

UTILITIES
PUBLIC SERVICE ELECTRIC AND GAS COMPANY (ELECTRIC)
COMCAST CABLE (CABLE)
MIDDLESEX WATER COMPANY (WATER MAINS)
ELIZABETH GAS COMPANY (GAS MAINS)
VERIZON-NEW JERSEY INC. (TELEPHONE / COMMUNICATIONS)
NEW JERSEY DEPARTMENT OF TRANSPORTATION (TRAFFIC SIGNALS & HIGHWAY LIGHTING)

CULVERTS IN THIS CONTRACT
① CULVERT NO. 9012 OVER HEARDS BROOK

RETAINING WALLS IN THIS CONTRACT
① RETAINING WALL TO THE NORTH OF MAIN STREET (CR 514), WEST OF CROSSPOINTE
② RETAINING WALL TO THE SOUTH OF 346 MAIN STREET
③ RETAINING WALL TO THE SOUTHWEST OF BRIDGE NO. 1210150
④ RETAINING WALL TO THE SOUTHWEST OF BRIDGE NO. 1210150
⑤ RETAINING WALL TO THE NORTHWEST OF BRIDGE NO. 1210150
⑥ RETAINING WALL TO THE EAST OF THE ROUTE 9 NORTHBOUND RAMP
⑦ RETAINING WALL TO THE SOUTHEAST OF BRIDGE NO. 1210150
⑧ RETAINING WALL TO THE SOUTHEAST OF BRIDGE NO. 1210150

JOHN E. McCORMAC - MAYOR
TOWNSHIP COUNCIL

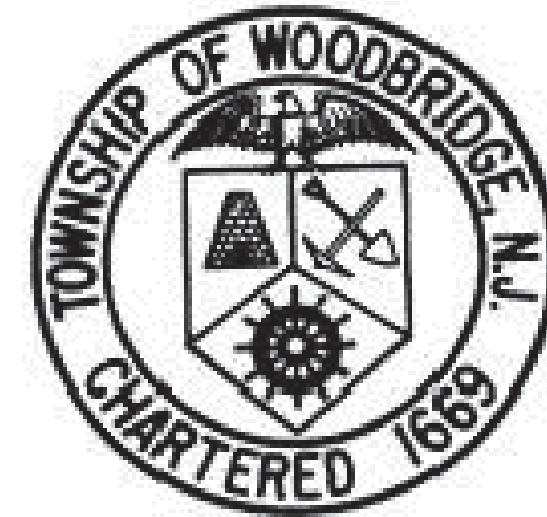
HOWIE BAUER GREGG M. FICARRA KYLE ANDERSON LIZBETH DEJESUS SHARON MCAULIFFE DEBBIE MEEHAN VIRBHADRA PATEL BRIAN SMALL CORY SPILLAR	COUNCIL PRESIDENT COUNCIL VICE PRESIDENT COUNCILMAN COUNCILWOMAN COUNCILWOMAN COUNCILWOMAN COUNCILMAN COUNCILMAN COUNCILMAN
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VITO CIMILLUCA JOHN M. MITCH JAMES P. NOLAN, JR., ESQ. GEORGE BREW MICHAEL GELIN, P.E.	BUSINESS ADMINISTRATOR MUNICIPAL CLERK DIRECTOR OF LAW DIRECTOR OF PUBLIC WORKS MUNICIPAL ENGINEER
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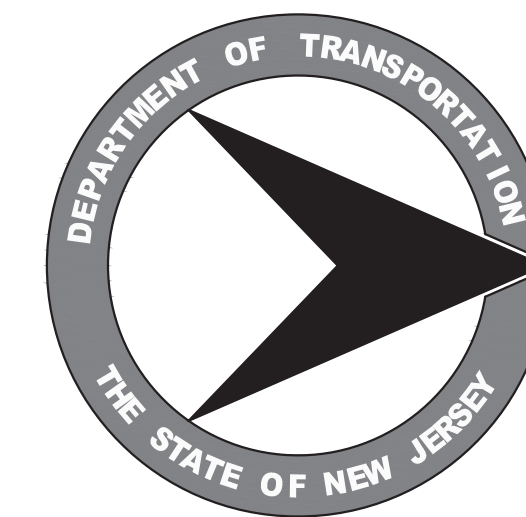
DESIGN TRAFFIC DATA - MAIN ST.		
A.D.T. (2019) - 2 WAY	=	19,933
A.D.T. (2024) - 2 WAY	=	21,733
D.H.V. (2024) - 2 WAY	=	1,058
D	=	54%
T	=	3%
V	=	40 M.P.H.

DESIGN TRAFFIC DATA - ROUTE 9 NORTHBOUND ON/OFF RAMP		
A.D.T. (2000) - 2 WAY	=	9,011
A.D.T. (2024) - 2 WAY	=	10,978
D.H.V. (2024) - 2 WAY	=	710
D	=	72%
T	=	3%
V	=	25 M.P.H.

DESIGN TRAFFIC DATA - ROUTE 9 SOUTHBOUND ON/OFF RAMP		
A.D.T. (2019) - 2 WAY	=	11,533
A.D.T. (2024) - 2 WAY	=	13,356
D.H.V. (2024) - 2 WAY	=	537
D	=	78%
T	=	0.6%
V	=	25 M.P.H.



State of New Jersey Department of Transportation



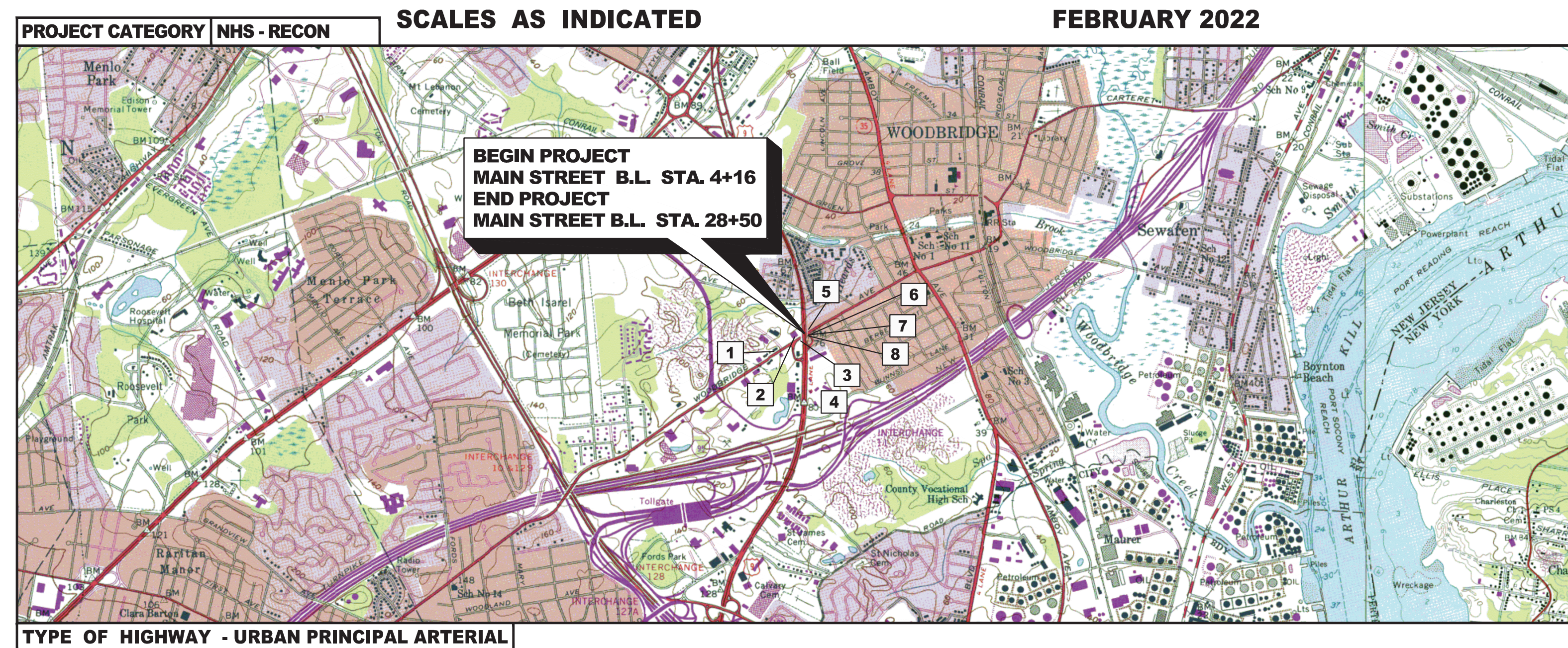
PLANS OF ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

CONTRACT NO. 2021-019

GRADING, PAVING, DRAINAGE, STRUCTURES AND TRAFFIC SIGNAL REPLACEMENT

TOWNSHIP OF WOODBRIDGE

MIDDLESEX COUNTY



KEY MAP



LENGTH OF PROJECT - ROUTE 9 NORTHBOUND ON/OFF RAMP	= 252.74 LIN. FT. OR 0.048 MILES
LENGTH OF PROJECT - ROUTE 9 SOUTHBOUND ON/OFF RAMP	= 275.53 LIN. FT. OR 0.052 MILES
LENGTH OF PROJECT - MAIN STREET (CR 514)	= 2434 LIN. FT. OR 0.461 MILES
LENGTH OF PROJECT - CROSSPOINTE TOWN SQUARE DRIVEWAY	= 412.33 LIN. FT. OR 0.078 MILES
TOTAL LENGTH OF PROJECT	= 3374.60 LIN. FT. OR 0.639 MILES

2019 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION TO GOVERN

"CHANGES MADE TO THESE PLANS SINCE SIGNATURE BY THE CONSULTANT MAY BE DETERMINED BY COMPARISON OF THE PLANS FILED AT THE DEPARTMENT WITH THOSE FILES AT THE OFFICE OF THE CONSULTANT."

INDEX OF SHEETS	
SHEET NUMBERS	DESCRIPTION
1	KEY
2-3	ESTIMATE - DISTRIBUTION OF QUANTITIES
4-8	TYPICAL SECTIONS
9	PLAN SHEET INDEX
10	CONSTRUCTION LEGEND
11-16	CONSTRUCTION PLANS
17	CRASH CUSHION COMPRESSIVE BARRIER SUMMARY TABLE
18	SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
19-23	DRAINAGE AND EROSION CONTROL PLANS
24	PROPOSED GRADING AND STABILIZATION AT CULVERT FASCIA
25-31	CURB RAMP DETAILS
32-71	CONSTRUCTION DETAILS
72-83	PROFILES
84-85	TIES
86-91	GRADES
92-135	TRAFFIC CONTROL AND STAGING PLANS
136-138	TRAFFIC SIGNAL PLAN
139-144	ELECTRICAL PLANS
145-150	UTILITY PLANS
151-156	TRAFFIC SIGNING AND STRIPING PLANS
157-179	CROSS SECTIONS
180-182	GENERAL STRUCTURAL NOTES
183-190	RETAINING WALL PLANS
191-197	CULVERT PLANS

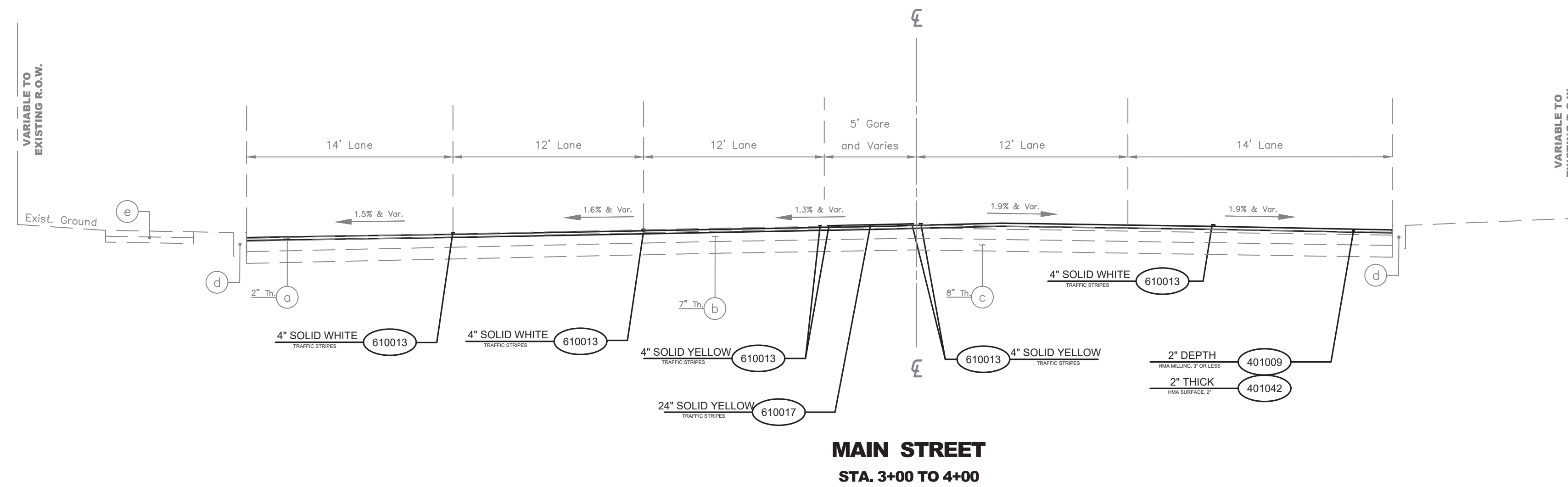
STANDARD ROADWAY CONSTRUCTION-TRAFFIC CONTROL-BRIDGE CONSTRUCTION DETAILS BOOKLET 2016 AND STANDARD ELECTRICAL DETAILS BOOKLET, 2007 ARE APPLICABLE TO THIS PROJECT EXCEPT FOR THOSE DETAILS CONTAINED HEREIN.

**MID-POINT OF PROJECT
LONGITUDE: 74° 17' 24" W
LATITUDE: 40° 33' 02" N**

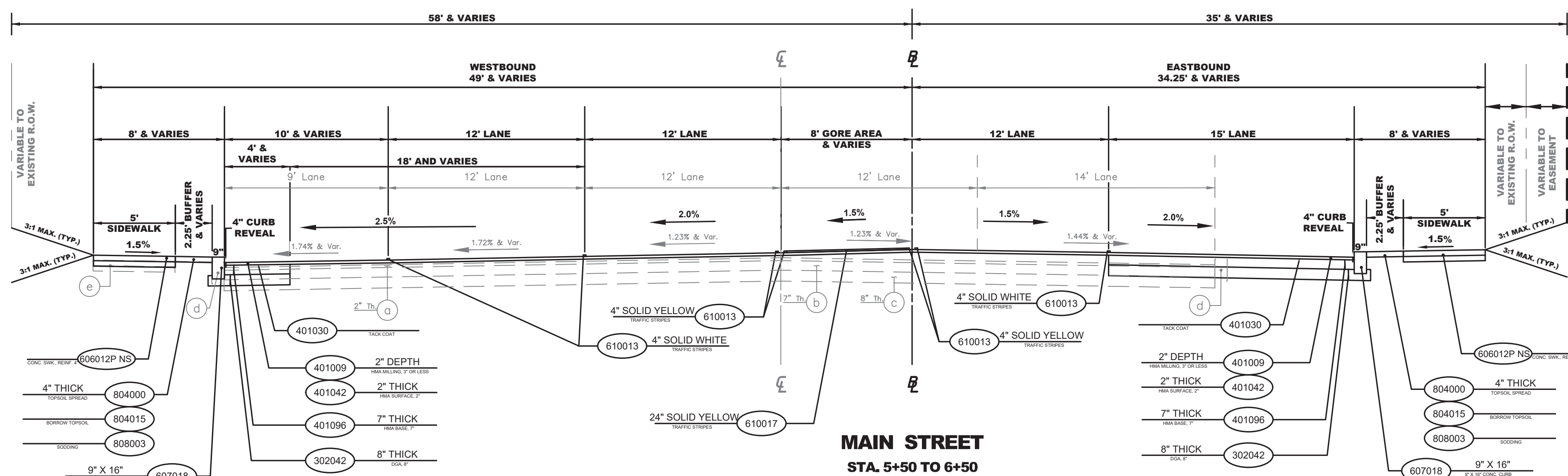
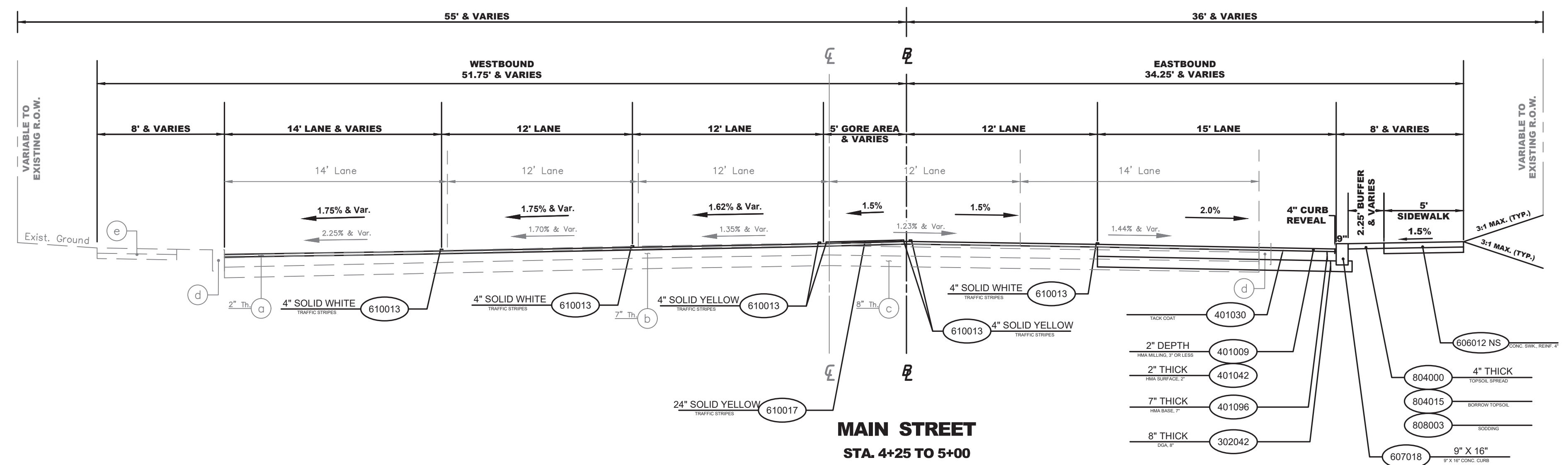
PREPARED BY

MICHAEL J. McCLELLAND, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE No. 32468





PROPOSED MATERIALS	
ITEM NO.	DESCRIPTION
302042P	DENSE -GRADED AGGREGATE BASE COURSE, 8" THICK
401009P	HMA MILLING, 3" OR LESS
401030M	TACK COAT
401036M	PRIME COAT
401042M	HOT MIX ASPHALT 9.5M64 SURFACE COURSE
401096M	HOT MIX ASPHALT 19M64 BASE COURSE
513003P	RETAINING WALL
610013M	TRAFFIC MARKINGS, 4"
610014M	TRAFFIC MARKINGS, 8"
610017M	TRAFFIC MARKINGS, 24"
606012P NS	CONCRETE SIDEWALK, REINFORCED, 4" THICK
607018P	9"x16" CONCRETE VERTICAL CURB
804000P	TOPSOIL SPREADING 4" THICK
804015P	BORROW TOPSOIL
808003P	SODDING



- NOTES:**
- ALL STATIONS SHOWN ON THESE TYPICAL SECTIONS CORRESPOND TO THE STATIONS SHOWN ON THE CONSTRUCTION PLANS.
 - CONTRACTOR SHALL PROVIDE POSITIVE SLOPE TOWARDS EXISTING DRAINAGE STRUCTURE OR UMBRELLA SECTION. CONTRACTOR'S WORK SHALL NOT RESULT IN PONDING CONDITIONS.

Existing Materials	
Item No.	Description
a	Hot Mix Asphalt 9.5M64 Surface Course, 2" Thick
b	Hot Mix Asphalt 19M64 Base Course, 7" Thick
c	Dense Graded Aggregate, 8" Thick
d	9"x16" Concrete Vertical Curb
e	Concrete Sidewalk, 4" Thick

TS-1
TS-5

No.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
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TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

TYPICAL SECTIONS (1 OF 5)

ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS

(732) 727 8000 (732) 462 7400
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

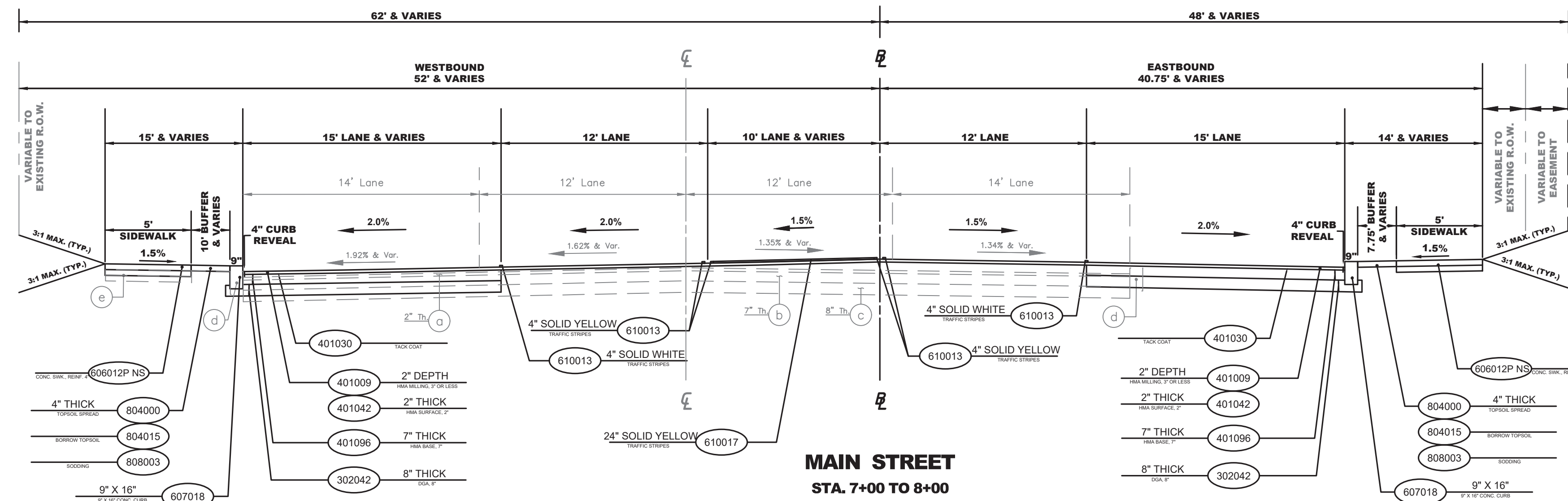
JOHN H. ALLGAIER P.E. & P.P. (1983 - 3551)	DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 258388	JOHN J. STEFANI P.E., L.S. & P.P. NO PE & LS LIC NO. 24271
JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 329962	MICHAEL J. MCCLELLAND P.E. & P.P. NO PE LIC NO. 334668	GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 394588

MICHAEL J. MCCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468

DATE: 2/17/2022

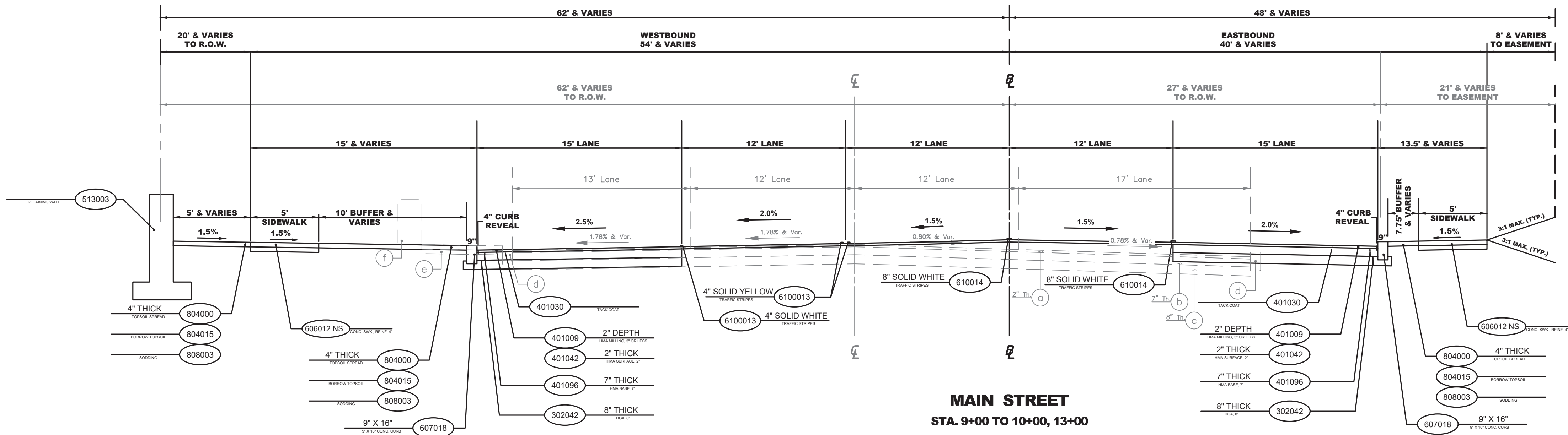
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CHECKED BY: JCW SHEET: 4 OF 197

FILE NO. PWB0A609.01

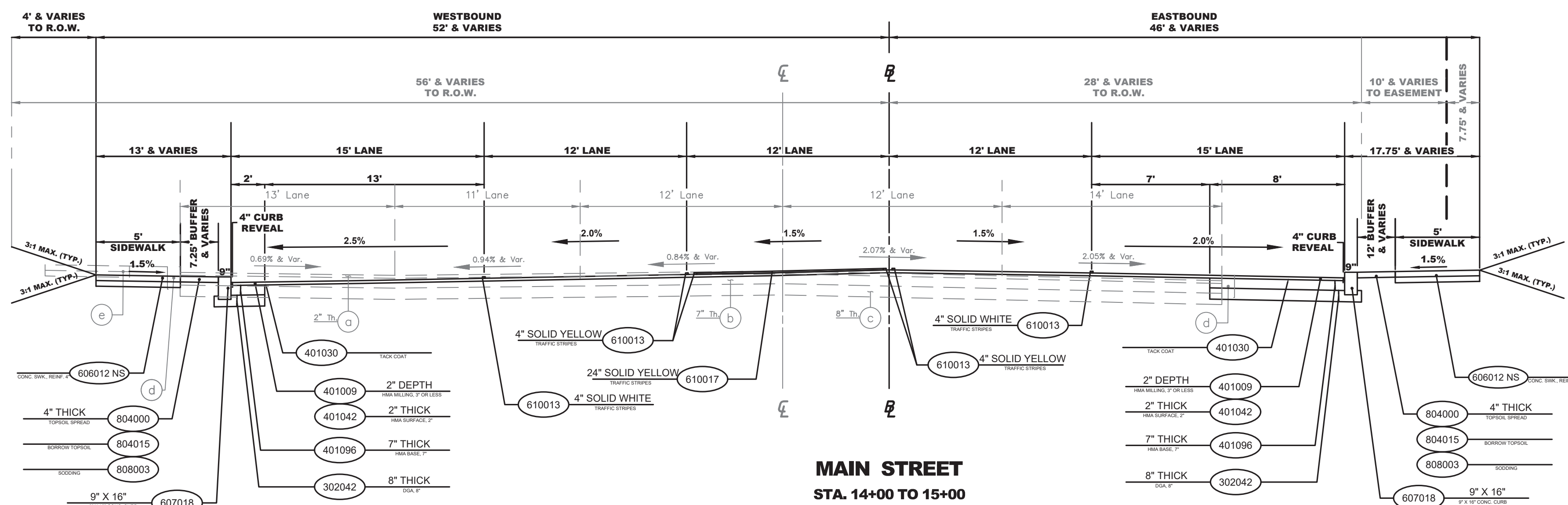


Existing Materials	
Item No.	Description
a	Hot Mix Asphalt 9.5M64 Surface Course, 2" Thick
b	Hot Mix Asphalt 19M64 Base Course, 7" Thick
c	Dense Graded Aggregate, 8" Thick
d	9"x16" Concrete Vertical Curb
e	Concrete Sidewalk, 4" Thick
f	Modular Block Retaining Wall
g	Parapet

PROPOSED MATERIALS	
ITEM NO.	DESCRIPTION
302042P	DENSE -GRADED AGGREGATE BASE COURSE, 8" THICK
401009P	HMA MILLING, 3" OR LESS
401030M	TACK COAT
401036M	PRIME COAT
401042M	HOT MIX ASPHALT 9.5M64 SURFACE COURSE
401096M	HOT MIX ASPHALT 19M64 BASE COURSE
513003P	RETAINING WALL
610003	TRAFFIC MARKINGS, 4"
610014	TRAFFIC MARKINGS, 8"
606012P NS	CONCRETE SIDEWALK, REINFORCED, 4" THICK
607018P	9"x16" CONCRETE VERTICAL CURB
804000P	TOPSOIL SPREADING 4" THICK
804015P	BORROW TOPSOIL
808003P	SODDING



- NOTES:**
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 - CONTRACTOR SHALL PROVIDE POSITIVE SLOPE TOWARDS EXISTING DRAINAGE STRUCTURE OR UMBRELLA SECTION. CONTRACTOR'S WORK SHALL NOT RESULT IN PONDING CONDITIONS.



TS-2
TS-5

No.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS
TYPICAL SECTIONS (2 OF 5)

CWE ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS

(732) 727 8000 (732) 462 7400
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

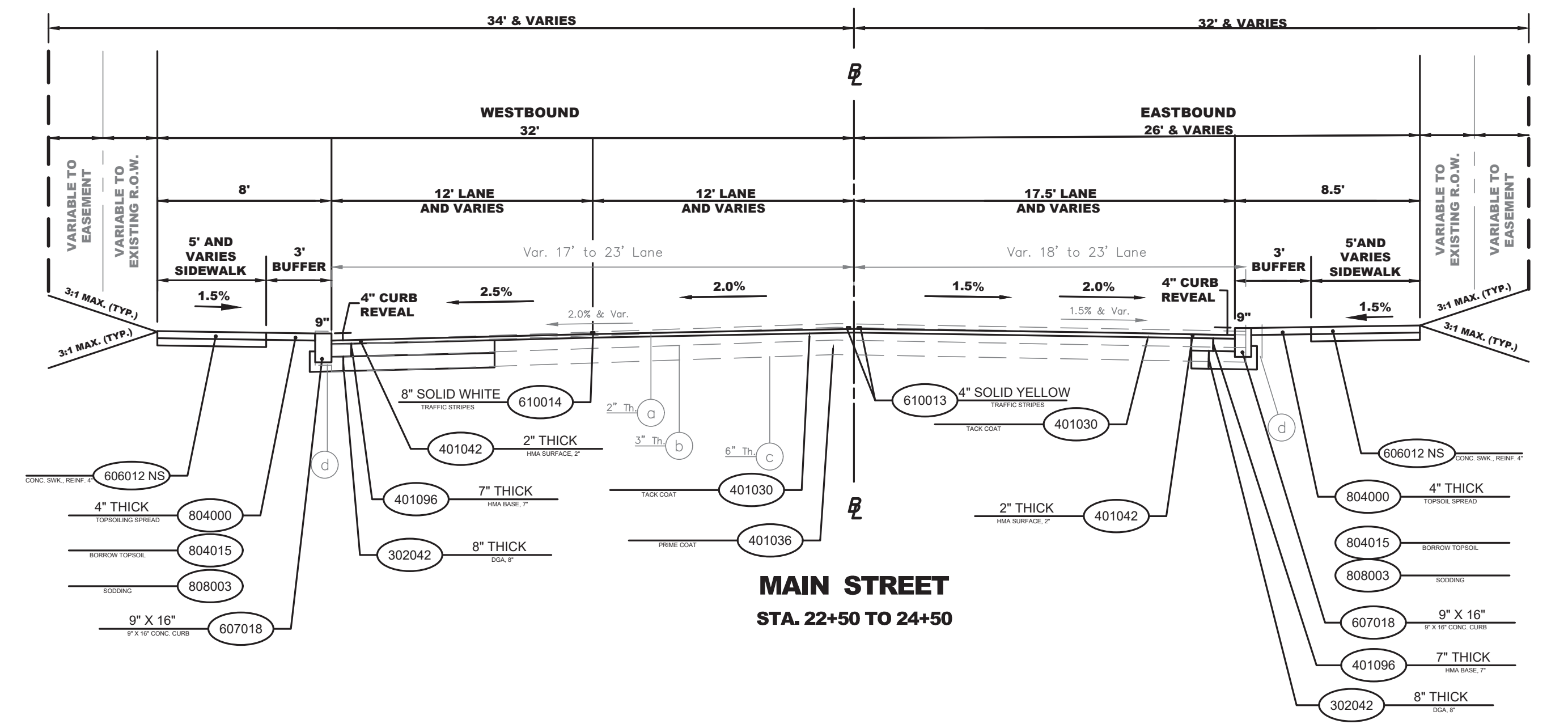
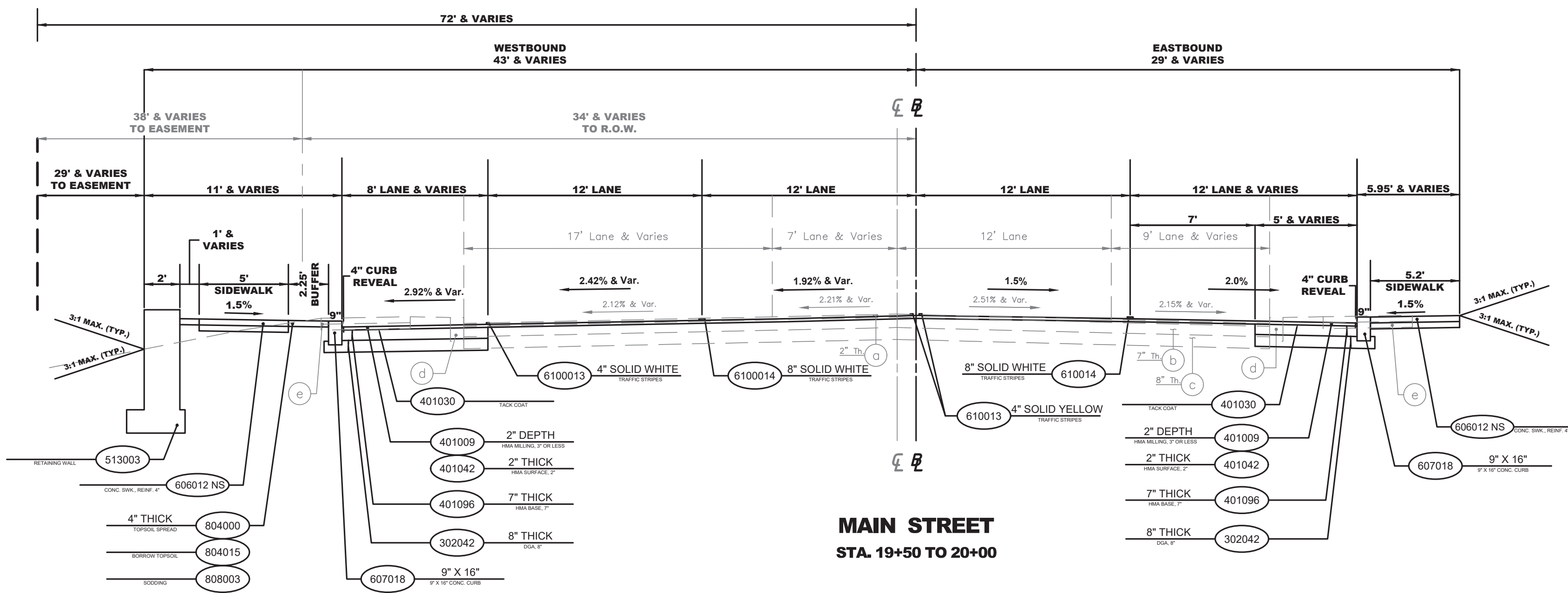
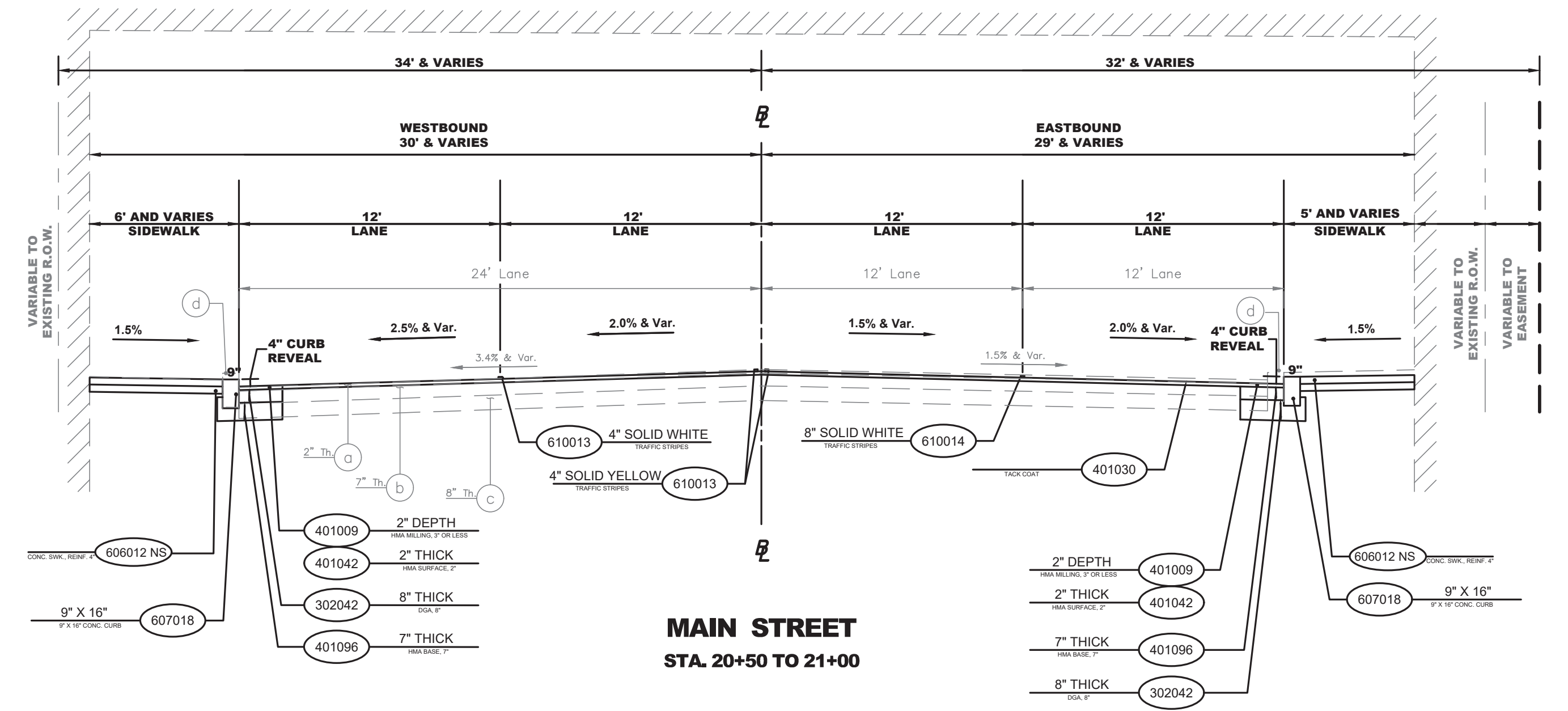
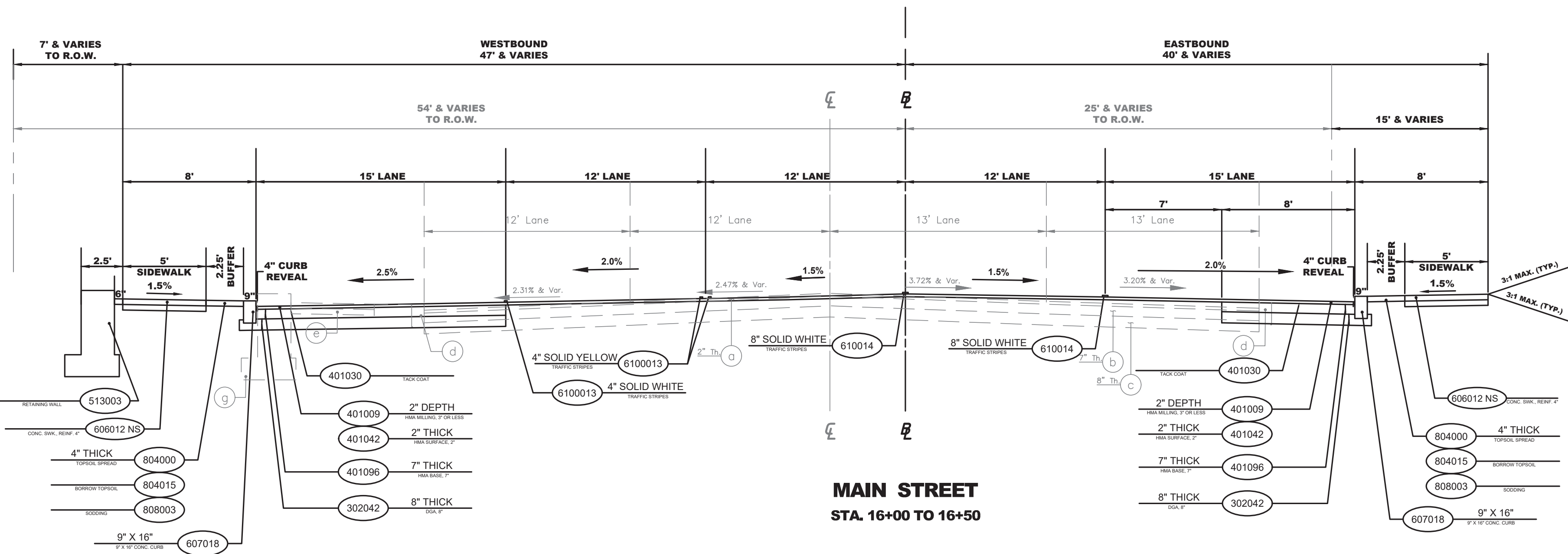
JOHN H. ALLGAIER P.E. & P.P. (1983 - 2021) NO PE LIC. NO. 25838	DAVID J. SAMUEL P.E. & P.P. NO PE LIC. NO. 2455	JOHN J. STEFANI P.E., L.S. & P.P. NO PE LIC. NO. 2089
JAY B. CORNELL P.E. & P.P. NO PE LIC. NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NO PE LIC. NO. 32468	GREGORY R. VALESI P.E. & P.P. NO PE LIC. NO. 39458

MICHAEL J. MCCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. 32468

As Shown DATE: February 2022
DRAWN BY: RCM DESIGNED BY: RCM
CHECKED BY: JCW SHEET: 5 OF 197

DATE: 2/17/2022

PWB0609.01



PROPOSED MATERIALS

ITEM NO.	DESCRIPTION
302042P	DENSE -GRADED AGGREGATE BASE COURSE, 8" THICK
401009P	HMA MILLING, 3" OR LESS
401030M	TACK COAT
401036M	PRIME COAT
401042M	HOT MIX ASPHALT 9.5M64 SURFACE COURSE
401096M	HOT MIX ASPHALT 19M64 BASE COURSE
513003P	RETAINING WALL
610013M	TRAFFIC MARKINGS, 4"
610014M	TRAFFIC MARKINGS, 8"
606012P NS	CONCRETE SIDEWALK, REINFORCED, 4" THICK
607018P	9"x16" CONCRETE VERTICAL CURB
804000P	TOPSOIL SPREADING 4" THICK
804015P	BORROW TOPSOIL
808003P	SODDING

Existing Materials

Item No.	Description
a	Hot Mix Asphalt 9.5M64 Surface Course, 2" Thick
b	Hot Mix Asphalt 19M64 Base Course, 7" Thick
c	Dense Graded Aggregate, 8" Thick
d	9"x16" Concrete Vertical Curb
e	Concrete Sidewalk, 4" Thick
f	Modular Block Retaining Wall

NOTES:

- ALL STATIONS SHOWN ON THESE TYPICAL SECTIONS CORRESPOND TO THE STATIONS SHOWN ON THE CONSTRUCTION PLANS.
- CONTRACTOR SHALL PROVIDE POSITIVE SLOPE TOWARDS EXISTING DRAINAGE STRUCTURE OR UMBRELLA SECTION. CONTRACTOR'S WORK SHALL NOT RESULT IN PONDING CONDITIONS.

TS-3
TS-5

NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
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TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS
TYPICAL SECTIONS (3 OF 5)

ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS

(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400

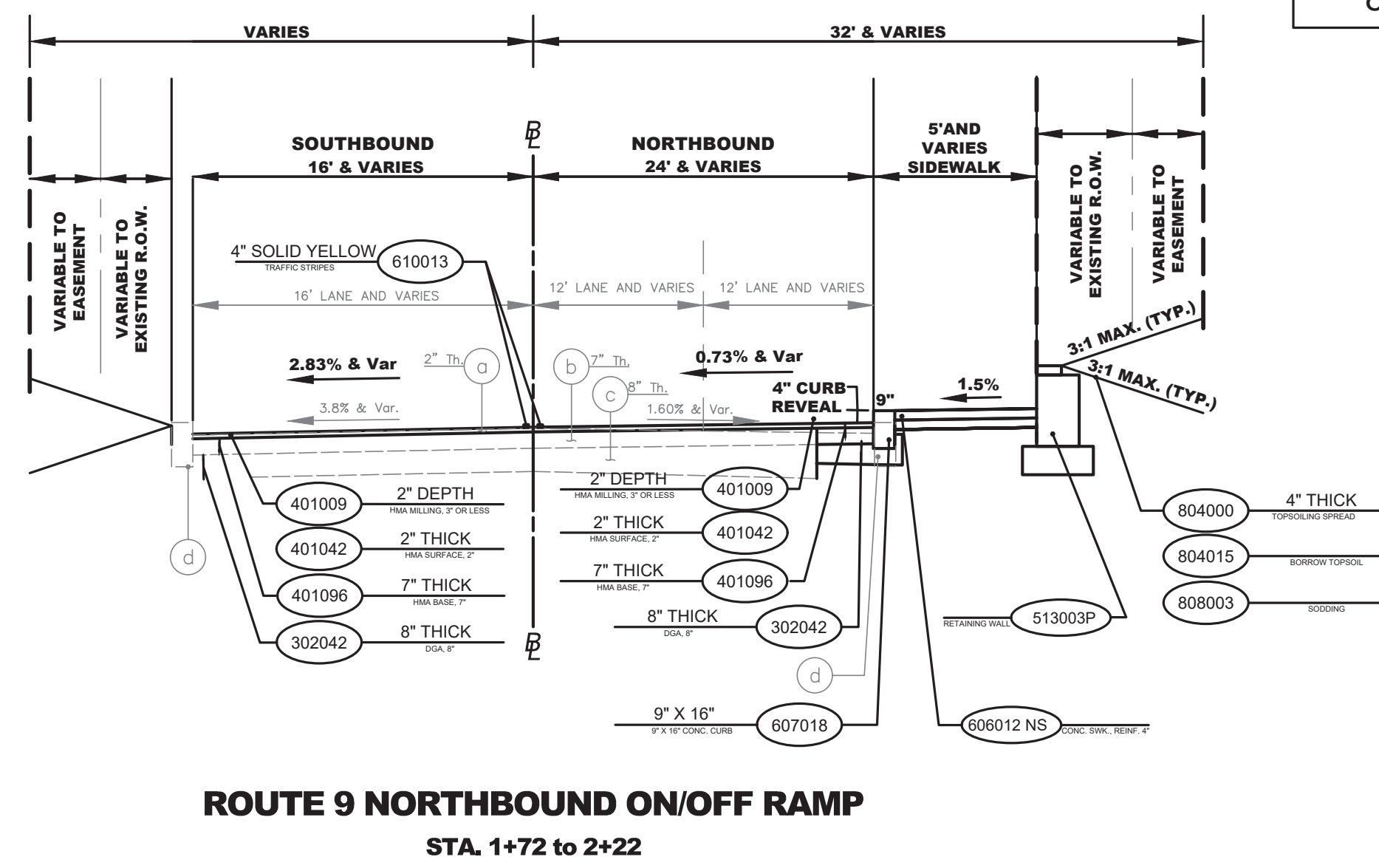
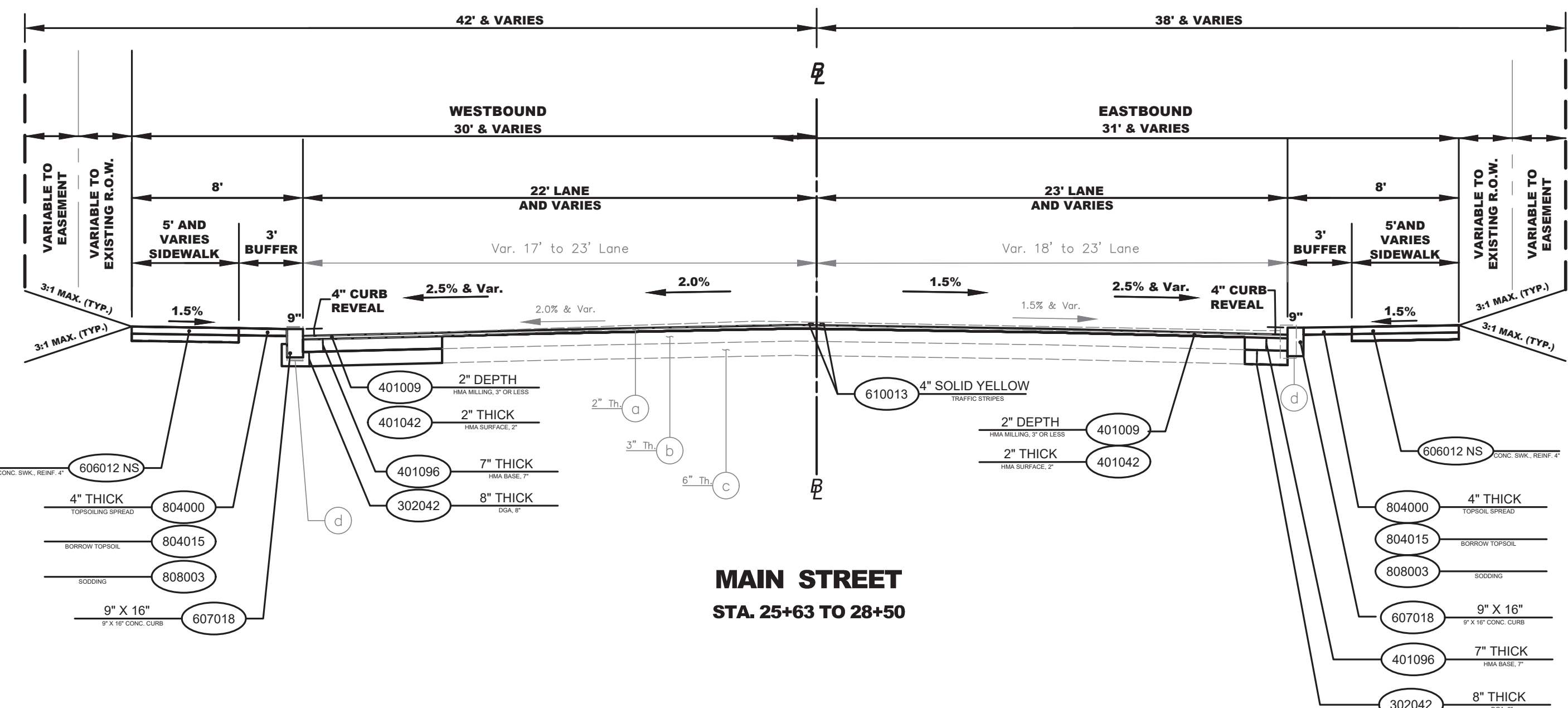
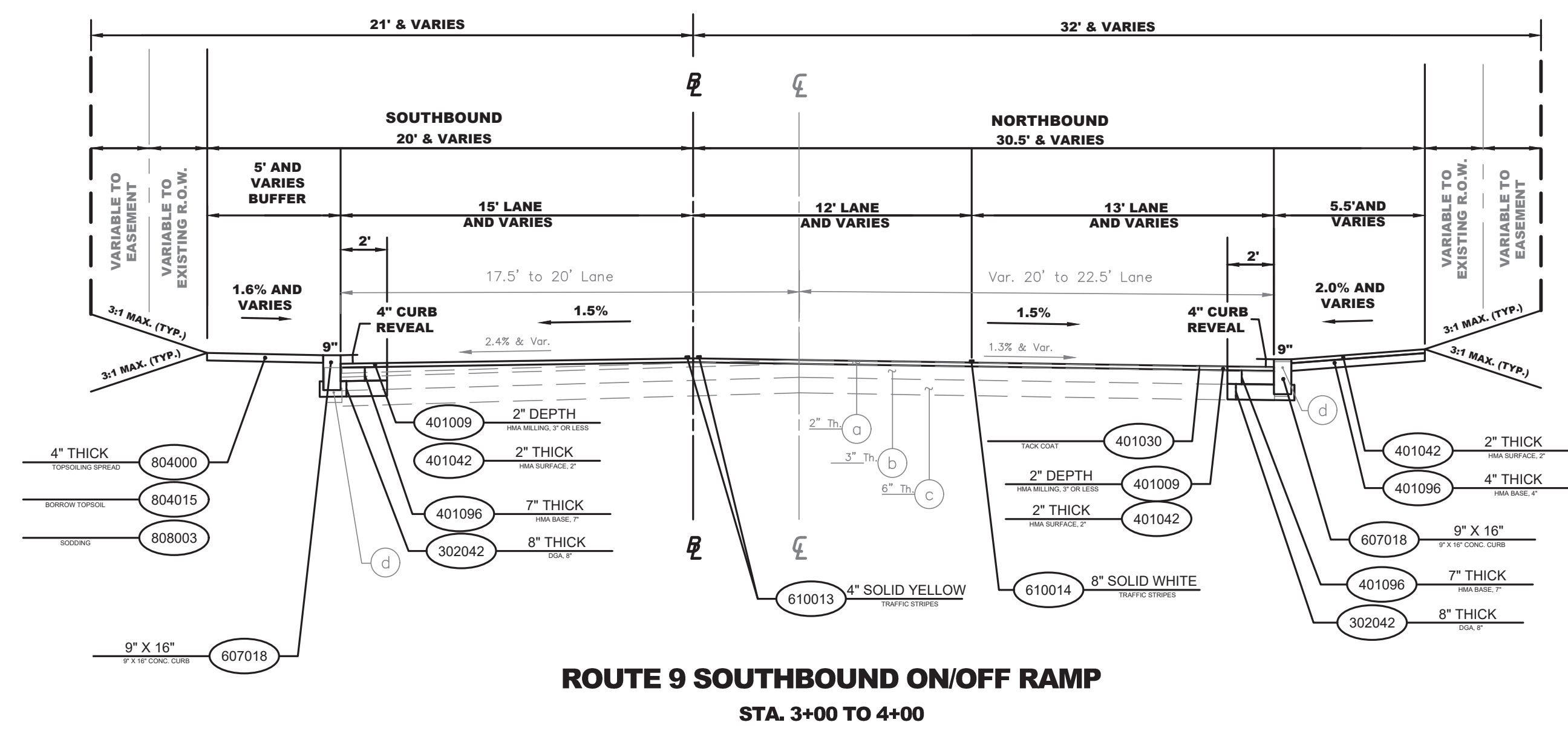
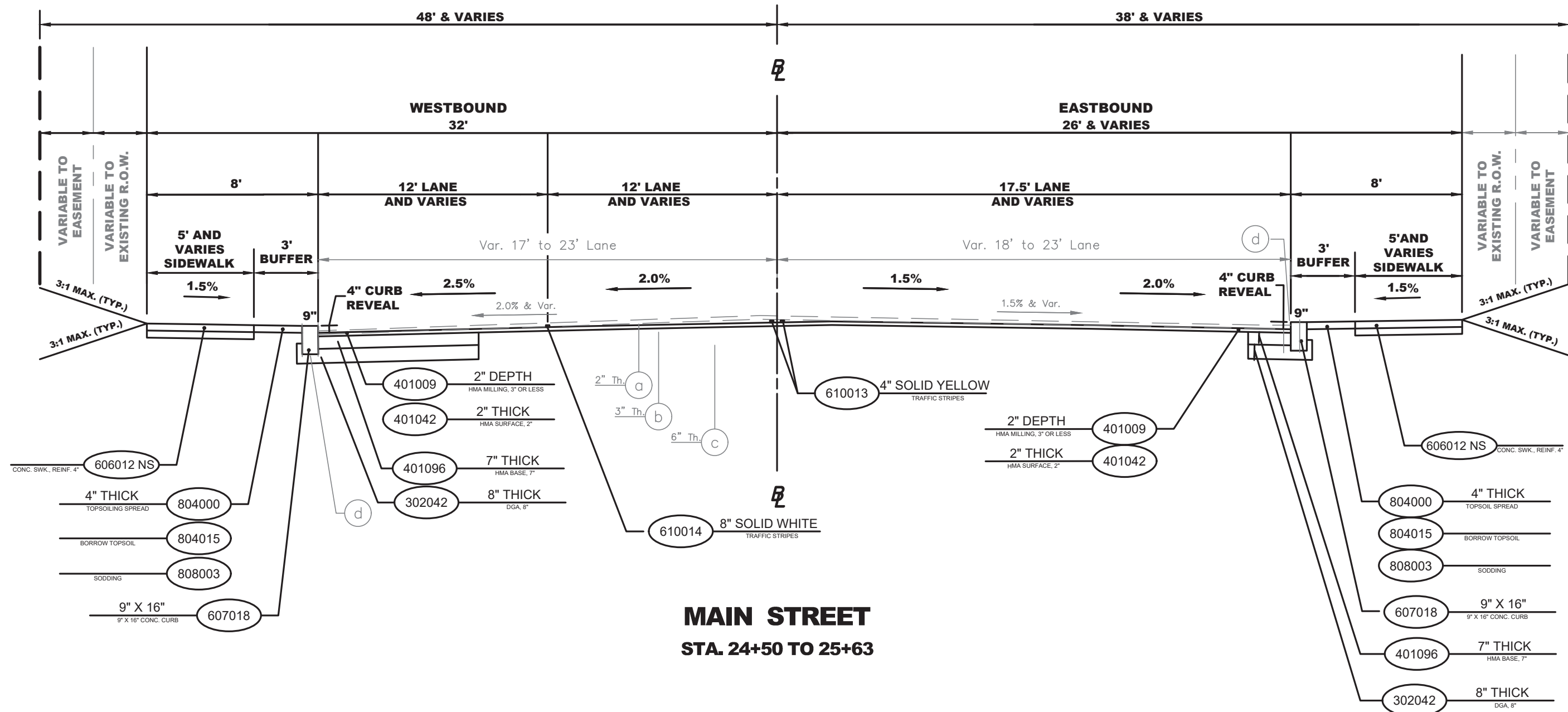
JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991) NO PE LIC NO. 25039	DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 24555	JOHN J. STEFANI P.E., L.S. & P.P. NO PE & LS LIC NO. 24271
JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NO PE LIC NO. 32468	GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 34458

MICHAEL J. MCCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468

As Shown February 2022
DRAWN BY RCM DESIGNED BY RCM
CHECKED BY JCW SHEET 6 OF 197

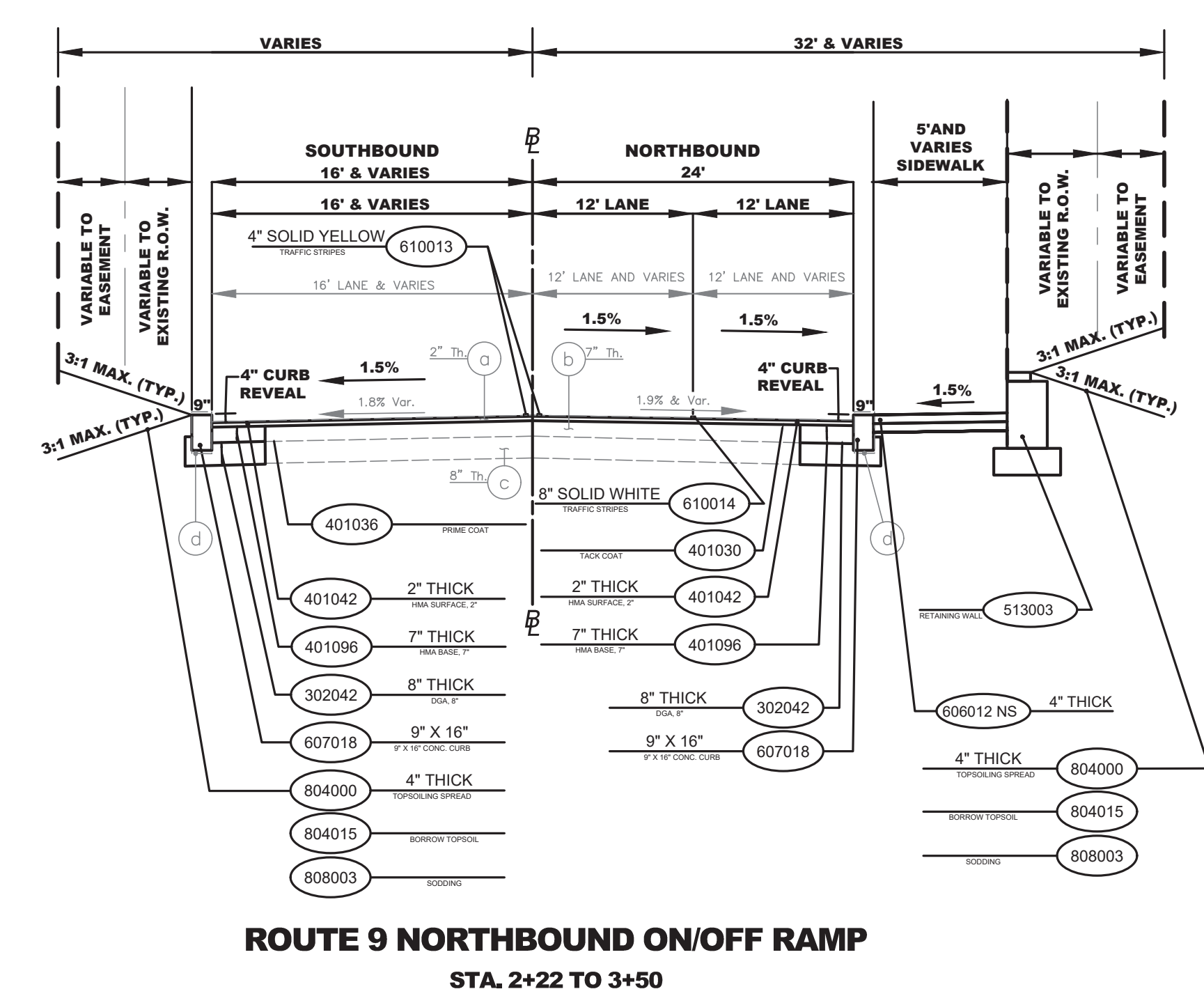
DATE: 2/17/2022

FILE NO. PWB0609.01



PROPOSED MATERIALS	
ITEM NO.	DESCRIPTION
302042P	DENSE -GRADED AGGREGATE BASE COURSE, 8\"
401009P	HMA MILLING, 3\" OR LESS
401030M	TACK COAT
401036M	PRIME COAT
401042M	HOT MIX ASPHALT 9.5M64 SURFACE COURSE
401096M	HOT MIX ASPHALT 19M64 BASE COURSE
513003P	RETAINING WALL
610013M	TRAFFIC MARKINGS, 4\"
610014M	TRAFFIC MARKINGS, 8\"
606012P NS	CONCRETE SIDEWALK, REINFORCED, 4\" THICK
607018P	9\"x16\" CONCRETE VERTICAL CURB
804000P	TOPSOIL SPREADING 4\" THICK
804015P	BORROW TOPSOIL
808003P	SODDING

Existing Materials	
Item No.	Description
a	Hot Mix Asphalt 9.5M64 Surface Course, 2\" Thick
b	Hot Mix Asphalt 19M64 Base Course, 7\" Thick
c	Dense Graded Aggregate, 8\" Thick
d	9\"x18\" Concrete Vertical Curb



- NOTES:**
- ALL STATIONS SHOWN ON THESE TYPICAL SECTIONS CORRESPOND TO THE STATIONS SHOWN ON THE CONSTRUCTION PLANS.
 - CONTRACTOR SHALL PROVIDE POSITIVE SLOPE TOWARDS EXISTING DRAINAGE STRUCTURE OR UMBRELLA SECTION. CONTRACTOR'S WORK SHALL NOT RESULT IN PONDING CONDITIONS.

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS
TYPICAL SECTIONS (4 OF 5)

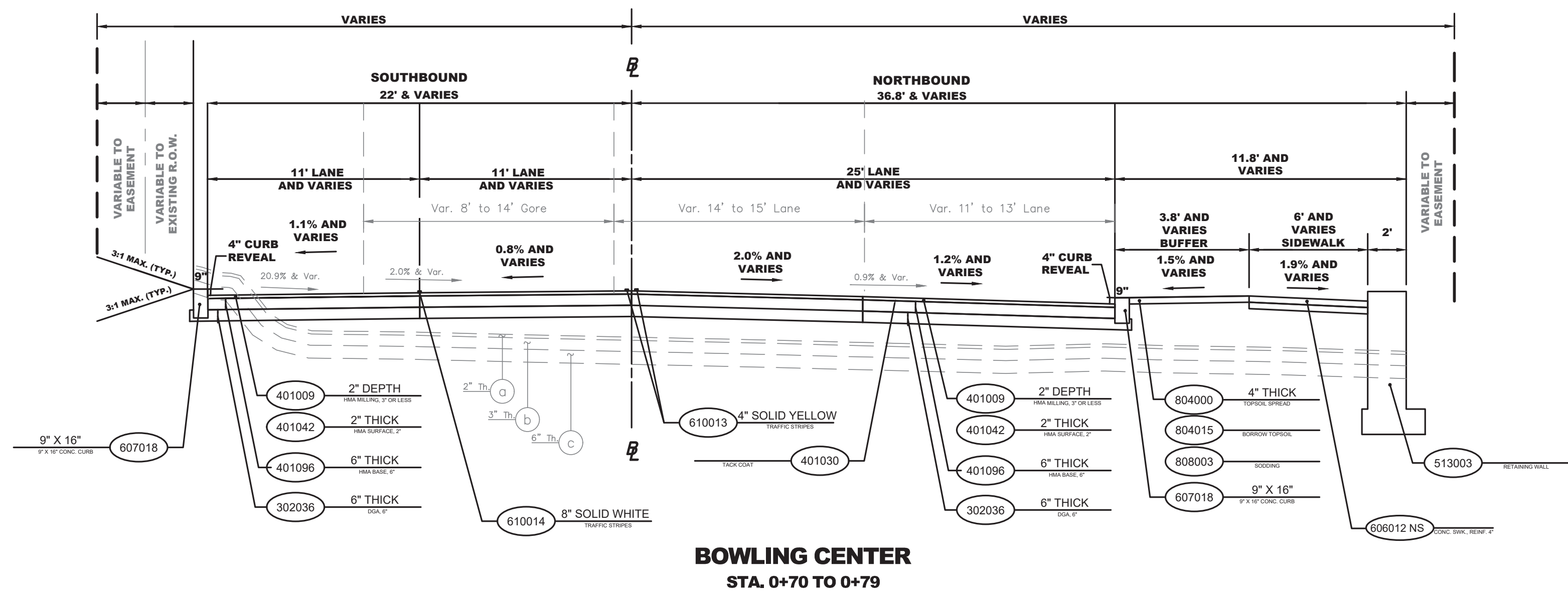
CVE ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS
(732) 727-8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462-7400

JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991) DAVID J. SAMUEL P.E. & P.P. (1983 - 1991) JOHN J. STEFANI P.E. L.S. & P.P. (1983 - 1991)
JAY B. CORNELL P.E. & P.P. (1983 - 1991) MICHAEL J. McCLELLAND P.E. & P.P. (1983 - 1991) GREGORY R. VALESI P.E. & P.P. (1983 - 1991)

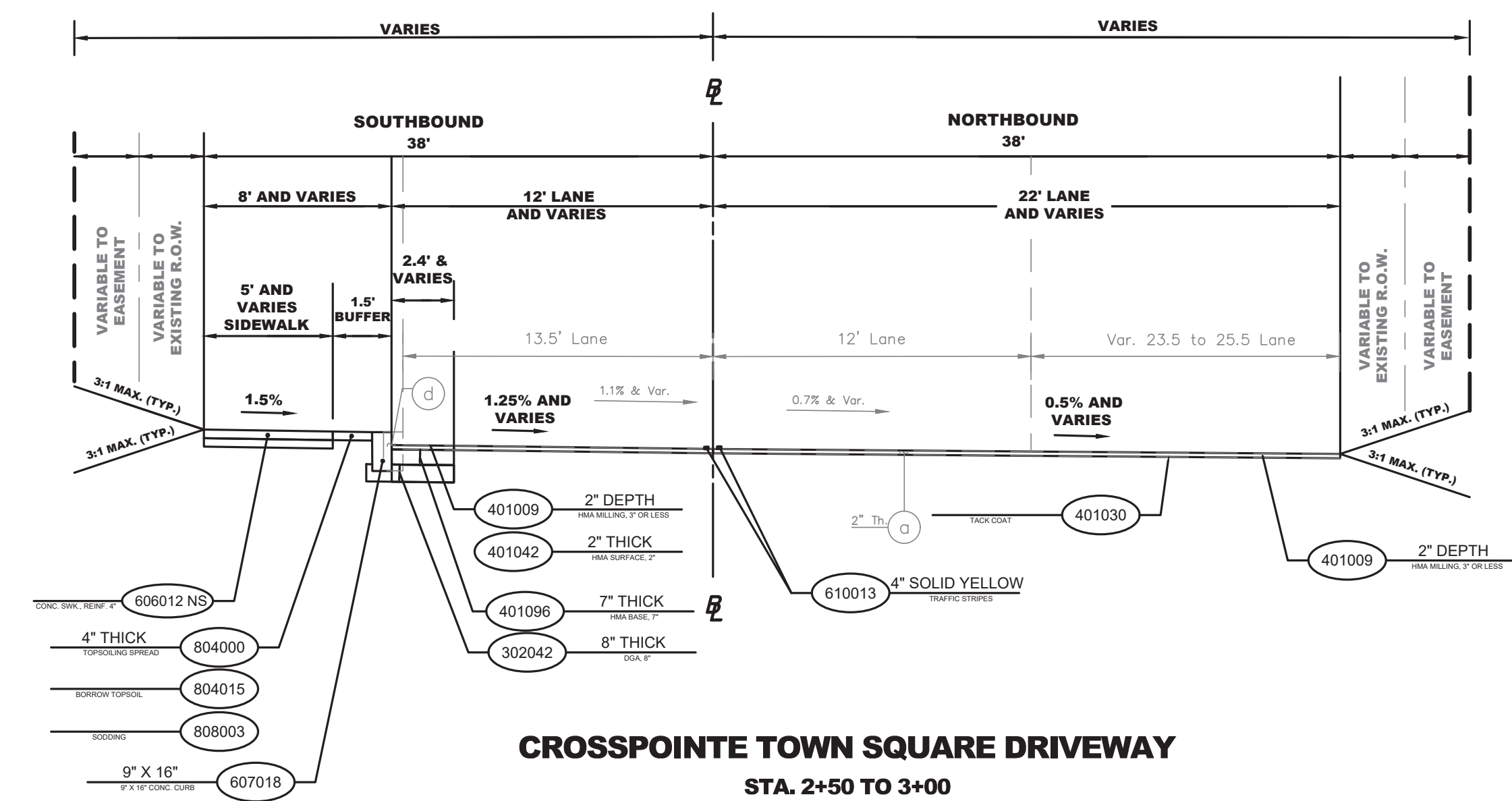
MICHAEL J. McCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. 32468

DATE: 2/17/2022
DRAWN BY: RCM
CHECKED BY: JCW
DESIGNED BY: RCM
SCALE: As Shown
DATE: February 2022
SHEET: 7 OF 197

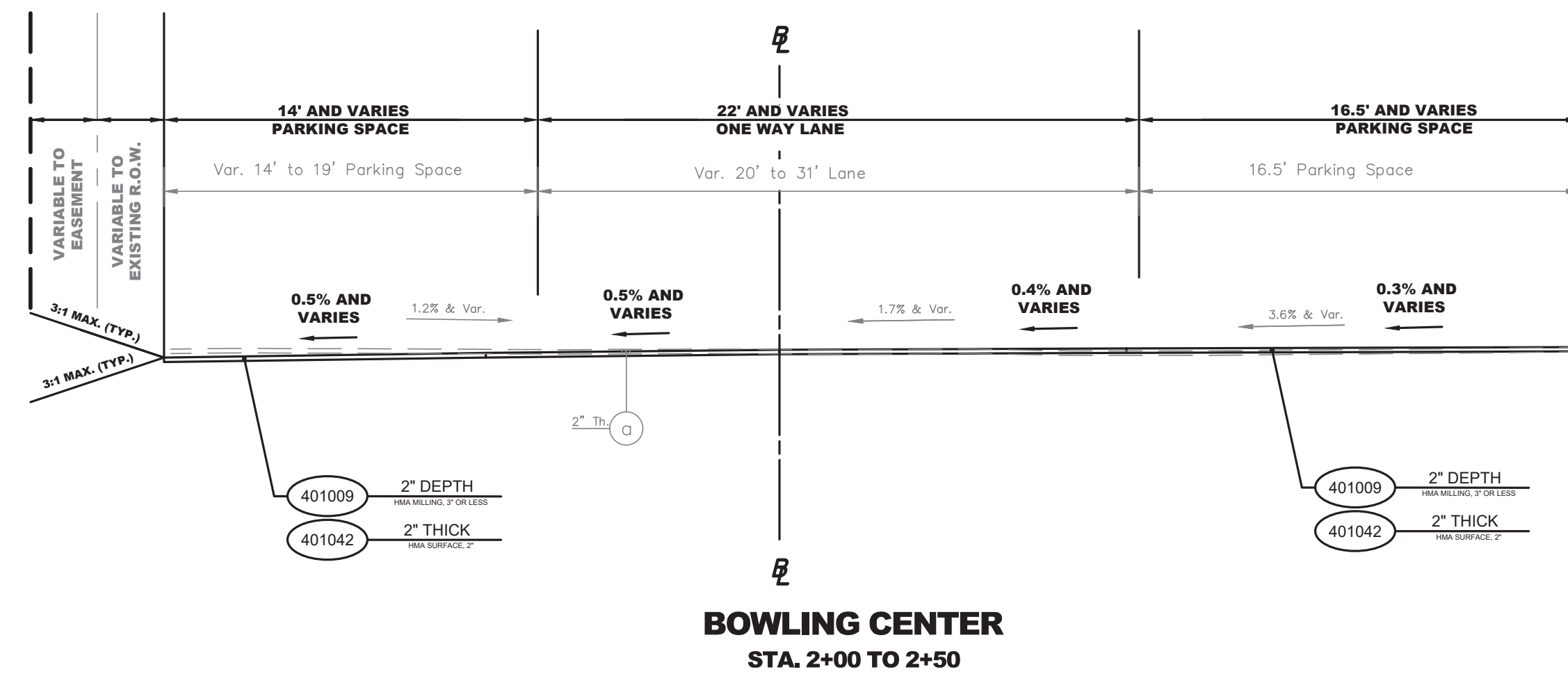
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TS-5
PWB0609.01



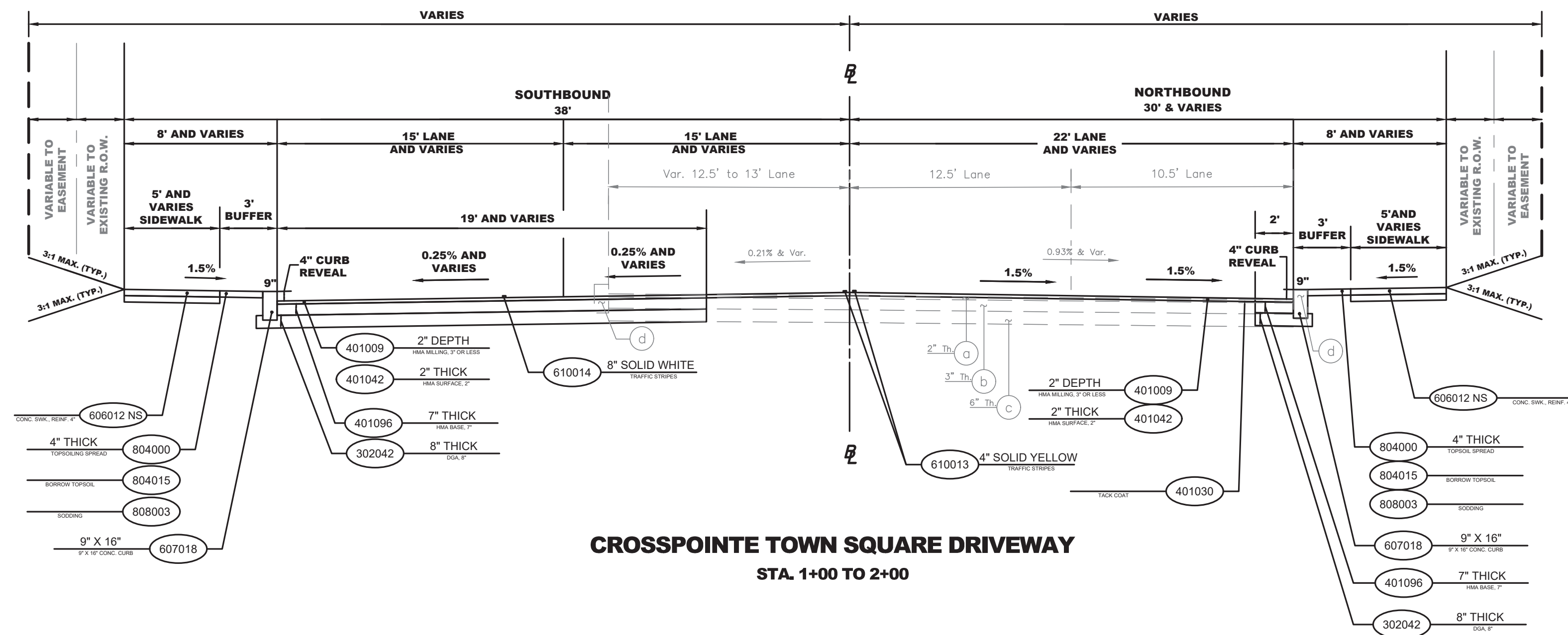
BOWLING CENTER
STA. 0+70 TO 0+79



CROSSPOINTE TOWN SQUARE DRIVEWAY
STA. 2+50 TO 3+00



BOWLING CENTER
STA. 2+00 TO 2+50



CROSSPOINTE TOWN SQUARE DRIVEWAY
STA. 1+00 TO 2+00

PROPOSED MATERIALS	
ITEM NO.	DESCRIPTION
302042P	DENSE -GRADED AGGREGATE BASE COURSE, 8" THICK
302036P	DENSE-GRADED AGGREGATE BASE COURSE, 6" THICK
401009P	HMA MILLING, 3" OR LESS
401030M	TACK COAT
401036M	PRIME COAT
401042M	HOT MIX ASPHALT 9.5M64 SURFACE COURSE
401096M	HOT MIX ASPHALT 19M64 BASE COURSE
513003P	RETAINING WALL
610013M	TRAFFIC MARKINGS, 4"
610014M	TRAFFIC MARKINGS, 8"
606012P NS	CONCRETE SIDEWALK, REINFORCED, 4" THICK
607018P	9"x16" CONCRETE VERTICAL CURB
804000P	TOPSOIL SPREADING 4" THICK
804015P	BORROW TOPSOIL
808003P	SODDING

Existing Materials	
Item No.	Description
a	Hot Mix Asphalt 9.5M64 Surface Course, 2" Thick
b	Hot Mix Asphalt 19M64 Base Course, 7" Thick
c	Dense Graded Aggregate, 8" Thick
d	9"x18" Concrete Vertical Curb

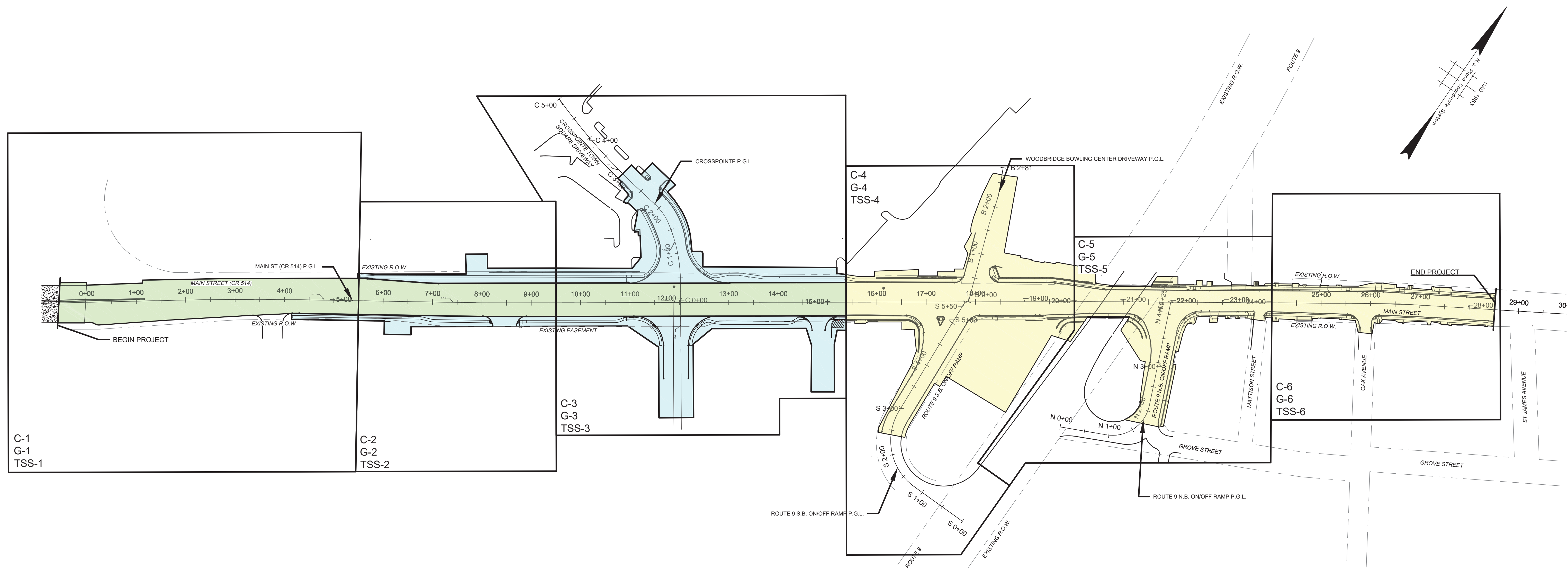
NOTES:

- ALL STATIONS SHOWN ON THESE TYPICAL SECTIONS CORRESPOND TO THE STATIONS SHOWN ON THE CONSTRUCTION PLANS.
- CONTRACTOR SHALL PROVIDE POSITIVE SLOPE TOWARDS EXISTING DRAINAGE STRUCTURE OR UMBRELLA SECTION. CONTRACTOR'S WORK SHALL NOT RESULT IN PONDING CONDITIONS.

<p>NO. DESCRIPTION OF REVISION DATE DRAWN CHECKED RELEASED</p>			
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TYPICAL SECTIONS (5 OF 5)</p>			
<p>(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>			
<p>JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991)</p>	<p>DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25839</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 2089</p>	<p>DATE February 2022</p>
<p>JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32952</p>	<p>MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468</p>	<p>GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458</p>	<p>SCALE As Shown</p>
<p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>			<p>DATE 2/17/2022</p>
<p>DRAWN BY RCM</p>			<p>DESIGNED BY RCM</p>
<p>CHECKED BY JCW</p>			<p>SHEET 8 OF 197</p>

TS-5

PWB0609.01



C-1
G-1
TSS-1

C-2
G-2
TSS-2

C-3
G-3
TSS-3

C-4
G-4
TSS-4

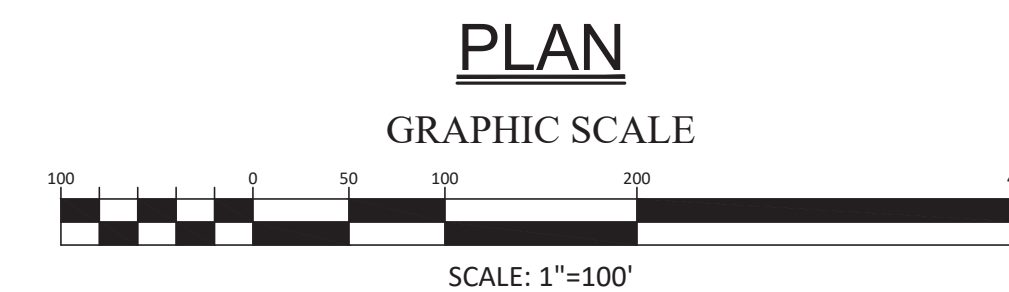
C-5
G-5
TSS-5

C-6
G-6
TSS-6

LEGEND:
SHEET C = CONSTRUCTION PLANS
SHEET G = GRADES
SHEET TSS = TRAFFIC SIGNALING AND STRIPING PLANS

CONSTRUCTION COST LIMITS:
 COUNTY OF MIDDLESEX / TOWNSHIP OF WOODBRIDGE
 DEVELOPERS'
 NJDOT

NOTES:
 DRAINAGE IMPROVEMENTS LOCATED WITHIN THE LIMITS OF THE VERMELLA DEVELOPMENT ASSOCIATED WITH THE ROADWAY IMPROVEMENT PROJECT ARE TO BE UNDER THE JURISDICTION OF THE COUNTY OF MIDDLESEX / TOWNSHIP OF WOODBRIDGE.
 WALL NO. 1 WITHIN THE DEVELOPERS' LIMITS IS TO BE UNDER THE JURISDICTION OF THE COUNTY OF MIDDLESEX / TOWNSHIP OF WOODBRIDGE.
 CONSTRUCTION OF ALL TRAFFIC SIGNAL EQUIPMENT AT THE INTERSECTION OF MAIN STREET (CR 514), CROSSPOINTE TOWN SQUARE DRIVEWAY AND THE VERMELLA DEVELOPMENT DRIVEWAY IS TO BE FUNDED BY THE VERMELLA DEVELOPMENT.



TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS PLAN SHEET INDEX		
(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400		
JOHN H. ALLGAIER P.E. & P.P. <small>(1983 - 2021)</small> JAY B. CORNELL P.E. & P.P. <small>NO PE LIC NO. 32962</small>	DAVID J. SAMUEL P.E. & P.P. <small>NO PE LIC NO. 25038</small> MICHAEL J. McCLELLAND P.E. & P.P. <small>NO PE LIC NO. 32468</small>	JOHN J. STEFANI P.E. L.S. & P.P. <small>NO PE & LS LIC NO. 24271</small> GREGORY R. VALES P.E. & P.P. <small>NO PE LIC NO. 39458</small>
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER <small>LIC. 32468</small>		DATE: February 2022 DESIGNED BY: RCM CHECKED BY: JCW
DATE: 2/17/2022		SHEET: 9 of 197

PSI-1
PSI-1

FILE NO. PWB0A609.01

NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD LEGEND

Linear Features	
Existing	PROPOSED
	Water Main (Size)
	Gas Main (Size)
	Telephone Conduit
	Electric Conduit (Highway or Utility)
	Cable TV
	Fiber Optic
	Intelligent Transportation System (Wires & Cables)
	Sanitary Sewers or Storm Drains
	Pavements (Concrete or Bituminous)
	Shoulders
	Curbs
	Slopes (Cut & Fill)
	Base Line
	Twp., City, County Lines
	Right of Way Lines (Access Permitted)
	Right of Way Lines (No Access)
	Easements
	Property Line
	Fence (Size & Type)
	Reset Fence
	Beam Guide Rail
	Reset Beam Guide Rail
	Noise Walls
	Wetland Limit Line
	Silt Fence
	Ditches
	Railroad Tracks
	Tree Line
	Mean High Water Line
	Tidelands Line

Topographical Features	
Existing	PROPOSED
	Inlets (Label Type)
	Inlets (Type ES)
	Manholes (Label Type or Utility)
	Reset (Inlets or Manholes)
	Reconstructed (Inlets or Manholes)
	Cast Iron Extension (Frame or Ring) (Inlet or Manhole)
	New Manhole Casting, Square Frame, Circular Cover
	R.C. End Section or C.M. Headwall
	Headwalls
	Headwalls & Aprons
	Water Gate Valves
	Reset Water Valve Cover
	Gas Gate Valves
	Reset Gas Valve Cover
	Hydrants
	Reset Hydrants
	Utility Pole (Type & Number)
	Temporary Utility Pole
	Traffic Signal
	Junction Box
	Fiber Optic Junction Box
	Junction Box Foundation
	Signs
	Vertical Panels
	Camera (With Blind Spot)
	Dynamic Message Sign (DMS)
	Guide Rail End Terminals
	Beam Guide Rail Anchorages
	Monuments
	ROW Monument (ROW Control Points)

Topographical Features	
Existing	PROPOSED
	Test Pit
	Borings (Boring Number)
	Deciduous Tree (Size, Kind)
	Evergreen Tree (Size, Kind)
	Shrub
	Hedge
	Wetland

Double Reference Codes	
EDQR	ESTIMATE AND DISTRIBUTION OF QUANTITIES – ROADWAY
TS	TYPICAL SECTIONS
PSI	PLAN SHEET INDEX
CL	CONSTRUCTION LEGEND
C	CONSTRUCTION PLANS
EP	ENVIRONMENTAL PLANS, SOIL EROSION & SEDIMENT CONTROL PLANS
D	DRAINAGE PLANS
DTL	CONSTRUCTION DETAILS
P	PROFILES
T	TIES
G	GRADES
TC	TRAFFIC CONTROL AND STAGING PLANS
TSP	TRAFFIC SIGNAL PLANS
E	ELECTRICAL PLANS
HL	HIGHWAY LIGHTING PLANS
ITS	INTELLIGENT TRANSPORTATION SYSTEM PLANS
U	UTILITY PLANS
SL	SIGN LOCATION PLANS
TSS	TRAFFIC SIGNALING AND STRIPING PLANS
STD	SIGN TEXT DETAILS
L	LANDSCAPE PLANS
MS	METHOD OF CROSS SECTIONS
X	CROSS SECTIONS
EQB	ESTIMATE OF QUANTITIES – BRIDGE
B	BRIDGE PLANS

Miscellaneous Symbols	
	Items With No Alternate
	Alternate Items
	For Alternate Pipe Items (C) = Concrete (M) = Metal
	Milling
	Full Reconstruction
	Building to be Demolished
	Removal of Concrete Base Course & Concrete Surface Courses
	Building to be Removed & Paid for Under Clearing Site
	Demolition No. & Parcel No. of Building to be Demolished
	PROFILE & LEVEL LINE
	High Point
	Low Point
	Bench Mark
	Proposed Bridge
	Concrete Bridge Approach
	N.J. State Plane Ground Coordinates
	North Arrow To Be Used On Standard Construction Sheets Where Bearings Refer To N. J. State Plane Ground Coordinates
	N.T.S.

ABBREVIATIONS USED IN THIS CONTRACT

AH., BK.	AHEAD, BACK	IP	IRON PIN	RCCP, R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE
BL.	BASELINE	J.B.	JUNCTION BOX	RCP, R.C.P.	REINFORCED CONCRETE PIPE
B.M.	BENCH MARK	L, R	LEFT, RIGHT	RMC, R.M.C.	RIGID METALLIC CONDUIT
B.T.	BELL TELEPHONE	L.O.P.	LIMIT OF PAVEMENT (PAVING)	RNMC, R.N.M.C.	RIGID NON-METALLIC CONDUIT
BIT., BITUM.	BITUMINOUS	L.O.M.	LIMIT OF MILLING	ROW, R.O.W.	RIGHT OF WAY
BLDG.	BUILDING	M.B.	MAILBOX	R.R.	RAILROAD
C.L.	CENTERLINE	M.P.	MILE POST	RTE., RT.	ROUTE
C.I.P.	CAST IRON PIPE	MAX.	MAXIMUM	SAN.	SANITARY
D.I.P.	DUCTILE IRON PIPE	MIN.	MINIMUM	SDWK.	SIDEWALK
C.V.C.	CONCRETE VERTICAL CURB	NO.	NUMBER	S.H.D.	STATE HIGHWAY DEPARTMENT
CONC.	CONCRETE	N.T.S.	NOT TO SCALE	SHLD.	SHOULDER
CULV.	CULVERT	PAV'T.	PAVEMENT	S.L.	SURVEY LINE
D, DIA.	DIAMETER	PERF.	PERFORATED	S.O.D.	SUBBASE OUTLET DRAIN
D.C.	DROP CURB	P.G.L.	PROFILE GRADE LINE	STY.	STORY
DE	DITCH EXCAVATION	P.L.	PROPERTY LINE, PROFILE LINE	T	TANGENT
DEP., DP	DEPRESSED CURB	PK	PARKER KAYLON MASONRY NAIL	TBA	TO BE ABANDONED
DH	DRILL HOLE	POC, P.O.C.	POINT ON CURVE	TBR	TO BE REMOVED
DWY	DRIVEWAY	POL, P.O.L.	POINT ON LINE	TEL.	TELEPHONE
E.B., W.B., N.B., S.B.	EASTBOUND, WESTBOUND	POT, P.O.T.	POINT ON TANGENT	TEMP.	TEMPORARY
		PRC, P.R.C.	POINT OF REVERSE CURVE	THK., TH.	THICK
		PROP.	PROPOSED	TYP.	TYPICAL
		PT, P.T.	POINT OF TANGENCY	U.D.	UNDERDRAIN
		PVC, P.V.C.	POLYVINYL CHLORIDE PIPE, POINT OF VERTICAL INTERSECTION	UP, U.P.	UTILITY POLE
				VAR.	VARIABLE, VARIES
		PVI, P.V.I.	POINT OF VERTICAL CURVATURE	WM	WATER METER
		PVT, P.V.T.	POINT OF VERTICAL TANGENCY, PAVEMENT		
		R	RADIUS		

ELECTRICAL PLAN ABBREVIATIONS

CF	CUTOFF LUMINAIRE, TYPE _____
E	EXPRESSWAY LUMINAIRE
GND	GROUND WIRE
ID	IMAGE DETECTOR
IDC	IMAGE DETECTOR CABLE
JBF	JUNCTION BOX FOUNDATION
L	LUMINAIRE
LMA-A	LIGHTING MAST ARM, ALUMINUM
LMA-S	LIGHTING MAST ARM, STEEL
LSA	LIGHTING STANDARD, ALUMINUM
LSF	LIGHTING STANDARD, FIBERGLASS
LSS	LIGHTING STANDARD, STEEL
MAS	MAST ARM SIGN
MSC II	MEDIUM SEMI-CUTOFF LUMINAIRE, TYPE 2
MSC III	MEDIUM SEMI-CUTOFF LUMINAIRE, TYPE 3
PB	PUSH BUTTON
PE	PREEMPTION UNIT
PSH	PEDESTRIAN SIGNAL HEAD
PSS	PEDESTRIAN SIGNAL STANDARD
TSH	TRAFFIC SIGNAL HEAD
TSMA-A	TRAFFIC SIGNAL MAST ARM, ALUMINUM
TSMA-S	TRAFFIC SIGNAL MAST ARM, STEEL
TSS-C	TRAFFIC SIGNAL STANDARD, ALUMINUM "C"
TSS-K	TRAFFIC SIGNAL STANDARD, ALUMINUM "K"
TSS-S	TRAFFIC SIGNAL STANDARD, STEEL
TSS-SC	TRAFFIC SIGNAL STANDARD, STEEL COMBINATION
TSS-T	TRAFFIC SIGNAL STANDARD, ALUMINUM "T"
UL-P	UNDERDECK LIGHTING, TYPE "P"
UL-W	UNDERDECK LIGHTING, TYPE "W"
V	VERTICAL LUMINAIRE

GENERAL NOTES:

- CONTRACTOR TO PROTECT ALL UNDERGROUND UTILITIES. TEST PITS MAY BE CONDUCTED BY PERMISSION OF THE RESIDENT ENGINEER.

CL-1
CL-1

NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

CONSTRUCTION LEGEND

ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS

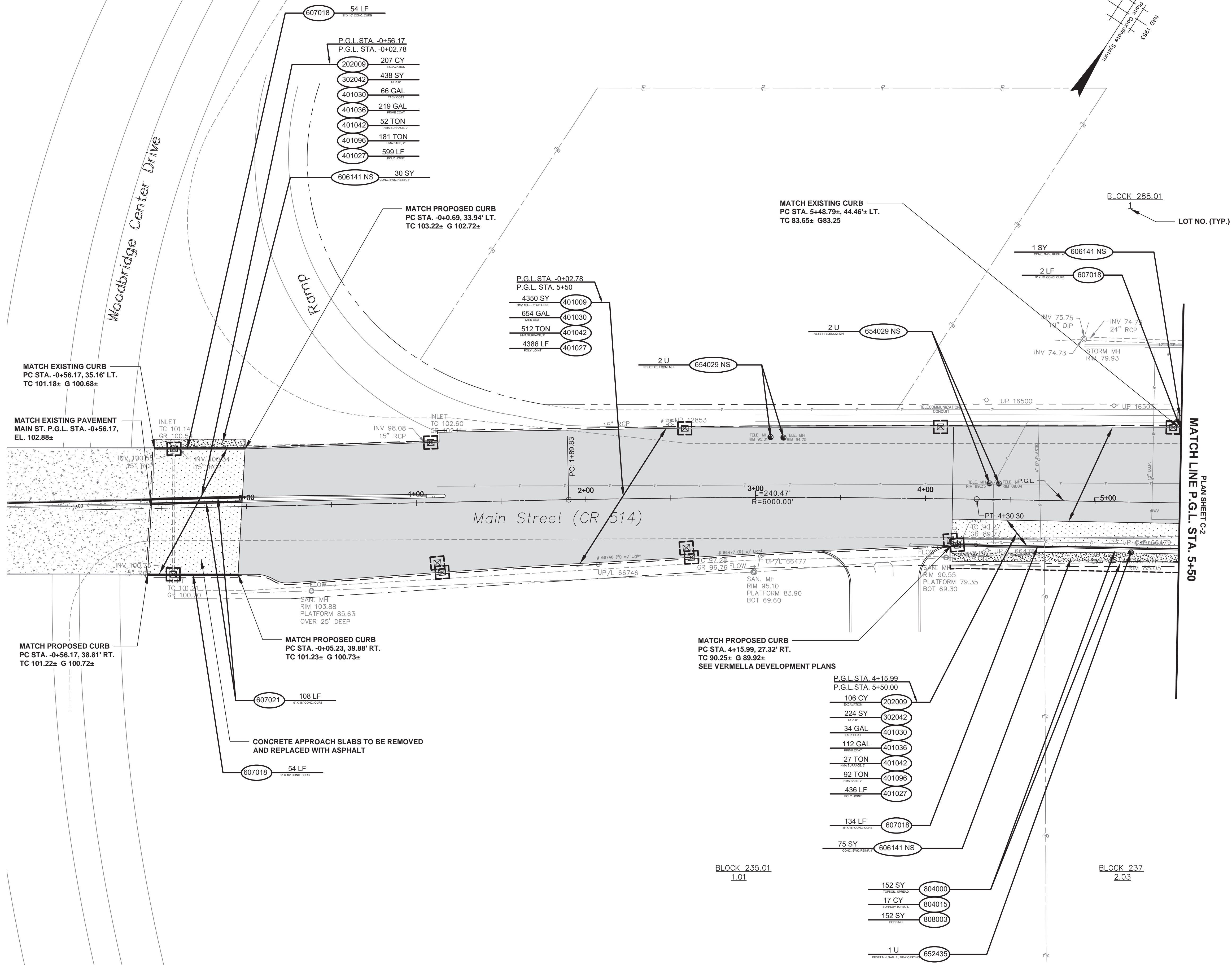
(732) 727 8000 (732) 462 7400
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIER P.E. & P.P. (1983 - 2021)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25638	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & L.S. LIC NO. 24271
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32992	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 33468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458

MICHAEL J. McCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. 32468

As Shown DATE February 2022
DRAWN BY RCM DESIGNED BY RCM
CHECKED BY JCW SHEET 10 of 197


FILE NO. **PWB04609.01**



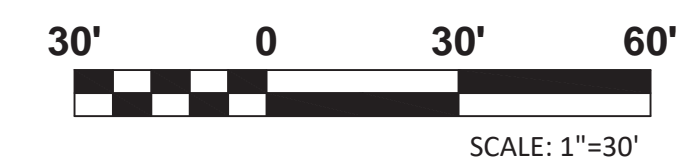
NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
202009P	EXCAVATION, UNCLASSIFIED	313	CY
302042P	DENSE-GRADED AGGREGATE BASE COURSE, 8" THICK	662	SY
401009P	HMA MILLING, 3" OR LESS	4350	SY
401027M	POLYMERIZED JOINT ADHESIVE	5421	LF
401030M	TACK COAT	754	GAL
401036M	PRIME COAT	331	GAL
401042M	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	591	TON
401096M	HOT MIX ASPHALT 19M64 BASE COURSE	273	TON
606141P NS	CONCRETE SIDEWALK, REINFORCED, 4" THICK	106	SY
607018P	9" X 16" CONCRETE VERTICAL CURB	244	LF
607021P	9" X 18" CONCRETE VERTICAL CURB	108	LF
652435M	RESET MANHOLE, SANITARY SEWER, USING NEW CASTING	1	UN
654029M NS	RESET TELECOMMUNICATIONS MANHOLE	4	UN
804000P	TOPSOIL SPREADING, 4" THICK	275	SY
804015P	BORROW TOPSOIL	31	CY
808003P	SODDING	275	SY

- P.G.L. STA. 4+15.99
P.G.L. STA. 5+50.00
- 106 CY (202009)
 - 224 SY (302042)
 - 34 GAL (401030)
 - 112 GAL (401036)
 - 27 TON (401042)
 - 92 TON (401096)
 - 436 LF (401027)
 - 134 LF (607018)
 - 75 SY (606141 NS)
 - 152 SY (804000)
 - 17 CY (804015)
 - 152 SY (808003)
 - 1 U (652435)

C-1
C-6

No. DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY</p> <p>ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p> <p>CONSTRUCTION PLANS (1 OF 6)</p> <p>MAIN STREET FROM STA. 4+15 TO STA. 5+50</p>				
 <p>CVE ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p> <p>(732) 727 8000 (732) 462 7400</p> <p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>				
JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991)		DAVID J. SAMUEL P.E. & P.P. (1983 - 1991)		JOHN J. STEFANI P.E. L.S. & P.P. (1983 - 1991)
JAY B. CORNELL P.E. & P.P. (1983 - 1991)		MICHAEL J. MCCLELLAND P.E. & P.P. (1983 - 1991)		GREGORY R. VALESI P.E. & P.P. (1983 - 1991)
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER		LIC. 32468		DATE: February 2022
DRAWN BY: MP		DESIGNED BY: MP		SCALE: As Shown
CHECKED BY: JCW		DATE: 2/17/2022		SHEET: 11 of 197

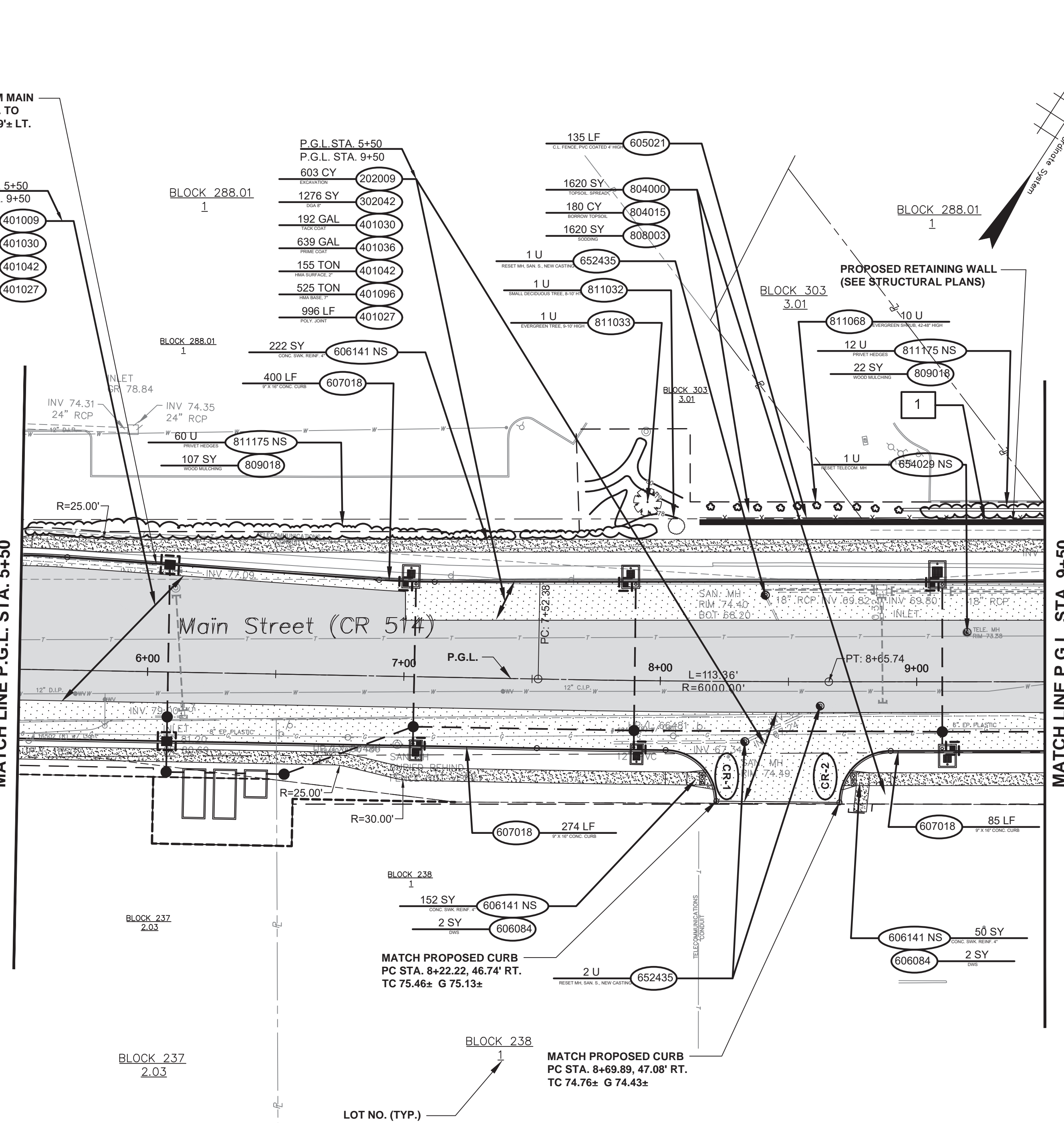
FILE NO. PWB0609.01
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REMOVE EXISTING CURB FROM MAIN ST. P.G.L. STA. 5+50.00, 44'± LT. TO MAIN ST. P.G.L. STA. 9+50.00, 39'± LT.

- P.G.L. STA. 5+50
- P.G.L. STA. 9+50
- 1800 SY
- 270 GAL
- 212 TON
- 1600 LF

PLAN SHEET C-1
MATCH LINE P.G.L. STA. 5+50




MATCH LINE P.G.L. STA. 9+50
PLAN SHEET C-3

NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
202009P	EXCAVATION, UNCLASSIFIED	603	CY
302042P	DENSE-GRADED AGGREGATE BASE COURSE, 8" THICK	1276	SY
401009P	HMA MILLING, 3" OR LESS	1800	SY
401027M	POLYMERIZED JOINT ADHESIVE	2596	LF
401030M	TACK COAT	462	GAL
401036M	PRIME COAT	639	GAL
401042M	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	367	TON
401096M	HOT MIX ASPHALT 19M64 BASE COURSE	525	TON
605021P	CHAIN-LINK FENCE, PVC-COATED STEEL, 4' HIGH	135	LF
606141P NS	CONCRETE SIDEWALK, REINFORCED, 4" THICK	424	SY
606084P	DETECTABLE WARNING SURFACE	4	SY
607018P	9" X 16" CONCRETE VERTICAL CURB	759	LF
652435M	RESET MANHOLE, SANITARY SEWER, USING NEW CASTING	1	UN
654029M NS	RESET TELECOMMUNICATIONS MANHOLE	1	UN
804000P	TOPSOIL SPREADING, 4" THICK	1620	SY
804015P	BORROW TOPSOIL	180	CY
808003P	SODDING	1620	SY
809018M	WOOD MULCHING	129	SY
811032M	SMALL DECIDUOUS TREE, 8-10' HIGH, B&B	1	UN
811033M	EVERGREEN TREE, 9-10' HIGH, B&B	1	UN
811068M	EVERGREEN SHRUB, 42-48" HIGH, B&B	10	UN
811176M NS	PRIVET HEDGES	72	UN

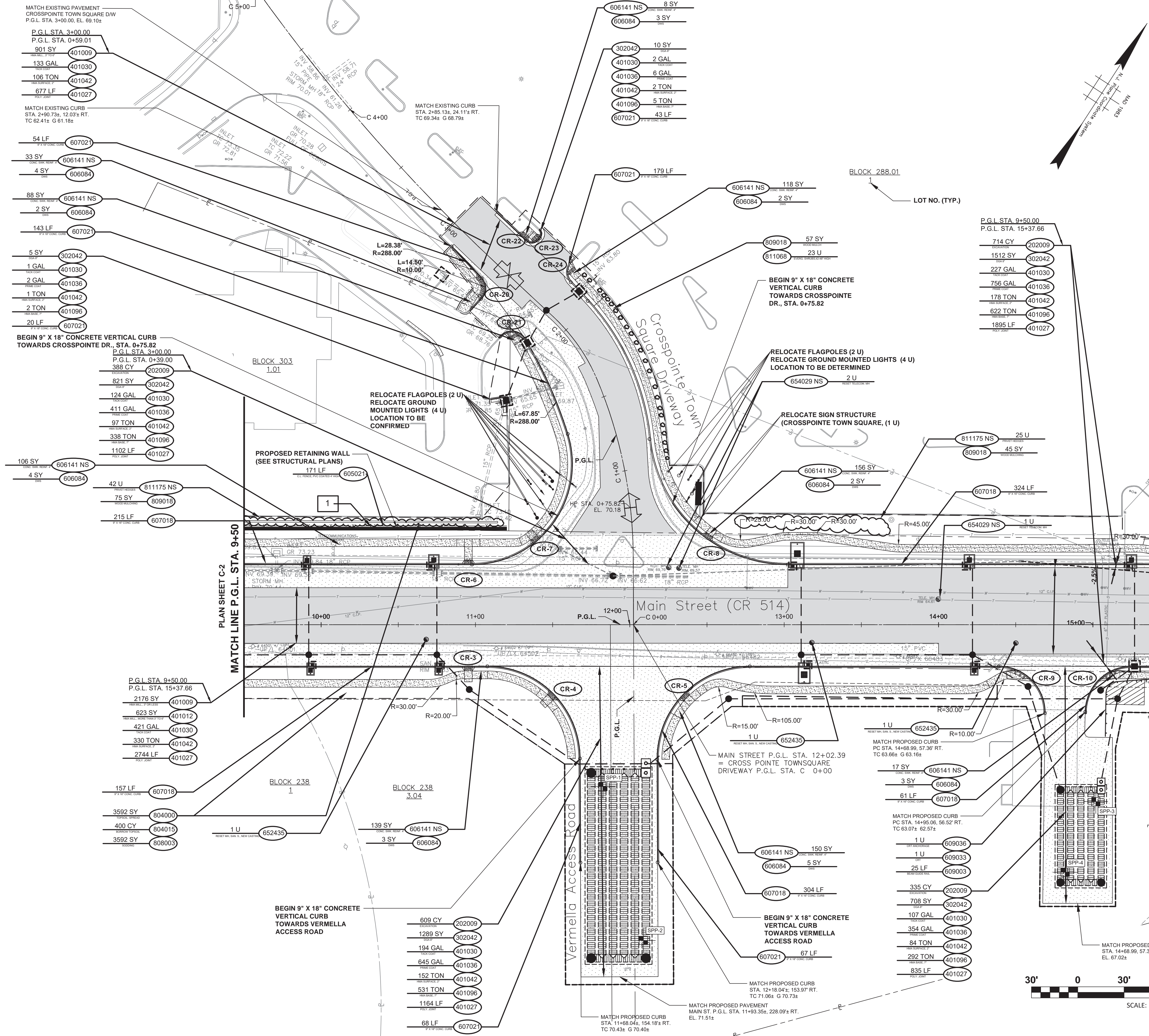
MISCELLANEOUS STRUCTURES		
NO.	DESCRIPTION	STRUCTURE NO.
1	RETAINING WALL NO. 1, MAIN ST. P.G.L., BEGIN STA. 8+14., 61.04' LT., END STA. 9+50, 61.25' LT.	



C-2
C-6

NO. DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY</p> <p>ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p> <p>CONSTRUCTION PLANS (2 OF 6)</p>				
<p>MAIN STREET FROM STA. 5+50 TO STA. 9+50</p>				
 <p>ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p> <p>(732) 727 8000 (732) 462 7400</p> <p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>				
JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991)		DAVID J. SAMUEL P.E. & P.P. NO PP LIC NO. 2455		JOHN J. STEFANI P.E., L.S. & P.P. NO PE & LS LIC NO. 24271
JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32962		MICHAEL J. MCCLELLAND P.E. & P.P. NO PP LIC NO. 3874		GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 39458
<p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>				
SCALE: As Shown			DATE: February 2022	
DRAWN BY: MP			DESIGNED BY: MP	
CHECKED BY: JCW			SHEET: 12 OF 197	
DATE: 2/17/2022				

FILE NO. PWB0609.01



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
202009P	EXCAVATION, UNCLASSIFIED	2046	CY
302042P	DENSE-GRADED AGGREGATE BASE COURSE, 8" THICK	4345	SY
401009P	HMA MILLING, 3" OR LESS	3077	SY
401012P	HMA MILLING, MORE THAN 3" TO 6"	623	SY
401027M	POLYMERIZED JOINT ADHESIVE	8417	LF
401030M	TACK COAT	1209	GAL
401036M	PRIME COAT	2174	GAL
401042M	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	949	TON
401096M	HOT MIX ASPHALT 19M64 BASE COURSE	1790	TON
605021P	CHAIN-LINK FENCE, PVC-COATED STEEL, 4" HIGH	171	LF
606141P NS	CONCRETE SIDEWALK, REINFORCED, 4" THICK	815	SY
606084P	DETECTABLE WARNING SURFACE	25	SY
607018P	9" X 18" CONCRETE VERTICAL CURB	1061	LF
607021P	9" X 18" CONCRETE VERTICAL CURB	594	LF
652435M	RESET MANHOLE, SANITARY SEWER, USING NEW CASTING	1	UN
654029M NS	RESET TELECOMMUNICATIONS MANHOLE	3	UN
804000P	TOPSOIL SPREADING, 4" THICK	3592	SY
804015P	BORROW TOPSOIL	400	CY
808003P	SODDING	3592	SY
809018M	WOOD MULCHING	177	SY
811068M	EVERGREEN SHRUB, 42-48" HIGH, B&B	23	UN
811176M NS	PRIVET HEDGES	67	UN

- FOR PROPOSED DRAINAGE ITEMS AND QUANTITIES, SEE DRAINAGE PLANS.
- FOR PROPOSED RETAINING WALL ITEMS AND QUANTITIES, SEE STRUCTURAL PLANS.

MISCELLANEOUS STRUCTURES		
NO.	DESCRIPTION	STRUCTURE NO.
1	RETAINING WALL NO. 1, MAIN ST. P.G.L. BEGIN STA. 9+50, 61.25' LT., END STA. 11+20.18, 61.25' LT.	

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY

ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS
CONSTRUCTION PLANS (3 OF 6)

MAIN STREET
CROSSPOINTE TOWN SQUARE DRIVEWAY

FROM STA. 9+50 TO STA. 15+37.66
FROM STA. 0+39 TO STA. 4+51.33

CV&E ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400

3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991) NO PE LIC NO. 25839 NO PP LIC NO. 2455	DAVID J. SAMUEL P.E. & P.P. (1983 - 1991) NO PE LIC NO. 24559 NO PP LIC NO. 24271	JOHN J. STEFANI P.E., L.S. & P.P. (1983 - 1991) NO PE LIC NO. 32952 NO PP LIC NO. 39458
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MICHAEL J. MCCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. 32468

DATE: 2/17/2022

SCALE: As Shown

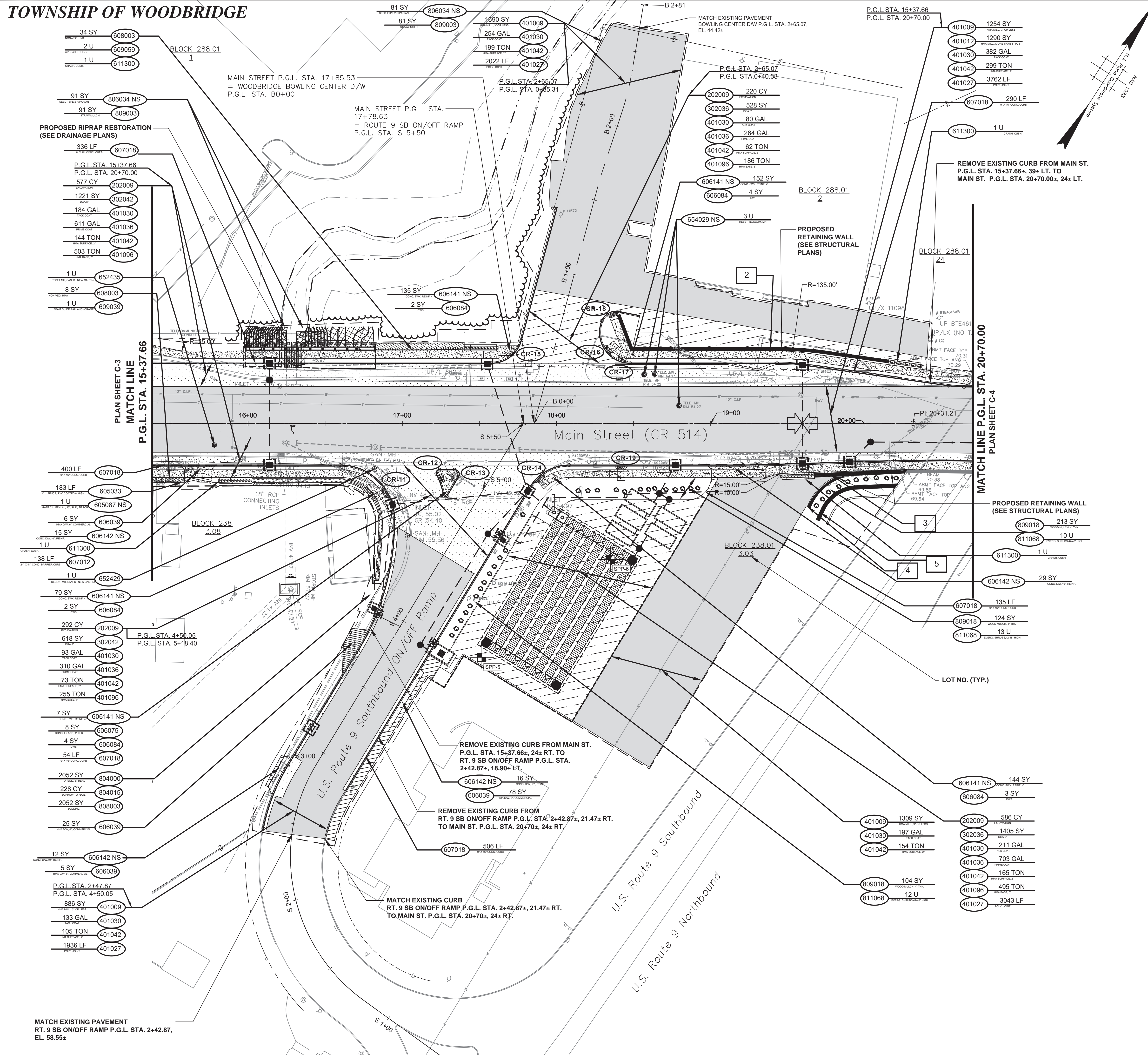
CHECKED BY: JCW

DESIGNED BY: MP

SHEET: 13 OF 197

FILE NO.: PWB0609.01

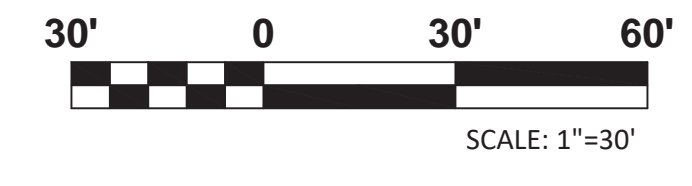




NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
202009P	EXCAVATION, UNCLASSIFIED	1675	CY
302042P	DENSE-GRADED AGGREGATE BASE COURSE, 8" THICK	1839	SY
401009P	HMA MILLING, 3" OR LESS	5139	SY
401012P	HMA MILLING, MORE THAN 3" TO 6"	1290	SY
401027M	POLYMERIZED JOINT ADHESIVE	10763	LF
401030M	TACK COAT	1534	GAL
401036M	PRIME COAT	1888	GAL
401042M	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	1201	TON
401096M	HOT MIX ASPHALT 19M64 BASE COURSE	1439	TON
605033P	CHAIN-LINK FENCE, PVC-COATED STEEL, 8' HIGH	183	LF
605087M NS	GATE, CHAIN-LINK FENCE, ALUMINUM-COATED STEEL, 20' WIDE,	1	UN
606141P NS	CONCRETE SIDEWALK, REINFORCED, 4" THICK	510	SY
606039P	HOT MIX ASPHALT DRIVEWAY, 6" THICK	114	SY
606143P NS	CONCRETE DRIVEWAY, REINFORCED, 10" THICK	63	SY
606075P	CONCRETE ISLAND, 4" THICK	8	SY
606084P	DETECTABLE WARNING SURFACE	15	SY
607012P	24" X 41" CONCRETE BARRIER CURB	138	LF
607018P	9" X 16" CONCRETE VERTICAL CURB	1721	LF
608003P	NON-VEGETATIVE SURFACE, HOT MIX ASPHALT	42	SY
609027M	TANGENT GUIDE RAIL TERMINAL	1	UN
609039M	BEAM GUIDE RAIL ANCHORAGE	1	UN
609059M	APPROACH GUIDE RAIL TRANSITION TL-3	2	UN
611300M	CRASH CUSHION, COMPRESSIVE BARRIER, TYPE 2, WIDTH NARROW	4	UN
652429M	RECONSTRUCT MANHOLE, SANITARY SEWER, USING NEW CASTING	1	UN
652435M	RESET MANHOLE, SANITARY SEWER, USING NEW CASTING	1	UN
654029M NS	RESET TELECOMMUNICATIONS MANHOLE	3	UN
804000P	TOPSOIL SPREADING, 4" THICK	2052	SY
804015P	BORROW TOPSOIL	228	CY
806034P NS	FERTILIZING AND SEEDING, TYPE 2, RIPARIAN ZONE	172	SY
808003P	SODDING	2052	SY
809003M	STRAW MULCHING	172	SY
809018M	WOOD MULCHING	441	SY
811068M	EVERGREEN SHRUB, 42-48" HIGH, B&B	35	UN

- FOR PROPOSED DRAINAGE ITEMS AND QUANTITIES, SEE DRAINAGE PLANS.
- FOR PROPOSED RETAINING WALL ITEMS AND QUANTITIES, SEE STRUCTURAL PLANS.

NO.	DESCRIPTION	STRUCTURE NO.
2	RETAINING WALL NO. 2, MAIN ST. P.G.L. BEGIN STA. 18+39.36, 70.08' LT., END STA. 20+15.12, 39.20' LT.	
3	RETAINING WALL NO. 3, MAIN ST. P.G.L., BEGIN STA. 19+67.26, 32.73' RT., END STA. 19+91.36, 31.62' RT.	
4	RETAINING WALL NO. 4, MAIN ST. P.G.L., BEGIN STA. 19+62.62, 53.76' RT., END STA. 20+27.53, 29.97' RT.	
5	RETAINING WALL NO. 5, MAIN ST. P.G.L., BEGIN STA. 19+68.60, 62.16' RT., END STA. 20+20.98, 39.28' RT.	



TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY

ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

CONSTRUCTION PLANS (4 OF 6)

MAIN STREET ON/OFF RAMP RT. 9 SB FROM STA. 15+37.66 TO STA. 21+30.63
ON/OFF RAMP RT. 9 SB FROM STA. 2+42.87 TO STA. 5+18.40
BOWLING CENTER D/W FROM STA. 0+40.38 TO STA. 2+65.07

ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400

3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIR P.E. & P.P. (1983 - 2021) NJ PE LIC NO. 25839	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24555	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE LIC NO. 24271
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 33468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458

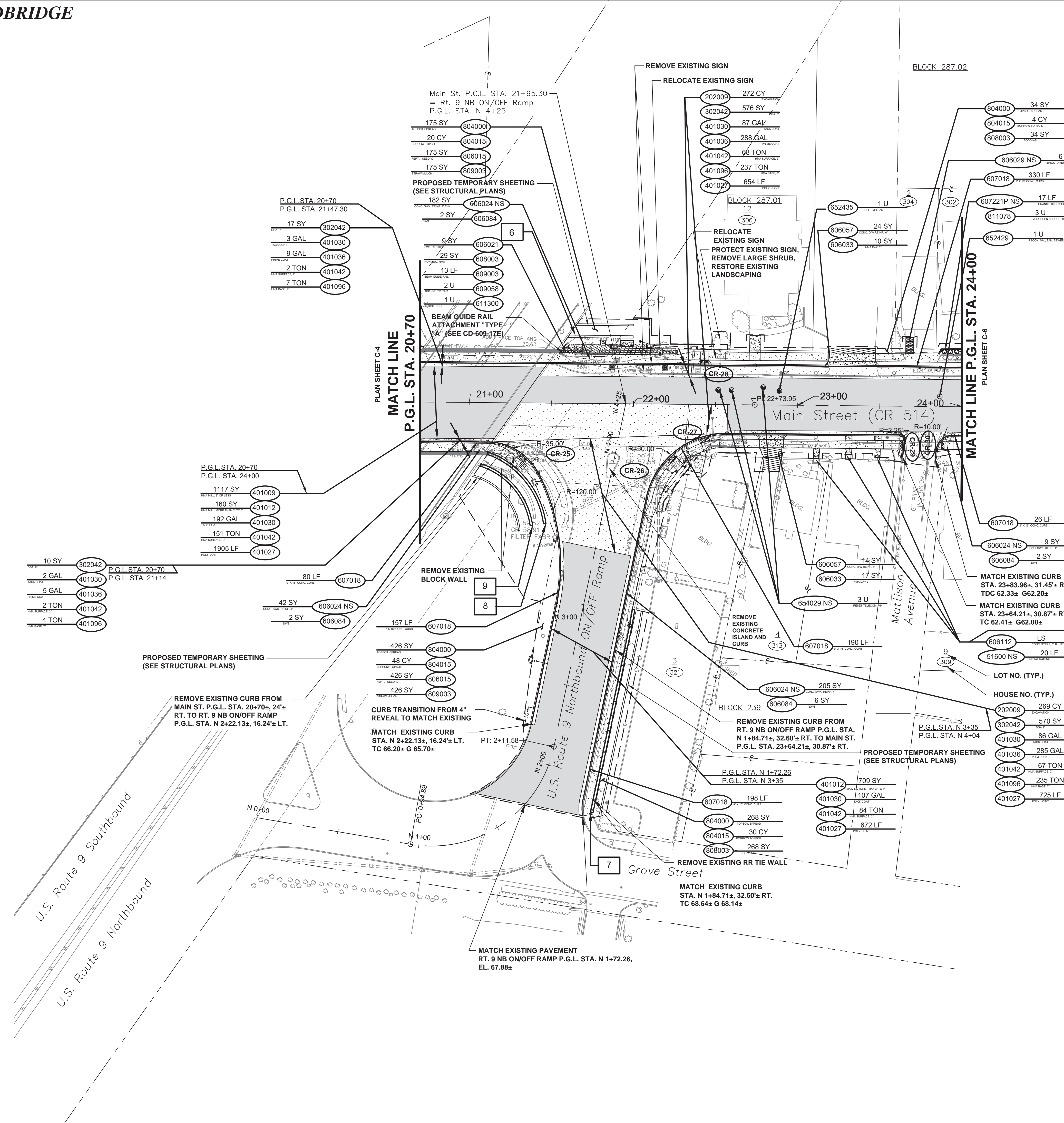
MICHAEL J. MCCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. 32468

As Shown
February 2022

DRAWN BY: MP
DESIGNED BY: MP

CHECKED BY: JCW
DATE: 2/17/2022
SHEET: 14 OF 197

FILE NO. PWB06A09.01



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
202009P	EXCAVATION, UNCLASSIFIED	845	CY
302042P	DENSE-GRADED AGGREGATE BASE COURSE, 8" THICK	1173	SY
401009P	HMA MILLING, 3" OR LESS	1117	SY
401012P	HMA MILLING, MORE THAN 3" TO 6"	709	SY
401027M	POLYMERIZED JOINT ADHESIVE	3956	LF
401030M	TACK COAT	477	GAL
401036M	PRIME COAT	587	GAL
401042M	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	374	TON
401096M	HOT MIX ASPHALT 19M64 BASE COURSE	483	TON
516001M NS	METAL RAILING	20	LF
606021P	CONCRETE SIDEWALK, 8" THICK	9	SY
606141P NS	CONCRETE SIDEWALK, REINFORCED, 4" THICK	438	SY
606033P	HOT MIX ASPHALT DRIVEWAY, 2" THICK	41	SY
606142P NS	CONCRETE DRIVEWAY, REINFORCED, 6" THICK	38	SY
606084P	DETECTABLE WARNING SURFACE	12	SY
606029P NS	BRICK PAVERS	6	SY
607018P	9" X 16" CONCRETE VERTICAL CURB	981	LF
607221P NS	GRANITE BLOCK CURB	17	LF
608003P	NON-VEGETATIVE SURFACE, HOT MIX ASPHALT	29	SY
609003M	BEAM GUIDE RAIL	13	LF
609058M	APPROACH GUIDE RAIL TRANSITION TL-2	2	UN
611300M	CRASH CUSHION, COMPRESSIVE BARRIER, TYPE 2, WIDTH NARROW	1	UN
652435M	RESET MANHOLE, SANITARY SEWER, USING NEW CASTING	1	UN
654029M NS	RESET TELECOMMUNICATIONS MANHOLE	3	UN
804000P	TOPSOIL SPREADING, 4" THICK	903	SY
806015P	FERTILIZING AND SEEDING, TYPE D	601	SY
804015P	BORROW TOPSOIL	102	CY
808003P	SODDING	302	SY
809003M	STRAW MULCHING	601	SY
811078M	EVERGREEN SHRUB, 18"-24" HIGH, #3 CONTAINER	3	UN

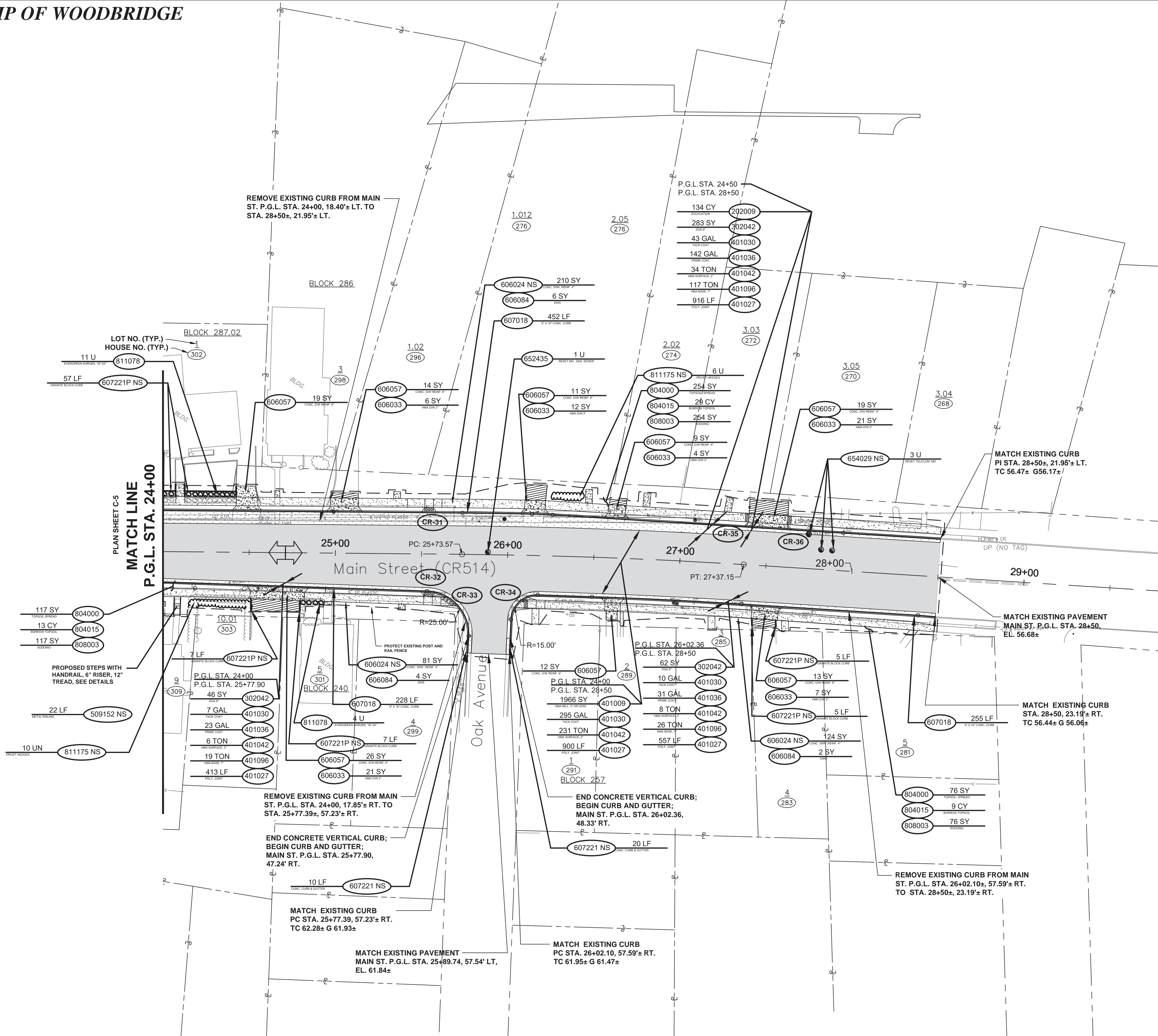
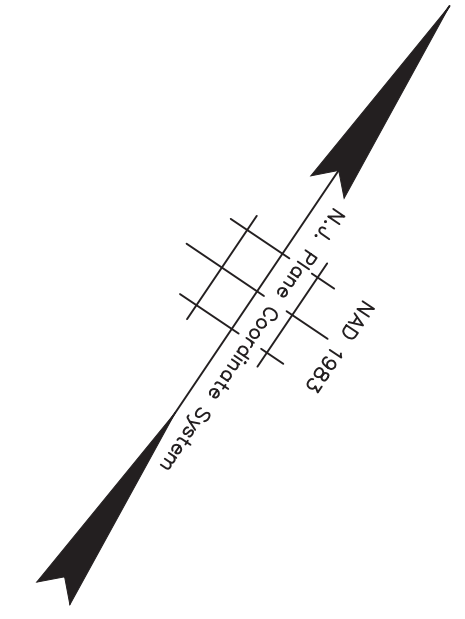
- FOR PROPOSED DRAINAGE ITEMS AND QUANTITIES, SEE DRAINAGE PLANS.
- FOR PROPOSED RETAINING WALL ITEMS AND QUANTITIES, SEE STRUCTURAL PLANS.

MISCELLANEOUS STRUCTURES		
NO.	DESCRIPTION	STRUCTURE NO.
6	RETAINING WALL NO. 6, MAIN ST. P.G.L., BEGIN STA. 21+59.53, 40' LT., END STA. 21+99.53, 40' LT.	
7	RETAINING WALL NO. 7, RT. 9 NB ON/OFF RAMP P.G.L., BEGIN STA. 1+87.81, 35.41' RT., END STA. 3+03.26±, 29.55' RT.	
8	RETAINING WALL NO. 8, RT. 9 NB ON/OFF RAMP P.G.L., BEGIN STA. 3+43.72, 32.64' LT., END STA. 3+79.10±, 76.32' LT.	
9	RETAINING WALL NO. 9, RT. 9 NB ON/OFF RAMP P.G.L., BEGIN STA. 3+40.97, 40.34' LT., END STA. 3+79.10±, 76.32' LT.	



2. REVISION TO COMBINE PHASES 1 AND 2.		01/03/2022	RCM
1. ADDRESSED TYPED REVIEW COMMENTS, DATED NOVEMBER 13, 2021.		12/10/2021	MP
NO.	DESCRIPTION OF REVISION	DATE	DRAWN CHECKED RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS CONSTRUCTION PLANS (5 OF 6)			
MAIN STREET FROM STA. 20+70 TO STA. 24+00		 CME ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS (732) 727-8000 (732) 462-7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194	
JOHN H. ALLGAIER P.E. & P.P. (1993 - 2011) NJ P.E. LIC. NO. 25838 NJ P.P. LIC. NO. 24855	DAVID J. SAMUEL P.E. & P.P. NJ P.E. LIC. NO. 24973 NJ P.P. LIC. NO. 2089	JOHN J. STEFANI P.E. L.S. & P.P. NJ P.E. LIC. NO. 24973 NJ P.P. LIC. NO. 2089	
JAY B. CORNELL P.E. & P.P. NJ P.E. LIC. NO. 32468	MICHAEL J. MCCLELLAND P.E. & P.P. NJ P.E. LIC. NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ P.E. LIC. NO. 4361	
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468		As Shown February 2022 DRAWN BY DESIGNED BY MP MP CHECKED BY SHEET JCW 15 OF 197	

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C-6
PWB060901



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
202009P	EXCAVATION, UNCLASSIFIED	134	CY
302042P	DENSE-GRADED AGGREGATE BASE COURSE, 8" THICK	391	SY
401009P	HMA MILLING, 3" OR LESS	1966	SY
401027M	POLYMERIZED JOINT ADHESIVE	2786	LF
401030M	TACK COAT	355	GAL
401036M	PRIME COAT	196	GAL
401042M	HOT MIX ASPHALT 9.5M64 SURFACE COURSE	279	TON
401096M	HOT MIX ASPHALT 19M64 BASE COURSE	162	TON
516001M NS	METAL RAILING	22	LF
606033P	HOT MIX ASPHALT DRIVEWAY, 2" THICK	71	SY
606084P	DETECTABLE WARNING SURFACE	12	SY
606141P NS	CONCRETE SIDEWALK, REINFORCED, 4" THICK	415	SY
606142P NS	CONCRETE DRIVEWAY, REINFORCED, 6" THICK	123	SY
607018P	9" X 16" CONCRETE VERTICAL CURB	935	LF
607221P NS	GRANITE BLOCK CURB	81	LF
607222P NS	CONCRETE CURB AND GUTTER	30	LF
652435M	RESET MANHOLE, SANITARY SEWER, USING NEW CASTING	1	UN
654029M NS	RESET TELECOMMUNICATIONS MANHOLE	3	UN
804000P	TOPSOIL SPREADING, 4" THICK	447	SY
804015P	BORROW TOPSOIL	51	CY
808003P	SODDING	447	SY
811078M	EVERGREEN SHRUB, 18"-24" HIGH, #3 CONTAINER	15	UN
811176M NS	PRIVET HEDGES	16	UN



2. REVISED TO COMBINE PHASES 1 AND 2.		01/03/2022	RCM
1. ADDRESSED NADOT REVIEW COMMENTS, DATED NOVEMBER 13, 2021.		12/10/2021	MP
No.	DESCRIPTION OF REVISION	DATE	DRAWN CHECKED RELEASED

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY

ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

CONSTRUCTION PLANS (6 OF 6)

MAIN STREET FROM STA. 24+00 TO STA. 28+50

CME ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS (732) 462-7400
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIR P.E. & P.P. NJ PE LIC. NO. 25838 NJ PP LIC. NO. 2455	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC. NO. 24971 NJ PP LIC. NO. 2089	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE LIC. NO. 32468 NJ PP LIC. NO. 32770
JAY B. CORNELL P.E. & P.P. NJ PE LIC. NO. 32468	MICHAEL J. MCLELLAND P.E. & P.P. NJ PE LIC. NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC. NO. 34456 NJ PP LIC. NO. 4362

MICHAEL J. MCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468

SCALE: As Shown DATE: February 2022
DRAWN BY: MP DESIGNED BY: MP
CHECKED BY: JCW SHEET: 16 of 197

DATE: 2/17/2022



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CRASH CUSHION COMPRESSIVE BARRIER SUMMARY TABLE						
NJDOT PAY ITEM NO.	DESCRIPTION	DESIGN SPEED	ROUTE AND STATION	PRODUCT	FOUNDATION	BACKUP SYSTEM
611300	CRASH CUSHION, COMPRESSIVE BARRIER TYPE 2, WIDTH NARROW	45 MPH	MAIN STREET PROPOSED GRADE LINE (P.G.L.) STATION 15+81.56, 36' RT.	QUADGUARD M10 w/TENSION STRUT BACKUP, 6 BAY, 24" WIDE, 22' LENGTH OR APPROVED EQUAL	6" THICK REINFORCED CONCRETE PAD	TENSION STRUT BACKUP
611300	CRASH CUSHION, COMPRESSIVE BARRIER TYPE 2, WIDTH NARROW	45 MPH	MAIN STREET PROPOSED GRADE LINE (P.G.L.) STATION 17+61.16, 48.08' RT.	QUADGUARD M10 w/TENSION STRUT BACKUP, 6 BAY, 24" WIDE, 22' LENGTH OR APPROVED EQUAL	6" THICK REINFORCED CONCRETE PAD	TENSION STRUT BACKUP
611300	CRASH CUSHION, COMPRESSIVE BARRIER TYPE 2, WIDTH NARROW	45 MPH	MAIN STREET PROPOSED GRADE LINE (P.G.L.) STATION 19+46.27, 33.37' RT.	QUADGUARD M10 w/TENSION STRUT BACKUP, 6 BAY, 24" WIDE, 22' LENGTH OR APPROVED EQUAL	6" THICK REINFORCED CONCRETE PAD	TENSION STRUT BACKUP
611300	CRASH CUSHION, COMPRESSIVE BARRIER TYPE 2, WIDTH NARROW	45 MPH	MAIN STREET PROPOSED GRADE LINE (P.G.L.) STATION 20+35.60, 36.28' LT.	QUADGUARD M10 w/TENSION STRUT BACKUP, 3 BAY, 24" WIDE, 13' LENGTH OR APPROVED EQUAL	6" THICK REINFORCED CONCRETE PAD	TENSION STRUT BACKUP
611300	CRASH CUSHION, COMPRESSIVE BARRIER TYPE 2, WIDTH NARROW	30 MPH	MAIN STREET PROPOSED GRADE LINE (P.G.L.) STATION 22+26.48, 31.00' LT.	QUADGUARD M10 w/TENSION STRUT BACKUP, 6 BAY, 24" WIDE, 22' LENGTH OR APPROVED EQUAL	6" THICK REINFORCED CONCRETE PAD	TENSION STRUT BACKUP

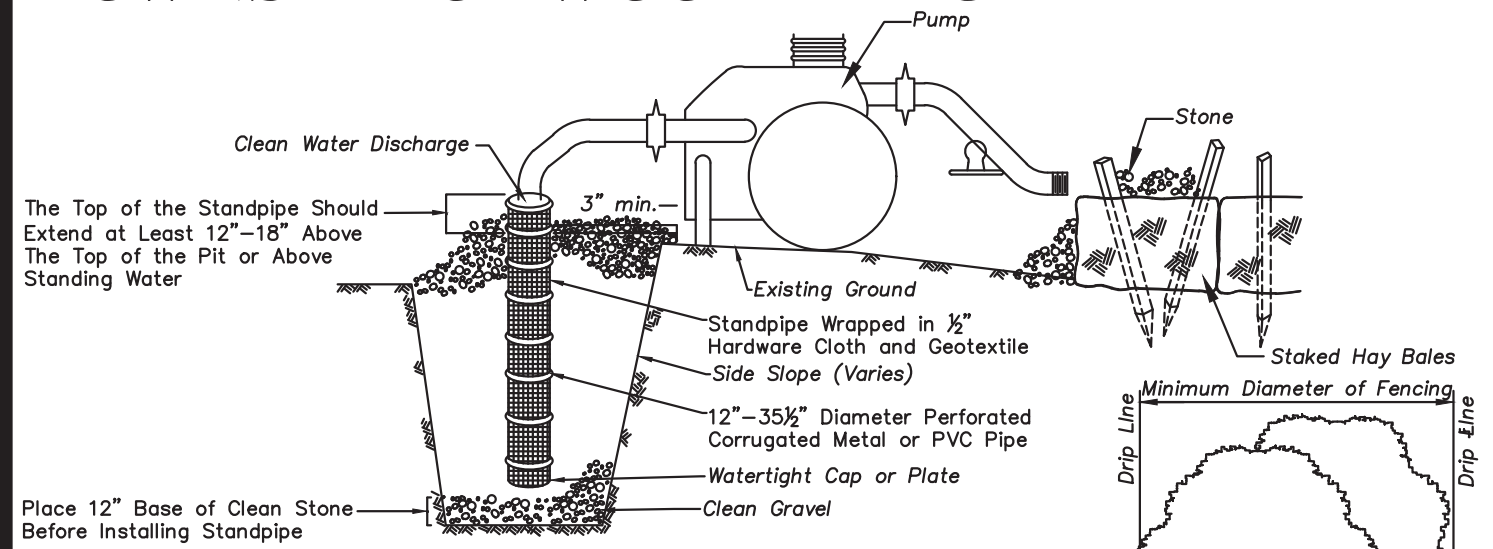
NOTE:

FOR EACH LOCATION SHOWN IN THE CRASH CUSHION COMPRESSIVE BARRIER SUMMARY TABLE, INSTALL ONE (1) OF THE CRASH CUSHIONS LISTED FOR THAT LOCATION.

CC-1
CC-1

No. _____				DATE _____	DRAWN _____	CHECKED _____	RELEASED _____
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
CRASH CUSHION COMPRESSIVE BARRIER SUMMARY TABLE MAIN STREET							
 ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS (732) 727 8000 (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194							
JOHN H. ALLGAIR P.E. & P.P. NJ PE LIC NO. 25839 (1983 - 2001)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 2455	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271	JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32762	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458	SCALE: As Shown DATE: February 2022 DRAWN BY: MP DESIGNED BY: MP CHECKED BY: JCW SHEET: 17 of 197	
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER  LIC. 32468						FILE NO. PWB0609.01	

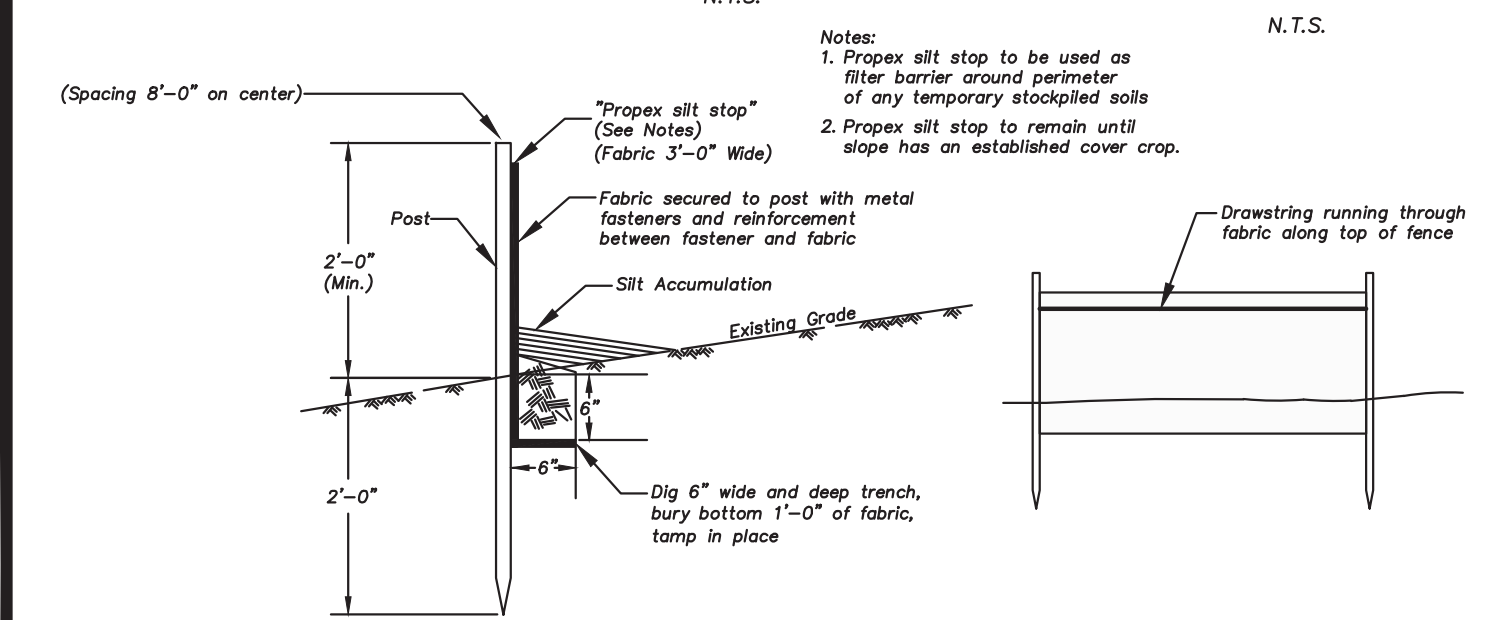
TOWNSHIP OF WOODBRIDGE



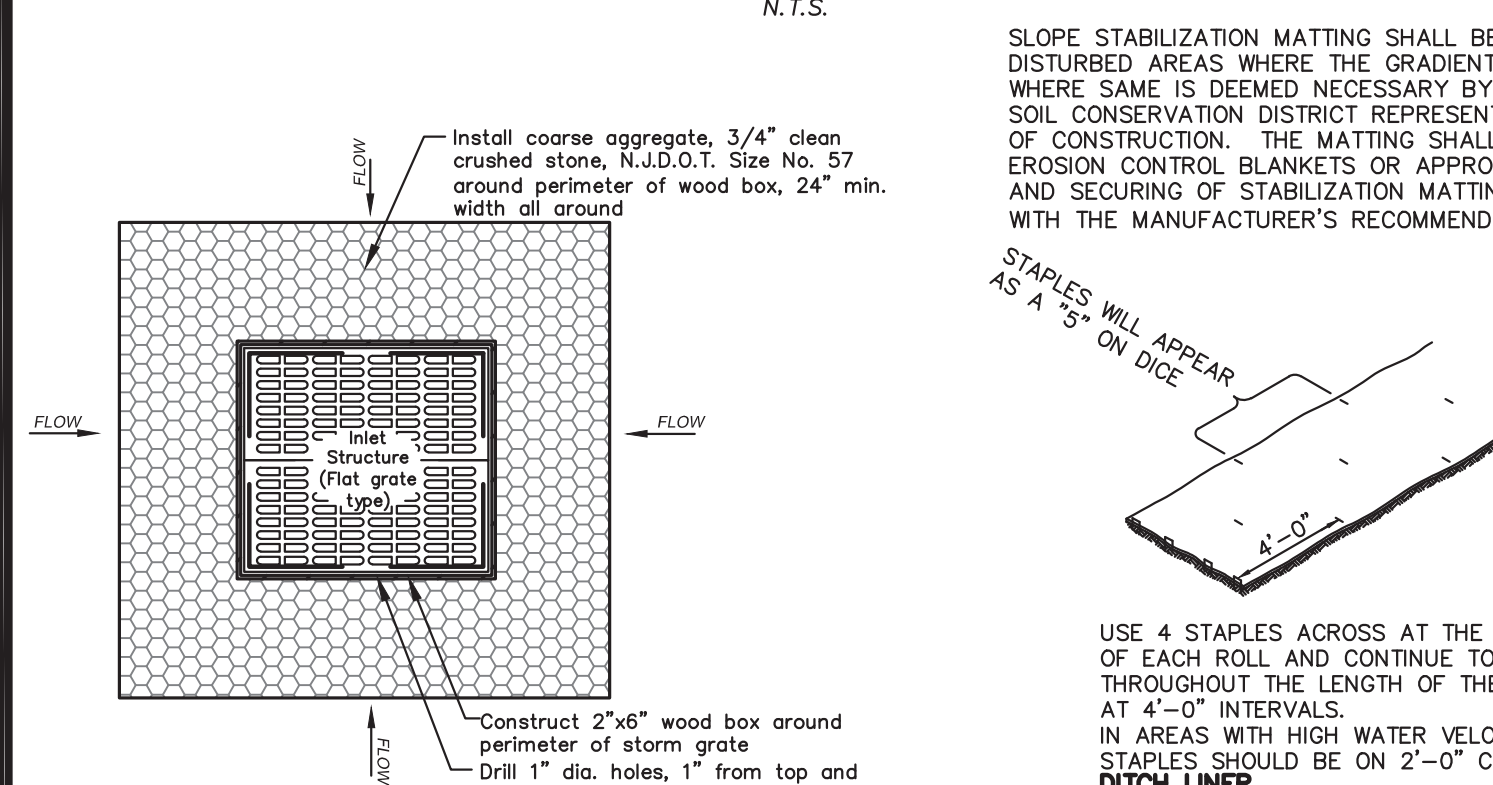
Construction Specifications
1. Pit dimensions are variable with the minimum diameter being two(2) times the standpipe diameter.
2. The standpipe should be constructed by perforating a 12\"/>

DEWATERING DETAIL

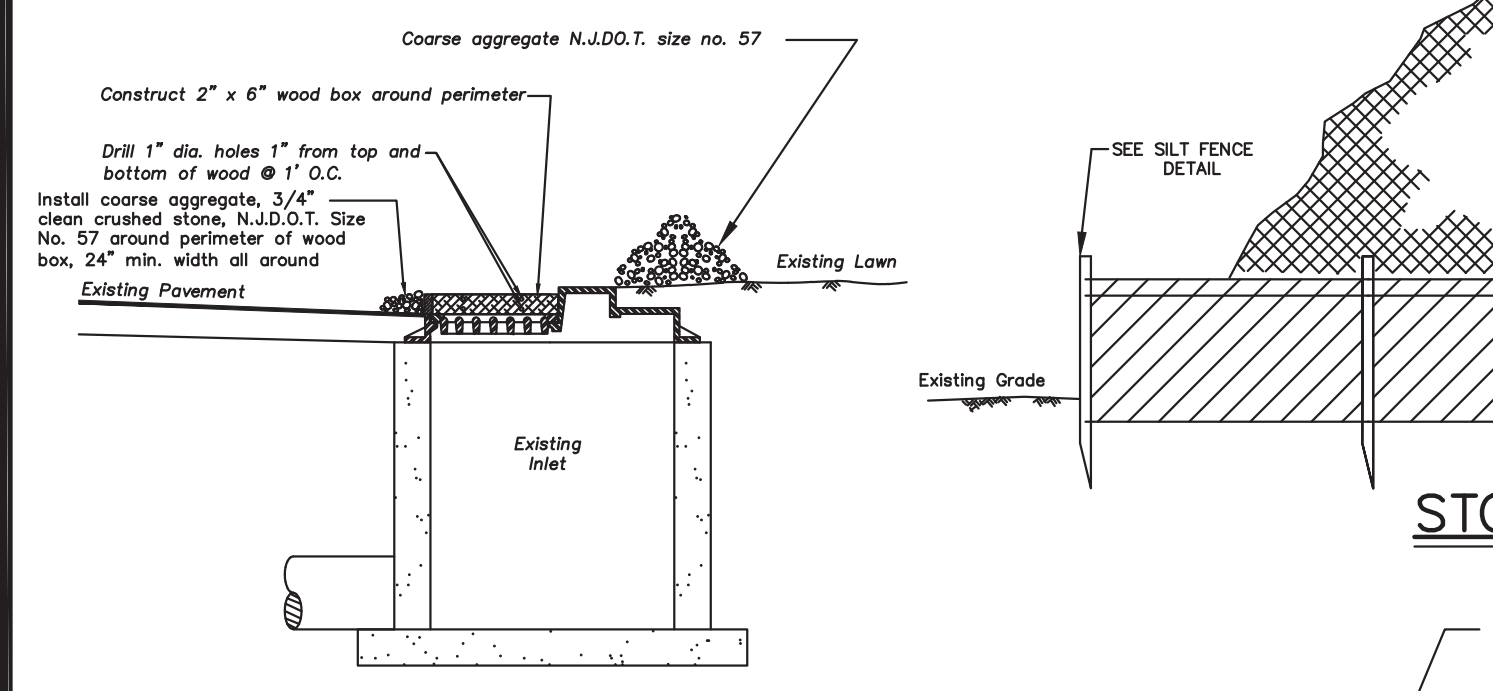
TYPICAL TREE PROTECTION DETAIL



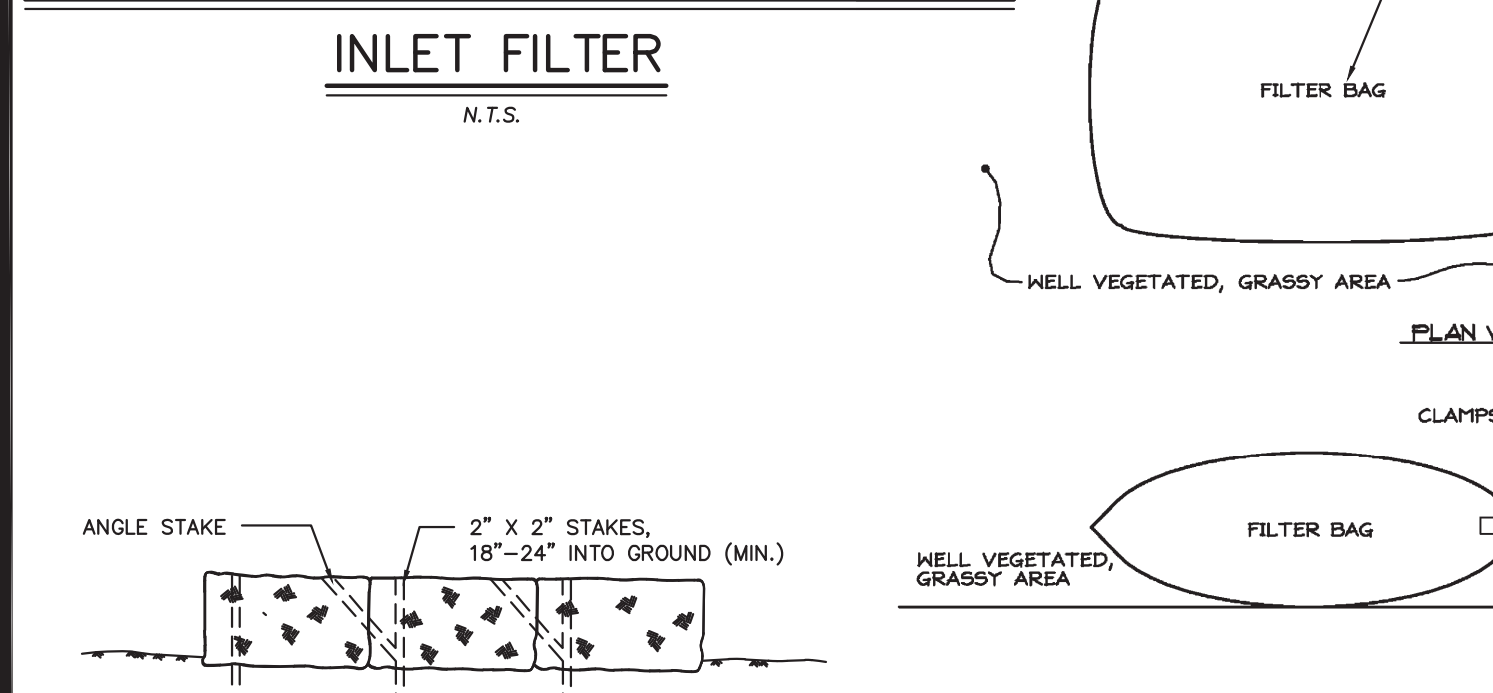
SILT STOP SEDIMENT BARRIER DETAIL



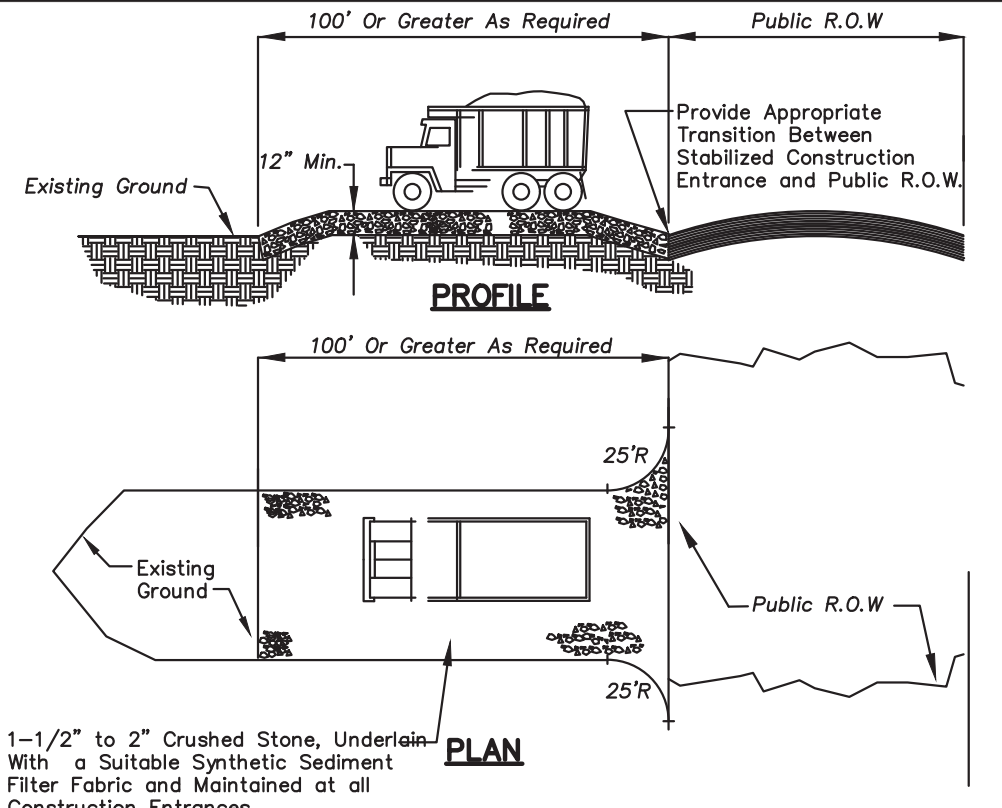
CONSTRUCTION NOTES:
Initial siltation protection to remain until completion of final grading and establishment of cover. Also, periodic checks must be made after each rainfall to excavate and remove excess sediment from ground inlets.



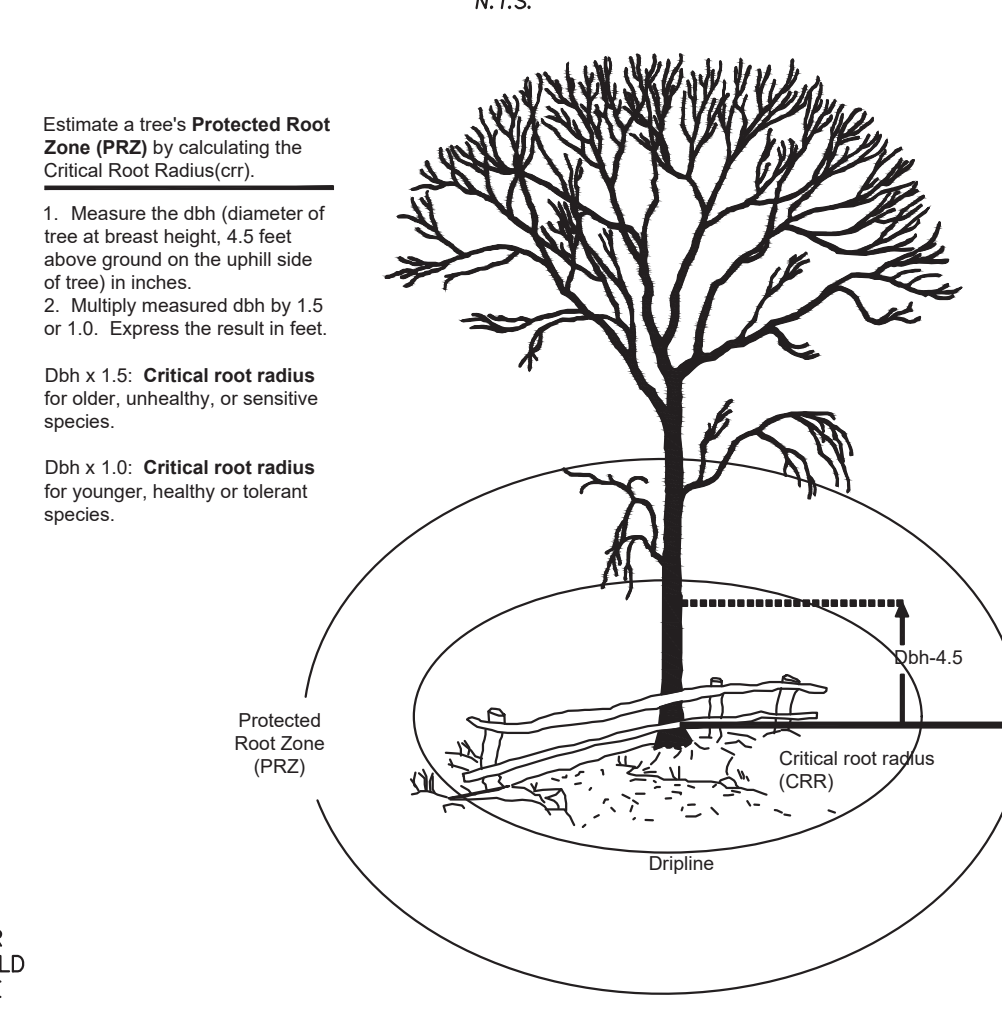
INLET SILTATION PROTECTION DETAIL



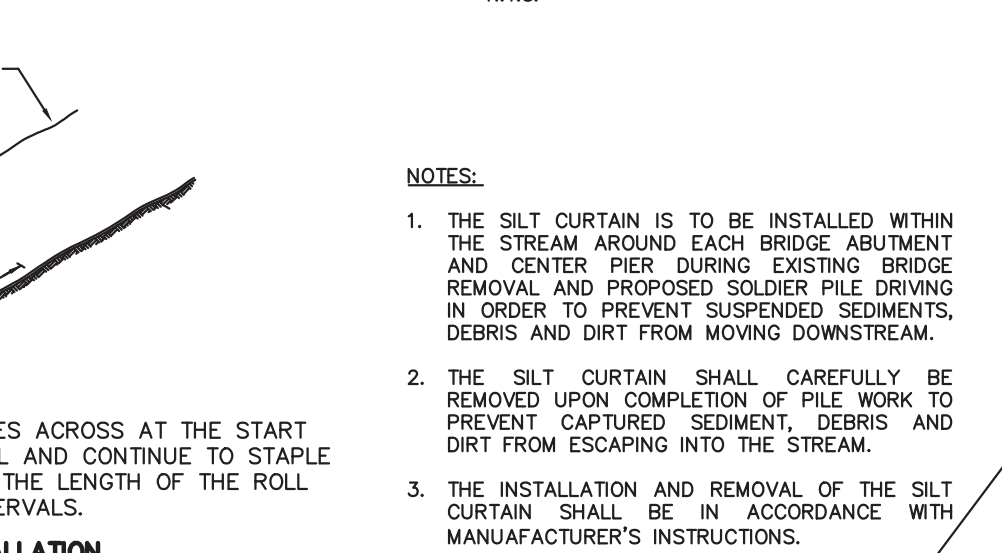
STRAW BALE SILTATION DIKE DETAIL



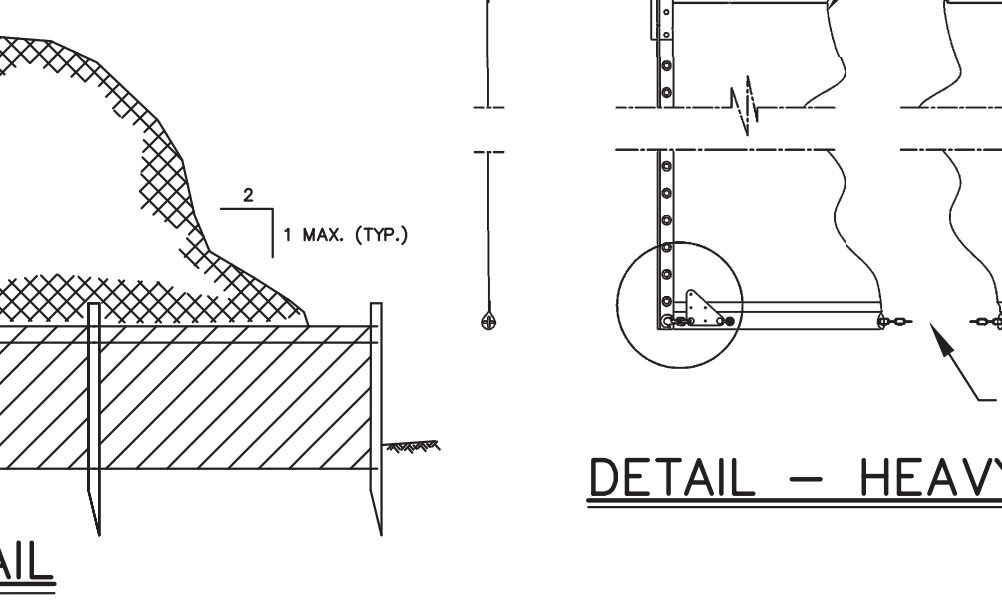
STABILIZED CONSTRUCTION ENTRANCE



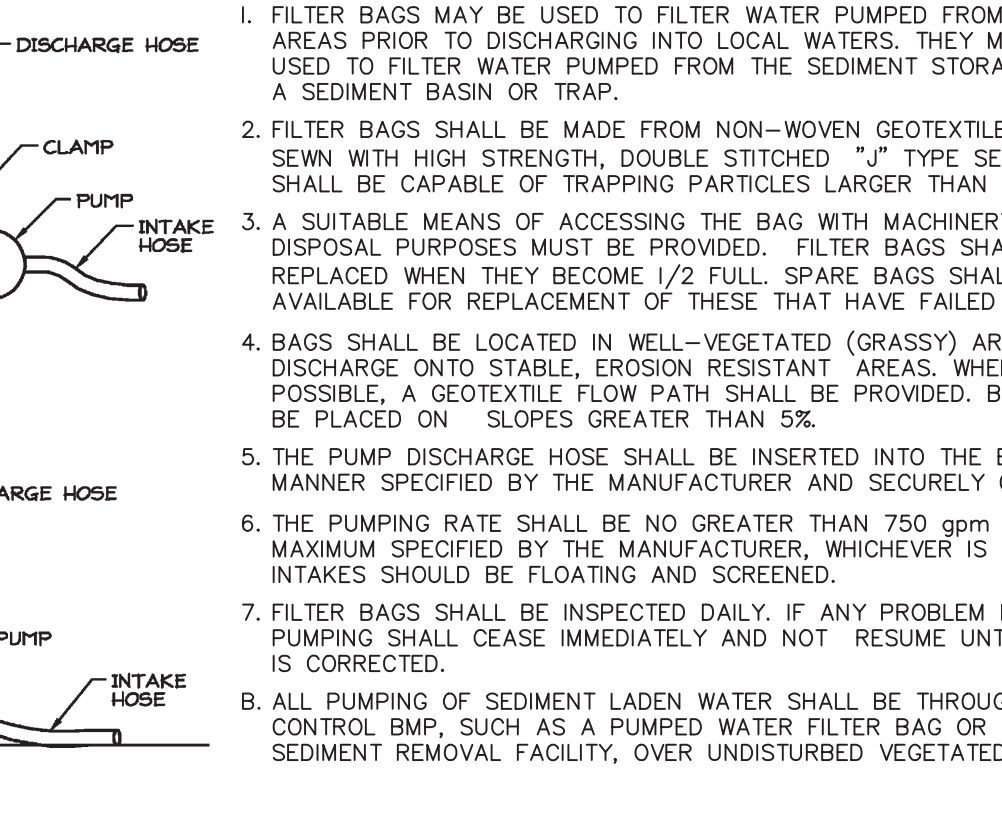
ROOT PROTECTION



EXCELSIOR CURLEX II MATTING FOR SLOPE STABILIZATION INSTALLATION DETAIL



STOCKPILE DETAIL



DETAIL - PUMPED WATER SEDIMENT CONTROL BAG

ACID SOILS MITIGATION

- 1. LIMIT THE EXCAVATION AREA AND EXPOSURE TIME WHEN HIGH ACID-PRODUCING SOILS ARE ENCOUNTERED.
2. TOPSOIL STRIPPED FROM THE SITE SHALL BE STORED SEPARATELY FROM TEMPORARILY STOCKPILED HIGH ACID-PRODUCING SOILS.
3. STOCKPILES OF HIGH ACID-PRODUCING SOIL SHOULD BE LOCATED ON LEVEL LAND TO MINIMIZE ITS MOVEMENT, ESPECIALLY WHEN THIS MATERIAL HAS A HIGH CLAY CONTENT.
4. TEMPORARILY STOCKPILED HIGH ACID-PRODUCING SOIL MATERIAL TO BE STORED MORE THAN 48 HOURS SHOULD BE COVERED WITH PROPERLY ANCHORED, HEAVY GRADE SHEETS OF POLYETHYLENE WHERE POSSIBLE. IF NOT POSSIBLE, STOCKPILES SHALL BE COVERED WITH A MINIMUM OF 3 TO 6 INCHES OF WOOD CHIPS TO MINIMIZE EROSION OF THE STOCKPILE. SILT FENCE SHALL BE INSTALLED AT THE TOE OF THE SLOPE TO CONTAIN MOVEMENT OF THE STOCKPILED MATERIAL. TOPSOIL SHALL NOT BE APPLIED TO THE STOCKPILES TO PREVENT TOPSOIL CONTAMINATION WITH HIGH ACID-PRODUCING SOIL.

SITE PREPARATION

- A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDING PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING.
B. IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH STANDARD FOR LAND GRADING.
C. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.

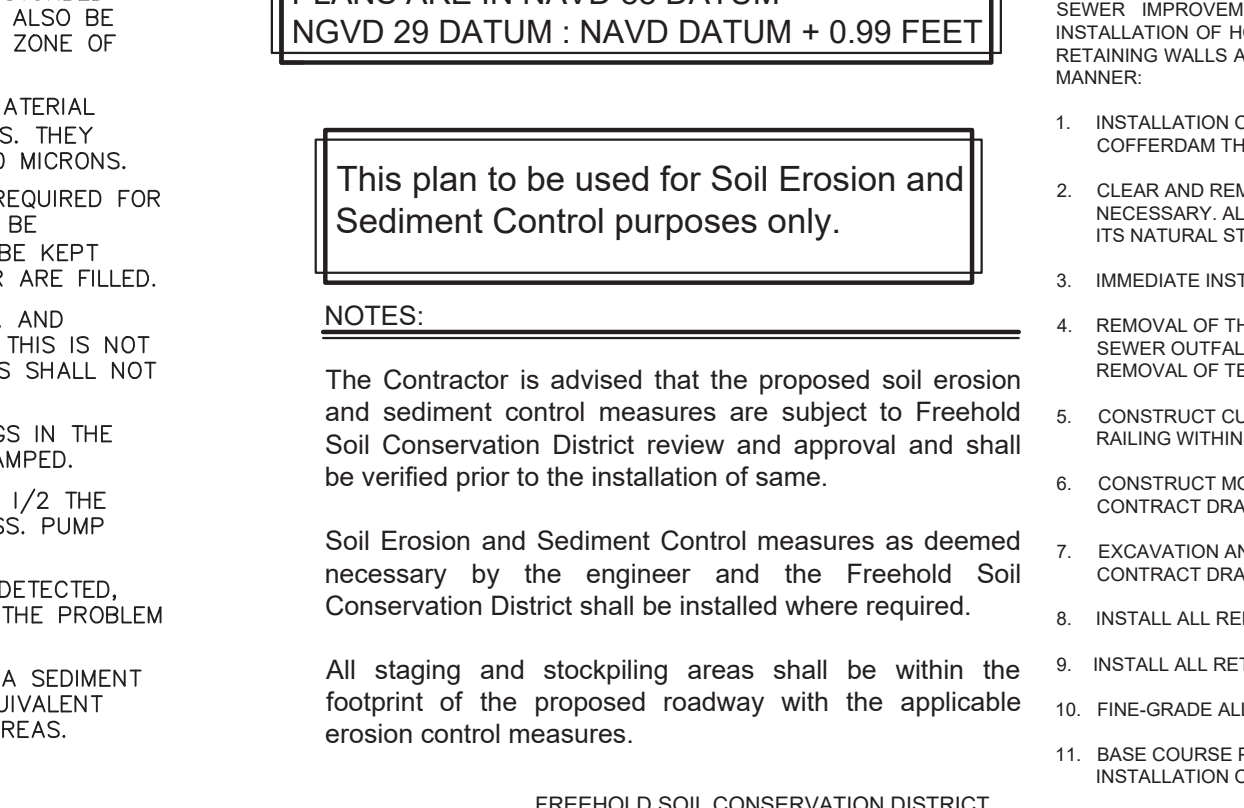
TEMPORARY SEEDING SPECIFICATIONS

- APPLY 10-20-10 FERTILIZER AT A RATE OF 500 LBS. PER ACRE OR 11 LBS. PER 1,000 SQ. FEET. COOL SEASON GRASSES
- APPLY PERENNIAL RYE GRASS AT A RATE OF 100 LBS. PER ACRE OR 1 LB. PER 1,000 SQ. FT.
- APPLY SPRING OATS AT A RATE OF 80 LBS. PER ACRE OR 2 LBS. PER 1,000 SQ. FT.
- APPLY ANNUAL RYEGRASS AT A RATE OF 100 LBS. PER ACRE OR 2 LBS. PER 1,000 SQ. FT.
- APPLY WINTER BARLEY AT A RATE OF 90 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ. FT.
- APPLY WINTER CEREAL RYE AT A RATE OF 112 LBS. PER ACRE OR 2.8 LBS. PER 1,000 SQ. FT.
- APPLY PEARL MILLET AT A RATE OF 20 LBS. PER ACRE OR 0.5 LBS. PER 1,000 SQ. FT.
- APPLY MILLET (GERMAN OR HUNGARIAN) AT A RATE OF 30 LBS. PER ACRE OR 0.7 LBS. PER SQ. FT.

MODIFIED SEED MIX ERNMX-280 SEEDING SPECIFICATIONS

- APPLY 10-20-10 FERTILIZER AT A RATE OF 500 LBS. PER ACRE OR 11 LBS. PER 1,000 SQ. FEET.
- APPLY MODIFIED SEED MIX ERNMX-280 EASTERN WEST VIRGINIA STEEP SLOPE MIX WITH DEERTONGUE AND BLACKVEED SUSAN SEEDS REMOVED. SEED AT 45 LBS PER ACRE WITH A COVER CROP FOR A COVER CROP USE ONE OF THE FOLLOWING: GRASS OATS (50 LBS PER ACRE 1 JAN. TO 30 APRIL), BROWN TOP MILLET (10 LBS PER ACRE 1 MAY. TO 31 AUG.) OR GRASS RYE (80 LBS PER ACRE 1 SEP. TO 31 DEC.)
- THE ABOVE DESCRIBED SEED MIX SHALL BE APPLIED ONLY TO AREAS REGULATED BY THE NJDEP WITHIN THE PROJECT LIMITS.

DETAIL - HEAVY DUTY IN STREAM SILT BARRIER



SOIL EROSION AND SEDIMENT CONTROL NOTES:

- 1. THE FREEHOLD SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY SOIL DISTURBANCE ACTIVITY.
2. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
3. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE-CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS.
4. N.J.S.A. 4:24-39 ET SEQ. REQUIRES THAT NO CERTIFICATES OF OCCUPANCY BE ISSUED BEFORE THE DISTRICT DETERMINES THAT A PROJECT OR PORTION THEREOF IS IN FULL COMPLIANCE WITH THE CERTIFIED PLAN AND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY AND A REPORT OF COMPLIANCE HAS BEEN ISSUED UPON WRITTEN REQUEST FROM THE APPLICANT. THE DISTRICT MAY ISSUE A REPORT OF COMPLIANCE WITH CONDITIONS ON A LOT-BY-LOT OR SECTION-BY-SECTION BASIS, PROVIDED THAT THE PROJECT OR PORTION THEREOF IS IN SATISFACTORY COMPLIANCE WITH THE SEQUENCE OF DEVELOPMENT AND TEMPORARY MEASURES FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN IMPLEMENTED, INCLUDING PROVISIONS FOR STABILIZATION AND SITE WORK.
5. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN SIXTY (60) DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW OR EQUIVALENT MATERIAL, AT A RATE OF 2 TO 2 1/2 TONS PER ACRE, ACCORDING TO STATE STANDARDS FOR STABILIZATION WITH MULCH ONLY.
6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (i.e. STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AND A MULCH ANCHOR, IN ACCORDANCE WITH STATE STANDARDS.
7. A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE ROADS, DRIVEWAYS AND PARKING AREAS IN AREAS WHERE NO UTILITIES ARE PRESENT. THE SUB-BASE SHALL BE INSTALLED WITHIN FIFTEEN (15) DAYS OF THE PRELIMINARY GRADING.
8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A PAD OF CLEAN CRUSHED STONE AT POINTS WHERE TRAFFIC WILL BE ACCESSING THE CONSTRUCTION SITE AFTER INTERIOR ROADWAYS ARE PAVED. INDIVIDUAL LOTS REQUIRE A STABILIZED CONSTRUCTION ENTRANCE CONSISTING OF ONE INCH TO TWO INCH (1\"/>

PERMANENT SEEDING SPECIFICATIONS:

- APPLY FERTILIZER AND LIME IN THE SAME RATES AS DENOTED IN THE TEMPORARY SEEDING SPECIFICATIONS ABOVE.
- APPLY THE FOLLOWING SEED MIXTURE ONLY DURING SPECIFIED PLANTING DATES AT THE SPECIFIED RATES.
FINE FESCUE (BLEND) - 45 LBS. PER ACRE
HARD FESCUE - 20 LBS. PER ACRE
CHEWING FESCUE - 5 LBS. PER ACRE
OR STRONG CREEPING RED FESCUE
OR KENTUCKY BLUEGRASS
OR PERENNIAL RYEGRASS
- APPLY MULCH AND MULCH ANCHORING AS SPECIFIED BELOW.
- THE ABOVE DESCRIBED SEED MIX SHALL NOT BE APPLIED TO ANY AREAS REGULATED BY THE NJDEP WITHIN THE PROJECT LIMITS.

SEQUENCE OF CONSTRUCTION:

Table with columns for activity, duration, and notes. Activities include: 1. INSTALLATION OF ALL SEDIMENT AND EROSION CONTROL DEVICES INCLUDING TEMPORARY COFFERDAM THAT CAN BE PLACED PRIOR TO ANY MAJOR SOIL DISTURBANCES. 10 DAYS; 2. CLEAR AND REMOVE AND/OR RELOCATE ALL EXISTING VEGETATION IN THOSE AREAS WHERE NECESSARY. ALL REMAINING VEGETATION TO BE PROPERLY PROTECTED AND TO REMAIN IN ITS NATURAL STATE. 5 DAYS; 3. IMMEDIATE INSTALLATION OF ALL REMAINING SEDIMENT AND EROSION CONTROL DEVICES. 2 DAYS; 4. REMOVAL OF THE EXISTING STORM SEWER SYSTEMS, CONSTRUCTION OF TEMPORARY STORM SEWER OUTFALLS, CONSTRUCTION OF NEW STORM SEWER SYSTEMS AND HEADWALL, AND REMOVAL OF TEMPORARY STORM SEWER OUTFALLS. 60 DAYS; 5. CONSTRUCT CULVERT EXTENSION, CONCRETE HEADWALL AND WINGWALLS, AND BRIDGE RAILING WITHIN THE COFFERDAM AS SHOWN ON THE CONTRACT DRAWINGS. 120 DAYS; 6. CONSTRUCT MODULAR BLOCK RETAINING WALLS AT THE LOCATIONS IDENTIFIED IN THE CONTRACT DRAWINGS. 60 DAYS; 7. EXCAVATION AND CONSTRUCTION OF THE PAVEMENT BASE FOR THE AREAS IDENTIFIED IN THE CONTRACT DRAWINGS. 60 DAYS; 8. INSTALL ALL REPLACEMENT TRAFFIC SIGNALS AND ASSOCIATED EQUIPMENT. 30 DAYS; 9. INSTALL ALL RETAINING WALLS AND ASSOCIATED RESTORATION. 30 DAYS; 10. FINE-GRADE ALL PAVEMENT RECONSTRUCTION AREAS. 20 DAYS; 11. BASE COURSE PAVEMENT TO BE APPLIED IMMEDIATELY FOLLOWING FINE GRADING AND INST. ALL OTHER IMPROVEMENTS IN ORDER TO STABILIZE PAVEMENT AREAS. 30 DAYS; 12. ASPHALT PAVEMENT SURFACE COURSE AND STRIPING. 10 DAYS; 13. FINE-GRADE REMAINDER OF SITE AND STABILIZE WITH PERMANENT VEGETATIVE COVER AND LANDSCAPING. 20 DAYS; 14. REMOVE ALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROL DEVICES. 5 DAYS

COUNTY OF MIDDLESEX

MULCHING

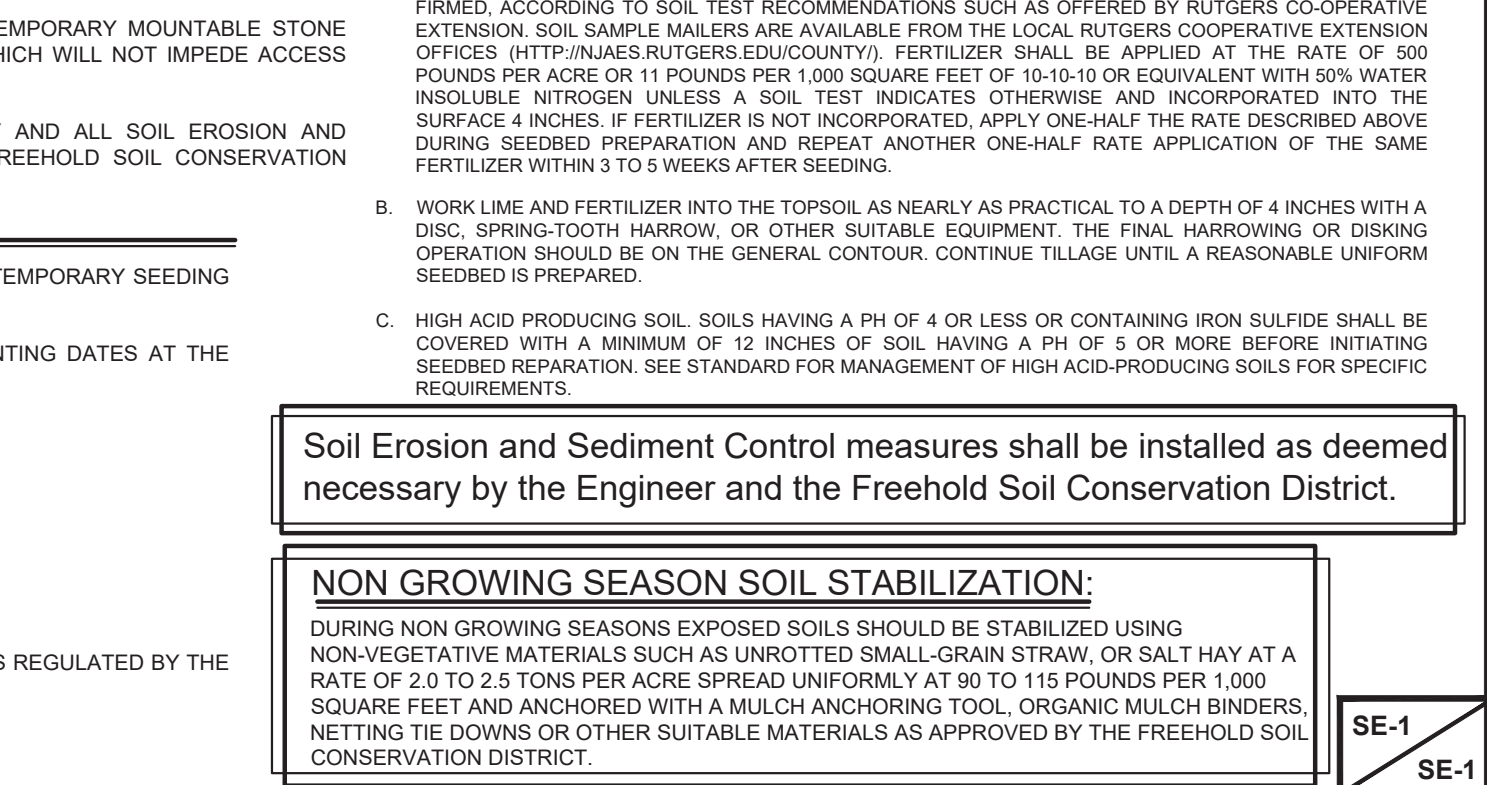
- MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DEEMED COMPLIANCE WITH THIS MULCHING REQUIREMENT.
A. STRAW OR HAY, UNROTTED SMALL GRASS STRAW, HAY FREE OF SEEDS, APPLIED AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRIMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER (TACKIFIER OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED.
APPLICATION: SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 95% OF THE SOIL SURFACE WILL BE COVERED FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH. DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION.
ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS.
1. PEG AND TWINE: DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRIS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
2. MULCH NETTINGS: STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOVED.
3. CRIMPER (MULCH ANCHORING TOOL): A TRACTOR-OR PLAIN IMPLEMENT, SOMEWHAT LIKE A DISC HARROW, ESPECIALLY DESIGNED TO PULL OR CUT SOME OF THE BROADCAST LONG FIBER MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR. WHEN MOST OPERATE ON THE CONTOUR OF SLOPES, STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.
4. LIQUID MULCH-BINDERS - MAY BE USED TO ANCHOR HAY OR STRAW MULCH.
a. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CRESTS OR BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE.
b. USE ONE OF THE FOLLOWING:
(1) ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER BASED, HYDROLYZABLE MATERIALS WHEN MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANED NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOOTOXIC EFFECT OR IMPED GROWTH OF TURFGRASS. USE AT RATES AND WEATHER CONDITIONS AS SPECIFIED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS STATE.
(2) SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.
NOTE: ALL NAMES GIVEN ABOVE ARE REGISTERED TRADE NAMES. THIS DOES NOT CONSTITUTE A COMMENDATION OF THESE PRODUCTS TO THE EXCLUSION OF OTHER PRODUCTS.
B. WOOD-FIBER OR PAPER-FIBER MULCH SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS. USED AT THE RATE OF 1,500 POUNDS PER ACRE (OR AS RECOMMENDED BY THE PROJECT MANUFACTURER) AND MAY BE APPLIED BY A HYDROSEEDER. THIS MULCH SHALL NOT BE MIXED IN THE TANK WITH SEED. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.
C. PELLETEDT MULCH, COMPRESSED AND EXTRUDED PAPER AND/OR WOOD FIBER PRODUCT, WHICH CONTAIN CO-POLYMERS, TACKIFIERS, FERTILIZERS AND COLORING AGENTS, THE DRY PELLETS, WHEN APPLIED TO A SEEDED AREA AND WATERED, FORM A MULCH MAT. PELLETEDT MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT THE RATE OF 60-75 LBS./1,000 SQUARE FEET AND ACTIVATED WITH 0.2 TO 0.4 INCHES OF WATER. THIS MATERIAL HAS BEEN FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWN OR RECONSTRUCTION AREAS. SEEDED AREAS WHERE WEED-SEED FREE MULCH IS DESIRED OR ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE.

- APPLYING THE FILL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETEDT MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE.
TEMPORARY SEEDBED PREPARATIONS
A. APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY Rutgers CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL Rutgers COOPERATIVE EXTENSION OFFICES. FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE (OR AS RECOMMENDED BY THE LOCAL Rutgers COOPERATIVE EXTENSION OFFICES) WITH 50% WATER-SOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. APPLY LIMESTONE AT THE RATE OF 2 TONS/ACRE UNLESS SOIL TESTING INDICATES OTHERWISE. CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES.
B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING-TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE DONE ON THE GENERAL COURSE. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.
C. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED IN ACCORDANCE WITH THE ABOVE.
D. SOILS HIGH IN SULPHIDES OR HAVING A PH OF 4 OR LESS REFER TO STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, PG. 1-1.
PERMANENT SEEDBED PREPARATIONS
A. UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY Rutgers CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL Rutgers COOPERATIVE EXTENSION OFFICES (HTTP://JINIAES.RUTGERS.EDU/COUNTY/). FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT WITH 50% WATER SOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. APPLY ONE-HALF RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING.
B. WORK LIME AND FERTILIZER INTO THE TOPSOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING-TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE DONE ON THE GENERAL COURSE. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.
C. HIGH ACID PRODUCING SOILS HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A PH OF 5 OR MORE BEFORE INITIATING SEEDBED PREPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS FOR SPECIFIC REQUIREMENTS.

Soil Erosion and Sediment Control measures shall be installed as deemed necessary by the Engineer and the Freehold Soil Conservation District.

NON GROWING SEASON SOIL STABILIZATION:

DURING NON GROWING SEASONS EXPOSED SOILS SHOULD BE STABILIZED USING NON-VEGETATIVE MATERIALS SUCH AS UNROTTED SMALL-GRAIN STRAW, OR SALT HAY AT A RATE OF 2 TO 2.5 TONS PER ACRE SPREAD UNIFORMLY AT 90 TO 115 POUNDS PER 1,000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL, ORGANIC MULCH BINDERS, NETTING TIE DOWNS OR OTHER SUITABLE MATERIALS AS APPROVED BY THE FREEHOLD SOIL CONSERVATION DISTRICT.

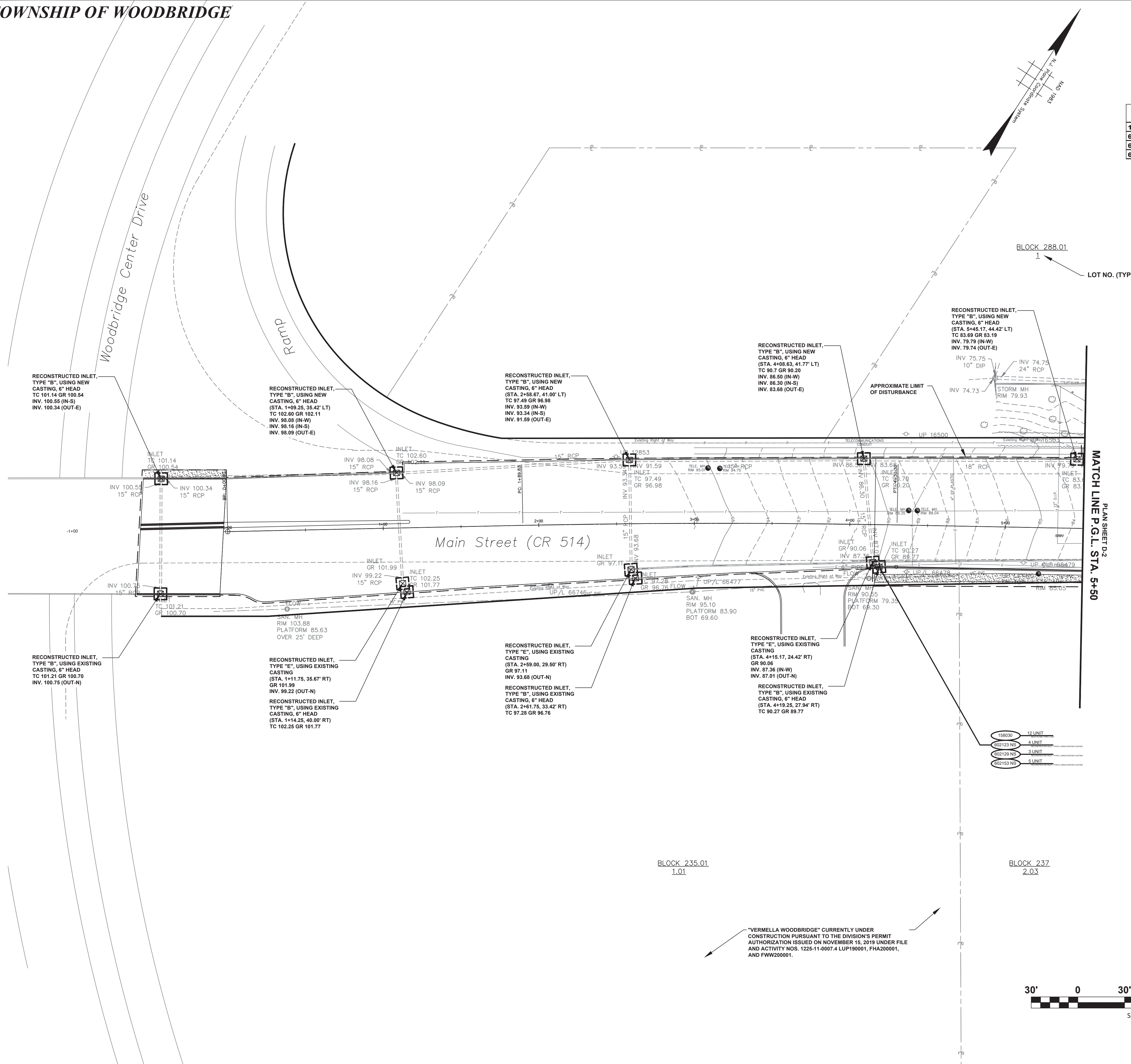


TOWNSHIP OF WOODBRIDGE

Professional engineering stamp for MICHAEL J. MCLELLAND P.E., CONSULTING AND MUNICIPAL ENGINEERS. Includes project title 'ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS', date '2/17/2022', and scale 'As Shown'. The stamp also includes the engineer's name and contact information.


NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
158030M	INLET FILTER, TYPE 2, 2' X 4'	12	UN
602123M	RECONSTRUCTED INLET, TYPE B, USING EXISTING CASTING	4	UN
602129M	RECONSTRUCTED INLET, TYPE E, USING EXISTING CASTING	3	UN
602153M	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING	5	UN

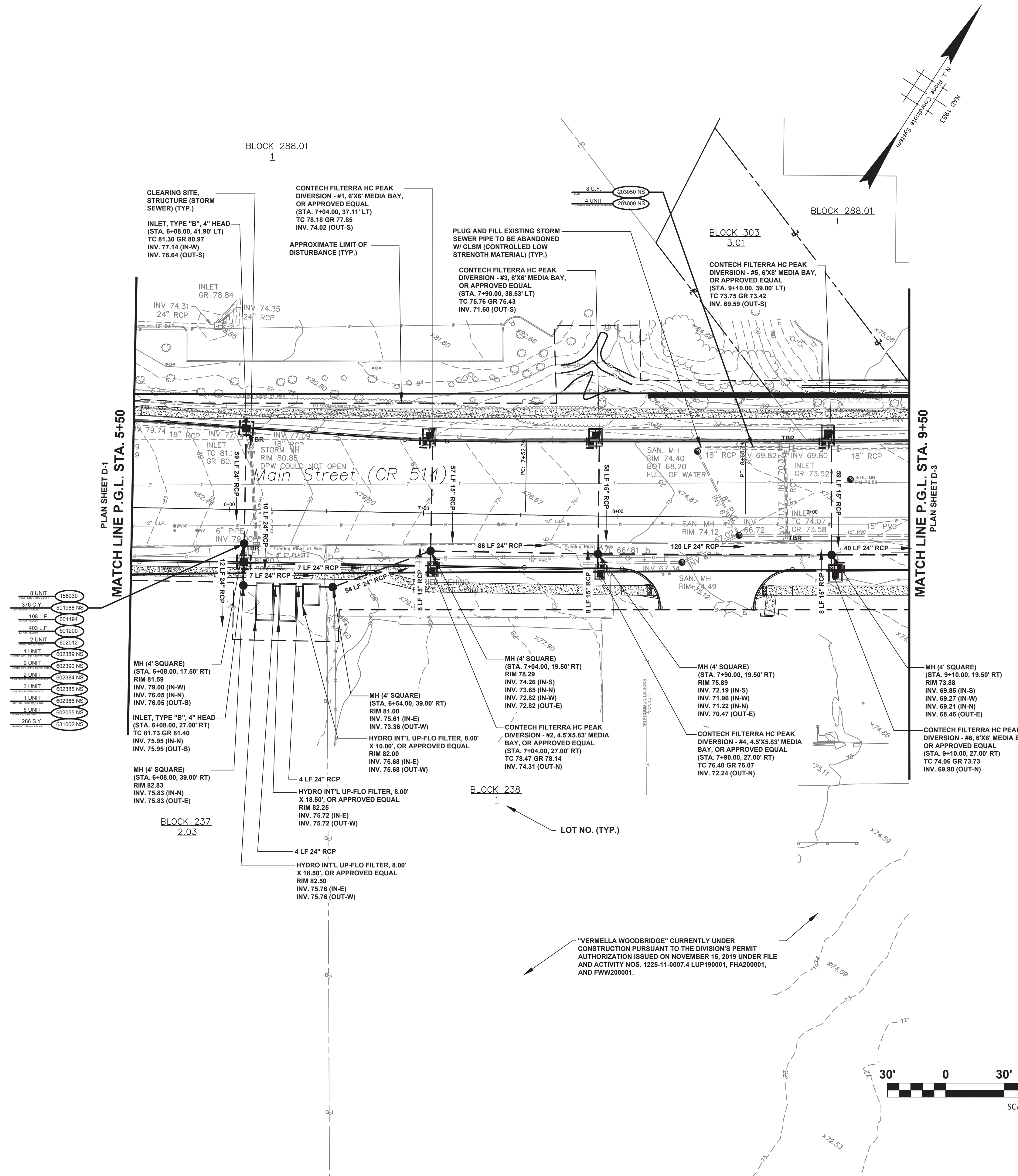
- FOR PROPOSED CONSTRUCTION ITEMS AND QUANTITIES, SEE CONSTRUCTION PLANS.
- FOR PROPOSED RETAINING WALL ITEMS AND QUANTITIES, SEE STRUCTURAL PLANS.



MATCH LINE P.G.L. STA. 5+50

D-1
D-5

No.		DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS						
DRAINAGE AND EROSION CONTROL PLANS (1 OF 5) MAIN STREET FROM STA. 0+00 TO STA. 5+50						
 CONSULTING AND MUNICIPAL ENGINEERS						
(732) 727 8000 (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194						
JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25839	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271				
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32992	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 38794	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458				
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER L.C. 32468			DATE February 2022			
DRAWN BY: RB CHECKED BY: SB			SCALE As Shown	DESIGNED BY SB		
DATE: 2/17/2022			CHECKED BY SB	SHEET 19	FILE NO. PWB04609.01	



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
158030M	INLET FILTER, TYPE 2, 2' X 4'	8	UN
201009P NS	CLEARING SITE, STRUCTURE (STORM SEWER)	4	UN
203050M NS	CONTROLLED LOW STRENGTH MATERIAL	8	CY
601194P	15" REINFORCED CONCRETE PIPE, CLASS V	198	LF
601200P	24" REINFORCED CONCRETE PIPE, CLASS V	403	LF
601988P NS	DENSE GRADED AGGREGATE FOR PIPE TRENCH	376	CY
602012M	INLET, TYPE B, 4" HEAD	2	UN
602055M NS	MANHOLE, 4' SQUARE	6	UN
602384M NS	CONTECH FILTERRA HC PEAK DIVERSION, 4.5' X 5.83'	2	UN
602385M NS	CONTECH FILTERRA HC PEAK DIVERSION, 6' X 6'	3	UN
602386M NS	CONTECH FILTERRA HC PEAK DIVERSION, 6' X 8'	1	UN
602389M NS	HYDRO INTERNATIONAL UP FLO FILTER, 8' X 10'	1	UN
602390M NS	HYDRO INTERNATIONAL UP FLO FILTER, 8' X 18.5'	2	UN
631002M NS	ROADWAY TRENCH REPAIR	286	SY

- FOR PROPOSED CONSTRUCTION ITEMS AND QUANTITIES, SEE CONSTRUCTION PLANS.
- FOR PROPOSED RETAINING WALL ITEMS AND QUANTITIES, SEE STRUCTURAL PLANS.

- 8 UNIT 158030
- 376 C.Y. 601988 NS
- 198 L.F. 601194
- 403 L.F. 601200
- 2 UNIT 602012
- 1 UNIT 602055 NS
- 2 UNIT 602384 NS
- 2 UNIT 602385 NS
- 1 UNIT 602386 NS
- 1 UNIT 602055 NS
- 286 S.Y. 631002 NS

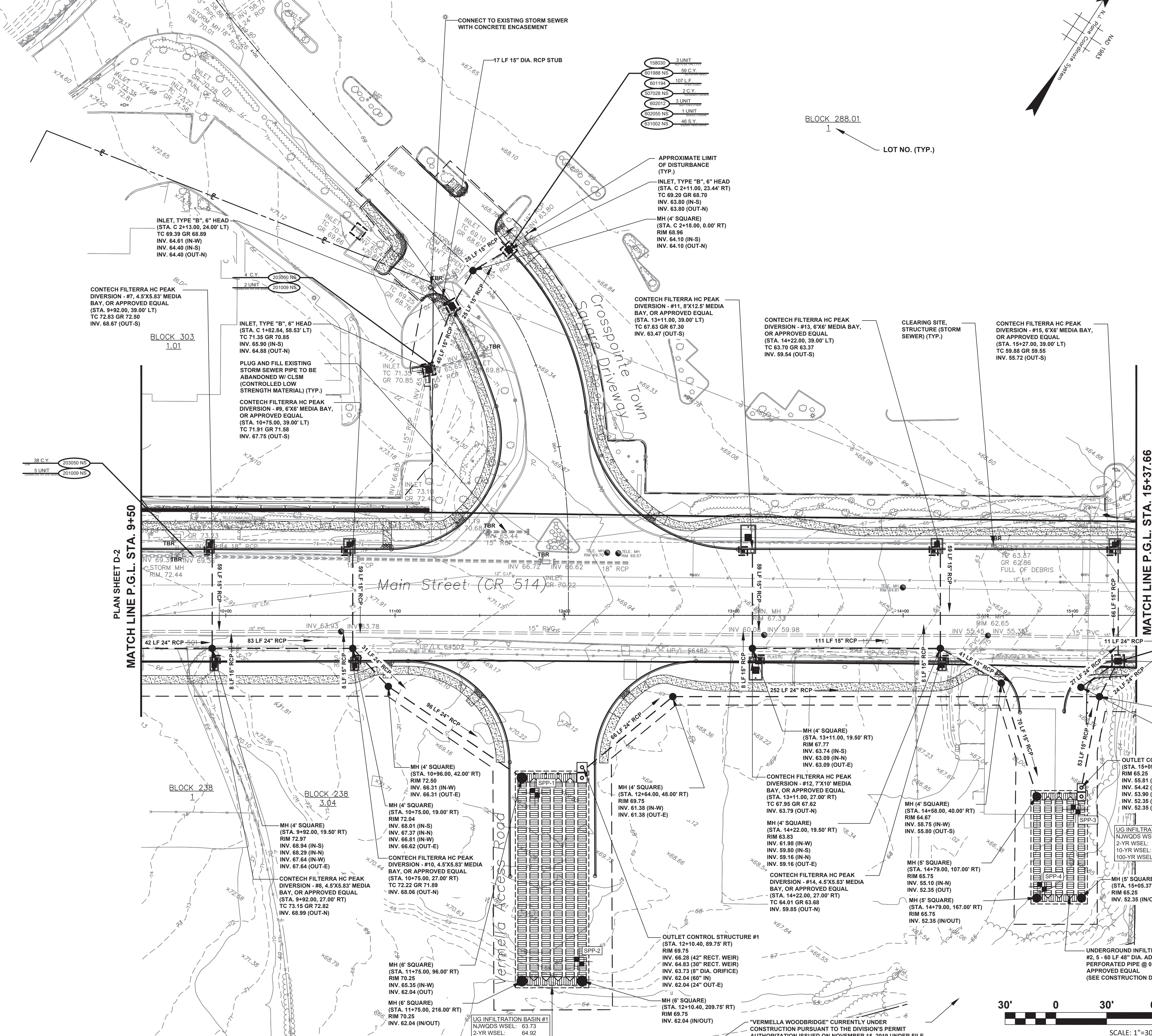
D-2
D-5

No. _____	DATE _____	DRAWN _____	CHECKED _____	RELEASED _____
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY				
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS				
DRAINAGE AND EROSION CONTROL PLANS (2 OF 5)				
MAIN STREET FROM STA. 5+50 TO STA. 9+50				
ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS				
(732) 727 8000 (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194				
JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991)	DAVID J. SAMUEL P.E. & P.P. NO PP LIC NO. 2455	JOHN J. STEFANI P.E. L.S. & P.P. NO PE LIC NO. 24271		
JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32962	MICHAEL J. McCLELLAND P.E. & P.P. NO PP LIC NO. 3874	GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 39458		
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER			SCALE: As Shown DATE: February 2022 DRAWN BY: RB DESIGNED BY: SB CHECKED BY: SB SHEET: 20 of 197	
			DATE: 2/17/2022	

"VERMELLA WOODBRIDGE" CURRENTLY UNDER CONSTRUCTION PURSUANT TO THE DIVISION'S PERMIT AUTHORIZATION ISSUED ON NOVEMBER 15, 2019 UNDER FILE AND ACTIVITY NOS. 1225-11-0007.4 LUP190001, FHA20001, AND FWW20001.



DRAWING NO. PWB0609.01



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
158006M	SILT FENCE	30	LF
158030M	INLET FILTER, TYPE 2, 2' X 4'	14	UN
201009P NS	CLEARING SITE, STRUCTURE (STORM SEWER)	7	UN
203050M NS	CONTROLLED LOW STRENGTH MATERIAL	42	CY
507028M NS	ENCASEMENT CONCRETE	2	CY
601194P	15" REINFORCED CONCRETE PIPE, CLASS V	716	LF
601200P	24" REINFORCED CONCRETE PIPE, CLASS V	632	LF
601988P NS	DENSE GRADED AGGREGATE FOR PIPE TRENCH	731	CY
602012M	INLET, TYPE B, 4" HEAD	1	UN
602012M	INLET, TYPE B, 6" HEAD	3	UN
602055M NS	MANHOLE, 4' SQUARE	10	UN
602059M NS	MANHOLE, 5' SQUARE	3	UN
602061M NS	MANHOLE, 6' SQUARE	3	UN
602223M	OUTLET CONTROL STRUCTURE #1	1	UN
602223M	OUTLET CONTROL STRUCTURE #2	1	UN
602381M NS	UNDERGROUND INFILTRATION BASIN #1	1	UN
602382M NS	UNDERGROUND INFILTRATION BASIN #2	1	UN
602384M NS	CONTECH FILTERRA HC PEAK DIVERSION, 4.5' X 5.83'	4	UN
602385M NS	CONTECH FILTERRA HC PEAK DIVERSION, 6' X 6'	3	UN
602387M NS	CONTECH FILTERRA HC PEAK DIVERSION, 7' X 10'	1	UN
602388M NS	CONTECH FILTERRA HC PEAK DIVERSION, 8' X 12.5'	1	UN
631002M NS	ROADWAY TRENCH REPAIR	468	SY

- FOR PROPOSED CONSTRUCTION ITEMS AND QUANTITIES, SEE CONSTRUCTION PLANS.
- FOR PROPOSED RETAINING WALL ITEMS AND QUANTITIES, SEE STRUCTURAL PLANS.

PLAN SHEET D-2
MATCH LINE P.G.L. STA. 9+50

MATCH LINE P.G.L. STA. 15+37.66
PLAN SHEET D-4

BLOCK 238
1

BLOCK 238
3

BLOCK 238
1

D-3
D-5

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY

ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

DRAINAGE AND EROSION CONTROL PLANS (3 OF 5)

MAIN STREET FROM STA. 9+50 TO STA. 15+37.66
CROSSPOINTE TOWN SQUARE DRIVEWAY FROM STA. 0+39 TO STA. 4+51.33

CONTECH FILTERRA
CONSULTING AND MUNICIPAL ENGINEERS
(732) 727-8000

3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKLE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25839	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE LIC NO. 20899
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 33468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458

MICHAEL J. McCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER

DATE: 2/17/2022

SCALE: As Shown

DRAWN BY: RB
DESIGNED BY: SB

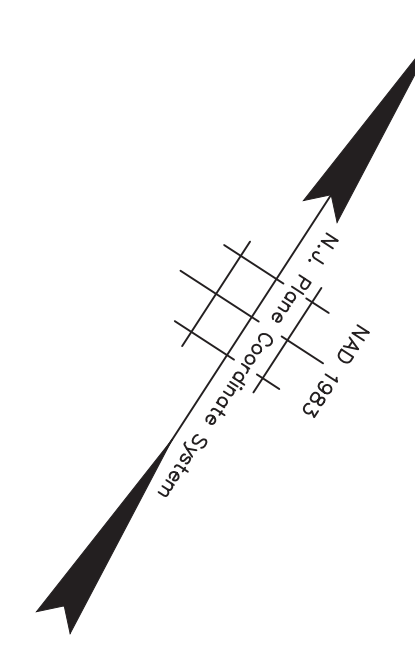
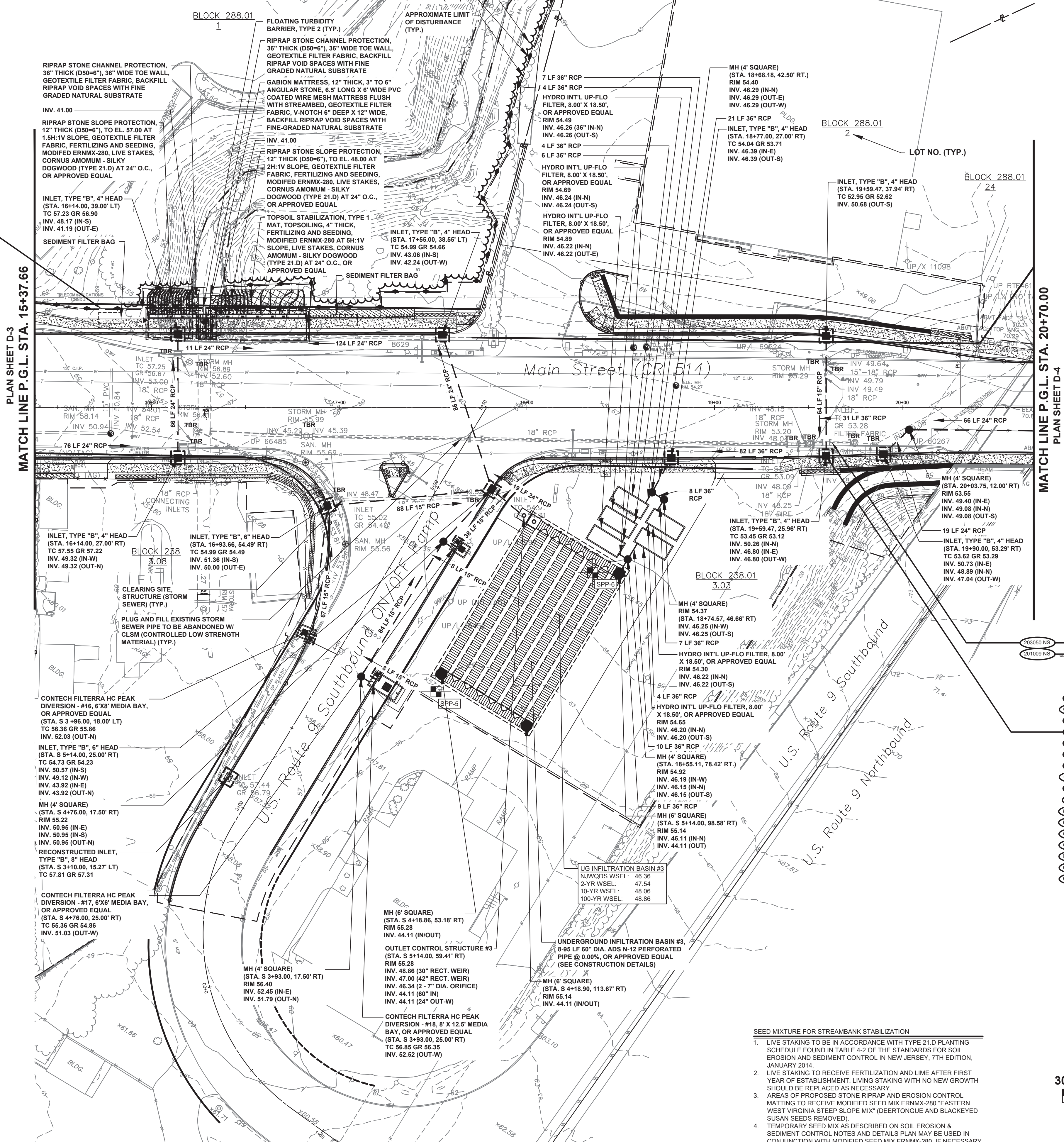
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SHEET: 21 OF 197

FILE NO.: PWB06A09.01

"VERMELLA WOODBRIDGE" CURRENTLY UNDER CONSTRUCTION ISSUED TO THE DIVISIONS PERMIT AUTHORIZATION ISSUED ON NOVEMBER 15, 2019 UNDER FILE AND ACTIVITY NOS. 1225-11-0007.4 LUP190001, FHA200001, AND FW200001.



470 LF	158006
155 LF	158040
2 UNITS	158055 NS
2 CY	604013 NS
13 SY	603058 NS
68 SY	603017
50 SY	804000
8 CY	804015
88 SY	806034 NS
50 SY	807003
50 SY	808003
237 UNIT	811177 NS



PAY ITEM NO.	NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
158006M		SILT FENCE	470	LF
158030M		INLET FILTER, TYPE 2, 2' X 4'	13	UN
158045M		FLOATING TURBIDITY BARRIER, TYPE 2	155	LF
158055M NS		SEDIMENT FILTER BAG	2	UN
201009P NS		CLEARING SITE, STRUCTURE (STORM SEWER)	13	UN
203050M NS		CONTROLLED LOW STRENGTH MATERIAL	26	CY
601194P		15" REINFORCED CONCRETE PIPE, CLASS V	357	LF
601200P		24" REINFORCED CONCRETE PIPE, CLASS V	391	LF
601206P		36" REINFORCED CONCRETE PIPE, CLASS V	193	LF
601988P NS		DENSE GRADED AGGREGATE FOR PIPE TRENCH	1063	CY
602012M		INLET, TYPE B, 4" HEAD	7	UN
602012M		INLET, TYPE B, 6" HEAD	2	UN
602055M NS		MANHOLE, 4' SQUARE	6	UN
602061M NS		MANHOLE, 6' SQUARE	3	UN
602154M NS		RECONSTRUCTED INLET, TYPE B, 8" HEAD	1	UN
602223M		OUTLET CONTROL STRUCTURE #3	1	UN
602383M NS		UNDERGROUND INFILTRATION BASIN #3	1	UN
602385M NS		CONTECH FILTERRA HC PEAK DIVERSION, 6' X 6'	1	UN
602386M NS		CONTECH FILTERRA HC PEAK DIVERSION, 6' X 8'	1	UN
602388M NS		CONTECH FILTERRA HC PEAK DIVERSION, 8' X 12.5'	1	UN
602390M NS		HYDRO INTERNATIONAL UP FLO FILTER, 8' X 18.5'	5	UN
603017P		RIPRAP STONE SLOPE PROTECTION, 12" THICK (D50=6")	48	SY
603055P NS		RIPRAP STONE CHANNEL PROTECTION, 36" THICK (D50=6")	13	SY
604013P NS		GABION MATTRESS, 12" THICK, 3" TO 4" ANGULAR STONE	2	CY
631002M NS		ROADWAY TRENCH REPAIR	496	SY
804000P		TOPSOIL SPREADING, 4" THICK	50	SY
804015P		BORROW TOPSOIL	6	CY
806034P NS		FERTILIZING AND SEEDING, MODIFIED ERNMX-280	98	SY
807003M		TOPSOIL STABILIZATION, TYPE 1 MAT	50	SY
808003P		SODDING	50	SY
811177M NS		LIVE STAKES, CORNUS AMOMUM - SILKY DOGWOOD	237	UN

- FOR PROPOSED CONSTRUCTION ITEMS AND QUANTITIES, SEE CONSTRUCTION PLANS.
- FOR PROPOSED RETAINING WALL ITEMS AND QUANTITIES, SEE STRUCTURAL PLANS.

158006	13 UNIT
601194	1063 C.Y.
601194	357 L.F.
601200	391 L.F.
601200	193 L.F.
602012	7 UNIT
602012	2 UNIT
602055	1 UNIT
602061	1 UNIT
602154	1 UNIT
602223	1 UNIT
602385	1 UNIT
602386	1 UNIT
602388	1 UNIT
602390	5 UNIT
603017	48 SY
603055	13 SY
604013	2 SY
631002	496 SY
804000	50 SY
804015	6 SY
806034	98 SY
807003	50 SY
808003	50 SY
811177	237 UN

SEED MIXTURE FOR STREAMBANK STABILIZATION

- LIVE STAKING TO BE IN ACCORDANCE WITH TYPE 21 D PLANTING SCHEDULE FOUND IN TABLE 4-2 OF THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, 7TH EDITION, JANUARY 2014.
- LIVE STAKING TO RECEIVE FERTILIZATION AND LIME AFTER FIRST YEAR OF ESTABLISHMENT. LIVING STAKING WITH NO NEW GROWTH SHOULD BE REPLACED AS NECESSARY.
- AREAS OF PROPOSED STONE RIPRAP AND EROSION CONTROL MATTING TO RECEIVE MODIFIED SEED MIX ERNMX-280 (EASTERN WEST VIRGINIA STEEP SLOPE MIX) (DEERTONGUE AND BLACKEYED SUSAN SEEDS REMOVED).
- TEMPORARY SEED MIX AS DESCRIBED ON SOIL EROSION & SEDIMENT CONTROL NOTES AND DETAILS PLAN MAY BE USED IN CONJUNCTION WITH MODIFIED SEED MIX ERNMX-280, IF NECESSARY.



TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY

ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

DRAINAGE AND EROSION CONTROL PLANS (4 OF 5)

**MAIN STREET
ON/OFF RAMP RT. 9 SB
BOWLING CENTER D/W**

FROM STA. 15+37.66 TO STA. 21+30.63
FROM STA. 2+42.87 TO STA. 5+18.40
FROM STA. 0+40.38 TO STA. 2+65.07

OWE ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS (732) 462-7400
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991) DAVID J. SAMUEL P.E. & P.P. (NO PE LIC NO. 25839) (NO PP LIC NO. 2455) JOHN J. STEFANI P.E., L.S. & P.P. (NO PE LIC NO. 24821) (NO PP LIC NO. 2089)

JAY B. CORNELL P.E. & P.P. (NO PE LIC NO. 32962) MICHAEL J. MCCLELLAND P.E. & P.P. (NO PE LIC NO. 39458) (NO PP LIC NO. 3770) GREGORY R. VALESI P.E. & P.P. (NO PE LIC NO. 39458) (NO PP LIC NO. 4361)

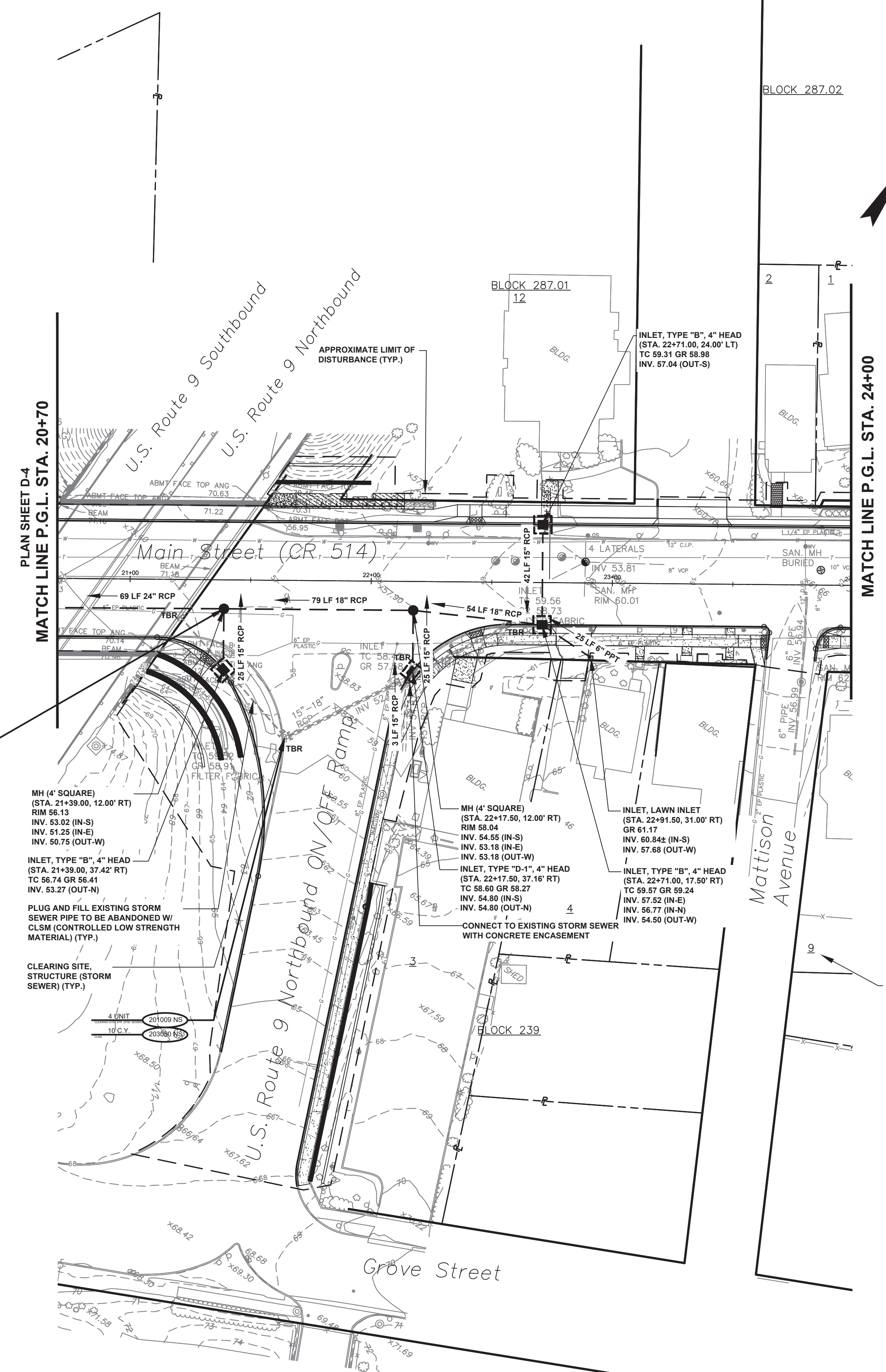
MICHAEL J. MCCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER L.I.C. 32468

As Shown DATE February 2022
DRAWN BY RB DESIGNED BY SB
CHECKED BY SB SHEET 22 OF 197

DATE 2/17/2022

D-4
D-5

FILE NO. PWB06A09.01



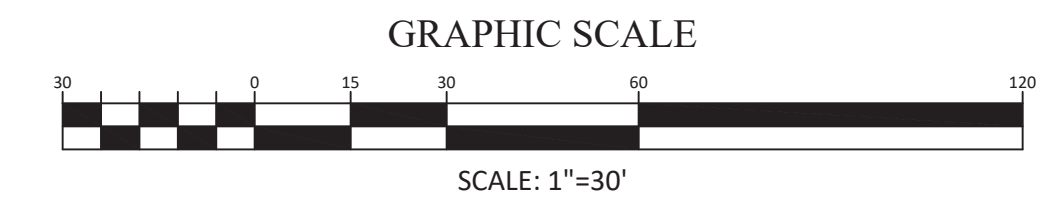
NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
158030M	INLET FILTER, TYPE 2, 2' X 4'	4	UN
201009P NS	CLEARING SITE, STRUCTURE (STORM SEWER)	4	UN
203050M NS	CONTROLLED LOW STRENGTH MATERIAL	10	CY
507028M NS	ENCASEMENT CONCRETE	2	CY
601194P	15" REINFORCED CONCRETE PIPE, CLASS V	95	LF
601196P	18" REINFORCED CONCRETE PIPE, CLASS V	133	LF
601200P	24" REINFORCED CONCRETE PIPE, CLASS V	69	LF
601988P NS	DENSE GRADED AGGREGATE FOR PIPE TRENCH	288	CY
601989M NS	6" POLYPROPYLENE TUBING (STORM SEWER)	25	LF
602012M	INLET, TYPE B, 4" HEAD	3	UN
602030M	INLET, TYPE D-1, 4" HEAD	1	UN
602055M NS	MANHOLE, 4' SQUARE	2	UN
602091M NS	INLET, LAWN INLET	1	UN
631002M NS	ROADWAY TRENCH REPAIR	145	SY

- FOR PROPOSED CONSTRUCTION ITEMS AND QUANTITIES, SEE CONSTRUCTION PLANS.
- FOR PROPOSED RETAINING WALL ITEMS AND QUANTITIES, SEE STRUCTURAL PLANS.

- 4 UNIT 158030
- 288 C.Y. 601988 NS
- 95 L.F. 601194
- 133 L.F. 601196
- 69 L.F. 601200
- 25 L.F. 601989
- 2 C.Y. 602028 NS
- 1 UNIT 602052 NS
- 3 UNIT 602012
- 1 UNIT 602030
- 2 UNIT 602055 NS
- 145 S.Y. 631002 NS

PLAN SHEET D-4
MATCH LINE P.G.L. STA. 20+70

MATCH LINE P.G.L. STA. 24+00



TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY

ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

DRAINAGE AND EROSION CONTROL PLANS (5 OF 5)

MAIN STREET FROM STA. 20+70 TO STA. 24+00

CVE ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS

(732) 727 8000 (732) 462 7400
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991)	DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 25839	JOHN J. STEFANI P.E. L.S. & P.P. NO PE & LS LIC NO. 24271
JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32952	MICHAEL J. McCLELLAND P.E. & P.P. NO PE LIC NO. 38794	GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 39458

MICHAEL J. McCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER L.I.C. 32468

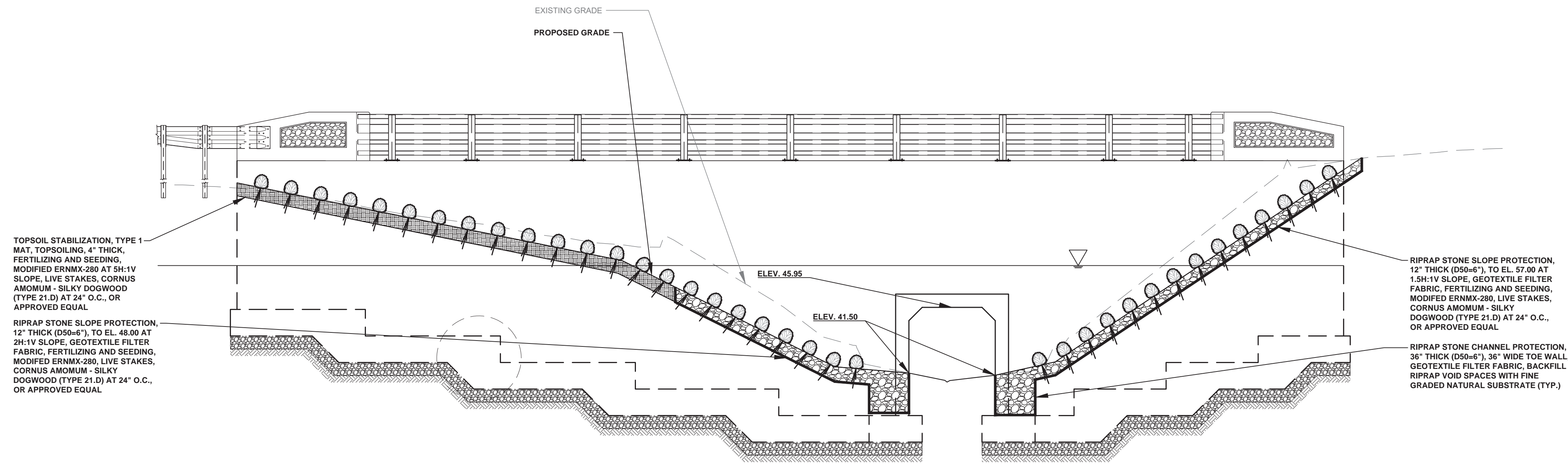
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DESIGNED BY: SB
CHECKED BY: SB
DATE: 2/17/2022

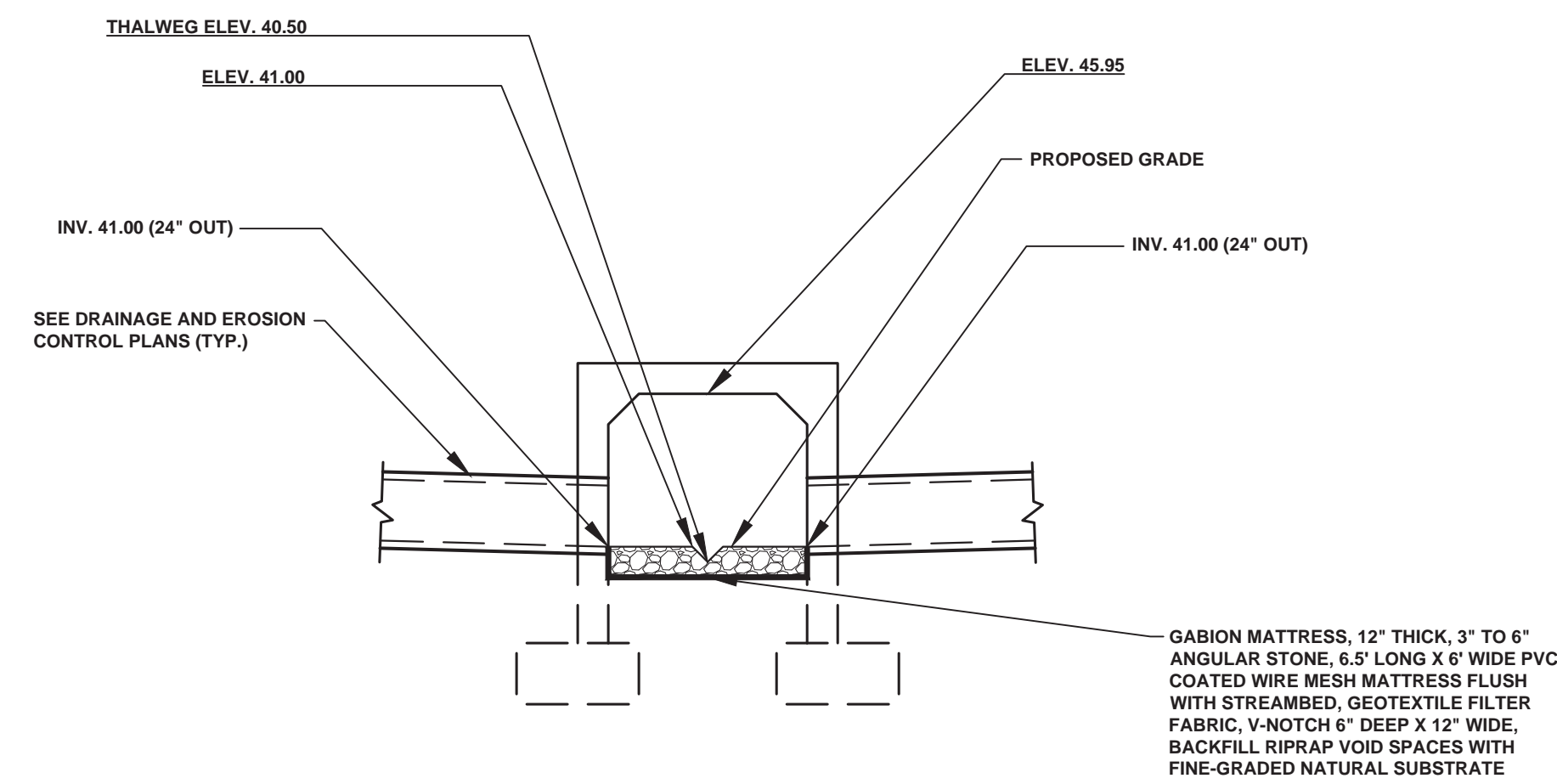
SCALE: As Shown
DATE: February 2022

SHEET: 23 of 197

FILE NO. PWB0609.01



PROPOSED SCHEMATIC CULVERT DOWNSTREAM HEADWALL ELEVATION (E2)
 SCALE: 3/16"=1'-0" (FACING UPSTREAM)

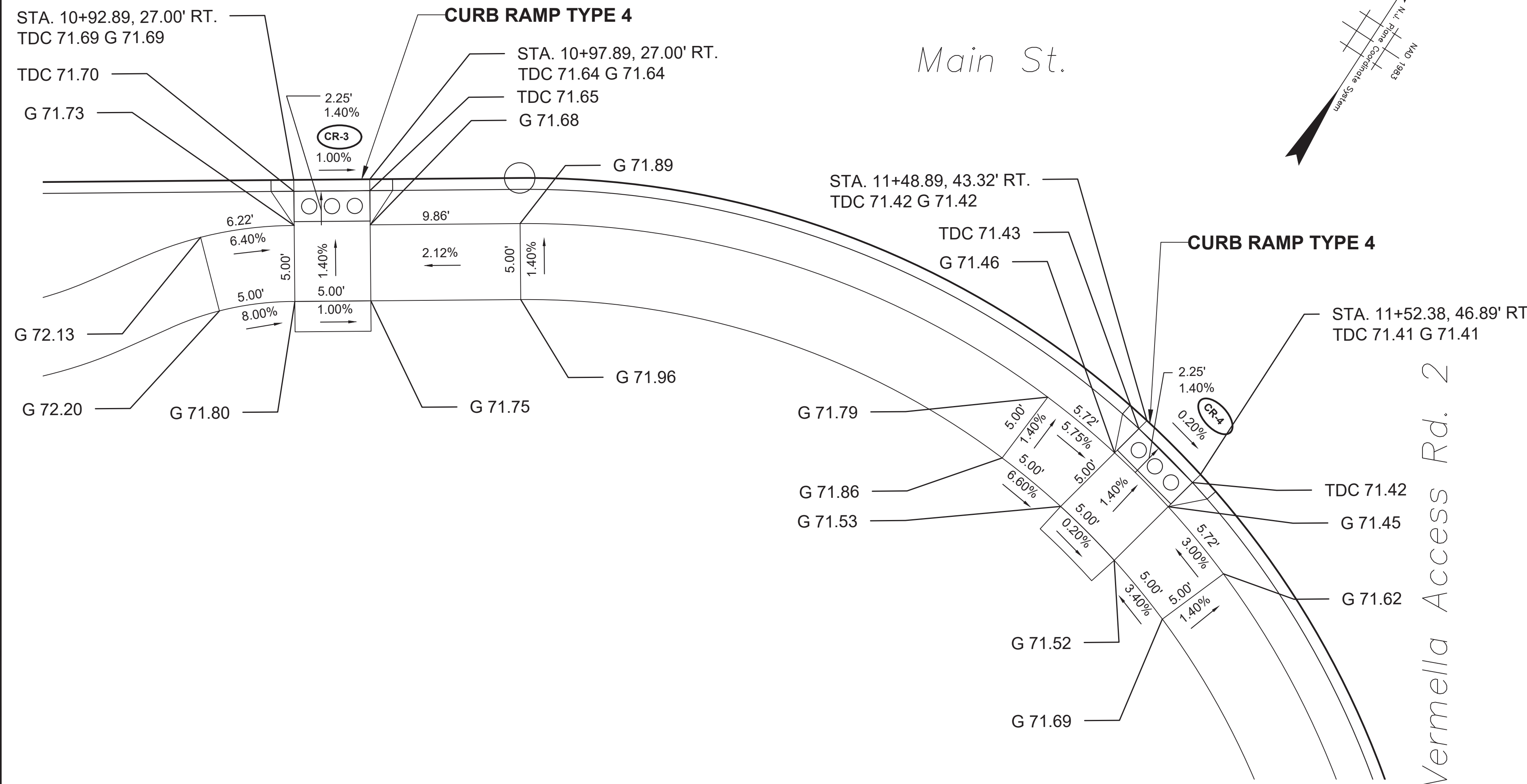


PROPOSED CULVERT SECTION AT OUTFALLS (FACING UPSTREAM)
 SCALE: 3/16"=1'-0"

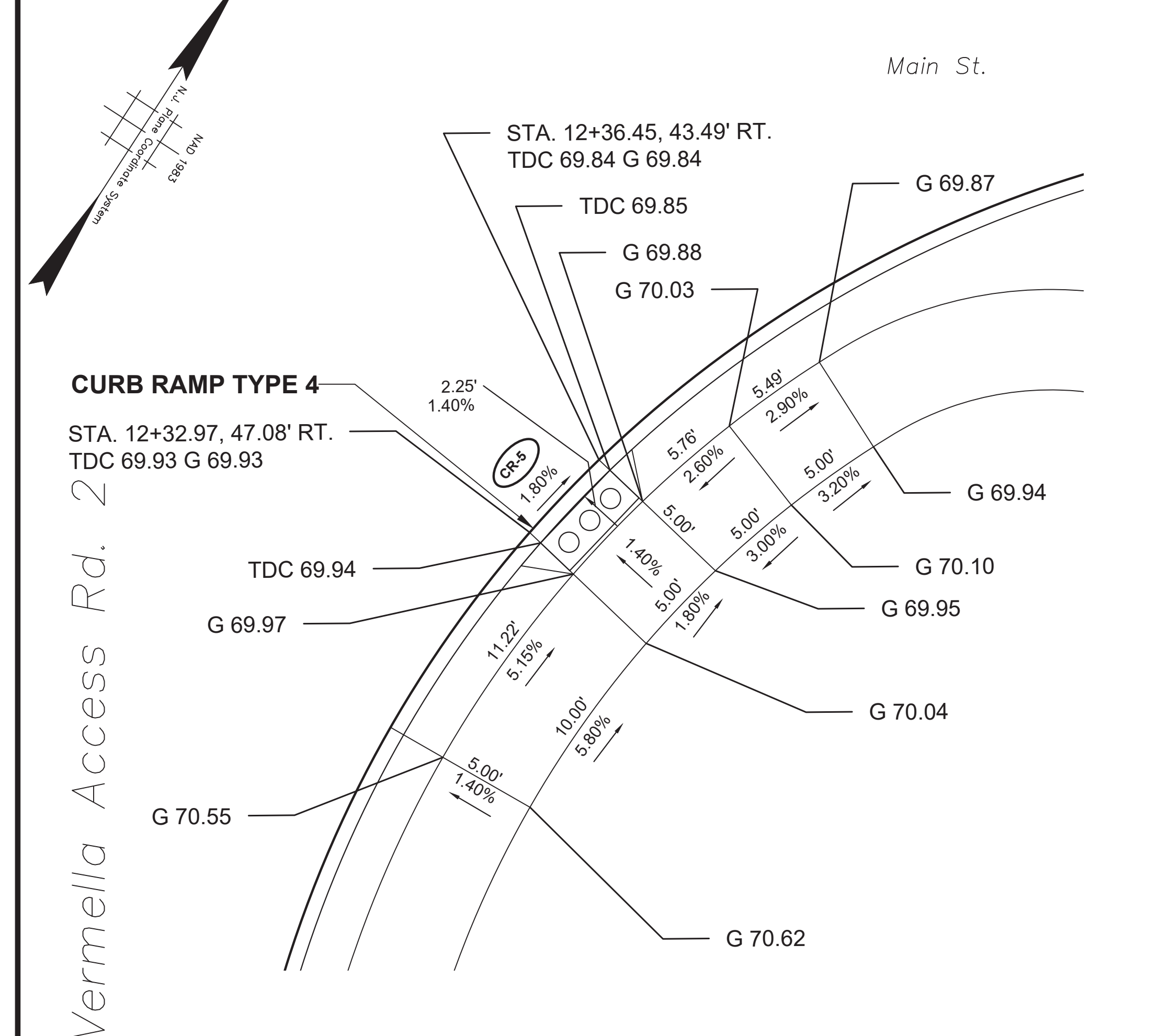
- SEED MIXTURE FOR STREAMBANK STABILIZATION
1. LIVE STAKING TO BE IN ACCORDANCE WITH TYPE 21.D PLANTING SCHEDULE FOUND IN TABLE 4-2 OF THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, 7TH EDITION, JANUARY 2014.
 2. LIVE STAKING TO RECEIVE FERTILIZATION AND LIME AFTER FIRST YEAR OF ESTABLISHMENT. LIVING STAKING WITH NO NEW GROWTH SHOULD BE REPLACED AS NECESSARY.
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 4. TEMPORARY SEED MIX AS DESCRIBED ON SOIL EROSION & SEDIMENT CONTROL NOTES AND DETAILS PLAN MAY BE USED IN CONJUNCTION WITH MODIFIED SEED MIX ERNMX-280, IF NECESSARY.

TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS			
PROPOSED GRADING & STABILIZATION AT CULVERT FASCIA			
CONSULTING AND MUNICIPAL ENGINEERS			
(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400			
JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991) NO PE LIC NO. 25839	DAVID J. SAMUEL P.E. & P.P. NO PP LIC NO. 2455 NO PE & LS LIC NO. 24271	JOHN J. STEFANI P.E., L.S. & P.P. NO PE & LS LIC NO. 24271 NO PP LIC NO. 2089	GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 39458 NO PP LIC NO. 4361
JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NO PP LIC NO. 3874 NO PE LIC NO. 32468	SCALE As Shown	DATE February 2022
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER		L.C. 32468	DRAWN BY SB
		DATE 2/17/2022	CHECKED BY JW
		SHEET 24 of 197	FILE NO. PWB0A609.01

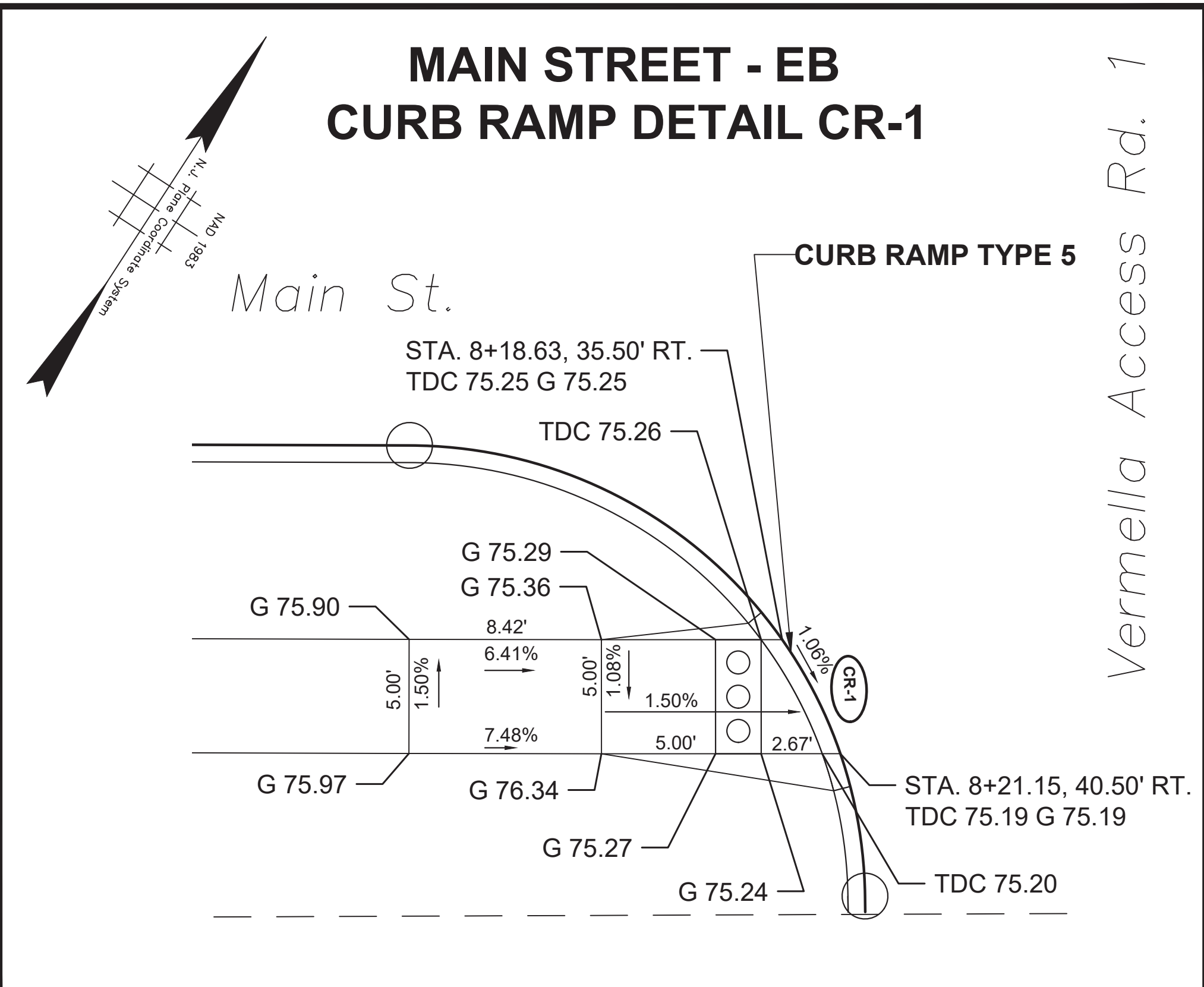
**MAIN STREET - EB
CURB RAMP DETAIL CR-3 & CR-4**



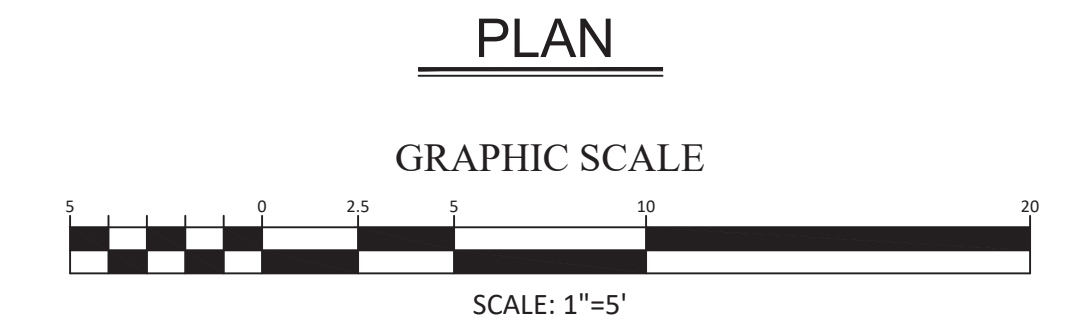
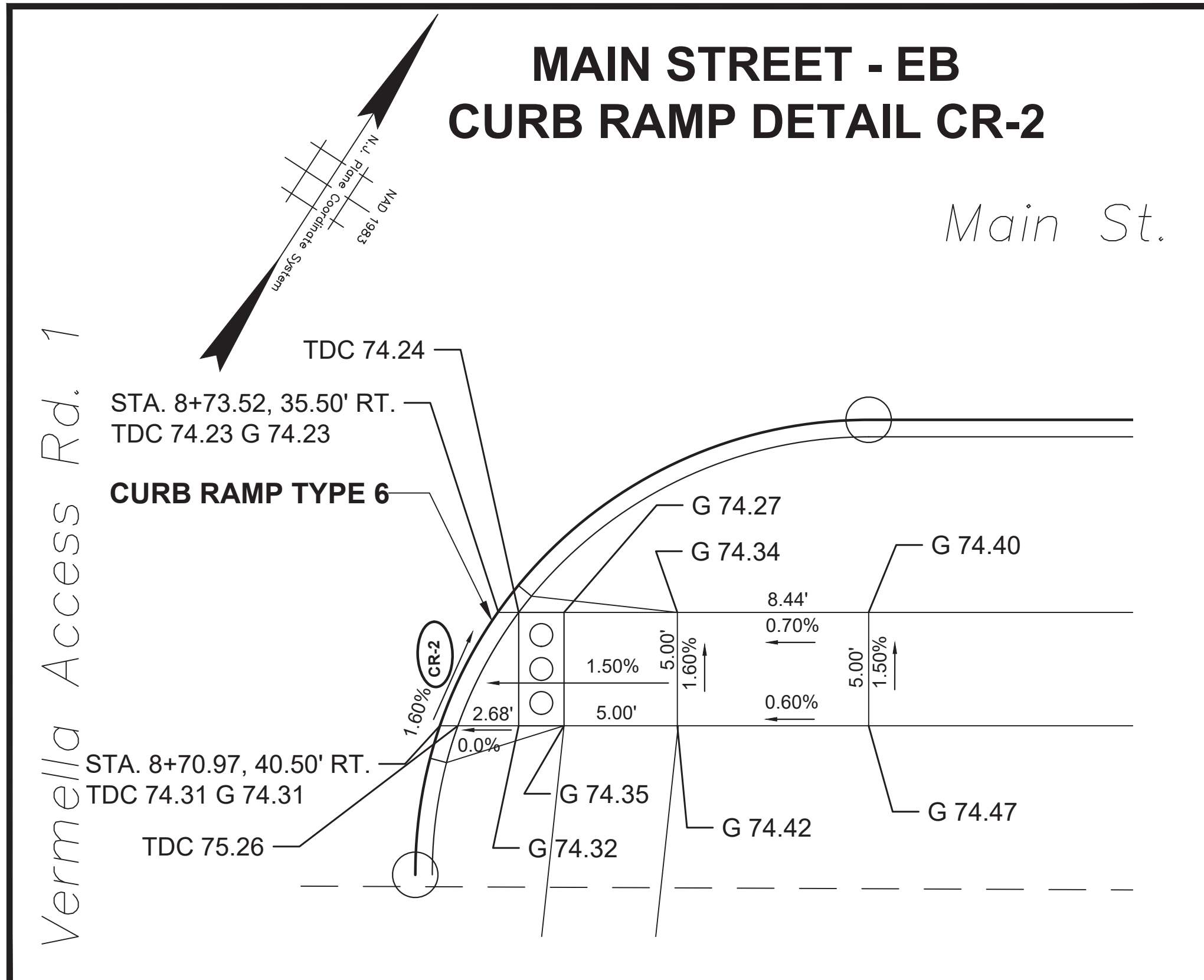
**MAIN STREET - EB
CURB RAMP DETAIL CR-5**



**MAIN STREET - EB
CURB RAMP DETAIL CR-1**

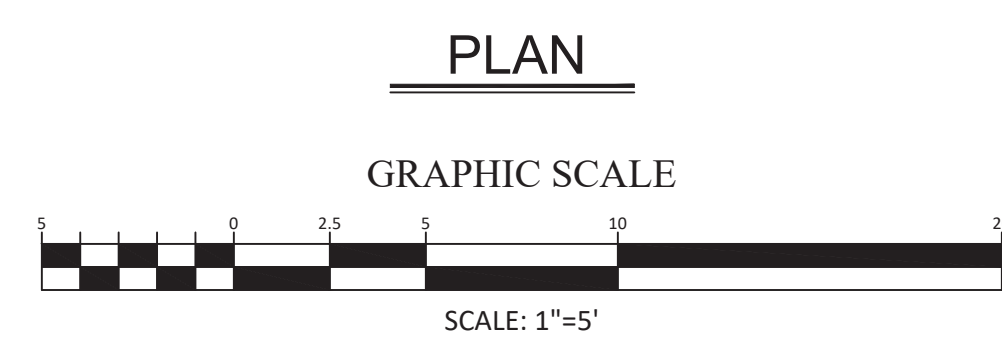
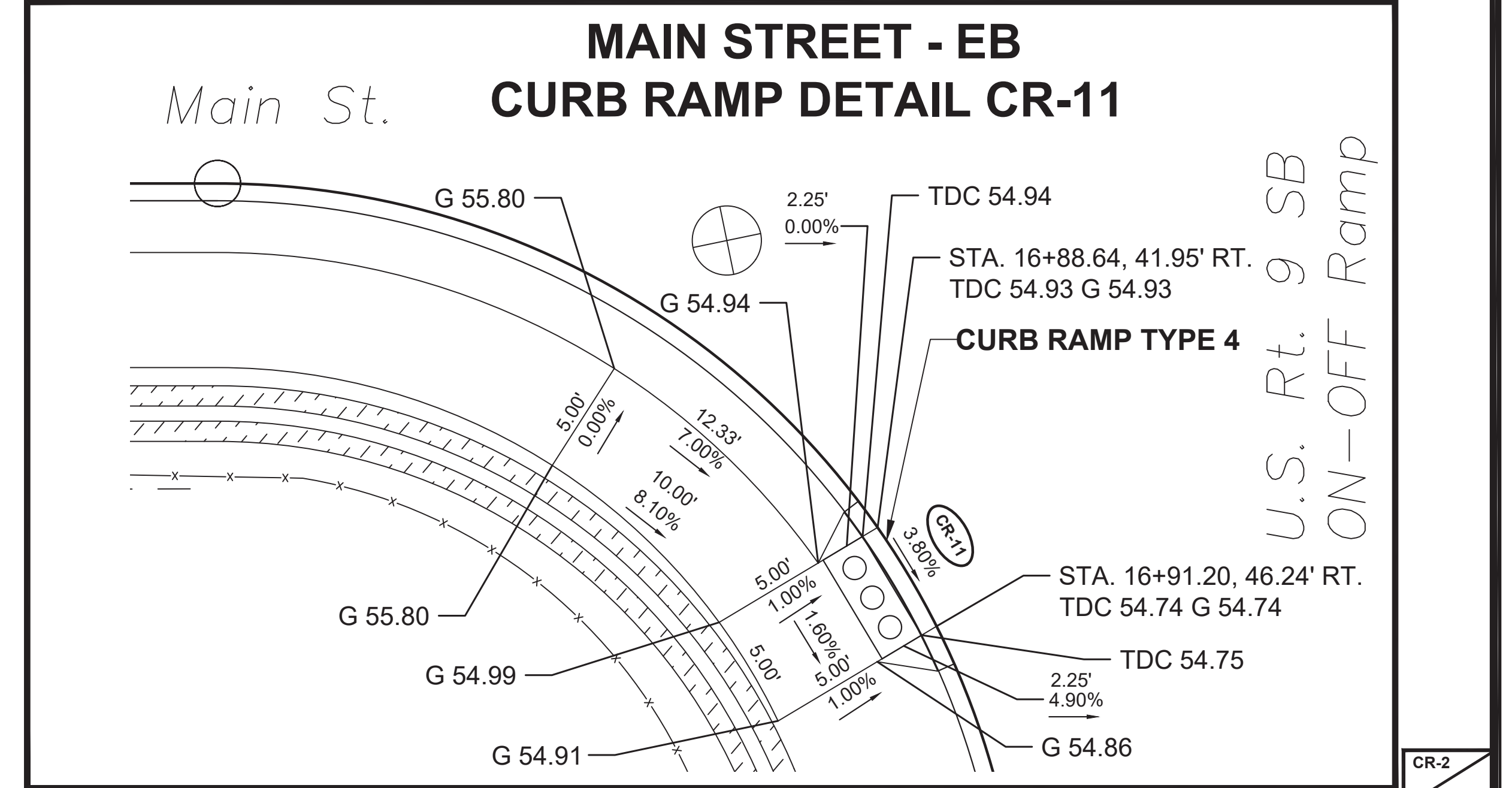
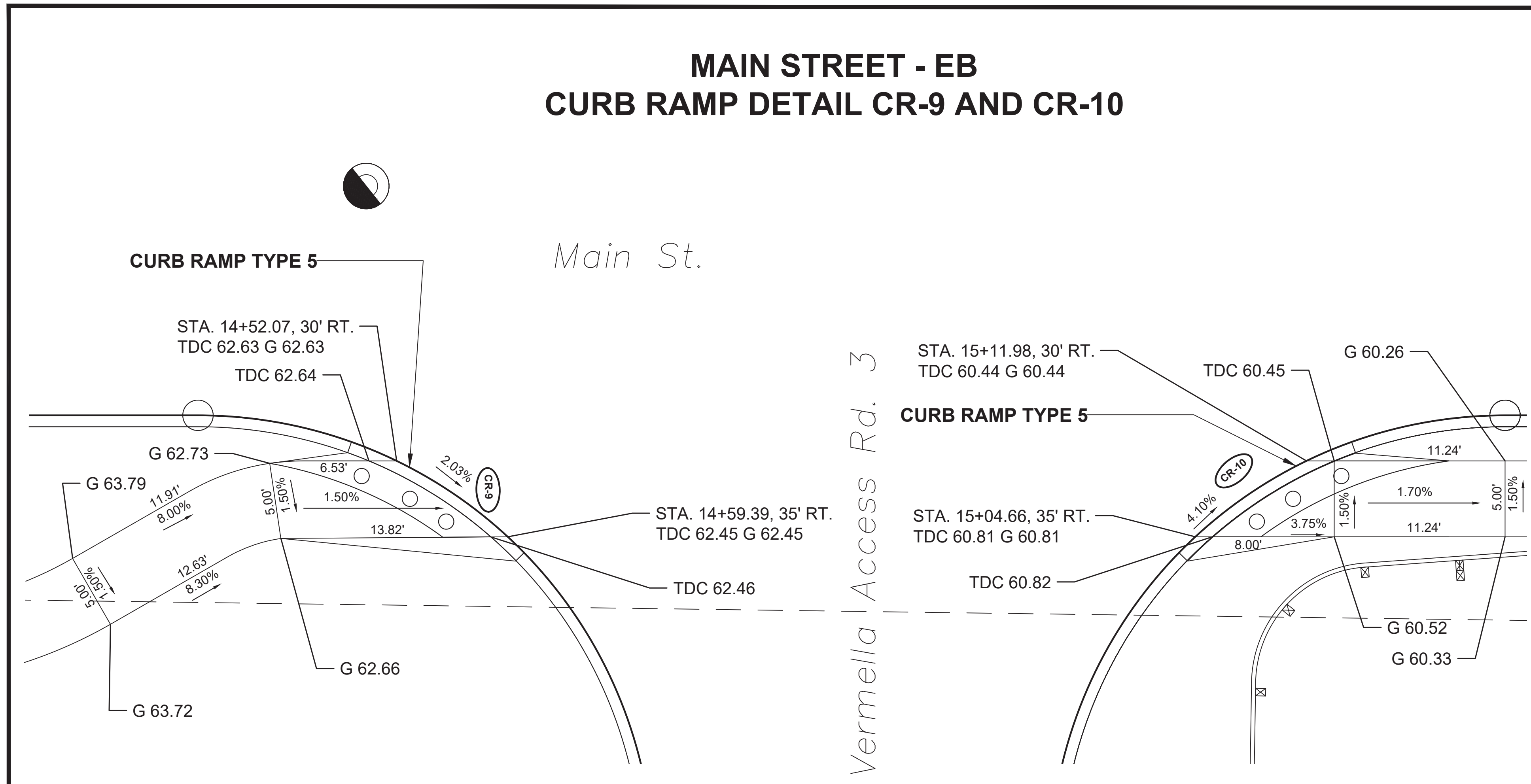
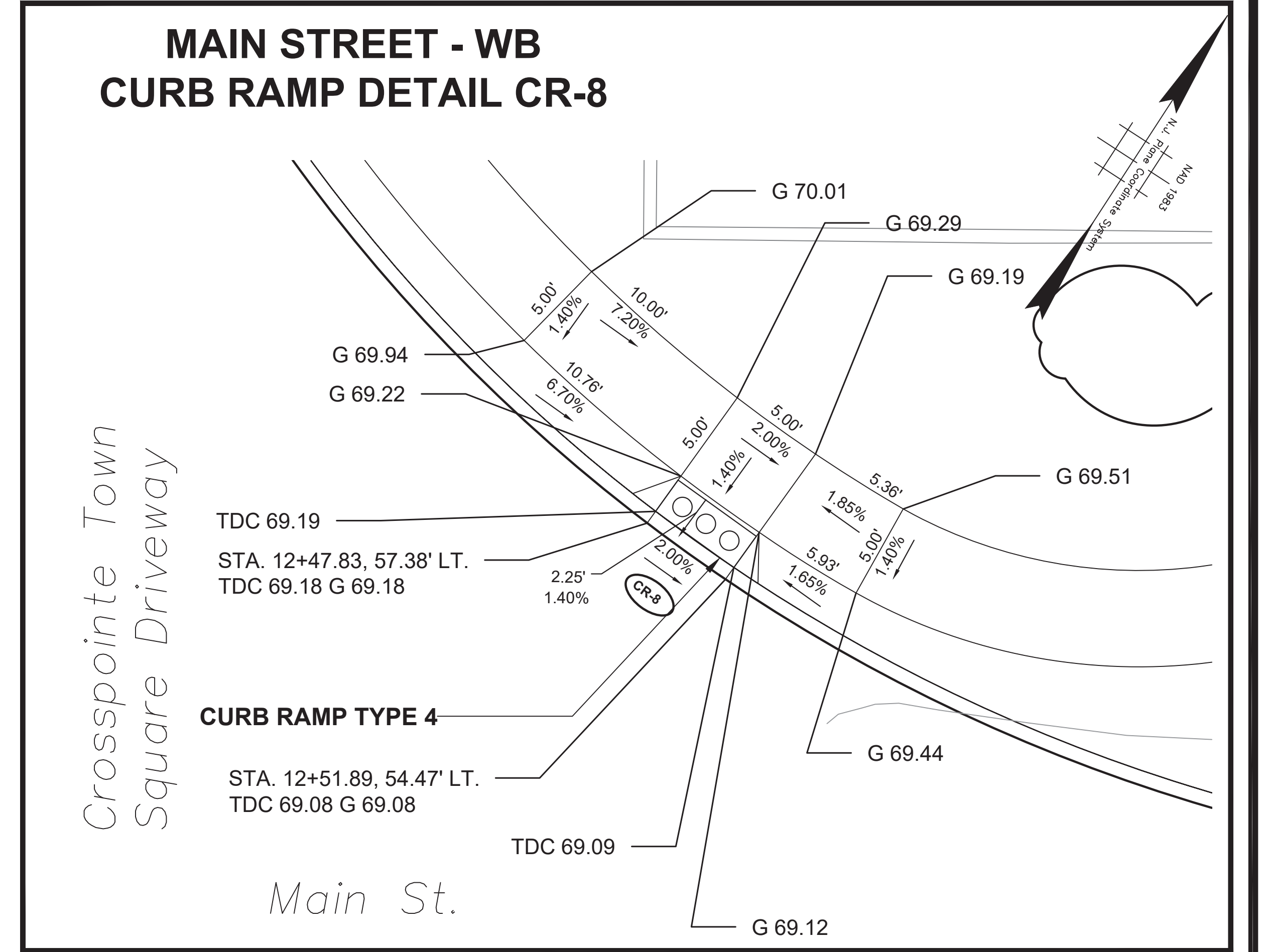
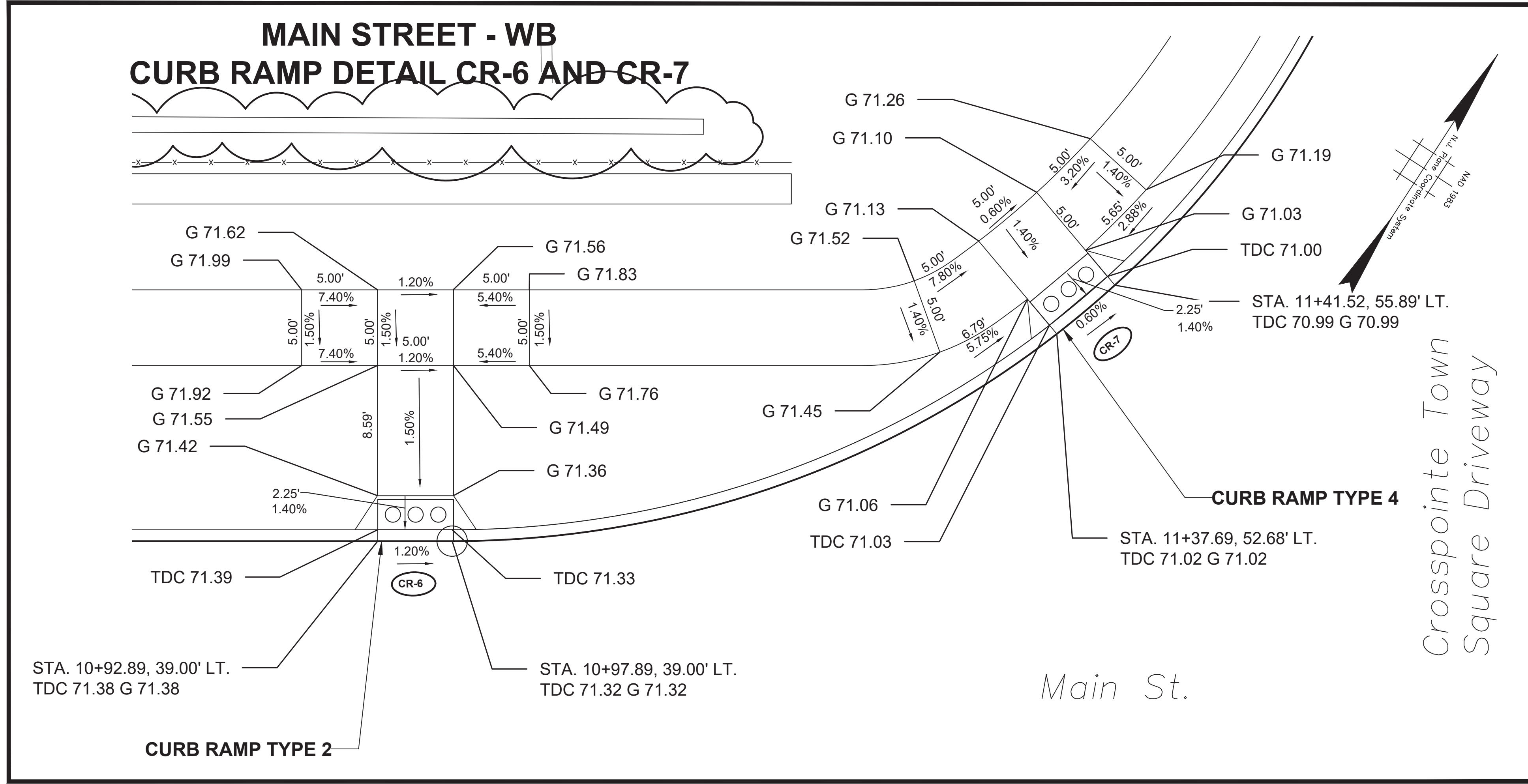


**MAIN STREET - EB
CURB RAMP DETAIL CR-2**



<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p>			
<p>CURB RAMP DETAILS (1 OF 7)</p>			
<p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>			
<p>JOHN H. ALLGAIER P.E. & P.P. (1983 - 2021) JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32992</p>	<p>DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 25839 MICHAEL J. McCLELLAND P.E. & P.P. NO PE LIC NO. 38794</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NO PE & LS LIC NO. 24271 MICHAEL J. VALESI P.E. & P.P. NO PE LIC NO. 39458</p>	<p>DATE: February 2022 DRAWN BY: MP CHECKED BY: JCW SHEET: 25 of 197</p>
<p>MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>			<p>DATE: 2/17/2022</p>

CR-1
 CR-7
 DRAWING NO.
 PWB0A609.01



NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY

ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

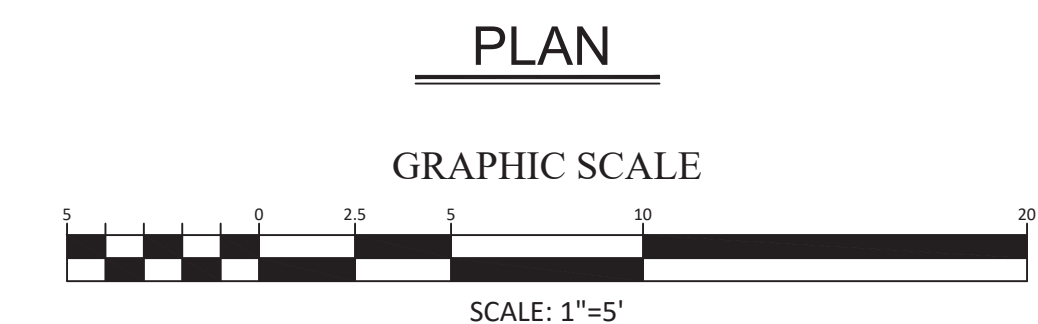
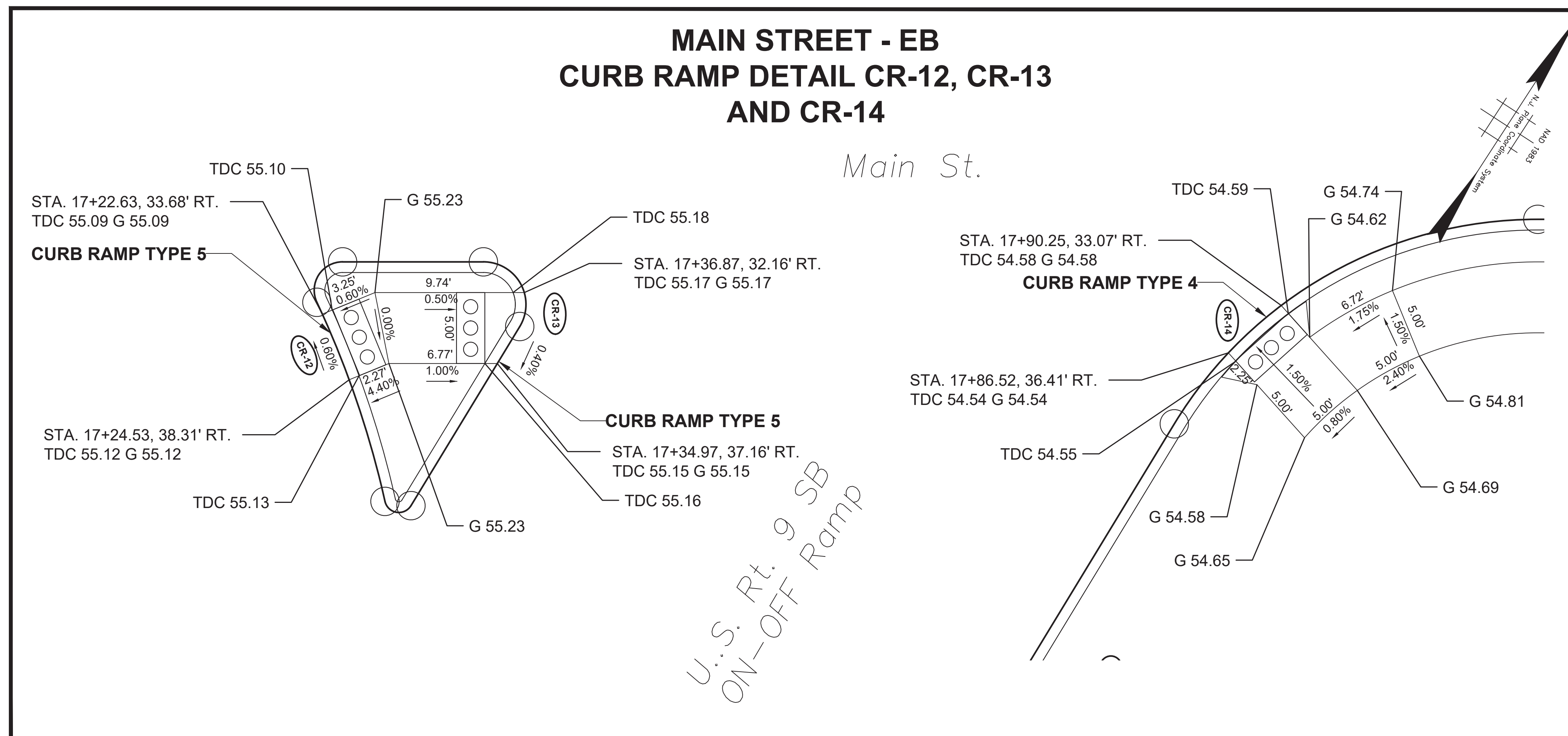
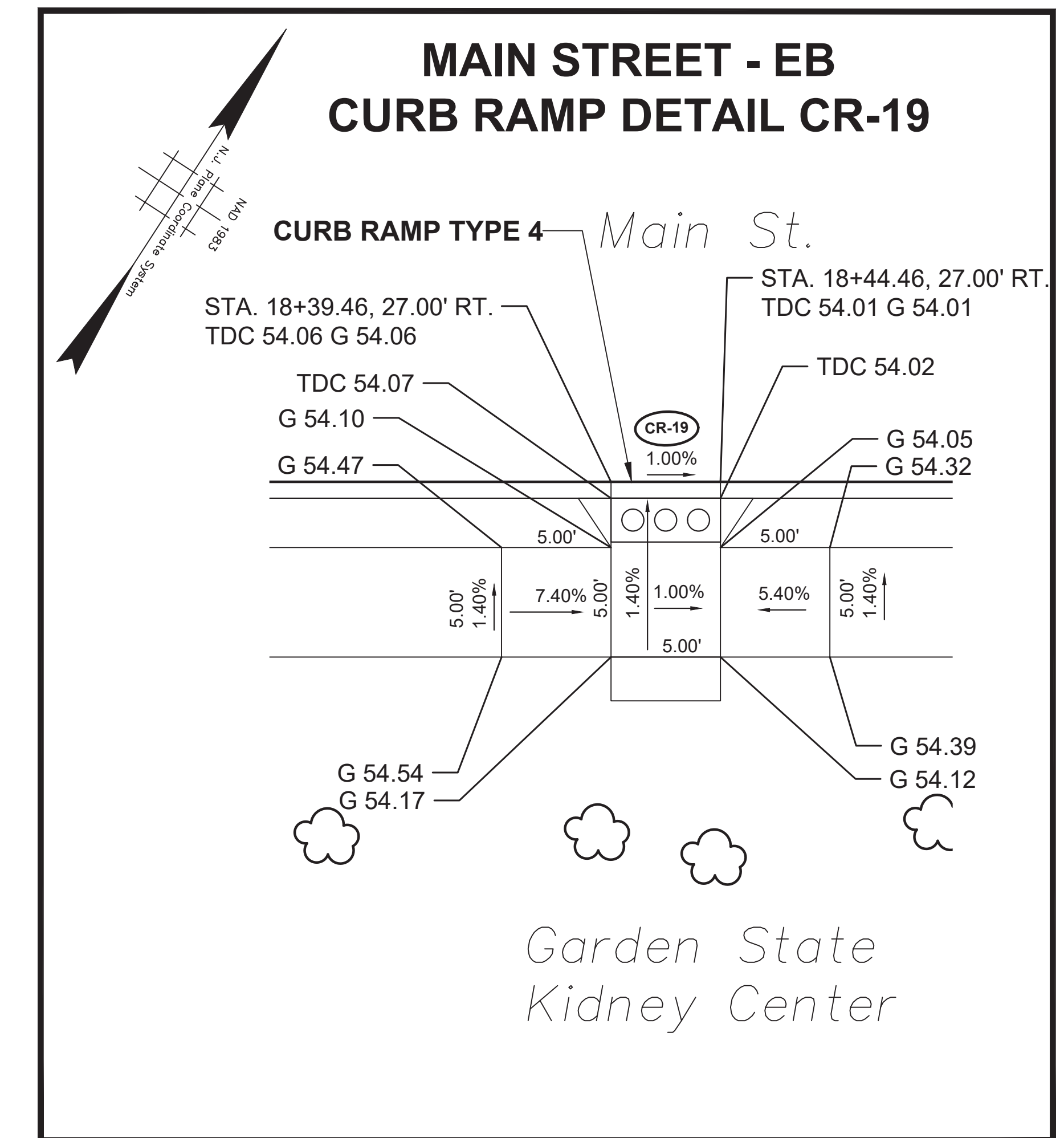
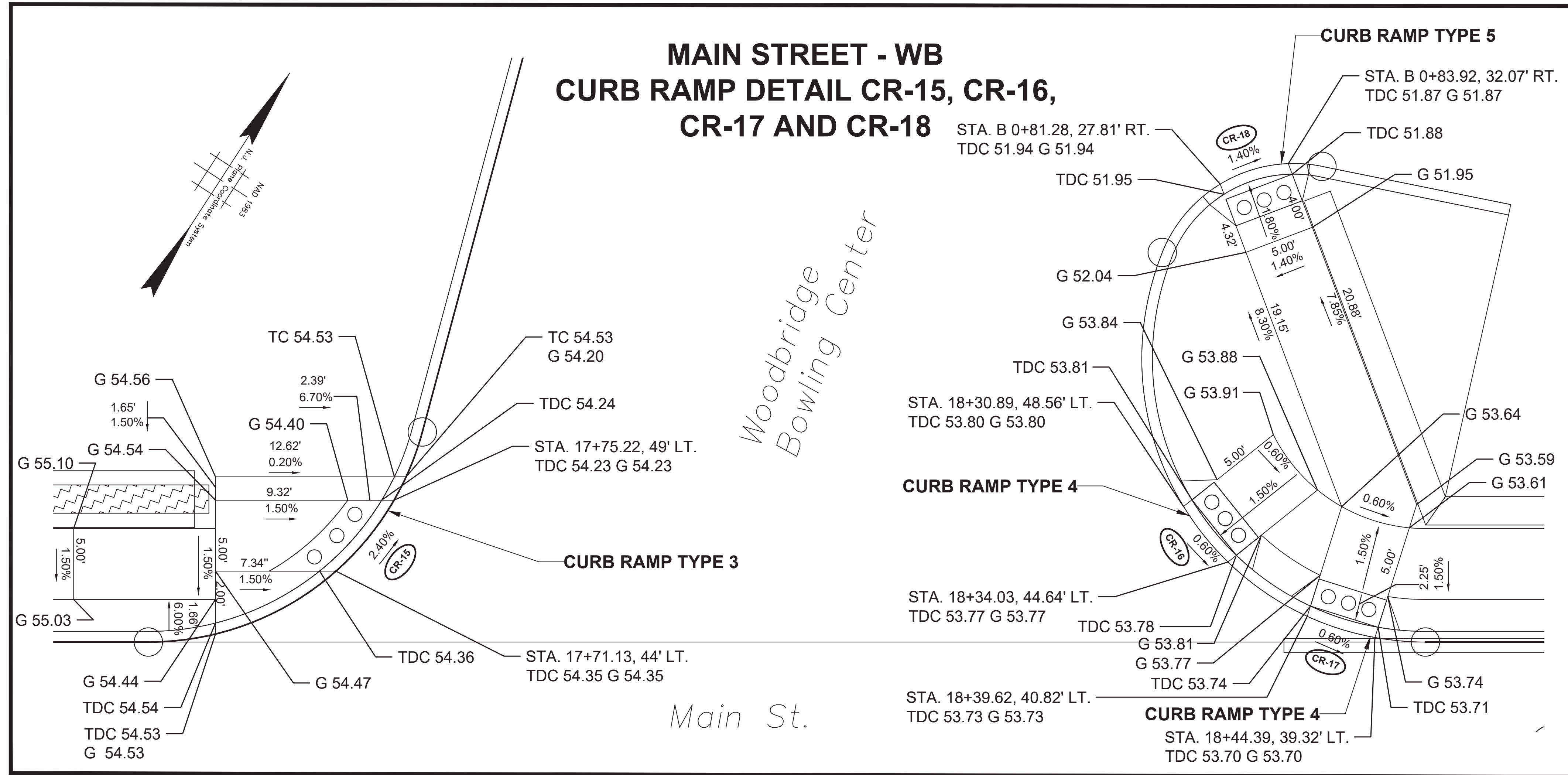
CURB RAMP DETAILS (2 OF 7)

ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS

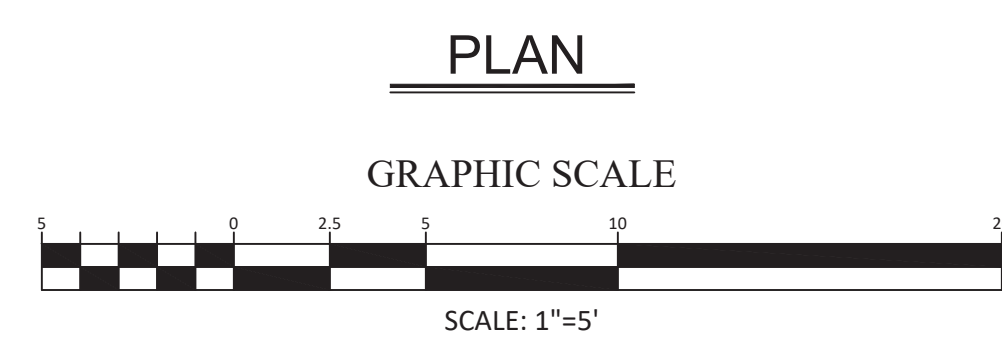
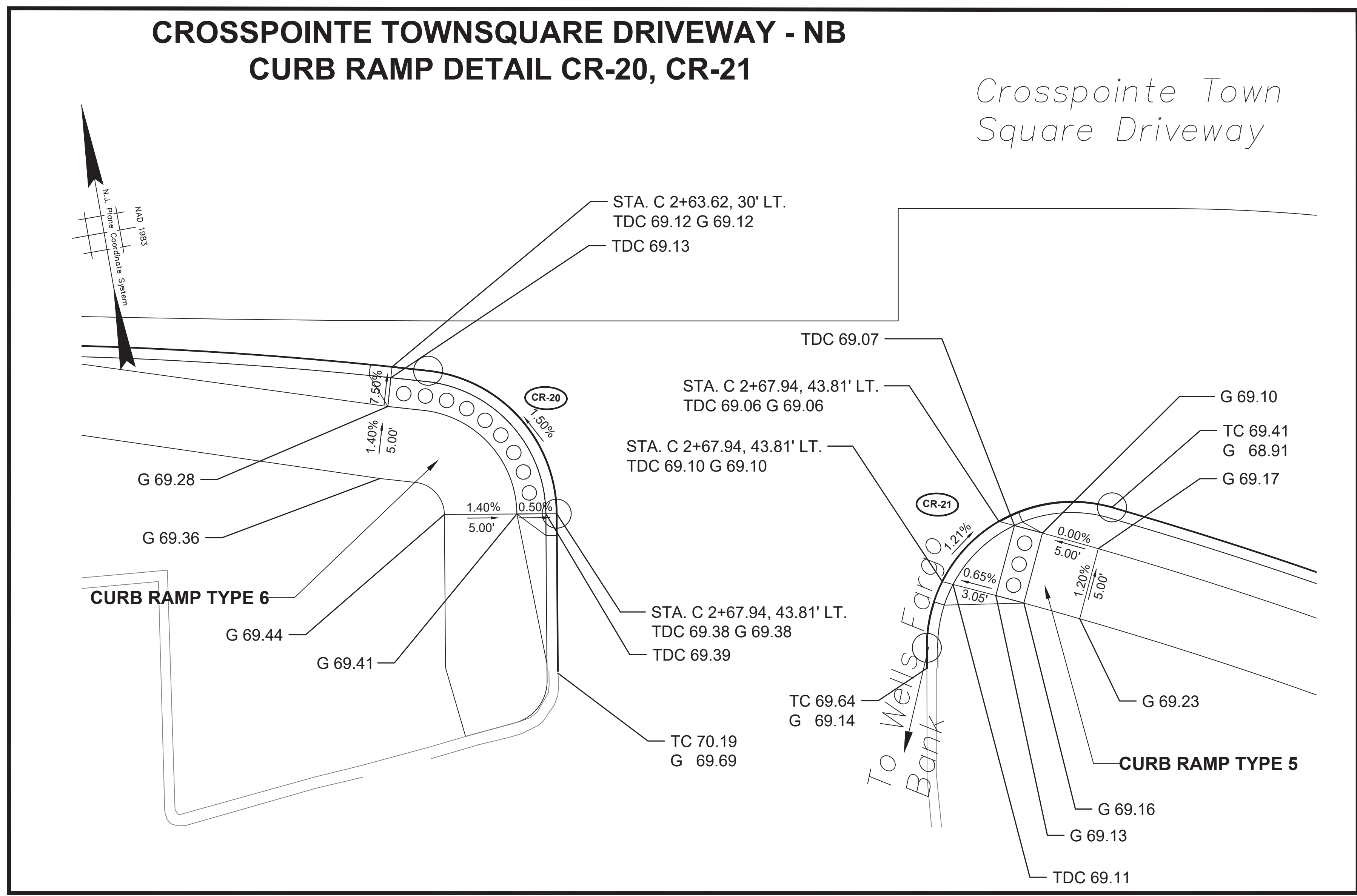
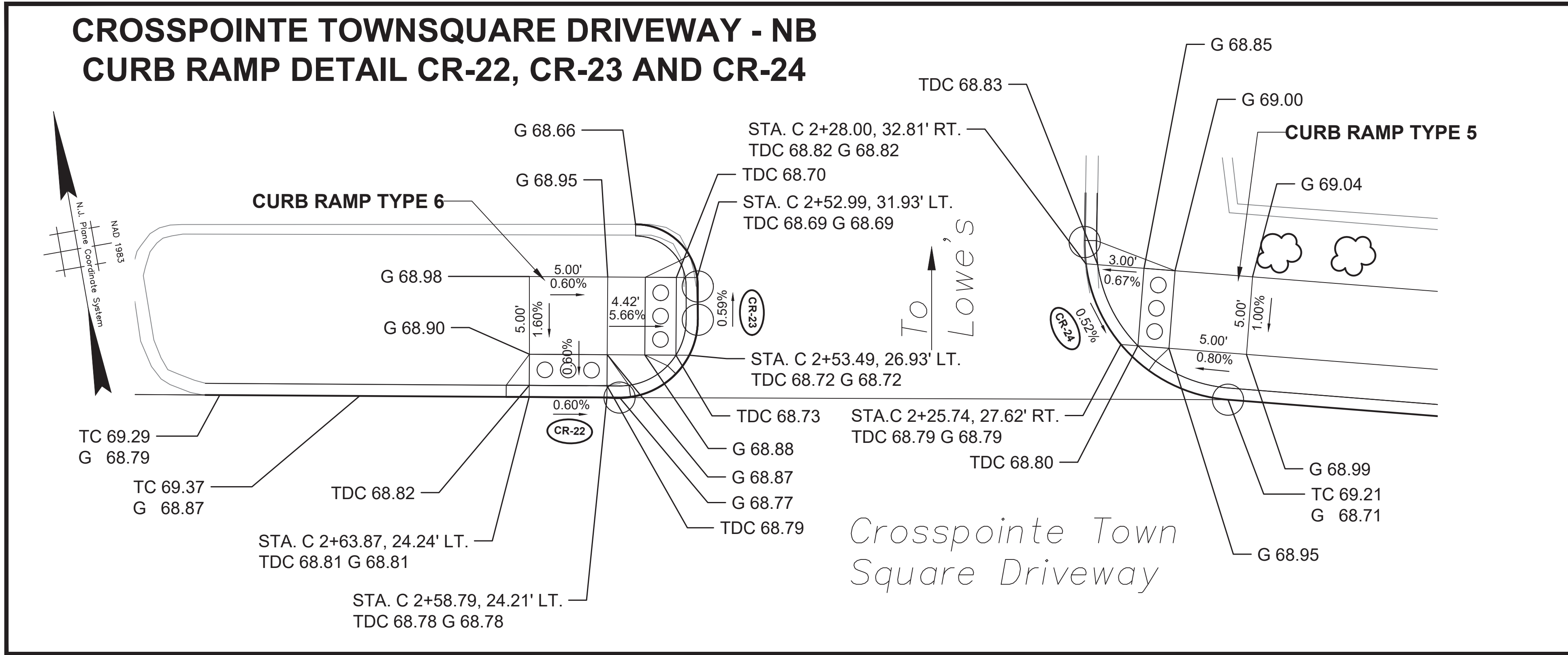
(732) 727 8000 (732) 462 7400

3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIER P.E. & P.P. <small>(1983 - 2021)</small> JAY B. CORNELL P.E. & P.P. <small>NO PE LIC NO. 32956</small>	DAVID J. SAMUEL P.E. & P.P. <small>NO PE LIC NO. 25839</small> MICHAEL J. MCCLELLAND P.E. & P.P. <small>NO PE LIC NO. 38774</small>	JOHN J. STEFANI P.E. L.S. & P.P. <small>NO PE & LS LIC NO. 24271</small> GREGORY R. VALESI P.E. & P.P. <small>NO PE LIC NO. 39458</small>
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER <small>LIC. 32468</small>		
As Shown DESIGNED BY MP		DATE February 2022 DRAWN BY MP CHECKED BY JCW
FILE NO. PWB0609.01		SHEET 26 of 197

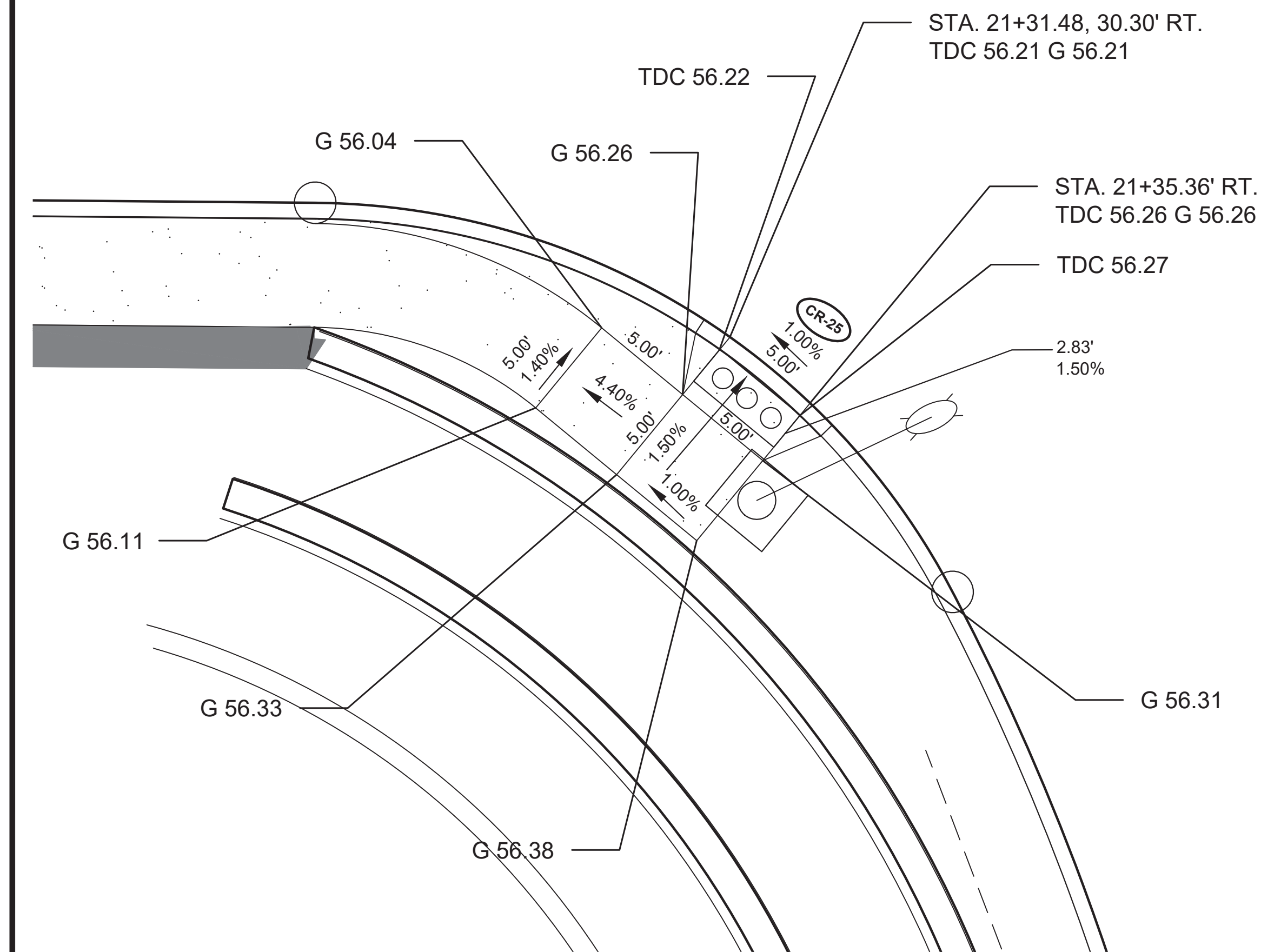


<p style="text-align: center;">TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY</p> <p style="text-align: center;">ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p> <p style="text-align: center;">CURB RAMP DETAILS (3 OF 7)</p> <div style="text-align: center;"> <p>CVE ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p> <p>(732) 727 8000 (732) 462 7400</p> <p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p> </div> <table style="width: 100%; font-size: small;"> <tr> <td>JOHN H. ALLGAIER P.E. & P.P. (1983 - 2021)</td> <td>DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24539</td> <td>JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & LS LIC NO. 24271</td> </tr> <tr> <td>JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32952</td> <td>MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468</td> <td>GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458</td> </tr> </table> <p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p> <p style="text-align: right;">DATE: 2/17/2022</p>	JOHN H. ALLGAIER P.E. & P.P. (1983 - 2021)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24539	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & LS LIC NO. 24271	JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32952	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458	<table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <tr> <th>NO.</th> <th>DESCRIPTION OF REVISION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECKED</th> <th>RELEASED</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table> <p style="text-align: center;">SCALE: As Shown</p> <p style="text-align: center;">DATE: February 2022</p> <p style="text-align: center;">DRAWN BY: MP DESIGNED BY: MP</p> <p style="text-align: center;">CHECKED BY: JCW SHEET: 27 of 197</p> <p style="text-align: right; font-size: x-small;">FILE NO. PWB0609.01</p>	NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED						
JOHN H. ALLGAIER P.E. & P.P. (1983 - 2021)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24539	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & LS LIC NO. 24271																	
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32952	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458																	
NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED														

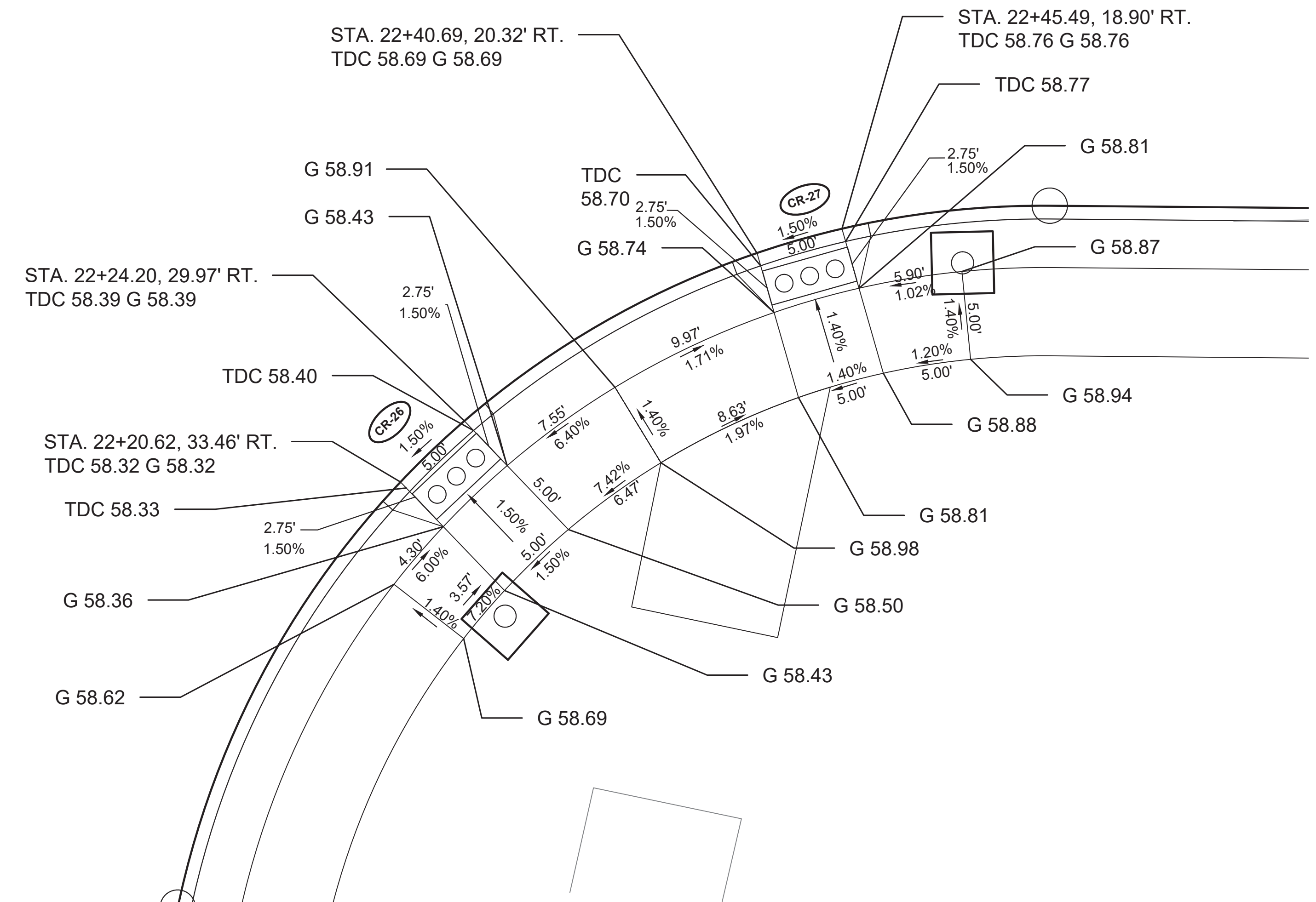


No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
CURB RAMP DETAILS (4 OF 7)							
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194							
JOHN H. ALLGAIER P.E. & P.P. (1983 - 3551)		DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24539		JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271		GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458	
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32992		MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 38774		GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458		GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 43561	
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468				As Shown February 2022		DATE February 2022	
DRAWN BY MP				DESIGNED BY MP		CHECKED BY JCW	
FILE NO. PWB0A609.01				SHEET 28 of 197		DATE 2/17/2022	

MAIN STREET - EB
CURB RAMP DETAIL CR-25
CURB RAMP TYPE 4 MODIFIED

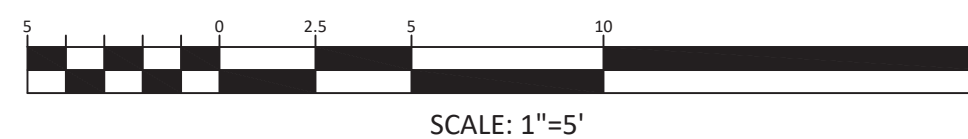


MAIN STREET - EB
CURB RAMP DETAIL CR-26 & CR-27
CURB RAMP TYPE 4



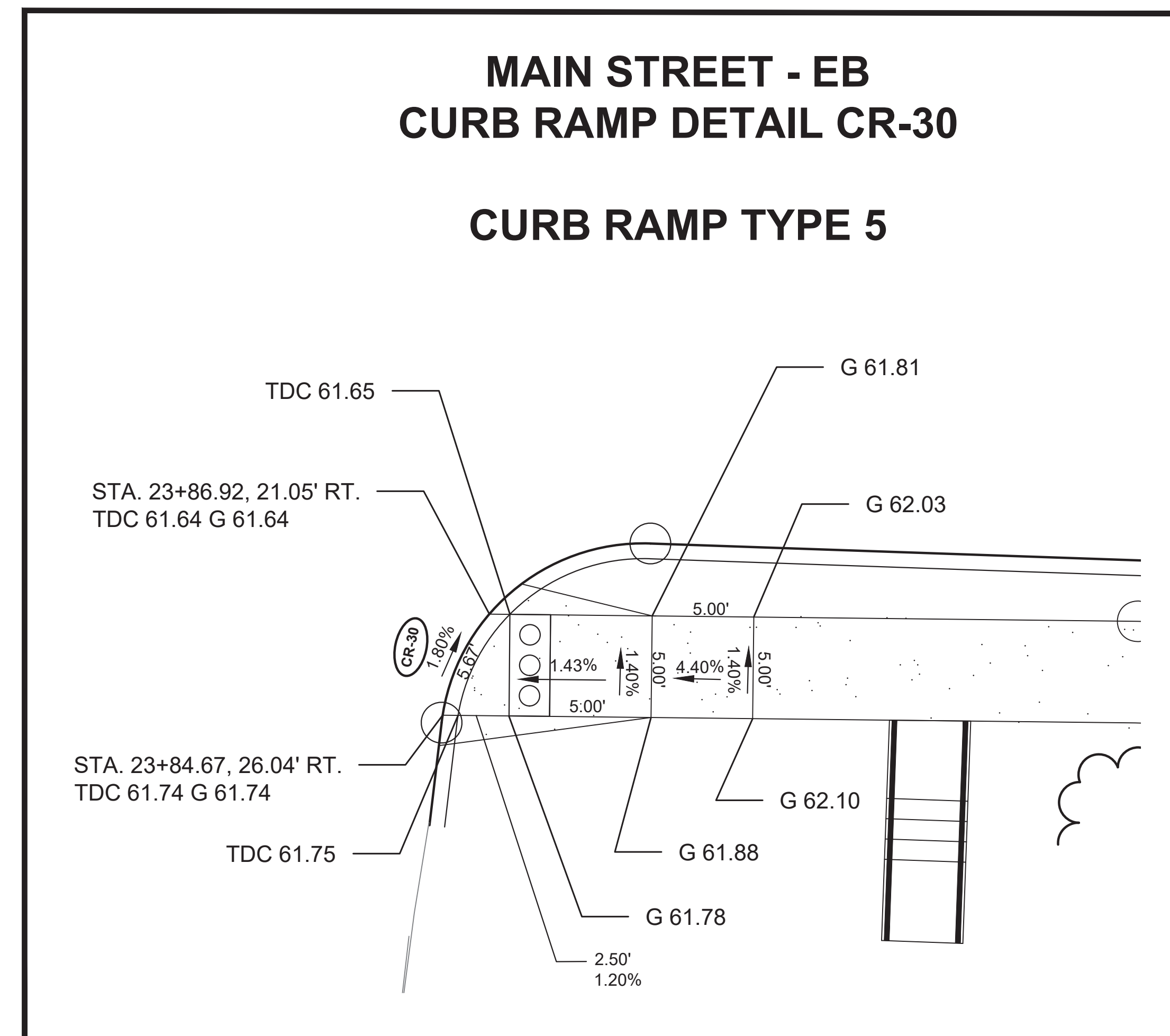
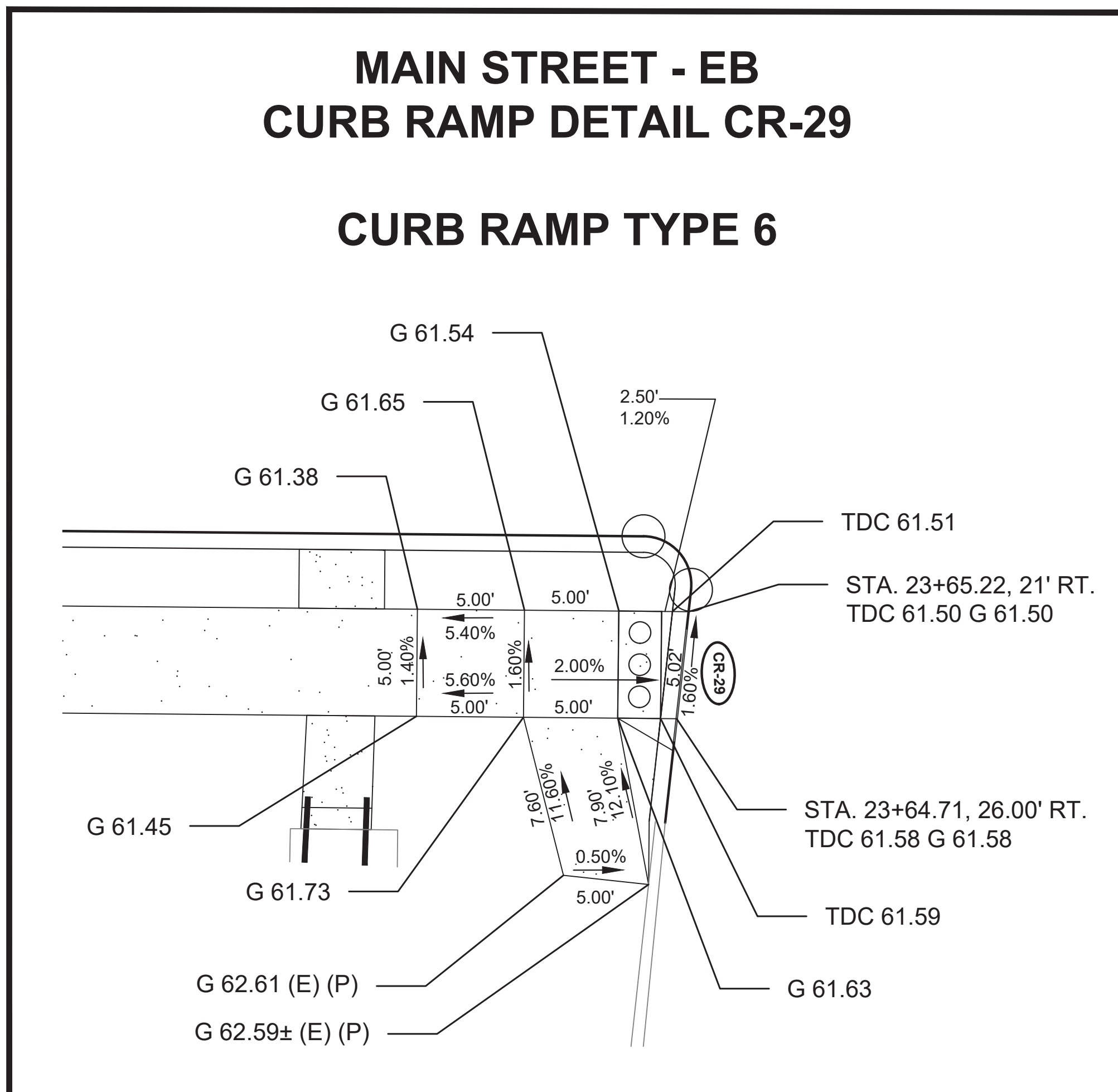
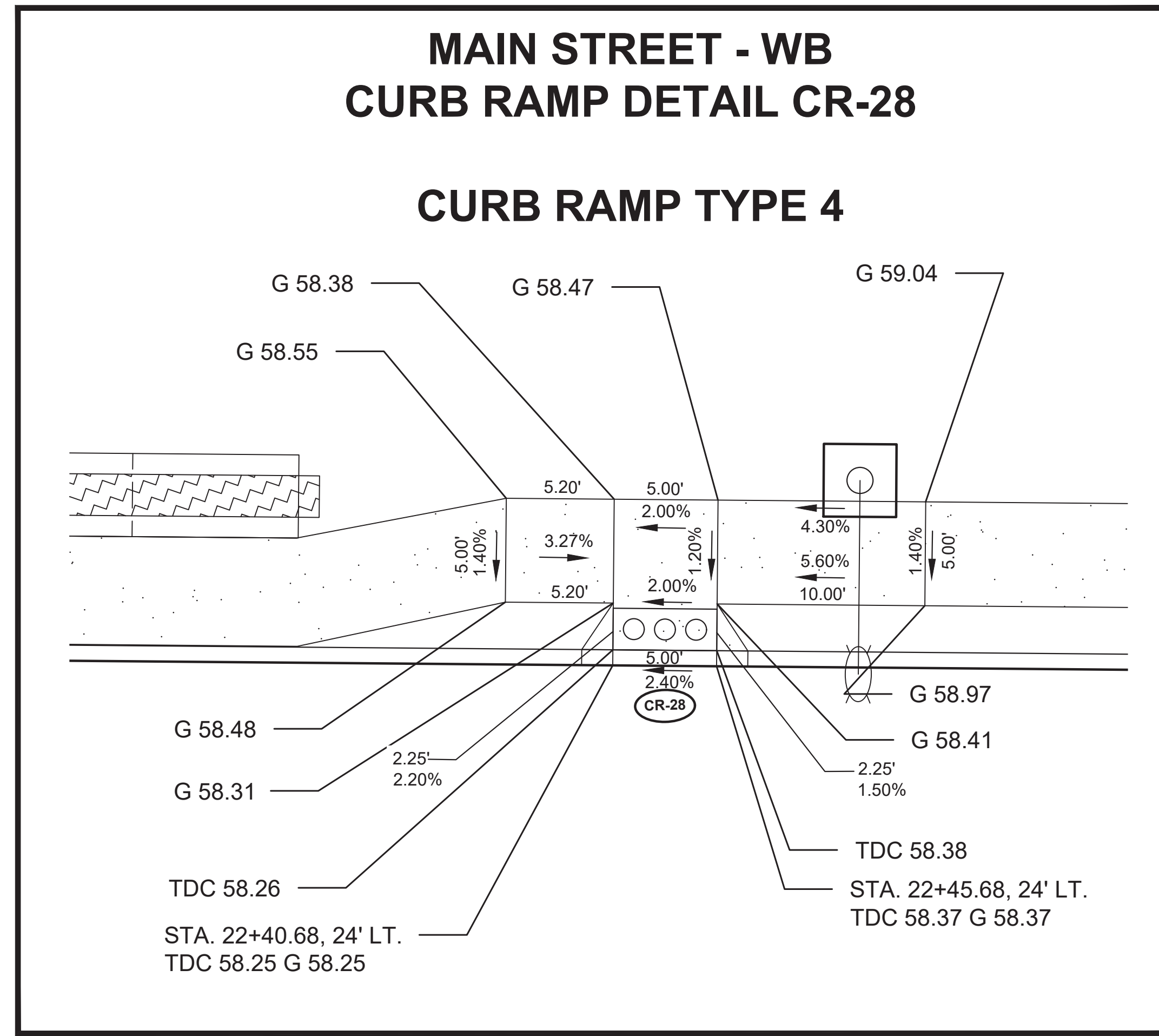
PLAN

GRAPHIC SCALE

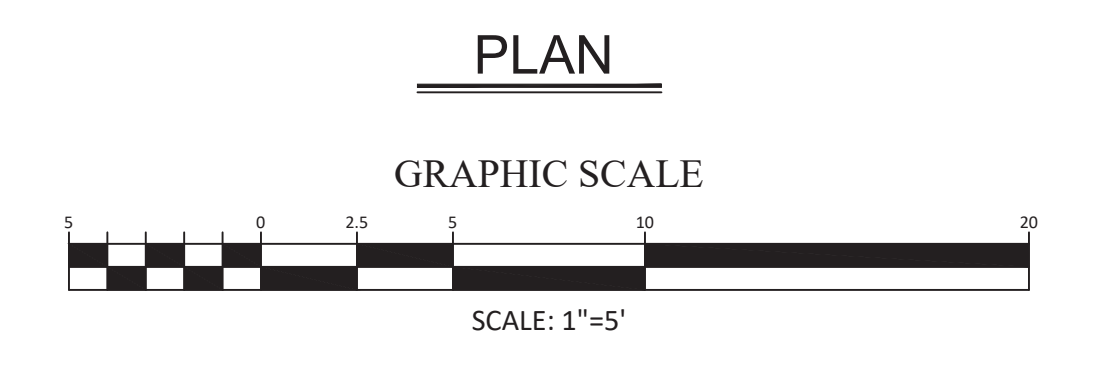



NOTE:
INSTALL DETECTABLE WARNING SURFACES IN SUCH THAT THE TRUNCATED DOMES ON THE CURB RAMPS ARE ALIGNED WITH THE DIRECTION OF PEDESTRIAN TRAVEL ON THE RAMP.

