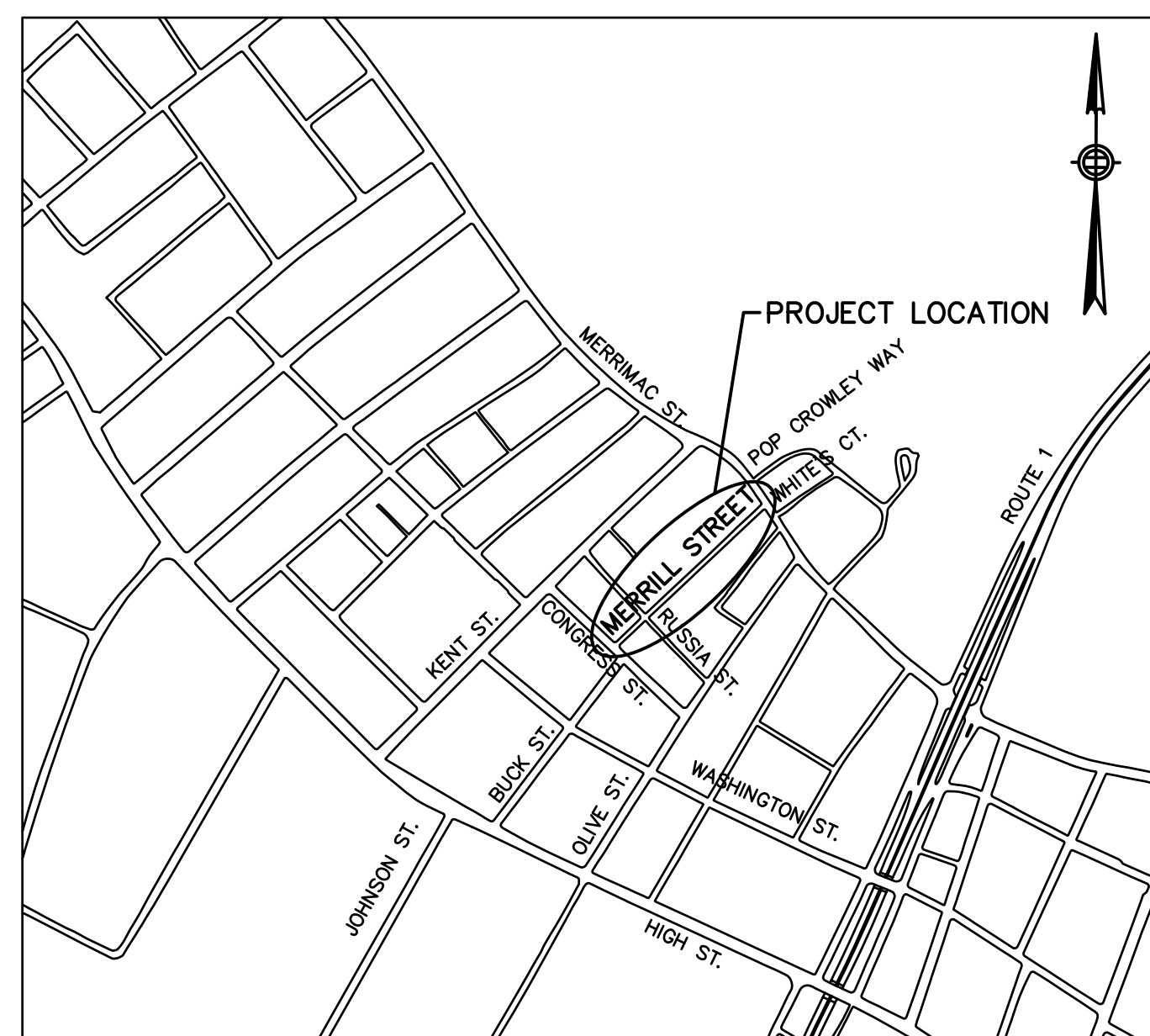


THE CITY OF NEWBURYPORT
DEPARTMENT OF PUBLIC SERVICES
FULL DEPTH RECONSTRUCTION
OF MERRILL STREET
IN THE CITY OF
NEWBURYPORT
ESSEX COUNTY
THE COMMONWEALTH OF MASSACHUSETTS

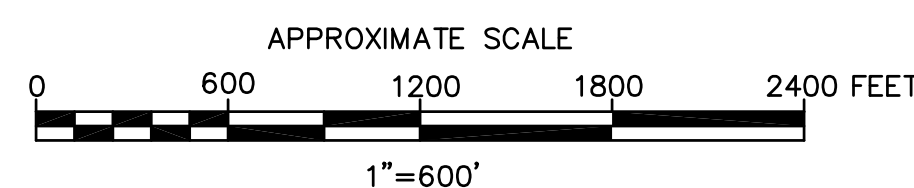
CONTRACT NO. R13-1019
JULY 15, 2013

INDEX
SHEET NO. DESCRIPTION

- C-1 TITLE SHEET & INDEX
- C-2 LEGENDS, GENERAL NOTES, &
ABBREVIATIONS
- C-3 EXISTING CONDITIONS PLAN
- C-4 DEMOLITION PLAN
- C-5 ROADWAY PLAN & PROFILE I
- C-6 ROADWAY PLAN & PROFILE II
- C-7 GRADING & DRAINAGE PLAN I
- C-8 GRADING & DRAINAGE PLAN II
- C-9 GRADING & DRAINAGE PLAN III
- C-10 DRAINAGE PROFILE I
- C-11 DRAINAGE PROFILE II
- C-12 SANITARY SEWER PLAN & PROFILE I
- C-13 SANITARY SEWER PLAN & PROFILE II
- C-14 WATER DISTRIBUTION PLAN & PROFILE I
- C-15 WATER DISTRIBUTION PLAN & PROFILE II
- C-16 PAVEMENT MARKINGS & SIGNAGE PLAN
- C-17 TRAFFIC SIGN SUMMARY
- C-18 DETAILS I
- C-19 DETAILS II
- C-20 DETAILS III
- C-21 DETAILS IV
- C-22 DETAILS V



LOCUS MAP



CITY OF NEWBURYPORT

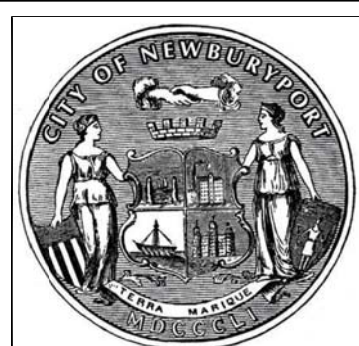
DONNA D. HOLADAY, MAYOR

DEPARTMENT OF PUBLIC SERVICES

ANTHONY J. FURNARI DIRECTOR
ANDREW LAFFERTY DEPUTY DIRECTOR
JON-ERIC WHITE, P.E. CITY ENGINEER
DEBBIE CHENG, E.I.T. ASSISTANT ENGINEER

PREPARED BY:

CITY OF NEWBURYPORT ENGINEERING DEPARTMENT



CITY OF NEWBURYPORT
DEPARTMENT OF PUBLIC SERVICES
16A PERRY WAY
NEWBURYPORT, MA 01950

Rev No	Date	Drawn	Chkd	Description
Revisions				

Designed By:
D. CHENG

Checked By:
J.E. WHITE

Date:
JULY 15, 2013

SCALE:
AS NOTED

MERRILL STREET FULL DEPTH RECONSTRUCTION

TITLE SHEET & INDEX

Sheet No.
1 OF 22

C-1

LEGEND

UTILITIES

EXISTING	PROPOSED	DESCRIPTION
		CATCH BASIN
		HYDRANT
		WATER GATE
		SANITARY SEWER MANHOLE
		DRAINAGE MANHOLE
		WATER MAIN
		SANITARY SEWER MAIN
		DRAINAGE MAIN
		GAS MAIN
		GAS GATE
		SERVICE CONNECTION CAPPED

GRADING/ROADWAY

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINE
		CONSTRUCTION BASE LINE
		SPOT ELEV.
		TOP OF CURB ELEV.
		BOT. OF CURB ELEV.
		MAJOR CONTOUR
		MINOR CONTOUR
		TREE & TREE DIAMETER
		STREET SIGN
		UTILITY POLE
		CURB CORNER TYPE A
		BULLNOSE CURB CORNER
		DETECTABLE WARNING PANEL
		GRANITE CURB
		RECESSED GRAN. CURB

GENERAL NOTES:

- EXISTING SURVEY INFORMATION FOR MERRILL STREET, CONGRESS STREET, RUSSIA STREET, AND MERRIMAC STREET WAS PREPARED BY DESIGN CONSULTANTS INC., NEWBURYPORT MA, BASED ON AN ON-THE-GROUND SURVEY PERFORMED BETWEEN MARCH 5 AND MARCH 8, 2012. ADDITIONAL EXISTING SURVEY FOR RUSSIA STREET WAS PERFORMED AND PREPARED BY THE DEPARTMENT OF PUBLIC SERVICES PERSONNEL ON JULY 9, 2012.
- THE HORIZONTAL CONTROL IS BASED UPON THE MASSACHUSETTS MAINLAND STATE PLANE COORDINATE SYSTEM (2001) AND THE NATIONAL GEODETIC SURVEY (NAD83).
- THE VERTICAL DATUM SHOWN HEREON IS REFERENCE NAVD 1988.
- ALL WORK SHALL BE IN ACCORDANCE WITH THESE DRAWINGS, THE SPECIFICATIONS, AND MASSACHUSETTS DEPARTMENT OF TRANSPORTATION (FORMERLY MASSHIGHWAY) STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988 EDITION AND ANY SUPPLEMENTAL SPECIFICATIONS AS OF JUNE 2013.
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ANY AND ALL EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL CALL DIG SAFE AT 811 OR 888-344-7233 AT LEAST 72 HOURS, EXCLUSIVE OF SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS, BUT NO MORE THAN 30 DAYS BEFORE THE PROPOSED EXCAVATION IS TO BE MADE. A COPY OF THE DIG SAFE PROJECT ACCOUNT NUMBER SHALL BE GIVEN TO THE DPS PRIOR TO EXCAVATION.
- UPON AWARD OF THE CONTRACT, THE CONTRACTOR SHALL MAKE ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY PERMITS AS REQUIRED BY LAW, PAY ALL FEES, AND POST ALL BONDS ASSOCIATED WITH THE WORK. ALL PERMITS MUST BE OBTAINED PRIOR TO PERFORMING THE WORK. CONTRACTORS MUST BE ON THE NEWBURYPORT DPS CONTRACTOR LIST IN ORDER TO OBTAIN A TRENCH AND STREET OPENING PERMIT. CITY COUNCIL APPROVAL IS REQUIRED TO GET ON THE LIST. THE CONTRACTORS PERFORMING THE WORK SHALL CONTACT NEWBURYPORT DPS TO REQUEST INCLUSION ONTO THE LIST. DELAYS DUE TO THE CONTRACTOR'S LACK OF OBTAINING SAID PERMIT(S) WILL BE AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL COORDINATE ALL ARRANGEMENTS FOR ANY ALTERATION OR ADJUSTMENT OF GAS, ELECTRIC/CABLE/PHONE, AND ANY OTHER PRIVATE UTILITY PRIOR TO PERFORMING THE WORK.
- EXISTING PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATIONS ARE NOT GUARANTEED.
- THE TERM "PROPOSED" (PROP.) MEANS WORK TO BE CONSTRUCTED HEREIN USING NEW MATERIALS. MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R) SHALL MEAN TO RE-SET EXISTING MATERIALS AND TO FURNISH ANY ADDITIONAL NEW MATERIAL OF THE SAME TYPE AND DIMENSIONS AS NECESSARY TO COMPLETE THE WORK.
- THE CONTRACTOR SHALL PROVIDE FOR THE SAFE AND ORDERLY PASSAGE OF VEHICULAR AND PEDESTRIAN TRAFFIC IN AREAS UNDER CONSTRUCTION (REFER TO THE SPECIFICATIONS).
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. ALL CONSTRUCTION ACTIVITY SHALL BE IN ACCORDANCE WITH OSHA REGULATIONS AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS.
- SHOULD AN EXISTING UTILITY BE FOUND TO BE IN CONFLICT WITH THE PROPOSED WORK AND NOT ADDRESSED IN THE PLANS, THE LOCATION SIZE AND TYPE SHALL BE ACCURATELY DETERMINED WITHOUT DELAY, BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
- EXISTING VEGETATION AND LANDSCAPING WITHIN THE LIMITS OF WORK THAT ARE NOT SCHEDULED FOR REMOVAL SHALL BE PROTECTED FROM DAMAGES DUE TO CONSTRUCTION PRIOR TO PERFORMING THE WORK.
- AREAS OUTSIDE THE LIMITS OF WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS OR NEGLIGENCE SHALL BE RESTORED TO BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- SHOP DRAWINGS OF ALL CASTINGS, PRECAST CONCRETE STRUCTURES, PIPE, AND MANUFACTURED COMPONENTS SHALL BE SUBMITTED FOR APPROVAL BEFORE ORDERING.
- ALL UNDERGROUND STRUCTURES AND UTILITIES ARE TO BE CAPABLE OF WITHSTANDING H20 WHEEL LOADS.
- TREES AND SHRUBS WITHIN THE LIMITS OF WORK NOT SCHEDULED FOR REMOVAL AS INDICATED ON THE PLANS SHALL ONLY BE REMOVED UPON APPROVAL OF THE ENGINEER.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED, BY THE CONTRACTOR, TO THEIR ORIGINAL CONDITION, AT THE CONTRACTOR'S EXPENSE.
- IT IS THE INTENT OF THE DESIGN TO PROVIDE A MINIMUM 3-FOOT CLEARANCE PAST ALL OBSTRUCTIONS WITHIN THE CONSTRUCTED SIDEWALK. THE CONTRACTOR SHALL VERIFY THAT ALL POTENTIAL OBSTRUCTIONS HAVE BEEN ADDRESSED IN THE PLANS, INCLUDING, BUT NOT LIMITED TO, SIGNS, UTILITY POLES, AND HYDRANTS SO THEY ARE LOCATED TO PROVIDE THIS MINIMUM PATH OF TRAVEL CLEARANCE AND MINIMUM CLEARANCE TO CURB REVEALS AS REQUIRED BY MASSDOT E107.7.0.
- DETECTABLE WARNING PANELS SHALL BE INSTALLED ON ALL WHEELCHAIR RAMPS AND SHALL COMPLY WITH MDOT CONSTRUCTION STANDARD E107.6.5.
- ALL EROSION CONTROLS MUST BE INSPECTED, REPAIRED AND SILT REMOVED AS NECESSARY TO ELIMINATE SILT RUNOFF FROM THE SITE. SILT SACKS SHALL BE INSTALLED ON ALL CATCH BASINS THAT ARE IN OPERATION UNTIL THE PROJECT IS COMPLETE OR AS OTHERWISE DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL PERFORM TEST PITS FOR EXPLORATORY PURPOSES AS NECESSARY OR AS OTHERWISE DIRECTED BY THE ENGINEER.

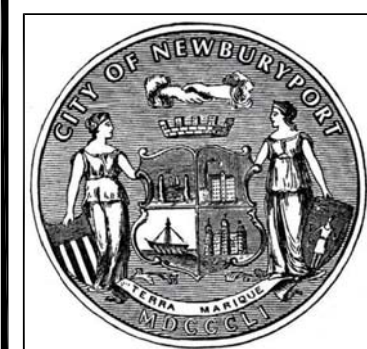
ABBREVIATIONS

GENERAL

ABAN.	ABANDONED
ADJ.	ADJUST
BC	BOTTOM OF CURB
BCW	BITUMINOUS OVER CONCRETE SIDEWALK
BIT.	BITUMINOUS
BW	BITUMINOUS CONCRETE SIDEWALK
BKW	BRICK SIDEWALK
CEM.	CEMENT
CONC.	CONCRETE
CRC	CURVED RECESSED CURB
CTC	CURVED TRANSITION CURB
CW	CONCRETE WALK
DIA.	DIAMETER
D.W.	DRIVEWAY
ELEV.	ELEVATION
EL.	ELEVATION
EXIST.	EXISTING
GRAN.	GRANITE
H.C.	HANDICAP
L	LENGTH
LT	LEFT
MAT'L	MATERIAL
MAX.	MAXIMUM
MIN.	MINIMUM
N.T.S.	NOT TO SCALE
PROP.	PROPOSED

UTILITIES

CBCI	CATCH BASIN WITH CURB INLET
D	DRAINAGE
DI	DUCTILE IRON
DMH	DRAIN MANHOLE
G	GAS
HDPE	HIGH DENSITY POLYETHYLENE
I	INVERT ELEVATION
PL	PLASTIC
PVC	POLYVINYLCHLORIDE
R	RIM ELEVATION
RCP	REINFORCED CONCRETE PIPE
S	SEWER
SMH	SEWER MANHOLE
VCP	VITRIFIED CLAY PIPE
W	WATER
W.G.	WATER GATE
WI	WROUGHT IRON



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Checked By:
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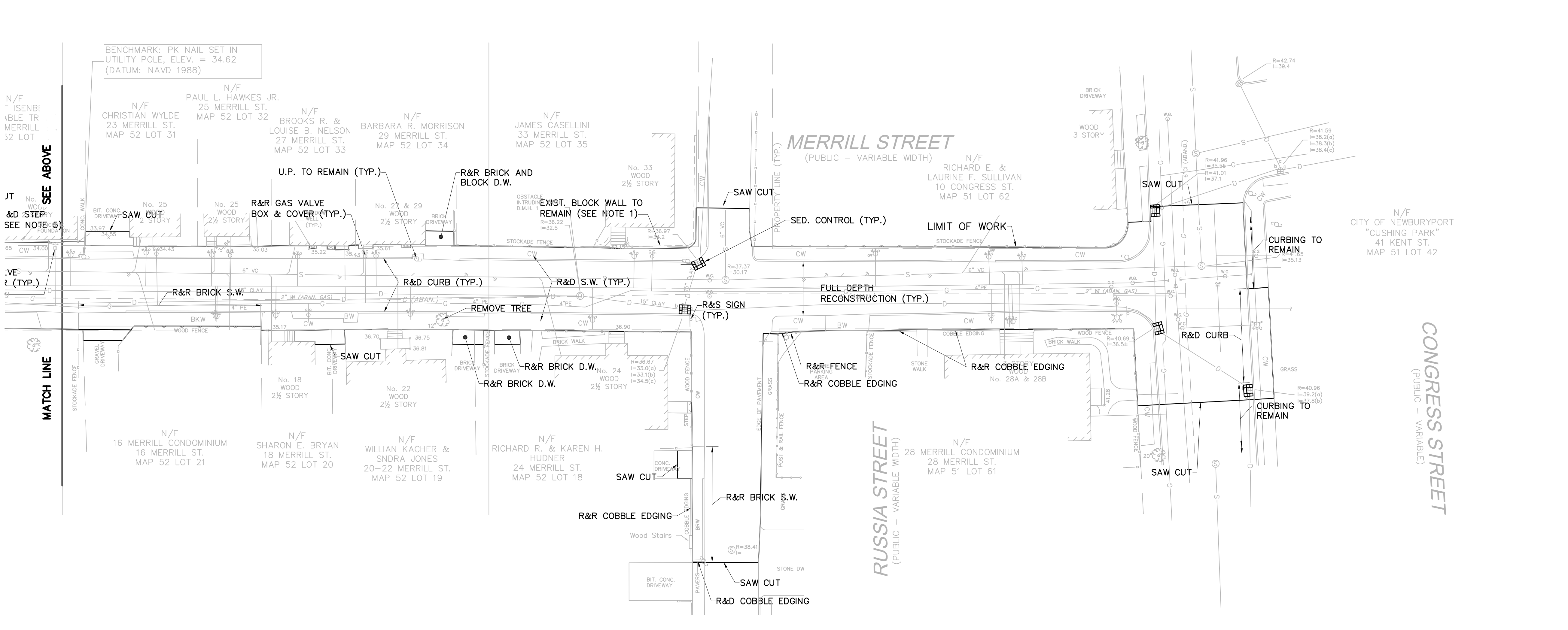
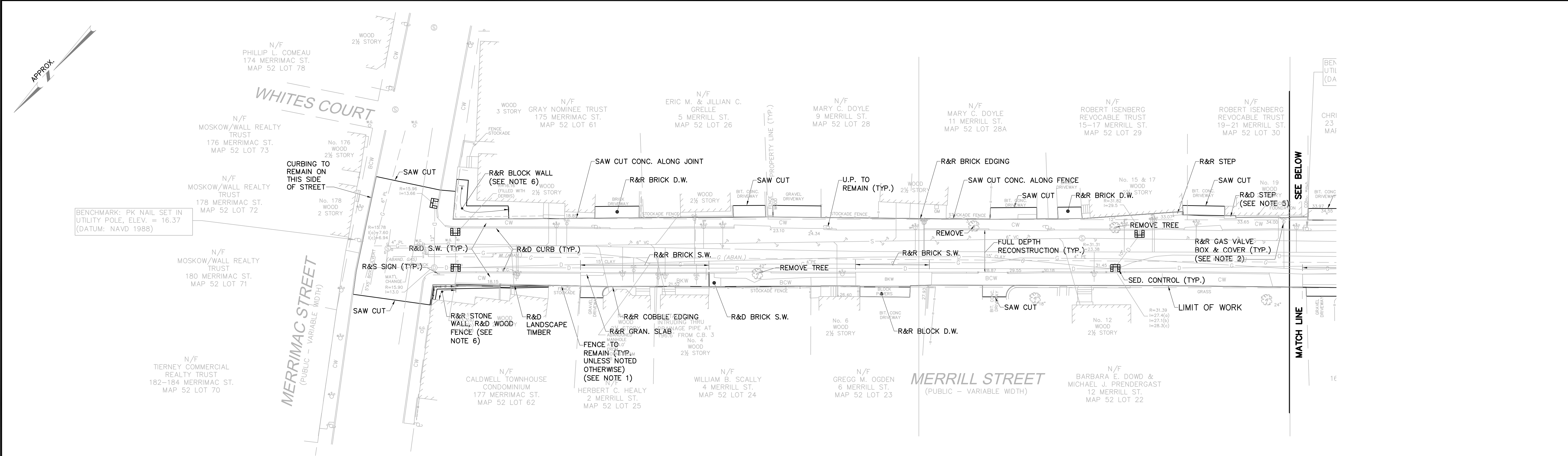
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JULY 15, 2013

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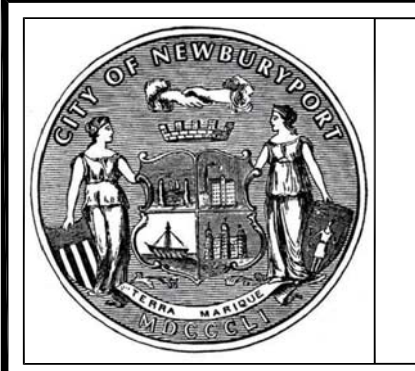
MERRILL STREET FULL DEPTH RECONSTRUCTION
LEGENDS, GENERAL NOTES, &
ABBREVIATIONS

Sheet No.
2 OF 22

C-2



- DEMOLITION PLAN NOTES:**
1. ALL EXISTING FENCING, RETAINING WALLS, STEPS, AND OTHER HARDSCAPES AT THE BACK OF SIDEWALKS SHALL REMAIN, UNLESS NOTED OTHERWISE. CONTRACTOR SHALL PROTECT DURING CONSTRUCTION OPERATIONS AND REPLACE DAMAGED PROPERTY CAUSED BY CONTRACTOR'S OPERATIONS.
 2. EXISTING GAS VALVE BOX & COVERS SHALL BE REMOVED & RESET TO MEET FINISHED GRADES. FOR OTHER UTILITY DEMOLITION, REFER TO UTILITY PLANS.
 3. ALL EXISTING CURBING WITHIN LIMITS OF WORK SHALL BE REMOVED AND DELIVERED TO THE DPS STOCKYARD AT FULTON PIT, UNLESS NOTED OTHERWISE.
 4. REMOVE & DISPOSE ALL EXISTING SIDEWALK, DRIVEWAY, AND ROADWAY MATERIALS WITHIN LIMITS OF WORK, AS SHOWN, UNLESS NOTED OTHERWISE.
 5. REMOVE & DISPOSE CONCRETE STEP AT 19 MERRILL STREET, AS SHOWN, AND INSTALL WOOD LATTICE IN ITS PLACE.
 6. CONTRACTOR SHALL PERFORM A TEST PIT AT THE BASE OF BOTH WALLS AT MERRIMAC STREET TO DETERMINE THE DEPTHS OF THE WALLS PRIOR TO REMOVING ANY WALLS OR FENCES. THE ENGINEER WILL DETERMINE IF ADEQUATE DEPTHS EXIST TO ALLOW FOR THE LOWERING OF THE NEW SIDEWALKS.
 7. CONTRACTOR SHALL INSTALL SEDIMENTATION (SED.) CONTROL PRIOR TO PERFORMING ANY WORK.



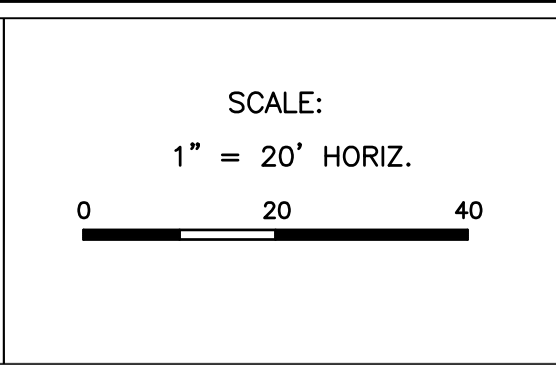
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 16A PERRY WAY
 NEWBURYPORT, MA 01950

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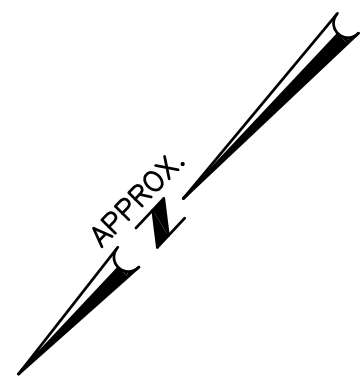


MERRILL STREET FULL DEPTH RECONSTRUCTION

DEMOLITION PLAN

Sheet No.
4 OF 22

C-4



BENCHMARK: PK NAIL SET IN UTILITY POLE, ELEV. = 16.37 (DATUM: NAVD 1988)

WHITES COURT

MERRIMAC STREET
(PUBLIC - VARIABLE WIDTH)

C STREET
(TABLE WIDTH)

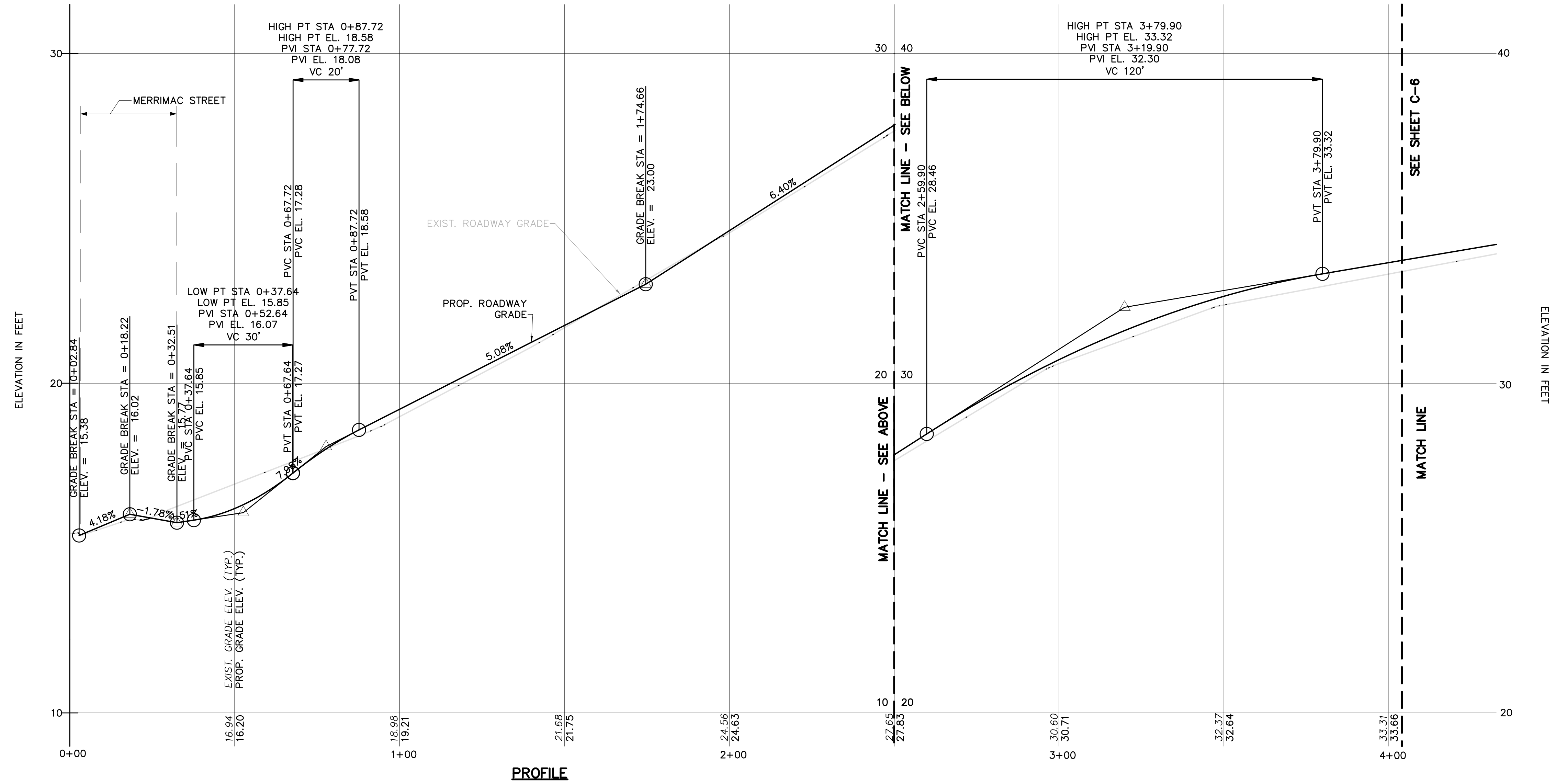
MERRILL STREET
(PUBLIC - VARIABLE WIDTH)

MATCH LINE
SEE SHEET C-6

PLAN

ROADWAY LAYOUT PLAN & PROFILE NOTES:

1. ALL ITEMS TO BE REMOVED & RESET (R&R) SHALL BE REMOVED, TEMPORARILY STORED, PROTECTED, AND RESET TO THE LOCATIONS SHOWN.
2. NEW GRAVEL DRIVEWAY MATERIALS SHALL MEET THE DRIVEWAY MATERIALS THAT CURRENTLY EXIST, BOTH IN TYPE, COLOR, AND SIZE.
3. MEET EXISTING DRIVEWAY AND ROADWAY MATERIALS TO PRODUCE A UNIFORM, SMOOTH JOINT SURFACE. REFER TO SPECIFICATION SECTION 02500.
4. TRANSITION CURBS SHALL BE CUT VERTICALLY AT THE APPROXIMATE ANGLE TO ENSURE A TIGHT JOINT. CUTS 90° FROM THE TOP OF TRANSITION CURBS WILL BE REJECTED.
5. CONTRACTOR SHALL PERFORM A TEST PIT AT THE BASE OF BOTH WALLS AT MERRIMAC STREET TO DETERMINE THE DEPTH OF THE WALLS PRIOR TO REMOVING THE WALLS OR FENCE. THE ENGINEER WILL DETERMINE IF ADEQUATE DEPTHS EXIST TO ALLOW FOR THE LOWERING OF THE NEW SIDEWALKS. IF REMOVAL AND RESETTING OF WALL(S) ARE NECESSARY, REMOVE AND RESET TO MATCH THE EXISTING TOP OF WALL ELEVATIONS. RESETTING SHALL BE IN ACCORDANCE WITH THESE DRAWINGS AND THE SPECIFICATIONS.



