

Extension of Naugatuck Street

Hartford, Connecticut

Bid Set - September 1, 2018

Revised thru 03-08-2019

DEVELOPMENT TEAM

Property Owner - Right of Way	City of Hartford
Construction Manager- Roadway	Capital Region Development Authority
Residential Developer	Toraal Developement LLC
Civil Engineer	F. A. Hesketh & Associates, Inc.
Landscape Architect	F. A. Hesketh & Associates, Inc.
Surveyor	F. A. Hesketh & Associates, Inc.

LIST OF DRAWINGS

Title Sheet
Grading and Sedimentation & Erosion Control Plan
Plan & Profile (Naugatuck Street)
Plan & Profile (Clark Street & Hampton Street)
Plan & Profile (MDC Water, Sanitary & Storm)
Utility Plan (Gas, Electric, Telephone & CATV)
Landscape Plan
Site Details
Standard Roadway and Street Details
Standard Traffic/Equipment Details
Notes
Topographic Survey
Boring Plan and Logs

For Information Only (NIC)

GR-2 thru GR-3	Grading and Sedimentation & Erosion Control Plan
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David S. Ziaks P.E. #13336

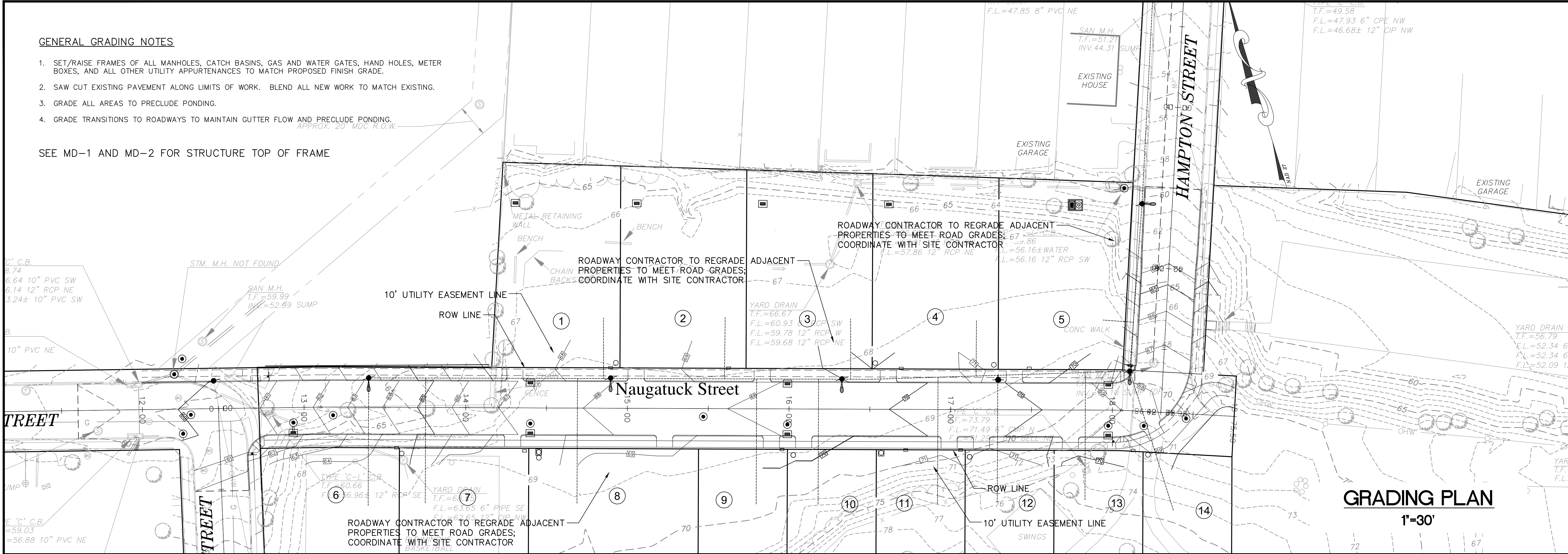
FAH F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Civil & Traffic Engineers • Surveyors • Planners • Landscape Architects

Phone (860) 653-8000
Fax (860) 844-8600
e-mail mail@fahesketh.com

GENERAL GRADING NOTES

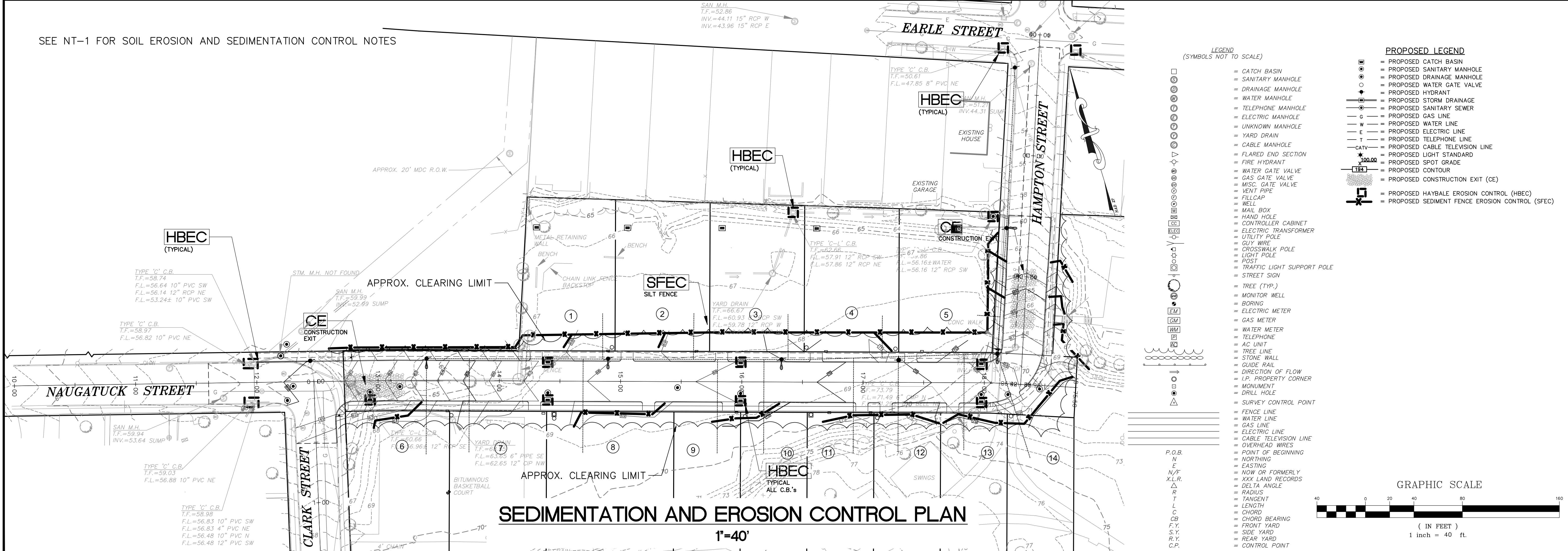
1. SET/RAISE FRAMES OF ALL MANHOLES, CATCH BASINS, GAS AND WATER GATES, HAND HOLES, METER BOXES, AND ALL OTHER UTILITY APPURTENANCES TO MATCH PROPOSED FINISH GRADE.
2. SAW CUT EXISTING PAVEMENT ALONG LIMITS OF WORK. BLEND ALL NEW WORK TO MATCH EXISTING.
3. GRADE ALL AREAS TO PRECLUDE PONDING.
4. GRADE TRANSITIONS TO ROADWAYS TO MAINTAIN GUTTER FLOW AND PRECLUDE PONDING.

SEE MD-1 AND MD-2 FOR STRUCTURE TOP OF FRAME



GRADING PLAN
1"=30'

SEE NT-1 FOR SOIL EROSION AND SEDIMENTATION CONTROL NOTES



SEDIMENTATION AND EROSION CONTROL PLAN
1"=40'

LEGEND
(SYMBOLS NOT TO SCALE)

- = CATCH BASIN
- = SANITARY MANHOLE
- = DRAINAGE MANHOLE
- = WATER MANHOLE
- = TELEPHONE MANHOLE
- = ELECTRIC MANHOLE
- = UNKNOWN MANHOLE
- = YARD DRAIN
- = CABLE MANHOLE
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- = DELTA ANGLE
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- = TANGENT
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PROPOSED LEGEND

- = PROPOSED CATCH BASIN
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- = PROPOSED CABLE TELEVISION LINE
- = PROPOSED LIGHT STANDARD
- = PROPOSED SPOT GRADE
- = PROPOSED CONTOUR
- = PROPOSED CONSTRUCTION EXIT (CE)
- = PROPOSED HAYBALE EROSION CONTROL (HBEC) (SPEC)
- = PROPOSED SEDIMENT FENCE EROSION CONTROL (SFEC)

Revisions:		No.		Description	
1		05-31-06		City Comments	
2		03-13-08		City Comments	
3		04-03-08		City Comments	
4		05-09-08		City Comments	
5		09-01-18		Roadway Bid Set	
6		02-25-19		Revised Bid Set	
ROADWAY GRADING AND SEDIMENTATION & EROSION CONTROL		CRDA/TORAL DEVELOPMENT LLC		NAUGATUCK STREET EXTENSION	
HARTFORD, CONNECTICUT		Date: 05-19-06		Drawn by: CAD	
Job no: 04193		Checked by: DSZ		Sheet no: 1 OF 3	
Scale: AS NOTED		Published: 12860 NAUGT07.dwg		GR-1, Feb. 24, 2019 - 11:22:46 PM	

GR-1

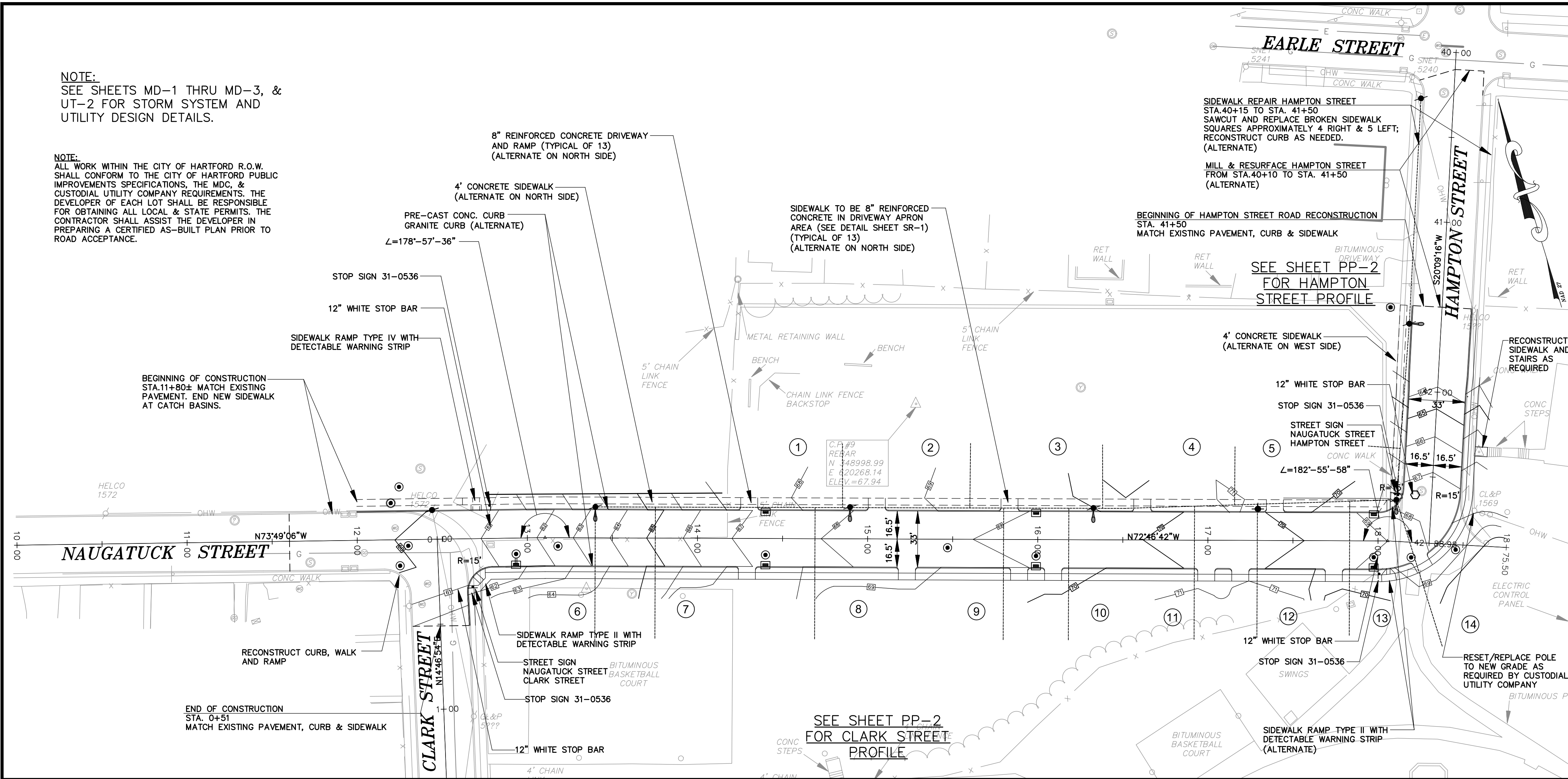
Phone (860) 883-8000
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e-mail: m.hesketh@fahe.com

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NOTE:
SEE SHEETS MD-1 THRU MD-3, &
UT-2 FOR STORM SYSTEM AND
UTILITY DESIGN DETAILS.

