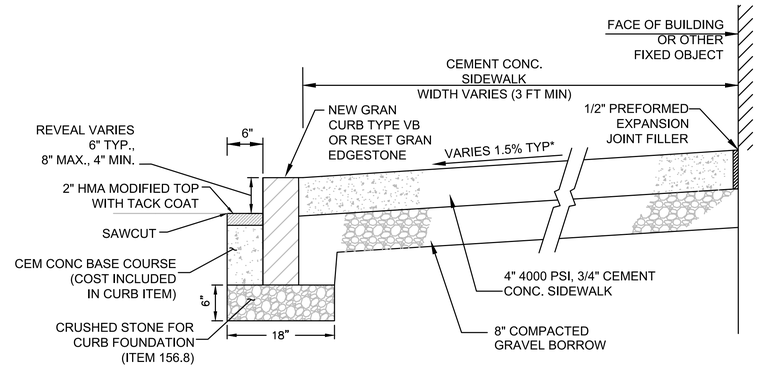


NOTES: 1) SAWCUT BRICK TO MATCH BUILDING FACE AND AROUND EXPOSED UTILITY STRUCTURES.
2) IN THE LOCATIONS WHERE THE BACK OF WALK ABUTS A LANDSCAPE AREA USE 1/4" X 5" BLACK METAL EDGING STAKED AT 2' O.C.

BRICK WALK ON BITUMINOUS CONCRETE SETTING BED

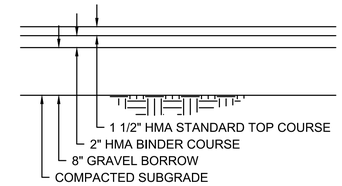
NOT TO SCALE



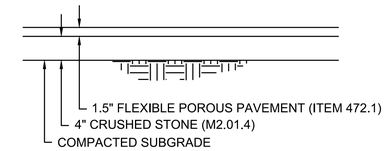
* CONTRACTOR SHALL PROVIDE CONTINUOUS CROSS SLOPE TOWARDS STREET TO PROVIDE POSITIVE DRAINAGE AWAY FROM BACK OF WALK.