PROFILE



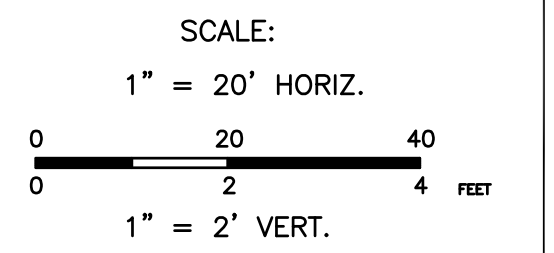
CITY OF NEWBURYPORT
DEPARTMENT OF PUBLIC SERVICES
16A PERRY WAY
NEWBURYPORT, MA 01950

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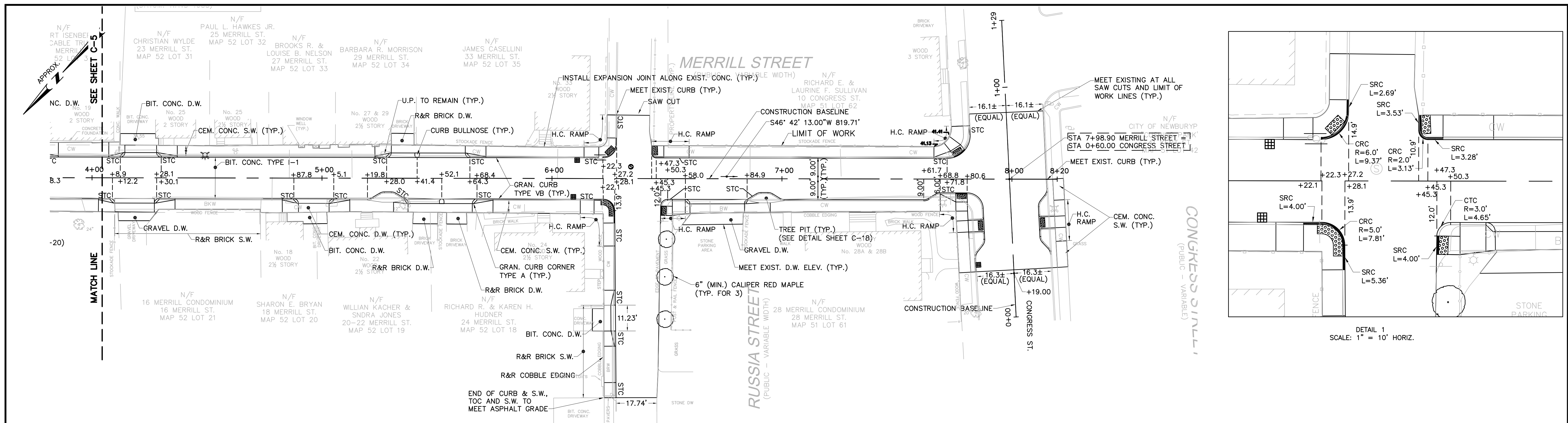
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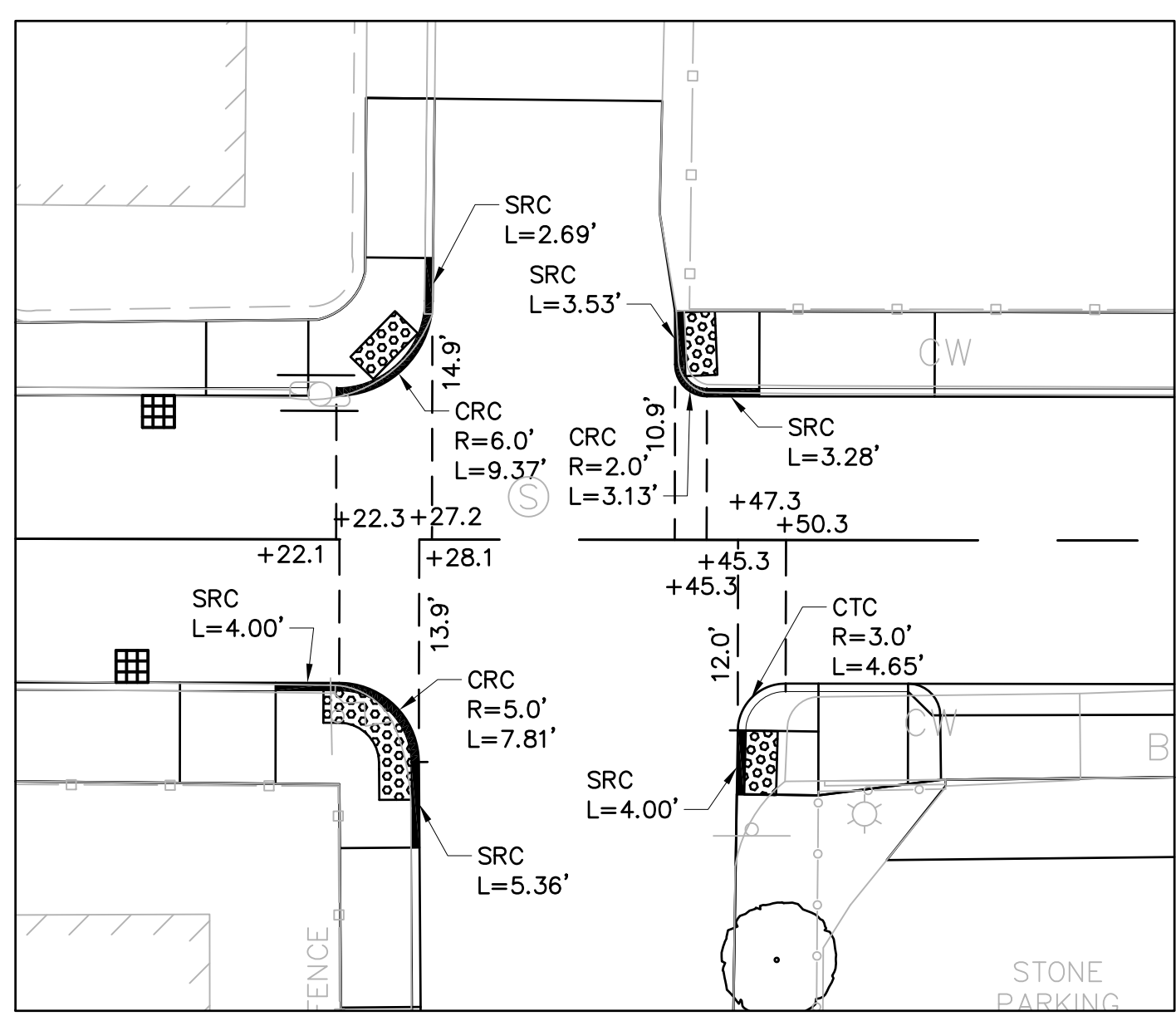


MERRILL STREET FULL DEPTH RECONSTRUCTION
ROADWAY PLAN & PROFILE I

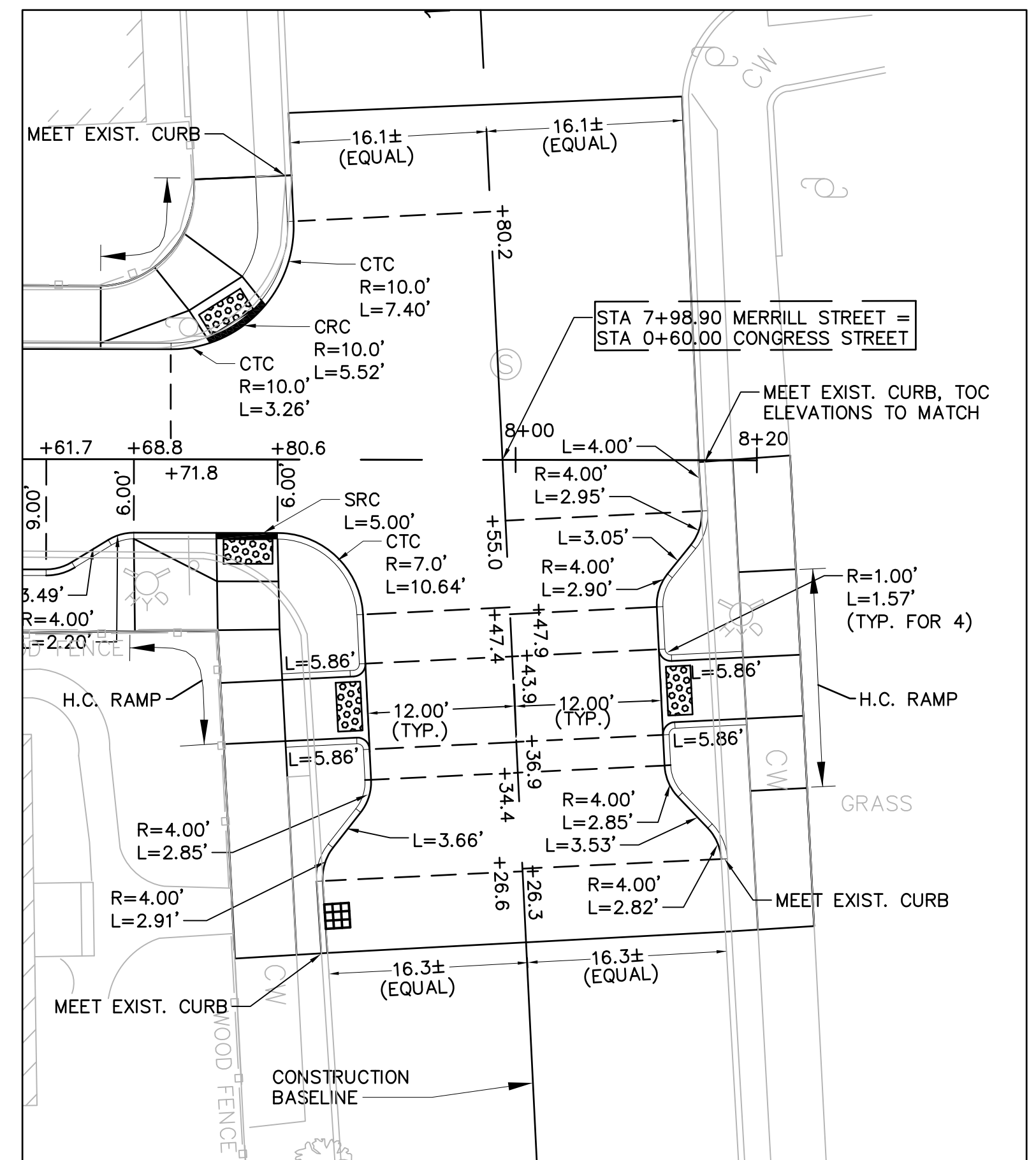
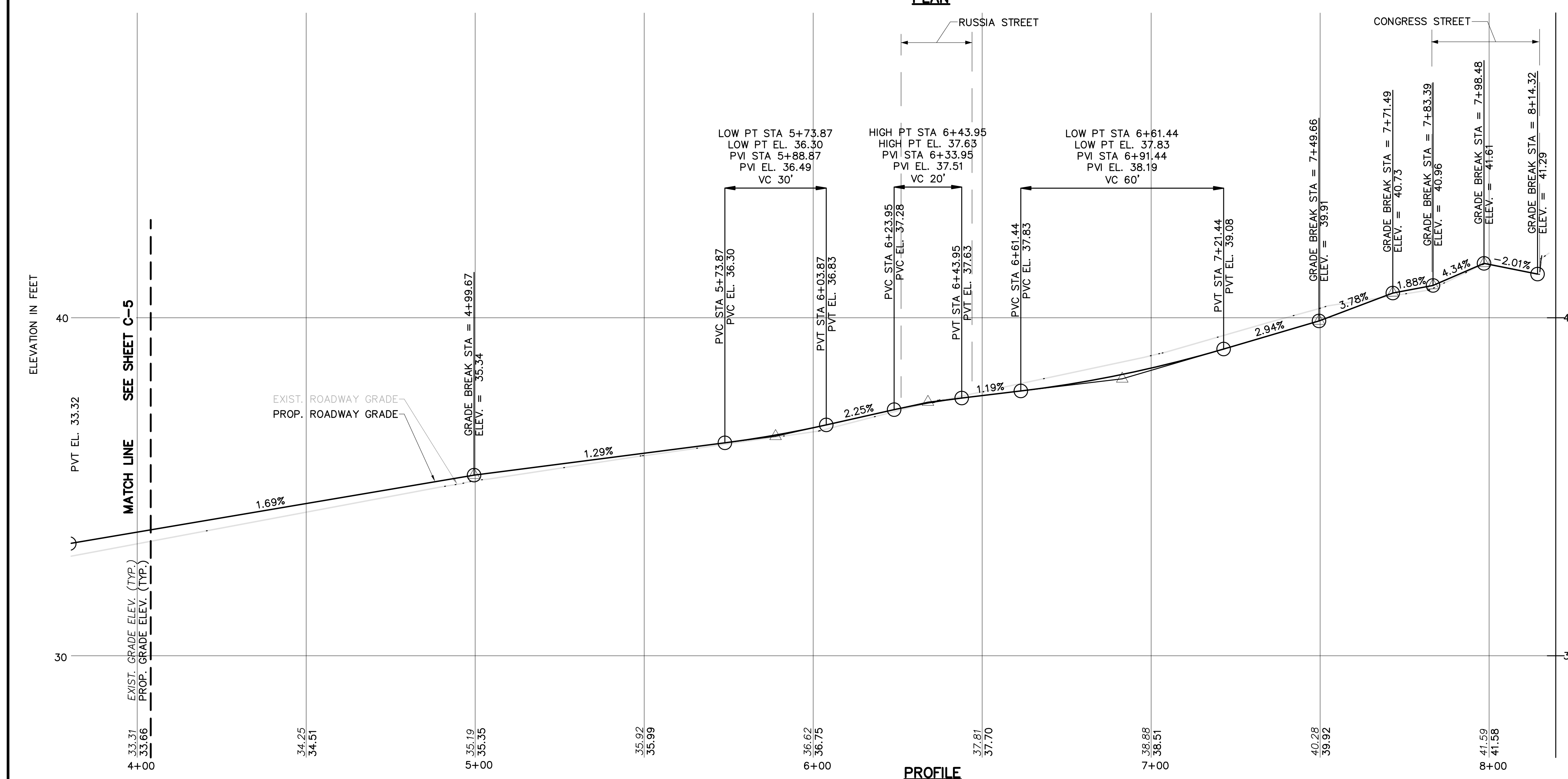
Sheet No.
5 OF 22
C-5



CONGRESS STREET
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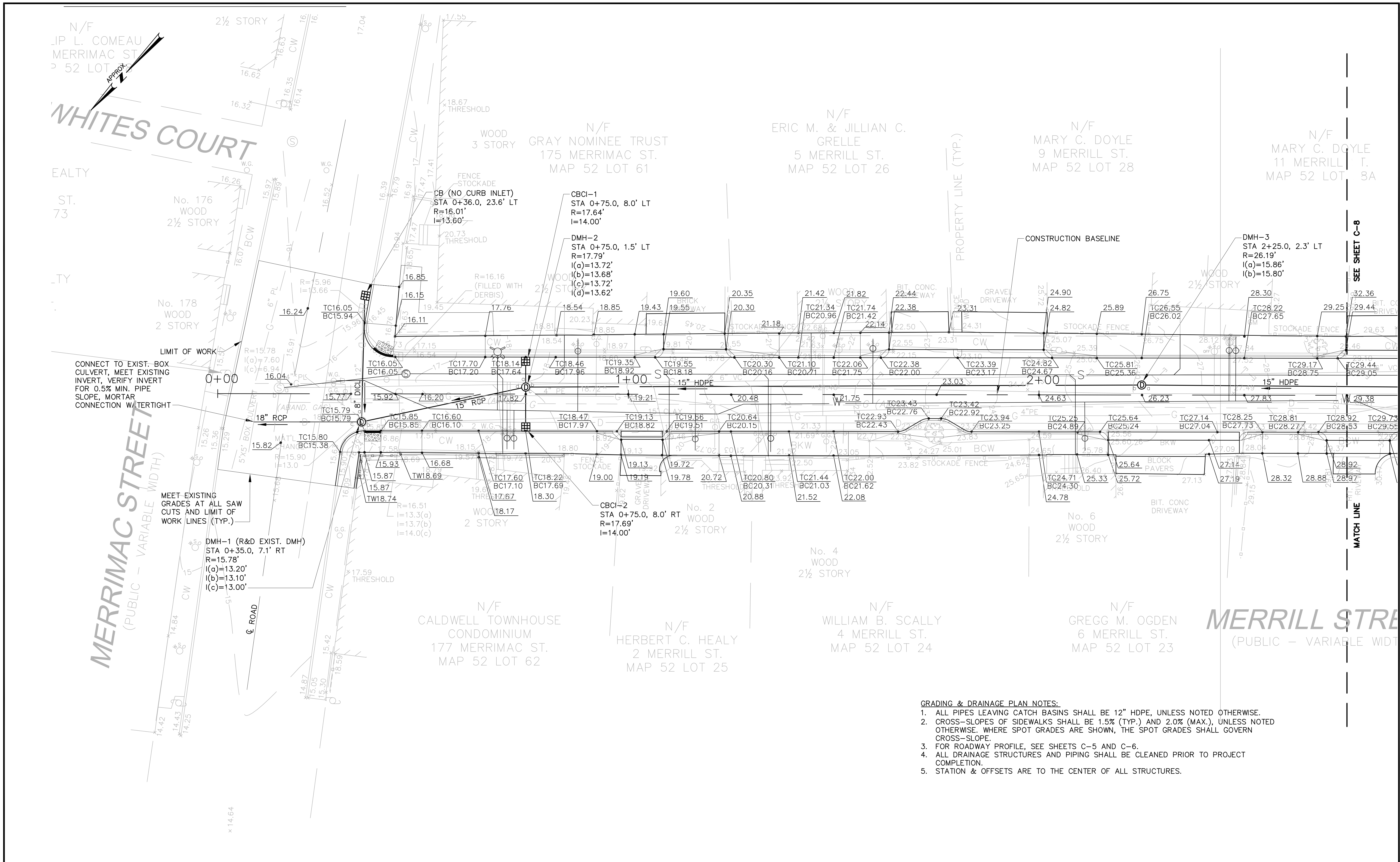
DETAIL 1
SCALE: 1" = 10' HORIZ.



DETAIL 2
SCALE: 1" = 10' HORIZ.

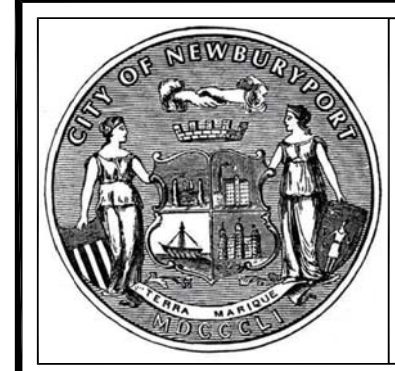
ROADWAY LAYOUT PLAN & PROFILE NOTES:
1. FOR ADDITIONAL NOTES, SEE SHEET C-5.

	<p>CITY OF NEWBURYPORT DEPARTMENT OF PUBLIC SERVICES 16A PERRY WAY NEWBURYPORT, MA 01950</p>	Designed By: D. CHENG	SCALE: 1" = 20' HORIZ. 1" = 2' VERT.	<p>MERRILL STREET FULL DEPTH RECONSTRUCTION</p> <p>ROADWAY PLAN & PROFILE II</p>	Sheet No. 6 OF 22 C-6
		Checked By: J.E. WHITE			



GRADING & DRAINAGE PLAN NOTES:

1. ALL PIPES LEAVING CATCH BASINS SHALL BE 12" HDPE, UNLESS NOTED OTHERWISE.
2. CROSS-SLOPES OF SIDEWALKS SHALL BE 1.5% (TYP.) AND 2.0% (MAX.), UNLESS NOTED OTHERWISE. WHERE SPOT GRADES ARE SHOWN, THE SPOT GRADES SHALL GOVERN CROSS-SLOPE.
3. FOR ROADWAY PROFILE, SEE SHEETS C-5 AND C-6.
4. ALL DRAINAGE STRUCTURES AND PIPING SHALL BE CLEANED PRIOR TO PROJECT COMPLETION.
5. STATION & OFFSETS ARE TO THE CENTER OF ALL STRUCTURES.



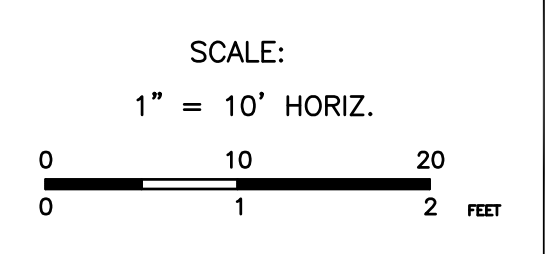
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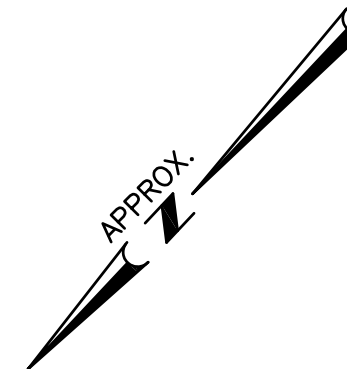
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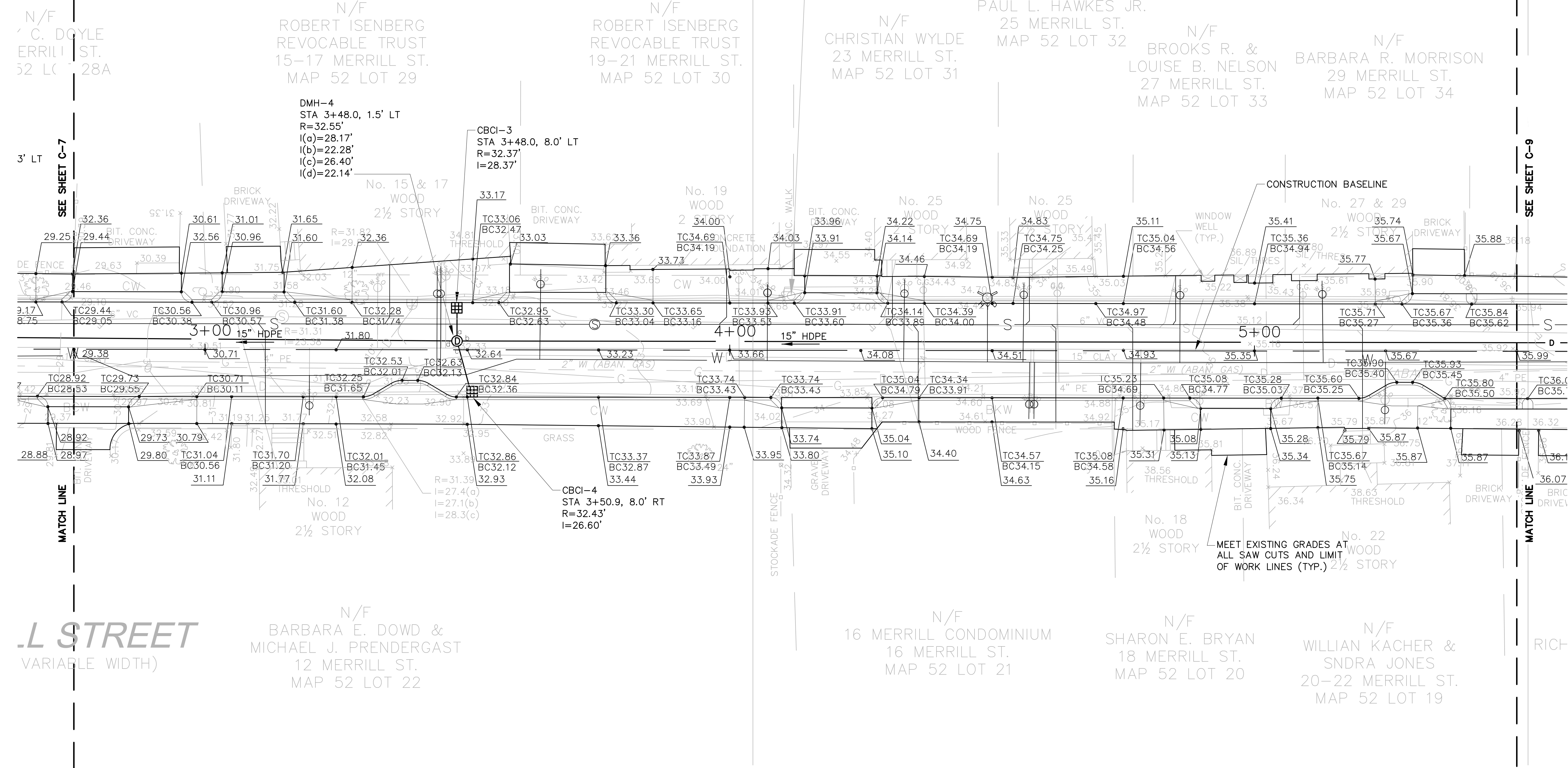


MERRILL STREET FULL DEPTH RECONSTRUCTION
GRADING & DRAINAGE PLAN I

Sheet No.
7 OF 22
C-7



BENCHMARK: PK NAIL SET IN
UTILITY POLE, ELEV. = 34.62
(DATUM: NAVD 1988)



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VARIABLE WIDTH)

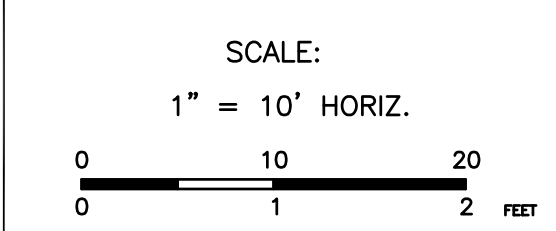
GRADING & DRAINAGE PLAN NOTES:
1. FOR ADDITIONAL NOTES, SEE SHEET C-7.



