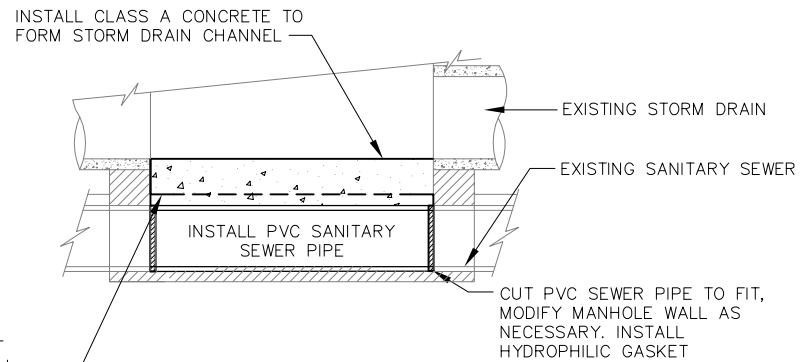


**CROSS SECTION**



**SECTION A-A**

REMOVE BRICK INVERT AS NEEDED TO INSTALL PVC SANITARY SEWER PIPE TO APPROPRIATE ELEVATIONS

95% DETAILS  
NOT FOR CONSTRUCTION

**THE WORKS**  
CAMBRIDGE  
DEPARTMENT  
OF PUBLIC

**COMMON MANHOLE SEPARATION - TYPE 2**  
**COMMON MANHOLE CONVERTED TO DRAIN MANHOLE DETAIL**

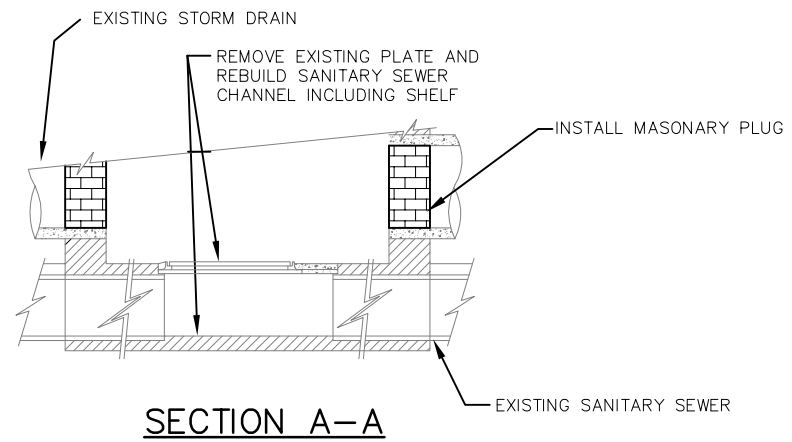
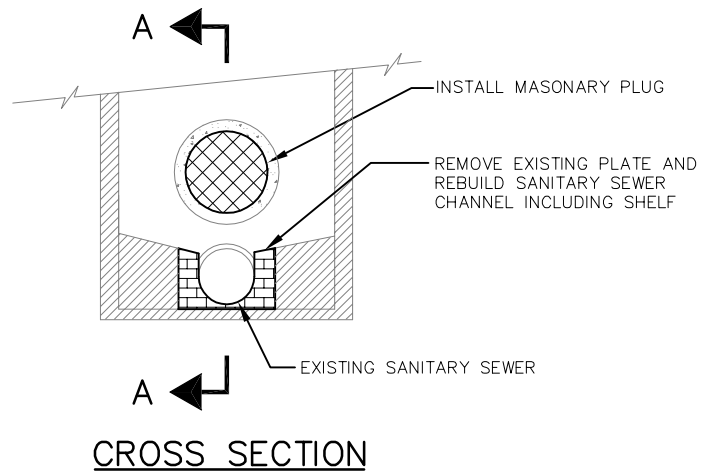
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 02252

**2252.10**



95% DETAILS  
NOT FOR CONSTRUCTION

**THE WORKS**  
CAMBRIDGE  
DEPARTMENT  
OF PUBLIC

# COMMON MANHOLE SEPARATION - TYPE 5 COMMON MANHOLE CONVERTED TO SEWER MANHOLE DETAIL

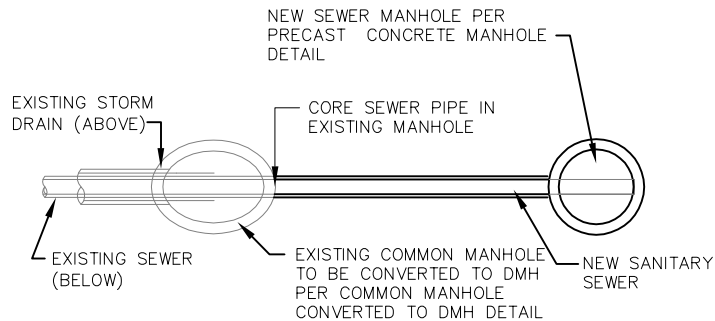
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

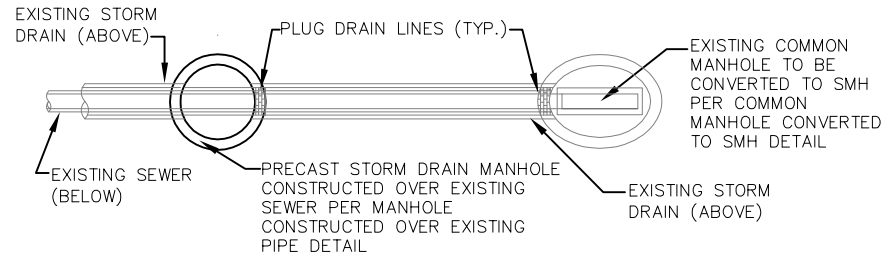
SPEC. SECTION REF#: 02252

**2252.13**



**PLAN**  
**END OF LINE COMMON MANHOLE TO BE  
 CONVERTED TO DMH DETAIL**

- NOTES:
1. UNLESS OTHERWISE NOTED, PROPOSED PIPE TO MATCH INSIDE DIAMETER OF EXISTING PIPE
  2. UNLESS OTHERWISE NOTED, PROPOSED SEWER SHALL BE PVC AND PROPOSED DRAIN SHALL BE RCP



**PLAN**  
**END OF LINE COMMON MANHOLE TO BE  
 CONVERTED TO SMH DETAIL**

- NOTES:
1. LOCATE ALL EXISTING STORM DRAIN CONNECTIONS WITHIN THE PORTION OF EXISTING STORM DRAIN THAT IS TO BE ABANDONED AND RECONNECT THOSE CONNECTIONS TO THE STORM DRAIN.
  2. ANY PORTION OF THE EXISTING STORM DRAIN THAT IS TO BE ABANDONED IN PLACE SHALL BE FILLED WITH FLOWABLE CONCRETE FILL AND PLUGGED.
  3. VERIFY ALL DRAIN CONNECTIONS TO THE PROPOSED ABANDONED SECTION OF DRAIN, IF ANY LIVE CONNECTIONS EXIST, COORDINATE WITH THE ENGINEER TO PROVIDE RECONNECTION. IF SERVICE IS NOT LIVE, THE CONNECTION AT THE STORM DRAIN SHALL BE PLUGGED

95% DETAILS  
 NOT FOR CONSTRUCTION

**THE WORKS**  
 CAMBRIDGE  
 DEPARTMENT  
 OF PUBLIC

**COMMON MANHOLE SEPARATION - TYPE 1  
 END OF LINE CONVERSIONS**

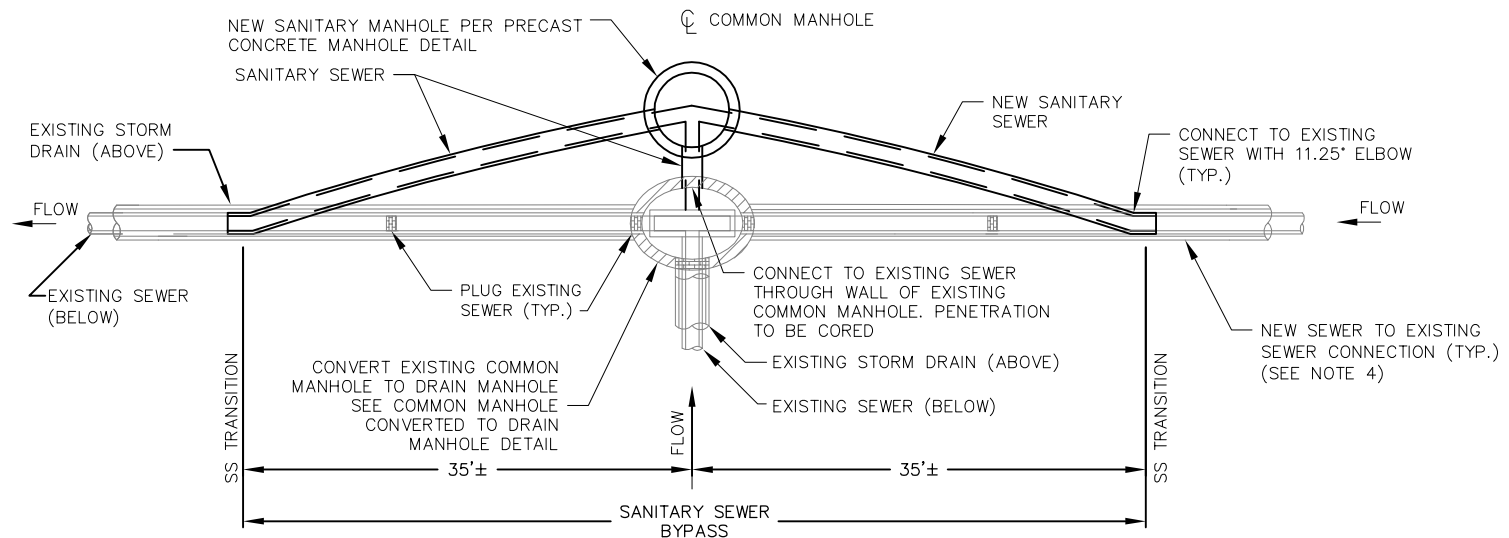
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
 OF ISSUE: 02/05

SPEC. SECTION REF#: 02252

**2252.9**



**NOTES:**

1. LOCATE ALL EXISTING SEWER CONNECTIONS WITHIN THE PORTION OF EXISTING SEWER THAT IS TO BE ABANDONED AND RECONNECT THOSE CONNECTIONS TO THE SEWER.

2. ANY PORTION OF THE EXISTING SEWER THAT IS TO BE ABANDONED IN PLACE SHALL BE FILLED WITH FLOWABLE CONCRETE FILL AND PLUGGED.

3. VERIFY ALL SEWER CONNECTIONS TO THE PROPOSED ABANDONED SECTION OF SEWER, IF ANY LIVE CONNECTIONS EXIST, COORDINATE WITH THE ENGINEER TO PROVIDE RECONNECTION. IF SERVICE IS NOT LIVE, THE CONNECTION AT THE SEWER SHALL BE PLUGGED.

4. SEE THE APPROPRIATE SPECIFICATION OR STANDARD FOR THE PROPOSED SEWER MATERIAL FOR PIPE TO PIPE CONNECTION REQUIREMENTS.

95% DETAILS  
NOT FOR CONSTRUCTION

**THE WORKS**  
CAMBRIDGE  
DEPARTMENT  
OF PUBLIC

**COMMON MANHOLE SEPARATION - TYPE 4  
SANITARY SEWER BYPASS (WITH LATERAL)**

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

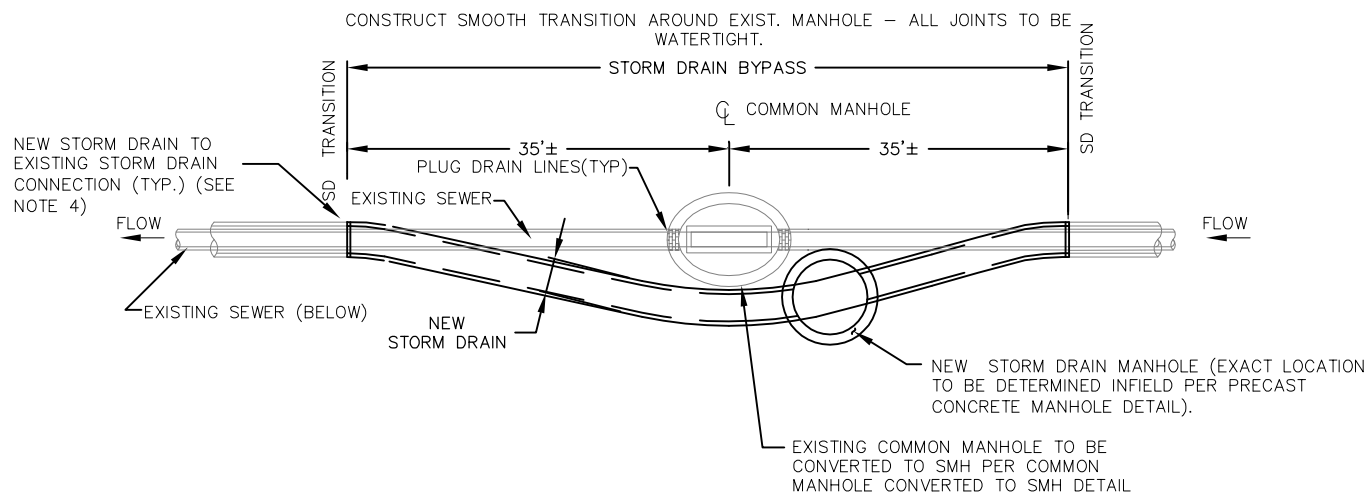
SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 02252

**2252.12**





NOTES:

1. LOCATE ALL EXISTING STORM DRAIN CONNECTIONS WITHIN THE PORTION OF EXISTING STORM DRAIN THAT IS TO BE ABANDONED AND RECONNECT THOSE CONNECTIONS TO THE STORM DRAIN.
2. ANY PORTION OF THE EXISTING STORM DRAIN THAT IS TO BE ABANDONED IN PLACE SHALL BE FILLED WITH FLOWABLE CONCRETE FILL AND PLUGGED.
3. VERIFY ALL DRAIN CONNECTIONS TO THE PROPOSED ABANDONED SECTION OF DRAIN, IF ANY LIVE CONNECTIONS EXIST, COORDINATE WITH THE ENGINEER TO PROVIDE RECONNECTION. IF SERVICE IS NOT LIVE, THE CONNECTION AT THE STORM DRAIN SHALL BE PLUGGED.
4. SEE THE APPROPRIATE SPECIFICATION OR STANDARD FOR THE PROPOSED STORM DRAIN MATERIAL FOR PIPE TO PIPE CONNECTION REQUIREMENTS.

95% DETAILS  
NOT FOR CONSTRUCTION

**THE WORKS**  
CAMBRIDGE  
DEPARTMENT  
OF PUBLIC

## COMMON MANHOLE SEPARATION - TYPE 3 STORM DRAIN BYPASS

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

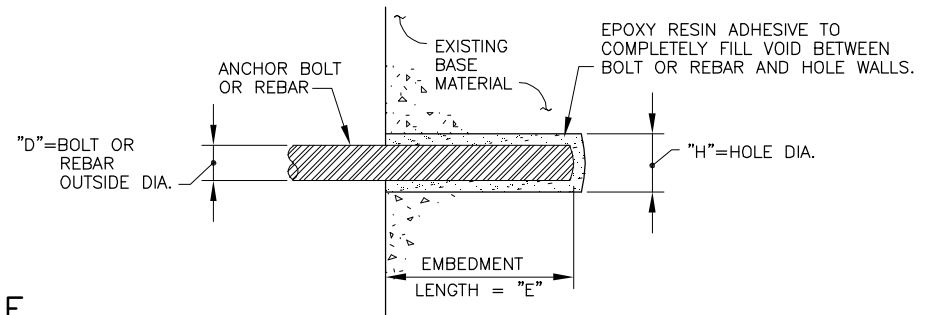
SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 02252

**2252.11**

	BOLT OR REBAR OUTSIDE DIAMETER "D" (INCHES)	REQUIRED EMBEDMENT LENGTH "E" (INCHES)	REQUIRED HOLE DIAMETER "H" (INCHES)	REQUIRED ALLOWABLE ADHESIVE BOND STRENGTH IN 4,000 psi CONCRETE USING S.F. = 4.0
ANCHOR BOLTS	3/8	3 3/8	7/16	2,270
	1/2	4 1/2	9/16	4,360
	5/8	5 5/8	3/4	7,545
	3/4	6 3/4	7/8	9,735
	7/8	7 7/8	1	10,595
	1	9	1 1/8	14,890
	1 1/4	11 1/4	1 3/8	22,940
	1 1/2	13 1/2	1 5/8	32,360
REBAR	#3 BAR	4 1/2	1/2	3,970
	#4 BAR	6	5/8	6,590
	#5 BAR	7 1/2	3/4	9,825
	#6 BAR	9	7/8	13,735
	#7 BAR	10 1/2	1	18,210
	#8 BAR	12	1 1/8	23,465
	#9 BAR	13 1/2	1 3/8	32,015



## TYPICAL EPOXY DOWELLING DETAIL & SCHEDULE

### NOTES:

1. DRILL HOLES, CLEAN OUT AND INSTALL EPOXY AND BOLT OR REBAR IN STRICT CONFORMANCE WITH EPOXY MANUFACTURER'S WRITTEN RECOMMENDATIONS. REFER TO CAST IN PLACE CONCRETE FOR EPOXY REQUIREMENTS.
2. UNLESS OTHERWISE INDICATED ON DRAWINGS, PROVIDE THE EMBEDMENT LENGTH AND HOLE DIAMETER INDICATED IN THE SCHEDULE ABOVE, FOR THE BOLT OR REBAR SIZE REQUIRED.
3. REQUIRED EPOXY BOND STRENGTHS ARE BASED ON A SAFETY FACTOR (S.F.) OF 4.0.
4. PROVIDE STAINLESS STEEL SCREEN RODS IN HOLES IN HOLLOW BASE MATERIALS (MASONRY CAVITY WALLS).
5. UNLESS OTHERWISE INDICATED ALL ANCHOR BOLTS SHALL BE OF GALVANIZED A36 THREADED ROD STOCK. WHERE STAINLESS STEEL ANCHORS ARE REQUIRED THEY SHALL BE AISI TYPE 316 (ASTM A193).



## EPOXY DOWELL DETAIL

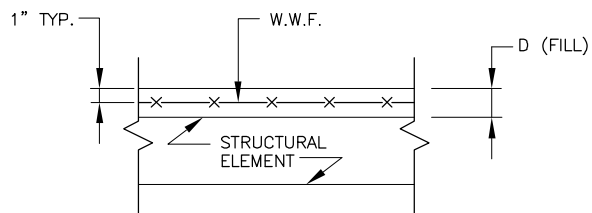
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 03300

3300.2



NOTE:  
1. PROVIDE W.W.F. IN CONCRETE FILL, SIZE AS TABULATED, UNLESS OTHERWISE NOTED.

D	W.W.F.
2" TO 4"	6x6 - W 1.4 x W 1.4
5" TO 8"	6x6 - W 2.0 x W 2.0
9" PLUS	6x6 - W 2.9 x W 2.9



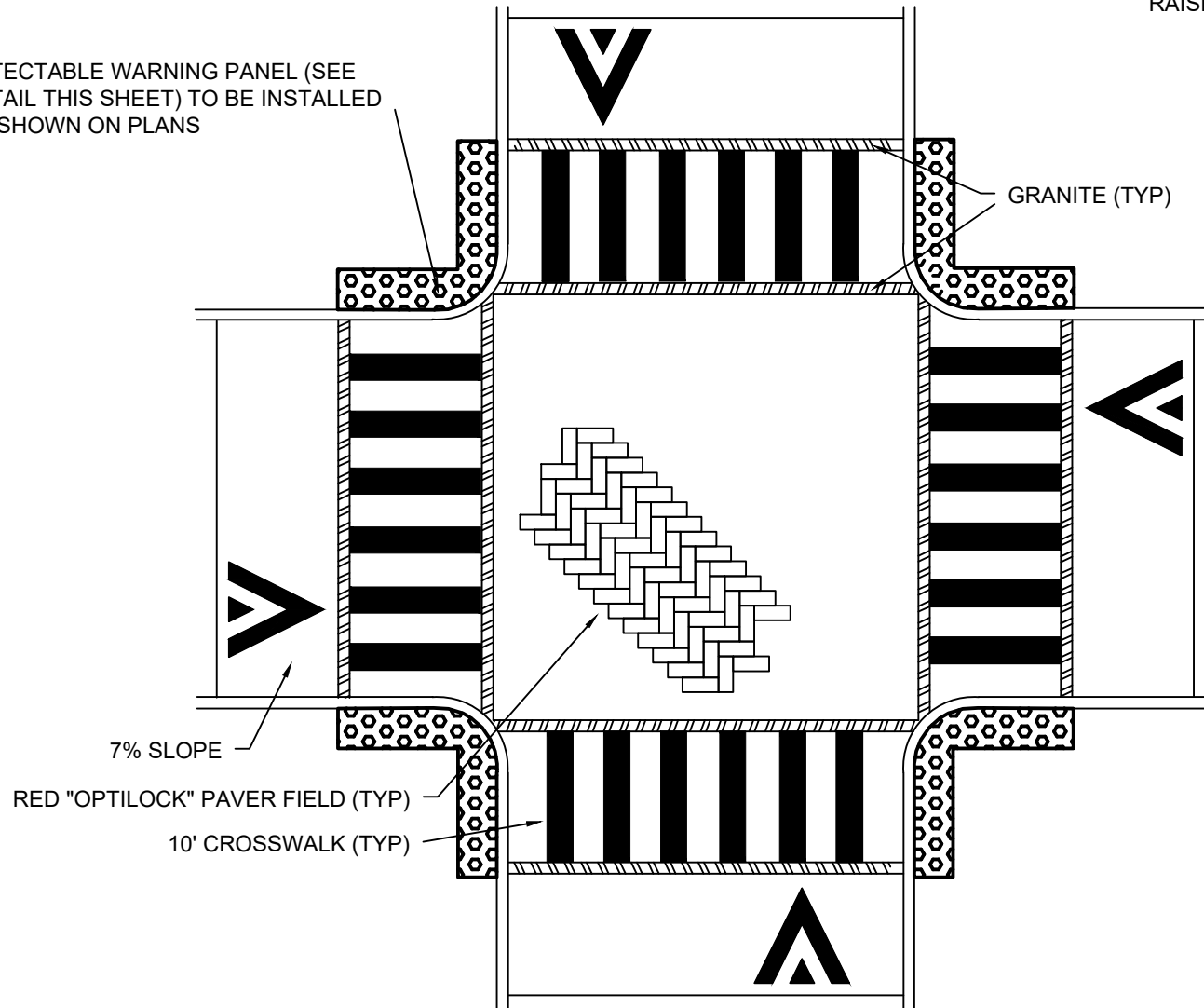
## TYPICAL WELDED WIRE FABRIC FOR CONCRETE FILL DETAIL

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.	DATE OF ISSUE: 02/05	SPEC. SECTION REF#: 03300	3300.3
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SEE: RAISED INTERSECTION PROFILE  
RAISED INTERSECTION W/ PAVERS DETAIL

DETECTABLE WARNING PANEL (SEE  
DETAIL THIS SHEET) TO BE INSTALLED  
AS SHOWN ON PLANS



## 4-WAY RAISED INTERSECTION PLAN

SCALE: N.T.S. CITY OF CAMBRIDGE STANDARD DETAILS 1/20



## 4-WAY RAISED INTERSECTION PLAN

CITY OF CAMBRIDGE STANDARD DETAILS

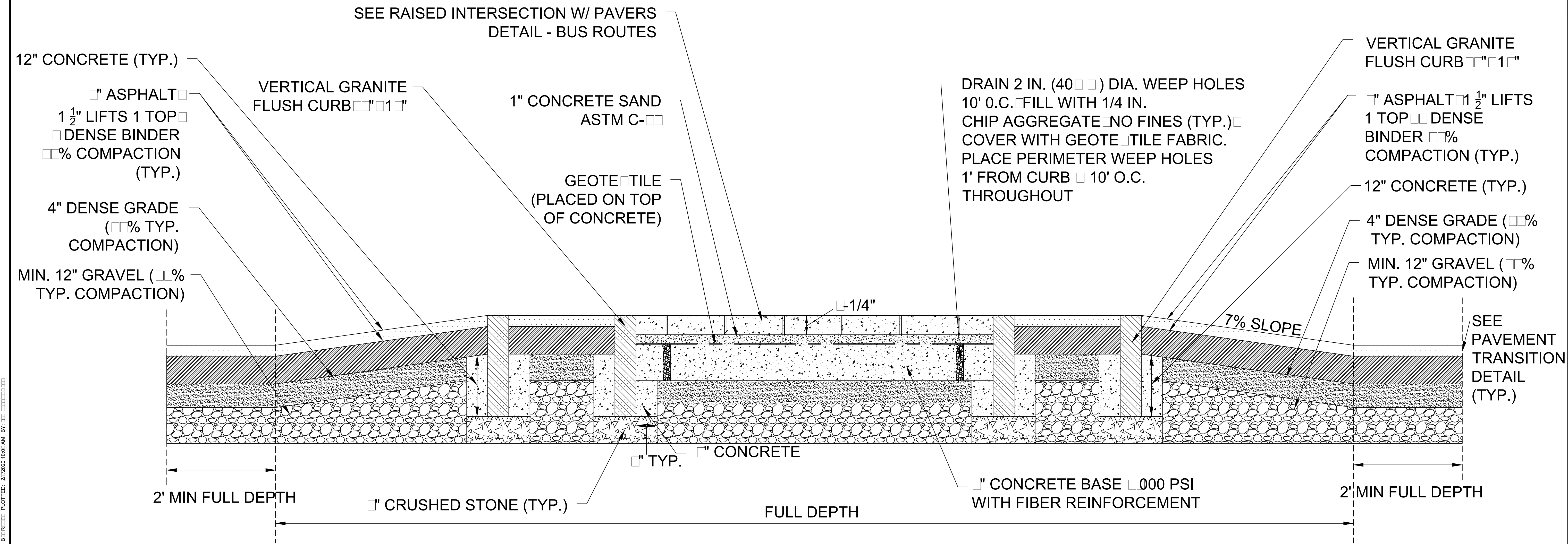
SCALE: N.T.S.

DATE  
OF ISSUE: 1/20

SPEC. SECTION REF#:

NOTES:

1. SEE SPECIFICATIONS FOR ADDITIONAL  
RAISED INTERSECTION  
CONSTRUCTION REQUIREMENTS



RAISED INTERSECTION PROFILE PAVERS W/ CONCRETE BASE - BUS ROUTE

SCALE: N.T.S.



Sheet	AS NOTED			
Date	JANUARY 2020			
Drawn by	N.C.			
Checked by	FMM			
Designated by	SH			
Contract	1M	N.C.	Drawn by	D.C.
Approved by			REVISIONS	

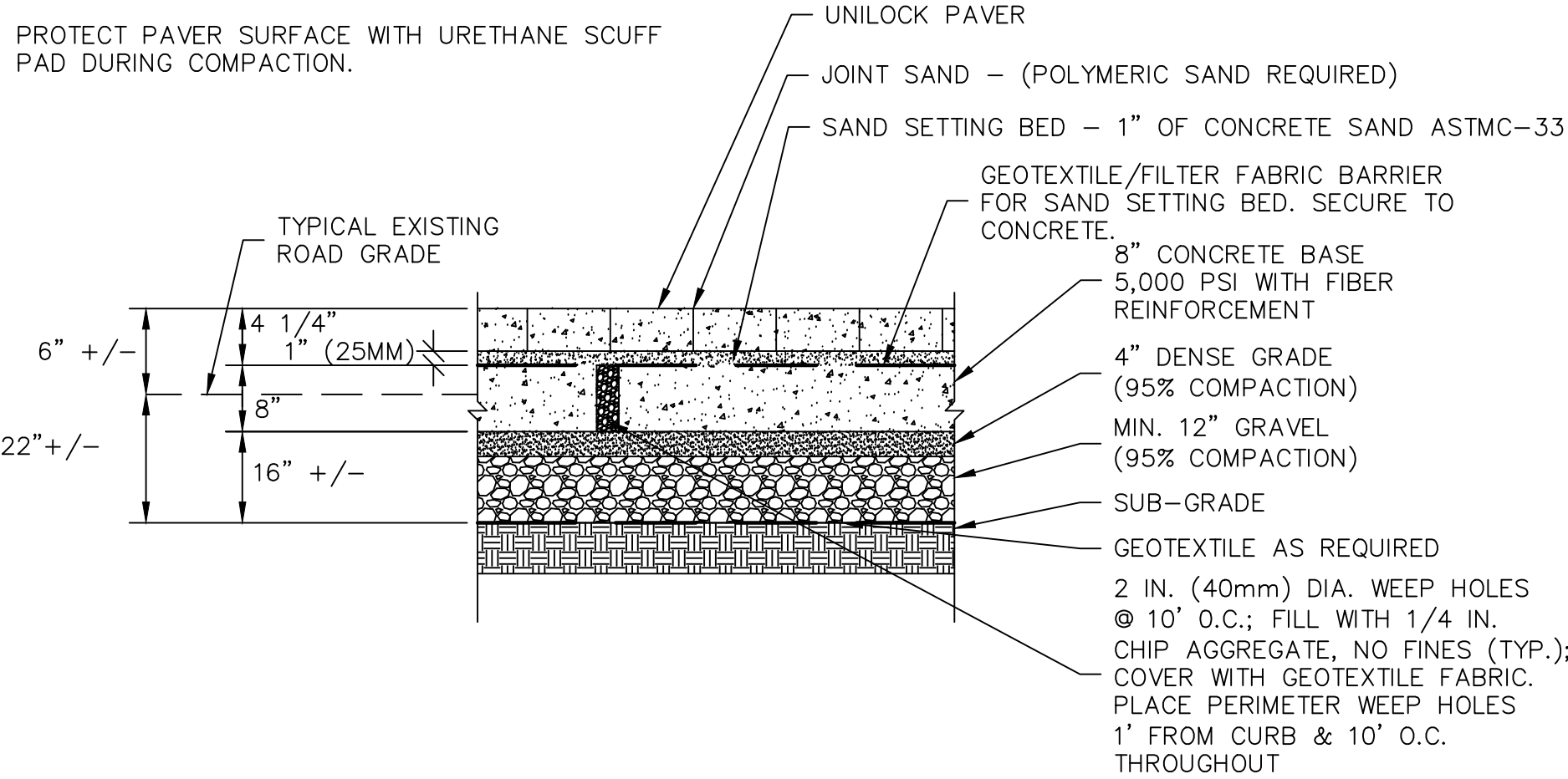


City of Cambridge	CITY OF CAMBRIDGE MASSACHUSETTS
Project	CITY OF CAMBRIDGE STANDARD DETAILS
Drawn by	RAISED INTERSECTION - PROFILE BUS ROUTE

Sheet	
File No.	

NOTES:

- 1. WEEP HOLES TO BE CONSTRUCTED WITH 2" PVC SLEEVE OR EQUIVALENT. CONTRACTOR TO PREVENT CEMENT CONCRETE FROM COVERING THE WEEP HOLES.
- 2. PROTECT PAVER SURFACE WITH URETHANE SCUFF PAD DURING COMPACTION.



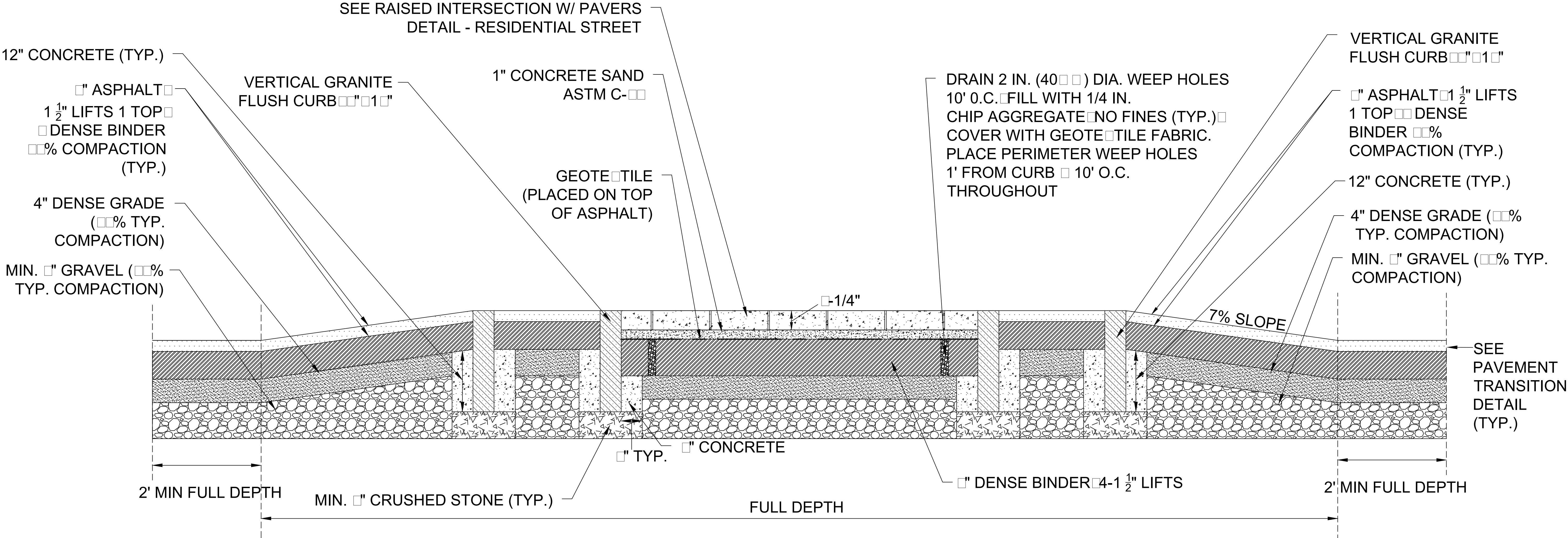
RAISED INTERSECTION W/ PAVERS-BUS ROUTE

SCALE: N.T.S.

	RAISED INTERSECTION W/ PAVERS DETAIL - BUS ROUTE		
	CITY OF CAMBRIDGE STANDARD DETAILS		
	SCALE: N.T.S.	DATE OF ISSUE: 12/19	SPEC. SECTION REF#:

NOTES:

1. SEE SPECIFICATIONS FOR ADDITIONAL  
RAISED INTERSECTION  
CONSTRUCTION REQUIREMENTS



RAISED INTERSECTION PROFILE - PAVERS W/ ASPHALT BASE - RESIDENTIAL STREET  
SCALE: N.T.S.



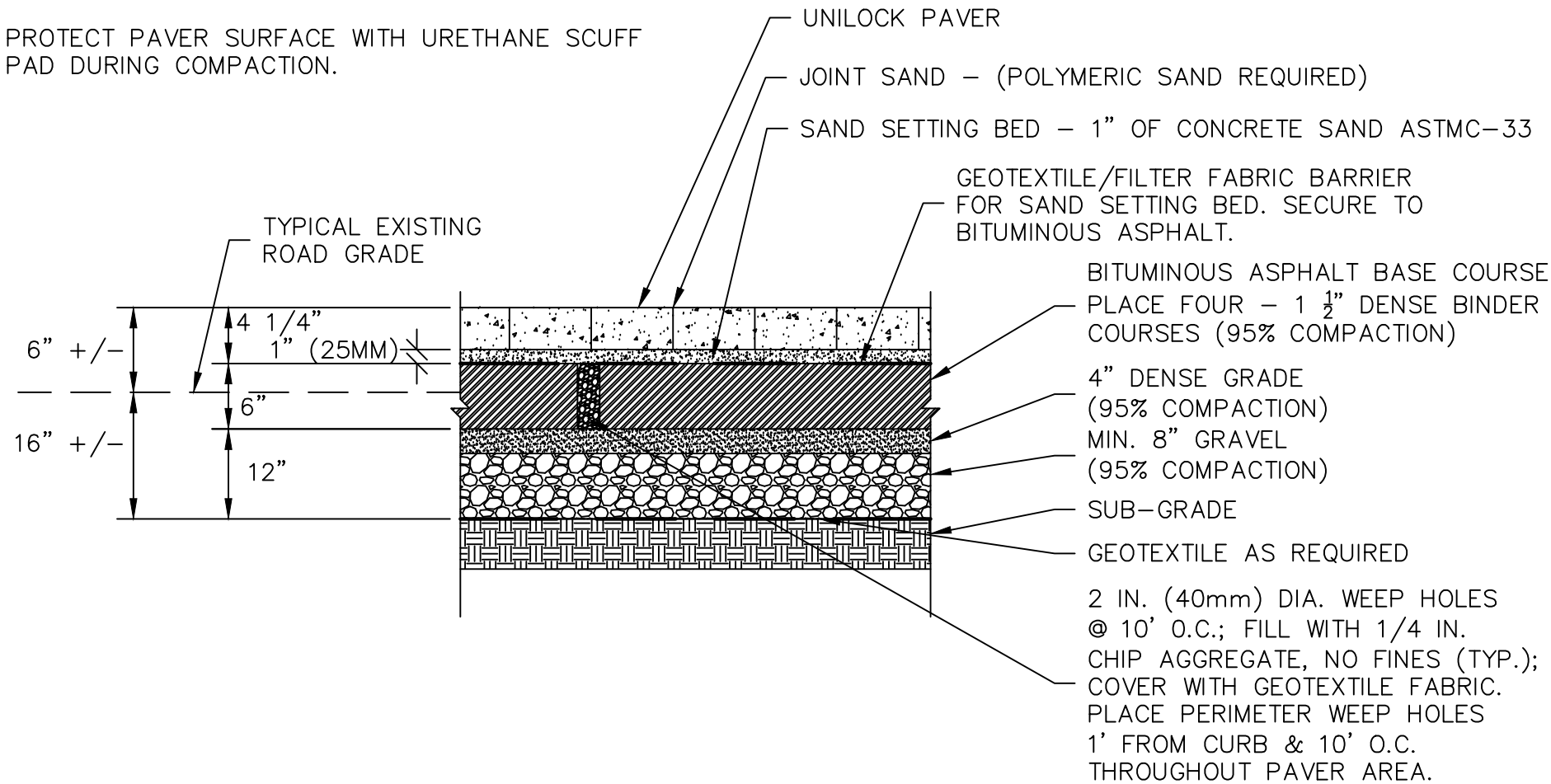
STATUS	AS NOTED			
DATE	JANUARY 2020			
DESIGNED BY	FM			
DRAWN BY	SH			
CHECKED BY	AM	NO	DATE	DATE
APPROVED BY		REVISIONS		



CITY OF CAMBRIDGE MASSACHUSETTS	STATUS
CITY OF CAMBRIDGE STANDARD DETAILS	PROJECT
RAISED INTERSECTION - PROFILE RESIDENTIAL STREET	DATE

NOTES:

- 1. WEEP HOLES TO BE CONSTRUCTED WITH 2" PVC SLEEVE OR EQUIVALENT. CONTRACTOR TO PREVENT CEMENT CONCRETE FROM COVERING THE WEEP HOLES.
- 2. PROTECT PAVER SURFACE WITH URETHANE SCUFF PAD DURING COMPACTION.



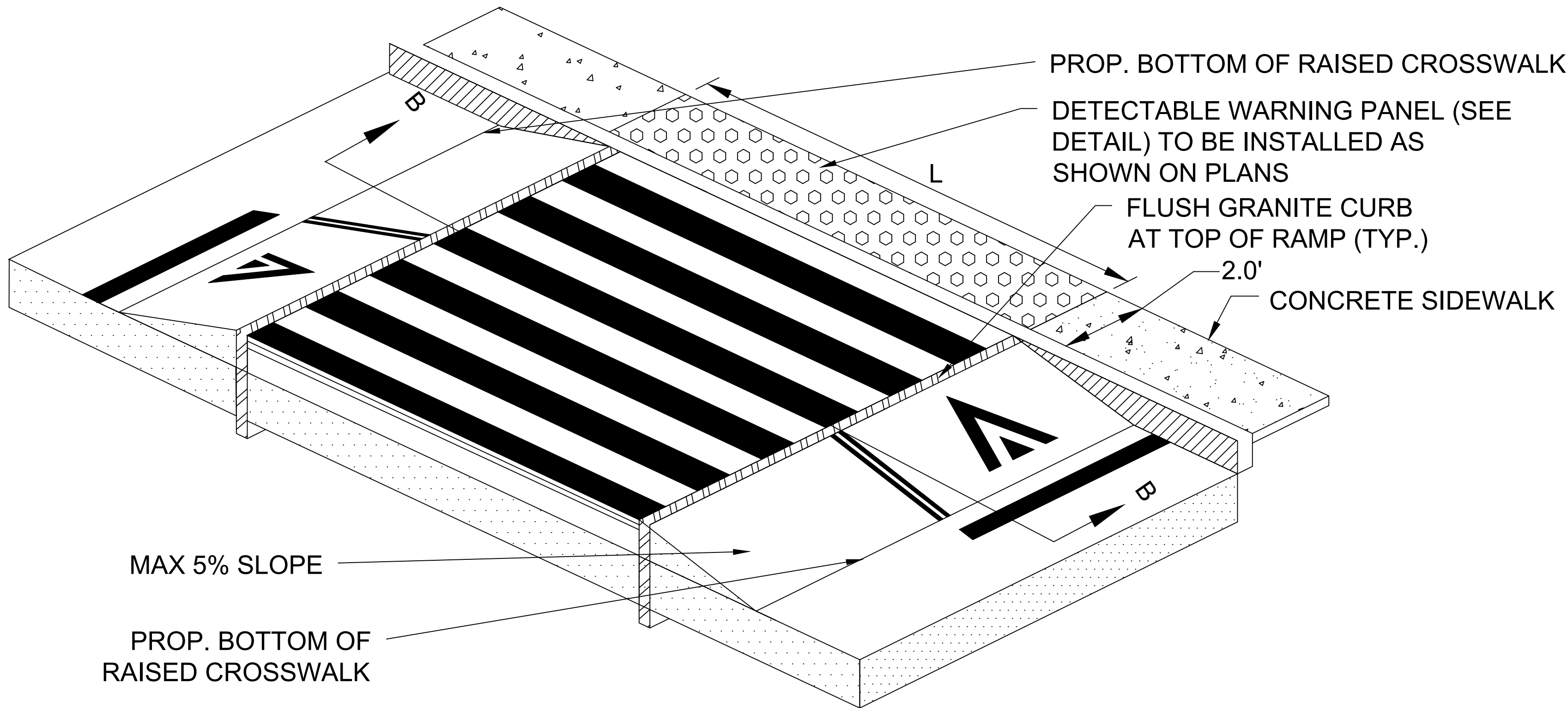
RAISED INTERSECTION W/ PAVERS-RESIDENTIAL STREET

SCALE: N.T.S.

	RAISED INTERSECTION W/ PAVERS DETAIL - RESIDENTIAL STREET		
	CITY OF CAMBRIDGE STANDARD DETAILS		
	SCALE: N.T.S.	DATE OF ISSUE: 1/20	SPEC. SECTION REF#:

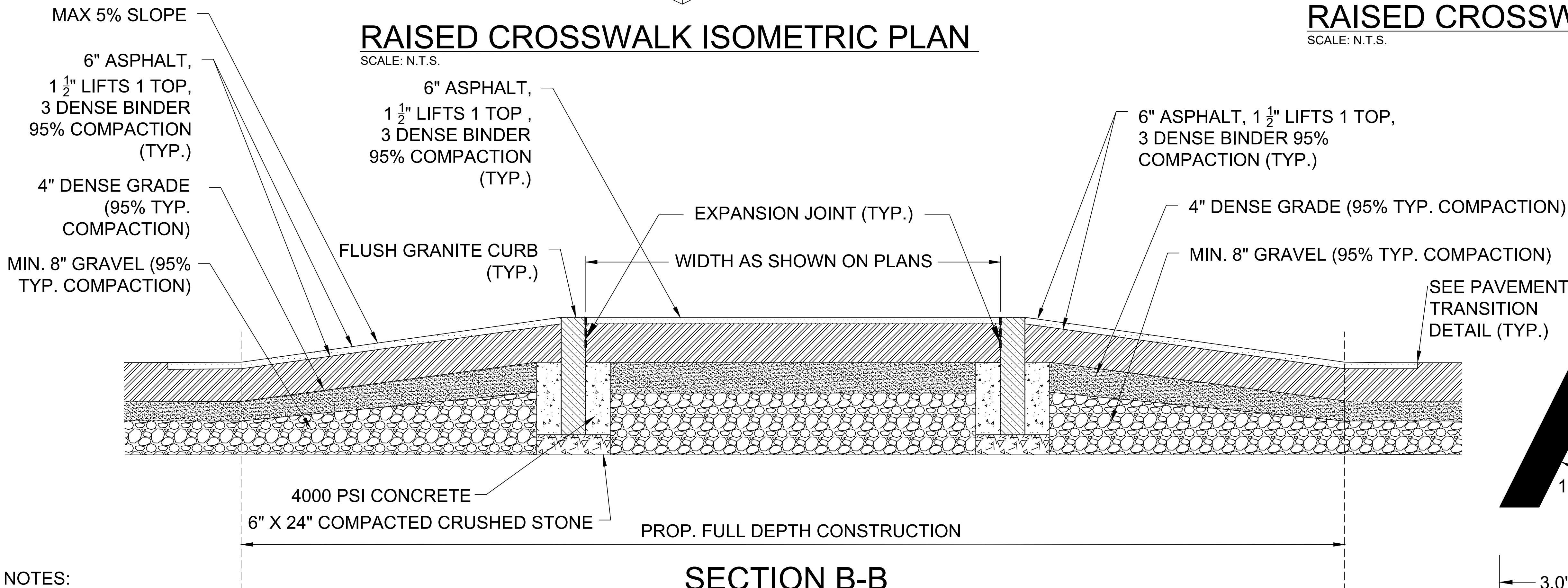


CAD FILE: C:\Users\shuebschmann\OneDrive - Kleinfelder\Desktop\Raised Intersection-Details.dwg LAYOUT: Raised Crosswalk PLOTTED: 1/28/2020 11:04 AM BY: sam huettschmann



### RAISED CROSSWALK ISOMETRIC PLAN

SCALE: N.T.S.