CR-5			
CR-7			
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS			
CURB RAMP DETAILS (5 OF 7)			
(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400			
JOHN H. ALLGAIR P.E. & P.P. (1983 - 2001)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25828	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271	REGISTRATION NO.
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 3874	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458	DATE
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER L.C. 32468		As Shown	February 2022
		DRAWN BY	MP
DATE: 2/17/2022		CHECKED BY	JCW
		DESIGNED BY	MP
		SHEET	29 of 197
		FILE NO.	PWB0609.01

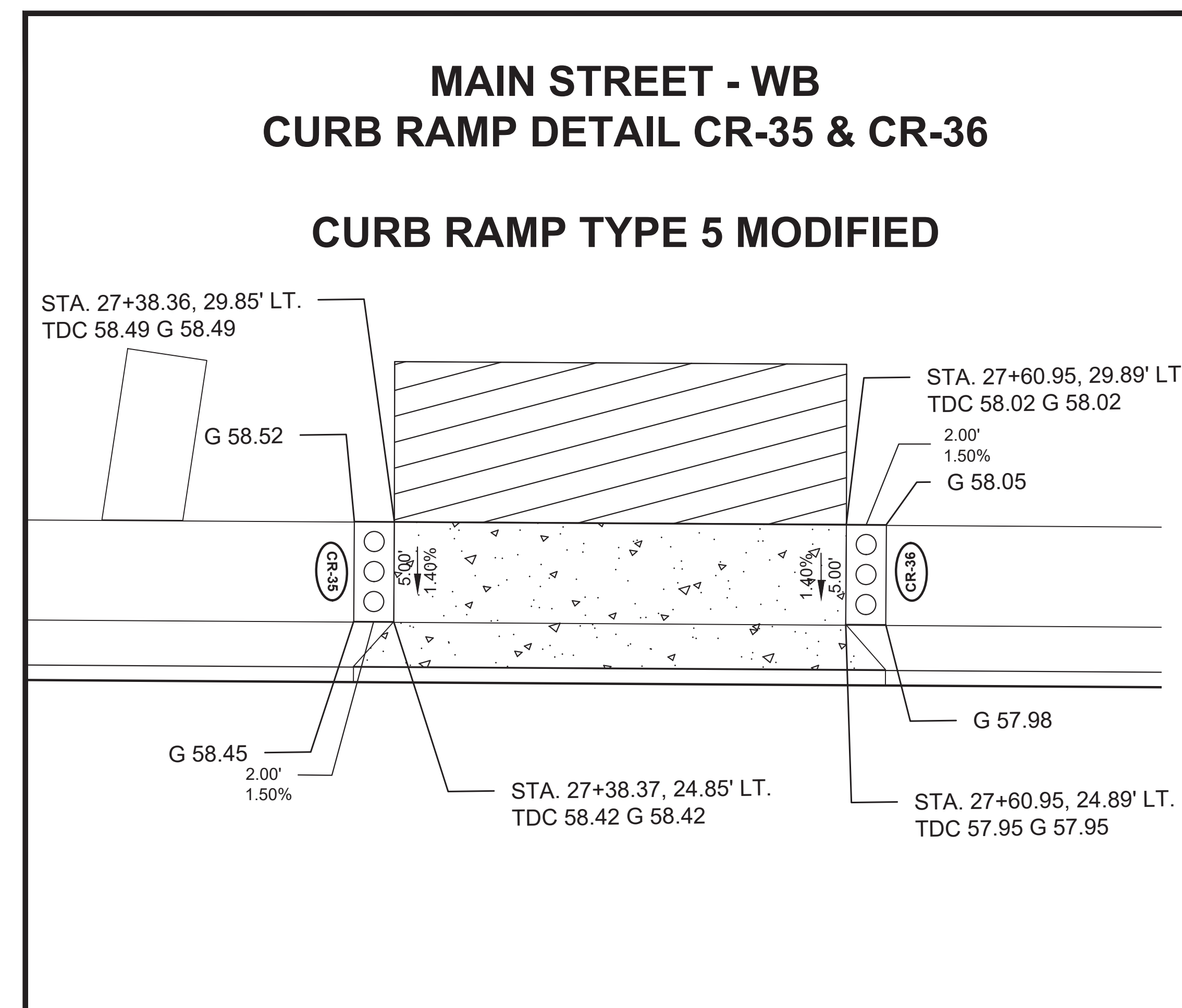
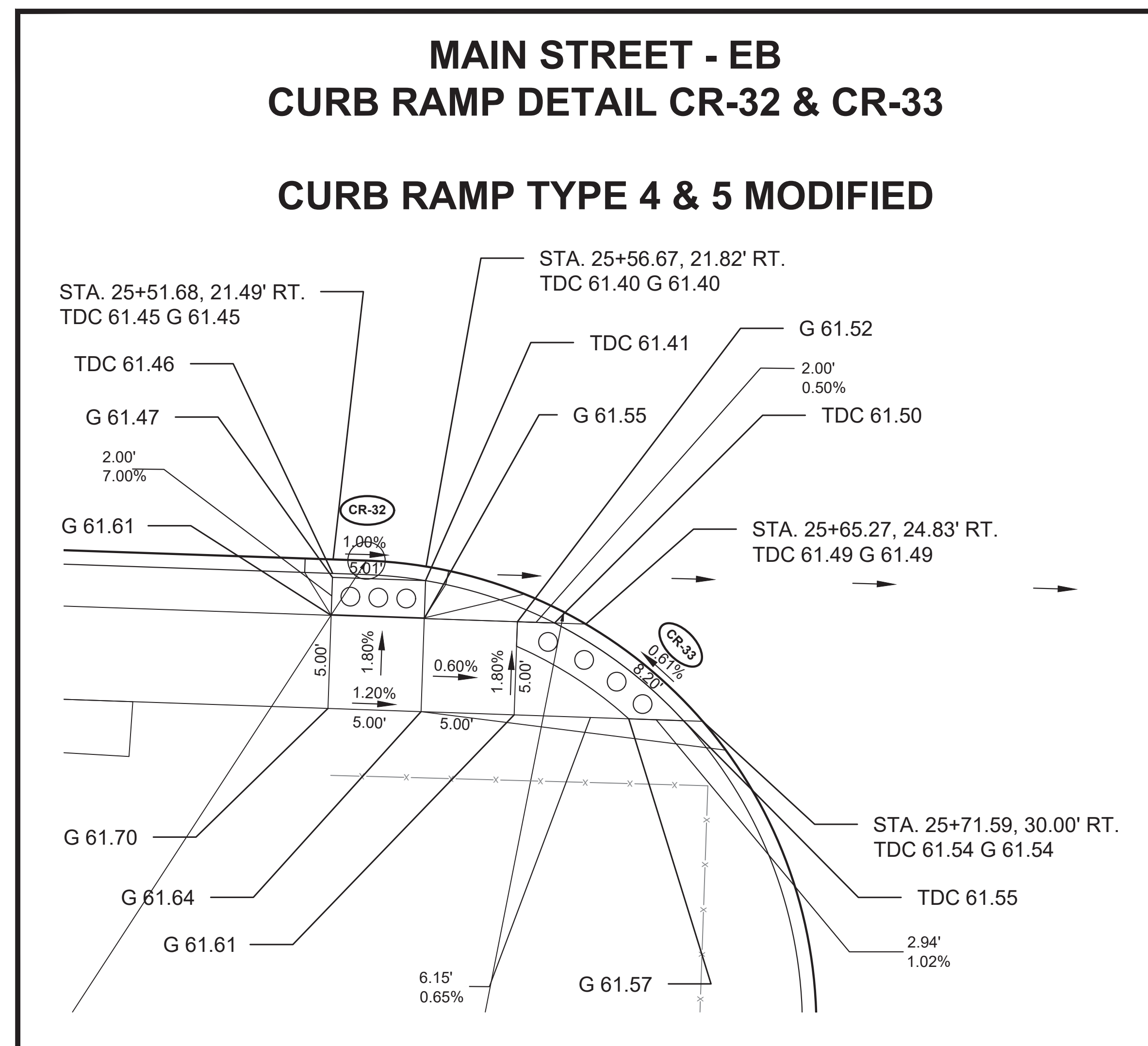
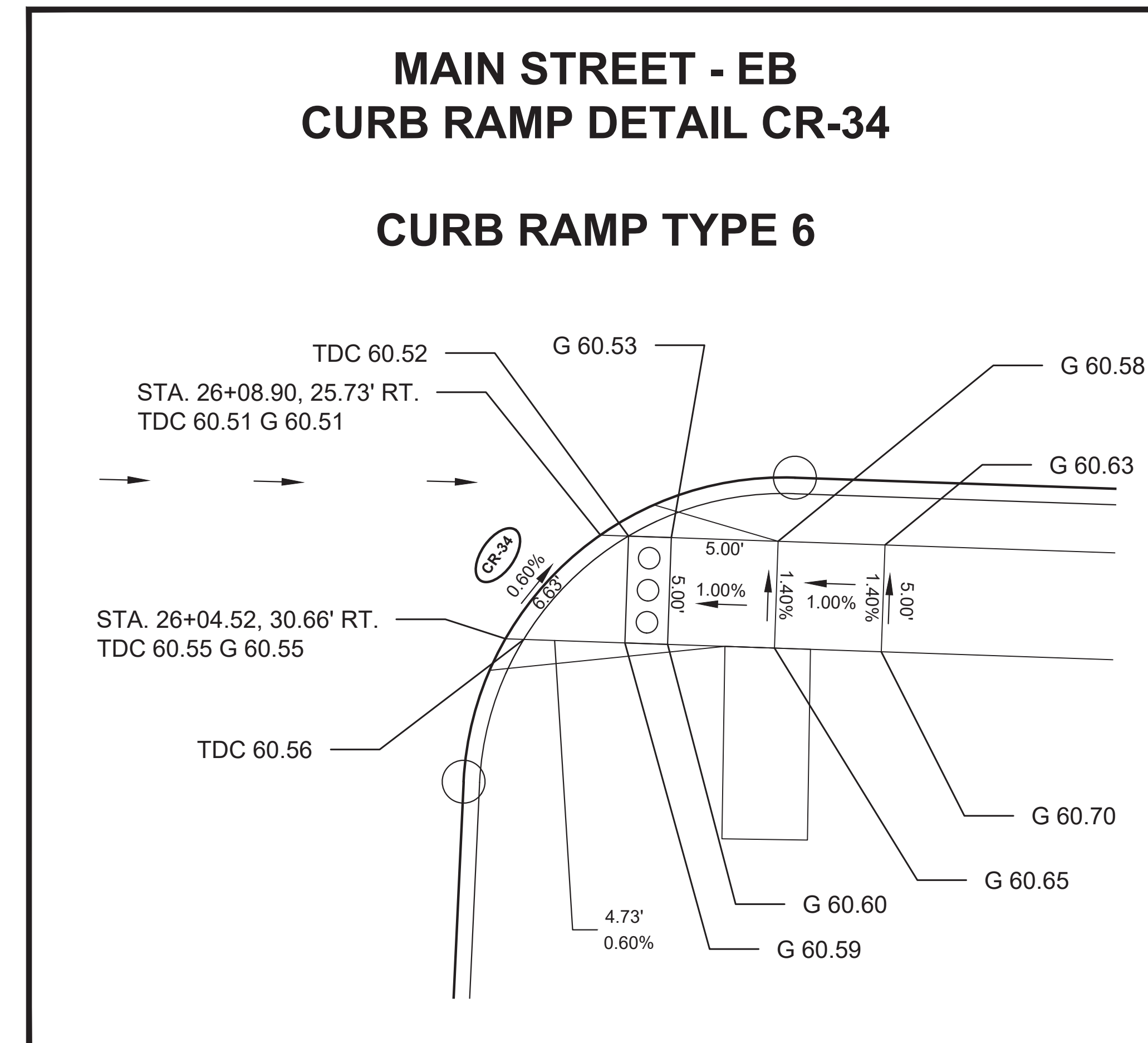
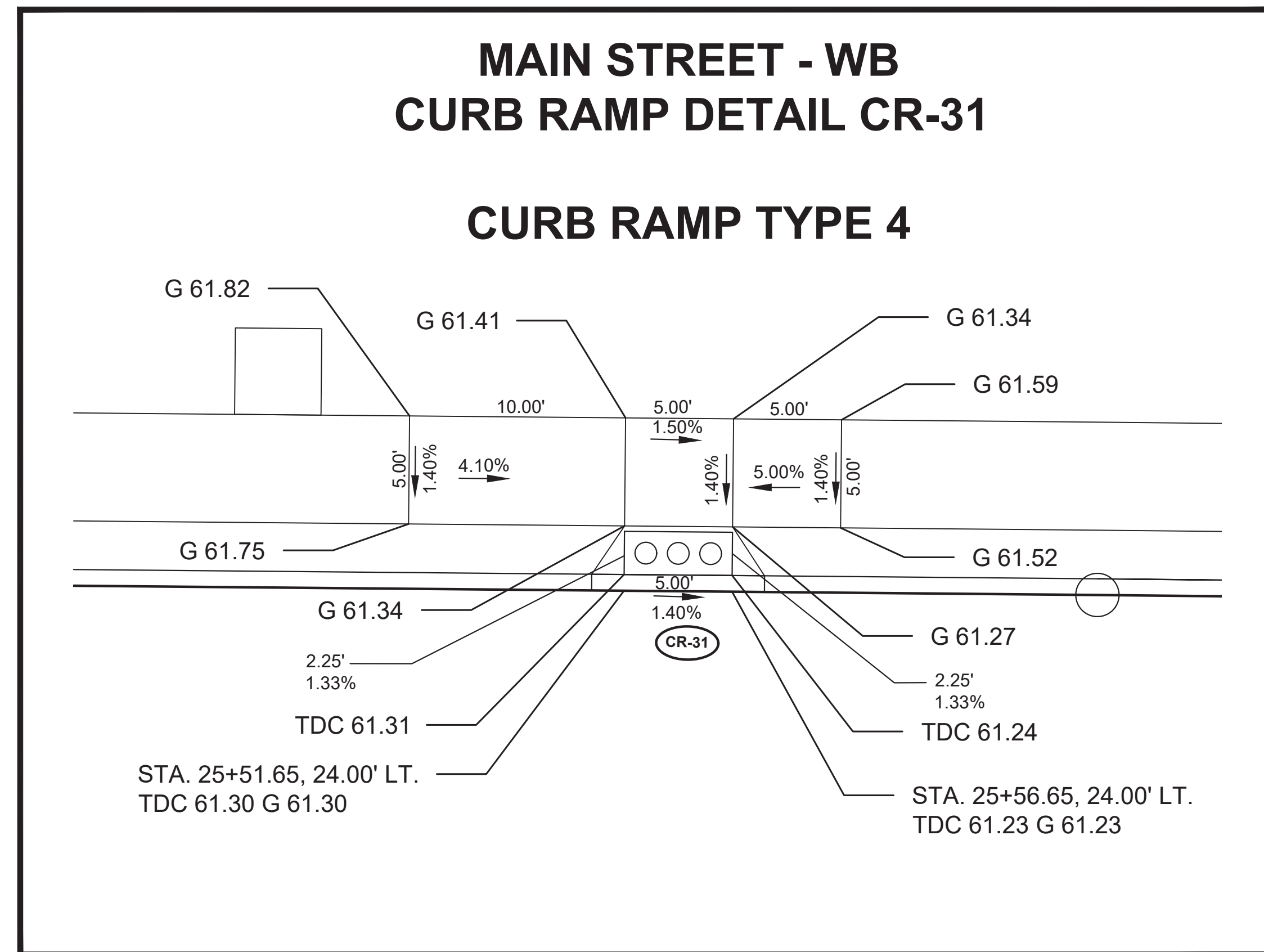


NOTE:
INSTALL DETECTABLE WARNING SURFACES IN SUCH THAT THE TRUNCATED DOMES ON THE CURB RAMPS ARE ALIGNED WITH THE DIRECTION OF PEDESTRIAN TRAVEL ON THE RAMP.

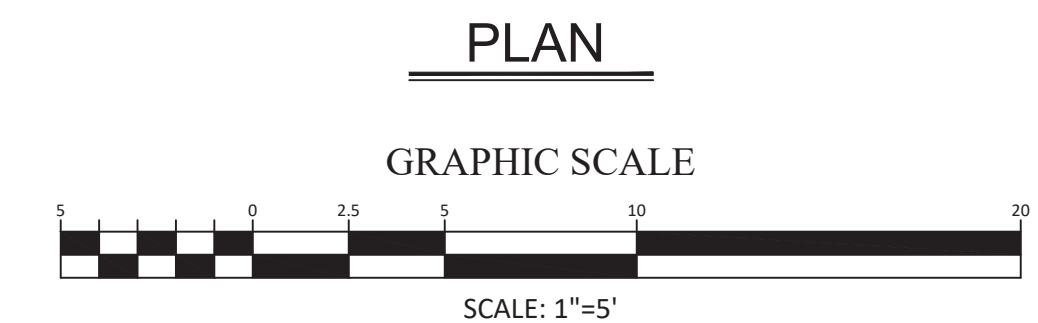



No. DESCRIPTION OF REVISION DATE DRAWN CHECKED RELEASED	
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS	
CURB RAMP DETAILS (6 OF 7)	
 (732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194	
JOHN H. ALLGAIR P.E. & P.P. (193 - 3551) JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32952	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25839 MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 32468
JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271 GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458	SCALE: As Shown DATE: February 2022 DRAWN BY: MP DESIGNED BY: MP / JD CHECKED BY: JCW SHEET: 30 of 197
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468 DATE: 2/17/2022	

CR-6
 CR-7
 DRAWING NO. PWB0A609.01

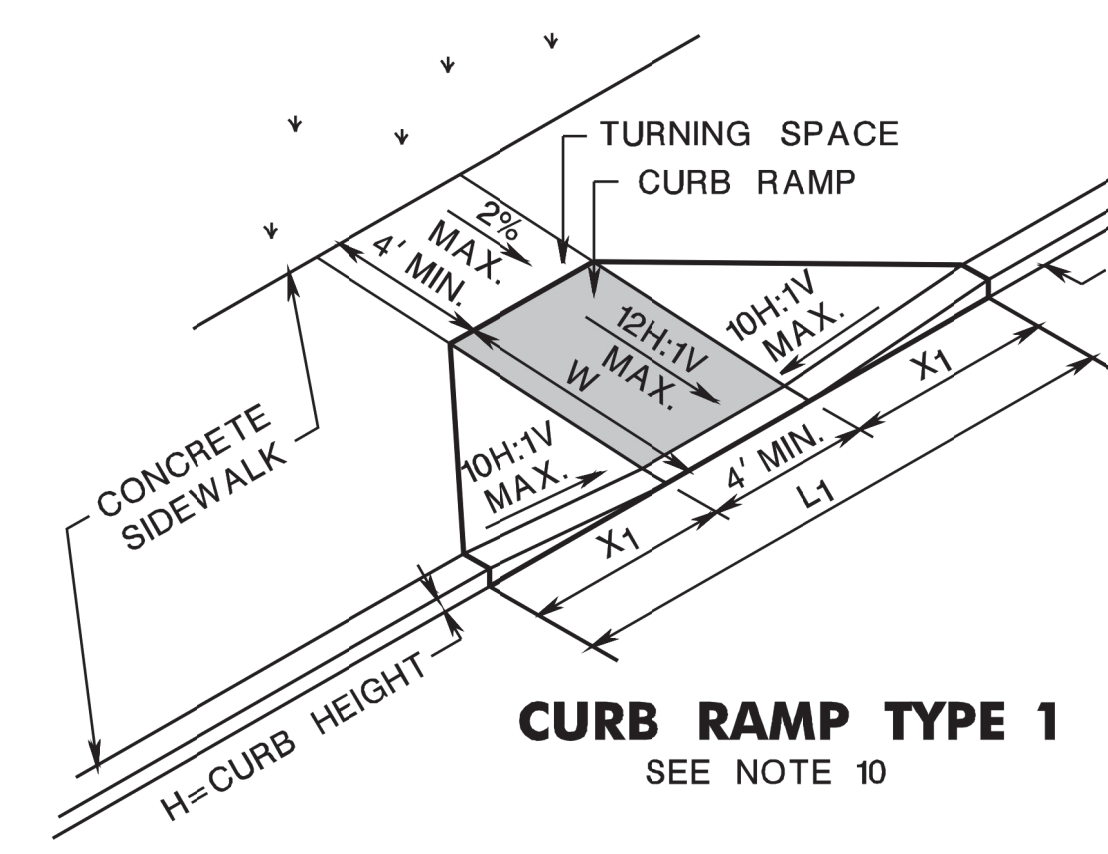


NOTE:
INSTALL DETECTABLE WARNING SURFACES IN SUCH THAT THE TRUNCATED DOMES ON THE CURB RAMPS ARE ALIGNED WITH THE DIRECTION OF PEDESTRIAN TRAVEL ON THE RAMP.

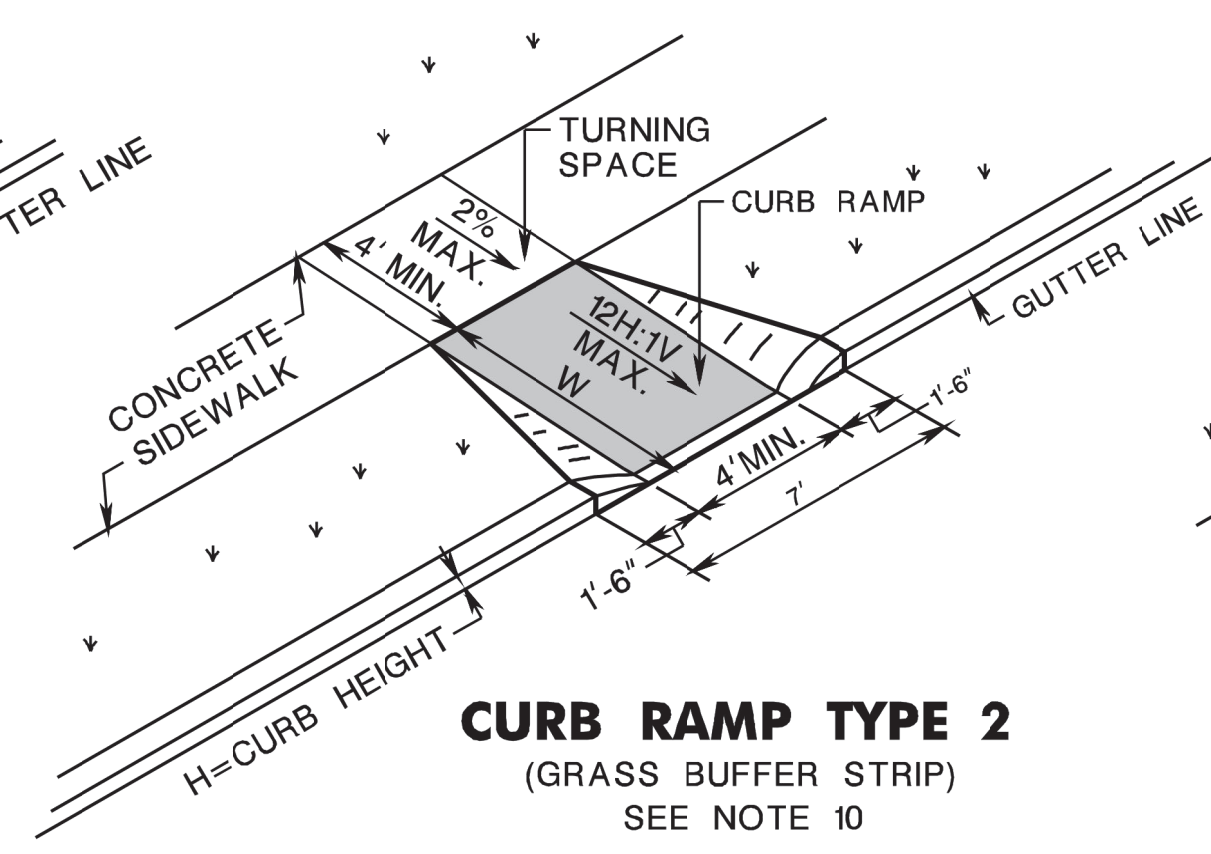


<p style="text-align: center;">TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY</p> <p style="text-align: center;">ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p> <p style="text-align: center;">CURB RAMP DETAILS (7 OF 7)</p> <div style="text-align: center;">  <p>CVE ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p> <p>(732) 727 8000 (732) 462 7400</p> <p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p> </div> <table border="0" style="width: 100%; font-size: small;"> <tr> <td>JOHN H. ALLGAIER P.E. & P.P. (1983 - 2021)</td> <td>DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25828</td> <td>JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & L.S. LIC NO. 24271</td> </tr> <tr> <td>JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32992</td> <td>MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468</td> <td>GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458</td> </tr> </table> <p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER</p> <p style="text-align: right;">DATE: 2/17/2022</p>	JOHN H. ALLGAIER P.E. & P.P. (1983 - 2021)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25828	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & L.S. LIC NO. 24271	JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32992	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>DESCRIPTION OF REVISION</th> <th>DATE</th> <th>DRAWN</th> <th>CHECKED</th> <th>RELEASED</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table> <p style="text-align: center;">SCALE: As Shown</p> <p style="text-align: center;">DESIGNED BY: February 2022</p> <p style="text-align: center;">DRAWN BY: MP</p> <p style="text-align: center;">CHECKED BY: MP, JD</p> <p style="text-align: center;">SHEET: 31 of 197</p> <p style="text-align: right; font-size: x-small;">DRAWING NO. PWB0609.01</p>	NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED						
JOHN H. ALLGAIER P.E. & P.P. (1983 - 2021)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25828	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & L.S. LIC NO. 24271																	
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32992	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458																	
NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED														

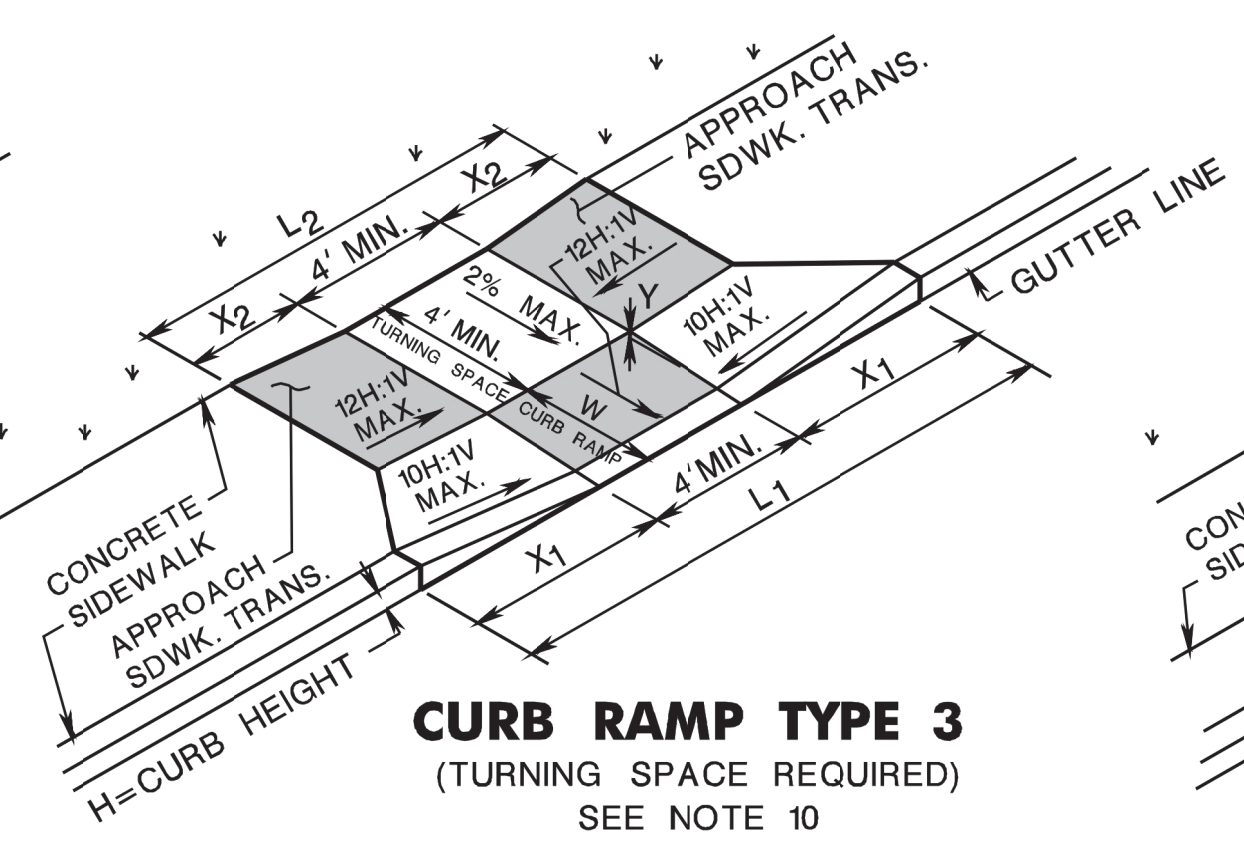
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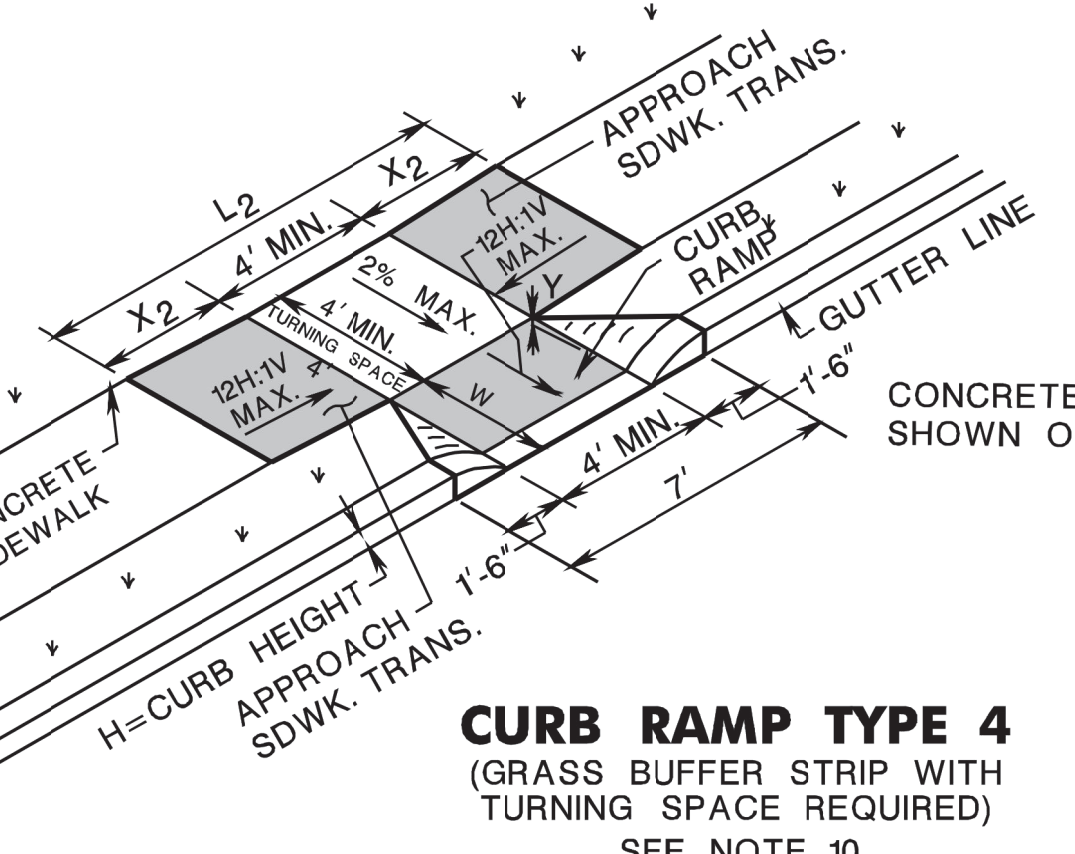
CURB RAMP TYPE 1
SEE NOTE 10



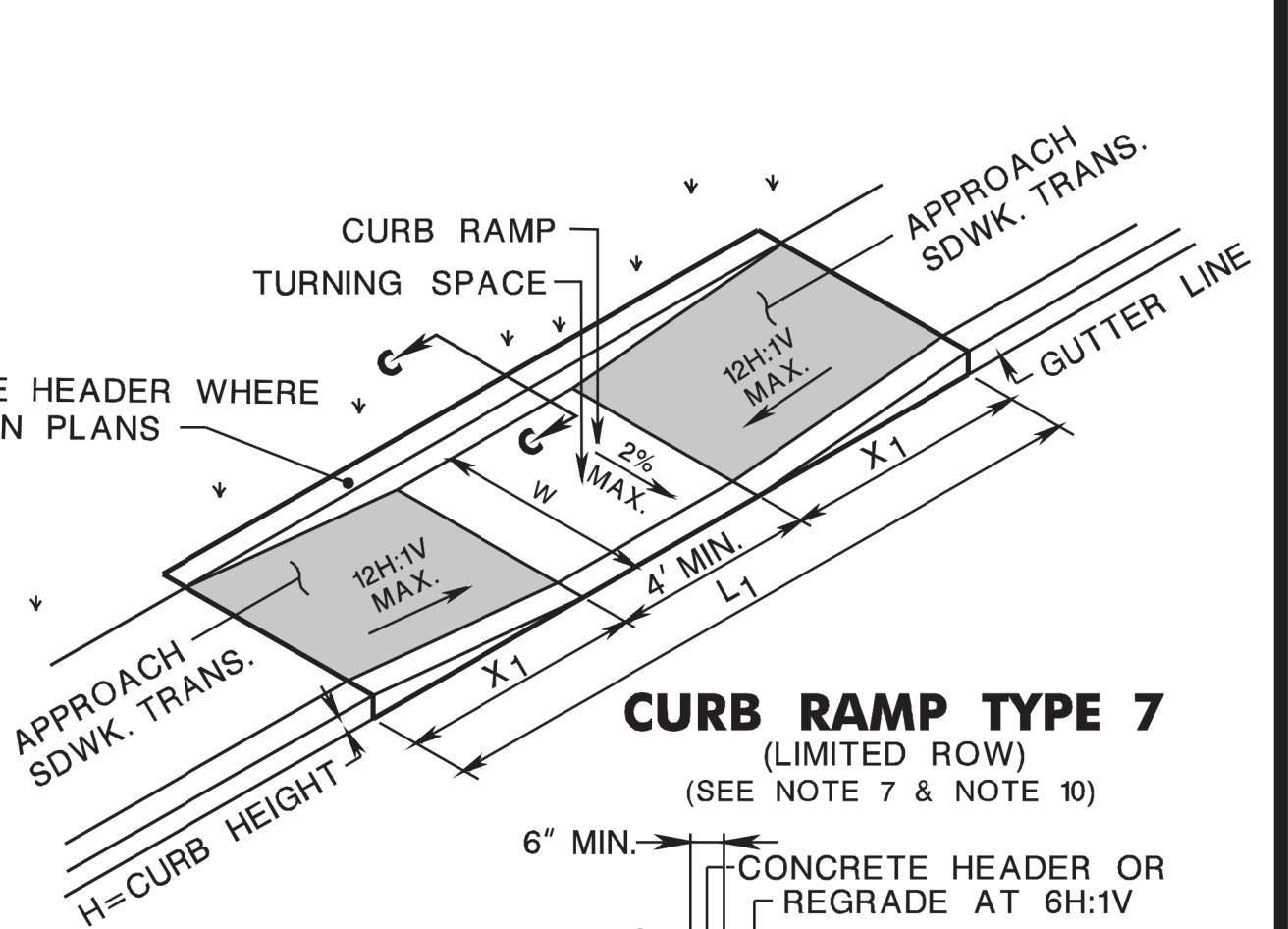
CURB RAMP TYPE 2
(GRASS BUFFER STRIP)
SEE NOTE 10



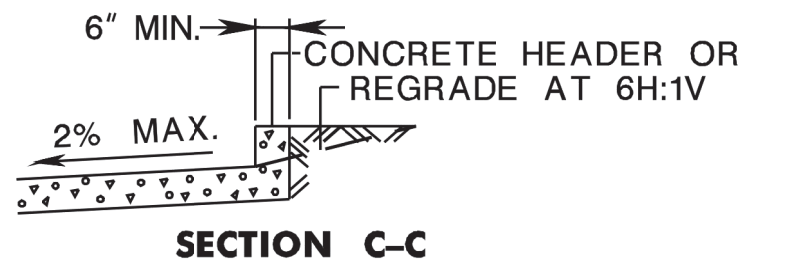
CURB RAMP TYPE 3
(TURNING SPACE REQUIRED)
SEE NOTE 10



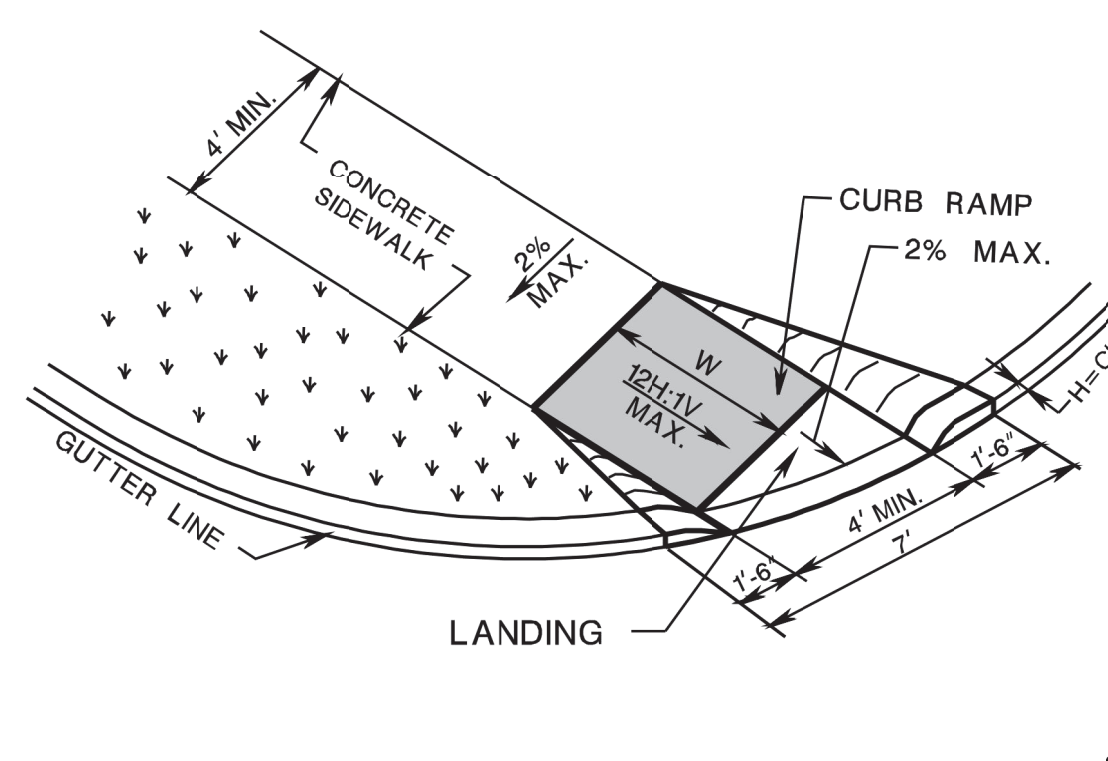
CURB RAMP TYPE 4
(GRASS BUFFER STRIP WITH
TURNING SPACE REQUIRED)
SEE NOTE 10



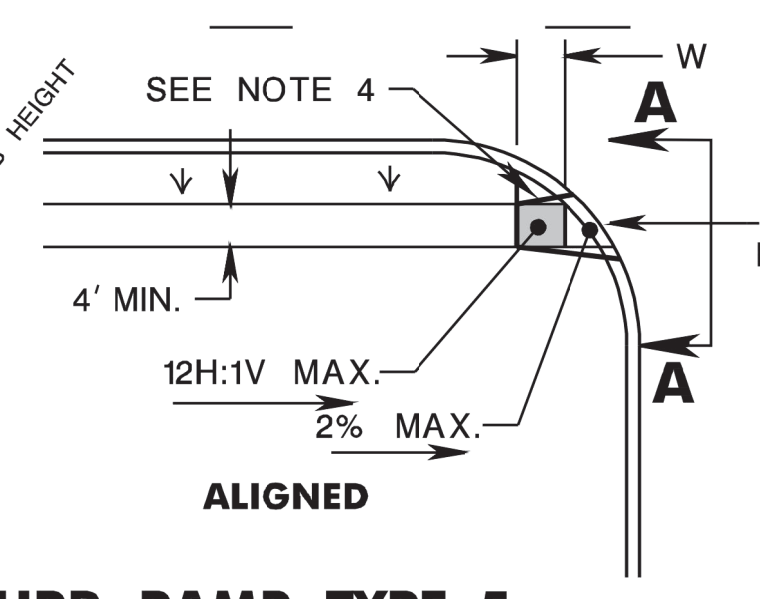
CURB RAMP TYPE 7
(LIMITED ROW)
(SEE NOTE 7 & NOTE 10)



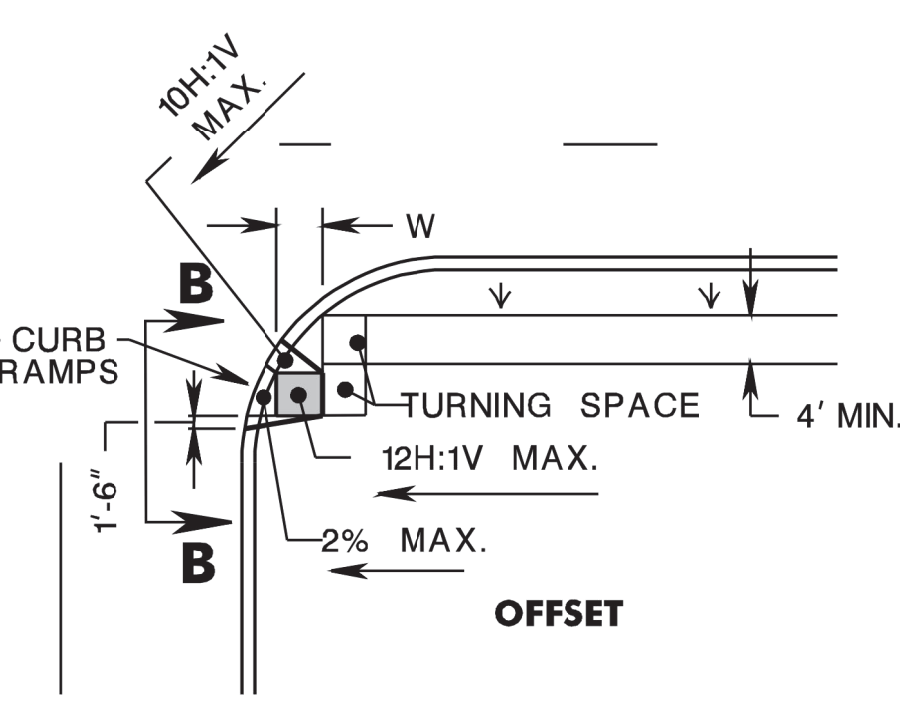
SECTION C-C



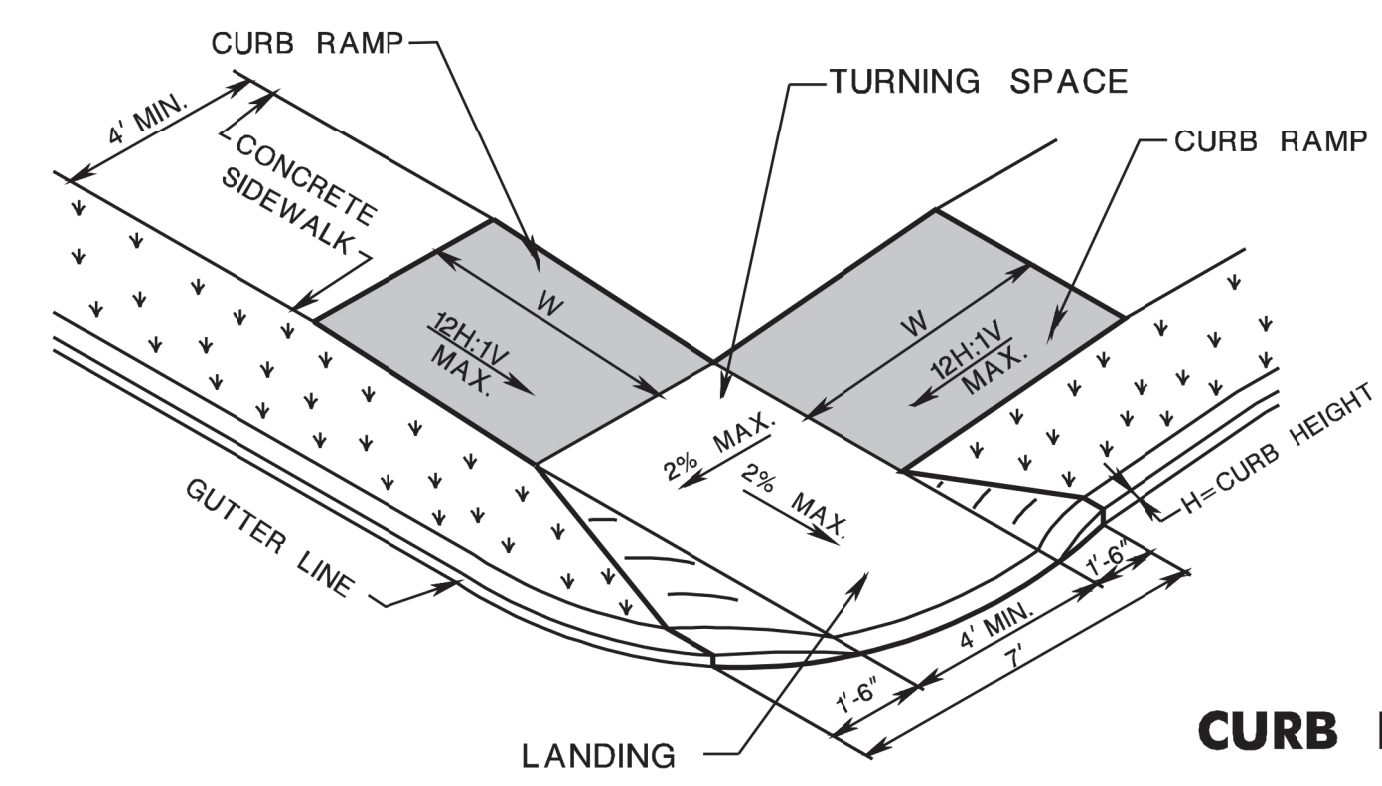
CURB RAMP TYPE 5



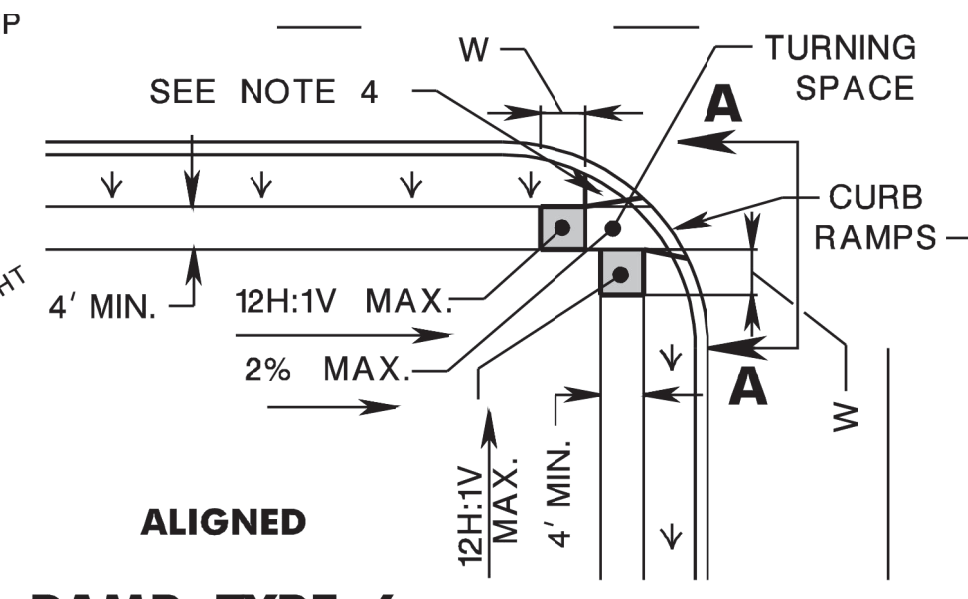
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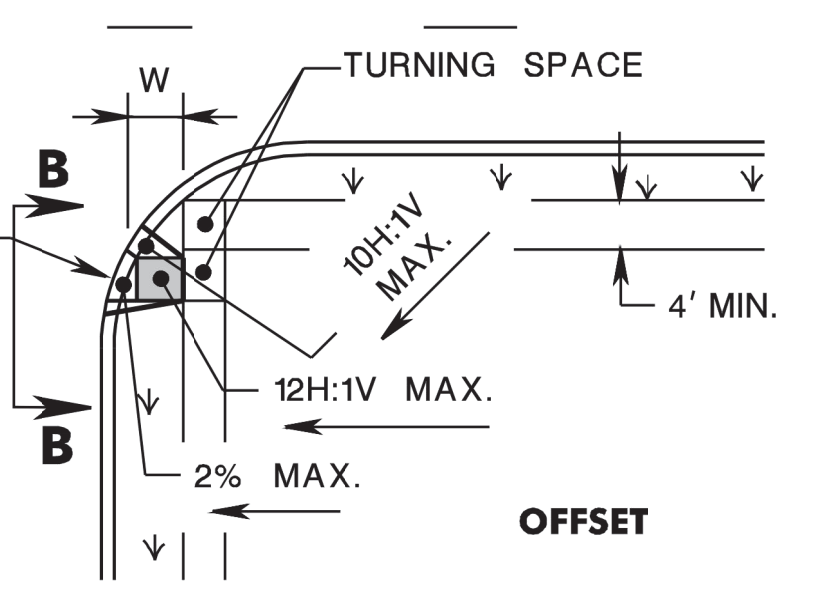
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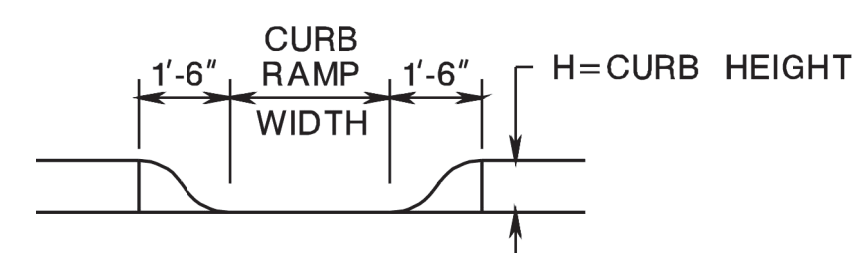
CURB RAMP TYPE 6



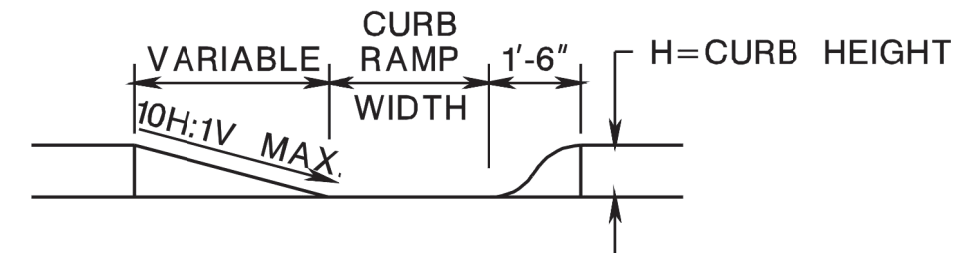
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OFFSET

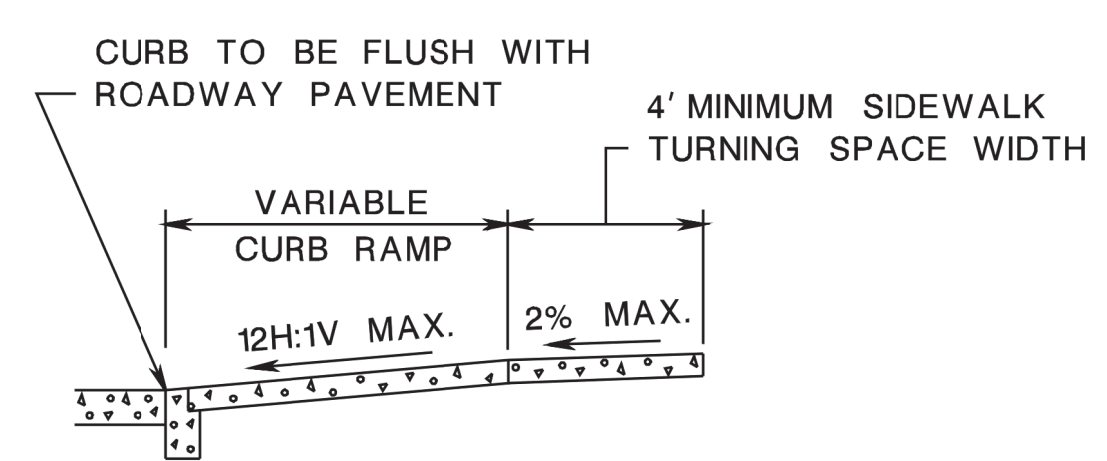


SECTION A-A

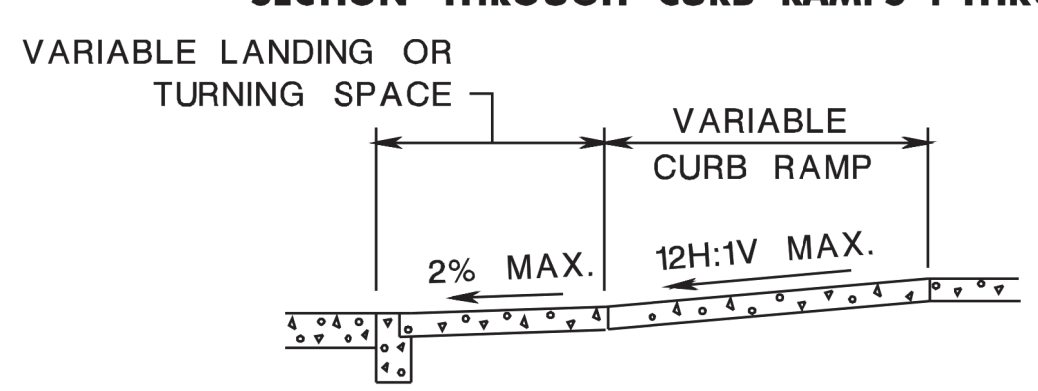


SECTION B-B

NOTE:
CURB RAMP OPENING TO BE FLUSH WITH ROADWAY PAVEMENT (CURB RAMP TYPES 5 & 6).



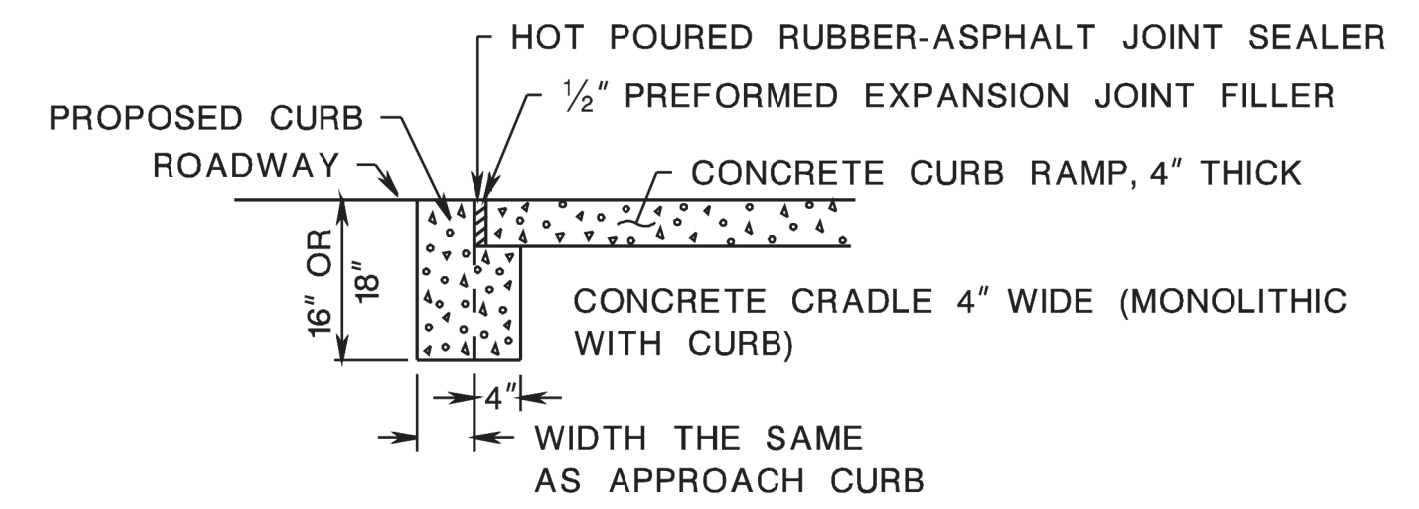
SECTION THROUGH CURB RAMPS 1 THROUGH 4



SECTION THROUGH CURB RAMPS 5 AND 6

NOTES:

- KEEP TURNING SPACE, APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP CLEAR OF OBSTRUCTIONS THAT PROTRUDE ABOVE THE SURFACE.
- FOR DIMENSIONS SEE CD-606-3 AND CD-606-4
- CURB (DROPPED CURB) GUTTERLINE TO BE FLUSH WITH ROADWAY PAVEMENT THE ENTIRE WIDTH OF THE RAMP (4 FEET MIN.) AT ALL CURB RAMPS.
- FOR CURB RAMP TYPES 5 AND 6, IF A GRASS BUFFER DOES NOT EXIST, SLOPE CURB TO EQUAL SLOPE OF ADJACENT CURB RAMP.
- SIDEWALK AND CURB RAMP WITHIN AREA ENCLOSED BY HEAVY LINES INDICATES THE PAY LIMIT FOR CONCRETE SIDEWALK OF THE APPROPRIATE ADJACENT THICKNESS.
- CURB AND HEADER WITHIN AREA ENCLOSED BY HEAVY LINES INDICATES THE PAY LIMIT FOR VERTICAL CURB OR SLOPING CURB OF THE APPROPRIATE ADJACENT SIZE AND KIND.
- WHERE THE DISTANCE FROM THE GUTTER LINE TO THE OUTSIDE EDGE OF SIDEWALK IS 6 FEET OR LESS, USE CURB RAMP TYPE 7, INSTEAD OF CURB RAMP TYPE 1 THROUGH 4.
- CROSSWALKS AND STOP LINES MAY BE MARKED OR UNMARKED. SEE PLANS.
- THE 12H:1V MAX SLOPE IS THE RUNNING SLOPE FOR CURB RAMPS, BUT ONLY THE 12H:1V SLOPE MEASURED AS X₂ IS THE RUNNING SLOPE FOR TYPE 3 AND TYPE 4 CURB RAMPS. ENSURE THE RUNNING SLOPE OF CURB RAMPS DOES NOT REQUIRE ITS LENGTH TO EXCEED 15 FEET. THE RUNNING SLOPE MAY EXCEED THE 12H:1V MAX SLOPE SO AS NOT TO EXCEED THE 15 FEET MAXIMUM LENGTH.
- CURB RAMP TYPE 1 THROUGH 7 ARE NORMALLY PLACED ON THE RADIUS RETURN AT THE INTERSECTION AND ON A TANGENT SECTION AS DRAWN.



DROPPED CURB AND CRADLE

CONCRETE SIDEWALK
(PUBLIC SIDEWALK CURB RAMP)
N.T.S.

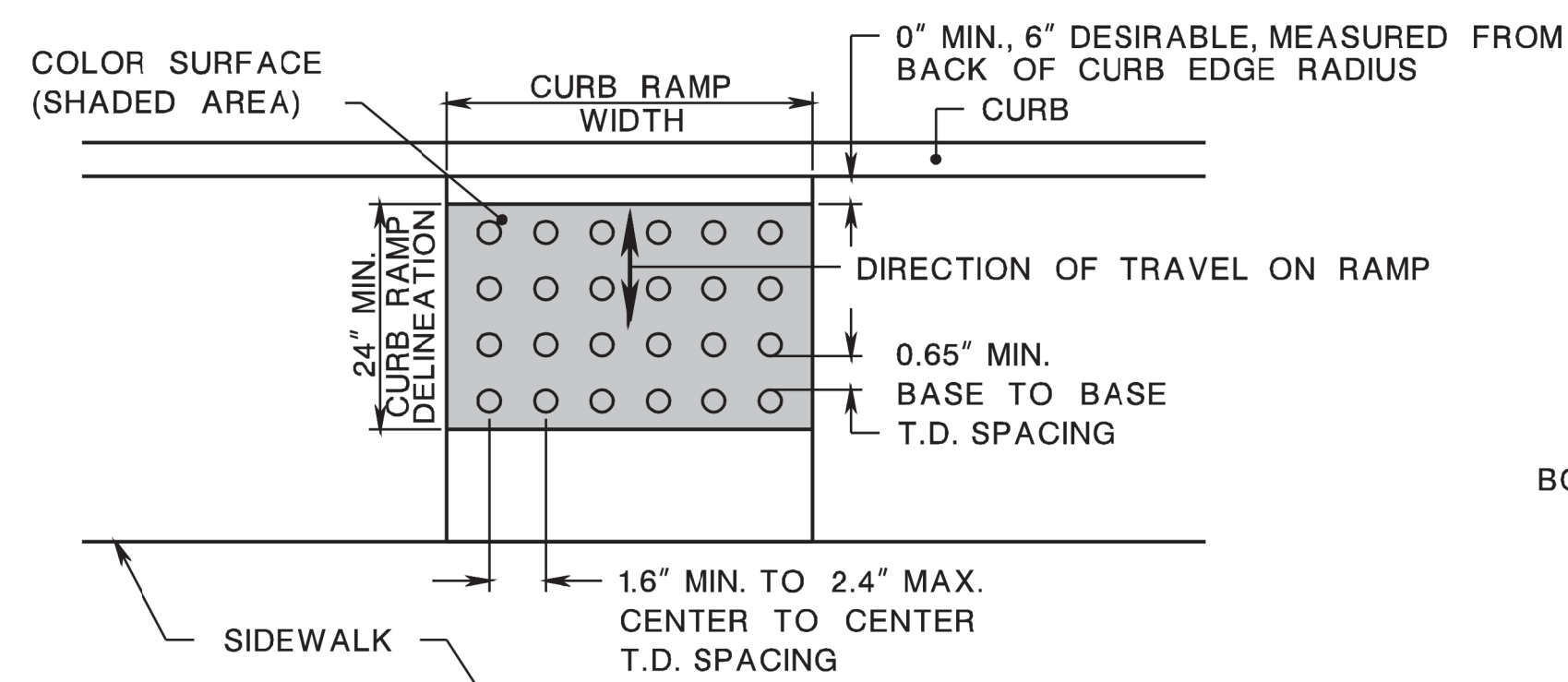
CD-606-1

NEW JERSEY DEPARTMENT OF TRANSPORTATION

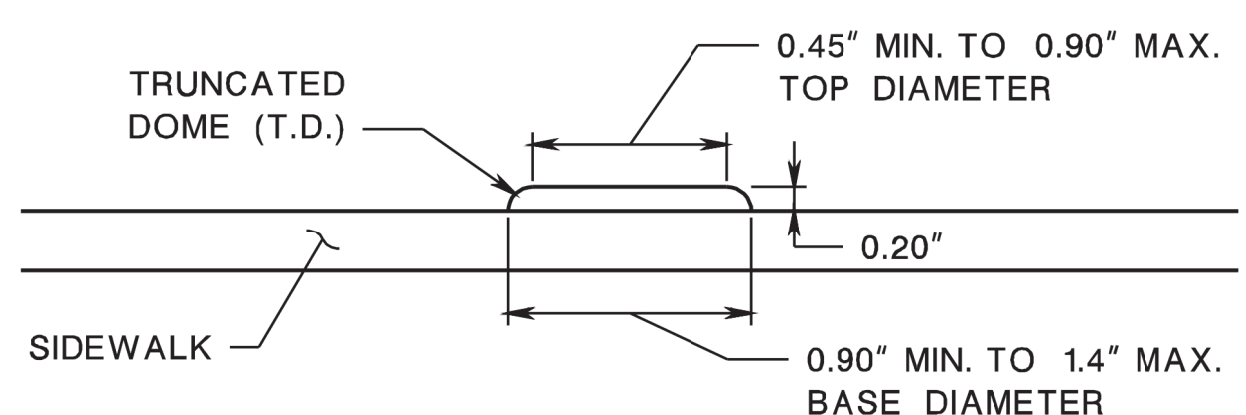
CONSTRUCTION DETAILS

CURB RAMPS

CD-606-1.1

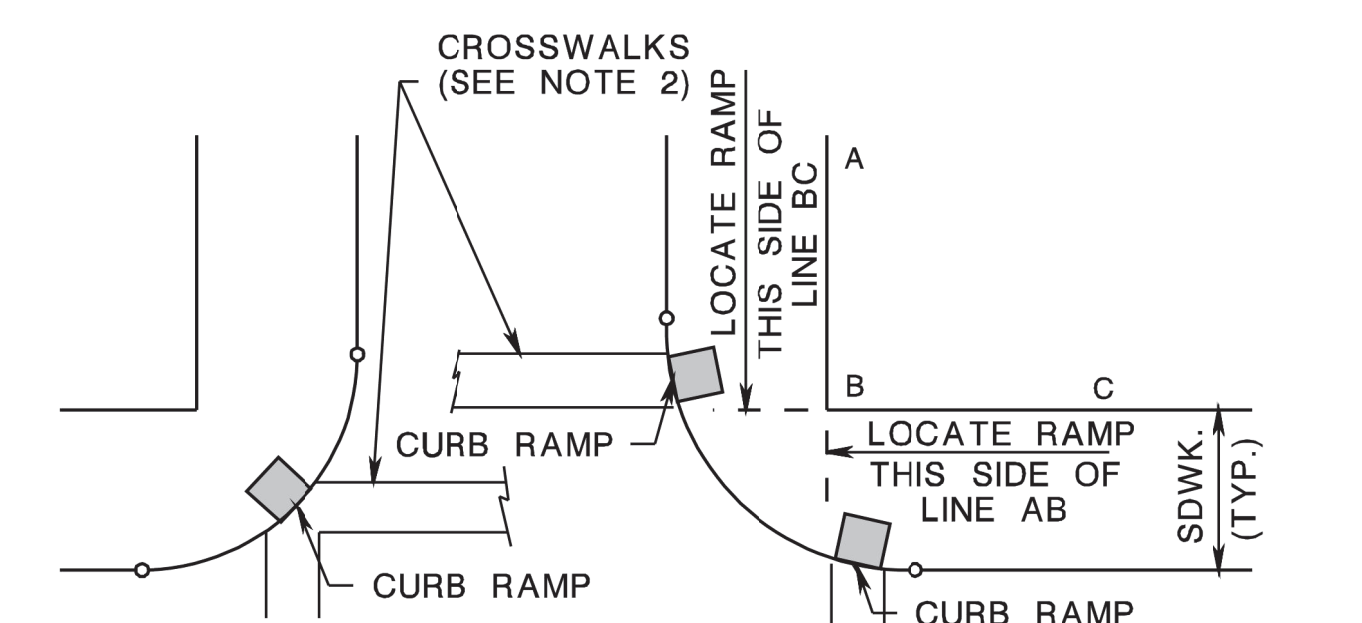


PLAN VIEW

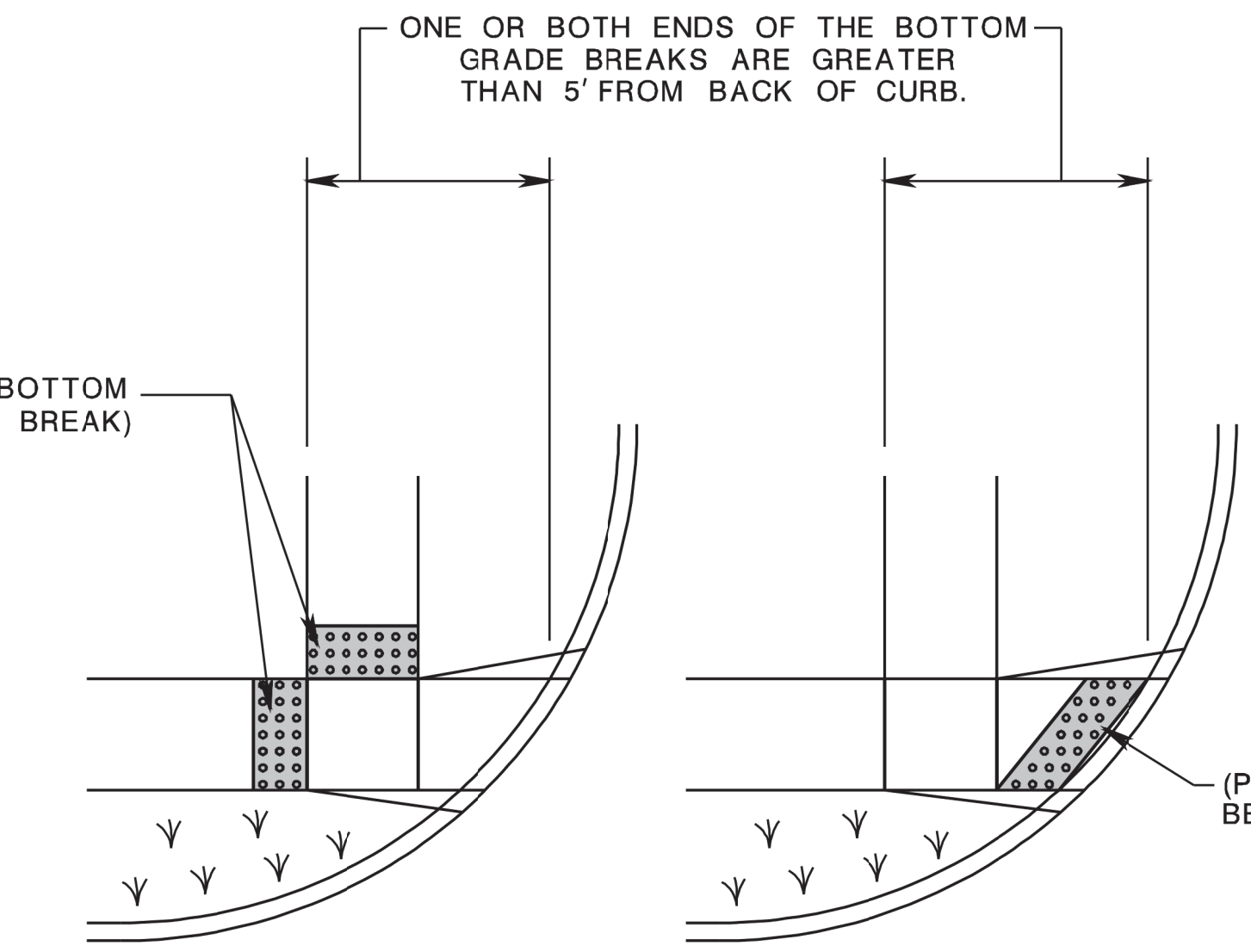
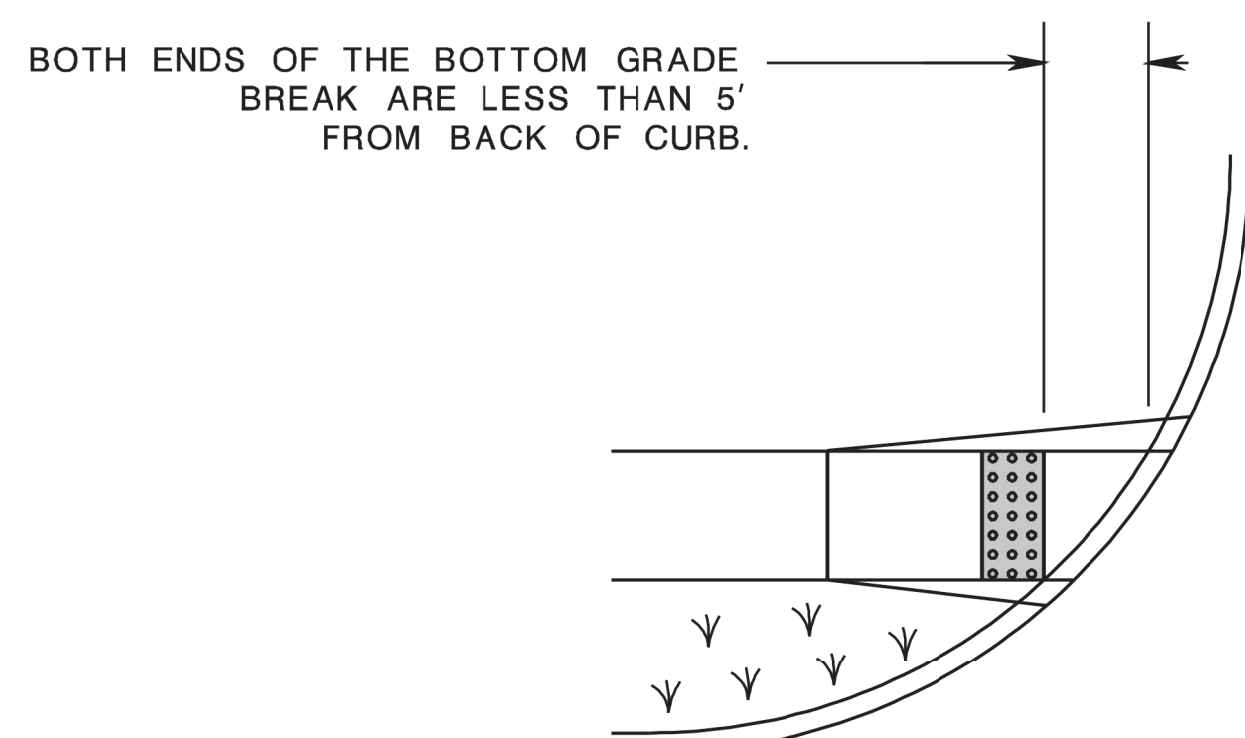


ELEVATION

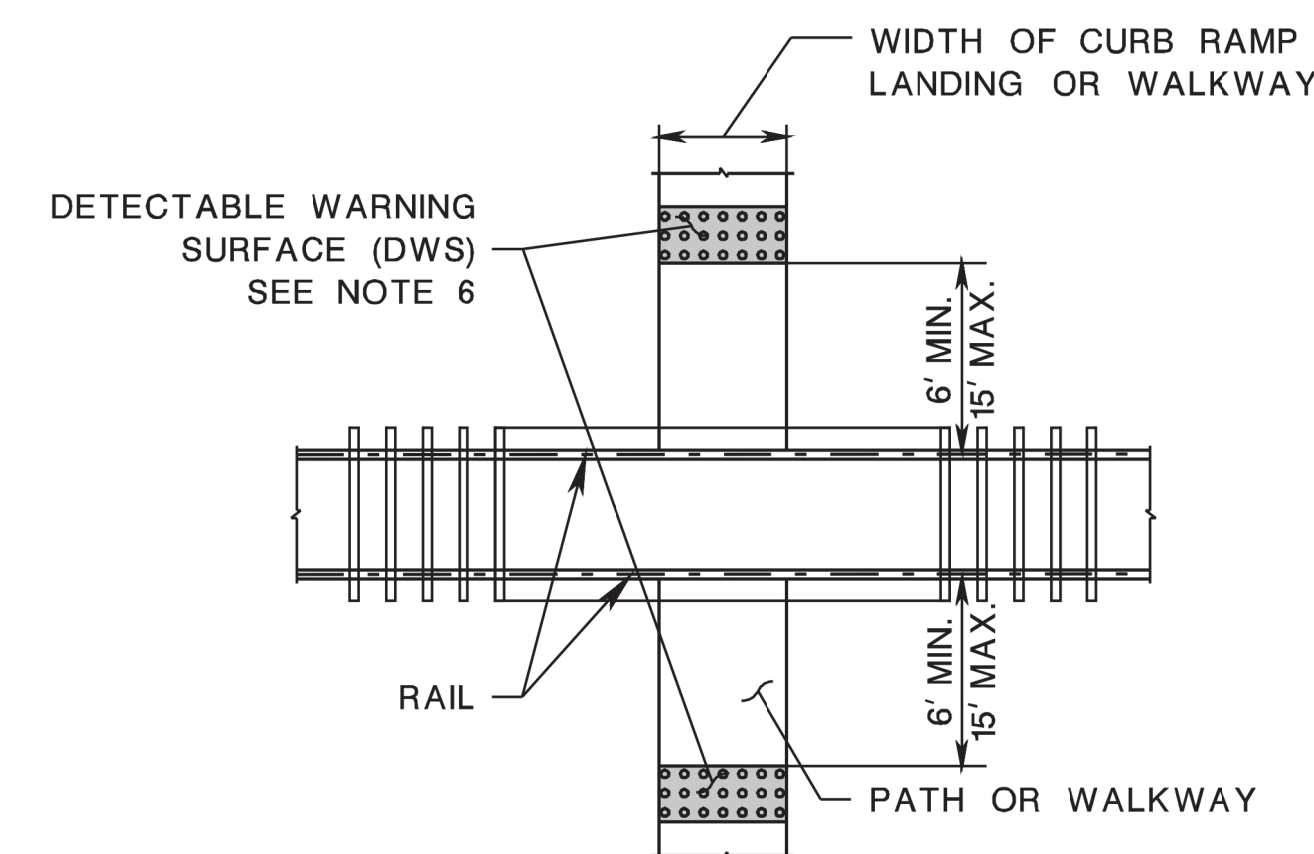
DETECTABLE WARNING SURFACE



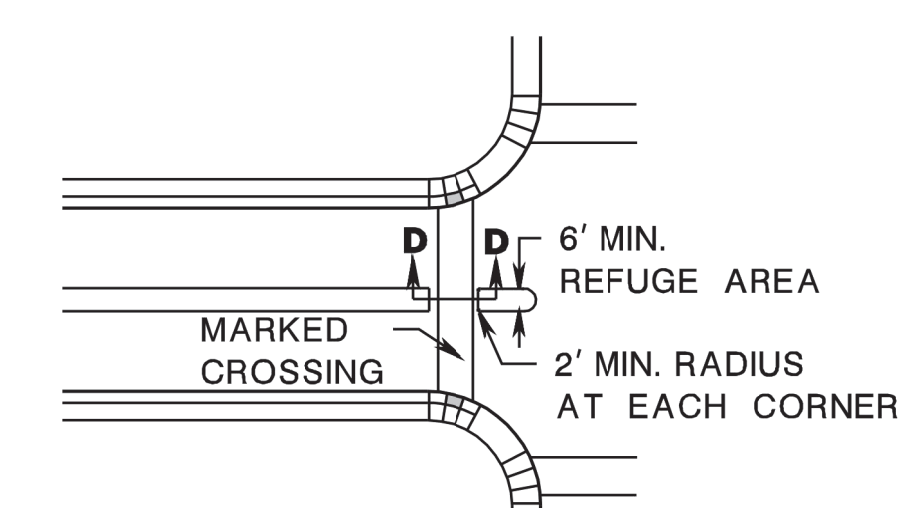
LOCATION OF CURB RAMP TYPES 1, 2, 3, 4, & 7 FOR CROSSING PARALLEL AND PERPENDICULAR TO HIGHWAY



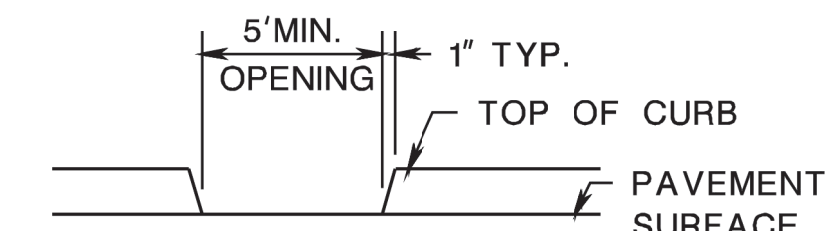
PLACEMENT OF DETECTABLE WARNING SURFACE FOR CURB RAMP TYPE 5 AND 6



PEDESTRIAN RAILROAD CROSSING



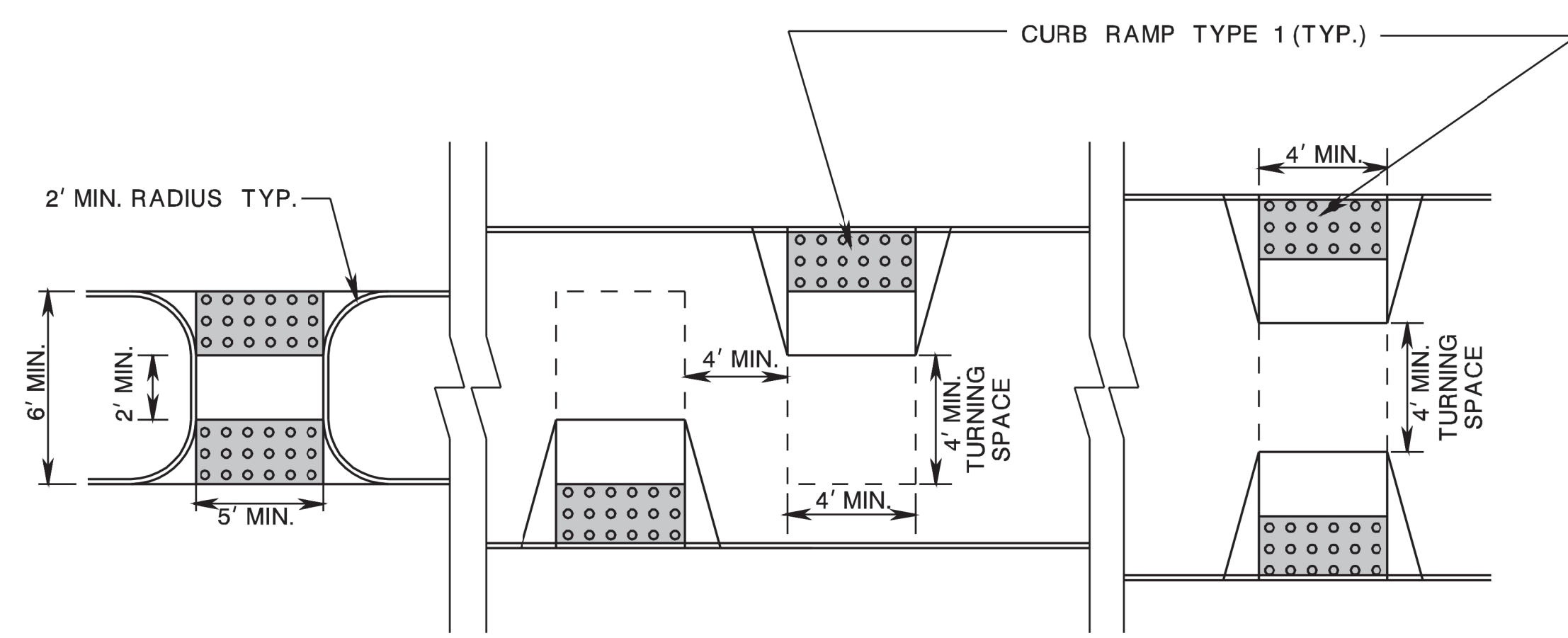
NOTE:
WHERE PRACTICAL, END LEFT TURN ISLAND OR DIVISIONAL ISLAND BEFORE CROSSWALK TO ELIMINATE CUT-THROUGH



SECTION D-D

NOTE:
5' MIN. WIDE OPENING TO BE FLUSH WITH ROADWAY PAVEMENT

PEDESTRIAN REFUGE ISLAND WALKWAY OPENING AT INTERSECTIONS



NARROW ISLAND WIDTH (SEE NOTE 3) MEDIUM ISLAND WIDTH (SEE NOTE 4) LARGE ISLAND WIDTH (SEE NOTE 4)

PEDESTRIAN REFUGE ISLAND

DETECTABLE WARNING SURFACE N.T.S.

- NOTES:**
- KEEP TURNING SPACE, APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP CLEAR OF OBSTRUCTIONS THAT PROTRUDE ABOVE THE SURFACE.
 - CROSSWALKS AND STOP LINES MAY BE MARKED OR UNMARKED, SEE PLANS.
 - FOR NARROW ISLAND WIDTH, SEE PEDESTRIAN REFUGE ISLAND WALKWAY OPENING AT INTERSECTIONS DETAIL.
 - FOR MEDIUM AND LARGE ISLAND WIDTH, SEE CURB RAMP TYPE 1 ON CD-606-1.
 - CONSTRUCT CURB RAMP TYPES 1, 2, 3, 4, & 7 PERPENDICULAR TO CURBLINE, AS SHOWN.
 - IF A CURB RAMP IS REQUIRED, THE LOCATION OF THE DETECTABLE WARNING SURFACE MUST BE AT THE BOTTOM OF THE RAMP AND WITHIN THE REQUIRED DISTANCE FROM THE RAIL.
 - A STANDARD DETECTABLE WARNING (DWS) SURFACE IS NOT AVAILABLE TO FIT THIS APPLICATION, AND THEREFORE ONE WILL NEED TO BE CUSTOMIZED. THE DWS SHOULD COVER THE ENTIRE WIDTH OF THE RAMP. THE ROWS OF DOMES ON THE DWS SHOULD FOLLOW THE DIRECTION OF TRAVEL OF THE RAMP, SO PEDESTRIANS WHO USE MOBILE DEVICES CAN TRACK BETWEEN THE DOMES.

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CD-606-2
NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

CD-606-2.1

CURB RAMP TYPE 1

0.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	2.50	2.50	9.00
4	4	3.33	3.33	10.67
5	5	4.17	4.17	12.33
6	6	5.00	5.00	14.00
7	7	5.83	5.83	15.67
8	8	6.67	6.67	17.33
9	9	7.50	7.50	19.00

1.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	2.78	2.27	9.05
4	4	3.70	3.03	10.73
5	5	4.63	3.79	12.42
6	6	5.56	4.55	14.10
7	7	6.48	5.30	15.78
8	8	7.41	6.06	17.47
9	9	8.33	6.82	19.15

2.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	3.13	2.08	9.21
4	4	4.17	2.78	10.94
5	5	5.21	3.47	12.68
6	6	6.25	4.17	14.42
7	7	7.29	4.86	16.15
8	8	8.33	5.56	17.89
9	9	9.38	6.25	19.63

3.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	3.57	1.92	9.49
4	4	4.76	2.56	11.33
5	5	5.95	3.21	13.16
6	6	7.14	3.85	14.99
7	7	8.33	4.49	16.82
8	8	9.52	5.13	18.65
9	9	10.71	5.77	20.48

4.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	4.17	1.79	9.95
4	4	5.56	2.38	11.94
5	5	6.94	2.98	13.92
6	6	8.33	3.57	15.90
7	7	9.72	4.17	17.89
8	8	11.11	4.76	19.87
9	9	12.50	5.36	21.86

5.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	5.00	1.67	10.67
4	4	6.67	2.22	12.89
5	5	8.33	2.78	15.11
6	6	10.00	3.33	17.33
7	7	11.67	3.89	19.56
8	8	13.33	4.44	21.78
9	9	15.00	5.00	24.00

6.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	6.25	1.56	11.81
4	4	8.33	2.08	14.42
5	5	10.42	2.60	17.02
6	6	12.50	3.13	19.63
7	7	14.58	3.65	22.23
8	8	16.67	4.17	24.84
9	9	18.75	4.69	27.45

7.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	8.33	1.47	13.80
4	4	11.11	1.96	17.07
5	5	13.89	2.45	20.34
6	6	16.67	2.94	23.61
7	7	19.45	3.43	26.88
8	8	22.23	3.92	30.15
9	9	25.00	4.41	33.42

CURB RAMP TYPE 3

0.0 % GUTTER LINE PROFILE									
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET	
3	2.75	2.50	2.50	9.00	2.75	0.91	0.91	5.82	
4	2.75	3.33	3.33	10.67	2.75	1.91	1.91	7.82	
5	2.75	4.17	4.17	12.33	2.75	2.91	2.91	9.82	
6	2.75	5.00	5.00	14.00	2.75	3.91	3.91	11.83	
7	2.75	5.83	5.83	15.67	2.75	4.91	4.91	13.83	
8	2.75	6.67	6.67	17.33	2.75	5.91	5.91	15.83	
9	2.75	7.50	7.50	19.00	2.75	6.91	6.91	17.83	

1.0 % GUTTER LINE PROFILE									
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET	
3	3.0	3.33	3.33	10.67	3.0	1.72	1.72	7.44	
4	3.0	4.17	4.17	12.33	3.0	2.72	2.72	9.44	
5	3.0	5.00	5.00	14.00	3.0	3.72	3.72	11.45	
6	3.0	5.83	5.83	15.67	3.0	4.72	4.72	13.45	
7	3.0	6.67	6.67	17.33	3.0	5.72	5.72	15.45	
8	3.0	7.50	7.50	19.00	3.0	6.72	6.72	17.45	

2.0 % GUTTER LINE PROFILE									
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET	
3	3.5	3.33	3.33	10.67	3.5	1.34	1.34	6.68	
4	3.5	4.17	4.17	12.33	3.5	2.34	2.34	8.68	
5	3.5	5.00	5.00	14.00	3.5	3.34	3.34	10.69	
6	3.5	5.83	5.83	15.67	3.5	4.34	4.34	12.69	
7	3.5	6.67	6.67	17.33	3.5	5.34	5.34	14.69	
8	3.5	7.50	7.50	19.00	3.5	6.34	6.34	16.69	

3.0 % GUTTER LINE PROFILE									
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET	
3	4.0	3.33	3.33	10.67	4.0	0.96	0.96	7.92	
4	4.0	4.17	4.17	12.33	4.0	1.96	1.96	9.93	
5	4.0	5.00	5.00	14.00	4.0	2.96	2.96	11.93	
6	4.0	5.83	5.83	15.67	4.0	3.96	3.96	13.93	
7	4.0	6.67	6.67	17.33	4.0	4.96	4.96	15.93	
8	4.0	7.50	7.50	19.00	4.0	5.96	5.96	17.93	

4.0 % GUTTER LINE PROFILE									
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET	
3	2.75	4.17	1.79	9.95	2.75	1.75	0.62	6.37	
4	2.75	5.56	2.38	11.94	2.75	3.68	1.29	8.97	
5	2.75	6.94	2.98	13.92	2.75	5.60	1.97	11.57	
6	2.75	8.33	3.57	15.90	2.75	7.53	2.64	14.17	
7	2.75	9.72	4.17	17.89	2.75	9.45	3.32	16.77	
8	2.75	11.11	4.76	19.87	2.75	11.38	4.00	19.37	
9	2.75	12.50	5.36	21.86	2.75	13.30	4.67	21.97	

5.0 % GUTTER LINE PROFILE									
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET	
3	3.0	4.17	1.79	9.95	3.0	1.39	0.49	5.88	
4	3.0	5.56	2.38	11.94	3.0	3.31	1.16	8.48	
5	3.0	6.94	2.98	13.92	3.0	5.24	1.84	11.08	
6	3.0	8.33	3.57	15.90	3.0	7.16	2.52	13.68	
7	3.0	9.72	4.17	17.89	3.0	9.09	3.19	16.28	
8	3.0	11.11	4.76	19.87	3.0	11.01	3.87	18.88	
9	3.0	12.50	5.36	21.86	3.0	12.94	4.54	21.48	

6.0 % GUTTER LINE PROFILE									
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET	
3	3.5	4.17	1.79	9.95	3.5	0.66	0.23	4.89	
4	3.5	5.56	2.38	11.94	3.5	2.58	0.91	7.49	
5	3.5	6.94	2.98	13.92	3.5	4.51	1.58	10.09	
6	3.5	8.33	3.57	15.90	3.5	6.43	2.26	12.69	
7	3.5	9.72	4.17	17.89	3.5	8.36	2.93	15.29	
8	3.5	11.11	4.76	19.87	3.5	10.28	3.61	17.89	
9	3.5	12.50	5.36	21.86	3.5	12.20	4.29	20.49	

7.0 % GUTTER LINE PROFILE									
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET	
3	4.0	4.17	1.79	9.95	4.0	1.85	0.65	6.50	
4	4.0	5.56	2.38	11.94	4.0	3.78	1.33	9.10	
5	4.0	6.94	2.98	13.92	4.0	5.70	2.00	11.70	
6	4.0	8.33	3.57	15.90	4.0	7.62	2.68	14.30	
7	4.0	9.72	4.17	17.89	4.0	9.55	3.35	16.90	
8	4.0	11.11	4.76	19.87	4.0	11.47	4.03	19.50	
9	4.0	12.50	5.36	21.86	4.0	13.39	4.71	22.10	

0-8 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	3	1.50	1.50	7.00
4	4	1.50	1.50	7.00
5	5	1.50	1.50	7.00
6	6	1.50	1.50	7.00
7	7	1.50	1.50	7.00
8	8	1.50	1.50	7.00
9	9	1.50	1.50	7.00

1.0 % GUTTER LINE PROFILE									
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET	
3	2.75	2.78	2.27	9.05	2.75	1.04	0.81	5.85	
4	2.75	3.70	3.03	10.73	2.75	2.17	1.71	7.88	
5	2.75	4.63	3.79	12.42	2.75	3.31	2.60	9.91	
6	2.75	5.56	4.55	14.10	2.75	4.45	3.49	11.94	
7	2.75	6.48	5.30	15.78	2.75	5.58	4.39	13.97	
8	2.75	7.41	6.06	17.47	2.75	6.72	5.28	16.00	
9	2.75	8.33	6.82	19.15	2.75	7.86	6.17	18.03	

2.0 % GUTTER LINE PROFILE									
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET	
3	3.0	3.13	2.08	9.21	3.0	0.82	0.64	5.46	
4	3.0	4.17	2.78	10.94	3.0	1.96	1.54	7.49	
5	3.0	5.21	3.47	12.68	3.0	3.09	2.43	9.52	
6	3.0	6.25	4.17	14.42	3.0	4.23	3.32	11.55	
7	3.0	7.29	4.86	16.15	3.0	5.37	4.22	13.58	
8	3.0	8.33	5.56	17.89	3.0	6.50	5.11	15.61	
9	3.0	9.38	6.25						

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CURB RAMP TYPE 4

0.0 % GUTTER LINE PROFILE							
H INCHES	W FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET		
3	2.75	2.75	0.91	0.91	5.82		
4			1.91	1.91	7.82		
5			2.91	2.91	9.82		
6			3.91	3.91	11.82		
7			4.91	4.91	13.83		
8			5.91	5.91	15.83		
9			6.91	6.91	17.83		
3			**	**	**	**	**
4			1.72	1.72	7.44		
5	2.72	2.72	9.44				
6	3.72	3.72	11.45				
7	4.72	4.72	13.45				
8	5.72	5.72	15.45				
9	6.72	6.72	17.45				
3	**	**	**	**	**		
4	1.34	1.34	6.68				
5	2.34	2.34	8.68				
6	3.34	3.34	10.69				
7	4.34	4.34	12.69				
8	5.34	5.34	14.69				
9	6.34	6.34	16.69				
3	**	**	**	**	**		
4	**	**	**	**	**		
5	1.96	1.96	7.92				
6	2.96	2.96	9.93				
7	3.96	3.96	11.93				
8	4.96	4.96	13.93				
9	5.96	5.96	15.93				

4.0 % GUTTER LINE PROFILE					
H INCHES	W FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	2.75	2.75	1.75	0.62	6.37
4			3.68	1.29	8.97
5			5.60	1.97	11.57
6			7.53	2.64	14.17
7			9.45	3.32	16.77
8			11.38	4.00	19.37
9			13.30	4.67	21.97
3			1.39	0.49	5.88
4			3.31	1.16	8.48
5	5.24	1.84	11.08		
6	7.16	2.52	13.68		
7	9.09	3.19	16.28		
8	11.01	3.87	18.88		
9	12.94	4.54	21.48		
3	0.66	0.23	4.89		
4	2.58	0.91	7.49		
5	4.51	1.58	10.09		
6	6.43	2.26	12.69		
7	8.36	2.93	15.29		
8	10.28	3.61	17.89		
9	12.20	4.29	20.49		
3	**	**	**	**	**
4	1.85	0.65	6.50		
5	3.78	1.33	9.10		
6	5.70	2.00	11.70		
7	7.62	2.68	14.30		
8	9.55	3.35	16.90		
9	11.47	4.03	19.50		

1.0 % GUTTER LINE PROFILE					
H INCHES	W FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	2.75	2.75	1.04	0.81	5.85
4			2.17	1.71	7.88
5			3.31	2.60	9.91
6			4.45	3.49	11.94
7			5.58	4.39	13.97
8			6.72	5.28	16.00
9			7.86	6.17	18.03
3			0.82	0.64	5.46
4			1.96	1.54	7.49
5	3.09	2.43	9.52		
6	4.23	3.32	11.55		
7	5.37	4.22	13.58		
8	6.50	5.11	15.61		
9	7.64	6.00	17.64		
3	0.39	0.30	4.69		
4	1.53	1.20	6.72		
5	2.66	2.09	8.75		
6	3.80	2.98	10.78		
7	4.94	3.88	12.81		
8	6.07	4.77	14.84		
9	7.21	5.66	16.87		
3	**	**	**	**	**
4	1.09	0.86	5.95		
5	2.23	1.75	7.98		
6	3.37	2.65	10.01		
7	4.50	3.54	12.04		
8	5.64	4.43	14.07		
9	6.78	5.32	16.10		

5.0 % GUTTER LINE PROFILE					
H INCHES	W FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	2.75	2.75	2.28	0.57	6.85
4			4.78	1.19	9.98
5			7.29	1.82	13.10
6			9.79	2.45	16.23
7			12.29	3.07	19.36
8			14.79	3.70	22.49
9			17.29	4.32	25.62
3			1.80	0.45	6.26
4			4.31	1.08	9.38
5	6.81	1.70	12.51		
6	9.31	2.33	15.64		
7	11.81	2.95	18.77		
8	14.32	3.58	21.89		
9	16.82	4.20	25.02		
3	0.85	0.21	5.07		
4	3.36	0.84	8.20		
5	5.86	1.46	11.32		
6	8.36	2.09	14.45		
7	10.86	2.71	17.58		
8	13.37	3.34	20.71		
9	15.87	3.96	23.84		
3	**	**	**	**	**
4	2.41	0.60	7.01		
5	4.91	1.23	10.14		
6	7.41	1.85	13.26		
7	9.91	2.48	16.39		
8	12.42	3.10	19.52		
9	14.92	3.73	22.65		

2.0 % GUTTER LINE PROFILE					
H INCHES	W FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	2.75	2.75	1.20	0.73	5.93
4			2.52	1.54	8.06
5			3.83	2.35	10.18
6			5.15	3.16	12.30
7			6.47	3.96	14.43
8			7.78	4.77	16.55
9			9.10	5.58	18.67
3			0.95	0.58	5.53
4			2.27	1.39	7.65
5	3.58	2.20	9.78		
6	4.90	3.00	11.90		
7	6.22	3.81	14.02		
8	7.53	4.62	16.15		
9	8.85	5.42	18.27		
3	0.45	0.28	4.72		
4	1.77	1.08	6.85		
5	3.08	1.89	8.97		
6	4.40	2.70	11.09		
7	5.72	3.50	13.22		
8	7.03	4.31	15.34		
9	8.35	5.12	17.46		
3	**	**	**	**	**
4	1.27	0.78	6.04		
5	2.58	1.58	8.16		
6	3.90	2.39	10.29		
7	5.22	3.20	12.41		
8	6.53	4.00	14.53		
9	7.85	4.81	16.66		

6.0 % GUTTER LINE PROFILE					
H INCHES	W FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	2.75	2.75	3.26	0.53	7.79
4			6.84	1.11	11.95
5			10.41	1.69	16.10
6			13.99	2.27	20.26
7			17.56	2.86	24.41
8			21.14	3.44	28.57
9			24.72	4.02	32.72
3			2.58	0.42	7.00
4			6.16	1.00	11.16
5	9.73	1.58	15.31		
6	13.31	2.16	19.47		
7	16.88	2.75	23.62		
8	20.46	3.33	27.77		
9	24.04	3.91	31.92		
3	1.22	0.20	5.42		
4	4.80	0.78	9.58		
5	8.37	1.36	13.74		
6	11.95	1.94	17.89		
7	15.52	2.52	22.04		
8	19.10	3.10	26.19		
9	22.68	3.69	30.34		
3	**	**	**	**	**
4	3.44	0.56	8.00		
5	7.02	1.14	12.16		
6	10.59	1.72	16.31		
7	14.17	2.30	20.47		
8	17.75	2.89	24.62		
9	21.33	3.47	28.77		

3.0 % GUTTER LINE PROFILE					
H INCHES	W FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	2.75	2.75	1.42	0.67	6.09
4			2.99	1.41	8.39
5			4.55	2.14	10.69
6			6.11	2.88	12.99
7			7.68	3.61	15.29
8			9.24	4.35	17.59
9			10.81	5.08	19.89
3			1.13	0.53	5.66
4			2.69	1.27	7.96
5	4.25	2.00	10.26		
6	5.82	2.74	12.55		
7	7.38	3.47	14.85		
8	8.94	4.21	17.15		
9	10.51	4.94	19.45		
3	0.53	0.25	4.78		
4	2.10	0.99	7.08		
5	3.66	1.72	9.38		
6	5.22	2.46	11.68		
7	6.79	3.19	13.98		
8	8.35	3.93	16.28		
9	9.91	4.66	18.58		
3	**	**	**	**	**
4	1.50	0.71	6.21		
5	3.07	1.44	8.51		
6	4.63	2.18	10.81		
7	6.19	2.91	13.11		
8	7.76	3.65	15.41		
9	9.32	4.38	17.71		

7.0 % GUTTER LINE PROFILE					
H INCHES	W FEET	Y INCHES	X _{2U} FEET	X _{2L} FEET	L ₂ FEET
3	2.75	2.75	5.71	0.50	10.20
4			11.97	1.04	17.01
5			18.23	1.58	23.82
6			24.49	2.13	30.63
7			30.75	2.67	37.44
8			37.01	3.21	44.25
9			43.27	3.76	51.06
3			4.52	0.39	8.91
4			10.78	0.94	15.72
5	17.04	1.48	22.53		
6	23.30	2.02	29.34		
7	29.56	2.57	36.15		
8	35.82	3.11	42.96		
9	42.08	3.65	49.77		
3	2.14	0.19	6.32		
4	8.40	0.73	13.13		
5	14.67	1.27	19.94		
6	20.94	1.82	26.75		
7	27.20	2.36	33.56		
8	33.46	2.90	40.37		
9	39.72	3.45	47.18		
3	**	**	**	**	**
4	6.03	0.52	10.55		
5	12.29	1.07	17.36		
6	18.55	1.61	24.17		
7	24.81	2.15	30.98		
8	31.07	2.70	37.79		
9	37.33	3.24	44.60		

CURB RAMP TYPE 7

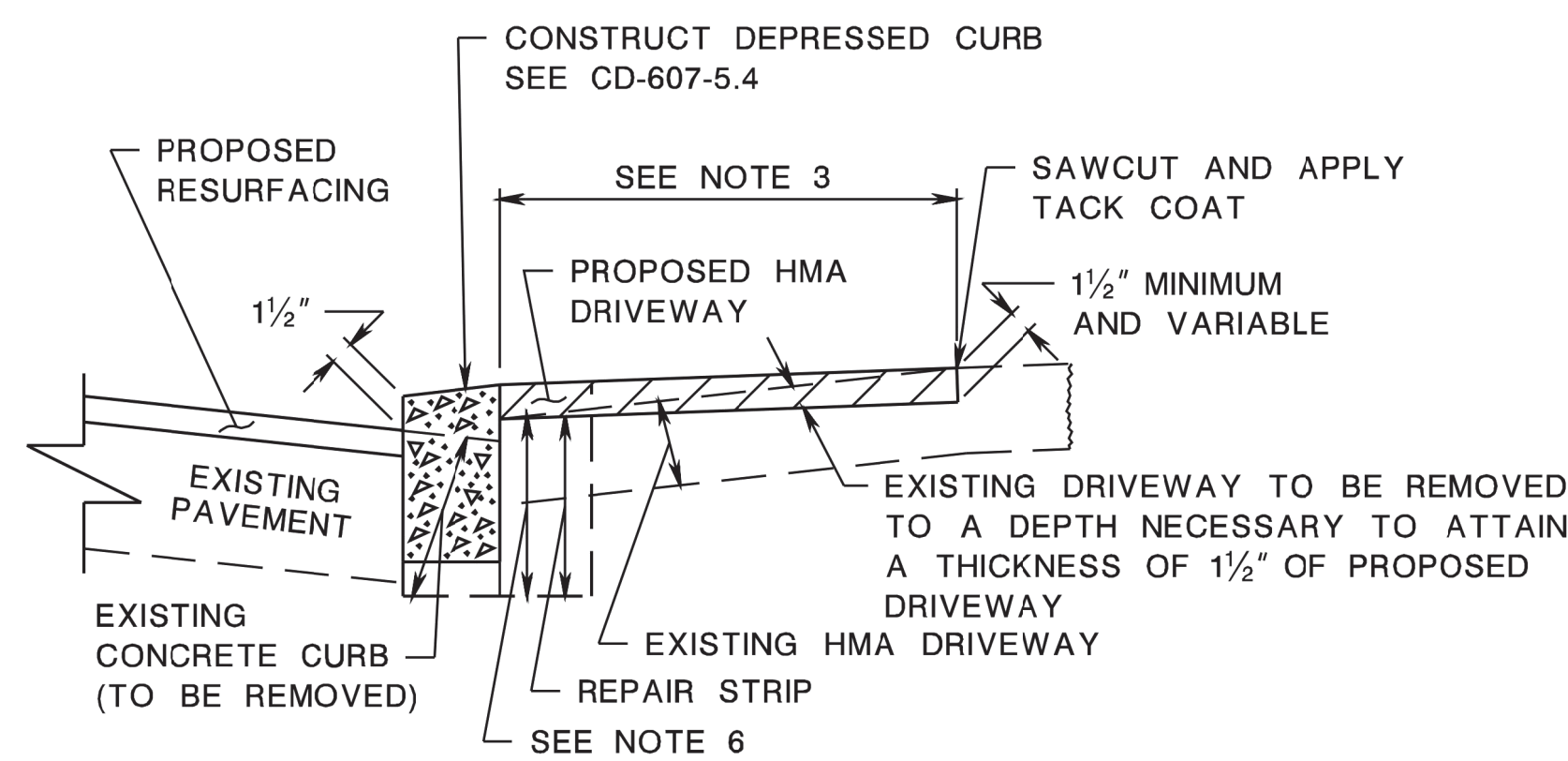
0.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	4' MIN. 7' MAX.	3.00	3.00	10.00
4		4.00	4.00	12.00
5		5.00	5.00	14.00
6		6.00	6.00	16.00
7		7.00	7.00	18.01
8		8.00	8.00	20.01
9		9.00	9.00	22.01

1.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	4' MIN. 7' MAX.	3.41	2.68	10.09
4		4.55	3.57	12.12
5		5.68	4.47	14.15
6		6.82	5.36	16.18
7		7.96	6.25	18.21
8		9.10	7.15	20.24
9		10.23	8.04	22.27

2.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	4' MIN. 7' MAX.	3.95	2.42	10.37
4		5.27	3.23	12.49
5		6.58	4.03	14.62
6		7.90	4.84	16.74
7		9.22	5.65	18.86
8		10.53	6.45	20.99
9		11.85	7.26	23.11

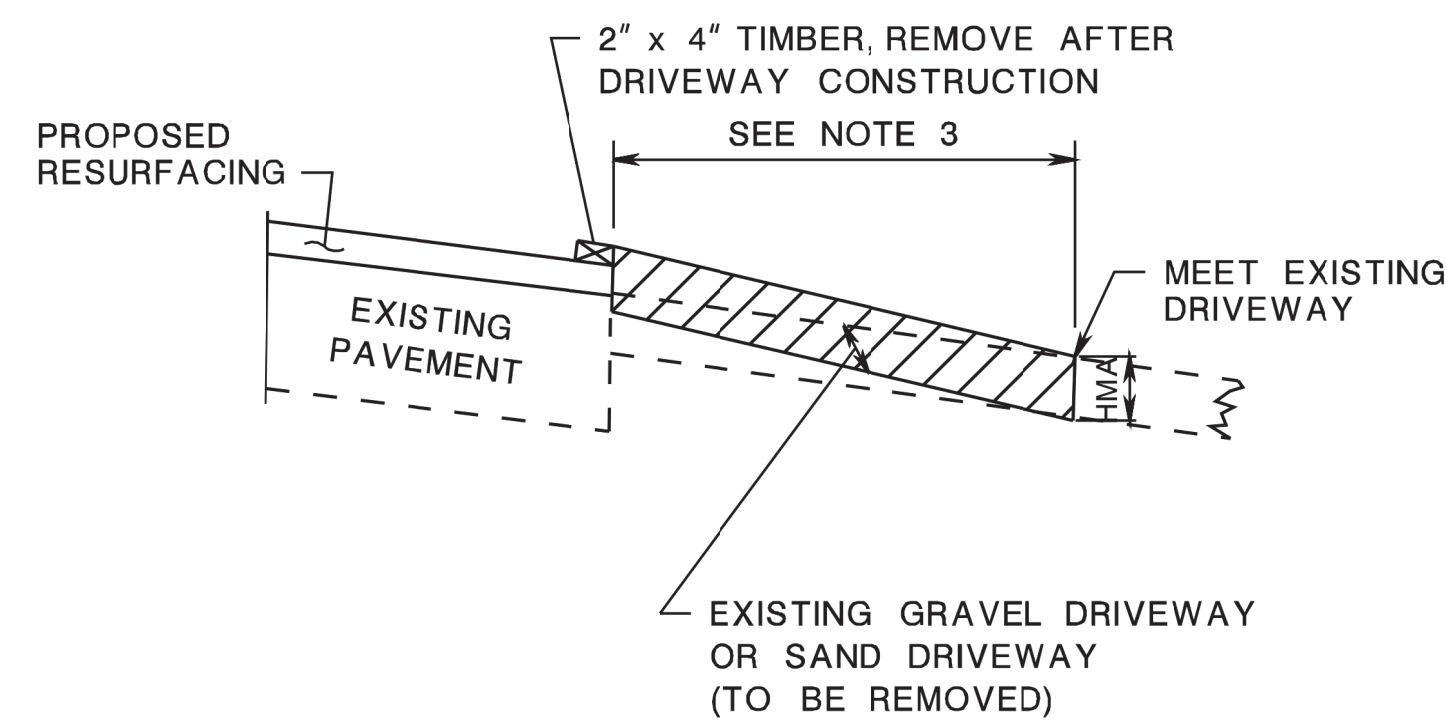
3.0 % GUTTER LINE PROFILE				
H INCHES	W FEET	X _{1U} FEET	X _{1L} FEET	L ₁ FEET
3	4' MIN. 7' MAX.	4.69	2.21	10.90
4		6.25	2.94	13.20
5		7.82	3.68	15.49
6		9.38	4.41	17.79
7		10.94	5.15	20.09
8		12.51	5.88	22.39
9		14.07	6.62	24.69

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TYPE A
**RESURFACING OF EXISTING HMA DRIVEWAY
 (WITH DEPRESSED CURB)**

CD-606-5.1



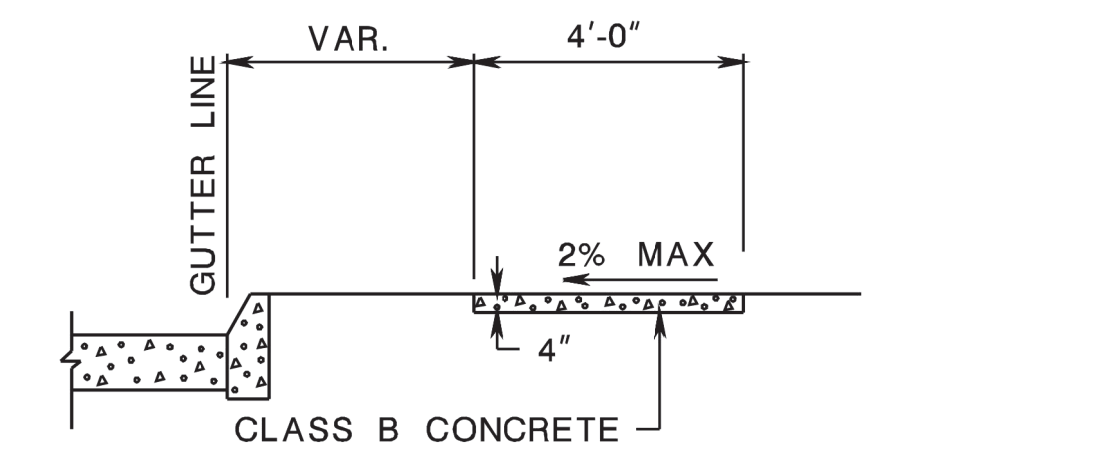
TYPE D
**CONSTRUCTION OF HMA DRIVEWAY
 OR CONVERSION OF EXISTING GRAVEL DRIVEWAY
 (WITHOUT DEPRESSED CURB)**

CD-606-5.4

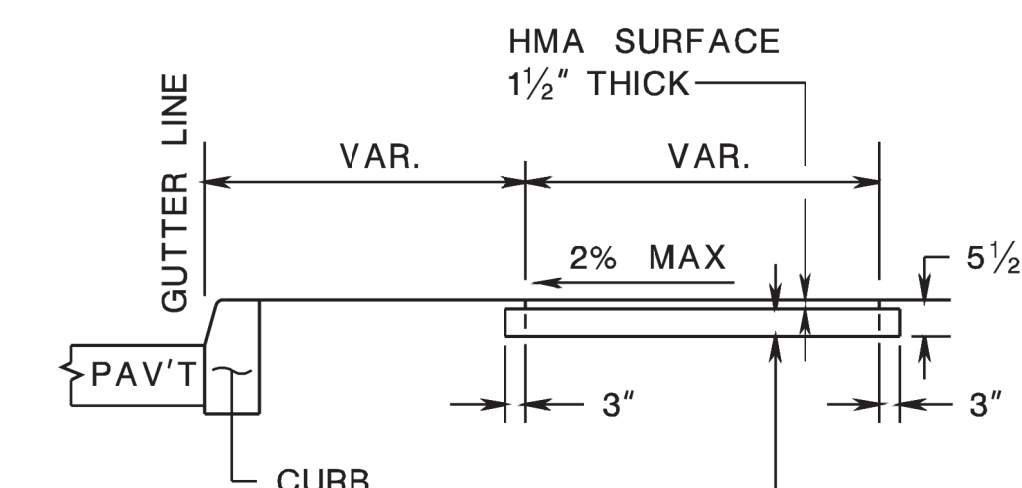
GENERAL NOTES:

1. ALL MATERIAL, REPAIR STRIPS, AND EXCAVATION FOR DRIVEWAY CONSTRUCTION TO BE INCLUDED IN THE BID PRICE FOR HMA DRIVEWAY, CONCRETE DRIVEWAY, OR CONCRETE CURB.
2. USE HMA SURFACE COURSE FOR HMA DRIVEWAY.
3. CONSTRUCT 5 FEET LONG DRIVEWAY UNLESS OTHERWISE SHOWN ON PLANS OR AS DIRECTED.
4. MAINTAIN EXISTING DIRECTION OF FLOW ON DRIVEWAY.
5. USE DENSE GRADED AGGREGATE BASE COURSE TO PROVIDE TEMPORARY ACCESS DURING DRIVEWAY CONSTRUCTION.
6. DENSE GRADED AGGREGATE BASE COURSE.
7. WHERE SIDEWALK CROSSES DRIVEWAY PROVIDE A 2% MAXIMUM SIDEWALK CROSS SLOPE WITHIN DRIVEWAY AREA.

CD-606-5.7

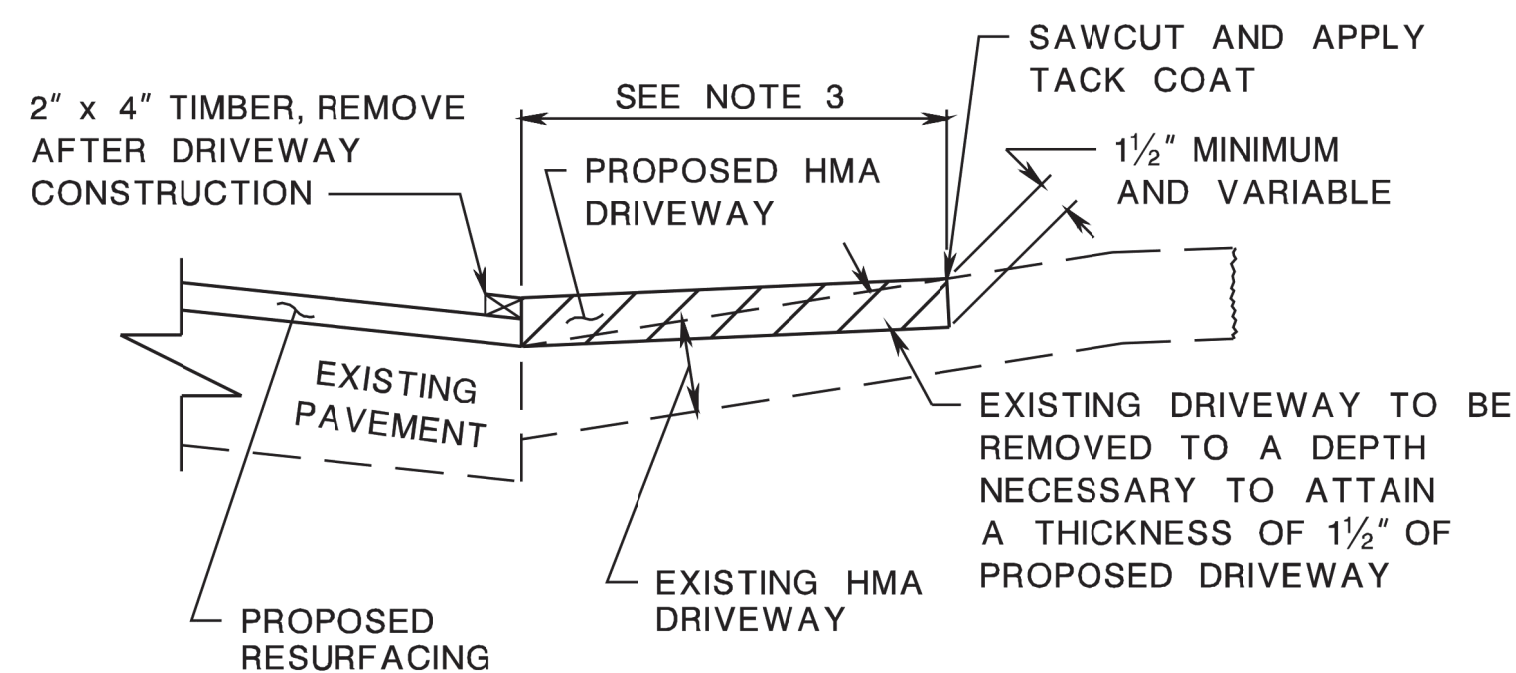


CONCRETE SIDEWALK, 4" THICK
 CD-606-5.9



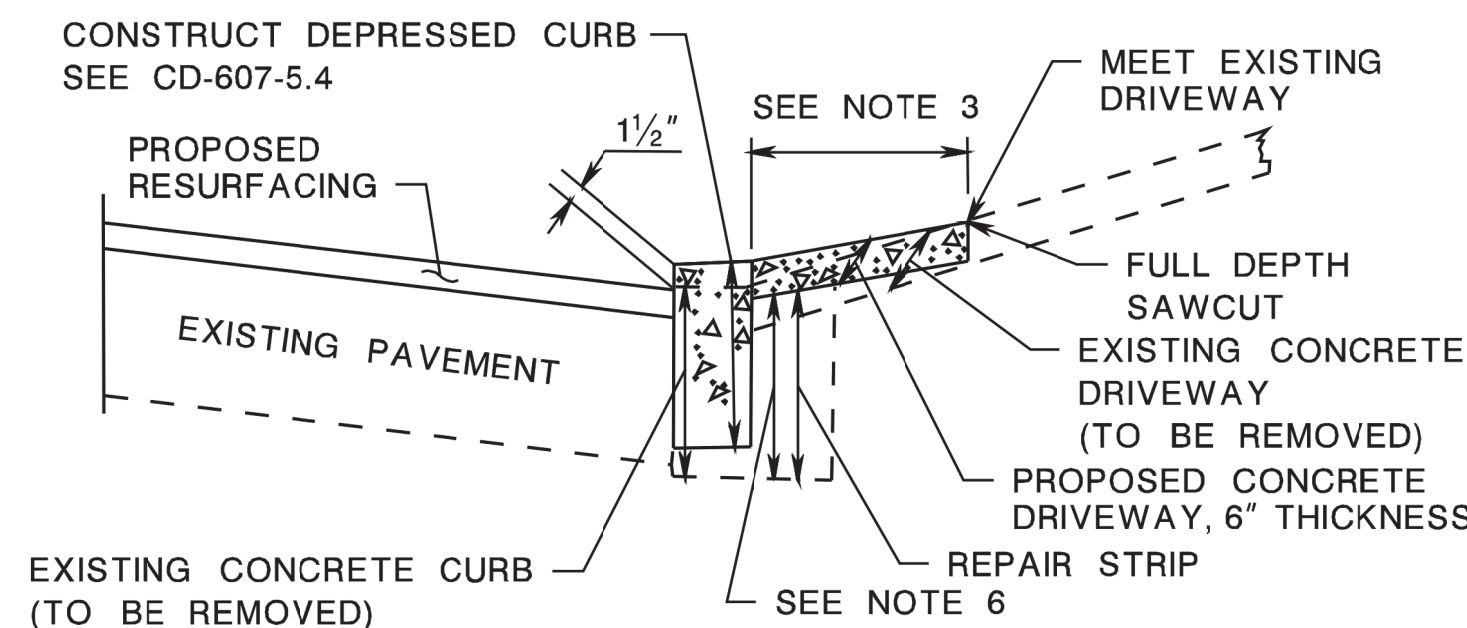
DENSE GRADED AGGREGATE BASE COURSE,
 4" THICK OR AGGREGATE BASE COURSE,
 4" THICK AGGREGATE BASE COURSE IS
 SOIL AGGREGATE, DESIGNATION I-5.

HMA SIDEWALK, 5 1/2" THICK
 CD-606-5.10



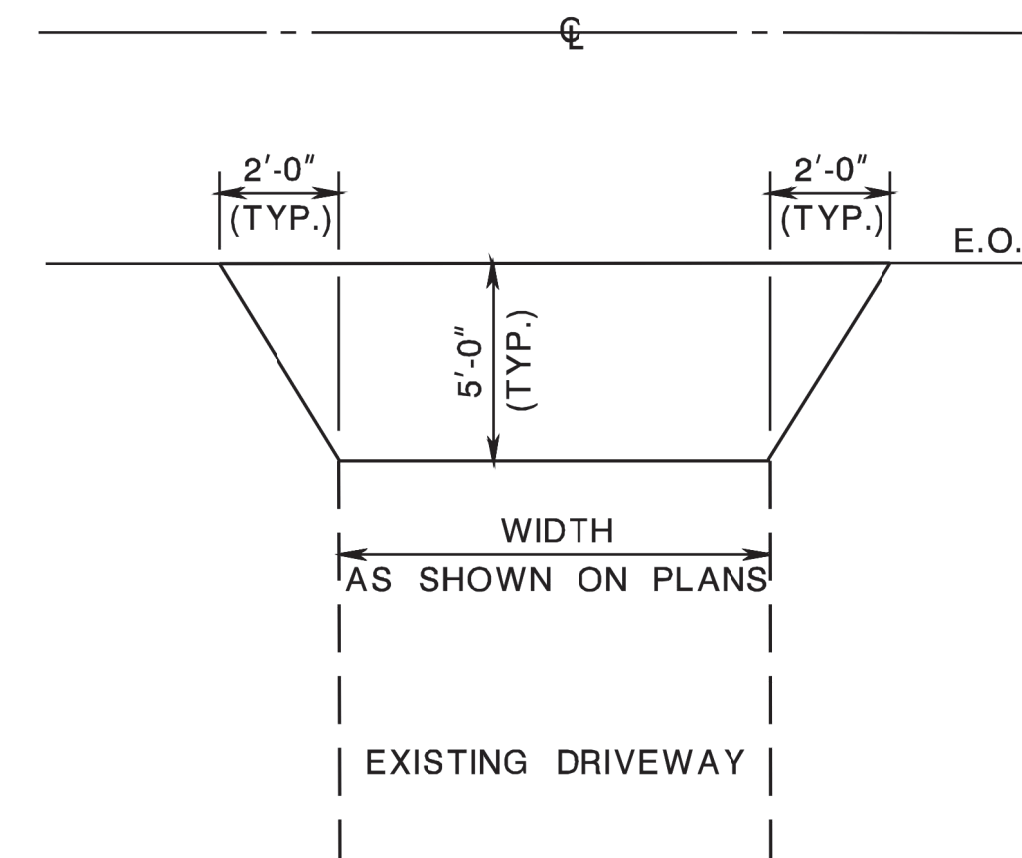
TYPE B
**RESURFACING OF EXISTING HMA DRIVEWAY
 (WITHOUT DEPRESSED CURB)**

CD-606-5.2



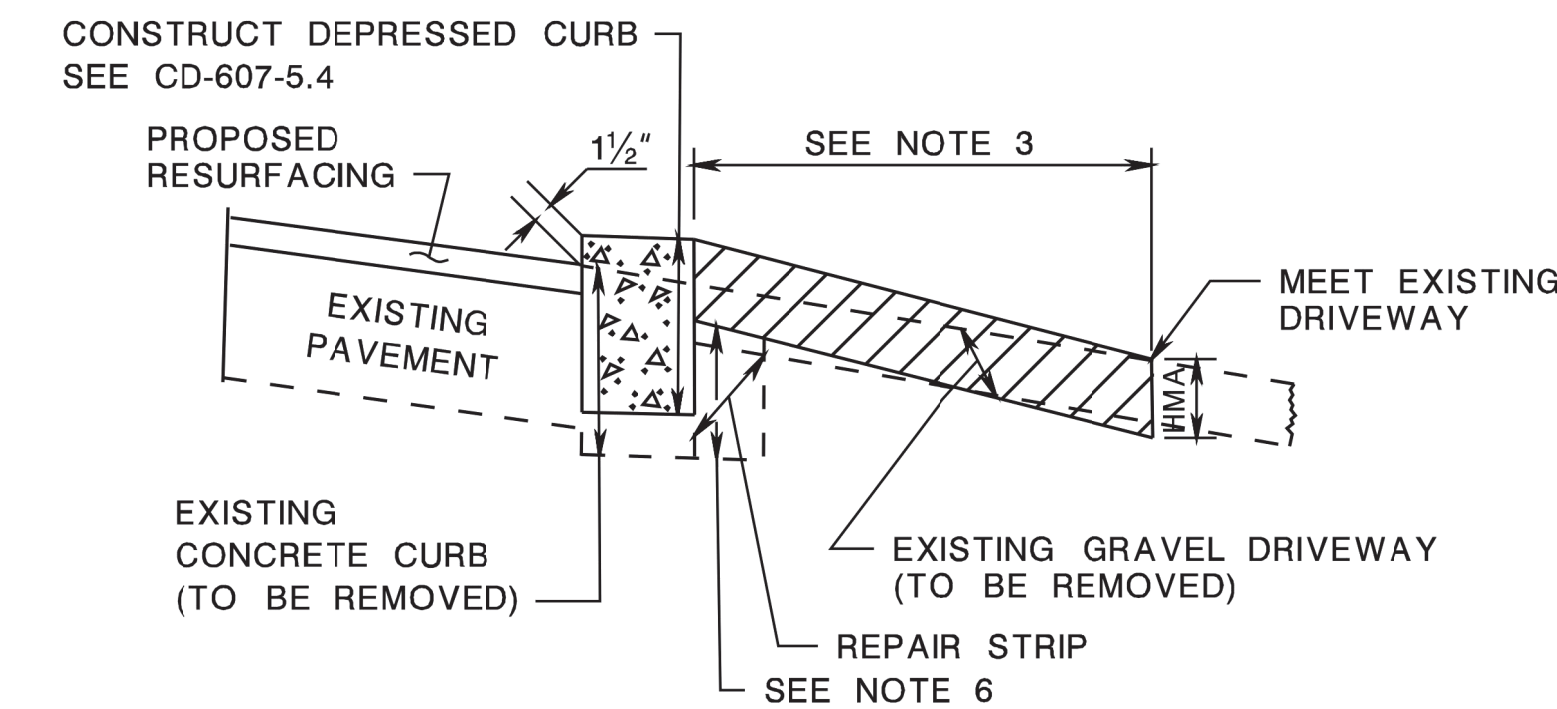
TYPE E
**RECONSTRUCTION OF CONCRETE DRIVEWAY
 (WITH DEPRESSED CURB)**

CD-606-5.5



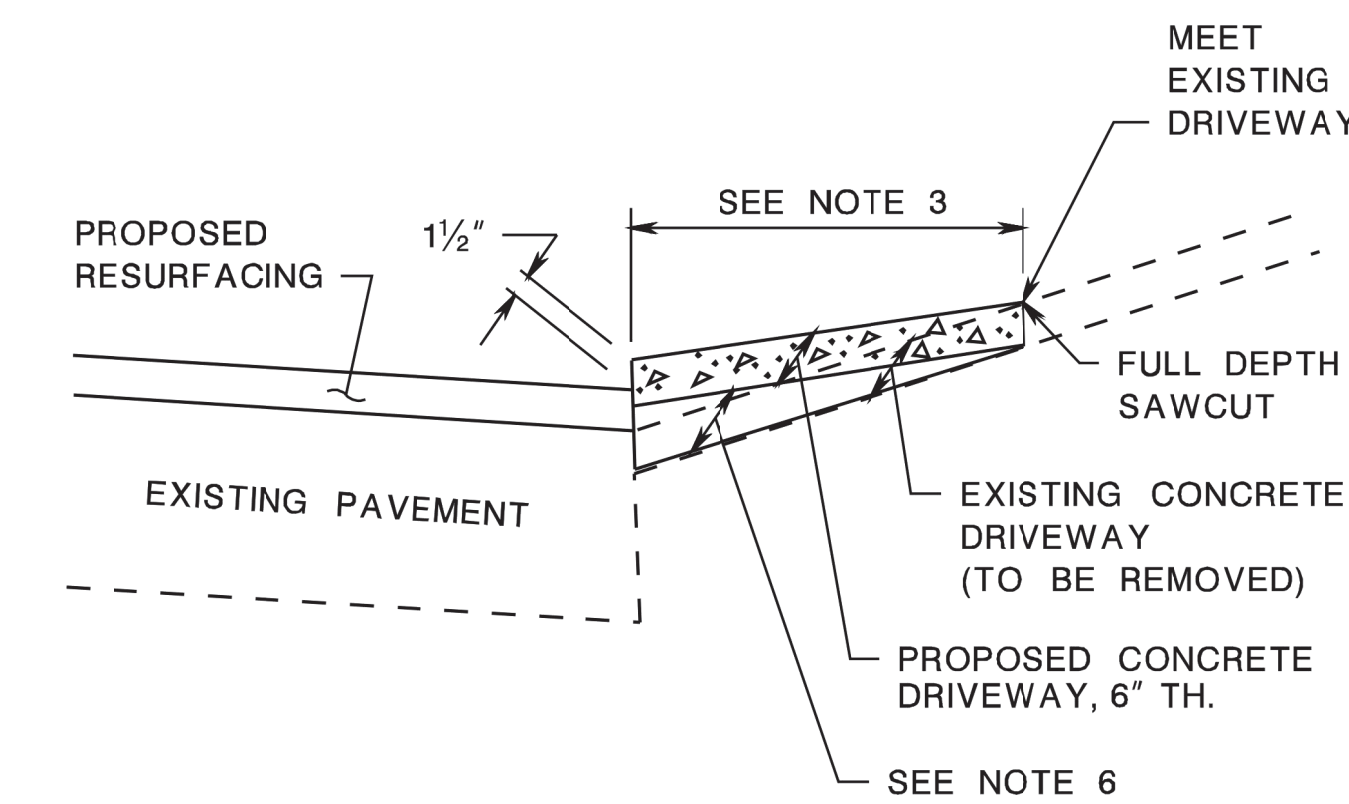
**TYPICAL DRIVEWAY TREATMENT
 PLAN VIEW**

CD-606-5.8



TYPE C
**CONSTRUCTION OF HMA DRIVEWAY
 OR CONVERSION OF EXISTING GRAVEL DRIVEWAY
 (WITH DEPRESSED CURB)**

CD-606-5.3



TYPE F
**RECONSTRUCTION OF CONCRETE DRIVEWAY
 (WITHOUT DEPRESSED CURB)**

CD-606-5.6

**CONCRETE AND HMA,
 DRIVEWAY AND SIDEWALK**

N.T.S.

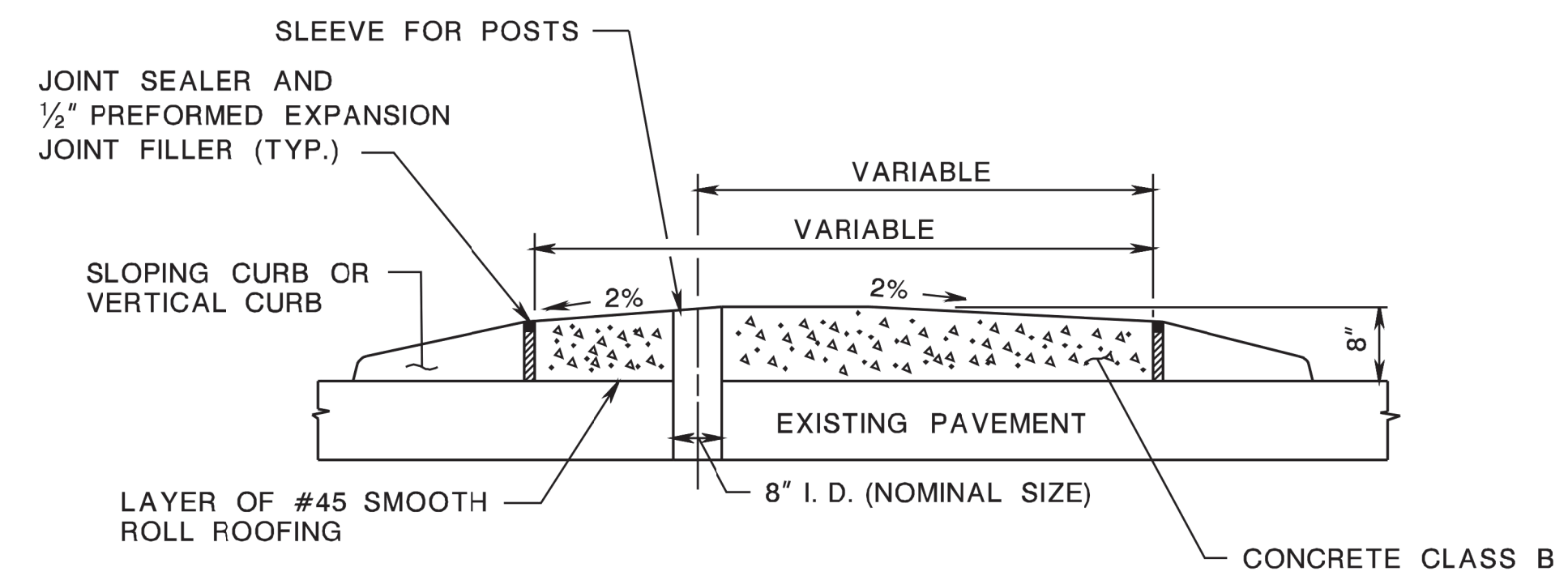
HMA = HOT MIX ASPHALT

CD-606-5

NEW JERSEY DEPARTMENT OF TRANSPORTATION

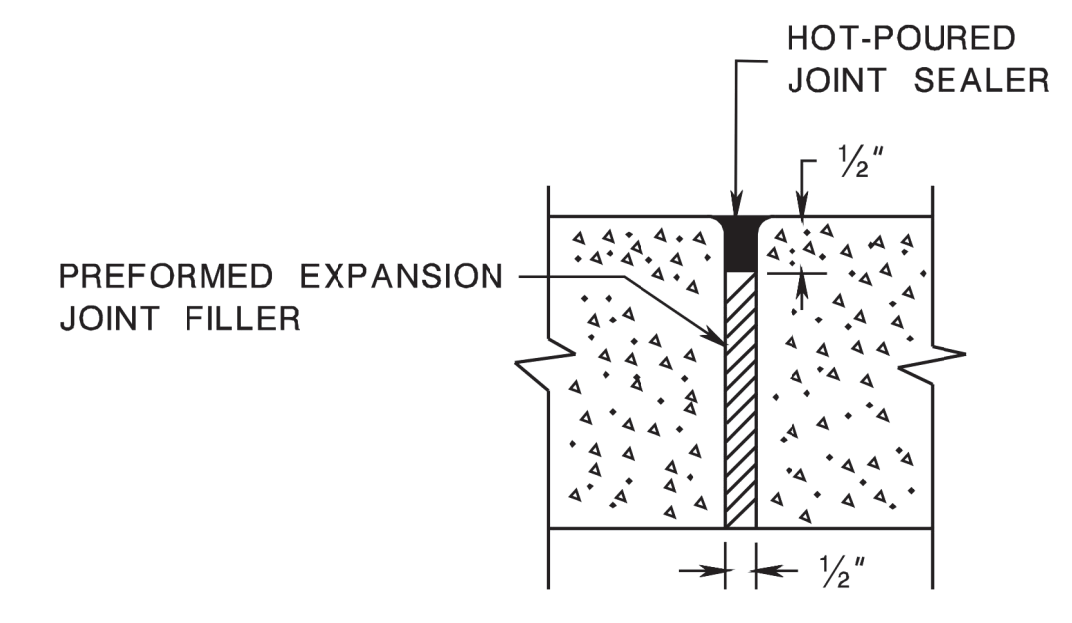
CONSTRUCTION DETAILS

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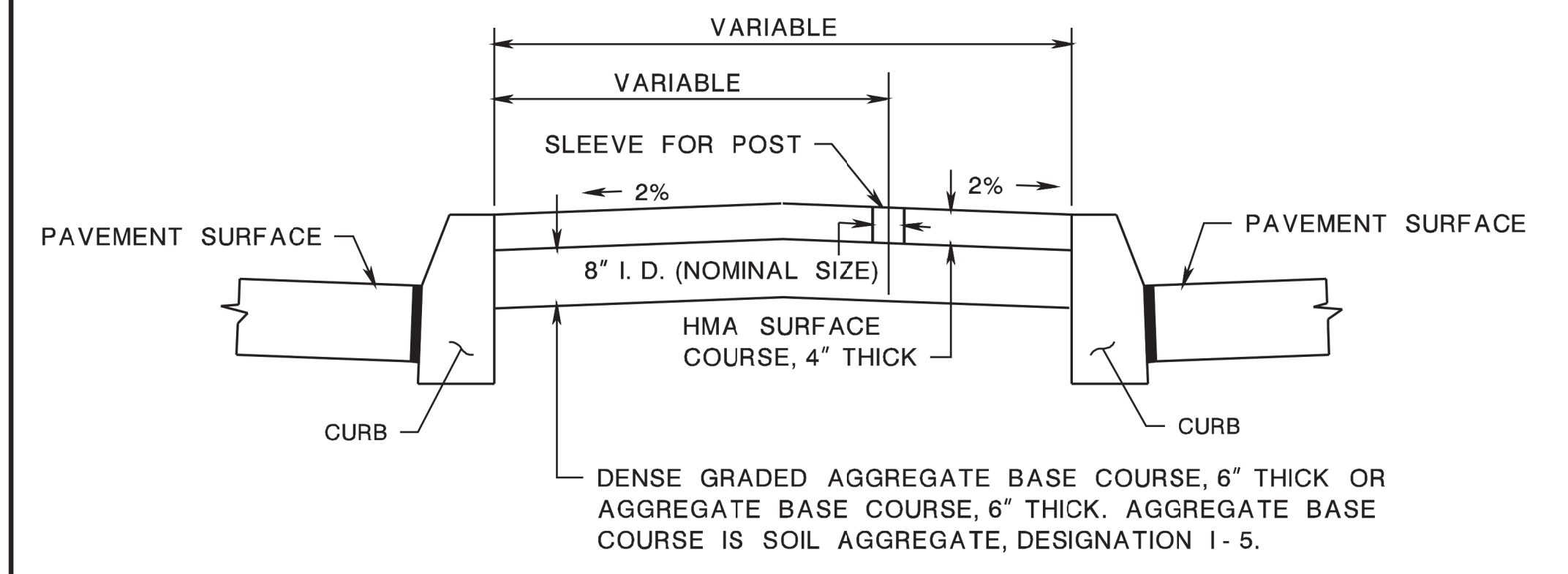
CONCRETE ISLAND ON EXISTING PAVEMENT

CD-606-6.1



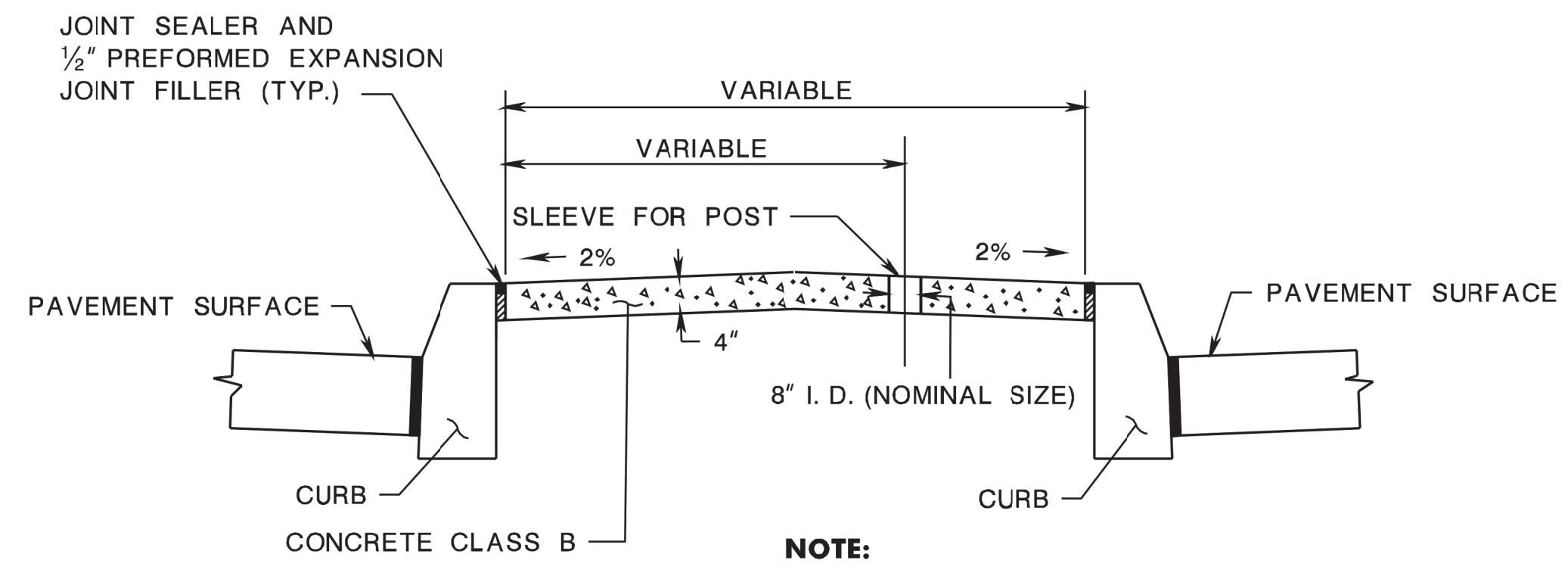
LONGITUDINAL AND TRANSVERSE JOINT TREATMENT FOR CONCRETE ISLAND

CD-606-6.2



HMA ISLAND, 10" THICK

CD-606-6.3



CONCRETE ISLAND, 4" THICK

CD-606-6.4

NOTE:
 TRANSVERSE JOINTS TO BE AS CONSTRUCTED FOR CONCRETE VERTICAL CURB.

CONCRETE AND HMA ISLAND

N.T.S.
 HMA = HOT MIX ASPHALT

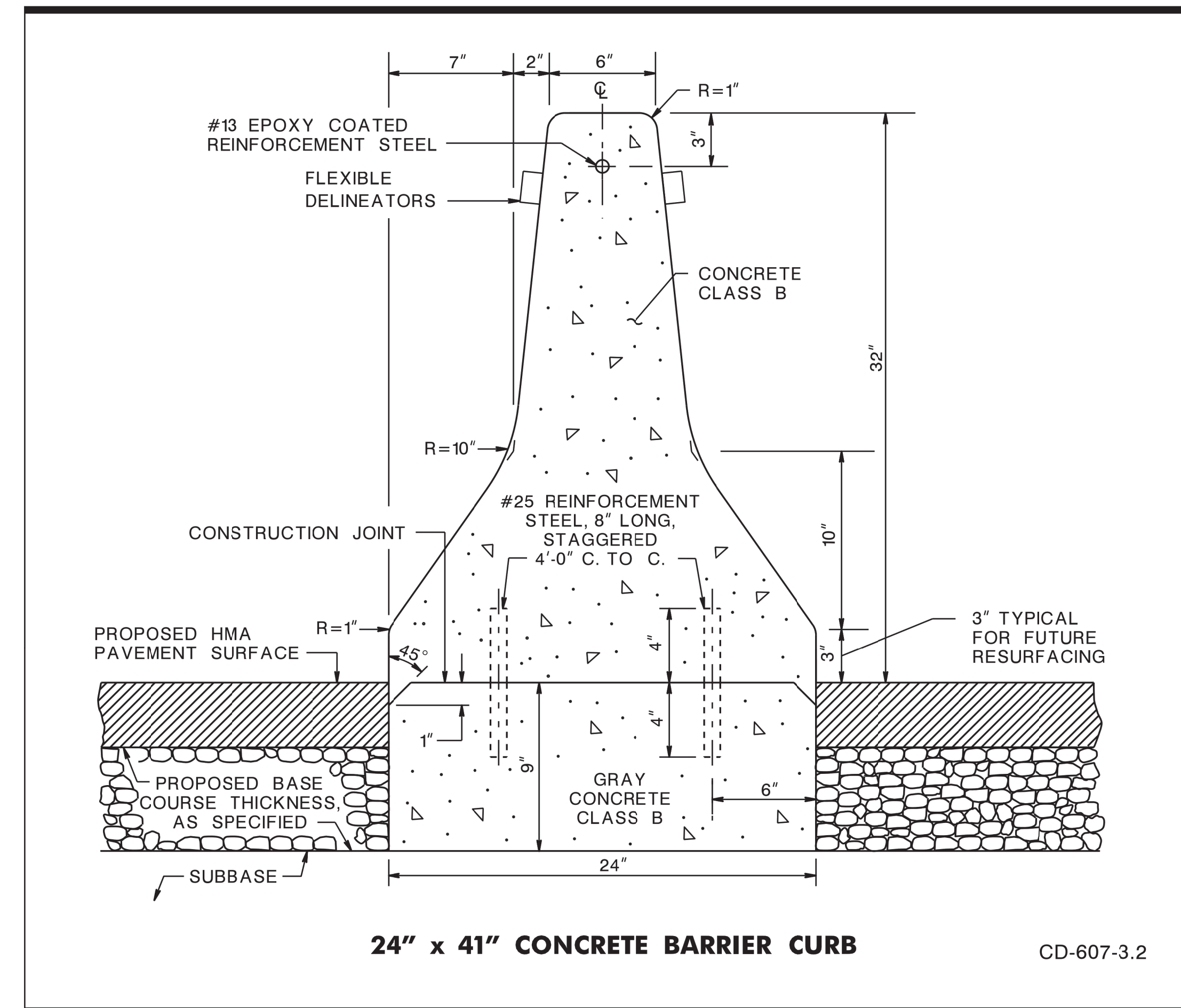
CD-606-6

NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

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 BDC607-07-CD-607-3.1 & CD-607-3.2 TEXT REVISED
 BDC607-07-CD-607-3.1 & CD-607-3.2 DIMENSIONS ADDED
 BDC607-07 ORIGINAL SHEET

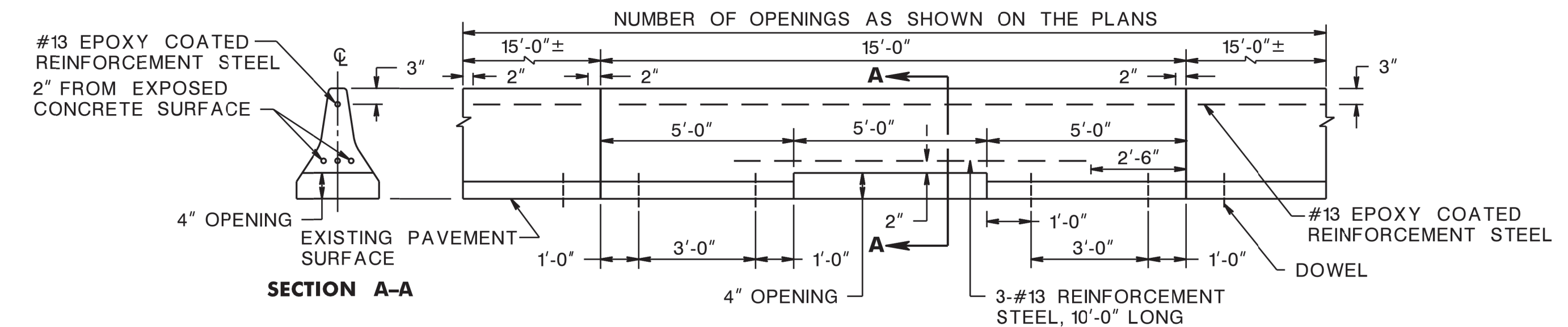


24" x 41" CONCRETE BARRIER CURB

CD-607-3.2

GENERAL NOTES:

- (A) WHERE DOWELLED BARRIER CURB IS TO BE CONSTRUCTED ON EXISTING CONCRETE PAVEMENT OR EXISTING CONCRETE BASE COURSE:
 - (1) INSTALL TRANSVERSE JOINTS IN THE CURBS AT AND DIRECTLY OVER TRANSVERSE JOINTS IN THE PAVEMENT. TREAT DEFINITE CRACKS THROUGH THE PAVEMENT AS JOINTS. ALSO CONSTRUCT ADDITIONAL JOINTS IN THE CURB SO SPACED AS TO MAKE EQUAL SECTIONS NOT OVER 15'-0" IN LENGTH.
 - (2) FILL THE TRANSVERSE JOINTS WITH PREFORMED BITUMINOUS-IMPREGNATED FIBER JOINT FILLER, COMPLYING WITH THE REQUIREMENTS OF AASHTO M-213 SPECIFICATION, RECESSED 1/4" FROM FACES AND TOP OF CURB. THE THICKNESS OF THE TRANSVERSE EXPANSION JOINT FILLER IS AS FOLLOWS:
 - (a) 1/2" FOR IMMEDIATE JOINTS AND JOINTS OVER DEFINITE CRACKS, 3/4" OVER PAVEMENT JOINTS WHERE SLAB LENGTH IS 50 FEET OR LESS, 1" OVER PAVEMENT JOINTS WHERE SLAB LENGTH IS MORE THAN 50 FEET.
 - (b) VARIABLE IN MULTIPLES OF 1/2" BUT NOT LESS THAN THE EXISTING WIDTH OF THE TRANSVERSE JOINTS IN BRIDGES AND JOINTS BETWEEN THE APPROACH SLABS AND BRIDGES.
 - (c) THE THICKNESS OF 1" OR MORE LAYERS OF 1/2" MATERIAL MAY BE GLUED OR OTHERWISE FASTENED TOGETHER BY A MEANS SATISFACTORY TO THE RE. WHERE THE REQUIRED JOINT OPENING EXCEEDS 1", THE CONTRACTOR MAY CONSTRUCT OPEN JOINTS.
 - (3) CLEAN THE SURFACE OF THE EXISTING CONCRETE PAVEMENT OR CONCRETE BASE COURSE AS SPECIFIED IN THE SPECIFICATIONS PRIOR TO THE CONSTRUCTION OF THE CURB THEREON.
- (B) WHERE DOWELLED BARRIER CURB IS TO BE CONSTRUCTED ACROSS A LONGITUDINAL JOINT IN THE EXISTING CONCRETE OR BASE COURSE, OMIT THE DOWELS IN THE SHORTER PORTION OF THE CURB. CONSTRUCT THE CURB IN THIS PORTION OF THE PANEL WITH 45# SMOOTH ROLL ROOFING BETWEEN IT AND THE EXISTING PAVEMENT.
- (C) WHERE BARRIER CURB IS TO BE CONSTRUCTED ON PROPOSED CONCRETE BASE, INSTALL TRANSVERSE JOINTS 1/2" WIDE IN THE BASE 20'-0" APART AND IN THE BARRIER CURB DIRECTLY OVER JOINTS IN THE BASE. FILL THE JOINTS WITH PREFORMED BITUMINOUS-IMPREGNATED FIBER JOINT FILLER, COMPLYING WITH THE REQUIREMENTS OF AASHTO M-213 SPECIFICATION, RECESSED 1/4" FROM FACES AND TOP OF CURB.
- (D) THE FINISHED SURFACE OF THE BARRIER CURB IS TO BE SMOOTH, DENSE UNPITTED AND FREE FROM AIR BUBBLE POCKETS, DEPRESSIONS, AND HONEYCOMBS. IF THE RE DEEMS IT NECESSARY, THE CURB IS TO BE GIVEN A WOOD FLOAT FINISH RUBBED WITH A MIXTURE OF CEMENT, SAND, AND WATER TO OBTAIN THE ABOVE MENTIONED FINISHED SURFACE.
- (E) INSTALL FLEXIBLE DELINEATORS ON BARRIER CURB.
- (F) REINFORCEMENT STEEL IS IN METRIC UNITS.



OPENINGS TO BE CONSTRUCTED IN BARRIER CURB

HMA = HOT MIX ASPHALT

BARRIER CURB

N.T.S.

CD-607-3

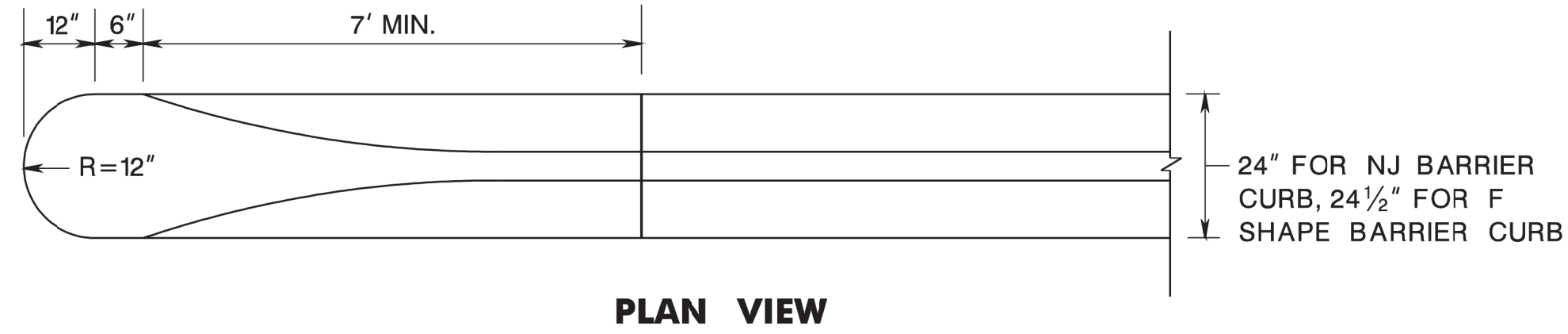
NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

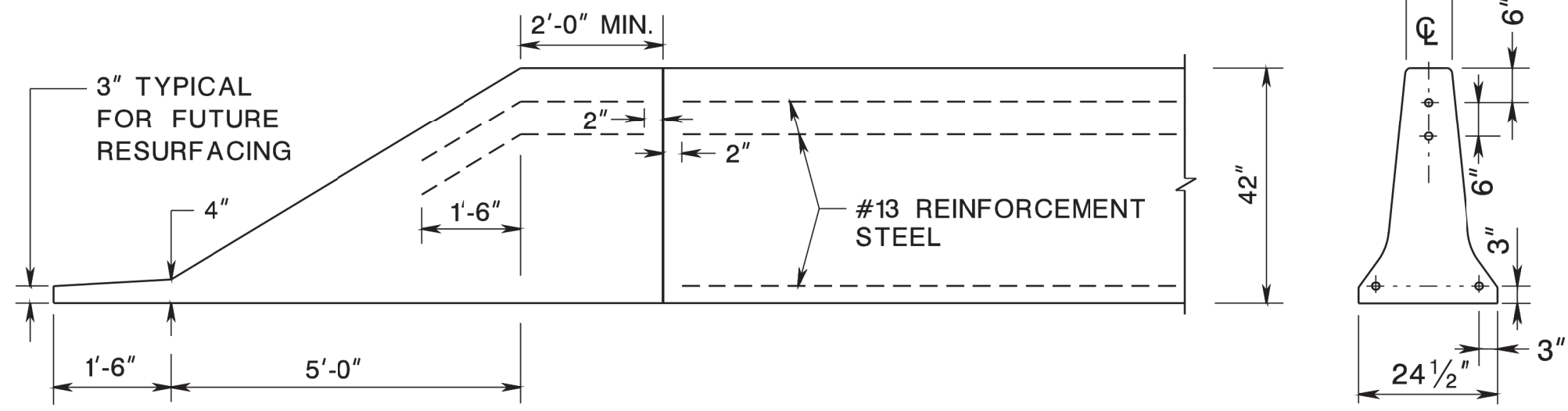
MASH TL-3 NJ BARRIER CURB

CD-607-3.3

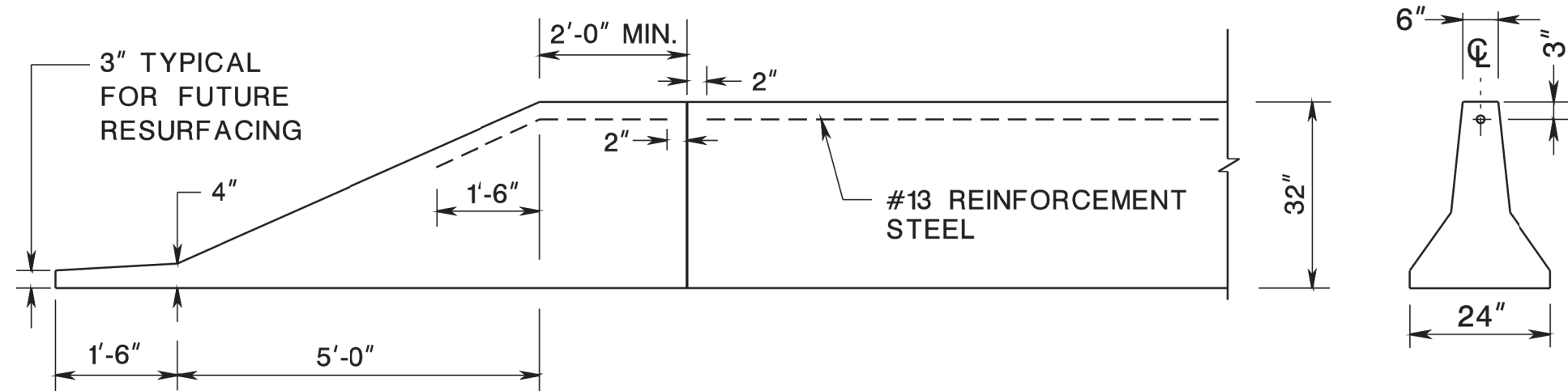
BDCIBD-05-REVISED SECTION 15'x41" BARRIER DIM
BDCCTD-06-NJ BARRIER ADDED
BDCCTD-02-NEW SHEET



PLAN VIEW



42" F SHAPE BARRIER CURB TAPERED END



32" NJ BARRIER CURB TAPERED END

NOTES:

1. THIS DETAIL IS TO BE USED ONLY AT THE TRAILING END OF BARRIER CURB SEPARATING SAME DIRECTION TRAFFIC OR WHERE THE TERMINAL IS BEYOND THE CLEAR ZONE.
2. REINFORCEMENT STEEL IS IN METRIC UNITS.
3. PAYMENT FOR NJ BARRIER CURB TAPERED END WILL BE MADE UNDER ITEM "CONCRETE BARRIER CURB". PAYMENT FOR F SHAPE BARRIER CURB TAPERED END WILL BE MADE UNDER "F SHAPE CONCRETE BARRIER CURB".

BARRIER CURB TAPERED END

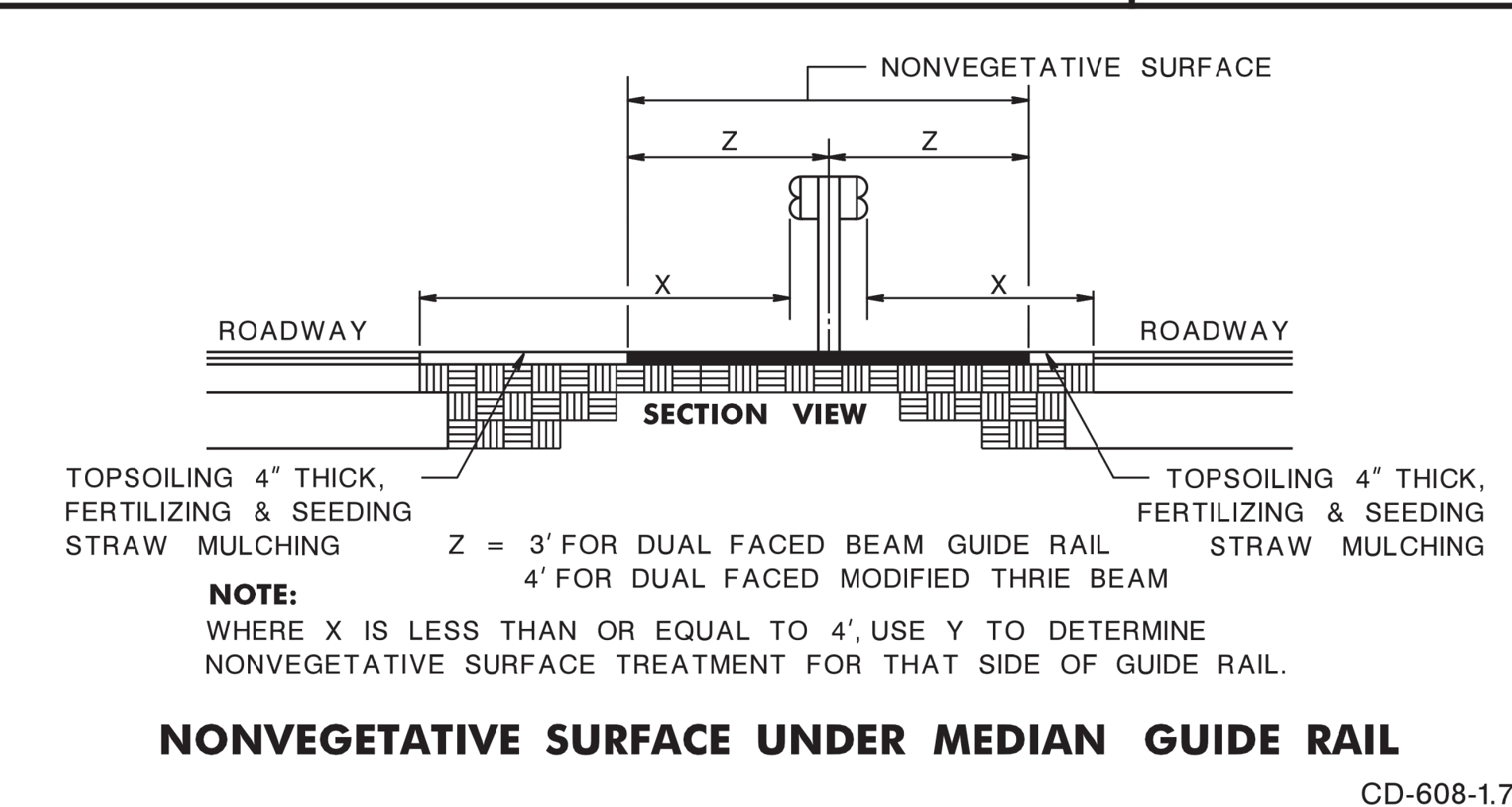
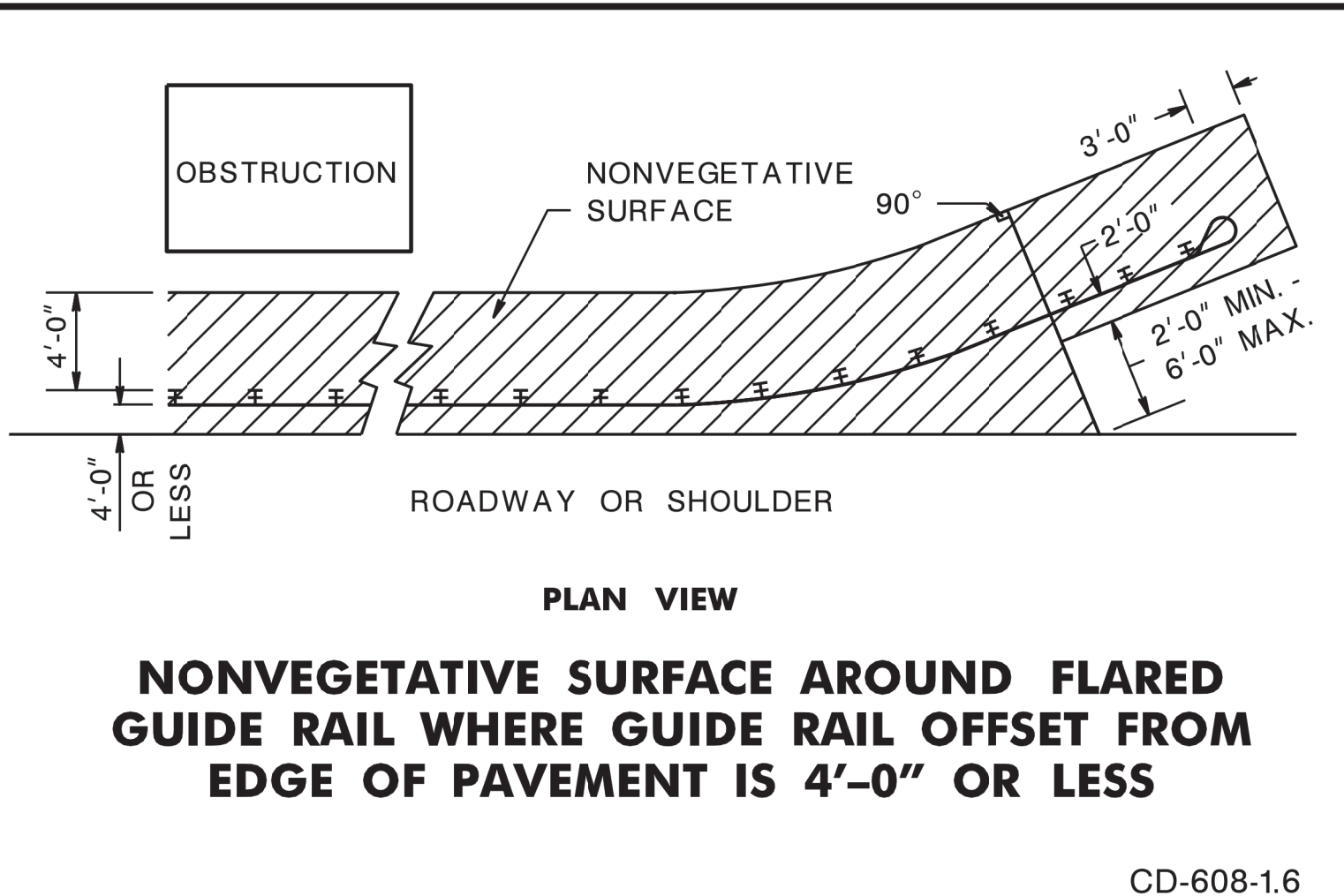
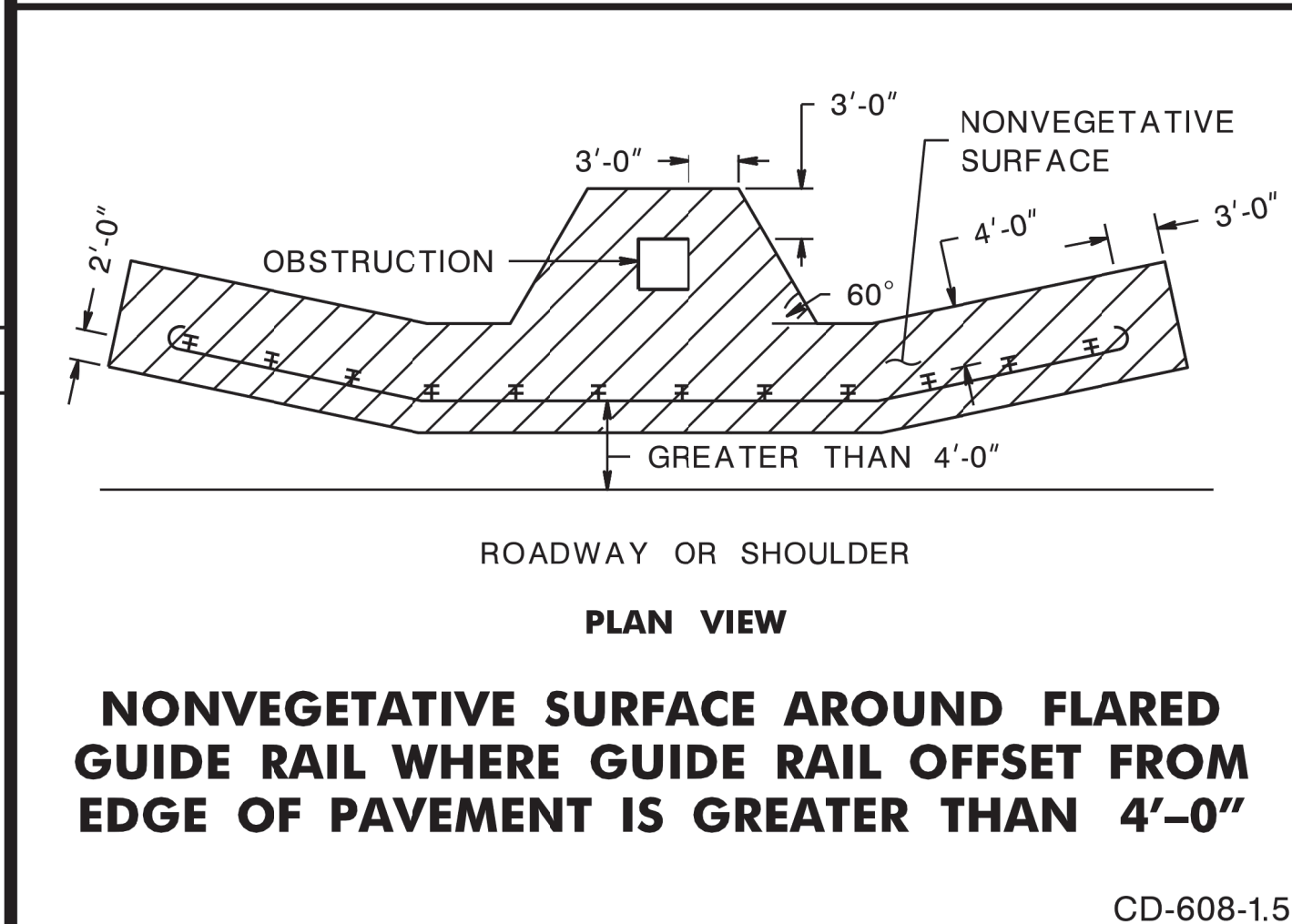
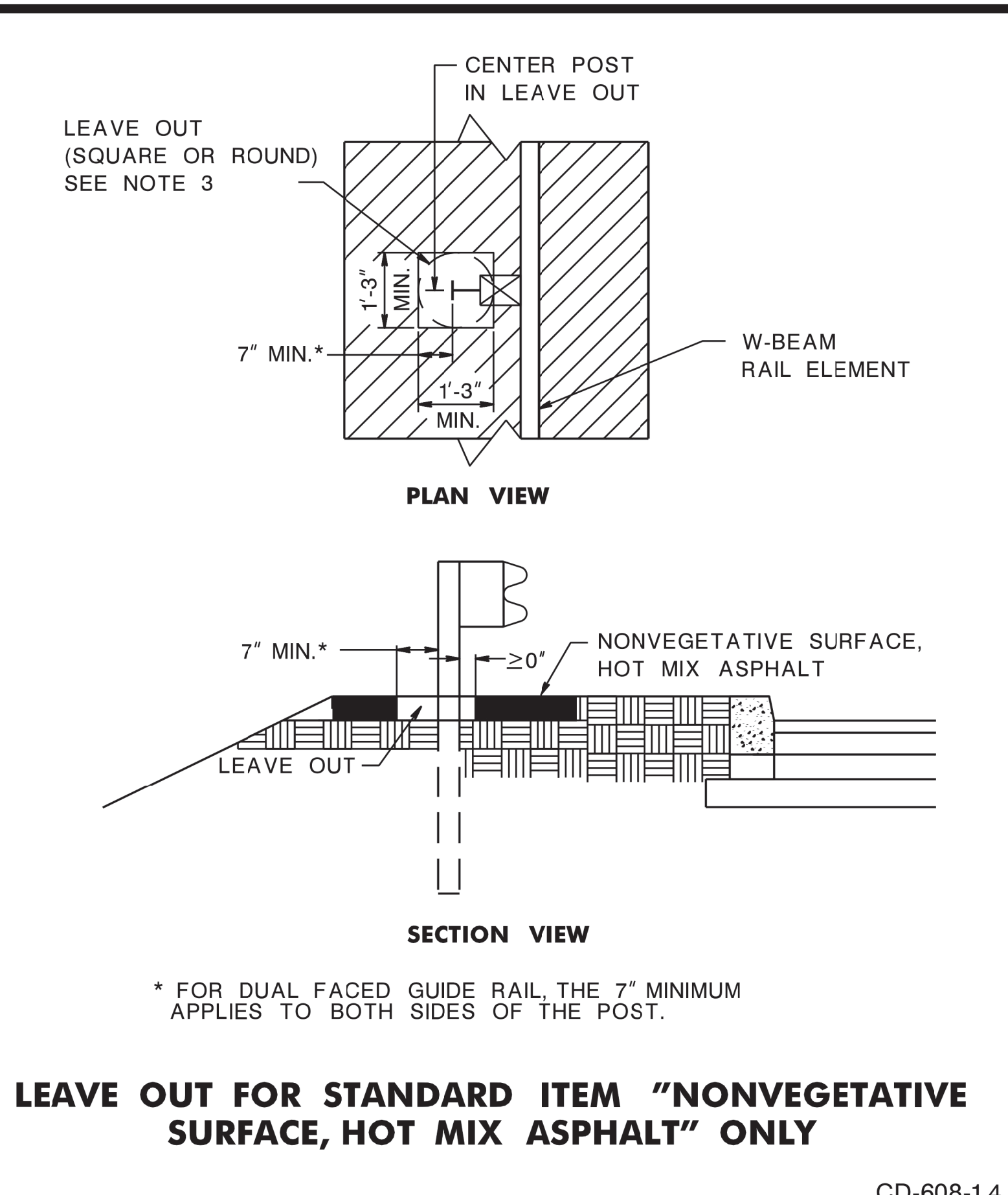
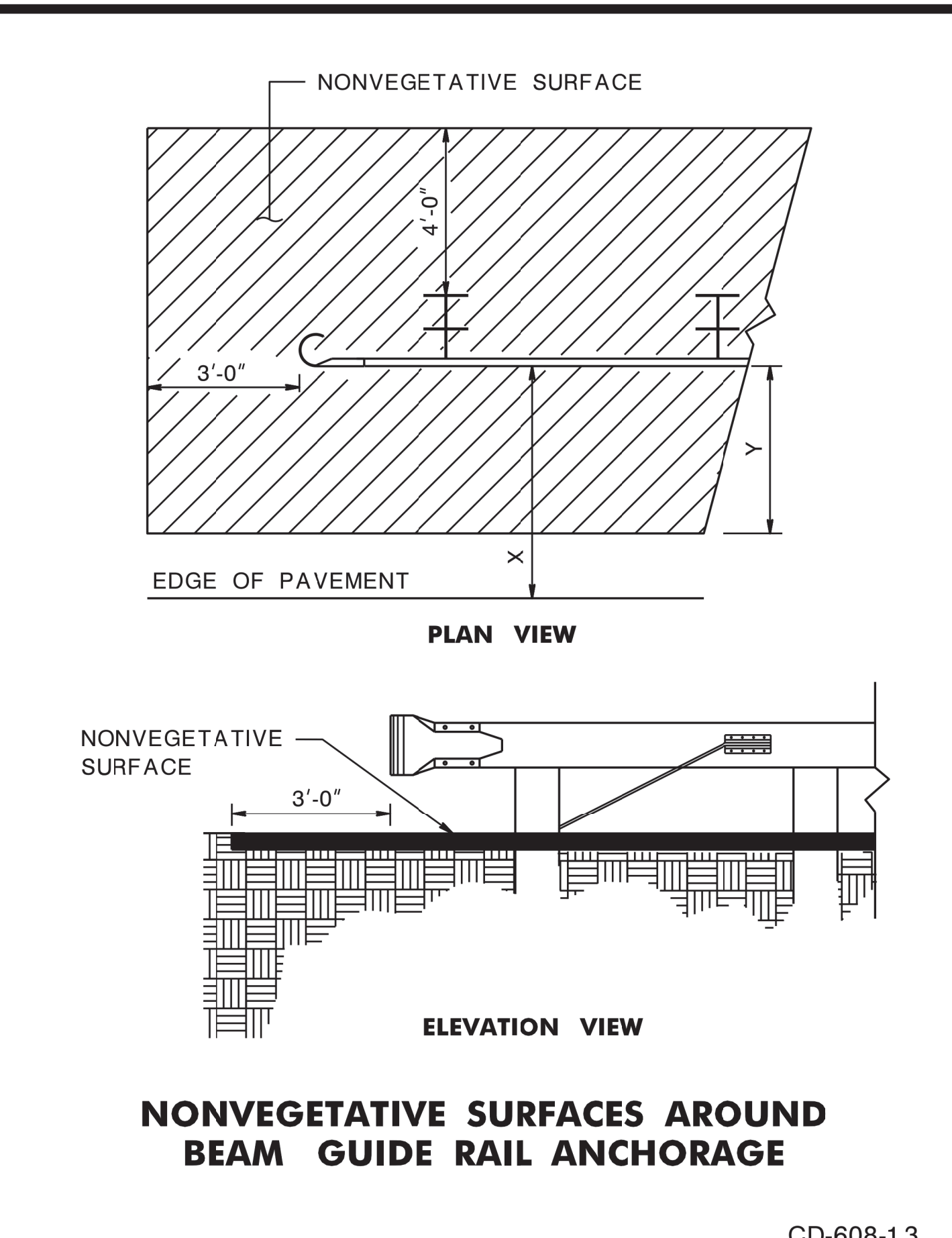
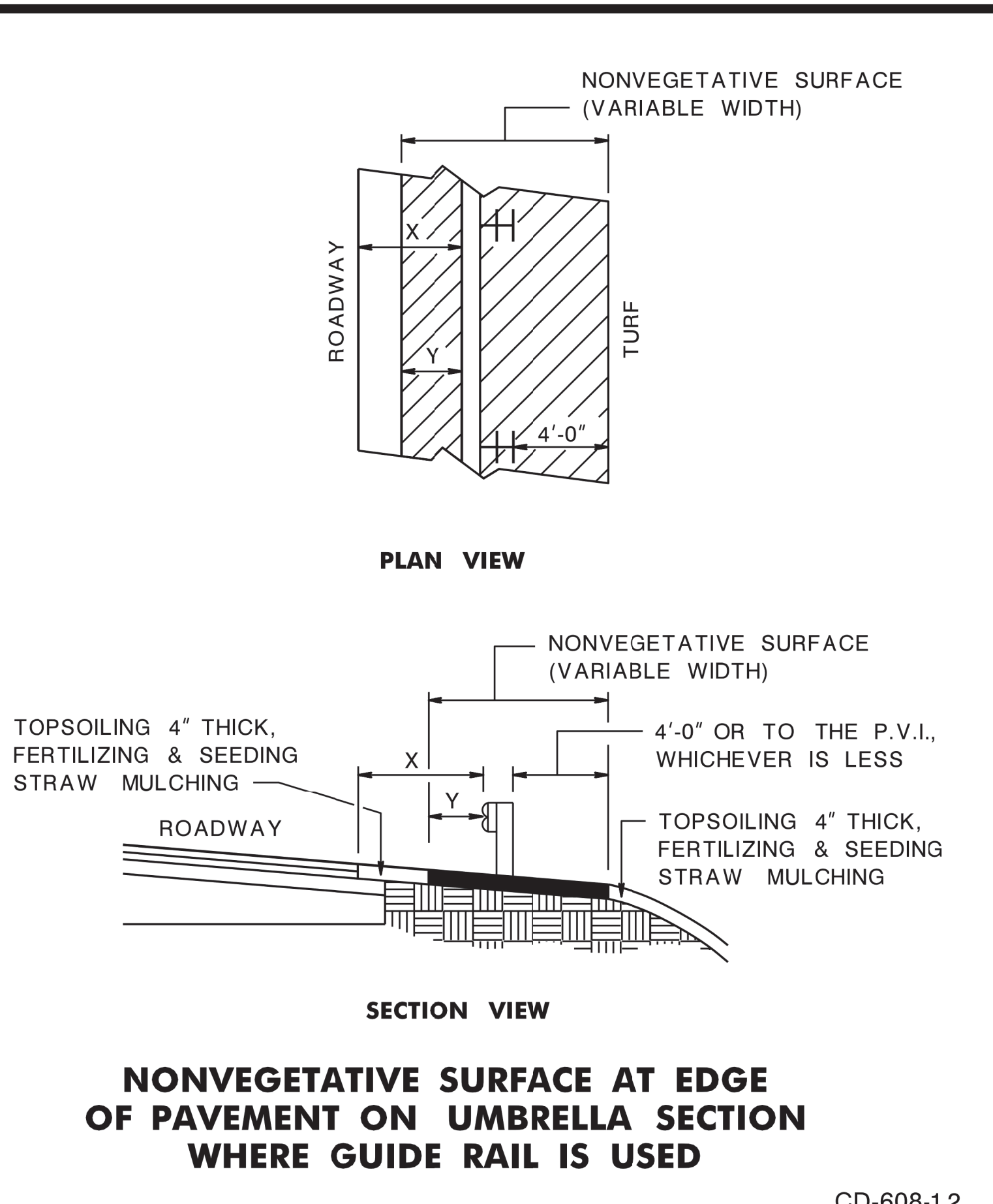
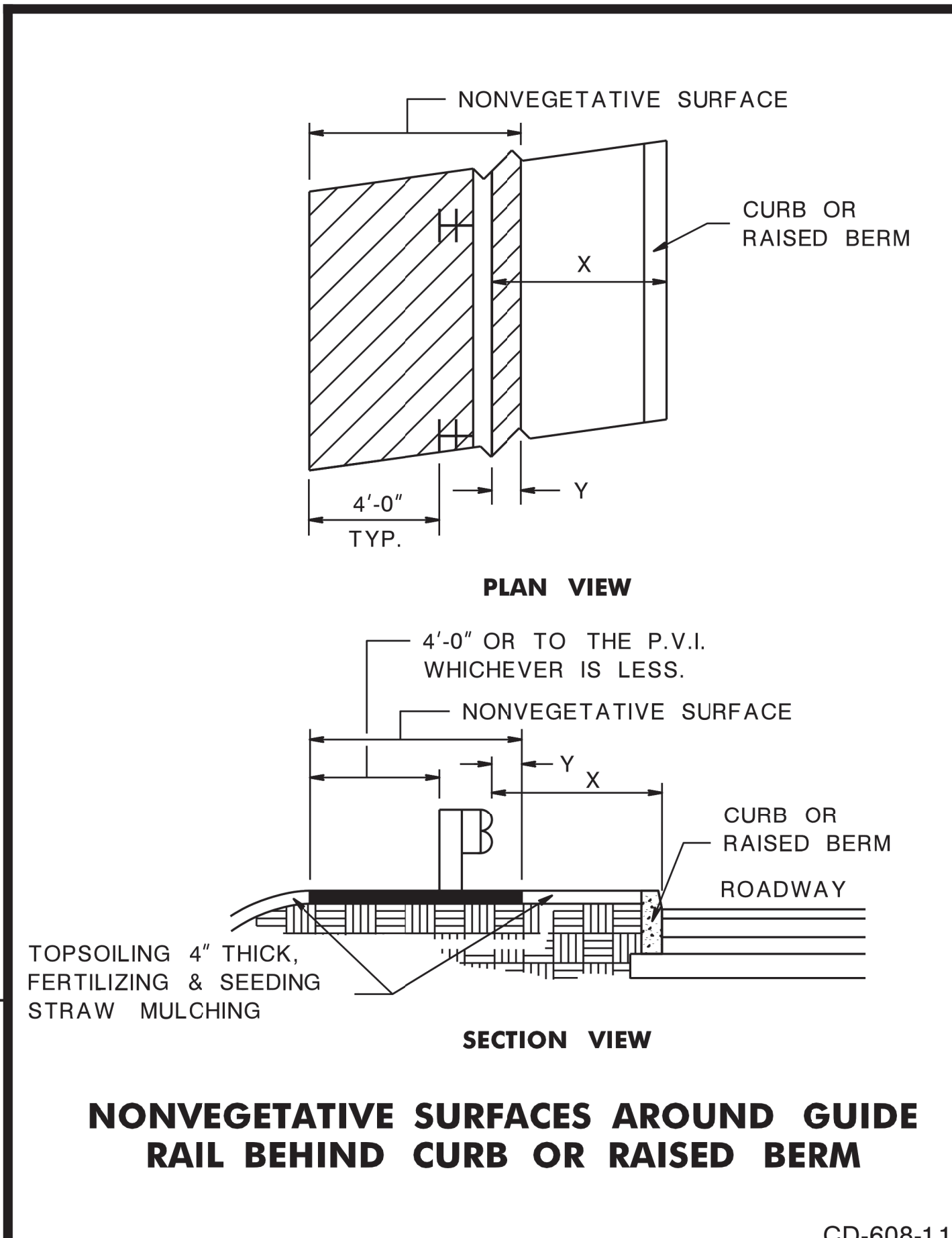
CD-607-6.1

CD-607-6.2

CD-607-6

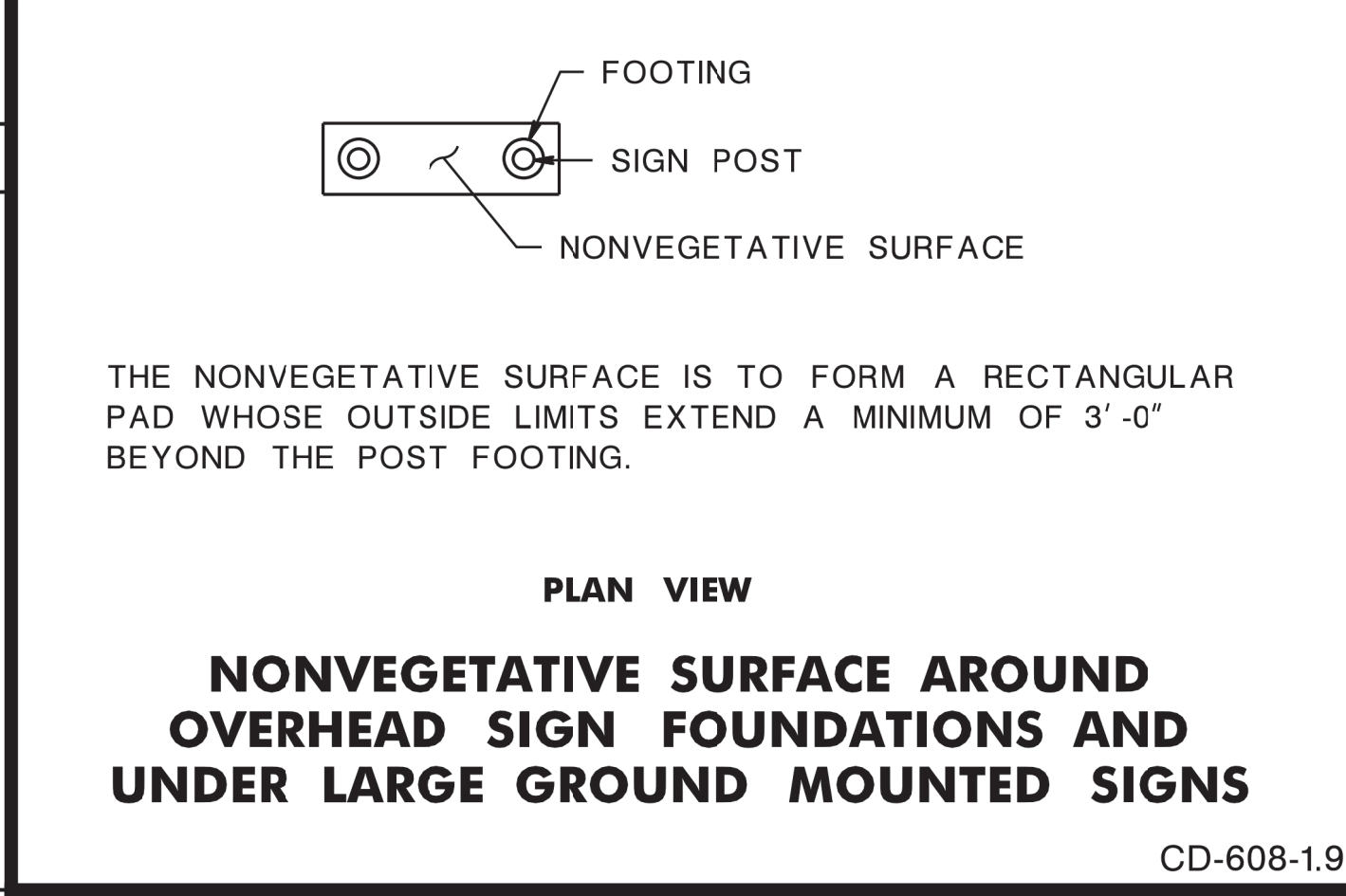
NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS



X	Y
GUIDE RAIL OFFSET FROM EDGE OF PAVEMENT	WIDTH OF NONVEGETATIVE SURFACE IN FRONT OF GUIDE RAIL
GREATER THAN 4'-0" LESS THAN OR EQUAL TO 4'-0"	2'-0" Y=X

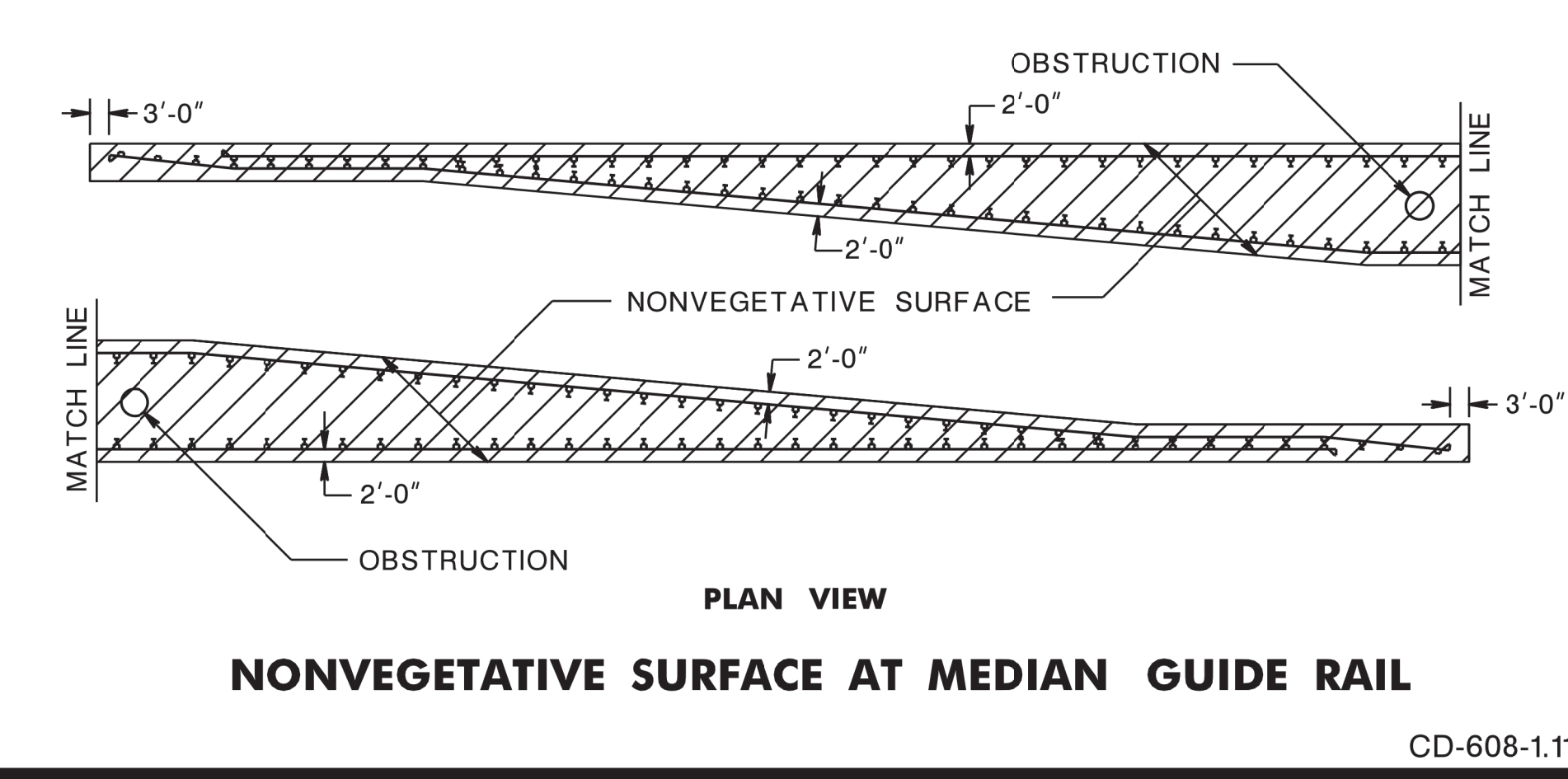
CD-608-1.8



GENERAL NOTES:

- IF THE END OF THE GUIDE RAIL IS BURIED IN THE SLOPE, THE LIMIT OF NONVEGETATIVE SURFACE RELATIVE TO THE BURIED GUIDE RAIL WILL BE DETERMINED BY THE RE.
- SEE TYPICAL SECTIONS FOR CROSS SLOPES IN ROADSIDE (BORDER OR SIDEWALK AREA).
- LEAVE OUTS CAN BE FILLED WITH:
 - COARSE AGGREGATE, SIZE NO. 57 TO BE HAND TAMPED, THEN SEAL SURFACE WITH EMULSIFIED ASPHALT AT 0.35 GAL/SY ±0.05 AS PER STANDARD SPECIFICATIONS SECTION 902; OR
 - COARSE AGGREGATE, SIZE NO. 57 IN BASE OF LEAVE OUT AND TOP WITH NONVEGETATIVE SURFACE, HMA, 2" THICK. GRADE TO DRAIN AND HAND TAMP LEAVE OUT SURFACE.

CD-608-1.10



NONVEGETATIVE SURFACE
N.T.S.

CD-608-1

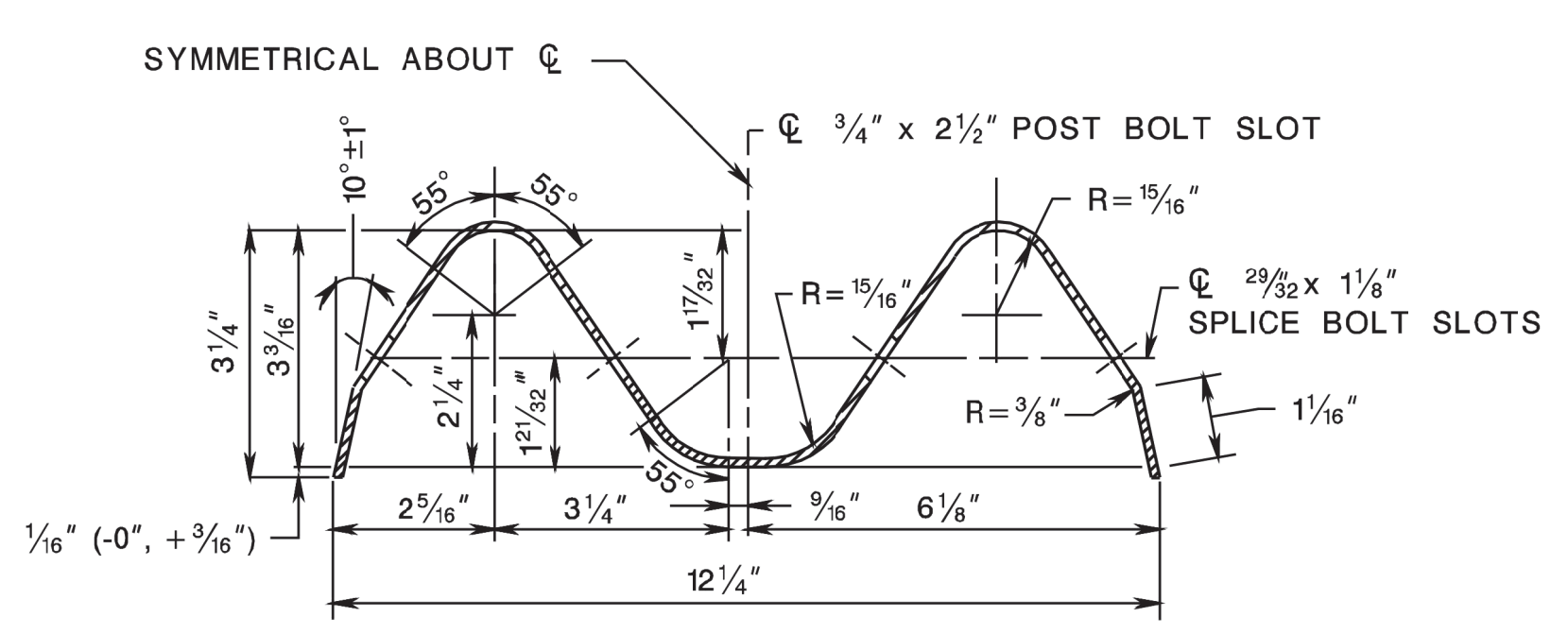
NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

40
197

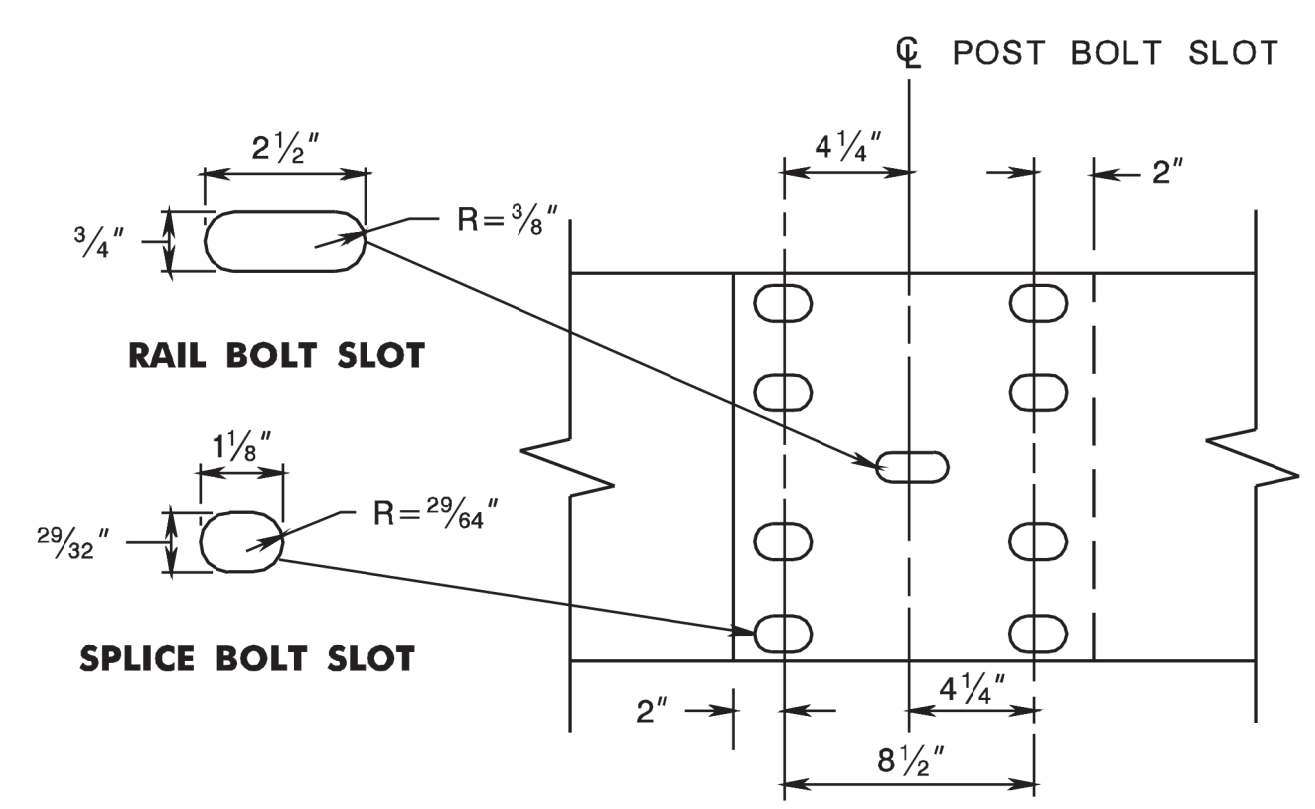
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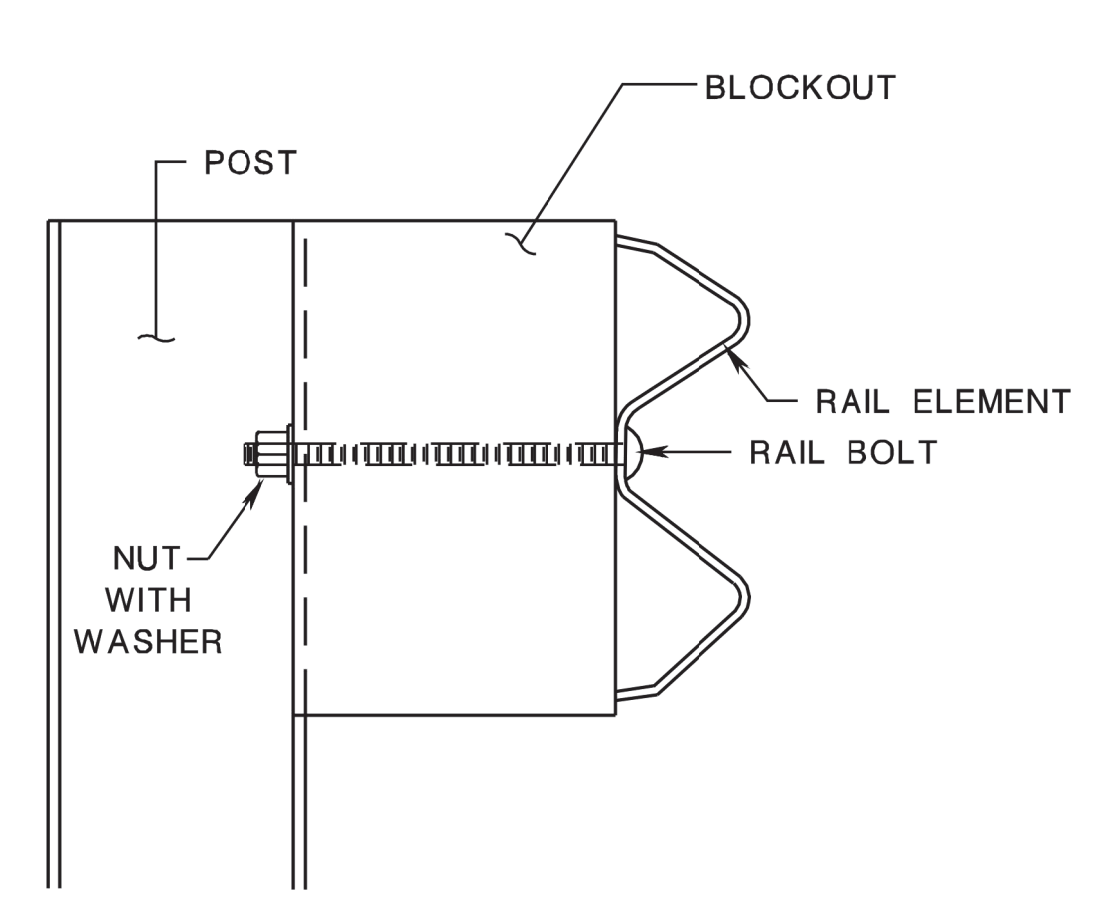


RAIL ELEMENT TO BE SUPPLIED IN LENGTHS OF 13'-6 1/2" OR 26'-0 1/2"

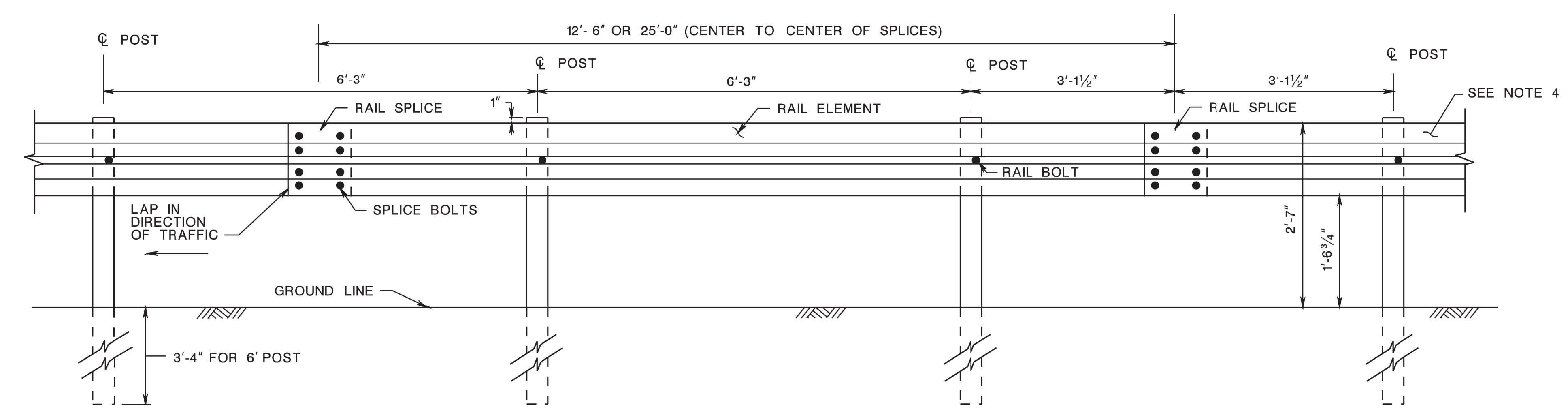
W-BEAM RAIL ELEMENT



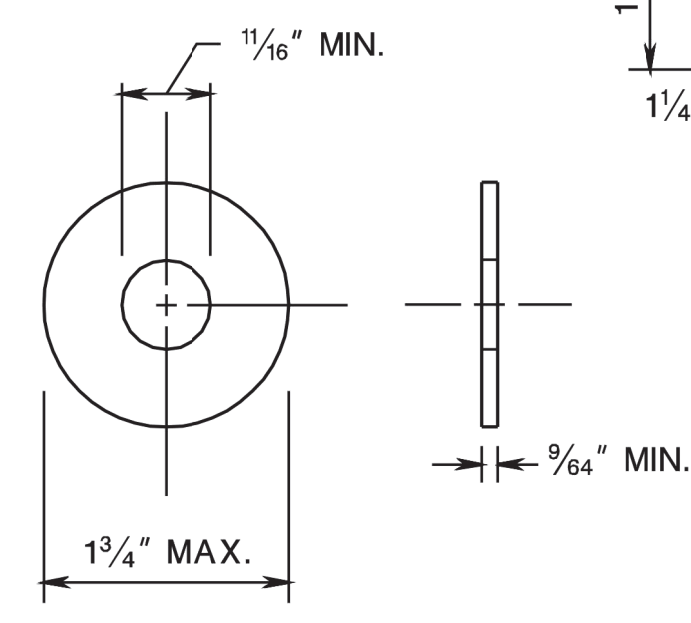
RAIL SPLICE



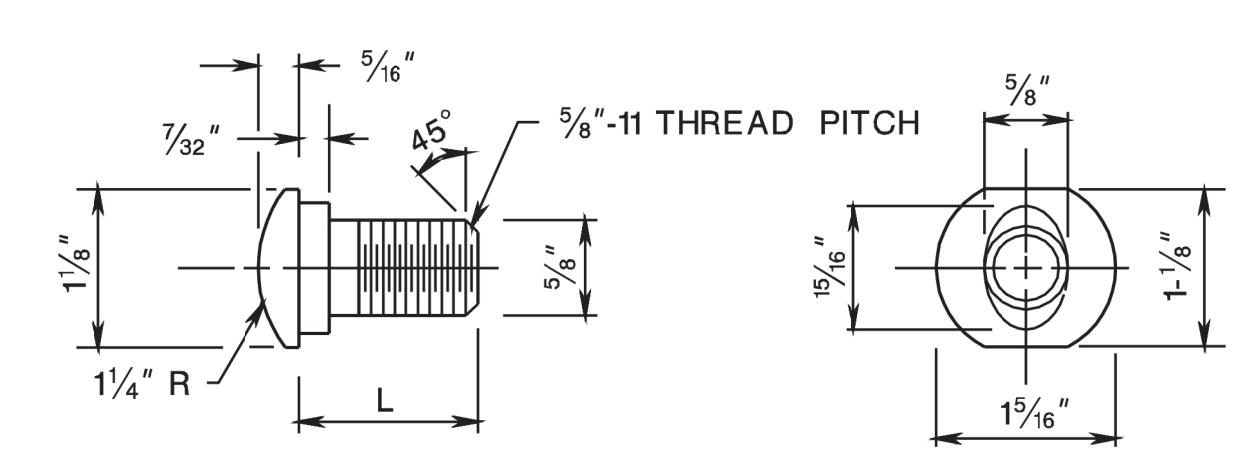
BEAM GUIDE RAIL POST ASSEMBLY



BEAM GUIDE RAIL

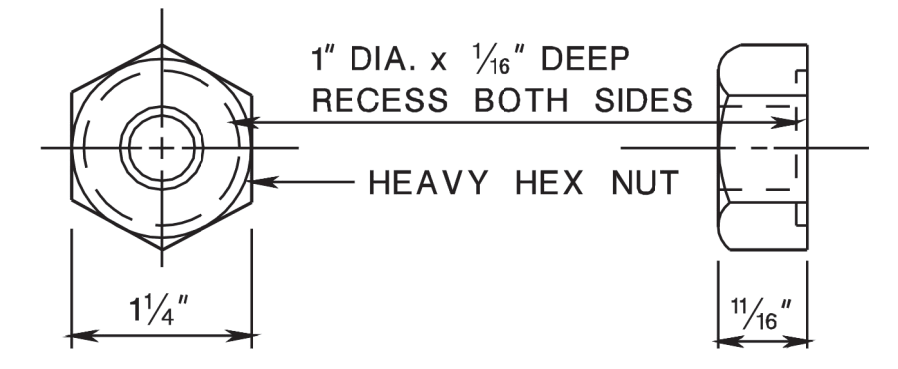


STEEL WASHER



TYPE	L	MIN. THREAD LENGTH
SPLICE	1 1/4"	FULL LENGTH THREAD
RAIL	9 1/2"	1 3/4"

5/8" DIA. BUTTON HEAD BOLT



5/8" DIA. RECESS NUT

SPLICE & RAIL NUT & BOLT

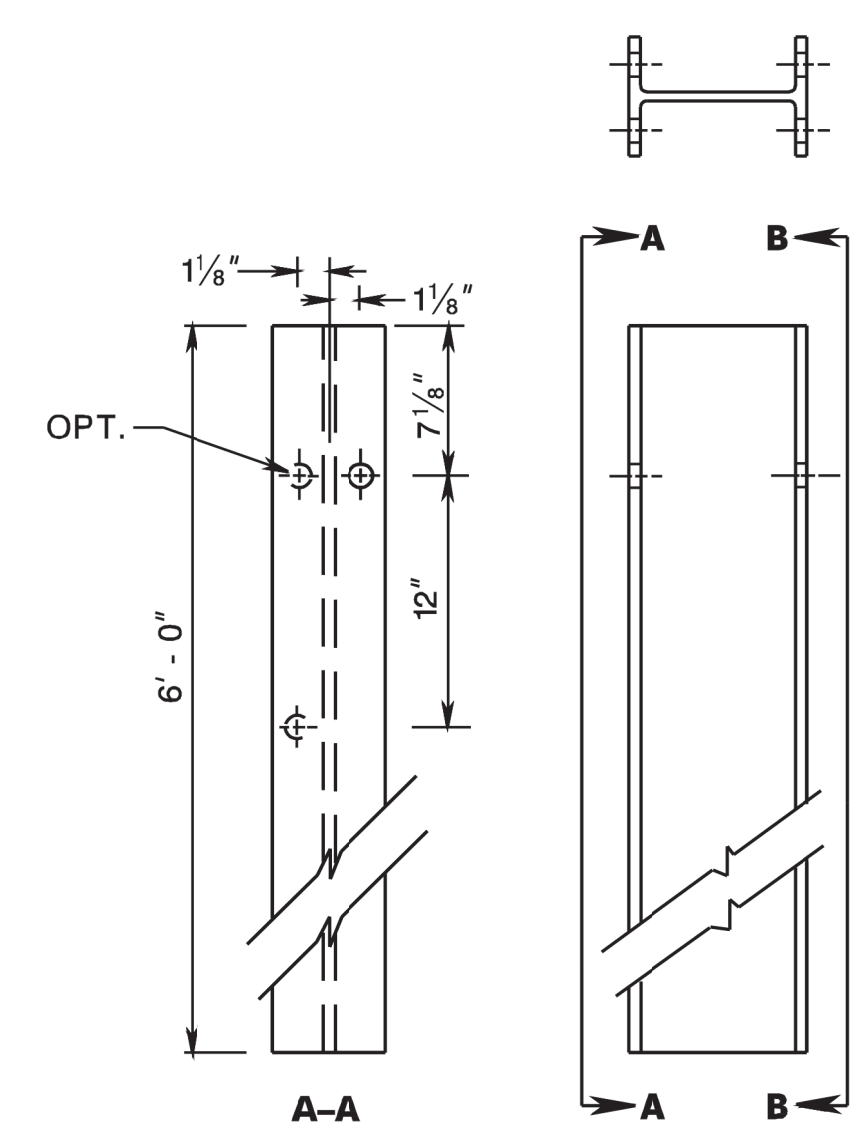
BEAM GUIDE RAIL (MASH TL-3)

N.T.S.

CD-609-1

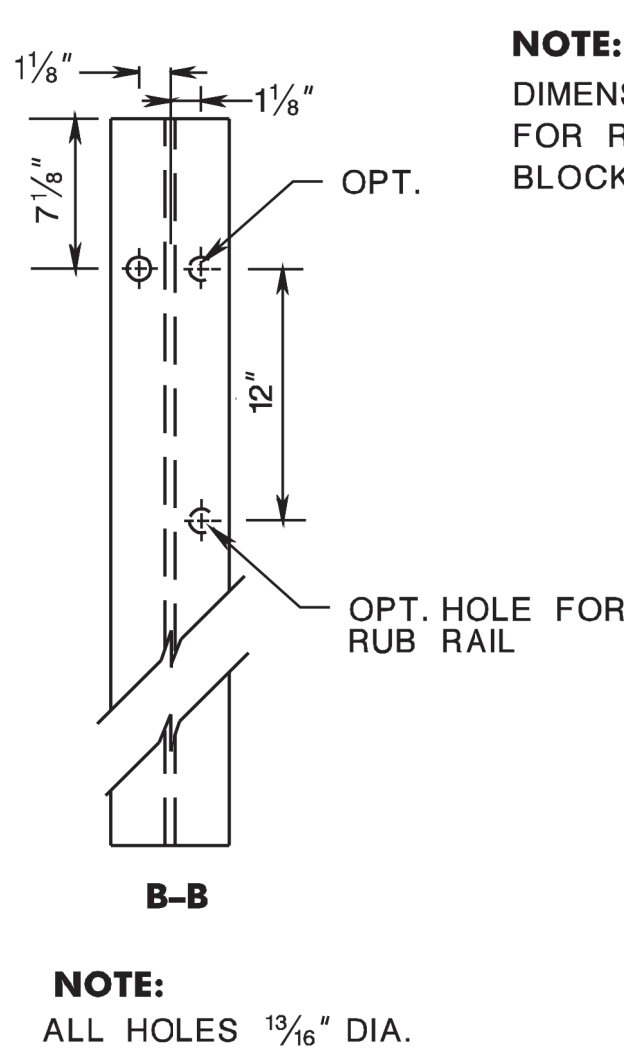
NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

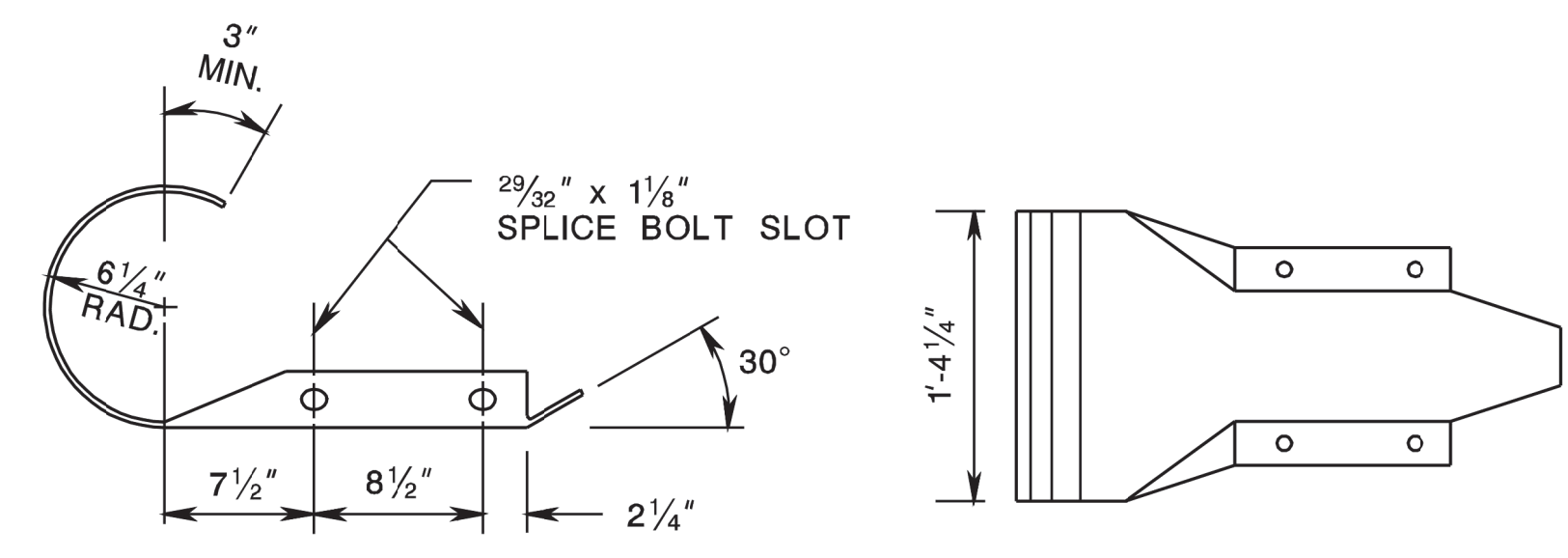


W6x8.5 OR W6x9 STEEL POST

6' POST



APPROVED RECYCLED/
SYNTHETIC MATERIALS
6" x 8" x 14" BLOCKOUT

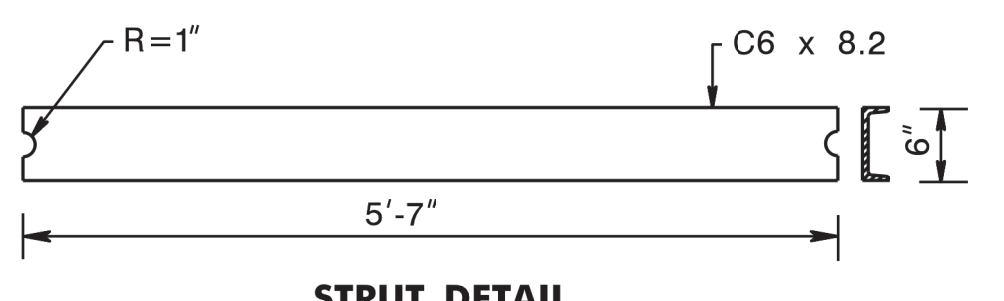
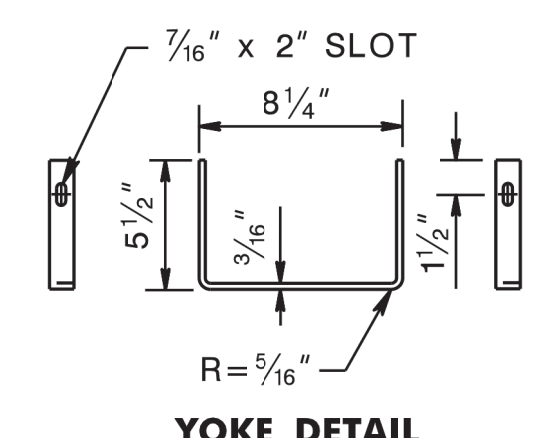
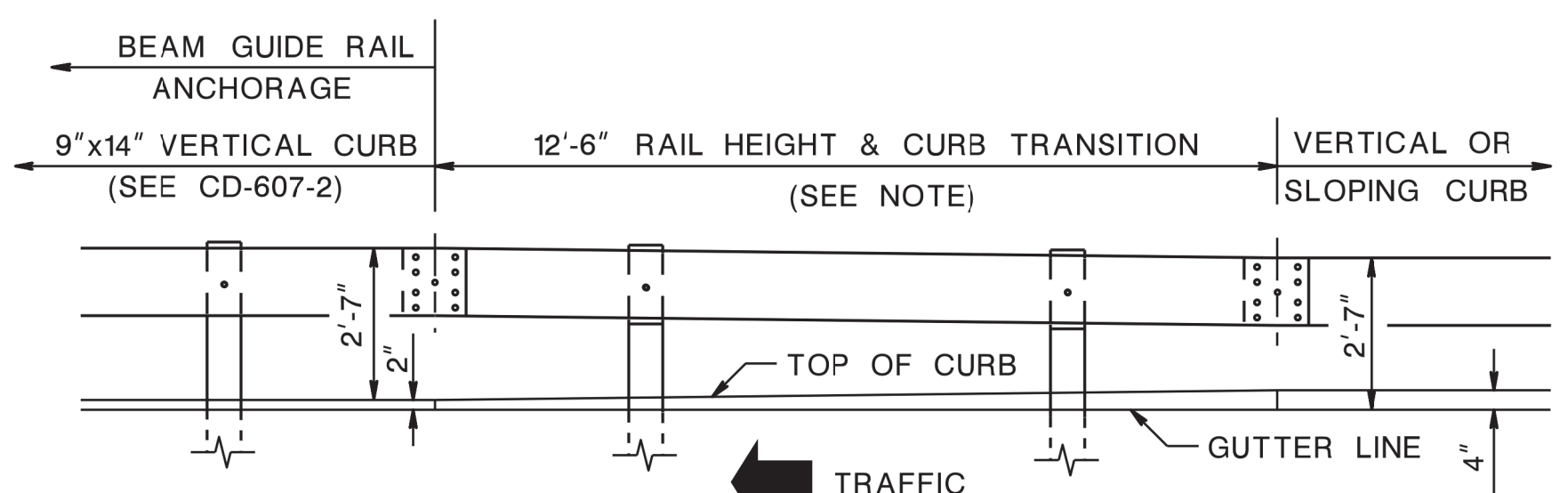
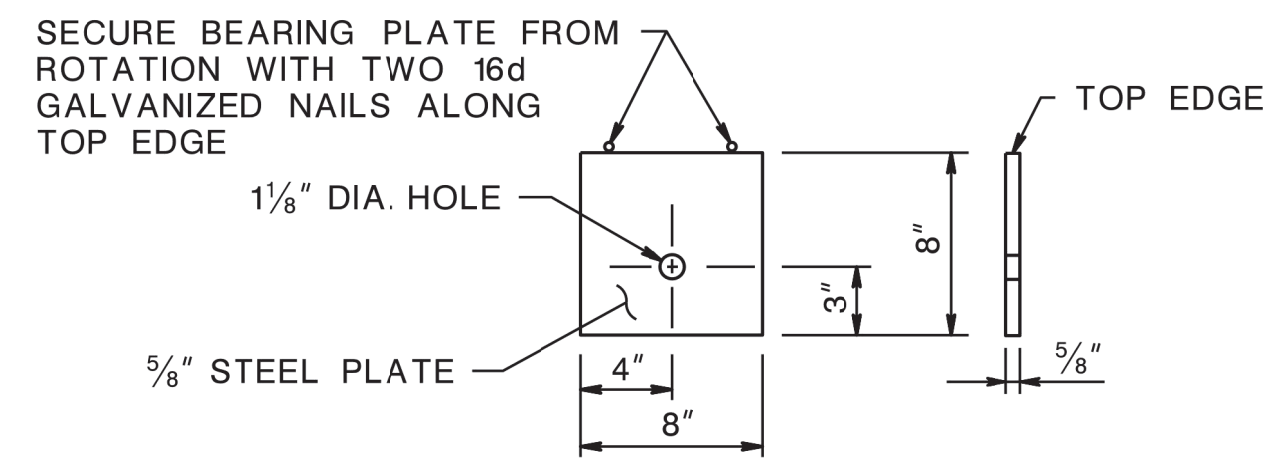
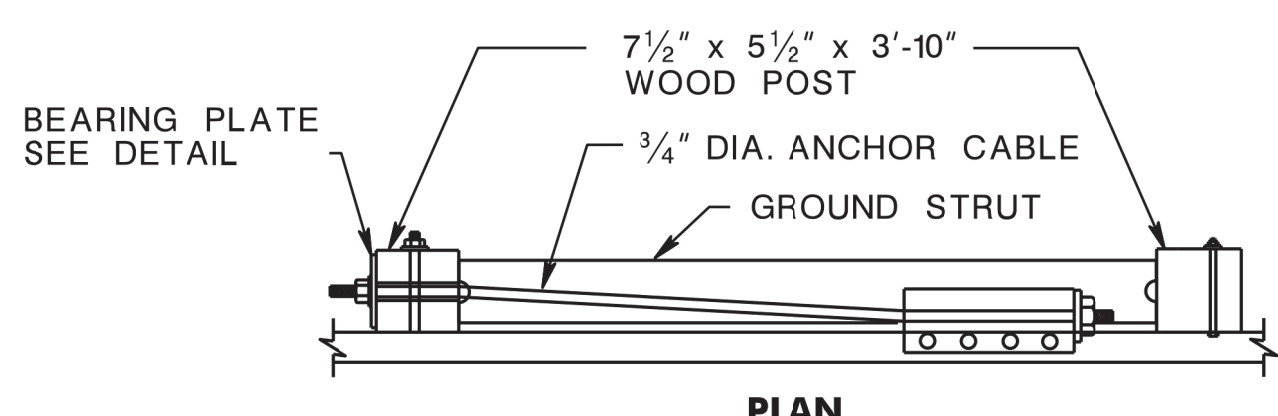


END SECTION (ROUNDED)

NOTES:

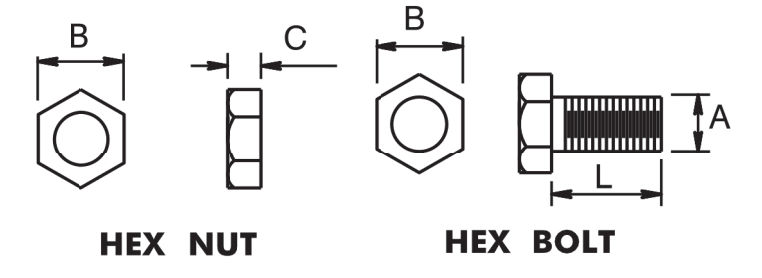
- ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
- FURNISH RAIL ELEMENTS SHOPCURVED, CONCAVE OR CONVEX, FOR RADII BETWEEN 20 AND 150 FEET.
- WHERE TRANSITIONING TO EXISTING GUIDE RAIL, AN END TERMINAL, OR A CRASH CUSHION MOUNTED AT A HEIGHT OTHER THAN 2'-7", THE VERTICAL TRANSITION TO BE ACCOMPLISHED IN A MINIMUM LENGTH OF 12'-6" FOR EACH 2" OF VERTICAL CHANGE. SEE CD-609-8.
- INSTALL AN END TERMINAL AS SHOWN ON THE PLANS. USE THE END SECTION (ROUNDED) ON THE END OF THE RAIL ELEMENT WHERE DUAL FACED BEAM GUIDE RAIL ENDS AND SINGLE FACED BEAM GUIDE RAIL BEGINS.

CD-609-1.1



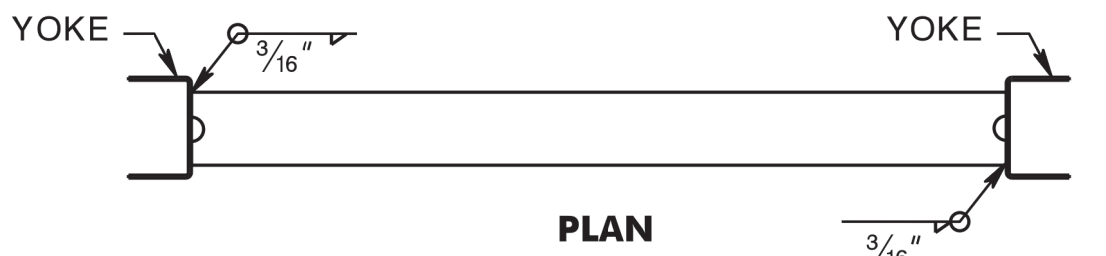
NOTE: WHERE GUIDE RAIL IS OFFSET 4 FEET OR MORE FROM THE GUTTER LINE, RAIL HEIGHT IS MEASURED FROM THE GROUND LINE (CD-609-8A). A RAIL HEIGHT TRANSITION IS NOT REQUIRED.

RAIL HEIGHT TRANSITION FOR GUIDE RAIL ANCHORAGE WITH 2" VERTICAL CURB WHERE GUIDE RAIL IS OFFSET LESS THAN 4 FEET FROM THE GUTTER LINE

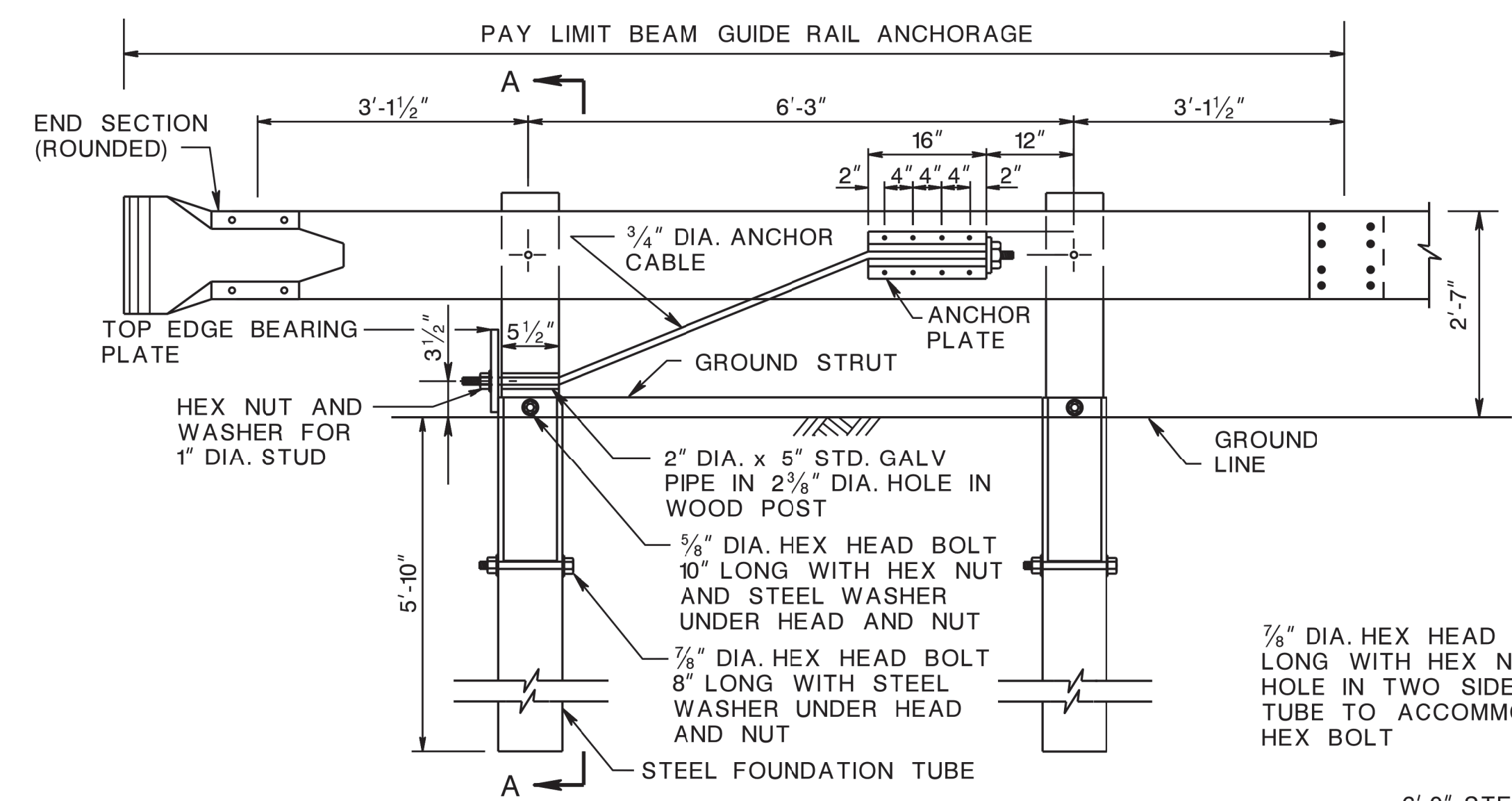


BOLT SIZE	THREAD PITCH	A	B	C	L
5/8"	11	5/8"	15/16"	39/64"	1 1/2", 10"
7/8"	9	7/8"	1 1/16"	3/4"	8"

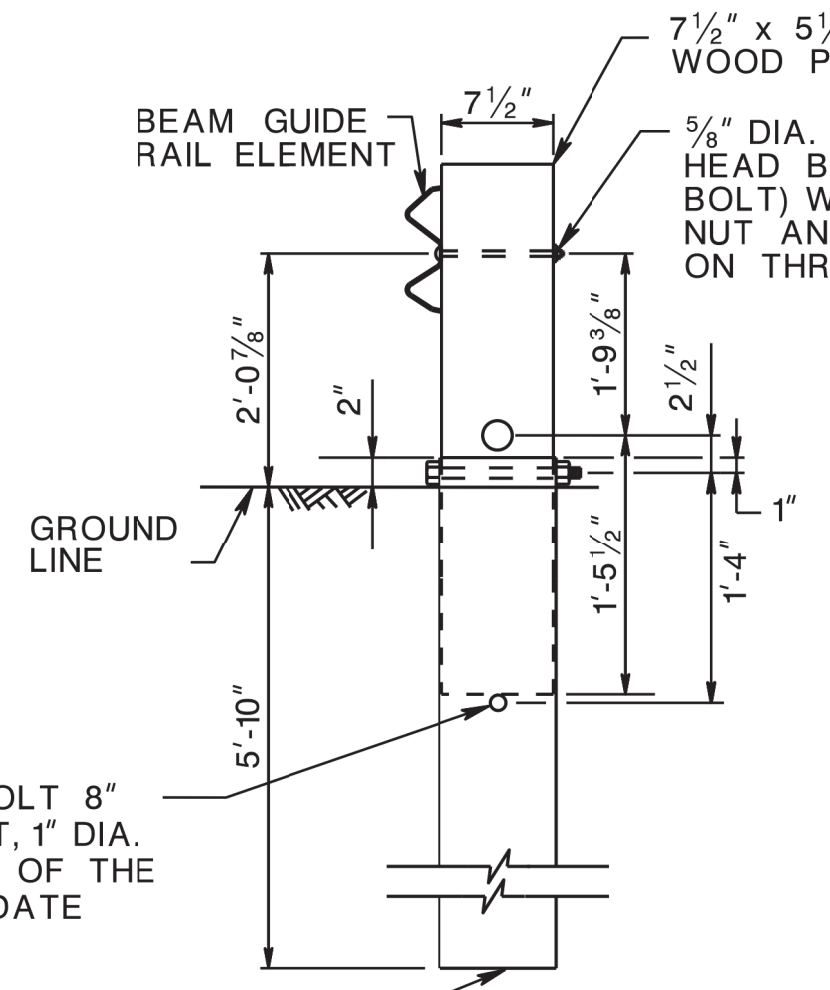
HEX NUT AND BOLT



ELEVATION GROUND STRUT

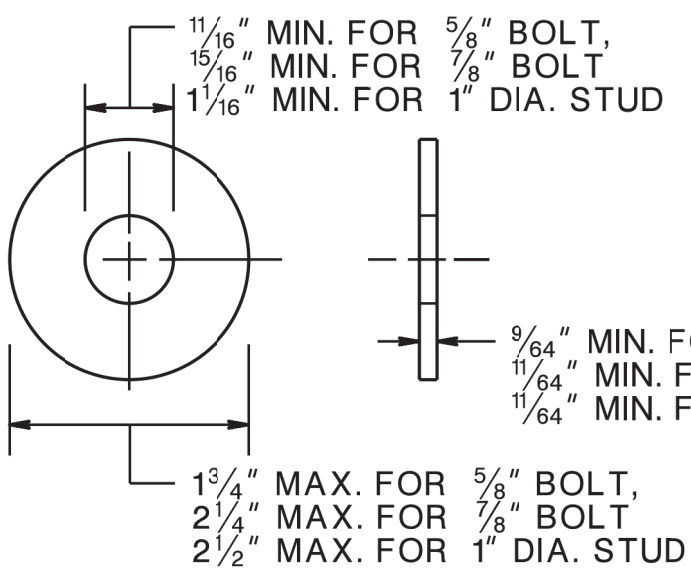


BEARING PLATE

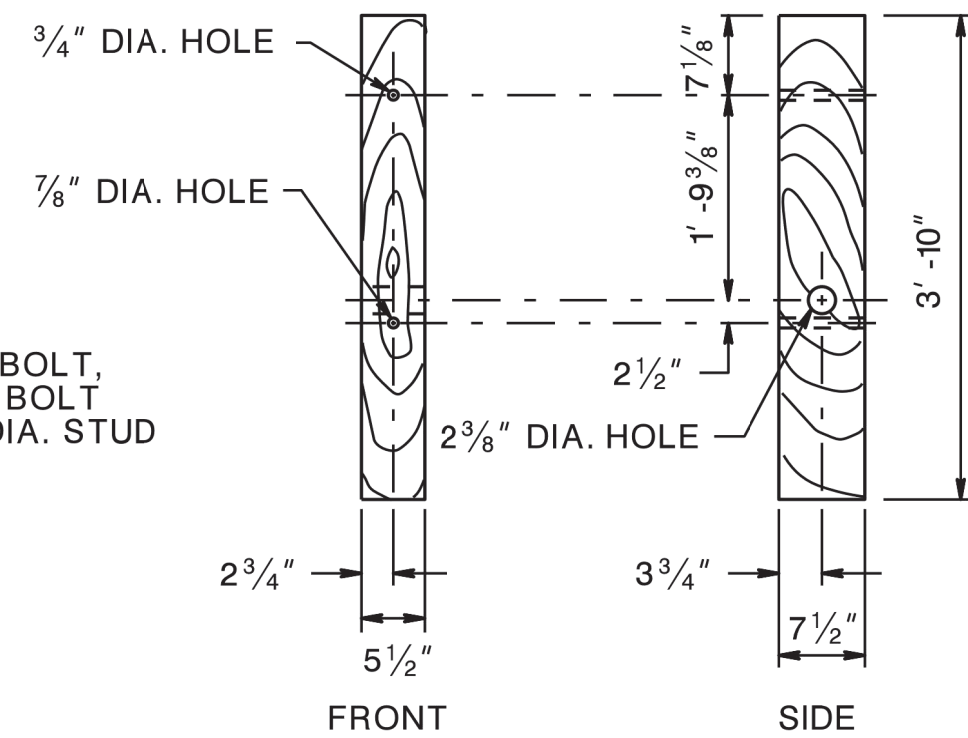


ELEVATION BEAM GUIDE RAIL ANCHORAGE

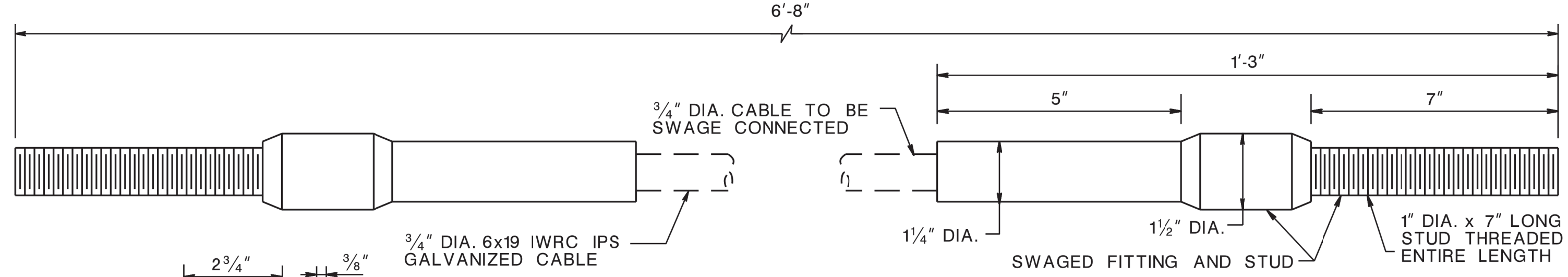
SECTION A-A



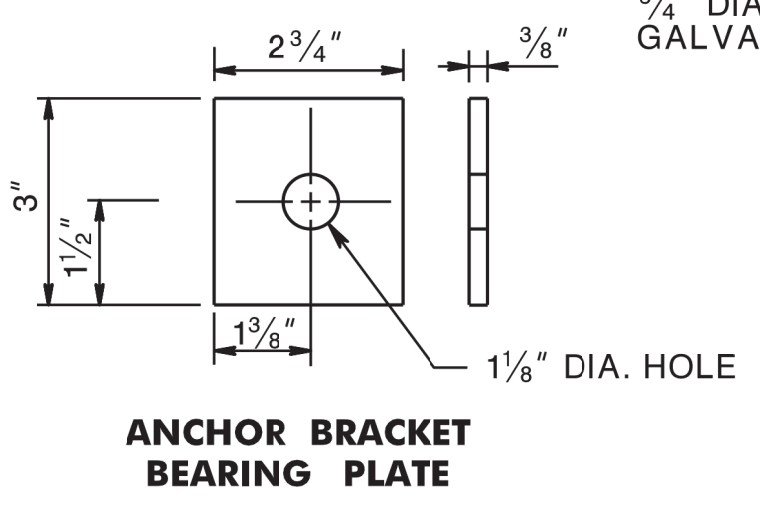
STEEL WASHER



WOOD POST

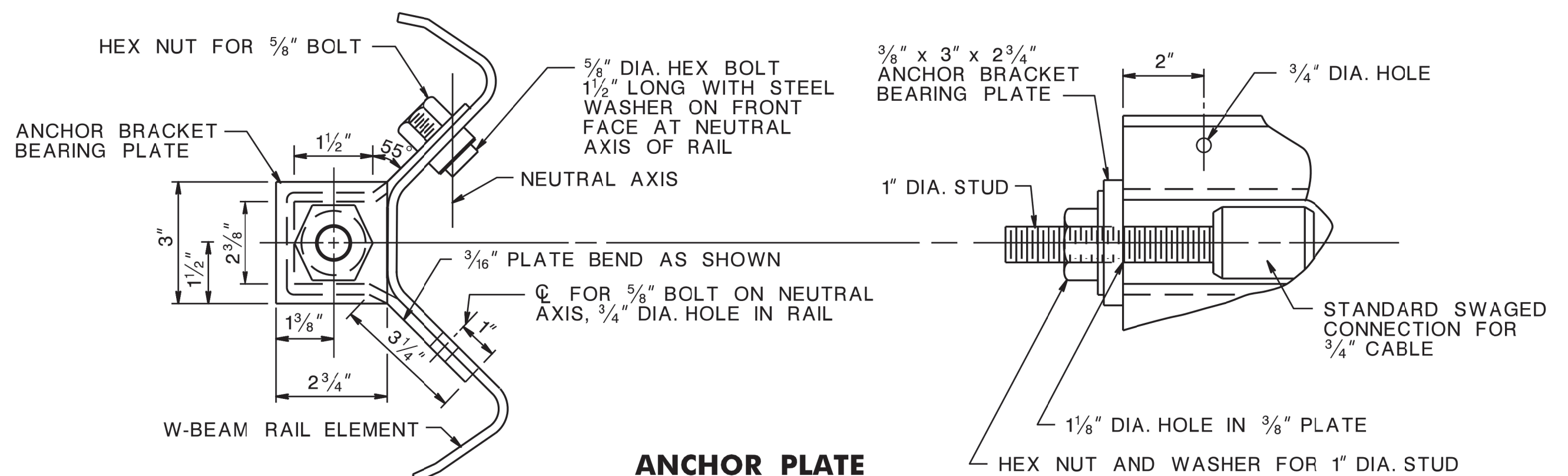


CABLE ASSEMBLY

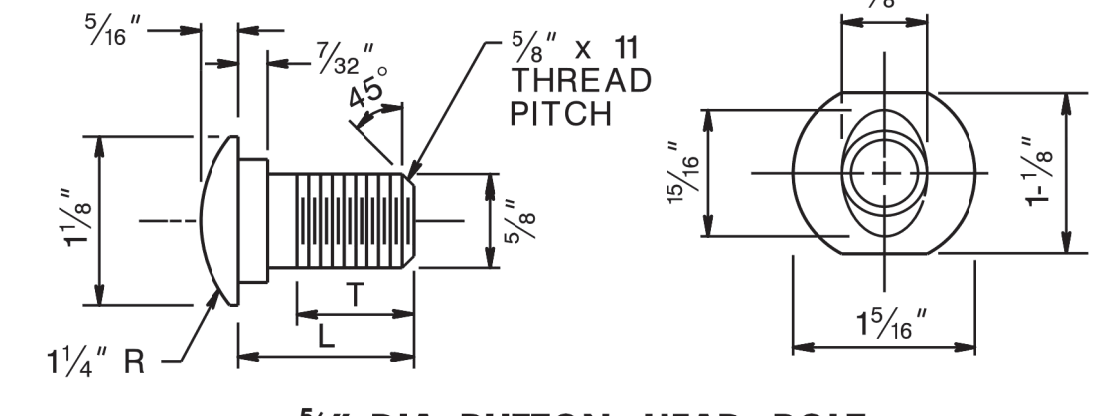
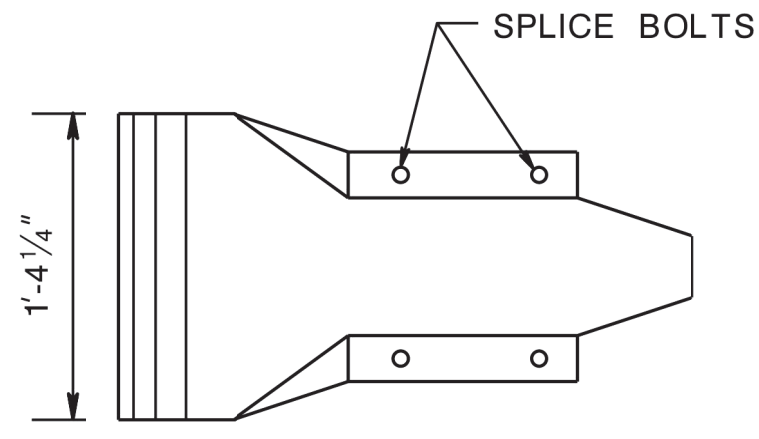


ANCHOR BRACKET BEARING PLATE

NOTE: OTHER ANCHOR CABLE ASSEMBLIES MAY BE USED. MINIMUM BREAKING STRENGTH OF ASSEMBLY TO BE 42,700 LBS.



ANCHOR PLATE



TYPE	L	MIN. THREAD LENGTH (T)
RAIL	10"	4"
SPLICE	1 1/4"	FULL LENGTH THREAD

5/8" DIA. BUTTON HEAD BOLT

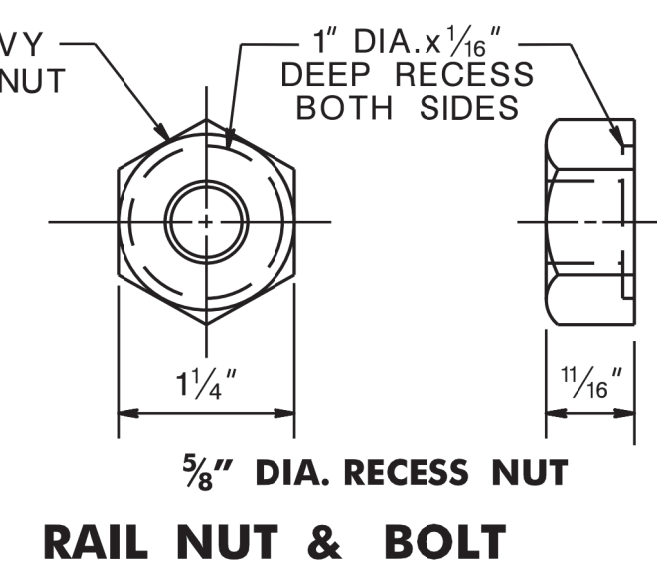
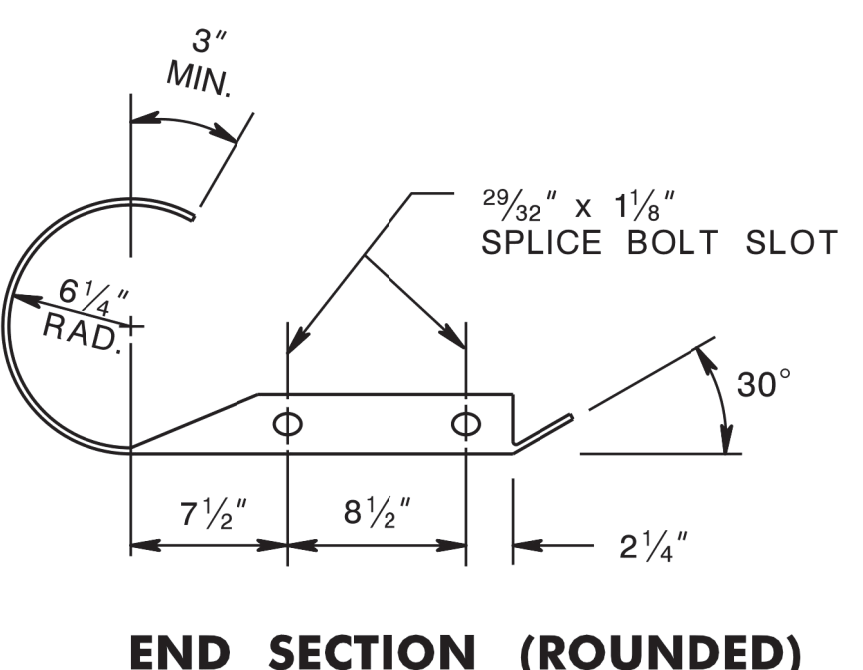
BEAM GUIDE RAIL ANCHORAGE (MASH TL-3)

N.T.S.

CD-609-4

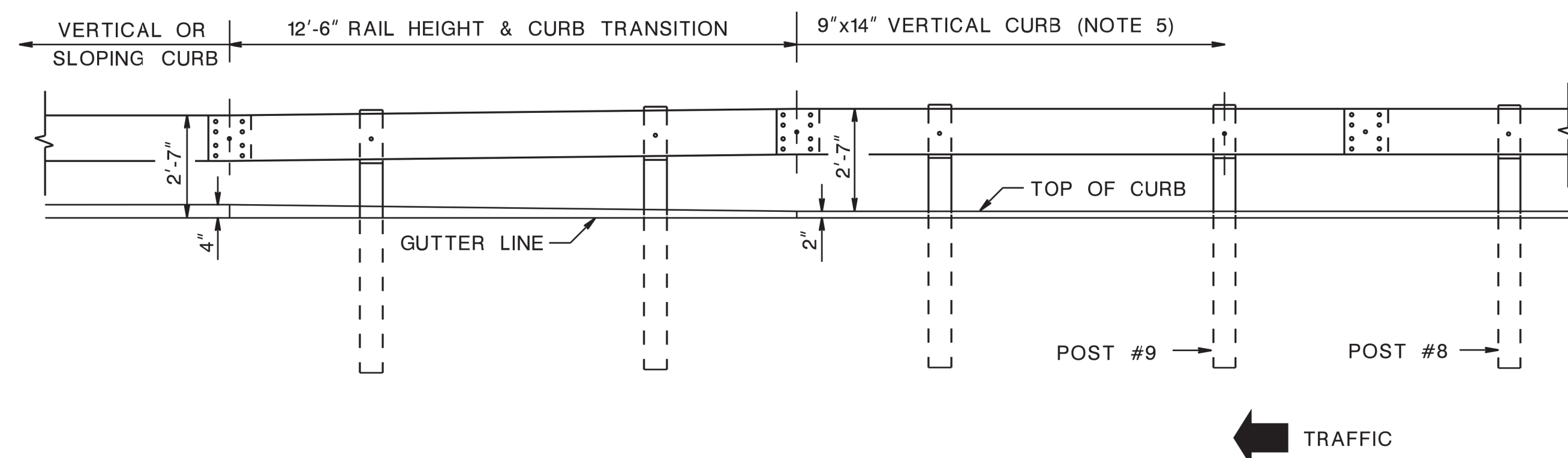
NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS



CD-609-4.1

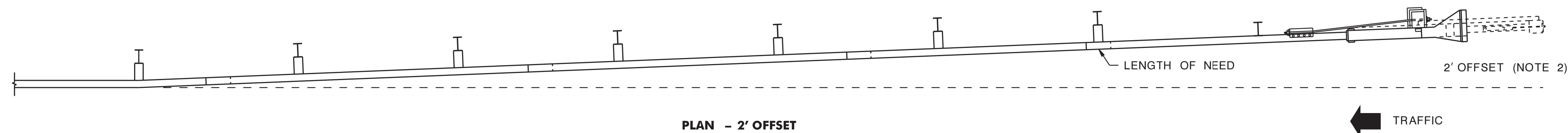
BDCB-07-ANCHORAGE WITH CURB REVISED
 BDCD-10-ANCHORAGE WITH CURB ADDED
 BDCD-02-REVISIONS TO CD-609-4
 BDCB-04-ORIGINAL SHEET



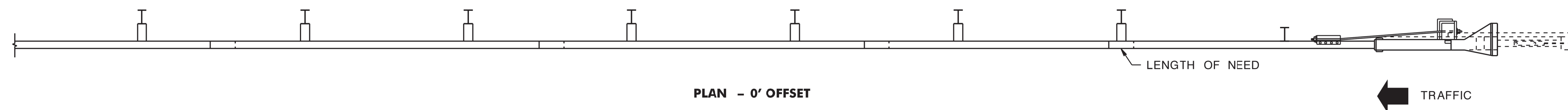
RAIL HEIGHT TRANSITION FOR TANGENT GUIDE RAIL TERMINAL WITH 2" VERTICAL CURB WHERE GUIDE RAIL IS OFFSET LESS THAN 4 FEET FROM THE GUTTER LINE (NOTE 6)

NOTES:

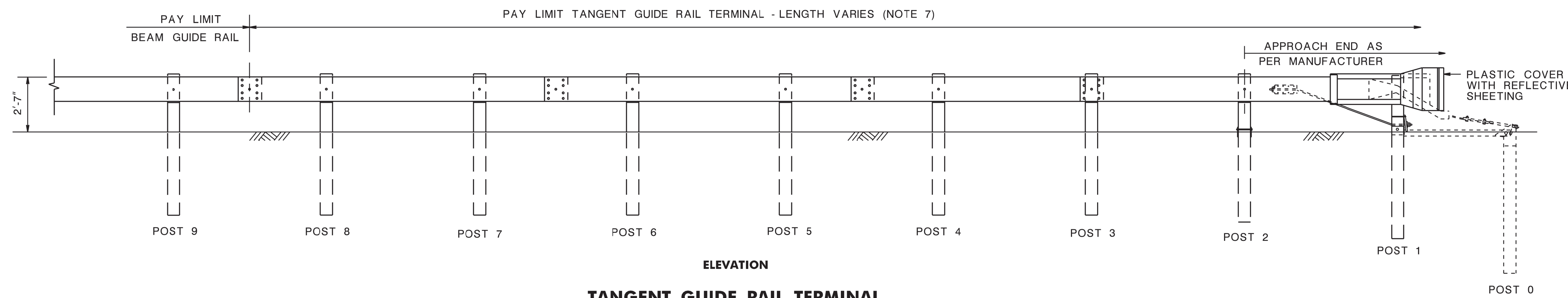
1. NUMBER OF POSTS, TYPE OF POST, POST SPACING, FLARE RATE, AND MATERIALS TO BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND THE DEPARTMENT'S QUALIFIED PRODUCTS LIST.
2. THE LOCATION OF THE 2 FOOT OFFSET VARIES WITH EACH MANUFACTURER. WHERE A 2 FOOT OFFSET IS SHOWN ON THE PLANS, CONSTRUCT THE TANGENT GUIDE RAIL TERMINAL WITH A STRAIGHT FLARE FOR ITS ENTIRE LENGTH AS PER THE MANUFACTURER.
3. WHERE GUIDE RAIL IS INSTALLED FLUSH WITH THE GUTTER LINE OR OFFSET 6 INCHES FROM THE GUTTER LINE, CONSTRUCT THE TANGENT GUIDE RAIL TERMINAL WITH A TWO FOOT OFFSET SO THAT THE TERMINAL END DOES NOT PROTRUDE INTO THE ROADWAY.
4. WHERE THE DOWNSTREAM GUIDE RAIL IS ON A HORIZONTAL CURVE, CONSTRUCT THE TANGENT GUIDE RAIL TERMINAL IN A STRAIGHT LINE AS SHOWN ON THIS DETAIL (DO NOT FOLLOW THE HORIZONTAL CURVE).
5. 9"x14" CONCRETE VERTICAL CURB WHERE SHOWN ON PLANS. SEE CD-607-2 FOR ADDITIONAL CURB TRANSITION DETAILS.
6. WHERE GUIDE RAIL IS OFFSET 4 FEET OR MORE FROM THE GUTTER LINE, RAIL HEIGHT OF THE GUIDE RAIL AND TANGENT GUIDE RAIL TERMINAL IS MEASURED FROM THE GROUND LINE (CD-609-8A). A RAIL HEIGHT TRANSITION IS NOT REQUIRED.
7. LENGTH OF TANGENT GUIDE RAIL TERMINAL AS PER MANUFACTURER. SEE QUALIFIED PRODUCTS LIST.
8. LOCATION OF POST #1 AS SHOWN ON THE PLANS.



PLAN - 2' OFFSET



PLAN - 0' OFFSET



TANGENT GUIDE RAIL TERMINAL

TANGENT GUIDE RAIL TERMINAL (MASH TL-3)

N.T.S.