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DEPARTMENT OF PUBLIC SERVICES
16A PERRY WAY
NEWBURYPORT, MA 01950

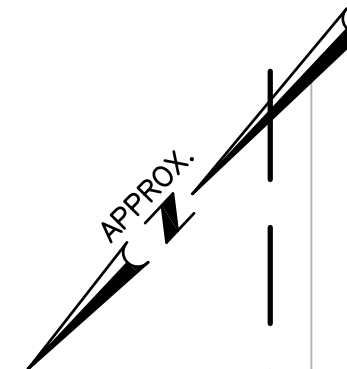
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JULY 15, 2013



MERRILL STREET FULL DEPTH RECONSTRUCTION
GRADING & DRAINAGE PLAN II

Sheet No.
8 OF 22
C-8

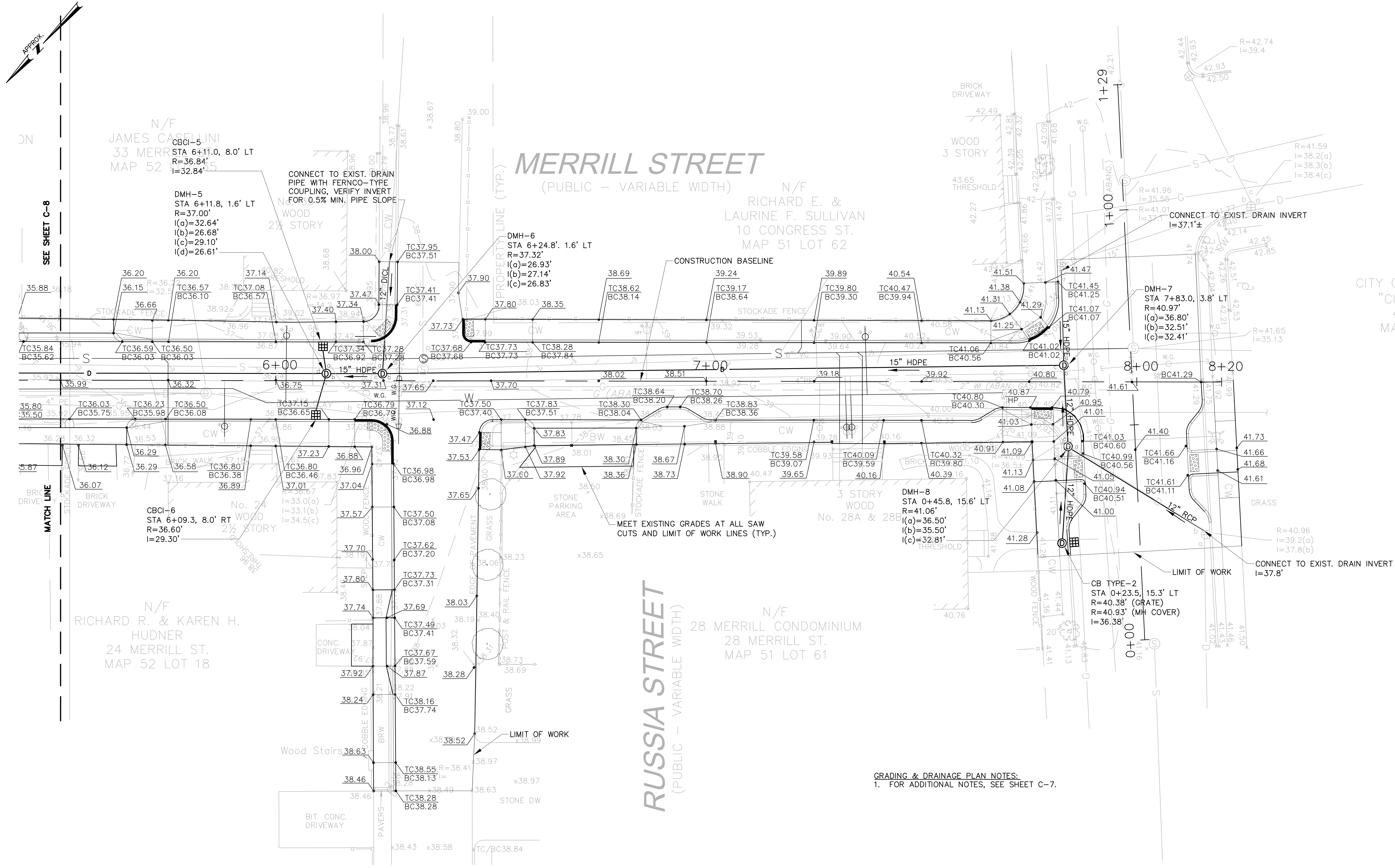


MERRILL STREET

(PUBLIC - VARIABLE WIDTH)

RUSSIA STREET

(PUBLIC - VARIABLE WIDTH)



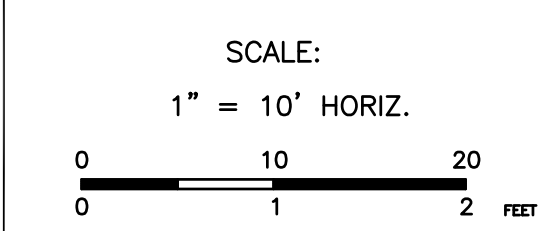
GRADING & DRAINAGE PLAN NOTES:
1. FOR ADDITIONAL NOTES, SEE SHEET C-7.



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NEWBURYPORT, MA 01950

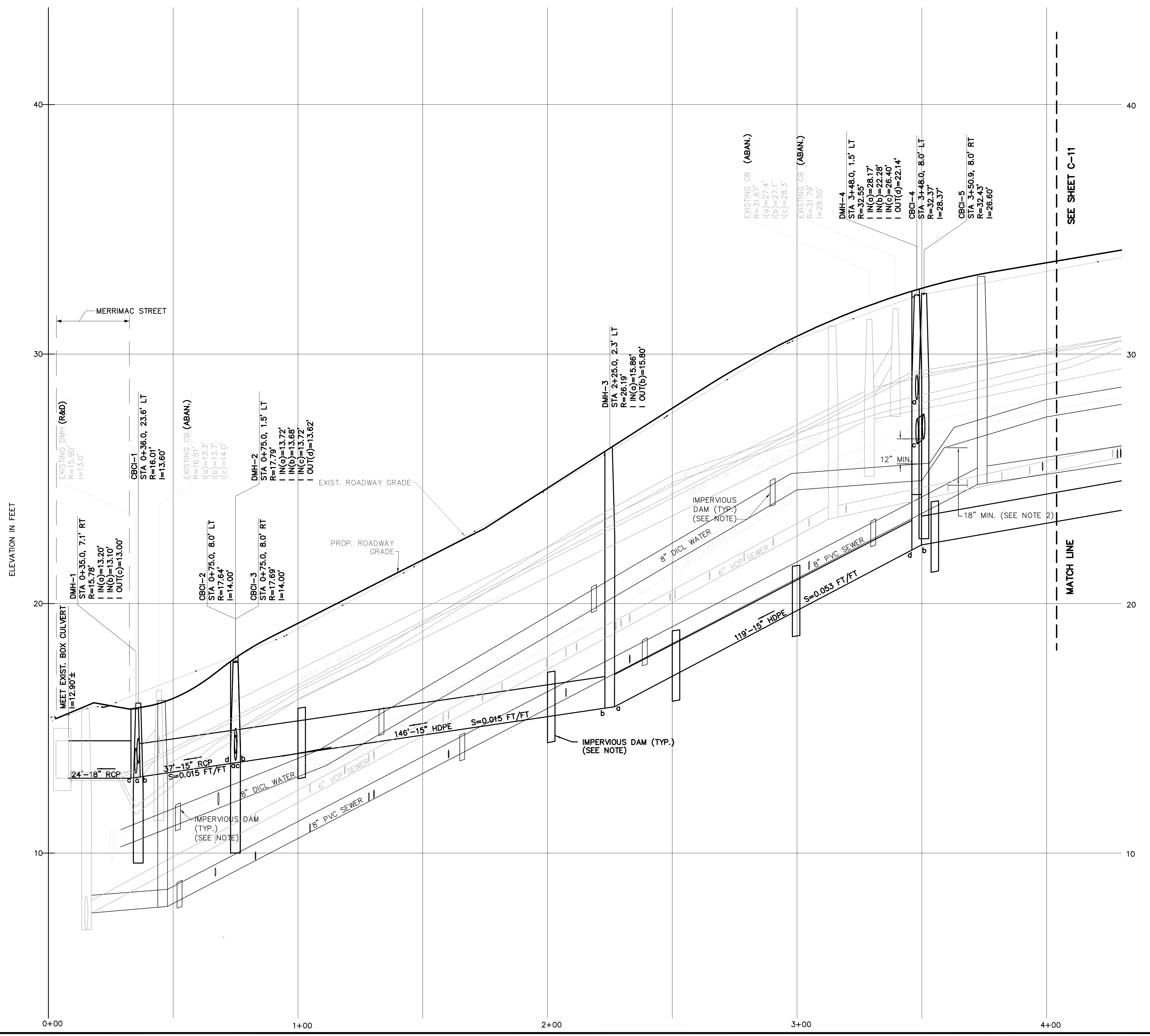
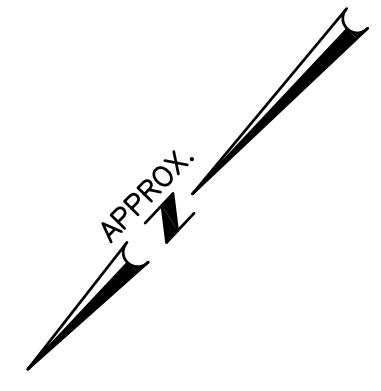
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MERRILL STREET FULL DEPTH RECONSTRUCTION
GRADING & DRAINAGE PLAN III

Sheet No.
9 OF 22
C-9



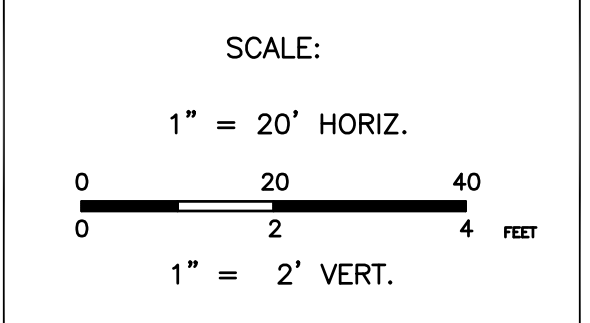
NOTES:
 1. INSTALL AT LEAST TWO (2) IMPERVIOUS DAMS BETWEEN EACH MANHOLE AS SHOWN. DAMS SHALL BE CLAY OR SIMILAR IMPERVIOUS MATERIAL AND SHALL EXTEND 1-FOOT BELOW THE BOTTOM OF THE TRENCH AND EXTEND TO THE SIDES OF THE TRENCH AND UP TO THE CROWN OF THE PIPE. DAM SHALL BE AT LEAST 2-FOOT WIDE.



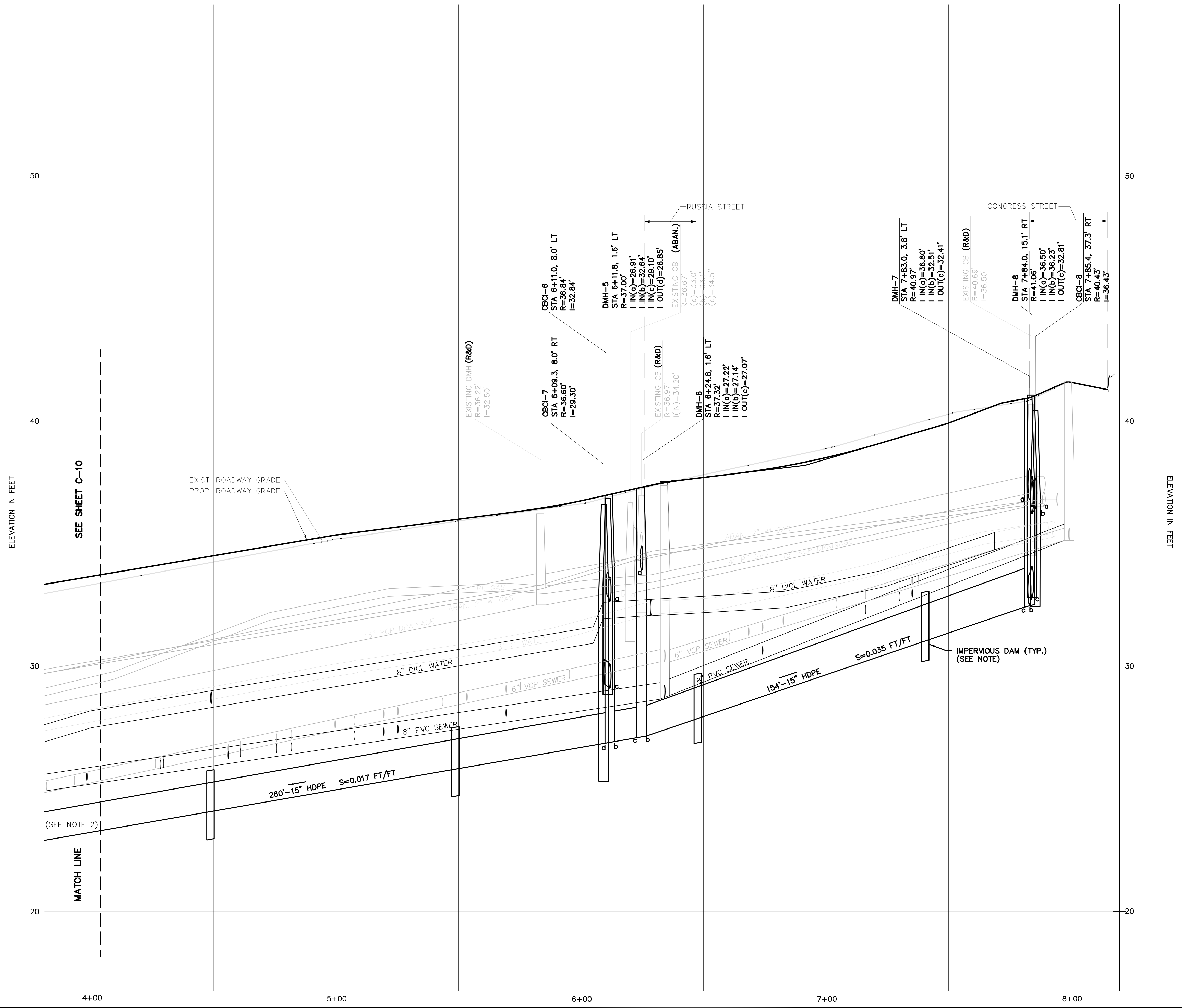
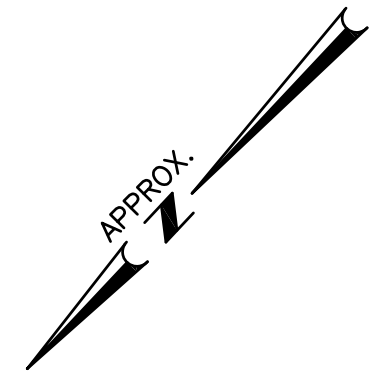
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MERRILL STREET FULL DEPTH RECONSTRUCTION
 DRAINAGE PROFILE I



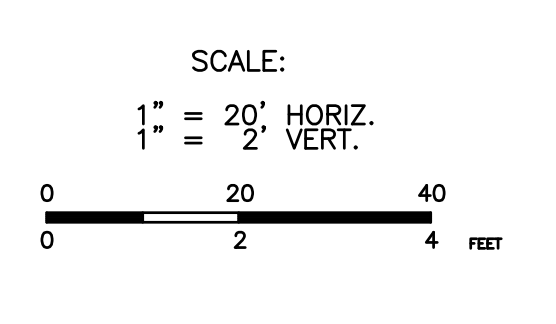
CITY OF NEWBURYPORT
DEPARTMENT OF PUBLIC SERVICES
16A PERRY WAY
NEWBURYPORT, MA 01950

Rev No	Date	Drawn	Chkd	Description

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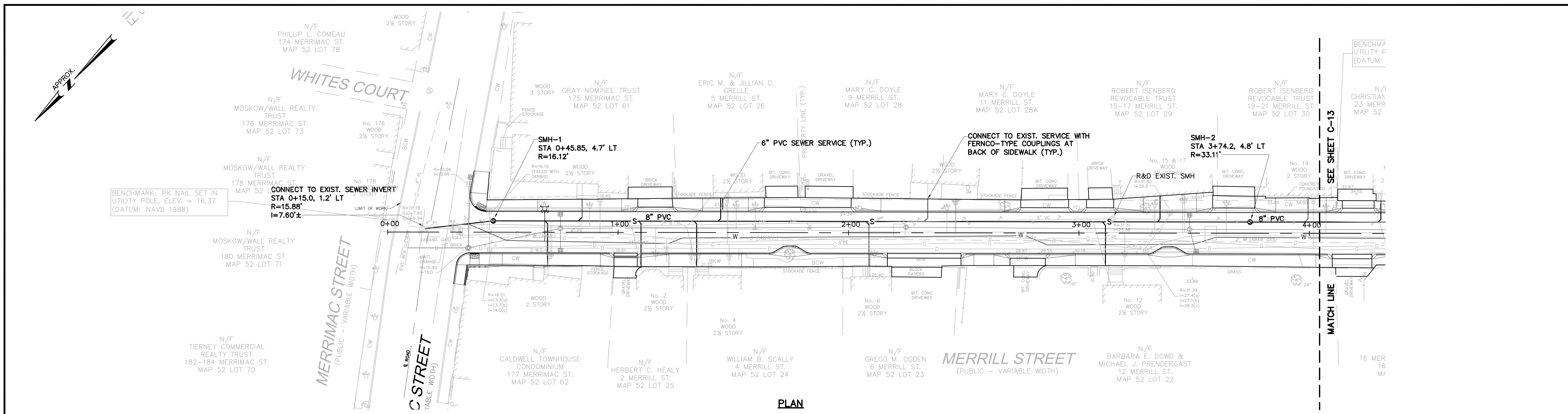
Checked By:
J.E. WHITE

Date:
JULY 15, 2013

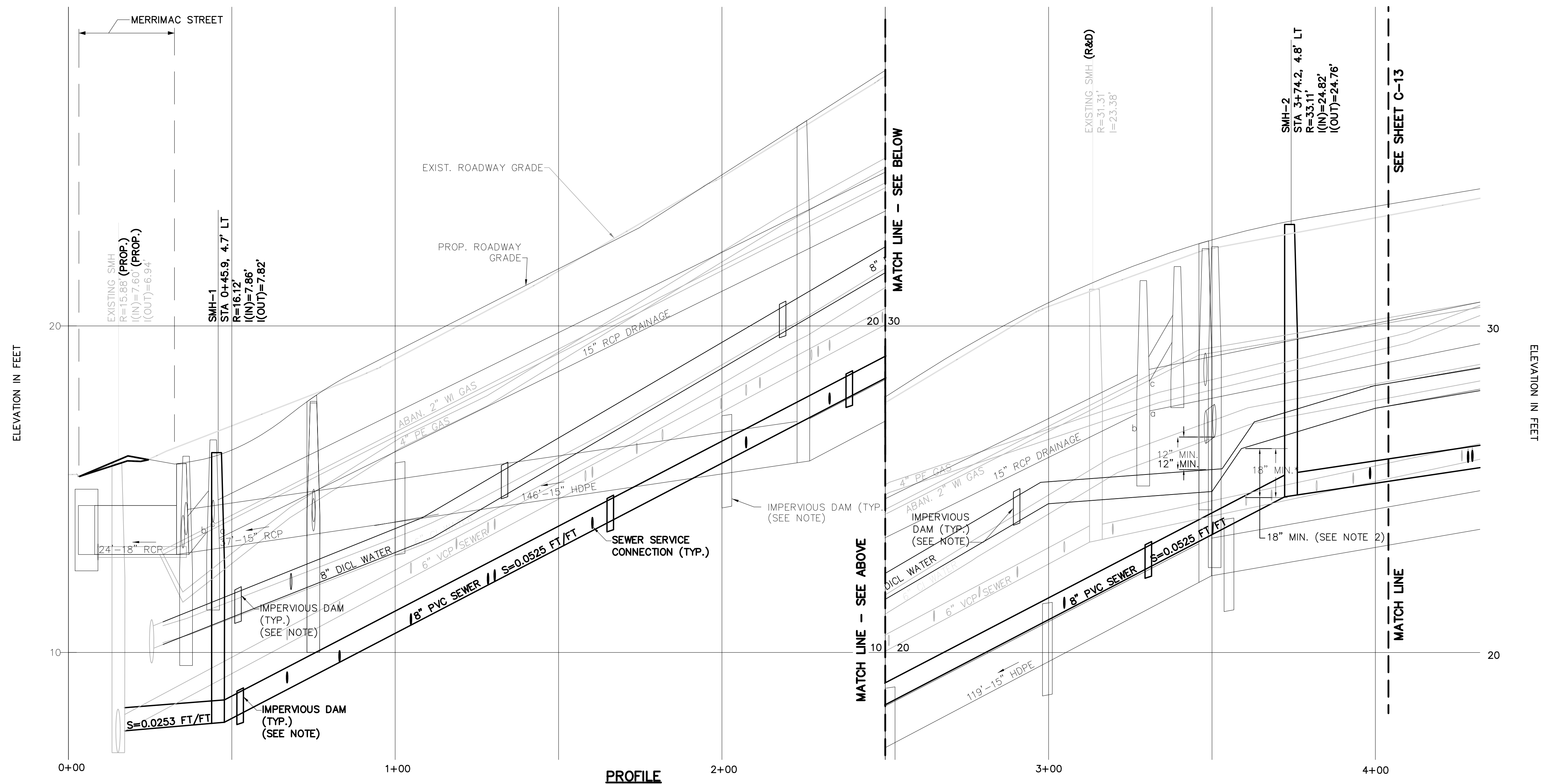


MERRILL STREET FULL DEPTH RECONSTRUCTION
DRAINAGE PROFILE II

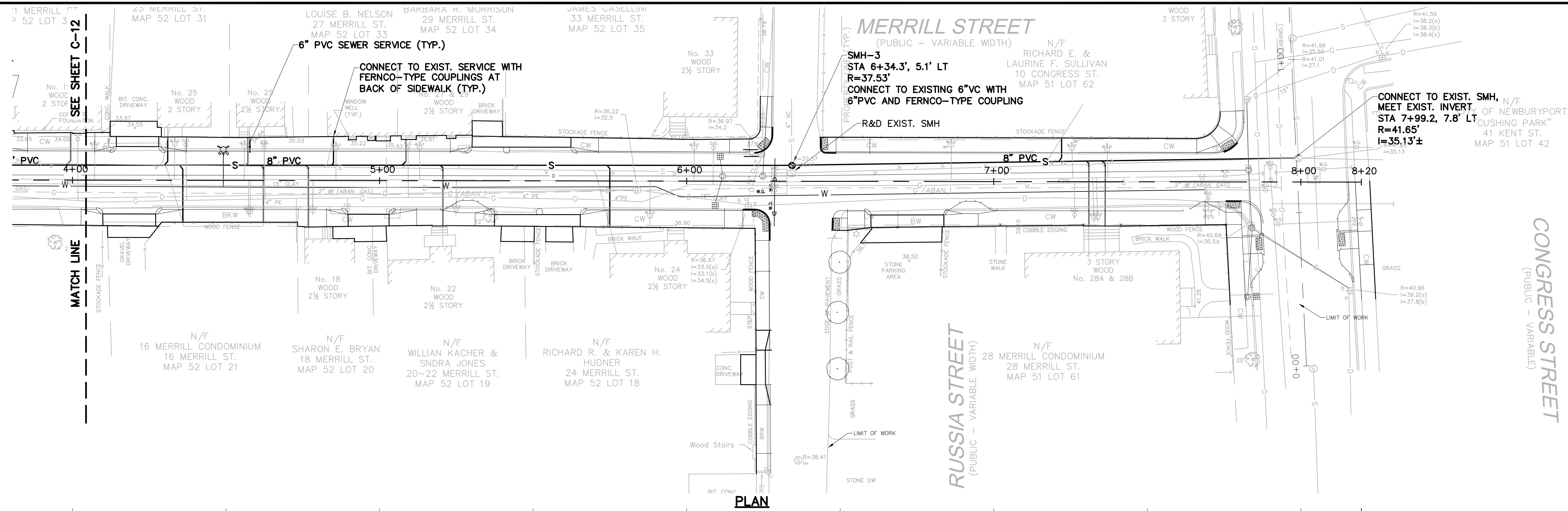
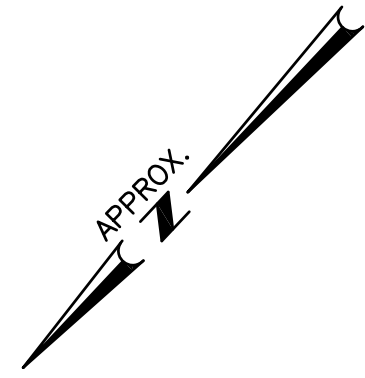
Sheet No.
11 OF 22
C-11



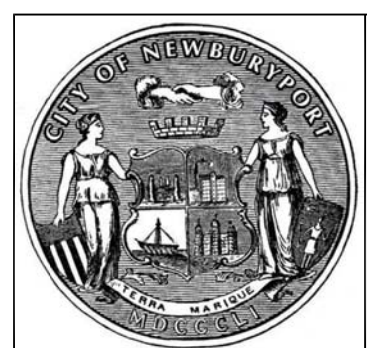
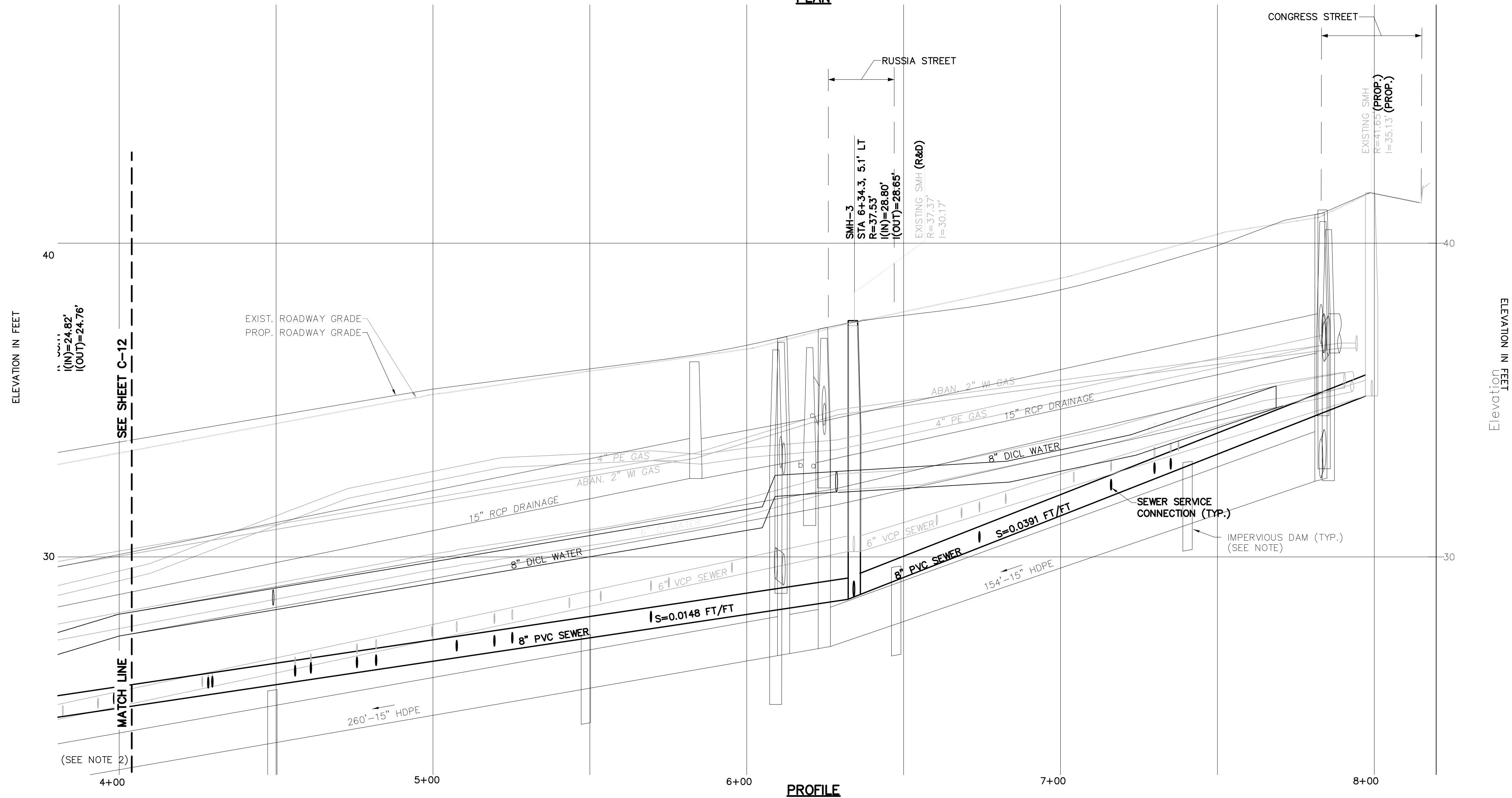
SANITARY SEWER PLAN & PROFILE NOTES:
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ACTIVE SEWER SERVICES.