NOTE:
ALL WORK WITHIN THE CITY OF HARTFORD R.O.W.
SHALL CONFORM TO THE CITY OF HARTFORD PUBLIC
IMPROVEMENTS SPECIFICATIONS, THE MDC, &
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(SYMBOLS NOT TO SCALE)

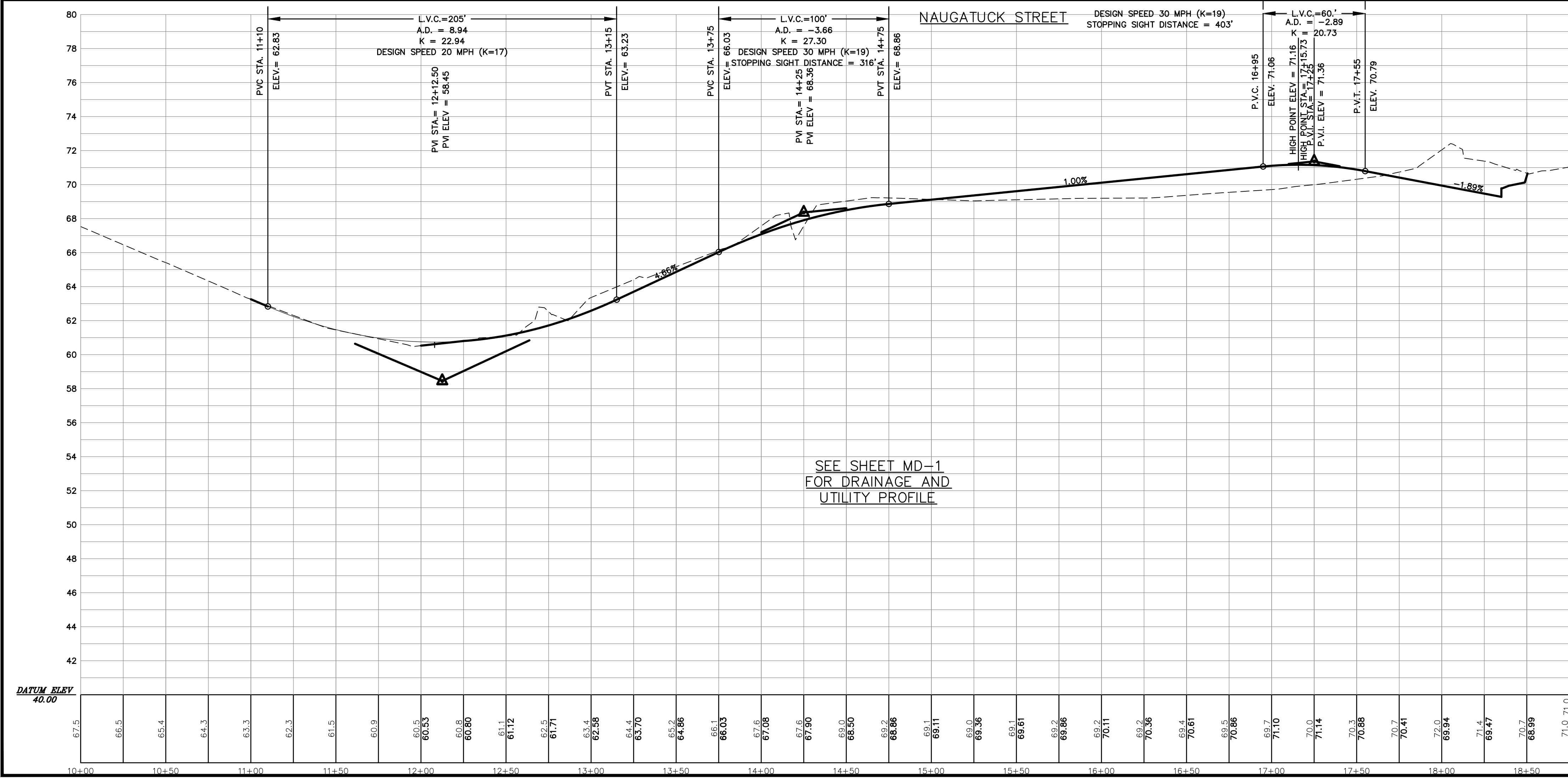
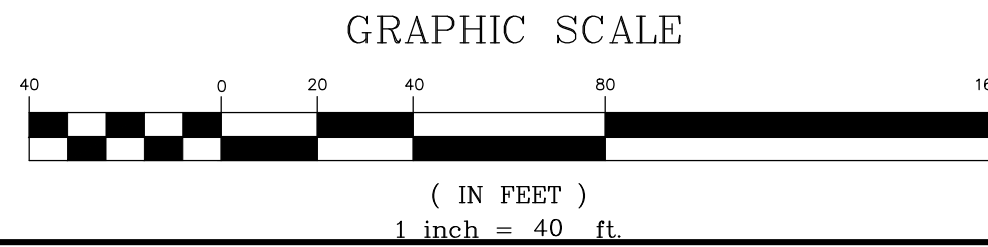
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BEARINGS AND COORDINATES DEPICTED HEREON
REFER TO THE 1927 NORTH AMERICAN DATUM
(NAD 27). MDC MON #77184 N = 348,434.23
AND E = 621,305.12 & MDC MON # 77185 N
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ELEVATIONS DEPICTED HEREON REFER TO THE
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OBSERVATIONS TAKEN ON JULY 20, 2017 AND
OPUS PROCESSING RESULTS ON HARTFORD MDC
STATION #HH-115 ELEVATION = 78.73.



SCALE
HORIZ.: 1"=40'
VERT.: 1"=4'

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PLAN AND PROFILE
NAUGATUCK STREET
PREPARED FOR
CRDA/TORAL DEVELOPMENT LLC
NAUGATUCK STREET EXTENSION
HARTFORD, CONNECTICUT

PP-1

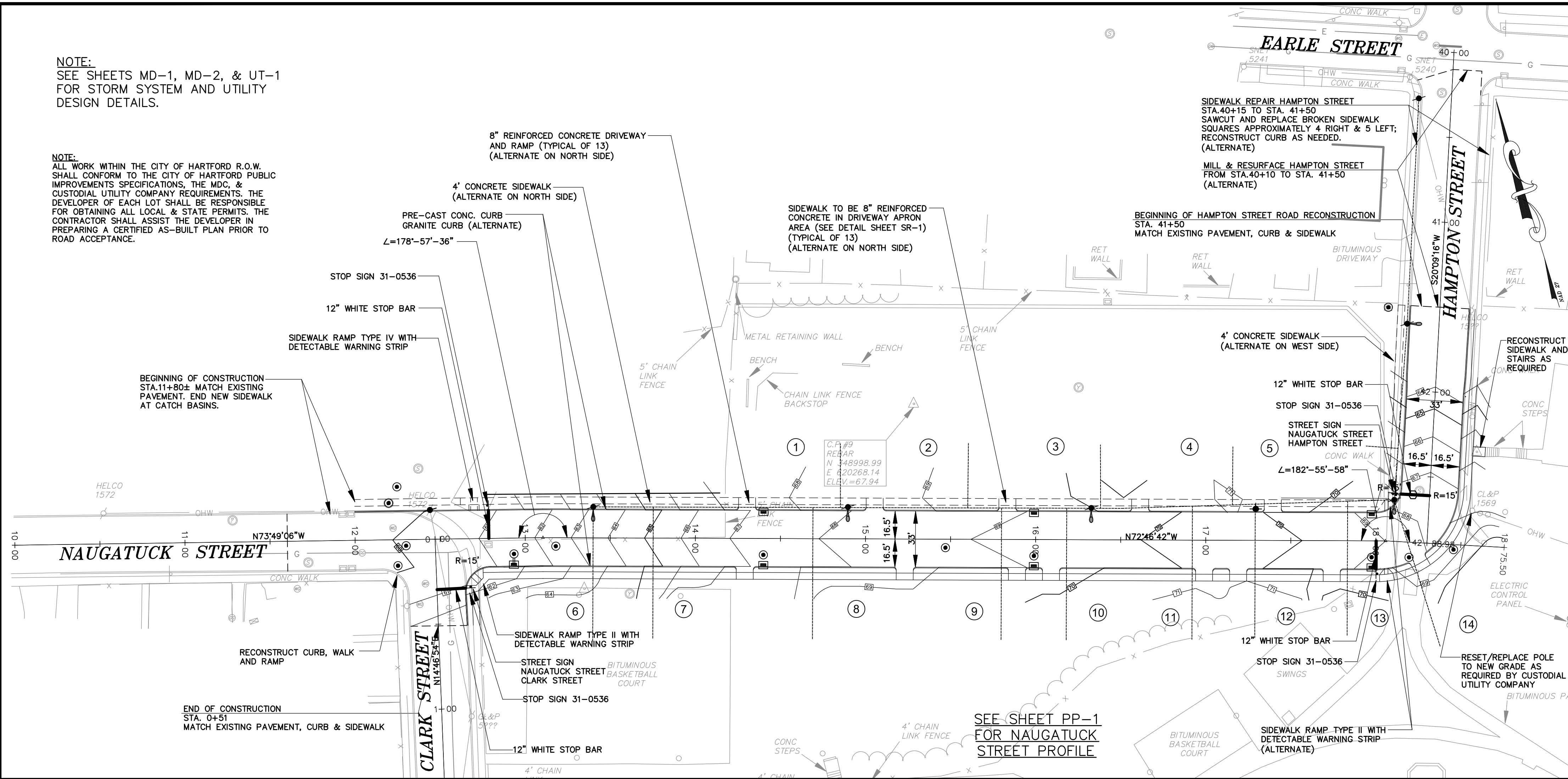
Date: 05-19-06
Scale: 1" = 40'
Drawn by: CAD
Checked by: DSZ
Job no: 04193
Sheet no: 1 OF 2

FAH F. A. Hesketh & Associates, Inc.
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e-mail: fah@fahsketh.com

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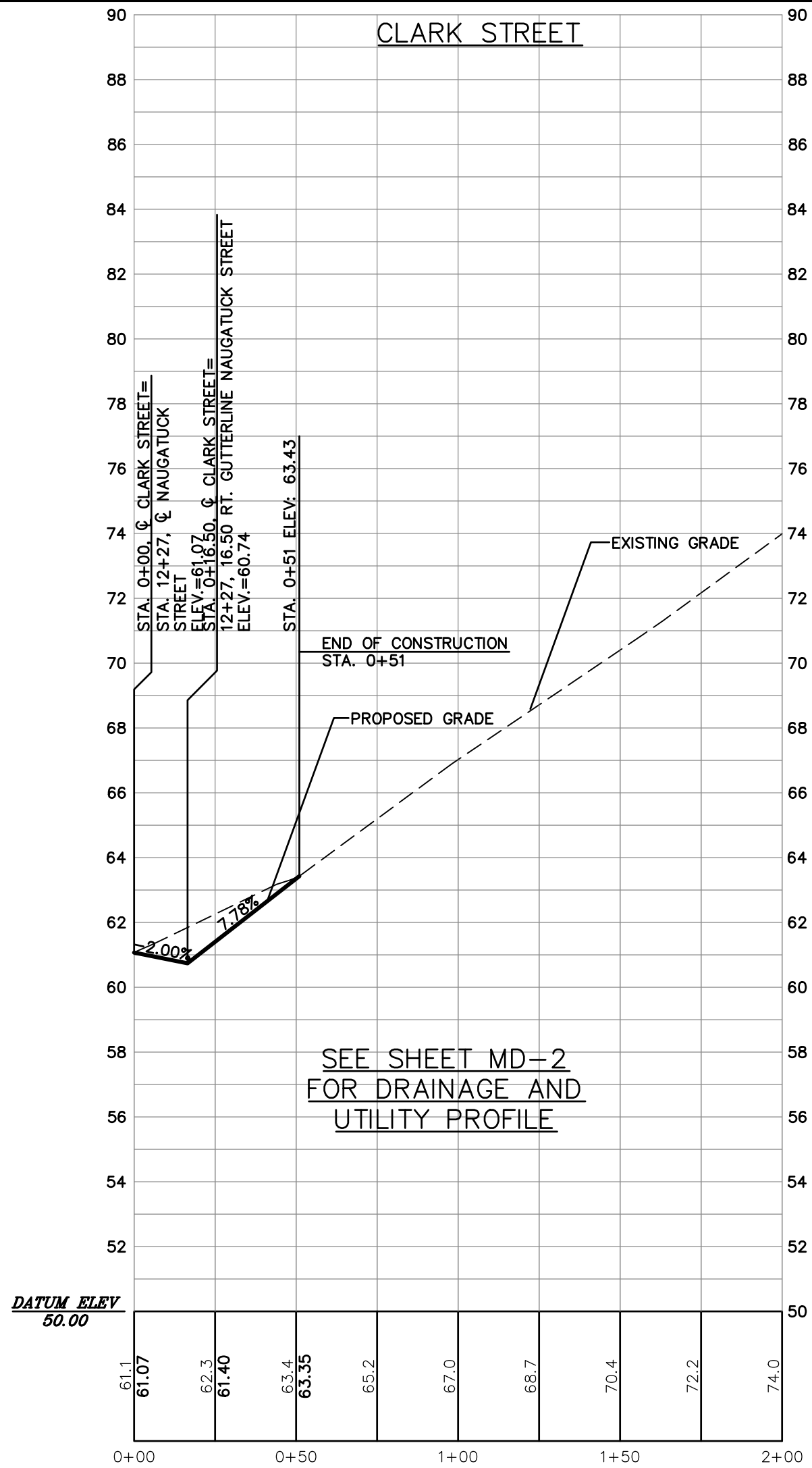
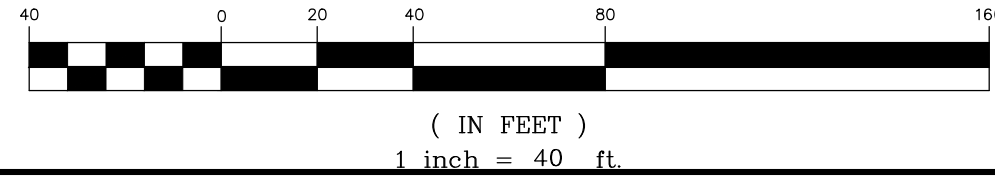
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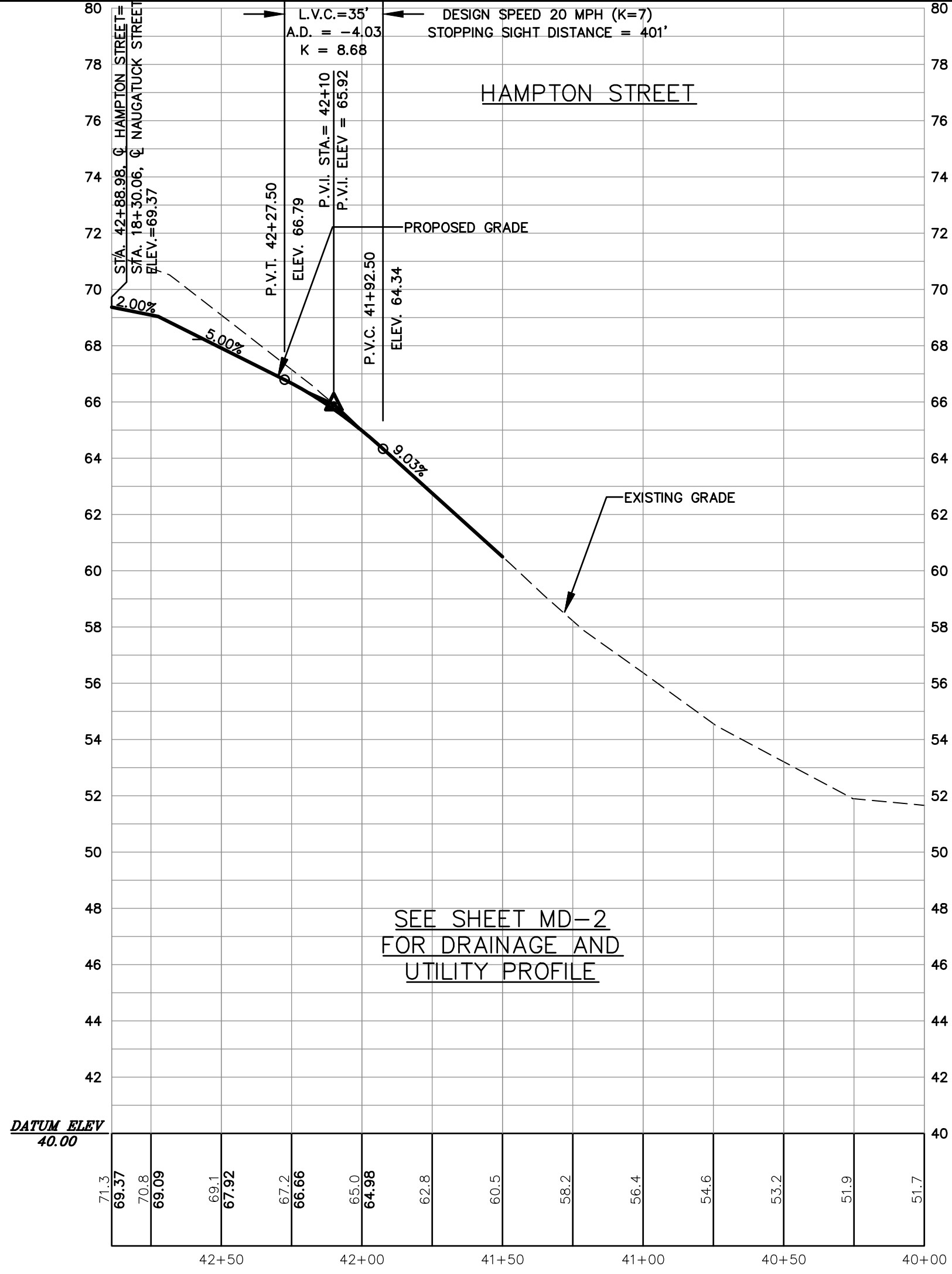
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STATION #H-115 ELEVATION = 78.73.

