

TOWN OF FAIRHAVEN, MASSACHUSETTS

HEDGE STREET – PHASE III/IV

ROADWAY IMPROVEMENT PROJECT

DECEMBER 1, 2020

PUBLIC WORKS DEPARTMENT

VINCENT FURTADO, BPW SUPERINTENDENT
 JOHN M. CHARBONNEAU, HIGHWAY SUPERINTENDENT
 LINDA L. SCHICK, SEWER SUPERINTENDENT
 JEFF FURTADO, WATER SUPERINTENDENT

DIRECTOR OF PLANNING & ECONOMIC DEVELOPMENT

PAUL CASEY, PLANNING & ECONOMIC DEVELOPMENT DIRECTOR

TOWN HALL ADDRESS

40 CENTER STREET
 FAIRHAVEN, MA 02719

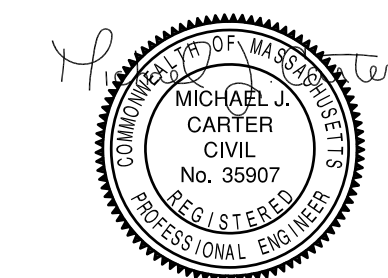


IMAGE OBTAINED FROM: "OFFICE OF GEOGRAPHIC AND ENVIRONMENTAL INFORMATION (MASSGIS), COMMONWEALTH OF MASSACHUSETTS"

LOCUS PLAN
 SCALE : 1" = 1,000'±

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12/01/2020

ABBREVIATIONS

ACP	ASBESTOS CEMENT PIPE
BBC	BITUMINOUS BERM CURB
BLDG	BUILDING
BND	BOUND
BIT	BITUMINOUS
BM	BENCH MARK
BOL	BOLLARD
BRK	BRICK
CB	CATCH BASIN
CS	COMBINED SEWER
C	CONDUIT
CL	CENTERLINE
CIP	CAST IRON PIPE
CMP	CORRUGATED METAL PIPE
CSMH	COMBINED SEWER MANHOLE
CST	COBBLESTONE
CULV	CULVERT
CO	COUNTY
CONC	CONCRETE
C.L.D.I.	CONC. LINED DUCTILE IRON
CLF	CHAIN LINK FENCE
DI	DUCTILE IRON PIPE
DR	DRIVE
DMH	DRAIN MANHOLE
EMH	ELECTRIC MANHOLE
EX	EXISTING
FAB	FIRE ALARM BOX
EOP	EDGE OF PAVEMENT
EOR	EDGE OF GRAVEL ROAD
FDMH	FIRE DEPT. MANHOLE
GAR	GARAGE
G	GAS LINE
GBC	GRANITE BLOCK CURB
GI	GUTTER INLET
GD	GROUND
GV	GAS VALVE
HW	HEADWALL
HSE	HOUSE
HOR	HORIZONTAL
HYD	HYDRANT
HP	HIGH PRESSURE
L	LEAD
LP	LIGHT POLE
MB	MAIL BOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
NG	NATURAL GAS
PE	POLYETHYLENE PIPE
PROP	PROPOSED
PL	APPROXIMATE PROPERTY LINE
RCP	REINFORCED CONCRETE PIPE
RET WALL	RETAINING WALL
ROW	APPROXIMATE RIGHT OF WAY
RR	RAILROAD
SB	STONE BOUND
SN	SIGN
SMH	SEWER MANHOLE
STA	STATION
S	SEWER LINE
SS	SEWER SERVICE
STL	STEEL
SW	SIDEWALK
TMH	TELEPHONE MANHOLE
T	TREE
TS	TRAFFIC SIGN
TYP	TYPICAL
UP	UTILITY POLE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
W	WATER MAIN
WALK	WALKWAY
WG	WATER GATE
WD	WOOD
WIP	WROUGHT IRON PIPE
WMH	WATER MANHOLE
W	WATER SERVICE
WSO	WATER SERVICE SHUTOFF
WV	WATER VALVE

SYMBOLS

- THE FOLLOWING SYMBOLS ARE USED TO IDENTIFY UTILITY APPURTENANCES.
- THE SIZE AND TYPE IS NOTED ON THE PLANS ADJACENT TO THE SYMBOL.

	BENCHMARK
	BOUND
	BUILDING
	CATCH BASIN
	TREE
	BUSH OR SHRUB
	DRAIN MANHOLE
	FLARED END
	GAS VALVE
	HYDRANT
	LIGHTPOLE
	ROCK
	SEWER MANHOLE
	UTILITY POLE
	WATER VALVE
	SIGN

LINEWORK

EXISTING	PROPOSED	
		CONTOUR MAJOR
		CONTOUR MINOR
		CURB
		DRAIN LINE
		DRIVEWAY
		EDGE OF PAVEMENT
		GAS LINE
		SEWER LINE
		SIDEWALK
		WATER LINE

WATER SYSTEM NOTES

- LOCATION OF PROPOSED WATER MAINS AND APPURTENANCES MAY BE ALTERED IN THE FIELD BY THE ENGINEER TO SUIT FIELD CONDITIONS. THE CONTRACTOR SHALL EXCAVATE TEST PITS ALONG THE ALIGNMENT OF THE PROPOSED WATER MAIN AT A MINIMUM 20' SPACING TO DETERMINE THE LOCATION OF THE EXISTING WATER MAIN AND SERVICES AS REQUIRED BY THE ENGINEER AND PRIOR COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL PLAN AND PERFORM TEST PIT EXCAVATION WELL IN ADVANCE OF COMMENCING CONSTRUCTION TO ALLOW TIME TO REVIEW ACTUAL CONDITIONS ENCOUNTERED. TEST PITS NOT SPECIFICALLY IDENTIFIED SHALL BE EXCAVATED BY THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER. INCLUDE FOR PAYMENT UNDER THE UNCLASSIFIED EXCAVATION ITEM 4A.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING WATER SERVICES SHOWN ON THE PLAN AND BE RESPONSIBLE FOR LOCATING ANY ADDITIONAL SERVICES NOT SHOWN.
- EXISTING WATER SERVICE REPLACEMENT SHALL BE DONE ONCE THE PROPOSED WATER MAIN IS TESTED AND DISINFECTED.
- THE CONTRACTOR SHALL BRACE AND SUPPORT ALL UTILITIES CROSSED OR ADJACENT TO THE WATER MAIN CONSTRUCTION AS NECESSARY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL AFFECTED WATER CUSTOMERS, IN WRITING, OF SHUTTING OFF SERVICE AT LEAST TWO DAYS PRIOR TO SHUTDOWN. NOTICE CARDS WILL BE FURNISHED BY THE CONTRACTOR WHICH WILL INCLUDE THE HOURS OF SHUTDOWN AND NOTE THAT A TEMPORARY RUSTY WATER CONDITION MAY EXIST. NOTICE CARDS WILL ALSO HAVE SPACE FOR THE CONTRACTOR TO FILL IN THE SPECIFIC DATES FOR EACH SHUTDOWN. THE WORK SHALL BE SCHEDULED IN SECTIONS, AS APPROVED BY THE ENGINEER, AS IT IS NECESSARY TO ALLOW FOR COMPLETION OF THE WORK AND RESTORATION OF SERVICE TO THE CUSTOMER WITHIN THE TIMES SPECIFIED BY THE ENGINEER.
- THE CONTRACTOR SHALL SUPPORT UTILITY POLES WITHIN 10 FEET OF THE PROPOSED PIPE WORK OR AS DIRECTED BY THE ENGINEER. COST ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE PRICE OF MISCELLANEOUS WORK ITEM.
- PROPOSED FITTINGS AND VALVES SHALL BE RESTRAINED BY MJ RESTRAINTS (MEGALUG OR EQUAL).
- PROPOSED CORPORATION COCKS, CURB STOPS AND COPPER TUBING FOR EACH HOUSE SERVICE SHALL BE 3/4 INCH IN SIZE UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER.
- UNLESS OTHERWISE NOTED, THE PROPOSED WATER MAIN SHALL BE INSTALLED WITH A MINIMUM GROUND COVER OF FIVE FEET.
- THE EXISTING WATER SERVICES SHALL BE REPLACED TO THE PROPERTY LINE AND CURB STOP.
- PROPOSED WATER PIPE SHALL BE CEMENT LINED DUCTILE IRON (C.L.D.I.), CLASS 52.
- THE EXISTING WATER SYSTEM SHALL BE ABANDONED BY CLOSING VALVES, REMOVING VALVE BOXES AND HYDRANTS, CAPPING ALL PIPE ENDS, REMOVING THE TEMPORARY COUPLINGS AND CONNECTIONS UPON ACTIVATION OF THE PROPOSED WATER SYSTEM.
- ANY EXISTING WATER PIPE REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE PRICE OF THE ASSOCIATED PIPE ITEM.
- THE WATER MAINS ON MAIN AND ADAMS STREETS ARE CAST IRON.

ROADWAY RECONSTRUCTION NOTES

- ALL TRENCHES WILL BE MECHANICALLY COMPACTED AS DETERMINED BY THE ENGINEER. ALL TRENCHES WILL BE COMPACTED TO 95% COMPACTION. INCLUDE PAYMENT UNDER ASSOCIATED PIPE ITEMS.
- AFTER THE COMPACTION PROCESS IS COMPLETED, THE CONTRACTOR SHALL MAINTAIN TRENCH GRAVEL FLUSH TO EXISTING GRADE UNTIL TRENCH PAVING IS INSTALLED AS REQUIRED BY THE ENGINEER.
- THE CONTRACTOR WILL ALLOW THE TRENCHES TO SETTLE THE REQUIRED PERIOD (30 DAY MIN) AS STATED IN THE SPECIFICATIONS PRIOR TO RECLAIMING THE ENTIRE WIDTH OF THE STREET.
- PRIOR TO RECLAIMING STREET, THE CONTRACTOR SHALL COMPLETE ALL EXCAVATING AND PREPARING SUBGRADE REQUIRED TO GRADE THE RECLAIMED BASE TO THE PROPOSED PLAN AND PROFILE AND ALSO LOWER ALL CASTINGS AS SPECIFIED IN SECTION 02220 OF THE CONTRACT SPECIFICATIONS.
- THE CONTRACTOR SHALL FURNISH AND AND INSTALL OR REMOVE AND REPLACE SIGNS AS REQUIRED TO PERFORM THE PROPOSED WORK.
- THE CONTRACTOR SHALL BE PAID FOR WORK REQUIRED TO SUPPORT OR REMOVE AND REPLACE EXISTING STRUCTURES AND UTILITY LINES ADJACENT TO OR WITHIN THE LIMITS OF TRENCH EXCAVATION UNDER LUMP SUM ITEM NO. 7B (MISC. WORK).
- THE CONTRACTOR SHALL MAINTAIN ONE LANE OF TRAFFIC AT ALL TIMES DURING THE CONSTRUCTION, AND SHALL MAINTAIN ACCESS TO ALL RESIDENTIAL DRIVEWAYS AND ACCESS WAYS.
- THE CONTRACTOR SHALL RECLAIM THE ENTIRE WIDTH OF EXISTING PAVEMENT MATERIAL ON EACH STREET. THE LIMITS (EDGE OF PAVEMENT) OF THE EXISTING PAVED SURFACE ARE SHOWN IN THE PLAN VIEW OF THESE CONSTRUCTION DRAWINGS.
- AFTER PULVERIZING THE EXISTING IN PLACE ASPHALT AND UNDERLYING MATERIALS (TOTAL OF 16" DEPTH), THE CONTRACTOR SHALL PLACE, GRADE AND COMPACT THE EXISTING RECLAIMED BASE COURSE TO A 12" DEPTH AS SHOWN ON THE TYPICAL ROADWAY CROSS-SECTION PLAN TO ALLOW THE PLACEMENT OF A 2-1/2" INTERMEDIATE COURSE (SIC-12.5-TABLE 450.1) AND A 1-1/2" SURFACE COURSE (SSC-9.5-TABLE 450.1) AS SPECIFIED AND ACCORDING TO MASSDOT SECTION 450-"HOT MIX ASPHALT PAVEMENT".
- ALL PROPOSED CUTS AND FILLS REQUIRED TO GRADE THE RECLAIMED MATERIAL TO A 12" DEPTH SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 5B (RECLAIM ITEM).
- THE CONTRACTOR SHALL FINE GRADE THE EXISTING RECLAIMED BASE COURSE MATERIAL NO MORE THAN 24 HOURS PRIOR TO THE PLACEMENT OF THE 2 1/2" BASE COURSE PAVEMENT. ALL GRADING, COMPACTION AND DUST CONTROL ASSOCIATED WITH THE RECLAIMED BASE COURSE SHALL BE INCLUDED IN THE PRICE OF ITEM 4B (FINE GRADING).
- THE CONTRACTOR SHALL GRADE THE EXISTING RECLAIMED BASE COURSE MATERIAL TO MATCH PROPOSED CENTERLINE GRADE AS SHOWN ON THE PROPOSED PROFILE AND TO MEET THE PAVEMENT REQUIREMENTS SHOWN ON THE TYPICAL ROADWAY CROSS SECTION PLAN.
- THE COSTS ASSOCIATED WITH THE EXCAVATION, PLACEMENT AND DISPOSAL OF SURPLUS SUBBASE MATERIAL SHALL BE INCLUDED IN THE PRICE OF THE RECLAIMED BASE COURSE ITEM 5B. SURPLUS SUBBASE MATERIAL IS THE PROPERTY OF THE CONTRACTOR. SEE SECTION 01025/02220, ITEM 5B OF THE CONTRACT SPECIFICATIONS.
- THE CONTRACTOR SHALL STOCKPILE AND RETAIN SUFFICIENT SURPLUS SUBBASE AND RECLAIMED PAVEMENT SUBBASE MATERIALS TO USE AS NEEDED IN THE ENTIRE PROJECT AREA. NO ADDITIONAL PAYMENT FOR PLACEMENT SHALL BE MADE UNDER ITEM 5B. SURPLUS SUBBASE AND RECLAIMED PAVEMENT SUBBASE MATERIAL SHALL BE USED ONSITE PRIOR TO GRAVEL BORROW MATERIAL.
- THE CONTRACTOR SHALL REMOVE AND REPLACE OR SUPPORT UTILITY POLES WITHIN 10 FEET OF THE PROPOSED PIPE CENTERLINE OR AS DIRECTED BY THE ENGINEER. INCLUDE ALL ASSOCIATED COSTS UNDER MISCELLANEOUS WORK ITEM.
- THE CONTRACTOR SHALL LOAM AND SEED ALL DISTURBED AREAS.
- THE ENGINEER IN THE FIELD SHALL DETERMINE WHICH DRIVEWAYS REQUIRE REMOVAL OF EXISTING PAVEMENT AND REPLACEMENT TO TRANSITION TO THE PROPOSED BACK OF SIDEWALK.
- ALL WORK REQUIRED TO LOWER, RAISE, AND EXTEND THE EXISTING CASTINGS & VALVE BOXES TO THE PROPOSED FINISH GRADE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 5B. ALL WATER AND GAS GATE BOXES SHALL BE REPLACED TO THE VALVE AND PAID UNDER THE ASSOCIATED ITEM.
- ALL CASTINGS, GATE BOXES, ETC. DAMAGED BY THE CONTRACTOR DURING RECONSTRUCTION SHALL BE SUPPLIED AND REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

STOCKPILED EXCAVATED MATERIALS

- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING A LOCATION FOR STAGING AND STORING STOCKPILED MATERIALS.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF LOCATION AND ANY PRIVATE AGREEMENTS AND ALL FEES THAT MAY BE ASSOCIATED WITH THE USE OF AN AREA FOR STORING STOCKPILED MATERIALS.
- THE TOWN OF FAIRHAVEN IS NOT RESPONSIBLE FOR PROVIDING A LOCATION FOR STAGING OR STORAGE OF STOCKPILED MATERIAL.
- NO EQUIPMENT SHALL BE ALLOWED TO BE PARKED ON THE ROAD WHEN NOT IN USE.
- STOCKPILED SUITABLE EXCAVATED MATERIAL SHALL BE USED ONSITE FOR SUITABLE TRENCH BACKFILL AND OTHER AREAS REQUIRING SUITABLE BACKFILL. NO ADDITIONAL PAYMENT SHALL BE MADE FOR THE PLACEMENT OF THIS MATERIAL.
- ALL SURPLUS EXCAVATED MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DISPOSE OF OFFSITE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

STOCKPILED EXCAVATED MATERIALS

- STOCKPILED SUITABLE EXCAVATED MATERIAL (EXCAVATED UNDER ITEM 5B) SHALL BE USED ONSITE FOR ROADWAY SUBGRADE, SIDEWALKS, MISCELLANEOUS DRIVEWAYS AND OTHER AREAS REQUIRING SUITABLE GRAVEL SUBBASE. NO ADDITIONAL PAYMENT SHALL BE MADE FOR THE PLACEMENT OF THIS MATERIAL.

RAISING CASTINGS

- PRIOR TO RECLAIMING THE EXISTING PAVEMENT, ALL CASTINGS SHALL BE REMOVED AND STORED FOR REUSE. STRUCTURES SHALL THEN BE PLATED AT A 16" MINIMUM DEPTH AND BRICK WORK REMOVED AND DISPOSED OF AS REQUIRED.
- ALL CASTINGS, CATCH BASINS AND WATER BOXES WILL BE RAISED TO BINDER GRADER AFTER PLACEMENT OF THE 2-1/2" BINDER PAVING COURSE. (SPRING XXXX CONSTRUCTION SEASON)
- ALL CASTINGS WILL BE RAISED TO FINISH GRADE PRIOR TO PLACEMENT OF THE 1-1/2" FINAL PAVING COURSE. (FALL XXXX CONSTRUCTION SEASON)

CONSTRUCTION SEQUENCE

- FALL XXXX INSTALL THE SANITARY SEWER SYSTEM, DRAINAGE SYSTEM, WATER SYSTEM, AND TRENCH PAVING AS REQUIRED.
- EARLY SPRING/SUMMER XXXX RECLAIM AND INSTALL 2-1/2" BINDER COURSE, SIDEWALKS AND PRECAST CONCRETE CURB ON HEDGE STREET AS SPECIFIED.
- FALL OF XXXX INSTALL 1-1/2" FINAL PAVING ON HEDGE STREET AS SPECIFIED.

MISCELLANEOUS AND DRAINAGE NOTES

- THE CONTRACTOR SHALL CUT JOINTS IN THE EXISTING PAVEMENT AREAS WHERE THE PROPOSED PAVEMENT SHALL MEET TO ALLOW A SMOOTH TRANSITION AFTER PAVING. ALL JOINTS SHALL BE SANDED AND SEALED. PAYMENT UNDER ASSOCIATED PAVING ITEM.
- THE CONTRACTOR WILL INSTALL ALL TEMPORARY SEDIMENTATION BARRIERS AS REQUIRED DURING CONSTRUCTION PHASING. INCLUDE FOR PAYMENT UNDER MISCELLANEOUS WORK ITEM.
- PAYMENT FOR REMOVING AND DISPOSING OF EXISTING MANHOLES, CATCH BASINS AND PIPE AS SPECIFIED AND SHOWN ON THE PLANS TO BE INCLUDED FOR PAYMENT THE ASSOCIATED ITEM.
- THE CONTRACTOR SHALL EXCAVATE TEST PITS ALONG THE ALIGNMENT OF THE PROPOSED DRAINAGE PIPE TO LOCATE THE EXISTING WATER AND GAS MAINS AND SERVICES AS REQUIRED BY THE ENGINEER AND PRIOR TO ORDERING THE DRAINAGE PIPE AND COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL PLAN AND PERFORM TEST PIT EXCAVATION WELL IN ADVANCE OF COMMENCING CONSTRUCTION TO ALLOW TIME TO REVIEW ACTUAL CONDITIONS ENCOUNTERED. TEST PITS NOT SPECIFICALLY IDENTIFIED SHALL BE EXCAVATED BY THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER. INCLUDE FOR PAYMENT UNDER THE UNCLASSIFIED EXCAVATION ITEM.
- EXISTING GRATES, FRAMES AND COVERS REMOVED OR REPLACED FROM THE WORK SHALL BE DELIVERED TO THE FAIRHAVEN DPW GARAGE BY THE CONTRACTOR. INCLUDE FOR PAYMENT UNDER MISC. WORK ITEM.
- REMOVAL AND DISPOSAL OF THE EXISTING POURED IN PLACE CONCRETE CURB REMOVED FROM THE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. INCLUDE FOR PAYMENT UNDER MISC. WORK ITEM.

FINE GRADING AND COMPACTING

- THE CONTRACTOR SHALL FINE GRADE AND COMPACT ALL AREAS IN PREPARATION FOR PAVEMENT, INCLUDING, BUT NOT LIMITED TO THE ROADWAY AREAS AND TRANSITION DRIVEWAY AREAS. THE CONTRACTOR SHALL ALSO STRAIGHT CUT ALL EXISTING JOINTS AND EDGES IN PREPARATION FOR FINAL PAVEMENT. PAYMENT UNDER ITEM 4B (FINE GRADING AND COMPACTION).
- PAYMENT FOR GRADING AND COMPACTING THE PROPOSED CONC. SIDEWALK, RAMPS, AND DRIVEWAY APRONS SHALL BE INCLUDED UNDER THE ASSOCIATED CONCRETE ITEM.

SEWER NOTES

- THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE LOCATION OF THE EXISTING SEWER SERVICES AT THE TOWN PROPERTY LINE FOR CONNECTION TO THE PROPOSED SEWER.
- ALL FITTINGS, ADAPTERS, COUPLINGS, CAPS, ETC. ASSOCIATED WITH THE PROPOSED SEWER AND DRAINAGE SYSTEM SHALL BE INCLUDED FOR PAYMENT IN THE ASSOCIATED PIPE ITEM.
- THE PROPOSED SEWER SERVICES ARE SHOWN IN THEIR APPROXIMATE LOCATION. THE EXACT LOCATION OF EACH SEWER SERVICE WILL BE DETERMINED BY THE ENGINEER AFTER TEST PITS ARE COMPLETED.
- THE SEWER SERVICE PIPE SHALL BE 6" SCH 35 PVC.
- THE EXISTING 8" VC SEWER MAIN ALONG HEDGE STREET SHALL REMAIN IN SERVICE DURING THE INSTALLATION OF THE PROPOSED 8" PVC AND SHALL BE BYPASS PUMPED BY THE CONTRACTOR DURING CONSTRUCTION.
- DURING CONSTRUCTION OF THE SEWER MAIN, THE CONTRACTOR SHALL MAKE TEMPORARY WATER TIGHT CONNECTIONS TO EXISTING SERVICES UNTIL SERVICES ARE REPLACED TO THE PROPERTY LINE.
- AFTER CONSTRUCTION OF THE PROPOSED SEWER MAIN AND MANHOLES IS COMPLETE, THE EXISTING SEWER SERVICES SHALL BE REPLACED WITH 6" SCH 35 PVC FROM THE PROPOSED SEWER MAIN TO THE PROPERTY LINE AND CLEAN OUT.

GENERAL NOTES

- PLANS AND TOPOGRAPHIC INFORMATION ARE PREPARED FROM GROUND SURVEY BY GCG ASSOCIATES, INC.
- THE LOCATIONS AND ELEVATIONS IN FEET SHOWN REFER TO MA STATE PLANE COORDINATE SYSTEM. (NAD 83 -NAVD 88)
- THE LOCATIONS OF SUBSURFACE UTILITIES AND STRUCTURES WERE OBTAINED FROM AVAILABLE TOWN AND UTILITY RECORDS. THE SIZE, TYPE AND LOCATION OF UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL PROPERLY LOCATE THE UTILITIES PRIOR TO THE BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN UTILITY INFORMATION BY CONTACTING DIGSAFE (811). THE CONTRACTOR SHALL EXCAVATE TEST PITS TO VERIFY UTILITY LINES. PAYMENT INCLUDED UNDER ITEM 4A (UNCLASSIFIED EXCAVATION).
- WATER MAINS ARE ASSUMED TO BE 5 FEET BELOW THE EXISTING GROUND SURFACE. GAS LINES ARE ASSUMED TO BE 3 FEET BELOW THE EXISTING GROUND SURFACE. TELEPHONE AND ELECTRIC CONDUIT ARE ASSUMED TO BE 2 FEET BELOW THE EXISTING GROUND SURFACE.
- LOCATION OF PROPOSED DRAINAGE SYSTEM MAY BE ALTERED IN THE FIELD BY THE ENGINEER TO SUIT FIELD CONDITIONS.
- THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A CONSTRUCTION SCHEDULE Delineating the SEQUENCE OF WORK, TRAFFIC MANAGEMENT PLAN AND ESTIMATED TIME OF COMPLETION OF EACH SEGMENT OF WORK, PRIOR TO THE COMMENCEMENT OF WORK.
- THE CONTRACTOR SHALL MAINTAIN CONTINUOUS TRAFFIC FLOW DURING CONSTRUCTION SATISFACTORY TO THE ENGINEER AND THE TOWN OF FAIRHAVEN. NO EQUIPMENT SHALL BE ALLOWED TO BE PARKED ON THE ROAD WHEN NOT IN USE. MATERIALS SHALL NOT BE STOCKPILED ON THE ROAD.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE RESTORATION AND CLEAN UP UPON COMPLETION OF THE PROJECT. PAYMENT ITEM 7B
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES AND PROCEDURES, AND FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH ALL WORK INCLUDED UNDER THIS CONTRACT. THE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL SAFETY BARRIERS, WARNING FLASHERS AND THE LIKE, AS REQUIRED BY THE CONDUCT OF THE WORK FOR THE PROTECTION OF WORKERS AND NON-WORKERS ALIKE. THE CONTRACTORS ATTENTION IS DIRECTED TO OSHA REQUIREMENTS.
- ALL CONSTRUCTION SIGNING SHALL CONFORM TO THE REQUIREMENTS OF THE STATE OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION (MASSDOT) AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- PRIOR TO THE PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT FOR REVIEW BY THE TOWN, A TRAFFIC MANAGEMENT PLAN IN COMPLIANCE WITH MASSDOT AND MUTCD. SAID PLAN WILL SHOW HOW TRAFFIC FLOW WILL BE HANDLED DURING CONSTRUCTION. PAYMENT ITEM 7C.
- THE CONTRACTOR SHALL BE PAID FOR WORK REQUIRED TO SUPPORT OR REMOVE AND REPLACE EXISTING STRUCTURES AND UTILITY LINES ADJACENT TO OR WITHIN THE LIMITS OF EXCAVATION UNDER LUMP SUM ITEM NO. 7B.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITY SERVICES AS SHOWN ON THE PLAN AND BE RESPONSIBLE FOR LOCATING ANY ADDITIONAL SERVICES NOT SHOWN.
- TRENCH DEWATERING COSTS THROUGHOUT THE DURATION OF THE PROPOSED PROJECT SHALL BE INCLUDED IN THE ASSOCIATED BID ITEMS. GROUNDWATER ELEVATION IS TO BE ASSUMED 3 FEET BELOW THE EXISTING GRADE FOR BIDDING PURPOSES.

TRENCH PAVING NOTES

- ALL TRENCHES SHALL BE SAW-CUT ONLY. NO OTHER METHOD OF CUTTING THE EXISTING PAVEMENT SHALL BE ACCEPTABLE. THIS WORK SHALL BE INCLUDED UNDER THE ASSOCIATED ITEM. NO SEPARATE PAYMENTS SHALL BE MADE FOR THIS CUTTING.
- THE CONTRACTOR SHALL INSTALL AND MAINTAIN A 2" MINIMUM THICKNESS, TEMPORARY TRENCH PAVING TO STABILIZE THE TRENCHES ON HEDGE STREET. INCLUDE FOR PAYMENT UNDER ITEM 5A.

TOWN OF FAIRHAVEN, MASSACHUSETTS
HEDGE STREET - PHASE III/IV

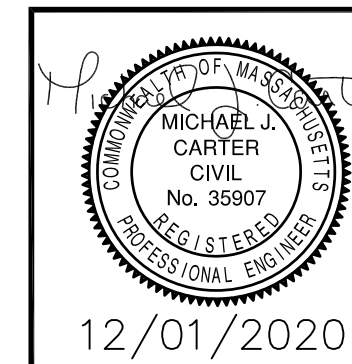
LEGEND & CONSTRUCTION NOTES

GCG ASSOCIATES, INC.

WILMINGTON MASSACHUSETTS

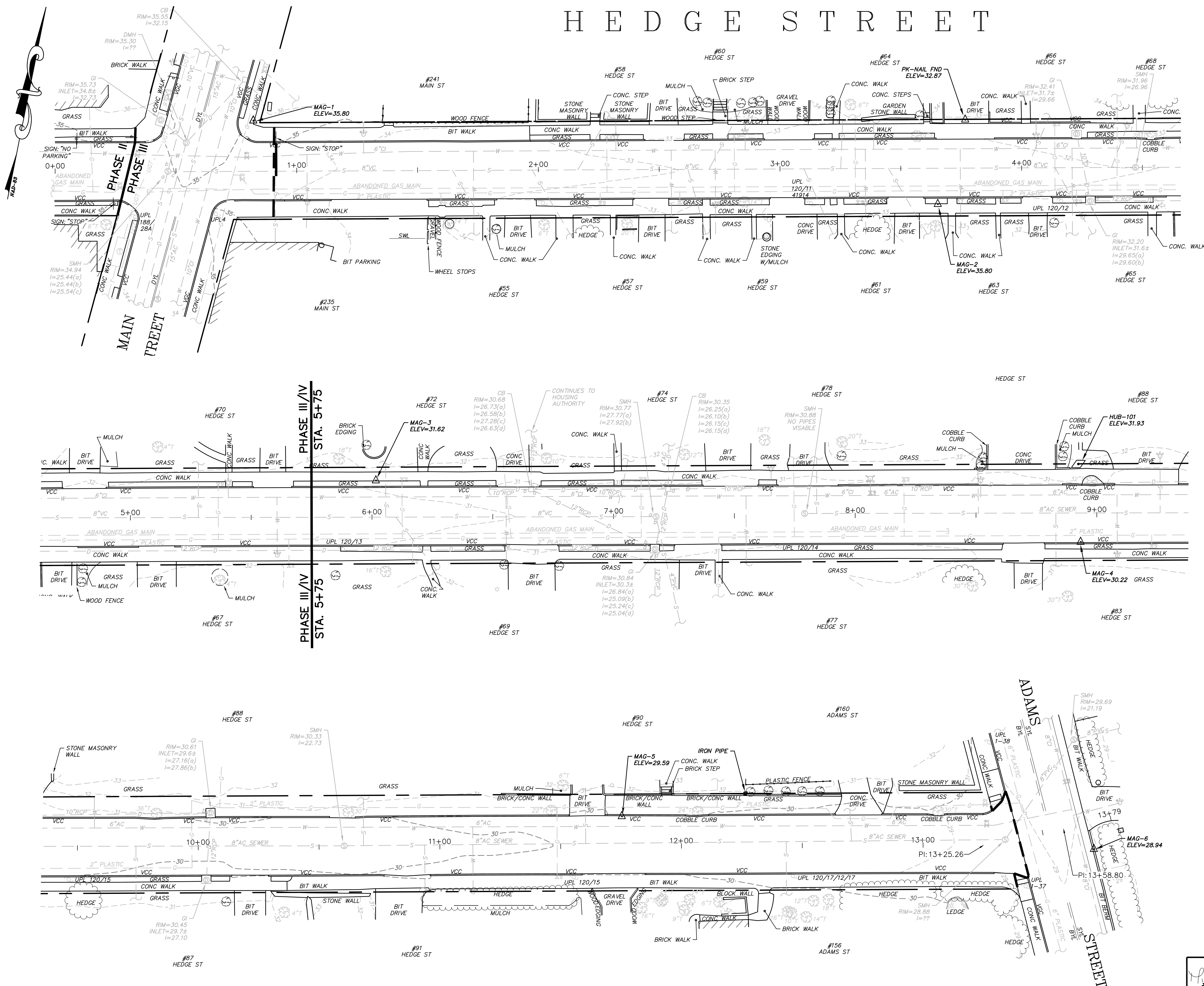
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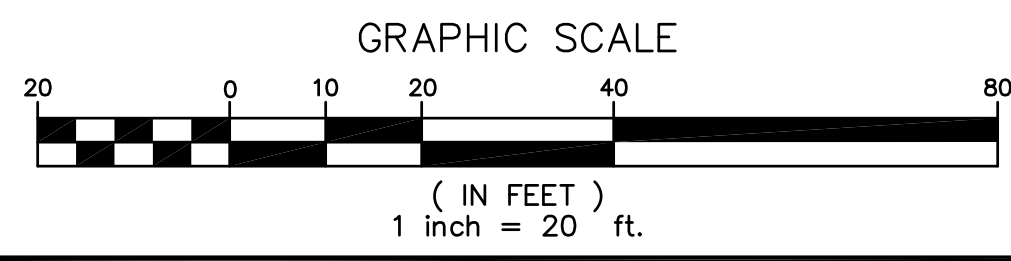


12/01/2020

HEDGE STREET



PLAN
SCALE: 1" = 20'



TOWN OF FAIRHAVEN, MASSACHUSETTS
HEDGE STREET - PHASE III/IV

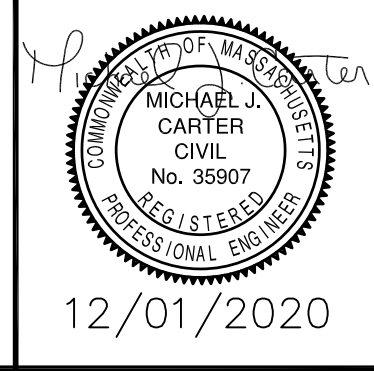
EXISTING CONDITIONS PLAN
STA 0+00 - STA 13+79

GCG ASSOCIATES, INC.