	<p>CITY OF NEWBURYPORT DEPARTMENT OF PUBLIC SERVICES 16A PERRY WAY NEWBURYPORT, MA 01950</p>	<table border="1"> <thead> <tr> <th>Rev No</th> <th>Date</th> <th>Drawn</th> <th>Chkd</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Rev No	Date	Drawn	Chkd	Description						<p>Designed By: D. CHENG</p>	<p>SCALE: 1" = 20' HORIZ. 0 20 40 0 2 4 FEET 1" = 2' VERT.</p>	<p>MERRILL STREET FULL DEPTH RECONSTRUCTION SANITARY SEWER PLAN & PROFILE I</p>	<p>Sheet No. 12 OF 22 C-12</p>
			Rev No	Date	Drawn	Chkd	Description									
<p>Checked By: J.E. WHITE</p>	<p>Date: JULY 15, 2013</p>															



SANITARY SEWER PLAN & PROFILE NOTES:
 1. FOR ADDITIONAL NOTES, SEE SHEET C-12.



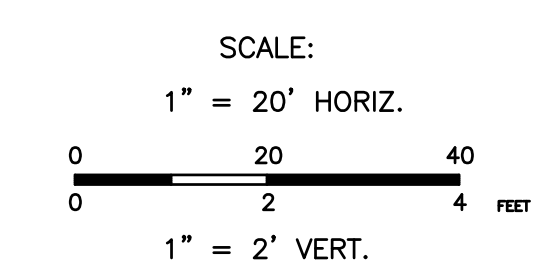
CITY OF NEWBURYPORT
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 NEWBURYPORT, MA 01950

Rev No	Date	Drawn	Chkd	Description

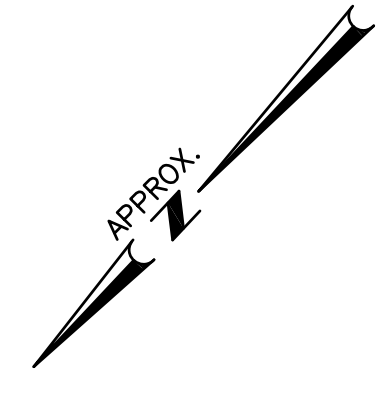
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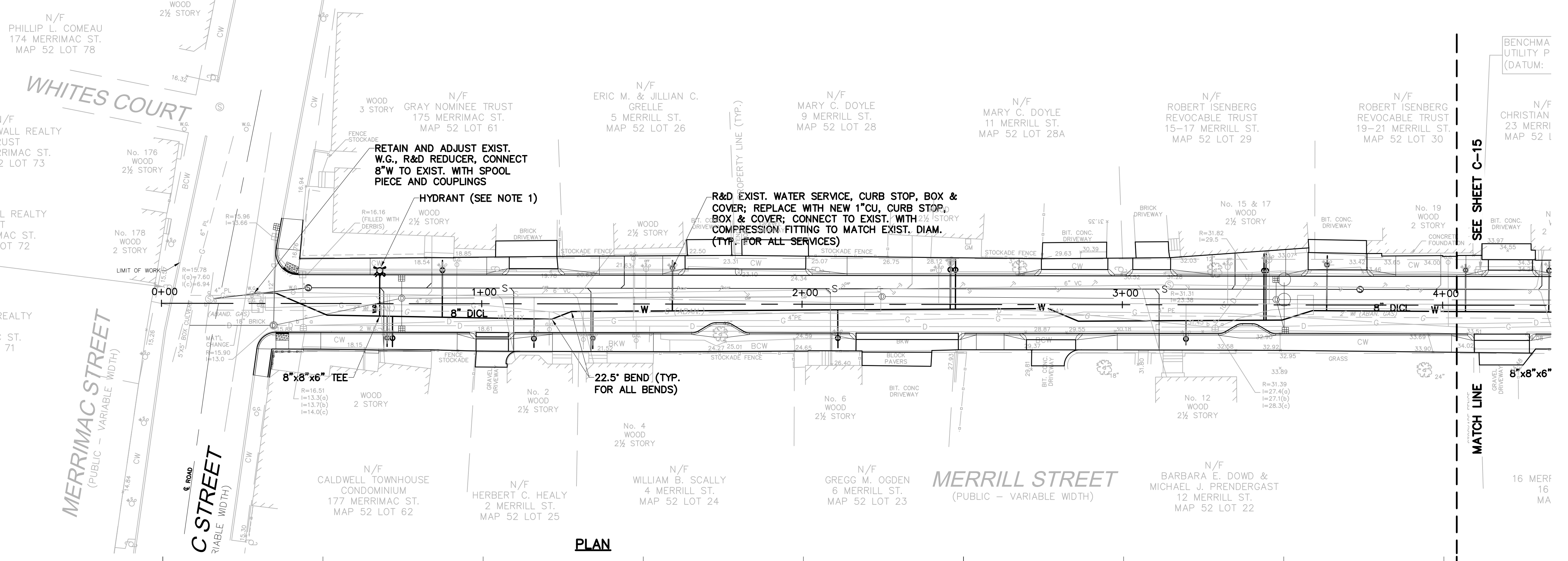
Date:
JULY 15, 2013



MERRILL STREET FULL DEPTH RECONSTRUCTION
SANITARY SEWER PLAN & PROFILE II

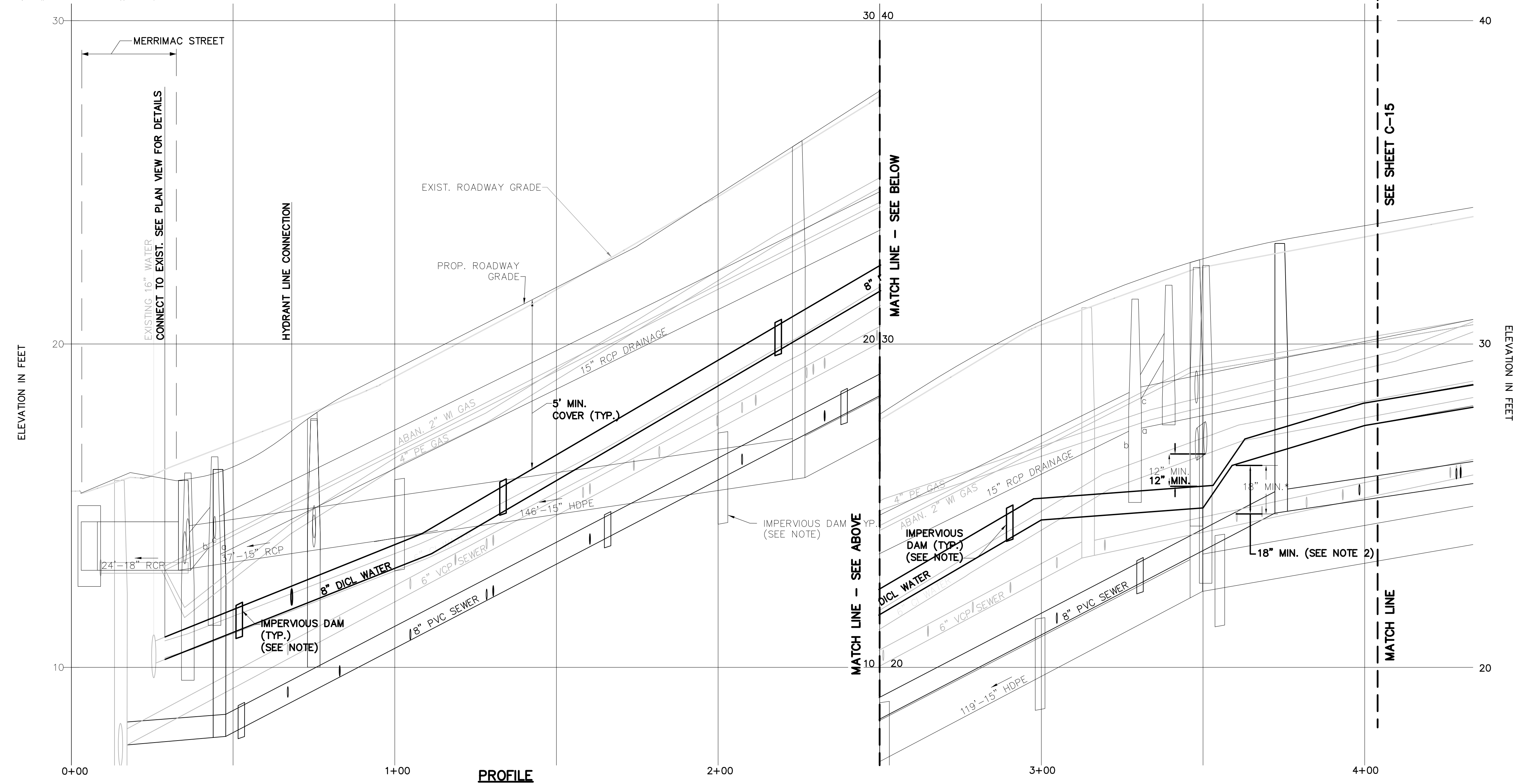


BENCHMARK: PK NAIL SET IN UTILITY POLE, ELEV. = 16.37 (DATUM: NAVD 1988)



PLAN

- WATER DISTRIBUTION PLAN & PROFILE NOTES:**
1. ALL HYDRANT CONNECTIONS SHALL BE 6" DI CL WITH 6" GATE VALVE & BOX.
 2. WATER AND SEWER MAINS SHALL BE SEPARATED 10' HORIZONTALLY OR 18" VERTICALLY WITH WATER ABOVE SEWER.
 3. THE CONTRACTOR SHALL MEET WITH THE DPS WATER DIVISION PRIOR TO PERFORMING ANY WORK TO COORDINATE SHUTDOWNS, TEMPORARY WATER SYSTEM, TIE-INS, MATERIALS, TESTING, AND ALL OTHER WATER WORK.
 4. INSTALL AT LEAST TWO (2) IMPERVIOUS DAMS BETWEEN EACH MANHOLE AS SHOWN. DAMS SHALL BE CLAY OR SIMILAR IMPERVIOUS MATERIAL AND SHALL EXTEND 1-FOOT BELOW THE BOTTOM OF THE TRENCH AND EXTEND TO THE SIDES OF THE TRENCH AND UP TO THE CROWN OF THE PIPE. DAM SHALL BE AT LEAST 2-FOOT WIDE.



PROFILE



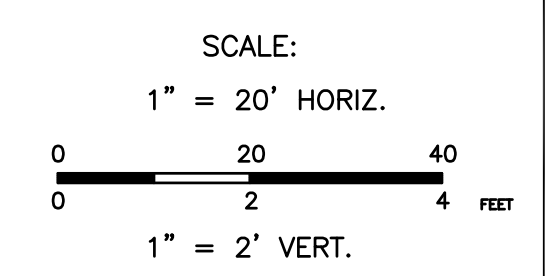
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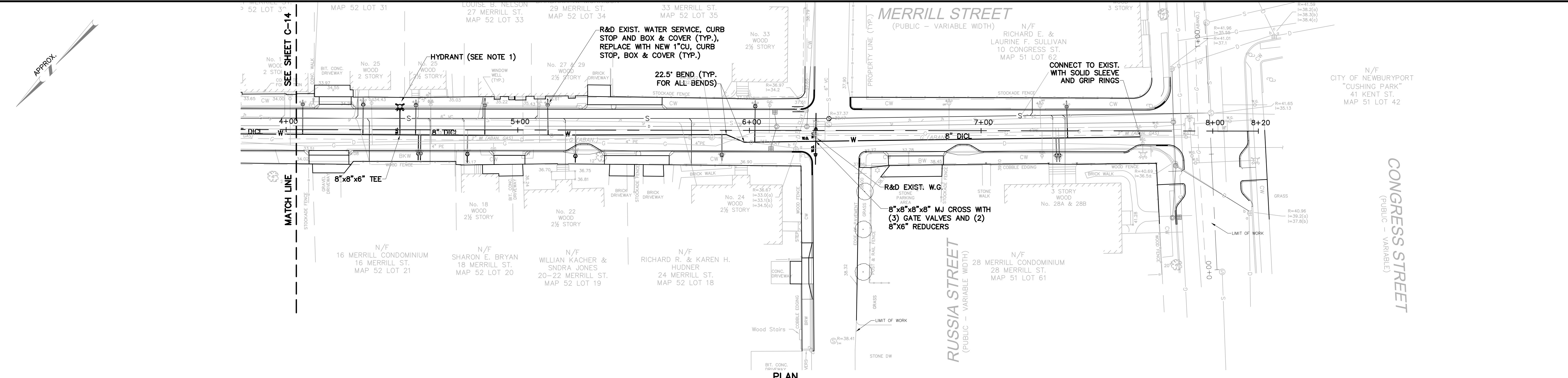
Checked By:
J.E. WHITE

Date:
JULY 15, 2013

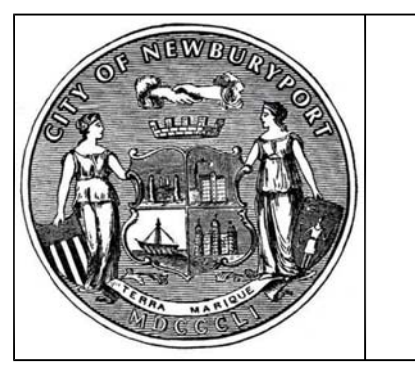
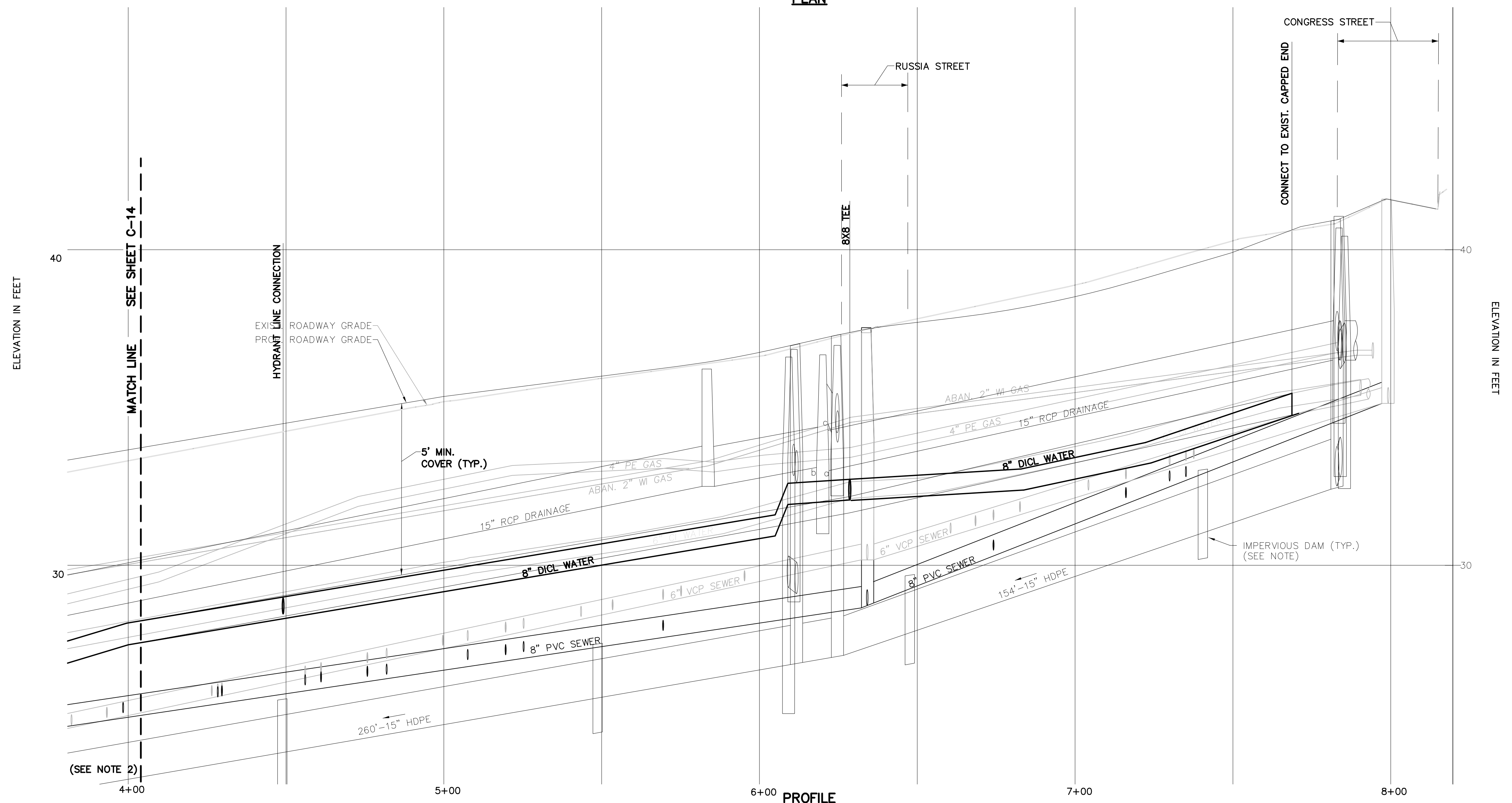


MERRILL STREET FULL DEPTH RECONSTRUCTION
WATER DISTRIBUTION PLAN & PROFILE I

Sheet No.
14 OF 22
C-14



WATER DISTRIBUTION PLAN & PROFILE NOTES.
 1. FOR ADDITIONAL NOTES, SEE SHEET C-14.



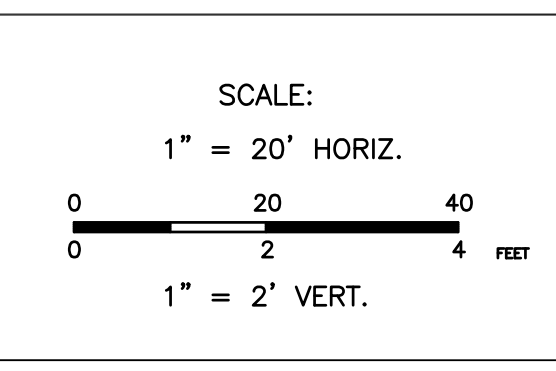
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 NEWBURYPORT, MA 01950

Rev No	Date	Drawn	Chkd	Description

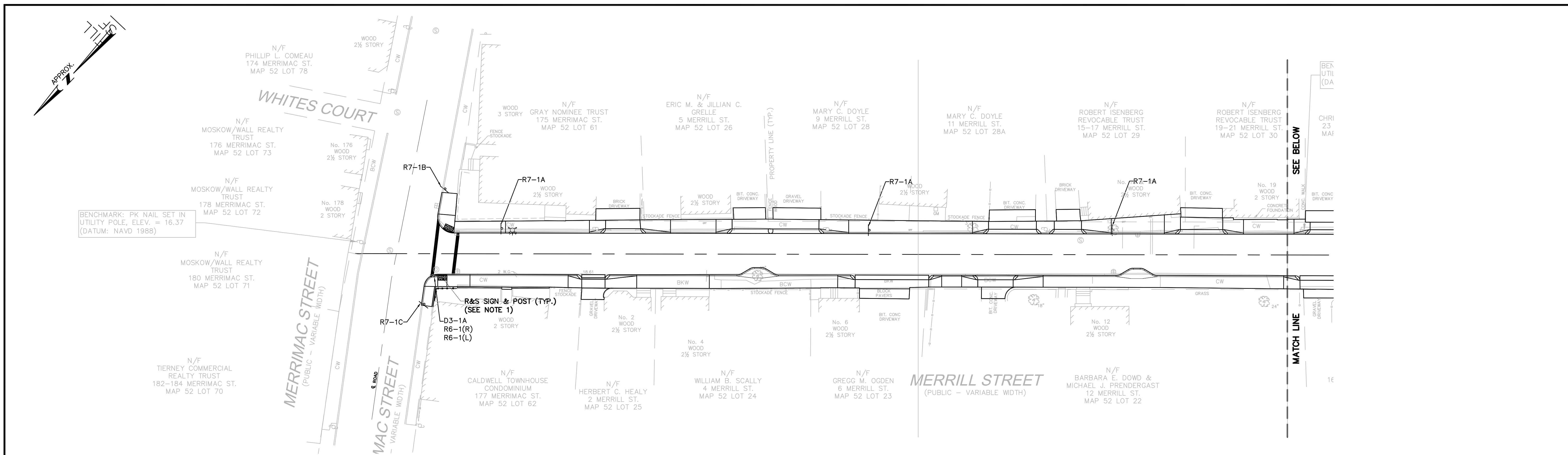
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D. CHENG

Checked By:
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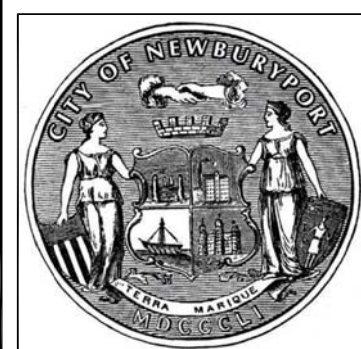
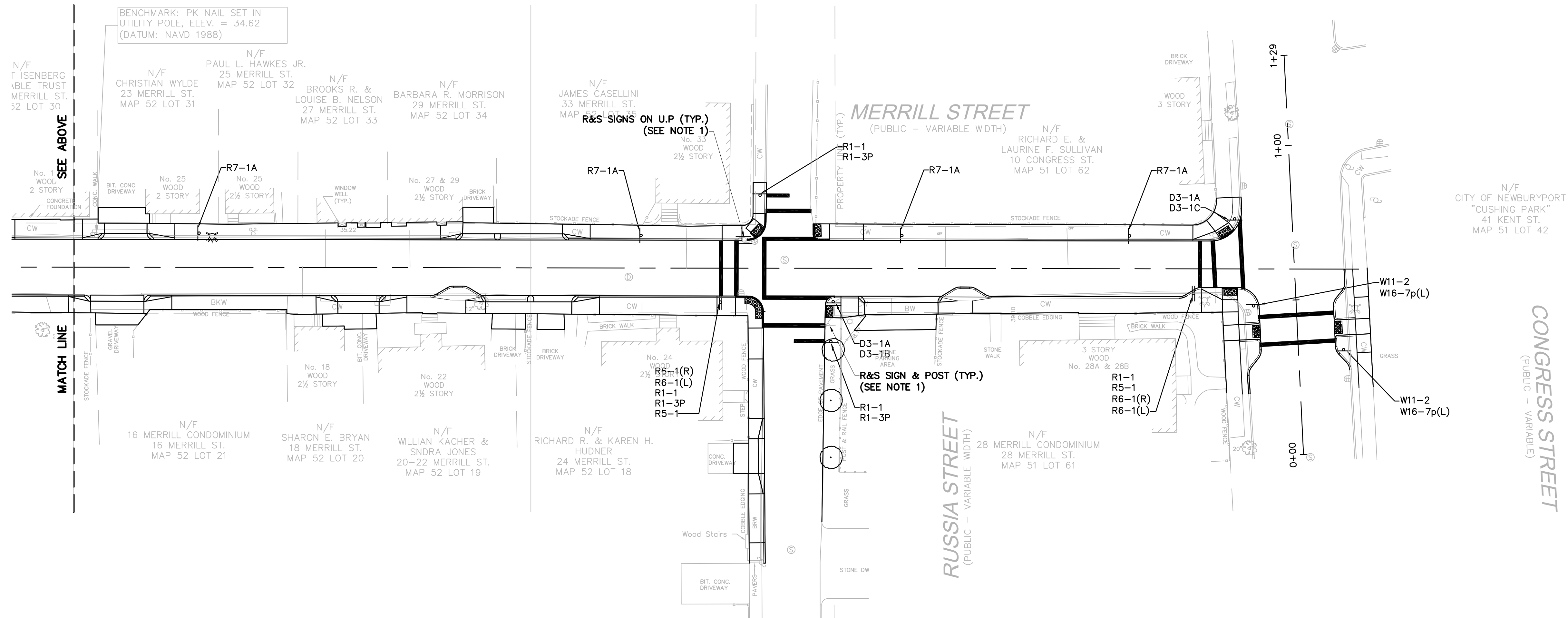


MERRILL STREET FULL DEPTH RECONSTRUCTION
WATER DISTRIBUTION PLAN & PROFILE II



PAVEMENT MARKINGS & SIGNAGE PLAN NOTES:

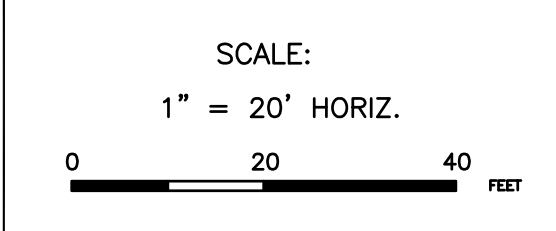
1. ALL EXISTING SIGNS SHALL BE REMOVED FROM SITE AND DELIVERED TO THE DPS FACILITY ON PERRY WAY.
2. STREET SIGNS WILL BE FURNISHED AND DELIVERED TO THE CONTRACTOR BY THE CITY. CONTRACTOR SHALL FURNISH THE SIGN POSTS AND ALL HARDWARE FOR CONNECTING THE SIGN TO THE POST.



CITY OF NEWBURYPORT
DEPARTMENT OF PUBLIC SERVICES
16A PERRY WAY
NEWBURYPORT, MA 01950

Rev No	Date	Drawn	Chkd	Description




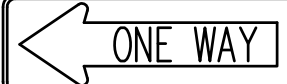









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Date:
JULY 15, 2013



**MERRILL STREET FULL DEPTH RECONSTRUCTION
PAVEMENT MARKINGS & SIGNAGE
PLAN**

Sheet No.
16 OF 22
C-16

TRAFFIC SIGN SUMMARY

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA IN SQUARE FEET	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK- GROUND	LEGEND	BORDER			
R1-1	30"	30"		①	①	①	4	①	①	①	P-5 (4)	6.25	25.00
R1-3P	18"	6"					3				MOUNT W/ R1-1	0.75	2.25
R5-1	30"	30"					2				MOUNT W/ R1-1	6.25	12.50
R6-1(L)	36"	12"					3				MOUNT W/ D3-1A	3.00	9.00
R6-1(R)	36"	12"					3				MOUNT W/ D3-1A	3.00	9.00
R7-1A	12"	18"					7				P-5 (7)	1.50	10.50
R7-1B	12"	18"					1				P-5 (1)	1.50	1.50
R7-1C	12"	18"					1				P-5 (1)	1.50	1.50
D3-1A	VAR	12"					3				P-5 (3)	--	--
D3-1B	VAR	12"					1				MOUNT W/ D3-1A	--	--
D3-1C	VAR	12"					1				MOUNT W/ D3-1A	--	--
W11-2	30"	30"					2				P-5 (2)	6.25	12.50
W16-7P(L)	24"	12"		▼	▼	▼	2	▼	▼	▼	MOUNT W/ W11-2	2.00	4.00

① SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES 2009 EDITIONS FOR LATEST SPECIFICATIONS ON TEXT DIMENSIONS AND COLOR.



