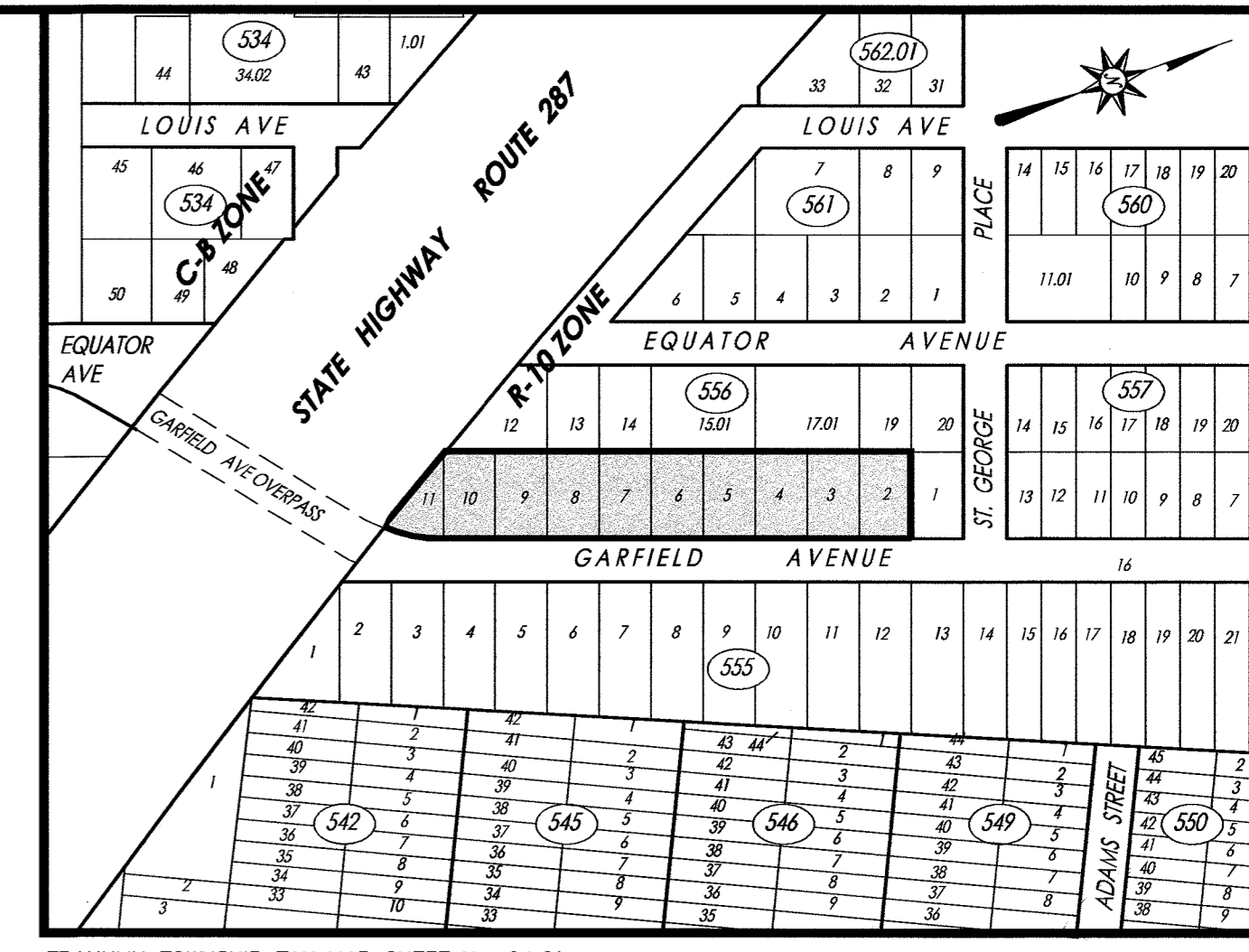
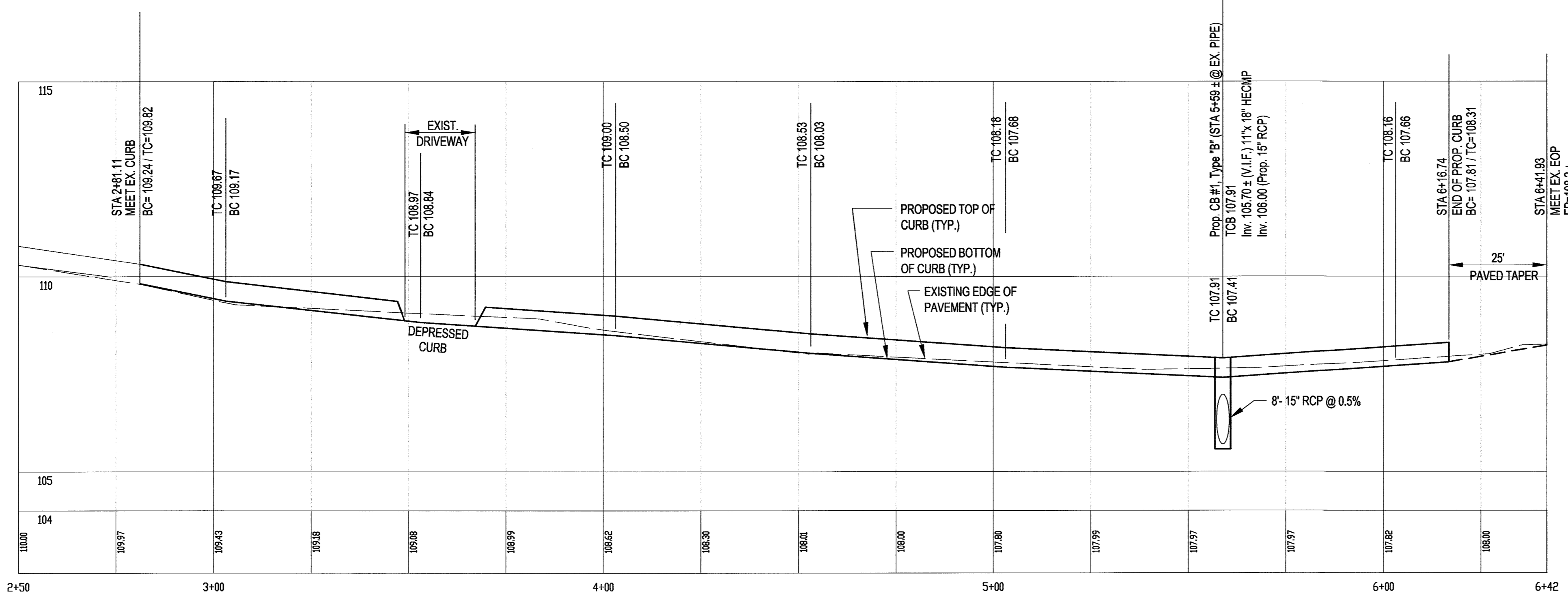