GRAPHIC SCALE



SCALE
HORIZ.: 1" = 40'
VERT.: 1" = 4'



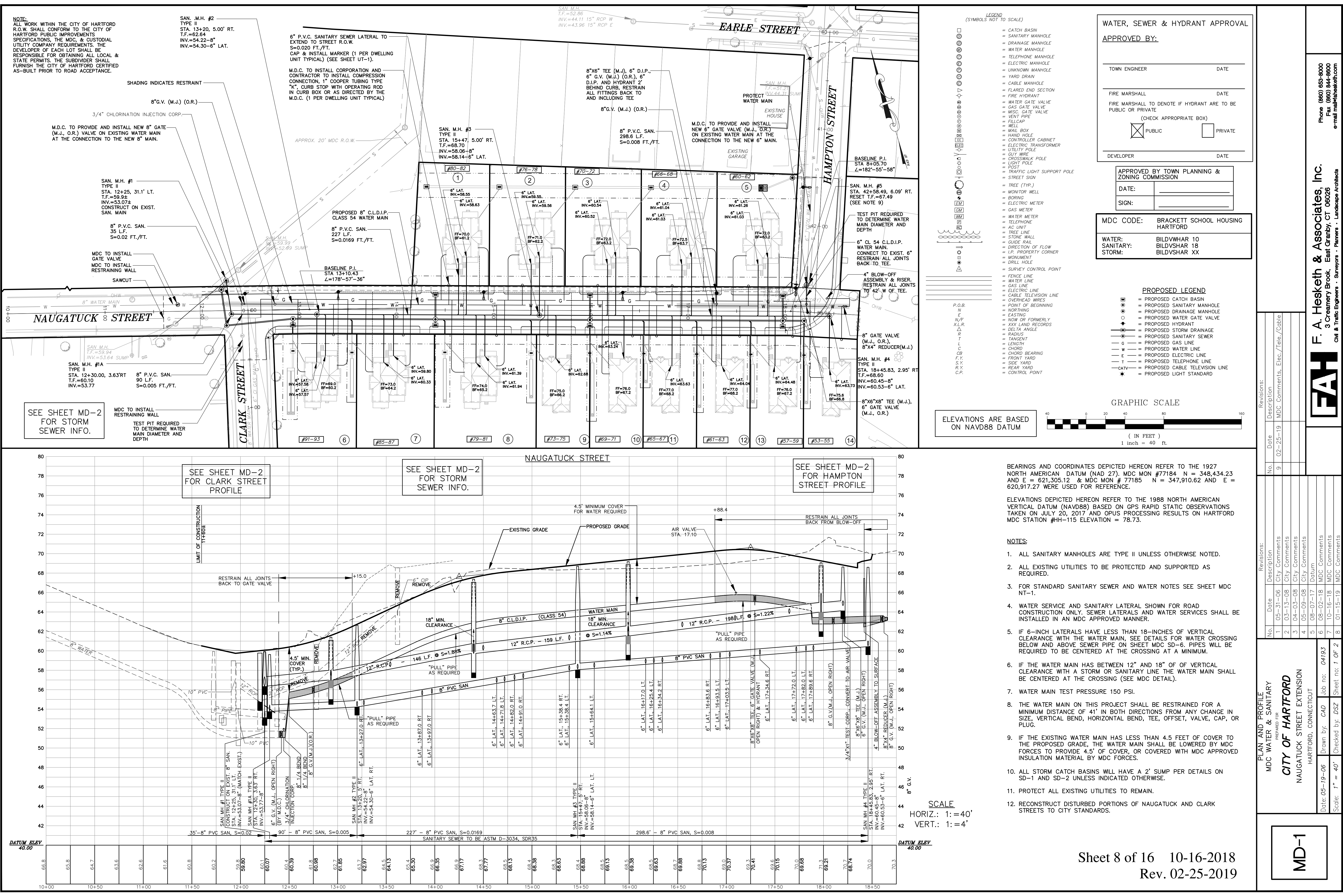
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PLAN AND PROFILE CLARK STREET & HAMPTON STREET PREPARED FOR CRDA/TORAL DEVELOPMENT LLC NAUGATUCK STREET EXTENSION HARTFORD, CONNECTICUT	Date: 05-19-06 Drawn by: CAD Job no: 04193	Checked by: DSZ Sheet no: 2 OF 2
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PP-2

FAH F. A. Hesketh & Associates, Inc.
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WATER, SEWER & HYDRANT APPROVAL

APPROVED BY:

TOWN ENGINEER

DATE

FIRE MARSHALL

DATE

FIRE MARSHALL TO DENOTE IF HYDRANT ARE TO BE PUBLIC OR PRIVATE

(CHECK APPROPRIATE BOX)

PUBLIC

PRIVATE

DEVELOPER

DATE

APPROVED BY TOWN PLANNING & ZONING COMMISSION

DATE:

SIGN:

MDC CODE:

BRACKETT SCHOOL HOUSING HARTFORD

WATER:

BILDVWHAR 10

SANITARY:

BILDVSHAR 18

STORM:

BILDVSHAR XX

PROPOSED LEGEND

PROPOSED CATCH BASIN

PROPOSED SANITARY MANHOLE

PROPOSED DRAINAGE MANHOLE

PROPOSED WATER GATE VALVE

PROPOSED HYDRANT

PROPOSED STORM DRAINAGE

PROPOSED SANITARY SEWER

PROPOSED GAS LINE

PROPOSED WATER LINE

PROPOSED ELECTRIC LINE

PROPOSED TELEPHONE LINE

PROPOSED CABLE TELEVISION LINE

PROPOSED LIGHT STANDARD

GRAPHIC SCALE

1 inch = 40 ft.

ELEVATIONS ARE BASED ON NAVD88 DATUM

REVISIONS:

No.	Date	Description
9	02-25-19	MDC Comments, Elec./Tele./Cable

PLAN AND PROFILE

MDC WATER & SANITARY

CITY OF HARTFORD

NAUGATUCK STREET EXTENSION

HARTFORD, CONNECTICUT

Drawn by: CAD

Job no: 04193

Checked by: DSZ

Sheet no: 1 OF 2

Scale: 1" = 40'

DATE: 05-19-06

MD-1

PHONE (860) 653-8000

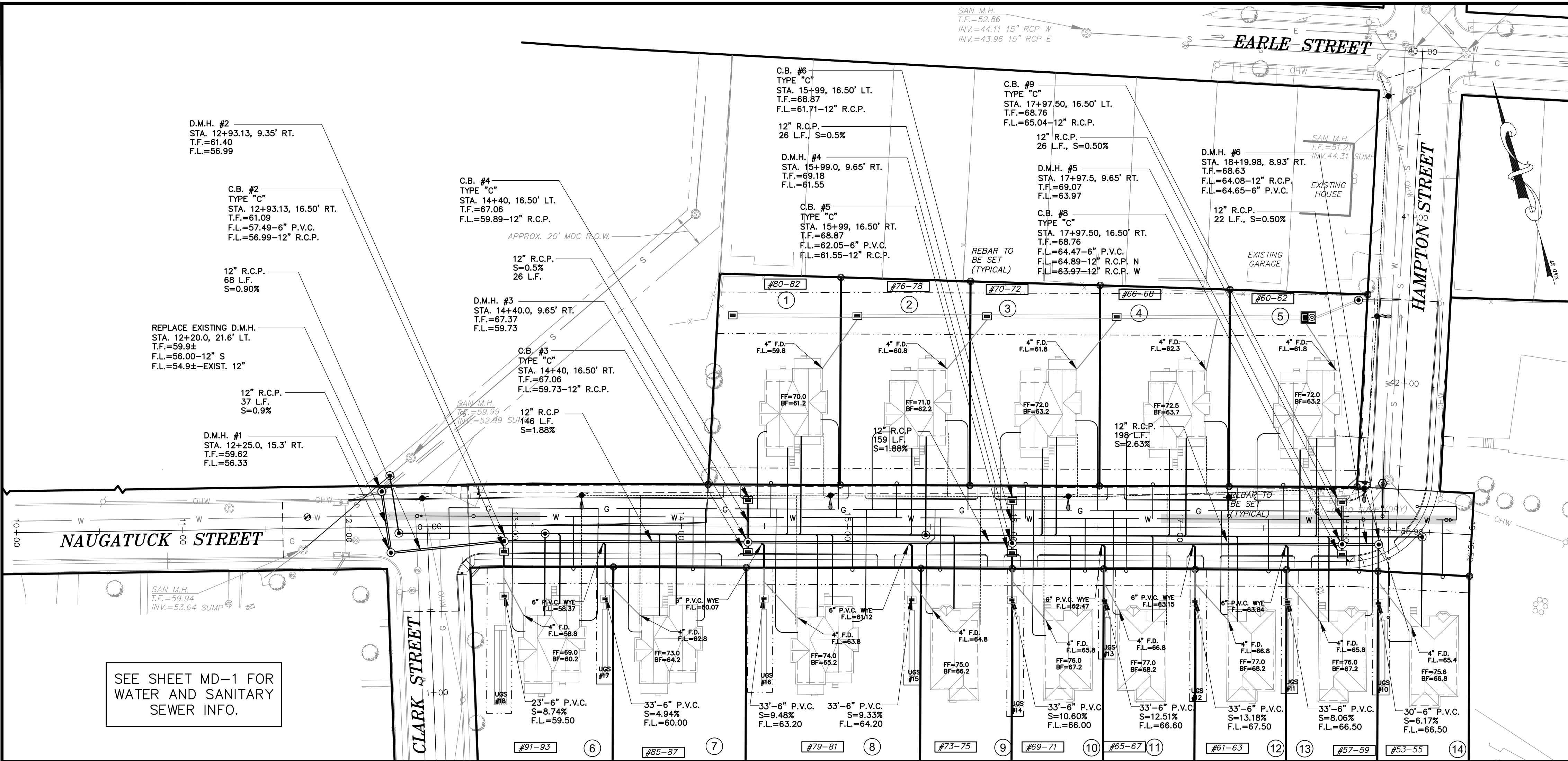
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E-MAIL mha@hesketh.com

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WATER, SEWER & HYDRANT APPROVAL

APPROVED BY:

TOWN ENGINEER _____ DATE _____

FIRE MARSHALL _____ DATE _____

FIRE MARSHALL TO DENOTE IF HYDRANT ARE TO BE PUBLIC OR PRIVATE (CHECK APPROPRIATE BOX)

☒ PUBLIC ☐ PRIVATE

DEVELOPER _____ DATE _____

APPROVED BY TOWN PLANNING & ZONING COMMISSION

DATE: _____

SIGN: _____

MDC CODE: BRACKETT SCHOOL HOUSING HARTFORD

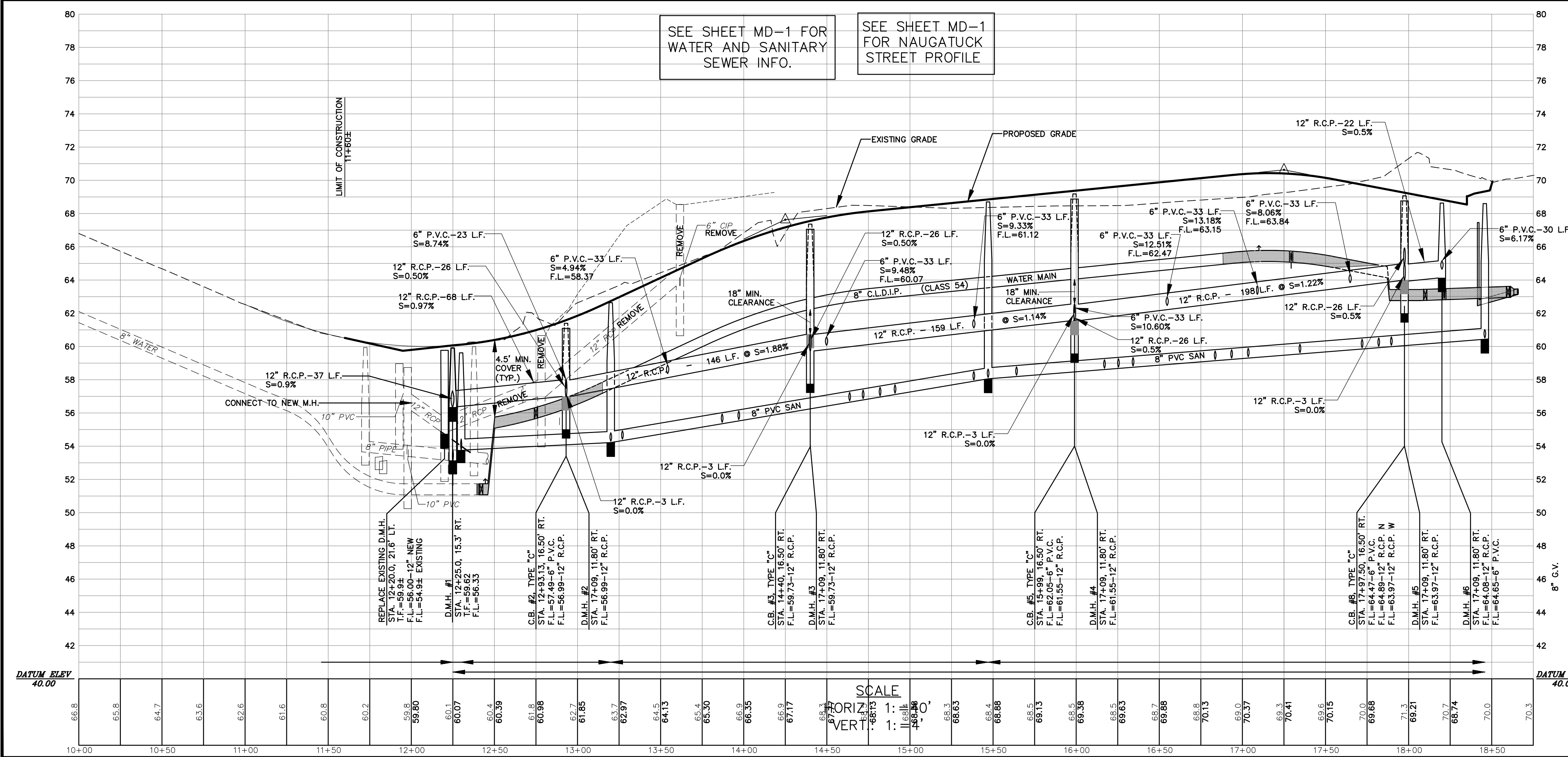
WATER: BILDVWHAR 10
SANITARY: BILDVSHAR 18
STORM: BILDVSHAR XX

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GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.



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NOTES:

- ALL SANITARY MANHOLES ARE TYPE II UNLESS OTHERWISE NOTED.
- ALL EXISTING UTILITIES TO BE PROTECTED AND SUPPORTED AS REQUIRED.
- FOR STANDARD SANITARY SEWER AND WATER NOTES SEE SHEET MDC NT-1.
- WATER SERVICE AND SANITARY LATERAL SHOWN FOR ROAD CONSTRUCTION ONLY. SEWER LATERALS AND WATER SERVICES SHALL BE INSTALLED IN AN MDC APPROVED MANNER.
- IF 6-INCH LATERALS HAVE LESS THAN 18-INCHES OF VERTICAL CLEARANCE WITH THE WATER MAIN, SEE DETAILS FOR WATER CROSSING BELOW AND ABOVE SEWER PIPE ON SHEET MDC SD-6. PIPES WILL BE REQUIRED TO BE CENTERED AT THE CROSSING AT A MINIMUM.
- WATER MAIN TEST PRESSURE 150 PSI.
- IF THE EXISTING WATER MAIN HAS LESS THAN 4.5 FEET OF COVER TO THE PROPOSED GRADE, THE WATER MAIN SHALL BE LOWERED BY MDC FORCES TO PROVIDE 4.5' OF COVER, OR COVERED WITH MDC APPROVED INSULATION MATERIAL BY MDC FORCES.