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DEPARTMENT OF PUBLIC SERVICES
16A PERRY WAY
NEWBURYPORT, MA 01950

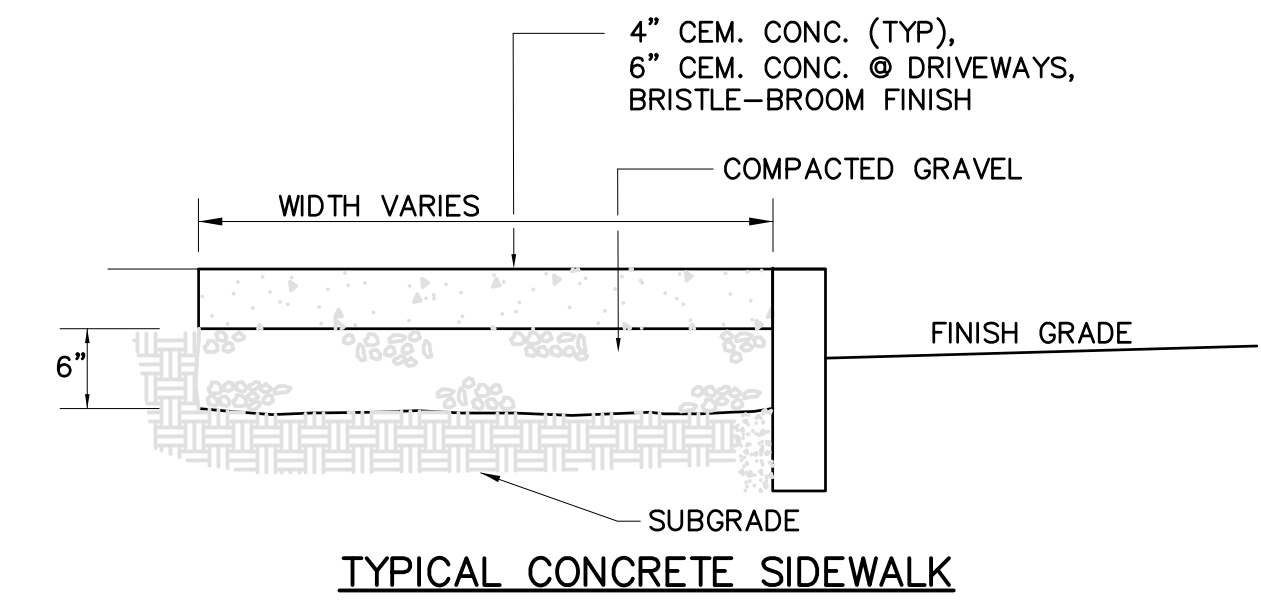
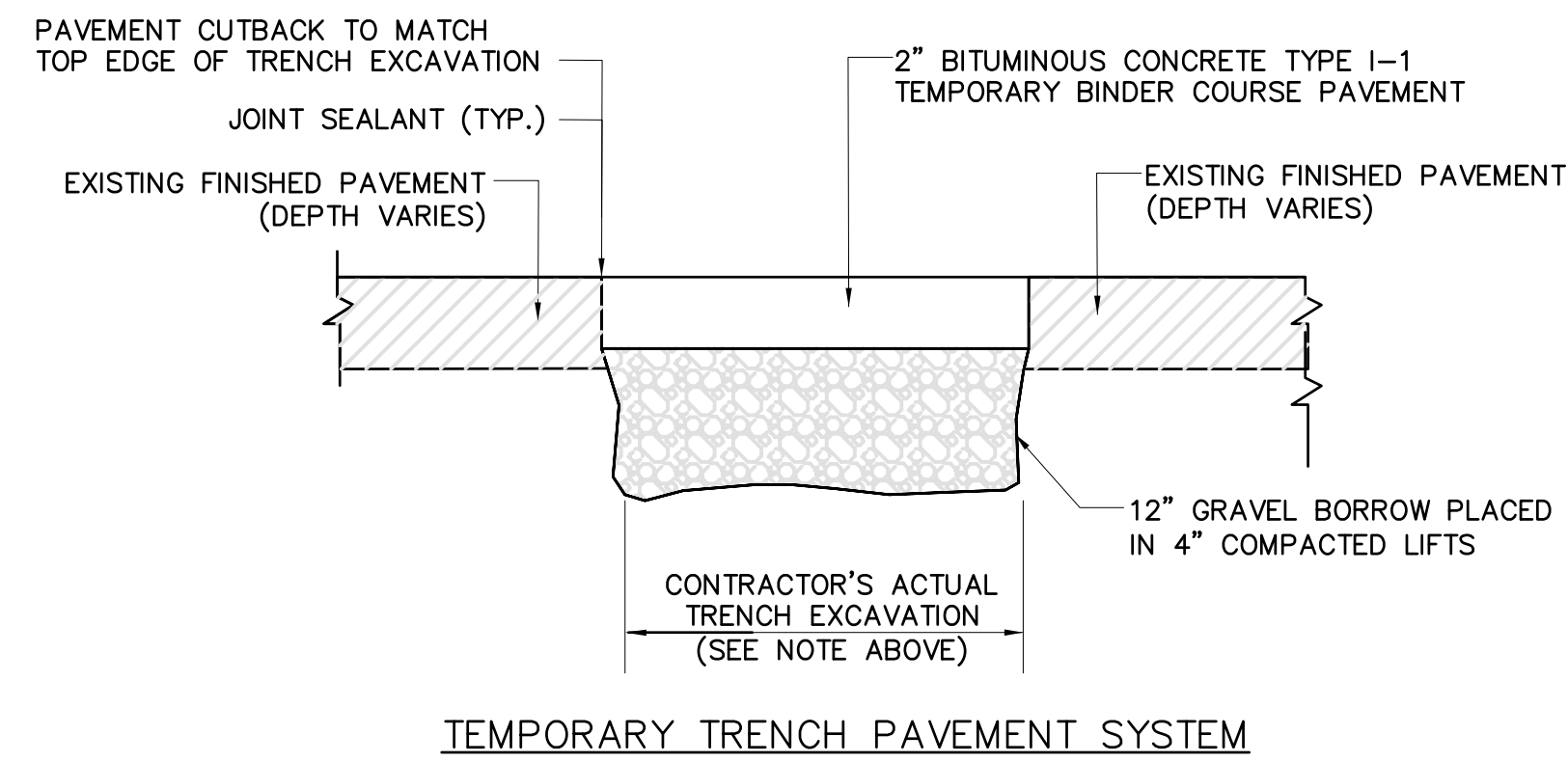
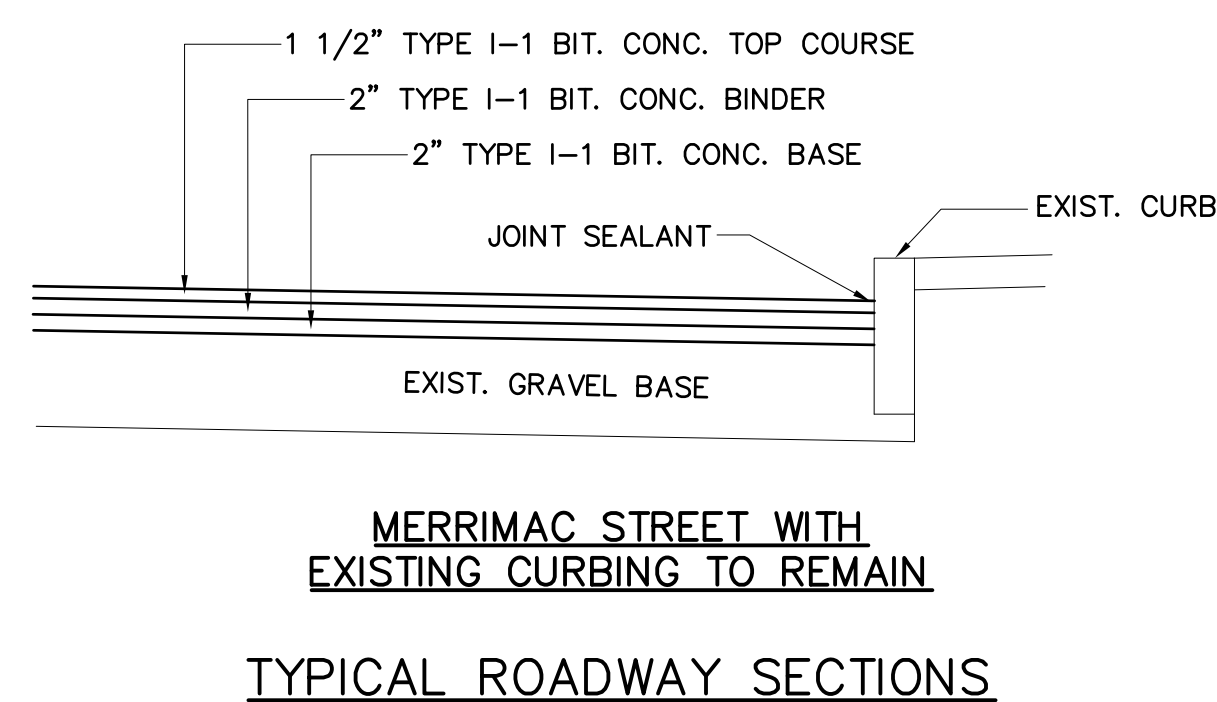
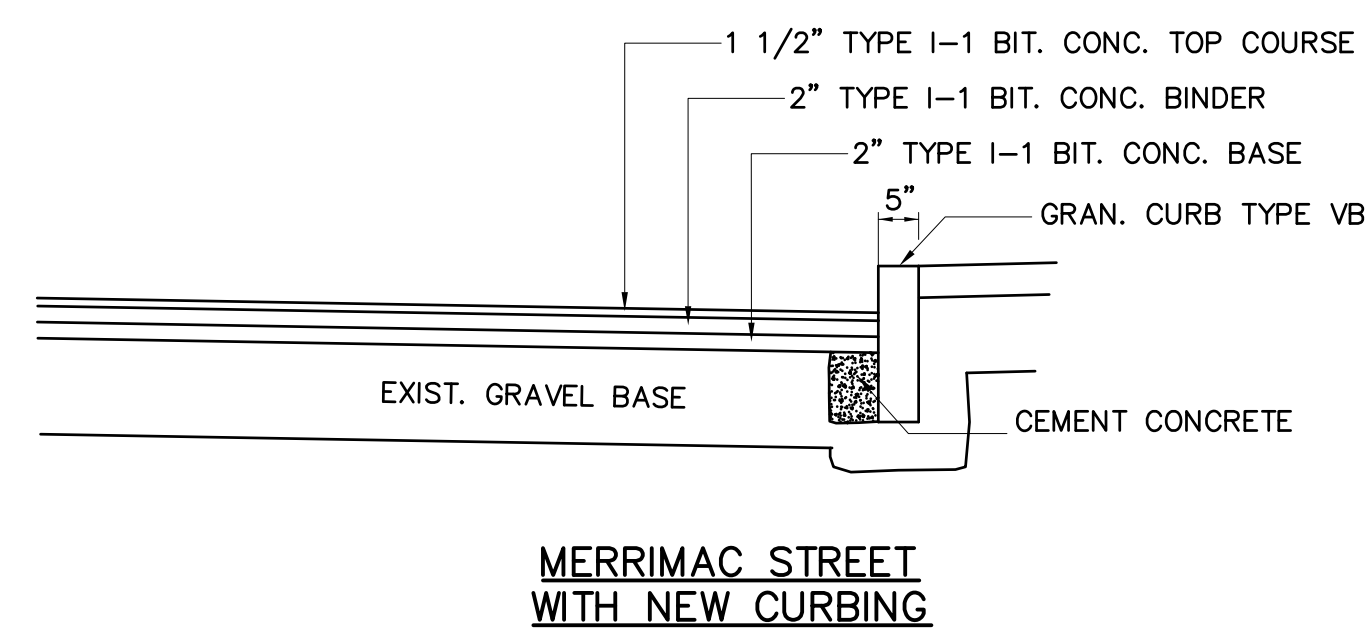
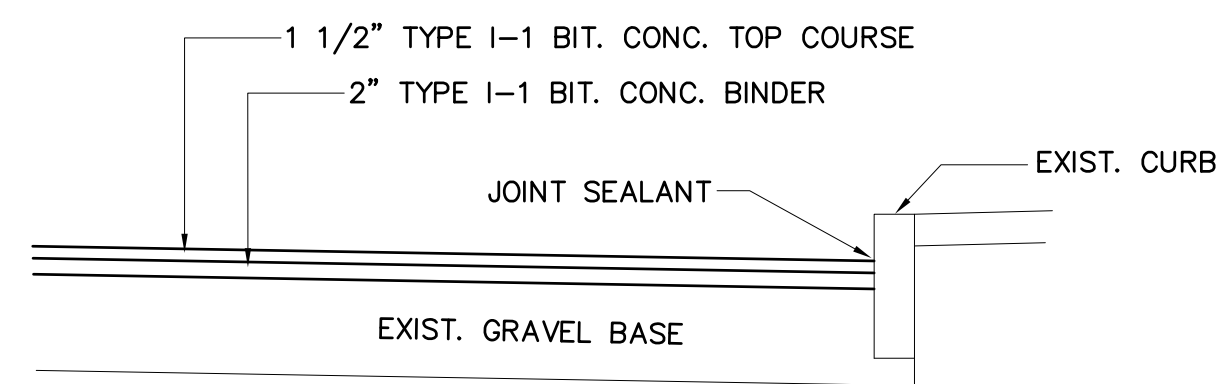
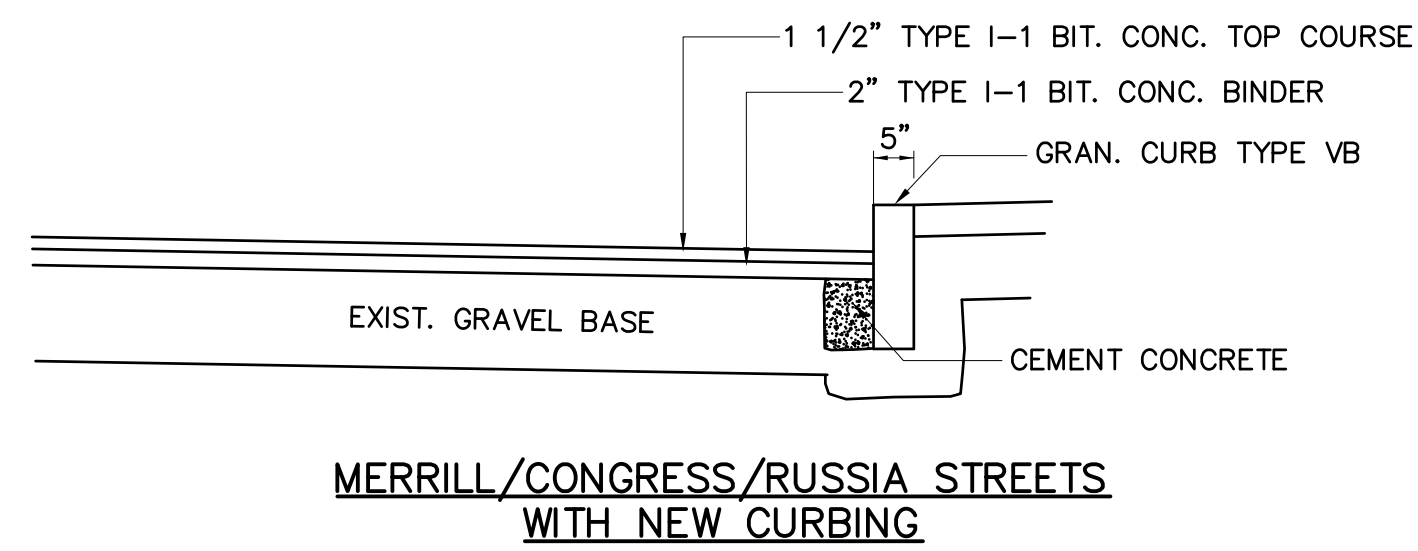
Rev No	Date	Draw	Chkd	Description					
				Revisions					

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Date:
JULY 15, 2013

SCALE:
NONE

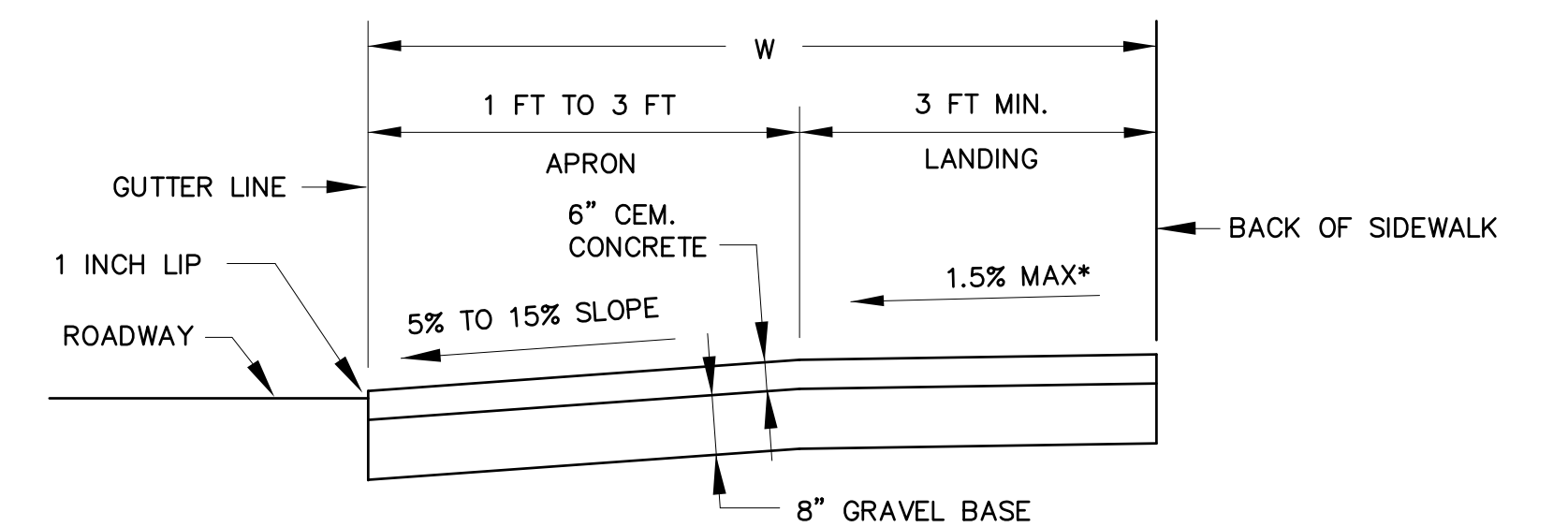
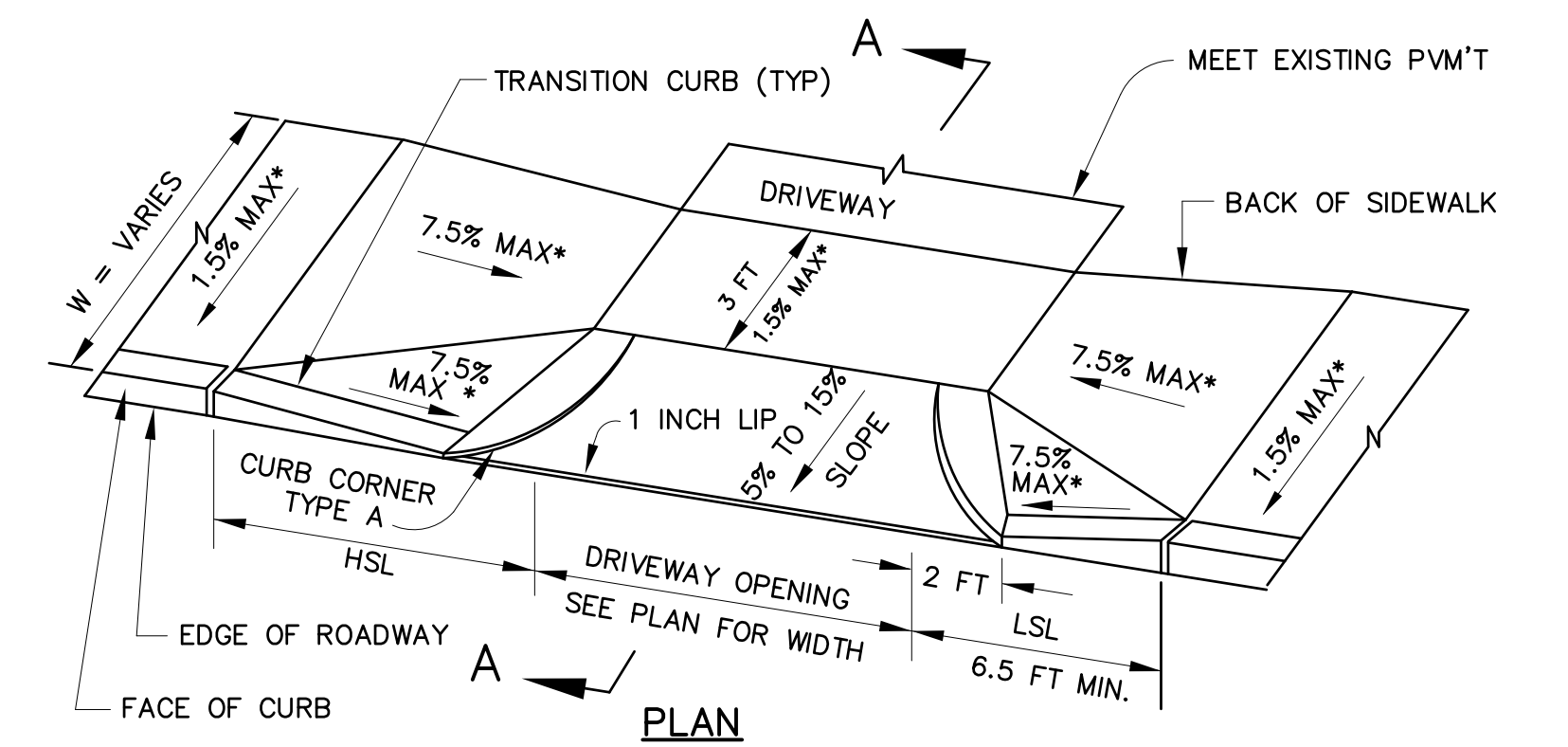
MERRILL STREET FULL DEPTH RECONSTRUCTION
TRAFFIC SIGN SUMMARY

Sheet No.
17 OF 22
C-17



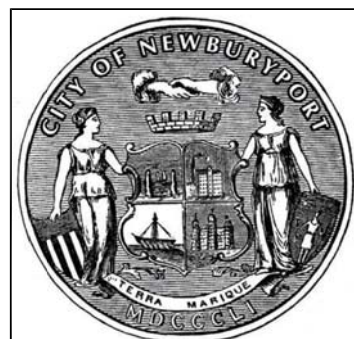
- NOTE:
1. TYPICAL SIDEWALK THICKNESS IS 4-INCHES. SIDEWALK THICKNESS AT DRIVEWAYS IS 6-INCHES.
 2. CONCRETE TO BE 4000 PSI FIBER REINFORCED.

- PAVING NOTES:**
1. THE BINDER AND BASE COURSES AND ANY TEMPORARY PAVEMENT PATCH SHALL REMAIN THROUGH ONE WINTER SEASON BEFORE FINAL TOP COURSE PAVING OR AS DIRECTED BY THE CITY, BUT NOT LESS THAN 90 DAYS. IF 1/2" OR GREATER SETTLING OCCURS, CONTRACTOR SHALL PROVIDE A LEVELING COURSE TO MATCH FINISH PAVEMENT.
 2. ASPHALT DRIVEWAYS SHALL CONSIST OF 1-1/2 INCH CLASS 1 BITUMINOUS CONCRETE TOP COURSE TYPE I-1 PLACED ON A 2 INCH CLASS 1 BITUMINOUS CONCRETE, TYPE I-1 BINDER COURSE MATERIAL. ROADWAY SUBBASE SHALL BE 8 INCHES OF GRAVEL BORROW PLACED IN 4 INCH LIFTS AND COMPACTED.



**CEMENT CONCRETE DRIVEWAY AT
SIDEWALK**

SCALE : NONE



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NEWBURYPORT, MA 01950

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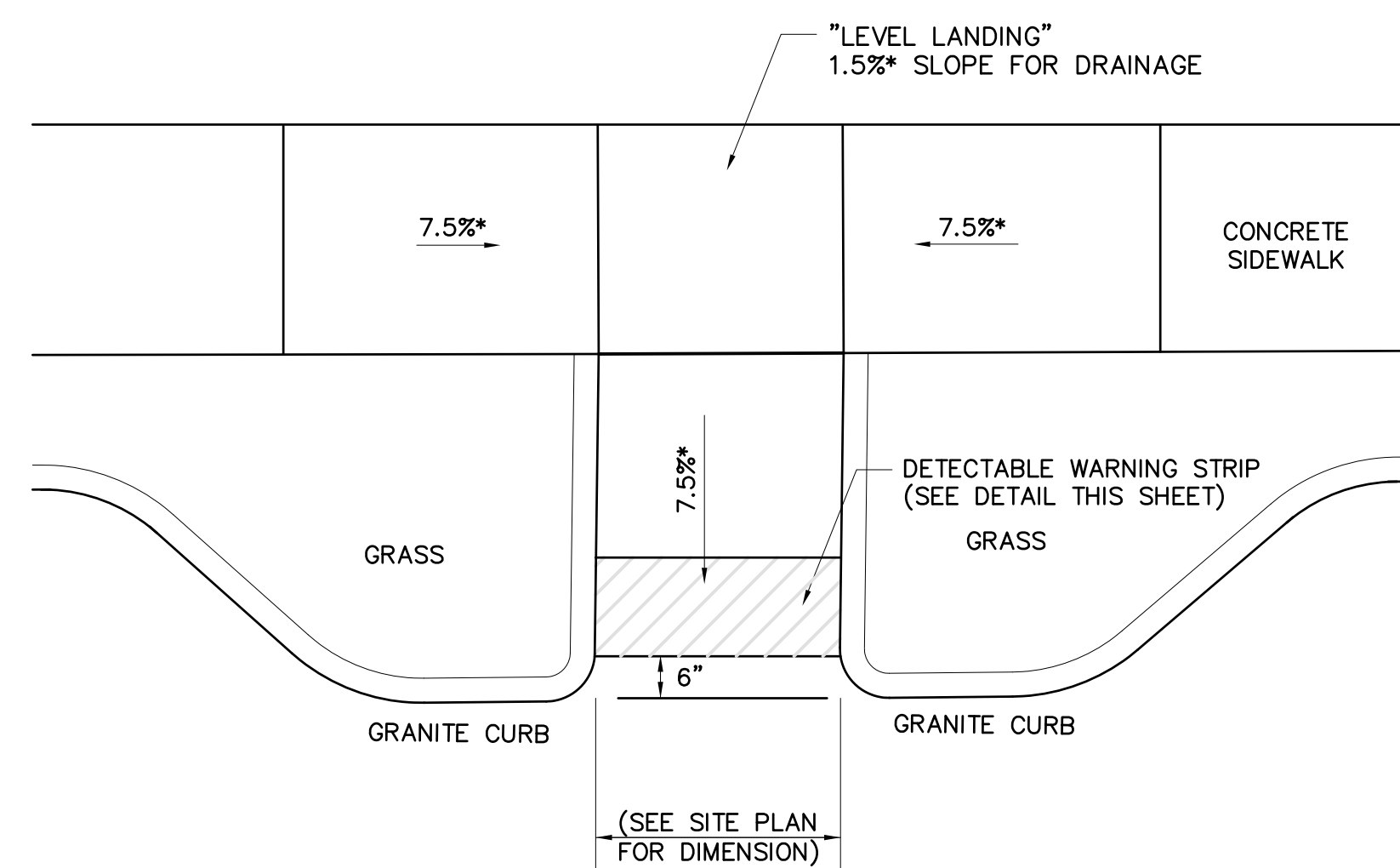
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MERRILL STREET FULL DEPTH RECONSTRUCTION