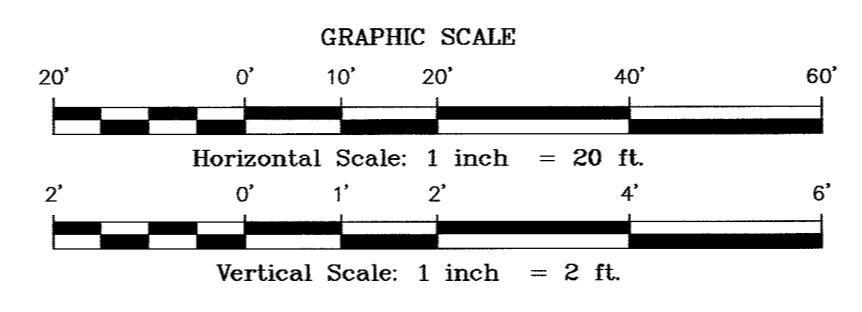
**GARFIELD AVENUE - ROAD WIDENING**  
SCALE: 1" = 20'



FRANKLIN TOWNSHIP TAX MAP SHEET No. 94.01.  
KEY MAP  
SCALE: 1" = 200'



**GARFIELD AVENUE - ROAD WIDENING (PROFILE VIEW)**  
SCALE: 1" = 20'



- NOTES :**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH FRANKLIN TOWNSHIP STANDARD DETAILS AND IF DISCREPANCIES EXIST BETWEEN DETAILS SHOWN HEREON AND THE TOWNSHIP STANDARDS, THE TOWNSHIP STANDARD SHALL BE PREVAIL.
  - ALL UTILITY BACKFILL MATERIALS ARE SUBJECT TO REVIEW AND APPROVAL OF THE TOWNSHIP ENGINEER.
  - ALL TRAFFIC CONTROL SIGNS AND DEVICES SHALL COMPLY WITH CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. TEMPORARY LANE CLOSURE DURING CONSTRUCTION SHALL FOLLOW N.J.D.O.T. GUIDELINES SUBJECT TO TOWNSHIP ENGINEER APPROVAL.
  - EXISTING CONDITIONS SHOWN HEREON ARE BASED ON PLANS BY OTHERS AS PER REFERENCES. CONTRACTOR MUST VERIFY EXISTING CONDITIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO THE START OF CONSTRUCTION.
  - CONTRACTOR MUST NOTIFY "NJ ONE CALL SYSTEM" FOR UTILITY MARKOUT PRIOR TO CONSTRUCTION AS REQUIRED.

- REFERENCES :**
- MINOR SUBDIVISION FOR LOTS 2-11 IN BLOCK 556, FRANKLIN TOWNSHIP, SOMERSET COUNTY, NEW JERSEY BY VANC CLEEF ENGINEERING ASSOCIATES, ROBERT B. HEIBELL, N.J.P.E. & L.S. LIC. No. 20792, DATED JUNE 10, 2014 LAST REVISED SEPT. 25, 2014.
  - FRANKLIN TOWNSHIP TAX MAP SHEET No. 94.01.
  - BOUNDARY AND TOPOGRAPHIC SURVEY BLOCK 555 LOTS 15-19, BLOCK 556 LOTS 2-11, FRANKLIN TOWNSHIP, SOMERSET COUNTY, NEW JERSEY BY KUPPER ASSOCIATES, PETER J. MOORE, N.J.P.L.S. LIC. # 37602, DATED MAY 7, 2002.
  - AERIAL INFORMATION BY NEW JERSEY OFFICE OF INFORMATION TECHNOLOGY, OFFICE OF GIS, (THE NJ GEOGRAPHIC INFORMATION NETWORK) "ORTHOGRAPHY 2012" SOFTWARE, TILE No.'s H8A15 & H8C3.

**APPLICANT/OWNER**  
WARREN CAPITAL, INC.  
KENNETH T.J. LIN  
7 ORCHARD ROAD  
PISCATAWAY, NJ 08854  
(732) 801-8138

DATE:	DECEMBER 30, 2014
SCALE:	1" = 20'
PER TOWNSHIP	M.K.F. 4/01/15 DESIGNED BY: M.K.F.
PER TOWNSHIP	M.K.F. 2/4/15 DRAWN BY: A.B.
PER TOWNSHIP	M.K.F. 1/6/15 CHECKED BY: M.K.F.
REVISIONS	AUTH. DATE JOB No. 13-23-FS
BY:	Michael K. Ford New Jersey Professional Engineer No. 34722

**Van Cleef**  
ENGINEERING ASSOCIATES

Consulting Civil Engineering  
Environmental Engineering  
Municipal Engineering  
Land Surveying  
Professional Planning  
Landscape Architecture