### SECTION B-B

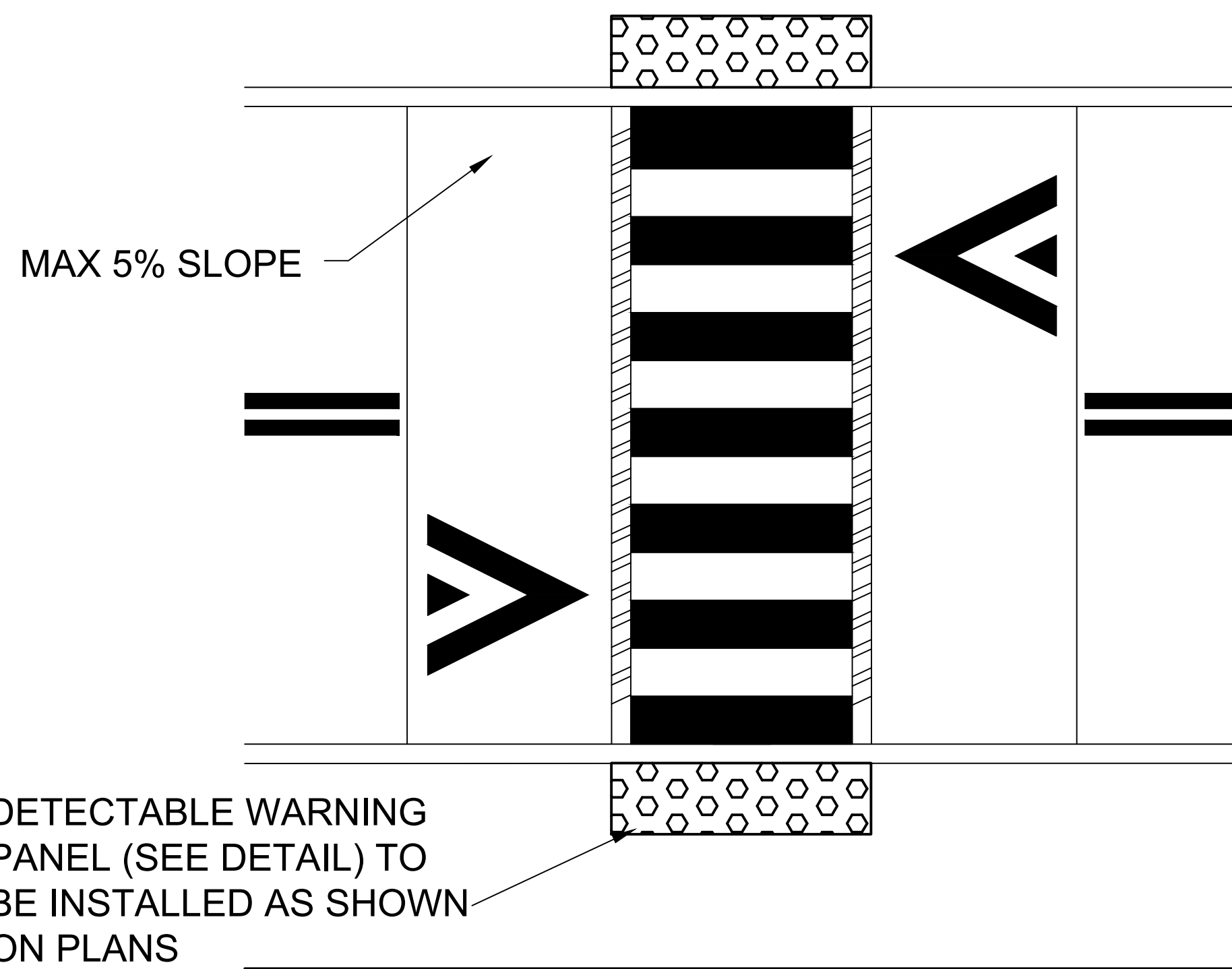
SCALE: N.T.S.

### RAISED CROSSWALK - SIDE STREETS

SCALE: N.T.S. CITY OF CAMBRIDGE STANDARD DETAILS 1/20

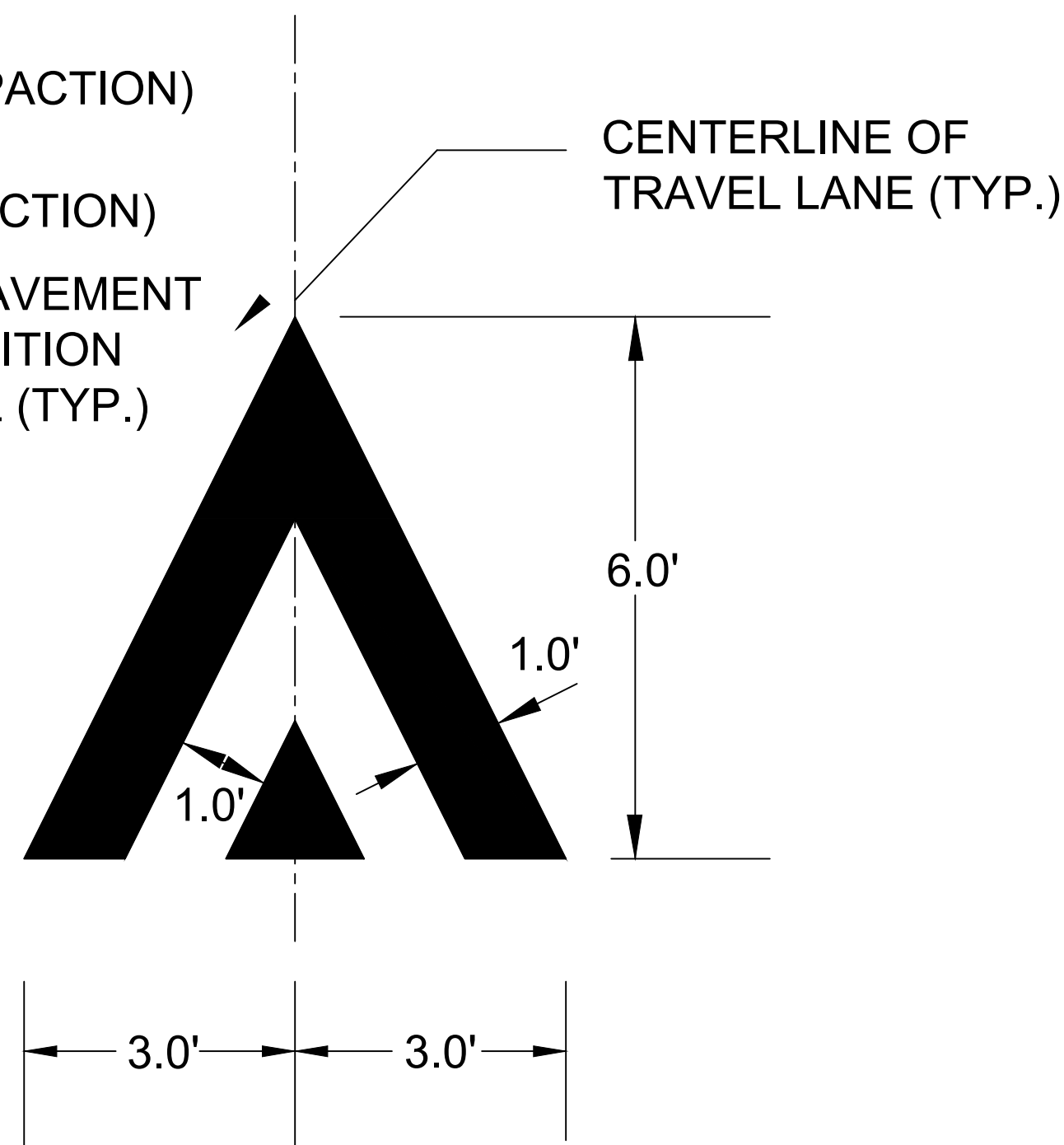
#### NOTES:

- SEE SPECIFICATIONS FOR ADDITIONAL RAISED INTERSECTION CONSTRUCTION REQUIREMENTS



### RAISED CROSSWALK PLAN VIEW

SCALE: N.T.S.

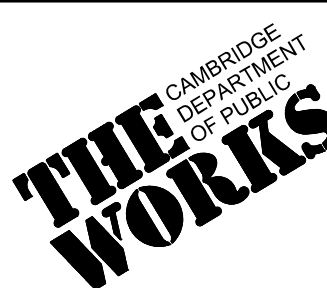


### RAMP MARKING DETAIL

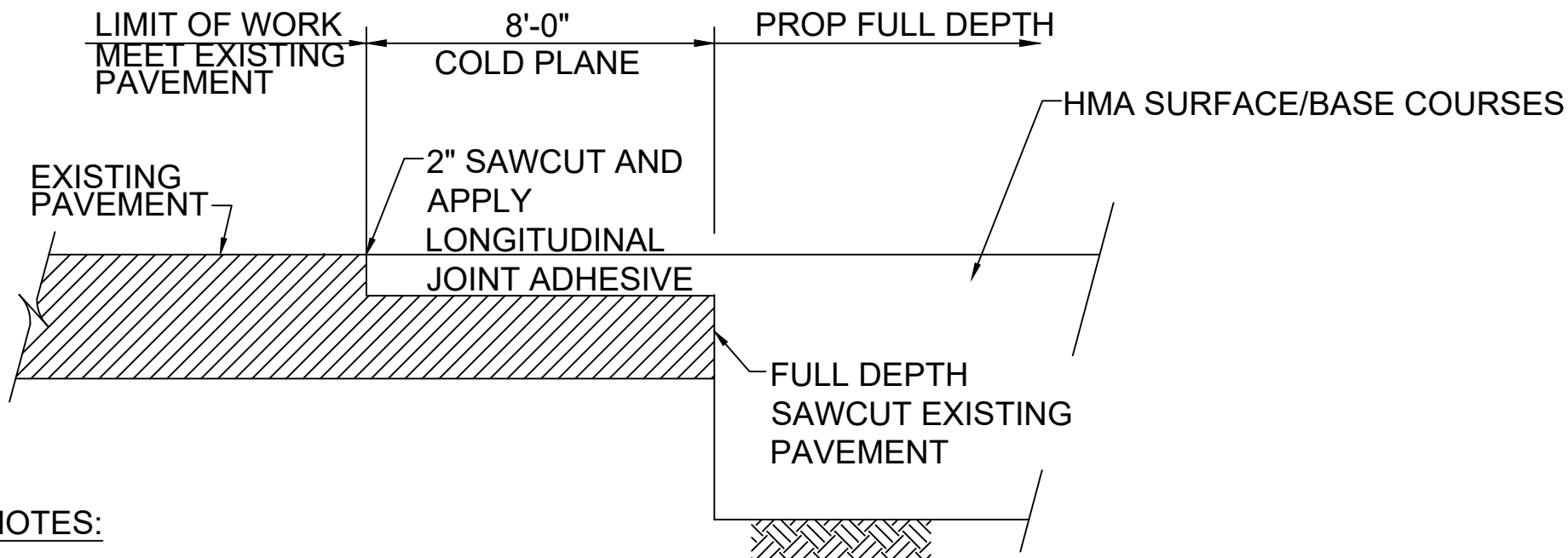
SCALE: N.T.S.



Scale	AS NOTED			
Date	JANUARY 2020			
Job No.				
Designed by	FMM			
Drawn by	SH			
Checked by	JM	No.	Description	Date
Approved by			REVISIONS	



Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet
Project	CITY OF CAMBRIDGE STANDARD DETAILS	
Drawing	RAISED CROSSWALK	File No.




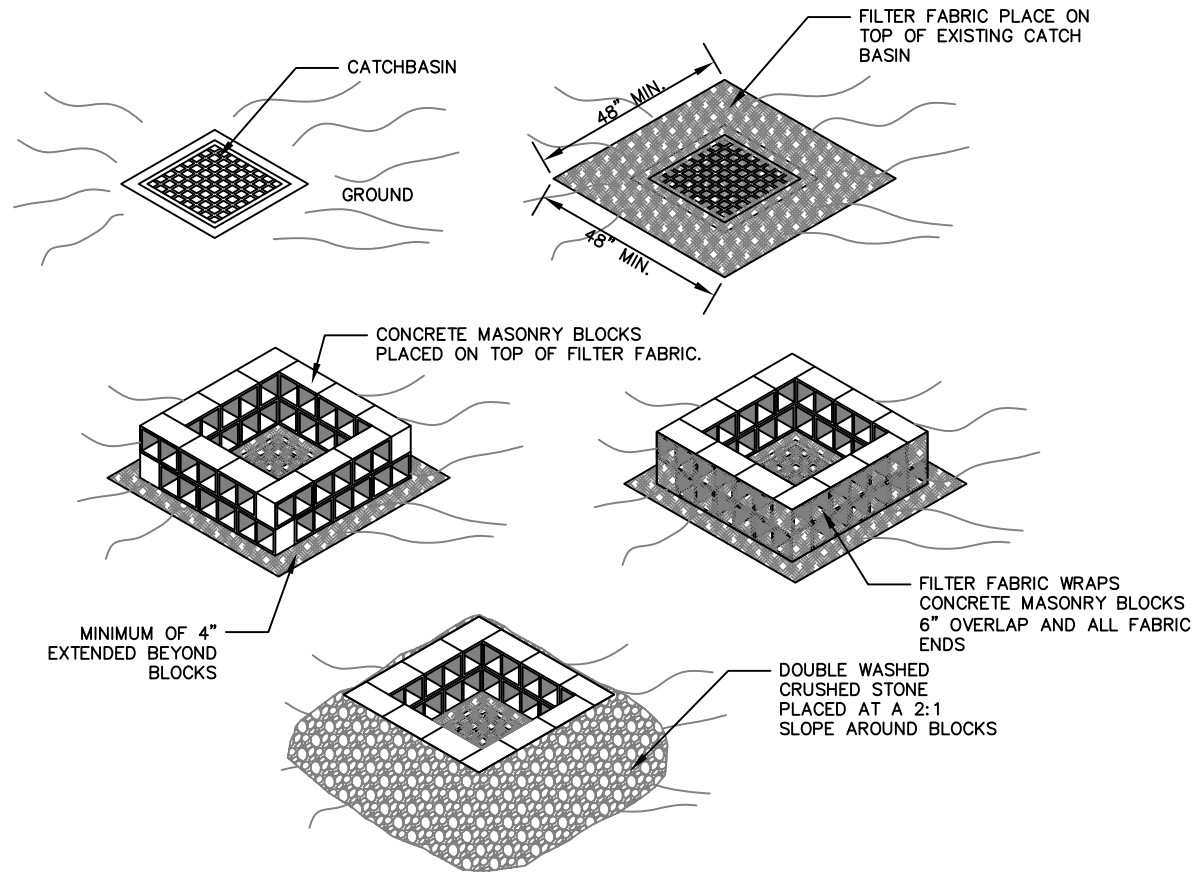
**NOTES:**

1. CLEAN ALL COLD PLANED SURFACES BEFORE APPLYING JOINT ADHESIVE, TACK COAT AND FINAL PAVEMENT.
2. APPLY TACK COAT TO COLD PLANED SURFACES PRIOR TO BEING OVERLAID AT THE RATE OF 0.10 GALLONS PER SQUARE YARD.
3. TEMPORARY PAVEMENT SHALL BE PLACED ALONG ANY LIP CREATED BY PAVEMENT REMOVAL. TEMPORARY PAVEMENT SHALL BE PLACED AT A SLOPE OF LESS THAN 1V:3H.

## PAVEMENT TRANSITION

SCALE: N.T.S.

	PAVEMENT TRANSITION		
	CITY OF CAMBRIDGE STANDARD DETAILS		
	SCALE: N.T.S.	DATE OF ISSUE: 1/20	SPEC. SECTION REF#:



THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE ANTICIPATED AND OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING

INSPECTION SCHEDULE SHALL COMPLY WITH THE 2008 EPA CONSTRUCTION GENERAL PERMIT

MAINTENANCE SHALL OCCUR WHEN NECESSARY. FILTER FABRIC SHALL BE SWEEPED CLEAN WHEN NEEDED AND GRAVEL SHALL BE REPLACED WHEN A NOTICEABLE AMOUNT OF FINES HAVE COLLECTED IN BETWEEN THE CRUSHED GRAVEL.

### CATCH BASIN W/ BLOCK AND GRAVEL INLET PROTECTION



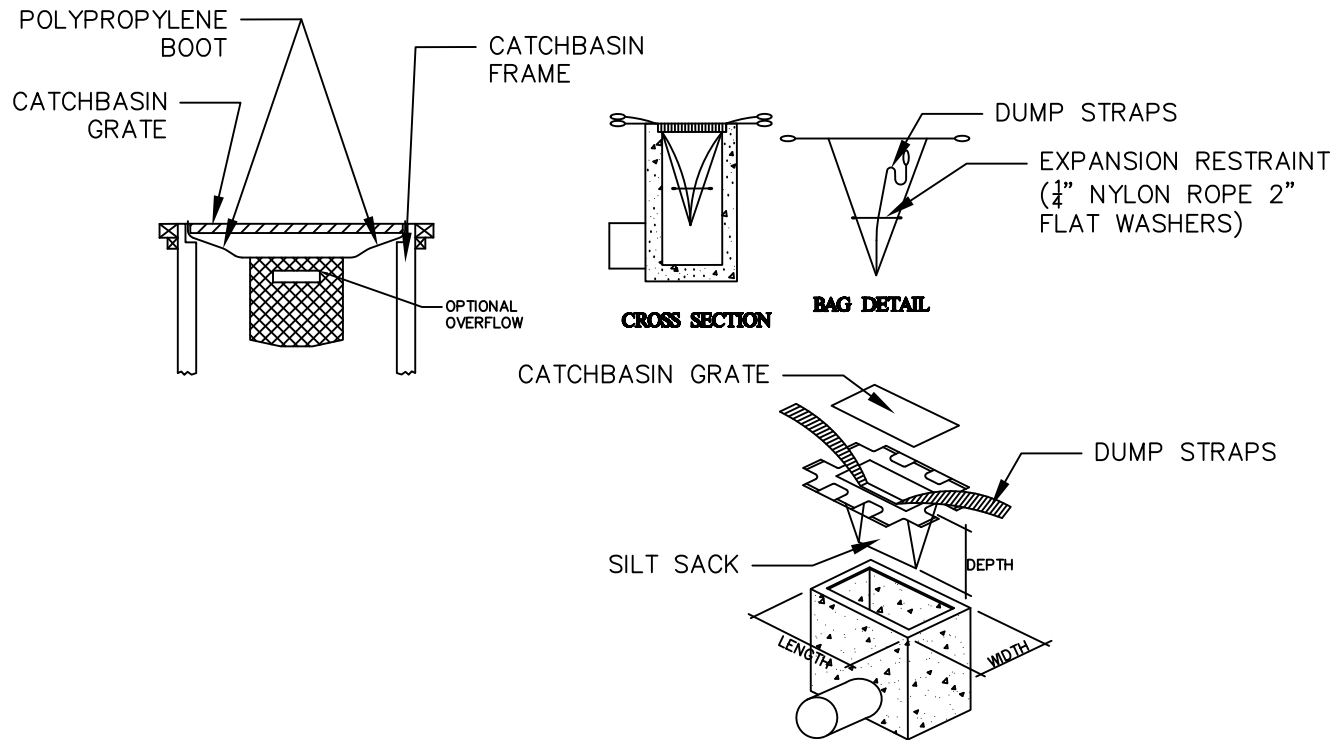
## INLET PROTECTION 1

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE OF ISSUE: 07/09

SPEC. SECTION REF#:



THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS SHEET, OVERLAND AND CONCENTRATED FLOWS (NOT GREATER THAN 1 CFS). THE METHOD CAN DRAIN FLAT AREA TO STEEP SLOPES. INLET CAPACITY WILL DECREASE WITH THIS METHOD AND CONTRACTOR SHALL EXPECT FLOODING TO OCCUR DURING HIGH FLOW EVENTS.

INSPECTION SCHEDULE SHALL COMPLY WITH THE 2008 EPA CONSTRUCTION GENERAL PERMIT

MAINTENANCE SHALL OCCUR WHEN NECESSARY. SILT SACKS SHALL BE CLEANED ONCE THE BAG IS FILLED HALF WAY WITH DEBRIS. CONTRACTOR SHALL REMOVE SILT SACK AND PLACE NEW UNIT. DO NOT EMPTY SILT SACK CONTENTS INTO THE CATCHBASIN.

### CATCH BASIN W/ SILT SACK INLET PROTECTION



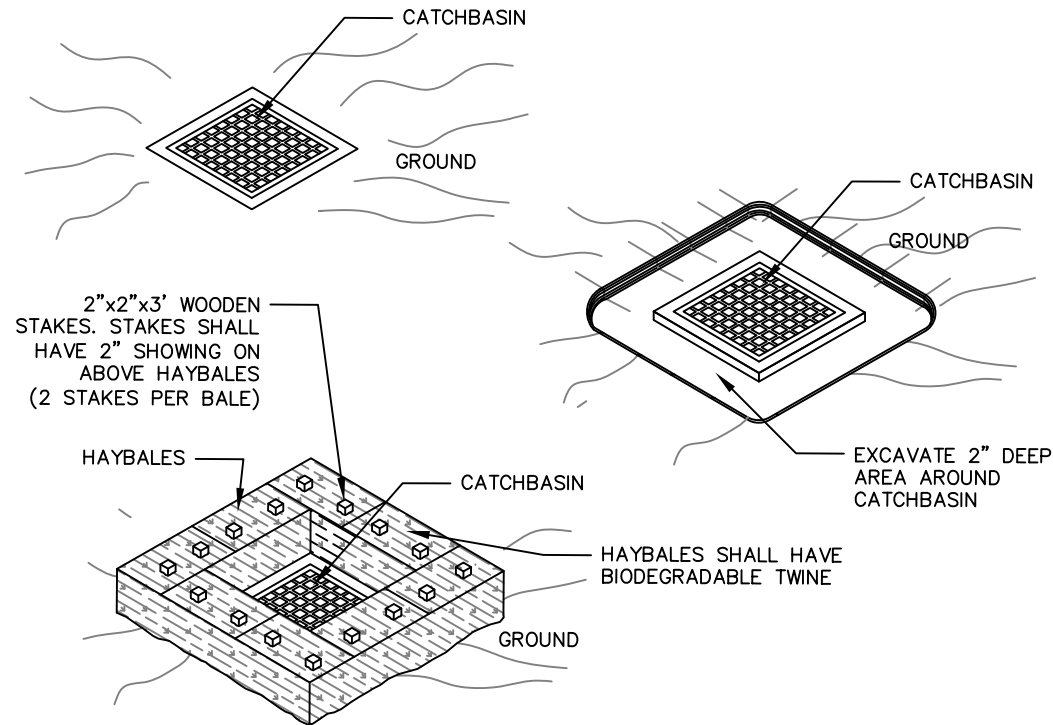
#### INLET PROTECTION 2

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 07/09

SPEC. SECTION REF#:



INSPECTION SCHEDULE SHALL COMPLY WITH THE 2008 EPA CONSTRUCTION GENERAL PERMIT  
 THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT  
 AREA (SLOPE NO GREATER THAN 5%). WHERE THE INLET ACCEPTS SHEET OR OVERLAND FLOWS  
 (NOT GREATER THAN 1 CFS). THIS METHOD SHOULD NOT APPLY TO AN INLET ACCEPTING  
 CONCENTRATED FLOW.

HAYBALES SHOULD BE MADE FROM REGIONALLY FARMED HAY TO REDUCE THE POSSIBILITY OF  
 INVASIVE SPECIES. WHEN POSSIBLE STRAW BALES SHOULD BE USED.

HAYBALES SHOULD ONLY BE USED WHEN APPROVED BY THE CITY OF CAMBRIDGE. HAYBALES ARE  
 ALLOWS FOR PROJECTS THAT HAVE A DURATION OF LESS THAN THREE MONTHS.

MAINTENANCE SHALL OCCUR WHEN NECESSARY. HAYBALES ARE HIGHLY IMPERVIOUS AND THE  
 CONTRACTOR SHOULD EXPECT PONDING IN THE AREA. HAYBALES SHOULD BE REPLACED EVERY 1  
 TO 3 MONTHS DEPENDING ON CONDITIONS.

### **CATCH BASIN W/ HAYBALES INLET PROTECTION**



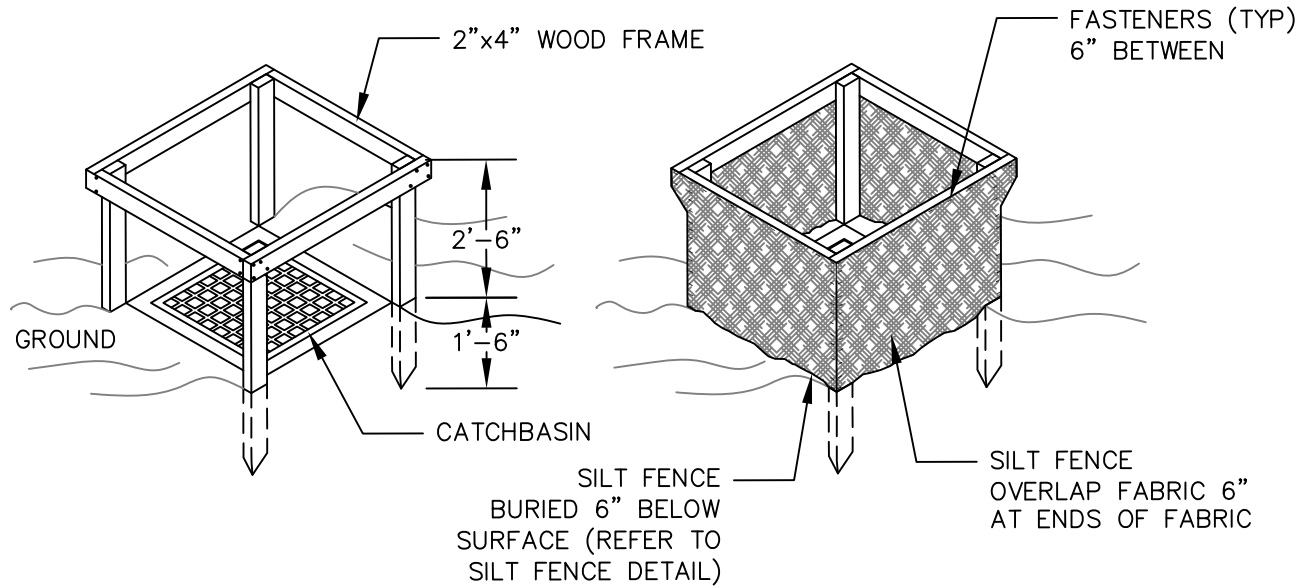
### **INLET PROTECTION 3**

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
 OF ISSUE: 07/09

SPEC. SECTION REF#:



THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPE NO GREATER THAN 5%). WHERE THE INLET ACCEPTS SHEET OR OVERLAND FLOW (NOT GREATER THAN 1 CFS) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS

INSPECTION SCHEDULE SHALL COMPLY WITH THE 2008 EPA CONSTRUCTION GENERAL PERMIT MAINTENANCE SHALL OCCUR WHEN NECESSARY. SILT FENCE SHALL BE REPLACE EVERY 6 MONTHS AND STACKS SHALL BE INSPECTED TO ENSURE STRUCTURAL INTEGRITY.

### CATCH BASIN W/ SILT FENCE INLET PROTECTION



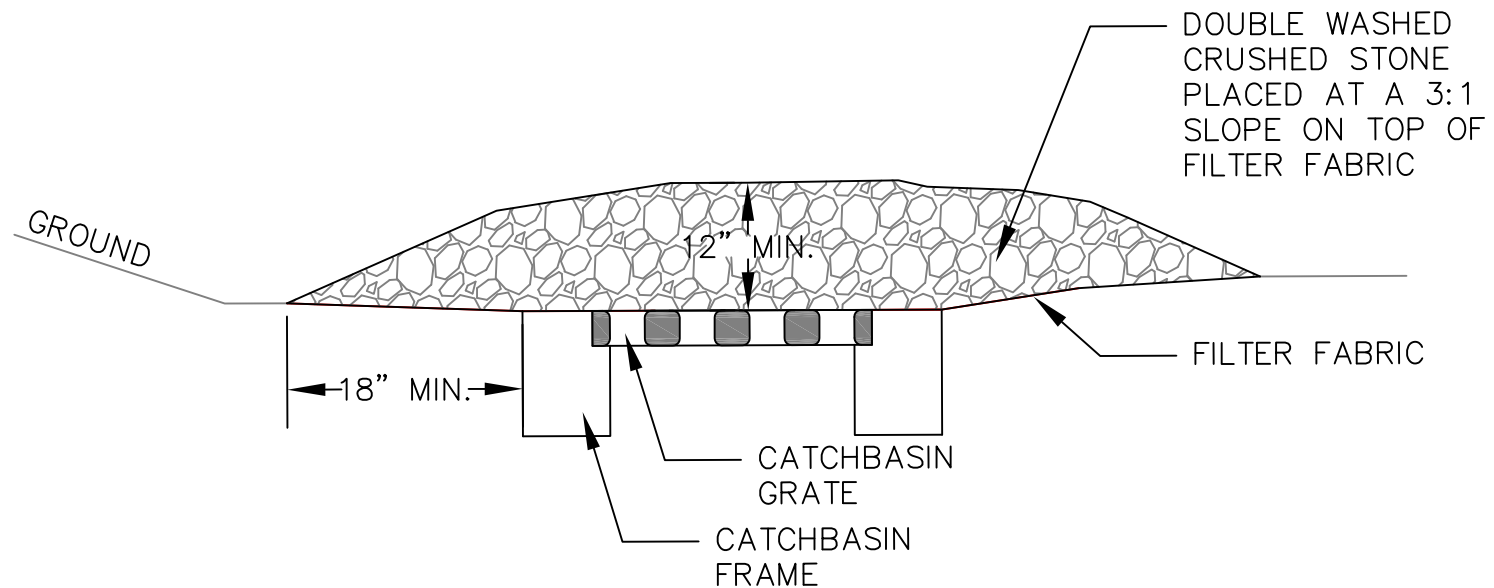
#### INLET PROTECTION 4

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE OF ISSUE: 07/09

SPEC. SECTION REF#:



THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE ANTICIPATED BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

INSPECTION SCHEDULE SHALL COMPLY WITH THE 2008 EPA CONSTRUCTION GENERAL PERMIT

MAINTENANCE SHALL OCCUR WHEN NECESSARY. GRAVEL SHALL BE REPLACED WHEN A NOTICEABLE AMOUNT OF FINES HAVE COLLECTED IN BETWEEN THE CRUSHED GRAVEL. FILTER FABRIC SHALL BE REPLACED EVERY 6 MONTHS.

## CATCH BASIN W/ GRAVEL INLET PROTECTION



### INLET PROTECTION 5

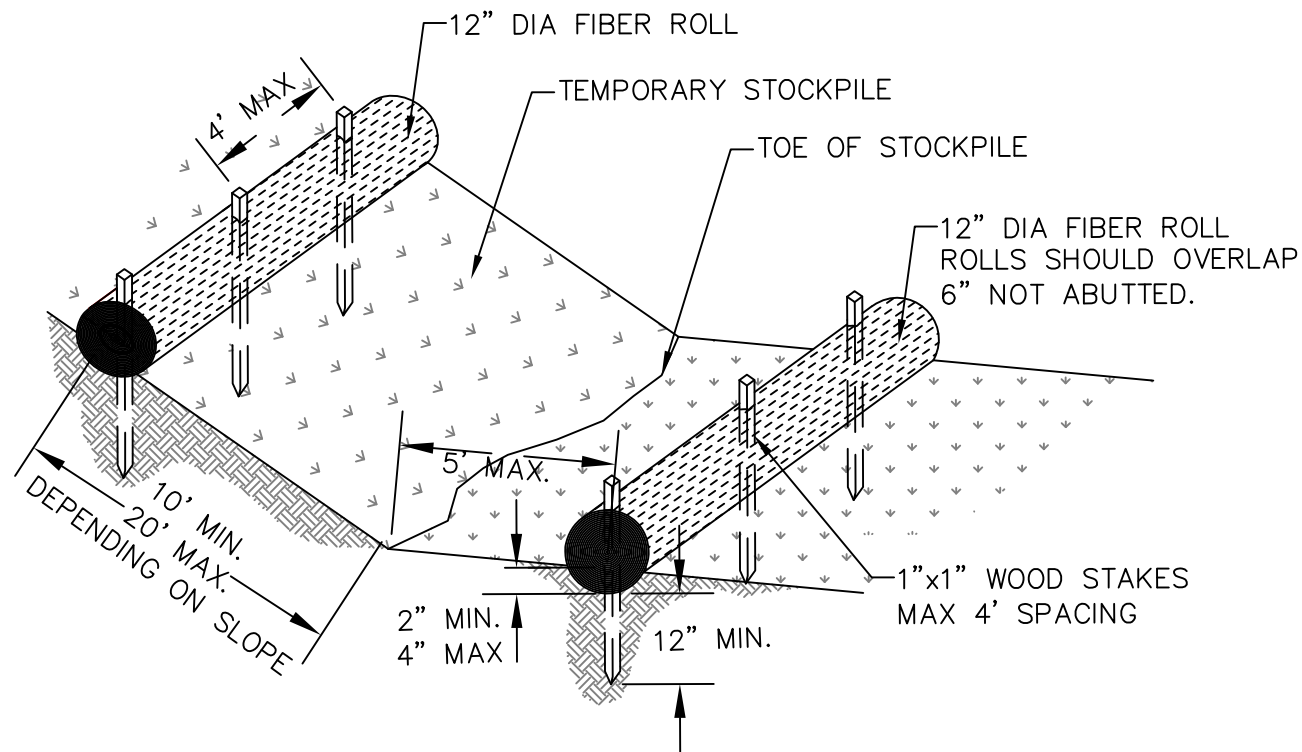
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE OF ISSUE: 07/09

SPEC. SECTION REF#:





INSPECTION SCHEDULE SHALL COMPLY WITH THE 2008 EPA CONSTRUCTION GENERAL PERMIT

MAINTENANCE SHALL OCCUR WHEN NECESSARY. FIBER ROLLS SHALL BE REPLACE EVERY 6 MONTHS AND STACKS SHALL BE INSPECTED TO ENSURE STRUCTURAL INTEGRITY. FIBER ROLLS SHALL BE INSPECTED WEEKLY AND ALL MAINTENANCE ISSUES SHALL BE CORRECT AT THAT TIME.

TEMPORARY STOCKPILES ARE STOCKPILES THAT WILL BE USED WITHIN 14 DAYS FOR BEING PLACED. IF A STOCKPILE IS BEING LEFT UNDISTURBED FOR LONGER THAT 14 DAYS THEN PERMANENT STABILIZATION WILL BE REQUIRED



## FIBER ROLL STOCKPILE PROTECTION

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE OF ISSUE: 07/09

SPEC. SECTION REF#:



## EROSION AND SEDIMENT CONTROL NOTES

1. PRIOR TO ANY LAND DISTURBANCE ACTIVITIES COMMENCING ON THE SITE, THE DEVELOPER SHALL PHYSICALLY MARK LIMITS OF NO LAND DISTURBANCE ON THE SITE WITH TAPE, SIGNS, OR ORANGE CONSTRUCTION FENCE, SO THAT WORKERS CAN SEE THE AREAS TO BE PROTECTED. THE PHYSICAL MARKERS SHALL REMAIN IN PLACE UNTIL A CERTIFICATE OF COMPLETION HAS BEEN ISSUED.
2. APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO SOIL DISTURBANCE. MEASURES SHALL BE TAKEN TO CONTROL EROSION WITHIN THE PROJECT AREA. SEDIMENT IN RUNOFF WATER SHALL BE TRAPPED AND RETAINED WITHIN THE PROJECT AREA. WETLAND AREAS AND SURFACE WATERS SHALL BE PROTECTED FROM SEDIMENT.
3. MINIMIZE TOTAL AREA OF DISTURBANCE AND PROTECT NATURAL FEATURES AND SOIL.
4. THE CONTRACTOR SHALL SEQUENCE ALL ACTIVITIES TO MINIMIZE SIMULTANEOUS AREAS OF DISTURBANCE. MASS CLEARINGS AND GRADING OF THE ENTIRE SITE SHALL BE AVOIDED.
5. MINIMIZE SOIL EROSION AND CONTROL SEDIMENTATION DURING CONSTRUCTION,
6. DIVERT UNCONTAMINATED WATER AROUND DISTURBED AREAS.
7. INSTALL AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND GOOD ENGINEERING PRACTICES OR THE 2008 EPA'S CONSTRUCTION GENERAL PERMIT.
8. PROTECT AND MANAGE ON AND OFF-SITE MATERIAL STORAGE AREAS (OVERBURDEN AND STOCKPILES OF DIRT, BORROW AREAS, OR OTHER AREAS USED SOLELY BY THE PERMITTED PROJECT ARE CONSIDERED A PART OF THE PROJECT).
9. COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS INCLUDING WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS, AND AIR QUALITY REQUIREMENTS, INCLUDING DUST CONTROL.
10. SEDIMENT SHALL BE REMOVED ONCE THE VOLUME REACHES  $\frac{1}{4}$  TO  $\frac{1}{2}$  THE HEIGHT OF THE EROSION CONTROL DEVICE. SEDIMENT SHALL BE REMOVED FROM SILT FENCE PRIOR TO REACHING THE LOAD-BEARING CAPACITY OF THE SILT FENCE WHICH MAY BE LOWER THAN  $\frac{1}{4}$  TO  $\frac{1}{2}$  THE HEIGHT.
11. SEDIMENT FROM SEDIMENT TRAPS OR SEDIMENTATION PONDS SHALL BE REMOVED WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT.
12. BMPS TO BE USED FOR INFILTRATION AFTER CONSTRUCTION SHALL NOT BE USED AS BMPS DURING CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE BOARD. MANY INFILTRATION TECHNOLOGIES ARE NOT DESIGNED TO HANDLE THE HIGH CONCENTRATIONS OF SEDIMENTS TYPICALLY FOUND IN CONSTRUCTION RUNOFF, AND THUS MUST BE PROTECTED FROM CONSTRUCTION RELATED SEDIMENT LOADINGS.
13. SOIL STOCKPILES MUST BE STABILIZED OR COVERED AT THE END OF EACH WORKDAY. STOCKPILE SIDE SLOPES SHALL NOT BE GREATER THAN 2:1. ALL STOCKPILES SHALL BE SURROUNDED BY SEDIMENT CONTROLS.
14. FOR ACTIVE CONSTRUCTION AREAS SUCH AS BORROW OR STOCKPILE AREAS, ROADWAY IMPROVEMENTS AND AREAS WITHIN 50 FEET OF A BUILDING UNDER CONSTRUCTION, A PERIMETER SEDIMENT CONTROL SYSTEM SHALL BE INSTALLED AND MAINTAINED TO CONTAIN SOIL.
15. A TRACKING PAD OR OTHER APPROVED STABILIZATION METHOD SHALL BE CONSTRUCTED AT ALL ENTRANCE/EXIST POINTS OF THE SITE TO REDUCE THE AMOUNT OF SOIL CARRIED ONTO ROADWAYS AND OFF THE SITE.
16. ON THE CUT SIDE OF ROADS, DITCHES SHALL BE STABILIZED IMMEDIATELY WITH ROCK RIP-RAP OR OTHER NON-ERODIBLE LINERS, OR WHERE APPROPRIATE, VEGETATIVE MEASURES SUCH AS HYDROSEEDING OR JUTE MATTING.
17. PERMANENT SEEDING SHALL BE UNDERTAKEN IN THE SPRING FROM MARCH THROUGH MAY, AND IN LATE SUMMER AND EARLY FALL FROM AUGUST TO OCTOBER 15. DURING THE PEAK SUMMER MONTHS AND IN THE FALL AFTER OCTOBER 15, WHEN SEEDING IS FOUND TO BE IMPRACTICAL, APPROPRIATE TEMPORARY STABILIZATION SHALL BE APPLIED. PERMANENT SEEDING MAY BE UNDERTAKEN DURING THE SUMMER IF PLANS PROVIDE FOR ADEQUATE MULCHING AND WATERING.
18. ALL SLOPES STEEPER THAN 3:1 (H:V, 33.3%), AS WELL AS PERIMETER DIKES, SEDIMENT BASINS OR TRAPS, AND EMBANKMENTS MUST, UPON COMPLETION, BE IMMEDIATELY STABILIZED WITH SOD, SEED AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES. AREAS OUTSIDE OF THE PERIMETER SEDIMENT CONTROL SYSTEM MUST NOT BE DISTURBED.
19. TEMPORARY SEDIMENT TRAPPING DEVICES MUST NOT BE REMOVED UNTIL PERMANENT STABILIZATION IS ESTABLISHED IN ALL CONTRIBUTORY DRAINAGE AREAS.
20. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION. DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS OF REMOVAL.
21. PROPERLY MANAGE ON-SITE CONSTRUCTION AND WASTE MATERIALS.
22. PREVENT OFF-SITE VEHICLE TRACKING OF SEDIMENTS.
23. DUST SHALL BE CONTROLLED AT THE SITE.
24. ALL PREVIOUSLY DISTURBED LAND SHALL BE STABILIZED BY APPROVED METHODS AFTER 14 DAYS IF LEFT UNDISTURBED. THIS INCLUDES STOCKPILES, CONSTRUCTION ENTRANCES, GRADED AREAS AND OTHER CONSTRUCTION ACTIVITY RELATED CLEARING.
25. IF WORK IS HALTED OVER WINTER MONTHS THE CONTRACTOR SHALL BE RESPONSIBLE FOR STABILIZING THE AREA THROUGH GROUND COVER PRACTICES..