ELEVATIONS ARE BASED ON NAVD88 DATUM

Revisions:

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7	10-16-18	MDC Comments
8	01-15-19	MDC Comments

PLAN AND PROFILE

MDC STORM

CITY OF HARTFORD

NAUGATUCK STREET EXTENSION

HARTFORD, CONNECTICUT

Drawn by: CAD Job no: 04193

Checked by: DSZ Sheet no: 2 OF 2

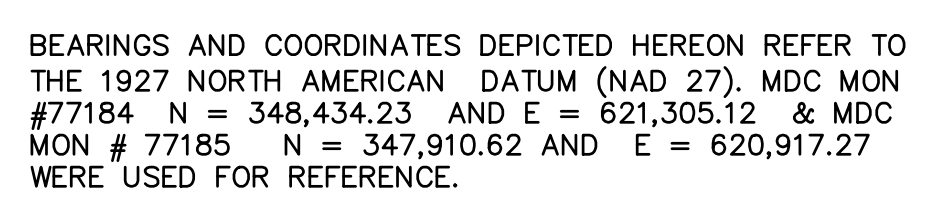
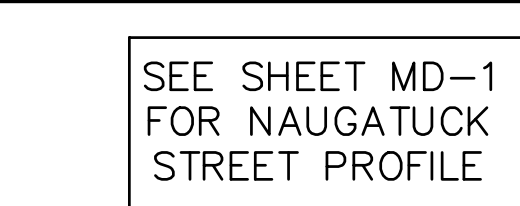
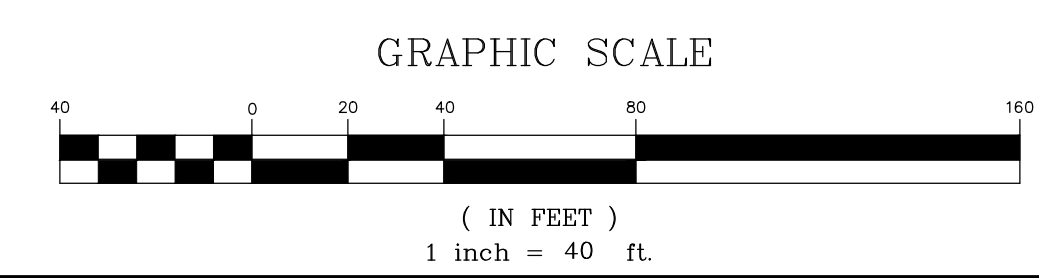
Scale: 1" = 40'

Date: 05-19-06

MD-2

Sheet 9a of 16 10-16-2018 Rev. 02-25-2019

F.A.H. F. A. Hesketh & Associates, Inc. 3 Creamery Brook, East Granby, CT 06026 Phone (860) 883-8000 Fax (860) 844-8600 e-mail: fah@fahinc.com



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ELEVATIONS ARE BASED
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Sheet 9b of 16 10-16-2018
Rev. 02-25-2019

<div><div>MD-3</div><div>PLAN AND PROFILE MDC WATER, SANITARY & STORM PREPARED FOR CITY OF HARTFORD NAUGATUCK STREET EXTENSION HARTFORD, CONNECTICUT</div></div>	Date: 05-19-06		Drawn by: CAD	Job no: 04193	Sheet no: 2 OF 2	
	Scale: 1" = 40'		Checked by: DSZ			
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Date: 05-19-06		Drawn by: CAD		Job no: 04193		
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NOTES:

- ALL WORK WITHIN THE CITY OF HARTFORD R.O.W. SHALL CONFORM TO THE CITY OF HARTFORD PUBLIC IMPROVEMENTS SPECIFICATIONS, THE MDC, & CUSTODIAL UTILITY COMPANY REQUIREMENTS.
- SEE SHEETS MDC -1 AND MDC-2 FOR STORM, SANITARY AND WATER DETAILS.
- ROADWAY CONTRACTOR TO INSTALL:

WATER (MDC)

- WATER MAIN IN NAUGATUCK
- WATER SERVICE TO CURB BOX AND CURB BOX (2 EACH HOUSE)

SANITARY (MDC)

- 8" SANITARY SEWER, MANHOLES, ETC. IN NAUGATUCK
- 6" SANITARY LATERAL TO EASEMENT LINE (2 EACH HOUSE)

STORM (MDC)

- STORM SEWERS, MANHOLES, CATCH BASINS, ETC. IN NAUGATUCK
- 6" STORM DRAINS TO EASEMENT LINE (LOTS 6-14)

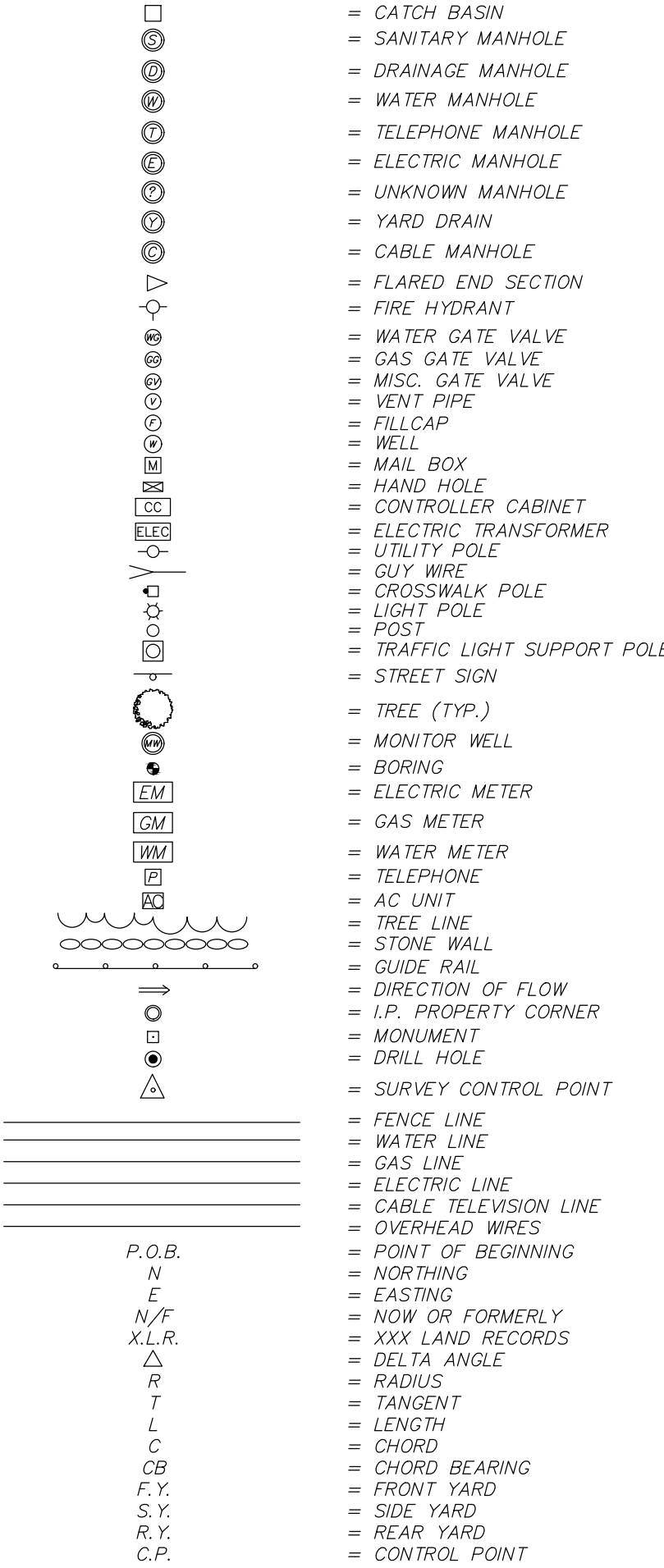
GAS (CNG)

- TRENCHING AND BACKFILL FOR GAS MAIN IN NAUGATUCK
- TRENCHING AND BACKFILL TO EASEMENT LINE FOR GAS SERVICE (2 EACH HOUSE)

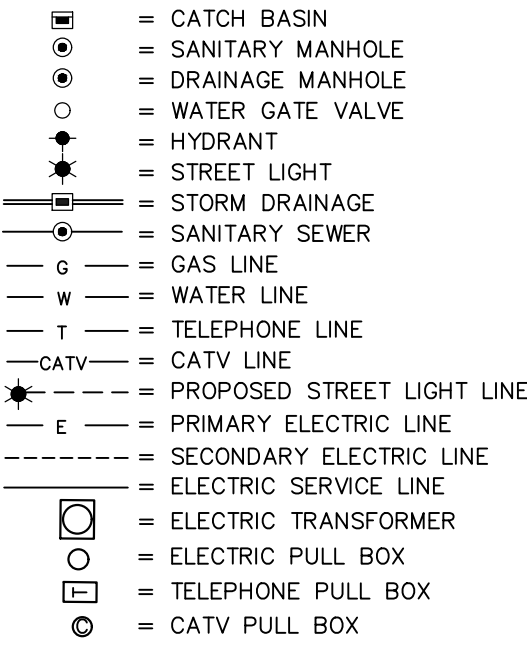
GENERAL UTILITY NOTES:

- THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND ARE BASED ON AVAILABLE AS-BUILT INFORMATION FROM UTILITY COMPANY RECORDS, THE PROPERTY OWNER, AND LIMITED SURVEY DATA. ALL EXISTING UTILITIES MAY NOT BE SHOWN AND THOSE SHOWN MAY NOT BE ACCURATE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES ON THE SITE PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY AND NOTIFYING THE DESIGN SITE ENGINEER OF POTENTIAL CONFLICTS WITH PROPOSED ALIGNMENT AND GRADE AND/OR ANY ADJUSTMENTS TO THE PLANS WHICH ARE NECESSARY. TEST PITS WILL BE REQUIRED AT ALL PROPOSED UTILITY CROSSINGS IN ORDER TO DETERMINE UNDERGROUND UTILITY LOCATIONS AND TO IDENTIFY POTENTIAL CONFLICTS WITH VERTICAL AND HORIZONTAL ALIGNMENTS SHOWN ON THE PLANS. TEST PITS SHALL BE COMPLETED BY THE CONTRACTOR AT HIS EXPENSE.
- CONTACT "CALL BEFORE YOU DIG" AT 1-800-922-4455 TO MARK THE LOCATION OF ALL UNDERGROUND UTILITIES AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
- A PRE-CONSTRUCTION MEETING WITH TOWN STAFF SHALL BE HELD PRIOR TO START OF CONSTRUCTION.
- REMOVE/ABANDON EXISTING UTILITIES AS REQUIRED FOR CONSTRUCTION OF THE IMPROVEMENTS WHETHER OR NOT SHOWN ON THESE PLANS. ALL WORK SHALL BE IN ACCORDANCE WITH CUSTODIAL UTILITY COMPANY REQUIREMENTS. CONSULT WITH CUSTODIAL UTILITY COMPANY AND ENGINEER PRIOR TO ABANDONING UTILITIES.
- ALL MATERIALS AND INSTALLATION ARE TO BE IN ACCORDANCE WITH THE CITY OF HARTFORD, CONN. D.O.T. FORM 817, OR CUSTODIAL UTILITY COMPANY SPECIFICATION, AS APPROPRIATE.
- ALL NEW SITE UTILITIES ARE TO BE INSTALLED UNDERGROUND, UNLESS INDICATED OTHERWISE.
- ALL UTILITIES TO BE INSTALLED IN ACCORDANCE WITH UTILITY COMPANY APPLICABLE REQUIREMENTS. FINAL LOCATION OF UTILITY CONNECTIONS IS SUBJECT TO REVISION BY INDIVIDUAL UTILITY COMPANIES PRIOR TO THE INSTALLATION. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE WORK WITH THE APPLICABLE UTILITY COMPANIES.
- FLOW LINE AND INVERT ELEVATIONS OF ALL STORM AND SANITARY SEWERS MUST BE COORDINATED WITH FINAL HOUSE DRAWINGS. NOTIFY DESIGN ENGINEER OF CONFLICTS PRIOR TO START OF CONSTRUCTION.
- CONNECT ALL ROOF LEADERS AND FOOTING DRAINS, WHERE APPLICABLE, INTO NEW STORM DRAINAGE SYSTEMS DRAINING TO THE DETENTION BASIN OF WATER QUALITY BASINS, AS SHOWN.
- ALL WORK RELATED TO GAS, ELECTRIC, TELEPHONE AND COMMUNICATION SERVICE SHALL BE IN ACCORDANCE WITH THE CUSTODIAL UTILITY COMPANY STANDARDS AND SPECIFICATIONS.
- COORDINATE PLACEMENT OF TRANSFORMER AND ROUTING OF UTILITY SERVICE WITH EVERSOURCE.
- RELOCATE OR RESET, AS APPROPRIATE, ALL ELECTRIC, TELEPHONE, COMMUNICATION SERVICE HANDHOLES, MANHOLES, PULL BOXES, ETC., AS REQUIRED, FOR COMPLETION OF WORK. COORDINATE RELOCATIONS OR RESETTING WITH CUSTODIAL UTILITY COMPANY REPRESENTATIVES.

LEGEND
(SYMBOLS NOT TO SCALE)



PROPOSED LEGEND

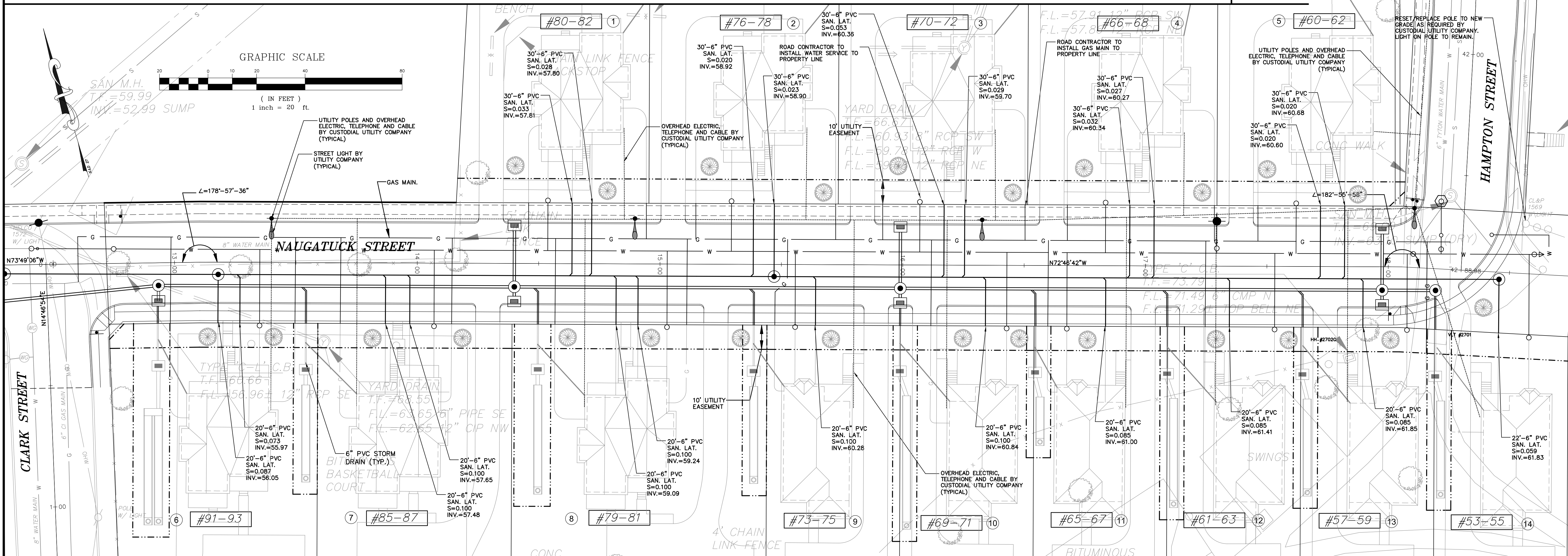


APPROVED BY TOWN PLANNING & ZONING COMMISSION

DATE: _____
SIGN: _____

MDC CODE: BRACKETT SCHOOL HOUSING
HARTFORD

WATER: BILDVWHAR 10
SANITARY: BILDVSHAR 18
STORM: BILDVSHAR XX



Revisions:			
No.	Date	Description	Revised Bid Set
9	03-08-19		

Revisions:			
No.	Date	Description	Revised Bid Set
1	05-31-06	City Comments	
2	03-13-08	City Comments	
3	04-03-08	City Comments	
4	05-09-08	City Comments	
5	06-21-08	MDC Comments - gas main	
6	08-02-08	MDC Comments	
7	09-01-08	Roadway bid set	
8	10-16-08	MDC Comments	