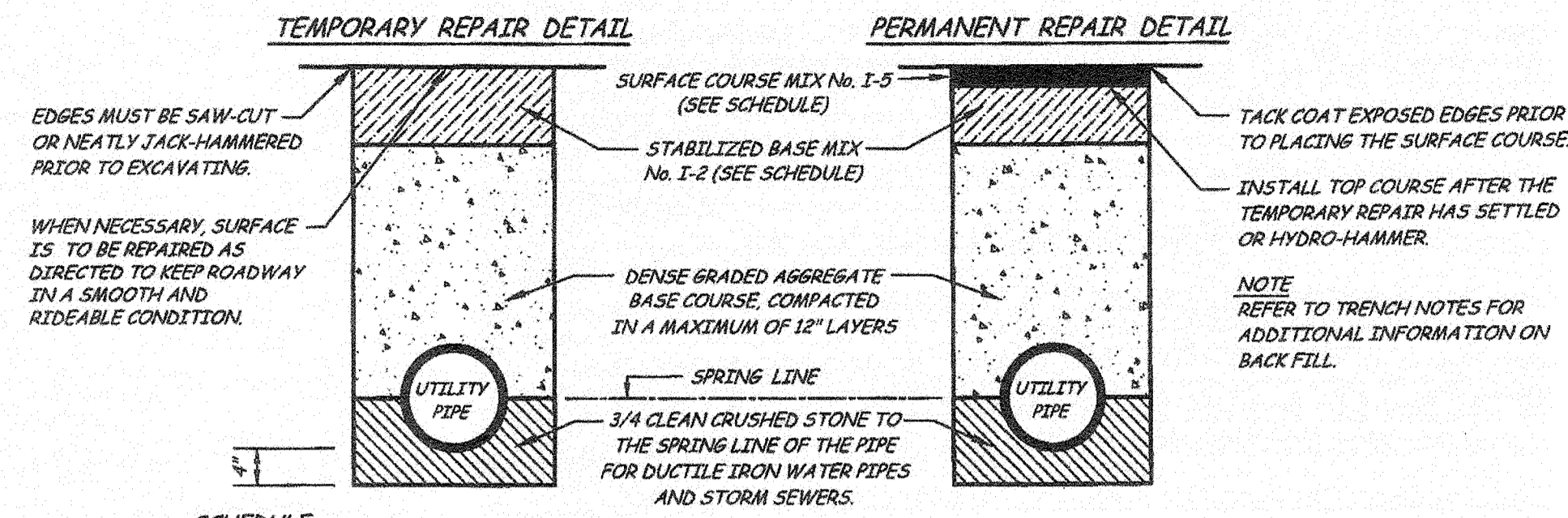
32 BROWER LANE, PO BOX 5877, HILLSBOROUGH, NJ 08844  
EMAIL: VCA@VANCLEEF.COM WEB: WWW.VCAE.COM  
PHONE: (908) 359-8291 FAX: (908) 359-1580 NJ LLC CERT. No. 24GA28123200

**GARFIELD AVENUE WIDENING PLAN**  
FOR  
LOTS 2.01 & 8.01 (FORMER 2-11) IN BLOCK 556  
SITUATED IN  
FRANKLIN TOWNSHIP,  
SOMERSET COUNTY, NEW JERSEY

FILE No. 8785-L-Road

THE FRANKLIN TOWNSHIP DEPARTMENT OF PUBLIC WORKS MUST BE NOTIFIED 24 HOURS BEFORE THE START OF ANY WORK IN THE PUBLIC RIGHT-OF-WAY.

A TOWNSHIP ROAD OPENING PERMIT IS TO BE OBTAINED FROM THE FRANKLIN TOWNSHIP PUBLIC WORKS DEPARTMENT PRIOR TO THE INSTALLATION OF ANY UTILITY SERVICES. THE ROADWAY IS TO BE RESTORED IN ACCORDANCE WITH THE CONDITIONS OUTLINED IN THE PERMIT.



**TEMPORARY REPAIR DETAIL**

**PERMANENT REPAIR DETAIL**

EDGES MUST BE SAW-CUT OR NEATLY TACK-HAMMERED PRIOR TO EXCAVATING.

WHEN NECESSARY, SURFACE IS TO BE REPAIRED AS DIRECTED TO KEEP ROADWAY IN A SMOOTH AND RIDEABLE CONDITION.

SURFACE COURSE MIX No. 1-5 (SEE SCHEDULE)

STABILIZED BASE MIX No. 1-2 (SEE SCHEDULE)

DENSE GRADED AGGREGATE BASE COURSE, COMPACTED IN A MAXIMUM OF 12" LAYERS

3/4" CLEAN CRUSHED STONE TO THE SPRING LINE OF THE PIPE FOR DUCTILE IRON WATER PIPES AND STORM SEWERS.

TACK COAT EXPOSED EDGES PRIOR TO PLACING THE SURFACE COURSE

INSTALL TOP COURSE AFTER THE TEMPORARY REPAIR HAS SETTLED OR HYDRO-HAMMER.

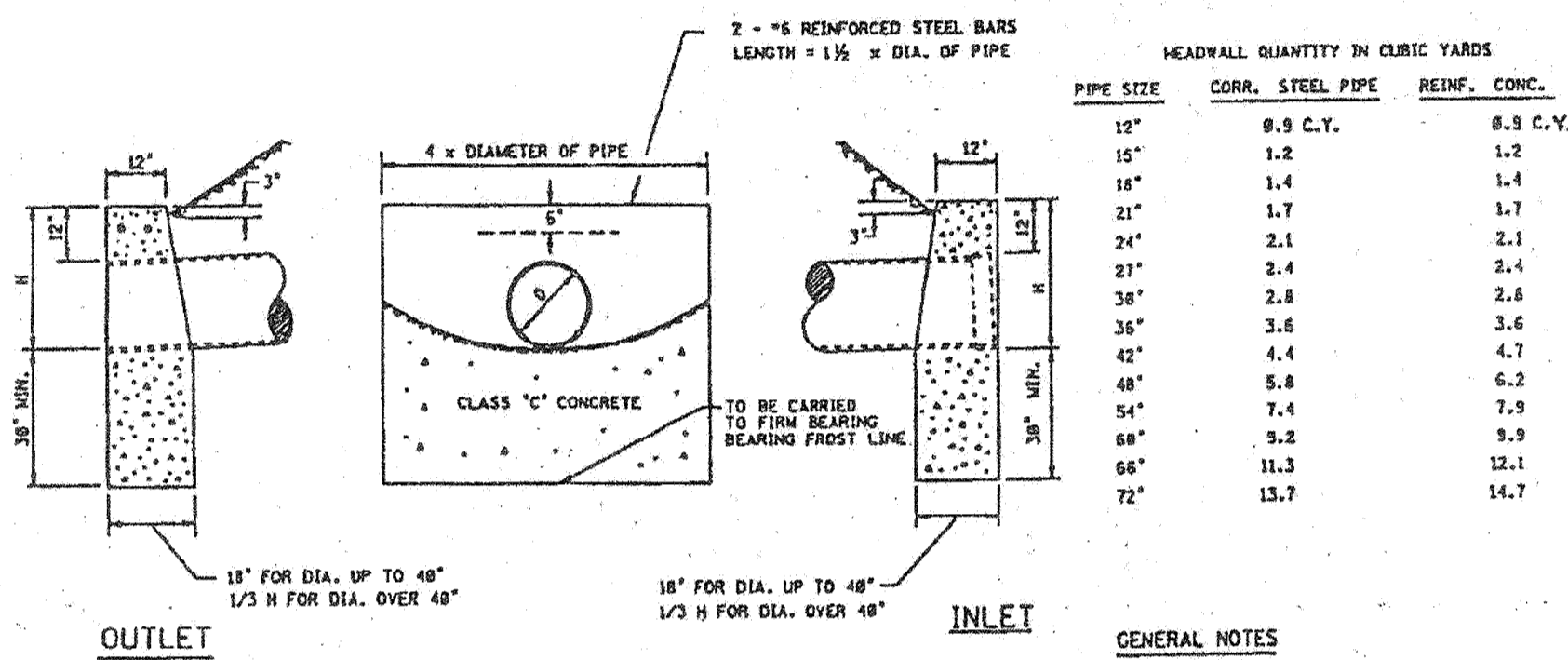
NOTE REFER TO TRENCH NOTES FOR ADDITIONAL INFORMATION ON BACK FILL.