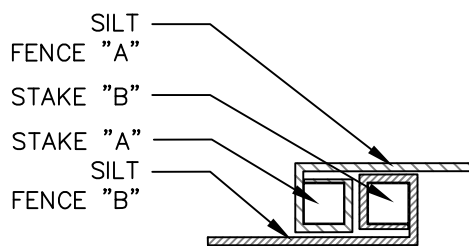
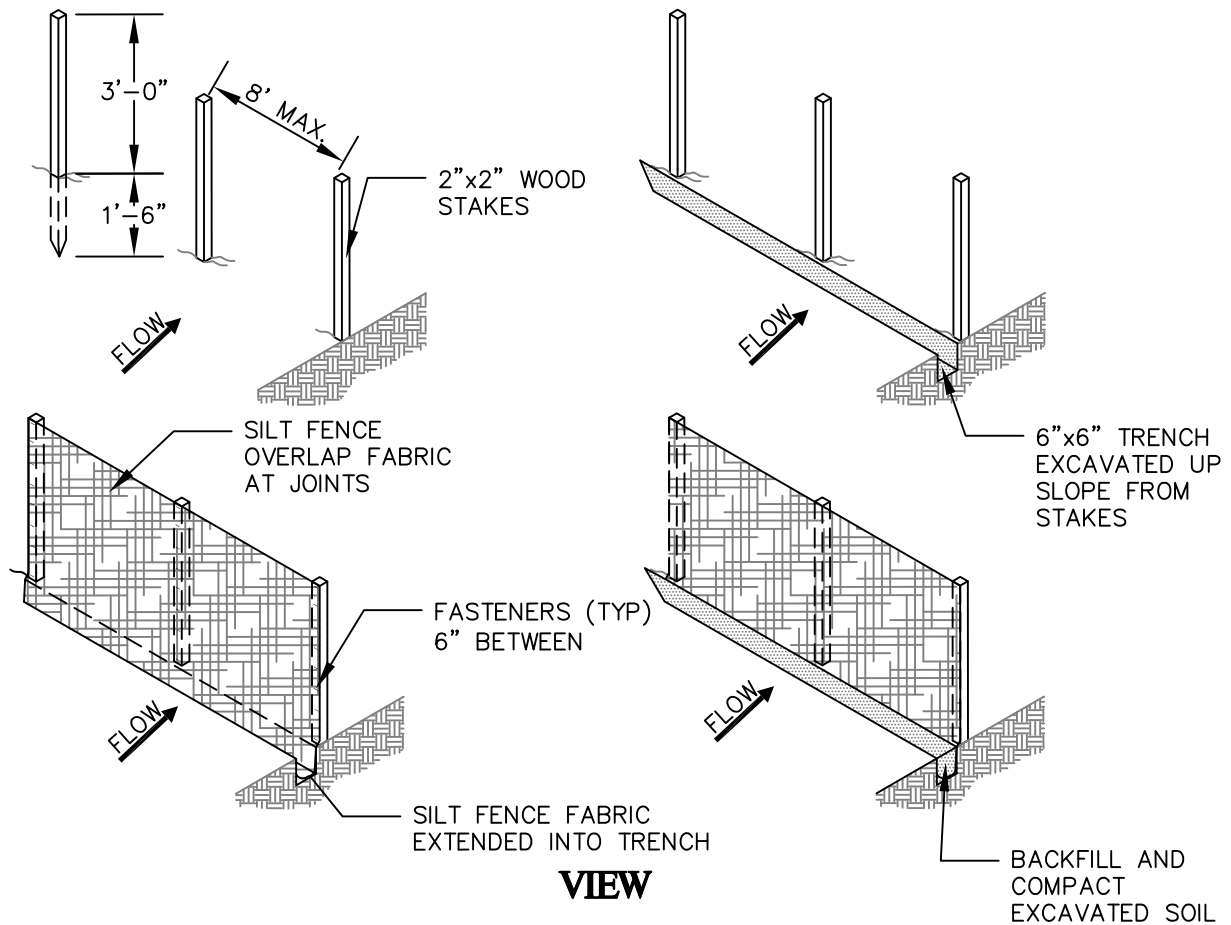
## EROSION AND SEDIMENT CONTROL GENERAL NOTES

### CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

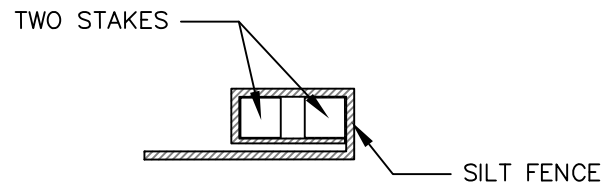
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DATE  
OF ISSUE: 07/09

SPEC. SECTION REF#:



**JOINT DETAIL**



**END JOINT DETAIL**

INSPECTION SCHEDULE SHALL COMPLY WITH THE 2008 EPA CONSTRUCTION GENERAL PERMIT

MAINTENANCE SHALL OCCUR WHEN NECESSARY. SILT FENCE SHALL BE REPLACED EVERY 6 MONTHS AND STAKES SHALL BE INSPECTED TO ENSURE STRUCTURAL INTEGRITY. SILT FENCE SHALL BE INSPECTED WEEKLY AND ALL MAINTENANCE ISSUES SHALL BE CORRECT AT THAT TIME.



## SILT FENCE

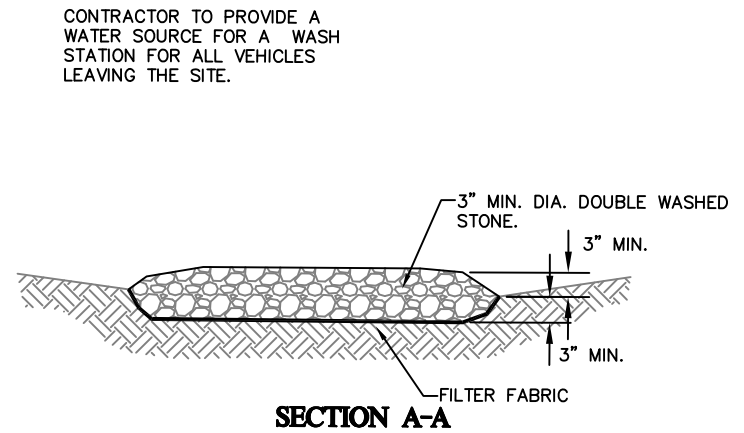
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE OF ISSUE:

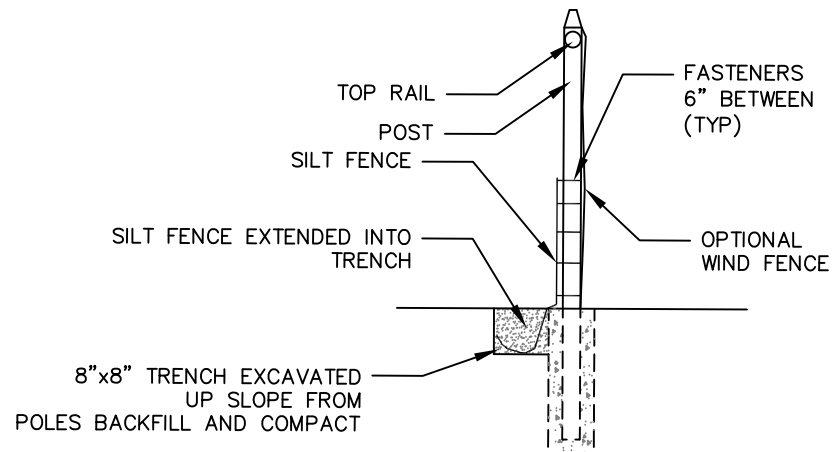
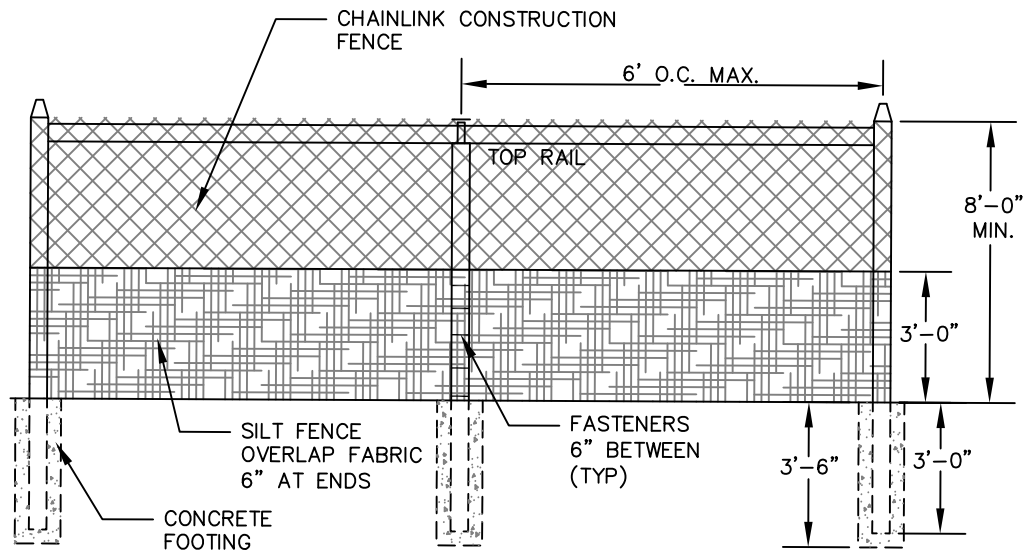
07/09

SPEC. SECTION REF#:



SPEC. SECTION REF#:





INSPECTION SCHEDULE SHALL COMPLY WITH THE 2008 EPA CONSTRUCTION GENERAL PERMIT

MAINTENANCE SHALL OCCUR WHEN NECESSARY. SILT FENCE SHALL BE REPLACE EVERY 6 MONTHS AND POST SHALL BE INSPECTED TO ENSURE STRUCTURAL INTEGRITY. SILT FENCE SHALL BE INSPECTED WEEKLY AND ALL MAINTENANCE ISSUES SHALL BE CORRECT AT THAT TIME.



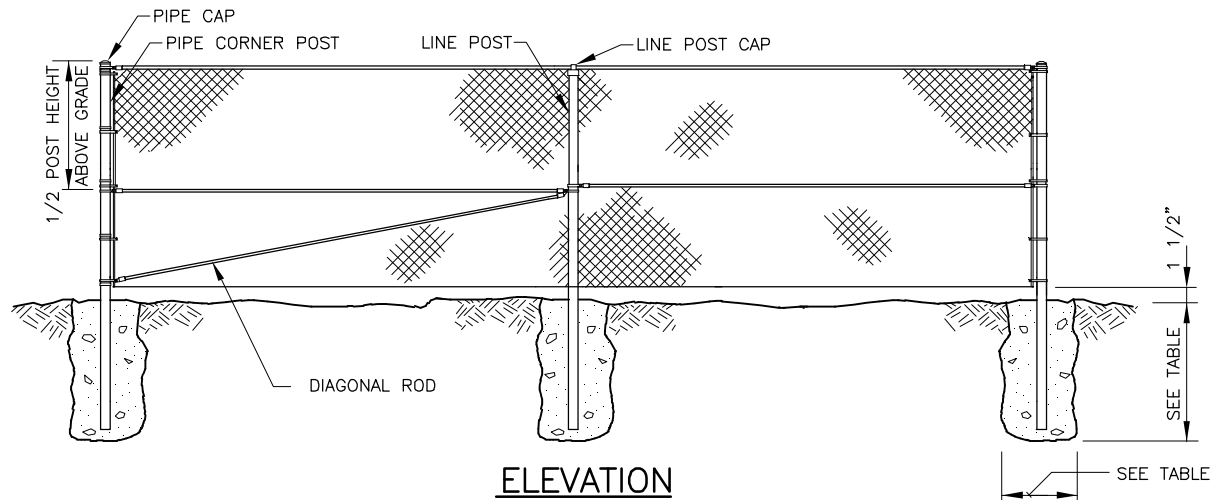
## SUPER SILT FENCE

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 07/09

SPEC. SECTION REF#:



POST SETTING REQUIREMENT			
TYPE OF POST	HOLE DIA. AT TOP*	HOLE DEPTH	POST EMBEDMENT
LINE	9"	38"	36"
TERMINAL	12"	38"	36"

\*MIN. HOLE DIAMETER IN SOFT OR LOOSE SOIL SHALL BE 18"

NOTES:

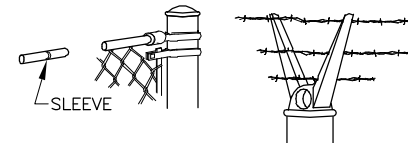
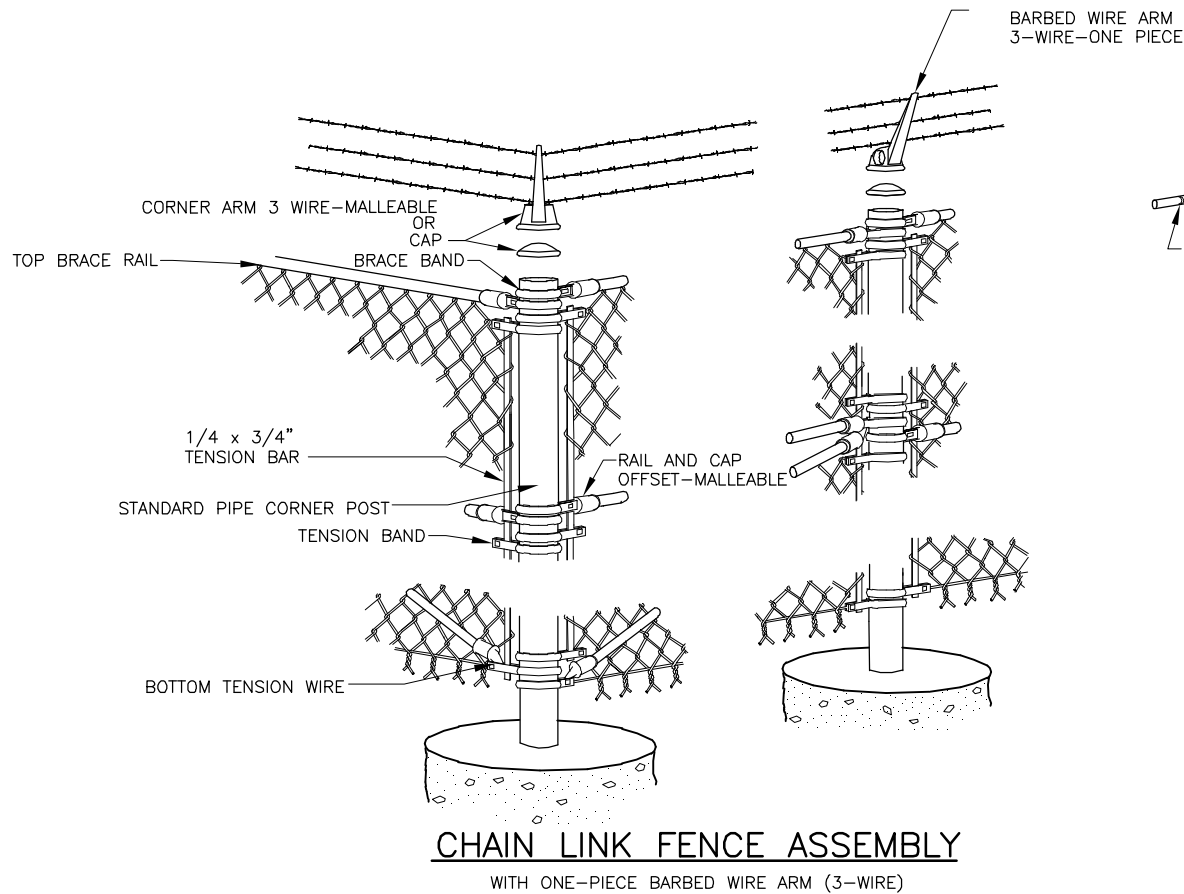
1. POST SPACING: LINE POSTS SHALL BE EVENLY SPACED, CENTER TO CENTER.
2. BARBED WIRE ARM WHERE REQUIRED SHALL BE PER CHAIN LINK FENCES AND GATES, AND CHAIN LINK FENCE DETAIL 2.
3. POST FOOTING SHALL HAVE A 1" CROWN FINISH
4. SEE CHAIN LINK FENCE DETAIL 2 FOR CHAIN LINK FENCE ASSEMBLY, ALTERNATE POSTS, AND FABRIC SELVAGE DETAILS.



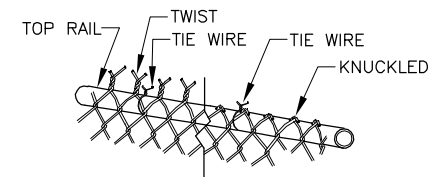
## CHAIN LINK FENCE DETAIL 1

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

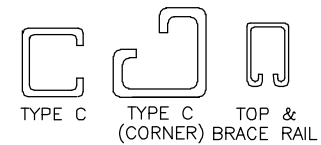
SCALE: N.T.S.	DATE OF ISSUE: 02/05	SPEC. SECTION REF#: 02830	2830.1
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### BARBED WIRE ARM



### FABRIC SELVAGE



### ALTERNATE POSTS

SEE CHAIN LINK FENCES AND GATES



## CHAIN LINK FENCE DETAIL 2

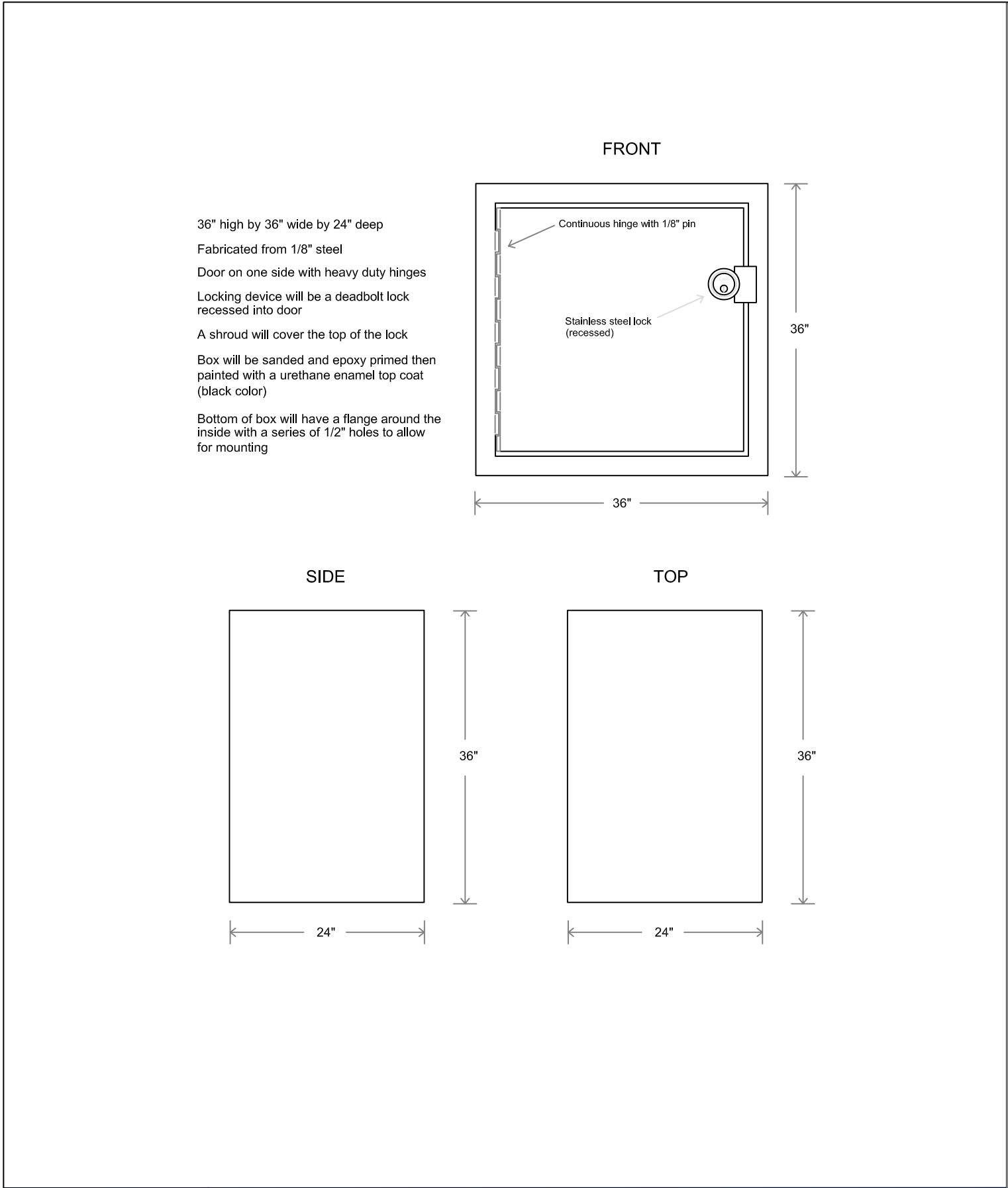
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

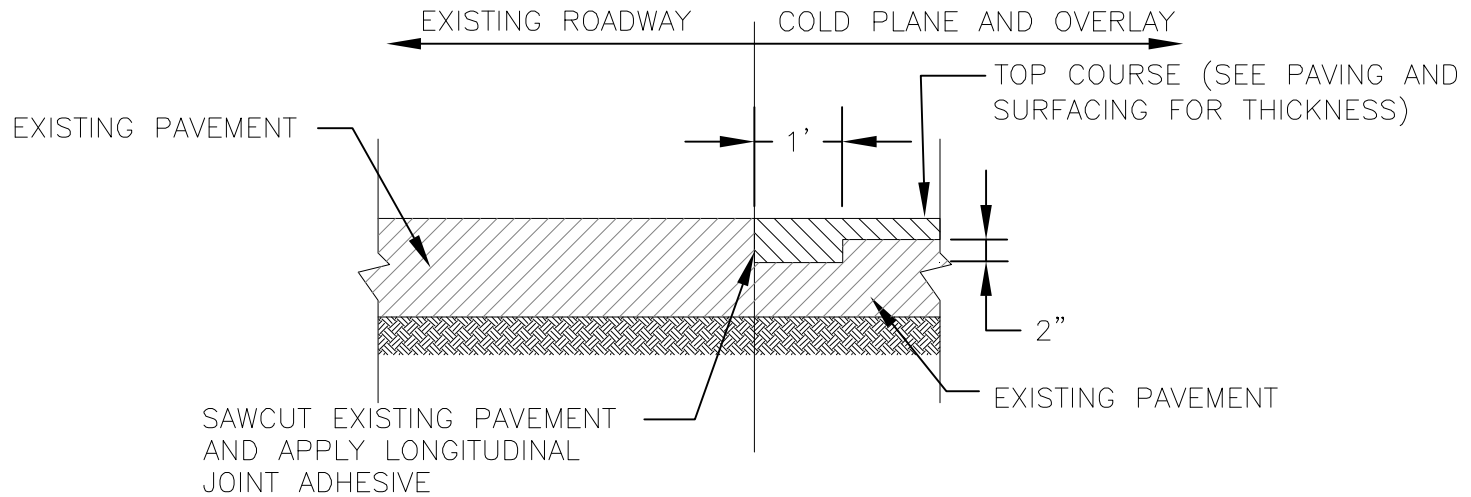
SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 02830

**2830.2**





NOTES:

1. CLEAN ALL COLD PLANED SURFACES BEFORE APPLYING JOINT ADHESIVE AND FINAL PAVEMENT



**COLD PLANE AND OVERLAY JOINT DETAIL**

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

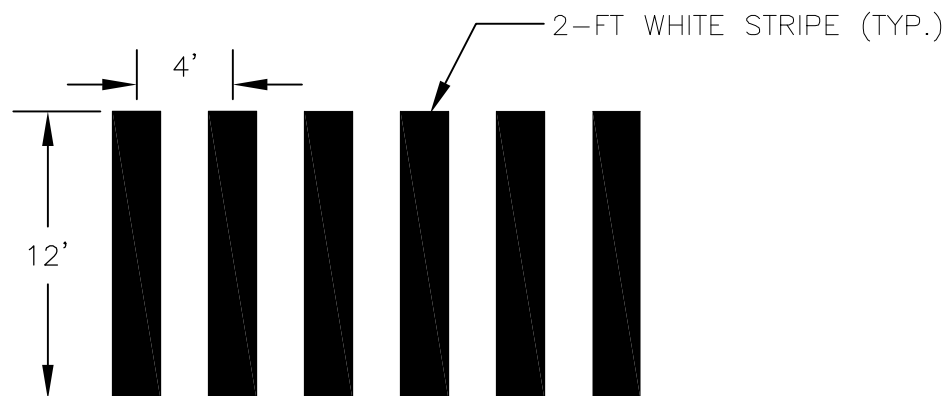
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DATE  
OF ISSUE: 02/05

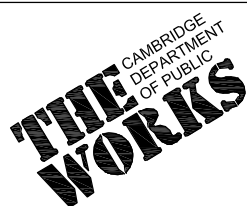
SPEC. SECTION REF#: 02500

**2500.2**





## CAMBRIDGE STANDARD CROSSWALK



### CAMBRIDGE STANDARD CROSSWALK

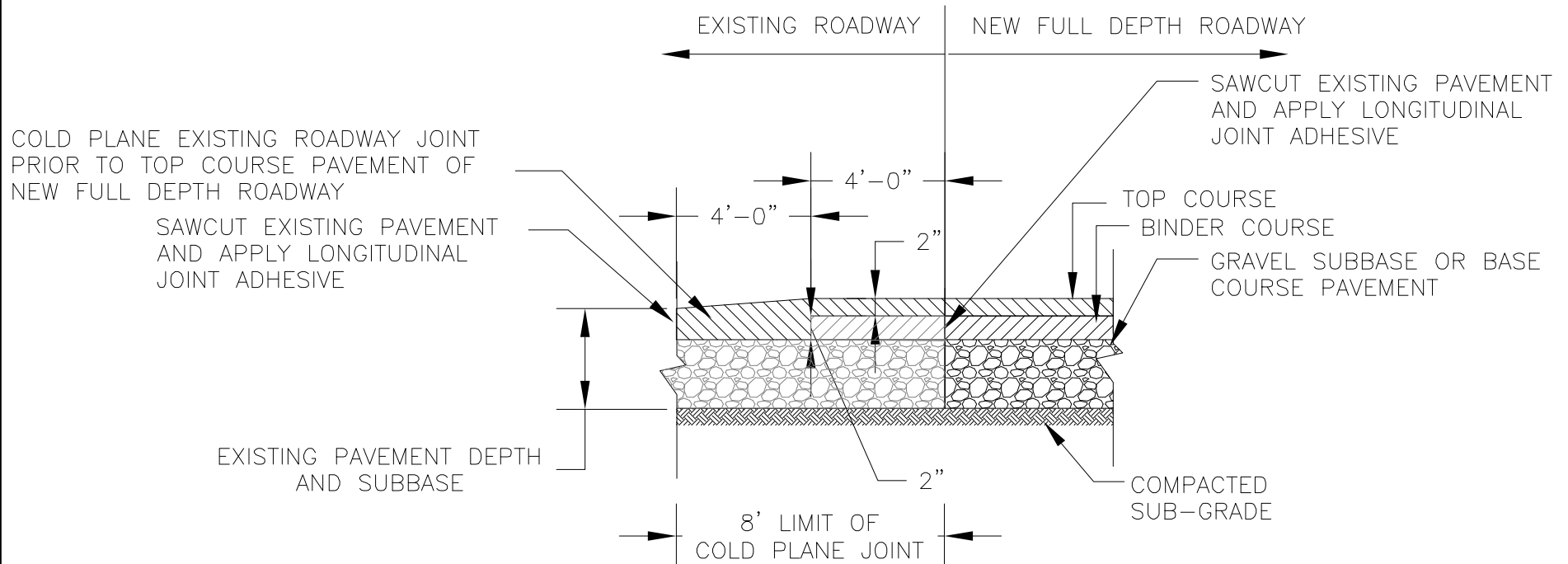
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 02577

**2577.1**



NOTES:

1. CLEAN ALL COLD PLANED SURFACES BEFORE APPLYING JOINT ADHESIVE AND FINAL PAVEMENT



**FULL DEPTH PAVEMENT JOINT DETAIL**

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

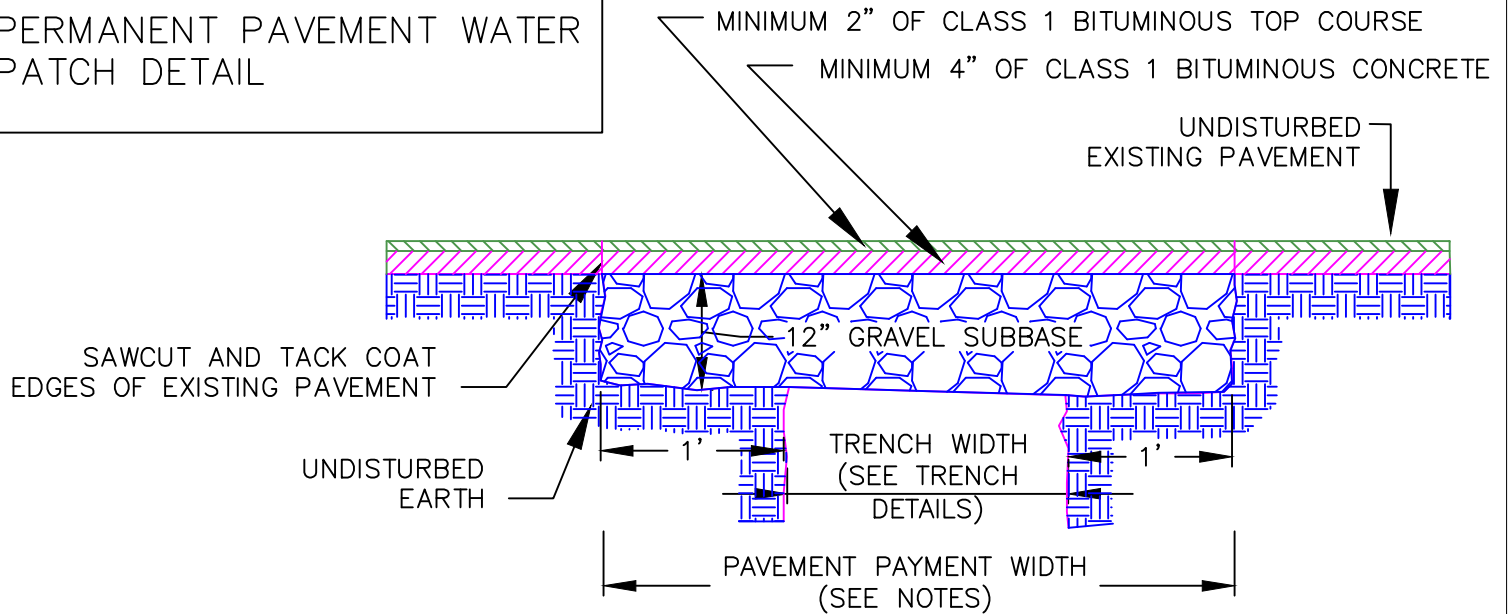
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DATE  
OF ISSUE: 02/05

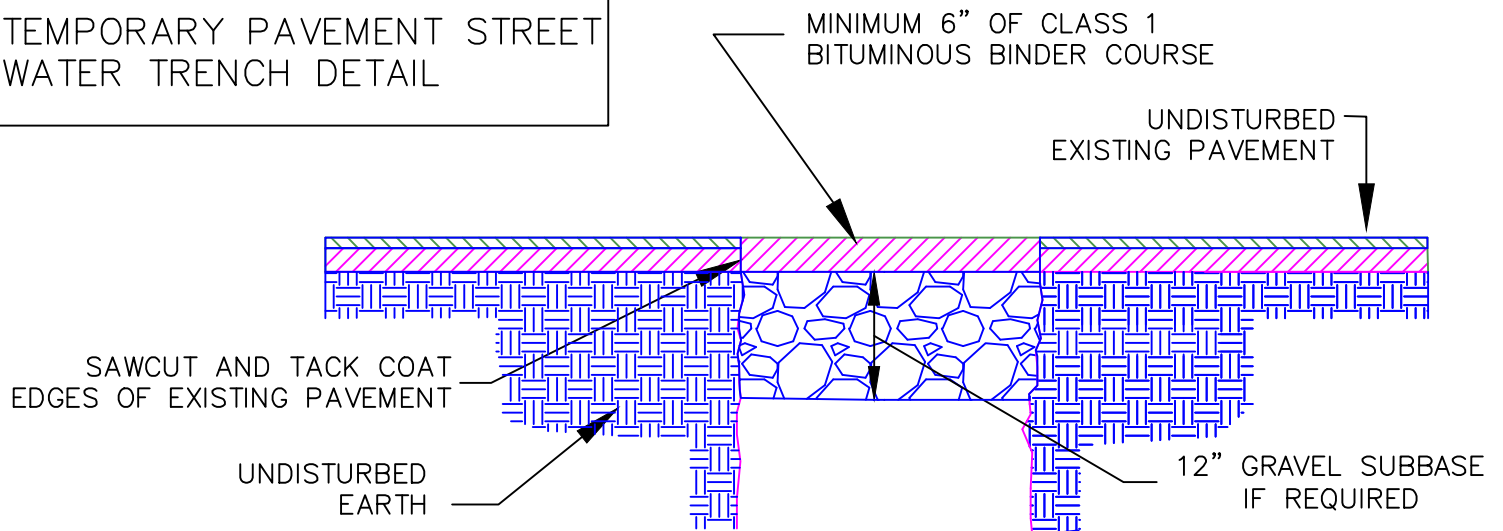
SPEC. SECTION REF#: 02500

**2500.3**

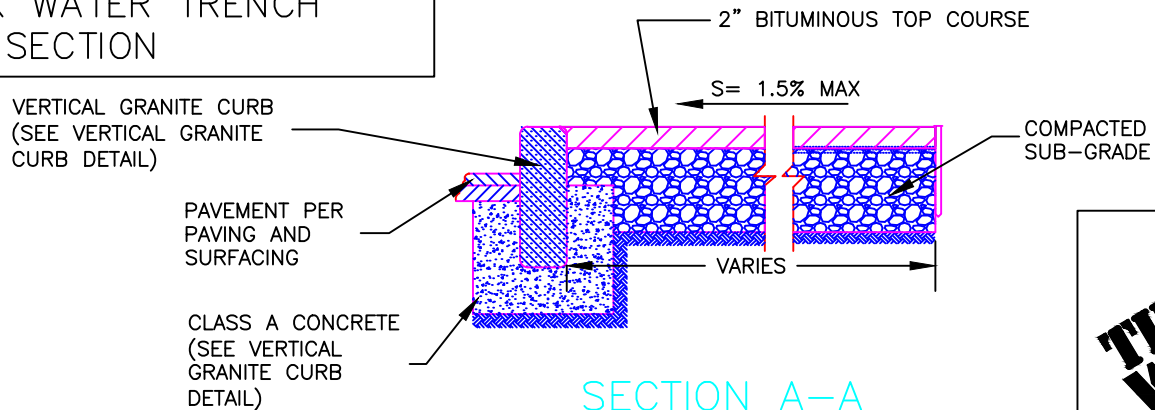
## PERMANENT PAVEMENT WATER PATCH DETAIL



## TEMPORARY PAVEMENT STREET WATER TRENCH DETAIL



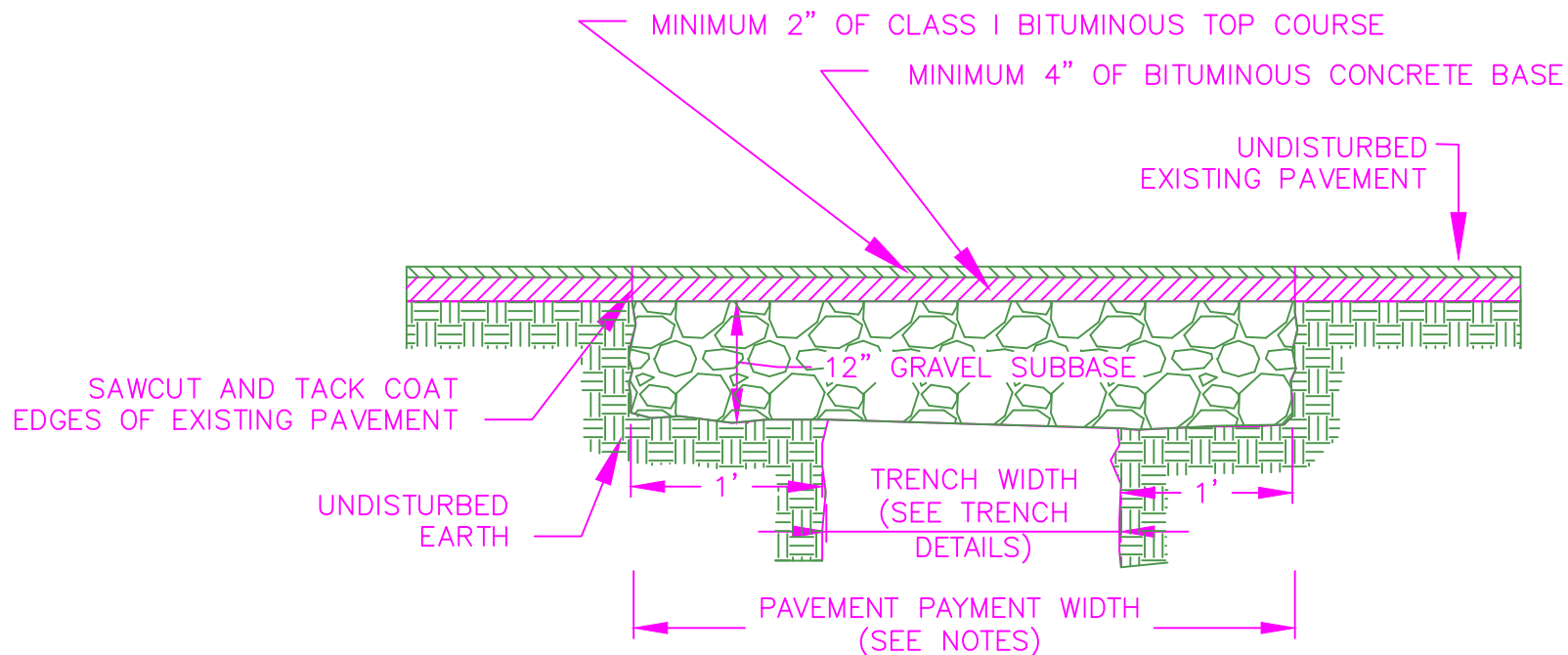
## TEMPORARY PAVEMENT SIDEWALK WATER TRENCH DETAIL – SECTION



CAMBRIDGE  
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OF PUBLIC  
**THE WORKS**

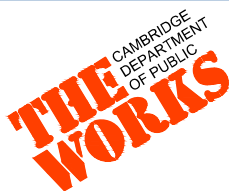
### NOTES:

1. PERMANENT TRENCH PAVEMENT PAYMENT WIDTH SHALL BE THE TRENCH PAY LIMIT PLUS 2 FEET
2. REMOVE AND DISPOSE ALL TEMPORARY PAVEMENT AS REQUIRED. RESTORE AND COMPACT SUBBASE AS REQUIRED PRIOR TO PERMANENT TRENCH PAVEMENT.
3. SIDEWALKS SHALL MATCH WIDTH AND SLOPE OF EXISTING SIDEWALKS UNLESS OTHERWISE NOTED.



NOTES:

1. PERMANENT TRENCH PAVEMENT PAYMENT WIDTH SHALL BE THE TRENCH PAY LIMIT PLUS 2 FEET
2. REMOVE AND DISPOSE ALL TEMPORARY PAVEMENT AS REQUIRED. RESTORE AND COMPACT SUBBASE AS REQUIRED PRIOR TO PERMANENT TRENCH PAVEMENT.