CURB SETTING AND CEMENT CONCRETE SIDEWALK

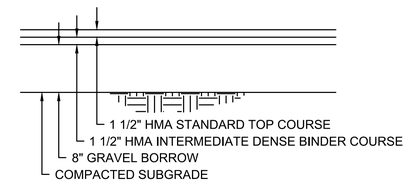
NOT TO SCALE



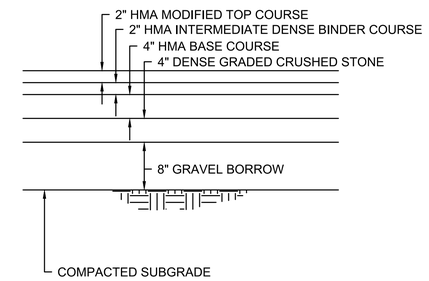
HOT MIX ASPHALT DRIVEWAY
NOT TO SCALE



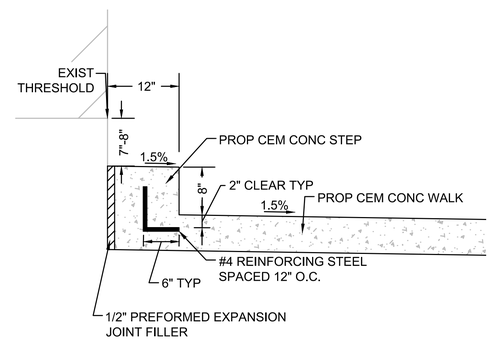
FLEXIBLE PAVEMENT
NOT TO SCALE



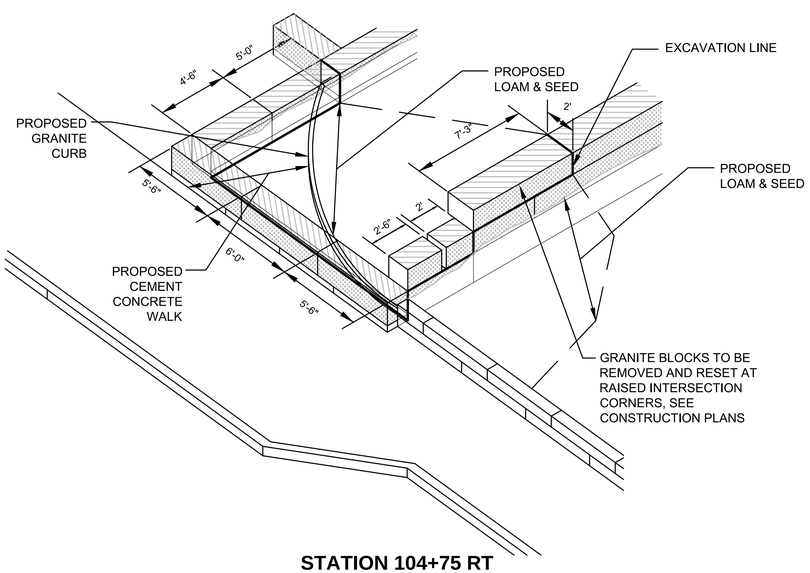
HOT MIX ASPHALT WALK
NOT TO SCALE



FULL DEPTH HMA PAVEMENT
NOT TO SCALE

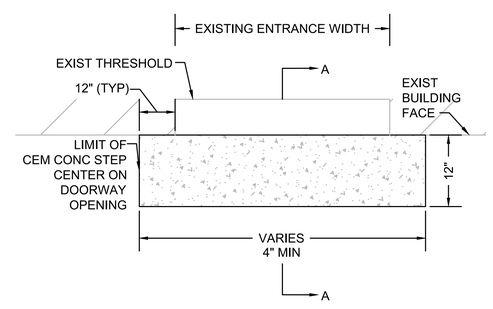


SECTION A-A
NOT TO SCALE



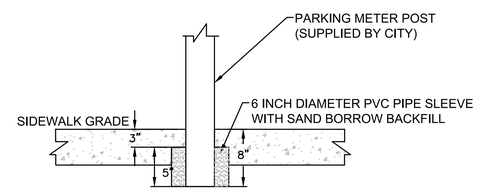
STATION 104+75 RT
NEW HAVEN & NORTHAMPTON (MANHAN) RAIL TRAIL ENTRANCE

NOT TO SCALE

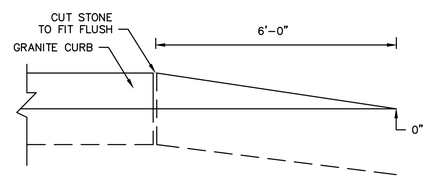


PLAN VIEW
NOT TO SCALE

CEMENT CONCRETE STEP DETAIL
NOT TO SCALE

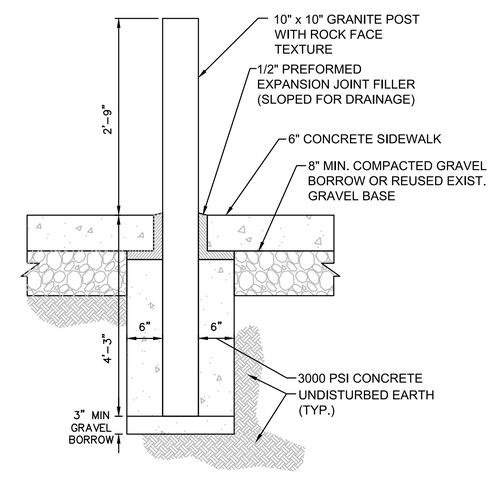


PARKING METER INSTALLATION DETAIL
NOT TO SCALE



TRANSITION CURB (NO WCR) ELEVATION VIEW

NOT TO SCALE
(PAID UNDER ITEM 509.)



GRANITE BOLLARD DETAIL
NOT TO SCALE

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CONSTRUCTION DETAILS

PLEASANT STREET IMPROVEMENTS

PREPARED FOR:
CITY OF NORTHAMPTON

NITSCH PROJECT #	10890
SCALE:	
DATE:	MARCH 2017
PROJECT MANAGER:	SF
SURVEYOR:	NITSCH
DRAFTED BY:	CB
CHECKED BY:	SF

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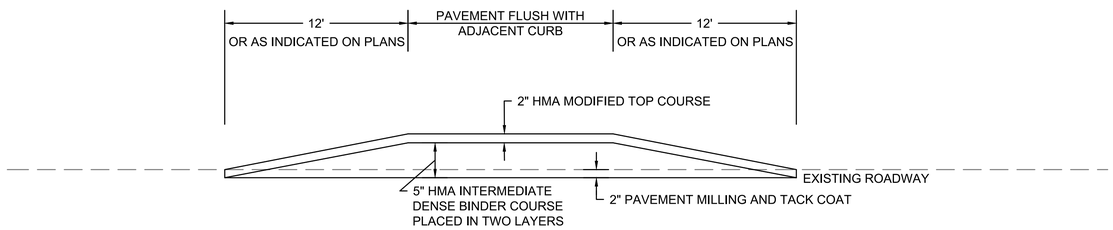
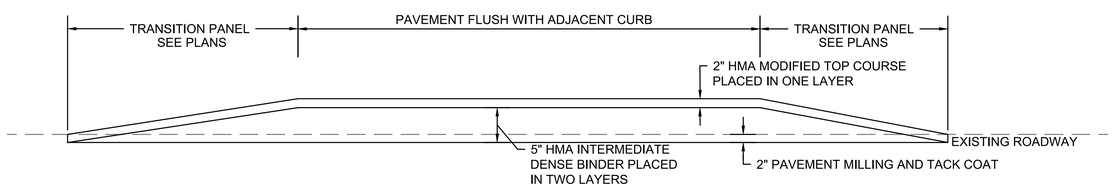