**SCHEDULE:**

ROAD CLASS	USUAL PAY T WIDTH	R.O.W. WIDTH	STABILIZED BASE	SURFACE COURSE	USE
LOCAL RESIDENTIAL	30 FEET	60 FEET	4"	1 1/2"	
LOCAL NON-RESIDENTIAL	40 FEET	80 FEET	6"	1 1/2"	
COLLECTOR RESIDENTIAL	36 FEET	72 FEET	6"	2"	
COLLECTOR NON-RESIDENTIAL	42 FEET	84 FEET	7"	2"	
MAJOR COLLECTOR	48 FEET	96 FEET	7"	2"	
ARTERIAL	80 FEET	160 FEET	7"	2"	

**RESTORATION OF STREET OPENING DETAIL**

N.T.S.



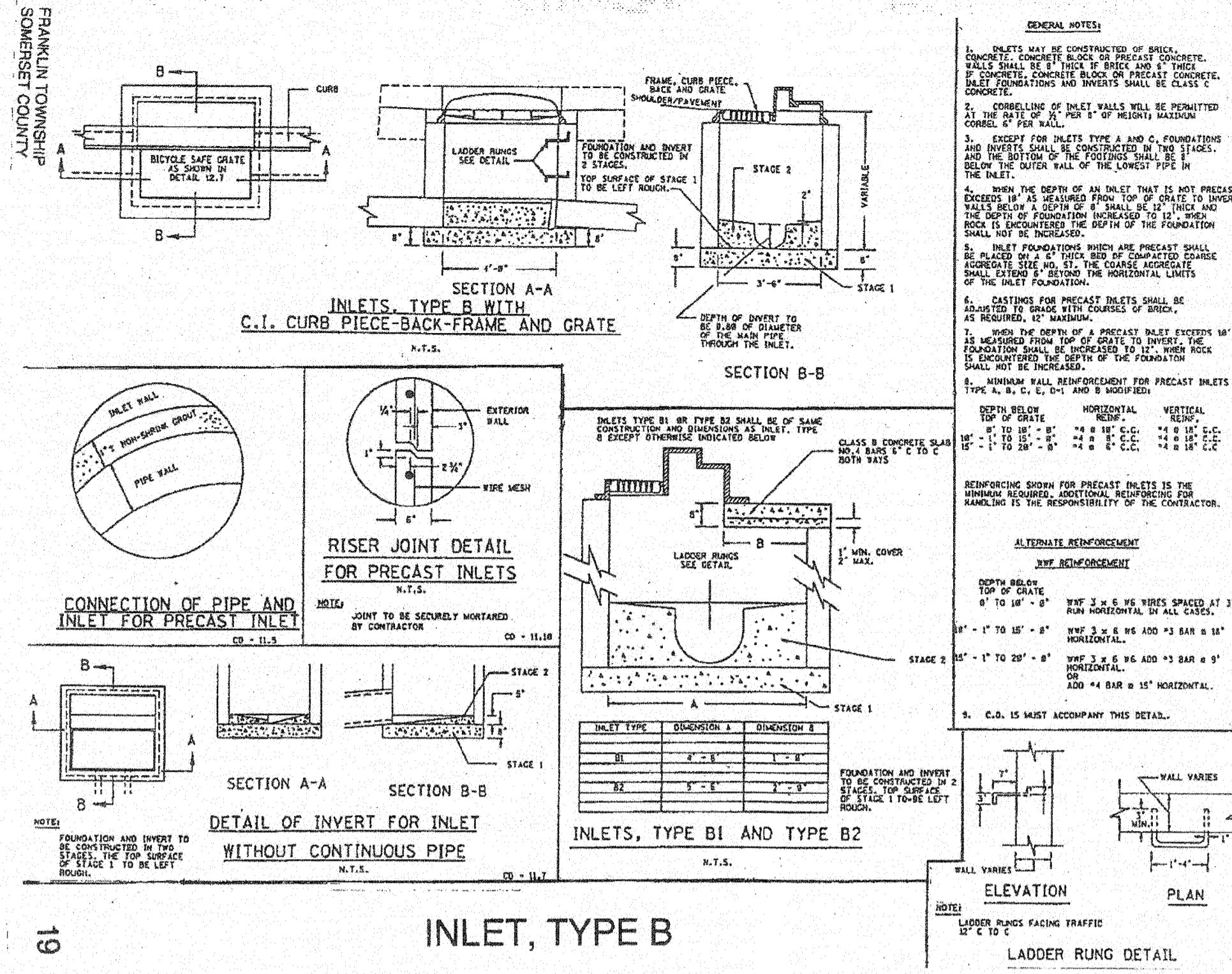
HEADWALL QUANTITY IN CUBIC YARDS

PIPE SIZE	CONC. STEEL PIPE	REINF. CONC.
12"	8.9 C.Y.	8.3 C.Y.
15"	1.2	1.2
18"	1.4	1.4
21"	1.7	1.7
24"	2.1	2.1
27"	2.4	2.4
30"	2.8	2.8
36"	3.6	3.6
42"	4.4	4.7
48"	5.8	6.2
54"	7.4	7.9
60"	9.2	9.9
66"	11.3	12.1
72"	13.7	14.7