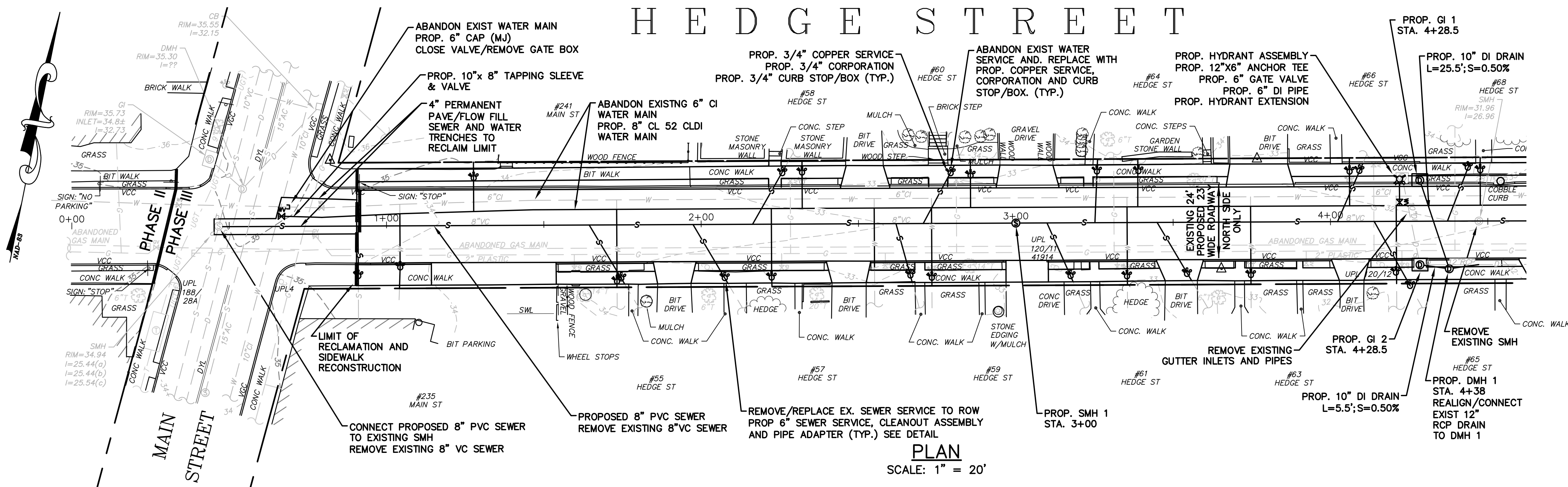
WILMINGTON MASSACHUSETTS

SCALE: 1" = 20' DATE: DECEMBER 1, 2020

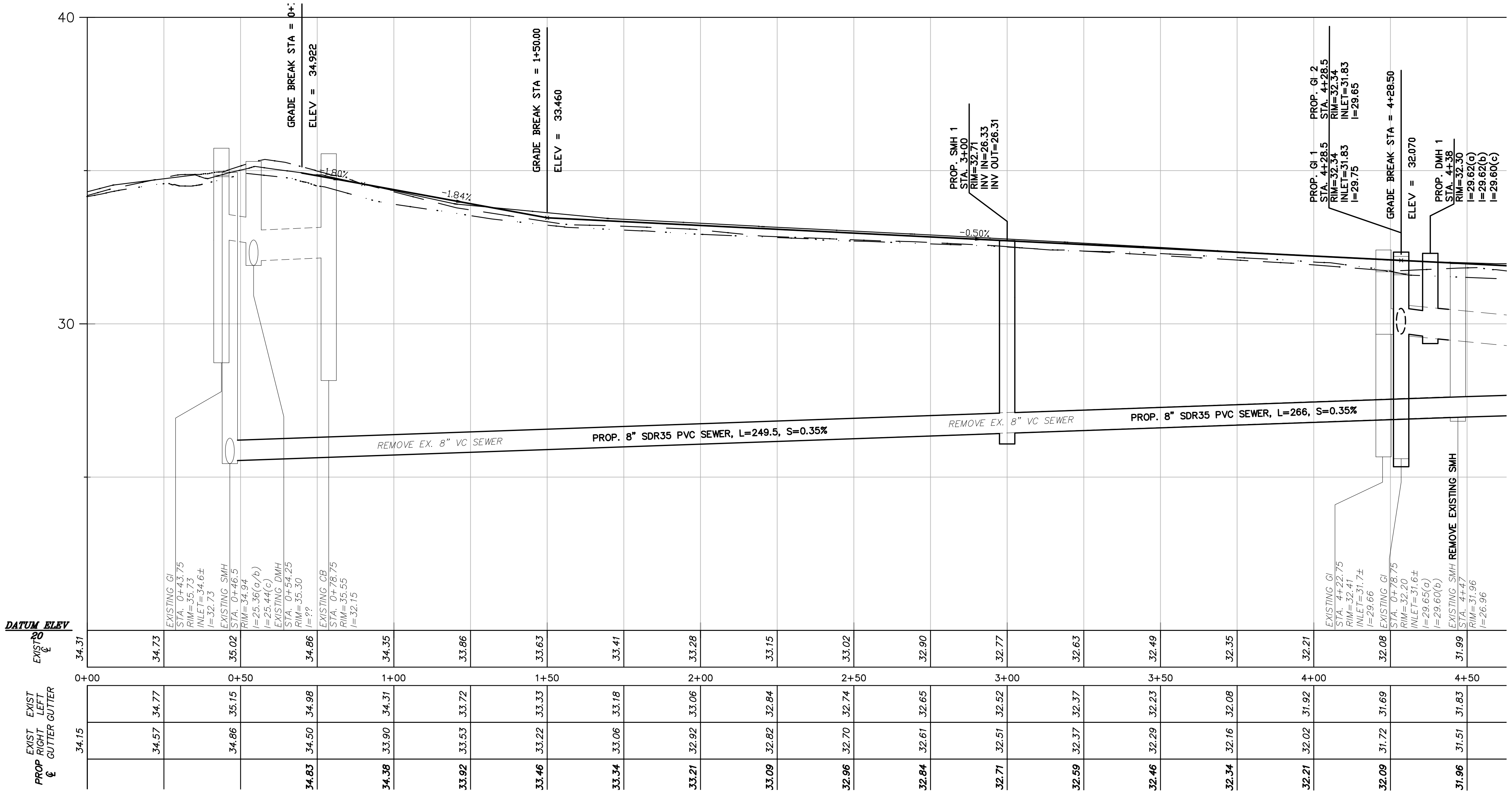
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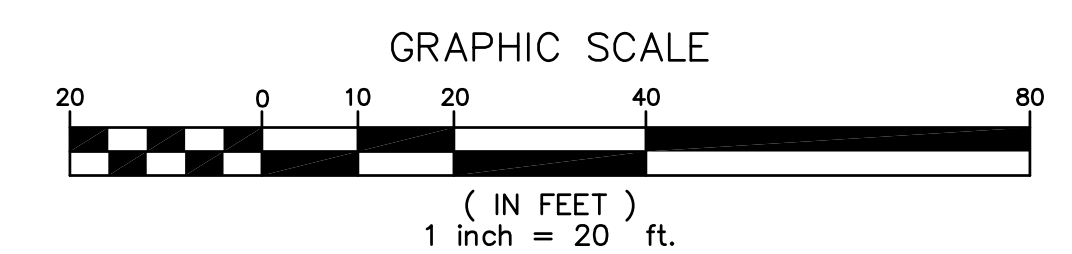
HEDGE STREET



PLAN
SCALE: 1" = 20'



- EXISTING CENTER LINE
- - - EXISTING LEFT GUTTER
- - - EXISTING RIGHT GUTTER
- - - EXISTING SEWER LINE
- - - EXISTING DRAIN LINE
- PROPOSED SEWER LINE



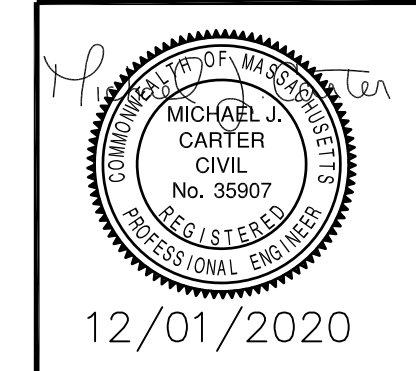
**TOWN OF FAIRHAVEN, MASSACHUSETTS
HEDGE STREET - PHASE III/IV**

**EXISTING CONDITIONS PLAN
STA 0+00 - STA 4+62**

GCG ASSOCIATES, INC.
WILMINGTON MASSACHUSETTS

SCALE: 1" = 20' DATE: DECEMBER 1, 2020

JOB NO. \FILE NAME:	DESIGNED BY: L.P.B.	PLAN NO.
	DRAWN BY: L.P.B.	4 OF 12
	CHECKED BY: M.J.C.	



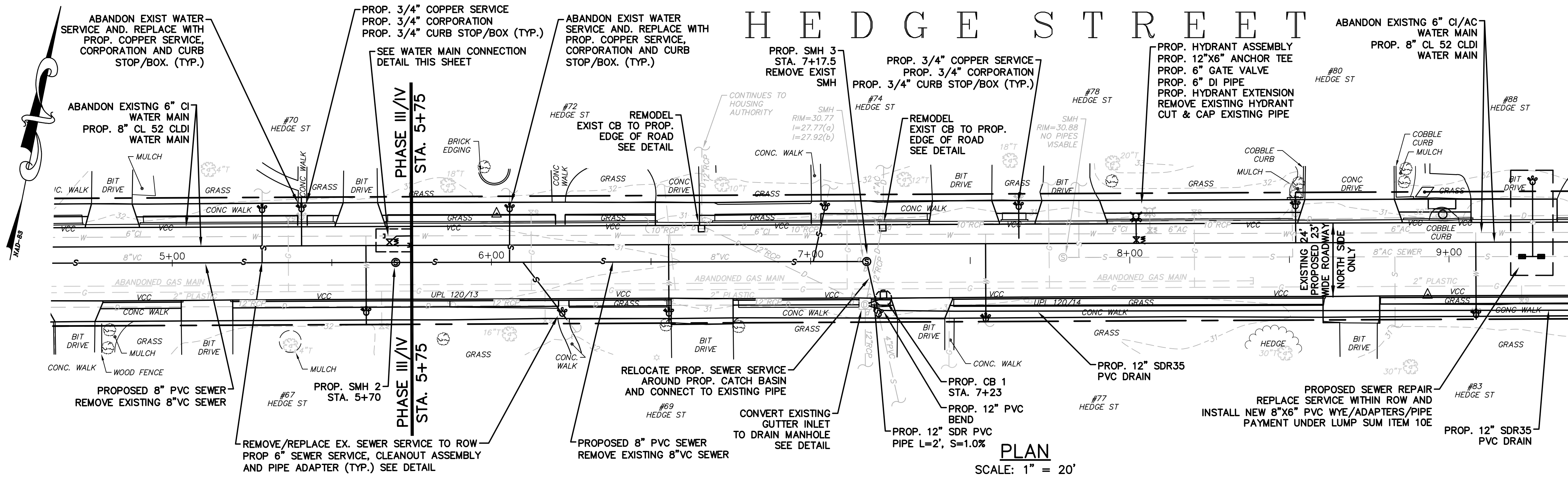
12/01/2020

PLAN
SCALE: 1" = 20' (HORIZONTAL)
SCALE: 1" = 2' (VERTICAL)

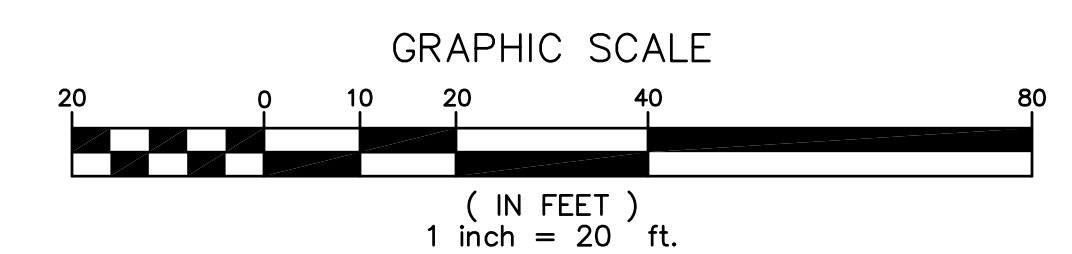
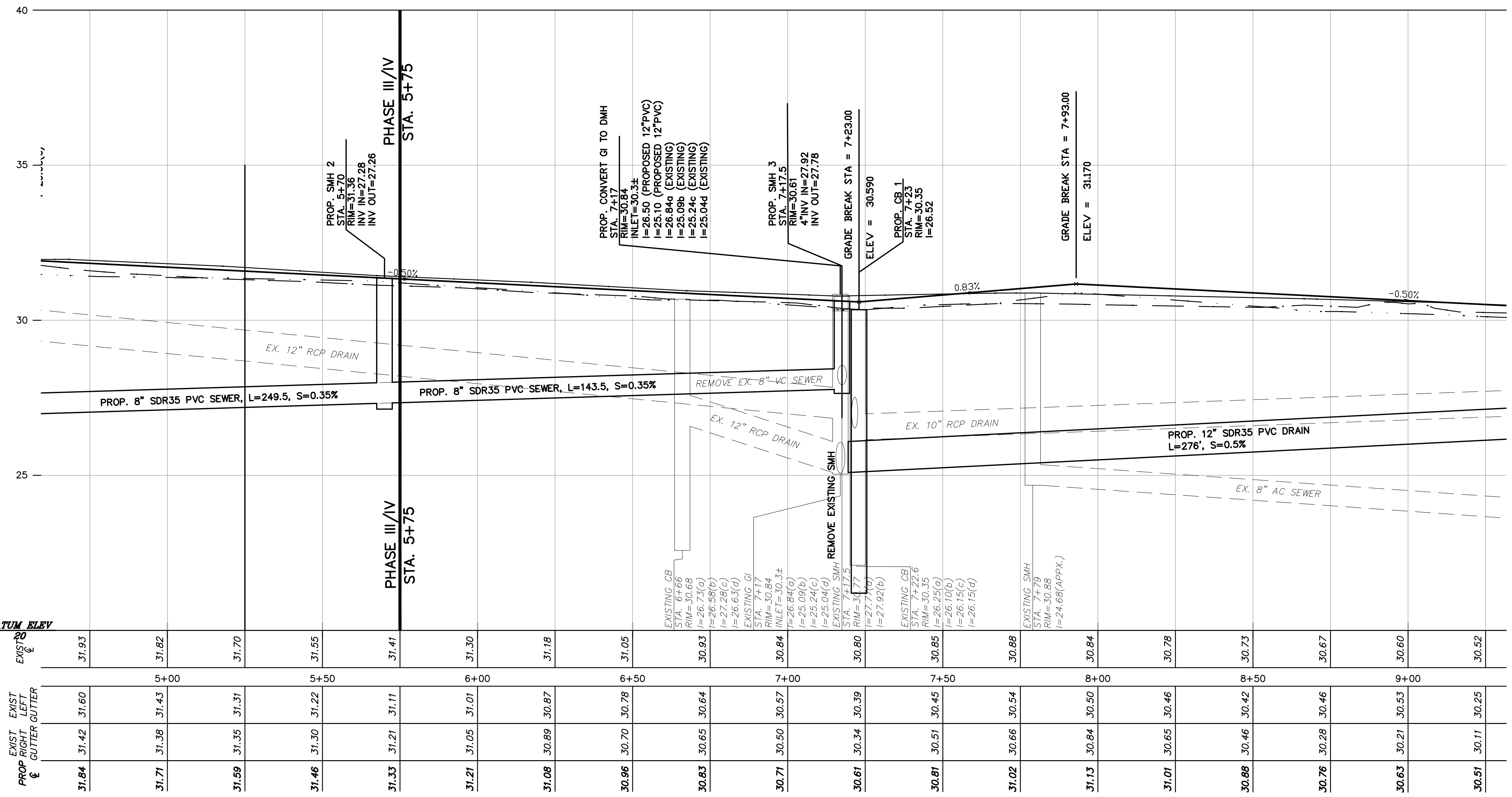
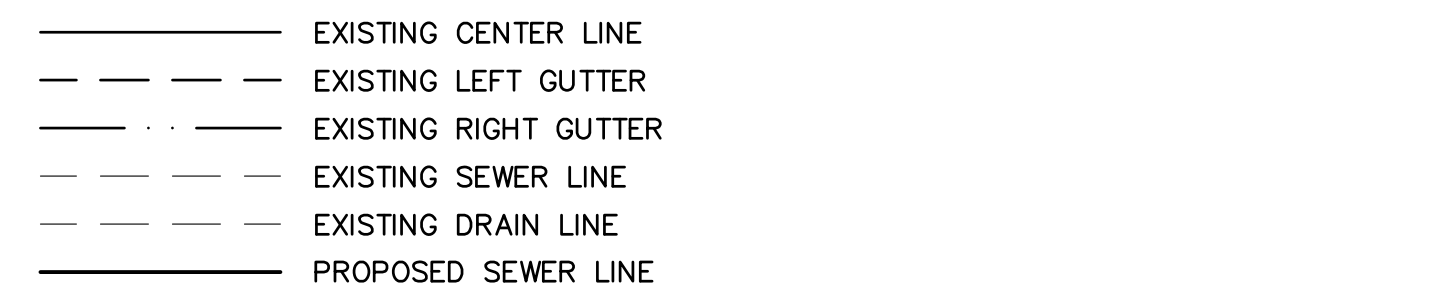
1996-WORKING

1996-WORKING

HEDGE STREET



PHASE III - WATER MAIN CONNECTION DETAIL
NOT TO SCALE



DATUM ELEV	EXIST ELEV	PROP. RIGHT GUTTER ELEV	PROP. LEFT GUTTER ELEV
20	31.93	31.84	31.60
		31.71	31.43
		31.59	31.31
		31.46	31.22
		31.33	31.11
	31.30	31.21	31.01
	31.18	31.08	30.87
	31.05	30.96	30.78
	30.93	30.83	30.64
	30.84	30.71	30.57
	30.80	30.61	30.39
		30.81	30.45
		31.02	30.66
		31.13	30.84
		31.01	30.65
		30.88	30.46
		30.63	30.21
		30.51	30.11
			30.25

PLAN
SCALE: 1" = 20' (HORIZONTAL)
SCALE: 1" = 2' (VERTICAL)

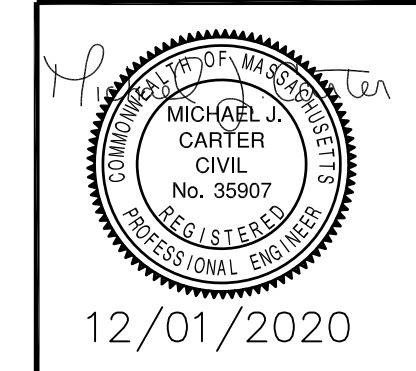
TOWN OF FAIRHAVEN, MASSACHUSETTS
HEDGE STREET - PHASE III/IV

EXISTING CONDITIONS PLAN
STA 4+62 - STA 9+30

GCG ASSOCIATES, INC.
WILMINGTON MASSACHUSETTS

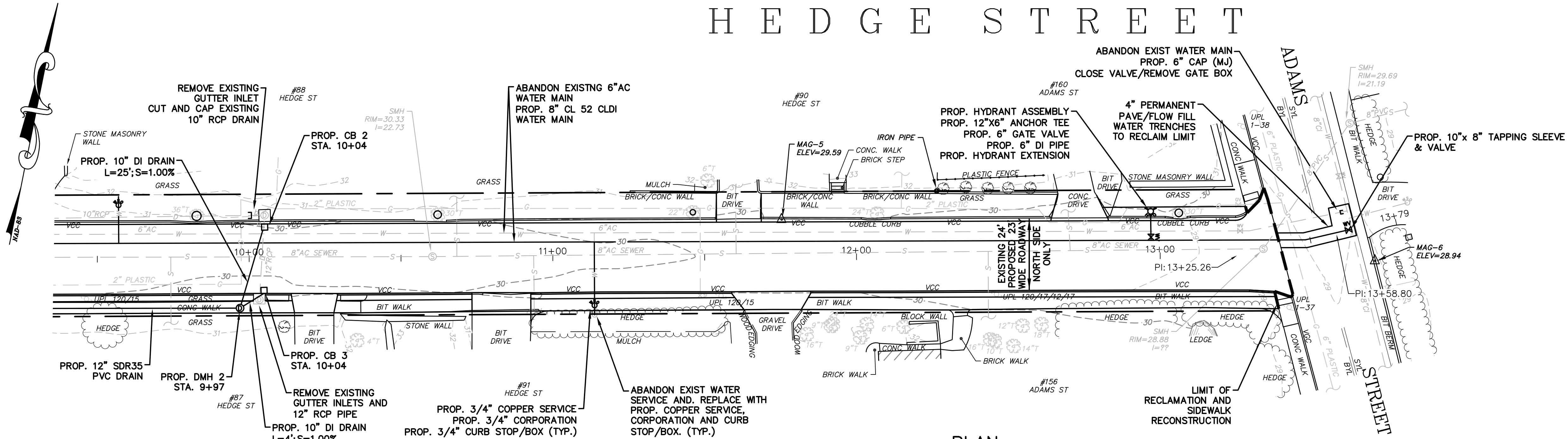
SCALE: 1" = 20' DATE: DECEMBER 1, 2020

JOB NO. \FILE NAME: 1996-WORKING DESIGNED BY: L.P.B. PLAN NO. 5 OF 12
DRAWN BY: L.P.B.
CHECKED BY: M.J.C.



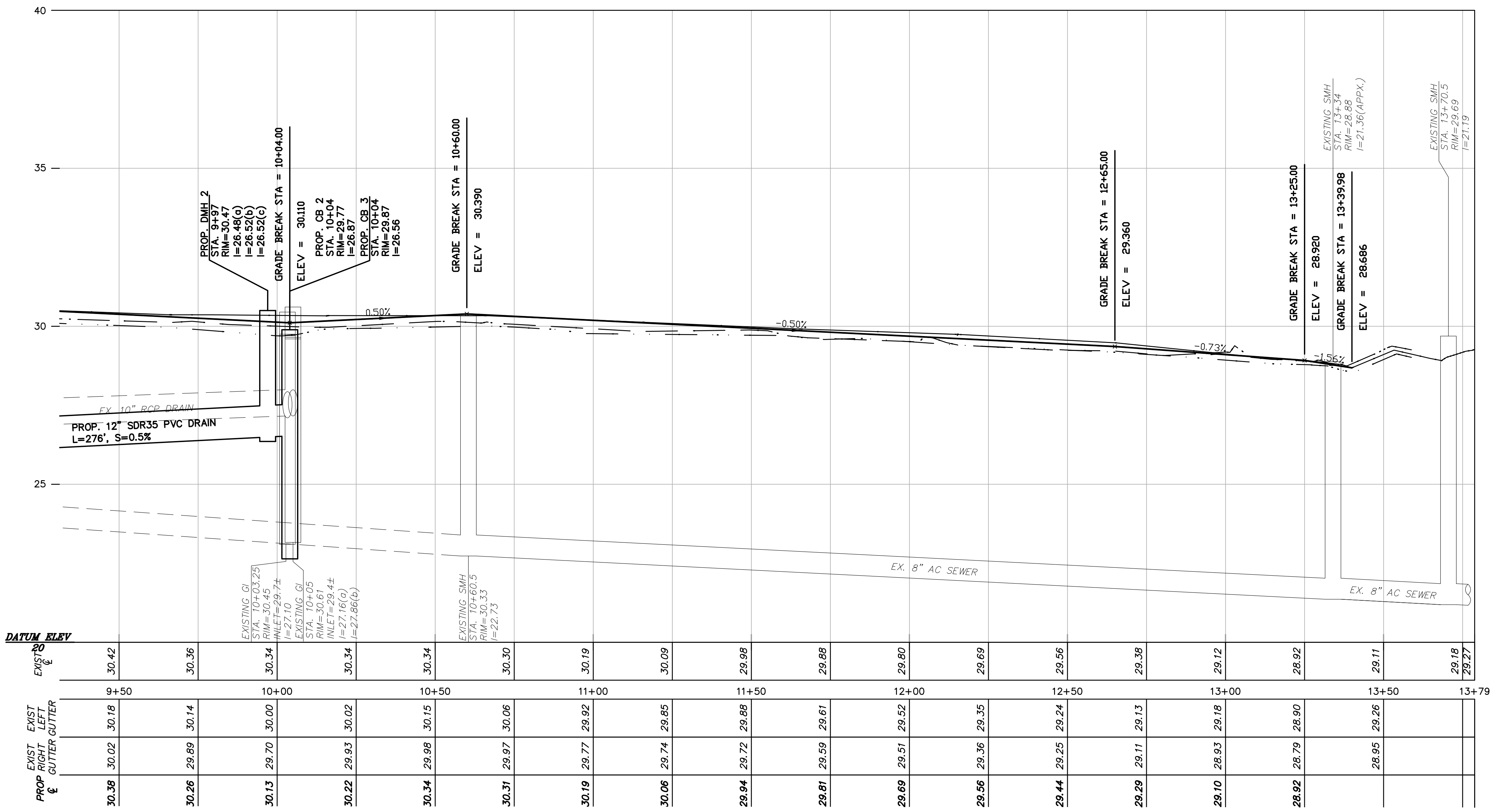
12/01/2020

HEDGE STREET



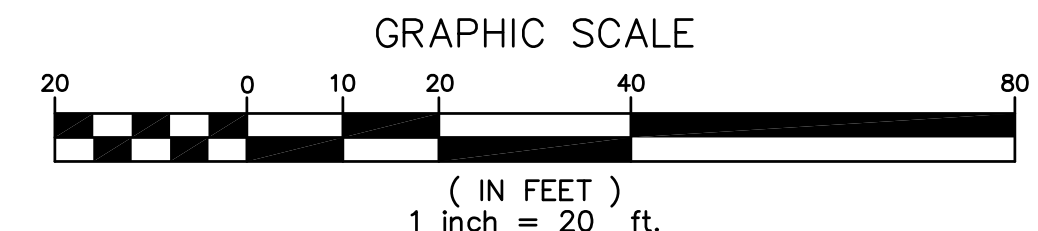
PLAN
SCALE: 1" = 20'

- EXISTING CENTER LINE
- - - EXISTING LEFT GUTTER
- - - EXISTING RIGHT GUTTER
- - - EXISTING SEWER LINE
- - - EXISTING DRAIN LINE
- PROPOSED SEWER LINE



DATUM ELEV																			
EXIST. 20'	30.42	30.36	30.34	30.34	30.34	30.30	30.19	30.09	29.98	29.88	29.80	29.69	29.56	29.38	29.12	28.92	29.11	29.18	29.27
EXIST. RIGHT GUTTER	9+50	10+00	10+50	11+00	11+50	12+00	12+50	13+00	13+50	13+79									
EXIST. LEFT GUTTER	30.18	30.14	30.00	30.02	30.06	29.92	29.85	29.88	29.61	29.52	29.35	29.24	29.13	29.18	28.90	29.26			
PROP. RIGHT GUTTER	30.38	30.26	30.13	30.22	30.34	30.31	30.19	30.06	29.94	29.81	29.69	29.56	29.44	29.29	29.10	28.92	29.26		

PLAN
SCALE: 1" = 20' (HORIZONTAL)
SCALE: 1" = 2' (VERTICAL)



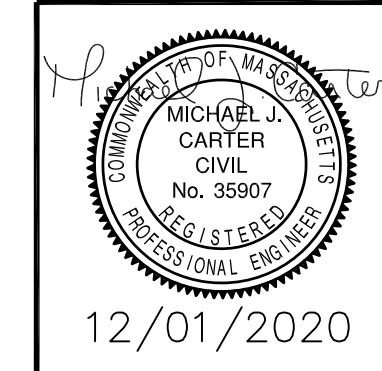
TOWN OF FAIRHAVEN, MASSACHUSETTS
HEDGE STREET - PHASE III/IV

PLAN & PROFILE
STA 9+30 - STA 13+79

GCG ASSOCIATES, INC.
WILMINGTON MASSACHUSETTS

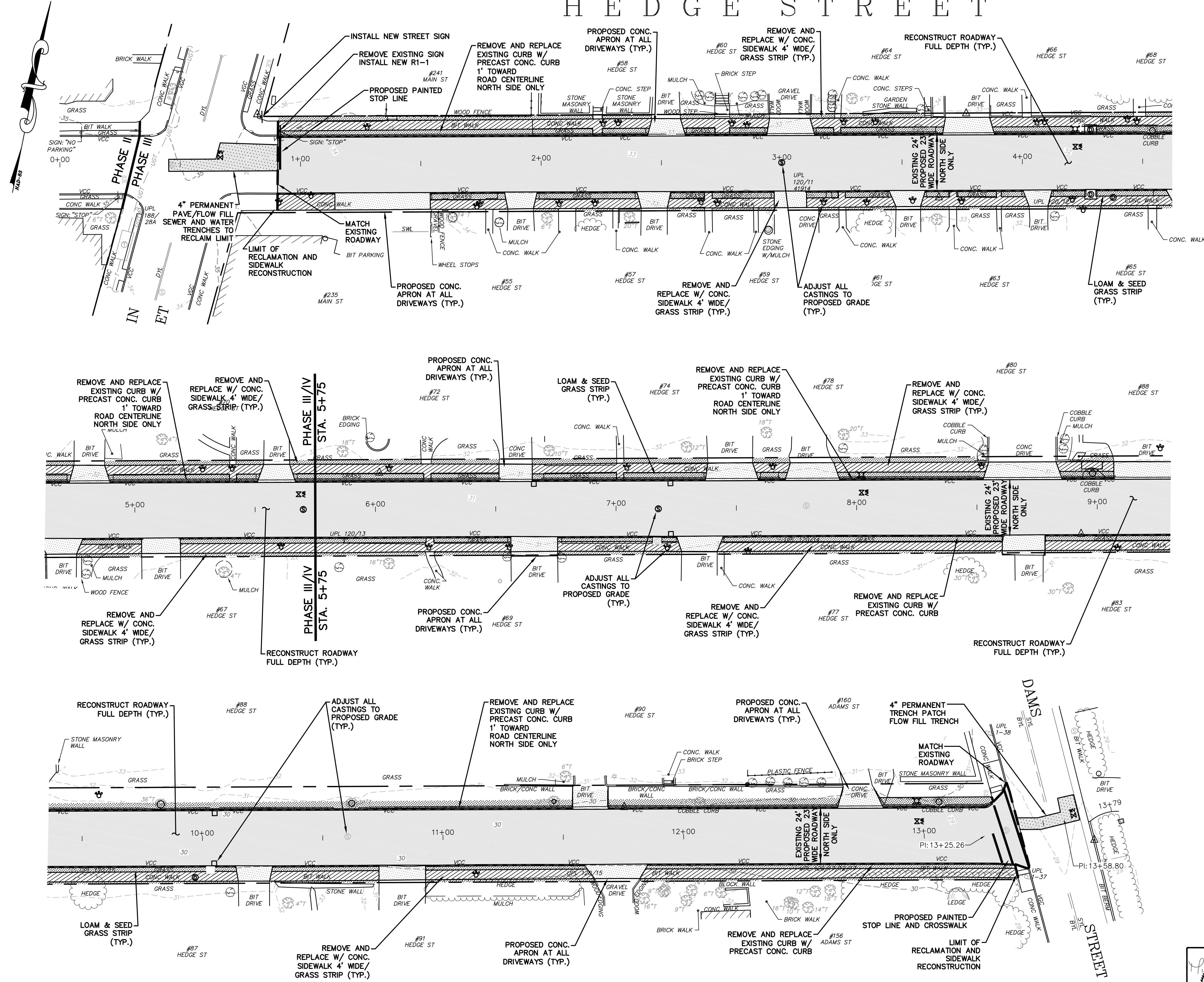
SCALE: 1" = 20' DATE: DECEMBER 1, 2020

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	DRAWN BY: L.P.B.	6 OF 12
	CHECKED BY: M.J.C.	