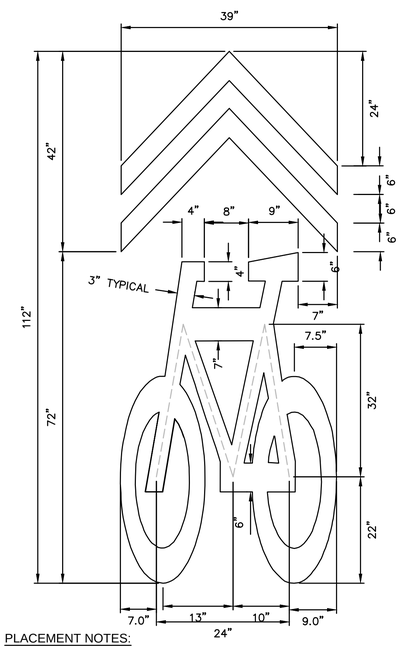
RAISED CROSSWALK

NOT TO SCALE



RAISED INTERSECTION

NOT TO SCALE

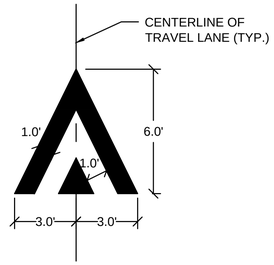


PLACEMENT NOTES:

1. SHARED LANE MARKING SYMBOLS SHALL BE PLACED SO THAT THE CENTER IS 4 FEET FROM THE ADJACENT CURB LINE OR PARKING LANE.
2. DO NOT PLACE SYMBOLS ON LANE LINES.
3. SHARED LANE SYMBOLS SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS.
4. SHARED LANE MARKING SHALL BE WHITE REFLECTORIZED THERMOPLASTIC (ITEM 864.04).

SHARROW LANE SYMBOL

NOT TO SCALE

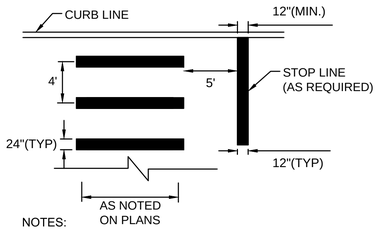


NOTES:

1. PAVEMENT MARKING SHALL BE WHITE REFLECTORIZED THERMOPLASTIC (ITEM 864.04)

RAMP PAVEMENT MARKING DETAIL

NOT TO SCALE

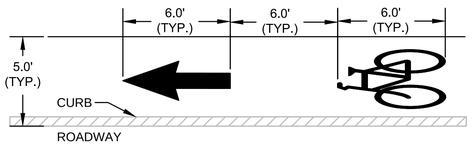


NOTES:

1. ALL PROPOSED STOP LINES AND CROSSWALKS SHALL BE WHITE REFLECTORIZED THERMOPLASTIC (ITEM 865.1).

CROSSWALK & STOP LINE

NOT TO SCALE



NOTES:

1. BIKE PATH ARROWS AND BIKE SYMBOL SHALL BE REFLECTORIZED WHITE PAINT (ITEM 864).

BIKE PATH MARKINGS

NOT TO SCALE

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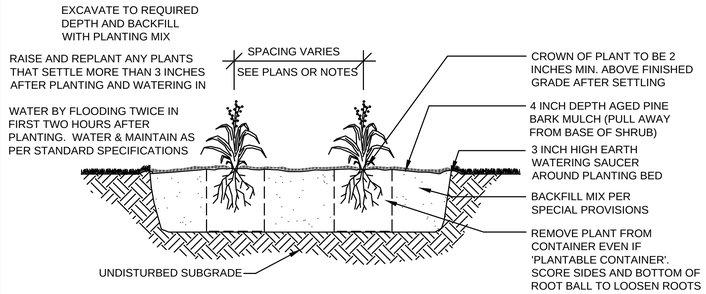
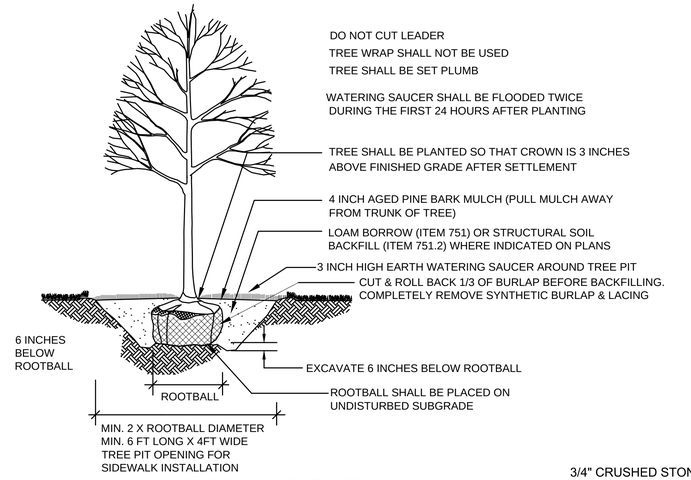