**CONCRETE HEADWALL DETAIL**

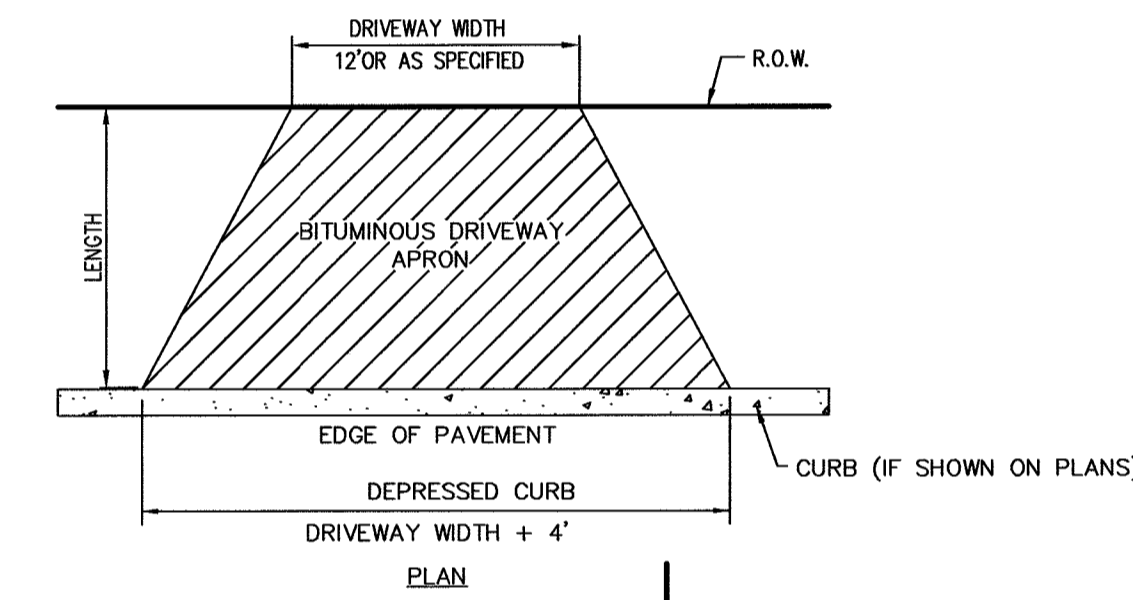
N.T.S.

- GENERAL NOTES**
- THE RUBBING OF HEADWALLS TO REMOVE FORM MARKS AS REQUIRED IN SUBSECTION 541.14 FOR CONCRETE STRUCTURE WILL NOT BE REQUIRED FOR HEADWALLS AT THE BOTTOM OF EMBANKMENT IN RURAL AREAS.
  - ALL EDGES TO BE CHAMFERED 1".
  - FOR ARCH PIPE USE LENGTH OF HEADWALL AS 3H + SPAN.
  - FOR MORE THAN ONE PIPE, SET THE PIPE A MINIMUM OF ONE FOOT APART (OUTSIDE BARRIED TO OUTSIDE BARRIED); THE ENDS OF THE HEADWALL SHALL BE SET 20 OFF THE E OF THE CONTROLLING PIPE.



**INLET, TYPE B**

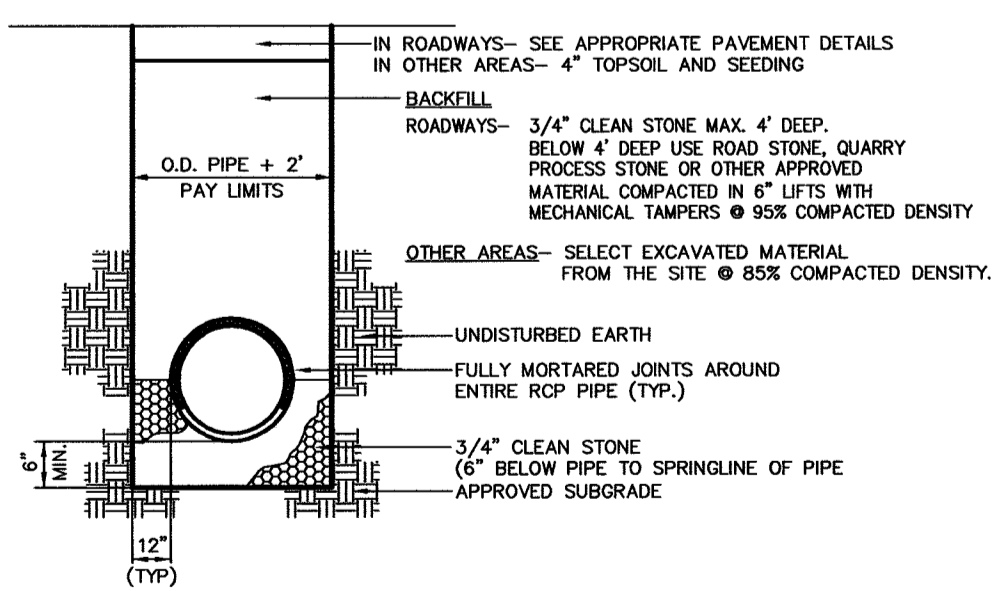
N.T.S.