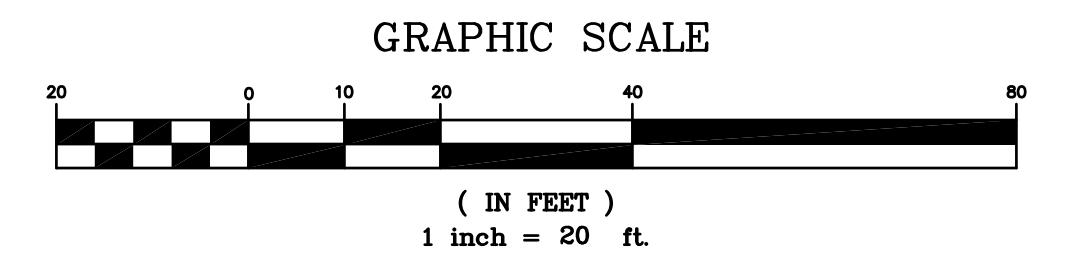
12/01/2020

HEDGE STREET



HATCH LEGEND

	REMOVE AND REPLACE SIDEWALK
	RECONSTRUCT DRIVEWAY APRON
	REMOVE AND REPLACE HANDICAP RAMP
	RECLAIM EXISTING PAVEMENT
	LOAM AND SEED
	REMOVE CONC. CURB REPLACE WITH PRECAST CONCRETE CURB



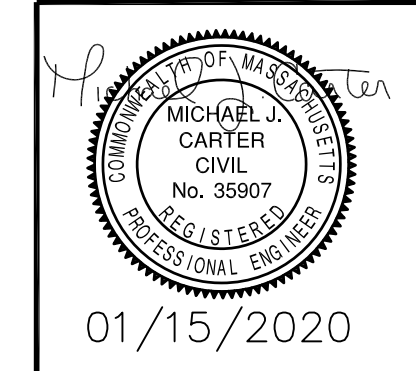
TOWN OF FAIRHAVEN, MASSACHUSETTS
HEDGE STREET - PHASE III/IV

SITE PLAN
STA 0+00 - STA 13+79

GCG ASSOCIATES, INC.
WILMINGTON MASSACHUSETTS

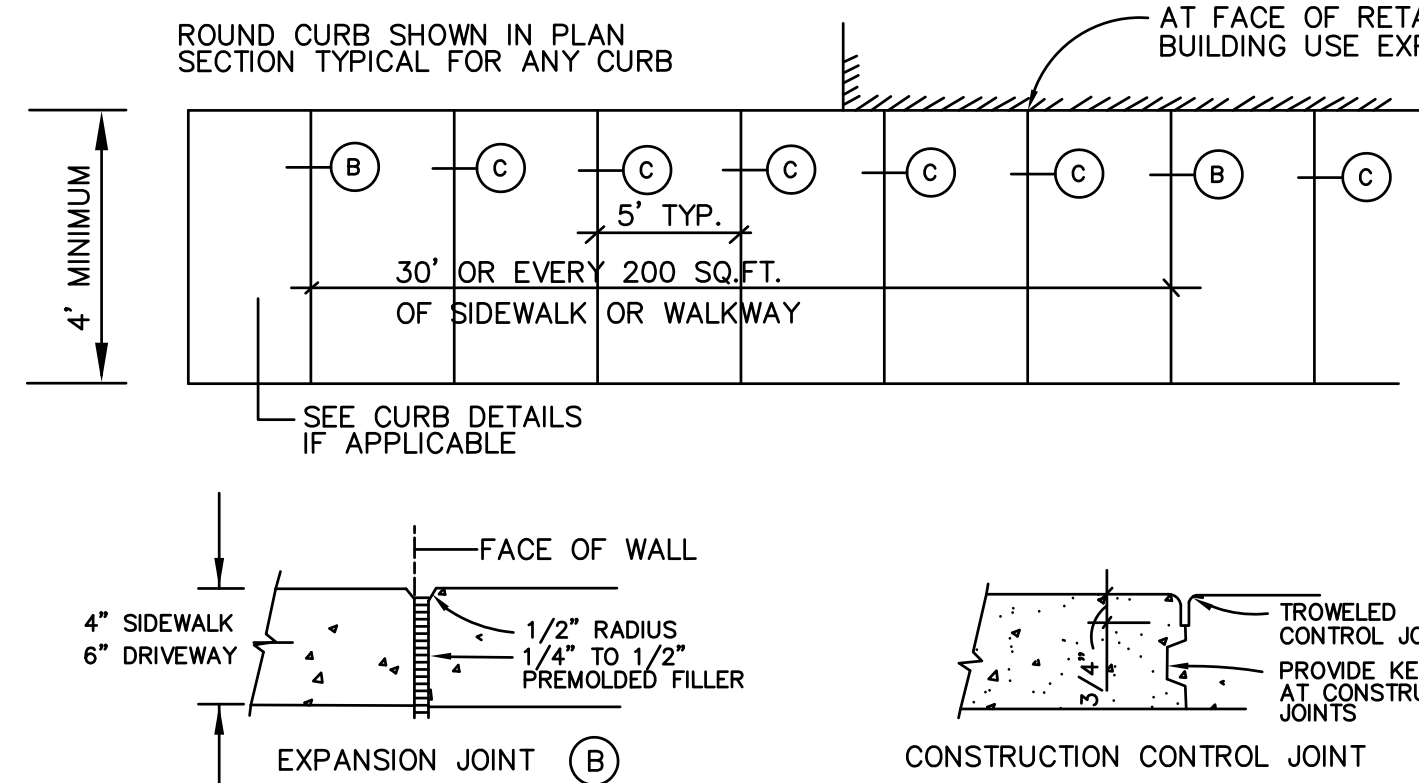
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JOB NO. FILE NAME:	DESIGNED BY: L.P.B.	PLAN NO.
1996-WORKING	DRAWN BY: L.P.B.	7 OF 12
	CHECKED BY: M.J.C.	

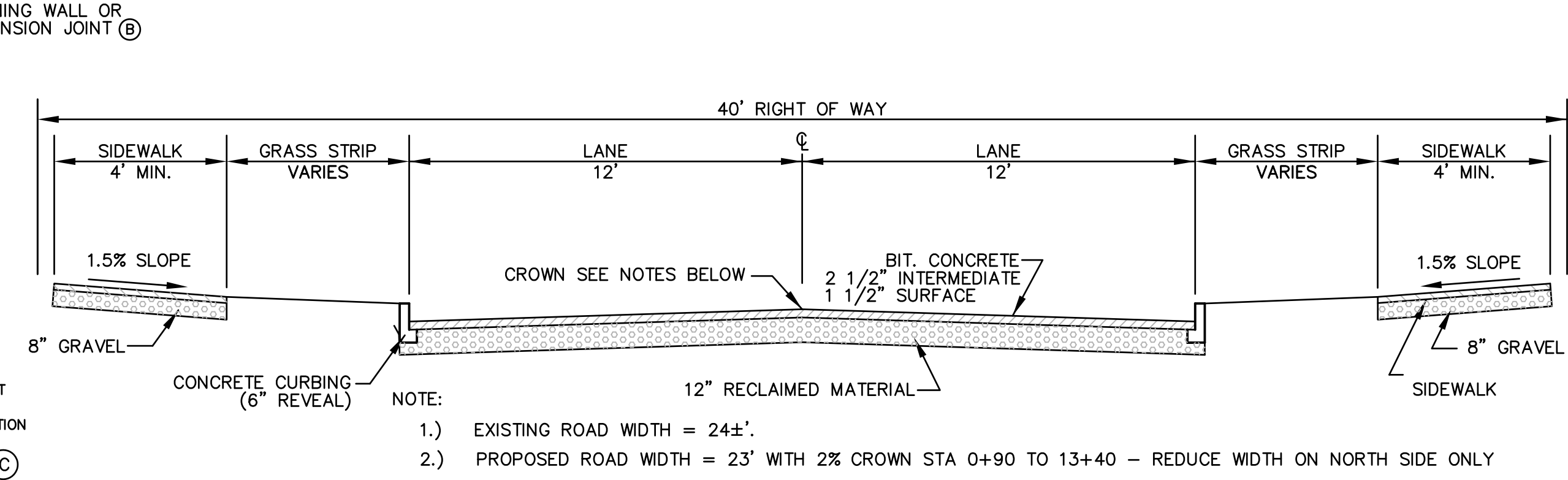


PLAN
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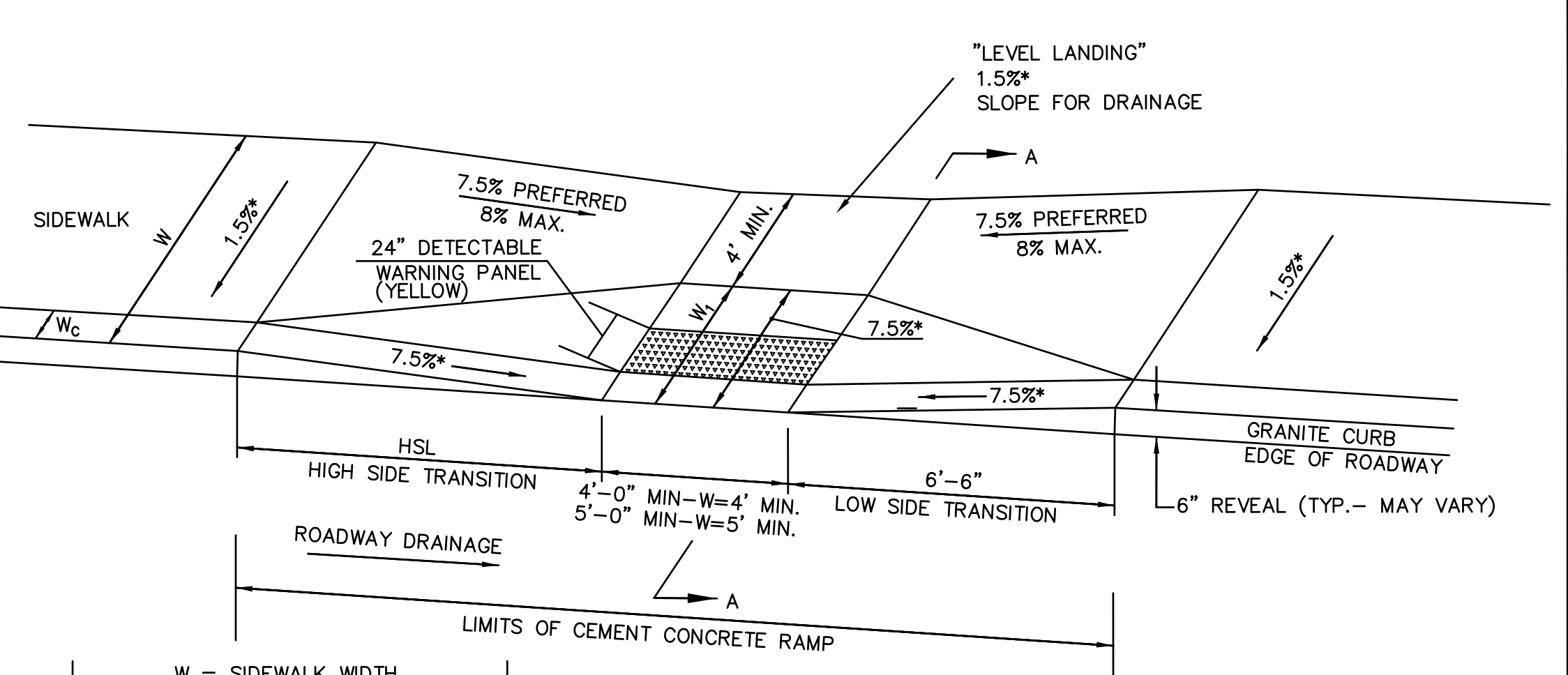
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 1996-WORKING



TYPICAL CEMENT CONCRETE SIDEWALK PLAN
N.T.S.

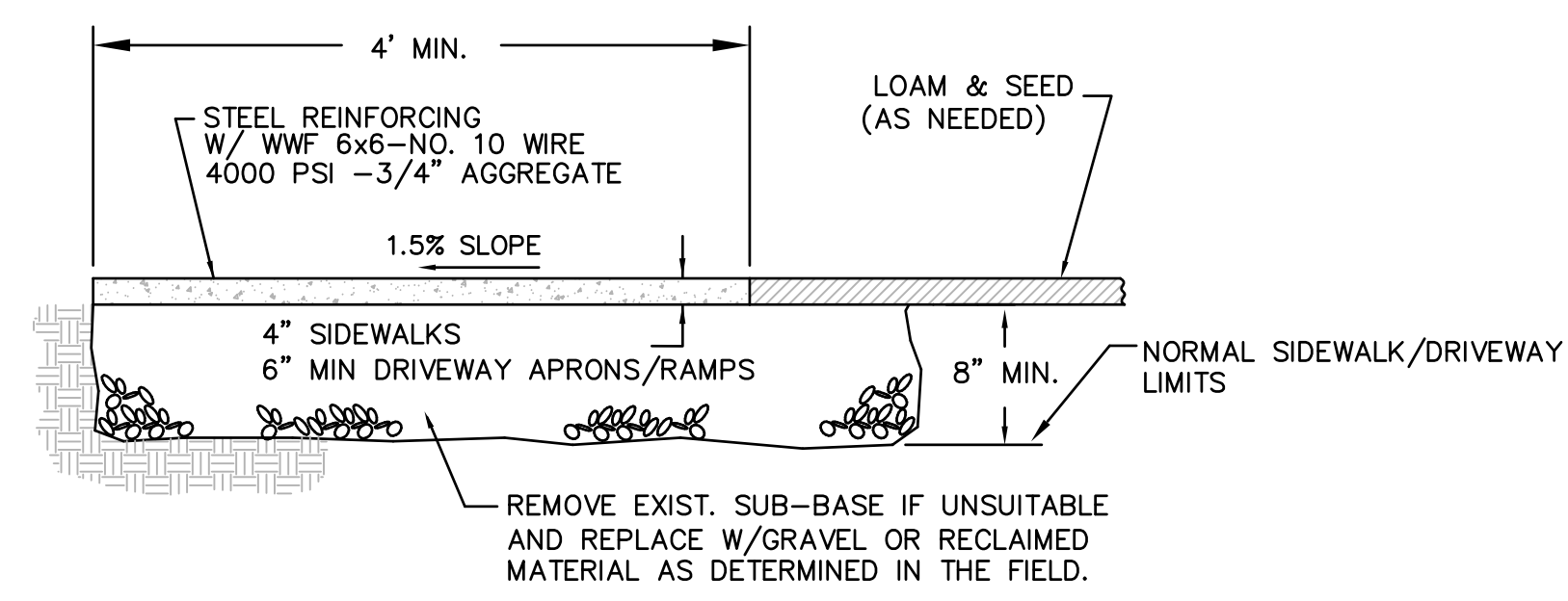


TYPICAL PROPOSED CROSS SECTION OF HEDGE STREET
NOT TO SCALE

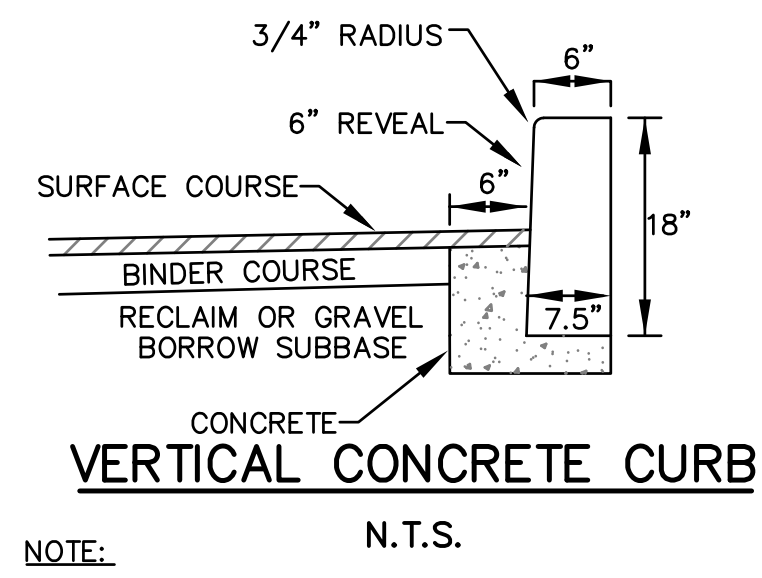


- NOTES:**
1. THE DIMENSIONS SHOWN AT ROADWAY EDGE ARE FIXED DISTANCES.
 2. RAMP CROSS SECTION TO BE SAME AS ADJACENT SIDEWALK; e.g. DEPTH OF SURFACES.
 3. PORTLAND CEMENT CONCRETE RAMPS ARE TO BE TEXTURED BY BROOMING IN A DIRECTION PARALLEL TO THE LENGTH OF THE RAMP.
 4. IN NO CASE ARE THE RAMPS TO BE PLACED BEHIND THE STOP LINE.
 5. SIDEWALKS THAT CROSS DRIVEWAYS SHALL BE RAMPED TO MEET THE GRADE OF THE DRIVEWAY.
- * THESE DIMENSIONS ARE SUBJECT TO CHANGE IN THE FIELD IF EXISTING APPURTENANCES OR CONDITIONS WILL MAKE THE RAMP LOCATIONS IMPRACTICAL OR UNSAFE.

WHEELCHAIR RAMP CONDITION
N.T.S.

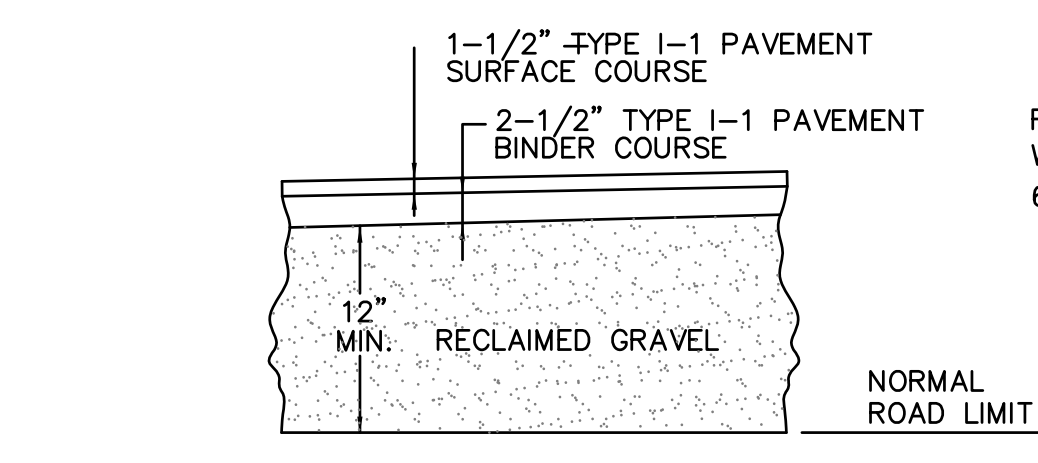


SIDEWALK DETAIL
N.T.S.

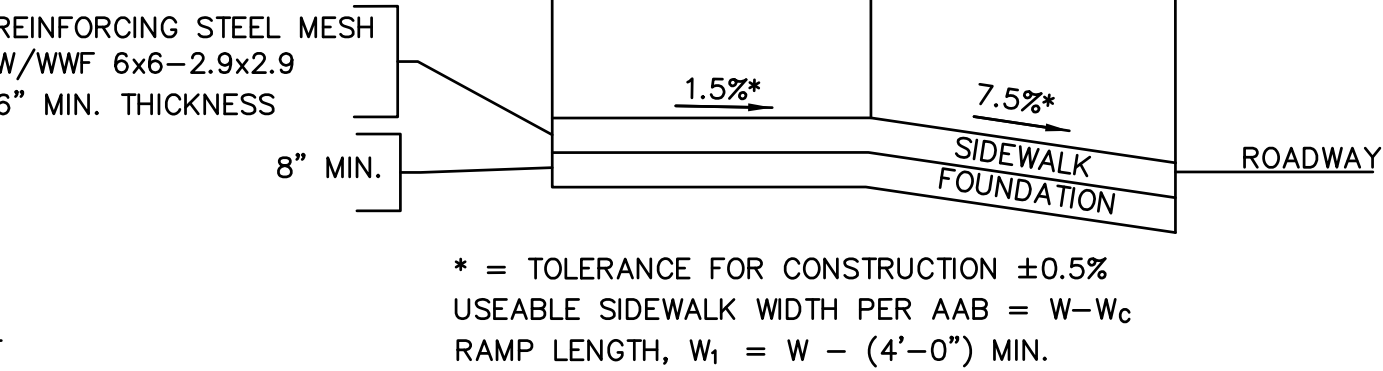


- NOTE:**
1. VERTICAL PRECAST CONCRETE CURB TO BE AS MANUFACTURED BY PRECAST SPECIALTIES CORP., ABINGTON, MA 02351, Tel: 781-878-7220, (info@precastspecialtiescorp.com) AS A TOWN STANDARD

VERTICAL CONCRETE CURB
N.T.S.



TYPICAL ROADWAY PAVEMENT SECTION
N.T.S.



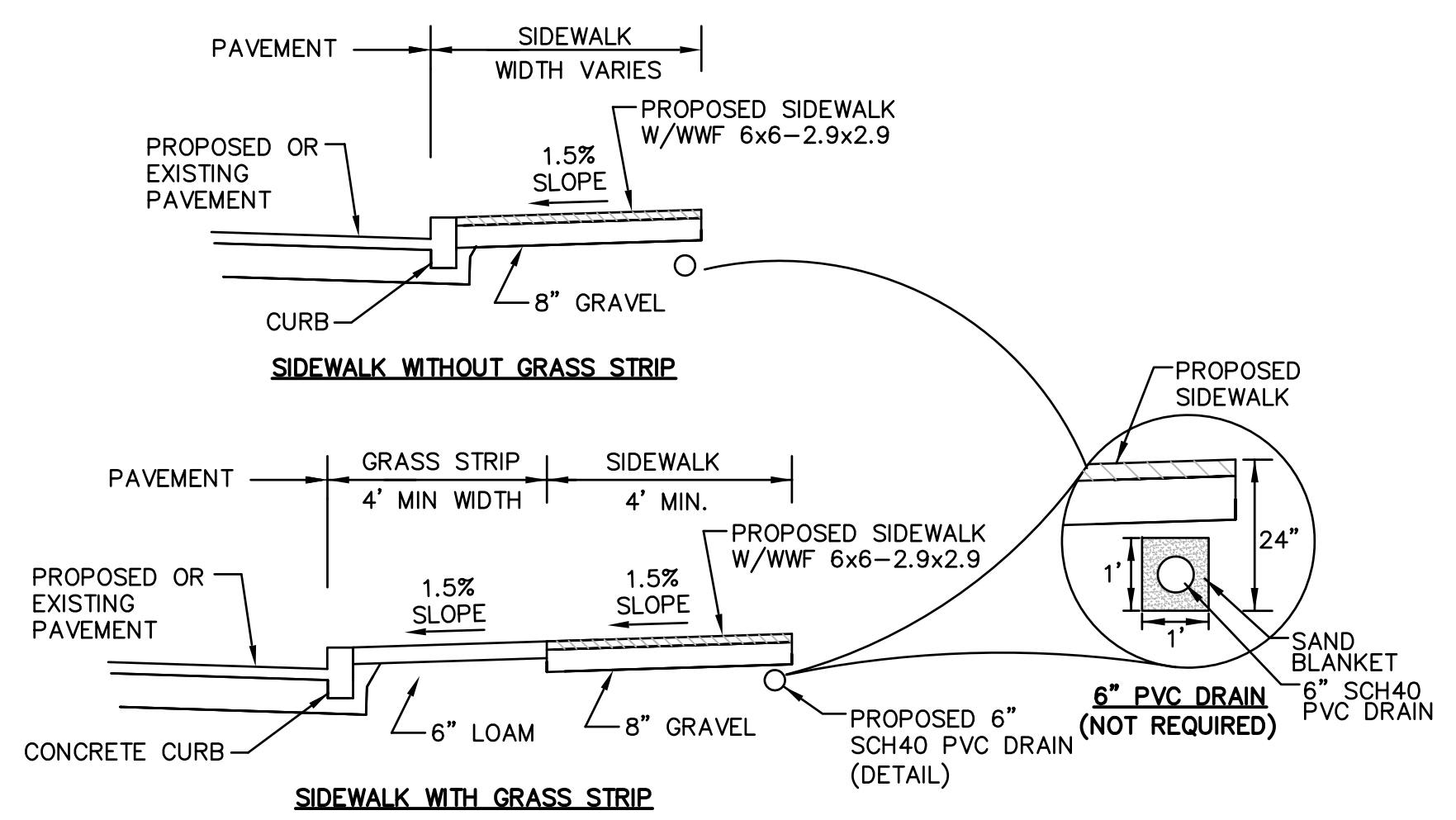
* = TOLERANCE FOR CONSTRUCTION ±0.5% USEABLE SIDEWALK WIDTH PER AAB = W - W_c RAMP LENGTH, W₁ = W - (4'-0") MIN.

ROAD PROFILE GRADE	*HIGH SIDE TRANSITION LENGTH
0	6'-6"
>0 - 1	7'-8"
>1 - 2	9'-0"
>2 - 3	11'-0"
>3 - 4	14'-0"
>4	15'-0" MAX.

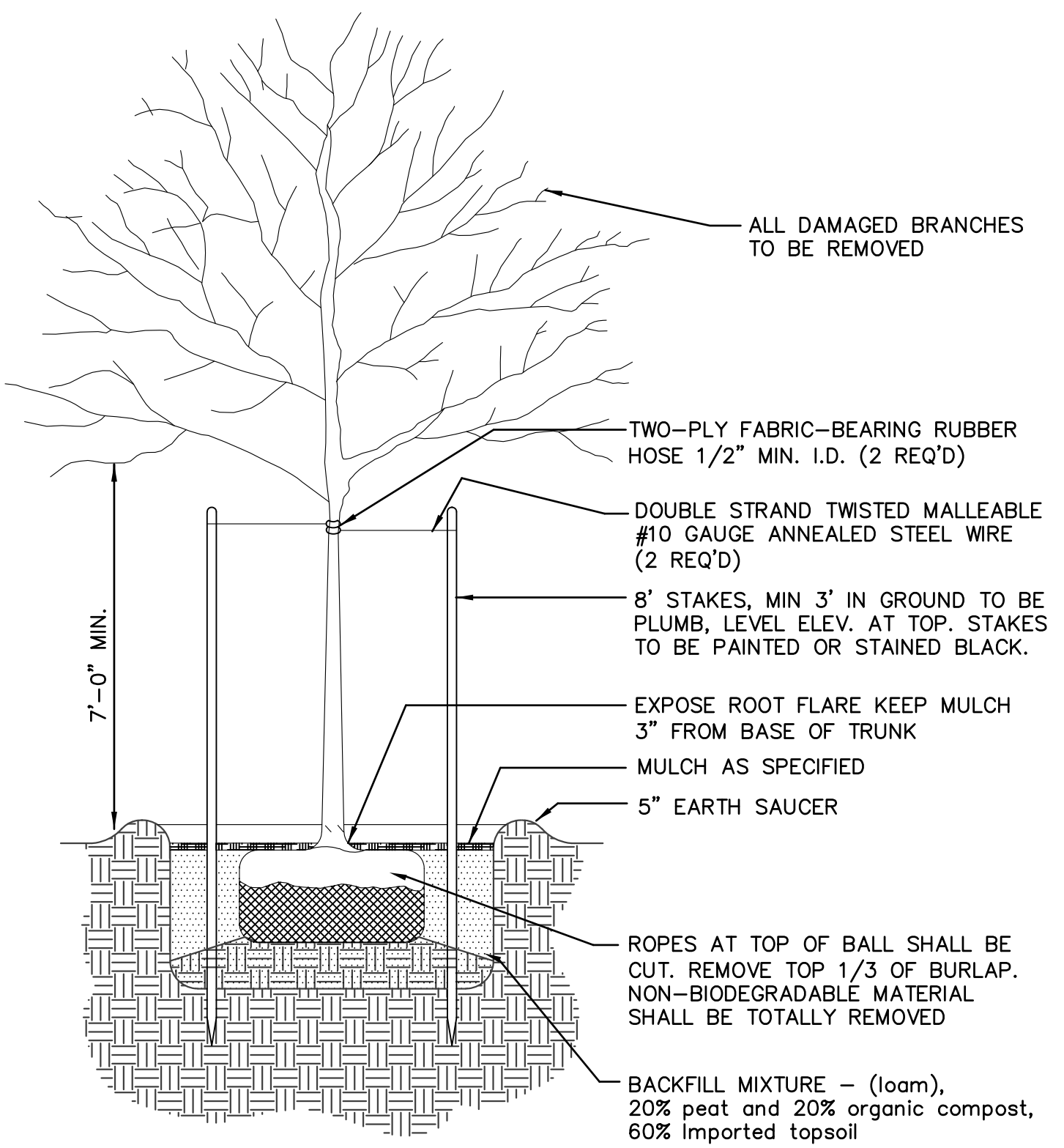
* BASED ON DESIGN SLOPE OF 7.5% AND CURB REVEAL OF 6".

