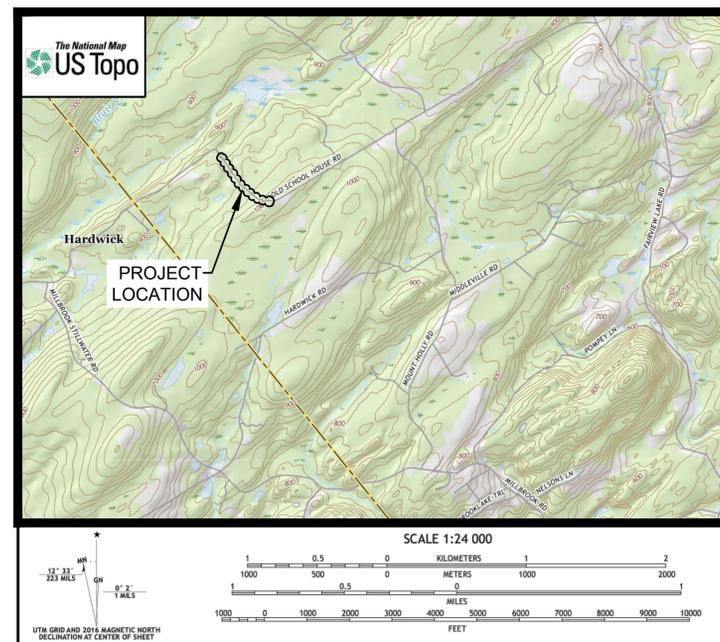


OLD SCHOOL HOUSE ROAD RECONSTRUCTION SECTION III TOWNSHIP OF STILLWATER SUSSEX COUNTY, NEW JERSEY

SHEET INDEX

SHEET	DESCRIPTION
1	TITLE SHEET
2	CONSTRUCTION PLAN START TO STA 05+75
3	CONSTRUCTION PLAN STA 5+75 TO STA 11+75
4	CONSTRUCTION PLAN STA 11+75 TO END
5	CONSTRUCTION DETAILS
6	TRAFFIC CONTROL PLAN

SUMMARY OF QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1	HMA MILLING, 3" or LESS	S.Y.	3,000
2	HMA 19M84 BASE COURSE	TONS	600
3	HMA 9.5M84 SURFACE COURSE	TONS	550
4	18" HIGH DENSITY POLYETHYLENE PIPE	L.F.	380
5	18" HIGH DENSITY POLYETHYLENE PIPE	L.F.	30
6	SUBBASE OUTLET DRAIN	L.F.	185
7	INLET, TYPE A	EACH	5
8	TRAFFIC STRIPES, 4"	L.F.	3,800
9	TOPSOIL, FERTILIZING & SEEDING	S.Y.	200
10	FUEL PRICE ADJUSTMENT	L.S.	1
11	ASPHALT PRICE ADJUSTMENT	L.S.	1



KEY MAP

REFERENCE: USGS, THE NATIONAL MAP, US TOPO, FLATBROOKVILLE QUADRANGLE, NJ-PA, 7.5 MINUTE SERIES, 2016.

MAYOR

Lisa Chammings

COMMITTEE MEMBERS

Timmy Fisher Bill Morrison
Charles Gross George Scott

STATE OF NEW JERSEY

DEPARTMENT OF TRANSPORTATION

STANDARD SPECIFICATIONS FOR ROAD
AND BRIDGE CONSTRUCTION, 2007.

STANDARD ROADWAY CONSTRUCTION,
TRAFFIC CONTROL - BRIDGE CONSTRUCTION
DETAILS BOOKLET, 2016.



GUERIN & VREELAND ENGINEERING, INC.

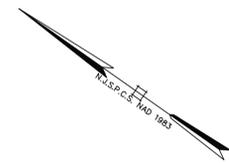
BARTLEY SQUARE
272 ROUTE 206 - SUITE 215
FLANDERS, NJ 07836

(973) 252-9340
FAX (973) 252-3069
www.guerinvreeland.com

MAY 2019

REVISIONS		TITLE SHEET	
Date	Description	AS SHOWN	DATE
			MAY 2019

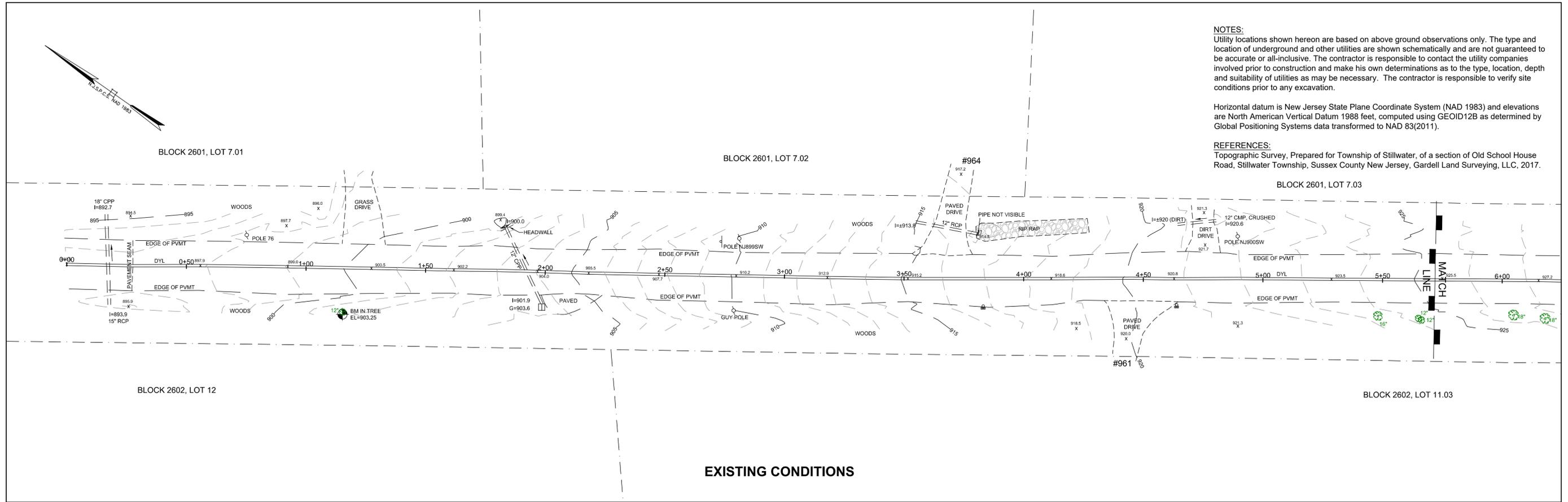
GUERIN & VREELAND ENGINEERING, INC. BARTLEY SQUARE 272 ROUTE 206 - SUITE 215 FLANDERS, NJ 07836 www.guerinvreeland.com Cert. of Authorization #24GA28049400		SCALE: AS SHOWN	DATE: MAY 2019
DRAWN BY: IMGV	CHECKED BY: RPG	SHEET NO.: 1 OF 6	
PROJECT NO.: 1217		PROJECT NO.: 1217	