**BITUMINOUS APRON DETAIL**

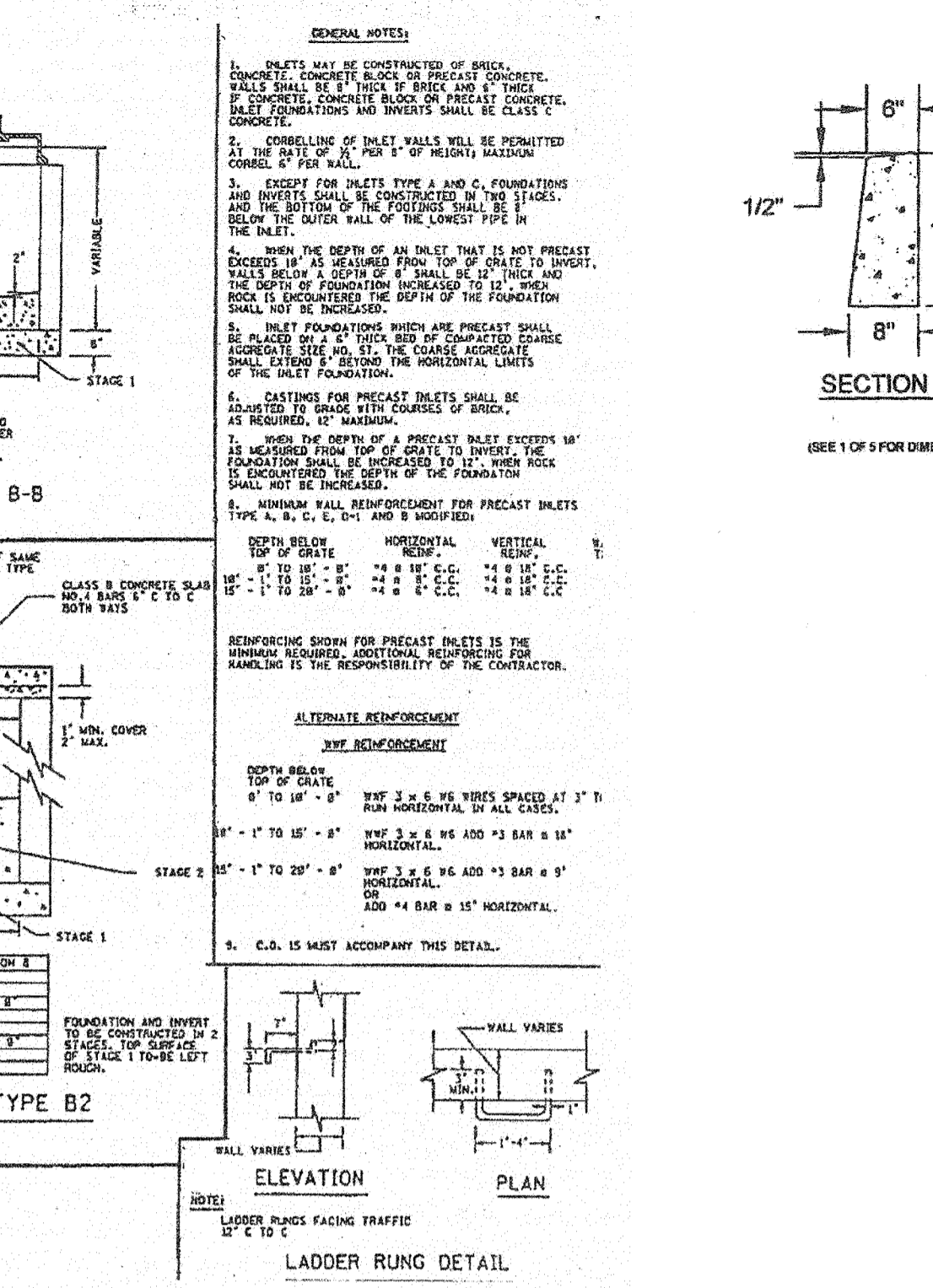
N.T.S.

-PAY LIMITS MAY BE EXTENDED AS DIRECTED BY THE TOWNSHIP ENGINEER.  
-TEMPORARY SHEETING AND SHORING MUST BE PROVIDED IN COMPLIANCE WITH O.S.H.A.



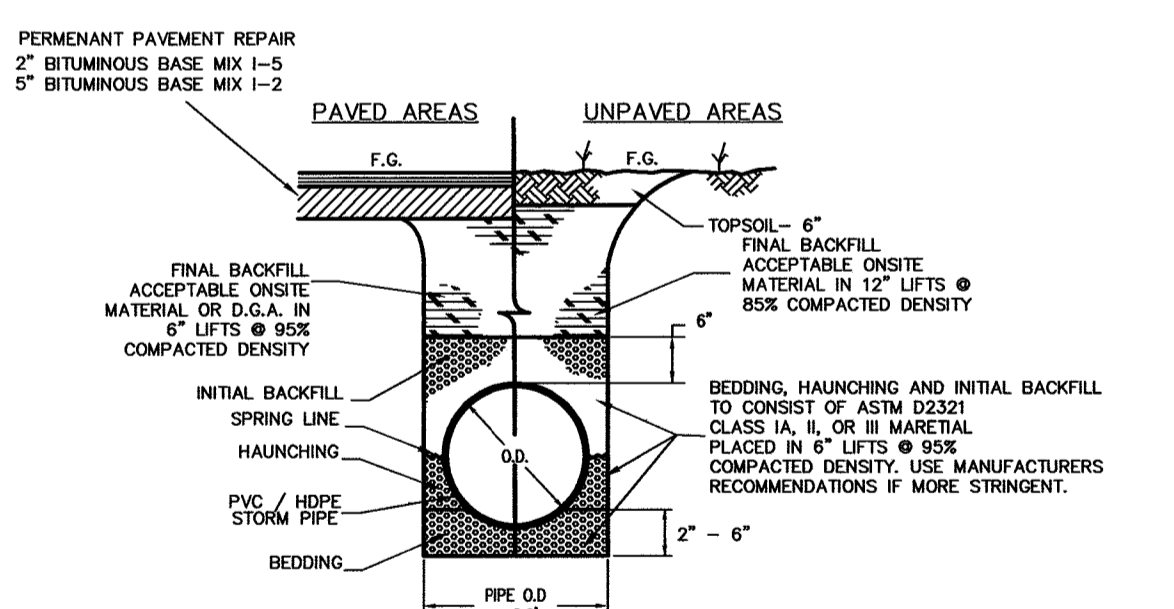
**RCP STORM DRAINAGE PIPE**

N.T.S.