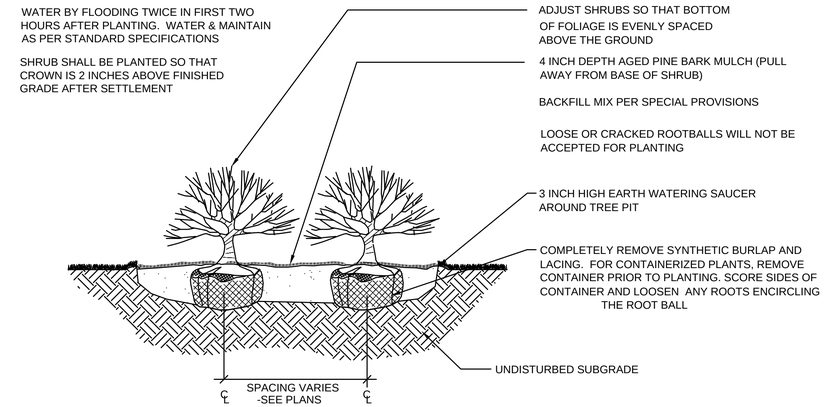
PERENNIAL PLANTING DETAIL

NOT TO SCALE



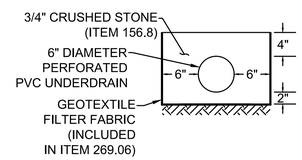
TREE PLANTING DETAIL

NOT TO SCALE



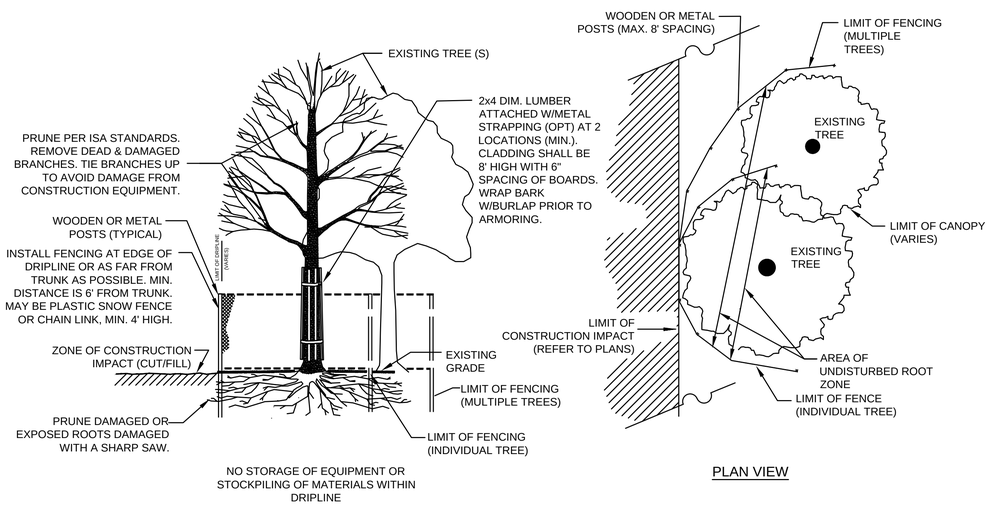
SHRUB PLANTING DETAIL

NOT TO SCALE



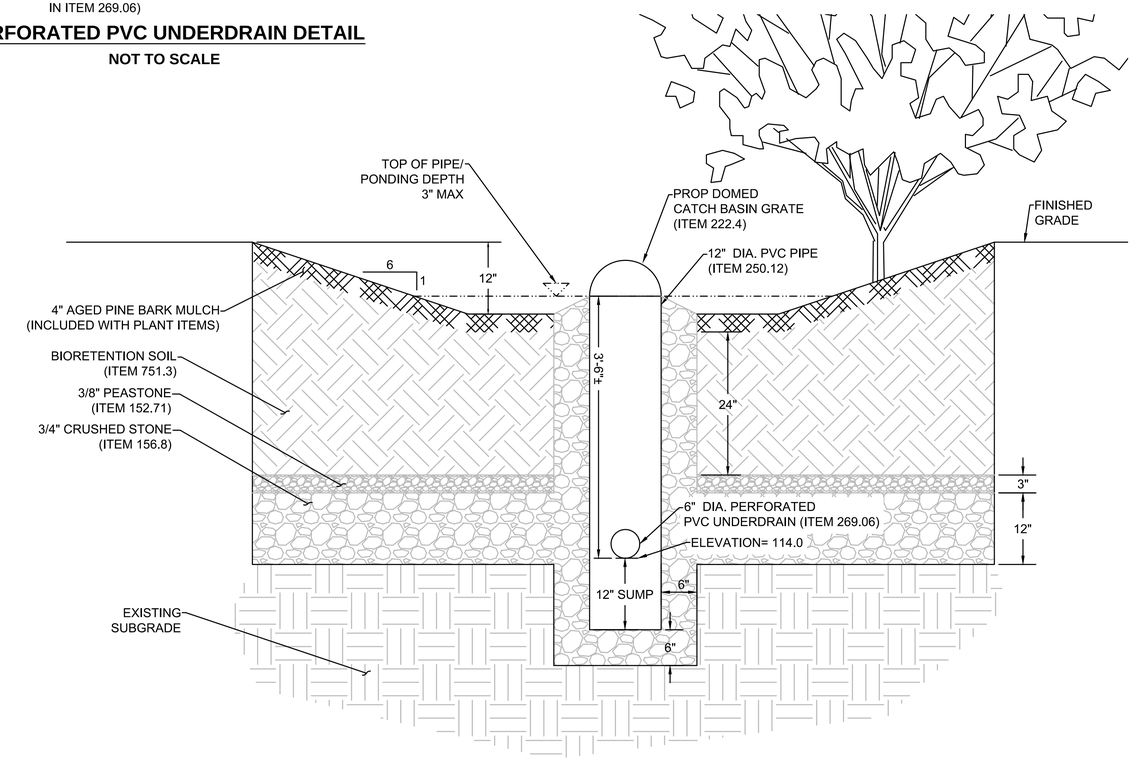
PERFORATED PVC UNDERDRAIN DETAIL

NOT TO SCALE