CD-609-5

NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

CD-609-5.1

BDC609-07-FLARED TERMINAL DELETED
 BDC7D7D-06-TERMINAL WITH CURB ADDED
 BDC7D7D-02-REVISIONS TO CD-609-5
 BDC609-03-ORIGINAL SHEET

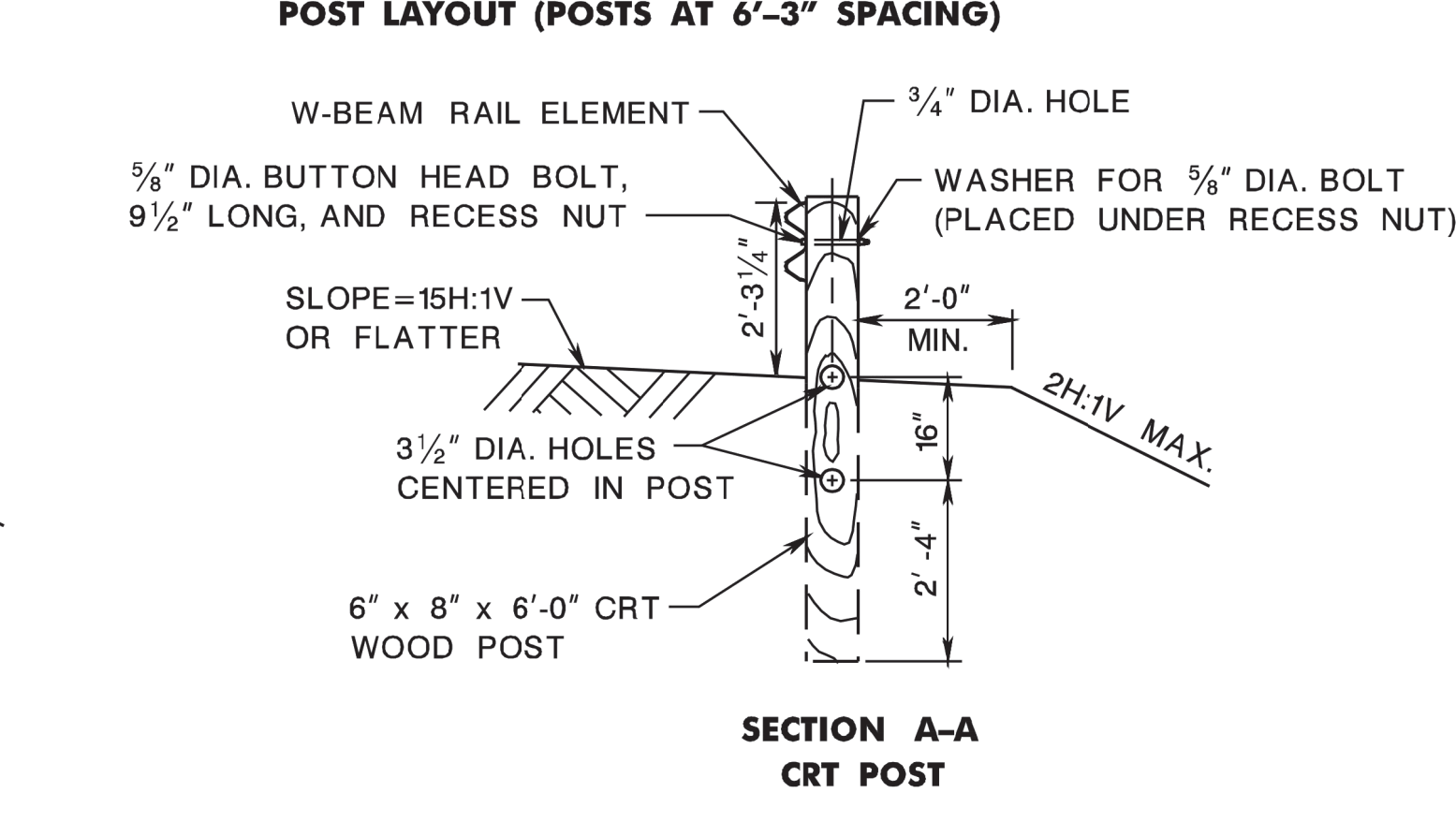
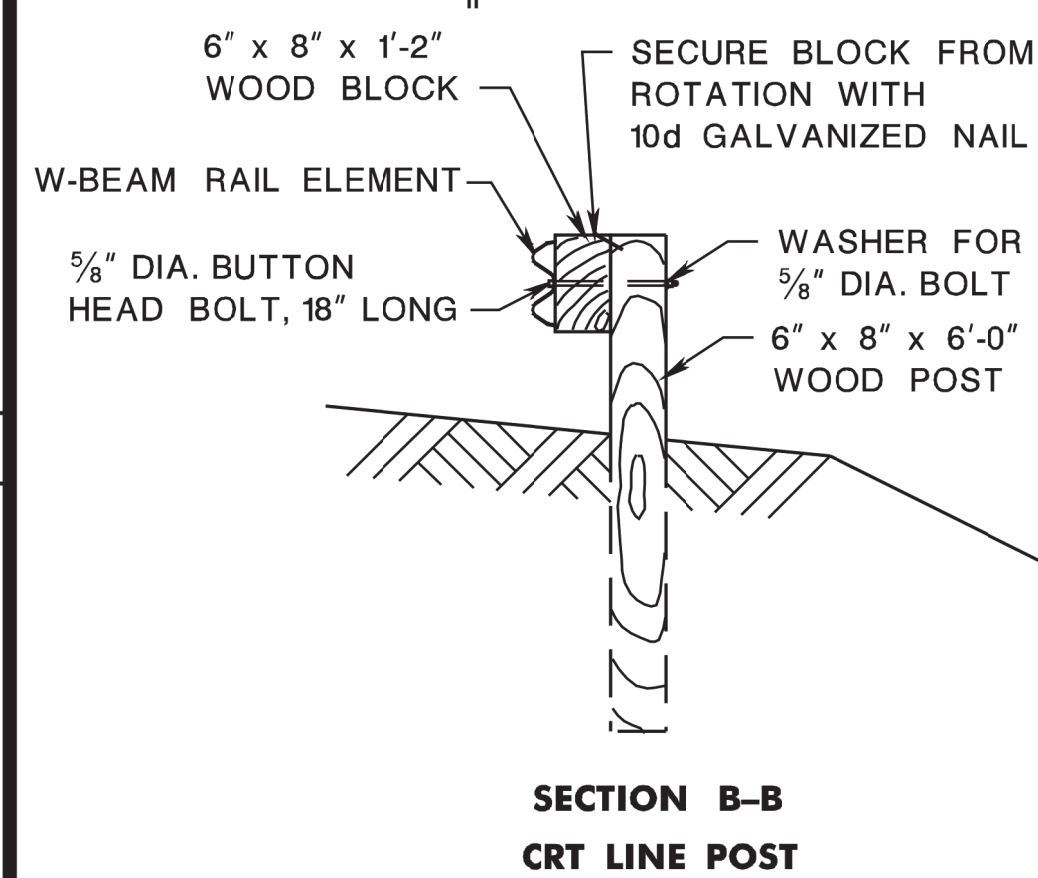
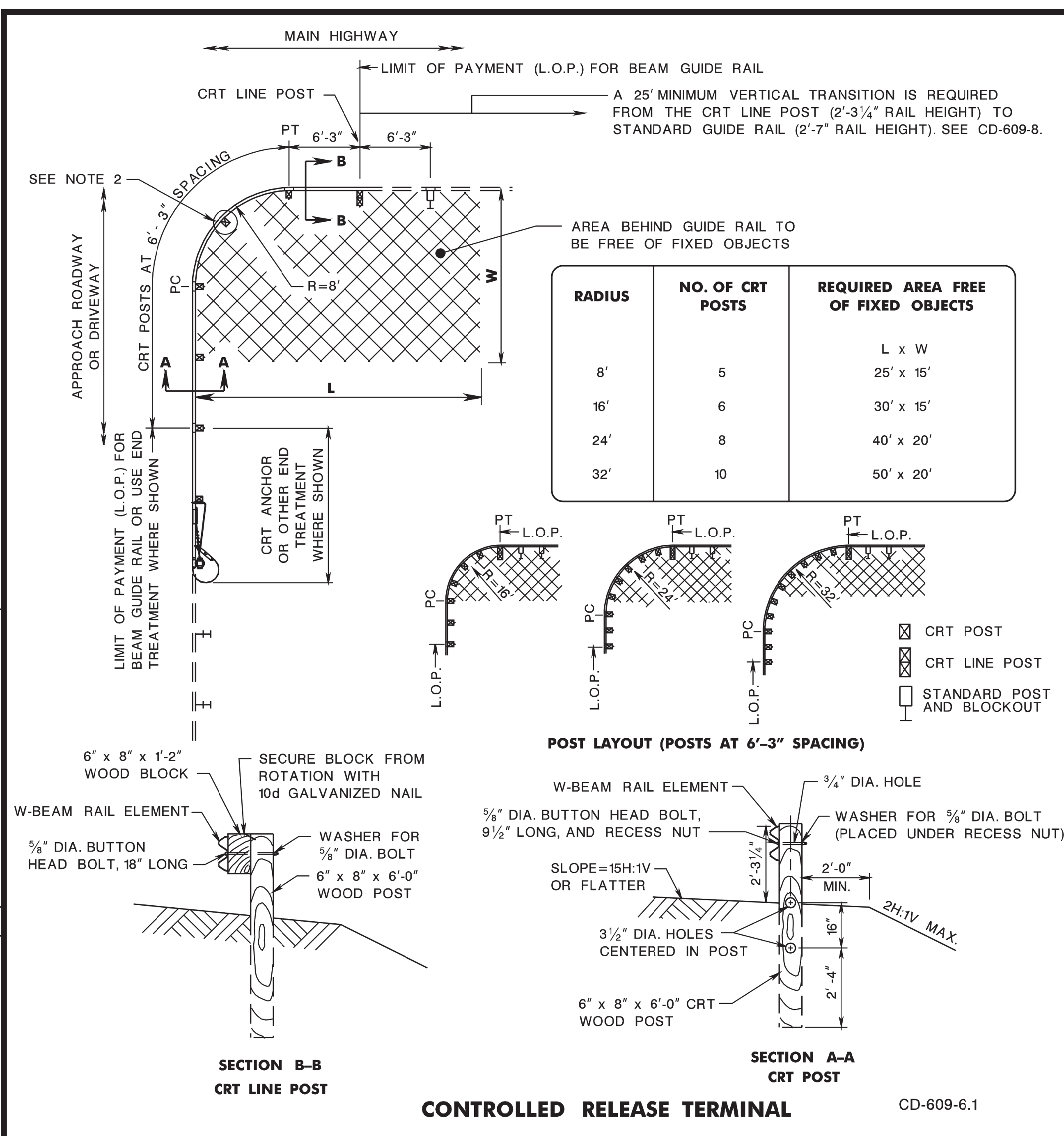
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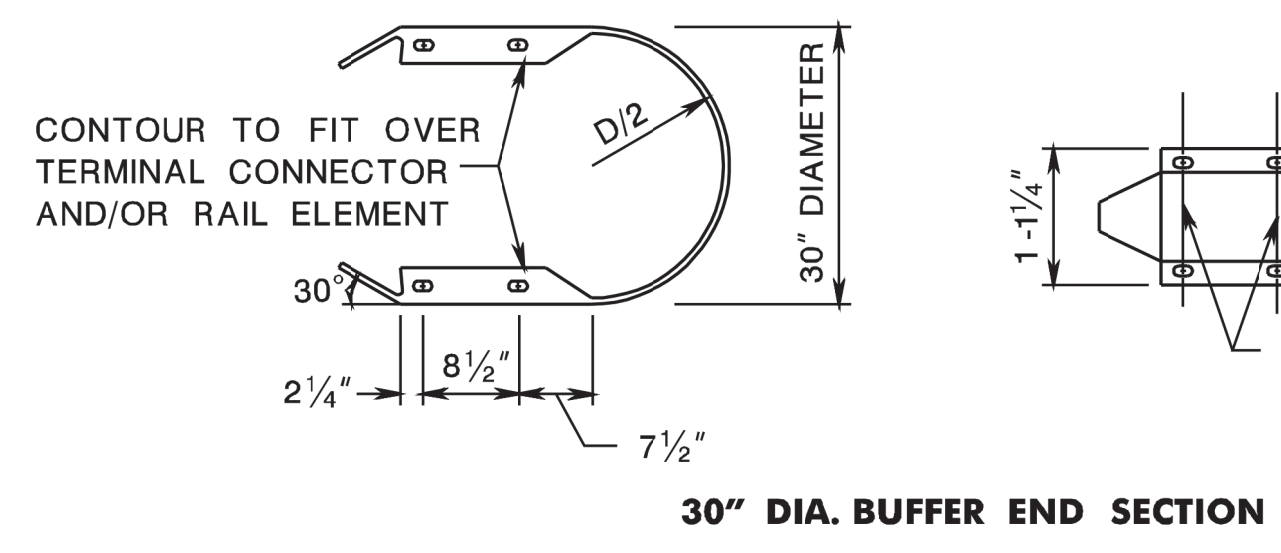
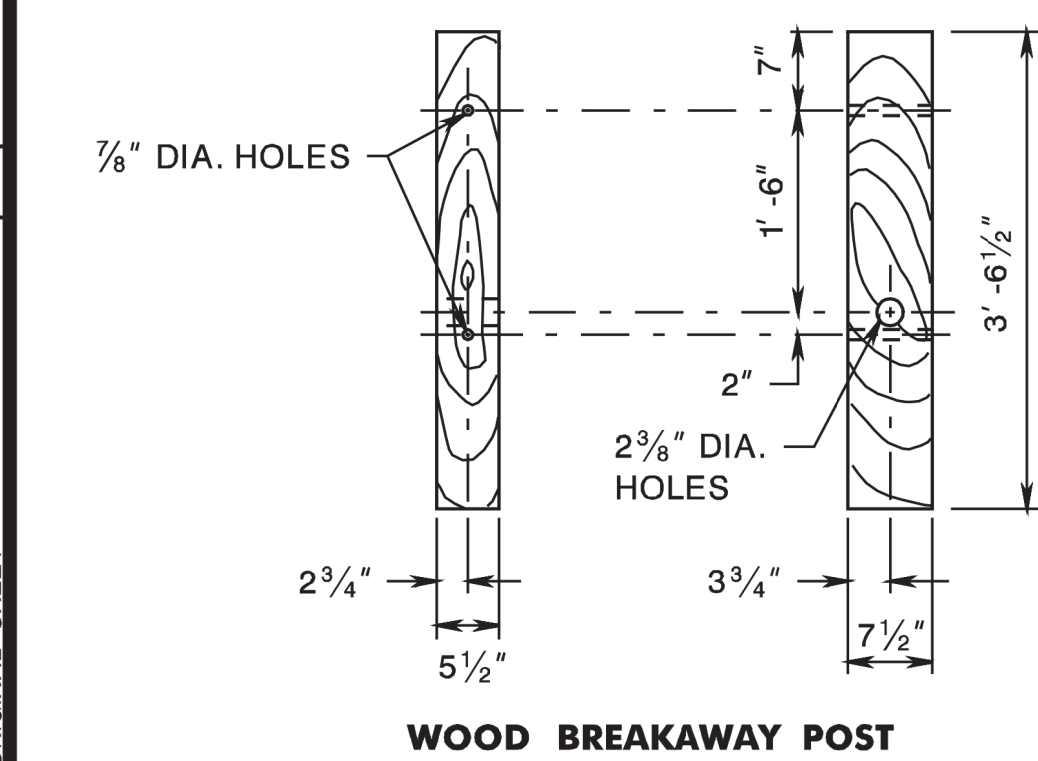
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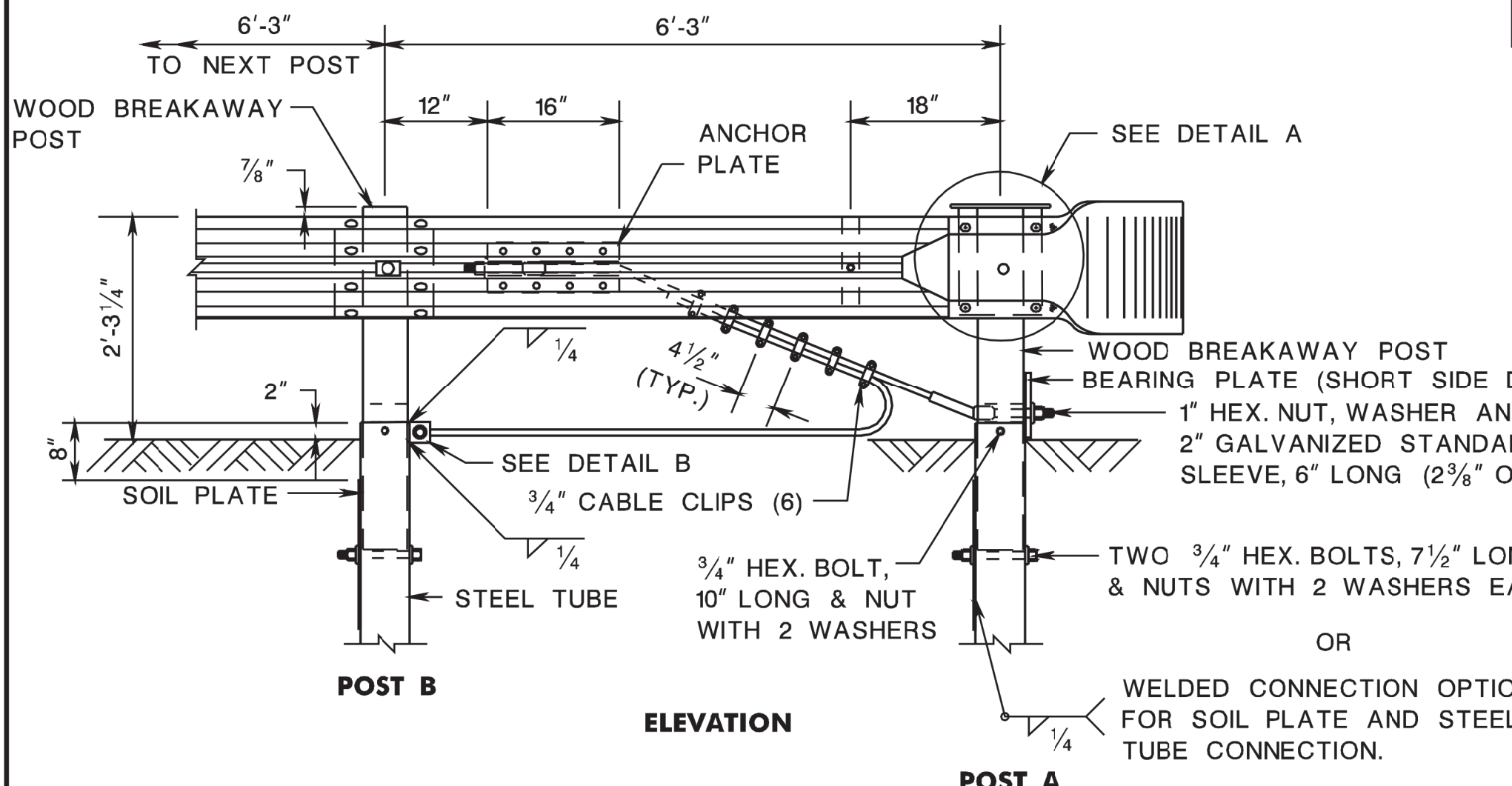
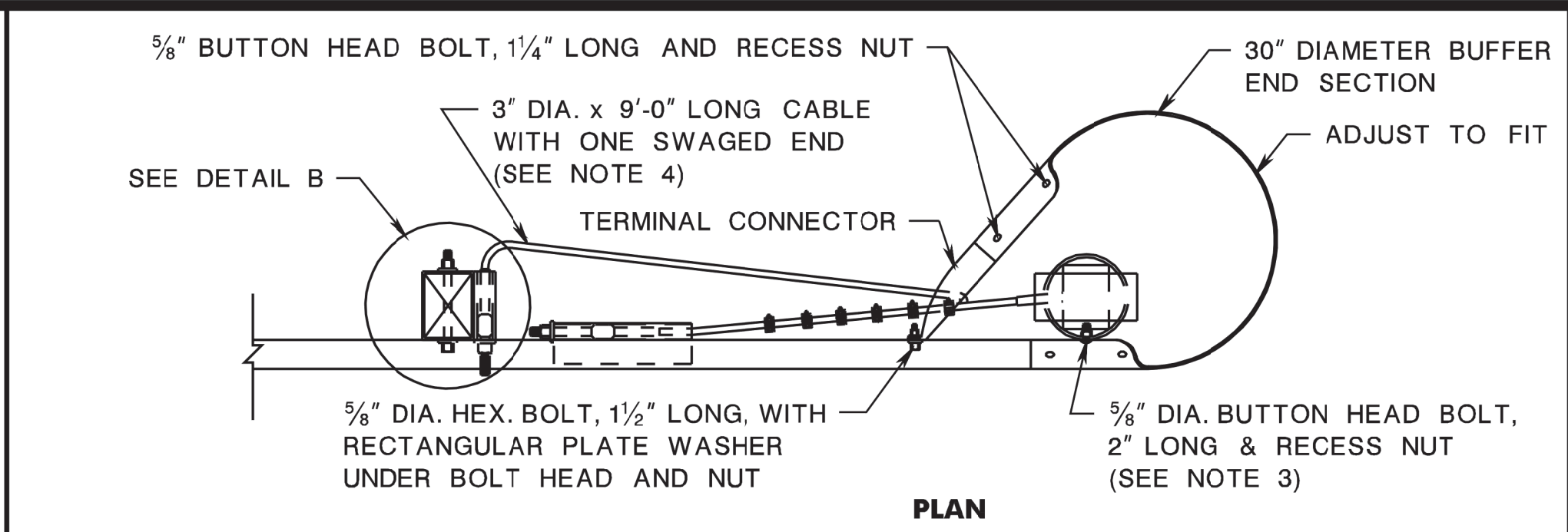
BDCTD02 REVISIONS TO CD-609-6
BDCTD01 ORIGINAL SHEET



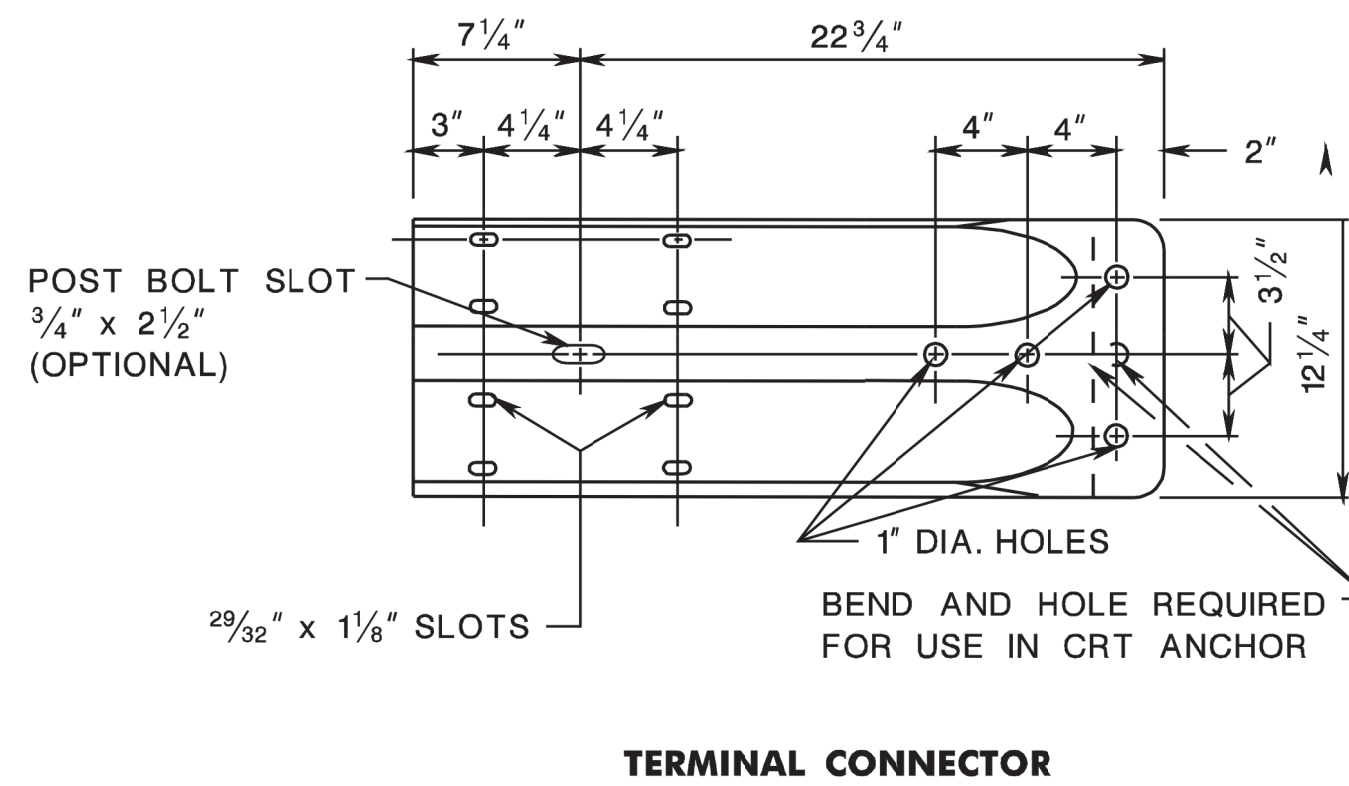
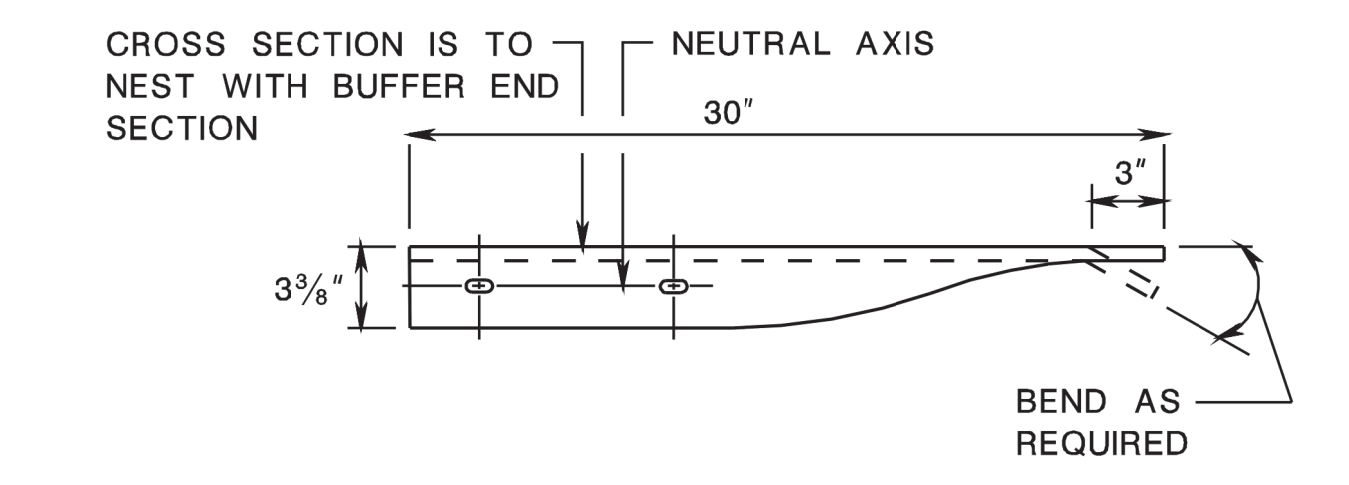
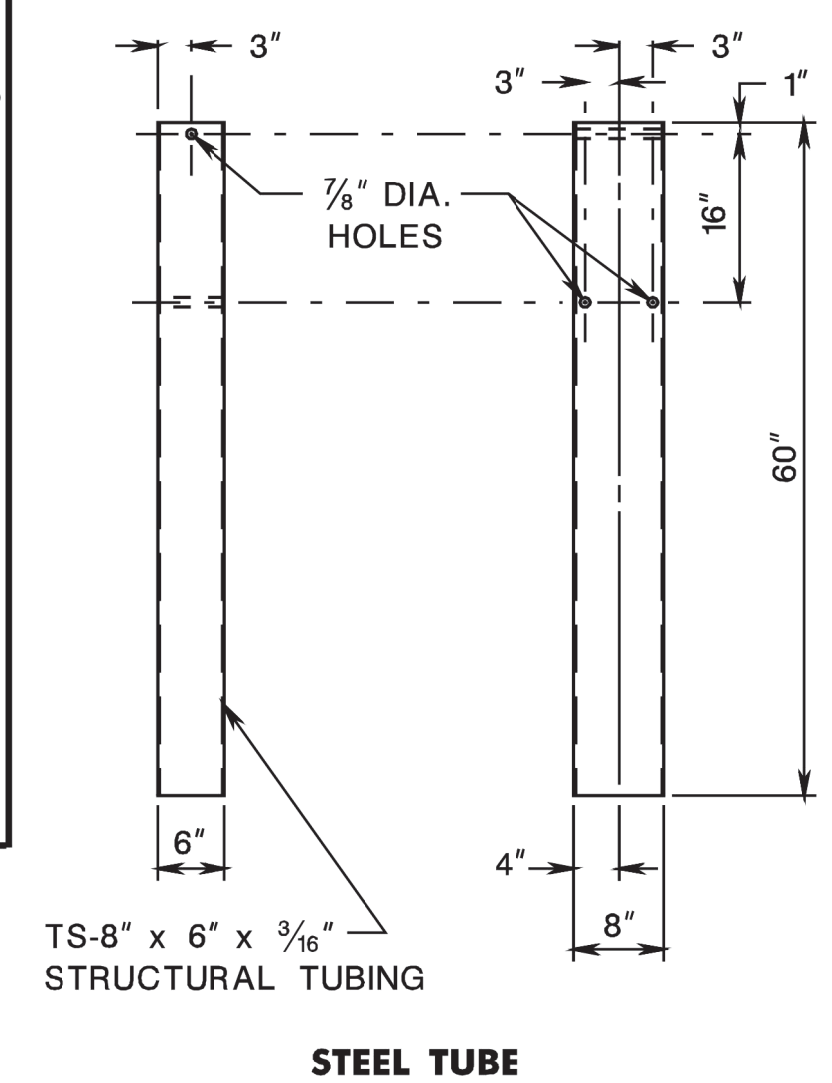
CONTROLLED RELEASE TERMINAL CD-609-6.1



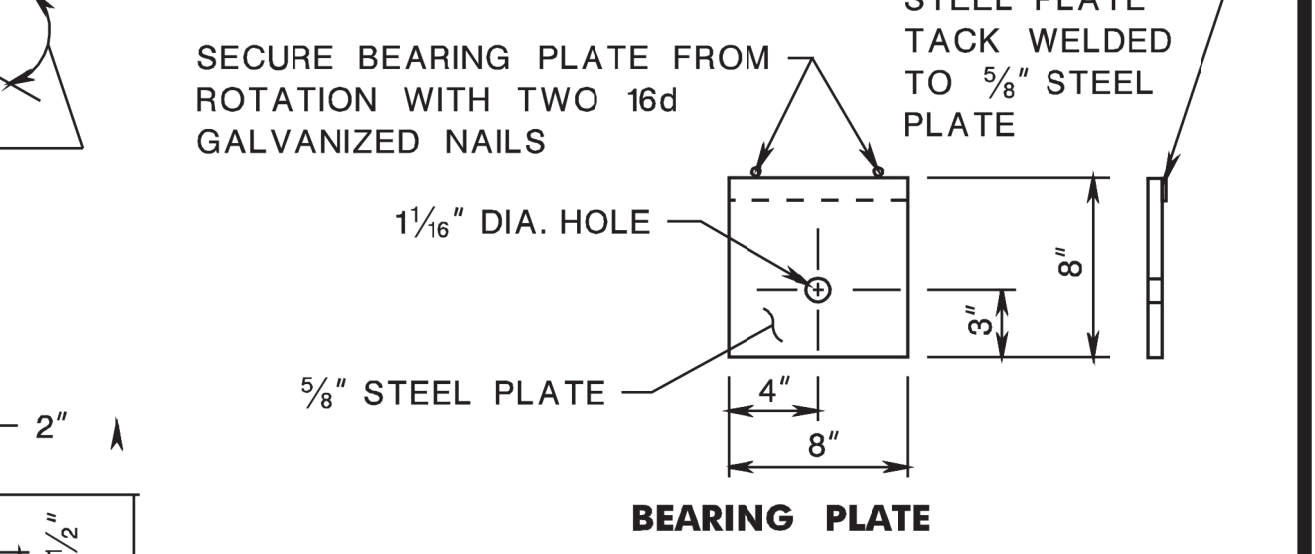
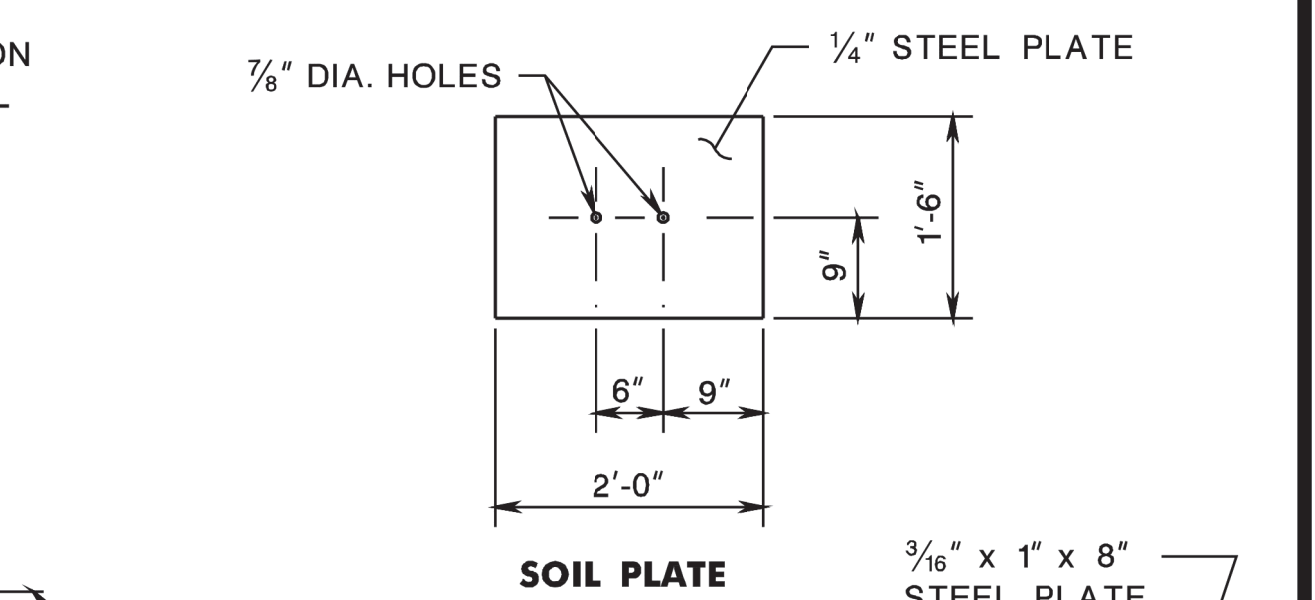
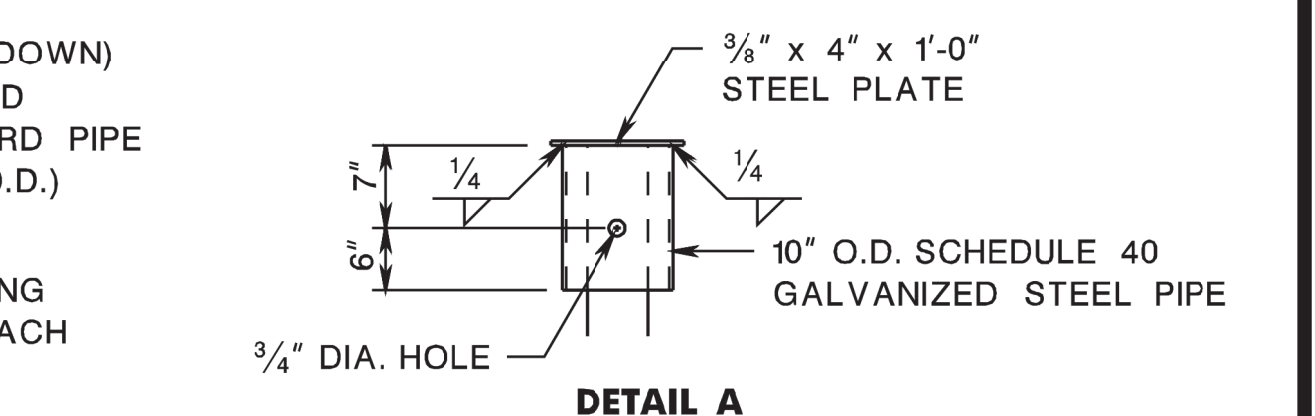
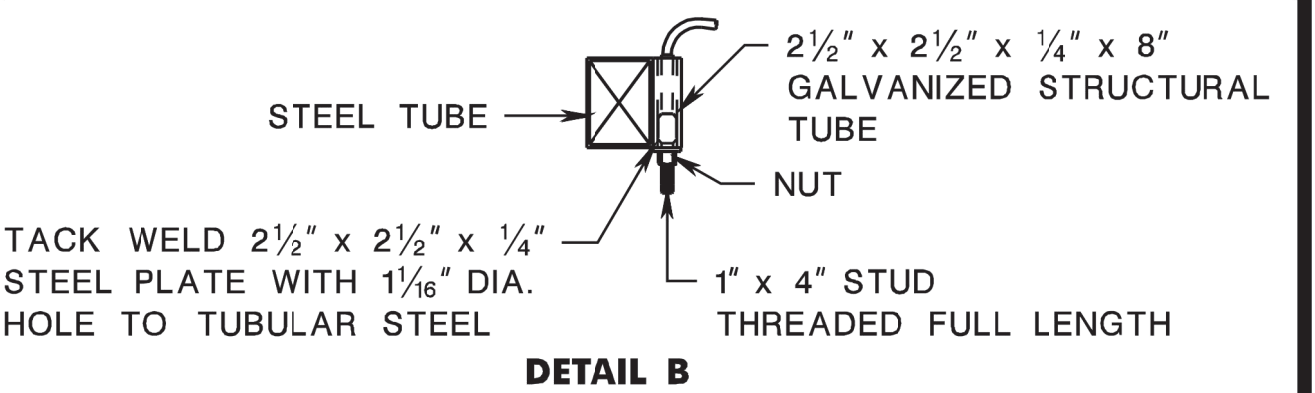
CONTROLLED RELEASE TERMINAL ANCHORAGE



CRT ANCHOR



- GENERAL NOTES**
- NO WASHERS ARE USED ON THE 5/8" DIA. BUTTON HEAD BOLTS CONNECTING THE RAIL TO THE CONTROLLED RELEASE TERMINAL (CRT) POSTS.
 - FOR 8 FOOT RADIUS, THE RAIL ELEMENT NOT TO BE BOLTED TO THE CRT POST AT THE CENTER OF THE NOSE AS SHOWN.
 - ATTACH W-BEAM TO STEEL PIPE WITH BUTTON HEAD BOLT WITH NO WASHER. NO CONNECTION TO POST IS REQUIRED.
 - WIRE ROPE CABLE TO CONFORM TO THE REQUIREMENTS OF AASHTO M30 AND BE 3/4" DIAMETER PREFORMED, 6 x 19, WIRE STRAND CORE OR INDEPENDENT WIRE ROPE CORE, GALVANIZED, RIGHT REGULAR LAY, MANUFACTURED OF IMPROVED PLOW STEEL WITH A MINIMUM BREAKING STRENGTH OF 42,800 POUNDS.
 - STRUCTURAL TUBING TO CONFORM TO ASTM A500.
- CD-609-6.3

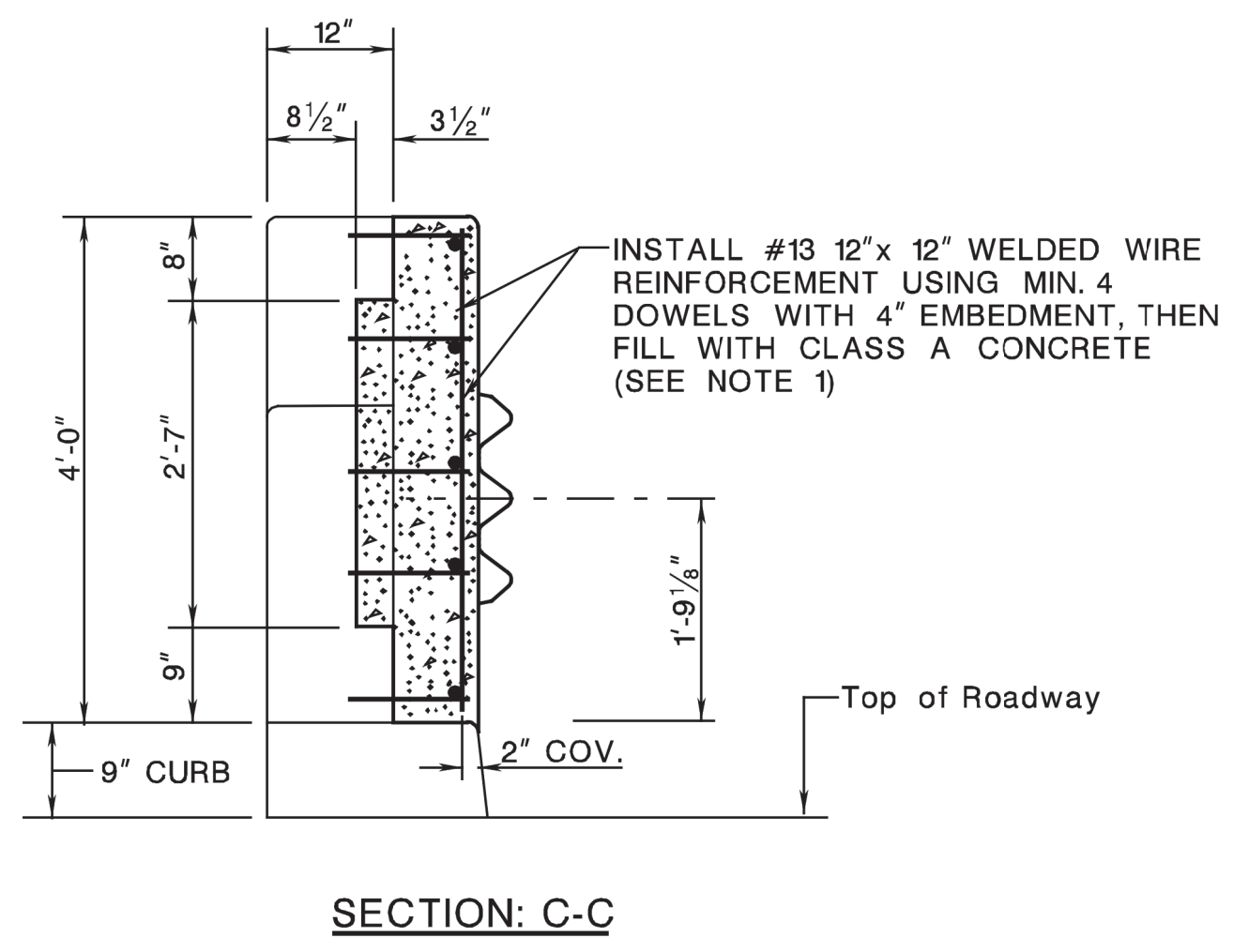
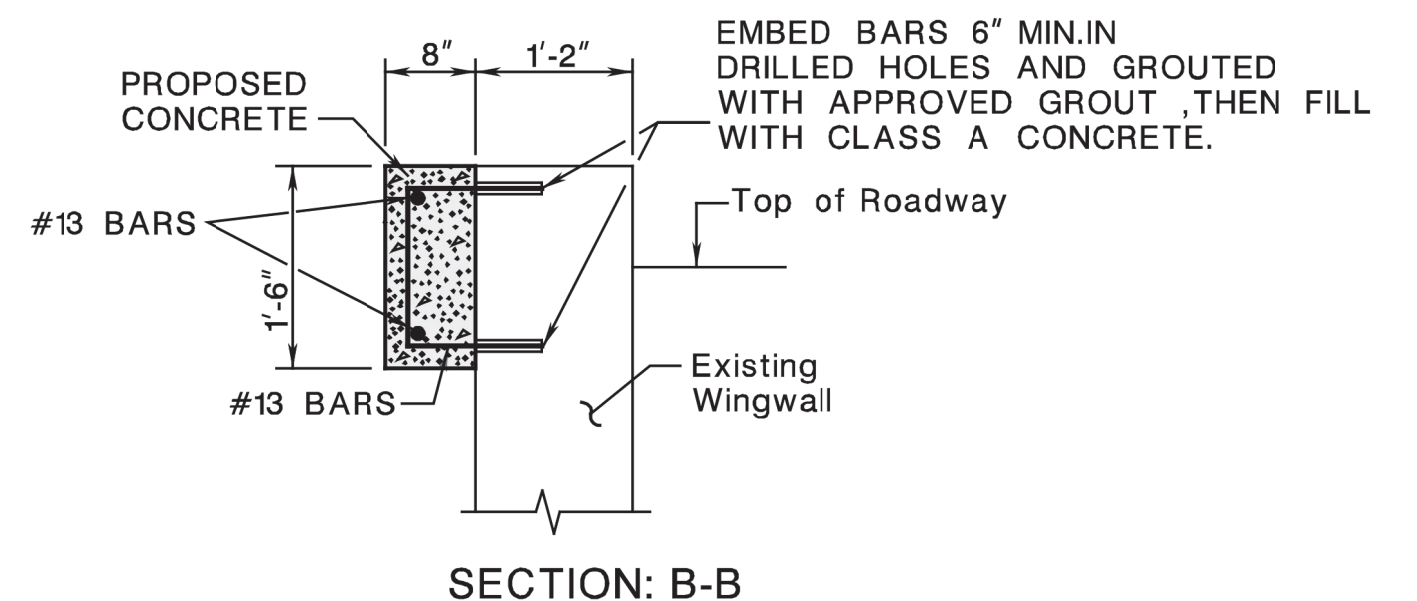
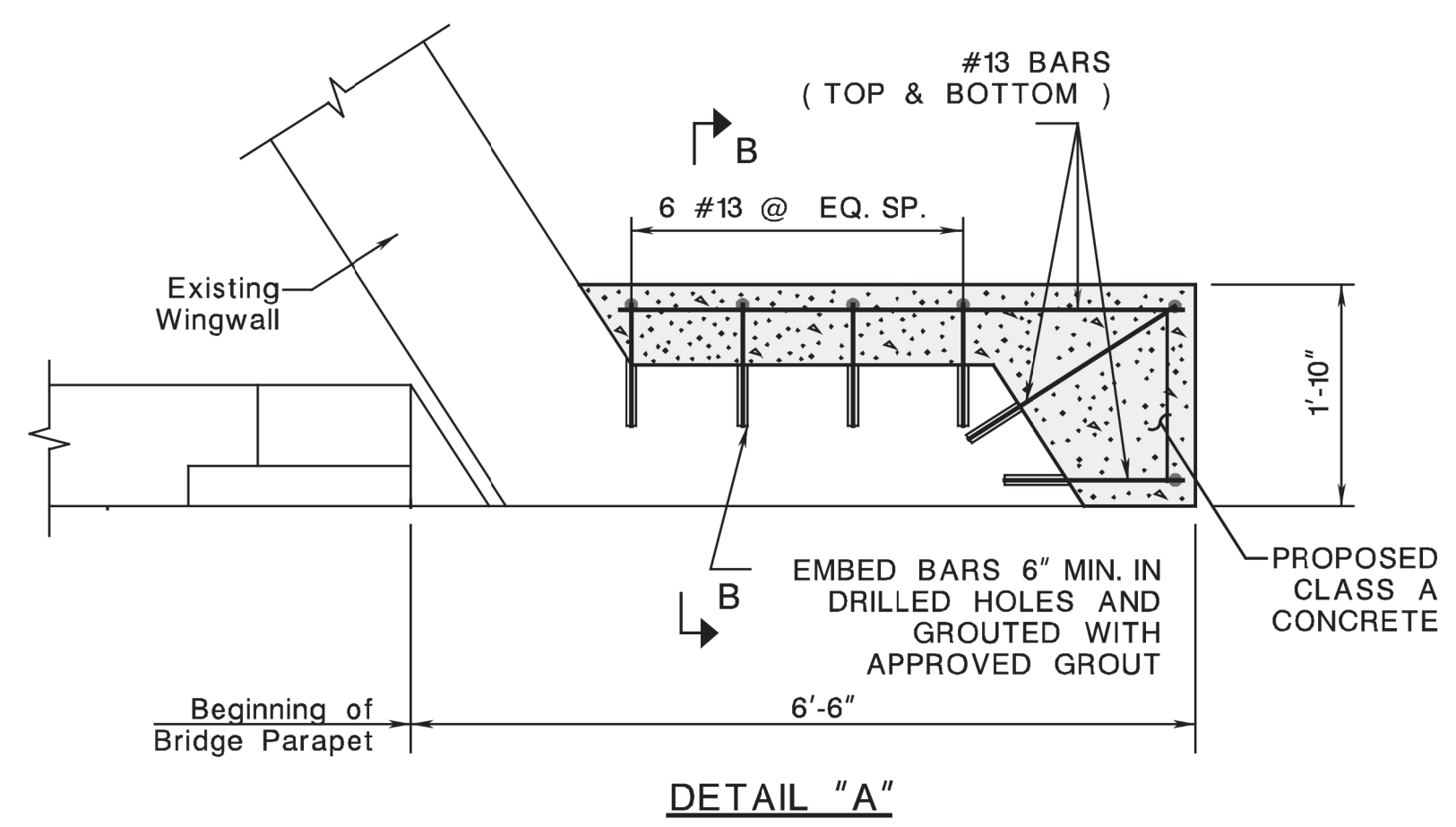
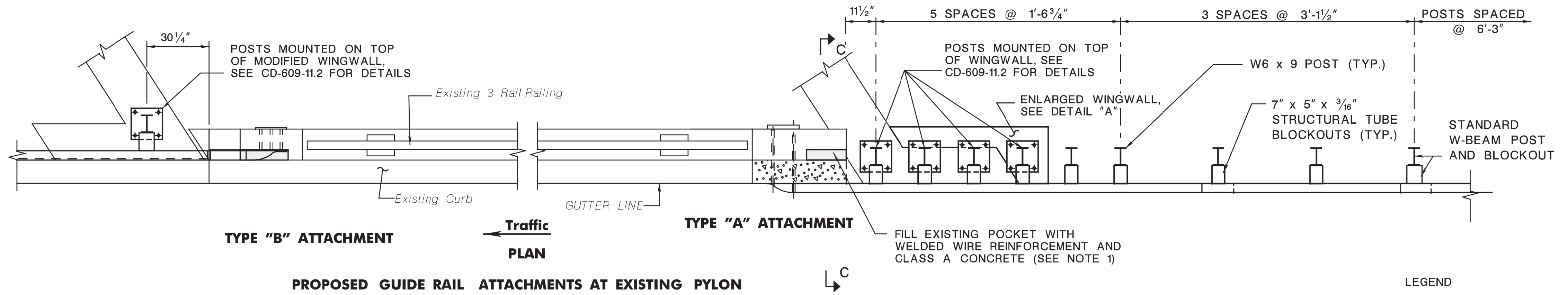
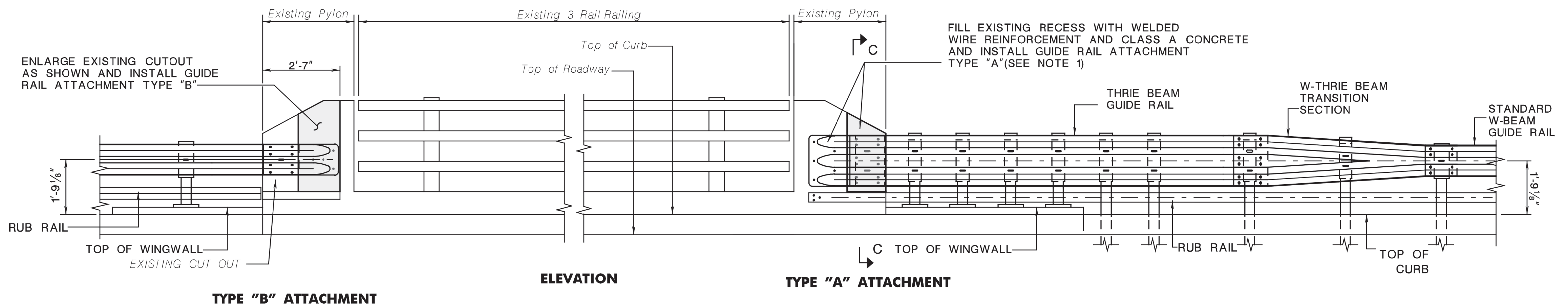


CONTROLLED RELEASE TERMINAL (NCHRP 230 TL-3)

N.T.S. CD-609-6
NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

CD-609-6.2



LEGEND
 PROPOSED CLASS A CONCRETE

NOTES:
 1. CONFORM WELDED WIRE REINFORCEMENT TO SUBSECTION 905.01.03 OF NJDOT STANDARD SPECIFICATION.
 2. FOR BRIDGE ATTACHMENT TYPES AND ADDITIONAL DETAILS, REFER TO CD-609-17.

3-RAIL RAILING WITH PYLON
 N.T.S.

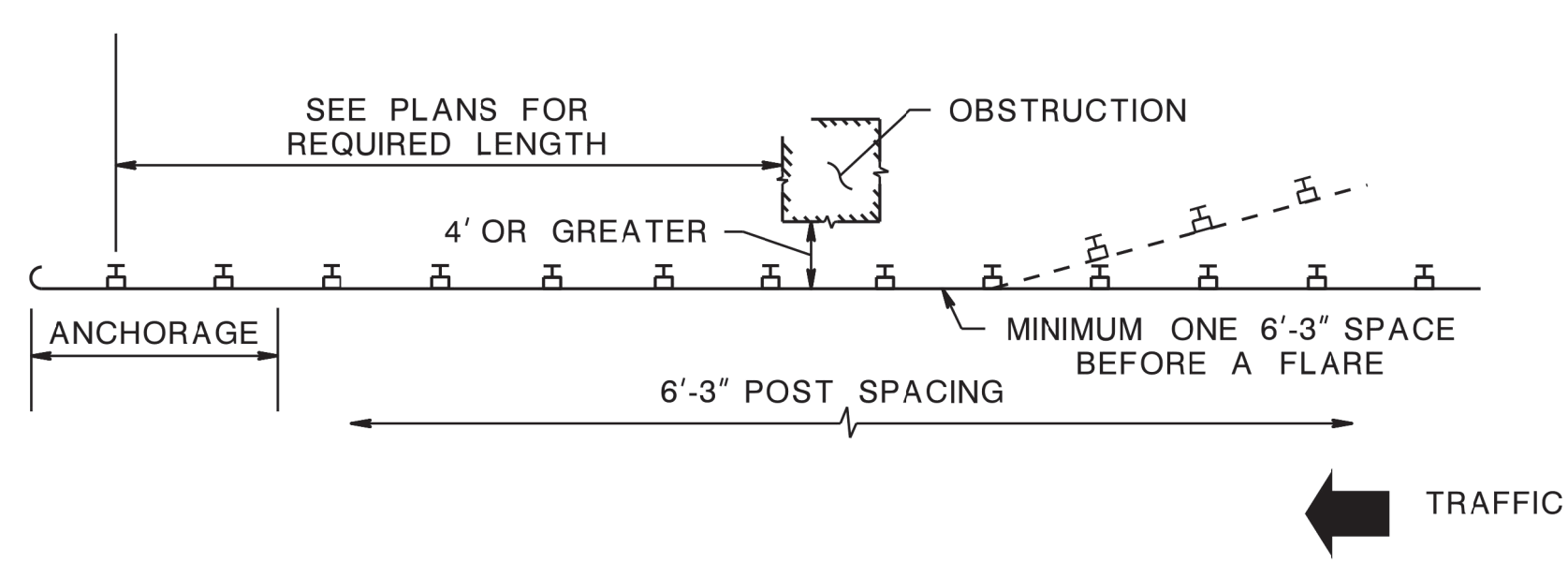
BCD-609-7
 NEW JERSEY DEPARTMENT OF TRANSPORTATION
 BUREAU OF STRUCTURAL ENGINEERING

BRIDGE CONSTRUCTION DETAILS

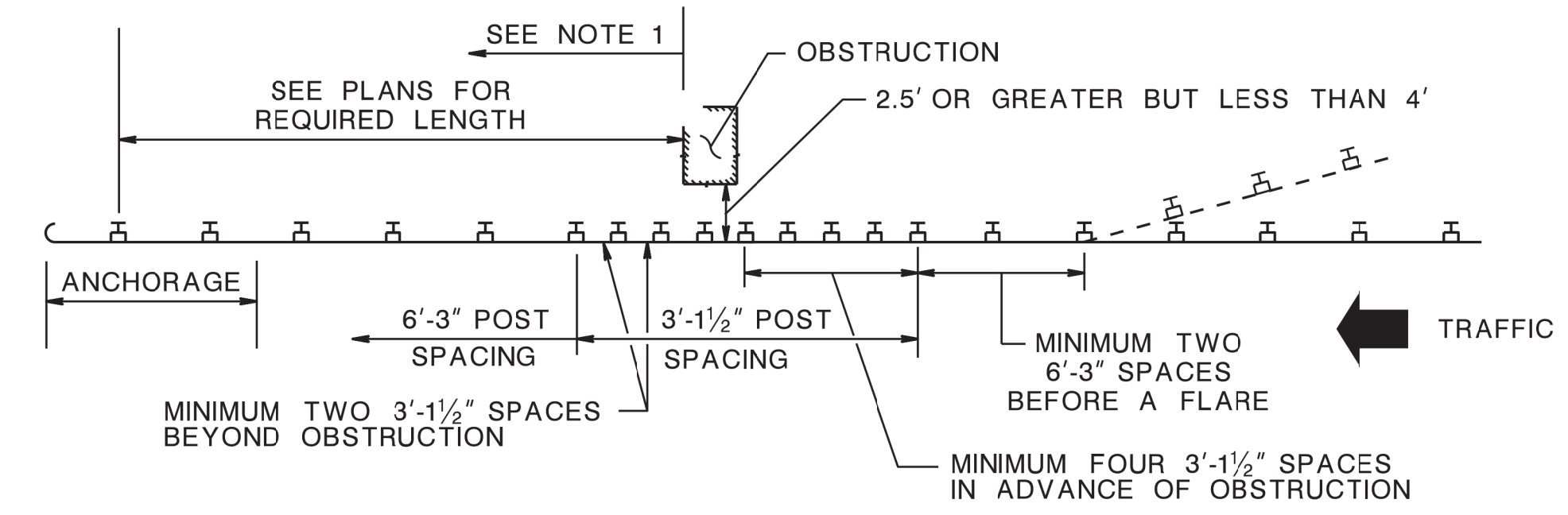
GUIDE RAIL ATTACHMENT - EXISTING STRUCTURE WITH APPROACH AND/OR TRAILING WINGWALLS AND APPROACH CURB

BCD-609-7.1

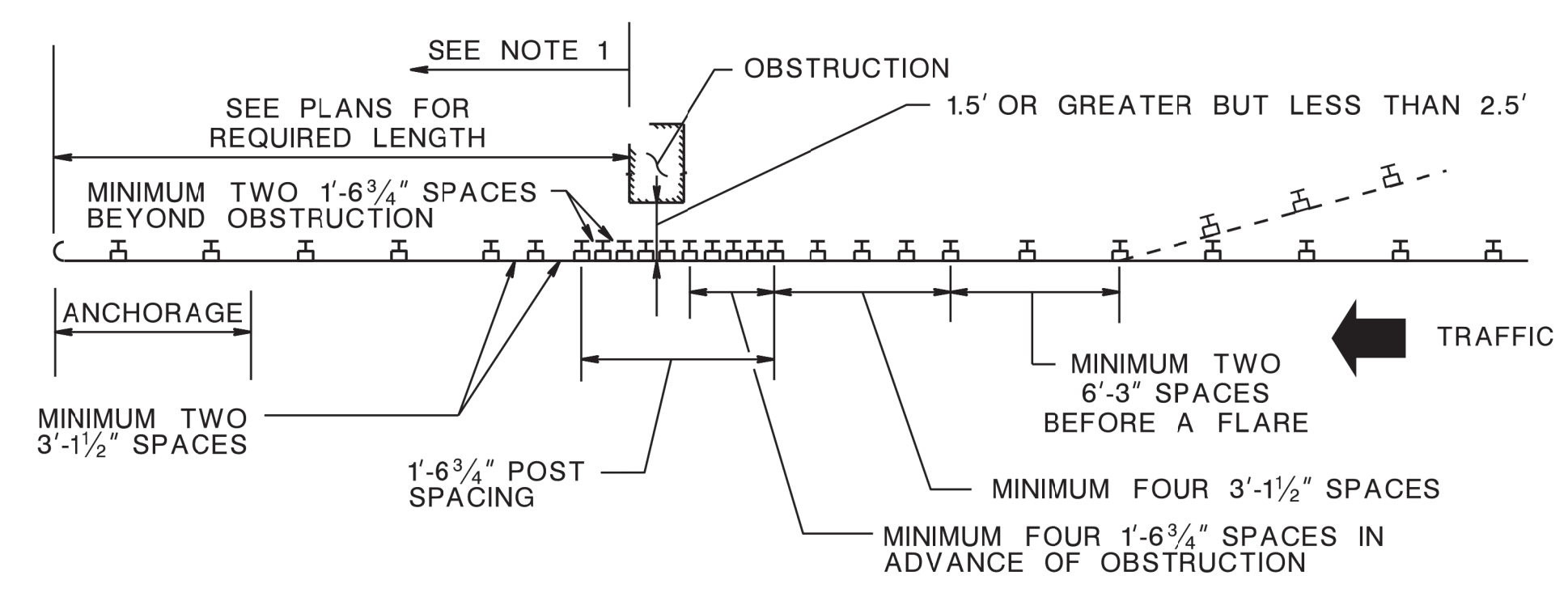
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 BCD-609-7 ORIGINAL SHEET



WHERE CLEARANCE FROM FACE OF RAIL TO OBSTRUCTION IS 4' OR GREATER (SEE NOTE 2)



WHERE CLEARANCE FROM FACE OF RAIL TO OBSTRUCTION IS 2.5' OR GREATER BUT LESS THAN 4' (SEE NOTE 2)



WHERE CLEARANCE FROM FACE OF RAIL TO OBSTRUCTION IS 1.5' OR GREATER BUT LESS THAN 2.5' (SEE NOTE 2)

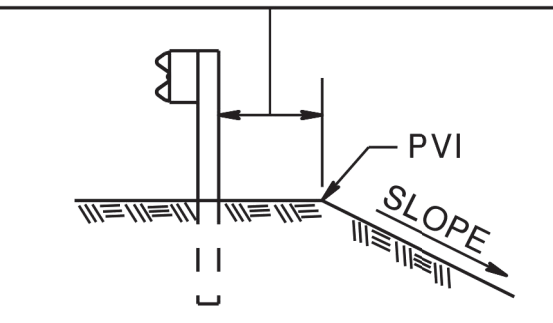
NOTES:

1. WHERE AN APPROACH END TREATMENT AT THE TRAILING END OF GUIDE RAIL IS SHOWN ON THE PLANS, THE POST SPACING REQUIREMENTS SHALL BE THE SAME AS THE APPROACH END.
2. IN A FILL SECTION WHERE THE DISTANCE FROM THE BACK OF THE POST TO THE PVI IS LESS THAN 1' AND THE SLOPE IS STEEPER THAN 3:1, THE MINIMUM CLEARANCE FROM THE FACE OF THE RAIL TO AN OBSTRUCTION IS INCREASED BY 1' DUE TO INCREASED POST DEFLECTION.
3. ADDITIONAL POSTS AND BLOCKOUTS WILL BE PAID FOR UNDER PAY ITEM "BEAM GUIDE RAIL POST".

CLEARANCE FROM FACE OF RAIL TO OBSTRUCTION

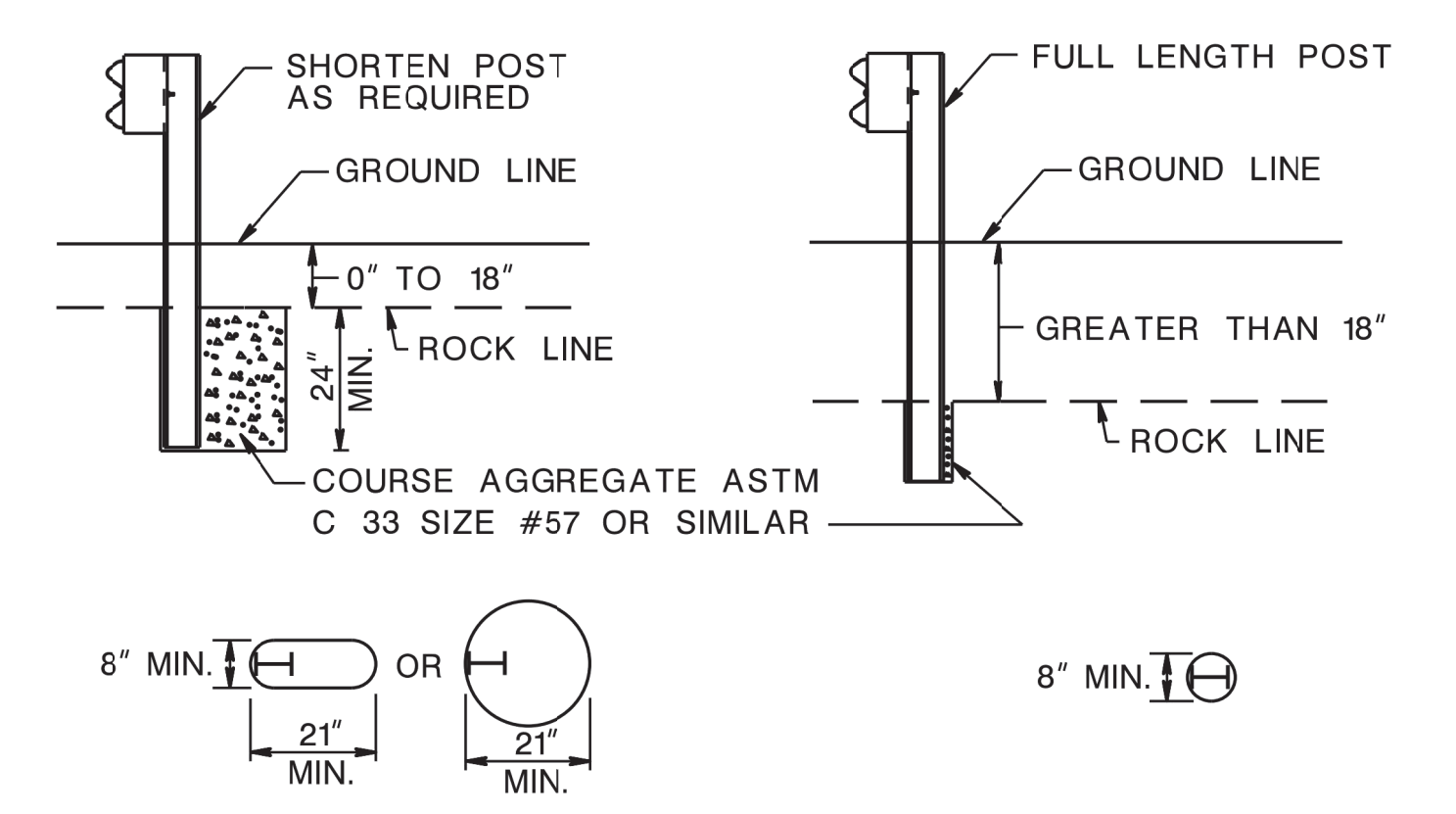
CD-609-8.1

DISTANCE FROM BACK OF POST TO PVI	SLOPE	ADDITIONAL POST LENGTH
IF LESS THAN 2' BUT GREATER OR EQUAL TO 1'	6:1 OR FLATTER STEEPER THAN 6:1 TO 3:1 STEEPER THAN 3:1 TO 2:1	NO CHANGE 1' 2'
IF LESS THAN 1'	6:1 OR FLATTER STEEPER THAN 6:1 TO 3:1 STEEPER THAN 3:1 TO 2:1	1' 2' 3'



ADDITIONAL LENGTH BEAM GUIDE RAIL POSTS

CD-609-8.2

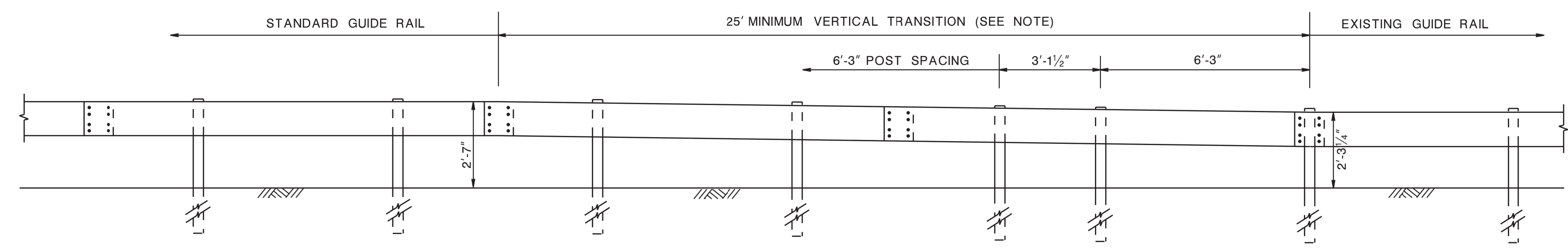


CASE 1

CASE 2

GUIDE RAIL POST INSTALLATION IN ROCK

CD-609-8.3



NOTE:

WHERE TRANSITIONING TO EXISTING GUIDE RAIL, AN END TERMINAL, OR A CRASH CUSHION MOUNTED AT A HEIGHT OTHER THAN 2'-7", THE VERTICAL TRANSITION SHALL BE ACCOMPLISHED IN A MINIMUM LENGTH OF 12'-6" FOR EACH 2" OF VERTICAL CHANGE.

VERTICAL TRANSITION TO EXISTING 27 1/4" HIGH GUIDE RAIL

CD-609-8.4

BEAM GUIDE RAIL TREATMENTS

N.T.S.

CD-609-8

NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

BDCB07 CLEARANCE DETAILS REVISED
 BDCD02 REVISIONS TO CD-609-8
 BDCB01 ORIGINAL SHEET

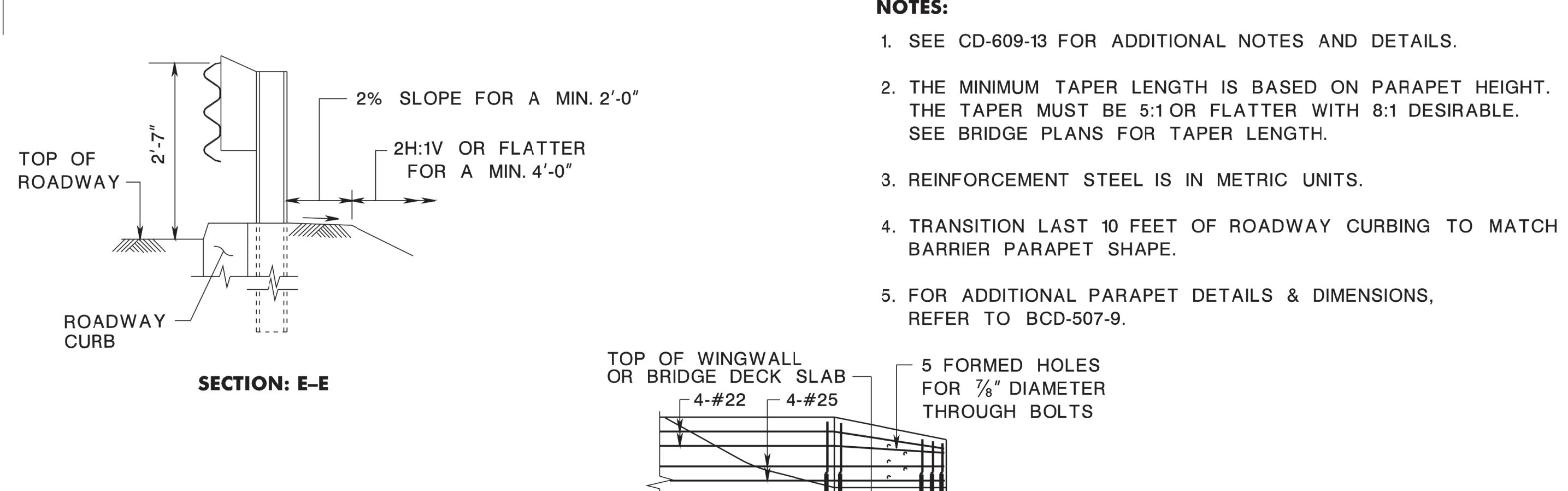
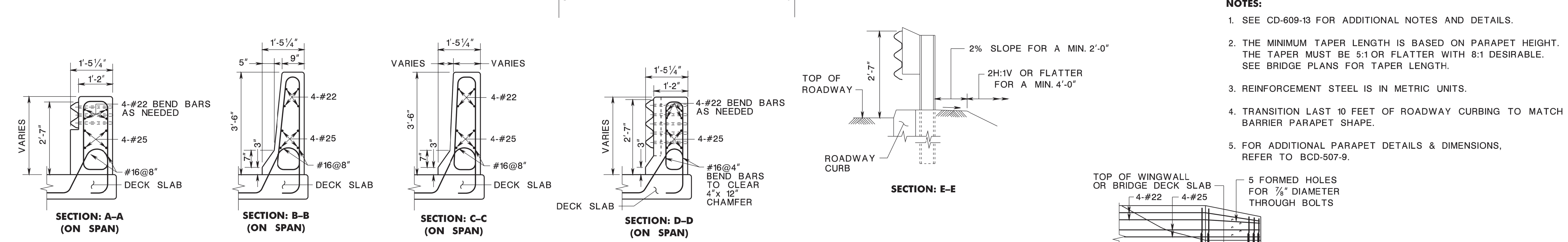
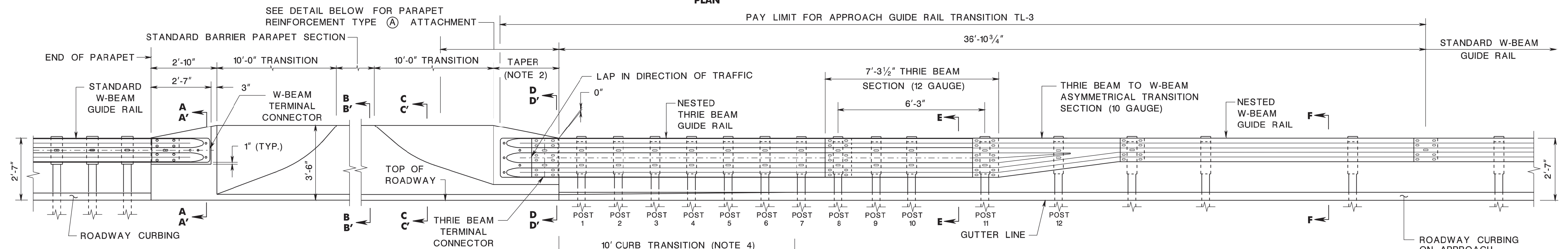
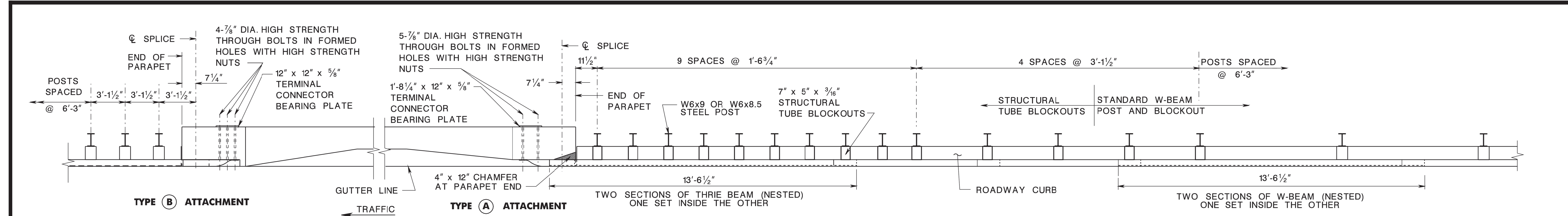
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BDC18D-05-REVISED SECTION D-D & D'-D'. DIM.
BDC17D-02-REVISIONS TO CD-609-15
BDC16D-01-ORIGINAL SHEET



- NOTES:**
- SEE CD-609-13 FOR ADDITIONAL NOTES AND DETAILS.
 - THE MINIMUM TAPER LENGTH IS BASED ON PARAPET HEIGHT. THE TAPER MUST BE 5:1 OR FLATTER WITH 8:1 DESIRABLE. SEE BRIDGE PLANS FOR TAPER LENGTH.
 - REINFORCEMENT STEEL IS IN METRIC UNITS.
 - TRANSITION LAST 10 FEET OF ROADWAY CURBING TO MATCH BARRIER PARAPET SHAPE.
 - FOR ADDITIONAL PARAPET DETAILS & DIMENSIONS, REFER TO BCD-507-9.

GUIDE RAIL ATTACHMENT - NEW CONSTRUCTION - DESIGN SPEED GREATER THAN 45 MPH (MASH TL-3) F SHAPE BARRIER PARAPET (WITH ROADWAY CURBING ON APPROACH)

BEAM GUIDE RAIL ATTACHMENTS

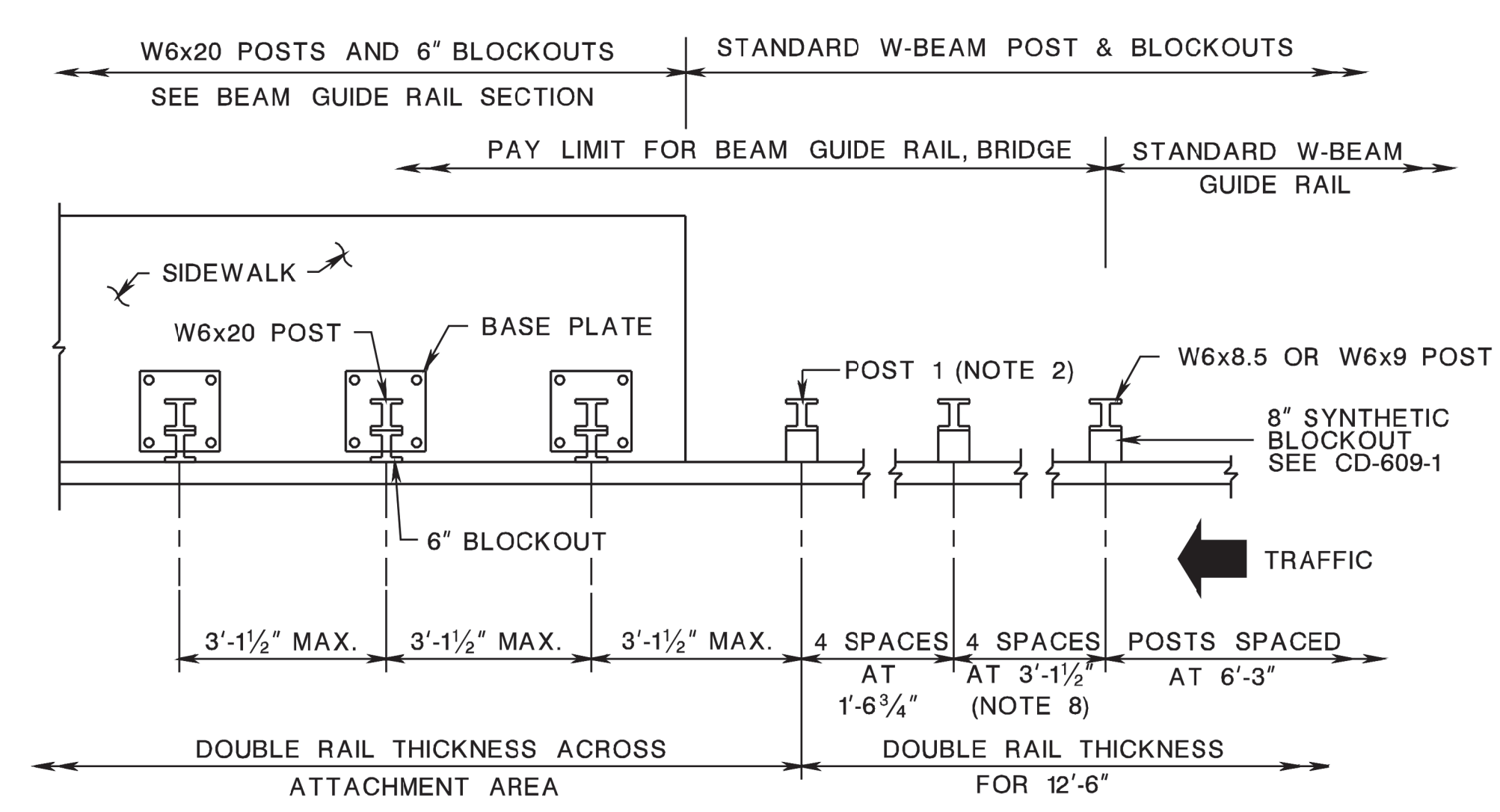
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CD-609-15

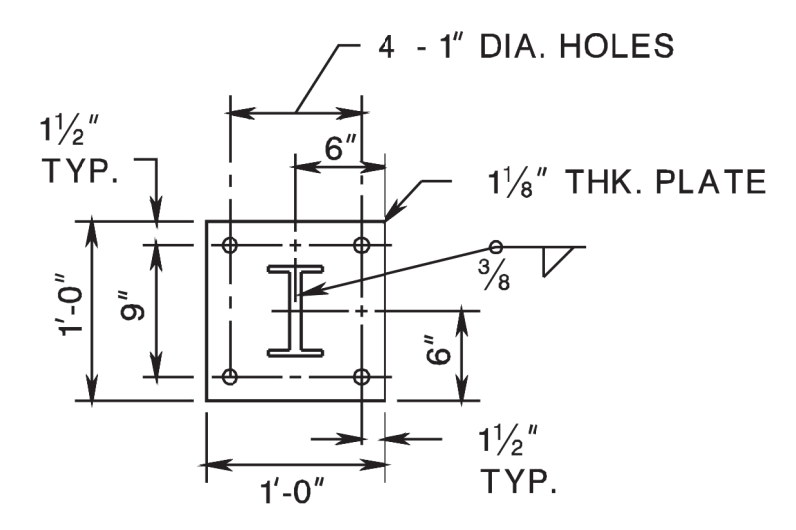
NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

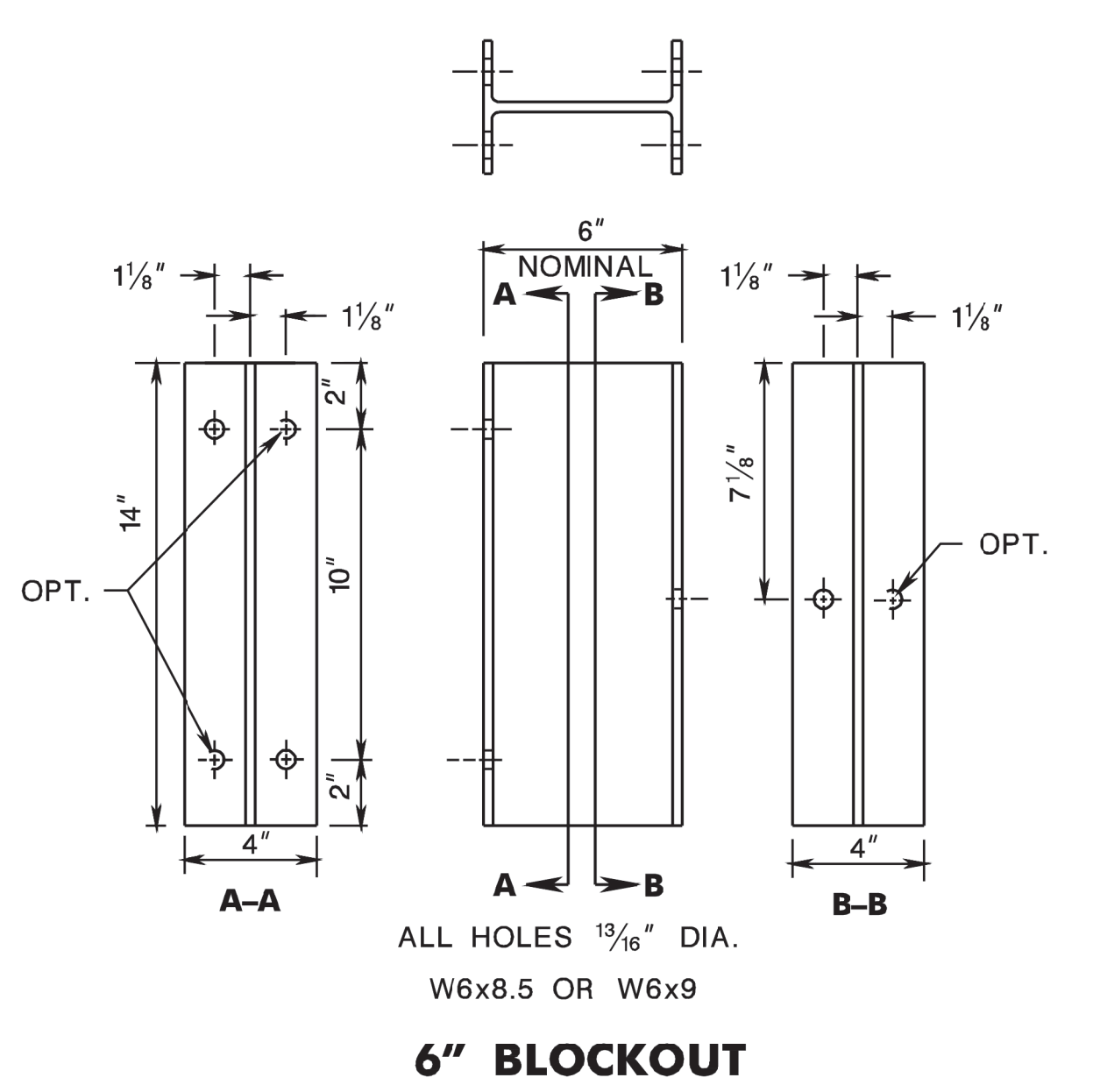
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 BDC6D01-ORIGINAL SHEET



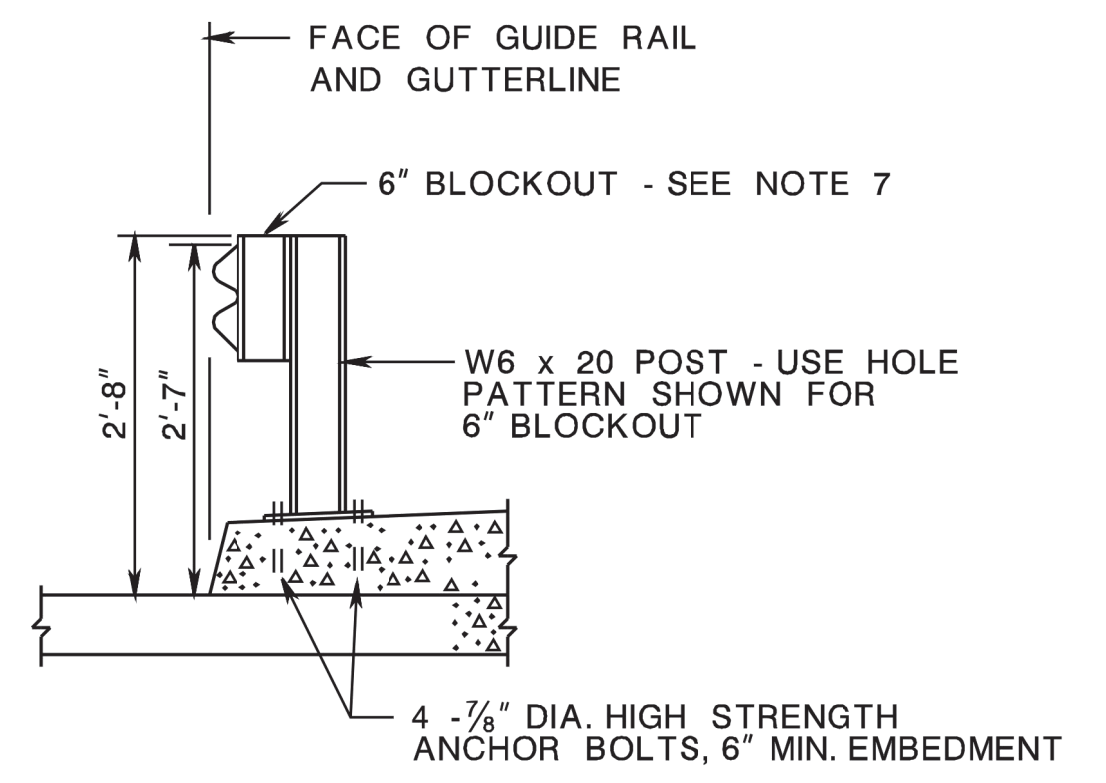
BEAM GUIDE RAIL ATTACHMENT TO SIDEWALK (NCHRP 350 TL-3)



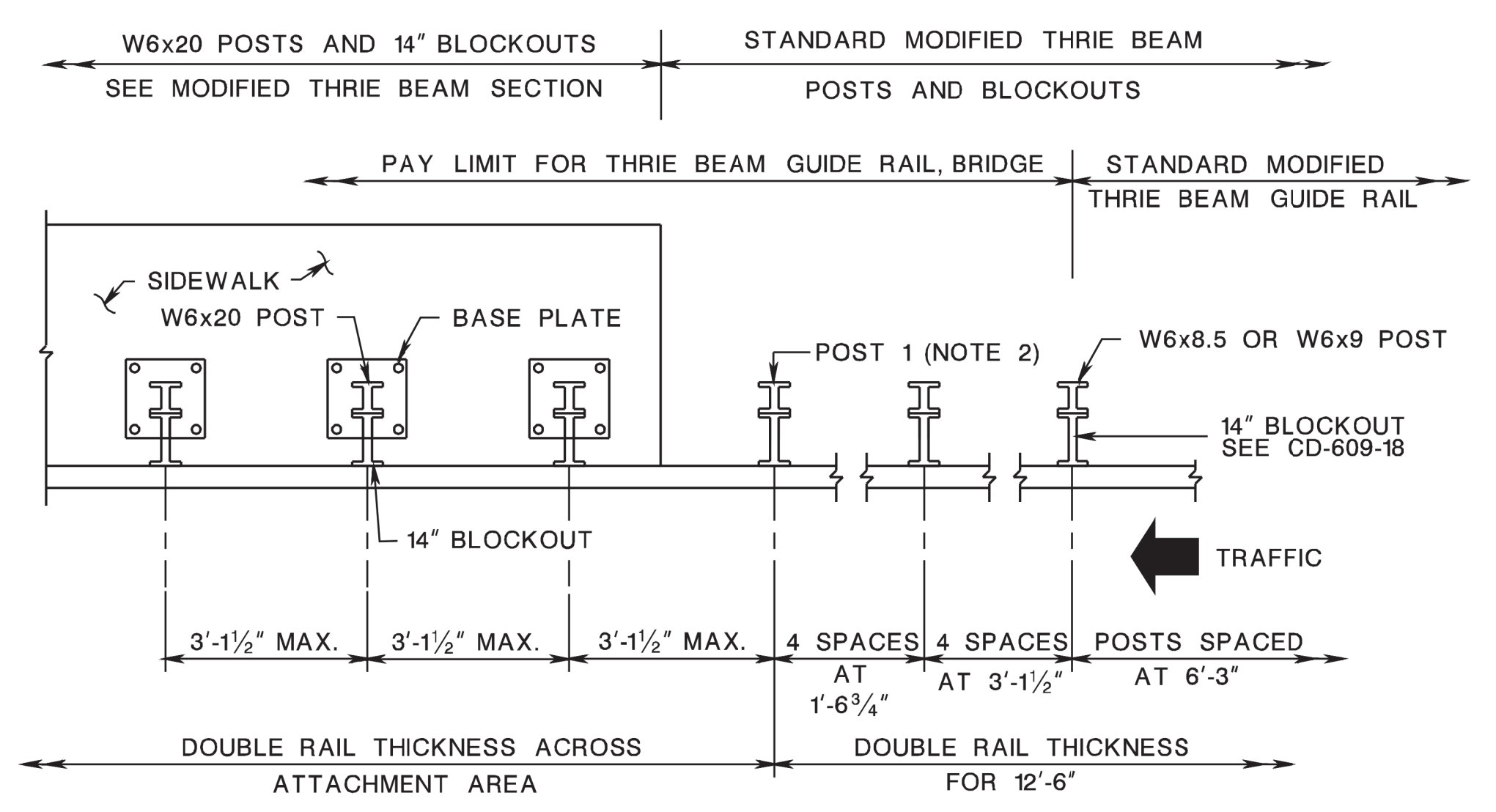
BASE PLATE



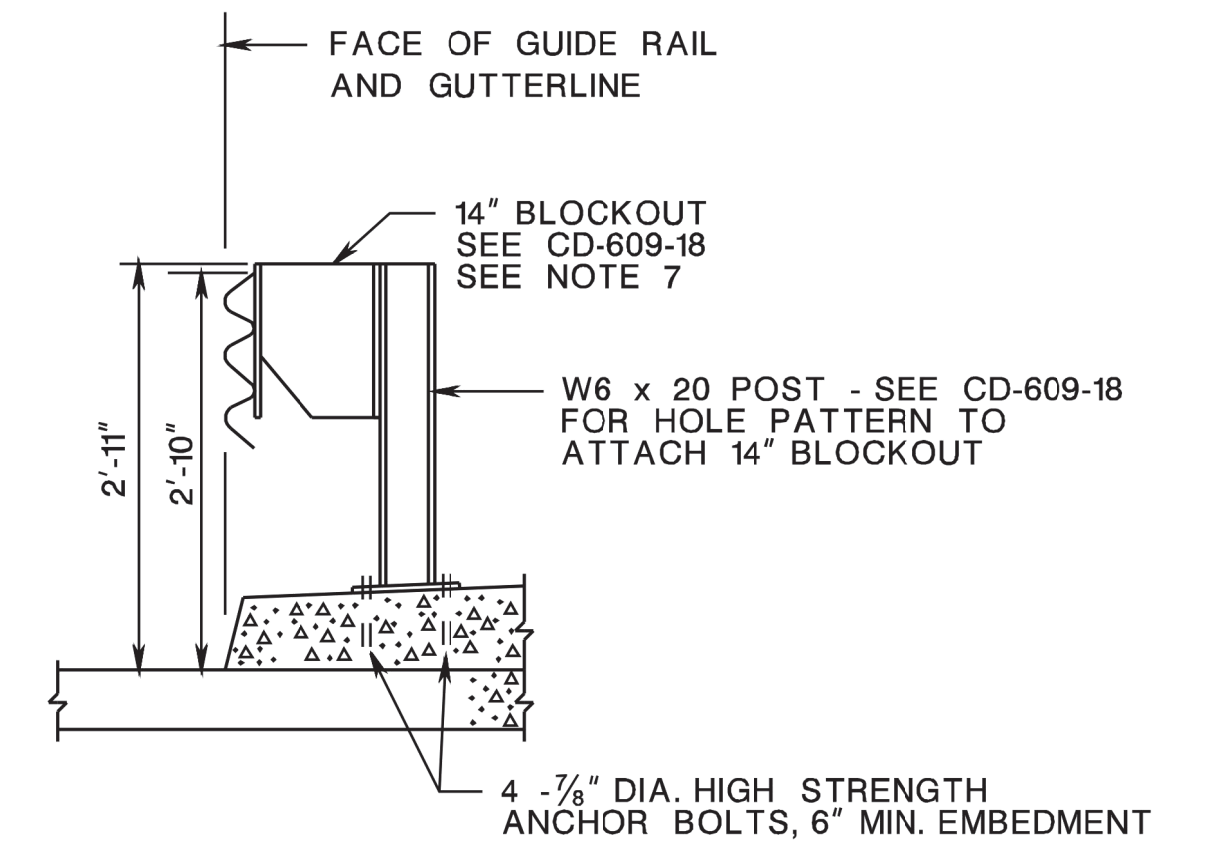
6" BLOCKOUT



BEAM GUIDE RAIL SECTION



MODIFIED THRIE BEAM GUIDE RAIL ATTACHMENT TO SIDEWALK (NCHRP 350 TL-4)



MODIFIED THRIE BEAM SECTION

NOTES:

1. USE "BEAM GUIDE RAIL, BRIDGE" ITEM OR "THRIE BEAM GUIDE RAIL, BRIDGE" ITEM IF SIDEWALK IS ON A STRUCTURE. IF SIDEWALK IS NOT ON A STRUCTURE, USE "BEAM GUIDE RAIL, BRIDGE" ITEM OR "THRIE BEAM GUIDE RAIL, BRIDGE" ITEM AND SIDEWALK IS TO BE A MINIMUM 8" THICK WITH A MINIMUM WIDTH EQUAL TO THE NONVEGETATIVE REQUIREMENTS SHOWN ON CD-608-1.
2. WHEN THE CONFIGURATION OF BRIDGE ABUTMENTS AND WINGWALLS DO NOT ACCOMMODATE THE INSTALLATION OF POST 1, THE W6x20 POST MAY BE ATTACHED TO THE ABUTMENT HEADER WITH THE USE OF A BASE PLATE.
3. STRUCTURAL STEEL PLATES AND SHAPES TO CONFORM TO ASTM A36 AND BE GALVANIZED PER ASTM A123.
4. STEEL BOLTS, NUTS AND WASHERS TO CONFORM TO ASTM A307, UNLESS DESIGNATED AS HIGH STRENGTH STEEL. HIGH STRENGTH BOLTS, NUTS AND WASHERS TO CONFORM TO ASTM F3125, GRADE A325. HARDWARE TO BE GALVANIZED PER ASTM A153.
5. HIGH STRENGTH BOLTS FOR BASE PLATE ANCHORAGE TO BE FULLY THREADED. USE AN ADHESIVE ANCHOR BOLT SYSTEM MEETING THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS. INSTALL BOLTS A MINIMUM 6" EMBEDMENT AND AS PER MANUFACTURER'S RECOMMENDATION TO ENSURE A MINIMUM PULLOUT STRENGTH OF 24,000 POUNDS. CARE TO BE EXERCISED TO AVOID DAMAGE TO EXISTING REINFORCEMENT AND CONDUITS.
6. WELD POSTS TO BASE PLATES ACCORDING TO THE ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.
7. ATTACH BLOCKOUTS TO POSTS WITH TWO POST BOLTS USING DIAGONALLY OPPOSITE HOLES. SEE CD-609-18 FOR POST BOLT AND RAIL BOLT DETAILS.
8. ONE ADDITIONAL 3'-1 1/2" POST SPACING MAY BE NEEDED TO TRANSITION TO 6'-3" POST SPACING WITH MID-POST SPLICES.
9. WHERE THERE IS NO CURB, THE SIDEWALK SHALL BE CONSTRUCTED LEVEL WITH ADJACENT GROUND OR PAVEMENT.
10. THIS DETAIL CAN IMPROVE IMPACT PERFORMANCE OF A BRIDGE WITH SAFETYWALKS. THIS DETAIL SHALL NOT BE USED ON A BRIDGE DECK REPLACEMENT OR SUPERSTRUCTURE REPLACEMENT PROJECT.

BEAM GUIDE RAIL ATTACHMENTS

N.T.S.

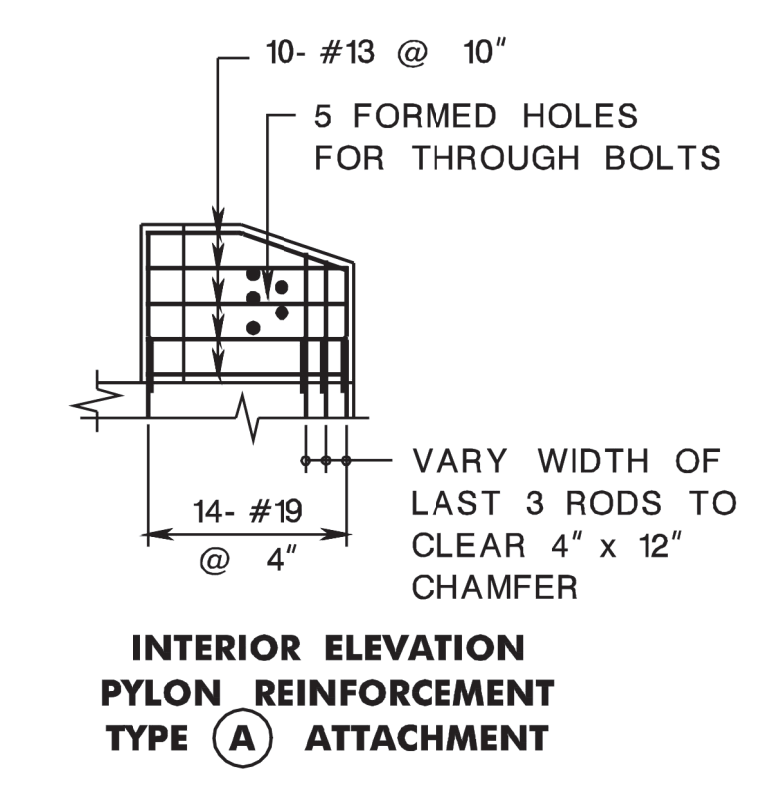
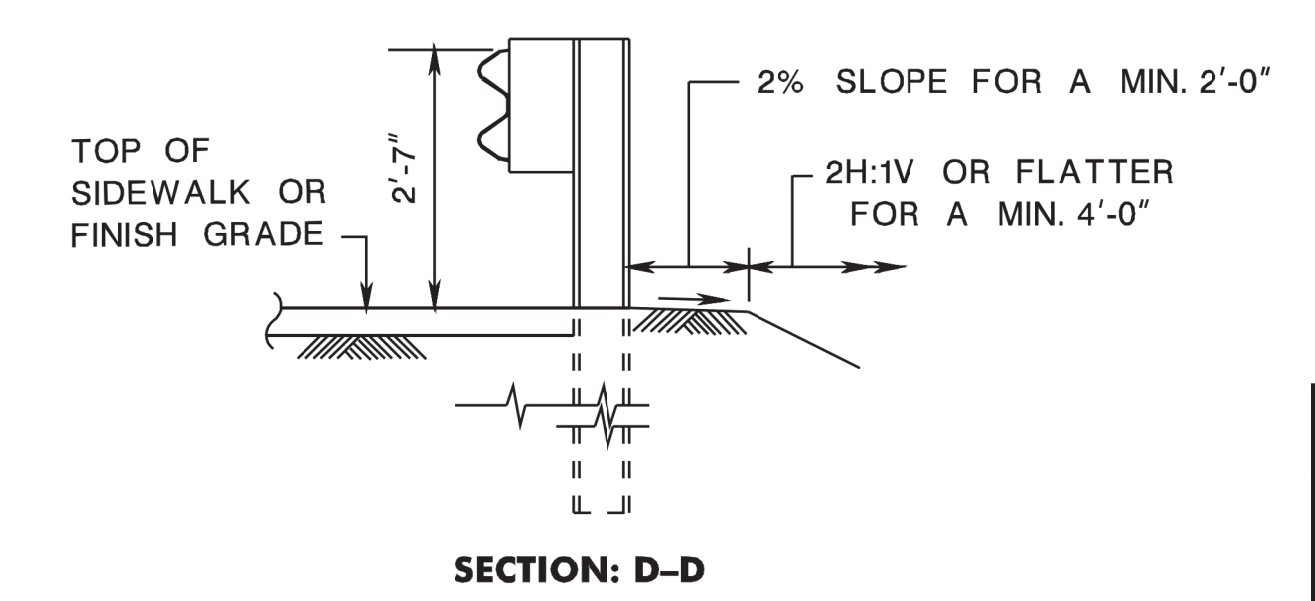
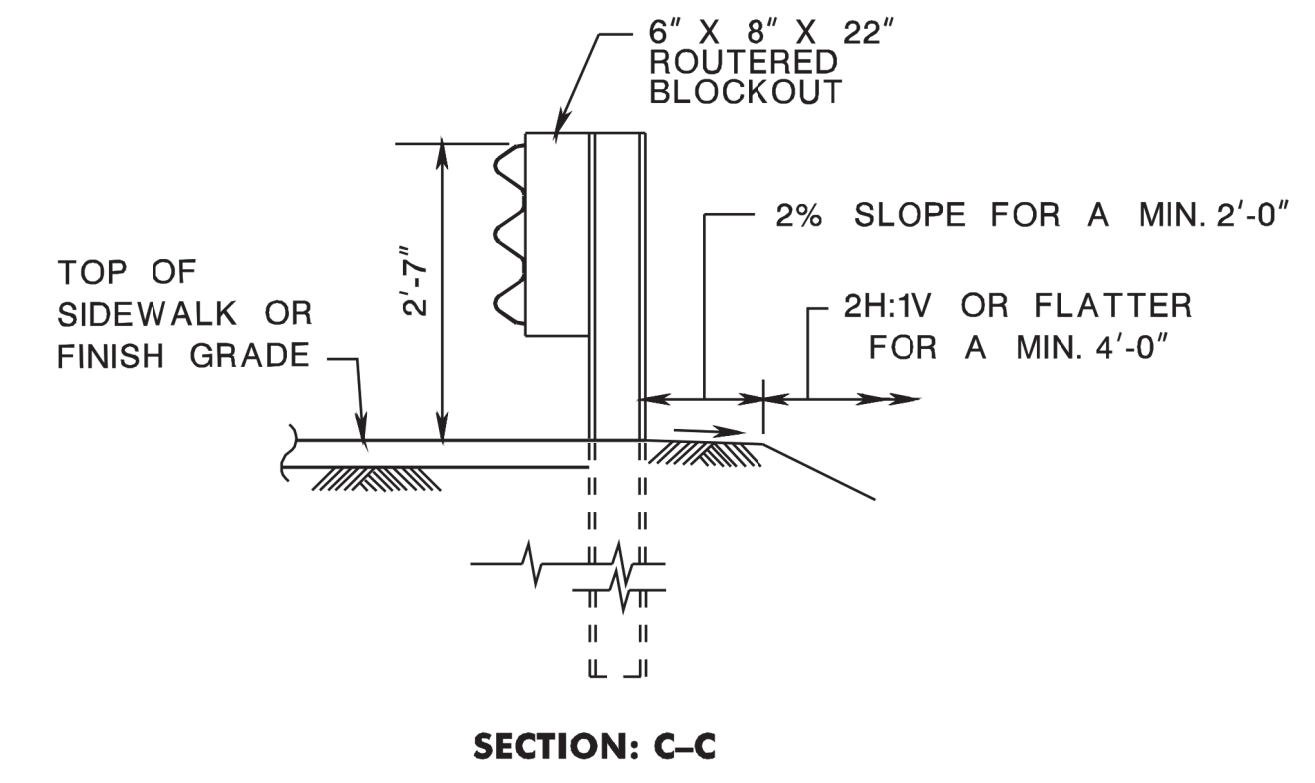
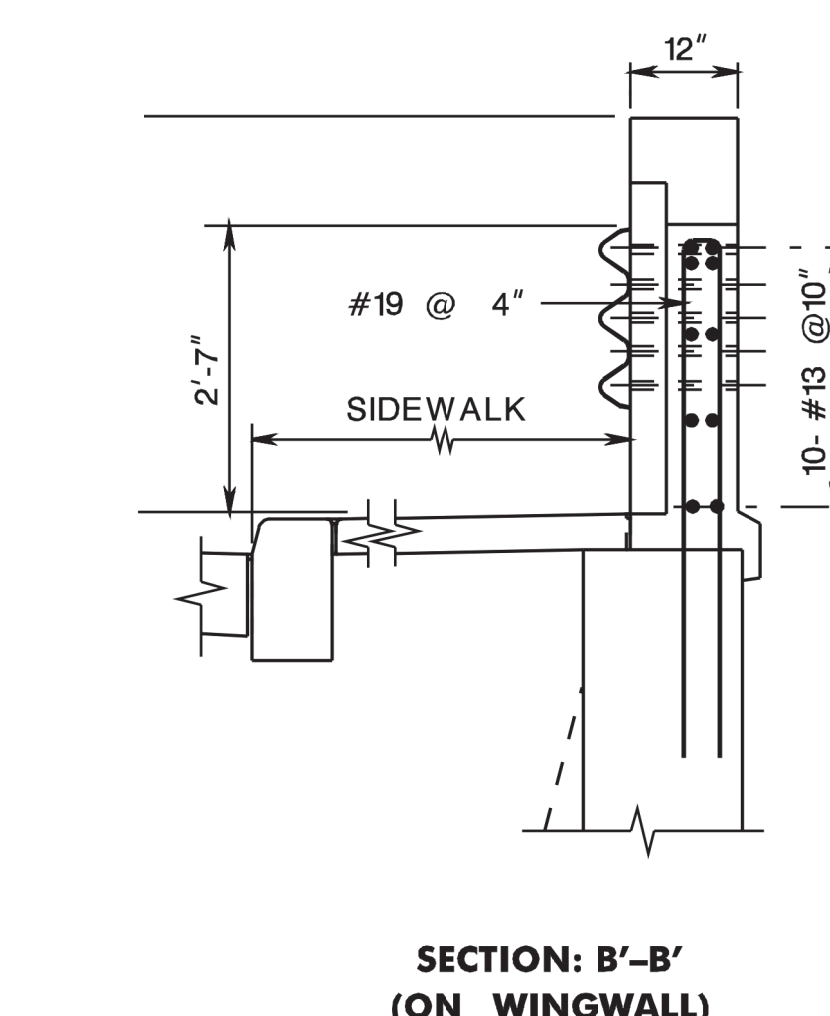
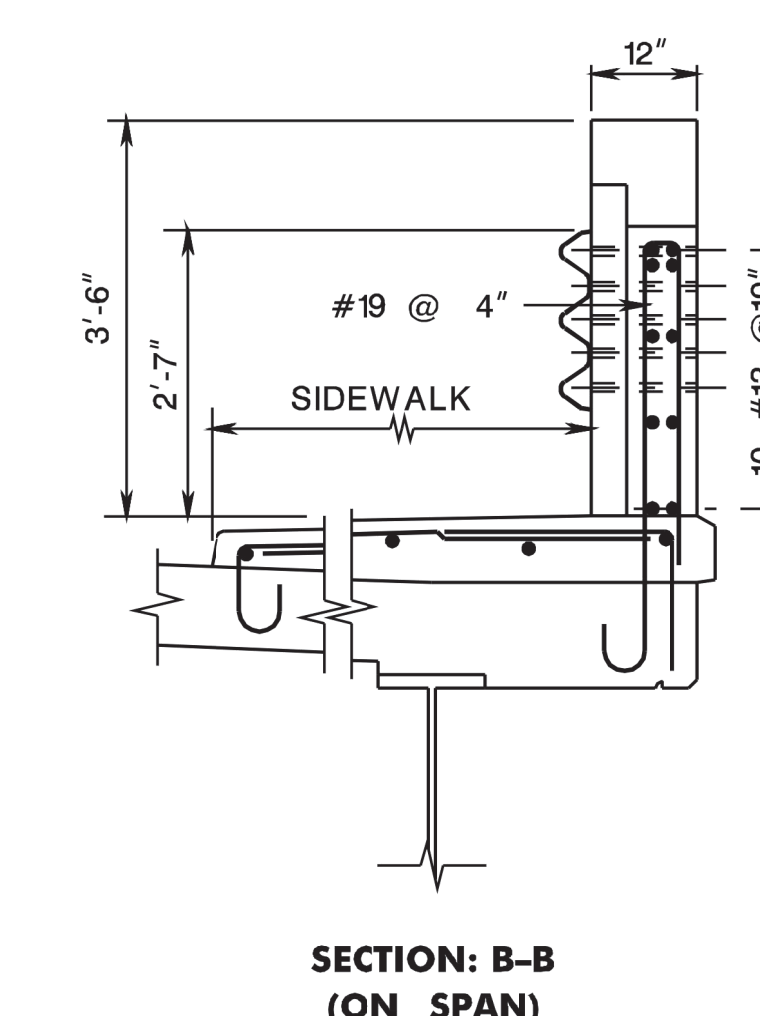
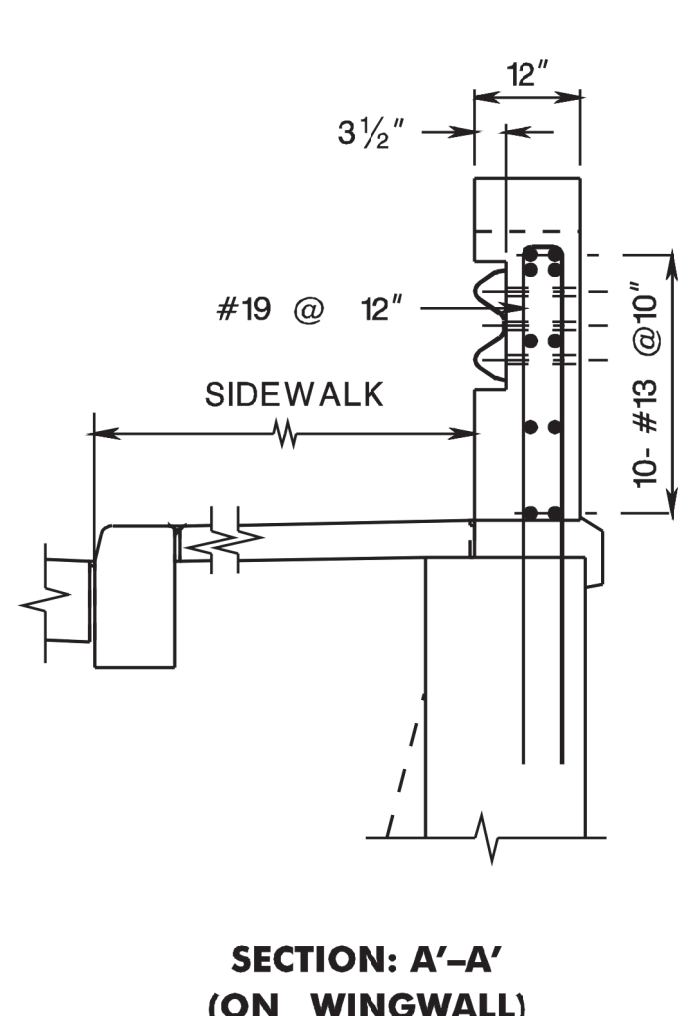
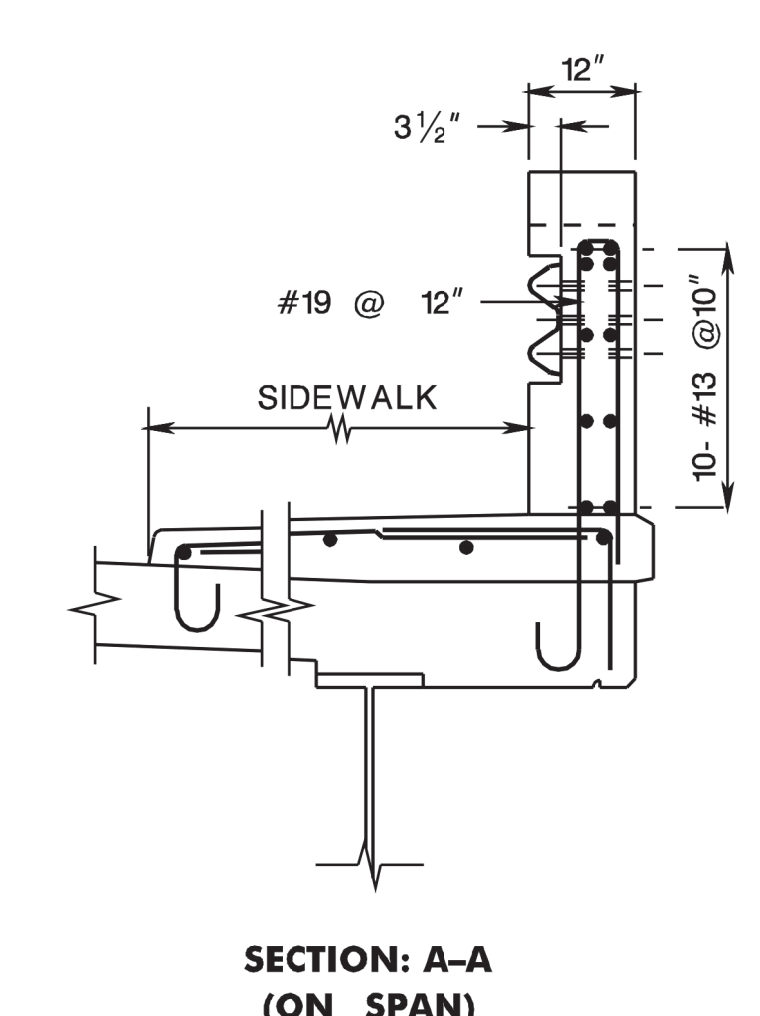
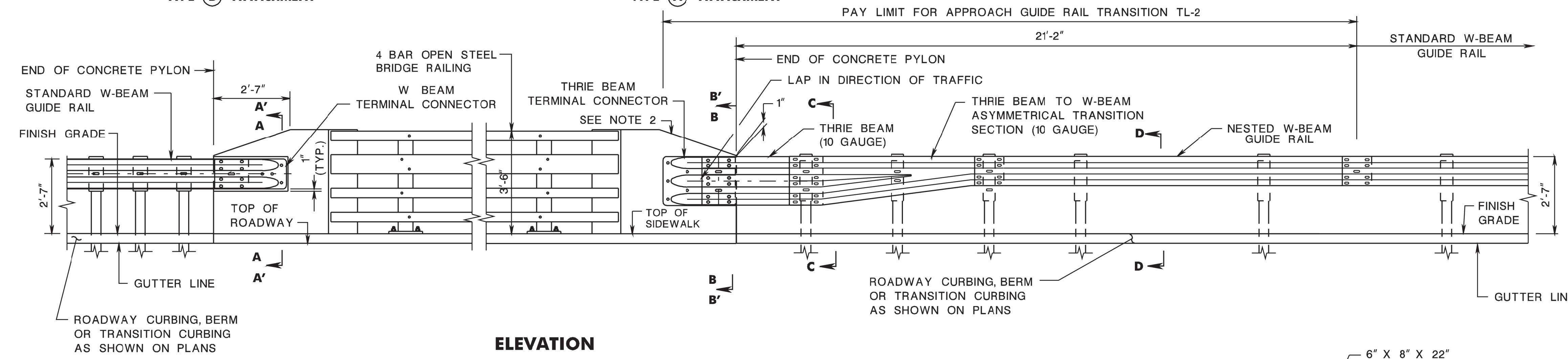
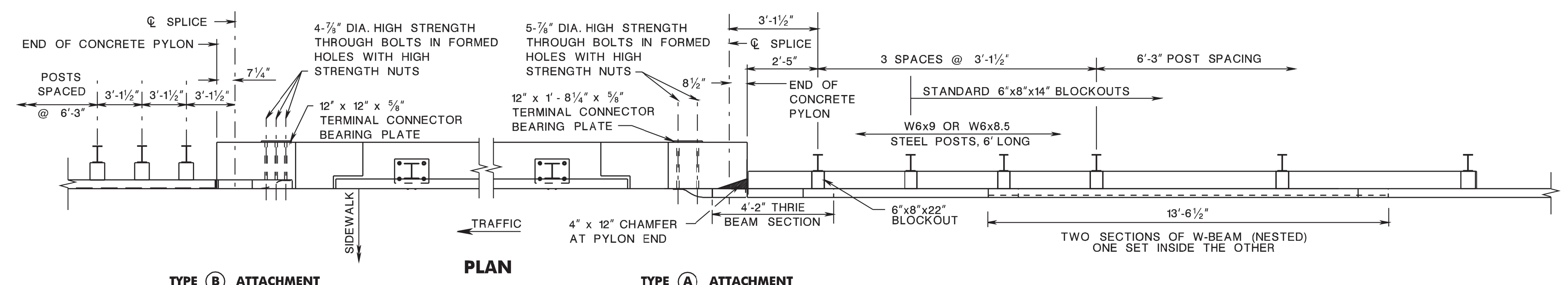
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NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

CD-609-11.1

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BEAM GUIDE RAIL ATTACHMENTS

N.T.S.

CD-609-17A

NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

**GUIDE RAIL ATTACHMENT - NEW CONSTRUCTION - DESIGN SPEED 45 MPH OR LESS (MASH TL-2)
SIDEWALK WITH 4 BAR OPEN STEEL BRIDGE RAILING PARAPET**

CD-609-17A.1

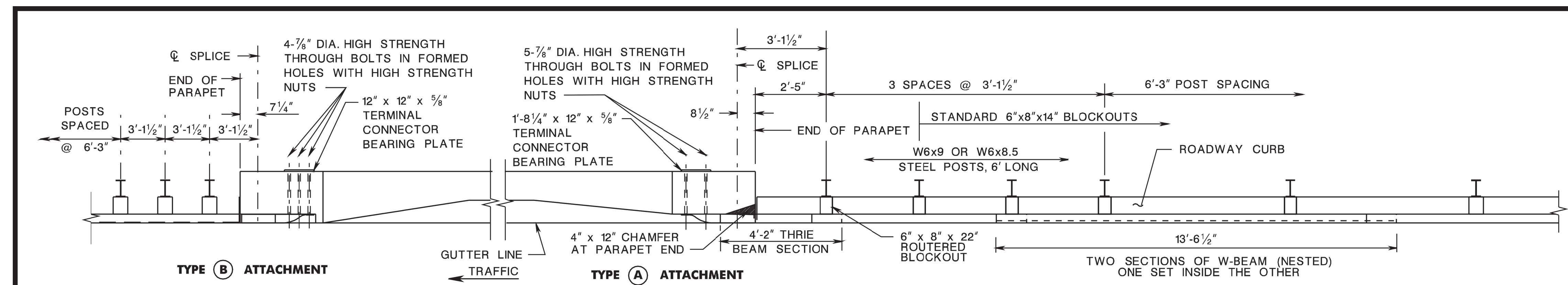
- NOTES:**
- SEE CD-609-13 FOR ADDITIONAL NOTES AND DETAILS.
 - THE TAPER MUST BE 5:1 OR FLATTER WITH 8:1 DESIRABLE. SEE BRIDGE PLANS FOR TAPER LENGTH.
 - REINFORCEMENT STEEL IS IN METRIC UNITS.
 - FOR ADDITIONAL PARAPET DETAILS & DIMENSIONS, SEE BCD-507-11 & BCD-507-12.

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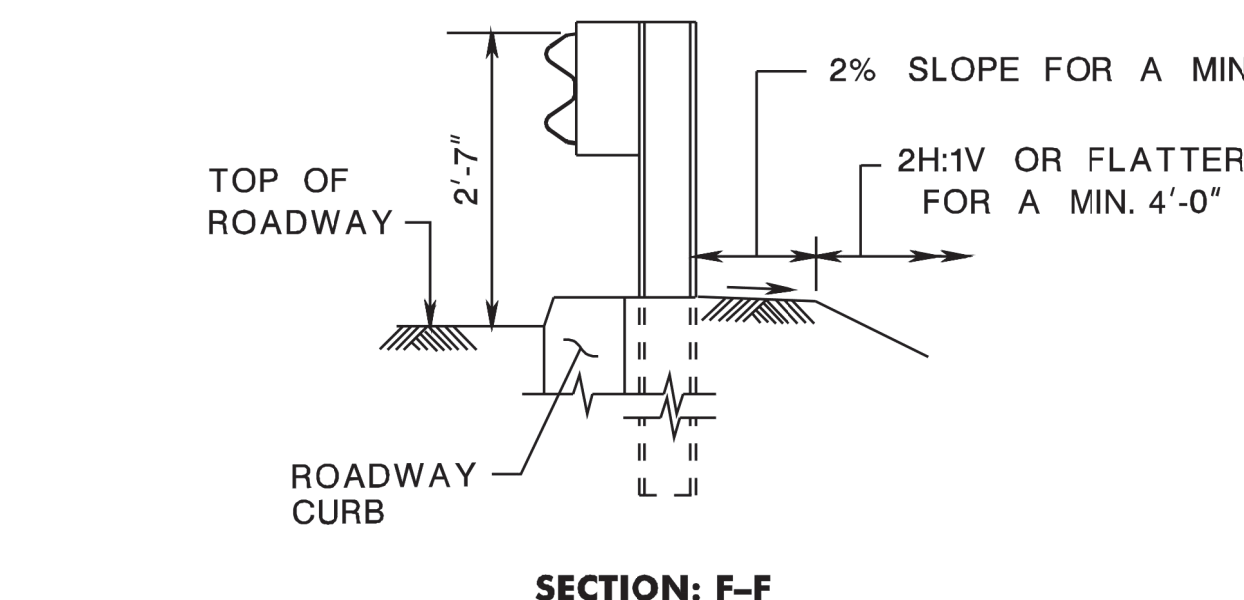
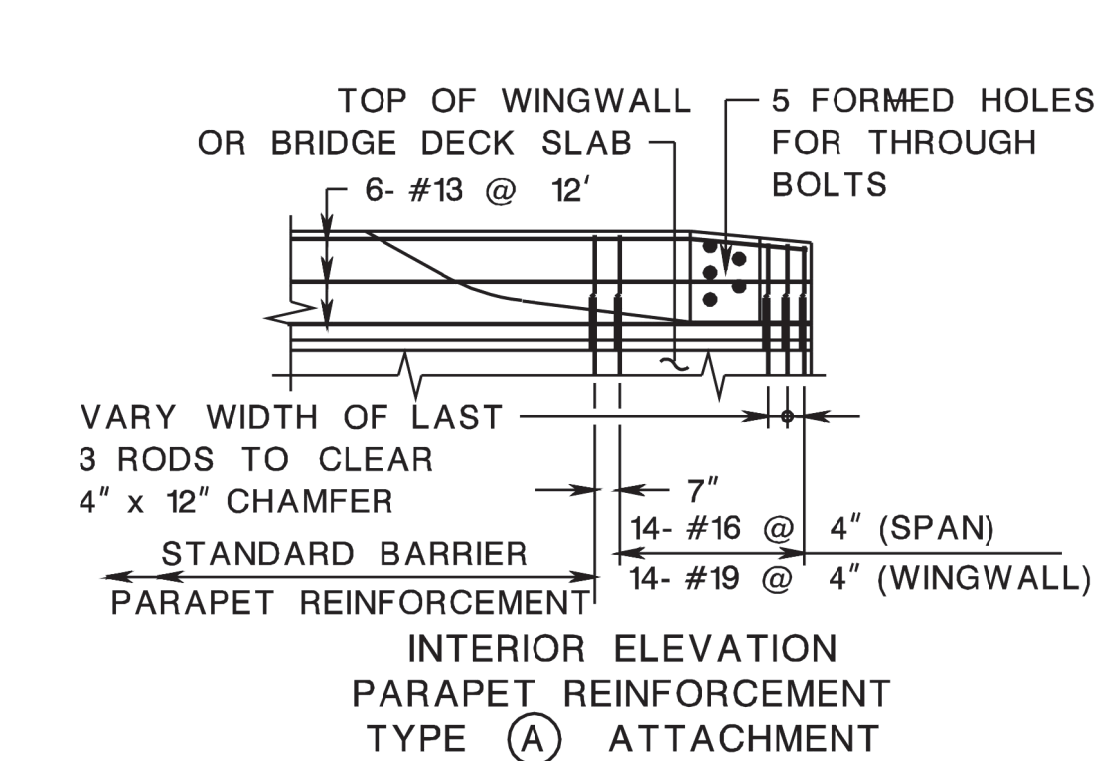
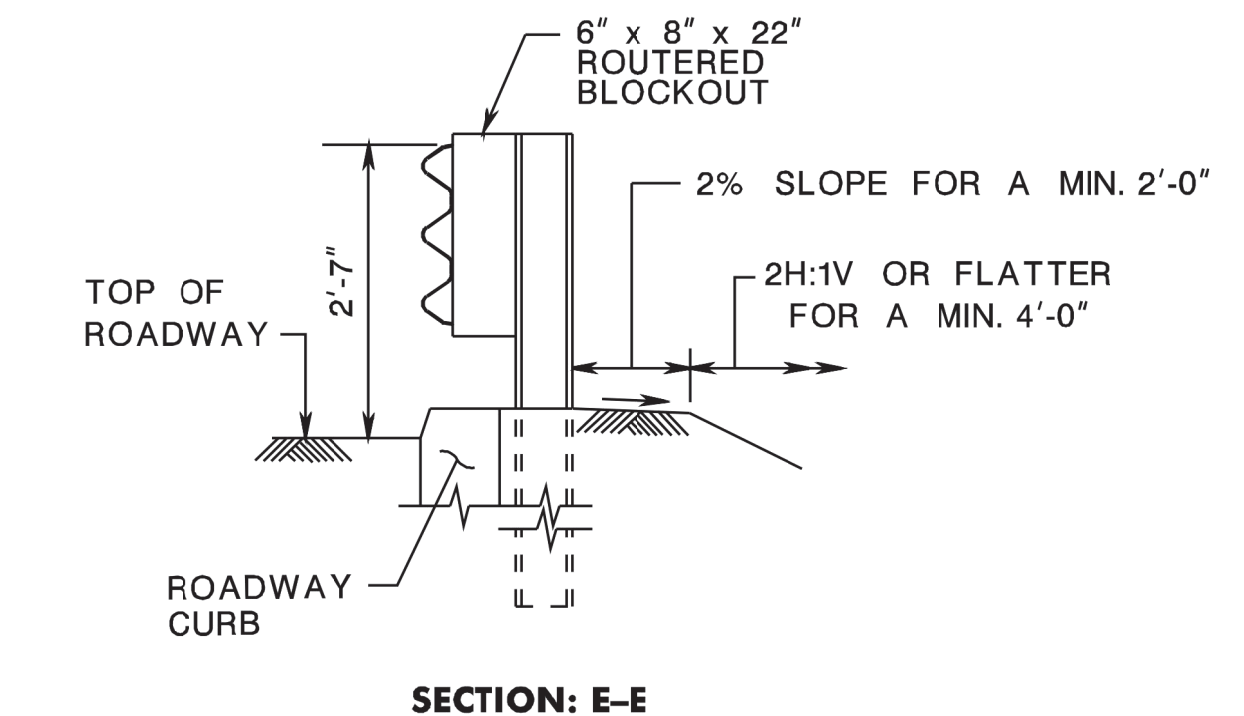
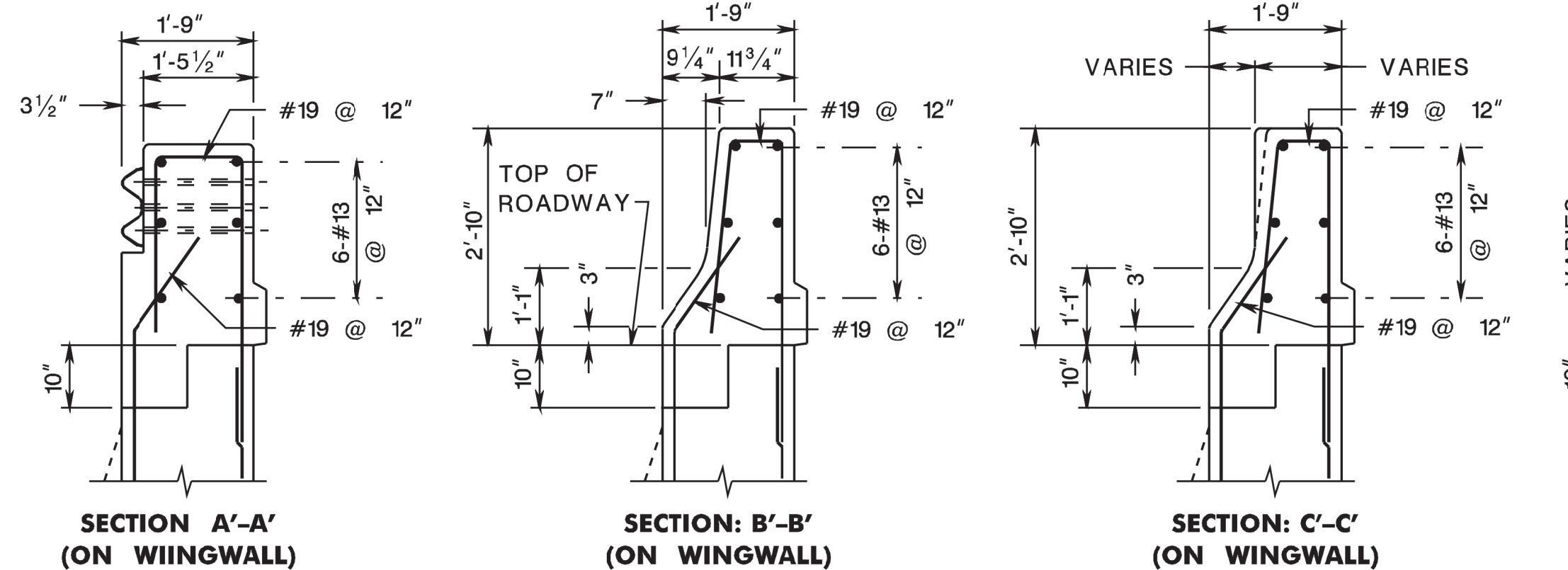
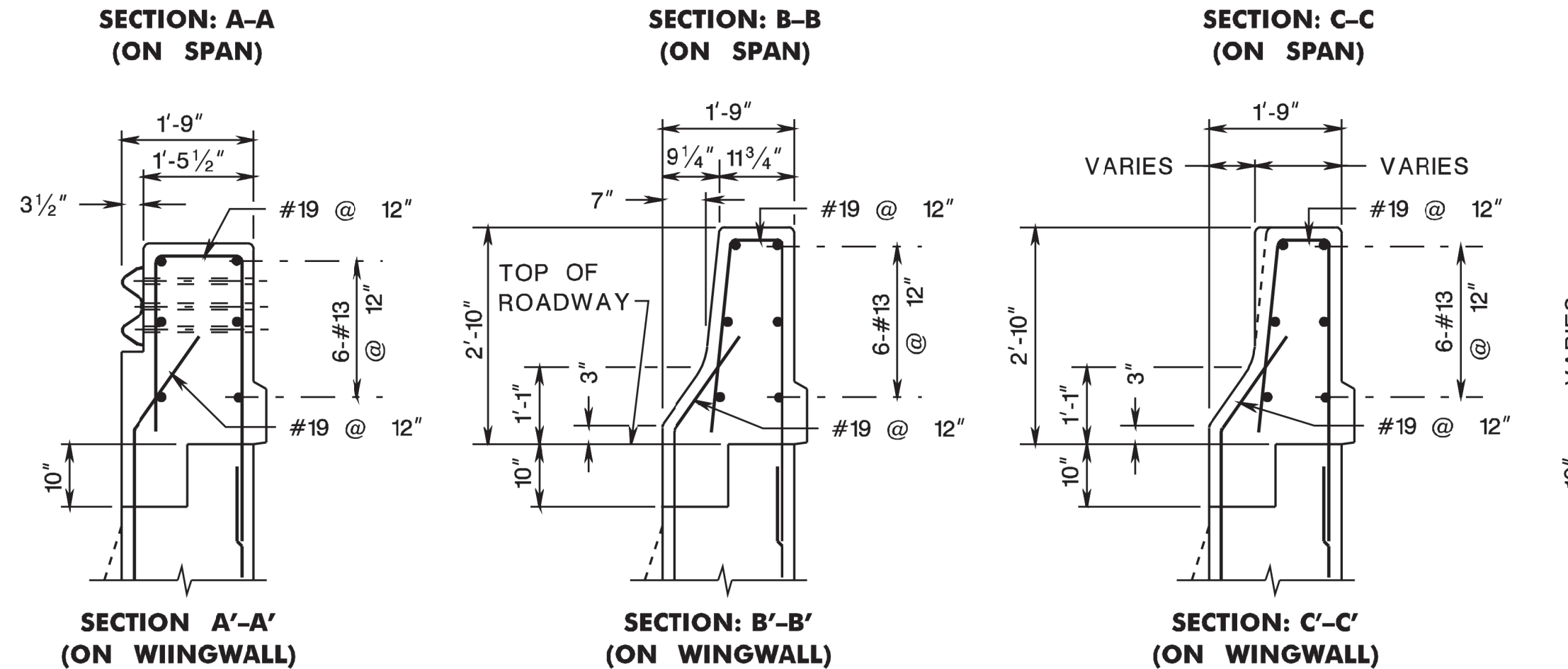
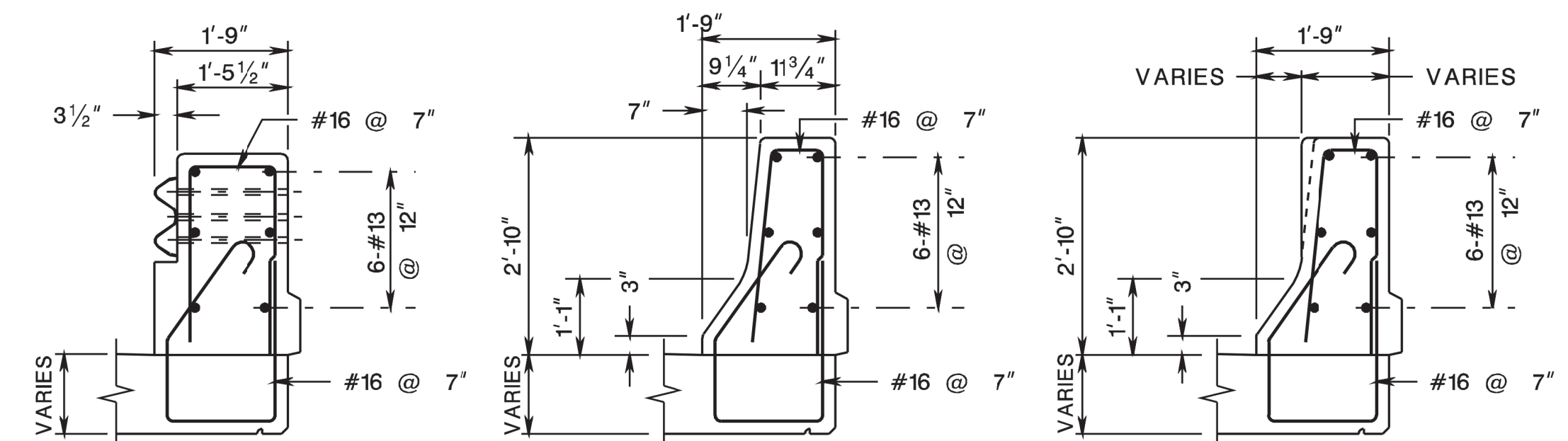
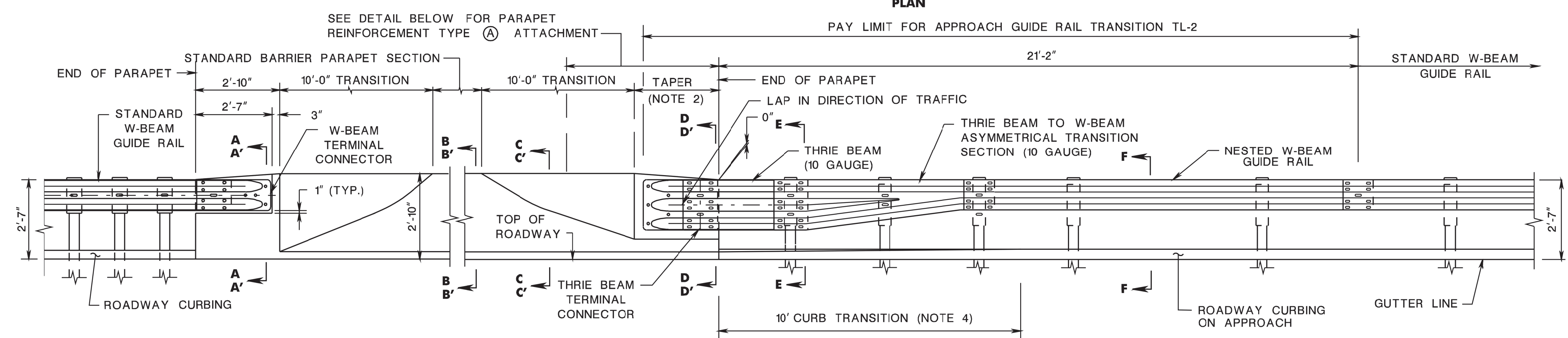
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- NOTES:**
1. SEE CD-609-13 FOR ADDITIONAL NOTES AND DETAILS.
 2. THE MINIMUM TAPER LENGTH IS BASED ON PARAPET HEIGHT. THE TAPER MUST BE 5:1 OR FLATTER WITH 8:1 DESIRABLE. SEE BRIDGE PLANS FOR TAPER LENGTH.
 3. REINFORCEMENT STEEL IS IN METRIC UNITS.
 4. TRANSITION LAST 10 FEET OF ROADWAY CURBING TO MATCH BARRIER PARAPET SHAPE.
 5. FOR ADDITIONAL PARAPET DETAILS & DIMENSIONS, SEE BCD-507-3.4.



BEAM GUIDE RAIL ATTACHMENTS

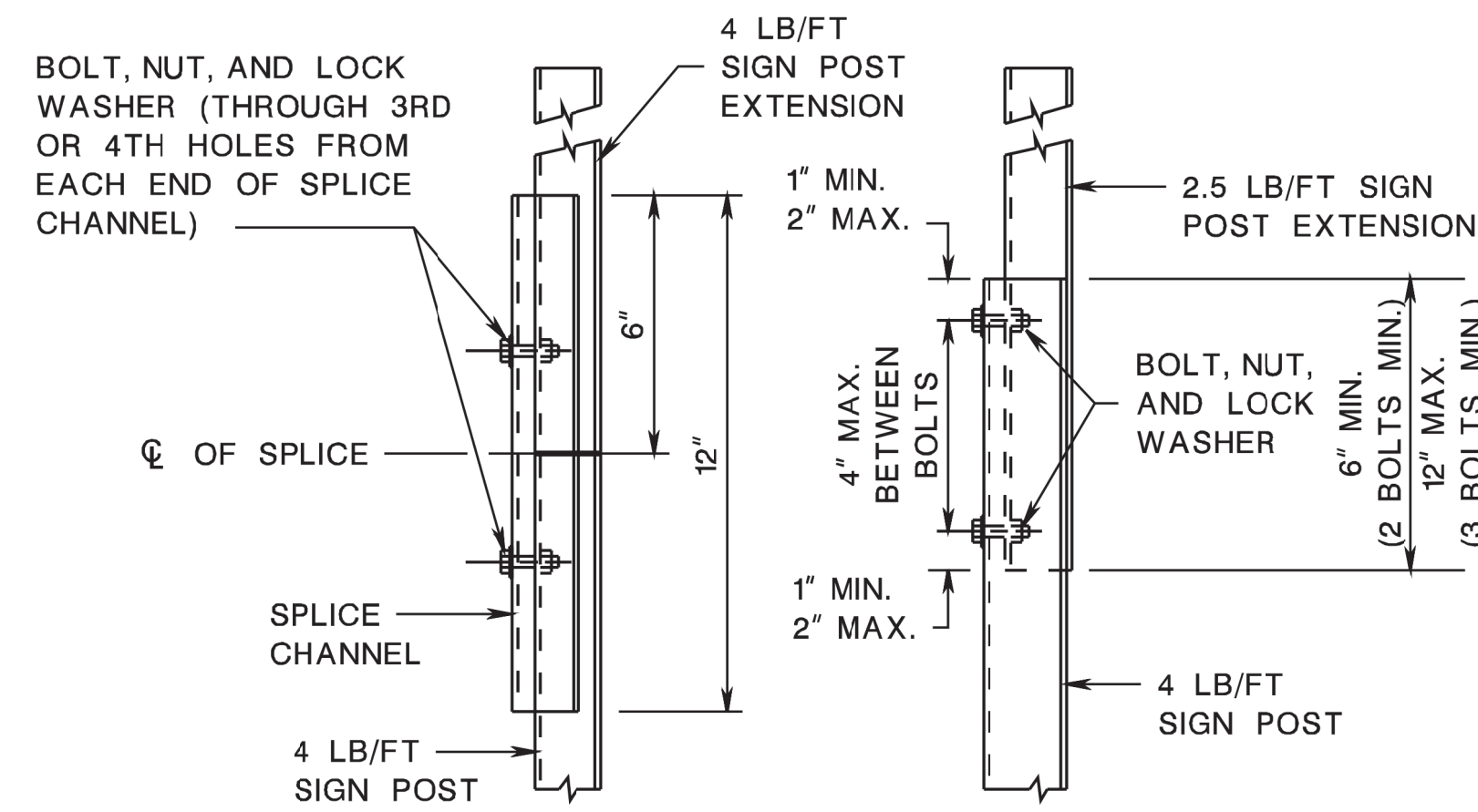
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CD-609-17E

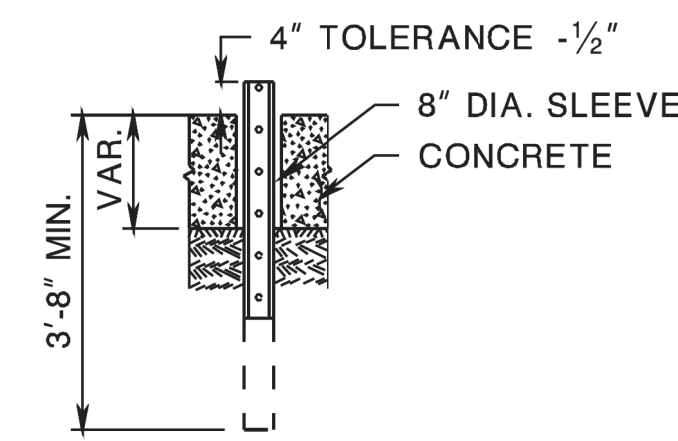
NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

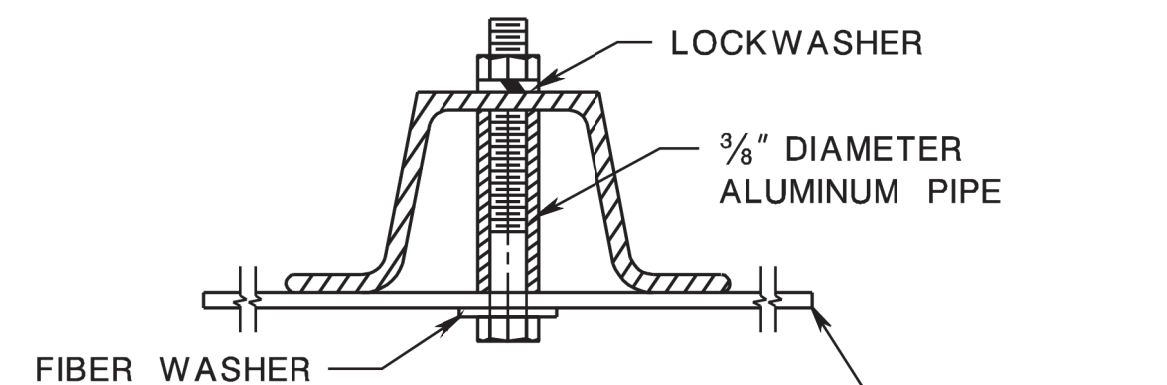
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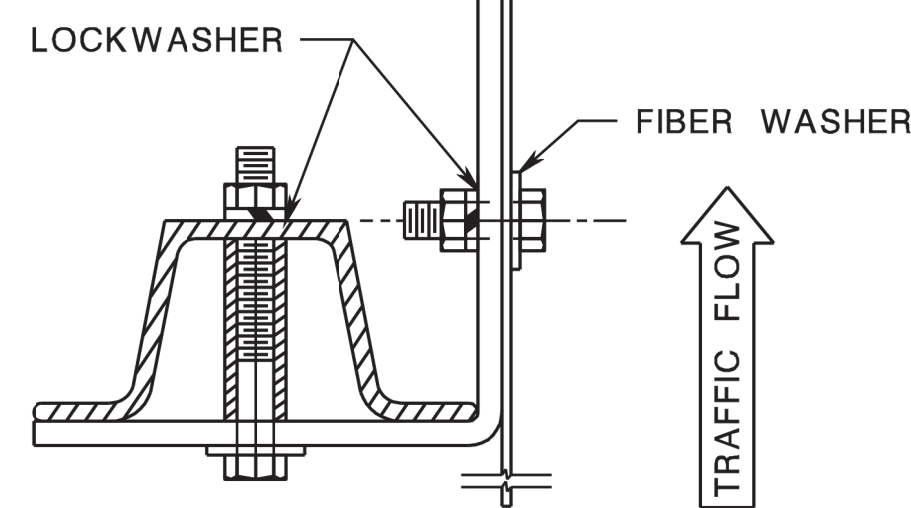
SIGN POST EXTENSION SPLICE DETAILS



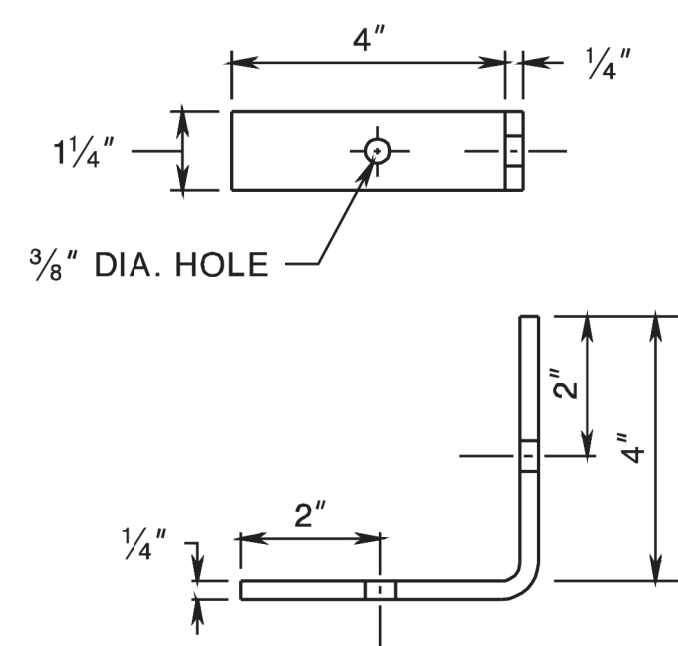
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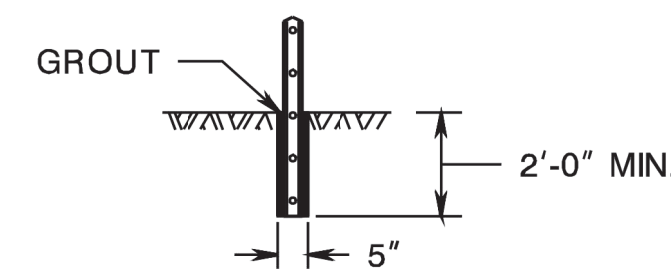
FRONT MOUNT BRACKET



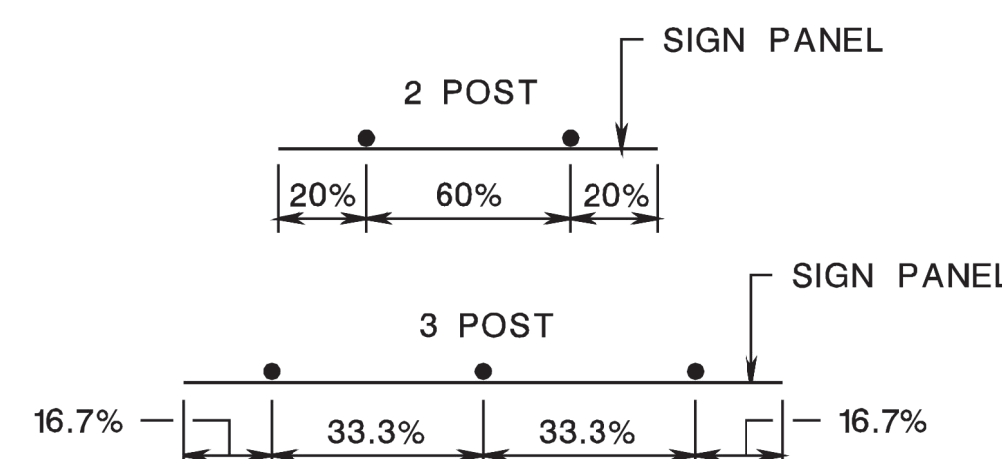
SIDE MOUNT BRACKET



DETAIL OF BRACKET FOR SIDE MOUNTED SIGNS



ROCK INSTALLATION

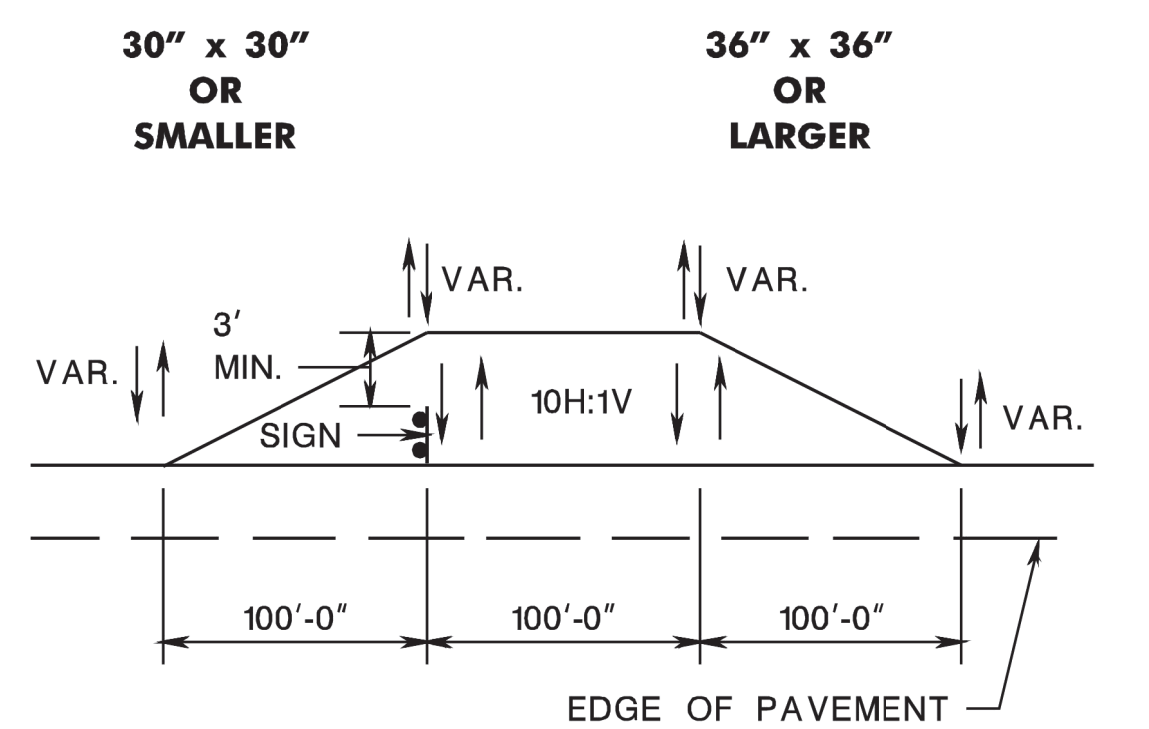
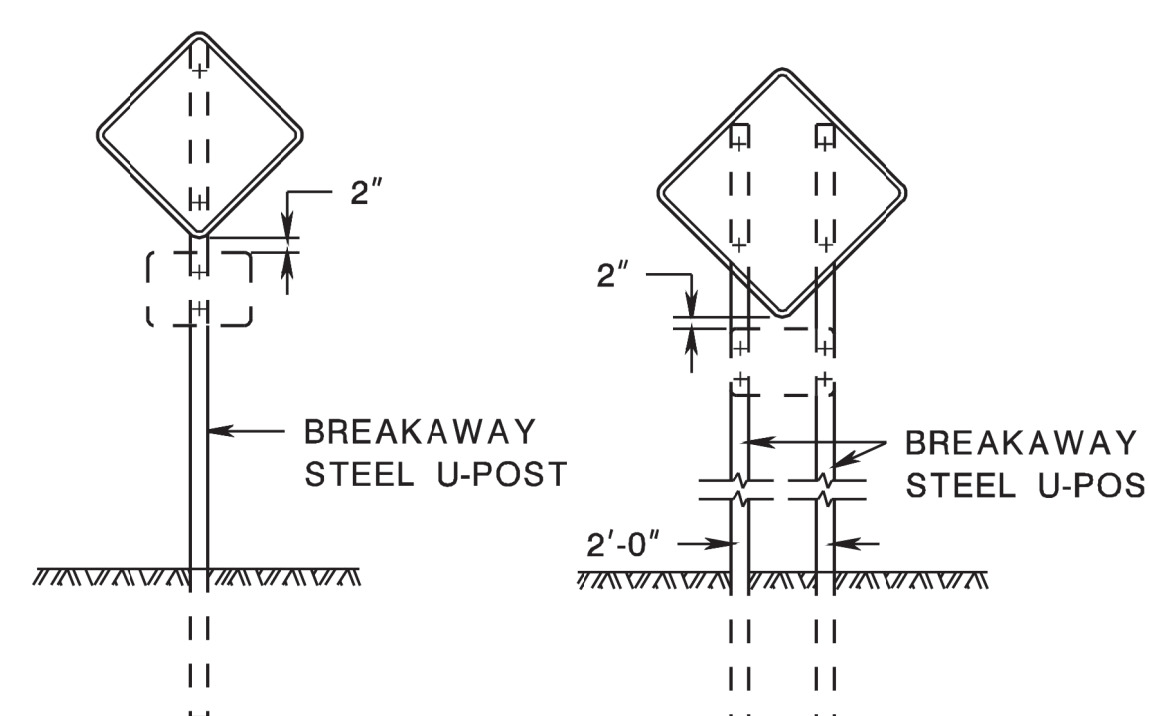
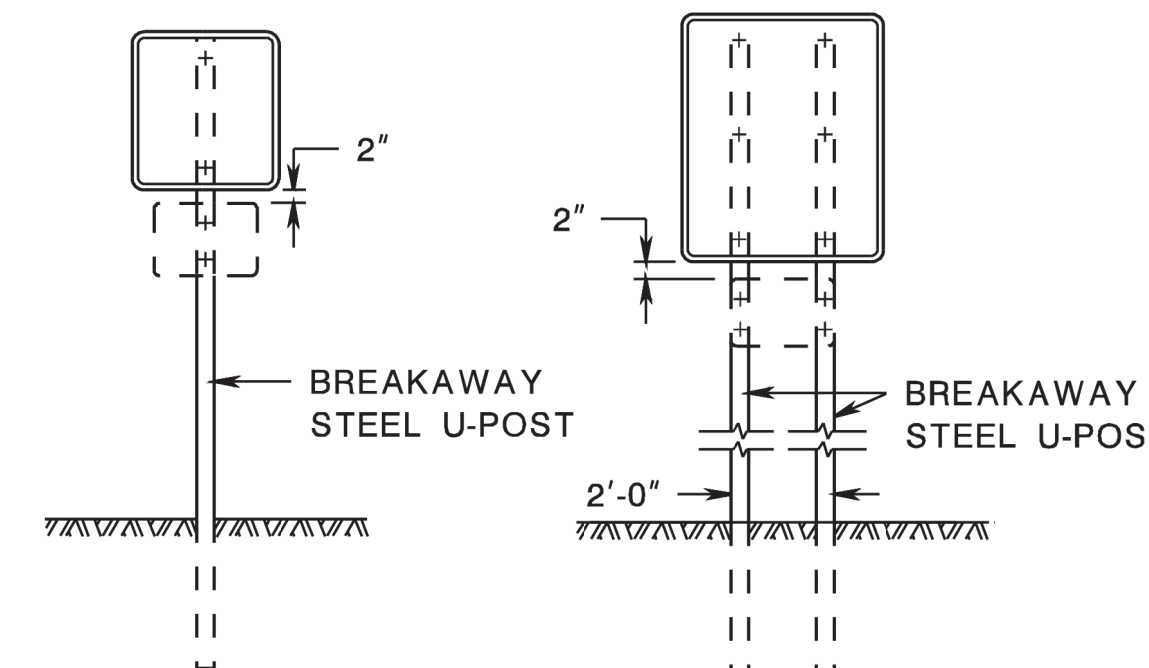
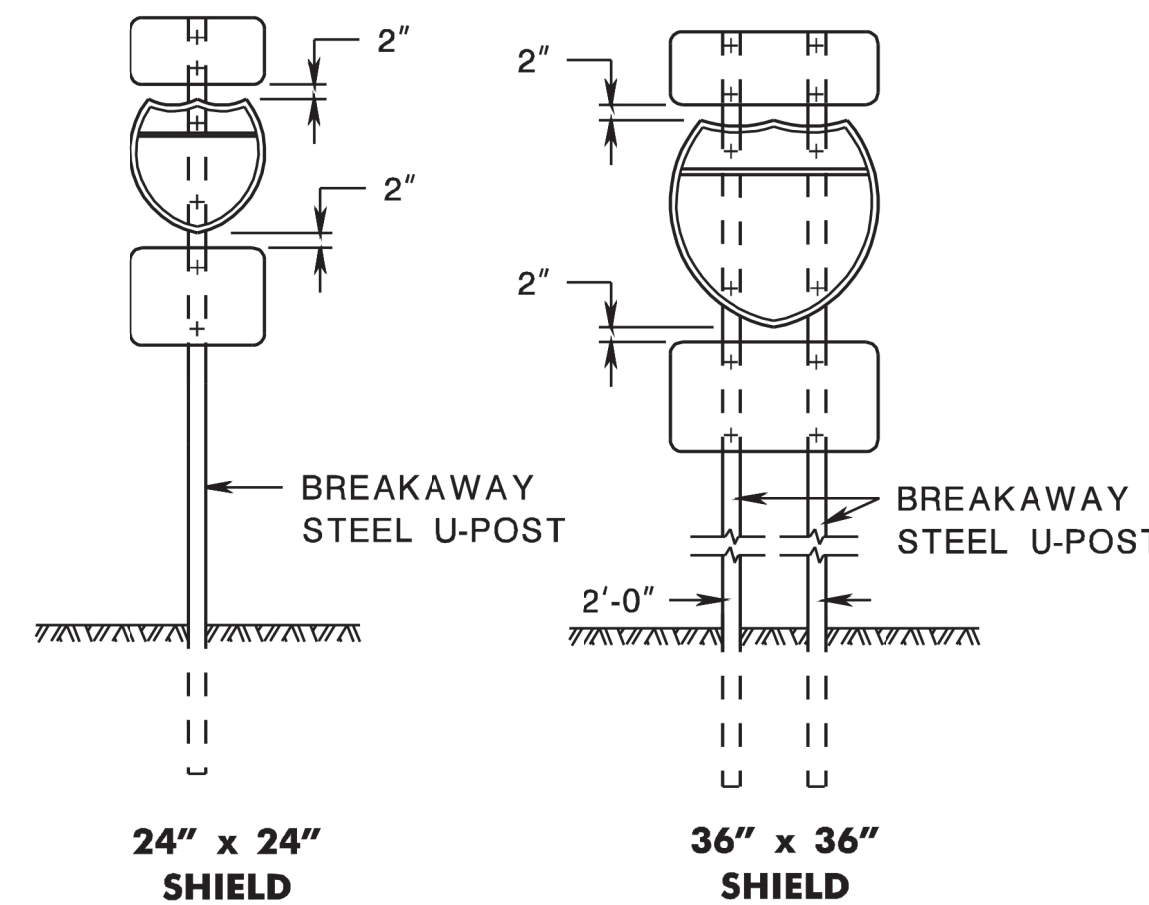


STEEL U-POST SPACING

PANEL SIZE (W x H)	# OF POSTS	POST SIZE (LB/FT)
18" x 18"	1	2.5
18" x 24"	1	2.5
24" x 24"	1	2.5
24" x 30"	1	2.5
24" x 36"	1	2.5
30" x 24"	1	2.5
30" x 30"	1	2.5
36" x 12"	2	2.5
36" x 36" x 36"	2	2.5
30" x 36"	1	4.0

PANEL SIZE (W x H)	# OF POSTS	POST SIZE (LB/FT)
36" x 36"	2	2.5
36" x 48"	2	2.5
45" x 36"	2	2.5
48" x 24"	2	2.5
48" x 36"	2	2.5
48" x 48"	2	4.0
48" x 64" x 64"	2	2.5
60" x 36"	2	4.0
48" x 60"	2	4.0
60" x 30"	2	4.0

**U-POST SELECTION TABLE
BREAKAWAY SIGN SUPPORT**



STEEL U-POST GRADING DETAIL

GENERAL NOTES:

- ALL POSTS TO BE OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION AS STATED IN THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AND AS INDICATED BELOW.
- ALL SMALL SIGN SUPPORTS TO BE OF THE BREAKAWAY TYPE WITH EXCEPTION OF THOSE INSTALLED BEHIND GUIDE RAIL OR OTHER ROADSIDE BARRIER.
- ALL STEEL POSTS AND BRACKETS TO BE CUT, BENT, AND HOLES PUNCHED AND DRILLED BEFORE GALVANIZING. GALVANIZING TO BE ACCORDING TO ASTM A123.
- ALL STEEL U-POST SIGN SUPPORTS MUST BE INSTALLED FACING THE PREDOMINANT TRAFFIC FLOW. USE A MOUNTING BRACKET ON SIDE MOUNTED SIGNS SUCH AS "ONE WAY" SIGNS INSTALLED IN MEDIANS.
- SIGN PANEL SIZES ARE TO DETERMINE POST TYPE AND NUMBER AS SHOWN ON THIS DETAIL.
- BOLTS ARE NOT TO PROTRUDE MORE THAN 3/4" BEYOND THE NUT WHEN TIGHT, BUT ARE TO ENGAGE ALL THREADS IN THE NUT.
- WHEN SIGNS ARE INSTALLED ON SLOPES 10H:1V OR FLATTER, THE MINIMUM VERTICAL CLEARANCE REQUIREMENTS FOR SIGNS ARE:
FOR SINGLE POST INSTALLATIONS - THE MINIMUM DISTANCE BETWEEN THE EDGE OF THE PAVEMENT AND THE BOTTOM OF ANY PANEL MUST BE 7 FEET, AND THE MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO THE TOP OF ANY SIGN PANEL MUST BE 9 FEET.
FOR MULTI-POST INSTALLATIONS - THE MINIMUM DISTANCE BETWEEN THE EDGE OF PAVEMENT AND THE BOTTOM OF A MAIN SIGN PANEL MUST BE 7 FEET.
SECONDARY SIGN PANELS (LAND SERVICE HIGHWAYS) - THE MINIMUM DISTANCE BETWEEN THE EDGE OF PAVEMENT AND THE BOTTOM OF A SECONDARY SIGN PANEL IS 6 FEET.
SECONDARY SIGN PANELS (INTERSTATE AND FREEWAYS) - THE BOTTOM OF THE MAIN SIGN TO BE A MINIMUM OF 8 FEET AND THE SECONDARY SIGN PANEL A MINIMUM OF 5 FEET ABOVE THE EDGE OF PAVEMENT.
WHERE GRADING OF 10H:1V OR FLATTER CANNOT BE OBTAINED, OR WHERE CURB OR BERM IS GREATER THAN 4 INCHES, THE MINIMUM VERTICAL CLEARANCE WILL BE MEASURED FROM THE GROUND LINE TO THE BOTTOM OF THE SIGN.
- THE HORIZONTAL OFFSET FROM EDGE OF PAVEMENT TO EDGE OF SIGN IS DERIVED FROM SECTION 2A.19 OF THE MUTCD AS FOLLOWS:
FOR URBAN INSTALLATIONS - IN AREAS WHERE LATERAL OFFSETS ARE LIMITED, A MINIMUM LATERAL OFFSET OF 2 FEET IS DESIRABLE. A MINIMUM OFFSET OF 1 FOOT FROM THE FACE OF THE CURB MAY BE USED IN AREAS WHERE THE SIDEWALK WIDTH IS LIMITED OR WHERE EXISTING POLES ARE CLOSE TO THE CURB.
FOR RURAL INSTALLATIONS - 6 FEET MINIMUM DESIRABLE FROM EDGE OF SHOULDER, BUT 12 FEET MINIMUM DESIRABLE FROM EDGE OF TRAFFIC OR AUXILIARY LANE.
FOR INTERSTATE AND FREEWAY INSTALLATIONS - 6 FEET MINIMUM DESIRABLE FROM EDGE OF SHOULDER, BUT NOT LESS THAN 12 FEET FROM THE EDGE OF TRAFFIC OR AUXILIARY LANE.
FOR RAMP INSTALLATIONS - 6 FEET MINIMUM FROM EDGE OF ROAD.
WHERE BEHIND GUIDE RAIL - 4 FEET MINIMUM FROM BACK OF BEAM GUIDE RAIL ELEMENT TO SIGN POST.
- DO NOT INSTALL PERMANENT SIGN SUPPORTS ON SLOPES GREATER THAN 10H:1V, EXCEPT WHERE GRADING OF 10H:1V CANNOT BE OBTAINED OR THE SIGN SUPPORTS WILL BE BEHIND A TRAFFIC BARRIER. THE SLOPE IS TO EXTEND A MINIMUM OF 3 FEET BEYOND THE OUTSIDE EDGE OF SIGN (SEE GRADING DETAIL FOR SLOPE TREATMENT).
- EXTRUDED ALUMINUM SIGN PANELS ARE NOT PERMITTED FOR USE WITH STEEL U-POST SIGN SUPPORTS.
- DO NOT PLACE STEEL U-POST SIGN SUPPORTS IN FRONT OF GUIDE RAIL AND THE POSTS MUST NOT STRADDLE GUIDE RAIL.
- TO EXTEND THE HEIGHT OF A SIGN POST, A MAXIMUM OF ONE SPLICE MAY BE MADE AND MUST BE A MINIMUM OF 9 FEET FROM THE GROUNDLINE TO CENTER LINE OF SPLICE.

STEEL U-POST SIGN SUPPORTS

N.T.S.

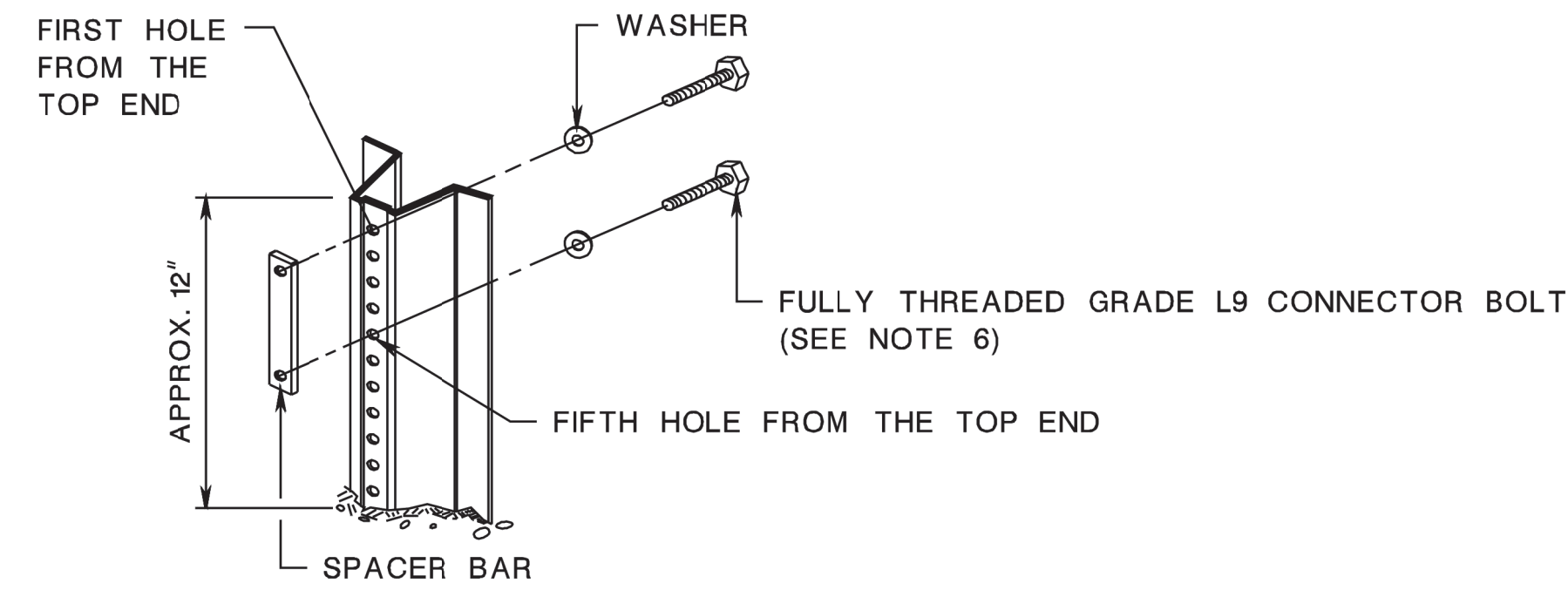
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NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

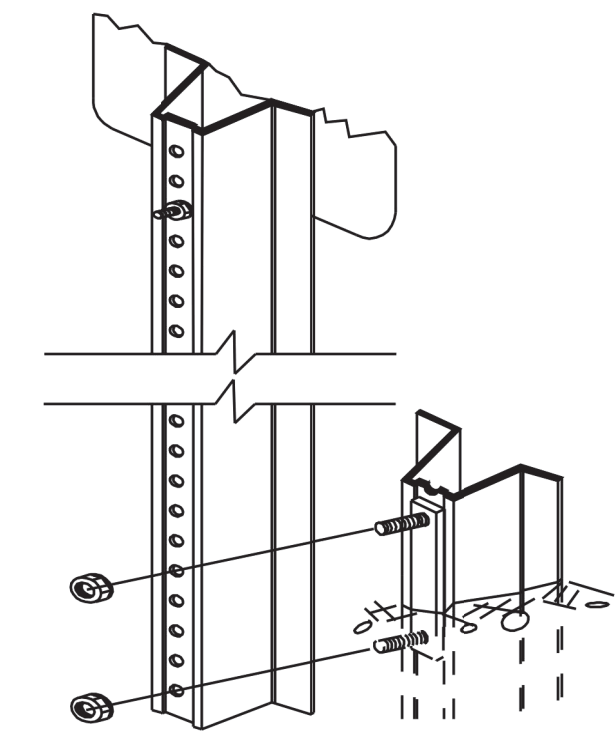
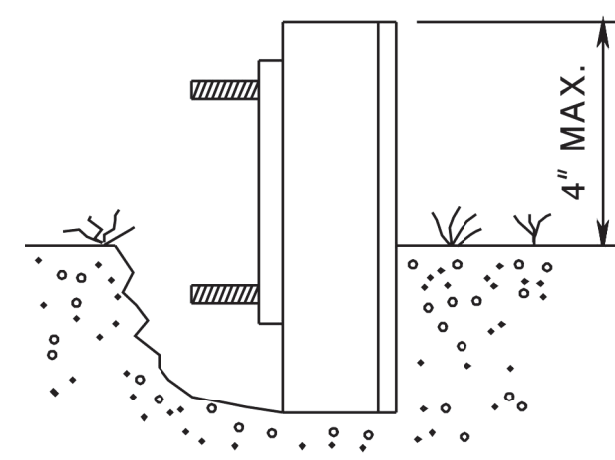
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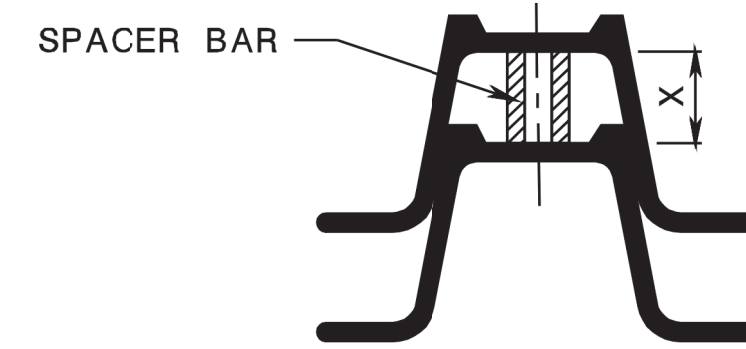
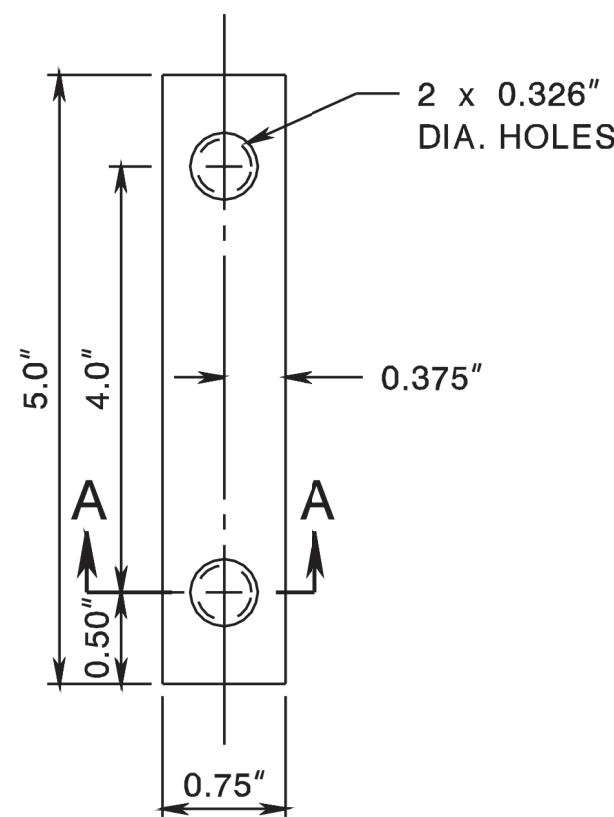


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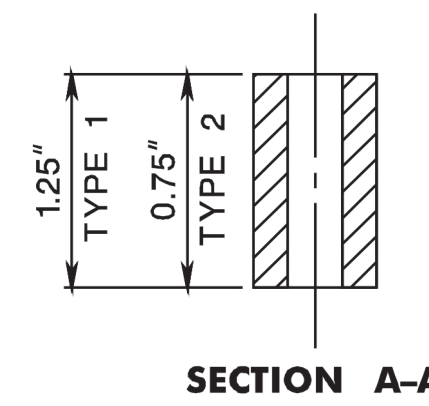
1. DRIVE ANCHOR POST ASSEMBLY TO WITHIN APPROXIMATELY 12 INCHES ABOVE GROUND LEVEL. PLACE BOLT AND WASHER IN FIRST AND FIFTH HOLES FROM THE TOP END, AND SECURE BOLTS ONTO SPACER.
2. DRIVE ANCHOR POST ASSEMBLY TO WITHIN A MAXIMUM OF 4 INCHES ABOVE GROUND LEVEL.
3. DIG OUT AROUND BACK OF ANCHOR POST ASSEMBLY TO ALLOW ROOM FOR TOP POST TO BE ATTACHED.
4. NEST TOP POST ASSEMBLY ONTO PROTRUDING ANCHOR POST ASSEMBLY BOLTS, THROUGH THE FIRST AND FIFTH HOLES FROM THE BOTTOM OF THE TOP POST.
5. PLACE AND TIGHTEN A SELF-LOCKING FLANGE NUT ON EACH BOLT. WHEN INSTALLATION IS COMPLETE, TOP OF GROUND POST NOT TO EXCEED 4 INCHES ABOVE GROUND LEVEL.
6. SIZE OF CONNECTOR BOLT FOR TYPE 1, 5/16" x 1 1/2" SIZE OF CONNECTOR BOLT FOR TYPE 2, 5/16" x 2"
7. THE CONNECTOR BOLTS ARE TO BE FULLY THREADED. EACH CONNECTOR BOLT AND NUT TO BE CLEARLY STAMPED WITH MANUFACTURER'S IDENTIFYING MARK.



ANCHOR POST ASSEMBLY SIGN SUPPORTS



WHEN X IS GREATER THAN 0.75", USE TYPE 1 SPACER BAR
 WHEN X IS 0.75" OR LESS, USE TYPE 2 SPACER BAR

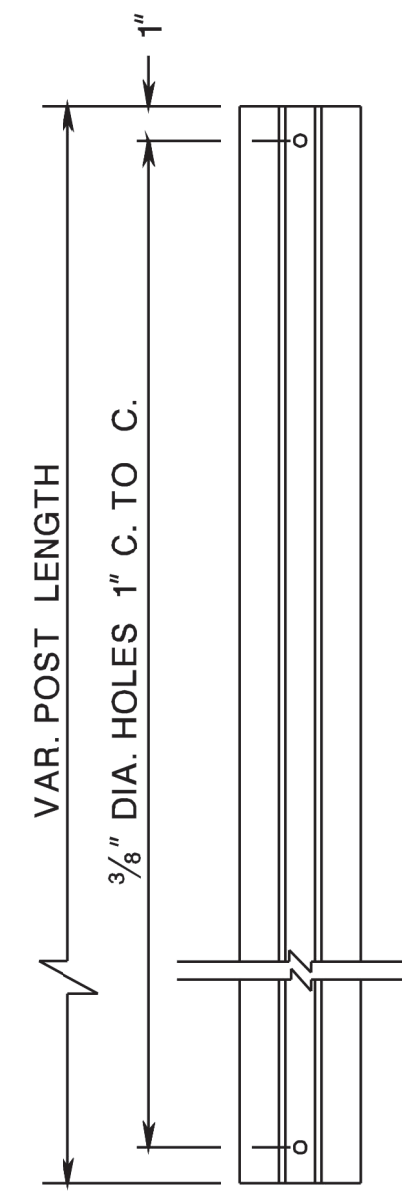


SPACER BAR

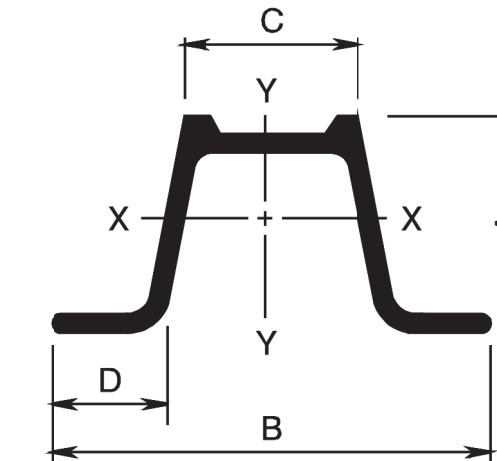
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WEIGHT * LBS./FT.	DIMENSIONS (IN)				AREA IN. ²	X-X AXIS **		Y-Y AXIS	
	"A"	"B"	"C"	"D"		I(IN. ⁴)	S(IN. ³)	I(IN. ⁴)	S(IN. ³)
2.50	1.516	3.062	1.278	0.669	0.760	0.228	0.313	0.539	0.352
4.00	1.968	3.500	1.336	0.834	1.187	0.611	0.707	1.161	0.664

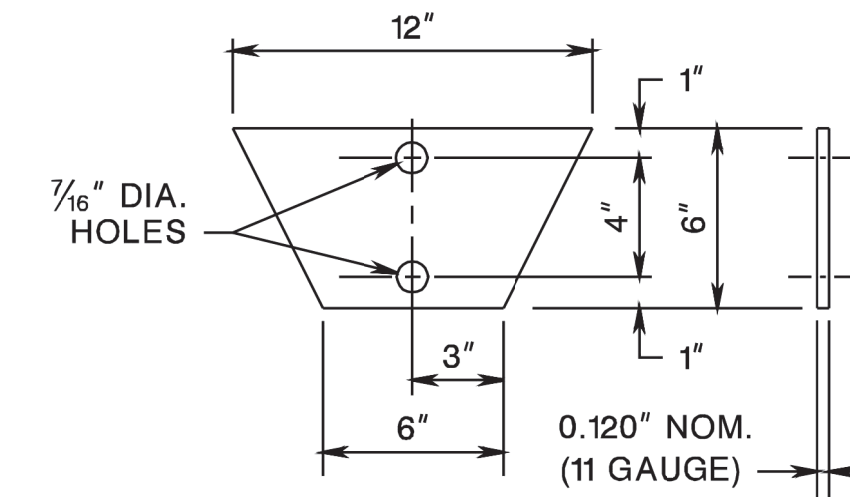
TYPE 1 STEEL U-POST PROPERTIES
 * ± 5%
 ** GOVERNING SECTION



TOP POST U-POST



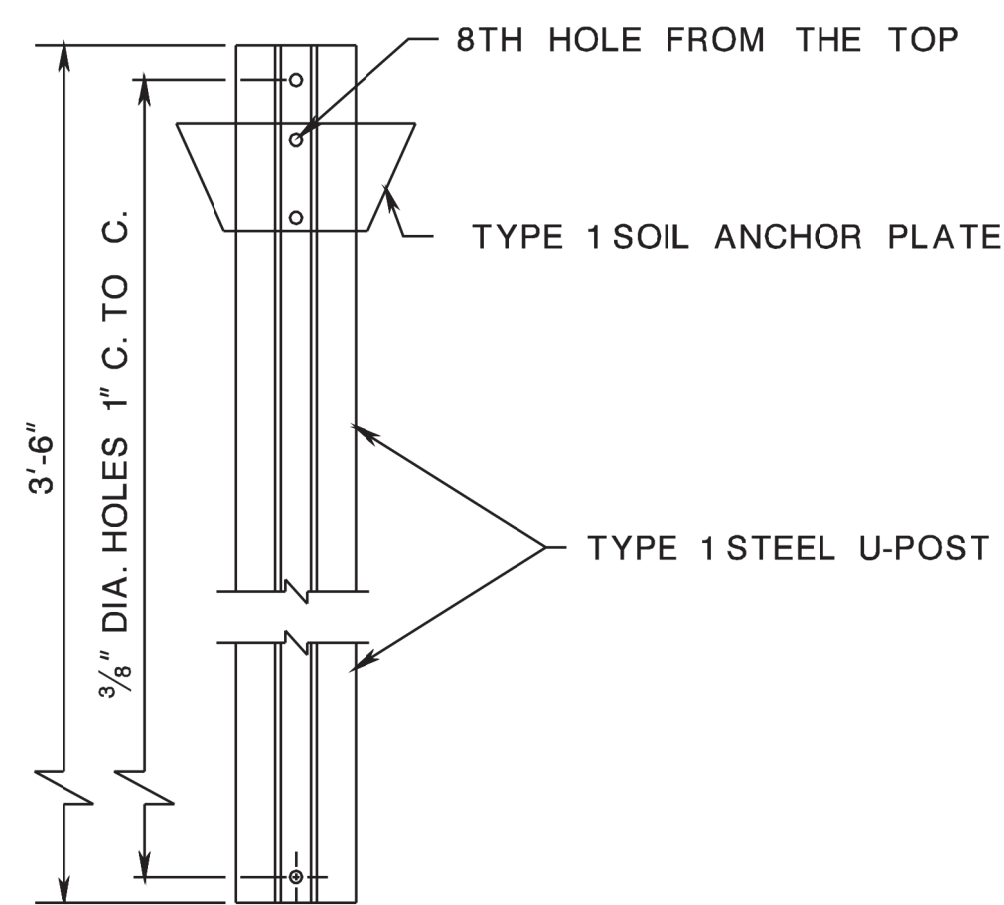
TYPE 1 STEEL U-POST



TYPE 1 SOIL ANCHOR PLATE

NOTES:

1. ANCHOR POST AND TOP POST TO BE OF EQUAL WEIGHT / FEET.
2. SOIL ANCHOR PLATE TO BE ATTACHED TO ALL ANCHOR POSTS.
3. THE MATERIAL FOR THE SOIL ANCHOR PLATES TO BE CARBON SHEET STEEL.
4. THE STEEL "U" POST TO BE GRADE 60.



TYPE 1 ANCHOR POST ASSEMBLY

STEEL U-POST SIGN SUPPORTS

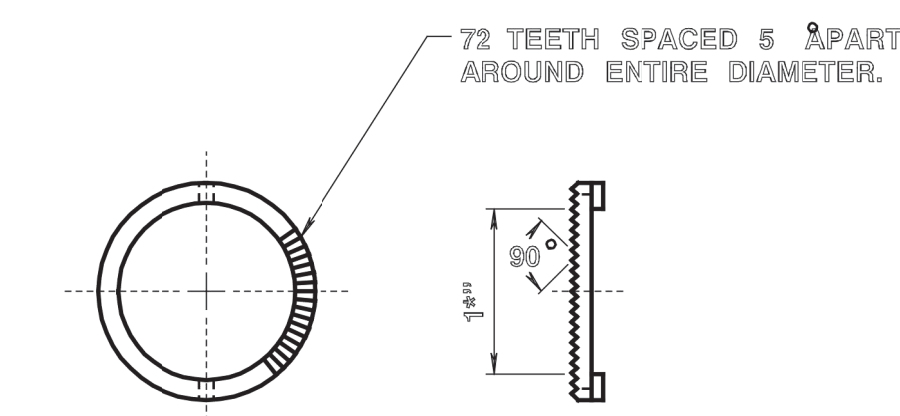
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CD-612-5

NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

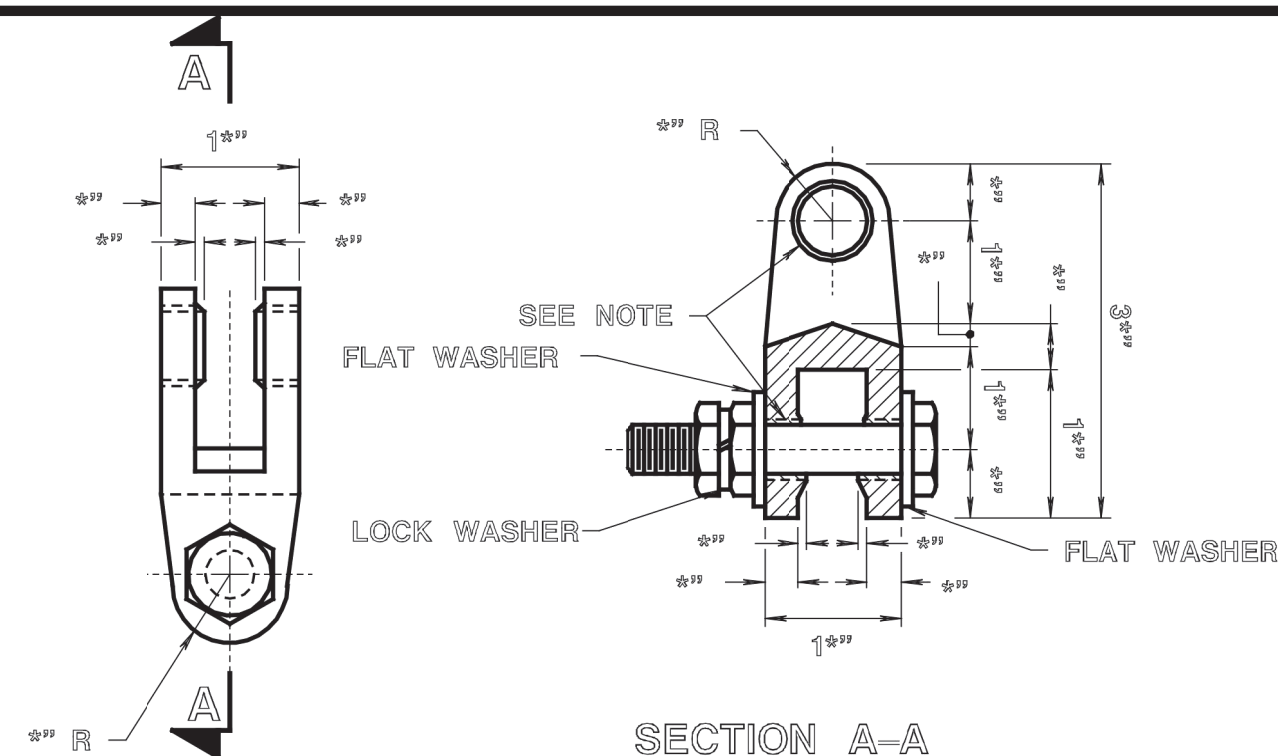
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NOTE:
SERRATED POSITIONING RING TO BE PROVIDED WHEN TRAFFIC SIGNAL IS DIRECTLY ATTACHED TO WIRE OUTLET FITTING.

DETAIL OF HEAD POSITIONING RING

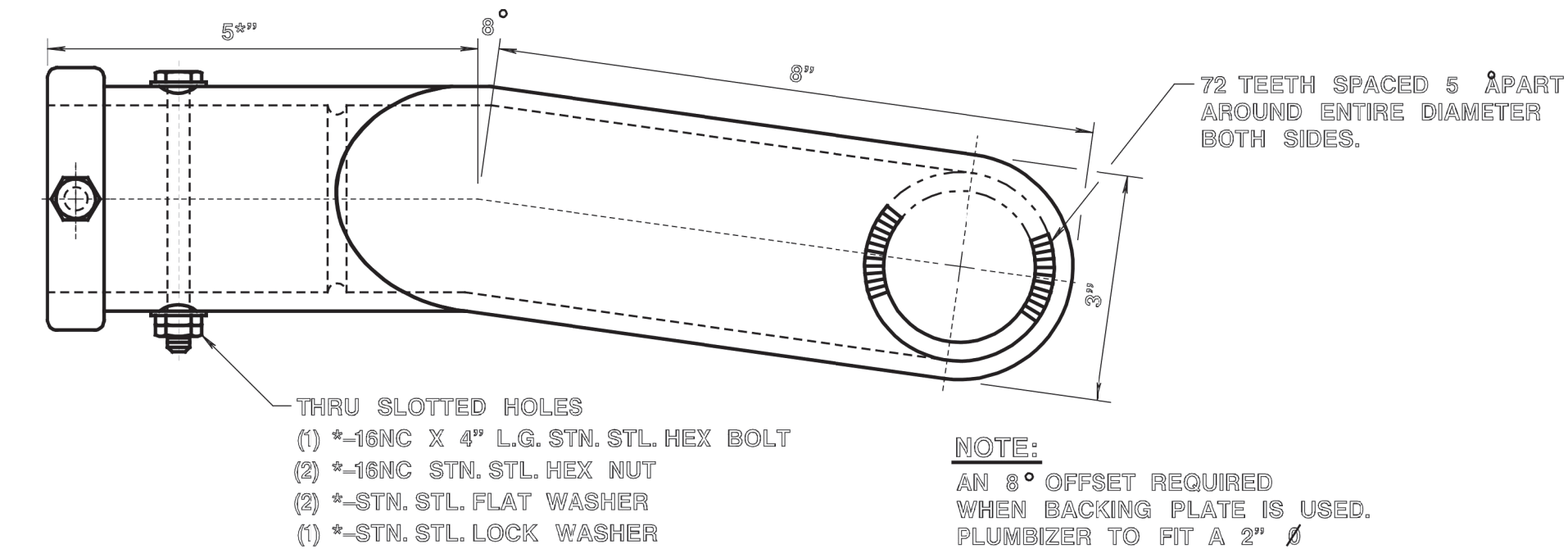
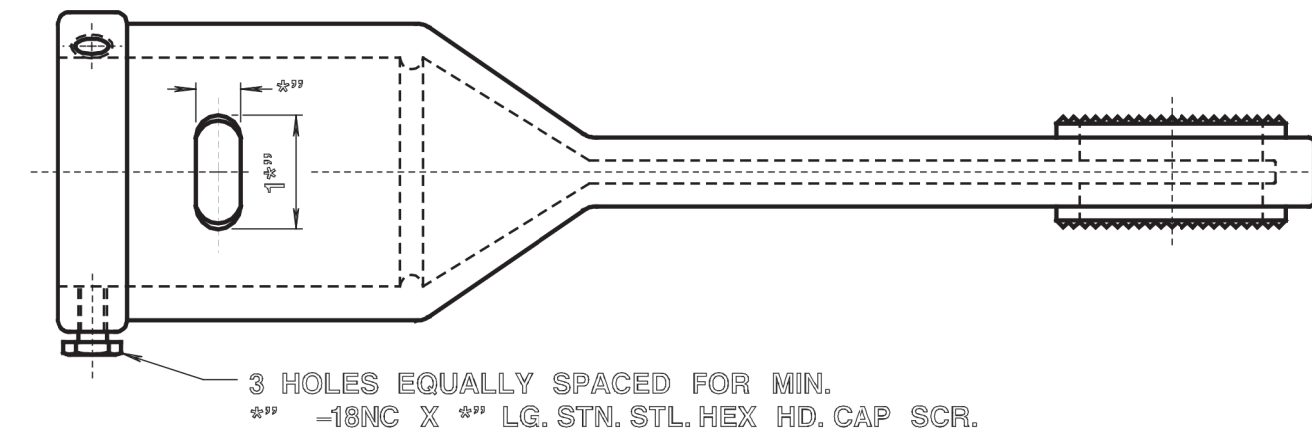
MATERIAL: DELRIN



UNIVERSAL JOINT

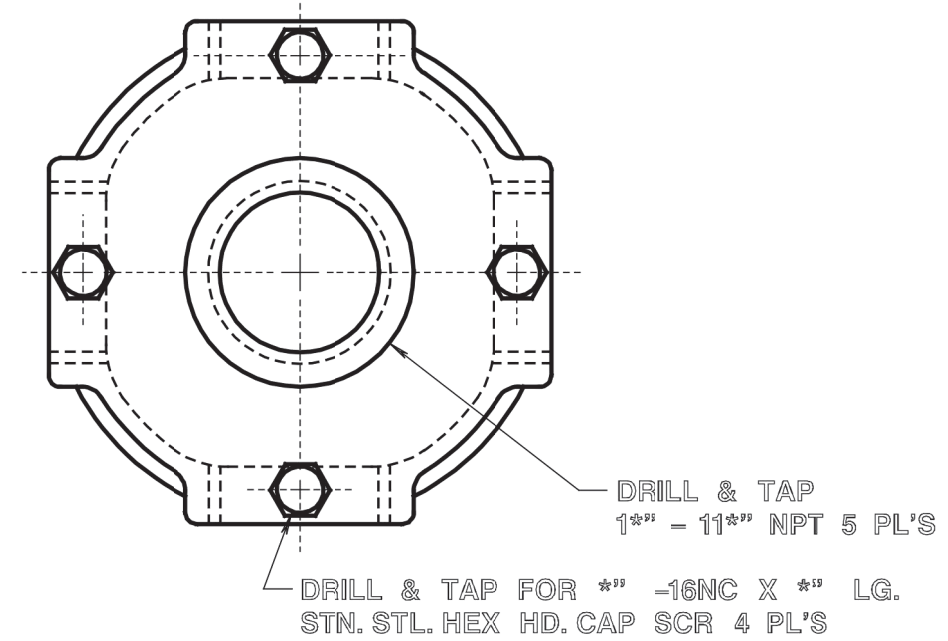
MATERIAL - BRONZE, 85-5-5-5

NOTE:
DRILL CASTING FOR C304 STN. STL. $\frac{1}{8}$ " THK. WALL BUSHINGS, FURNISH & PRESS FIT INTO CASTING.
FURNISH WITH EACH UNIVERSAL JOINT:
(1) $\frac{1}{8}$ " - 11 NC X 3" L.G. STN. STL. HEX BOLT
(2) $\frac{1}{8}$ " - 11 NC STN. STL. HEX NUTS
(3) $\frac{1}{8}$ " STN. STL. FLAT WASHER
(1) $\frac{1}{8}$ " STN. STL. LOCK WASHER



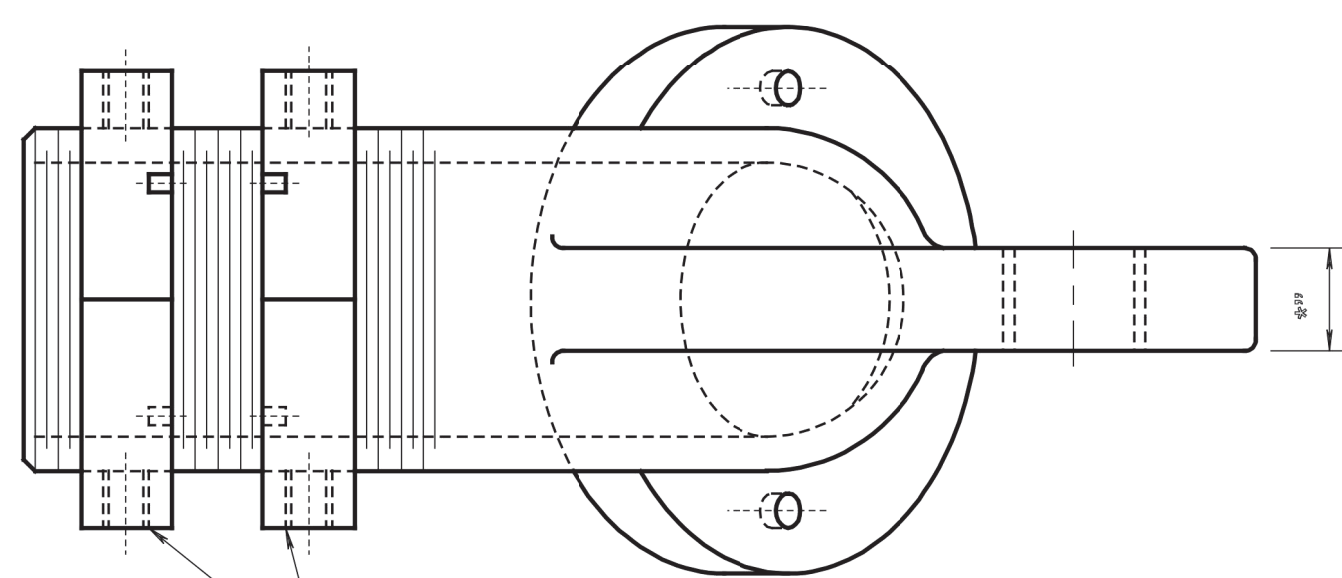
ELEVATOR PLUMBIZER

MATERIAL - ALUMINUM ALLOY 356

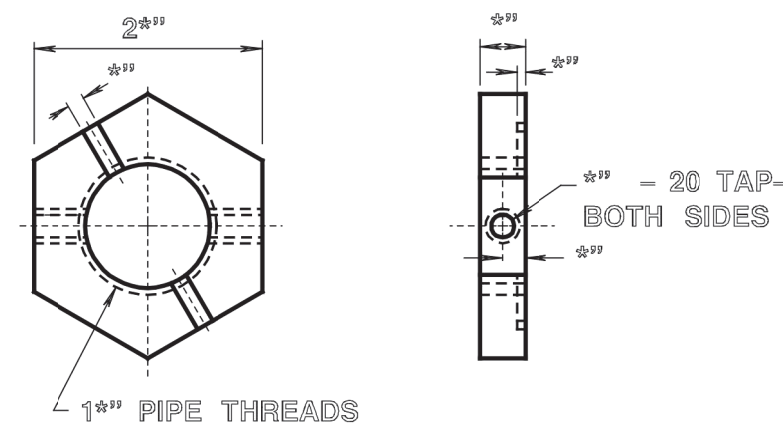


POST TOP ADAPTER

MATERIAL - ALUMINUM ALLOY 356
(FOR OPTICALLY PROGRAMMED INDICATIONS ONLY)

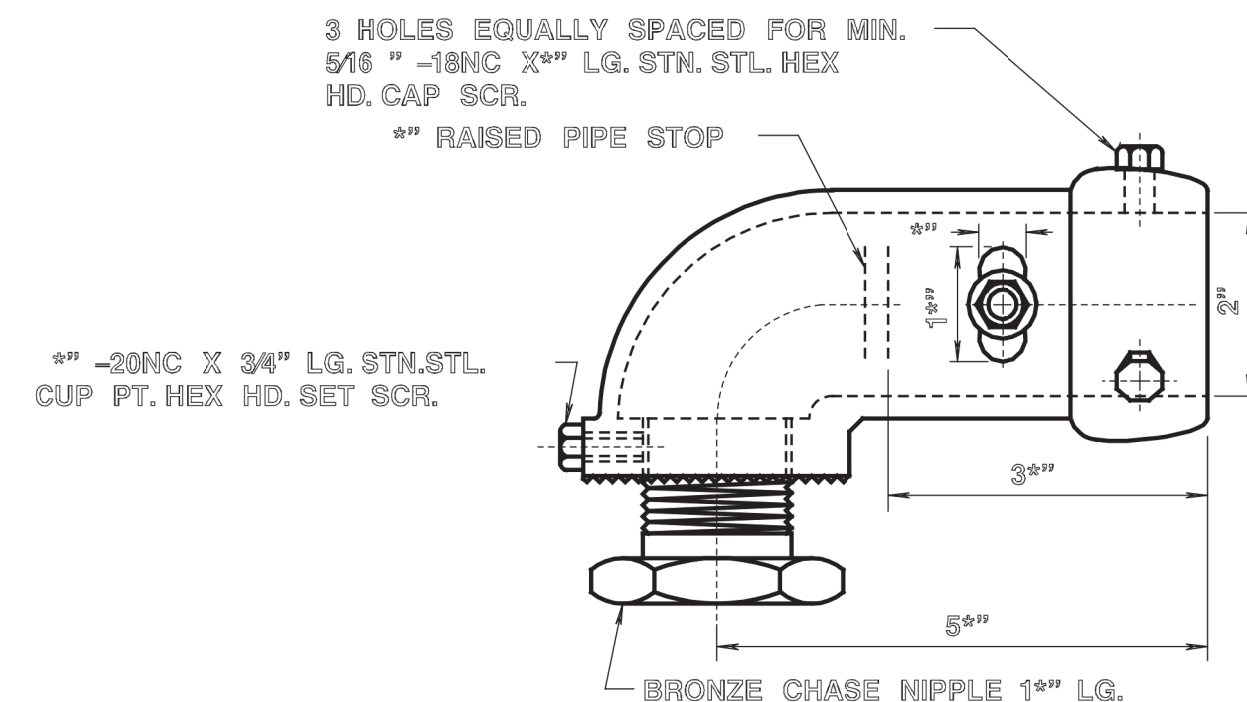


HEX LOCK NUTS - BRONZE FURNISH (2) WITH EACH OUTLET NUTS TO BE PROVIDED WITH $\frac{1}{8}$ " DP X $\frac{1}{8}$ " WIDE SLOT FOR SERRATED RING; DRILL & TAP $\frac{1}{8}$ " - 20 FOR (2) STN. STL. SOC. HD. SET SCR, ONE EACH SIDE.



HEX LOCK NUT

MATERIAL: BRONZE, 85-5-5-5

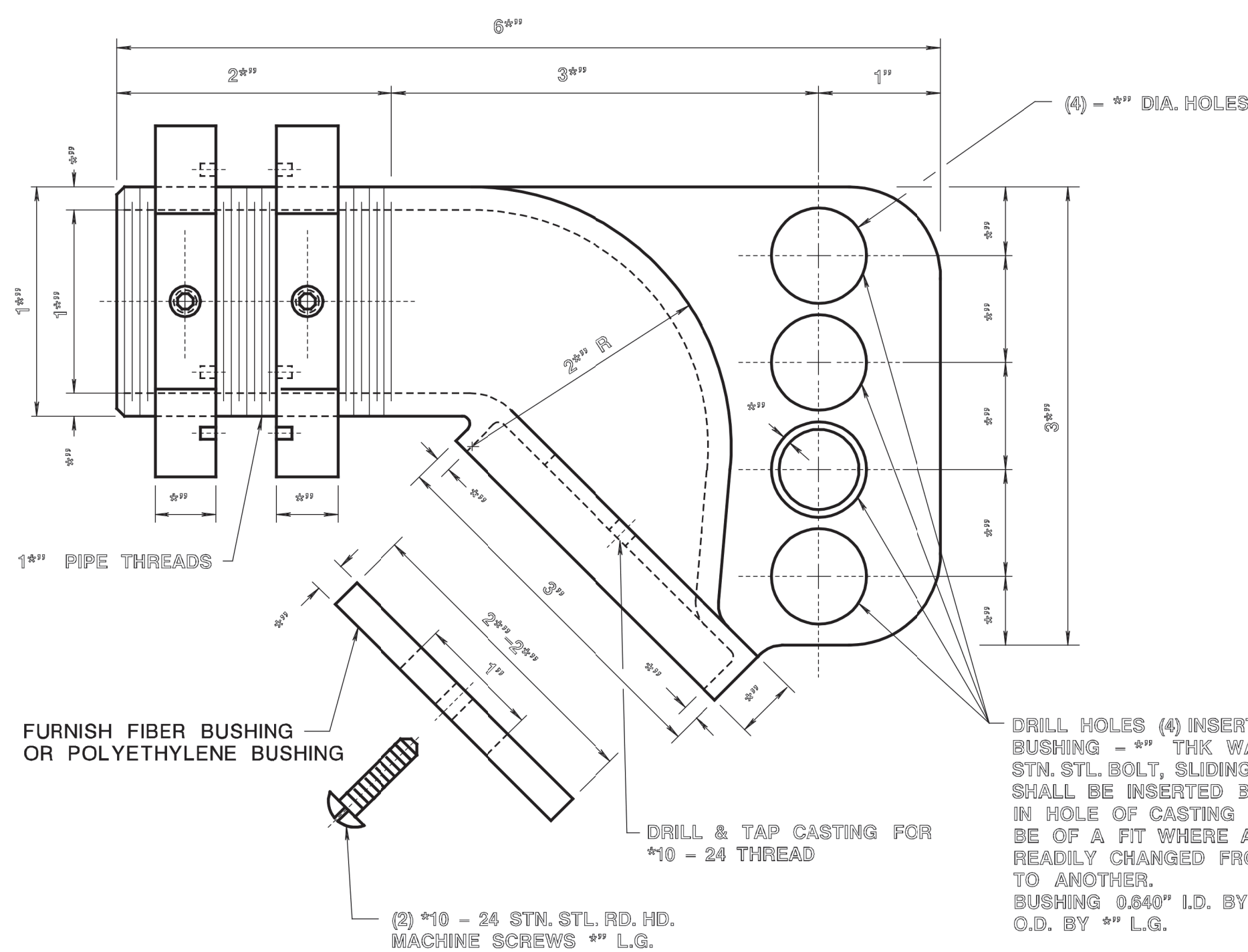


MAST ARM SLIP FITTER

MATERIAL - BRONZE, 85-5-5-5

THRU HOLES
1- $\frac{1}{8}$ " -18NC X 4" L.G. STN. STL. HEX BOLT
2- $\frac{1}{8}$ " -18NC STN. STL. HEX NUTS
1- $\frac{1}{8}$ " STN. STL. FLAT WASHERS
1- $\frac{1}{8}$ " STN. STL. LOCK WASHER

NOTES:
1. THE SLIP FITTER SHALL BE UTILIZED IN MOUNTING OPTICALLY PROGRAMMED TRAFFIC SIGNALS
2. WHEN USED FOR MOUNTING SIGNALS BACK TO BACK DRILL THRU NIPPLE AND USE A 1" L.G. CAP SCREW.
3. SLIP FITTER TO FIT A 2" $\frac{1}{8}$ " MAST ARM END.

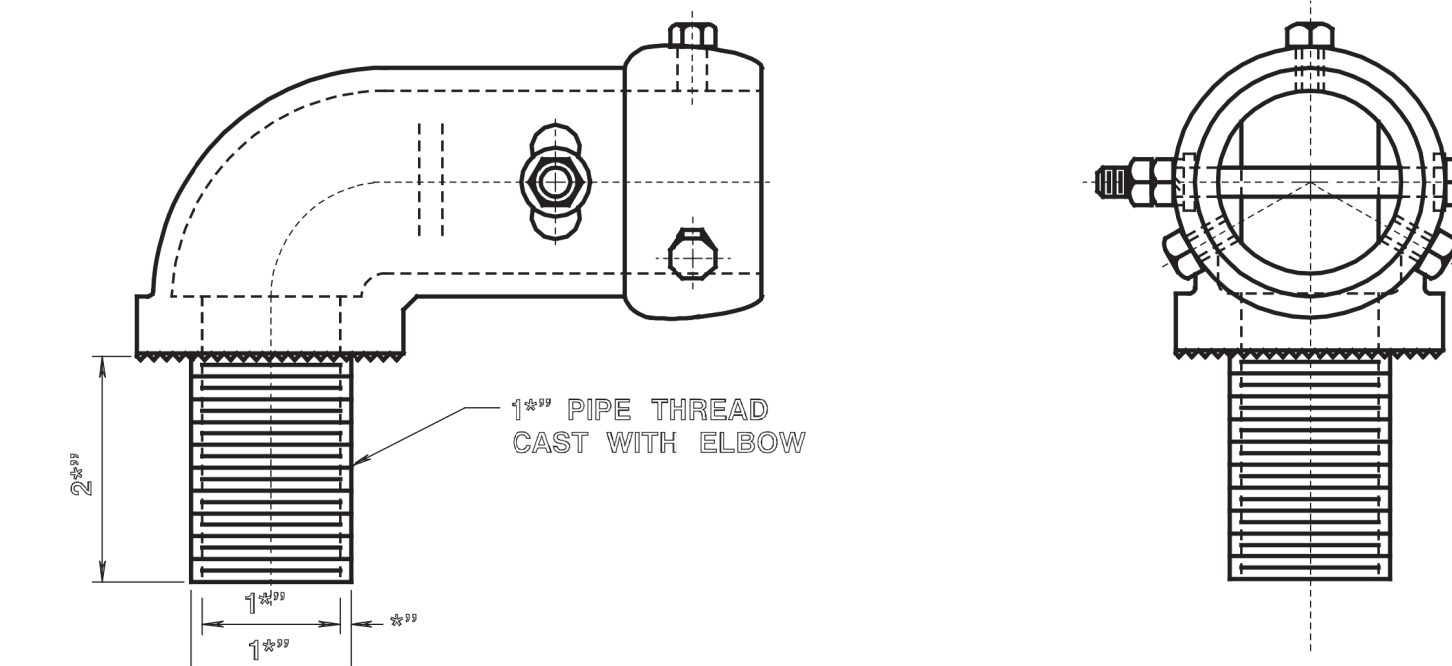


WIRE OUTLET

MATERIAL: BRONZE, 85-5-5-5

DRILL HOLES (4) INSERT (1) STN. STL. BUSHING - $\frac{1}{8}$ " THK WALL I.D. TO TAKE $\frac{1}{8}$ " STN. STL. BOLT, SLIDING FIT. BUSHING SHALL BE INSERTED BY THE FABRICATOR IN HOLE OF CASTING AS SHOWN AND TO BE OF A FIT WHERE AS BUSHING CAN BE READILY CHANGED FROM ONE HOLE TO ANOTHER.
BUSHING 0.840" I.D. BY .0785" O.D. BY 2" L.G.

NOTE:
ON INSTALLATION PLACE THE BUSHING IN THE APPROPRIATE MOUNTING HOLE AS REQUIRED TO OBTAIN VERTICAL POSITIONING AND MAXIMUM VISIBILITY OF THE SIGNAL ASSEMBLY TO THE APPROACH ROADWAY AND AS DIRECTED BY THE ENGINEER.



ALTERNATE MAST ARM SLIP FITTER

SAME AS ABOVE EXCEPT WHERE NOTED

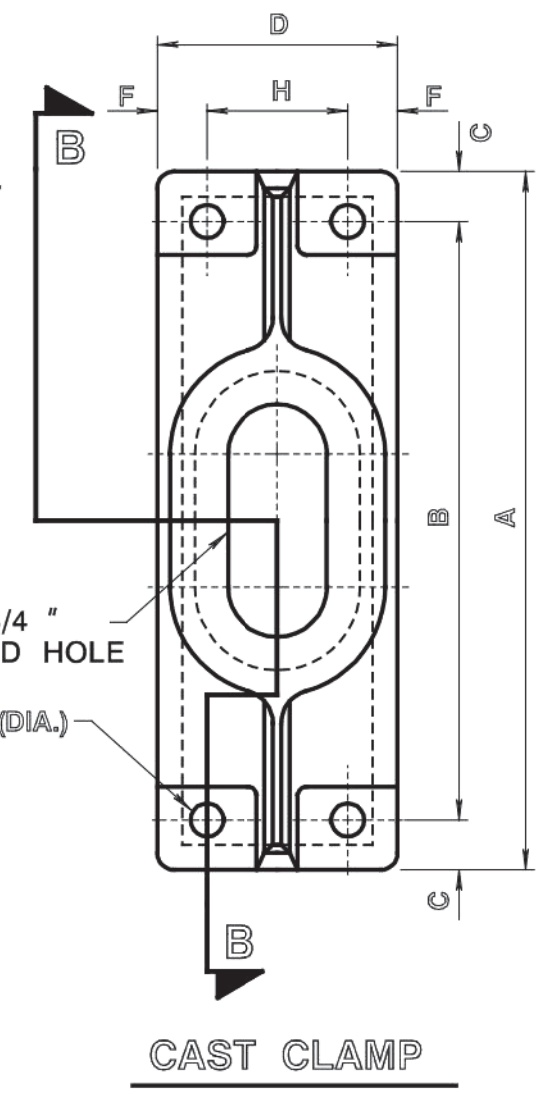
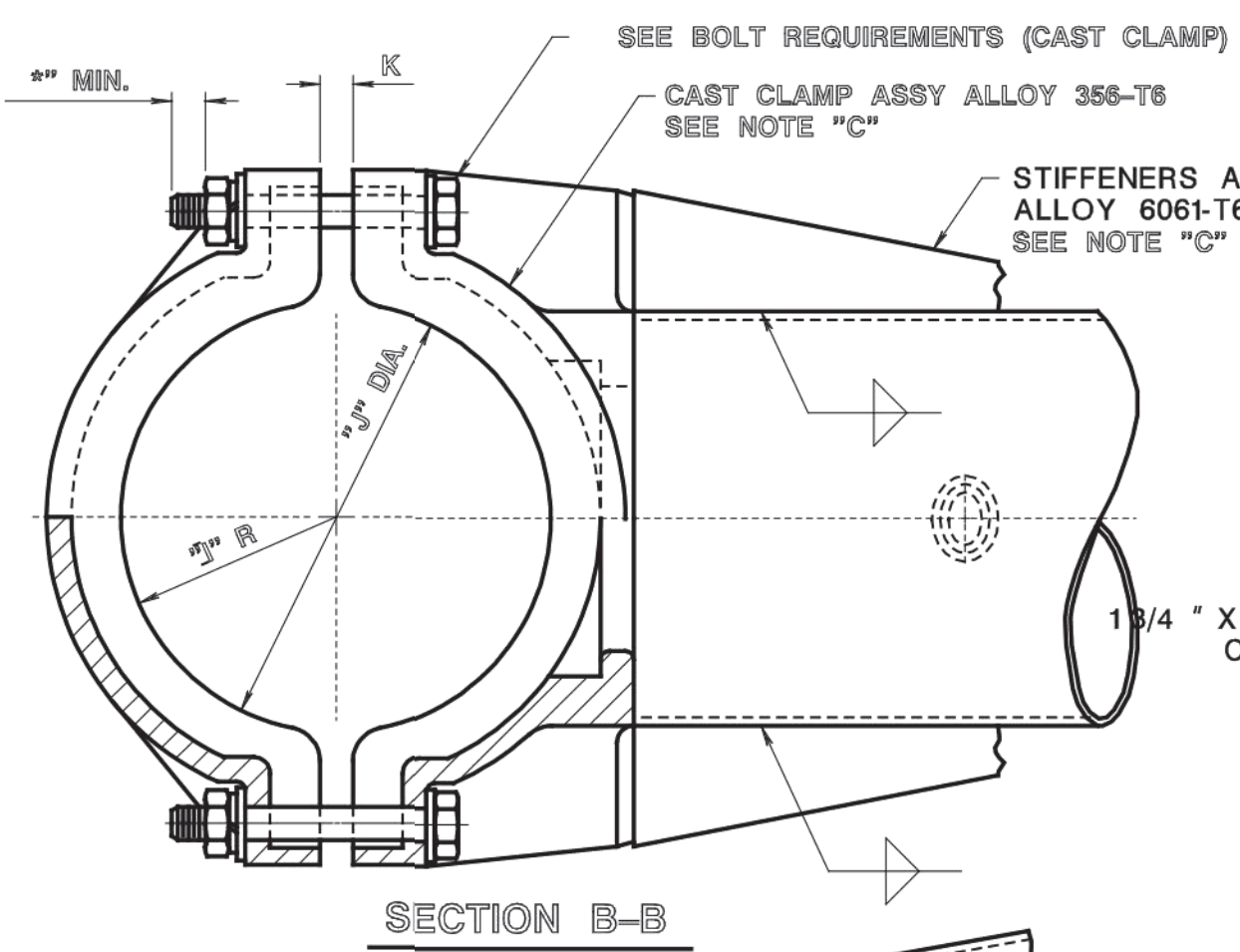
NOTES:
1. ALL TOLERANCES OF CASTINGS $\pm .005$.
2. ALL STAINLESS STEEL BOLTS ON THIS SHEET PER ASTM A193, GRADE B8.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

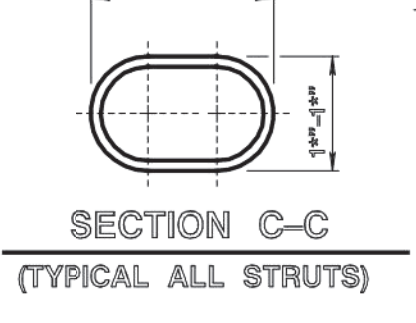
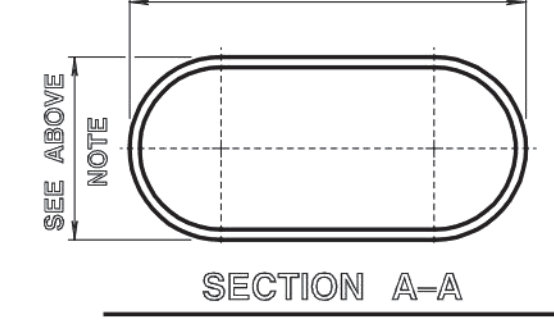
ELECTRICAL DETAILS
N.T.S.

UNIVERSAL JOINT, WIRE OUTLET, MAST ARM SLIP FITTER, POST TOP ADAPTER AND ELEVATOR PLUMBIZER

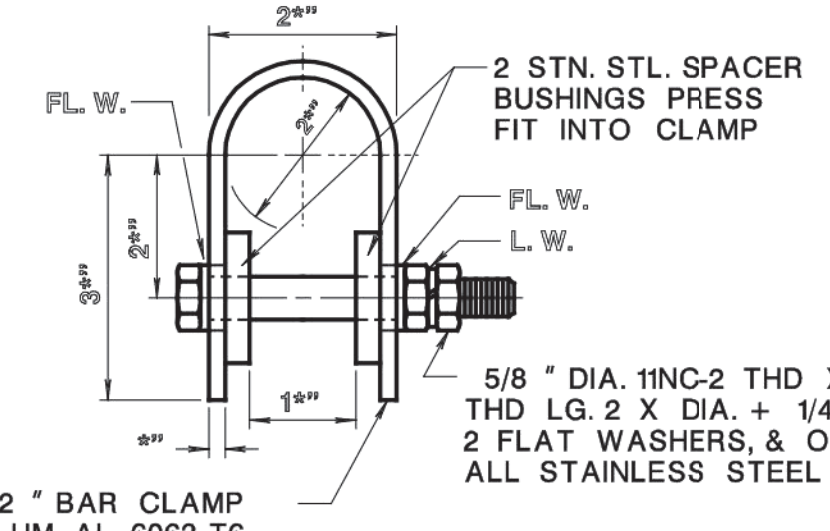
T-0407



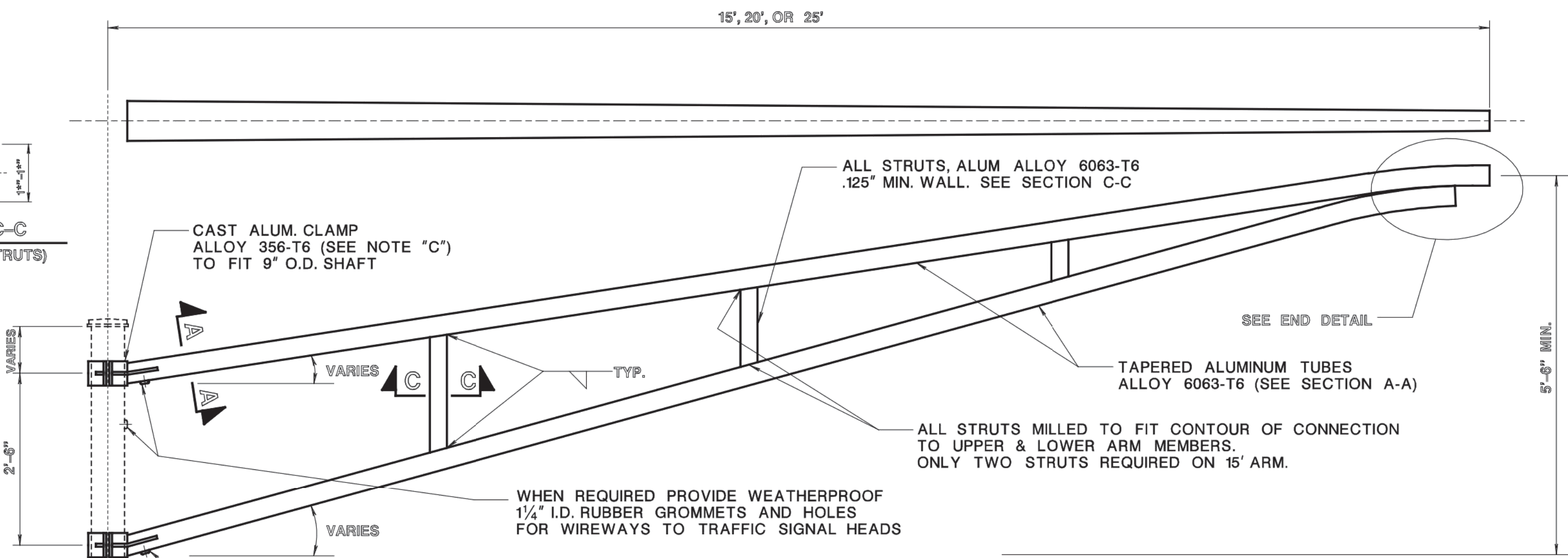
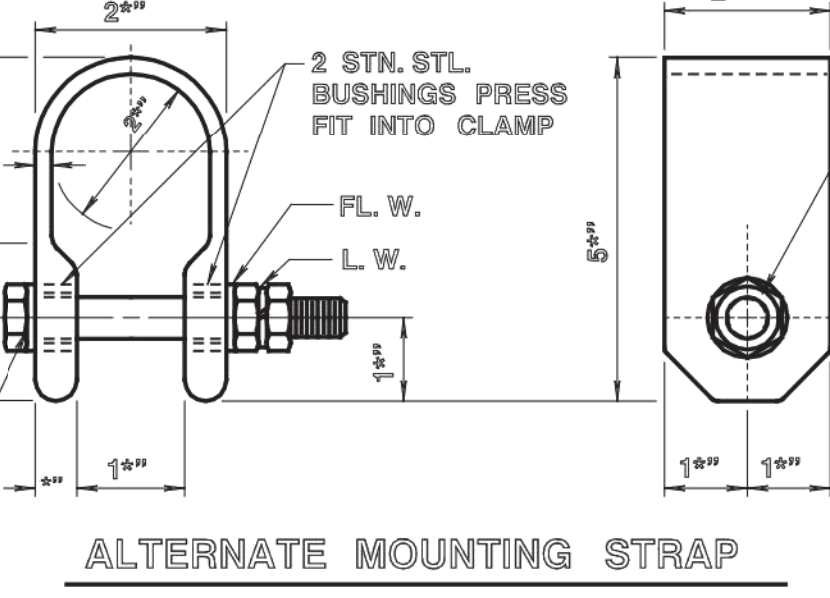
NOTE
 1. 20' & 25' MAST ARMS MIN. 8" X .188" WALL TUBE ELLIPSIZED TO APPROX. 3" X 8" SECTION
 2. 15' MAST ARM MIN. 5" X .188" WALL TUBE ELLIPSIZED TO APPROX. 3" X 8" SECTION



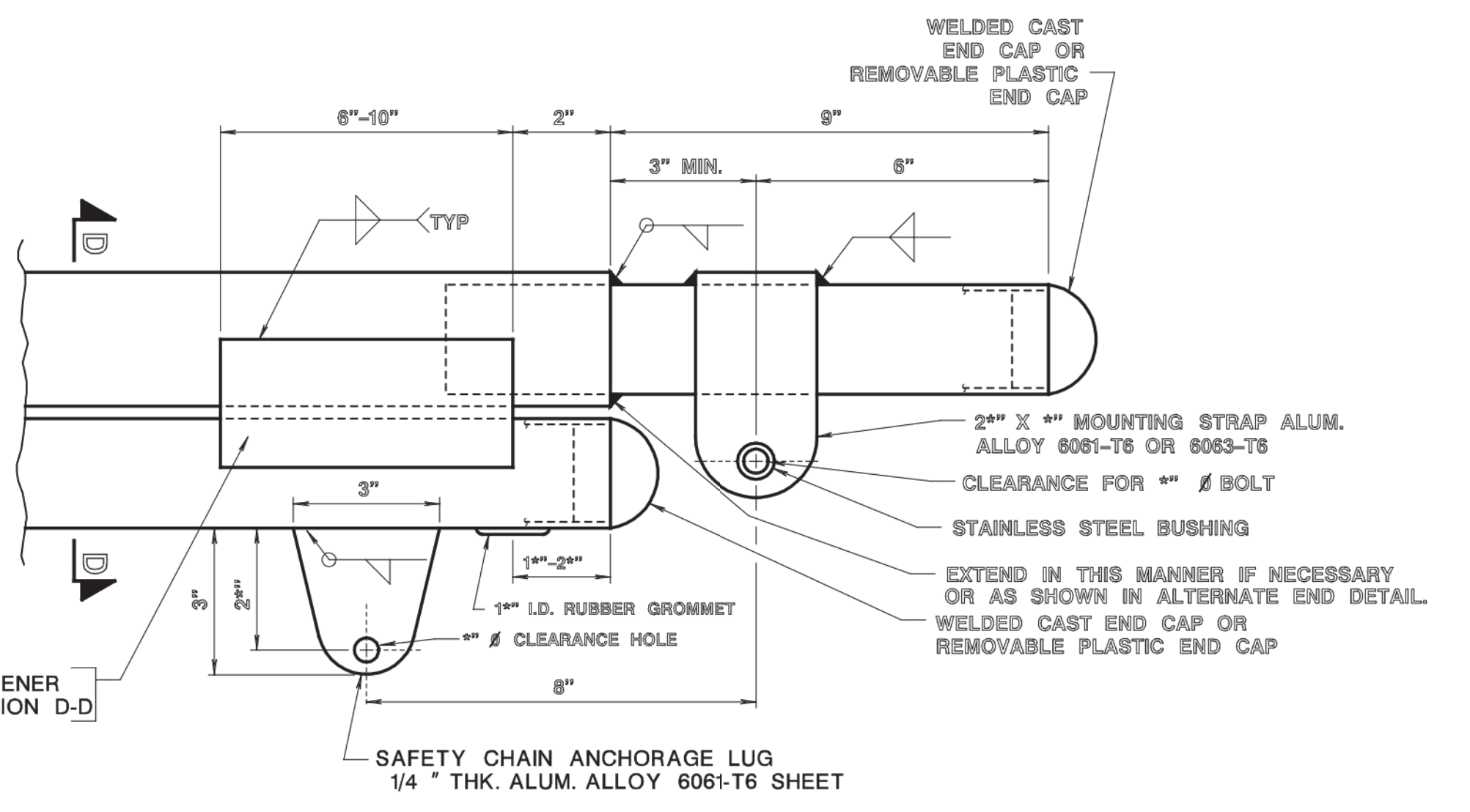
STN. STL. BUSHING FOR ALTERNATE MOUNTING STRAP



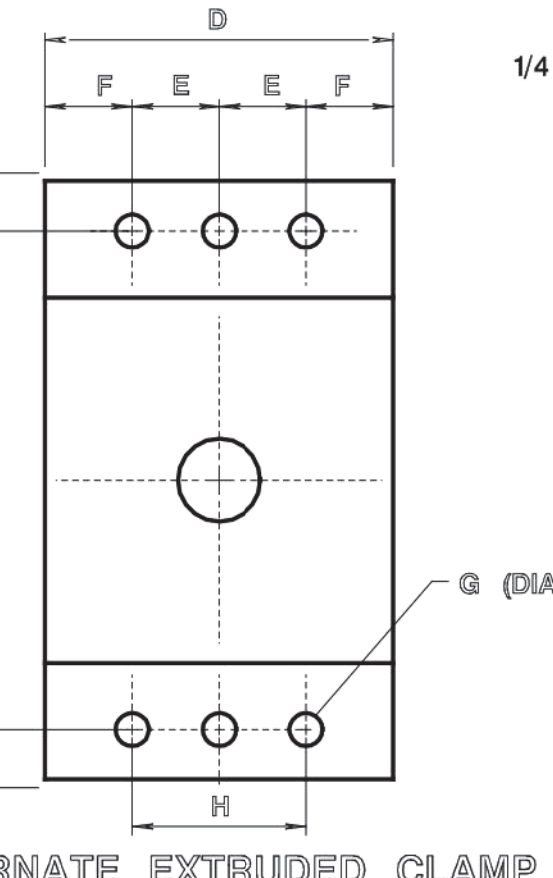
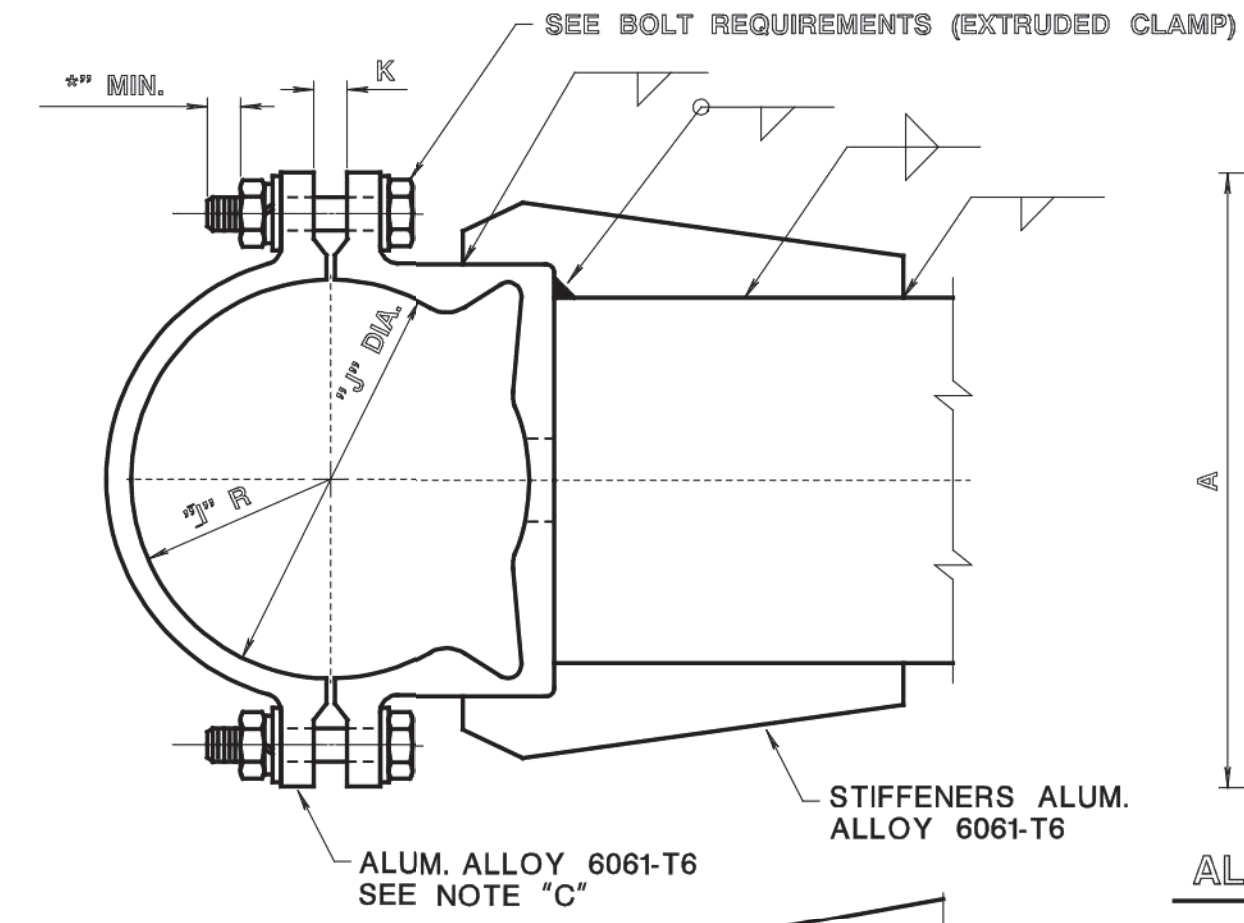
MOUNTING STRAP DETAIL (FOR ALTERNATE MOUNTING STRAP SEE DETAIL ON THIS SHEET)



TRAFFIC SIGNAL MAST ARM FOR "K" STANDARD



END DETAIL

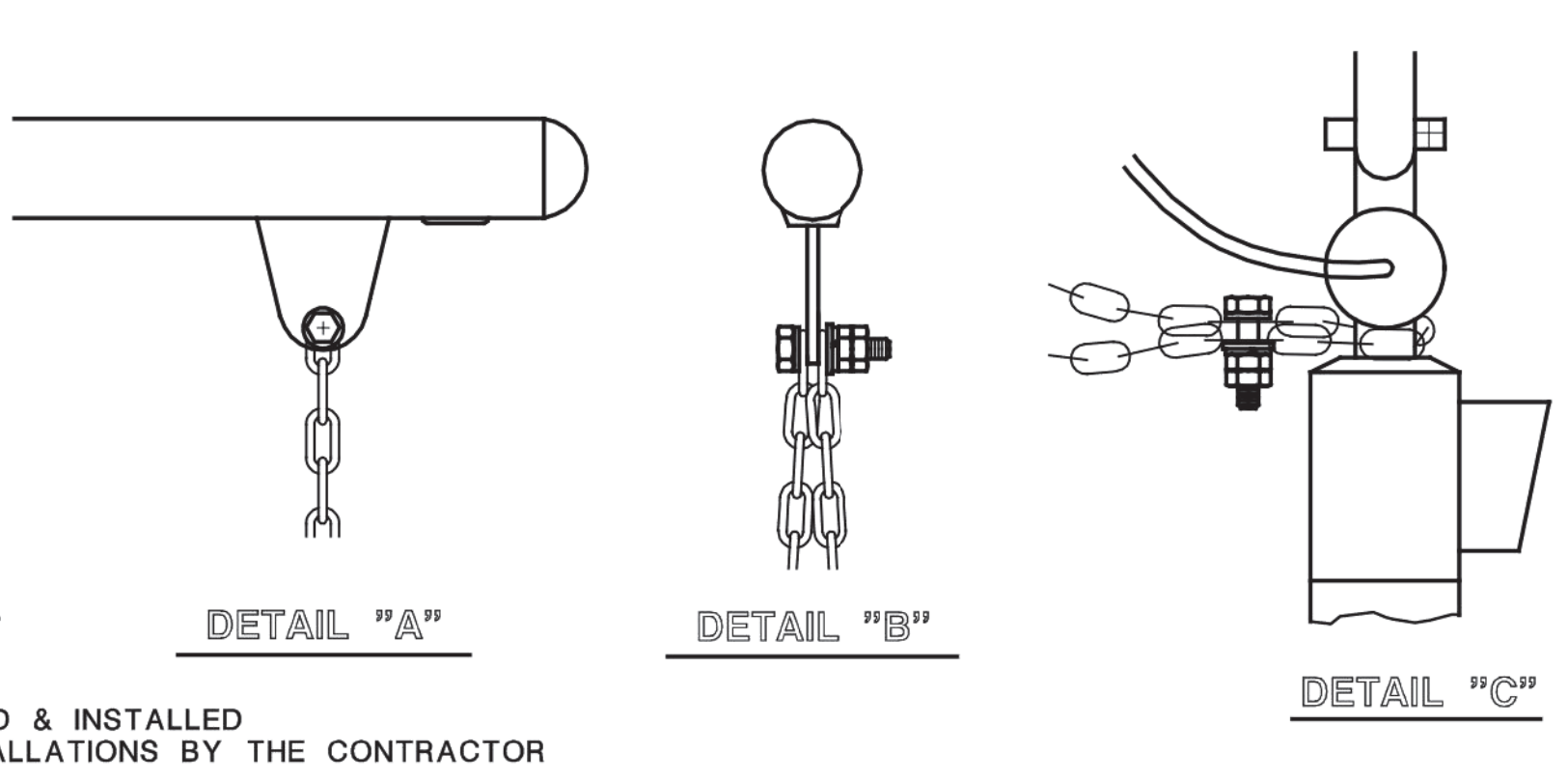
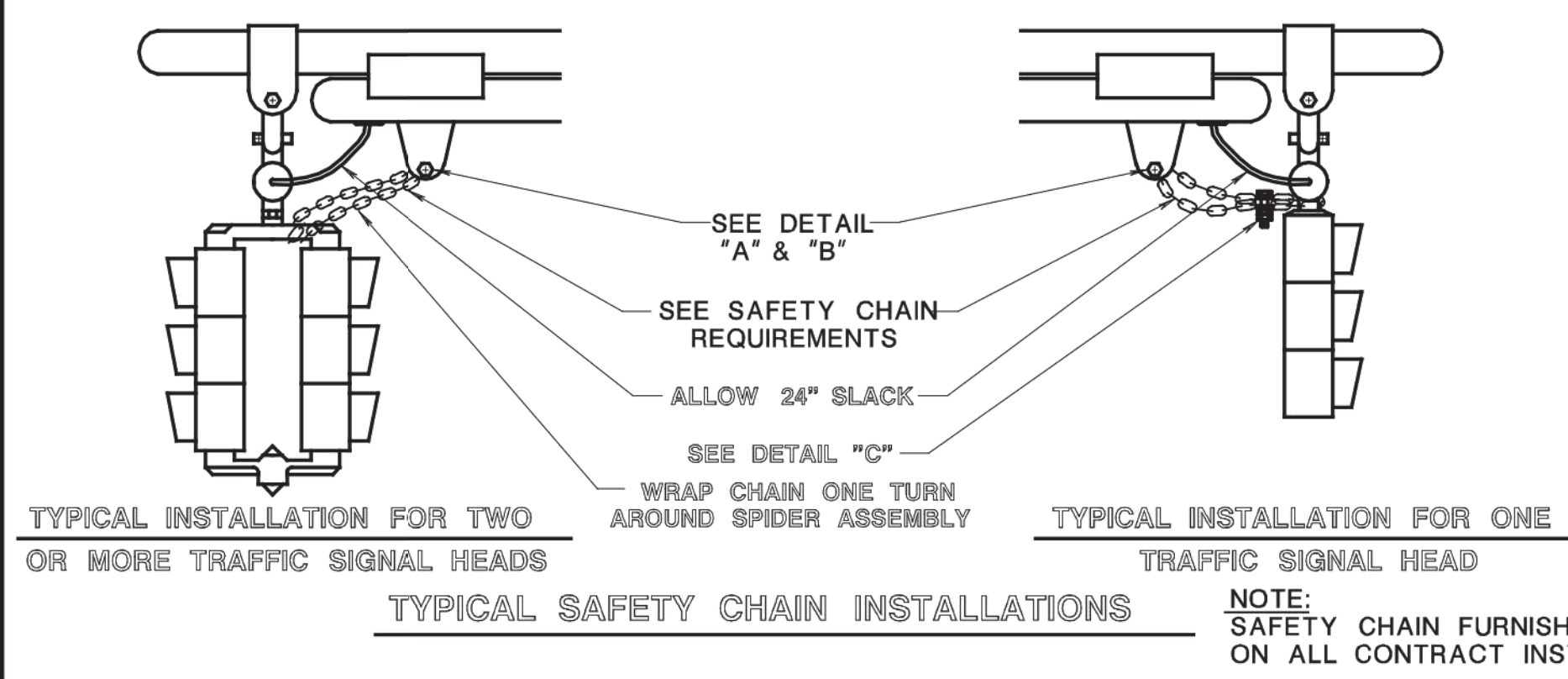


BOLT REQUIREMENTS
 12 - # STN. STL. HEX HD. BOLTS, ASTM A193, GRADE B8
 24 - # STN. STL. FLAT WASHERS
 12 - # STN. STL. LOCK WASHERS
 12 - # STN. STL. HEX NUTS

DIMENSION CHART - CAST & EXTRUDED CLAMP

LETTER	A	B	C	D	E	F	G	H	J	J	K
MIN. "	12"	10"	*	5	1"	*	*	3	4"	9	*
MAX. "	14"	12"	1	7	1"	1"	*	3"	4"	9"	2"

NOTES
 "A" DESIGN THE 25' MAST ARM TO ADEQUATELY SUPPORT 4-4 SECTION 8" WITH 1-3 SECTION MID MOUNT, OR 4-3 SECTION 12" WITH 1-3 SECTION MID MOUNT, 12" TRAFFIC INDICATORS AND ASSOCIATED MOUNTING HARDWARE. THE 15' AND 20' MAST ARMS SHALL SUPPORT 4-3 SECTION 12" INDICATORS WHICH ARE FIXED MOUNTED. WIND VELOCITY 80 M.P.H. - GUST FACTOR 1.3
 "B" MAST ARM WILL BE INSTALLED ON NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD ALUMINUM TRAFFIC SIGNAL STANDARD CONFORMING TO DRAWING NO. T-10 WITH TRANSFORMER BASE DRAWING NO. T-10.
 "C" AN EXTRUDED CLAMP MAY BE SUPPLIED AS AN ALTERNATE TO THE CAST BAND INDICATED. GENERAL CONFIGURATION MUST BE SIMILAR AND STIFFENERS MUST BE INSTALLED AS INDICATED. CLAMP MUST FIT A 9" POLE AND BOLT ARRANGEMENT MUST BE IDENTICAL. STRENGTH OF ASSEMBLED ARM MUST EQUAL OR EXCEED CAST CLAMP CONSTRUCTION. EXTRUSION ALLOY 6061-T6.
 "D" DESIGN AND MANUFACTURE ACCORDING TO THE 2001 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS. UTILIZE APPENDIX C OF THE SPECIFICATIONS FOR IDENTIFICATION OF LOADING CRITERIA. DESIGN WIND SPEED IS 80 MPH. DESIGN FOR FATIGUE IS WAVED.
 "E" ALL STAINLESS STEEL BOLTS CONFORM TO ASTM A193 GRADE B8.



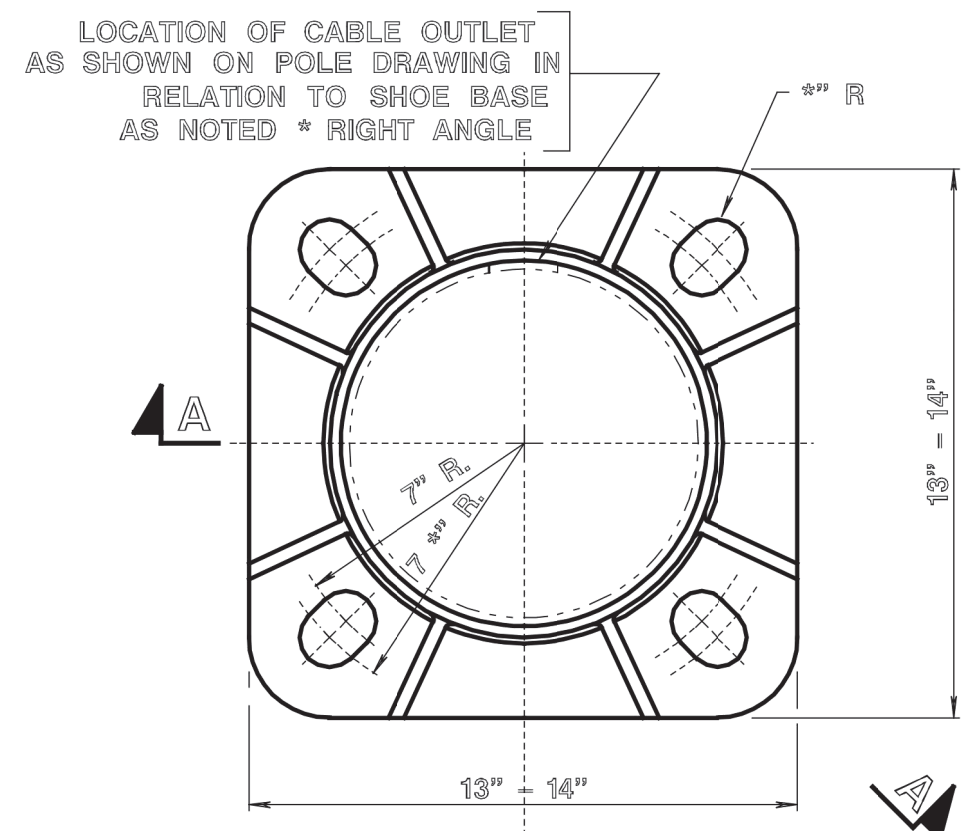
SAFETY CHAIN REQUIREMENTS FOR TWO OR MORE TRAFFIC SIGNALS
 FURNISH:
 42" OF # HOT DIPPED GALVANIZED OILPROOF STRAIGHT LINK CHAIN
 1 - # X 2" L.G. STAINLESS STEEL HEX HEAD BOLT FULLY THREADED
 2 - # STAINLESS STEEL HEX NUTS
 2 - # STAINLESS STEEL FLAT WASHERS
 1 - # STAINLESS STEEL LOCK WASHER
SAFETY CHAIN REQUIREMENTS FOR ONE TRAFFIC SIGNAL
 FURNISH:
 42" OF # HOT DIPPED GALVANIZED OILPROOF STRAIGHT LINK CHAIN
 2 - # X 2" L.G. STAINLESS STEEL HEX HEAD BOLT FULLY THREADED
 4 - # STAINLESS STEEL HEX NUTS
 4 - # STAINLESS STEEL FLAT WASHERS
 2 - # STAINLESS STEEL LOCK WASHER

NEW JERSEY DEPARTMENT OF TRANSPORTATION
 ELECTRICAL DETAILS
 N.T.S.
 TRAFFIC SIGNAL MAST ARM 15', 20' & 25'
 WITH CLAMP DETAIL FOR "K"
 T-0907

REFERENCE

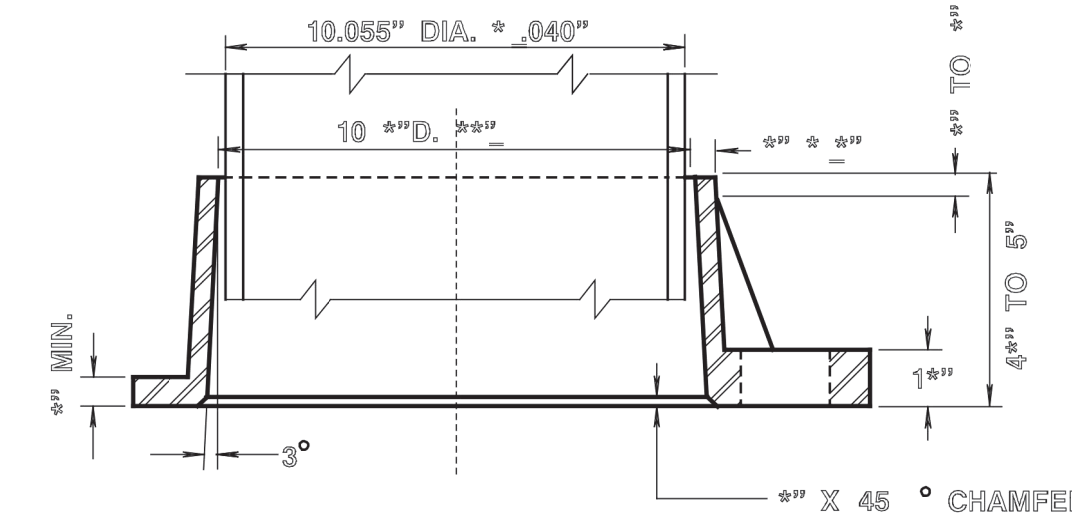
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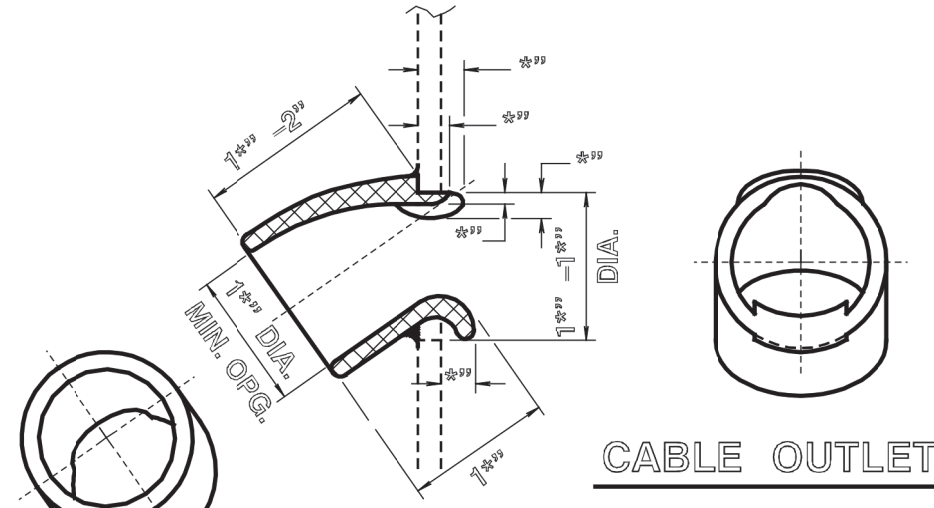


DETAIL 'A'
ALUMINUM SHOE BASE

ALUMINUM ALLOY 356-T6, ASTM SPEC. NO. SAND CAST B25 PERM. MOLD CST6 B108, ASTM ALLOY DESIG. S970A

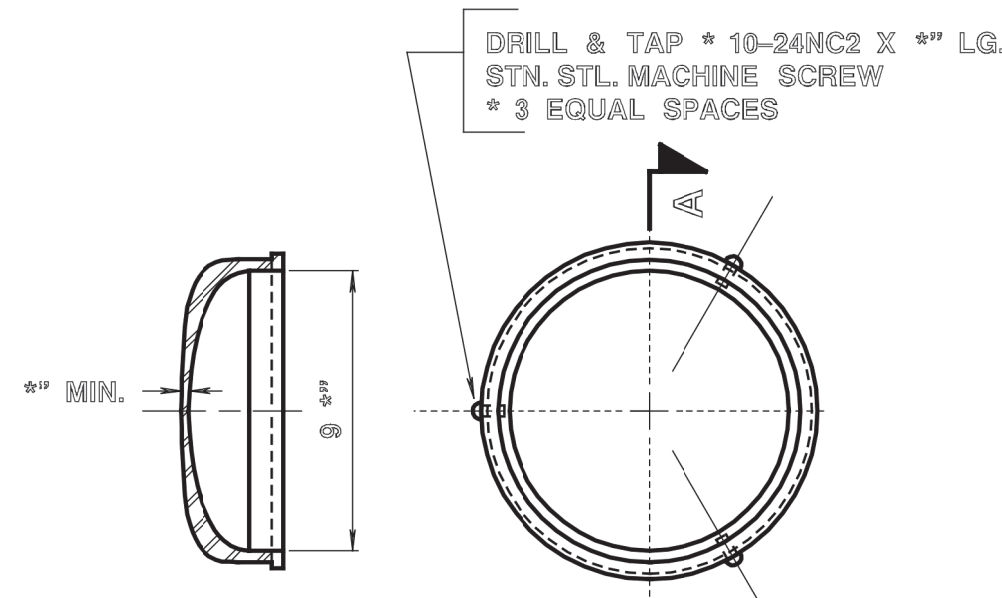


SECTION A-A



CABLE OUTLET

CAST ALUMINUM ALLOY
DETAIL 'B'



SECTION A-A
CAST ALUMINUM ALLOY

CAST ALUMINUM CAP

DETAIL 'C'

FURNISH WITH EACH POLE

1. 4-1" DIA. X 4" LONG HEX HD. BOLTS 8 THDS. PER INCH, CLASS 2 - FREE FT STAINLESS STEEL ASTM A193 GRADE B8
2. 4-1" DIA. PLAIN WASHERS, STAINLESS STEEL (2" O.D. X 1/4" THICK)
3. 4-1" DIA. LOCK WASHERS, STAINLESS STEEL (1/4" THICK)
4. 4-1" DIA. HEX NUTS, STAINLESS STEEL.
5. 4-BOLT COVERS, ALUMINUM ALLOY WITH GR. B8 STAINLESS STEEL SCREWS.
6. 4-1" DIA. PLAIN WASHERS, STAINLESS STEEL (2" O.D. X 1/4" THICK OR 2" O.D. X 1/4" THICK AS RECOMMENDED BY MANUFACTURER.)

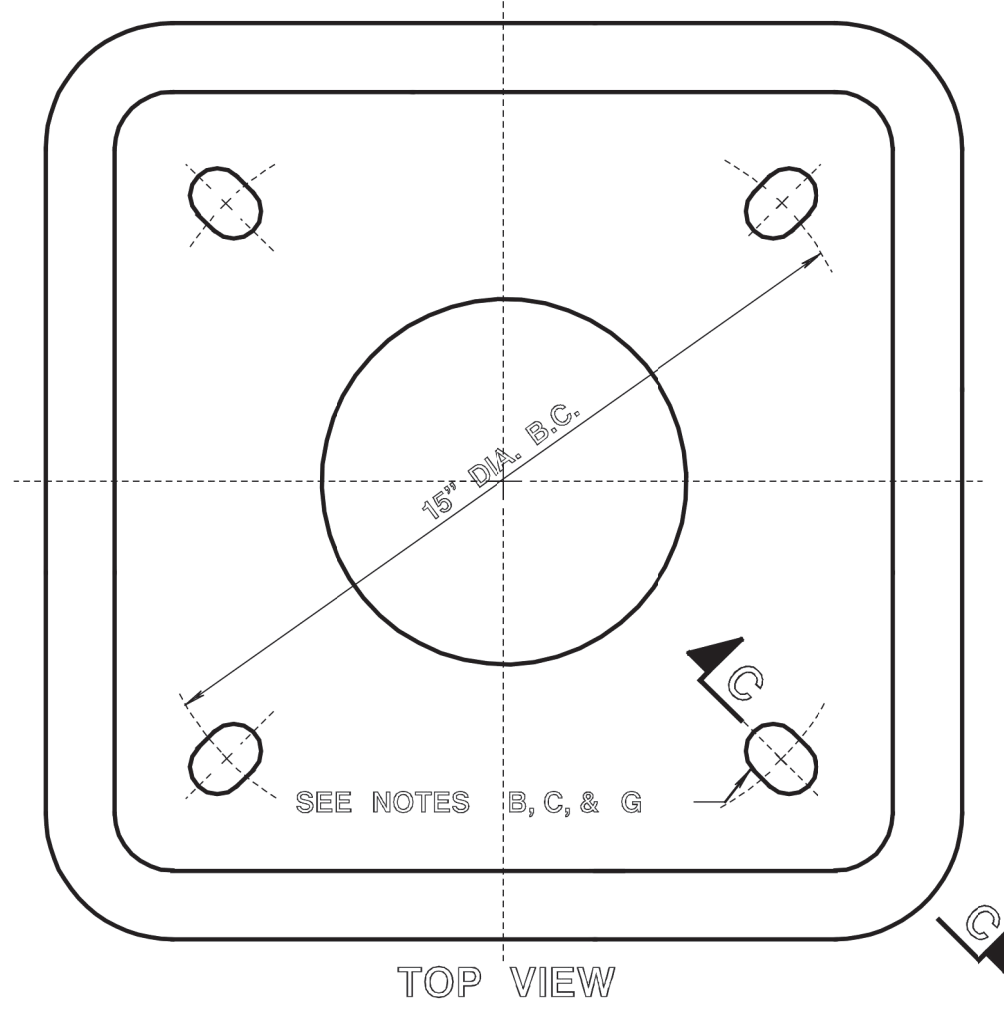
9" O.D.
CABLE OUTLET - SEE DETAIL "B"

NOTES

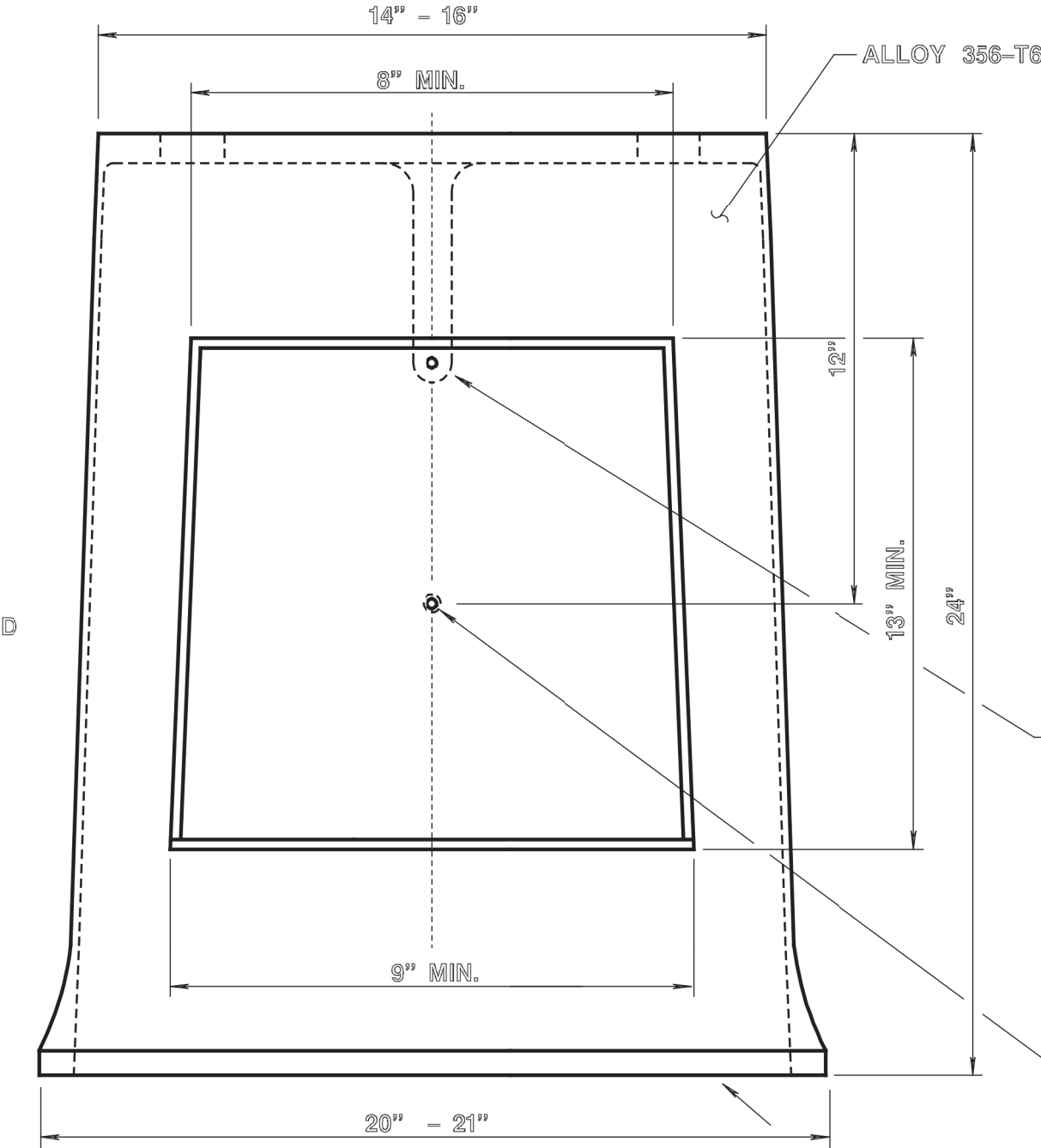
- A. SLOT SUFFICIENT SIZE TO ACCEPT 1" DIA. BOLTS ON A 22" DIA. BOLT CIRCLE.
- B. SLOT SUFFICIENT SIZE TO ACCEPT 1" DIA. BOLTS ON A 15" DIA. BOLT CIRCLE.
- C. THE MAXIMUM LENGTH OF SLOT SHALL BE SUCH THAT WHEN A 13" SQUARE SHOE BASE IS MOUNTED ON TOP OF THE TRANSFORMER BASE, THE SLOTS SHALL BE COMPLETELY COVERED BY SHOE BASE.
- D. THE MAXIMUM THICKNESS OF BASE ALLOWED WILL GUARANTEE A 1" MINIMUM INSERTION INTO PUMPROD COUPLING OF 3" LONG ANCHOR BOLT WITH LOCK WASHER AND FLAT WASHER INSTALLED, ASSUMING 1/4" SHIM.
- E. THE BASE SHALL BE DESIGNED SUCH THAT THERE IS A 1/4" MINIMUM CLEARANCE FROM THE 2" FLAT WASHER TO THE INNER SIDES.
- F. BASE SHALL MEET THE STRENGTH REQUIREMENTS NECESSARY TO SUPPORT THE MAXIMUM OVERTURNING MOMENT THAT A TYPE "K" STANDARD WILL SUPPORT.
- G. DESIGN THE BASE SUCH THAT A 2" OR 2 1/2" FLATWASHER AS SUPPLIED BY THE MANUFACTURER SHALL HAVE A CLEARANCE TO THE INNER SIDES.
- H. THE MANUFACTURER SUPPLIES ALL OTHER HARDWARE WHICH IT IS NECESSARY TO INSTALL THE BASE AS WELL AS INSTRUCTION FOR INSTALLATION.
- I. DIAGRAM IS FOR METHOD OF INSTALLATION.

NOTE:

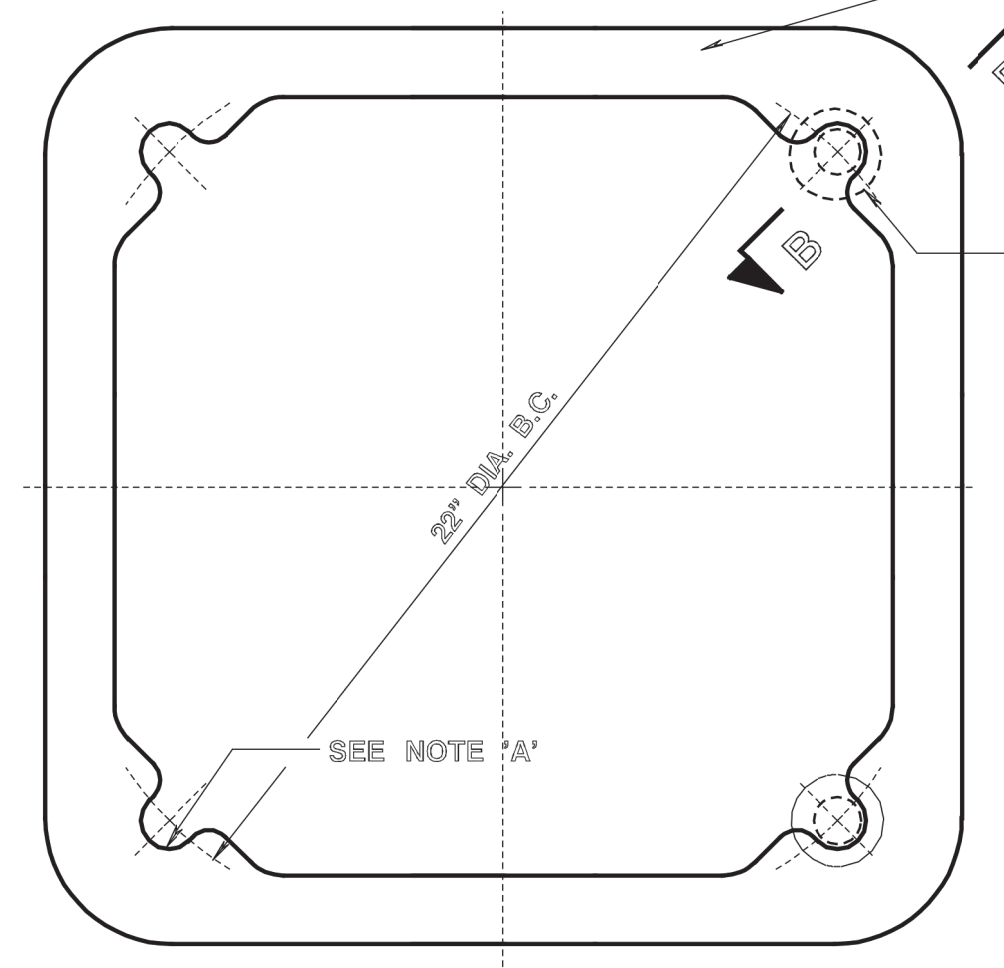
DESIGN AND MANUFACTURE ACCORDING TO THE 2001 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS. UTILIZE APPENDIX C OF THE SPECIFICATIONS FOR IDENTIFICATION OF LOADING CRITERIA. DESIGN WIND SPEED IS 80 MPH. DESIGN FOR FATIGUE IS WAIVED.



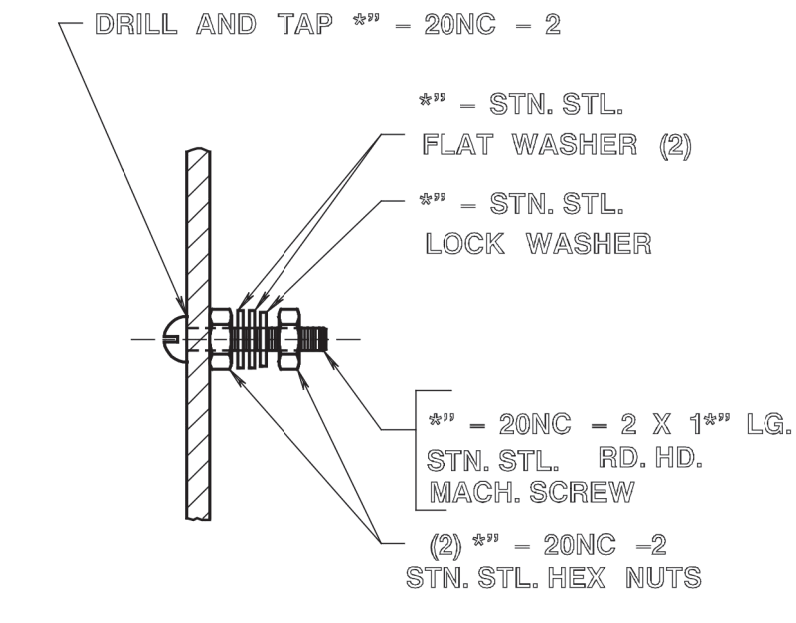
TOP VIEW



ELEVATION



BOTTOM VIEW
TRANSFORMER BASE - 'K'



DETAIL "D"

GROUND STUD DETAIL
OPPOSITE DOOR OPENING

- WALL OF TRANSFORMER BASE
- MOUNTING CLIP 1"X1"X1/4" 6061-T6 AL. ALLOY DRILLED AND TAPPED
- 1/2" - 20NC - 2 SOC. HD. MACH. SCREW 1" LG.
 - 1/2" - 20NC - 2 NUT
 - (2) 1/2" - FLAT WASHERS
 - 1/4" - LOCK WASHER
 - 1/2" - 20NC - 2 NUT

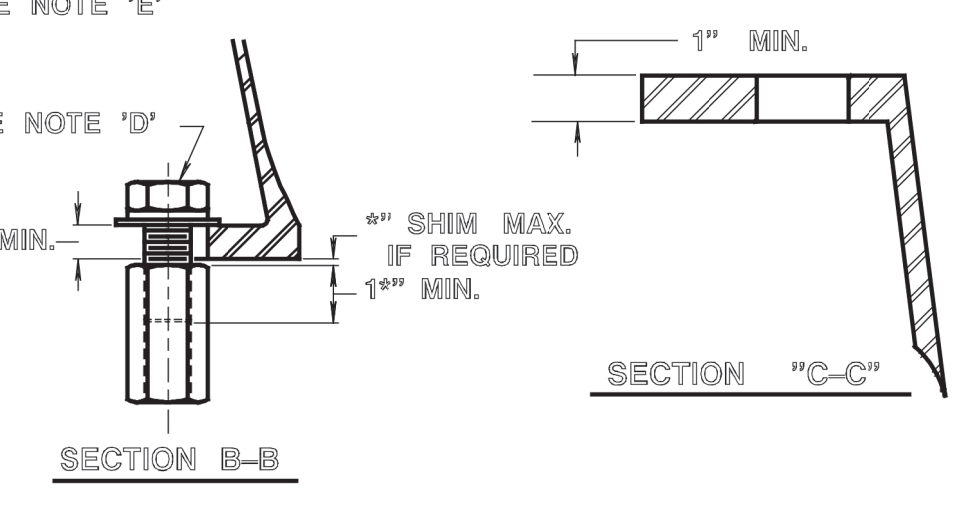
DETAIL "E"

ALTERNATE GROUND STUD DETAIL
OPPOSITE DOOR OPENING

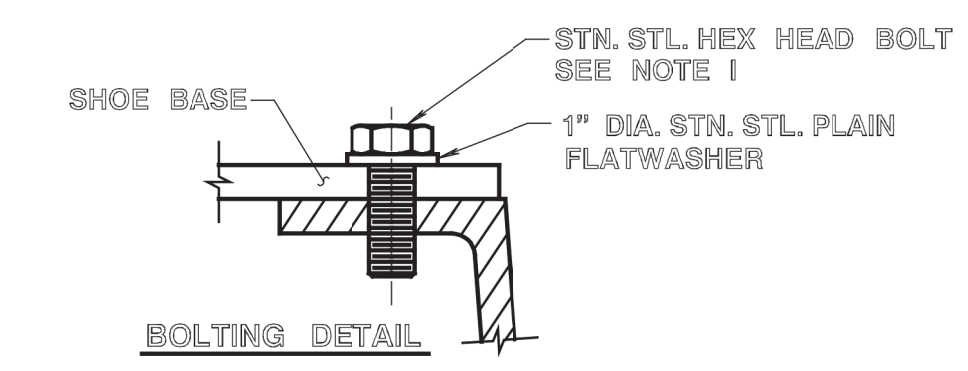
PROVIDE PLASTIC DOOR TYPE - ABS MODIFIED FOR UV RESISTANCE. STEEL GRAY COLOR, 1/4" THICK MIN. ATTACH DOOR TO BASE WITH AN APPROVED, VANDAL RESISTANT LOCKING DEVICE, USING STAINLESS STEEL HARDWARE.

DRILL AND TAP HOLE FOR 1/2" X 1" - 20 NC - 2 STAINLESS STEEL GROUND STUD OPPOSITE DOOR. (SEE DETAIL D OR ALTERNATE DETAIL E)

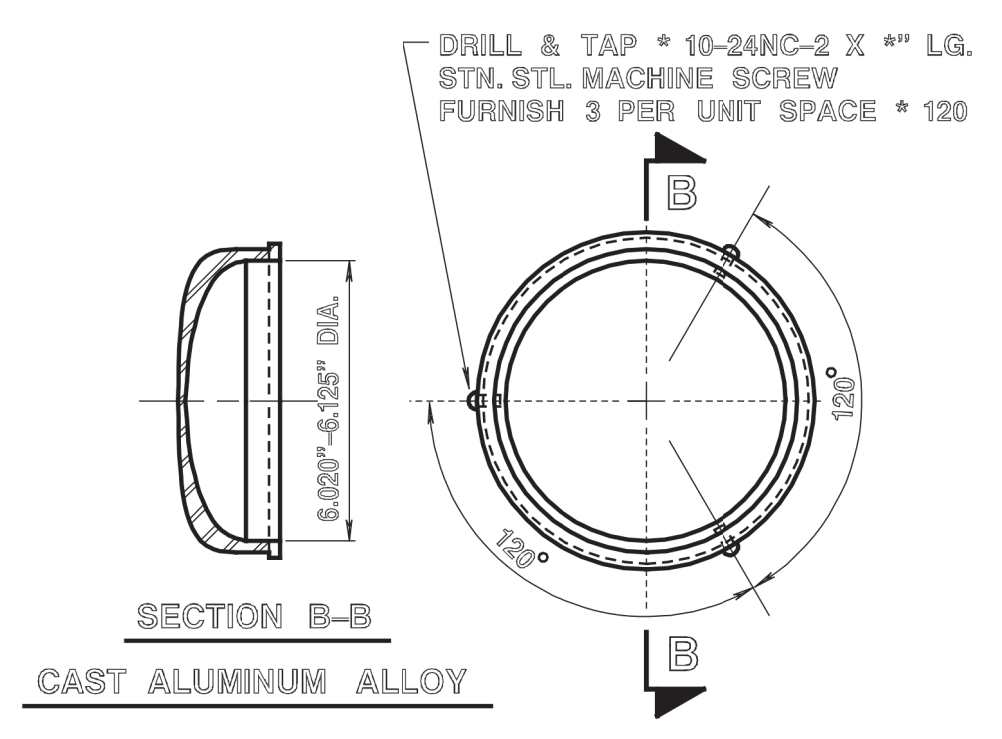
BOTTOM PAINTED WITH ONE COAT BITUMINOUS BASE PAINT.



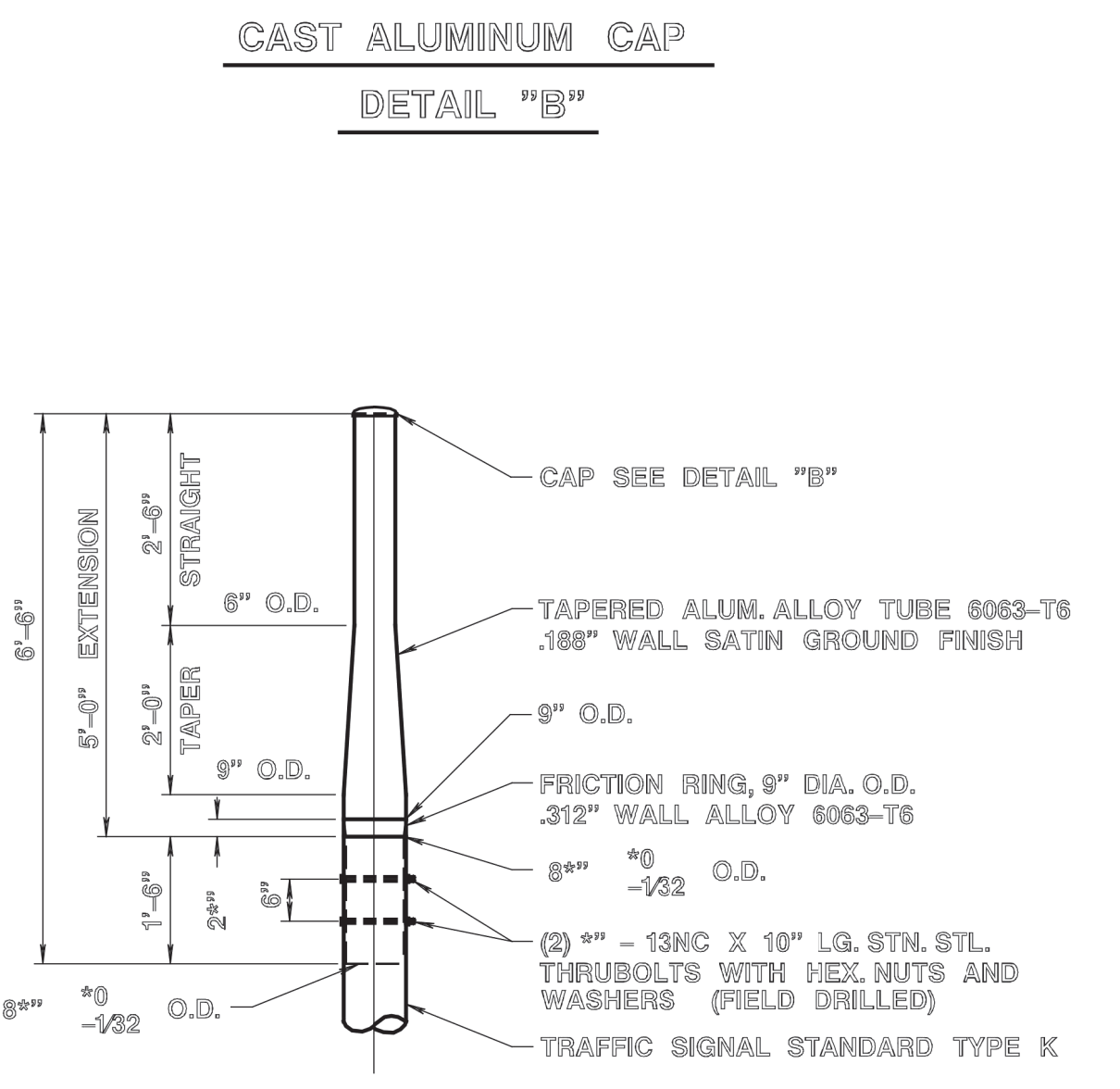
SECTION B-B



BOLTING DETAIL



SECTION B-B
CAST ALUMINUM ALLOY



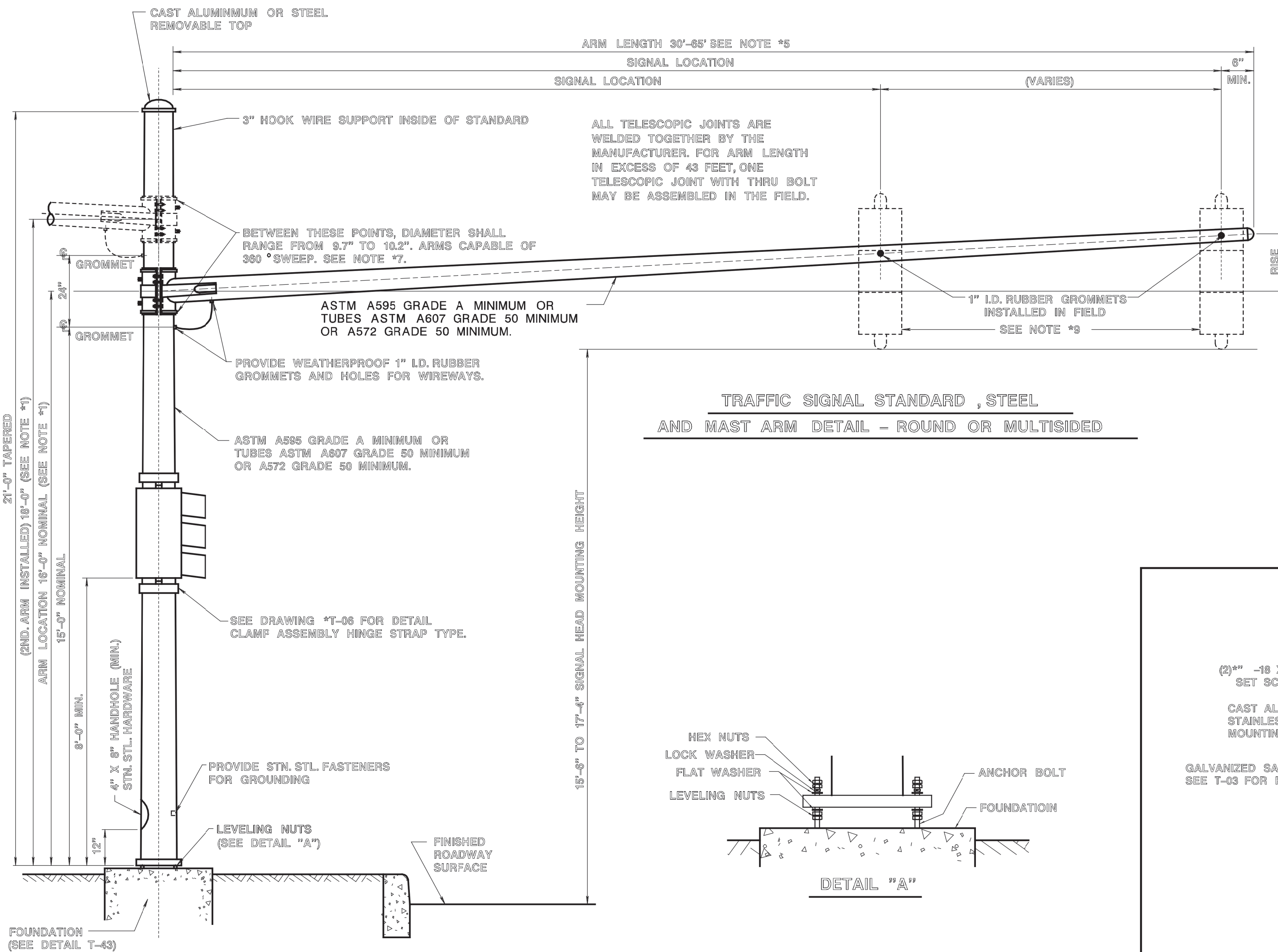
TRAFFIC SIGNAL EXTENSION "KE"

NOTE:

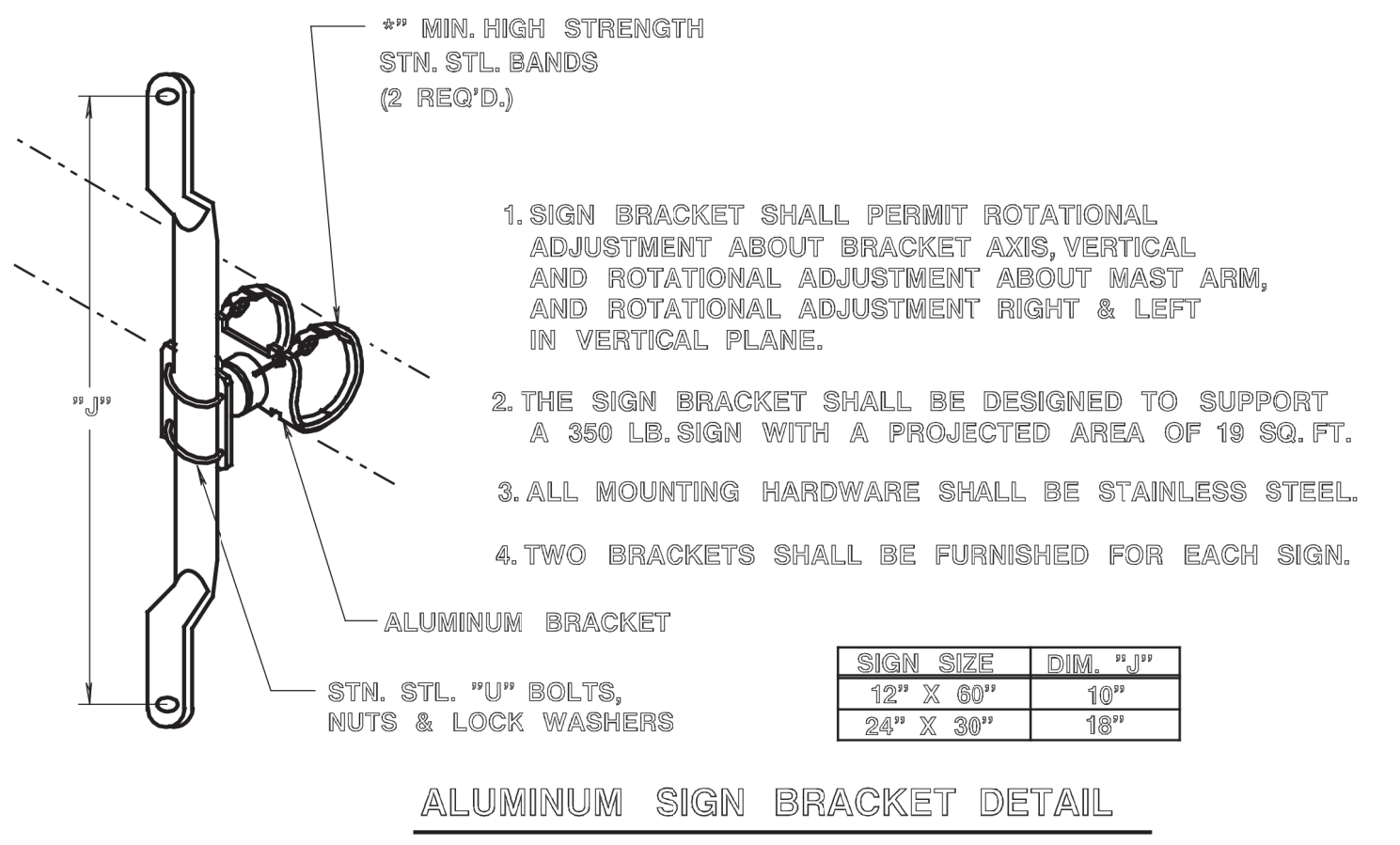
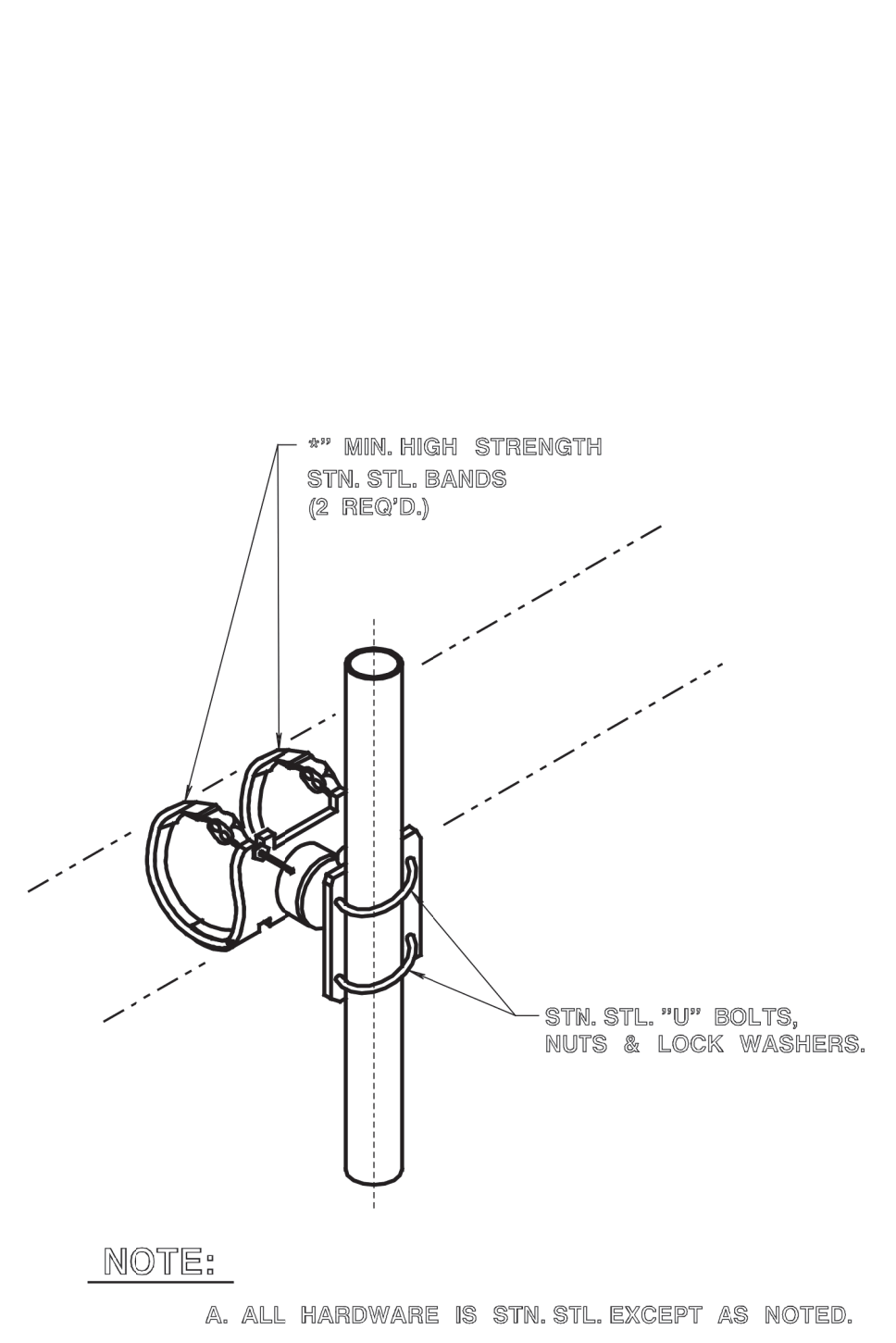
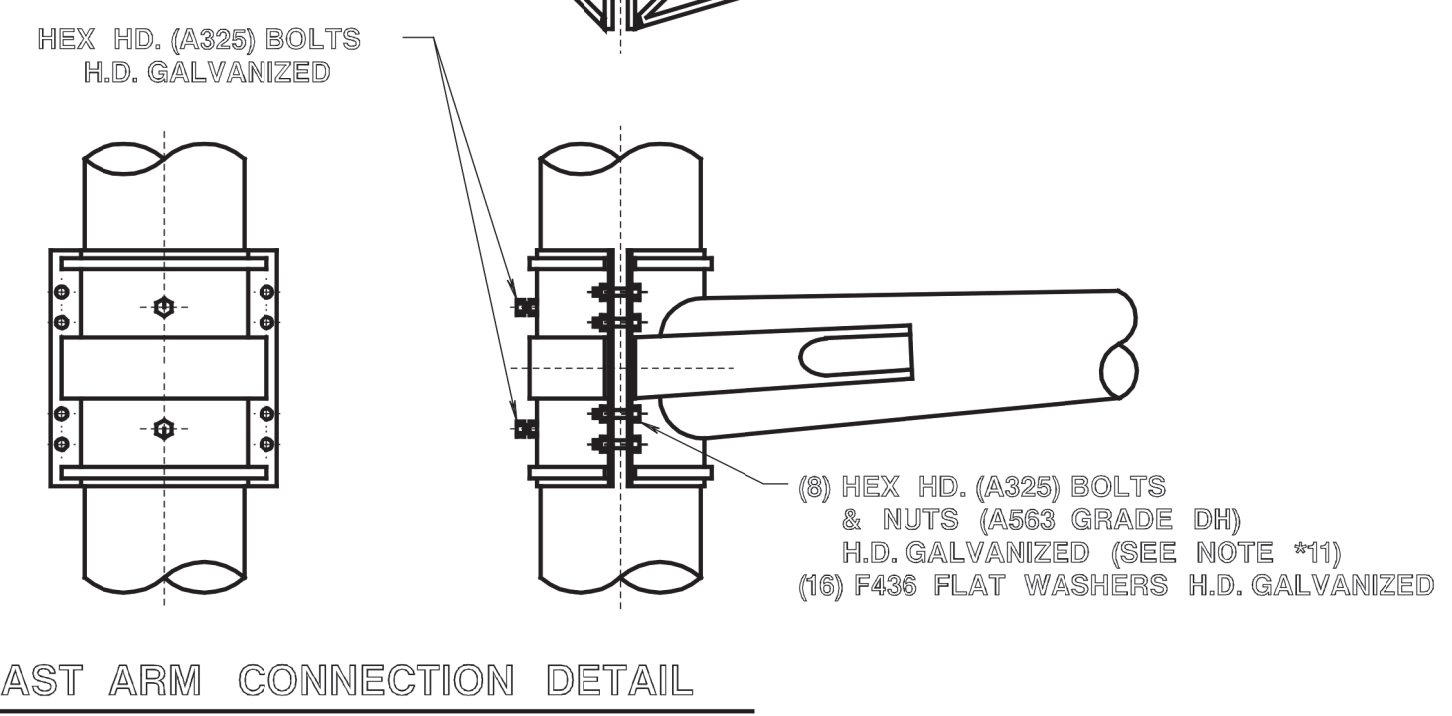
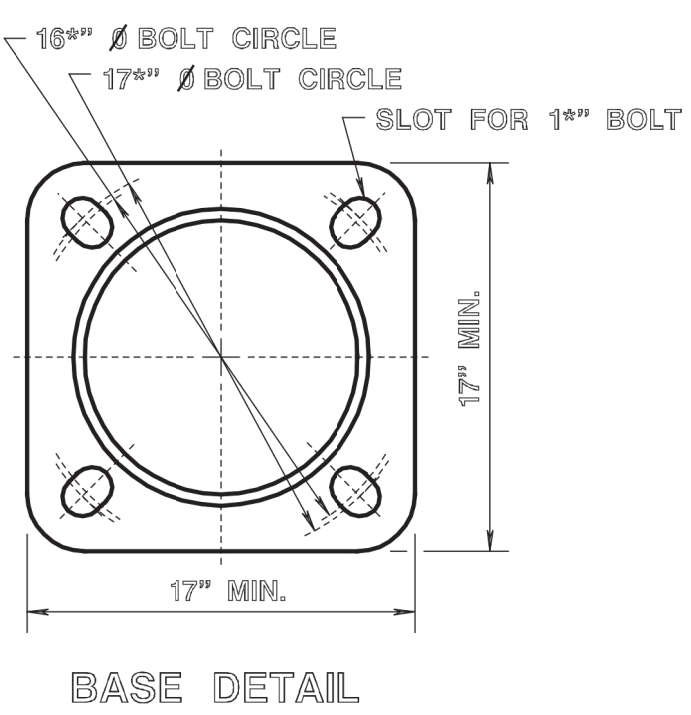
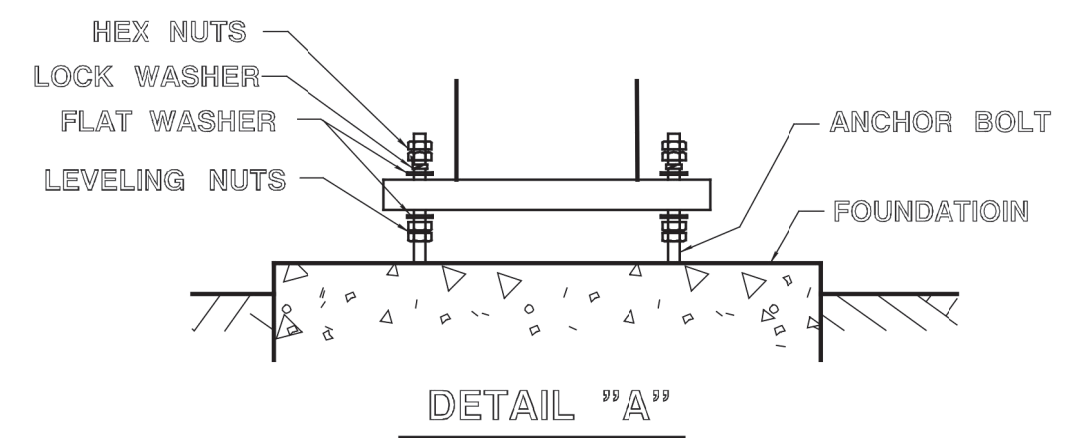
1. FURNISH WITH EACH STANDARD:
 - (1) FRICTION RING, 9" DIA. O.D. .312" WALL ALLOY 6063-T6
 - (1) CAP
 - (2) 1/2" - 13NC X 10" LG. STN. STL. THROUBOLTS WITH STN. STL. HEX NUTS AND STN. STL. WASHERS
2. FURNISHED CERTIFICATIONS THAT ALUMINUM ALLOY AND TEMPER SHOWN MEET REQUIREMENTS AS SET FORTH BELOW OR AS OTHERWISE INDICATED ON DRAWING.
3. DO NOT INSTALL STANDARD WITHOUT ARM.