PERMANENT STREET WATER PATCH DETAIL

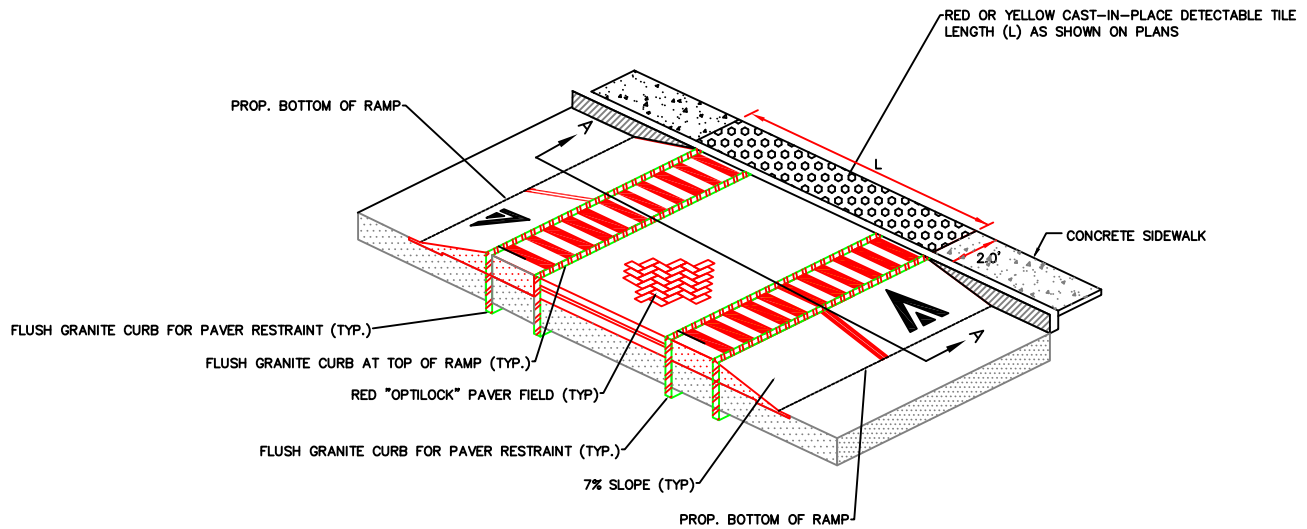
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE OF ISSUE: 02/05

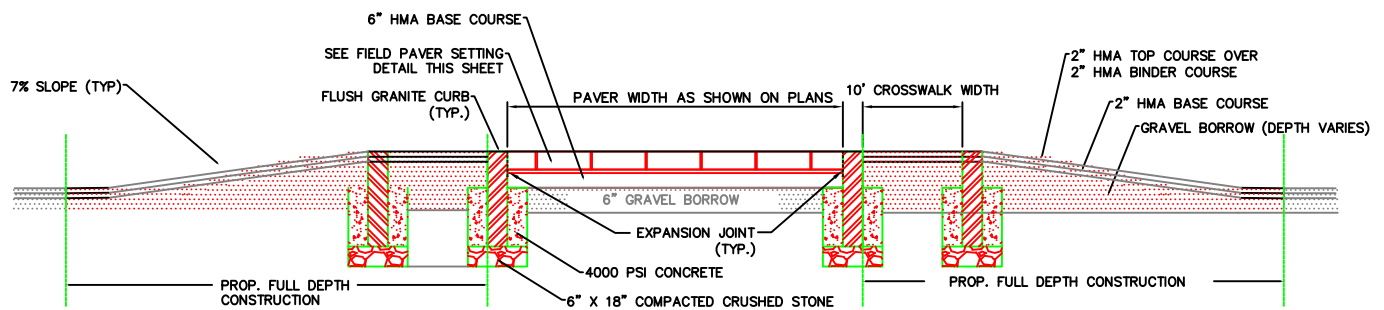
SPEC. SECTION REF#: 02500

200.1

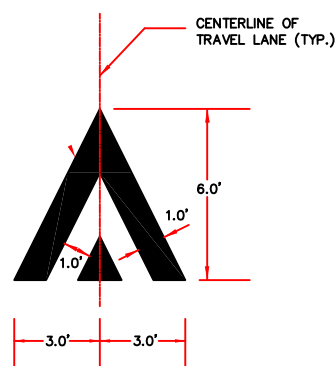


**MID-BLOCK RAISED CROSSWALK ISOMETRIC PLAN**

NTS

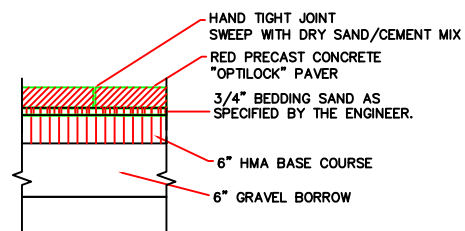


**SECTION A-A**



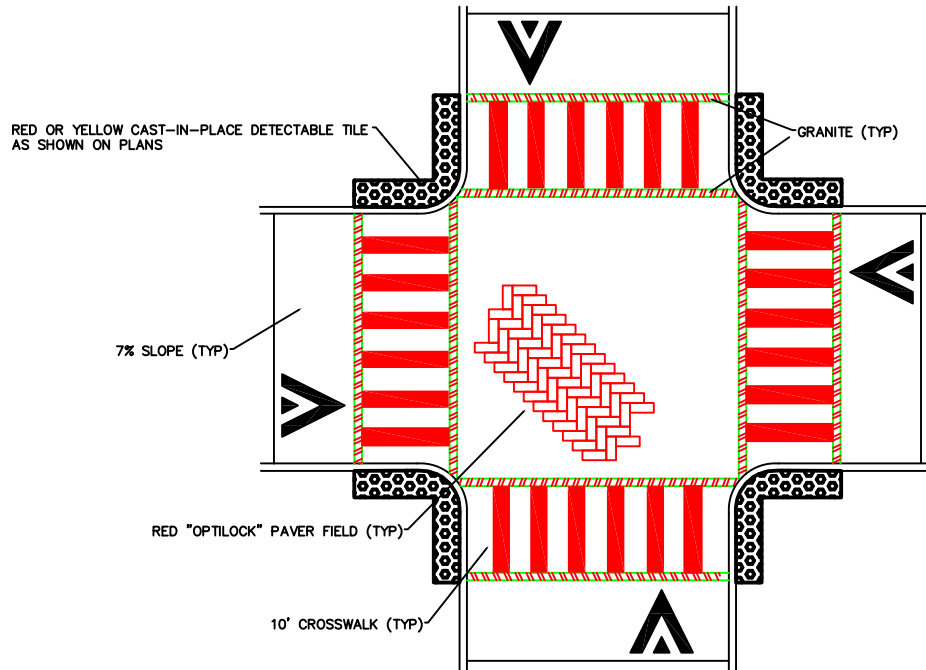
**RAMP MARKING DETAIL**

NTS

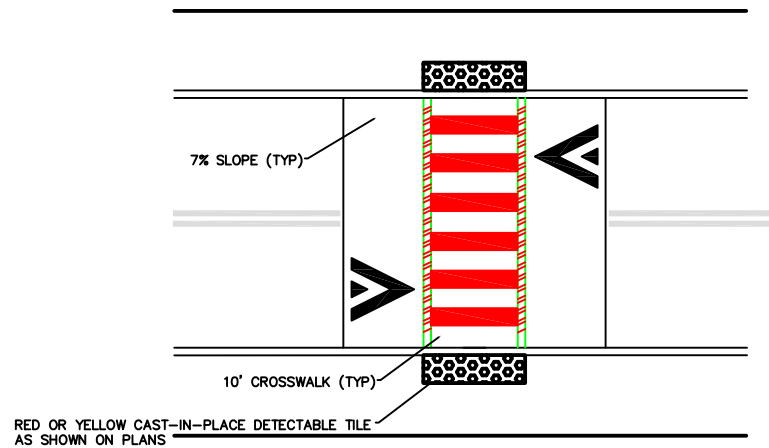


**"FIELD" PAVER SETTING DETAIL**

NTS



**4-WAY RAISED INTERSECTION PLAN**  
NTS



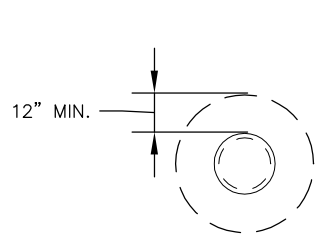
## MID-BLOCK RAISED CROSSWALK DETAIL

### CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

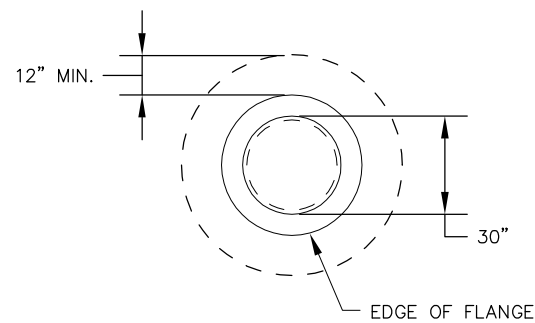
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DATE  
OF ISSUE: 5/2010

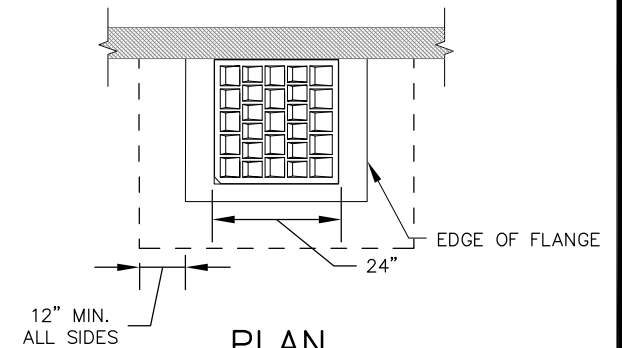
SPEC. SECTION REF#:



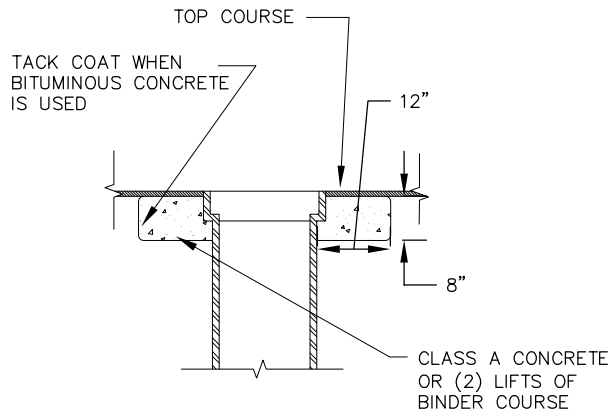
PLAN



PLAN

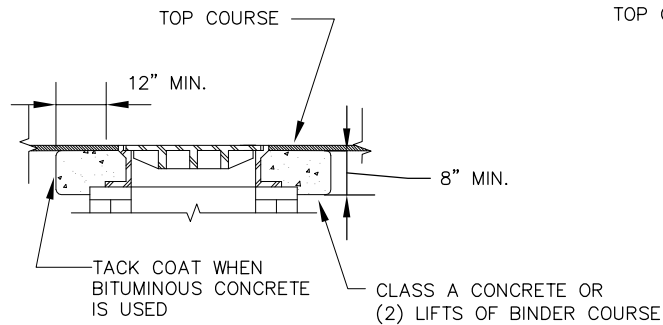


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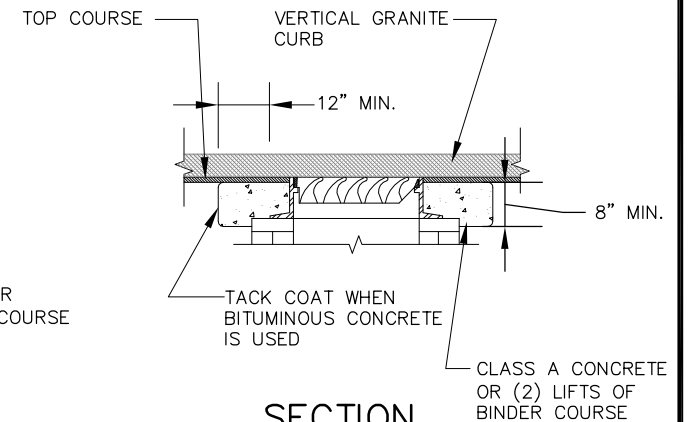
SECTION

GATE BOXES



SECTION

MANHOLES



SECTION

CATCH BASINS

95% DETAILS  
NOT FOR CONSTRUCTION

**THE WORKS**  
CAMBRIDGE  
DEPARTMENT  
OF PUBLIC  
WORKS

## RAISING CASTINGS DETAIL

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 02252

**2252.14**

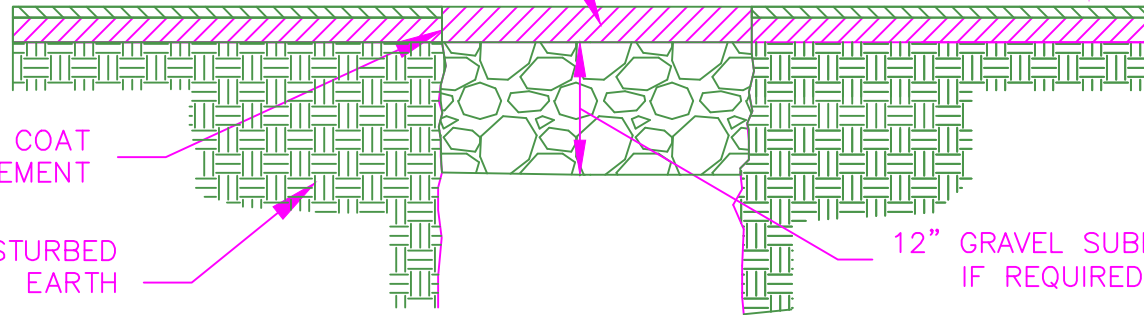
MINIMUM OF CLASS 1 6" BITUMINOUS BINDER COURSE

UNDISTURBED  
EXISTING PAVEMENT

SAWCUT AND TACK COAT  
EDGES OF EXISTING PAVEMENT

UNDISTURBED  
EARTH

12" GRAVEL SUBBASE  
IF REQUIRED



NOTES:

1. TEMPORARY TRENCH PAVEMENT PAYMENT WIDTH SHALL BE EQUAL TO THE TRENCH PAYMENT LIMIT
2. REMOVE AND DISPOSE ALL TEMPORARY PAVEMENT AS REQUIRED. RESTORE AND COMPACT SUBBASE AS REQUIRED PRIOR TO PERMANENT TRENCH PAVEMENT.



TEMPORARY STREET WATER TRENCH PATCH  
DETAIL

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

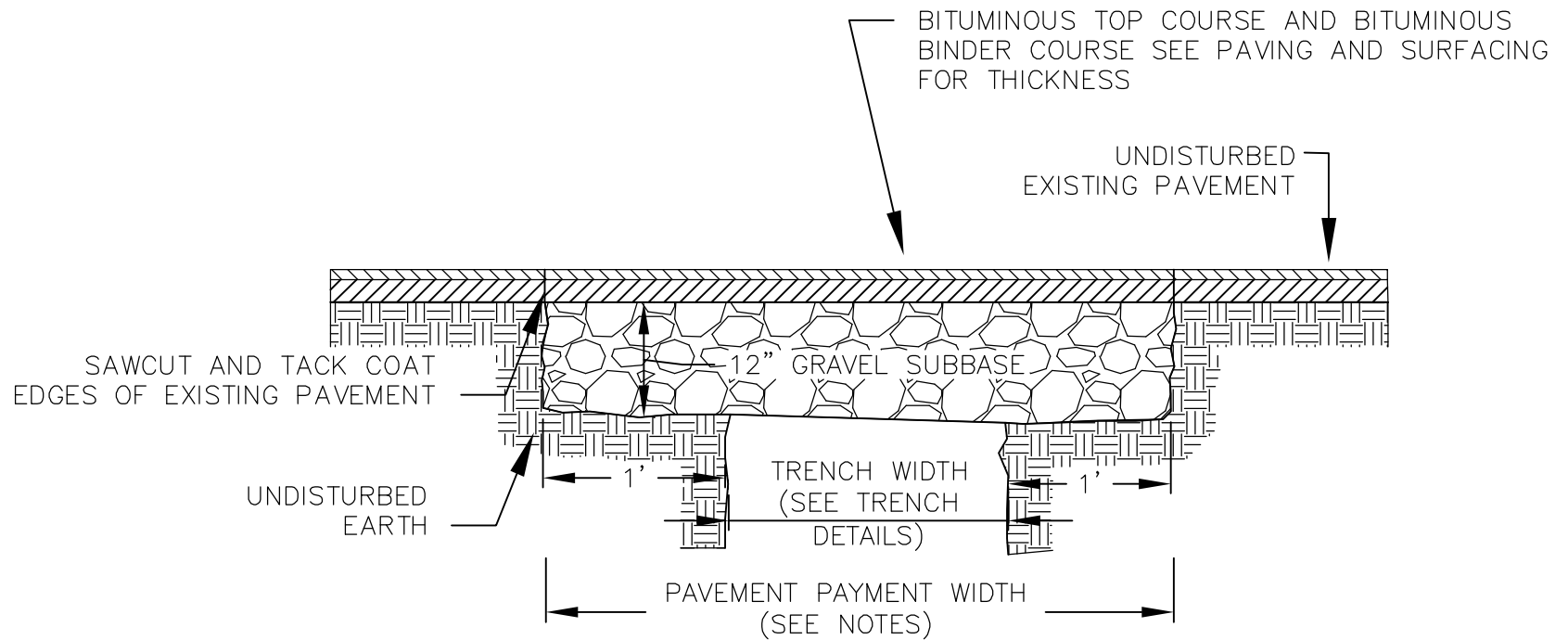
SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 02500

200.1





NOTES:

1. PERMANENT TRENCH PAVEMENT PAYMENT WIDTH SHALL BE THE TRENCH PAY LIMIT PLUS 2 FEET
2. TEMPORARY TRENCH PAVEMENT PAYMENT WIDTH SHALL BE EQUAL TO THE TRENCH PAYMENT LIMIT
3. REMOVE AND DISPOSE ALL TEMPORARY PAVEMENT AS REQUIRED. RESTORE AND COMPACT SUBBASE AS REQUIRED PRIOR TO PERMANENT TRENCH PAVEMENT.



TRENCH PAVEMENT DETAIL

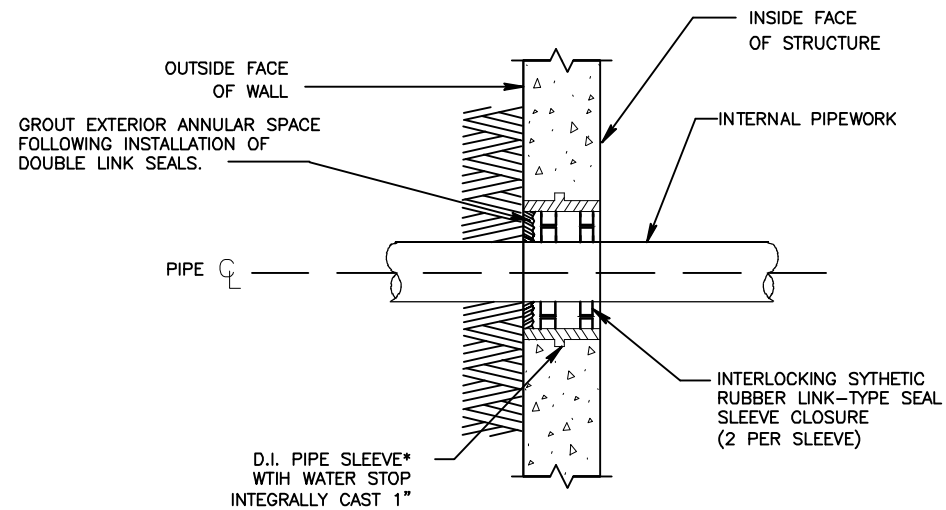
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE OF ISSUE: 02/05

SPEC. SECTION REF#: 02500

2500.1



\*SIZE OF SLEEVE TO SUIT PIPE SIZE AND SEAL.



## BURIED WALL PIPE SLEEVE CLOSURE

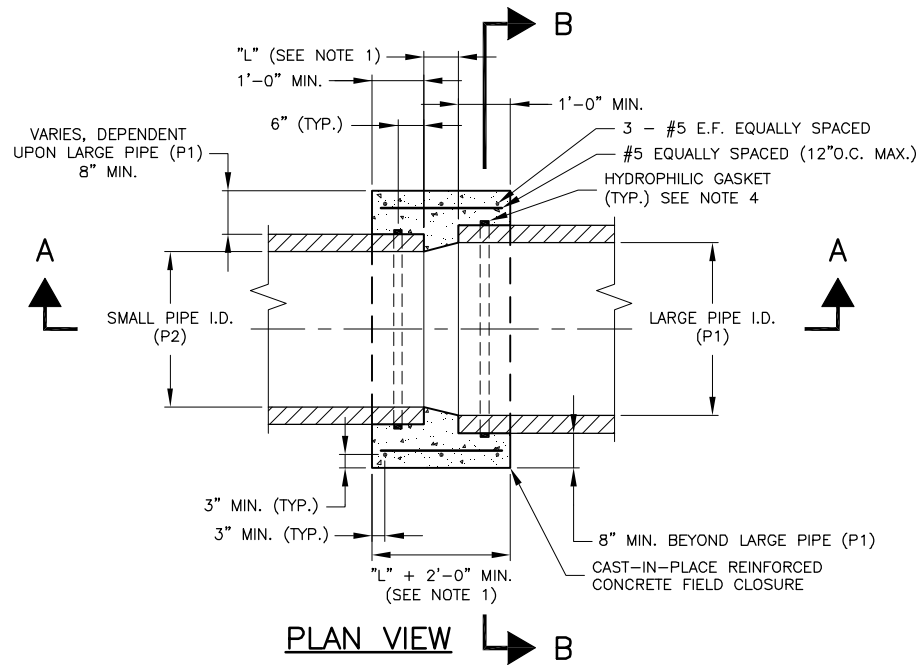
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

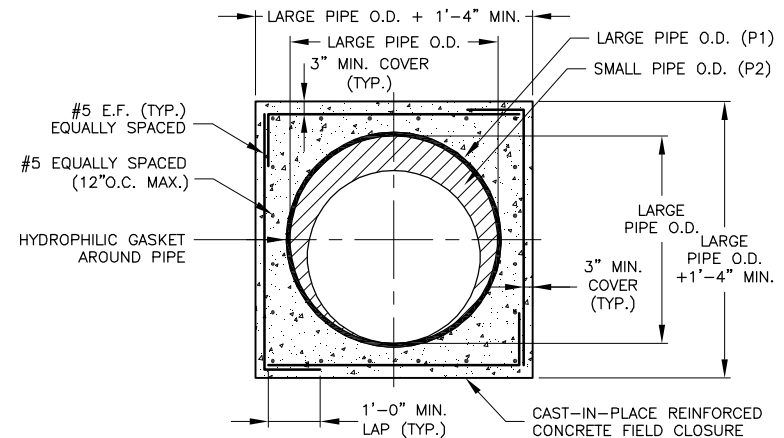
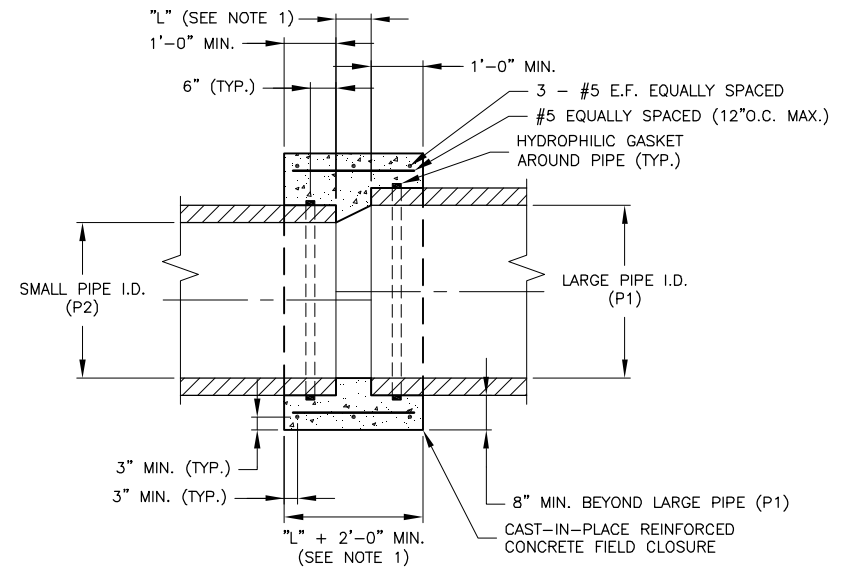
SPEC. SECTION REF#: 03300

**3300.4**



NOTES:

1. SPACING BETWEEN PIPES (L) DEPENDS ON PIPE SIZES, FOR PIPES OF THE SAME SIZE USE 4". THE DISTANCE "L" EQUALS THE LARGE PIPE I.D. MINUS THE SMALL PIPE I.D. TIMES TWO [ $L = (P1 - P2) \times 2$ ] BUT NO LESS THAN 4".
2. PROPOSED PIPE INVERT SHALL MATCH EXISTING PIPE INVERT UNLESS OTHERWISE NOTED.
3. SAND BLAST EXISTING PIPE PERIMETER AND APPLY BONDING AGENT PRIOR TO CONCRETE ENCASEMENT.
4. CONCRETE AND REBAR REQUIREMENTS SHALL CONFORM TO CAST-IN-PLACE CONCRETE.
5. LOCATION OF FIELD CLOSURE SHALL BE SUBJECT TO THE ENGINEER'S APPROVAL.
6. FOR NON-PRESSURE PIPES OF DIFFERENT MATERIALS OR SIZES.



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## CAST IN PLACE FIELD CLOSURE

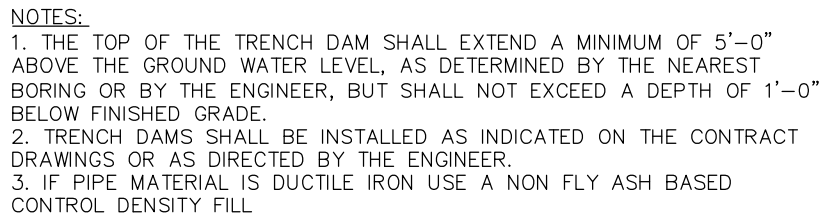
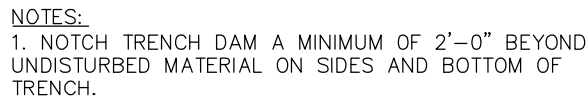
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

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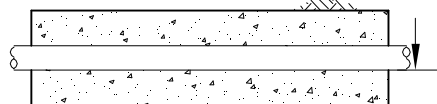
DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 03300

3300.1



SANITARY SEWER  
OR STORM DRAIN

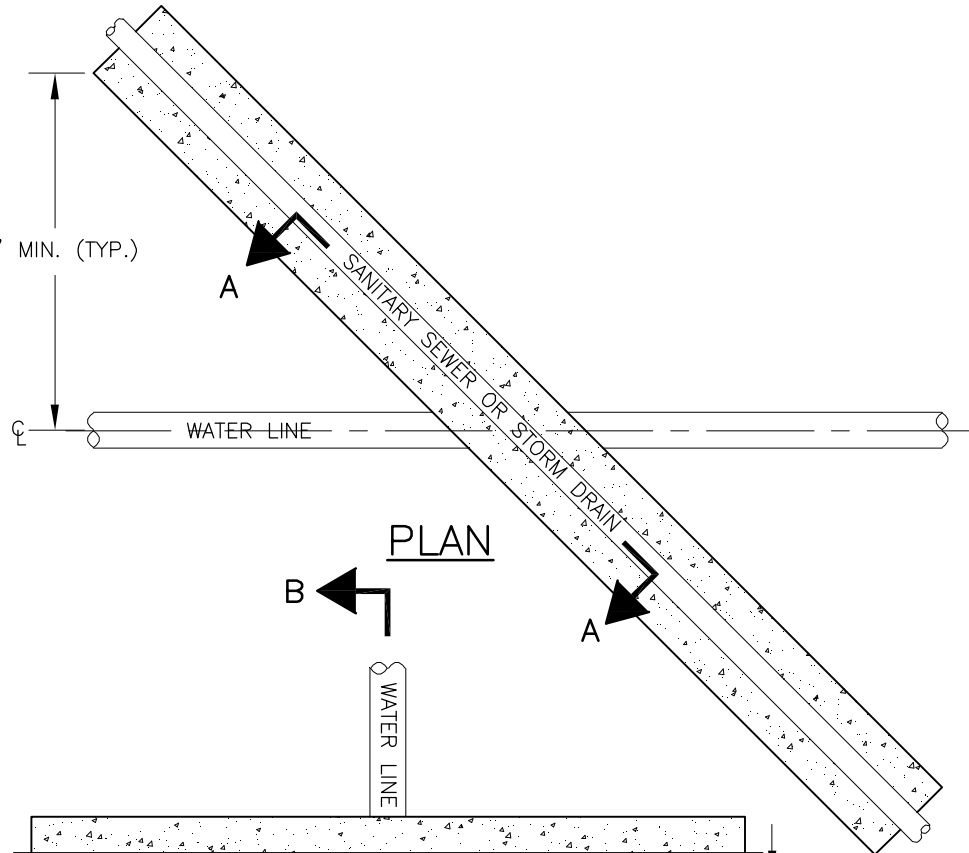


WATER LINE

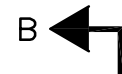
12" (MIN)  
CONCRETE  
ENCASEMENT  
TYP. ALL  
AROUND

SECTION A-A

10' MIN. (TYP.)



PLAN

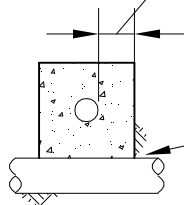


WATER LINE



PLAN

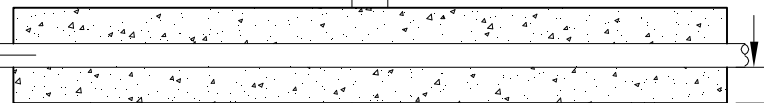
12" (MIN.)  
CONCRETE ENCASEMENT  
TYP. ALL AROUND



WATER LINE

PROTECT WATER MAIN WITH  
30lb FELT ROOFING PAPER  
PRIOR TO PLACING  
CONCRETE

SANITARY SEWER  
OR STORM DRAIN



10' MIN.  
TYP.

12" (MIN) CONCRETE  
ENCASEMENT TYP.  
ALL AROUND

SECTION B-B

NOTE:

1. CONCRETE SHALL HAVE A MINIMUM 3,000 PSI STRENGTH

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OF PUBLIC  
WORKS

## STORM DRAIN AND SANITARY SEWER CROSSING ABOVE WATER MAIN

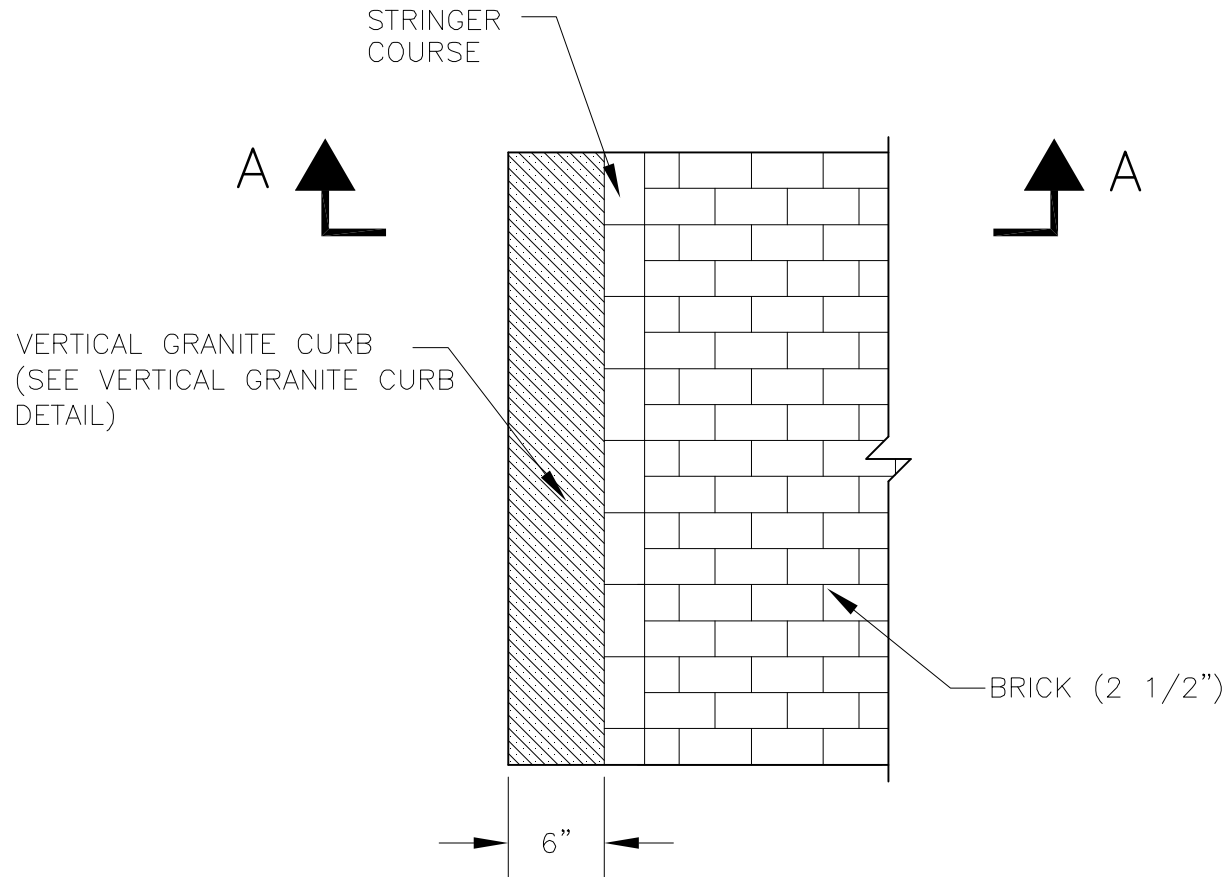
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 02630

2630.1



NOTE:  
AROUND HYDRANTS, UTILITY POLES SIGN POSTS ETC., SEE  
EXPANSION JOINT DETAIL

## PLAN



### BRICK SIDEWALK DETAIL - PLAN

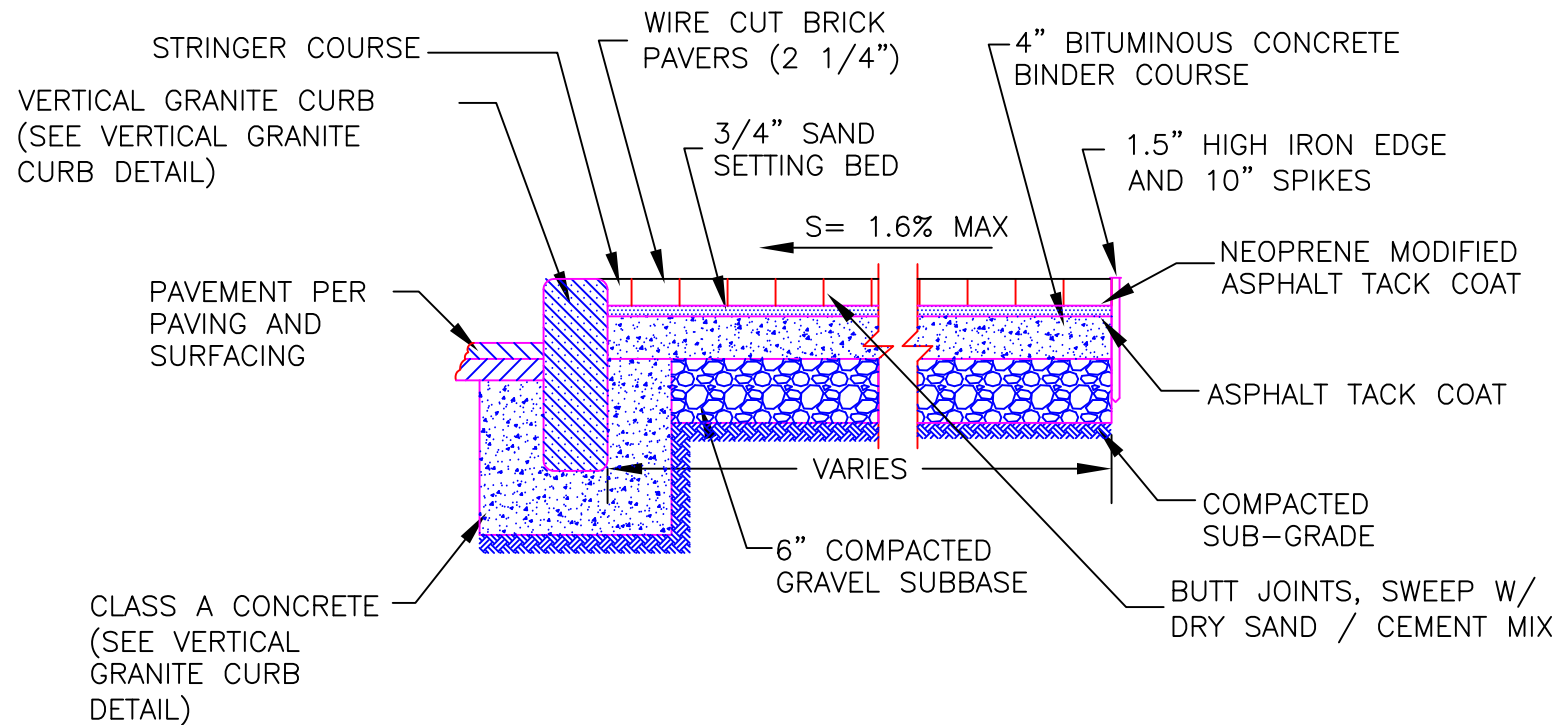
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 02524

2524.8



## SECTION A-A

### NOTES:

1. SIDEWALKS SHALL MATCH WIDTH AND SLOPE OF EXISTING SIDEWALKS UNLESS OTHERWISE NOTED.
2. BITUMINOUS CONCRETE BINDER COURSE SHALL BE 6" DEPTH (IN TWO 3" COURSES) AT DRIVEWAYS. REFER TO PROJECT DRAWINGS OR ENGINEER'S INSTRUCTIONS FOR LOCATIONS
3. FOR BRICK LAYOUT PATTERN SEE PLAN VIEW DETAIL 2524.8



## ASPHALT BASE BRICK SIDEWALK DETAIL - SECTION

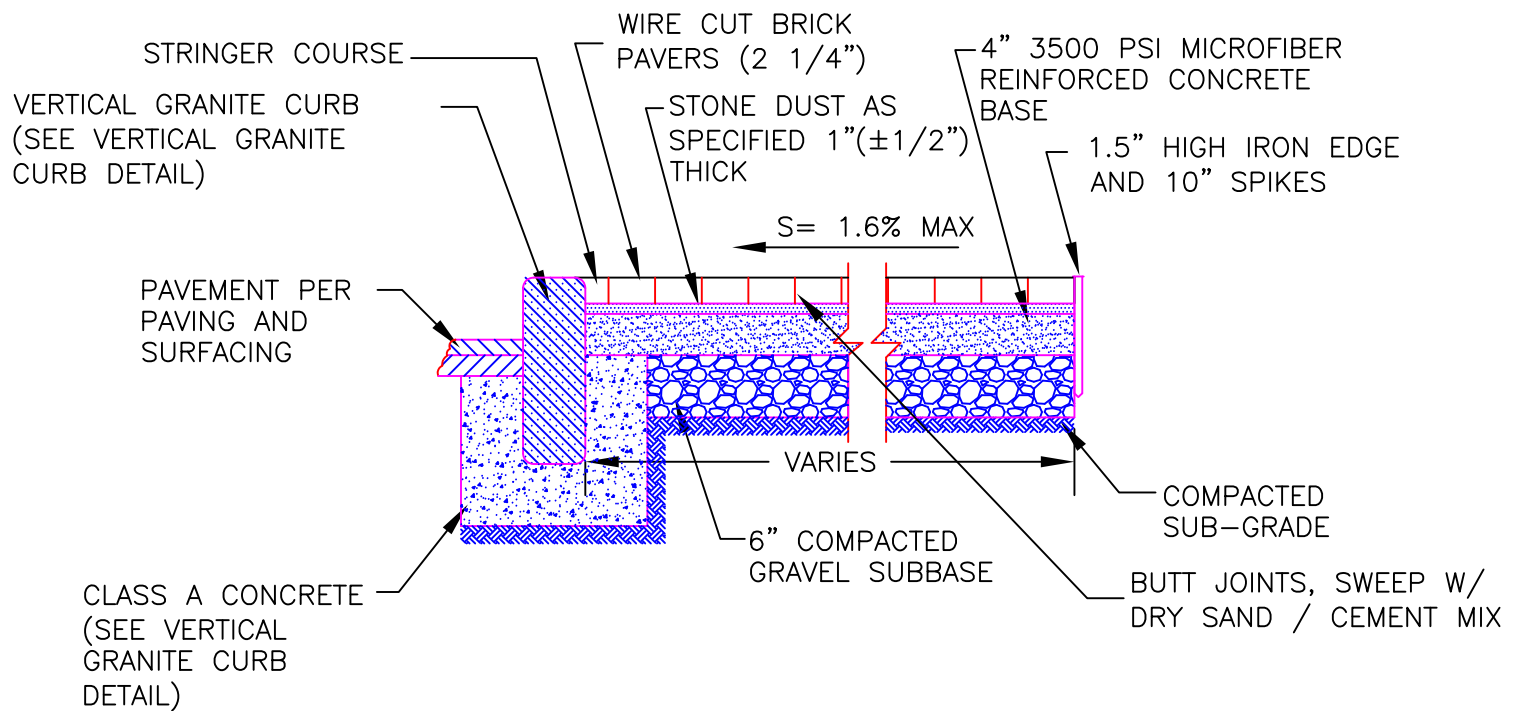
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE OF ISSUE: 02/05

SPEC. SECTION REF#: 02524

2524.9



## SECTION A-A

### NOTES:

1. SIDEWALKS SHALL MATCH WIDTH AND SLOPE OF EXISTING SIDEWALKS UNLESS OTHERWISE NOTED.
2. FOR BRICK LAYOUT PATTERN SEE PLAN VIEW DETAIL 2524.8



### CONCRETE BASE BRICK SIDEWALK DETAIL - SECTION

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

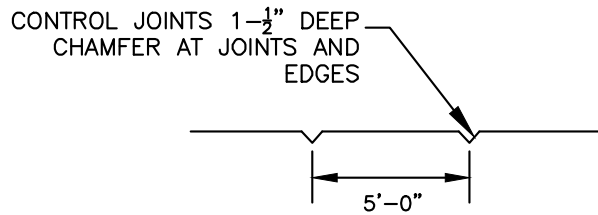
SCALE: N.T.S.

DATE OF ISSUE: 02/05

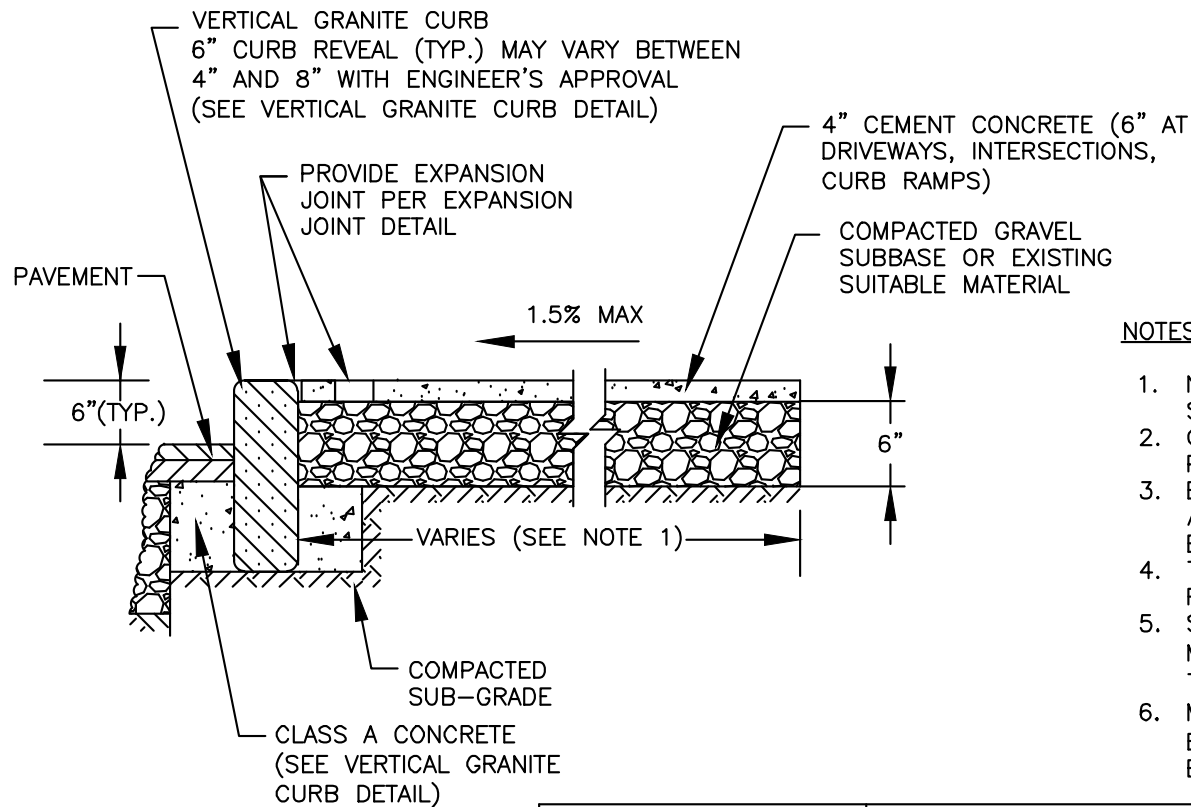
SPEC. SECTION REF#: 02524

2524.10

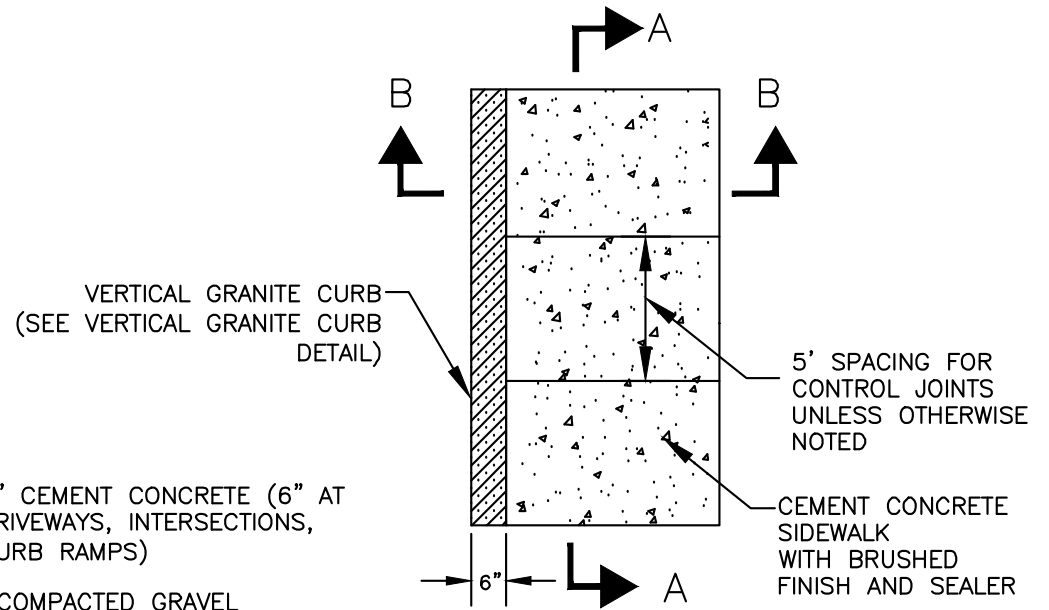




SECTION A-A



SECTION B-B



PLAN

NOTES:

1. NEW SIDEWALK SHALL MATCH WIDTH OF EXISTING SIDEWALK UNLESS OTHERWISE NOTED.
2. CEMENT CONCRETE SHALL BE 4,000 PSI TYPE II POLYPROPYLENE MICROFIBER REINFORCED.
3. EXPANSION JOINTS SHALL BE PLACED EVERY 30 FEET, AND AROUND HYDRANTS, UTILITY POLES, SIGN POSTS ETC., SEE EXPANSION JOINT DETAIL 2524.4.
4. TOOLED CONTROL JOINTS SHALL BE PLACED EVERY 5 FEET, SEE SECTION A-A.
5. SIDEWALKS SHALL BE BUILT ACCORDING TO ADA AND MA AAB REGULATIONS. 1.5% MAX (0.5% CONSTRUCTION TOLERANCE) CROSS SLOPE.
6. MINIMUM CLEARANCE OF 3' SHALL BE PROVIDED AT EXISTING TREE PITS. MINIMUM CLEARANCE OF 4' SHALL BE PROVIDED AT ALL OTHER LOCATIONS.