EXISTING TREE PROTECTION DETAIL

NOT TO SCALE



BIORETENTION AREA DETAIL

NOT TO SCALE

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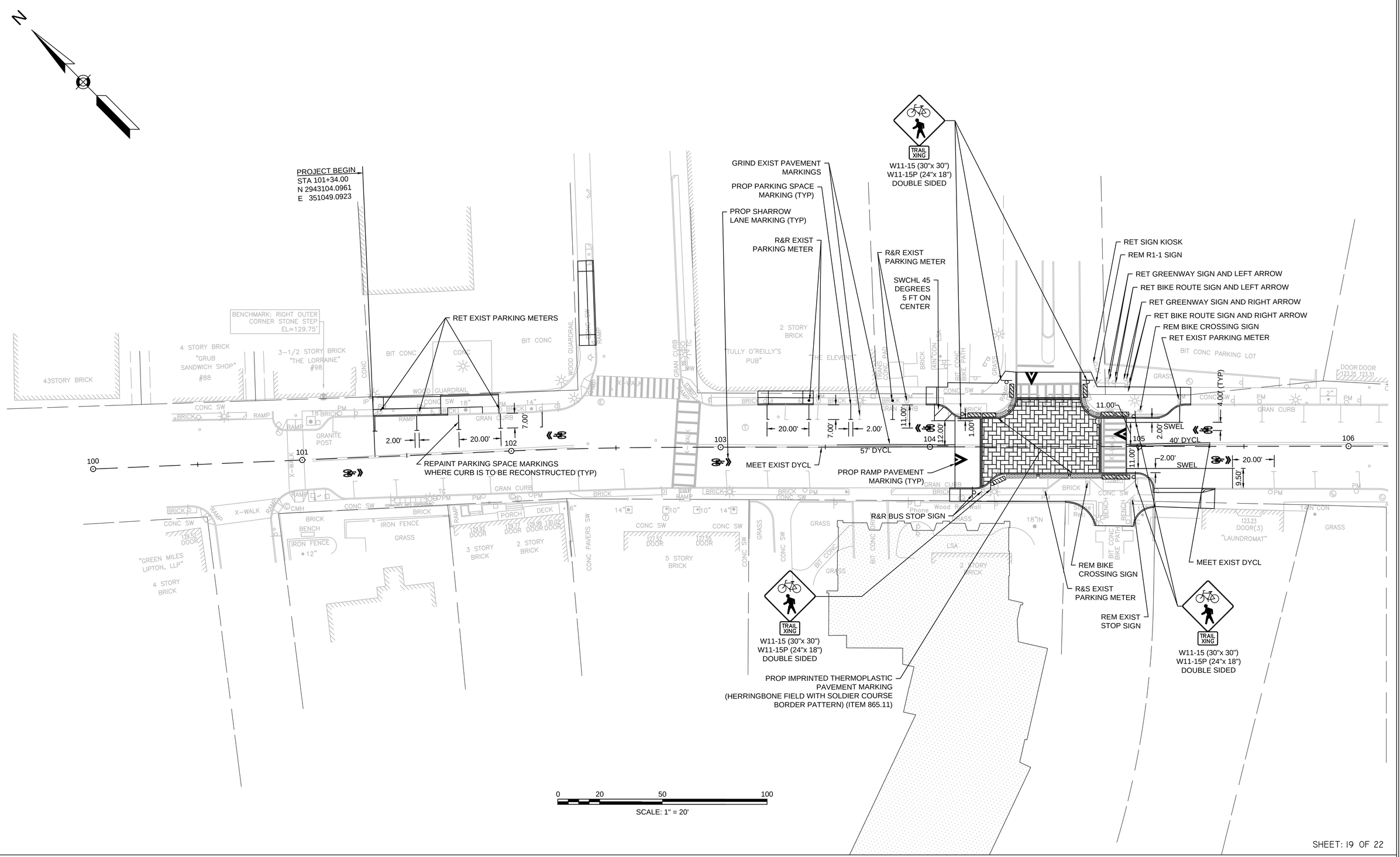

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PAVEMENT MARKING & SIGNAGE PLAN

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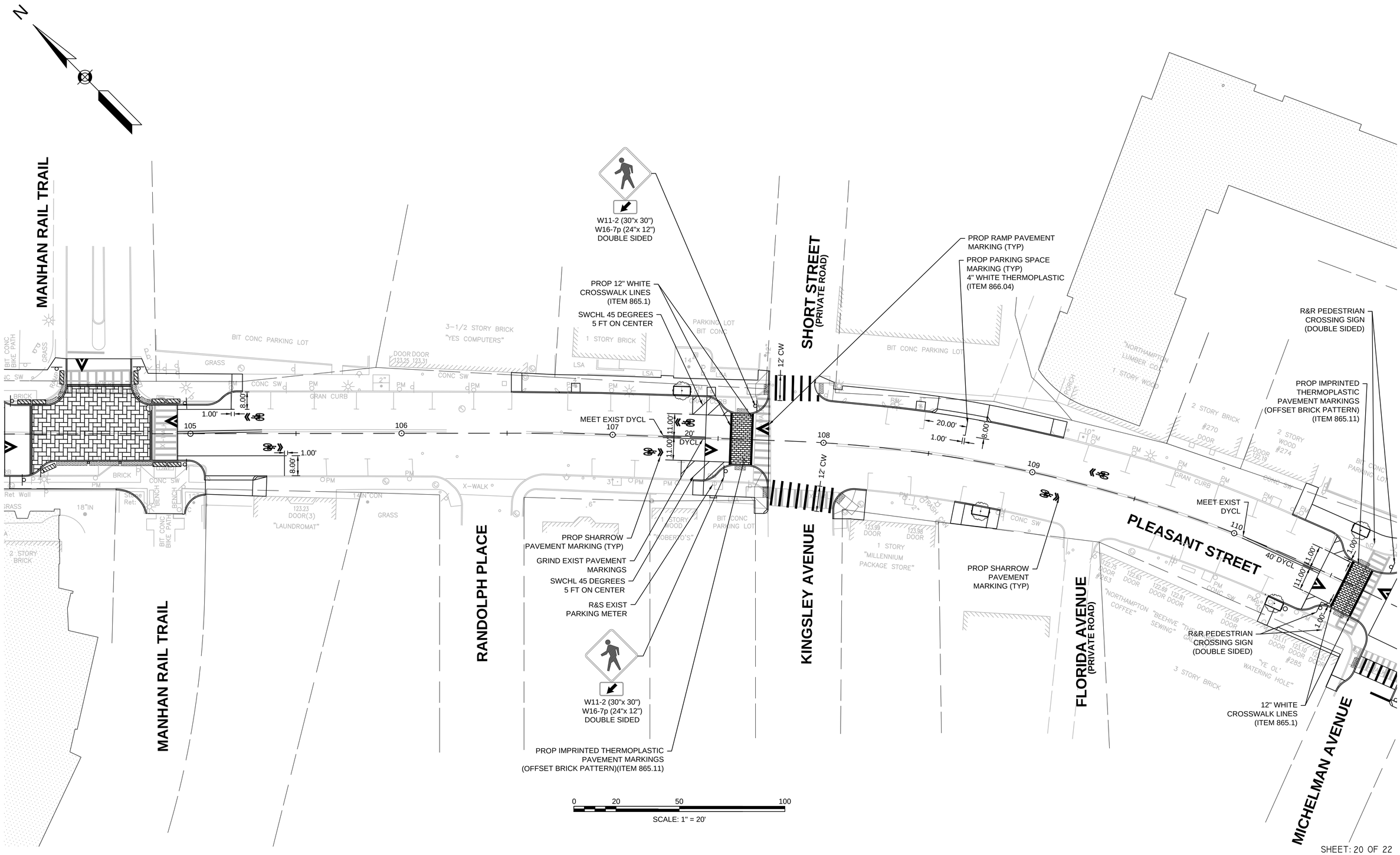