NEW JERSEY DEPARTMENT OF TRANSPORTATION
ELECTRICAL DETAILS
N.T.S.
TRAFFIC SIGNAL STANDARD "K"
TRANSFORMER BASE
& TRAFFIC SIGNAL EXTENSION "KE"

T-1007



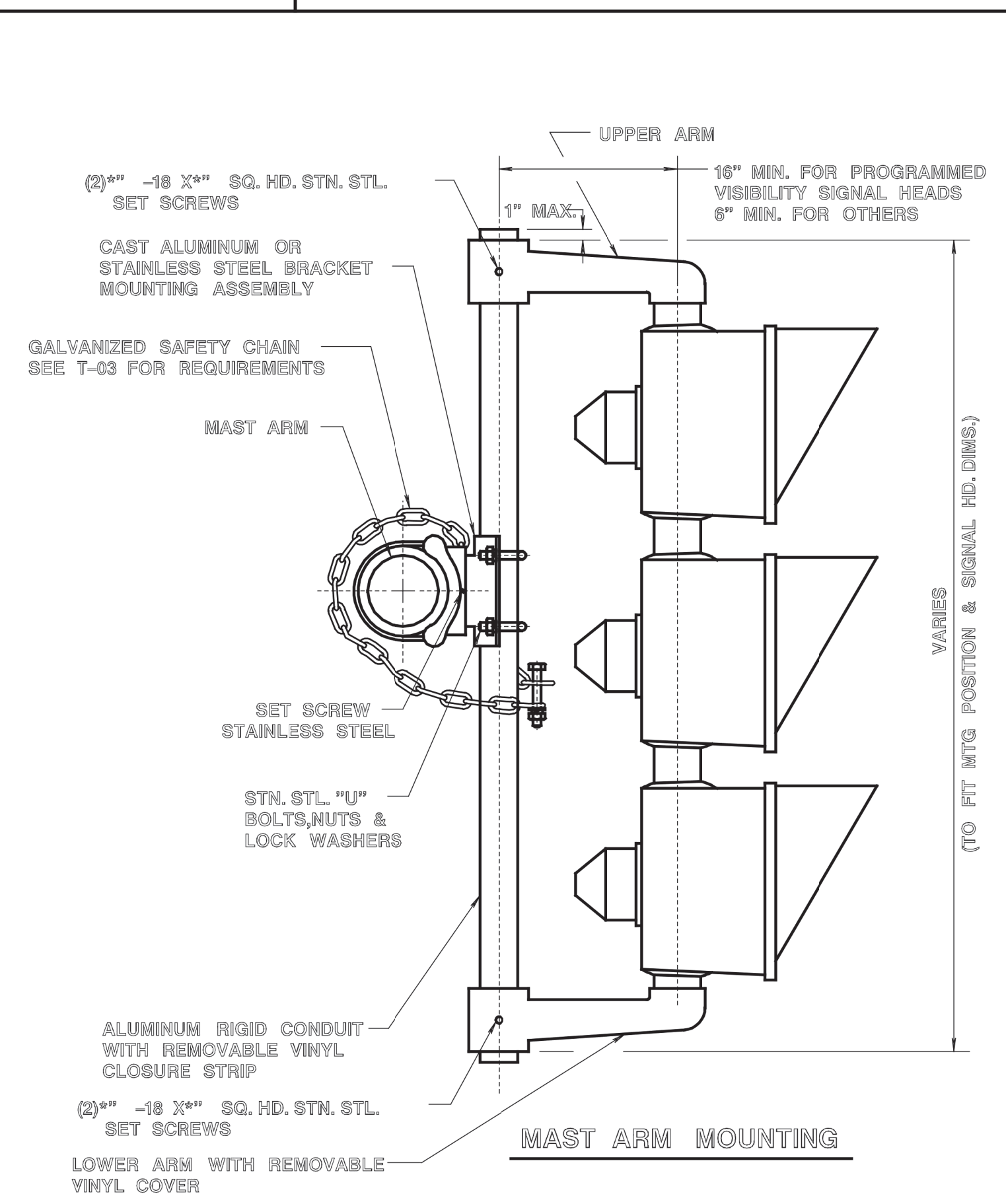
**TRAFFIC SIGNAL STANDARD, STEEL
AND MAST ARM DETAIL - ROUND OR MULTISIDED**



SIGN SIZE	DIM. "U"
12" X 60"	10"
24" X 36"	18"

ALUMINUM SIGN BRACKET DETAIL

NOTE:
A. ALL HARDWARE IS STN. STL. EXCEPT AS NOTED.



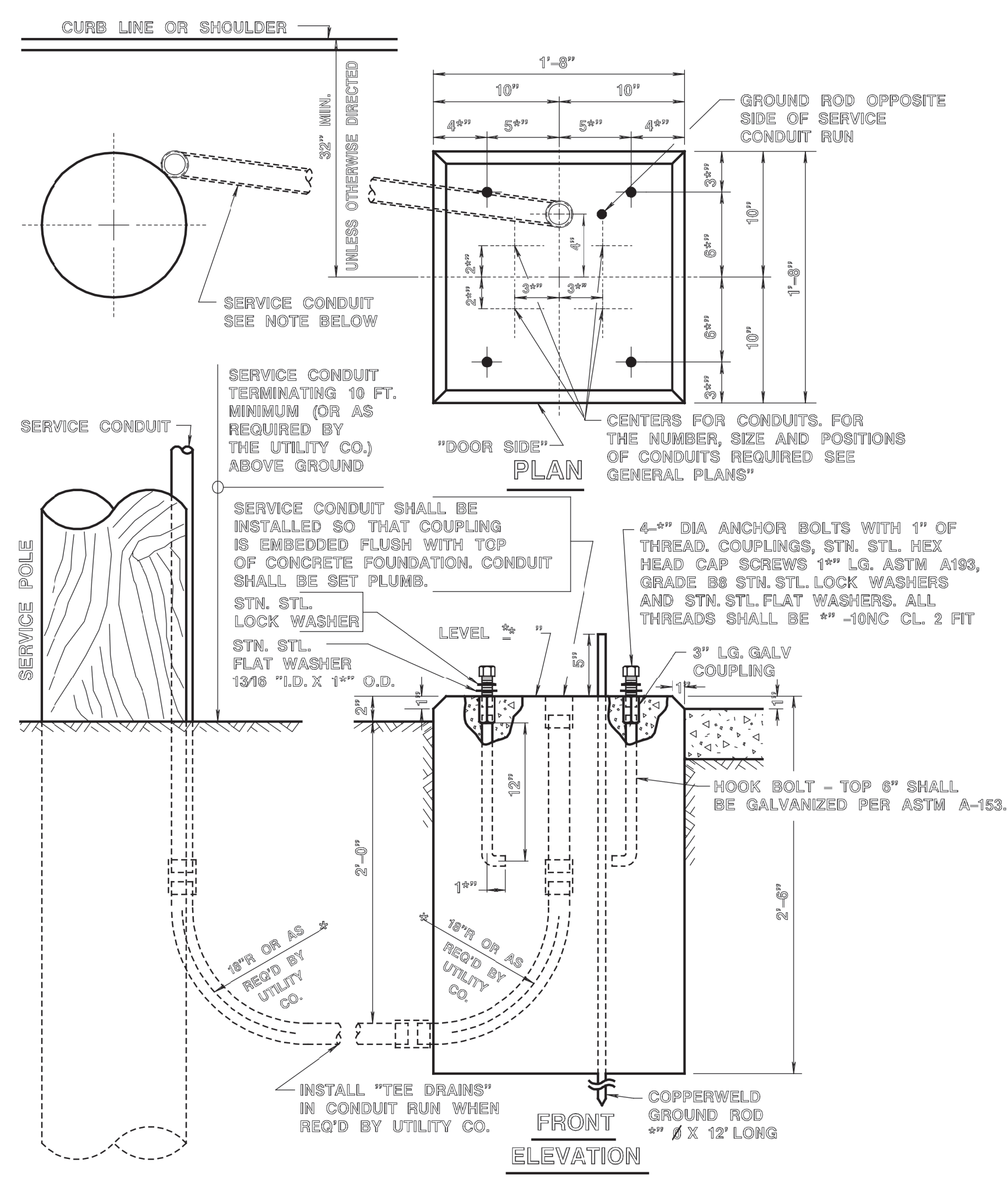
VARIES (TO FIT WTG POSITION & SIGNAL HD. DIMS.)

MAST ARM MOUNTING

NOTES:

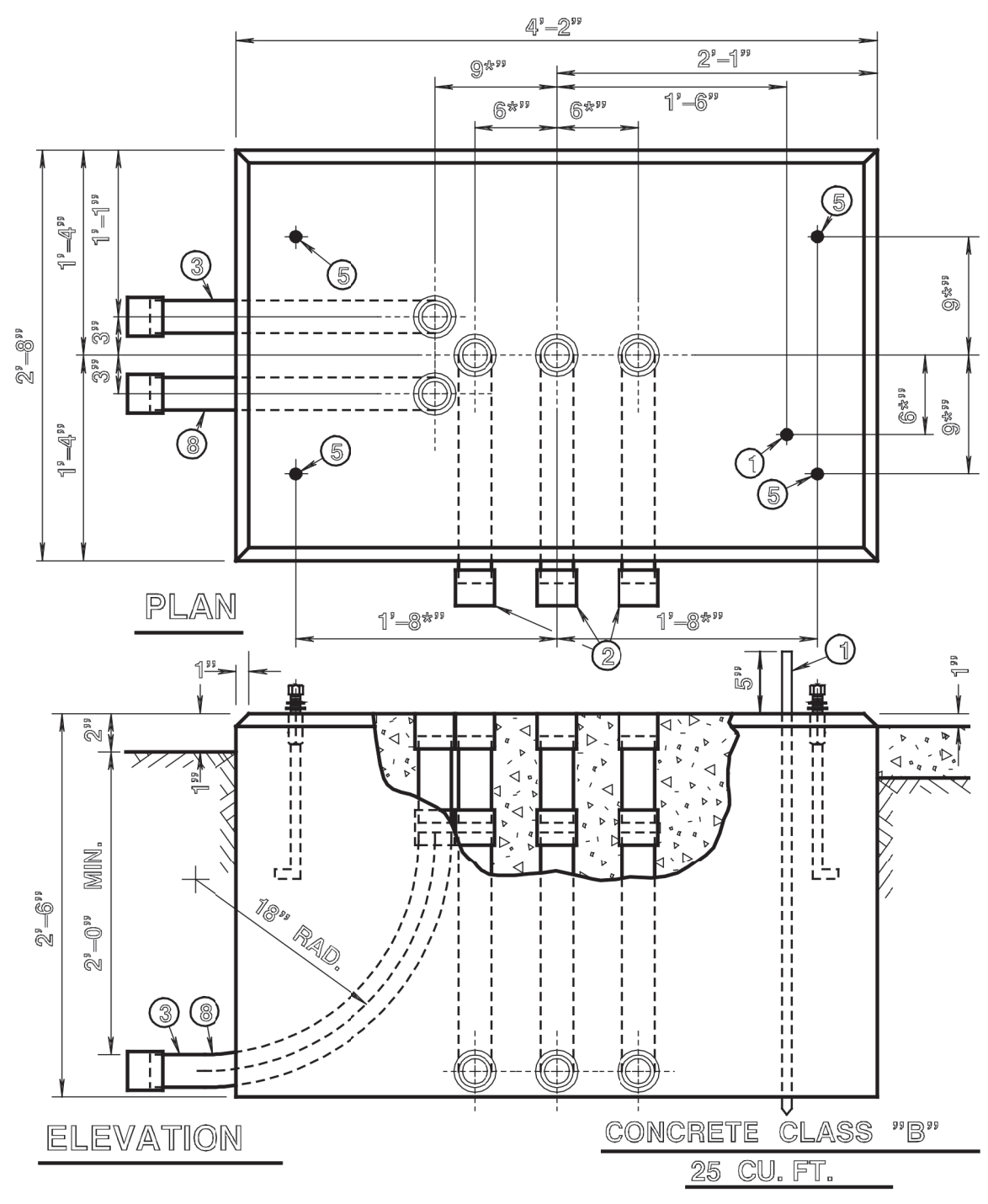
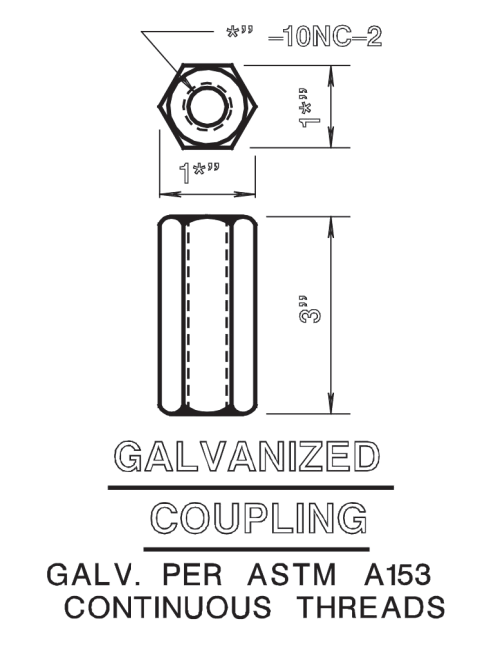
- STANDARD AND MAST ARMS ARE HOT DIPPED GALVANIZED STEEL. FINISH IN ACCORDANCE WITH SPECIFICATIONS ASTM A123.
- DESIGN AND MANUFACTURE ACCORDING TO THE 2001 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS. UTILIZE APPENDIX C OF THE SPECIFICATIONS FOR IDENTIFICATION OF LOADING CRITERIA. DESIGN WIND SPEED IS 80 MPH. DESIGN FOR FATIGUE IS WAVED FOR STEEL MAST ARMS 50 FEET AND SMALLER.
- MAST ARMS WILL SUPPORT THE FOLLOWING (MAXIMUM LOADING):
 -FIXED SIGNALS BACK-TO-BACK AT THE END OF ARM, TOTAL WT. * 100 LBS., PROJ. AREA * 8.4 S.F.
 -FIXED SIGNALS BACK-TO-BACK AT A MINIMUM DISTANCE OF 1/3 THE ARM LENGTH FROM THE END, TOTAL WT. * 100 LBS., PROJ. AREA * 8.4 S.F.
 -FIXED SIGN (MAX. DEPTH * 2.0 FT.) MIDWAY BETWEEN SIGNALS, WT. * 70 LBS., PROJ. AREA * 12 S.F.
- STANDARD WILL SUPPORT TWO MAST ARMS, ONE 45 FT. AND ONE 30 FT. IN LENGTH (MAX.) WITH THE ABOVE LOADING ON EACH ARM AND A MINIMUM ARM SEPARATION ANGLE OF 45°, OR ONE ARM WITH A MAXIMUM LENGTH OF 65' WITH THE ABOVE LOADING.
- SIZE OF MAST ARM SUPPLIED NOTED ON PLAN SHEET OR BID PROPOSAL.
- STANDARD AND MAST ARMS MUST BE ROUND OR MULTISIDED. (MINIMUM 8 SIDED).
- CLAMP FOR ALL MAST ARMS CAPABLE OF ACCOMMODATING VARIOUS POLE DIAMETERS (8.7" TO 10.2") WITHOUT AFFECTING LOAD CHARACTERISTICS OF ASSEMBLED UNIT. ALL CLAMPS DESIGNED FOR ATTACHMENT TO ROUND OR MULTISIDED POLES. CLAMP CAPABLE OF ROTATIONAL ADJUSTMENT RIGHT AND LEFT FROM VERTICAL PLANE AND 360° ROTATIONAL ADJUSTMENT ABOUT MAST ARMS.
- THE ARM LOCATION SHALL BE DETERMINED IN THE FIELD TO PROVIDE A ROADWAY CLEARANCE OF 15'-6" MIN. TO 17'-4" MAX. TO ALL INDICATIONS. THE DEPARTMENT WILL DETERMINE WHICH ARM MOUNTED AT THE TOP POSITION TO PROVIDE THE PROPER CLEARANCE.
- ALL INDICATIONS SET PLUMB AND AT THE SAME ELEVATION.
- SUPPLY CERTIFICATION BY A LICENSED PROFESSIONAL ENGINEER WHICH INCLUDES DESIGN CALCULATIONS THAT THE STANDARD AND MAST ARM DESIGN MEETS ALL SPECIFIED LOADING REQUIREMENTS.
- ALL HEX NUTS, A563 GRADE DH, INSTALLED BY "TURN OF THE NUT METHOD", SEAT NUT, THEN TORQUE MINIMUM *TURN.
- SUPPLY ANCHOR BOLTS, LOCK WASHERS, FLAT WASHERS, NUTS, AND LEVELING NUTS WITH EACH POLE. LEVELING NUTS ARE ASTM A307.
- DO NOT INSTALL STANDARD WITHOUT ARM.

NEW JERSEY DEPARTMENT OF TRANSPORTATION
ELECTRICAL DETAILS
N.T.S.
TRAFFIC SIGNAL POLE STANDARD, STEEL
AND MAST ARM DETAILS

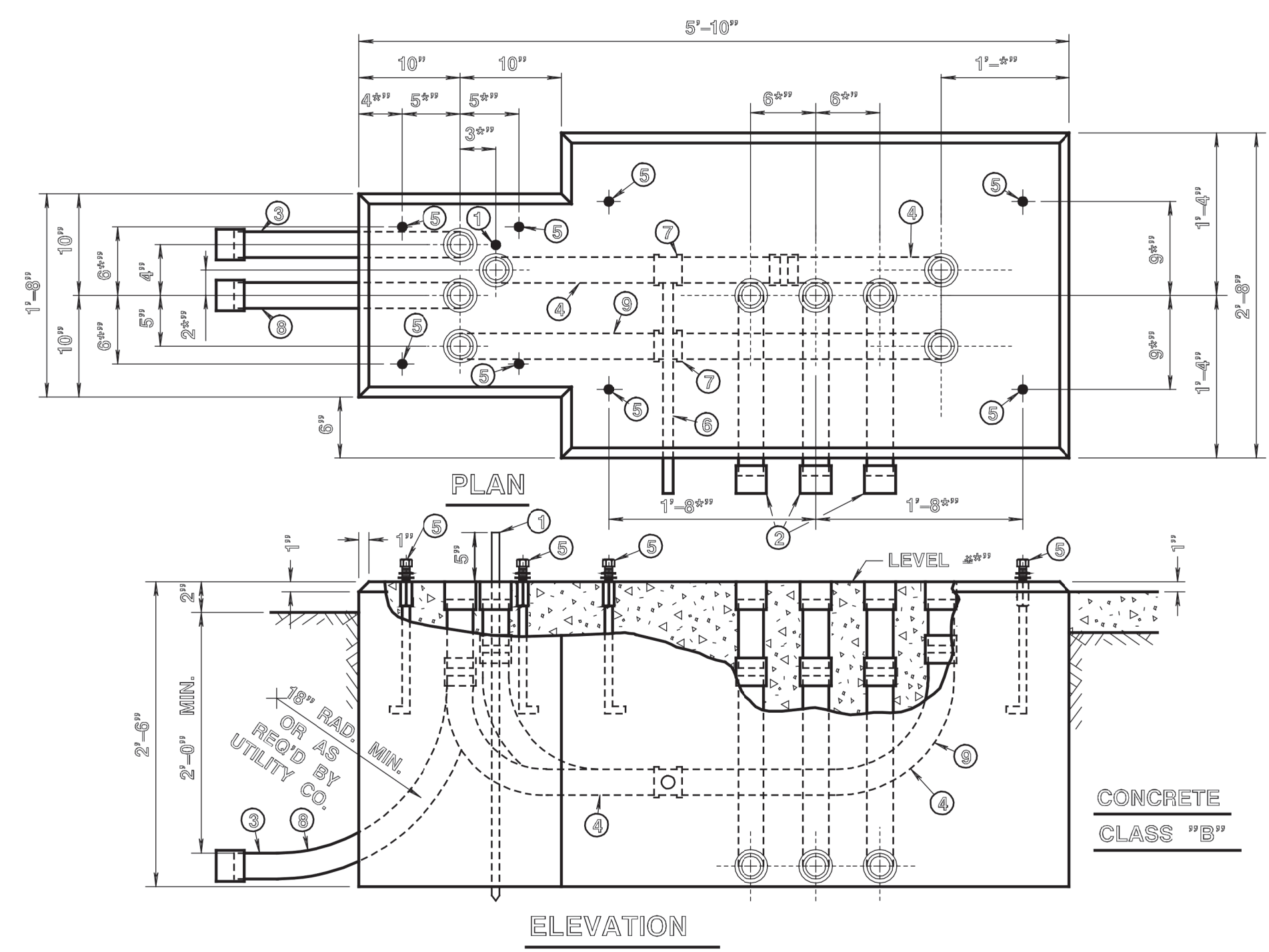


CONCRETE CLASS "B"
7 CU. FT.

FOUNDATION TYPE "MCF"



FOUNDATION TYPE "P"



FOUNDATION TYPE "P-MC"

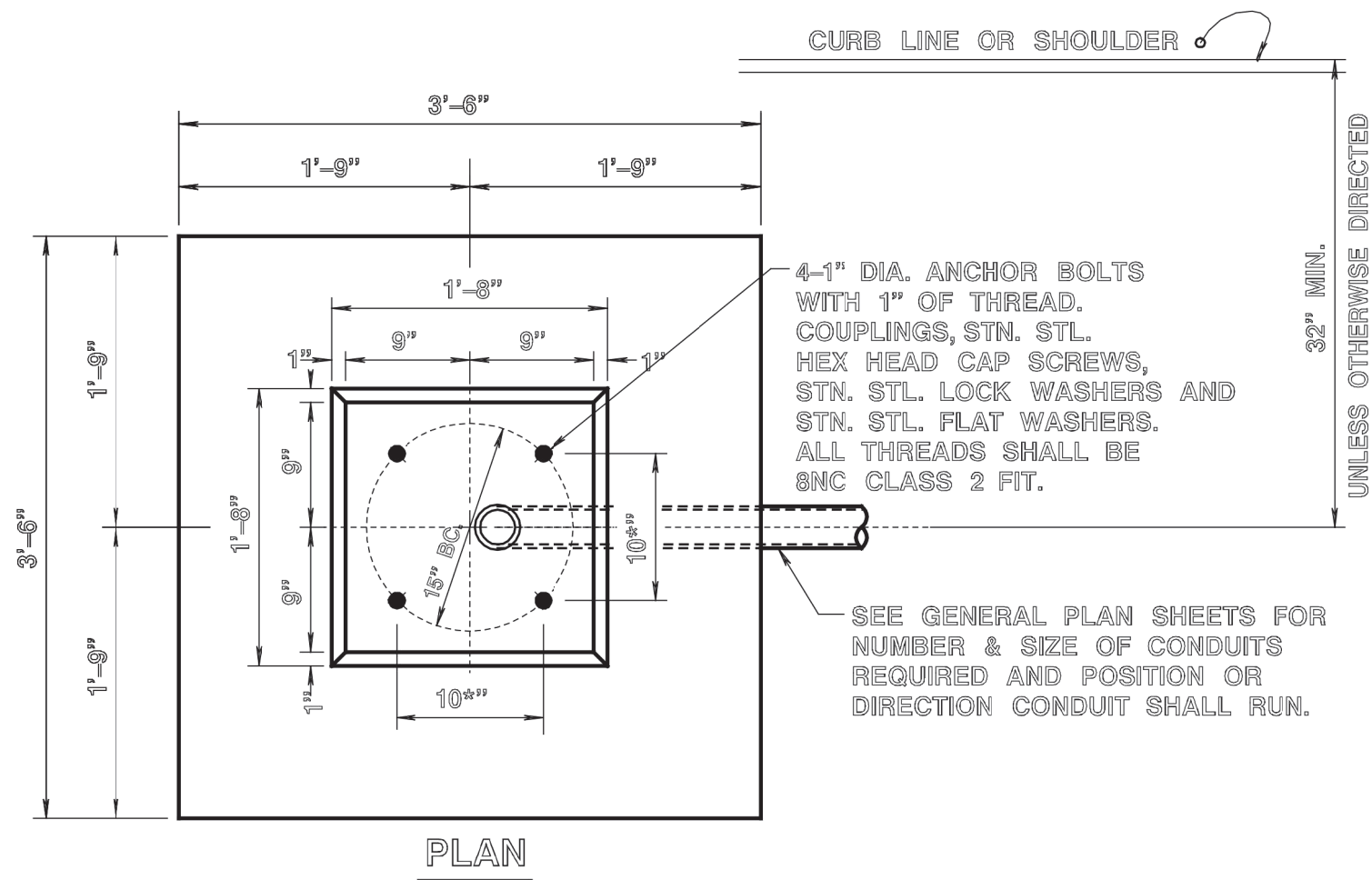
- ITEM**
- ① #4 X 12' L.G. GROUND ROD.
 - ② 3" DIA. RIGID METALLIC CONDUIT. (ALL SHALL EXTEND TO JUNCTION BOX)
 - ③ RIGID METALLIC CONDUIT (SERVICE CONDUIT). SEE GENERAL PLAN FOR DIRECTION AND SIZE
 - ④ 2" DIA. RIGID METALLIC CONDUIT (SERVICE CONDUIT)
 - ⑤ #4 DIA. ANCHOR BOLTS (SEE "SP" FOUNDATION FOR DETAILS)
 - ⑥ DRAIN 1" DIA. RIGID METALLIC CONDUIT (PITCH TO JUNCTION BOX).
 - ⑦ 2" X 2" X 1" GALV. TEE FITTING.
 - ⑧ RIGID METALLIC CONDUIT (INTERCONNECT CONDUIT). SEE GENERAL PLAN FOR DIRECTION AND SIZE IF NOT SPECIFIED 2" DIA. RMC SHALL BE INSTALLED.
 - ⑨ 2" DIA. RIGID METALLIC CONDUIT (INTERCONNECT CONDUIT)

- NOTES:**
1. ALL CONDUIT SHALL BE INSTALLED SO THAT COUPLINGS ARE EMBEDDED PLUMB AND FLUSH WITH TOP OF CONCRETE FOUNDATION.
 2. J-BOLT MUST BE INSERTED 1" INTO 3" COUPLING
 3. ALL FOUNDATIONS SHALL BE POURED MONOLITHIC

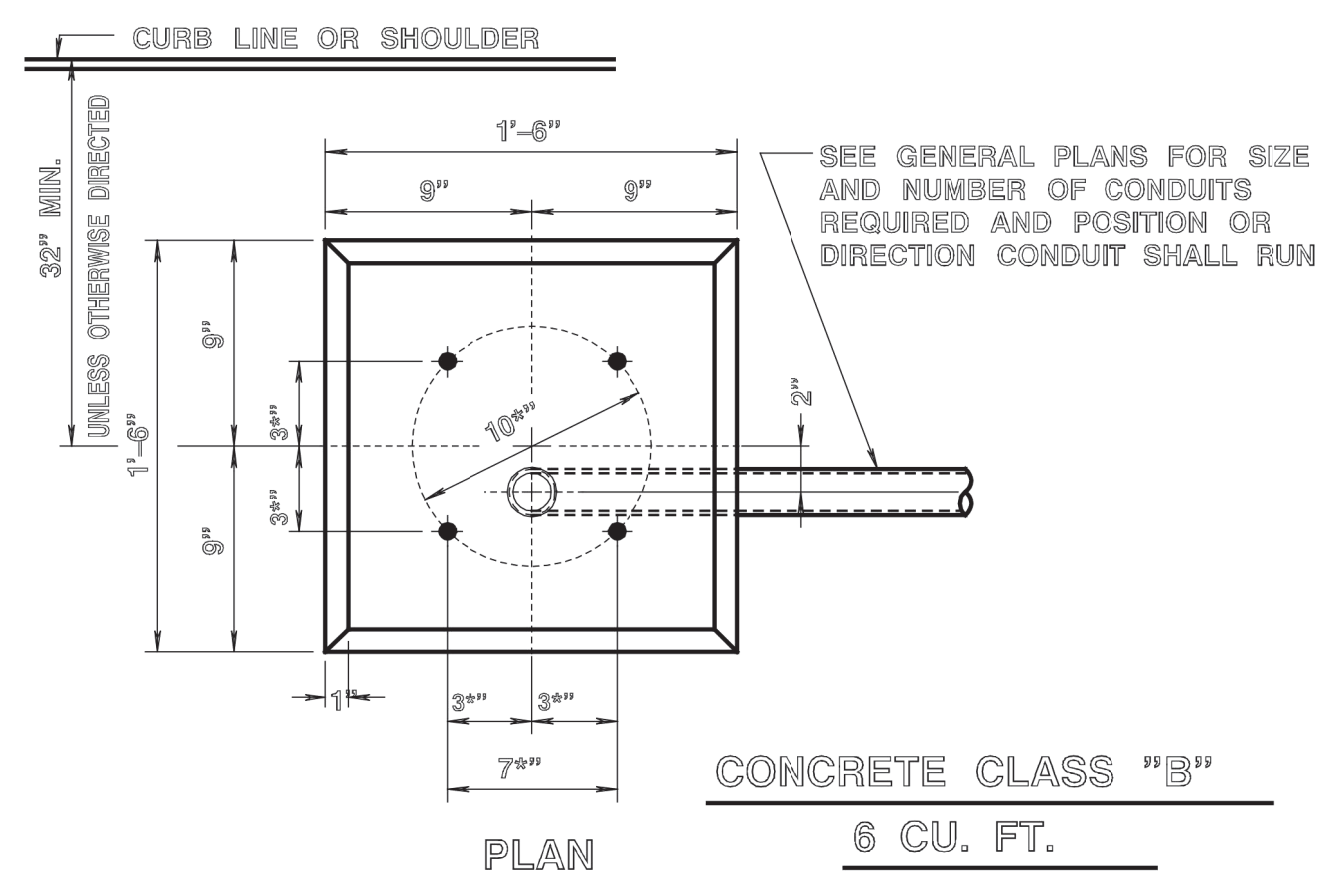
NEW JERSEY DEPARTMENT OF TRANSPORTATION

ELECTRICAL DETAILS
N.T.S.

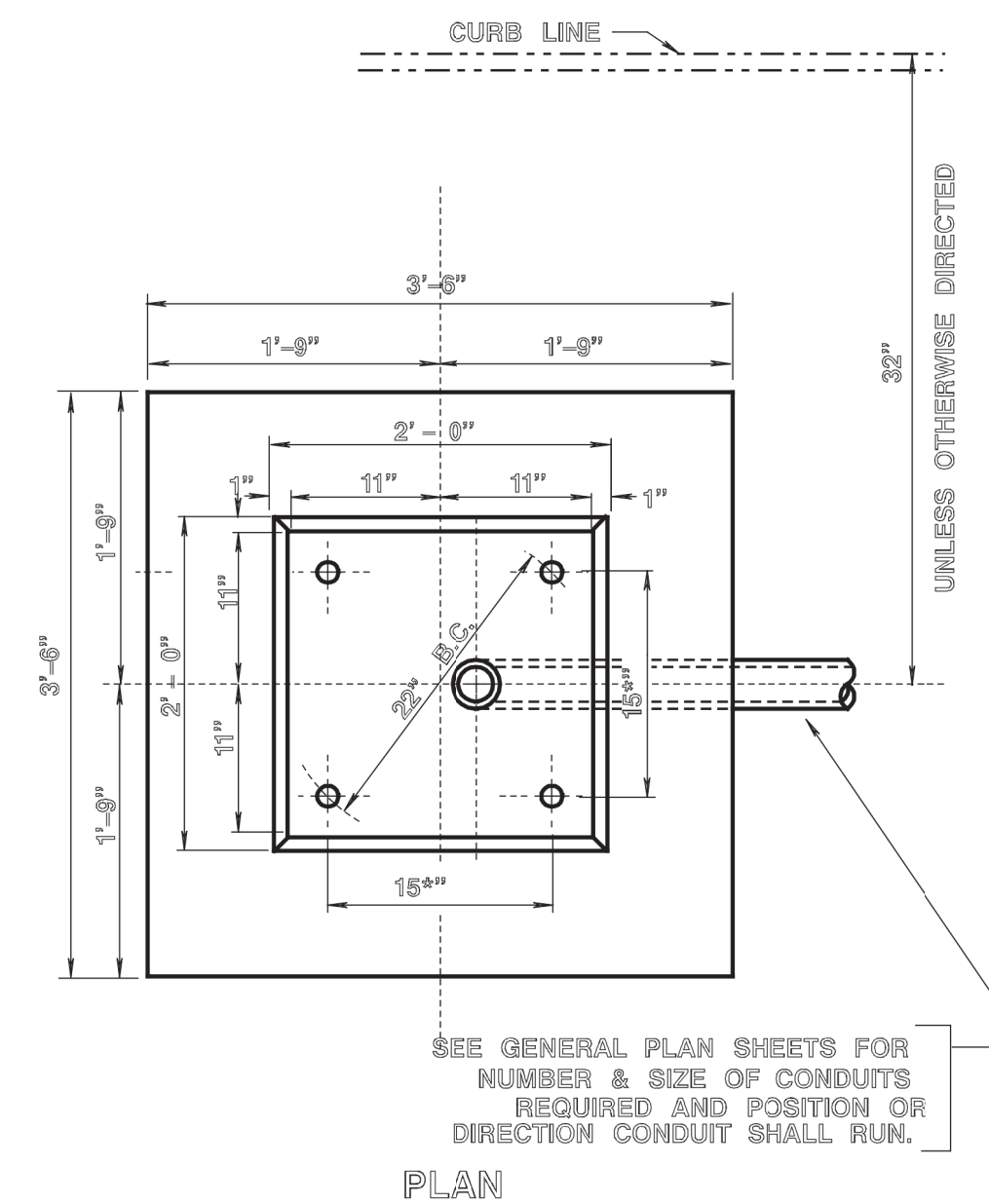
TYPICAL DETAILS FOR FOUNDATION
MCF, P & P-MC



CONCRETE CLASS "B"
1.5 CU. YDS.
FOUNDATION SHALL BE POURED
MONOLITHIC

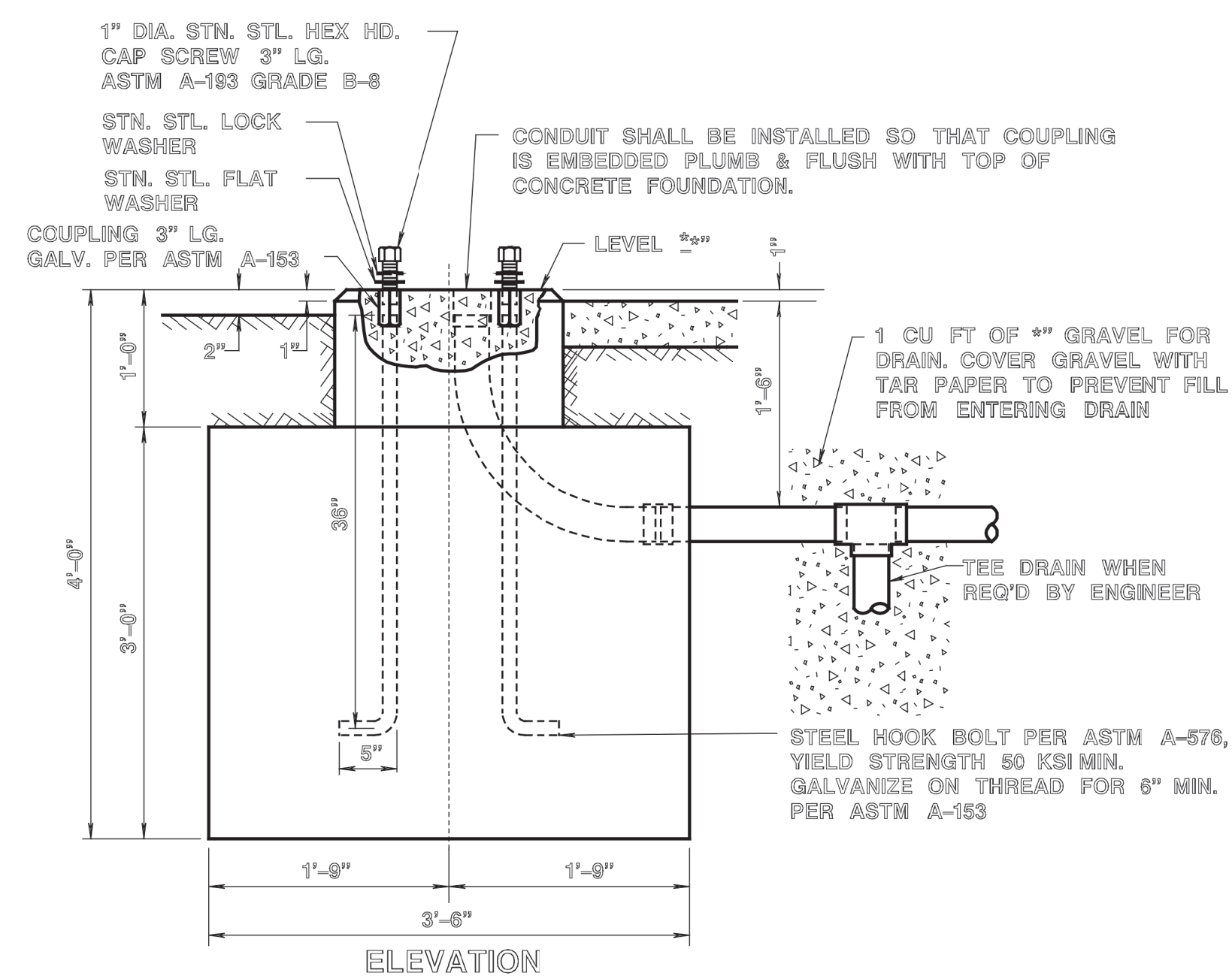


CONCRETE CLASS "B"
6 CU. FT.

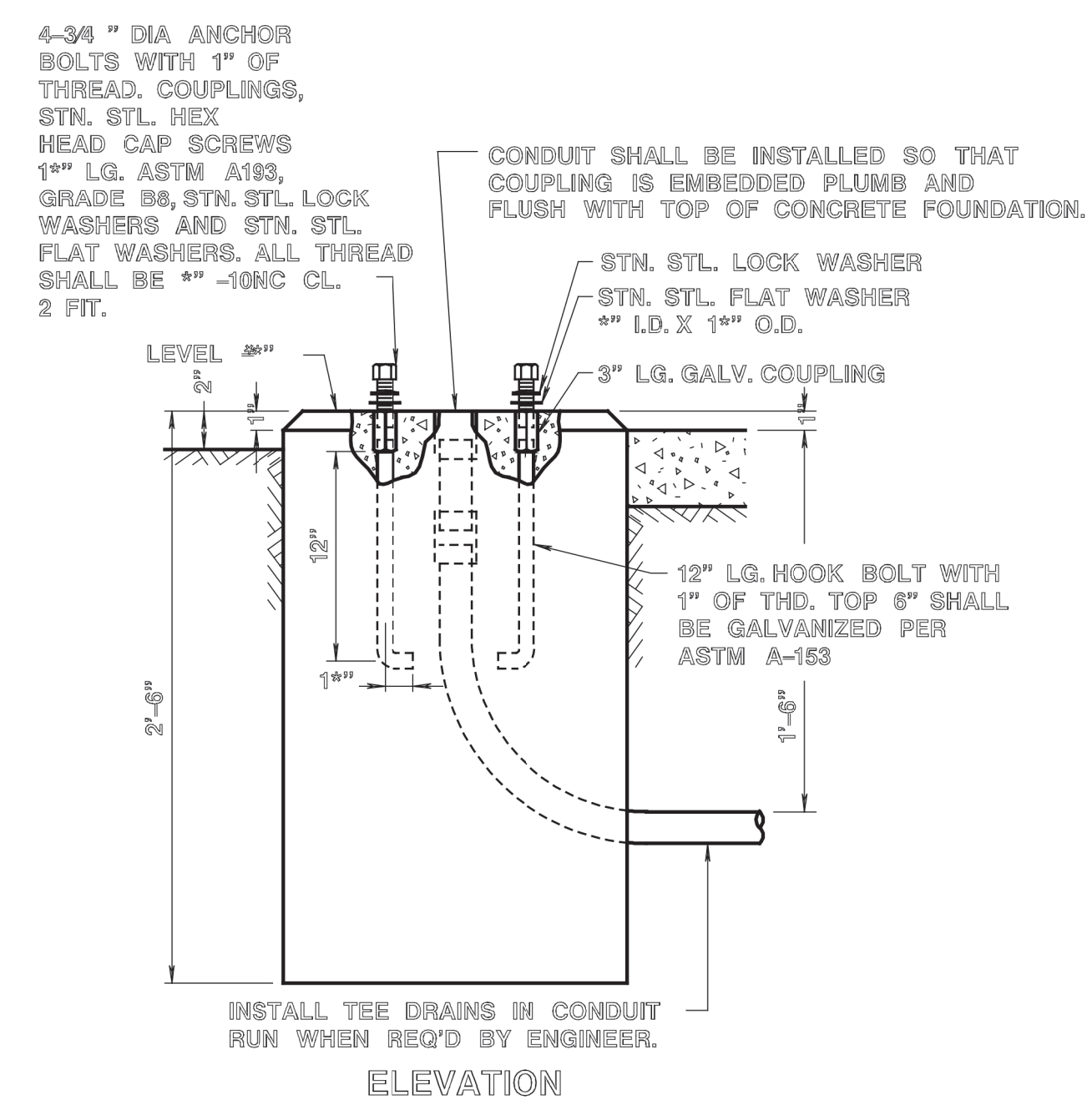


CONDUIT SHALL BE INSTALLED SO THAT COUPLING IS EMBEDDED PLUMB AND FLUSH WITH TOP OF CONCRETE FOUNDATION.

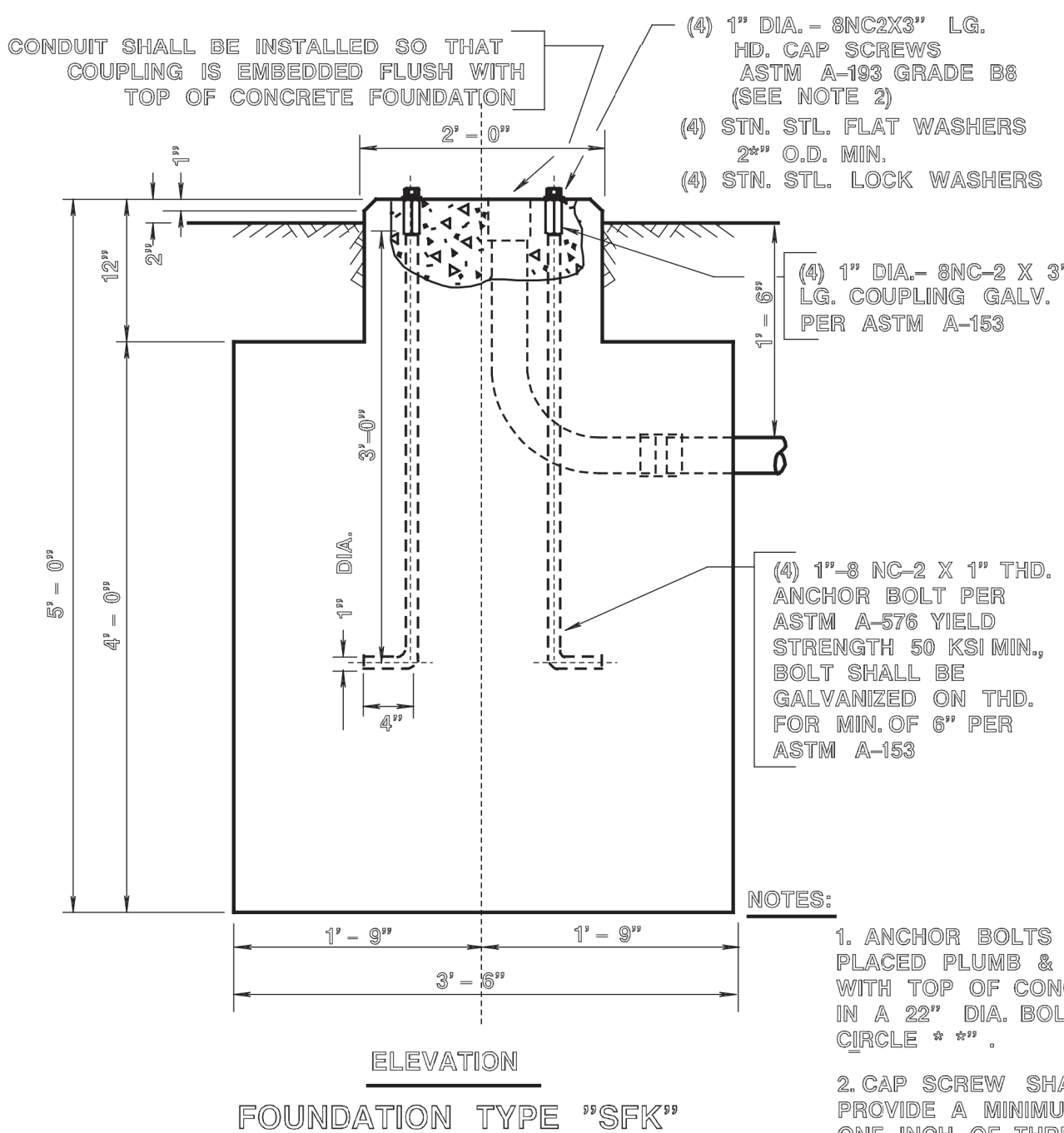
(4) 1" DIA. - 8NC2X3" LG. HD. CAP SCREWS ASTM A-193 GRADE B8 (SEE NOTE 2)
(4) STN. STL. FLAT WASHERS 2" O.D. MIN.
(4) STN. STL. LOCK WASHERS



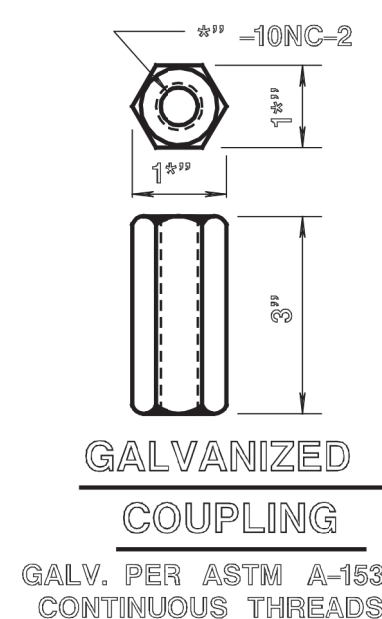
FOUNDATION TYPE "SFT"



FOUNDATION TYPE "SPF"



CONCRETE CLASS "B"
2 CU. YDS.
FOUNDATION SHALL BE POURED MONOLITHIC



GALVANIZED COUPLING

GALV. PER ASTM A-153
CONTINUOUS THREADS

NOTES:
1. ALL CONDUIT SHALL BE INSTALLED SO THAT COUPLINGS ARE EMBEDDED PLUMB AND FLUSH WITH TOP OF CONCRETE FOUNDATION.
2. J-BOLT MUST BE INSERTED 1" INTO 3" COUPLING

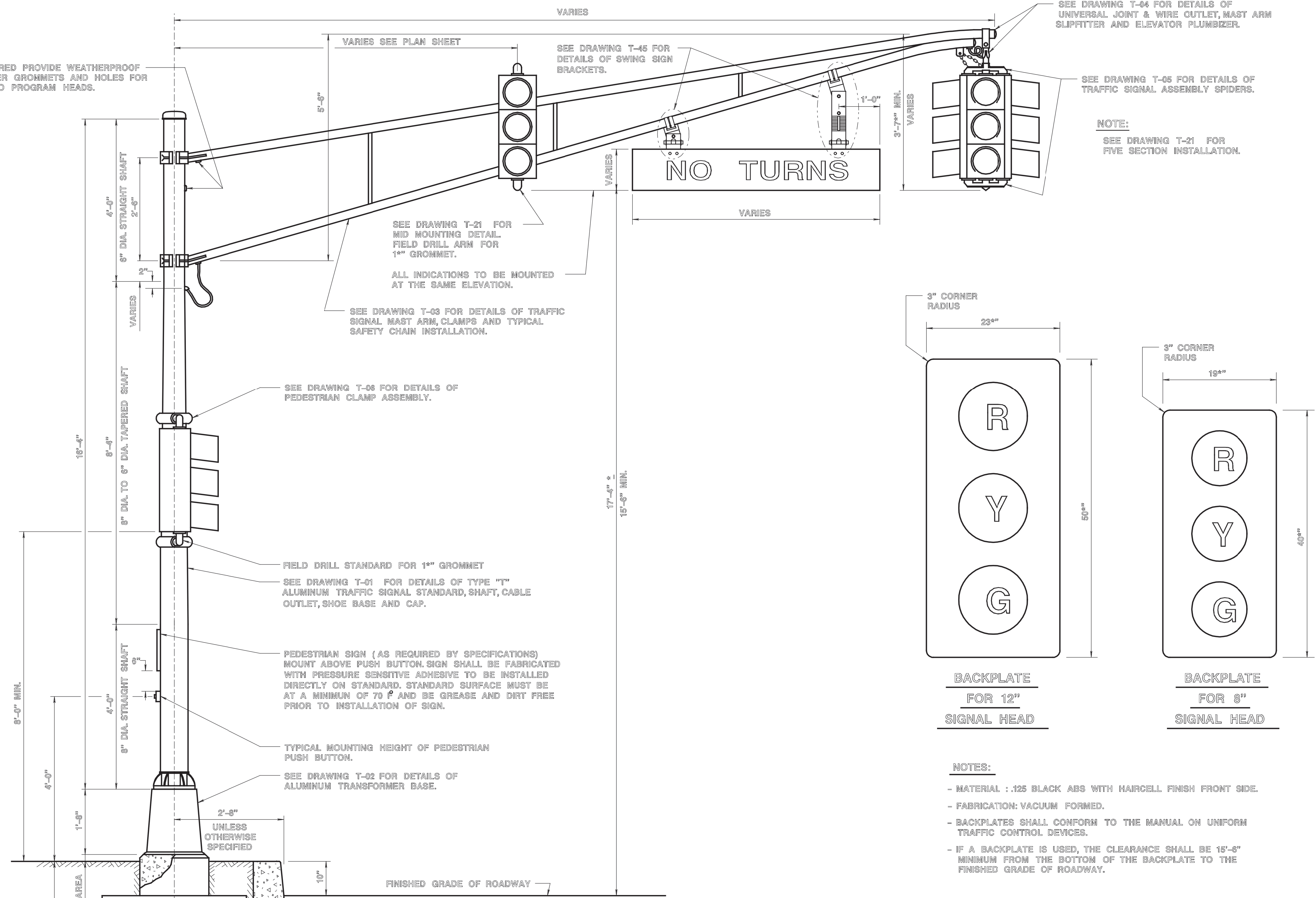
NEW JERSEY DEPARTMENT OF TRANSPORTATION

ELECTRICAL DETAILS
N.T.S.

TYPICAL DETAILS FOR FOUNDATION SFT, SPK & SPF

T-1707

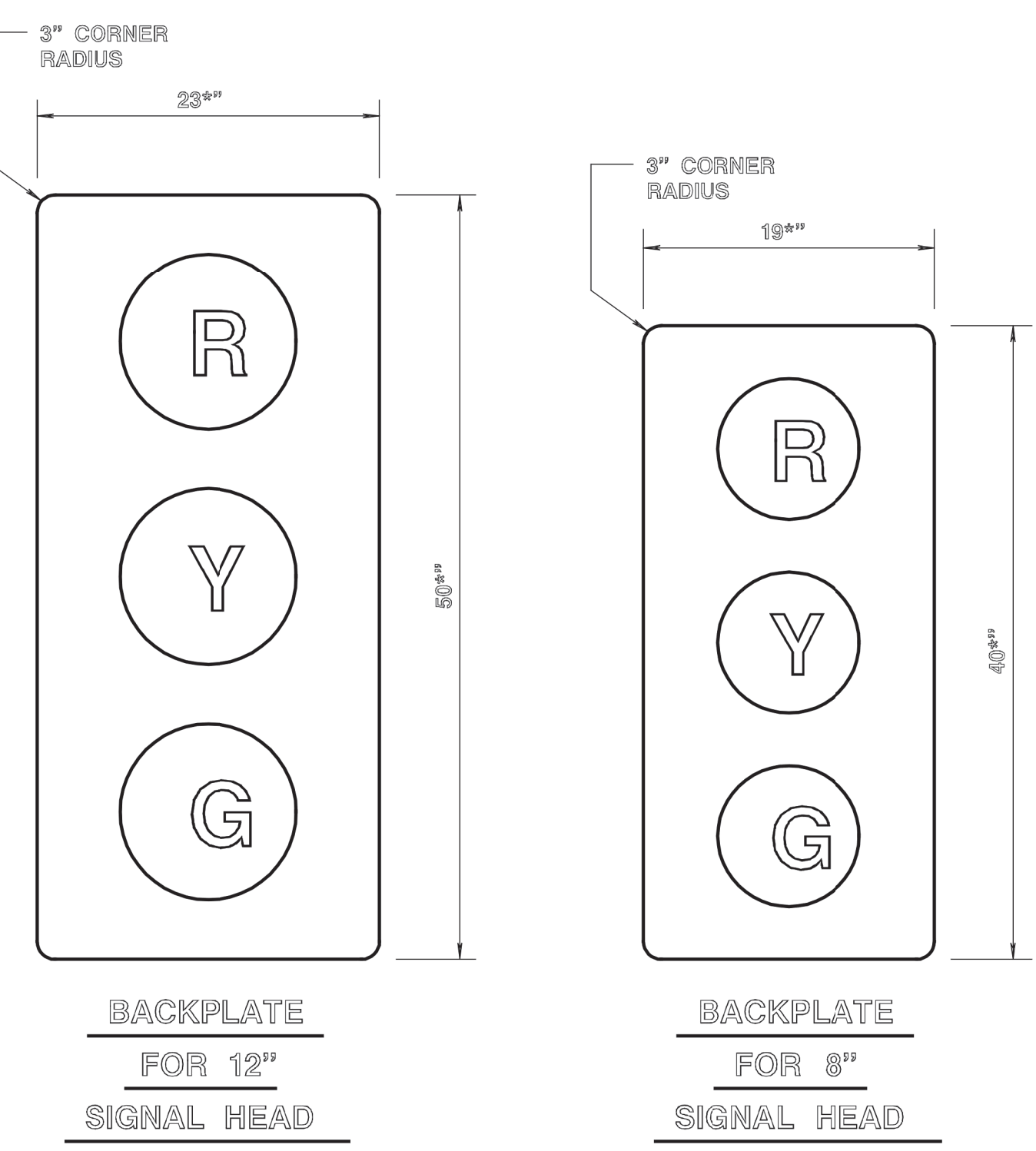
WHEN REQUIRED PROVIDE WEATHERPROOF 1" I.D. RUBBER GROMMETS AND HOLES FOR WIREWAYS TO PROGRAM HEADS.



SEE DRAWING T-04 FOR DETAILS OF UNIVERSAL JOINT & WIRE OUTLET, MAST ARM SLIPFITTER AND ELEVATOR PLUMBIZER.

SEE DRAWING T-05 FOR DETAILS OF TRAFFIC SIGNAL ASSEMBLY SPIDERS.

NOTE:
SEE DRAWING T-21 FOR FIVE SECTION INSTALLATION.

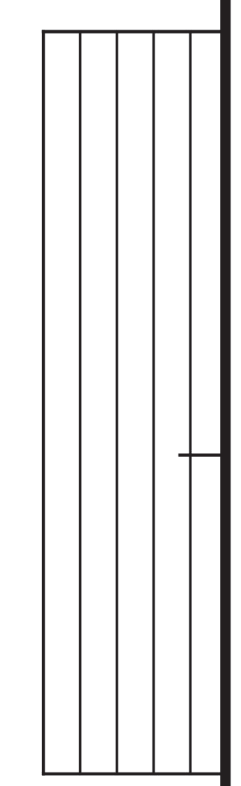


BACKPLATE
FOR 12"
SIGNAL HEAD

BACKPLATE
FOR 8"
SIGNAL HEAD

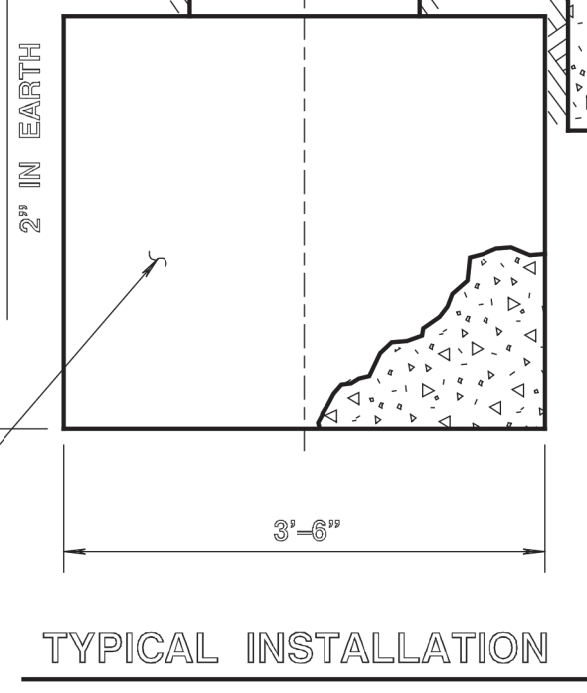
- NOTES:
- MATERIAL : .125 BLACK ABS WITH HAIRCELL FINISH FRONT SIDE.
 - FABRICATION: VACUUM FORMED.
 - BACKPLATES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - IF A BACKPLATE IS USED, THE CLEARANCE SHALL BE 15'-6" MINIMUM FROM THE BOTTOM OF THE BACKPLATE TO THE FINISHED GRADE OF ROADWAY.

REFERENCE

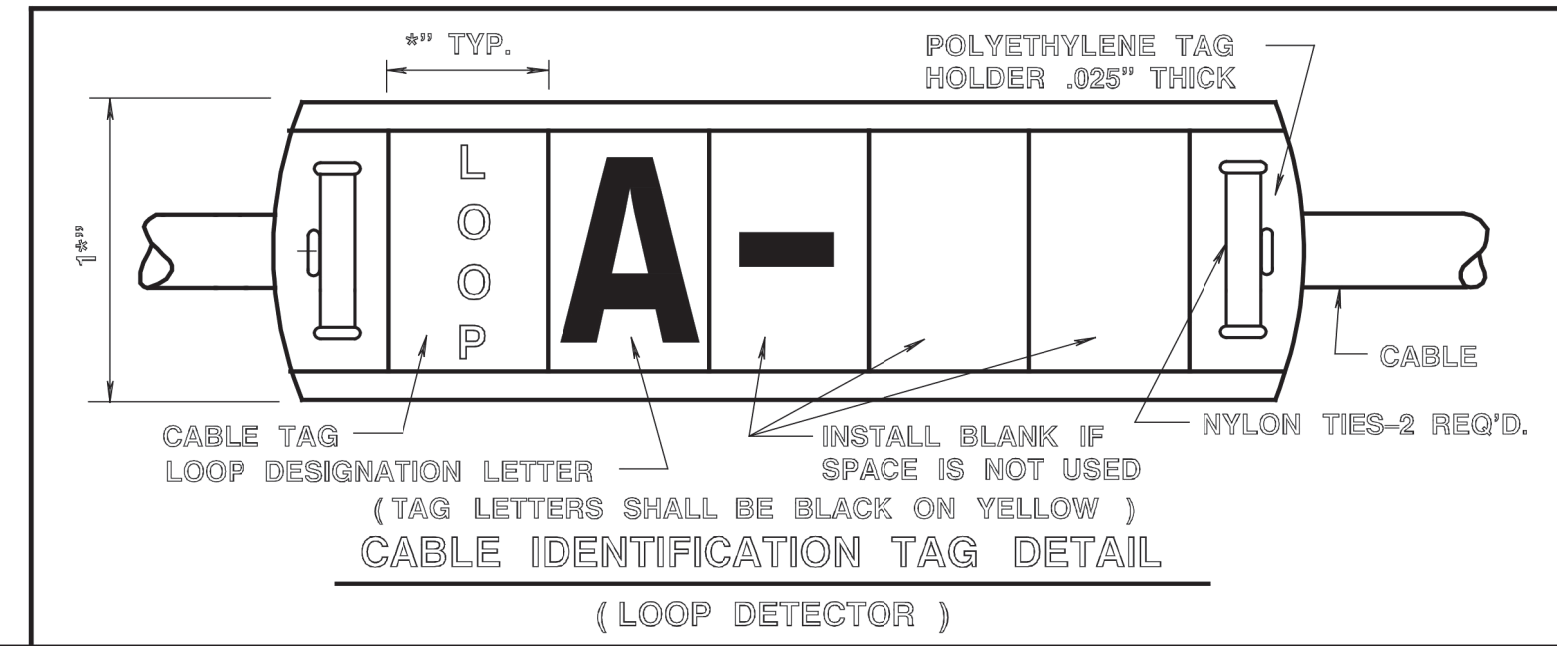


BDC07D-03

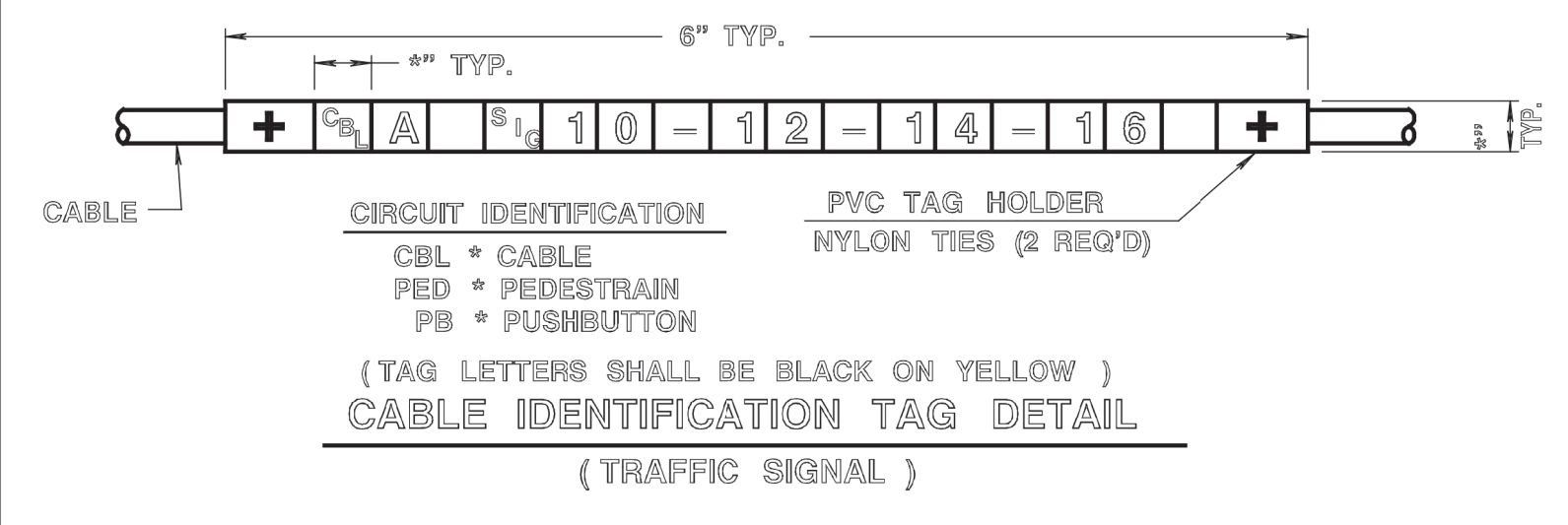
SEE DRAWING T-17 FOUNDATION, TYPE SFT.



TYPICAL INSTALLATION

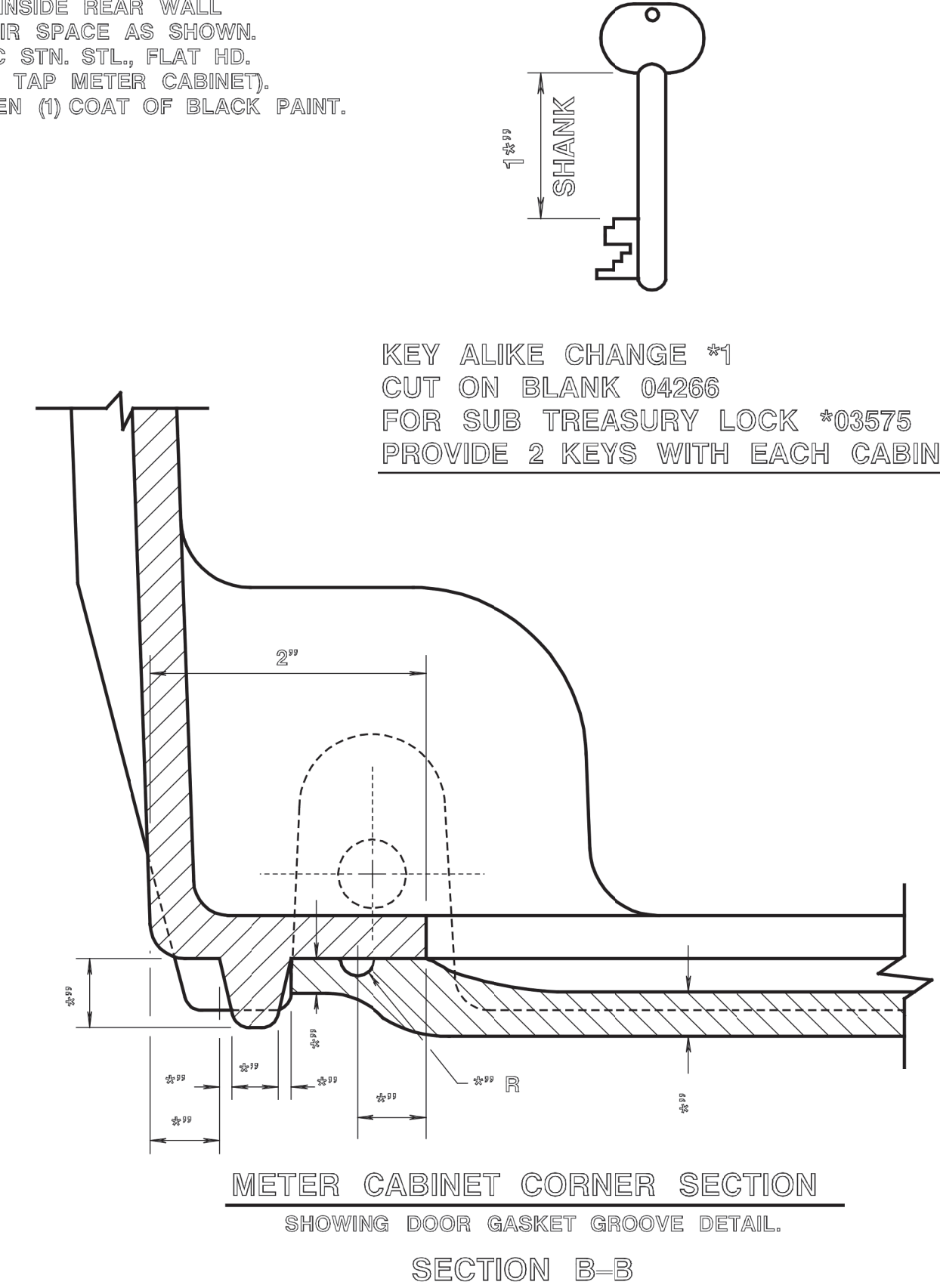
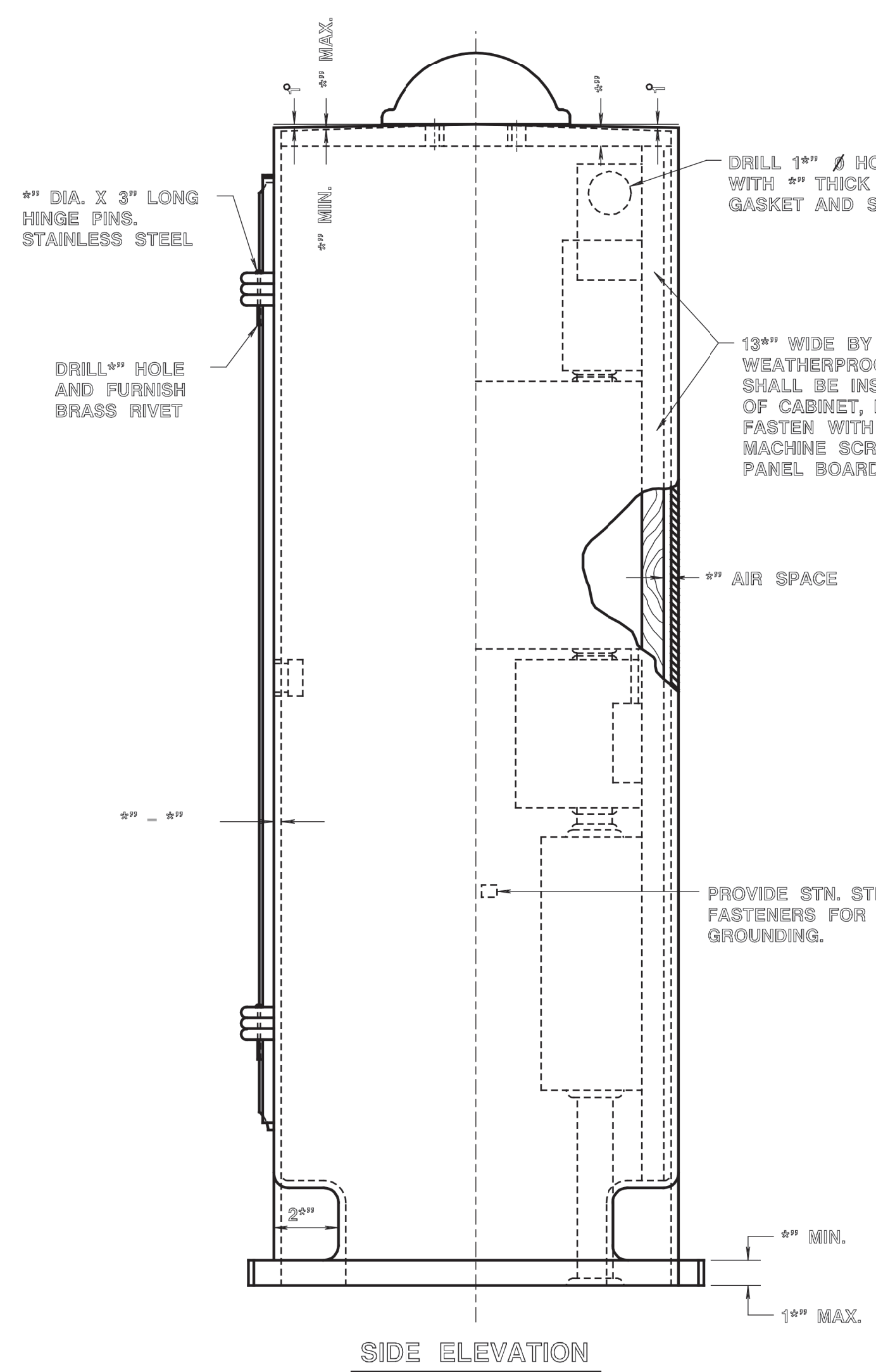
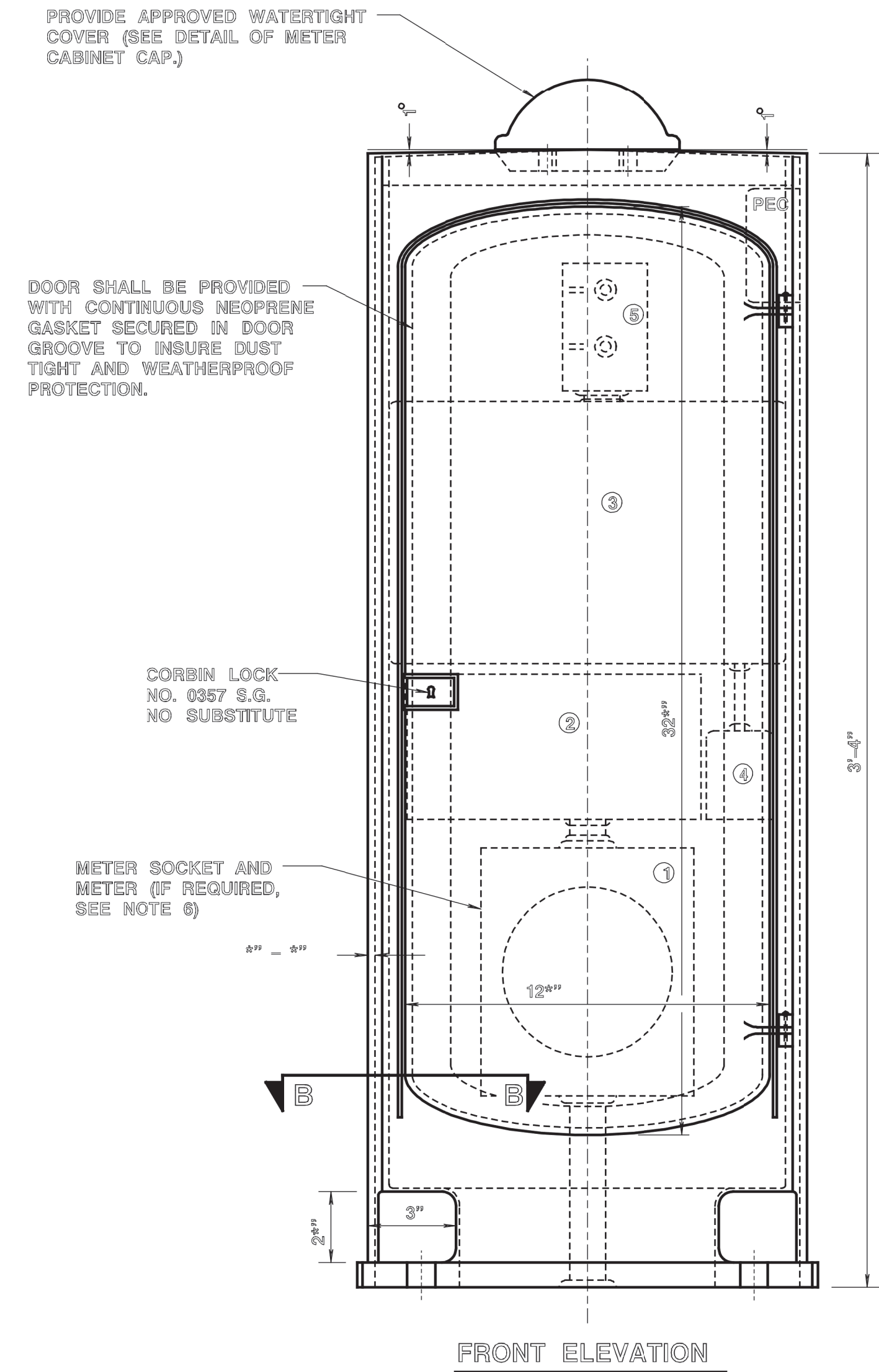
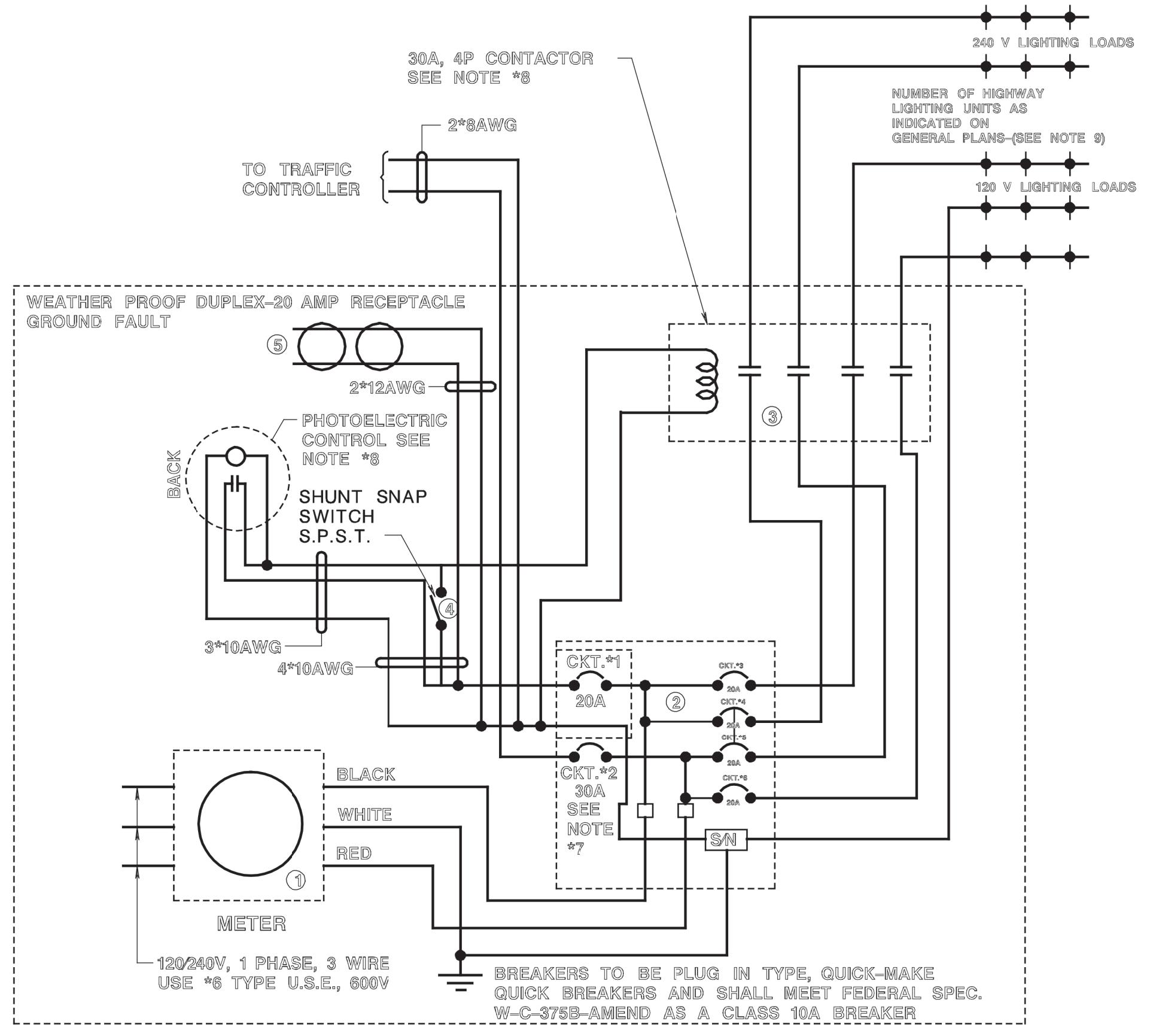
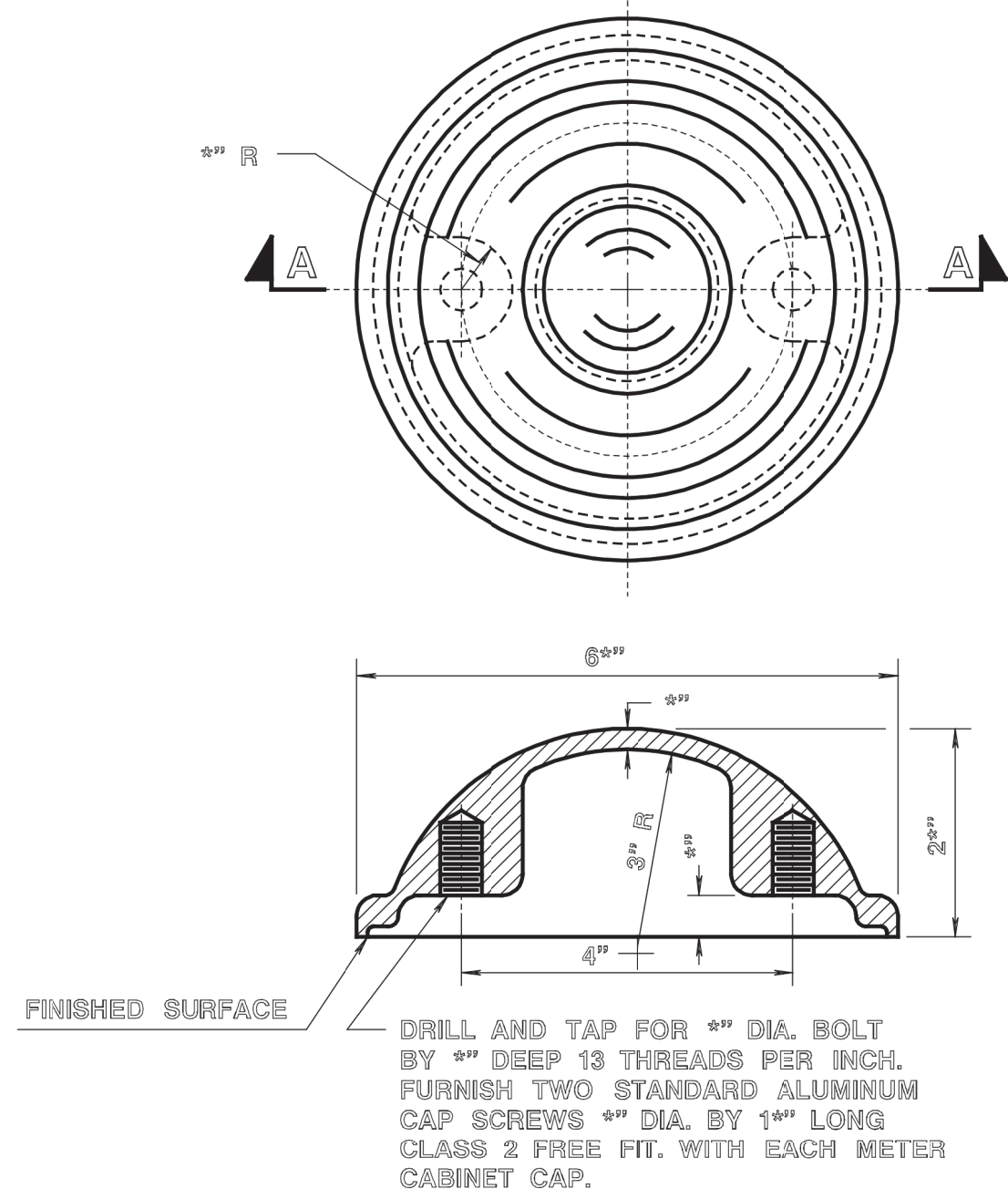
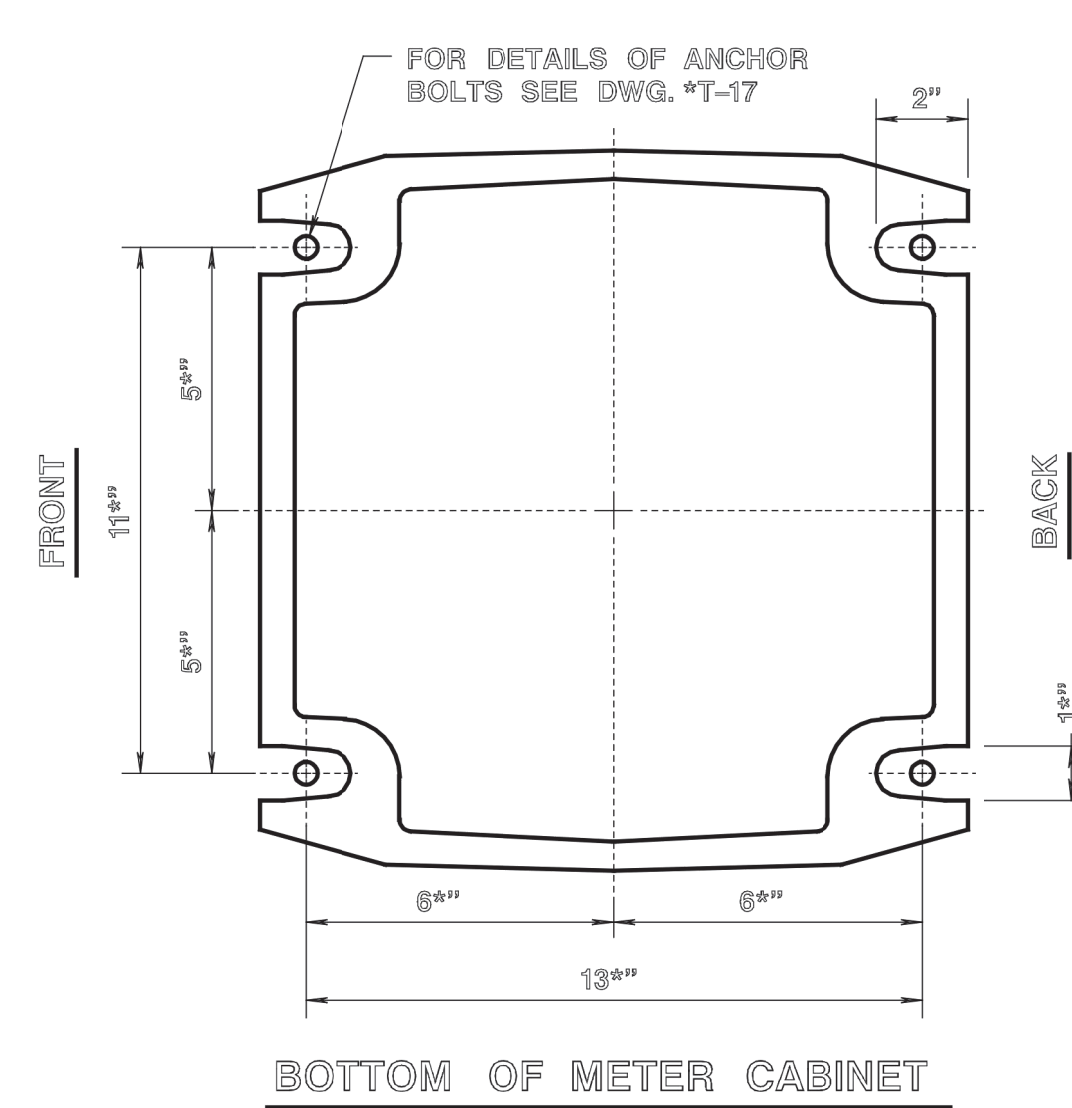
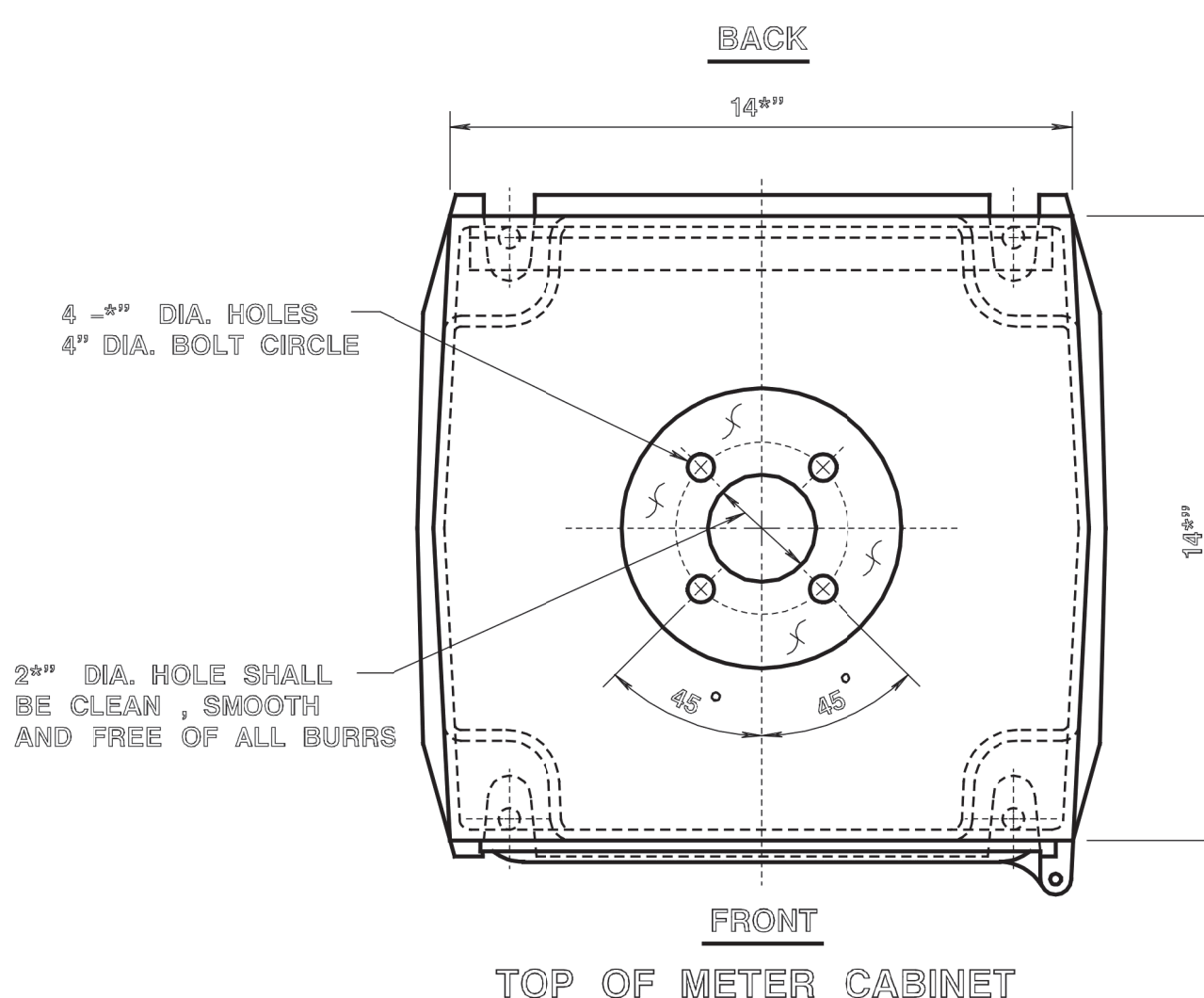


CABLE IDENTIFICATION TAG DETAIL
(LOOP DETECTOR)



CABLE IDENTIFICATION TAG DETAIL
(TRAFFIC SIGNAL)

NEW JERSEY DEPARTMENT OF TRANSPORTATION
ELECTRICAL DETAILS
N.T.S.
TYPICAL TRAFFIC SIGNAL INSTALLATION



NOTE:
ALL WIRE TO BE #8-AWG-600 VOLT
OR AS OTHERWISE SHOWN.

SCHEMATIC WIRING DIAGRAM: 120/240 VOLT

LEGEND

- ① METER SOCKET-INSTALLED BY CONTRACTOR-PROVIDED BY UTILITY COMPANY ON REQUEST. (IN JCF&L CO. AREA METER SOCKET IS TO BE INSTALLED AND FURNISHED BY CONTRACTOR)
- ② 4/8 CIRCUIT LOAD CENTER WITH ENCLOSURE COMPLETE WITH 1-30A & 5-20A CIRCUIT BREAKERS.
- ③ MAGNETIC CONTACTOR, 30 AMP, 120 VOLT COIL NEMA 1 ENCLOSURE.
- ④ PHOTOELECTRIC CONTROL UNIT 15 AMP. SHUNT SWITCH IN 2' X 4' HANDY BOX OR EQUIVALENT.
- ⑤ WEATHERPROOF, 20A DUPLEX RECEPTICAL GROUND FAULT.
- ⑥ IF METER IS NOT REQUIRED, INSTALL 1" I.D. SEALTITE FLEX CONDUIT AND 1" I.D. NIPPLE FROM REDUCER COUPLING TO MAIN BREAKER PANEL.
- ⑦ A 40 AMP BREAKER SHALL BE INSTALLED WITH EIGHT PHASE CONTROLLER ASSEMBLIES.
- ⑧ FOR METER CABINET "TL", PHOTOELECTRIC CONTROL AND MAGNETIC CONTACTOR SHALL BE FURNISHED AND INSTALLED.
- ⑨ THE TOTAL NUMBER OF CIRCUIT BREAKERS SHALL NOT EXCEED SIX.

METER CABINET DETAIL
 - ALUMINUM ALLOY, COMMERCIAL DESIGNATION 355
 A.S.T.M. DESIGNATION B28-56T, ALLOY 56 70A.
 - THE CABINET SHALL BE FREE OF BURRS, SHARP EDGES,
 DENTS, PINHOLES, AND PARTING LINES AND SHALL HAVE
 A UNIFORM #30 GRIT FINISH.
 - FOR ALTERNATE FABRICATED METER CABINET SEE DWG. T-35

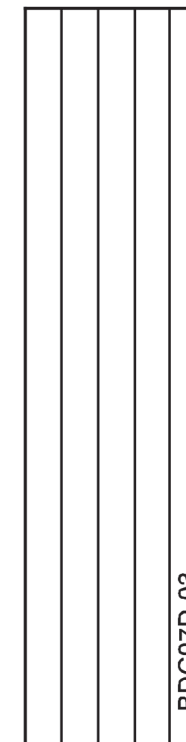
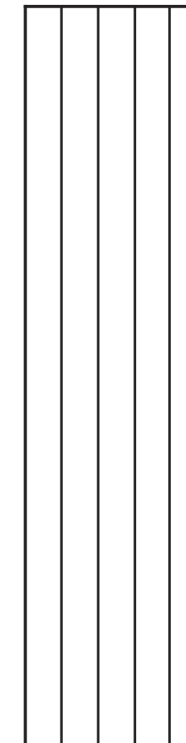
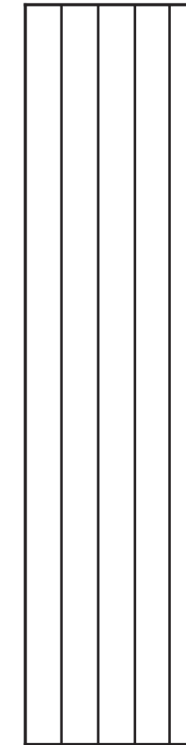
METER CABINET TYPE "T"
 METER CABINET TYPE "TL" - SEE NOTE #8

NEW JERSEY DEPARTMENT OF TRANSPORTATION	
ELECTRICAL DETAILS	
N.T.S.	
METER CABINET "T" AND "TL"	
ELECTRICAL INSTALLATION	
T-1907	60 197

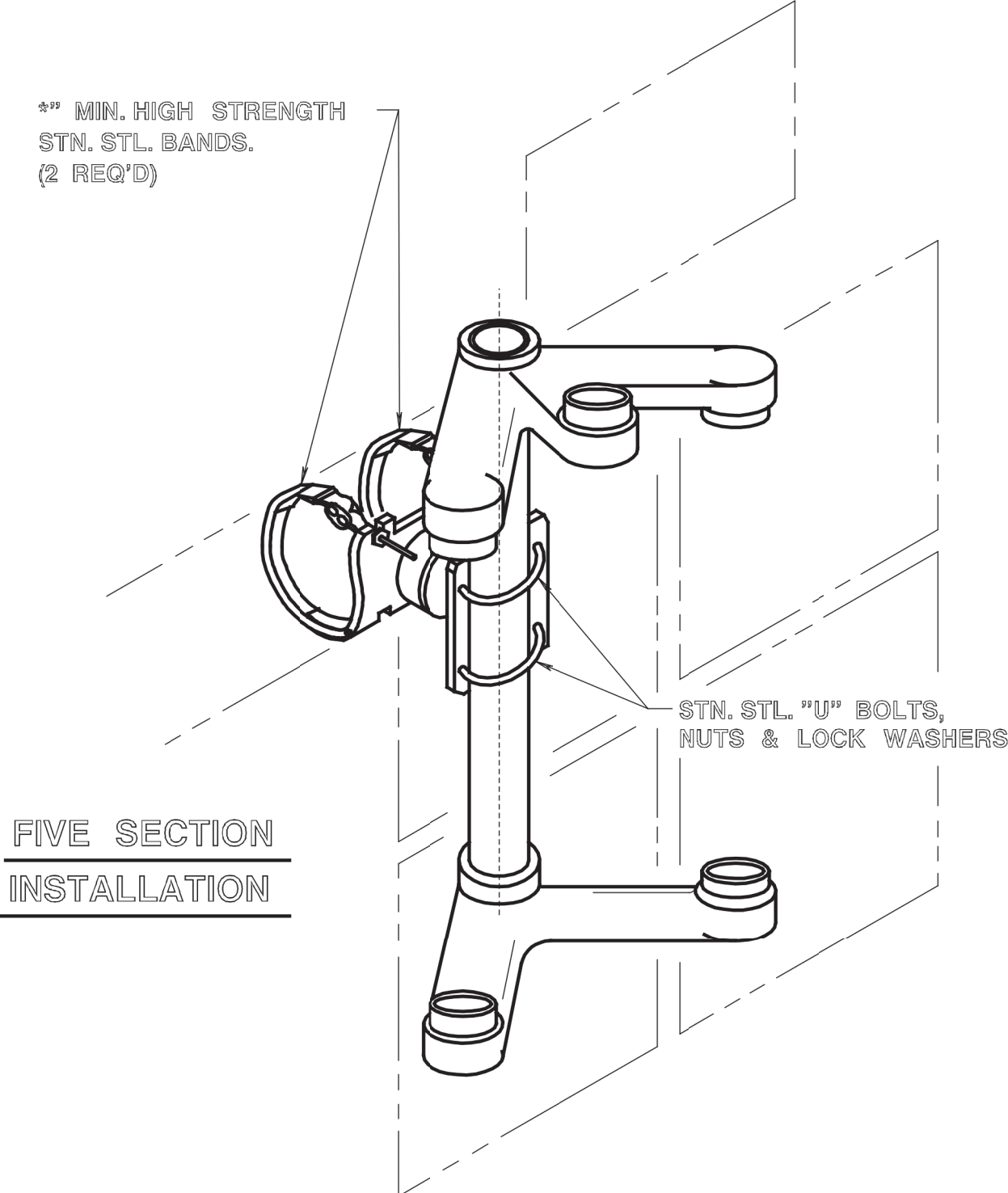
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BDC07D-03

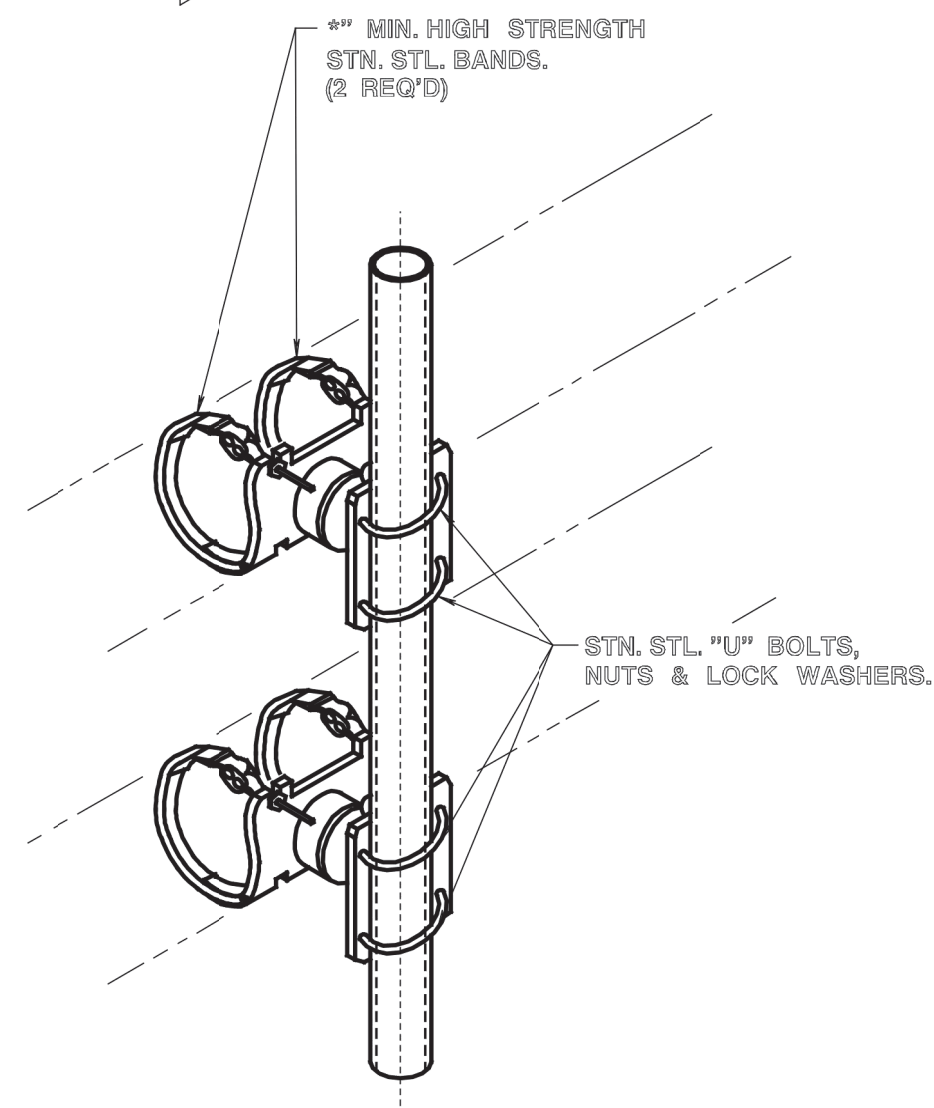
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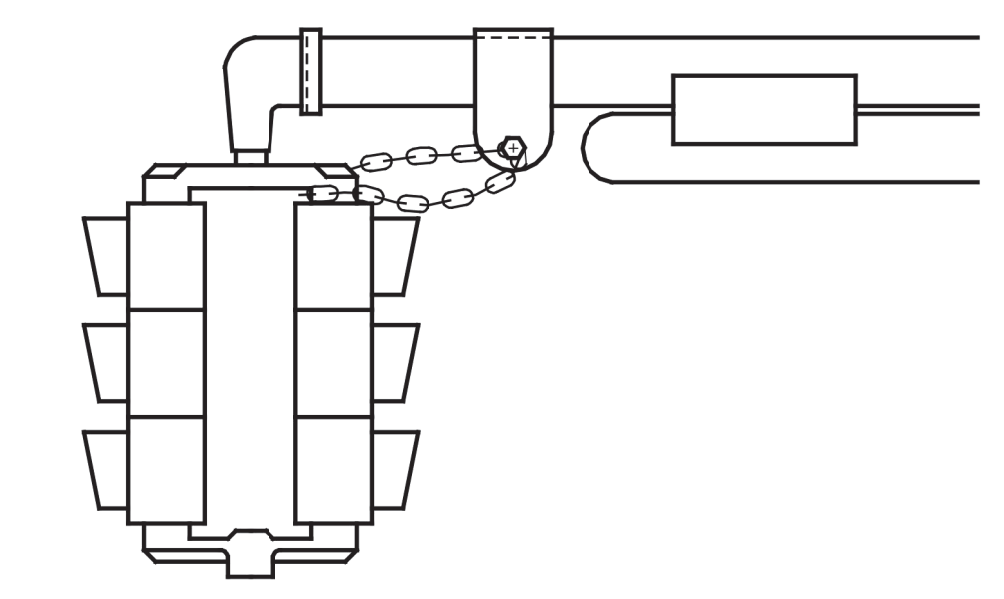


**FIVE SECTION
INSTALLATION**



MID MAST BRACKET DETAIL

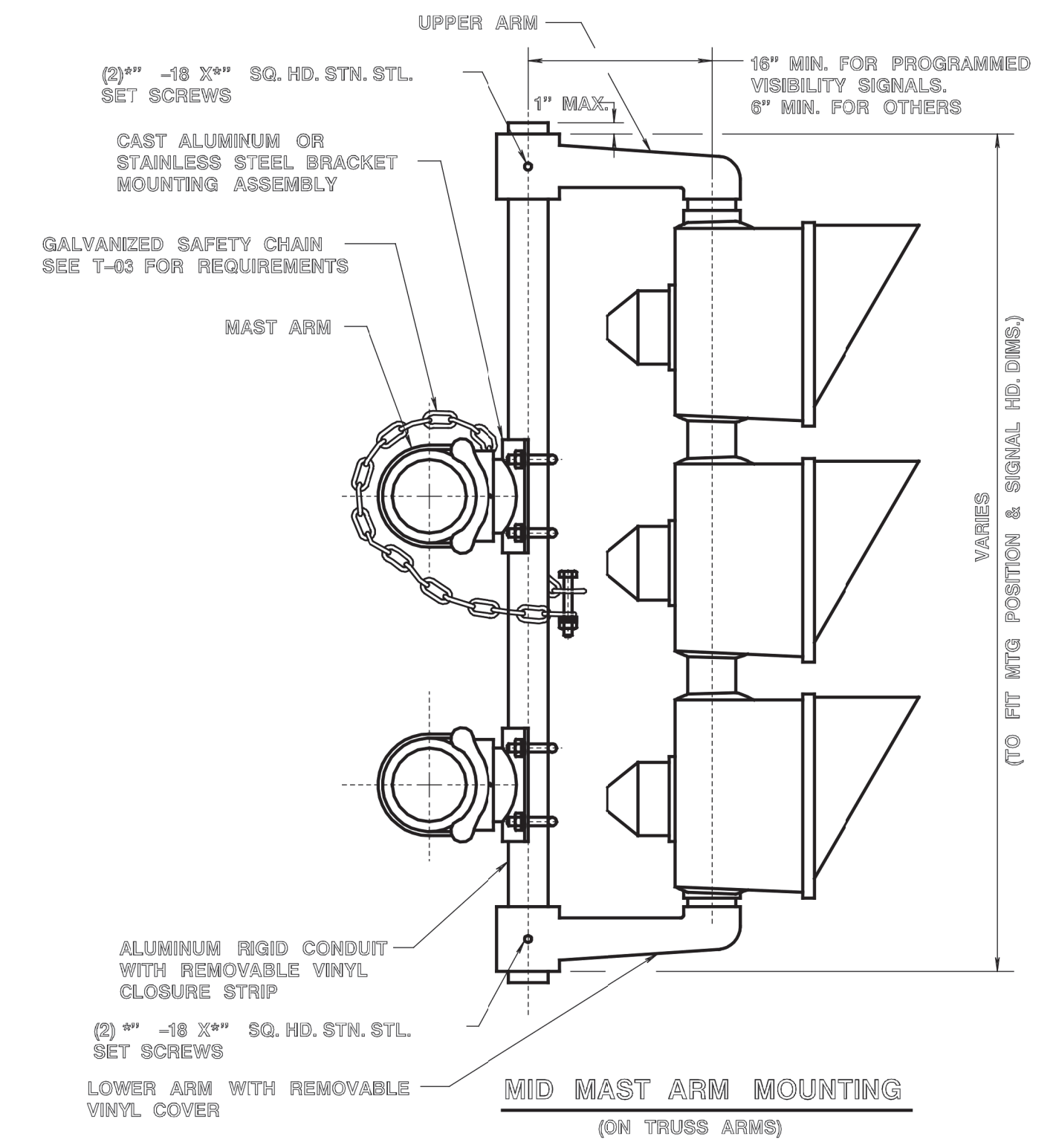
- NOTES:**
1. TO MOUNT SIGNALS ON A PEDESTAL STANDARD INVERT 3 IN LINE BRACKETS WITH PIPE AND ELBOWS, USE A 4" SLIPFITTER IN PLACE OF THE MAST ARM PLUMBIZER.
 2. TO MOUNT 8" SIGNALS BACK TO BACK WITH 12" SIGNALS USE SPACER NIPPLES ON BOTTOM. RED SIGNALS SHALL BE IN LINE.
 3. TO MOUNT BACK TO BACK OPTICALLY PROGRAMMED SIGNALS USE MID MAST BRACKET.
 4. DESIGN AND MANUFACTURE ACCORDING TO THE 2001 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS. UTILIZE APPENDIX C OF THE SPECIFICATIONS FOR IDENTIFICATION OF LOADING CRITERIA. DESIGN WIND SPEED IS 80 MPH. DESIGN FOR FATIGUE IS WAVED.



TYPICAL TRAFFIC SIGNAL INSTALLATION

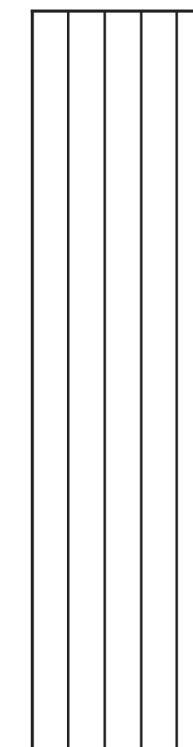
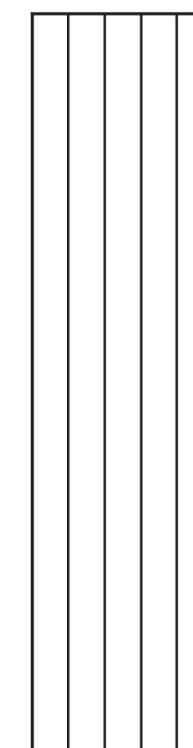
SAFETY CHAIN REQUIREMENTS FOR TRAFFIC SIGNALS

- FURNISH:**
- 42' LG. 2" HOT DIPPED GALVANIZED COILPROOF STRAIGHT LINK CHAIN.
 - 1 - 4" X 2" LG. STAINLESS STEEL HEX HEAD BOLT.
 - 2 - 2" STAINLESS STEEL HEX NUTS.
 - 2 - 2" STAINLESS STEEL FLAT WASHERS.
 - 1 - 2" STAINLESS STEEL LOCK WASHER.

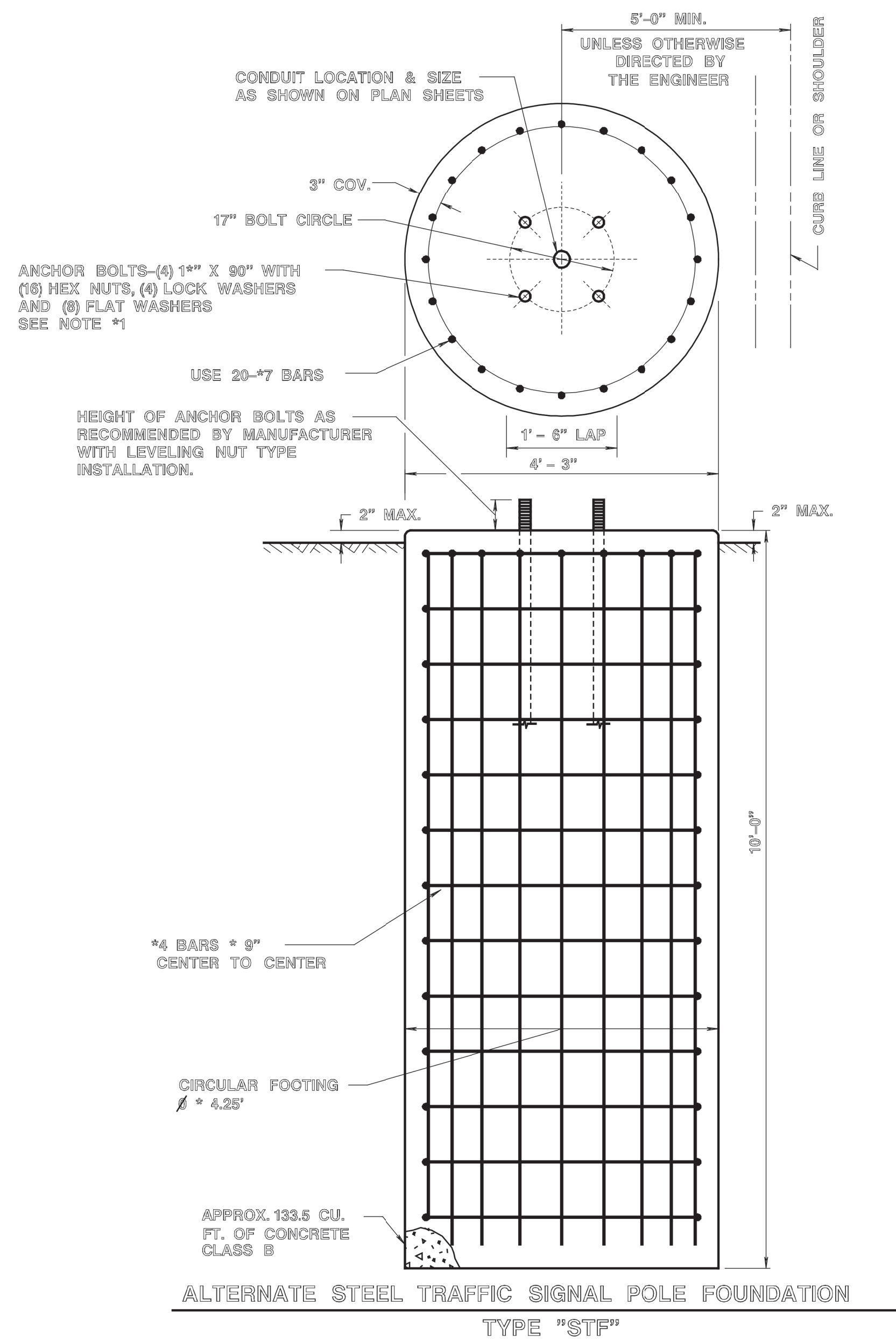
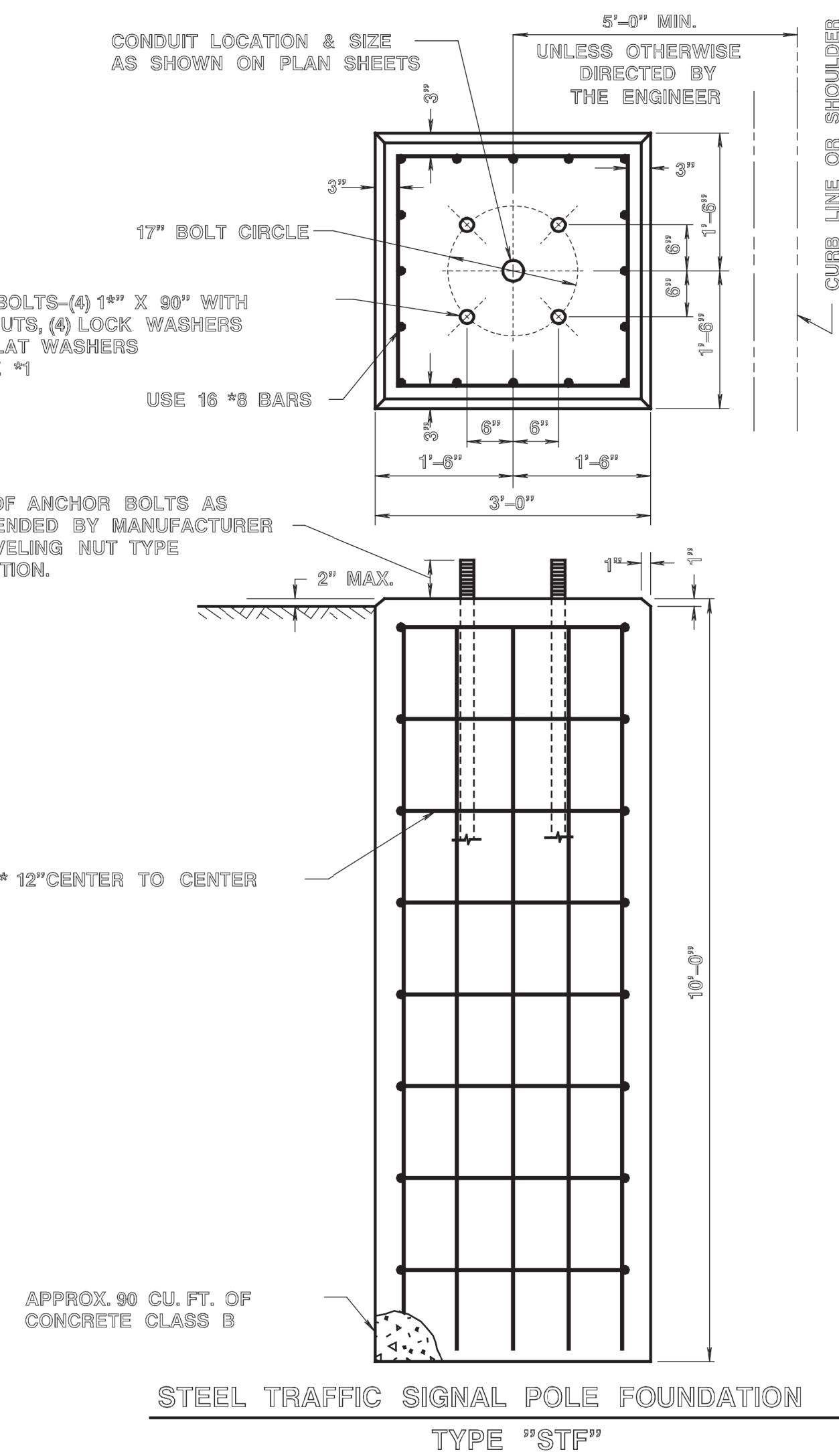


NEW JERSEY DEPARTMENT OF TRANSPORTATION	
ELECTRICAL DETAILS N.T.S.	
OPTICALLY PROGRAMMED AND MIDMAST MOUNTING DETAILS	
T-2107	61 197

REFERENCE



BDC07D.03
BDC 000-002 - ORIGINAL SHEET



NOTE:

1. ANCHOR BOLTS SHALL BE HOT DIPPED GALVANIZED STEEL ASTM A1554 GRADE 55.

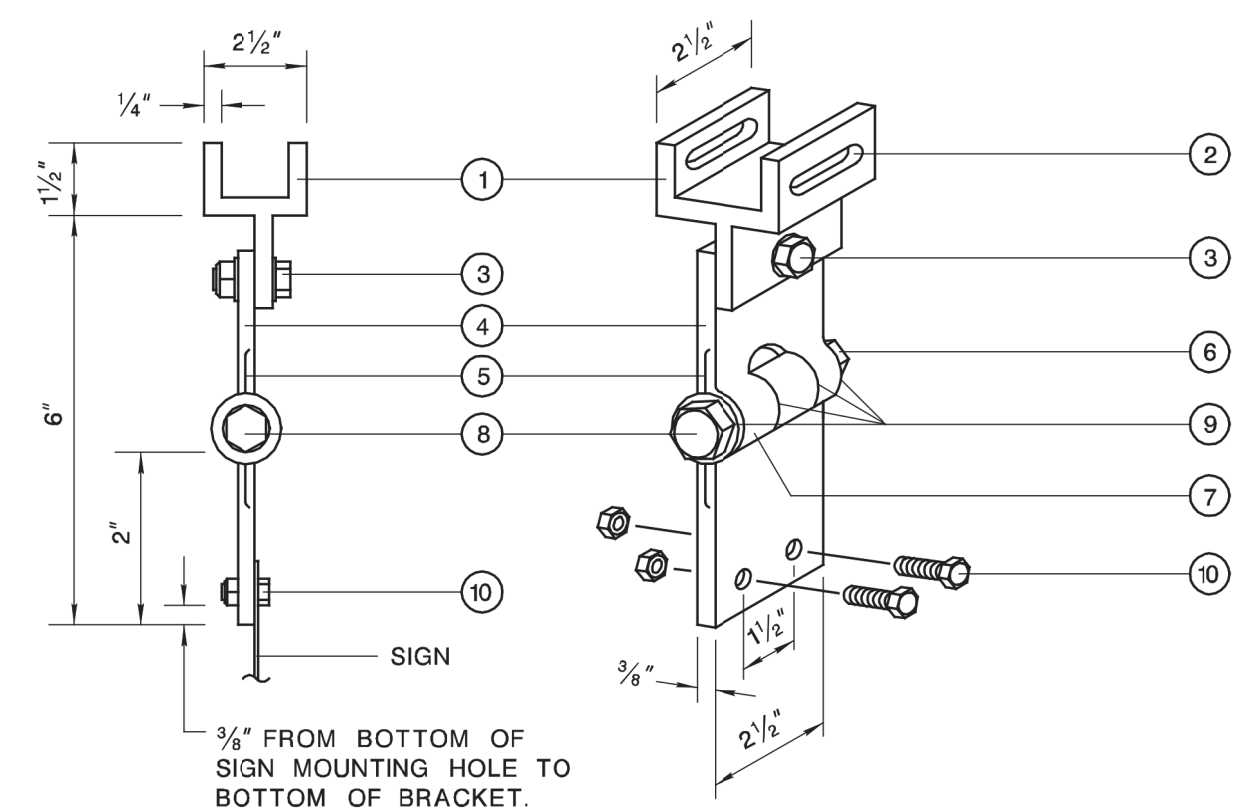
NEW JERSEY DEPARTMENT OF TRANSPORTATION

ELECTRICAL DETAILS
N.T.S.

STEEL TRAFFIC SIGNAL POLE
FOUNDATION DETAILS

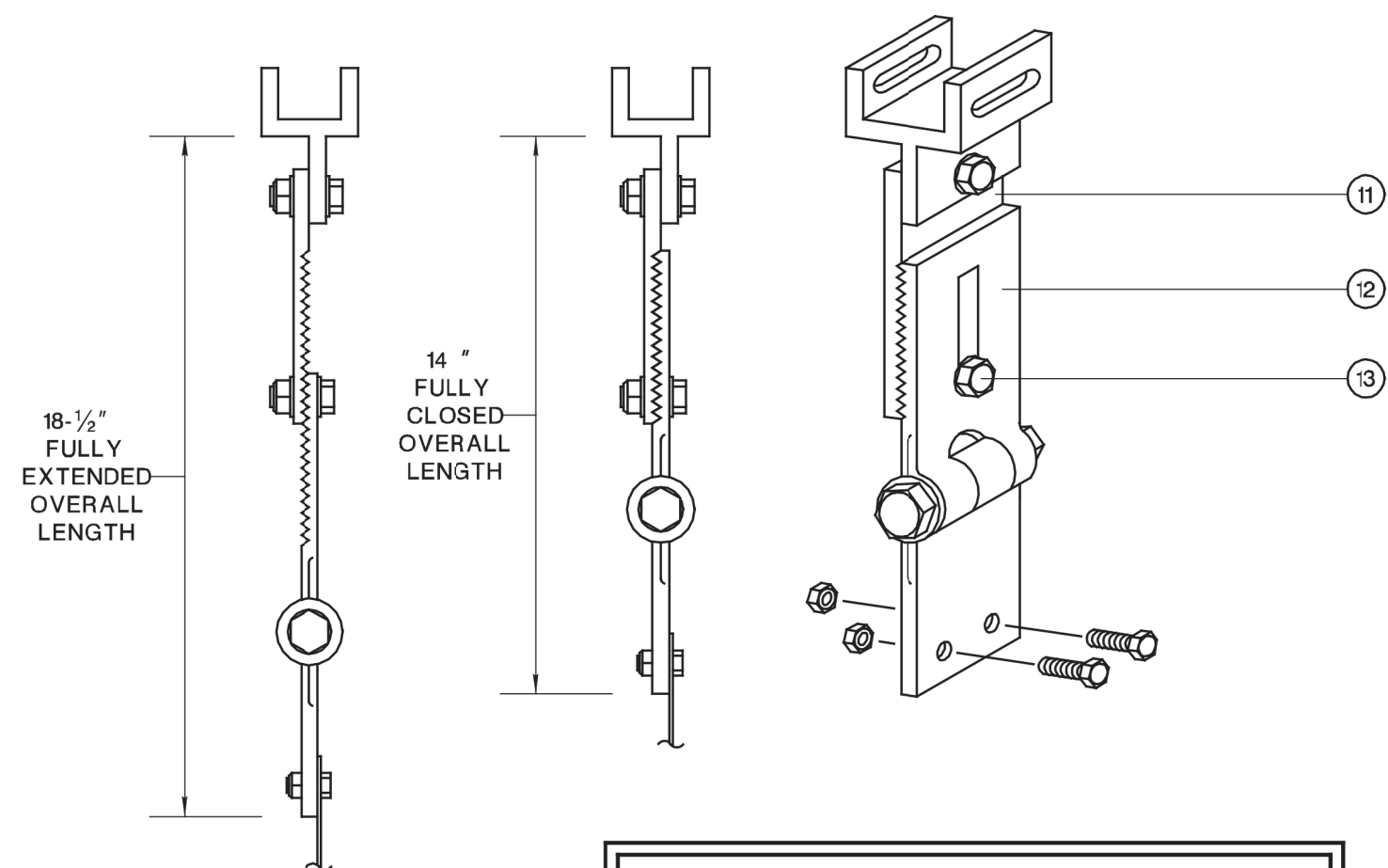
T-4301

FIXED LENGTH NON-ADJUSTABLE SWING SIGN BRACKET



- 1 PIVOTAL UPPER BRACKET.
- 2 1/4" x 1/4" SLOT FOR DOUBLE STRAPPING TO MAST ARM. (M2G-34S(HD), .030 x 3/4" HEAVY DUTY STAINLESS STEEL STRAP WITH M2G-34B(HD) BUCKLE RECOMMENDED.)
- 3 1/2" - 13 x 1 1/2" STAINLESS STEEL HEX HEAD BOLT WITH STAINLESS STEEL HEX LOCK NUT AND 1/8" STAINLESS STEEL WASHER (BOTH SIDES). ALLOWS UPPER BRACKET TO PIVOT AND ALIGN WITH MAST ARM.
- 4 6" OVERALL DROP WITH FIXED LENGTH SIGN BRACKET.
- 5 STAINLESS STEEL DAMPENER SPRING (REMOVABLE).
- 6 STAINLESS STEEL HEX LOCK NUT WITH 1/8" STAINLESS STEEL WASHER.
- 7 1" O.D. AXLE HOUSING.
- 8 1/2" - 13 x 4" STAINLESS STEEL HEX HEAD BOLT WITH 1/8" STAINLESS STEEL WASHER.
- 9 OILITE BUSHING.
- 10 SIGN MOUNTING SETS, CONSISTING OF TWO EACH 3/8" - 18 x 1" STAINLESS STEEL HEX HEAD BOLT WITH STAINLESS STEEL HEX LOCK NUT. TWO HOLES ON 1 1/2" CENTERS PROVIDE POSITIVE LOCK SIGN MOUNTING TO BRACKET.

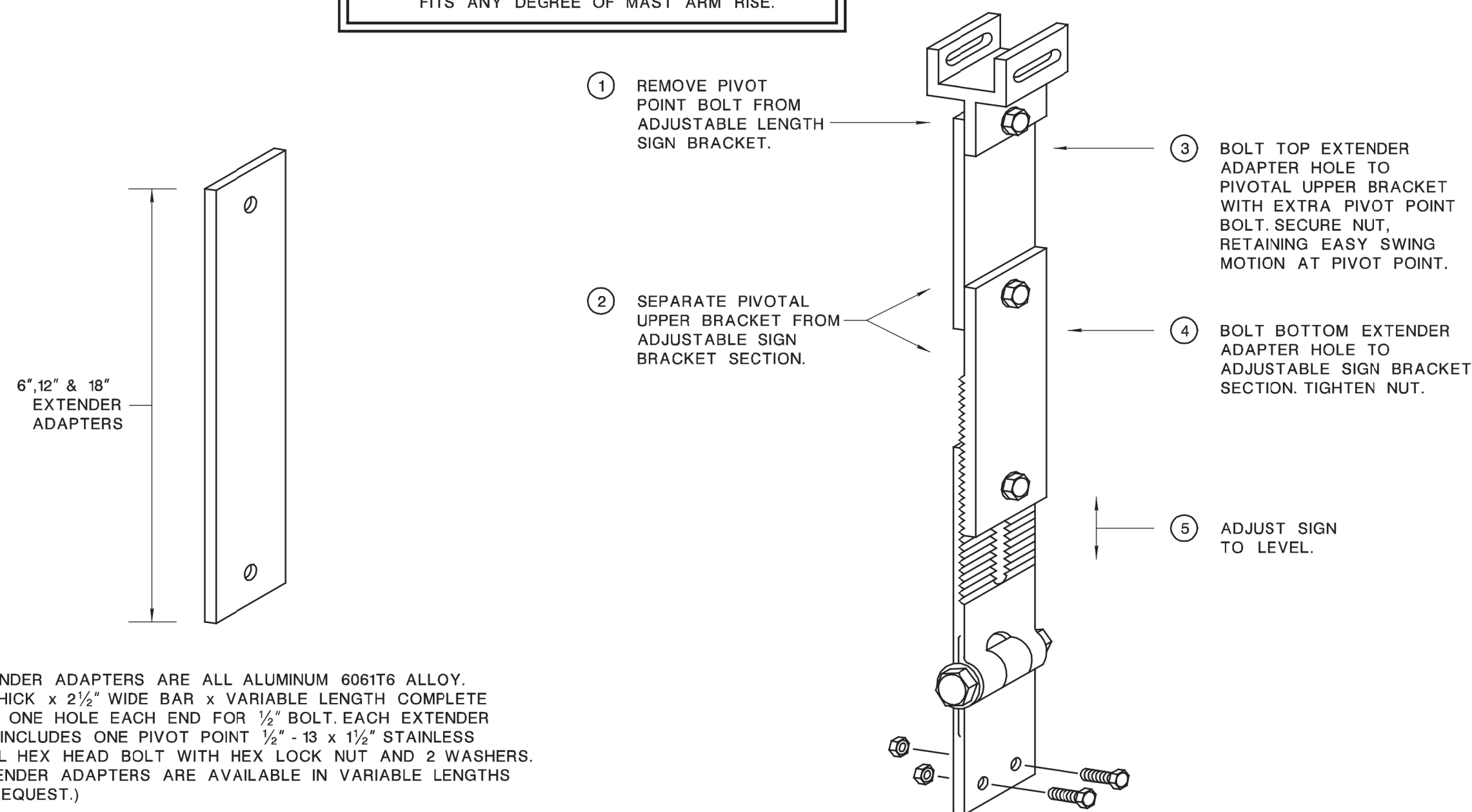
ADJUSTABLE LENGTH SWING SIGN BRACKET



- 11 8 3/4" OVERALL LENGTH UPPER ADJUSTABLE SIGN BRACKET SECTION.
- 12 9" OVERALL LENGTH LOWER ADJUSTABLE SIGN BRACKET SECTION INCLUDING AXLE HOUSING (8" OVERALL LENGTH TO TOP OF AXLE HOUSING).
- 13 1/2" - 13 x 1 1/2" STAINLESS STEEL HEX BOLT WITH STAINLESS STEEL HEX LOCK NUT AND 1/8" STAINLESS STEEL WASHERS (BOTH SIDES). LOOSEN LOCK NUT, ADJUST BRACKET TEETH TO LEVEL SIGN.

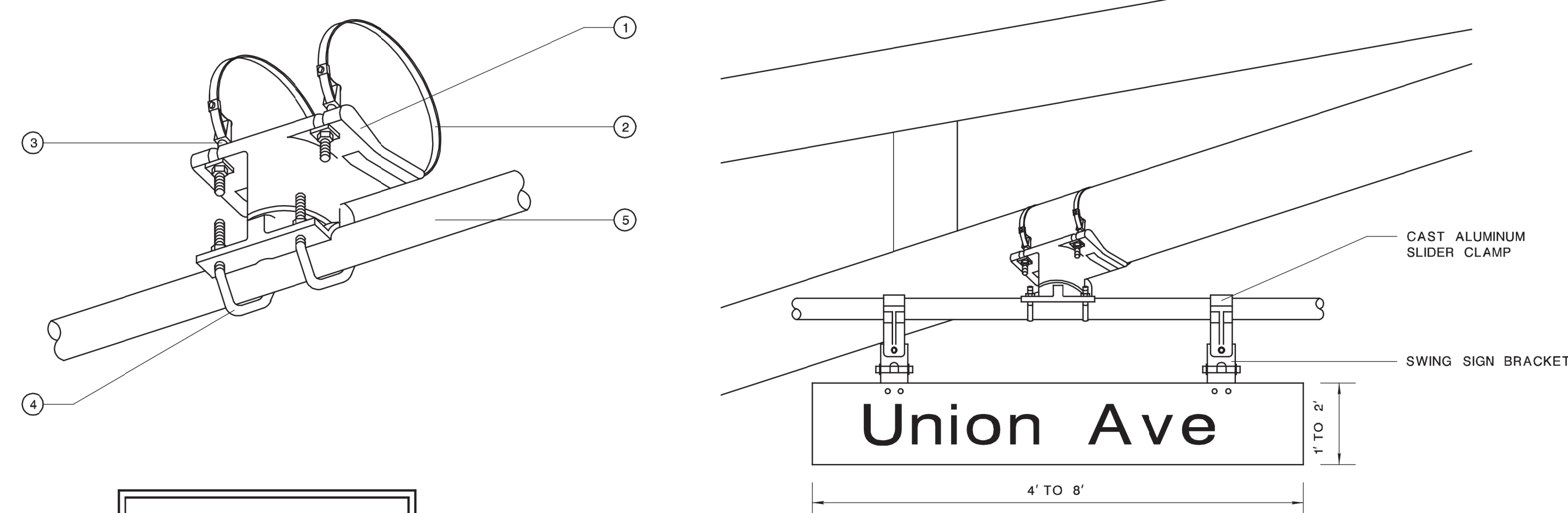
EXTENDER ADAPTERS

FOR ADJUSTABLE LENGTH SWING SIGN BRACKET. EXTENDS BRACKET TO LEVEL SIGN. FITS ANY DEGREE OF MAST ARM RISE.

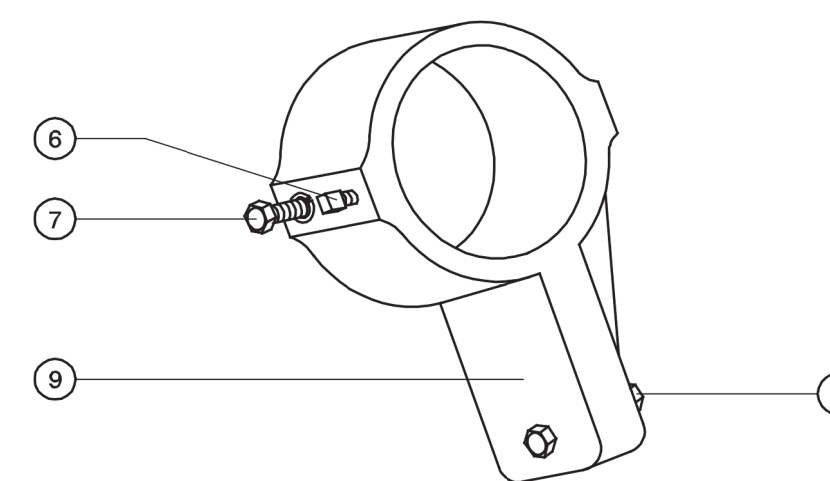


EXTENDER ADAPTERS ARE ALL ALUMINUM 6061T6 ALLOY. 3/8" THICK x 2 1/2" WIDE BAR x VARIABLE LENGTH COMPLETE WITH ONE HOLE EACH END FOR 1/2" BOLT. EACH EXTENDER BAR INCLUDES ONE PIVOT POINT 1/2" - 13 x 1 1/2" STAINLESS STEEL HEX HEAD BOLT WITH HEX LOCK NUT AND 2 WASHERS. (EXTENDER ADAPTERS ARE AVAILABLE IN VARIABLE LENGTHS ON REQUEST.)

MAST ARM ASSEMBLY BRACKET

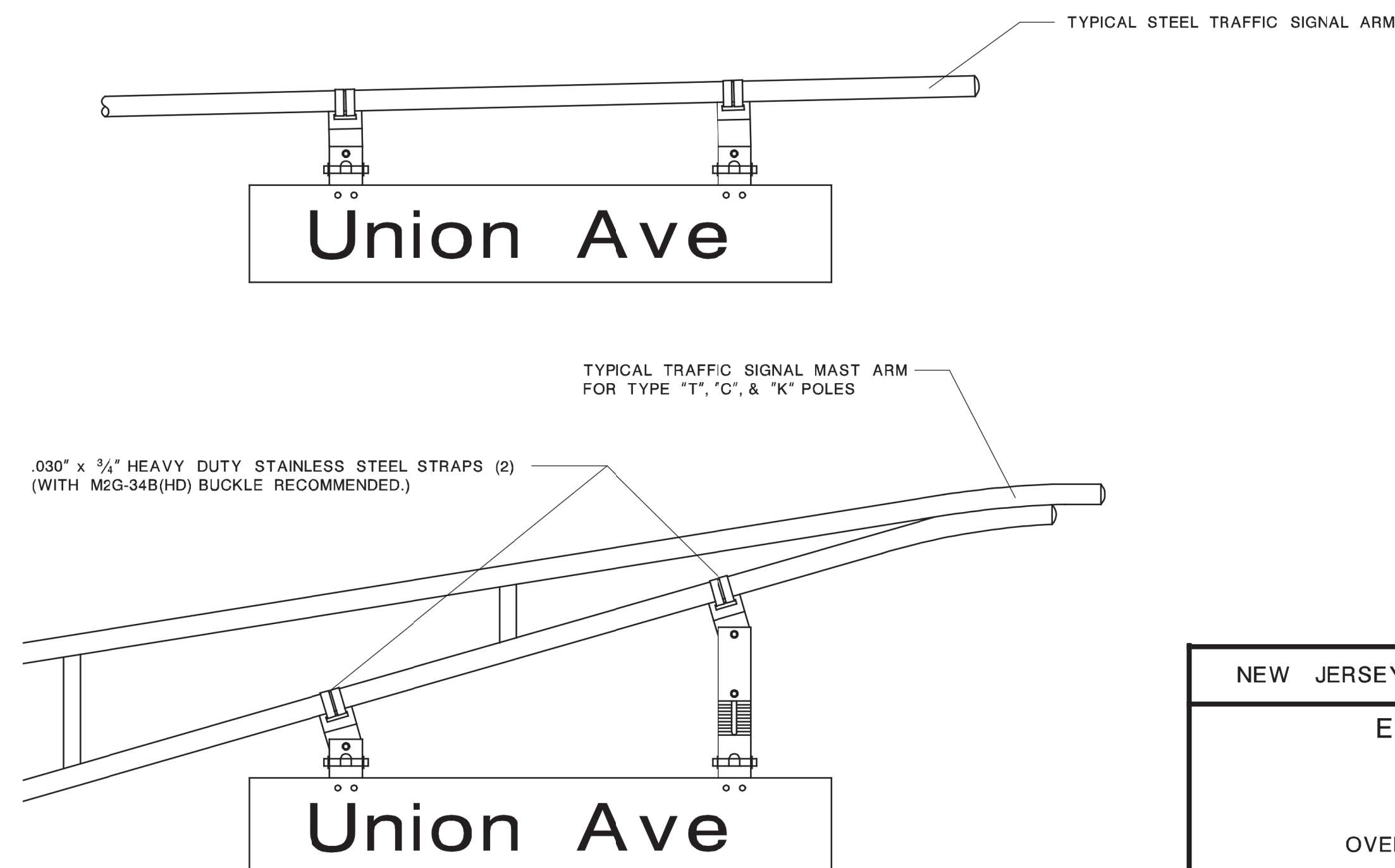


SLIDER CLAMP



- 1 CLAMP SHALL BE ALUMINUM ALLOY (356-T6)
- 2 3/4" STAINLESS STEEL STRAP (2) WITH 3/8" BANDCLAMP.
- 3 STAINLESS STEEL CLAMP SCREW WITH BEARING WASHER, 7/16" FLATWASHER & 3/8" - 14 HEX NUT. CLAMP SCREW SHALL BE INSTALLED WITH MAINTAINING A MINIMUM OF 1/4" CLEARANCE TO THE MAST ARM CLAMP.
- 4 5/8" - 18 x 1 3/4" x 2 5/8" x 7/8" U-BOLT WITH 3/8" SPLIT LOCKWASHER & 3/8" - 18 HEX NUT.
- 5 1 1/2" ALUMINUM TUBE
- 6 3/8" SQUARE HEAD SET SCREW
- 7 5/8" x 1 1/2" HEX BOLT WITH LOCKWASHER
- 8 3/8" x 1 1/2" STAINLESS STEEL HEX HEAD BOLT WITH STAINLESS STEEL HEX LOCK NUT AND 1/8" STAINLESS STEEL WASHER (BOTH SIDES). A BRONZE REDUCER BUSHING (1/2" TO 3/4") SHALL BE USED INSIDE THE SLIDER CLAMP.
- 9 CAST ALUMINUM SLIDER CLAMP

NOTE:
INSTALLATION OF SLIDER: DRILL 3/8" HOLE THRU ONE WALL OF PIPE. TIGHTEN 3/8" x 1 1/2" HEX BOLT WITH LOCKWASHER INTO SLIDER THRU HOLE IN PIPE. ATTACH 5/8" SQUARE HEAD SET SCREW.



NEW JERSEY DEPARTMENT OF TRANSPORTATION

ELECTRICAL DETAILS
N.T.S.

OVERHEAD MAST ARM ADJUSTABLE
SWING SIGN BRACKETS

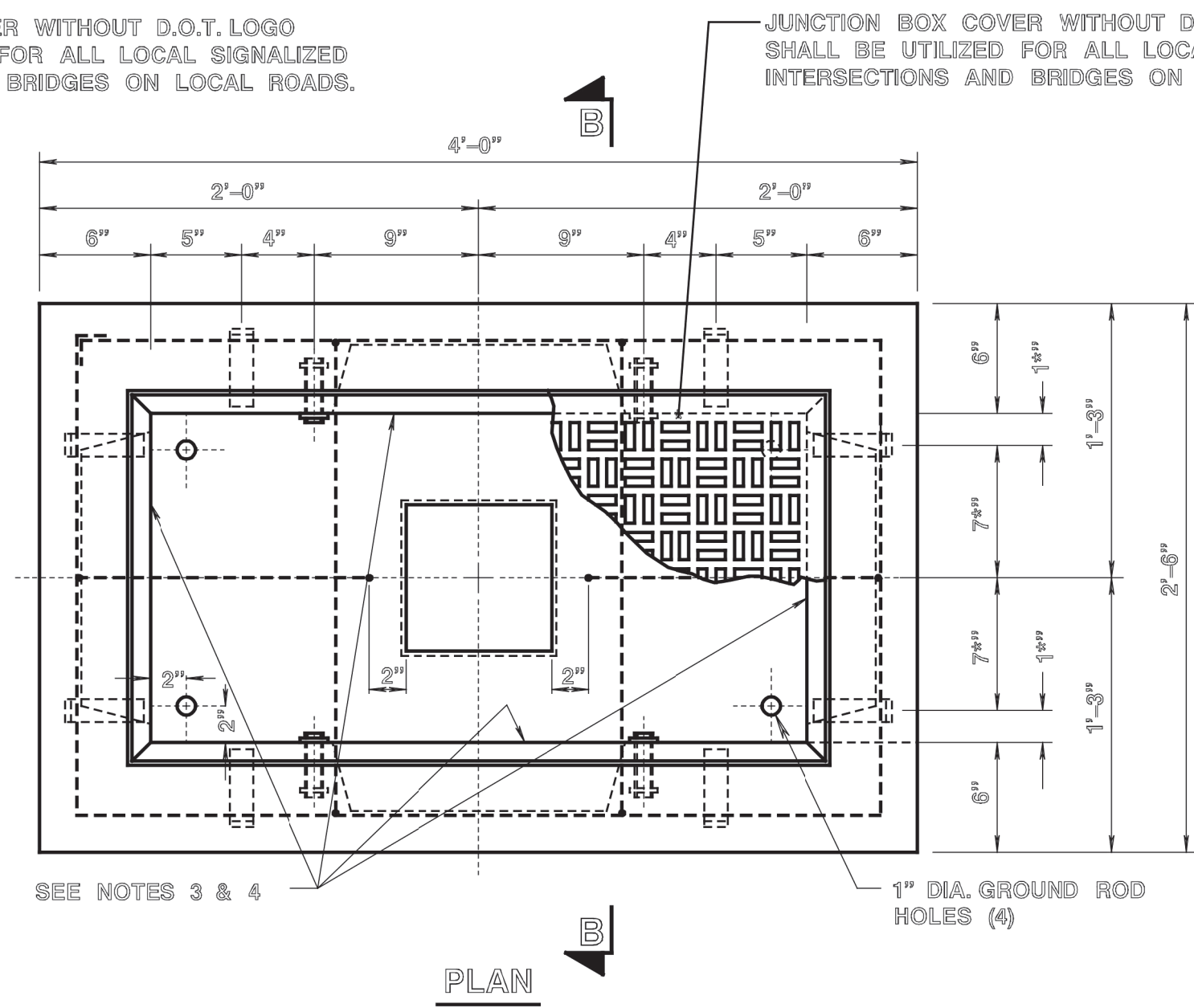
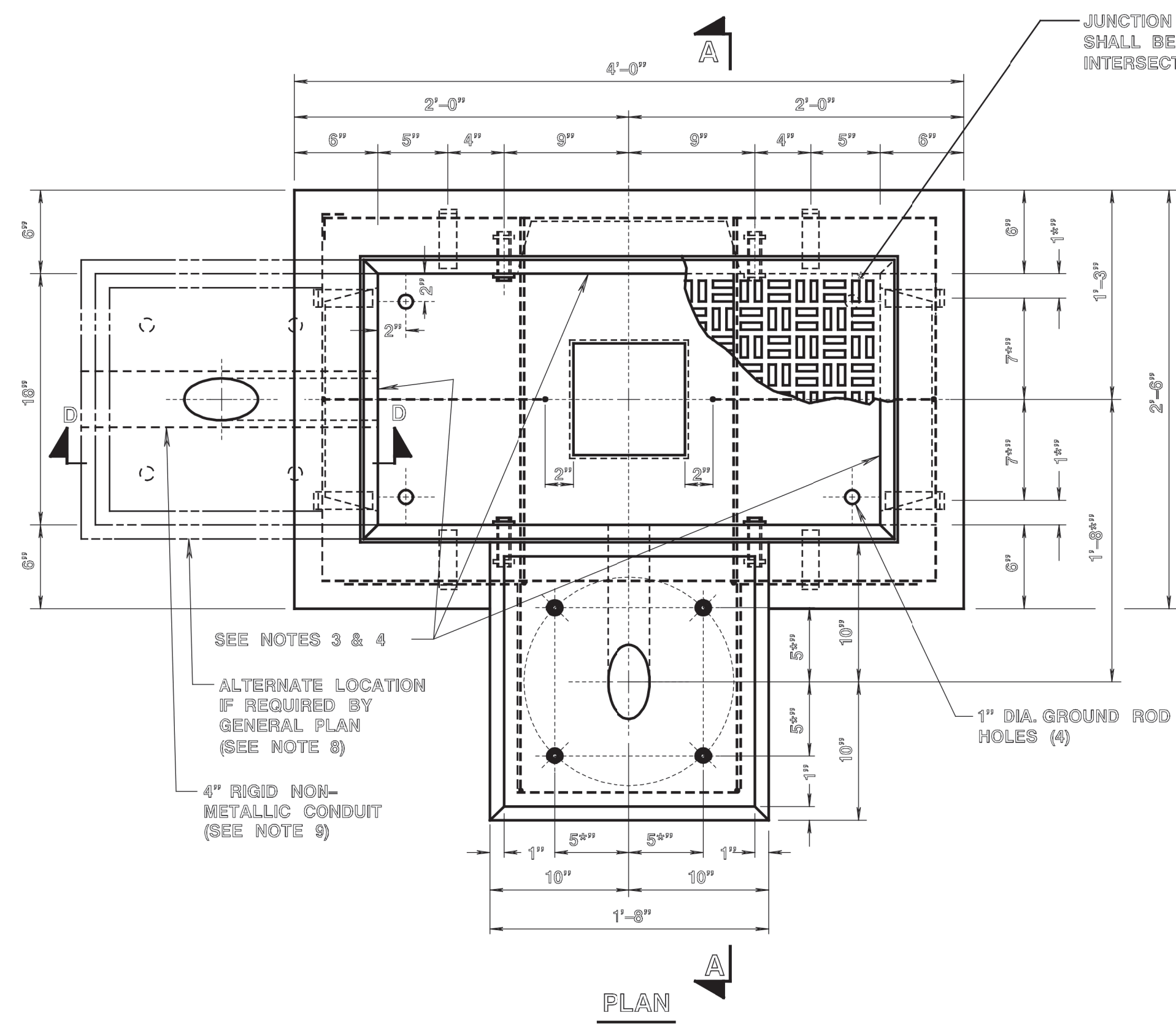
T-4507

63
197

REFERENCE

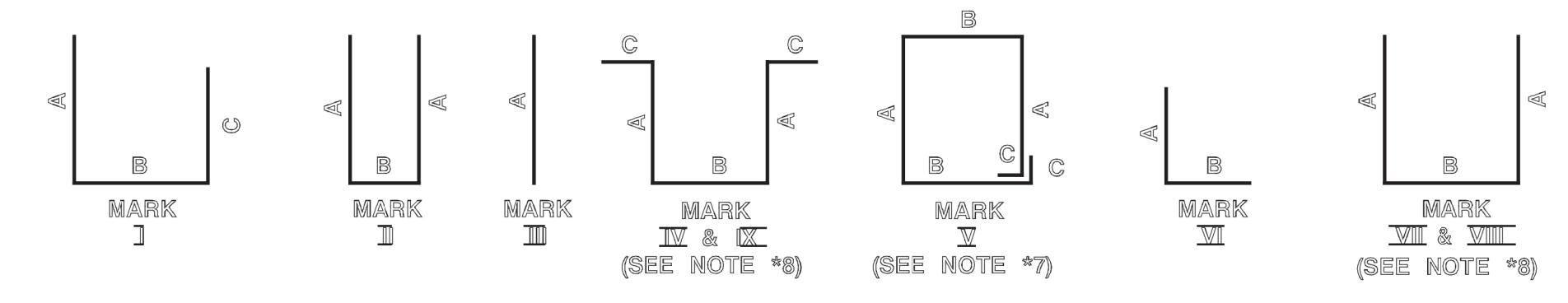
BDC07D-03

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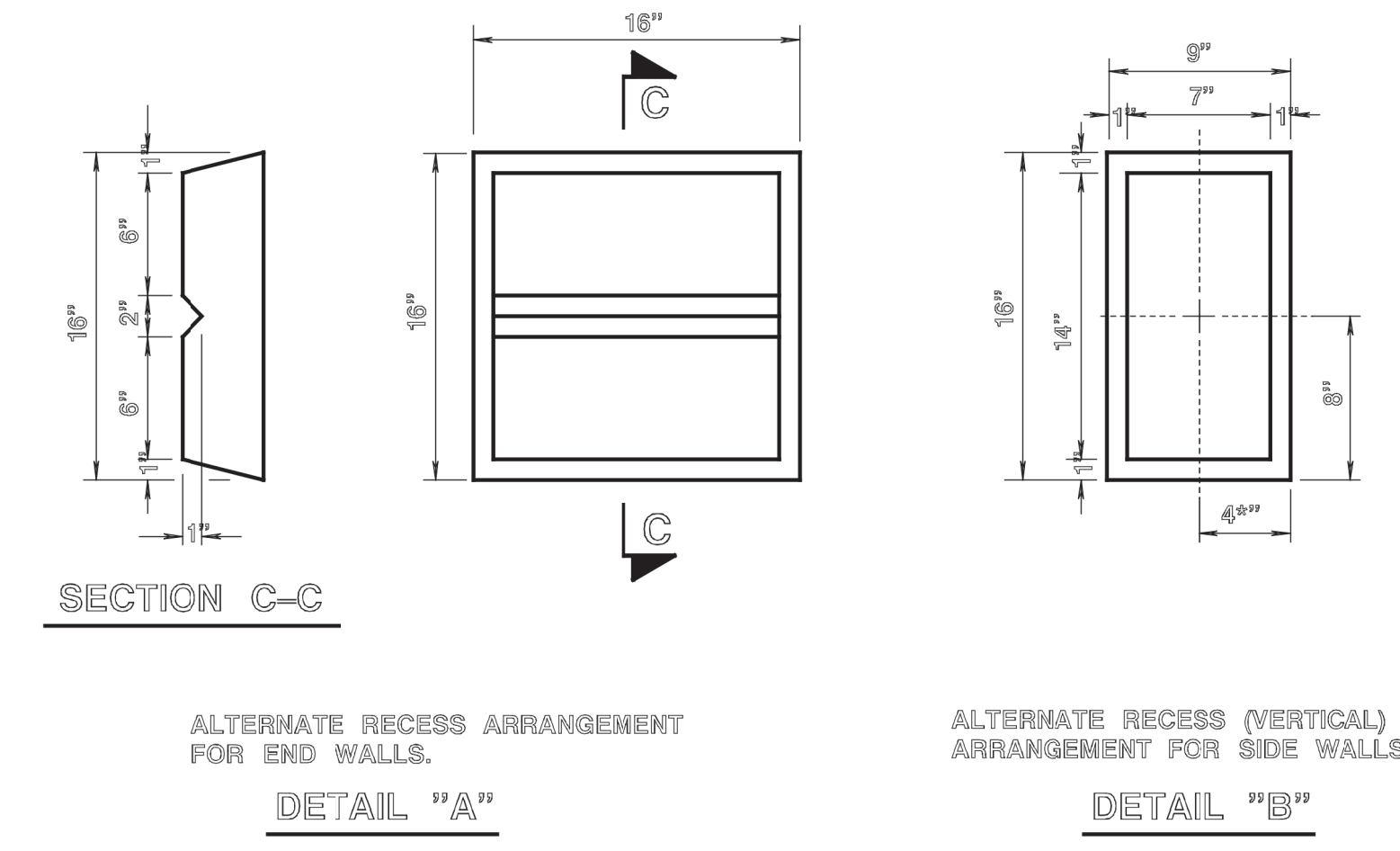
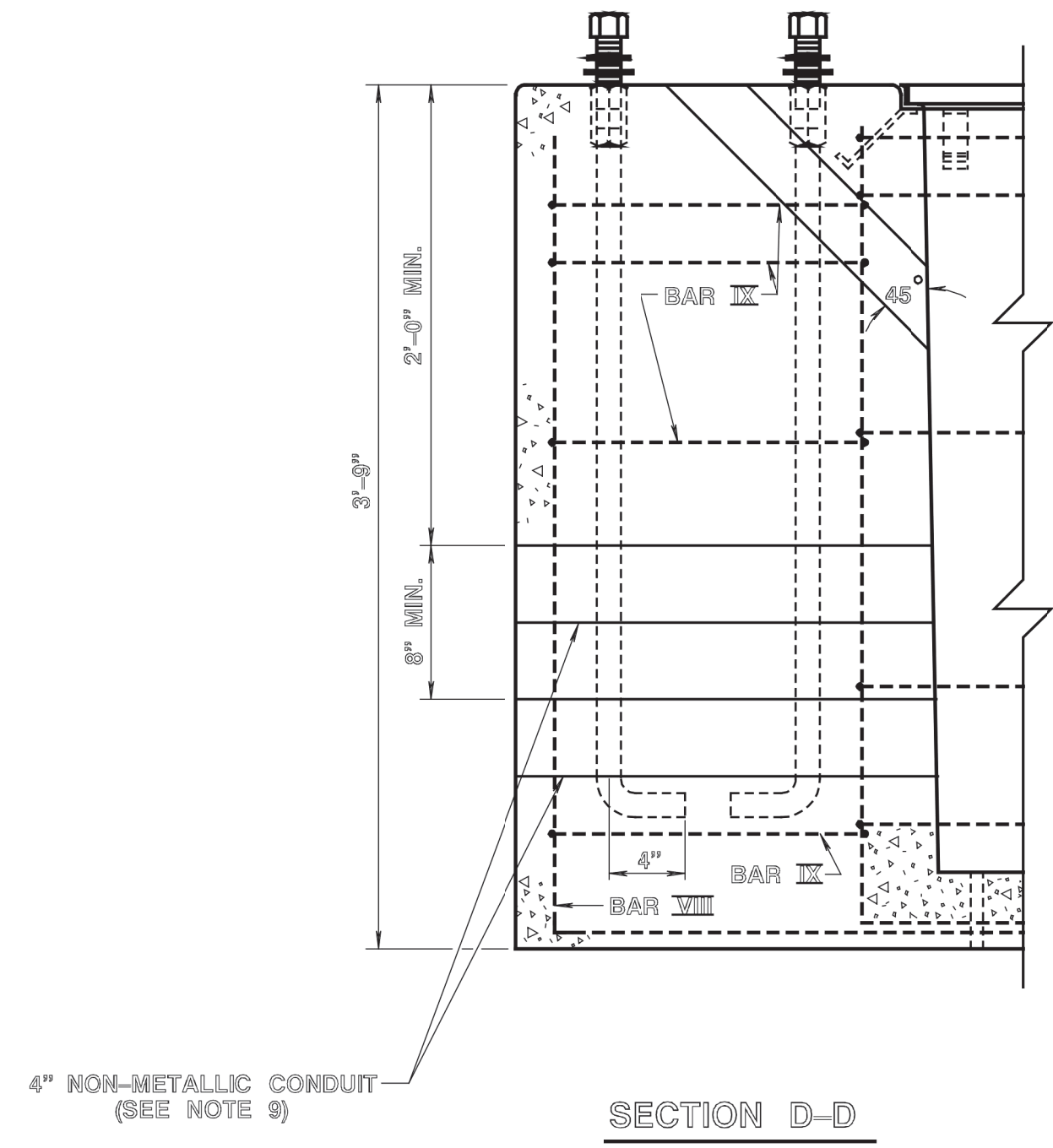
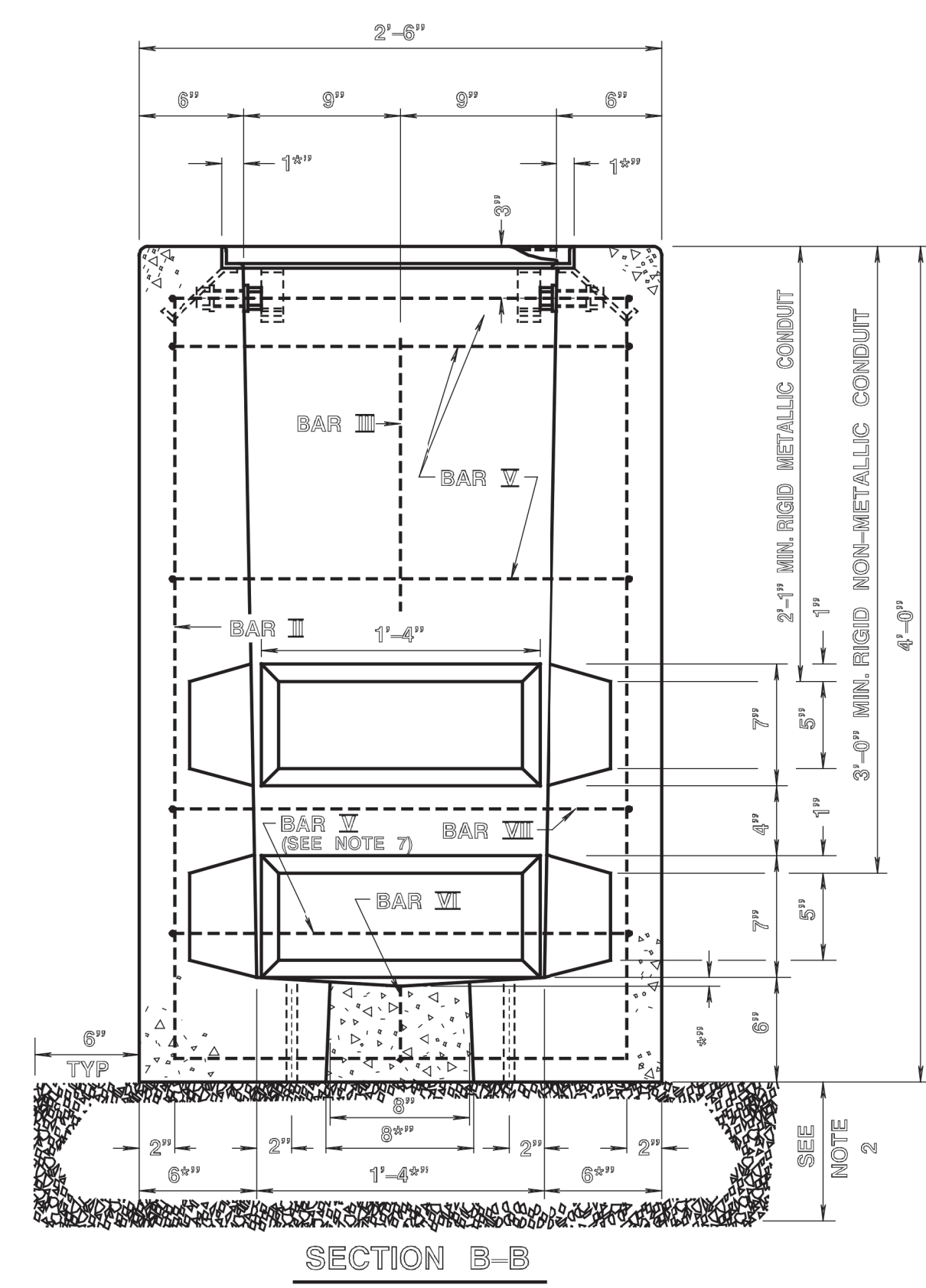
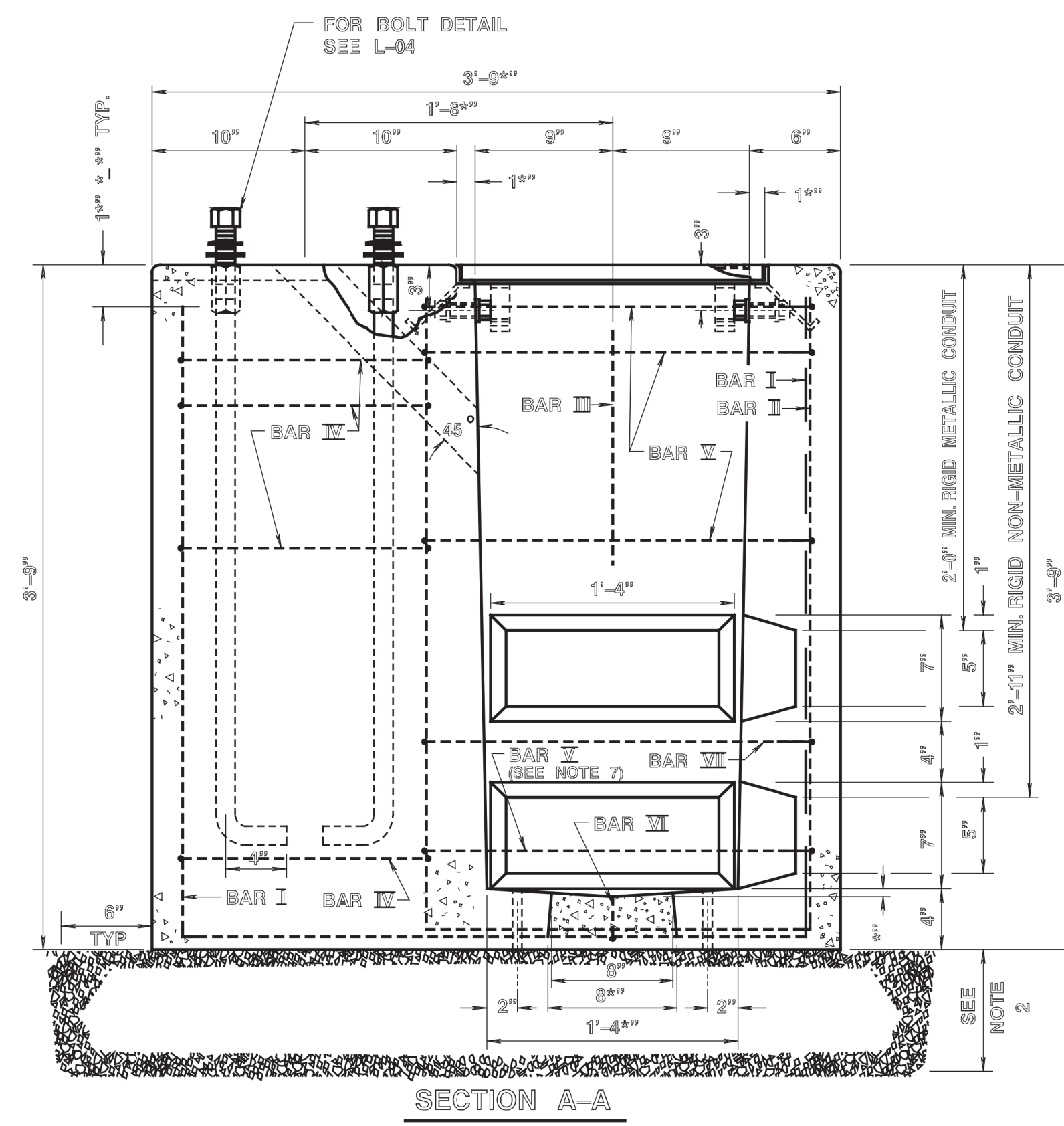
ITEM				
JUNCTION BOX FOUNDATION "JBF"				
MARK	SIZE NO. 4 RODS			NO. RODS REQ.
J	41"	40"	40"	2
I	40"	24"	—	2
II	18"	—	—	2
III	15"	16"	12"	4
IV	44"	26"	4"	4
V	1"	15"	—	2
VI	15"	28"	—	2
VII	40"	58"	—	2
VIII	15"	16"	4"	4

ITEM				
18" X 36" JUNCTION BOX "JB"				
MARK	SIZE NO. 4 RODS			NO. RODS REQ.
I	42"	25"	—	4
II	21"	—	—	2
III	44"	28"	4"	3
IV	2"	16"	—	2
V	15"	25"	—	2



NOTES:

- 1) THE CONSTRUCTION AND INSTALLATION OF PRECAST JUNCTION BOX FOUNDATION AND 18" X 36" JUNCTION BOX SHALL CONFORM TO SPECIFICATIONS FOR THE CONTRACT AND TO DETAILS AND NOTES SHOWN ON THIS DRAWING AND IN ADDITION SHALL INCLUDE APPLICABLE NOTES AND DETAILS SHOWN ON DRAWING FOR CAST-IN-PLACE TYPE.
- 2) COMPACTED 4" GRAVEL OR BROKEN STONE BASE REQUIRED FOR ALL PRECAST UNITS. MINIMUM DEPTH 8".
- 3) A 18" X 7" X 4" RECESS TO BE PROVIDED IN SIDE AND END WALLS AS SHOWN.
- 4) AFTER THE INSTALLATION OF CONDUIT, ALL OPEN RECESSES ARE TO BE COMPLETELY BRICKED AND FINISHED.
- 5) AN ALTERNATE RECESS ARRANGEMENT MAY BE SUBSTITUTED AS SHOWN BELOW IN DETAIL "A" & "B". IF THIS ARRANGEMENT IS USED AND THE CONDUIT IS BROUGHT INTO THE JUNCTION BOX THROUGH THE TOP OF THE RECESS THEN THE ENTIRE RECESS MUST BE BRICKED FROM TOP TO BOTTOM.
- 6) PRECAST JUNCTION BOX FOUNDATION MAY BE INSTALLED BEHIND THE GUIDE RAIL OR IN AREAS WHERE THE SLOPE IS LESS THAN 1:22.
- 7) INSTALL THIS BAR WHEN USING DETAIL "A" ONLY.
- 8) FOR ALTERNATE LOCATION FOR THE FOUNDATION, USE MARK 8 AND 9 IN PLACE OF MARK 1 AND 4.
- 9) ALIGN CONDUITS.



JUNCTION BOX FOUNDATION "JBF"
PRECAST

18" X 36" JUNCTION BOX "JB"
PRECAST

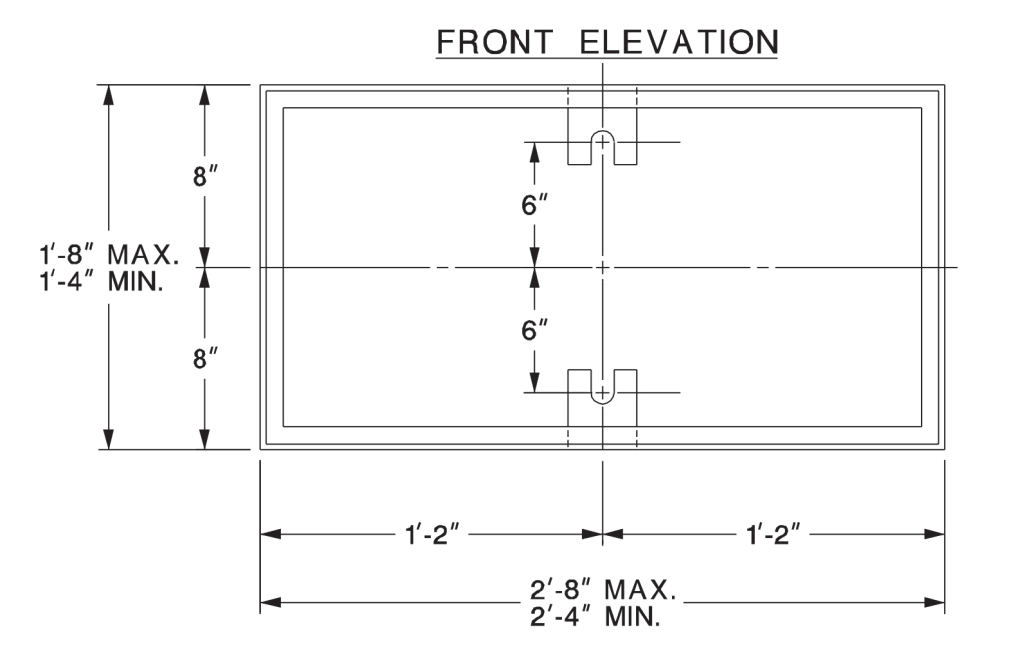
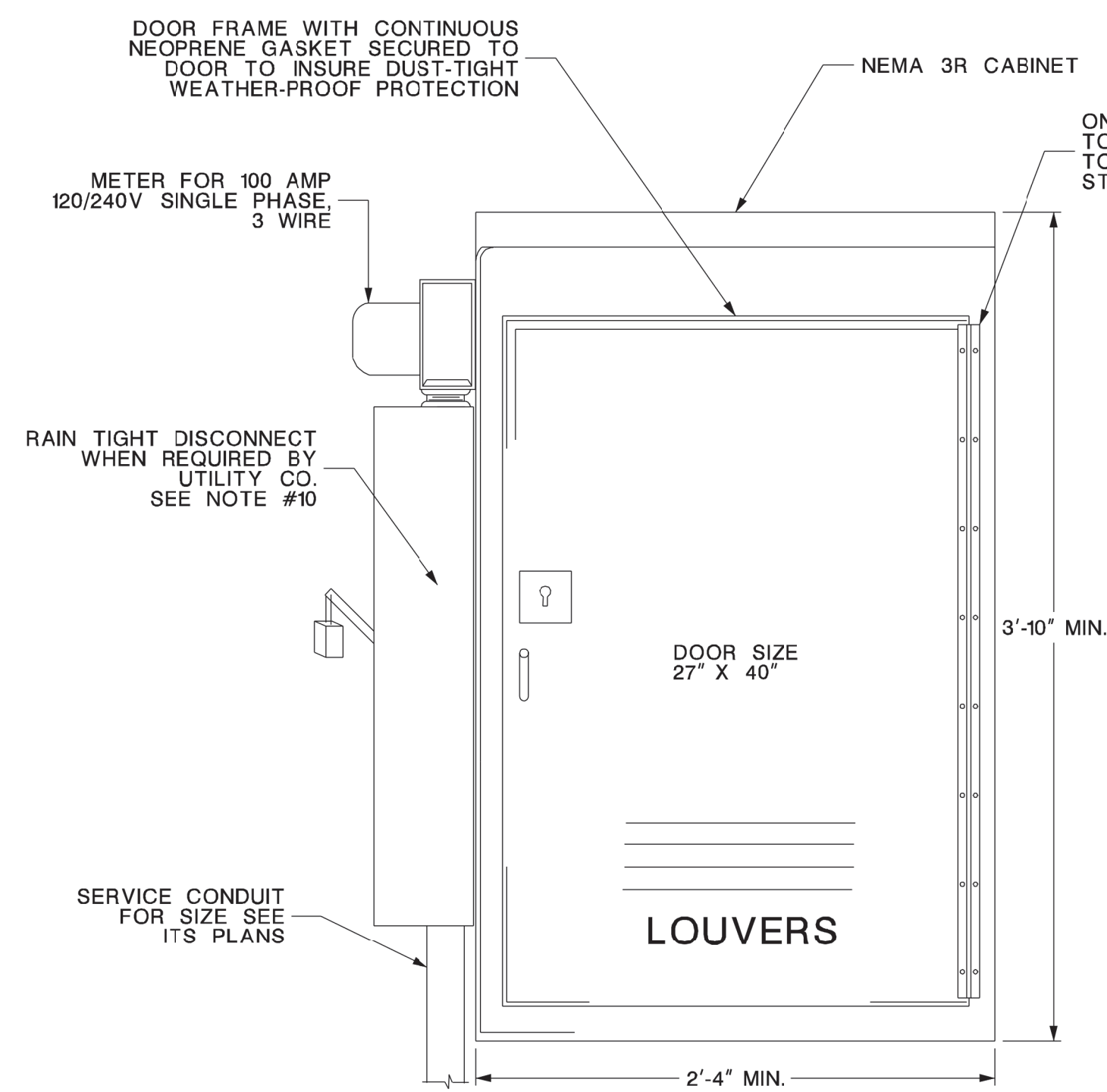
ALTERNATE JUNCTION BOX FOUNDATION
PRECAST

NEW JERSEY DEPARTMENT OF TRANSPORTATION

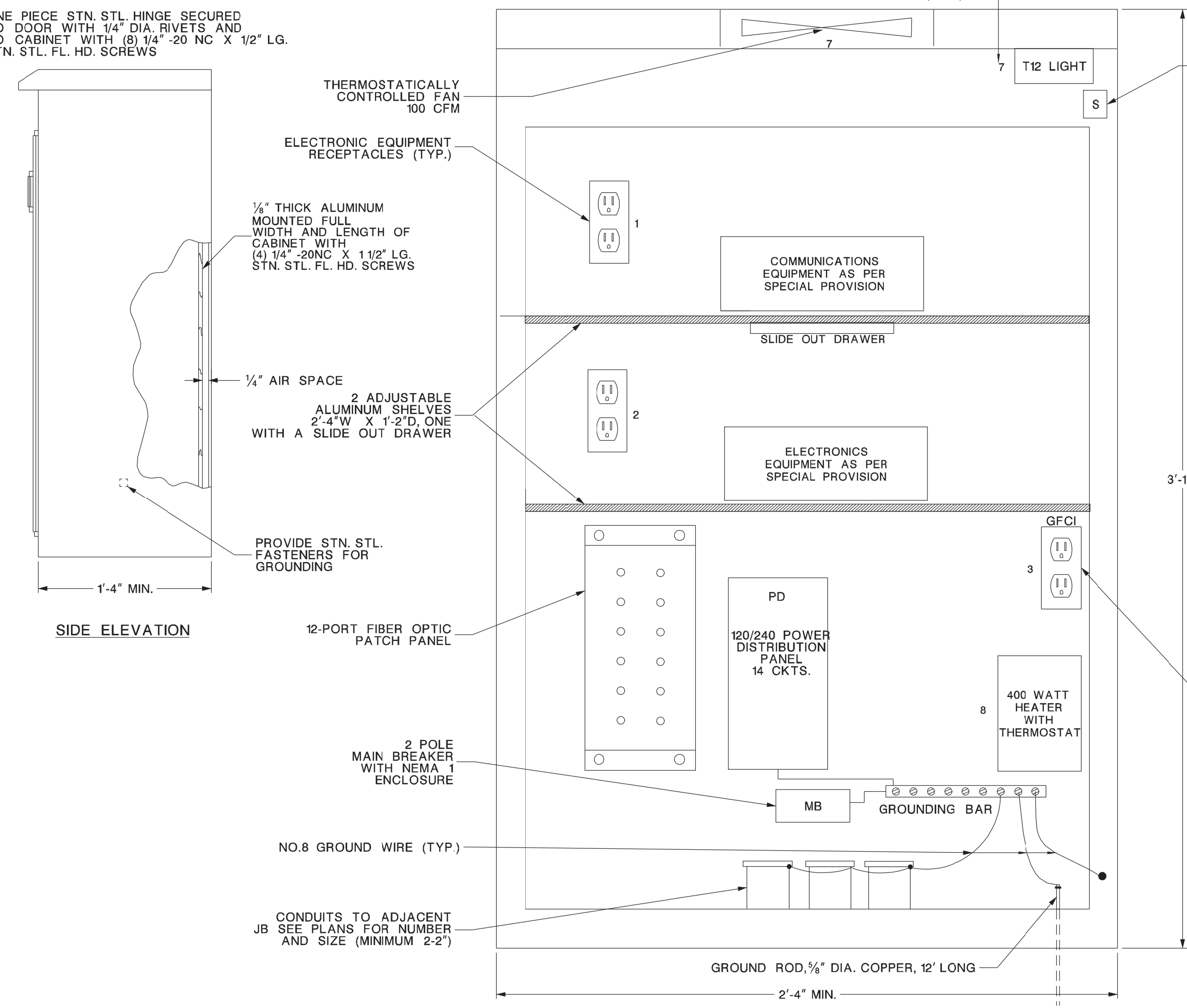
ELECTRICAL DETAILS
N.T.S.

JUNCTION BOX FOUNDATION "JBF"
18" X 36" JUNCTION BOX "JB"
PRECAST

L-0507



CABINET TYPE "M" - FABRICATED



CABINET EQUIPMENT LAYOUT (TYP.)

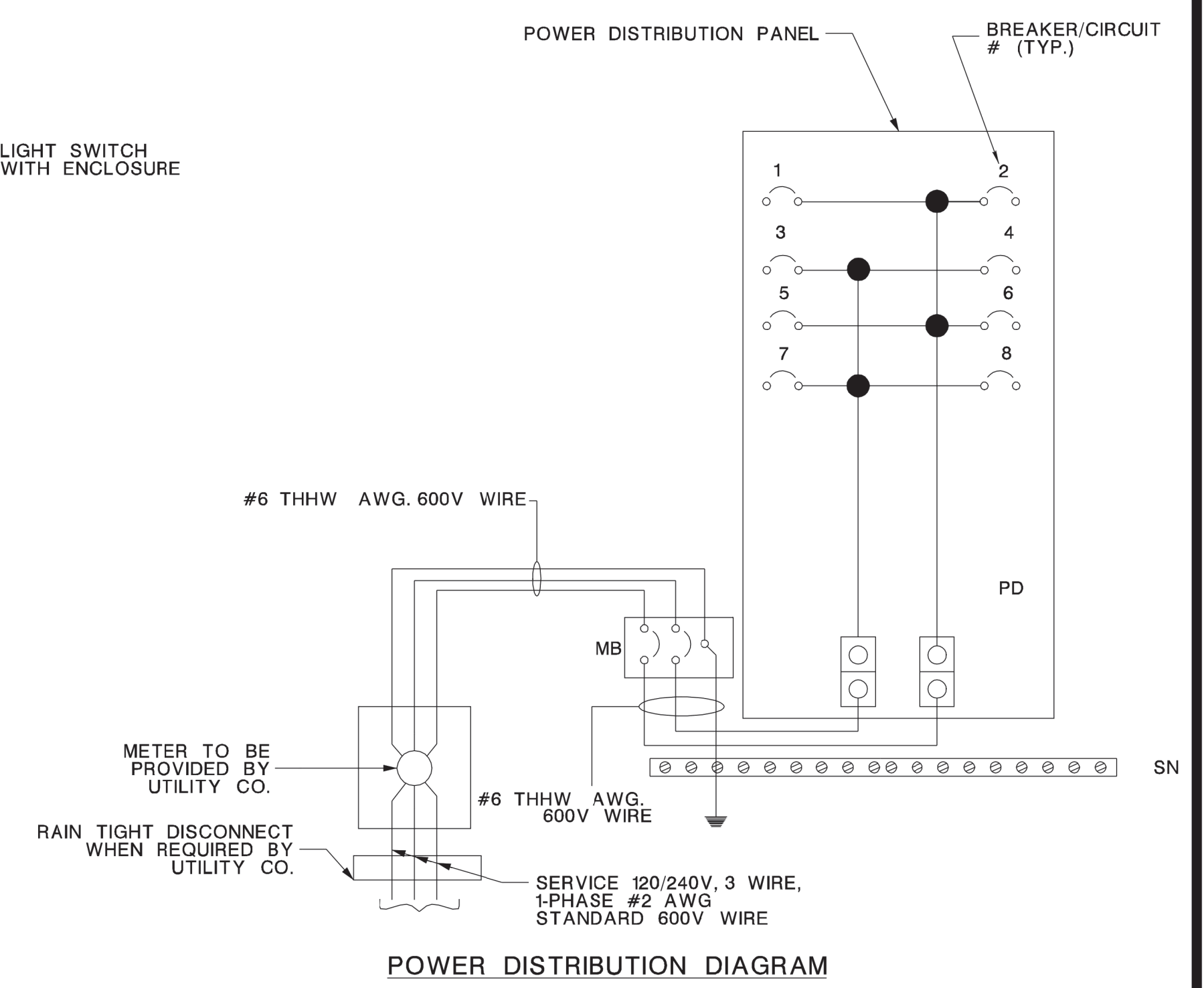


TABLE A

BREAKERS #	BREAKER RATING FUNCTION	TRIP RATING (AMPS)
MB	MAIN BREAKER 60 AMP	60
1	ELECTRONIC EQUIPMENT RECEPTACLE	15
2	ELECTRONIC EQUIPMENT RECEPTACLE	15
3	CONVENIENCE RECEPTACLE (GFCI)	15
4	SPARE	15
5	SPARE	15
6	SPARE	15
7	FAN & LIGHT	15
8	HEATER	20

- NOTES:
- ENSURE CABINET AND CABINET DOOR IS FABRICATED FROM SHEET ALUMINUM 1/8" THICK, 5052-H32 ALLOY, UNPAINTED.
 - SUPPLY WITH EACH CABINET (2) ANCHOR BOLTS 3/4" - 10NC X 15" LG. STL WITH GALVANIZED 3" COUPLING (2) STAINLESS STEEL 1 1/2" O.D. X 1/4" THK. FLAT WASHERS AND (2) 3/4" - 10NC X 3" LG. STAINLESS STEEL CAP SCR.
 - SECURE CABINET DOOR WITH A SUB-TREASURY LOCK NO. 0357S AND KEYPAD ALIKE FOR KEY NO. 5 AVAILABLE FROM THE AMERICAN HARDWARE CO. NEW BRITAIN, CONN. OR A TUMBLER LOCK NO. 15481 ARS AND KEYPAD ALIKE FOR NO. 2 AVAILABLE FROM CORBIN LOCK CO. NEW BRITAIN, CONN.
 - SECURE CABINET LOCK TO THE DOOR WITH #10 - 24 X 1 1/2" ROUND HEAD (STN. STL.) MACHINE SCREWS.
 - 120V EXPOSED WIRING IS NOT PERMITTED. ENCASE WIRING TO ENCLOSURES AND OUTLETS IN LIQUID TIGHT FLEXIBLE CONDUIT AND FITTINGS INSIDE THE CABINET.
 - ENSURE ALL EQUIPMENT IS UL & NEMA LISTED FOR OUTDOOR INSTALLATION INSIDE NEMA 3R CABINET.
 - LABEL ALL ELECTRICAL RECEPTACLES EXCEPT GFCI AS "ELECTRONIC EQUIPMENT ONLY". AND GFCI RECEPTACLE AS "CONVENIENCE RECEPTACLE".
 - FOR BREAKER RATINGS, SEE TABLE A.
 - PROVIDE SURGE SUPPRESSION.
 - METER, RAIN TIGHT DISCONNECT SWITCH AND SERVICE CONDUIT ARE NOT REQUIRED IF ELECTRIC SERVICE IS CONNECTED TO ANOTHER LOAD CENTER AND NOT TO UTILITY COMPANY POWER SOURCE.
 - WHERE REQUIRED, ENSURE METER PAN CONFORMS TO UTILITY COMPANY'S HEIGHT REQUIREMENTS.

NOT TO SCALE

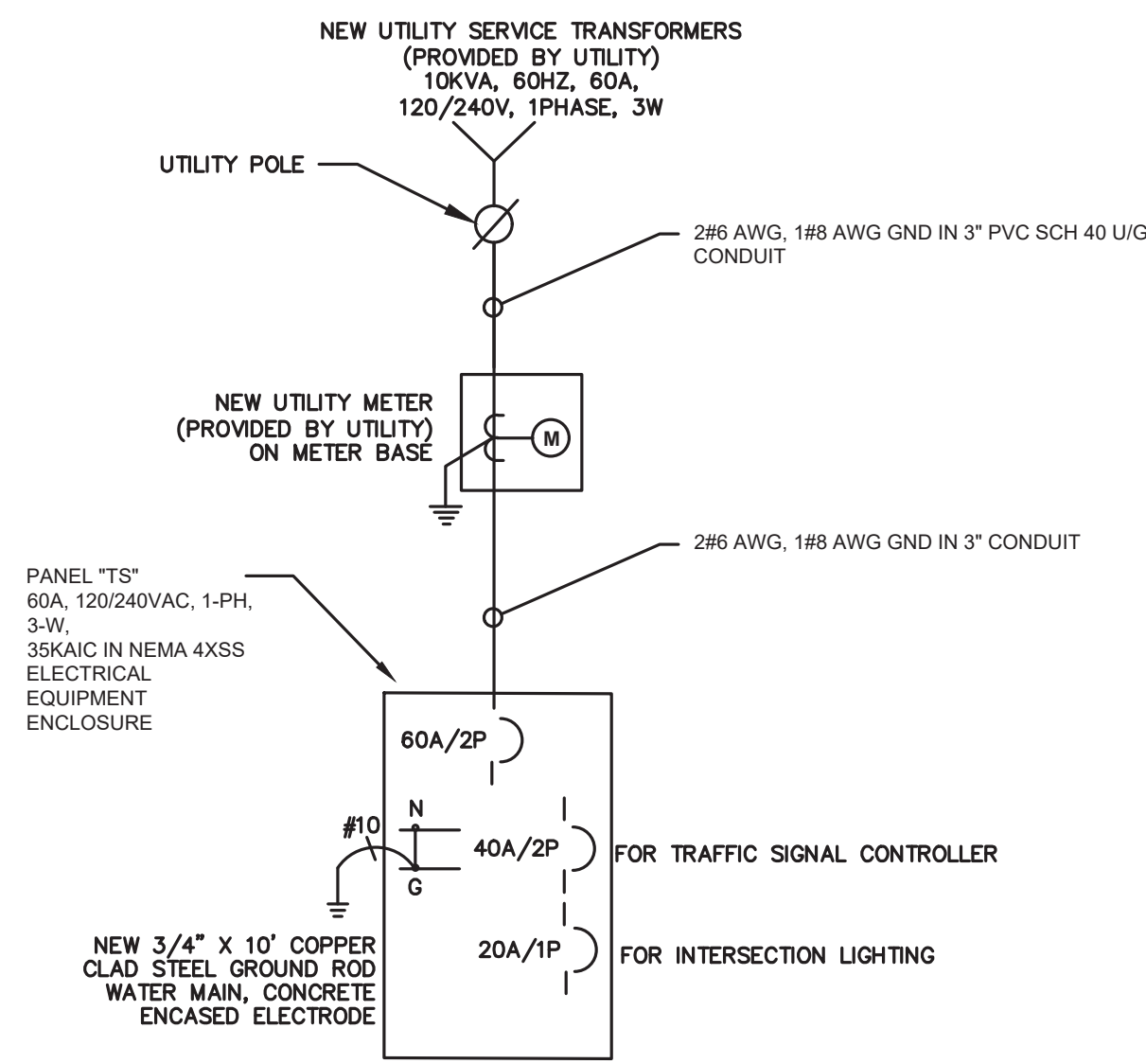
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NEW JERSEY DEPARTMENT OF TRANSPORTATION

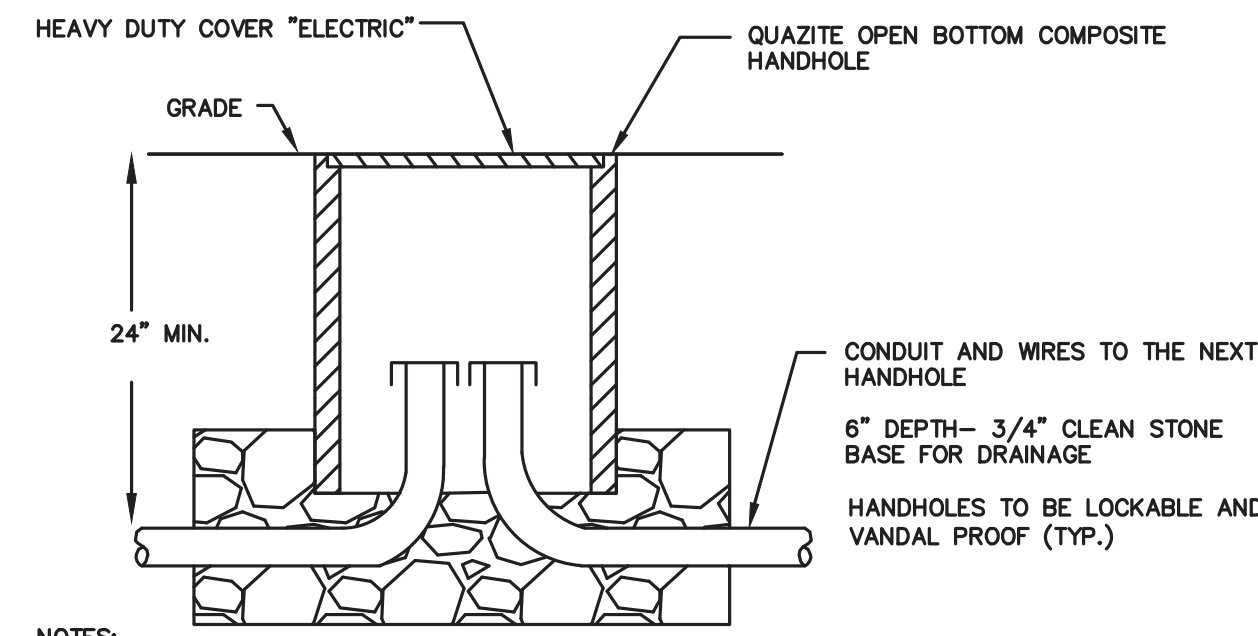
ITS DETAILS

ITS CONTROLLER

65
197



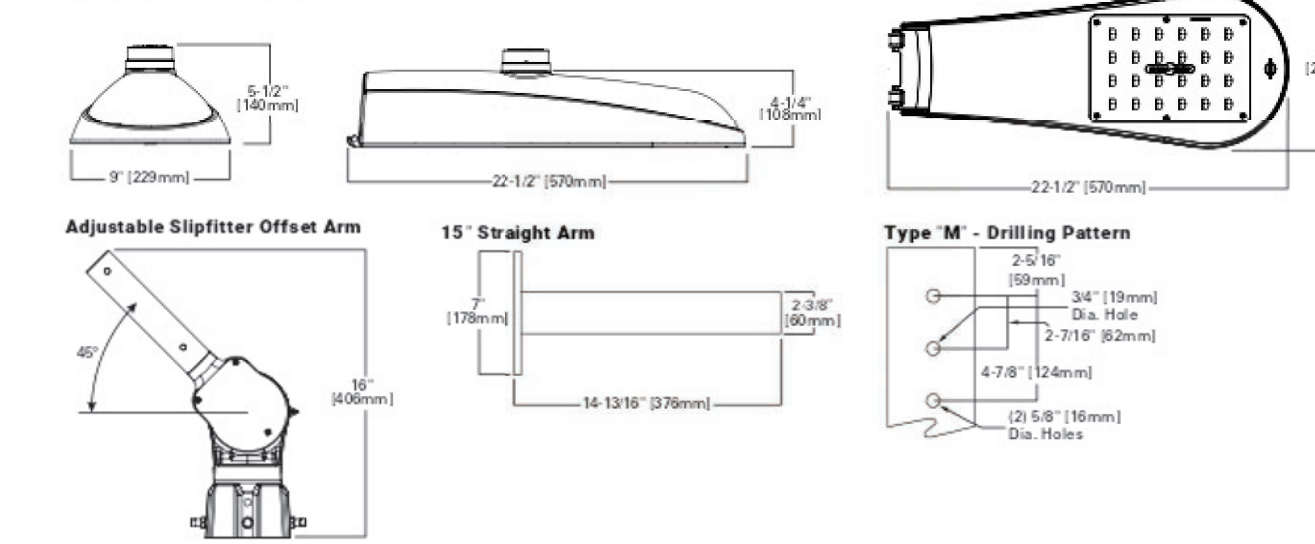
ONE-LINE DIAGRAM (PER INTERSECTION)
N.T.S.



- NOTES:
1. UNDERGROUND HANDHOLE SHALL BE AN OPEN BOTTOM QUAZITE ENCLOSURE WITH GASKETS AS MANUFACTURED BY HUBBELL OR APPROVED EQUAL WITH VERTICAL DESIGN LOAD RATING OF 22,500 LBS (TIER 22).
 2. ALL COVERS SHALL BE DESIGNED TO BOLT DOWN WITH GASKETS TO REDUCE INCOMING FLUIDS AND WITH A PERMANENTLY MARKED LOGO "ELECTRIC" AS MANUFACTURED BY HUBBELL OR APPROVED EQUAL WITH VERTICAL DESIGN LOAD RATING OF 22,500 LBS (TIER 22).

TYPICAL HANDHOLE DETAIL
N.T.S.

Dimensional Details



Lumen Maintenance

Light Engine	Ambient Temperature	T8-T11 Lumen Maintenance (at 1000 Hours)	Theoretical L70 (Hours)
PA1	40°C	98%	> 800,000 @ 40°C

Lumen Multiplier

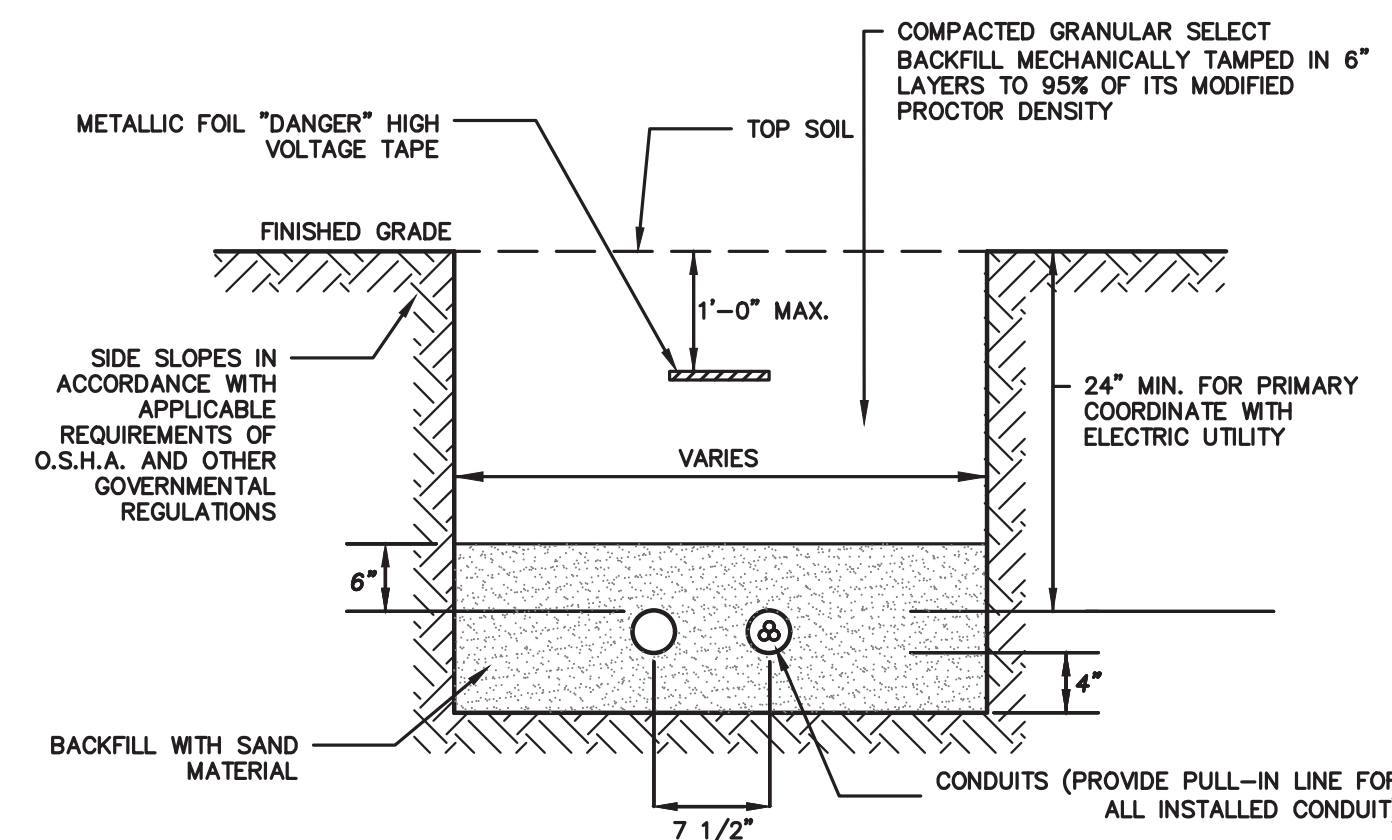
Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

FADC Settings

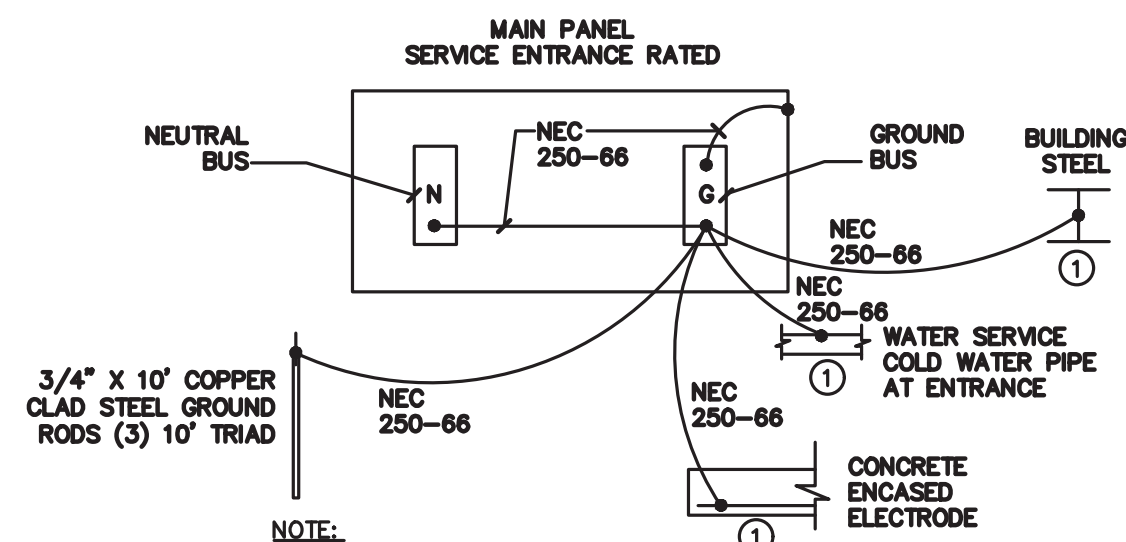
FADC Position	Percent of Typical Lumen Output
1	25%
2	49%
3	55%
4	62%
5	72%
6	77%
7	82%
8	85%
9	90%
10	100%

Note: * 0.95 typical value

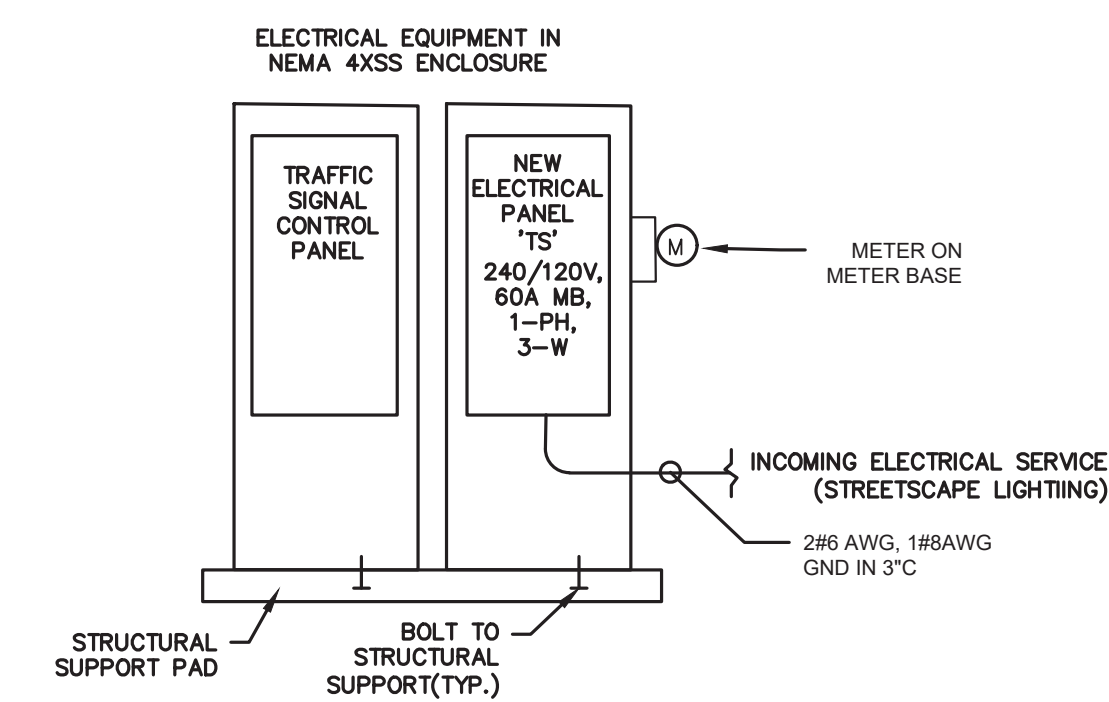
LUMINAIRE DETAIL
N.T.S.



TYPICAL TRENCHING DETAIL
N.T.S.

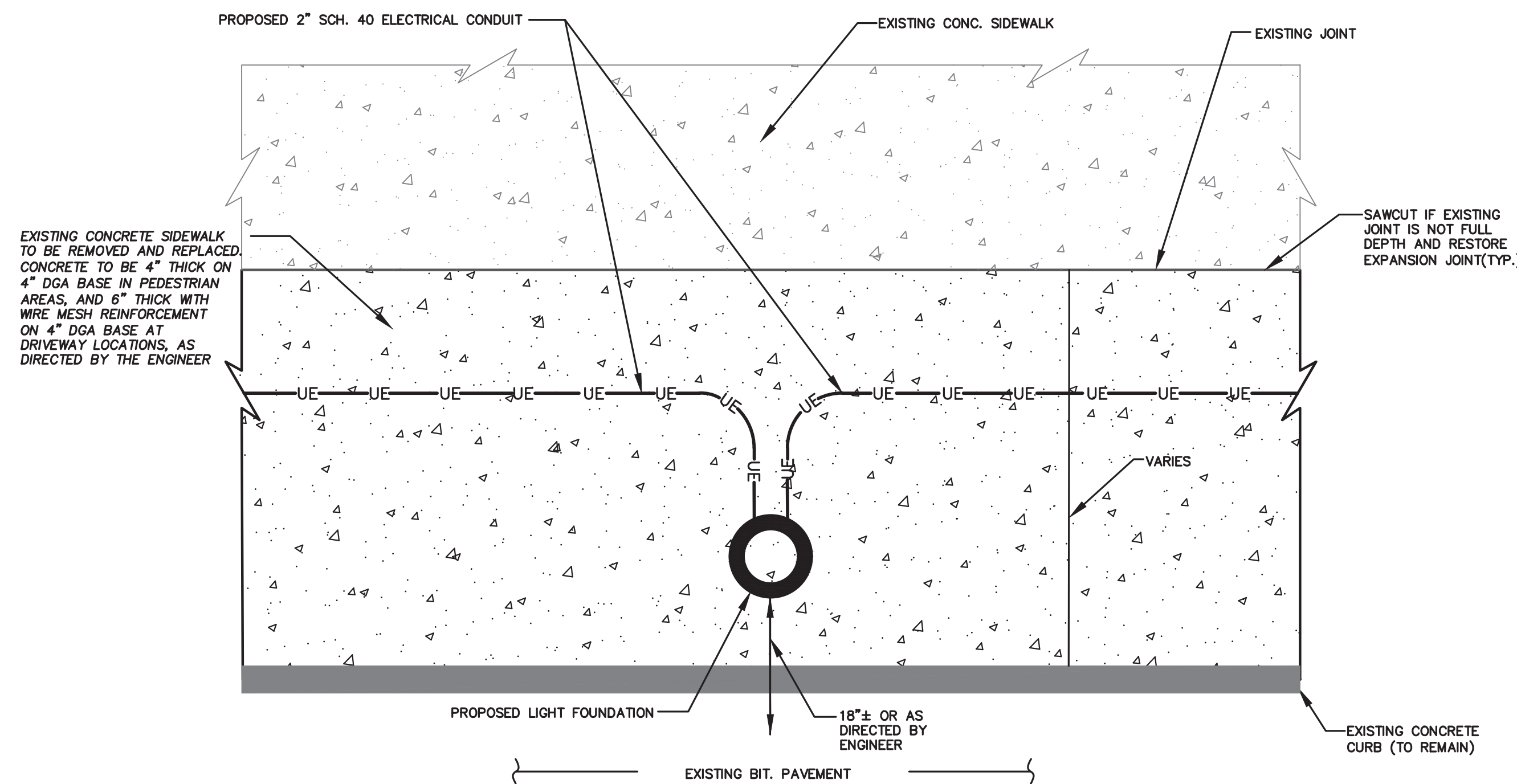


SERVICE GROUNDING DETAIL
N.T.S.



- NOTES:
1. CONTRACTOR TO SUBMIT AND VERIFY ACTUAL SIZE OF ENCLOSURE DURING SHOP DRAWING STAGE OF PROJECT.
 2. THE ENCLOSURE SHALL BE NEMA 4XSS.
 3. NEW PANELBOARD "TS" TO FEED ALL 120/240V LIGHTING LOADS AND TRAFFIC SIGNAL CONTROLLER LOADS.

ELECTRICAL EQUIPMENT & ENCLOSURE (PER INTERSECTION)
N.T.S.



PLAN-TYPICAL LIGHT FOUNDATION INSTALLATION IN CONCRETE
N.T.S.

CD-1 CD-6

NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

CONSTRUCTION DETAILS (1 OF 6)

CVE
ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS

(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400

JOHN H. ALLGAIER P.E. & P.P. (1983 - 2021) NJ PE LIC NO. 25839	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24555	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & L.S. LIC NO. 24271 NJ PP LIC NO. 2089
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32956	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458 NJ PP LIC NO. 4361

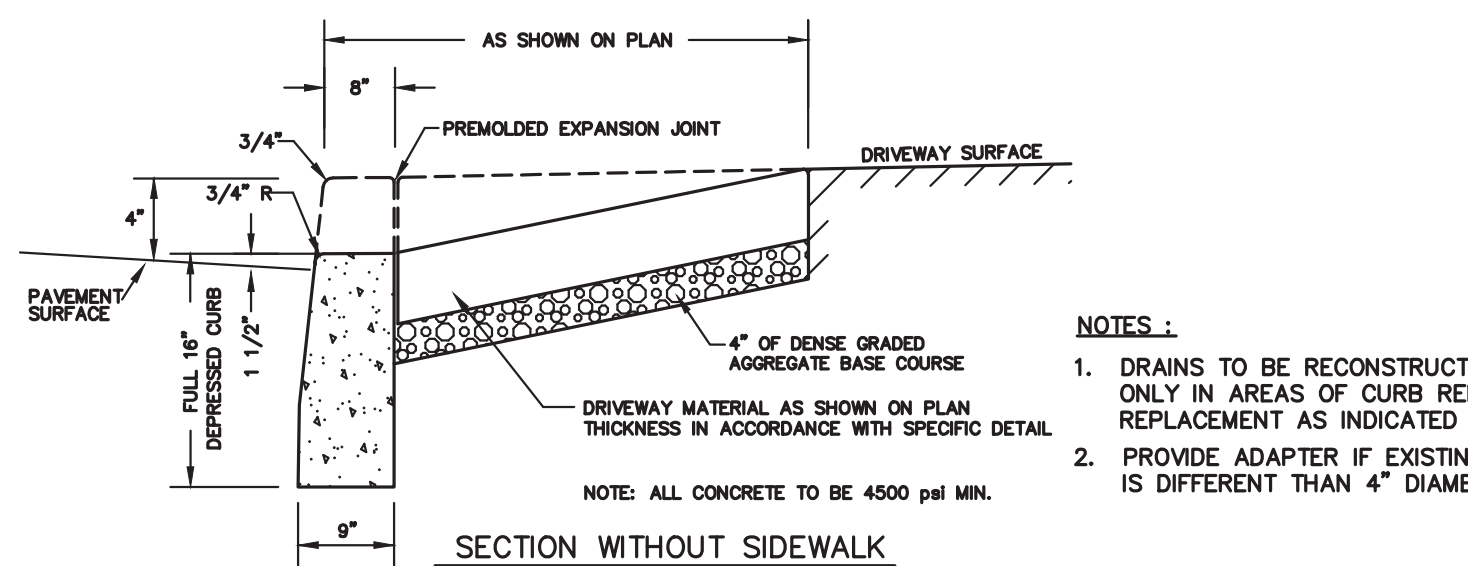
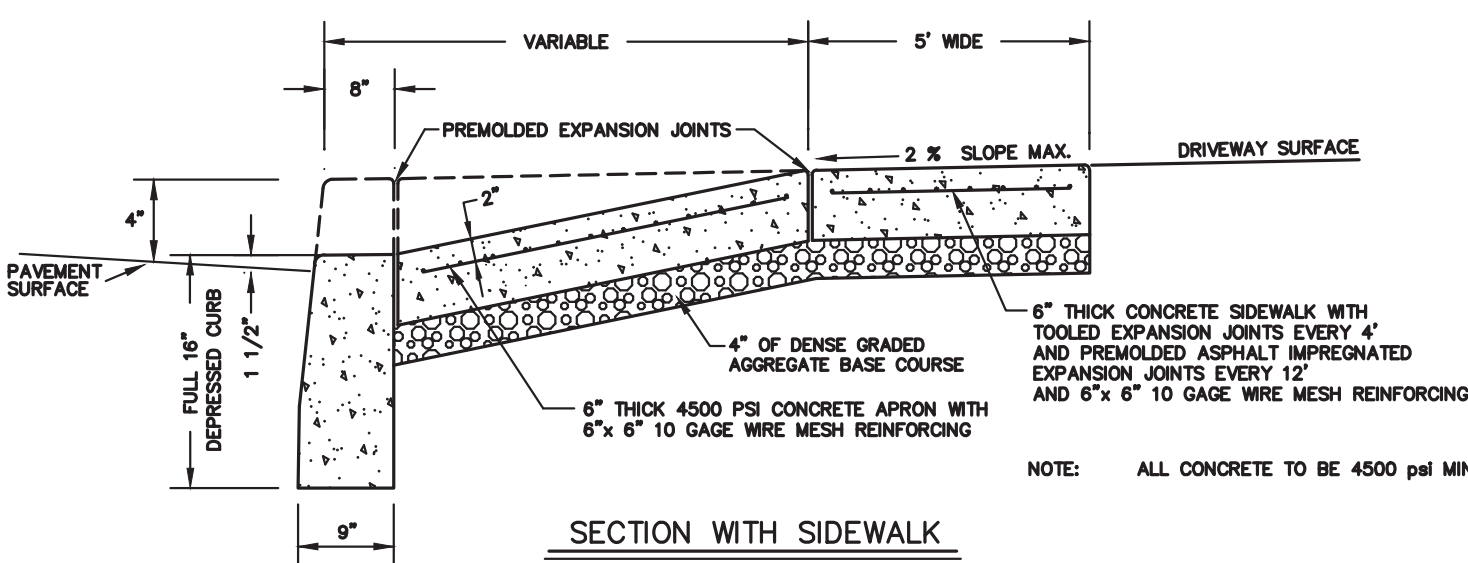
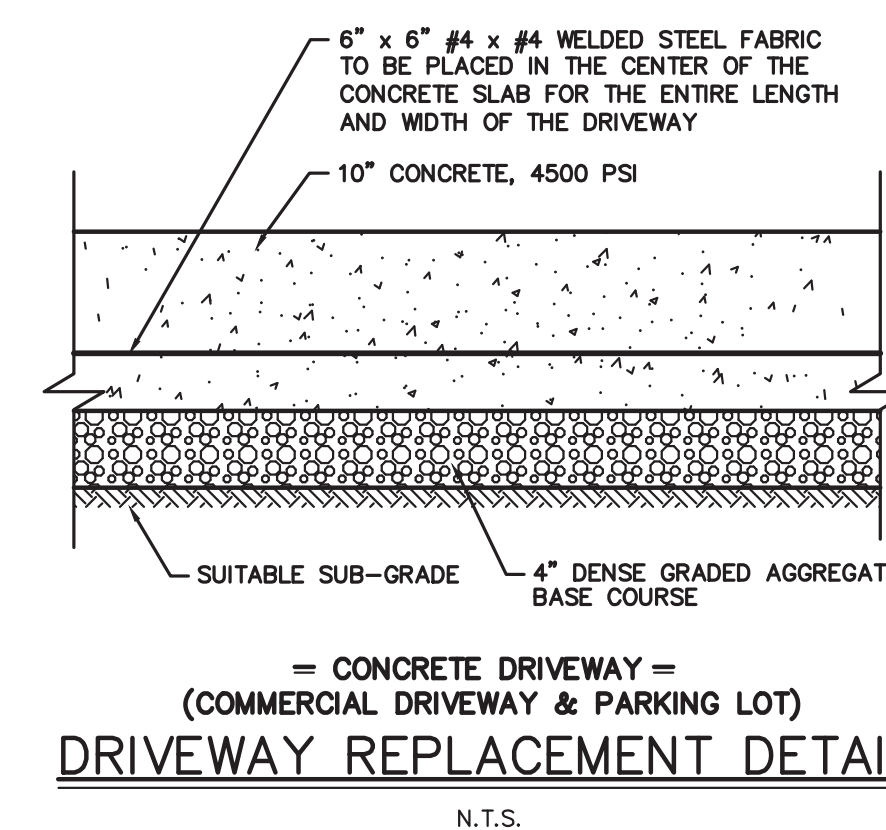
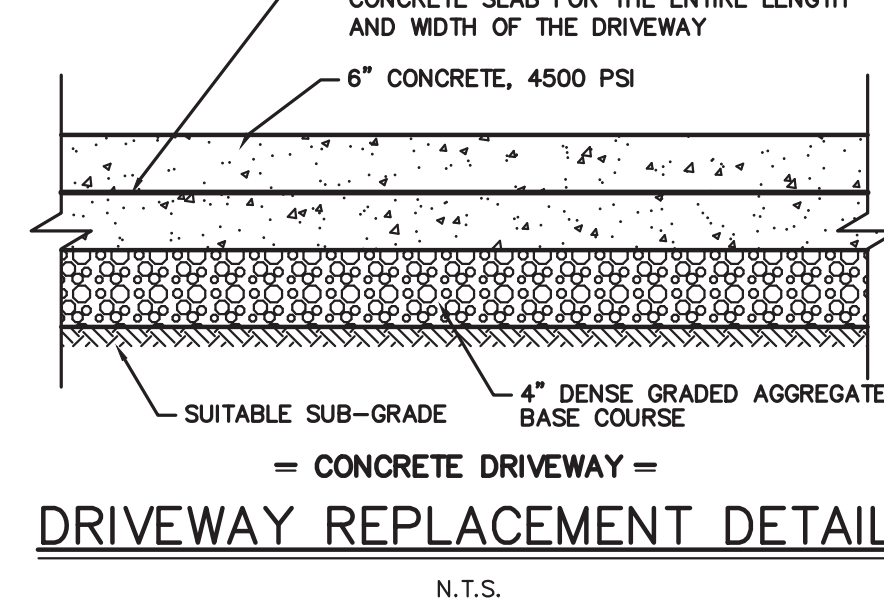
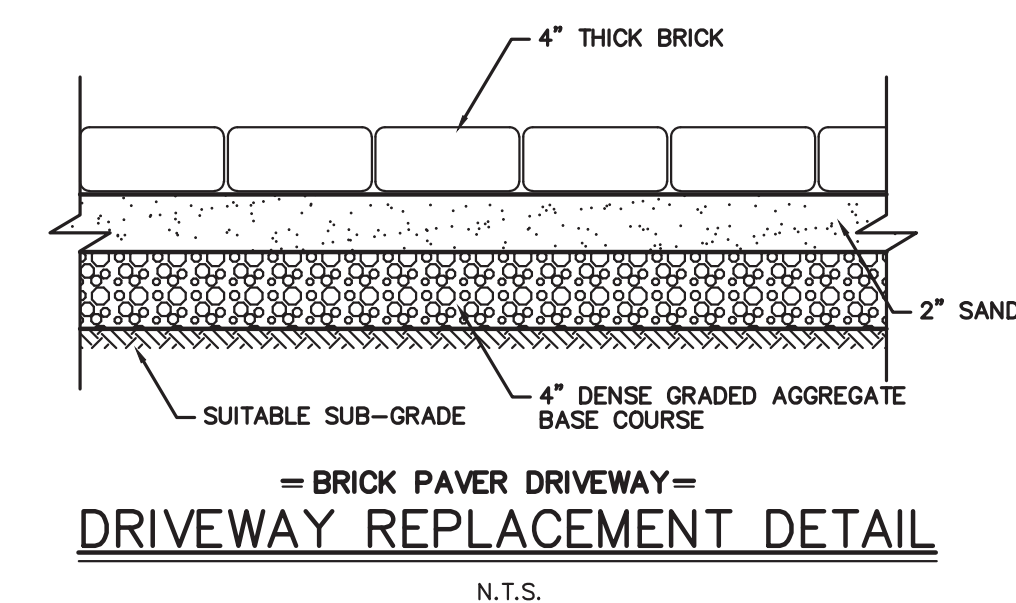
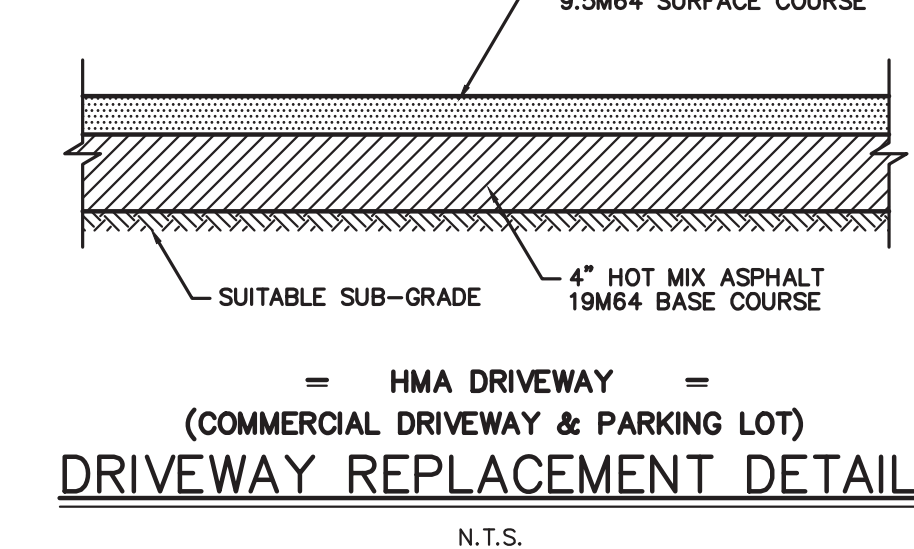
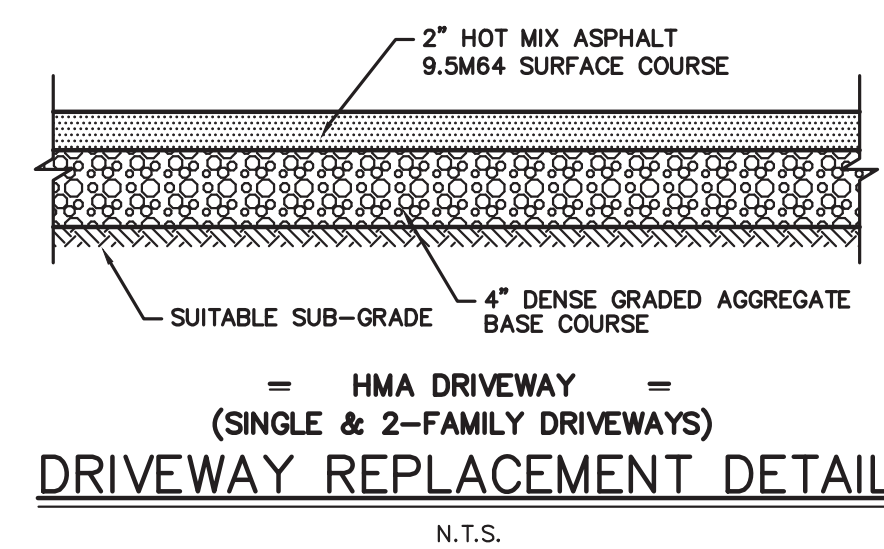
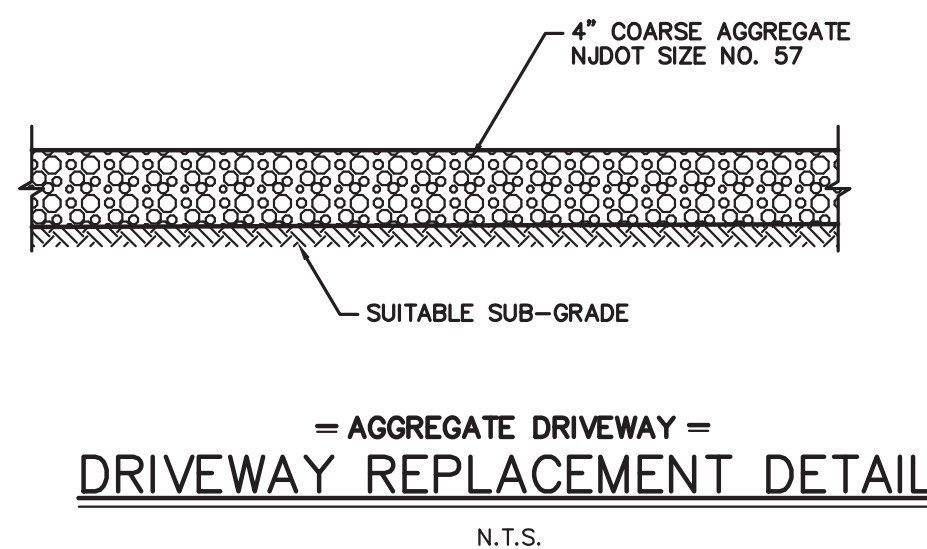
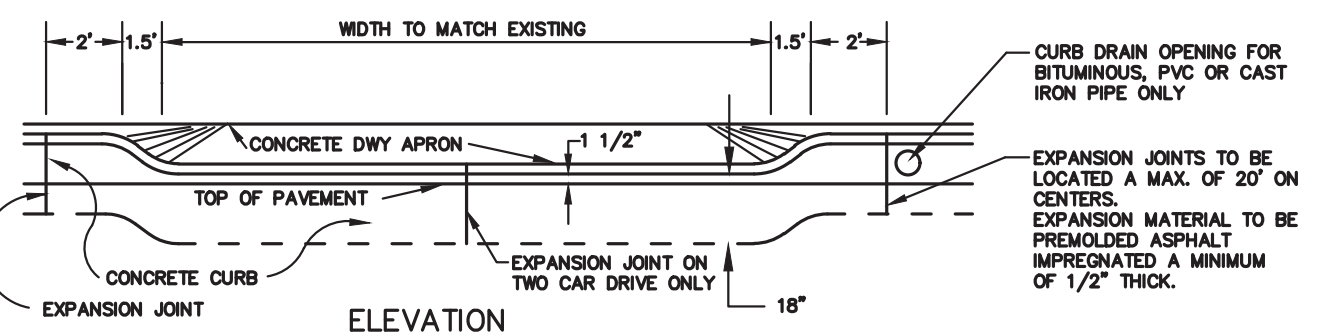
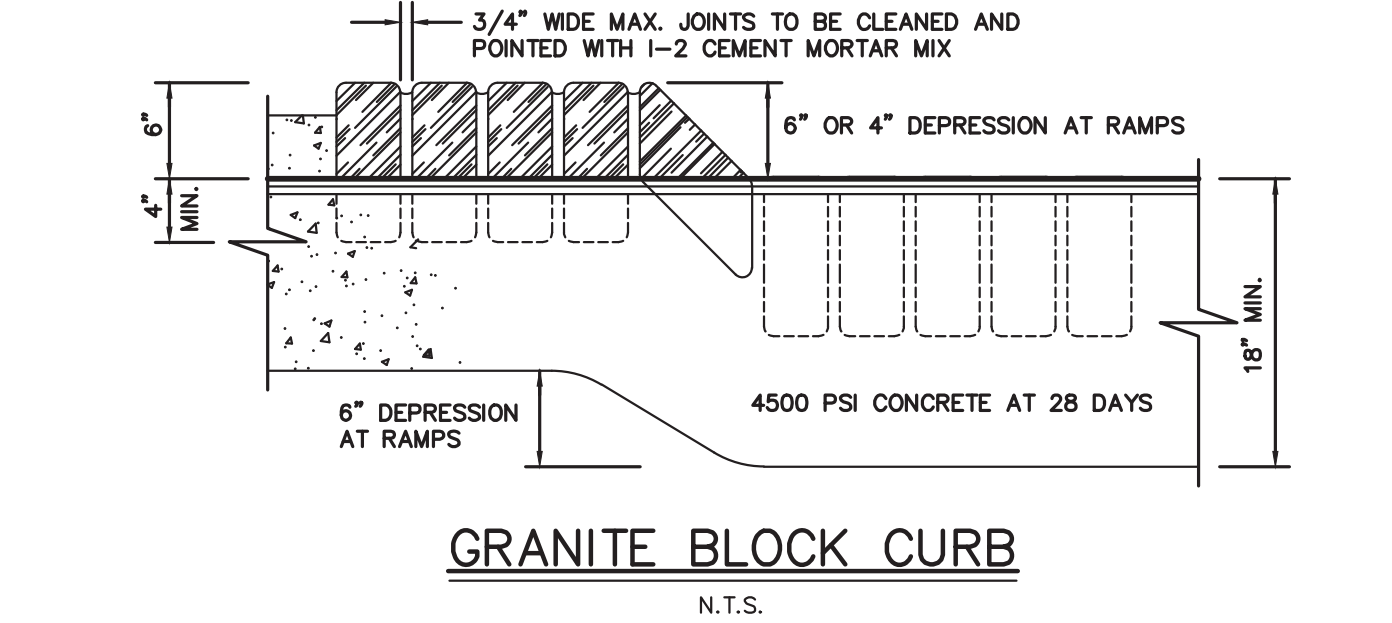
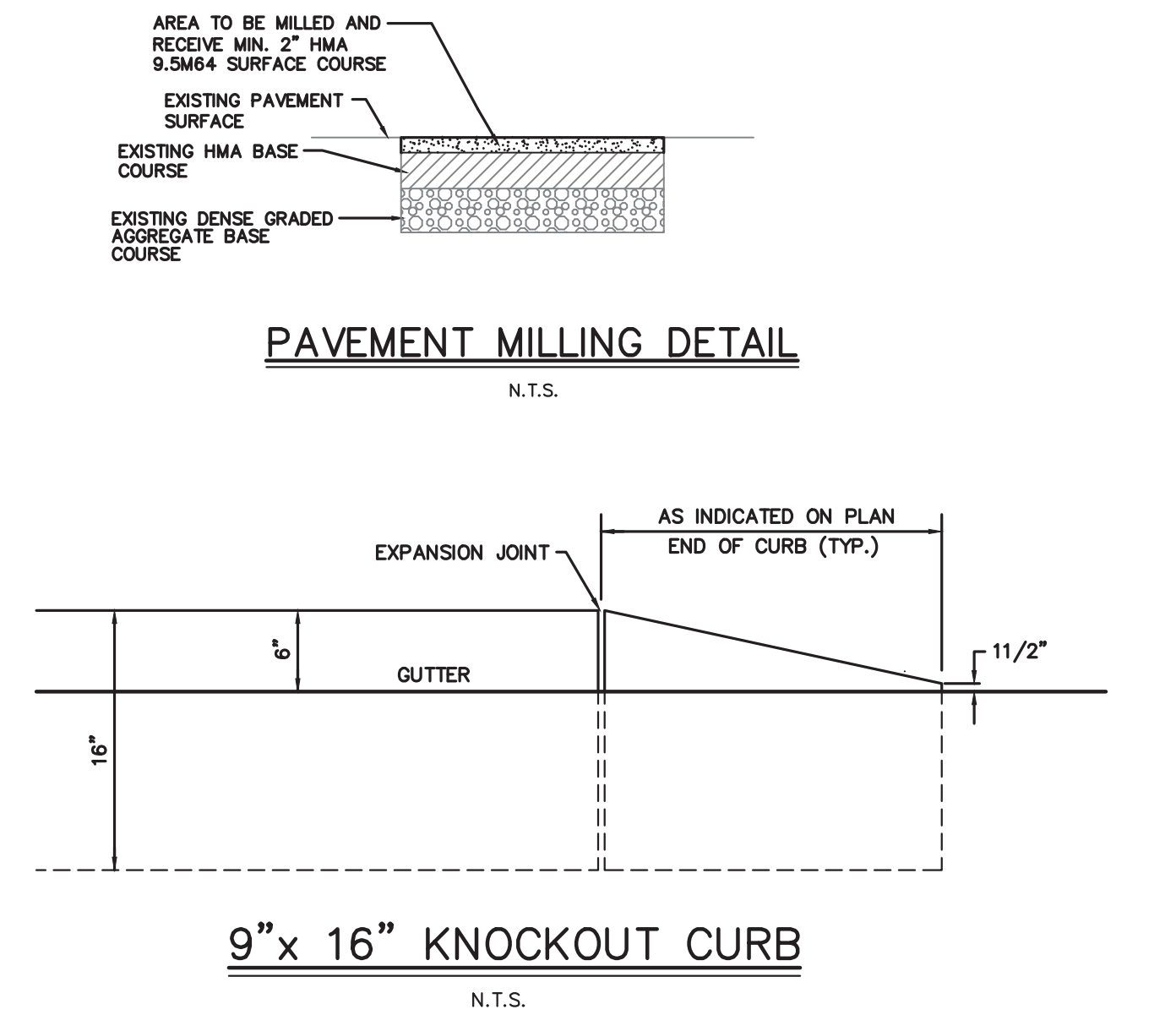
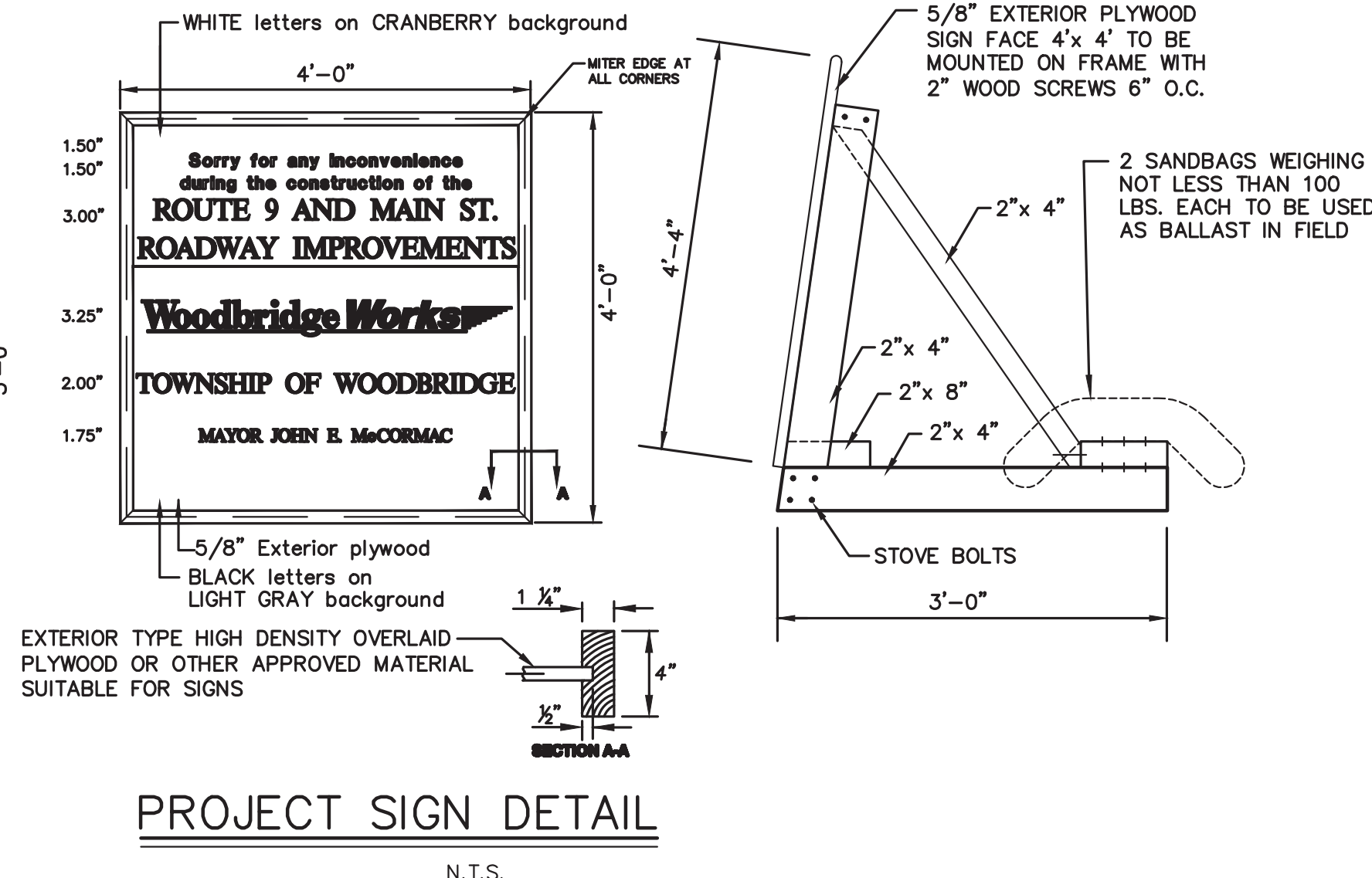
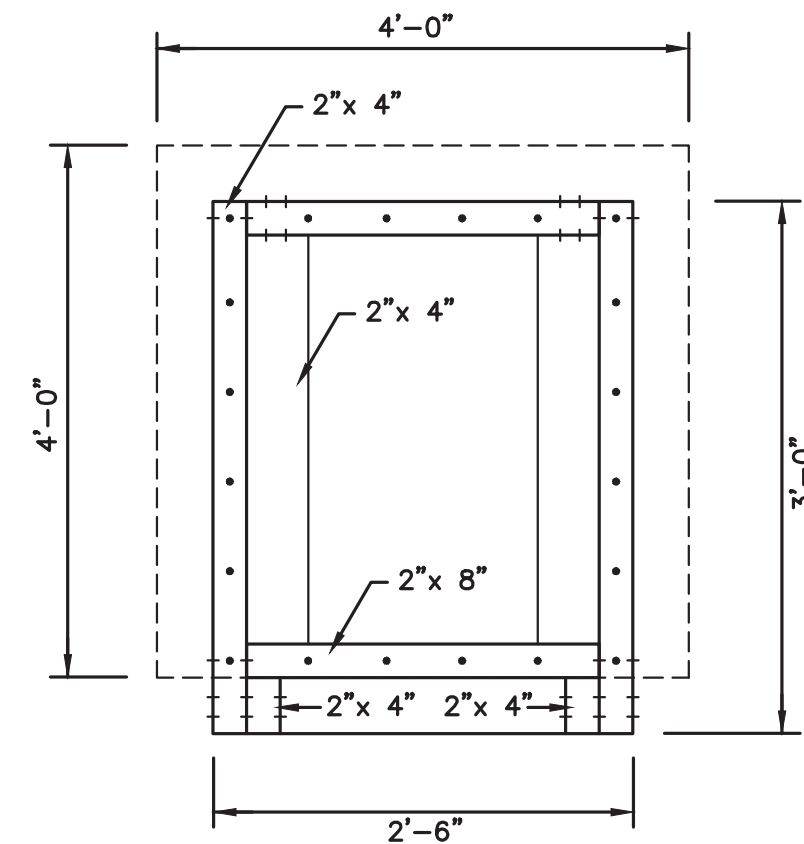
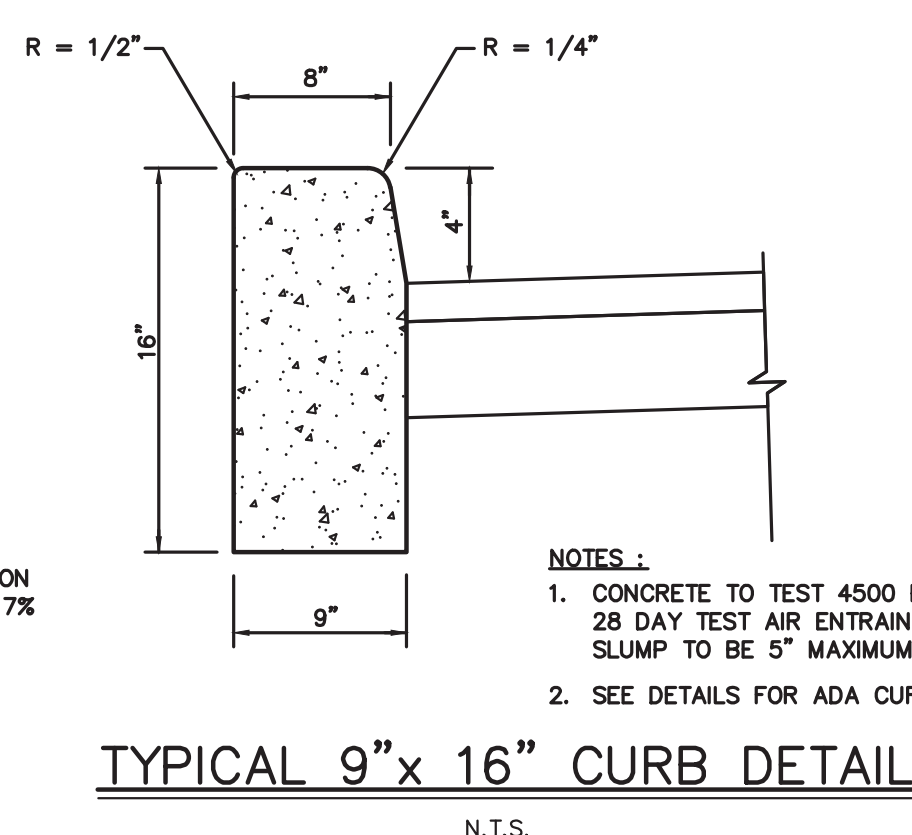
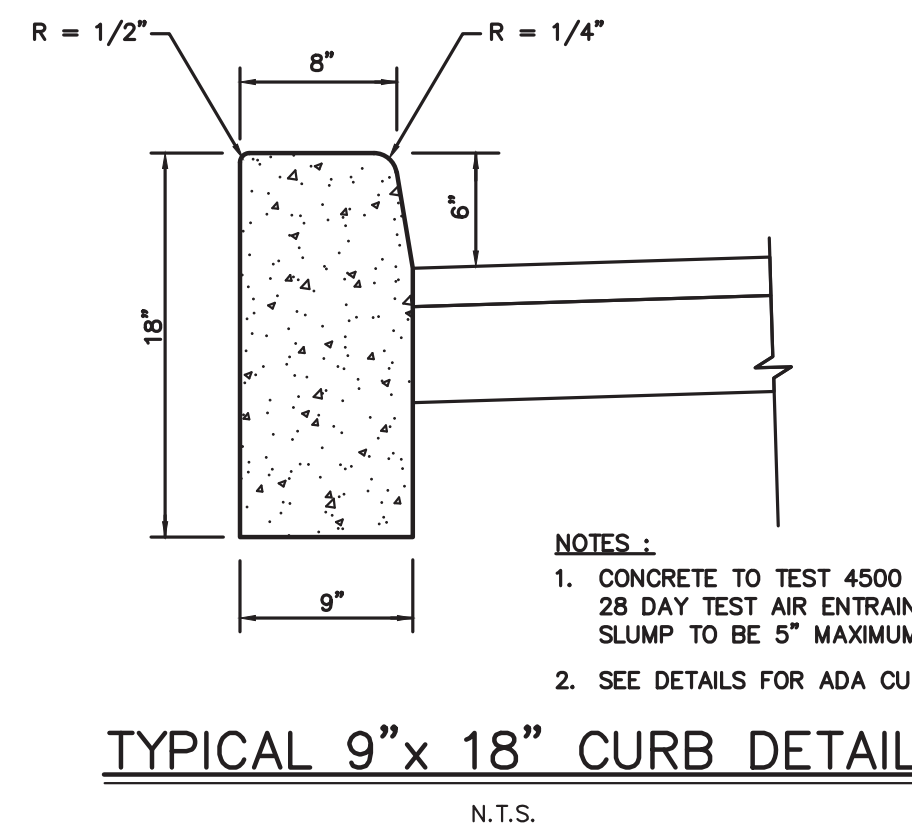
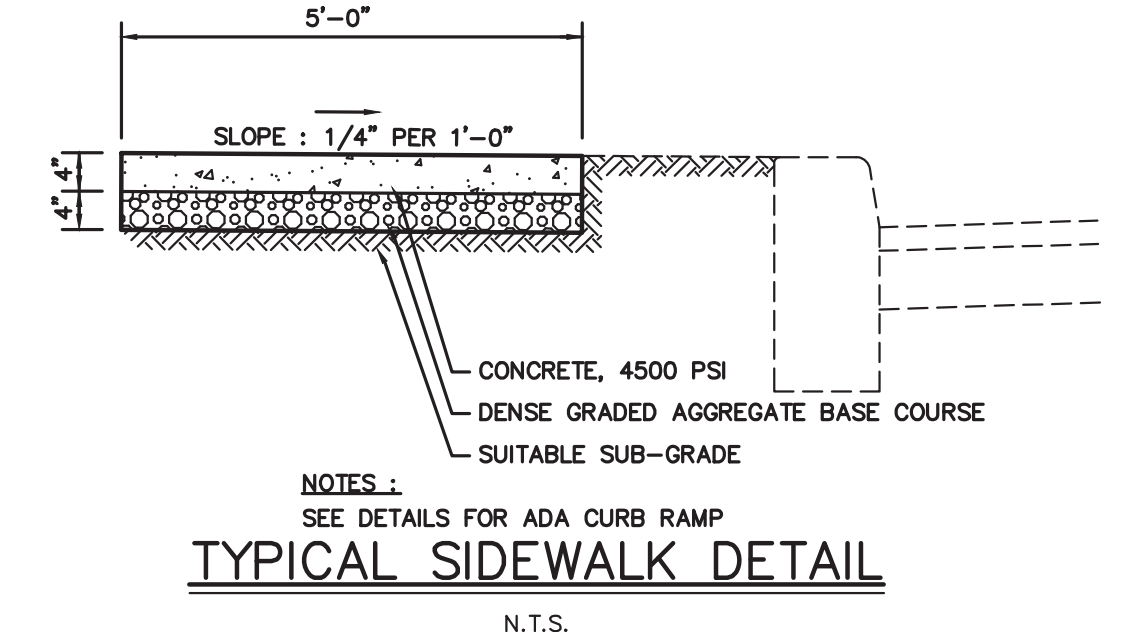
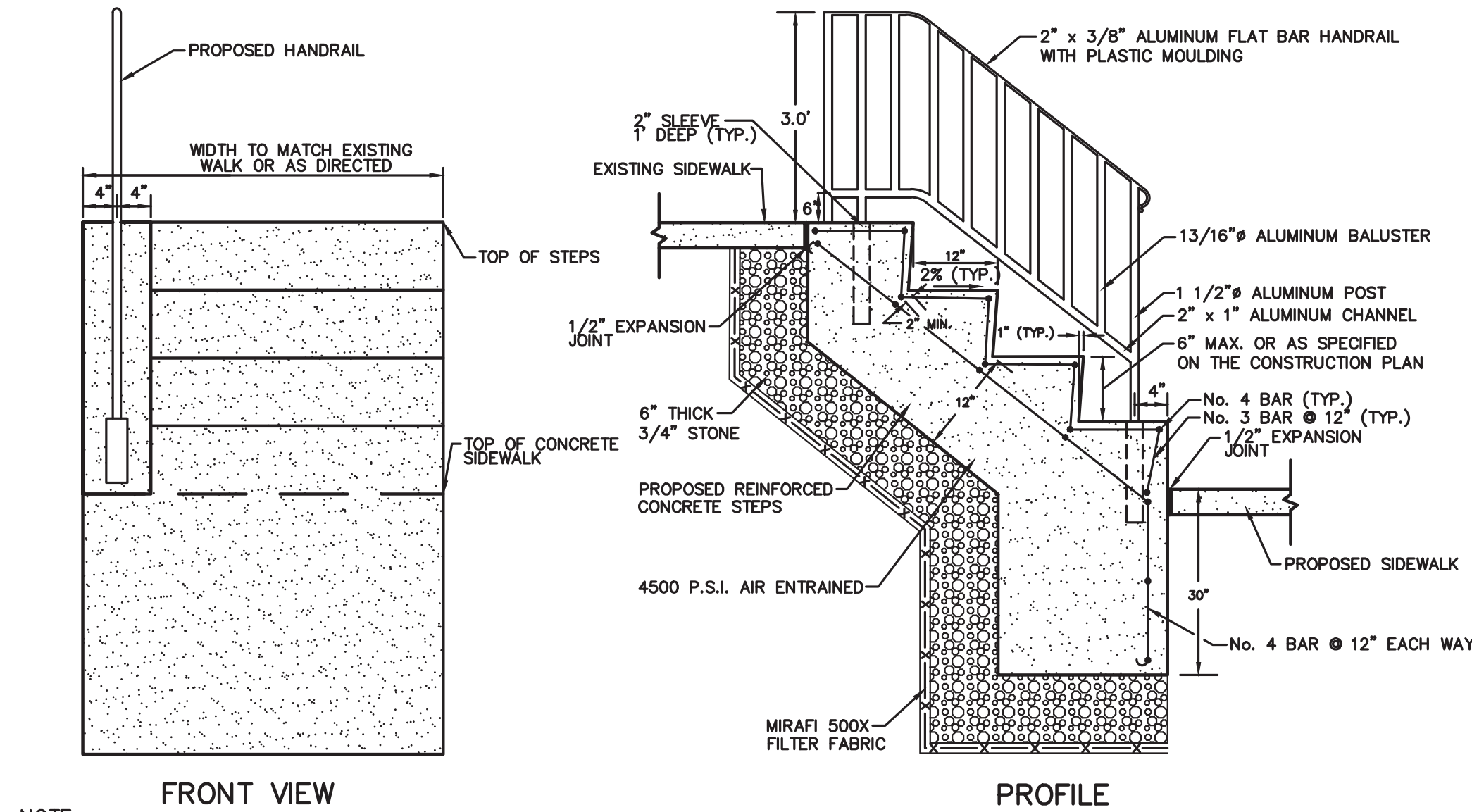
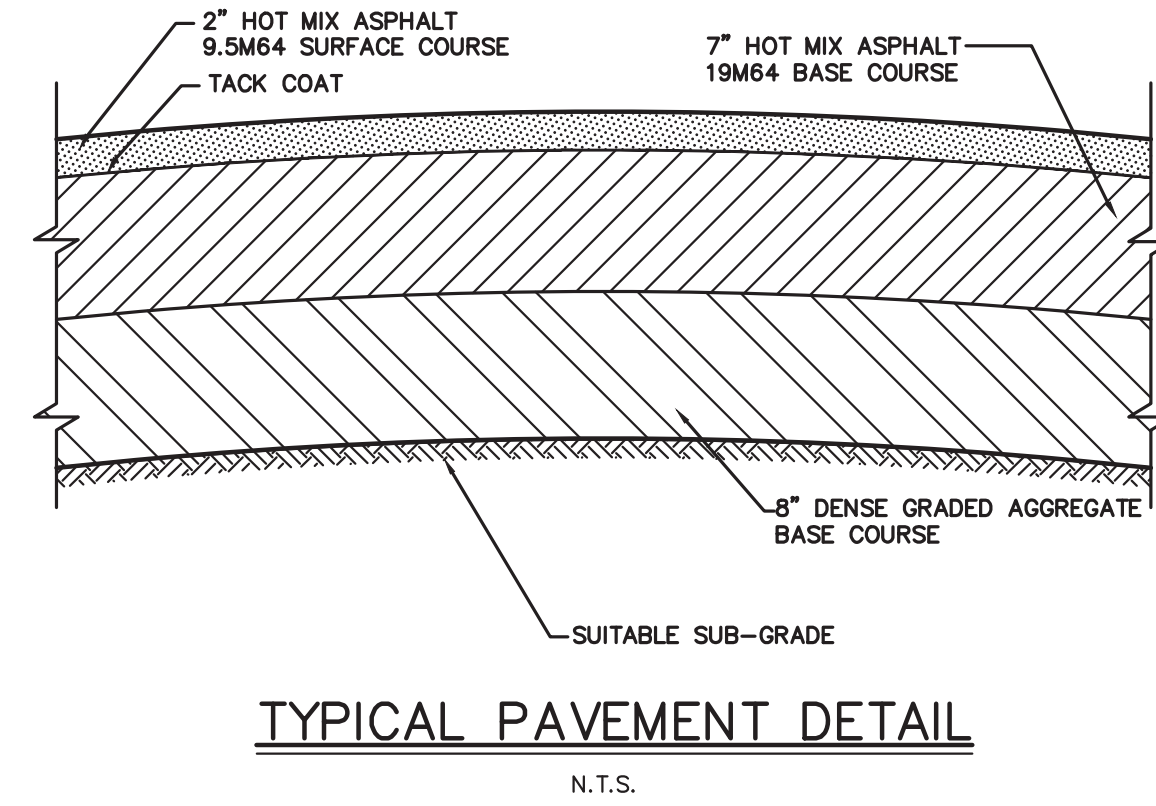
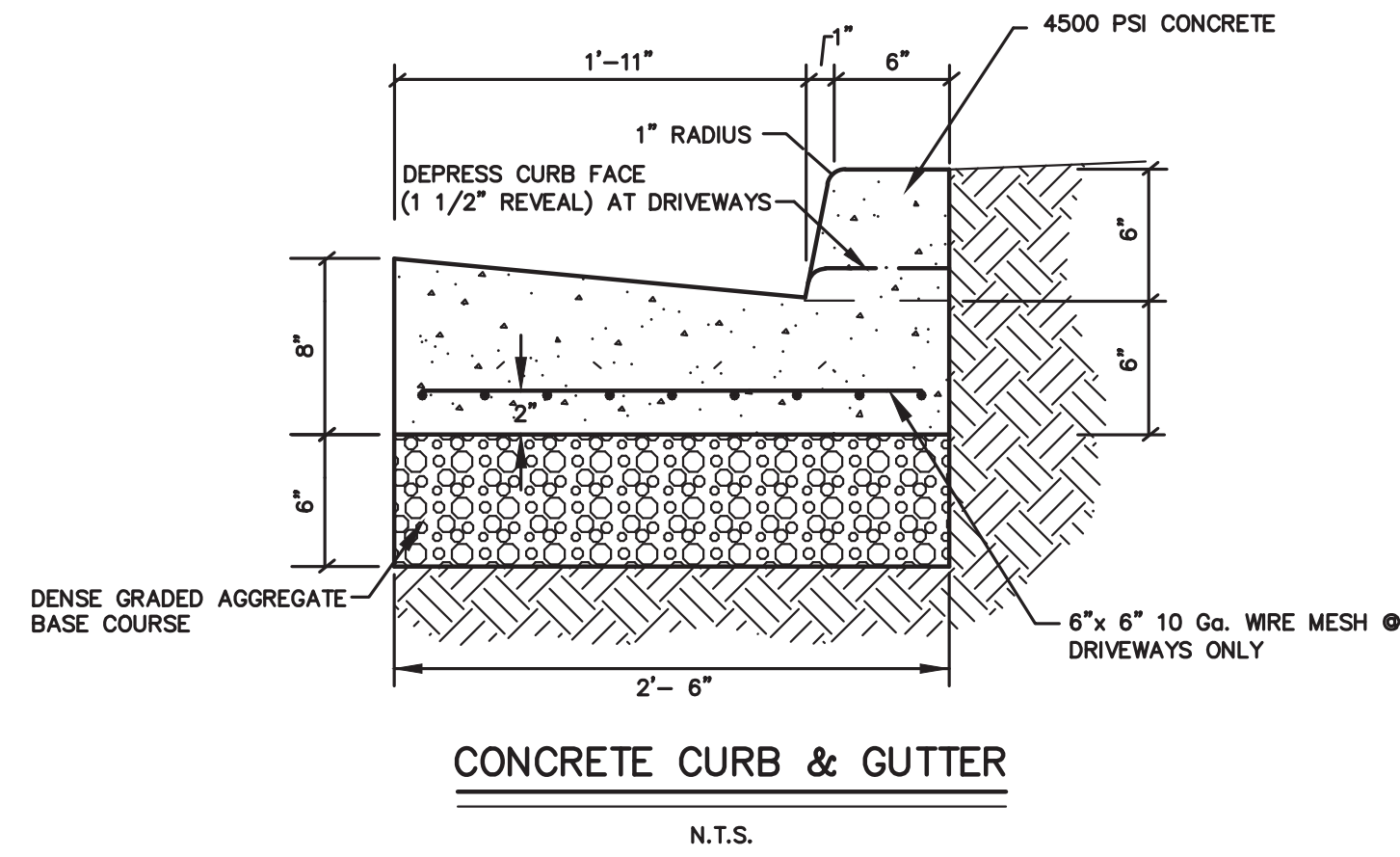
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CHECKED BY: JCV SHEET: 66 of 197

DATE: 2/17/2022

FILE NO. PWB04609.01



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CD-6

NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

CONSTRUCTION DETAILS (2 OF 6)

CVE ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS

(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 (732) 462 7400 1460 ROCKIE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

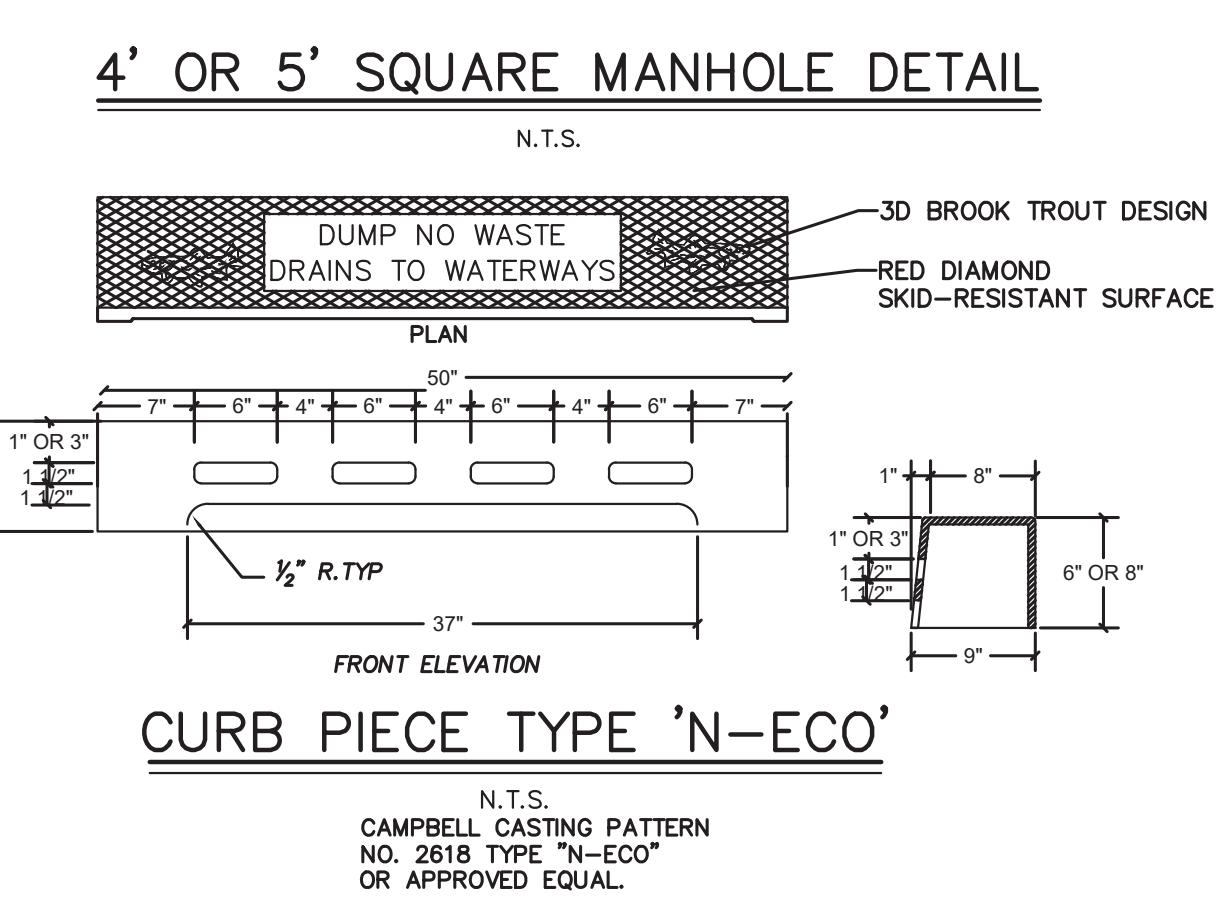
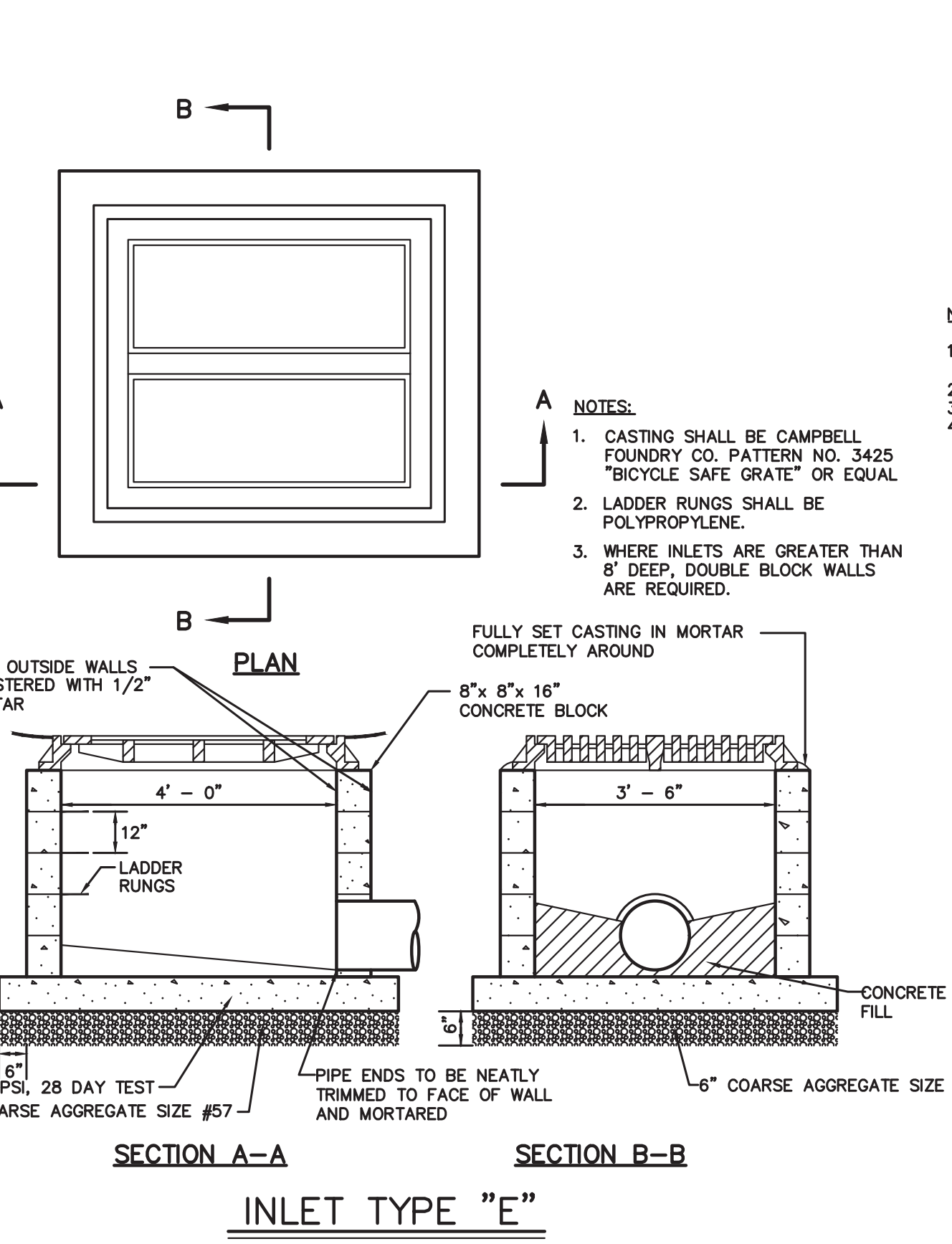
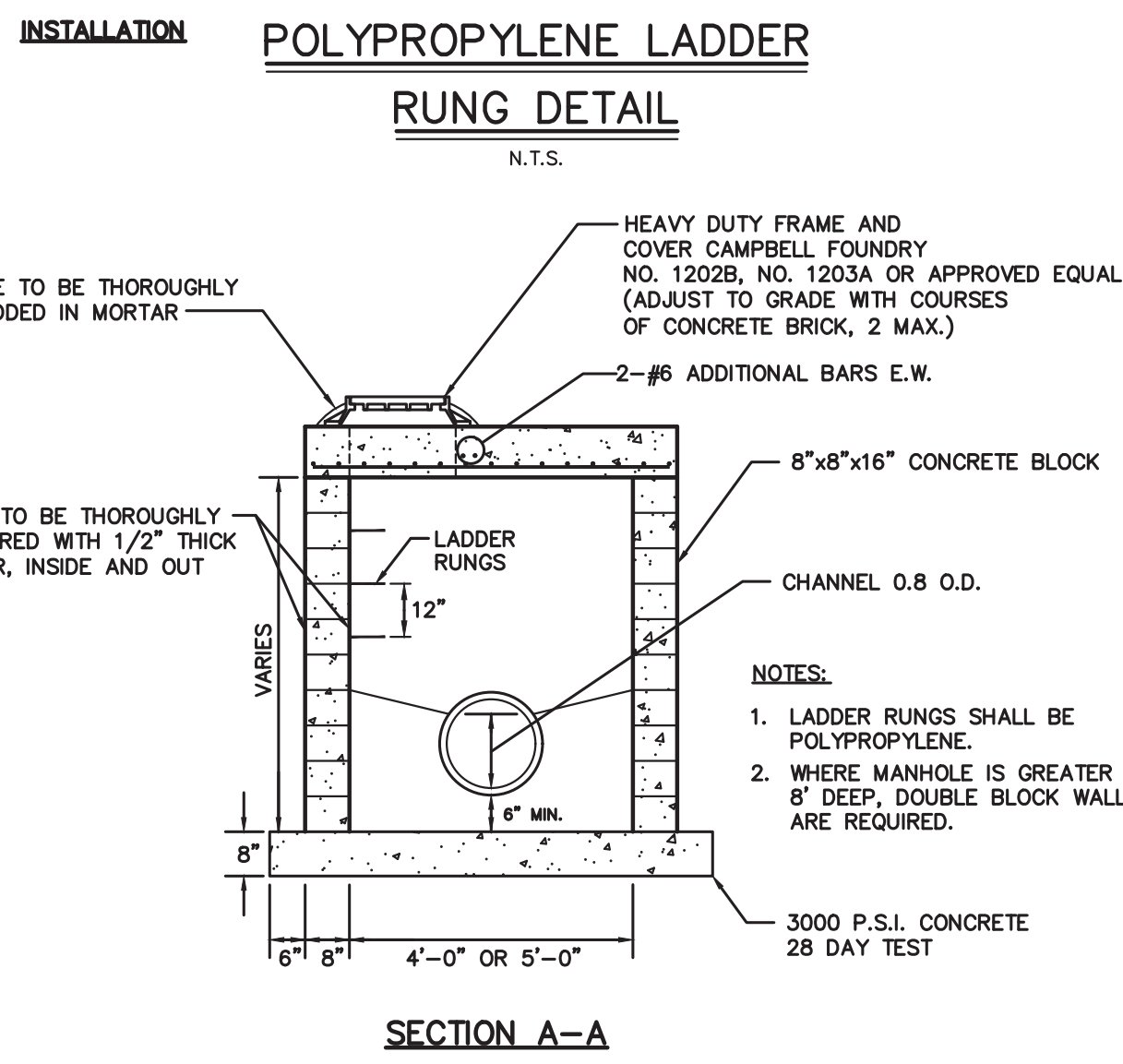
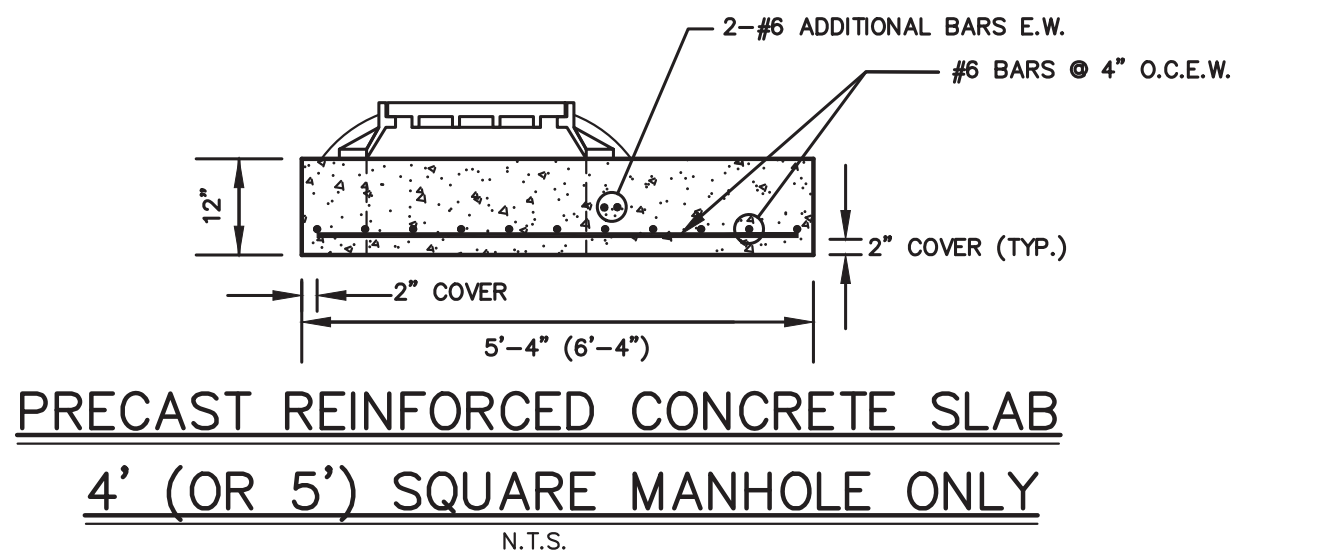
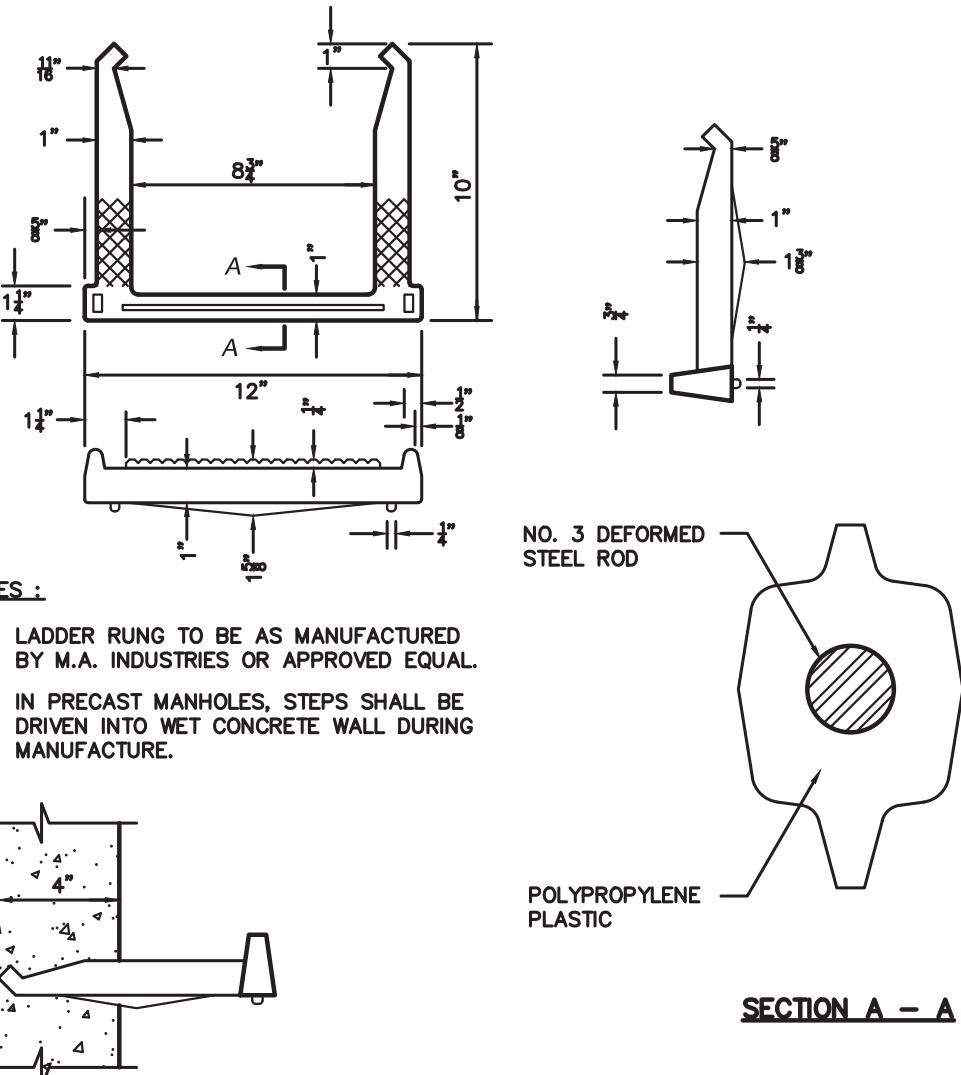
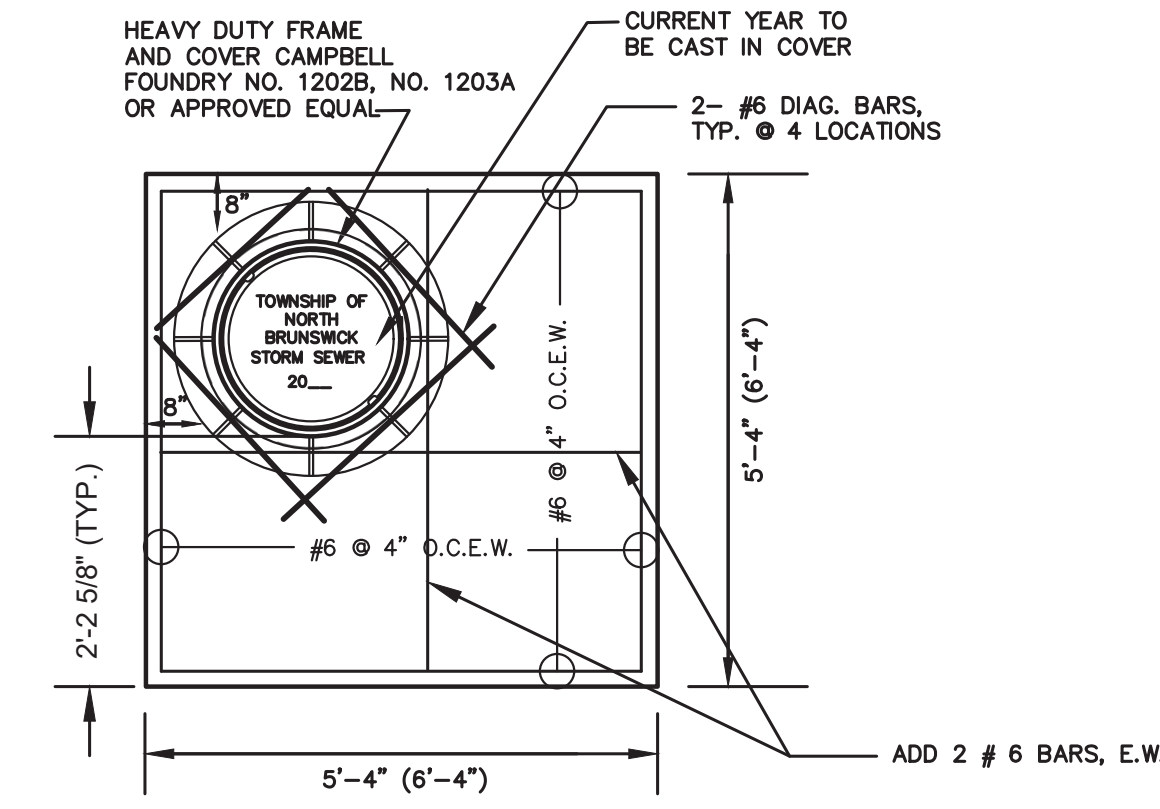
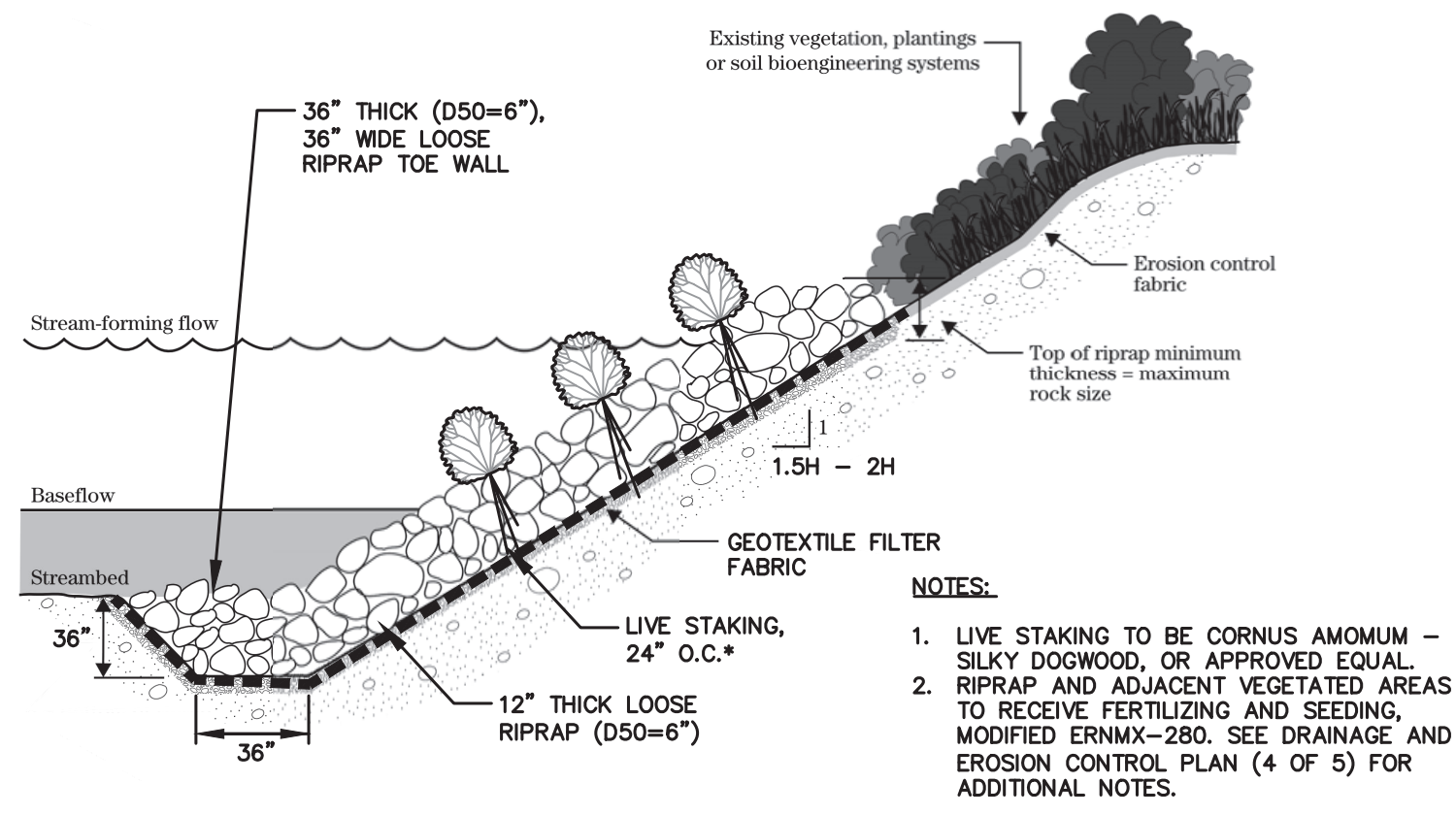
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JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32952	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458

MICHAEL J. McCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. 32468

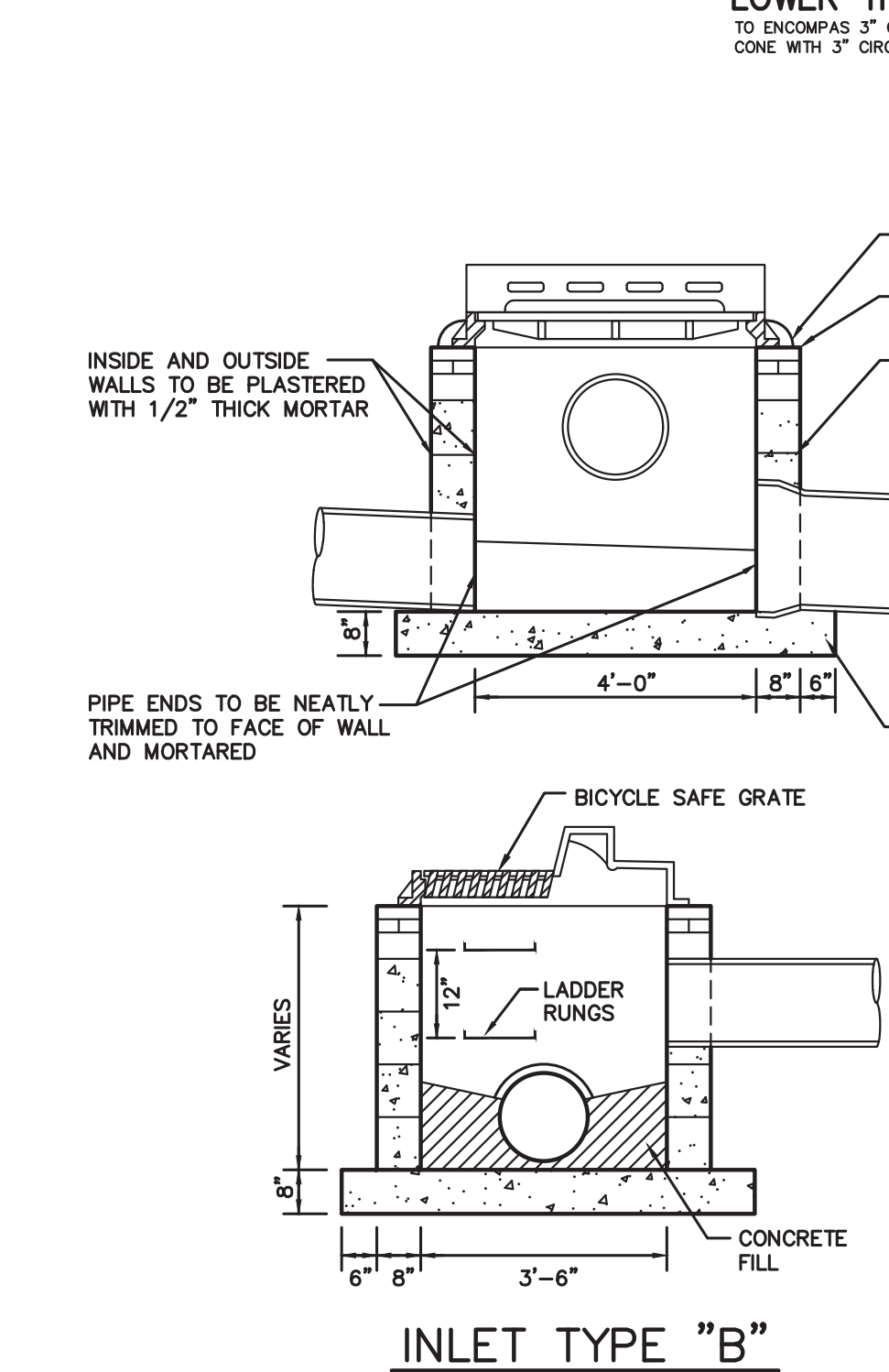
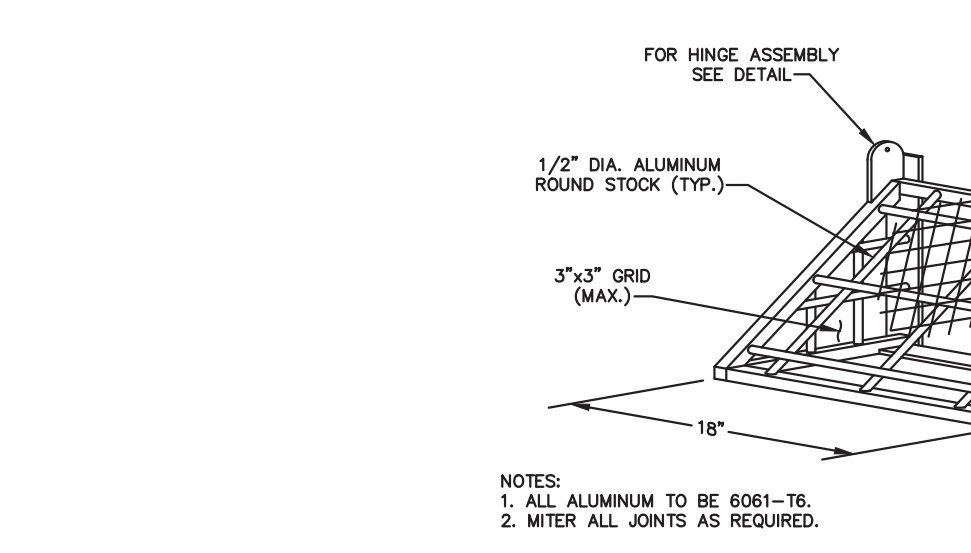
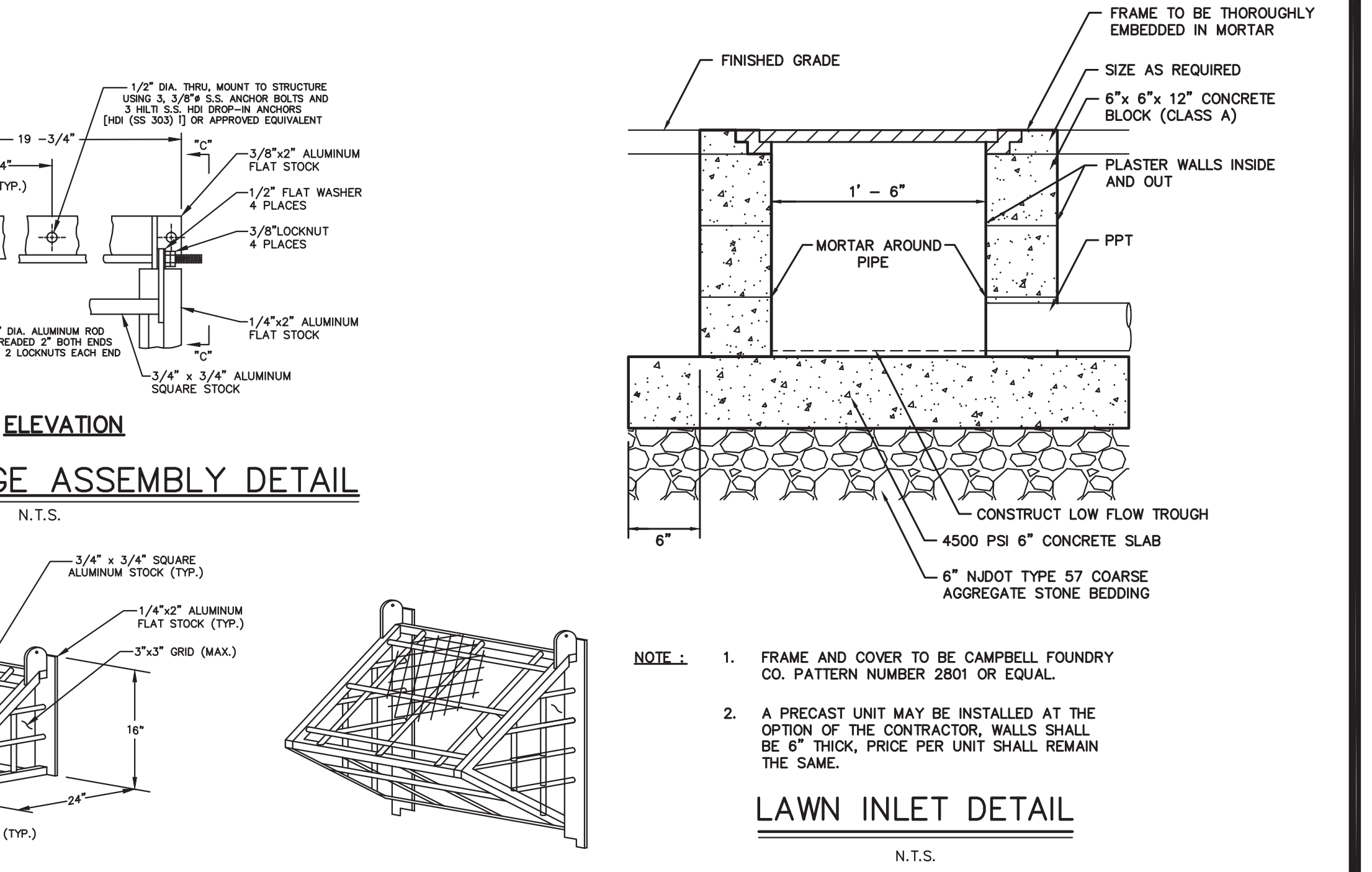
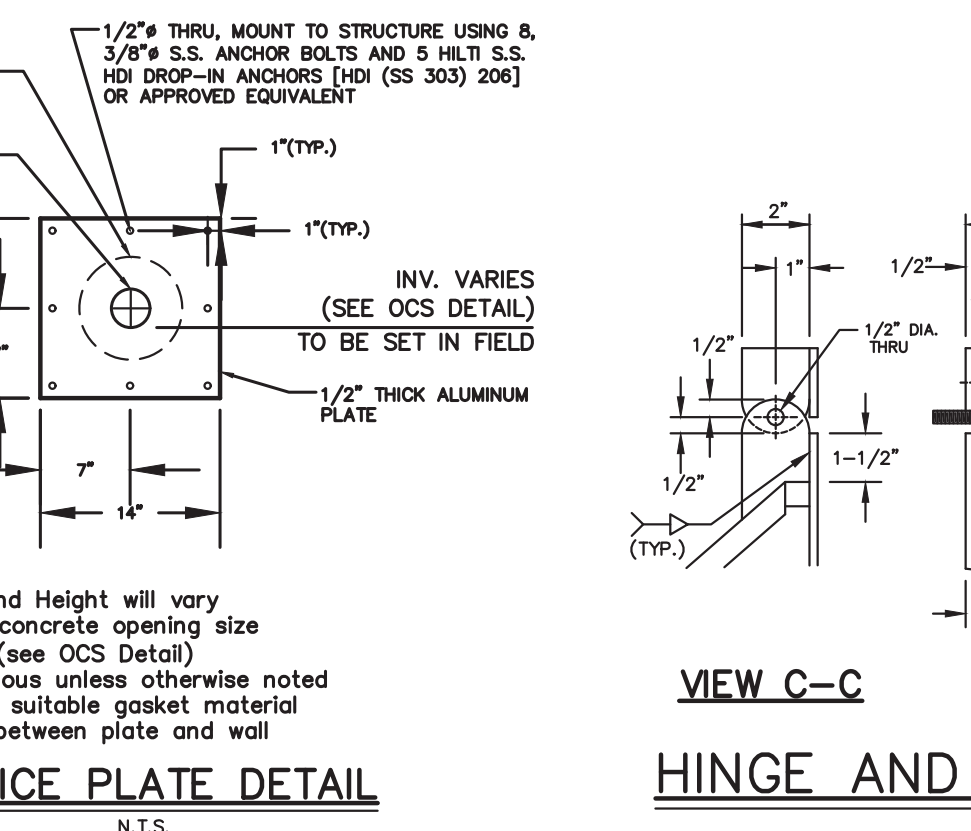
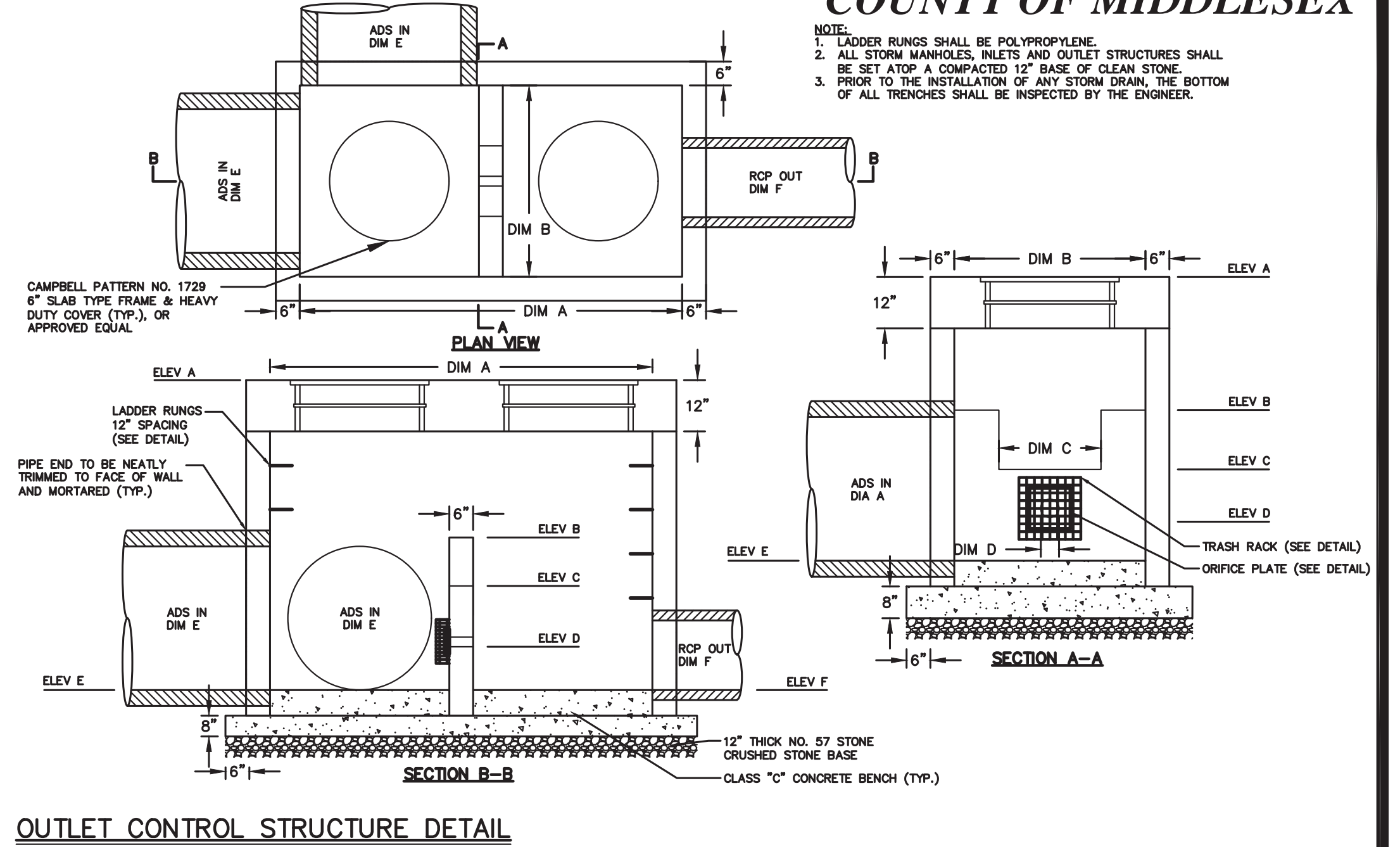
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FILE NO. PWB0609.01



	OCS #1	OCS #2	OCS #3
ELEV A	69.75	65.25	55.28
ELEV B	66.28	55.81	48.86
ELEV C	64.83	54.42	47.00
ELEV D	63.73	53.90	46.34
ELEV E	62.04	52.35	44.11
ELEV F	62.04	52.35	44.11
DIM A	12'	10'	12'
DIM B	6'	5'	6'
DIM C	30"	15"	42"
DIA E	60"	48"	60"
DIA F	24"	15"	24"



CD-3 CD-6

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

CONSTRUCTION DETAILS (3 OF 6)

(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400

3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKLE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

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JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32962 NO PP LIC NO. 39458

MICHAEL J. MCCLELLAND P.E. & P.P. NO PE LIC NO. 33468 NO PP LIC NO. 3770

GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 33468 NO PP LIC NO. 43561

MICHAEL J. MCCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER L.I.C. 32468

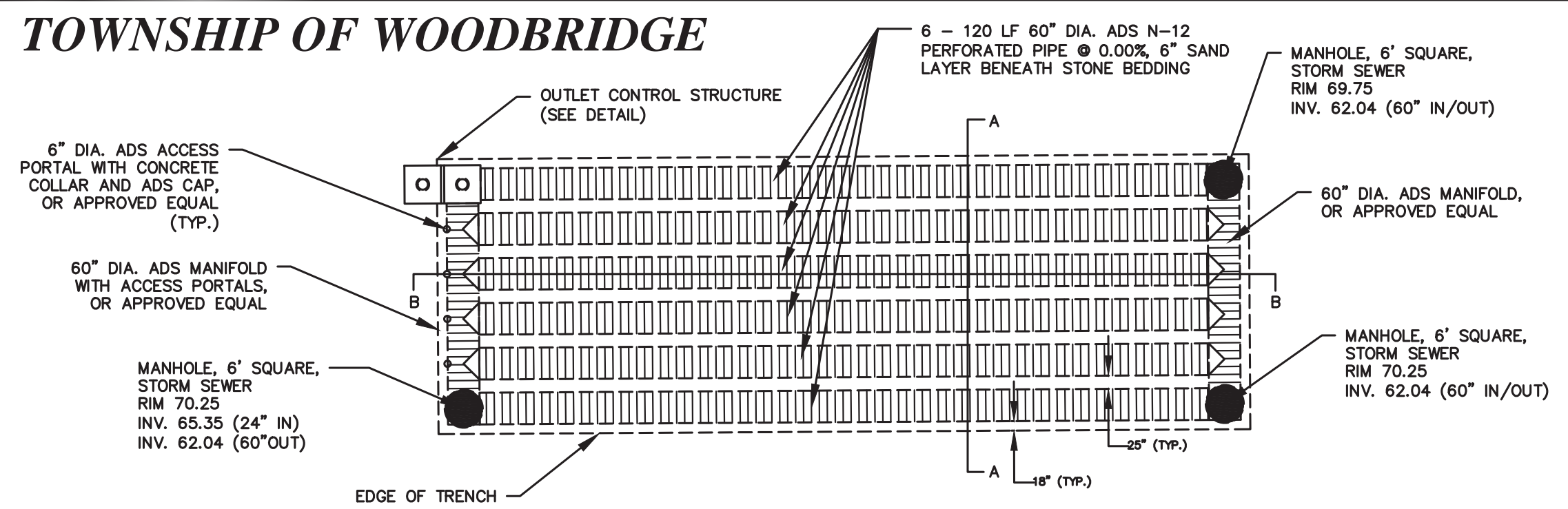
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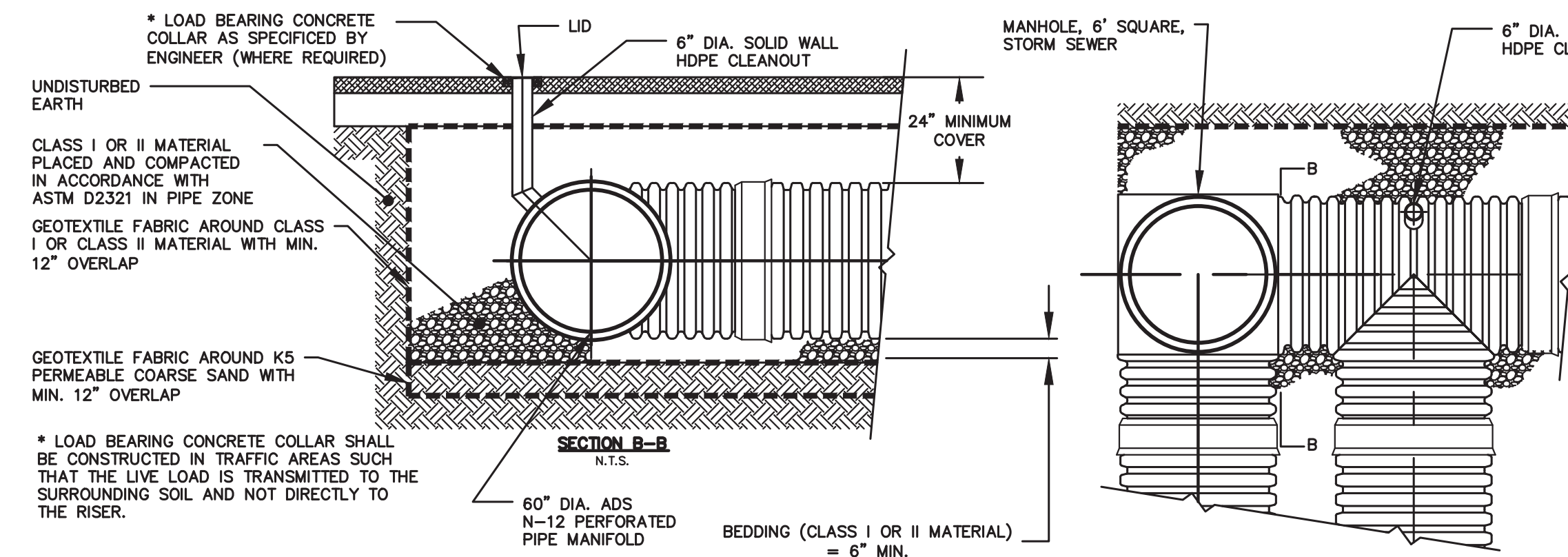
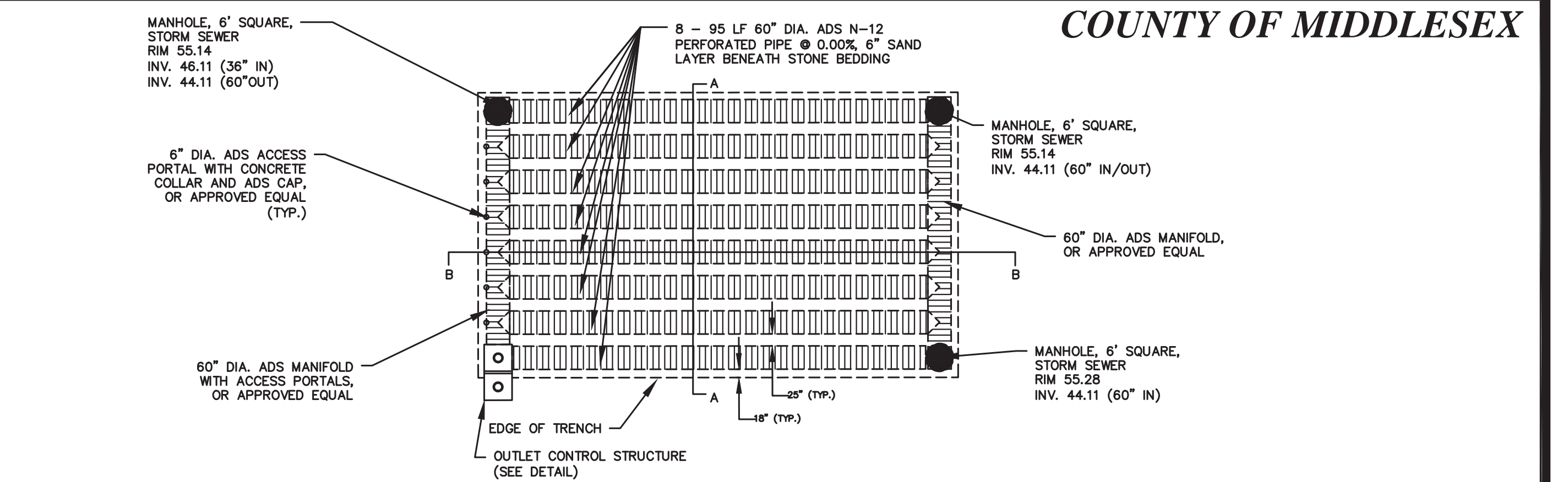
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DATE 2/17/2022

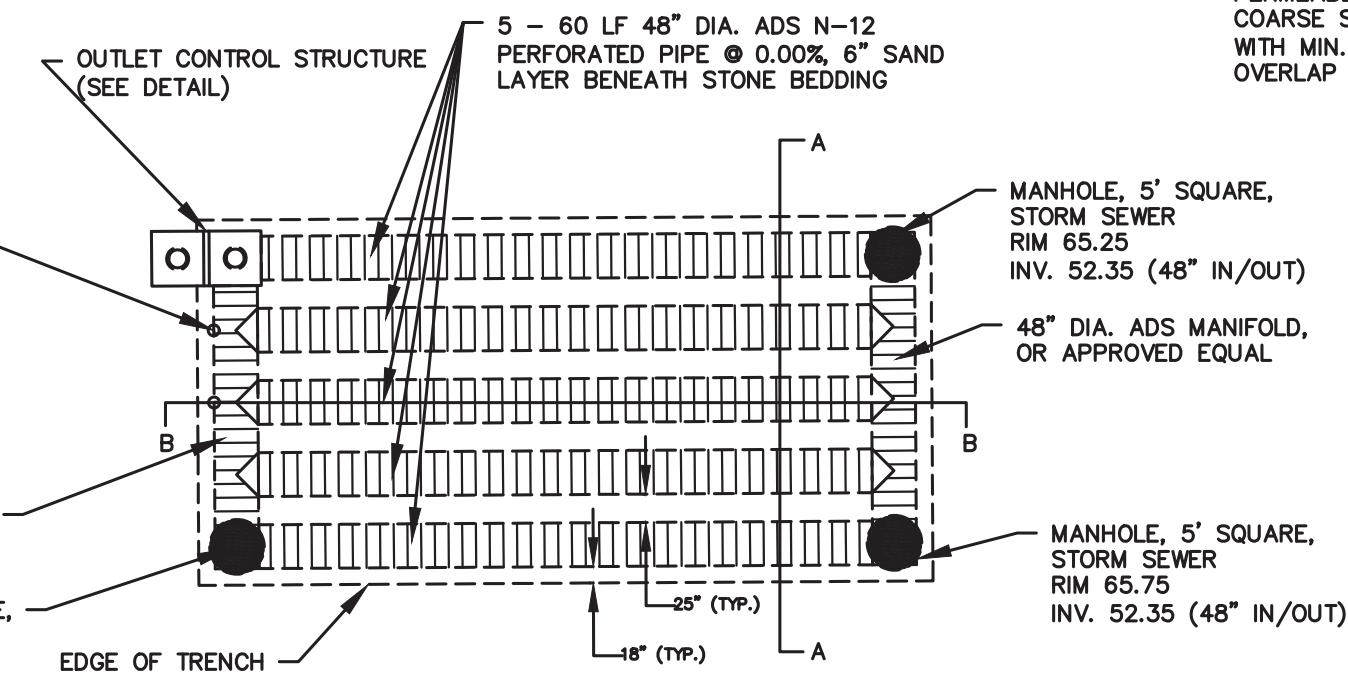
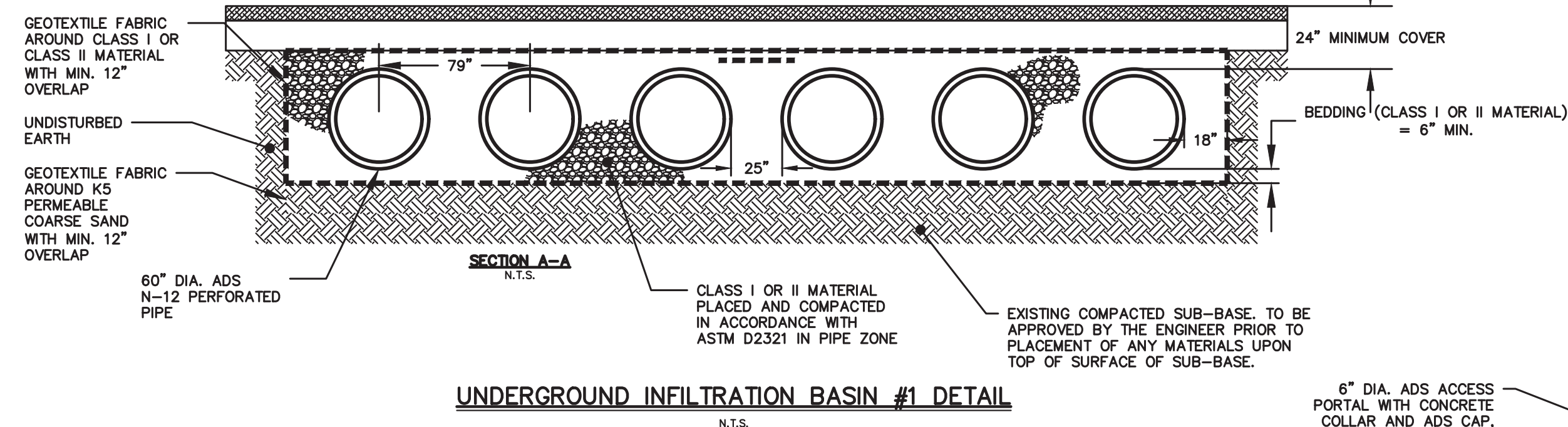
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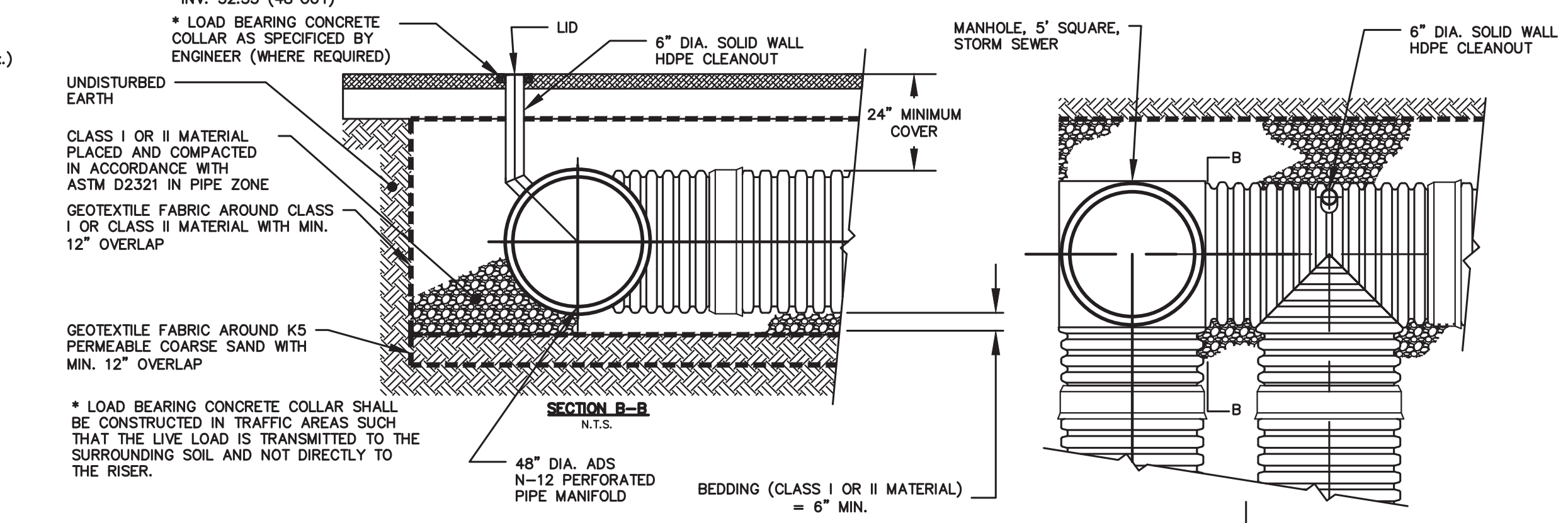
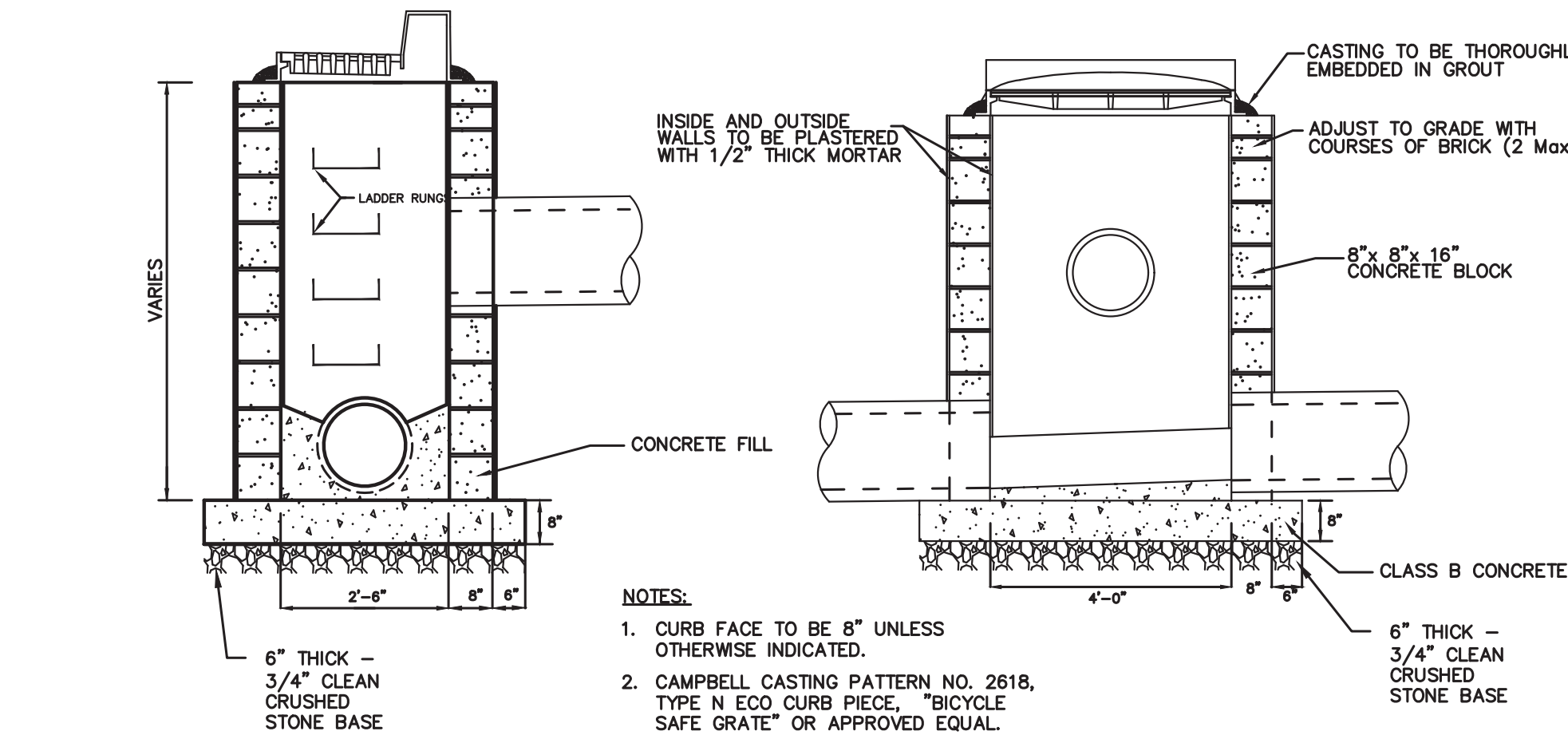
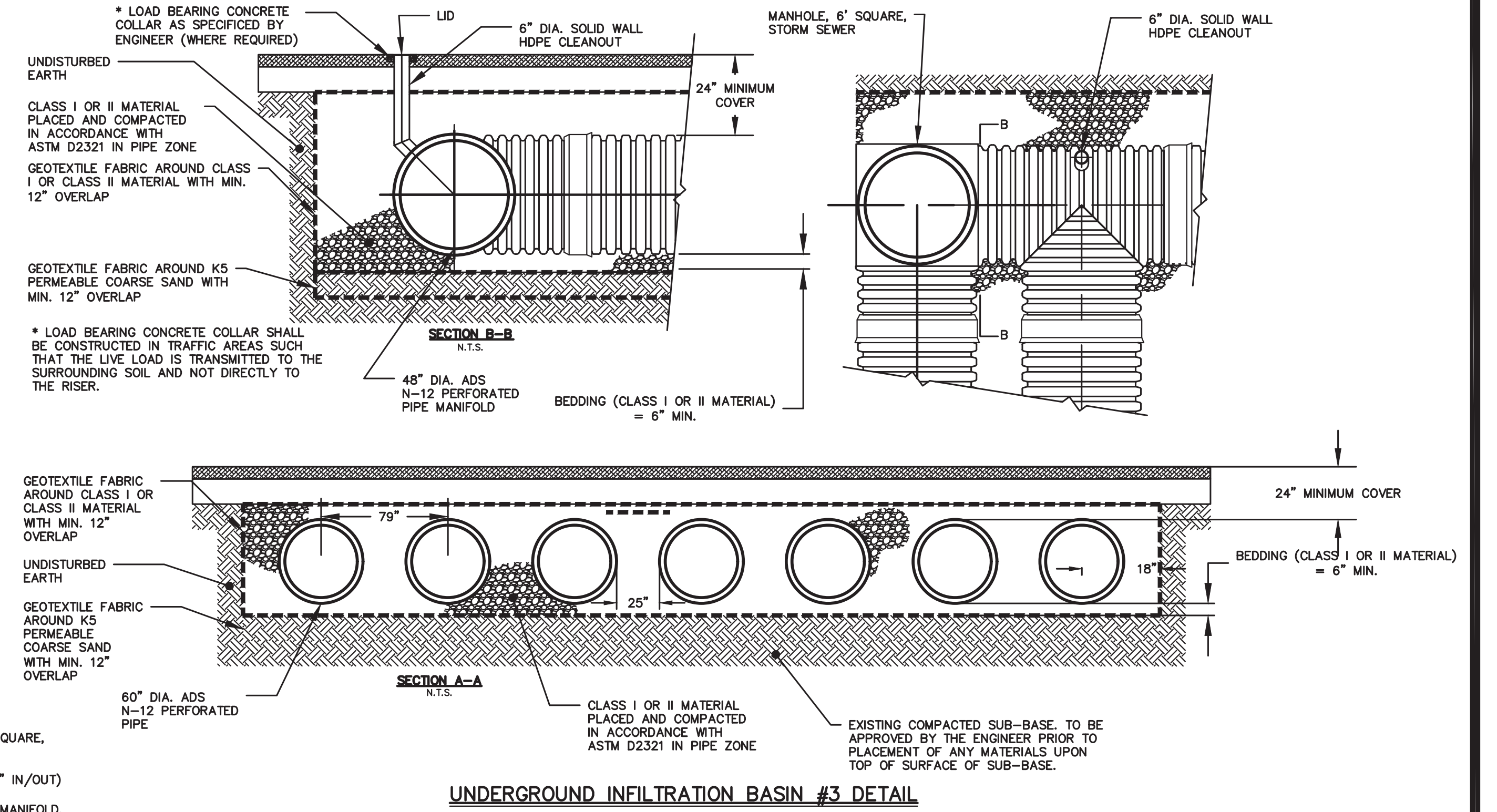
TYPICAL STORM SEWER MANHOLE FRAME & COVER



UNDERGROUND INFILTRATION BASIN #1 DETAIL



UNDERGROUND INFILTRATION BASIN #3 DETAIL



UNDERGROUND INFILTRATION #2 BASIN DETAIL

CD-4 CD-6

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TOWNSHIP OF WOODBRIDGE
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CONSTRUCTION DETAILS (4 OF 6)

CVE
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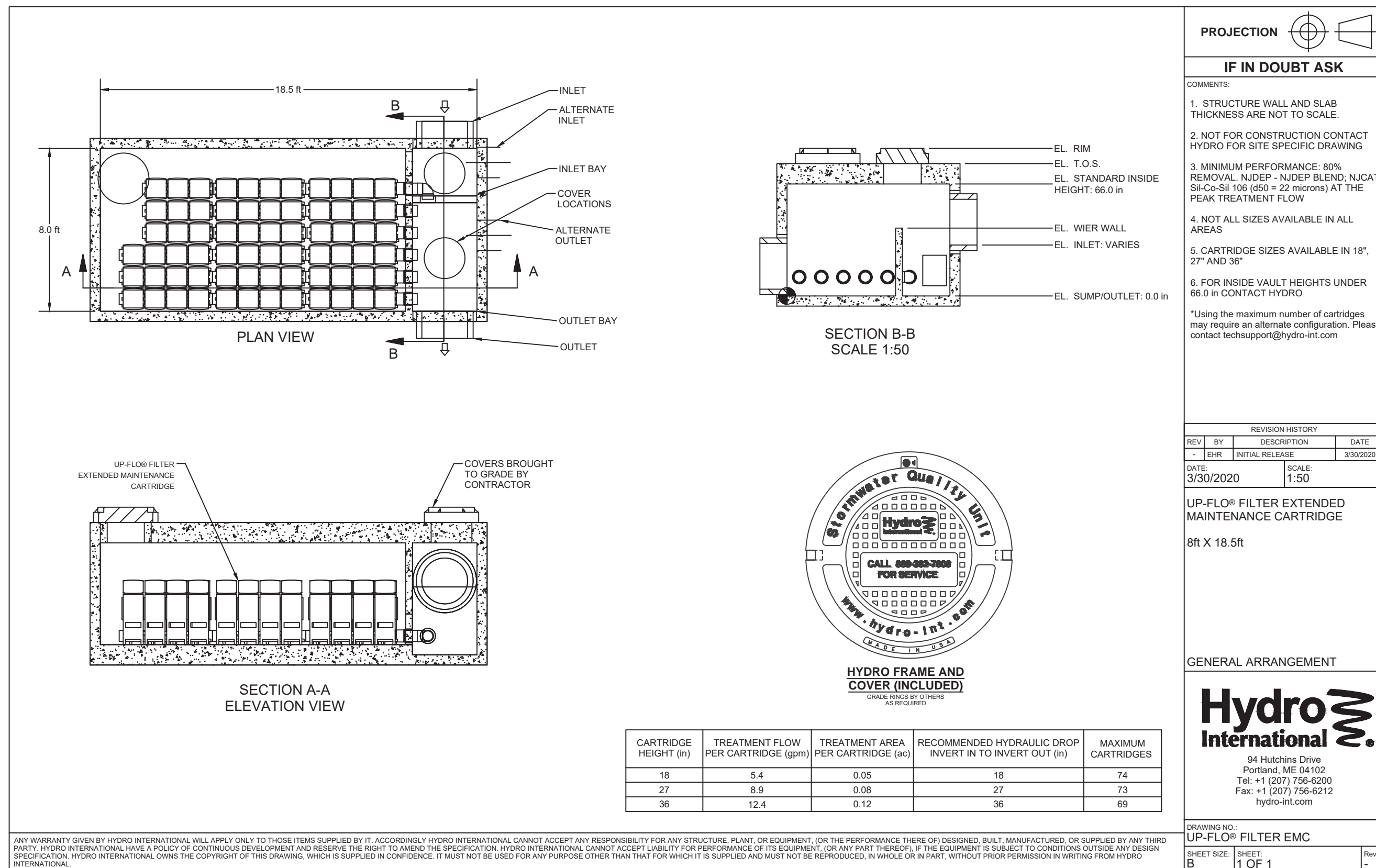
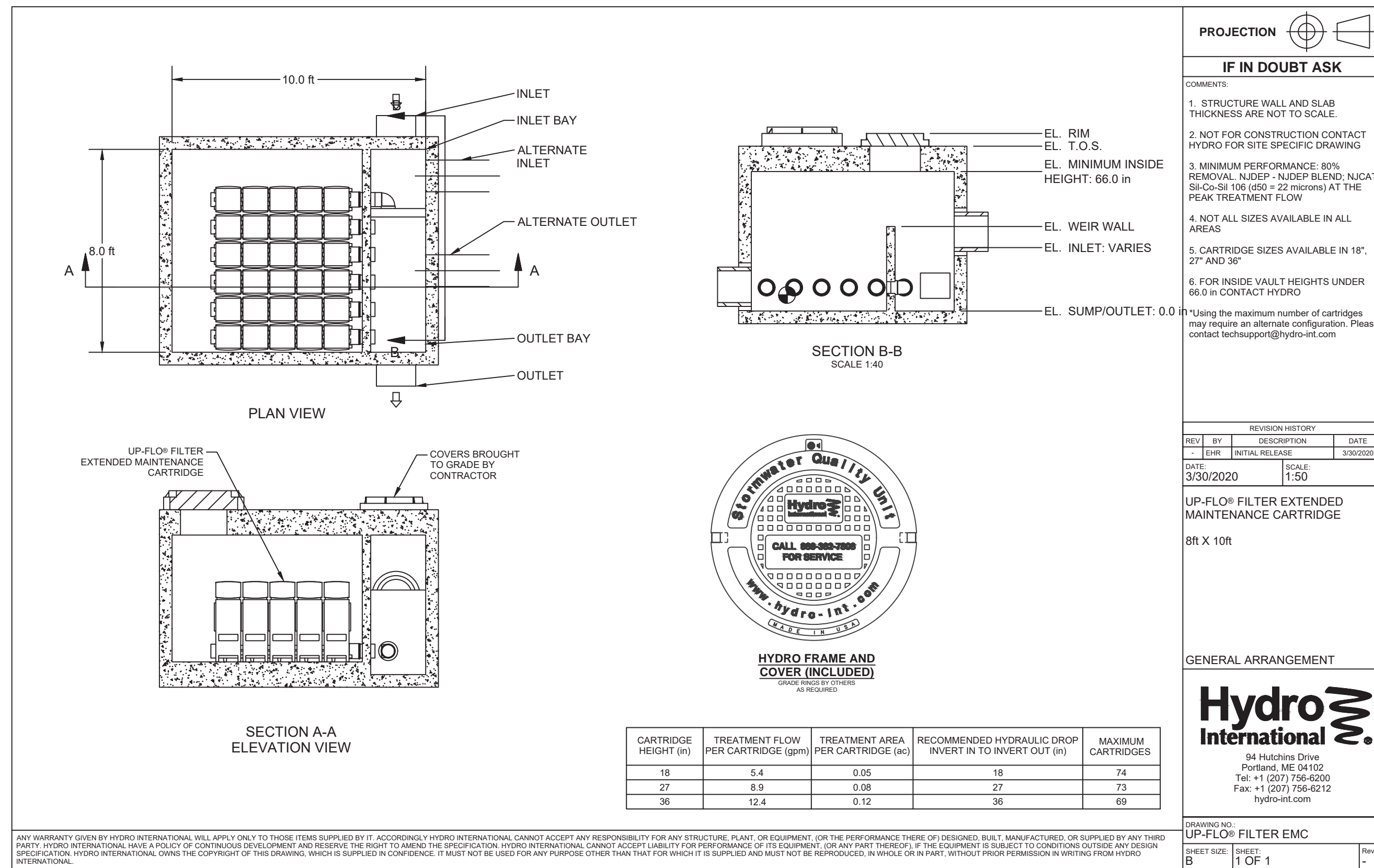
(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400

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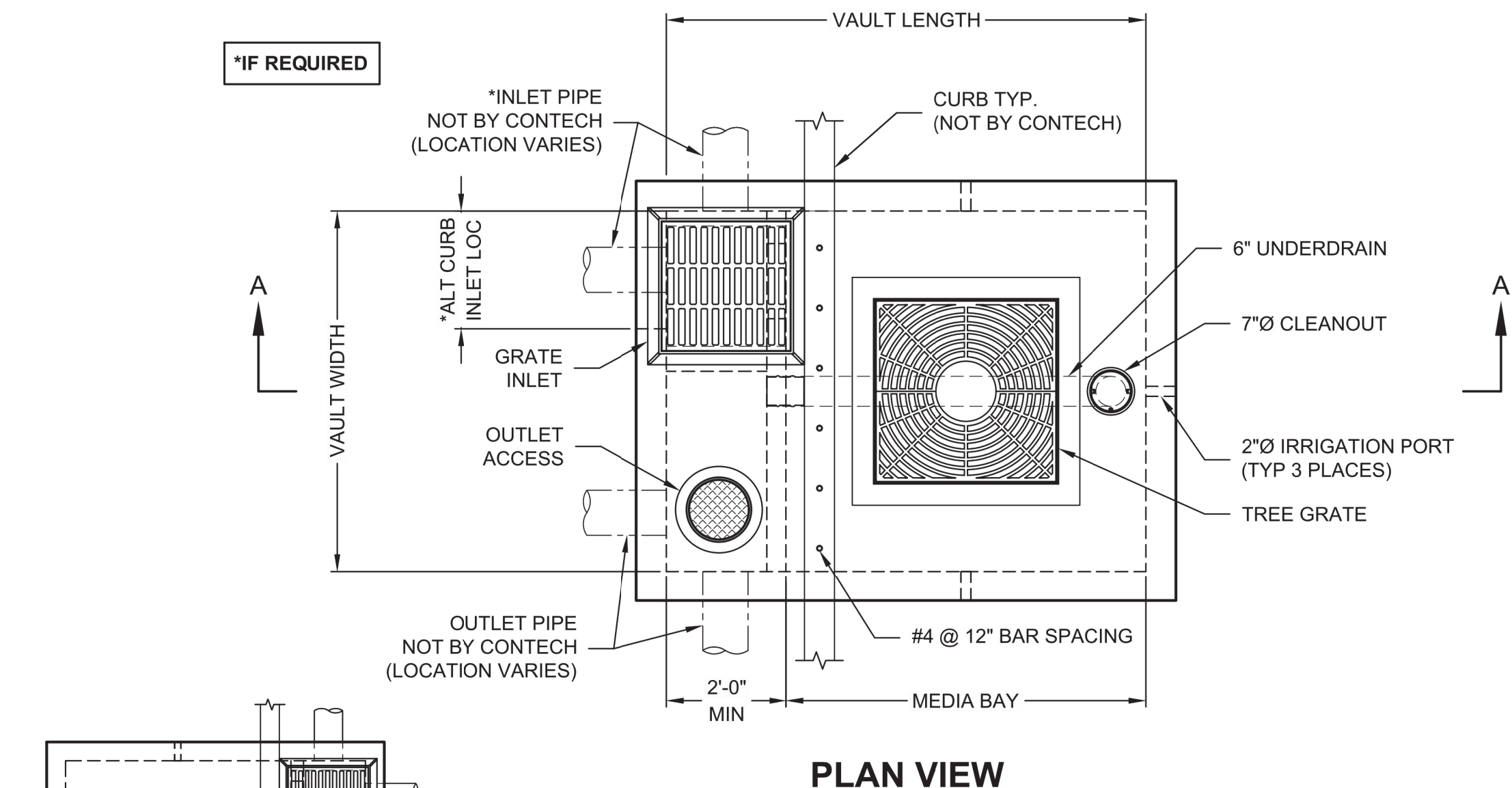
MICHAEL J. MCCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. 32468

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DATE 2/17/2022

FILE NO. PWB04609.01



HYDRO INTERNATIONAL UP-FLO FILTER
TYPICAL DETAIL
 N.T.S.