DETAILS I

Sheet No.
18 OF 22

C-18

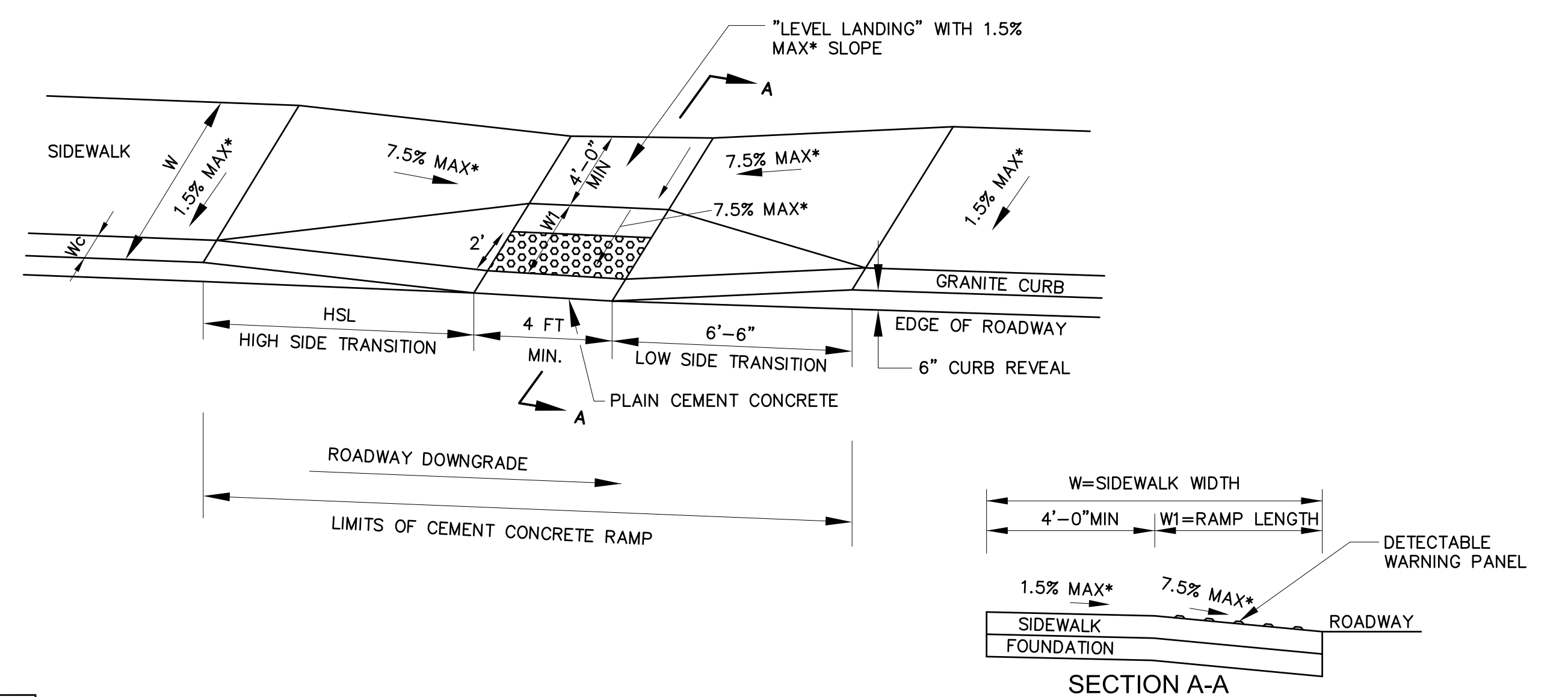


WHEELCHAIR RAMP WITH GRASS STRIP

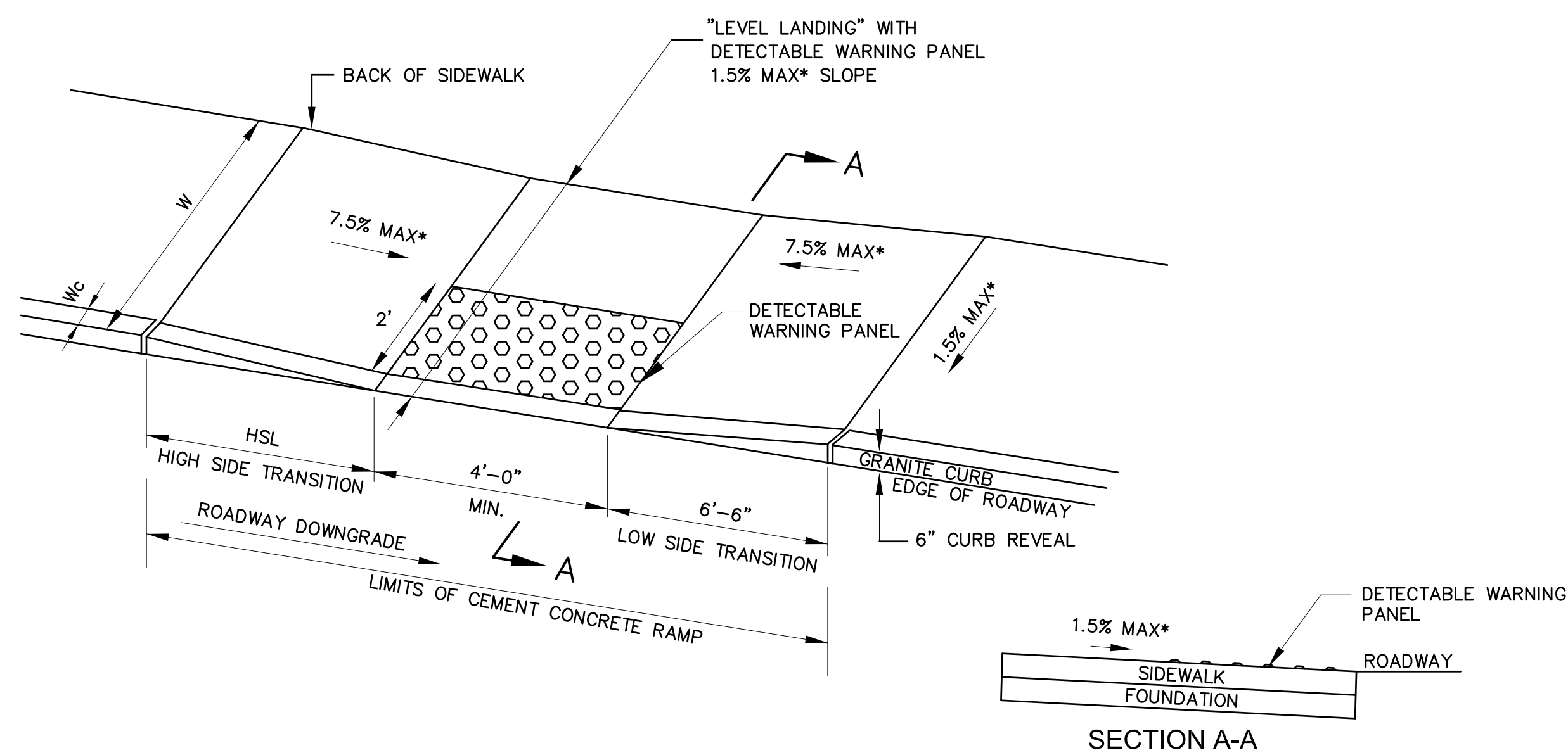
*** WHEELCHAIR RAMP NOTES:**
 THESE WHEELCHAIR RAMP DETAILS PROVIDE THE MINIMUM AND MAXIMUM DIMENSIONS AND SLOPES PER ADA. FOR ACTUAL DIMENSIONS AND SLOPES, REFER TO THE LAYOUT AND GRADING PLANS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF HE/SHE IDENTIFIES ANY SLOPE OR DIMENSION ON THE PLANS THAT DOES NOT MEET CODE.

LEGEND:

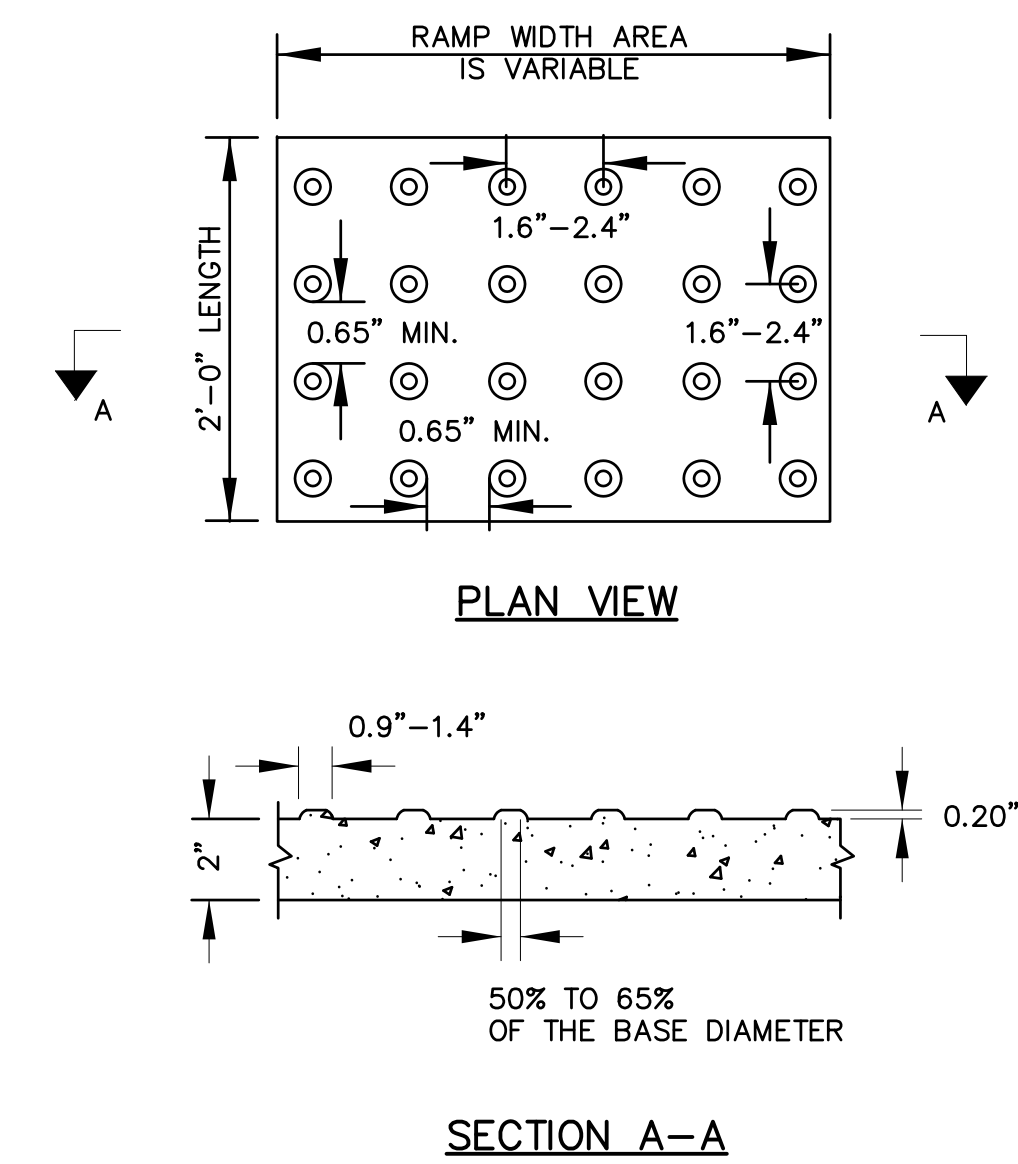
- HSL = HIGH SIDE FRONT TRANSITION LENGTH (SEE PLANS FOR DIMENSIONS)
- W = SIDEWALK WIDTH
- Wc = CURB WIDTH
- CC = CEMENT CONCRETE
- * = TOLERANCE FOR CONSTRUCTION ±0.5%
- USABLE SIDEWALK WIDTH PER AAB = W-Wc
- RAMP LENGTH, W1 = W-4'-0" MIN



WHEELCHAIR RAMP LESS THAN 12'-4" SIDEWALK

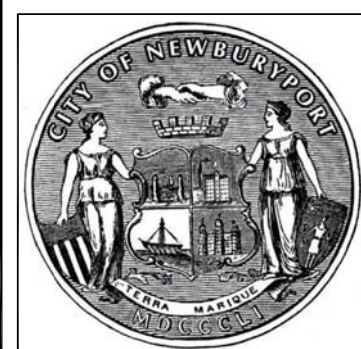


WHEELCHAIR RAMP ON NARROW SIDEWALK WITH DETECTABLE WARNING PANEL



NOTE:
 PANELS SHALL BE PLASTIC OR SIMILAR MATERIAL AND PERMANENTLY APPLIED TO THE RAMP. COLOR SHALL BE BRICK RED.

DETECTABLE WARNING STRIP



CITY OF NEWBURYPORT
 DEPARTMENT OF PUBLIC SERVICES
 16A PERRY WAY
 NEWBURYPORT, MA 01950

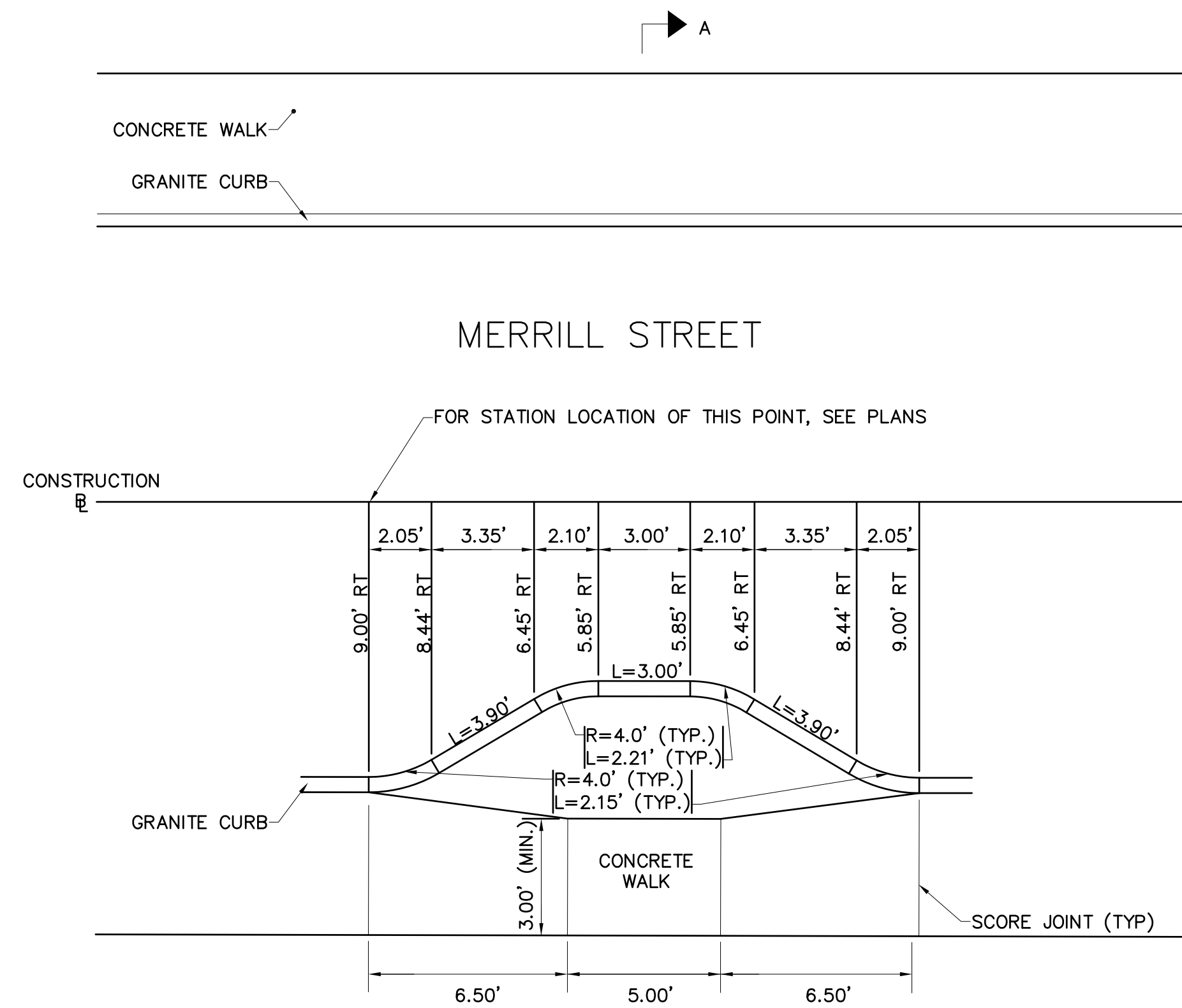
Rev No	Date	Drawn	Chkd	Description

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 Checked By:
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 Date:
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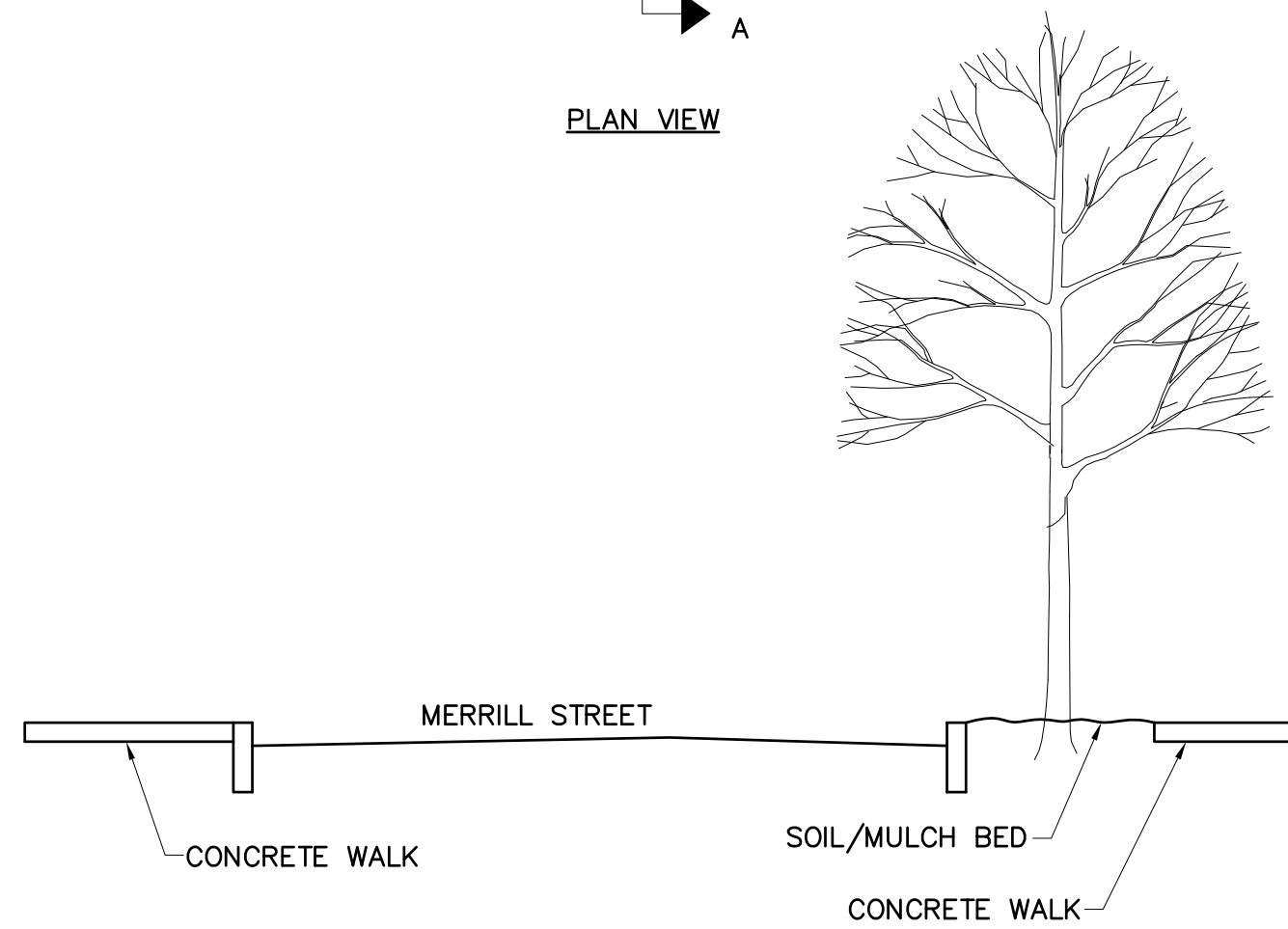
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MERRILL STREET FULL DEPTH RECONSTRUCTION
DETAILS II

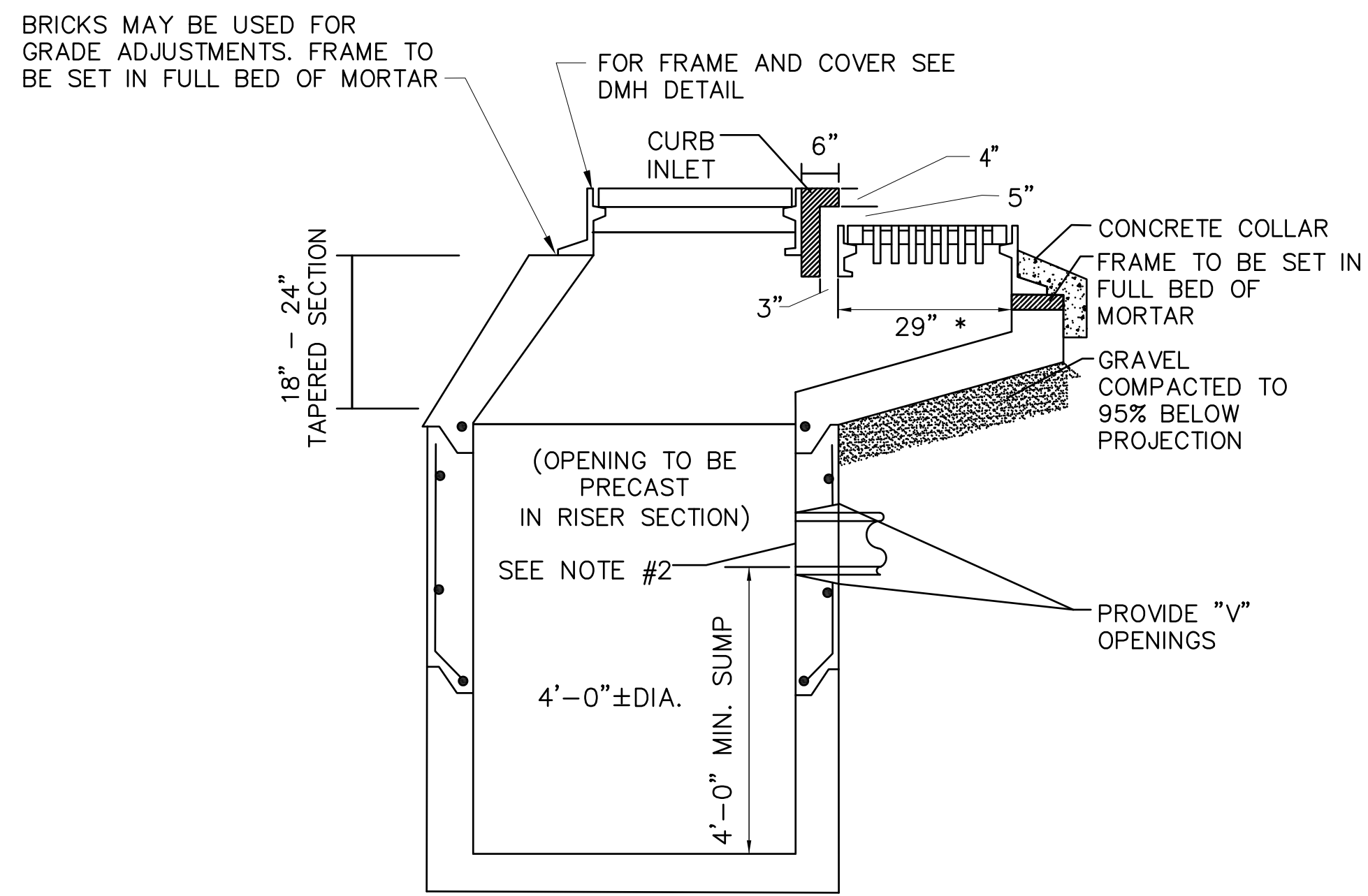
Sheet No.
 19 OF 22
C-19



PLAN VIEW

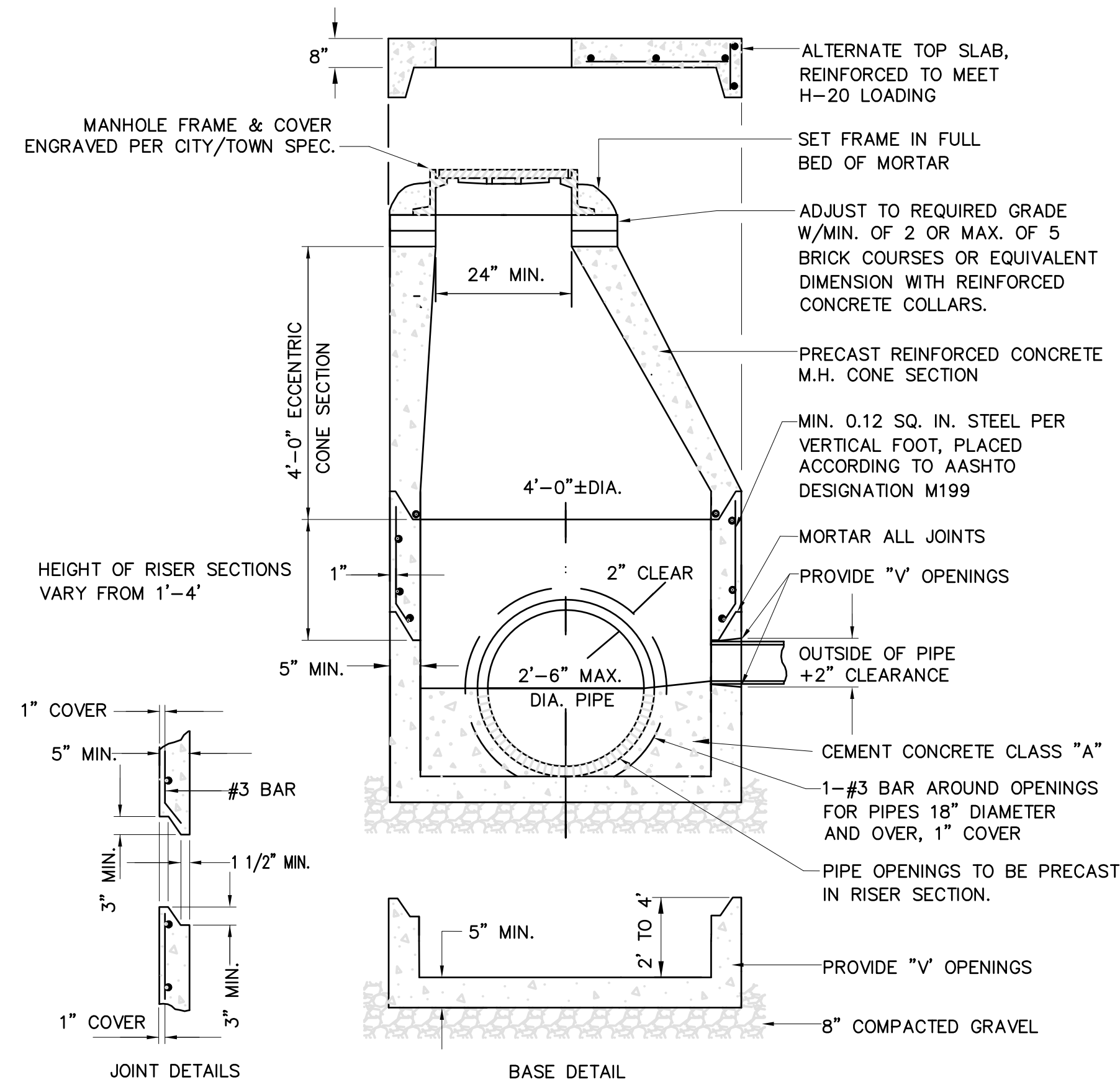


TYPICAL TREE PIT LAYOUT
N.T.S.

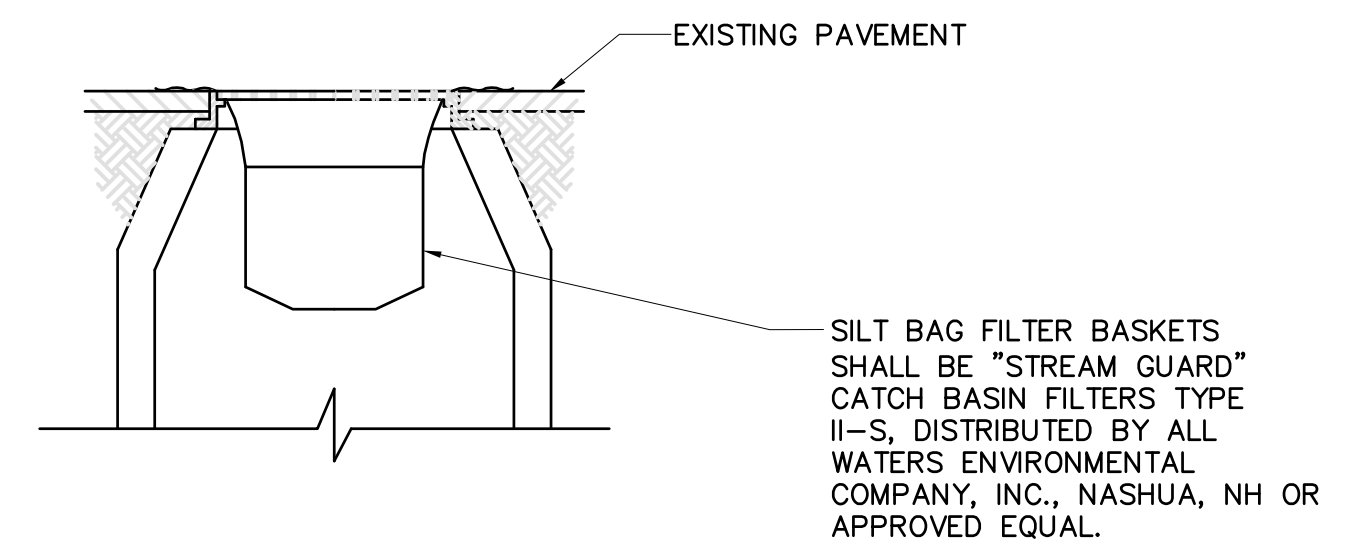


- NOTES:
1. DETAILS NOT INDICATED ABOVE ARE TO BE SIMILAR TO THOSE FOR DRAIN MANHOLE DETAIL.
 2. FACE OF PIPE FLUSH WITH FACE OF WALL ALONG CENTERLINE OF PIPE.
 3. WHEN A CURB INLET IS INSTALLED, THE OPENING SHALL BE 24"X27".