WHEELCHAIR RAMP NOTES

1. ROADWAY SIDEWALK CROSS SLOPES, FOR BRICK, CEMENT CONCRETE, AND BITUMINOUS CONCRETE, AS INDICATED IN THE STANDARD SPECIFICATIONS, WILL BE 1.5%. A CONSTRUCTION TOLERANCE OF ±0.5% IS ACCEPTABLE ON ROADWAY SIDEWALKS. SIDEWALKS ON BRIDGES WILL BE CONSTRUCTED TO A CROSS SLOPE OF 1.0% IN ACCORD WITH BRIDGE POLICY. (REFER TO STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, SECTION 700.) IN ACCORDANCE WITH 521 CMR THE RULES AND REGULATIONS OF THE ARCHITECTURAL ACCESS BOARD (AAB), THE SIDEWALK CROSS SLOPE CANNOT EXCEED 2.0%.
2. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'-0" (1.00 m) SHALL BE MAINTAINED PAST ALL OBSTRUCTIONS (UTILITY POLES, SIGNS, SIGNAL FOUNDATIONS AND MASTS, MAILBOXES, ALONG DRIVE OPENINGS, ETC.).
3. THE WHEELCHAIR RAMP SLOPES AND SIDE SLOPES (TRANSITIONS) WILL BE 7.5% WITH A CONSTRUCTION TOLERANCE OF ±0.5%. HOWEVER, THESE SLOPES MAY BE FLATTER WHEN WARRANTED BY SURROUNDING CONDITIONS.
4. WHERE THE ROAD PROFILE EXCEEDS 4%, THE HIGH SIDE TRANSITION LENGTH UNDER ANY CONDITIONS NEED NOT EXCEED 4.57m (15').
5. IN NO CASE WHERE A STOP LINE IS WARRANTED, SHALL A RAMP BE PLACED ON THE TRAFFIC APPROACH SIDE OF THAT STOP LINE.
6. FIXED OBJECTS (I.E. UTILITY POLES, HYDRANTS, SIGNS, SIGNAL FOUNDATIONS, ETC.) MUST NOT ENCROUGH ON ANY PART OF THE WHEELCHAIR RAMP INCLUDING TRANSITION SLOPES.
7. AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP, EXCLUDING CURB TRANSITIONS, TO BE LOCATED OUTSIDE THE CROSSWALK. THE WHEELCHAIR RAMP ENTRANCE IS TO BE CENTERED IN THE CROSSWALK WHENEVER POSSIBLE.
8. CATCH BASINS WHICH ARE IN THE VICINITY OF A WHEELCHAIR RAMP SHALL BE LOCATED UPGRADE OF THE RAMP ENTRANCE.
9. THE ENTRANCE OF A WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
10. TESTING SURFACE: WHEN TESTING WITH A STRAIGHTEDGE PLACED PARALLEL TO THE LINE OF THE SLOPE THERE SHALL BE NO DEVIATION FROM A TRUE SURFACE IN EXCESS OF 1/4" (6 mm).
11. SIDEWALK CONSTRUCTION SHALL BE IN CONFORMANCE WITH MASS HIGHWAY CONSTRUCTION STANDARD FOR HANDICAPPED RAMPS. SEE CONTRACT DOCUMENTS AND SPECIFICATIONS FOR COPIES OF WHEELCHAIR RAMP DETAILS REQUIRED ON THE PROJECT.
12. EACH WHEELCHAIR RAMP SHALL HAVE A POURED INPLACE, ADS DETECTABLE WARNING PANEL. PANELS SHALL BE ALIGNED TO THE BACK OF THE PROPOSED CURB RADIUS AS REQUIRED.

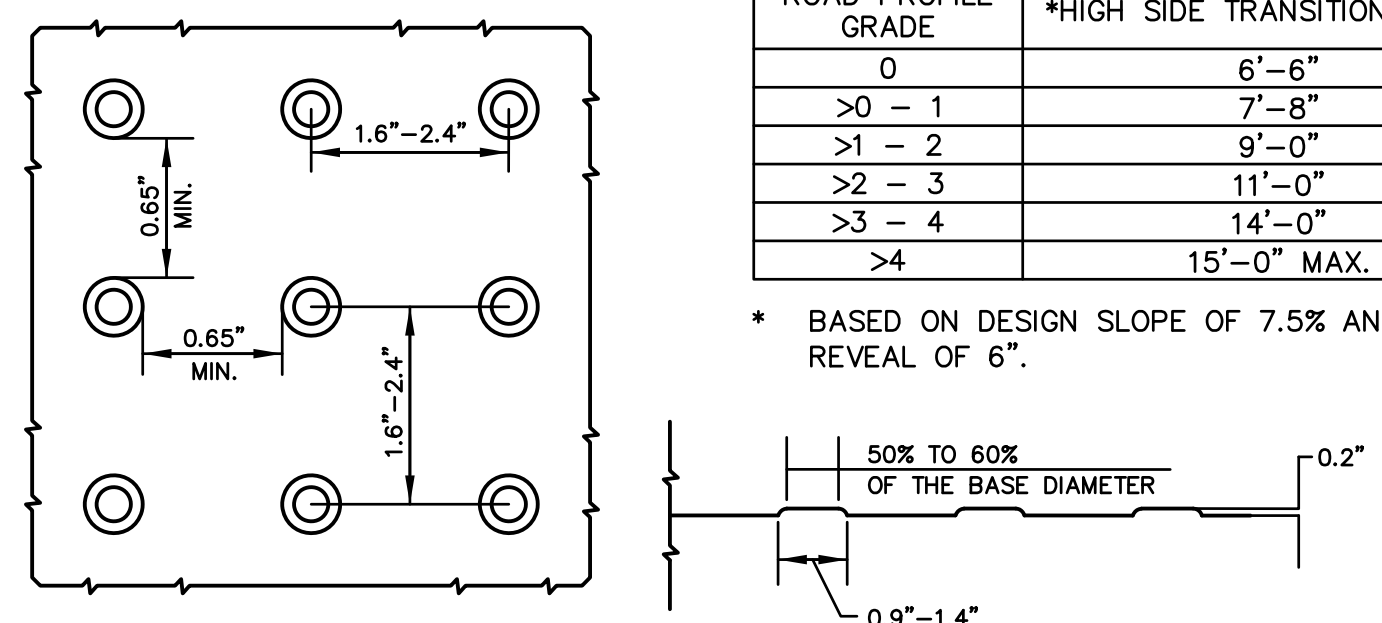


TYPICAL SIDEWALK CROSS SECTION
N.T.S.

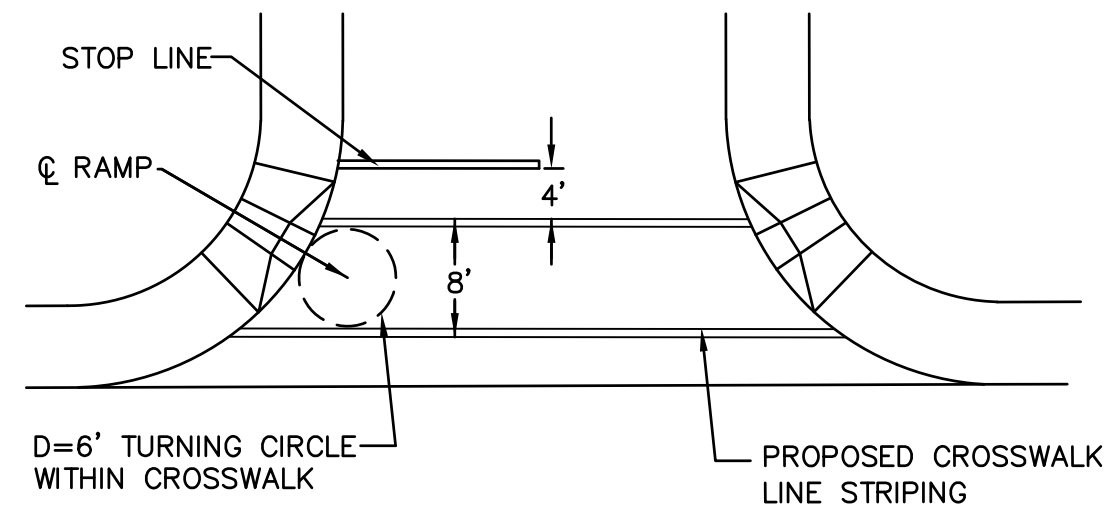


NOTE: TREE SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS EXISTING GRADE.

DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE

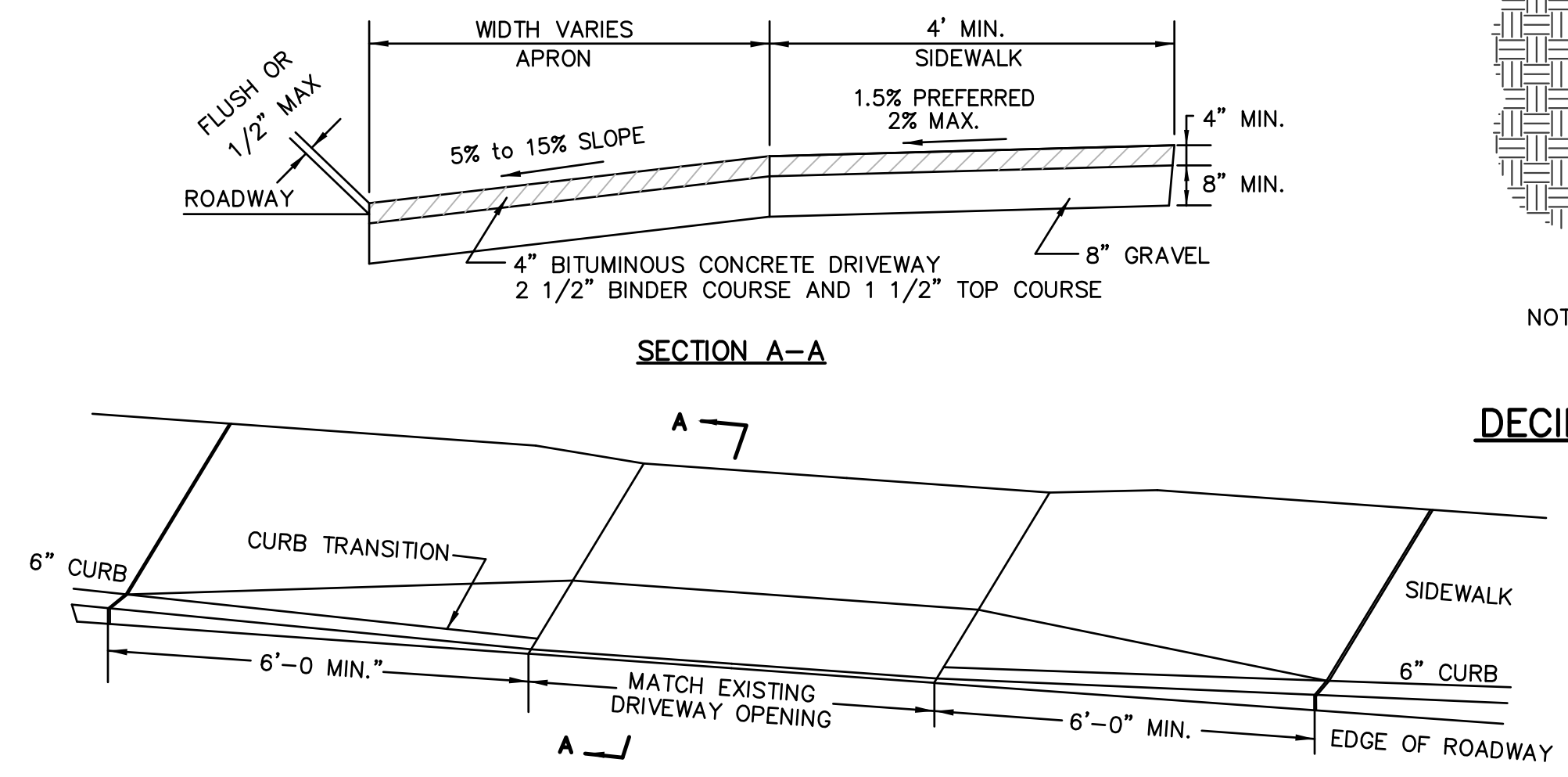


DETECTABLE WARNING PANEL DOME LAYOUT
N.T.S.



- NOTES:**
1. CROSSWALKS SHALL BE PAINTED AT ALL PAIRED WHEELCHAIR RAMP LOCATIONS WITHIN THE LIMITS OF WORK.
 2. THE CROSSWALKS AND STOP LINES SHALL BE PAINTED WITH 12" WIDE, WHITE REFLECTORIZED, EPOXY PAINT IN THE PATTERN SHOWN.

PAIRED WHEELCHAIR RAMP & CROSSWALK DETAIL
N.T.S.



TYPICAL DRIVEWAY
N.T.S.

PLANTING OF STREET TREES - (SEE SHEET 7 OF 12 FOR LOCATIONS)

KEY	BASE QTY	BOTANICAL NAME	COMMON NAME	MINIMUM SIZE	ROOT
ZS	0	ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA	2-1/2" cal.	B&B
ALTERNATE (IF GREEN VASE ZELKOVA IS NOT AVAILABLE):					
0	0	PLATANUS ACERFOLIA	LONDON PLANE TREE	2-1/2" cal.	B&B
CK	0	CORNUS KOUSA	KOUSA DOGWOOD	2-1/2" cal.	B&B
ALTERNATE (IF KOUSA DOGWOOD IS NOT AVAILABLE):					
0	0	CERCIS CANADENSIS 'FLAME'	EASTERN RED BUD	2-1/2" cal.	B&B

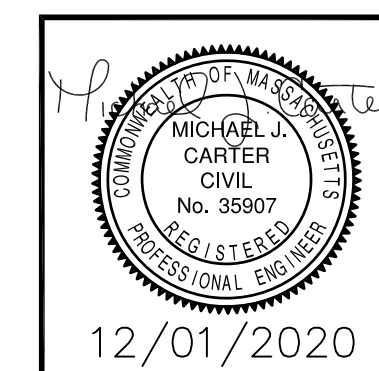
TOWN OF FAIRHAVEN, MASSACHUSETTS
HEDGE STREET - PHASE III/IV

MISCELLANEOUS DETAILS I

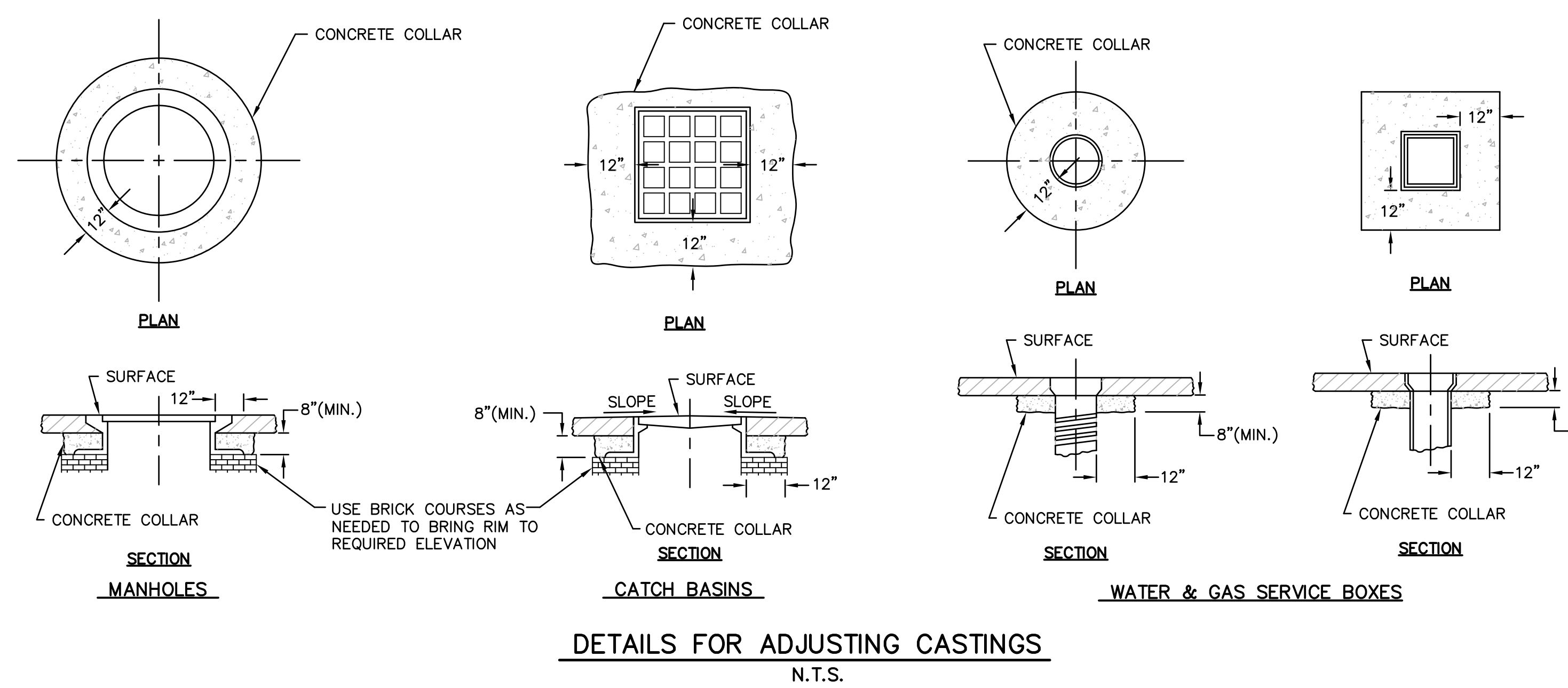
GCG ASSOCIATES, INC.
WILMINGTON MASSACHUSETTS

SCALE: AS NOTED DATE: DECEMBER 1, 2020

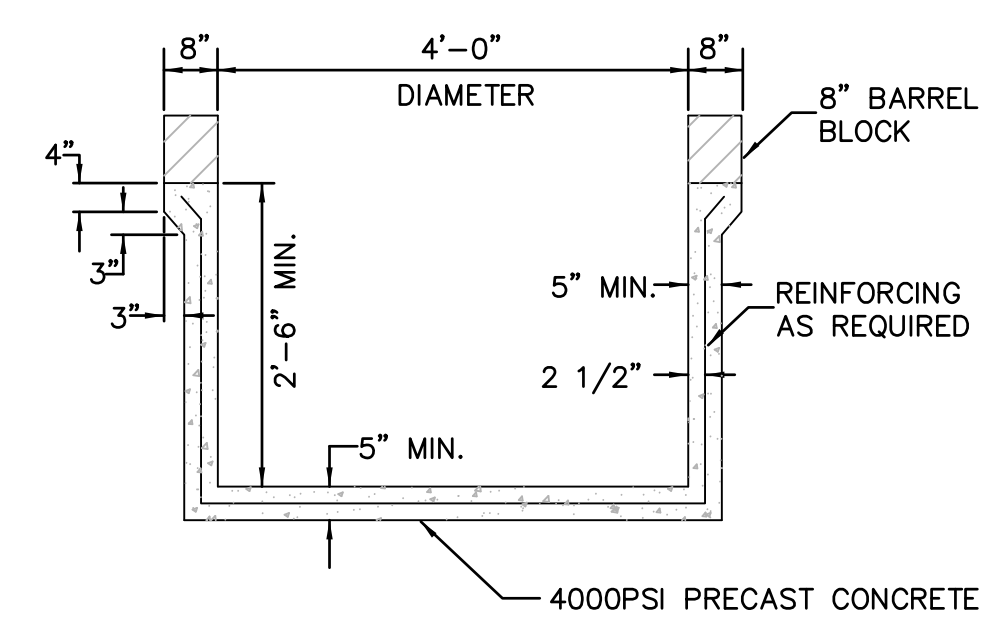
JOB NO. \FILE NAME: 1996-DETAILS.DWG DESIGNED BY: J.T.C. PLAN NO. 8 OF 12
DRAWN BY: J.T.C.
CHECKED BY: M.J.C.



12/01/2020

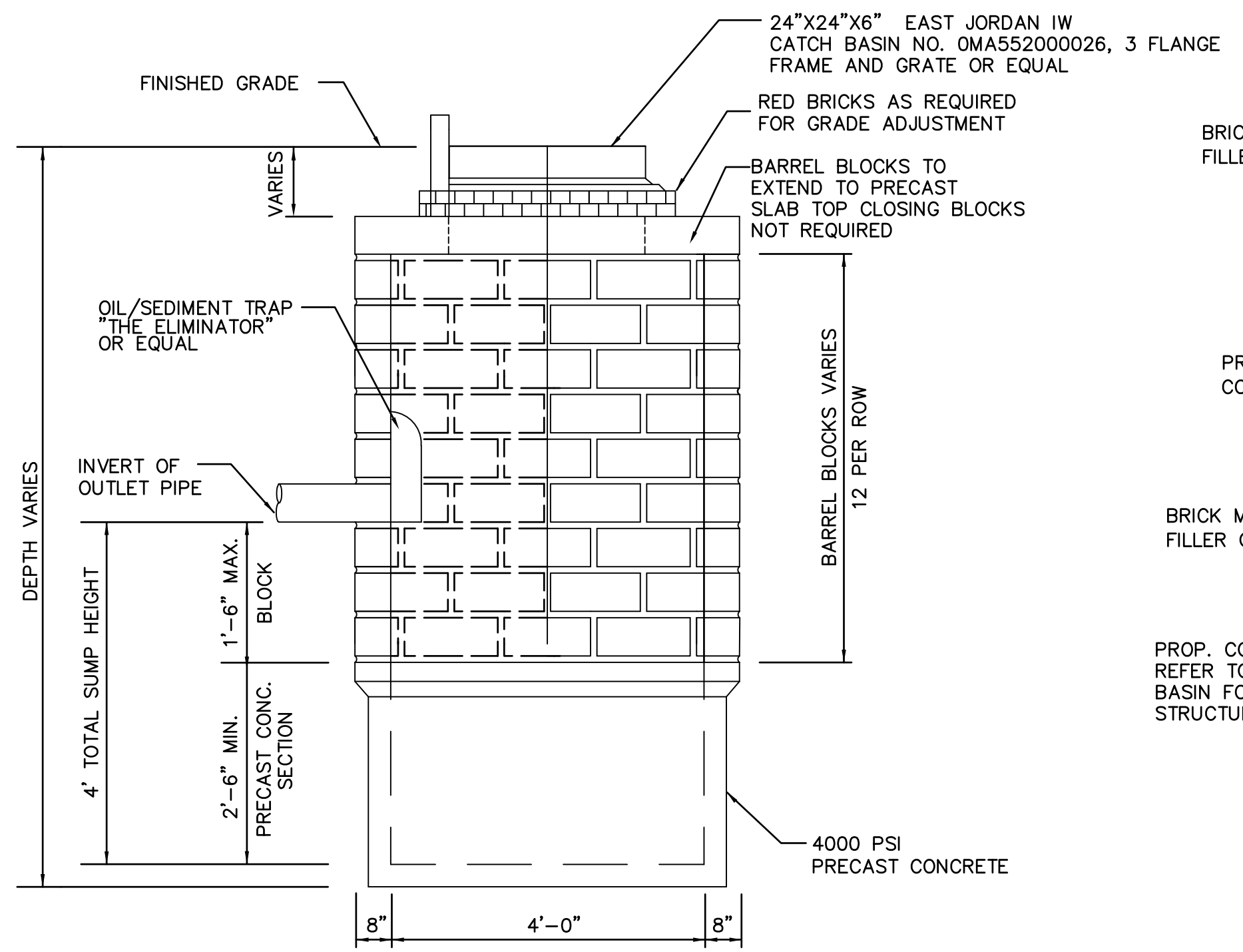


DETAILS FOR ADJUSTING CASTINGS
 N.T.S.

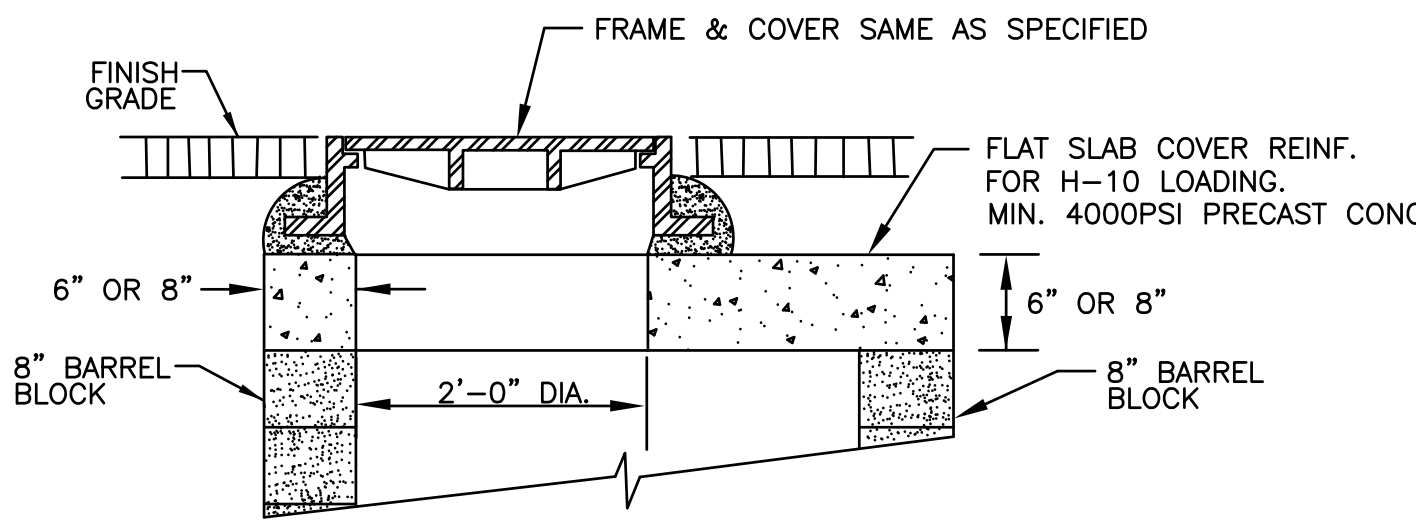


- NOTE:
1. PRECAST CONCRETE SUMP TO CONFORM TO ASTM C478.
 2. CONCRETE SHALL BE 4000 PSI MINIMUM.
 3. STEEL REINFORCEMENT TO MEET OR EXCEED H-20 LOADING.
 4. REINFORCING STEEL 0.12 SQ. IN./LF & 0.12 SQ. IN. (BOTH WAYS) BASE BOTTOM.

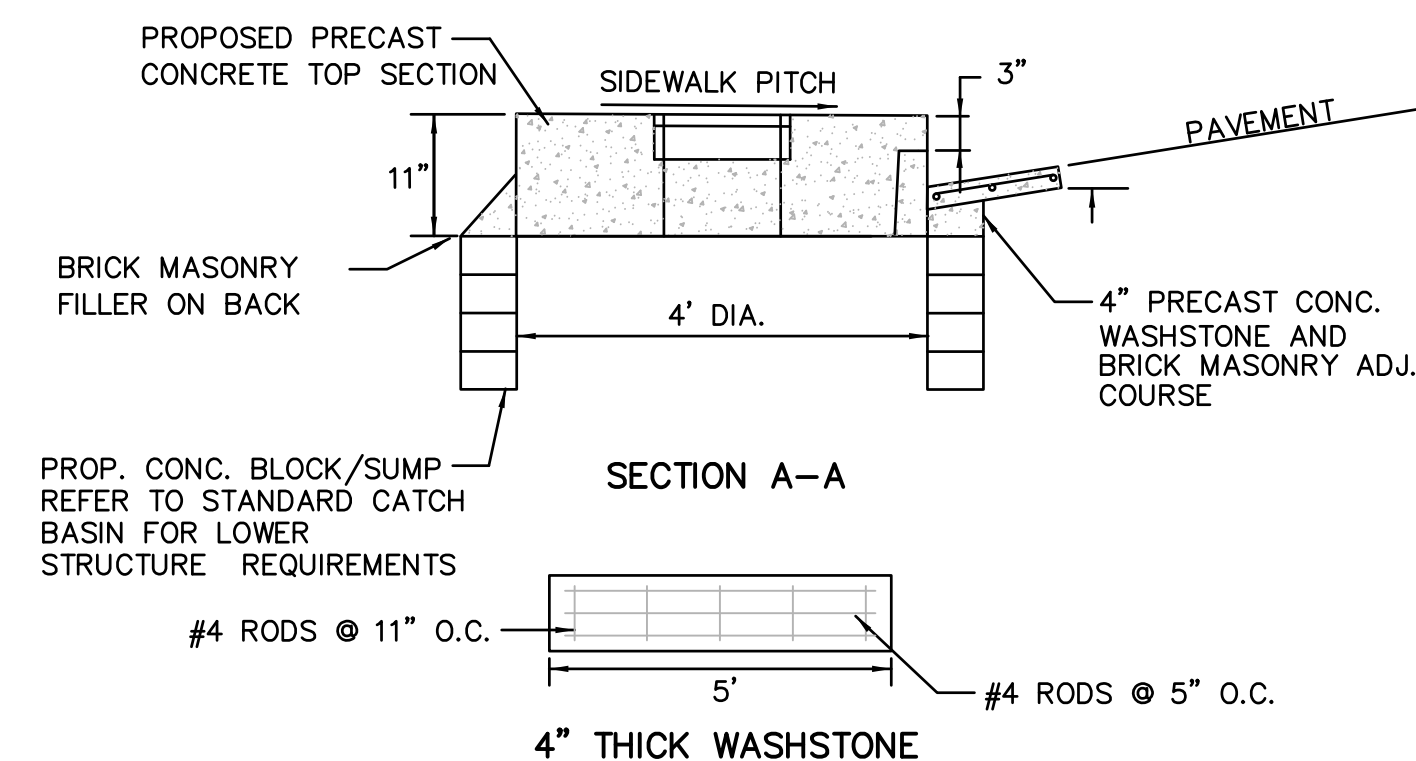
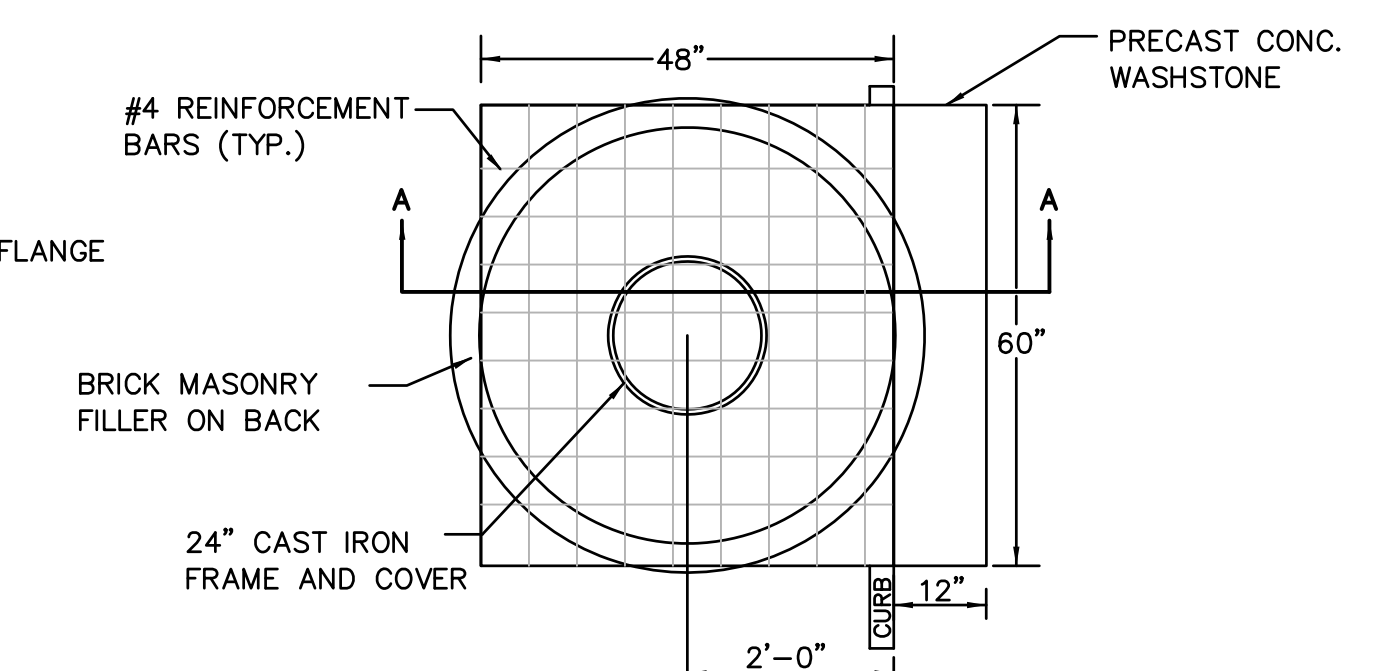
PRECAST CONCRETE CATCH BASIN SUMP
 NOT TO SCALE