FILTERRA HC PEAK DIVERSION

INLET #	AREA TREATED (AC)	DESIGN FLOW (CFS)	MAXIMUM PEAK FLOW (CFS)	MEDIA BAY SIZE
1	.099	.314	.784	6'X6'
2	.072	.228	.570	4.5'X5.83'
3	.085	.269	.673	6'X6'
4	.065	.206	.515	4.5'X5.83'
5	.124	.393	.982	6'X6'
6	.108	.342	.855	6'X6'
7	.084	.266	.665	4.5'X5.83'
8	.062	.196	.491	4.5'X5.83'
9	.085	.269	.673	6'X6'
10	.062	.196	.491	4.5'X5.83'
11	.318	1.007	2.519	8'X12.5'
12	.234	.741	1.853	7'X10'
13	.114	.361	.903	6'X6'
14	.084	.266	.665	4.5'X5.83'
15	.107	.339	.847	6'X6'
16	.084	.266	.665	6'X6'
17	.117	.371	.927	6'X6'
18	.256	.811	2.028	8'X12.5'

CONTECH FILTERRA HC PEAK DIVERSION - GRATE
TYPICAL DETAIL
 N.T.S.

*MAX BYPASS FLOW IS INTERNAL WEIR FLOW. SITE SPECIFIC ANALYSIS IS REQUIRED TO DETERMINE CURB INLET FLOW CAPACITY

FTPD-HC STANDARD HEIGHT CONFIGURATION

DESIGNATION (OPTIONS: -P, -T, -PT)	DESIGNATION (OPTIONS: -P, -T, -PT)	MEDIA BAY SIZE	VAULT SIZE (W x L)	WEIR LENGTH/ MAX CURB OPENING	*MAX BYPASS FLOW (CFS)	INLET/ OUTLET ACCESS DIA	TREE GRATE QTY & SIZE
FTPD0404-HC	N/A CA	4 x 4	4 x 6	1'-8"	1.4	12"12"	(1) 3' x 3'
FTPD0405-HC	CA ONLY	4 x 4.5	4 x 6.5	1'-8"	1.4	12"12"	(1) 3' x 3'
FTPD0406-HC	N/A DE, MD, NJ, PA, VA, WV ONLY	4 x 6	4 x 8	1'-8"	1.4	12"12"	(1) 3' x 3'
FTPD0408-HC	DE, MD, NJ, PA, VA, WV ONLY	4.5 x 5.83	4.5 x 7.83	1'-8"	1.4	12"12"	(1) 3' x 3'
FTPD0604-HC	ALL	6 x 4	6 x 6	1'-8"	1.4	12"12"	(1) 3' x 3'
FTPD0606-HC	ALL	6 x 6	6 x 8	1'-8"	1.4	12"12"	(1) 3' x 3'
FTPD0608-HC	ALL	6 x 8	6 x 10	1'-8"	1.4	12"12"	(1) 4' x 4'
FTPD0610-HC	ALL	6 x 10	6 x 12	1'-8"	1.4	12"12"	(1) 4' x 4'
FTPD0710-HC	ALL	7 x 10	7 x 13	2'-0"	2.1	24"24"	(1) 4' x 4'
FTPD0810-HC	ALL	8 x 10.5	8 x 14	3'-0"	2.5	24"24"	(1) 4' x 4'
FTPD08125-HC	N/A OR, WA	8 x 12.5	8 x 16	3'-0"	2.5	24"24"	(2) 4' x 4'
FTPD0815-HC	OR, WA ONLY	9 x 11.5	9 x 15	3'-0"	2.5	24"24"	(2) 4' x 4'

N/A = NOT AVAILABLE

CD-5 CD-6

TOWNSHIP OF WOODBRIDGE
 MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

CONSTRUCTION DETAILS (5 OF 6)

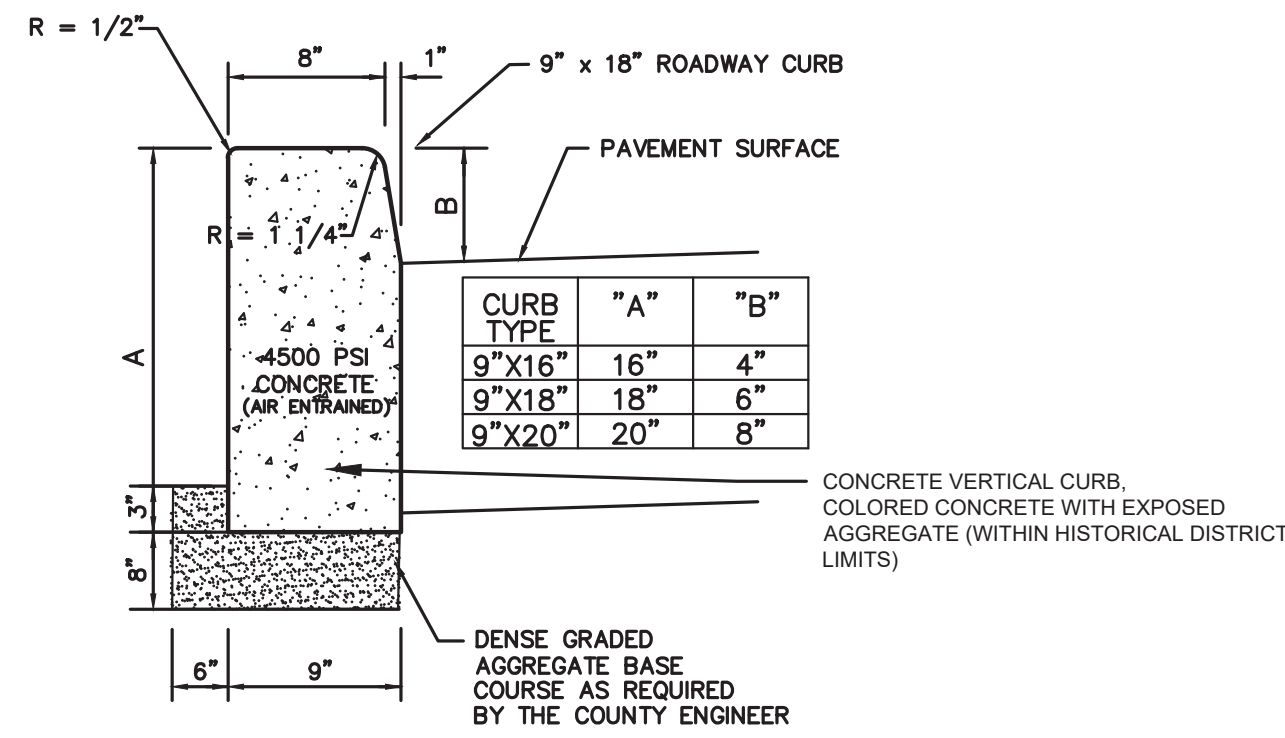
CVE ASSOCIATES
 CONSULTING AND MUNICIPAL ENGINEERS
 (732) 727-8000 (732) 462-7400
 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKLE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIR P.E. & P.P. (1983 - 2021) DAVID J. SAMUEL P.E. & P.P. JOHN J. STEFANI P.E., L.S. & P.P. (1983 - 2021) MICHAEL J. MCCLELLAND P.E. & P.P. GREGORY R. VALESI P.E. & P.P. (1983 - 2021) MICHAEL J. MCCLELLAND P.E. & P.P. GREGORY R. VALESI P.E. & P.P. (1983 - 2021)

MICHAEL J. MCCLELLAND P.E.
 NEW JERSEY PROFESSIONAL ENGINEER
 L.I.C. 32468
 DATE: 2/17/2022

As Shown February 2022
 DRAWN BY SB DESIGNED BY SB
 CHECKED BY JW SHEET 70 of 197

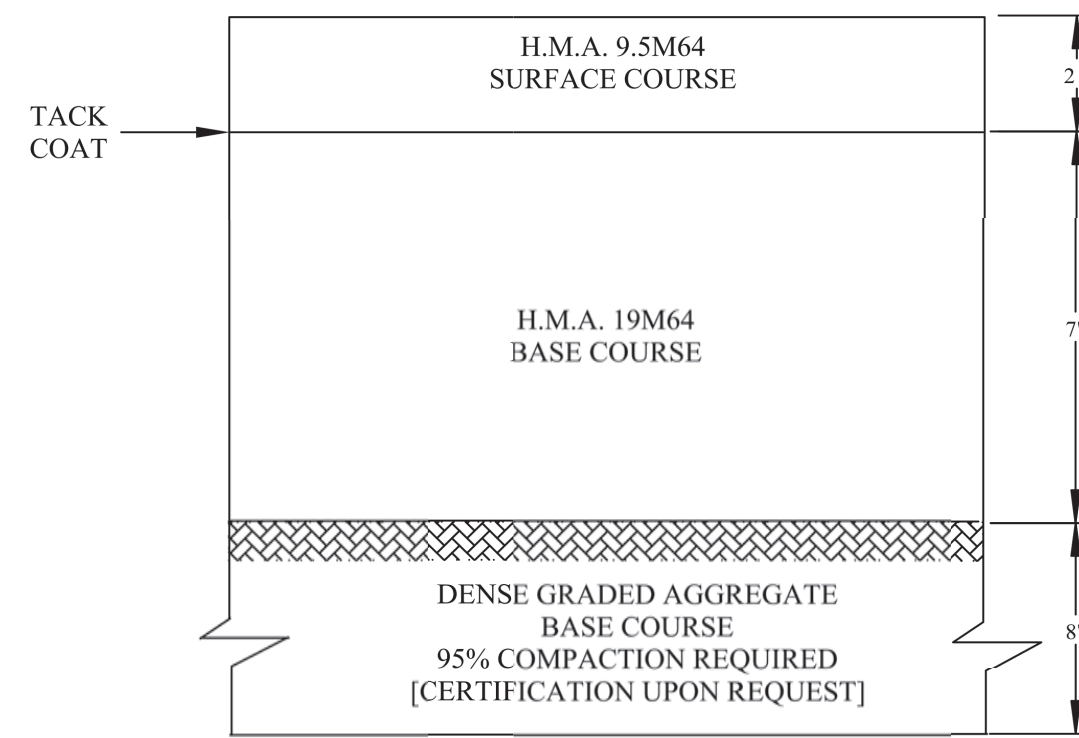
FILE NO. PWB06A09.01



- NOTES:
- TRANSVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 10'-0" APART AND SHALL BE FILLED WITH PREFORMED BITUMINOUS IMPREGNATED FIBER JOINT FILLER COMPLYING WITH A.A.S.H.T.O. SPEC M213, RECESSED 1/4" FROM FRONT FACE AND TOP OF CURB EXPANSION JOINTS THROUGH AND ADJACENT TO CURB SHALL BE INCLUDED IN THE COST OF THE CURB.
 - PROPOSED CURBING SHALL BE TAPERED TO MEET EXISTING CURBING WHERE NECESSARY.

CONCRETE VERTICAL CURB

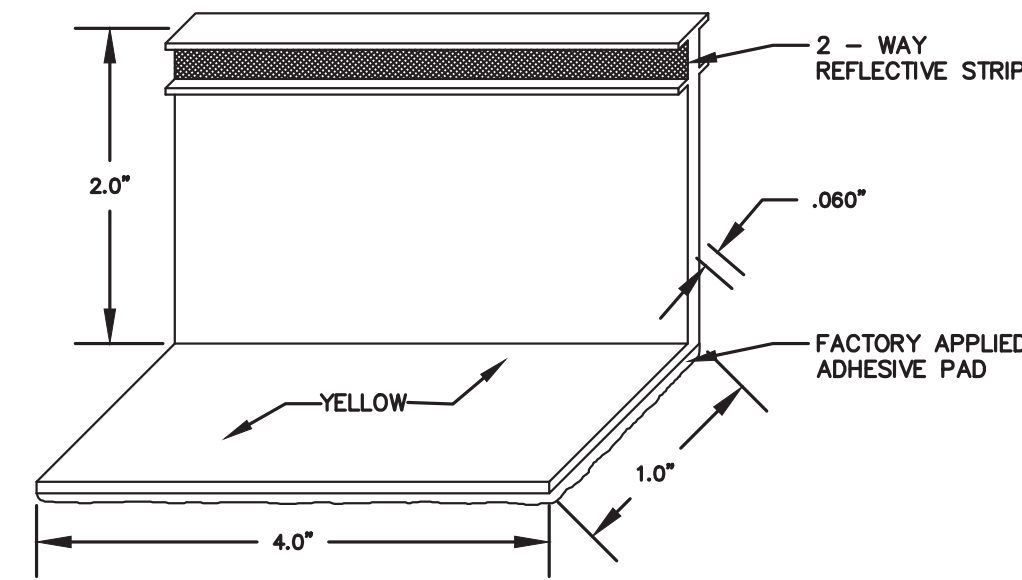
N.T.S.



COUNTY DETAIL – HOT MIX ASPHALT PAVEMENT

N.T.S.

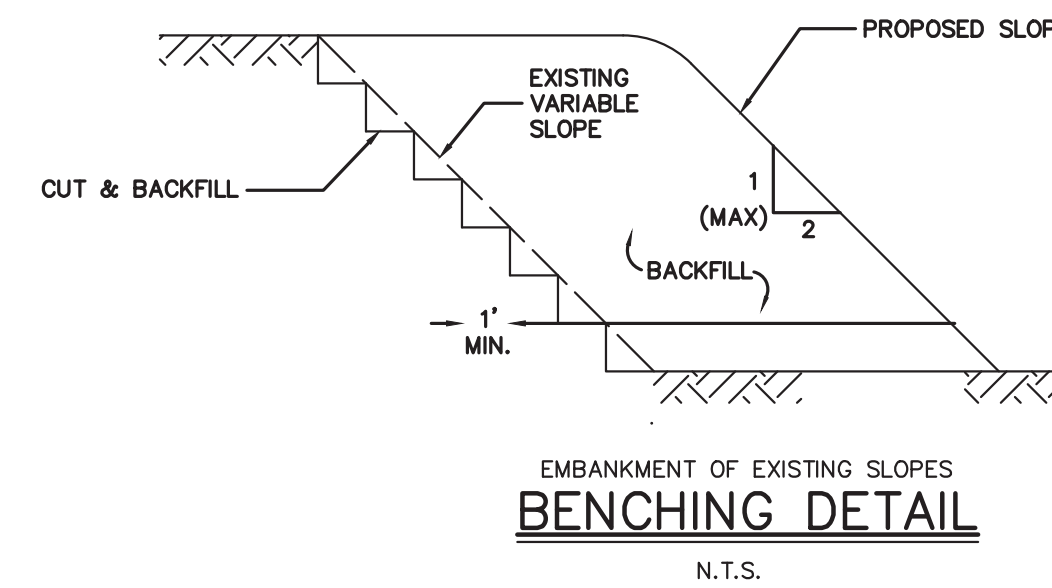
- NOTES:
- MIX NUMBERS ARE IN ACCORDANCE WITH THE CURRENT NEW JERSEY DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
 - IN LIEU OF DENSE GRADED (DGA), RECYCLED CONCRETE AGGREGATE (RCA) IS ACCEPTABLE. ALL RCA MUST MEET NJDOT SPECIFICATIONS AND BE CERTIFIED BY AN NJDOT APPROVED PLANT OF ORIGIN. ALL RCA SHIPMENTS MUST BE FREE OF FOREIGN MATERIALS AND CONTAMINANTS.
 - PAVEMENT CORES (UPON REQUEST)



T.O.M. TEMPORARY OVERLAY MARKERS SHALL BE 2-WAY YELLOW, AS MANUFACTURED BY DAVIDSON PLASTICS CORPORATION, OR APPROVED EQUAL.

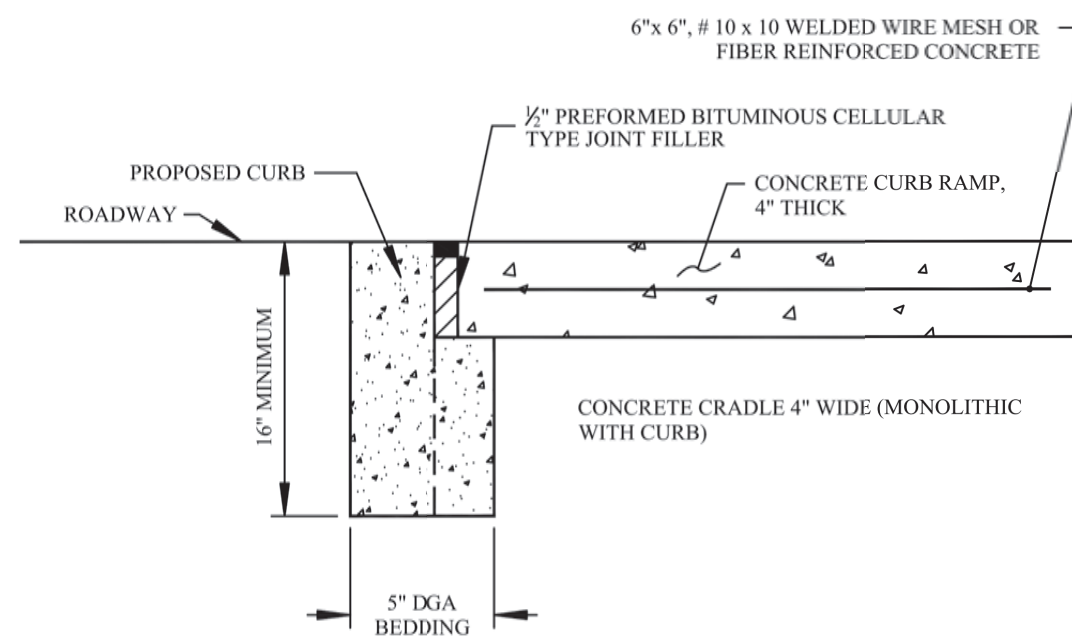
TEMPORARY REFLECTOR

N.T.S.



BENCHING DETAIL

N.T.S.

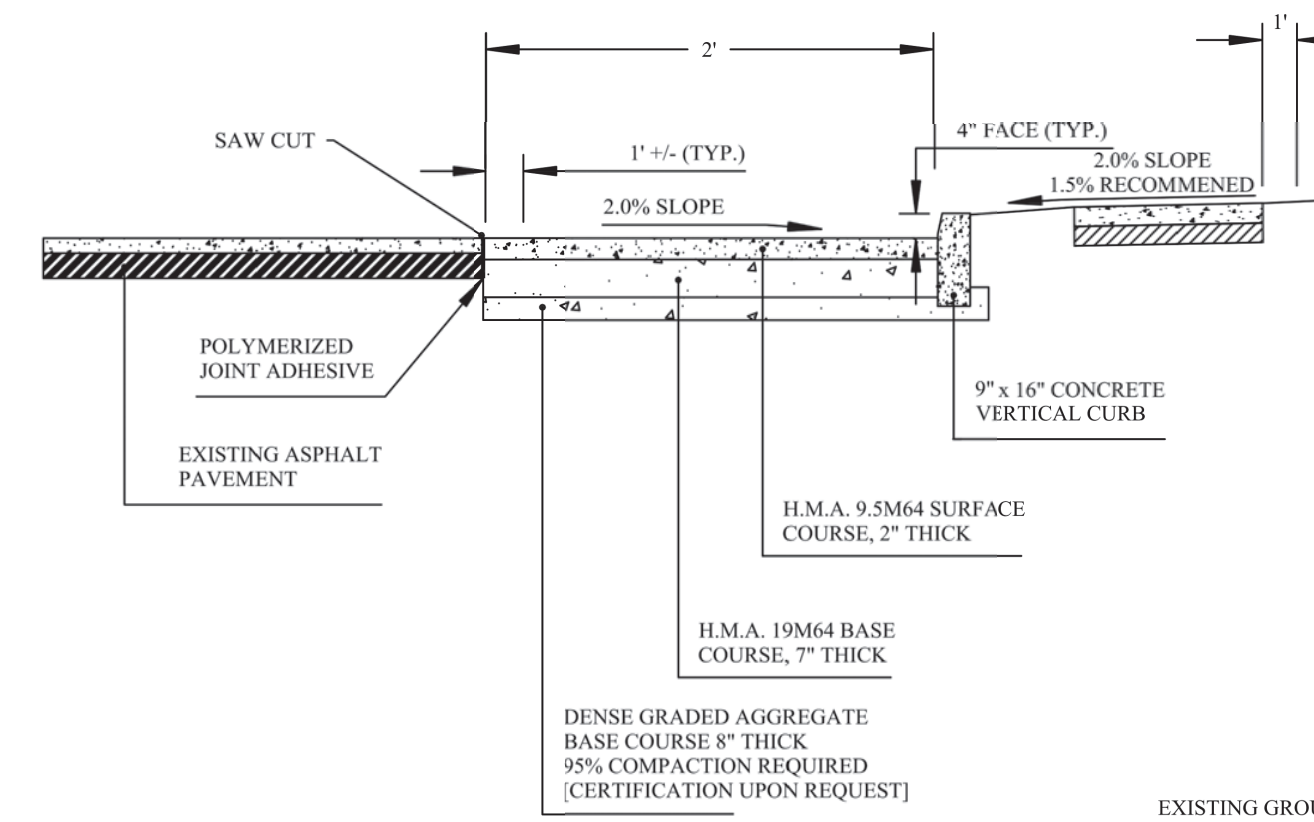


NOTES:

- TRANSVERSE EXPANSION JOINTS, 1/2" WIDE, SHALL BE PROVIDED AT INTERVALS OF NOT MORE THAN 10'. FILLED WITH PREFORMED BITUMINOUS CELLULAR JOINT FILLER (ASHTO M33). LONGITUDINAL JOINTS, SHALL BE PROVIDED BETWEEN CURBS AND ABUTTING SIDEWALKS, AND SHALL BE FILLED WITH PREFORMED BITUMINOUS CELLULAR JOINT FILLER (ASHTO M33). THE TOP OF ALL JOINT FILLER SH TRIMMED 1/2" BELOW THE TOP OF THE SIDEWALK AND FILLED WITH JOINT SEALER (SIRAFLEX-A), OR AN APPROVED EQUAL.
- IN LIEU OF DENSE GRADED (DGA), RECYCLED CONCRETE AGGREGATE (RCA) IS ACCEPTABLE. ALL RCA MUST MEET NJDOT SPECIFICATIONS AND BE CERTIFIED BY AN NJDOT APPROVED PLANT OF ORIGIN. ALL RCA SHIPMENTS MUST BE FREE OF FOREIGN MATERIALS AND CONTAMINANTS.

COUNTY DETAIL – CONCRETE CURB DETAIL FOR ADA RAMPS

N.T.S.



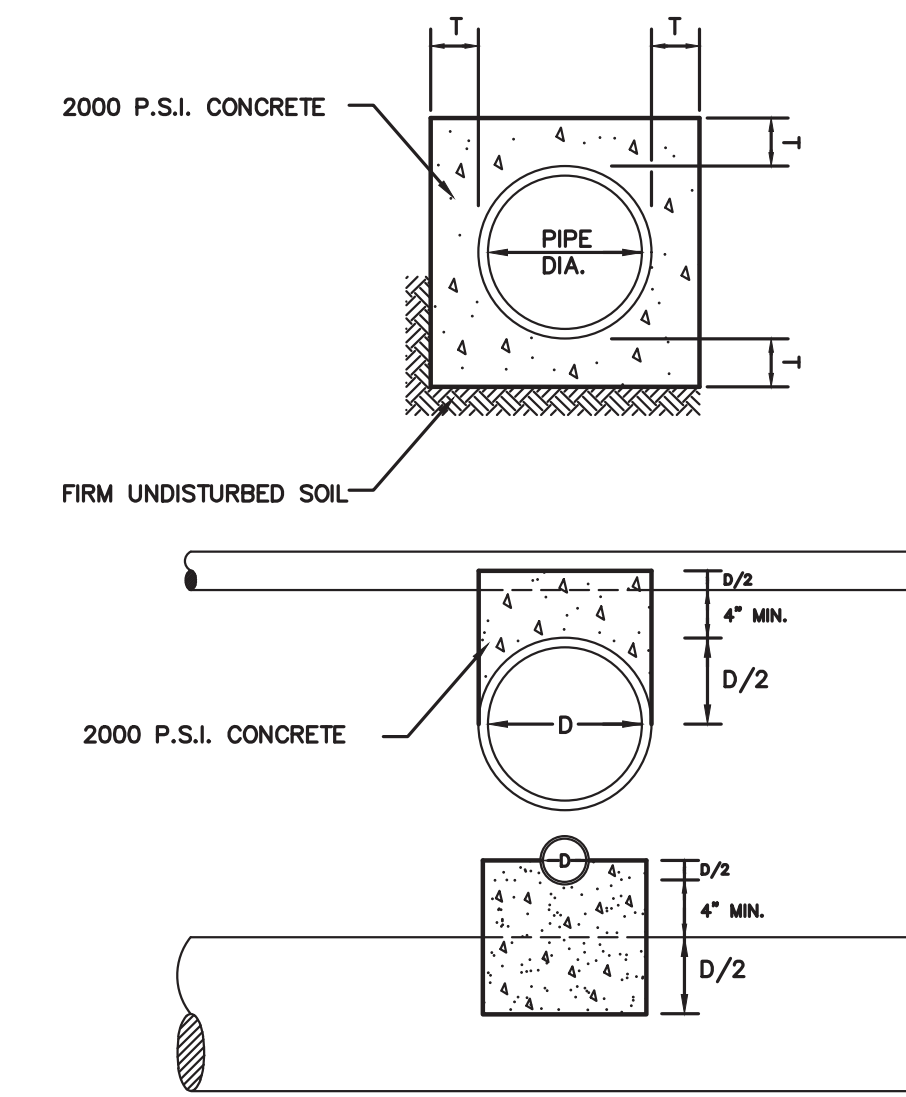
NOTE:

- PROVIDE SLOPE TOWARDS GUTTER LINE TO ENSURE POSITIVE DRAINAGE.

COUNTY DETAIL – CURB INSTALLATION

N.T.S.

DIMENSIONS														
DIA.	6"	8"	10"	12"	15"	18"	21"	24"	27"	30"	36"	42"		
T	5"	5.5"	5.5"	6"	6"	6"	6"	6"	6"	7"	8"	9"	10"	12"



CONCRETE ENCASEMENT & CRADLE

N.T.S.

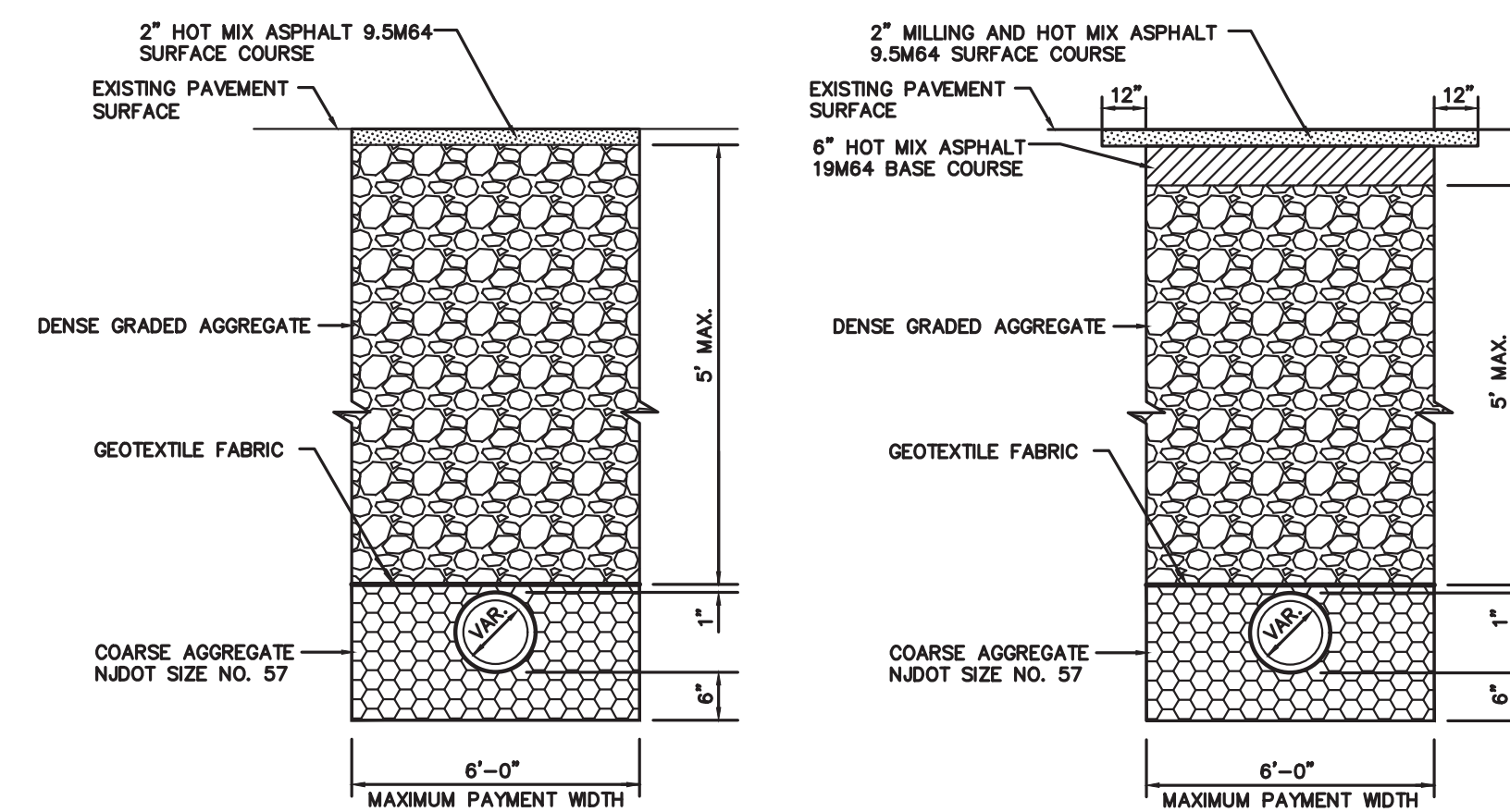


SIGN A

- NOTES:
- MATERIAL TO BE 0.125" ALUMINUM.
 - LEGEND TO BE BLACK AND GREEN.
 - COLOR PALETTE NUMBERS PANTONE 362C, PANTONE 348C, PANTONE 419C & PANTONE COOL GRAY 1)
 - BACKGROUND OF SIGN TO BE WHITE, TYPE XI RETROREFLECTIVE SHEETING.

PROJECT IDENTIFICATION SIGN

N.T.S.



TEMPORARY TRENCH REPAIR

N.T.S.

ROADWAY TRENCH REPAIR

N.T.S.

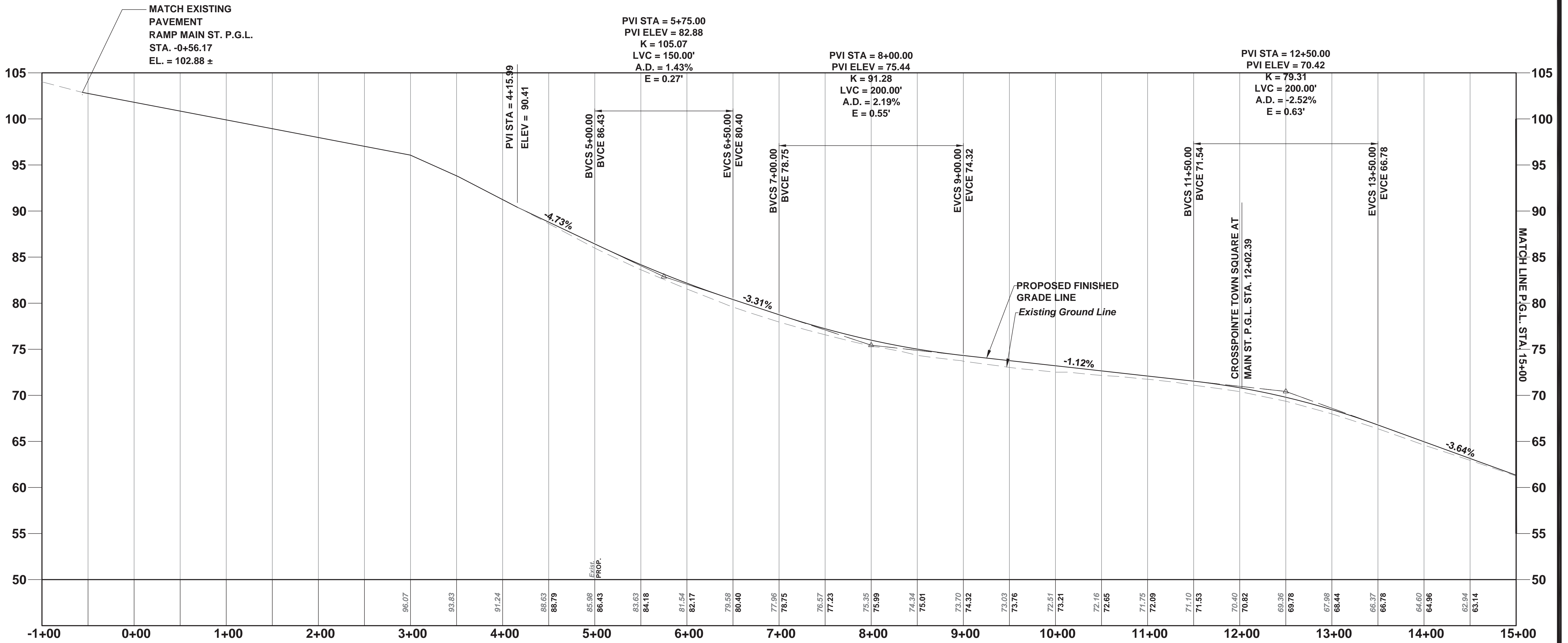
TYPICAL BEDDING AND TRENCH DETAILS

N.T.S.

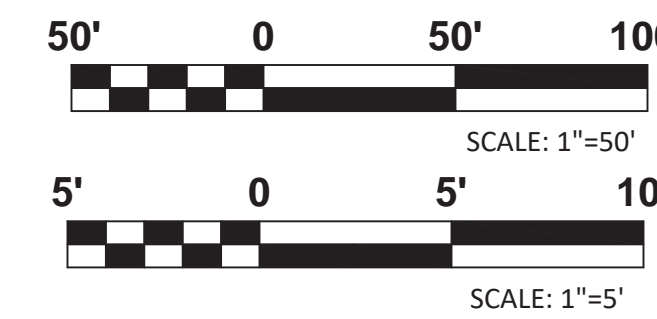
No. _____				DATE _____				DRAWN _____				CHECKED _____				RELEASED _____			
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS																			
CONSTRUCTION DETAILS (6 OF 6)																			
(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194																			
JOHN H. ALLGAIR P.E. & P.P. (1983 - 2021)				DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 245038				JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & L.S. LIC NO. 24271				GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458							
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32992				MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 33468				MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 33468				GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458							
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468																			
As Shown February 2022 DRAWN BY RCM DESIGNED BY RCM CHECKED BY JCW SHEET 71 of 197																			

CD-6

FILE NO. PWB0609.01



**MAIN STREET (CR 514) P.G.L. PROFILE
DESIGN SPEED = 45 MPH**



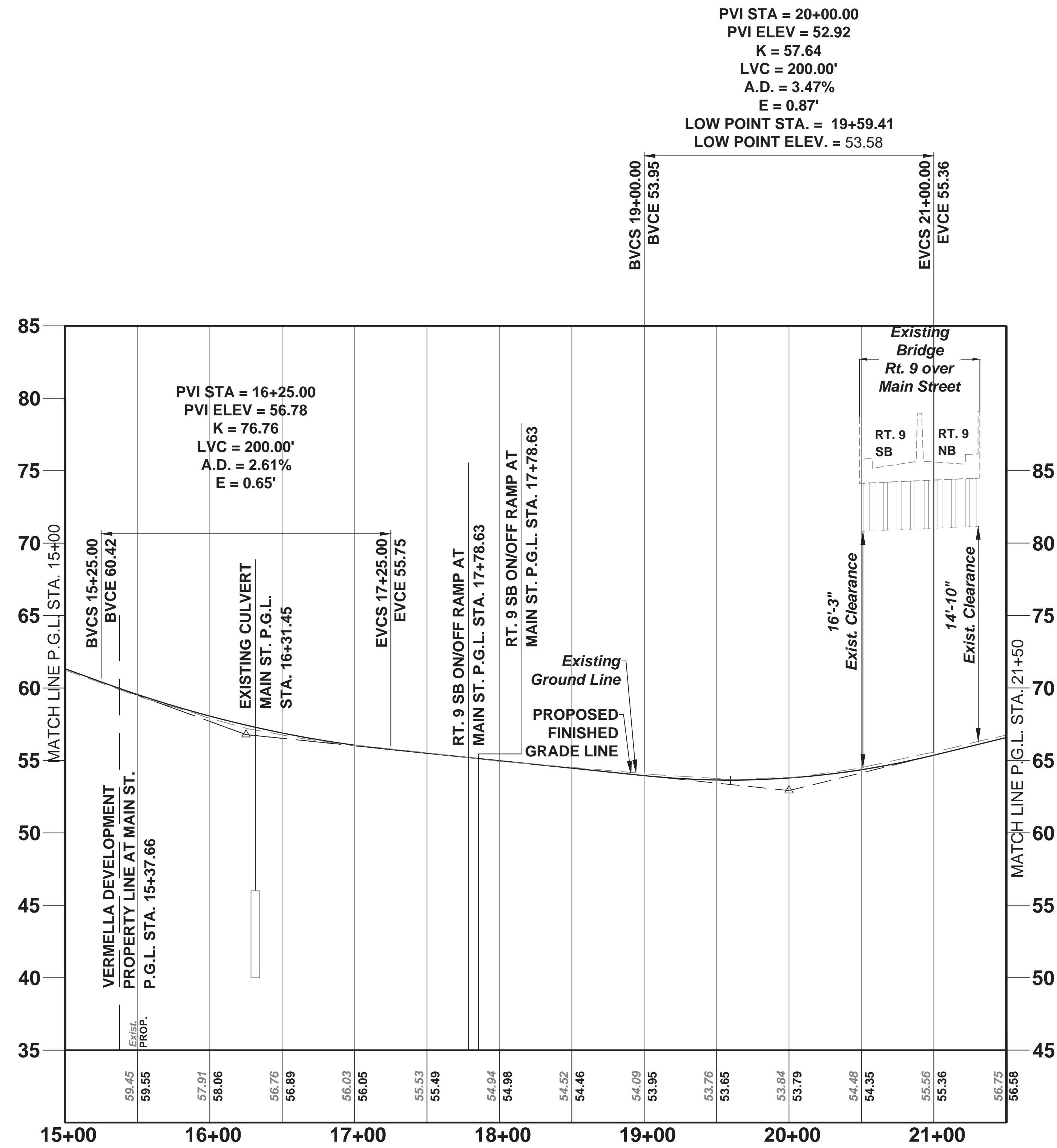
NOTE:

E = DIFFERENCE BETWEEN THE P.V.I. ELEVATION AND THE VERTICAL CURVE ELEVATION AT THE P.V.I. STATION

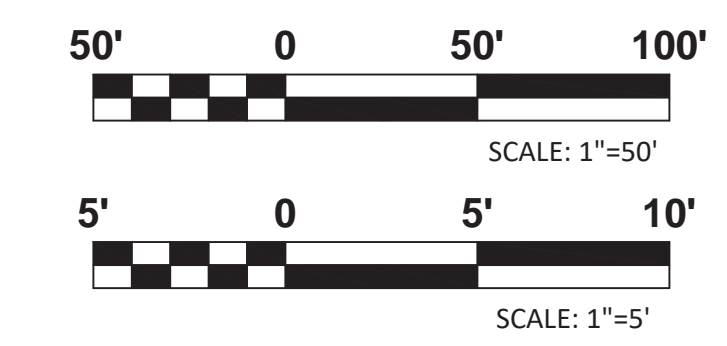
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TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
ROADWAY PROFILES (1 OF 7) MAIN STREET FROM STA. 4+15 TO STA. 15+00							
 CME ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS				(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400			
JOHN H. ALLGAIER P.E. & P.P.	DAVID J. SAMUEL P.E. & P.P.	JOHN J. STEFANI P.E. L.S. & P.P.					
JAY B. CORNELL P.E. & P.P.	MICHAEL J. MCCLELLAND P.E. & P.P.	GREGORY R. VALESI P.E. & P.P.					
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468			SCALE	DATE	DRAWN BY	DESIGNED BY	
			As Shown	February 2022	MP	MP	
			CHECKED BY	SHEET			
			JCW	72	of 197		

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P-7

PWB0609.01



**MAIN STREET (CR 514) P.G.L. PROFILE
DESIGN SPEED = 45 MPH**

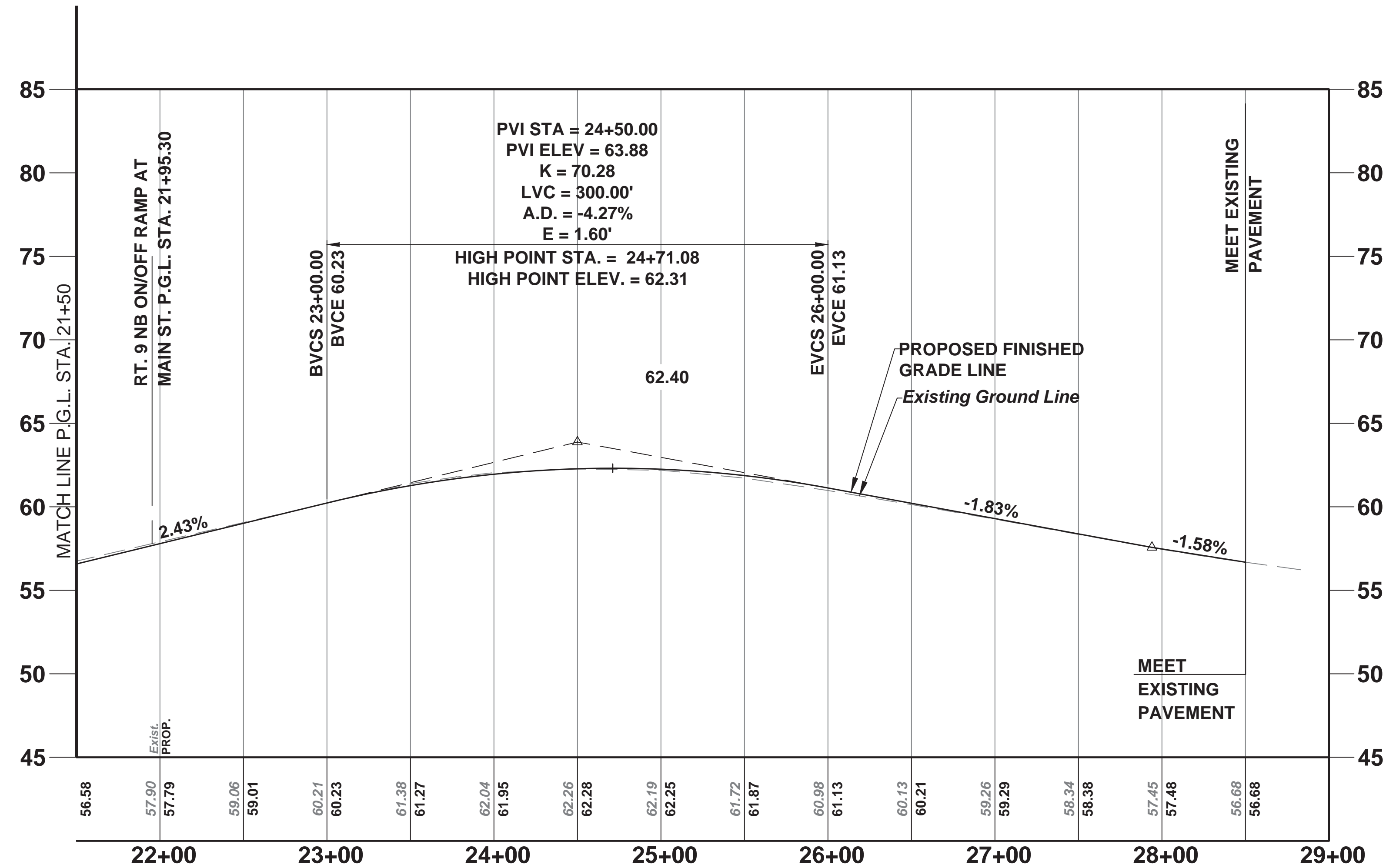


NOTE:
E = DIFFERENCE BETWEEN THE P.V.I. ELEVATION AND THE VERTICAL CURVE ELEVATION AT THE P.V.I. STATION

No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
ROADWAY PROFILES (2 OF 7) MAIN STREET FROM STA. 15+00 TO STA. 21+30.63							
CONSULTING AND MUNICIPAL ENGINEERS 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 727-8000 (732) 462-7400							
JOHN H. ALLGAIER P.E. & P.P. NJ PE LIC NO. 25838 NJ P.P. LIC NO. 2455	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25838 NJ P.P. LIC NO. 2455	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271 NJ P.P. LIC NO. 2089					
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468 NJ P.P. LIC NO. 3270	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458 NJ P.P. LIC NO. 4361					
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468		SCALE: As Shown DATE: February 2022					
DRAWN BY: MP CHECKED BY: JCW		DESIGNED BY: MP SHEET: 73 of 197					
DATE: 2/17/2022							

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P-7

PWBO609.01



MAIN STREET (CR 514) P.G.L. PROFILE
DESIGN SPEED = 30 MPH

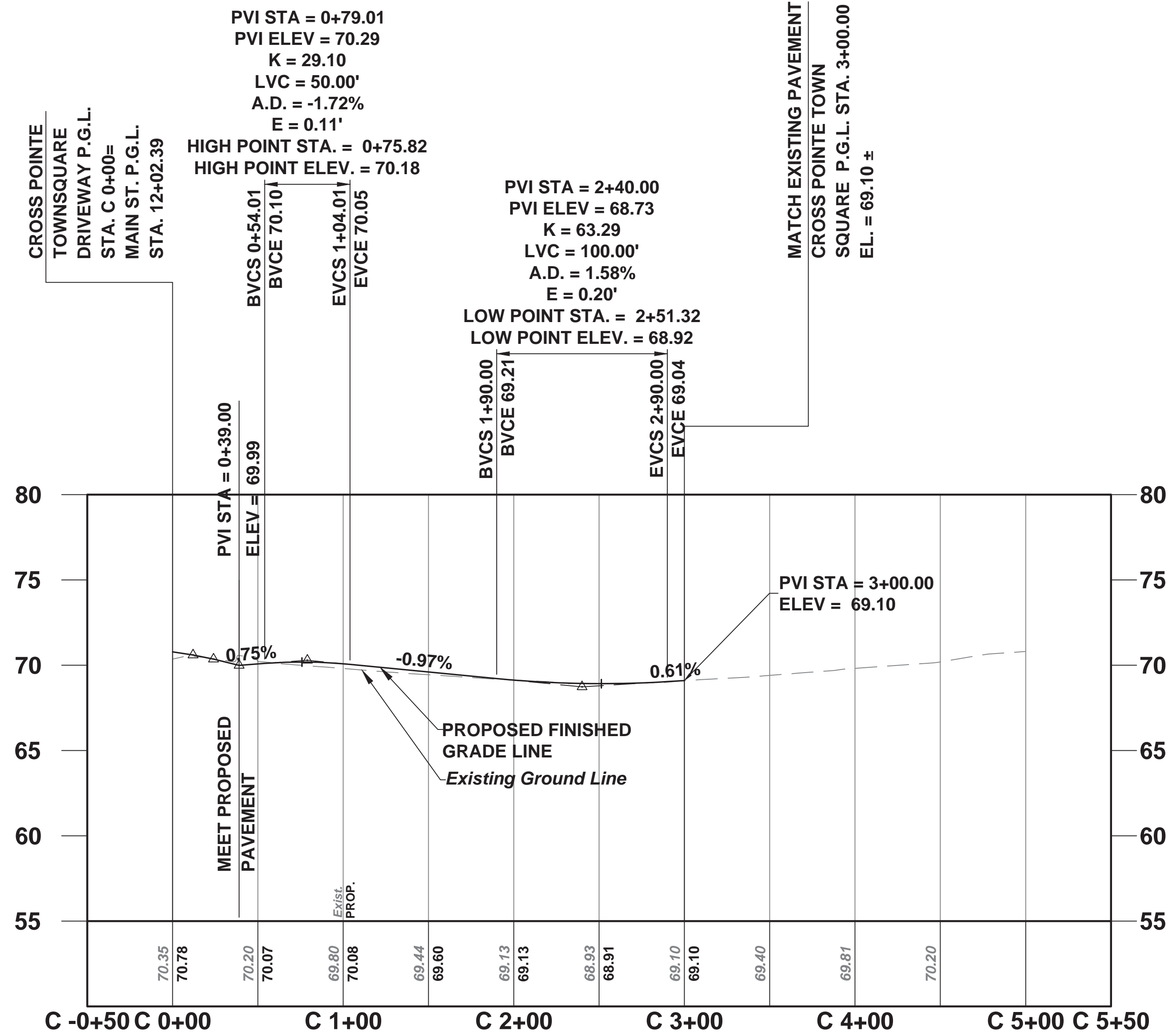


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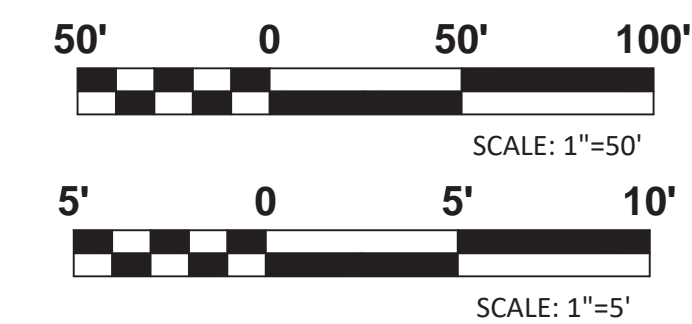
E = DIFFERENCE BETWEEN THE P.V.I. ELEVATION AND THE VERTICAL CURVE ELEVATION AT THE P.V.I. STATION

No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
ROADWAY PROFILES (3 OF 7) MAIN STREET FROM STA. 20+70 TO STA. 28+50							
CONSULTING AND MUNICIPAL ENGINEERS							
JOHN H. ALLGAIER P.E. & P.P. NJ PE LIC NO. 25838 NJ PP LIC NO. 2455		DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25838 NJ PP LIC NO. 2455		JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & L.S. LIC NO. 24271 NJ PP LIC NO. 2089			
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962		MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468		GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458			
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468				SCALE: As Shown DATE: February 2022		DRAWN BY: MP DESIGNED BY: MP	
CHECKED BY: JCW DATE: 2/17/2022				SHEET: 74 of 197		PWB0609.01	

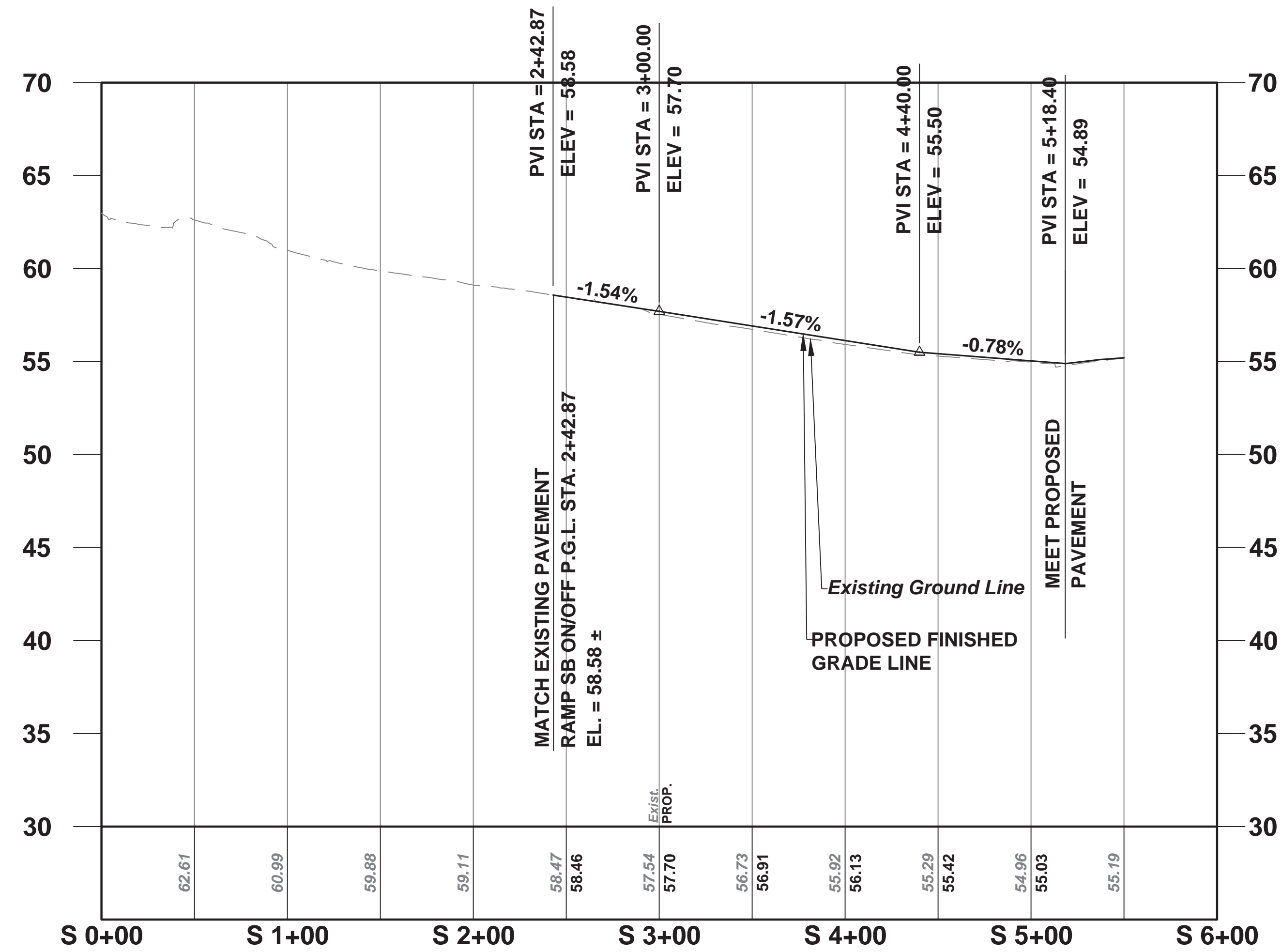
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P-7



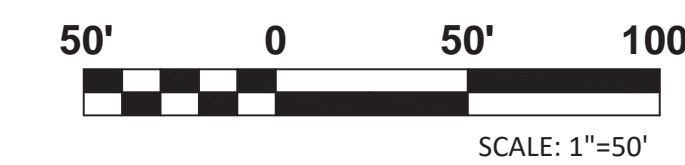
CROSSPOINTE TOWN SQUARE DRIVEWAY P.G.L. PROFILE
DESIGN SPEED = 30 MPH



No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
ROADWAY PROFILES (4 OF 7) CROSSPOINTE TOWN SQUARE D/W FROM STA. 0+39 TO STA. 4+51.33							
(732) 727-8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462-7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194							
JOHN H. ALLGAIER P.E. & P.P. LIC. 32468	DAVID J. SAMUEL P.E. & P.P. LIC. 32468	JOHN J. STEFANI P.E. L.S. & P.P. LIC. 32468	GREGORY R. VALESI P.E. & P.P. LIC. 32468				
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468		SCALE: As Shown DATE: February 2022		DRAWN BY: MP CHECKED BY: JCW		DESIGNED BY: MP SHEET: 75 of 197	
DATE: 2/17/2022							



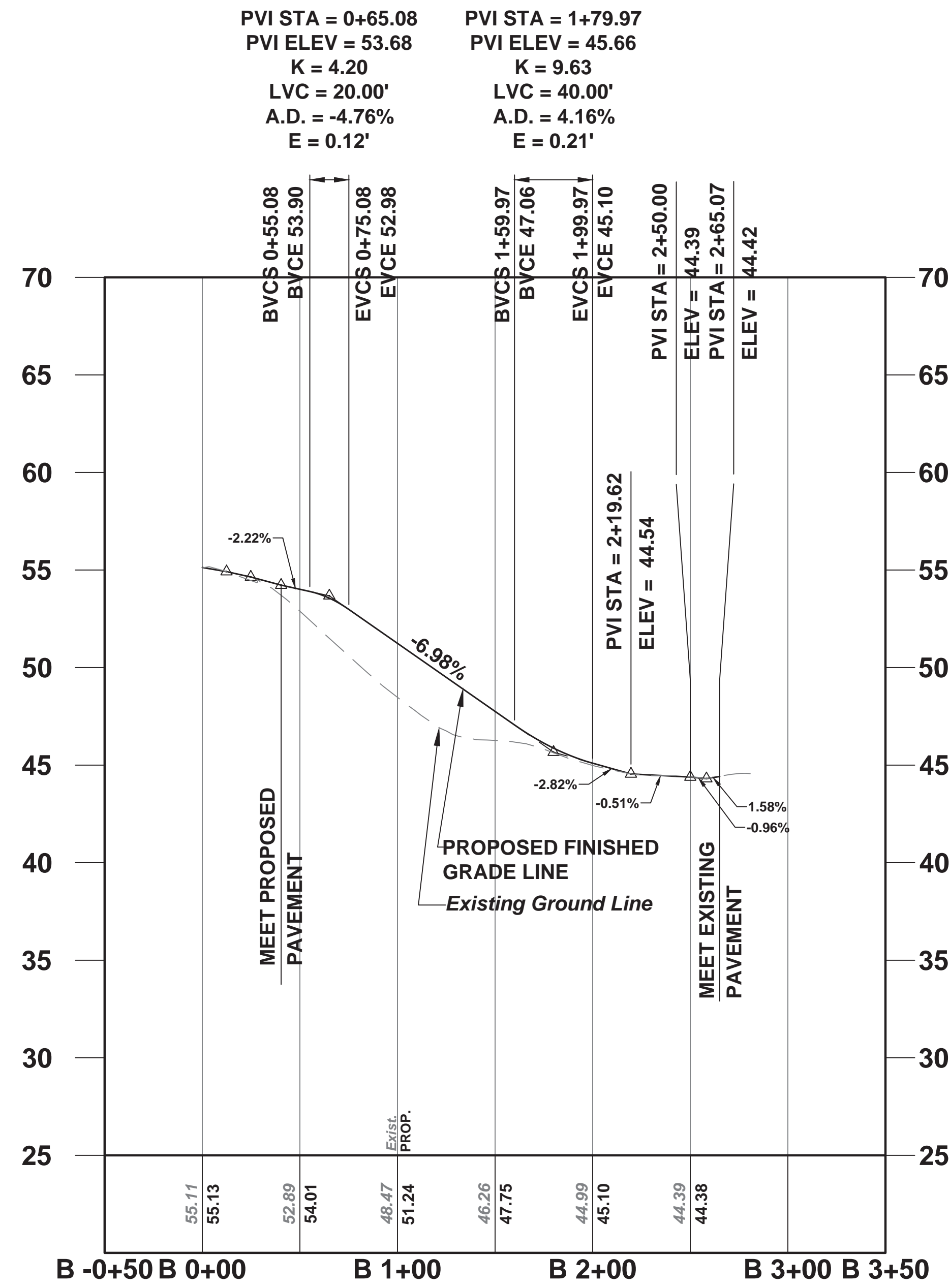
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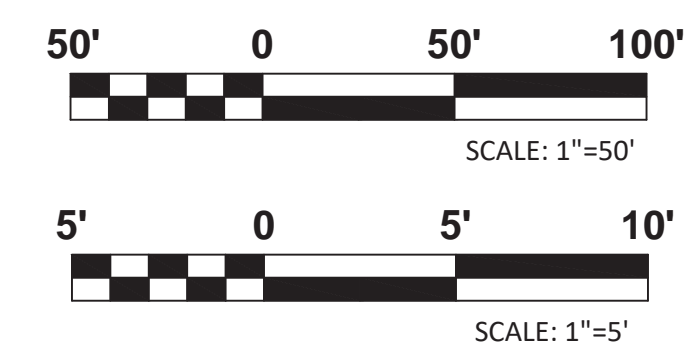
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS			
ROADWAY PROFILES (5 OF 7) ON/OFF RAMP RT. 9 SB FROM STA. 2+42.87 TO STA. 5+18.40			
CONSULTING AND MUNICIPAL ENGINEERS			
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194			
JOHN H. ALLGAIER P.E. & P.P. (732) 727-8000 NJ PE LIC NO. 25838	DAVID J. SAMUEL P.E. & P.P. (732) 462-7400 NJ PE LIC NO. 24955	JOHN J. STEFANI P.E. L.S. & P.P. (732) 462-7400 NJ PE LIC NO. 24971	GREGORY R. VALESI P.E. & P.P. (732) 462-7400 NJ PE LIC NO. 4361
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468		SCALE: As Shown DATE: February 2022	DRAWN BY: MP CHECKED BY: JCV SHEET: 76 of 197

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PWB0609.01



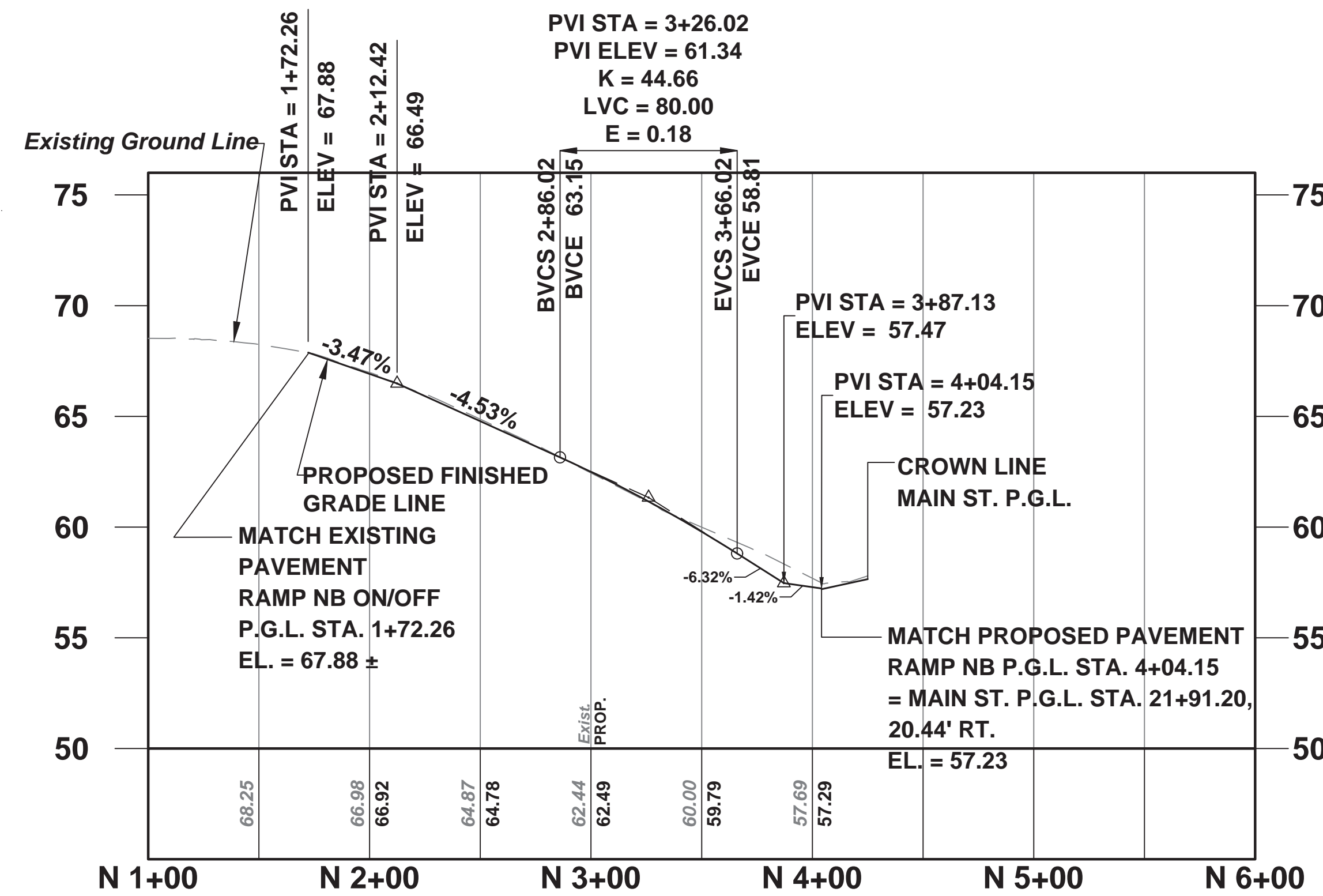
BOWLING CENTER D/W P.G.L. PROFILE



No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
ROADWAY PROFILES (6 OF 7) BOWLING CENTER D/W FROM STA. 0+40.38 TO STA. 2+65.07							
CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194							
JOHN H. ALLGAIER P.E. & P.P. NJ PE LIC NO. 25838 (1997 - 2011)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24855	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & L.S. LIC NO. 24271 NJ PP LIC NO. 2089					
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458 NJ PP LIC NO. 4361					
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468		SCALE: As Shown DATE: February 2022					
CHECKED BY: JCW DATE: 2/17/2022		DRAWN BY: MP DESIGNED BY: MP SHEET: 77 of 197					

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P-7

PWBOA609.01



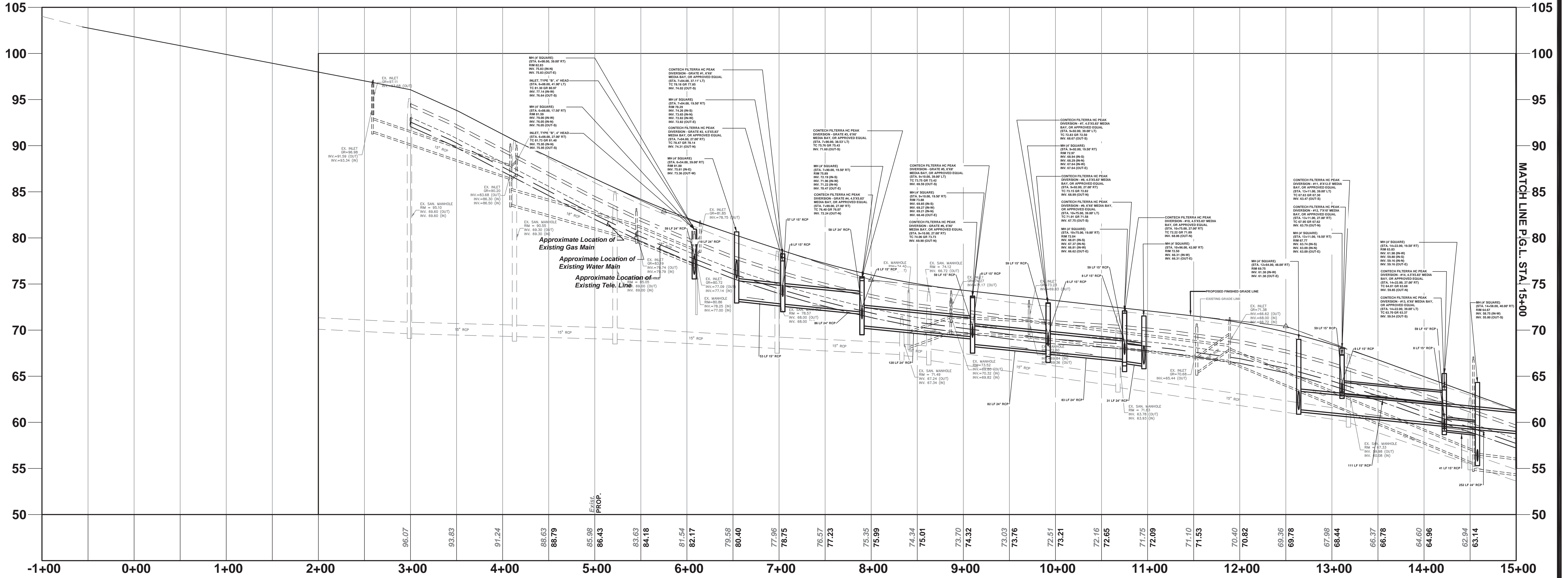
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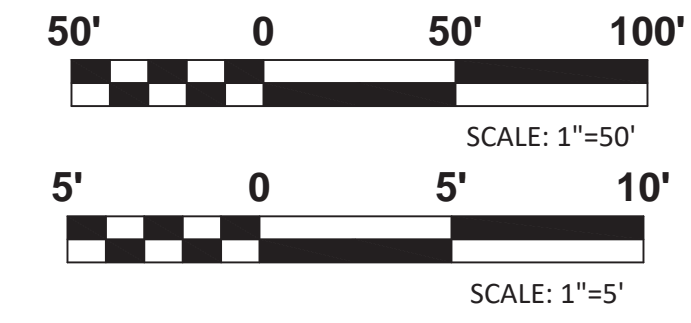
NOTE:

E = DIFFERENCE BETWEEN THE P.V.I. ELEVATION AND THE VERTICAL CURVE ELEVATION AT THE P.V.I. STATION

TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY			
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS			
ROADWAY PROFILES (7 OF 7)			
ON/OFF RAMP RT. 9 NB		FROM STA. 1+72.26 TO STA. 4+04.15	
 CONSULTING AND MUNICIPAL ENGINEERS			
(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400			
JOHN H. ALLGAIER P.E. & P.P. NJ PE LIC NO. 25838 NJ PP LIC NO. 2455	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25838 NJ PP LIC NO. 2455	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 2089	
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 32770	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458 NJ PP LIC NO. 4361	
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468		SCALE: As Shown DATE: February 2022	DRAWN BY: MP DESIGNED BY: MP
CHECKED BY: JCW DATE: 2/17/2022		SHEET: 78 of 197	P-7 P-7



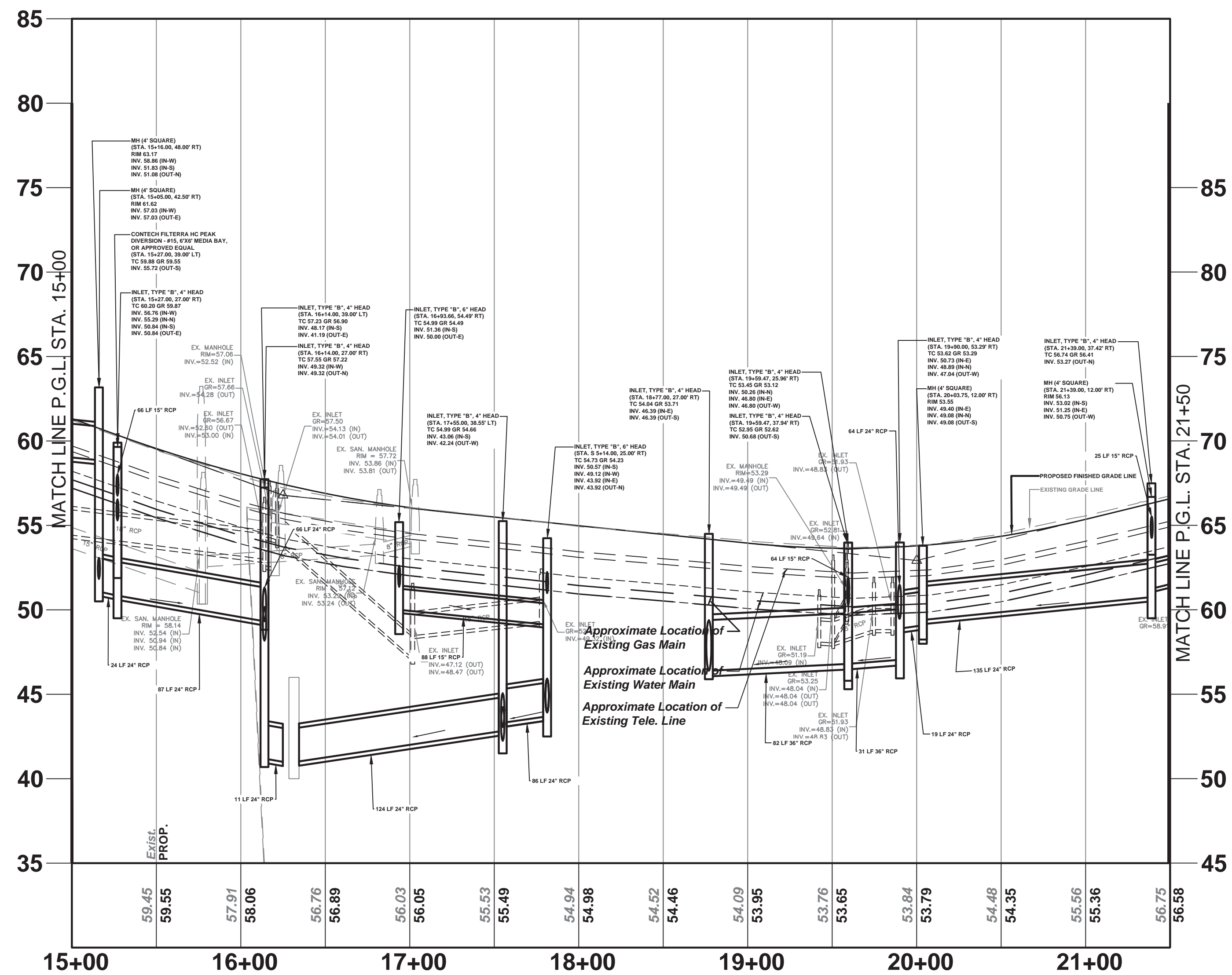
MAIN STREET (CR 514) P.G.L. PROFILE



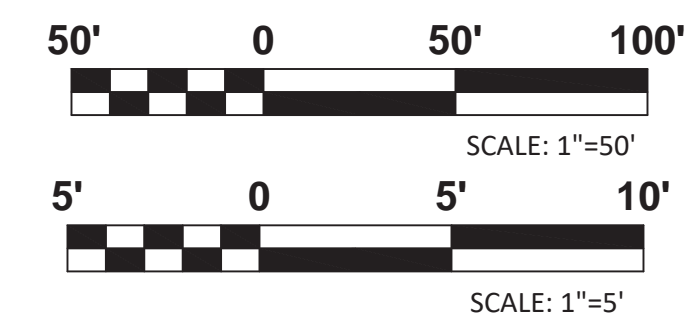
No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
DRAINAGE PROFILES (1 OF 5) MAIN STREET FROM STA. 2+00 TO STA. 15+00							
				CME ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS (732) 462-7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194			
JOHN H. ALLGAIER P.E. & P.P.		DAVID J. SAMUEL P.E. & P.P.		JOHN J. STEFANI P.E., L.S. & P.P.			
JAY B. CORNELL P.E. & P.P.		MICHAEL J. MCCLELLAND P.E. & P.P.		GREGORY R. VALESI P.E. & P.P.			
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER L.C. 32468				SCALE: As Shown DATE: February 2022 DRAWN BY: RB DESIGNED BY: SB CHECKED BY: JW SHEET: 79 of 197			

DP-1
DP-5

PWB0609.01



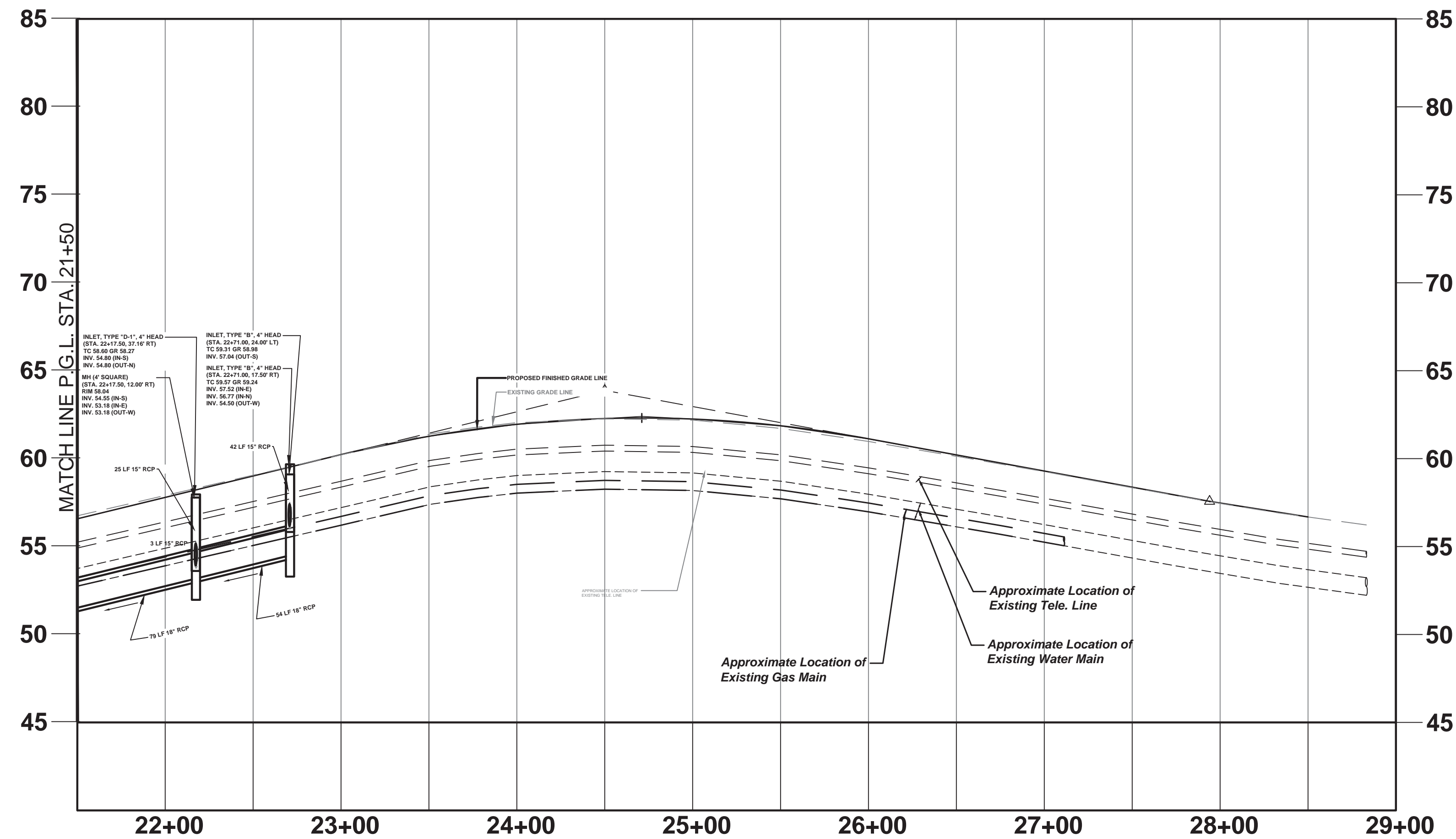
MAIN STREET (CR 514) P.G.L. PROFILE



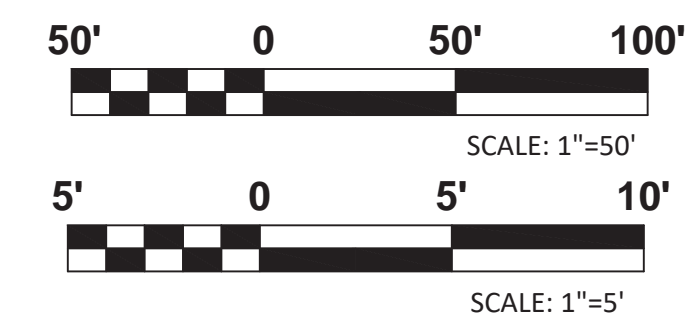
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TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
DRAINAGE PROFILES (2 OF 5) MAIN STREET FROM STA. 15+00 TO STA. 21+30.63							
(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194							
JOHN H. ALLGAIER P.E. & P.P. 1993 - 2001 NJ P.E. LIC. NO. 25838	DAVID J. SAMUEL P.E. & P.P. NJ P.E. LIC. NO. 2455	JOHN J. STEFANI P.E. L.S. & P.P. NJ P.E. & L.S. LIC. NO. 24271	JAY B. CORNELL P.E. & P.P. NJ P.E. LIC. NO. 32962 MICHAEL J. MCCLELLAND P.E. & P.P. NJ P.E. LIC. NO. 32468 GREGORY R. VALESI P.E. & P.P. NJ P.E. LIC. NO. 34456				
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER L.C. 32468		SCALE As Shown	DATE February 2022	DRAWN BY RB	DESIGNED BY SB	CHECKED BY JW	SHEET 80 of 197

DP-2
DP-5

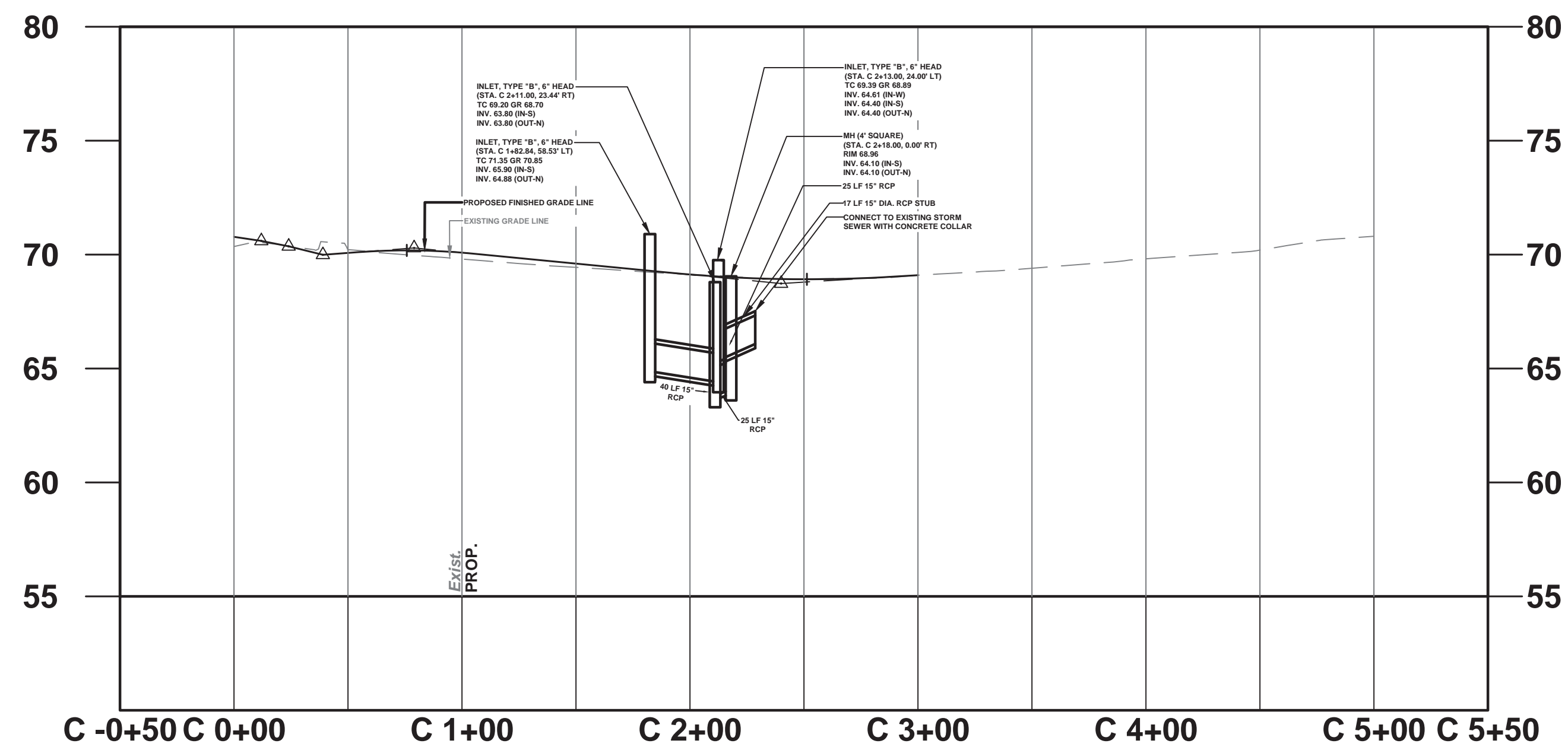
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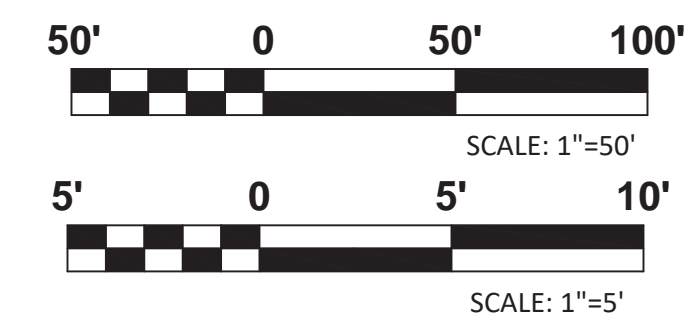
MAIN STREET (CR 514) P.G.L. PROFILE



DP-3		DP-5	
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY			
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS			
DRAINAGE PROFILES (3 OF 5)			
MAIN STREET		FROM STA. 20+70 TO STA. 28+50	
 CONSULTING AND MUNICIPAL ENGINEERS			
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162		1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194	
JOHN H. ALLGAIER P.E. & P.P. (1993 - 2011) NJ PE LIC NO. 25838	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 2455	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & L.S. LIC NO. 24271	NJ PP LIC NO. 2089
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458	NJ PP LIC NO. 4362
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468		SCALE: As Shown	DATE: February 2022
DRAWN BY: RB		DESIGNED BY: SB	
CHECKED BY: JW		SHEET: 81 of 197	
DATE: 2/17/2022		PROJECT NO.: PWBOA609.01	



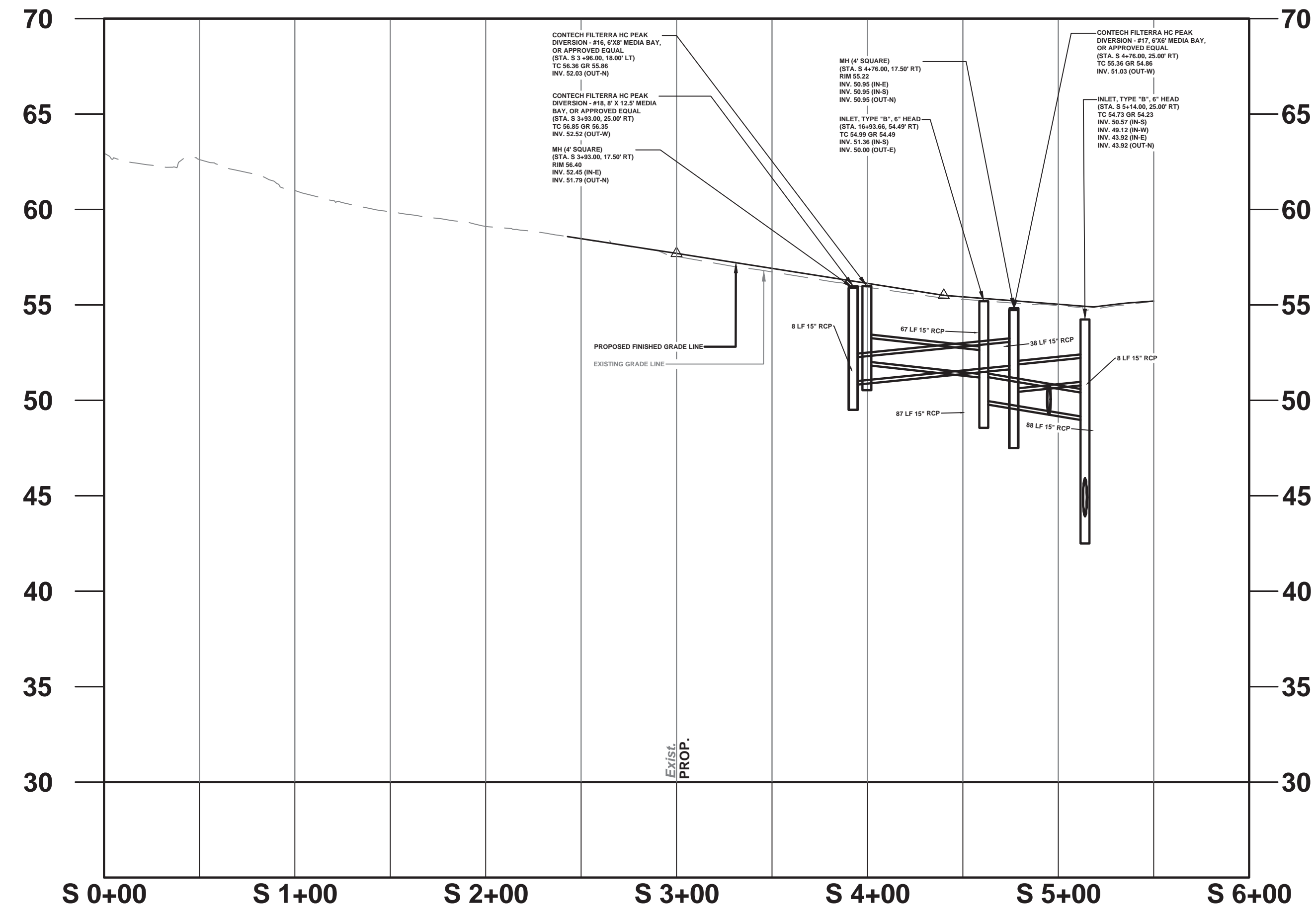
CROSSPOINT P.G.L. PROFILE



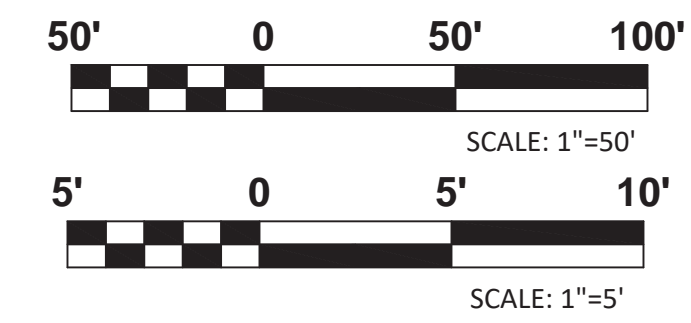
No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
DRAINAGE PROFILES (4 OF 5) CROSSPOINT TOWN SQUARE D/W FROM STA. 0+39 TO STA. 4+51.33							
CONSULTING AND MUNICIPAL ENGINEERS 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194							
JOHN H. ALLGAIER P.E. & P.P. NJ PE LIC NO. 25838 NJ PP LIC NO. 2455	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25838 NJ PP LIC NO. 2455	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE LIC NO. 24271 NJ PP LIC NO. 2089					
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962 NJ PP LIC NO. 3874	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 3770	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458 NJ PP LIC NO. 4361					
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468			SCALE	DATE			
As Shown February 2022			SCALE	DATE			
DRAWN BY RB			SCALE	DATE			
CHECKED BY JW			SCALE	DATE			
DATE 2/17/2022			SCALE	DATE			
SHEET 82 of 197			SCALE	DATE			



DP-4
DP-5

PWB0609.01



ON/OFF RAMP RT. 9 SB P.G.L. PROFILE

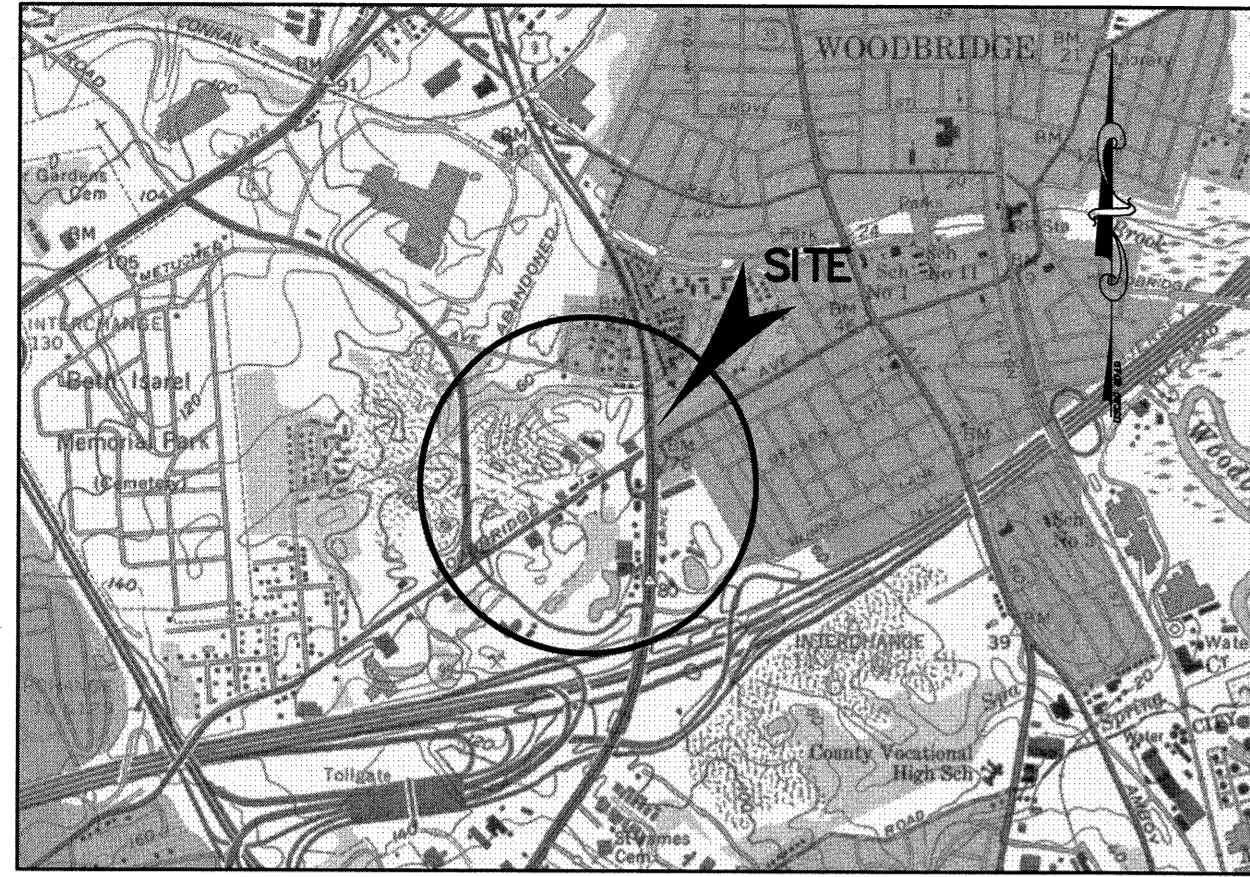


No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
DRAINAGE PROFILES (5 OF 5) ON/OFF RAMP RT. 9 SB FROM STA. 2+42.87 TO STA. 5+18.40							
 CONSULTING AND MUNICIPAL ENGINEERS							
(732) 727 8000		3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162		1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194		(732) 462 7400	
JOHN H. ALLGAIER P.E. & P.P. NJ PE LIC NO. 25838 (1997 - 2001)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 2455 NJ PE LIC NO. 25838	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & L.S. LIC NO. 24271 NJ PP LIC NO. 2089					
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 32770	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34456 NJ PP LIC NO. 4361					
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468			SCALE	DATE			
 As Shown February 2022			DRAWN BY	DATE			
			RB	SB			
			CHECKED BY	SHEET			
			JW	83 of 197			
			DATE				
			2/17/2022				

DP-5

DP-5

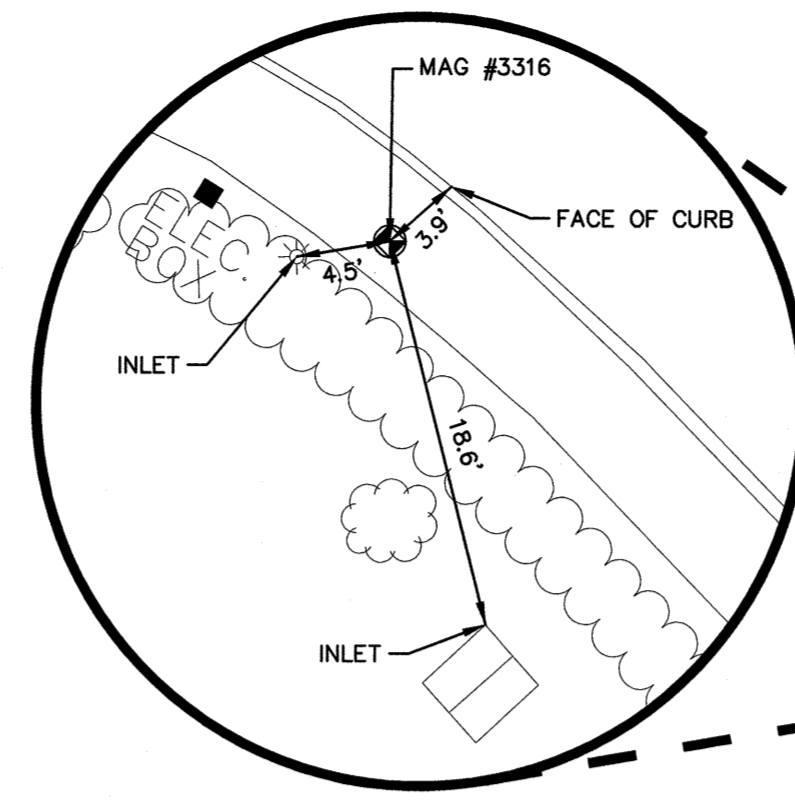
PWBOA609.01



LOCATION MAP
SCALE 1:2,000

NOTES:

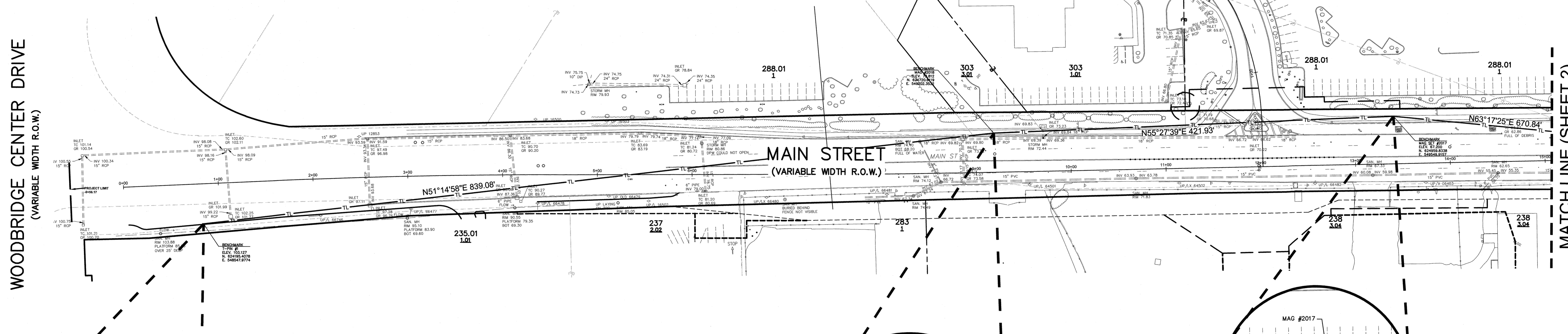
- THIS SURVEYOR IS NOT QUALIFIED TO MAKE A DETERMINATION AS TO THE EXISTENCE OR NON-EXISTENCE OF ENVIRONMENTALLY UNSAFE CONDITIONS. THEREFORE, NO STATEMENT IS BEING MADE OR IMPLIED HEREON, NOR SHOULD IT BE ASSUMED OR CONSTRUED THAT ANY STATEMENT IS BEING MADE BY THE FACT THAT NO EVIDENCE OF ENVIRONMENTALLY UNSAFE CONDITIONS ARE PORTRAYED HEREON. THE CLIENT SHOULD PURSUE THESE MATTERS SEPARATE AND APART FROM THIS SURVEY.
- THIS SURVEYOR HAS NOT BEEN RETAINED TO MAKE ANY DETERMINATIONS AS TO THE EXISTENCE OR NON-EXISTENCE OF WETLANDS. THEREFORE, NO STATEMENT IS BEING MADE OR IMPLIED HEREON, NOR SHOULD IT BE ASSUMED OR CONSTRUED THAT ANY STATEMENT IS BEING MADE BY THE FACT THAT NO EVIDENCE OF WETLANDS IS PORTRAYED HEREON. THE CLIENT SHOULD PURSUE THIS MATTER SEPARATE AND APART FROM THIS SURVEY.
- THIS SURVEYOR CONDUCTED NO UNDERGROUND EXPLORATIONS. THEREFORE, ONLY THOSE PHYSICAL FEATURES WHICH WERE PLAINLY VISIBLE AT THE TIME OF THIS SURVEY ARE PORTRAYED HEREON.
- SURVEY DATA PORTRAYED HEREON IS BASED UPON FIELD OBSERVATIONS COLLECTED IN FEBRUARY OF 2019 BY ROBINSON AERIAL AND APRIL OF 2019 THROUGH JUNE OF 2021 BY CME ASSOCIATES.
- BASIS FOR BEARINGS IS THE NORTH AMERICAN DATUM OF 1983, NEW JERSEY STATE PLANE COORDINATE SYSTEM, UNITED STATES SURVEY FOOT. ALL VALUES REDUCED TO GROUND COORDINATES; CONTROL MONUMENTS FOR CONVERSION: MADISON HALE, 12 N 3, ELIZ S BASE, RNR 11, 12 U 3, B+O 4, HOS, CHURCH. AVERAGE COMBINED SCALE FACTOR OF 0.99990639, CENTROID N. 625,773.6834, E. 551,187.3718. GPS POSITIONS DERIVED VIA REAL TIME KINEMATIC SURVEY IN COORDINATION WITH KEYSTONE KEYNET VRS NETWORK.
- VERTICAL DATUM ESTABLISHED BY ROBINSON AERIAL - NAVD83.



MAG #3316
ELEV. 70.662
N 625,004.4681
E 549,108.4937
STA: 4+11.27
OFFSET: 19.10' LT.
N.T.S.

WOODBRIDGE CENTER DRIVE
(VARIABLE WIDTH R.O.W.)

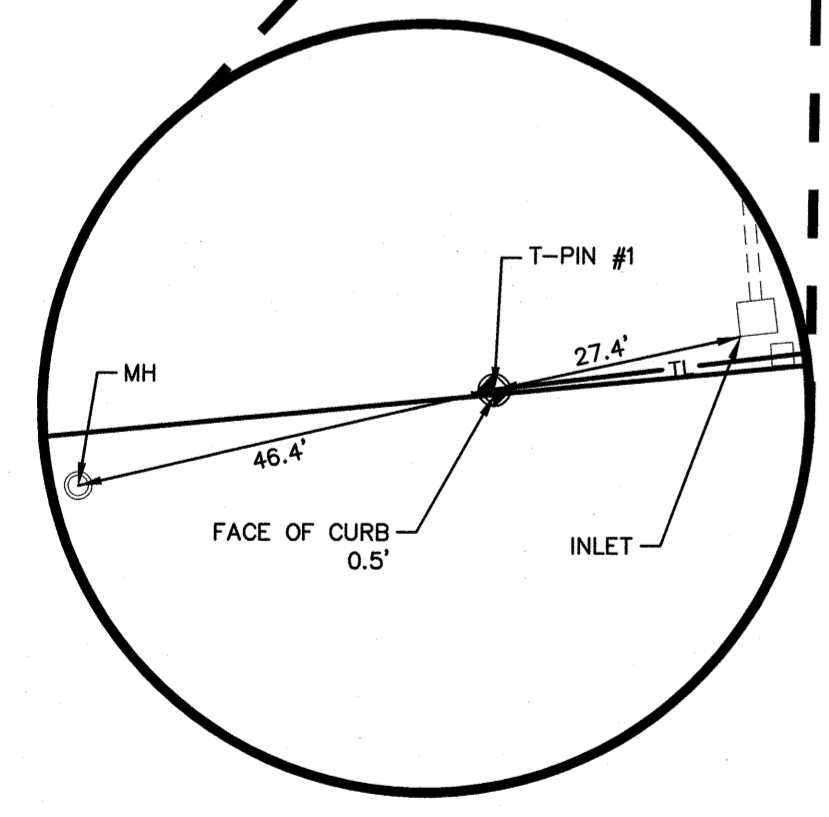
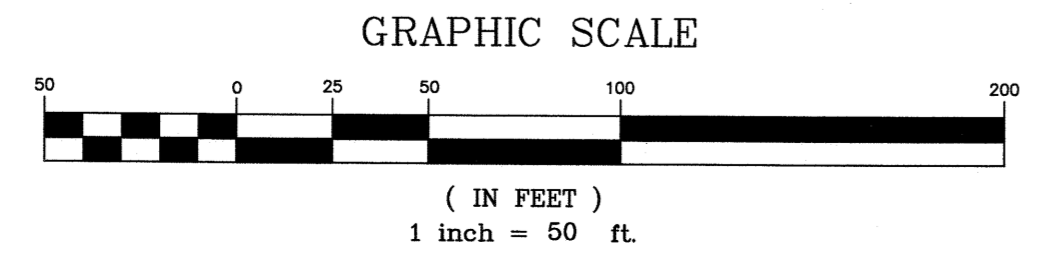
MATCH LINE (SHEET 2)



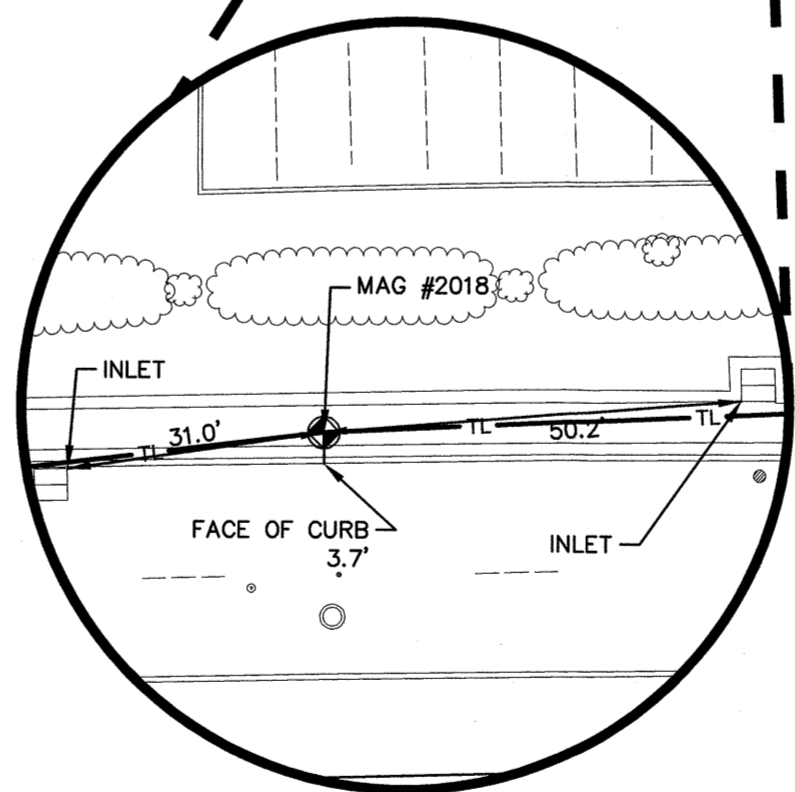
NEW JERSEY DEPARTMENT OF TRANSPORTATION
STANDARD R.O.W. LEGEND

BASE LINE	PROPOSED R.O.W. LINE	Existing R.O.W. Line	STATE HIGHWAY PARCEL NUMBER	(sur.) SURVEY DATA
R.O.W. LINE & NO ACCESS LINE	NO ACCESS	No Access Line	5	D.A. DEED AREA
SLOPE	PROPOSED SLOPE (E. or Ditch)	Previously Acquired Slope	EXISTING MONUMENT	(FM) FILED MAP
LIMIT OF GRADING	PROPOSED CURB LINE	Existing Curb	PROPOSED MONUMENT	(TM) TAX MAP
CURB	PROPOSED DRAINAGE	Existing Drainage	MUP MULTI-USE PATH	(S) SCALED
DRAINAGE	PROPOSED DITCH	Existing Ditch	(C) CURVE NUMBER	(L) LEASE
EXISTING UNDERGROUND UTILITIES	Existing Sanitary Sewer	Existing Sanitary Sewer	PC POINT OF CURVATURE	(ET) ENTIRE TRACT
Existing Water Main	Existing Gas Main	Existing Gas Main	POC POINT OF COMPOUND CURVATURE	94 TAX MAP BLOCK NO.
Existing Telephone Conduit	Existing Electric Conduit	Existing Electric Conduit	PT POINT OF TANGENCY	94 FILED MAP BLOCK NO.
PROPERTY LINE	Existing Property Line	Existing Property Line	POL POINT ON LINE	21 TAX MAP LOT NO.
COMMON OWNERSHIP LINE	Existing (Type) Easement	Existing (Type) Easement	POC POINT ON CURVE	21 FILED MAP LOT NO.
TOWNSHIP, CITY, COUNTY LINES	PROPOSED (TYPE) EASEMENT	PROPOSED (TYPE) EASEMENT	PRC PAGE	DEED BOOK
EASEMENT LINES	Existing Flood Hazard Line	Existing Flood Hazard Line	WATER GATE VALVE	DEED BOOK
WETLAND LIMITS	Existing (Type) Fence	Existing (Type) Fence	GAS GATE VALVE	DEED BOOK
Existing Guided	PROPOSED FENCE	PROPOSED FENCE	POLE	DEED BOOK
Existing Flood Hazard Line	PROPOSED SILT FENCE	PROPOSED SILT FENCE	HYDRANT	DEED BOOK
	Existing 100 Year Flood Line	Existing 100 Year Flood Line	DECIDUOUS TREE	DEED BOOK
	Existing Flood Hazard Line	Existing Flood Hazard Line	SHRUB	DEED BOOK
			EVERGREEN TREE	DEED BOOK
			HEDGE	DEED BOOK
			SWAMP	DEED BOOK
			DEED DATA	DEED BOOK
			REMAINING AREA	DEED BOOK
			PARKING METER	DEED BOOK
			IRON PIN	DEED BOOK
			HEADWALL & APRON	DEED BOOK

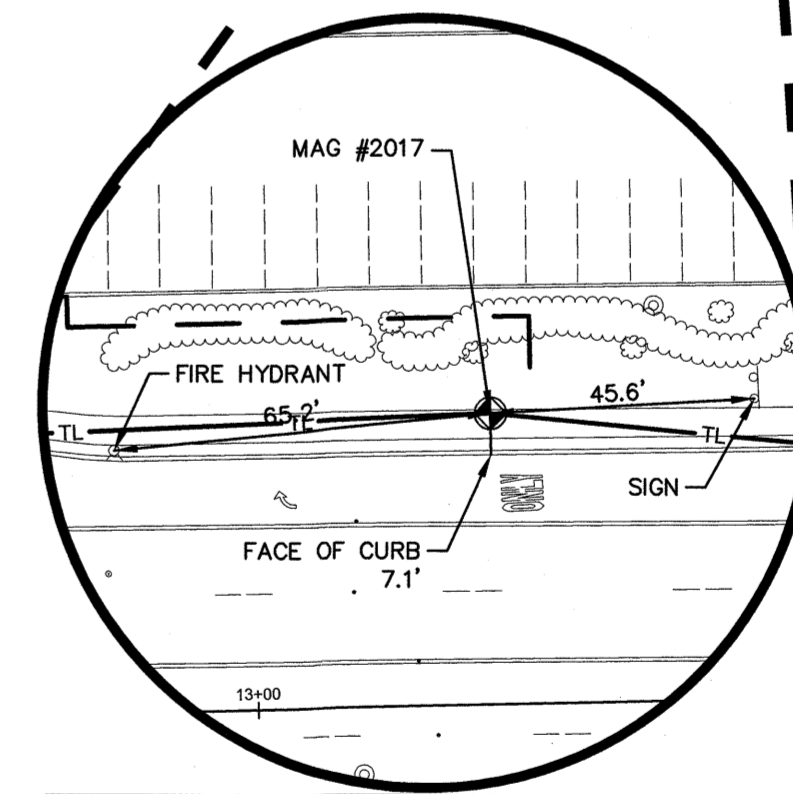
Note: The proposed parcel courses and the north arrow depicted may differ from the system utilized to plot the deed distances and courses.



T-PIN #1
ELEV. 103.127
N 624,195.4078
E 548,547.9774
STA: 0+82.80
OFFSET: 42.22' RT.
N.T.S.



MAG #2018
ELEV. 73.812
N 624,720.6119
E 549,202.3532
STA: 9+19.15
OFFSET: 41.35' LT.
N.T.S.



MAG #2017
ELEV. 67.200
N 624,959.8338
E 549,549.957
STA: 13+40.99
OFFSET: 50.08' LT.
N.T.S.

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

TIE SHEET (1 OF 2)

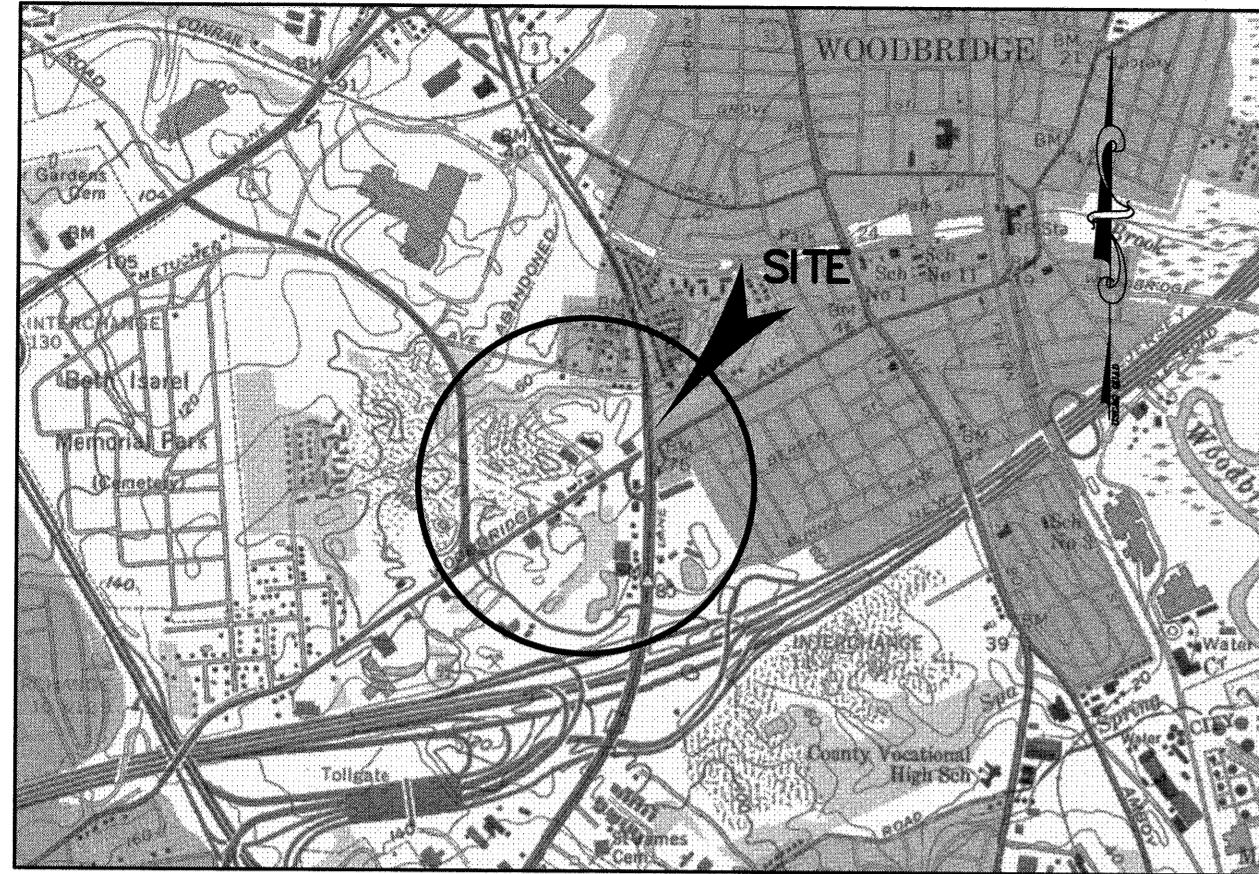
CME ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS

JOHN H. ALLGAIER P.E. & P.P. 1191-1-2021	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 2495	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. McFARLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458

MICHAEL J. McFARLAND P.L.S.
NEW JERSEY PROFESSIONAL LAND SURVEYOR

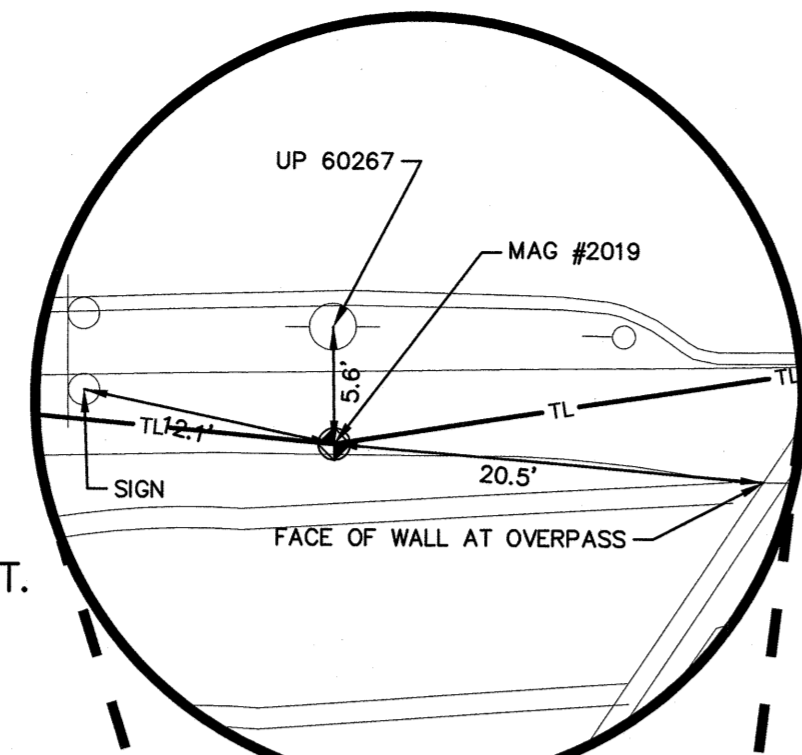
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DESIGNED BY: MLB
CHECKED BY: MJM
SHEET: 84 of 197

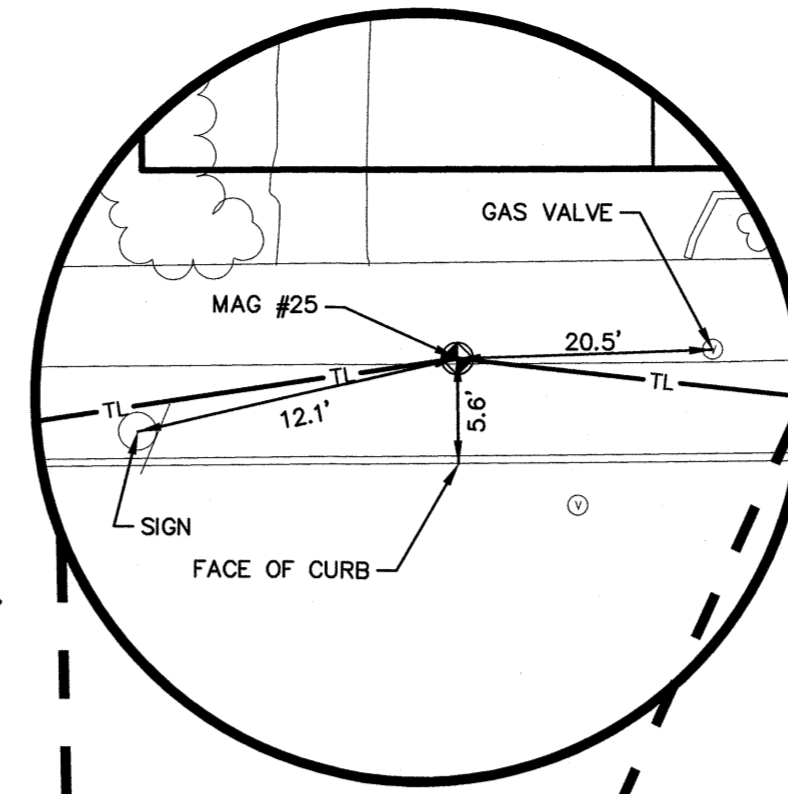


LOCATION MAP
SCALE 1 : 2,000

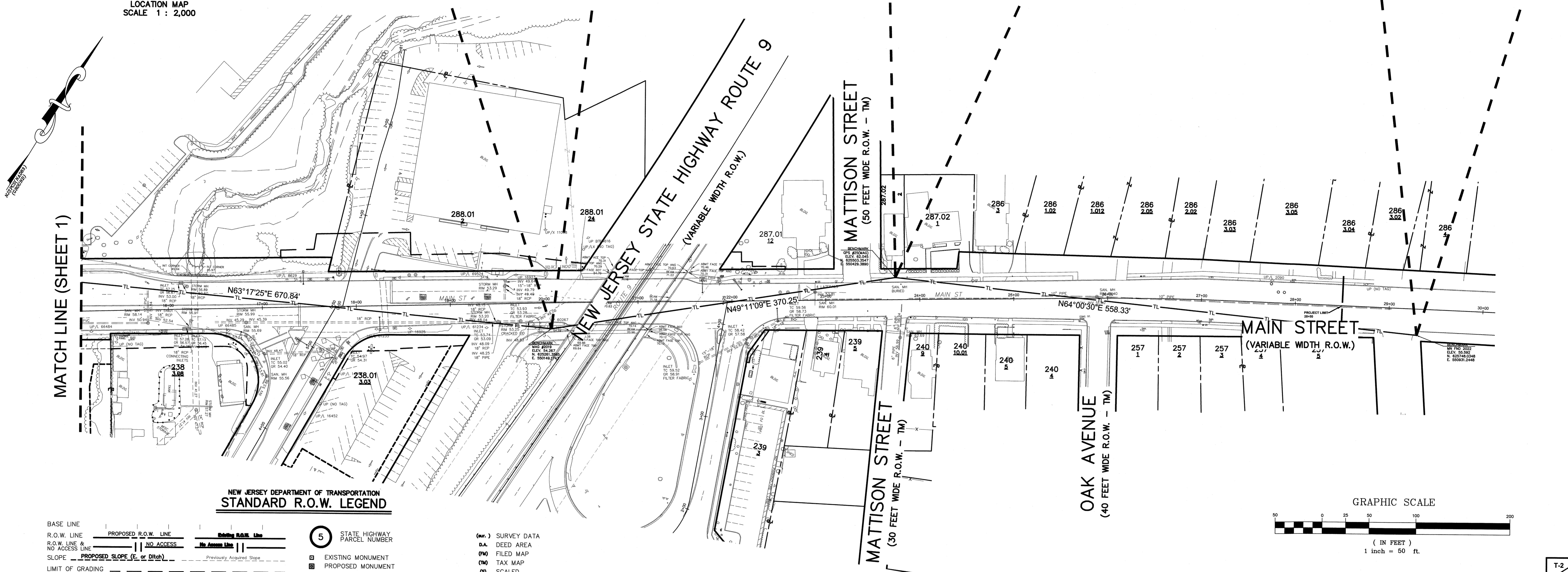
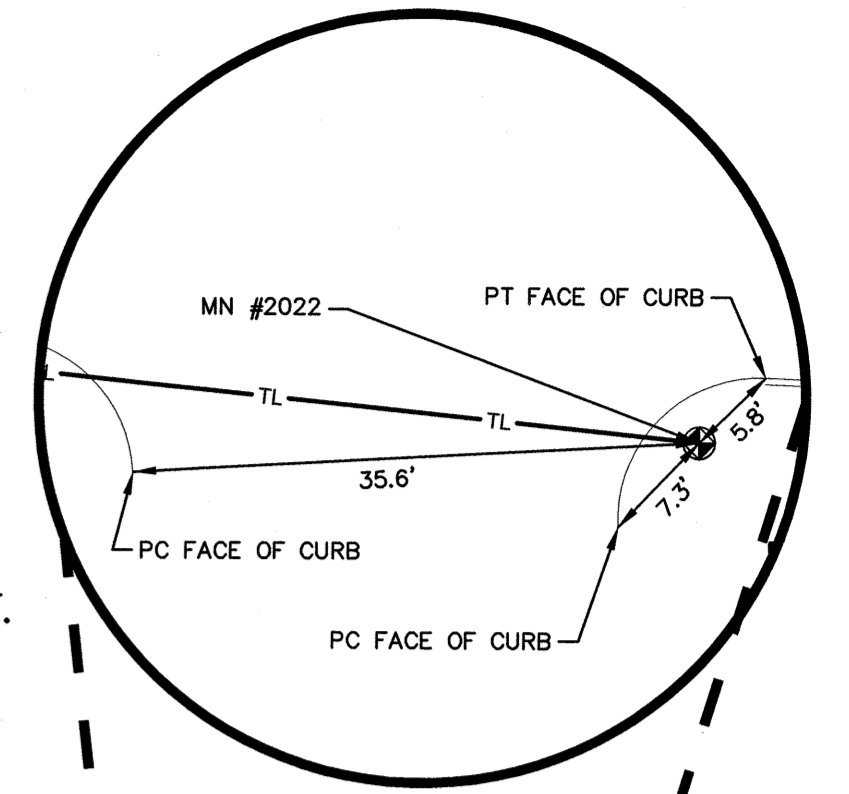
MAG #2019
ELEV. 54.267
N 625,261.3585
E 550,149.1743
STA: 20+07.33
OFFSET: 27.51' RT.
N.T.S.



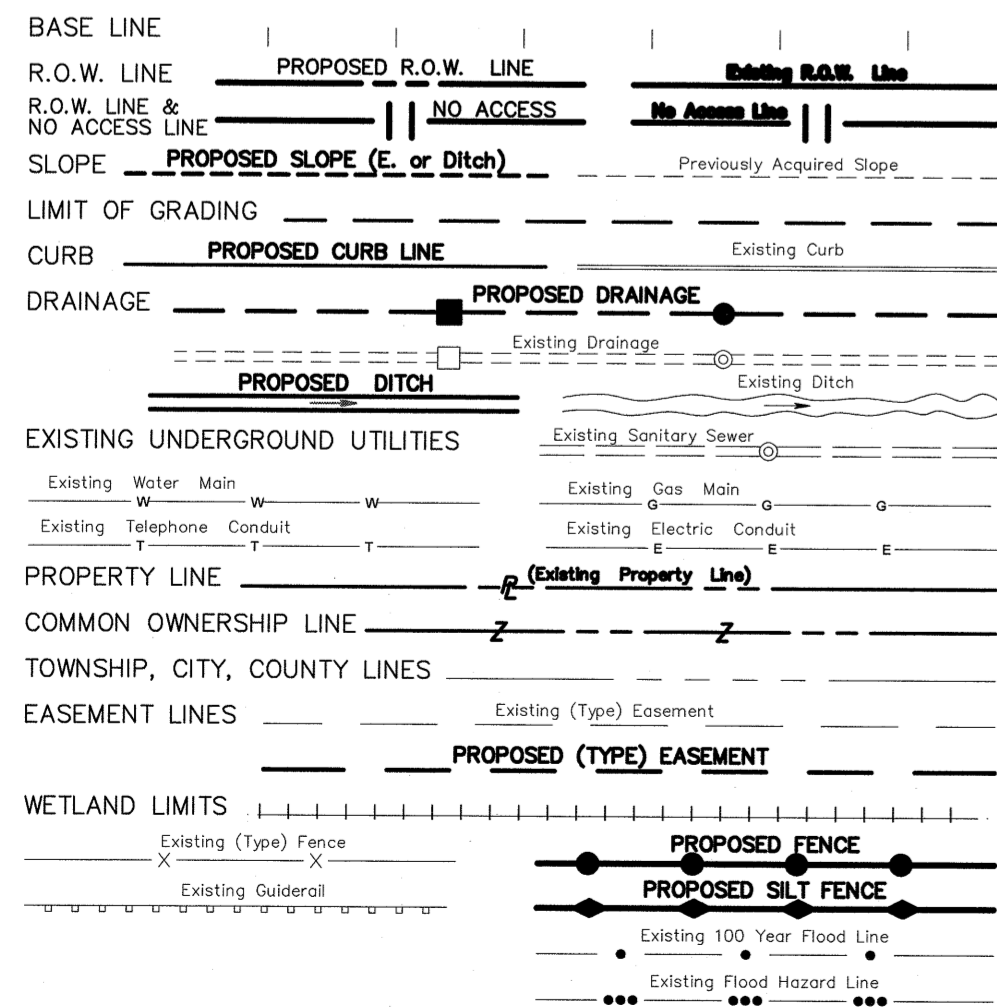
MAG #25
ELEV. 62.045
N 625,503.3547
E 550,429.3890
STA: 23+74.24
OFFSET: 23.56' LT.
N.T.S.



MAG #2022
ELEV. 55.592
N 625,748.0348
E 550,931.2448
STA: 29+30.49
OFFSET: 27.98' RT.
N.T.S.



NEW JERSEY DEPARTMENT OF TRANSPORTATION
STANDARD R.O.W. LEGEND



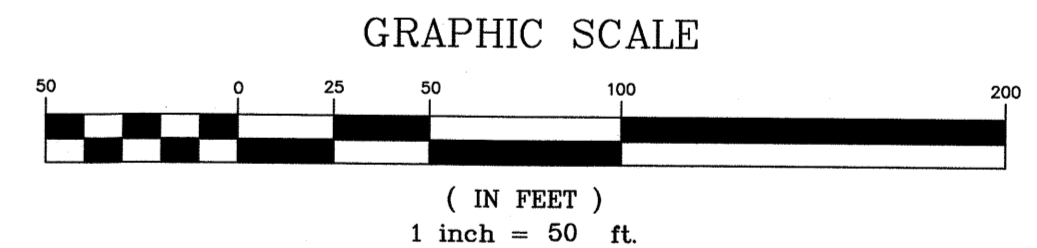
5 STATE HIGHWAY
PARCEL NUMBER

- EXISTING MONUMENT
- PROPOSED MONUMENT
- MULTI-USE PATH
- CURVE NUMBER
- POINT OF CURVATURE
- POINT OF COMPOUND CURVATURE
- POINT OF TANGENCY
- POINT ON LINE
- POINT ON CURVE
- POINT OF REVERSE CURVATURE
- POINT OF INTERSECTION
- BASE LINE
- PROPERTY LINE
- CENTER LINE
- SURVEY LINE
- DEED COURSE NUMBER
- MEASURED
- CALCULATED
- MORE OR LESS
- DEED DATA
- PARKING METER
- IRON PIN

- (sur.) SURVEY DATA
- D.A. DEED AREA
- (FM) FILED MAP
- (TM) TAX MAP
- (S) SCALED
- (L) LEASE
- (ET) ENTIRE TRACT
- 94 TAX MAP BLOCK NO.
- 94 FILED MAP BLOCK NO.
- 21 TAX MAP LOT NO.
- 21 FILED MAP LOT NO.
- 6887 DEED BOOK
- 586 PAGE
- WATER GATE VALVE
- GAS GATE VALVE
- POLE
- HYDRANT
- DECIDUOUS TREE
- SHRUB
- EVERGREEN TREE
- HEDGE
- SWAMP
- R.A. REMAINING AREA
- HEADWALL & APRON

NOTES:

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- THIS SURVEYOR HAS NOT BEEN RETAINED TO MAKE ANY DETERMINATIONS AS TO THE EXISTENCE OR NON-EXISTENCE OF WETLANDS. THEREFORE, NO STATEMENT IS BEING MADE OR IMPLIED HEREON, NOR SHOULD IT BE ASSUMED OR CONSTRUED THAT ANY STATEMENT IS BEING MADE BY THE FACT THAT NO EVIDENCE OF WETLANDS IS PORTRAYED HEREON. THE CLIENT SHOULD PURSUE THIS MATTER SEPARATE AND APART FROM THIS SURVEY.
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- BASES FOR BEARINGS IS THE NORTH AMERICAN DATUM OF 1983, NEW JERSEY STATE PLANE COORDINATE SYSTEM, UNITED STATES SURVEY FOOT. ALL VALUES REDUCED TO GROUND COORDINATES. CONTROL MONUMENTS FOR CONVERSION: MADISON, HALE, 12 N 3, ELIZ S BASE, R/R 11, 12 U 3, B+O 4, HOS. CHURCH. AVERAGE COMBINED SCALE FACTOR OF 0.99990639, CENTROID N. 625,773.8834, E. 551,187.3718. GPS POSITIONS DERIVED VIA REAL TIME KINEMATIC SURVEY IN COORDINATION WITH KEYSTONE KEYNET VRS NETWORK.
- VERTICAL DATUM ESTABLISHED BY ROBINSON AERIAL - NAVD83.



T-2

NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

TIE SHEET (2 OF 2)

CME ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS

3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

(732) 727 8000 (732) 462 7400

JOHN H. ALLGAIR P.E. & P.P. (1993 - 2001) NJ PE LIC NO. 25838	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24855	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & L.S. LIC NO. 24271
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 36374	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34469

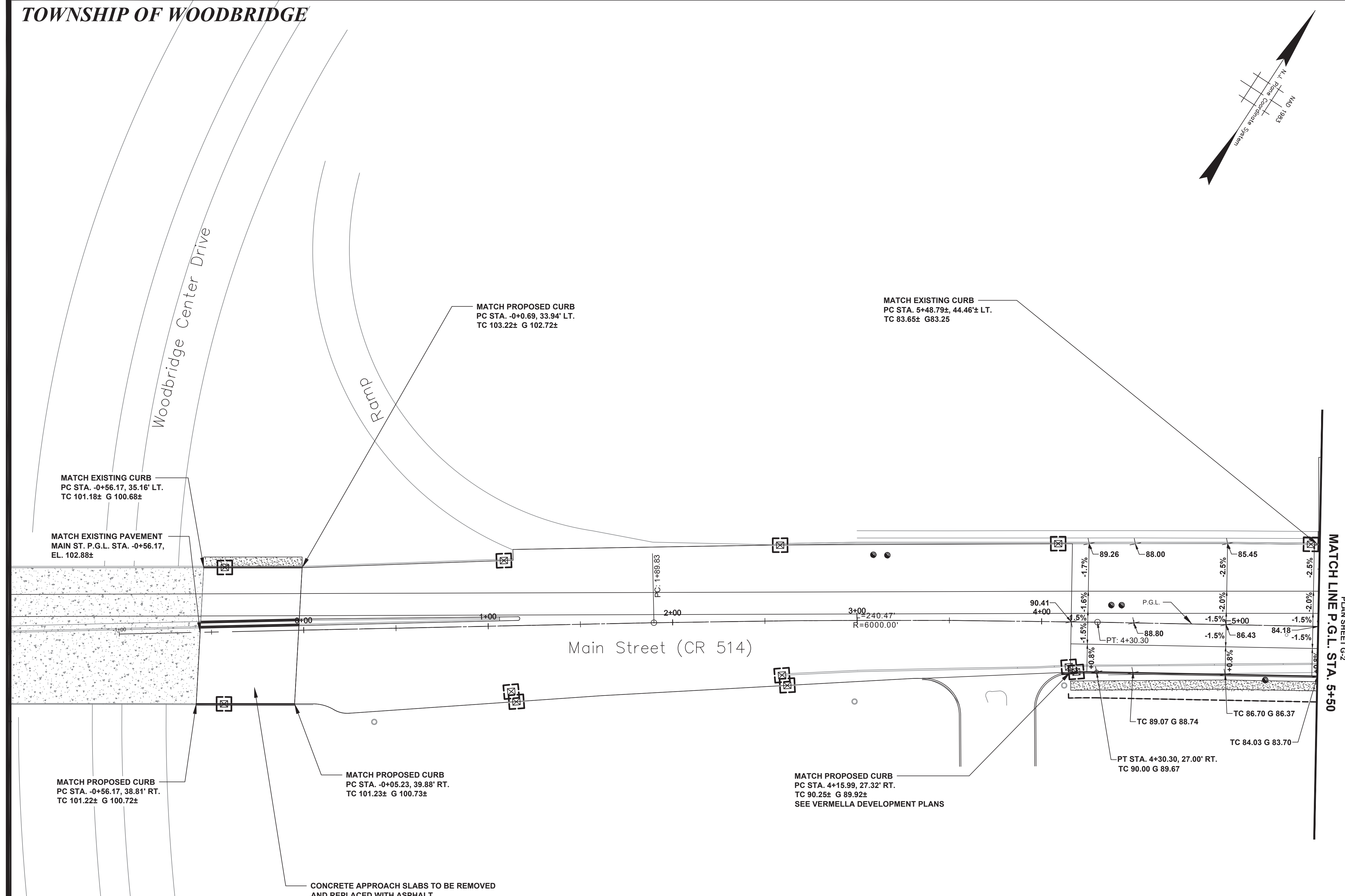
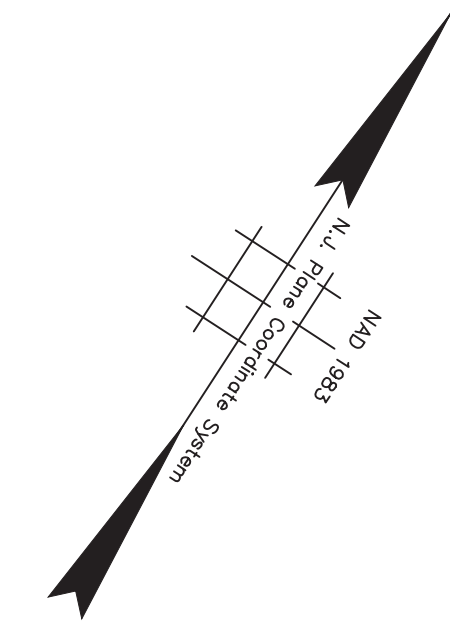
MICHAEL J. MCCOURL P.L.S.
NEW JERSEY PROFESSIONAL LAND SURVEYOR


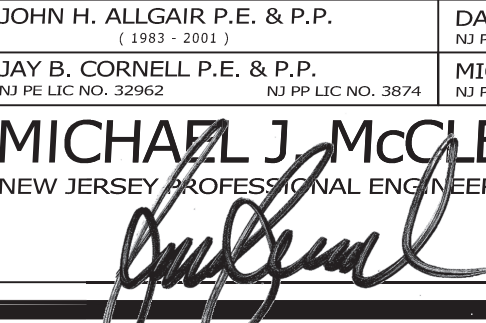
LIC. 38338

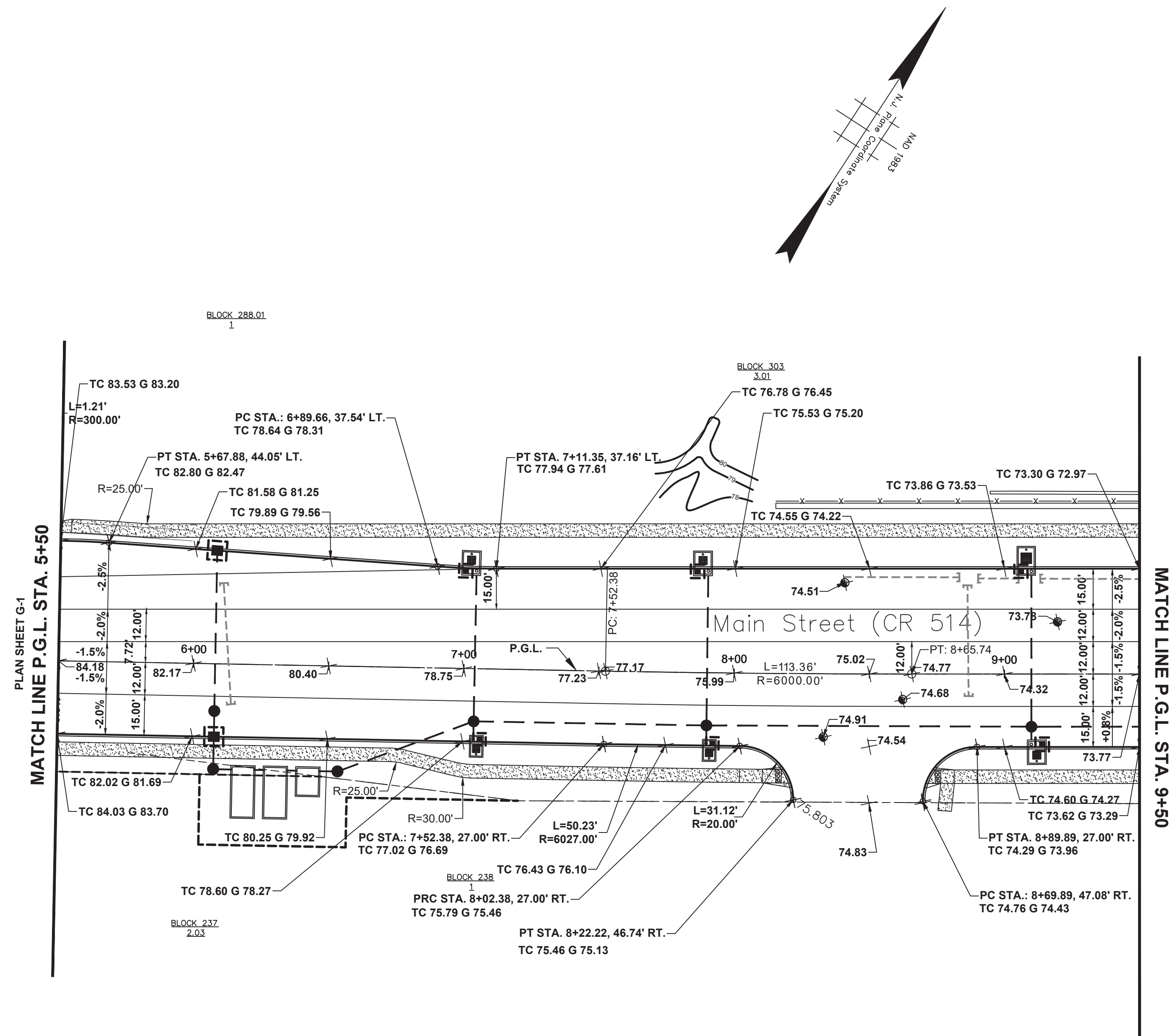
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DATE: February 2022
DRAWN BY: MLB
DESIGNED BY: MJM
CHECKED BY: MJM
DATE: 2/17/22

SHEET 65 of 197

PWB0A609.01



No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
GRADES (1 OF 6) MAIN STREET FROM STA. 4+15 TO STA. 5+50							
 ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS							
(732) 727 8000		3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162		1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194		(732) 462 7400	
JOHN H. ALLGAIER P.E. & P.P. (1983 - 2001)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25839	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & L.S. LIC NO. 24271	JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32952	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 38794	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458		
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER 			As Shown L.I.C. 32468		DATE February 2022		FILE NO. PWB04609.01
DATE: 2/17/2022				CHECKED BY: JCW	SHEET: 86 of 197		

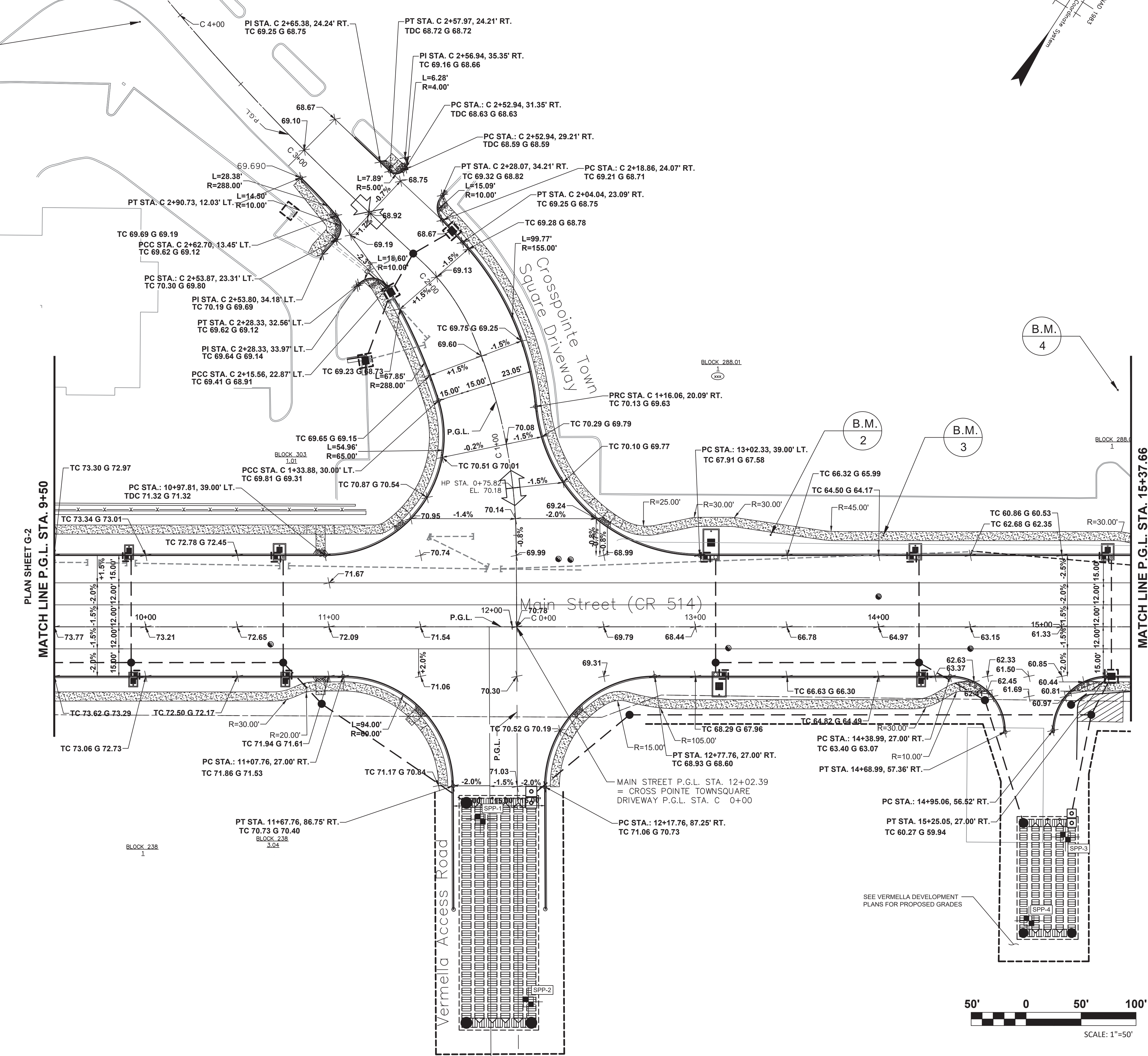
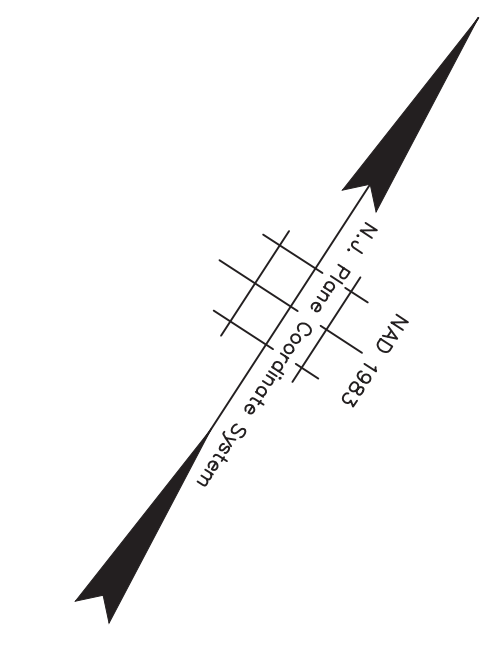


B.M.1 - MN #5192, MAIN ST. P.G.L. STA. 5+71.51, 124.33' LT. - Elev. 79.793



No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
GRADES (2 OF 6) MAIN STREET FROM STA. 5+50 TO STA. 9+50							
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 727 8000 (732) 462 7400							
JOHN H. ALLGAIR P.E. & P.P. (1983 - 2001)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25039 NJ PP LIC NO. 2455	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 2089	JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32792 NJ PP LIC NO. 3874	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 3720	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458 NJ PP LIC NO. 4361	DATE: February 2022	
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468				SCALE: As Shown DRAWN BY: MP CHECKED BY: JCW		SHEET: 87 of 197 FILE NO.: PWB0A609.01	

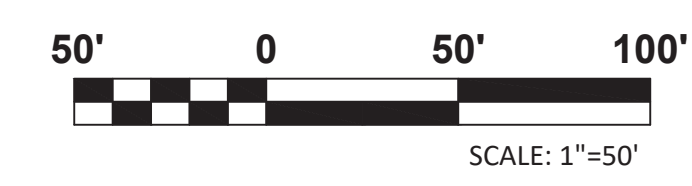
B.M. 5



PLAN SHEET G-2
MATCH LINE P.G.L. STA. 9+50

MATCH LINE P.G.L. STA. 15+37.66
PLAN SHEET G-4

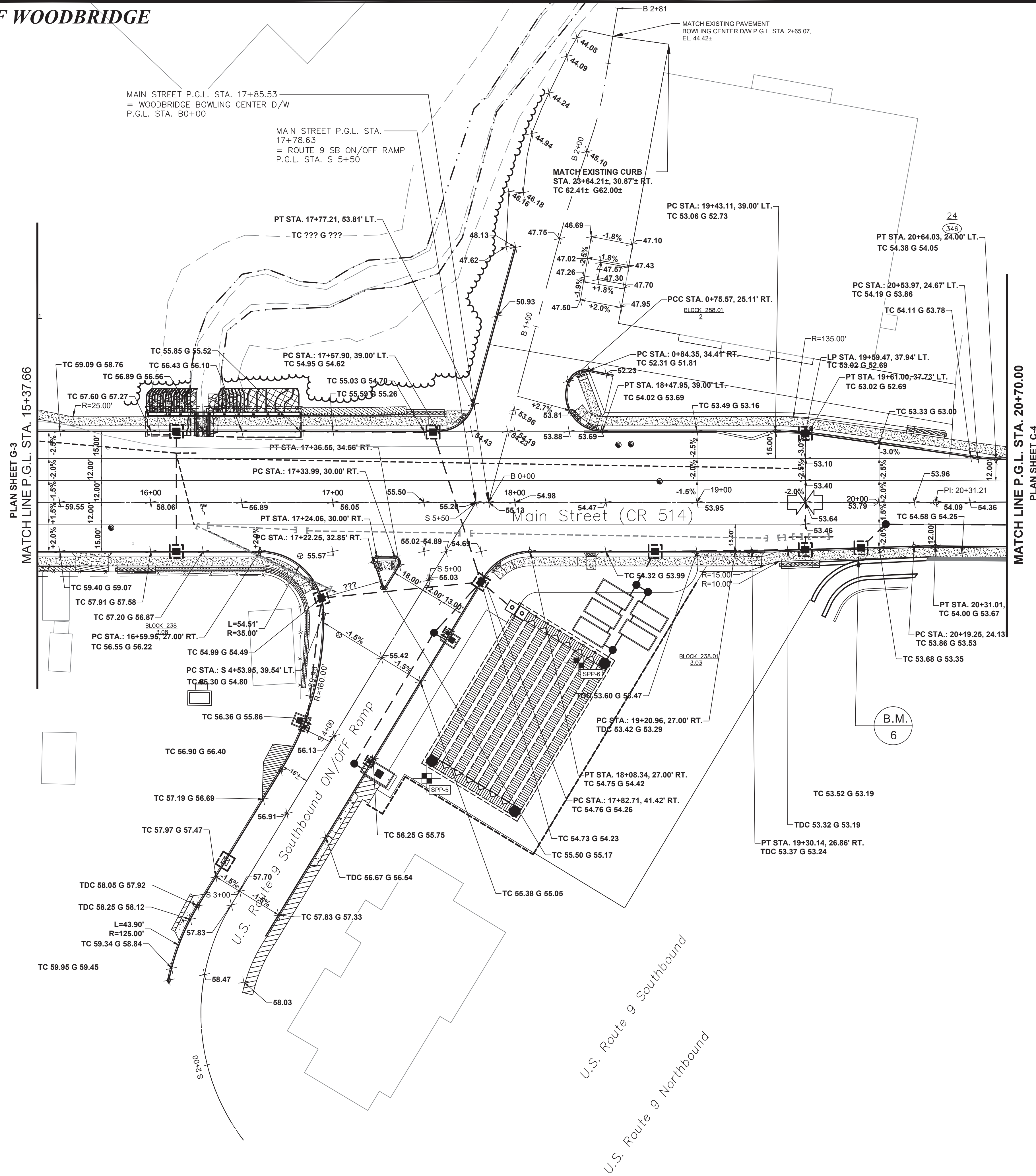
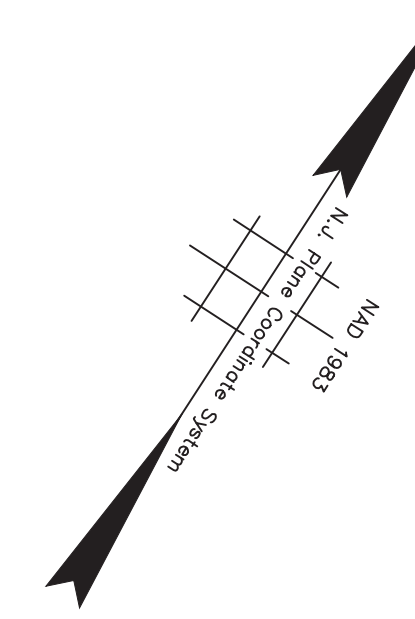
- B.M.2 - MAG SET #2017, MAIN ST. P.G.L. STA. 13+41, 50.09' LT. - Elev. 67.200
- B.M.3 - GPS SPK #103, MAIN ST. P.G.L. STA. 14+02.54, 49.86' LT. - Elev. 65.363
- B.M.4 - GPS #19028-7, MAIN ST. P.G.L. STA. 15+30.49, 129.21' LT. - Elev. 63.744
- B.M.5 - MN # 3316, CROSSPOINTE TOWN SQUARE DR. P.G.L. STA. 4+11.27, 19.1' LT. - Elev. 70.662



<p style="text-align: center;">TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY</p> <p style="text-align: center;">ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p> <p style="text-align: center;">GRADES (3 OF 6)</p> <p style="text-align: center;">MAIN STREET FROM STA. 9+50 TO STA. 15+37.66</p> <p style="text-align: center;">CROSSPOINTE TOWN SQUARE DRIVEWAY FROM STA. 0+39 TO STA. 4+52</p> <p style="text-align: center;">ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p> <p style="text-align: center;">(732) 727 8000 (732) 462 7400</p> <p style="text-align: center;">3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>			
<p>JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991)</p>	<p>DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25839</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NJ PE LIC NO. 24271</p>	<p>JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962</p>
<p>MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 3874</p>	<p>MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 32468</p>	<p>GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458</p>	<p>DATE: February 2022</p>
<p>MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER</p>		<p>SCALE: As Shown</p>	<p>DESIGNED BY: MP</p>
<p>DATE: 2/17/2022</p>		<p>CHECKED BY: JCW</p>	<p>SHEET: 88 of 197</p>

G-3
G-6

FILE NO. PWB0609.01



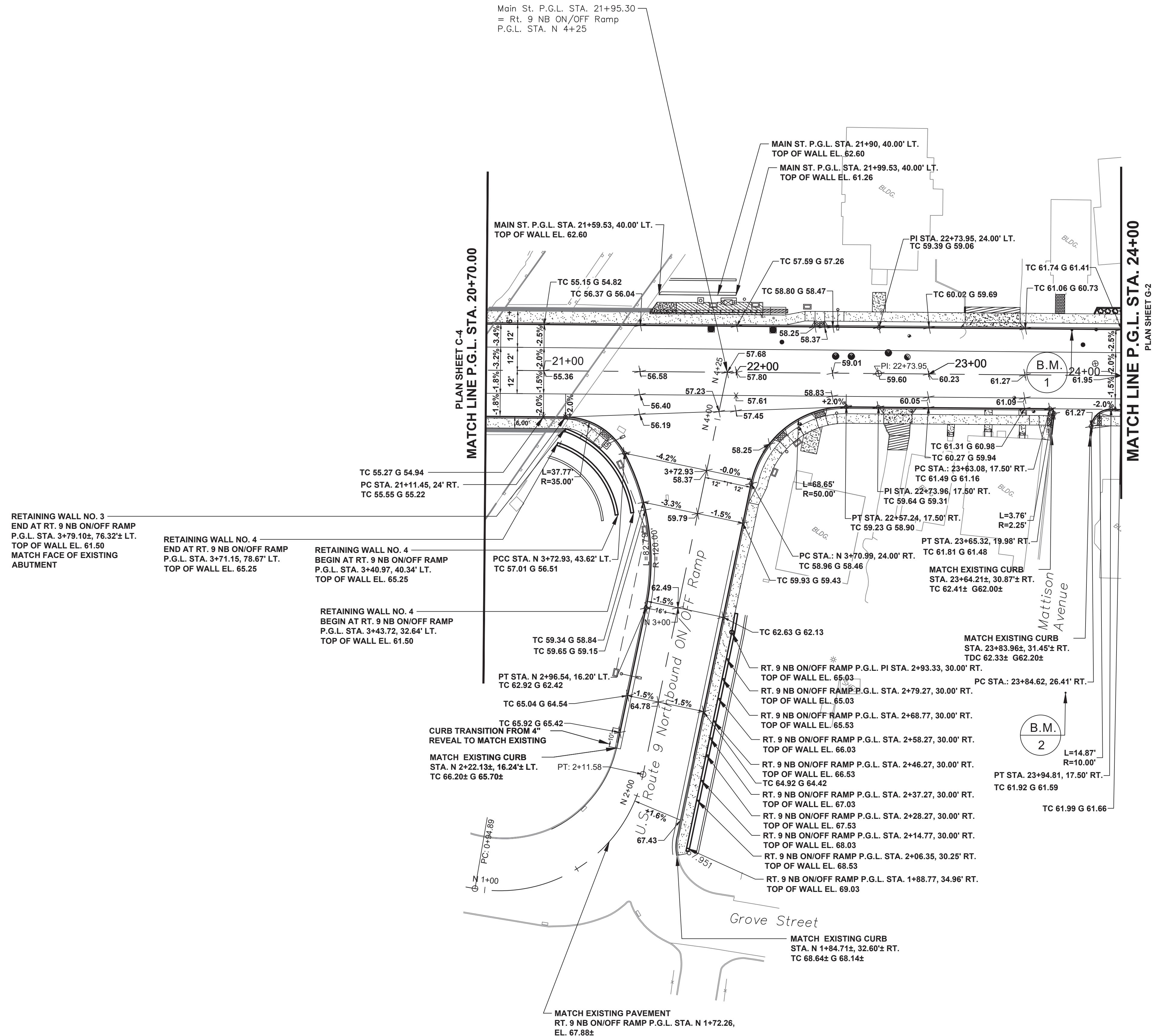
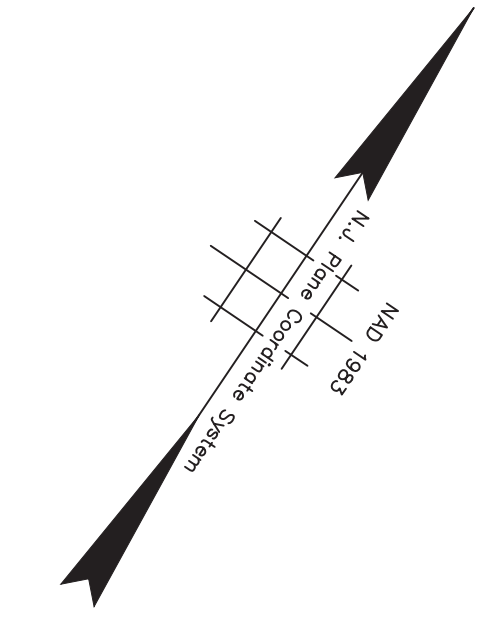
B.M. 6 - GPS PIN #104, MAIN ST. P.G.L. STA. 19+88.73, 30.20' RT. - Elev. 54.428



<p style="text-align: center;">TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY</p> <p style="text-align: center;">ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p> <p style="text-align: center;">GRADES (4 OF 6)</p> <p>MAIN STREET ON/OFF RAMP RT. 9 SB BOWLING CENTER D/W FROM STA. 9+50 TO STA. 15+37.66</p> <p>FROM STA. 2+42.87 TO STA. 5+18.40</p> <p>FROM STA. 0+40.38 TO STA. 2+65.07</p>			
<p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p> <p>(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400</p>			
<p>JOHN H. ALLGAIER P.E. & P.P. (1983 - 2021)</p> <p>JAY B. CORNELL P.E. & P.P. NJ P.E. LIC. NO. 32952</p>	<p>DAVID J. SAMUEL P.E. & P.P. NJ P.E. LIC. NO. 2455</p> <p>MICHAEL J. McCLELLAND P.E. & P.P. NJ P.E. LIC. NO. 32468</p>	<p>JOHN J. STEFANI P.E., L.S. & P.P. NJ P.E. LIC. NO. 2089</p> <p>GREGORY R. VALESI P.E. & P.P. NJ P.E. LIC. NO. 39458</p>	<p>DATE: February 2022</p> <p>SCALE: As Shown</p>
<p>MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>			<p>DATE: 2/17/2022</p> <p>CHECKED BY: JCW</p>

G-4
G-6

FILE NO.
PWB0609.01



RETAINING WALL NO. 3
 END AT RT. 9 NB ON/OFF RAMP
 P.G.L. STA. 3+79.10±, 76.32' LT.
 TOP OF WALL EL. 61.50
 MATCH FACE OF EXISTING
 ABUTMENT

RETAINING WALL NO. 4
 END AT RT. 9 NB ON/OFF RAMP
 P.G.L. STA. 3+71.15, 78.67' LT.
 TOP OF WALL EL. 65.25

RETAINING WALL NO. 4
 BEGIN AT RT. 9 NB ON/OFF RAMP
 P.G.L. STA. 3+40.97, 40.34' LT.
 TOP OF WALL EL. 65.25

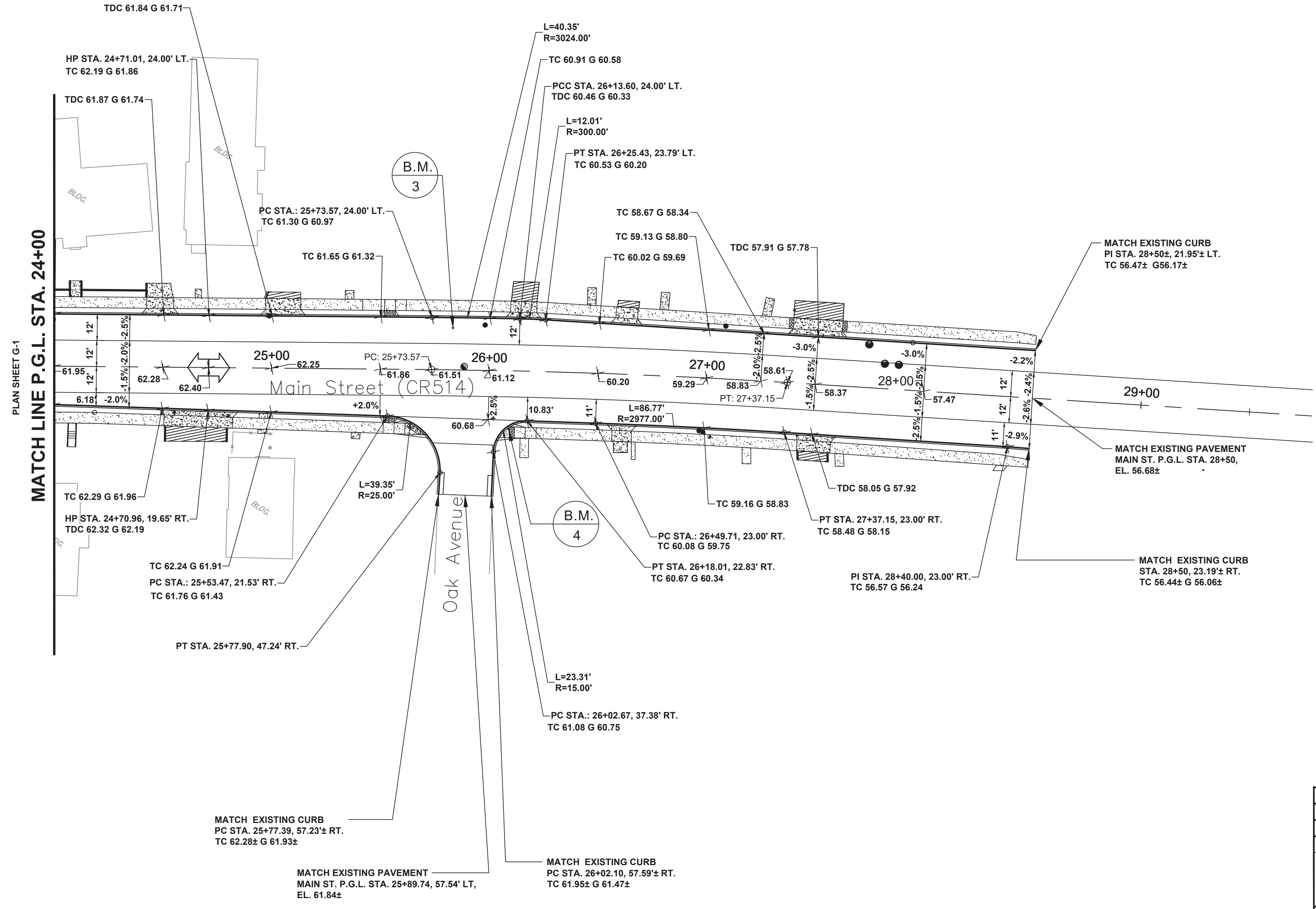
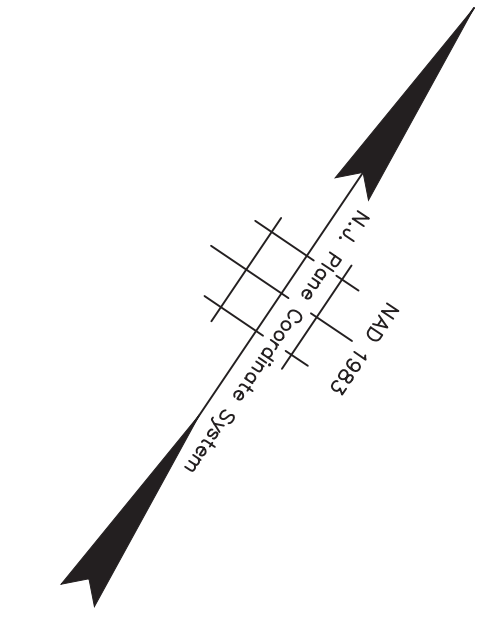
RETAINING WALL NO. 4
 BEGIN AT RT. 9 NB ON/OFF RAMP
 P.G.L. STA. 3+43.72, 32.64' LT.
 TOP OF WALL EL. 61.50

B.M.1 - GPS #25 (MAG), MAIN ST. P.G.L. STA. 23+74.19, 23.50' LT. - Elev. 62.039
 B.M.2 - MAG SET 2628 MAIN ST. P.G.L. STA. 23+72.59, 164.88' RT. - Elev. 68.364

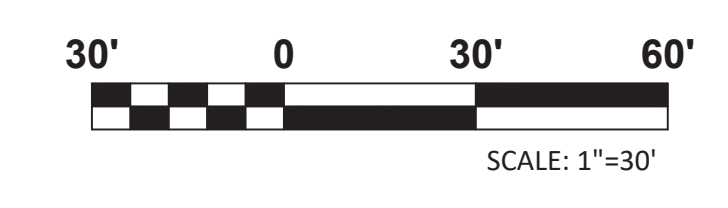


No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
GRADES (5 OF 6) MAIN STREET FROM STA. 20+70 TO STA. 24+00							
 CME ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194							
JOHN H. ALLGAIER P.E. & P.P. 1993 - 2001 NJ PE LIC NO. 25838	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24855	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & L.S. LIC NO. 24271	JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962 MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 38754 GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34498				
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468 DATE: 2/17/2022				SCALE: As Shown DATE: February 2022 DRAWN BY: MP CHECKED BY: JCV SHEET: 90 of 197			

G-5
G-6
PWB0609.01



B.M.3 - GPS #26 MAIN ST. P.G.L. STA. 25+83.16, 19.26' LT. - Elev. 61.106
 B.M.4 - MAG 21 MAIN ST. P.G.L. STA. 26+09.51, 26.91' RT. - Elev. 60.547




















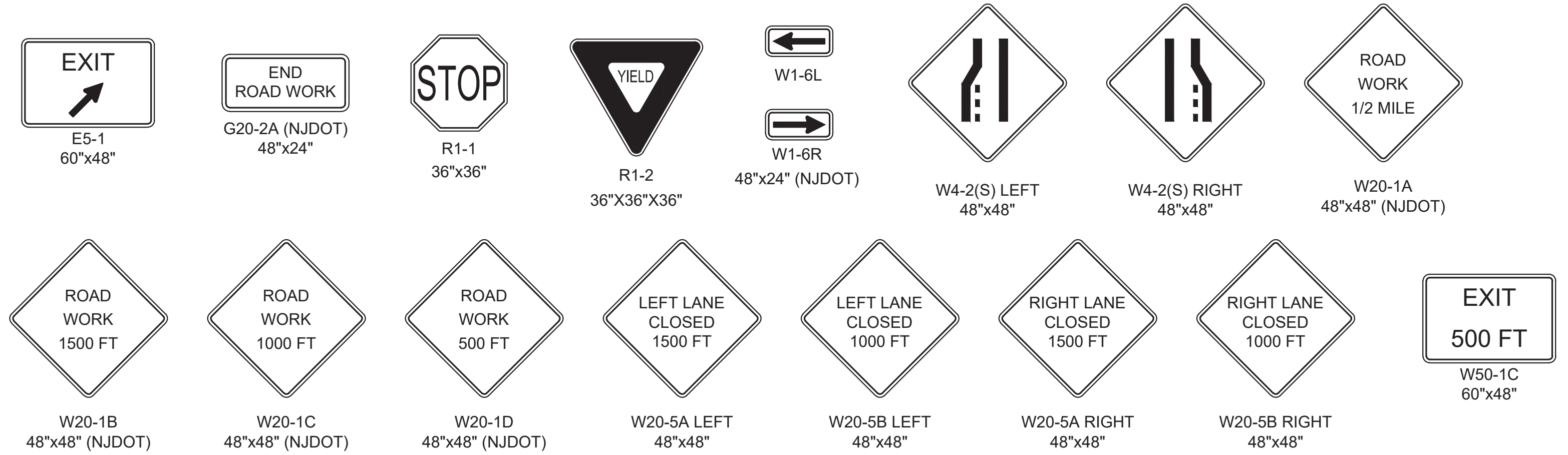
No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED	
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS								
GRADES (6 OF 6) MAIN STREET FROM STA. 24+00 TO STA. 28+50								
 CONSULTING AND MUNICIPAL ENGINEERS 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 727-8000 (732) 462-7400								
JOHN H. ALLGAIER P.E. & P.P. 1993 - 2011 NJ P.E. LIC. NO. 25838	DAVID J. SAMUEL P.E. & P.P. NJ P.P. LIC. NO. 2455	JOHN J. STEFANI P.E. L.S. & P.P. NJ P.E. & L.S. LIC. NO. 24271	JAY B. CORNELL P.E. & P.P. NJ P.E. LIC. NO. 32963 MICHAEL J. MCCLELLAND P.E. & P.P. NJ P.E. LIC. NO. 32468 MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468					GREGORY R. VALESI P.E. & P.P. NJ P.E. LIC. NO. 34456
SCALE: As Shown DRAWN BY: MP CHECKED BY: JCW		DATE: February 2022 DESIGNED BY: MP SHEET: 91 of 197		DATE: 2/17/2022				

G-6
G-6

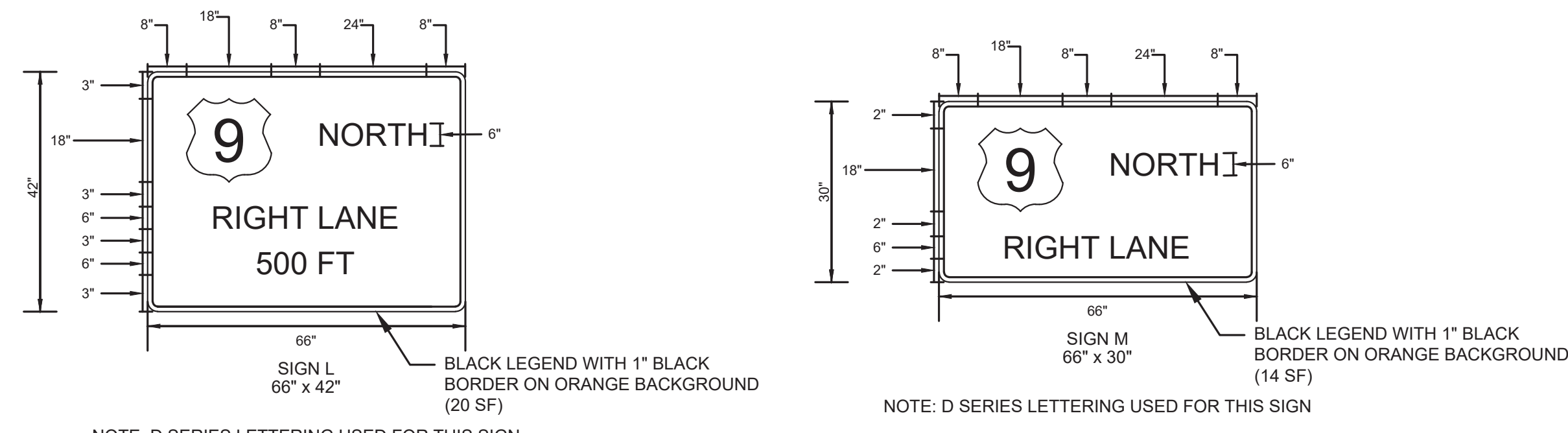
PWBOAG09.01

LEGEND

-  BREAKAWAY BARRICADES
-  BREAKAWAY BARRICADES WITH SIGN
-  CONSTRUCTION SIGNS
-  DRUMS
-  CONES
-  PRECAST CONCRETE CURB CONSTRUCTION BARRIER (TYPE SPECIFIED)
-  DIRECTION OF TRAFFIC FLOW
-  TRAFFIC DIRECTOR, FLAGGER
-  TRAILER MOUNTED ARROW BOARD SHOWING CAUTION MODE
-  ILLUMINATED FLASHING ARROW MOUNTED ON TOWING VEHICLE SHOWING ARROW PATTERN (Left, Right, Both)
-  TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION AND ARROW BOARD SHOWING CAUTION MODE
-  TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION AND ARROW BOARD SHOWING ARROW PATTERN (Left, Right Both)
-  TEMPORARY CRASH CUSHION, INERTIAL BARRIER SYSTEM
-  TEMPORARY CRASH CUSHION (all other approved)
-  BUFFER ZONE
-  WORK AREA
-  PAINT STRIPING TRUCK OR OTHER VEHICLE



CONSTRUCTION SIGN LEGEND
N.T.S.



CONSTRUCTION GUIDE SIGN DETAILS
N.T.S.

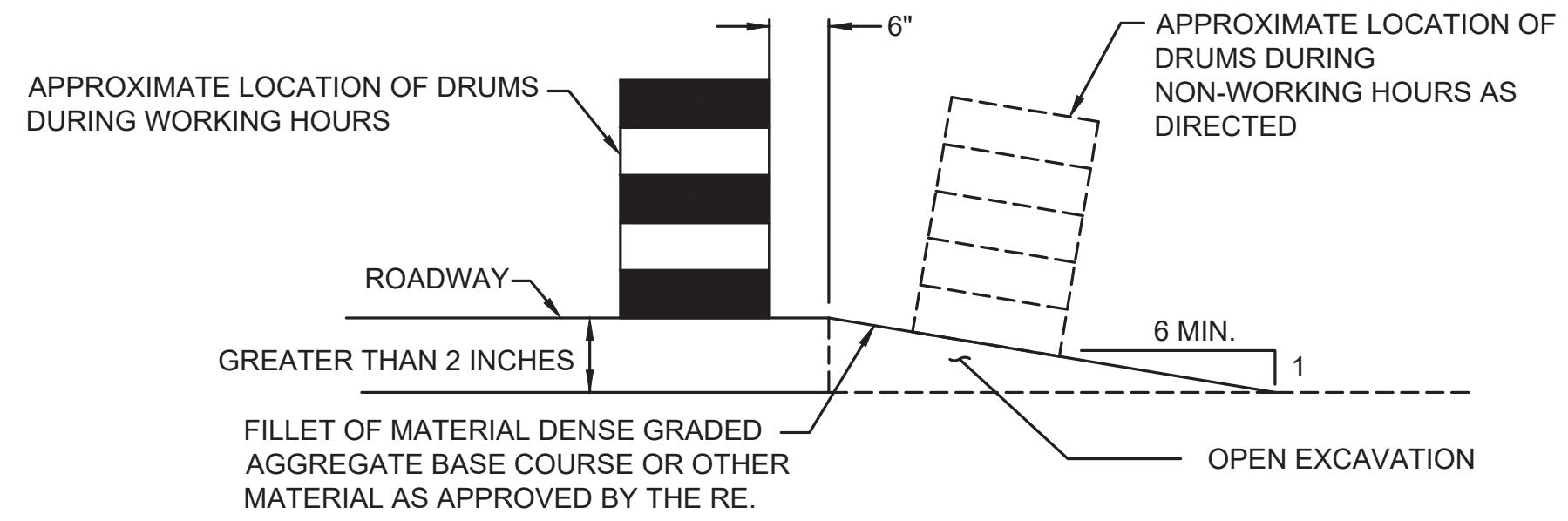
CONSTRUCTION SIGN TABLE							
SIGN NUMBER	SIGN DESIGNATION	MESSAGE	SIZE	AREA IN S.F.	REQUIRED QUANTITY IN NUMBER	TOTAL AREA IN S.F.	
1	E5-1	EXIT	60" x 48"	20	1	20	
2	G20-2A	END ROAD WORK	60" x 24"	10	2	20	
3	R1-1	STOP	36" x 36"	9	1	9	
4	R1-2	YIELD	36" x 36" x 36"	5	2	10	
5	W1-6	ONE DIRECTION LARGE ARROW	48" x 24"	8	27	216	
6	W4-2(S)	LANE ENDS (SYMBOL)	48" x 48"	16	1	16	
7	W20-1A	ROAD WORK 1/2 MILE	48" x 48"	16	2	32	
8	W20-1B	ROAD WORK 1500 FT.	48" x 48"	16	2	32	
9	W20-1C	ROAD WORK 1000 FT.	48" x 48"	16	2	32	
10	W20-1D	ROAD WORK 500 FT.	48" x 48"	16	2	32	
11	W20-5A	LEFT/RIGHT LANE CLOSED 1500 FT.	48" x 48"	16	1	16	
12	W20-5B	LEFT/RIGHT LANE CLOSED 1000 FT.	48" x 48"	16	1	16	
13	W50-1C	EXIT 500 FT.	60" x 48"	20	1	20	
14	SIGN E	US ROUTE 9 NORTH 500 FT. GUIDE SIGN	66" x 42"	20	1	20	
15	SIGN F	US ROUTE 9 NORTH GUIDE SIGN	66" x 30"	14	1	14	

REGULATORY APPROACH SPEED OF TRAFFIC MILES/HOUR	RECOMMENDED SIGHT DISTANCE TO BEGINNING OF CHANNELIZING TAPERS		
	DESIRABLE		MINIMUM
	RURAL FEET	URBAN FEET	RURAL AND URBAN FEET
25	375	525	150
30	450	625	200
35	525	725	250
40	600	825	325
45	675	925	400
50	750	1025	475
55	825	1150	550
60	1000	1275	650
65	1050	1275	725

- NOTES:**
- AVOIDANCE MANEUVER IS FOR A SPEED, PATH, AND / OR DIRECTION CHANGE PRIOR TO THE BEGINNING OF CHANNELIZING TAPERS.
 - RECOMMENDED DISTANCES BETWEEN TWO SEPARATE LANE CLOSURES ARE DOUBLE THE VALUES SHOWN ABOVE.
 - RURAL AND URBAN ROAD DESIGNATIONS ARE AS DEFINED IN THE NJDOT STATE HIGHWAY STRAIGHT LINE DIAGRAMS.
 - PROVIDE DESIRABLE VALUES WHEREVER POSSIBLE. IF IT IS NOT FEASIBLE OR PRACTICAL TO PROVIDE DESIRABLE VALUES BECAUSE OF HORIZONTAL OR VERTICAL CURVATURE OR IF RELOCATION OF THE TAPER IS NOT POSSIBLE, THEN MINIMUM VALUES CAN BE APPLIED. WHEN MINIMUM VALUES ARE USED, PAY SPECIAL ATTENTION TO THE USE OF SUITABLE TRAFFIC CONTROL DEVICES WHEN PROVIDING ADVANCED WARNING OF THE CONDITIONS THAT ARE LIKELY TO BE ENCOUNTERED.
 - LOCATE TAPERS TO MAXIMIZE THE VISIBILITY OF THEIR TOTAL LENGTH.


REGULATORY APPROACH SPEED OF TRAFFIC MILES / HOUR	RECOMMENDED TAPER LENGTH AND SPACING FOR CHANNELIZING TAPERS			MAXIMUM DEVICE (B) SPACING ALONG TAPERS IN FEET	RECOMMENDED SPACING ALONG TANGENTS	
	MINIMUM TAPER RATIO IN LENGTH PER FOOT OF WIDTH	MINIMUM TAPER LENGTH L - FOR LANE WIDTHS				
		10'	11'	12'		
25	10.5:1	105	115	125	25	50
30	15:1	150	165	180	30	60
35	20.5:1	205	225	245	35	70
40	27:1	270	300	325	40	80
45	45:1	450	495	540	45	90
50	50:1	500	550	600	50	100
55	55:1	550	605	660	55	110
60	60:1	600	660	720	60	120
65	65:1	650	715	780	65	130

NOTE:
THE MAXIMUM DEVICE SPACING ALONG CURVES IS DEFINED FOR TAPERS (B) IN THE ABOVE TABLE.



ESCAPE RAMP DETAIL

TC-1
TC-44

<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY</p> <p>ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p> <p>TRAFFIC CONTROL AND STAGING PLANS - LEGEND</p>			
 <p>ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p> <p>(732) 727 8000 (732) 462 7400</p> <p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>			
<p>JOHN H. ALLGAIER P.E. & P.P. (1983 - 2021) NO PE LIC NO. 25838</p>		<p>DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 2455</p>	
<p>JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32964</p>		<p>MICHAEL J. McCLELLAND P.E. & P.P. NO PE LIC NO. 32468</p>	
<p>MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>		<p>GREGORY R. VALES P.E. & P.P. NO PE LIC NO. 34458</p>	
<p>As Shown</p>		<p>February 2022</p>	
<p>DESIGNED BY RCM</p>		<p>DESIGNED BY RCM</p>	
<p>CHECKED BY KEUCJW</p>		<p>CHECKED BY RCM</p>	
<p>DATE: 2/17/2022</p>		<p>DATE: February 2022</p>	
<p>FILE NO. PWB0A609.01</p>		<p>SHEET 92 of 197</p>	

GENERAL NOTES:

1. ADVANCE WARNING SIGNS DISTANCES, AND TAPER LENGTHS MAY BE EXTENDED, AT DIRECTION OF THE ENGINEER, TO ADJUST FOR REDUCED VISIBILITY DUE TO HORIZONTAL AND VERTICAL CURVATURE OF THE ROADWAY.
2. THE APPROXIMATE LOCATIONS OF THE ILLUMINATED FLASHING ARROW BOARDS ARE SHOWN ON THE TRAFFIC CONTROL PLANS. THESE LOCATIONS MAY BE MODIFIED AS APPROVED BY THE RE TO ADJUST FOR VISIBILITY DUE TO HORIZONTAL OR VERTICAL CURVATURE OF THE ROADWAY OR TO POSITION AT A SAFER LOCATION. ILLUMINATED FLASHING ARROW BOARDS ARE TO BE USED FOR TEMPORARY LANE CLOSINGS AND AT LOCATIONS SHOWN ON THE TRAFFIC CONTROL PLANS.
3. PRIOR TO ANY ROAD CONSTRUCTION, TRAFFIC CONTROL SIGNS AND DEVICES SHALL BE IN PLACE.
4. RAMPS AND/OR SIDE STREETS ENTERING THE ROADWAY AFTER THE FIRST ADVANCE WARNING SIGN SHALL BE PROVIDED WITH AT LEAST ONE W20-IF SIGN (ROAD WORK AHEAD) AS A MINIMUM.
5. ALL EXISTING ROAD SIGNS, PAVEMENT MARKINGS AND/OR PLOWABLE PAVEMENT REFLECTORS WHICH CONFLICT WITH THE PROPOSED TRAFFIC CONTROL PLAN SHALL BE COVERED, REMOVED OR RELOCATED AS DIRECTED BY THE RE.
6. CONFLICTING OR NON-OPERATING SIGNAL INDICATIONS ON EITHER THE EXISTING, TEMPORARY, OR PROPOSED TRAFFIC SIGNAL SYSTEMS SHALL BE BAGGED OR COVERED.
7. MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES - PART VI "STANDARDS AND GUIDES FOR TRAFFIC CONTROL FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE, UTILITY, AND INCIDENT MANAGEMENT OPERATIONS", UNLESS OTHERWISE NOTED IN THE PLANS AND SPECIFICATIONS.
8. CONSTRUCTION SIGN W99-2 (GIVE US A BRAKE) SHALL BE LOCATED 200 FEET IN ADVANCE OF PROJECT LIMITS.
9. A W1-6 (ARROW) SIGN MOUNTED ON A BREAKAWAY BARRICADE AND CENTERED ON THE CLOSED WIDTH SHALL BE LOCATED 100 FEET BEYOND EACH INTERSECTION OR MAIN ACCESS POINT WITHIN THE AREA OF A LANE OR SHOULDER CLOSURE.
10. CONSTRUCTION SIGNS R11-4 (ROAD CLOSED TO THRU TRAFFIC) SHALL BE PLACED AT THE INTERSECTING STREETS WHICH ARE CLOSED TO TRAFFIC BECAUSE OF CONSTRUCTION.
11. CONSTRUCTION SIGNS W8-9A (SYMBOL FOR UNEVEN PAVEMENT) AND W8-14A (GROOVED PAVEMENT) SHALL BE USED WHEN SUCH PAVEMENT CONDITIONS EXIST.
12. MOVING WORK AREAS IN A LANE CLOSURE REQUIRE A TRAILER MOUNTED ILLUMINATED FLASHING ARROW TO REMAIN AT THE END OF THE TAPER. THE TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION THAT SHALL MOVE WITH THE WORK AREAS TO KEEP A 60 FEET MIN. AND 150 FEET MAX. BUFFER IN ADVANCE OF EACH WORK AREA.
13. THE CONTRACTOR SHALL SUBMIT A PLAN FOR THE ACCESS OF CONSTRUCTION VEHICLES THROUGHOUT THE WORK SITE WHERE SPACE CONSTRAINTS PREVENT THE USE OF LANE CLOSURES. THE PLAN SHALL BE SUBMITTED TO THE RE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
14. ALL EXCAVATED AREAS WITHIN OR ADJACENT TO THE ROADWAY SHALL BE BACKFILLED AND PLACED ON AT LEAST 6H : 1V SLOPE BEFORE THE END OF EACH WORK DAY. OTHER EXCAVATED AREA WITHIN THE CLEAR ZONE SHALL BE BACKFILLED.
15. WHERE REQUIRED, THE CONTRACTOR SHALL MAKE PROVISIONS FOR MAINTAINING PEDESTRIAN CROSSING LOCATIONS AND TYPE, AS DIRECTED BY THE RE.
16. BITUMINOUS CONCRETE PLACED DURING THE VARIOUS CONSTRUCTION STAGES SHALL BE TRANSITIONED ON A MINIMUM 20H : 1V SLOPE TO MEET THE ADJACENT EXISTING GRADE AT THE LONGITUDINAL AND TRANSVERSE LIMITS OF THE STAGE CONSTRUCTION AREAS UNLESS OTHERWISE NOTED ON THE STAGE CONSTRUCTION PLANS.
17. THE PLACEMENT AND / OR RELOCATION OF CONSTRUCTION BARRIER CURB TO BE DONE DURING ALLOWABLE LANE CLOSURE HOURS.
18. CONSTRUCTION ZONE SPEED LIMIT WILL BE DETERMINED BY THE TRAFFIC SIGNAL & SAFETY ENGINEERING, REGIONAL TRAFFIC ENGINEER - WORK ZONE, AT THE TIME OF OR DURING CONSTRUCTION, AS REQUESTED BY THE RE.
19. THE SPEED LIMIT, R2-1 (BLACK ON WHITE) WITH ADDED WORK ZONE PLATE (BLACK ON ORANGE) SIGNS SHALL BE LOCATED THROUGH WORK AREAS AS DIRECTED BY THE TRAFFIC SIGNAL & SAFETY ENGINEERING REGIONAL TRAFFIC ENGINEER - WORK ZONE.
20. THE REDUCED SPEED AHEAD SIGN, W3-5(S) (BLACK ON ORANGE) SHALL BE LOCATED IN ADVANCE OF SPEED LIMIT R2-1 SIGNS WHICH REDUCE THE NORMAL POSTED SPEED LIMIT THROUGH THE CONSTRUCTION ZONE.
21. TRAFFIC FINES DOUBLED IN WORK AREA (R1N)S-17(S), 4 FEET BY 2.5 FEET SIGN SHALL BE LOCATED 500 FEET AFTER THE FIRST ADVANCE WARNING SIGN, (W20 SERIES) AT EACH WORK AREA LOCATED WITHIN URBAN AREAS. THIS SIGN SHALL ALSO BE USED ON PROJECTS REQUIRING MOVING OPERATIONS IN WHICH CASE THE SIGN SHALL BE MOUNTED ON A SLOW MOVING CONSTRUCTION VEHICLE.
22. THE FINAL HMA SURFACE PAVEMENT SHALL NOT BE CONSTRUCTED UNTIL THE FINAL STAGE OF THE PROJECT UNLESS OTHERWISE DIRECTED BY THE RE OR INDICATED ON THE PLANS. MANHOLES AND INLETS SHALL BE SET TO FINISHED GRADE AND TEMPORARY PAVEMENT RAMPS ARE TO BE CONSTRUCTED AROUND THEM WITH A MINIMUM 20H : 1V SLOPE IN ALL DIRECTIONS USING HOT MIX ASPHALT PAVEMENT. THIS TEMPORARY MATERIAL WILL BE REMOVED IMMEDIATELY PRIOR TO PLACING THE SURFACE COURSE.

23. TRAFFIC CONTROL DEVICES FOR LANE CLOSURES INCLUDING SIGNS, CONES, BARRICADES, SHALL BE PLACED AS SHOWN ON PLANS. SIGNS SHALL NOT BE PLACED WITHOUT ACTUAL LANE CLOSURES AND SHALL BE IMMEDIATELY REMOVED UPON REMOVAL OF THE CLOSURES.
24. CONES MAY BE SUBSTITUTED FOR DRUMS AND INSTALLED UPON THE APPROVAL OF THE RE.
25. TRAFFIC IMPACT NOTICES AND CHANGES

A. TERMS:
WHEN THE FOLLOWING TERMS ARE USED, THE INTENT AND MEANING SHALL BE AS FOLLOWS:

- i. IMPACTS TO NORMAL TRAFFIC FLOW - WORK THAT REQUIRES A PORTION OF THE PAVED ROADWAY BEING BLOCKED OR CLOSED WITH SAFETY DEVICES OR VEHICLES, INCLUDING, BUT NOT LIMITED TO, FULL OR PARTIAL LANE CLOSURES, FULL OR PARTIAL RAMP CLOSURES, SHOULDER CLOSURES, MOVING OPERATIONS SUCH AS TRAFFIC STRIPING OR SWEEPING, LANE SHIFTS, OR ALTERNATING TRAFFIC. THIS APPLIES EVEN WHEN DETOURS ARE PROVIDED.
- ii. TEMPORARY LANE CLOSURES - WORK DESCRIBED UNDER "IMPACTS TO NORMAL TRAFFIC FLOW" WHICH IS ROUTINELY SET UP AND REMOVED ON A DAILY BASIS.
- iii. PERMANENT LANE CLOSURES - WORK DESCRIBED UNDER "IMPACTS TO NORMAL TRAFFIC FLOW" WHICH REMAINS IN PLACE CONTINUOUSLY FOR 24 HOURS OR MORE.

B. ADVANCE NOTICES

FOR THE INITIAL START OF WORK THAT REQUIRES "IMPACTS TO NORMAL TRAFFIC FLOW", THE CONTRACTOR SHALL NOTIFY THE RE IN WRITING, ON THE ADVANCE FORM TO-103 PROVIDED BY THE DEPARTMENT, OF THE PROPOSED DATE. THE NOTICE SHALL BE SUBMITTED AT LEAST TWENTY-EIGHT CALENDAR DAYS, BUT NOT MORE THAN SIXTY CALENDAR DAYS, BEFORE THE PROPOSED DATE. START OF WORK THAT IMPACTS NORMAL TRAFFIC FLOW WILL NOT BE PERMITTED PRIOR TO THE DATE STATED IN THE NOTICE. THE CONTRACTOR SHALL CONFIRM, IN WRITING TO THE RE, THE PROPOSED DATE SEVEN (AND/OR FOURTEEN) CALENDAR DAYS BEFORE STARTING THE ESTABLISHMENT OF THE TRAFFIC CONTROL MEASURES FOR THE TRAFFIC IMPACT. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE RE IF THE PROPOSED ESTABLISHMENT CANNOT BE COMPLETED ON THE PROPOSED DATE.

FOR A "PERMANENT LANE CLOSURE", THE CONTRACTOR SHALL NOTIFY THE RE IN WRITING, ON ADVANCE FORM TO-103, OF THE PROPOSED DATE A NEW TRAFFIC PATTERN WILL BE ESTABLISHED. THE NOTICE SHALL BE SUBMITTED AT LEAST TWENTY-EIGHT CALENDAR DAYS, BUT NOT MORE THAN SIXTY CALENDAR DAYS, IN ADVANCE OF THE PROPOSED DATE. START OF A NEW TRAFFIC PATTERN WILL NOT BE PERMITTED PRIOR TO THE DATE STATED IN THE NOTICE. THE CONTRACTOR SHALL CONFIRM, IN WRITING TO THE RE, THE PROPOSED DATE OF THE NEW TRAFFIC PATTERN SEVEN (AND/OR FOURTEEN) DAYS BEFORE STARTING TRAFFIC CONTROL MEASURE FOR THE ESTABLISHMENT OF THE NEW PATTERN. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE RE IF THE PROPOSED ESTABLISHMENT CANNOT BE COMPLETED ON THE PROPOSED DATE.

STARTING THE ESTABLISHMENT OF A NEW PERMANENT TRAFFIC PATTERN SHALL BEGIN NO EARLIER THAN 11:00 PM FRIDAY AND SHALL BE COMPLETED AND READY FOR OPERATIONS BY 6:00 PM THE FOLLOWING THE ESTABLISHMENT SHALL BE COMPLETED IN ACCORDANCE WITH THE LANE CLOSURE HOURS SPECIFIED IN THE CONTRACT.

ADVANCE NOTICES SENT PRIOR TO THE PRE-CONSTRUCTION MEETING SHALL BE ADDRESSED TO THE CONTACT PERSON AS SPECIFIED IN SUBSECTION 101.04 OF THE SPECIAL PROVISIONS.

C. PROGRESS NOTICES

ALL "IMPACTS TO NORMAL TRAFFIC FLOW" SCHEDULED FOR THE SEVEN DAY PERIOD STARTING ON THE FOLLOWING MONDAY SHALL BE SUBMITTED TO THE RE BY 9:00 AM OF EACH FRIDAY ON WEEKLY FORM TO-100 PROVIDED BY THE DEPARTMENT.

EACH DAY OF "TEMPORARY LANE CLOSURES" SHALL BE SUBMITTED TO THE RE BY 9:00 AM THE DAY IN ADVANCE OF THE START OF THOSE OPERATIONS ON DAILY FORM TO-101 PROVIDED BY THE DEPARTMENT.

"TEMPORARY LANE CLOSURES" FOR WEEKENDS SHALL BE SUBMITTED TO THE RE BY 9:00 AM ON THE IMMEDIATELY PRECEDING FRIDAY ON THE DAILY FORM TO-101 PROVIDED BY THE DEPARTMENT.

D. CHANGES TO THE SCHEDULED CLOSURES

REQUEST FOR A CHANGE TO THE TRAFFIC CONTROL REQUIREMENTS IN THE CONTRACT DOCUMENTS SHALL BE SUBMITTED IN WRITING TO THE RE AS FOLLOWS:

CHANGES TO THE SCHEDULED HOURS FOR "TEMPORARY LANE CLOSURES" SHALL BE SUBMITTED TO THE RE AT LEAST EIGHT CALENDAR DAYS IN ADVANCE OF WHEN THE CHANGE IS PROPOSED TO START.


OTHER PROPOSED CHANGES TO "TEMPORARY LANE CLOSURES" AND ALL CHANGES TO "PERMANENT LANE CLOSURES" SHALL BE SUBMITTED TO THE RE AS SPECIFIED IN THE SPECIFICATIONS.

26. WHERE MILLING OR HMA PAVING IS PERFORMED AND THE LANE IS TO BE RE-OPENED TO TRAFFIC EACH DAY, APPLY TRAFFIC STRIPES AS DIRECTED BY THE RE.

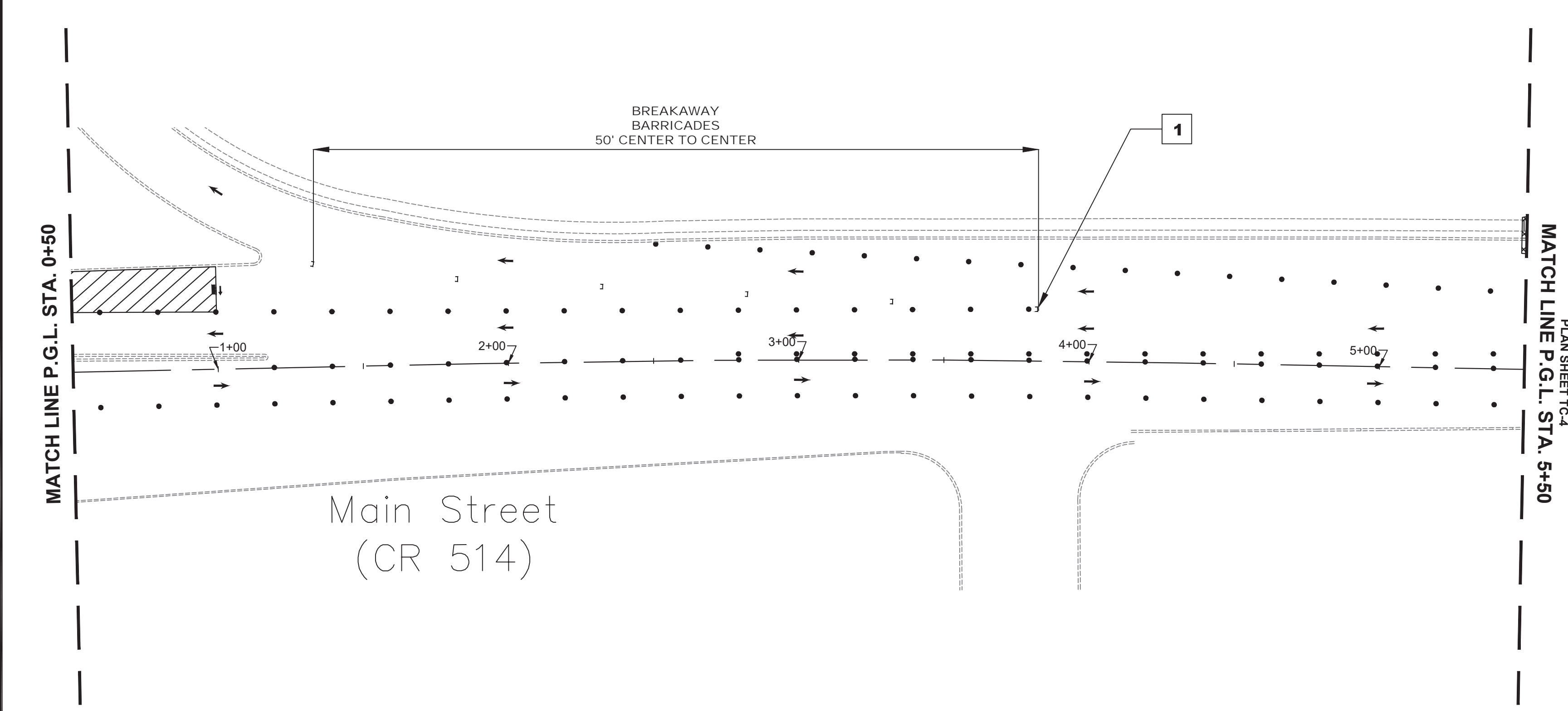
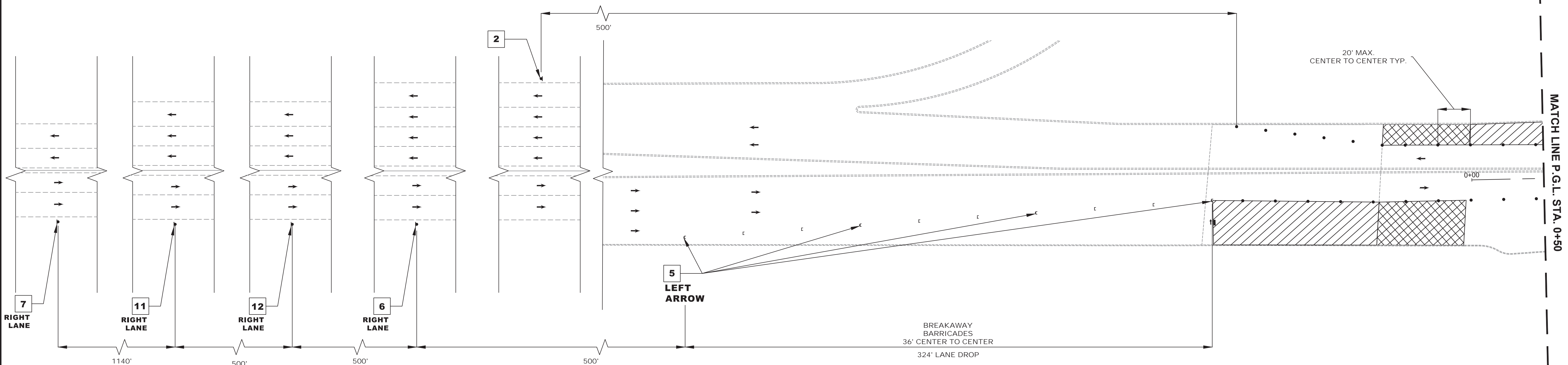
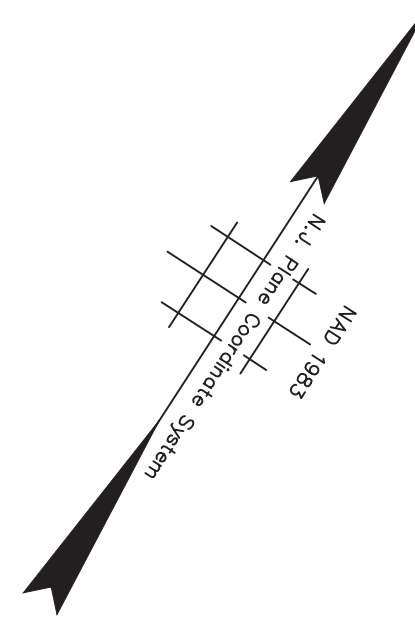
NOTES - TRAFFIC CONTROL PLANS

1. ONE LANE OF 11 FEET WIDE UNOBSTRUCTED TRAVELED WAY IN EACH DIRECTION SHALL BE MAINTAINED ON MAIN STREET (CR 514) AND U.S. ROUTE 9 NORTHBOUND ON/OFF RAMP AT ALL TIMES.
2. MAIN STREET (CR 514) ROADWAY CONSTRUCTION FOR THE VARIOUS STAGES SHALL BE COMPLETE TO THE TOP OF THE 19M64 HMA BASE COURSE SO THAT THE FINAL SURFACE COURSE CAN BE PLACED IN ONE CONTINUOUS OPERATION DURING THE FINAL STAGE.
3. LANE CLOSURES WILL NOT BE PERMITTED AFTER NOON OF THE DAY BEFORE, DURING AND UNTIL NOON OF THE DAY AFTER THE FOLLOWING HOLIDAYS OR HOLIDAY WEEKEND PERIODS: NEW YEAR'S DAY, PRESIDENT'S DAY, GOOD FRIDAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, COLUMBUS DAY, THANKSGIVING, AND CHRISTMAS. LANE CLOSURES WILL NOT BE PERMITTED ON ELECTION DAY BETWEEN THE HOURS OF 5A.M. AND 10P.M.

TC-2
TC-44

<p>No. DESCRIPTION OF REVISION DATE DRAWN CHECKED RELEASED</p>			
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY</p> <p>ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p> <p>TRAFFIC CONTROL AND STAGING PLANS - GENERAL NOTES</p>			
 <p>CVE ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p> <p>(732) 727 8000 (732) 462 7400</p> <p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>			
<p>JOHN H. ALLGAIR P.E. & P.P. (1983 - 3581 J) NJ PE LIC NO. 25828H</p>	<p>DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24555 NJ PE LIC NO. 24271</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NJ PE LIC NO. 2089</p>	<p>REGISTRATION NO. PWB04609.01</p>
<p>JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 3296A</p>	<p>MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468</p>	<p>GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458</p>	<p>DATE: February 2022</p>
<p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER</p> <p>LIC. 32468</p>		<p>SCALE: As Shown</p>	<p>CHECKED BY: RCM</p>
<p>CHECKED BY: <i>[Signature]</i></p>		<p>DATE: 2/17/2022</p>	<p>SHEET: 93 of 197</p>

NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	16	UN
159006M	DRUM	116	UN
159012M	CONSTRUCTION SIGNS	126	SF
159027M	FLASHING ARROW BOARD, 4' X 8'	1	UN
159108M	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION	1	UN



STAGE 1A CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

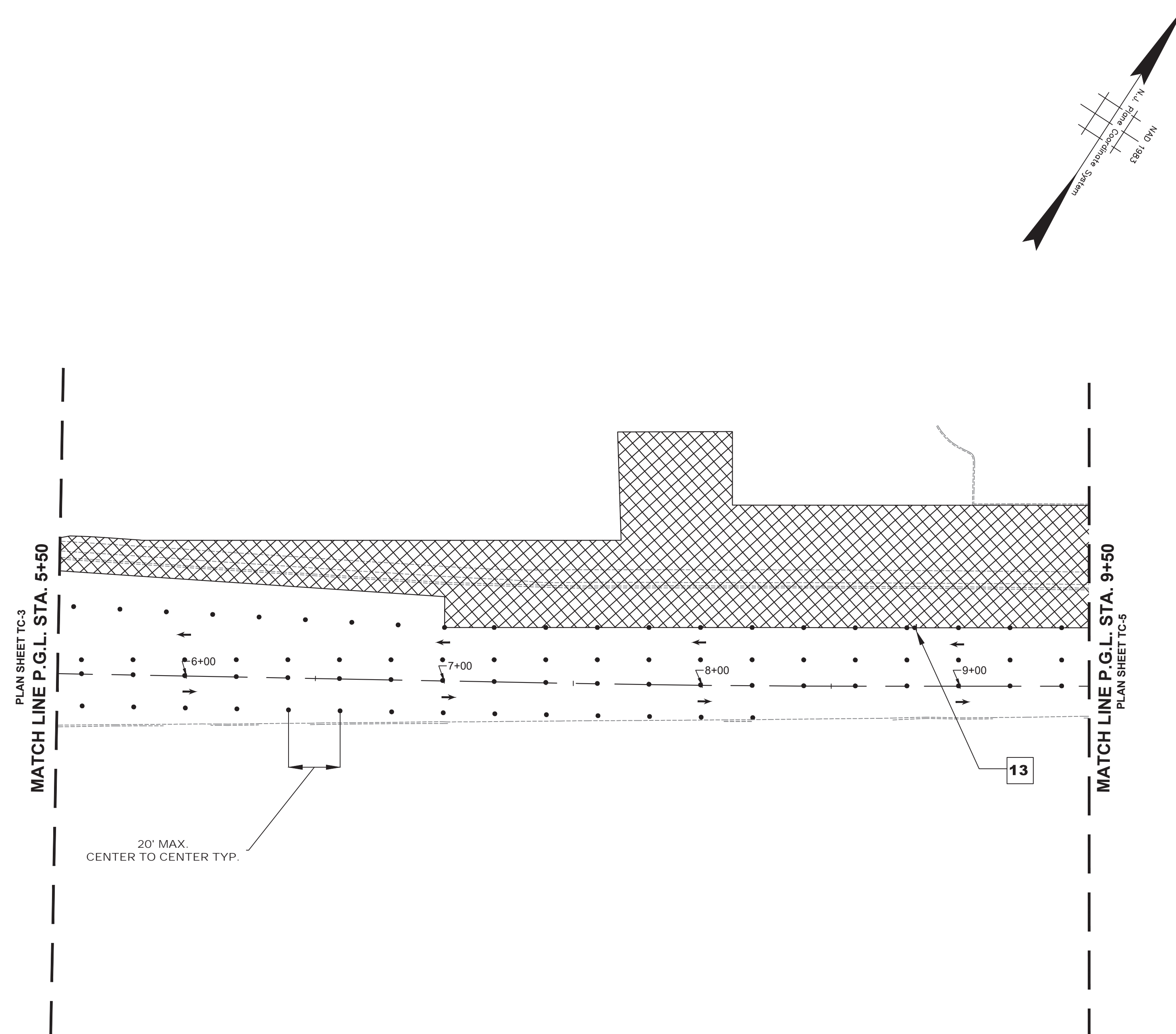
1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 1A AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



<p>TC-3 TC-44</p>			
<p>DESCRIPTION OF REVISION</p>			
DATE	DRAWN	CHECKED	RELEASED
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 1A (1 OF 6)</p>			
<p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>			
<p>JOHN H. ALLGAIER P.E. & P.P. (732) 727 8000 NJ PE LIC NO. 25039 NJ PP LIC NO. 2455</p>	<p>DAVID J. SAMUEL P.E. & P.P. (732) 462 7400 NJ PE LIC NO. 24271 NJ PP LIC NO. 2089</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NJ PE LIC NO. 32952 NJ PP LIC NO. 3874</p>	<p>GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 3770</p>
<p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER</p>		<p>SCALE: As Shown DATE: February 2022 DRAWN BY: RCM DESIGNED BY: RCM CHECKED BY: KEU/CJW SHEET: 94 of 197</p>	
<p>DATE: 2/17/2022</p>			
<p>FILE NO.: PWB0A609.01</p>			




STAGE 1A CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 1A AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

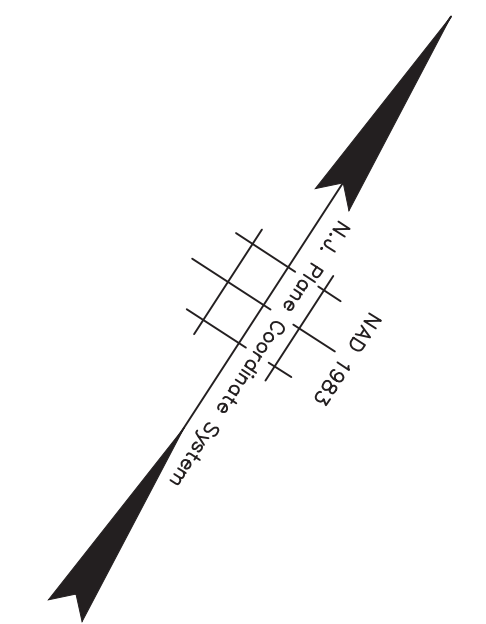
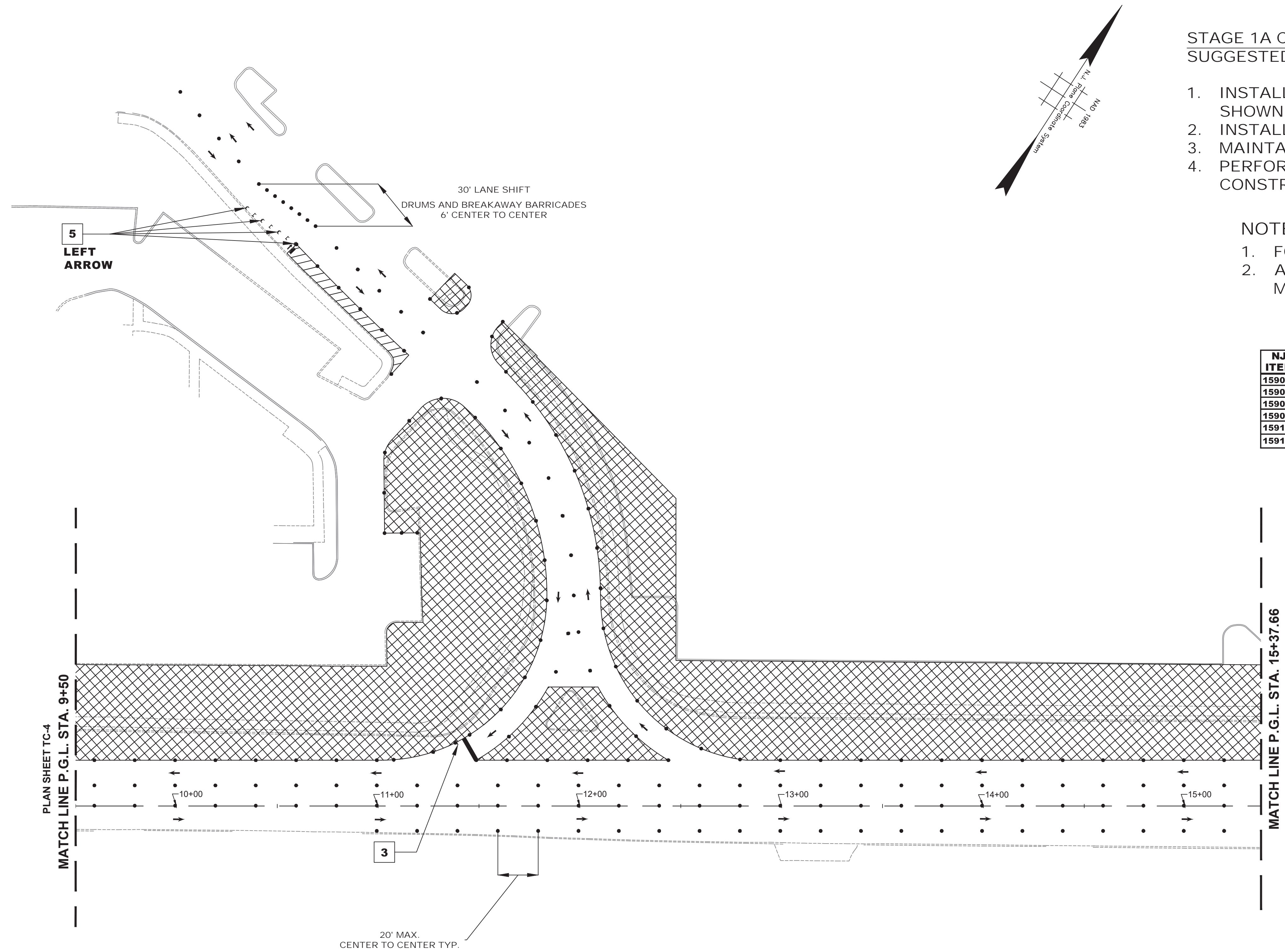
1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
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NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159006M	DRUM	75	UN
159012M	CONSTRUCTION SIGNS	20	SF

<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY</p> <p>ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p> <p>TRAFFIC CONTROL AND STAGING PLANS - STAGE 1A (2 OF 6)</p>			
 <p>ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p> <p>(732) 727 8000 (732) 462 7400</p> <p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>			
<p>JOHN H. ALLGAIR P.E. & P.P. DAVID J. SAMUEL P.E. & P.P. JOHN J. STEFANI P.E. L.S. & P.P.</p> <p>(193 - 3581) (NJ PE LIC NO. 25839) (NJ PE LIC NO. 24271)</p>			
<p>JAY B. CORNELL P.E. & P.P. MICHAEL J. McCLELLAND P.E. & P.P. GREGORY R. VALESI P.E. & P.P.</p> <p>(NJ PE LIC NO. 32962) (NJ PE LIC NO. 32468) (NJ PE LIC NO. 34458)</p>			
<p>MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER</p> <p><i>(Signature)</i></p>		<p>As Shown DATE February 2022</p> <p>DRAWN BY RCM DESIGNED BY RCM</p> <p>CHECKED BY KEU/CJW SHEET 95 of 197</p>	
<p>SCALE: DATE: 2/17/2022</p>			

TC-4
TC-44

FILE NO. PWB0A609.01



STAGE 1A CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 1A AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

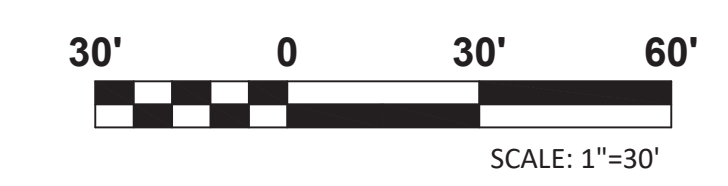
NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES


NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	7	UN
159006M	DRUM	179	UN
159012M	CONSTRUCTION SIGNS	41	SF
159027M	FLASHING ARROW BOARD, 4' X 8'	1	UN
159108M	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION	1	UN
159126M	TEMPORARY TRAFFIC STRIPES, 4"	75	LF

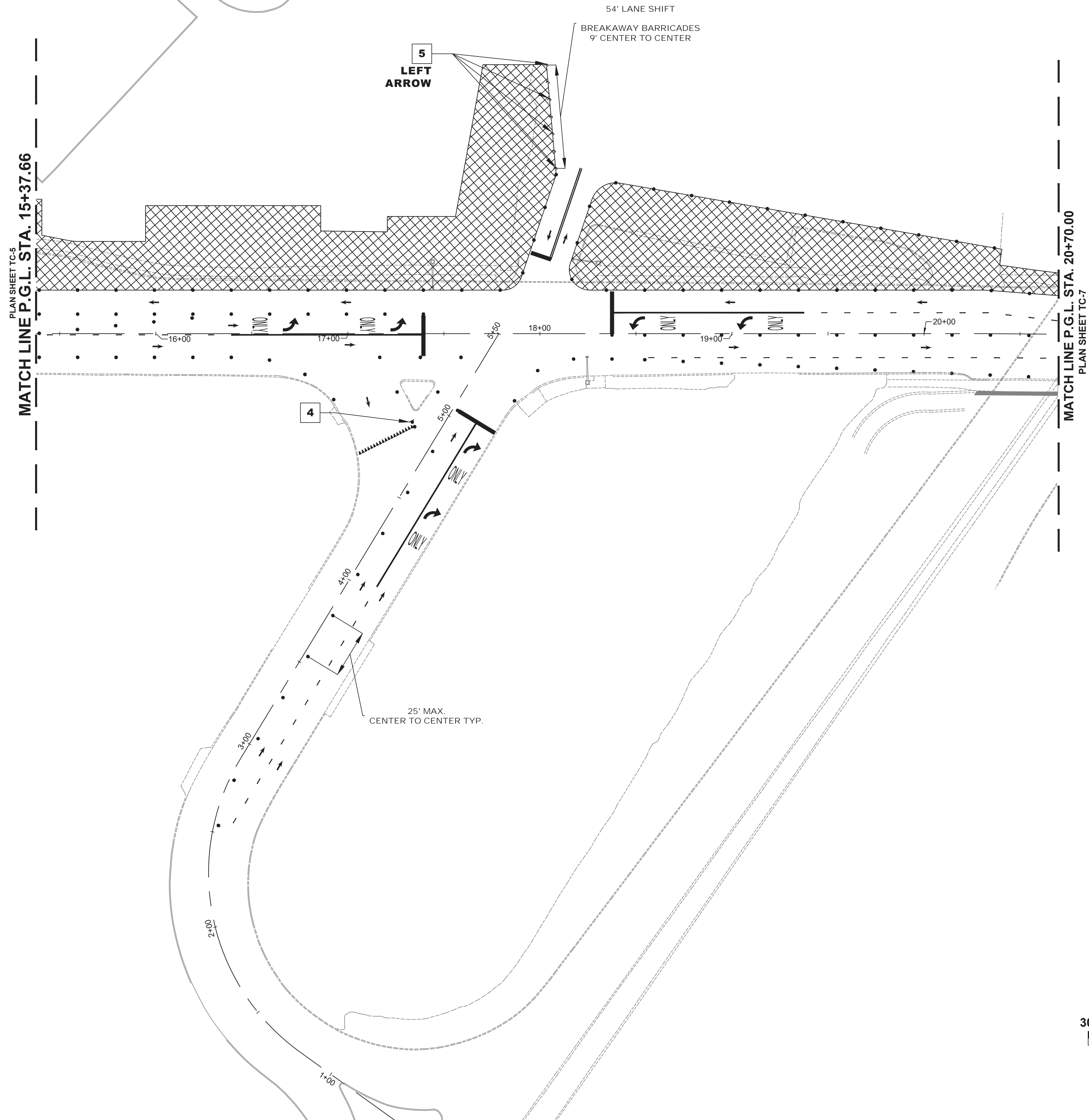
PLAN SHEET TC-4
MATCH LINE P.G.L. STA. 9+50

MATCH LINE P.G.L. STA. 15+37.66
PLAN SHEET TC-6



TC-5
TC-44

NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 1A (3 OF 6)					
 CME ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS (732) 727-8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462-7400					
JOHN H. ALLGAIER P.E. & P.P. <small>(1993 - 2001)</small> NO PE LIC NO. 25838		DAVID J. SAMUEL P.E. & P.P. <small>(1993 - 2001)</small> NO PE LIC NO. 24855		JOHN J. STEFANI P.E. L.S. & P.P. <small>(1993 - 2001)</small> NO PE & L.S. LIC NO. 24271	
JAY B. CORNELL P.E. & P.P. <small>(1993 - 2001)</small> NO PE LIC NO. 32962		MICHAEL J. MCCLELLAND P.E. & P.P. <small>(1993 - 2001)</small> NO PE LIC NO. 32468		GREGORY R. VALESIO P.E. & P.P. <small>(1993 - 2001)</small> NO PE LIC NO. 34456	
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER <small>LIC. 32468</small>			SCALE: As Shown	DATE: February 2022	REGISTERED NO. PW06A09.01
DRAWN BY: RCM CHECKED BY: KEK/JCW DATE: 2/17/2022			DESIGNED BY: RCM	SHEET: 96 of 197	DRAWING NO.



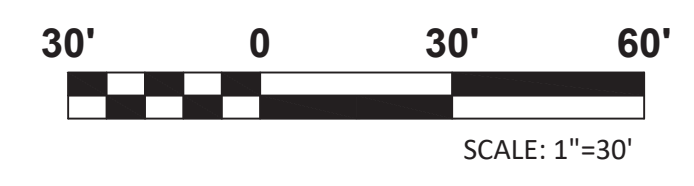
NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	7	UN
159006M	DRUM	112	UN
159012M	CONSTRUCTION SIGNS	37	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	1303	LF
159132M	TEMPORARY PAVEMENT MARKINGS	233	SF
702057M NS	INTERIM TRAFFIC SIGNAL SYSTEM, LOCATION NO. 2	1	LS

STAGE 1A CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION


1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL INTERIM TRAFFIC SIGNAL SYSTEM AS DESIGNED BASED ON THE EXISTING CONDITIONS ENCOUNTERED IN THE FIELD AND/OR THE CONDITIONS TO BE ENCOUNTERED IN THE SPECIFIC TRAFFIC CONTROL AND STAGING PLANS STAGE. THE INTERIM TRAFFIC SIGNAL PLAN SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER CURRENTLY LICENSED IN THE STATE OF NEW JERSEY AS RETAINED BY THE CONTRACTOR AND THE SIGNED AND SEALED PLANS SHALL BE SUBMITTED TO THE RE FOR APPROVAL.
3. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
4. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
5. PERFORM STAGE 1A AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

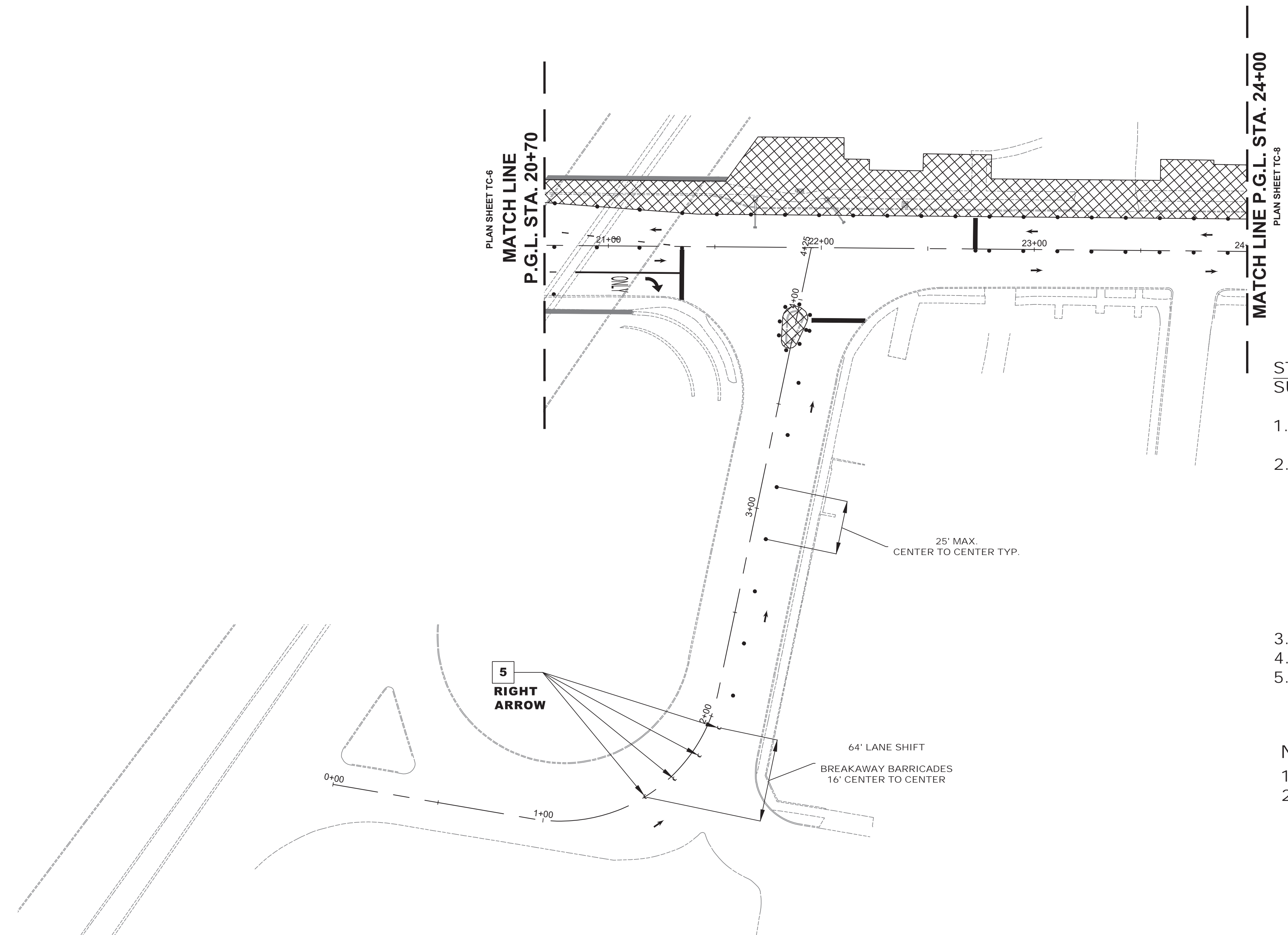
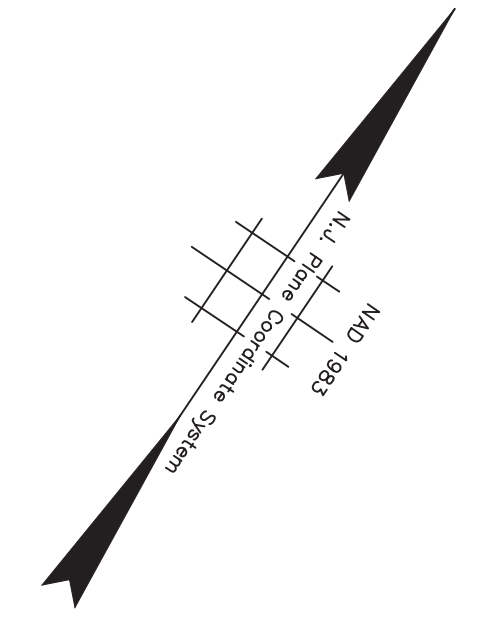
1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



TC-6
TC-44

No.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY</p> <p>ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p> <p>TRAFFIC CONTROL AND STAGING PLANS - STAGE 1A (4 OF 6)</p>					
 <p>CVE ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p> <p>(732) 727 8000 (732) 462 7400</p> <p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>					
JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991)		DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25839		JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271	
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962		MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 38794		GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458	
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER			As Shown DATE: February 2022		
DRAWN BY: RCM			DESIGNED BY: RCM		
CHECKED BY: KEU/CJW			SHEET: 97 of 197		
DATE: 2/17/2022			SCALE: 1"=30'		

FILE NO. PWB0609.01
 DRAWING NO.



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	4	UN
159006M	DRUM	50	UN
159012M	CONSTRUCTION SIGNS	32	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	502	LF
159132M	TEMPORARY PAVEMENT MARKINGS	37	SF
702057M NS	INTERIM TRAFFIC SIGNAL SYSTEM, LOCATION NO. 3	1	LS

STAGE 1A CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL INTERIM TRAFFIC SIGNAL SYSTEM AS DESIGNED BASED ON THE EXISTING CONDITIONS ENCOUNTERED IN THE FIELD AND/OR THE CONDITIONS TO BE ENCOUNTERED IN THE SPECIFIC TRAFFIC CONTROL AND STAGING PLANS STAGE. THE INTERIM TRAFFIC SIGNAL PLAN SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER CURRENTLY LICENSED IN THE STATE OF NEW JERSEY AS RETAINED BY THE CONTRACTOR AND THE SIGNED AND SEALED PLANS SHALL BE SUBMITTED TO THE RE FOR APPROVAL.
3. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
4. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
5. PERFORM STAGE 1A AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES




TC-7
TC-44

No.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY

ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

TRAFFIC CONTROL AND STAGING PLANS - STAGE 1A (5 OF 6)



CME ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS

(732) 727 8000 (732) 462 7400

3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIER P.E. & P.P. NJ PE LIC NO. 25838 NJ PP LIC NO. 2455	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24971 NJ PP LIC NO. 2089	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 2089
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962 NJ PP LIC NO. 3874	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 3770	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458 NJ PP LIC NO. 4361

MICHAEL J. MCCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. 32468

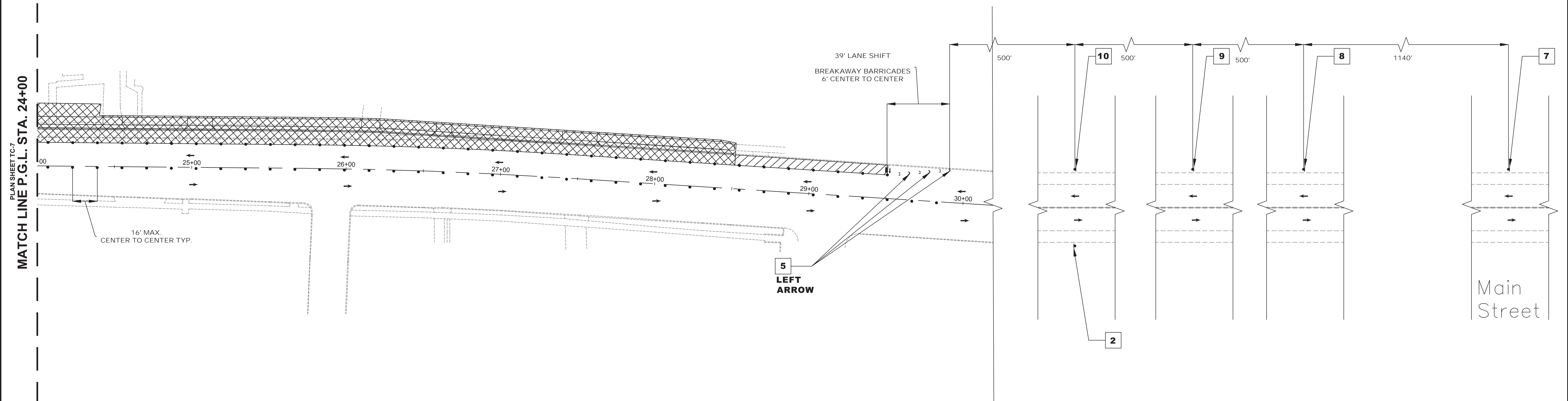
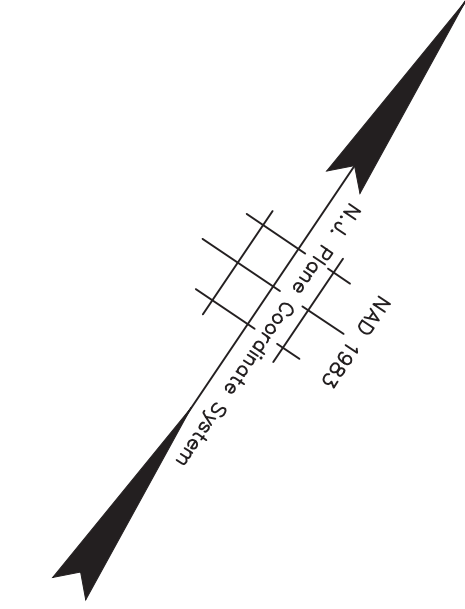
SCALE: As Shown DATE: February 2022

DRAWN BY: RCM DESIGNED BY: RCM

CHECKED BY: KEJ/UCW SHEET: 98 of 197

DATE: 2/17/2022

PWB0609.01
 DRAWING NO.
 REGISTERED



PLAN SHEET TC-7
MATCH LINE P.G.L. STA. 24+00




NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	6	UN
159006M	DRUM	72	UN
159012M	CONSTRUCTION SIGNS	98	SF
159027M	FLASHING ARROW BOARD, 4' X 8'	1	UN
159108M	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION	1	UN

**STAGE 1A CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION**

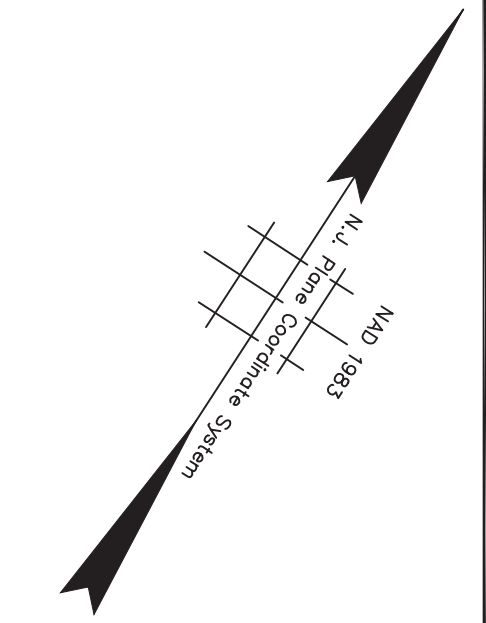
1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 1A AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

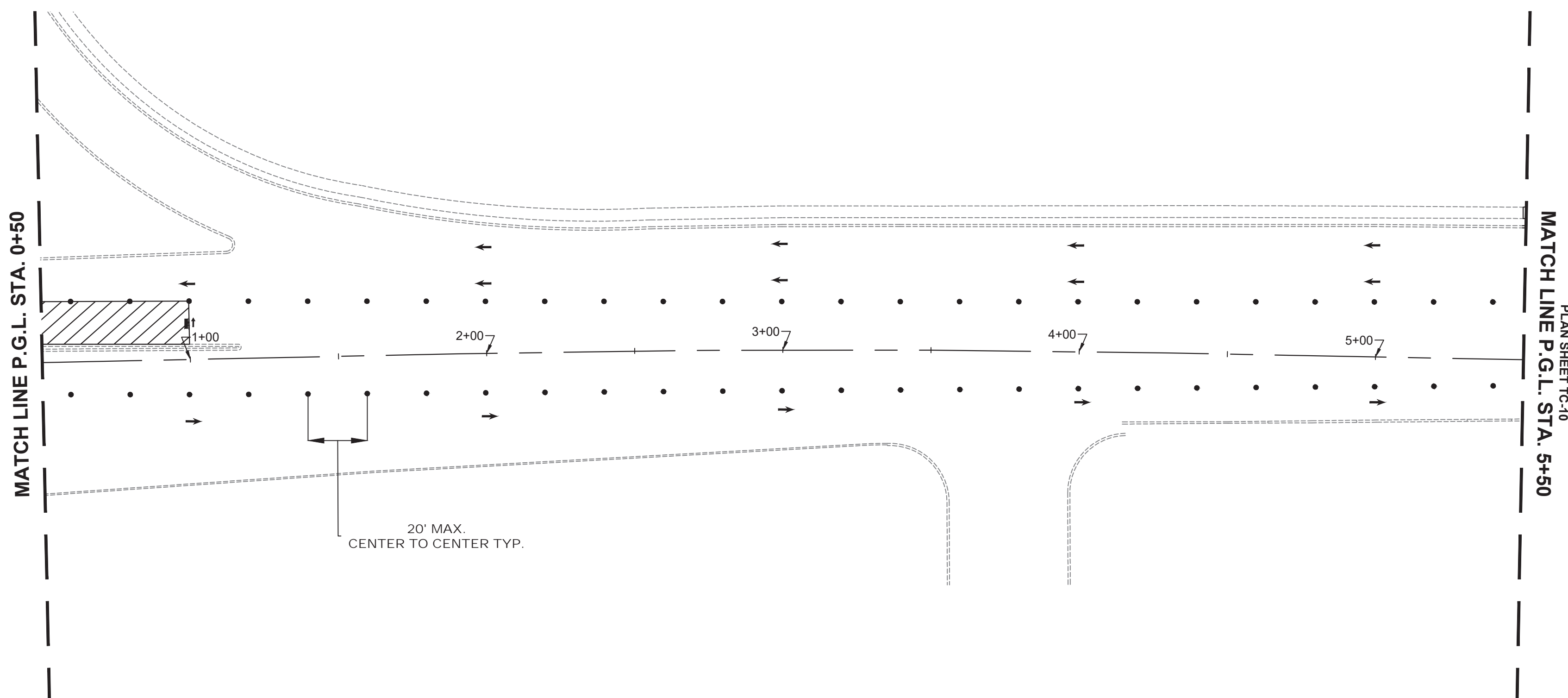
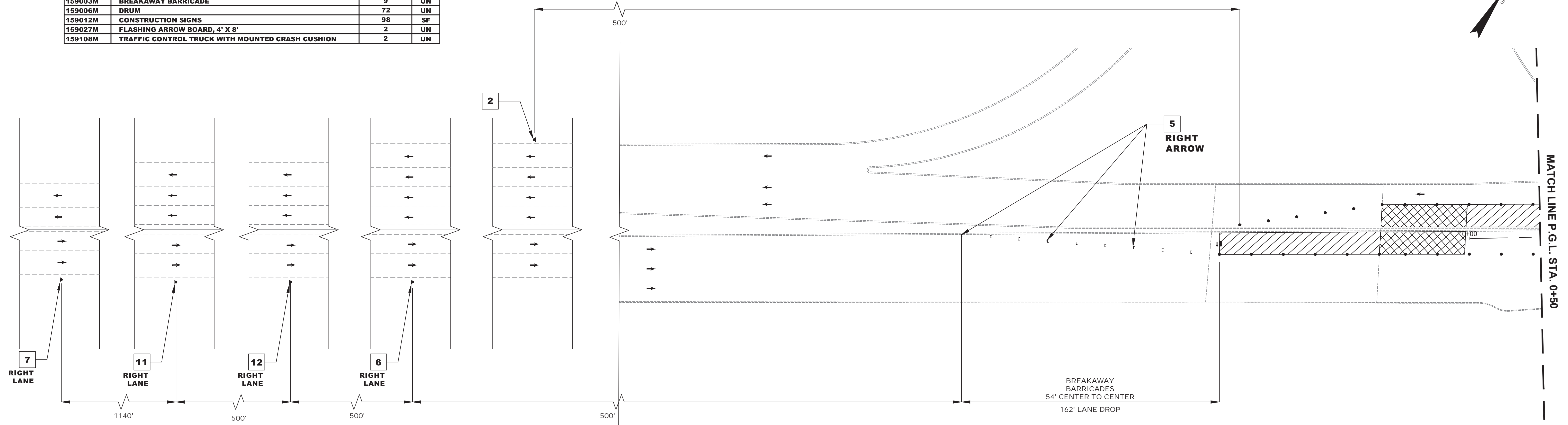
1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES

TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 1A (6 OF 6)			
 CVE ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS			
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194			
(732) 727 8000		(732) 462 7400	
JOHN H. ALLGAIR P.E. & P.P. DAVID J. SAMUEL P.E. & P.P. JOHN J. STEFANI P.E. L.S. & P.P. <small>(1983 - 1991)</small> <small>NI PP LIC NO. 2455</small> <small>NI PE & LS LIC NO. 24271</small> <small>NI PP LIC NO. 2089</small>			
JAY B. CORNELL P.E. & P.P. <small>NI PE LIC NO. 32962</small>		MICHAEL J. McCLELLAND P.E. & P.P. <small>NI PP LIC NO. 3874</small> <small>NI PE LIC NO. 32468</small> <small>NI PP LIC NO. 3720</small>	
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER		SCALE: As Shown DATE: February 2022	
DRAWN BY: RCM		DESIGNED BY: RCM	
CHECKED BY: KEU/CJW		SHEET: 99 of 197	
DATE: 2/17/2022			

TC-8
 TC-44
 REGISTERED
 DRAWING NO.
 FILE NO. PWB0609.01



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	9	UN
159006M	DRUM	72	UN
159012M	CONSTRUCTION SIGNS	98	SF
159027M	FLASHING ARROW BOARD, 4' X 8'	2	UN
159108M	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION	2	UN

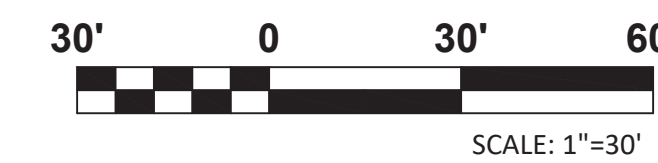


STAGE 1B CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 1B AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

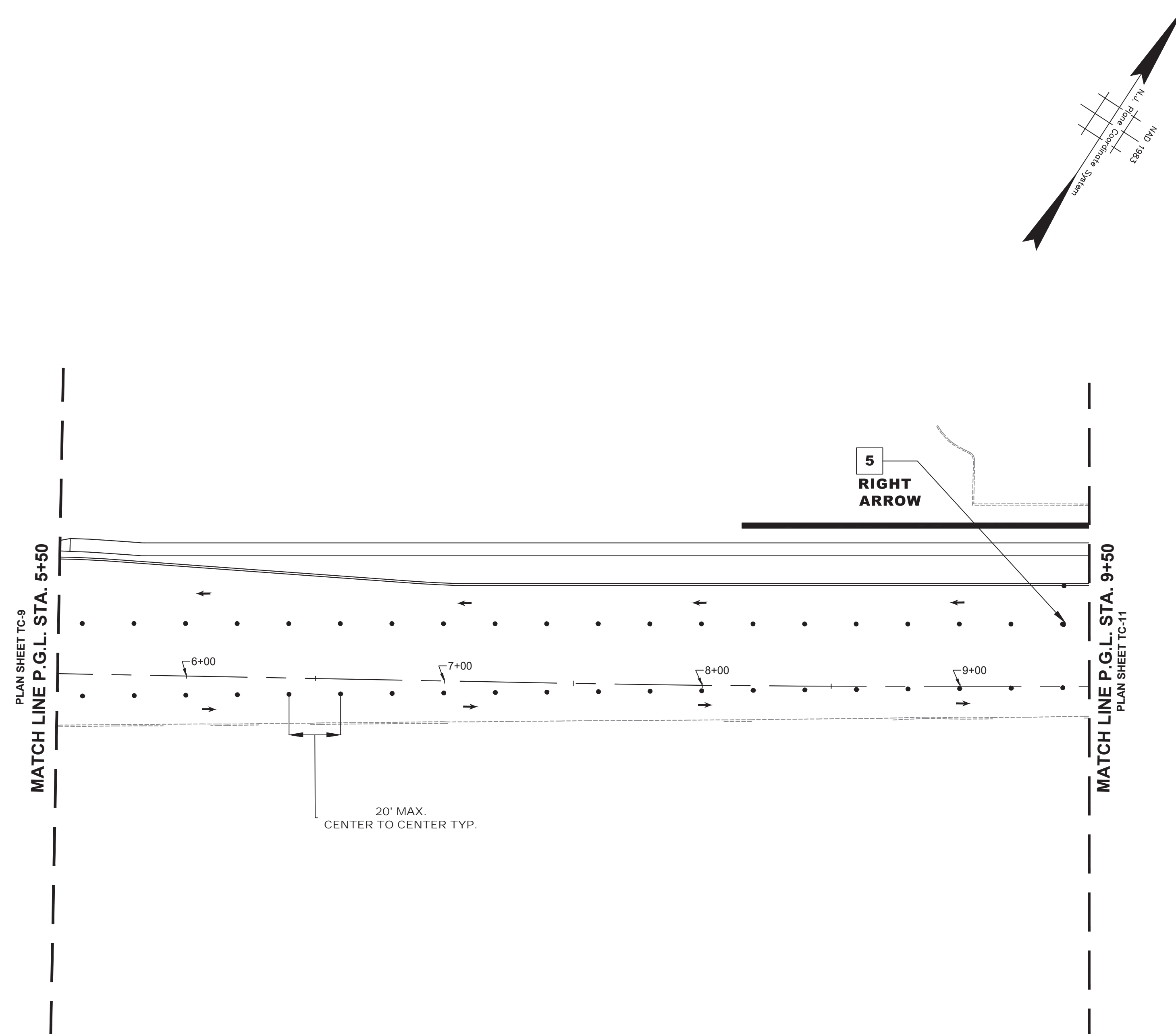
NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



<p>TC-9 TC-44</p>			
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 1B (1 OF 6)</p>			
<p>CVE ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS (732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400</p>			
<p>JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991)</p>	<p>DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24539</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271</p>	<p>GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458</p>
<p>JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962</p>	<p>MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 32468</p>	<p>SCALE As Shown</p>	<p>DATE February 2022</p>
<p>MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER</p>		<p>LIC. 32468</p>	<p>DESIGNED BY RCM</p>
<p><i>[Signature]</i></p>		<p>CHECKED BY KEC/JCW</p>	<p>SHEET 100 of 197</p>
<p>DATE: 2/17/2022</p>			

FILE NO. PWB00609.01



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	1	UN
159006M	DRUM	41	UN
159012M	CONSTRUCTION SIGNS	8	SF

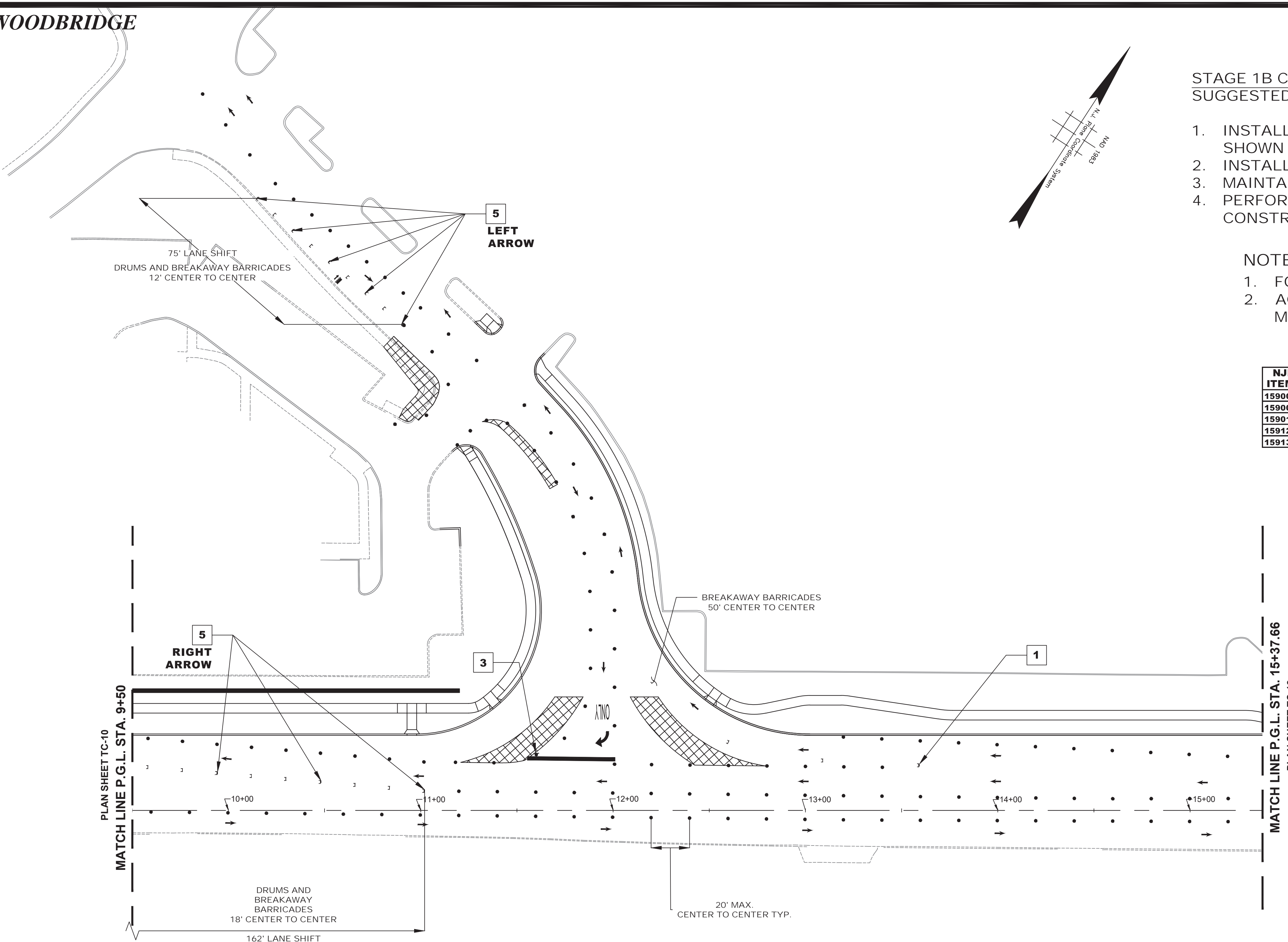
STAGE 1B CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 1B AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES

<p style="text-align: right;">TC-10 TC-44</p>			
<p style="text-align: center;">TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 1B (2 OF 6)</p>			
<p>(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400</p> <p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>			
<p>JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991)</p>	<p>DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25839</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271</p>	<p>JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962</p>
<p>MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468</p>	<p>GREGORY R. VALES P.E. & P.P. NJ PE LIC NO. 34458</p>	<p>SCALE: As Shown</p>	<p>DATE: February 2022</p>
<p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>		<p>DRAWN BY: RCM</p>	<p>DESIGNED BY: RCM</p>
<p>CHECKED BY: <i>[Signature]</i></p>		<p>CHECKED BY: KEU/CJW</p>	<p>SHEET: 101 of 197</p>
<p>DATE: 2/17/2022</p>		<p>FILE NO.: PWB0A609.01</p>	



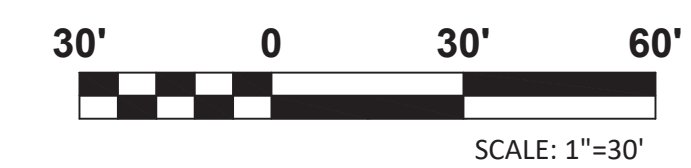
STAGE 1B CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION


1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 1B AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

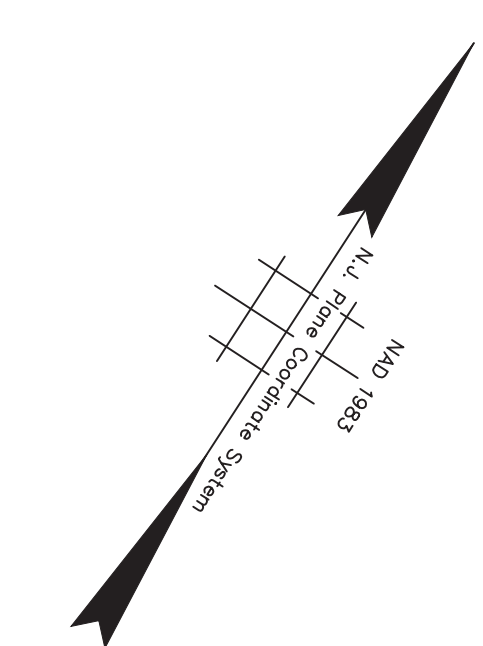
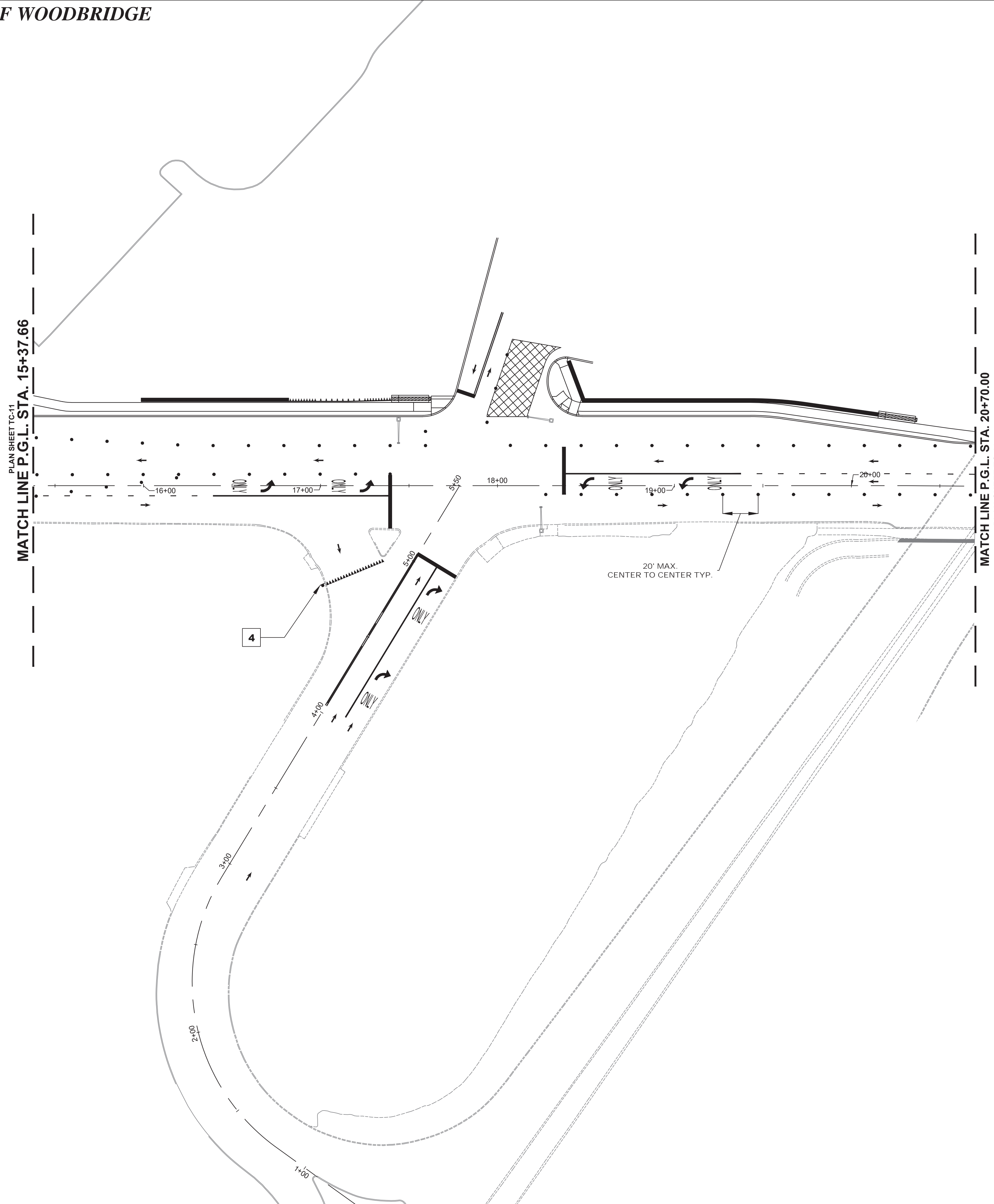
NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES

NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	22	UN
159006M	DRUM	113	UN
159012M	CONSTRUCTION SIGNS	93	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	276	LF
159132M	TEMPORARY PAVEMENT MARKINGS	37	SF



TC-11 TC-44	
NO. DESCRIPTION OF REVISION DATE DRAWN CHECKED RELEASED	REGISTERED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 1B (3 OF 6)	
 ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS (732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400	
JOHN H. ALLGAIER P.E. & P.P. (1983 - 2001) NJ PE LIC NO. 258168 NJ PP LIC NO. 2455	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 258168 NJ PP LIC NO. 2455
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 38724	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 37770
JOHN J. STEFANI P.E. L.S. & P.P. NJ PE LIC NO. 2455 NJ PS LIC NO. 2089	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458 NJ PP LIC NO. 4361
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468	
SCALE: As Shown DATE: February 2022	DRAWN BY: RCM CHECKED BY: RCM SHEET: 102 of 197
DATE: 2/17/2022 CHECKED BY: KE/CJW	REGISTERED NO.: PWBA0609.01



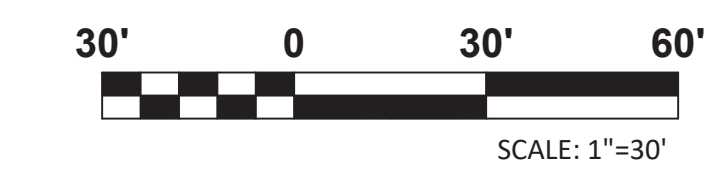
NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159006M	DRUM	59	UN
159126M	TEMPORARY TRAFFIC STRIPES, 4"	1315	LF
159132M	TEMPORARY PAVEMENT MARKINGS	233	SF
702057M	INTERIM TRAFFIC SIGNAL SYSTEM, LOCATION NO. 2	1	LS

STAGE 1B CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION


1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL INTERIM TRAFFIC SIGNAL SYSTEM AS DESIGNED BASED ON THE EXISTING CONDITIONS ENCOUNTERED IN THE FIELD AND/OR THE CONDITIONS TO BE ENCOUNTERED IN THE SPECIFIC TRAFFIC CONTROL AND STAGING PLANS STAGE. THE INTERIM TRAFFIC SIGNAL PLAN SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER CURRENTLY LICENSED IN THE STATE OF NEW JERSEY AS RETAINED BY THE CONTRACTOR AND THE SIGNED AND SEALED PLANS SHALL BE SUBMITTED TO THE RE FOR APPROVAL.
3. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
4. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
5. PERFORM STAGE 1B AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

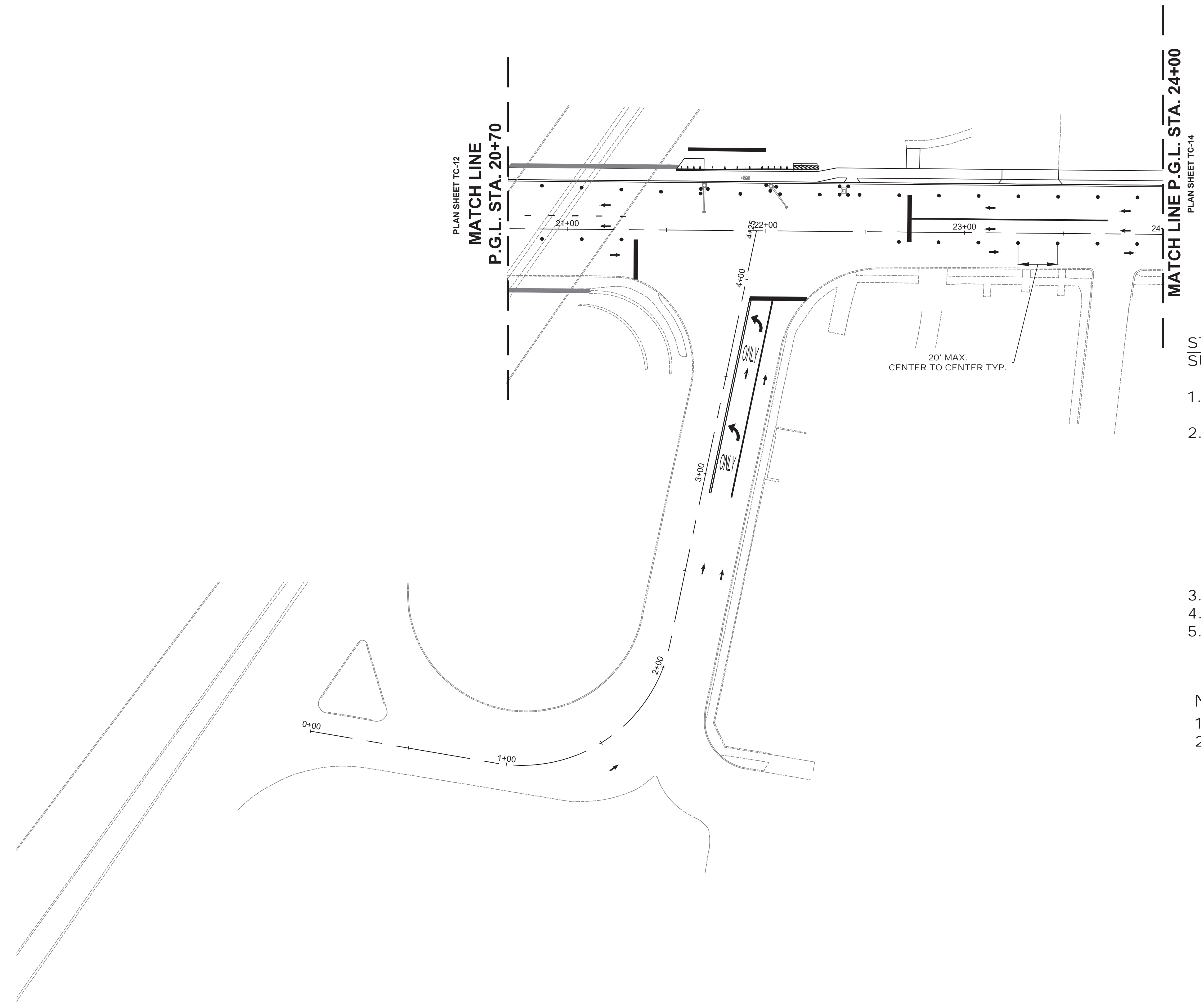
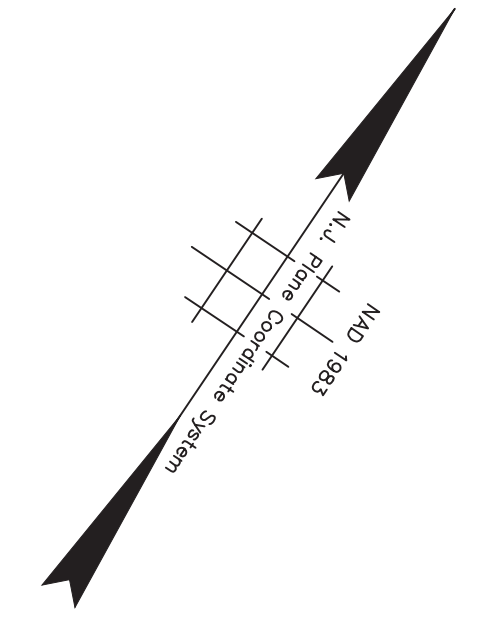
NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



TC-12
TC-44

No. _____ DESCRIPTION OF REVISION _____ DATE _____ DRAWN _____ CHECKED _____ RELEASED _____	
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 1B (4 OF 6)	
 ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS (732) 727 8000 (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194	
JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991) JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32962	DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 25839 MICHAEL J. McCLELLAND P.E. & P.P. NO PE LIC NO. 38794 MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468 DATE: 2/17/2022
JOHN J. STEFANI P.E. L.S. & P.P. NO PE & LS LIC NO. 24271 GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 34458 SCALE: As Shown DATE: February 2022	NO PE LIC NO. 20899 NO PE LIC NO. 43561 DRAWN BY: RCM DESIGNED BY: RCM CHECKED BY: KEU/CJW SHEET: 103 of 197 FILE NO.: PWB0A609.01



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159006M	DRUM	35	UN
159126M	TEMPORARY TRAFFIC STRIPES, 4"	1053	LF
159132M	TEMPORARY PAVEMENT MARKINGS	73	SF
702057M NS	INTERIM TRAFFIC SIGNAL SYSTEM, LOCATION NO. 3	1	LS


STAGE 1B CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL INTERIM TRAFFIC SIGNAL SYSTEM AS DESIGNED BASED ON THE EXISTING CONDITIONS ENCOUNTERED IN THE FIELD AND/OR THE CONDITIONS TO BE ENCOUNTERED IN THE SPECIFIC TRAFFIC CONTROL AND STAGING PLANS STAGE. THE INTERIM TRAFFIC SIGNAL PLAN SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER CURRENTLY LICENSED IN THE STATE OF NEW JERSEY AS RETAINED BY THE CONTRACTOR AND THE SIGNED AND SEALED PLANS SHALL BE SUBMITTED TO THE RE FOR APPROVAL.
3. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
4. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
5. PERFORM STAGE 1B AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

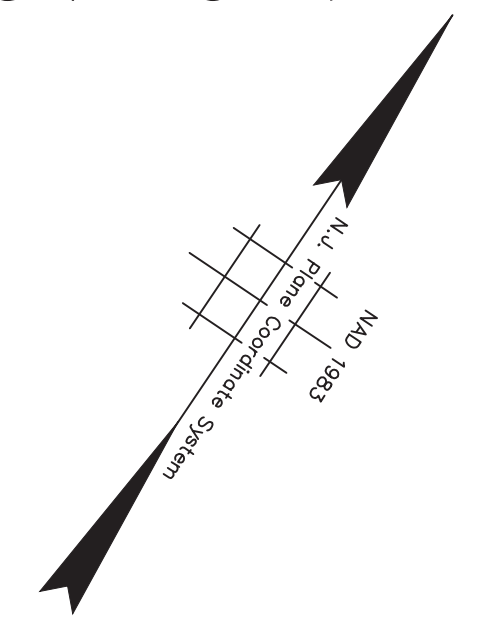
1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



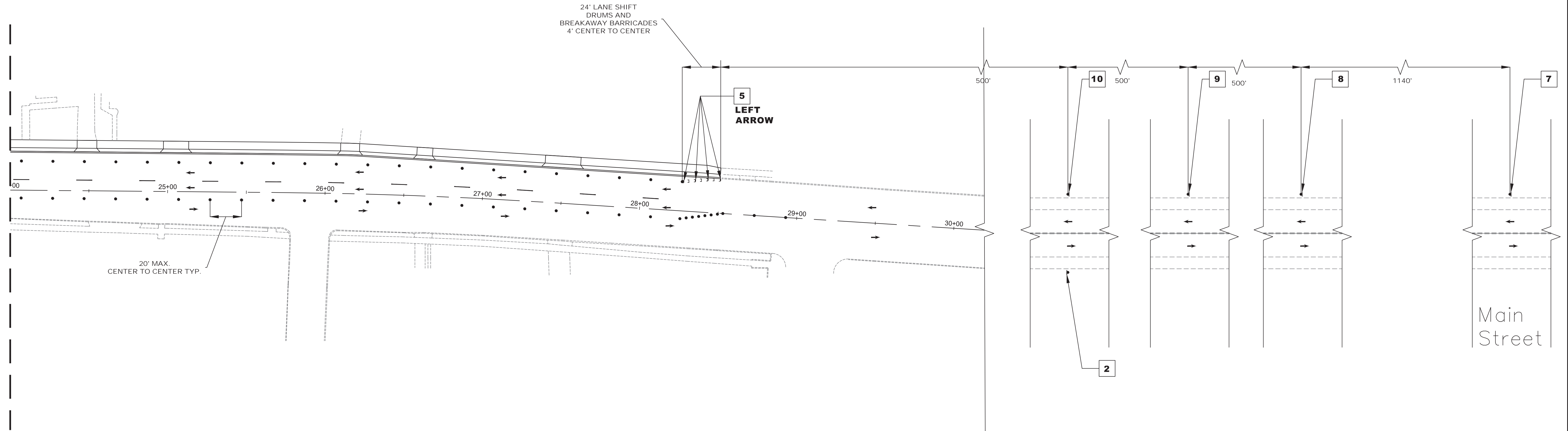
No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 1B (5 OF 6)</p>							
 ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS (732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400							
JOHN H. ALLGAIER P.E. & P.P. 1993 - 2001 NJ PE LIC NO. 25838	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 2455	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & L.S. LIC NO. 24271					
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458					
<p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>			SCALE	DATE			
			As Shown	February 2022			
			DRAWN BY	DESIGNED BY			
			RCM	RCM			
			CHECKED BY	SHEET			
			KEC/UCW	104 of 197			
			DATE				
			2/17/2022				

TC-13
TC-44

PWBOAG09.01



PLAN SHEET TC-13
MATCH LINE P.G.L. STA. 24+00



20' MAX. CENTER TO CENTER TYP.