CATCH BASIN TYPE-2
(BRADLEY HEAD)

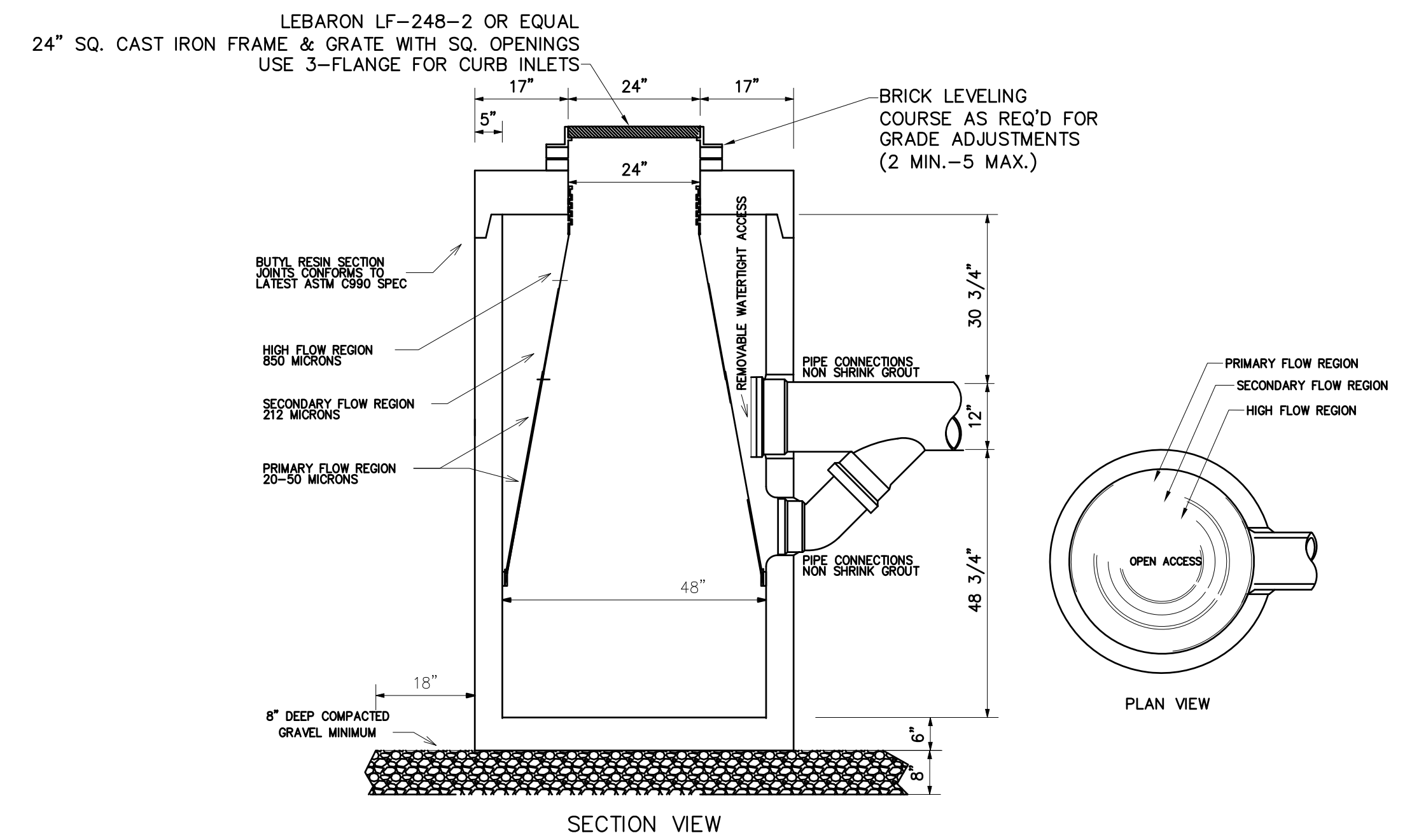


PRECAST CONCRETE DMH



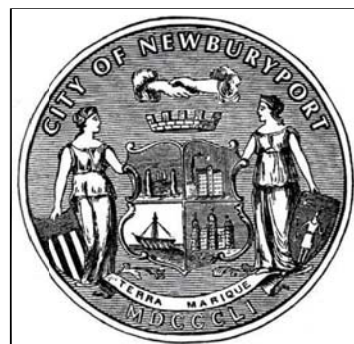
- NOTE:
- TO BE PROVIDED TO ALL C.B.'S IN THE VICINITY OF NEW CONSTRUCTION. C.B.'S TO BE PROTECTED AS SHOWN ABOVE, WITH MINIMUM WEEKLY MAINTENANCE, OR AS REQUIRED AND REPLACEMENT IF NECESSARY.

CATCH BASIN INLET PROTECTION



- NOTES:
1. WATER QUALITY UNIT SHALL BE MODEL SBZ 160D BY STORMWATER BUFFER ZONE OR EQUAL. CONTACT MANUFACTURER FOR ADDITIONAL DETAILS NECESSARY FOR FABRICATION AND INSTALLATION AT 978-801-1729.
 2. PRECAST REINFORCED CONCRETE CATCH BASIN TO BE CAPABLE OF SUPPORTING H-20 LOADING PER AASHTO H5-20-44 AND ASTM C478 SPEC FOR PRECAST REINFORCED CONCRETE MANHOLE SECTIONS. CONCRETE 4,000 PSI AFTER 28 DAYS.
 3. ALL CONCRETE TO BE AIR ENTRAINED.
 4. STRUCTURE TO BE SET BY CONTRACTOR. WATER QUALITY INTERNAL PARTS TO BE ADJUSTED BY STORMWATER BUFFER ZONE PERSONNEL OR EQUIVALENT.

STANDARD CATCH BASIN



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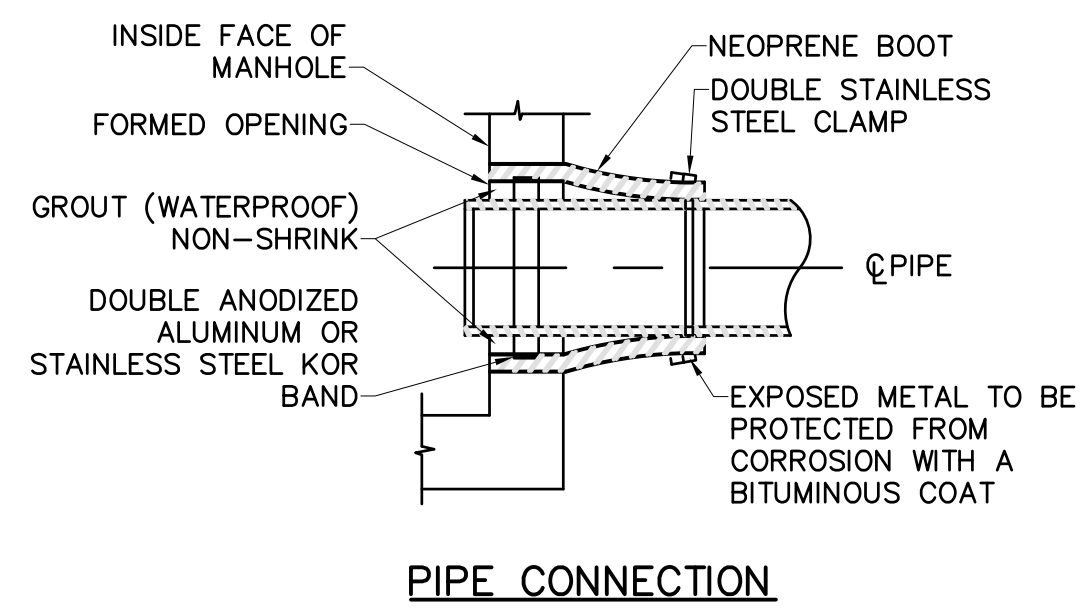
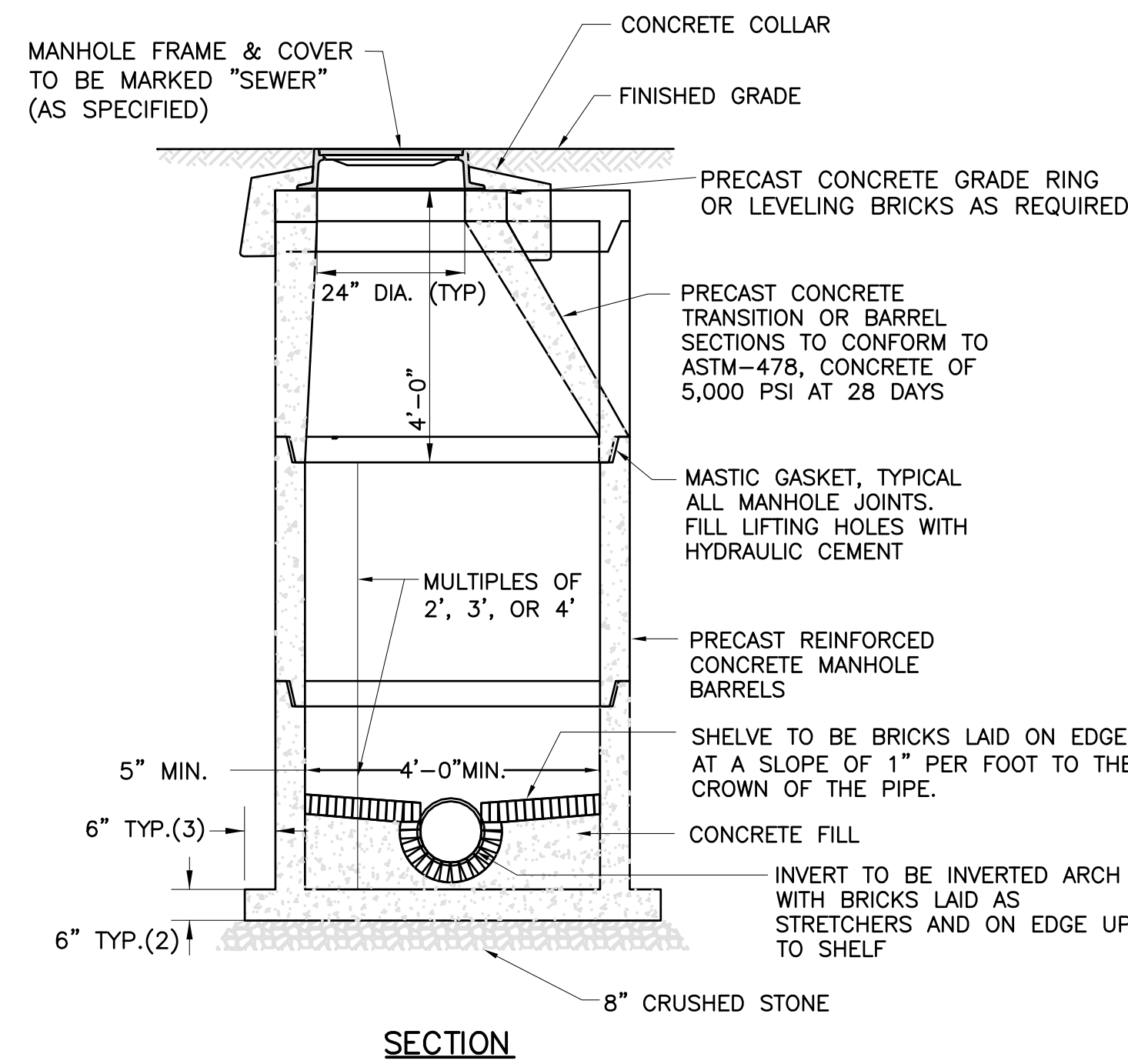
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MERRILL STREET FULL DEPTH RECONSTRUCTION

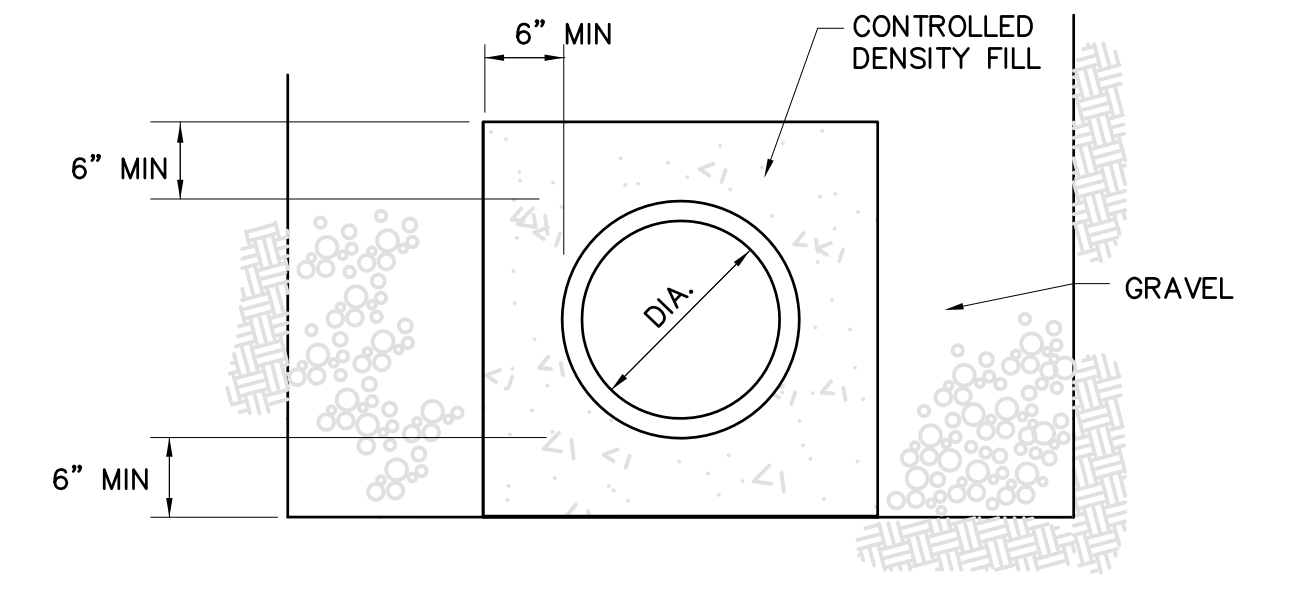
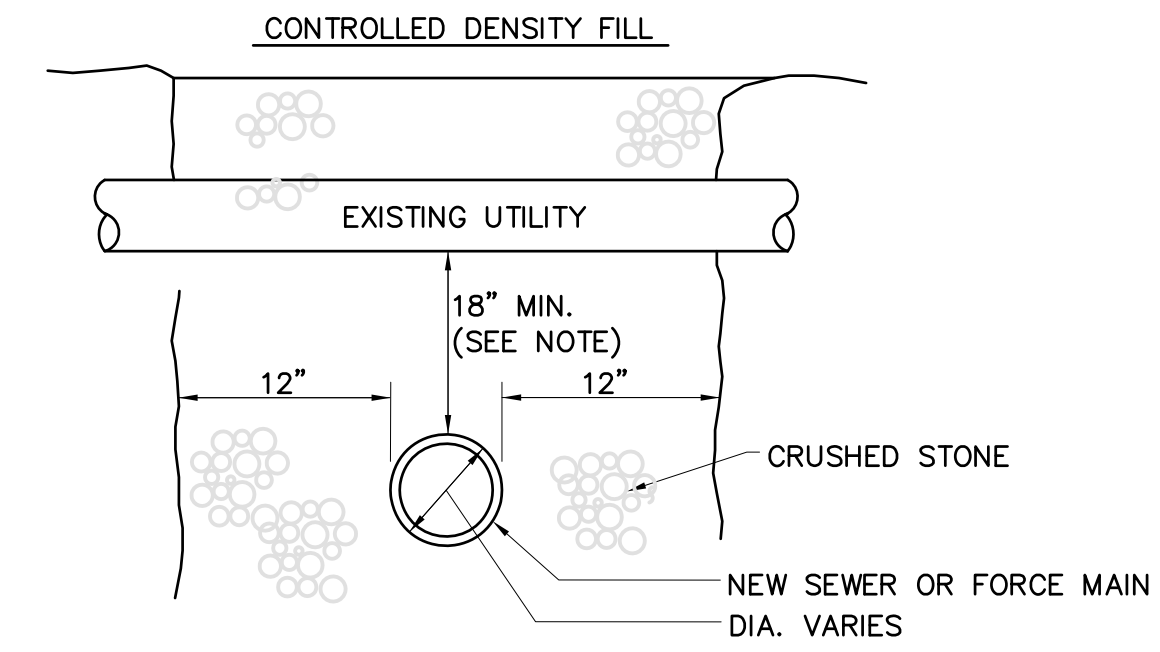
DETAILS III

Sheet No.
20 OF 22

C-20



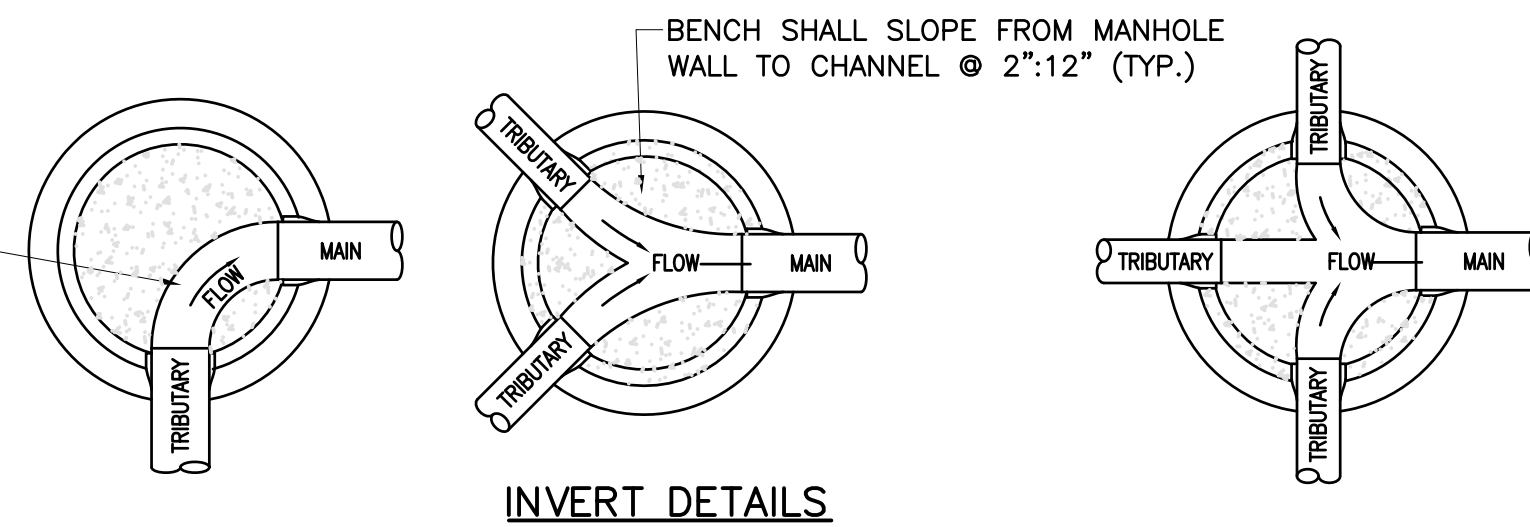
PIPE CONNECTION



NOTE:
 CONTROLLED DENSITY FILL IS TO BE USED TO ENCASE ALL SANITARY SEWERS AND SERVICE CONNECTIONS WHICH ARE WITHIN 18 INCHES OF A WATERLINE. ENCASEMENT SHALL BE A MINIMUM OF 6 INCHES AROUND THE SANITARY SEWER, WATER PIPE AND/OR SERVICE CONNECTION AND EXTEND A MINIMUM OF 10 FEET BEYOND THE WATER PIPE AND 10' FEET BEYOND THE SEWER PIPE.
 WHEN PLACING CDF SECURE PIPE TO PREVENT FLOATATION

TYPICAL SECTION AT UTILITY CROSSING

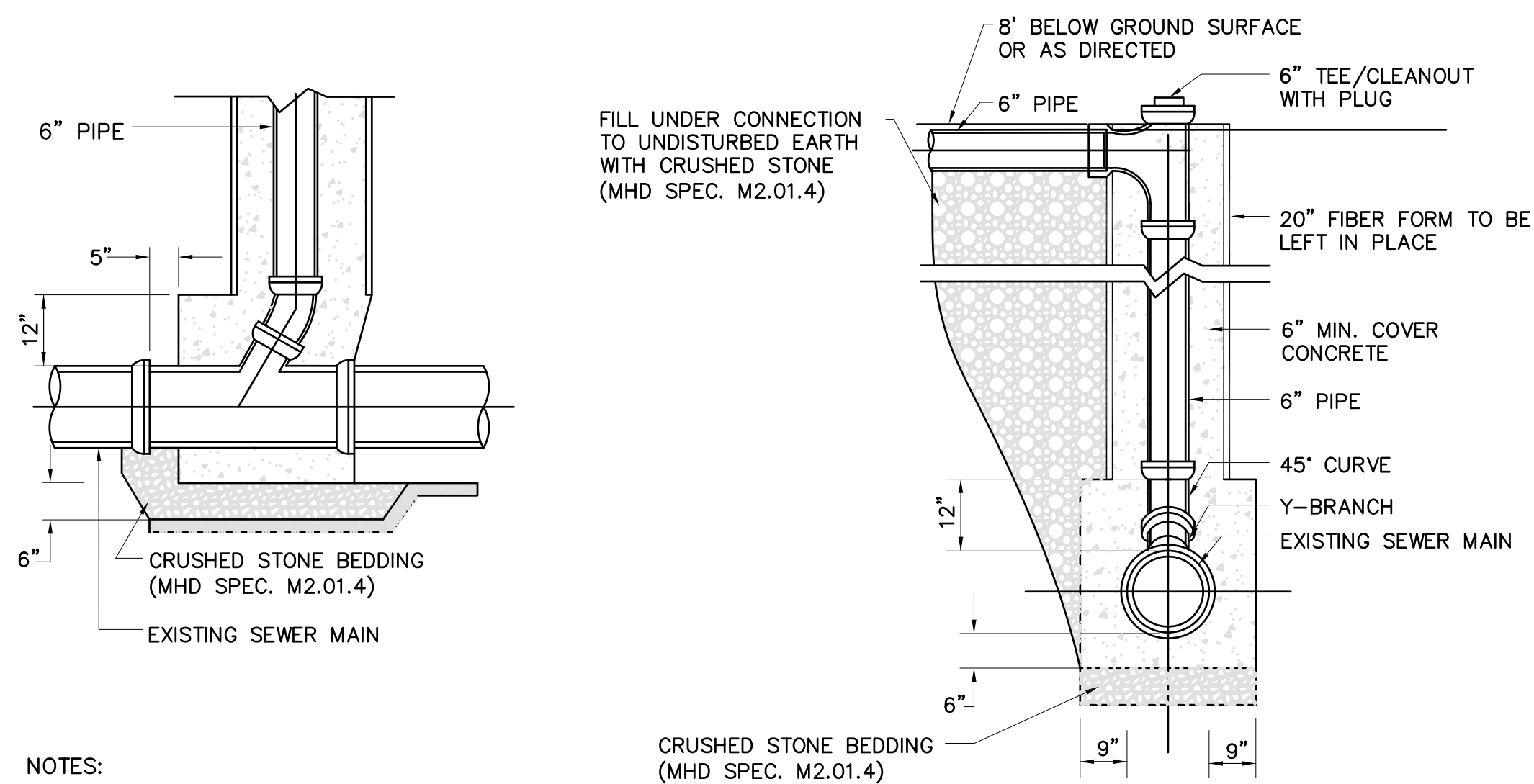
CHANNELS FORMED WITH A SMOOTH CURVE BETWEEN PIPES. CHANNEL DEPTH TO BE 3/4 DIAMETER OF THE CONTRIBUTING SEWER MAIN (TYP.)



INVERT DETAILS

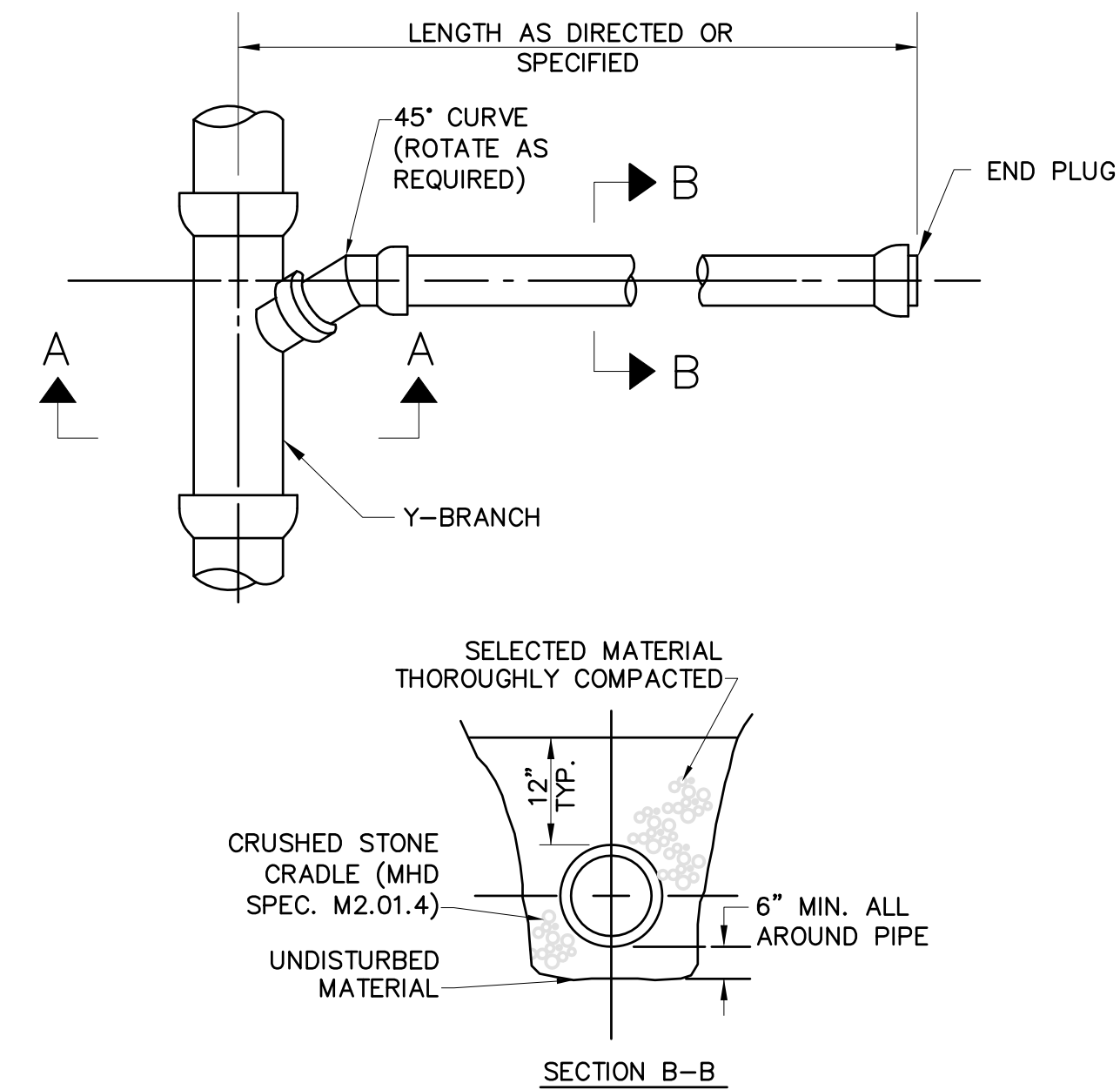
- NOTES:
- 5'-0" DIAMETER FOR ALL MANHOLE DEPTHS GREATER THAN 20 FEET OR WHEN ORDERED BY THE ENGINEER OR FOR INTERIOR DROP CONNECTIONS.
 - 6" MIN. WALL THICKNESS AND 7 INCH MIN. BASE THICKNESS WITH 5'-0" DIAMETER MANHOLES.
 - 4 TO 6 INCH VERTICAL SURFACE AT THE TOP OF THE TRANSITION OR CONE SECTION REQUIRED TO ALLOW AIR-VACUUM TESTING OF THE MANHOLE DURING INSTALLATION.
 - MAXIMUM FIRST PIPE LENGTH FROM MANHOLE IS 3'-0".
 - MANHOLE FRAMES AND COVERS SHALL BE WATERTIGHT FRAMES AND COVERS, LeBARON LBW288 OR APPROVED EQUAL.
 - BENCH AND CHANNELS TO BE FORMED USING CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
 - CONCRETE SHALL BE TROWELED TO A SMOOTH FINISH.
 - BENCH AND INVERT TOP COURSE OF RED BRICK SHALL BE COATED WITH A 10 MIL THICKNESS OF AN ACID RESISTANT COATING.