**THE WORKS**  
CAMBRIDGE  
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**CEMENT CONCRETE SIDEWALK DETAIL**

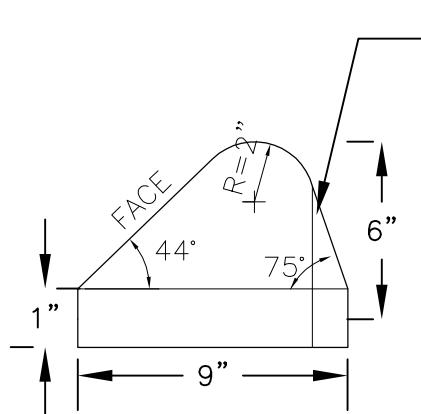
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 10/21

SPEC. SECTION REF#: 02524

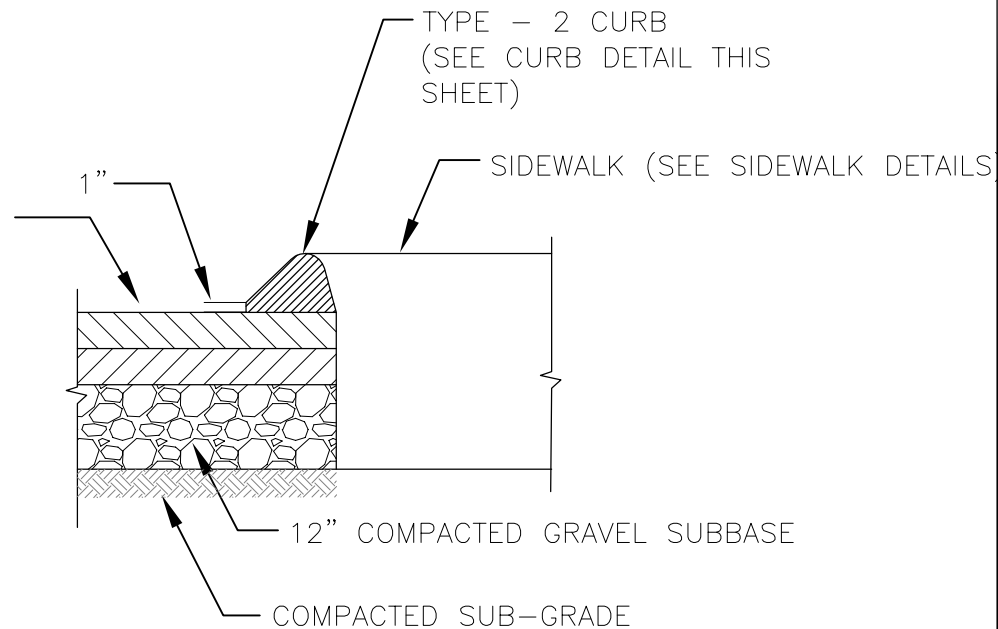
**2524.3**



### CURB DETAIL

CURB IS TYPE-2 PER MHD CONSTRUCTION STANDARDS

PAVEMENT PER  
PAVING AND  
SURFACING



95% DETAILS  
NOT FOR CONSTRUCTION

**THE WORKS**  
CAMBRIDGE  
DEPARTMENT  
OF PUBLIC

### BITUMINOUS CONCRETE CURB DETAIL

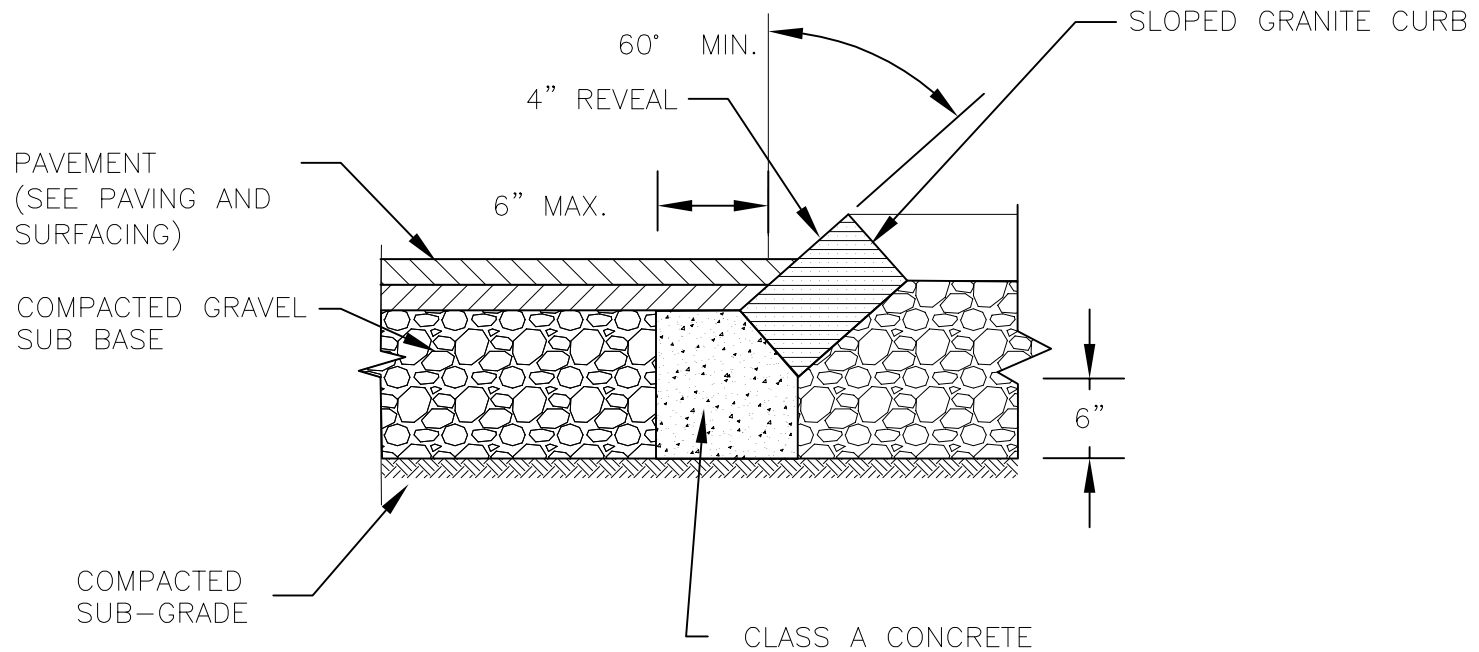
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 02524

**2524.9**



NOTES:

1. PLACE AND COMPACT GRAVEL PRIOR TO SETTING SLOPED GRANITE CURB

95% DETAILS  
NOT FOR CONSTRUCTION

CAMBRIDGE  
DEPARTMENT  
OF PUBLIC  
**THE WORKS**

## SLOPED GRANITE CURB DETAIL

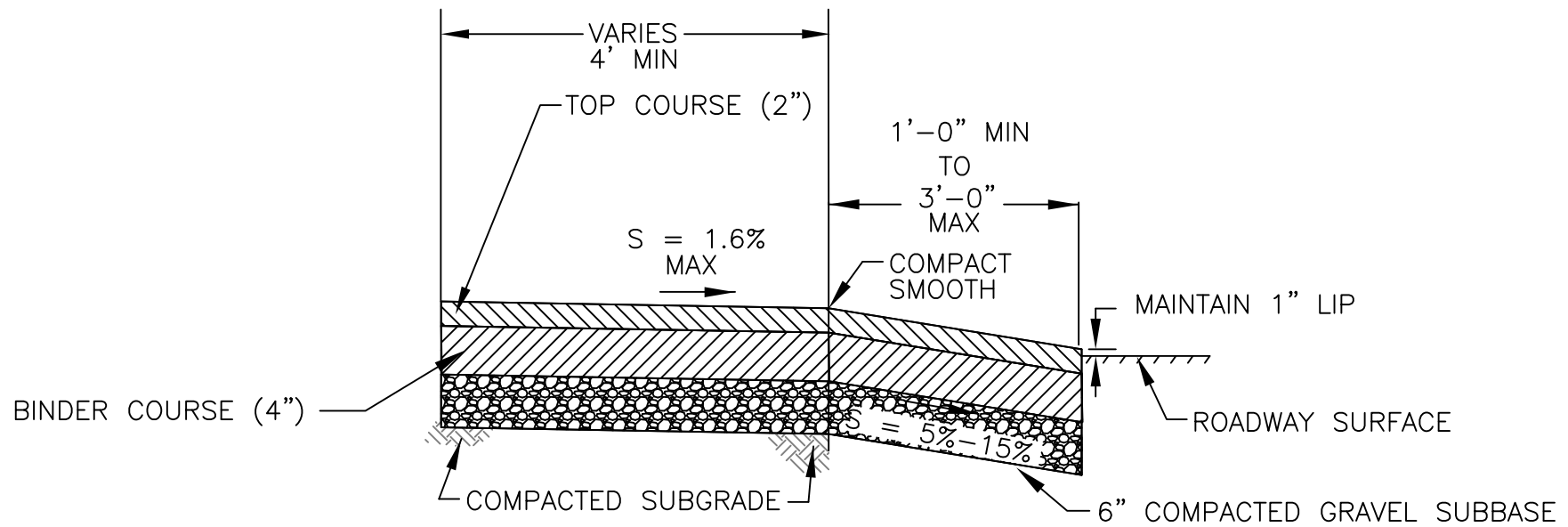
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

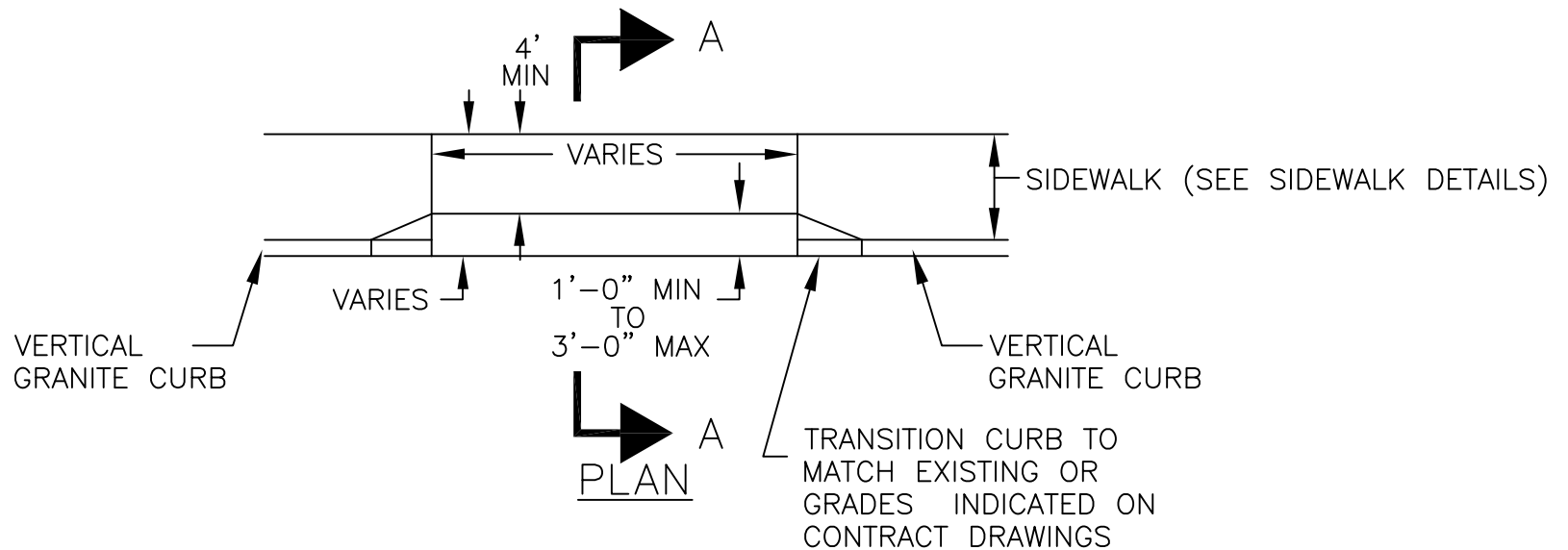
DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 02524

**2524.2**



SECTION A-A



**THE WORKS**  
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DEPARTMENT  
OF PUBLIC

## BITUMINOUS CONCRETE DRIVEWAY APRON DETAIL

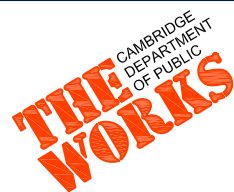
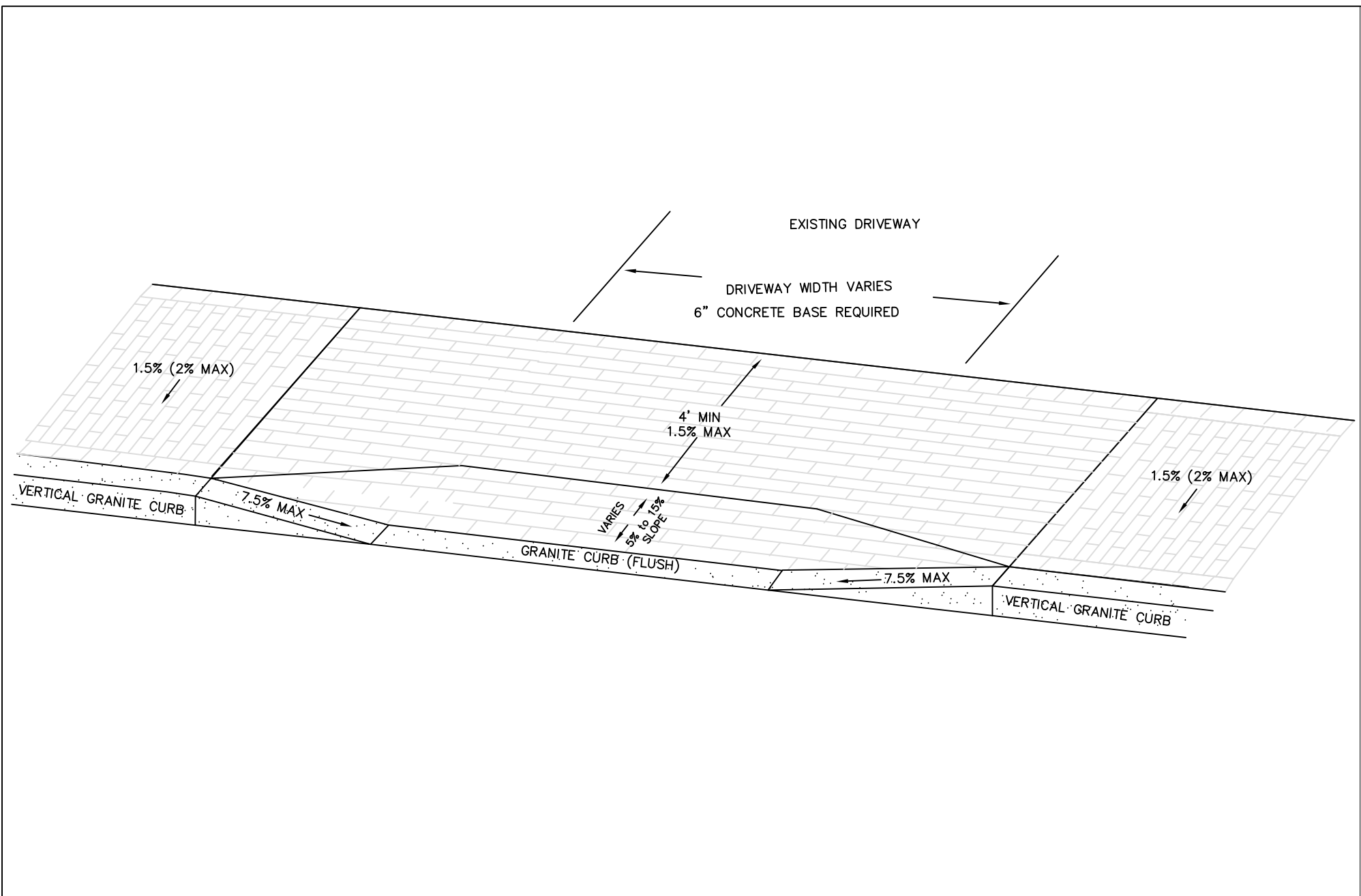
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 01 / 19

SPEC. SECTION REF#: 02524

2524.6



## BRICK DRIVEWAY APRON DETAIL

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

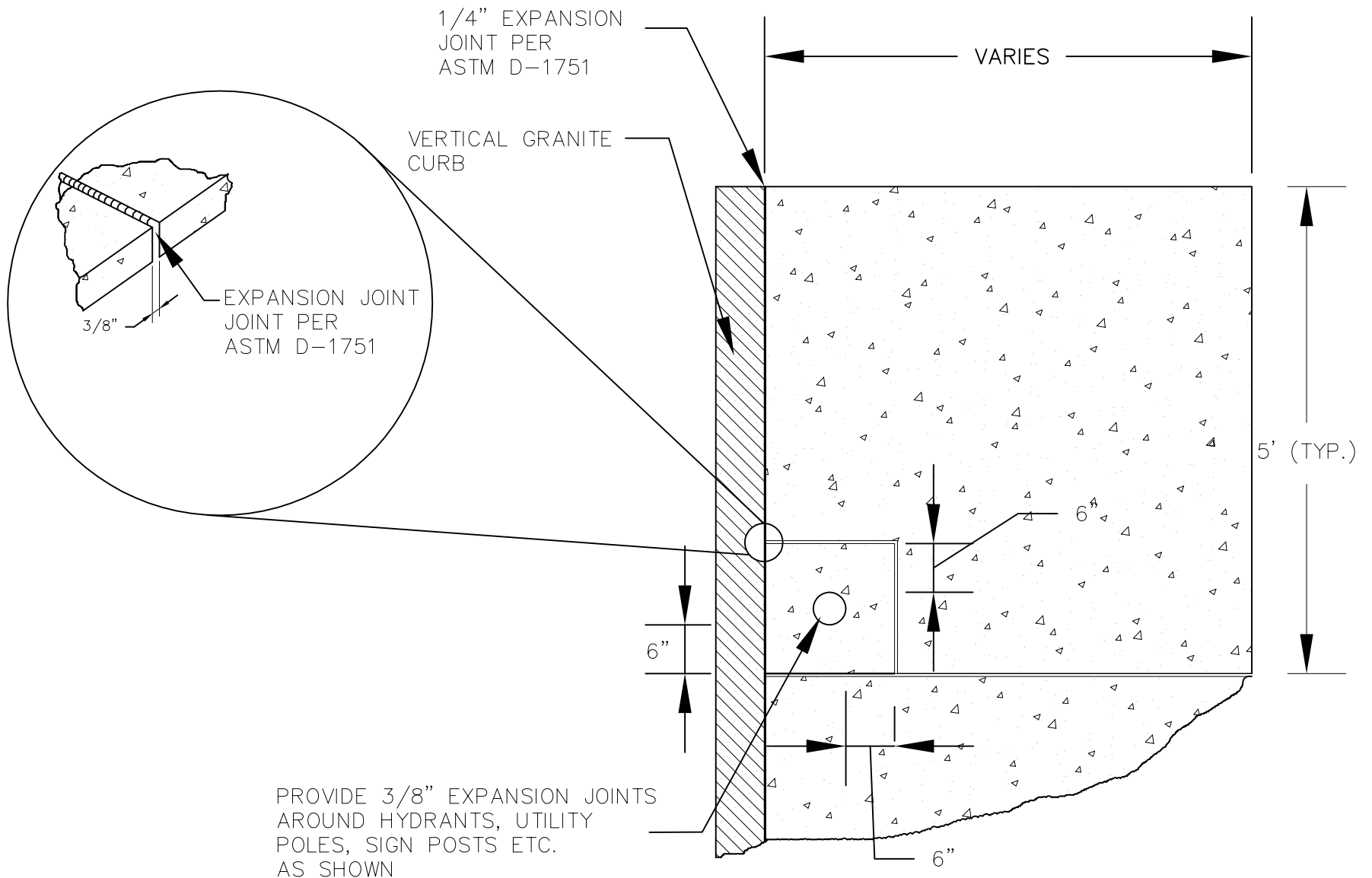
SCALE: N.T.S.

DATE OF ISSUE: 01 / 19

SPEC. SECTION REF#: 02524

2524.10





95% DETAILS  
NOT FOR CONSTRUCTION

**THE WORKS**  
CAMBRIDGE  
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OF PUBLIC

## SIDEWALK EXPANSION JOINT DETAIL

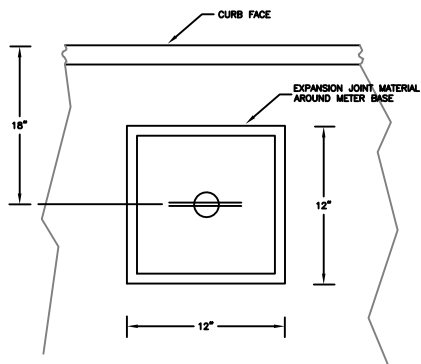
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

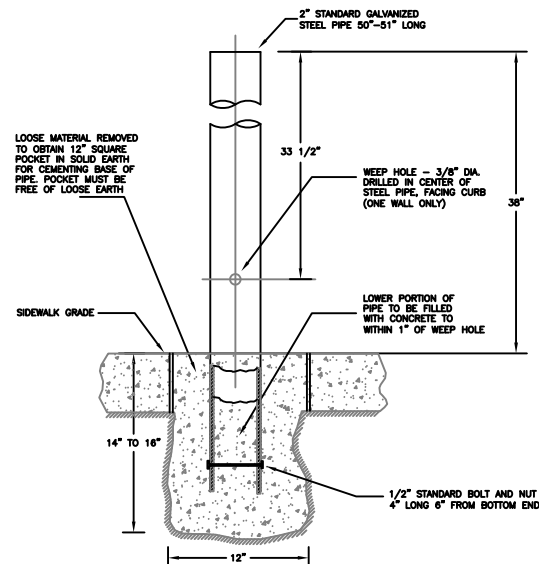
DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 02524

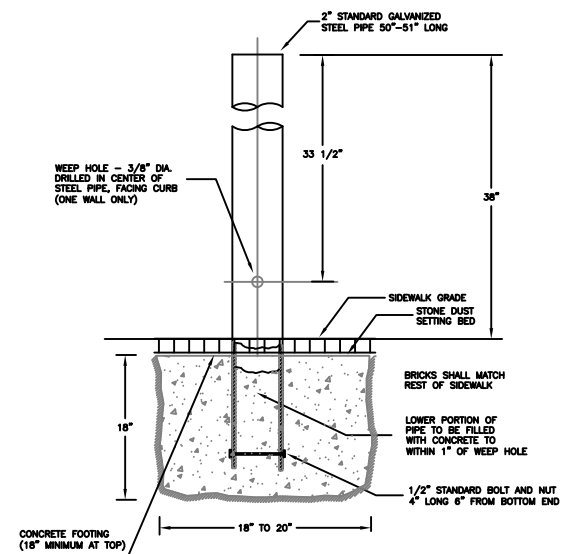
**2524.4**



PLAN — PARKING METER POST



SECTION — PARKING METER POST, CONCRETE SIDEWALK



SECTION — PARKING METER POST, BRICK SIDEWALK

**THE WORKS**  
CAMBRIDGE  
DEPARTMENT  
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## PARKING METER POST

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: NTS

DATE  
OF ISSUE:

SPEC. SECTION REF#:





Stantec Consulting Services Inc  
5 Burlington Woods Drive, Suite 300  
Burlington MA 01803 U.S.A.  
Tel. 781.221.1000  
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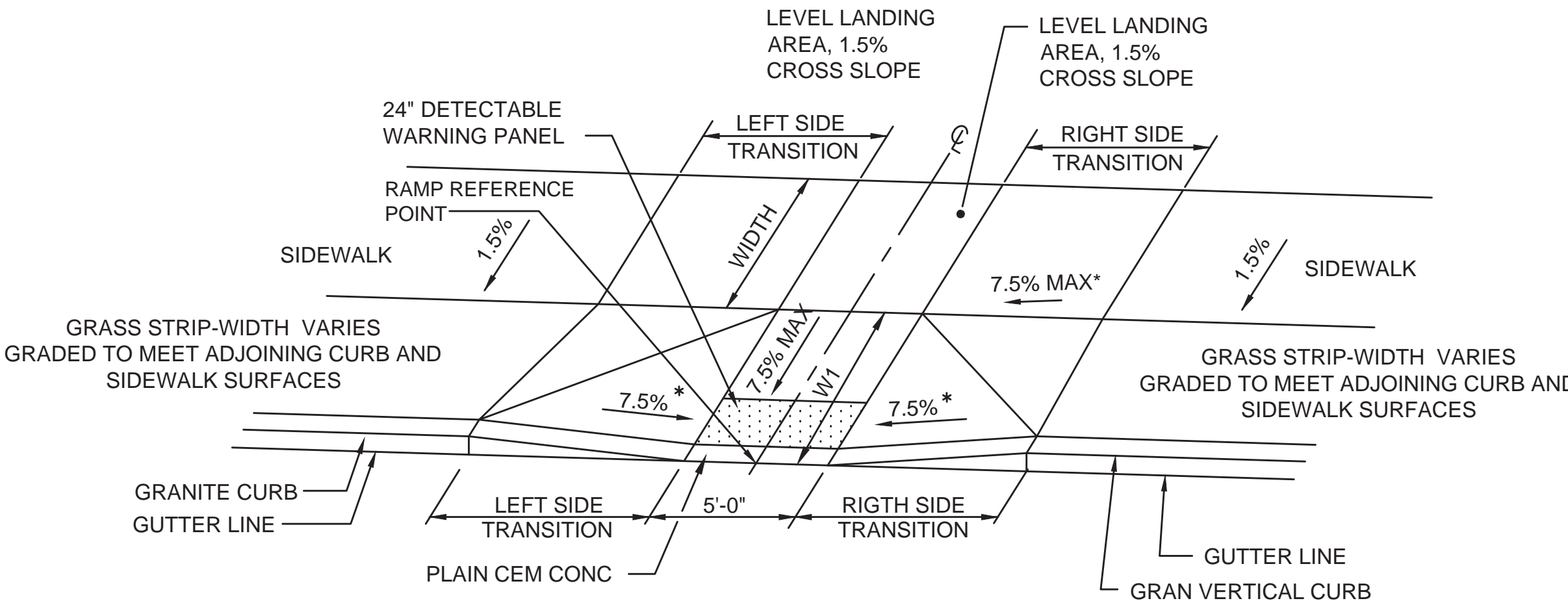
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### Consultants:

### Legenc

## Notes



WHEELCHAIR RAMP DETAIL - TYPE A

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NOT TO SCALE

WHEELCHAIR RAMPS											
WCR #	TYPE	RAMP REFERENCE POINT			WIDTH OF SIDEWALK (W)	WIDTH OF RAMP OPENING	DEPTH OF LEVEL LANDING	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		REMARKS
		BASELINE	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	
H1	-	HEALEY	20+22.64	13.50 LT	SEE RAISED CROSSWALK DETAIL ON SHEET 55						
H2	-	HEALEY	20+22.64	13.50 RT							
P1	-	PARKER	30+23.74	13.00 LT	SEE RAISED INTERSECTION DETAIL ON SHEET 55						
P2	-	PARKER	30+23.74	13.00 RT							
P3	-	PARKER	34+33.07	14.81 LT							
P4	-	PARKER	34+65.53	14.17 LT							
P5	-	PARKER	34+29.26	7.00 RT							
P5A	-	PARKER	34+67.03	7.00 RT							
P6	-	PARKER	37+44.30	13.00 RT	SEE RAISED CROSSWALK DETAIL ON SHEET 55						
P7	-	PARKER	37+36.65	13.00 LT							
P8	A	CONCORD	41+01.68	16.79 RT	8.50'	5.00'	4.00'	2.80%	6'-6"	11'-0"	
P9	A	CONCORD	41+01.68	16.68 LT	6.25'	5.00'	3.88'	-3.60%	6'-0"	6'-6"	
P10	-	BOND	50+27.21	17.06 RT	SEE RAISED INTERSECTION DETAIL ON SHEET 55						
P11	-	BOND	50+27.14	16.15 LT							
D1	-	CLIFTON	1+44.71	13.33 RT							
D2	-	DUDLEY	20+19.10	13.27 LT							
D3	-	DUDLEY	20+19.10	13.25 RT							
D4	-	JACKSON	0+76.26	13.18 RT							
D5	-	JACKSON	0+76.24	13.20 LT	SEE RAISED CROSSWALK DETAIL ON SHEET 55						
D6	A	DUDLEY	22+57.90	13.25 LT							
D7	A	DUDLEY	23+01.45	7.25 LT							
D8	A	DUDLEY	22+57.90	13.25 RT							
D9	-	JACKSON	1+23.76	13.33 RT							
D10	-	JACKSON	1+23.74	13.31 LT							
D11	A	DUDLEY	23+01.45	13.25 RT	7.00'	5.00'	4.00'	-0.75%	7'-8"	4'-8"	
D12	A	DUDLEY	25+38.13	7.25 LT	13.00'	5.00'	7.00'	0.70%	6'-6"	7'-8"	
D13	-	CLAY	0+76.24	13.20 RT	SEE RAISED CROSSWALK DETAIL ON SHEET 55						
D14	-	CLAY	0+76.24	13.18 LT							
D15	A	DUDLEY	25+81.56	13.25 LT	7.19'	5.00'	3.19'	0.50%	6'-6"	7'-8"	
D16	A	DUDLEY	25+38.13	7.25 RT	12.63'	5.00'	6.63'	-0.70%	7'-8"	6'-6"	
D17	-	CLAY	1+23.74	13.19 RT	SEE RAISED CROSSWALK DETAIL ON SHEET 55						
D18	-	CLAY	1+23.76	13.21 LT							
D19	A	DUDLEY	25+81.56	13.25 RT	6.50'	5.00'	3.00'	-0.50%	7'-8"	6'-6"	
D20	A	DUDLEY	28+17.95	7.25 LT	13.00'	5.00'	7.00'	0.40%	6'-6"	7'-8"	
D21	-	MONTGOMERY	0+81.27	13.08 RT	SEE RAISED CROSSWALK DETAIL ON SHEET 55						
D22	-	MONTGOMERY	0+81.27	13.08 LT							
D23	A	DUDLEY	28+61.42	7.25 LT	12.50'	5.00'	6.50'	1.20%	6'-6"	9'-0"	
D24	A	DUDLEY	28+17.95	7.25 RT	12.00'	5.00'	6.00'	-0.50%	7'-8"	6'-6"	
D25	-	MONTGOMERY	1+23.77	13.24 RT	SEE RAISED CROSSWALK DETAIL ON SHEET 55						
D26	-	MONTGOMERY	1+23.77	13.07 LT							
D27	A	DUDLEY	28+61.42	13.25 RT	6.50'	5.00'	4.00'	-1.20%	6'-6"	6'-6"	
D28	A	DUDLEY	30+98.11	7.25 LT	12.50'	5.00'	6.50'	1.30%	6'-6"	9'-0"	
D29	-	REED	0+76.25	13.31 RT	SEE RAISED CROSSWALK DETAIL ON SHEET 55						
D30	-	REED	0+76.25	13.31 LT							
D31	A	DUDLEY	31+41.82	13.25 LT	6.67'	5.00'	4.17'	1.30%	6'-6"	9'-0"	
D32	A	DUDLEY	30+98.11	7.25 RT	12.65'	5.00'	6.65'	-1.30%	9'-0"	6'-6"	
D33	-	REED	1+18.75	13.35 RT	SEE RAISED CROSSWALK DETAIL ON SHEET 55						
D34	-	REED	1+18.75	13.35 LT							
D35	A	DUDLEY	31+41.82	7.25 RT	12.50'	5.00'	6.50'	-1.30%	9'-0"	6'-6"	
D36	-	DUDLEY	34+54.72	15.32 RT	SEE RAISED INTERSECTION DETAIL ON SHEET 55						
D37	-	DUDLEY	34+55.33	14.99 LT							
D38	-	DUDLEY	34+87.10	18.27 LT							
D39	-	DUDLEY	34+85.18	24.14 RT							
D40	-	DUDLEY	39+34.68	7.25 LT							
D41	-	DUDLEY	39+34.68	13.25 RT							
D42	A	MASS AVE	0+69.22	32.78 RT	17.00'	5.00'	12.00'	-1.70%	9'-0"	6'-6"	
D43	A	MASS AVE	0+76.32	32.81 LT	15.00'	5.00'	8.50'	1.70%	-	9'-0"	TREE PIT ON RIGHT

Revision	By	Appd.	YY.MM.DD
Issued	By	Appd.	YY.MM.DD

File Name:	wcr del contract 22.dwg	DWN	CHKD	DSGN	DATE
		Dwn.	Chkd.	Dsgn.	YY.MM.DD

Permit-Sec



Client/Projec

Cambridge Department of Public Works

Chapter 90 Contract 22  
Healey St., Parker St. & Dudley St.  
Cambridge, MA

Title

## WHEELCHAIR RAMP DETAILS

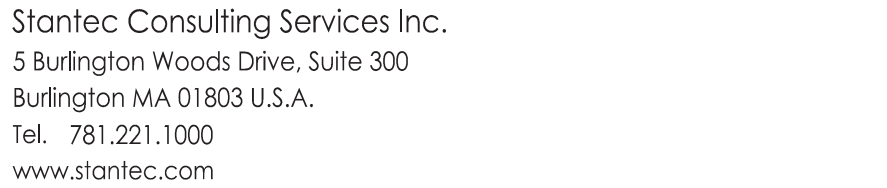
Project No. 179410352	Scale NOT TO SCALE	
Drawing No.	Sheet	Revision



- NOTES:
1. FOR RAISED CROSSWALK/INTERSECTION APPROACH RAMPS WITH A STOP CONTROL THE SLOPE OF THE RAMP SHALL BE A 3% CHANGE FROM THE APPROACHING ROADWAY PROFILE.
  2. FOR RAISED CROSSWALK/INTERSECTION APPROACH RAMPS WITHOUT A STOP CONTROL THE SLOPE OF THE RAMP SHALL BE A 5% CHANGE FROM THE APPROACHING ROADWAY PROFILE.







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### Legend

## Notes



NOT TO SCALE



1. REFER TO TECHNICAL SPECIFICATIONS FOR MATERIAL REQUIREMENTS.
2. THE CONTRACTOR SHALL RESTRAIN ALL EXISTING PIPE AND FITTINGS WITH CLAMPS, HARNESSSES AND/OR ANY OTHER MEANS ACCEPTED BY THE ENGINEER PRIOR TO REMOVING ANY OF THE EXISTING HYDRANT COMPONENTS.
3. FOR HYDRANTS RELOCATED TO NEW MAIN CONNECTION LOCATIONS, THE EXISTING TEE WILL BE REMOVED AND REPLACED WITH A MECHANICAL DRESSER COUPLING AND SUITABLE SIZED SECTION OF PIPE.
4. ALL HYDRANTS SHALL BE CONSISTENT WITH CITY OF MELROSE WATER DEPARTMENT STANDARDS.
5. IF CONCRETE THRUST BLOCK IS USED, DO NOT BLOCK DRAIN.

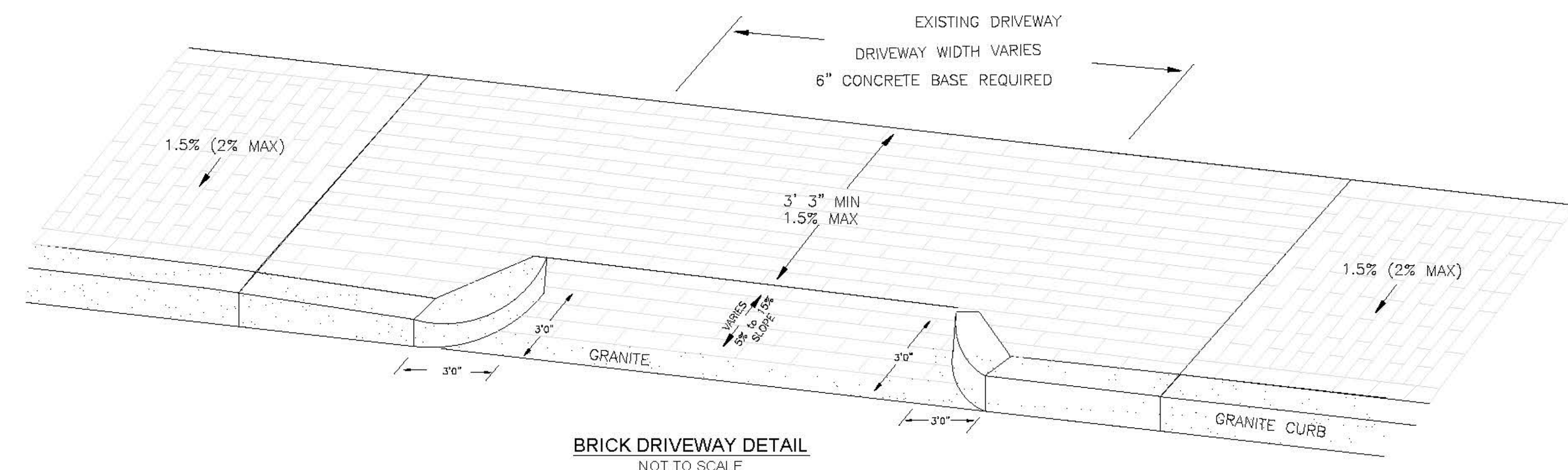
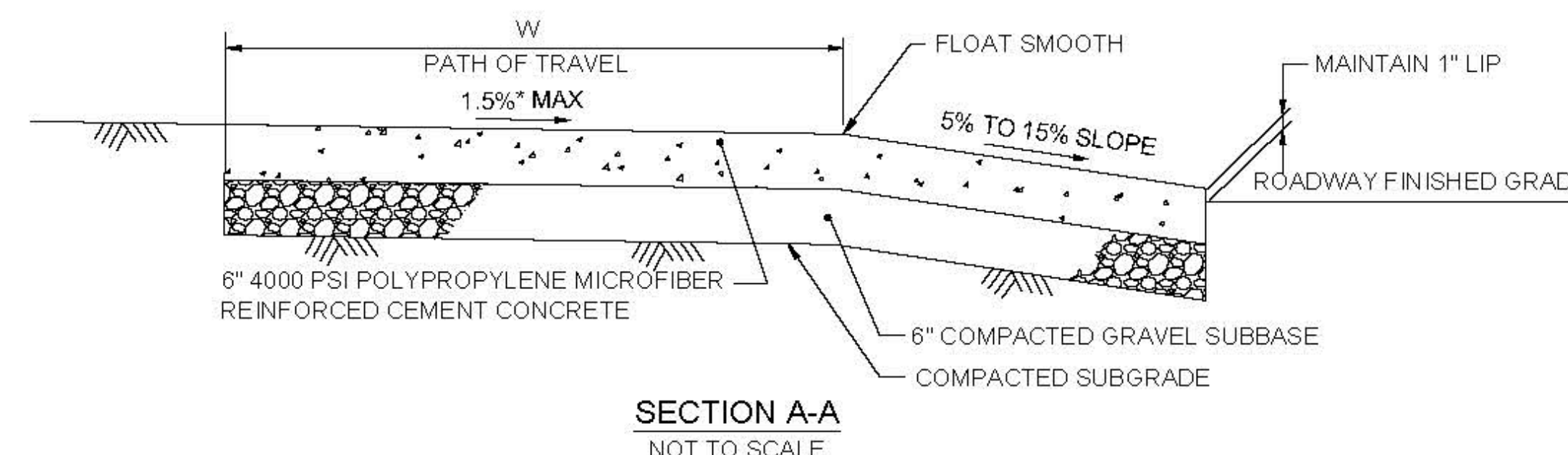
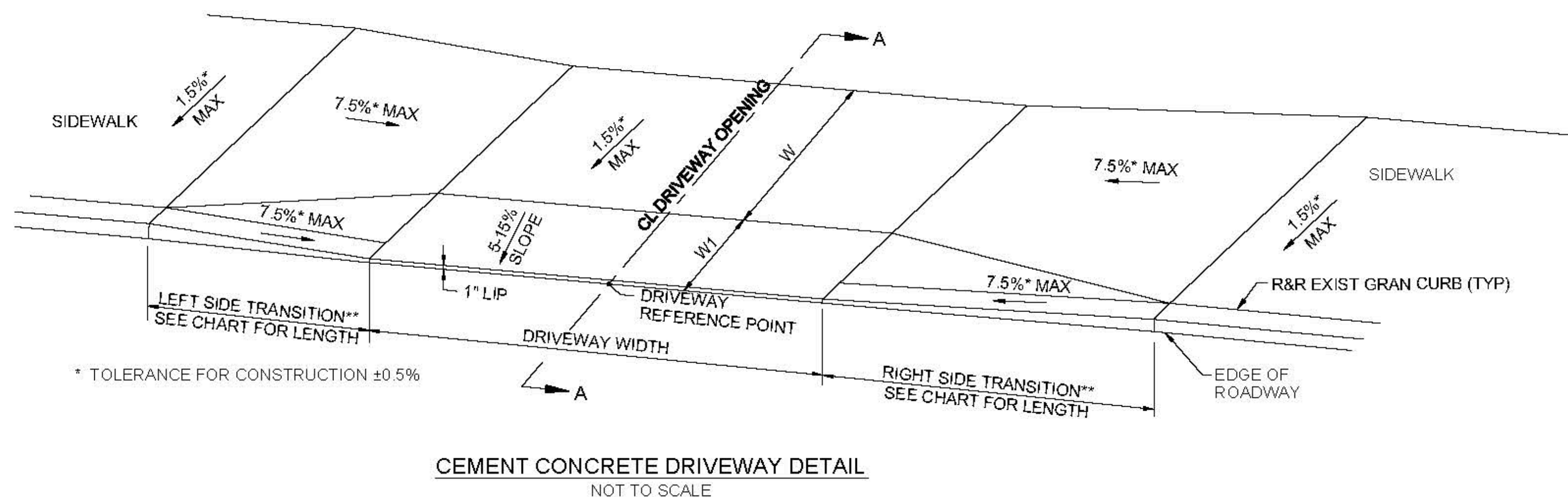


NOTES:

1. REFER TO TECHNICAL SPECIFICATIONS FOR MATERIAL REQUIREMENTS.
2. SUBJECT TO FIELD MODIFICATION BY ENGINEER.



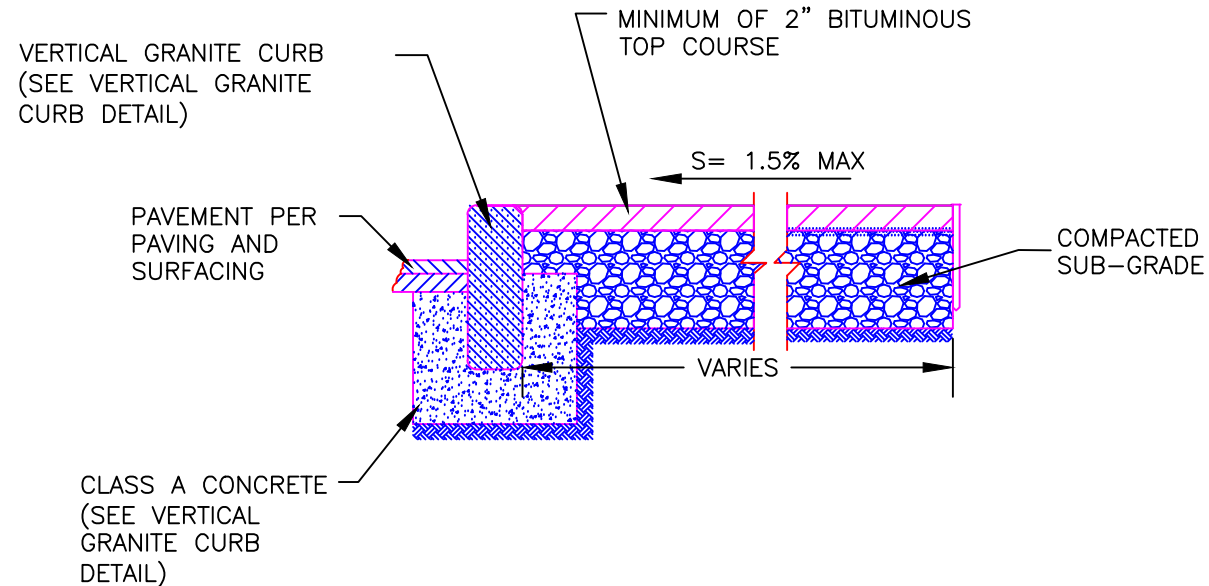




DRIVEWAYS										
DW #	RAMP REFERENCE POINT			WIDTH OF RAMP (W1)	WIDTH OF SIDEWALK (W)	WIDTH OF DRIVEWAY AT GUTTER	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		REMARKS
	BASELINE	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	
H1	HEALEY	20+78.12	13.50 RT	1.50'	3.32'	13.00'	9.70%	2'-0"	15'-0"	3 INCH REVEAL LT SIDE
H2	HEALEY	20+93.62	13.50 RT	1.50'	3.06'	10.00'	9.00%	6'-6"	2'-0"	3 INCH REVEAL RT SIDE
H3	HEALEY	21+07.35	13.50 LT	2.50'	3.00'	12.00'	-9.50%	15'-0"	3'-3"	3 INCH REVEAL RT SIDE
H4	HEALEY	21+26.32	13.50 RT	2.00'	3.00'	10.00'	6.00%	6'-6"	15'-0"	
H5	HEALEY	21+29.72	13.50 LT	2.00'	3.00'	12.00'	-4.20%	7'-2"	6'-6"	3 INCH REVEAL LT SIDE
H6	HEALEY	21+33.46	13.50 RT	2.00'	3.00'	10.00'	3.00%	6'-6"	14'-0"	
H7	HEALEY	22+15.07	13.50 LT	2.50'	3.00'	12.00'	1.70%	6'-6"	9'-0"	
H8	HEALEY	22+73.30	13.50 RT	2.00'	3.15'	14.00'	-0.50%	7'-8"	6'-6"	
H9	HEALEY	22+79.26	13.50 LT	2.00'	3.5'	20.00'	1.00%	6'-6"	9'-0"	
H10	HEALEY	23+60.86	13.50 LT	2.00'	4.00'	12.00'	0.50%	6'-6"	2'-0"	HIGH POINT RT SIDE
H11	HEALEY	23+75.76	13.50 LT	2.00'	4.00'	10.00'	-0.60%	2'-0"	6'-6"	HIGH POINT LT SIDE
P1	PARKER	30+85.47	13.00 LT	3.00'	4.16'	18.00'	-2.60%	14'-0"	6'-6"	
P2	PARKER	31+73.56	13.00 LT	3.00'	4.00'	13.00'	0.00%	6'-6"	6'-6"	AT HIGH POINT
P3	PARKER	32+79.50	13.00 RT	2.50'	4.50'	20.00'	-0.40%	7'-8"	6'-6"	
P4	PARKER	32+81.83	13.00 LT	2.50'	4.00'	12.00'	0.40%	6'-6"	7'-8"	
P5	PARKER	33+26.01	13.00 LT	3.00'	4.00'	12.00'	0.20%	7'-8"	6'-6"	
P6	PARKER	33+65.75	13.00 LT	3.00'	4.00'	11.00'	0.00%	6'-6"	6'-6"	AT HIGH POINT
P7	PARKER	33+74.16	13.00 RT	2.00'	5.00'	13.00'	0.00%	7'-8"	6'-6"	AT HIGH POINT
P8	PARKER	34+94.03	13.00 LT	2.50'	4.00'	10.00'	0.40%	6'-0"	7'-8"	
P9	PARKER	35+02.36	13.00 RT	2.00'	4.00'	16.00'	-0.50%	7'-8"	5'-4"	
P10	PARKER	35+37.05	13.00 LT	2.50'	4.00'	12.00'	1.75%	6'-6"	2'-0"	3 INCH REVEAL RT SIDE
P11	PARKER	35+53.50	13.00 RT	2.50'	4.00'	12.00'	-2.65%	9'-0"	6'-6"	
P12	PARKER	35+69.55	13.00 LT	2.50'	4.50'	45.00'	4.50%	2'-0"	15'-0"	3 INCH REVEAL LT SIDE
P13	PARKER	36+29.25	13.00 RT	2.00'	4.00'	12.00'	-4.20%	15'-0"	6'-6"	
P14	PARKER	36+67.90	13.00 RT	6.00'	6.00'	14.00'	-7.10%	15'-0"	6'-6"	
D1	DUDLEY	21+23.97	13.25 RT	6.50'	6.50'	21.00'	-1.00%	2'-0"	6'-6"	3 INCH REVEAL LT SIDE
D2	DUDLEY	21+54.91	13.25 LT	2.00'	5.00'	54.00'	0.80%	6'-6"	2'-0"	3 INCH REVEAL RT SIDE
D3	DUDLEY	21+45.47	13.25 RT	2.50'	4.00'	12.00'	-1.00%	7'-0"	2'-0"	3 INCH REVEAL RT SIDE
D4	DUDLEY	21+90.91	13.25 LT	2.00'	4.50'	10.00'	0.80%	2'-0"	7'-8"	3 INCH REVEAL LT SIDE