Main Street



STAGE 1B CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 1B AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

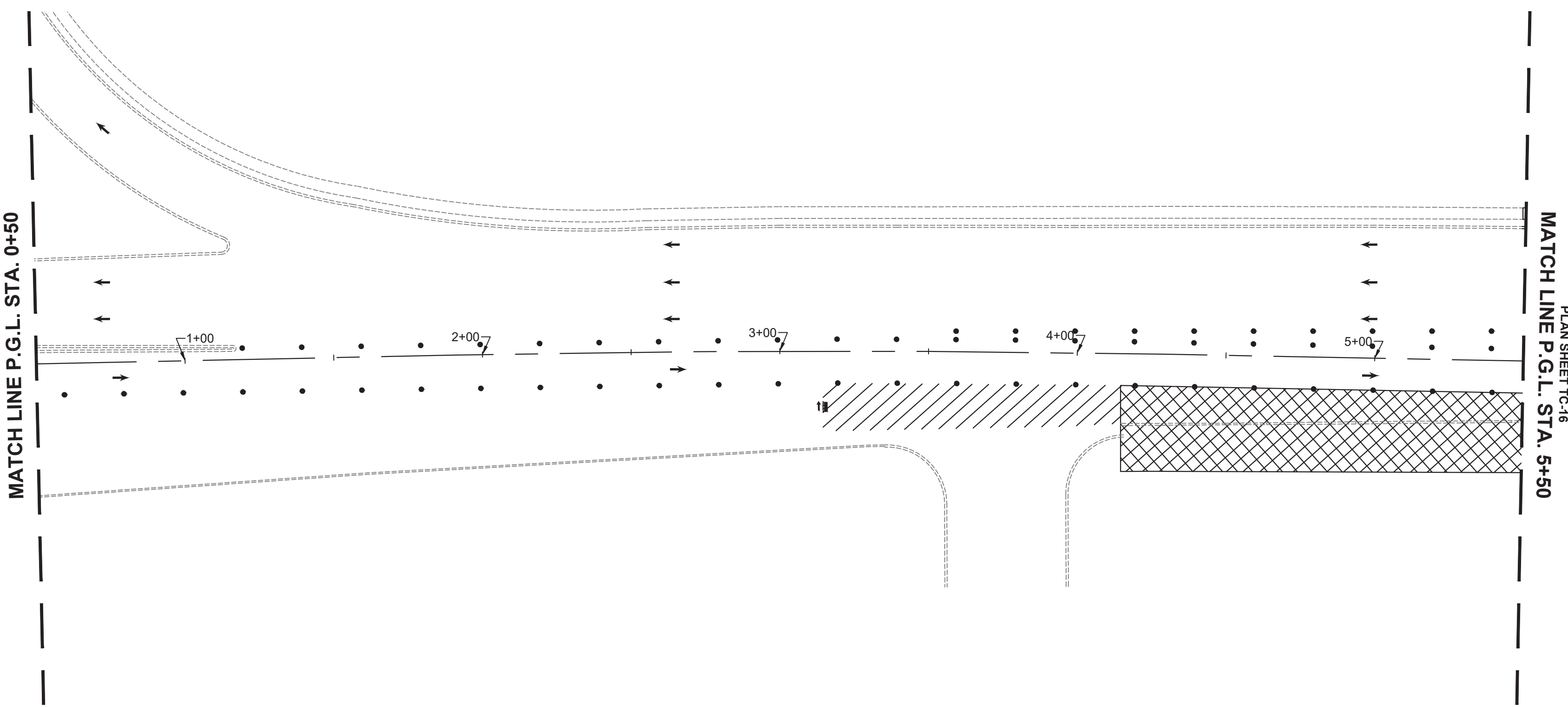
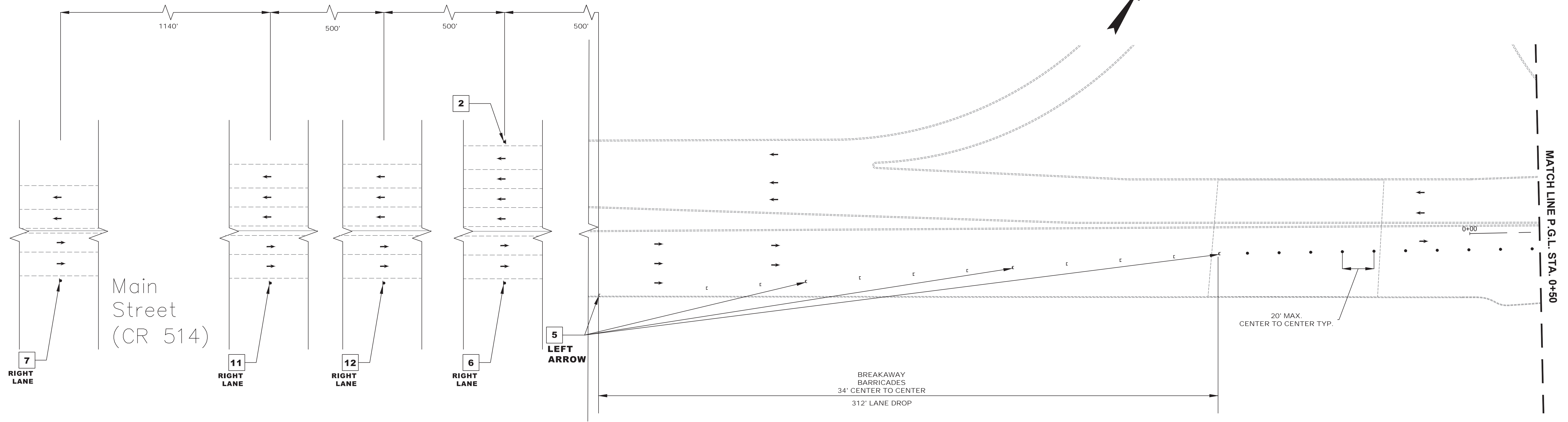
NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES

NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	7	UN
159006M	DRUM	53	UN
159012M	CONSTRUCTION SIGNS	106	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	110	LF

<p>TC-14 TC-44</p>			
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 1B (6 OF 6)</p>			
<p>(732) 727 8000 (732) 462 7400</p> <p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>			
<p>JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991)</p>	<p>DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25839</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271</p>	<p>GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458</p>
<p>JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32992</p>	<p>MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 38794</p>	<p>DATE: February 2022</p>	<p>SCALE: As Shown</p>
<p>MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER</p>		<p>LIC. 32468</p>	<p>DESIGNED BY: RCM CHECKED BY: RCM</p>
		<p>DATE: 2/17/2022</p>	<p>CHECKED BY: KEU/CJW SHEET: 105 of 197</p>
			<p>FILE NO. PWB0609.01</p>

NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	12	UN
159006M	DRUM	67	UN
159012M	CONSTRUCTION SIGNS	106	SF
159027M	FLASHING ARROW BOARD, 4' X 8'	1	UN
159108M	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION	1	UN



STAGE 2A CONSTRUCTION SUGGESTED SEQUENCE OF CONSTRUCTION

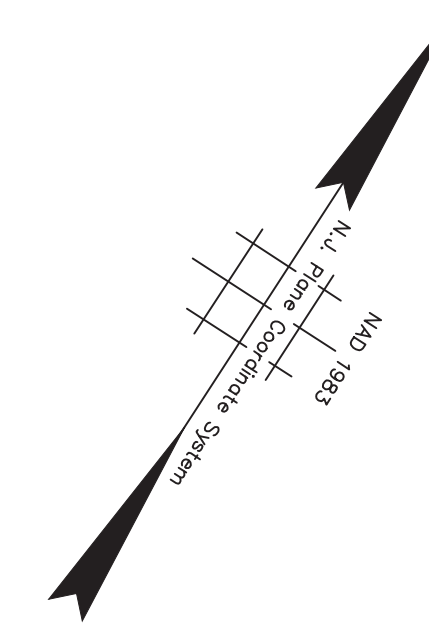
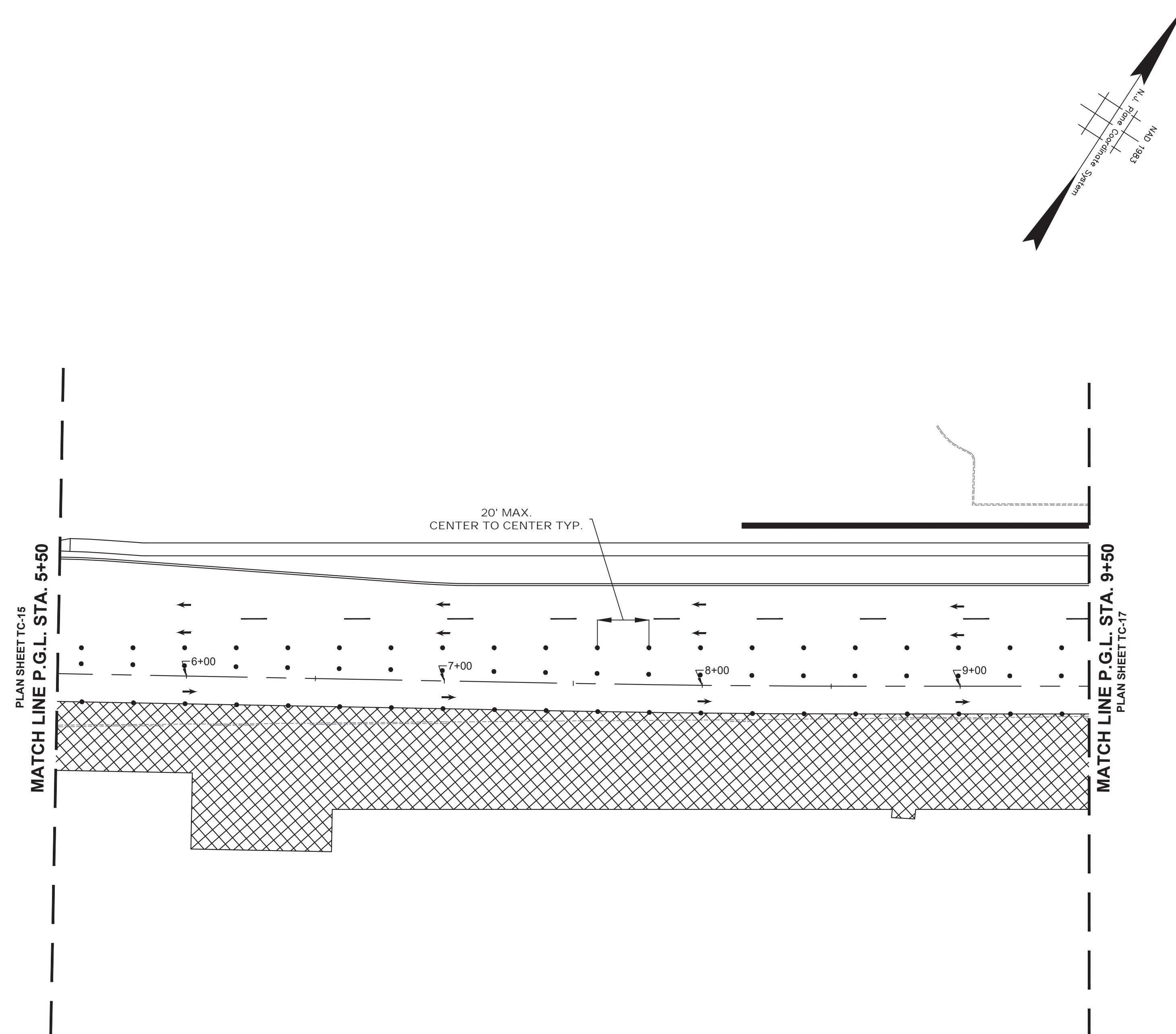
1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
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4. PERFORM STAGE 2A AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



<p>TC-15 TC-44</p>			
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 2A (1 OF 6)</p>			
<p>CVE ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS (732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400</p>			
<p>JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991)</p>	<p>DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25839 NJ PP LIC NO. 2455</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 2089</p>	<p>JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32992 NJ PP LIC NO. 3874</p>
<p>MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER</p>	<p>MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 3720</p>	<p>GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458 NJ PP LIC NO. 4361</p>	<p>SCALE: As Shown DATE: February 2022 DESIGNED BY: RCM DRAWN BY: RCM CHECKED BY: KEQ/CW SHEET: 106 of 197</p>
<p>MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>			<p>DATE: 2/17/2022</p>
<p>FILE NO. PWB0609.01</p>			



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159006M	DRUM	60	UN
159126M	TEMPORARY TRAFFIC STRIPES, 4"	100	LF

STAGE 2A CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

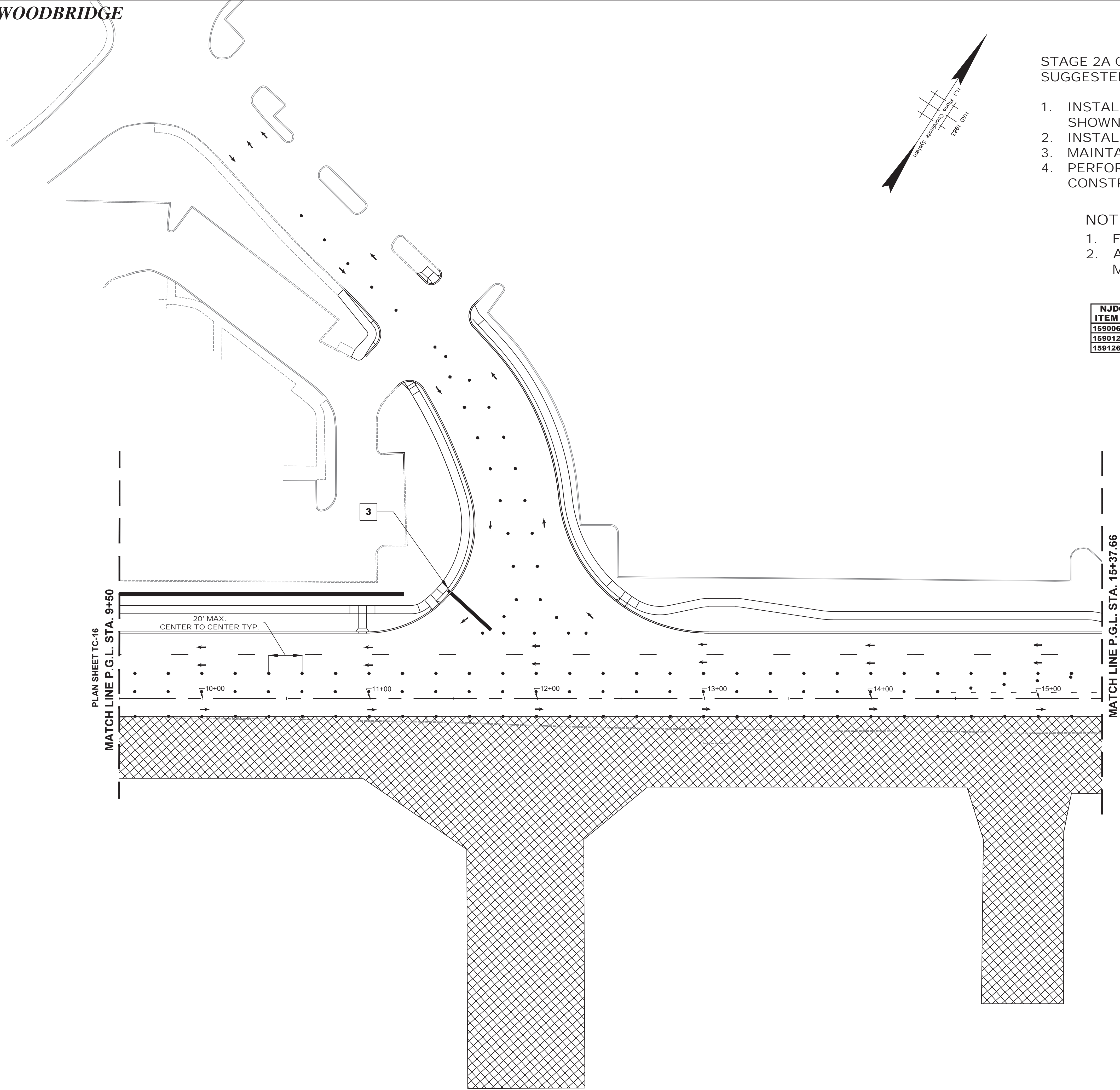
1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 2A AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES

TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 2A (2 OF 6)			
ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS			
(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162		(732) 462 7400 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194	
JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991) NJ PE LIC NO. 25839	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24555	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 2089	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458 NJ PP LIC NO. 4361
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 3720	SCALE: As Shown DATE: February 2022	
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER 		L.C. 32468 DRAWN BY: RCM CHECKED BY: KEU/CJW	SHEET: 107 of 197 FILE NO.: PWB0A609.01

TC-16
TC-44



STAGE 2A CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 2A AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES

NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159006M	DRUM	117	UN
159012M	CONSTRUCTION SIGNS	9	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	372	LF

PLAN SHEET TC-16
MATCH LINE P.G.L. STA. 9+50

MATCH LINE P.G.L. STA. 15+37.66
PLAN SHEET TC-18

20' MAX.
CENTER TO CENTER TYP.



TC-17
TC-44

NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY

ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS
TRAFFIC CONTROL AND STAGING PLANS - STAGE 2A (3 OF 6)

CME
ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS

(732) 727 8000 (732) 462 7400

3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

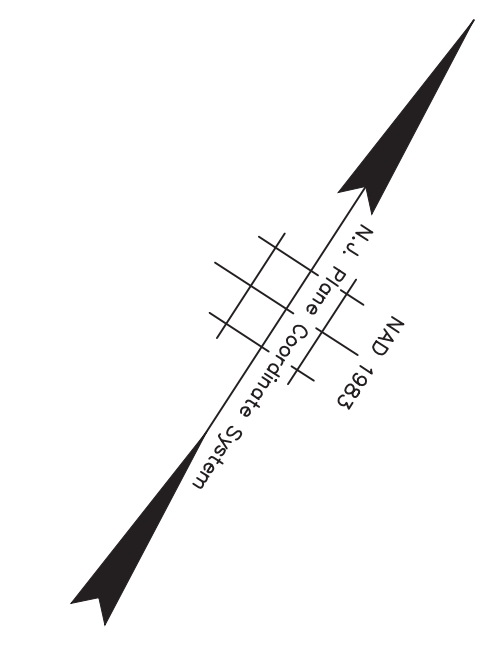
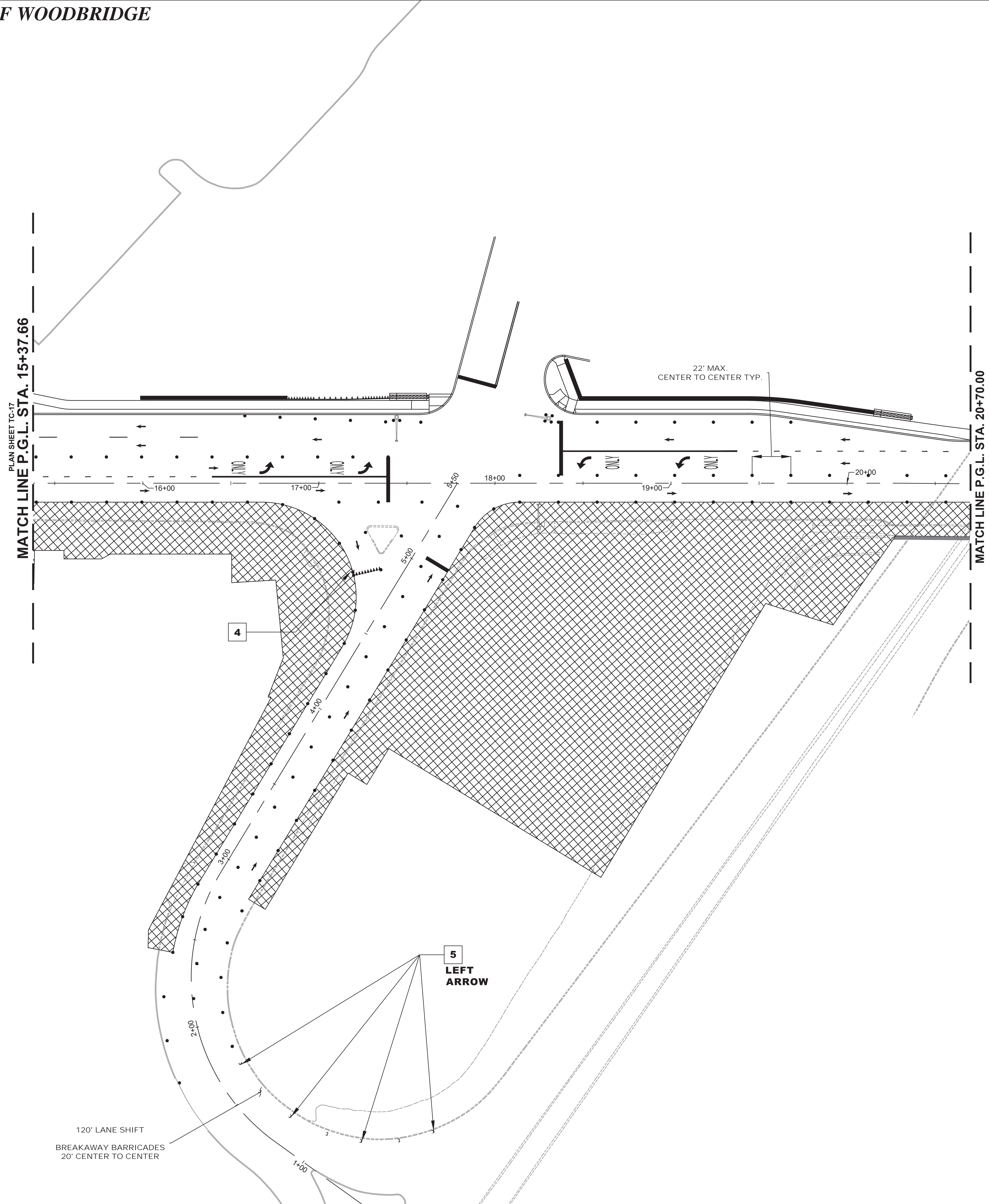
JOHN H. ALLGAIR P.E. & P.P. (1981 - 2001) NJ PE LIC NO. 25638	DAVID J. SAMUEL P.E. & P.P. NJ PP LIC NO. 2455	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 2099
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32963	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 32668 NJ PP LIC NO. 3874	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458 NJ PP LIC NO. 4361

MICHAEL J. McCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. 32468

SCALE	DATE
As Shown	February 2022
DRAWN BY RCM	DESIGNED BY RCM
CHECKED BY KEC/JCW	SHEET 108 of 197

DATE: 2/17/2022

FILE NO. PWBOA609.01



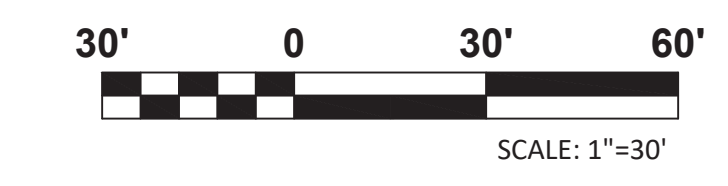
NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	7	UN
159006M	DRUM	122	UN
159012M	CONSTRUCTION SIGNS	37	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	1154	LF
159132M	TEMPORARY PAVEMENT MARKINGS	152	SF
702057M	INTERIM TRAFFIC SIGNAL SYSTEM, LOCATION NO. 2	1	LS

STAGE 2A CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL INTERIM TRAFFIC SIGNAL SYSTEM AS DESIGNED BASED ON THE EXISTING CONDITIONS ENCOUNTERED IN THE FIELD AND/OR THE CONDITIONS TO BE ENCOUNTERED IN THE SPECIFIC TRAFFIC CONTROL AND STAGING PLANS STAGE. THE INTERIM TRAFFIC SIGNAL PLAN SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER CURRENTLY LICENSED IN THE STATE OF NEW JERSEY AS RETAINED BY THE CONTRACTOR AND THE SIGNED AND SEALED PLANS SHALL BE SUBMITTED TO THE RE FOR APPROVAL.
3. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
4. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
5. PERFORM STAGE 2A AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

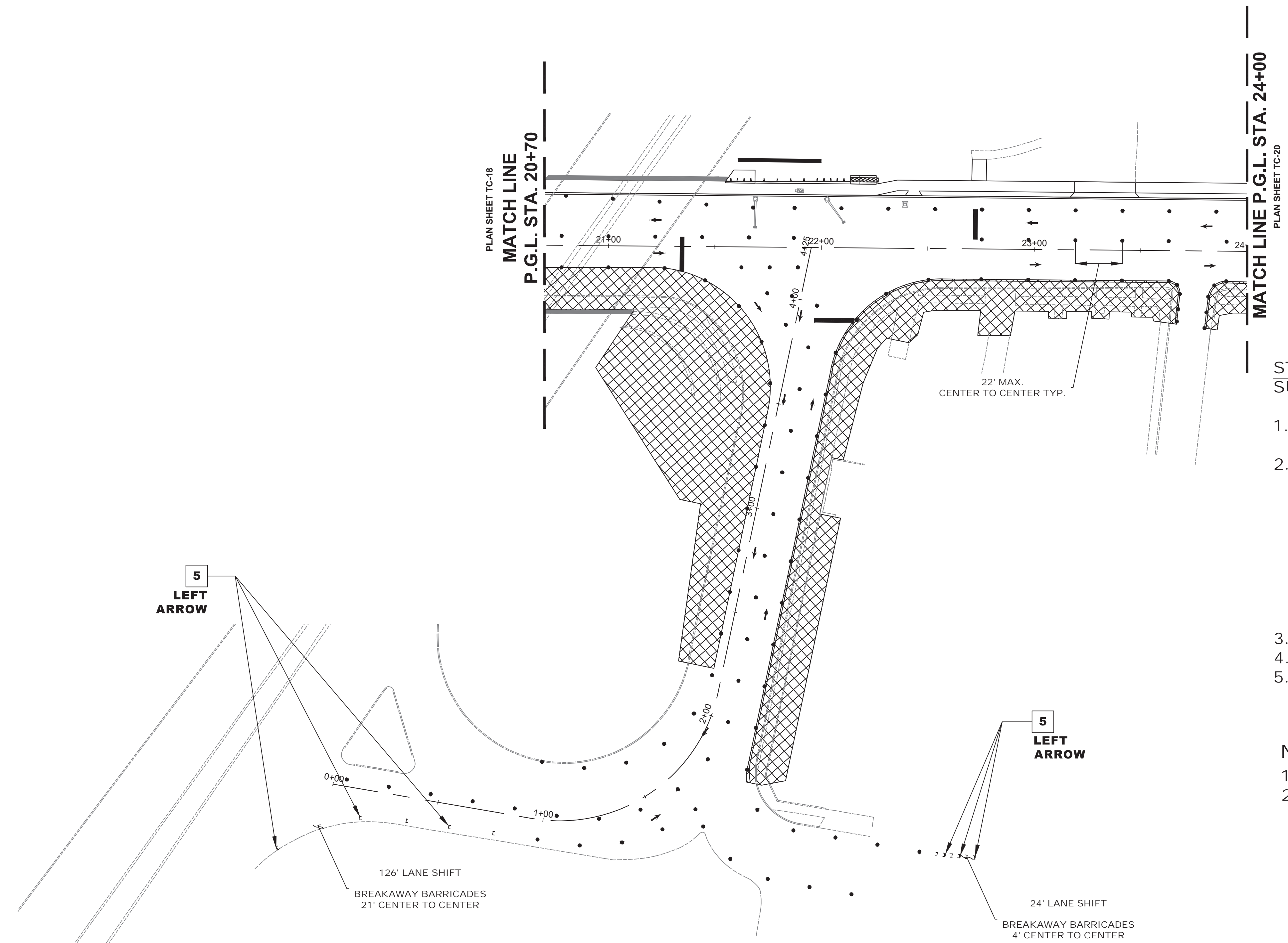
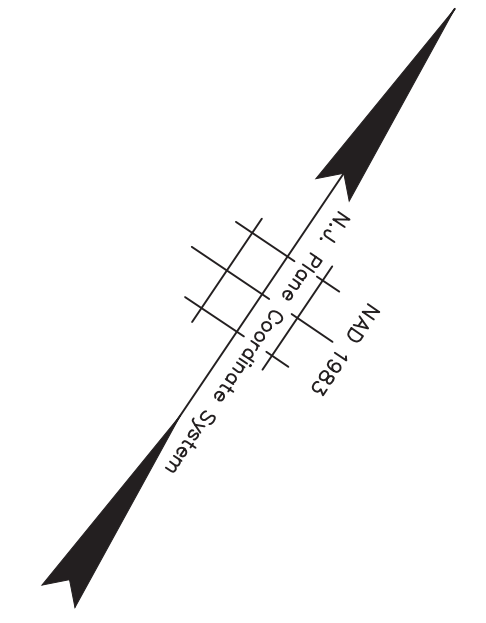
1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



TC-18
TC-44

No. DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY</p> <p>ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p> <p>TRAFFIC CONTROL AND STAGING PLANS - STAGE 2A (4 OF 6)</p>				
<p>ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p> <p>(732) 727 8000 (732) 462 7400</p> <p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>				
JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24539	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271	JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32952	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 32468
<p>MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER</p> <p>LIC. 32468</p> <p>As Shown DATE February 2022</p> <p>DRAWN BY RCM DESIGNED BY RCM</p> <p>CHECKED BY KEU/CJW SHEET 109 of 197</p> <p style="text-align: right;">DATE 2/17/2022</p>				

DRAWING NO. PWB0A609.01



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	12	UN
159006M	DRUM	125	UN
159012M	CONSTRUCTION SIGNS	48	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	294	LF
702057M	INTERIM TRAFFIC SIGNAL SYSTEM, LOCATION NO. 3	1	LS

STAGE 2A CONSTRUCTION SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL INTERIM TRAFFIC SIGNAL SYSTEM AS DESIGNED BASED ON THE EXISTING CONDITIONS ENCOUNTERED IN THE FIELD AND/OR THE CONDITIONS TO BE ENCOUNTERED IN THE SPECIFIC TRAFFIC CONTROL AND STAGING PLANS STAGE. THE INTERIM TRAFFIC SIGNAL PLAN SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER CURRENTLY LICENSED IN THE STATE OF NEW JERSEY AS RETAINED BY THE CONTRACTOR AND THE SIGNED AND SEALED PLANS SHALL BE SUBMITTED TO THE RE FOR APPROVAL.
3. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
4. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
5. PERFORM STAGE 2A AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:


1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES

5 LEFT ARROW

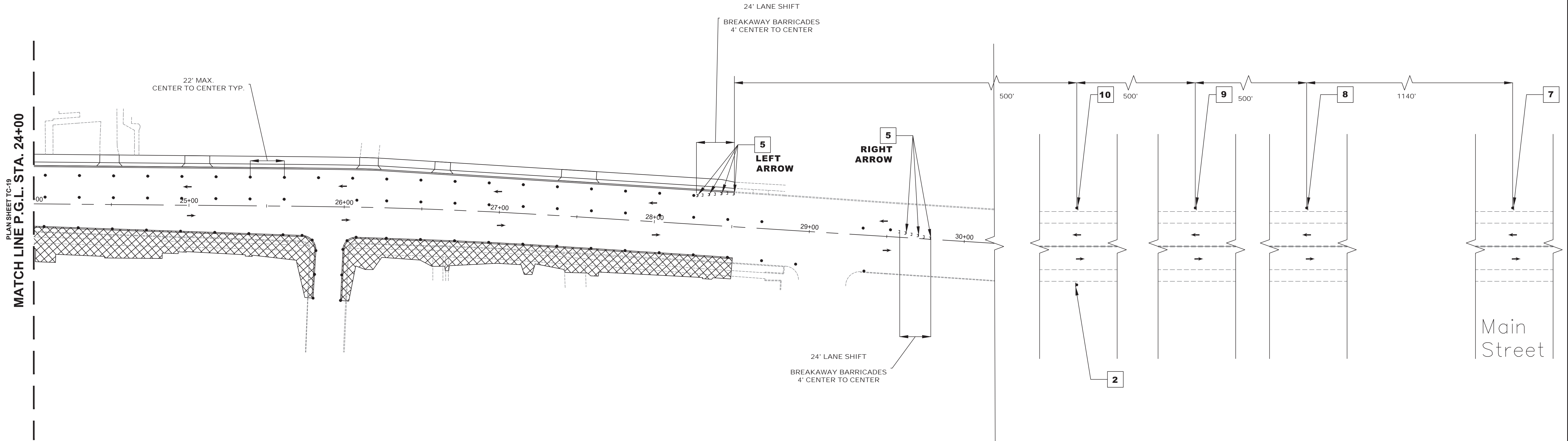
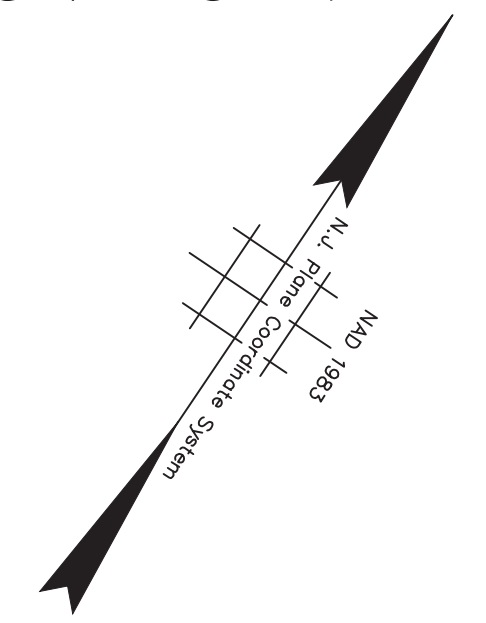
5 LEFT ARROW



TC-19
TC-44

No.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 2A (5 OF 6)					
 ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS (732) 727-8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462-7400					
JOHN H. ALLGAIER P.E. & P.P. 1993 - 2001 NJ PE LIC NO. 25838	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24855	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & L.S. LIC NO. 24271	NJ PP LIC NO. 24855	NJ PP LIC NO. 2089	NJ PP LIC NO. 4361
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	NJ PP LIC NO. 32770	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 24456	NJ PP LIC NO. 4361
MICHAEL J. MCCLELLAND P.E.			NEW JERSEY PROFESSIONAL ENGINEER		
LIC. 32468			DATE: 2/17/2022		
DRAWN BY: RCM		SCALE: As Shown		DATE: February 2022	
CHECKED BY: KEJ/UCW		DESIGNED BY: RCM		SHEET: 110 of 197	

PWB0609.01
 DRAWING NO.



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	13	UN
159006M	DRUM	75	UN
159012M	CONSTRUCTION SIGNS	130	SF

STAGE 2A CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 2A AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES




TC-20
TC-44

No.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY

ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

TRAFFIC CONTROL AND STAGING PLANS - STAGE 2A (6 OF 6)



CVE ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS

(732) 727 8000 (732) 462 7400

3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25839 NJ PP LIC NO. 2455	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 2089
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32992	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 38794 NJ PP LIC NO. 3770	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458 NJ PP LIC NO. 4361

MICHAEL J. McCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468

SCALE: As Shown DATE: February 2022

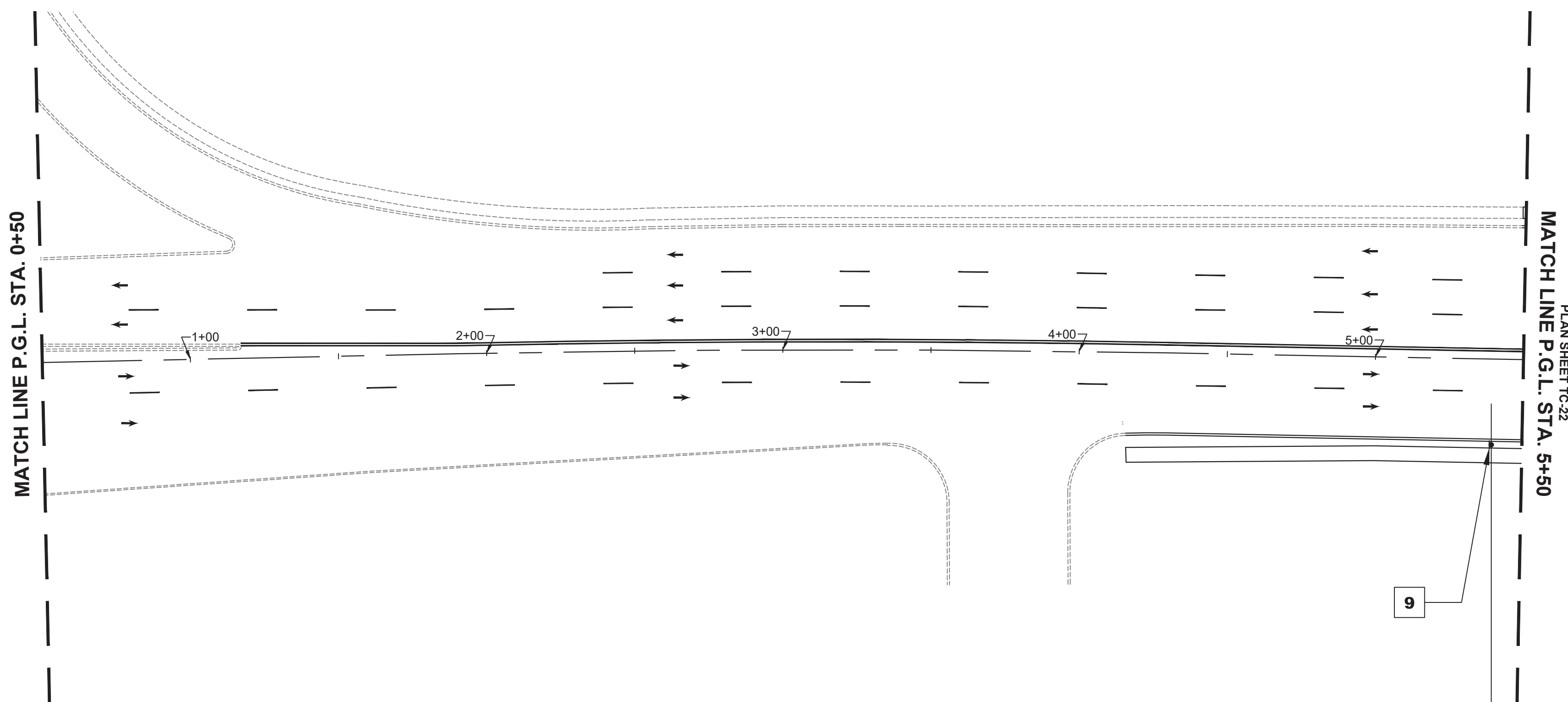
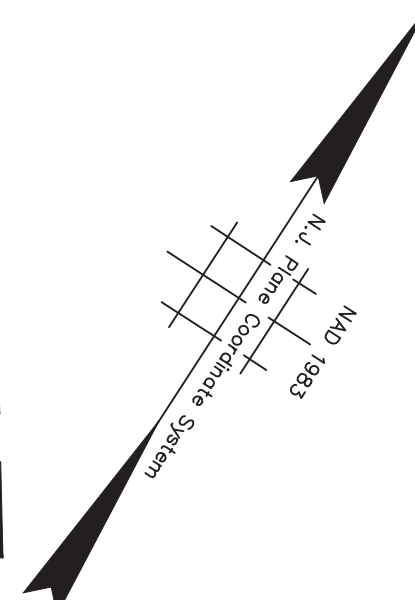
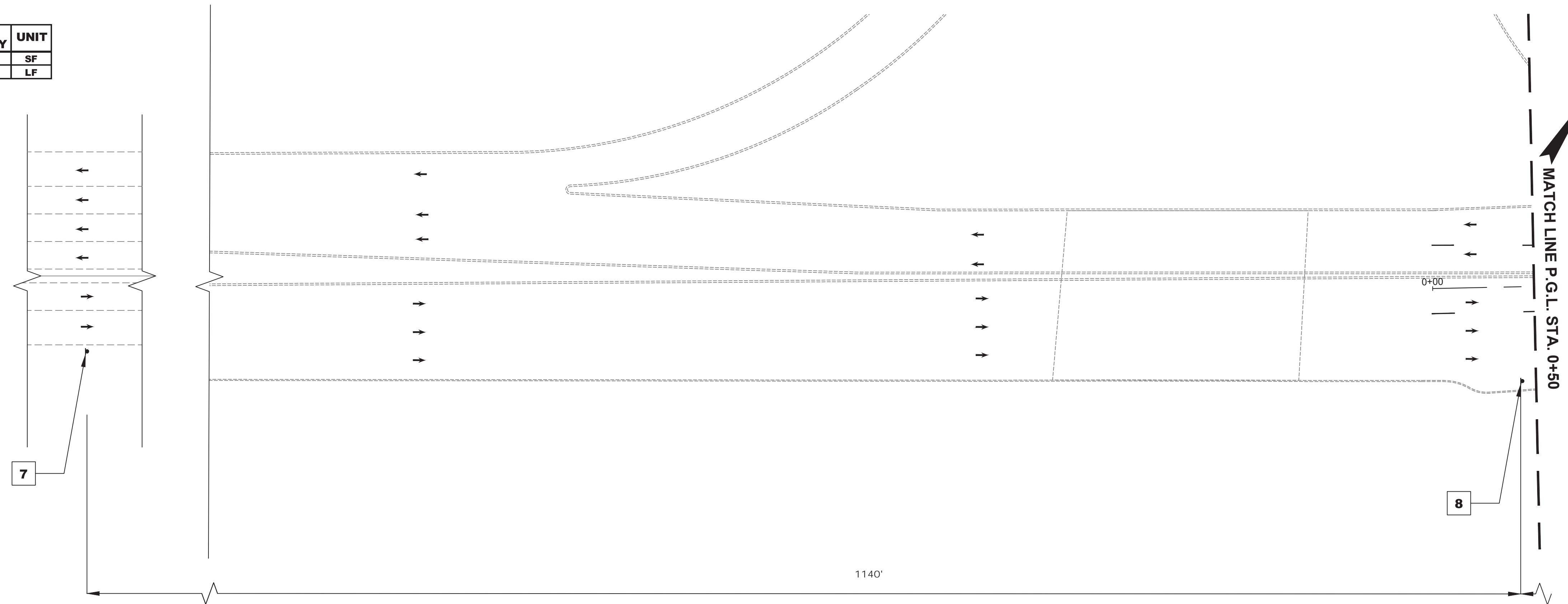
DRAWN BY: RCM DESIGNED BY: RCM

CHECKED BY: KEU/CJW SHEET: 111 of 197

DATE: 2/17/2022

FILE NO. PWB0A609.01

NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159012M	CONSTRUCTION SIGNS	48	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	1226	LF



STAGE 2B CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

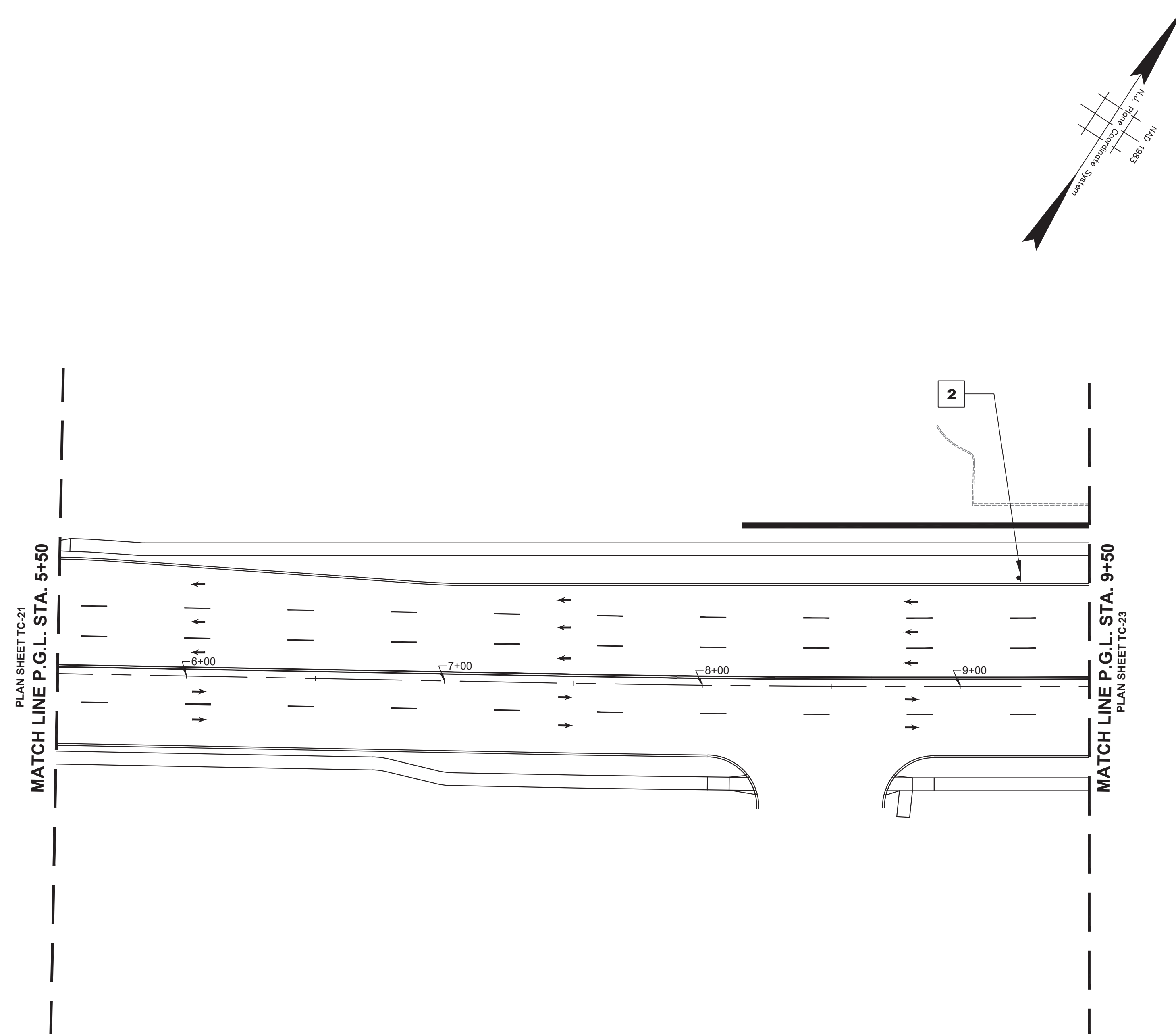
1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 2B AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



<p>TC-21 TC-44</p>			
<p>NO. DESCRIPTION OF REVISION DATE DRAWN CHECKED RELEASED</p>			
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 2B (1 OF 6)</p>			
<p>CVE ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS (732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400</p>			
<p>JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991) JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 327962 NO PP LIC NO. 38794</p>	<p>DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 258339 MICHAEL J. McCLELLAND P.E. & P.P. NO PE LIC NO. 324668 NO PP LIC NO. 37270</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NO PE & LS LIC NO. 24271 NO PP LIC NO. 20889 GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 394588 NO PP LIC NO. 43561</p>	<p>DATE February 2022</p>
<p>MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>		<p>SCALE As Shown</p>	<p>DESIGNED BY RCM</p>
<p><i>[Signature]</i></p>		<p>CHECKED BY KEC/JCW</p>	<p>SHEET 112 of 197</p>
<p>DATE 2/17/2022</p>			
<p>FILE NO. PWB0A609.01</p>			



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159012M	CONSTRUCTION SIGNS	10	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	1100	LF

STAGE 2B CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 2B AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

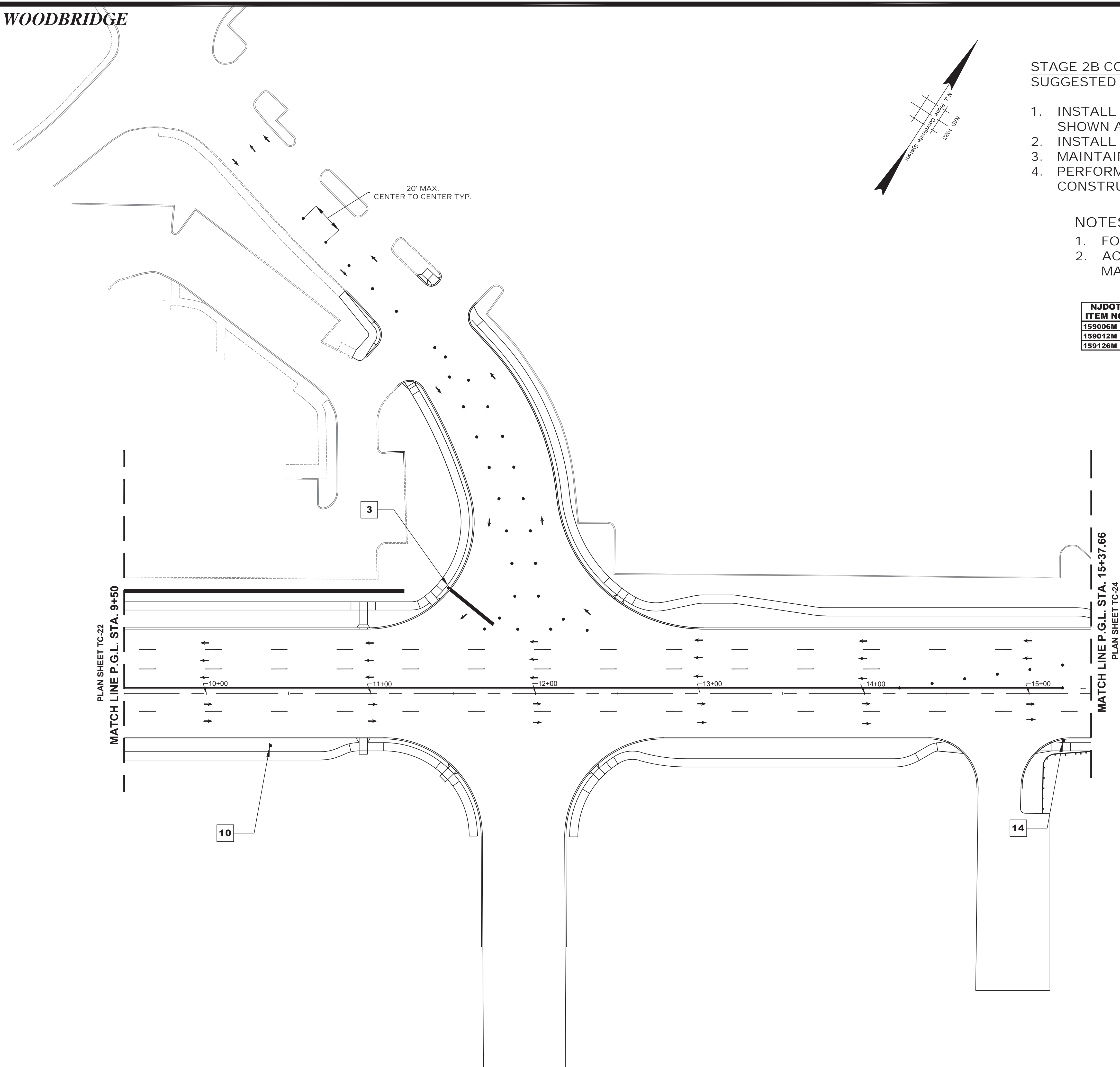
NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES

TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 2B (2 OF 6)			
(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400			
JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991) NJ PE LIC NO. 25839	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24558	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 2089	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458 NJ PP LIC NO. 4361
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 3770	SCALE: As Shown DATE: February 2022	
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468		DRAWN BY: RCM CHECKED BY: KEJCJW	SHEET: 113 of 197

TC-22
TC-44

FILE NO. PWB0A609.01



STAGE 2B CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION


1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 2B AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

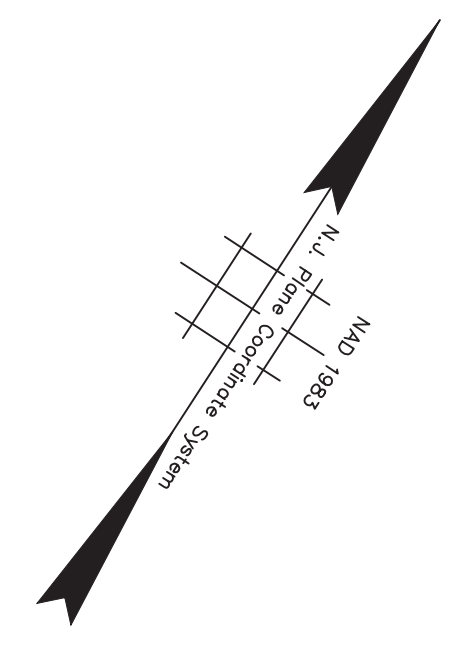
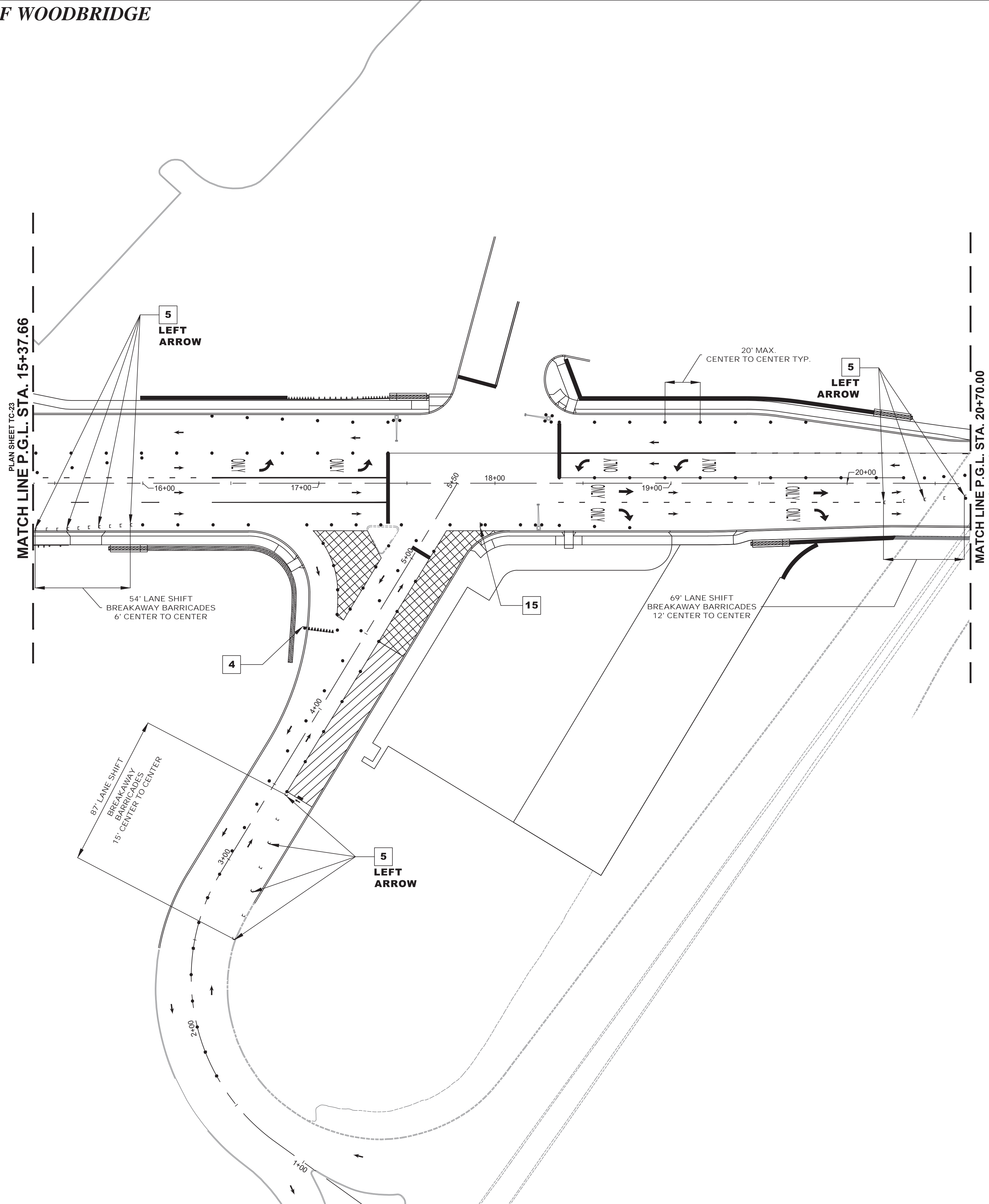
1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES

NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159006M	DRUM	36	UN
159012M	CONSTRUCTION SIGNS	45	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	1790	LF



<p>TC-23 TC-44</p>				
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 2B (3 OF 6)</p>				
 <p>ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p> <p>(732) 727-8000 (732) 462-7400</p> <p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>				
<p>JOHN H. ALLGAIER P.E. & P.P. (1993 - 2001) NO PE LIC NO. 25838</p>		<p>DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 24855</p>		<p>JOHN J. STEFANI P.E. L.S. & P.P. NO PE & L.S. LIC NO. 24271 NO PP LIC NO. 2089</p>
<p>JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32462</p>		<p>MICHAEL J. MCCLELLAND P.E. & P.P. NO PE LIC NO. 32468</p>		<p>GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 34456 NO PP LIC NO. 4361</p>
<p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>			<p>SCALE: As Shown DATE: February 2022</p> <p>DRAWN BY: RCM DESIGNED BY: RCM</p> <p>CHECKED BY: KEK/JCW SHEET: 114 of 197</p> <p>DATE: 2/17/2022</p>	

DRAWING NO. PWB0609.01



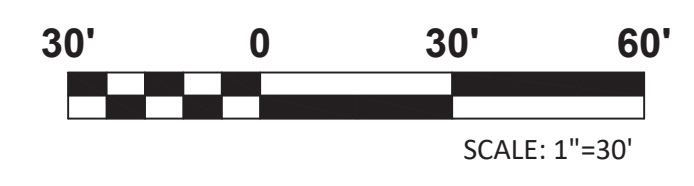
NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	22	UN
159006M	DRUM	103	UN
159012M	CONSTRUCTION SIGNS	107	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	1464	LF
159132M	TEMPORARY PAVEMENT MARKINGS	285	SF
702057M NS	INTERIM TRAFFIC SIGNAL SYSTEM, LOCATION NO. 2	1	LS

STAGE 2B CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION


1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL INTERIM TRAFFIC SIGNAL SYSTEM AS DESIGNED BASED ON THE EXISTING CONDITIONS ENCOUNTERED IN THE FIELD AND/OR THE CONDITIONS TO BE ENCOUNTERED IN THE SPECIFIC TRAFFIC CONTROL AND STAGING PLANS STAGE. THE INTERIM TRAFFIC SIGNAL PLAN SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER CURRENTLY LICENSED IN THE STATE OF NEW JERSEY AS RETAINED BY THE CONTRACTOR AND THE SIGNED AND SEALED PLANS SHALL BE SUBMITTED TO THE RE FOR APPROVAL.
3. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
4. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
5. PERFORM STAGE 2B AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES

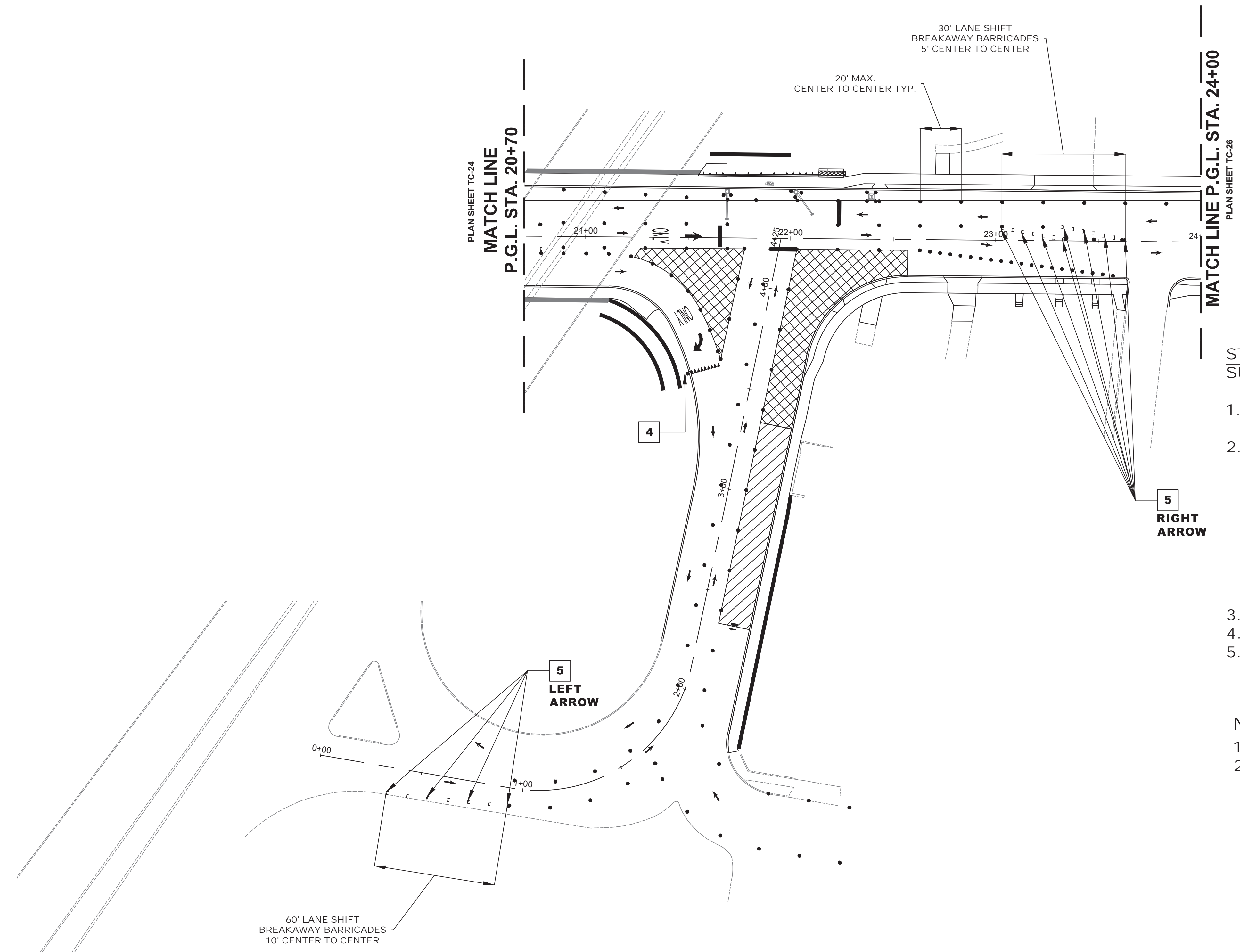
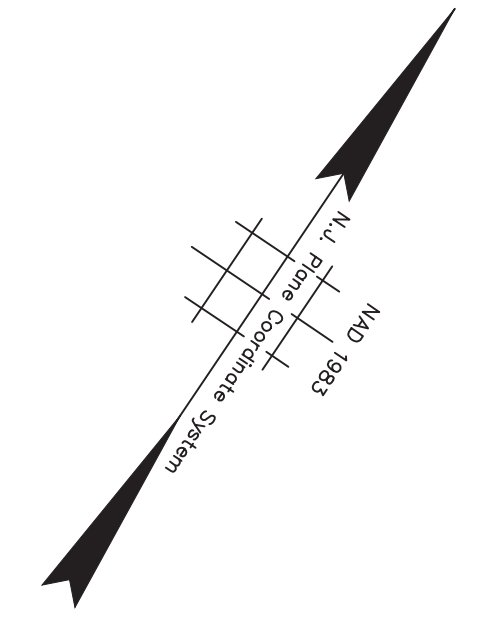


TC-24
TC-44

No. DESCRIPTION OF REVISION DATE DRAWN CHECKED RELEASED	
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 2B (4 OF 6)	
 (732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194	
JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991) J. NO. PE LIC. NO. 25039 NO. PP LIC. NO. 2455	DAVID J. SAMUEL P.E. & P.P. NO. PE LIC. NO. 24271 NO. PP LIC. NO. 2089
JAY B. CORNELL P.E. & P.P. NO. PE LIC. NO. 32962 NO. PP LIC. NO. 3874	MICHAEL J. McCLELLAND P.E. & P.P. NO. PE LIC. NO. 32468 NO. PP LIC. NO. 3720
GREGORY R. VALESI P.E. & P.P. NO. PE LIC. NO. 34458 NO. PP LIC. NO. 4361	
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER L.I.C. 32468	
As Shown DRAWN BY RCM CHECKED BY KEU/CJW	DATE February 2022 DESIGNED BY RCM SHEET 115 of 197

DATE: 2/17/2022

FILE NO. PWB0A609.01



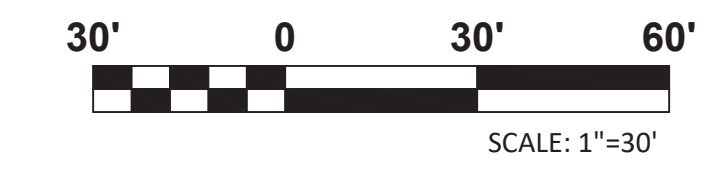
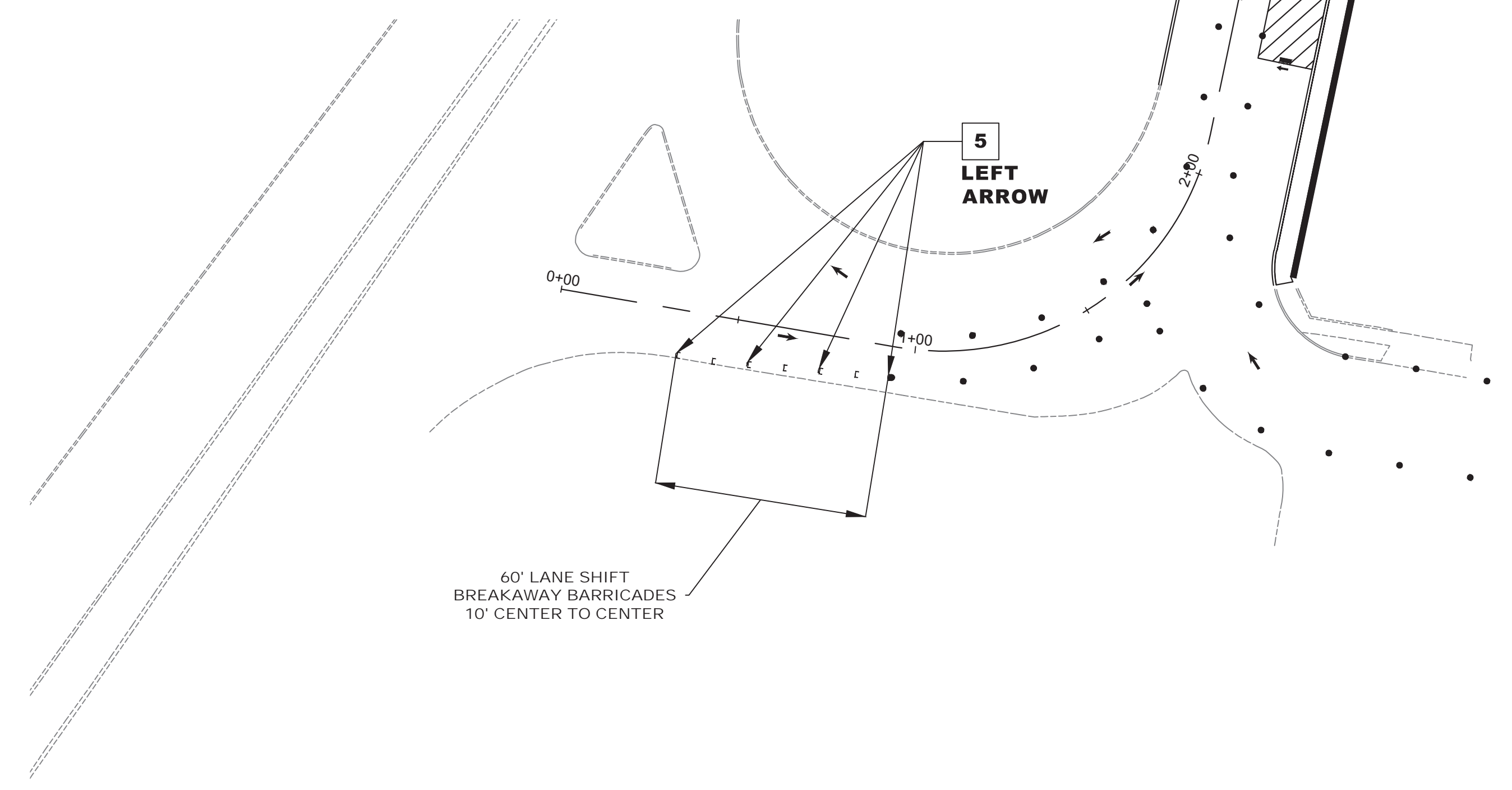
NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159006M	DRUM	103	UN
159012M	CONSTRUCTION SIGNS	107	SF
159027M	FLASHING ARROW BOARD, 4' X 8"	1	UN
159108M	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION	1	UN
159126M	TEMPORARY TRAFFIC STRIPES, 4"	1464	LF
159132M	TEMPORARY PAVEMENT MARKINGS	285	SF
702057M NS	INTERIM TRAFFIC SIGNAL SYSTEM, LOCATION NO. 3	1	LS

STAGE 2B CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL INTERIM TRAFFIC SIGNAL SYSTEM AS DESIGNED BASED ON THE EXISTING CONDITIONS ENCOUNTERED IN THE FIELD AND/OR THE CONDITIONS TO BE ENCOUNTERED IN THE SPECIFIC TRAFFIC CONTROL AND STAGING PLANS STAGE. THE INTERIM TRAFFIC SIGNAL PLAN SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER CURRENTLY LICENSED IN THE STATE OF NEW JERSEY AS RETAINED BY THE CONTRACTOR AND THE SIGNED AND SEALED PLANS SHALL BE SUBMITTED TO THE RE FOR APPROVAL.
3. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
4. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
5. PERFORM STAGE 2B AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

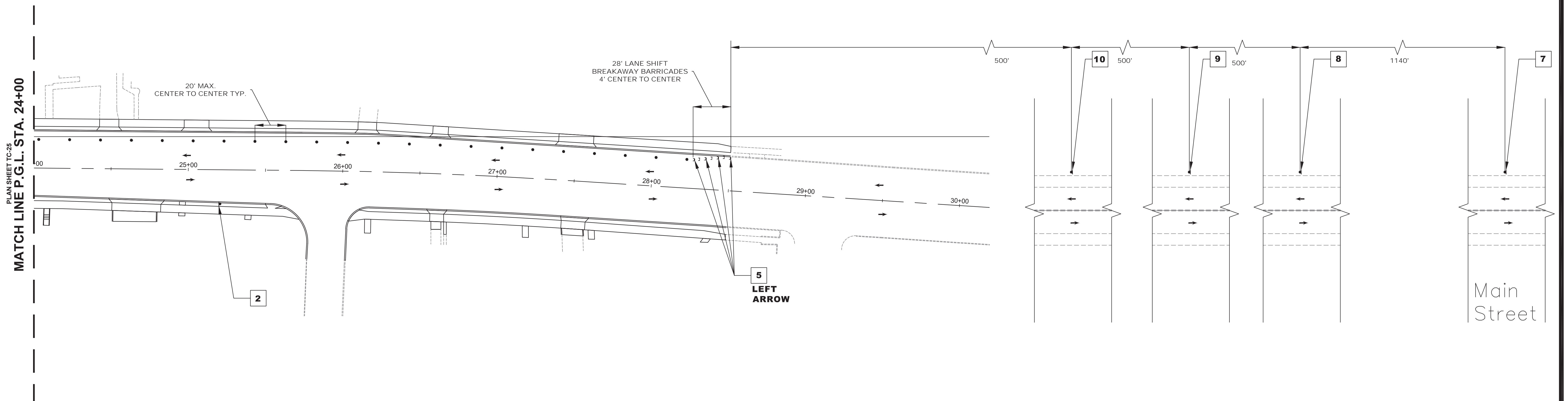
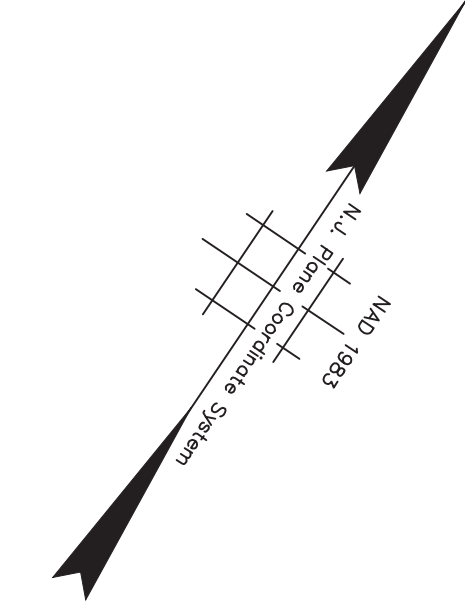
NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



<p>TC-25 TC-44</p>			
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 2B (5 OF 6)</p>			
<p>ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p> <p>(732) 727 8000 (732) 462 7400</p> <p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>			
<p>JOHN H. ALLGAIER P.E. & P.P. NJ PE LIC NO. 25838 NJ PP LIC NO. 35962</p>	<p>DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24555 NJ PP LIC NO. 38774</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 2089</p>	<p>GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 24456 NJ PP LIC NO. 4361</p>
<p>MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>		<p>SCALE: As Shown DATE: February 2022</p>	<p>DATE: 2/17/2022 SHEET: 116 of 197</p>

PWBOAG09.01



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	7	UN
159006M	DRUM	22	UN
159012M	CONSTRUCTION SIGNS	106	SF

STAGE 2B CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION


1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 2B AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES

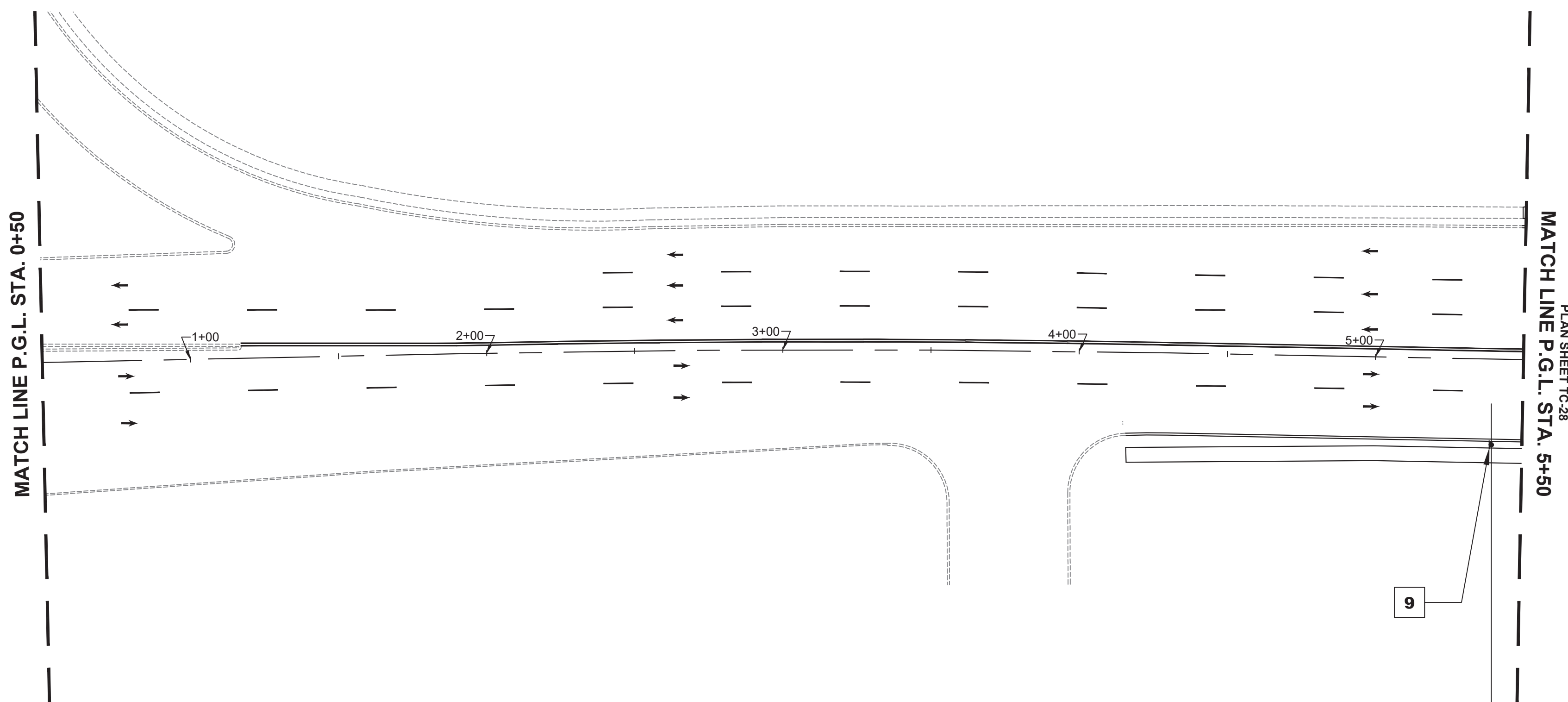
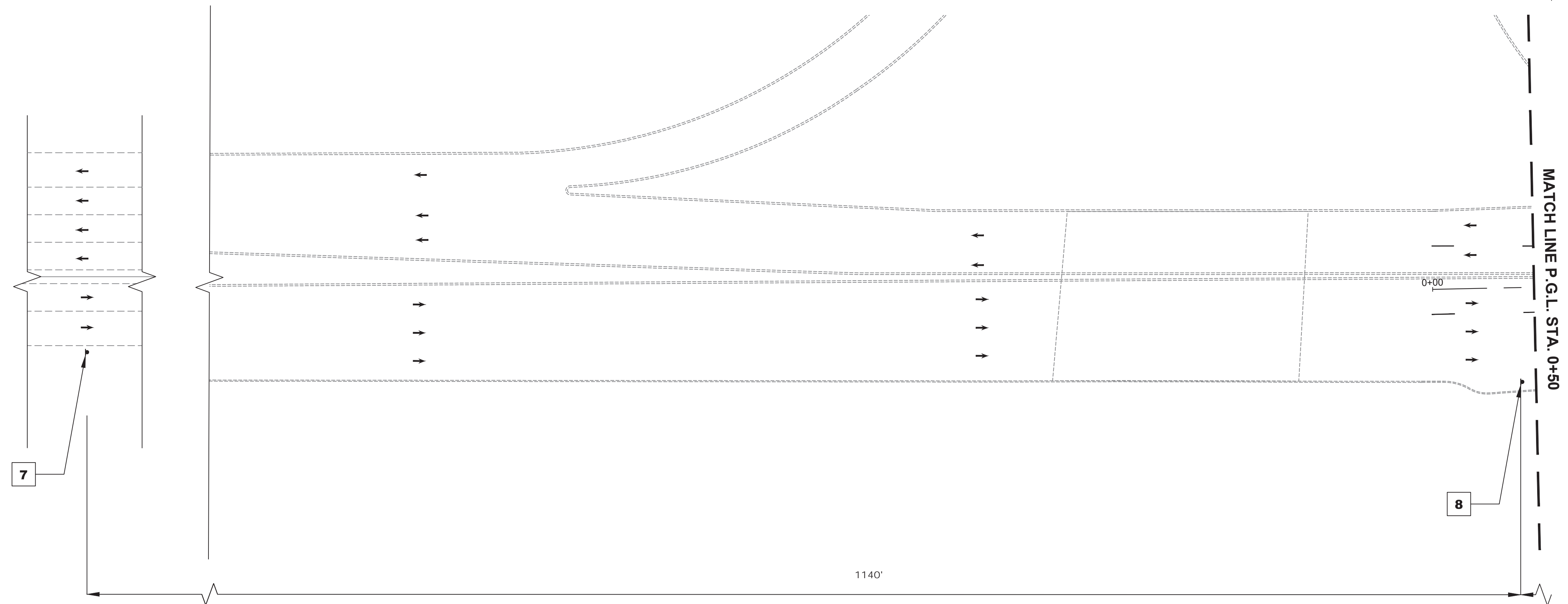
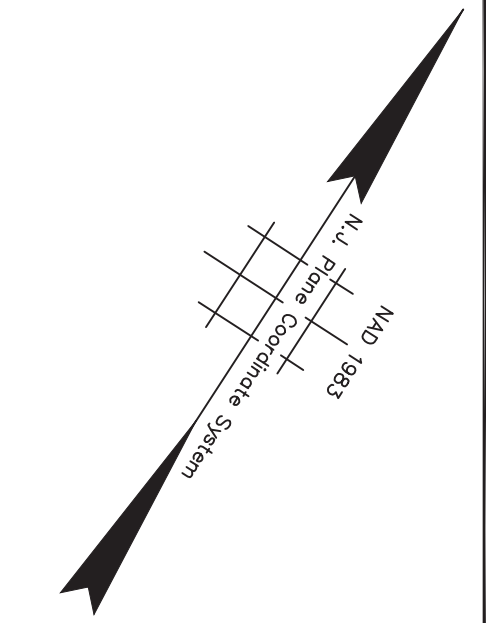


TC-26
TC-44

No.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY</p> <p>ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p> <p>TRAFFIC CONTROL AND STAGING PLANS - STAGE 2B (6 OF 6)</p>					
 <p>CVE ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p> <p>(732) 727 8000 (732) 462 7400</p> <p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>					
JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991) JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32992 NO PP LIC NO. 3874		DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 25839 NO PP LIC NO. 2455 MICHAEL J. McCLELLAND P.E. & P.P. NO PE LIC NO. 32468 NO PP LIC NO. 3770		JOHN J. STEFANI P.E. L.S. & P.P. NO PE & LS LIC NO. 24271 NO PP LIC NO. 2089 GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 34458 NO PP LIC NO. 4361	
<p>MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER</p>			<p>SCALE: As Shown DATE: February 2022</p> <p>DRAWN BY: RCM DESIGNED BY: RCM</p> <p>CHECKED BY: KEUCJW SHEET: 117 of 197</p> <p>DATE: 2/17/2022</p>		

FILE NO. PWB0609.01

NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159012M	CONSTRUCTION SIGNS	48	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	1226	LF



STAGE 2C CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

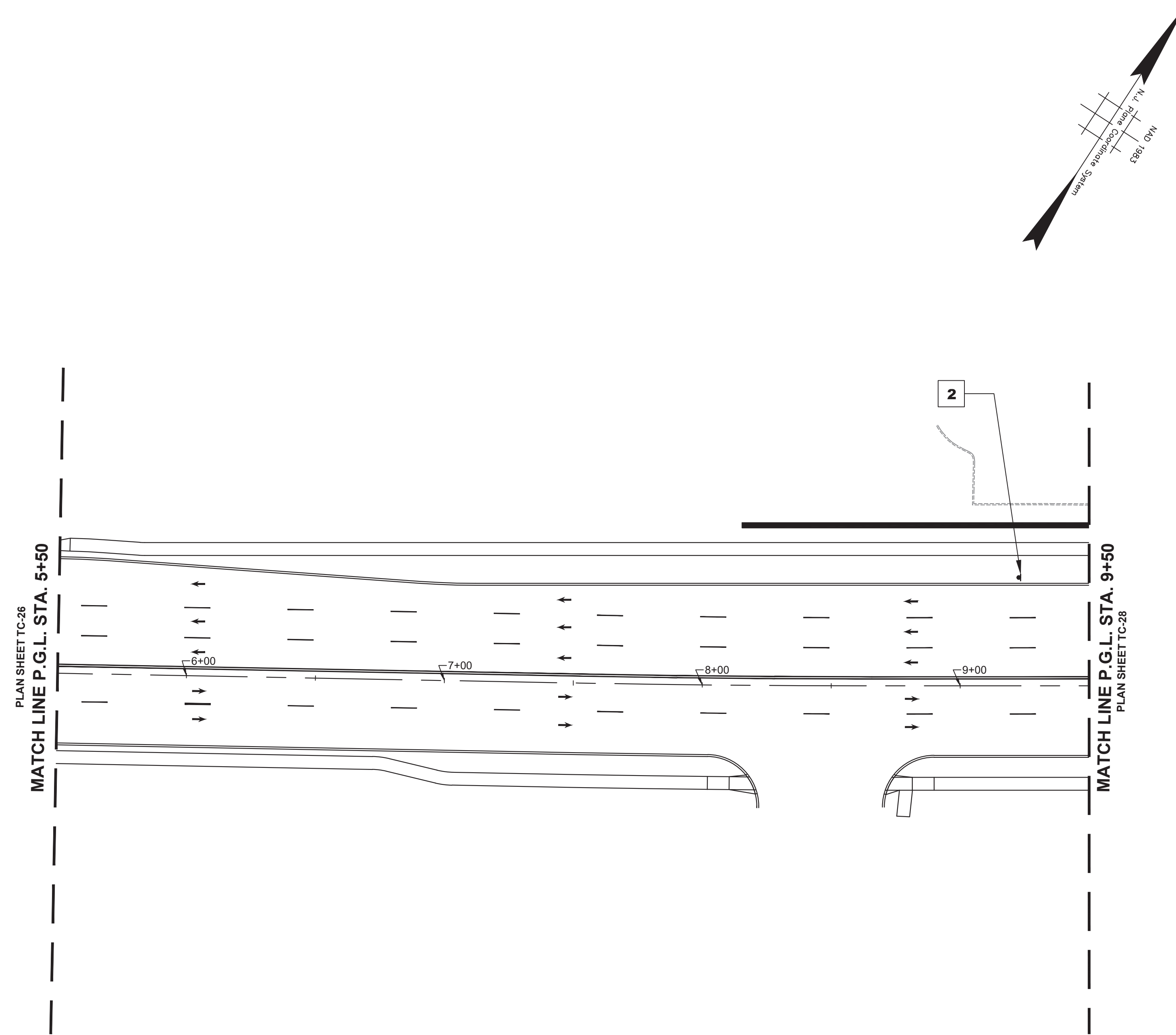
1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 2C AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



<p>TC-27 TC-44</p>			
<p>DESCRIPTION OF REVISION</p>			
DATE	DRAWN	CHECKED	RELEASED
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 2C (1 OF 6)</p>			
<p>(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>			
<p>JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991)</p>	<p>DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 25839</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NO PE & LS LIC NO. 24271</p>	<p>NO PP LIC NO. 2089</p>
<p>JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32792</p>	<p>MICHAEL J. McCLELLAND P.E. & P.P. NO PE LIC NO. 32468</p>	<p>GREGORY R. VALESII P.E. & P.P. NO PE LIC NO. 34458</p>	<p>NO PP LIC NO. 4361</p>
<p>MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER</p>		<p>As Shown</p>	<p>DATE February 2022</p>
<p>SCALE</p>		<p>DRAWN BY RCM</p>	<p>DESIGNED BY RCM</p>
<p>CHECKED BY KEC/JCW</p>		<p>SHEET 118 of 197</p>	<p>FILE NO. PWB0A609.01</p>
<p>DATE: 2/17/2022</p>			



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159012M	CONSTRUCTION SIGNS	10	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	1100	LF


STAGE 2C CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

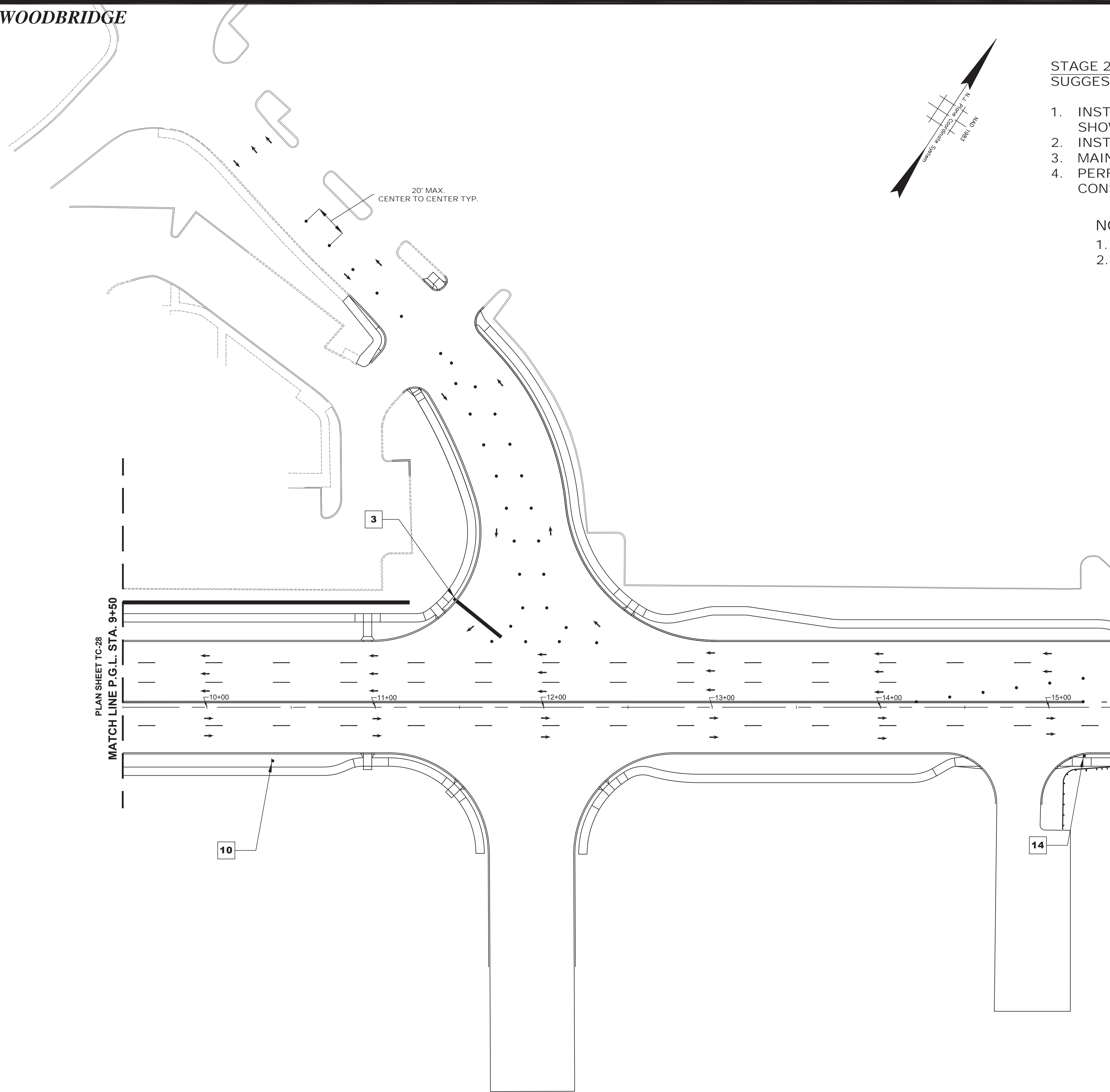
1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 2C AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



TC-28 TC-44			
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 2C (2 OF 6)			
 ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS (732) 727 8000 (732) 462 7400			
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194			
JOHN H. ALLGAIR P.E. & P.P. <small>(1983 - 1991)</small>	DAVID J. SAMUEL P.E. & P.P. <small>NY PE LIC NO. 25839</small>	JOHN J. STEFANI P.E. L.S. & P.P. <small>NY PE & LS LIC NO. 24271</small>	NY PP LIC NO. 2089
JAY B. CORNELL P.E. & P.P. <small>NY PE LIC NO. 32962</small>	MICHAEL J. McCLELLAND P.E. & P.P. <small>NY PE LIC NO. 32468</small>	GREGORY R. VALESI P.E. & P.P. <small>NY PE LIC NO. 34458</small>	NY PP LIC NO. 4361
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER <small>LIC. 32468</small>		SCALE: As Shown DATE: February 2022	DRAWN BY: RCM DESIGNED BY: RCM CHECKED BY: KEU/CJW SHEET: 119 of 197
FILE NO. PWB0A609.01			REGISTERED



STAGE 2C CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 2C AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES

NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159006M	DRUM	36	UN
159012M	CONSTRUCTION SIGNS	45	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	1790	LF

PLAN SHEET TC-28
MATCH LINE P.G.L. STA. 9+50

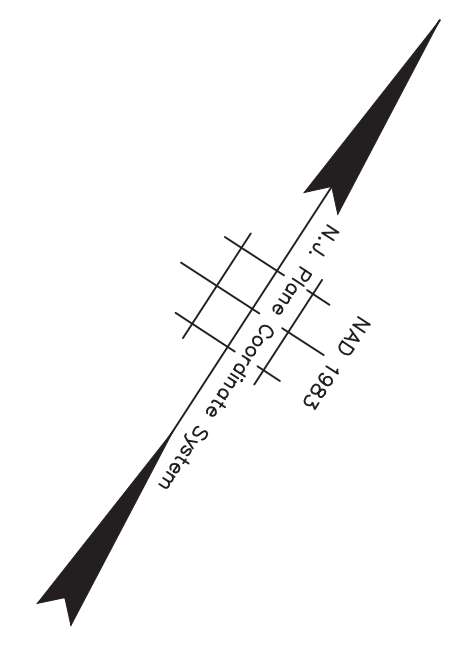
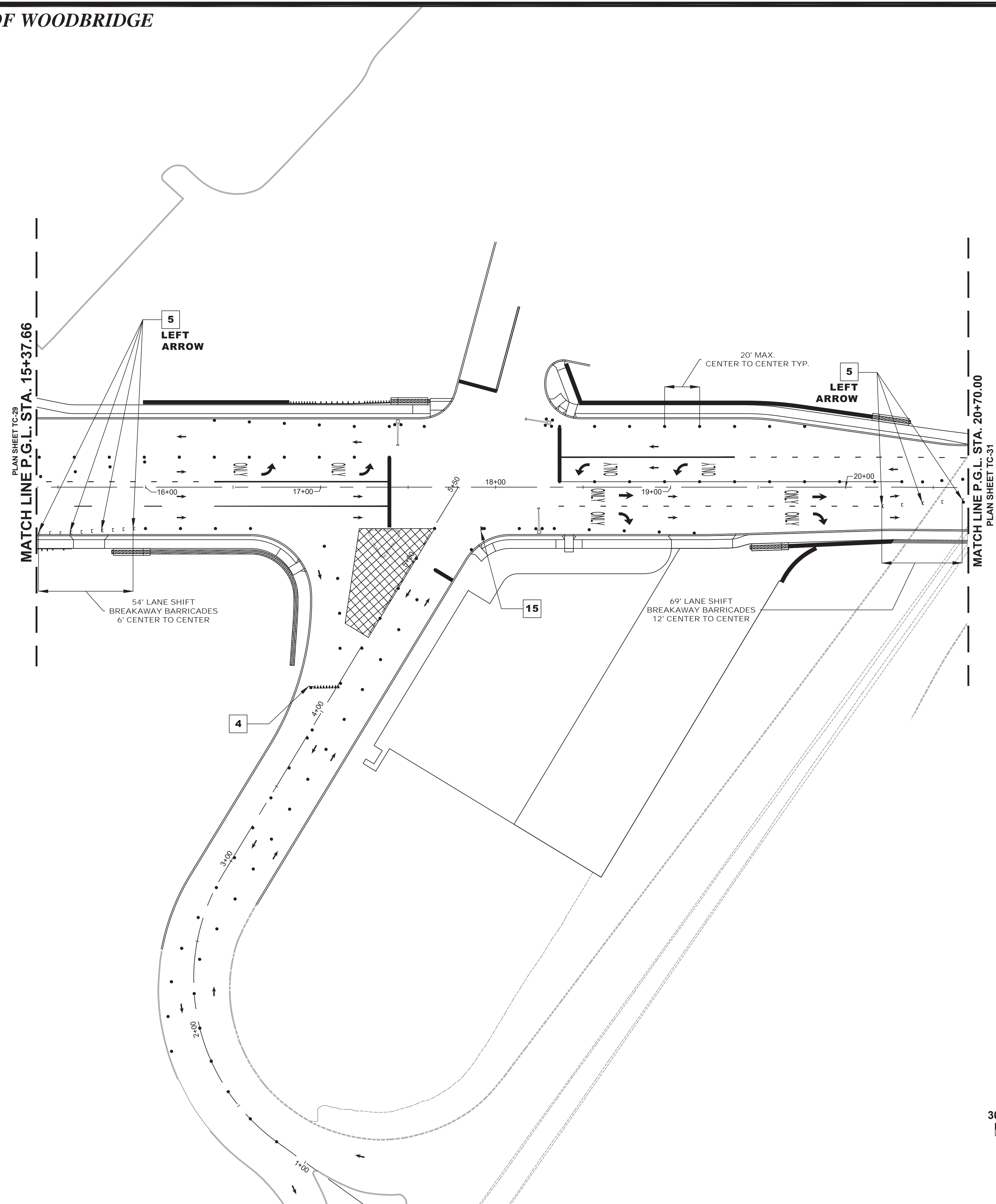
MATCH LINE P.G.L. STA. 15+37.66
PLAN SHEET TC-30



<p>NO. DESCRIPTION OF REVISION DATE DRAWN CHECKED RELEASED</p>			
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 2C (3 OF 6)</p>			
<p>ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p>			
<p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>		<p>(732) 727 8000 (732) 462 7400</p>	
<p>JOHN H. ALLGAIR P.E. & P.P. NJ PE LIC NO. 24538</p>	<p>DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 2455</p>	<p>JOHN J. STEFANI P.E., L.S., & P.P. NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 2089</p>	<p>GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458 NJ PP LIC NO. 4361</p>
<p>JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962</p>	<p>MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 3770</p>	<p>SCALE: As Shown DATE: February 2022</p>	
<p>MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>		<p>DESIGNED BY: RCM DRAWN BY: RCM CHECKED BY: KEC/JCW</p>	<p>SHEET: 120 of 197</p>
<p>DATE: 2/17/2022</p>			

TC-29
TC-44

FILE NO. PWB0A609.01



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	15	UN
159006M	DRUM	113	UN
159012M	CONSTRUCTION SIGNS	86	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	1355	LF
159132M	TEMPORARY PAVEMENT MARKINGS	292	SF
702057M NS	INTERIM TRAFFIC SIGNAL SYSTEM, LOCATION NO. 2	1	LS

STAGE 2C CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION



1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL INTERIM TRAFFIC SIGNAL SYSTEM AS DESIGNED BASED ON THE EXISTING CONDITIONS ENCOUNTERED IN THE FIELD AND/OR THE CONDITIONS TO BE ENCOUNTERED IN THE SPECIFIC TRAFFIC CONTROL AND STAGING PLANS STAGE. THE INTERIM TRAFFIC SIGNAL PLAN SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER CURRENTLY LICENSED IN THE STATE OF NEW JERSEY AS RETAINED BY THE CONTRACTOR AND THE SIGNED AND SEALED PLANS SHALL BE SUBMITTED TO THE RE FOR APPROVAL.
3. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
4. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
5. PERFORM STAGE 2C AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

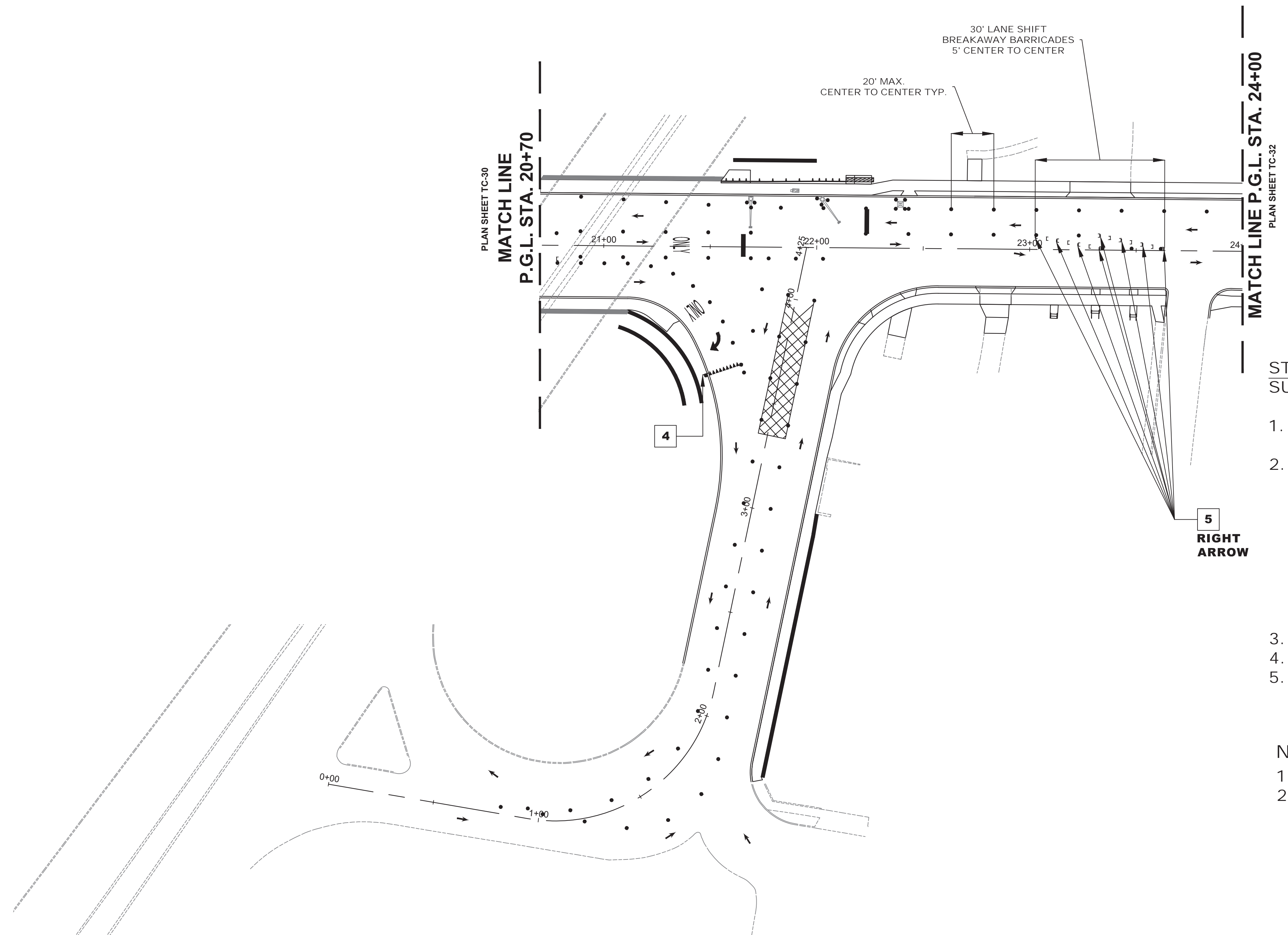
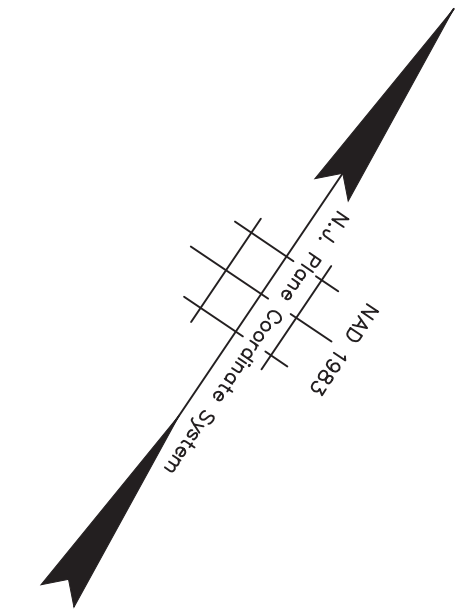
NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



TC-30
TC-44

No.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 2C (4 OF 6)					
 ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS (732) 727 8000 (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194					
JOHN H. ALLGAIR P.E. & P.P. <small>(1983 - 2001)</small> JAY B. CORNELL P.E. & P.P. <small>(1983 - 2001)</small>		DAVID J. SAMUEL P.E. & P.P. <small>(1983 - 2001)</small> MICHAEL J. McCLELLAND P.E. & P.P. <small>(1983 - 2001)</small>		JOHN J. STEFANI P.E. L.S. & P.P. <small>(1983 - 2001)</small> GREGORY R. VALESI P.E. & P.P. <small>(1983 - 2001)</small>	
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER 		As Shown February 2022 RCM RCM		DATE February 2022 SHEET 121 of 197	
SCALE: 1"=30' LIC. 32468		DATE: 2/17/2022		FILE NO. PWB0609.01	



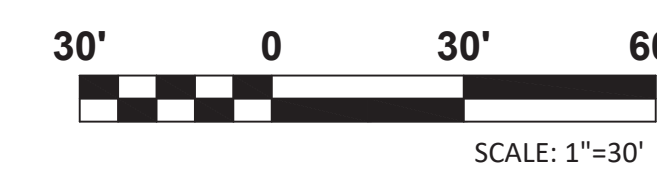
NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	7	UN
159006M	DRUM	22	UN
159012M	CONSTRUCTION SIGNS	42	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	261	LF
159132M	TEMPORARY PAVEMENT MARKINGS	77	SF
702057M NS	INTERIM TRAFFIC SIGNAL SYSTEM, LOCATION NO. 3	1	LS

STAGE 2C CONSTRUCTION SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL INTERIM TRAFFIC SIGNAL SYSTEM AS DESIGNED BASED ON THE EXISTING CONDITIONS ENCOUNTERED IN THE FIELD AND/OR THE CONDITIONS TO BE ENCOUNTERED IN THE SPECIFIC TRAFFIC CONTROL AND STAGING PLANS STAGE. THE INTERIM TRAFFIC SIGNAL PLAN SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER CURRENTLY LICENSED IN THE STATE OF NEW JERSEY AS RETAINED BY THE CONTRACTOR AND THE SIGNED AND SEALED PLANS SHALL BE SUBMITTED TO THE RE FOR APPROVAL.
3. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
4. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
5. PERFORM STAGE 2C AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

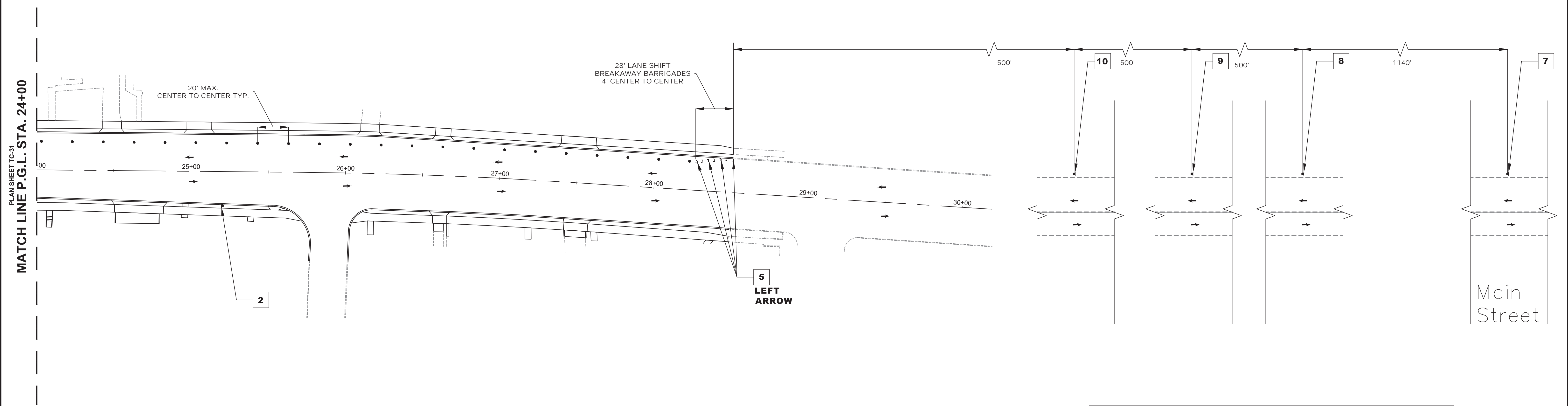
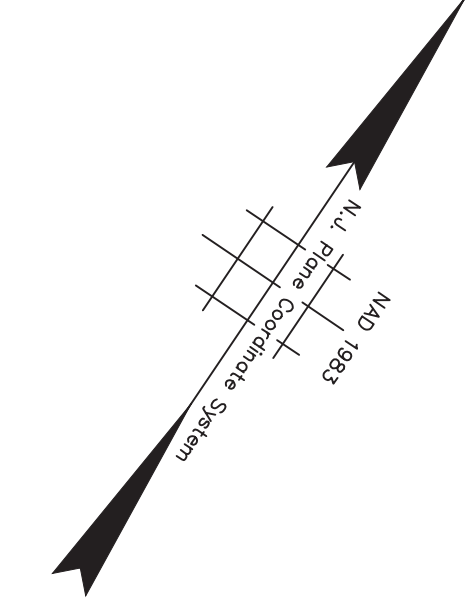
NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 2C (5 OF 6)			
(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194			
JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991) JAY B. CORNELL P.E. & P.P. NJ P.E. LIC. NO. 32952	DAVID J. SAMUEL P.E. & P.P. NJ P.E. LIC. NO. 2455 MICHAEL J. McCLELLAND P.E. & P.P. NJ P.E. LIC. NO. 38794	JOHN J. STEFANI P.E. L.S. & P.P. NJ P.E. & L.S. LIC. NO. 24271 NJ P.P. LIC. NO. 2089 GREGORY R. VALESI P.E. & P.P. NJ P.E. LIC. NO. 39458 NJ P.P. LIC. NO. 4361	DATE February 2022 DRAWN BY RCM CHECKED BY KEU/CJW
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468			SCALE As Shown DATE February 2022 SHEET 122 of 197

TC-31
 TC-44
 DRAWING NO.
 PWB0A609.01



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	7	UN
159006M	DRUM	22	UN
159012M	CONSTRUCTION SIGNS	106	SF

STAGE 2C CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 2C AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES




TC-32
TC-44

No.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY

ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

TRAFFIC CONTROL AND STAGING PLANS - STAGE 2C (6 OF 6)



OVE ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS

(732) 727 8000 (732) 462 7400

3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

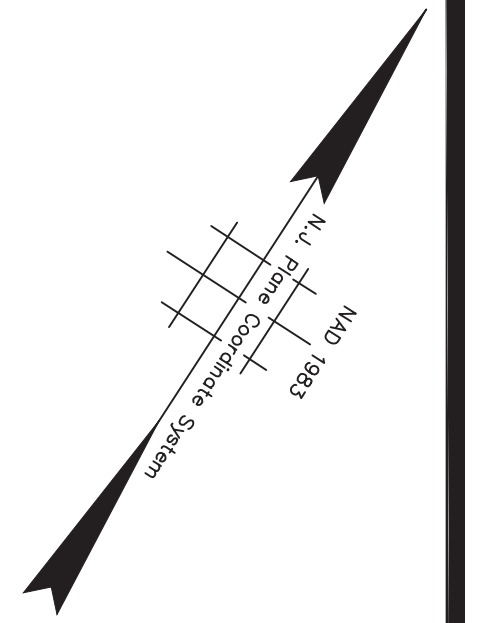
JOHN H. ALLGAIER P.E. & P.P. <small>(1983 - 1991)</small>	DAVID J. SAMUEL P.E. & P.P. <small>NO PE LIC NO. 25839</small>	JOHN J. STEFANI P.E., L.S. & P.P. <small>NO PE & LS LIC NO. 24271</small>
JAY B. CORNELL P.E. & P.P. <small>NO PE LIC NO. 32992</small>	MICHAEL J. McCLELLAND P.E. & P.P. <small>NO PE LIC NO. 38774</small>	GREGORY R. VALESI P.E. & P.P. <small>NO PE LIC NO. 39458</small>

MICHAEL J. McCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. 32468

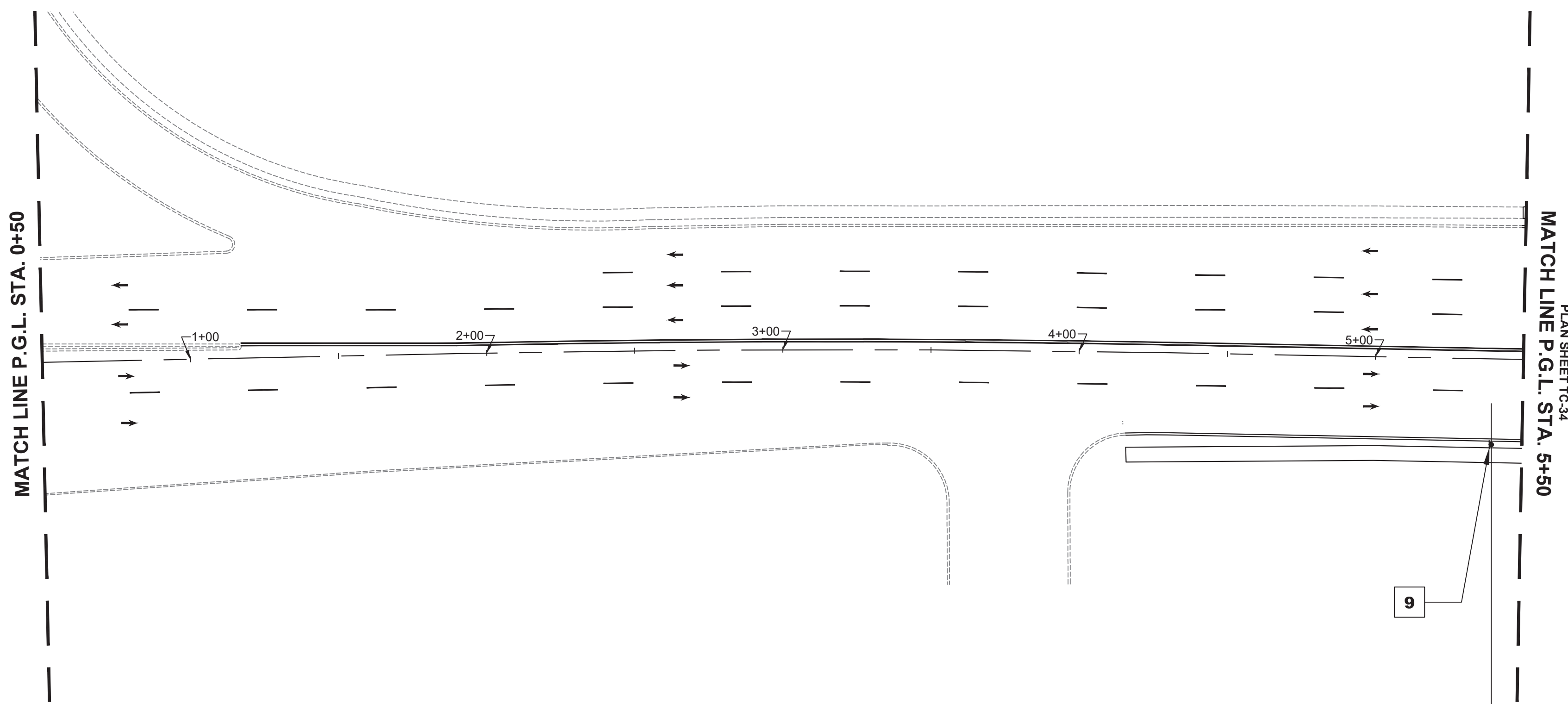
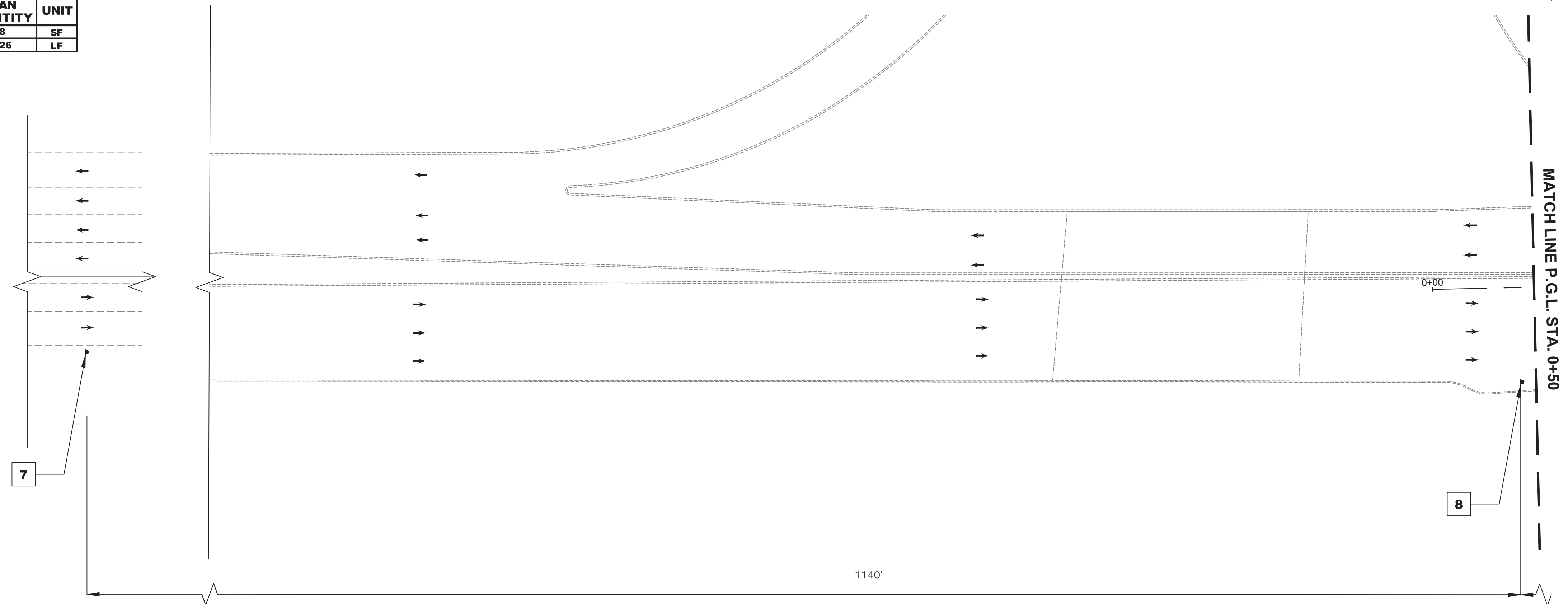
DATE: 2/17/2022

SCALE: As Shown	DATE: February 2022
DRAWN BY: RCM	DESIGNED BY: RCM
CHECKED BY: KEU/CJW	SHEET: 123 of 197

DRAWING NO. PWB0609.01



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159012M	CONSTRUCTION SIGNS	48	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	1226	LF

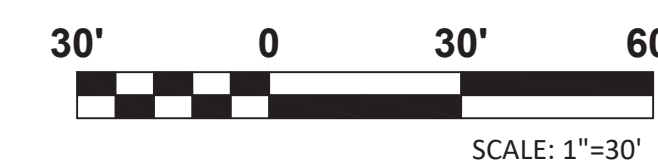


STAGE 2D CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

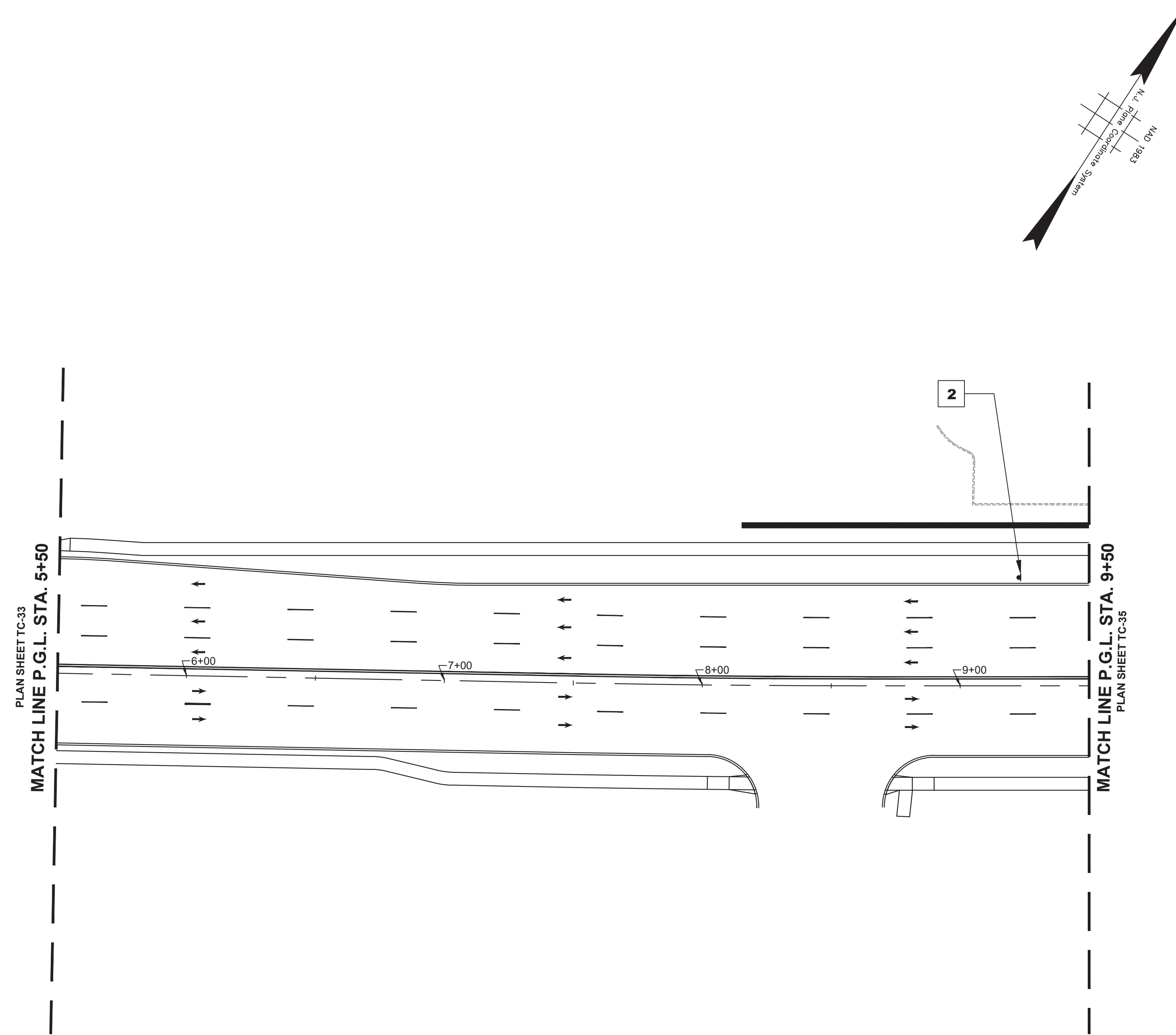
1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 2D AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



<p>TC-33 TC-44</p>			
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 2D (1 OF 6)</p>			
<p>(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400</p>			
<p>JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991)</p>	<p>DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 25839</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NO PE & LS LIC NO. 24271</p>	<p>REGISTRATION NO.</p>
<p>JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32792</p>	<p>MICHAEL J. McCLELLAND P.E. & P.P. NO PE LIC NO. 32468</p>	<p>GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 34458</p>	<p>DATE</p>
<p>MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER</p>			<p>SCALE As Shown</p>
<p>DESIGNED BY RCM</p>			<p>DATE February 2022</p>
<p>CHECKED BY KEC/JCW</p>			<p>DESIGNED BY RCM</p>
<p>DATE 2/17/2022</p>			<p>CHECKED BY RCM</p>
<p>FILE NO. PWB0A609.01</p>			<p>SHEET 124 of 197</p>



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159012M	CONSTRUCTION SIGNS	10	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	1100	LF


STAGE 2D CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

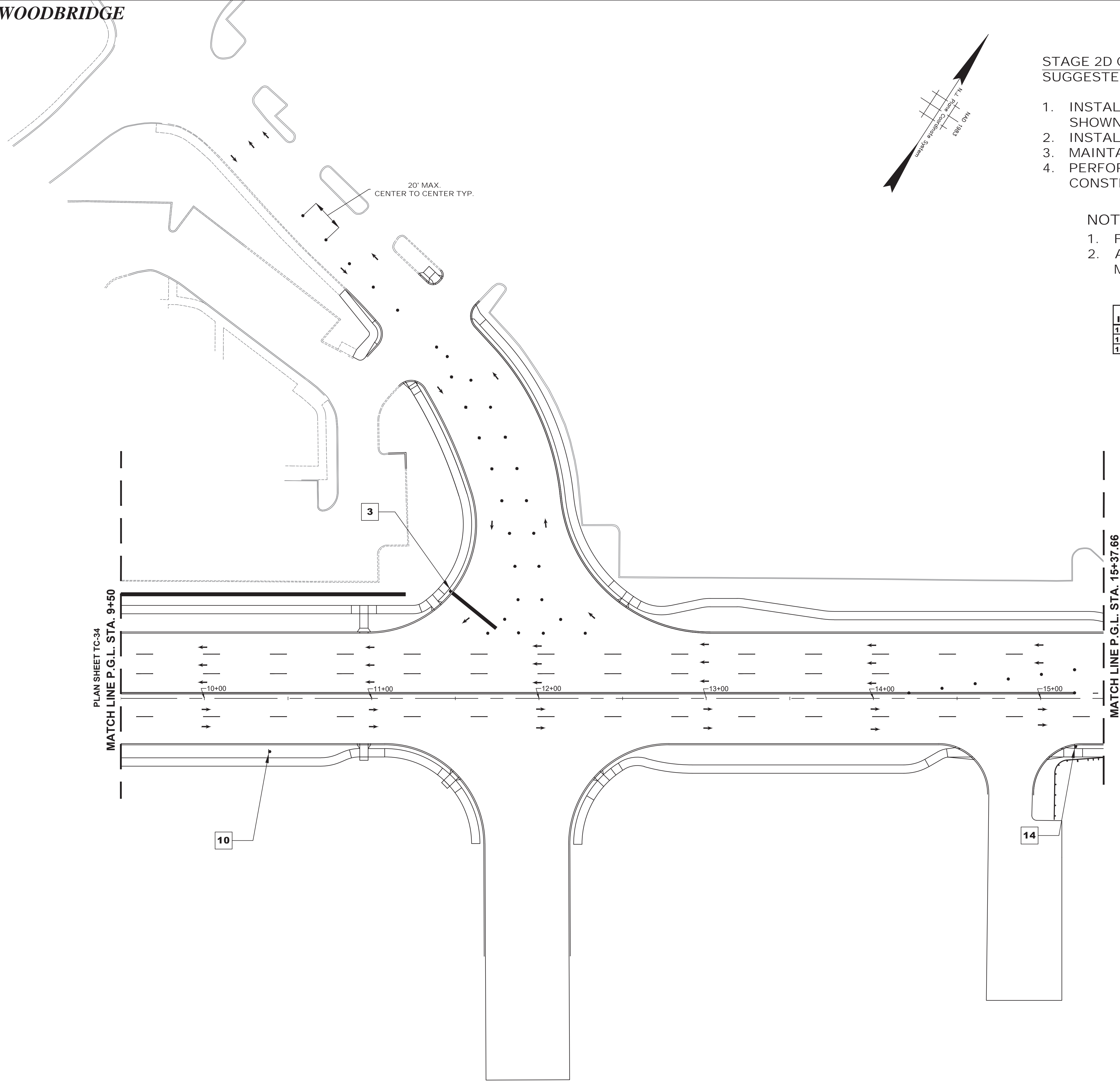
1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 2D AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 2D (2 OF 6)			
 ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS (732) 727 8000 (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194			
JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991) JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 329962 MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 324668 MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 324668	DAVID J. SAMUEL P.E. & P.P. NJ PP LIC NO. 245339 MICHAEL J. MCCLELLAND P.E. & P.P. NJ PP LIC NO. 324668 GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 344548 SCALE As Shown L.C. 324668	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 242711 GREGORY R. VALESI P.E. & P.P. NJ PP LIC NO. 43561 DATE February 2022 DRAWN BY RCM CHECKED BY KEU/CJW	No. DESCRIPTION OF REVISION DATE DRAWN CHECKED RELEASED FILE NO. PWB0A609.01 SHEET 125 of 197



STAGE 2D CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 2D AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:


1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES

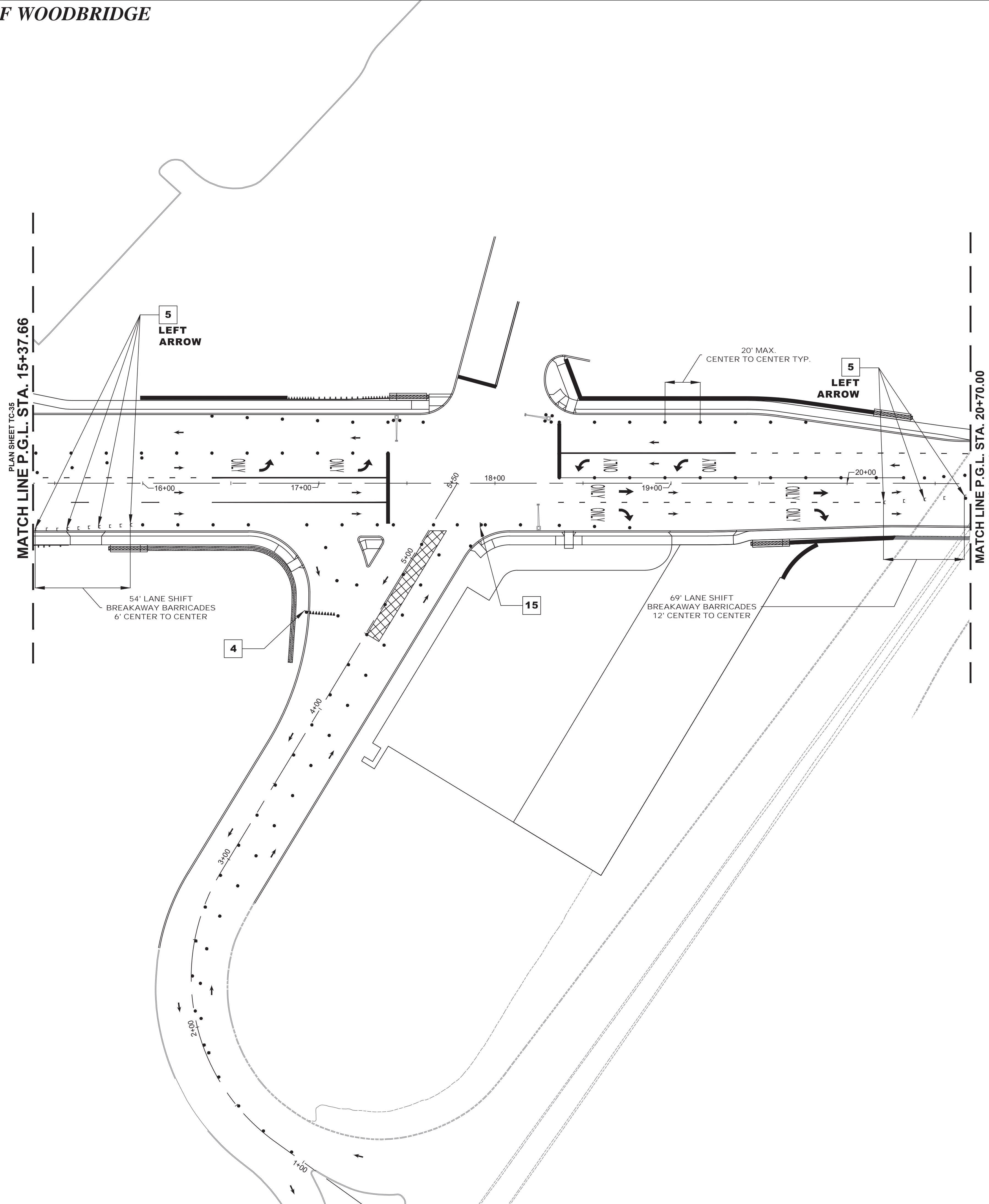
NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159006M	DRUM	36	UN
159012M	CONSTRUCTION SIGNS	45	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	1790	LF

PLAN SHEET TC-34
MATCH LINE P.G.L. STA. 9+50

MATCH LINE P.G.L. STA. 15+37.66
PLAN SHEET TC-36



<p>TC-35 TC-44</p>			
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 2D (3 OF 6)</p>			
 <p>ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p>			
<p>(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400</p>			
<p>JOHN H. ALLGAIER P.E. & P.P. NJ PE LIC NO. 25838 (1993 - 2021)</p>		<p>DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 2455 NJ PE & LS LIC NO. 24271</p>	
<p>JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32062 NJ PP LIC NO. 3874</p>		<p>MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 3770</p>	
<p>MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>		<p>GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458 NJ PP LIC NO. 4361</p>	
<p>SCALE: As Shown</p>		<p>DATE: February 2022</p>	
<p>DRAWN BY: RCM</p>		<p>DESIGNED BY: RCM</p>	
<p>CHECKED BY: KEJCJW</p>		<p>SHEET: 126 of 197</p>	
<p>DATE: 2/17/2022</p>			
<p>FILE NO.: PWBOA609.01</p>			



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	15	UN
159006M	DRUM	109	UN
159012M	CONSTRUCTION SIGNS	75	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	1285	LF
159132M	TEMPORARY PAVEMENT MARKINGS	292	SF
702057M NS	INTERIM TRAFFIC SIGNAL SYSTEM, LOCATION NO. 2	1	LS

STAGE 2D CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION


1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL INTERIM TRAFFIC SIGNAL SYSTEM AS DESIGNED BASED ON THE EXISTING CONDITIONS ENCOUNTERED IN THE FIELD AND/OR THE CONDITIONS TO BE ENCOUNTERED IN THE SPECIFIC TRAFFIC CONTROL AND STAGING PLANS STAGE. THE INTERIM TRAFFIC SIGNAL PLAN SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER CURRENTLY LICENSED IN THE STATE OF NEW JERSEY AS RETAINED BY THE CONTRACTOR AND THE SIGNED AND SEALED PLANS SHALL BE SUBMITTED TO THE RE FOR APPROVAL.
3. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
4. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
5. PERFORM STAGE 2D AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

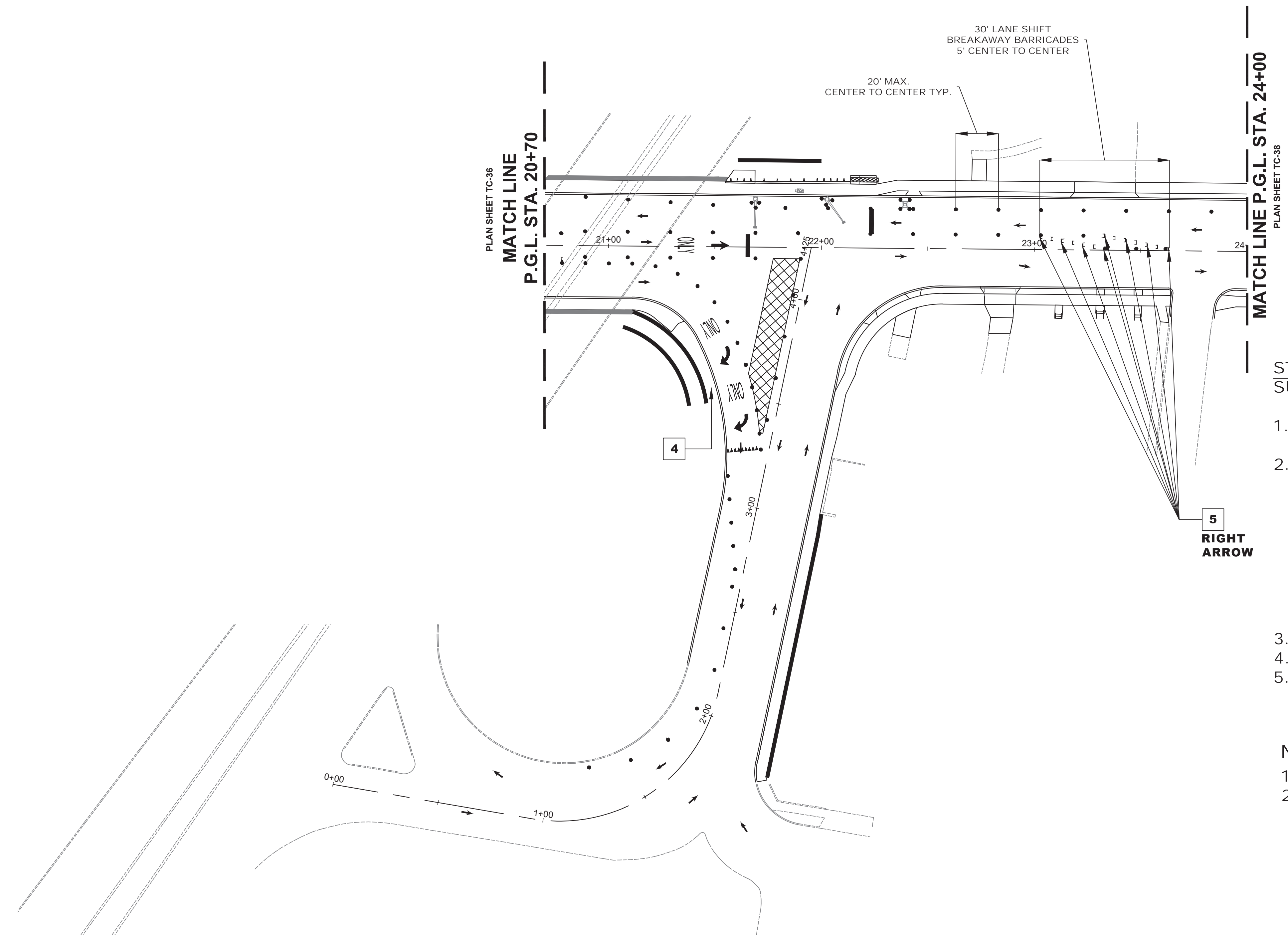
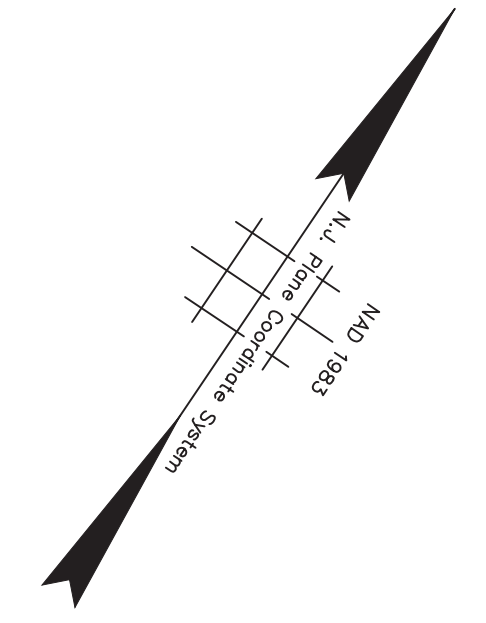
1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



TC-36
TC-44

No.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 2D (4 OF 6)</p>					
 <p>CVE ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p> <p>(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400</p>					
JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991)		DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24539 NJ PP LIC NO. 2455		JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 2089	
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32952		MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 3770		GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458 NJ PP LIC NO. 4361	
<p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER</p>					
As Shown			DATE: February 2022		
DRAWN BY: RCM			DESIGNED BY: RCM		
CHECKED BY: KEU/CJW			SHEET: 127 OF 197		
SCALE: As Shown					
DATE: 2/17/2022					

DRAWING NO. PWB0609.01
 FILE NO.



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	15	UN
159006M	DRUM	95	UN
159012M	CONSTRUCTION SIGNS	69	SF
159126M	TEMPORARY TRAFFIC STRIPES, 4"	254	LF
159132M	TEMPORARY PAVEMENT MARKINGS	113	SF
702057M NS	INTERIM TRAFFIC SIGNAL SYSTEM, LOCATION NO. 3	1	LS

STAGE 2D CONSTRUCTION SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL INTERIM TRAFFIC SIGNAL SYSTEM AS DESIGNED BASED ON THE EXISTING CONDITIONS ENCOUNTERED IN THE FIELD AND/OR THE CONDITIONS TO BE ENCOUNTERED IN THE SPECIFIC TRAFFIC CONTROL AND STAGING PLANS STAGE. THE INTERIM TRAFFIC SIGNAL PLAN SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER CURRENTLY LICENSED IN THE STATE OF NEW JERSEY AS RETAINED BY THE CONTRACTOR AND THE SIGNED AND SEALED PLANS SHALL BE SUBMITTED TO THE RE FOR APPROVAL.
3. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
4. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
5. PERFORM STAGE 2D AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

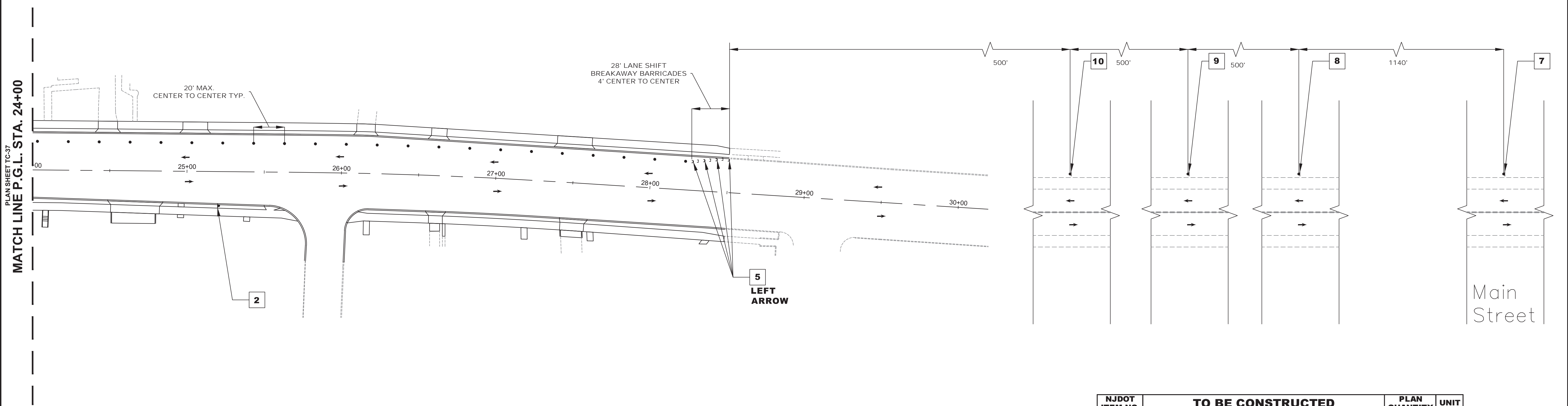
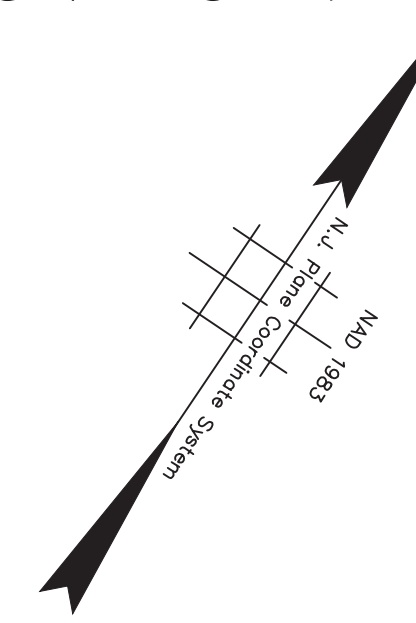
NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



<p>TC-37 TC-44</p>			
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 2D (5 OF 6)</p>			
<p>ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p> <p>(732) 727 8000 (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>			
<p>JOHN H. ALLGAIER P.E. & P.P. 1993 - 2001 NJ PE LIC NO. 25838</p>	<p>DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24855</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 2089</p>	<p>GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458 NJ PP LIC NO. 4361</p>
<p>JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962</p>		<p>MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 32770</p>	
<p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>		<p>SCALE: As Shown</p>	<p>DATE: February 2022</p>
<p>DRAWN BY: RCM</p>		<p>DESIGNED BY: RCM</p>	
<p>CHECKED BY: KEJ/UCW</p>		<p>SHEET: 128 of 197</p>	
<p>DATE: 2/17/2022</p>			

DRAWING NO. PW0609.01



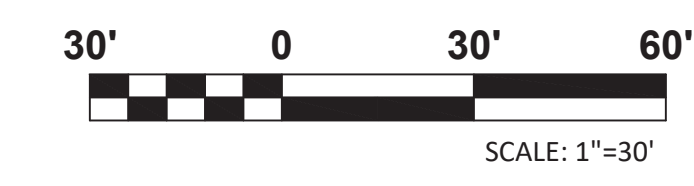
NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
159003M	BREAKAWAY BARRICADE	7	UN
159006M	DRUM	22	UN
159012M	CONSTRUCTION SIGNS	106	SF

STAGE 2D CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION


1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. PERFORM STAGE 2D AREA WORK AS SHOWN ON THE CONSTRUCTION PLANS.

NOTES:

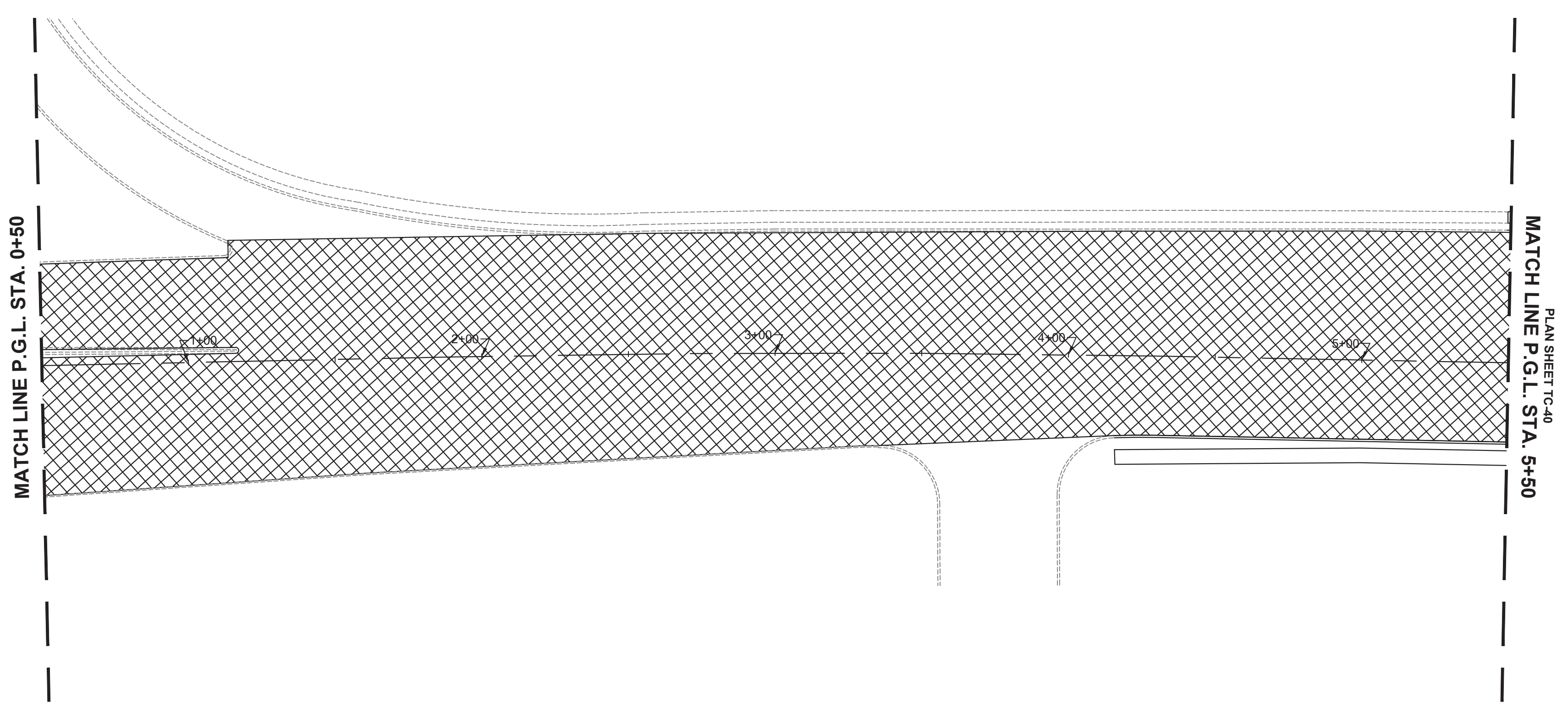
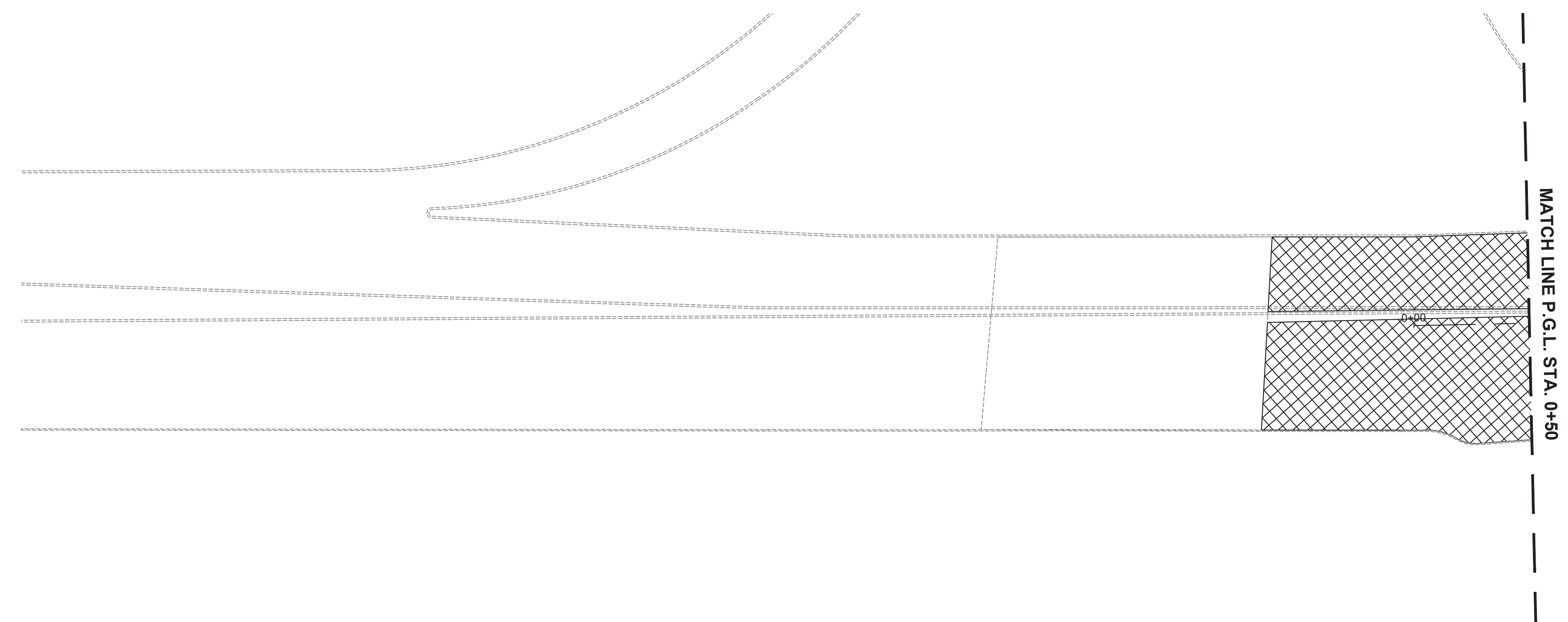
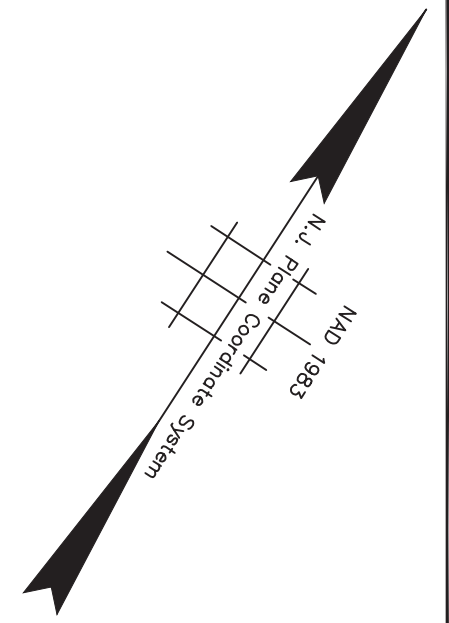
1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



TC-38
TC-44

No.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 2D (6 OF 6)					
 ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS					
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194					
JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991) NJ PE LIC NO. 24539		DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24539		JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 2089	
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962		MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 32468		GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458 NJ PP LIC NO. 4361	
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER L.C. 32468			SCALE: As Shown DATE: February 2022 DRAWN BY: RCM DESIGNED BY: RCM CHECKED BY: KEU/CJW SHEET: 129 of 197		
DATE: 2/17/2022					

FILE NO. PWB04609.01



STAGE 3 CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. MAINTAIN EXISTING TRAFFIC SIGNAL EQUIPMENT, AS NECESSARY, AND INSTALL PROPOSED TRAFFIC SIGNAL EQUIPMENT, AS REQUIRED.
5. MILL ENTIRE PROJECT AS INDICATED.
6. INSTALL TEMPORARY STRIPING IN ACCORDANCE WITH FINAL STRIPING CONFIGURATION.
7. ACTIVATION OF NEW TRAFFIC SIGNAL EQUIPMENT, & DECOMMISSION/REMOVAL OF FUNCTIONALLY OBSOLETE TRAFFIC SIGNAL EQUIPMENT.
8. OVERLAY THE ENTIRE PROJECT.
9. INSTALL FINAL STRIPING.
10. FINAL CLEANUP.

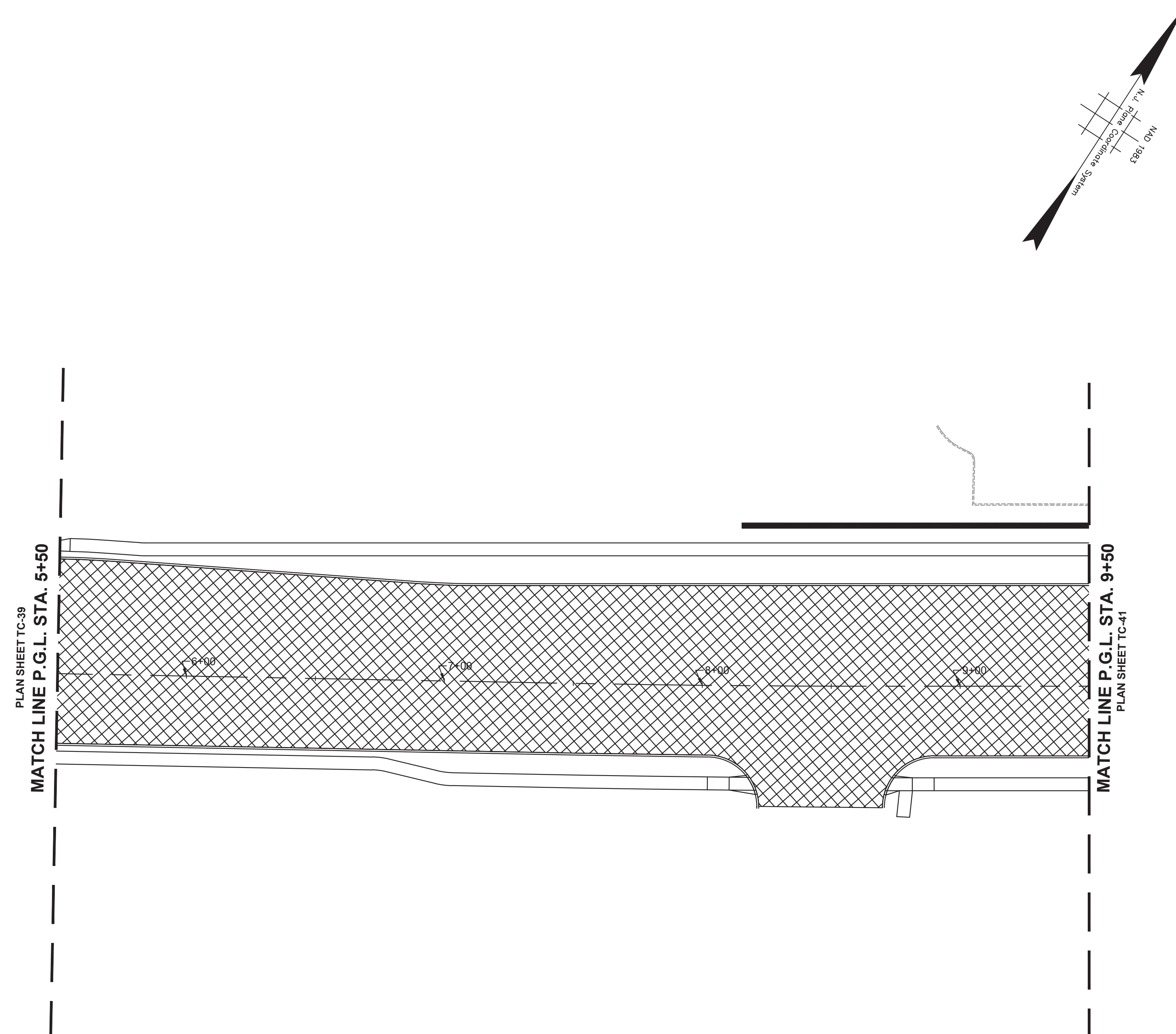


- NOTES:
1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
 2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES

TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 3 (1 OF 6)			
 ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS			
(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162		(732) 462 7400 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194	
JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991) NJ PE LIC NO. 25839	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24555	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 20889	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458 NJ PP LIC NO. 43561
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 38794 NJ PP LIC NO. 3726	SCALE: As Shown DATE: February 2022	
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468		DRAWN BY: RCM CHECKED BY: KEU/CJW	SHEET: 130 of 197

TC-39
TC-44

FILE NO.
PWB0A609.01





STAGE 3 CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

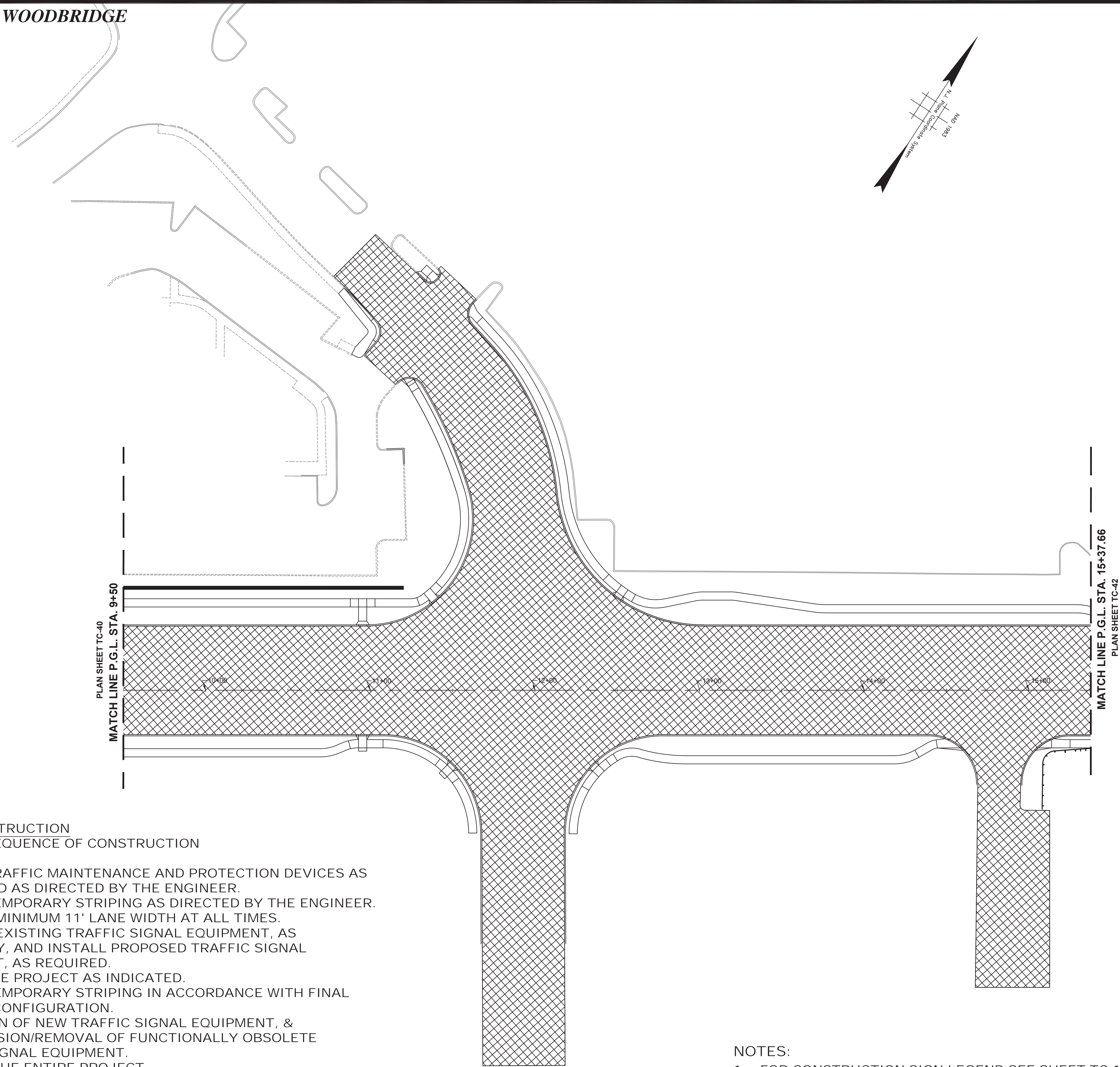
1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. MAINTAIN EXISTING TRAFFIC SIGNAL EQUIPMENT, AS NECESSARY, AND INSTALL PROPOSED TRAFFIC SIGNAL EQUIPMENT, AS REQUIRED.
5. MILL ENTIRE PROJECT AS INDICATED.
6. INSTALL TEMPORARY STRIPING IN ACCORDANCE WITH FINAL STRIPING CONFIGURATION.
7. ACTIVATION OF NEW TRAFFIC SIGNAL EQUIPMENT, & DECOMMISSION/REMOVAL OF FUNCTIONALLY OBSOLETE TRAFFIC SIGNAL EQUIPMENT.
8. OVERLAY THE ENTIRE PROJECT.
9. INSTALL FINAL STRIPING.
10. FINAL CLEANUP.

NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



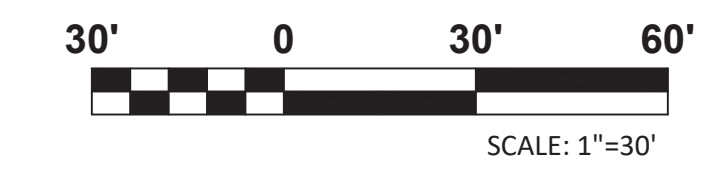
TC-40 TC-44			
No.	DESCRIPTION OF REVISION	DATE	DRAWN CHECKED RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 3 (2 OF 6)			
 ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS			
(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400			
JOHN H. ALLGAIER P.E. & P.P. <small>(1983 - 1991)</small>	DAVID J. SAMUEL P.E. & P.P. <small>NO PE LIC NO. 25839 NO PP LIC NO. 2455</small>	JOHN J. STEFANI P.E. L.S. & P.P. <small>NO PE & LS LIC NO. 24271 NO PP LIC NO. 2089</small>	REGISTERED DRAWING NO. PWB0A609.01 FILE NO. 131 of 197
JAY B. CORNELL P.E. & P.P. <small>NO PE LIC NO. 32962</small>	MICHAEL J. McCLELLAND P.E. & P.P. <small>NO PE LIC NO. 38794 NO PP LIC NO. 3720</small>	GREGORY R. VALESI P.E. & P.P. <small>NO PE LIC NO. 34458 NO PP LIC NO. 4361</small>	
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER <small>LIC. 32468</small>			SCALE: As Shown DATE: February 2022 DRAWN BY: RCM DESIGNED BY: RCM CHECKED BY: KEU/CJW SHEET:
			DATE: 2/17/2022



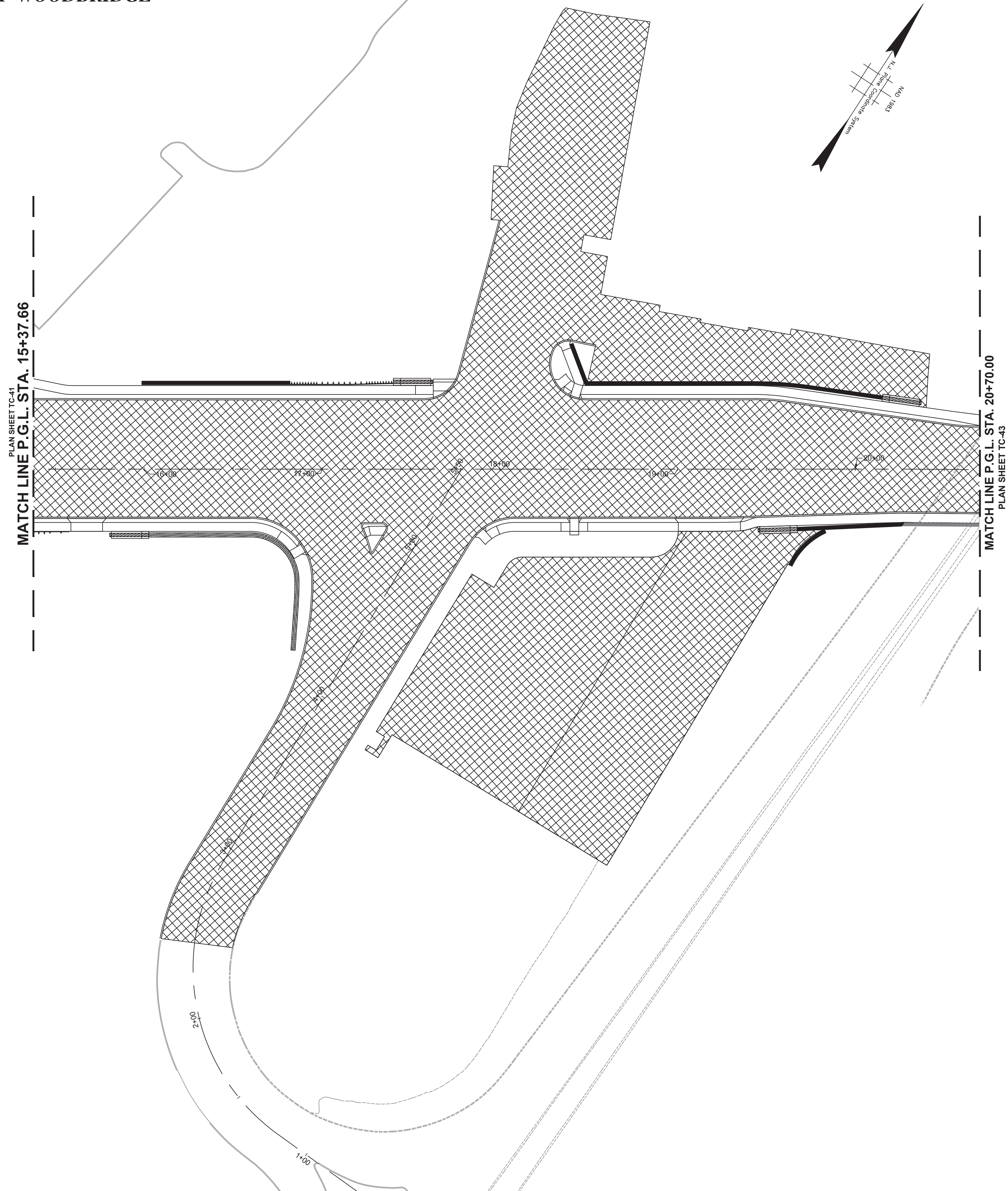
STAGE 3 CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
3. MAINTAIN MINIMUM 11' LANE WIDTH AT ALL TIMES.
4. MAINTAIN EXISTING TRAFFIC SIGNAL EQUIPMENT, AS NECESSARY, AND INSTALL PROPOSED TRAFFIC SIGNAL EQUIPMENT, AS REQUIRED.
5. MILL ENTIRE PROJECT AS INDICATED.
6. INSTALL TEMPORARY STRIPING IN ACCORDANCE WITH FINAL STRIPING CONFIGURATION.
7. ACTIVATION OF NEW TRAFFIC SIGNAL EQUIPMENT, & DECOMMISSION/REMOVAL OF FUNCTIONALLY OBSOLETE TRAFFIC SIGNAL EQUIPMENT.
8. OVERLAY THE ENTIRE PROJECT.
9. INSTALL FINAL STRIPING.
10. FINAL CLEANUP.

- NOTES:
1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
 2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



TC-41 TC-44		
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY</p> <p>ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p> <p>TRAFFIC CONTROL AND STAGING PLANS - STAGE 3 (3 OF 6)</p>		
<p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p> <p>(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400</p>		
<p>JOHN H. ALLGAIER P.E. & P.P. (1983 - 2001) NO PE LIC NO. 32963</p>	<p>DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 25838</p>	<p>JOHN J. STEFANI P.E., L.S., & P.P. NO PE & LS LIC NO. 24273</p>
<p>JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 38024</p>	<p>MICHAEL J. MCCLELLAND P.E. & P.P. NO PE LIC NO. 32468</p>	<p>GREGORY R. VALESIO P.E. & P.P. NO PE LIC NO. 34458</p>
<p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>		<p>SCALE: As Shown DATE: February 2022</p>
<p>DRAWN BY: RCM CHECKED BY: KEGUCW</p>		<p>DESIGNED BY: RCM SHEET: 132 of 197</p>
<p>DATE: 2/17/2022</p>		<p>REGISTERED DRAWING NO. PWB0A609.01</p>




STAGE 3 CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
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8. OVERLAY THE ENTIRE PROJECT.
9. INSTALL FINAL STRIPING.
10. FINAL CLEANUP.

NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY</p> <p>ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p> <p>TRAFFIC CONTROL AND STAGING PLANS - STAGE 3 (4 OF 6)</p>			
 <p>CVE ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p> <p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>			
<p>JOHN H. ALLGAIER P.E. & P.P. NJ PE LIC NO. 24539</p>		<p>DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24555</p>	
<p>JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32792</p>		<p>MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 32468</p>	
<p>MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER</p>		<p>JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271</p>	
<p>As Shown</p>		<p>February 2022</p>	
<p>DATE: 2/17/2022</p>		<p>133 of 197</p>	

TC-42
TC-44

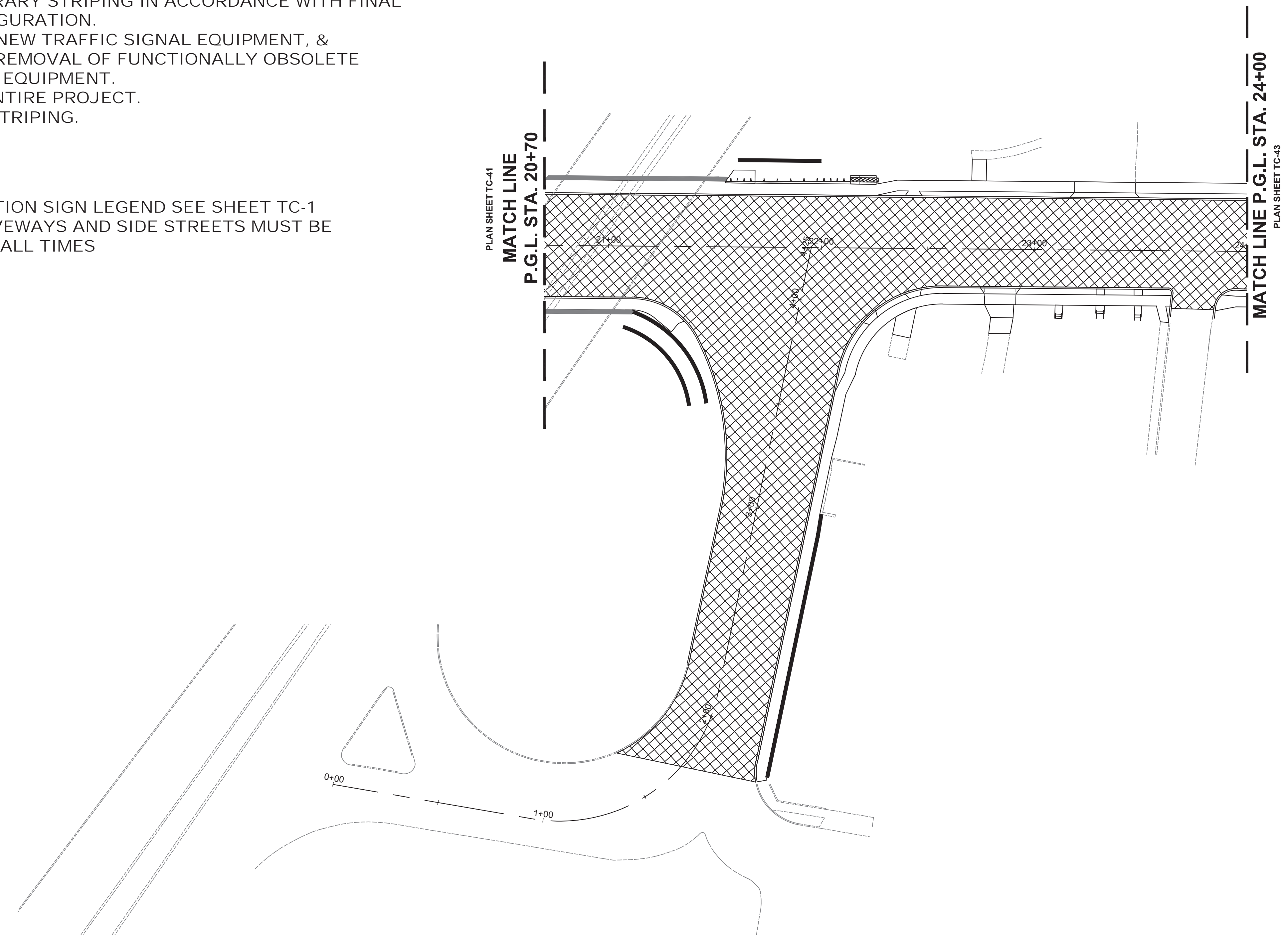
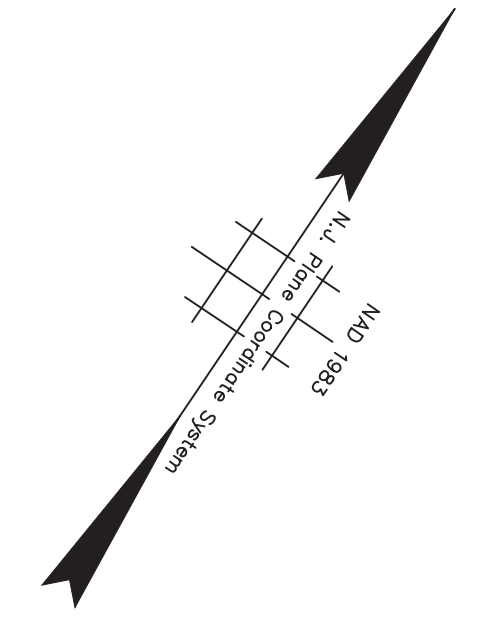
FILE NO.
PWB0A609.01


STAGE 3 CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
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8. OVERLAY THE ENTIRE PROJECT.
9. INSTALL FINAL STRIPING.
10. FINAL CLEANUP.

NOTES:

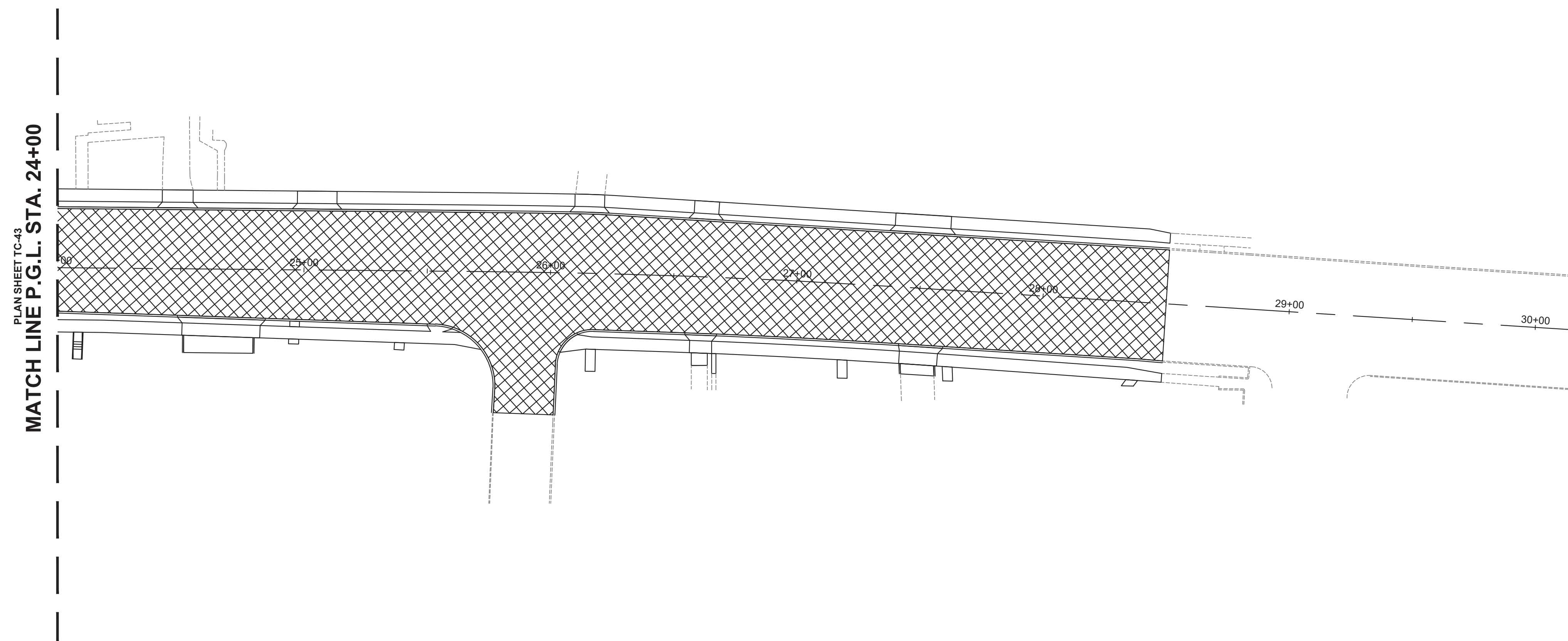
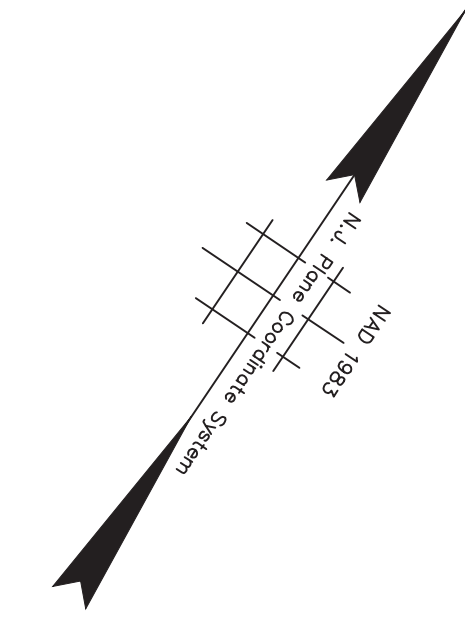
1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES



No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC CONTROL AND STAGING PLANS - STAGE 3 (5 OF 6)							
 CME ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194							
JOHN H. ALLGAIER P.E. & P.P. NJ PE LIC NO. 25838 NJ PP LIC NO. 2455	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24971 NJ PP LIC NO. 2089	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE LIC NO. 24971 NJ PP LIC NO. 2089					
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962 NJ PP LIC NO. 3874	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 3770	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458 NJ PP LIC NO. 4361					
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468		SCALE As Shown	DATE February 2022				
DRAWN BY RCM		DESIGNED BY RCM					
CHECKED BY KEC/UCW		SHEET 134 of 197					
DATE: 2/17/2022							

TC-43
TC-44

PWBOAG09.01




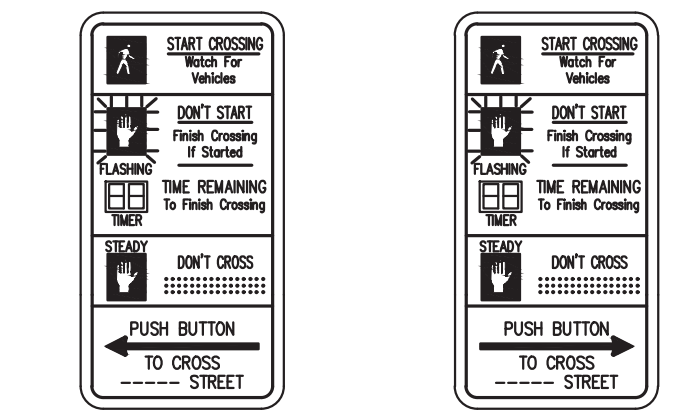
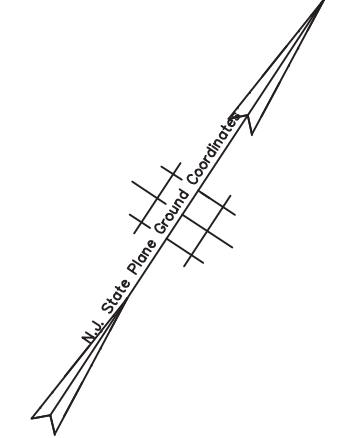
STAGE 3 CONSTRUCTION
SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL TRAFFIC MAINTENANCE AND PROTECTION DEVICES AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. INSTALL TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.
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8. OVERLAY THE ENTIRE PROJECT.
9. INSTALL FINAL STRIPING.
10. FINAL CLEANUP.

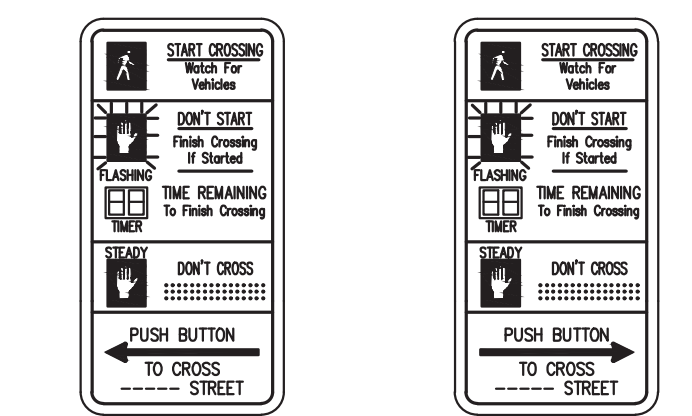
NOTES:

1. FOR CONSTRUCTION SIGN LEGEND SEE SHEET TC-1
2. ACCESS TO DRIVEWAYS AND SIDE STREETS MUST BE MAINTAINED AT ALL TIMES

TC-44			
TC-44			
No.	DESCRIPTION OF REVISION	DATE	DRAWN
			CHECKED
			RELEASED
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY</p> <p>ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p> <p>TRAFFIC CONTROL AND STAGING PLANS - STAGE 3 (6 OF 6)</p>			
 <p>ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p> <p style="font-size: x-small;">(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400</p>			
JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25838	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271	
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 38794	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458	
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER		SCALE As Shown	DATE February 2022
DRAWN BY RCM		DESIGNED BY RCM	
CHECKED BY KEC/JCW		SHEET 135 of 197	
DATE: 2/17/2022		FILE NO.: PWB0A609.01	



R10-3(L) w/ BRAILLE (B' STREET) 9'x15'
R10-3(R) w/ BRAILLE (B' STREET) 9'x15'



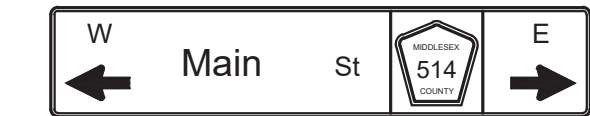
R10-3(L) w/ BRAILLE (C' STREET) 9'x15'
R10-3(R) w/ BRAILLE (C' STREET) 9'x15'



R9-3 18'x18'
R9-3b(L) 18'x12'



R9-3 18'x18'
R9-3b(R) 18'x12'

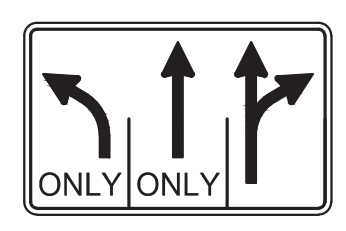


MAST ARM SIGN "A"
84' x 18'
DOUBLE SIDED

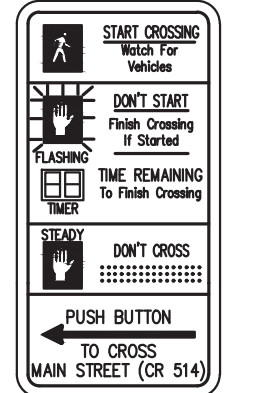
NOTE: B SERIES LETTERING USED FOR THIS SIGN



R(NJ)10-13A 60'x12'



R(NJ)3-8T 48'x30'



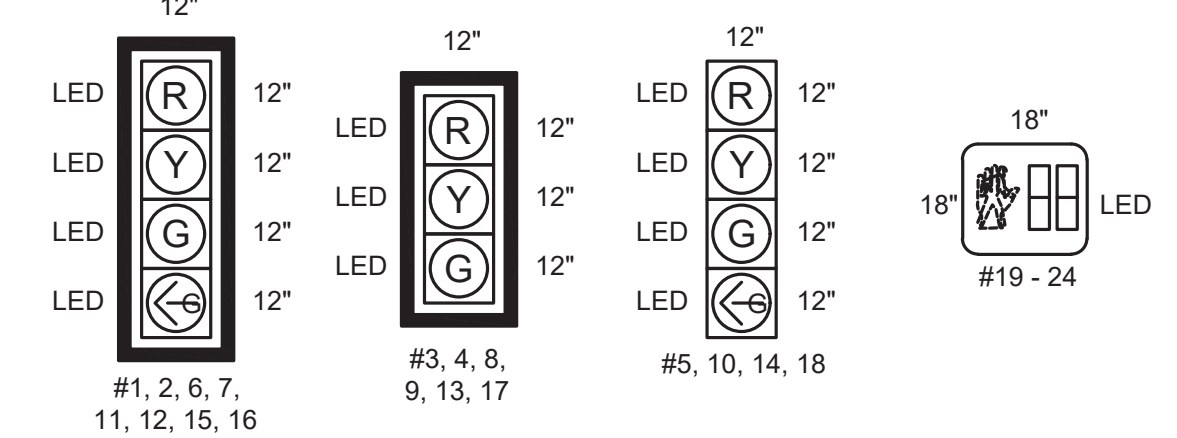
R10-3(L) w/ BRAILLE (MAIN STREET) 9'x15'



R(NJ)3-8F 30'x30'

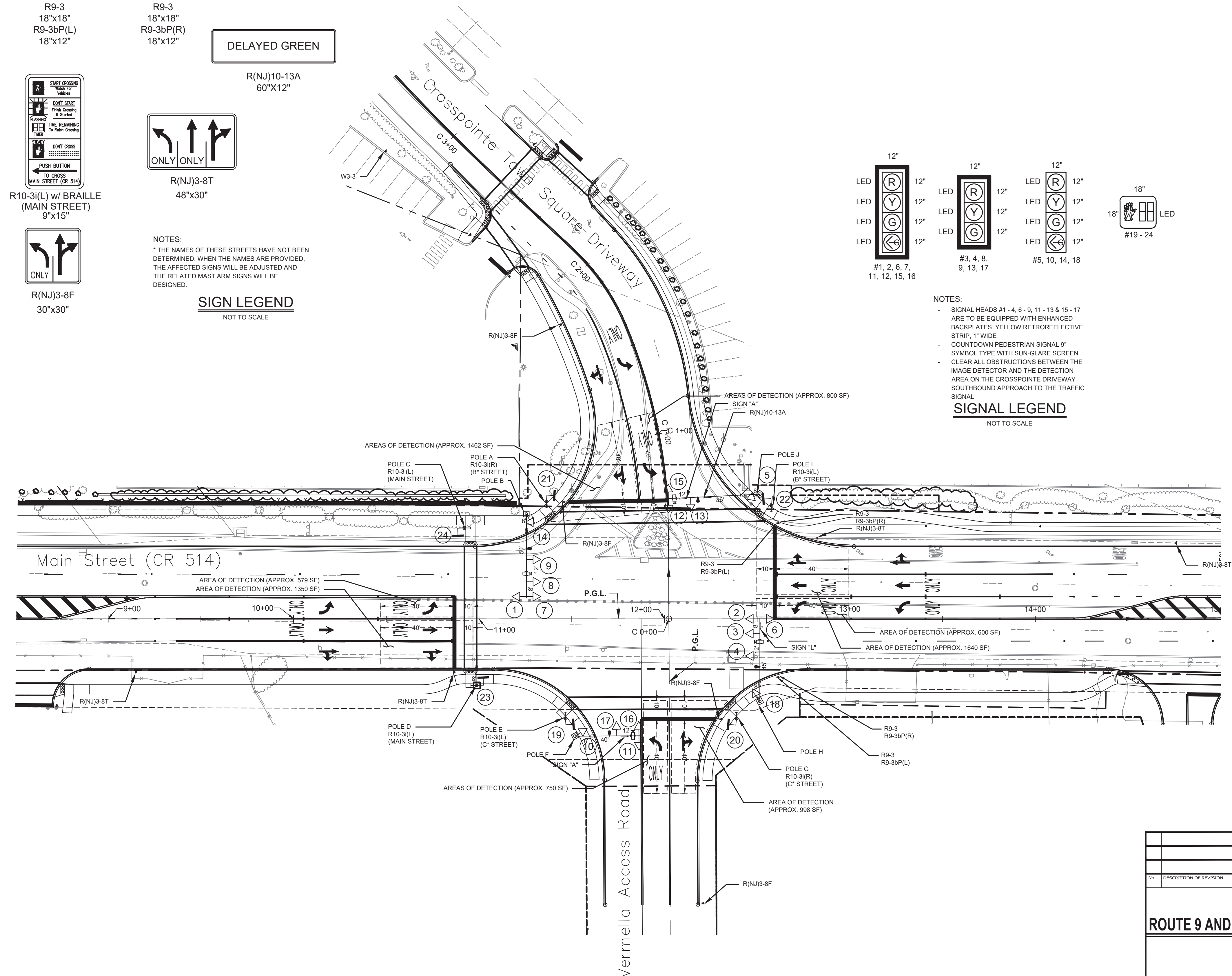
NOTES:
* THE NAMES OF THESE STREETS HAVE NOT BEEN DETERMINED. WHEN THE NAMES ARE PROVIDED, THE AFFECTED SIGNS WILL BE ADJUSTED AND THE RELATED MAST ARM SIGNS WILL BE DESIGNED.

SIGN LEGEND
NOT TO SCALE

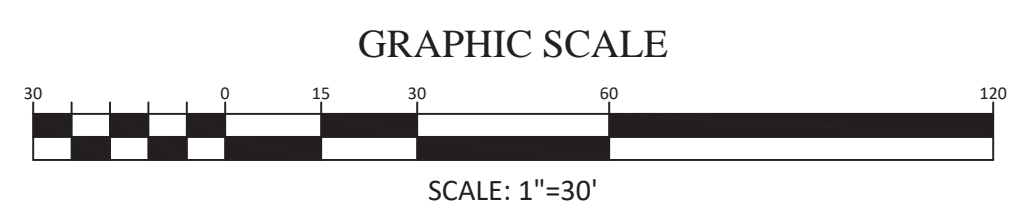


NOTES:
- SIGNAL HEADS #1 - 4, 6 - 9, 11 - 13 & 15 - 17 ARE TO BE EQUIPPED WITH ENHANCED BACKPLATES, YELLOW RETROREFLECTIVE STRIP, 1" WIDE
- COUNTDOWN PEDESTRIAN SIGNAL 9" SYMBOL TYPE WITH SUN-GLARE SCREEN
- CLEAR ALL OBSTRUCTIONS BETWEEN THE IMAGE DETECTOR AND THE DETECTION AREA ON THE CROSSPOINTE DRIVEWAY SOUTHBOUND APPROACH TO THE TRAFFIC SIGNAL

SIGNAL LEGEND
NOT TO SCALE



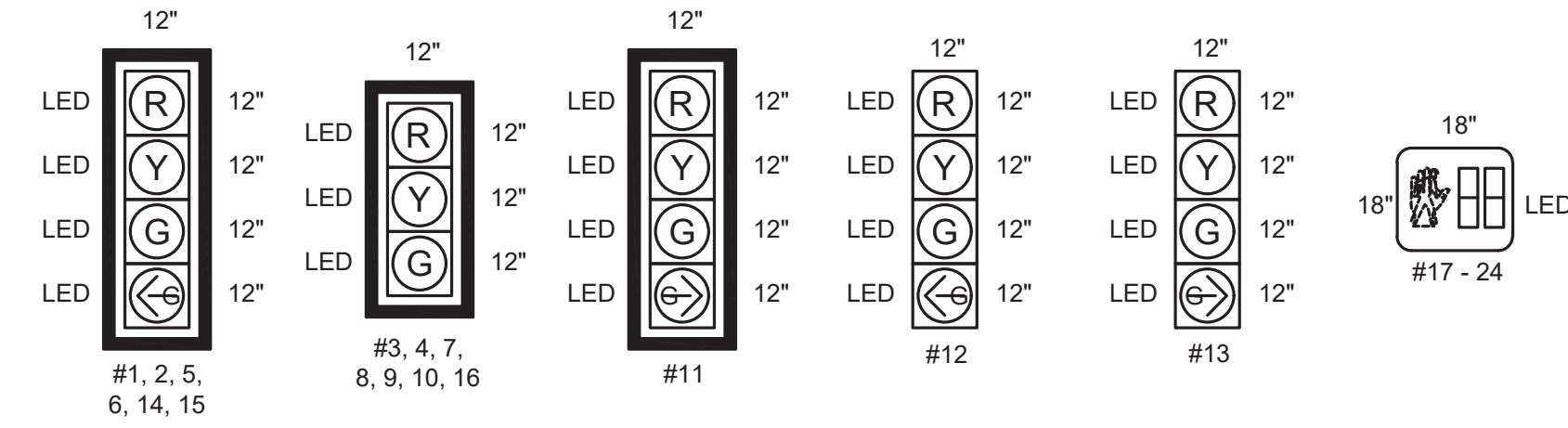
PLAN



SCALE: 1"=30'

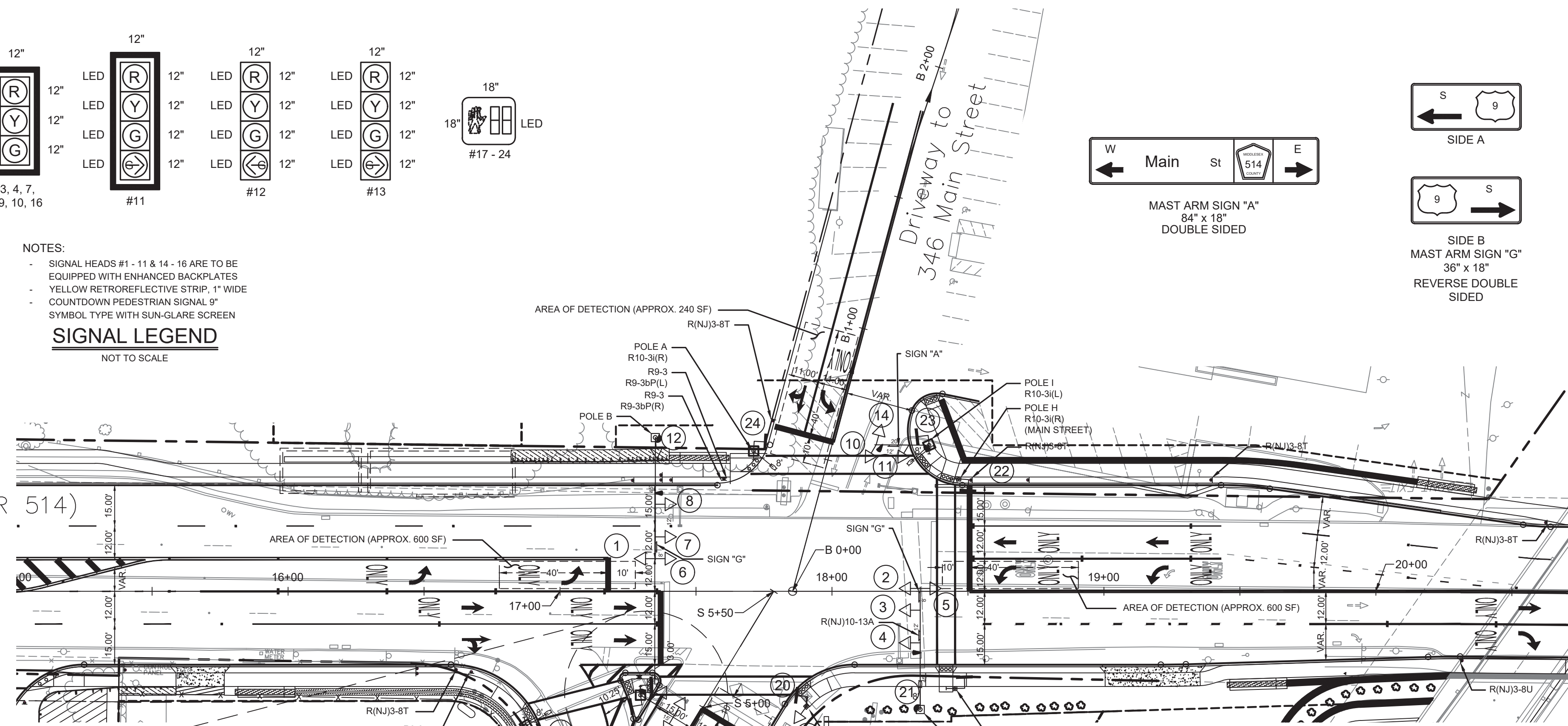
- NOTE:
- REFER TO SHEETS 53 TO 65 FOR TRAFFIC SIGNAL CONSTRUCTION DETAILS.
 - ALL PROPOSED PUSH BUTTONS TO BE ADA COMPLIANT.

TSP-1				TSP-3			
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC SIGNAL PLANS (1 OF 3)							
(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194							
JOHN H. ALLGAIER P.E. & P.P. (1983 - 2021)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25839	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & L.S. LIC NO. 24271					
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458					
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER L.C. 32468 DATE: 2/17/2022			SCALE: As Shown DATE: February 2022 DESIGNED BY: KEC/RCM CHECKED BY: JCW/KEC SHEET: 136 OF 197		FILE NO.: PWB04609.01		

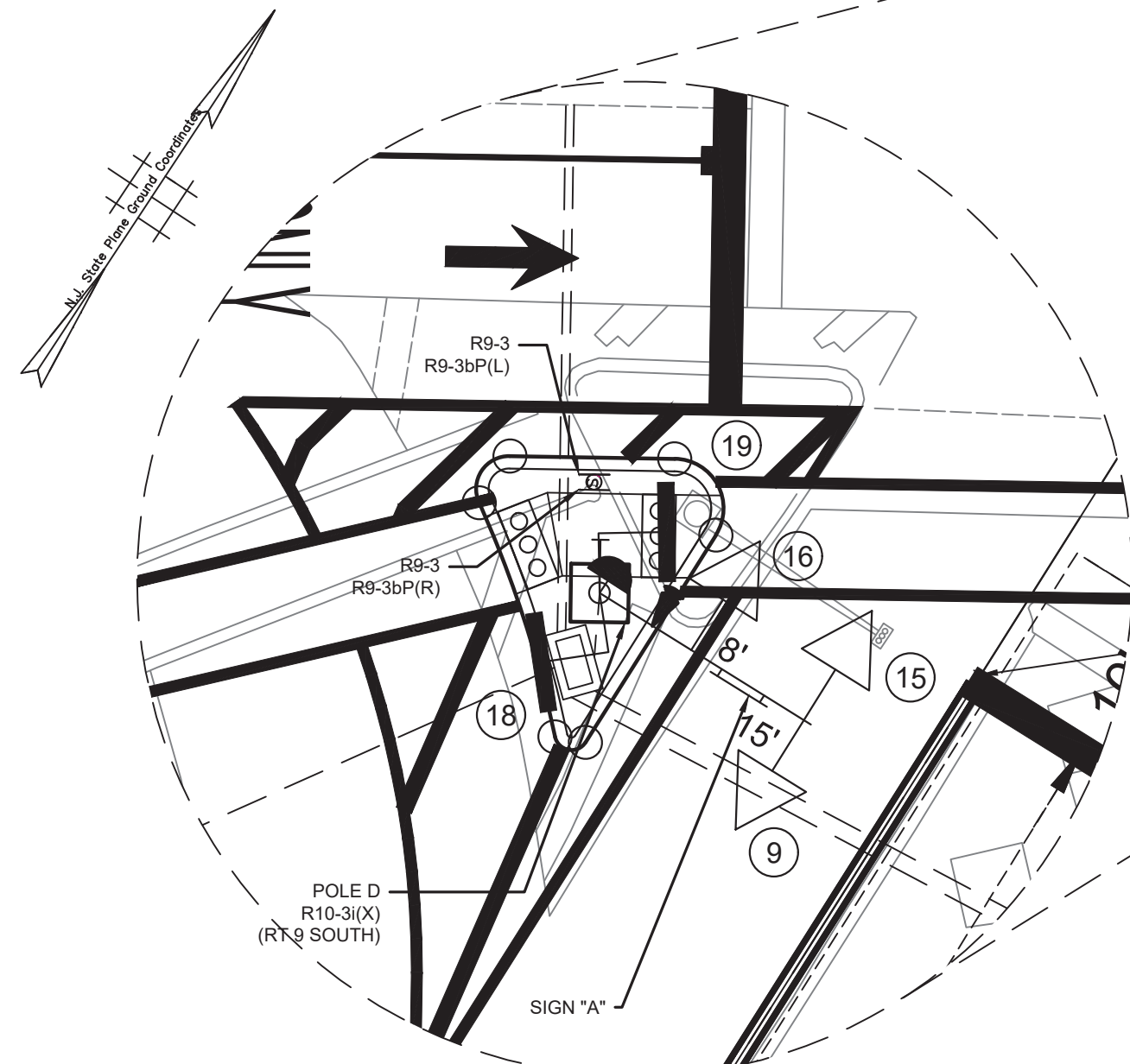


NOTES:
 - SIGNAL HEADS #1 - 11 & 14 - 16 ARE TO BE EQUIPPED WITH ENHANCED BACKPLATES
 - YELLOW RETROREFLECTIVE STRIP, 1" WIDE
 - COUNTDOWN PEDESTRIAN SIGNAL, 9" SYMBOL TYPE WITH SUN-GLARE SCREEN
SIGNAL LEGEND
 NOT TO SCALE

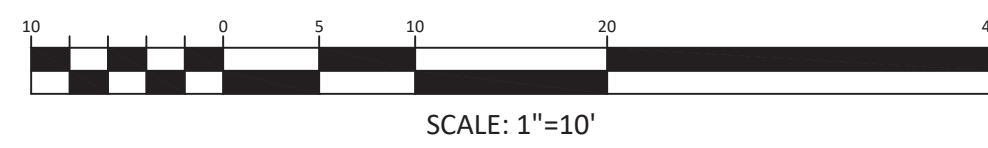
Main Street (CR 514)



Main Street (CR 514)



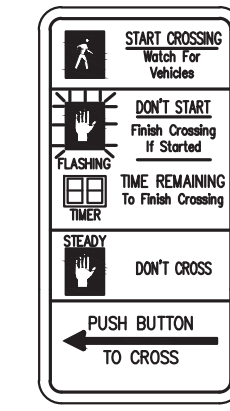
GRAPHIC SCALE



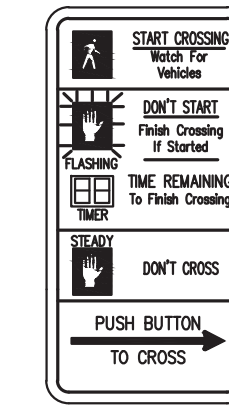
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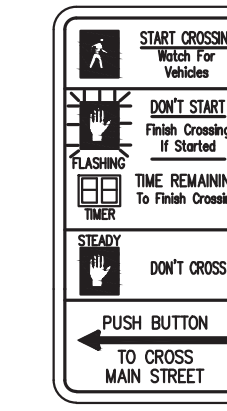
R-12
36"x36"x36"



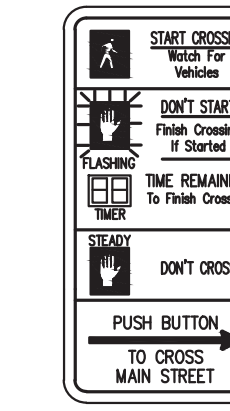
R10-3i(L)
9"x15"



R10-3i(R)
9"x15"



R10-3i(L)
(MAIN STREET)
9"x15"



R10-3i(R)
(MAIN STREET)
9"x15"



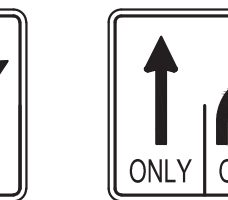
R9-3
18"x18"
R9-3bP(L)
18"x12"



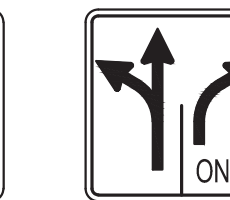
R(NJ)3-8F
30"x30"



R(NJ)3-8T
48"x30"



R(NJ)3-8U
30"x30"

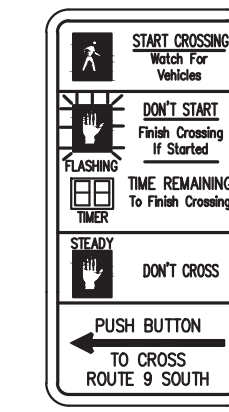


R(NJ)3-8AA
30"x30"

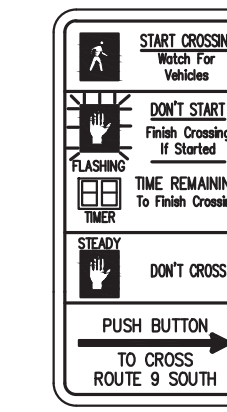
SIGN LEGEND
NOT TO SCALE



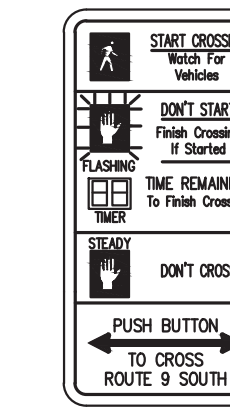
R3-7R
36"x36"



R10-3i(L)
(RT 9 SOUTH)
9"x15"



R10-3i(R)
(RT 9 SOUTH)
9"x15"



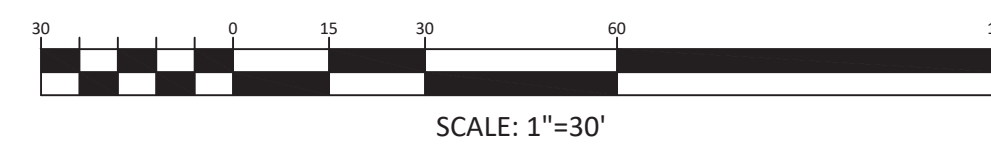
R10-3i(X)
(RT 9 SOUTH)
9"x15"



R9-3
18"x18"
R9-3bP(R)
18"x12"

PLAN

GRAPHIC SCALE



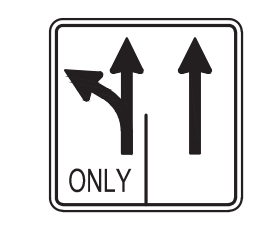
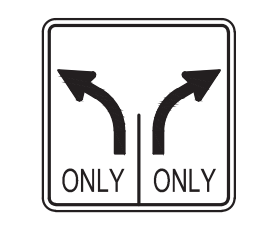
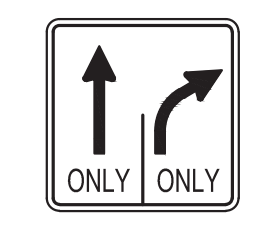
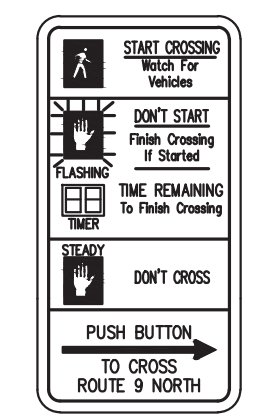
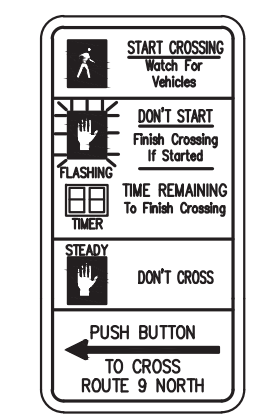
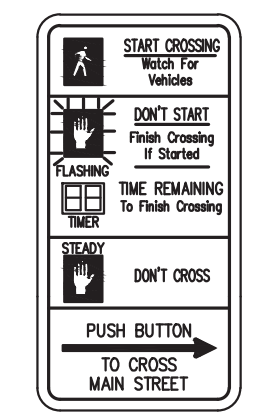
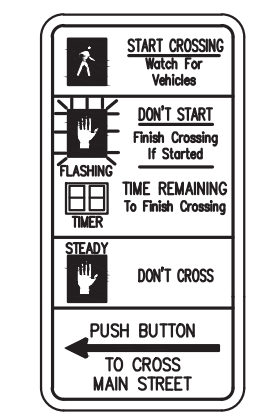
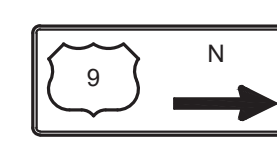
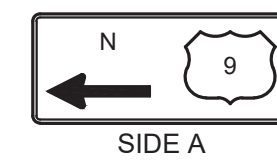
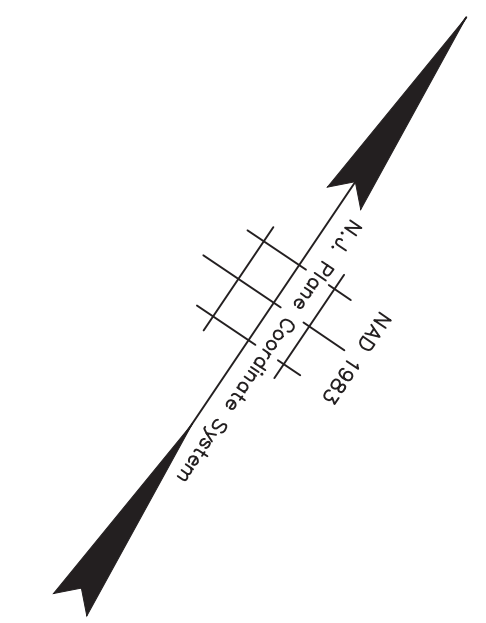
SCALE: 1"=30'

NOTE:

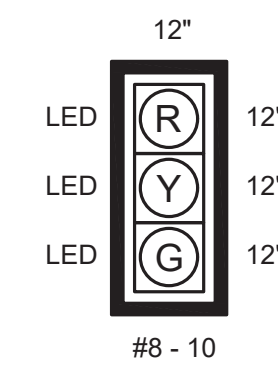
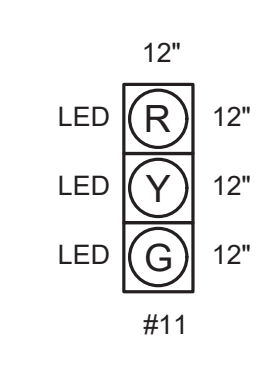
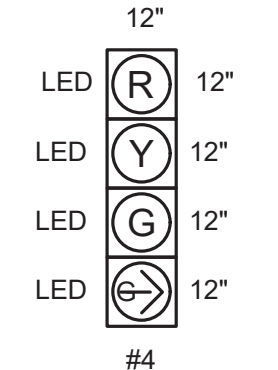
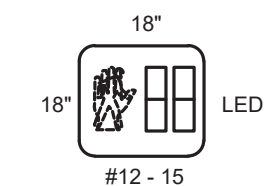
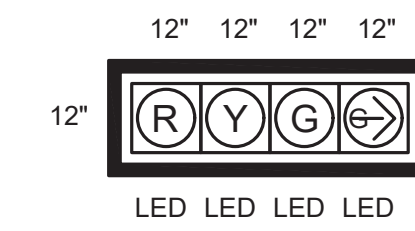
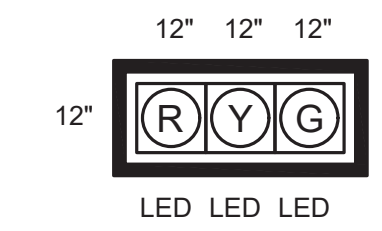
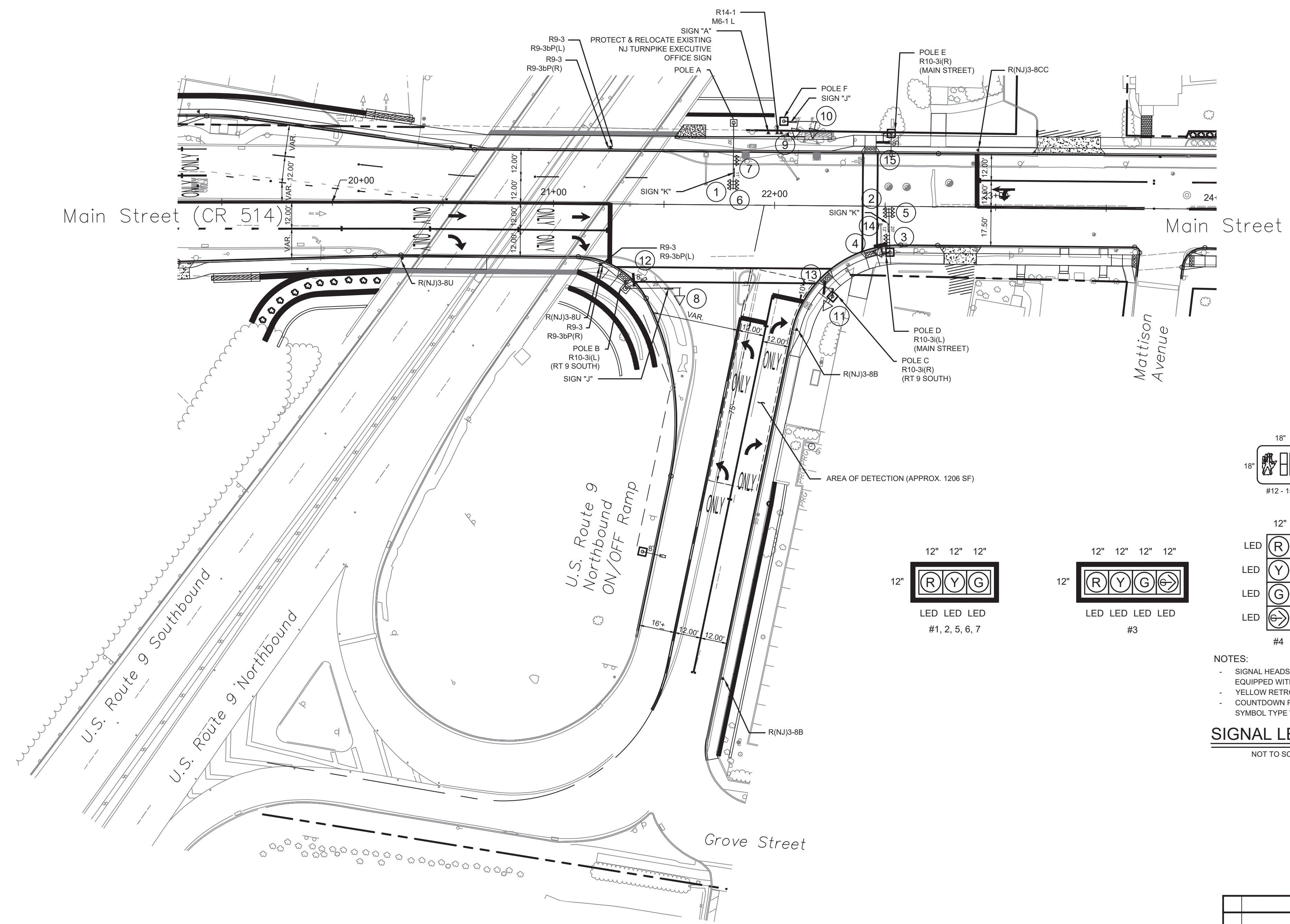
- REFER TO SHEETS 53 TO 65 FOR TRAFFIC SIGNAL CONSTRUCTION DETAILS.
- ALL PROPOSED PUSH BUTTONS TO BE ADA COMPLIANT.

TSP-2				TSP-3			
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC SIGNAL PLANS (2 OF 3)</p>							
<p>OVE ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p>							
<p>(732) 727 8000 (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>							
JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991) NJ PE LIC NO. 245039 NJ PP LIC NO. 20899		DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24555 NJ PP LIC NO. 24271		JOHN J. STEFANI P.E., L.S. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 3770		GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458 NJ PP LIC NO. 4361	
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER L.C. 32468				As Shown February 2022 RCM RCM/KEC DATE: 2/17/2022 SHEET: 137 of 197			

FILE NO. PWB0609.01

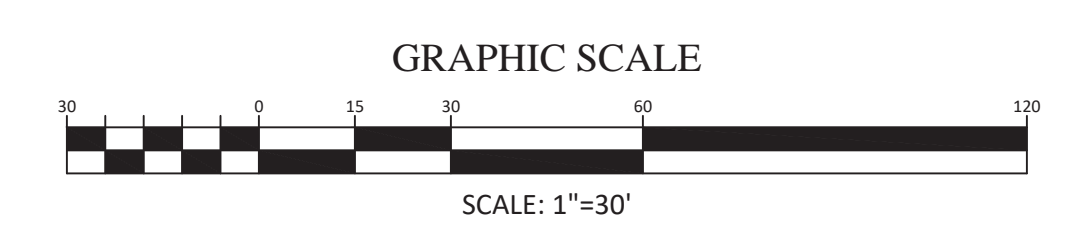


SIGN LEGEND
NOT TO SCALE



NOTES:
- SIGNAL HEADS #1 - 3 & 5 - 10 ARE TO BE EQUIPPED WITH ENHANCED BACKPLATES
- YELLOW RETROREFLECTIVE STRIP, 1" WIDE
- COUNTDOWN PEDESTRIAN SIGNAL 9"
- SYMBOL TYPE WITH SUN-GLARE SCREEN

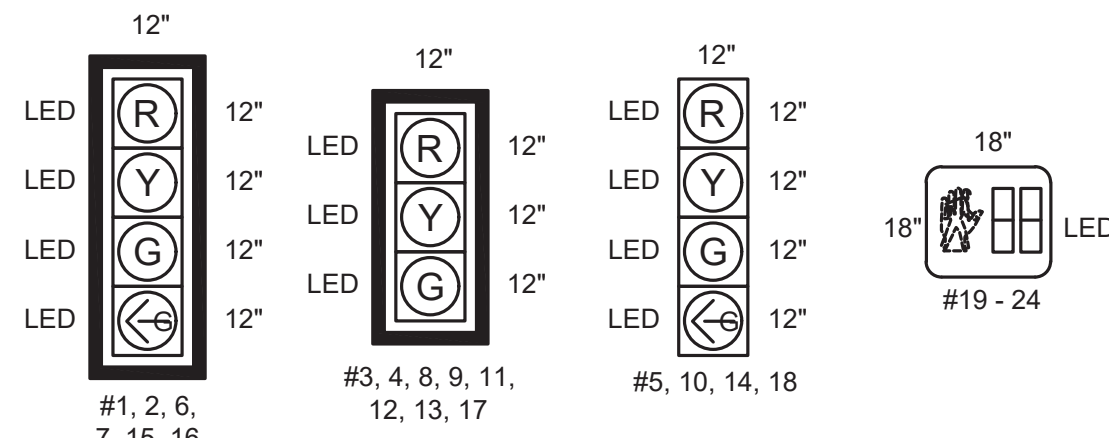
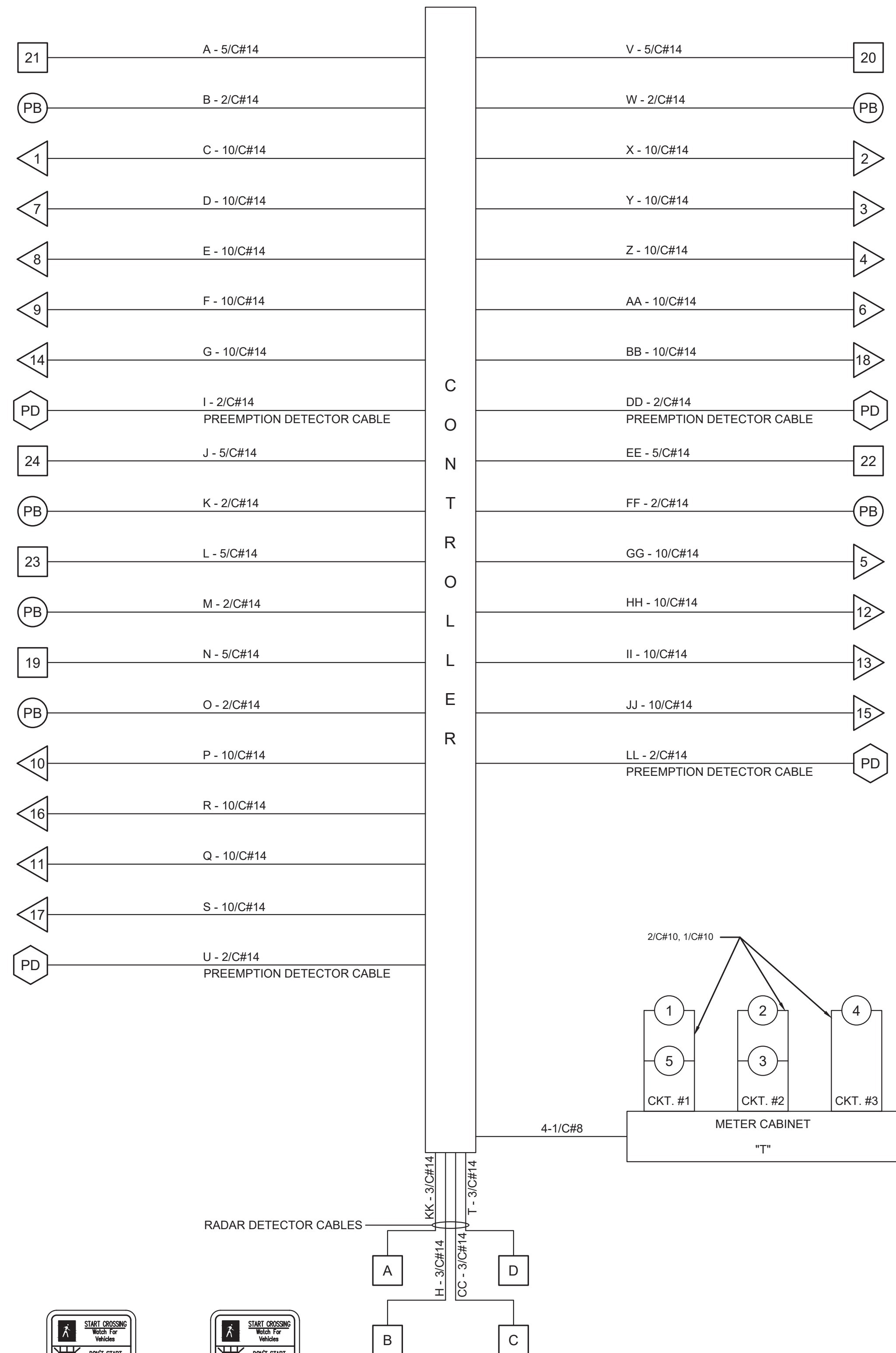
SIGNAL LEGEND
NOT TO SCALE



- NOTE:
1. REFER TO SHEETS 53 TO 65 FOR TRAFFIC SIGNAL CONSTRUCTION DETAILS.
 2. ALL PROPOSED PUSH BUTTONS TO BE ADA COMPLIANT.

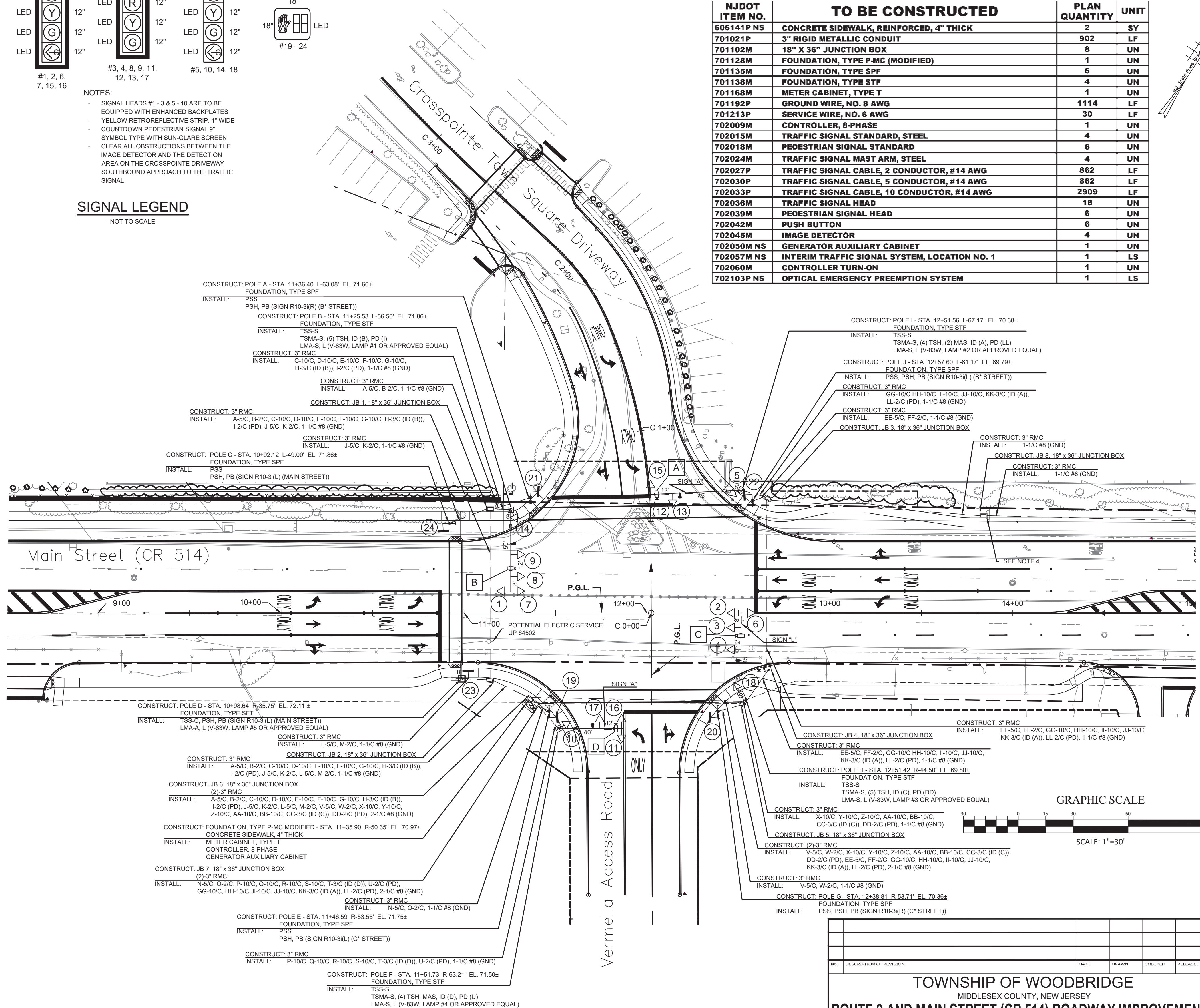
TSP-3			
TSP-3			
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC SIGNAL PLANS (3 OF 3)			
<p>ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p> <p>(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 (732) 462 7400 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>			
JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991) JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32956 MICHAEL J. MCCLELLAND P.E. & P.P. NO PE LIC NO. 32468 MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER L.I.C. 32468	DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 24558 MICHAEL J. MCCLELLAND P.E. & P.P. NO PE LIC NO. 32468 As Shown L.I.C. 32468	JOHN J. STEFANI P.E. L.S. & P.P. NO PE & LS LIC NO. 24271 GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 34458 February 2022 RCM RCM/KEC JCW	DATE February 2022 SHEET 138 of 197
FILE NO. PWB04609.01			

BLOCK WIRING DIAGRAM

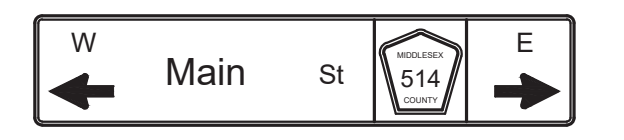
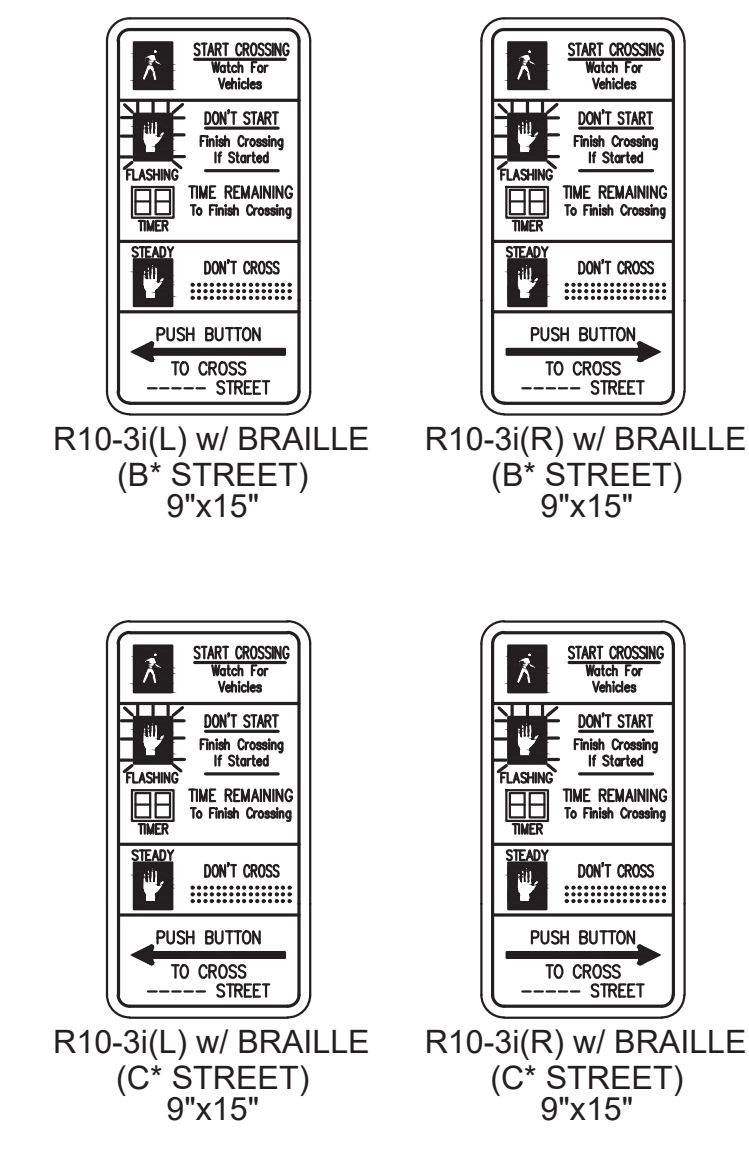


NOTES:
 - SIGNAL HEADS #1 - 3 & 5 - 10 ARE TO BE EQUIPPED WITH ENHANCED BACKPLATES
 - YELLOW RETROREFLECTIVE STRIP, 1" WIDE
 - COUNTDOWN PEDESTRIAN SIGNAL, 9" SYMBOL TYPE WITH SUN-GLARE SCREEN
 - CLEAR ALL OBSTRUCTIONS BETWEEN THE IMAGE DETECTOR AND THE DETECTION AREA ON THE CROSSPOINTE DRIVEWAY SOUTHBOUND APPROACH TO THE TRAFFIC SIGNAL

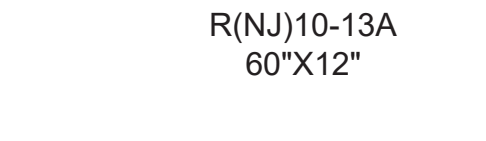
SIGNAL LEGEND
 NOT TO SCALE



NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
606141P NS	CONCRETE SIDEWALK, REINFORCED, 4" THICK	2	SY
701021P	3" RIGID METALLIC CONDUIT	902	LF
701102M	18" X 36" JUNCTION BOX	8	UN
701128M	FOUNDATION, TYPE P-MC (MODIFIED)	1	UN
701135M	FOUNDATION, TYPE SPF	6	UN
701138M	FOUNDATION, TYPE STF	4	UN
701168M	METER CABINET, TYPE T	1	UN
701192P	GROUND WIRE, NO. 8 AWG	1114	LF
701213P	SERVICE WIRE, NO. 6 AWG	30	LF
702009M	CONTROLLER, 8-PHASE	1	UN
702015M	TRAFFIC SIGNAL STANDARD, STEEL	4	UN
702018M	PEDESTRIAN SIGNAL STANDARD	6	UN
702024M	TRAFFIC SIGNAL MAST ARM, STEEL	4	UN
702027P	TRAFFIC SIGNAL CABLE, 2 CONDUCTOR, #14 AWG	862	LF
702030P	TRAFFIC SIGNAL CABLE, 5 CONDUCTOR, #14 AWG	862	LF
702033P	TRAFFIC SIGNAL CABLE, 10 CONDUCTOR, #14 AWG	2909	LF
702036M	TRAFFIC SIGNAL HEAD	18	UN
702039M	PEDESTRIAN SIGNAL HEAD	6	UN
702042M	PUSH BUTTON	6	UN
702045M	IMAGE DETECTOR	4	UN
702050M NS	GENERATOR AUXILIARY CABINET	1	UN
702057M NS	INTERIM TRAFFIC SIGNAL SYSTEM, LOCATION NO. 1	1	LS
702060M	CONTROLLER TURN-ON	1	UN
702103P NS	OPTICAL EMERGENCY PREEMPTION SYSTEM	1	LS



NOTE: D SERIES LETTERING USED FOR THIS SIGN



SIGN LEGEND
 NOT TO SCALE

NOTE:

1. REFER TO SHEETS 53 TO 65 FOR TRAFFIC SIGNAL CONSTRUCTION DETAILS.
2. ALL PROPOSED PUSH BUTTONS TO BE ADA COMPLIANT.
3. INSTALL GROUND WIRE (GND), 1/C#8 AWG, INSULATED (COLOR GREEN) CONTINUOUSLY THROUGHOUT THE TRAFFIC SIGNAL SYSTEM. SECURE TO ALL GROUND RODS, CABINETS, TRAFFIC SIGNAL BASES AND LIGHTING BASES AS NOTED.
4. JUNCTION BOX IS PROPOSED TO PROVIDE A HARDWIRE INTERCONNECTION TO THE SIGNAL AT THE INTERSECTION OF MAIN STREET AND THE ROUTE 9 SOUTHBOUND ON/OFF RAMP.

TOWNSHIP OF WOODBRIDGE
 MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS
 ELECTRICAL PLANS (1 OF 6)

CONSULTING AND MUNICIPAL ENGINEERS
 (732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKIE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400

JOHN H. ALLGAIR P.E. & P.P. (1983 - 2021) DAVID J. SAMUEL P.E. & P.P. NO. PE LIC. NO. 25839 NO. PP LIC. NO. 2455 JOHN J. STEFANI P.E., L.S. & P.P. NO. PE LIC. NO. 24271 NO. PP LIC. NO. 2089
 JAY B. CORNELL P.E. & P.P. NO. PE LIC. NO. 32962 MICHAEL J. MCCLELLAND P.E. & P.P. NO. PE LIC. NO. 32468 GREGORY R. VALESI P.E. & P.P. NO. PE LIC. NO. 39458
MICHAEL J. MCCLELLAND P.E.
 NEW JERSEY PROFESSIONAL ENGINEER L.C. 32468
 SCALE: As Shown DATE: February 2022
 DRAWN BY: RCM DESIGNED BY: KECRCM
 CHECKED BY: JCWJEC SHEET: 139 OF 197
 DATE: 2/17/2022

E-1
 E-6

PWB0609.01

Phase	90 Second Background Cycle Signal Indications										Time (Sec.)	
	1,2,5	3,4	6,7,10	8,9	11-12,14	13	15,16,18	17	19-22	23-24	I	II
NORMAL OPERATON												
A) CR 514 (Main St) EB/WB Lead Left<G-/G Change	R	<G-/G	R	R	R	R	R	DW	DW	6-10	6-10	
B) CR 514 (Main St) EB/WB ROW Change Clearance	G	G	G	G	R	R	R	DW	DW	53-34	53-34	
C) Crosspointe Town Square Driveway / Vermella Access Road NB/SB Lead Left Change	R	R	R	R	<G-/G	R	<G-/G	DW	DW	6	6	
D) Crosspointe Town Square Driveway / Vermella Access Road NB/SB ROW Change Clearance	R	R	R	R	G	G	G	DW	DW	6-21	6-21	
PEDESTRIAN OPERATON												
A) CR 514 (Main St) EB/WB Lead Left<G-/G Change	R	<G-/G	R	R	R	R	R	DW	DW	6-10	6-10	
B) CR 514 (Main St) EB/WB ROW Pedestrian Clearance Vehicle Extension Change Clearance	G	G	G	G	R	R	R	W	DW	4	4	
C) Crosspointe Town Square Driveway / Vermella Access Road NB/SB Lead Left Change	R	R	R	R	<G-/G	R	<G-/G	DW	DW	6	6	
D) Crosspointe Town Square Driveway / Vermella Access Road NB/SB ROW Pedestrian Clearance Change Clearance	R	R	R	R	G	G	G	DW	W	4	4	
Emergency Operation	Y	Y	Y	Y	R	R	R	DARK	DARK	-	-	

Notes:

- The timings in Timing Plan I shall run Monday – Friday, excluding Holidays, from 12:00 am – 12:00 am.
- The timings in Timing Plan II shall run Saturday, Sunday, and Holidays from 12:00 am – 12:00 am.
- *An offset of 0 seconds is measured from the beginning of yellow to Main Street Traffic at this intersection during Timing Plan I. An offset of 0 seconds is measured from the beginning of yellow to Main Street Traffic at this intersection during Timing Plan II. This intersection shall be coordinated with the Master intersection of US Route 9 Southbound On/Off Ramp and CR 514 (Main Street).
- The vehicle memory is to be off and the extension is to be 2 seconds.
- The manual control cord is to be disconnected.
- Phase B shall be capable of being skipped.
- Display DW if no pedestrian actuation occurs.
- In the case of power failure, operate the traffic signal in full operation mode for twenty-four (24) hours and thereafter in flash mode until the traffic signal is fixed.
- The controller shall employ a 3 second delay prior to calling left turn phases on all approaches.
- The controller shall employ a 5 second delay prior to calling side street through and right turn movements.

CONDUIT LENGTH (LF)				NUMBER OF WIRES										TOTAL LENGTH OF WIRES (LF)										CONDUIT											
CONNECTION	3"	2-3"	3-3"	10/C #14 - Vehicle Heads		5/C #14 - Pedestrian Heads		2/C #14 - Push Buttons		3/C #14 - Image Detection Cable		2/C #14 - Preemption		2/C #10 - Lamp		1/C #10 - Lamp (Ground Wire)		10/C #14		5/C #14		2/C #14		2/C #10 - Lamp		1/C #10 - Lamp (Ground Wire)		3/C #14 (IDC)		#8-AWG		FILL (in. ²)		FILL (%)	
POLE A	JB 1	22	0	0	UN	I.D.	UN	I.D.	UN	I.D.	UN	I.D.	UN	I.D.	UN	I.D.	UN	I.D.	32	0	32	32	0	32	32	0	32	0	32	0.328	4%				
POLE B	JB 1	10	0	0	5	C,D,E,F,G	1	A	1	B	1	H	1	I	1	LAMP 1	1	LAMP 1	20	100	0	0	20	0	0	0	20	20	1.870979804	25%					
POLE C	JB 1	28	0	0	1	J	1	K	1	H	1	I	1	LAMP 1	1	LAMP 1	38	0	38	38	0	0	0	0	0	38	0.328	4%							
POLE D	JB 2	14	0	0	1	L	1	M	2	LAMP 5	1	LAMP 5	24	0	24	24	0	48	24	0	24	0	24	0.328	4%										
POLE I	JB 3	14	0	0	4	GG,HH,II,JJ	1	KK	1	LL	2	LAMP 2	1	LAMP 2	24	96	0	0	24	48	24	24	24	24	1.548979804	21%									
POLE J	JB 3	8	0	0	1	EE	1	FF	18	0	18	18	0	0	0	0	0	18	0.328	4%															
POLE K	JB 3	115	0	0	129	0	0	0	0	0	0	0	0	0	0	0	0	129	0.057	1%															
POLE L	JB 3	91	0	0	4	GG,HH,II,JJ	1	EE	1	FF	1	KK	1	LL	2	LAMP 2	1	LAMP 2	105	420	105	105	105	210	105	105	1.819979804	24%							
POLE M	JB 5	13	0	0	1	V	1	W	23	0	23	23	0	0	0	0	0	23	0.328	4%															
POLE N	JB 5	4	0	0	5	XY,Z,AA,BB	1	CC	1	DD	2	LAMP 3	1	LAMP 3	14	70	0	0	14	28	14	14	14	1.870979804	25%										
POLE O	JB 5	116	0	0	5	XY,Z,AA,BB	1	V	1	W	1	CC	1	DD	4	LAMP 2,3	2	LAMP 2,3	130	650	130	130	130	520	260	130	130	2.141979804	29%						
POLE P	JB 6	111	0	0	4	GG,HH,II,JJ	1	EE	1	FF	1	KK	1	LL	125	500	125	125	125	0	0	125	125	1.819979804	24%										
POLE Q	JB 7	7	0	0	1	N	1	O	17	0	17	17	0	0	0	0	0	17	0.328	4%															
POLE R	JB 7	17	0	0	4	P,Q,R,S	1	T	1	U	2	LAMP 4	1	LAMP 4	27	108	0	0	27	54	27	27	27	1.548979804	21%										
SUB-TOTAL	902	0	0																																
TOTAL LENGTH	902																		10/C-14	5/C-14	2/C-14	Preemption	2/C-10	1/C-10	I.D.C.	#8-AWG									

* Interconnect between JB 7 and the adjacent intersection


E-2
E-6

NO. _____	DATE _____
DRAWN _____	CHECKED _____
RELEASED _____	REGISTERED _____

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY

ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

ELECTRICAL PLANS (2 OF 6)



CVE ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS

(732) 727 8000 (732) 462 7400

3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIR P.E. & P.P. (1983 - 2021) NJ PE LIC NO. 25828	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 2455	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & L.S. LIC NO. 24271 NJ PP LIC NO. 2089
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGORY R. VALES P.E. & P.P. NJ PE LIC NO. 39458 NJ PP LIC NO. 4361

MICHAEL J. McCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER

LIC. 32468

As Shown February 2022

DRAWN BY RCM

DESIGNED BY RCM/KEC

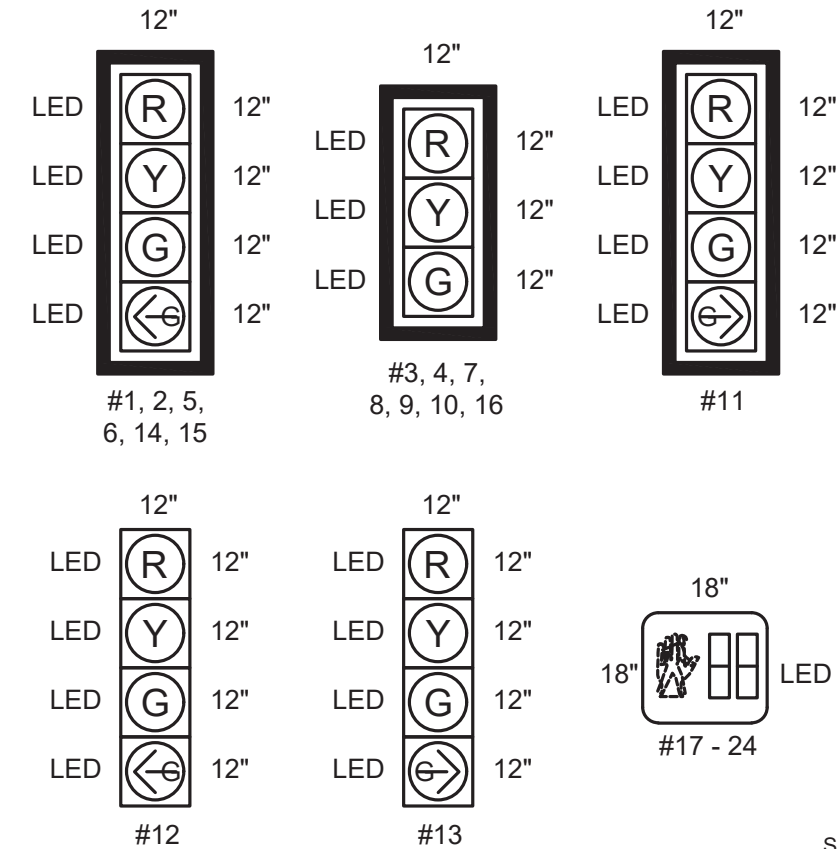
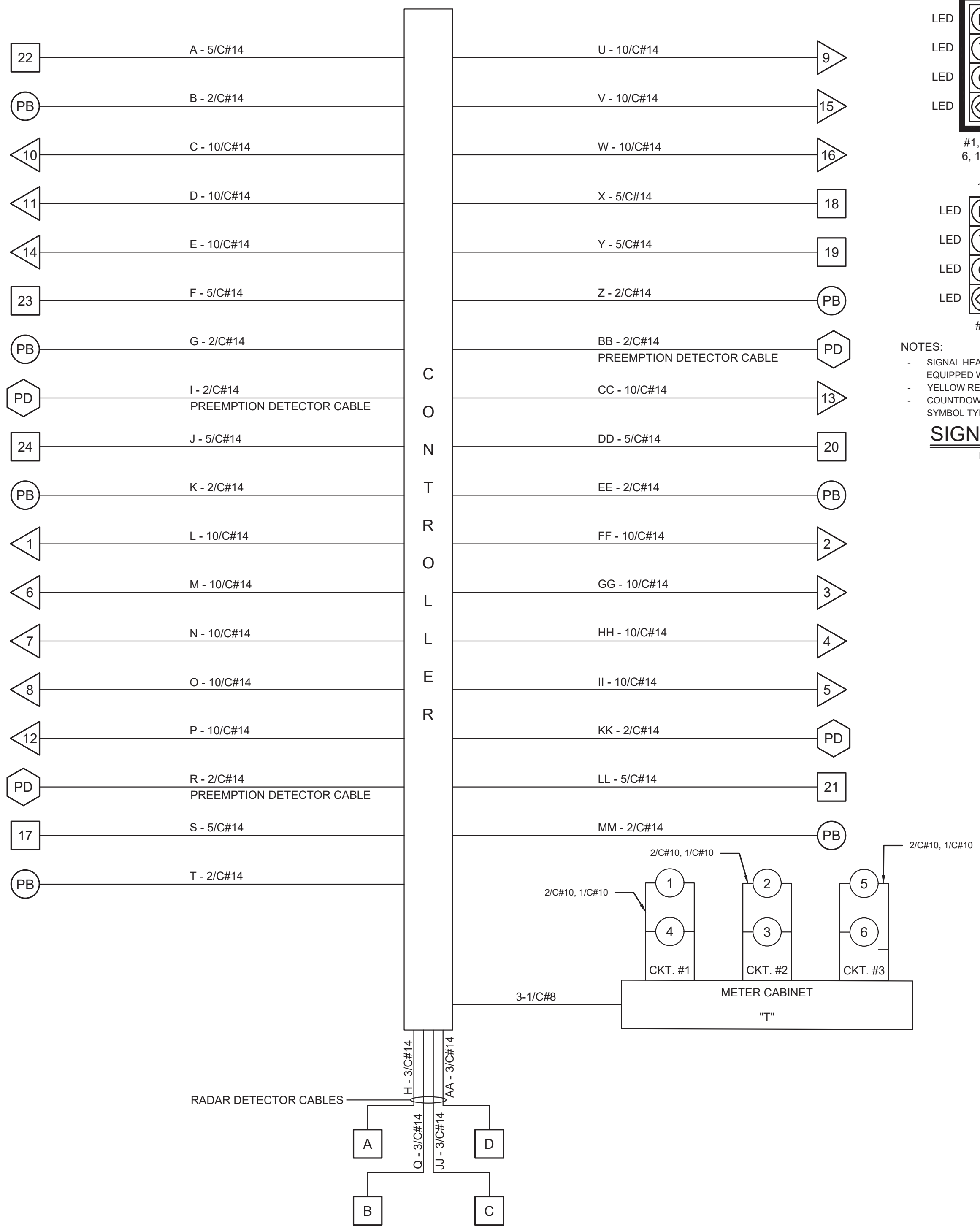
CHECKED BY JCW

DATE 2/17/2022

SHEET 140 OF 197

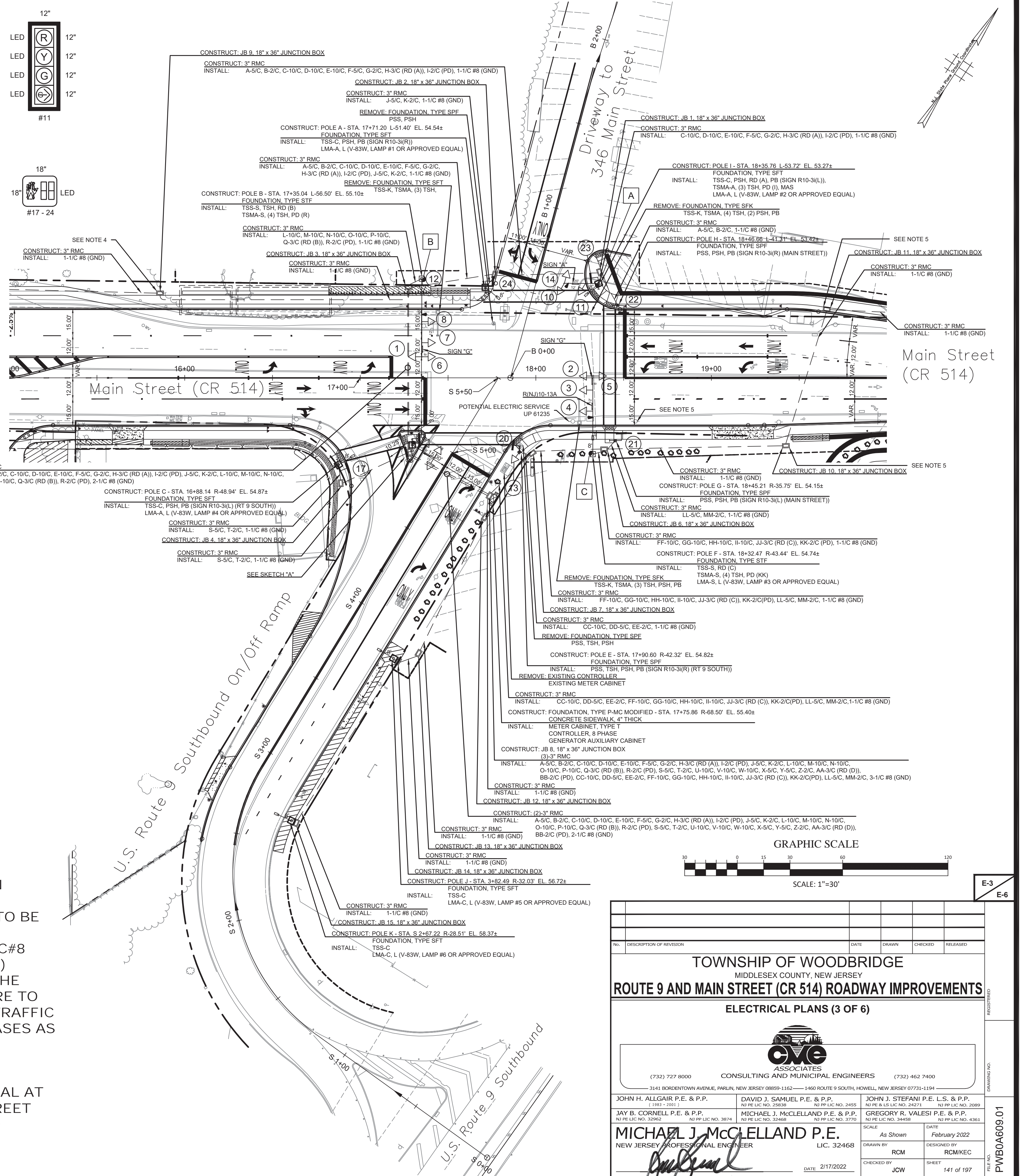
DRAWING NO. **PWB04609.01**

BLOCK WIRING DIAGRAM



NOTES:
 SIGNAL HEADS #1 - 11 & 14 - 16 ARE TO BE EQUIPPED WITH ENHANCED BACKPLATES
 YELLOW RETROREFLECTIVE STRIP, 1" WIDE
 COUNTDOWN PEDESTRIAN SIGNAL 9" SYMBOL TYPE WITH SUN-GLARE SCREEN

SIGNAL LEGEND
 NOT TO SCALE



- NOTE:
- REFER TO SHEETS 53 TO 65 FOR TRAFFIC SIGNAL CONSTRUCTION DETAILS.
 - ALL PROPOSED PUSH BUTTONS TO BE ADA COMPLIANT.
 - INSTALL GROUND WIRE (GND), 1/C#8 AWG, INSULATED (COLOR GREEN) CONTINUOUSLY THROUGHOUT THE TRAFFIC SIGNAL SYSTEM. SECURE TO ALL GROUND RODS, CABINETS, TRAFFIC SIGNAL BASES AND LIGHTING BASES AS NOTED.
 - JUNCTION BOX IS PROPOSED TO PROVIDE A HARDWIRE INTERCONNECTION TO THE SIGNAL AT THE INTERSECTION OF MAIN STREET AND THE ROUTE 9 SOUTHBOUND ON/OFF RAMP.

NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
606141P NS	CONCRETE SIDEWALK, REINFORCED, 4" THICK	2	SY
701021P	3" RIGID METALLIC CONDUIT	994	LF
701102M	18" X 36" JUNCTION BOX	11	UN
701128M	FOUNDATION, TYPE P-MC (MODIFIED)	1	UN
701144M	FOUNDATION, TYPE SFK	3	UN
701135M	FOUNDATION, TYPE SPF	4	UN
701138M	FOUNDATION, TYPE STF	2	UN
701168M	METER CABINET, TYPE T	1	UN
701192P	GROUND WIRE, NO. 8 AWG	1479	LF
701213P	SERVICE WIRE, NO. 6 AWG	26	LF
702009M	CONTROLLER, 8-PHASE	1	UN
702012M	TRAFFIC SIGNAL STANDARD, ALUMINUM	3	UN
702015M	TRAFFIC SIGNAL STANDARD, STEEL	2	UN
702018M	PEDESTRIAN SIGNAL STANDARD	4	UN
702021M	TRAFFIC SIGNAL MAST ARM, ALUMINUM	2	UN
702024M	TRAFFIC SIGNAL MAST ARM, STEEL	2	UN
702027P	TRAFFIC SIGNAL CABLE, 2 CONDUCTOR, #14 AWG	1245	LF
702030P	TRAFFIC SIGNAL CABLE, 5 CONDUCTOR, #14 AWG	1245	LF
702033P	TRAFFIC SIGNAL CABLE, 10 CONDUCTOR, #14 AWG	2643	LF
702036M	TRAFFIC SIGNAL HEAD	16	UN
702039M	PEDESTRIAN SIGNAL HEAD	6	UN
702042M	PUSH BUTTON	6	UN
702046M NS	RADAR DETECTOR	4	UN
702050M NS	GENERATOR AUXILIARY CABINET	1	UN
702057M NS	INTERIM TRAFFIC SIGNAL SYSTEM, LOCATION NO. 2	1	LS
702060M	CONTROLLER TURN-ON	1	UN
702103P NS	OPTICAL EMERGENCY PREEMPTION SYSTEM	1	LS

TOWNSHIP OF WOODBRIDGE
 MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS
 ELECTRICAL PLANS (3 OF 6)

CONSULTING AND MUNICIPAL ENGINEERS

JOHN H. ALLGAIER P.E. & P.P.
 DAVID J. SAMUEL P.E. & P.P.
 JOHN J. STEFANI P.E., L.S. & P.P.

JAY B. CORNELL P.E. & P.P.
 MICHAEL J. MCCLELLAND P.E. & P.P.
 GREGORY R. VALESI P.E. & P.P.

MICHAEL J. MCCLELLAND P.E.
 NEW JERSEY PROFESSIONAL ENGINEER

DATE: 2/17/2022

SCALE: As Shown

DESIGNED BY: RCM
 CHECKED BY: JCW

FILE NO. PWB04609.01

NORMAL OPERATON

A) CR 514 (Main St)** EB/WB Lead Left Change	<G-/G <Y-/G	R	<G-/G <Y-/G	R	R	R/-G> R/-Y>	R	DW	DW	6 - 16 3	6 - 16 3
B) CR 514 (Main St)** EB/WB ROW Change Clearance	G Y R	G Y R	G Y R	G Y R	R R R	R R R	R	DW DW DW	DW DW DW	55 - 37 4* 2	55 - 30 4* 2
C) Route 9 SB On/Off Ramp** NB Lead Change	R	R	R	R	<G-/G <Y-/G	G	R	DW DW	DW DW	6 3	6 3
D) Route 9 SB On/Off Ramp** NB/SB ROW Change Clearance	R R R	R R R	R R R	R R R	G Y R/-G>	G Y R	G	DW DW DW	DW DW DW	6 - 14 3 2	6 - 21 3 2

PEDESTRIAN OPERATON

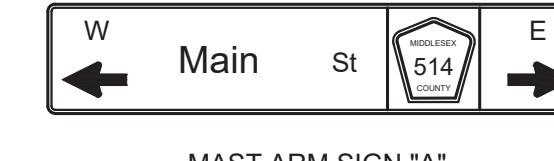
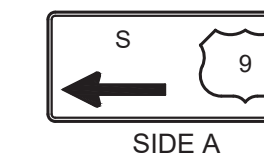
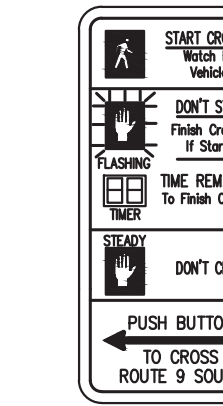
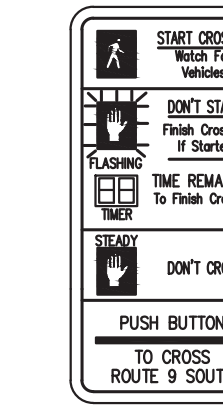
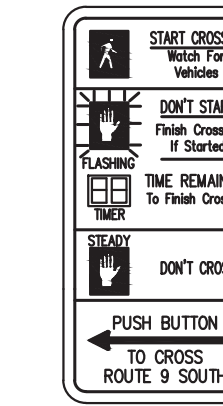
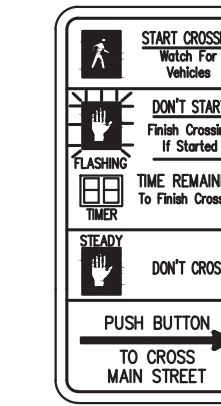
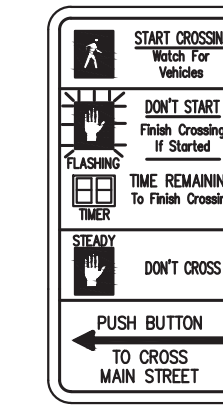
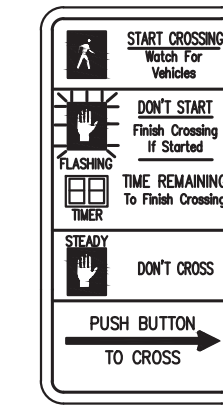
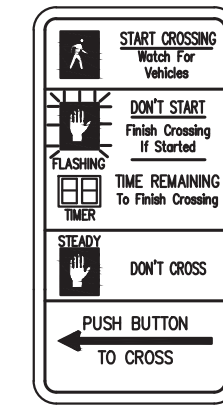
A) CR 514 (Main St)** EB/WB Lead Left Change	<G-/G <Y-/G	R	<G-/G <Y-/G	R	R	R/-G> R/-Y>	R	DW	DW	6 - 16 3	6 - 16 3
B) CR 514 (Main St)** EB/WB ROW Pedestrian Clearance Vehicle Extension Change Clearance	G G G Y R	G G G Y R	G G G Y R	G G G Y R	R R R R R	R R R R R	R	DW FDW DW DW DW	DW DW DW DW DW	4 26 10 - 0 4* 2	4 26 10 - 0 4* 2
C) Route 9 SB On/Off Ramp** NB Lead Change	R	R	R	R	<G-/G <Y-/G	G	R	DW DW	DW DW	6 3	6 3
D) Route 9 SB On/Off Ramp** NB/SB ROW Pedestrian Clearance Change Clearance	R R R R	R R R R	R R R R	R R R R	G G Y Y/-G>	G G Y R	G	DW FDW DW DW	DW FDW DW DW	4 17 3 2	4 17 3 2
Emergency Operation	Y	Y	Y	Y	R	R	R	DARK	DARK	-	-

Notes:

- The timings in Timing Plan I shall run Monday - Friday, excluding Holidays, from 12:00 am - 12:00 am.
- The timings in Timing Plan II shall run Saturday, Sunday, and Holidays from 12:00 am - 12:00 am.
- *An offset of 0 seconds is measured from the beginning of yellow to Main Street Traffic at this intersection during Timing Plan I. An offset of 0 seconds is measured from the beginning of yellow to Main Street Traffic at this intersection during Timing Plan II. This is the master intersection and shall be coordinated with the intersection of Route 9 Northbound On/Off Ramp and CR 514 (Main Street) and shall be coordinated with the intersection of CR 514 (Main Street) and Crosspointe Town Square Driveway and Vermella Access Road.
- The vehicle memory is to be off and the extension is to be 2 seconds.
- The manual control cord is to be disconnected.
- Phase B shall be capable of being skipped.
- Display DW if no pedestrian actuation occurs.
- In the case of power failure, operate the traffic signal in full operation mode for twenty-four (24) hours and thereafter in flash mode until the traffic signal is fixed]

**Pre-Emption Notes:

- The intersection shall have a controller cabinet with a controller or other components capable of pre-emption feature.
- Remote control pre-emption is permitted from all approaches to the intersection.
- During the transition into pre-emption control, the controller shall guarantee all minimum green, pedestrian clearance, yellow change and all-red clearance times. "Walk" times are to be aborted upon Emergency Pre-Emption.
- A minimum guaranteed green time of 7 seconds shall be provided to Main Street ROW (Phase B).
- A pre-emption call shall hold that direction/phase until released (with a minimum of 15 seconds ROW provided to that direction/phase.)
- A pre-emption from either of the Main Street approaches shall provide green interval ROW to both directions of Main Street.
- During the transition out of pre-emption control, yellow change and all-red clearance times shall be guaranteed.
- Upon termination of pre-emption, the controller shall exit and return to Route 9 SB On/Off Ramp ROW (Phase D). At this point, normal operation shall commence.
- Route 9 SB ramps ROW (Phase D) shall be guaranteed 15 seconds of minimum green time before a pre-emption to another direction or phase is serviced.
- If the controller is replaced with one without pre-emption capabilities, the pre-emption device shall be disconnected.



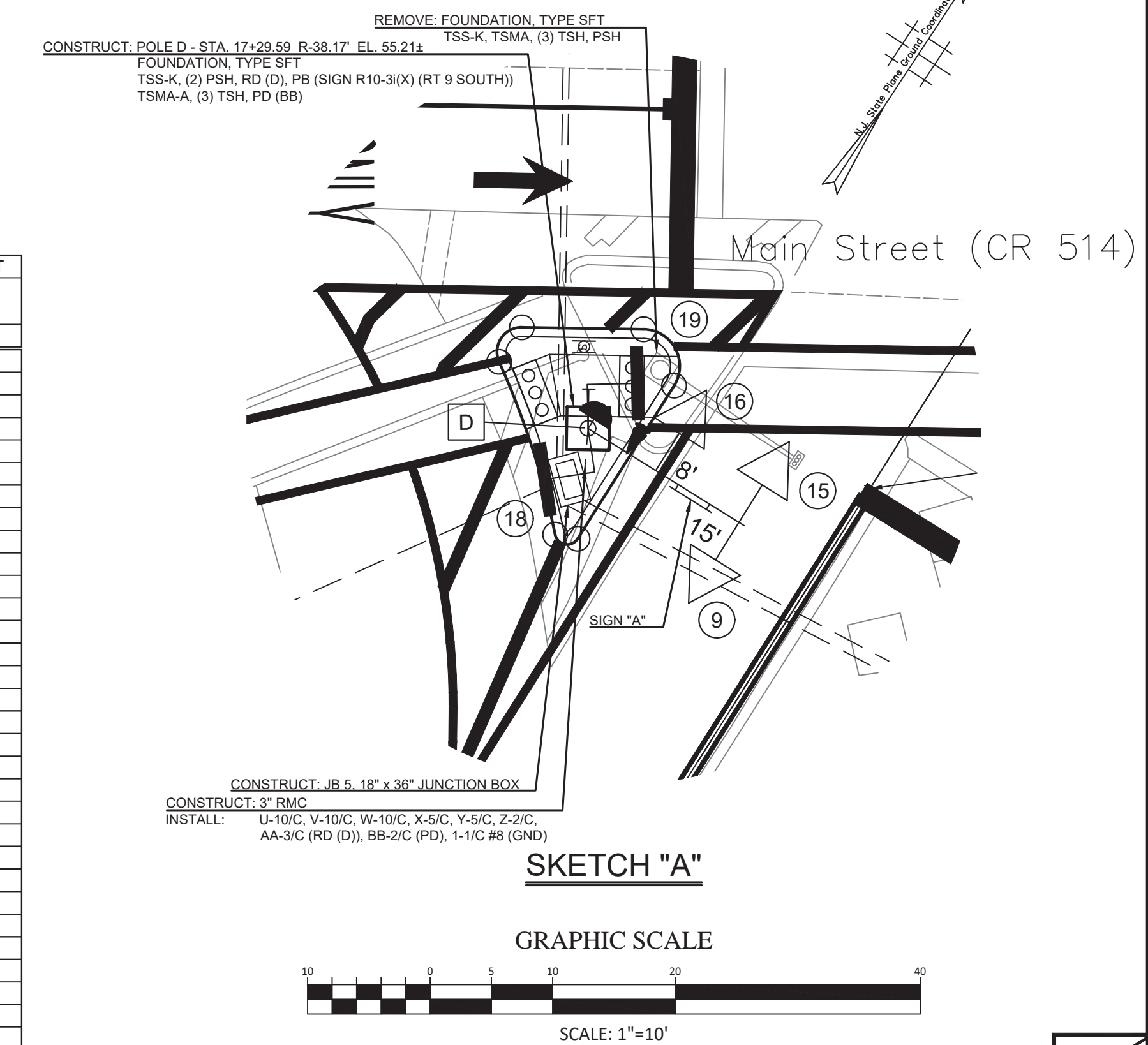
SIDE B
MAST ARM SIGN "G"
36" x 18"
REVERSE DOUBLE
SIDED

NOTE: D SERIES LETTERING USED FOR THIS SIGN

SIGN LEGEND
NOT TO SCALE

CONNECTION FROM TO	CONDUIT LENGTH (LF)			NUMBER OF WIRES												TOTAL LENGTH OF WIRES (LF)							CONDUIT					
	3"	2-3"	3-3"	10/C #14 - Vehicle Heads		5/C #14 - Pedestrian Heads		2/C #14 - Push Buttons		3/C #14 - Image Detection Cable		2/C #14 - Preemption		2/C #10 - Lamp		1/C #10 - Lamp (Ground Wire)		LENGTH	10/C #14	5/C #14	2/C #14	2/C #14 - Preemption	2/C #10 - Lamp	1/C #10 - Lamp (Ground Wire)	3/C #14 (IDC)	#8-AWG	FILL (in. ²)	FILL (%)
POLE H JB 1	20	0	0	UN	I.D.	UN	A	UN	B	UN		UN		UN		UN		30	0	30	30	0	0	0	0	30	0.328	4%
POLE I JB 1	5	0	0	3	C,D,E	1	F	1	G	1	H	1	I					15	45	15	15	15	0	15	15	1.497979804	20%	
JB 1 JB 2	58	0	0	3	C,D,E	2	A,F	2	B,G	1	H	1	I					72	216	144	144	72	0	72	72	1.768979804	24%	
POLE A JB 2	8	0	0			1	J	1	K									18	0	18	18	0	0	18	0.328	4%		
JB 2 JB 3	47	0	0	3	C,D,E	3	A,F,J	3	B,G,K	1	H	1	I					61	183	183	183	61	0	61	61	2.039979804	27%	
POLE B JB 3	9	0	0	5	L,M,N,O,P					1	Q	1	R					19	95	0	0	19	0	19	19	1.870979804	25%	
JB 3 JB 5	0	91	0	8	C,D,E,L,M,N,O,P	3	A,F,J	3	B,G,K	2	H,Q	2	I,R					105	840	315	315	210	0	210	210	3.853959607	26%	
POLE C JB 4	10	0	0			1	S	1	T					2	LAMP 4	1	LAMP 4	20	0	20	20	0	40	20	0	0.328	4%	
JB 4 JB 5	41	0	0			1	S	1	T					2	LAMP 4	1	LAMP 4	55	0	55	55	0	110	55	0	0.328	4%	
POLE D JB 5	4	0	0	3	U,V,W	2	XY	1	Z	1	AA	1	BB					14	42	28	14	14	0	14	14	1.663979804	22%	
JB 5 CONT JB 8	0	50	0	11	C,D,E,L,M,N,O,P,U,V,W	6	A,F,J,S,XY	5	B,G,K,T,Z	3	H,Q,AA	3	I,R,BB	2	LAMP 4	1	LAMP 4	64	704	384	320	192	128	64	192	128	5.731939411	38%
POLE G JB 6	7	0	0			1	LL	1	MM									17	0	17	17	0	0	17	0.328	4%		
POLE F JB 6	7	0	0	4	FF,GG,HH,II					1	JJ	1	KK					17	68	0	0	17	0	17	17	1.548979804	21%	
JB 6 JB 7	38	0	0	4	FF,GG,HH,II	1	LL	1	MM	1	JJ	1	KK					52	208	52	52	52	0	52	52	1.819979804	24%	
POLE E JB 7	7	0	0	1	CC	1	DD	1	EE									17	17	17	17	0	0	17	0.65	9%		
JB 7 CONT JB 8	31	0	0	5	CC,FF,GG,HH,II	2	DD,LL	1	EE,MM	1	JJ	1	KK					45	225	90	45	45	0	45	45	2.307979804	31%	
POLE K JB 15	5	0	0											2	LAMP 6	1	LAMP 6	15	0	0	0	0	30	15	0	15	0.057	1%
JB 15 JB 14	105	0	0											2	LAMP 6	1	LAMP 6	119	0	0	0	0	238	119	0	119	0.057	1%
POLE J JB 14	5	0	0											2	LAMP 5	1	LAMP 5	15	0	0	0	0	30	15	0	15	0.057	1%
JB 14 JB 13	11	0	0											4	LAMP 5,6	2	LAMP 5,6	25	0	0	0	0	100	50	0	25	0.057	1%
JB 13 JB 12	83	0	0											4	LAMP 5,6	2	LAMP 5,6	97	0	0	0	0	388	194	0	97	0.057	1%
JB 12 CONT JB 8	9	0	0											4	LAMP 5,6	2	LAMP 5,6	23	0	0	0	0	92	46	0	23	0.057	1%
JB 3 JB 9	150	0	0															164	0	0	0	0	0	164	0.057	1%		
JB 9 JB *	199	0	0															213	0	0	0	0	0	0	213	0.057	1%	
JB 6 JB 10	100	0	0															114	0	0	0	0	0	0	114	0.057	1%	
JB 10 JB 11	79	0	0															93	0	0	0	0	0	0	93	0.057	1%	
JB 11 JB **	78	0	0															92	0	0	0	0	0	0	92	0.057	1%	
SUB-TOTAL	1116	141	0																									
TOTAL LENGTH	1398	For Traffic Signal																10/C-14	5/C-14	2/C-14	Preemption	2/C-10	1/C-10	I.D.C.	#8-AWG			
																		2,843	1,368	1,245	697	1,156	578	697	1,750			

* Interconnect between JB 9 and the adjacent intersection
** Interconnect between JB 11 and the adjacent intersection



TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS
ELECTRICAL PLANS (4 OF 6)

CVE ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS
(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400

JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991) NO PE LIC NO. 25839 NO PP LIC NO. 24959
JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32952 NO PP LIC NO. 38774
DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 24555 NO PP LIC NO. 24271
MICHAEL J. McCLELLAND P.E. & P.P. NO PE LIC NO. 33466 NO PP LIC NO. 37370
JOHN J. STEFANI P.E. L.S. & P.P. NO PE LIC NO. 24271 NO PP LIC NO. 43561
GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 39458 NO PP LIC NO. 43561

MICHAEL J. McCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. 32468
DATE: 2/17/2022

As Shown February 2022
DRAWN BY RCM
CHECKED BY RCM/KEC
DESIGNED BY RCM/KEC
SHEET 142 OF 197

FILE NO. PWB04609.01

Phase	90 Second Background Cycle Signal Indications						Time (Sec.)	
	1-2	3	4-6	7-10	11-12	13-14	I	II
<u>NORMAL OPERATON</u>								
A) CR 514 (Main St) ROW**	G	G	G	R	DW	DW	64	48 66 - 41
Change	Y	Y/-G>	Y	R	DW	DW	4*	4*
Clearance	R	R/-G>	R	R	DW	DW	2	2
B) Route 9 NB On/Off Ramp ROW**	R	R/-G>	R	G	DW	DW	14 - 30	12 - 37
Change	R	R/-G>	R	Y	DW	DW	4	4
Clearance	R	R/-G>	R	R	DW	DW	2	2
<u>PEDESTRIAN OPERATON</u>								
A) CR 514 (Main St) ROW**	G	G	G	R	W	DW	4	4
Pedestrian Clearance	G	G	G	R	FDW	DW	23	23
Vehicle Extension	G	G	G	R	DW	DW	37 - 21	37 - 14
Change	Y	Y/-G>	Y	R	DW	DW	4*	4*
Clearance	R	R/-G>	R	R	DW	DW	2	2
B) Route 9 NB On/Off Ramp ROW**	R	R/-G>	R	G	DW	W	4	4
Pedestrian Clearance	R	R/-G>	R	G	DW	FDW	10	10
Vehicle Extension	R	R/-G>	R	G	DW	DW	0 - 16	0 - 23
Change	R	R/-G>	R	Y	DW	DW	4	4
Clearance	R	R/-G>	R	R	DW	DW	2	2
Emergency Operation	Y	Y	Y	R	DARK	DARK	-	-


Notes:

- The timings in Timing Plan I shall run Monday - Friday, excluding Holidays, from 12:00 am - 12:00 am.
 - The timings in Timing Plan II shall run Saturday, Sunday, and Holidays from 12:00 am - 12:00 am.
 - *An offset of 6 seconds is measured from the beginning of yellow to Main Street Traffic at this intersection during Timing Plan I. An offset of 10 seconds is measured from the beginning of yellow to Main Street Traffic at this intersection during Timing Plan II. This intersection shall be coordinated with the Master intersection of US Route 9 Southbound On/Off Ramp and CR 514 (Main Street).
 - The vehicle memory is to be off and the extension is to be 2 seconds.
 - The manual control cord is to be disconnected.
 - Phase B shall be capable of being skipped.
 - Display DW if no pedestrian actuation occurs.
 - In the case of power failure, operate the traffic signal in full operation mode for twenty-four (24) hours and thereafter in flash mode until the traffic signal is fixed.
- **Pre-Emption Notes:**
- The intersection shall have a controller cabinet with a controller or other components capable of pre-emption feature.
 - Remote control pre-emption is permitted from all approaches to the intersection.
 - During the transition into pre-emption control, the controller shall guarantee all minimum green, pedestrian clearance, yellow change and all-red clearance times. "Walk" times are to be aborted upon Emergency Pre-Emption.
 - A minimum guaranteed green time of 7 seconds shall be provided to Main Street ROW (Phase A).
 - A pre-emption call shall hold that direction/phase until released (with a minimum of 15 seconds ROW provided to that direction/phase.)
 - A pre-emption from either of the Main Street approaches shall provide green interval ROW to both directions of Main Street.
 - During the transition out of pre-emption control, yellow change and all-red clearance times shall be guaranteed.
 - Upon termination of pre-emption, the controller shall exit and return to Route US 9 NB On/Off Ramp ROW (Phase B). At this point, normal operation shall commence.
 - Route US 9 NB ramps ROW (Phase B) shall be guaranteed 15 seconds of minimum green time before a pre-emption to another direction or phase is serviced.
 - If the controller is replaced with one without pre-emption capabilities, the pre-emption device shall be disconnected.