UTILITY PLAN
GAS, ELECTRIC, TELEPHONE & CATV
PREPARED FOR
CITY OF HARTFORD
NAUGATUCK STREET EXTENSION
HARTFORD, CONNECTICUT

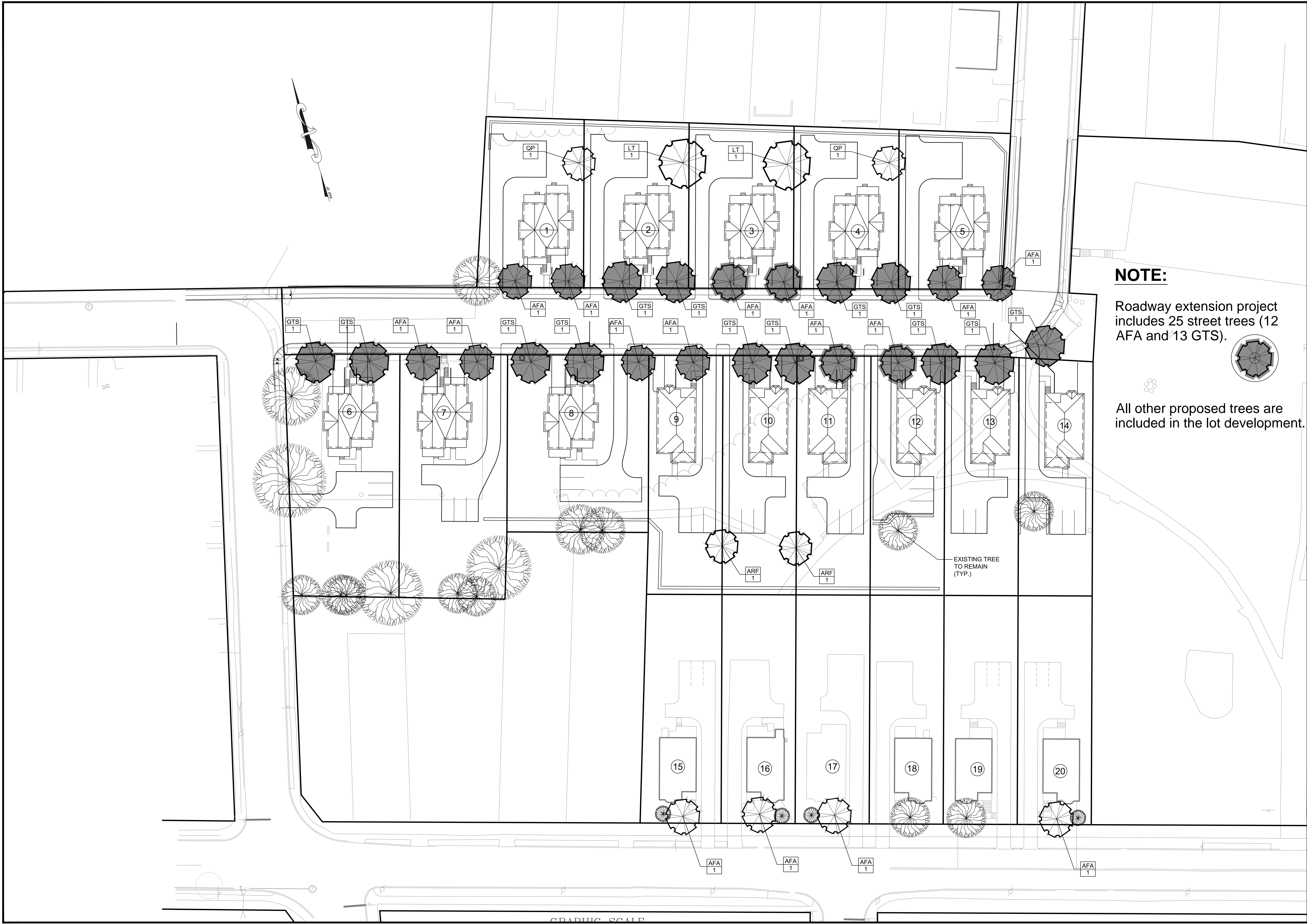
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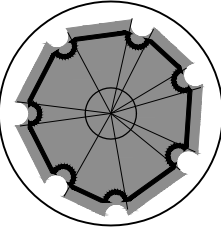
FAH F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Civil & Traffic Engineers • Planners • Surveyors • Landscape Architects

Phone (860) 653-8000
Fax (860) 644-8600
e-mail: fah@fahsketh.com



NOTE:

Roadway extension project includes 25 street trees (12 AFA and 13 GTS).



All other proposed trees are included in the lot development.

LS-1

TREE PLAN
PREPARED FOR:
CRDA/TORAL DEVELOPMENT LLC
BRACKETT KNOLL - PHASE II
HARTFORD, CONNECTICUT

Date: 01-26-18
Scale: 1" = 30'

Drawn by: CAD
Checked by: DSZ

Job no: 04193
Sheet no: 1 OF 2

Revisions:
No. Date Description
1 09-01-18 Roadway Bid Set

Phone (860) 883-8000
Fax (860) 844-8600
e-mail: mal@fah.com

F.A.H.
F. A. Hesketh & Associates, Inc.
6 Creamery Brook, East Granby, CT 06026
Civil & Traffic Engineers • Planners • Surveyors • Landscape Architects

LANDSCAPE SCHEDULE (Includes street trees and lot development)

Symbol	Botanical Name	Common Name	Quantity	Size	Root	Mature Height	Mature Spread
AFA	<i>Acer x freemanii</i> 'Autumn Blaze'	Autumn Blaze Maple	16	2 ½ to 3 inch caliper	Balled & Burlapped	Approximately 55 feet	Approximately 45 feet
ARF	<i>Acer rubrum</i> 'Franksred'	Red Sunset Maple	2	2 ½ to 3 inch caliper	Balled & Burlapped	Approximately 45 feet	Approximately 30 feet
GTS	<i>Gleditsia triacanthos</i> 'Shademaster'	Shademaster Honeylocust	13	2 ½ to 3 inch caliper	Balled & Burlapped	Approximately 50 feet	Approximately 50 feet
LT	<i>Liriodendron tulipifera</i>	Tuliptree	2	2 ½ to 3 inch caliper	Balled & Burlapped	Approximately 80 feet	Approximately 45 feet
QP	<i>Quercus palustris</i>	Pin Oak	2	2 ½ to 3 inch caliper	Balled & Burlapped	Approximately 65 feet	Approximately 35 feet

LANDSCAPE NOTES

1. All plants shall meet or exceed the specifications of Federal, State and County laws requiring inspection for plant disease and insect control.
2. Plant material shall conform with the "American Standard for Nursery Stock" by the American Association of Nurserymen, Inc. (ANSI Z60.1-2004).
3. All plants shall be certified true to name by the nursery source. Plant names shall be in accordance with "Hortis Third" (1976) by the staff of the Liberty Hyde Bailey Hortorium, Cornell University. One plant from each species shall be tagged with name and size of the plant in accordance with the standards of practice of the American Association of Nurserymen. Botanical names shall take precedence over common names.
4. Plant material shall be typical of their species and/or variety, with a normal habit of growth, sound, healthy and vigorous. They shall be well branched and densely foliated when in leaf, free of disease, insect pest, eggs or larvae. They shall have healthy well-developed root systems. All trees shall have straight single trunks with their main leader intact unless otherwise noted or approved.
5. All landscaped areas to have 2" shredded bark mulch (color: black) over weed control fabric. No weed control fabric in areas of groundcover or perennial plantings.
6. Provide protective covering of plant material during delivery and storage. Root balls shall not be cracked or broken. Do not prune plants prior to delivery. Remove unacceptable plant material immediately from the job site.
7. Plant locations on the Drawings are approximate and are to be used only as a guide. Contractor shall provide all field engineering services to accurately stake out locations for all plants prior to installation. Do not begin excavation until Project Landscape Architect has approved specific layout.
8. If requested by Project Landscape Architect, stake and guy each tree as shown on the applicable Drawings immediately after planting. Keep trees plumb and taut.
9. If requested by Project Landscape Architect, wrap the trunks of all trees spirally from the ground line to above the lowest main branch.
10. Perform all cultural care necessary to properly maintain plant viability and keep planted areas in a neat and orderly condition, including but not limited to:

a. Watering

b. Weed removal

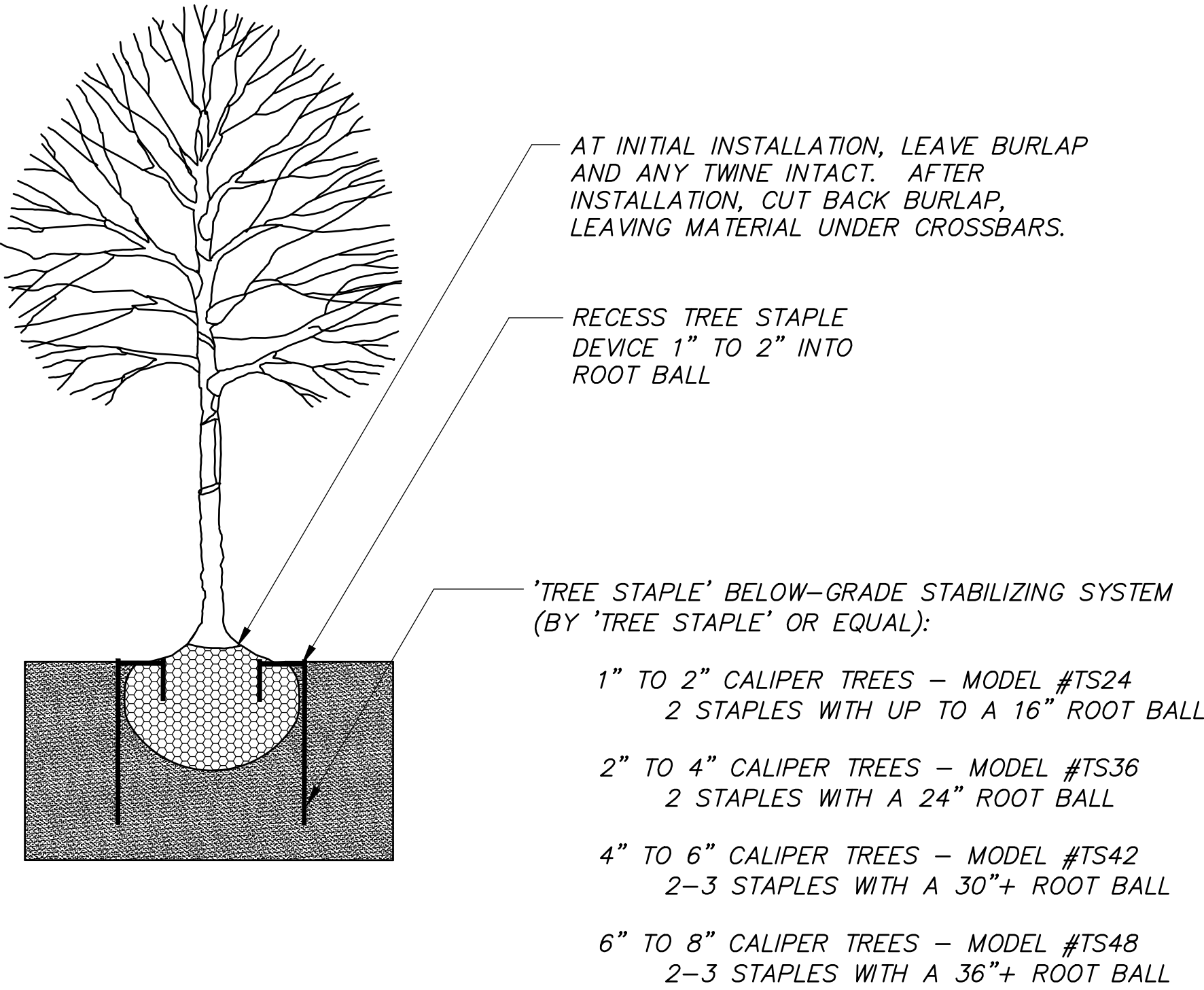
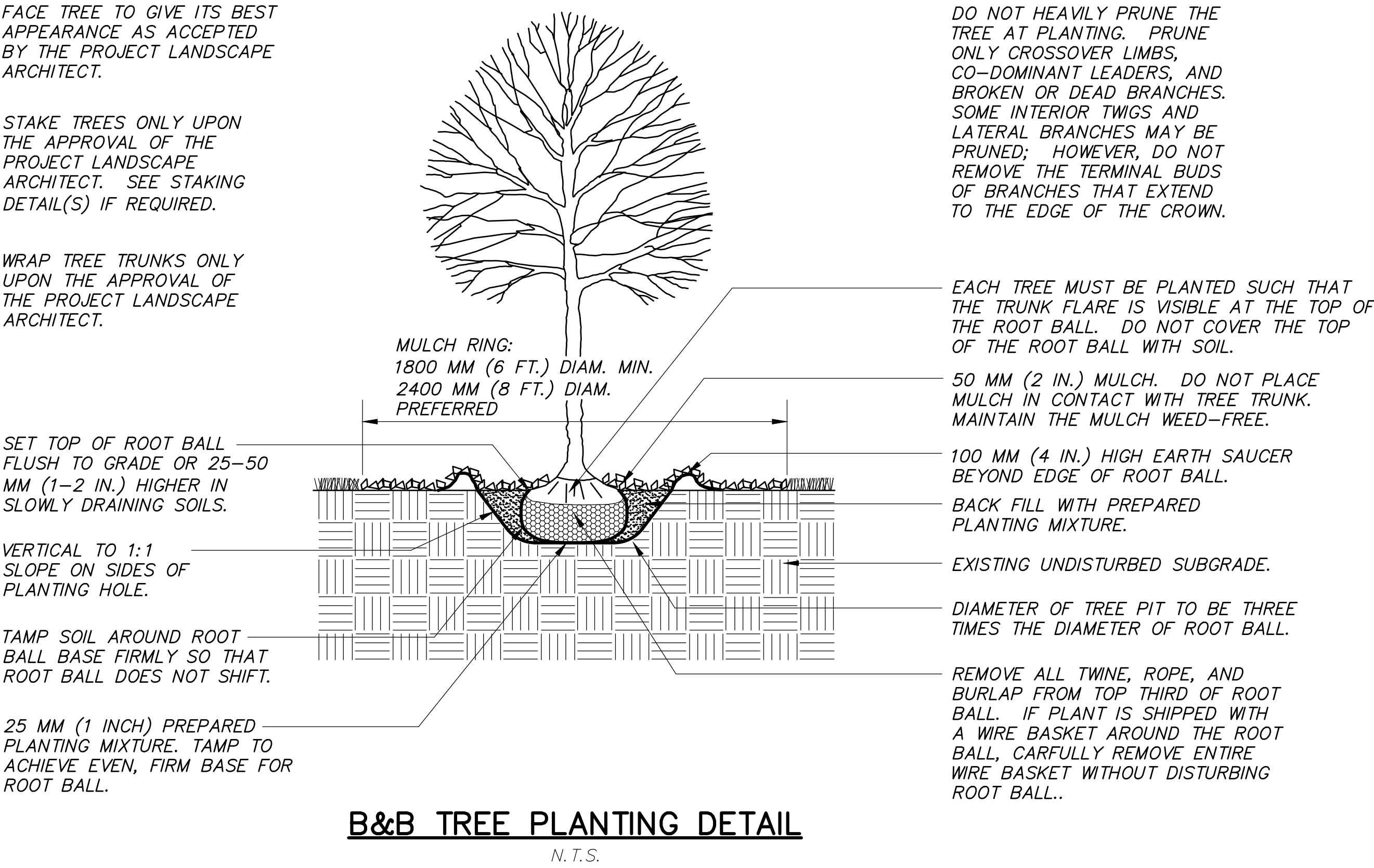
c. Apply lime or sulphur to adjust soil pH to specific plant requirements

d. Restore or reshape earth saucers

e. Pruning

f. Adjust and tighten tree supports to maintain plants at their proper grades and vertical position

g. Replace mulch to maintain proper depth
11. Contractor shall limit, to the greatest extent possible, all construction activities within driplines of trees to remain. Care shall be taken to limit compaction of soil and disturbance within these areas.