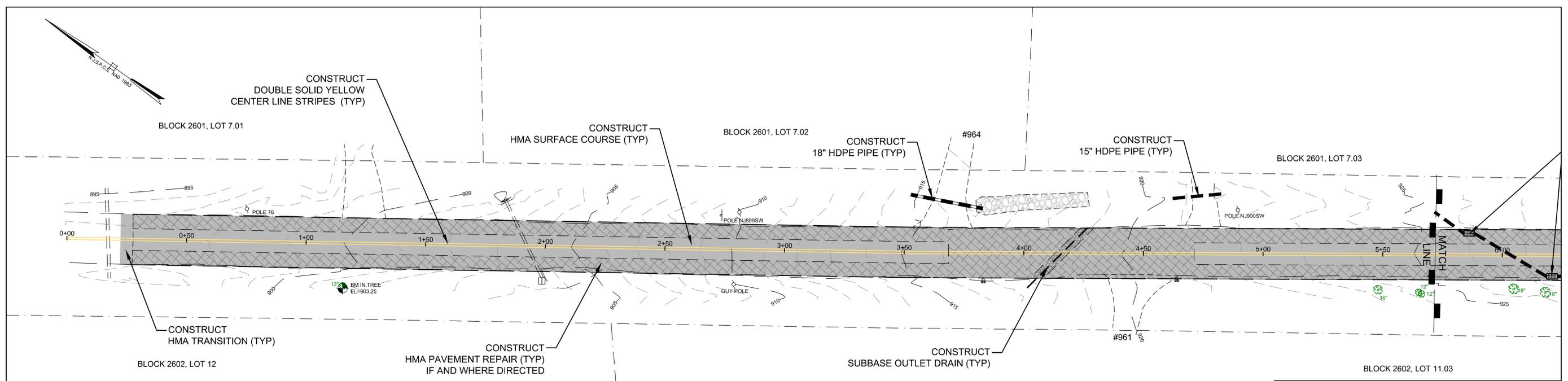
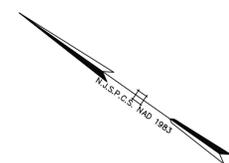
NOTES:
 Utility locations shown hereon are based on above ground observations only. The type and location of underground and other utilities are shown schematically and are not guaranteed to be accurate or all-inclusive. The contractor is responsible to contact the utility companies involved prior to construction and make his own determinations as to the type, location, depth and suitability of utilities as may be necessary. The contractor is responsible to verify site conditions prior to any excavation.

Horizontal datum is New Jersey State Plane Coordinate System (NAD 1983) and elevations are North American Vertical Datum 1988 feet, computed using GEOID12B as determined by Global Positioning Systems data transformed to NAD 83(2011).

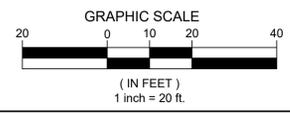
REFERENCES:
 Topographic Survey, Prepared for Township of Stillwater, of a section of Old School House Road, Stillwater Township, Sussex County New Jersey, Gardell Land Surveying, LLC, 2017.