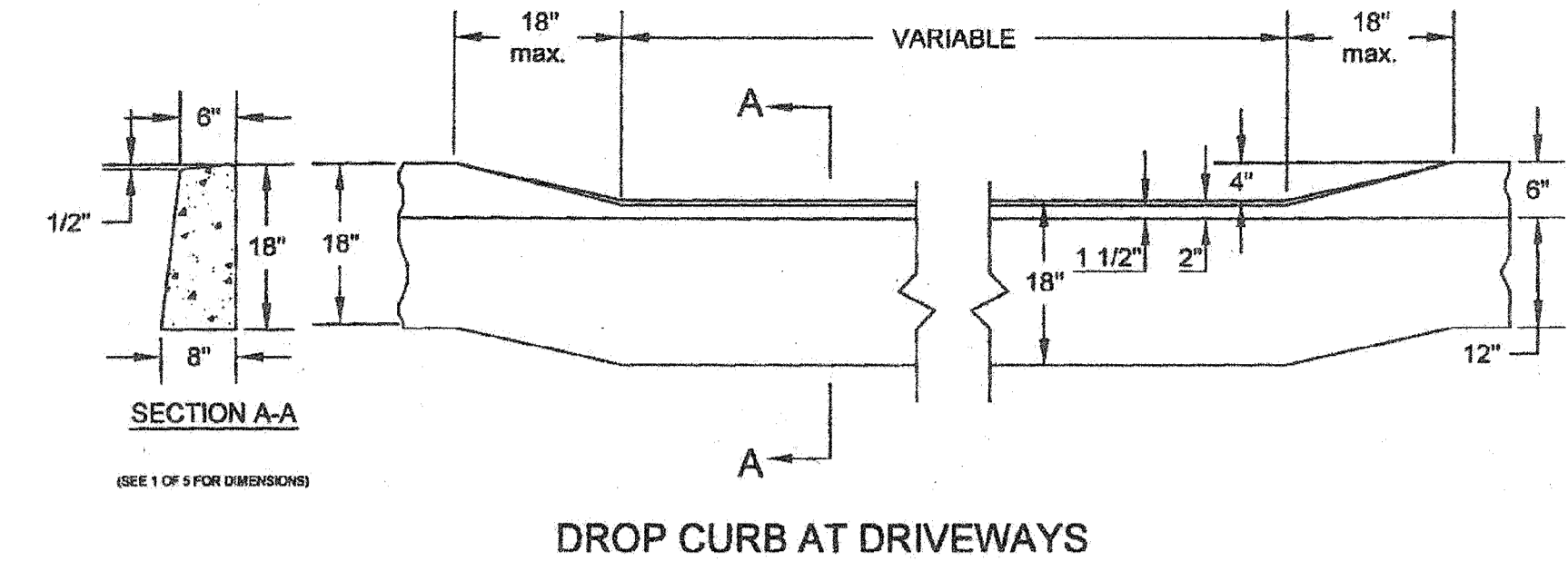
**TYPICAL CROSS SECTION ROAD WIDENING WITHOUT CURB @ EXISTING GARFIELD AVENUE**

NOT TO SCALE



**TRENCH DETAIL FOR PVC OR HDPE STORM DRAIN PIPE**

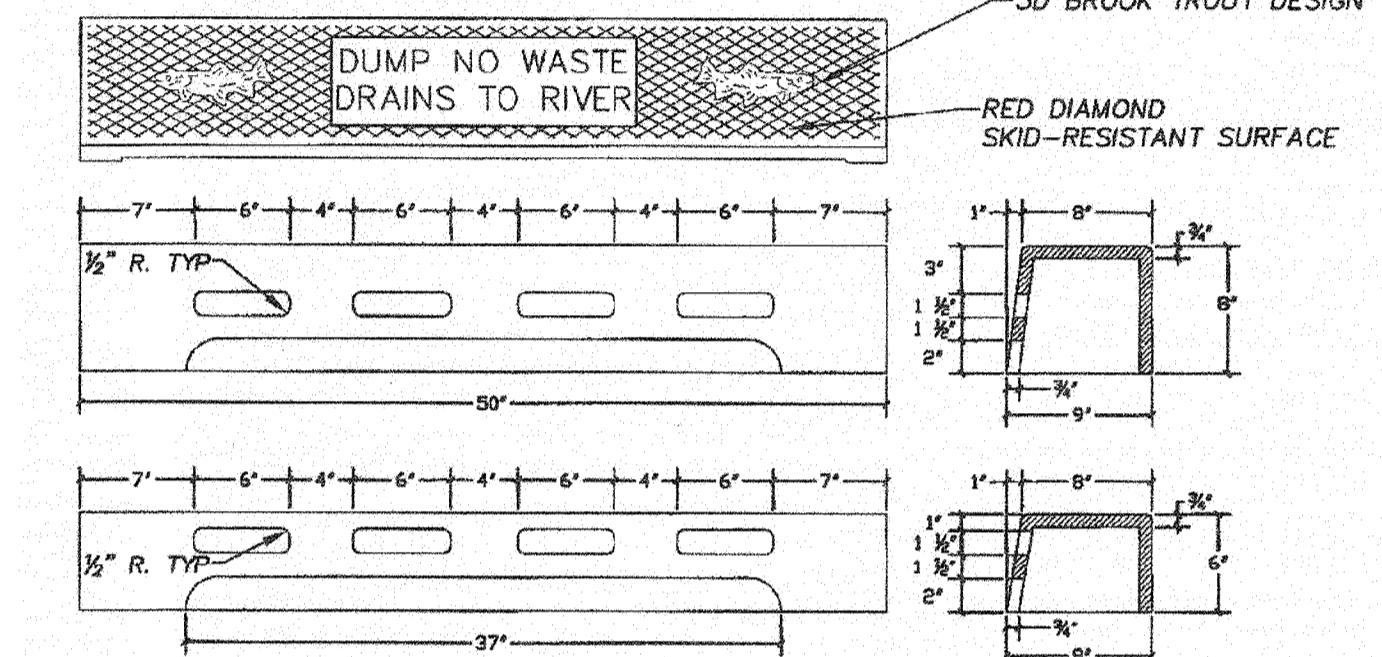
NOT TO SCALE



**DROP CURB AT DRIVEWAYS**

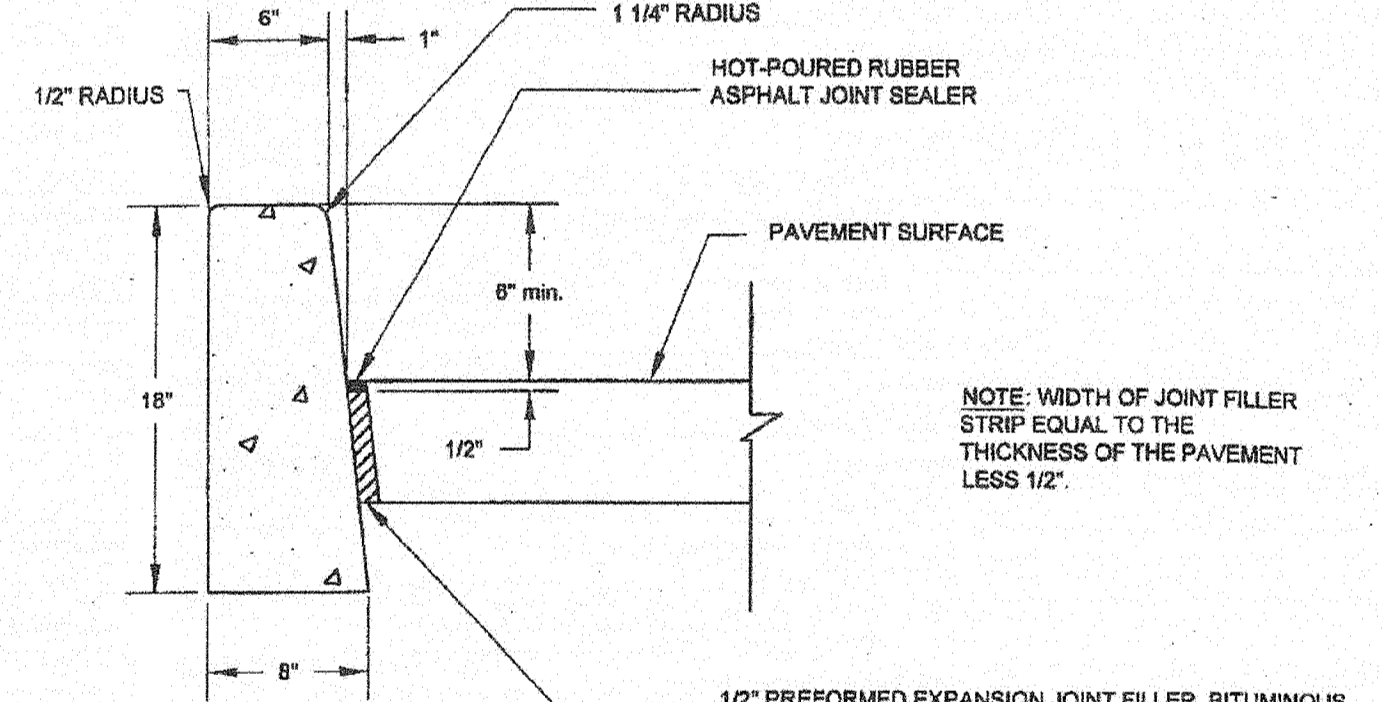
DETAIL SHOWN IS FOR CONCRETE CURB. DETAIL FOR GRANITE BLOCK CURB SHALL FOLLOW SAME DIMENSIONS IN THE DRIVEWAY AREA.

**CURB PIECE - TYPE "N-ECO"**  
CURB PIECE SHOWN BELOW REPLACES THAT SHOWN IN THE FRANKLIN TOWNSHIP STANDARD DETAILS FOR INLET CASTING. TYPE "B" FOR ALL NEW AND REPLACEMENT STRUCTURES.



**CURB PIECE - TYPE "N-ECO"**

N.T.S.



**CONCRETE VERTICAL CURB DETAIL**

N.T.S.

- NOTES:**
- CONCRETE TO BE NJDOT CLASS "B" (AIR ENTRAINED).
  - TRANSVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 20" - 0" APART AND SHALL BE FILLED WITH PREFORMED, BITUMINOUS-IMPREGNATED FIBER JOINT FILLER, COMPLYING WITH THE REQUIREMENTS OF AASHTO M-213, RECESSED 1/4" FROM THE FRONT FACE AND TOP OF THE CURB.