DRIVEWAYS										
DW #	RAMP REFERENCE POINT			WIDTH OF RAMP (W1)	WIDTH OF SIDEWALK (W)	WIDTH OF DRIVEWAY AT GUTTER	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		REMARKS
	BASELINE	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	
D5	DUDLEY	23+45.19	13.25 RT	3.00'	4.00'	12.00'	-0.80%	7'-8"	6'-6"	
D6	DUDLEY	23+85.69	13.25 RT	3.00'	4.00'	12.00'	-1.20%	10'-9"	6'-6"	
D7	DUDLEY	23+85.91	13.25 LT	2.50'	4.00'	12.00'	1.20%	6'-6"	9'-0"	
D8	DUDLEY	24+23.51	13.25 LT	2.50'	4.00'	12.00'	1.20%	6'-6"	9'-0"	
D9	DUDLEY	24+64.84	13.25 LT	2.50'	4.00'	12.00'	1.20%	6'-6"	9'-0"	
D10	DUDLEY	24+64.55	13.25 RT	3.00'	4.00'	12.00'	-0.95%	7'-8"	6'-6"	
D11	DUDLEY	25+04.51	13.25 LT	2.00'	5.00'	12.00'	1.10%	9'-4"	9'-0"	
D12	DUDLEY	26+29.33	13.25 LT	3.00'	3.00'	10.00'	0.80%	6'-6"	7'-8"	
D13	DUDLEY	26+59.54	13.25 RT	2.50'	4.00'	13.00'	-0.50%	7'-8"	6'-6"	
D14	DUDLEY	26+63.26	13.25 LT	3.00'	3.50'	12.00'	0.80%	7'-0"	7'-8"	
D15	DUDLEY	27+10.69	13.25 RT	2.00'	4.50'	10.00'	-0.50%	7'-8"	6'-6"	
D16	DUDLEY	27+33.44	13.25 LT	3.00'	3.50'	12.00'	0.50%	6'-6"	7'-0"	
D17	DUDLEY	27+55.52	13.25 RT	2.00'	4.50'	12.00'	-0.50%	7'-8"	6'-6"	
D18	DUDLEY	29+19.22	13.25 RT	2.00'	5.00'	12.00'	-1.40%	8'-8"	6'-6"	
D19	DUDLEY	29+40.83	13.25 LT	2.00'	4.50'	12.00'	1.40%	4'-8"	9'-0"	
D20	DUDLEY	29+47.36	13.25 RT	2.50'	4.50'	14.00'	-1.40%	9'-0"	6'-6"	
D21	DUDLEY	30+19.55	13.25 LT	6.50'	6.50'	12.00'	1.40%	6'-6"	9'-0"	
D22	DUDLEY	30+24.05	13.25 RT	3.00'	3.70'	12.00'	-1.40%	9'-0"	6'-6"	
D23	DUDLEY	33+12.31	13.25 RT	2.00'	4.50'	18.00'	-1.10%	9'-0"	6'-6"	
D24	DUDLEY	34+13.80	13.25 LT	2.00'	4.50'	18.00'	1.00%	6'-6"	7'-0"	
D25	DUDLEY	35+89.31	13.25 LT	3.00'	4.00'	12.00'	0.50%	6'-6"	7'-8"	
D26	DUDLEY	36+23.63	13.25 LT	3.00'	4.00'	14.00'	0.60%	6'-6"	7'-8"	
D27	DUDLEY	36+70.74	13.25 LT	3.00'	4.00'	12.00'	0.50%	6'-6"	7'-8"	
D28	DUDLEY	36+74.80	13.25 RT	3.00'	4.00'	12.00'	-0.50%	7'-8"	6'-6"	
D29	DUDLEY	37+47.76	13.25 LT	3.00'	4.00'	14.00'	0.50%	6'-6"	7'-8"	
D30	DUDLEY	37+85.38	13.25 LT	3.00'	4.00'	12.00'	-0.10%	7'-8"	6'-6"	
D31	DUDLEY	38+34.51	13.25 LT	3.00'	4.00'	12.00'	-0.60%	7'-8"	6'-6"	
D32	DUDLEY	38+20.87	13.25 RT	3.00'	4.00'	26.00'	0.50%	9'-8"	4'-10"	





## SECTION A-A

### NOTES:

1. SIDEWALKS SHALL MATCH WIDTH AND SLOPE OF EXISTING SIDEWALKS UNLESS OTHERWISE NOTED.



TEMPORARY SIDEWALK WATER TRENCH PATCH DETAIL – SECTION

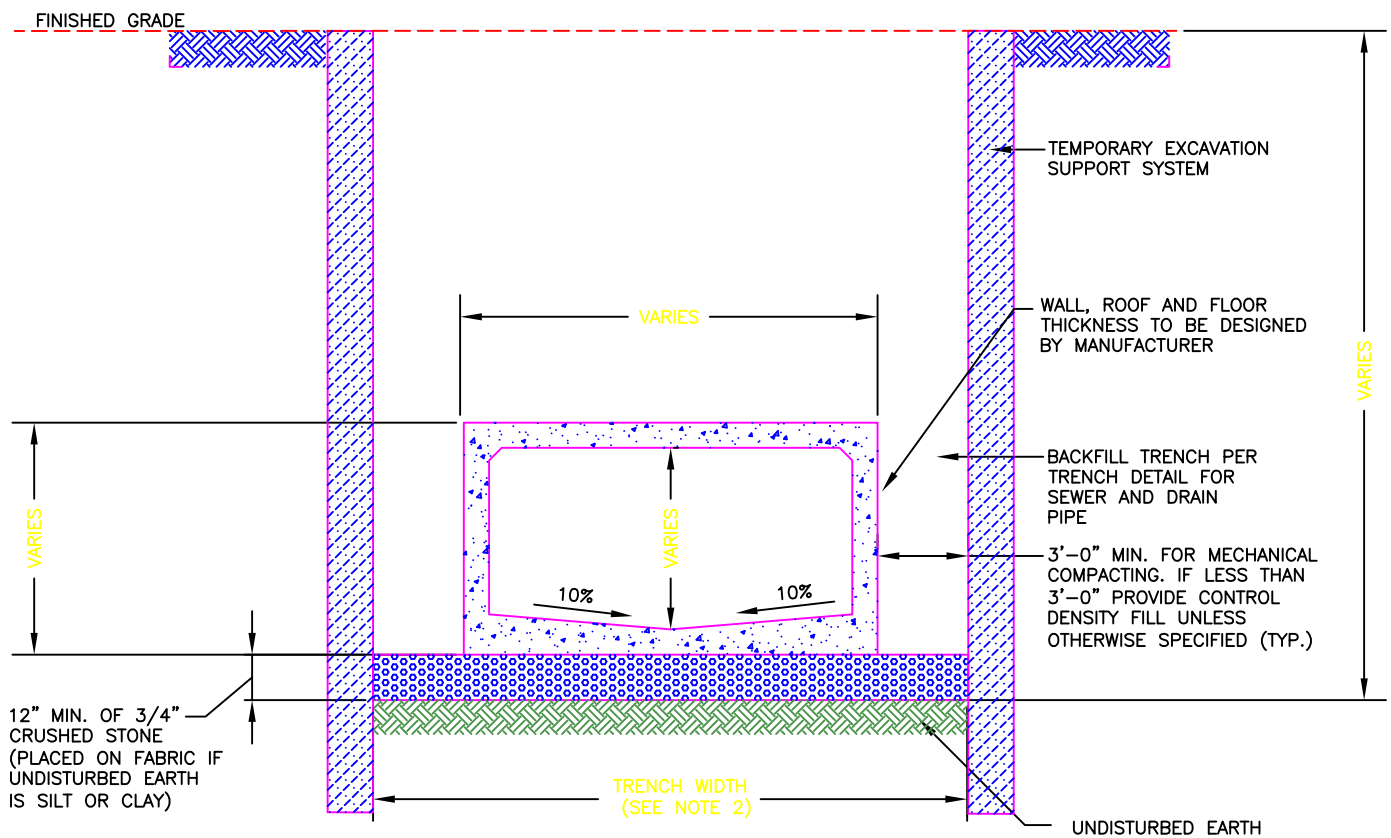
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 02524

2020



**NOTES:**

1. PRECAST REINFORCED CONCRETE BOX SECTIONS MANUFACTURED IN ACCORDANCE WITH PRECAST REINFORCED CONCRETE BOX CULVERT. WATERTIGHT GASKET JOINTS TO BE PROVIDED AS SPECIFIED.
2. TRENCH PAY LIMIT FOR BOX CULVERT IS OUTSIDE DIMENSION (WIDTH) PLUS 3' FOR TEMPORARY SUPPORT OF EXCAVATION PLUS SPACE BETWEEN CULVERT AND TEMPORARY SUPPORT OF EXCAVATION TO A MAXIMUM OF 6' TOTAL.

## BOX CULVERT DETAIL - SECTION

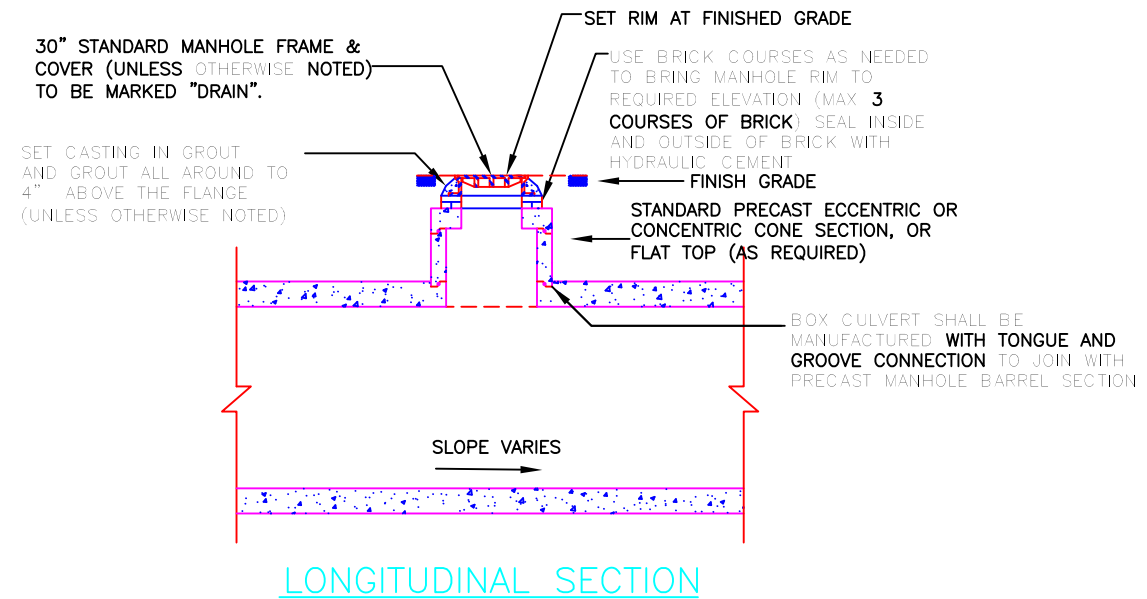
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE OF ISSUE: 02/05

SPEC. SECTION REF#: 02715

2715.1



## BOX CULVERT DETAIL - SECTION 2

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

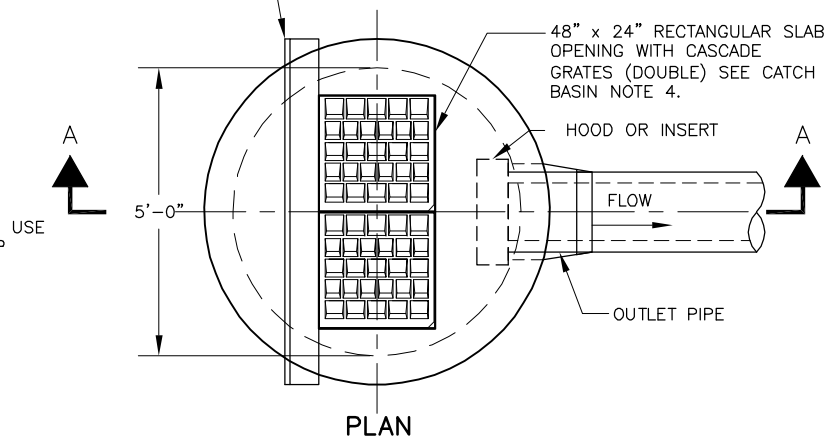
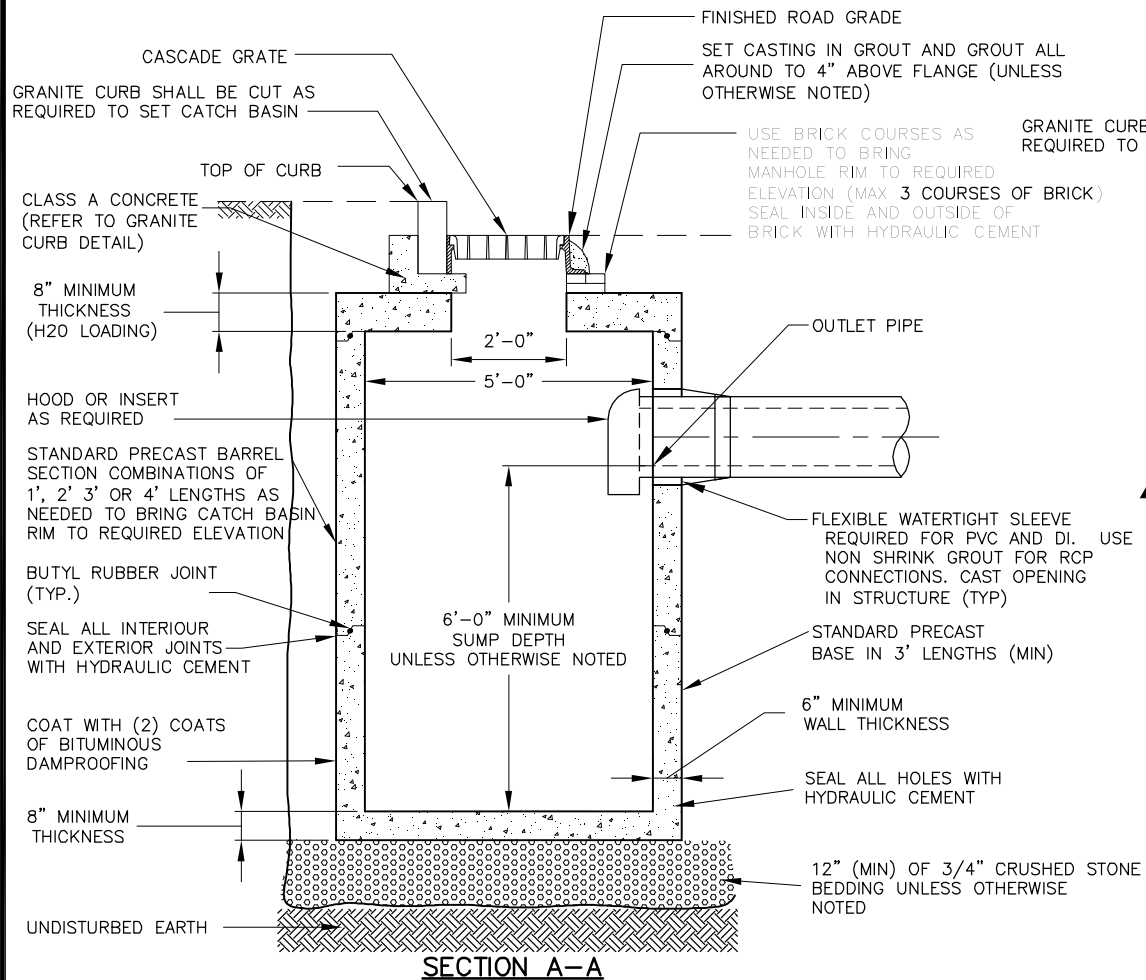
SCALE: N.T.S.

DATE  
OF ISSUE:

02/05

SPEC. SECTION REF#: 02715

2715.2



**THE WORKS**  
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OF PUBLIC

## TYPE 2 - DOUBLE GRATE CATCH BASIN

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

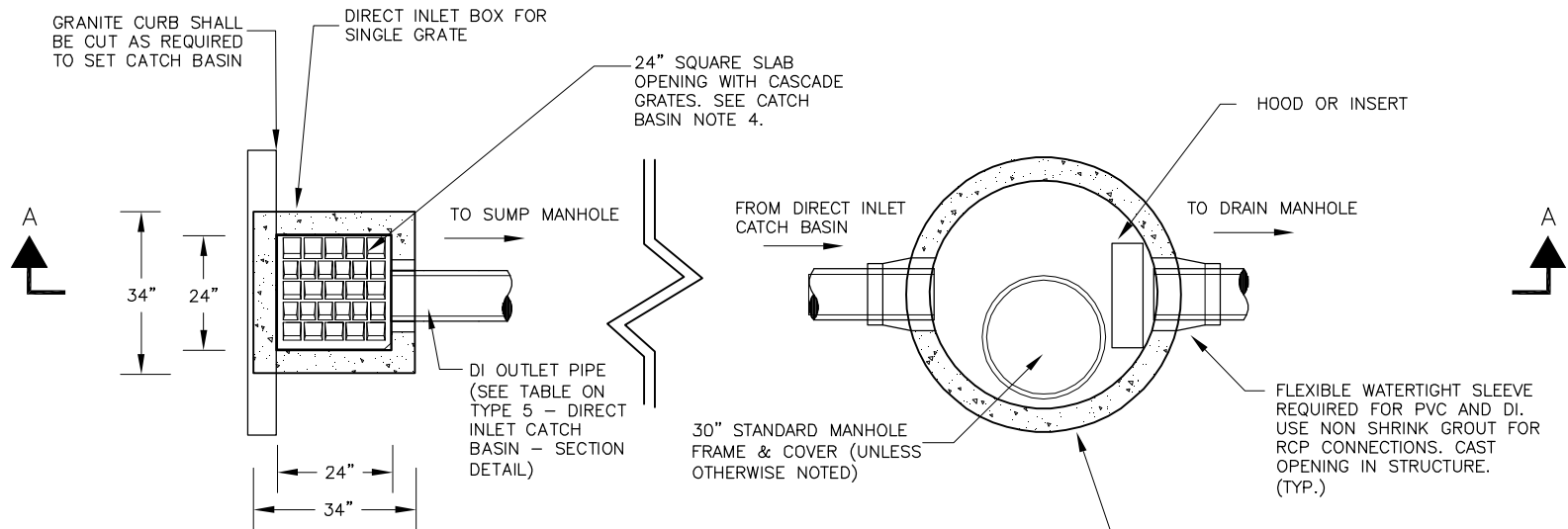
SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

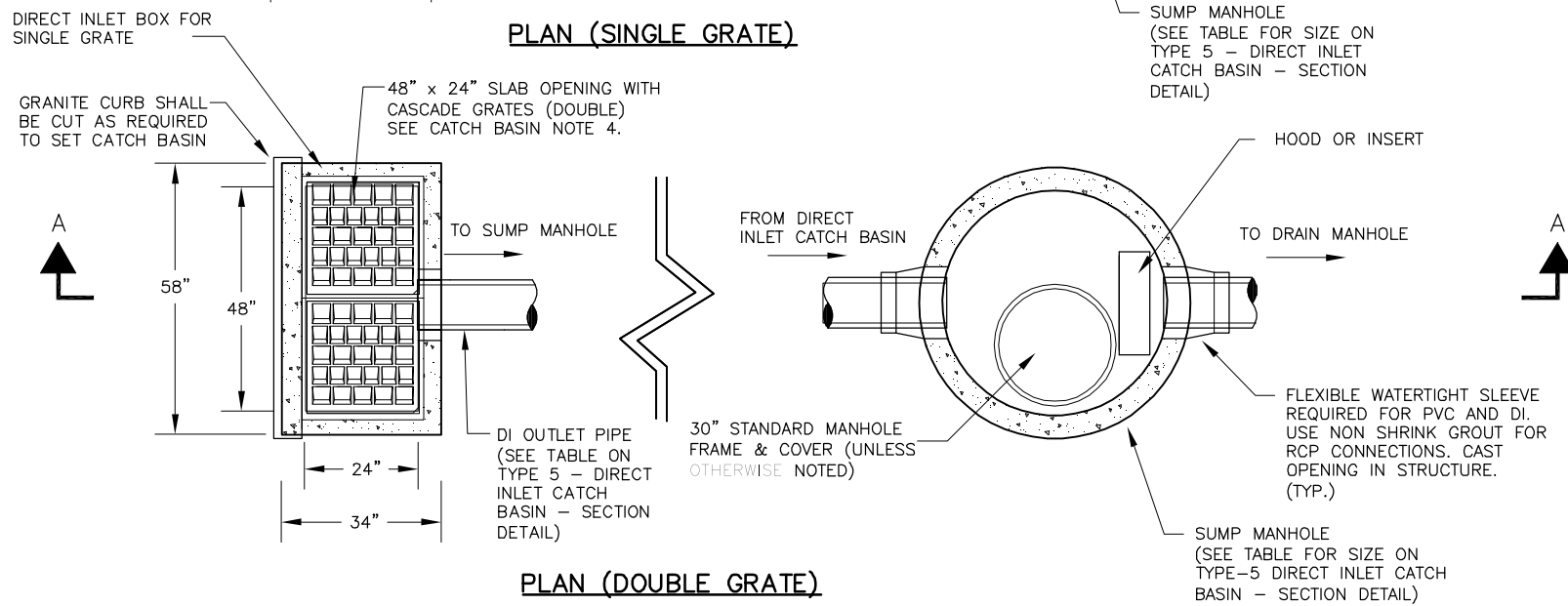
SPEC. SECTION REF#: 02604

2604.3

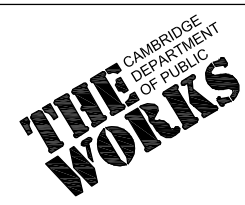




**PLAN (SINGLE GRATE)**



**PLAN (DOUBLE GRATE)**



**TYPE 5 - DIRECT INLET CATCH BASIN - PLAN**

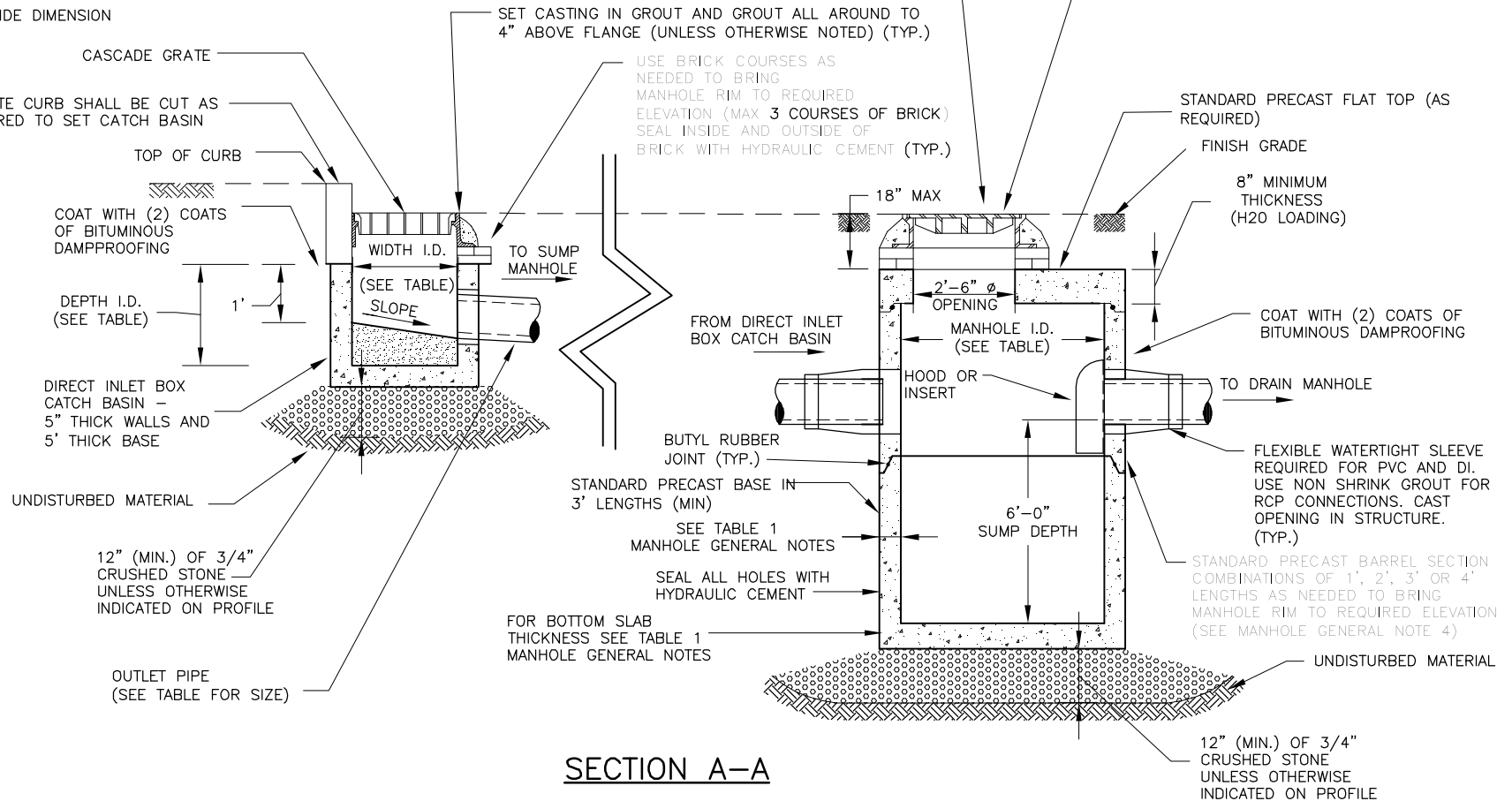
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.	DATE OF ISSUE: 02/05	SPEC. SECTION REF#: 02604	2604.6
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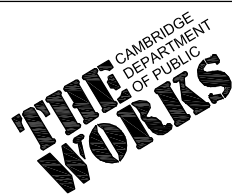
PRECAST INLET BOX AND SUMP MANHOLE SIZE TABLE

	PRECAST DIRECT INLET BOX			OUTLET PIPE	SUMP MANHOLE
	WIDTH (I.D.)	LENGTH (I.D.)	DEPTH (I.D.)	Ø (I.D.)	Ø (I.D.)
SINGLE GRATE	24"	24"	24"	12"	4'
DOUBLE GRATE	24"	48"	36"	15"	5'

I.D. = INSIDE DIMENSION



SECTION A-A



TYPE 5 - DIRECT INLET CATCH BASIN - SECTION

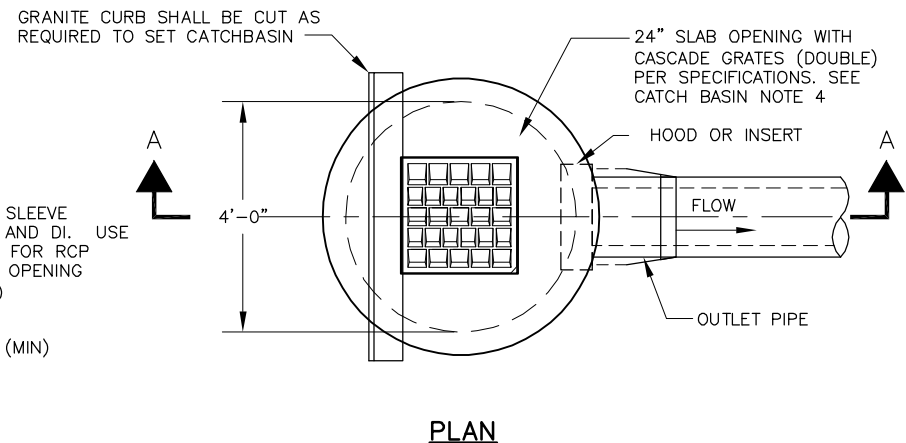
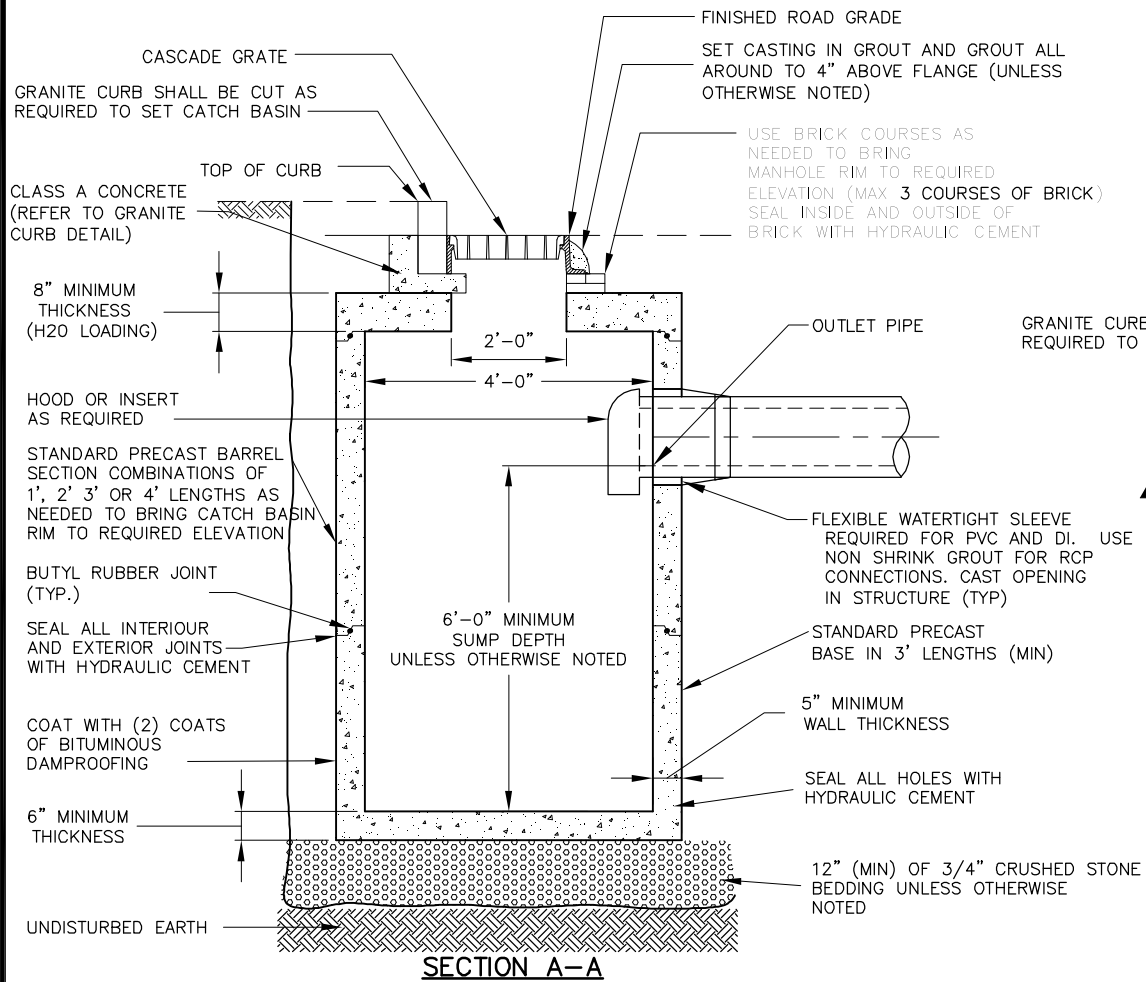
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE OF ISSUE: 02/05

SPEC. SECTION REF#: 02604

2604.5



**THE WORKS**  
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## TYPE 1 - SINGLE GRATE CATCH BASIN

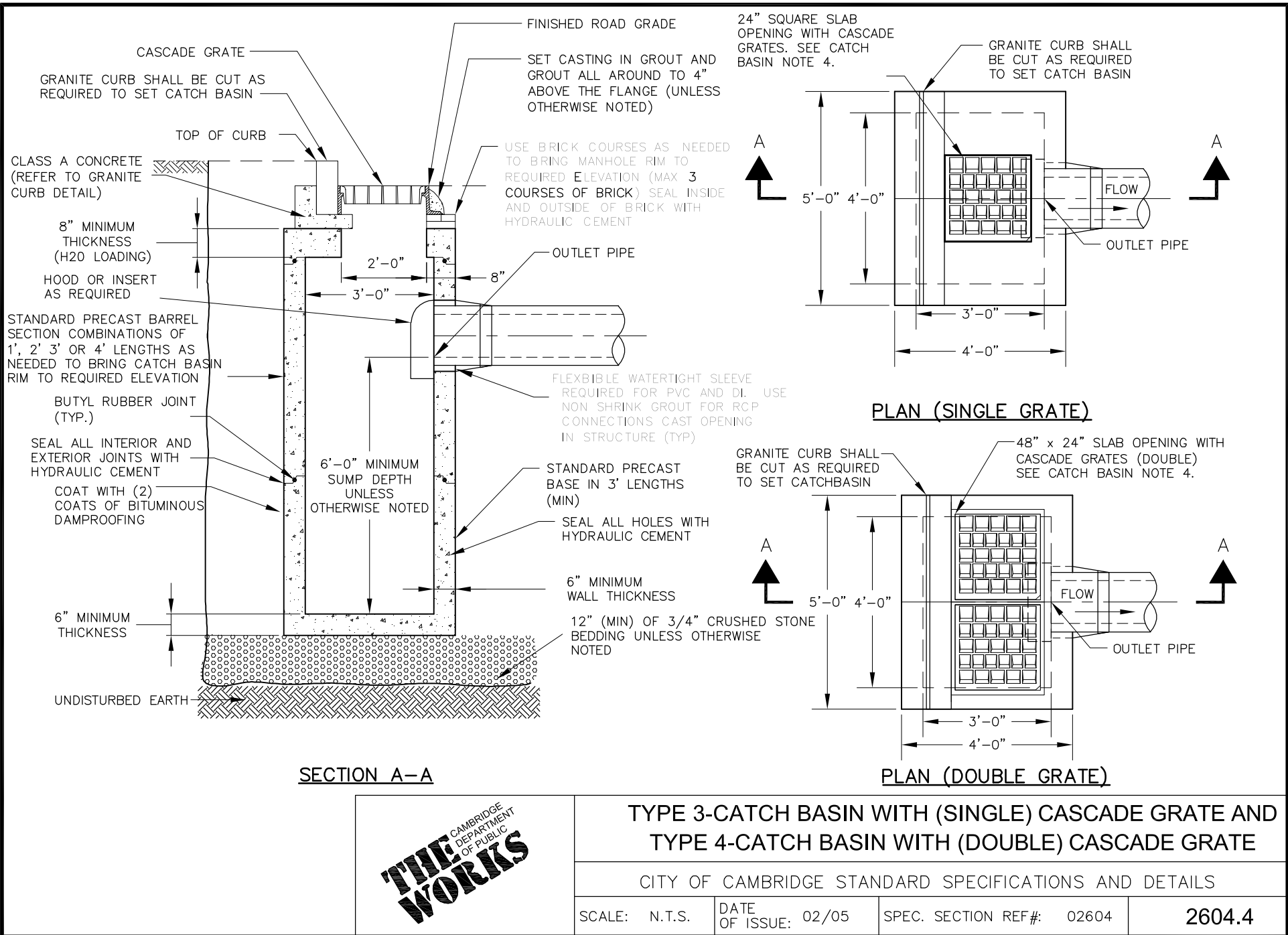
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

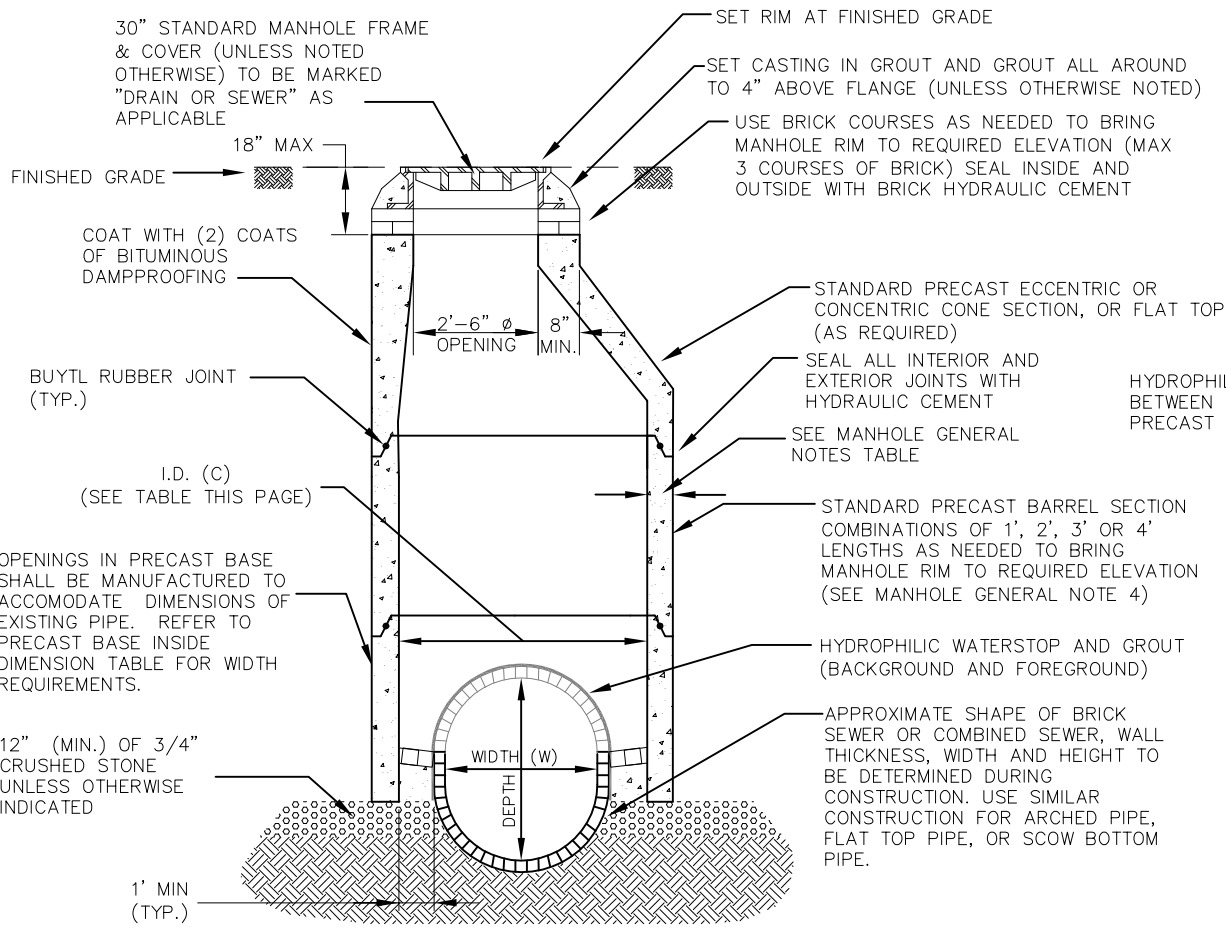
DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 02604

2604.2



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WORKS**

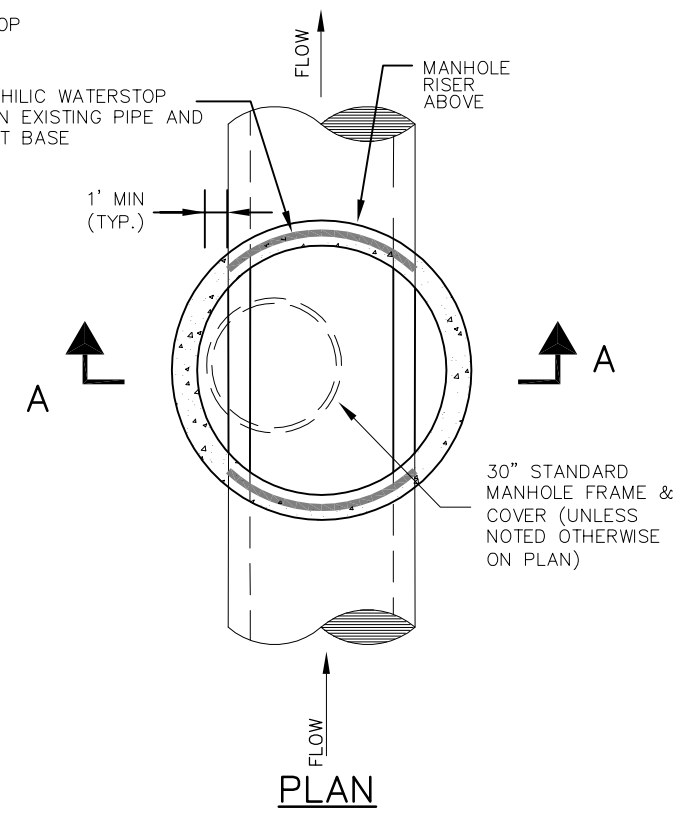


**SECTION A-A**

**PRECAST BASE INSIDE DIMENSION TABLE**

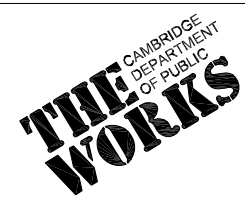
WIDTH (W)	I.D. (C)
8" TO 24"	4' $\phi$
27" TO 36"	5' $\phi$
48" TO 66"	6' $\phi$
66" TO 72"	8' $\phi$
> 72"	10' $\phi$

I.D. = INSIDE DIMENSION



**NOTES:**  
 1. REMOVE EXISTING BRICK PIPE TO SPRING LINE WITHIN THE INSIDE OF THE PRECAST MANHOLE BASE AND CONSTRUCT THE INVERT TO THE SPRING LINE AS SHOWN.