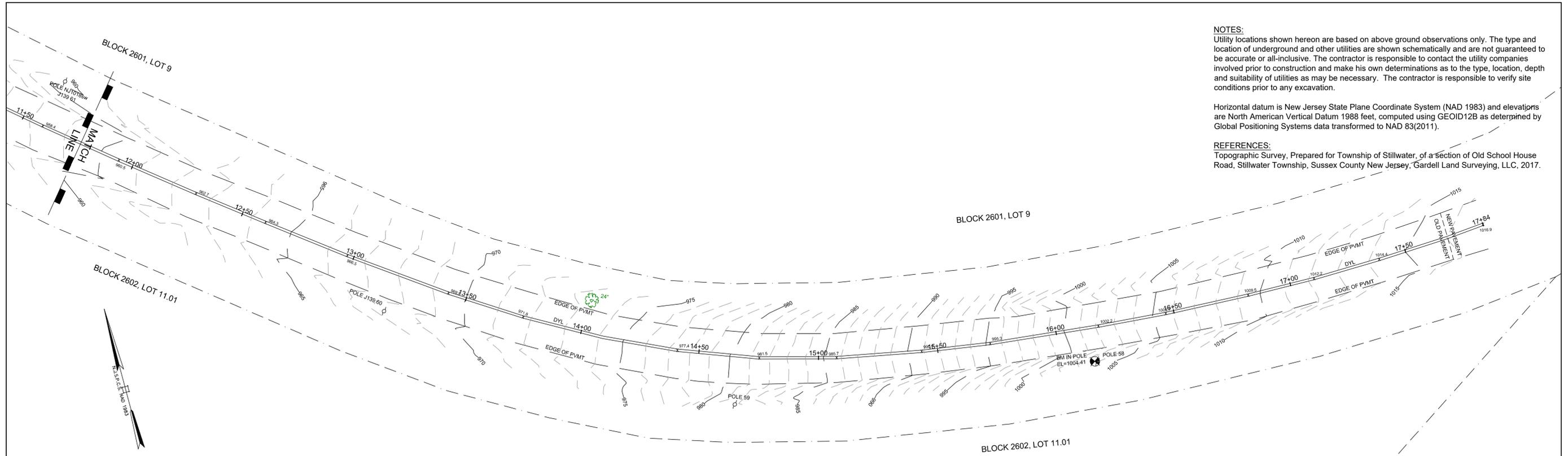
EXISTING CONDITIONS



PROPOSED IMPROVEMENTS



REVISIONS		START TO STA 05+75 OLD SCHOOL HOUSE ROAD RECONSTRUCTION STILLWATER TOWNSHIP, SUSSEX COUNTY, NJ	
Date	Description	SCALE:	DATE:
		AS SHOWN	MAY 2019
GUERIN & VREELAND ENGINEERING, INC. BARTLEY SQUARE 272 ROUTE 206 - SUITE 215 FLANDERS, NJ 07836 Cert. of Authorization #24GA29049400		DRAWN BY:	CHECKED BY:
		MGV	RPG
MICHAEL G. VREELAND, P.E. PROFESSIONAL ENGINEER, N.J. LIC. NO. 41682 <i>Michael G. Vreeland</i>		SHEET NO.:	PROJECT NO.:
		2 OF 6	1217

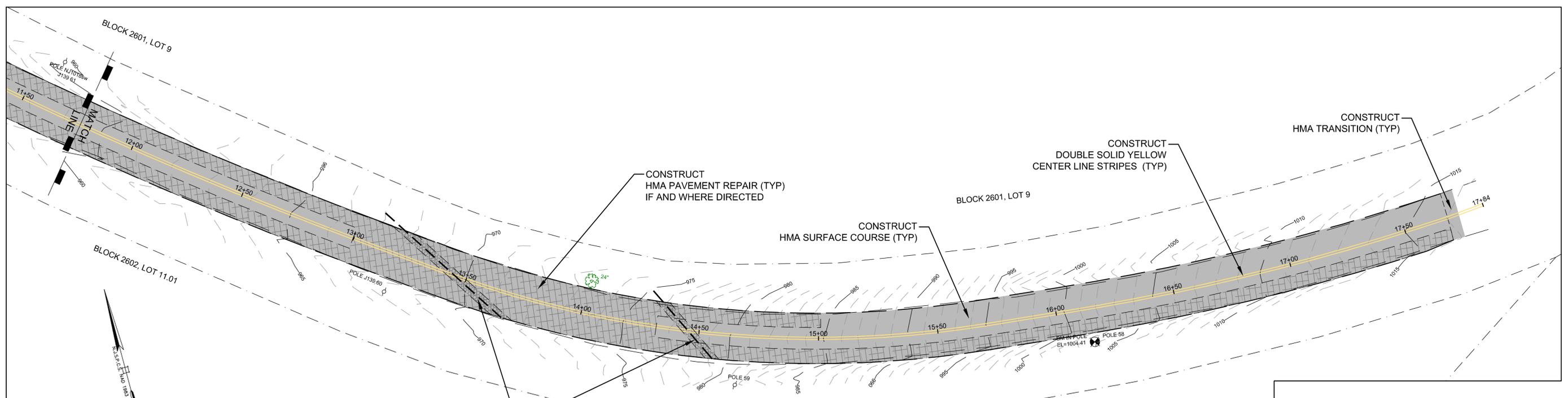


EXISTING CONDITIONS

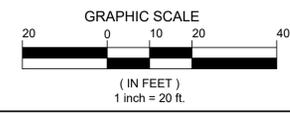
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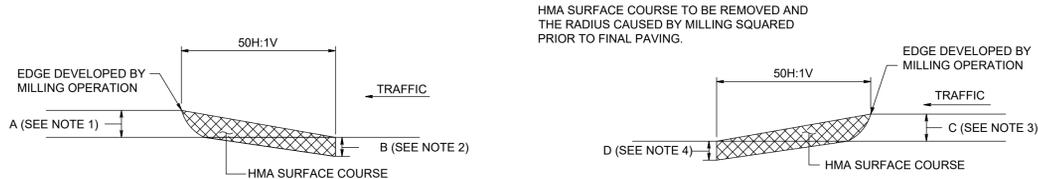
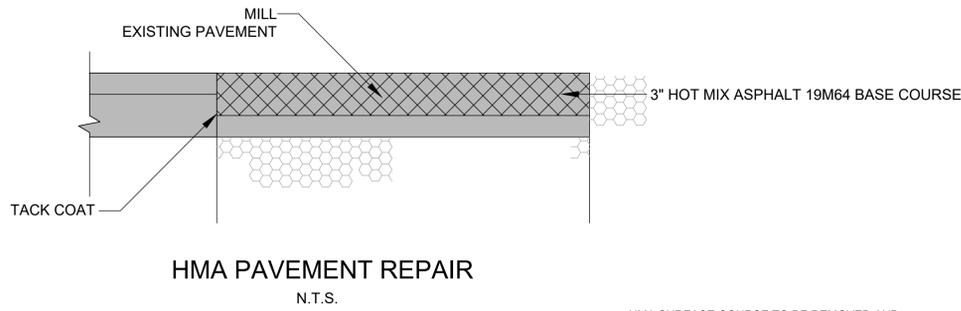
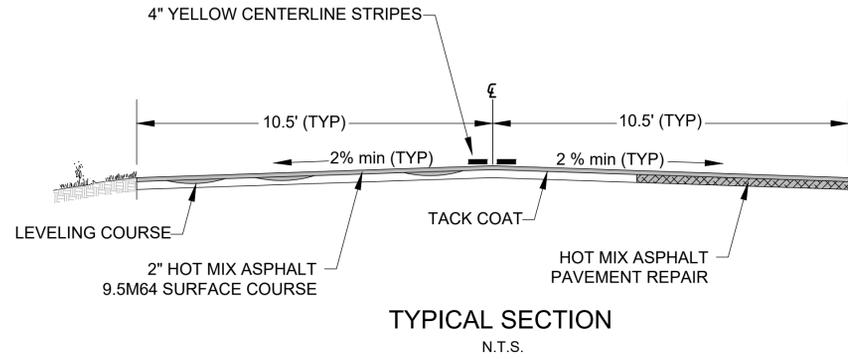
PROPOSED IMPROVEMENTS