TYPICAL PRECAST SEWER MANHOLE

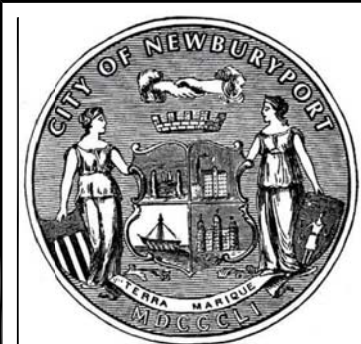
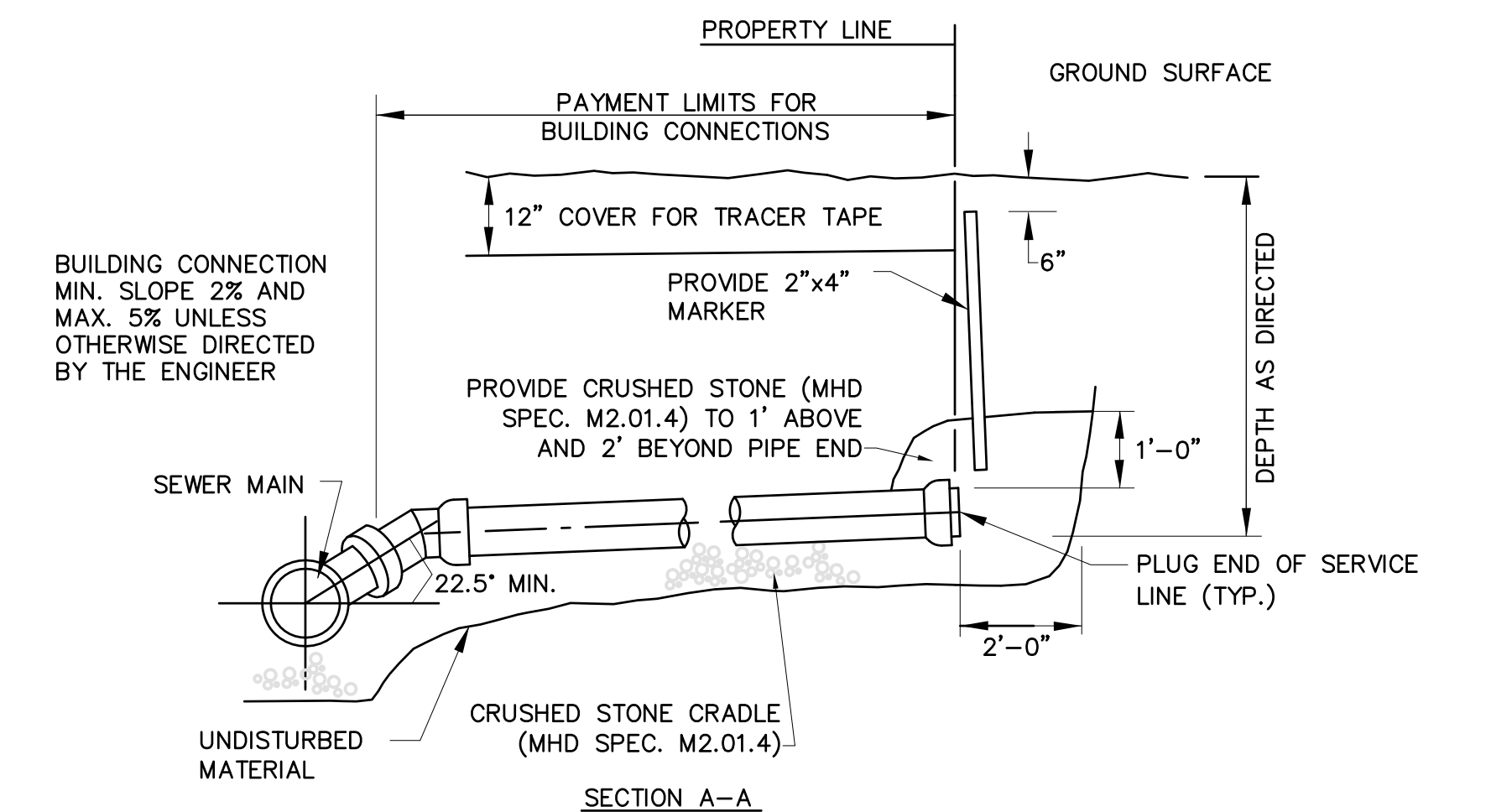


- NOTES:
- MINIMUM CHIMNEY HEIGHT = 3.0 FEET.
 - PAYMENT FROM CROWN OF SEWER MAIN TO THE TOP OF THE TEE.

PVC SEWER CHIMNEY



BUILDING SEWER CONNECTION



CITY OF NEWBURYPORT
 DEPARTMENT OF PUBLIC SERVICES
 16A PERRY WAY
 NEWBURYPORT, MA 01950

Rev No	Date	Drawn	Chkd	Description

Designed By:
D. CHENG

Checked By:
J.E. WHITE

Date:
JULY 15, 2013

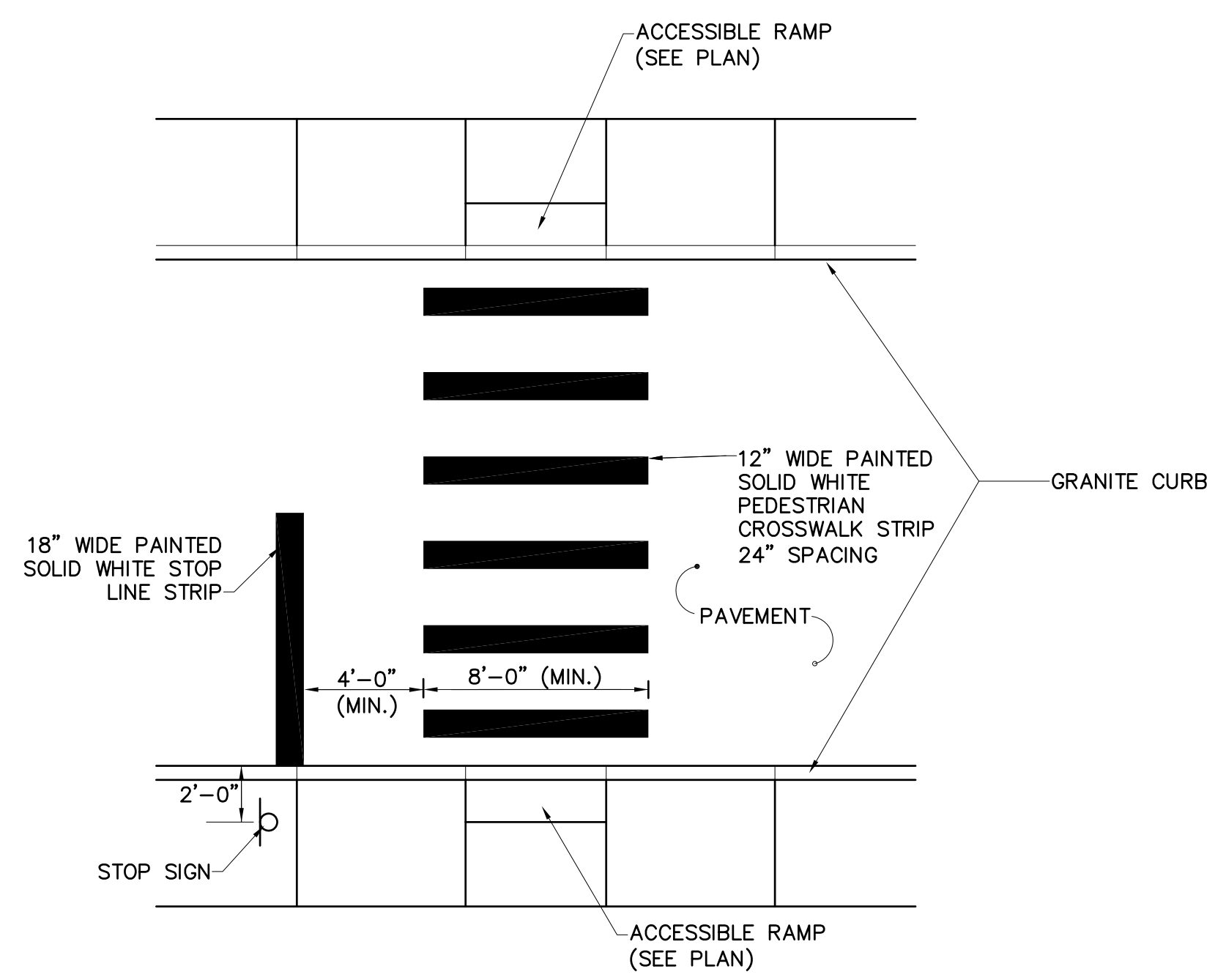
SCALE: NTS

MERRILL STREET FULL DEPTH RECONSTRUCTION

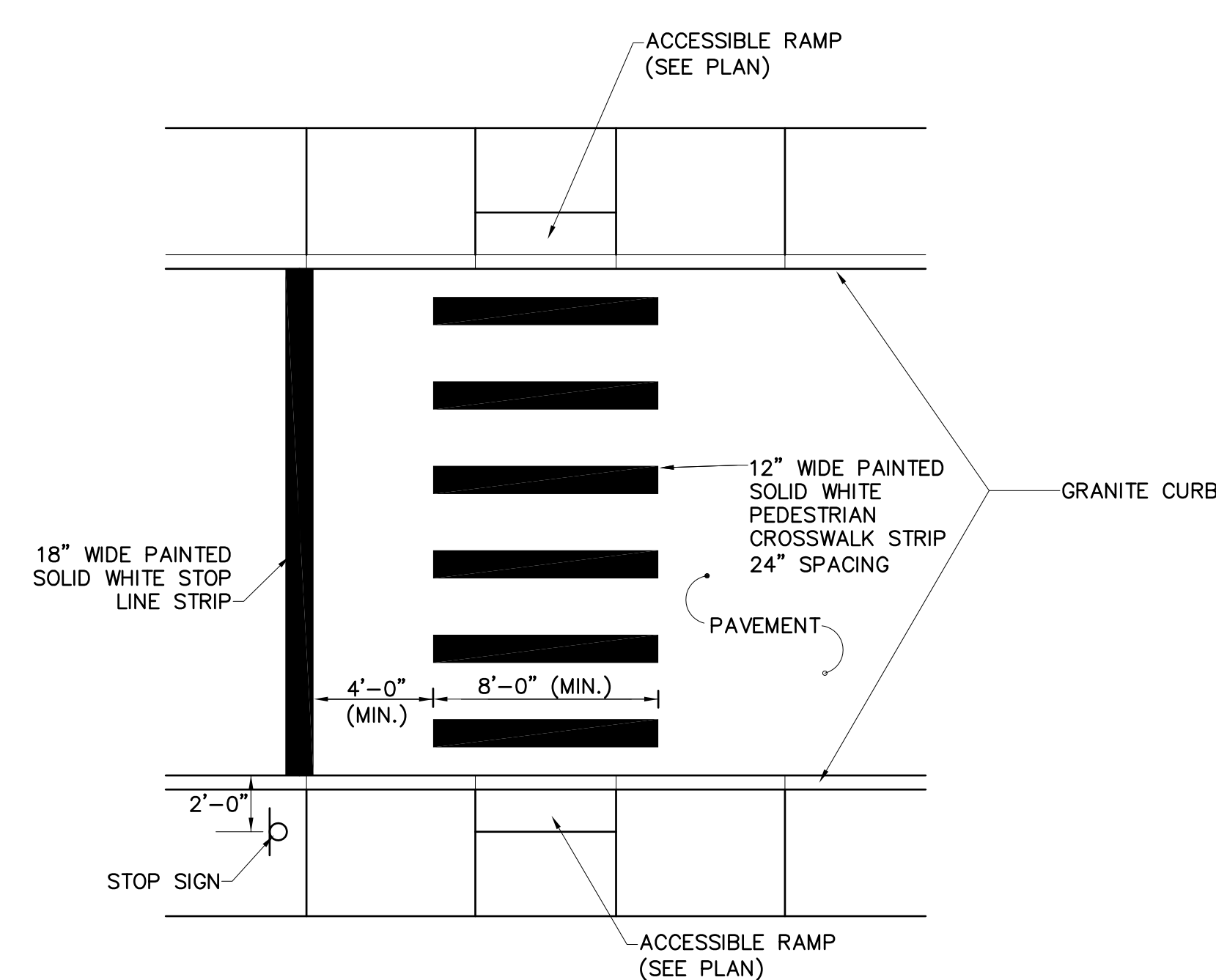
DETAILS IV

Sheet No.
21 OF 22

C-21

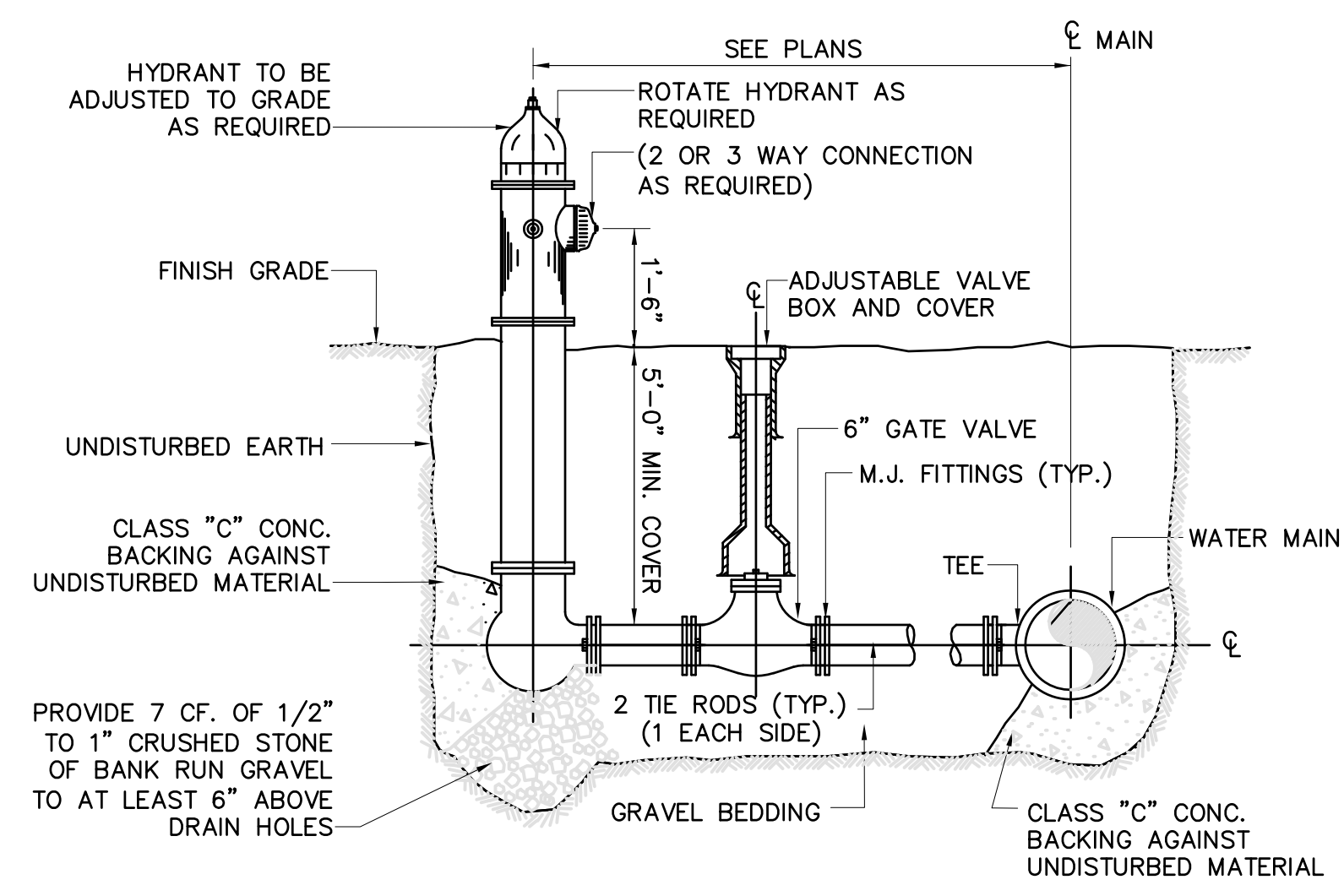


RUSSIA STREET

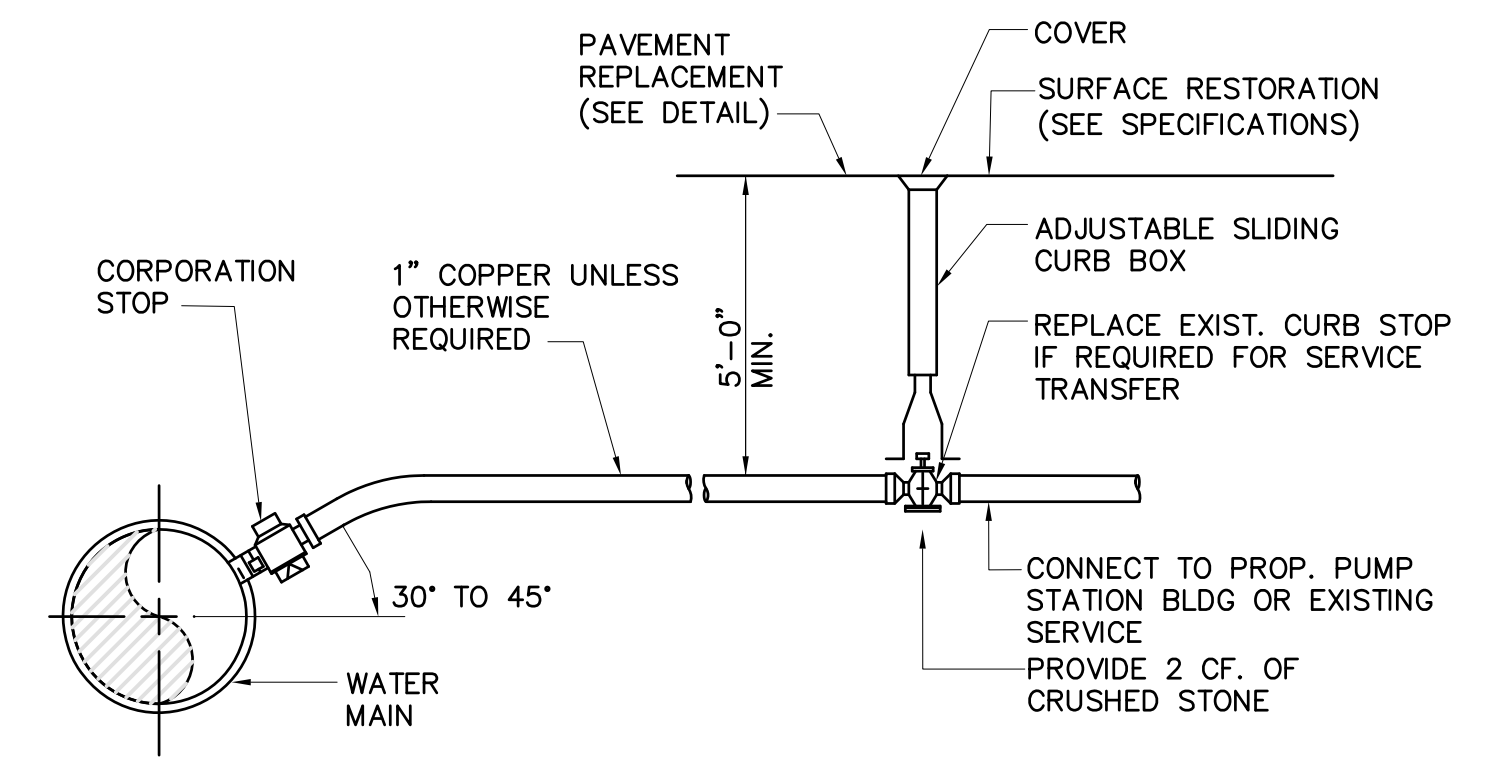


MERRILL STREET

PEDESTRIAN CROSSWALK, STOP LINE & SIGN PLACEMENT

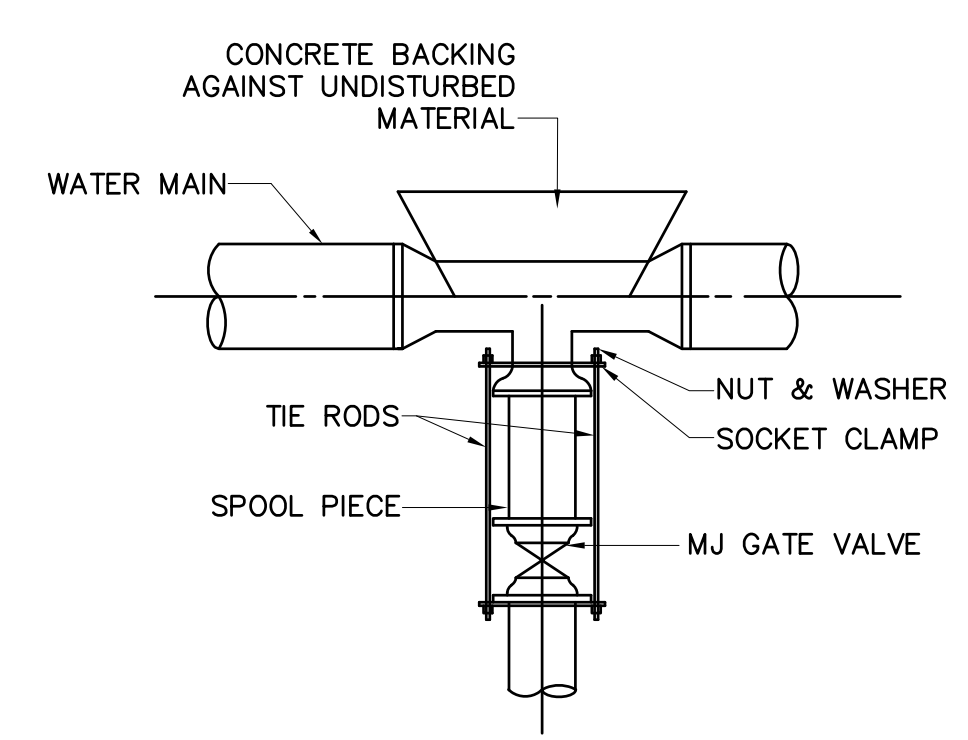


FIRE HYDRANT & VALVE ASSEMBLY

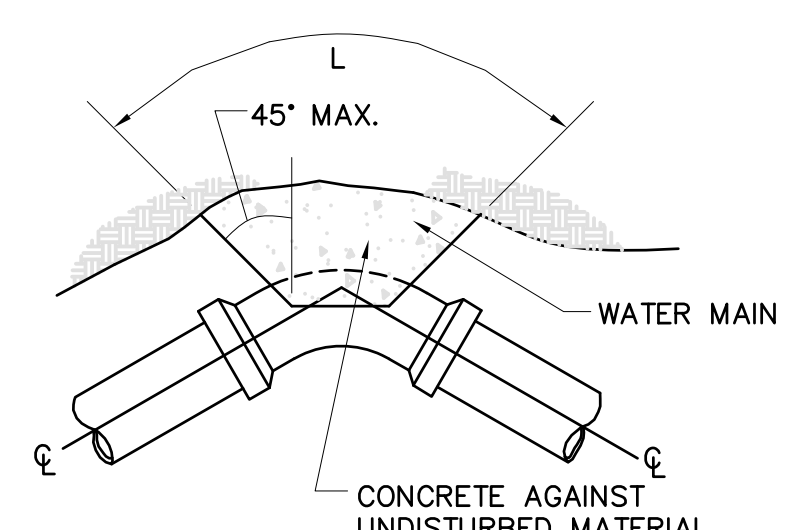


WATER SERVICE CONNECTION

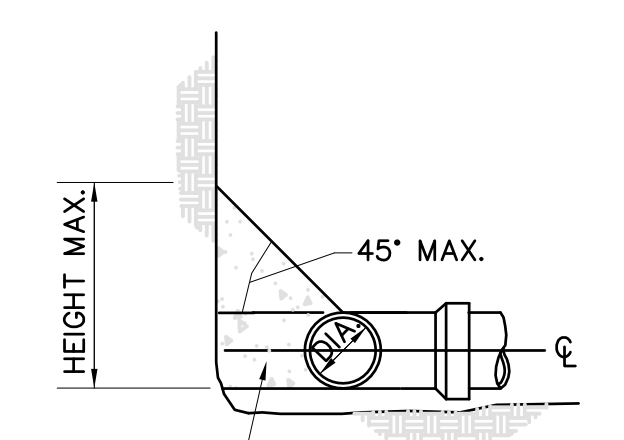
NOTE: PROVIDE SADDLE FOR ALL AC AND PVC MAINS AND ALL 2" OR LARGER STOPS



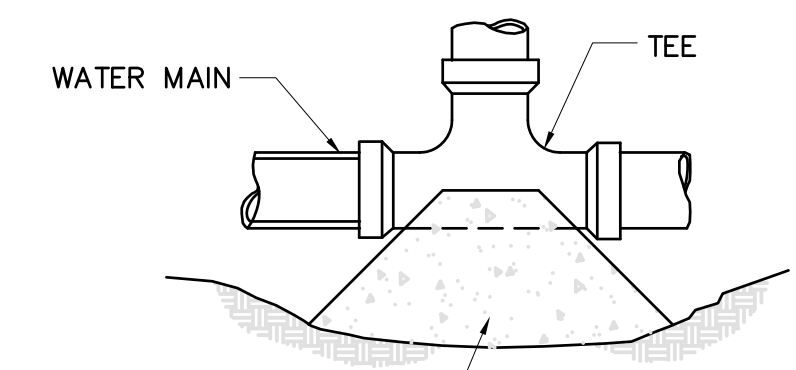
RESTRAINED JOINT TEE



PLAN - HORIZ. AND VERT. BEND



SECTION



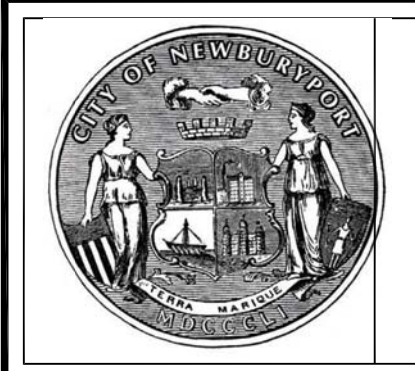
PLAN - TEE

FITTING	4" & LESS	6"	8"	10"	12"	16"
1/32 BEND (11 1/4")	2 S.F.	2 S.F.	2 S.F.	2 S.F.	3 S.F.	5 S.F.
1/16 BEND (22 1/2")	2 S.F.	2 S.F.	3 S.F.	3 S.F.	4 S.F.	5 S.F.
1/8 BEND (45°)	2 S.F.	2 S.F.	3 S.F.	5 S.F.	7 S.F.	12 S.F.
1/4 BEND (90°)	3 S.F.	3 S.F.	6 S.F.	9 S.F.	12 S.F.	21 S.F.
TEE / PLUG	2 S.F.	3 S.F.	4 S.F.	6 S.F.	9 S.F.	16 S.F.

NOTE:

- ALL ELBOWS, BENDS AND CAPS SHALL BE BRACED WITH CONCRETE THRUST BLOCKS. JOINTS SHALL NOT BE ENCASED IN CONCRETE.
- BEARING AREA IS AREA OF CONCRETE IN CONTACT WITH WALL OF TRENCH (H x L)
- HEIGHT AND LENGTH AS REQUIRED TO OBTAIN BEARING AREA SHOWN ON TABLE W/ H APPROX. 1/2 L.
- THRUST BLOCK SIZING BASED ON 150 PSI WATER PRESSURE AND 2000 PSI SOIL BEARING CAPACITY.

CONCRETE THRUST BLOCK DETAILS



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Date:
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SCALE: NTS

MERRILL STREET FULL DEPTH RECONSTRUCTION

DETAILS V

Sheet No.
22 OF 22

C-22