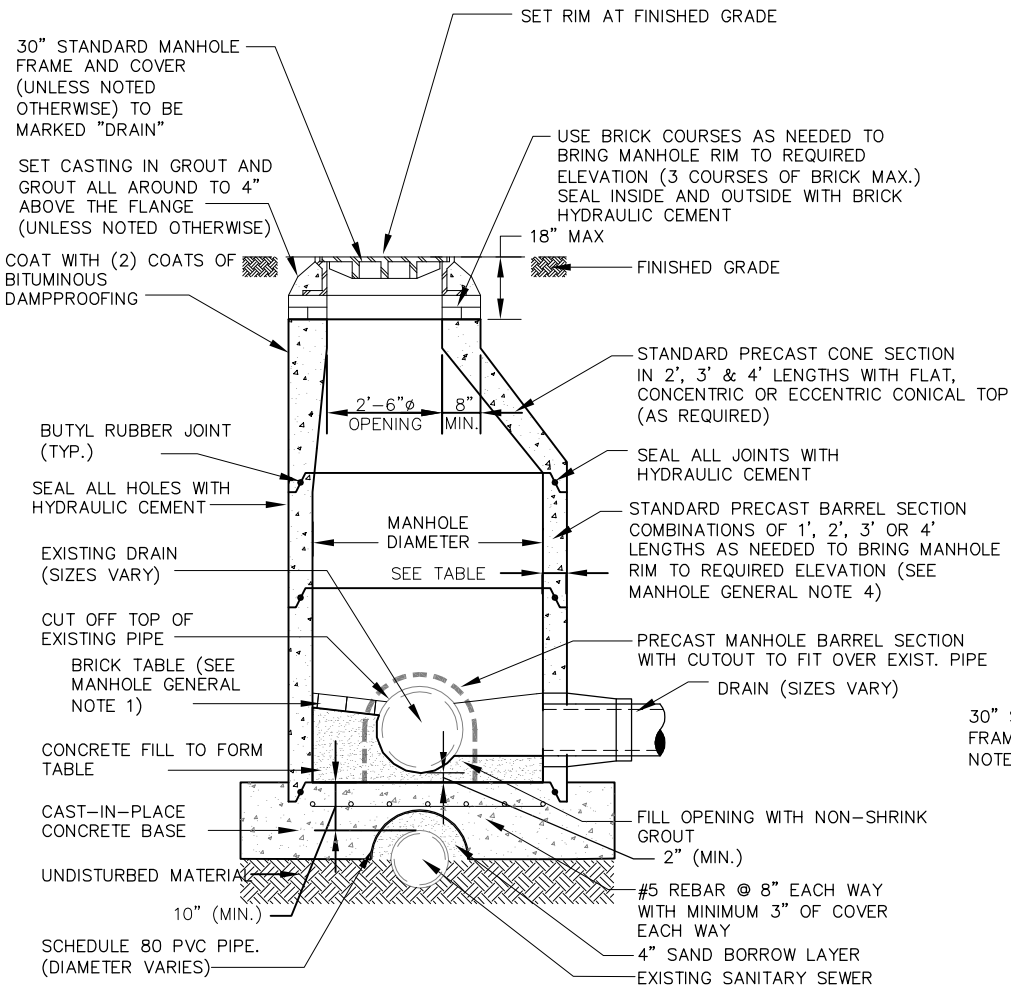
95% DETAILS  
 NOT FOR CONSTRUCTION



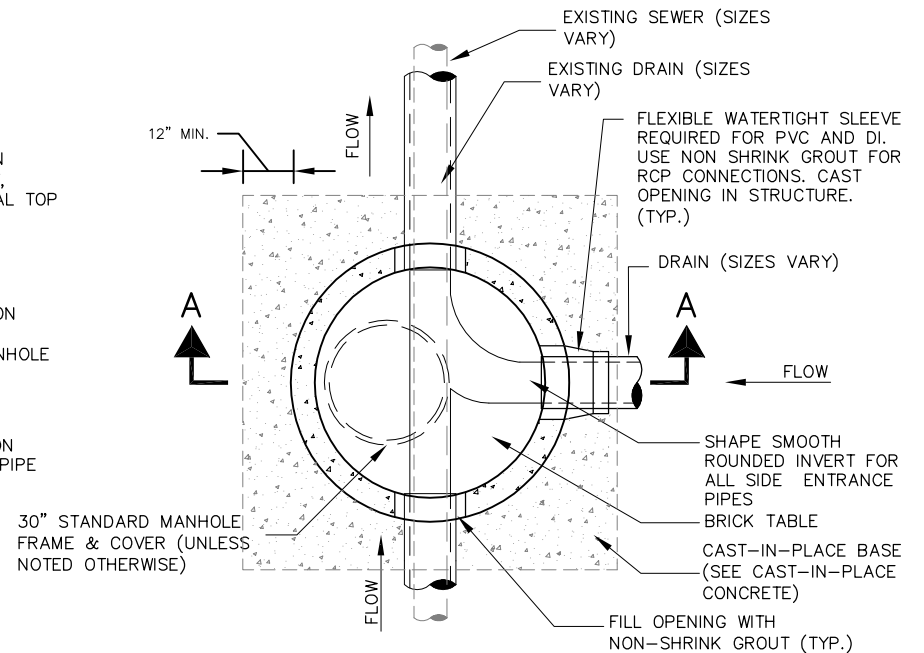
**TYPE 2 - PRECAST DROP OVER MANHOLE DETAIL**

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.	DATE OF ISSUE: 02/05	SPEC. SECTION REF#: 02252	<b>2252.3</b>
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**SECTION A-A**



**PLAN**

95% DETAILS  
NOT FOR CONSTRUCTION

**THE WORKS**  
CAMBRIDGE  
DEPARTMENT  
OF PUBLIC  
WORKS

## TYPE 5 - MANHOLE CONSTRUCTED OVER EXISTING SEWER DETAIL

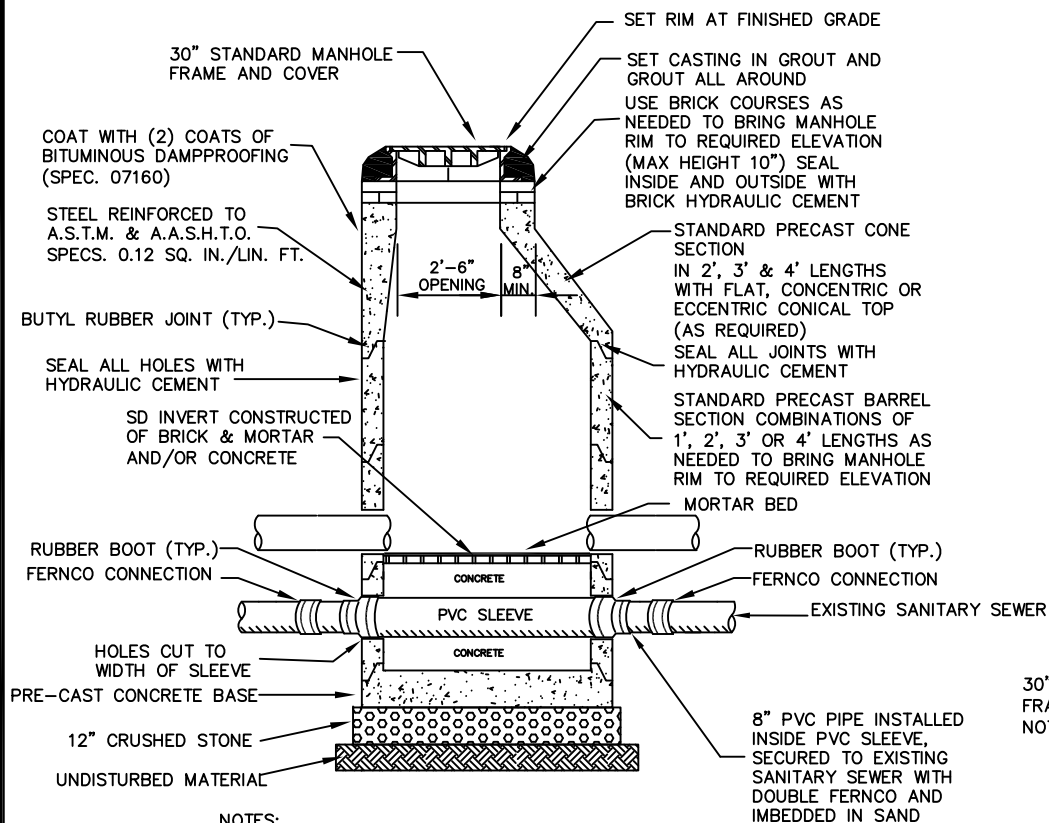
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE OF ISSUE: 02/05

SPEC. SECTION REF#: 02252

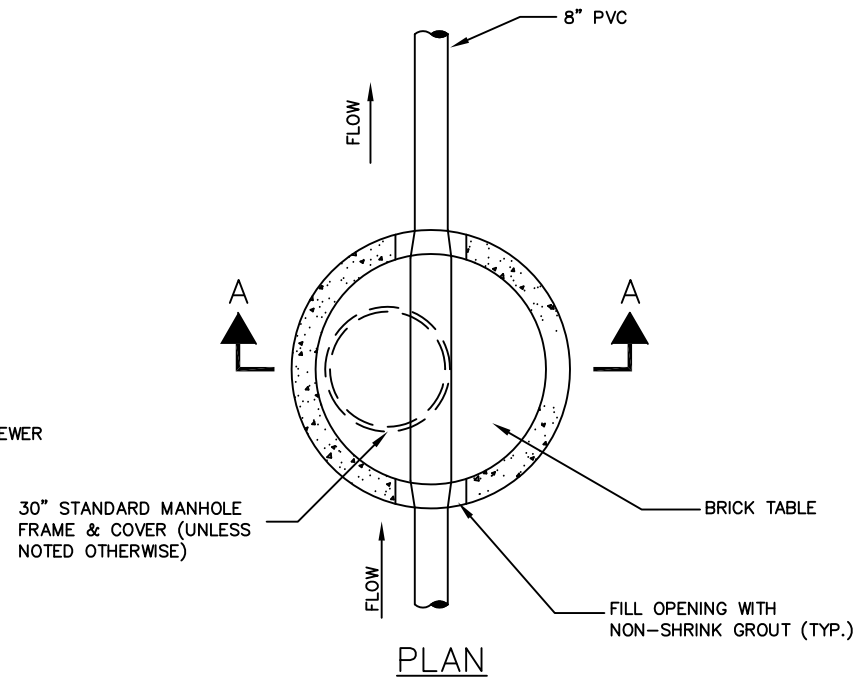
2252.6



**NOTES:**

1. SEWER OR DRAIN MANHOLE DIAMETER SHALL BE 4', 5', 6', OR 8' AS SHOWN ON PLAN VIEWS.
2. DESIGN PRECAST SECTIONS WITH FRAME AND COVER FOR AASHTO H20 LOADING.

**SECTION A-A**



**TYPE 6 - MANHOLE CONSTRUCTED OVER EXISTING UTILITY - WITH BASE**

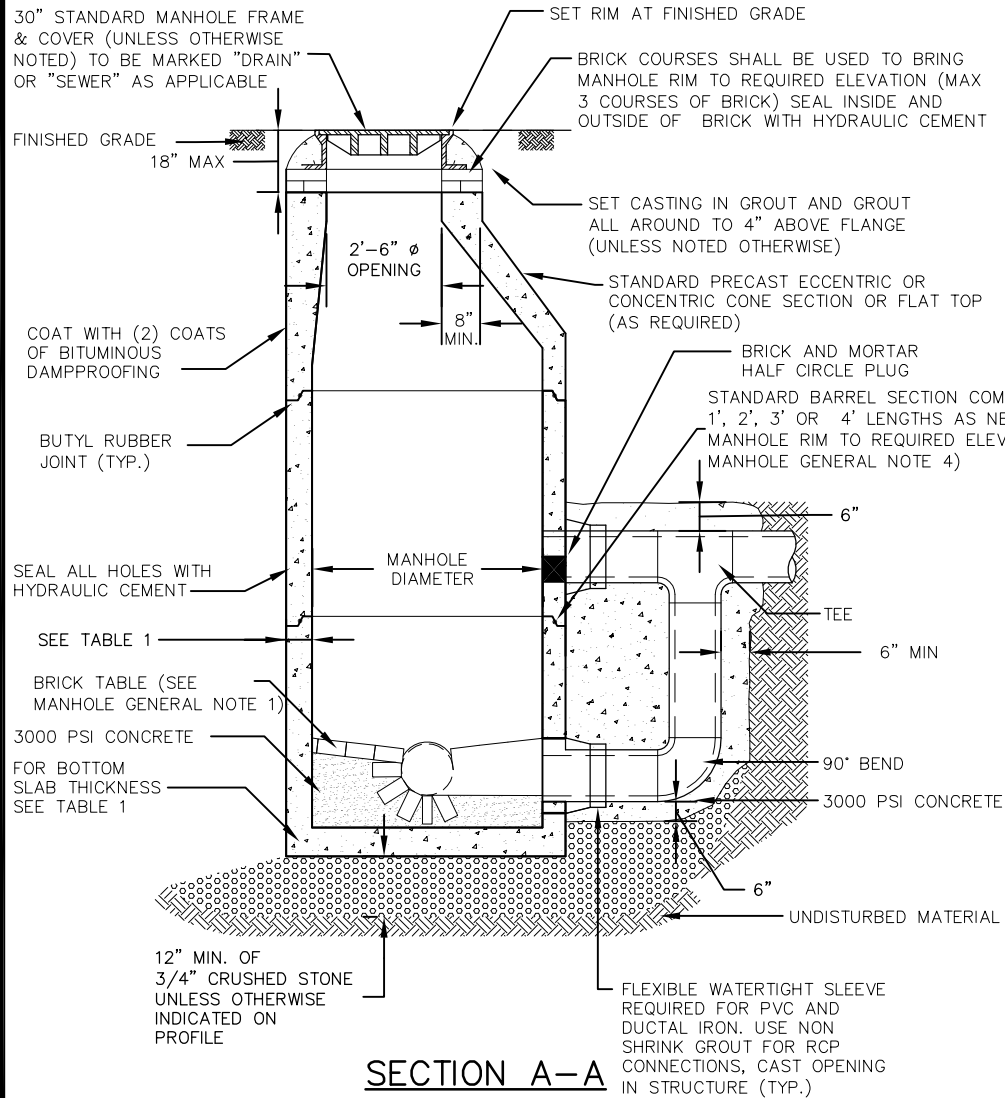
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

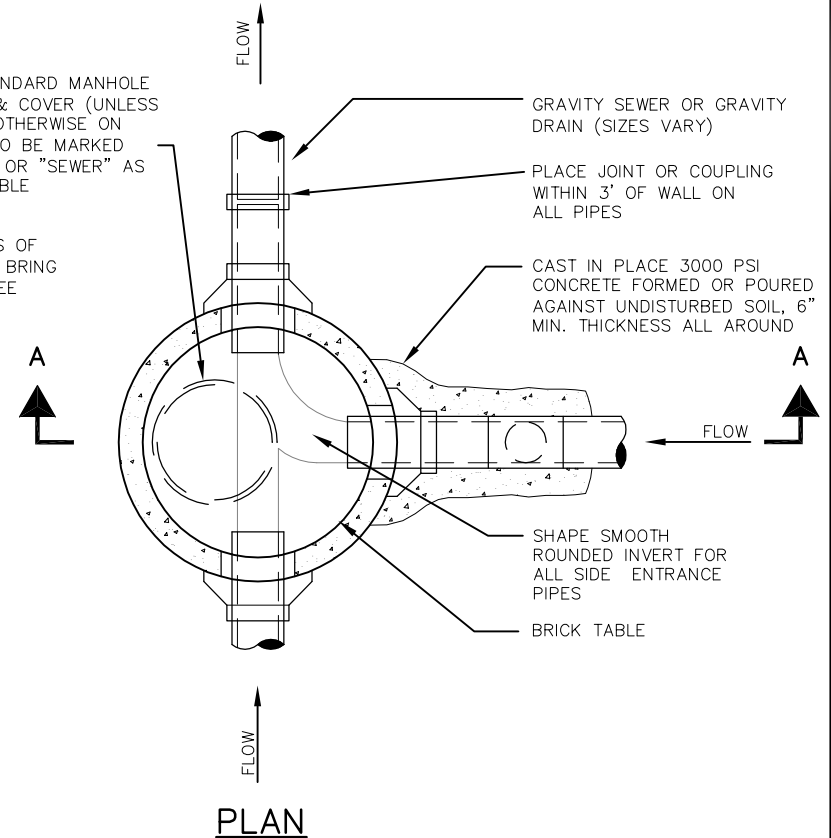
DATE OF ISSUE: 02/05

SPEC. SECTION REF#: 02252

2252.7



30" STANDARD MANHOLE FRAME & COVER (UNLESS NOTED OTHERWISE ON PLAN) TO BE MARKED "DRAIN" OR "SEWER" AS APPLICABLE



95% DETAILS  
NOT FOR CONSTRUCTION

**THE WORKS**  
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## TYPE 3 - DROP MANHOLE

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 02252

**2252.4**



TABLE 1				
MANHOLE DIAMETER	SIDE WALL MIN. THICKNESS	BOTTOM SLAB MIN. THICKNESS	MAX PIPE DIAMETER *	
			RCP	DI/PVC
4'	5"	6"	24"	30"
5'	6"	8"	36"	42"
6'	6"	8"	48"	54"
8'	8"	8"	66"	72"
10'	10"	10"	72"	84"

\* MAY VARY DEPENDING ON SIZE AND LOCATION OF ADDITIONAL PENETRATIONS OR RELATIONSHIP OF PENETRATIONS IN MANHOLE

#### MANHOLE GENERAL NOTES:

- HIGHEST POINT OF BRICK TABLE AT MANHOLE WALL, TO BE AT ELEV OF CROWN OF PIPE. TABLE TO SLOPE AT 8.3%.
- SEWER OR DRAIN MANHOLE DIAMETER SHALL BE 4', 5', 6', 8' OR 10' AS SHOWN ON PLAN/PROFILE VIEWS.
- DESIGN PRECAST SECTIONS WITH FRAME AND COVER FOR AASHTO H20 LOADINGS. UNLESS OTHERWISE NOTED
- MANHOLES LARGER THAN 4' IN DIAMETER AT THE BASE SHALL BE REDUCED IN DIAMETER TO 4' AT THE NEXT RISER SECTION UNLESS NOTED OTHERWISE ON PLANS.

TRENCH PAY LIMIT TABLE FOR MANHOLES

WALL THICKNESS	MAX TRENCH WIDTH
LESS THAN 6"	I.D. + 5'-0"
6" TO 12"	I.D. + 6'-0"
13" TO 18"	I.D. + 7'-0"
19" & GREATER	O.D. + 6'-0"

I.D. = INSIDE DIMENSION  
O.D. = OUTSIDE DIMENSION

FOR TRENCHES GREATER THAN 5' DEEP ADD  
3' FOR TEMPORARY SUPPORT OF EXCAVATION

95% DETAILS  
NOT FOR CONSTRUCTION

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OF PUBLIC  
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WORKS**

## MANHOLES - GENERAL NOTES AND DIMENSIONS

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 02252

**2252.1**

30" STANDARD MANHOLE FRAME & COVER (UNLESS NOTED OTHERWISE) TO BE MARKED "DRAIN"

SET CASTING IN GROUT AND GROUT ALL AROUND TO 4" ABOVE FLANGE (UNLESS NOTED OTHERWISE)

SET RIM AT FINISHED GRADE

USE BRICK COURSES AS NEEDED TO BRING MANHOLE RIM TO REQUIRED ELEVATION (MAX 3 COURSES OF BRICK) SEAL INSIDE AND OUTSIDE OF BRICK WITH HYDRAULIC CEMENT

18" MAX

FINISH GRADE  
STANDARD PRECAST ECCENTRIC OR CONCRETE CONE SECTION OR FLAT TOP (AS REQUIRED)

COAT WITH (2) COATS OF BITUMINOUS DAMPPROOFING

SEAL ALL HOLES WITH HYDRAULIC CEMENT

BUTYL RUBBER JOINT (TYP.)

SEE TABLE 1

STANDARD PRECAST BASE IN 3' LENGTHS (MIN)

FOR BOTTOM SLAB THICKNESS SEE TABLE 1

2'-6" Ø  
OPENING

8" MIN.

MANHOLE DIAMETER

4'-0" SUMP DEPTH

SEAL ALL INTERIOR AND EXTERIOR JOINTS WITH HYDRAULIC CEMENT

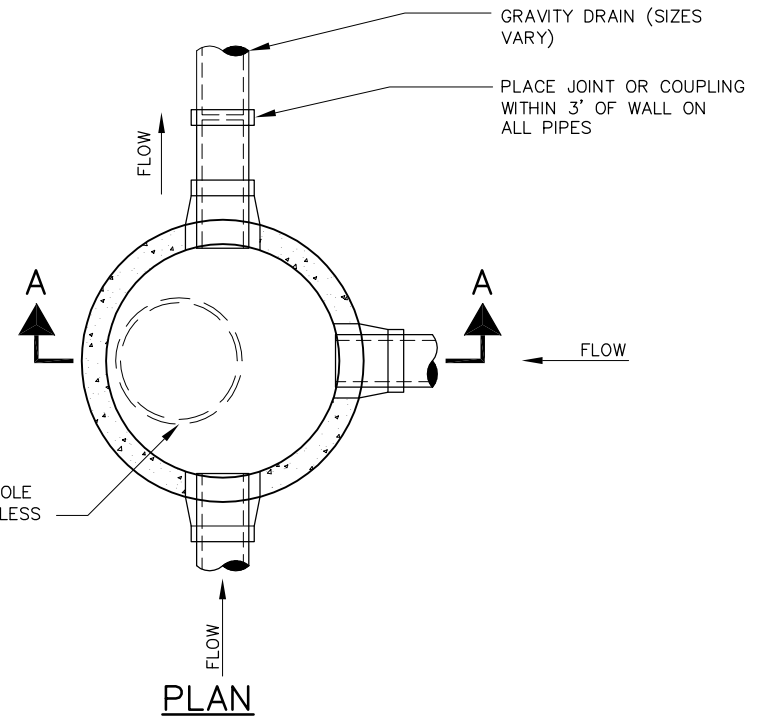
STANDARD PRECAST BARREL SECTION COMBINATIONS OF 1', 2', 3' OR 4' LENGTHS AS NEEDED TO BRING MANHOLE RIM TO REQUIRED ELEVATION (SEE MANHOLE GENERAL NOTE 4)

FLEXIBLE WATERTIGHT SLEEVE REQUIRED FOR PVC AND DI. USE NON SHRINK GROUT FOR RCP CONNECTIONS. CAST OPENING IN STRUCTURE. (TYP.)

12" (MIN.) OF 3/4" CRUSHED STONE UNLESS OTHERWISE INDICATED ON PROFILE

UNDISTURBED MATERIAL

SECTION A-A



95% DETAILS  
NOT FOR CONSTRUCTION

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## TYPE 4 - SUMP MANHOLE DETAIL

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 02252

2252.5

30" STANDARD MANHOLE FRAME & COVER (UNLESS NOTED OTHERWISE) TO BE MARKED "DRAIN" OR "SEWER" AS APPLICABLE

SET CASTING IN GROUT AND GROUT ALL AROUND TO 4" ABOVE THE FLANGE (UNLESS NOTED OTHERWISE)

COAT WITH (2) COATS OF BITUMINOUS DAMPPROOFING

BUTYL RUBBER JOINT (TYP.)

SEAL ALL HOLES WITH HYDRAULIC CEMENT

SEE TABLE 1

BRICK TABLE (SEE MANHOLE GENERAL NOTE 1)

FOR BOTTOM SLAB THICKNESS SEE TABLE 1

SET RIM AT FINISHED GRADE

USE BRICK COURSES AS NEEDED TO BRING MANHOLE RIM TO REQUIRED ELEVATION (MAX 3 COURSES OF BRICKS) SEAL INSIDE AND OUTSIDE OF BRICK WITH HYDRAULIC CEMENT

FINISH GRADE

STANDARD PRECAST ECCENTRIC OR CONCENTRIC CONE SECTION, OR FLAT TOP (AS REQUIRED)

SEAL ALL INTERIOR AND EXTERIOR JOINTS WITH HYDRAULIC CEMENT

STANDARD PRECAST BARREL SECTION COMBINATIONS OF 1', 2', 3' OR 4' LENGTHS AS NEEDED TO BRING MANHOLE RIM TO REQUIRED ELEVATION (SEE MANHOLE GENERAL NOTE 4)

STANDARD PRECAST BASE IN 3' LENGTHS (MIN.)

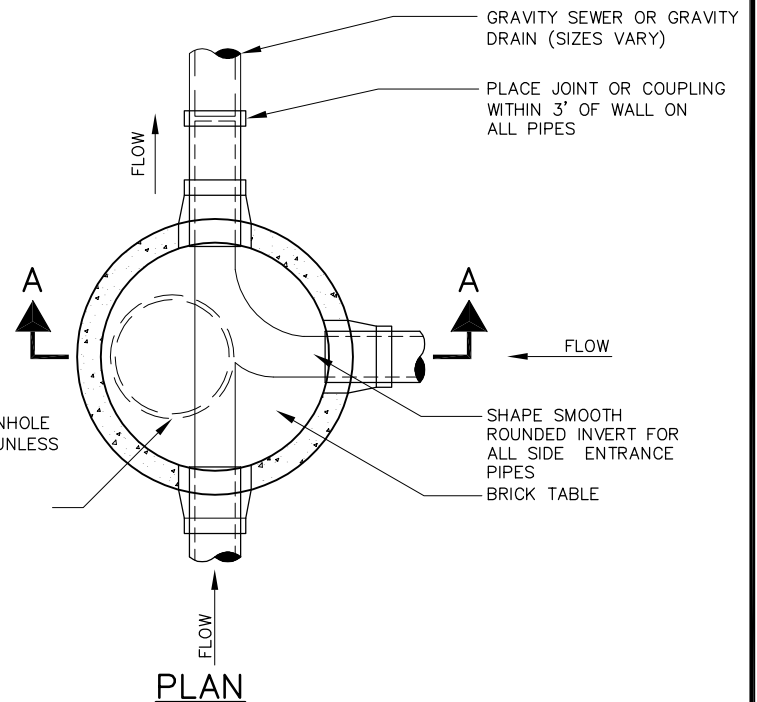
3000 PSI CONCRETE

FLEXIBLE WATERTIGHT SLEEVE REQUIRED FOR PVC AND DI. USE NON SHRINK GROUT FOR RCP CONNECTIONS. CAST OPENING IN STRUCTURE. (TYP.)

UNDISTURBED MATERIAL

12" (MIN.) OF 3/4" CRUSHED STONE UNLESS OTHERWISE INDICATED ON PROFILE

## SECTION A-A



95% DETAILS  
NOT FOR CONSTRUCTION

**THE WORKS**  
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WORKS

## TYPE 1 - MANHOLE DETAIL

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

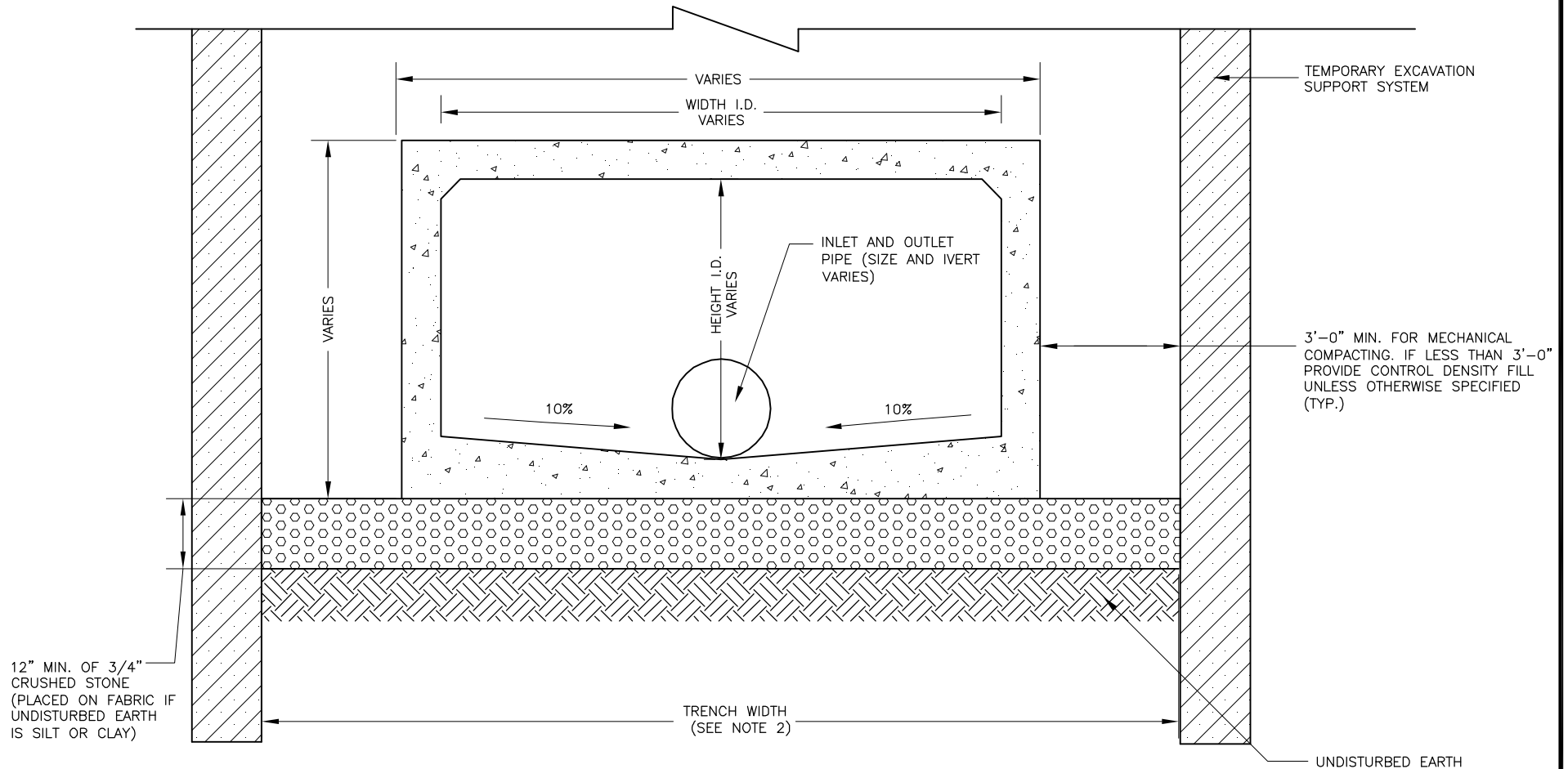
DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 02252

2252.2

NOTES:

1. PRECAST REINFORCED CONCRETE *BOX SECTIONS MANUFACTURED IN ACCORDANCE WITH PRECAST REINFORCED STORAGE TANK. WATERTIGHT GASKET JOINTS TO BE PROVIDED AS SPECIFIED.*
2. TRENCH PAY LIMIT FOR STORAGE TANK IS OUTSIDE DIMENSION (WIDTH) PLUS 3' FOR TEMPORARY SUPPORT OF EXCAVATION PLUS SPACE BETWEEN CULVERT AND TEMPORARY SUPPORT OF EXCAVATION TO A MAXIMUM OF 6' TOTAL.
3. STORAGE TANK WALL, ROOF AND SLAB THICKNESS TO BE DESIGNED BY THE MANUFACTURER
4. FLOATATION SLABS TO BE DESIGNED AND SPECIFIED BY THE MANUFACTURER



## STORAGE TANK DETAIL - SECTION

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.	DATE OF ISSUE: 02/05	SPEC. SECTION REF#: 02720	2720.2
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30" VENTED MANHOLE FRAME & COVER (UNLESS OTHERWISE NOTED) TO BE MARKED "DRAIN"

SET CASTING IN GROUT AND GROUT ALL AROUND TO 4" ABOVE THE FLANGE (UNLESS OTHERWISE NOTED)

COAT WITH (2) COATS OF BITUMINOUS DAMPPROOFING

SEAL ALL HOLES WITH HYDRAULIC CEMENT

BUTYL RUBBER JOINT (TYP.)

5"

INLET PIPE (INVERT ELEVATIONS VARY)

SET RIM AT FINISHED GRADE

USE BRICK COURSES AS NEEDED TO BRING MANHOLE RIM TO REQUIRED ELEVATION (MAX 3 COURSES OF BRICKS) SEAL INSIDE AND OUTSIDE OF BRICK WITH HYDRAULIC CEMENT

18" MAX

FINISH GRADE

STANDARD PRECAST ECCENTRIC OR CONCENTRIC CONE SECTION, OR FLAT TOP (AS REQUIRED)

SEAL ALL INTERIOR AND EXTERIOR JOINTS WITH HYDRAULIC CEMENT

2'-6" Ø  
OPENING

8" MIN.

STANDARD PRECAST BARREL SECTION COMBINATIONS OF 1', 2', 3' OR 4' LENGTHS AS NEEDED TO BRING MANHOLE RIM TO REQUIRED ELEVATION (SEE MANHOLE GENERAL NOTE 4)

4' DIAMETER

INV. EL. VARIES

VARIES

SLOPE 1%

STORAGE TANK SHALL BE MANUFACTURED WITH TONGUE AND GROOVE CONNECTION TO JOIN WITH PRECAST MANHOLE BARREL SECTION

BURIED WALL PIPE SLEEVE CLOSURES WITH DOUBLE LINK SEALS (TYPICAL OF ALL PENETRATIONS) (SEE BURIED WALL SLEEVE DETAIL)

OUTLET PIPE (INVERT ELEVATIONS VARY)

VARIES

SLOPE 1%



## STORAGE TANK DETAIL - SECTION

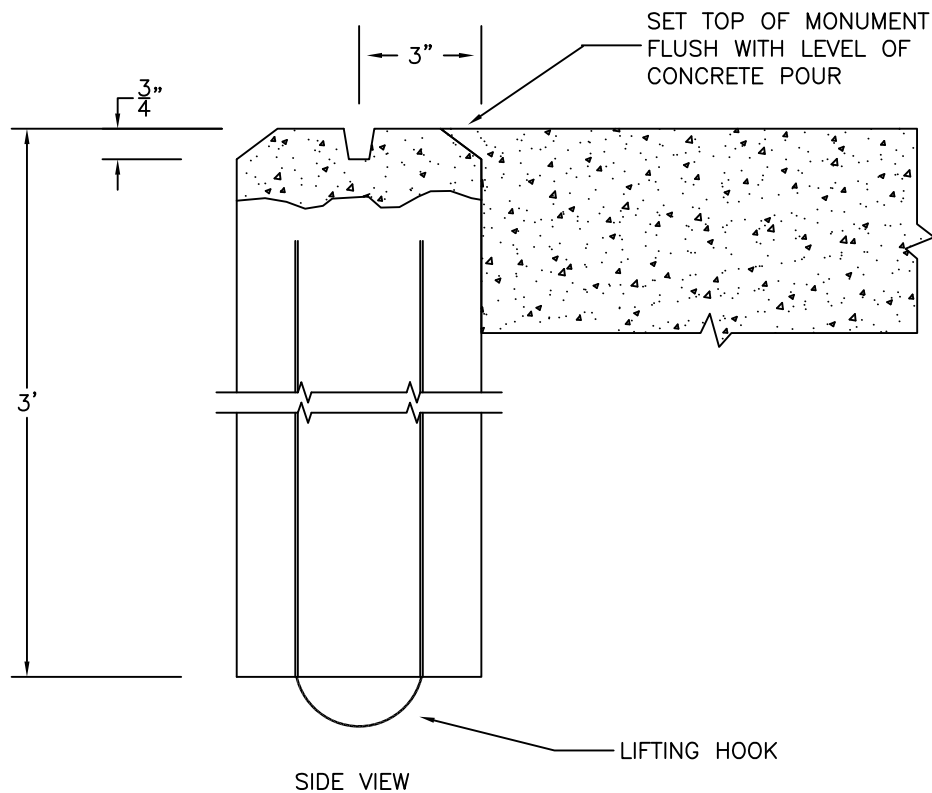
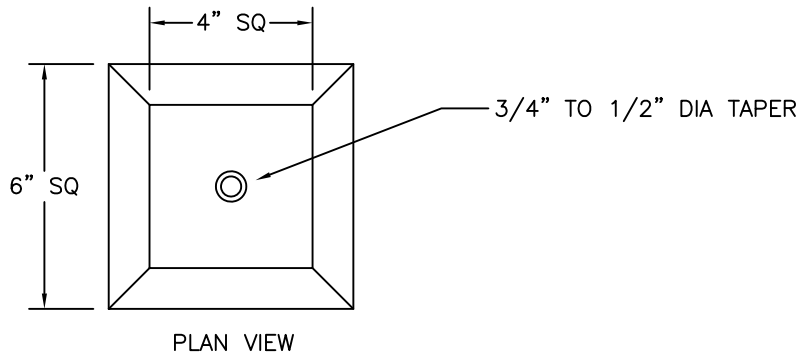
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE OF ISSUE: 02/05

SPEC. SECTION REF#: 02720

2720.2



NOTES:

1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS

SHEA CONCRETE PRODUCTS

WWW.SHEACONCRETE.COM | 1-800-696-7432

MISCELLANEOUS PRODUCTS – BOUNDARY MARKERS

PRODUCT ID BM6-3	WEIGHT (LBS)=110#
PRODUCT ID BM6-4	WEIGHT (LBS)=147#



SURVEY MONUMENT - PLAN AND SIDE VIEWS

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

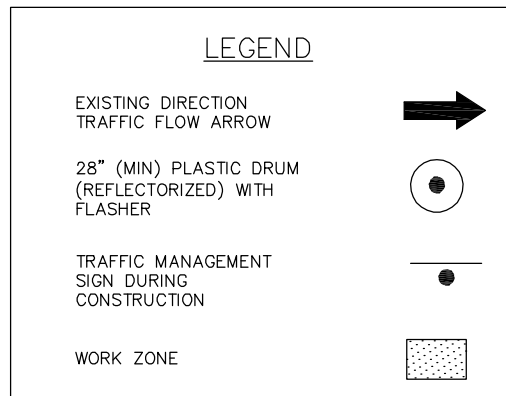
SCALE: N.T.S.

DATE OF ISSUE: 12/2019

SPEC. SECTION REF#:

TRAFFIC MANAGEMENT GENERAL NOTES:

1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D)
2. ALL SIGN LOCATIONS ON DETAILS ARE SHOWN SCHEMATICALLY. FINAL LOCATIONS SHALL BE DETERMINED BASED ON ACTUAL FIELD CONDITIONS AND CITY APPROVAL
3. ADDITIONAL TRAFFIC CONTROL DEVICES SHALL BE PROVIDED UPON THE CITY'S REQUEST
4. ALL TEMPORARY SIGNAGE AND TRAFFIC CONTROL DEVICES SHALL BE PROPERLY SECURED
5. ALL DRUMS NOT OTHERWISE SPECIFIED SHALL BE EQUIPPED WITH TYPE "C" -STEADY BURN WARNING LIGHTS
6. TEMPORARY TRAFFIC LANES WITHIN THE WORK ZONE SHALL BE A MINIMUM OF 11 FEET
7. ADVISORY SPEED LIMITS SHALL BE POSTED AS DIRECTED BY THE CITY
8. FLASHING ARROW BOARDS SHALL BE UTILIZED FOR LANE SHIFTS WHERE THE EXISTING SPEED LIMIT IS 35 M.P.H. OR GREATER
9. NON-ESSENTIAL TRAFFIC CONTROL DEVICES SHALL BE COVERED OR REMOVED DURING NON-WORK HOURS
10. ALL TRAVEL WAYS SHALL BE PROTECTED FROM DUST AND CONSTRUCTION DEBRIS AT ALL TIMES
11. TRAFFIC CONTROL INCLUDES NECESSARY STREET SWEEPING AND SNOW REMOVAL WITHIN THE WORK ZONE
12. VEHICULAR AND PEDESTRIAN SHALL BE ALLOWED ACCESS TO PRIVATE PROPERTY AT ALL TIMES DURING CONSTRUCTION
13. ALL TRAFFIC CONTROL DEVICES SHALL BE PLACED AND MOVED AS NECESSARY TO MAINTAIN ADEQUATE ABUTTER ACCESS AT ALL TIMES. WORK MAY REQUIRE ADDITIONAL SIGNAGE AND OTHER TRAFFIC CONTROL DEVICES, GRADING AND TEMPORARY PAVEMENT FOR PASSAGE OF PEDESTRIAN, VEHICULAR AND EMERGENCY TRAFFIC THROUGH WORK AREAS BOTH DURING AND AFTER WORK HOURS
14. EACH ABUTTER SHALL BE NOTIFIED BY THE CONTRACTOR AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS
15. CONSTRUCTION WORK ZONE SHALL BE STAGED AS TO ALLOW FOR CONTINUOUS ACCESS AT DRIVE ENTRANCES AND TO MINIMIZE DETOURS TO CAMBRIDGE ROADS
16. EXCAVATIONS SHALL BE PROTECTED BY STEEL PLATES OR BARRICADES DURING NON-WORK HOURS
17. GRADE SEPARATIONS IN EXCESS OF 2" DURING NON WORKING HOURS WILL REQUIRE DELINEATION BY DRUMS
18. EXCAVATION EDGES IN EXCESS OF 4" DEEP SHALL BE PROTECTED DURING NON-WORKING HOURS BY BACKFILLING WITH A WEDGE OF GRAVEL COMPACTED TO A 4:1 SLOPE
19. SAFE PEDESTRIAN WALKWAYS SHALL BE PROVIDED AND ACCESS TO LOCAL BUSINESSES AND RESIDENCES. PUBLIC WALKWAYS SHALL REMAIN OPEN AND ACCESSIBLE UNLESS OTHERWISE DIRECTED BY CITY.
20. ALL EXISTING PEDESTRIAN CROSSINGS SHALL BE MAINTAINED. ALTERNATIVE CROSSING SHALL BE PROVIDED WHEN EXISTING CROSSINGS ARE DISRUPTED BY CONSTRUCTION ACTIVITY. TEMPORARY LOCATIONS, SAFETY SIGNAGE AND SAFETY CONTROLS SHALL BE APPROVED BY THE CITY PRIOR TO IMPLEMENTATION
21. PEDESTRIAN WALKWAYS SHALL BE PROTECTED ALONG WORK ZONE WITH CONCRETE BARRIERS AND FENCING
22. POLICE DETAILS SHALL BE SCHEDULED AND COORDINATED BY THE CONTRACTOR TO MAINTAIN THE SAFETY OF PEDESTRIAN AND VEHICULAR TRAFFIC
23. DETOURS TO SHALL ONLY BE ALLOWED AS INDICATED OR AS APPROVED BY THE CITY OF CAMBRIDGE TRAFFIC AND PARKING DEPARTMENT



## TRAFFIC MANAGEMENT GENERAL NOTES AND LEGEND

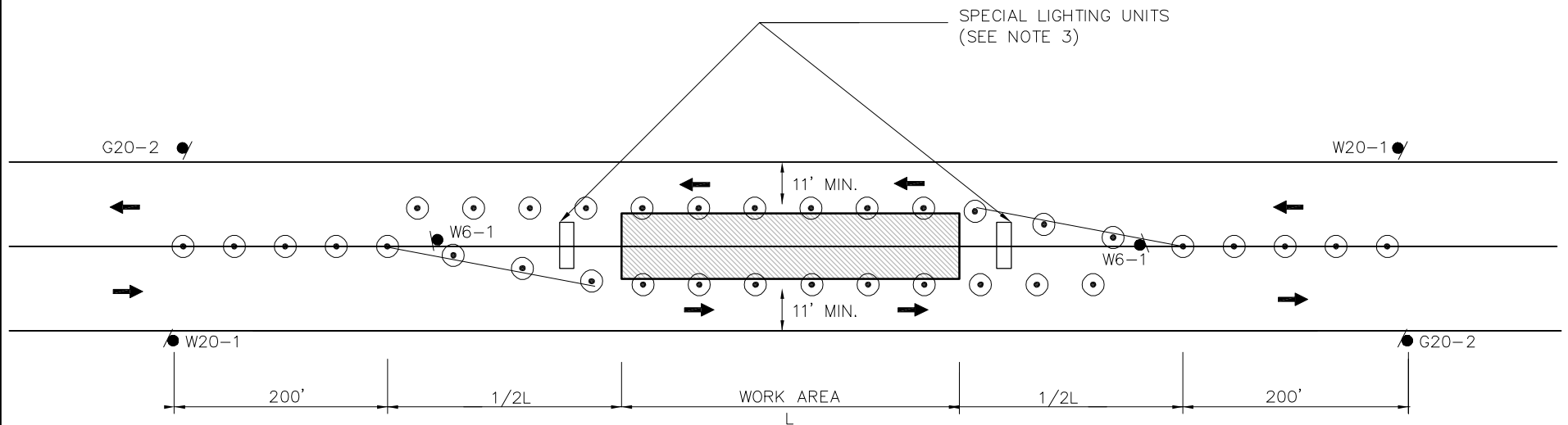
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 01570

**1570.1**



- NOTES:
1. ALL CONES AND DRUMS TO BE SPACED @ 20' O.C.
  2. L=AREA OF 1/2 DAY OF WORK (PER MUTCD MANUAL)
  3. SPECIAL LIGHTING UNITS (ARROW BOARDS) TO BE ADDED ON BOTH SIDES OF WORKZONE WHERE SPEED LIMIT MEETS OR EXCEEDS 35 M.P.H.