REVISIONS		DATE		DESCRIPTION	

STA 11+75 TO END OLD SCHOOL HOUSE ROAD RECONSTRUCTION
 STILLWATER TOWNSHIP, SUSSEX COUNTY, NJ

GUERIN & VREELAND ENGINEERING, INC.		SCALE:	DATE:
BARTLEY SQUARE 272 ROUTE 206 - SUITE 215 FLANDERS, NJ 07836		AS SHOWN	MAY 2019
www.guerinvreeland.com Cert. of Authorization #24GA29049400		DRAWN BY:	CHECKED BY:
MICHAEL G. VREELAND, P.E.		MGV	RPG
PROFESSIONAL ENGINEER, N.J. LIC. NO. 41682		SHEET NO:	PROJECT NO:
<i>Michael G. Vreeland</i>		4 OF 6	1217

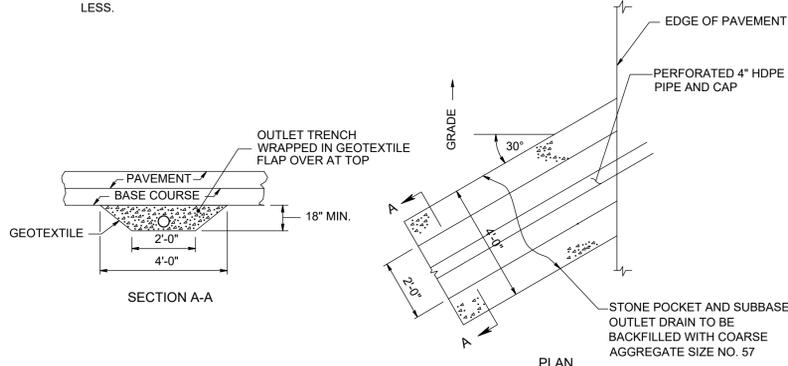


NOTES:

1. USE HMA SURFACE COURSE IN THE MILLING TRANSITION WHEN LEADING EDGE DEVELOPED BY MILLING OPERATION IS EQUAL TO OR GREATER THAN 1 INCH. NONE REQUIRED FOR EDGE LESS THAN 1 INCH.
2. ENSURE THAT THE THICKNESS OF THE HMA SURFACE COURSE IN THE MILLING TRANSITION IS NOT LESS THAN B. B IS EQUAL TO 2 INCHES OR A, WHICHEVER IS LESS.
3. USE HMA SURFACE COURSE IN THE MILLING TRANSITION WHEN TRAILING EDGE DEVELOPED BY MILLING OPERATION IS EQUAL TO OR GREATER THAN 1 1/2 INCHES. NONE REQUIRED FOR EDGE LESS THAN 1 1/2 INCHES.
4. ENSURE THAT THE THICKNESS OF THE HMA SURFACE COURSE IN THE MILLING TRANSITION IS NOT LESS THAN D. D IS EQUAL TO 2 INCHES OR C, WHICHEVER IS LESS.

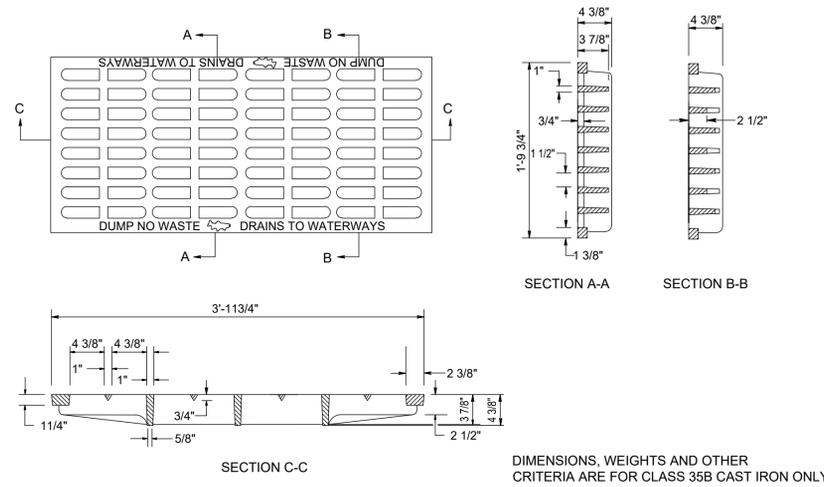
MILLING TRANSITIONS
REF: NJDOT CD-401-1.1

MILLING
N.T.S.

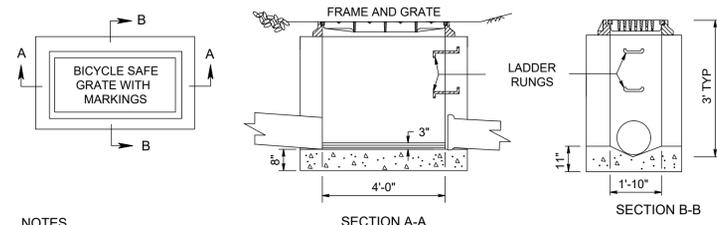


SUBBASE OUTLET DRAIN
N.T.S.