  - DUMMY JOINTS (FORMED) SHALL BE INSTALLED MIDWAY BETWEEN EXPANSION JOINTS.

DATE:	DECEMBER 30, 2014
SCALE:	AS SHOWN
DESIGNED BY:	M.K.F.
DRAWN BY:	A.B.
CHECKED BY:	M.K.F.
REVISIONS	AUTH. DATE JOB No. 13-23-FS

BY: *Michael K. Ford*  
Michael K. Ford  
New Jersey Professional Engineer  
No. 34722

**Van Cleaf ENGINEERING ASSOCIATES**

Consulting Civil Engineering  
Environmental Engineering  
Municipal Engineering  
Land Surveying  
Professional Planning  
Landscape Architecture

32 BROWER LANE, PO BOX 5877, HILLSBOROUGH, NJ 08844  
EMAIL: VCCNJ@VCEA.ORG WEB: WWW.VCEA.ORG  
PHONE: (908) 359-8291 FAX: (908) 359-1580 NJ LLC CERT. No. 246A28132300

**GARFIELD AVENUE - CONSTRUCTION DETAILS**  
FOR  
LOTS 2-11 IN BLOCK 556  
SITUATED IN  
FRANKLIN TOWNSHIP,  
SOMERSET COUNTY, NEW JERSEY