Revisions:

No.	Date	Description
1	09-01-18	Roadway Bid Set

LANDSCAPE NOTES AND SCHEDULE
PREPARED FOR

CRDA/TORAAAL DEVELOPMENT LLC
BRACKETT KNOLL - PHASE II
HARTFORD, CONNECTICUT

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Checked by: DSZ

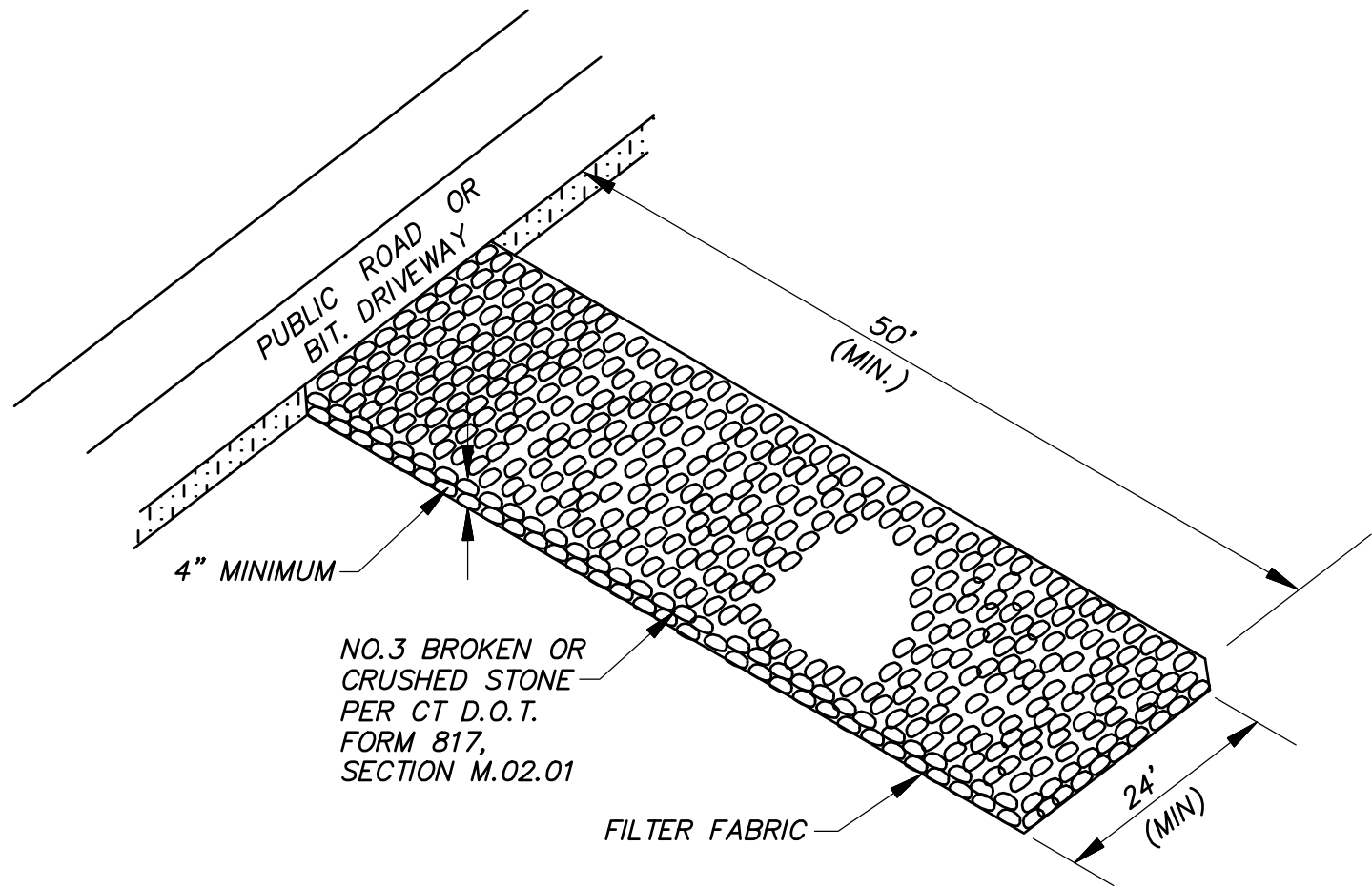
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LS-2

F. A. Hesketh & Associates, Inc.
6 Creamery Brook, East Granby, CT 06026
Civil & Traffic Engineers • Surveyors • Planners • Landscape Architects

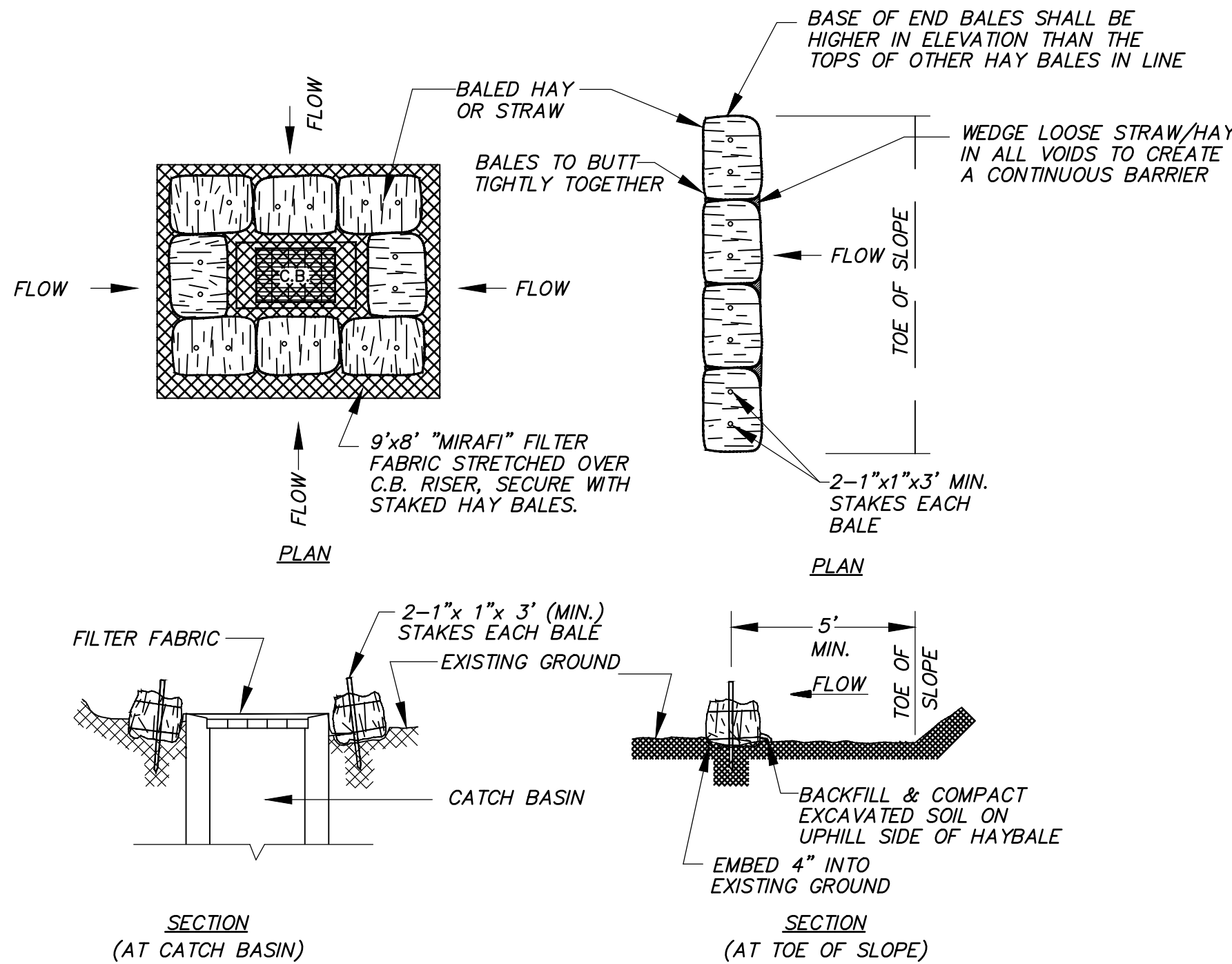
Phone (860) 653-8000
Fax (860) 844-8600
e-mail: mail@faheinc.com

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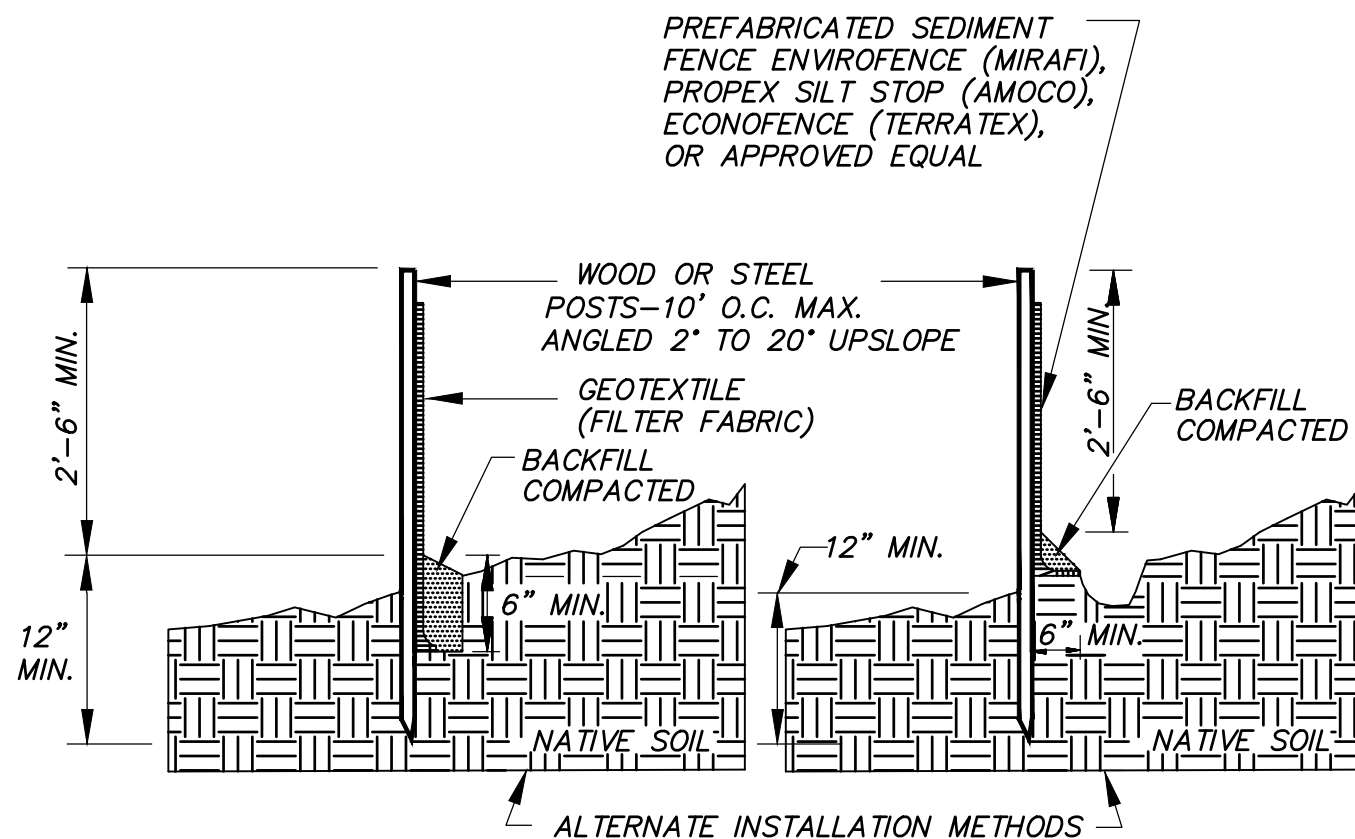
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N.T.S.



HAYBALE EROSION CONTROL (HBEC)