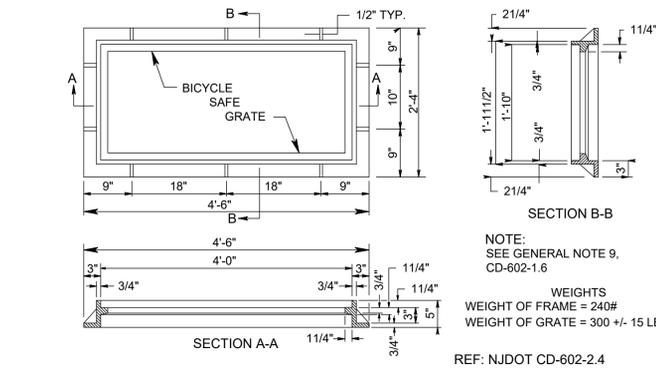
- NOTES:
1. THE SIZE OF PERFORATIONS TO BE SMALLER THAN SIZE OF STONE SPECIFIED, OTHERWISE WRAP FILTER FABRIC AROUND PIPE.



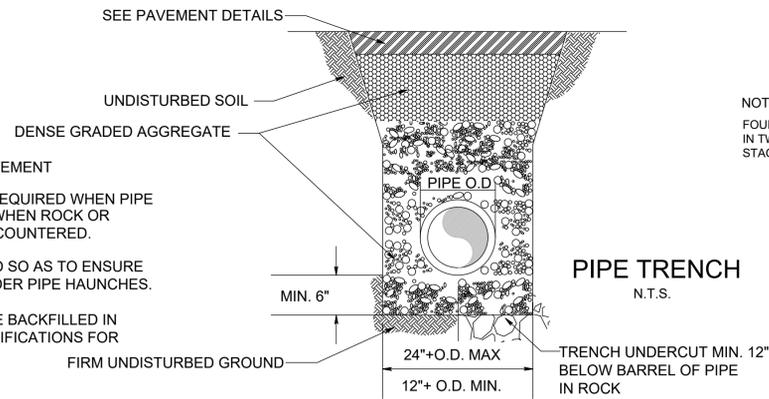
BICYCLE SAFE GRATE WITH MARKINGS
N.T.S.
REF: NJDOT CD-602-1.8



INLET, TYPE A
N.T.S.
REF: NJDOT CD-602-2.1



INLET TYPE A CASTING
N.T.S.



TRENCH DETAIL NOTES:

1. SAWCUT THE EXISTING PAVEMENT
2. ADDITIONAL EXCAVATION REQUIRED WHEN PIPE BEDDING IS DESIGNATED OR WHEN ROCK OR OTHER HARD MATERIAL IS ENCOUNTERED.
3. BACKFILL SHALL BE PLACED SO AS TO ENSURE SUFFICIENT COMPACTION UNDER PIPE HAUNCHES.
4. THE PIPE TRENCH SHALL BE BACKFILLED IN ACCORDANCE WITH THE SPECIFICATIONS FOR BACKFILLING.

GENERAL NOTES:

1. INLETS MAY BE CONSTRUCTED OF BRICK, CONCRETE, CONCRETE BLOCK, OR PRECAST CONCRETE. WALLS TO BE 8 INCHES THICK IF BRICK AND 6 INCHES THICK IF CONCRETE, CONCRETE BLOCK, OR PRECAST CONCRETE. INLET FOUNDATIONS AND INVERTS TO BE CLASS B CONCRETE.
2. CORBELLING OF INLET WALLS WILL BE PERMITTED AT THE RATE OF 1/2 INCH PER 8 INCHES OF HEIGHT; MAXIMUM CORBEL 6 INCHES PER WALL.
3. EXCEPT FOR INLETS TYPE A AND C, FOUNDATIONS AND INVERTS TO BE CONSTRUCTED IN TWO STAGES, AND THE BOTTOM OF THE FOOTINGS TO BE 8 INCHES BELOW THE OUTER WALL OF THE LOWEST PIPE IN THE INLET.
4. WHEN THE DEPTH OF AN INLET THAT IS NOT PRECAST EXCEEDS 10 FEET AS MEASURED FROM TOP OF GRATE TO INVERT, WALLS BELOW A DEPTH OF 8 FEET TO BE 12 INCHES THICK AND THE DEPTH OF FOUNDATION INCREASED TO 12 INCHES. WHEN ROCK IS ENCOUNTERED, THE DEPTH OF THE FOUNDATION NOT TO BE INCREASED.
5. PLACE INLET FOUNDATIONS WHICH ARE PRECAST ON A 6 INCH THICK BED OF COMPACTED COARSE AGGREGATE #57 EXTEND THE COARSE AGGREGATE 6 INCHES BEYOND THE HORIZONTAL LIMITS OF THE INLET FOUNDATION.
6. ADJUST CASTINGS FOR PRECAST INLETS TO GRADE WITH COURSES OF BRICK, AS REQUIRED, 12 INCHES MAXIMUM.
7. WHEN THE DEPTH OF A PRECAST INLET EXCEEDS 10 FEET AS MEASURED FROM TOP OF GRATE TO INVERT, THE FOUNDATION IS TO BE INCREASED TO 12 INCHES. WHEN ROCK IS ENCOUNTERED, THE DEPTH OF THE FOUNDATION IS NOT TO BE INCREASED.
8. MINIMUM WALL REINFORCEMENT FOR PRECAST INLETS TYPES A, B, C, E, D-1, D-2, AND B MODIFIED:

DEPTH BELOW TOP OF GRATE	HORIZONTAL REINF.	VERTICAL REINF.	WALL THK.
0' TO 10'-0"	#13 @ 10" C.C.	#13 @ 18" C.C.	6"
10'-1" TO 15'-0"	#13 @ 8" C.C.	#13 @ 18" C.C.	6"
15'-1" TO 20'-0"	#13 @ 6" C.C.	#13 @ 18" C.C.	6"

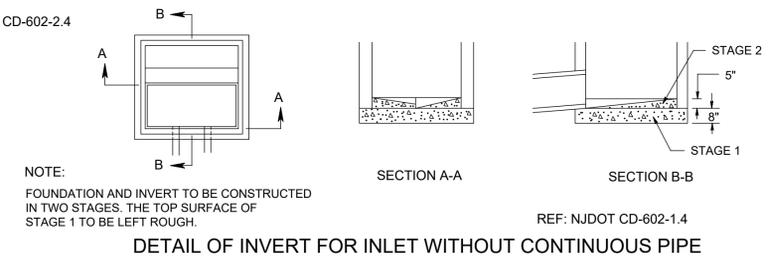
REINFORCING SHOWN FOR PRECAST INLETS IS THE MINIMUM REQUIRED. ADDITIONAL REINFORCING FOR HANDLING IS THE RESPONSIBILITY OF THE CONTRACTOR.