TYPICAL CONCRETE BLOCK CATCH BASIN
 NOT TO SCALE

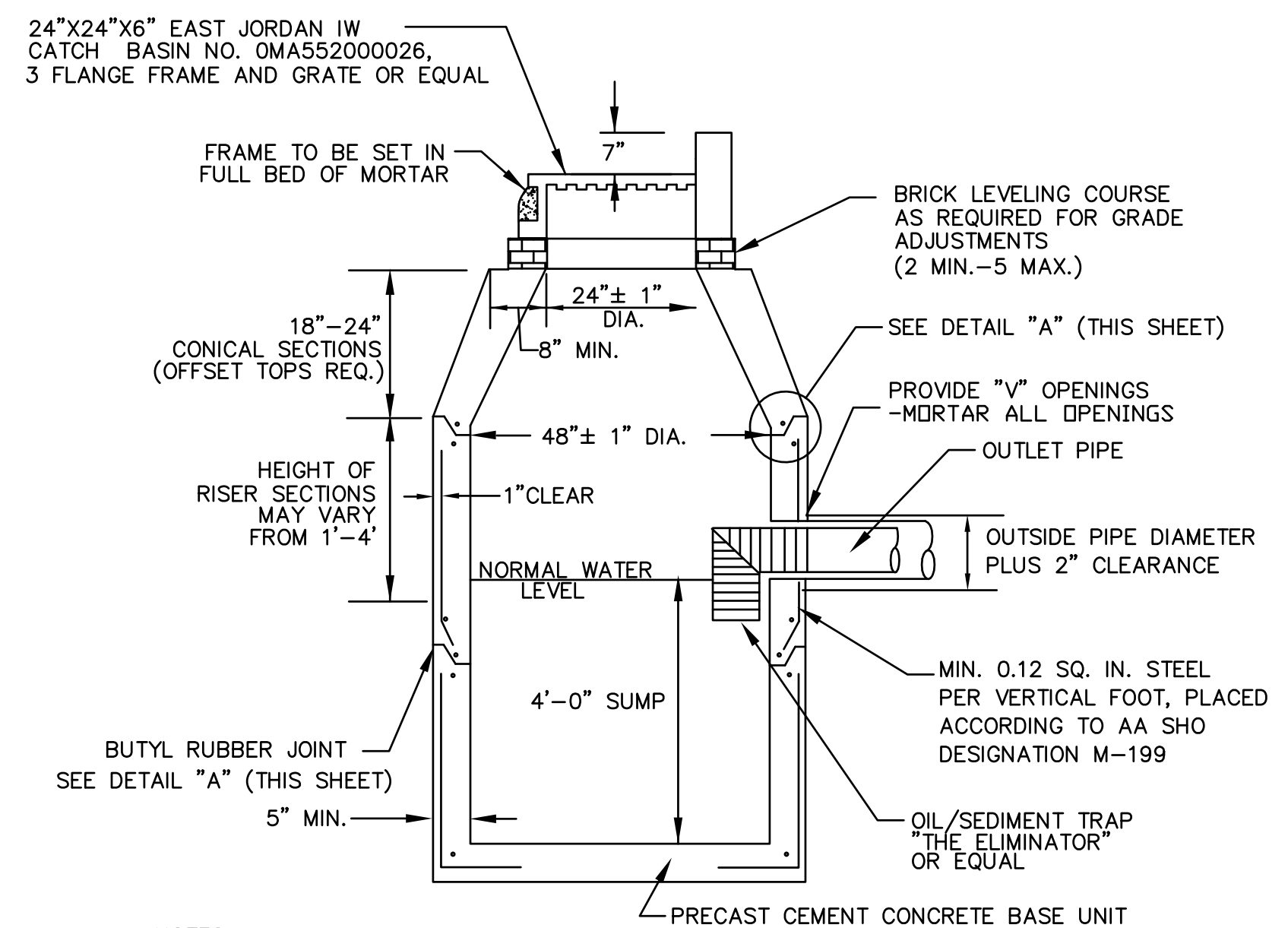


OFFSET TOP FOR ALL MANHOLES & CATCH BASINS
 NOT TO SCALE



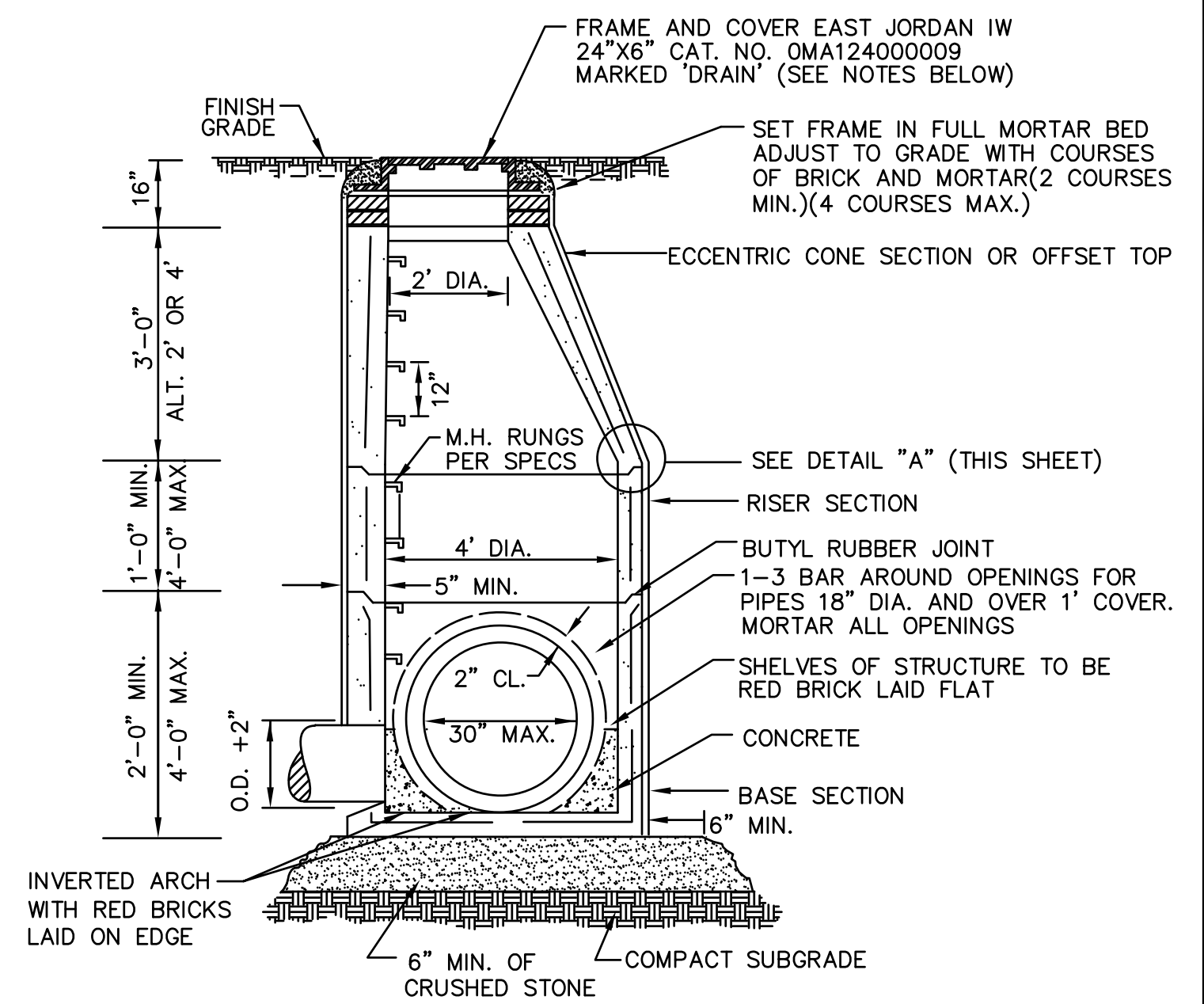
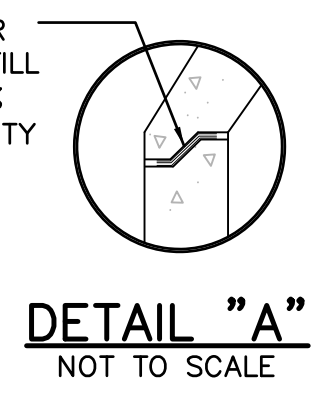
1. CONCRETE TO BE 5000 PSI.
2. BRICKS MAY BE USED BETWEEN TOP COURSE & COVER FOR FINE ADJUSTMENT.
3. LOWER SECTION OF GUTTER INLET STRUCTURE TO BE THE SAME AS STANDARD CATCH BASIN WITH SUMP.
4. INCLUDE OIL/SEDIMENT TRAP.
5. MANUFACTURER: BRISTOL COUNTY PRECAST, WESTPORT, MA OR EQUAL.

FALL-RIVER STANDARD GUTTER INLET
 NOT TO SCALE



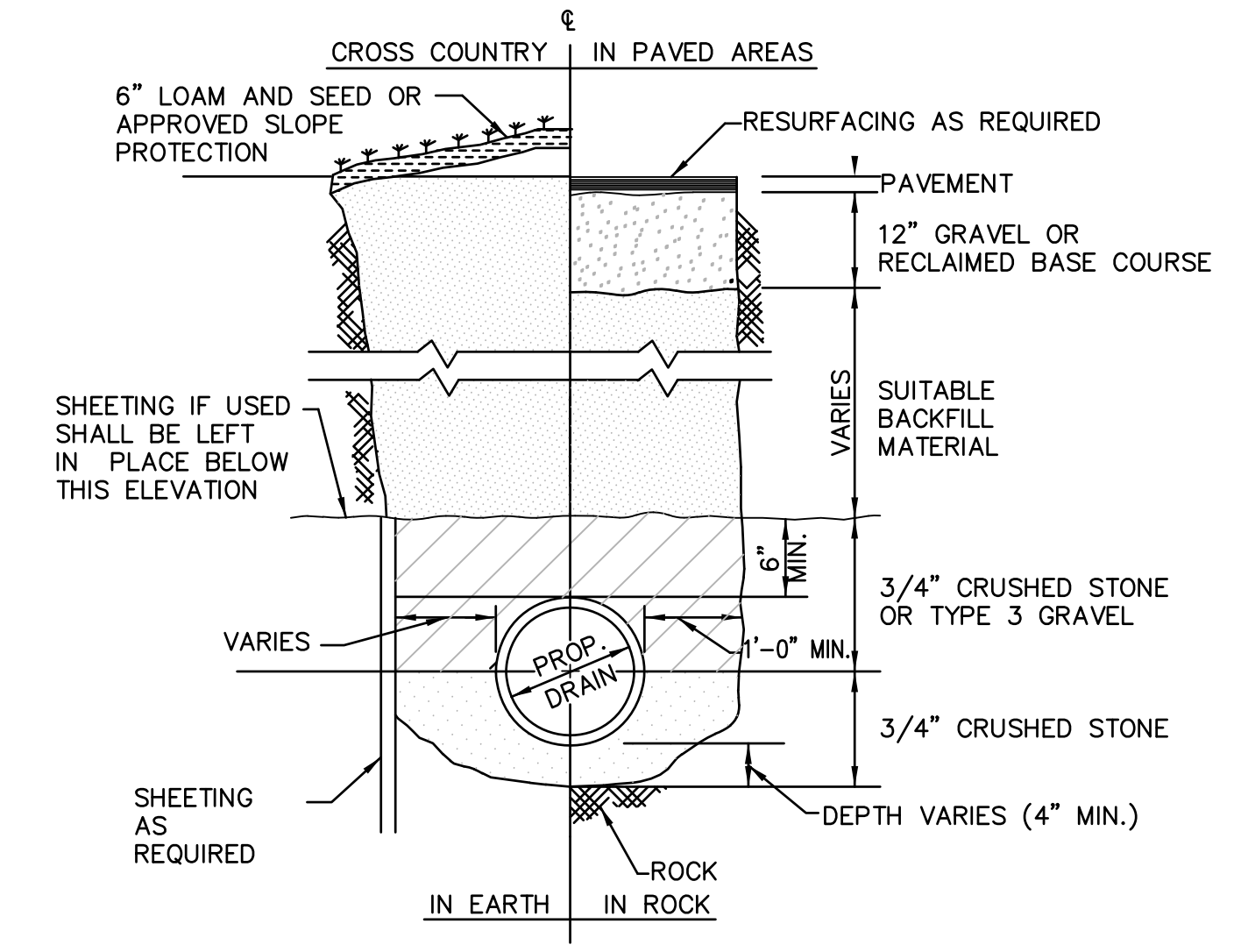
- NOTES:
- 1.) PRECAST REINFORCED CONCRETE OB BASE, CONE AND RISER SECTIONS PER A.S.T.M. C-478. MINIMUM 4000 PSI CONCRETE.
 - 2.) PRECAST CONCRETE STRUCTURE SHALL BE RATED FOR AASHTO HS-20 LOADING.
 - 3.) DOUBLE GRATED CATCH BASINS SHALL BE 5' IN DIAMETER, HAVE 6" WALLS AND PROVIDE A MIN. OPENING OF 24"X36".
- BUTYL RUBBER SEALANT TO FILL AT LEAST 75% OF JOINT CAVITY

PRECAST CONCRETE CATCH BASIN
 WITH GRANITE CURB INLET
 NOT TO SCALE

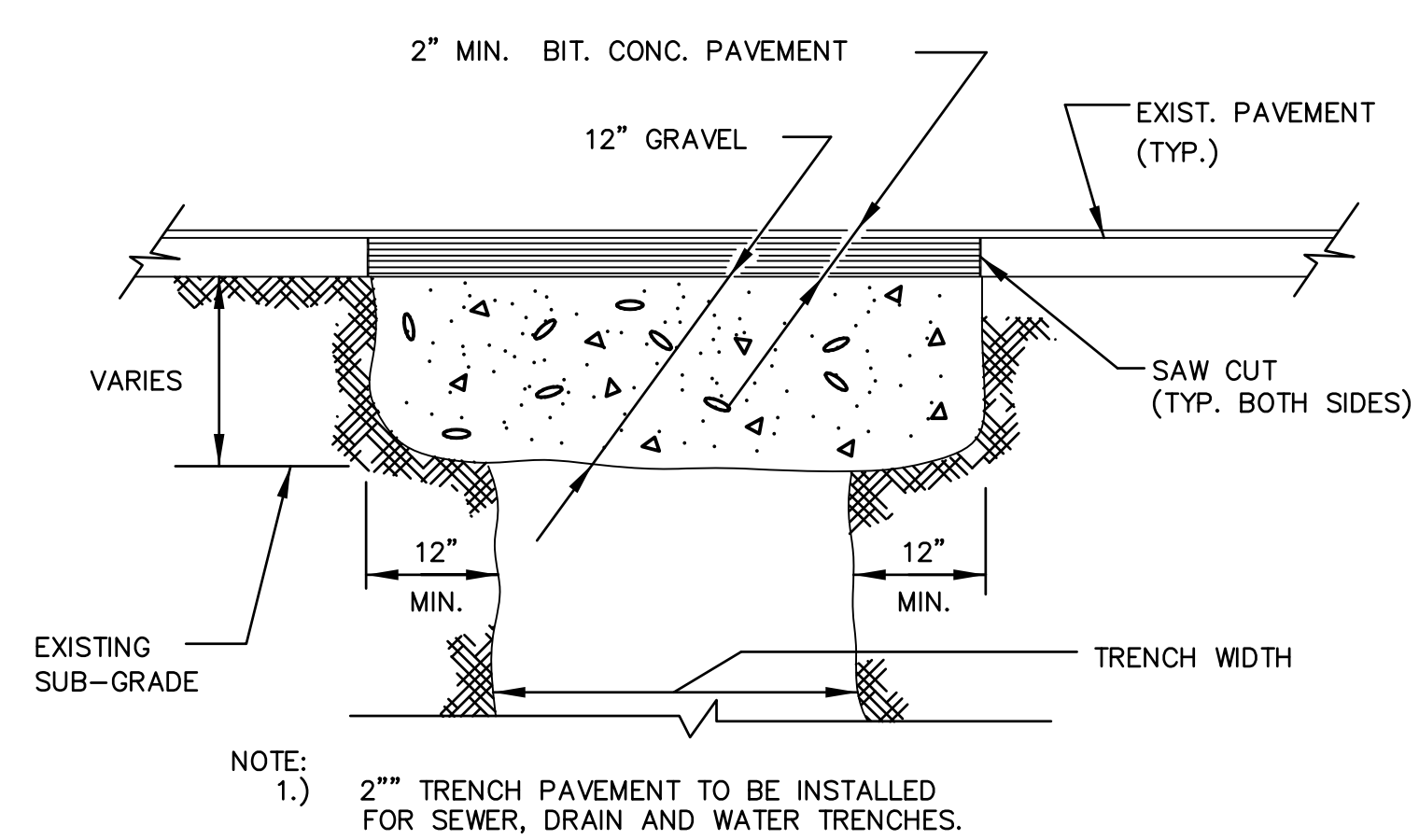


- NOTE:
1. PRECAST REINFORCED CONCRETE MANHOLE BASE, CONE AND RISER SECTIONS PER A.S.T.M. C-478 PIPE OPENINGS TO BE PRECAST IN BASE SECTION
 2. MINIMUM 4000 PSI PRECAST CONCRETE

TYPICAL PRECAST DRAIN MANHOLE
 NOT TO SCALE

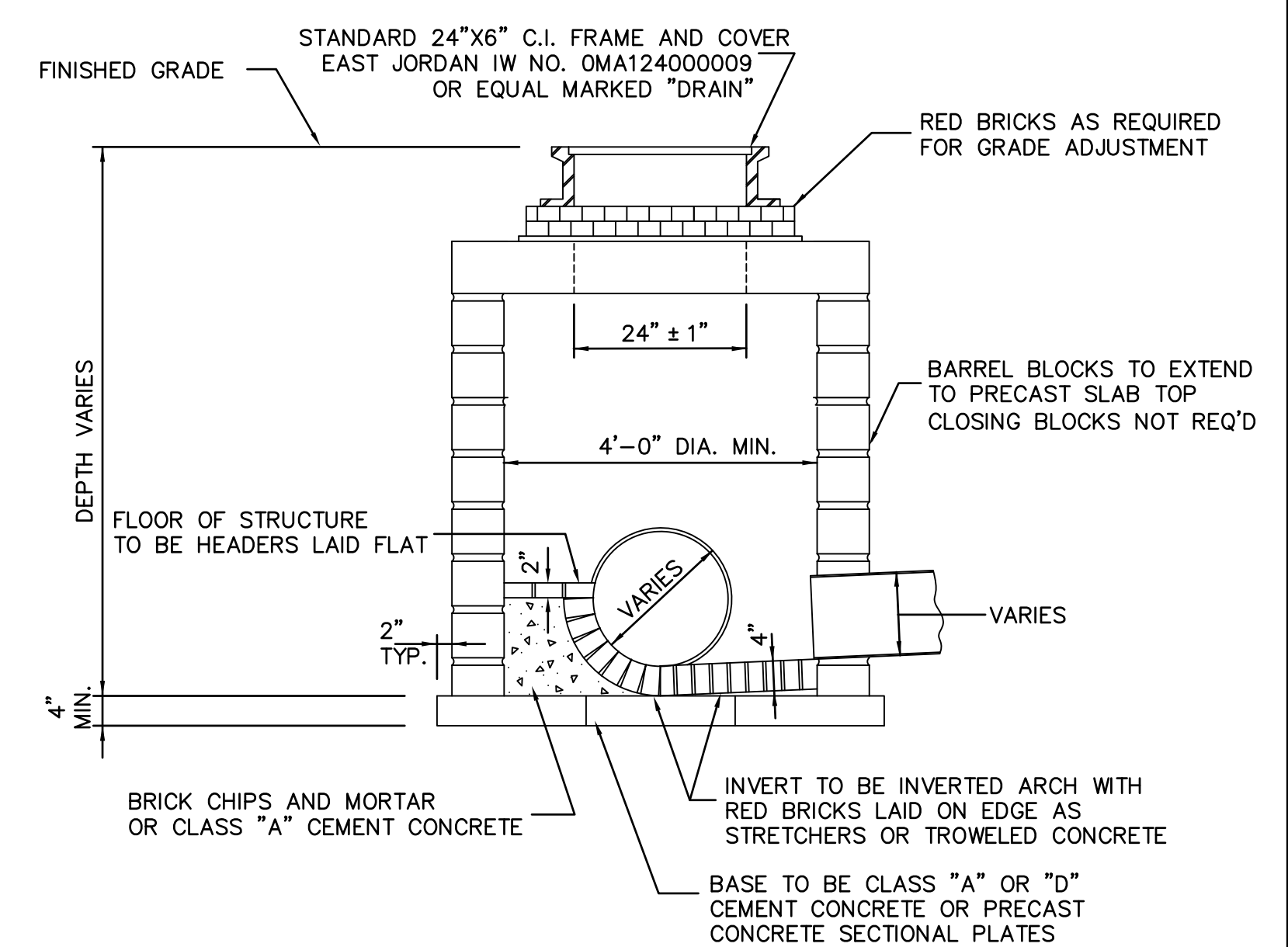


TYPICAL DRAIN/SEWER TRENCH DETAIL
 NOT TO SCALE



- NOTE:
- 1.) 2" TRENCH PAVEMENT TO BE INSTALLED FOR SEWER, DRAIN AND WATER TRENCHES.

TRENCH PAVEMENT DETAIL
 NOT TO SCALE



TYPICAL CONCRETE BLOCK DRAIN MANHOLE
 NOT TO SCALE

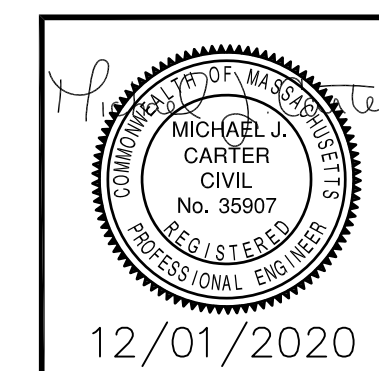
TOWN OF FAIRHAVEN, MASSACHUSETTS
 HEDGE STREET - PHASE III/IV

MISCELLANEOUS DETAIL II

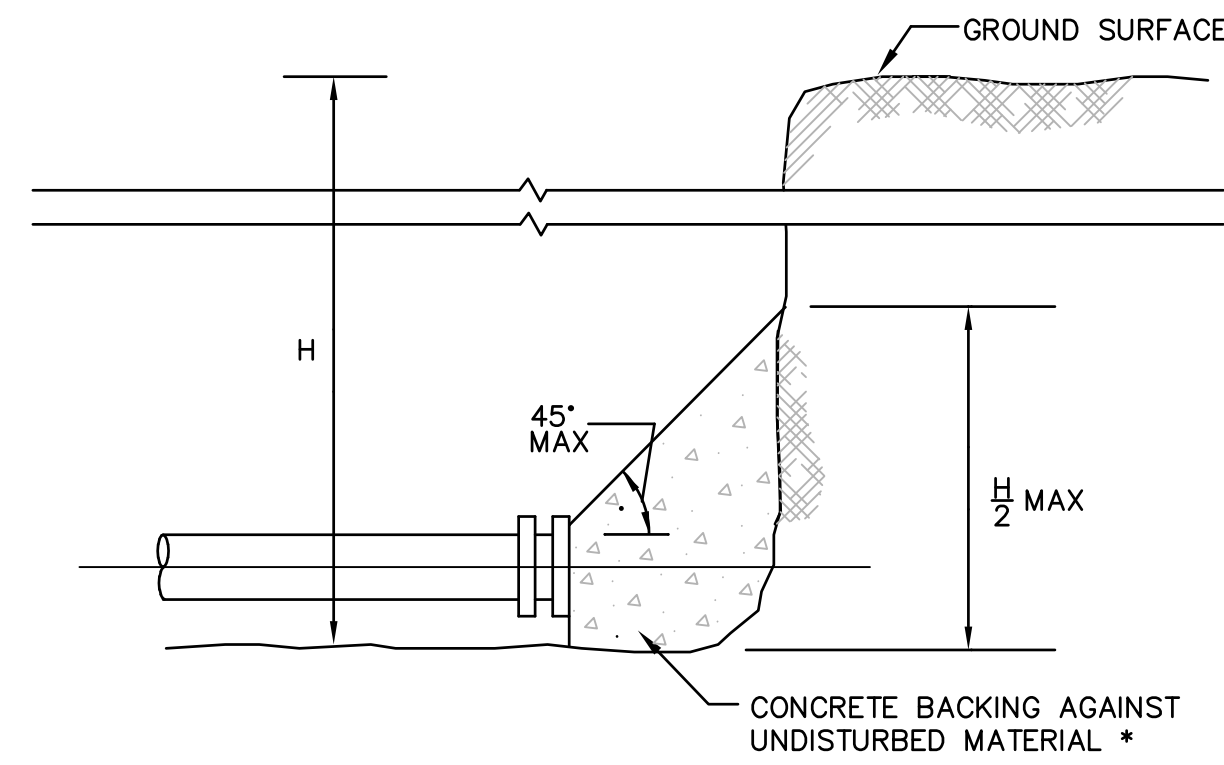
GCG ASSOCIATES, INC.
 WILMINGTON MASSACHUSETTS

SCALE: AS NOTED DATE: DECEMBER 1, 2020

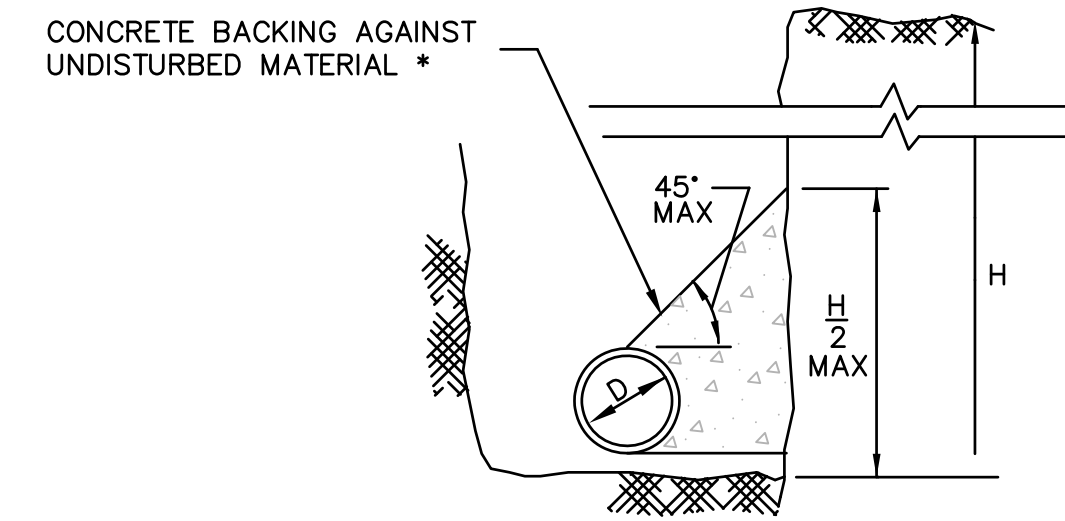
JOB NO. \FILE NAME: 1996-DETAILS.DWG DESIGNED BY: J.T.C. DRAWN BY: J.T.C. CHECKED BY: M.J.C. PLAN NO. 9 OF 12



12/01/2020



TYPICAL WATER MAIN PLUG
N.T.S.



TYPICAL WATER MAIN THRUST BLOCK SECTION DETAILS
N.T.S.

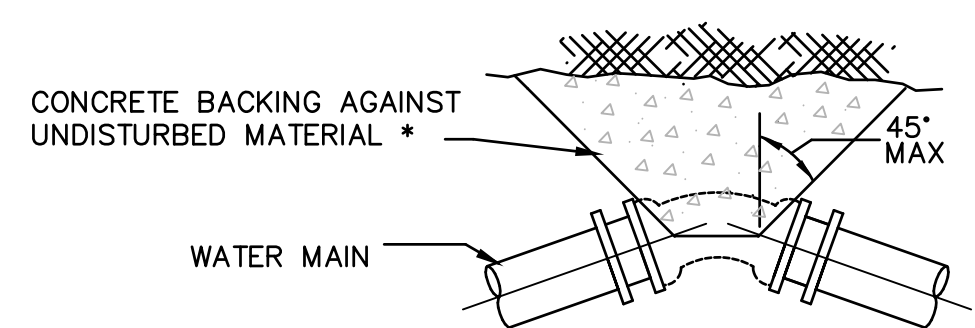
THRUST BLOCK BEARING AREAS FOR WATER PIPE

TABLE OF BEARING AREAS IN SQ. FT. AGAINST UNDISTURBED MATERIAL FOR WATER MAIN FITTINGS*			
SIZE OF MAIN (IN.)	90° BEND	TEES AND PLUGS	45° BEND
6	4	2.5	2
8	6	4	3
12	12	9	7
16	21	16	12

* TYPE OF SOIL IS MEDIUM CLAYEY, 6 OR MORE BLOWS PER FOOT, OR LOOSE GRANULAR, 9 OR MORE BLOWS PER FOOT. SOIL CONDITIONS OTHER THAN THOSE GIVEN WILL REQUIRE LARGER BEARING AREAS.