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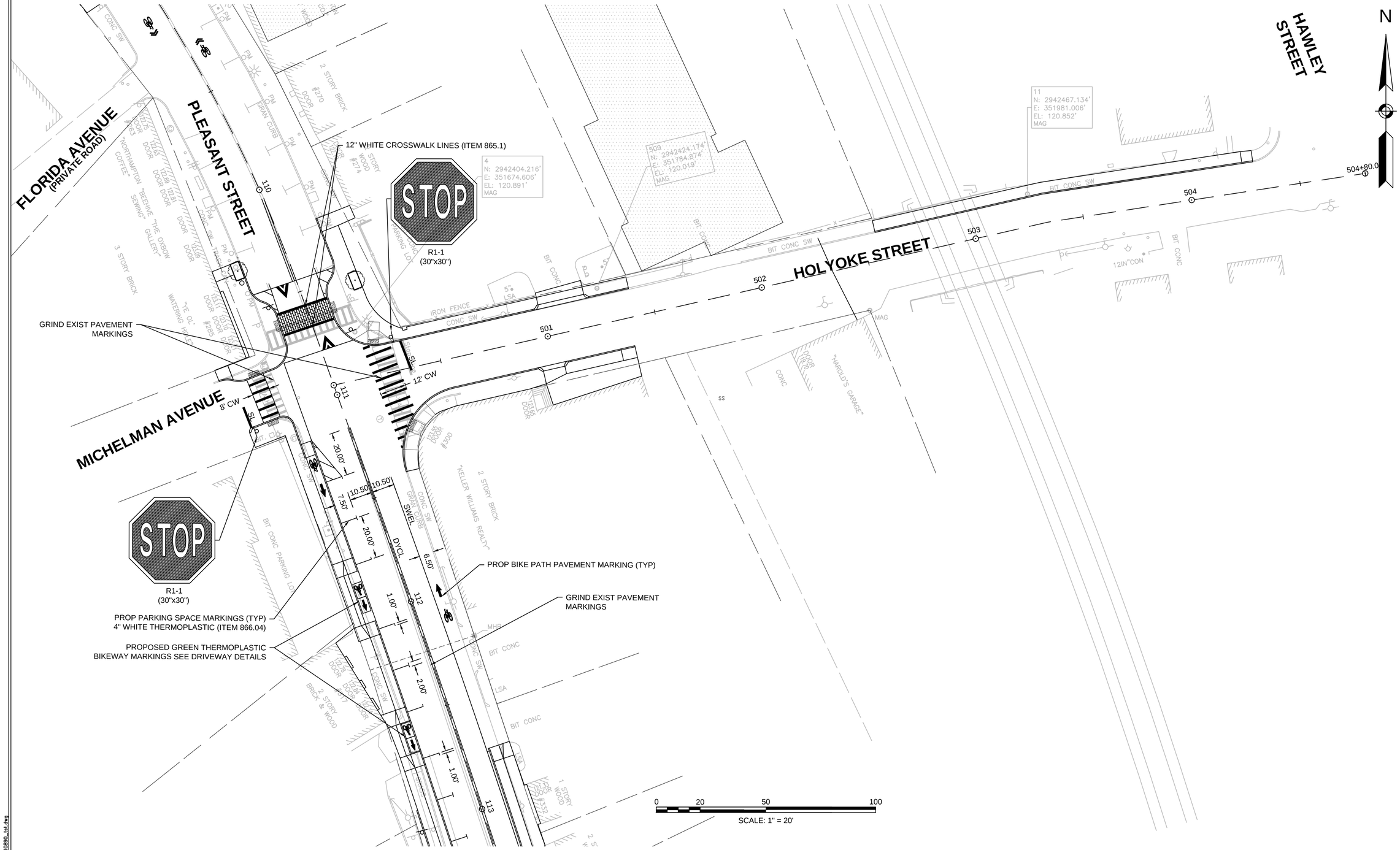