ALTERNATE REINFORCEMENT

DEPTH BELOW TOP OF GRATE	REINFORCEMENT
0' TO 10'-0"	WWF 3 x 6 W6 WIRES SPACED AT 3' TO RUN HORIZONTAL IN ALL CASES.
10'-1" TO 15'-0"	WWF 3 x 6 W6 ADD #10 REINFORCEMENT STEEL @ 18" HORIZONTAL.
15'-1" TO 20'0"	WWF 3 x 6 W6 ADD #10 REINFORCEMENT STEEL @ 9" HORIZONTAL OR ADD #13 REINFORCEMENT STEEL AT 15" HORIZONTAL.

9. DIMENSIONS, WEIGHTS, AND OTHER CRITERIA SHOWN ON THESE DETAILS ARE FOR CLASS 35B CAST IRON.

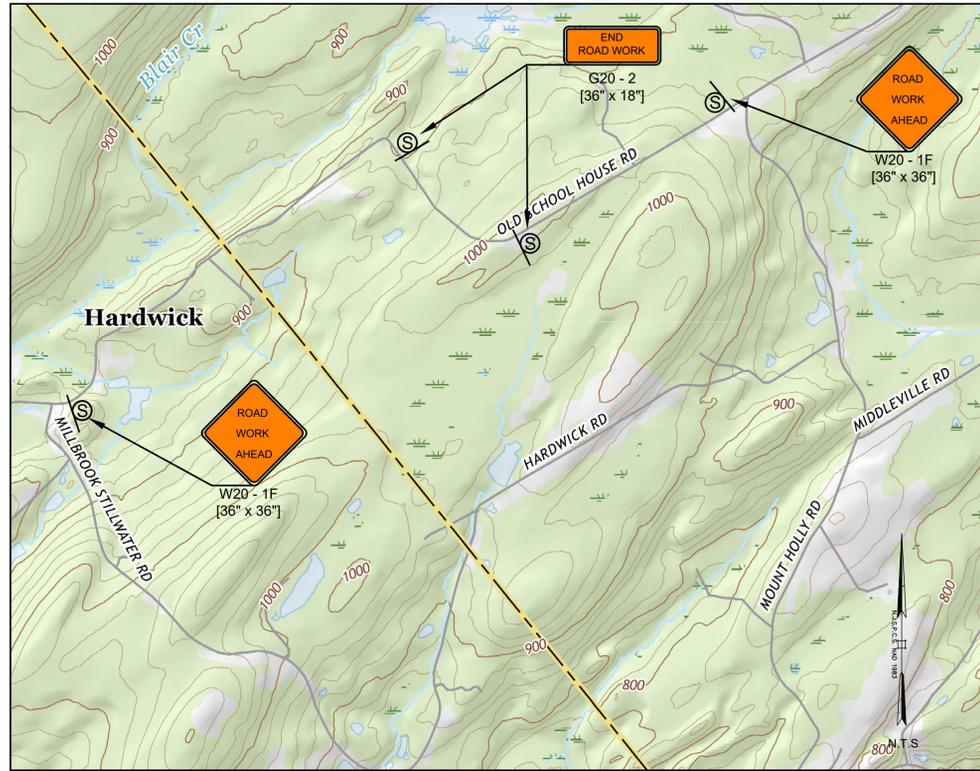
REF NJDOT CD-602-1.6



NOTE:
FOUNDATION AND INVERT TO BE CONSTRUCTED IN TWO STAGES. THE TOP SURFACE OF STAGE 1 TO BE LEFT ROUGH.

REF: NJDOT CD-602-1.4

REVISIONS		CONSTRUCTION DETAILS	
Date	Description	OLD SCHOOL HOUSE ROAD RECONSTRUCTION	
		STILLWATER TOWNSHIP, SUSSEX COUNTY, NJ	
GUERIN & VREELAND ENGINEERING, INC. BARTLEY SQUARE 272 ROUTE 206 - SUITE 215 FLANDERS, NJ 07836 (973) 252-9340 FAX (973) 252-3959 www.guerinvreeland.com Cert. of Authorization #24GA29049400		SCALE: AS SHOWN	DATE: MAY 2019
MICHAEL G. VREELAND, P.E. PROFESSIONAL ENGINEER, N.J. LIC. NO. 41682 <i>Michael G. Vreeland</i>		DRAWN BY: MGW	CHECKED BY: RPG
SHEET NO. 5 OF 6		PROJECT NO. 1217	



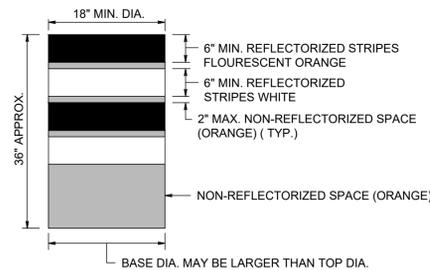
SIGN SCHEDULE

SIGN DESIGNATION	DESCRIPTION	QUANTITY
G20-2	END ROAD WORK	2
W5-1	ROAD NARROWS	2
W20-1F	ROAD WORK AHEAD	5
W21-1	WORKER SYMBOL	2

ENSURE DRUMS ARE MADE OF ORANGE PLASTIC WITH A MINIMUM OF FOUR ALTERNATE FLUORESCENT ORANGE AND WHITE RETROREFLECTIVE STRIPES. IF THERE ARE NON-REFLECTORIZED SPACES BETWEEN THE STRIPES, THEY ARE TO BE NO MORE THAN 2" WIDE. ENSURE RETROREFLECTIVE SHEETING FOR STRIPES CONFORMS WITH ASTM D 4956 TYPE VII OR VIII WITH S2 REQUIREMENTS.