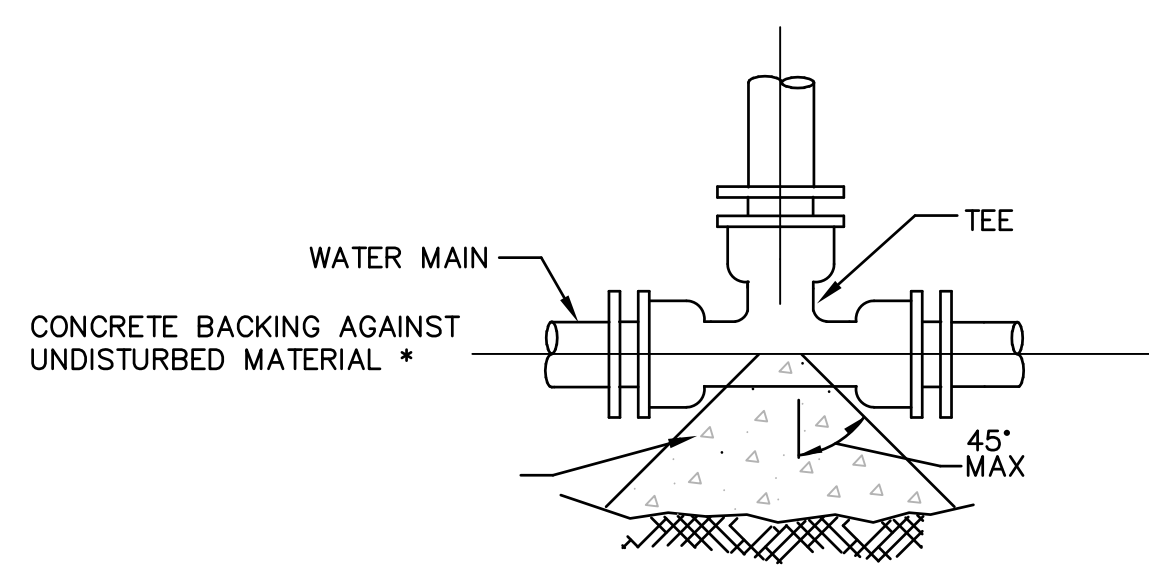
NOTES:

- FOR FITTINGS WITH LESS THAN 45° DEFLECTION, USE BEARING AREAS FOR 45° BEND.
- BEARING AREAS BASED ON HORIZONTAL PASSIVE SOIL PRESSURE OF 2000 P.S.F. AND INTERNAL WATER PRESSURE OF 150 P.S.I.G. JOINTS SHALL NOT BE ENCASED IN CONCRETE. BEARING AREAS MAY BE DISREGARDED FOR TRENCHES IN ROCK WHERE THE TOP OF THE ROCK FACE IS AT OR ABOVE THE CROWN OF THE PIPE. HOWEVER, CONCRETE BACKING SHALL BE PLACED BETWEEN THE PIPE AND THE ROCK FACE.
- ALL FITTINGS AND VALVES SHALL BE DUCTILE IRON MECHANICAL JOINT AND RESTRAINED WITH MJ RESTRAINTS. (MEGALUG OR EQUAL)
- WATER MAINS SHALL BE C.L.D.I. CLASS 52 - DOUBLE CEMENT LINED.
- ALL WORK RELATED TO THRUST BLOCKS SHALL BE PAID FOR UNDER THE CONCRETE ITEM.



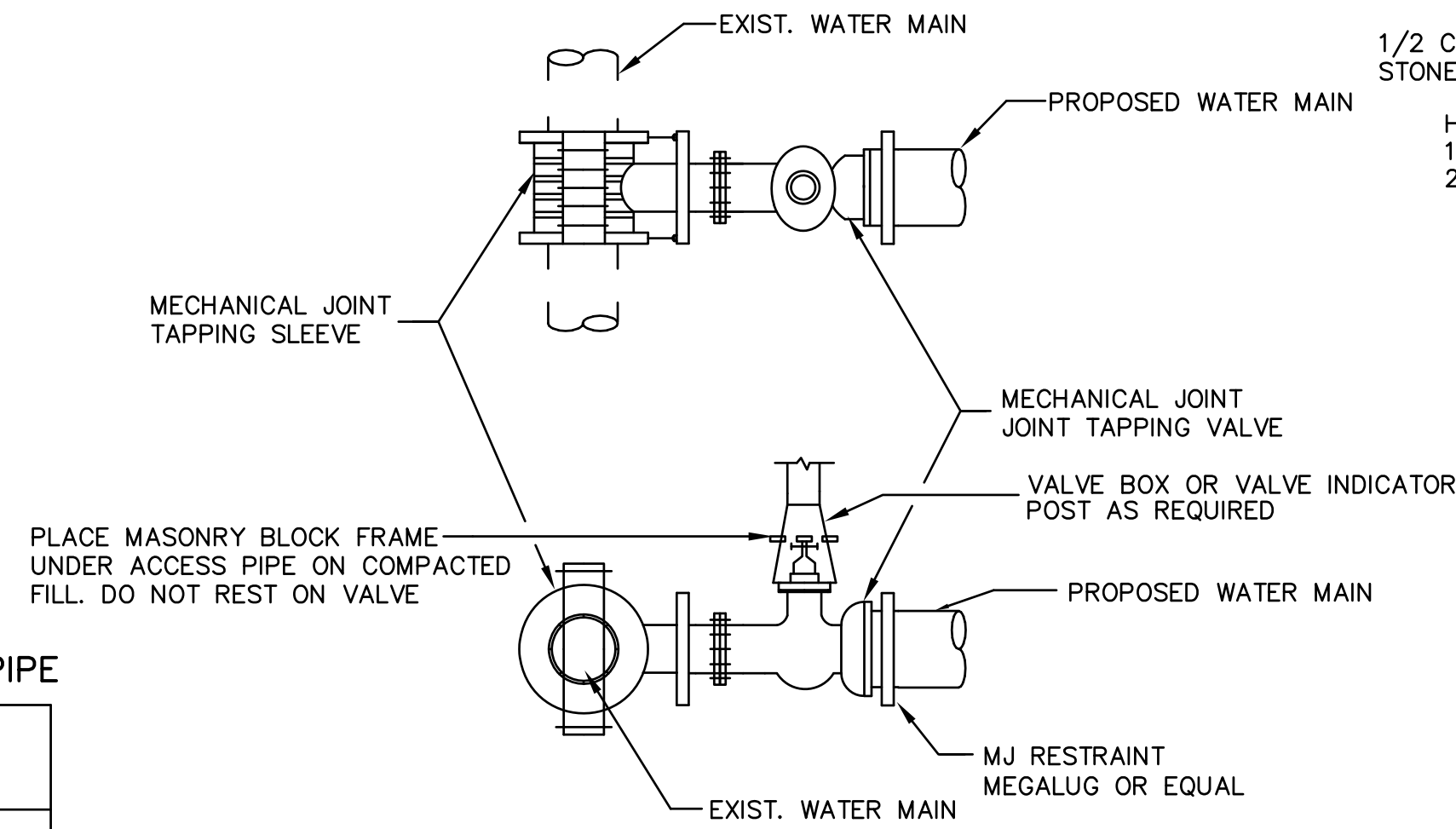
* SEE TABLE ON THRUST BLOCK BEARING AREAS FOR THE AREA OF CONCRETE REQUIRED.

TYPICAL WATER MAIN BEND THRUST BLOCK DETAILS
N.T.S.

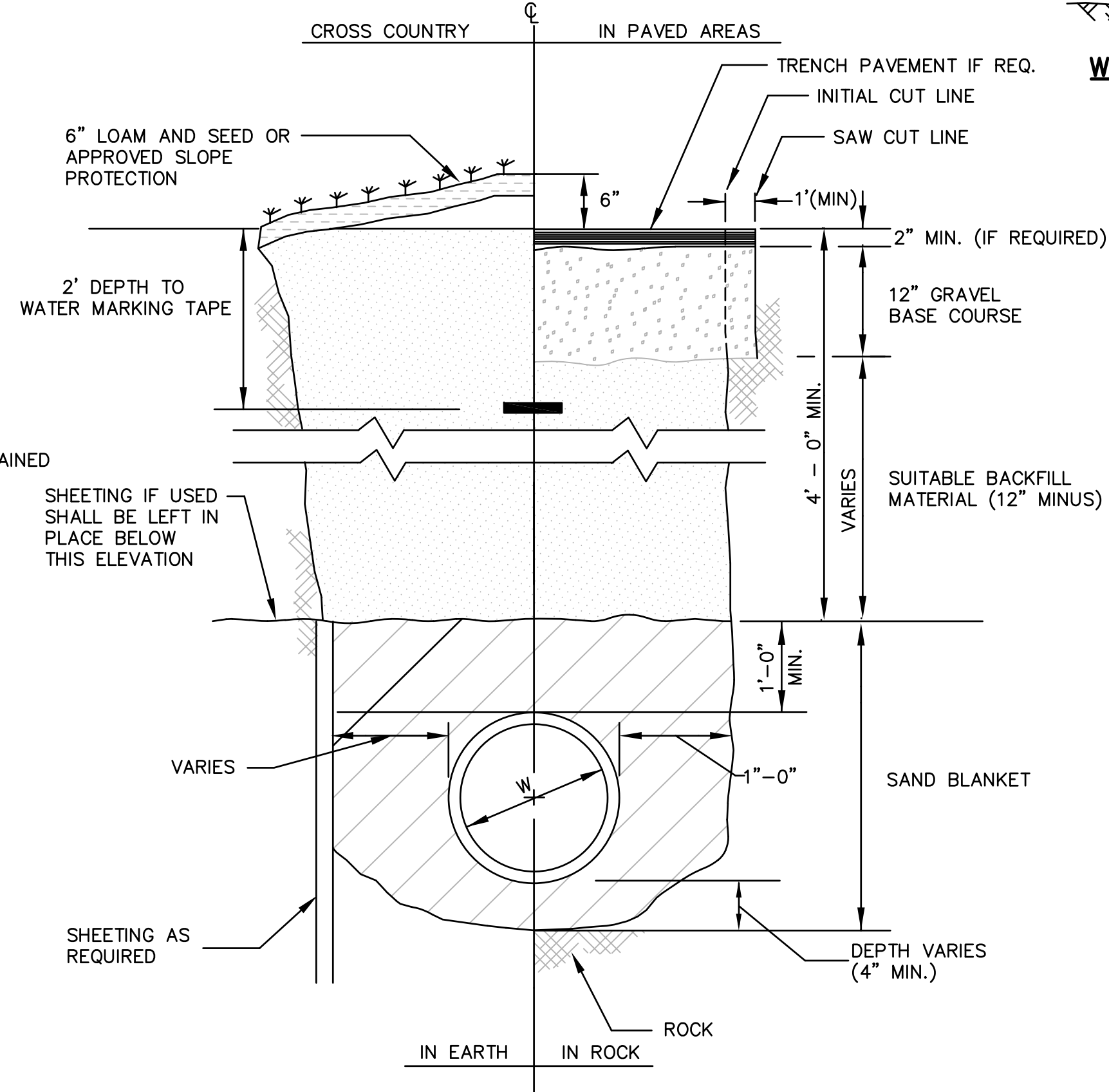


* SEE TABLE ON THRUST BLOCK BEARING AREAS FOR THE AREA OF CONCRETE REQUIRED.

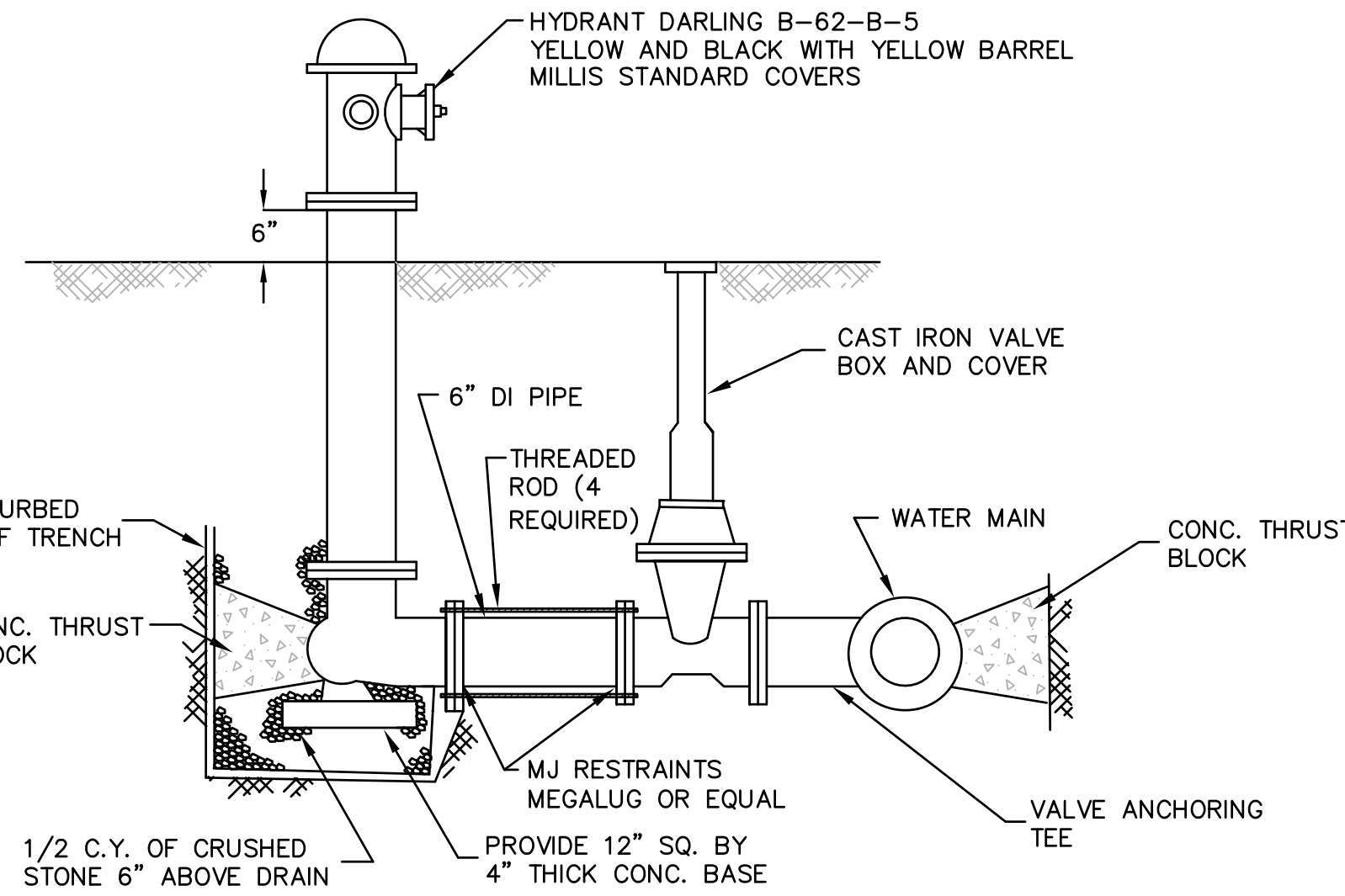
TYPICAL WATER MAIN TEE THRUST BLOCK DETAILS
N.T.S.



TYPICAL TAPPING SLEEVE AND VALVE
N.T.S.

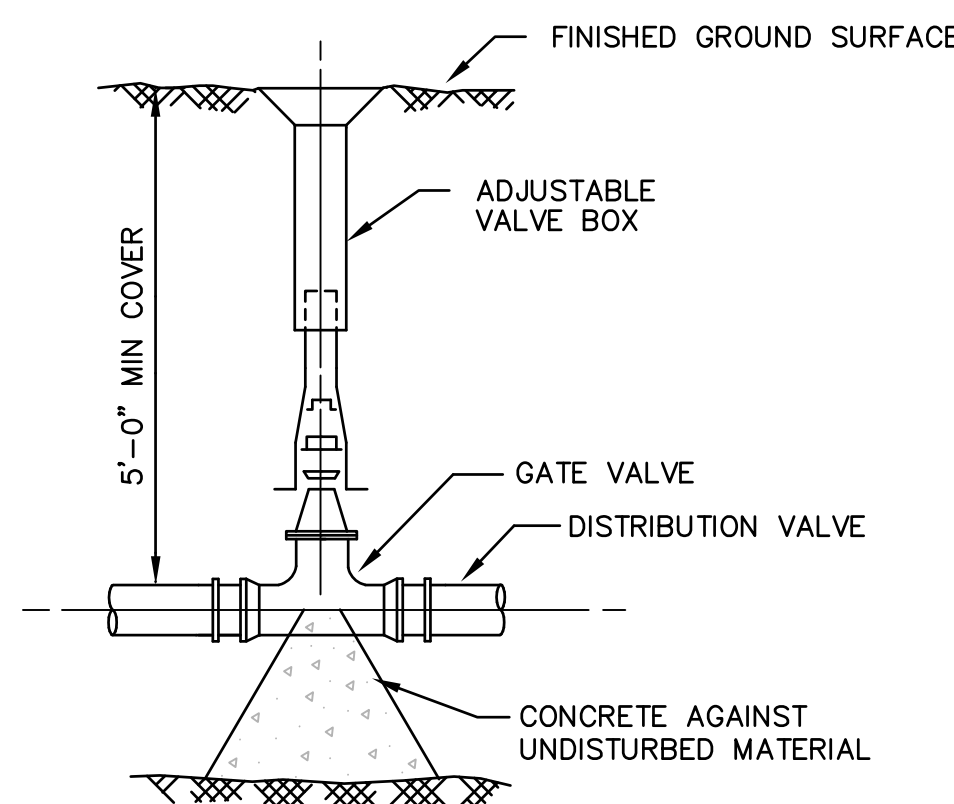


TYPICAL WATER MAIN/SERVICE TRENCH DETAIL
NOT TO SCALE



HYDRANT NOTES:
1. HYDRANT VALVE AND TEE SHALL BE RUDDED TOGETHER.
2. ALL HYDRANTS SHALL BE PLACED AT BACK OF SIDEWALK WITH HYDRANT MARKER.

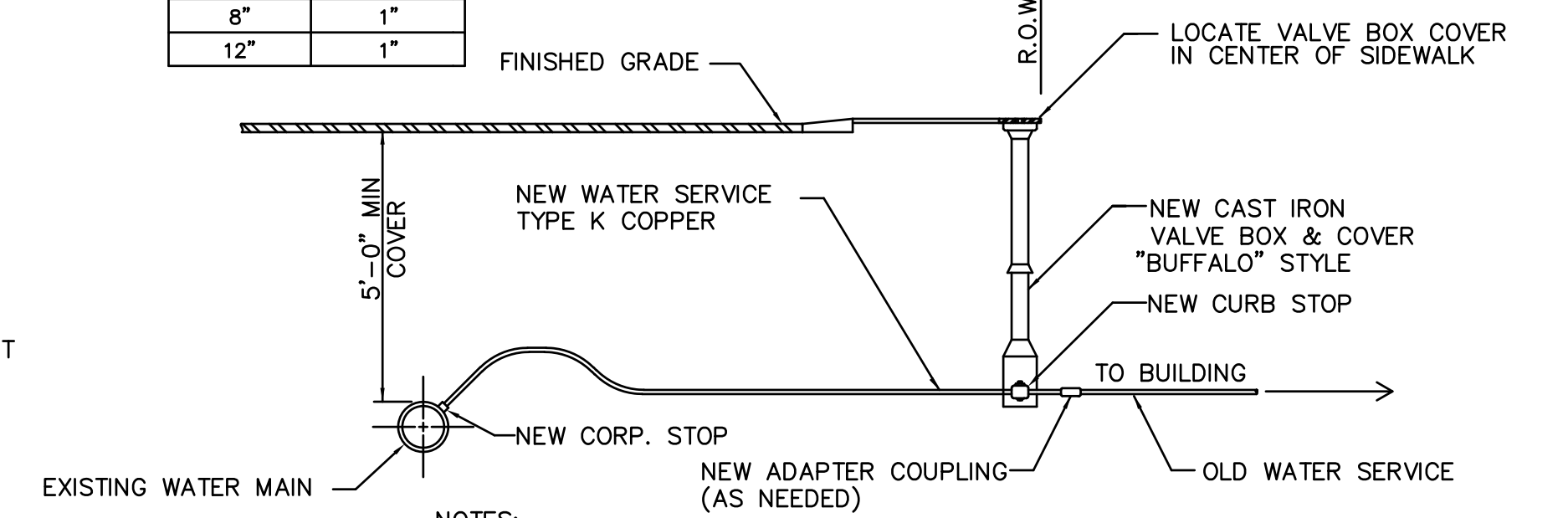
HYDRANT DETAIL
N.T.S.



WATER VALVE DETAIL
N.T.S.

MAXIMUM SIZE TAPPED CONNECTION *	
WATER MAIN DIAMETER	MAXIMUM TAP DIAMETER
4"	1/2"
6"	3/4"
8"	1"
12"	1"

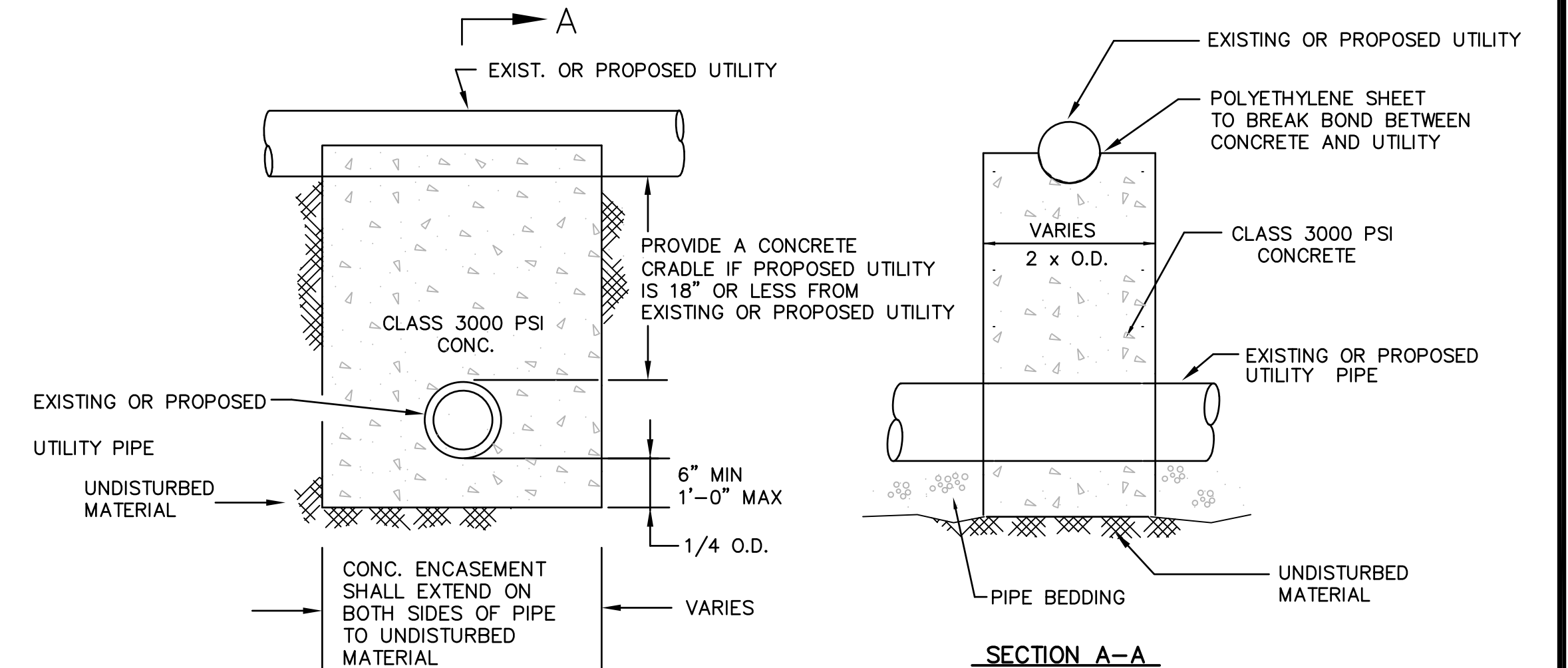
* WHERE THE SIZE OF THE CONNECTION EXCEEDS THAT GIVEN IN THE TABLE, A BOSS SHALL BE PROVIDED OR THE TAP SHALL BE MADE BY MEANS OF MULTIPLE CORP. STOPS AND BRANCH FITTINGS, TAPPED TEE, OR TAPPED SADDLE.



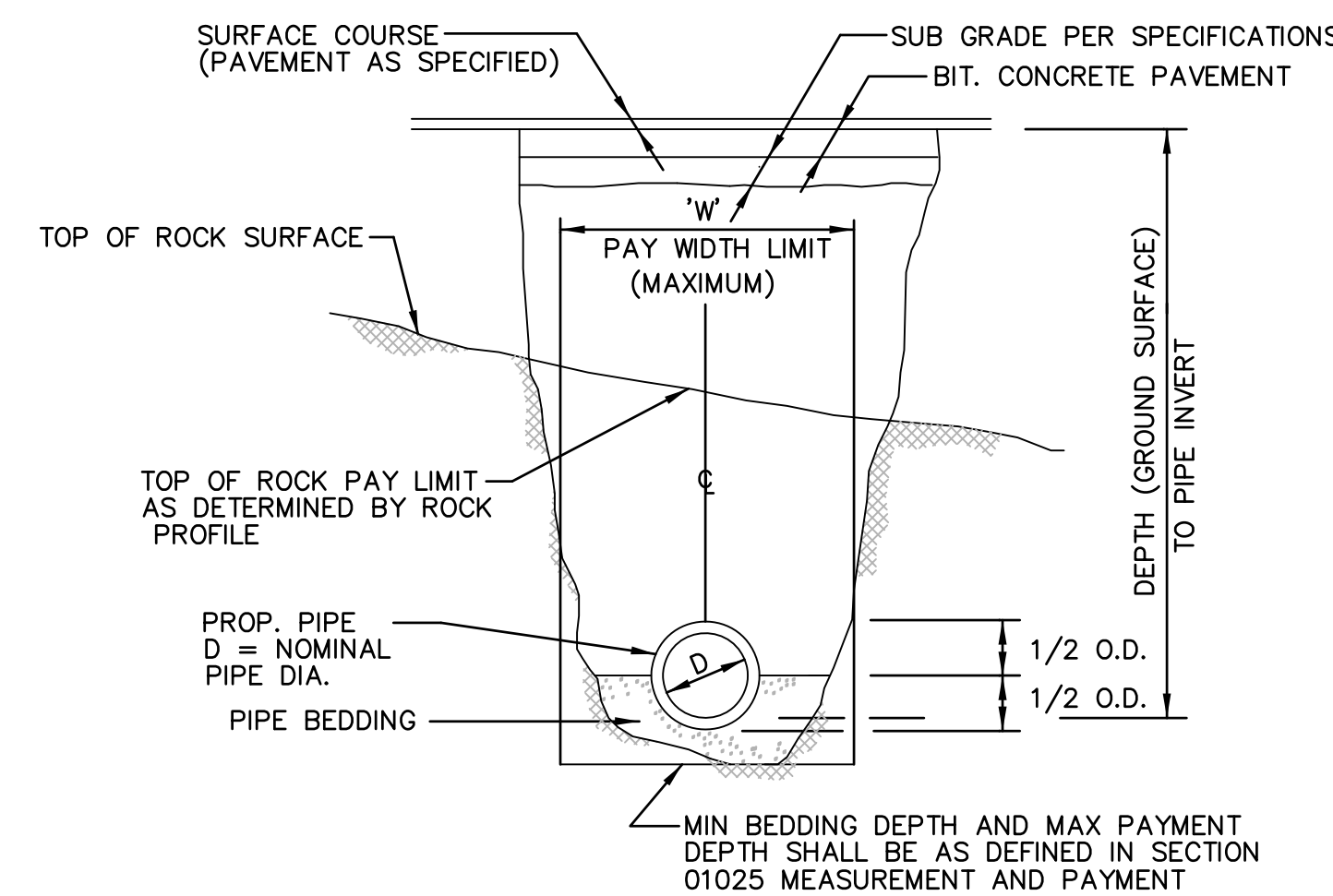
NOTES:

- ALL WATER SERVICES AND CURB STOPS SHALL BE REPLACED UP TO THE RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER. ALL FITTINGS REQUIRED SHALL BE INCLUDED IN THE PRICE OF THE PIPE.
- ALL NEW WATER SERVICES, CORPORATIONS & CURBSTOPS SHALL BE AS SHOWN ON THE PLANS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- ALL 2" WATER SERVICES REQUIRE SADDLE CONNECTIONS OR TAPPING TEES.

WATER SERVICE CONNECTION
NTS



CONCRETE UTILITY SUPPORT
NTS



TRENCH IN ROCK PAYMENT LIMITS
N.T.S.

NOTES:

- THE MAXIMUM PAY LIMIT FOR ROCK REMOVAL OUTSIDE MANHOLES SHALL BE WITHIN A VERTICAL LINE OFFSET ONE FOOT (1') OUTSIDE THE WIDEST DIMENSION OF THE STRUCTURE OR SHALL BE THE MAXIMUM CONNECTING TRENCH WIDTH, WHICHEVER IS GREATER.

DEPTH FROM GROUND SURFACE TO INVERT OF PIPE	PAY WIDTH LIMIT 'W' NOMINAL PIPE DIA.	
	0"-24"	OVER 24"
DEPTH ≤ 12'	5'-0"	D+3'-0"
12' < DEPTH < 20'	7'-0"	D+5'
DEPTH > 20'	9'-0"	D+7'

TOWN OF FAIRHAVEN, MASSACHUSETTS
HEDGE STREET - PHASE III/IV

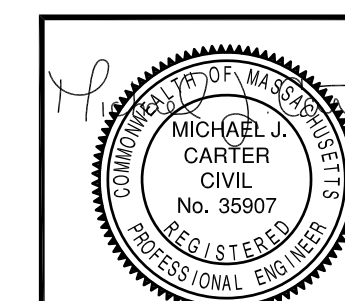
MISCELLANEOUS DETAILS III

GCG ASSOCIATES, INC.