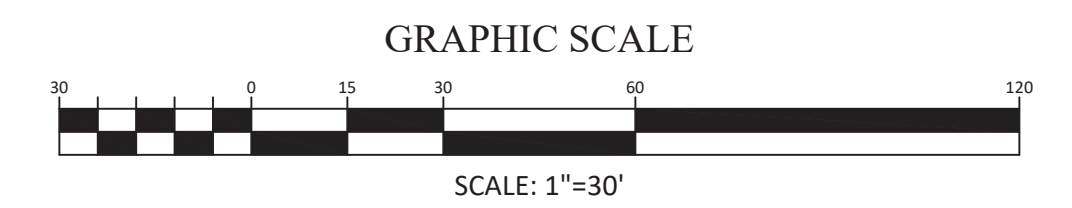
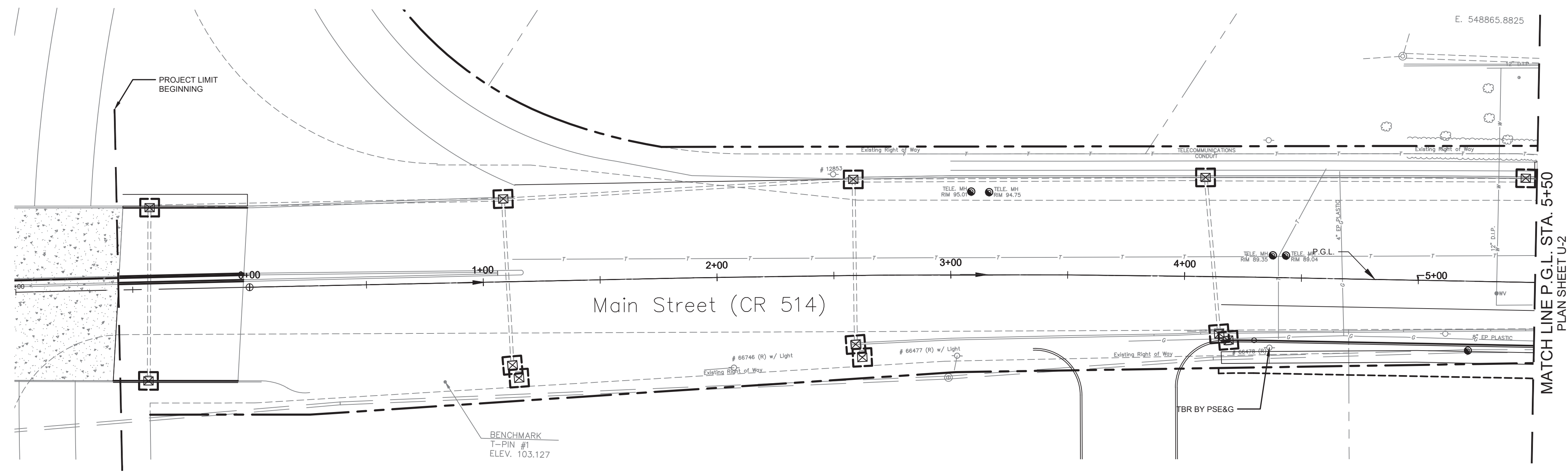
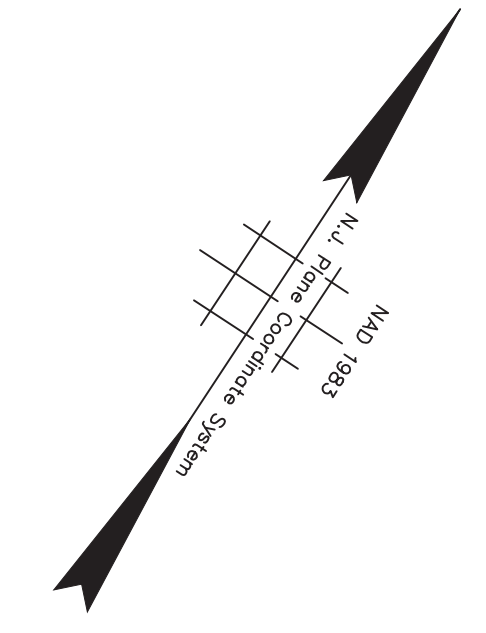
CONNECTION		CONDUIT LENGTH (LF)						NUMBER OF WIRES						TOTAL LENGTH OF WIRES (LF)						CONDUIT									
FROM	TO	3"	2-3"	3-3"	10/C #14 - Vehicle Heads		5/C #14 - Pedestrian Heads		2/C #14 - Push Buttons		3/C #14 - Radar Detection Cable		2/C #14 - Preemption		2/C #10 - Lamp		1/C #10 - Lamp (Ground Wire)		LENGTH	10/C #14	5/C #14	2/C #14	2/C #14 - Preemption	2/C #10 - Lamp	1/C #10 - Lamp (Ground Wire)	3/C #14 (IDC)	#8-AWG	FILL (in. ²)	FILL (%)
UN	I.D.	UN	I.D.	UN	I.D.	UN	I.D.	UN	I.D.	UN	I.D.	UN	I.D.	UN	I.D.	UN	I.D.	UN	I.D.										
POLE A	JB 6	6	0	0	3	A, B, C					1	D	1	E					16	48	0	0	16	0	0	16	16	1.226979804	16%
POLE G	JB 9	5	0	0	0										2	LAMP 3	1	LAMP 3	15					30	15				
	JB 9	72	0	0											2	LAMP 3	1	LAMP 3	86					172	86				
	JB 8	33	0	0											2	LAMP 3	1	LAMP 3	47					94	47				
POLE B	JB 1	11	0	0	1	F	1	G	1	H					2	LAMP 2	1	LAMP 2	21	21	21	21	0	42	21	0	21	0.65	9%
	JB 1	78	0	0	1	F	1	G	1	H					4	LAMP 2,3	2	LAMP 2,3	92	92	92	92	0	368	184	0	92	0.65	9%
	JB 2	19	0	0	1	F	1	G	1	H					4	LAMP 2,3	2	LAMP 2,3	33	33	33	33	0	132	66	0	33	0.65	9%
POLE C	JB 3	6	0	0	1	I	1	J	1	K									16	16	16	16	0	0	0	16	0.65	9%	
POLE D	JB 3	24	0	0	4	L, M, N, O	1	P	1	Q	1	R	1	S					34	136	34	34	34	0	0	34	34	1.819979804	24%
	JB 3	0	69	0	6	F, I, L, M, N, O	3	G, J, P	3	H, K, Q	1	R	1	S	4	LAMP 2,3	2	LAMP 2,3	83	498	249	249	83	332	166	83	166	3.005979804	20%
POLE E	JB 4	14	0	0			1	S	1	T					2	LAMP 1	1	LAMP 1	24	0	24	24	0	48	24	0	24	0.328	4%
	JB 4	0	25	0	6	F, I, L, M, N, O	4	G, J, P, T	4	H, K, Q, U	1	R	1	S	6	LAMP 1,2,3	3	LAMP 1,2,3	39	234	156	156	39	234	117	39	78	3.276979804	22%
POLE F	JB 5	5	0	0	2	V, W					1	X	1	Y					15	30	0	0	15	0	15	15	0.904979804	12%	
	JB 5	0	13	0	6	F, I, L, M, N, O, V, W	4	G, J, P, T	4	H, K, Q, U	1	R, X	1	S, Y	6	LAMP 1,2,3	3	LAMP 1,2,3	27	162	108	108	27	162	81	27	54	3.276979804	22%
	JB 6	6	0	0	3	A, B, C					1	D	1	E					20	60	0	0	20	0	0	20	1.226979804	16%	
	JB 7	150	0	0	0														164	0	0	0	0	0	0	164	0.057	1%	
SUB-TOTAL		429	107	0																									
TOTAL LENGTH		643																											

E-6

E-6

No. DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS ELECTRICAL PLANS (6 OF 6)					
 ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS					
(732) 727 8000		3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162		(732) 462 7400	
JOHN H. ALLGAIR P.E. & P.P. (1983 - 2021)		DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25839		JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271	
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32992		MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 38774		GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458	
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER L.I.C. 32468					
As Shown		DATE February 2022		DRAWN BY RCM	
DESIGNED BY RCM/KEC		CHECKED BY JCW		SHEET 144 of 197	
DATE 2/17/2022					


FILE NO. PWB04609.01
 DRAWING NO.



Potential Utility Conflicts:			
Utility Poles			
Companies: PSEG, Verizon and Comcast			
UP #:	Station:	Block:	Lot:
66478	4+36.87, Rt	ROW	ROW

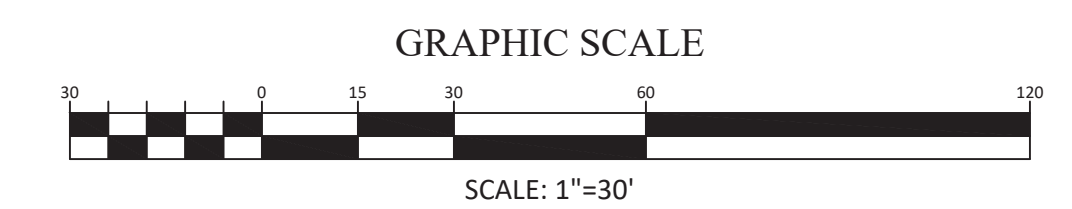
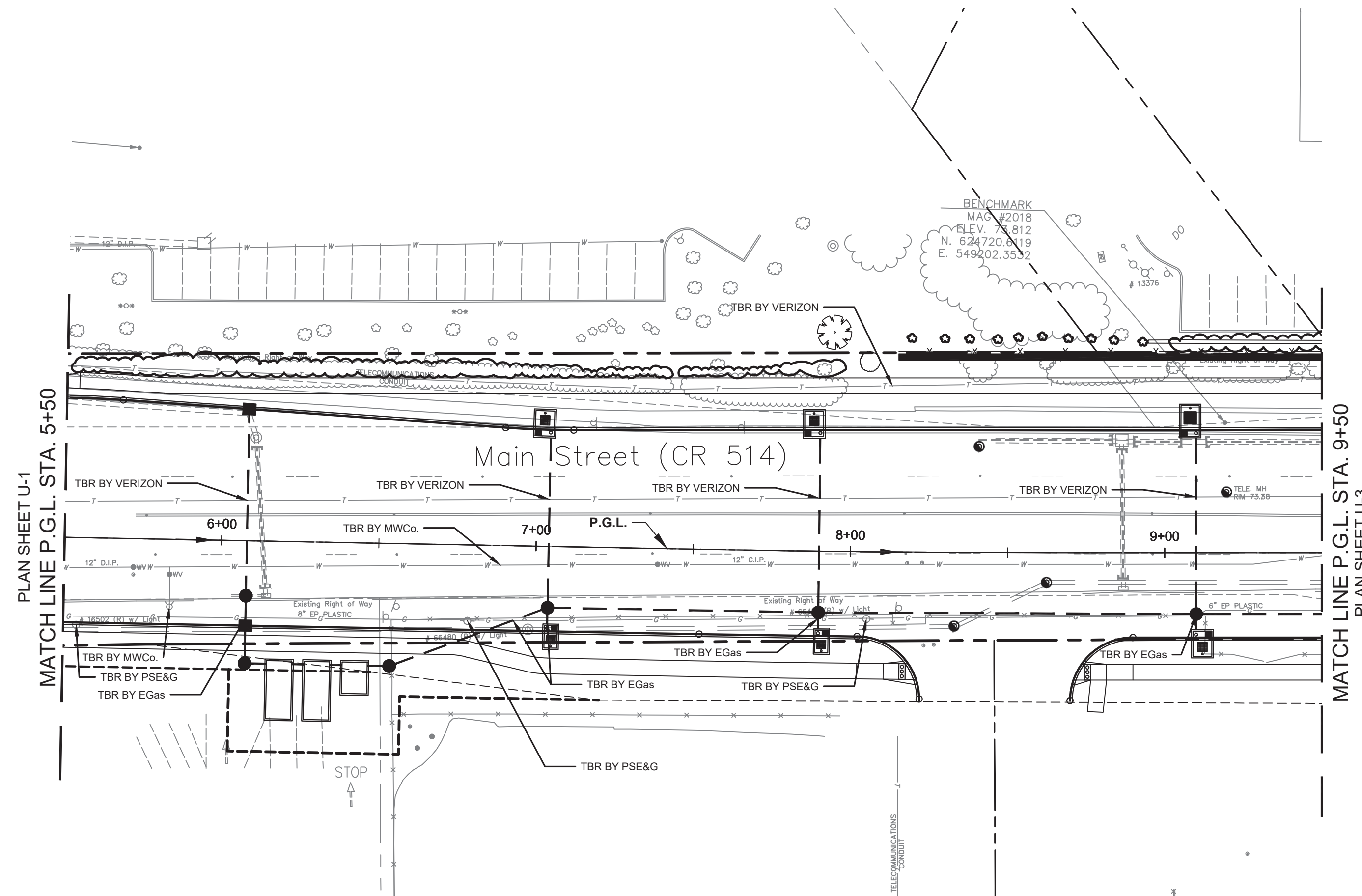
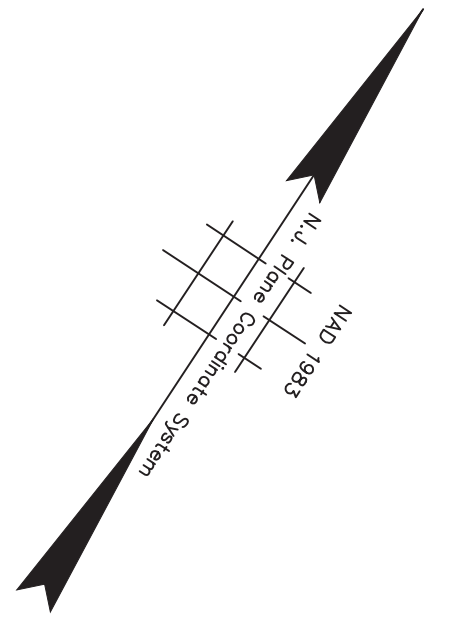
NOTES:

1. **PROTECT TOWNSHIP SANITARY SEWER FACILITIES AT ALL TIMES.**
2. **AERIAL UTILITIES TO BE RELOCATED BY PSE&G, VERIZON AND COMCAST.**
3. **UNDERGROUND UTILITIES TO BE RELOCATED BY MIDDLESEX WATER CO., VERIZON AND ELIZABETHTOWN GAS.**
4. **UTILITY COMPANIES TO PERFORM TEST PITS.**

<p>No. DESCRIPTION OF REVISION DATE DRAWN CHECKED RELEASED</p>	
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS UTILITY PLANS (1 OF 6)</p>	
 <p>ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p>	
<p>(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400</p>	
<p>JOHN H. ALLGAIR P.E. & P.P. (1983 - 2001) NJ PE LIC NO. 25838</p>	<p>DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 2455</p>
<p>JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32952</p>	<p>MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 3874</p>
<p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>	
<p>JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271</p>	<p>GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458</p>
<p>As Shown</p>	<p>DATE February 2022</p>
<p>DRAWN BY RCM</p>	<p>DESIGNED BY RCM</p>
<p>CHECKED BY JCW</p>	<p>SHEET 145 of 197</p>
<p>DATE 2/17/2022</p>	

U-1
U-6

FILE NO. PWB0609.01



Potential Utility Conflicts:
Utility Poles

Companies: PSEG, Verizon and Comcast			
UP #:	Station:	Block:	Lot:
16502	5+54.17, Rt	237	2.03
66480	6+78.60, Rt	238	1
66481	8+05.30, Rt	238	1

Utility Conflicts:
Fire Hydrants/Water Mains
Company: MWCo

Sta.:	Block:	Lot:
5+83.71, R	237	2.03

Potential Subsurface Utility Conflicts

Company:	Existing Facility:	Station:	Proposed Facility:
Elizabethtown Gas	8" E.P. Plastic	6+08.00, Rt	Storm Sewer
Elizabethtown Gas	8" E.P. Plastic	6+93.11, Rt	Storm Sewer
Elizabethtown Gas	8" E.P. Plastic	7+04.00, Rt	Storm Sewer
Elizabethtown Gas	8" E.P. Plastic	7+90.00, Lt	Storm Sewer
Elizabethtown Gas	8" E.P. Plastic	9+10.00, Rt	Storm Sewer
Verizon	Conduit	6+08.00, Lt	Storm Sewer
Verizon	Conduit	7+04.00, Lt	Storm Sewer
Verizon	Conduit	7+90.00, Lt	Storm Sewer
Verizon	Conduit	9+10.00, Lt	Storm Sewer

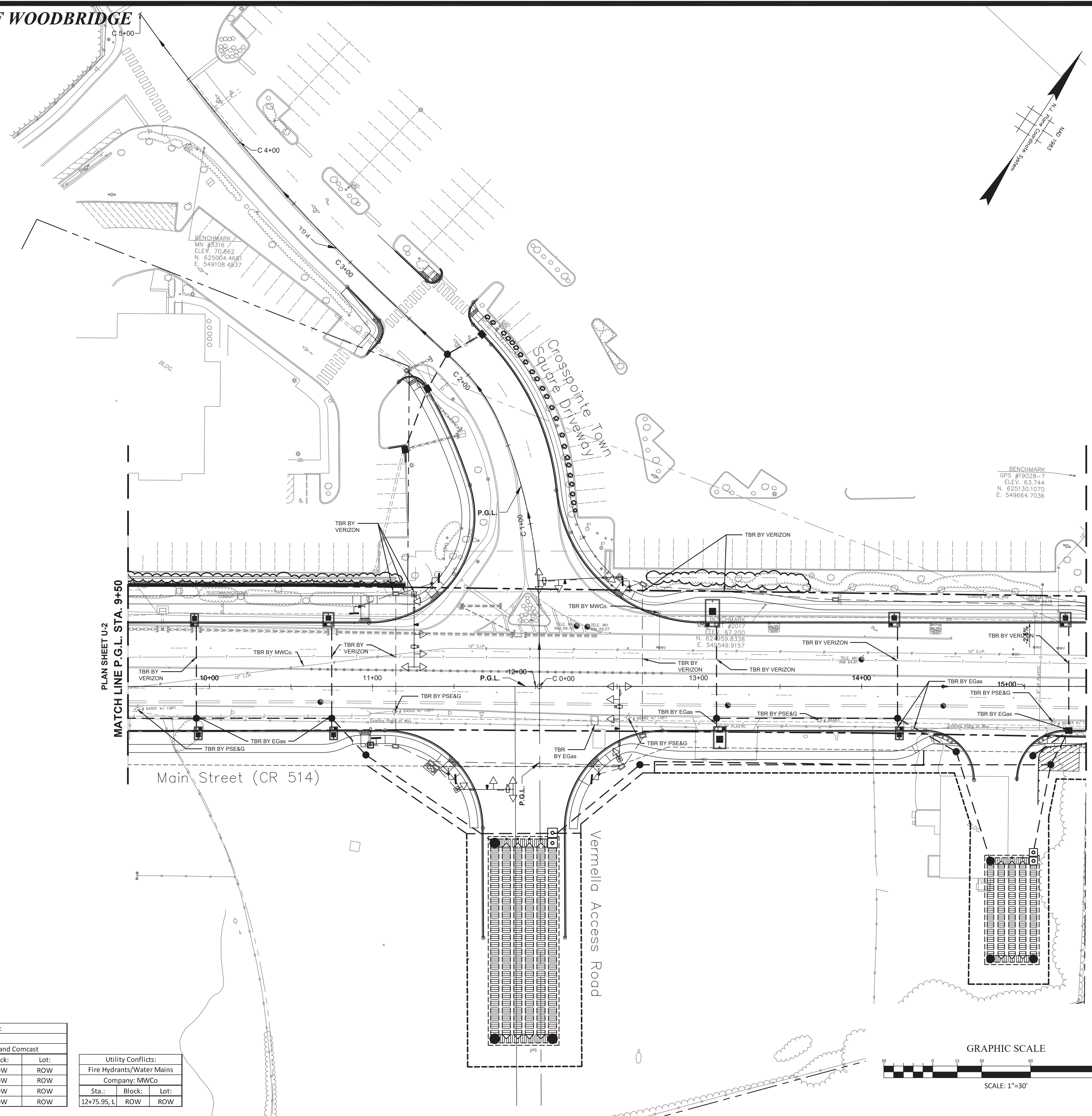
NOTES:

- 1. PROTECT TOWNSHIP SANITARY SEWER FACILITIES AT ALL TIMES.**
- 2. AERIAL UTILITIES TO BE RELOCATED BY PSE&G, VERIZON AND COMCAST.**
- 3. UNDERGROUND UTILITIES TO BE RELOCATED BY MIDDLESEX WATER CO., VERIZON, AND ELIZABETHTOWN GAS.**
- 4. UTILITY COMPANIES TO PERFORM TEST PITS.**

<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS UTILITY PLANS (2 OF 6)</p>			
<p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>			
<p>JOHN H. ALLGAIER P.E. & P.P. (1983 - 2581)</p>	<p>DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25838 NJ PP LIC NO. 2455</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 2089</p>	<p>GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458 NJ PP LIC NO. 4361</p>
<p>JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32762</p>	<p>MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 3720</p>	<p>SCALE: As Shown DATE: February 2022</p>	
<p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>		<p>DRAWN BY: RCM CHECKED BY: JCW</p>	<p>DESIGNED BY: RCM SHEET: 146 of 197</p>
<p>DATE: 2/17/2022</p>			

U-2
U-6

FILE NO. PWB0609.01



Potential Subsurface Utility Conflicts			
Company:	Existing Facility:	Station:	Proposed Facility:
Elizabethtown Gas	6" E.P. Plastic	9+92.00, Rt	Storm Sewer
Elizabethtown Gas	6" E.P. Plastic	10+75.00, Rt	Storm Sewer
Elizabethtown Gas	Subsurface Structure	12+36.33, Rt	Roadway Widening
Elizabethtown Gas	6" E.P. Plastic	13+11.00, Rt	Storm Sewer
Elizabethtown Gas	6" E.P. Plastic	14+22.00, Rt	Storm Sewer
Elizabethtown Gas	6" E.P. Plastic	14+32.24, Rt	Storm Sewer
Elizabethtown Gas	6" E.P. Plastic	15+27.00, Rt	Storm Sewer
Verizon	Conduit	9+92.00, Lt	Storm Sewer
Verizon	Conduit	10+75.00, Lt	Storm Sewer
Verizon	Conduit	11+12.71, Lt	Junction Box
Verizon	Conduit	11+14.28, Lt	Traffic Signal Conduit
Verizon	Conduit	11+19.75, Lt	Traffic Signal Conduit
Verizon	Conduit	11+25.53, Lt	Traffic Signal Foundation
Verizon	Conduit	12+65.48, Lt	Traffic Signal Conduit
Verizon	Conduit	12+84.66, Lt	Traffic Signal Conduit
Verizon	Conduit	13+11.00, Lt	Storm Sewer
Verizon	Conduit	13+15.77, Lt	Traffic Signal Conduit
Verizon	Conduit	14+22.00, Lt	Storm Sewer
Verizon	Conduit	15+27.00, Lt	Storm Sewer

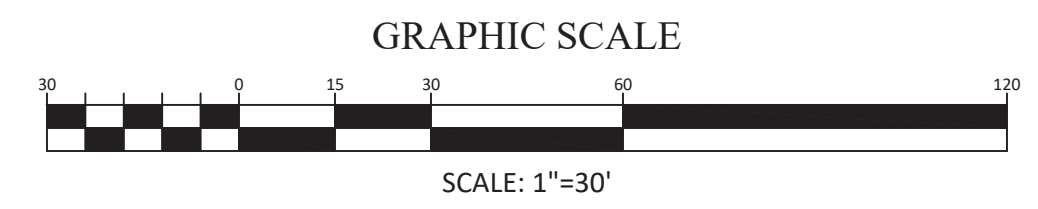
PLAN SHEET U-2
MATCH LINE P.G.L. STA. 9+50

MATCH LINE P.G.L. STA. 15+37.66
PLAN SHEET U-4

- NOTES:**
1. PROTECT TOWNSHIP SANITARY SEWER FACILITIES AT ALL TIMES.
 2. AERIAL UTILITIES TO BE RELOCATED BY PSE&G, VERIZON AND COMCAST.
 3. UNDERGROUND UTILITIES TO BE RELOCATED BY MIDDLESEX WATER CO., VERIZON, AND ELIZABETHTOWN GAS.
 4. UTILITY COMPANIES TO PERFORM TEST PITS.

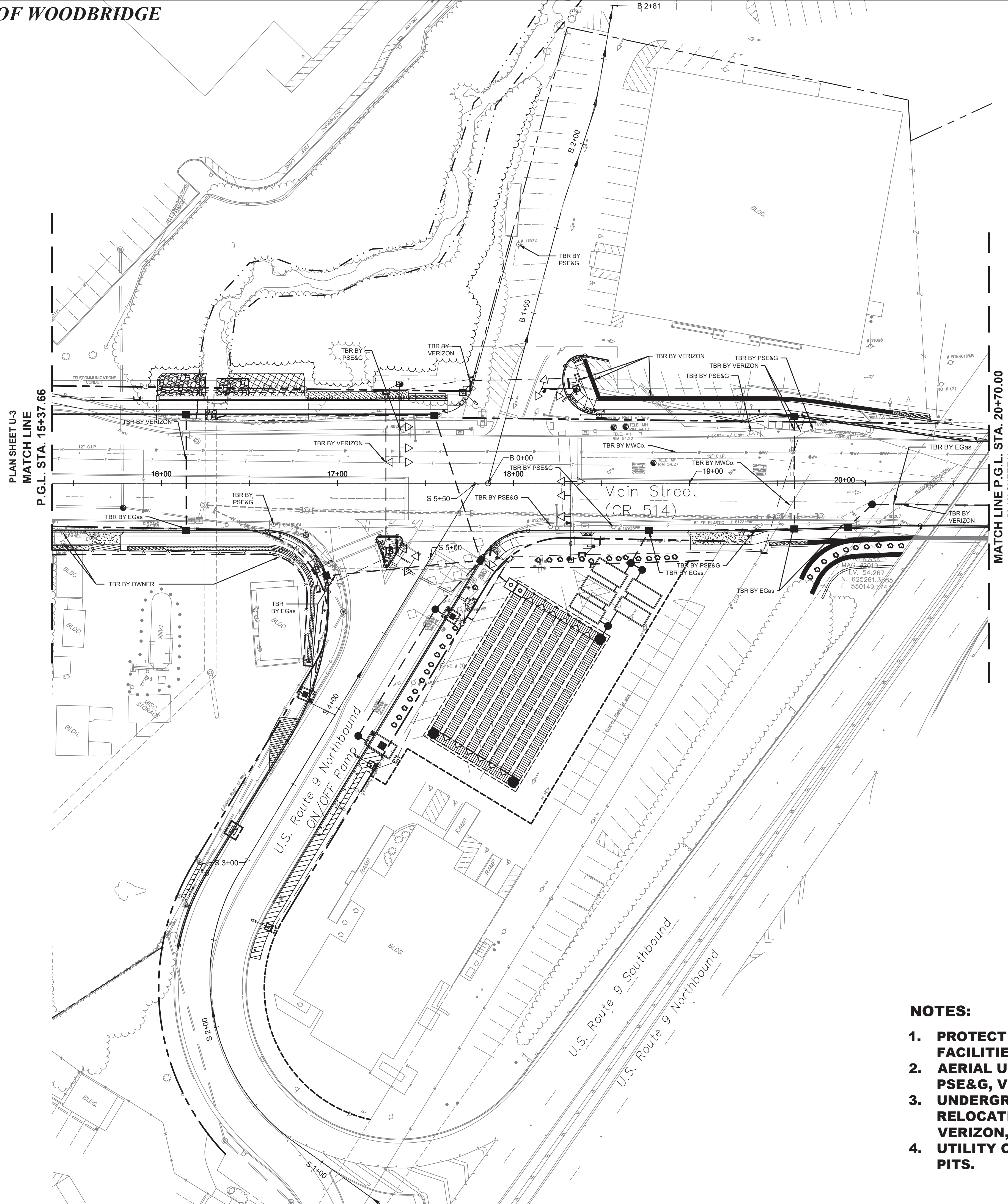
Utility Conflicts:			
Utility Poles			
Companies: PSEG, Verizon and Comcast			
UP #:	Station:	Block:	Lot:
64501	9+55.84, Rt	ROW	ROW
64502	11+12.45, Rt	ROW	ROW
66482	12+56.86, Rt	ROW	ROW
66483	13+73.88, Rt	ROW	ROW

Utility Conflicts:		
Fire Hydrants/Water Mains		
Company: MWC		
Sta.:	Block:	Lot:
12+75.95, L	ROW	ROW



TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS UTILITY PLANS (3 OF 6)			
<p>ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p>			
(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400			
JOHN H. ALLGAIR P.E. & P.P. (1981 - 2021) NJ PE LIC NO. 32962	DAVID J. SAMUEL P.E. & P.P. (1981 - 2021) NJ PE LIC NO. 32658	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE LIC NO. 29278	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468	DATE: February 2022 SCALE: As Shown DRAWN BY: RCM CHECKED BY: JCW
DATE: 2/17/2022			SHEET: 147 OF 197

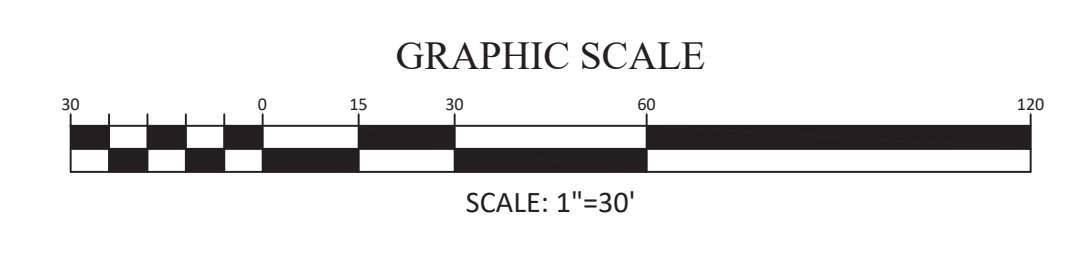
U-3
U-6
DRAWING NO.
PW80A609.01



Potential Utility Conflicts:			
Utility Poles			
Companies: PSEG, Verizon and Comcast			
UP #:	Station:	Block:	Lot:
66485WB	16+63.66, Rt	ROW	ROW
8629WB	17+36.21, Lt	ROW	ROW
61235WB	18+21.24, Rt	ROW	ROW
16925WB	18+56.73, Rt	ROW	ROW
69524	19+34.90, Lt	ROW	ROW
61234WB	19+38.36, Rt	ROW	ROW
16923	19+70.29, Lt	ROW	ROW
60267	20+07.84, Rt	ROW	ROW
11572	B 1+35.43, Lt	288.01	2

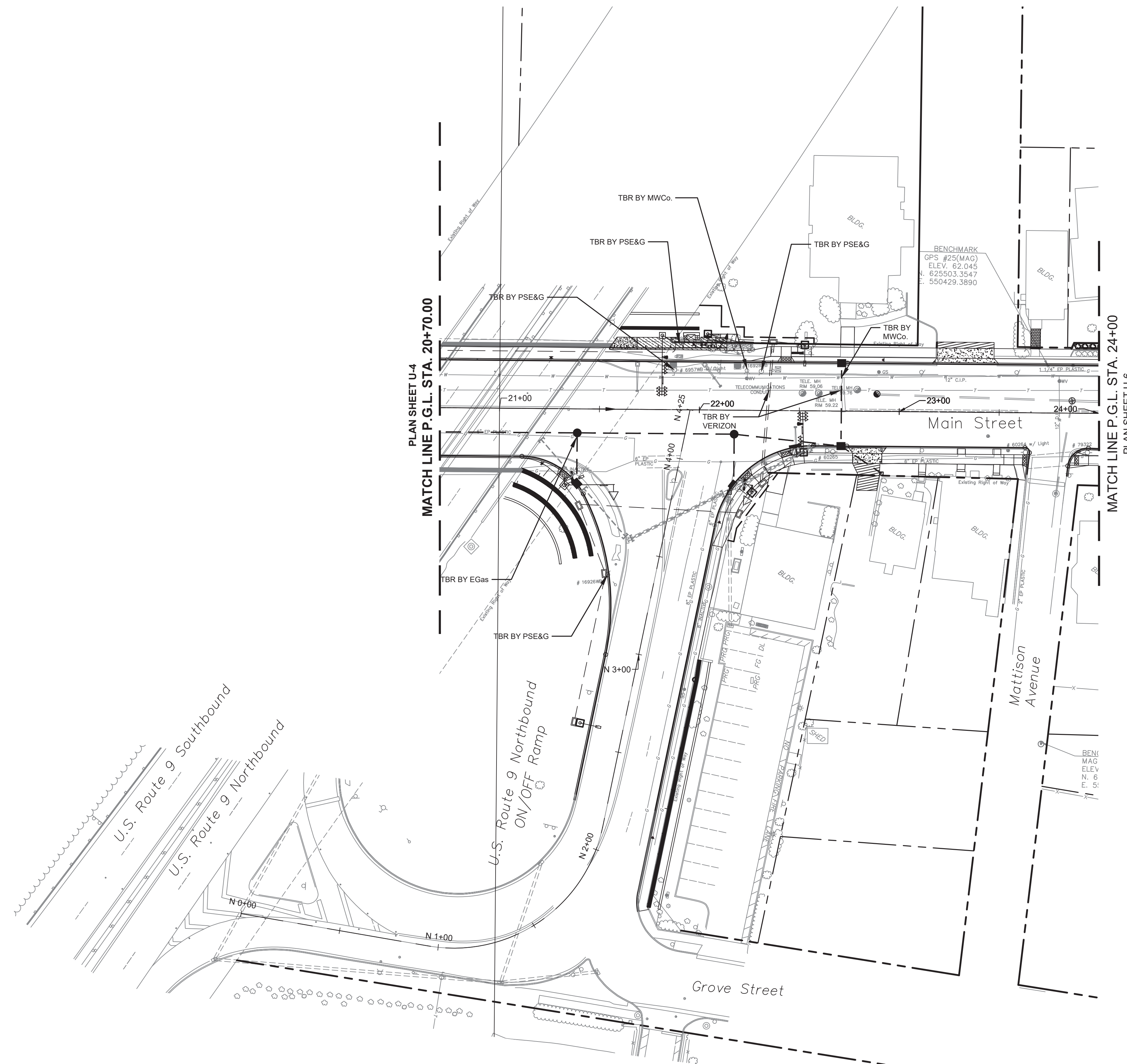
Utility Conflicts:		
Fire Hydrants/Water Mains		
Company: MWC		
Sta.:	Block:	Lot:
15+06.47, L	ROW	ROW

Potential Subsurface Utility Conflicts			
Company:	Existing Facility:	Station:	Proposed Facility:
Elizabethtown Gas	6" E.P. Plastic	16+14.00, Rt	Storm Sewer
Elizabethtown Gas	4" E.P. Plastic	16+84.00, Rt	Storm Sewer
Elizabethtown Gas	4" E.P. Plastic	16+98.83, Rt	Storm Sewer
Elizabethtown Gas	6" E.P. Plastic	18+77.00, Rt	Storm Sewer
Elizabethtown Gas	6" E.P. Plastic	19+59.45, Rt	Storm Sewer
Elizabethtown Gas	6" E.P. Plastic	20+15.76, Rt	Storm Sewer
Verizon	Conduit	16+14.00, Lt	Storm Sewer
Verizon	Conduit	17+27.58, Lt	Traffic Signal Conduit
Verizon	Conduit	17+75.14, Lt	Junction Box
Verizon	Conduit	17+91.46, Lt	Traffic Signal Conduit
Verizon	Conduit	18+36.92, Lt	Junction Box
Verizon	Conduit	18+45.78, Lt	Retaining Wall Foundation
Verizon	Conduit	18+77.72, Lt	Retaining Wall Foundation
Verizon	Conduit	19+59.47, Lt	Storm Sewer
Verizon	Conduit	19+63.00, Lt	Traffic Signal Conduit
Verizon	Conduit	20+20.87, Rt	Storm Sewer



- NOTES:**
- PROTECT TOWNSHIP SANITARY SEWER FACILITIES AT ALL TIMES.**
 - AERIAL UTILITIES TO BE RELOCATED BY PSE&G, VERIZON AND COMCAST.**
 - UNDERGROUND UTILITIES TO BE RELOCATED BY MIDDLESEX WATER CO., VERIZON, AND ELIZABETHTOWN GAS.**
 - UTILITY COMPANIES TO PERFORM TEST PITS.**

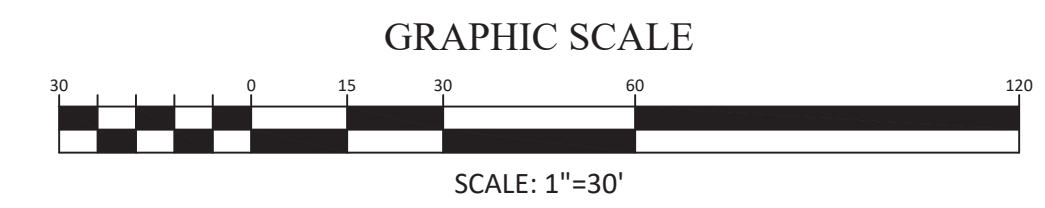
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS UTILITY PLANS (4 OF 6)			
(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194			
JOHN H. ALLGAIR P.E. & P.P. (1983 - 2001) JAY B. CORNELL P.E. & P.P. NJ P.E. LIC. NO. 32992	DAVID J. SAMUEL P.E. & P.P. NJ P.E. LIC. NO. 25839 MICHAEL J. MCCLELLAND P.E. & P.P. NJ P.E. LIC. NO. 32468	JOHN J. STEFANI P.E. L.S. & P.P. NJ P.E. & L.S. LIC. NO. 24271 GREGORY R. VALESI P.E. & P.P. NJ P.E. LIC. NO. 39458	DATE: February 2022 DESIGNED BY: MP DRAWN BY: MP CHECKED BY: JCW SHEET: 148 of 197
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER L.I.C. 32468 DATE: 2/17/2022			FILE NO.: PWB0609.01



Utility Conflicts:			
Utility Poles			
Companies: PSEG, Verizon and Comcast			
UP #:	Station:	Block:	Lot:
60267	20+07.84, Rt	ROW	ROW
16926WB	21+54.81, Rt	ROW	ROW
6957WB	21+87.33, Lt	ROW	ROW
16927	21+89.62, Lt	287.01	12
16928WB	22+30.85, Lt	ROW	ROW

Utility Conflicts:		
Fire Hydrants/Water Mains		
Company: MWCo		
Sta.:	Block:	Lot:
22+23.65, L	ROW	ROW

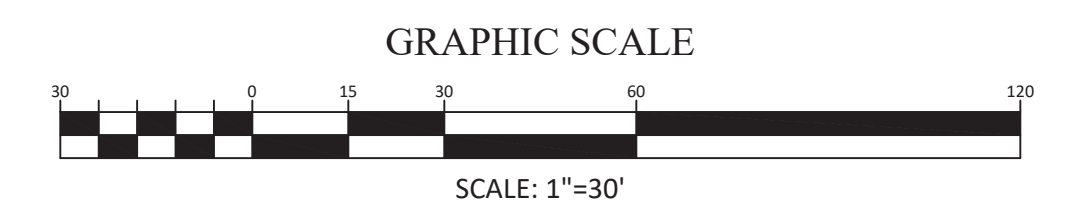
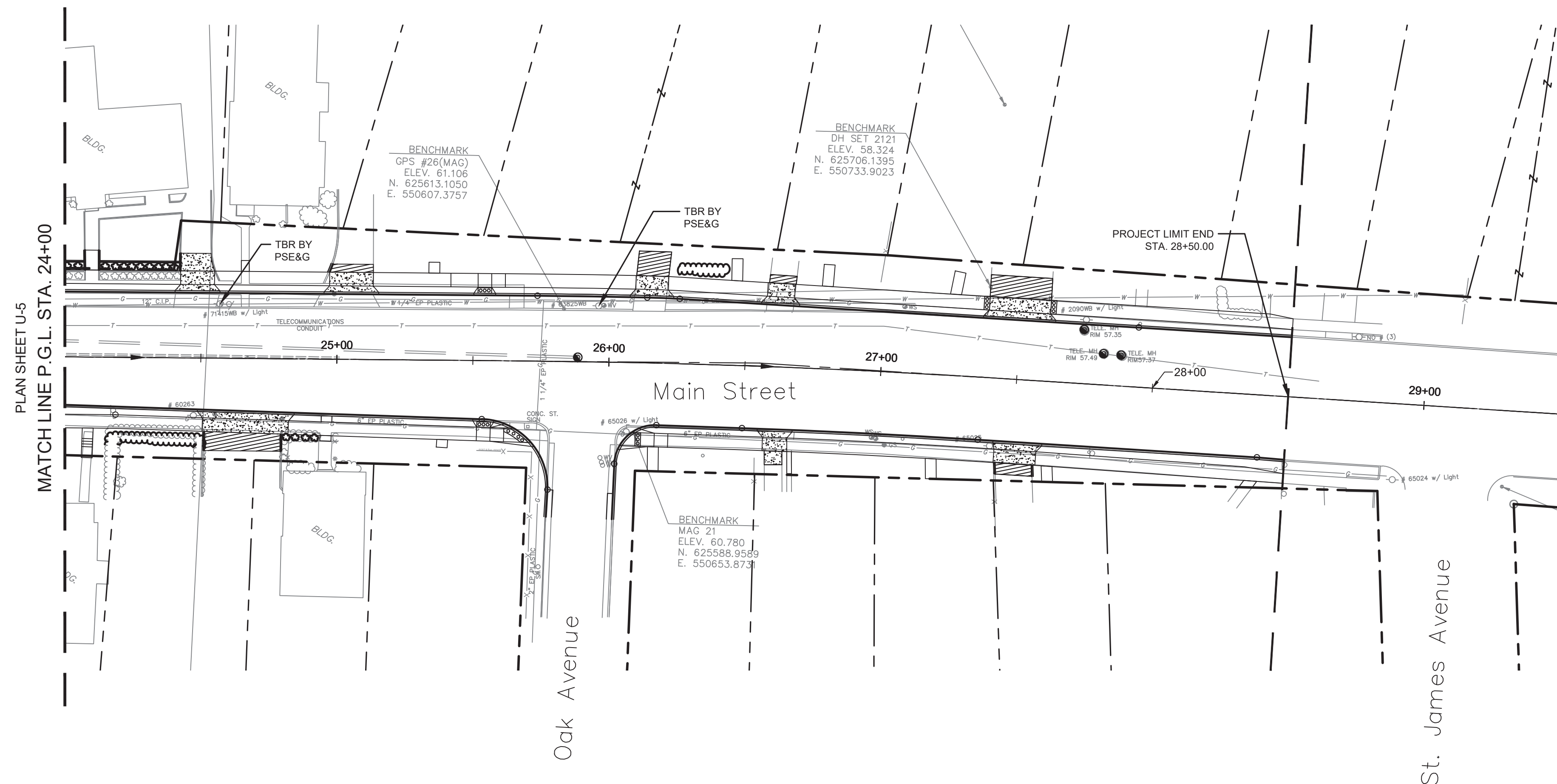
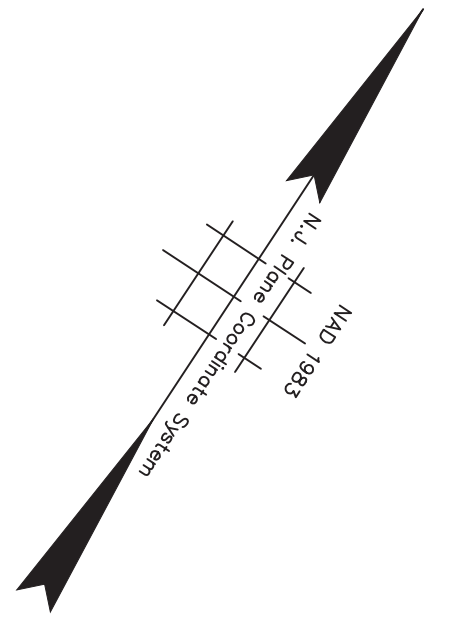
Potential Subsurface Utility Conflicts			
Company:	Existing Facility:	Station:	Proposed Facility:
Elizabethtown Gas	6" E.P. Plastic	21+38.99, Rt	Storm Sewer
Elizabethtown Gas	6" E.P. Plastic	22+81.29, Rt	Storm Sewer
Verizon	Conduit	22+34.87, Lt	Traffic Signal Conduit
Verizon	Conduit	22+71.00, Lt	Storm Sewer



NOTES:

- PROTECT TOWNSHIP SANITARY SEWER FACILITIES AT ALL TIMES.**
- AERIAL UTILITIES TO BE RELOCATED BY PSE&G, VERIZON AND COMCAST.**
- UNDERGROUND UTILITIES TO BE RELOCATED BY MIDDLESEX WATER CO., VERIZON, AND ELIZABETHTOWN GAS.**
- UTILITY COMPANIES TO PERFORM TEST PITS.**

No. DESCRIPTION OF REVISION				DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS UTILITY PLANS (5 OF 6)							
(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194							
JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25839	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & LS LIC NO. 24271					
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32952	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458					
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER			As Shown February 2022 L.C. 32468				
			DRAWN BY: RCM CHECKED BY: RCM DATE: 2/17/2022		DESIGNED BY: RCM SHEET: 149 of 197 FILE NO.: PWB0609.01		



Utility Conflicts:			
Utility Poles			
Companies: PSEG, Verizon and Comcast			
UP #:	Station:	Block:	Lot:
71415WB	24+56.85, Lt	ROW	ROW
63825WB	25+95.93, Lt	ROW	ROW

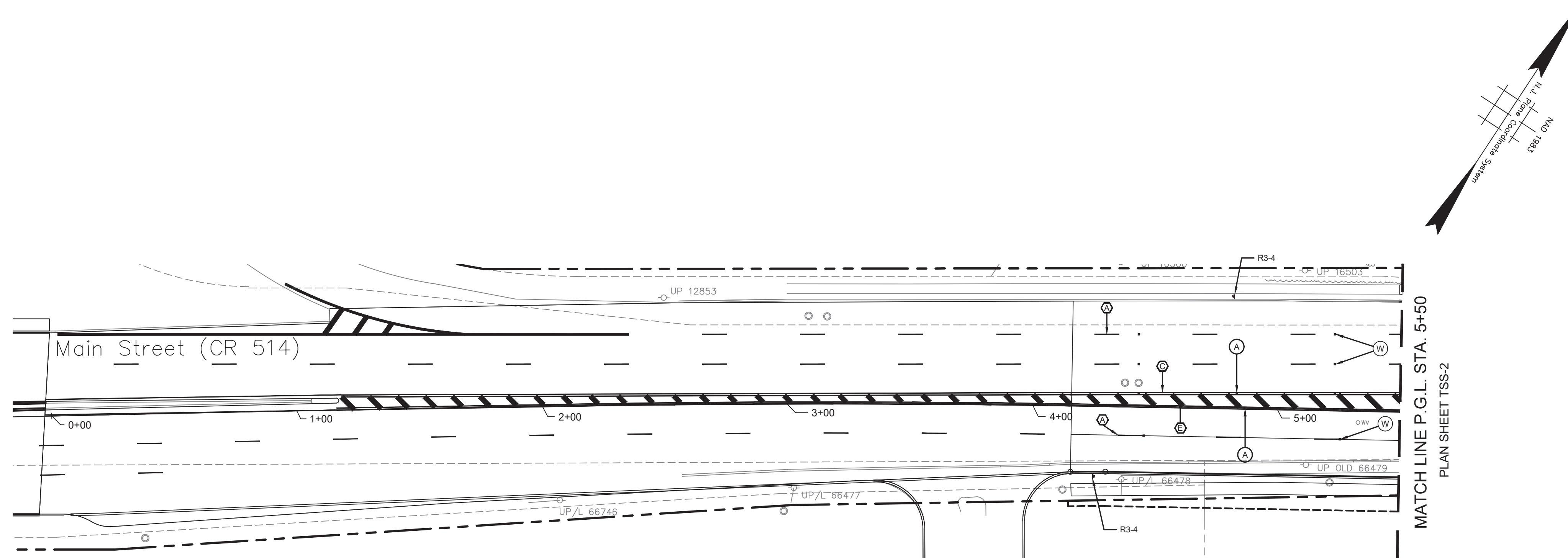
- NOTES:**
- PROTECT TOWNSHIP SANITARY SEWER FACILITIES AT ALL TIMES.**
 - AERIAL UTILITIES TO BE RELOCATED BY PSE&G, VERIZON AND COMCAST.**
 - UNDERGROUND UTILITIES TO BE RELOCATED BY MIDDLESEX WATER CO., VERIZON, AND ELIZABETHTOWN GAS.**
 - UTILITY COMPANIES TO PERFORM TEST PITS.**

TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS UTILITY PLANS (6 OF 6)			
(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194			
JOHN H. ALLGAIER P.E. & P.P. (1983 - 2001) JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32962 NO PP LIC NO. 3874	DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 24538 NO PP LIC NO. 2455 MICHAEL J. McCLELLAND P.E. & P.P. NO PE LIC NO. 32468 NO PP LIC NO. 3720	JOHN J. STEFANI P.E. L.S. & P.P. NO PE & L.S. LIC NO. 24271 NO PP LIC NO. 2089 GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 39458 NO PP LIC NO. 4361	DATE: February 2022 DRAWN BY: RCM CHECKED BY: RCM SHEET: 150 OF 197
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468			DATE: 2/17/2022 CHECKED BY: JCW

U-6
 U-6
 REGISTERED
 DRAWING NO.
 PWB0609.01

PERMANENT SIGN TABLE					
SIGN DESIGNATION	MESSAGE	SIZE X	AREA (S.F.)	REQUIRED QUANTITY	TOTAL AREA (S.F.)
R3-4	NO U-TURN	36" x 36"	9	2	18
SIGN TOTAL					18

NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
610013M	TRAFFIC MARKINGS LINES, 4"	2340	LF
610016M	TRAFFIC MARKINGS LINES, 12"	310	LF
610017M	TRAFFIC MARKINGS LINES, 24"	235	LF
612003P	REGULATORY AND WARNING SIGN	18	SF



R3-4
36"x36"

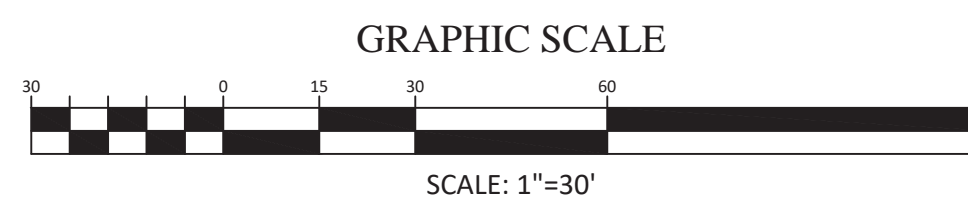
SIGN LEGEND
NOT TO SCALE

STRIPING LEGEND


- (A) 4" DASHED WHITE LINE, 10' LINE WITH 30' SPACE
- (B) 8" SOLID WHITE LINE
- (C) 2 - 4" SOLID YELLOW LINES, 6" CLEAR SPACE BETWEEN LINES
- (D) 2 - 8" SOLID WHITE LINE, 6" CLEAR SPACE BETWEEN LINES
- (E) 24" SOLID WHITE LINE
- (F) 4" DASHED WHITE LINE, 3' LINE WITH 9' SPACE

RPM LEGEND
NOT TO SCALE

- RAISED PAVEMENT MARKER (RPM)
- (W) W = RPM, MONO-DIRECTIONAL, WHITE LENS
- (A) A = RPM, MONO-DIRECTIONAL, AMBER LENS
- (BA) BA = RPM, BI-DIRECTIONAL, AMBER LENS



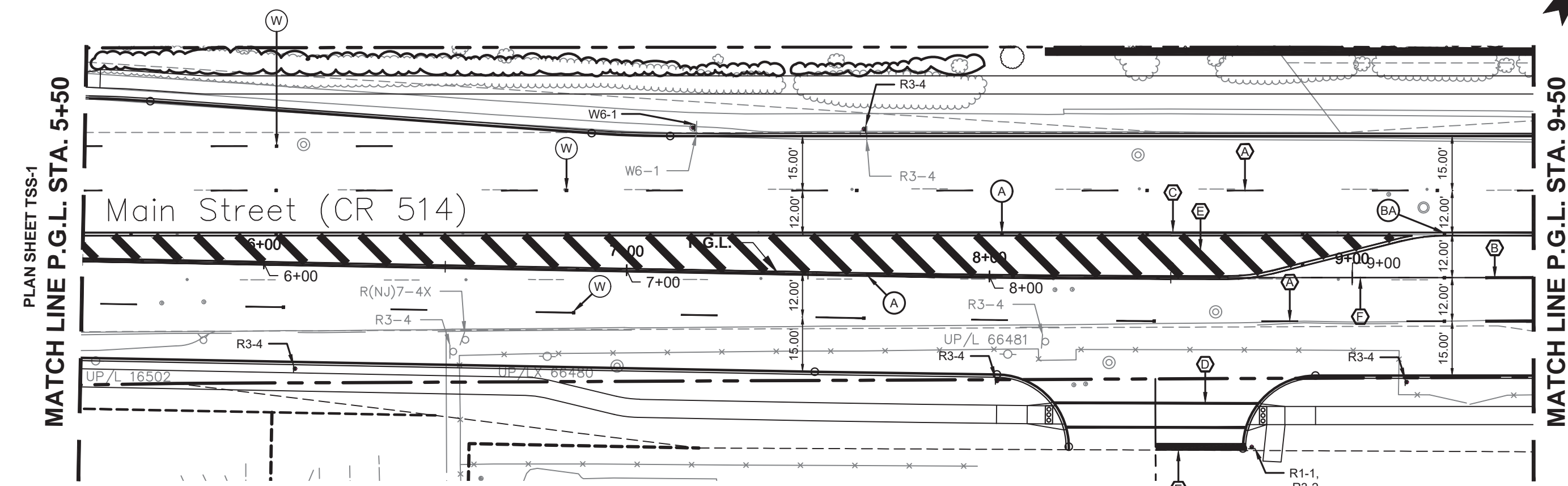
TSS-1
TSS-6

No. _____	DATE _____	DRAWN _____	CHECKED _____	RELEASED _____
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY</p> <p>ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p> <p>TRAFFIC SIGNING AND STRIPING PLAN (1 OF 6)</p>				
 <p>ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p> <p>(732) 727 8000 (732) 462 7400</p> <p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>				
<p>JOHN H. ALLGAIR P.E. & P.P. (1983 - 2001)</p> <p>JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32792</p>	<p>DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25838</p> <p>MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 38774</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & L.S. LIC NO. 24271</p> <p>GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458</p>	<p>SCALE: As Shown</p> <p>DATE: February 2022</p>	
<p>MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER</p> <p>LIC. 32468</p> <p><i>[Signature]</i></p>			<p>DRAWN BY: RCM</p> <p>CHECKED BY: JCW</p>	<p>DESIGNED BY: RCM/KEC</p> <p>SHEET: 151 of 197</p>

FILE NO. PWB04609.01

NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
610013M	TRAFFIC MARKINGS LINES, 4"	1775	LF
610014M	TRAFFIC MARKINGS LINES, 8"	133	LF
610017M	TRAFFIC MARKINGS LINES, 24"	425	LF
610012M	RPM, MONO-DIRECTIONAL, WHITE LENS	12	UN
610018M	RPM, MONO-DIRECTIONAL, AMBER LENS	18	UN
610021M	RPM, BI-DIRECTIONAL, AMBER LENS	1	UN
612003P	REGULATORY AND WARNING SIGN	63	SF

PERMANENT SIGN TABLE					
SIGN DESIGNATION	MESSAGE	SIZE X	AREA (S.F.)	REQUIRED QUANTITY	TOTAL AREA (S.F.)
R1-1	STOP	36" x 36"	9	1	9
R3-2	NO LEFT TURN	36" x 36"	9	1	9
R3-4	NO U-TURN	36" x 36"	9	4	36
W6-1	DIVIDED HIGHWAY	36" x 36"	9	1	9
				SIGN TOTAL	63



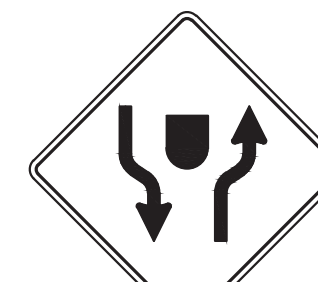
R1-1
36"x36"



R3-2
36"x36"

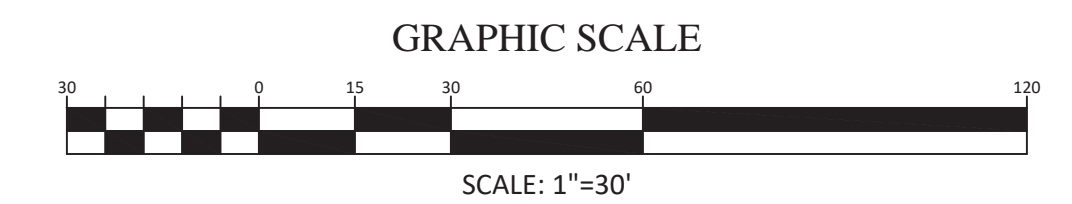


R3-4
36"x36"



W6-1
36"x36"

SIGN LEGEND
NOT TO SCALE



STRIPING LEGEND

- (A) 4" DASHED WHITE LINE, 10' LINE WITH 30' SPACE
- (B) 8" SOLID WHITE LINE
- (C) 2 - 4" SOLID YELLOW LINES, 6" CLEAR SPACE BETWEEN LINES
- (D) 2 - 8" SOLID WHITE LINE, 6" CLEAR SPACE BETWEEN LINES
- (E) 24" SOLID WHITE LINE
- (F) 4" DASHED WHITE LINE, 3' LINE WITH 9' SPACE

RPM LEGEND

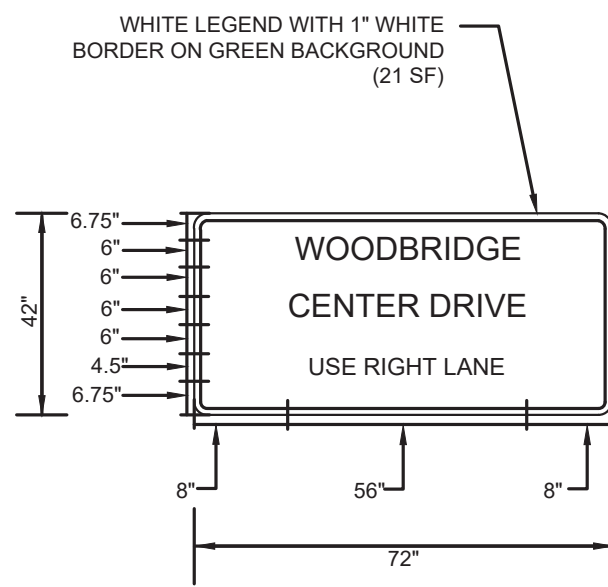
- RAISED PAVEMENT MARKER (RPM)
- (W) W = RPM, MONO-DIRECTIONAL, WHITE LENS
- (A) A = RPM, MONO-DIRECTIONAL, AMBER LENS
- (BA) BA = RPM, BI-DIRECTIONAL, AMBER LENS

<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS TRAFFIC SIGNING AND STRIPING PLAN (2 OF 6)</p>			
<p>CONSULTING AND MUNICIPAL ENGINEERS</p>			
<p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>			
<p>JOHN H. ALLGAIER P.E. & P.P. (1983 - 2021)</p>	<p>DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25039</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271</p>	<p>GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458</p>
<p>JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32952</p>	<p>MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468</p>	<p>As Shown</p>	<p>February 2022</p>
<p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER</p>		<p>LIC. 32468</p>	<p>DESIGNED BY RCM/KEC</p>
<p>DATE: 2/17/2022</p>		<p>CHECKED BY JCW</p>	<p>SHEET 152 OF 197</p>

TSS-2
TSS-6

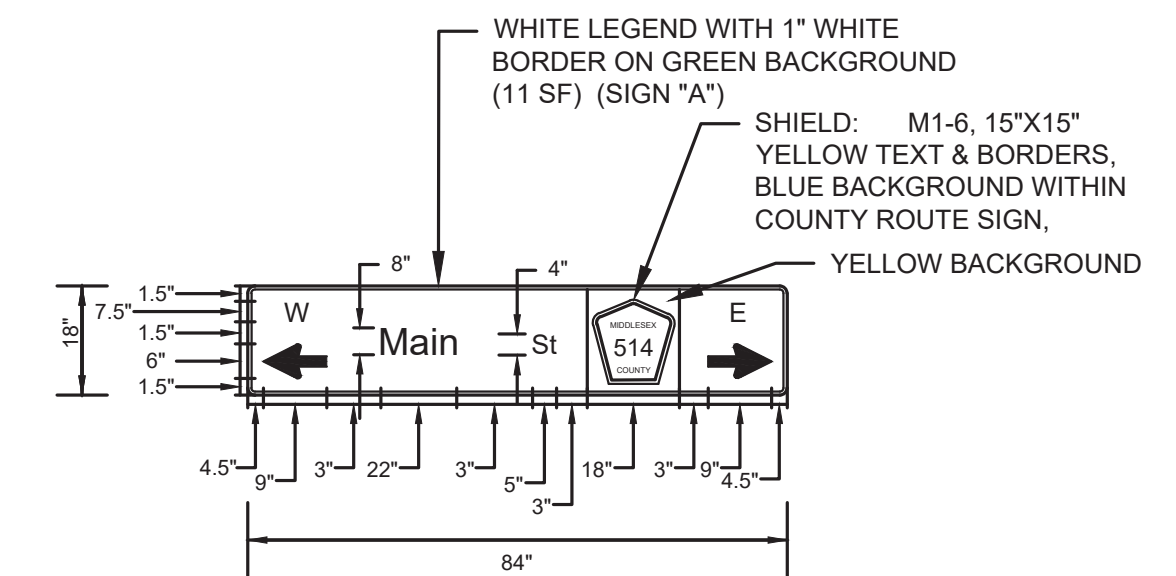
FILE NO.
PWB04609.01

PERMANENT SIGN TABLE						
SIGN DESIGNATION	MESSAGE	SIZE X	AREA (S.F.)	REQUIRED QUANTITY	TOTAL AREA (S.F.)	
M1-1	INTERSTATE ROUTE SIGN (95)	24" x 24"	4	1	4	
M1-4	U.S. ROUTE SIGN (9)	24" x 24"	4	1	4	
M2-1 (MOD)	JUNCTION (COLORS TO MATCH I-95)	24" x 12"	2	1	2	
M4-5 (MOD)	TO (COLORS TO MATCH I-95)	24" x 12"	2	1	2	
M5-1(R) (MOD)	RIGHT ARROW (COLORS TO MATCH I-95)	21" x 15"	3	1	3	
NJTP-1	NEW JERSEY TURNPIKE	24" x 24"	4	1	4	
R1-1	STOP	36" x 36"	9	4	36	
R3-4	NO U-TURN	36" x 36"	9	1	9	
R(NJ)3-8F	LANE CONFIGURATION: EXCLUSIVE LEFT, SHARED THROUGH-RIGHT	30" x 30"	7	4	28	
R(NJ)3-8T	LANE CONFIGURATION: EXCLUSIVE THROUGH, EXCLUSIVE RIGHT	48" x 30"	10	3	30	
R9-3	NO PEDESTRIAN CROSSING (SYMBOL)	18" x 18"	3	4	12	
R9-3bP(L)	USE CROSSWALK (LEFT)	18" x 12"	2	2	4	
R9-3bP(R)	USE CROSSWALK (RIGHT)	18" x 12"	2	2	4	
R(NJ)10-13A	DELAYED GREEN	60" x 12"	5	1	5	
W3-3	SIGNAL AHEAD	36" x 36"	9	1	9	
W11-2	PEDESTRIAN CROSSING	36" x 36"	9	1	9	
SIGN L - D3-1	OVERHEAD STREET NAME SIGN / MAST ARM SIGN - STREET C* (REVERSE DOUBLE SIDED)	TBD	TBD	1	TBD	
SIGN A - D3-1a	OVERHEAD STREET NAME SIGN / MAST ARM SIGN - WEST LEFT ARROW MAIN STREET CR 514 EAST RIGHT ARROW (DOUBLE SIDED)	84" x 18"	11	2	22	
SIGN B - D3-2	GUIDE SIGN - WOODBRIDGE CENTER DRIVE USE RIGHT LANE	72" x 42"	21	1	21	
SIGN TOTAL					187	

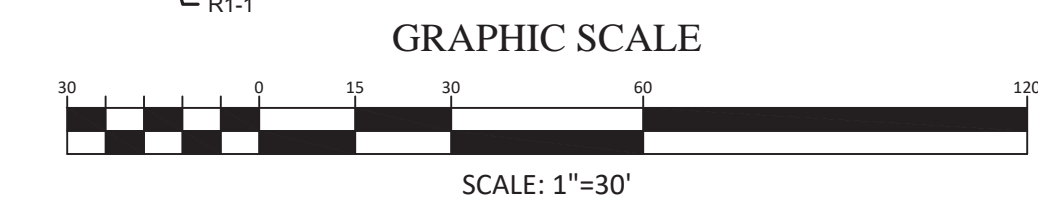
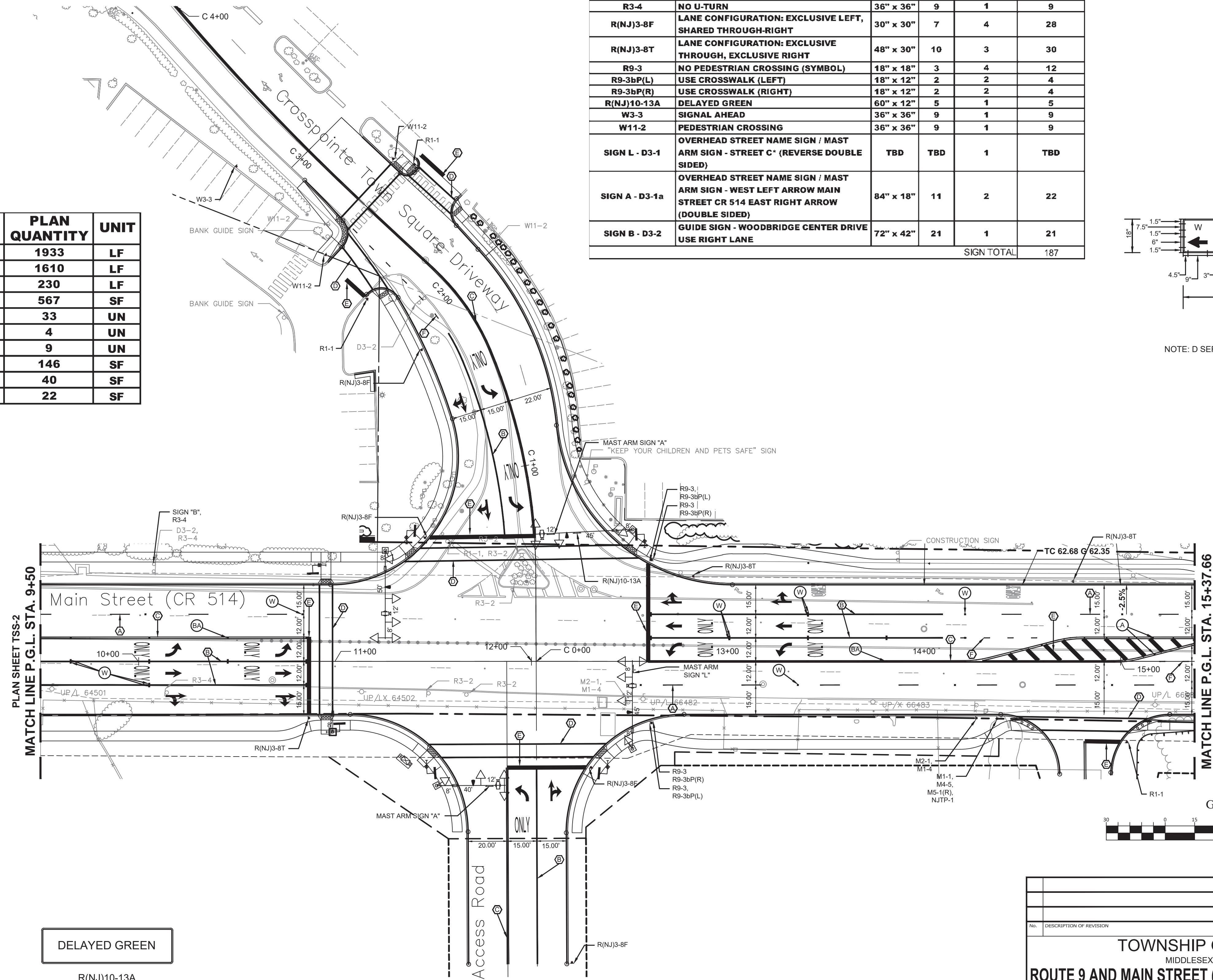


SIGN "B"
72" X 42"
NOTE: D SERIES LETTERING USED FOR THIS SIGN

NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
610013M	TRAFFIC MARKINGS LINES, 4"	1933	LF
610014M	TRAFFIC MARKINGS LINES, 8"	1610	LF
610017M	TRAFFIC MARKINGS LINES, 24"	230	LF
610060M	TRAFFIC MARKINGS SYMBOLS	567	SF
610012M	RPM, MONO-DIRECTIONAL, WHITE LENS	33	UN
610018M	RPM, MONO-DIRECTIONAL, AMBER LENS	4	UN
610021M	RPM, BI-DIRECTIONAL, AMBER LENS	9	UN
612003P	REGULATORY AND WARNING SIGN	146	SF
612009P	GUIDE SIGN, TYPE GA, BREAKAWAY SUPPORTS	40	SF
612030P NS	OVERHEAD STREET NAME SIGNS	22	SF



MAST ARM SIGN "A"
84" x 18"
DOUBLE SIDED
NOTE: D SERIES LETTERING USED FOR THIS SIGN



SIGN LEGEND
NOT TO SCALE

- M1-1 30"x24"
- M4-5 24"x12"
- NJTP-1 24"x24"
- M5-1(R) 21"x15"
- M2-1 24"x12"
- R1-1 36"x36"
- R3-4 36"x36"
- R(NJ)3-8F 30"x30"
- R(NJ)3-8T 48"x30"
- W3-3 36"x36"
- W11-2 36"x36"
- R9-3 18"x18"
- R9-3bP(L) 18"x12"
- R9-3 18"x18"
- R9-3bP(R) 18"x12"

STRIPING LEGEND

- A 4" DASHED WHITE LINE, 10' LINE WITH 30' SPACE
- B 8" SOLID WHITE LINE
- C 2-4" SOLID YELLOW LINES, 6" CLEAR SPACE BETWEEN LINES
- D 2-8" SOLID WHITE LINE, 6" CLEAR SPACE BETWEEN LINES
- E 24" SOLID WHITE LINE
- F 4" DASHED WHITE LINE, 3' LINE WITH 9' SPACE

RPM LEGEND
NOT TO SCALE

- RAISED PAVEMENT MARKER (RPM)
- W = RPM, MONO-DIRECTIONAL, WHITE LENS
- A = RPM, MONO-DIRECTIONAL, AMBER LENS
- BA = RPM, BI-DIRECTIONAL, AMBER LENS

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS
TRAFFIC SIGNING AND STRIPING PLAN (3 OF 6)

ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1400 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIER P.E. & P.P. (1983 - 2021)
DAVID J. SAMUEL P.E. & P.P. (1983 - 2021)
JOHN J. STEFANI P.E., L.S. & P.P. (1983 - 2021)

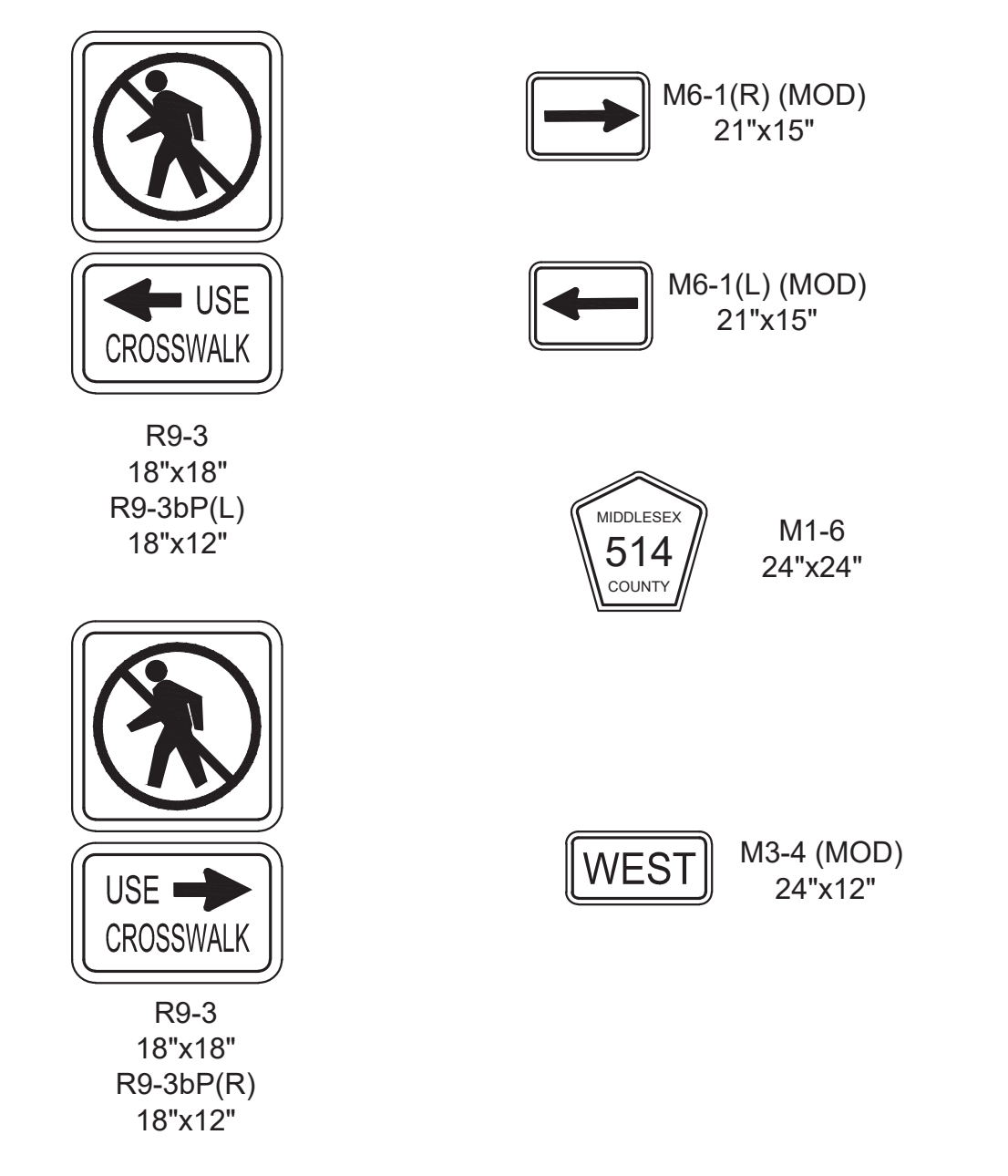
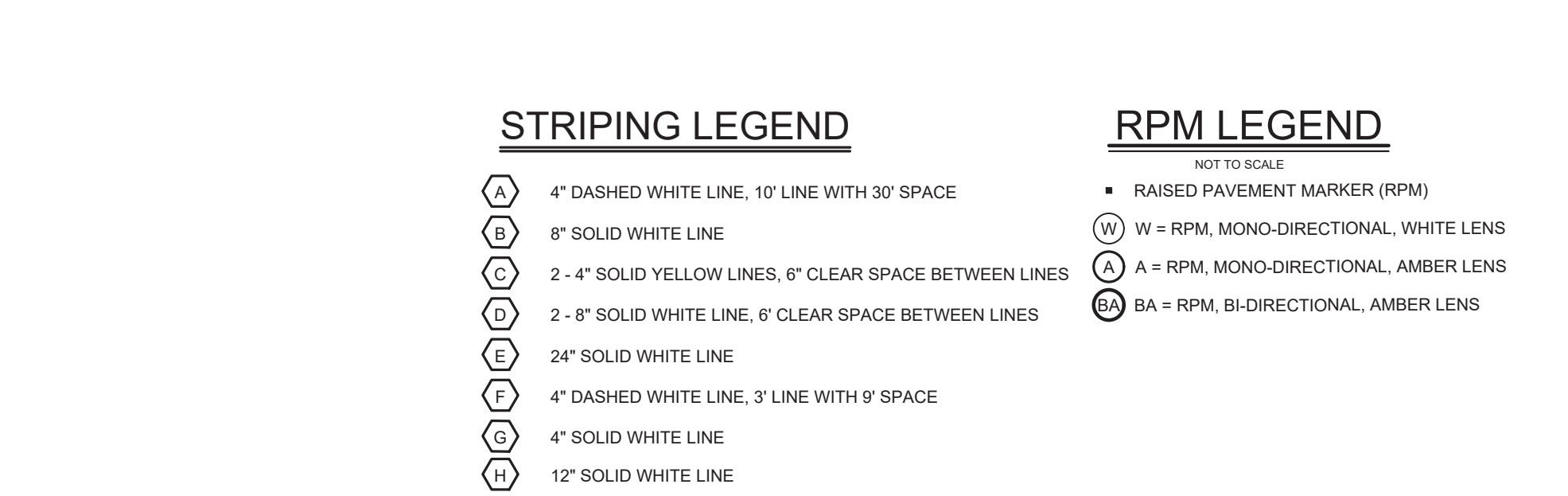
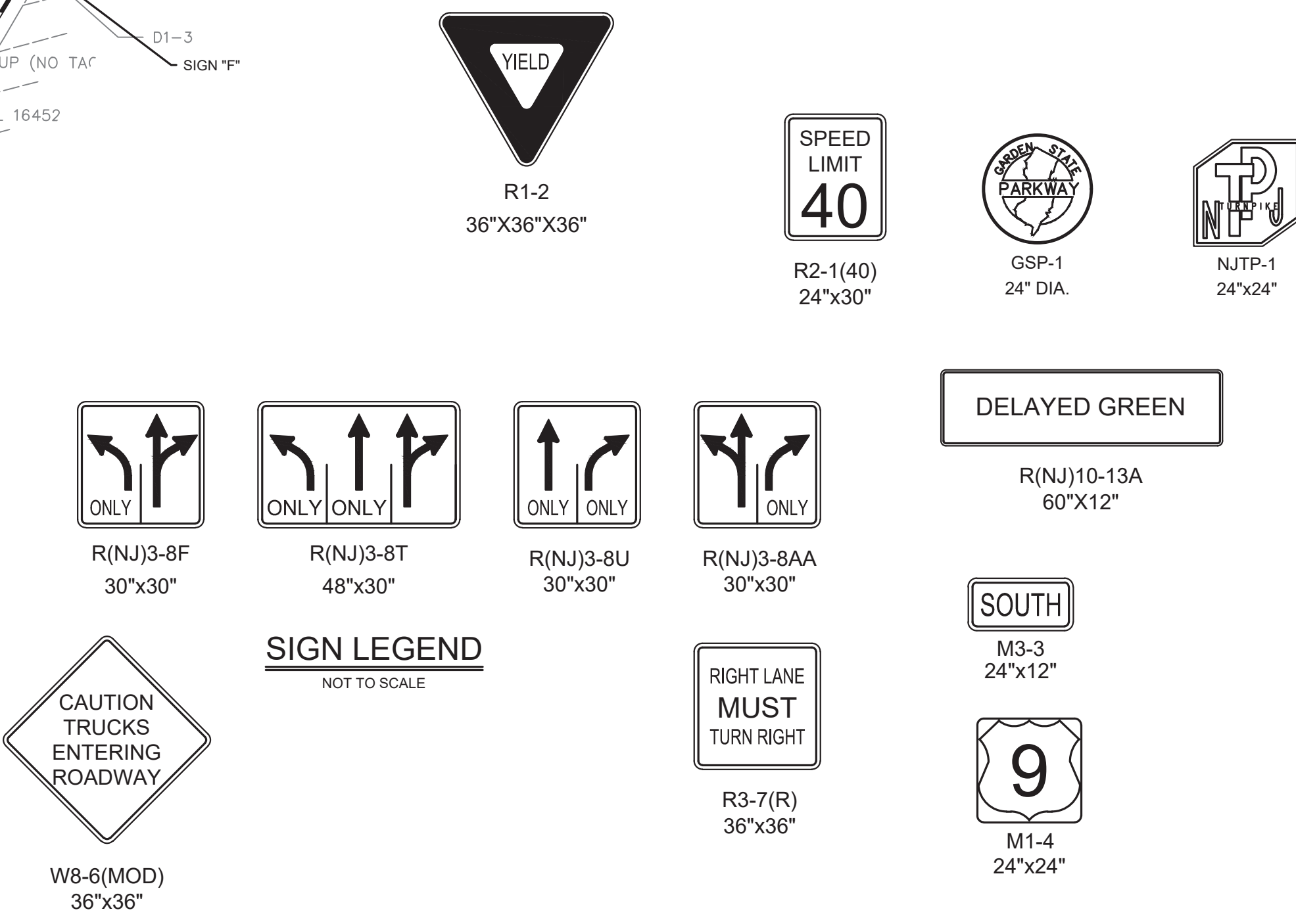
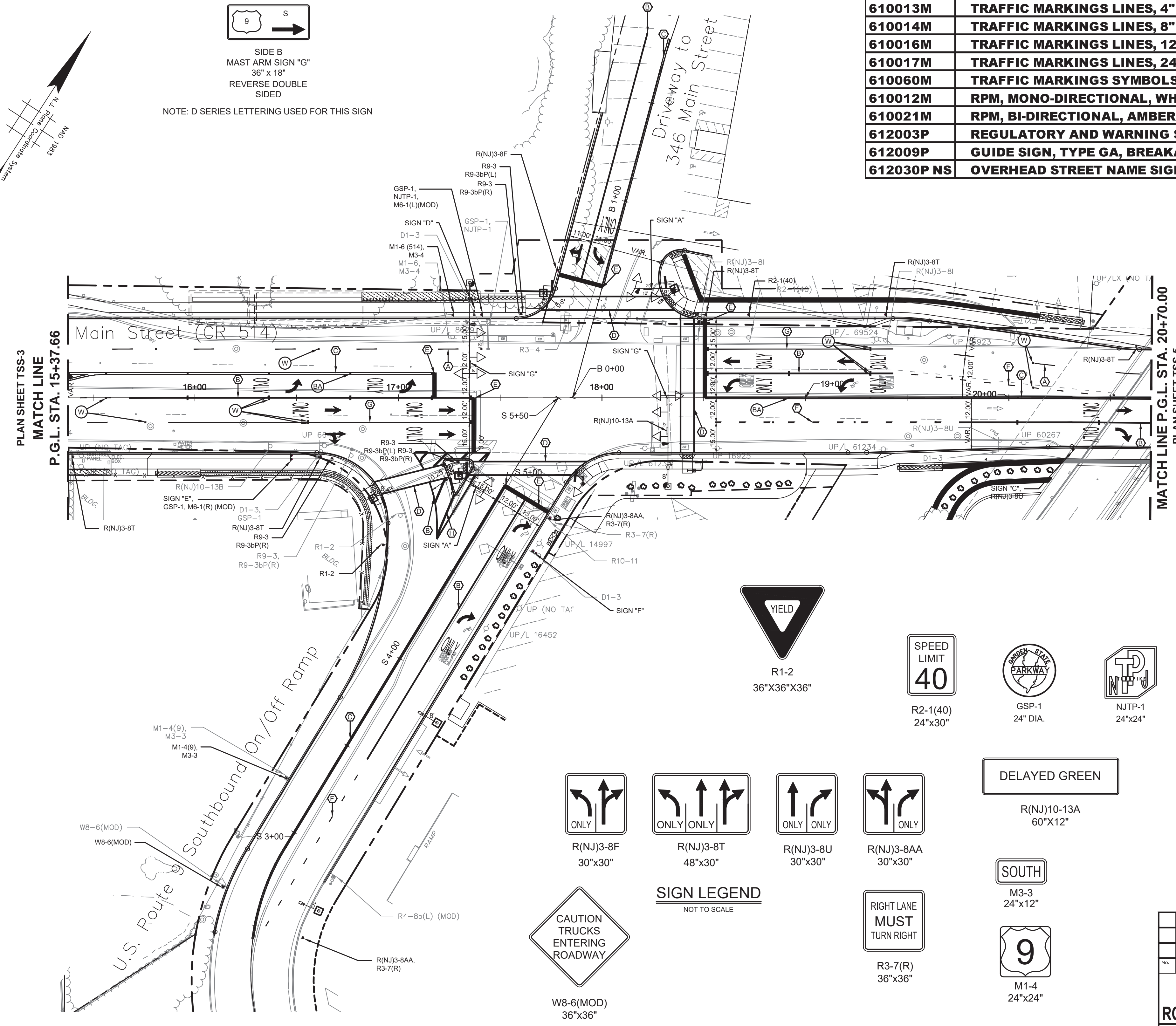
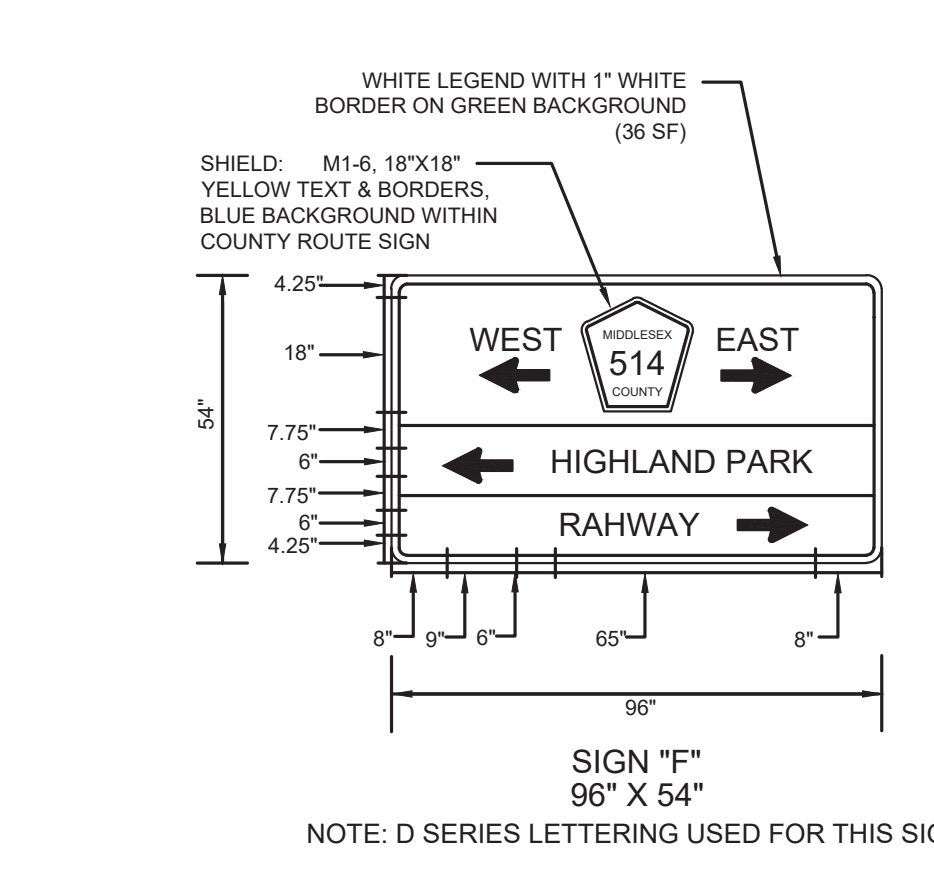
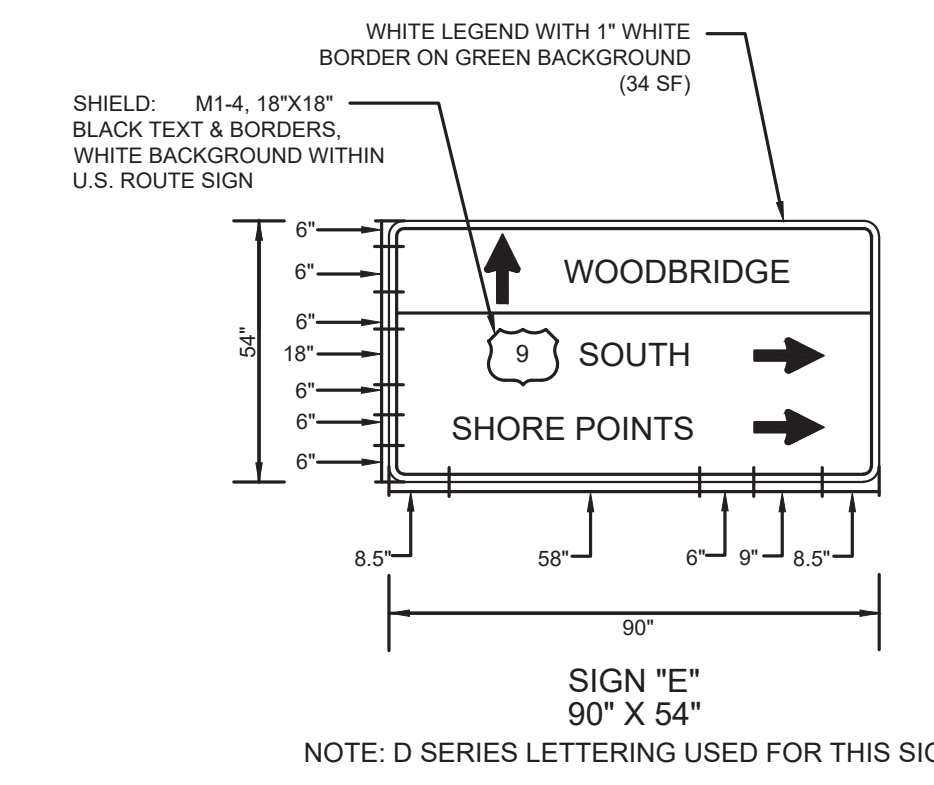
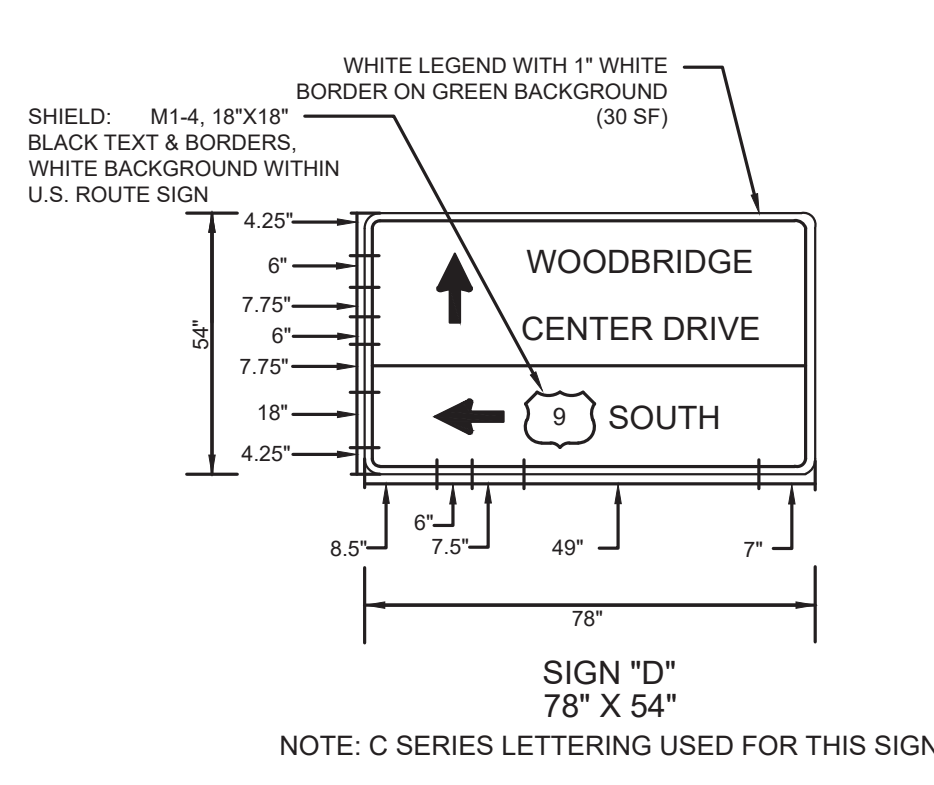
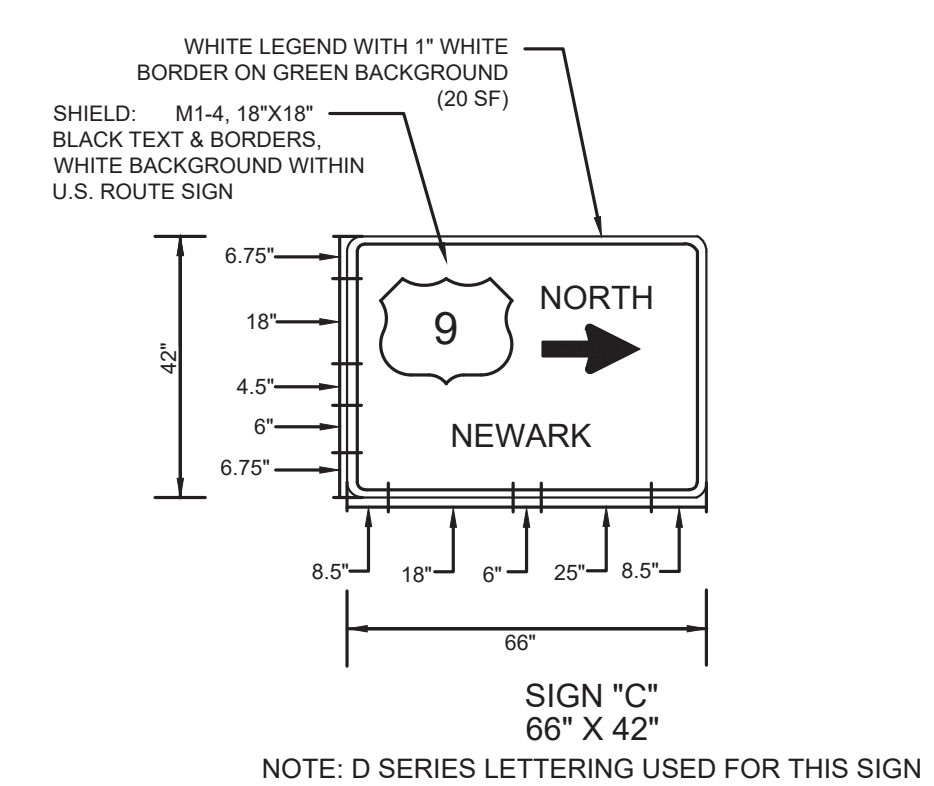
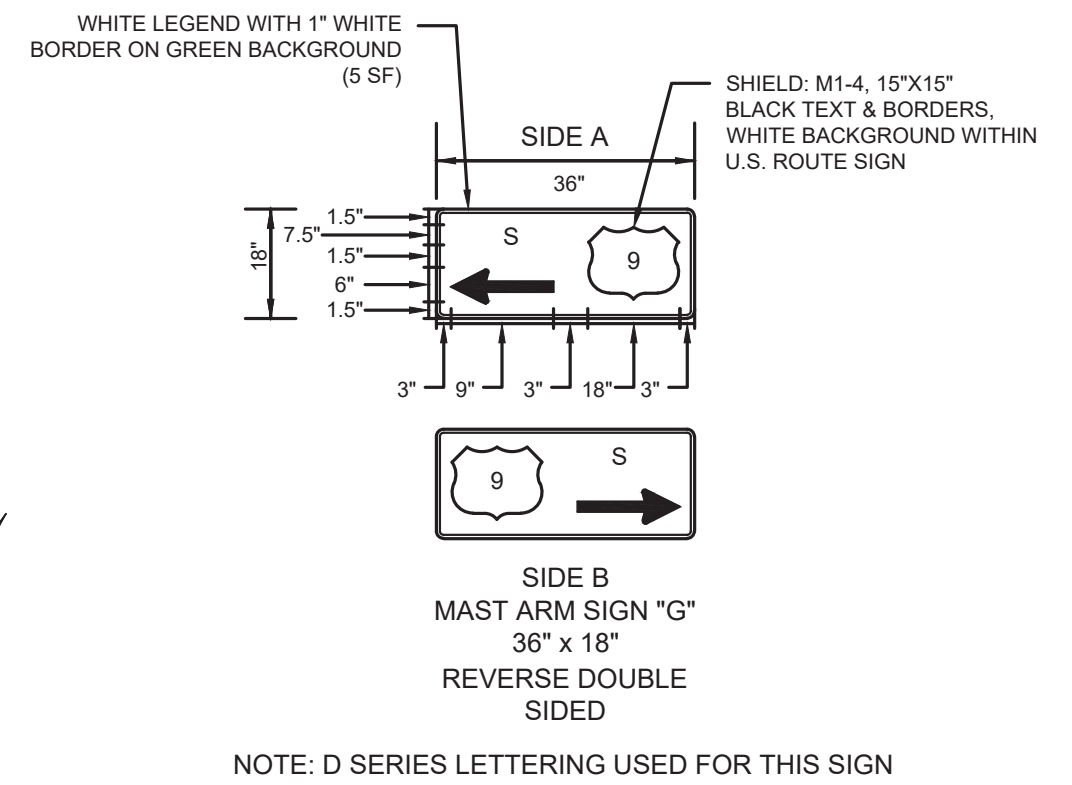
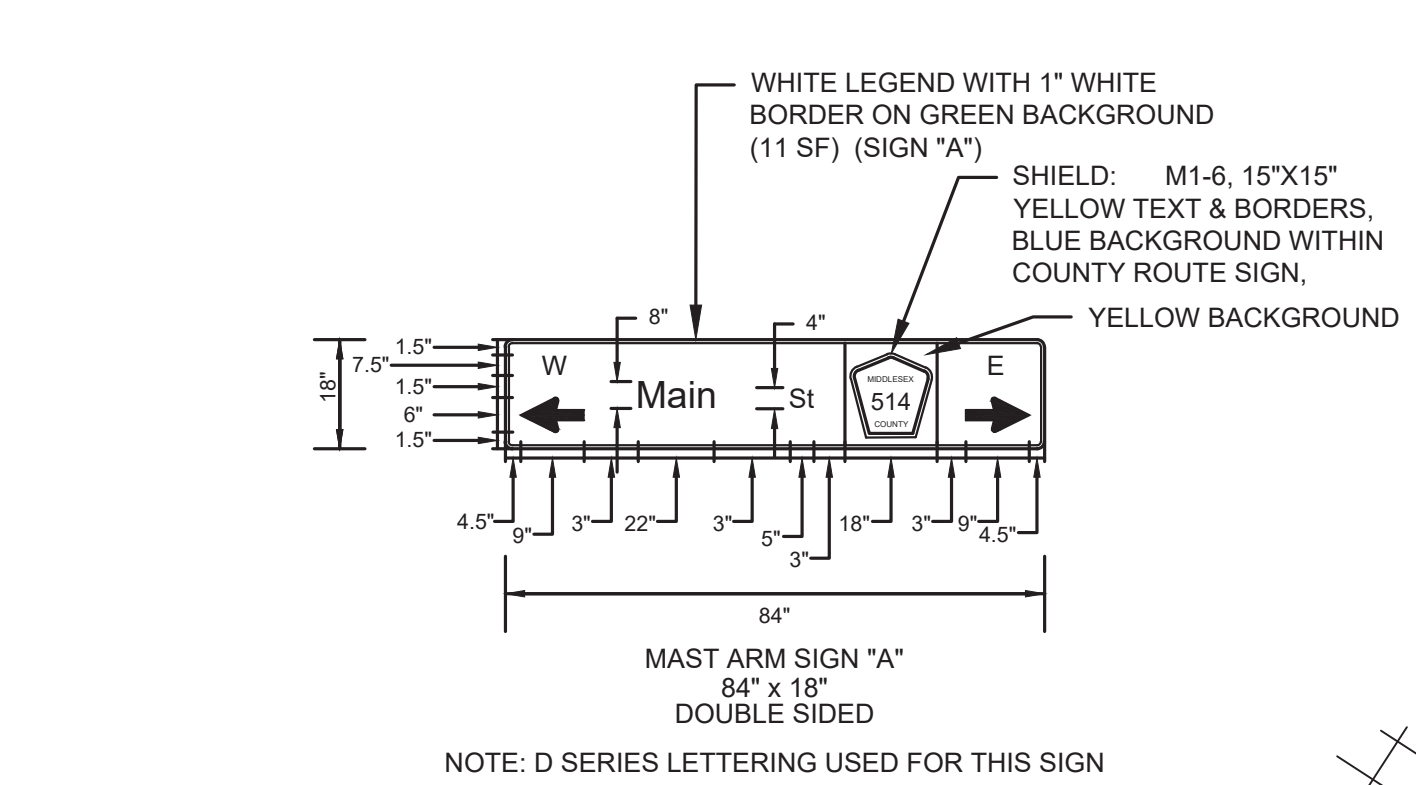
JAY B. CORNELL P.E. & P.P. (1983 - 2021)
MICHAEL J. McCLELLAND P.E. & P.P. (1983 - 2021)
GREGORY R. VALESI P.E. & P.P. (1983 - 2021)

MICHAEL J. McCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER
L.C. 32468
DATE: 2/17/2022

As Shown
February 2022
DESIGNED BY: RCM
CHECKED BY: RCM/KEC
DRAWN BY: JCW
SHEET: 153 OF 197

FILE NO. PWB04609.01

NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
610013M	TRAFFIC MARKINGS LINES, 4"	1963	LF
610014M	TRAFFIC MARKINGS LINES, 8"	1185	LF
610016M	TRAFFIC MARKINGS LINES, 12"	62	LF
610017M	TRAFFIC MARKINGS LINES, 24"	130	LF
610060M	TRAFFIC MARKINGS SYMBOLS	592	SF
610012M	RPM, MONO-DIRECTIONAL, WHITE LENS	40	UN
610021M	RPM, BI-DIRECTIONAL, AMBER LENS	11	UN
612003P	REGULATORY AND WARNING SIGN	106	SF
612009P	GUIDE SIGN, TYPE GA, BREAKAWAY SUPPORTS	154	SF
612030P NS	OVERHEAD STREET NAME SIGNS	34	SF



TSS-4 TSS-6

GRAPHIC SCALE
SCALE: 1"=30'

NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS
TRAFFIC SIGNING AND STRIPING PLAN (4 OF 6)

CVE ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS
(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400

JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991) NJ PE LIC. NO. 25839 NJ PP LIC. NO. 2455
JAY B. CORNELL P.E. & P.P. NJ PE LIC. NO. 32952 NJ PP LIC. NO. 3874
MICHAEL J. MCCLELLAND P.E. & P.P. (1983 - 1991) NJ PE LIC. NO. 32468 NJ PP LIC. NO. 3770

DAVID J. SAMUEL P.E. & P.P. NJ PE LIC. NO. 2455 NJ PP LIC. NO. 2455
MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC. NO. 32468 NJ PP LIC. NO. 3770
JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & L.S. LIC. NO. 24271 NJ PP LIC. NO. 2089
GREGORY R. VALESI P.E. & P.P. NJ PE LIC. NO. 34458 NJ PP LIC. NO. 4361

MICHAEL J. MCCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. 32468
DATE: 2/17/2022

As Shown February 2022
DRAWN BY RCM DESIGNED BY RCM/KEC
CHECKED BY JCW SHEET 154 OF 197

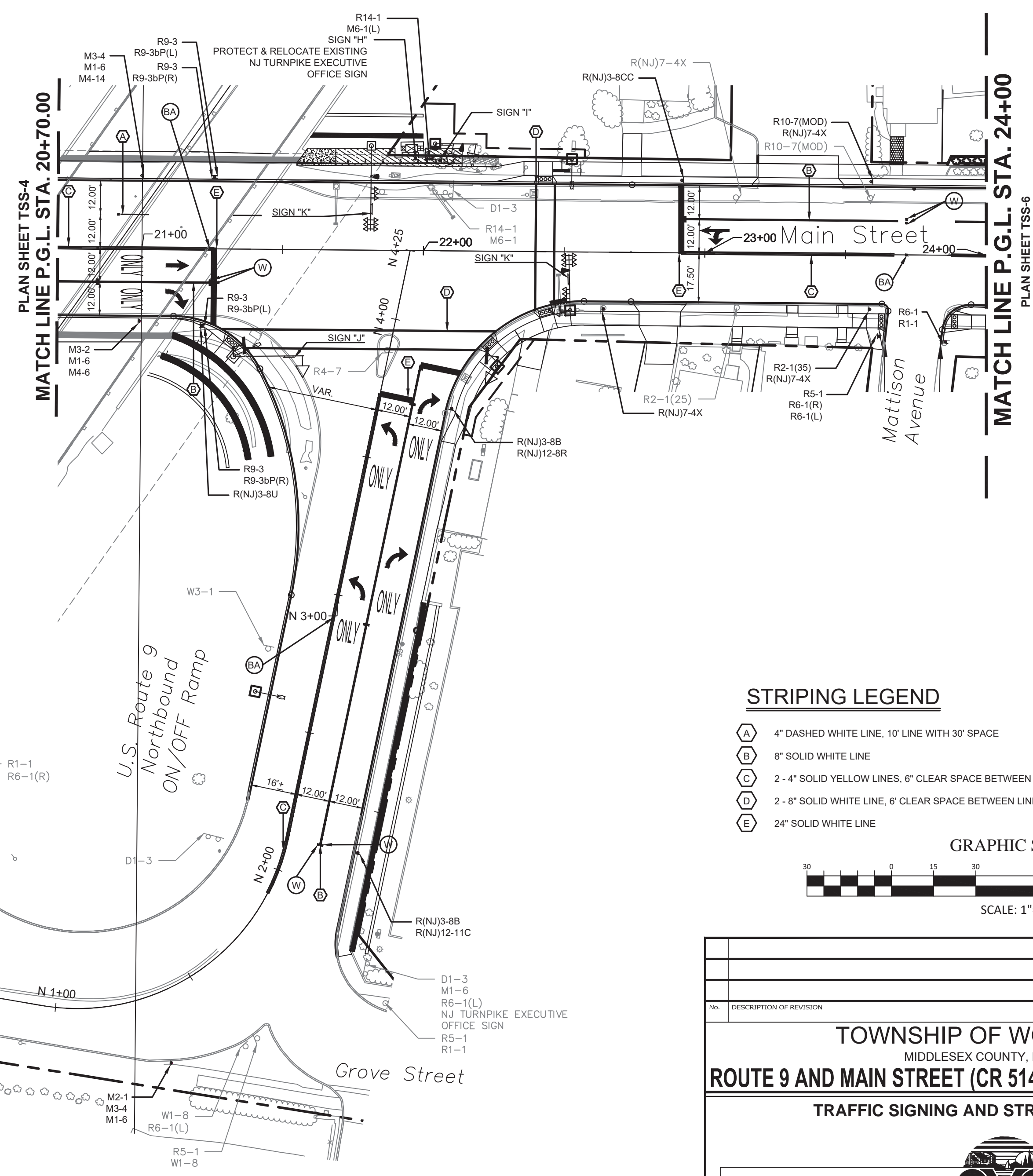
FILE NO. PWB04609.01

PERMANENT SIGN TABLE					
SIGN DESIGNATION	MESSAGE	SIZE X	AREA (S.F.)	REQUIRED QUANTITY	TOTAL AREA (S.F.)
M1-6	MIDDLESEX COUNTY ROUTE 514	24" x 24"	4	2	8
M2-1 (MOD)	JUNCTION (COLORS TO MATCH CR 514)	24" x 12"	2	1	2
M3-2 (MOD)	EAST (COLORS TO MATCH CR 514)	24" x 12"	2	1	2
M6-1(L)	LEFT ARROW	21" x 15"	3	1	3
M6-4 (MOD)	DOUBLE-ENDED LEFT-RIGHT ARROW (COLORS TO MATCH CR 514)	21" x 15"	3	1	3
R1-1	STOP	36" x 36"	9	1	9
R2-1(25)	SPEED LIMIT 25 MPH	24" x 30"	5	1	5
R(NJ)3-8B	LANE CONFIGURATION: EXCLUSIVE LEFT	30" x 30"	7	2	14
R(NJ)3-8U	LANE CONFIGURATION: EXCLUSIVE THROUGH, EXCLUSIVE RIGHT	30" x 30"	7	1	7
R(NJ)3-8CC	LANE CONFIGURATION: SHARED LEFT-THROUGH, EXCLUSIVE THROUGH	30" x 30"	7	1	7
R5-1	DO NOT ENTER	30" x 30"	7	1	7
R6-1(R)	ONE WAY (ARROW POINTING RIGHT)	36" x 12"	3	1	3
R(NJ)7-4X	NO STOPPING OR STANDING, DOUBLE	18" x 24"	3	3	9
R9-3	NO PEDESTRIAN CROSSING (SYMBOL)	18" x 18"	3	4	12
R9-3bP(L)	USE CROSSWALK (LEFT)	18" x 12"	2	2	4
R9-3bP(R)	USE CROSSWALK (RIGHT)	18" x 12"	2	2	4
R10-7	DO NOT BLOCK DRIVEWAY	24" x 30"	5	1	5
R14-1	TRUCK ROUTE	24" x 18"	3	1	3
SIGN H - D1-3	GUIDE SIGN - LEFT ARROW TO CR 514 / LEFT ARROW TO WOODBRIDGE CENTER DRIVE	96" x 54"	36	1	36
SIGN I - D1-3	GUIDE SIGN - LEFT ARROW NORTH US ROUTE 9 / LEFT ARROW NEWARK / STRAIGHT ARROW NEW BRUNSWICK	96" x 54"	36	1	36
SIGN J - D3-1	OVERHEAD STREET NAME SIGN / MAST ARM SIGN - WEST LEFT ARROW MAIN STREET EAST RIGHT ARROW (DOUBLE SIDED)	72" x 18"	9	2	18
SIGN K - D3-1	OVERHEAD STREET NAME SIGN / MAST ARM SIGN - US ROUTE 9 NORTH + DIRECTIONAL ARROW (REVERSE DOUBLE SIDED)	36" x 18"	5	2	10
SIGN TOTAL					207

NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
610013M	TRAFFIC MARKINGS LINES, 4"	715	LF
610014M	TRAFFIC MARKINGS LINES, 8"	597	LF
610017M	TRAFFIC MARKINGS LINES, 24"	78	LF
610060M	TRAFFIC MARKINGS SYMBOLS	242	SF
610012M	RPM, MONO-DIRECTIONAL, WHITE LENS	14	UN
610021M	RPM, BI-DIRECTIONAL, AMBER LENS	7	UN
612003P	REGULATORY AND WARNING SIGN	89	SF
612009P	GUIDE SIGN, TYPE GA, BREAKAWAY SUPPORTS	90	SF
612030P NS	OVERHEAD STREET NAME SIGNS	28	SF

NOTE: M2-1 (MOD) & M3-4 (MOD), SHALL MATCH THE M1-6 COLORS

SIGN LEGEND
NOT TO SCALE



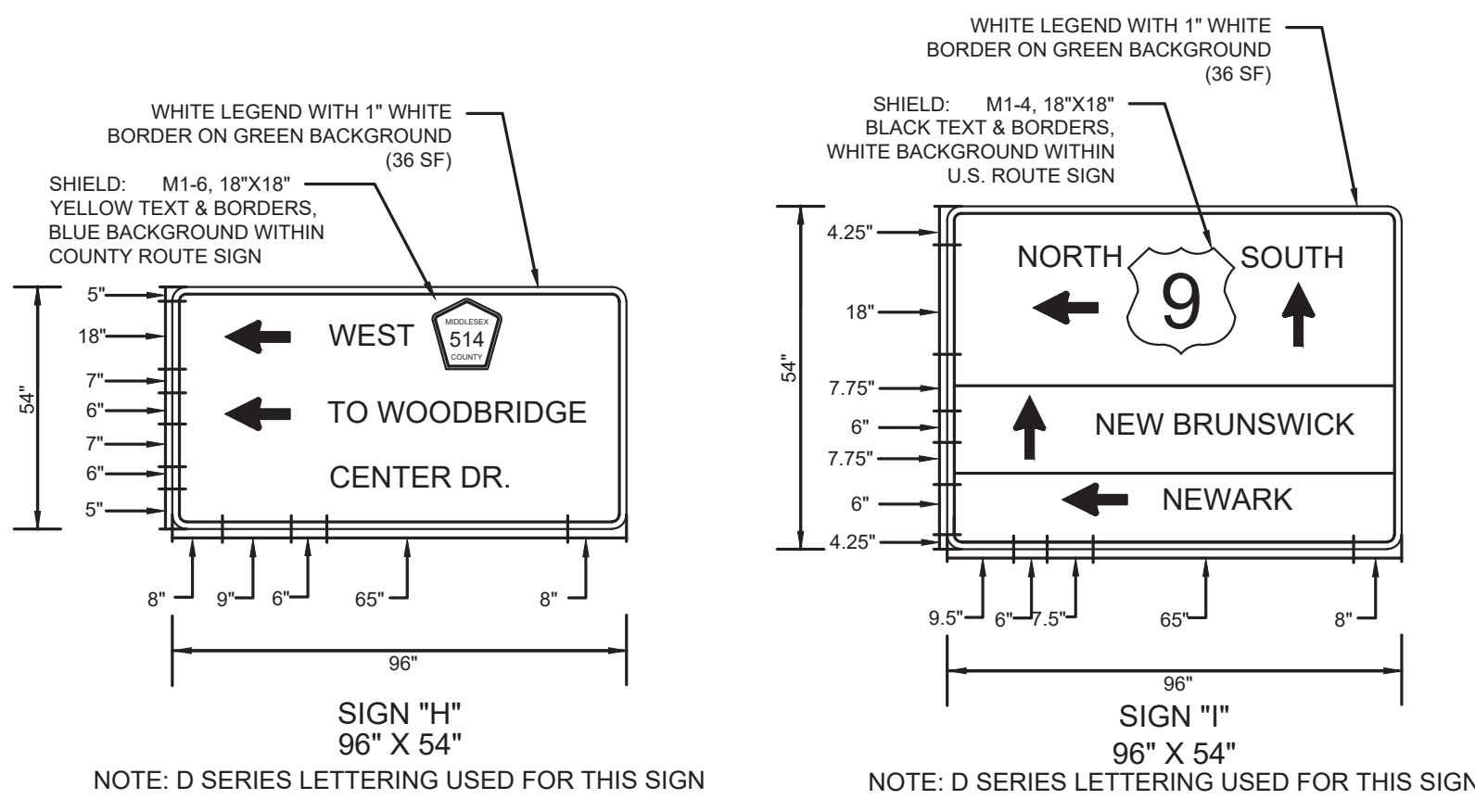
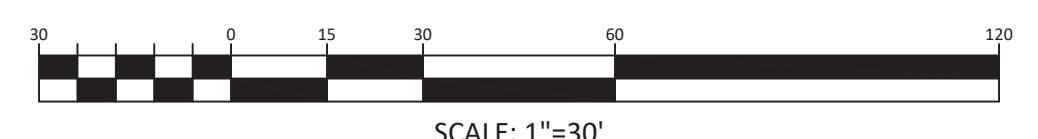
STRIPING LEGEND

- (A) 4" DASHED WHITE LINE, 10' LINE WITH 30' SPACE
- (B) 8" SOLID WHITE LINE
- (C) 2-4" SOLID YELLOW LINES, 6" CLEAR SPACE BETWEEN LINES
- (D) 2-8" SOLID WHITE LINE, 6" CLEAR SPACE BETWEEN LINES
- (E) 24" SOLID WHITE LINE

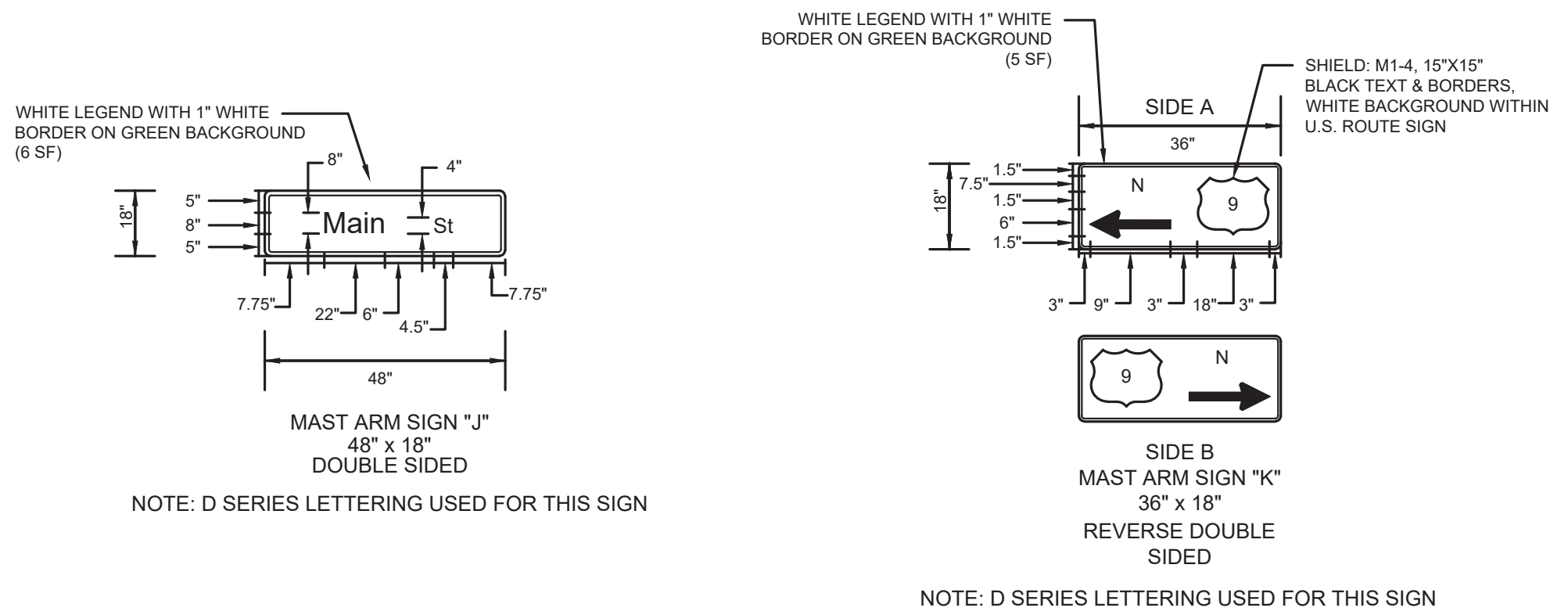
RPM LEGEND

- (W) W = RPM, MONO-DIRECTIONAL, WHITE LENS
- (A) A = RPM, MONO-DIRECTIONAL, AMBER LENS
- (BA) BA = RPM, BI-DIRECTIONAL, AMBER LENS

GRAPHIC SCALE



NOTE: D SERIES LETTERING USED FOR THIS SIGN



NOTE: D SERIES LETTERING USED FOR THIS SIGN

SIGN DETAILS
NOT TO SCALE

NOTE:
1. REFER TO SHEETS 51 TO 71 FOR TRAFFIC SIGNAL CONSTRUCTION DETAILS.

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS
TRAFFIC SIGNING AND STRIPING PLAN (5 OF 6)

CVE ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROCKLE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194
(732) 727 8000 (732) 462 7400

JOHN H. ALLGAIER P.E. & P.P. C 1983 - 2001 NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 2089	DAVID J. SAMUEL P.E. & P.P. NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 2089	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & LS LIC NO. 24271 NJ PP LIC NO. 2089
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32952	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 32468

MICHAEL J. MCCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. 32468

DATE: 2/17/2022

SCALE: As Shown

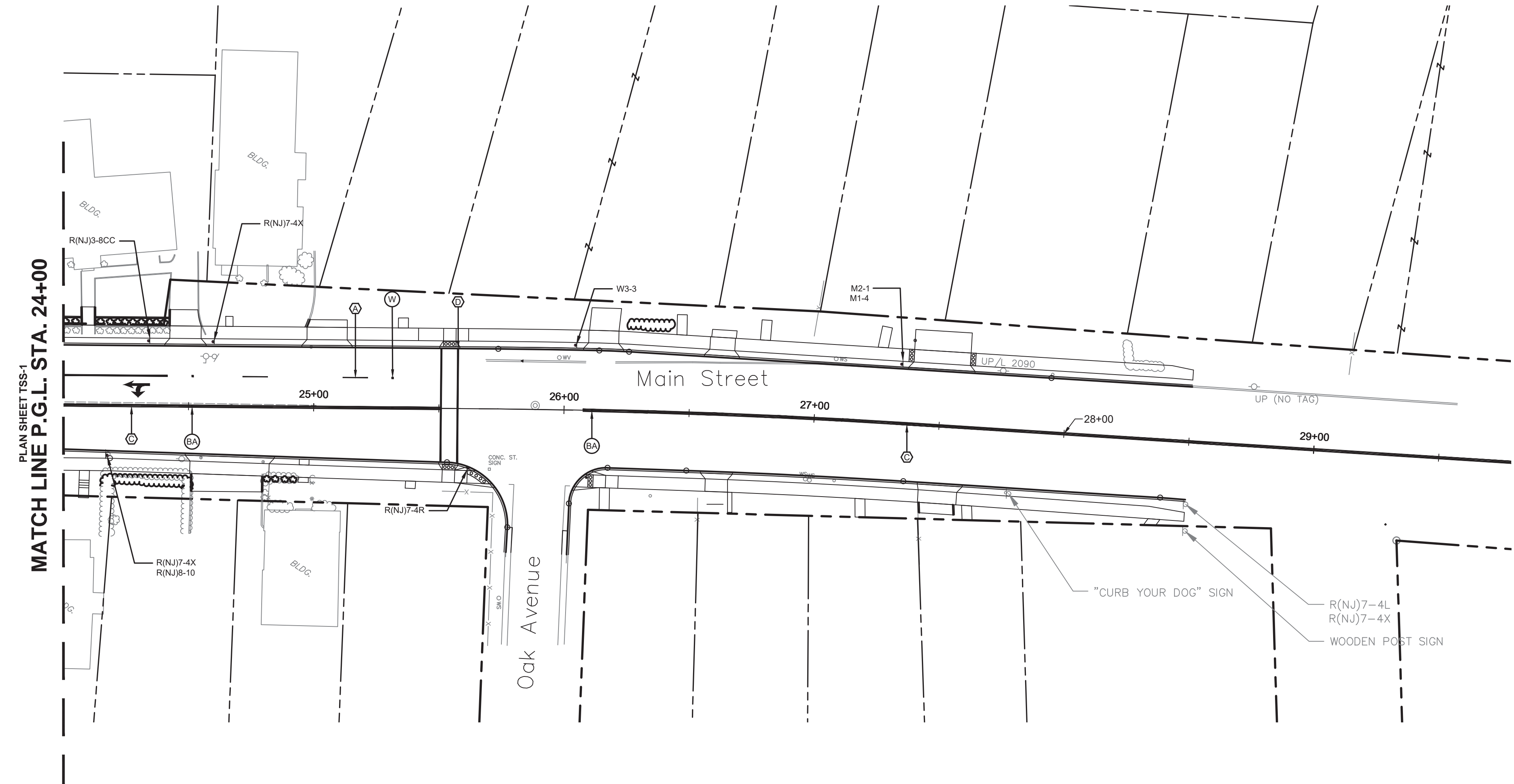
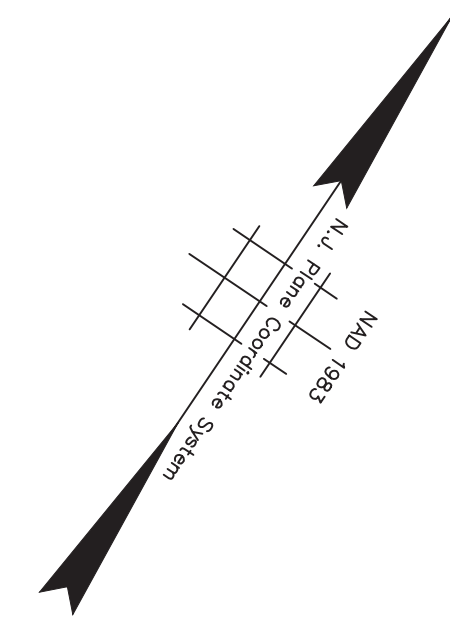
DESIGNED BY: RCM
CHECKED BY: RCM/KEC

DATE: February 2022

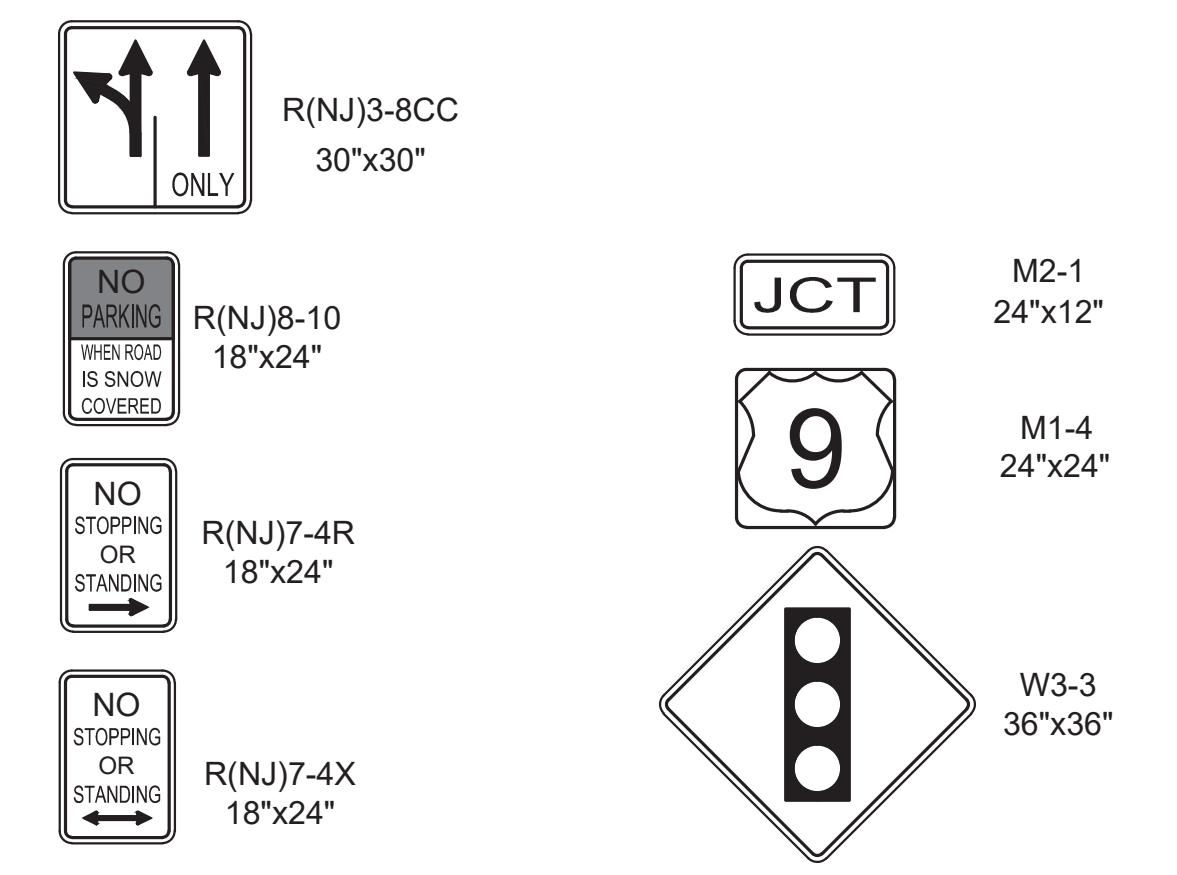
DRAWN BY: JCW
CHECKED BY: JCW

FILE NO. PWB04609.01

155 OF 197



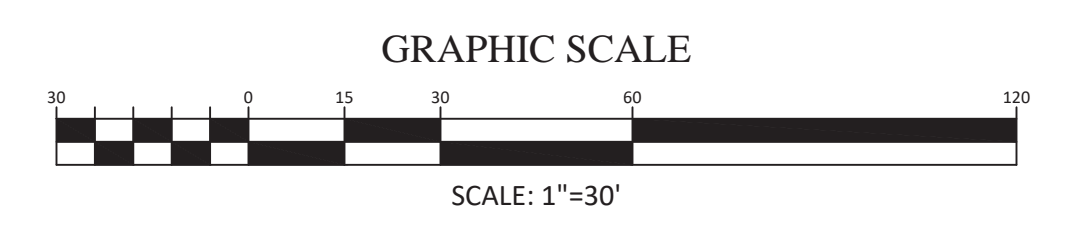
PLAN SHEET TSS-1
MATCH LINE P.G.L. STA. 24+00



SIGN LEGEND
NOT TO SCALE

PERMANENT SIGN TABLE					
SIGN DESIGNATION	MESSAGE	SIZE X	AREA (S.F.)	REQUIRED QUANTITY	TOTAL AREA (S.F.)
R(NJ)3-8CC	LANE CONFIGURATION: SHARED LEFT-THROUGH, EXCLUSIVE THROUGH	30" x 30"	7	1	7
R(NJ)7-4R	NO STOPPING OR STANDING, RIGHT ARROW	18" x 24"	3	1	3
R(NJ)7-4X	NO STOPPING OR STANDING, DOUBLE ENDED ARROW	18" x 24"	3	2	6
R(NJ)8-10	NO PARKING WHEN ROAD IS SNOW COVERED	18" x 24"	3	1	3
W3-3	WARNING: SIGNAL AHEAD	36" x 36"	9	1	9
M1-4	US ROUTE 9	24" x 24"	4	1	4
M2-1	JUNCTION	24" x 12"	2	1	2
SIGN TOTAL					34 S.F.

NJDOT ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
610013M	TRAFFIC MARKINGS LINES, 4"	732	LF
610014M	TRAFFIC MARKINGS LINES, 8"	134	LF
610012M	RPM, MONO-DIRECTIONAL, WHITE LENS	2	UN
610021M	RPM, BI-DIRECTIONAL, AMBER LENS	5	UN
612003P	REGULATORY AND WARNING SIGN	21	SF
612009P	GUIDE SIGN, TYPE GA, BREAKAWAY SUPPORTS	6	SF



STRIPING LEGEND

- (A) 4" DASHED WHITE LINE, 10' LINE WITH 30' SPACE
- (B) 8" SOLID WHITE LINE
- (C) 2 - 4" SOLID YELLOW LINES, 6" CLEAR SPACE BETWEEN LINES
- (D) 2 - 8" SOLID WHITE LINE, 6" CLEAR SPACE BETWEEN LINES
- (E) 24" SOLID WHITE LINE

RPM LEGEND

- RAISED PAVEMENT MARKER (RPM)
- (W) W = RPM, MONO-DIRECTIONAL, WHITE LENS
- (A) A = RPM, MONO-DIRECTIONAL, AMBER LENS
- (BA) BA = RPM, BI-DIRECTIONAL, AMBER LENS

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY

ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

TRAFFIC SIGNING AND STRIPING PLAN (6 OF 6)

CONSULTING AND MUNICIPAL ENGINEERS

(732) 727 8000 (732) 462 7400

3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIR P.E. & P.P. NJ PE LIC. NO. 25839 (1983 - 2021)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC. NO. 24558	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & L.S. LIC. NO. 24271 NJ PP LIC. NO. 20899
JAY B. CORNELL P.E. & P.P. NJ PE LIC. NO. 32962	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC. NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC. NO. 34458 NJ PP LIC. NO. 43561

MICHAEL J. McCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER

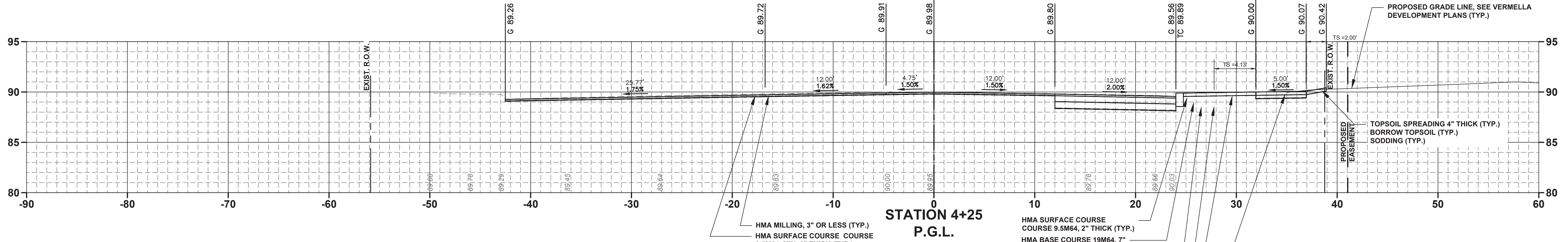
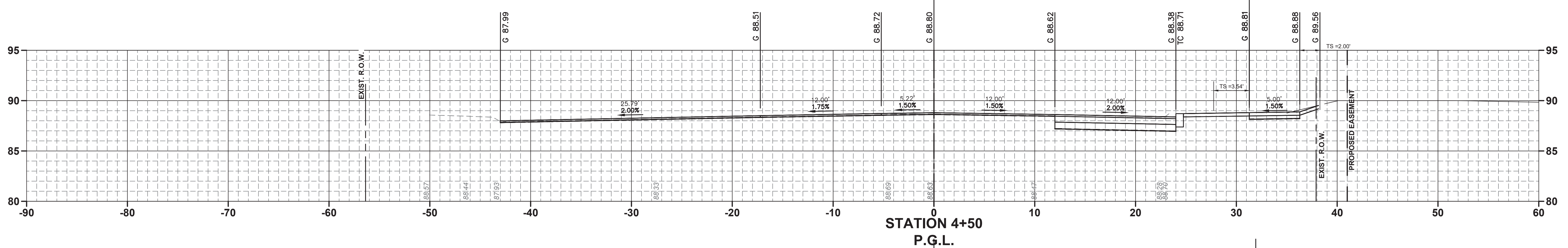
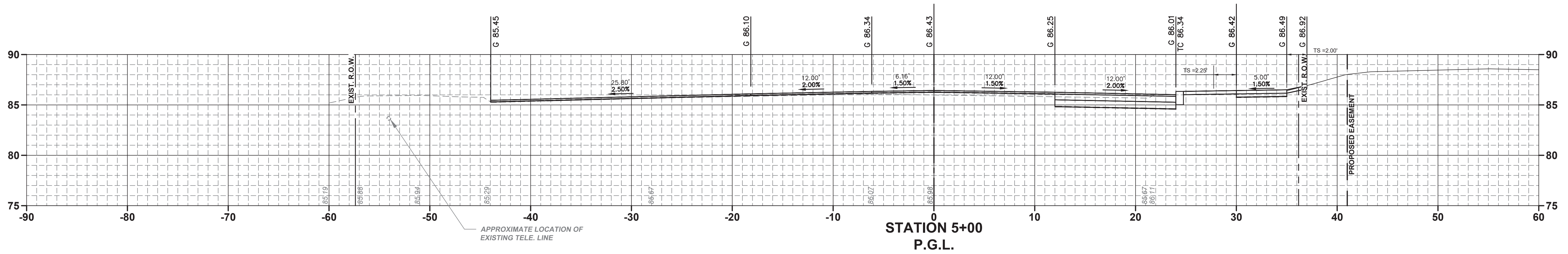
As Shown February 2022

DESIGNED BY: RCM/LJ KEK/LJ

CHECKED BY: JCW SHEET


DATE: 2/17/2022 156 OF 197

DRAWING NO. PWB0A609.01



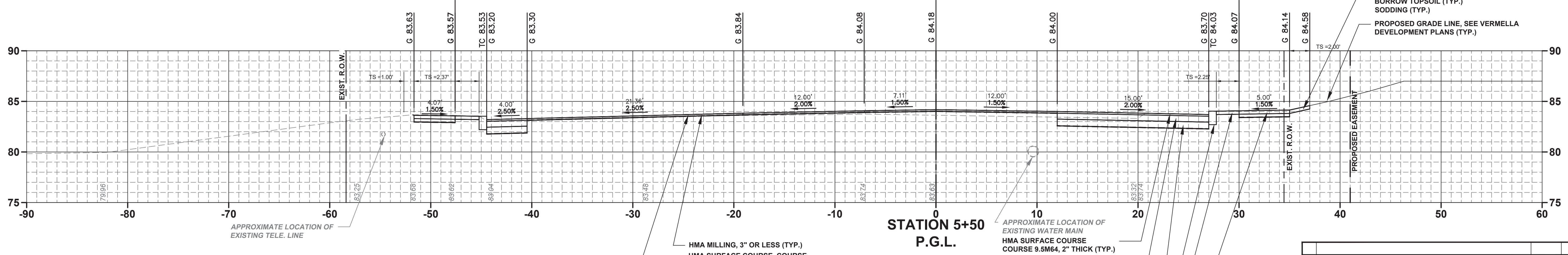
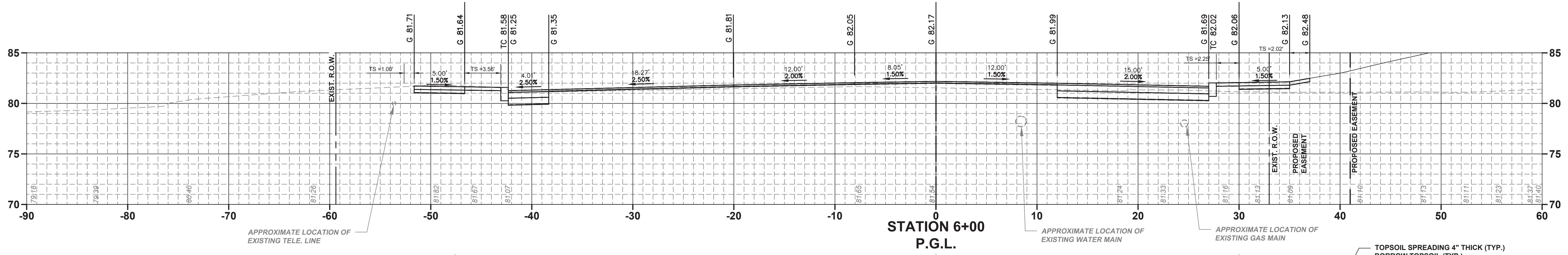
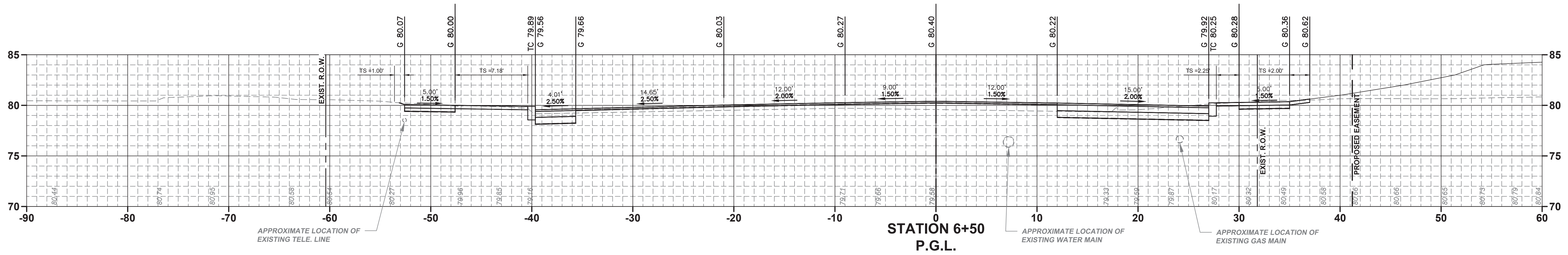
- HMA MILLING, 3" OR LESS (TYP.)
- HMA SURFACE COURSE COURSE 9.5M64, 2" THICK (TYP.)
- HMA SURFACE COURSE COURSE 9.5M64, MIN. 2" THICK (TYP.)
- DENSE GRADED AGGREGATE BASE COURSE, 8" THICK (TYP.)
- 9" X 16" CONCRETE VERTICAL CURB (TYP.)
- TOPSOIL SPREADING 4" THICK (TYP.)
- BORROW TOPSOIL (TYP.)
- SODDING (TYP.)
- CONCRETE SIDEWALK, REINFORCED, 4" THICK (TYP.)



No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
MAIN STREET CROSS SECTIONS (1 OF 13)							
MAIN STREET				P.G.L. STA. 4+00 TO STA. 4+50			
							
(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194							
JOHN H. ALLGAIR P.E. & P.P. (1937 - 2011) NJ P.E. LIC. NO. 25838		DAVID J. SAMUEL P.E. & P.P. NJ P.E. LIC. NO. 24455		JOHN J. STEFANI P.E. L.S. & P.P. NJ P.E. & L.S. LIC. NO. 24271 NJ P.P. LIC. NO. 2089		GREGORY R. VALESI P.E. & P.P. NJ P.E. LIC. NO. 34458 NJ P.P. LIC. NO. 4361	
JAY B. CORNELL P.E. & P.P. NJ P.E. LIC. NO. 32466		MICHAEL J. MCCLELLAND P.E. & P.P. NJ P.E. LIC. NO. 38724 NJ P.P. LIC. NO. 3770		MICHAEL J. MCCLELLAND P.E. LIC. 32468 NEW JERSEY PROFESSIONAL ENGINEER		SCALE: As Shown DATE: February 2022 DRAWN BY: MP DESIGNED BY: MP CHECKED BY: JCW SHEET: 157 of 197	
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468 DATE: 2/17/2022							

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X-23

PWB0609.01

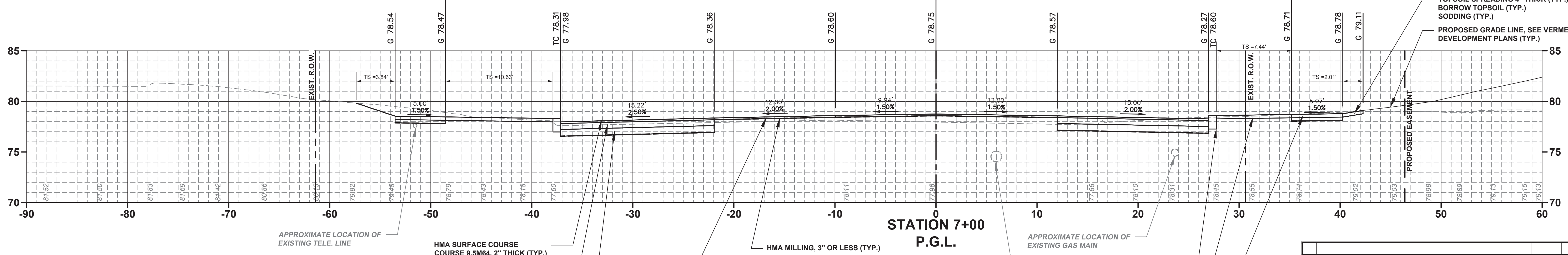
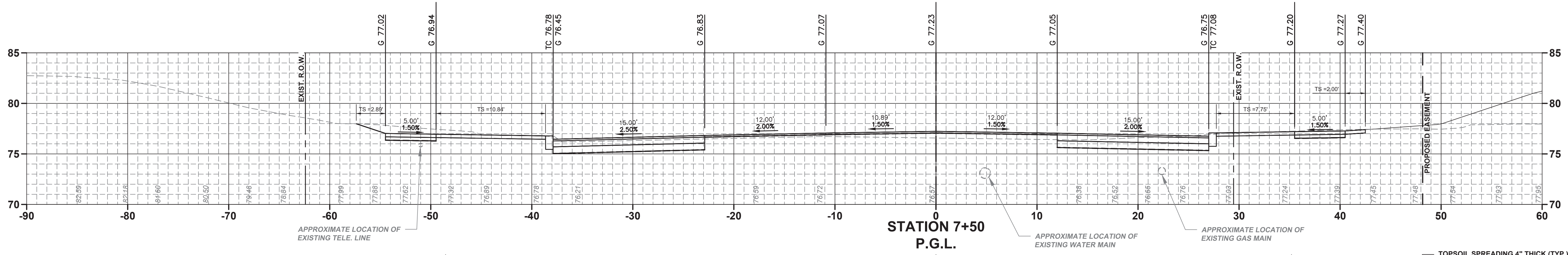
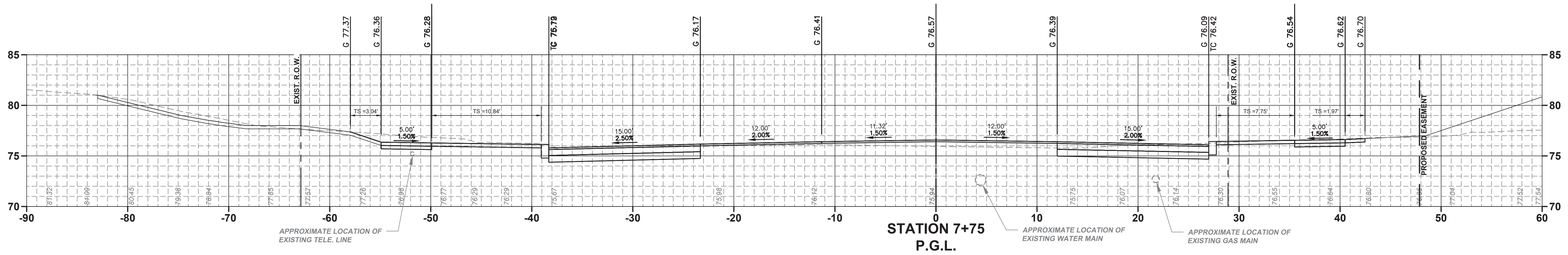


- HMA MILLING, 3" OR LESS (TYP.)
- HMA SURFACE COURSE COURSE 9.5M64, MIN. 2" THICK (TYP.)
- DENSE GRADED AGGREGATE BASE COURSE, 8" THICK (TYP.)
- 9" X 16" CONCRETE VERTICAL CURB (TYP.)
- TOPSOIL SPREADING 4" THICK (TYP.)
- BORROW TOPSOIL (TYP.)
- SODDING (TYP.)
- CONCRETE SIDEWALK, REINFORCED, 4" THICK (TYP.)



No. DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS					
MAIN STREET CROSS SECTIONS (2 OF 13)					
MAIN STREET			P.G.L. STA. 5+00 TO STA. 6+00		
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 727 8000 (732) 462 7400					
JOHN H. ALLGAIER P.E. & P.P. NJ PE LIC NO. 25838 NJ PP LIC NO. 2455	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24971 NJ PP LIC NO. 2089	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE LIC NO. 24971 NJ PP LIC NO. 2089			
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32468	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458			
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468			SCALE As Shown	DATE February 2022	
			DRAWN BY MP	DESIGNED BY MP	
DATE 2/17/2022			CHECKED BY JCW	SHEET 158 of 197	

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X-23
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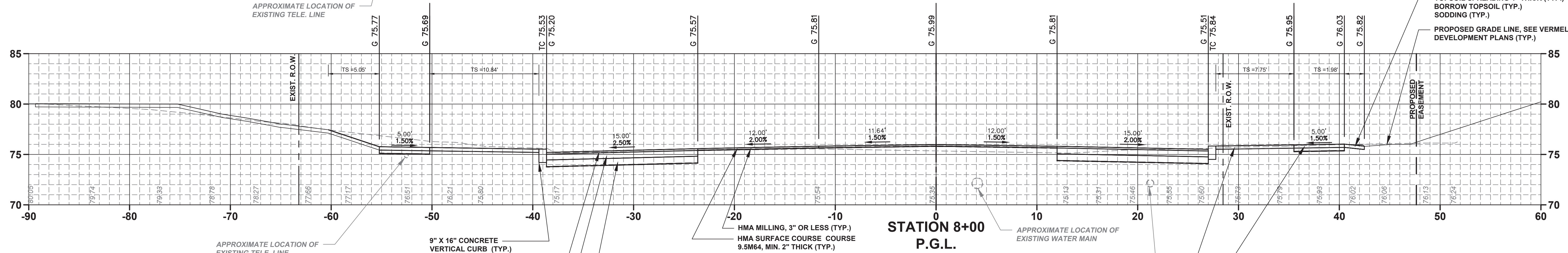
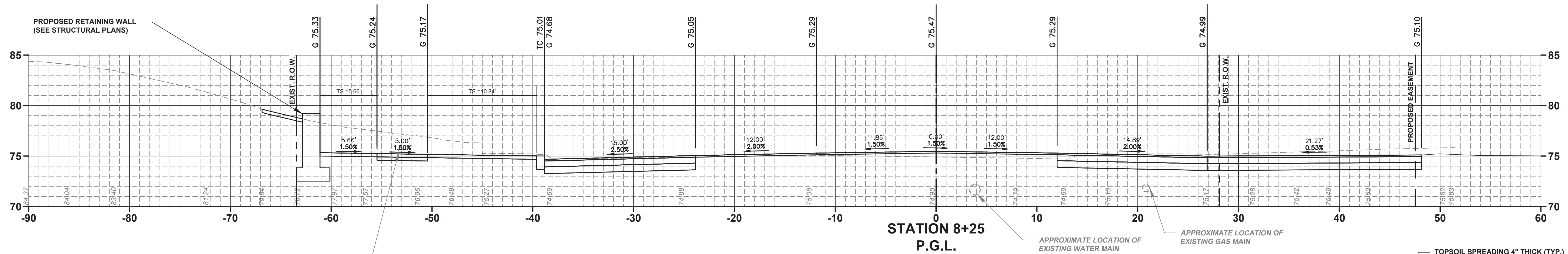
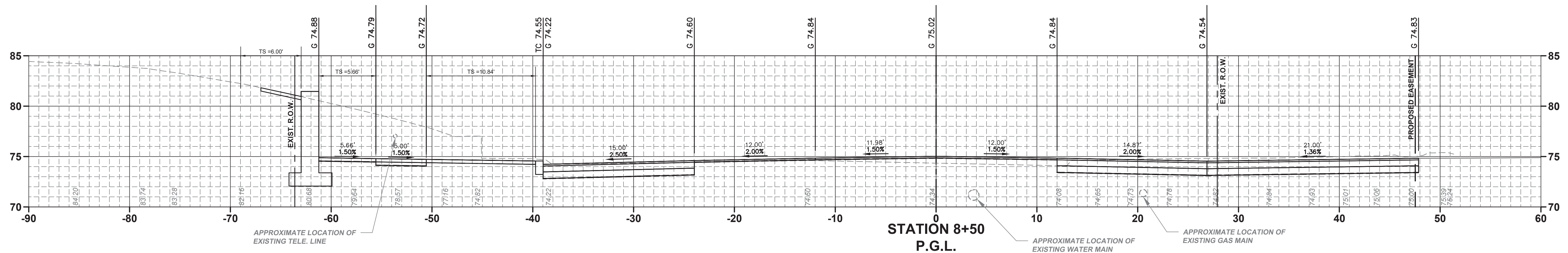
- HMA SURFACE COURSE COURSE 9.5M64, 2" THICK (TYP.)
- HMA BASE COURSE 19M64, 7" THICK (TYP.)
- DENSE GRADED AGGREGATE BASE COURSE, 8" THICK (TYP.)
- HMA MILLING, 3" OR LESS (TYP.)
- HMA SURFACE COURSE COURSE 9.5M64, MIN. 2" THICK (TYP.)
- 9" X 16" CONCRETE VERTICAL CURB (TYP.)
- TOPSOIL SPREADING 4" THICK (TYP.)
- BORROW TOPSOIL (TYP.)
- SODDING (TYP.)
- CONCRETE SIDEWALK, REINFORCED, 4" THICK (TYP.)



No. DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS					
MAIN STREET CROSS SECTIONS (3 OF 13)					
MAIN STREET			P.G.L. STA. 7+00 TO STA. 7+75		
CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400					
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194					
JOHN H. ALLGAIER P.E. & P.P. (1993 - 2011) NJ PE LIC. NO. 25838	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC. NO. 24455	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & L.S. LIC. NO. 24271 NJ PP LIC. NO. 2089			
JAY B. CORNELL P.E. & P.P. NJ PE LIC. NO. 32468	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC. NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC. NO. 34458 NJ PP LIC. NO. 4361			
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468			SCALE As Shown	DATE February 2022	
DRAWN BY 			DESIGNED BY MP	CHECKED BY JCW	SHEET 159 OF 197
DATE 2/17/2022					

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X-23

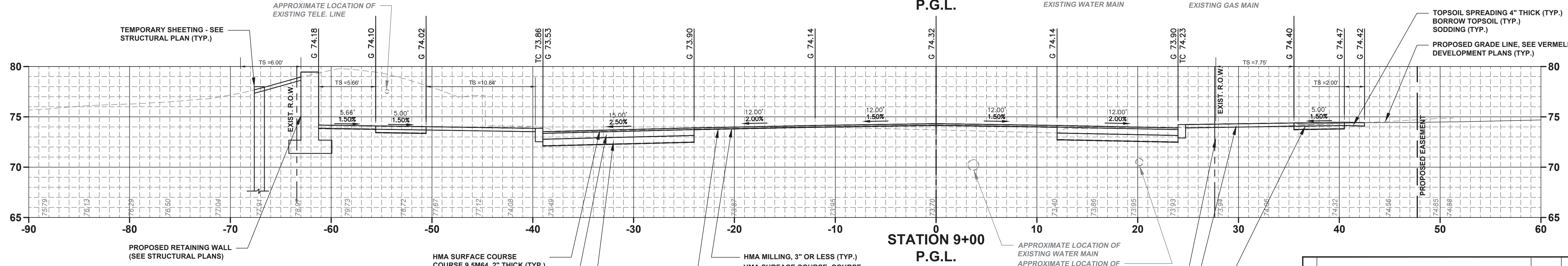
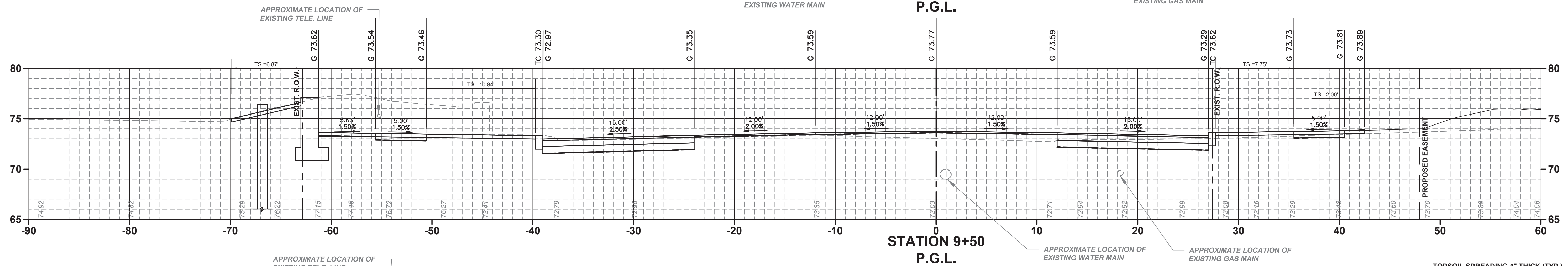
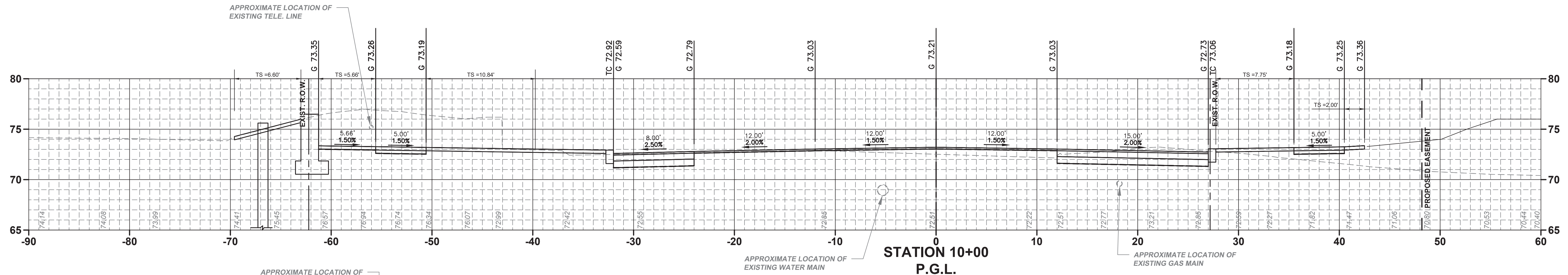
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- 9" X 16" CONCRETE VERTICAL CURB (TYP.)
- HMA SURFACE COURSE COURSE 9.5M64, 2" THICK (TYP.)
- HMA BASE COURSE 19M64, 7" THICK (TYP.)
- DENSE GRADED AGGREGATE BASE COURSE, 8" THICK (TYP.)
- HMA MILLING, 3" OR LESS (TYP.)
- HMA SURFACE COURSE COURSE 9.5M64, MIN. 2" THICK (TYP.)
- TOPSOIL SPREADING 4" THICK (TYP.)
- BORROW TOPSOIL (TYP.)
- SODDING (TYP.)
- CONCRETE SIDEWALK, REINFORCED, 4" THICK (TYP.)
- TOPSOIL SPREADING 4" THICK (TYP.)
- BORROW TOPSOIL (TYP.)
- SODDING (TYP.)
- PROPOSED GRADE LINE, SEE VERMELLA DEVELOPMENT PLANS (TYP.)



No.		DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
<p align="center">TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p> <p align="center">MAIN STREET CROSS SECTIONS (4 OF 13)</p> <p align="center">MAIN STREET P.G.L. STA. 8+00 TO STA. 8+50</p> <p align="center">CME ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>						
JOHN H. ALLGAIER P.E. & P.P. JAY B. CORNELL P.E. & P.P. MICHAEL J. MCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468 DATE: 2/17/2022	DAVID J. SAMUEL P.E. & P.P. MICHAEL J. MCLELLAND P.E. & P.P. LIC. 32468	JOHN J. STEFANI P.E. L.S. & P.P. GREGORY R. VALESI P.E. & P.P. DATE: February 2022 DESIGNED BY: MP CHECKED BY: JCW SHEET: 160 OF 197	X-4 X-23	REGISTERED DRAWING NO. PWB0609.01		



TEMPORARY SHEETING - SEE STRUCTURAL PLAN (TYP.)

PROPOSED RETAINING WALL (SEE STRUCTURAL PLANS)

HMA SURFACE COURSE
COURSE 9.5M64, 2" THICK (TYP.)
HMA BASE COURSE 19M64, 7"
THICK (TYP.)
DENSE GRADED AGGREGATE BASE
COURSE, 8" THICK (TYP.)

HMA MILLING, 3" OR LESS (TYP.)
HMA SURFACE COURSE COURSE
9.5M64, MIN. 2" THICK (TYP.)

APPROXIMATE LOCATION OF
EXISTING WATER MAIN
APPROXIMATE LOCATION OF
EXISTING GAS MAIN
9" X 16" CONCRETE
VERTICAL CURB (TYP.)

TOPSOIL SPREADING 4" THICK (TYP.)
BORROW TOPSOIL (TYP.)
SODDING (TYP.)
CONCRETE SIDEWALK,
REINFORCED, 4" THICK (TYP.)

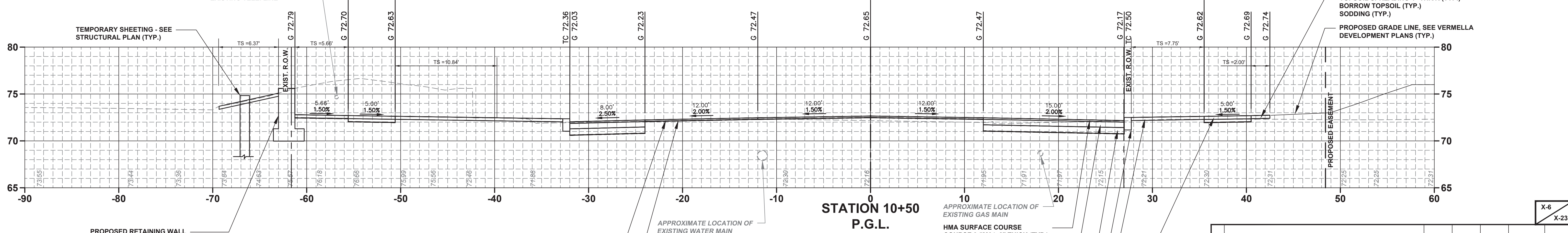
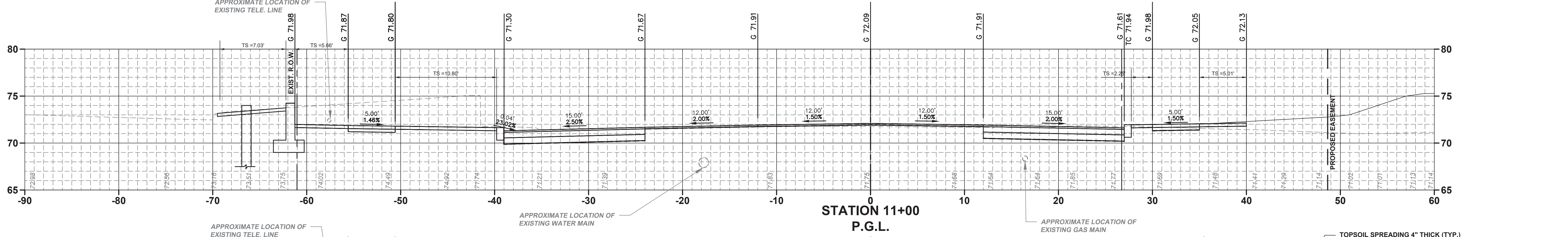
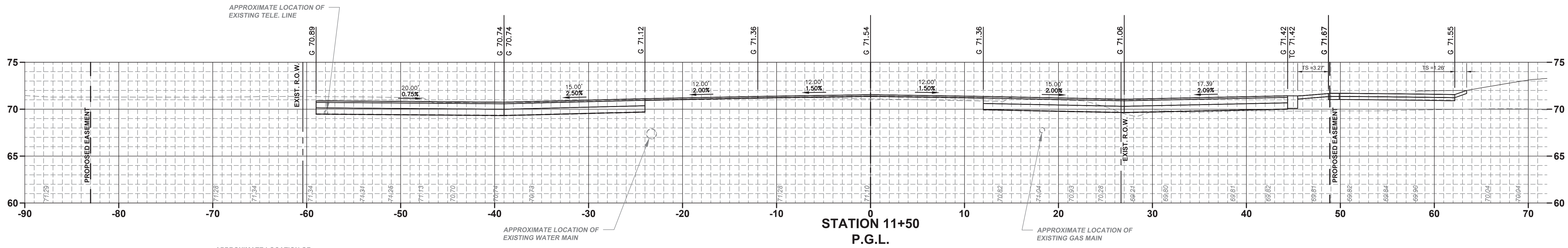
TOPSOIL SPREADING 4" THICK (TYP.)
BORROW TOPSOIL (TYP.)
SODDING (TYP.)
PROPOSED GRADE LINE, SEE VERMELLA
DEVELOPMENT PLANS (TYP.)



<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p> <p>MAIN STREET CROSS SECTIONS (5 OF 13) MAIN STREET P.G.L. STA. 9+00 TO STA. 10+00</p> <p>CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400</p>			
<p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>			
<p>JOHN H. ALLGAIER P.E. & P.P. 1993 - 2011 NJ P.E. LIC. NO. 25838</p>	<p>DAVID J. SAMUEL P.E. & P.P. NJ P.E. LIC. NO. 24455</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NJ P.E. & L.S. LIC. NO. 24271</p>	<p>GREGORY R. VALESI P.E. & P.P. NJ P.E. LIC. NO. 34458</p>
<p>JAY B. CORNELL P.E. & P.P. NJ P.E. LIC. NO. 32468</p>	<p>MICHAEL J. MCCLELLAND P.E. & P.P. NJ P.E. LIC. NO. 38724</p>	<p>MICHAEL J. MCCLELLAND P.E. & P.P. NJ P.E. LIC. NO. 32468</p>	<p>GREGORY R. VALESI P.E. & P.P. NJ P.E. LIC. NO. 34458</p>
<p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>		<p>DATE: 2/17/2022</p>	<p>SCALE: As Shown DESIGNED BY: February 2022 DRAWN BY: MP CHECKED BY: JCV SHEET: 161 OF 197</p>

X-5
X-23

PWB0609.01



TEMPORARY SHEETING - SEE STRUCTURAL PLAN (TYP.)

PROPOSED RETAINING WALL (SEE STRUCTURAL PLANS)

APPROXIMATE LOCATION OF EXISTING WATER MAIN

HMA MILLING, 3" OR LESS (TYP.)

HMA SURFACE COURSE COURSE 9.5M64, MIN. 2" THICK (TYP.)

APPROXIMATE LOCATION OF EXISTING GAS MAIN

HMA SURFACE COURSE COURSE 9.5M64, 2" THICK (TYP.)

HMA BASE COURSE 19M64, 7" THICK (TYP.)

DENSE GRADED AGGREGATE BASE COURSE, 8" THICK (TYP.)

9" X 16" CONCRETE VERTICAL CURB (TYP.)

TOPSOIL SPREADING 4" THICK (TYP.)

BORROW TOPSOIL (TYP.)

SODDING (TYP.)

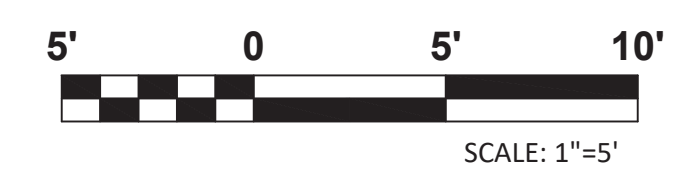
CONCRETE SIDEWALK, REINFORCED, 4" THICK (TYP.)

TOPSOIL SPREADING 4" THICK (TYP.)

BORROW TOPSOIL (TYP.)

SODDING (TYP.)

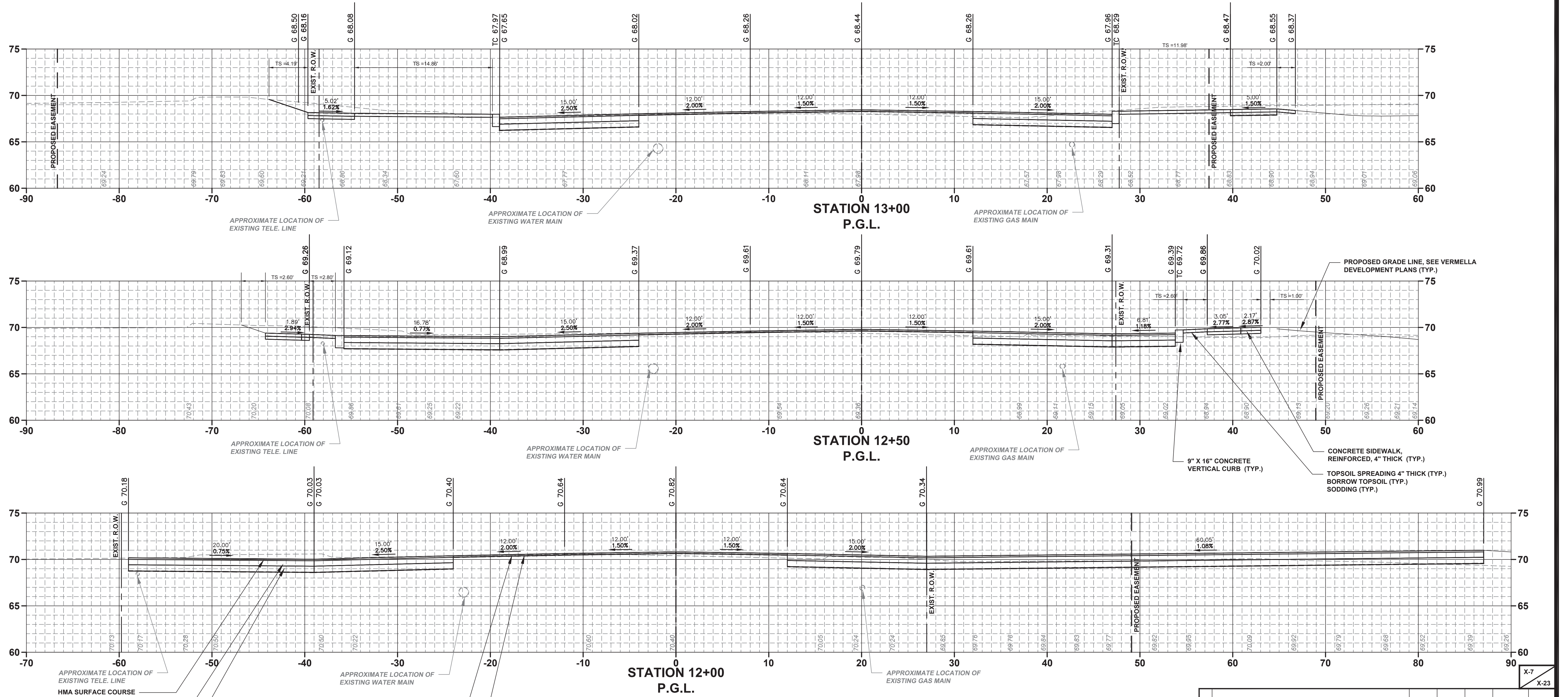
PROPOSED GRADE LINE, SEE VERMELLA DEVELOPMENT PLANS (TYP.)



No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
MAIN STREET CROSS SECTIONS (6 OF 13) MAIN STREET							
				P.G.L. STA. 10+50 TO STA. 11+50			
(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194							
JOHN H. ALLGAIER P.E. & P.P.		DAVID J. SAMUEL P.E. & P.P.		JOHN J. STEFANI P.E. L.S. & P.P.			
JAY B. CORNELL P.E. & P.P.		MICHAEL J. MCCLELLAND P.E. & P.P.		GREGORY R. VALESI P.E. & P.P.			
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468 DATE: 2/17/2022							
SCALE: As Shown DRAWN BY: MP CHECKED BY: JCW				DATE: February 2022 DESIGNED BY: MP SHEET: 162 of 197			

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X-23

PWB0609.01



APPROXIMATE LOCATION OF EXISTING TELE. LINE

HMA SURFACE COURSE COURSE 9.5M64, 2" THICK (TYP.)

HMA BASE COURSE 19M64, 7" THICK (TYP.)

DENSE GRADED AGGREGATE BASE COURSE, 8" THICK (TYP.)

HMA MILLING, 3" OR LESS (TYP.)

HMA SURFACE COURSE COURSE 9.5M64, MIN. 2" THICK (TYP.)



NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

MAIN STREET CROSS SECTIONS (7 OF 13)

MAIN STREET **P.G.L. STA. 12+00 TO STA. 13+00**

(732) 727 8000 **CONSULTING AND MUNICIPAL ENGINEERS** (732) 462 7400

3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIER P.E. & P.P. (1983 - 2021) NJ PE LIC NO. 25839	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24555	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & L.S. LIC NO. 24271
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 38774	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458

MICHAEL J. MCCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. 32468

DATE: 2/17/2022

SCALE: As Shown

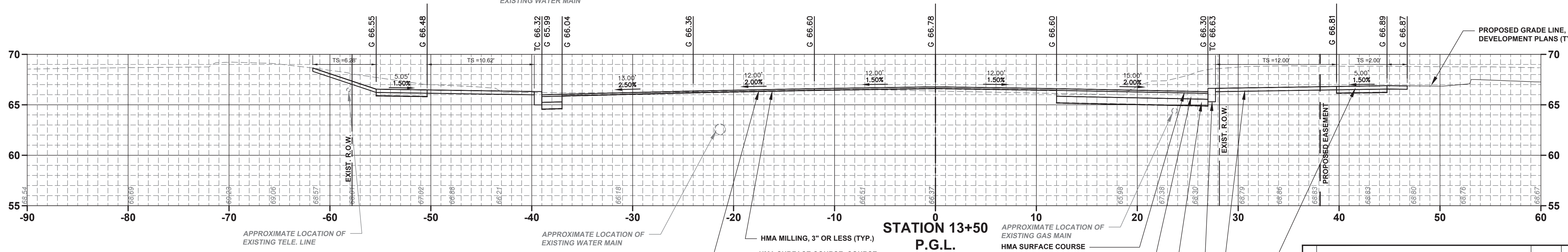
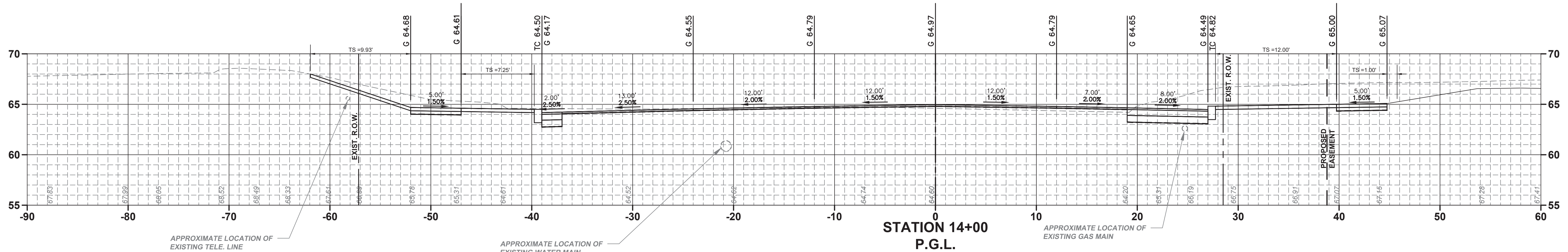
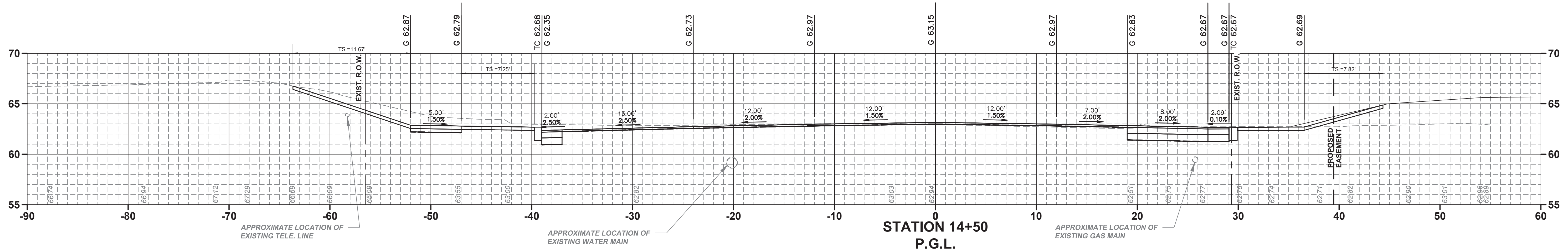
DESIGNED BY: February 2022

DRAWN BY: MP

CHECKED BY: JCW

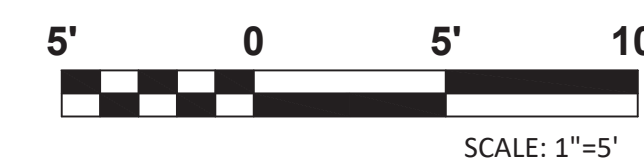
SHEET: 163 OF 197

FILE NO. **PWB0A609.01**



HMA MILLING, 3" OR LESS (TYP.)
 HMA SURFACE COURSE COURSE
 9.5M64, MIN. 2" THICK (TYP.)

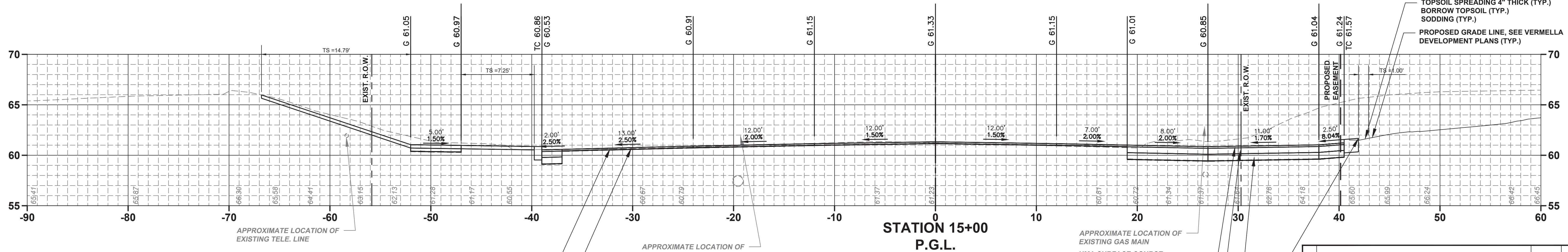
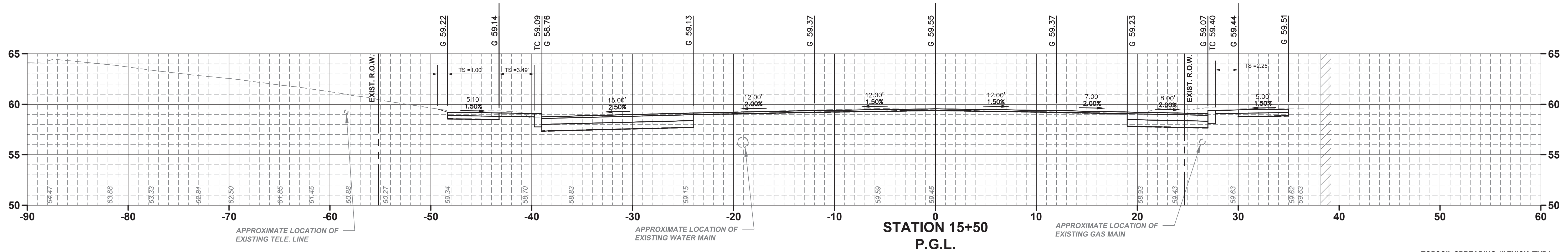
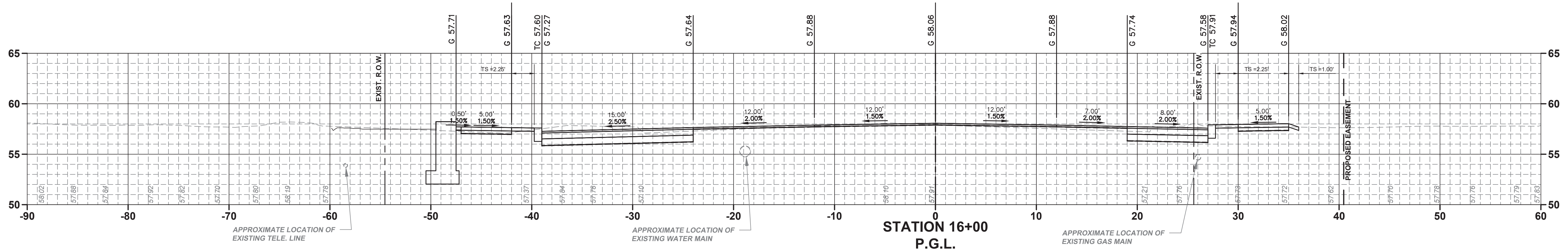
APPROXIMATE LOCATION OF EXISTING GAS MAIN
 HMA SURFACE COURSE COURSE
 9.5M64, 2" THICK (TYP.)
 HMA BASE COURSE 19M64, 7" THICK (TYP.)
 DENSE GRADED AGGREGATE BASE COURSE, 8" THICK (TYP.)
 9" X 16" CONCRETE VERTICAL CURB (TYP.)
 TOPSOIL SPREADING 4" THICK (TYP.)
 BORROW TOPSOIL (TYP.)
 SODDING (TYP.)
 CONCRETE SIDEWALK, REINFORCED, 4" THICK (TYP.)



No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
MAIN STREET CROSS SECTIONS (8 OF 13) MAIN STREET							
				P.G.L. STA. 13+50 TO STA. 14+50			
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 727 8000 (732) 462 7400							
JOHN H. ALLGAIER P.E. & P.P. 1993 - 2011 NJ PE LIC NO. 25838		DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24455		JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & L.S. LIC NO. 24271 NJ PP LIC NO. 2089		GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 4361	
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32468		MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 3874		MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468 DATE: 2/17/2022		SCALE: As Shown DATE: February 2022 DRAWN BY: MP DESIGNED BY: MP CHECKED BY: JCW SHEET: 164 of 197	

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X-23

PWB0609.01


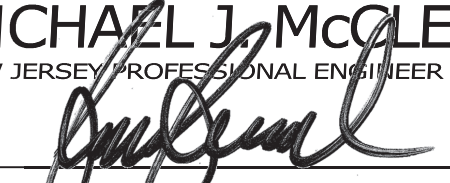


HMA MILLING, 3" OR LESS (TYP.)
HMA SURFACE COURSE COURSE 9.5M64, 2" THICK (TYP.)
HMA SURFACE COURSE COURSE 9.5M64, 7" THICK (TYP.)

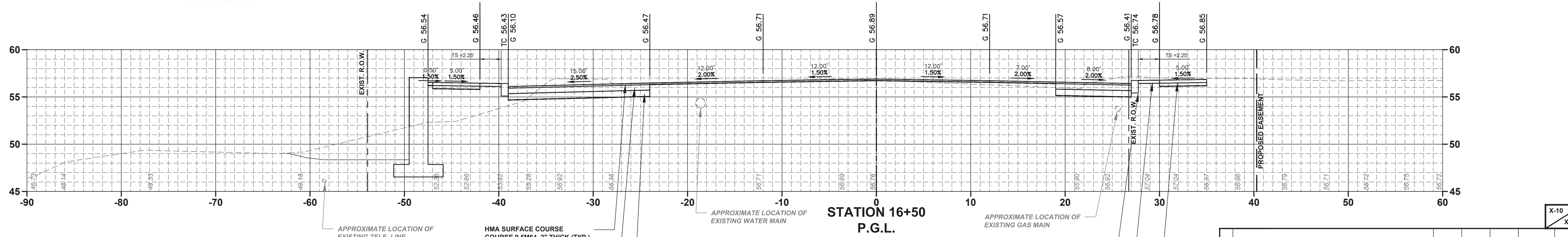
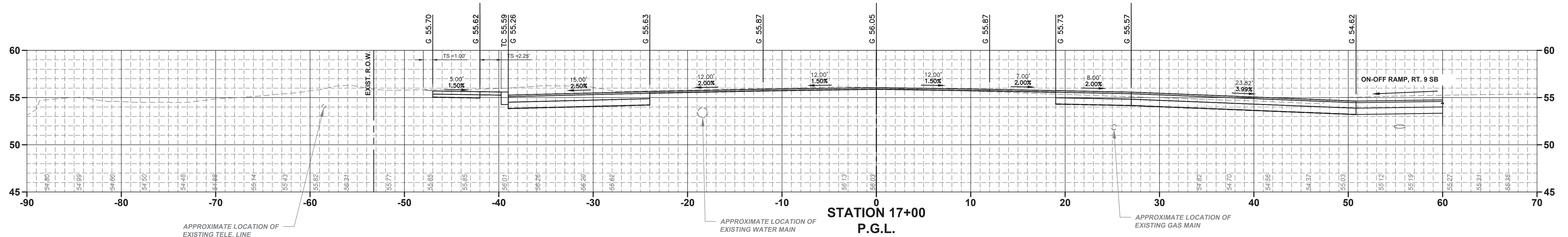
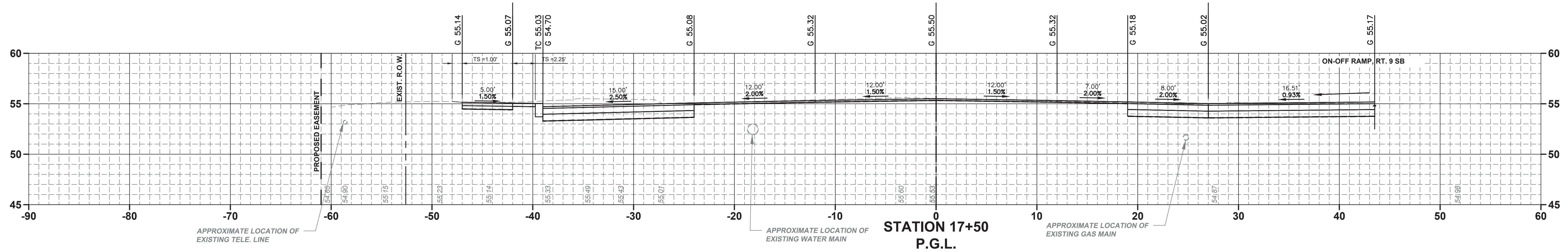
DENSE GRADED AGGREGATE BASE COURSE, 8" THICK (TYP.)
9" X 16" CONCRETE VERTICAL CURB (TYP.)

TOPSOIL SPREADING 4" THICK (TYP.)
BORROW TOPSOIL (TYP.)
SODDING (TYP.)
PROPOSED GRADE LINE, SEE VERMELLA DEVELOPMENT PLANS (TYP.)



No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
MAIN STREET CROSS SECTIONS (9 OF 13) MAIN STREET				P.G.L. STA. 15+00 TO STA. 16+00			
 (732) 727-8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462-7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194							
JOHN H. ALLGAIER P.E. & P.P. 1993 - 2011 NJ P.E. LIC. NO. 25838		DAVID J. SAMUEL P.E. & P.P. NJ P.E. LIC. NO. 25838		JOHN J. STEFANI P.E. L.S. & P.P. NJ P.E. LIC. NO. 24971		NJ P.P. LIC. NO. 2089	
JAY B. CORNELL P.E. & P.P. NJ P.E. LIC. NO. 32468		MICHAEL J. MCCLELLAND P.E. & P.P. NJ P.E. LIC. NO. 38724		MICHAEL J. MCCLELLAND P.E. & P.P. NJ P.E. LIC. NO. 32468		MICHAEL J. MCCLELLAND P.E. & P.P. NJ P.E. LIC. NO. 32468	
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468 				DATE 2/17/2022		SCALE As Shown	
DRAWN BY MP		DESIGNED BY MP		DATE February 2022		SHEET 165 OF 197	
CHECKED BY JCW		DATE 2/17/2022		SHEET 165 OF 197		PROJECT NO. PW0609.01	

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X-23



HMA SURFACE COURSE
 COURSE 9.5M64, 2" THICK (TYP.)
 HMA BASE COURSE 19M64, 7"
 THICK (TYP.)
 DENSE GRADED AGGREGATE BASE
 COURSE, 8" THICK (TYP.)

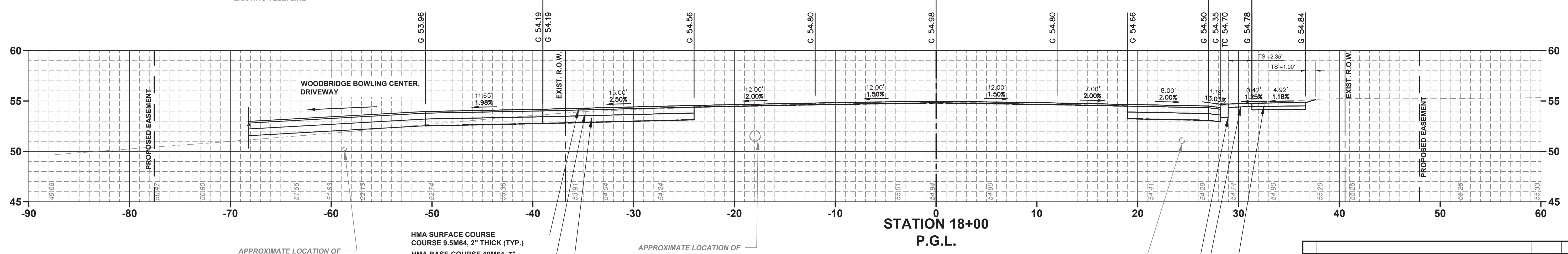
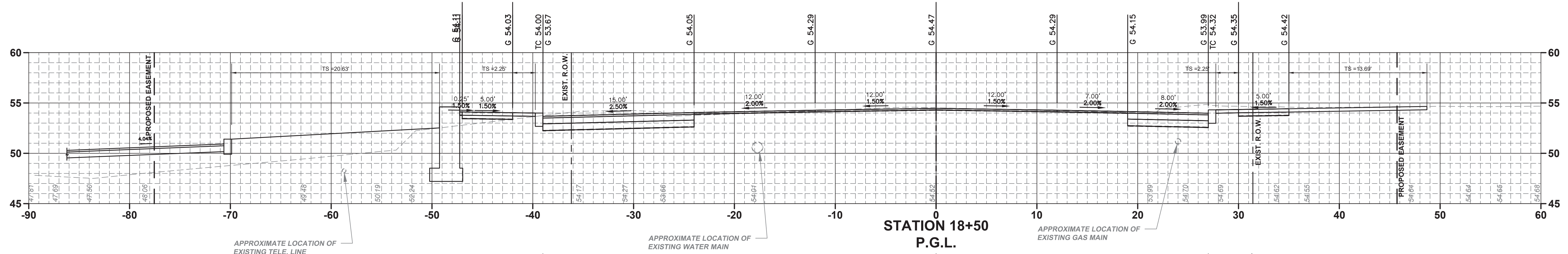
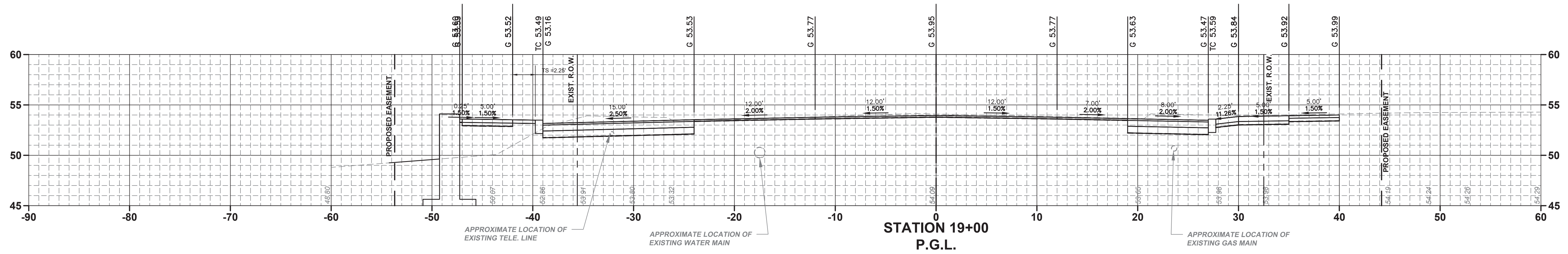
9" X 16" CONCRETE
 VERTICAL CURB (TYP.)
 TOPSOIL SPREADING 4" THICK (TYP.)
 BORROW TOPSOIL (TYP.)
 SODDING (TYP.)
 CONCRETE SIDEWALK,
 REINFORCED, 4" THICK (TYP.)



No. DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS					
MAIN STREET CROSS SECTIONS (10 OF 13) MAIN STREET P.G.L. STA. 16+50 TO STA. 17+50					
(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194					
JOHN H. ALLGAIER P.E. & P.P. <small>(1981 - 2011) NJ P.E. LIC. NO. 25838</small>	DAVID J. SAMUEL P.E. & P.P. <small>NJ P.E. LIC. NO. 24455</small>	JOHN J. STEFANI P.E. L.S. & P.P. <small>NJ P.E. LIC. NO. 24271 NJ P.P. LIC. NO. 2089</small>			
JAY B. CORNELL P.E. & P.P. <small>NJ P.E. LIC. NO. 32468</small>	MICHAEL J. MCCLELLAND P.E. & P.P. <small>NJ P.E. LIC. NO. 38724 NJ P.P. LIC. NO. 34468</small>	GREGORY R. VALESI P.E. & P.P. <small>NJ P.E. LIC. NO. 37710 NJ P.P. LIC. NO. 4361</small>			
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468			SCALE As Shown	DATE February 2022	
DRAWN BY 			DESIGNED BY MP	CHECKED BY JCW	SHEET 166 of 197
DATE 2/17/2022					

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 X-23

PWB0609.01



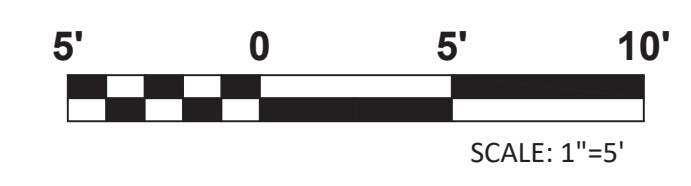
HMA SURFACE COURSE
COURSE 9.5M64, 2" THICK (TYP.)
HMA BASE COURSE 19M64, 7" THICK (TYP.)
DENSE GRADED AGGREGATE BASE COURSE, 8" THICK (TYP.)

APPROXIMATE LOCATION OF EXISTING GAS MAIN

9" X 16" CONCRETE VERTICAL CURB (TYP.)

TOPSOIL SPREADING 4" THICK (TYP.)
BORROW TOPSOIL (TYP.)
SODDING (TYP.)

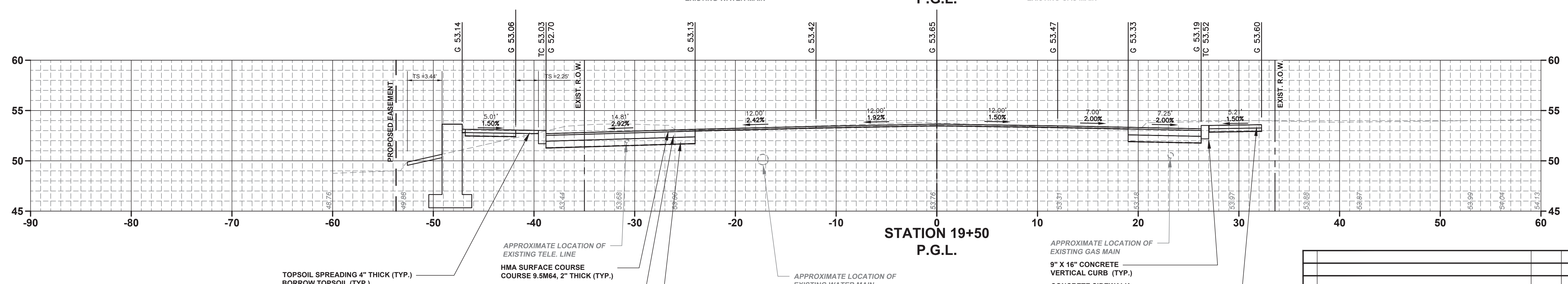
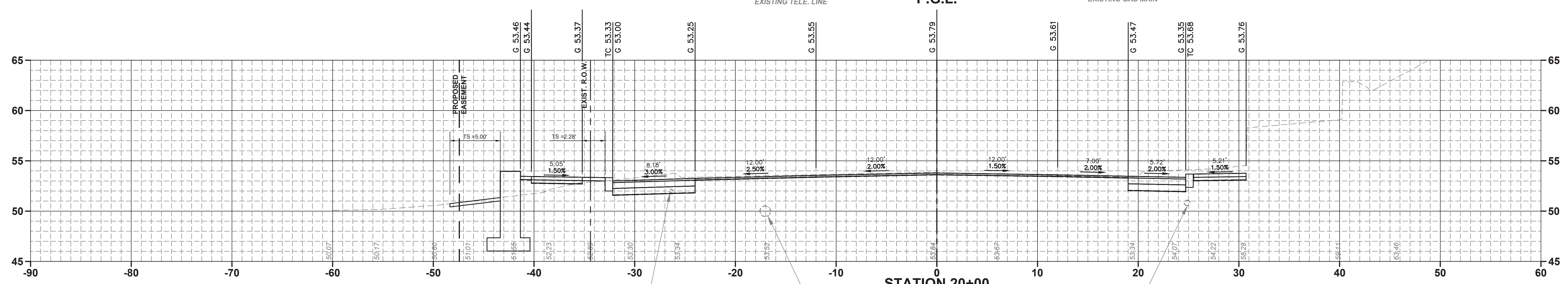
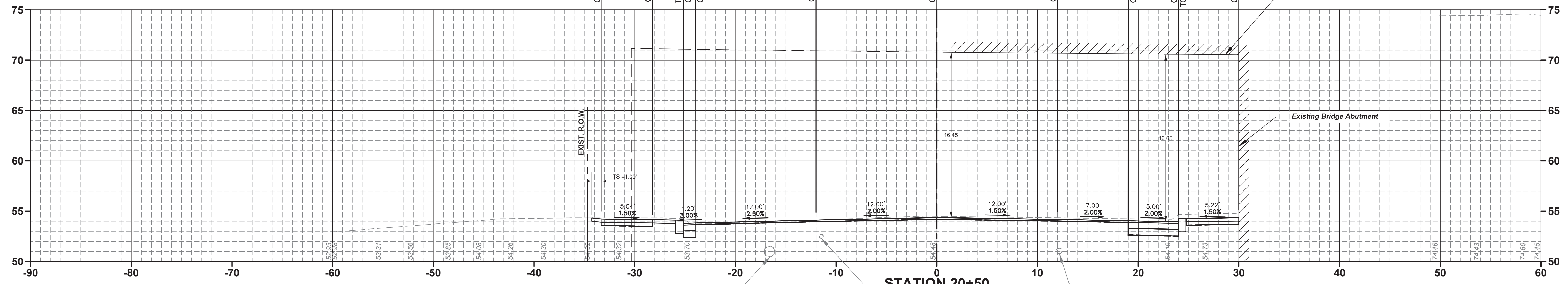
CONCRETE SIDEWALK, REINFORCED, 4" THICK (TYP.)



NO. DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS					
MAIN STREET CROSS SECTIONS (11 OF 13)					
MAIN STREET			P.G.L. STA. 18+00 TO STA. 19+00		
(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194					
JOHN H. ALLGAIER P.E. & P.P. NJ PE LIC. NO. 25838 NJ P.P. LIC. NO. 2455	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC. NO. 24971 NJ P.P. LIC. NO. 2089	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE LIC. NO. 24971 NJ P.P. LIC. NO. 2089			
JAY B. CORNELL P.E. & P.P. NJ PE LIC. NO. 32963	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC. NO. 38724 NJ P.P. LIC. NO. 3770	GREGORY R. VALESI P.E. & P.P. NJ PE LIC. NO. 34458 NJ P.P. LIC. NO. 4361			
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468			SCALE As Shown	DATE February 2022	
DRAWN BY MP			DESIGNED BY MP		
CHECKED BY JCW			SHEET 167 of 197		
DATE 2/17/2022					

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X-23

PWB0609.01



TOPSOIL SPREADING 4" THICK (TYP.)
BORROW TOPSOIL (TYP.)
SODDING (TYP.)

HMA SURFACE COURSE
COURSE 9.5M64, 2" THICK (TYP.)
HMA BASE COURSE 19M64, 7"
THICK (TYP.)
DENSE GRADED AGGREGATE BASE
COURSE, 8" THICK (TYP.)

APPROXIMATE LOCATION OF
EXISTING WATER MAIN

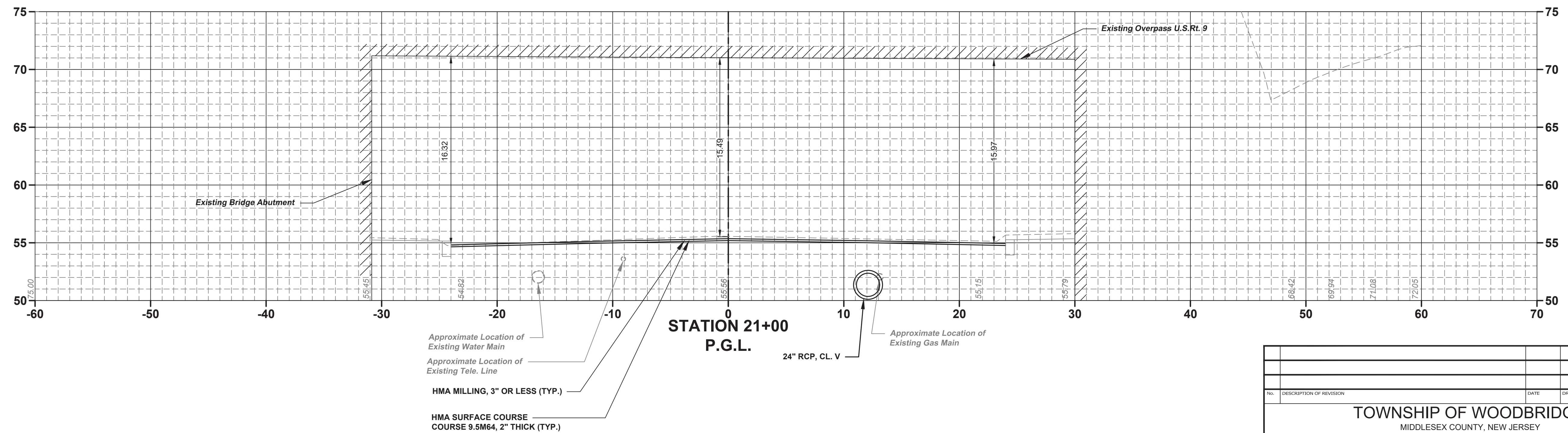
APPROXIMATE LOCATION OF
EXISTING GAS MAIN
9" X 16" CONCRETE
VERTICAL CURB (TYP.)
CONCRETE SIDEWALK,
REINFORCED, 4" THICK (TYP.)





No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
MAIN STREET CROSS SECTIONS (12 OF 13)							
MAIN STREET				P.G.L. STA. 19+50 TO STA. 20+50			
(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194							
JOHN H. ALLGAIER P.E. & P.P. NJ PE LIC NO. 25838 NJ PP LIC NO. 2455		DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25838 NJ PP LIC NO. 2455		JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & L.S. LIC NO. 24271 NJ PP LIC NO. 2089			
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 3874		MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468 NJ PP LIC NO. 3770		GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 34458 NJ PP LIC NO. 4361			
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468 DATE: 2/17/2022				SCALE: As Shown DATE: February 2022 DRAWN BY: MP DESIGNED BY: MP CHECKED BY: MP SHEET: 168 of 197			

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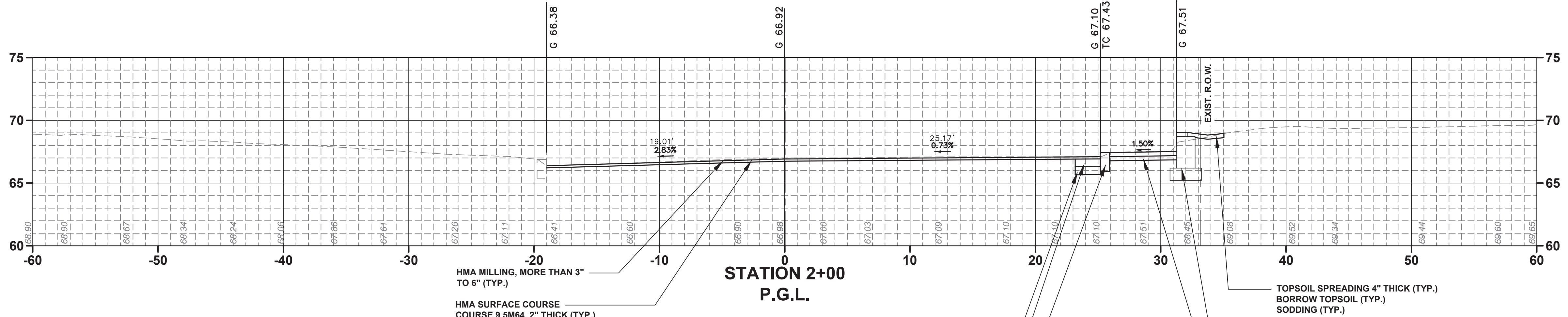
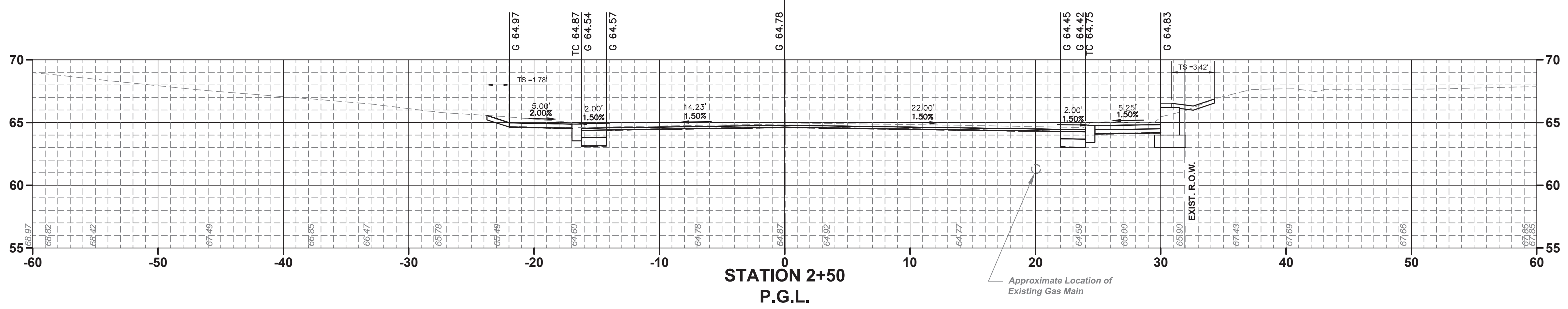
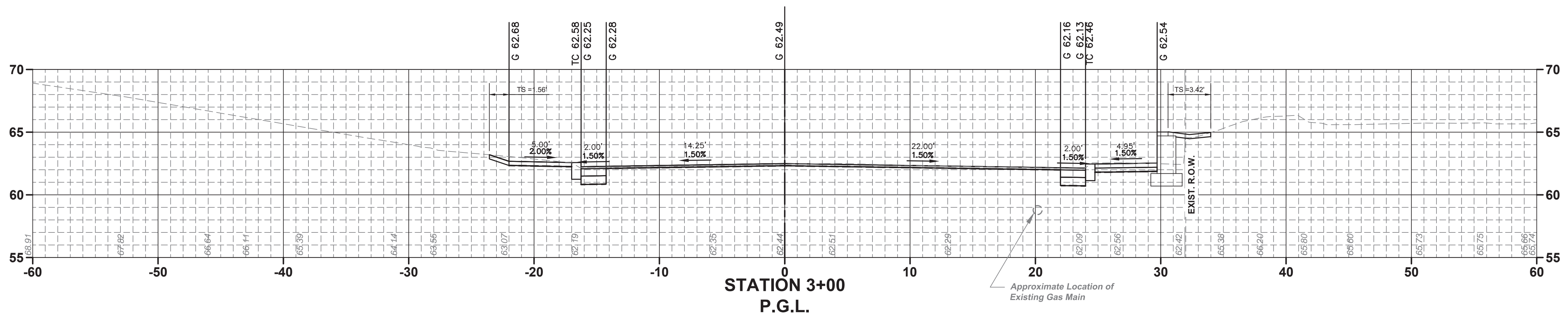
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No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED	
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS								
MAIN STREET CROSS SECTIONS (13 OF 13) MAIN STREET P.G.L. STA. 21+00								
 ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 727-8000 (732) 462-7400								
JOHN H. ALLGAIER P.E. & P.P. 1993 - 2011 NJ PE LIC. NO. 25838	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC. NO. 2455	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & L.S. LIC. NO. 24271						
JAY B. CORNELL P.E. & P.P. NJ PE LIC. NO. 32462	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC. NO. 38724	GREGORY R. VALESI P.E. & P.P. NJ PE LIC. NO. 34458						
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468 			SCALE	DATE	DRAWN BY	DESIGNED BY		
			As Shown	February 2022	MP	MP		
			CHECKED BY	DATE	SHEET			
			JCW	2/17/2022	169 of 197			

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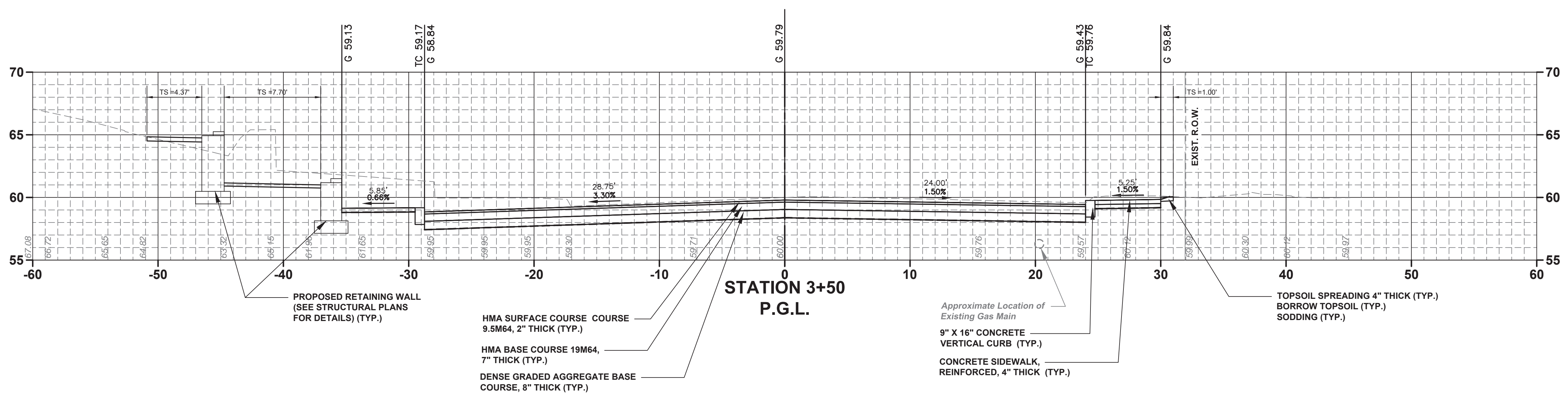
DRAWING NO. PWB0609.01



No.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
ROUTE 9 NORTHBOUND RAMP CROSS SECTIONS (1 OF 2)							
ON-OFF RAMP RT. 9 NB				P.G.L. STA. N 2+00 TO STA. N 3+00			
 CONSULTING AND MUNICIPAL ENGINEERS							
JOHN H. ALLGAIER P.E. & P.P. <small>(1983 - 2011)</small> NJ P.E. LIC. NO. 25838		DAVID J. SAMUEL P.E. & P.P. NJ P.E. LIC. NO. 32468		JOHN J. STEFANI P.E. L.S. & P.P. NJ P.E. LIC. NO. 24271		GREGORY R. VALESI P.E. & P.P. NJ P.E. LIC. NO. 34458	
JAY B. CORNELL P.E. & P.P. NJ P.E. LIC. NO. 32468		MICHAEL J. MCCLELLAND P.E. & P.P. NJ P.E. LIC. NO. 38774		SCALE: As Shown		DATE: February 2022	
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468				DRAWN BY: MP CHECKED BY:		DESIGNED BY: MP SHEET: 170 OF 197	
				DATE: 2/17/2022			

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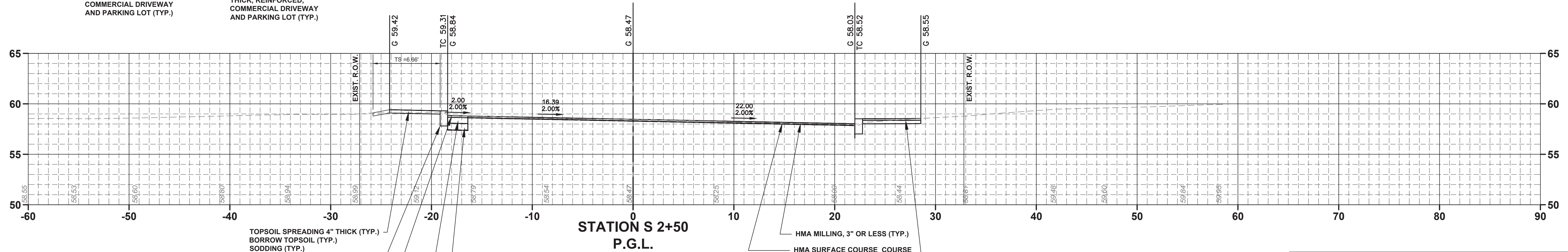
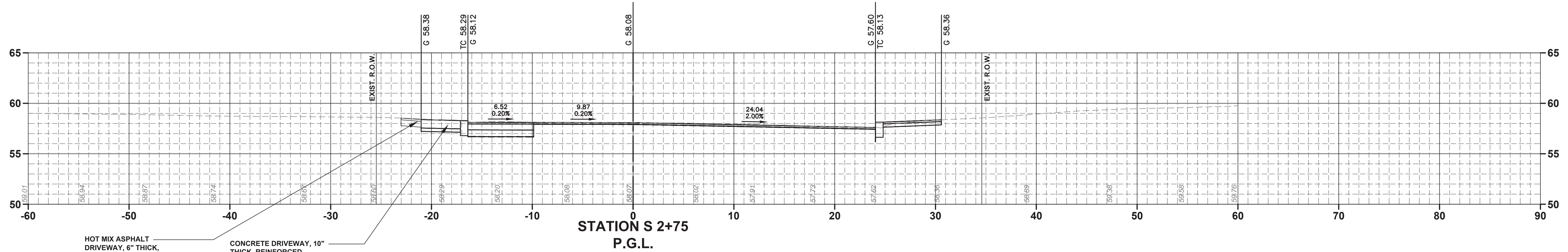
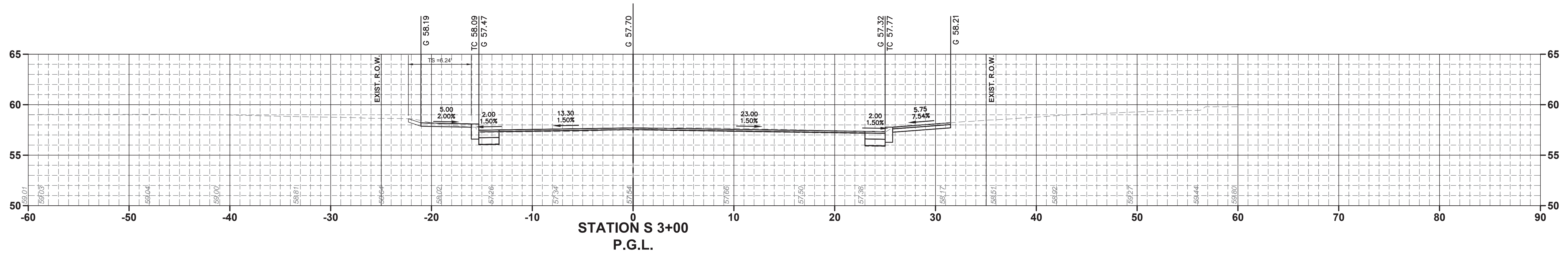
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NO.		DESCRIPTION OF REVISION		DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
ROUTE 9 NORTHBOUND RAMP CROSS SECTIONS (2 OF 2) ON-OFF RAMP RT. 9 NB P.G.L. STA. N 3+50							
ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS							
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 727 8000 (732) 462 7400							
JOHN H. ALLGAIER P.E. & P.P. NJ P.E. LIC. NO. 25838 (1987 - 2011)	DAVID J. SAMUEL P.E. & P.P. NJ P.P. LIC. NO. 2455	JOHN J. STEFANI P.E. L.S. & P.P. NJ P.E. & L.S. LIC. NO. 24271 NJ P.P. LIC. NO. 2089					
JAY B. CORNELL P.E. & P.P. NJ P.E. LIC. NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ P.E. LIC. NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ P.E. LIC. NO. 34458					
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468			SCALE As Shown	DATE February 2022			
DRAWN BY MP			DESIGNED BY MP				
CHECKED BY			SHEET MP				
DATE 2/17/2022			SHEET 171 of 197				

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X-23

DRAWING NO. PWB0609.01



HOT MIX ASPHALT DRIVEWAY, 6" THICK, COMMERCIAL DRIVEWAY AND PARKING LOT (TYP.)

CONCRETE DRIVEWAY, 10" THICK, REINFORCED, COMMERCIAL DRIVEWAY AND PARKING LOT (TYP.)

TOPSOIL SPREADING 4" THICK (TYP.)
BORROW TOPSOIL (TYP.)
SODDING (TYP.)

9" X 16" CONCRETE VERTICAL CURB (TYP.)

HMA SURFACE COURSE COURSE 9.5M64, 2" THICK (TYP.)

HMA BASE COURSE 19M64, 7" THICK (TYP.)

DENSE GRADED AGGREGATE BASE COURSE, 8" THICK (TYP.)

HMA MILLING, 3" OR LESS (TYP.)

HMA SURFACE COURSE COURSE 9.5M64, MIN. 2" THICK (TYP.)

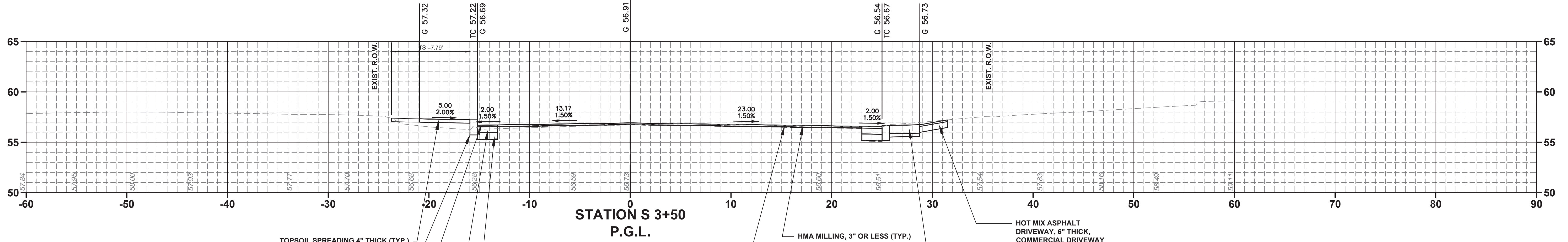
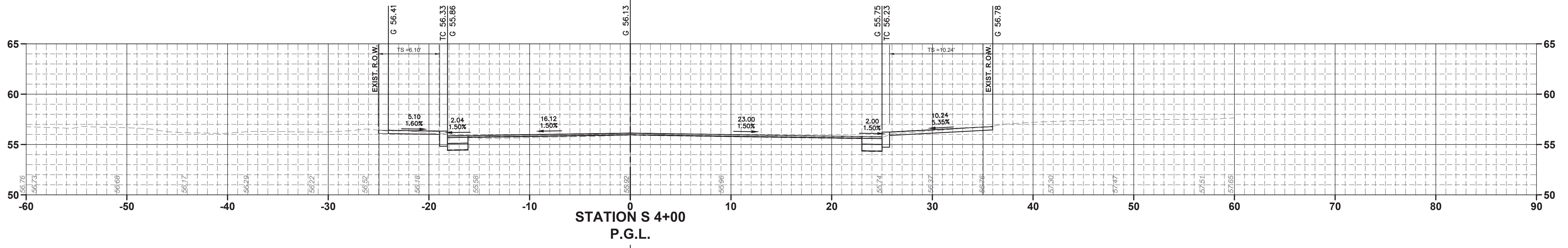
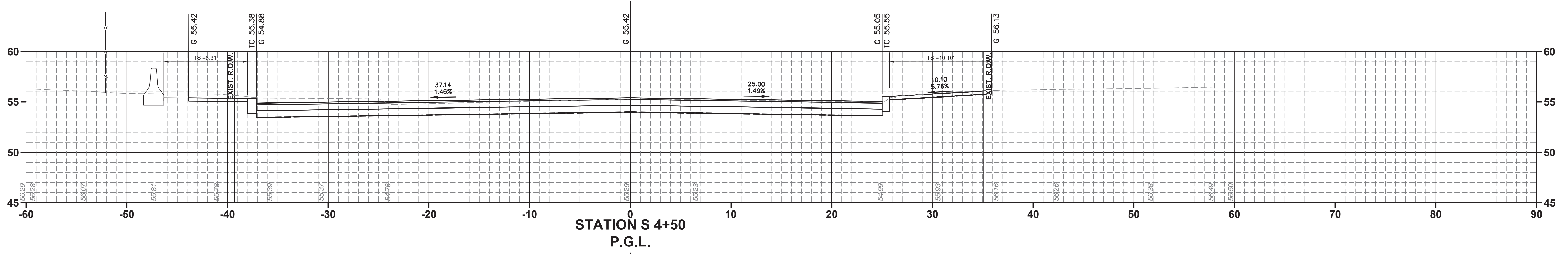
HOT MIX ASPHALT DRIVEWAY, 6" THICK, COMMERCIAL DRIVEWAY AND PARKING LOT (TYP.)



<p>NO. DESCRIPTION OF REVISION DATE DRAWN CHECKED RELEASED</p>			
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY</p> <p>ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p>			
<p>ROUTE 9 SOUTHBOUND RAMP CROSS SECTIONS (1 OF 2)</p> <p>ON-OFF RAMP RT. 9 SB P.G.L. STA. 2+50 TO STA. 3+00</p>			
<p>ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400</p> <p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>			
<p>JOHN H. ALLGAIER P.E. & P.P. (1983 - 2001) NO PE LIC NO. 25838 NO PP LIC NO. 2455</p>	<p>DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 24558 NO PP LIC NO. 2455</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NO PE & L.S. LIC NO. 24271 NO PP LIC NO. 2089</p>	<p>JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32952 NO PP LIC NO. 3874</p>
<p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER</p>	<p>MICHAEL J. MCCLELLAND P.E. & P.P. NO PE LIC NO. 32468 NO PP LIC NO. 3720</p>	<p>GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 39458 NO PP LIC NO. 4361</p>	<p>SCALE: As Shown DATE: February 2022 DRAWN BY: MP DESIGNED BY: MP CHECKED BY: JCW SHEET: 172 OF 197</p>
<p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>			<p>DATE: 2/17/2022</p>

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X-23

FILE NO. PWB0A609.01



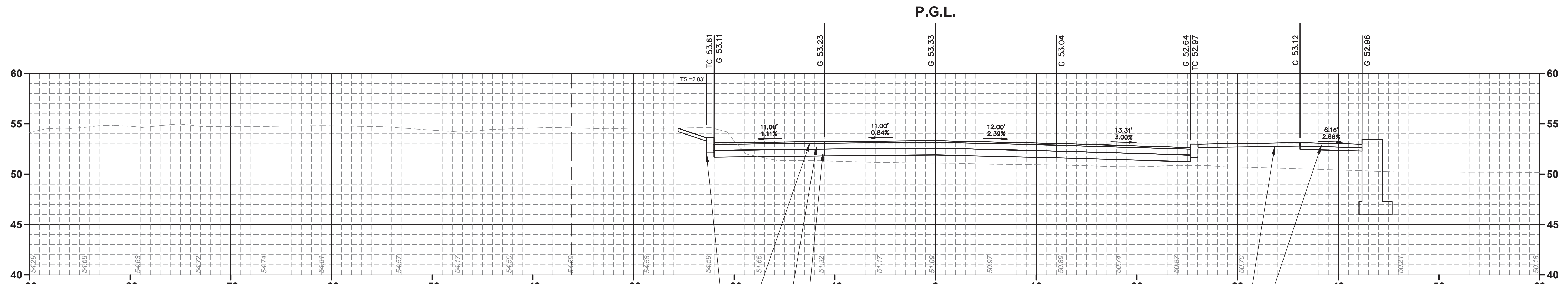
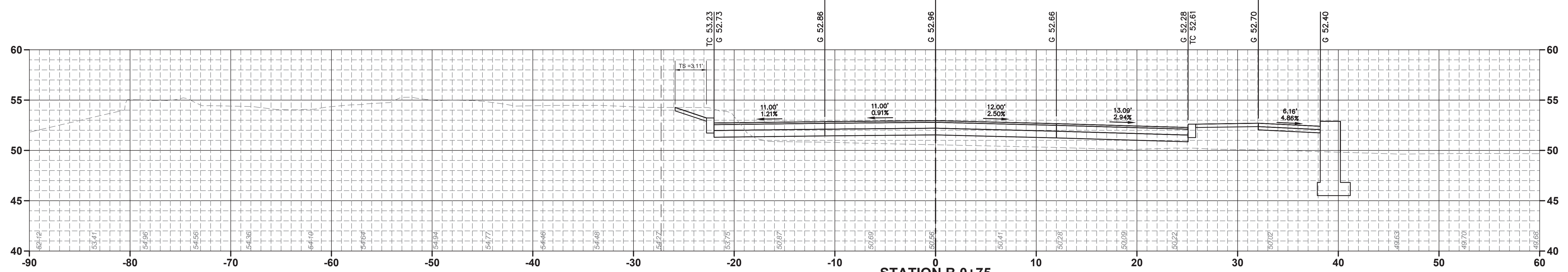
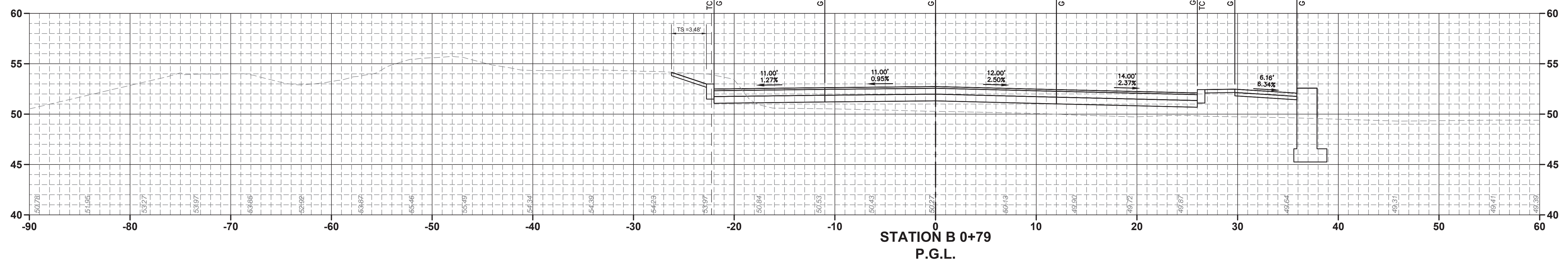
- TOPSOIL SPREADING 4" THICK (TYP.)
- BORROW TOPSOIL (TYP.)
- SODDING (TYP.)
- 9" X 16" CONCRETE VERTICAL CURB (TYP.)
- HMA SURFACE COURSE COURSE 9.5M64, 2" THICK (TYP.)
- HMA BASE COURSE 19M64, 7" THICK (TYP.)
- DENSE GRADED AGGREGATE BASE COURSE, 8" THICK (TYP.)
- HMA MILLING, 3" OR LESS (TYP.)
- HMA SURFACE COURSE COURSE 9.5M64, MIN. 2" THICK (TYP.)
- CONCRETE DRIVEWAY, 10" THICK, REINFORCED, COMMERCIAL DRIVEWAY AND PARKING LOT (TYP.)
- HOT MIX ASPHALT DRIVEWAY, 6" THICK, COMMERCIAL DRIVEWAY AND PARKING LOT (TYP.)



No.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY</p> <p>ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p> <p>ROUTE 9 SOUTHBOUND RAMP CROSS SECTIONS (2 OF 2)</p> <p>ON-OFF RAMP RT. 9 SB P.G.L. STA. 3+50 TO STA. 4+50</p>					
<p>ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p> <p>(732) 727 8000 (732) 462 7400</p> <p>3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>					
JOHN H. ALLGAIER P.E. & P.P. <small>(1983 - 2001)</small> JAY B. CORNELL P.E. & P.P. <small>NO PE LIC NO. 32952</small>		DAVID J. SAMUEL P.E. & P.P. <small>NO PE LIC NO. 25838</small> MICHAEL J. McCLELLAND P.E. & P.P. <small>NO PE LIC NO. 3874</small>		JOHN J. STEFANI P.E. L.S. & P.P. <small>NO PE & L.S. LIC NO. 24271</small> GREGORY R. VALESI P.E. & P.P. <small>NO PE LIC NO. 39458</small>	
<p>MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER</p> <p>As Shown February 2022</p> <p>DRAWN BY: MP DESIGNED BY: MP</p> <p>CHECKED BY: JCW SHEET: 173 of 197</p> <p style="text-align: right;">DATE: 2/17/2022</p>					

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DRAWING NO. PWB0A609.01



9" X 16" CONCRETE VERTICAL CURB (TYP.)
 HMA SURFACE COURSE COURSE 9.5M64, 2" THICK (TYP.)
 HMA BASE COURSE 19M64, 7" THICK (TYP.)
 DENSE GRADED AGGREGATE BASE COURSE, 8" THICK (TYP.)

TOPSOIL SPREADING 4" THICK (TYP.)
 BORROW TOPSOIL (TYP.)
 SODDING (TYP.)
 CONCRETE SIDEWALK, REINFORCED, 4" THICK (TYP.)



NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED

TOWNSHIP OF WOODBRIDGE
 MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

BOWLING CENTER CROSS SECTIONS (1 OF 3)

WOODBRIDGE BOWLING CENTER **P.G.L. STA. 0+70 TO STA. 0+79**

ASSOCIATES
 CONSULTING AND MUNICIPAL ENGINEERS

3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991) NJ PE LIC NO. 24539	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 2455	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & L.S. LIC NO. 24271 NJ PP LIC NO. 2089
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 32458 NJ PP LIC NO. 3720

MICHAEL J. McCLELLAND P.E.
 NEW JERSEY PROFESSIONAL ENGINEER
 L.I.C. 32468

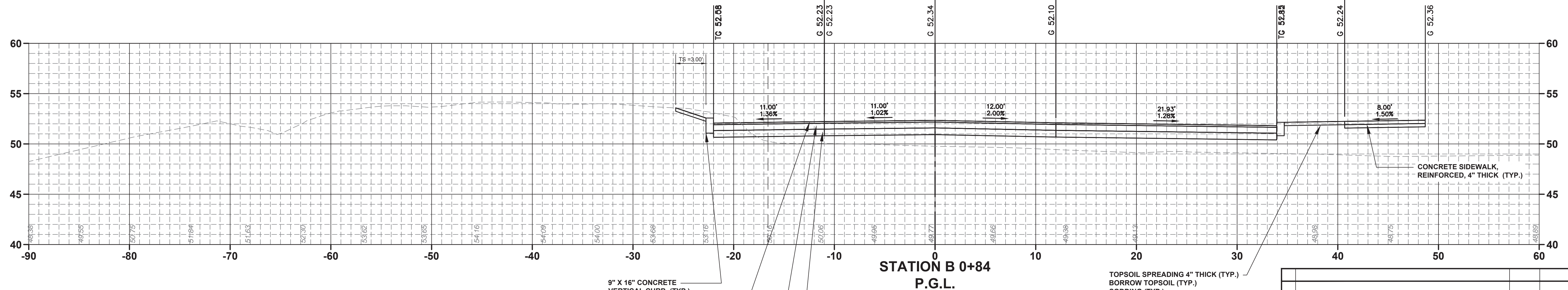
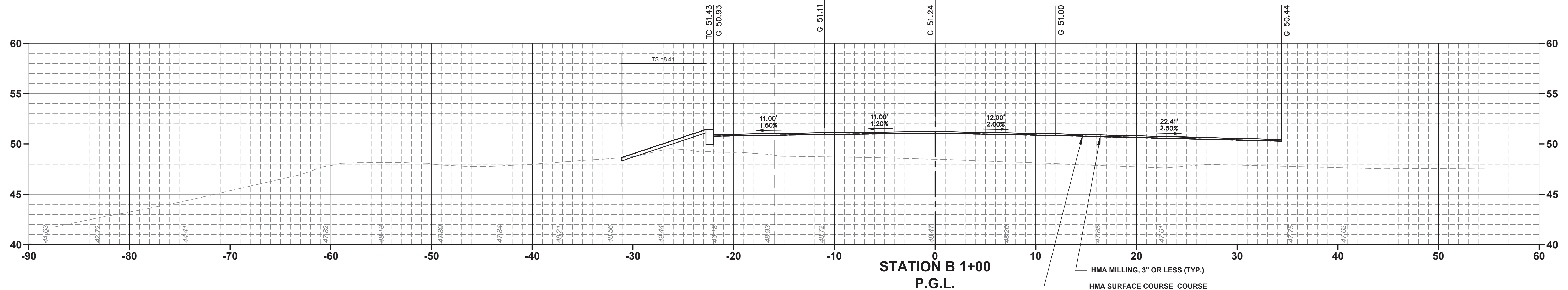
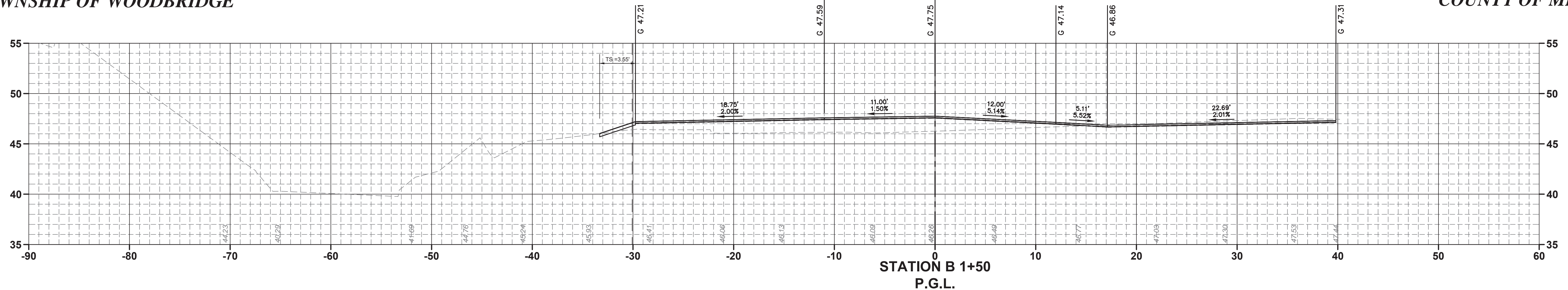
As Shown
 February 2022

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 CHECKED BY: JCW

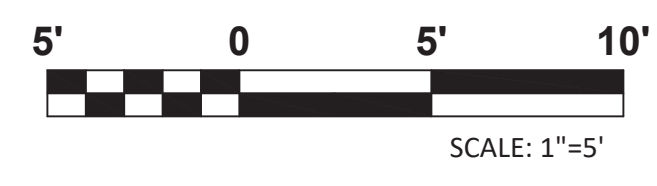
DATE: 2/17/2022
 SHEET: 174 of 197

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9" X 16" CONCRETE VERTICAL CURB (TYP.)
HMA SURFACE COURSE COURSE 9.5M64, 2" THICK (TYP.)
HMA BASE COURSE 19M64, 7" THICK (TYP.)
DENSE GRADED AGGREGATE BASE COURSE, 8" THICK (TYP.)



NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

BOWLING CENTER CROSS SECTIONS (2 OF 3)
WOODBRIDGE BOWLING CENTER P.G.L. STA. 0+84 TO STA. 1+50

ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS

3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIER P.E. & P.P. (1983 - 2021)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25638	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & L.S. LIC NO. 24271
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32952	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 33458	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458

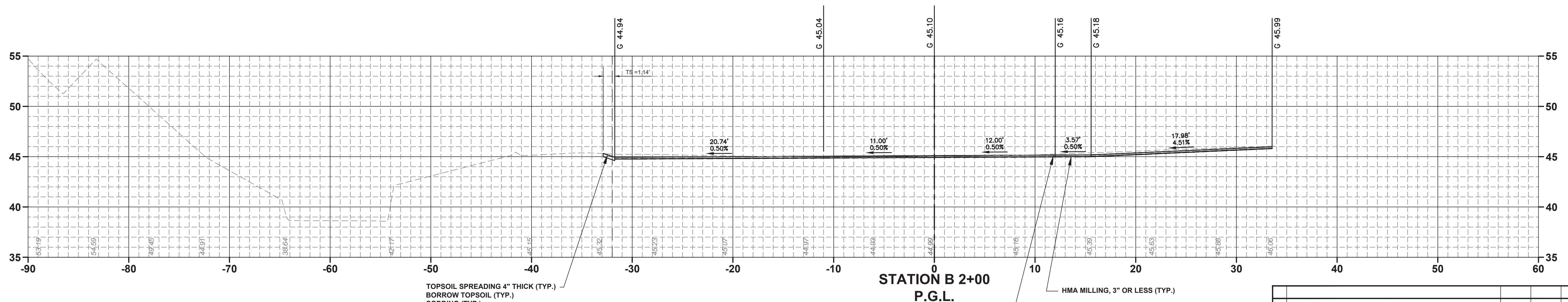
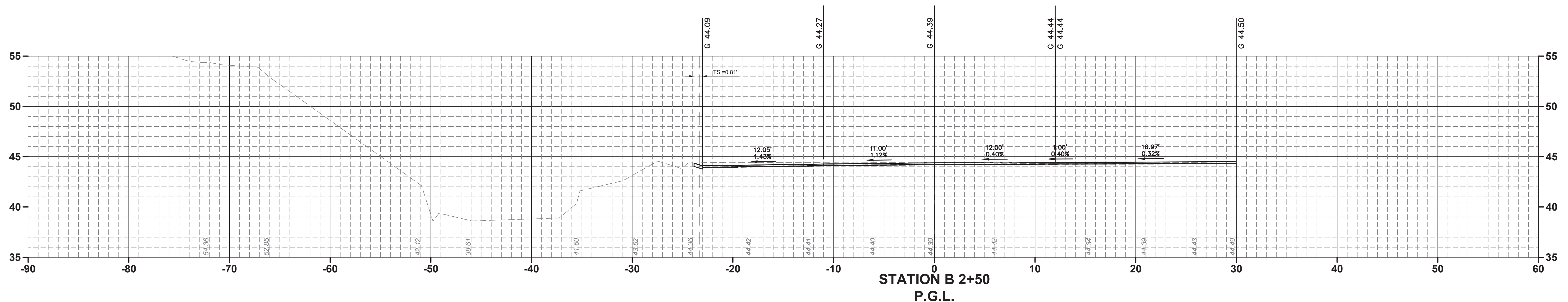
MICHAEL J. McCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. 32468

As Shown
February 2022

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TOPSOIL SPREADING 4" THICK (TYP.)
 BORROW TOPSOIL (TYP.)
 SODDING (TYP.)

HMA MILLING, 3" OR LESS (TYP.)
 HMA SURFACE COURSE COURSE
 9.5M64, MIN. 2" THICK (TYP.)




NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED

TOWNSHIP OF WOODBRIDGE
 MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

BOWLING CENTER CROSS SECTIONS (3 OF 3)

WOODBRIDGE BOWLING CENTER **P.G.L. STA. 2+00 TO STA. 2+50**


ASSOCIATES
 CONSULTING AND MUNICIPAL ENGINEERS

3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIER P.E. & P.P. (1983 - 2001)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25038	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & L.S. LIC NO. 24271
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32952	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458

MICHAEL J. McCLELLAND P.E.
 NEW JERSEY PROFESSIONAL ENGINEER

As Shown DATE: February 2022

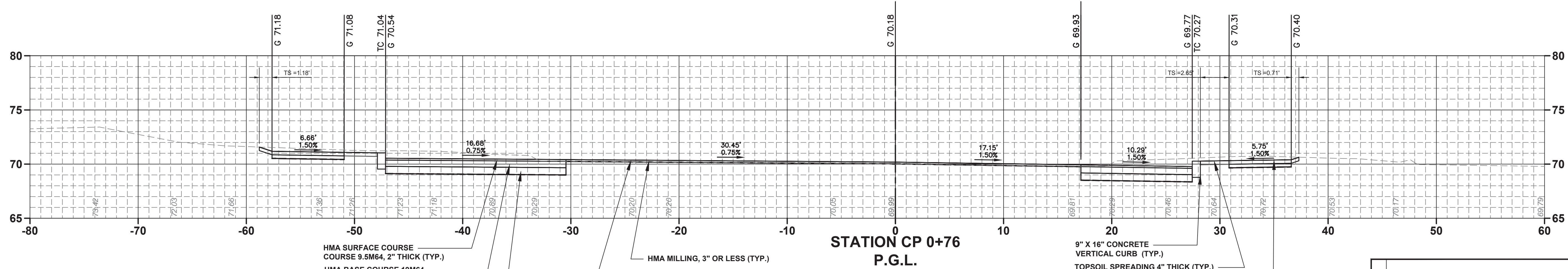
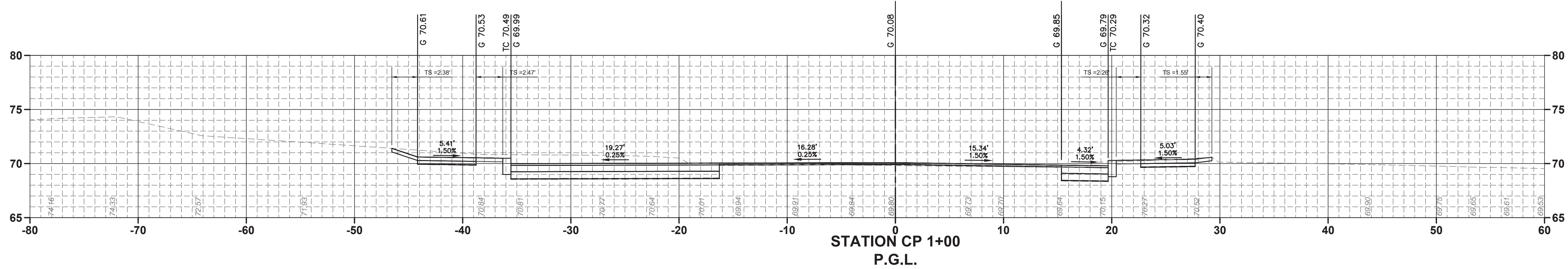
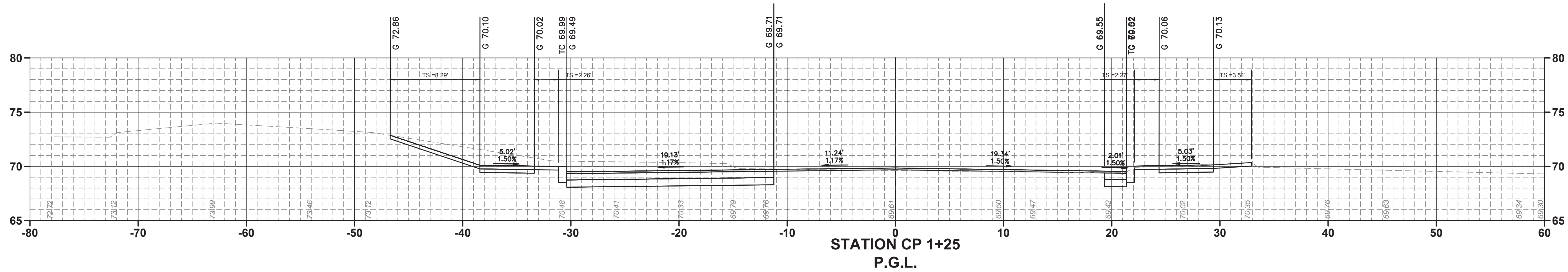
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CHECKED BY: JCW SHEET: 176 of 197

DATE: 2/17/2022

FILE NO. **PWB0A609.01**

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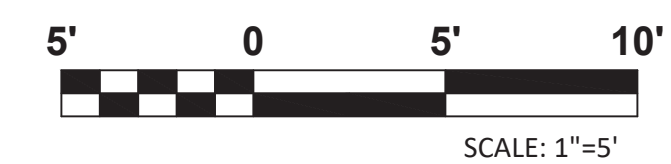
HMA SURFACE COURSE
COURSE 9.5M64, 2" THICK (TYP.)
HMA BASE COURSE 19M64,
7" THICK (TYP.)
DENSE GRADED AGGREGATE BASE
COURSE, 8" THICK (TYP.)

HMA MILLING, 3" OR LESS (TYP.)

HMA SURFACE COURSE COURSE
9.5M64, MIN. 2" THICK (TYP.)

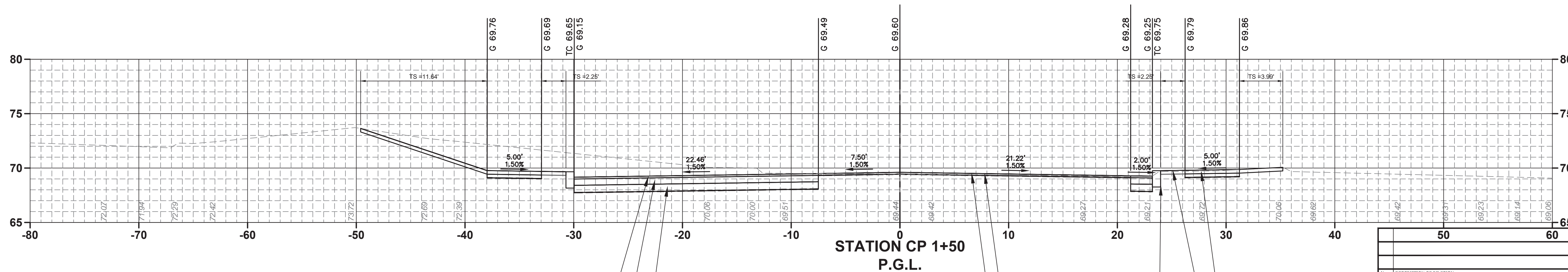
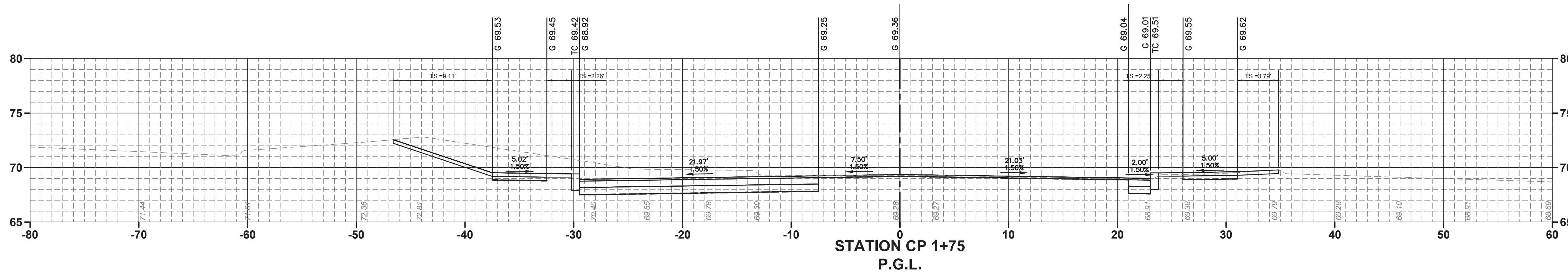
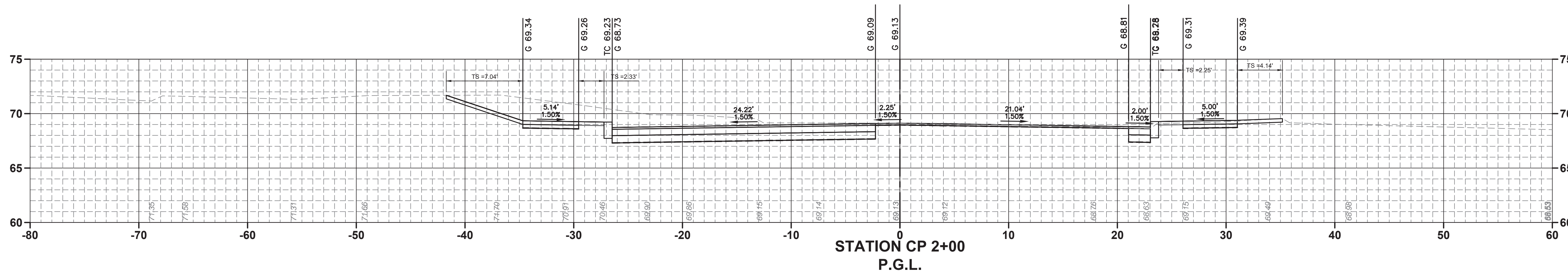
9" X 16" CONCRETE
VERTICAL CURB (TYP.)
TOPSOIL SPREADING 4" THICK (TYP.)
BORROW TOPSOIL (TYP.)
SODDING (TYP.)

CONCRETE SIDEWALK,
REINFORCED, 4" THICK (TYP.)

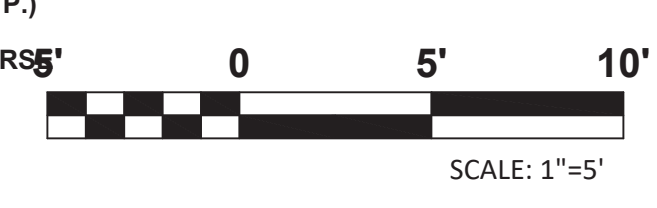


No.		DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS						
CROSSPOINT CROSS SECTIONS (1 OF 3)						
CROSSPOINT TOWN SQUARE DRIVEWAY				P.G.L. STA. 0+50 TO STA. 1+00		
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400						
JOHN H. ALLGAIER P.E. & P.P. (1983 - 2001) NJ PE LIC. NO. 25838	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC. NO. 2455	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & L.S. LIC. NO. 24271 NJ PP LIC. NO. 2089				
JAY B. CORNELL P.E. & P.P. NJ PE LIC. NO. 32962	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC. NO. 3874	GREGORY R. VALESI P.E. & P.P. NJ PE LIC. NO. 39458 NJ PP LIC. NO. 4361				
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER 		As Shown February 2022		DATE February 2022		
L.C. 32468		DRAWN BY MP		DESIGNED BY MP		
CHECKED BY JCW		SHEET 177 OF 197		FILE NO. PWB0A609.01		
DATE: 2/17/2022						

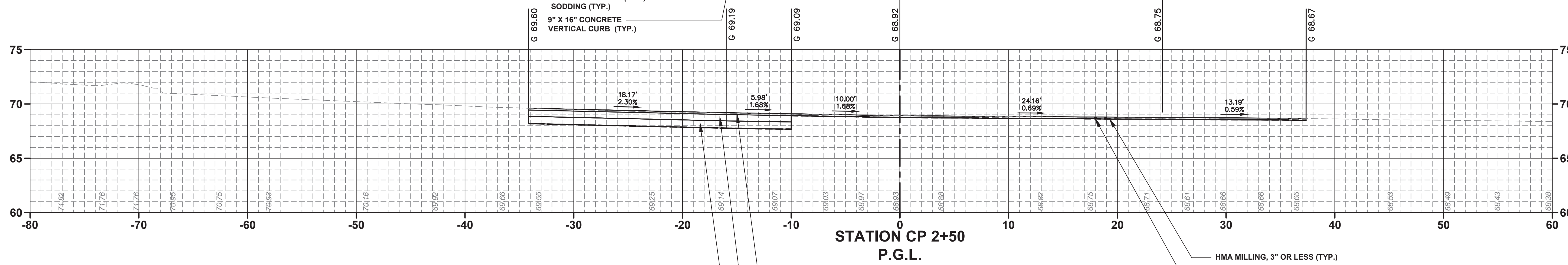
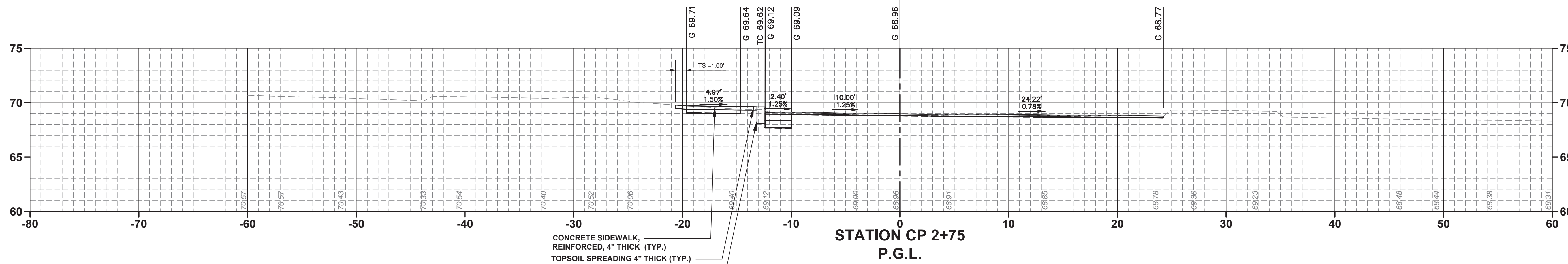
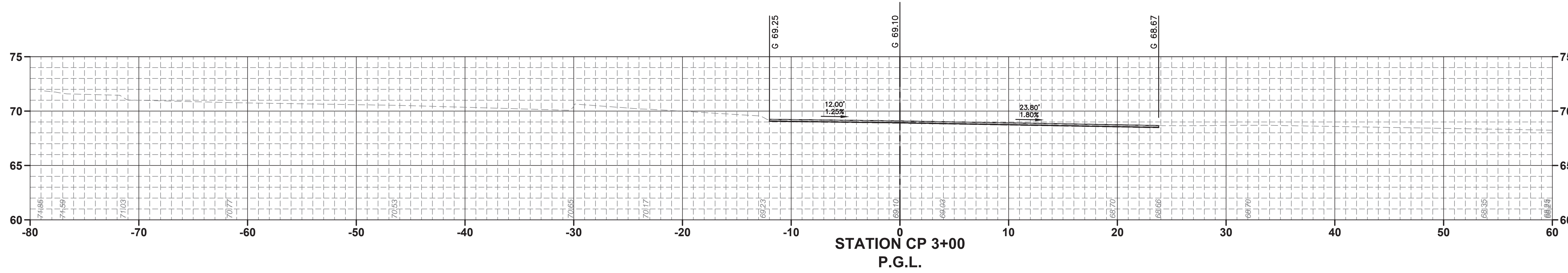
X-21
X-23



- HMA SURFACE COURSE
- COURSE 9.5M64, 2" THICK (TYP.)
- HMA BASE COURSE 19M64, 7" THICK (TYP.)
- DENSE GRADED AGGREGATE BASE COURSE, 8" THICK (TYP.)
- 9" X 16" CONCRETE VERTICAL CURB (TYP.)
- TOPSOIL SPREADING 4" THICK (TYP.)
- BORROW TOPSOIL (TYP.)
- SODDING (TYP.)
- CONCRETE SIDEWALK, REINFORCED, 4" THICK (TYP.)
- HMA MILLING, 3" OR LESS (TYP.)
- HMA SURFACE COURSE COURSE 9.5M64, MIN. 2" THICK (TYP.)



X-22		X-23	
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS			
CROSSPOINT CROSS SECTIONS (2 OF 3)			
CROSSPOINT TOWN SQUARE DRIVEWAY		P.G.L. STA. 1+25 TO STA. 1+75	
CONSULTING AND MUNICIPAL ENGINEERS			
(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400			
JOHN H. ALLGAIR P.E. & P.P. (1983 - 2001)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25839	JOHN J. STEFANI P.E. L.S. & P.P. NJ PE & LS LIC NO. 24271	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 38794	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER			
DATE: 2/17/2022		DRAWN BY: MP	DESIGNED BY: MP
CHECKED BY: JCW		SHEET: 178 of 197	
FILE NO. PWB0609.01			



CONCRETE SIDEWALK REINFORCED, 4" THICK (TYP.)
 TOPSOIL SPREADING 4" THICK (TYP.)
 BORROW TOPSOIL (TYP.)
 SODDING (TYP.)
 9" X 16" CONCRETE VERTICAL CURB (TYP.)

HMA SURFACE COURSE COURSE 9.5M64, 2" THICK (TYP.)
 HMA BASE COURSE 19M64, 7" THICK (TYP.)
 DENSE GRADED AGGREGATE BASE COURSE, 8" THICK (TYP.)

HMA MILLING, 3" OR LESS (TYP.)
 HMA SURFACE COURSE COURSE 9.5M64, MIN. 2" THICK (TYP.)



No.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED

TOWNSHIP OF WOODBRIDGE
 MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

CROSSPOINT CROSS SECTIONS (3 OF 3)

CROSSPOINTE TOWN SQUARE DRIVEWAY **P.G.L. STA. 2+00 TO STA. 2+75**

ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS

(732) 727 8000 (732) 462 7400
 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIR P.E. & P.P. (1983 - 2001) NJ PE LIC NO. 25839	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 2455	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & L.S. LIC NO. 24271
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32952	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 33468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458

MICHAEL J. McCLELLAND P.E.
 NEW JERSEY PROFESSIONAL ENGINEER
 LIC. 32468

DATE: 2/17/2022

SCALE: As Shown
 DRAWN BY: MP
 CHECKED BY: JCW

DATE: February 2022
 DESIGNED BY: MP
 SHEET: 179 of 197

DRAWING NO. **PWB0A609.01**

PROJECT STRUCTURAL NOTES

- THESE DRAWINGS PRESENT STRUCTURAL CONSTRUCTION PLANS AND DETAILS FOR THE MODULAR BLOCK RETAINING WALLS, CAST-IN-PLACE RETAINING WALLS AND PRECAST CULVERT EXTENSION AS PART OF THE ROUTE 9 AND MAIN STREET (CR514) ROADWAY IMPROVEMENTS FOR THE TOWNSHIP OF WOODBRIDGE, NEW JERSEY.
- THE GENERAL STRUCTURAL NOTES ARE PROVIDED ON DRAWING NOS. S-1 THROUGH S-3.
- THE MODULAR BLOCK AND CAST-IN-PLACE RETAINING WALLS ARE PROVIDED ON DRAWING NOS. S-4 THROUGH S-11.
- THE PRECAST CULVERT EXTENSION IS PROVIDED ON DRAWING NOS. S-12 THROUGH S-18.

GENERAL CONSTRUCTION NOTES:

- THE VARIOUS NOTES CONTAINED ON THESE DRAWINGS ARE APPLICABLE TO THE STRUCTURAL DRAWINGS. WHERE THERE IS A CONFLICT BETWEEN THESE NOTES AND THE STRUCTURAL DRAWINGS, THESE NOTES SHALL GOVERN.
- THE STRUCTURAL DESIGN OF THIS PROJECT IS IN ACCORDANCE WITH THE STATE OF NEW JERSEY UNIFORM CONSTRUCTION CODE CHAPTER 23, TITLE 5, AND IS BASED UPON APPROPRIATE PORTIONS OF THE LATEST EDITION OF THE FOLLOWING, AS REQUIRED:
 - THE INTERNATIONAL BUILDING CODE-NEW JERSEY EDITION.
 - ACI "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318).
 - ACI "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE ENVIRONMENTAL STRUCTURES" (ACI 350).
 - "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES AND SPECIFICATIONS FOR MASONRY STRUCTURES" ACI-ASCE 530.
 - "NATIONAL DESIGN SPECIFICATION FOR STRESS-GRADE LUMBER AND ITS FASTENINGS" BY THE NATIONAL FOREST PRODUCTS ASSOCIATION.
 - SPECIFICATIONS FOR ALUMINUM STRUCTURES.
 - AMERICAN INSTITUTE OF STEEL CONSTRUCTION, STEEL CONSTRUCTION MANUAL AISC.
 - AMERICAN SOCIETY OF CIVIL ENGINEERS MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, 7-16.
 - N.C.M.A. DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS
- THE CONTRACTOR IS RESPONSIBLE FOR CONFORMING TO ALL APPLICABLE SAFETY CODES AND REGULATIONS, CURRENTLY IN FORCE, DURING THE ENTIRE CONSTRUCTION PHASE.
- THE STRUCTURE, AS SHOWN ON THE CONTRACT DRAWINGS, IS STRUCTURALLY STABLE ONLY AFTER ITS COMPLETION. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL TEMPORARY BRACING AND SHORING REQUIRED TO MAINTAIN AND PROTECT ALL FOUNDATION EXCAVATIONS, FORMS, WALLS AND THE STRUCTURE'S MATERIALS DURING THE CONSTRUCTION PHASE OF THE PROJECT FROM THE EFFECTS OF GRAVITY, WIND, SEISMIC, SOIL, TEMPERATURE, CONSTRUCTION AND OTHER MISCELLANEOUS FORCES AND LOADINGS THAT MAY BE IMPOSED.
- WHERE SUCH TEMPORARY SHORING AND/OR BRACING IS DEEMED TO BE NECESSARY BY THE CONTRACTOR, OR INDICATED ON THE DRAWINGS, OR DIRECTED BY THE ENGINEER, IT SHALL BE DESIGNED AND INSPECTED BY A LICENSED PROFESSIONAL ENGINEER, CURRENTLY REGISTERED IN THE STATE OF NEW JERSEY, EMPLOYED BY THE CONTRACTOR.
- EACH CONTRACTOR IS RESPONSIBLE FOR, AND SHALL VERIFY AND COORDINATE ALL DIMENSIONS, ELEVATIONS, CLEARANCES, LOCATION OF EXISTING UTILITIES, AND OTHER DETAILS CONCERNING HIS WORK BEFORE PROCEEDING WITH SAID WORK. ANY DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER.
- THE GENERAL CONSTRUCTION CONTRACTOR SHALL VERIFY THE ELEVATIONS OF ANY EXISTING STRUCTURES, CLEARANCES TO NEW CONSTRUCTION, AND THE LOCATION OF ANY EXISTING UTILITIES, AND SHALL REPORT HIS FINDINGS, IN WRITING, TO THE ENGINEER.
- THE CONTRACTOR SHALL NOT COMMENCE ANY WORK UNTIL HE OBTAINS, AT HIS OWN EXPENSE, ALL REQUIRED INSURANCE COVERAGE AND SUBMITS COPIES OF SAME TO THE ENGINEER FOR REVIEW AND APPROVAL.
- THE CONTRACTOR SHALL OBTAIN, AT HIS OWN EXPENSE, ALL PERMITS FROM: FEDERAL, STATE, COUNTY, MUNICIPAL, OR OTHER REGULATORY AGENCY, WHICH MAY BE REQUIRED FOR CONSTRUCTION OF THIS PROJECT.
- THE CONTRACTOR SHALL DO EVERYTHING NECESSARY TO COMPLETE THE WORK IN ACCORDANCE WITH THE TERMS OF HIS CONTRACT, INCLUDING ALL GENERAL AND DETAILED ITEMS. THE WORK TO BE COMPLETED UNDER ANY ITEM SHALL NOT BE LIMITED TO EXACT EXTENT MENTIONED OR DESCRIBED, BUT SHALL INCLUDE ALL INCIDENTAL WORK NECESSARY OR CUSTOMARILY DONE IN THE COMPLETION OF ANY PARTICULAR ITEM.
- THE CONTRACTOR SHALL SUPPLY AND INSTALL ONLY SUCH MATERIALS AS SPECIFIED IN THE PROJECT SPECIFICATIONS AND/OR NOTED ON THE CONTRACT DRAWINGS. WHERE ANY CONFLICT MAY OCCUR REGARDING MATERIAL AND/OR METHODS OF INSTALLATION, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN. THE ENGINEER'S DECISION SHALL GOVERN. REVIEW AND ACCEPTANCE OF ANY SHOP DRAWING, PRODUCT DATA SHEET, CERTIFICATIONS, ETC., BY THE ENGINEER, DOES NOT EXCLUDE THE CONTRACTOR FROM CONFORMING WITH ALL REQUIREMENTS OF THE SPECIFICATIONS AND CONTRACT DOCUMENTS. THE ENGINEER SHALL BE INFORMED, BY THE CONTRACTOR IN WRITING, OF ANY NONCONFORMANCE AND OBTAIN WRITTEN CONCURRENCE OF SAME, BEFORE PROCEEDING WITH CONSTRUCTION.
- DETAILS SHOWN IN ANY SECTION APPLY TO ALL SIMILAR SECTIONS UNLESS OTHERWISE NOTED.
- EACH CONTRACTOR SHALL FULLY BRACE AND OTHERWISE PROTECT HIS WORK IN PROGRESS UNTIL THE STRUCTURE(S) AND/OR STRUCTURAL ELEMENT(S) IS(ARE) COMPLETED.
- THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN SAFE AND ADEQUATE TEMPORARY RELIEF AGAINST HYDROSTATIC UPLIFT DUE TO A HIGH GROUNDWATER LEVEL FOR THE DURATION OF THE PROJECT UNTIL THE NECESSARY CONSTRUCTION IS COMPLETED. NO SEPARATE MEASUREMENT WILL BE MADE FOR DEWATERING SYSTEMS, ALL COSTS ASSOCIATED WITH DEWATERING SHALL BE INCLUDED IN THE COST OF THE VARIOUS FOUNDATIONS, UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL REVIEW THE CONTRACT DRAWINGS OF ALL OTHER TRADES, OBTAIN THE LOCATION AND SIZE OF ALL OPENINGS IN WALLS, FLOORS, ROOFS, ETC., THAT ARE REQUIRED BY OTHER TRADES, AND SHALL INCLUDE IN HIS BID THE COST OF FRAMING AROUND THESE OPENINGS. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW OF SUCH DETAILS OF OPENING SIZES AND REINFORCEMENT, AS REQUIRED TO FRAME THE OPENINGS.
- THE CONTRACTOR SHALL SUBMIT TO ALL OTHER TRADES FOR THEIR REVIEW AND APPROVAL, COPIES OF THE VARIOUS SHOP DRAWINGS SHOWING THE LOCATION AND SIZE OF ALL OPENINGS EACH TRADE REQUIRES. IF THE OTHER TRADES DO NOT SUBMIT SUCH REQUIRED INFORMATION TO THE CONTRACTOR IN SUFFICIENT TIME FOR HIM TO COMPLETE HIS DETAIL DRAWINGS PRIOR TO INSTALLATION OF THE WORK, OR THE TRADES EITHER SUBMIT OR APPROVE INFORMATION AND/OR DETAILS THAT IS LATER PROVEN TO BE INCORRECT, THEN THE TRADE REQUIRING SUCH AN OPENING IN A WALL, FLOOR, ROOF, ETC. SHALL PROVIDE, REPLACE, REMOVE AND/OR ADJUST SUCH OPENINGS AT THE TRADE'S OWN EXPENSE. IF SUCH ALTERATION WORK AFFECTS THE STRUCTURAL SYSTEM THEN ALL PROPOSED REVISIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO ANY MODIFICATIONS TO THE PROJECT. ALL COSTS OF ANY REVIEW, REDESIGN, INSPECTION, CONSTRUCTION, ETC. SHALL BE PAID FOR BY THE TRADE CAUSING SUCH CHANGES.
- THE CONTRACTOR AND ALL AFFECTED TRADES SHALL REFER TO THE EQUIPMENT SCHEDULES AS SHOWN ON THE ELECTRICAL CONTRACT DRAWINGS WHERE APPLICABLE.
- FOR THE LOCATION AND DETAIL OF ALL DRAINS, SEE THE PLUMBING AND EQUIPMENT CONTRACT DRAWINGS, AS REQUIRED.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN SUFFICIENT TIME TO ALLOW FOR ANY NECESSARY INSPECTION AND/OR TESTING OF HIS WORK PRIOR TO INSTALLATION. THE CONTRACTOR SHALL SUPPLY ANY ASSISTANCE AND WORK SPACE NECESSARY TO PERFORM SUCH OPERATIONS. NO WORK REQUIRING INSPECTION AND/OR TESTING PRIOR TO INSTALLATION SHALL BE INSTALLED UNTIL THE INSPECTOR HAS COMPLETED HIS OPERATIONS AND ACCEPTED THE ITEMS BEING REVIEWED. FAILURE OF THE CONTRACTOR TO NOTIFY THE ENGINEER MAY RESULT IN INSTALLED CONSTRUCTION BEING REJECTED OR SUBJECT TO REMOVAL. ANY ADDITIONAL TESTING AND/OR INSPECTION TO CONFIRM THE ADEQUACY OF THE INSTALLED CONSTRUCTION WILL BE UNDERTAKEN AT THE CONTRACTOR'S EXPENSE.

- WHEN DISCREPANCIES, DEVIATIONS FROM THE CONTRACT DRAWINGS, OR DEFICIENT MATERIAL IS DISCOVERED, THE CONTRACTOR SHALL IMMEDIATELY REPAIR AND/OR CORRECT SUCH TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR SHALL BEAR THE COST OF ALL NECESSARY REDESIGN, MATERIALS, INSPECTION, ETC. ASSOCIATED WITH THE REPAIR AND/OR CORRECTIVE MEASURES.
- UPON COMPLETION OF THE PROJECT, IF THE WORK COMPLETED IS NOT ACCEPTABLE TO THE ENGINEER, HE WILL ADVISE THE CONTRACTOR IN WRITING AS TO THE PARTICULAR DEFECTS TO BE CORRECTED BEFORE FINAL ACCEPTANCE OF THE PROJECT WILL BE MADE. THE FINAL INSPECTION WILL BE MADE UPON NOTIFICATION BY THE CONTRACTOR THAT THE PROJECT IS COMPLETED.
- THE CONTRACTOR SHALL GUARANTEE HIS WORK AND THAT OF HIS SUBCONTRACTORS, FOR A PERIOD OF ONE YEAR AFTER THE DATE OF COMPLETION OF THE PROJECT.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION TO BE USED AND FOR THE SEQUENCES AND PROCEDURES TO BE USED BY HIM.
- SHOP DRAWINGS

IF NO CHANGES OR DEVIATIONS FROM THE CONTRACT DRAWINGS ARE PROPOSED, THEN THE CONTRACTOR IS REQUIRED TO SUBMIT FOR THE ENGINEER'S REVIEW AND APPROVAL CERTIFIED SHOP DRAWINGS FOR ALL CONCRETE REINFORCING STEEL PLACEMENT, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING: FLOOR SLABS, WALLS, FOOTINGS, ABUTMENTS, WINGWALLS, RETAINING WALLS, PARAPETS, PYLONS, BARRIERS, DECKS, APPROACH SLABS, SIDEWALKS, CURBS, PRESTRESSED CONCRETE CULVERTS. THE CONTRACT DRAWINGS WILL NOT BE PERMITTED AS A SUBSTITUTE FOR THESE REQUIRED SHOP DRAWINGS UNDER ANY CIRCUMSTANCE. IF THE CONTRACTOR PROPOSES ANY CHANGE OR DEVIATION FROM THE CONTRACT DRAWINGS, THEN THESE SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY RETAINED BY THE CONTRACTOR. CONSTRUCTION WILL NOT BE ALLOWED TO PROCEED WITHOUT THE ENGINEER'S REVIEW AND APPROVAL.

25. UTILITIES:

- UTILITY LOCATIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE FROM ABOVE GROUND OBSERVATIONS AND/OR RECORD INFORMATION PROVIDED BY THE VARIOUS UTILITY COMPANIES.
- THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS BASED ON INFORMATION AVAILABLE AT THE TIME OF THE DESIGN AND IS NOT GUARANTEED TO BE ACCURATE NOR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES WITHIN THE PROJECT LIMITS AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE POTENTIAL FOR CONFLICTS IN ORDER TO AVOID DISRUPTION OF SERVICE.
- NEW JERSEY ONE-CALL MUST BE CONTACTED AT 1-800-272-1000 AT LEAST THREE (3) FULL WORKING DAYS, BUT NOT MORE THAN TEN (10) DAYS, PRIOR TO THE PLANNED START DATE OF THE DIGGING OPERATIONS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ARRANGE FOR ALL UTILITY WORK ESSENTIAL FOR THE COMPLETION OF THE PROJECT AND TO COORDINATE THE WORK CARRIED ON BY THE PUBLIC UTILITIES WITH HIS OWN WORK. THE CONTRACTOR SHALL COOPERATE WITH UTILITY COMPANIES IN THE REMOVAL, RELOCATIONS AND REPLACEMENT OF UTILITIES. LOCATION OF RELOCATED UTILITIES SHALL BE VERIFIED WITH RESPECTIVE UTILITY COMPANIES. WHENEVER UNDERGROUND UTILITIES ARE ENCOUNTERED, THE CONTRACTOR SHALL TAKE SPECIAL PRECAUTIONS TO PREVENT BREAKAGE AND INTERRUPTION OF SERVICE.
- THERE MAY BE VARIOUS OVERHEAD FACILITIES WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL COORDINATE THE TEMPORARY AND/OR PERMANENT RELOCATIONS OF THESE FACILITIES BY THE UTILITY COMPANIES, AS NECESSARY. THE CONTRACTOR SHALL STAGE HIS WORK TO ALLOW THE REMOVAL OF OVERHEAD FACILITIES PRIOR TO THE START OF ANY WORK REQUIRING THE USE OF CRANES AND SHALL MEET ALL OSHA STANDARDS. THE CONTRACTOR SHALL ALSO CONSIDER THE IMPACT OF THE OVERHEAD UTILITIES WHEN SCHEDULING OPERATIONS AND SELECTING EQUIPMENT TO PERFORM THE WORK REQUIRED FOR THIS PROJECT. PARTICULAR ATTENTION SHALL BE GIVEN TO THE TEMPORARY SHEETING/COFFERDAMS, PILES AND/OR BEAM ERECTION TO BE CONSTRUCTED IN THE VICINITY OF THE OVERHEAD UTILITIES. NO CLAIM FOR ADDITIONAL COMPENSATION OR EXTENSION IN CONTRACT TIME WILL BE CONSIDERED FOR PROBLEMS OR DELAYS ENCOUNTERED AS A RESULT OF WORKING IN THE VICINITY OF THE OVERHEAD UTILITIES.
- THERE MAY BE VARIOUS UNDERGROUND SEWER, GAS AND OTHER LINES WITHIN THE PROJECT LIMITS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL UTILITY SERVICE FLOWS AND PRESSURES FOR THESE LINES UNLESS WRITTEN APPROVAL BY THE RESPONSIBLE UTILITY PERMITS HIM TO DO OTHERWISE. NO SEPARATE PAYMENT WILL BE MADE FOR COORDINATION WITH THE UTILITY OR FOR THE TEMPORARY SUPPORT OF EXISTING FACILITIES. ALL COSTS SHALL BE INCLUDED IN THE LUMP SUM BID FOR THE ITEM "CLEARING SITE."
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO ADEQUATELY PROTECT THE EXISTING STRUCTURES, FACILITIES, UTILITIES AND/OR EQUIPMENT THAT ARE TO REMAIN. ANY DAMAGE WHATSOEVER TO THE EXISTING STRUCTURES, FACILITIES, UTILITIES AND/OR EQUIPMENT THAT ARE TO REMAIN RESULTING FROM THE CONTRACTOR'S WORK SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER.

SHOP DRAWINGS AND SUBMITTALS:

- REPRODUCTION OF THE CONTRACT DRAWINGS FOR USE AS A SHOP DRAWING WILL NOT BE PERMITTED.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SO AS TO ALLOW SUFFICIENT TIME FOR THE ENGINEER TO REVIEW AND COMMENT (SEE THE SPECIFICATIONS FOR REQUIREMENTS).
- CONTRACTOR SHALL SUBMIT AN ELECTRONIC COPY OF EACH SHOP DRAWING AND/OR CALCULATIONS TO BE REVIEWED.
- NO SHOP DRAWING WILL BE ACCEPTED FOR REVIEW BY THE ENGINEER THAT HAS NOT BEEN CHECKED BY BOTH THE SUPPLIER OF THE MATERIAL AND THE CONTRACTOR INSTALLING SUCH MATERIAL. THE SUPPLIER'S CHECKED INITIALS SHALL APPEAR IN HIS TITLE BOX AND THE CONTRACTOR SHALL STAMP, DATE AND INITIAL VERIFICATION THAT HE HAS REVIEWED THE VARIOUS SHOP DRAWINGS AND FOUND THEM TO BE CORRECT IN ALL DETAIL AS TO CONFORMANCE WITH THE CONTRACT DRAWINGS.
- A 6"x6" SPACE SHALL BE LEFT BLANK ON EACH SHOP DRAWING SUBMITTED BY THE VARIOUS MATERIAL SUPPLIERS FOR THE ENGINEER'S REVIEW STAMP AND COMMENTS.
- ALL NECESSARY DIMENSIONAL COORDINATION SHALL BE DONE BY THE CONTRACTOR AND HIS MATERIAL SUPPLIER'S DETAILER.
- IF AND WHERE REQUIRED, THE CONTRACTOR AND HIS MATERIAL SUPPLIER'S DETAILER SHALL DO ALL NECESSARY COORDINATION WITH THE VARIOUS CONTRACT DRAWINGS (ELECTRICAL, PLUMBING, ARCHITECTURAL, HVAC, ETC.) AND THE VARIOUS OTHER TRADES, AS REQUIRED, FOR ATTACHMENTS, OPENINGS, FRAMES, PLATFORMS, CURBS, EMBEDDED ITEMS, CONNECTIONS, HUNG EQUIPMENT AND DUCTWORK OR PIPING THAT AFFECT OR ARE ATTACHED TO EACH STRUCTURAL FRAMING. ALL SUCH ITEMS SHALL BE SHOWN AND LOCATED ON THE VARIOUS SHOP DRAWINGS.
- IF AND WHERE REQUIRED, THE CONTRACTOR SHALL SEND TO THE VARIOUS OTHER TRADES ONE COPY OF EACH MATERIAL SUPPLIER'S ERECTION DRAWINGS SO THAT THEY MAY TRANSMIT INFORMATION, AS DEFINED IN NOTE #7, FOR USE IN PREPARING THE VARIOUS SHOP DRAWINGS. THE CONTRACTOR SHALL SEND A COPY OF THE LETTERS OF TRANSMITTAL OF THE COPY TO THE ENGINEER.
- ANY SHOP DRAWING SUBMISSION THAT IS NOT IN CONFORMANCE WITH THE ABOVE NOTES AND THE SPECIFICATIONS WILL BE REJECTED.
- THE CONTRACTOR SHALL HAVE ON THE SITE SHOP DRAWINGS THAT HAVE BEEN SATISFACTORILY REVIEWED BY THE ENGINEER AND THAT HE HAS CONFIRMED, BEFORE BEGINNING ANY INSTALLATION OF THE VARIOUS ITEMS DETAILED ON THE SHOP DRAWINGS. A CLEAN SET OF ERECTION AND DETAIL DRAWINGS, WITH NO MARKINGS, SHALL BE AVAILABLE ON THE SITE FOR USE AS NEEDED.
- PRINCIPAL STRUCTURAL SUBMITTALS SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE SUBMITTALS INCLUDED ON THE PARTIAL LIST OF TECHNICAL SUBMITTALS (ON THIS DRAWING):

DESIGN-BUILD NOTES:

- THE CONTRACTOR IS HEREBY ADVISED THAT THE FOLLOWING DRAWINGS CONTAIN PRELIMINARY DESIGN LAYOUTS, SECTIONS AND DETAILS FOR THE CONSTRUCTION OF THE MODULAR BLOCK RETAINING WALLS, CAST-IN-PLACE RETAINING WALLS, PRECAST 3-SIDED RIGID FRAME CULVERT EXTENSION, ALL CULVERT AND WALL FOUNDATIONS, AND REINFORCED CONCRETE HEADWALL AND WINGWALLS FOR THE PRECAST 3-SIDED RIGID FRAME CULVERT THAT WILL BE REQUIRED FOR THIS PROJECT. THESE DETAILS PROVIDE FOR MINIMUM DIMENSIONS AND MINIMUM REQUIREMENTS FOR THE STRUCTURES AND STRUCTURAL ELEMENTS TO BE DESIGNED AND BUILT. AS A PART OF THE BID FOR THIS PROJECT, THE CONTRACTOR WILL BE REQUIRED TO RETAIN THE SERVICES OF A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY TO DESIGN THESE STRUCTURAL ELEMENTS.
- THE CONTRACTOR'S ENGINEER WILL BE REQUIRED TO REVIEW THE PRELIMINARY DESIGN LAYOUTS, SECTIONS AND DETAILS FOR STRUCTURAL DESIGN LOADS, CODE COMPLIANCE AND CONSTRUCTABILITY; AND TO PERFORM A GEOTECHNICAL SUBSURFACE EXPLORATION PROGRAM TO DEVELOP SOIL DESIGN PROPERTIES. THE GEOTECHNICAL SUBSURFACE EXPLORATION PROGRAM SHALL INCLUDE THE MINIMUM NUMBER OF BORINGS REQUIRED PER CODE FOR EACH STRUCTURAL ELEMENT. THE DESIGN OF THE STRUCTURES AND STRUCTURAL ELEMENTS BY THE CONTRACTOR'S ENGINEER SHALL CONFORM TO THE FINDINGS OF THE REQUIRED GEOTECHNICAL SUBSURFACE EXPLORATION PROGRAM. THE COSTS ASSOCIATED WITH RETAINING A LICENSED PROFESSIONAL ENGINEER TO PERFORM THE GEOTECHNICAL SUBSURFACE EXPLORATION PROGRAM SHALL BE INCLUDED IN THE PRICE BID FOR THE ITEMS REQUIRING SAME.
- THE CONTRACTOR'S ENGINEER WILL BE REQUIRED TO SUBMIT DETAILED DESIGN CALCULATIONS, SHOP DRAWINGS AND/OR CATALOG CUTS TO THE OWNER'S ENGINEER FOR REVIEW AND APPROVAL FOR THE PRECAST 3-SIDED RIGID FRAME CULVERT, CAST-IN-PLACE RETAINING WALLS AND MODULAR BLOCK RETAINING WALLS AND THEIR FOUNDATIONS. THE CONTRACTOR'S ENGINEER'S LAYOUT SHALL BE BASED ON THE LAYOUT SHOWN ON THESE DRAWINGS.
- UPON APPROVAL BY THE OWNER'S ENGINEER, THE CONTRACTOR'S LICENSED PROFESSIONAL ENGINEER SHALL PROVIDE SIX (6) SETS OF SIGNED AND SEALED DETAILED DOCUMENTS TO THE OWNER'S ENGINEER FOR USE BY THE CONTRACTOR DURING CONSTRUCTION. THE COSTS ASSOCIATED WITH RETAINING A LICENSED PROFESSIONAL ENGINEER, INCLUDING PROVIDING THE REQUIRED DOCUMENTS, SHALL BE INCLUDED IN THE PRICE BID FOR THE ITEMS REQUIRING SAME.

STRUCTURAL DESIGN LOADS

1. BUILDING DESIGN CODE SPECIFICATIONS:

- N.J.A.C. CHAPTER 23 UNIFORM CONSTRUCTION
- THE INTERNATIONAL BUILDING CODE 2018, NEW JERSEY EDITION
- REFERENCE STANDARD FOR LOAD CALCULATIONS: ASCE 7-2016
- N.C.M.A. DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS, LATEST EDITION
- 2020 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION, AS MODIFIED BY SECTION 3 OF THE 2016 NJDOT DESIGN MANUAL FOR BRIDGES AND STRUCTURES, 6TH EDITION.

2. CONSTRUCTION SPECIFICATIONS:

- PROJECT SPECIFICATION MANUAL UNLESS NOTED OTHERWISE.
- 2019 NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND ALL AMENDMENTS, AS MODIFIED BY THE SPECIAL PROVISIONS AND THE PROJECT SUPPLEMENTARY SPECIFICATIONS.

3. BUILDING CRITERIA:

BUILDING USE GROUP: N.A. IBC2018-NJ Ed, Sec. 302.1, p 35
 CONSTRUCTION TYPE: TYPE III IBC2018-NJ Ed, Sec. 602, p 107
 OCCUPANCY LOAD: N.A.
 OCCUPANCY OR RISK CATEGORY: I ASCE 7-16 Tab. 1.5-1, IBC2018 NJ Ed.- Tab. 1604.5, p 352

4. DESIGN LOADS

A. DEAD LOAD:

DEAD LOADS SHALL INCLUDE THE UNIT WEIGHT OF ALL MATERIALS IMPOSING LOADS ON THE DESIGN STRUCTURE, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: PAVEMENTS, EARTH LOADS, LANDSCAPE FIXTURES, RAILINGS, FENCES, BUILDING, EQUIPMENT, ETC. THE FOLLOWING MINIMUM UNIT WEIGHTS SHALL APPLY, UNLESS NOTED OTHERWISE (SEE EQUIPMENT LOADS, WHERE NECESSARY, FOR MORE INFORMATION):

CONCRETE: 150 PCF
 STEEL: 490 PCF
 ALUMINUM: 171 PCF
 BACKFILL: 120 PCF SATURATED WEIGHT

EQUIPMENT DEAD LOADS: SEE MECHANICAL EQUIPMENT DRAWINGS AND APPROVED SHOP DRAWINGS FOR LOADS (WHERE REQUIRED).

EQUIPMENT: N/A

B. RETAINING WALL LOADS:

VERTICAL SURCHARGE LOAD: 100 LBS/FT – LIGHT VEHICLES
 250 LBS/FT – HEAVY VEHICLES

C. SNOW LOAD:

GROUND SNOW LOAD: Pg = 25 PSF ASCE 7-16 Fig. 7.2-1, p 52, IBC2018 Fig. 1608.2, p 365
 SNOW LOAD RISK CATEGORY: I
 SNOW EXPOSURE FACTOR, Ce = 1.0 ASCE 7-16 Tab. 7.3-1, p 58
 SNOW LOAD IMPORTANCE FACTOR, I = 0.80 ASCE 7-16 Tab. 1.5-2, p 5
 THERMAL FACTOR, N.A. ASCE 7-16 Tab. 7.3-2, p 58
 FLAT ROOF SNOW LOAD, N.A. ASCE 7-16 Sect. 7.3, p 51
 HIP/ OR GABLE ROOF FACTOR, N.A. ASCE 7-16 Sect. 7.4.1, p 54, Fig. 7.4-1, p 59
 SLOPED ROOF SNOW LOAD, N.A. ASCE 7-16 Sect. 7.4, p 54

D. WIND DESIGN DATA:

BASIC WIND SPEED (3-SECOND GUST) = 106 MPH ASCE 7-16, Fig. 26.5-10, p 257
 WIND LOAD RISK CATEGORY: I IBC2018-NJ Ed. Tab. 1604.5, p 352
 WIND EXPOSURE CATEGORY: C ASCE 7-16, Sect. 26.7.3, p 266
 INTERNAL PRESSURE COEF., Gcpi = N.A. ASCE 7-16, Sect. 26.13, p 271 & Tab. 26.13-1, p 271

E. SEISMIC DESIGN DATA:

SEISMIC OCCUPANCY IMPORTANCE FACTOR, I = 1.00 ASCE 7-16 Tab. 1.5-2, p 5
 RISK CATEGORY – I ASCE 7-16 Tab. 1.5-1, p 4, IBC2018, Tab.1604.5, p 352
 MAPPED SPECTRAL RESPONSE ACCELERATIONS:
 Ss = 0.271 x g IBC2018-NJ Ed., Fig. 1613.2.1, p 386
 Si = 0.057 x g ASCE 7-16, Sec. 11.4.2, Fig. 22-1 & 2, pp 211, 212
 SITE CLASS = D
 Fo = 1.583 IBC2018-NJ Ed., Tab. 1613.2.3(1) & (2), p 382
 Fv = 2.4 ASCE 7-16, Tab. 11.4-1 & 2, p 84
 MODIFIED SPECTRAL RESPONSE ACCELERATIONS:
 Sms = 0.43 x g IBC2018-NJ Ed., Sec. 1613.2.3, p 382
 ASCE 7-16 Sec. 11.4.4, p 84
 DESIGN SPECTRAL RESPONSE COEFFICIENTS:
 Sps = 0.138 x g IBC2018-NJ Ed., Sec. 1613.2.4, p 382
 Sps = 0.286 x g ASCE 7-16 Sec. 11.4.5, p 84
 Sps = 0.092 x g
 PEAK GROUND ACCELERATION: Pga = 0.165 IBC2018-NJ Ed., Fig. 1613.2.1(1)-(8), ASCE7-16, Sec. 11.8, p 86
 SEISMIC DESIGN CATEGORY = B IBC2018-NJ Ed., Sec. 1613.2.5, p 382, Tab. 1613.2.5 (1 & 2), p 383, ASCE7-16, Tab. 11.6-1 & 2, p 85

5. FOUNDATION DESIGN CRITERIA:

RETAINING WALLS: FOUNDATIONS SHALL BE SUPPORTED ON SPREAD FOOTINGS. MAXIMUM ALLOWABLE STATIC BEARING CAPACITY SHALL BE DETERMINED AS PART OF THE GEOTECHNICAL SUBSURFACE EXPLORATION PROGRAM REQUIRED AS PART OF THIS PROJECT.

NO SEPARATE PAYMENT SHALL BE MADE FOR REMOVAL OF ITEMS THAT INTERFERE WITH CONSTRUCTION ACTIVITY. ITEMS DESIGNATED TO BE RELOCATED, AND NEW TRAFFIC SIGNS, ALL COSTS THEREOF ARE TO BE INCLUDED IN THE BID PRICE FOR THE PAY ITEM "CLEARING SITE".


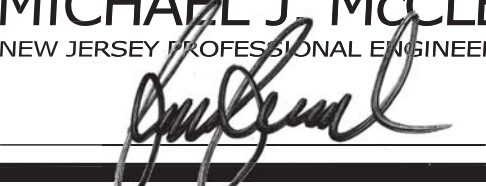
THE CONTRACTOR SHALL EXAMINE AND VERIFY IN THE FIELD ALL EXISTING CONDITIONS AND DIMENSIONS WITH THOSE SHOWN ON THE PLANS. IF FIELD CONDITIONS AND DIMENSIONS DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL USE THE FIELD CONDITIONS AND DIMENSIONS AND MAKE THE APPROPRIATE CHANGES TO THOSE SHOWN ON THE PLANS AS APPROVED BY THE ENGINEER. THE RESULTS OF THIS CHECK OF CONDITIONS AND DIMENSIONS SHALL BE SO NOTED ON THE DRAWINGS SUBMITTED FOR APPROVAL.

THERE SHALL BE NO CLAIM AGAINST THE OWNER MADE BY THE CONTRACTOR FOR WORK PERTAINING TO MODIFICATIONS AS MAY BE REQUIRED DUE TO ANY DIFFERENCES BETWEEN ACTUAL FIELD CONDITIONS AND THE DETAILS AND DIMENSIONS SHOWN ON THE CONTRACT PLANS.

ALL TEMPORARY SHEETING, SHEETING LEFT-IN-PLACE, AND ANY OTHER MEANS NECESSARY TO CONSTRUCT THE SUPPORT OF EXCAVATION SHALL BE INCLUDED IN THE BID PRICES FOR THE PAY ITEMS "PERMANENT COFFERDAM" AND "TEMPORARY SHEETING".