ENSURE THE TOP OF THE DRUM IS NOT OPEN. CONSTRUCT DRUMS TO INHIBIT ROLLING IF KNOCKED OVER.

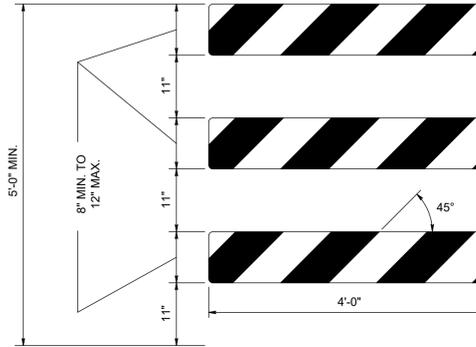
ENSURE THE REFLECTORIZED AREA OF DRUMS IS ROUND EXCEPT THAT OTHER SHAPES, WHICH PROVIDE THE SAME VISIBILITY AS AN 18 INCH DIAMETER ROUND DRUM REGARDLESS OF ORIENTATION, MAY BE USED.



WHEN BALLAST IS REQUIRED, USE SAND. THE MAXIMUM WEIGHT OF THE BALLAST SHALL BE 50 LBS. AND IS TO BE LOCATED APPROXIMATELY AT GROUND LEVEL. ALTERNATE TYPES OF BALLAST MUST BE APPROVED BY THE R.E.

DRUMS

REF: NJDOT CD-159-1.1



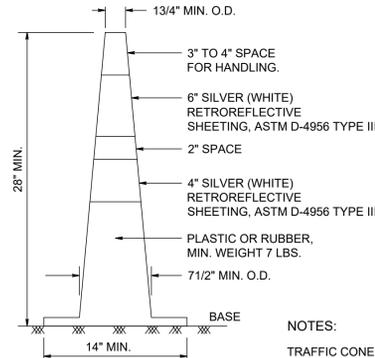
TYPE III BARRICADE - FRONT VIEW

NOTES:

- ENSURE THE 8" MIN. x 48", TO 12" MAX. x 48" BARRICADE RAILS TO BE ATTACHED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
- ENSURE ORANGE AND SILVER (WHITE) STRIPES TO BE RETROREFLECTIVE SHEETING, ASTM D 4956 TYPE III. ALTERNATE ORANGE AND SILVER (WHITE) STRIPES 6" WIDE SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES IN THE DIRECTION TRAFFIC IS TO PASS.
- THE FRAMING, RAILS AND BALLAST FOR BARRICADE BARRICADE TO BE NCHRP-350 CRASHED TESTED AND FHWA APPROVED.
- IF NECESSARY, FABRICATE THE BALLAST AND PLACE ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.

BREAKAWAY BARRICADES

REF: NJDOT CD-159-1.3



TRAFFIC CONES

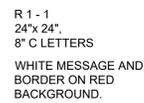
REF: NJDOT CD-159-1.2

NOTES:

- TRAFFIC CONES MUST BE PREDOMINATELY ORANGE IN COLOR.
- BASES MAY BE OF BREAKAWAY BALLASTED TYPE.
- MINOR MANUFACTURER'S VARIATIONS MAY BE ACCEPTABLE UPON APPROVAL OF THE ENGINEER.

TRAFFIC CONTROL DEVICES

N.T.S.



STOP VIEW



SLOW VIEW

NOTE:

SIGN FACES TO BE RETROREFLECTIVE SHEETING, ASTM D 4956 TYPE III.

STOP / SLOW PADDLE

REF: NJDOT CD-159-2.3

GENERAL NOTES:

- DIMENSIONS, COLORS AND DETAILS OF VARIOUS SIZE SIGNS, AND ACCESSORY PANELS TO FOLLOW STANDARDS IN THE CURRENT "STANDARD HIGHWAY SIGN PUBLICATION" AND THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".
- LETTERS AND NUMERALS SHALL CONFORM TO THE CURRENT MANUAL, "STANDARD ALPHABETS FOR HIGHWAY SIGNS" U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.
- MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".
- 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.
- ENSURE PRIOR TO ANY ROAD CONSTRUCTION TRAFFIC CONTROL SIGNS AND DEVICES ARE IN PLACE. DO NOT PLACE TRAFFIC CONTROL DEVICES FOR LANE CLOSURE WITHOUT ACTUAL LANE CLOSURES AND REMOVE IMMEDIATELY UPON REMOVAL OF THE CLOSURES.
- CONSTRUCTION SIGN W99-2 (GIVE US A BRAKE) SHALL BE LOCATED 200 FEET IN ADVANCE OF PROJECT LIMITS.
- LOCATE A W1-6 (ARROW) SIGN MOUNTED ON A BREAKAWAY BARRICADE AND CENTERED ON THE CLOSED WIDTH 100 FEET BEYOND EACH INTERSECTION OR MAIN ACCESS POINT WITHIN THE AREA OF A LANE OR SHOULDER CLOSURE.
- PLACE CONSTRUCTION SIGNS R11-4 (ROAD CLOSED TO THRU TRAFFIC) AT THE INTERSECTING STREETS WHICH ARE CLOSED TO TRAFFIC BECAUSE OF CONSTRUCTION.
- USE CONSTRUCTION SIGNS W8-9A (SYMBOL FOR UNEVEN PAVEMENT) AND W8-15 (GROOVED PAVEMENT) WHEN SUCH PAVEMENT CONDITIONS EXIST.
- WHERE REQUIRED MAKE PROVISIONS FOR MAINTAINING PEDESTRIAN CROSSING LOCATIONS.
- ENSURE ALL EXISTING ROAD SIGNS, PAVEMENT MARKINGS AND/OR PLOWABLE PAVEMENT REFLECTORS WHICH CONFLICT WITH THE PROPOSED TRAFFIC CONTROL PLAN ARE COVERED, REMOVED OR RELOCATED.
- SUBMIT A PLAN FOR THE SAFE ACCESS OF CONSTRUCTION VEHICLES THROUGHOUT THE WORK SITE WHERE SPACE CONSTRAINTS PREVENT THE USE OF LANE CLOSURES. SUBMIT THE PLAN TO THE ENGINEER IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