WILMINGTON MASSACHUSETTS

SCALE: AS NOTED DATE: DECEMBER 1, 2020

JOB NO. \FILE NAME: 1996-DETAILS.DWG DESIGNED BY: J.T.C. DRAWN BY: J.T.C. CHECKED BY: M.J.C. PLAN NO. 10 OF 12

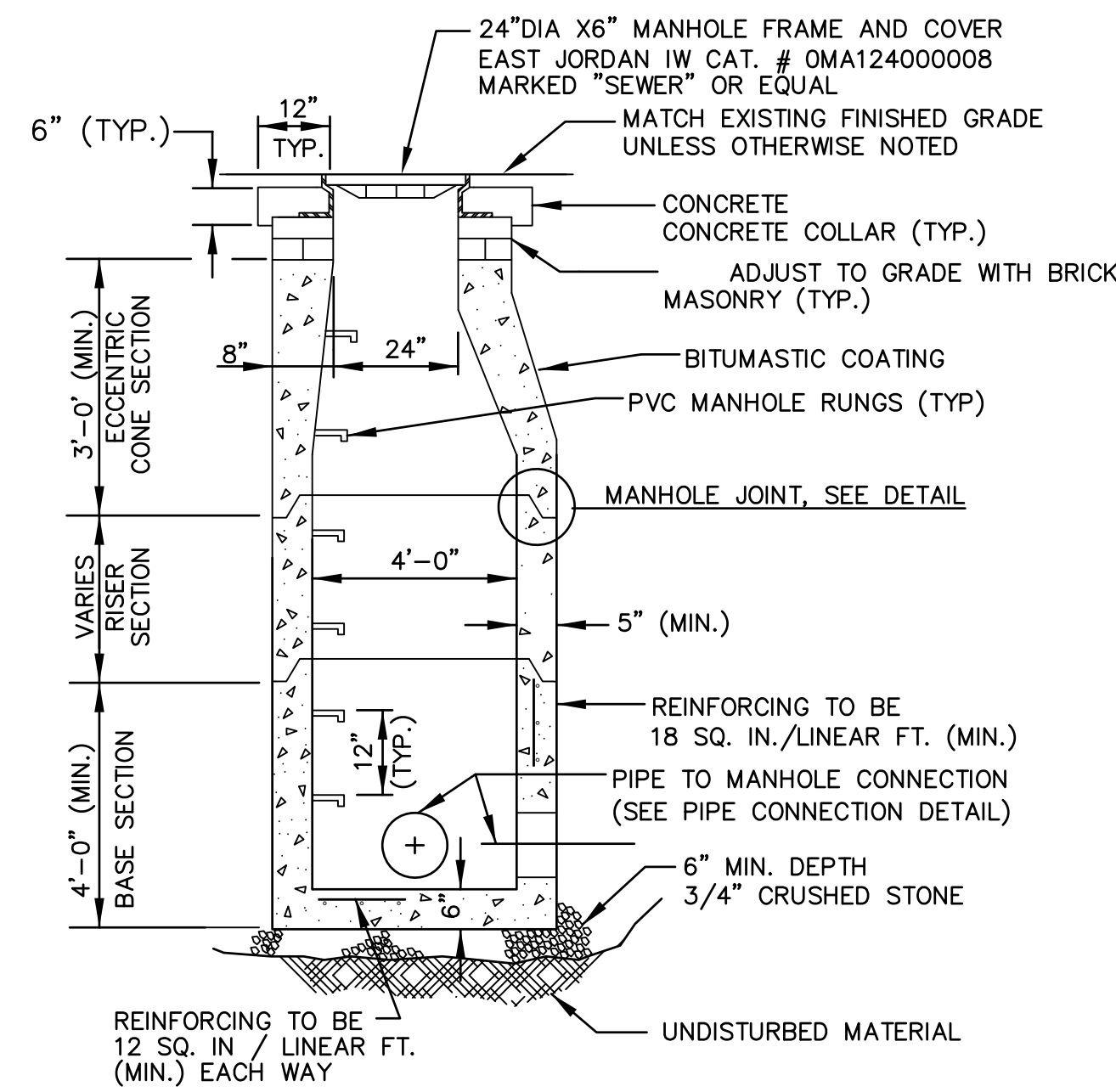


12/01/2020

MANHOLE GENERAL NOTES:

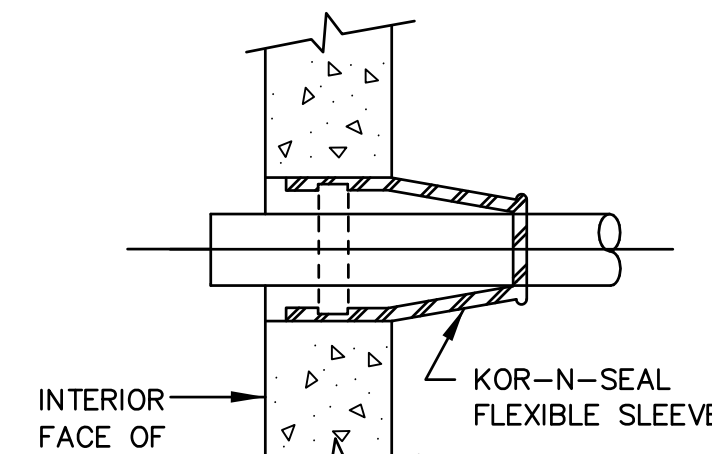
- ALL PRECAST CONCRETE MANHOLES SHALL CONFORM TO THE LATEST A.S.T.M. SPECIFICATIONS FOR PRECAST REINFORCED CONCRETE SECTIONS (A.S.T.M. C478). CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 P.S.I. REINFORCING STEEL SHALL CONFORM TO THE LATEST A.S.T.M. A185 SPECIFICATIONS.
- INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW AT CHANGES IN DIRECTION. THE INVERT SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTERLINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF 3000 P.S.I. CONCRETE FILL AND BRICK MASONRY. BRICK INVERT SHALL BE SLOPED TO PROVIDE SMOOTH TRANSITION FROM INLET TO OUTLET.
- WHEN THE DIFFERENCE IN ELEVATION BETWEEN THE INLET AND OUTLET PIPE ELEVATIONS IS GREATER THAN 2 FEET AT MANHOLES, INSIDE OR OUTSIDE MAHNOLE DROPS ARE REQUIRED.
- SHALLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H=20 LOADS.
- CONCRETE COLLARS TO BE CLASS 3000 P.S.I. CEMENT CONCRETE MASONRY OR BITUMINOUS CONCRETE AS APPROVED.
- ALL MANHOLES SHALL BE DAMPROOFED WITH BITUMASTIC COATING. COMMONWEALTH OF MASSACHUSETTS DEP STANDARDS REQUIRE 10 FEET HORIZONTAL SEPARATION BETWEEN SEWER AND WATER MAINS, HOWEVER, SHOULD CONSTRUCTION OPERATIONS REVEAL OR EXPOSE A WATER MAIN RUNNING APPROXIMATELY PARALLEL AND LESS THAN 10 FEET HORIZONTALLY FROM THE PROPOSED SEWER INSTALLATION AND WHERE IT IS NOT PRACTICABLE TO RELOCATE THE SEWER THE FOLLOWING METHODS OF PROTECTION MUST BE EMPLOYED.

THE SEWER WILL BE LAID IN A SEPARATE TRENCH AND THE ELEVATION OF THE TOP (CROWN) OF THE SEWER SHALL BE AT LEAST 18 INCHES BELOW THE BOTTOM (INVERT) OF THE WATER MAIN. IF THE ABOVE SEPARATION CANNOT BE ACHIEVED, THE WATER MAIN SHALL BE ENCASED IN CONCRETE.

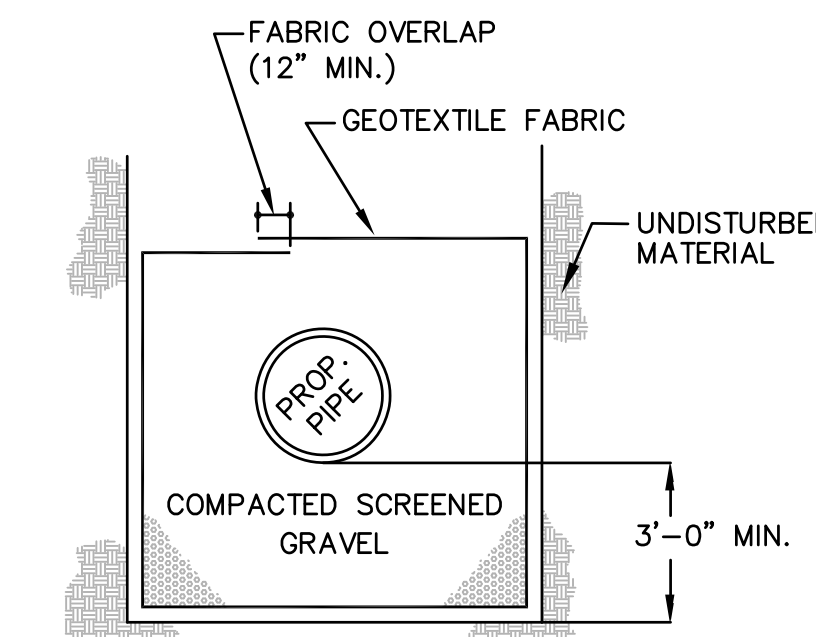


4'-0" PRECAST SEWER MANHOLE
NOT TO SCALE

MANHOLE JOINT DETAILS
NOT TO SCALE



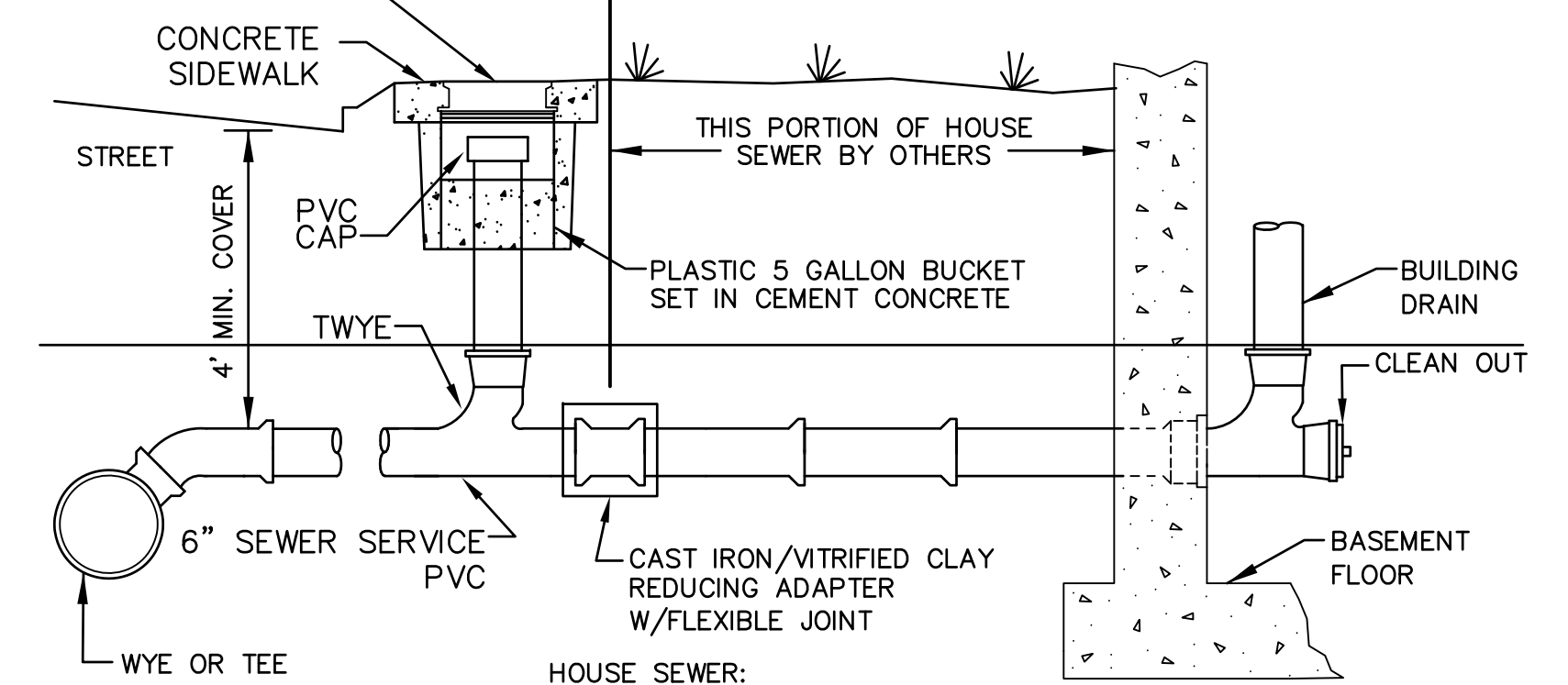
PIPE CONNECTION DETAILS
NOT TO SCALE



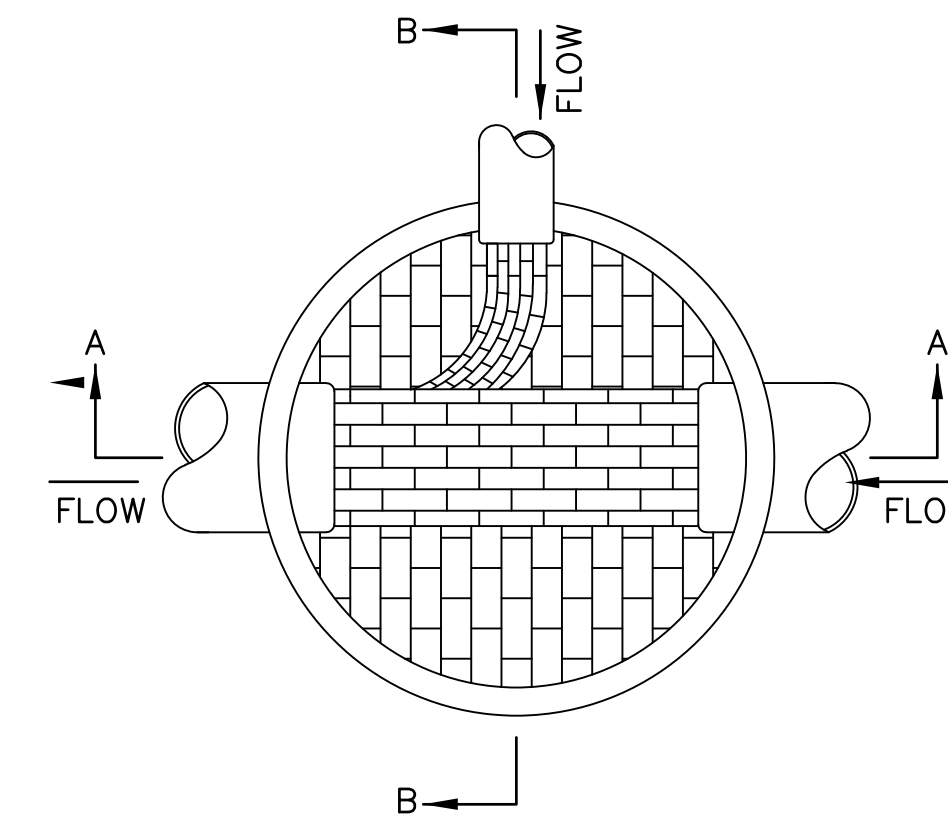
NOTE: PLACEMENT OF GEOTEXTILE FABRIC SHALL EXTEND 5' ON EITHER SIDE OF POOR SUBGRADE CONDITIONS.

TRENCH EXCAVATION WITH UNSUITABLE SOIL CONDITIONS
NOT TO SCALE

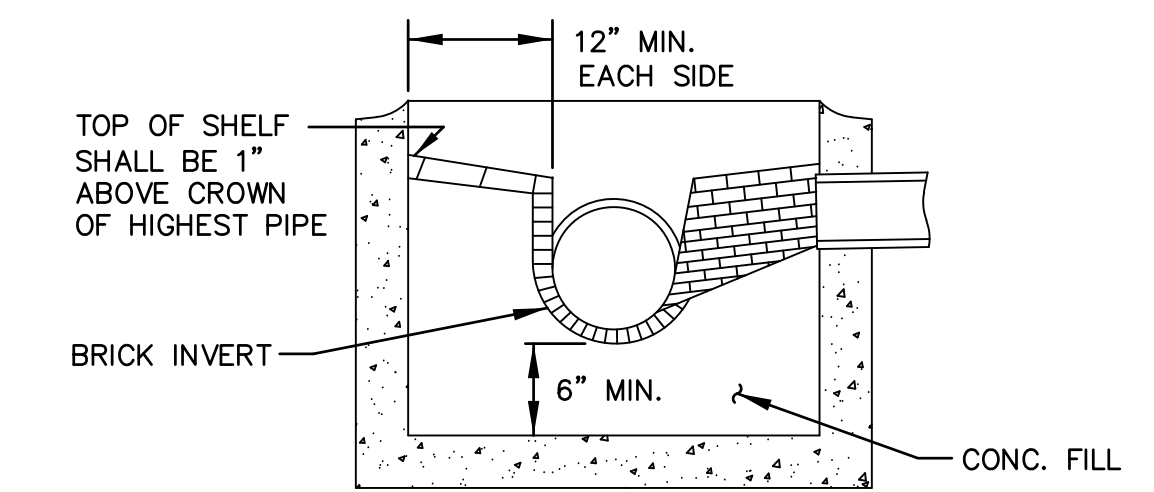
CLEAN-OUT ASSEMBLY WITH C.I. FRAME & COVER AT GRADE, EAST JORDAN IW 3661C, CAT NO. 00366120 MARKED "SEWER" OR EQUAL



HOUSE SERVICE
NOT TO SCALE

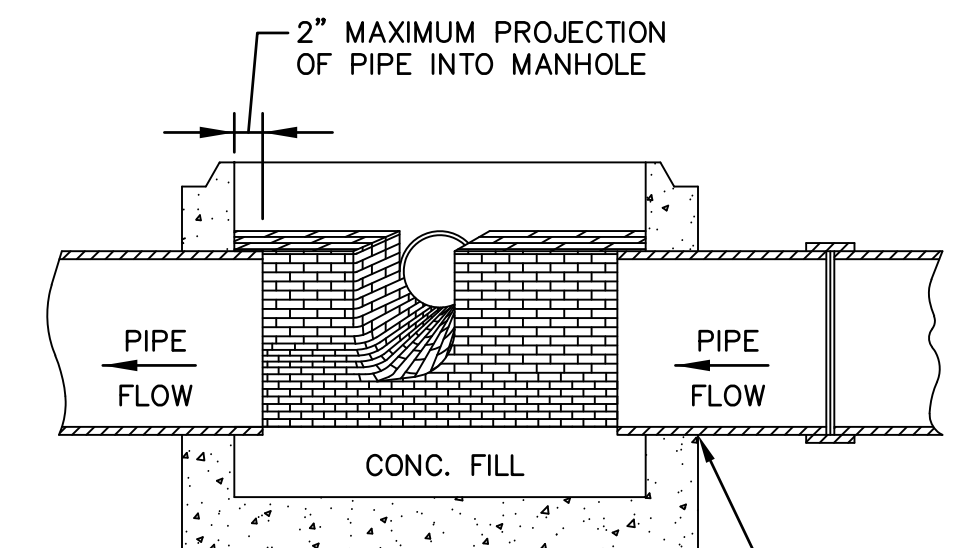


MANHOLE PLAN
NOT TO SCALE



NOTES:
1. CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT. INVERT BRICKS SHALL BE LAID ON EDGE.

SECTION B-B



NOTES:
1. INVERT AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF THE PIPE AND FLOW AT CHANGES IN DIRECTION; THE INVERT SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTERLINE OF THE PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPED TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL; UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF 3000 P.S.I. CONCRETE FILL AND BRICK MASONRY; AND THE BRICK INVERT SHALL BE SLOPED TO PROVIDE A SMOOTH TRANSITION FROM INLET TO OUTLET.

SECTION A-A

BRICK INVERT DETAILS
NOT TO SCALE

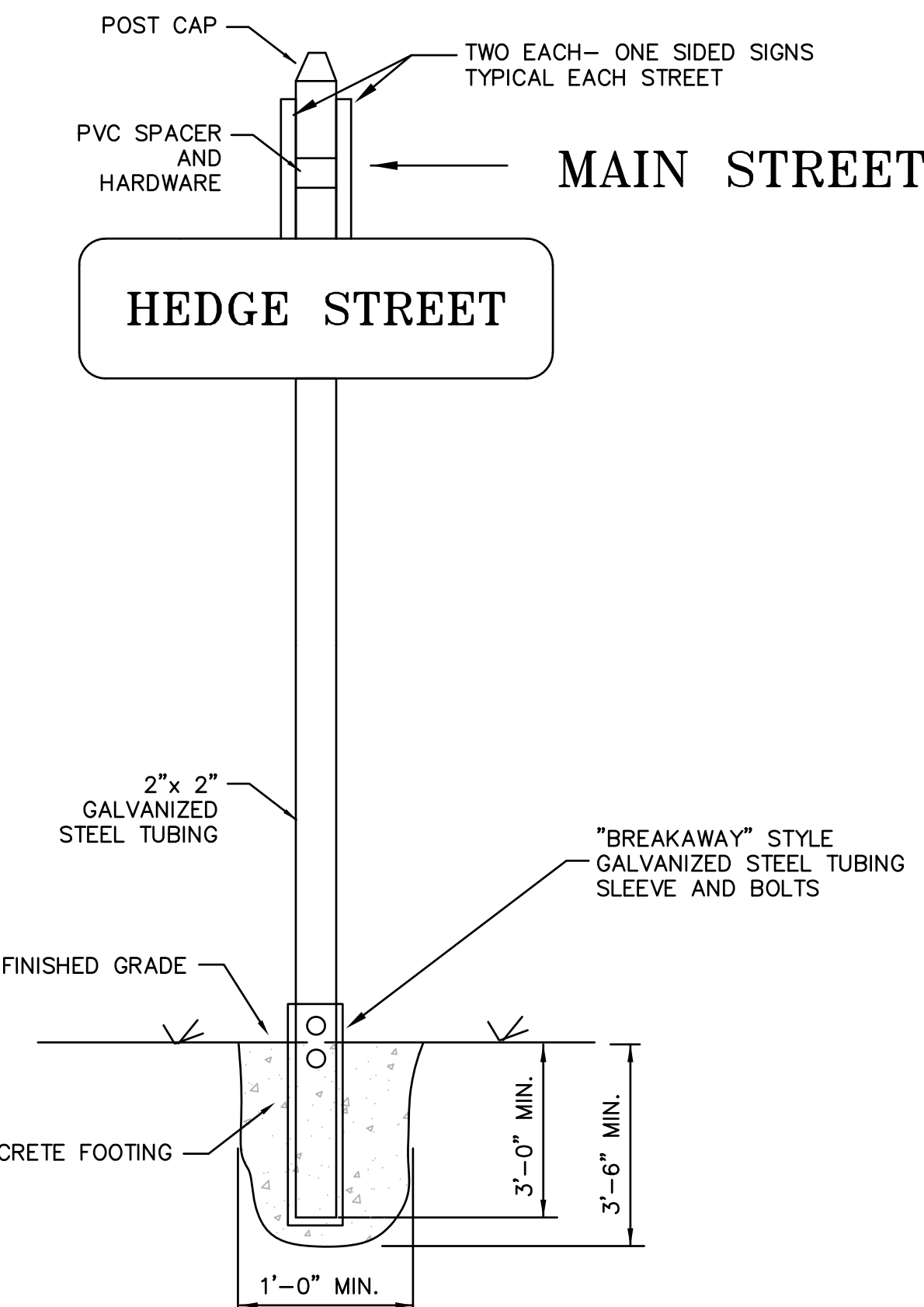
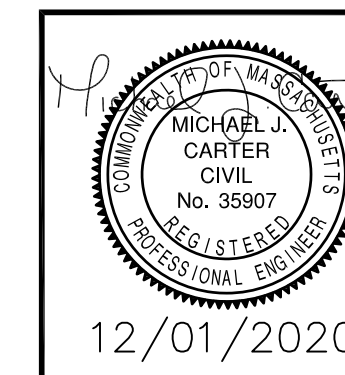
TOWN OF FAIRHAVEN, MASSACHUSETTS
HEDGE STREET - PHASE III/IV

MISCELLANEOUS DETAILS IV

GCG ASSOCIATES, INC.
WILMINGTON MASSACHUSETTS

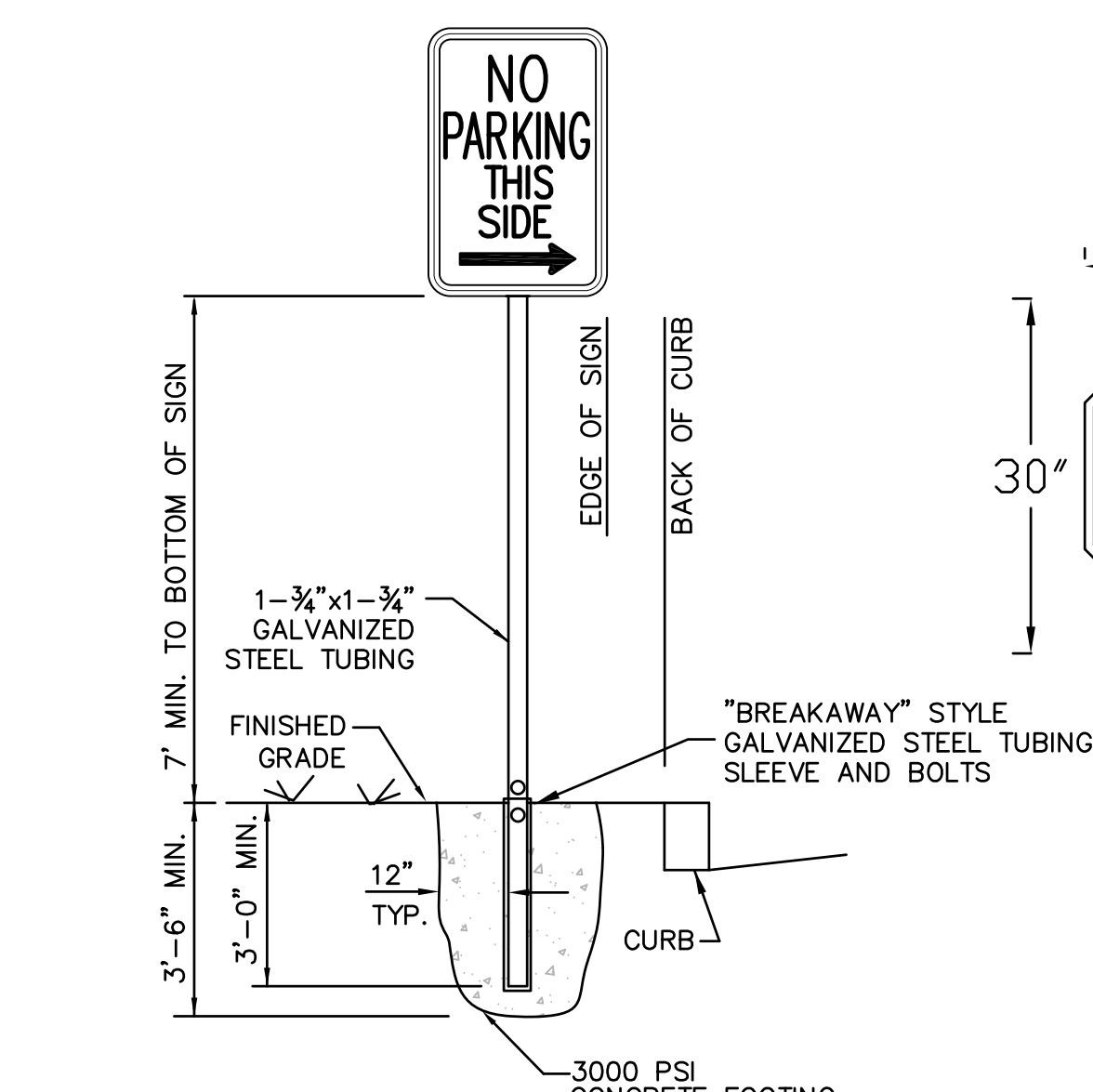
SCALE: AS NOTED DATE: DECEMBER 1, 2020

JOB NO. \FILE NAME: 1996-DETAILS.DWG DESIGNED BY: J.T.C. PLAN NO. 11 OF 12
DRAWN BY: J.T.C.
CHECKED BY: M.J.C.



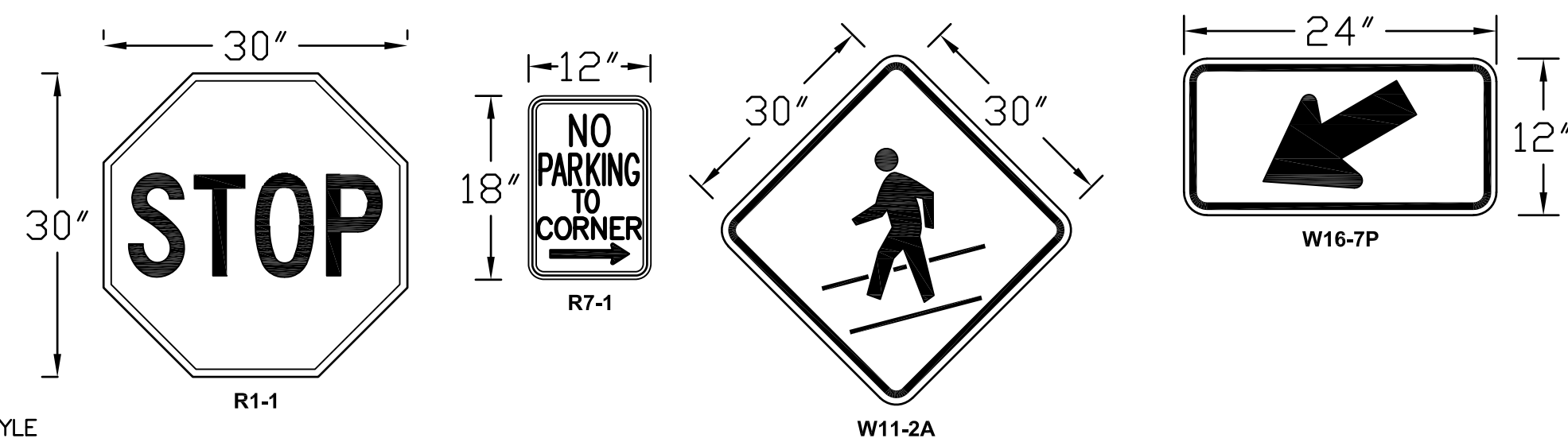
NOTE:
1. 2 PAIRS OF STREET SIGNS MOUNTED PERPENDICULAR ON EACH POST ASSEMBLY
2. STREET SIGNS TO BE MOUNTED PARALLEL TO STREETS THAT THEY NAME.
3. SEE SECTION 01025 - STREET SIGN
4. ALL SIGN POSTS SHALL BE GALVANIZED STEEL, BREAKAWAY STYLE, 2"x2" TUBING.

STREET SIGNS & FOOTING DETAIL
NOT TO SCALE



NOTE:
1. ALL SIGN POSTS SHALL BE GALVANIZED STEEL.
2. BREAKAWAY STYLE, 1-3/4"x1-3/4" TUBING.
3. POST SHALL COMPLY WITH MHD STANDARDS.
4. EDGE OF SIGN SHALL NOT OVERHANG BACK OF CURB.

TYPICAL SIGN INSTALLATION DETAIL
N.T.S.



SCHEDULE SIGN COLORS

QTY.	MUTCD SIGN	DESCRIPTION	LEGEND COLOR	BACKGROUND/BORDER/SYMBOL COLOR
1	R1-1	"STOP"	WHITE	RED/WHITE BORDER
0	W16-7P	LEFT ARROW DIAGONAL	BLACK	GREEN OR YELLOW FLUORESCENT BACKGROUND - BLACK ARROW SYMBOL
0	W11-2A	PEDESTRIAN SYMBOL WITH CROSSWALK	BLACK	GREEN OR YELLOW FLUORESCENT BACKGROUND, BLACK PEDESTRIAN SYMBOL
0	R7-1A	"NO PARKING TO CORNER"	RED	WHITE/RED BORDER
0	R7-1	"NO PARKING"	RED	WHITE/RED BORDER

NOTE:
1. ALL COLORS ARE RETROREFLECTIVE EXCEPT BLACK.
2. ALL SIGNS SHALL COMPLY WITH MUTCD 2009 AND MHD REGULATIONS.
3. ALL SIGNS TO BE ALUMINUM WITH REFLECTIVE BACKING.
4. SIGN POST WITH W11-2A WITH W16-7P IS CONSIDERED FOR PAYMENT AS ONE SIGN ASSEMBLY.

STANDARD SIGN DETAILS
N.T.S.

GENERAL

THIS PLAN PROPOSES EROSION CONTROL MEASURES TO ADEQUATELY CONTROL ACCELERATED SEDIMENTATION AND REDUCE THE DANGER FROM STORM WATER RUNOFF AT THE SITE. THE RUNOFF SHALL BE CONTROLLED BY THE INTERCEPTION, DIVERSION, AND SAFE DISPOSAL OF PRECIPITATION. RUNOFF SHALL ALSO BE CONTROLLED BY STAGING CONSTRUCTION ACTIVITY AND PRESERVING NATURAL VEGETATION WHEREVER POSSIBLE.

EXISTING VEGETATION SHALL BE PROTECTED AND ONLY THAT CLEARING AND GRUBBING ABSOLUTELY NECESSARY TO THE PROPOSED CONSTRUCTION SHALL BE PERFORMED. ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND CONTOUR, UNLESS OTHERWISE INDICATED ON THE PLANS. THE CONTRACTOR SHALL TAKE SPECIAL CARE WITH HIS CONSTRUCTION METHODS AND SHALL COMPLY WITH THE FOLLOWING GUIDELINES.