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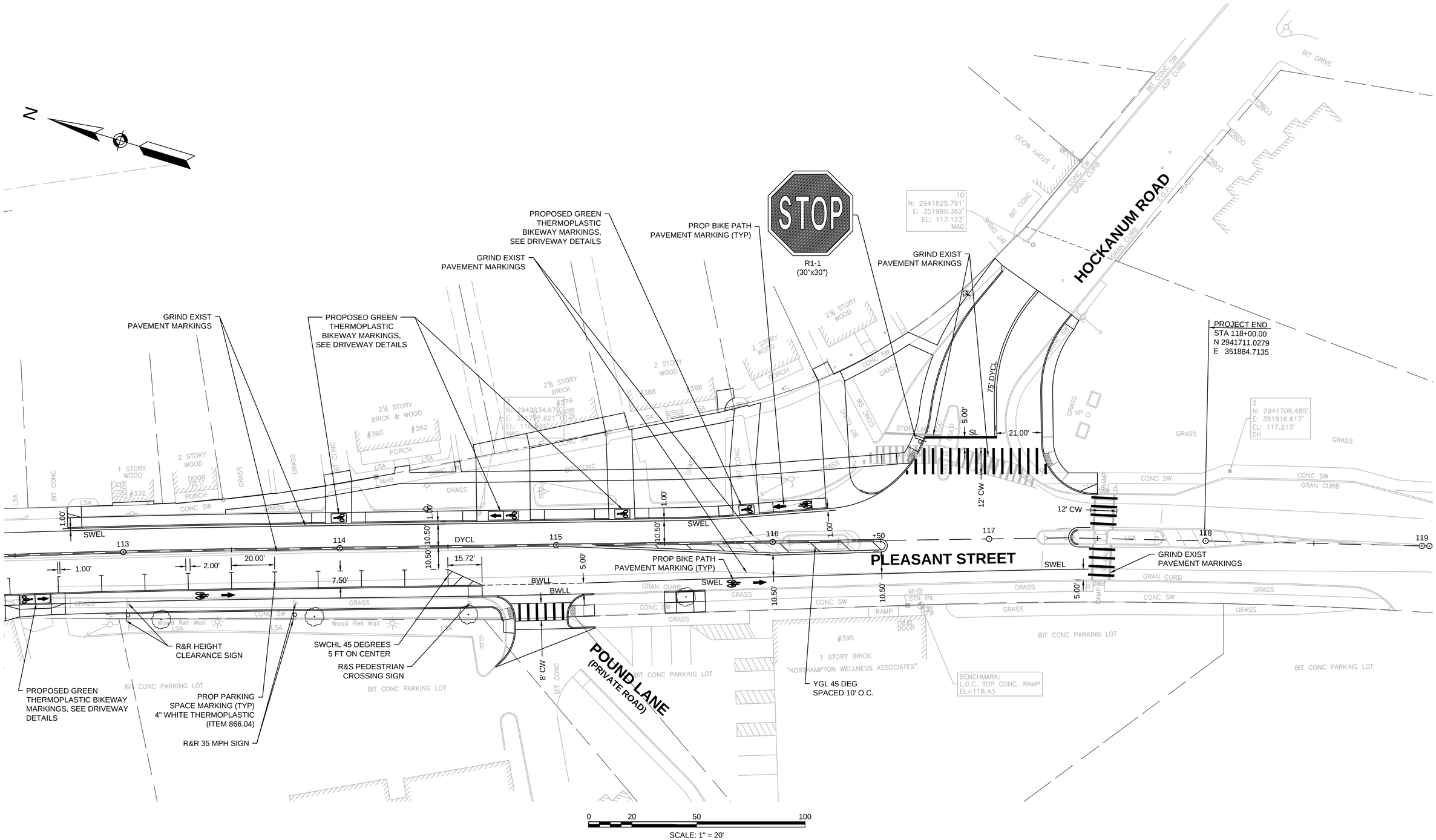

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