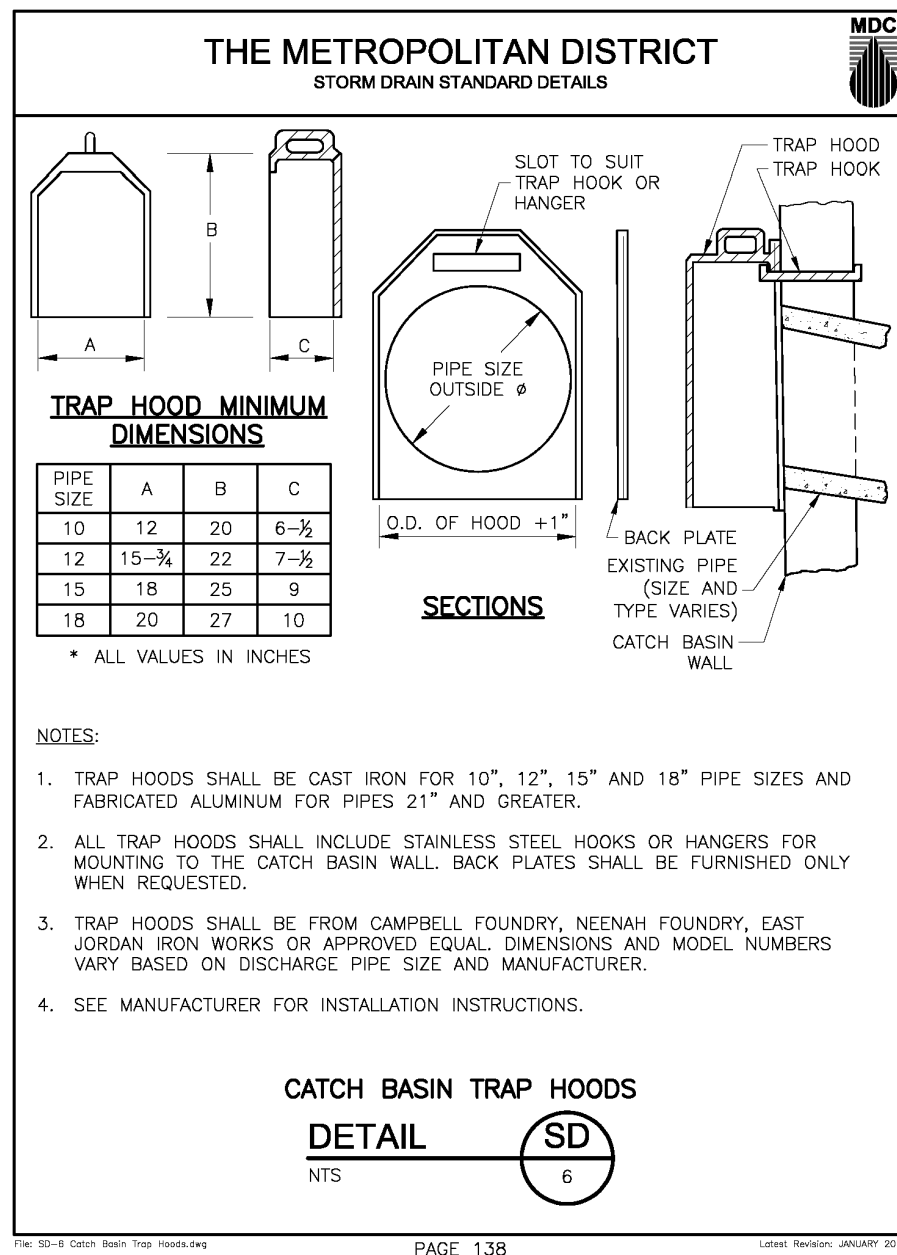
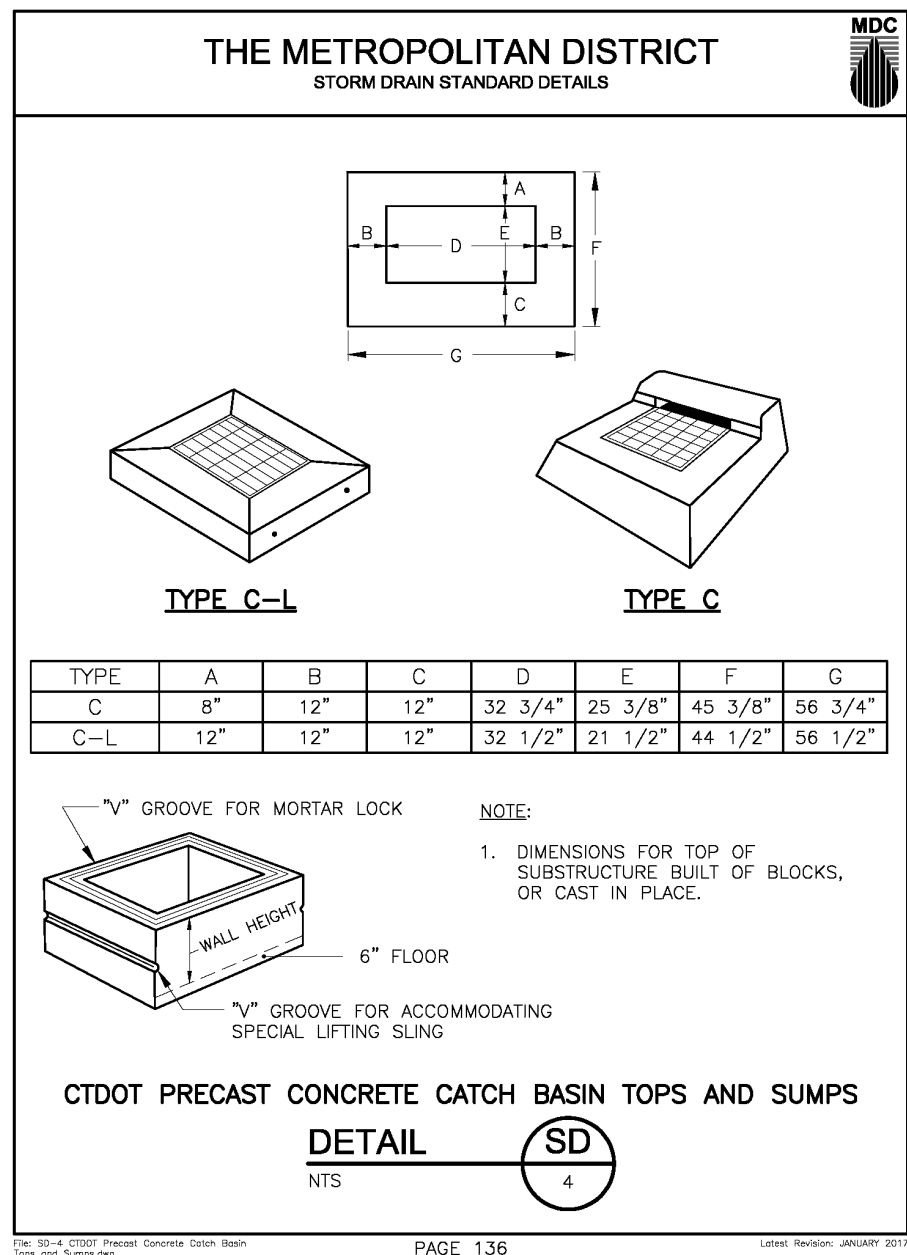
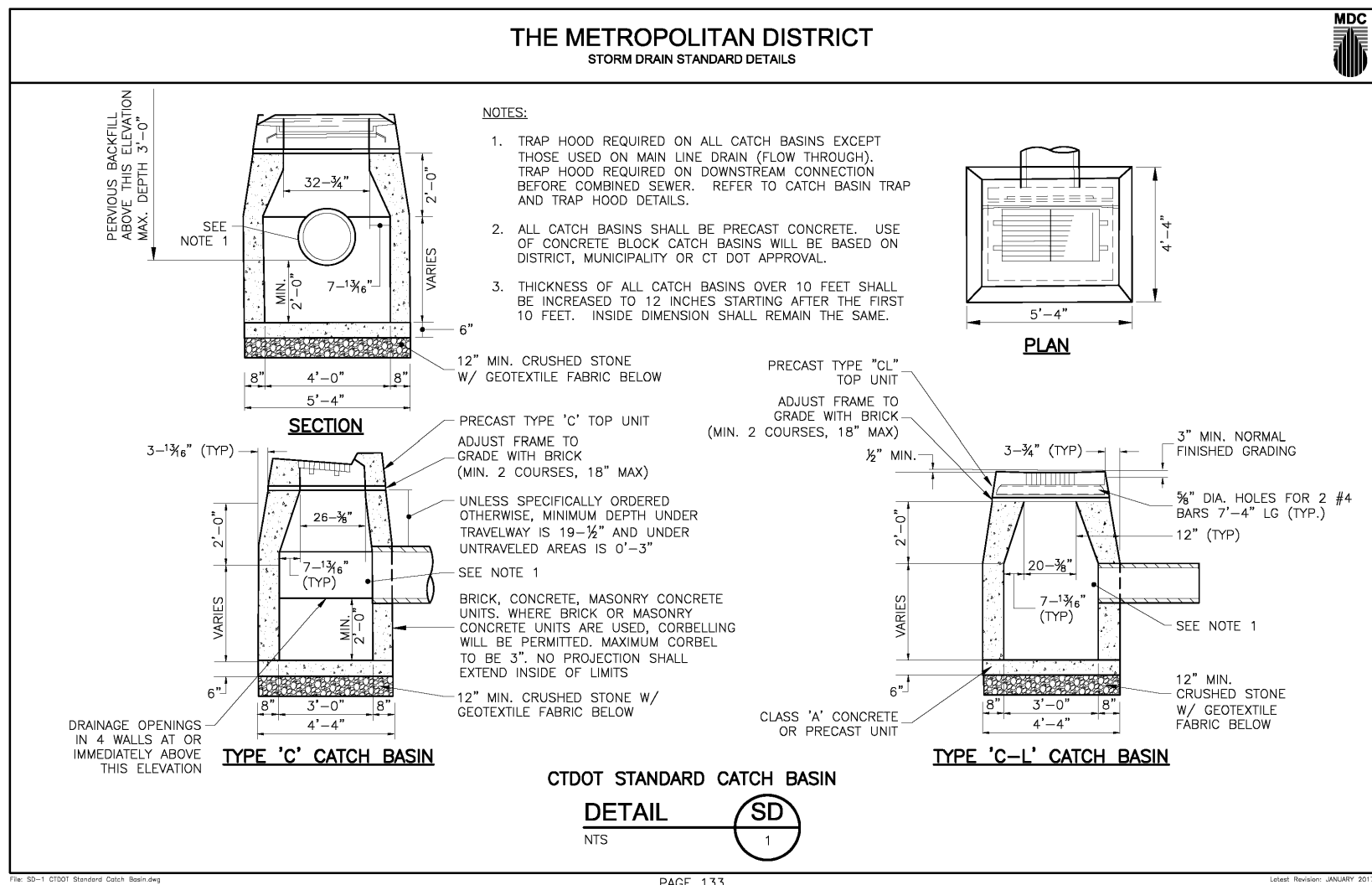
N.T.S.



- NOTE:
- WOOD POSTS SHALL BE HARDWOOD 1 1/2" x 1 1/2" x 48" MIN. STEEL POST SHALL BE A MINIMUM OF 0.5 POUNDS PER LINEAR FOOT X 48".
 - JOINTS, WHEN REQUIRED, SHALL BE SPliced & SECURELY SEALED TOGETHER, AT POST LOCATIONS ONLY, WITH A MINIMUM 6" OVERLAP.

SEDIMENT FENCE EROSION CONTROL (SFEC)

N.T.S.