SEDIMENTATION CONTROL

ALL AREAS SHALL BE PROTECTED FROM SEDIMENTATION DURING AND AFTER CONSTRUCTION. PARTICULARLY THE STORAGE OF EXCAVATED OR STOCKPILED MATERIAL. THE CONTRACTOR SHALL CAREFULLY STRIP ALL TOPSOIL, LOAM, OR ORGANIC MATTER PRIOR TO THE TRENCHING OR OTHER OPERATIONS AND SHALL STORE THEM SEPARATELY FROM ALL OTHER MATERIALS DURING EXCAVATION. EACH STOCKPILE MUST BE ADEQUATELY RINGED WITH SEDIMENT CONTROL MATERIAL (i.e., STRAW

~~BALES~~ OTHER WASTE RESULTING FROM EQUIPMENT MAINTENANCE AND CONSTRUCTION WILL NOT BE DISCARDED ON SITE.

STABILIZING OF SLOPES SHALL BE DONE IMMEDIATELY AFTER CONSTRUCTION OF SLOPES. SLOPES STEEPER THAN 3:1 SHALL BE PROTECTED WITH EROSION MATS. THESE MATS ARE MANUFACTURED COMBINATIONS OF MULCH AND NETTING AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ALL OTHER AREAS SHALL BE MULCHED WITH STRAW AT A RATE OF 1.5 TO 2 TONS PER ACRE. STRAW MULCH MUST BE ANCHORED IMMEDIATELY AFTER SPREADING TO PREVENT WINDBLOWING.

EROSION AND SEDIMENTATION CONTROL PLAN

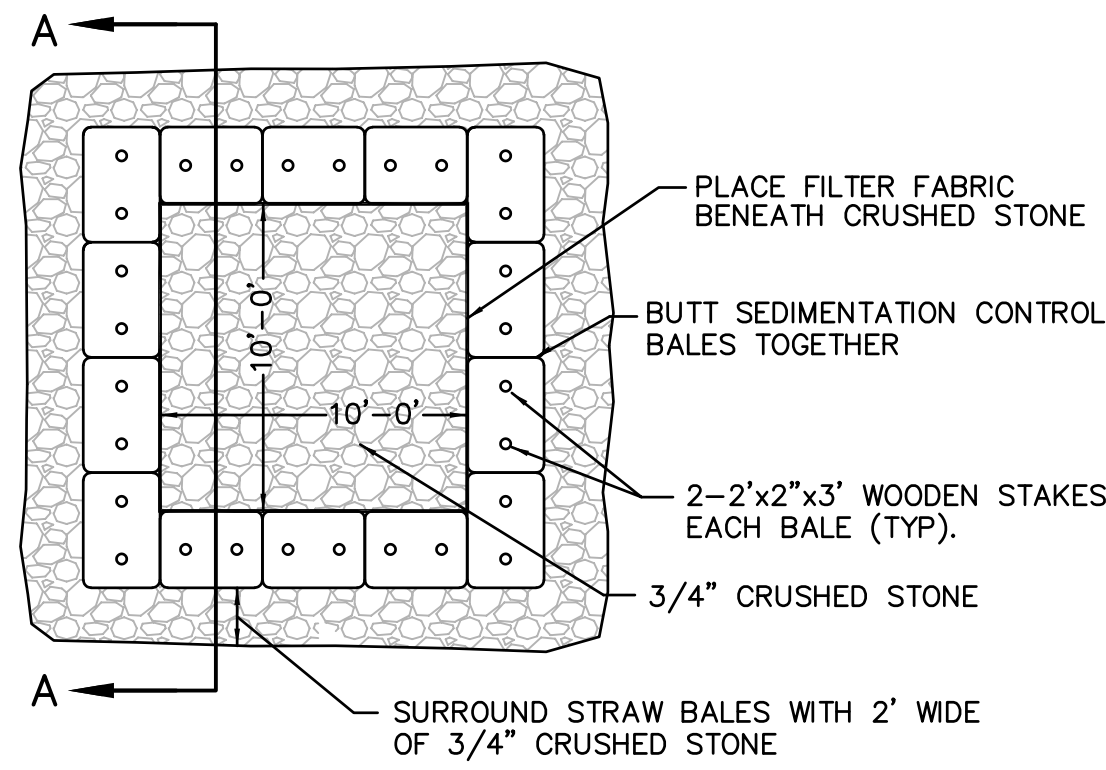
SEDIMENTATION CONTROL SYSTEM - THE SEDIMENTATION CONTROL SYSTEM SHALL CONSIST OF STRAW FILTER TUBES. THE SEDIMENTATION CONTROL SYSTEM SHALL BE INSTALLED IMMEDIATELY AFTER A CUT SLOPE HAS BEEN GRADED, BEFORE A FILL SLOPE HAS BEEN CREATED, AND AS INDICATED ON THE PLANS. DESIGN THE SYSTEM TO INTERCEPT SILT AND SEDIMENT BEFORE IT REACHES THE WETLANDS OR WATERCOURSES. DEPOSITS OF SEDIMENT AND SILT ARE TO BE PERIODICALLY REMOVED FROM THE UPSTREAM SIDE OF THE FENCE. THIS MATERIAL IS TO BE SPREAD AND STABILIZED IN AREAS NOT SUBJECT TO EROSION, OR IN AREAS WHICH ARE NOT TO BE PAVED OR BUILT ON. THE SEDIMENTATION CONTROL SYSTEM IS TO BE REPLACED AS NECESSARY TO PROVIDE PROPER FILTERING ACTION. THE SYSTEM IS TO REMAIN IN PLACE AND BE MAINTAINED TO INSURE EFFICIENT SILTATION CONTROL UNTIL ALL AREAS ABOVE THE FENCE ARE STABILIZED AND VEGETATION HAS BEEN ESTABLISHED.

STRAW FILTER TUBES (IN ADDITION TO CRUSHED STONE) USED FOR EROSION CONTROL SHALL BE RINGED AT CATCH BASINS LOCATED IN AREAS THAT WILL NOT BE PAVED AND WHERE SEDIMENT MAY ENTER THE CATCH BASIN OR AS DIRECTED BY THE RESIDENT ENGINEER. DEPOSITS OF SEDIMENT AND SILT ARE TO BE PERIODICALLY REMOVED FROM THE UPSTREAM SIDE OF THE EROSION CHECKS. THIS MATERIAL IS TO BE SPREAD AND STABILIZED IN AREAS NOT SUBJECT TO EROSION, OR IN AREAS WHICH ARE NOT TO BE PAVED OR BUILT ON. STRAW FILTER TUBES ARE TO BE REPLACED AS NECESSARY TO PROVIDE PROPER FILTERING ACTION. THE SYSTEM IS TO REMAIN IN PLACE AND BE MAINTAINED TO INSURE EFFICIENT SILTATION CONTROL UNTIL ALL AREAS ABOVE THE EROSION CHECKS ARE STABILIZED AND VEGETATION HAS BEEN ESTABLISHED.

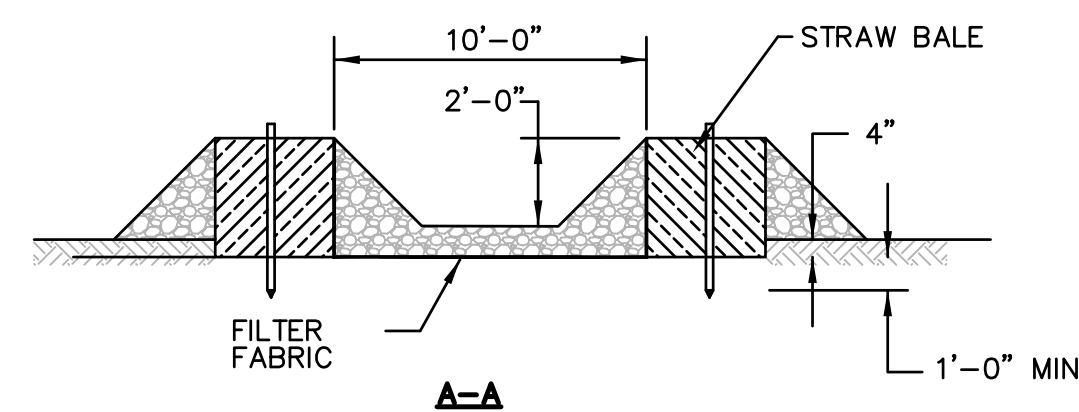
SILT SACK - SILT SACKS SHALL BE PLACED WITHIN ALL CATCH BASINS PRIOR TO CONSTRUCTION OR IMMEDIATELY AFTER INSTALLATION OF NEW CATCH BASINS. DEPOSITS OF SEDIMENT ARE TO BE PERIODICALLY REMOVED DURING CONSTRUCTION AND SPREAD AS DESCRIBED ABOVE. SILT SACKS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE AND SURROUNDING AREAS ARE STABILIZED.

IN ALL AREAS, REMOVAL OF TREES, BUSHES, AND OTHER VEGETATION, AND DISTURBANCE TO THE SOIL IS TO BE KEPT TO AN ABSOLUTE MINIMUM WHILE ALLOWING PROPER DEVELOPMENT OF THE SITE.

DEWATERING OF GROUNDWATER MAY BE NECESSARY DURING CONSTRUCTION. ALL DEWATERING ACTIVITIES SHALL BE CONDUCTED IN A MANNER THAT WILL NOT INTRODUCE SILT, SEDIMENT, CONTAMINATION, ETC. INTO A WETLAND RESOURCE AREA OR AN ADJACENT UPLAND RESOURCE AREA. DISCHARGED GROUNDWATER SHALL BE PROPERLY DETAINED, SETTLED, FILTERED OR OTHERWISE TREATED PRIOR TO ENTERING A WETLAND RESOURCE AREA OR AN ADJACENT UPLAND RESOURCE AREA (SEE DEWATERING DETAIL).



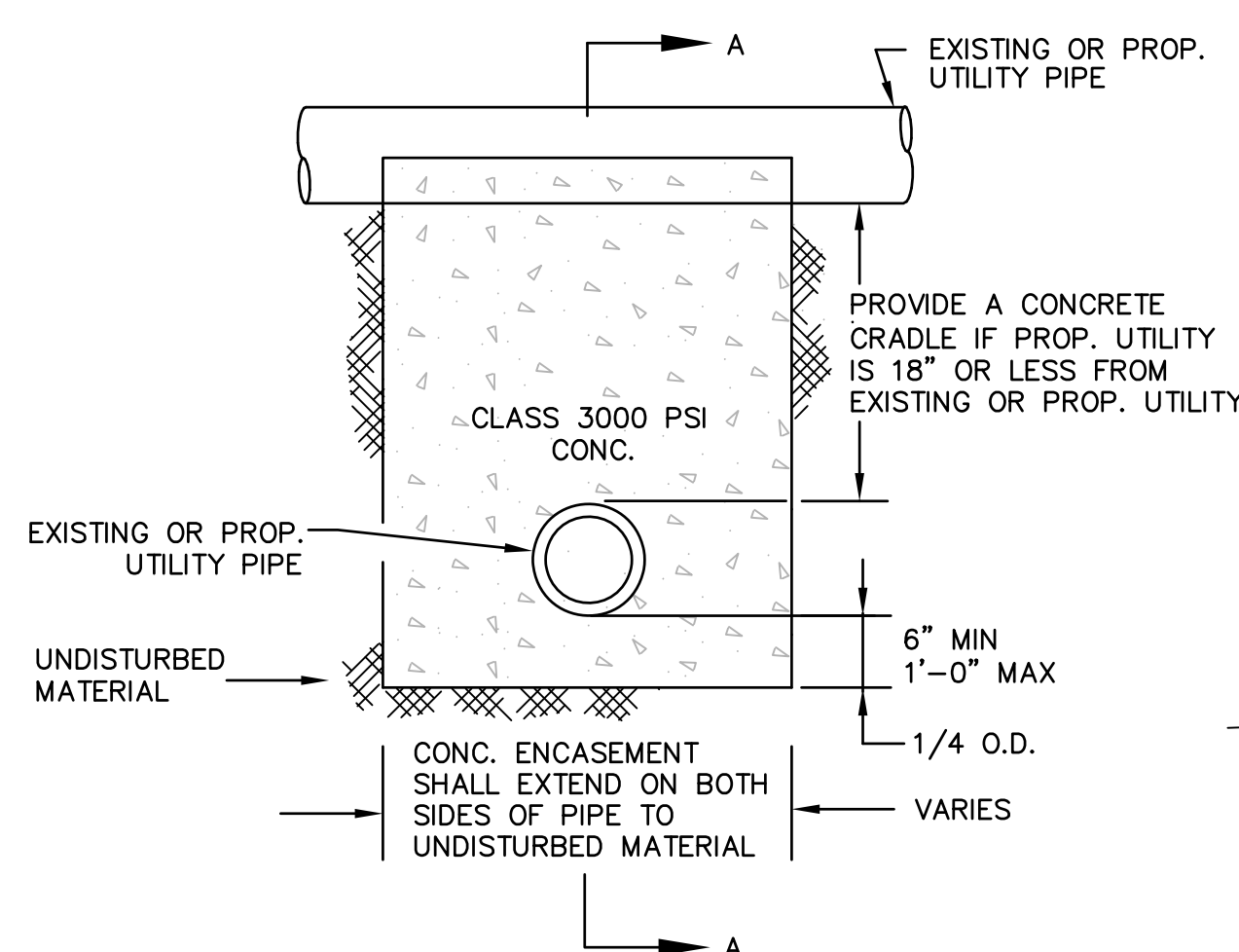
PLAN



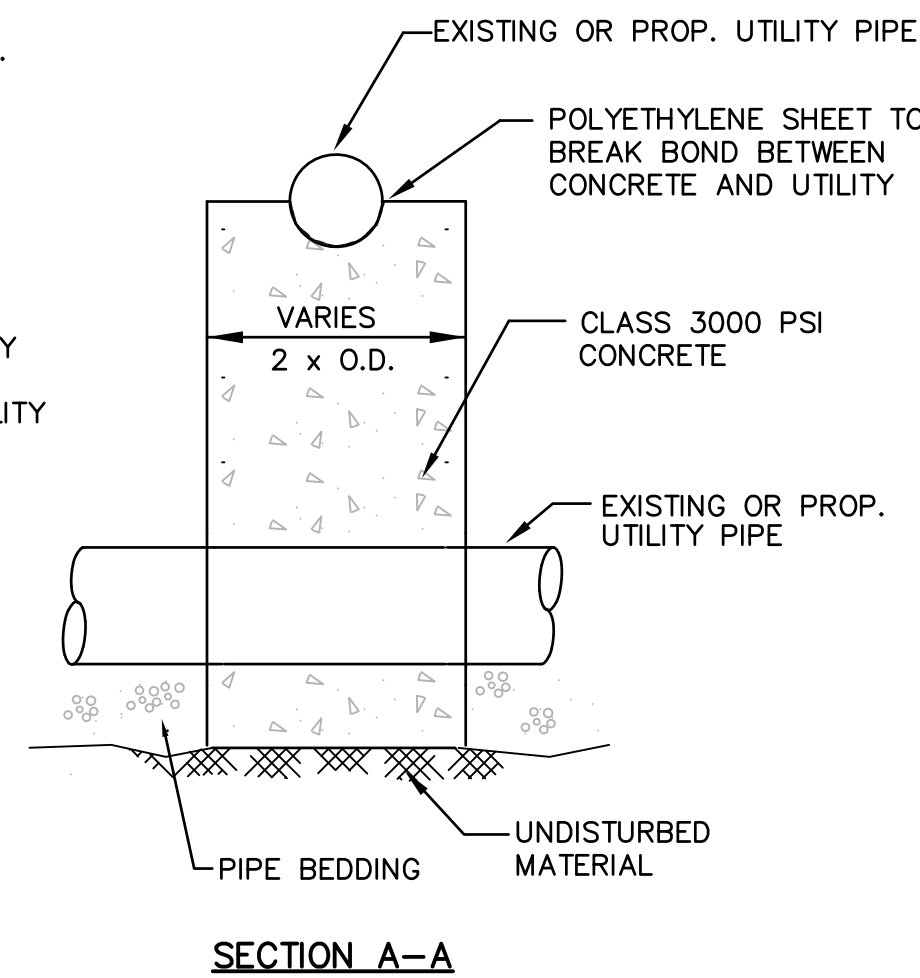
NOTE:
SILT BAGS, FILTERS, AND TANKS MAY BE USED AS AN ALTERNATIVE TO, OR IN COMBINATION WITH A SEDIMENT BASIN.

SEDIMENTATION CONTROL SYSTEM FOR ONSITE DEWATERING

N.T.S.

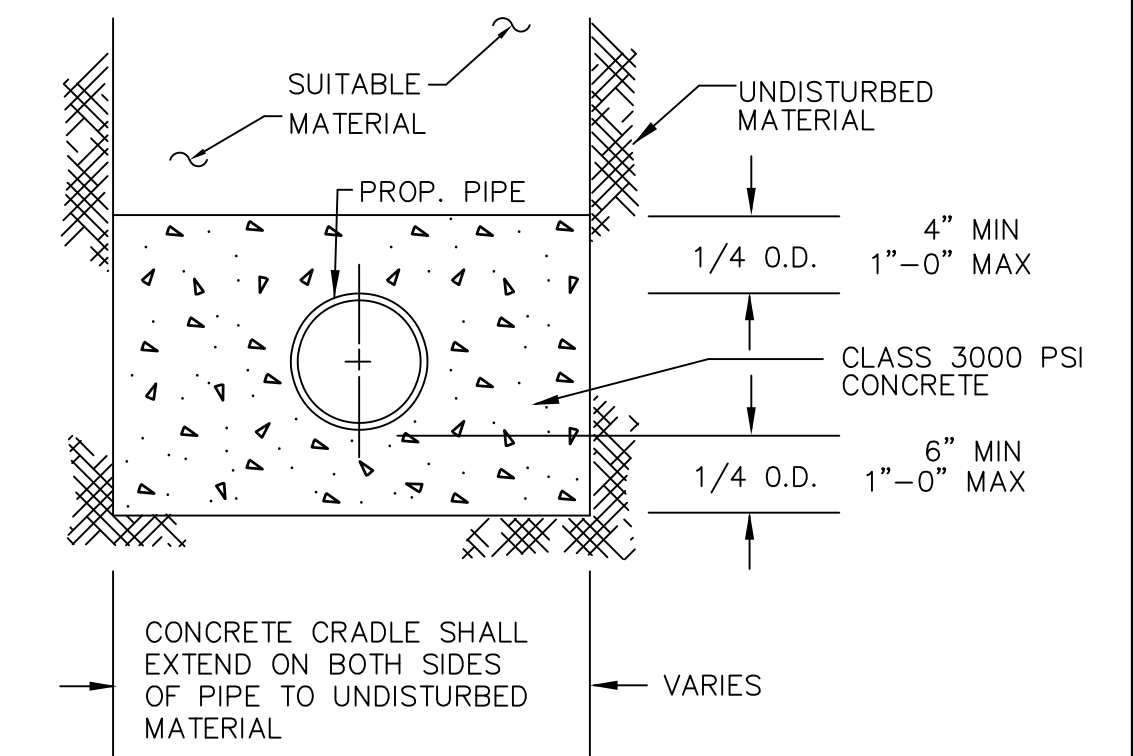


CONCRETE UTILITY SUPPORT
NOT TO SCALE

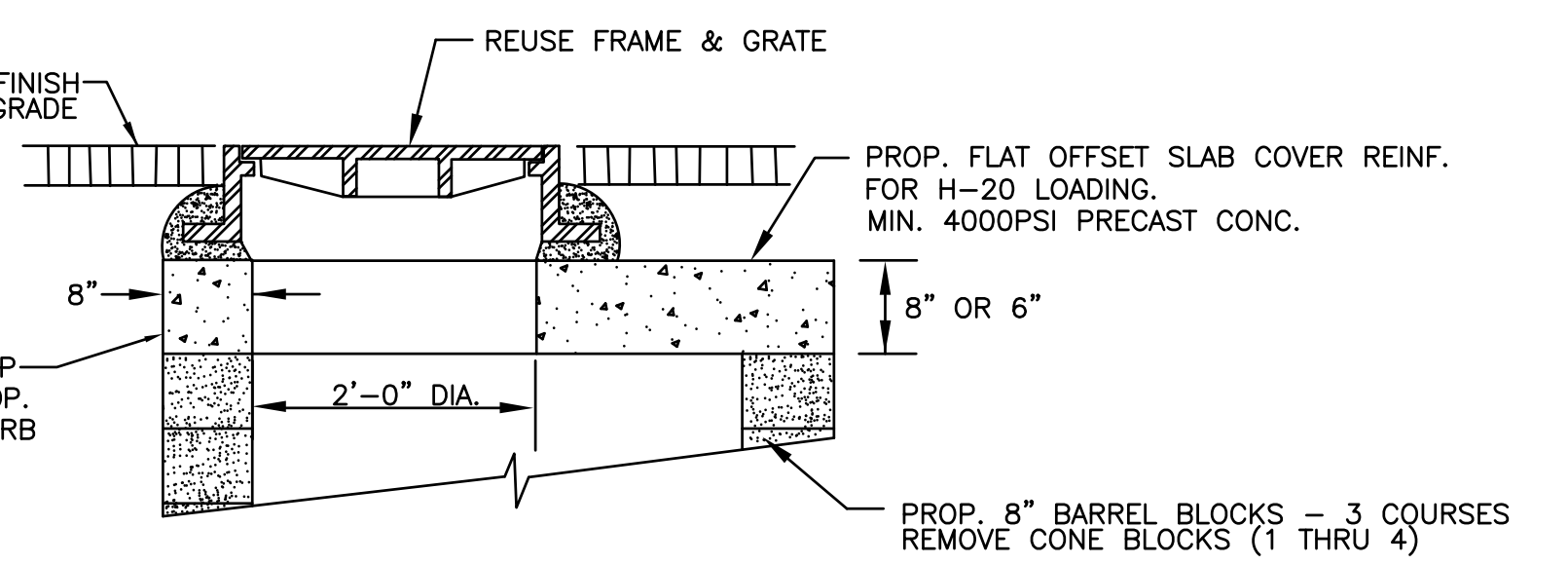


CONCRETE CRADLE
NOT TO SCALE

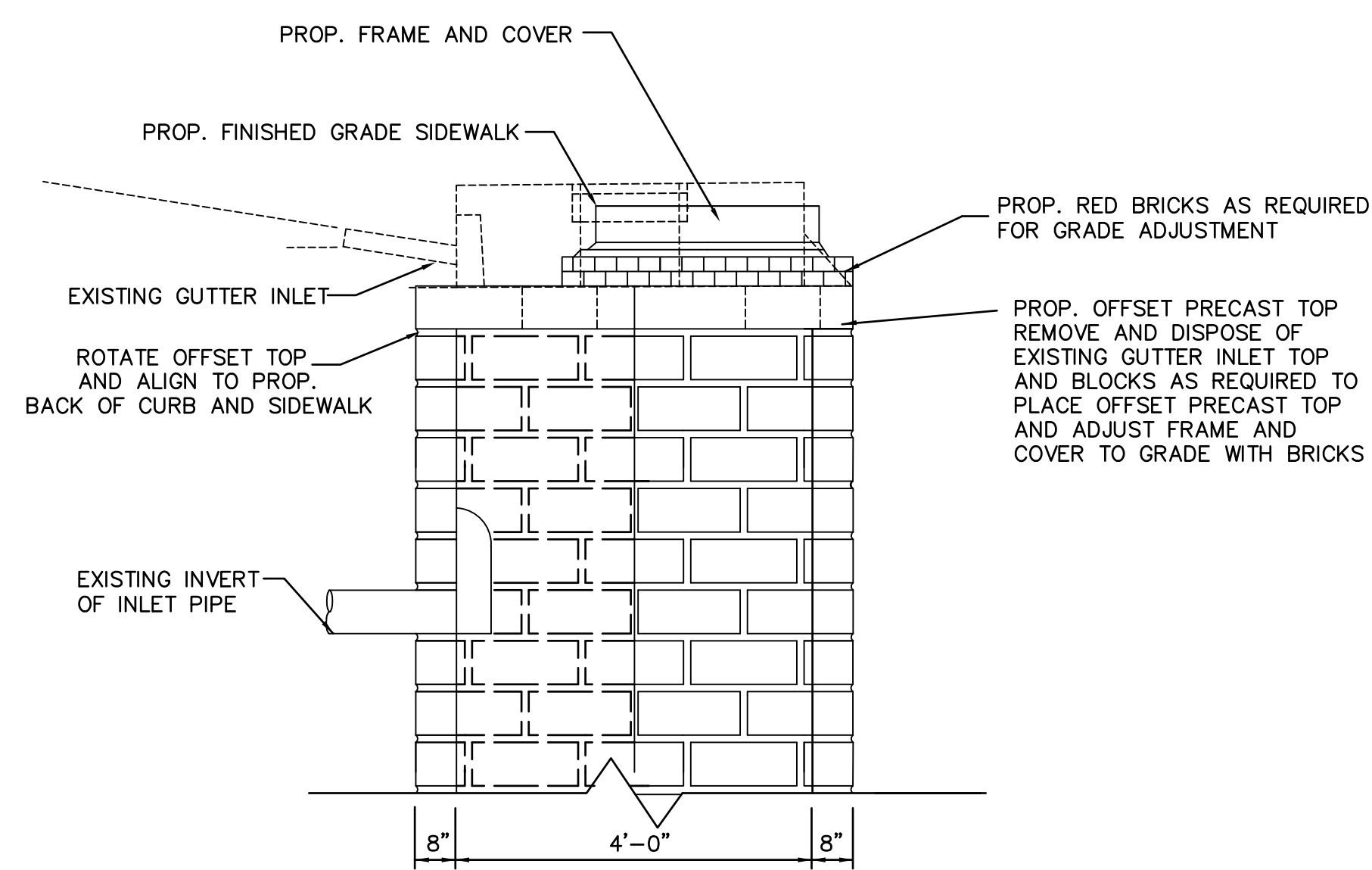
NOTES:
1. CONCRETE CRADLE OR ENCASEMENT SHALL TERMINATE AT PIPE JOINTS.
2. PIPE SHALL BE BRACED TO PREVENT MOVEMENT WHILE CONCRETE IS POURED.



CONCRETE DAMS & CONCRETE ENCASEMENT
NOT TO SCALE

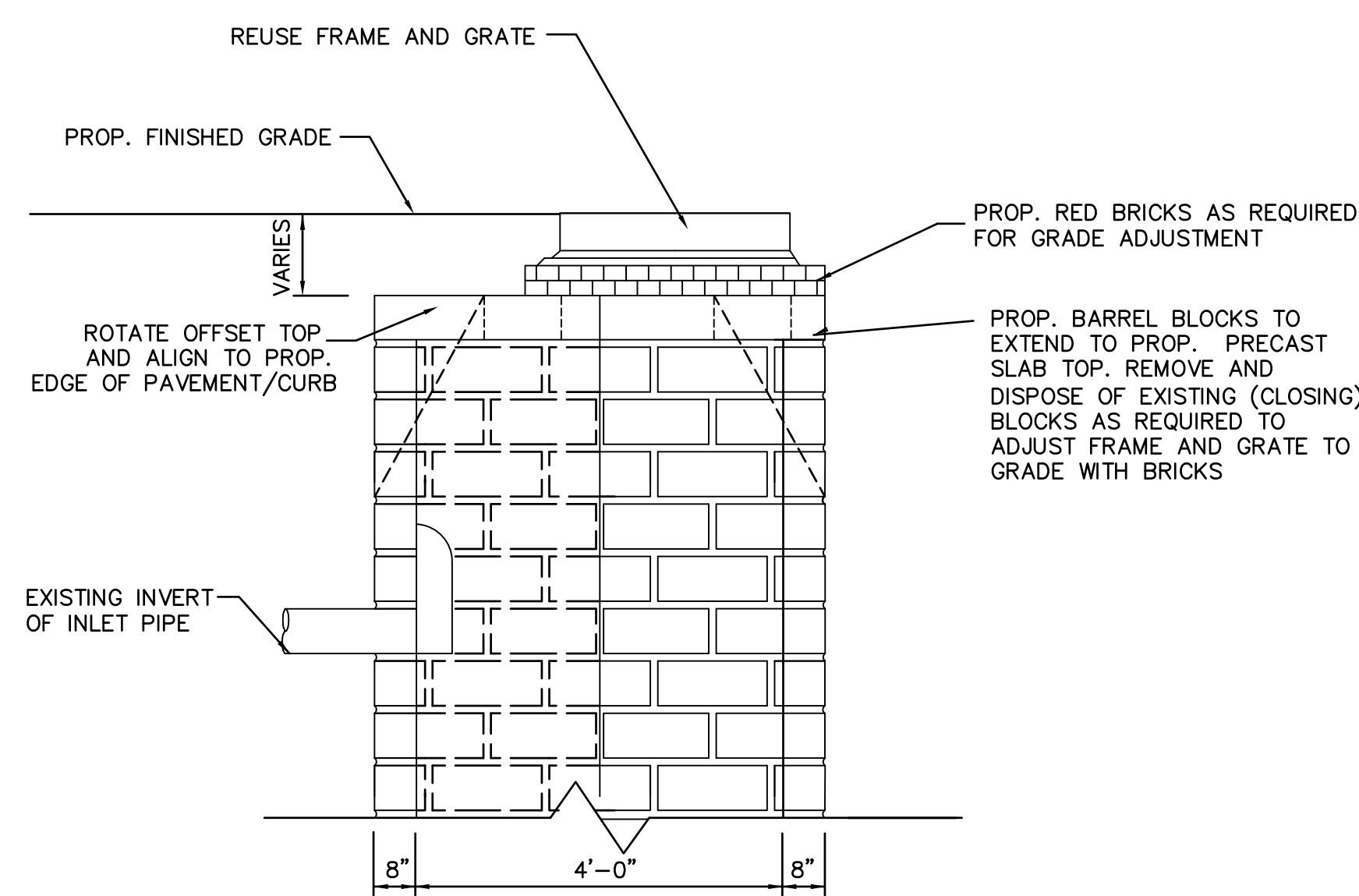


OFFSET TOP FOR REMODELED CATCH BASINS
STATION 6+66(L) & 7+23(L)
NOT TO SCALE



NOTES:
1.) EXIST. FRAME AND COVER TO BE LOCATED WITHIN GRASS STRIP AND SIDEWALK
2.) REMOVE EXISTING GUTTER INLET TOP AND BARREL BLOCKS AS REQUIRED AND REPLACE WITH THE OFFSET PRECAST CONCRETE TOP AND BRICK MASONRY.

CONVERT GUTTER INLET TO MANHOLE DETAIL - STATION 7+17(R)
NOT TO SCALE



NOTES:
1.) EXIST. FRAME AND COVER TO BE LOCATED TO PROPOSED 23' WIDTH EDGE OF PAVEMENT NORTH SIDE ONLY
2.) REMOVE EXISTING CONE (CLOSING) BARREL BLOCKS AS REQUIRED AND REPLACE WITH PROPOSED BARREL BLOCKS, OFFSET PRECAST CONCRETE SLAB TOP AND BRICK MASONRY.

CATCH BASIN REMODEL DETAIL - STATION 6+66(L) & 7+23(L)
NOT TO SCALE

TOWN OF FAIRHAVEN, MASSACHUSETTS
HEDGE STREET - PHASE III/IV

MISCELLANEOUS DETAILS V

GCG ASSOCIATES, INC.

WILMINGTON MASSACHUSETTS

SCALE: AS NOTED DATE: DECEMBER 1, 2020

JOB NO. \FILE NAME: 1996-DETAILS.DWG DESIGNED BY: J.T.C. DRAWN BY: J.T.C. CHECKED BY: M.J.C. PLAN NO. 12 OF 12