## TYPICAL INTERIOR LANE CLOSURE

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

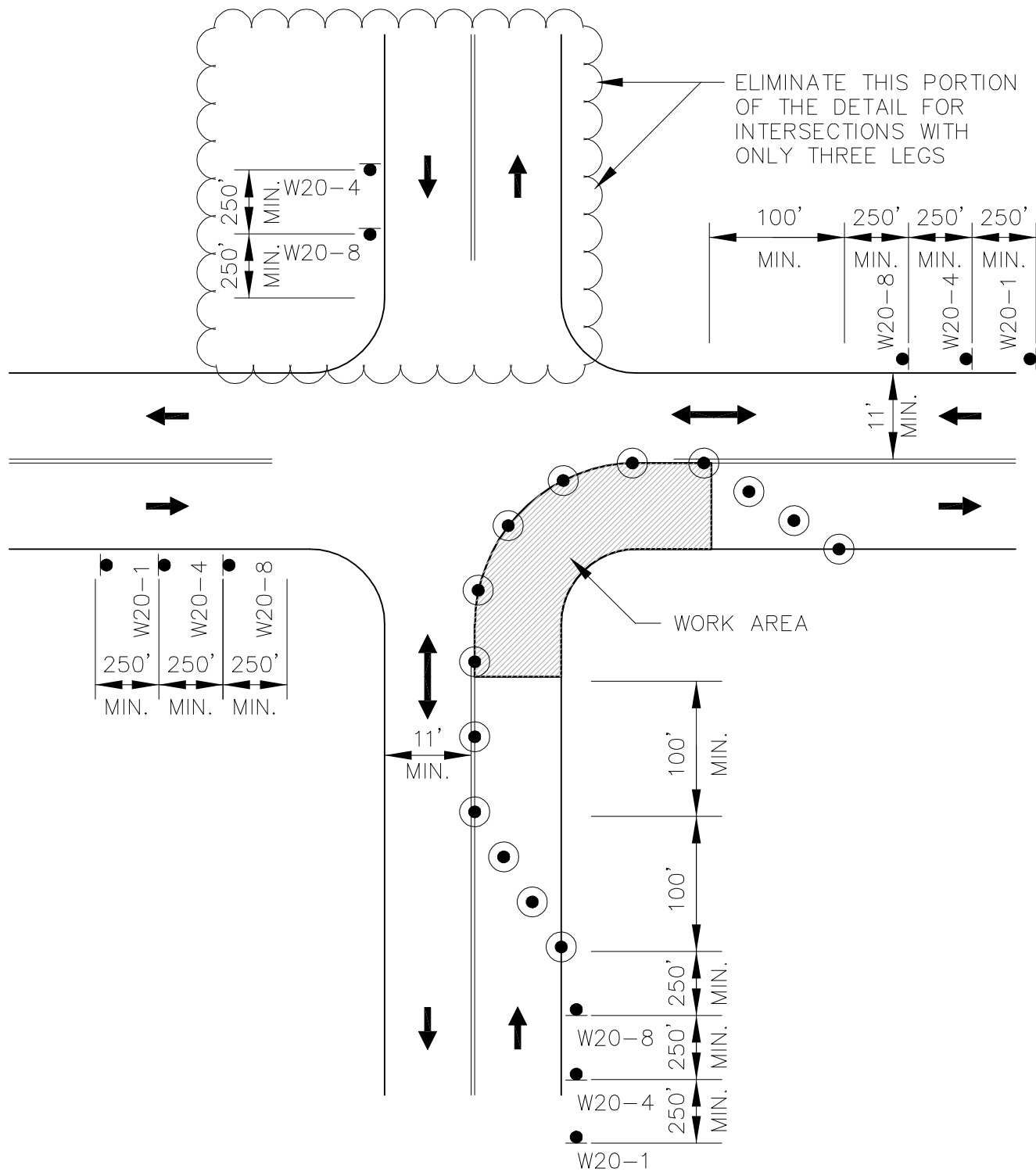
SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 01570

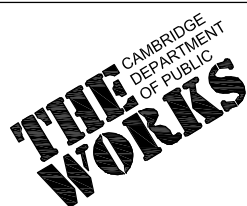
**1570.5**





NOTES:

1. ADVANCE WARNING SIGN PLACEMENT TO BE ADJUSTED AS NECESSARY AND APPROVED BY THE CITY.
2. ALL DRUMS AND CONES TO BE SPACED @ 20' O.C.



ONE LANE BI-DIRECTIONAL  
TRAFFIC AT INTERSECTIONS

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

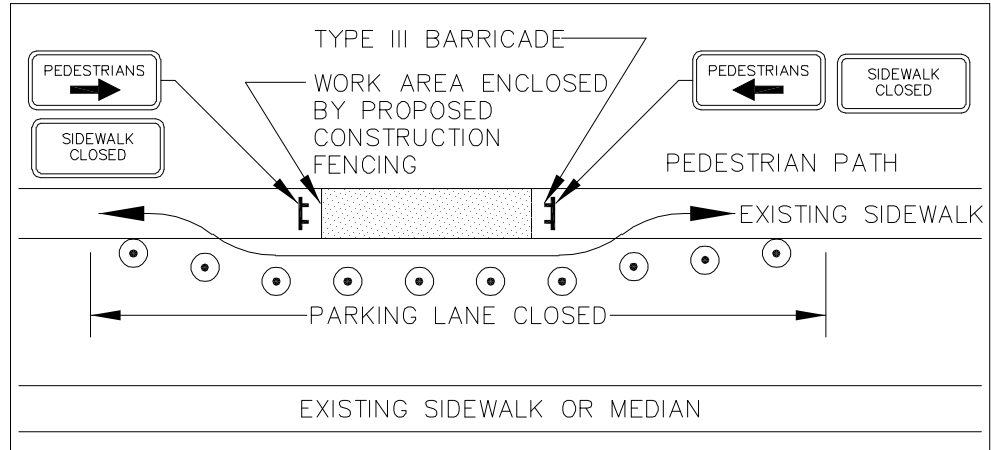
DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 01570

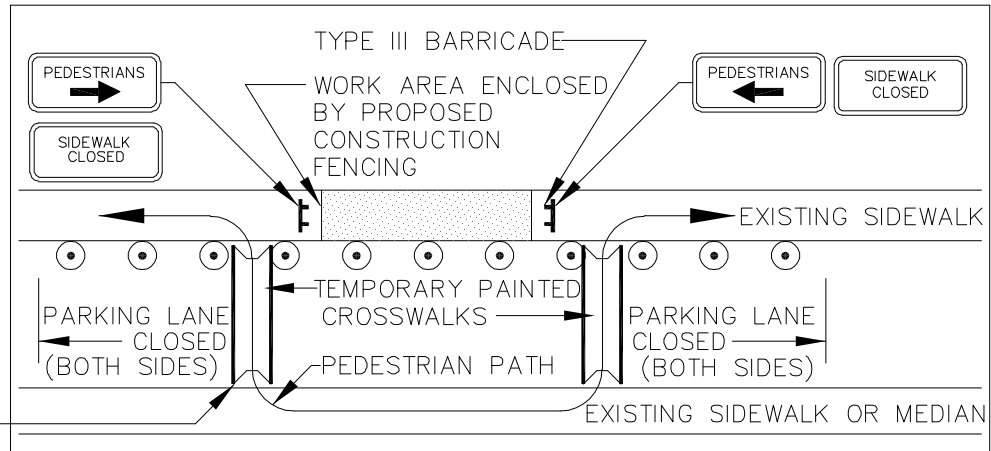
1570.7

TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING AND AS DIRECTED BY THE CITY.

TYPE I  
N.T.S.



TYPE II  
N.T.S.



TEMPORARY BITUMINOUS CONCRETE WHEEL CHAIR RAMP. WIDTH AND LENGTH PER ADA REQUIREMENTS BUT SHALL NOT INTRUDE INTO TRAVEL WAY

PEDESTRIAN BYPASS NOTES:

1. ADDITIONAL ADVANCE WARNING MAY BE REQUIRED BY THE CITY.
2. CONTROLS FOR PEDESTRIAN TRAFFIC ONLY, ARE SHOWN. VEHICULAR TRAFFIC SHALL BE MAINTAINED AS DETAILED ELSEWHERE.
3. STREET LIGHTING SHALL BE CONSIDERED WHEN LOCATING CONTROL DEVICES.
4. EXISTING WHEELCHAIR RAMPS SHALL BE CONSIDERED WHEN LOCATING TEMPORARY PAINTED CROSSWALKS.
5. DIRECTION OF PEDESTRIAN TRAVEL.
6. IF THE WORK ZONE DOES NOT PERMIT PEDESTRIANS TO TRAVEL ADJACENT TO IT AS SHOWN IN PEDESTRIAN BYPASS TYPE I, TEMPORARY CROSSWALKS WITH APPROPRIATE SIGNS SHALL BE INSTALLED TO CROSS PEDESTRIANS TO THE OPPOSITE SIDE OF THE STREET AS SHOWN IN PEDESTRIAN BYPASS TYPE II, AND AS DIRECTED BY THE ENGINEER.



**PEDSTRIAN BYPASS DETAIL**

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

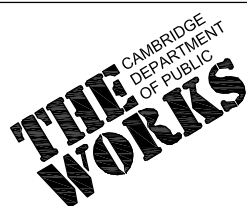
DATE OF ISSUE: 02/05

SPEC. SECTION REF#: 01570

**1570.8**

## CONSTRUCTION SIGN LEGEND

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS			COLOR		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW	BACK- GROUND	LEGEND	BORDER
G20-2	36"	24"		MUTCD STANDARD DETAIL			MUTCD STANDARD DETAIL		
W1-4L	30"	30"							
W1-4R	30"	30"							
W4-2L	48"	48"							
W4-2R	48"	48"							
W5-1	48"	48"							
W6-1	48"	48"							
W20-1	36"	36"							
W20-4	48"	48"							
W20-5L	48"	48"							
W20-5R	48"	48"							
W20-7b	36"	36"							
W20-8	36"	36"							



## CONSTRUCTION SIGN LEGEND

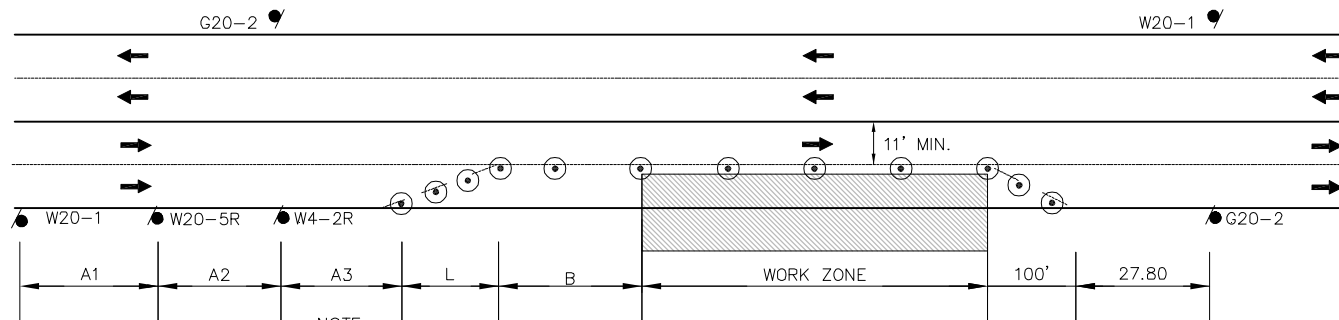
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 01570

**1570.2**



NOTE:  
1. THIS DETAIL SHOWS A RIGHT LANE CLOSURE DETAIL. THIS DETAIL SHALL ALSO BE USED FOR LEFT LANE CLOSURES WITH THE SIGN PLACEMENT AND TYPE AS APPROPRIATE

SPEED LIMIT (MPH)	SPACING FOR ADVANCE WARNING SIGNS (A1/A2/A3)	CHANNELIZING DEVICES			
		TRANSITION LENGTH (L)	BUFFER LENGTH (B)	DEVICE SPACING	MIN. #
25-40	500/500/500	320	160	20	30
45-55	500/1000/1000	680	360	40	30



## TYPICAL ONE LANE CLOSURE

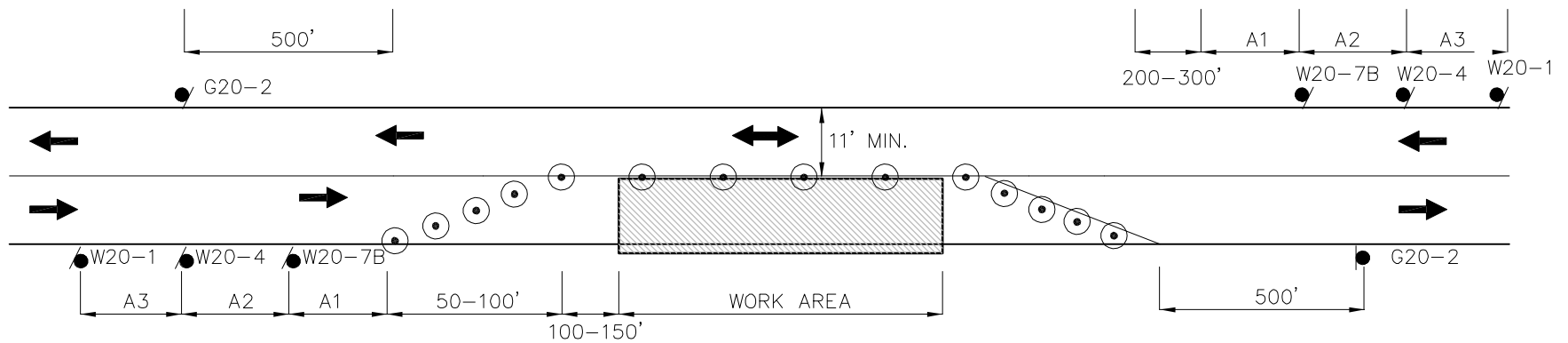
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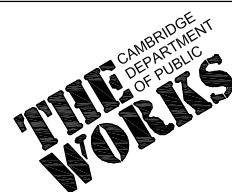
DATE OF ISSUE: 02/05

SPEC. SECTION REF#: 01570

1570.3



SPEED LIMIT (MPH)	SPACING FOR ADVANCE WARNING SIGNS (A1/A2/A3)	CHANNELIZING DEVICES	
		DEVICE SPACING	MIN. #
25-40	500/500/500	20	20
45-55	500/1000/1000	40	20



## TYPICAL TWO WAY ALTERNATING TRAFFIC

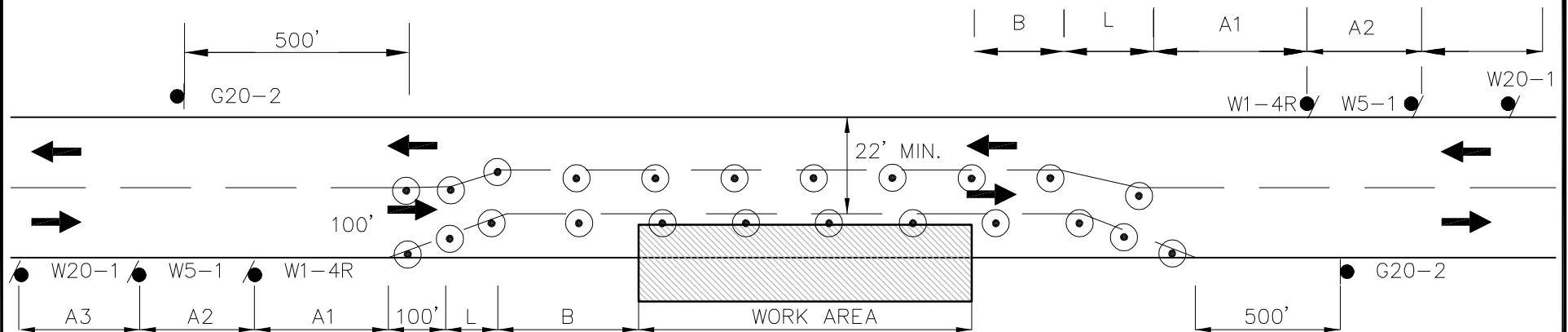
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 01570

**1570.6**



NOTES:

1. THIS DETAIL SHOWS A RIGHT LANE CLOSURE DETAIL. THIS DETAIL CAN ALSO BE USED FOR LEFT LANE CLOSURES, WITH SIGN PLACEMENT AND TYPE AS APPROPRIATE.

SPEED LIMIT (MPH)	SPACING FOR ADVANCE WARNING SIGNS (A1/A2/A3)	CHANNELIZING DEVICES			
		TRANSITION LENGTH (L)	BUFFER LENGTH (B)	DEVICE SPACING	MIN. #
25-40	500/500/500	320	160	20	90
45-55	500/1000/1000	680	360	40	90



## TYPICAL TWO-WAY STREET LANE SHIFT

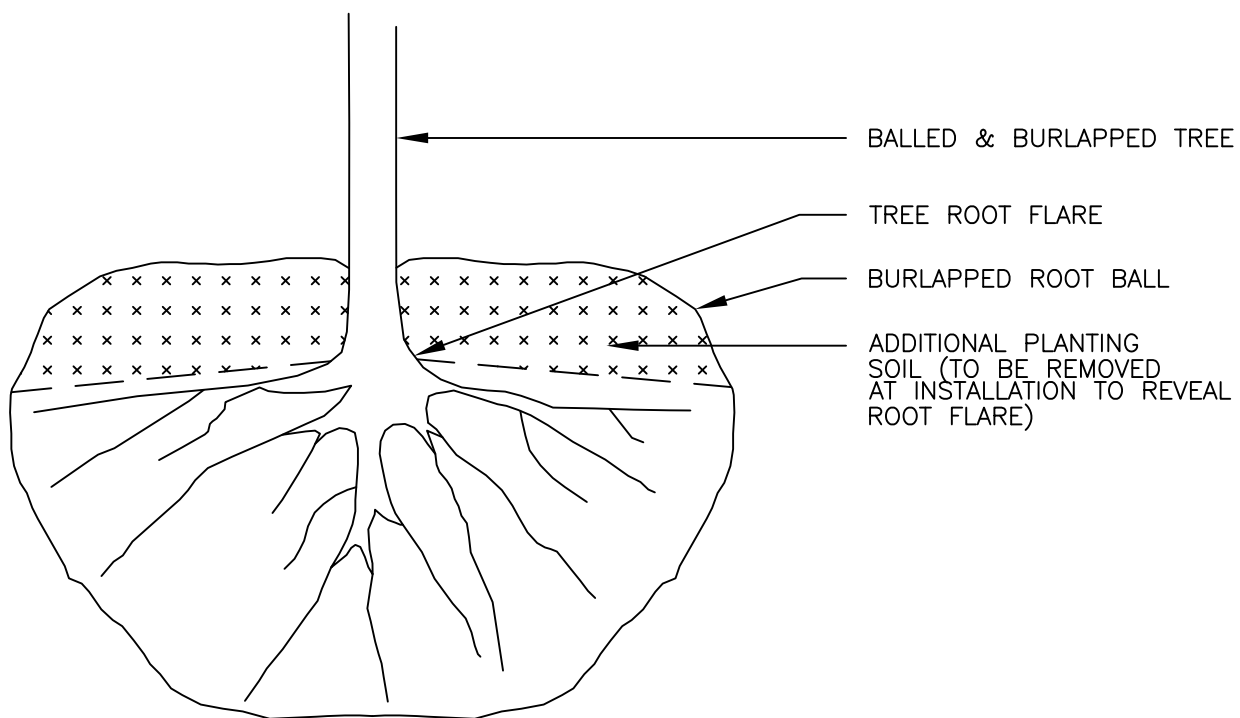
CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: N.T.S.

DATE  
OF ISSUE: 02/05

SPEC. SECTION REF#: 01570

1570.4



NOTE:  
TREE TO BE PLANTED WITH EXPOSED ROOT FLARE 1"–3" ABOVE FINISHED GRADE AT CURB

TREE CROWN AND TRUNK  
SHALL BE FREE OF DEFECTS  
AND TRUE TO FORM

TIE STRAPS FIRMLY AROUND  
TRUNK BUT STILL ALLOW  
MINOR TRUNK SWAY

ARBOR TIE OR OTHER  
WIDE, NON-ABRASIVE  
BELT STRAPPING

MULCH 2" DEPTH AT  
EDGE OF TREE WELL

TAPER TO 0" AT  
ROOT FLARE

FOR BALLED AND BURLAP  
TREES, CUT AND REMOVE  
BURLAP AND WIRE BASKET

PLACE ROOT BALL  
ON COMPACTED OR  
UNDISTURBED SOIL

#### NOTES:

- 4'-0" MIN. SIDEWALK WIDTH IS A REQUIREMENT OF THE CITY OF CAMBRIDGE
- TREES SHALL NOT BE PLANTED:
  - WITHIN 20' FROM THE CORNER OF INTERSECTING STREETS
  - WITHIN 10' FROM A LIGHT POLE
  - WITHIN 20' FROM STOP SIGNS
  - WITHIN 3' FROM UTILITIES
  - WITHIN 3' FROM HYDRANTS
  - WITHIN 3' FROM DRIVEWAYS
- \* SEE SPECIFICATIONS FOR COMPLETE LIST

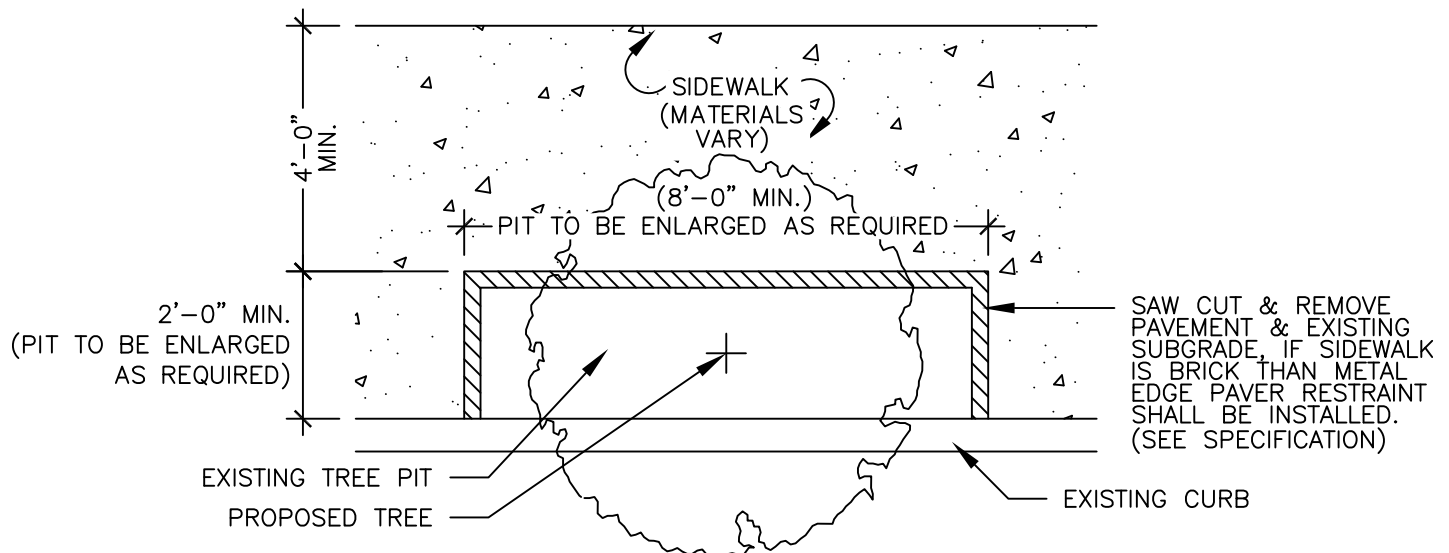
(2) 10'X2"X3" WOOD STAKES

PLANT TREE WITH  
EXPOSED ROOT FLARE 1"-3"  
ABOVE FINISHED GRADE AT  
CURB (SEE DETAIL #1 OF 6)

BACKFILL WITH  
APPROVED PLANTING SOIL  
(SEE SPECIFICATION)

SCARIFY & ROUGHEN  
PIT WALLS PRIOR TO  
PLANTING

SECTION



PLAN



### TREE PLANTING DETAIL (REPLACEMENT AT EXISTING TREE PIT)

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: NTS

DATE JANUARY  
OF ISSUE: 2022

SPEC. SECTION REF#: 02910

# 2 OF 6



TREE CROWN AND TRUNK SHALL BE FREE OF DEFECTS AND TRUE TO FORM

TIE STRAPS FIRMLY AROUND TRUNK BUT STILL ALLOW MINOR TRUNK SWAY

ARBOR TIE OR OTHER WIDE, NON-ABRASIVE BELT STRAPPING

MULCH 2" DEPTH AT EDGE OF TREE WELL

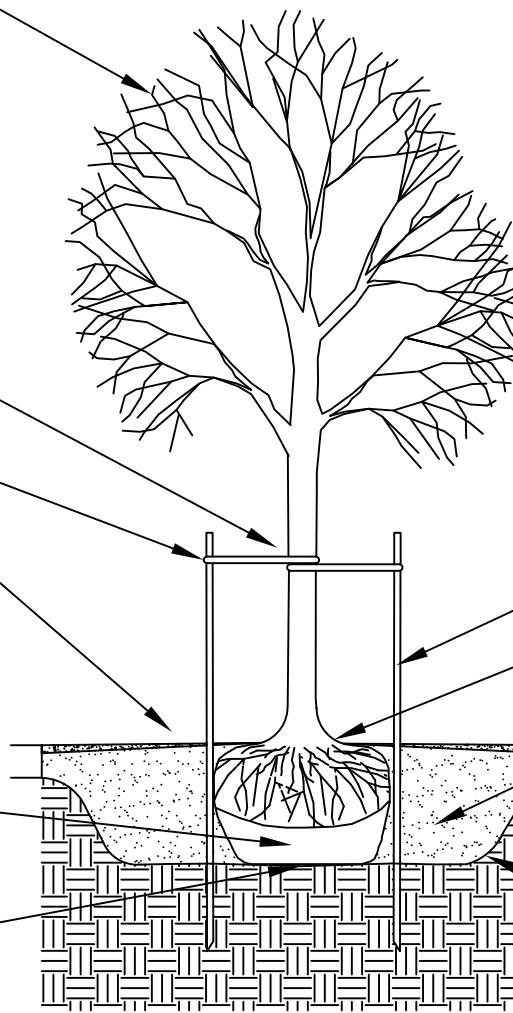
TAPER TO 0" AT ROOT FLARE

FOR BALLED AND BURLAP TREES, CUT AND REMOVE BURLAP AND WIRE BASKET

PLACE ROOT BALL ON COMPACTED OR UNDISTURBED SOIL

#### NOTES:

- 4'-0" MIN. SIDEWALK WIDTH IS A REQUIREMENT OF THE CITY OF CAMBRIDGE
- TREES SHALL NOT BE PLANTED:
  - WITHIN 20' FROM THE CORNER OF INTERSECTING STREETS
  - WITHIN 10' FROM A LIGHT POLE
  - WITHIN 20' FROM STOP SIGNS
  - WITHIN 3' FROM UTILITIES
  - WITHIN 3' FROM HYDRANTS
  - WITHIN 3' FROM DRIVEWAYS
- \* SEE SPECIFICATIONS FOR COMPLETE LIST



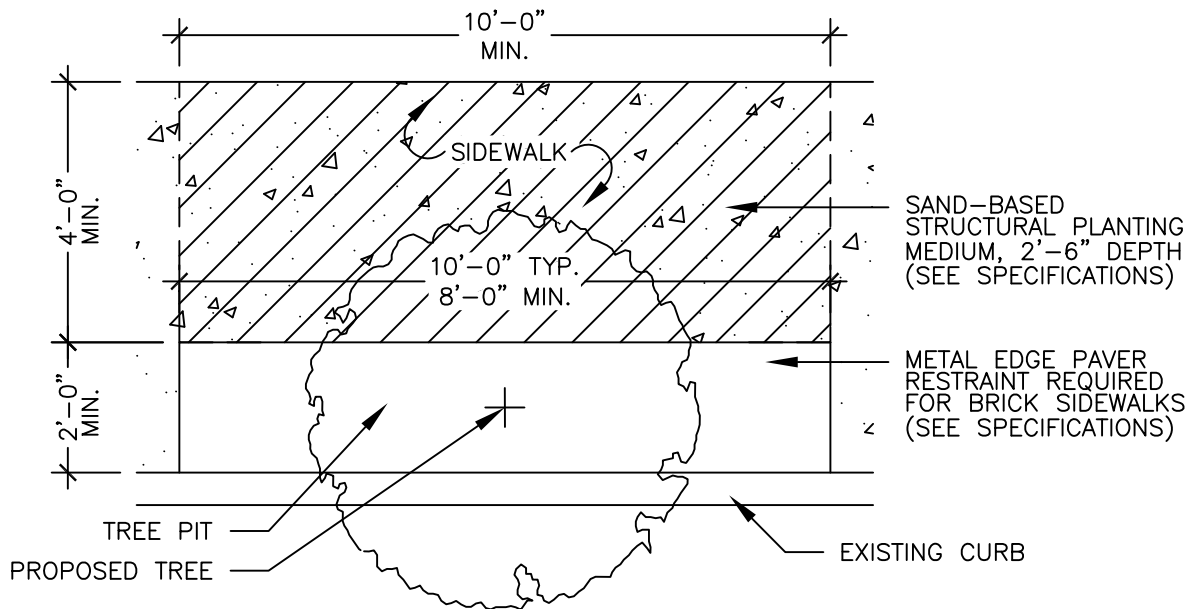
(2) 10'X2'X3" WOOD STAKES

PLANT TREE WITH EXPOSED ROOT FLARE 1"-3" ABOVE FINISHED GRADE AT CURB (SEE DETAIL #1 OF 6)

BACKFILL WITH APPROVED PLANTING SOIL (SEE SPECIFICATION)

SCARIFY & ROUGHEN PIT WALLS PRIOR TO PLANTING

#### SECTION



#### PLAN



#### TREE PLANTING DETAIL (6' SIDEWALK WIDTH)

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: NTS

DATE JANUARY  
OF ISSUE: 2022

SPEC. SECTION REF#: 02910

# 3 OF 6

TREE CROWN AND TRUNK  
SHALL BE FREE OF DEFECTS  
AND TRUE TO FORM

TIE STRAPS FIRMLY AROUND  
TRUNK BUT STILL ALLOW  
MINOR TRUNK SWAY

ARBOR TIE OR OTHER  
WIDE, NON-ABRASIVE  
BELT STRAPPING

MULCH 2" DEPTH AT  
EDGE OF TREE WELL

TAPER TO 0" AT  
ROOT FLARE

FOR BALLED AND BURLAP  
TREES, CUT AND REMOVE  
BURLAP AND WIRE BASKET

PLACE ROOT BALL  
ON COMPACTED OR  
UNDISTURBED SOIL

#### NOTES:

- 4'-0" MIN. SIDEWALK WIDTH IS A REQUIREMENT OF THE CITY OF CAMBRIDGE
- TREES SHALL NOT BE PLANTED:  
WITHIN 20' FROM THE CORNER OF INTERSECTING STREETS  
WITHIN 10' FROM A LIGHT POLE  
WITHIN 20' FROM STOP SIGNS  
WITHIN 3' FROM UTILITIES  
WITHIN 3' FROM HYDRANTS  
WITHIN 3' FROM DRIVEWAYS
- \* SEE SPECIFICATIONS FOR COMPLETE LIST

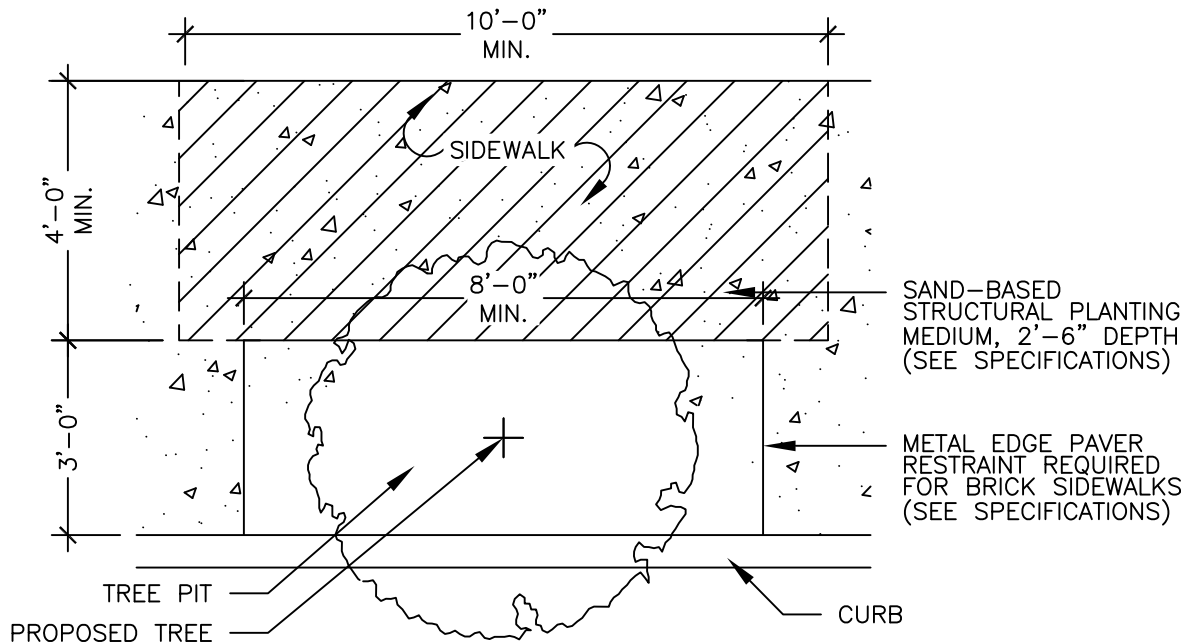
(2) 10'X2"X3" WOOD STAKES

PLANT TREE WITH  
EXPOSED ROOT FLARE 1"-3"  
ABOVE FINISHED GRADE AT  
CURB (SEE DETAIL #1 OF 6)

BACKFILL WITH  
APPROVED PLANTING SOIL  
(SEE SPECIFICATION)

SCARIFY & ROUGHEN  
PIT WALLS PRIOR TO  
PLANTING

SECTION



PLAN



### TREE PLANTING DETAIL (7' SIDEWALK WIDTH)

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: NTS

DATE JANUARY  
OF ISSUE: 2022

SPEC. SECTION REF#: 02910

# 4 OF 6

TREE CROWN AND TRUNK SHALL BE FREE OF DEFECTS AND TRUE TO FORM

TIE STRAPS FIRMLY AROUND TRUNK BUT STILL ALLOW MINOR TRUNK SWAY

ARBOR TIE OR OTHER WIDE, NON-ABRASIVE BELT STRAPPING

MULCH 2" DEPTH AT EDGE OF TREE WELL

TAPER TO 0" AT ROOT FLARE

FOR BALLED AND BURLAP TREES, CUT AND REMOVE BURLAP AND WIRE BASKET

PLACE ROOT BALL ON COMPACTED OR UNDISTURBED SOIL

#### NOTES:

- 4'-0" MIN. SIDEWALK WIDTH IS A REQUIREMENT OF THE CITY OF CAMBRIDGE
- TREES SHALL NOT BE PLANTED:
  - WITHIN 20' FROM THE CORNER OF INTERSECTING STREETS
  - WITHIN 10' FROM A LIGHT POLE
  - WITHIN 20' FROM STOP SIGNS
  - WITHIN 3' FROM UTILITIES
  - WITHIN 3' FROM HYDRANTS
  - WITHIN 3' FROM DRIVEWAYS
- \* SEE SPECIFICATIONS FOR COMPLETE LIST

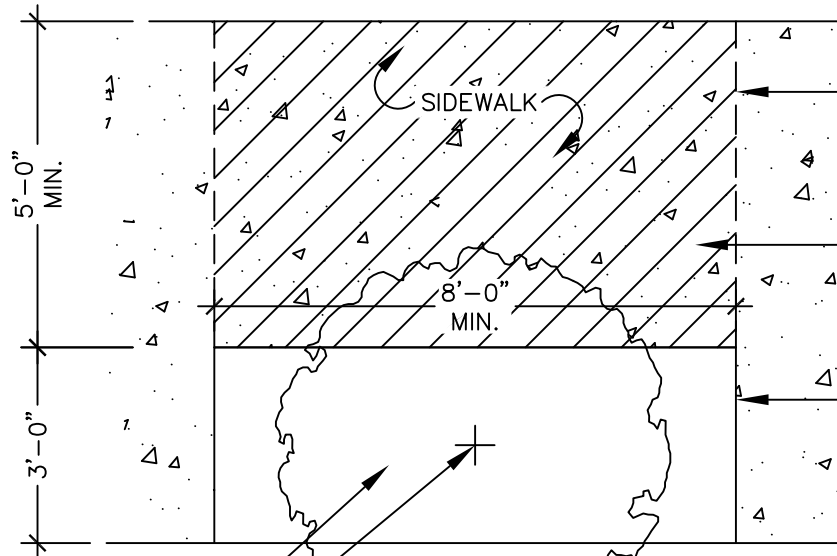
(2) 10'X2"X3" WOOD STAKES

PLANT TREE WITH EXPOSED ROOT FLARE 1"-3" ABOVE FINISHED GRADE AT CURB (SEE DETAIL #1 OF 6)

BACKFILL WITH APPROVED PLANTING SOIL (SEE SPECIFICATION)

SCARIFY & ROUGHEN PIT WALLS PRIOR TO PLANTING

#### SECTION



LIMITS OF STRUCTURAL PLANTING MEDIUM ALIGNED WITH EDGES OF TREE PIT

SAND-BASED STRUCTURAL PLANTING MEDIUM, 2'-6" DEPTH (SEE SPECIFICATIONS)

METAL EDGE PAVER RESTRAINT REQUIRED FOR BRICK SIDEWALK (SEE SPECIFICATIONS)

#### PLAN

TREE PIT  
PROPOSED TREE



#### TREE PLANTING DETAIL (8' SIDEWALK WIDTH)

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: NTS

DATE: JANUARY 2022  
OF ISSUE:

SPEC. SECTION REF#: 02910

# 5 OF 6

TREE CROWN AND TRUNK SHALL BE FREE OF DEFECTS AND TRUE TO FORM

TIE STRAPS FIRMLY AROUND TRUNK BUT STILL ALLOW MINOR TRUNK SWAY

ARBOR TIE OR OTHER WIDE, NON-ABRASIVE BELT STRAPPING

MULCH 2" DEPTH AT EDGE OF TREE WELL

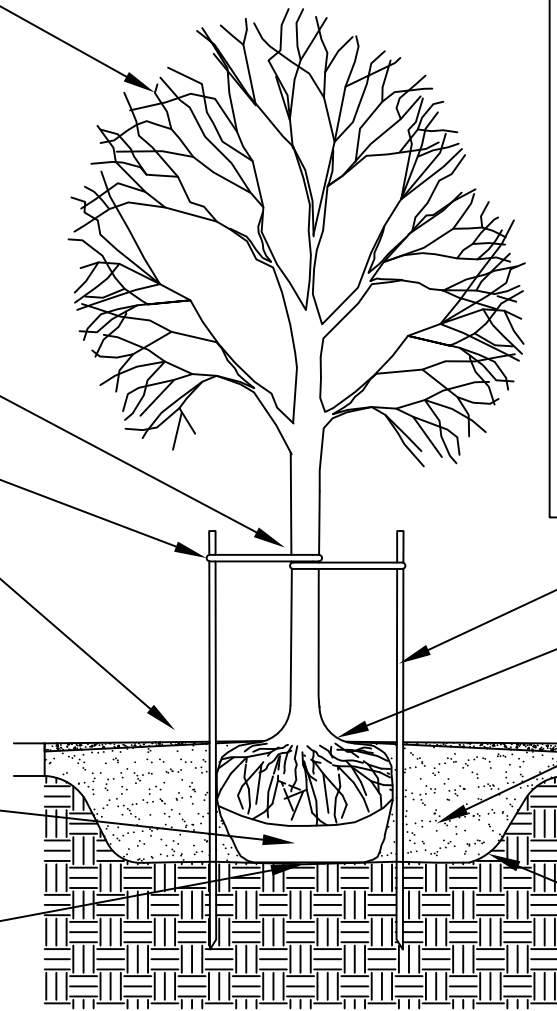
TAPER TO 0" AT ROOT FLARE

FOR BALLED AND BURLAP TREES, CUT AND REMOVE BURLAP AND WIRE BASKET

PLACE ROOT BALL ON COMPACTED OR UNDISTURBED SOIL

#### NOTES:

- 4'-0" MIN. SIDEWALK WIDTH IS A REQUIREMENT OF THE CITY OF CAMBRIDGE
- TREES SHALL NOT BE PLANTED:
  - WITHIN 20' FROM THE CORNER OF INTERSECTING STREETS
  - WITHIN 10' FROM A LIGHT POLE
  - WITHIN 20' FROM STOP SIGNS
  - WITHIN 3' FROM UTILITIES
  - WITHIN 3' FROM HYDRANTS
  - WITHIN 3' FROM DRIVEWAYS
- \* SEE SPECIFICATIONS FOR COMPLETE LIST



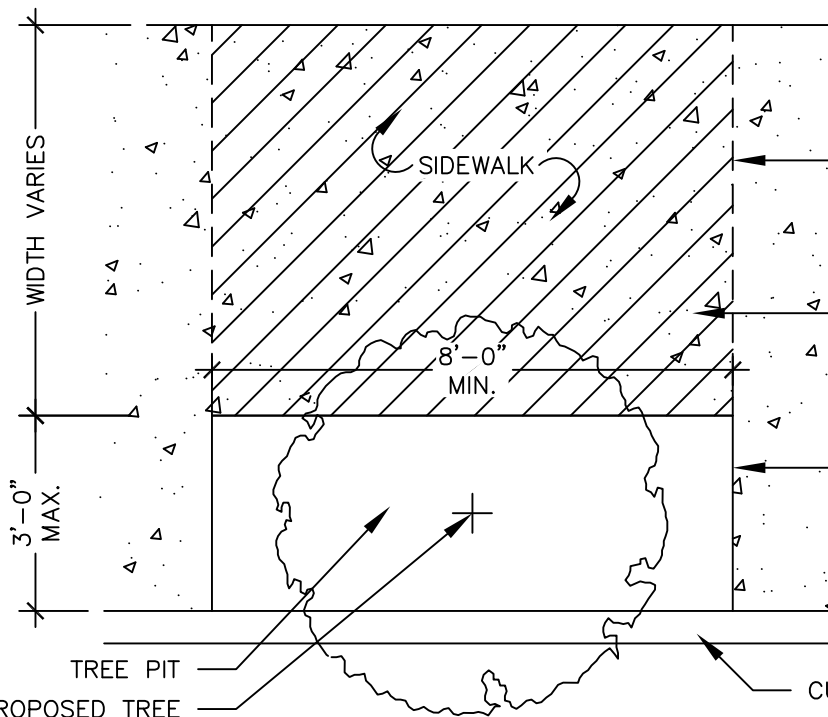
(2) 10'X2"X3" WOOD STAKES

PLANT TREE WITH EXPOSED ROOT FLARE 1"-3" ABOVE FINISHED GRADE AT CURB (SEE DETAIL #1 OF 6)

BACKFILL WITH APPROVED PLANTING SOIL (SEE SPECIFICATION)

SCARIFY & ROUGHEN PIT WALLS PRIOR TO PLANTING

#### SECTION



LIMITS OF STRUCTURAL PLANTING MEDIUM ALIGNED WITH EDGES OF TREE PIT

SAND-BASED STRUCTURAL PLANTING MEDIUM, 2'-6" DEPTH (SEE SPECIFICATIONS)

METAL EDGE PAVER RESTRAINT REQUIRED FOR BRICK SIDEWALKS (SEE SPECIFICATIONS)

#### PLAN



#### TREE PLANTING DETAIL (>8' SIDEWALK WIDTH)

CITY OF CAMBRIDGE STANDARD SPECIFICATIONS AND DETAILS

SCALE: NTS

DATE: JANUARY 2022  
OF ISSUE:

SPEC. SECTION REF#: 02910

# 6 OF 6