PAY ITEM NO.	TO BE CONSTRUCTED	PLAN QUANTITY	UNIT
17P	VIBRATION MONITORING	1	LS
21P	EXCAVATION, UNCLASSIFIED	2080	CY
24P	I-9 SOIL AGGREGATE	890	CY
25P	I-11 SOIL AGGREGATE	900	CY
26P	I-14 SOIL AGGREGATE	70	CY
32M	COARSE AGGREGATE, SIZE NO. 57	220	CY
40P	TEMPORARY SHEETING	16870	SF
41P	TEMPORARY COFFERDAM	1	LS
42P	PERMANENT COFFERDAM	1	LS
43P	REINFORCEMENT STEEL, GALVANIZED	1	LS
44P	CONCRETE FOOTING	118	CY
45P	CONCRETE WING WALL	156	CY
46P	CONCRETE PYLON	58	LF
47P	PRECAST CONCRETE CULVERT	13	LF
49P	STEEL 4-BAR BRIDGE RAILING	215	LF
50P	RETAINING WALL, LOCATION NO. 1	1180	SF
51P	RETAINING WALL, CAST-IN-PLACE, LOCATION NO. 2	500	SF
52P	RETAINING WALL, CAST-IN-PLACE, LOCATION NO. 3	60	SF
53P	RETAINING WALL, LOCATION NO. 4	360	SF
54P	RETAINING WALL, LOCATION NO. 5	290	SF
55P	RETAINING WALL, LOCATION NO. 6	200	SF
56P	RETAINING WALL, LOCATION NO. 7	250	SF
57P	RETAINING WALL, LOCATION NO. 8	250	SF
58P	RETAINING WALL, LOCATION NO. 9	250	SF

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S-5	PROPOSED RETAINING WALLS 2, 3, 4 AND 5 PLAN
S-6	PROPOSED RETAINING WALL 2 ELEVATIONS
S-7	PROPOSED RETAINING WALLS 3, 4 AND 5 ELEVATIONS
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S-9	PROPOSED RETAINING WALLS 8 AND 9 ELEVATIONS
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S-11	PROPOSED RETAINING WALL 7 ELEVATIONS
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S-18	STEEL RAILING ELEVATIONS AND DETAILS

1 REVISED PER NDOT COMMENTS		12/10/21	JS		
No.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS					
GENERAL STRUCTURAL NOTES SHEET 1 OF 3					
 (732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKLE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194					
JOHN H. ALLGAIR P.E. & P.P. (1983 - 2001) NJ PE LIC NO. 25839	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24559	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & L.S. LIC NO. 24271	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458 NJ PP LIC NO. 4361		
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 30468	SCALE: As Shown DATE: February 2022 DRAWN BY: SP DESIGNED BY: SP CHECKED BY: NH SHEET: 180 OF 197 DATE: 2/17/2022			
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468 					

S-1
S-18

DRAWING NO. PWB04609.01

LIST OF ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE AND HIGHWAY TRANSPORTATION OFFICIALS	LBS.	POUNDS
ACI	AMERICAN CONCRETE INSTITUTE	L.F.	LINEAR FEET
ADD'L	ADDITIONAL	LL	LIVE LOAD
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	LLH	LONG LEG HORIZONTAL
ALT.	ALTERNATE	LLV	LONG LEG VERTICAL
ALUM.	ALUMINUM	L(s)	ANGLE(S)
&	AND	LP	LOAD POINT
@	AT	LRFD	LOAD AND RESISTANCE FACTOR DESIGN
AP'PD	APPROVED	LT.	LEFT
APPROX.	APPROXIMATE	LT. WT.	LIGHTWEIGHT
ARCH.	ARCHITECTURAL	MANUF.	MANUFACTURER
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS	MASONRY	MASONRY
AVG.	AVERAGE	MAS.	MAXIMUM
AWS	AMERICAN WELDING SOCIETY	MECH.	MECHANICAL
		MET.	METRIC
		MIN.	MINIMUM
		MISC.	MISCELLANEOUS
BF	BACK FACE	MPH	MILES PER HOUR
BET.	BETWEEN	MATL.	MATERIAL
BLDG.	BUILDING	MTL.	METAL
BM, BMS	BEAM(S)		
B.O.F.	BOTTOM OF FOOTING	N	NORTH
BOTT., B	BOTTOM	NAVD	NORTH AMERICAN VERTICAL DATUM
BP	BASE OR BEARING PLATE	NGVD	NATIONAL GEODETIC VERTICAL DATUM
BRG.	BEARING	N.I.C.	NOT IN CONTRACT
BW	BOTTOM OF WALL	NJDOT	NEW JERSEY DEPARTMENT OF TRANSPORTATION
CFM	CUBIC FEET PER MINUTE	No., #	NUMBER
CFS	CUBIC FEET PER SECOND	N.T.S.	NOT TO SCALE
C.I.P.	CAST IN PLACE	N.W.	NORMAL WEIGHT
C.J.	CONTROL JOINT		
C., CL, &	CENTER LINE	o/c	ON CENTER
CLR	CLEAR	O.D.	OUTSIDE DIAMETER
CMU	CONCRETE MASONRY UNIT	O.F.	OUTSIDE FACE
CO	CLEANOUT	OPNG(S)	OPENING(S)
COL.	CONCRETE COLUMN	OPP.	OPPOSITE
CONC.	CONCRETE	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
CONN.	CONNECT/CONNECTION	OH'D	OVERHEAD
CONSTR.	CONSTRUCTION	P	PIER
CONT.	CONTINUOUS	PART'N	PARTITION
CONTR.	CONTRACTOR	PCF	POUNDS PER CUBIC FOOT
COORD.	COORDINATE	PERP.	PERPENDICULAR
CORP.	CORPORATION	PL, R	PLATE
COV.	COVER	PPT	PERFORATED POLYETHYLENE TUBING
CTR.	CENTER	PROJ.	PROJECTION
CY	CUBIC YARD	PSF	POUNDS PER SQUARE FOOT
		PSI	POUNDS PER SQUARE INCH
DEC.	DEGREE	QTY.	QUANTITY
DELAM.	DELTAMINATION	RCP	REINFORCED CONCRETE PIPE
DEMO.	DEMOLITION; DEMOLISH	RCSC	RESEARCH COUNCIL ON STEEL CONNECTIONS
DET.(S)	DETAIL(S)	RD	ROOF DRAIN
DIAG.	DIAGONAL	REF.	REFERENCE
DI.A., Ø	DIAMETER	REV.	REVISION
DIM., DIM'S	DIMENSION(S)	REINF.	REINFORCEMENT
DL	DEAD LOAD	REQ'D	REQUIRED
DN	DOWN	R.F.	REAR FACE
DO	DITTO	R.O.W.	RIGHT OF WAY
DS	DOWNSTREAM	RT.	RIGHT
DWG.(S)	DRAWING(S)	RTU	ROOF TOP UNIT
DWL(S)	DOWEL(S)	SAN.	SANITARY
EA.	EACH	SCHED.	SCHEDULE
E.F.	EACH FACE	SDI	STEEL DECK INSTITUTE
E.J.	EXPANSION JOINT	SECT.	SECTION
ELEC.	ELECTRICAL	SHT.	SHEET
EL., ELEV.	ELEVATION	SIM.	SIMILAR
EMBED.	EMBEDMENT	SPA.	SPACING
ENGL.	ENGLISH	SPEC.(S)	SPECIFICATION(S)
ENGR.	ENGINEER	SPL.	SPLICE
E.O.P.	EDGE OF PAVEMENT	SQ. FT., SF	SQUARE FOOT(FEET)
EQ.	EQUAL	SQ. IN.	SQUARE INCH(ES)
ETC.	ETCETERA	SQ. MI.	SQUARE MILE(S)
E.W.	EACH WAY	S.S.	STAINLESS STEEL
EX., EXIST.	EXISTING	SSPC	STEEL STRUCTURES PAINTING COUNCIL
EXP.	EXPANSION	STA.	STATION
EXT.	EXTERIOR	STD.	STANDARD
FD	FLOOR DRAIN	ST'L.	STEEL
FF	FRONT FACE	SYM.	SYMMETRICAL
FIN.	FINISH	T	TOP
FL.	FLANGE	TEMP.	TEMPORARY
FLR.	FLOOR	THK.	THICK
FNDL.	FOUNDATION	T.O.	TOP OF
F.P., F	FIRE PROOFING	T.O.F.	TOP OF FOOTING
FT., '	FEET, FOOT	T.O.S.	TOP OF SOIL
FTG., F	FOOTING	TW	TOP OF WALL
		TY.	TYPICAL
GA.	GAUGE	U.O.N.	UNLESS OTHERWISE NOTED
GALV.	GALVANIZED	U.S.	UPSTREAM
GB	GRADE BEAM	VERT.	VERTICAL
GC	GENERAL CONTRACTOR	V.I.F.	VERIFY IN FIELD
GEN.	GENERAL	W/	WITH
GR.	GRADE	W/O	WITHOUT
		WF	WIDE FLANGE
HORIZ.	HORIZONTAL	WP	WORKING POINT
H.P.	HIGH POINT	WWF	WELDED WIRE FABRIC
HT.	HEIGHT	YRS.	YEARS
IBC	INTERNATIONAL BUILDING CODE		
I.D.	INSIDE DIAMETER		
I.F.	INSIDE FACE		
IN., "	INCH		
INFO	INFORMATION		
INSUL.	INSULATION		
INT.	INTERIOR		
INV.	INVERT		
JT.	JOINT		
K	KIP		
KSI	KIPS PER SQUARE INCH		

EARTHWORK AND FOUNDATION PREPARATION

- EARTHWORK SHALL CONFORM TO THE PROJECT SPECIFICATIONS. WHERE A DIFFERENCE OCCURS BETWEEN THE DRAWINGS, THE DRAWING NOTES AND SPECIFICATIONS, THE MORE STRINGENT PROVISION OF THE DRAWINGS OR SPECIFICATIONS SHALL APPLY.
- SUBSURFACE CONDITIONS ARE UNKNOWN. THE CONTRACTOR'S ENGINEER WILL BE REQUIRED TO PERFORM A GEOTECHNICAL SUBSURFACE EXPLORATION PROGRAM TO DEVELOP SOIL DESIGN PROPERTIES. THE GEOTECHNICAL SUBSURFACE EXPLORATION PROGRAM SHALL INCLUDE THE MINIMUM NUMBER OF BORINGS REQUIRED PER CODE FOR EACH STRUCTURAL ELEMENT. THE DESIGN OF THE STRUCTURES AND STRUCTURAL ELEMENTS BY THE CONTRACTOR'S ENGINEER SHALL CONFORM TO THE FINDINGS OF THE REQUIRED GEOTECHNICAL SUBSURFACE EXPLORATION PROGRAM. THE COSTS ASSOCIATED WITH RETAINING A LICENSED PROFESSIONAL ENGINEER TO PERFORM THE GEOTECHNICAL SUBSURFACE EXPLORATION PROGRAM SHALL BE INCLUDED IN THE PRICE BID FOR THE ITEMS REQUIRING SAME.
- EARTHWORK AND FOUNDATION CONSTRUCTION SHALL CONFORM TO ALL SAFETY REGULATIONS HAVING JURISDICTION. THE CONTRACTOR SHALL RETAIN AN EXPERIENCED LICENSED PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF NEW JERSEY, TO DESIGN ALL REQUIRED TEMPORARY EXCAVATION SUPPORT SYSTEMS. THESE SYSTEMS SHALL BE DESIGNED TO MAINTAIN THE STABILITY OF FOUNDATION EXCAVATIONS, EARTH AND ROCK SYSTEM EXCAVATIONS AND/OR SLOPE SUPPORTING SYSTEMS. ALL SUCH SIGNED AND SEALED DESIGNS MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE START OF CONSTRUCTION. UNLESS OTHERWISE NOTED, THE EXCAVATION SUPPORT SYSTEMS SHALL NOT BE MEASURED. THE COST OF EXCAVATION SUPPORT SHALL BE INCLUDED IN THE PRICE BID FOR CORRESPONDING EXCAVATION ITEMS, WHERE APPLICABLE.
- COORDINATE THE FOUNDATION CONSTRUCTION WITH THE FOLLOWING, AS REQUIRED: SITE WORK, GRADING, EXCAVATION SUPPORT WORK, ROADWAY, DRAINAGE AND/OR UTILITY PLANS FOR THE FACILITY AT THE PROJECT SITE.
- SUBMIT QUALIFICATIONS OF TESTING LABORATORY FOR SOIL MECHANICS LABORATORY AND FIELD TESTING OF SOILS AND COARSE AGGREGATES, IF AND WHEN REQUIRED.
- IF AND WHERE REQUIRED, PERFORM TEST PITS ADJACENT TO EXISTING STRUCTURAL FOUNDATION(S) TO THE DEPTH OF BOTTOM(S) OF EXISTING FOOTING(S) IN ORDER TO DETERMINE THE BASE ELEVATION(S) AND CONDITION OF THE FOOTING(S) ADJACENT TO THE NEW STRUCTURE OR TO THE ELEVATION OF THE NEW FOUNDATION, WHICHEVER IS HIGHER. TEST PITS SHALL BE OBSERVED BY THE ENGINEER. FINAL REQUIREMENTS FOR UNDERPINNING, IF AND WHERE REQUIRED, AND/OR CONSTRUCTION ARE DEPENDENT ON ELEVATION AND CONDITION OF BELOW GRADE STRUCTURES AND SHALL BE ESTABLISHED BASED ON FINAL REVIEW OF CONDITIONS ENCOUNTERED.
- EXCAVATE TO LINE AND GRADE REQUIRED FOR CONSTRUCTION OF FOUNDATIONS AND SLABS ON GRADE.
- IF AND WHERE INDICATED, PROOF ROLLING AND COMPACTION OF EXPOSED SUBGRADES SHALL BE OBSERVED AND EVALUATED BY THE ENGINEER AND TESTED BY THE CONTRACTOR'S APPROVED TESTING AGENCY. MOISTURE CONDITION AND COMPACT EXPOSED SUBGRADES FOR SLABS AND FOUNDATIONS AND/OR EMBANKMENT FILLS, AS REQUIRED, TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE ASTM D1557 TEST PROCEDURE AND/OR ASTM D698 TEST PROCEDURE, AS REQUIRED. REMOVE SOILS THAT ARE OBSERVED TO YIELD OR UNCOMPACTABLE SOILS TO THE DEPTH ESTABLISHED BY THE ENGINEER. EXCAVATIONS BELOW THE LINE AND GRADE FOR THE FOUNDATIONS SHALL BE BACKFILLED WITH CONTROLLED COMPACTED FILL OR COARSE AGGREGATE BASED ON THE EVALUATION OF THE ENGINEER.
- EARTHWORK MATERIALS
 - SOIL AGGREGATES AND COARSE AGGREGATES FOR PROJECT EARTHWORK SHALL CONFORM TO THE GRADATIONS AND MATERIAL REQUIREMENTS GIVEN IN SECTION 901 OF THE NJDOT 2019 STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION UNLESS NOTED OTHERWISE HEREIN OR IN THE SPECIFICATIONS.
 - THE CONTRACTOR IS ADVISED THAT ALL SOIL AND STONE MATERIALS MUST BE CERTIFIED CLEAN BY THE SUBMISSION OF ACCEPTABLE TEST RESULTS. SHALL COMPLY WITH NJDOT QUALIFIED PRODUCT LIST AND APPROVED BY THE ENGINEER PRIOR TO DELIVERY OF THE MATERIALS TO THE SITE.
 - ALL SOIL MATERIALS SHALL BE MOISTURE CONDITIONED AS REQUIRED TO ACHIEVE THE SPECIFIED DEGREE OF COMPACTION.
 - EXCAVATED SITE SOILS CONFORMING TO THE GRADATION FOR STANDARD SOIL AGGREGATE 1-14 MODIFIED TO PERMIT A MAXIMUM OF 20 PERCENT OF FINES OF LOW PLASTICITY SHALL BE MOISTURE CONDITIONED AND USED IN THE BACKFILLS.
 - IMPORTED STRUCTURAL FILLS, IF REQUIRED, SHALL CONFORM TO NJDOT STANDARD SIZE 1-11 OR 1-13, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
 - DENSE GRADED AGGREGATES SHALL BE QUARRY PROCESSED BROKEN STONE MATERIALS CONFORMING TO THE NJDOT SPECIFICATIONS.
 - COARSE AGGREGATE BASE MATERIALS FOR CONCRETE STRUCTURAL FOUNDATIONS, SLABS, WORKING MATS, DRAINAGE FILLS AND/OR APRONS SHALL BE BROKEN STONE CONFORMING TO THE STANDARD SIZE COARSE AGGREGATE NO. 57 (1" TO NO. 4).
 - CONTROLLED LOW STRENGTH MATERIALS CONFORMING TO THE NJDOT STANDARD SPECIFICATION SHALL BE USED ONLY, IF AND WHERE INDICATED. IN ADDITION, THE MATERIAL SHALL BE USED IF AND WHERE DIRECTED OR REQUIRED DUE TO OVER EXCAVATION AND WHERE INDICATED FOR AREAS THAT ARE DIFFICULT TO ACCESS FOR COMPACTION.
- PROTECT SUBGRADES FROM SOFTENING DUE TO SURFACE WATER INFILTRATION, GROUNDWATER OR FROST. NO FILL OR CONCRETE SHALL BE PLACED ON SATURATED OR FROZEN GROUND. RECOMPACT MATERIALS THAT HAVE BEEN DISTURBED BY THE CONSTRUCTION OR DETERIORATED DUE TO EXPOSURE TO FROST OR SATURATION.
- COMPACT STRUCTURAL SOIL AGGREGATE FILLS, BACKFILLS AND/OR EMBANKMENT SOIL AGGREGATE FILLS, AS REQUIRED, IN MAXIMUM 8 INCH THICK LIFTS AND COMPACT EACH LIFT TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED IN ACCORDANCE WITH THE ASTM D1557 TEST PROCEDURE OR THE ASTM D698 TEST PROCEDURE, AS APPLICABLE.
- COMPACT COARSE AGGREGATE FILLS WITH A MINIMUM OF FOUR (4) PASSES OF A VIBRATORY PLATE COMPACTOR OR ROLLER WITH MINIMUM STATIC WEIGHT OF 500 POUNDS.
- PERFORM ALL EARTHWORK OPERATIONS IN CONFORMANCE WITH THE PERMITS AND SOIL EROSION AND SEDIMENT CONTROL MEASURES.
- SUBMIT EXCAVATION SCHEDULE TO ENGINEER FOR REVIEW. SCHEDULE SHALL BE PLANNED TO MAINTAIN ACCESS TO ROADWAY AND MAINTAIN EXISTING FACILITY IN OPERATION TO THE FULLEST EXTENT POSSIBLE. COORDINATE EXCAVATION SCHEDULES WITH SUBMITTALS FOR PRE-ENGINEERED STRUCTURES, WHERE APPLICABLE, SO THAT MODIFICATIONS TO THE FOUNDATION LAYOUT ARE FINALIZED PRIOR TO CONSTRUCTION OF FOUNDATIONS.
- STRIP EXISTING PAVEMENT, EQUIPMENT PADS, ABANDONED FOUNDATIONS AND DISPOSE OF MATERIALS, AS REQUIRED. SECURE EXISTING DRAINAGE AND UTILITY SYSTEMS.
- NO PAYMENT SHALL BE MADE FOR UNAUTHORIZED EXCAVATION BELOW THE LINES AND GRADES ESTABLISHED FOR THE CONSTRUCTION OF FOUNDATIONS AND SLABS ON GRADE AND SUB-FLOOR UTILITY SYSTEMS. AREAS OF UNAUTHORIZED EXCAVATION SHALL BE BACKFILLED WITH CONTROLLED LOW STRENGTH MATERIAL, COMPACTED DENSE GRADED AGGREGATE OR LEAN CONCRETE, AS DETERMINED BY THE ENGINEER.
- SLAB SUBGRADE SHALL BE PROOFROLLED WITH A LOADED 10 WHEEL TRUCK OR CONCRETE TRUCK PRIOR TO PLACEMENT OF FORMS AND REINFORCING. AREAS NOTED TO RUT OR YIELD SHALL BE EXCAVATED AND RECOMPACTED.
- PLACE GRAVEL AND/OR SEAL CONCRETE WORKING MATS, AS APPLICABLE AND AS REQUIRED BY SITE CONDITIONS.
- UNDERPINNING, ONLY IF AND WHERE DIRECTED:
 - UNDERPINNING OF EXISTING STRUCTURE FOUNDATIONS AND/OR SLABS SHALL BE PERFORMED BY THE CONTRACTOR IF AND WHERE INDICATED ON THE DRAWINGS AND/OR AS DIRECTED BY THE ENGINEER.
 - THE CONTRACTOR SHALL SUBMIT LATERAL AND VERTICAL SUPPORT DETAILS FOR THE EXISTING WALLS AND/OR FOOTINGS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW JERSEY, RETAINED BY THE CONTRACTOR, TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE START OF CONSTRUCTION. MAXIMUM DEPTH OF UNDERCUT SHALL BE 2 FEET AND MAXIMUM LENGTH OF UNDERPINNING SHALL BE 6 FEET.
 - THE CONTRACTOR SHALL SUPPORT THE SIDES OF EXCAVATION, AS REQUIRED, TO PRECLUDE SLOUGHING OF THE SIDES. INSTALL LAGGING AS REQUIRED.
 - THE CONTRACTOR SHALL PLACE REINFORCING IN ACCORDANCE WITH THE FOUNDATION DESIGN DETAILS.
 - THE CONTRACTOR SHALL PLACE CONCRETE TO A HEIGHT OF APPROXIMATELY 2 INCHES FROM THE BASE OF THE FOUNDATION AND RESUPPORT THE EXISTING WALLS USING DRY PACK OR LATEX MODIFIED NON-SHRINK GROUT.

STEEL NOTES

- STEEL CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE AISC "STEEL CONSTRUCTION MANUAL", AND SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" AS ADOPTED IN 2016.
- MATERIALS FOR STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:

COLUMNS OR GIRDERS	- A 572, GRADE 50 OR A992
PLATES AND MISC. STEEL	- A 36
STRUCTURAL TUBE	- A 500, GRADE B
STRUCTURAL PIPE	- A 501 OR A53, TYPE E OR S, GRADE B
COLD FORMED STEEL	- A 607 C1 GRADE 55
- ALL BOLTED CONNECTIONS SHALL BE MADE USING ASTM F3125 GRADE A490 H.S. BOLTS, 3/4" DIAMETER, UNLESS OTHERWISE NOTED ON THE PLANS.
- ANCHOR BOLTS SHALL BE OF A36 OR A307 STEEL.

- ONLY IF INDICATED ON THE PLANS, ALL STEEL SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 - STANDARD SPECIFICATION FOR ZINC (HOT DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS. DAMAGED COATINGS SHALL BE REPAIRED IN ACCORDANCE WITH ASTM A780 - STANDARD PRACTICE FOR REPAIR OF DAMAGED AND UNCOATED AREAS OF HOT-DIP GALVANIZED COATINGS. ALL FASTENERS FOR GALVANIZED STEEL STRUCTURAL MEMBERS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 STANDARD SPECIFICATION FOR ZINC COATING(HOT -DIP) ON IRON AND STEEL HARDWARE. IF AND WHERE INDICATED FASTENERS MAY BE STAINLESS STEEL IN LIEU OF GALVANIZED STEEL.
- ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH THEMEC 10-99 PRIMER OR APPROVED EQUAL 2.0 MILS IN THICKNESS, EXCEPT WHERE STEEL IS TO RECEIVE SPRAY APPLIED FIREPROOFING. ALL WELDS AND BARE SPOTS SHALL RECEIVE TOUCHUP PAINT. ALL STEEL WITH EXTERIOR EXPOSURE SHALL RECEIVE A SHOP PAINTED THEMEC SERIES 66 OR 161 PRIMER AND A FIELD APPLIED FINISH COAT AFTER PRIMER TOUCH UP. FINISH COAT SHALL BE EPOXY BASED WITH THICKNESS OF 2.0 MILS.
- SHOP AND ERECTION DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL. NO FABRICATION OF STEEL SHALL COMMENCE WITHOUT APPROVED SHOP DRAWINGS. SHOP DRAWINGS ARE PREPARED AND USED BY THE CONTRACTOR AS INSTRUMENTS TO SEQUENCE HIS WORK AND TO FACILITATE FABRICATION AND ERECTION. REVIEW OF SHOP DRAWINGS SHALL BE FOR GENERAL DETAIL AND ARRANGEMENT ONLY. CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR DIMENSIONS, PROPER FIT AND DETAILED DESIGN OF CONNECTIONS. THEIR APPROVAL BY THE STRUCTURAL ENGINEER IS NOT TO BE CONSTRUED AS A WAIVER OF CONSTRUCTION CONTRACT REQUIREMENTS OR RESPONSIBILITIES, UNLESS THE CONTRACTOR HAS BEEN GRANTED A DEVIATION IN WRITING.
- CONNECTIONS SHALL BE DESIGNED FOR MAXIMUM SAFE UNIFORM LOAD FOR THE SPAN OF THE MEMBER, OR FOR SHEARS SHOWN ON THE DRAWINGS x 1.10, UNLESS OTHERWISE DETAILED.
- DURING ERECTION, APPROVED TEMPORARY BRACING SHALL BE INSTALLED AS REQUIRED TO PREVENT DISTORTION OR DAMAGE TO THE FRAMEWORK DUE TO ERECTION FORCES.
- STEEL SHOP DRAWINGS SHALL BE COORDINATED WITH STAIR DETAILS. IF HANGER RODS ARE USED, PROVIDE STIFFENER PLATE 1/4" THICK MIN. ALONGSIDE HANGER LOCATION.

STRUCTURAL WELDING NOTES (NOT INCLUDING PROCESS PIPING OR EQUIPMENT)

- ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH STANDARDS OF THE AMERICAN WELDING SOCIETY. ELECTRODES MUST MEET E70XX SERIES REQUIREMENTS, LOW HYDROGEN, WITH MINIMUM TENSILE STRESS OF 70,000 PSI. ELECTRODES SHALL BE PRODUCED AND STORED IN ACCORDANCE WITH AWS D1.1 SECTIONS 4.5 OR 4.12.
- STEEL ERECTOR SHALL PROVIDE A FIRE WATCH DURING ALL FIELD WELDING OPERATIONS.
- ALL WELDERS ARE TO BE LICENSED AND CERTIFIED TO AWS STANDARDS OR THOSE REQUIRED BY APPLICABLE BUILDING CODE.
- ALL WELDS SHALL BE VISUALLY INSPECTED. ALL GROOVE WELDS SHALL RECEIVE RADIOGRAPHIC OR ULTRASONIC TESTING. MAGNETIC PARTICLE TEST 20% OF ALL FILLET WELDS. ALL TESTING SHALL BE PERFORMED BY A CERTIFIED TESTING LABORATORY RETAINED BY THE CONTRACTOR.
- REPORTS OF EACH TEST SHALL BE GIVEN TO THE STRUCTURAL ENGINEER. NO FAILED WELD SHALL BE PERMITTED TO REMAIN IN SERVICE. IT IS THE RESPONSIBILITY OF THE TESTING LABORATORY TO PROVIDE TIMELY NOTICE OF FAILED TESTS TO THE CONTRACTOR.
- WELDING SHALL PROGRESS IN A MANNER WHICH BALANCES THE STRESSES IN THE MEMBERS, IN ACCORDANCE WITH AWS.
- PREHEATING REQUIREMENTS FOR BASE METAL SHALL FOLLOW AWS GUIDELINES.

ALUMINUM NOTES

- ALL ALUMINUM ALLOY MEMBERS, FABRICATION THEREOF, AND ERECTION OF, SHALL CONFORM TO "SPECIFICATIONS FOR ALUMINUM STRUCTURES" BY THE ALUMINUM ASSOCIATION, LATEST EDITION, UNLESS NOTED OTHERWISE.
- ALUMINUM ALLOY FOR ALL ROLLED SECTIONS, PLATES AND ANGLES SHALL BE ALLOY 6061-T6 UNLESS OTHERWISE SPECIFIED.
- ALUMINUM ALLOY FOR PIPE SHALL BE ALLOY 6063-T832 UNLESS OTHERWISE SPECIFIED.
- ALUMINUM ALLOY FOR GRATING SHALL BE ALLOY 6063-T6 UNLESS OTHERWISE SPECIFIED.
- ALL FASTENERS BETWEEN ALUMINUM MEMBERS AND DISSIMILAR METALS SHALL BE MADE WITH STAINLESS STEEL BOLTS UNLESS OTHERWISE NOTED. ALL CONTACT SURFACES OF ALL MEMBERS SHALL BE PAINTED WITH ZINC CHROMATE PRIMER.
- ALL ALUMINUM SURFACES TO BE PLACED IN CONTACT WITH WOOD, CONCRETE, OR MASONRY SHALL BE GIVEN A HEAVY COAT OF AN ALKALI RESISTANT BITUMASTIC PAINT.

PIPING, PIPELINE APPURTENANCES, VALVES, SUPPORTS, HANGERS, STRUTS, BLOCKING AND ANCHORAGE NOTES

- PIPING TRADE CONTRACTORS SHALL REFER TO THE APPLICABLE DIVISIONS OF THE CONTRACT SPECIFICATIONS FOR SUPPORTS, BLOCKING, ANCHORAGE AND RESTRAINING OF ALL PIPING, VALVES AND PIPING APPURTENANCES.
- PIPING TRADE CONTRACTORS SHALL REVIEW WITH THE ENGINEER AND THE CONTRACTOR ALL LOCATION AND ARRANGEMENT OF PIPING, OPENINGS, PIPE SLEEVES, AND TRENCHES AS REQUIRED TO COMPLETE HIS WORK AND SHALL NOT PROCEED WITH THE INSTALLATION OF SAME UNTIL SUCH HAS BEEN REVIEWED AND WILL NOT IMPAIR THE STRUCTURAL INTEGRITY OF THE CONCRETE MEMBERS.
- PIPING TRADE CONTRACTORS SHALL PROVIDE AND COORDINATE THE INSTALLATION OF ALL ITEMS TO BE EMBEDDED IN THE CONCRETE SYSTEM AND SHALL COOPERATE SO AS NOT TO DELAY THE CONSTRUCTION WORK. SUCH ITEMS SHALL INCLUDE ALL PIPES, SLEEVES, BOLTS, STRUTS, HANGERS AND FITTINGS, ETC., THAT ARE TO BE EMBEDDED IN THE CONCRETE SYSTEM.

ELECTRICAL CONDUIT NOTES

- ELECTRICAL TRADE CONTRACTOR SHALL REVIEW WITH THE ENGINEER AND THE CONTRACTOR HIS PROPOSED LOCATION AND METHOD OF INSTALLATION OF CONDUITS IN CONCRETE CONSTRUCTION AND SHALL NOT PROCEED WITH INSTALLATION OF SAME UNTIL ARRANGEMENT OF CONDUITS AND OPENINGS HAS BEEN AGREED UPON.
- NO CONDUITS SHALL BE SO LOCATED AND INSTALLED THAT WILL IMPAIR THE STRUCTURAL INTEGRITY OF THE CONCRETE MEMBERS.
- THE CONTRACTOR SHALL CONFIRM ALL CONDUIT LOCATIONS FOR ELECTRICAL WIRING AND/OR PLUMBING OR DRAINAGE PIPES IN NEW CONCRETE MATS, WALLS OR SLABS PRIOR TO POURING THE SLAB CONCRETE. CORING THROUGH SLABS IS DISCOURAGED.
- NO CONDUIT WITH AN OUTSIDE DIAMETER LARGER THAN ONE-THIRD OF THE CONCRETE SLAB THICKNESS WILL BE PERMITTED TO BE INSTALLED IN THE SLAB SYSTEM WITHOUT REVIEW OF PENETRATION DETAILS.
- ALL CONDUIT CROSS-OVERS SHALL BE SO LOCATED SO THEY DO NOT VERTICALLY DISPLACE ANY MAIN REINFORCING BARS OR OTHERWISE IMPAIR THE STRUCTURAL INTEGRITY OF THE FRAMING SYSTEM (SEE NOTE 1).
- ALL CONDUITS SHALL BE SPACED A MINIMUM OF THREE CONDUIT DIAMETERS CENTER TO CENTER. LARGER SPACING OF CONDUIT IS PREFERRED.
- CONTINUOUS ROWS OF CONDUIT SHALL NOT BE PLACED PARALLEL TO THE BEARING EDGES OF CONCRETE SLABS WITHIN A DISTANCE EQUAL TO THE SLAB THICKNESS FROM THE FACE OF THE BEARING EDGE.

TIMBER NOTES

- ALL TIMBER SHALL CONFORM TO THE LATEST COPY OF THE NATIONAL DESIGN SPECIFICATIONS FOR STRESS-GRADE LUMBER BY THE NATIONAL FOREST PRODUCTS ASSOCIATION, FOR MATERIAL PROPERTIES, MANUFACTURE AND ATTACHMENTS.
- ALL STRESS GRADE TIMBER USED SHALL BE DOUGLAS FIR (NO. 1) OR ACCEPTED EQUAL, WITH MINIMUM ALLOWABLE UNIT STRESSES AS GIVEN HEREIN:

STRESS IN EXTREME FIBER IN BENDING	"F" - 1500 PSI
HORIZONTAL SHEAR	"H" - 95 PSI
COMPRESSION PERPENDICULAR TO GRAIN	"C" - 335 PSI
COMPRESSION PARALLEL TO GRAIN	"C1" - 1250 PSI
MODULUS OF ELASTICITY	"E" - 1,800,000 PSI
- MANUFACTURER SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW. SUCH SHOP DRAWINGS SHALL SHOW FULL DIMENSIONS OF EACH MEMBER, SPECIES OF WOOD USED, STRESS GRADE OF LUMBER, TYPE OF GLUE USED AND OTHER

- VARIABLES.
- ALL MEMBERS MUST BE ADEQUATELY BRACED DURING INSTALLATION, UNTIL COMPLETE STRUCTURAL SYSTEM HAS BEEN INSTALLED.
 - ALL METAL CONNECTORS, HANGERS, TIES, HOLDDOWNS, ANCHORS, PLATES, SEISMIC CONNECTORS, ETC., SHALL BE MADE WITH GALVANIZED STEEL CONNECTIONS, BY SIMPSON STRONG-TIE CO., OR ACCEPTABLE EQUAL. SHOP DRAWINGS OR CATALOGUE CUTS SHOWING THE CAPACITY OF EACH UNIT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
 - ALL NAILS USED SHALL BE GALVANIZED COMMON WIRE NAILS OF THE SIZES SHOWN ON THE CONTRACT DRAWINGS OR REQUIRED BY THE CONNECTORS.
 - "X" BRIDGING SHALL BE AS SPACED ON THE CONTRACT DRAWINGS AND MAY BE EITHER WOOD OR METAL.
 - PLYWOOD FOR EXTERIOR MEZZANINE DECKING SHALL BE MINIMUM 3/4" C-C EXT-DFFPA GRADE STRUCTURAL I, II WITH TREATMENT FOR FIRE RESISTANCE.
 - ALL PLYWOOD SHALL BE CONTINUOUS OVER TWO OR MORE SPANS AND SHALL BE INSTALLED WITH THE FACE GRAIN OF PLYWOOD PERPENDICULAR TO JOISTS OR SUPPORTING MEMBERS WITH THE JOINTS STAGGERED.

MISCELLANEOUS CARPENTRY

- REFER TO PROJECT SPECIFICATIONS FOR DETAILED REQUIREMENTS FOR CARPENTRY.
- CONFORM TO PROJECT SAFETY REQUIREMENTS FOR SCAFFOLDING CONSTRUCTION, AND WORK ALONG THE EDGES OF THE ROOF, WHERE APPLICABLE.
- TIMBER CONSTRUCTION: TIMBER SHALL CONFORM TO THE LATEST COPY OF THE NATIONAL DESIGN SPECIFICATIONS FOR STRESS-GRADE LUMBER BY THE NATIONAL FOREST PRODUCTS ASSOCIATION, FOR MATERIAL PROPERTIES, MANUFACTURE AND ATTACHMENTS.
- LUMBER STANDARDS: COMPLY WITH DOC P520 "AMERICAN SOFTWOOD LUMBER STANDARD AND WITH GRADING RULES OF INSPECTION AGENCIES.
- WOOD NAILERS, WOOD CURBS AND/OR WOOD COPING FRAMING:
 - WOOD CANTS, NAILERS, CURBS, BLOCKING AND/OR COPING WHICH SHALL BE COVERED AFTER INSTALLATION SHALL BE PRESSURE TREATED TO MINIMUM RETENTION OF 0.25 PCF AND KILN DRIED TO MOISTURE OF 19%.
 - WOOD NAILERS, CURBS, BLOCKING AND/OR COPING SHALL BE FABRICATED USING TREATED SOUTHERN PINE LUMBER GRADE NO. 2 OR BETTER.
 - NAILS, BOLTS AND LAG SCREWS SHALL BE HOT DIP GALVANIZED, SCREWS SHALL BE STAINLESS STEEL.
 - REMOVE AND REPLACE DETERIORATED NAILERS, IF AND WHERE ENCOUNTERED.

SELECTIVE DEMOLITION NOTES:

- CONFORM TO THE REQUIREMENTS OF THE PROJECT SPECIFICATION AND ALL REGULATIONS HAVING JURISDICTION.
- IF AND WHERE REQUIRED, COORDINATE WITH THE OWNER AND ENGINEER TO PERFORM TEST CORES PRIOR TO SELECTIVE DEMOLITION.
- PROVIDE BARRICADES AS REQUIRED TO MAINTAIN SAFE ACCESS TO THE CONSTRUCTION SITE. SUBMIT SHOP DRAWINGS FOR PROTECTIVE STRUCTURES AND/OR BARRICADES. PROJECT SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR. SUBMITTAL TO THE ENGINEER SHALL NOT RELIEVE THE CONTRACTOR OF HIS SOLE OBLIGATION TO MAINTAIN PROJECT SAFETY IN ACCORDANCE WITH ALL REGULATIONS HAVING JURISDICTION.
- CONTAIN, STOCKPILE, AND DISPOSE OF ALL DEMOLITION DEBRIS IN ACCORDANCE WITH ALL REGULATIONS HAVING JURISDICTION.

PARTIAL STRUCTURAL TECHNICAL SUBMITTALS LIST	SPECIFICATION REF.
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TESTING LABORATORY QUALIFICATIONS	SECTION 156
CONTRACTOR'S ENGINEER'S QUALIFICATIONS	SECTIONS 203/901
SOIL AGGREGATE AND SITE SUBGRADE MATERIAL COMPACTION TEST RESULTS (ASTM D1557)	SECTIONS 203/901
SOIL AGGREGATE GRAIN SIZE ANALYSES (ASTM D422)	SECTIONS 203/901
COARSE AGGREGATE GRAIN SIZE ANALYSES (ASTM D422)	SECTIONS 203/901
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PRODUCT DATA AND MATERIAL TEST REPORTS FOR CONCRETE WORK	SECTION 504/903
REINFORCING STEEL SHOP DRAWING FOR REINFORCED CONCRETE	SECTION 504/905
QUALIFICATIONS DATA FOR CONCRETE CONTRACTOR AND READY MIX SUPPLIER	SECTION 504/903
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MATERIAL CERTIFICATES FOR CEMENT, ADMIXTURES, GROUTS, CURING COMPOUNDS, ETC.	SECTION 504/903
MATERIAL CERTIFICATES FOR REINFORCING, WELDED WIRE FABRICS, ETC.	SECTION 504/905
MANUFACTURER'S PRODUCT DATA AND MATERIAL TEST REPORTS FOR LATEX MOD, REPAIR MORTAR	SECTION 504/903
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PRODUCT DATA AND MATERIAL TEST REPORTS FOR EACH TYPE OF PRODUCT	SECTION 910
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GROUT AND MORTAR MIX DESIGN AND TEST REPORTS	SECTION 903
MATERIAL CERTIFICATES FOR CEMENT, MORTAR, GROUTS, CURING COMPOUNDS, ETC.	SECTION 903
MATERIAL CERTIFICATES FOR DIMENSIONAL LUMBER	
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ICC-ES EVALUATION REPORTS FRAMING ANCHORS	SECTION 510/915
PRODUCT DATA FOR EACH TYPE OF SHEATHING MATERIALS	SECTION

CAST-IN-PLACE CONCRETE:

- ALL REINFORCED CAST-IN-PLACE REINFORCED CONCRETE SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI STANDARD 318-CURRENT EDITION) AND THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURE" (ACI STANDARD 315), EXCEPT AS SPECIFICALLY MODIFIED BY THE CONTRACT DRAWINGS AND SPECIFICATIONS.
- ALL REINFORCING STEEL SHALL BE INTERMEDIATE GRADE, NEW DEFORMED BILLET-STEEL REINFORCING, CONFORMING TO ASTM SPECIFICATION ASTM A615, GRADE 60 UNLESS NOTED OTHERWISE.
- ALL WELDED WIRE FABRIC USED ON THE PROJECT SHALL CONFORM TO ASTM SPECIFICATION A-185.
- ALL REINFORCING STEEL BARS, DOWELS, WELDED WIRE FABRIC, AND/OR SUPPORT CHAIRS SHALL BE CORROSION PROTECTED (I.E., EPOXY-COATED IN ACCORDANCE WITH ASTM A775 OR HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A767) AS INDICATED ON THE DRAWINGS. UNCOATED OR BLACK BARS WILL NOT BE PERMITTED. BRICKS OR OTHER MASONRY SUPPORTS FOR THE REBAR MATS WILL NOT BE PERMITTED.
- ALL DETAILING, BENDING, PLACEMENT AND SUPPORT OF REINFORCING STEEL SHALL CONFORM TO THE STANDARDS CITED IN NOTE #1, EXCEPT AS MAY BE MODIFIED BY THESE NOTES, CONTRACT DRAWINGS AND SPECIFICATIONS.
- ALL REINFORCING SHALL BE LAP SPLICED, BENT AND DEVELOPED AS PER THE TYPICAL DETAILS. CONTINUOUS BOTTOM REINFORCING SHALL BE LAP SPLICED AT SUPPORT POINTS AND CONTINUOUS TOP REINFORCING SHALL BE LAP SPLICED MIDWAY BETWEEN SUPPORTS. REINFORCING SHALL NOT BE RE-BENT ONCE PLACED WITHOUT THE PERMISSION OF THE ENGINEER.
- CLEAR CONCRETE COVER OVER MAIN REINFORCING SHALL BE AS CALLED FOR IN THE TYPICAL DETAILS, UNLESS SHOWN OTHERWISE ON THE CONTRACT DRAWINGS.
- ALL OF THE STANDARD AND/OR SPECIAL ACCESSORIES REQUIRED TO SUPPORT, HOLD AND TIE REINFORCEMENT IN ITS PROPER POSITION SHALL BE PROVIDED AND INSTALLED BY THE CONCRETE CONTRACTOR. THIS INCLUDES SUPPORT BARS AND/OR INDIVIDUAL HIGH CHAIRS FOR THE TOP LAYER OF REINFORCING AND BOLSTERS FOR THE BOTTOM LAYER OF REINFORCING. REINFORCING SHALL BE WIRED IN PLACE AS REQUIRED. ANY SPECIAL SUPPORTS AS REQUIRED SHALL BE DESIGNED AND DETAILED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO INSTALLATION OF THE SAME BY THE CONTRACTOR.
- WHERE REINFORCED SLABS ARE GREATER THAN 12" IN THICKNESS, INDIVIDUAL HIGH CHAIRS SHALL BE PROVIDED TO SUPPORT THE TOP REINFORCING. SUCH HIGH CHAIRS SHALL ADEQUATELY SUPPORT ALL CONSTRUCTION LOADINGS AND SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND ACCEPTANCE BEFORE BEING INSTALLED.
- ALL STRUCTURAL MEMBERS SHALL BE CAST MONOLITHICALLY FULL DEPTH, UNLESS SHOWN OTHERWISE ON THE CONTRACT DRAWINGS.
- VERTICAL CONSTRUCTION JOINTS IN WALLS WHERE NOT SPECIFICALLY SHOWN ON THE CONTRACT DRAWINGS SHALL BE LOCATED AT THE MIDPOINT BETWEEN PIERS, BUTTRESSES AND/OR INTERSECTING WALLS AND A MINIMUM OF 4'-0" FROM ANY OPENINGS ON THE WALLS.
- HORIZONTAL CONSTRUCTION JOINTS WILL NOT BE PERMITTED IN CONCRETE WALLS UNLESS SPECIFICALLY DETAILED ON THE CONTRACT DRAWINGS.
- ALL CONSTRUCTION JOINTS IN FRAMED SLABS AND BEAMS SHALL BE LOCATED AT OR ADJACENT TO THE MIDSPAN OF THE MEMBERS. FOR FURTHER REQUIREMENTS, SEE THE TYPICAL DETAILS.
- IMMEDIATELY BEFORE PLACING NEW CONCRETE, ALL CONSTRUCTION JOINTS SHALL RECEIVE A COATING OF A BONDING AGENT.
- ALL EXPOSED CONCRETE EDGES SHALL BE GROUND TO A 3/8" RADIUS OR CHAMFERED AS PER THE CONTRACT DRAWINGS.
- PROVIDE ADDITIONAL REINFORCING, AS PER THE TYPICAL DETAILS, FOR ALL OPENINGS IN CONCRETE WALLS AND/OR SLABS, UNLESS SHOWN OTHERWISE ON THE CONTRACT DRAWINGS.
- THE SPACING OF REINFORCING, AS SHOWN ON THE CONTRACT DRAWINGS, IS THE MAXIMUM PERMITTED. THIS SPACING MAY BE REDUCED FOR CONSTRUCTION CONSIDERATIONS, BUT SHALL NOT BE EXCEEDED.
- AT FRAMED CONSTRUCTION AREAS, IF INDICATED ON THE PROJECT PLANS, THE CONTRACTOR SHALL ADJUST THE SHORING, USING SURVEYING INSTRUMENTS, PRIOR TO PLACING ANY CONCRETE AND IMMEDIATELY AFTER THE PLACING OF SAID CONCRETE. NO ADJUSTMENT OF FORM ELEVATIONS WILL BE PERMITTED AFTER THE CONCRETE HAS ATTAINED ITS INITIAL SET. THE CONTRACTOR SHALL CAMBER FORMS, AS REQUIRED, TO COMPENSATE FOR THE FORMWORK DEFLECTION CAUSED BY THE PLACEMENT OF CONCRETE AND ANY DEFLECTION OF THE SLABS AND BEAMS AFTER THE REMOVAL OF THE FORMS.
- SLAB FINISHES SHALL CONFORM TO THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS. EXCEPT WHERE NOTED OTHERWISE, SLAB / WALL FINISH SHALL CONFORM WITH THE REQUIREMENTS FOR NON-SLIP BROOM FINISH AS SPECIFIED WITHIN THE CONTRACT SPECIFICATIONS.

CONCRETE PROPORTIONING, PLACEMENT AND CURING:

- ALL CONCRETE USED ON THIS PROJECT SHALL HAVE MINIMUM 28-DAY ULTIMATE COMPRESSIVE STRENGTHS (f_c') AS NOTED BELOW. SUCH STRENGTHS SHALL BE DETERMINED, IN ACCORDANCE WITH ACI REQUIREMENTS, BY A CERTIFIED TESTING LABORATORY TO BE RETAINED BY THE CONTRACTOR. FOR FURTHER REQUIREMENTS, SEE THE SPECIFICATIONS AND SPECIAL INSPECTION NOTES.
 $f_c' = 4,000$ PSI. CONCRETE HAVING THIS ULTIMATE COMPRESSIVE STRENGTH SHALL BE USED THROUGHOUT THE PROJECT UNLESS NOTED OTHERWISE ON THE CONTRACT DRAWINGS.
MAXIMUM WATER/ CEMENT RATIO = 0.45, MINIMUM 580 POUNDS OF CEMENT PER CUBIC YARD OF CONCRETE.
- ALL NORMAL WEIGHT CONCRETE, REGARDLESS OF SPECIFIED DESIGN STRENGTH, SHALL CONTAIN STONE OR GRAVEL AGGREGATE SUCH THAT THE WEIGHT OF THE HARDENED CONCRETE IS 145 POUNDS PER CUBIC FOOT ($\pm 3\%$) WITH THE INCLUSION OF ENTRAINED AIR. FOR FURTHER REQUIREMENTS SEE THE SPECIFICATIONS.
- ALL CONCRETE EXPOSED TO THE ATMOSPHERE SHALL CONTAIN 6% ($\pm 1.5\%$) ENTRAINED AIR.
- ALL CEMENT USED SHALL BE PORTLAND CEMENT, TYPE I CONFORMING TO ASTM C-150. SLAG CEMENT SHALL NOT BE USED IN ANY MIX DESIGN AND WILL NOT BE PERMITTED.
- ALL AGGREGATES, BOTH FINE AND COARSE, SHALL CONFORM TO ASTM C33. UNLESS NOTED OTHERWISE, COARSE AGGREGATE SHALL BE TYPE 57.
- ADMIXTURES USED SHALL NOT CONTAIN ANY FREE CHLORIDE IONS IN ANY AMOUNT GREATER THAN NORMALLY CONTAINED IN POTABLE WATER.
- ALL WATER USED IN THE CONCRETE MIX SHALL BE POTABLE.
- MAXIMUM SLUMP OF CONCRETE, AT POINT OF DISCHARGE, SHALL NOT EXCEED 3 INCHES (± 1 INCH).
- CONTRACTOR MAY ELECT TO USE A HIGH RANGE WATER REDUCING ADMIXTURE (SUPERPLASTICIZER) TO FACILITATE PLACEMENT OF CONCRETE. MAXIMUM SLUMP, AFTER INTRODUCTION OF SUPERPLASTICIZER, SHALL NOT EXCEED 8 INCHES.
- WHENEVER THE AMBIENT TEMPERATURE IS GREATER THAN 90 DEGREES FAHRENHEIT, THE CONTRACTOR SHALL FOLLOW THE PROCEDURES OF ACI 305, HOT WEATHER CONCRETING, UNLESS OTHERWISE NOTED.
- WHENEVER THE MEAN AVERAGE AMBIENT TEMPERATURE IS BELOW 40 DEGREES FAHRENHEIT, FOR THREE CONSECUTIVE DAYS, THE CONTRACTOR SHALL FOLLOW THE PROCEDURES OF ACI 306, COLD WEATHER CONCRETING, UNLESS OTHERWISE NOTED.
- IMMEDIATELY AFTER FINISHING OPERATIONS ARE COMPLETED, ALL EXTERIOR CAST-IN-PLACE CONCRETE SHALL RECEIVE AN APPLICATION OF KUREX VOX WHITE PIGMENTED CURING COMPOUND, MANUFACTURED BY THE EUCLID CHEMICAL COMPANY OR EQUAL. THE CURING COMPOUND SHALL BE APPLIED AS PER THE MANUFACTURER'S INSTRUCTIONS.

MASONRY:

- ALL MASONRY CONSTRUCTION AND MATERIALS USED SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES AND SPECIFICATIONS FOR MASONRY STRUCTURES" ACI-ASCE 530.1.
- HOLLOW LOAD BEARING MASONRY UNITS SHALL CONFORM TO ASTM C90, GRADE N, TYPE 1 AND BE MADE WITH NORMAL WEIGHT AGGREGATES UNLESS LIGHT WEIGHT AGGREGATES ARE INDICATED IN THE SCHEDULE. FOR FINISH REQUIREMENTS, SEE THE CONTRACT DRAWINGS.
- CONCRETE MASONRY UNITS SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 1900 PSI ON THE NET AREA.
- WHERE SHOWN ON THE CONTRACT DRAWINGS, AND/OR SECTIONS, THE MASONRY UNIT CORES SHALL BE FILLED SOLID WITH GROUT. PROVIDE MINIMUM 3"x3" CLEANOUTS, WHERE REQUIRED, AT THE BOTTOM OF EACH LIFT. CLOSE AND BRACE CLEANOUTS AFTER CLEANING CORES.
- ALL MASONRY UNITS, DIRECTLY BELOW LINTEL BEARING LOCATIONS, SHALL BE FILLED SOLID WITH GROUT FOR THE FULL HEIGHT OF THE WALL.
- ALL MASONRY UNITS, EACH SIDE OF OPENINGS, SHALL BE FILLED SOLID WITH GROUT FOR A WIDTH OF 2'-0", FULL HEIGHT OF MASONRY. PROVIDE ONE #5 VERTICAL REINFORCING, MINIMUM, WHERE NO OTHER REINFORCING IS CALLED FOR.
- GROUT SHALL BE PLACED IN LIFTS WITH A MAXIMUM HEIGHT OF FIVE FEET.
- GROUT SHALL BE CONSOLIDATED WITH MECHANICAL VIBRATION AFTER PLACING AND REVIBRATED AFTER INITIAL WATER LOSS AND SETTLEMENT HAS OCCURRED AND BEFORE INITIAL STIFFENING.
- ALL MASONRY WALLS SHALL BE RUNNING BOND CONSTRUCTION, UNLESS SHOWN OTHERWISE ON THE CONTRACT DRAWINGS. ALL MORTAR JOINTS SHALL BE FULL BED JOINTS. FOR FURTHER FINISH REQUIREMENTS, SEE THE CONTRACT DRAWINGS.
- TRUSS TYPE (HEAVY DUTY) MASONRY WALL REINFORCING, DUR-0-WAL OR EQUAL, CONFORMING TO ASTM A82 SHALL BE PROVIDED IN ALL MASONRY WALLS AS FOLLOWS:
A. IN THE FIRST TWO BED JOINTS ABOVE A BEARING JOINT
B. IN EVERY SECOND BED JOINT, EXCEPT AS NOTED
C. IN THE TOP THREE BED JOINTS BELOW ANY FRAMING LEVEL-BEARING WALL CONSTRUCTION
- MASONRY BOND BEAM SHALL BE PROVIDED IN THE COURSE OF MASONRY DIRECTLY BELOW A FRAMING LEVEL LOCATION, IN ALL MASONRY WALLS, BOTH BEARING AND NON-BEARING. UNLESS NOTED OTHERWISE ON THE CONTRACT DRAWINGS, THE BOND BEAM SHALL BE REINFORCED WITH TWO #5 CONTINUOUS REINFORCING AND FILLED WITH PEA GRAVEL CONCRETE HAVING AN ULTIMATE COMPRESSIVE STRENGTH OF 4,000 PSI.
- THE MAXIMUM SHELL THICKNESS OF THE BOND BEAM MASONRY UNITS SHALL NOT EXCEED 1-1/2".
- WHERE MASONRY UNITS ABUT CONCRETE WALLS, BEAMS OR COLUMNS AND/OR STRUCTURAL STEEL BEAMS OR COLUMNS, PROVIDE ANCHORS AS PER THE TYPICAL DETAILS.
- WHEN EITHER THE AMBIENT TEMPERATURE IS 100 DEGREES OR HIGHER, OR THE AMBIENT TEMPERATURE IS 90 OR HIGHER WITH A WIND VELOCITY OF 8 MPH OR GREATER, THE CONTRACTOR SHALL FOLLOW THE HOT WEATHER PROCEDURES AS REQUIRED BY ACI 530.1.
- WHERE MASONRY WALLS ARE REINFORCED, DOWELS SHALL BE PROVIDED FROM THE FOUNDATION WALL AND THE REINFORCING SHALL EXTEND INTO ANY BOND BEAMS OR CONCRETE CONSTRUCTION, AS PER THE TYPICAL DETAILS.
- THE CONTRACTOR SHALL COVER THE TOP OF ALL UNFINISHED MASONRY WORK EACH NIGHT AS WEATHER PROTECTION.
- WHEN EITHER THE AMBIENT TEMPERATURE OR THE TEMPERATURE OF THE MASONRY UNITS FALLS BELOW 40 DEGREES FAHRENHEIT, THE CONTRACTOR SHALL FOLLOW THE COLD WEATHER PROCEDURES AS REQUIRED BY ACI 530.1.

MASONRY MORTAR AND GROUT:

- ALL MORTAR FOR NEW MASONRY SHALL CONFORM TO THE REQUIREMENTS OF ASTM C270.
- CEMENT USED IN MASONRY MORTAR SHALL BE PORTLAND CEMENT, TYPE I OR III, CONFORMING TO ASTM C150.
- CONCRETE REPAIR MORTAR SHALL BE POLYMER MODIFIED PORTLAND CEMENT REPAIR MORTAR CONFORMING TO THE MANUFACTURER'S SPECIFICATIONS FOR SIKATOP 123 OR EQUAL. REPAIR MORTAR SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- UNLESS NOTED OTHERWISE, ALL MORTAR USED ON THE PROJECT SHALL BE TYPE S OR TYPE M MORTAR. CONTRACTOR SHALL SUBMIT PROPOSED MIX PROPORTIONS TO THE ENGINEER FOR REVIEW AND ACCEPTANCE BEFORE COMMENCING CONSTRUCTION.
- ALL MORTAR INGREDIENTS SHALL BE MIXED FOR THREE TO FIVE MINUTES IN A MECHANICAL BATCH MIXER.
- MORTAR SHALL BE RETEMPERED OR REMIXED, AS REQUIRED, TO MAINTAIN WORKABILITY. ANY MORTAR THAT HAS BEGUN TO STIFFEN OR HAS NOT BEEN USED WITHIN 2-1/2 HOURS AFTER MIXING SHALL BE DISCARDED.
- CHLORIDE CONTAINING ADMIXTURES SHALL NOT BE USED IN THE MAKING OF MORTAR.
- ALL MORTAR JOINTS FOR HOLLOW CMU UNITS SHALL BE AS FOLLOWS:
A. ALL HEAD AND BED JOINTS SHALL BE 3/8" THICK; BED JOINT OVER FOUNDATION MAY VARY FROM 1/4" TO 3/4" IN THICKNESS.
B. WEBS IN ALL COURSES OF PIERS, PILASTERS AND COLUMNS SHALL BE FULLY MORTARED.
C. ALL COLLAR JOINTS, LESS THAN 3/4" IN THICKNESS, SHALL BE FILLED.
D. HEAD JOINTS SHALL BE MORTARED FOR A DISTANCE EQUAL TO THE FACE SHELL THICKNESS OF THE UNIT, FROM EACH FACE OF THE UNIT.
- ALL GROUT USED ON THE PROJECT SHALL CONFORM TO THE REQUIREMENTS OF ASTM C476.
- GROUT SHALL BE PEA GRAVEL GROUT WITH A MINIMUM ULTIMATE COMPRESSIVE STRENGTH, f_c' , OF 2,000 PSI AT 28 DAYS. MAXIMUM DENSITY OF GROUT TO BE 105 PCF. SLUMP AT POINT OF PLACEMENT TO BE 9" +/- 1". GROUT SHALL BE PLACED WITHIN 1-1/2 HOURS AFTER MIXING.
- WHERE CMU CELLS ARE TO BE FILLED WITH GROUT, ALL MORTAR PROTRUSIONS GREATER THAN 1/2" SHALL BE REMOVED. DO NOT ALLOW MORTAR TO FALL TO BOTTOM OF WALL WHERE NO CLEANOUTS ARE PRESENT.

STRUCTURAL ANCHORING SYSTEMS:

- UNLESS NOTED OTHERWISE ON THE CONTRACT DRAWINGS, THE CONTRACTOR MAY FURNISH AND INSTALL THE HILTI HIT HY-200 THREADED ROD ANCHORING SYSTEM (OR EQUIVALENT SYSTEM ACCEPTED BY THE ENGINEER). ANCHORS DEVELOPED IN MULTI-WYTHE BRICK AND HOLLOW STRUCTURAL CLAY TILE MASONRY SHALL BE INSTALLED USING HILTI HY20 RESIN SYSTEM WITH SCREEN TUBE DESIGNED FOR ANCHORAGE.
- UNLESS NOTED OTHERWISE ON THE CONTRACT DRAWINGS, ALL ANCHORS IN CONCRETE SHALL BE HILTI HOT-DIPPED GALVANIZED OR STAINLESS STEEL KWIK BOLTS T22 (OR EQUIVALENT SYSTEM ACCEPTED BY THE ENGINEER). MINIMUM EMBEDMENT OF ANCHOR SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
- MINIMUM DEPTH OF DRILLED HOLE TO BE EMBEDMENT LENGTH PLUS DIAMETER OF ANCHOR.
- ALL ANCHORS USED IN MASONRY WALLS SHALL BE HILTI HAS-E THREADED RODS WITH COMPATIBLE NUTS AND WASHERS FOR THREADED ROD ANCHORS. ANCHORING POINTS IN MASONRY WALLS SHALL BE GROUTED SOLID WHERE ACCESSIBLE. ANCHORS IN HOLLOW MASONRY SHALL BE SET USING THE HY20 SYSTEM WITH SCREEN TUBES.
- CONCRETE SHALL DEVELOP A MINIMUM ULTIMATE COMPRESSIVE STRENGTH, AS VERIFIED BY COMPRESSION TESTS, OF 3,500 PSI PRIOR TO THE INSTALLATION OF ANY ANCHORING SYSTEM.
- MASONRY GROUT SHALL DEVELOP A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 1500 PSI PRIOR TO THE INSTALLATION OF ANY ANCHORING SYSTEM.
- INSTALLATION OF ANY ANCHORING SYSTEM USED SHALL BE AS PER THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- UNLESS NOTED OTHERWISE ON THE CONTRACT DRAWINGS, ALL ANCHORING SYSTEMS SHALL BE INSTALLED SUCH THAT THE MANUFACTURER'S WRITTEN MINIMUM SPACING AND EDGE DISTANCE REQUIREMENTS TO DEVELOP THE MAXIMUM LOAD CAPACITY OF THE ANCHOR ARE ADHERED TO.

BAR SIZE		REINFORCING DEVELOPMENT AND TENSION LAP SPLICE LENGTHS																
		CONC. COVER = 0.75 IN MIN SP.=1.5+db IN				CONC. COVER = 1 IN MIN SP.=2.0+db IN				CONC. COVER = 1.5 IN MIN SP.=3.0+db IN				CONC. COVER = 2 IN MIN SP.=4.0+db IN				
		UNCOATED		EPOXY COATED		UNCOATED		EPOXY COATED		UNCOATED		EPOXY COATED		UNCOATED		EPOXY COATED		
ENGL.	MET.	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	TOP	OTHERS	
#3	10	A	12	12	15	13	12	12	15	13	12	12	14	12	12	12	14	12
		B	16	16	19	17	16	16	19	17	16	16	18	16	16	16	18	16
#4	13	A	19	15	24	22	15	12	20	17	15	12	18	14	15	12	18	14
		B	24	19	32	28	20	16	25	22	20	16	23	18	20	16	23	18
#5	16	A	28	21	36	32	22	17	29	26	19	15	24	22	19	15	22	17
		B	36	28	47	41	29	22	38	33	24	19	32	28	24	19	29	22
#6	19	A	37	29	49	43	31	24	40	35	22	17	29	26	22	17	29	26
		B	48	37	63	56	40	31	52	46	29	22	38	34	29	22	38	34
#7	22	A	60	46	78	69	50	38	65	57	37	28	48	42	33	25	43	38
		B	78	60	102	90	64	50	84	74	48	37	62	55	42	33	55	49
#8	25	A	74	57	97	86	62	48	81	71	47	36	61	54	37	29	49	43
		B	96	74	126	111	80	62	105	93	60	47	79	70	48	37	63	56
#9	29	A	90	69	117	104	76	58	99	87	57	44	75	66	46	36	60	53
		B	117	90	153	135	98	76	128	113	74	57	97	86	60	46	78	69
#10	32	A	108	83	141	125	92	70	120	106	70	54	92	81	57	44	74	66
		B	140	108	183	162	119	92	155	137	91	70	119	105	74	57	97	85
#11	36	A	127	98	166	146	108	83	141	125	84	64	109	97	68	53	89	79
		B	165	127	215	190	141	108	184	162	109	84	142	125	89	68	116	102

BAR LAP SPLICE NOTES:

- TABULATED VALUES ARE BASED ON GRADE 60 REINFORCING AND NORMAL WEIGHT CONCRETE.
- WHEN BAR SPACING CONTROLS LAP LENGTHS, BAR SPACING USED TO DETERMINE LAP SPLICE LENGTH SHALL BE GREATER THAN TWICE THE EQUIVALENT TABULAR CONCRETE COVER PLUS THE BAR DIAMETER.
- TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS ARE CALCULATED PER THE ACI 318-11 EDITION, SECTION 12.2.3 AND SECTION 12.15, RESPECTIVELY.
- LAP SPLICES SHALL BE USED FOR MINIMUM 28 DAY ULTIMATE COMPRESSIVE STRENGTH OF NORMAL WEIGHT CONCRETE 4,000 PSI AND ALL SPECIFIED PROJECT STRENGTHS UP TO 5,000 PSI.
- WHERE LESS THAN HALF OF THE REINFORCING SHOWN IS LAP SPLICED AT ANY ONE LOCATION, A CLASS A SPLICE MAY BE USED. ALL SPLICES SHALL BE CONSIDERED CLASS B, UNLESS OTHERWISE NOTED.
- MINIMUM STRAIGHT TENSION DEVELOPMENT LENGTH FOR REINFORCING CAST-IN-PLACE SHALL BE EQUAL TO OR GREATER THAN THE CLASS A LAP LENGTH, UNLESS OTHERWISE NOTED ON THE DETAILS.
- TOP REINFORCING IS ANY REINFORCING WITH MORE THAN 12 INCHES OF CONCRETE BELOW THE BAR.
- TABULAR LENGTHS ARE BASED ON A MINIMUM CENTER-TO-CENTER BAR SPACING OF TWICE THE CLEAR CONCRETE COVER PLUS ONE BAR DIAMETER.
- FOR LIGHT WEIGHT AGGREGATE CONCRETE, MULTIPLY THE TABULATED VALUES BY 1.3.

TYPICAL COVER FOR REINFORCING BARS	
REINFORCING CLEAR COVER SHALL BE A MINIMUM OF ONE BAR DIAMETER OR THE VALUES SHOWN BELOW, WHICHEVER IS GREATER, UNLESS SHOWN OTHERWISE.	
FOUNDATION ELEMENTS:	
SURFACES PLACED AGAINST SOIL	3"
AGAINST FORMED SURFACES	2"
WALLS:	
SURFACES EXPOSED TO SOIL AND OR LIQUIDS	2"
SURFACES EXPOSED TO WEATHER	1 1/2"
INTERIOR SURFACE	1"
SLABS (UNLESS NOTED OTHERWISE)	1 1/2"
PIERS AND BUTTRESSES (CLEAR DISTANCE TO TIES)	2"
SURFACES EXPOSED TO SOIL AND WEATHER	1 1/2"
OTHER SURFACES:	
BEAMS (CLEAR DISTANCE TO STIRRUPS)	2"
COLUMNS (CLEAR DISTANCE TO TIES)	1 1/2"

COMPRESSION DOWEL EMBEDMENT AND LAP SPLICE LENGTHS			
BAR SIZE		MINIMUM COMPRESSION LAP (INCHES)	MINIMUM DOWEL EMBEDMENT (INCHES)
NUMBER	METRIC		
#3	10	12"	9"
#4	13	15"	12"
#5	16	19"	14"
#6	19	23"	17"
#7	22	26"	20"
#8	25	30"	22"
#9	29	34"	25"
#10	32	38"	28"
#11	36	42"	31"
#14	43	-	38"
#18	57	-	50"

COMPRESSION DOWEL NOTES:


- ALL REINFORCING TO CONFORM TO ASTM A615-GRADE 60.
- TABULATED VALUES ARE BASED ON UNCOATED REINFORCING BARS. APPLICABLE FACTORS ARE REQUIRED FOR COATED AND/OR GALVANIZED REINFORCING BARS.
- MIN. 28 DAY ULTIMATE COMPRESSIVE STRENGTH OF NORMAL WEIGHT PROJECT CAST-IN PLACE CONCRETE - 4,000 PSI OR BETTER.

S-3
S-18

1 REVISED PER NUDOT COMMENTS	12/10/21	JS	DATE	DRAWN	CHECKED	RELEASED
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TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

GENERAL STRUCTURAL NOTES SHEET 3 OF 3



OVE ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS

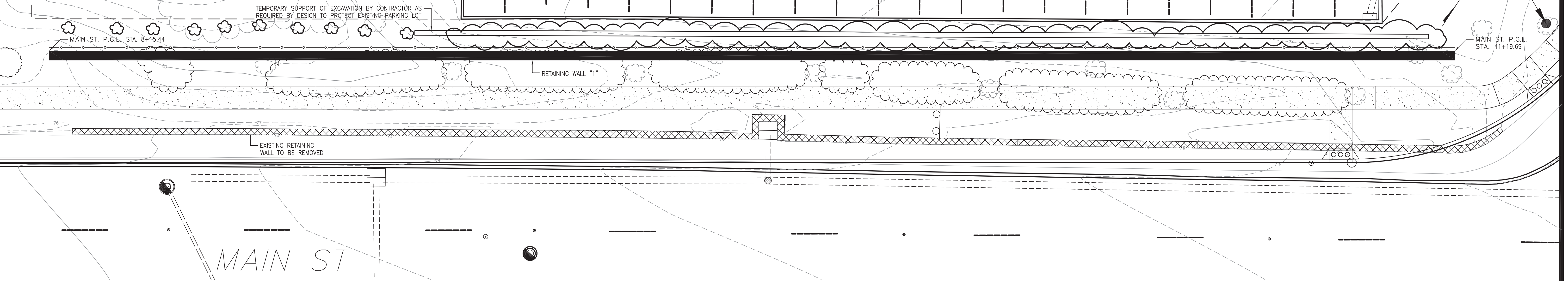
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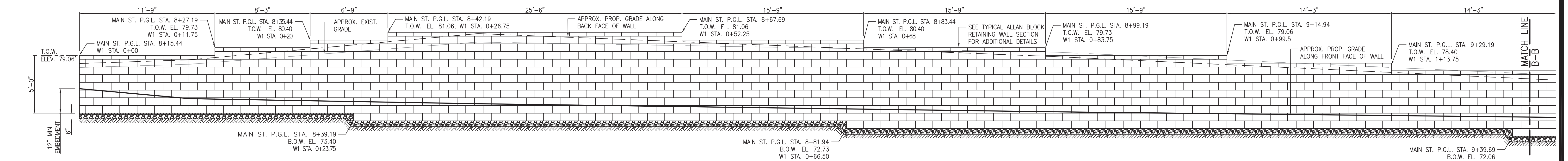
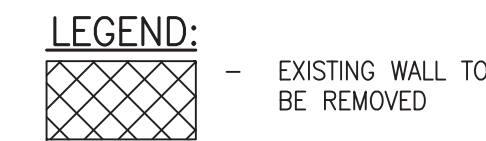
JOHN H. ALLGAIR P.E. & P.P. (1983 - 2021) NJ PE LIC NO. 25839	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24555	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE LIC NO. 24271 NJ L.S. LIC NO. 2089
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGOR R. VALESI P.E. & P.P. NJ PE LIC NO. 39458

MICHAEL J. MCCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. 32468

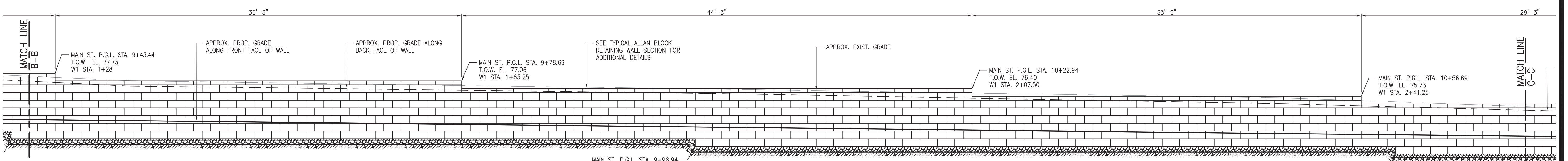
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DATE: February 2022
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DESIGNED BY: SP
CHECKED BY: NH
SHEET: 182 OF 197
FILE NO. PWB040609.01



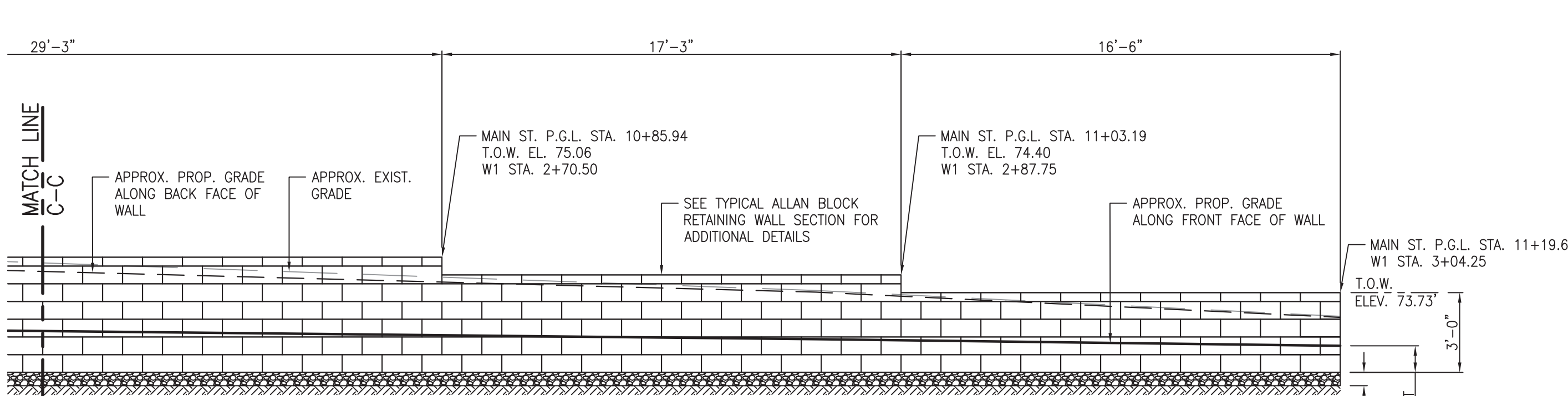
PROPOSED RETAINING WALL 1 PLAN
SCALE: 1"=10'



FRONT ELEVATION VIEW RETAINING WALL "1"
SCALE: 1/4"=1'-0"



FRONT ELEVATION VIEW RETAINING WALL "1"
SCALE: 1/4"=1'-0"



FRONT ELEVATION VIEW RETAINING WALL "1"
SCALE: 1/4"=1'-0"

PROPRIETARY RETAINING WALL DESIGN-BUILD CONSTRUCTION NOTES:

1. THE PROPOSED PROPRIETARY RETAINING WALL SHOWN IN THESE DRAWINGS IS THE ALLAN BLOCK TYPICAL REINFORCED GEOGRID WALL OR APPROVED EQUAL. THE MODULAR ALLAN BLOCK DETAILS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. CONTRACTOR TO COORDINATE WITH WALL MANUFACTURER ON EXACT BLOCK DIMENSIONS AND BLOCK PLACEMENT IN ACCORDANCE WITH THE BLOCK MANUFACTURER'S DESIGN AND WALL SPECIFICATIONS.
2. THE CONTRACTOR IS HEREBY ADVISED THAT THE PROPRIETARY RETAINING WALL DESIGN DRAWINGS CONTAIN A PRELIMINARY DESIGN LAYOUT FOR THE CONSTRUCTION OF THE MODULAR BLOCK TYPE RETAINING WALL AND ITS FOUNDATION ELEMENTS THAT WILL BE REQUIRED FOR THIS PROJECT. THESE DETAILS PROVIDE FOR MINIMUM DIMENSIONS AND MINIMUM REQUIREMENTS FOR THE STRUCTURES AND STRUCTURAL ELEMENTS TO BE DESIGNED AND BUILT AS A PART OF THE BID FOR THIS PROJECT. THE CONTRACTOR WILL BE REQUIRED TO RETAIN THE SERVICES OF A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY TO DESIGN ALL OF THESE STRUCTURAL ELEMENTS FOR THE RETAINING WALL SPECIFIED AND TO FINALIZE ALL WALL DIMENSIONS.
3. THE CONTRACTOR'S ENGINEER WILL BE REQUIRED TO REVIEW THE PRELIMINARY DESIGN LAYOUT FOR STRUCTURAL DESIGN LOADS, CODE COMPLIANCE (2018 IBC, NJ EDITION AND ASCE 7-2016) AND CONSTRUCTABILITY.
4. CONTRACTOR TO PERFORM A GEOTECHNICAL SUBSURFACE INVESTIGATION PROGRAM TO OBTAIN SOIL DESIGN PROPERTIES FOR THE DESIGN OF THE STRUCTURES AND STRUCTURAL ELEMENTS. THIS PROGRAM TO BE PERFORMED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY RETAINED BY THE CONTRACTOR.
5. THE CONTRACTOR'S ENGINEER WILL BE REQUIRED TO SUBMIT DETAILED DESIGN CALCULATIONS, SHOP DRAWINGS AND/OR CATALOG CUTS TO THE OWNER'S ENGINEER FOR REVIEW AND APPROVAL FOR THE SPECIFIED RETAINING WALL PRIOR TO THE WALL'S FABRICATION OR CONSTRUCTION. THE CONTRACTOR'S ENGINEER'S LAYOUT SHALL BE BASED ON THE PRELIMINARY LAYOUT SHOWN ON THESE DRAWINGS.
6. UPON APPROVAL BY THE OWNER'S ENGINEER, THE CONTRACTOR'S LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY SHALL PROVIDE SIX (6) SETS OF SIGNED AND SEALED DETAILED DOCUMENTS TO THE OWNER'S ENGINEER FOR USE BY THE CONTRACTOR DURING CONSTRUCTION. THE COSTS ASSOCIATED WITH RETAINING A LICENSED PROFESSIONAL ENGINEER, INCLUDING PROVIDING THE REQUIRED DOCUMENTS, SHALL BE INCLUDED IN THE PRICE BID FOR THE NEW RETAINING WALL STRUCTURE AND ITS FOUNDATION, INCLUDING ALL APPURTENANCES, AS DESCRIBED HEREIN.
7. GRADING/SLOPE BEHIND WALLS OR BETWEEN TERRACED WALLS WILL BE AS REQUIRED BY THE WALL MANUFACTURER.

PAY LIMIT NOTES:

1. THE PROPRIETARY RETAINING WALLS WILL BE MEASURED BY THE SQUARE FOOT UNDER THE PAY ITEM "RETAINING WALL, LOCATION NO. ..."
2. THE AREA MEASURED WILL BE THE PRODUCT OF THE AVERAGE HEIGHT DETERMINED BY EXTENDING THE FINAL GROUND LINES AT THE TOP AND BOTTOM OF THE WALL TO A VERTICAL PLANE OF THE FRONT FACE OF WALL AND THE TOTAL LENGTH OF WALL SHOWN.

NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

PROPOSED RETAINING WALL 1 PLAN AND ELEVATIONS

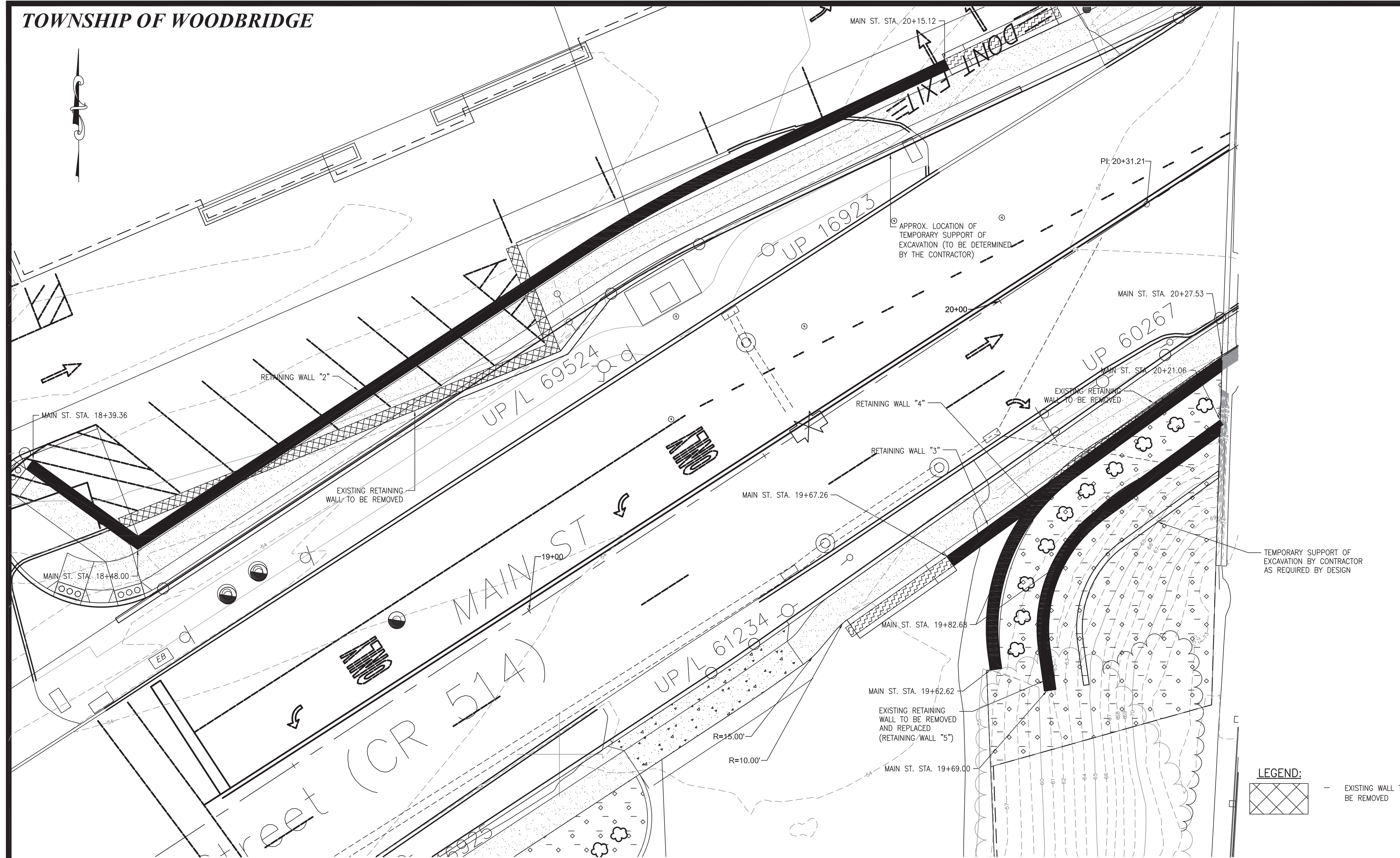
(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194
 (732) 462 7400

JOHN H. ALLGAIER P.E. & P.P. (1983 - 2021) NO PE LIC NO. 25839 NO PP LIC NO. 2455	DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 2455 NO PP LIC NO. 2089	JOHN J. STEFANI P.E. L.S. & P.P. NO PE LIC NO. 24271 NO PP LIC NO. 2089
JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32952 NO PP LIC NO. 3874	MICHAEL J. MCCLELLAND P.E. & P.P. NO PE LIC NO. 32468 NO PP LIC NO. 3720	GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 39458 NO PP LIC NO. 4361

MICHAEL J. MCCLELLAND P.E.
 NEW JERSEY PROFESSIONAL ENGINEER
 L.I.C. 32468
 DATE: 2/17/2022

As Shown February 2022
 DRAWN BY: RT DESIGNED BY: RT/JS
 CHECKED BY: NH SHEET: 183 of 197



FILE NO. **PWB0609.01**



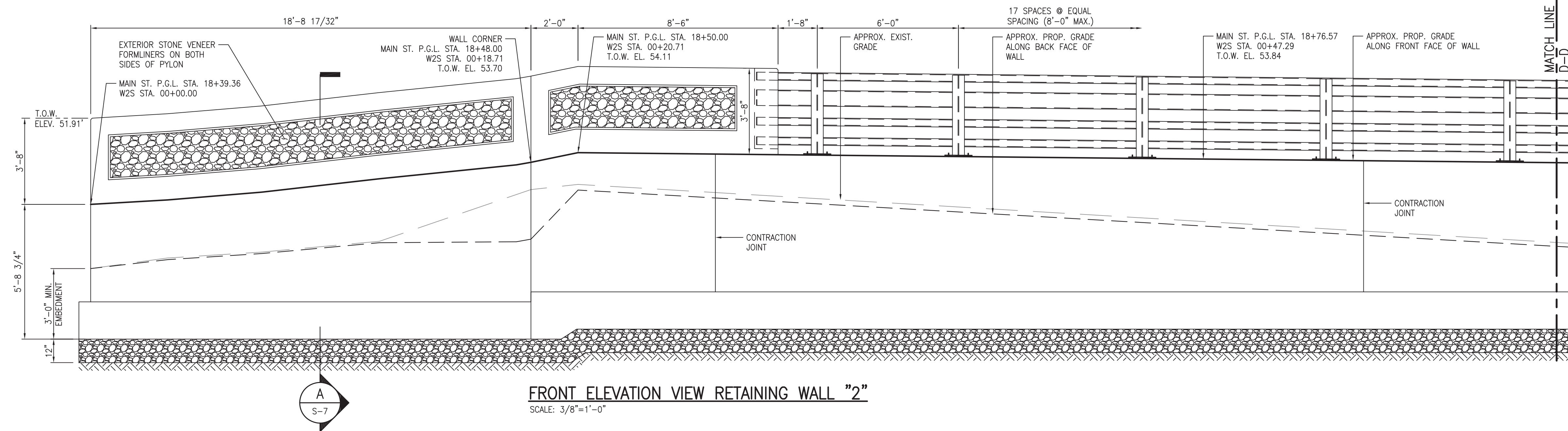
- PROPRIETARY RETAINING WALL DESIGN-BUILD CONSTRUCTION NOTES:**
1. THE PROPOSED PROPRIETARY RETAINING WALL SHOWN IN THESE DRAWINGS IS THE ALLAN BLOCK TYPICAL REINFORCED GEOGRID WALL OR APPROVED EQUAL. THE MODULAR ALLAN BLOCK DETAILS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. CONTRACTOR TO COORDINATE WITH WALL MANUFACTURER ON EXACT BLOCK DIMENSIONS AND BLOCK PLACEMENT IN ACCORDANCE WITH THE BLOCK MANUFACTURER'S DESIGN AND WALL SPECIFICATIONS.
 2. THE CONTRACTOR IS HEREIN ADVISED THAT THE PROPRIETARY RETAINING WALL DESIGN DRAWINGS CONTAIN A PRELIMINARY DESIGN LAYOUT FOR THE CONSTRUCTION OF THE MODULAR BLOCK TYPE RETAINING WALL AND ITS FOUNDATION ELEMENTS THAT WILL BE REQUIRED FOR THIS PROJECT. THESE DETAILS PROVIDE FOR MINIMUM DIMENSIONS AND MINIMUM REQUIREMENTS FOR THE STRUCTURES AND STRUCTURAL ELEMENTS TO BE DESIGNED AND BUILT. AS A PART OF THE BID FOR THIS PROJECT, THE CONTRACTOR WILL BE REQUIRED TO RETAIN THE SERVICES OF A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY TO DESIGN ALL OF THESE STRUCTURAL ELEMENTS FOR THE RETAINING WALL SPECIFIED AND TO FINALIZE ALL WALL DIMENSIONS.
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 4. CONTRACTOR TO PERFORM A GEOTECHNICAL SUBSURFACE INVESTIGATION PROGRAM TO OBTAIN SOIL DESIGN PROPERTIES FOR THE DESIGN OF THE STRUCTURES AND STRUCTURAL ELEMENTS. THIS PROGRAM TO BE PERFORMED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY RETAINED BY THE CONTRACTOR.
 5. THE CONTRACTOR'S ENGINEER WILL BE REQUIRED TO SUBMIT DETAILED DESIGN CALCULATIONS, SHOP DRAWINGS AND/OR CATALOG CUTS TO THE OWNER'S ENGINEER FOR REVIEW AND APPROVAL FOR THE SPECIFIED RETAINING WALL PRIOR TO THE WALL'S FABRICATION OR CONSTRUCTION. THE CONTRACTOR'S ENGINEER'S LAYOUT SHALL BE BASED ON THE PRELIMINARY LAYOUT SHOWN ON THESE DRAWINGS.
 6. UPON APPROVAL BY THE OWNER'S ENGINEER, THE CONTRACTOR'S LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY SHALL PROVIDE SIX (6) SETS OF SIGNED AND SEALED DETAILED DOCUMENTS TO THE OWNER'S ENGINEER FOR USE BY THE CONTRACTOR DURING CONSTRUCTION. THE COSTS ASSOCIATED WITH RETAINING A LICENSED PROFESSIONAL ENGINEER, INCLUDING PROVIDING THE REQUIRED DOCUMENTS, SHALL BE INCLUDED IN THE PRICE BID FOR THE NEW RETAINING WALL STRUCTURE AND ITS FOUNDATION, INCLUDING ALL APPURTENANCES, AS DESCRIBED HEREIN.
 7. GRADING/SLOPE BEHIND WALLS OR BETWEEN TERRACED WALLS WILL BE AS REQUIRED BY THE WALL MANUFACTURER.
- PAY LIMIT NOTES:**
1. THE PROPRIETARY RETAINING WALLS WILL BE MEASURED BY THE SQUARE FOOT UNDER THE PAY ITEM "RETAINING WALL, LOCATION NO. ___".
 2. THE AREA MEASURED WILL BE THE PRODUCT OF THE AVERAGE HEIGHT DETERMINED BY EXTENDING THE FINAL GROUND LINES AT THE TOP AND BOTTOM OF THE WALL TO A VERTICAL PLANE OF THE FRONT FACE OF WALL AND THE TOTAL LENGTH OF WALL SHOWN.

PROPOSED RETAINING WALLS 2, 3, 4 AND 5 PLAN
SCALE: 1"=10'

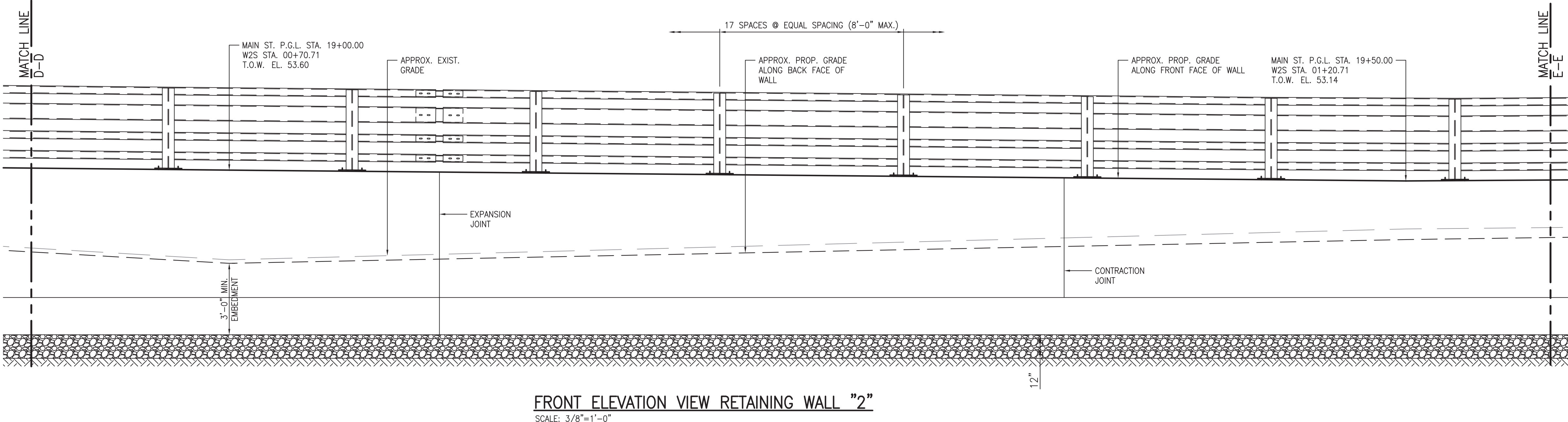
S-5
S-18

No.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS PROPOSED RETAINING WALLS 2, 3, 4 AND 5 PLAN					
 OVE ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS					
(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162		(732) 462 7400 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194			
JOHN H. ALLGAIER P.E. & P.P. <small>(1983 - 1991)</small> NJ PE LIC NO. 25839	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 2455	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & L.S. LIC NO. 24271 NJ PP LIC NO. 2089			
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 33468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458 NJ PP LIC NO. 4361			
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER 			SCALE: As Shown DATE: February 2022		
			DRAWN BY: RTJS CHECKED BY: NH	DESIGNED BY: RTJS SHEET: 184 of 197	DATE: 2/17/2022

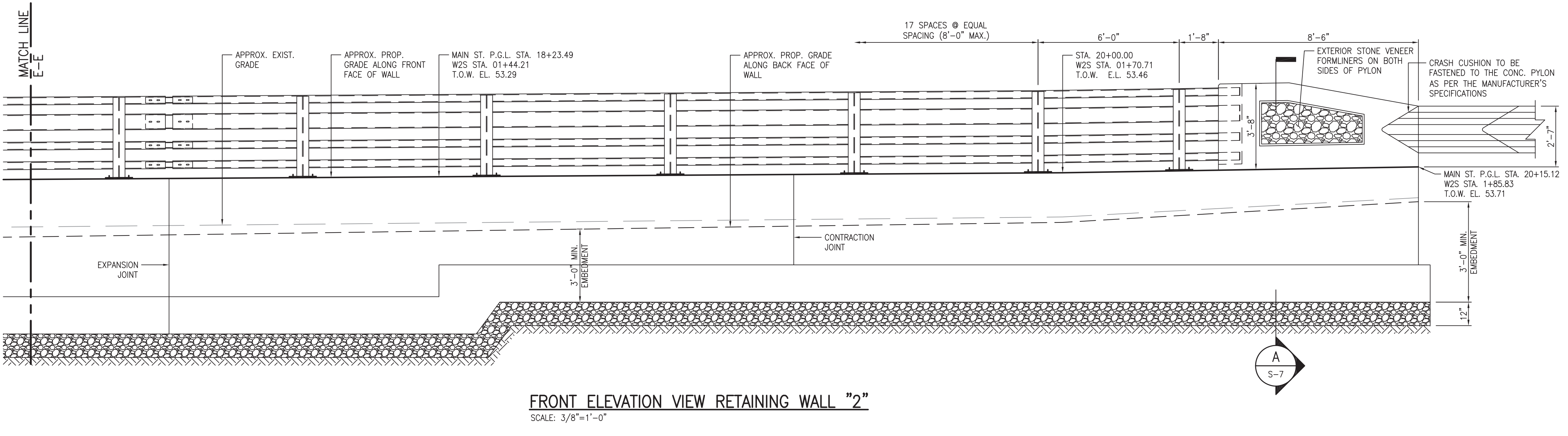
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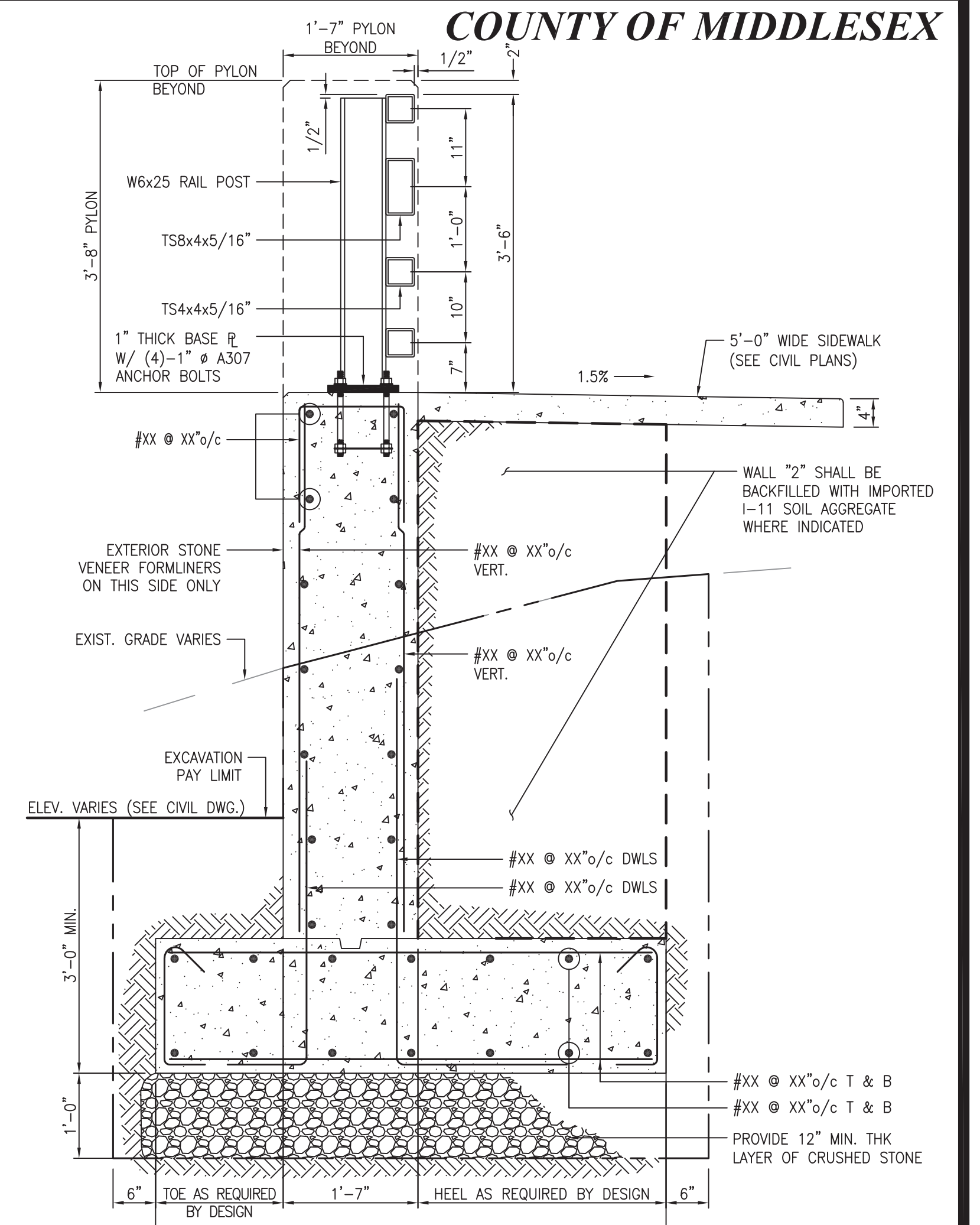
FRONT ELEVATION VIEW RETAINING WALL "2"
SCALE: 3/8"=1'-0"



FRONT ELEVATION VIEW RETAINING WALL "2"
SCALE: 3/8"=1'-0"



FRONT ELEVATION VIEW RETAINING WALL "2"
SCALE: 3/8"=1'-0"



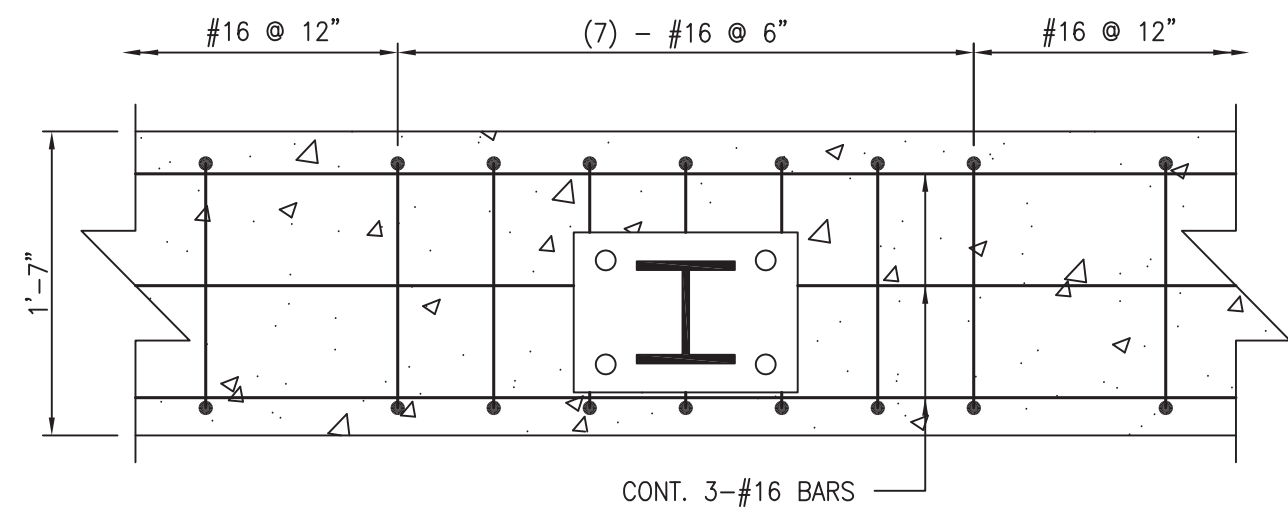
WALL 2 EXCAVATION AND BACKFILL PAY LIMITS
SCALE: 3/4"=1'-0"

- CAST-IN-PLACE CONCRETE RETAINING WALL DESIGN-BUILD CONSTRUCTION NOTES:**
- THE CONTRACTOR IS HEREBY ADVISED THAT THE CAST-IN-PLACE CONCRETE RETAINING WALL DESIGN DRAWINGS CONTAIN A PRELIMINARY DESIGN LAYOUT FOR THE CONSTRUCTION OF THE RETAINING WALL AND ITS FOUNDATION ELEMENTS THAT WILL BE REQUIRED FOR THIS PROJECT. THESE DETAILS PROVIDE FOR MINIMUM DIMENSIONS AND MINIMUM REQUIREMENTS FOR THE STRUCTURES AND STRUCTURAL ELEMENTS TO BE DESIGNED AND BUILT, AS A PART OF THE BID FOR THIS PROJECT, THE CONTRACTOR WILL BE REQUIRED TO RETAIN THE SERVICES OF A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY TO DESIGN ALL OF THESE STRUCTURAL ELEMENTS FOR THE RETAINING WALL SPECIFIED AND TO FINALIZE ALL WALL DIMENSIONS.
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- PAY LIMIT NOTES:**
- THE PROPRIETARY RETAINING WALLS WILL BE MEASURED BY THE SQUARE FOOT UNDER THE PAY ITEM "RETAINING WALL, CAST-IN-PLACE, LOCATION NO. -".
 - THE AREA MEASURED WILL BE THE PRODUCT OF THE AVERAGE HEIGHT DETERMINED BY EXTENDING THE FINAL GROUND LINES AT THE TOP AND BOTTOM OF THE WALL TO A VERTICAL PLANE OF THE FRONT FACE OF WALL AND THE TOTAL LENGTH OF WALL SHOWN.

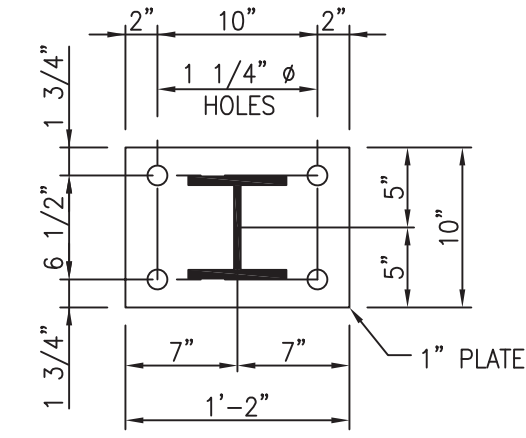
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TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS					
PROPOSED RETAINING WALL 2 ELEVATIONS					
(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 — 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400					
JOHN H. ALLGAIER P.E. & P.P. NO PE LIC NO. 25839 NO PP LIC NO. 2455	DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 24271 NO PP LIC NO. 2289	JOHN J. STEFANI P.E. L.S. & P.P. NO PE LIC NO. 32468 NO PP LIC NO. 3270			
JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32468 NO PP LIC NO. 3270	MICHAEL J. MCCLELLAND P.E. & P.P. NO PE LIC NO. 32468 NO PP LIC NO. 3270	GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 32468 NO PP LIC NO. 3270			
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER L.C. 32468			SCALE: As Shown DATE: February 2022 DRAWN BY: RTJS DESIGNED BY: RTJS CHECKED BY: NH SHEET: 185 OF 197		

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S-18

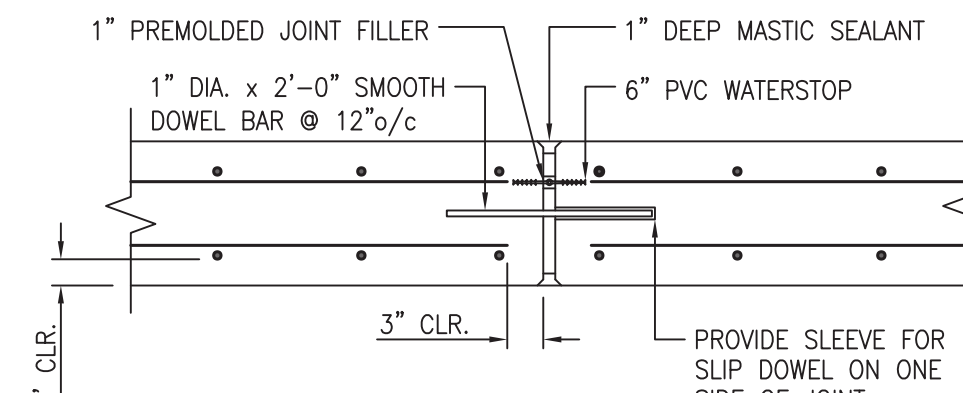
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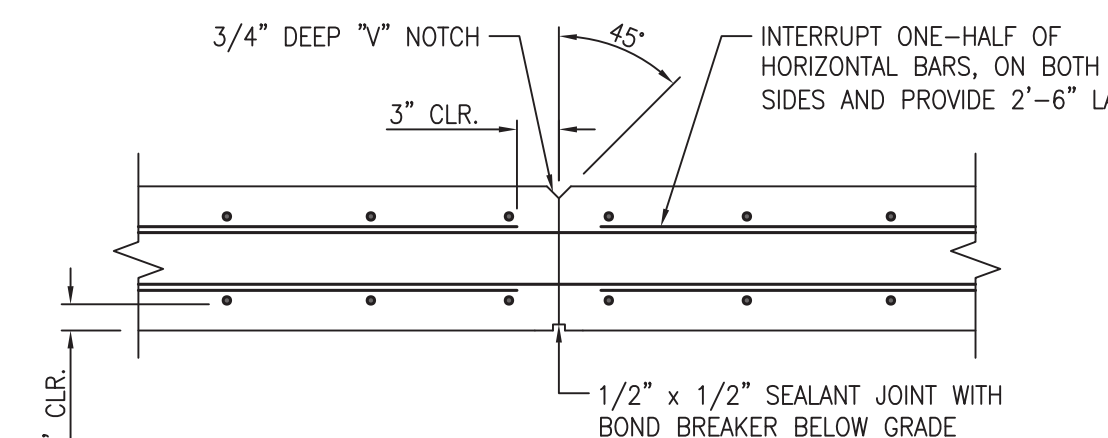
ADDITIONAL REINFORCEMENT AT STEEL RAILING PLAN
SCALE: 1"=1'-0"



BASE PLATE PLAN
SCALE: 1"=1'-0"

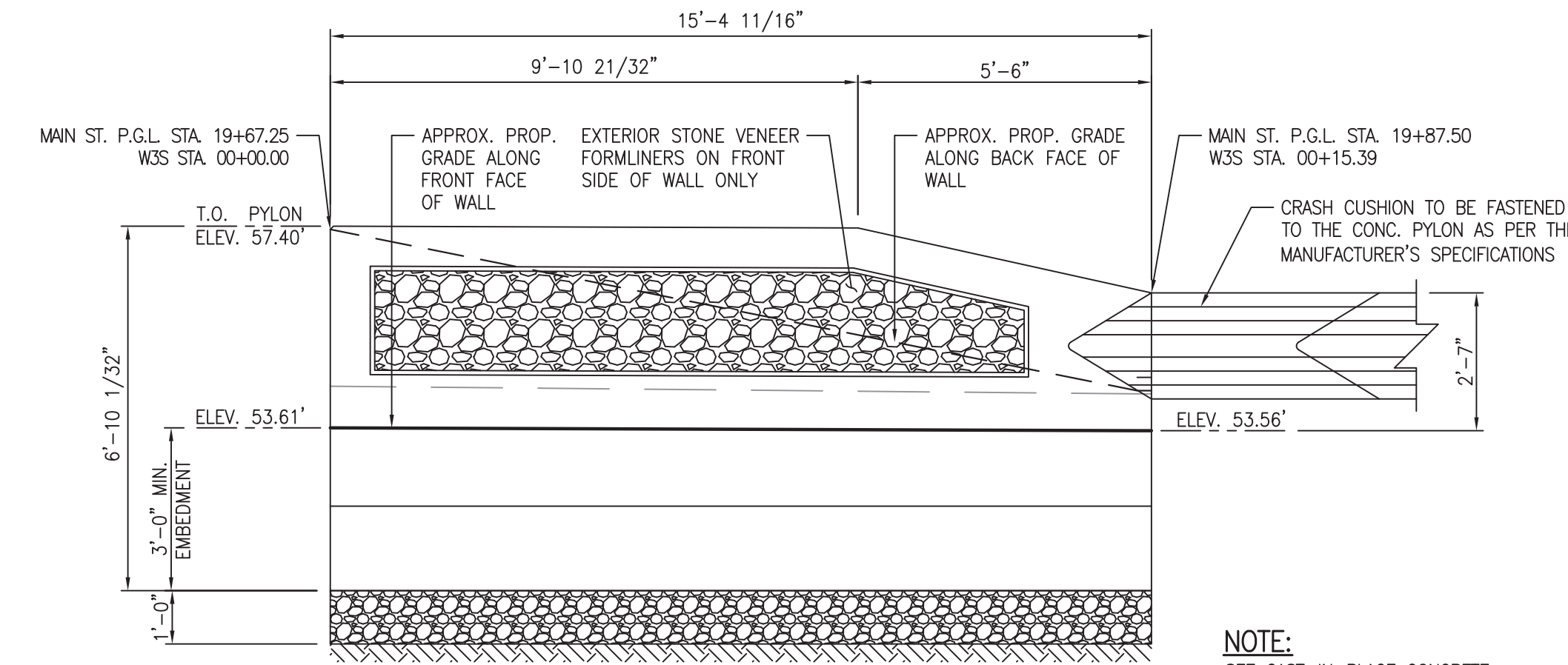


TYPICAL EXPANSION JOINT DETAIL
SCALE: N.T.S. 90'-0" o/c MAX.

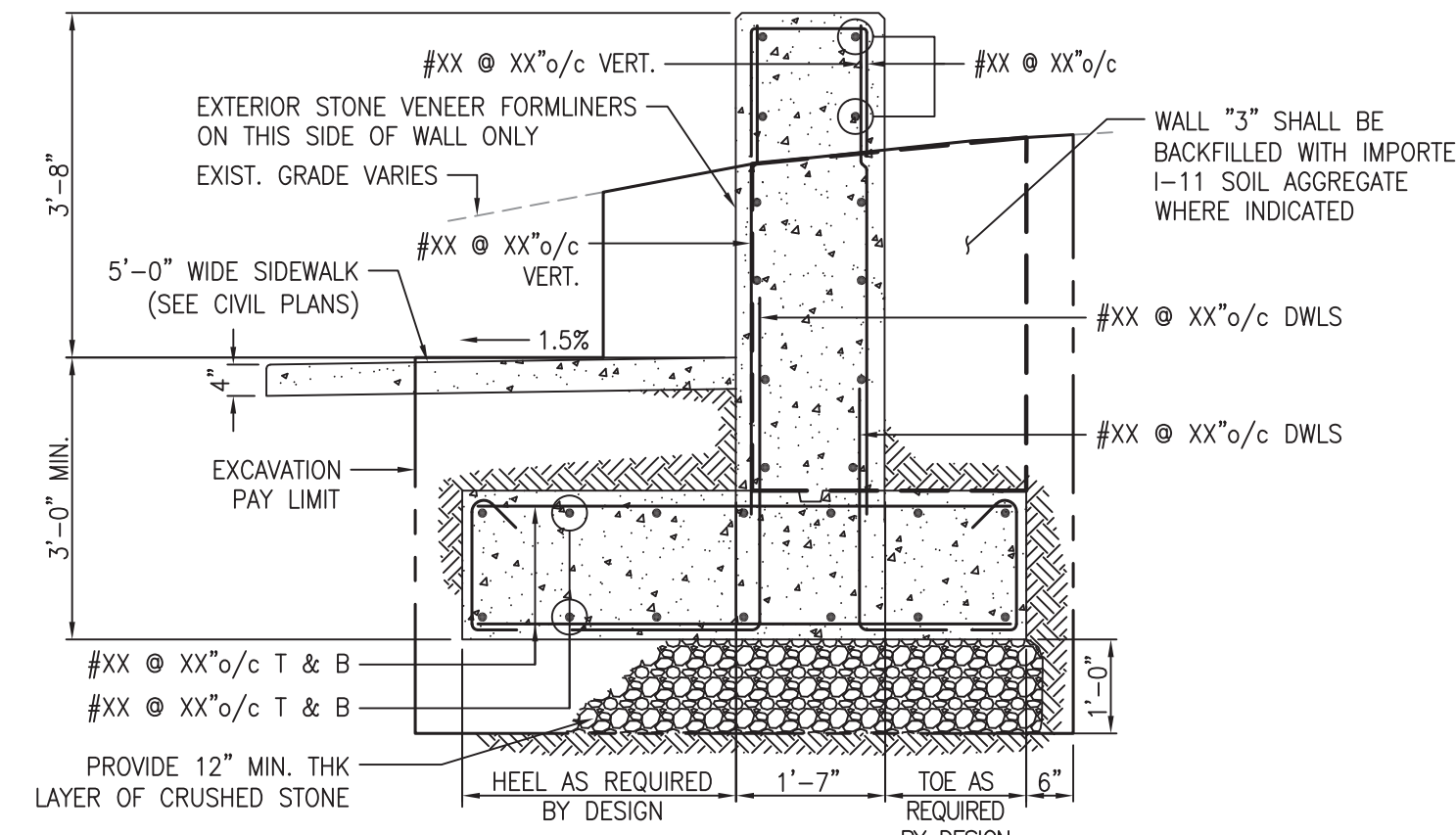


TYPICAL CONTRACTION JOINT DETAIL
SCALE: N.T.S. 30'-0" o/c MAX.

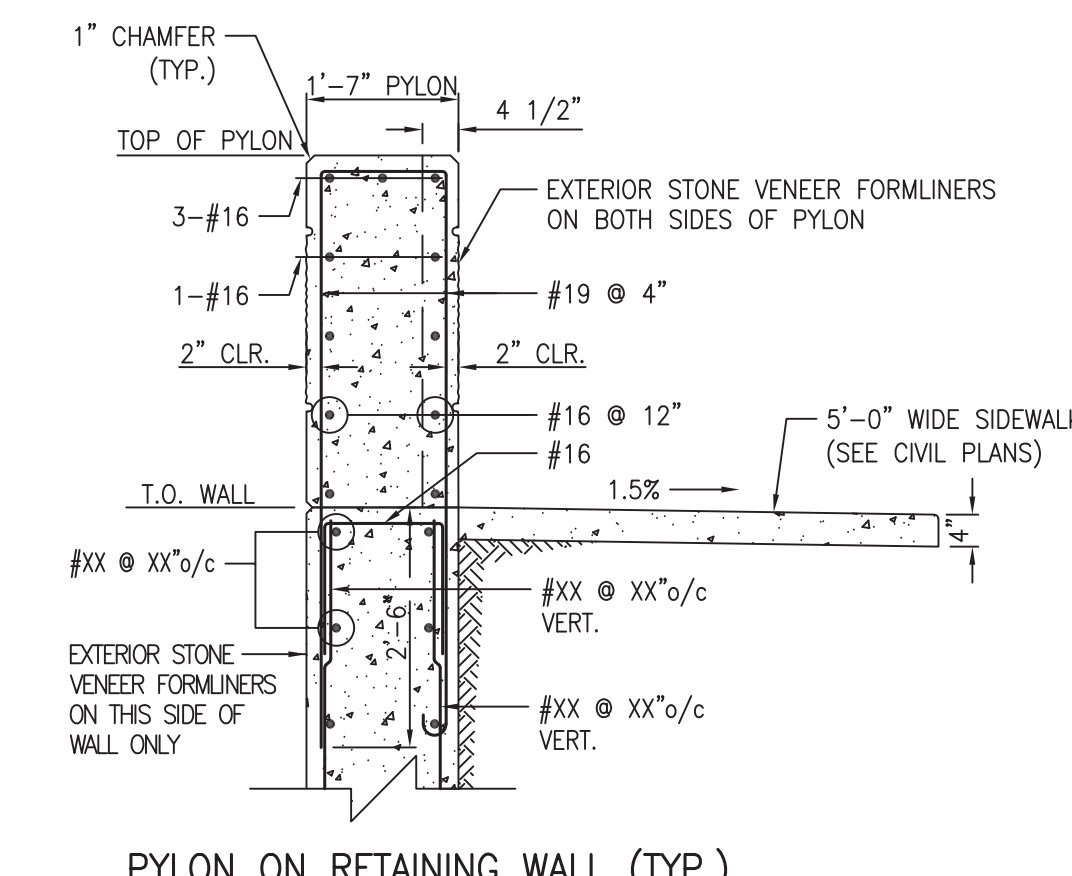
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- PAY LIMIT NOTES:**
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 - THE AREA MEASURED WILL BE THE PRODUCT OF THE AVERAGE HEIGHT DETERMINED BY EXTENDING THE FINAL GROUND LINES AT THE TOP AND BOTTOM OF THE WALL TO A VERTICAL PLANE OF THE FRONT FACE OF WALL AND THE TOTAL LENGTH OF WALL SHOWN.



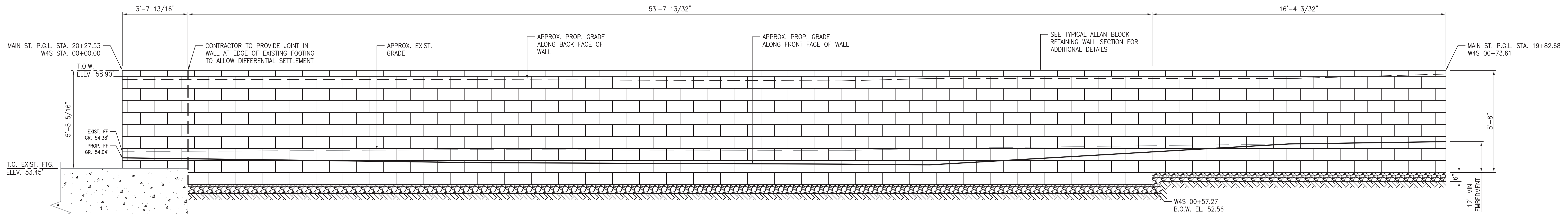
FRONT ELEVATION VIEW RETAINING WALL "3"
SCALE: 3/8"=1'-0"



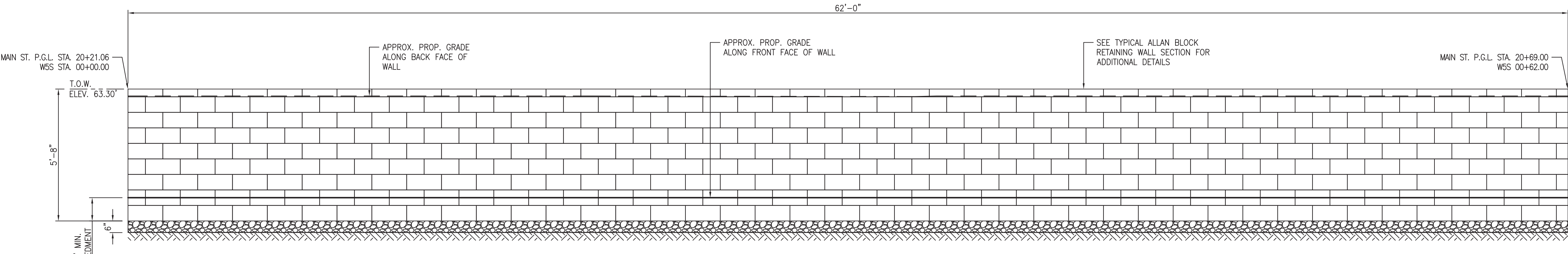
WALL 3 EXCAVATION AND BACKFILL PAY LIMITS
SCALE: 1/2"=1'-0"



SECTION A
SCALE: 1/2"=1'-0"

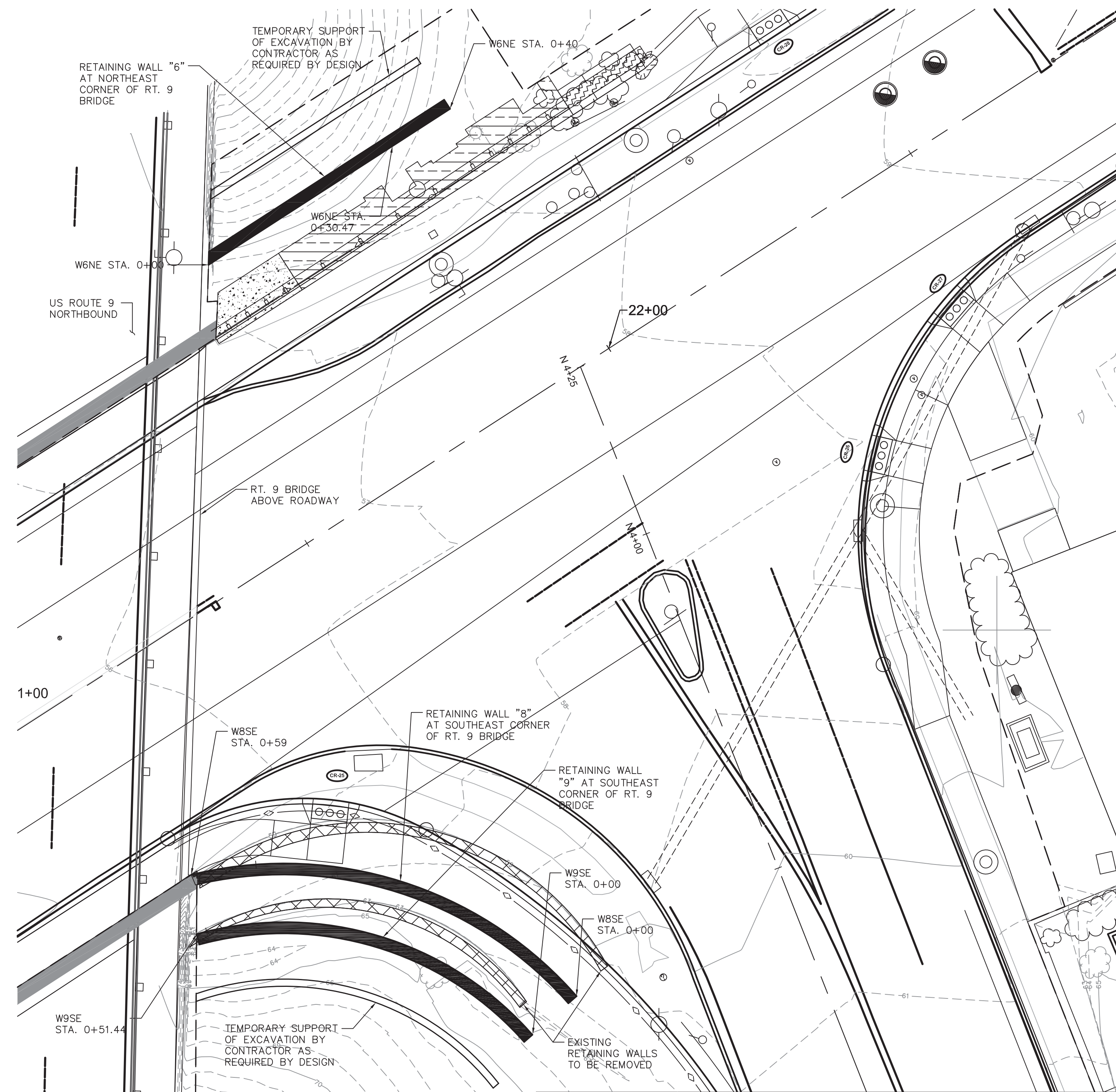


FRONT ELEVATION VIEW RETAINING WALL "4"
SCALE: 3/8"=1'-0"



FRONT ELEVATION VIEW RETAINING WALL "5"
SCALE: 3/8"=1'-0"

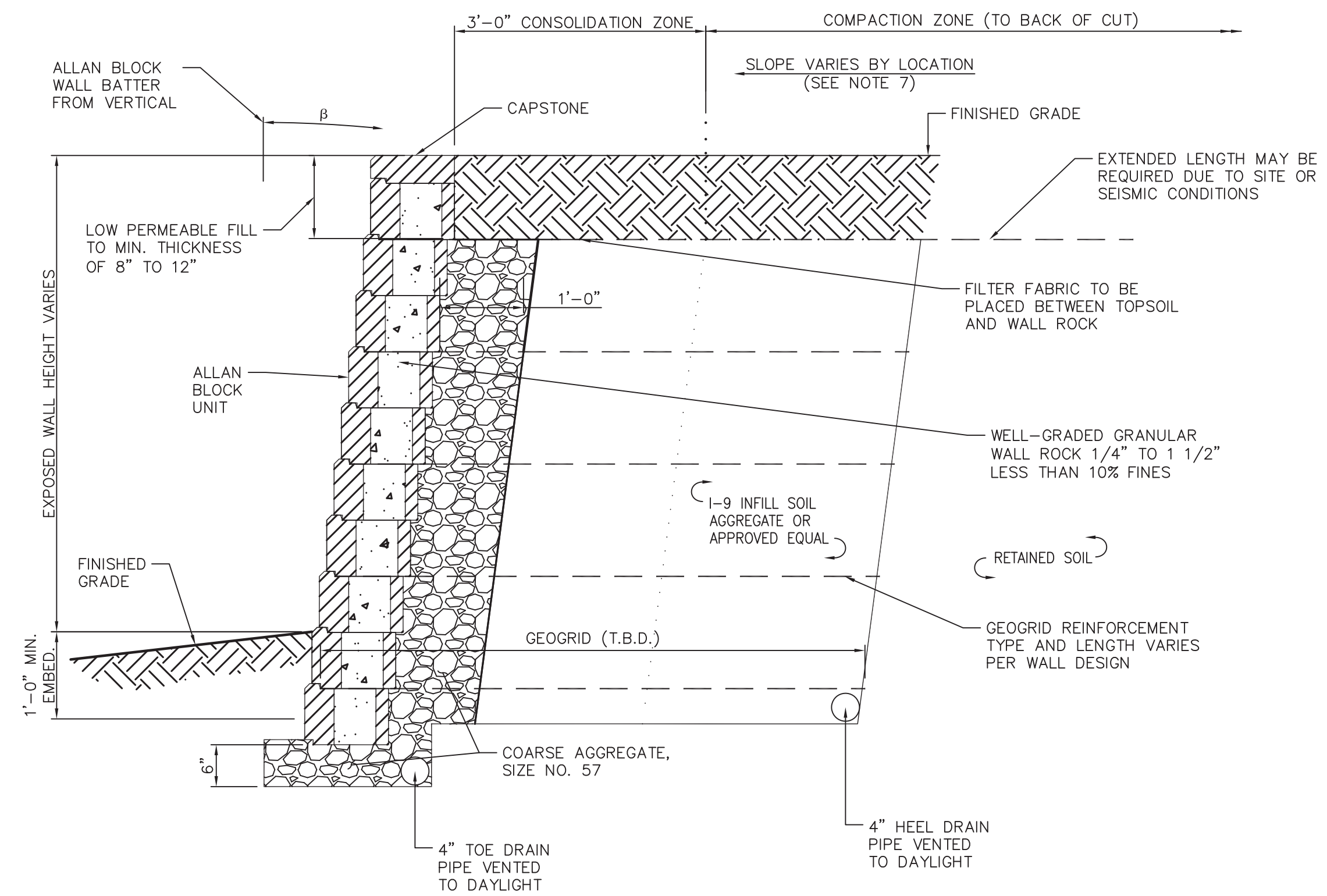
No.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS PROPOSED RETAINING WALLS 3, 4, AND 5 ELEVATIONS					
(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194					
JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25839	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & LS LIC NO. 24271			
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32952	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 38794	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458			
MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER L.I.C. 32468			SCALE: As Shown DATE: February 2022	FILE NO. PWB0609.01	
CHECKED BY: <i>[Signature]</i> DATE: 2/17/2022			DRAWN BY: RTJS SHEET: 186 of 197		



PROPOSED RETAINING WALLS 6, 8 AND 9 PLAN
SCALE: 1"=10'

MATCH LINE A-A
PLAN SHEET S-3

LEGEND:
 - EXISTING WALL TO BE REMOVED



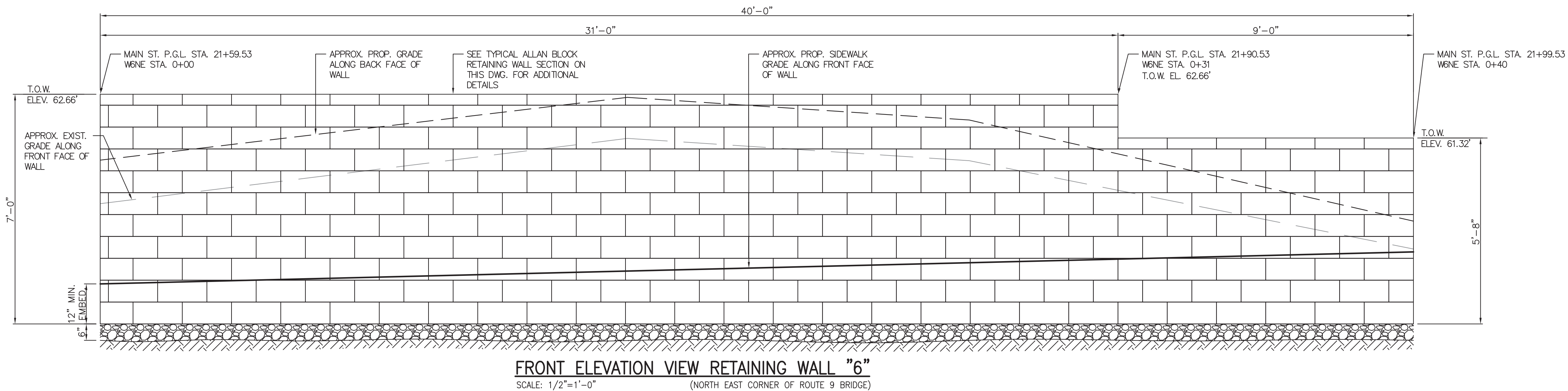
TYPICAL ALLAN BLOCK RETAINING WALL SECTION
SCALE: 3/4"=1'-0"

PROPRIETARY RETAINING WALL DESIGN-BUILD CONSTRUCTION NOTES:

1. THE PROPOSED PROPRIETARY RETAINING WALL SHOWN IN THESE DRAWINGS IS THE ALLAN BLOCK TYPICAL REINFORCED GEGRID WALL OR APPROVED EQUAL. THE MODULAR ALLAN BLOCK DETAILS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. CONTRACTOR TO COORDINATE WITH WALL MANUFACTURER ON EXACT BLOCK DIMENSIONS AND BLOCK PLACEMENT IN ACCORDANCE WITH THE BLOCK MANUFACTURER'S DESIGN AND WALL SPECIFICATIONS.
2. THE CONTRACTOR IS HERIN ADVISED THAT THE PROPRIETARY RETAINING WALL DESIGN DRAWINGS CONTAIN A PRELIMINARY DESIGN LAYOUT FOR THE CONSTRUCTION OF THE MODULAR BLOCK TYPE RETAINING WALL AND ITS FOUNDATION ELEMENTS THAT WILL BE REQUIRED FOR THIS PROJECT. THESE DETAILS PROVIDE FOR MINIMUM DIMENSIONS AND MINIMUM REQUIREMENTS FOR THE STRUCTURES AND STRUCTURAL ELEMENTS TO BE DESIGNED AND BUILT. AS A PART OF THE BID FOR THIS PROJECT, THE CONTRACTOR WILL BE REQUIRED TO RETAIN THE SERVICES OF A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY TO DESIGN ALL OF THESE STRUCTURAL ELEMENTS FOR THE RETAINING WALL SPECIFIED AND TO FINALIZE ALL WALL DIMENSIONS.
3. THE CONTRACTOR'S ENGINEER WILL BE REQUIRED TO REVIEW THE PRELIMINARY DESIGN LAYOUT FOR STRUCTURAL DESIGN LOADS, CODE COMPLIANCE (2018 IBC, NJ EDITION AND ASCE 7-2016) AND CONSTRUCTABILITY.
4. CONTRACTOR TO PERFORM A GEOTECHNICAL SUBSURFACE INVESTIGATION PROGRAM TO OBTAIN SOIL DESIGN PROPERTIES FOR THE DESIGN OF THE STRUCTURES AND STRUCTURAL ELEMENTS. THIS PROGRAM TO BE PERFORMED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY RETAINED BY THE CONTRACTOR.
5. THE CONTRACTOR'S ENGINEER WILL BE REQUIRED TO SUBMIT DETAILED DESIGN CALCULATIONS, SHOP DRAWINGS AND/OR CATALOG CUTS TO THE OWNER'S ENGINEER FOR REVIEW AND APPROVAL FOR THE SPECIFIED RETAINING WALL PRIOR TO THE WALL'S FABRICATION OR CONSTRUCTION. THE CONTRACTOR'S ENGINEER'S LAYOUT SHALL BE BASED ON THE PRELIMINARY LAYOUT SHOWN ON THESE DRAWINGS.
6. UPON APPROVAL BY THE OWNER'S ENGINEER, THE CONTRACTOR'S LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY SHALL PROVIDE SIX (6) SETS OF SIGNED AND SEALED DETAILED DOCUMENTS TO THE OWNER'S ENGINEER FOR USE BY THE CONTRACTOR DURING CONSTRUCTION. THE COSTS ASSOCIATED WITH RETAINING A LICENSED PROFESSIONAL ENGINEER, INCLUDING PROVIDING THE REQUIRED DOCUMENTS, SHALL BE INCLUDED IN THE PRICE BID FOR THE NEW RETAINING WALL STRUCTURE AND ITS FOUNDATION, INCLUDING ALL APPURTENANCES, AS DESCRIBED HEREIN.
7. GRADING/SLOPE BEHIND WALLS OR BETWEEN TERRACED WALLS WILL BE AS REQUIRED BY THE WALL MANUFACTURER.

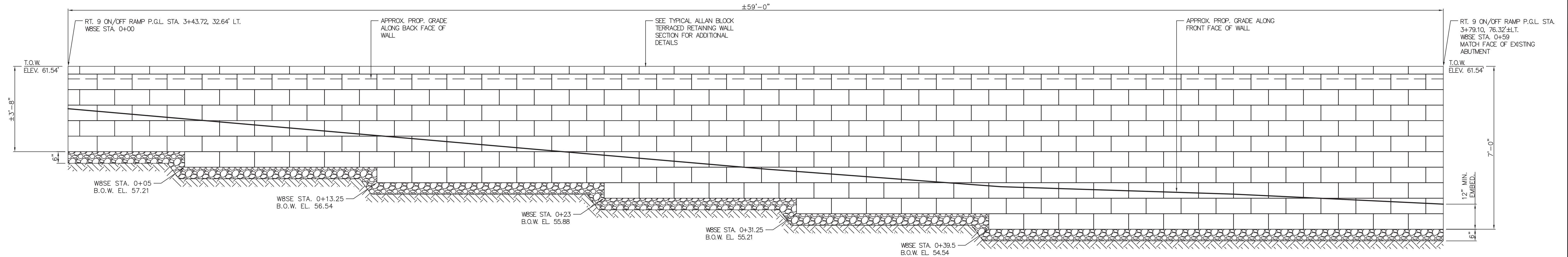
PAY LIMIT NOTES:

1. THE PROPRIETARY RETAINING WALLS WILL BE MEASURED BY THE SQUARE FOOT UNDER THE PAY ITEM "RETAINING WALL, LOCATION NO. ..."
2. THE AREA MEASURED WILL BE THE PRODUCT OF THE AVERAGE HEIGHT DETERMINED BY EXTENDING THE FINAL GROUND LINES AT THE TOP AND BOTTOM OF THE WALL TO A VERTICAL PLANE OF THE FRONT FACE OF WALL AND THE TOTAL LENGTH OF WALL SHOWN.

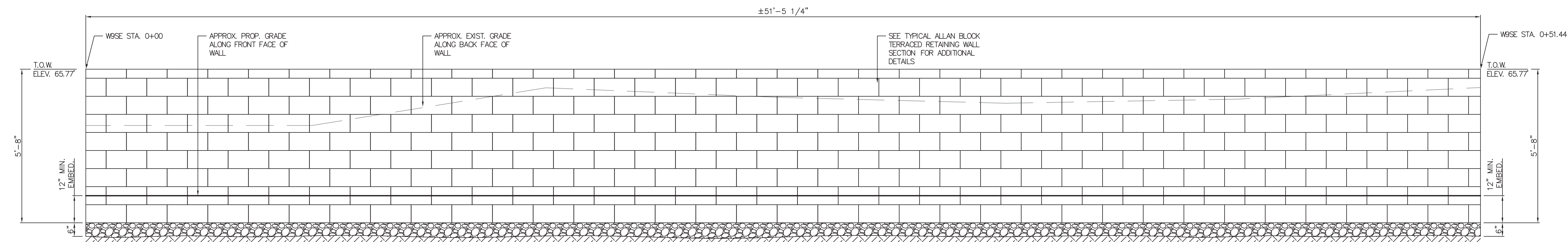


FRONT ELEVATION VIEW RETAINING WALL "6"
SCALE: 1/2"=1'-0" (NORTH EAST CORNER OF ROUTE 9 BRIDGE)

<p>5-8 S-18</p>			
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p>			
<p>PROPOSED RETAINING WALLS 6, 8 AND 9 PLAN, ELEVATIONS AND TYPICAL DETAIL</p>			
<p>CVE ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS (732) 727 8000 (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKY HILL ROAD, HOWELL, NEW JERSEY 07731-1194</p>			
<p>JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991) NO PE LIC NO. 25839 NO PP LIC NO. 2089</p>	<p>DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 24558 NO PP LIC NO. 2455</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NO PE LIC NO. 24271 NO PP LIC NO. 2089</p>	<p>REGISTRATION NO.</p>
<p>JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32962 NO PP LIC NO. 3874</p>	<p>MICHAEL J. MCCLELLAND P.E. & P.P. NO PE LIC NO. 32468 NO PP LIC NO. 3770</p>	<p>GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 34458 NO PP LIC NO. 4361</p>	<p>SCALE: As Shown DATE: February 2022</p>
<p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>			<p>CHECKED BY: SP DATE: 2/17/2022</p>
<p>FILE NO. PWB0609.01</p>			<p>187 OF 197</p>



FRONT ELEVATION VIEW RETAINING WALL "8"
SCALE: 1/2"=1'-0" (SOUTH EAST CORNER OF ROUTE 9 BRIDGE)




FRONT ELEVATION VIEW RETAINING WALL "9"
SCALE: 1/2"=1'-0" (SOUTH EAST CORNER OF ROUTE 9 BRIDGE)

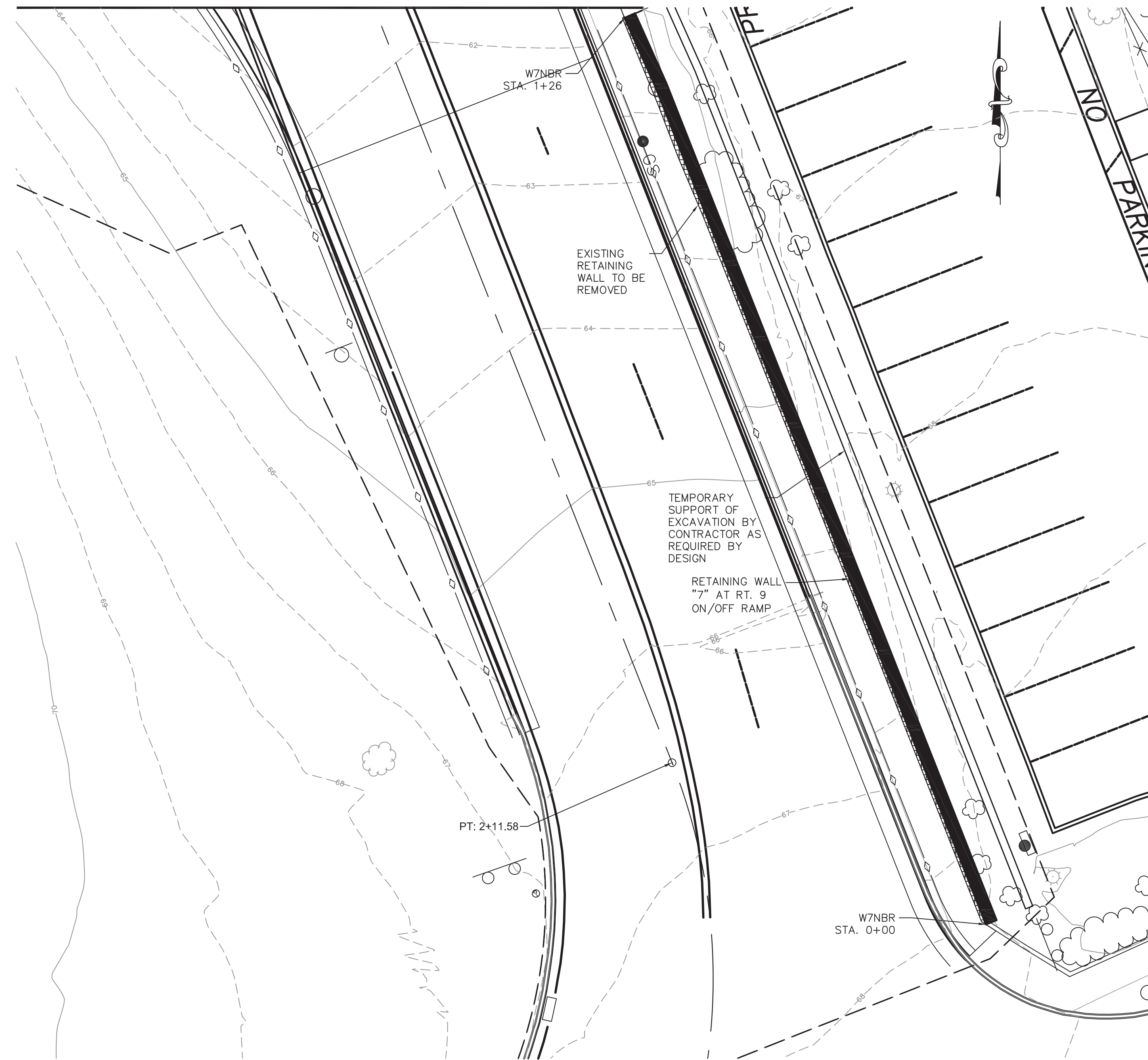
PROPRIETARY RETAINING WALL DESIGN-BUILD CONSTRUCTION NOTES:

1. THE PROPOSED PROPRIETARY RETAINING WALL SHOWN IN THESE DRAWINGS IS THE ALLAN BLOCK TYPICAL REINFORCED GEOGRID WALL OR APPROVED EQUAL. THE MODULAR ALLAN BLOCK DETAILS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. CONTRACTOR TO COORDINATE WITH WALL MANUFACTURER ON EXACT BLOCK DIMENSIONS AND BLOCK PLACEMENT IN ACCORDANCE WITH THE BLOCK MANUFACTURER'S DESIGN AND WALL SPECIFICATIONS.
2. THE CONTRACTOR IS HEREBY ADVISED THAT THE PROPRIETARY RETAINING WALL DESIGN DRAWINGS CONTAIN A PRELIMINARY DESIGN LAYOUT FOR THE CONSTRUCTION OF THE MODULAR BLOCK TYPE RETAINING WALL AND ITS FOUNDATION ELEMENTS THAT WILL BE REQUIRED FOR THIS PROJECT. THESE DETAILS PROVIDE FOR MINIMUM DIMENSIONS AND MINIMUM REQUIREMENTS FOR THE STRUCTURES AND STRUCTURAL ELEMENTS TO BE DESIGNED AND BUILT. AS A PART OF THE BID FOR THIS PROJECT, THE CONTRACTOR WILL BE REQUIRED TO RETAIN THE SERVICES OF A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY TO DESIGN ALL OF THESE STRUCTURAL ELEMENTS FOR THE RETAINING WALL SPECIFIED AND TO FINALIZE ALL WALL DIMENSIONS.
3. THE CONTRACTOR'S ENGINEER WILL BE REQUIRED TO REVIEW THE PRELIMINARY DESIGN LAYOUT FOR STRUCTURAL DESIGN LOADS, CODE COMPLIANCE (2018 IBC, NJ EDITION AND ASCE 7-2016) AND CONSTRUCTABILITY.
4. CONTRACTOR TO PERFORM A GEOTECHNICAL SUBSURFACE INVESTIGATION PROGRAM TO OBTAIN SOIL DESIGN PROPERTIES FOR THE DESIGN OF THE STRUCTURES AND STRUCTURAL ELEMENTS. THIS PROGRAM TO BE PERFORMED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY RETAINED BY THE CONTRACTOR.
5. THE CONTRACTOR'S ENGINEER WILL BE REQUIRED TO SUBMIT DETAILED DESIGN CALCULATIONS, SHOP DRAWINGS AND/OR CATALOG CUTS TO THE OWNER'S ENGINEER FOR REVIEW AND APPROVAL FOR THE SPECIFIED RETAINING WALL PRIOR TO THE WALL'S FABRICATION OR CONSTRUCTION. THE CONTRACTOR'S ENGINEER'S LAYOUT SHALL BE BASED ON THE PRELIMINARY LAYOUT SHOWN ON THESE DRAWINGS.
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7. GRADING/SLOPE BEHIND WALLS OR BETWEEN TERRACED WALLS WILL BE AS REQUIRED BY THE WALL MANUFACTURER.

PAY LIMIT NOTES:

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2. THE AREA MEASURED WILL BE THE PRODUCT OF THE AVERAGE HEIGHT DETERMINED BY EXTENDING THE FINAL GROUND LINES AT THE TOP AND BOTTOM OF THE WALL TO A VERTICAL PLANE OF THE FRONT FACE OF WALL AND THE TOTAL LENGTH OF WALL SHOWN.

<p style="text-align: right;">S-9 S-18</p>			
<p>No. DESCRIPTION OF REVISION DATE DRAWN CHECKED RELEASED</p>			
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS</p>			
<p>PROPOSED RETAINING WALLS 8 AND 9 ELEVATIONS</p>			
 <p>OVE ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS</p>			
<p>(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400</p>			
<p>JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991) NJ PE LIC NO. 25839</p>	<p>DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 24555</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NJ PE LIC NO. 20899</p>	<p>REGISTRATION NO. DRAWING NO.</p>
<p>JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962</p>	<p>MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 38794</p>	<p>GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458</p>	<p>SCALE: As Shown DATE: February 2022</p>
<p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>			<p>DRAWN BY: SP CHECKED BY: NH DATE: 2/17/2022</p>
<p>FILE NO. PWB0A609.01</p>			<p>SHEET 188 of 197</p>



PROPOSED RETAINING WALL 7 PLAN

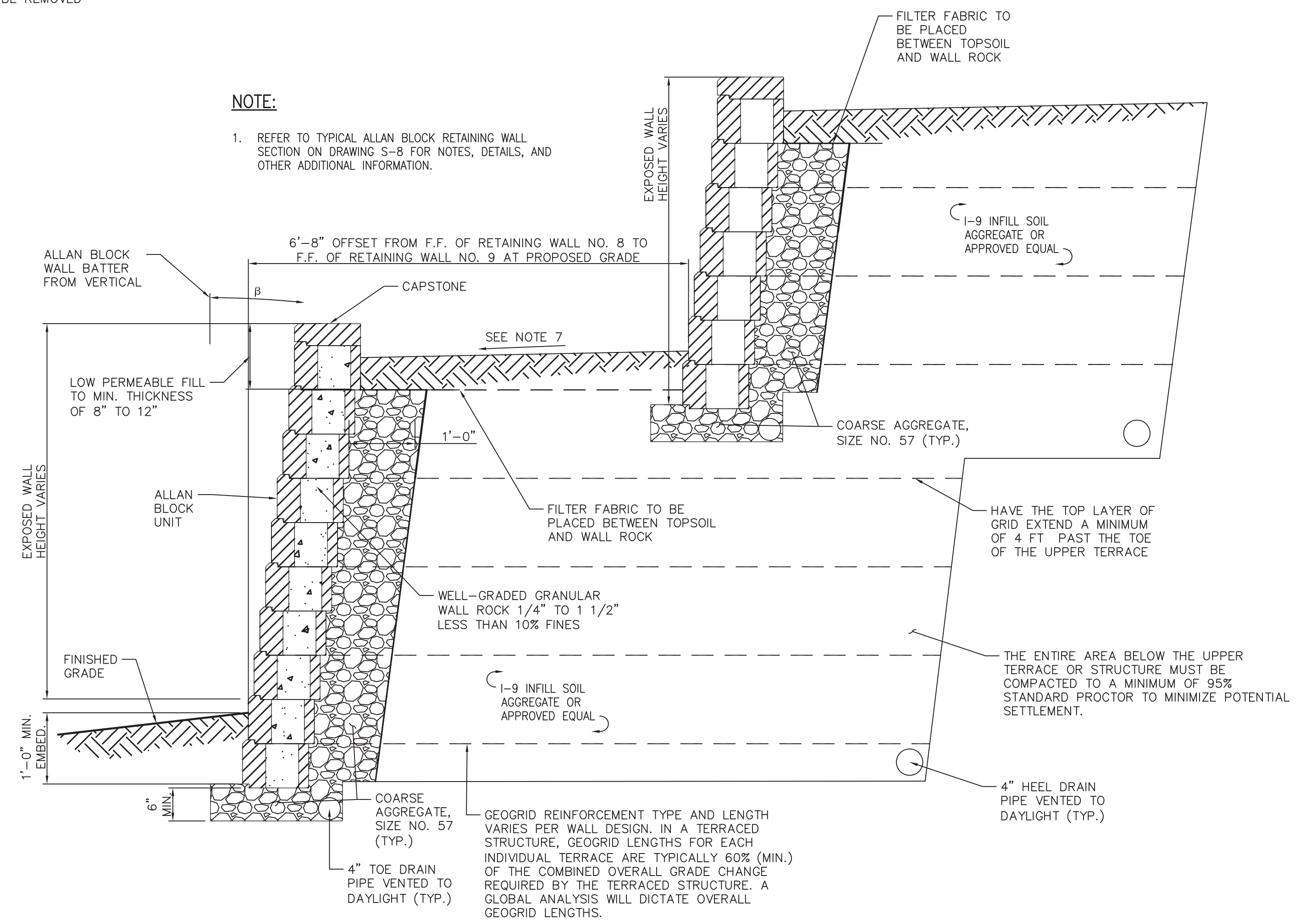
SCALE: 1"=10'

LEGEND:

EXISTING WALL TO BE REMOVED

NOTE:

1. REFER TO TYPICAL ALLAN BLOCK RETAINING WALL SECTION ON DRAWING S-8 FOR NOTES, DETAILS, AND OTHER ADDITIONAL INFORMATION.



TYPICAL ALLAN BLOCK TERRACED RETAINING WALLS SECTION

SCALE: 3/4"=1'-0"


PROPRIETARY RETAINING WALL DESIGN-BUILD CONSTRUCTION NOTES:

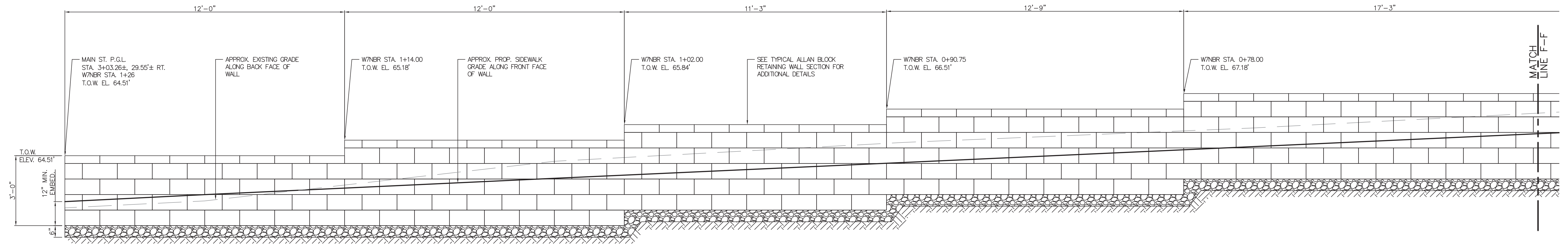
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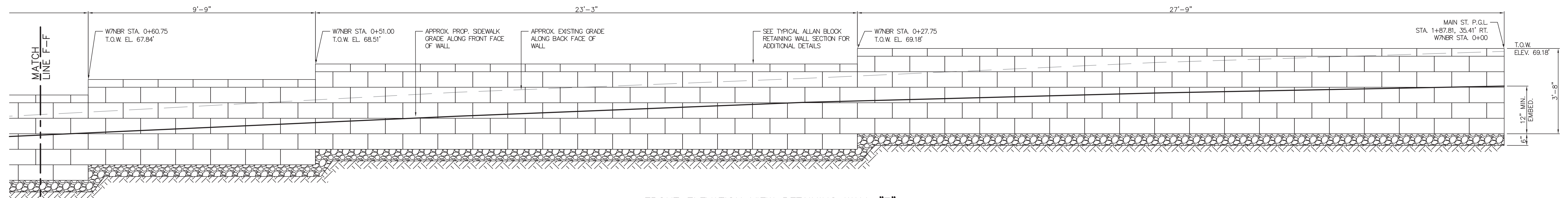
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2. THE AREA MEASURED WILL BE THE PRODUCT OF THE AVERAGE HEIGHT DETERMINED BY EXTENDING THE FINAL GROUND LINES AT THE TOP AND BOTTOM OF THE WALL TO A VERTICAL PLANE OF THE FRONT FACE OF WALL AND THE TOTAL LENGTH OF WALL SHOWN.

S-10
S-18

No. DESCRIPTION OF REVISION				DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
PROPOSED RETAINING WALL 7 PLAN AND TERRACED DETAIL							
 ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS							
(732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400							
JOHN H. ALLGAIER P.E. & P.P. NJ PE LIC NO. 25839 (1983 - 1991)		DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 2455		JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & LS LIC NO. 24271		NJ PP LIC NO. 2089	
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962		MICHAEL J. McCLELLAND P.E. & P.P. NJ PE LIC NO. 33468		GREGORY R. VALESII P.E. & P.P. NJ PE LIC NO. 34458		NJ PP LIC NO. 4361	
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER				SCALE: As Shown DATE: February 2022		DRAWN BY: SP DESIGNED BY: SP	
CHECKED BY: NH DATE: 2/17/2022				SHEET: 189 of 197		FILE NO.: PWB0609.01	



FRONT ELEVATION VIEW RETAINING WALL "7"
SCALE: 1/2"=1'-0" (ROUTE 9 NORTHBOUND ON/OFF RAMP)



FRONT ELEVATION VIEW RETAINING WALL "7"
SCALE: 1/2"=1'-0" (ROUTE 9 NORTHBOUND ON/OFF RAMP)

PROPRIETARY RETAINING WALL DESIGN-BUILD CONSTRUCTION NOTES:

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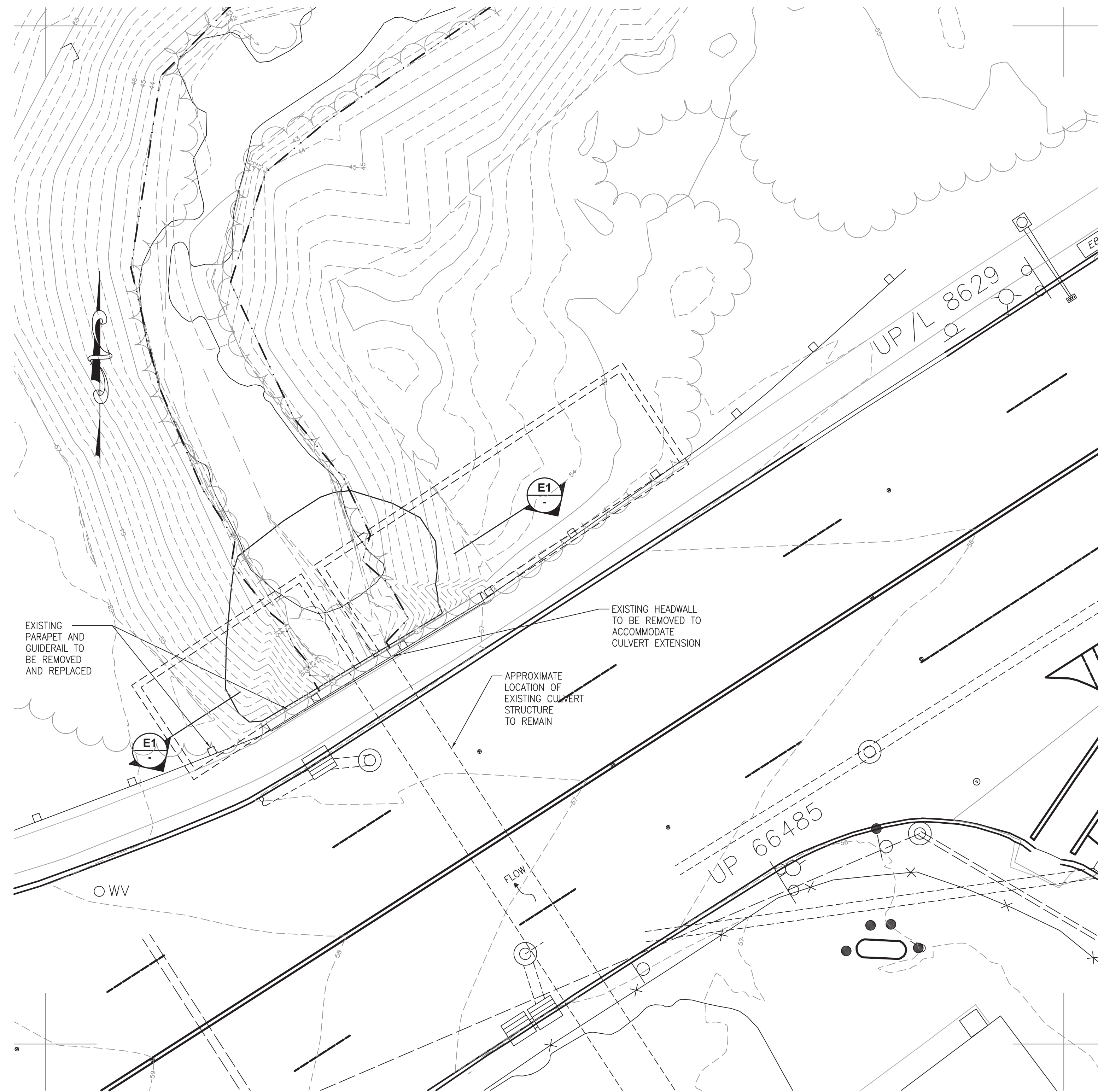
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1. THE PROPRIETARY RETAINING WALLS WILL BE MEASURED BY THE SQUARE FOOT UNDER THE PAY ITEM "RETAINING WALL, LOCATION NO. ...".
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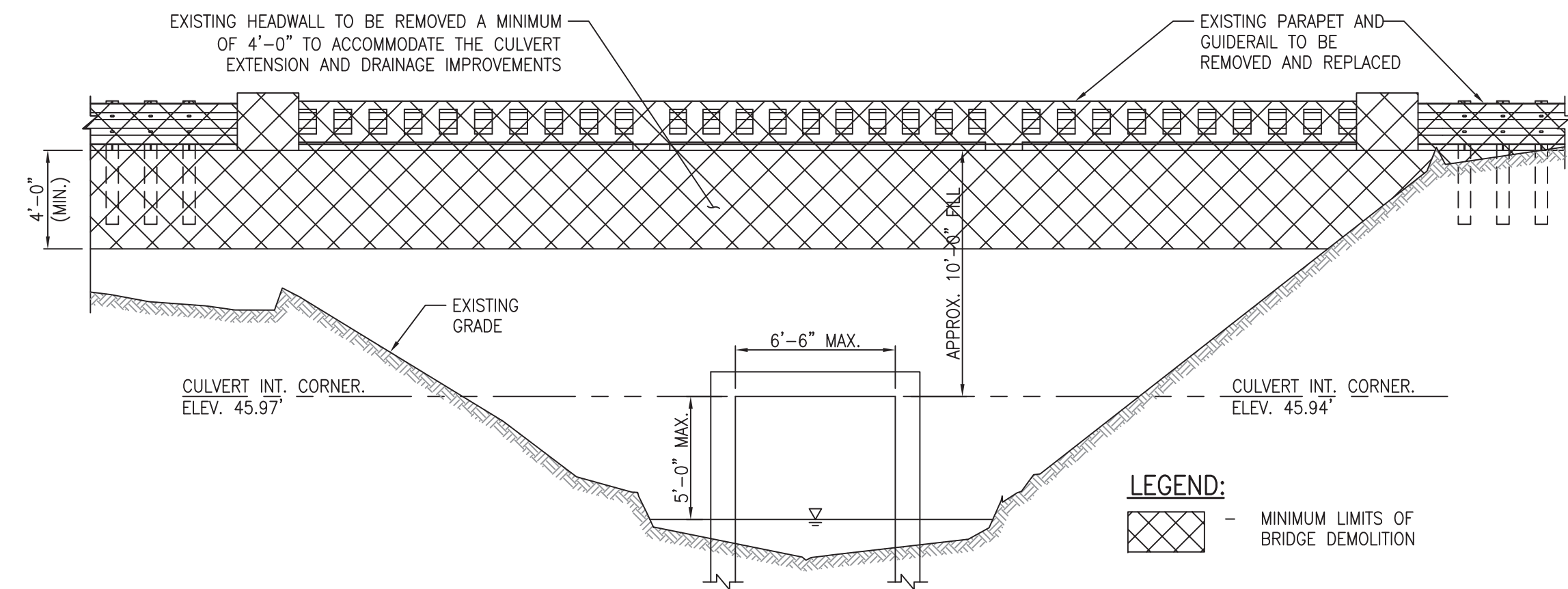
S-11
S-18

No. DESCRIPTION OF REVISION				DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS							
PROPOSED RETAINING WALL 7 ELEVATIONS							
(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194							
JOHN H. ALLGAIR P.E. & P.P. (1983 - 2021)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25839	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE & L.S. LIC NO. 24271					
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MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER L.I.C. 32468			SCALE	DATE			
			As Shown	February 2022			
			DRAWN BY SP	DESIGNED BY SP			
			CHECKED BY NH	SHEET	190 of 197		
			DATE 2/17/2022				

DRAWING NO. PWB0609.01



EXISTING CULVERT PARTIAL PLAN
SCALE: 1"=10'



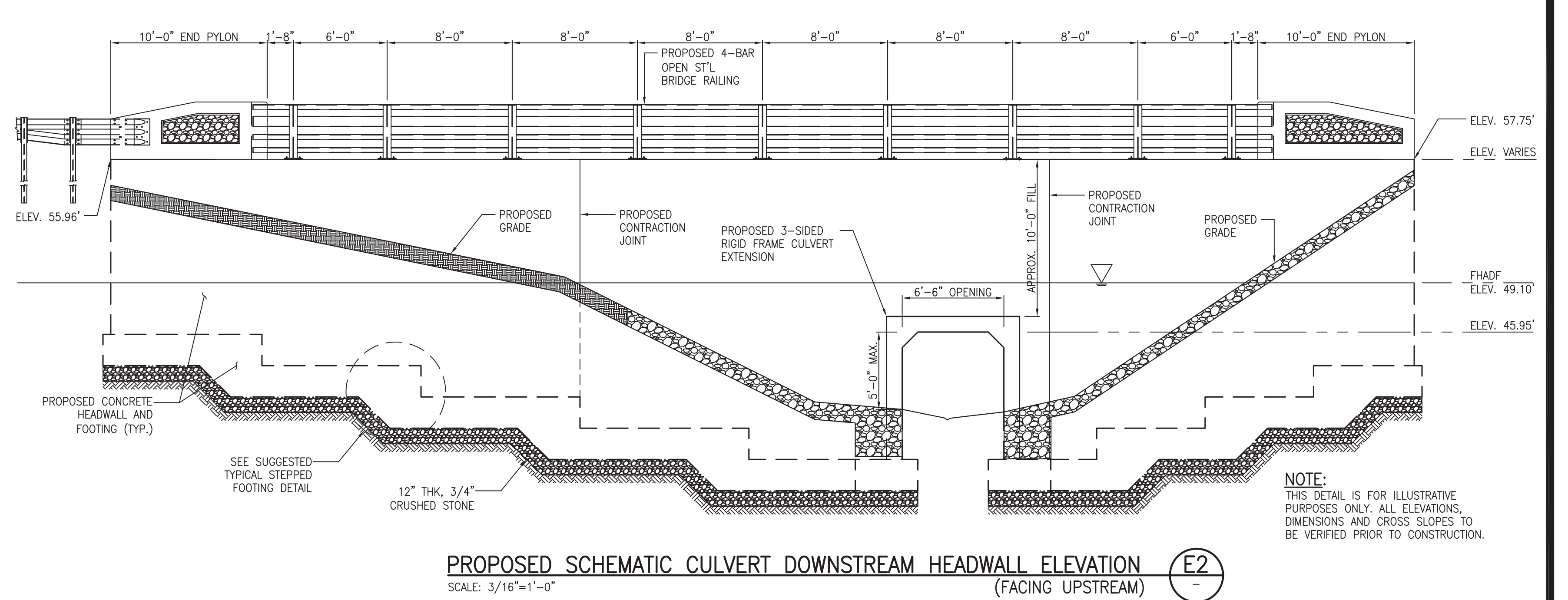
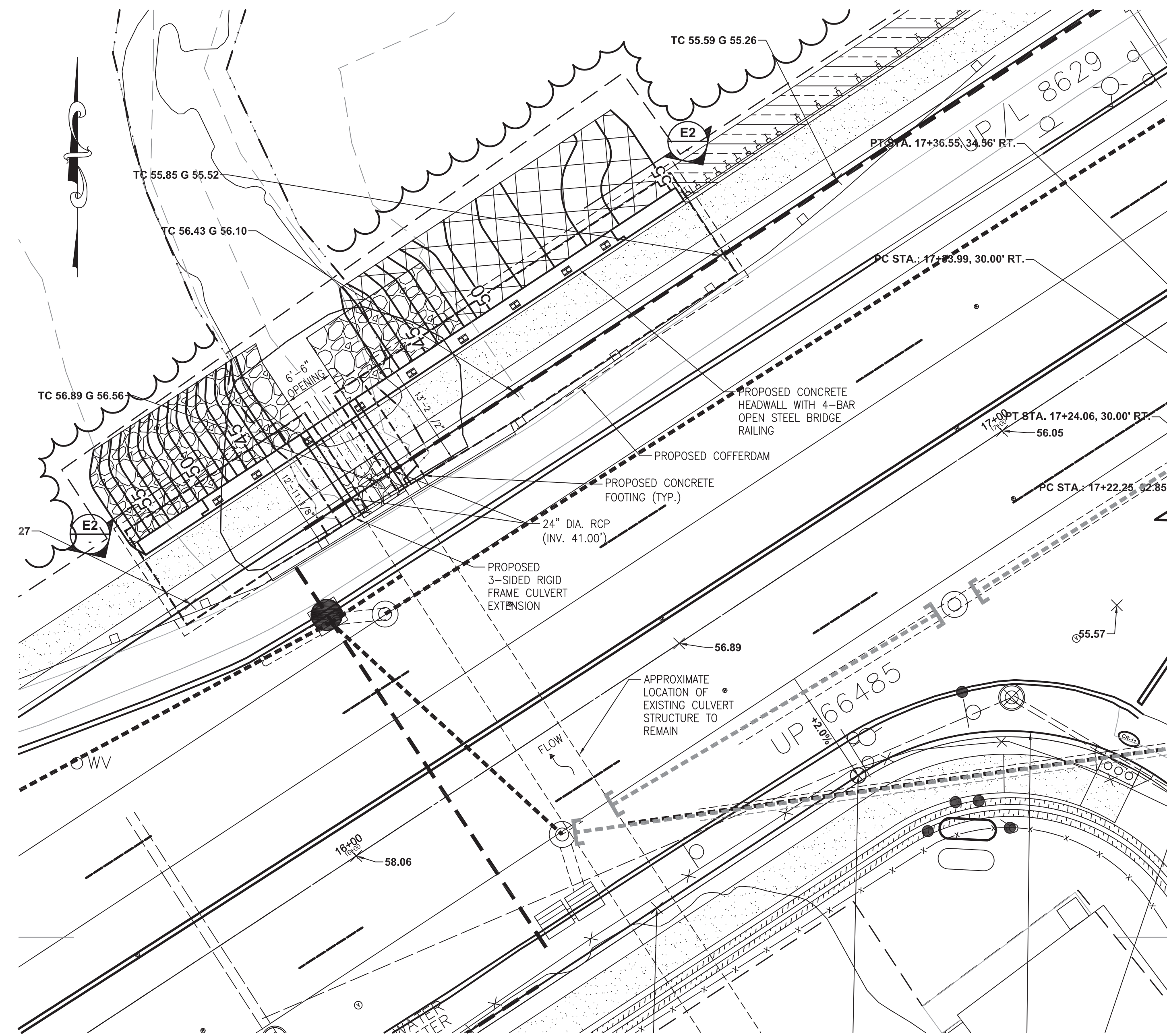
EXISTING CULVERT DOWNSTREAM HEADWALL ELEVATION (FACING UPSTREAM) E1
SCALE: 3/16"=1'0"

NOTES:

1. THE EXISTING CULVERT STRUCTURE, INCLUDING THE SUPERSTRUCTURE, ABUTMENTS, AND FOOTINGS SHALL REMAIN. THE EXISTING DOWNSTREAM HEADWALL SHALL BE REMOVED TO ACCOMMODATE THE CULVERT EXTENSION AS PART OF THE CONSTRUCTION STAGING. PAYMENT FOR THE REMOVAL AND DISPOSAL OF THE EXISTING DOWNSTREAM HEADWALL SHALL BE INCLUDED IN THE LUMP SUM FOR THE PAY ITEM ENTITLED "CLEARING SITE".
2. THE CONTRACTOR IS ALERTED TO THE FACT THAT THERE ARE UTILITIES IN THIS AREA. THE UTILITIES HAVE BEEN LOCATED ON THE CONTRACT DRAWINGS USING THE MOST UP-TO-DATE AVAILABLE INFORMATION. THIS DOES NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF CONTACTING THE UTILITY AGENCIES AND ACCURATELY LOCATING ALL THE UTILITIES WHICH MAY INTERFERE WITH THE CONSTRUCTION OF THIS PROJECT PRIOR TO THE START OF ANY WORK. THE CONTRACTOR SHALL INCLUDE ALL THE LOCATIONS OF THE UTILITIES ON ANY APPLICABLE WORKING DRAWINGS. TEST PITS WILL BE REQUIRED AS DIRECTED BY ENGINEER. THE COSTS FOR TEST PITS SHALL BE INCLUDED IN THE VARIOUS PAY ITEMS BID FOR THE PROJECT.
3. DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTION SO AS NOT TO DAMAGE ADJACENT EXISTING STRUCTURES AND/OR UTILITIES TO REMAIN. ANY DAMAGE DONE BY THE CONTRACTOR SHALL BE REPAIRED OR RESTORED TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE COUNTY.
4. THE CONTRACTOR SHALL SUBMIT A DEMOLITION PLAN TO THE ENGINEER FOR APPROVAL SHOWING THE PROPOSED MEANS AND METHODS, AS WELL AS ANY EQUIPMENT THAT WILL BE USED IN ORDER TO REMOVE THE EXISTING DOWNSTREAM HEADWALL BEFORE STARTING DEMOLITION.
5. TEMPORARY SHIELDING SHALL BE PROVIDED BY THE CONTRACTOR TO PREVENT DEBRIS FROM FALLING INTO THE WATER DURING THE REMOVAL OF THE EXISTING STRUCTURE, AS NECESSARY OR AS DIRECTED. ANY MATERIAL OR DEBRIS THAT INADVERTENTLY ENTERS THE WATERWAY DURING DEMOLITION OR CONSTRUCTION SHALL BE REMOVED IMMEDIATELY.
6. THE INFORMATION PRESENTED HEREON IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT GUARANTEED TO BE CORRECT. ELEVATIONS SHOWN HERE MAY BE FROM EXISTING PLANS. BIDDERS SHALL VISIT THE SITE BEFORE SUBMITTING BIDS TO ASCERTAIN THE EXTENT OF THE WORK.
7. REMOVAL OF THE EXISTING DOWNSTREAM HEADWALL AND TEMPORARY SHIELDING SHALL BE PAID FOR UNDER THE LUMP SUM PAY ITEM "CLEARING SITE".
8. SEPARATE PAYMENT WILL NOT BE MADE FOR REMOVAL OF EXISTING UTILITIES ON THE CULVERT.
9. ELEVATIONS SHOWN ON THIS DRAWING ARE IN AN ASSUMED VERTICAL DATUM.
10. THE EXISTING CULVERT CARRIES MULTIPLE EXISTING UTILITY LINES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL UTILITY SERVICE FLOWS AND PRESSURES FOR THESE LINES, UNLESS WRITTEN APPROVAL BY THE RESPONSIBLE UTILITY PERMITS THEM TO DO OTHERWISE. NO SEPARATE PAYMENT WILL BE MADE FOR COORDINATION WITH THE UTILITY OR FOR THE TEMPORARY SUPPORT OF EXISTING FACILITIES TO REMAIN DURING CONSTRUCTION. ALL ASSOCIATED COSTS FOR SUCH WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR THE ITEM "CLEARING SITE".
11. REFER TO THE COFFERDAM NOTES FOR INFORMATION REGARDING THE MAINTENANCE OF STREAM FLOW. THIS COFFERDAM SHALL BE INSTALLED ACCORDING TO THE CONSTRUCTION STAGING SCHEME SHOWN ON THE STAGING PLANS, AS APPLICABLE.
12. IF DURING THE INSTALLATION OF THE COFFERDAM OR DURING THE DEMOLITION OF THE EXISTING DOWNSTREAM HEADWALL, THE CONTRACTOR ENCOUNTERS UNANTICIPATED SUBSURFACE OBSTRUCTIONS, SUCH AS BOULDERS, EXISTING PILES OR OTHER UNKNOWN STRUCTURES, THE CONTRACTOR SHALL STOP ALL CONSTRUCTION ACTIVITIES IN THAT AREA AND NOTIFY THE ENGINEER IMMEDIATELY TO DETERMINE HOW TO PROCEED.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS NECESSARY FOR CONSTRUCTION IN ACCORDANCE WITH LOCAL, COUNTY, OR STATE REGULATIONS OR ANY OTHER AGENCIES HAVING JURISDICTION IN THESE MATTERS. THE CONTRACTOR IS ADVISED THAT THEY ARE RESPONSIBLE TO PAY FOR, ACQUIRE AND COMPLY WITH ANY ROAD OPENING PERMITS IF REQUIRED IN CONJUNCTION WITH THE PROPOSED IMPROVEMENTS.
14. EXISTING VIEWS WERE CREATED USING INFORMATION FROM CME ASSOCIATES' SURVEY BASEMAP, THE 2012 BRIDGE EVALUATION SURVEY REPORT PREPARED BY GIBSON ASSOCIATES, AND THE 2018 CULVERT INSPECTION SURVEY REPORT PREPARED FOR THE NEW JERSEY TURNPIKE AUTHORITY BY HNTB CORPORATION.

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No.		DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS EXISTING CULVERT PLAN AND ELEVATION						
 CME ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS (732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400						
JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991)		DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 25839		JOHN J. STEFANI P.E. L.S. & P.P. NO PE & LS LIC NO. 24271		NO PP LIC NO. 2089
JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32952		MICHAEL J. McCLELLAND P.E. & P.P. NO PE LIC NO. 38794		GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 39458		NO PP LIC NO. 43561
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER L.C. 32468 DATE: 2/17/2022				SCALE: As Shown DATE: February 2022 DRAWN BY: SP DESIGNED BY: SP CHECKED BY: NH SHEET: 191 of 197		FILE NO.: PWB0A609.01



GENERAL NOTES:

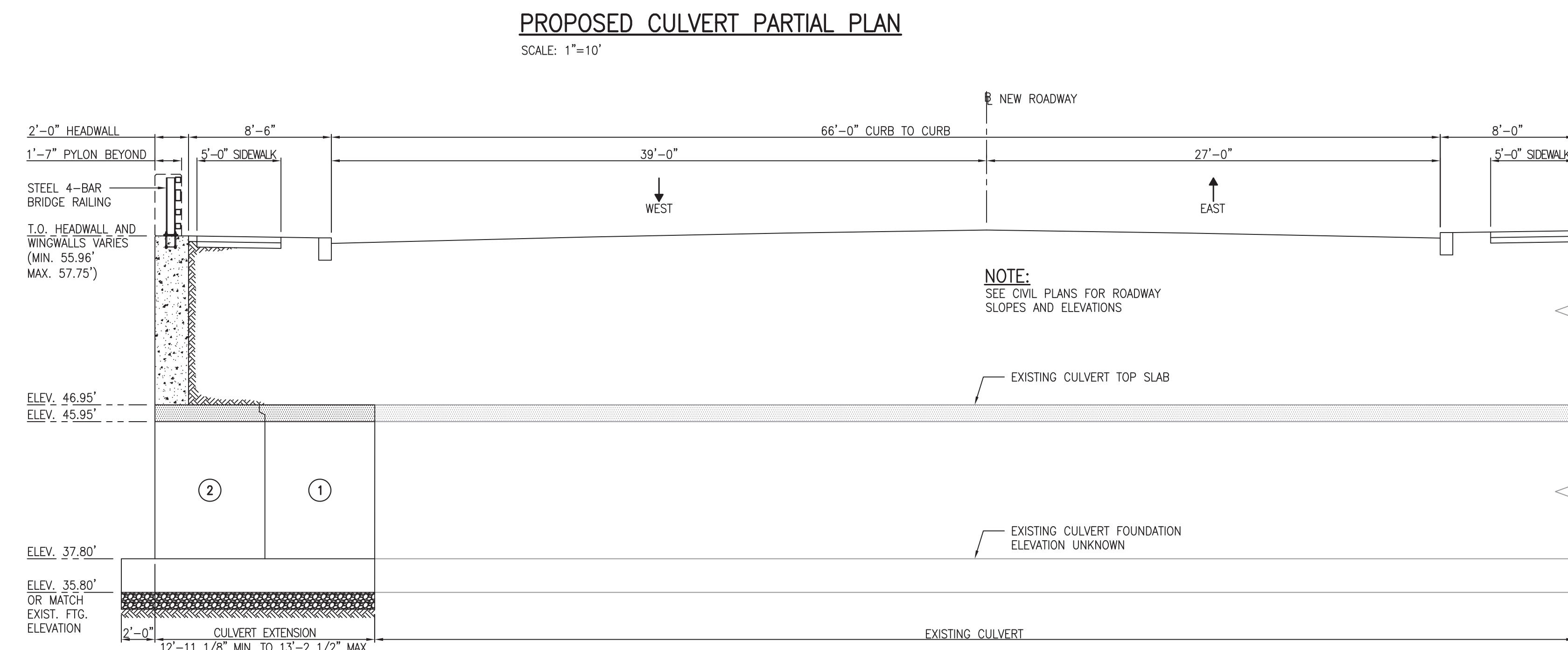
- DESIGN SPECIFICATIONS:
 - a. 2020 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION, AS MODIFIED BY SECTION 3 OF THE 2016 NJDOT DESIGN MANUAL FOR BRIDGES AND STRUCTURES, 6TH EDITION.
- CONSTRUCTION SPECIFICATIONS:
 - a. 2019 NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND ALL AMENDMENTS, AS MODIFIED BY THE SPECIAL PROVISIONS AND SUPPLEMENTARY SPECIFICATIONS.
- LIVE LOAD:
 - a. AASHTO LRFD HL-93 VEHICULAR LIVE LOAD.
- SUPERSTRUCTURE:
 - a. DEAD LOAD INCLUDES A SUPERIMPOSED DEAD LOAD OF 25 PSF FOR FUTURE 2" THICK OVERLAY ON THE CULVERT.
- SEISMIC DESIGN NOTES:
 - (1) SEISMIC PERFORMANCE ZONE 1
 - (2) BRIDGE OPERATIONAL CATEGORY: ESSENTIAL BRIDGE
 - (3) PEAK GROUND ACCELERATION (PGA) = 0.165 x g
 - (4) SPECTRAL ACCELERATION COEFFICIENTS
SHORT PERIOD (0.2 SEC) ACCELERATION COEFF. (Ss) = 0.271xg
1 SECOND PERIOD ACCELERATION COEFFICIENT (S1) = 0.057xg
 - (5) SITE CLASSIFICATION: "D" STIFF SOIL SOIL
Fpqa = 1.47 As = Fpqa x PGA = 0.243 x g
Fo = 1.583 Sds = 0.286 x g
Fv = 2.4 Sd1 = 0.092 x g

CONCRETE DESIGN STRESSES:

- IN ACCORDANCE WITH SECTION 27.1 OF THE NJDOT DESIGN MANUAL FOR BRIDGES AND STRUCTURES, 6TH EDITION, THE CONCRETE CLASSES ARE DEFINED AS FOLLOWS:
 - (1) CLASS A CIP APPROACH SLABS
 - (2) CLASS B CIP ABUTMENTS, WINGWALLS, FOOTINGS
 - (3) CLASS HPC-1 CIP DECKS, SIDEWALKS, CONCRETE PATCH, PARAPETS, CURBS AND PYLONS
 - (4) CLASS P PRECAST BEAMS AND CULVERTS
- IN ACCORDANCE WITH TABLES 903.03.06-3, 903.05.02-1 AND 903.05.04-1 OF THE 2019 NJDOT STANDARD SPECIFICATIONS, THE FOLLOWING ARE THE SPECIFIED MINIMUM COMPRESSIVE STRENGTHS REQUIRED FOR CAST-IN-PLACE (CIP) AND PRECAST CONCRETE (f'c):
 - (1) CLASS DESIGN STRENGTHS:
 - CLASS A 4,600 PSI
 - CLASS B 3,700 PSI
 - CLASS HPC-1 4,400 PSI
 - CLASS P 5,500 PSI
 - (2) VERIFICATION STRENGTHS:
 - CLASS A 5,400 PSI
 - CLASS B 4,500 PSI
 - CLASS HPC-1 5,400 PSI
 - CLASS P 6,000 PSI
 - (3) ALLOWABLE STRESS, EXTREME FIBER IN COMPRESSION (fc):
 - CLASS A 1,600 PSI
 - CLASS B 1,200 PSI
 - CLASS HPC-1 1,600 PSI
 - CLASS P 2,000 PSI

REINFORCEMENT STEEL:

- ASTM A615 (GRADE 60), fy = 60,000 PSI, fs = 24,000 PSI
- ALL REINFORCEMENT STEEL BARS, DOWELS, WELDED WIRE FABRIC AND/OR SUPPORT CHAIRS TO BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A767. ELECTRO PLATED GALVANIZING IS NOT ACCEPTABLE AND WILL BE REJECTED.
- BRICKS OR OTHER MASONRY SUPPORTS FOR THE REBAR MATS WILL NOT BE PERMITTED.
- ELEVATION DATUM:
 - a. GPS POSITIONS DERIVED VIA REAL TIME KINEMATIC SURVEY IN COORDINATION WITH KEYSTONE KEYNET VRS NETWORK.
 - b. VERTICAL DATUM ESTABLISHED BY ROBINSON AERIAL - NAVD88.
- STRUCTURAL STEEL:
 - a. STRUCTURAL STEEL SHALL CONFORM TO AASHTO M270, GRADE 50 (ASTM A 709, GRADE 50) DESIGNATION, EXCEPT WHERE NOTED OTHERWISE.
 - b. STEEL SHEET PILING SHALL CONFORM TO ASTM A572 GRADE 50.
 - c. STEEL ANCHOR RODS SHALL CONFORM TO AASHTO M270, GRADE 50 ASTM A 709, GRADE 50.
- FOUNDATION DESIGN CRITERIA:
 - a. CULVERT AND WINGWALLS: FOUNDATIONS SHALL BE SUPPORTED ON SPREAD FOOTINGS. MAXIMUM ALLOWABLE STATIC BEARING CAPACITY SHALL BE DETERMINED AS PART OF THE GEOTECHNICAL SUBSURFACE EXPLORATION PROGRAM REQUIRED AS PART OF THIS PROJECT. SEE THE DESIGN-BUILD NOTES ON DRAWING NO. S-1 FOR MORE INFORMATION.
 - b. CONTRACTOR SHALL PERFORM TEST PITS TO LOCATE THE EXISTING CULVERT AND WINGWALL FOOTINGS. PROPOSED CULVERT AND WINGWALL FOOTINGS SHALL BE FOUNDED AT THE SAME ELEVATION, AND REINFORCEMENT SHALL BE DRILLED AND GROUTED INTO THE EXISTING FOOTINGS WHEREVER POSSIBLE.
 - c. SOIL FRICTION ANGLE FOR IMPORTED FILL (θ) = 34°.
 - d. LOADS:
 - (1) UNIT WEIGHT OF SOIL 125 PCF
 - (2) UNIT WEIGHT OF CONCRETE 150 PCF



HYDRAULIC AND HYDROLOGIC DATA

DESIGN DISCHARGE	788 CFS
DESIGN WATER SURFACE ELEVATION	49.10'
ENERGY LINE ELEVATION	49.42'
FREQUENCY	100YR + 25%

FLOOD ELEVATION DATA

	Q (CFS)	WSEL (FT)
100YR	788	49.10
25YR	477	47.31
10YR	368	46.56

DESIGN-BUILD NOTES:

- THE CONTRACTOR IS HEREBY ADVISED THAT THESE DRAWINGS CONTAIN PRELIMINARY DESIGN LAYOUTS, SECTIONS AND DETAILS FOR THE CONSTRUCTION OF THE PRECAST 3-SIDED RIGID FRAME CULVERT EXTENSION, CULVERT AND WINGWALL FOUNDATIONS, AND REINFORCED CONCRETE HEADWALL AND WINGWALLS FOR THE PRECAST 3-SIDED RIGID FRAME CULVERT THAT WILL BE REQUIRED FOR THIS PROJECT. THESE DETAILS PROVIDE FOR MINIMUM DIMENSIONS AND MINIMUM REQUIREMENTS FOR THE STRUCTURES AND STRUCTURAL ELEMENTS TO BE DESIGNED AND BUILT. AS A PART OF THE BID FOR THIS PROJECT, THE CONTRACTOR WILL BE REQUIRED TO RETAIN THE SERVICES OF A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY TO DESIGN THESE STRUCTURAL ELEMENTS.
- THE CONTRACTOR'S ENGINEER WILL BE REQUIRED TO REVIEW THE PRELIMINARY DESIGN LAYOUTS, SECTIONS AND DETAILS FOR STRUCTURAL DESIGN LOADS, CODE COMPLIANCE AND CONSTRUCTABILITY; AND TO PERFORM A GEOTECHNICAL SUBSURFACE EXPLORATION PROGRAM TO DEVELOP SOIL DESIGN PROPERTIES. THE GEOTECHNICAL SUBSURFACE EXPLORATION PROGRAM SHALL INCLUDE THE MINIMUM NUMBER OF BORINGS REQUIRED PER CODE FOR EACH STRUCTURAL ELEMENT. THE DESIGN OF THE STRUCTURES AND STRUCTURAL ELEMENTS BY THE CONTRACTOR'S ENGINEER SHALL CONFORM TO THE FINDINGS OF THE REQUIRED GEOTECHNICAL SUBSURFACE EXPLORATION PROGRAM. THE COSTS ASSOCIATED WITH RETAINING A LICENSED PROFESSIONAL ENGINEER TO PERFORM THE GEOTECHNICAL SUBSURFACE EXPLORATION PROGRAM SHALL BE INCLUDED IN THE PRICE BID FOR THE ITEMS REQUIRING SAME.
- THE CONTRACTOR'S ENGINEER WILL BE REQUIRED TO SUBMIT DETAILED DESIGN CALCULATIONS, SHOP DRAWINGS AND/OR CATALOG CUTS TO THE OWNER'S ENGINEER FOR REVIEW AND APPROVAL FOR THE PRECAST 3-SIDED RIGID FRAME CULVERT, REINFORCED CONCRETE HEADWALL AND WINGWALLS, AND THEIR FOUNDATIONS. THE CONTRACTOR'S ENGINEER'S LAYOUT SHALL BE BASED ON THE LAYOUT SHOWN ON THESE DRAWINGS.

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NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
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TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

PROPOSED CULVERT PLAN, ELEVATION AND SECTION

ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS

(732) 727 8000 (732) 462 7400
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIR P.E. & P.P. NJ PE LIC NO. 25839	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 2455	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE LIC NO. 24271
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 32468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 39458

MICHAEL J. MCCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. 32468

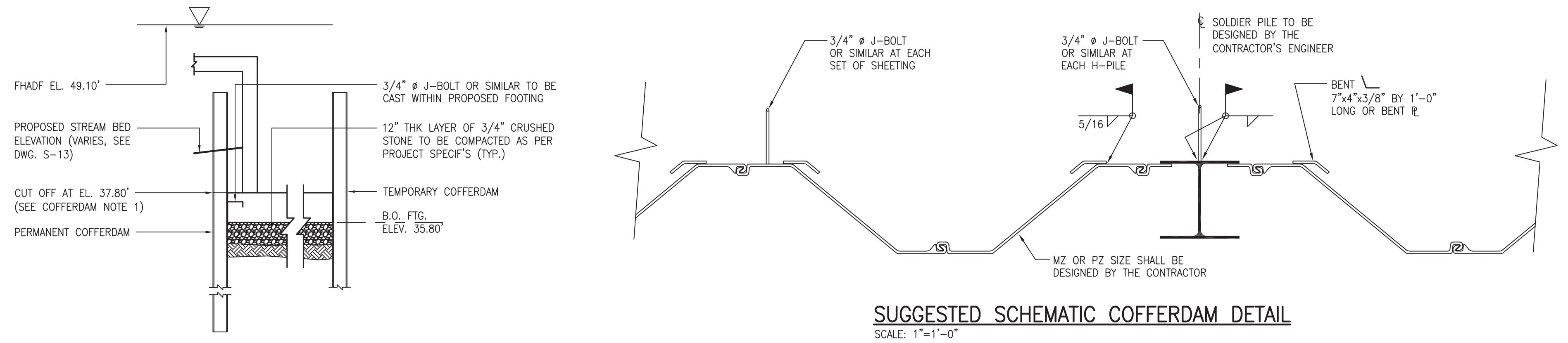
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CHECKED BY NH SHEET 192 OF 197

DATE 2/17/2022

FILE NO. PWB06A09.01

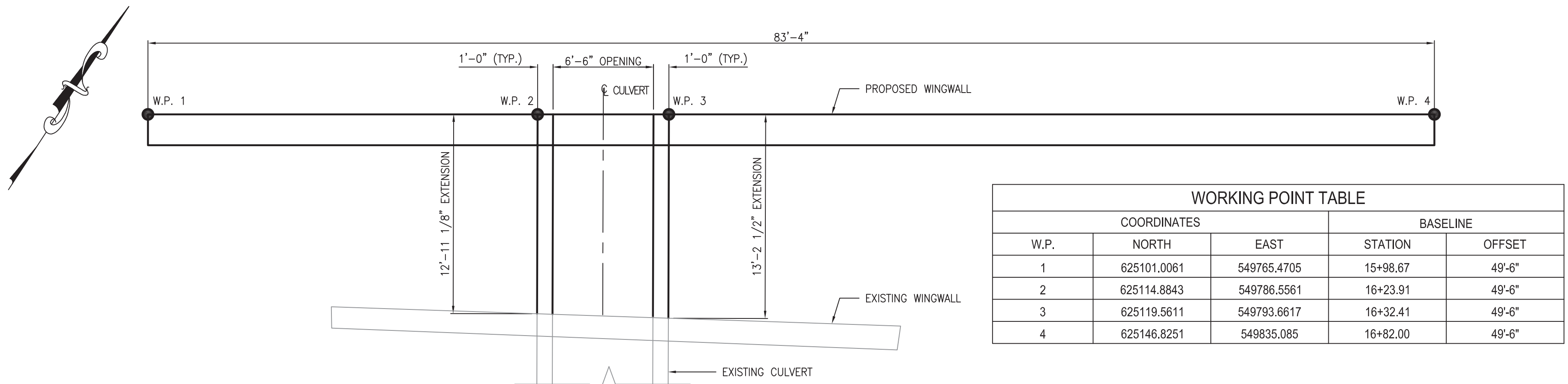
COFFERDAM NOTES:

- THE COFFERDAM SHALL BE CONSTRUCTED TO SEPARATE THE STREAM FLOW FROM EXCAVATED AREAS DURING DEMOLITION AND CONSTRUCTION ACTIVITIES. THE COFFERDAM SHALL CONSIST OF PERMANENT AND/OR TEMPORARY STRUCTURAL MEMBERS (SEE THIS DRAWING FOR PERMANENT AND TEMPORARY COFFERDAM LIMITS). CONTRACTOR TO CUT OFF TOP OF PERMANENT COFFERDAM TO FINAL ELEVATION INDICATED ON THE PLANS. DURING CONSTRUCTION, CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING THE TOP OF COFFERDAM ELEVATION USING THE TABLES ON DRAWING NO. S-13.
- PERMANENT COFFERDAM:
 - THE PERMANENT COFFERDAM SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY RETAINED BY THE CONTRACTOR, EXPERIENCED AND WELL QUALIFIED IN THE DESIGN OF EXCAVATION SUPPORT SYSTEMS. SIGNED AND SEALED WORKING DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND CONSTRUCTION. THE PERMANENT COFFERDAM SHALL BE NEW HOT-ROLLED INTERLOCKING STEEL SHEETING CONFORMING TO THE STANDARD P227 SECTION, MINIMUM, AND SHALL BE DESIGNED TO ACT AS PERMANENT SCOUR PROTECTION FOR THE CULVERT.
 - PERMANENT COFFERDAM SHALL CONFORM TO ASTM A328 AND SHALL BE FABRICATED FROM STEEL CONFORMING TO ASTM A572.
 - STEEL COFFERDAM SHALL BE SHOP COATED WITH COAL TAR EPOXY WITH PREPARATION AND PRIME COATING PREPARED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- TEMPORARY COFFERDAM
 - THE TEMPORARY COFFERDAM ELEMENTS SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY RETAINED BY THE CONTRACTOR, EXPERIENCED AND WELL QUALIFIED IN THE DESIGN OF EXCAVATION SUPPORT SYSTEMS. THE DESIGN SHALL ALSO CONSIDER MAINTENANCE OF EXCAVATION SUPPORT (WALERS, STRUTS, TIE RODS, ETC.) AND STREAM FLOW. SIGNED AND SEALED WORKING DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND CONSTRUCTION.
 - THE MAINTENANCE OF STREAM FLOW SYSTEM SHALL BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLOOR HAZARD AREA (FHA) PERMITS FILED FOR THIS PROJECT.
- STEEL TIE RODS, HARDWARE AND FABRICATIONS:
 - TIE RODS: TIE RODS FOR BULKHEAD ANCHORAGES SHALL BE FABRICATED FROM STEEL CONFORMING TO ASTM A615 GRADE 75 WITH MINIMUM YIELD STRESS OF 75 KSI. TIE RODS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A767 AND SHALL BE SHOP OR FIELD COATED WITH COAL TAR EPOXY COATING MATERIAL.
 - STEEL BOLTS AND HARDWARE SHALL BE FABRICATED FROM STEEL CONFORMING TO ASTM A307 OR A36 AND SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153.
 - STEEL FABRICATIONS AND PLATES SHALL BE FABRICATED FROM STEEL CONFORMING TO ASTM A36, A572 OR A992 AS NOTED ON THE DETAILS AND SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123.
 - ALL HANGERS, FASTENERS (NAILS, SCREWS, FLAT WASHERS AND BOLTS) AND STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED OR STAINLESS STEEL.
- PERMANENT COFFERDAM INSTALLATION
 - PERFORM REQUIRED UTILITY MARKOUTS IN ACCORDANCE WITH THE SPECIFICATIONS. CONTACT SEWER UTILITIES TO LOCATE THE SANITARY SEWERS NOT COVERED IN THE ONE CALL SYSTEM MARKOUT PRIOR TO SETTING OR DRIVING PERMANENT OR TEMPORARY COFFERDAM. THE CONTRACTOR IS SOLELY RESPONSIBLE TO MONITOR GROUND VIBRATIONS ADJACENT TO THE PIPELINES.
 - PERMANENT COFFERDAM LAYOUT SHALL CONFORM TO THE LAYOUT CONTROLS INDICATED ON THE STRUCTURAL DRAWINGS. PREPARE WORKING DRAWINGS AS SHOP DRAWINGS FOR LAYOUT CONFORMING TO THE DESIGN LAYOUT. REPORT CONFLICTS, IF ANY, TO THE ENGINEER FOR RESOLUTION. REFER TO THIS DRAWING FOR LIMITS OF COFFERDAM.
 - SET DRIVING TEMPLATES AND GUIDE BEAMS AS REQUIRED TO MAINTAIN THE STRICT TOLERANCES REQUIRED BY THE SHEET PILING LAYOUT DESIGN.
 - INSTALL INTERLOCKED PERMANENT COFFERDAM TO THE DEPTHS INDICATED ON THE SCHEMATIC COFFERDAM DETAIL. REPORT ANY OBSTRUCTIONS ENCOUNTERED TO THE ENGINEER. EXCAVATE OR PROVIDE SPUDS TO PUSH ASIDE OBSTRUCTIONS AS REQUIRED.
 - MAINTAIN PERMANENT COFFERDAM ALIGNMENT AND PLUMB WITHIN SPECIFIED MAXIMUM 3 INCH DEVIATION IN PLAN AND MAXIMUM 1% DEVIATION FROM PLUMB.
 - CUTOFF PERMANENT COFFERDAM AT REQUIRED ELEVATIONS, NO HIGHER THAN THE TOP OF THE TOEWALL. REPAIR ANY DAMAGE TO COATINGS AS REQUIRED PRIOR TO BACKFILL.
 - INSTALL WALERS, ANCHORAGES AND CAPS AS REQUIRED BY PLAN.
- THE COFFERDAM, IF APPLICABLE, SHALL BE PROVIDED WITH A MINIMUM 12" THICK LAYER OF NJDOT STANDARD SIZE COARSE AGGREGATE (OR A MINIMUM 1 FOOT THICK PLAIN CONCRETE SEAL/ WORKING MAT) TO PROVIDE A SUITABLE BEARING SURFACE AND/OR TO TRY TO REDUCE INFLOW BENEATH THE BASE OF THE SHEETING, AS REQUIRED. PROVISIONS SHALL BE MADE FOR INTERNAL DEWATERING TO MITIGATE THE DEVELOPMENT OF EXCESSIVE UPLIFT PRESSURES BENEATH THE SLABS.
- PREDRILLING OR ANY OTHER MEANS NECESSARY TO INSTALL THE COFFERDAM WILL NOT BE MEASURED. ALL COSTS TO INSTALL THE TEMPORARY AND/OR PERMANENT PORTION OF THE COFFERDAM, NJDOT STANDARD SIZE COARSE AGGREGATE, CONCRETE SEAL AND/OR CONCRETE WORKING MAT SHALL BE INCLUDED IN THE PAY ITEMS "TEMPORARY COFFERDAM" AND "PERMANENT COFFERDAM".

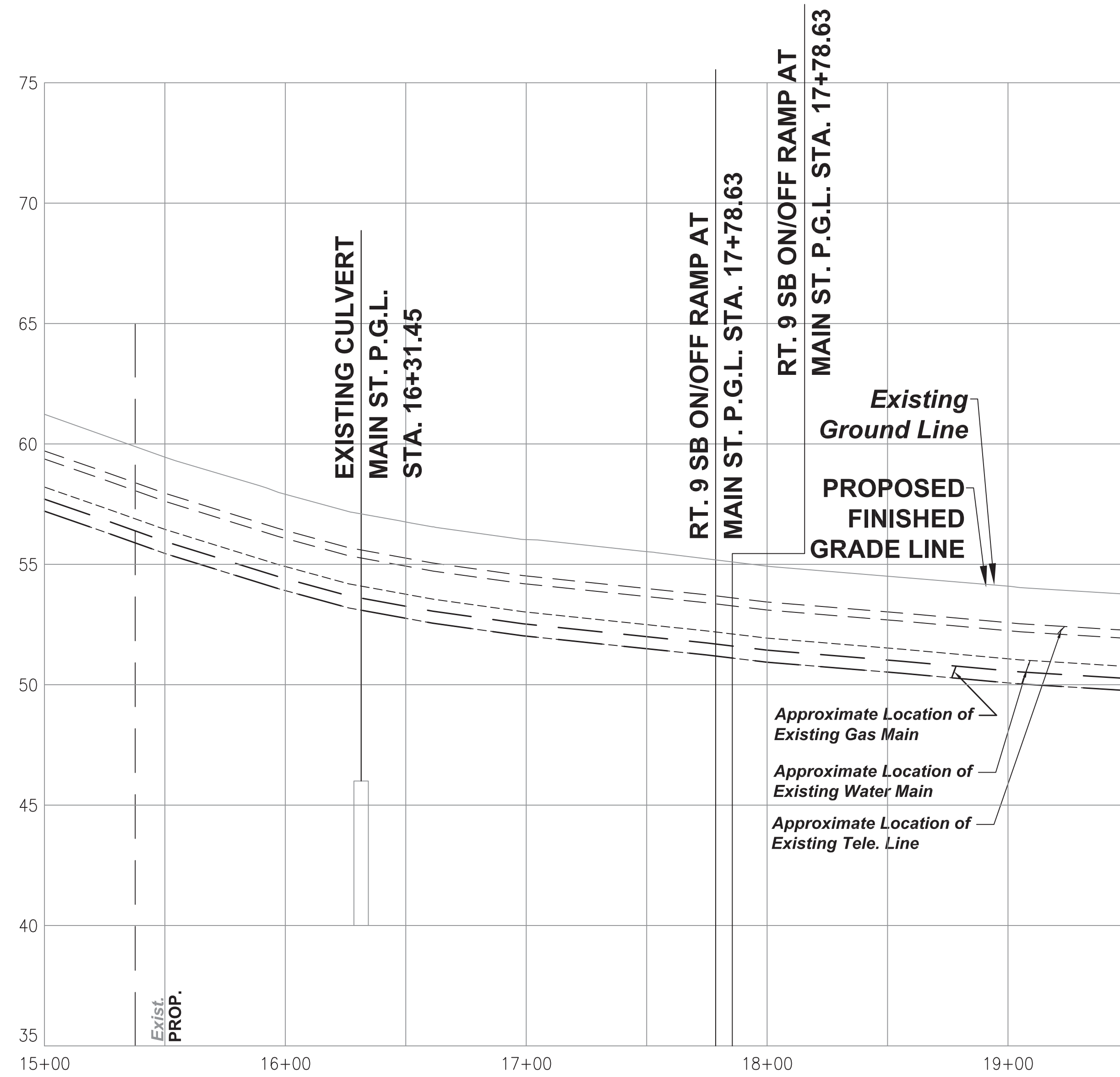


SCHEMATIC COFFERDAM SECTION
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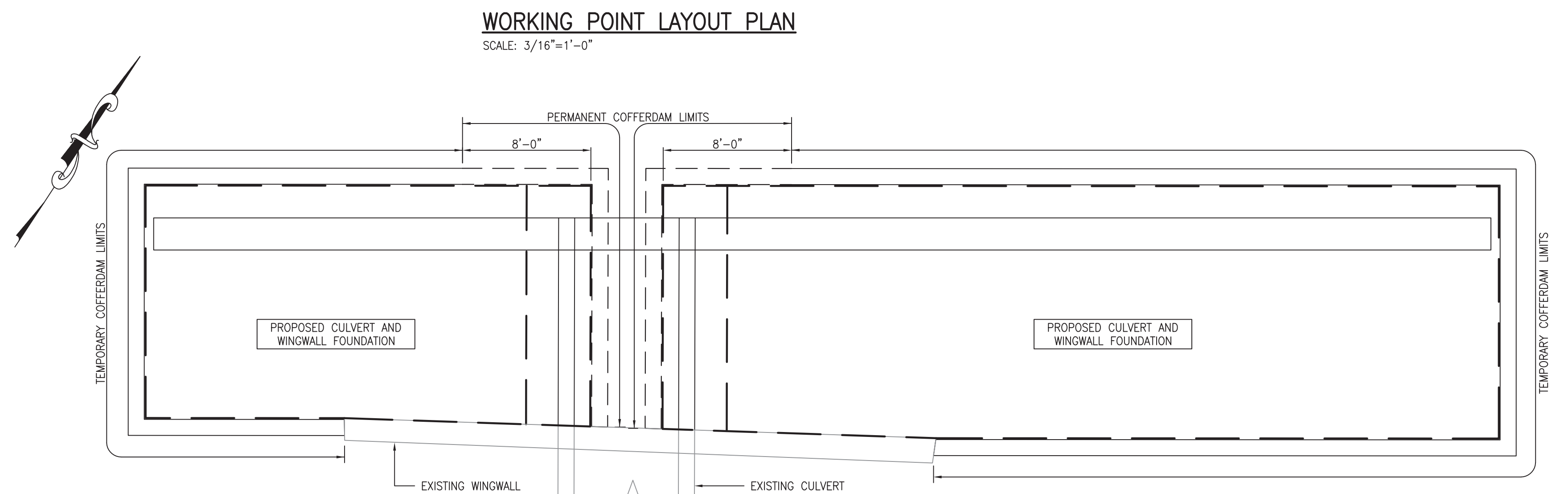
SUGGESTED SCHEMATIC COFFERDAM DETAIL
SCALE: 1"=1'-0"



WORKING POINT TABLE				
W.P.	COORDINATES		BASELINE	
	NORTH	EAST	STATION	OFFSET
1	625101.0061	549765.4705	15+98.67	49'-6"
2	625114.8843	549786.5561	16+23.91	49'-6"
3	625119.5611	549793.6617	16+32.41	49'-6"
4	625146.8251	549835.085	16+82.00	49'-6"



PROFILE
SCALE: N.T.S.



MAINTENANCE OF STREAM FLOW LIMITS
N.T.S.

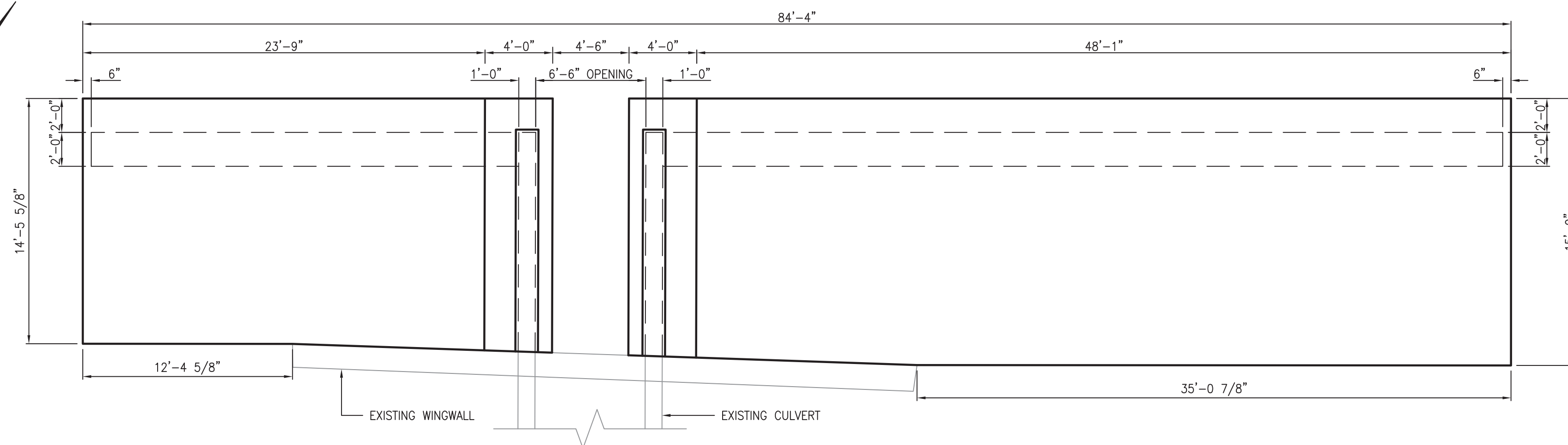
DESIGN-BUILD NOTES:

- THE CONTRACTOR IS HEREIN ADVISED THAT THESE DRAWINGS CONTAIN PRELIMINARY DESIGN LAYOUTS, SECTIONS AND DETAILS FOR THE CONSTRUCTION OF THE PRECAST 3-SIDED RIGID FRAME CULTVERT EXTENSION, CULTVERT AND WINGWALL FOUNDATIONS, AND REINFORCED CONCRETE HEADWALL AND WINGWALLS FOR THE PRECAST 3-SIDED RIGID FRAME CULTVERT THAT WILL BE REQUIRED FOR THIS PROJECT. THESE DETAILS PROVIDE FOR MINIMUM DIMENSIONS AND MINIMUM REQUIREMENTS FOR THE STRUCTURES AND STRUCTURAL ELEMENTS TO BE DESIGNED AND BUILT. AS A PART OF THE BID FOR THIS PROJECT, THE CONTRACTOR WILL BE REQUIRED TO RETAIN THE SERVICES OF A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY TO DESIGN THESE STRUCTURAL ELEMENTS.
- THE CONTRACTOR'S ENGINEER WILL BE REQUIRED TO REVIEW THE PRELIMINARY DESIGN LAYOUTS, SECTIONS AND DETAILS FOR STRUCTURAL DESIGN LOADS, CODE COMPLIANCE AND CONSTRUCTABILITY; AND TO PERFORM A GEOTECHNICAL SUBSURFACE EXPLORATION PROGRAM TO DEVELOP SOIL DESIGN PROPERTIES. THE GEOTECHNICAL SUBSURFACE EXPLORATION PROGRAM SHALL INCLUDE THE MINIMUM NUMBER OF BORINGS REQUIRED PER CODE FOR EACH STRUCTURAL ELEMENT. THE DESIGN OF THE STRUCTURES AND STRUCTURAL ELEMENTS BY THE CONTRACTOR'S ENGINEER SHALL CONFORM TO THE FINDINGS OF THE REQUIRED GEOTECHNICAL SUBSURFACE EXPLORATION PROGRAM. THE COSTS ASSOCIATED WITH RETAINING A LICENSED PROFESSIONAL ENGINEER TO PERFORM THE GEOTECHNICAL SUBSURFACE EXPLORATION PROGRAM SHALL BE INCLUDED IN THE PRICE BID FOR THE ITEMS REQUIRING SAME.
- THE CONTRACTOR'S ENGINEER WILL BE REQUIRED TO SUBMIT DETAILED DESIGN CALCULATIONS, SHOP DRAWINGS AND/OR CATALOG CUTS TO THE OWNER'S ENGINEER FOR REVIEW AND APPROVAL FOR THE PRECAST 3-SIDED RIGID FRAME CULTVERT, REINFORCED CONCRETE HEADWALL AND WINGWALLS, AND THEIR FOUNDATIONS. THE CONTRACTOR'S ENGINEER'S LAYOUT SHALL BE BASED ON THE LAYOUT SHOWN ON THESE DRAWINGS.

<p>No. DESCRIPTION OF REVISION DATE DRAWN CHECKED RELEASED</p>			
<p>TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS PROPOSED CULTVERT PROFILE, WORKING POINTS AND COFFERDAM DETAILS</p>			
<p>(732) 727 8000 CONSULTING AND MUNICIPAL ENGINEERS (732) 462 7400 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194</p>			
<p>JOHN H. ALLGAIR P.E. & P.P. (1983 - 1991)</p>	<p>DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 25839 NO PP LIC NO. 2455</p>	<p>JOHN J. STEFANI P.E. L.S. & P.P. NO PE LIC NO. 24271 NO PP LIC NO. 2089</p>	<p>JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32952 NO PP LIC NO. 3874</p>
<p>MICHAEL J. MCCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER LIC. 32468</p>	<p>MICHAEL J. MCCLELLAND P.E. & P.P. NO PE LIC NO. 32468 NO PP LIC NO. 3770</p>	<p>GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 39458 NO PP LIC NO. 4361</p>	<p>SCALE: As Shown DATE: February 2022 DRAWN BY: RTJS DESIGNED BY: RTJS CHECKED BY: NH SHEET: 193 of 197</p>

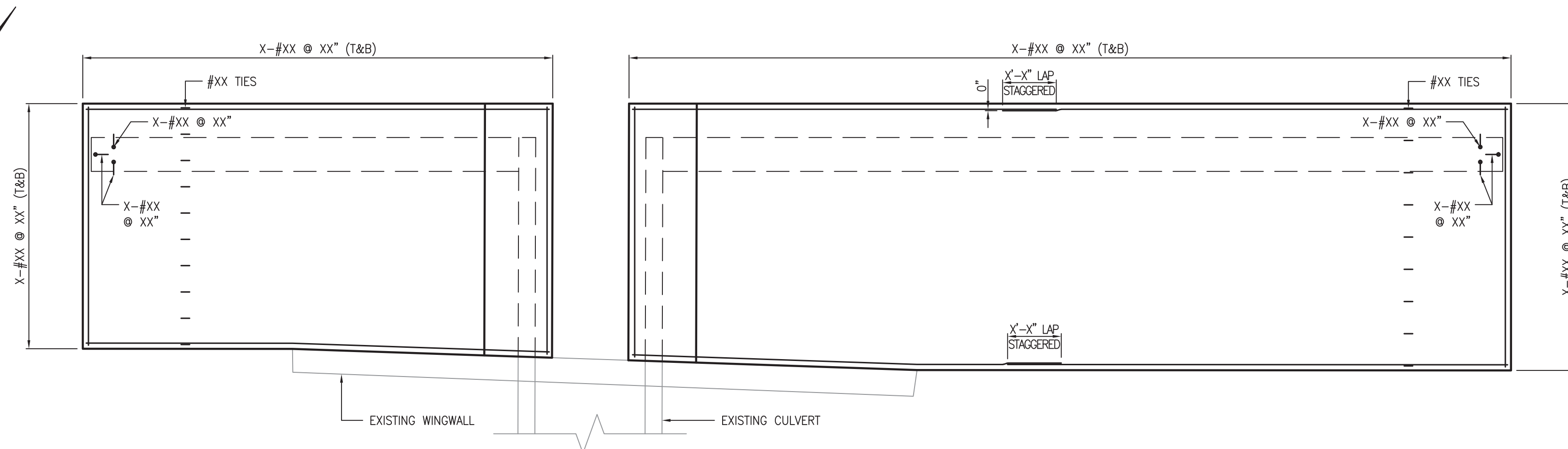
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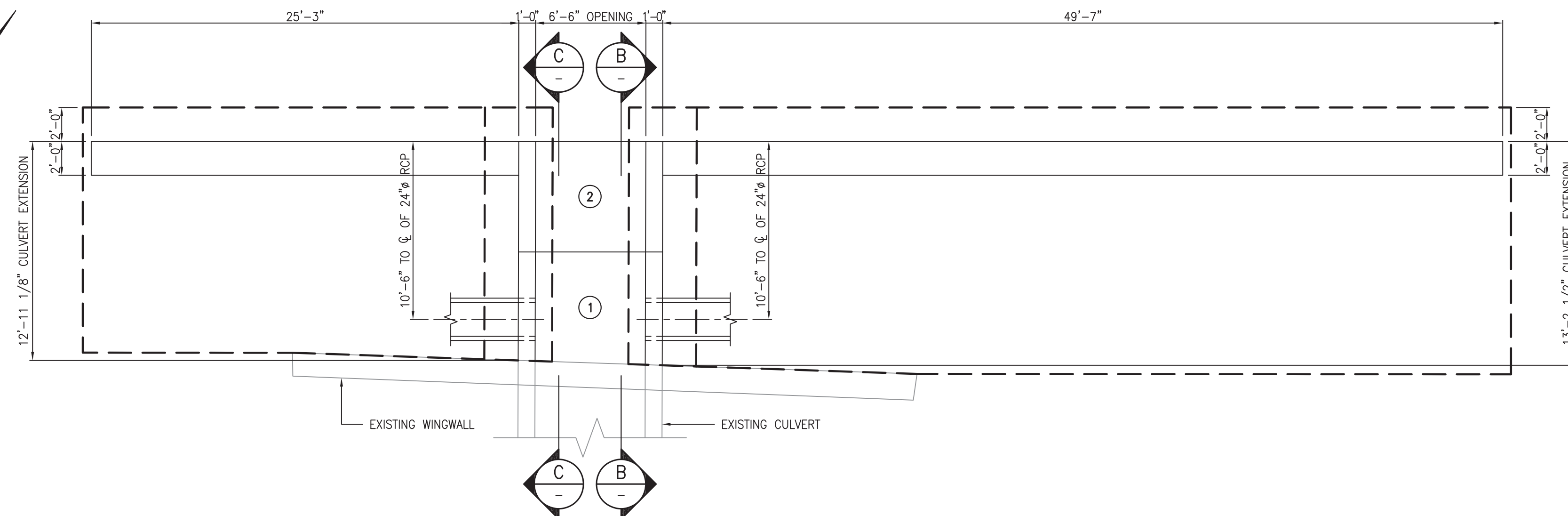
FOOTING LAYOUT PLAN
SCALE: 3/16"=1'-0"

- NOTES:**
1. DIMENSIONS ARE APPROXIMATE. ALL DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
 2. CONTRACTOR SHALL PERFORM TEST PITS TO LOCATE THE EXISTING CULVERT AND WINGWALL FOOTINGS. PROPOSED CULVERT AND WINGWALL FOOTINGS SHALL BE FOUNDED AT THE SAME ELEVATION, AND REINFORCEMENT SHALL BE DRILLED AND GROUTED INTO THE EXISTING FOOTINGS WHEREVER POSSIBLE.
 3. THE 12" THK, 3/4" CRUSHED STONE LAYER SHALL BE INCLUDED IN THE ITEMS REQUIRING SAME.

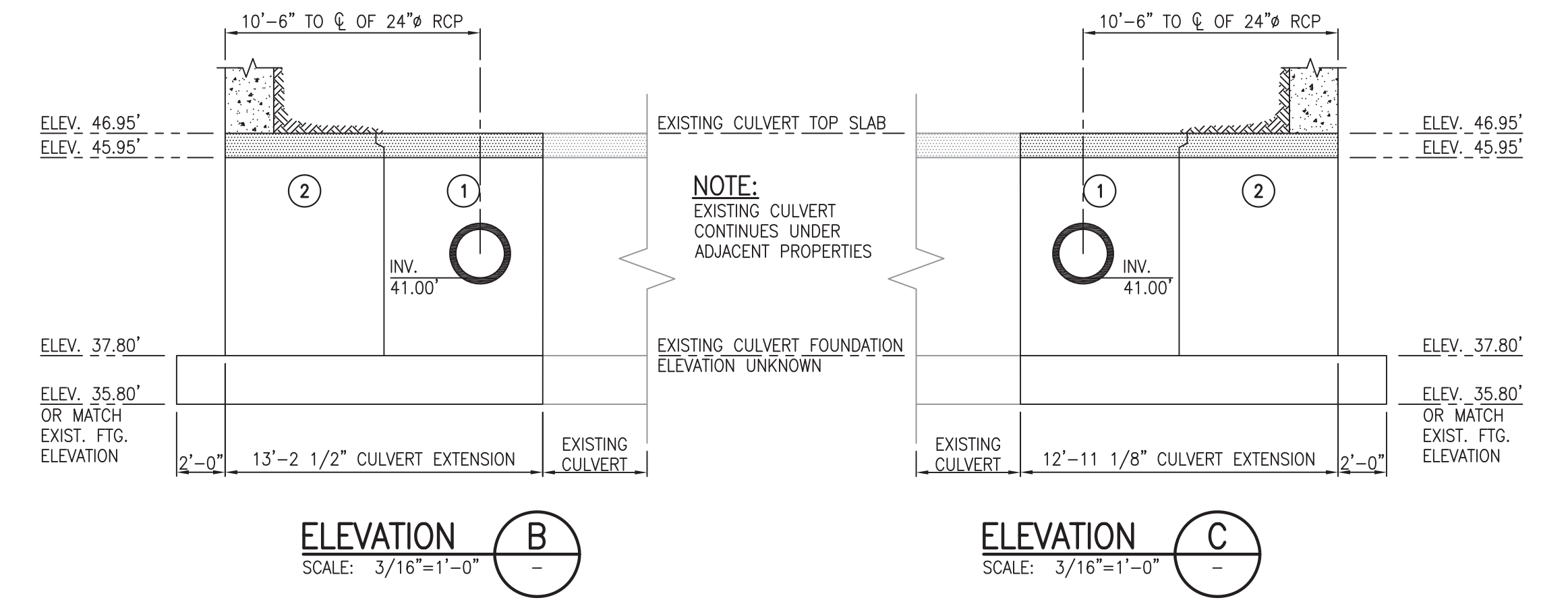


FOOTING REINFORCEMENT PLAN
SCALE: 3/16"=1'-0"

- NOTES:**
1. REFER TO THE TYPICAL STEP DETAIL FOR ADDITIONAL REINFORCEMENT.
 2. CONTRACTOR SHALL PERFORM TEST PITS TO LOCATE THE EXISTING CULVERT AND WINGWALL FOOTINGS. PROPOSED CULVERT AND WINGWALL FOOTINGS SHALL BE FOUNDED AT THE SAME ELEVATION, AND REINFORCEMENT SHALL BE DRILLED AND GROUTED INTO THE EXISTING FOOTINGS WHEREVER POSSIBLE.

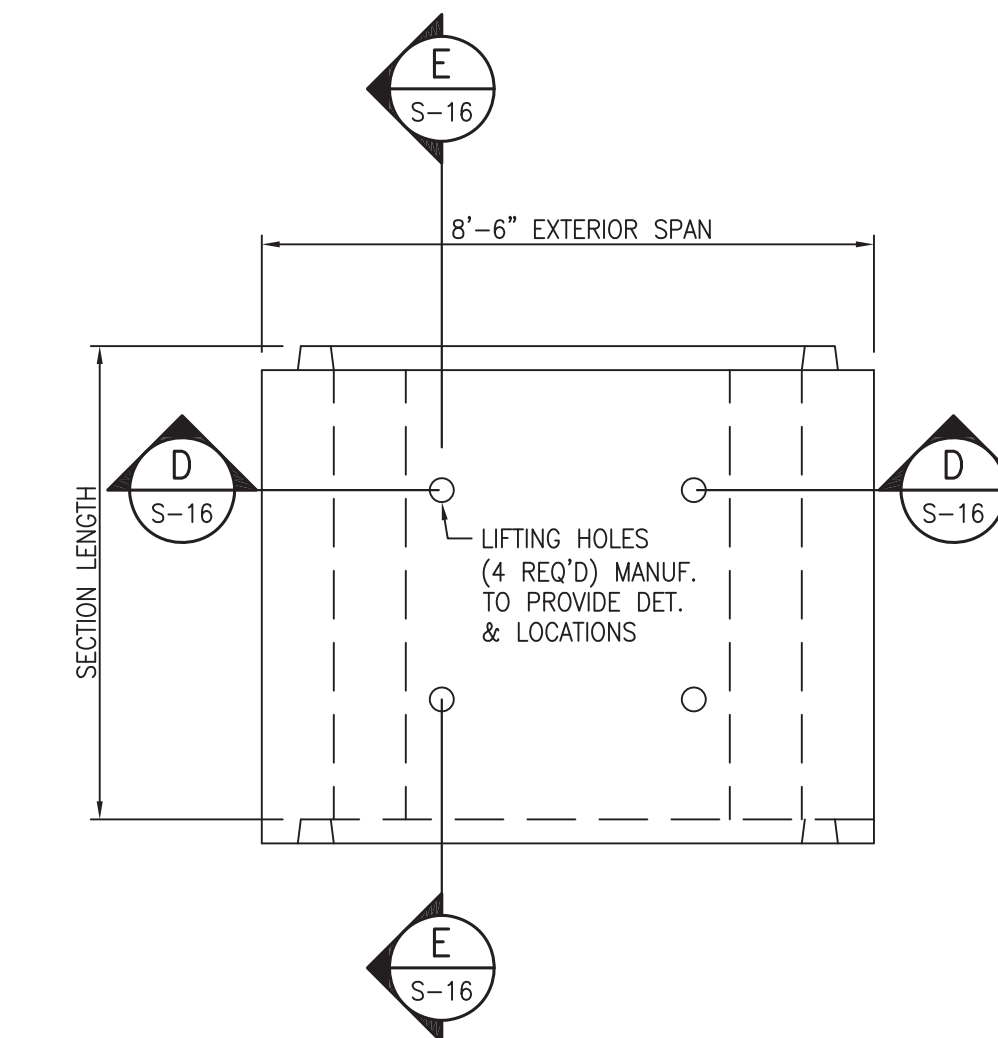


PRECAST CONCRETE CULVERT AND WINGWALL LAYOUT PLAN
SCALE: 3/16"=1'-0"



ELEVATION B
SCALE: 3/16"=1'-0"

ELEVATION C
SCALE: 3/16"=1'-0"



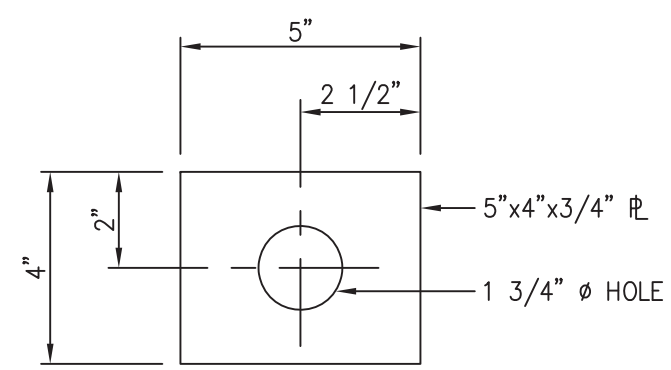
PRECAST CONCRETE 3-SIDED RIGID FRAME PLAN
SCALE: 3/8"=1'-0"

DESIGN-BUILD NOTES:

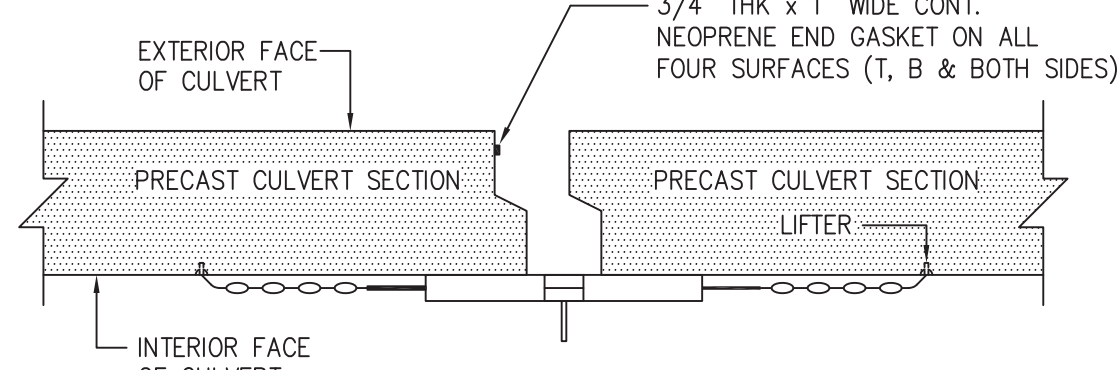
1. THE CONTRACTOR IS HEREIN ADVISED THAT THESE DRAWINGS CONTAIN PRELIMINARY DESIGN LAYOUTS, SECTIONS AND DETAILS FOR THE CONSTRUCTION OF THE PRECAST 3-SIDED RIGID FRAME CULVERT EXTENSION, CULVERT AND WINGWALL FOUNDATIONS, AND REINFORCED CONCRETE HEADWALL AND WINGWALLS FOR THE PRECAST 3-SIDED RIGID FRAME CULVERT THAT WILL BE REQUIRED FOR THIS PROJECT. THESE DETAILS PROVIDE FOR MINIMUM DIMENSIONS AND MINIMUM REQUIREMENTS FOR THE STRUCTURES AND STRUCTURAL ELEMENTS TO BE DESIGNED AND BUILT AS A PART OF THE BID FOR THIS PROJECT. THE CONTRACTOR WILL BE REQUIRED TO RETAIN THE SERVICES OF A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY TO DESIGN THESE STRUCTURAL ELEMENTS.
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S-15
S-18

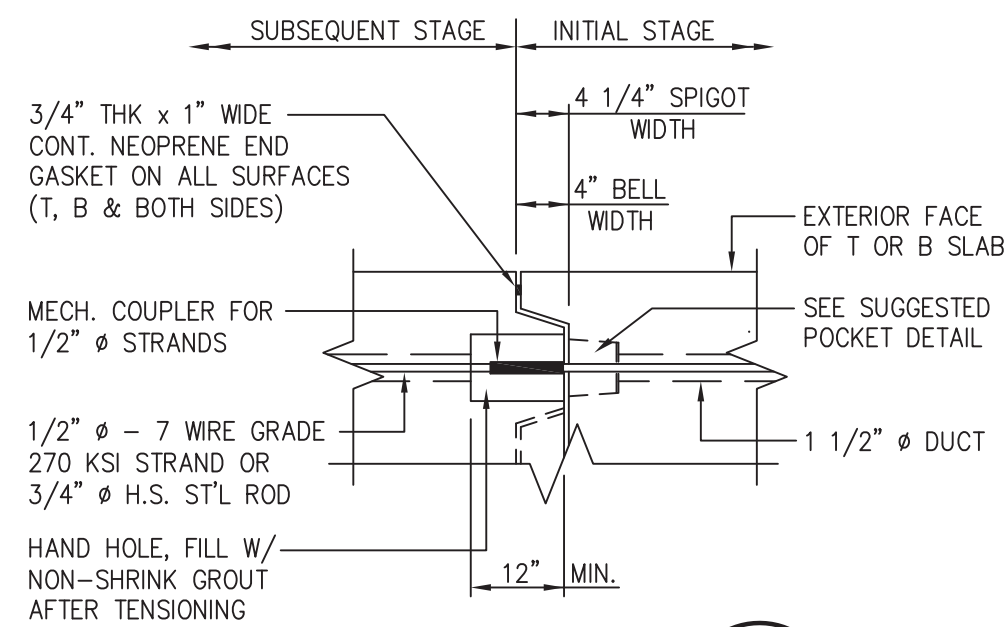
NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED
TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS FOOTING, REINFORCEMENT AND PRECAST CULVERT PLANS AND SECTIONS					
 (732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400					
JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991) NO PE LIC NO. 25839		DAVID J. SAMUEL P.E. & P.P. NO PE LIC NO. 24555		JOHN J. STEFANI P.E., L.S. & P.P. NO PE & L.S. LIC NO. 24271 NO PP LIC NO. 20899	
JAY B. CORNELL P.E. & P.P. NO PE LIC NO. 32952		MICHAEL J. McCLELLAND P.E. & P.P. NO PE LIC NO. 38774		GREGORY R. VALESI P.E. & P.P. NO PE LIC NO. 39458 NO PP LIC NO. 43561	
MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER L.I.C. 32468			SCALE: As Shown DATE: February 2022 DRAWN BY: RTJS DESIGNED BY: RTJS CHECKED BY: NH SHEET: 194 of 197		
FILE NO. PWB0A609.01					



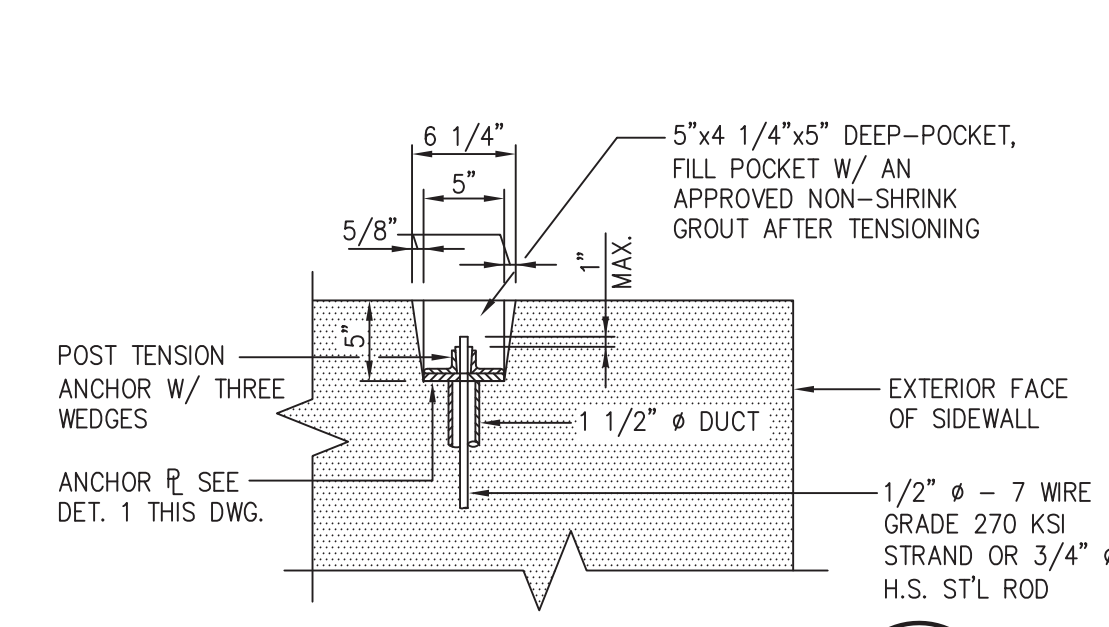
ANCHOR PLATE DETAIL 1
SCALE: 3/8"=1'-0"



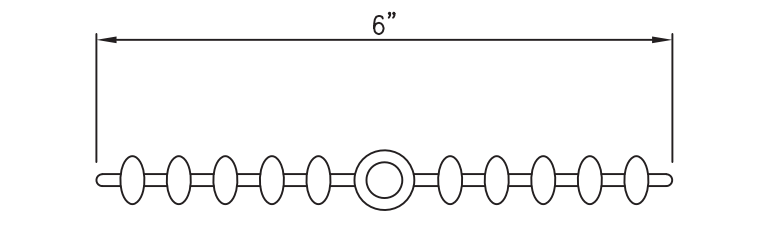
SUGGESTED PULLING DETAIL 2
SCALE: 1/2"=1'-0"



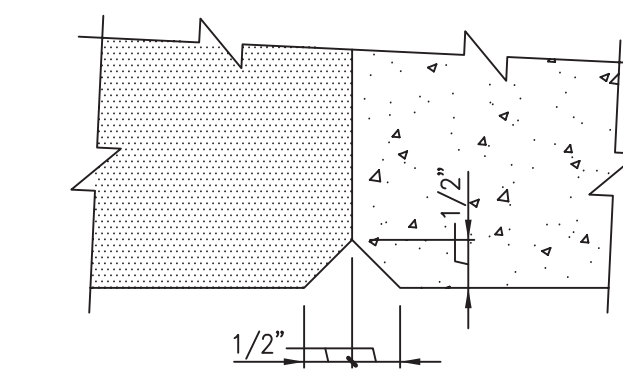
CONNECTION DETAIL 3
N.T.S.



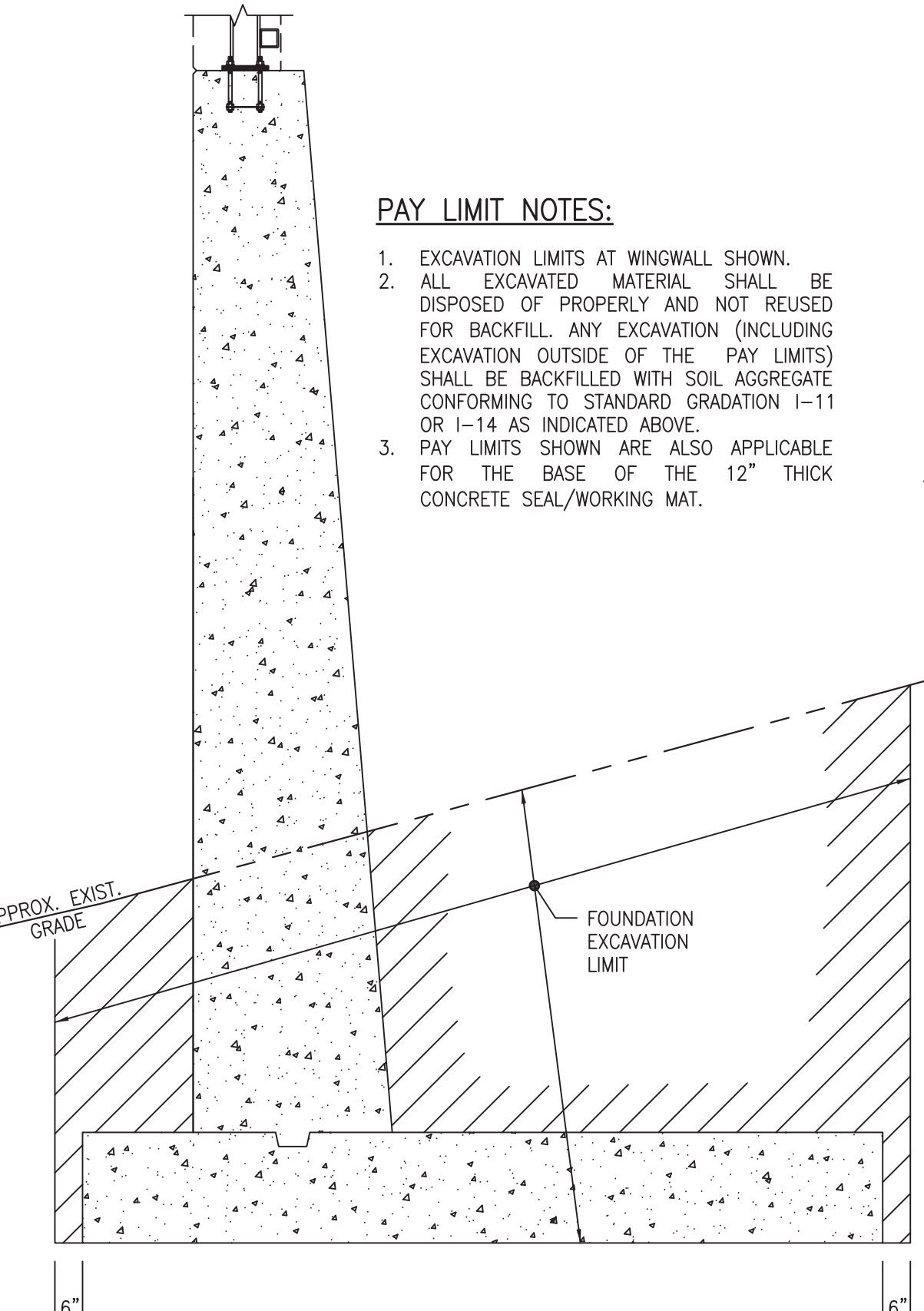
SUGGESTED POCKET DETAIL 4
N.T.S.



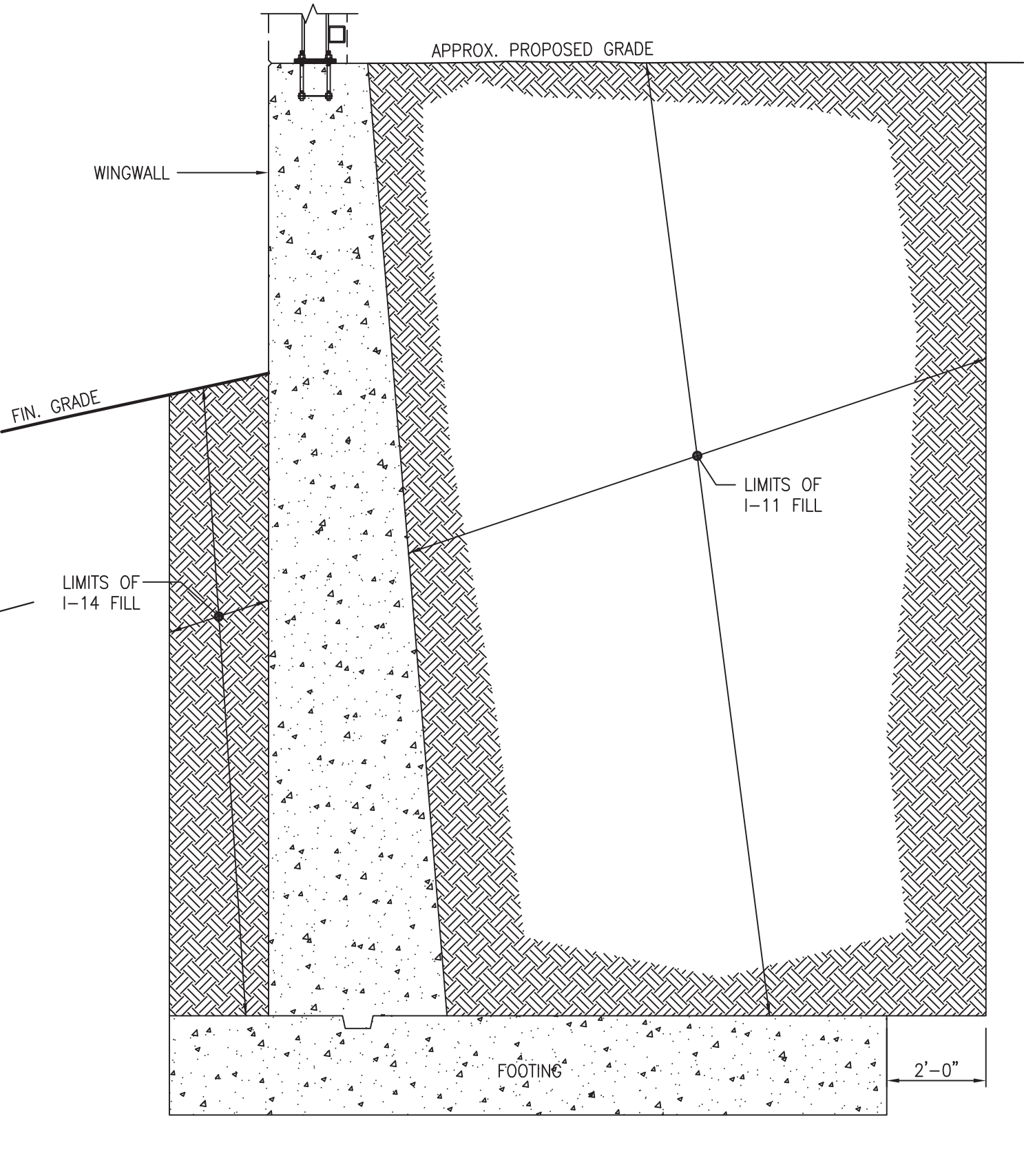
PLASTIC WATERSTOP DETAIL 5
SCALE: 6"=1'-0"



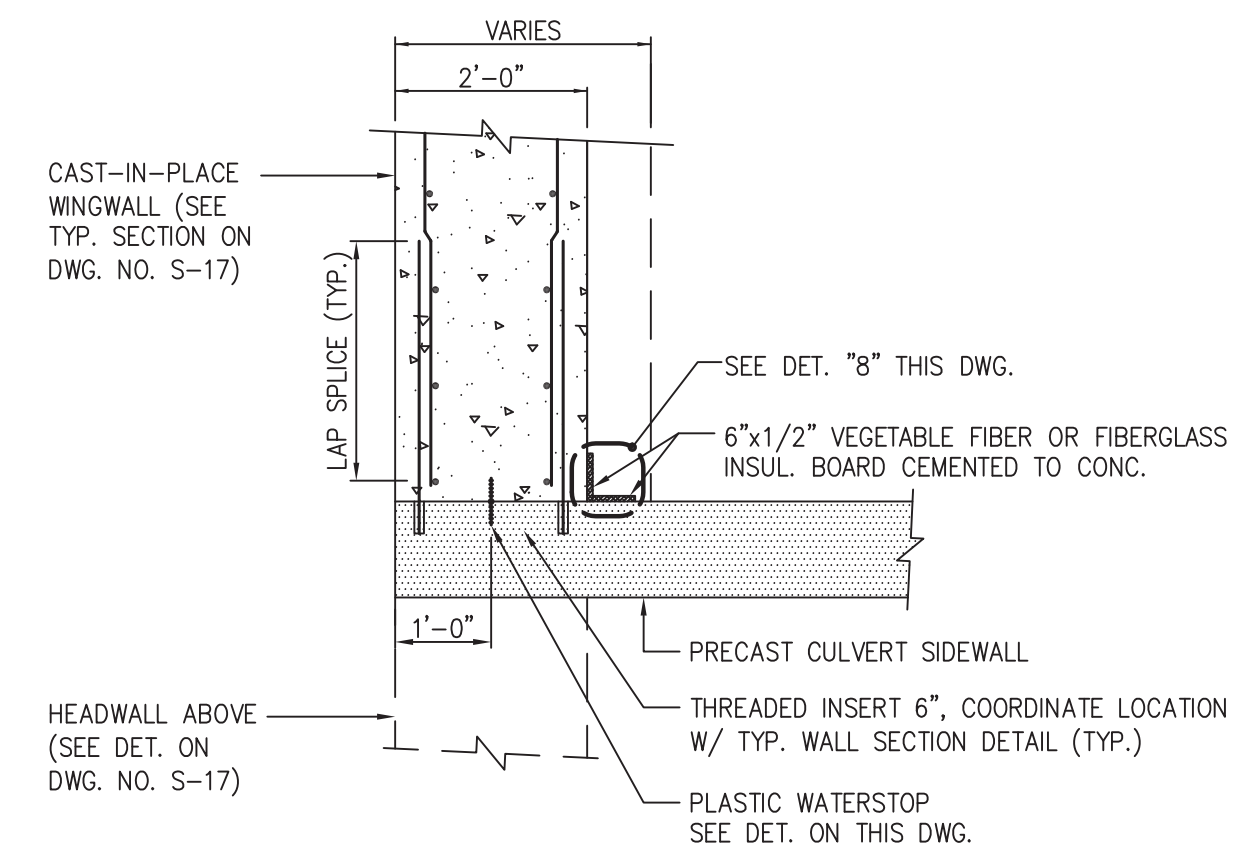
V-GROOVE DETAIL 6
SCALE: 6"=1'-0"



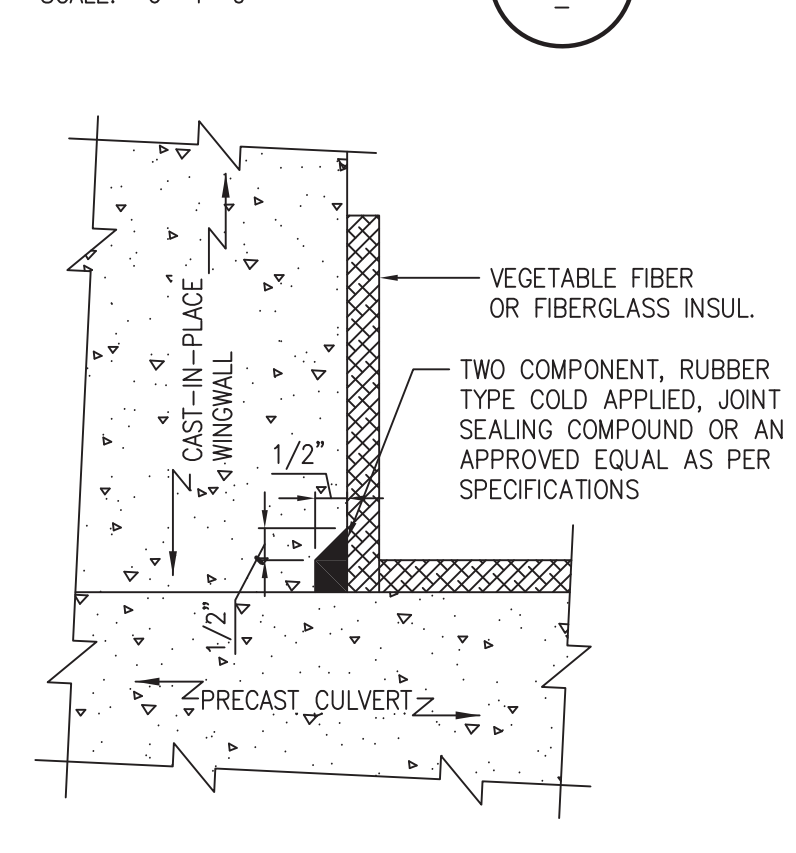
PAY LIMITS OF EXCAVATION DETAIL
SCALE: 3/8"=1'-0"



PAY LIMITS OF EXCAVATION DETAIL
SCALE: 3/8"=1'-0"



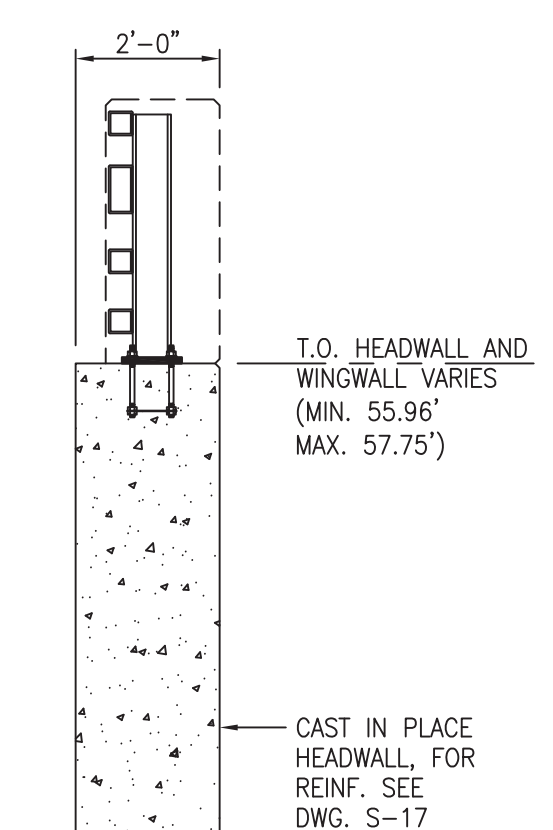
WINGWALL/CULVERT CONSTRUCTION JOINT DETAIL 7
SCALE: 1/2"=1'-0"



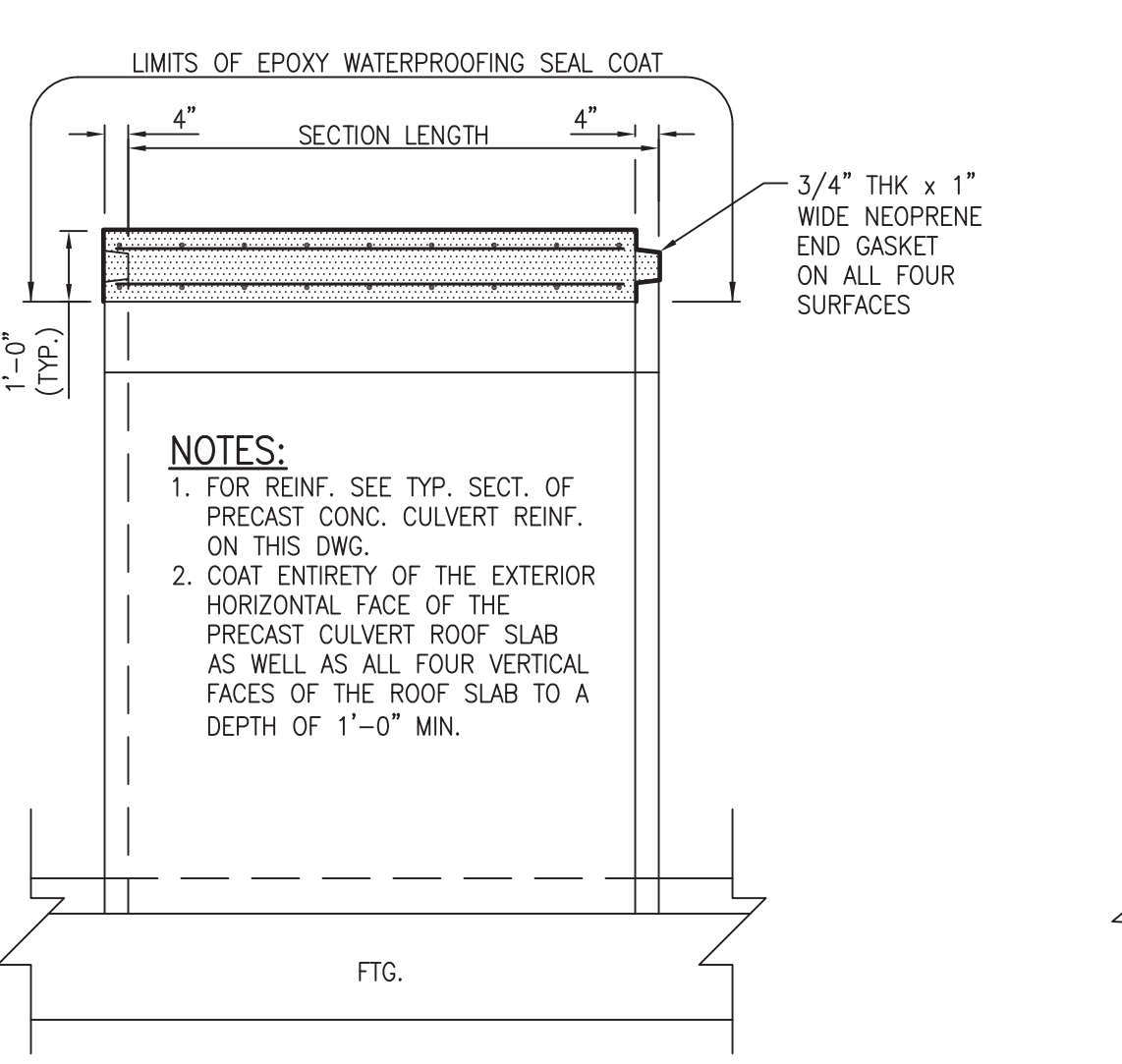
DETAIL 8
SCALE: 6"=1'-0"

DESIGN-BUILD NOTES:

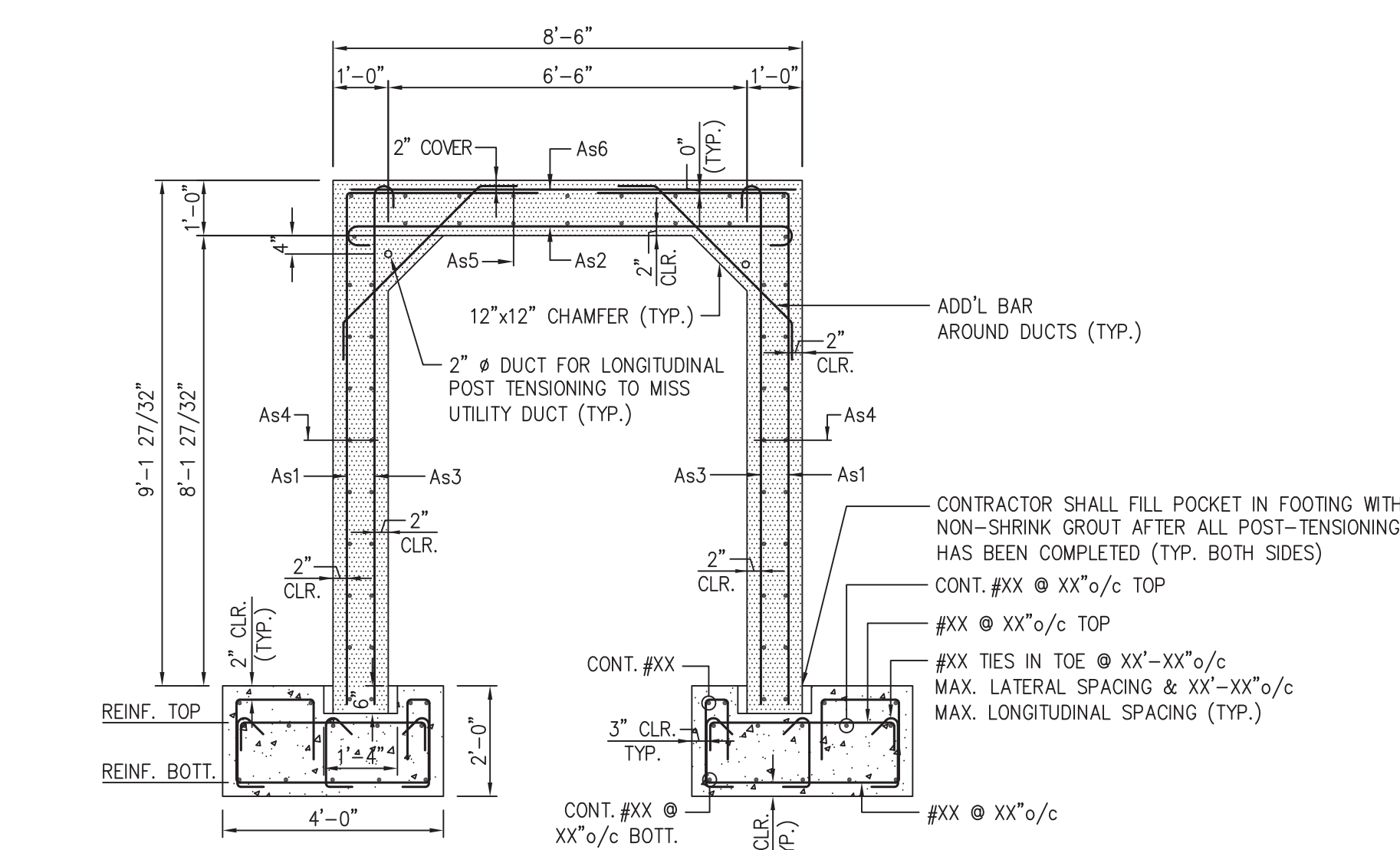
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SECTION AT HEADWALL
SCALE: 3/8"=1'-0"



SECTION E
SCALE: 3/8"=1'-0"



TYPICAL PRECAST CULVERT REINFORCEMENT SECTION D
SCALE: 3/8"=1'-0"

LABEL	MINIMUM AREA OF STEEL REQUIRED
As1	X.XX SQ. IN PER FOOT
As2	X.XX SQ. IN PER FOOT
As3	X.XX SQ. IN PER FOOT
As4	X.XX SQ. IN PER VERTICAL FOOT
As5	X.XX SQ. IN PER HORIZONTAL FOOT
As6	X.XX SQ. IN PER FOOT

SEE PRECAST CULVERT NOTE 3

PRECAST CULVERT NOTES:

- SEE DRAWING NOS. S-1 THROUGH S-3 AND DRAWING NO. S-13 FOR GENERAL NOTES.
- PRECAST CULVERT SPAN AND RISE MUST BE MAINTAINED, NO EXCEPTIONS.
- THE PRECAST CULVERT MANUFACTURER SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL. THE MANUFACTURER SHALL PROVIDE STRUCTURAL DESIGN CALCULATIONS SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY FOR THE PROPOSED CULVERT.
- LAP SPLICES AND DEVELOPMENT LENGTHS SHALL BE DETERMINED BY THE DESIGNER IN ACCORDANCE WITH CURRENT AASHTO DESIGN CRITERIA.
- THE MINIMUM CONCRETE COVER OVER THE CIRCUMFERENTIAL REINFORCEMENT SHALL BE AS SHOWN ON THE TYPICAL SECTION OF CULVERT REINFORCEMENT ON THIS DRAWING.
- WELDED DEFORMED STEEL WIRE FABRIC, CONFORMING TO AASHTO M221 AND HAVING A DIAMETER OF AT LEAST 3/8 INCHES MAY BE SUBSTITUTED FOR DEFORMED BARS, PROVIDED THE MINIMUM AREA OF STEEL REQUIRED IS SATISFIED.
- LONGITUDINAL TIE BOLTS, WHERE UTILIZED, SHALL CONFORM TO THE REQUIREMENTS OF CURRENT ASTM DESIGNATION A307 AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION, INCLUDING THREADING IN ACCORDANCE WITH THE REQUIREMENTS OF CURRENT ASTM A153.
- ALL LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT. AFTER THE GROUT HAS CURED, THE AREA SHALL BE COATED WITH AN EPOXY WATERPROOFING SEAL COAT.
- A PLASTIC WATERSTOP SHALL BE PROVIDED TO PREVENT WATER FROM ENTERING THE VERTICAL JOINT BETWEEN THE END OF THE PRECAST CULVERT SECTIONS AND ANY CAST-IN-PLACE APPURTENANCES, SUCH AS WINGWALLS AND CAST-IN-PLACE CULVERT SECTIONS.
- PRIOR TO BACKFILLING, A 2 FOOT WIDE STRIP OF FILTER FABRIC SHALL BE PLACED OVER THE TOP AND SIDE OF ALL TRANSVERSE JOINTS.
- PRECAST END SECTIONS SHALL BE A MAXIMUM OF 10'-0".
- THE EPOXY WATERPROOFING COATING ON THE ROOF SLAB SHALL BE PROVIDED AT THE PRECASTING PLANT. THE COST OF SHOP AND FIELD APPLIED WATERPROOFING SEAL COAT SHALL BE INCLUDED IN THE PRICE FOR THE BID ITEM, "PRECAST CONCRETE CULVERT".
- PRECAST REINFORCED CONCRETE CULVERT UNITS SHALL BE MANUFACTURED IN STEEL FORMS AND STEEL CURED.
- PRECAST REINFORCED CONCRETE CULVERT UNITS SHALL NOT BE SHIPPED UNTIL 72 HOURS AFTER FABRICATION AND THE 28 DAY COMPRESSIVE STRENGTH REQUIREMENT IS MET.
- REINFORCING BARS FOR THE CULVERT SHALL BE INCLUDED IN THE ITEM PRECAST CONCRETE CULVERT.
- CULVERT MANUFACTURER SHALL PREPARE CONNECTION DETAILS BETWEEN THE EXISTING CULVERT AND THE PROPOSED CULVERT SECTION, TO BE SUBMITTED TO THE OWNER'S ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND CONSTRUCTION.

POST-TENSIONING NOTES:

- FABRICATOR SHALL PROVIDE ALL DETAILS FOR POST-TENSIONING CONNECTIONS.
- CONTRACTOR SHALL SHOW POST-TENSIONING PROCEDURES INCLUDING STRESSING SEQUENCE STEPS.
- SNUG FIT ALL JOINTS BEFORE POST-TENSIONING. CONTRACTOR SHALL TAKE SPECIAL CARE TO KEEP CULVERT JOINTS CLEAN AT THE POST-TENSIONING STAGE.
- AFTER STRESSING, GROUT ALL STRAND VOIDS USING AN APPROVED COMPOUND.
- PROVIDE SEALS OR GASKETS AROUND THE DUCTS AT THE JOINT TO MAKE THE JOINTS WATERTIGHT.
- ALL POST-TENSIONING MUST BE WITNESSED AND APPROVED BY THE ENGINEER.
- AFTER POST-TENSIONING IS APPROVED, PERFORM THE FOLLOWING: CUT STRANDS TO PROVIDE A MINIMUM OF 2 1/4" CLEAR FROM OUTSIDE FACE OF CONCRETE; COAT ANCHORAGE AND STRANDS WITH A COAL TAR EPOXY; COAT RECESS WITH EPOXY BONDING COMPOUND; AND FILL RECESS WITH NON-SHRINK GROUT. THE USE OF EPOXY BONDING COMPOUNDS SHALL BE IN CONFORMANCE WITH NJDOT STANDARD SPECIFICATIONS.
- CONTRACTOR SHALL FILL POCKET IN FOOTING WITH NON-SHRINK GROUT AFTER ALL POST-TENSIONING HAS BEEN COMPLETED.
- POST-TENSION AND GROUT BEFORE BACKFILLING AND ALLOWING TRAFFIC OVER THE CULVERT. ALLOW GROUT TO ACHIEVE SPECIFIED MINIMUM STRENGTH BEFORE BACKFILLING.

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NO.	DESCRIPTION OF REVISION	DATE	DRAWN	CHECKED	RELEASED

TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY, NEW JERSEY
ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS

PRECAST CULVERT AND WINGWALL SECTIONS AND DETAILS

CVE ASSOCIATES
CONSULTING AND MUNICIPAL ENGINEERS

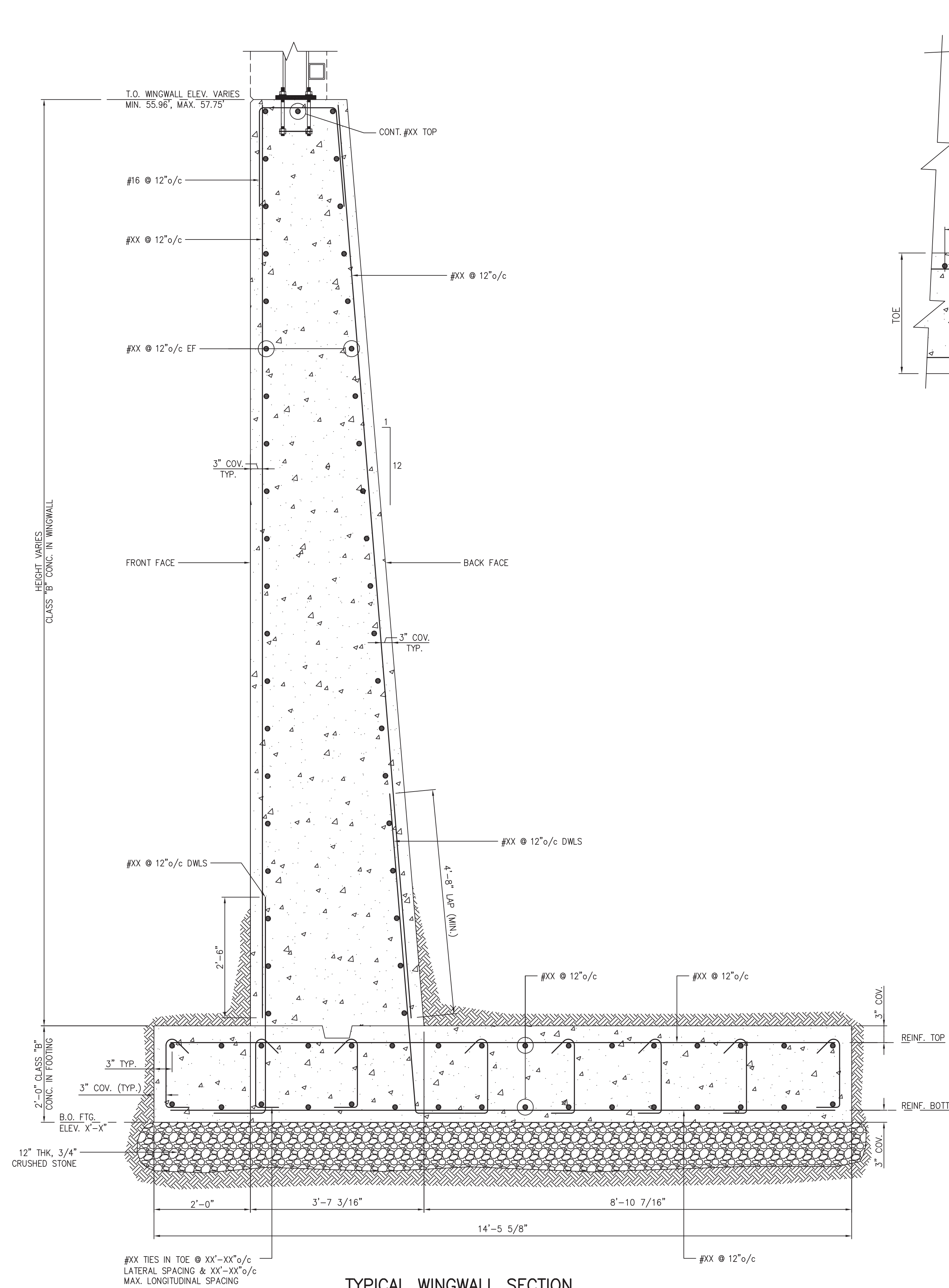
(732) 727 8000 (732) 462 7400
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROCKLE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194

JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991)	DAVID J. SAMUEL P.E. & P.P. NJ PE LIC NO. 25839	JOHN J. STEFANI P.E., L.S. & P.P. NJ PE LIC NO. 24271
JAY B. CORNELL P.E. & P.P. NJ PE LIC NO. 32962	MICHAEL J. MCCLELLAND P.E. & P.P. NJ PE LIC NO. 33468	GREGORY R. VALESI P.E. & P.P. NJ PE LIC NO. 33720

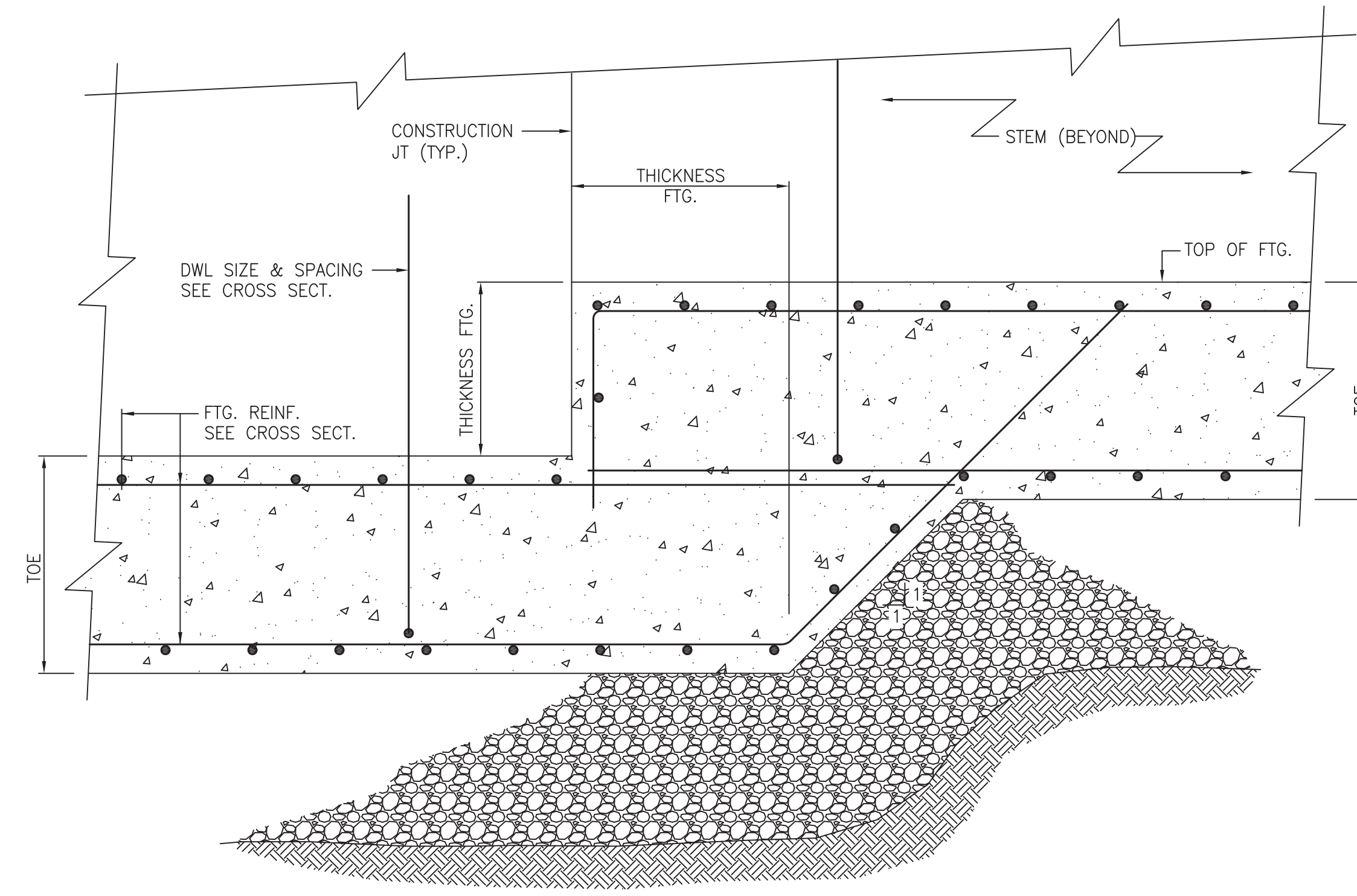
MICHAEL J. MCCLELLAND P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LIC. 32468

SCALE: As Shown
DATE: February 2022
DRAWN BY: RTJS
DESIGNED BY: RTJS
CHECKED BY: NH
SHEET: 195 OF 197

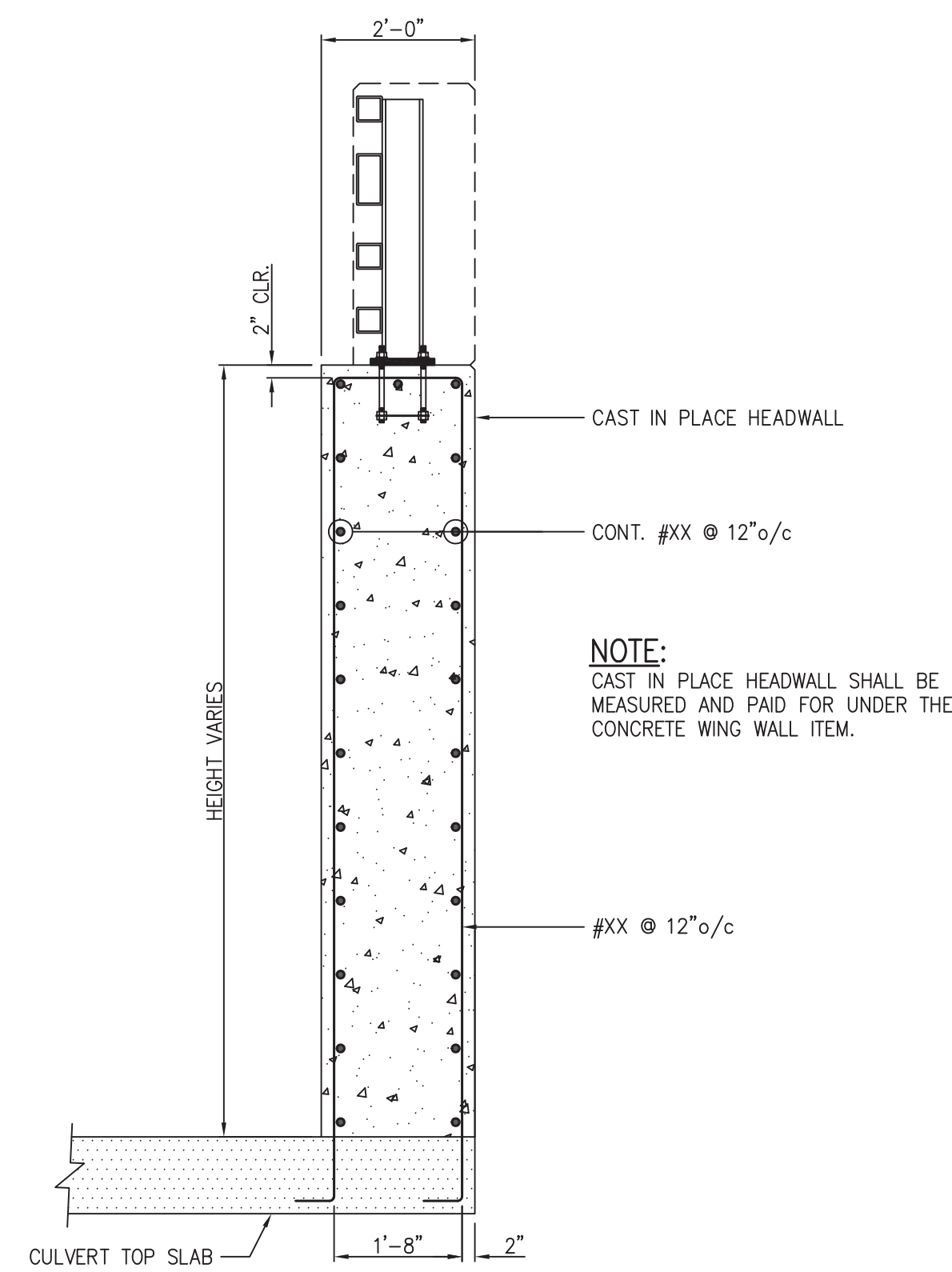
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TYPICAL WINGWALL SECTION
SCALE: 3/4"=1'-0"




TYPICAL STEPPED FOOTING DETAIL
SCALE: 3/4"=1'-0"

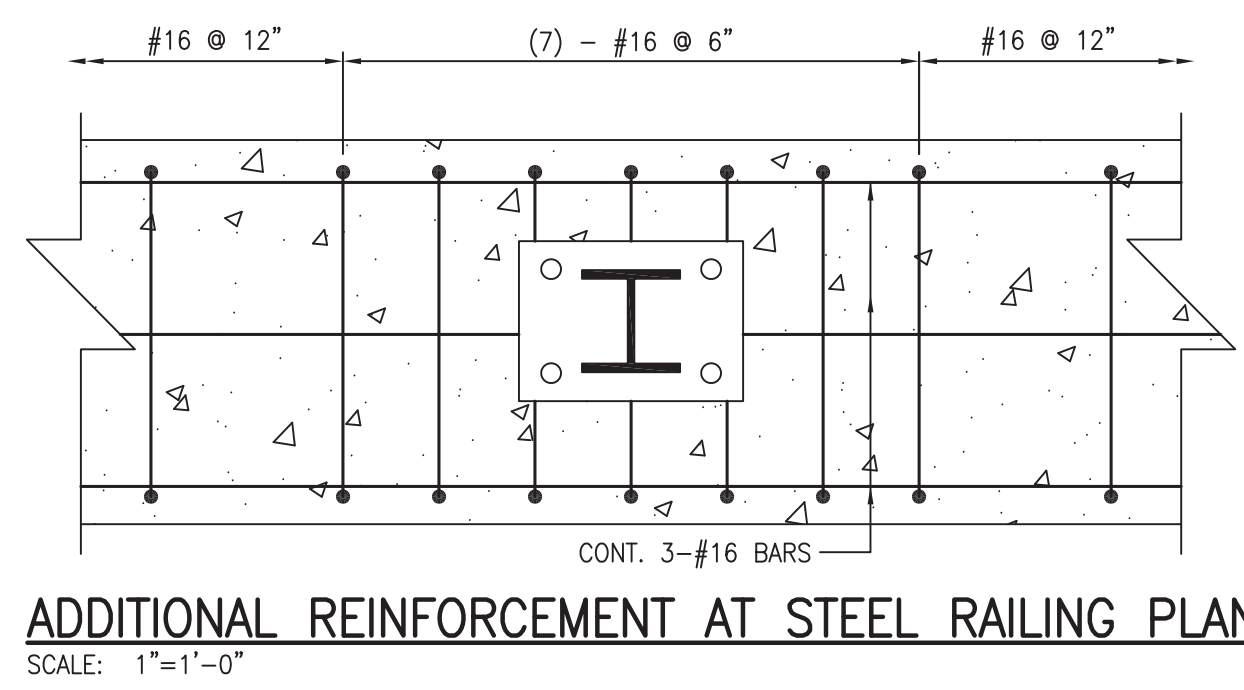
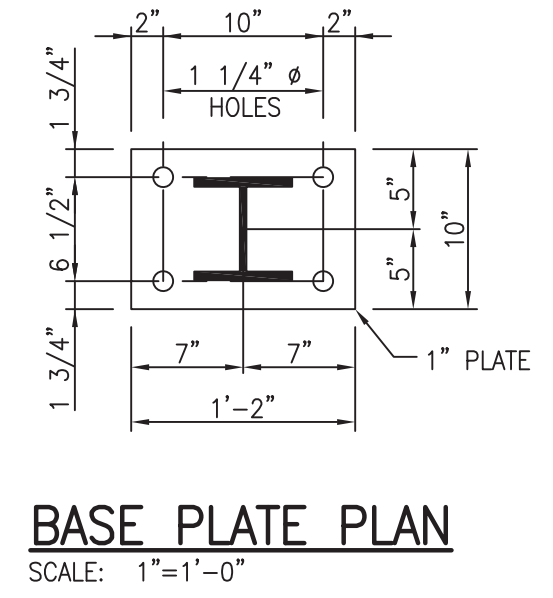
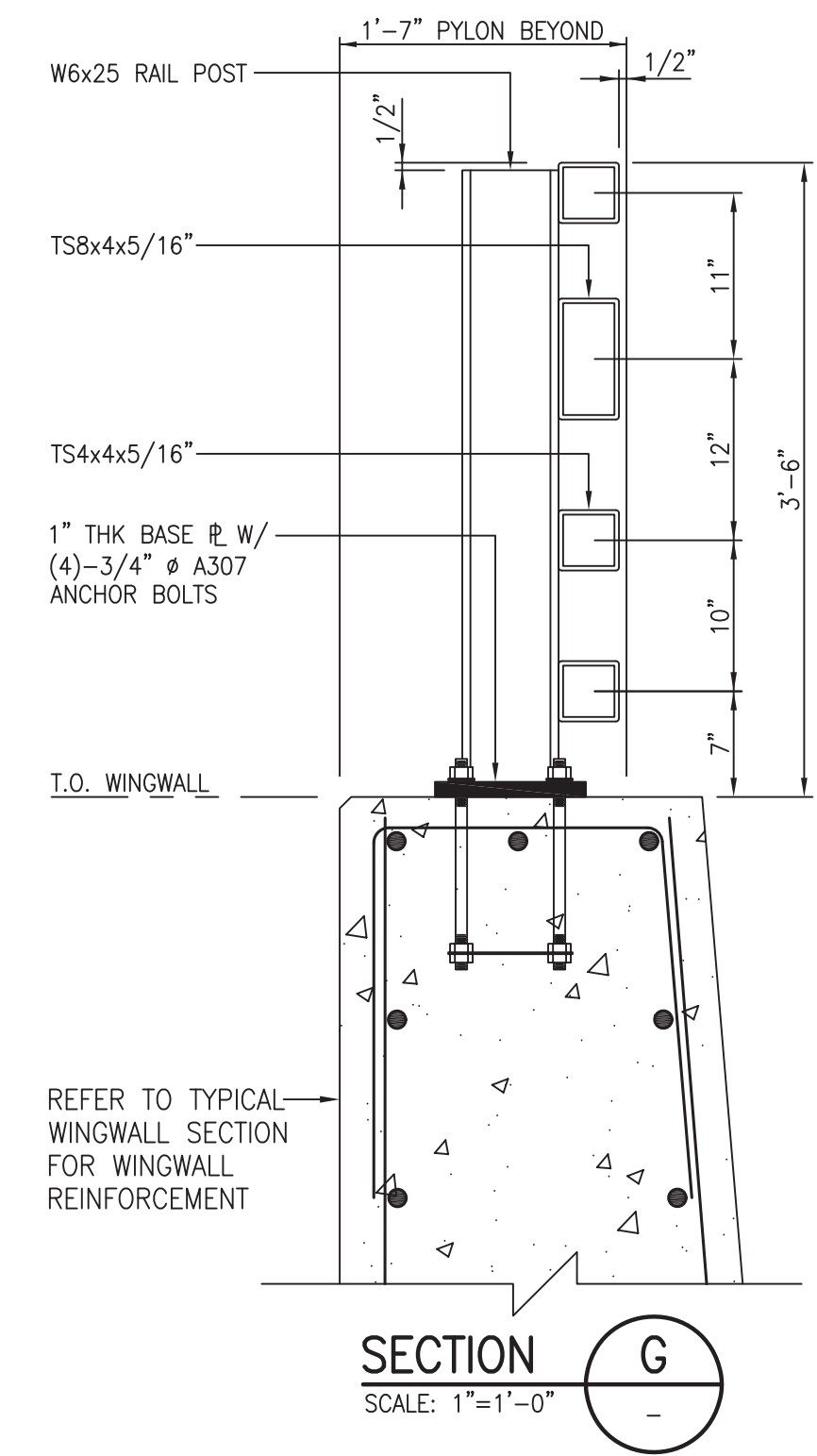
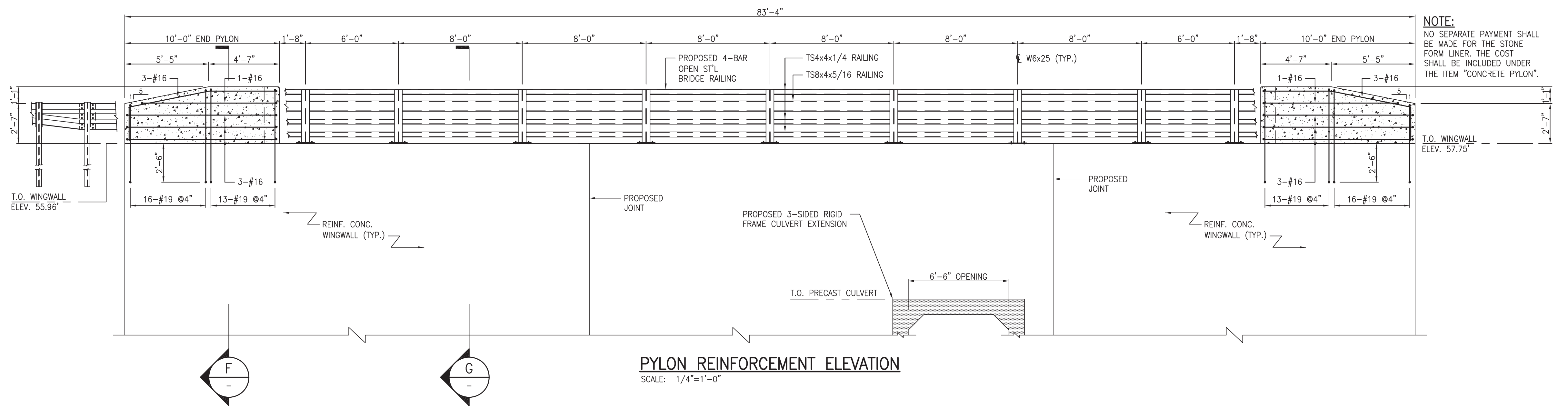
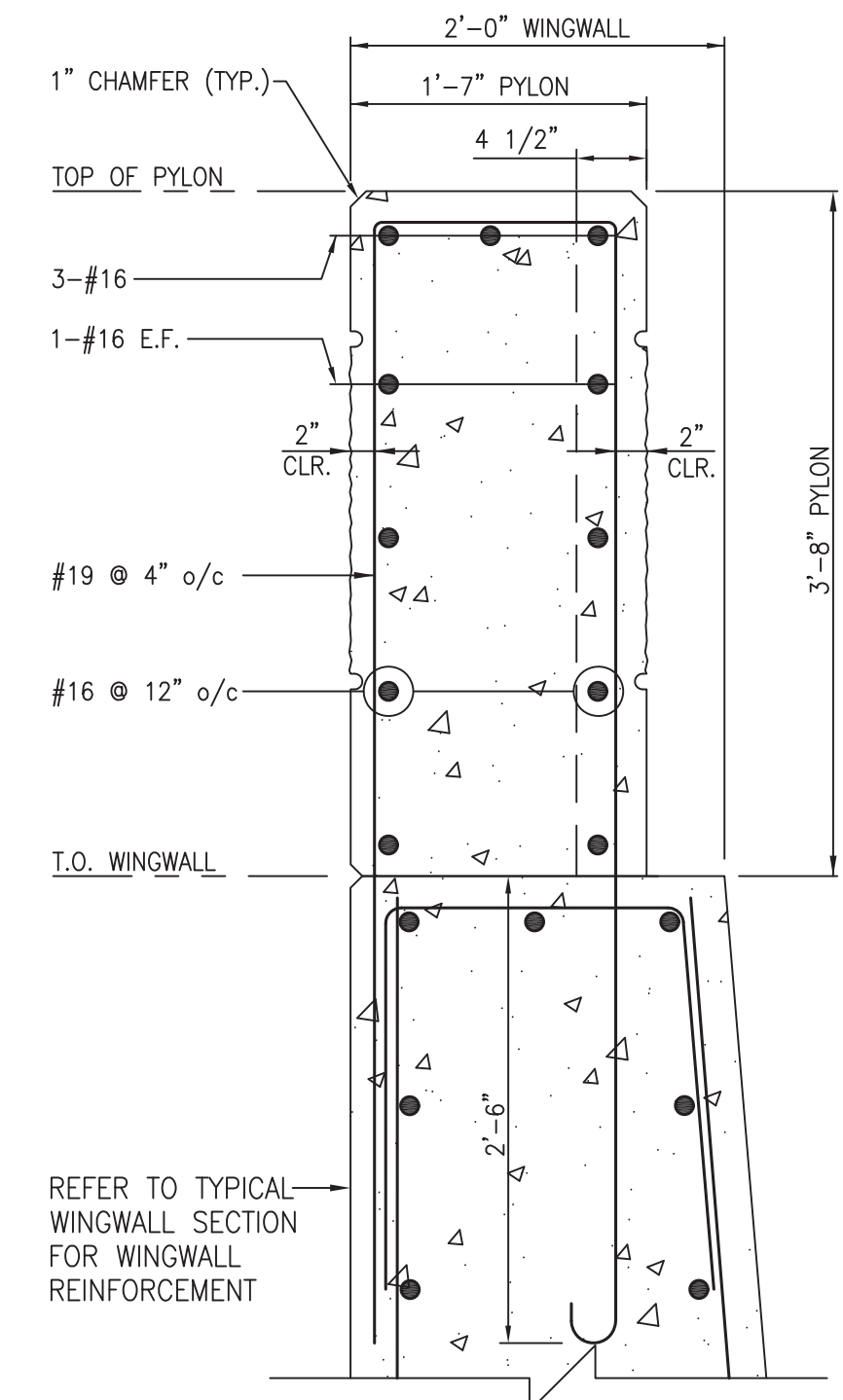
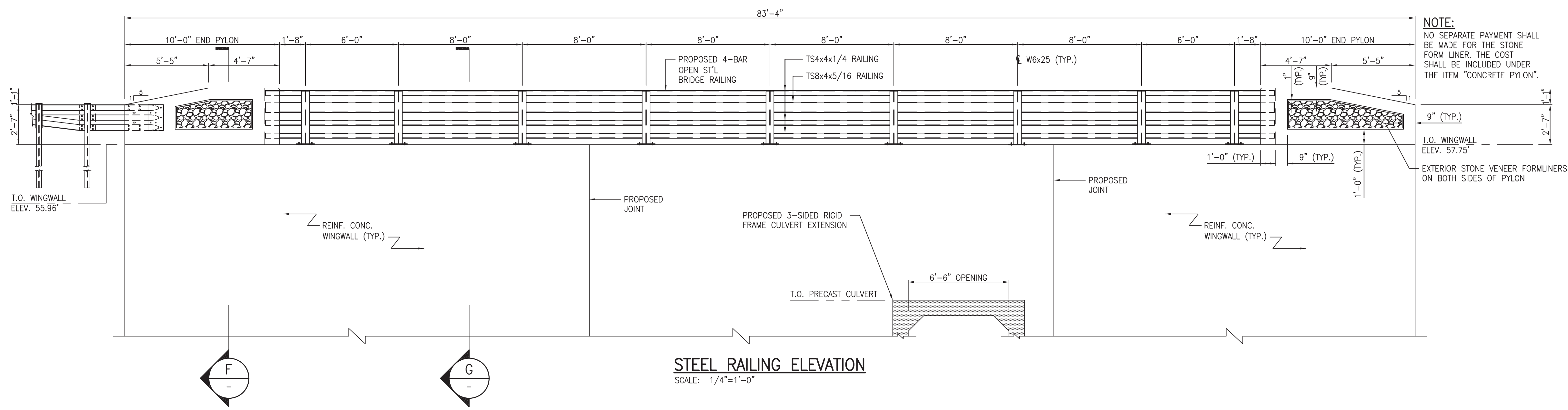


HEADWALL REINFORCEMENT SECTION
SCALE: 1/2"=1'-0"

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TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS WINGWALL AND HEADWALL SECTIONS AND DETAILS					
 CONSULTING AND MUNICIPAL ENGINEERS					
3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162		1460 ROCKITE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194		(732) 727 8000	
JOHN H. ALLGAIER P.E. & P.P. (1983 - 1991)		DAVID J. SAMUEL P.E. & P.P. (1983 - 1991)		JOHN J. STEFANI P.E., L.S. & P.P. (1983 - 1991)	
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MICHAEL J. McCLELLAND P.E.		LIC. 32468		DATE February 2022	
DRAWN BY RTJS		CHECKED BY RTJS		SHEET 196 of 197	
CHECKED BY NH		DATE 2/17/2022		FILE NO. PWB04609.01	



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TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY ROUTE 9 AND MAIN STREET (CR 514) ROADWAY IMPROVEMENTS STEEL RAILING ELEVATION AND DETAILS					
 ASSOCIATES CONSULTING AND MUNICIPAL ENGINEERS (732) 727 8000 3141 BORDENTOWN AVENUE, PARLIN, NEW JERSEY 08859-1162 1460 ROUTE 9 SOUTH, HOWELL, NEW JERSEY 07731-1194 (732) 462 7400					
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MICHAEL J. McCLELLAND P.E. NEW JERSEY PROFESSIONAL ENGINEER L.C. 32468 DATE: 2/17/2022		As Shown February 2022 DRAWN BY: RTJS CHECKED BY: NH SHEET: 197 of 197	FILE NO. PWB0609.01 DRAWING NO.		