BACKING MATERIAL

- USE ALUMINUM FLAT SHEET OF ALLOY AND TEMPER 5052-H38 OR 6061-T6:
 - 0.10" THICK FOR ALL CONSTRUCTION SIGNS EXCEPT SIGNS SHOWN MOUNTED ON BREAKAWAY BARRICADES.
 - 0.024" THICK FOR ALL CONSTRUCTION SIGNS SHOWN MOUNTED ON BREAKAWAY BARRICADES.

TEMPORARY SIGN SUPPORTS

- USE WELL SEASONED LUMBER FOR SIGN SUPPORTS, FREE OF SPLITS, KNOTS AND WARPS, OR OF STEEL COMPONENTS.
- WOOD POSTS TO HAVE A UNIFORM CROSS-SECTION AND NOT TO EXCEED THE FOLLOWING DIMENSIONS FOR:
 - SINGLE POST = 4" x 6"
 - TWO POSTS = 3" x 6" OR 4" x 5"
 - THREE POSTS = 3" x 5" OR 4" x 4"

4" X 6" WOOD POSTS TO BE MODIFIED BY DRILLING 1 1/2 INCH DIAMETER HOLES 4 INCHES AND 18 INCHES ABOVE THE GROUND LINE AND PERPENDICULAR TO THE ROADWAY CENTERLINE.

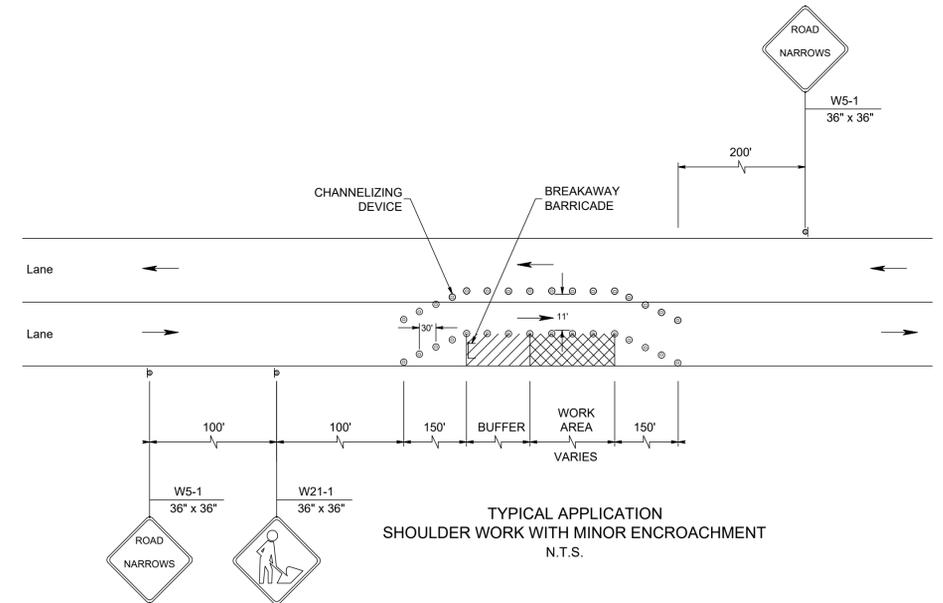
- NO BRACING IS PERMITTED. VERTICAL CLEARANCES FOR SIGNS MOUNTED ON WOOD SUPPORTS TO BE 7 FOOT MINIMUM. EMBEDMENT DEPTH FOR THE WOOD POST NOT TO EXCEED 3.5 FEET.
- STEEL POSTS IN ACCORDANCE WITH THE STANDARD DETAIL FOR U-POST SIGN SUPPORT.
- TEMPORARY SIGN SUPPORTS NOT MEETING THIS CRITERIA TO BE SHIELDED BY A LONGITUDINAL BARRIER OR CRASH CUSHIONS.
- USE WOOD POST ONLY ON TEMPORARY SIGN SUPPORTS.

SIGN FACES

- USE SIGN FACES OF ASTM D 4956 TYPE VII OR VIII FLUORESCENT ORANGE SHEETING.

FASTENING

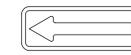
- SECURELY FASTEN ALL SIGNS TO THEIR SUPPORTS WITH BOLTS, NUTS AND WASHERS, AS SPECIFIED.



TYPICAL APPLICATION SHOULDER WORK WITH MINOR ENCROACHMENT N.T.S.



W8 - 15 [36" x 36"]



(L OR R) W1-6 [48" x 24"]

REVISIONS		DATE	
Date	Description		

TRAFFIC CONTROL PLAN
OLD SCHOOL HOUSE ROAD
RECONSTRUCTION
 STILLWATER TOWNSHIP, SUSSEX COUNTY, NJ

GUERIN & VRELAND ENGINEERING, INC. BARTLEY SQUARE 272 ROUTE 206 - SUITE 215 FLANDERS, NJ 07836 Cert. of Authorization #24GA29049400	SCALE: AS SHOWN	DATE: MAY 2019
MICHAEL G. VRELAND, P.E. PROFESSIONAL ENGINEER, N.J. LIC. NO. 41682	DRAWN BY: MGW	CHECKED BY: RPG
	SHEET NO: 6 OF 6	PROJECT NO: 1217