MDC CODE:	BRACKETT SCHOOL HOUSING HARTFORD
WATER:	BILDVWHAR 10
SANITARY:	BILDVWHAR 18
STORM:	BILDVWHAR XX

SD-1

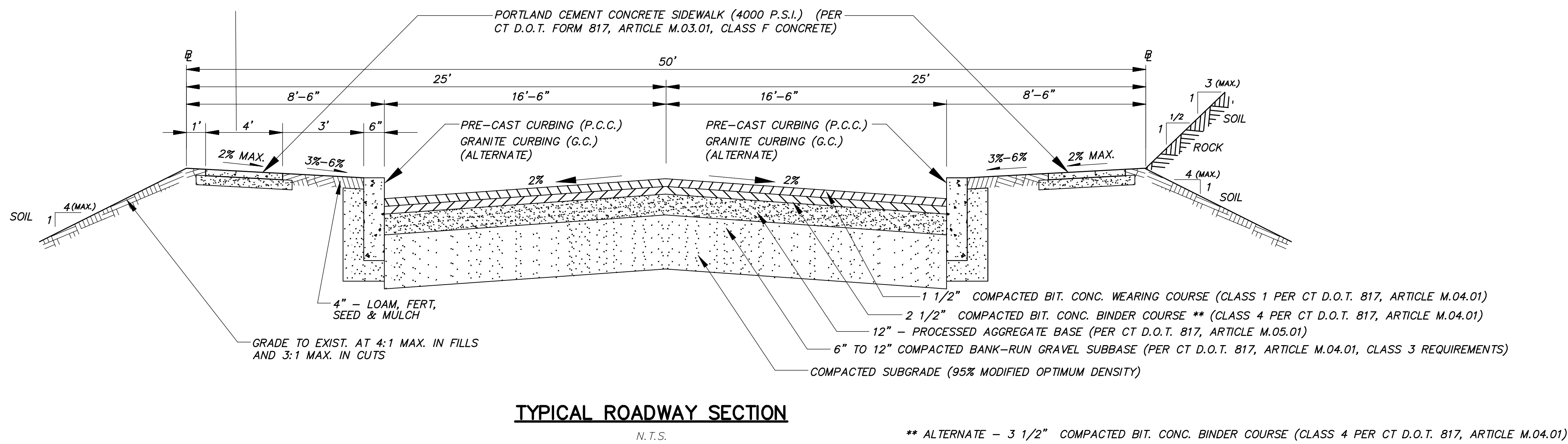
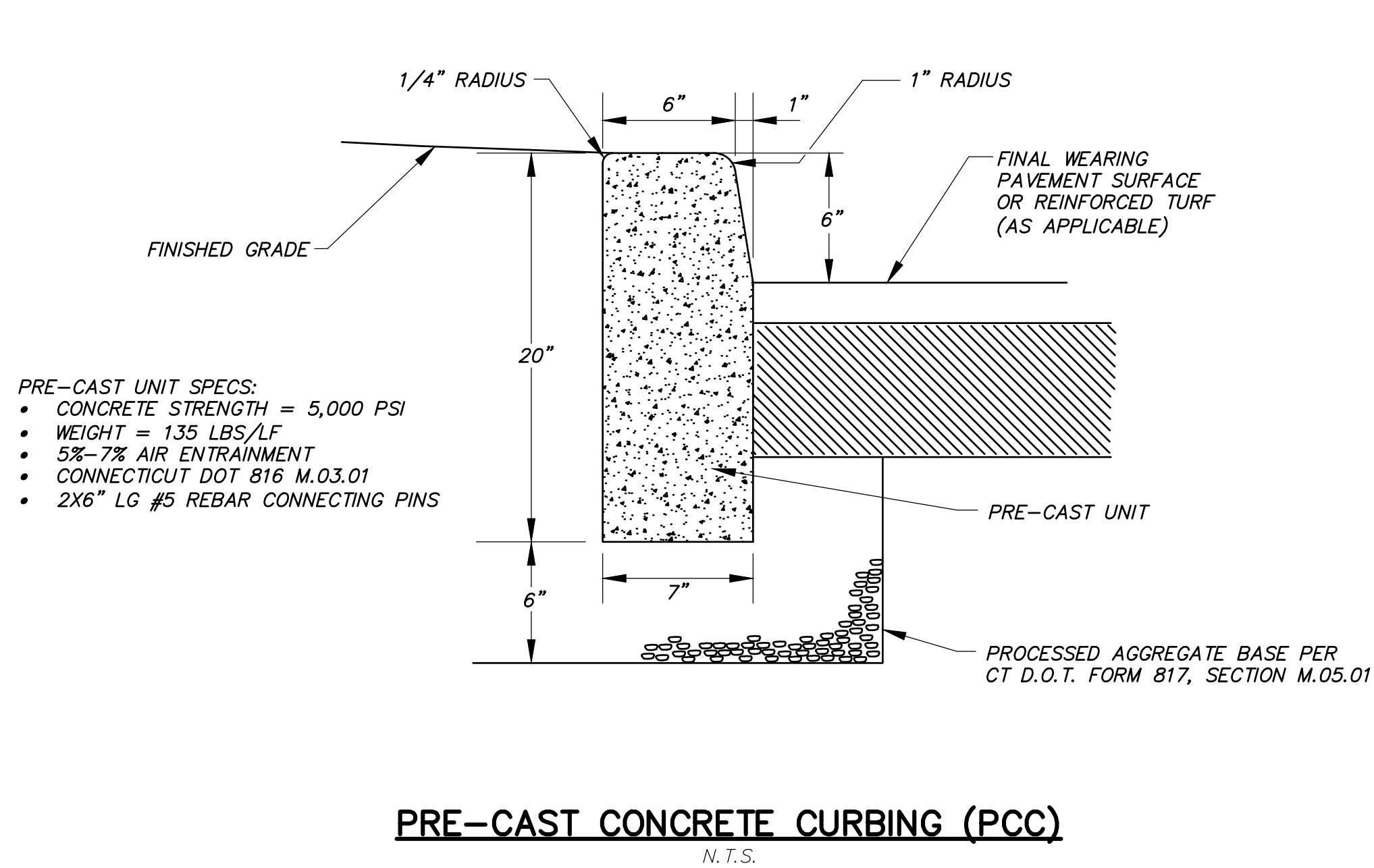
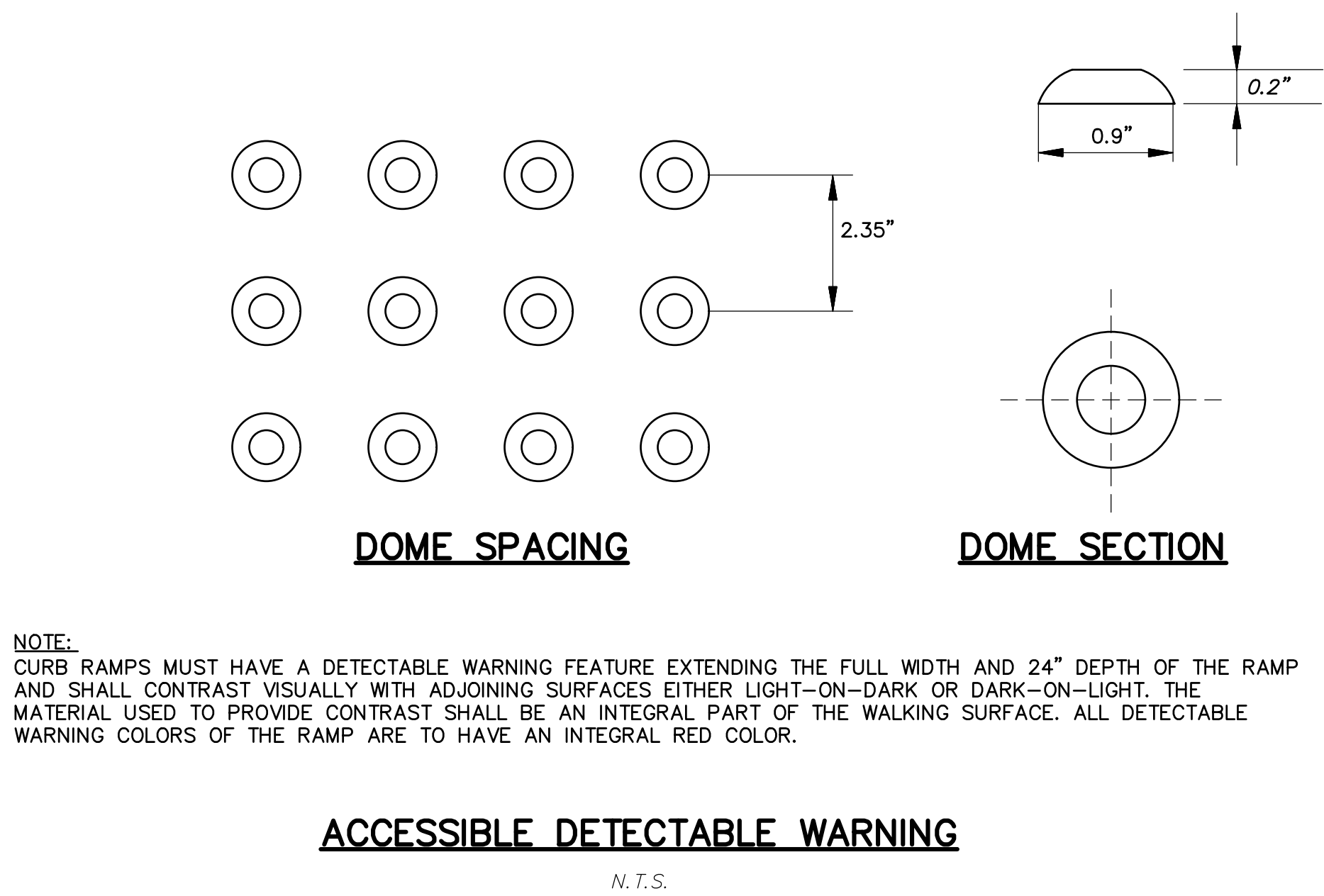
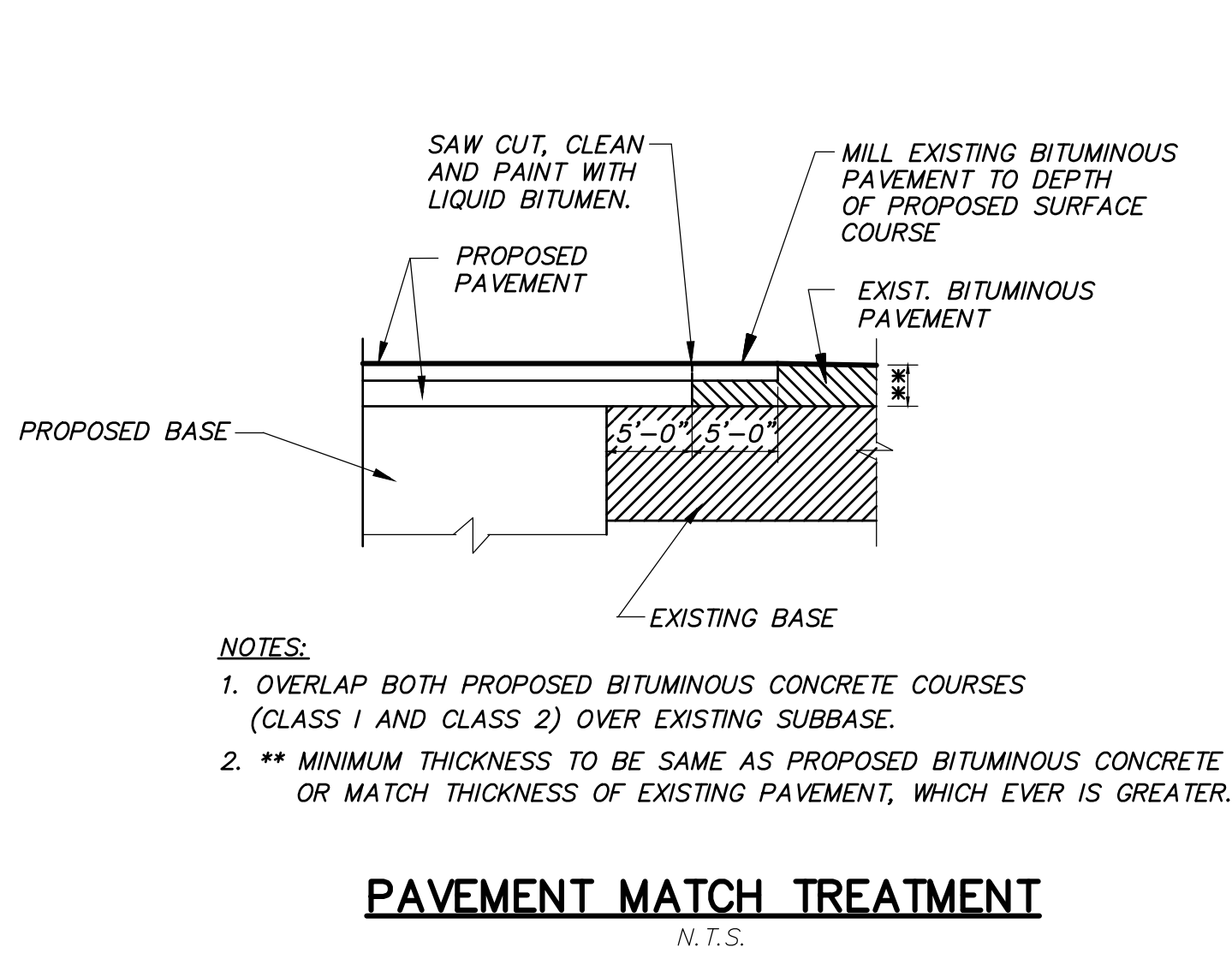
SITE DETAILS
PREPARED FOR
CITY OF HARTFORD
NAUGATUCK STREET EXTENSION
HARTFORD, CONNECTICUT

Date: 05-19-06 Drawn by: CAD Job no: 04193
Scale: AS NOTED Checked by: DSZ Sheet no: 1 OF 7

No.	Date	Description
1	05-25-06	Town & Client Comments
2	04-06-08	Town Comments
3	08-02-18	MDC Comments
4	03-08-19	Revised Bid Set

FAH F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Civil & Traffic Engineers • Planners • Surveyors • Landscape Architects

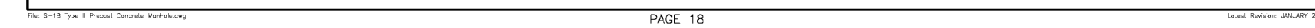
Phone (860) 653-8000
Fax (860) 844-8600
e-mail: fah@fahct.com



Revisions:		No.		Date		Description	
1	05-31-06	City Comments					
2	04-06-08	Town Comments					
3	05-09-08	Town Comments					
4	08-03-18	Roadway Bid Set					
5	03-08-19	Revised Bid Set					

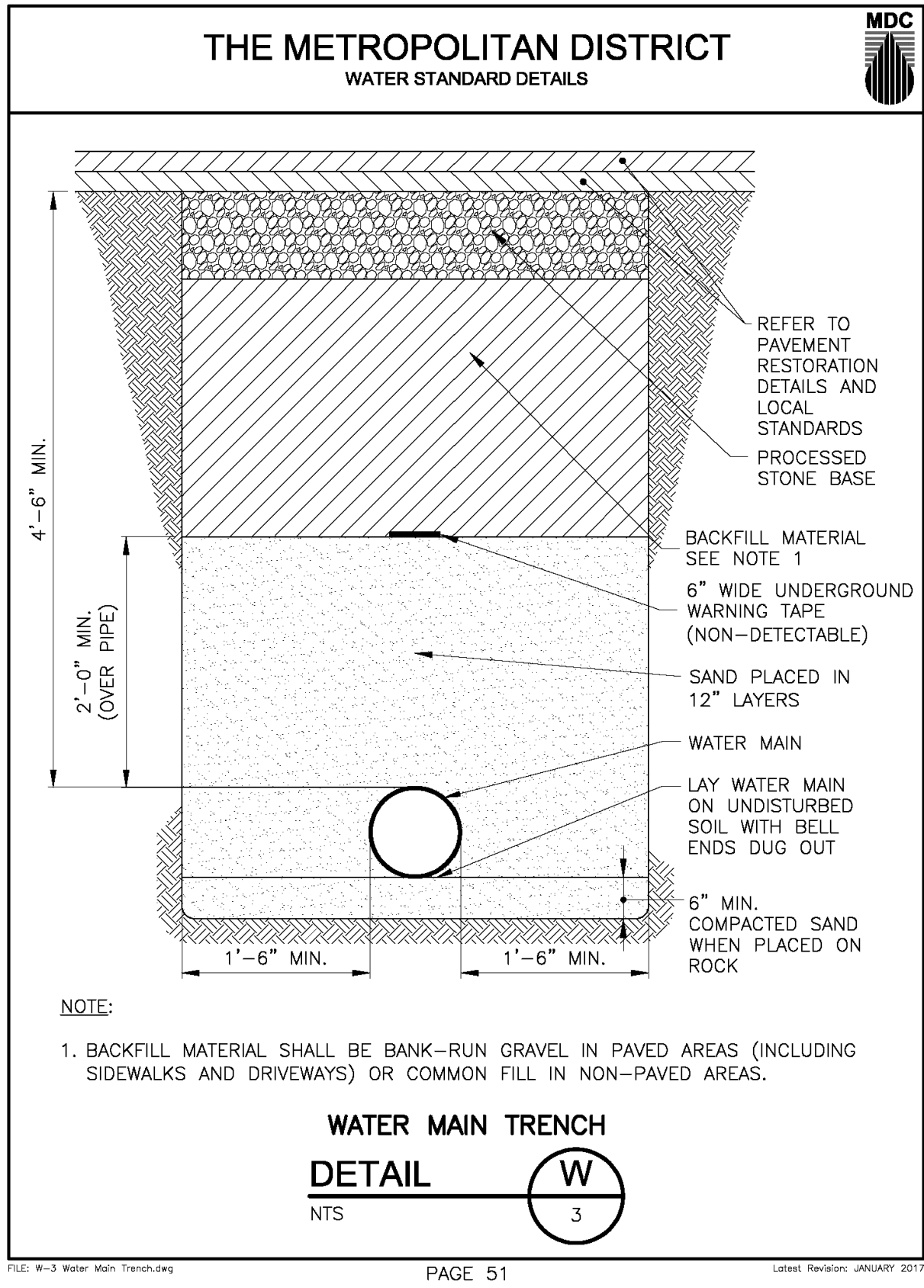
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PREPARED FOR		NAUGATUCK STREET EXTENSION	
HARTFORD, CONNECTICUT			
Date: 05-19-06	Drawn by: CAD	Job no: 04193	Sheet no: 3 OF 7
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SD-3

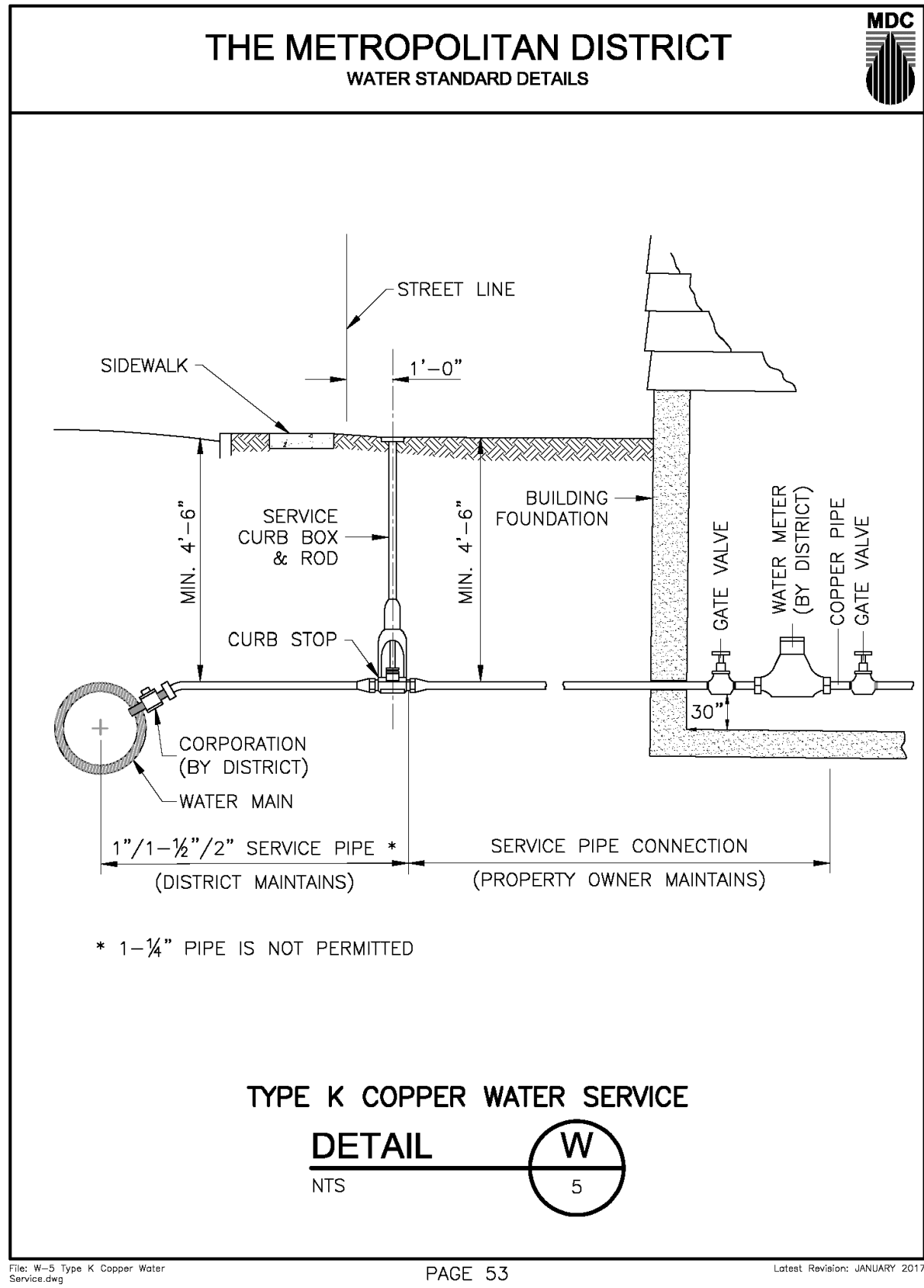
SD-4

<p align="center"> SITE DETAILS PREPARED FOR <i>CITY OF HARTFORD</i> NAUTAGATUCK STREET EXTENSION HARTFORD, CONNECTICUT </p>		Date: 05-19-06 Scale: AS NOTED Drawn by: CAD Checked by: DS2 Job no: 04193 Sheet no 4 OF 7
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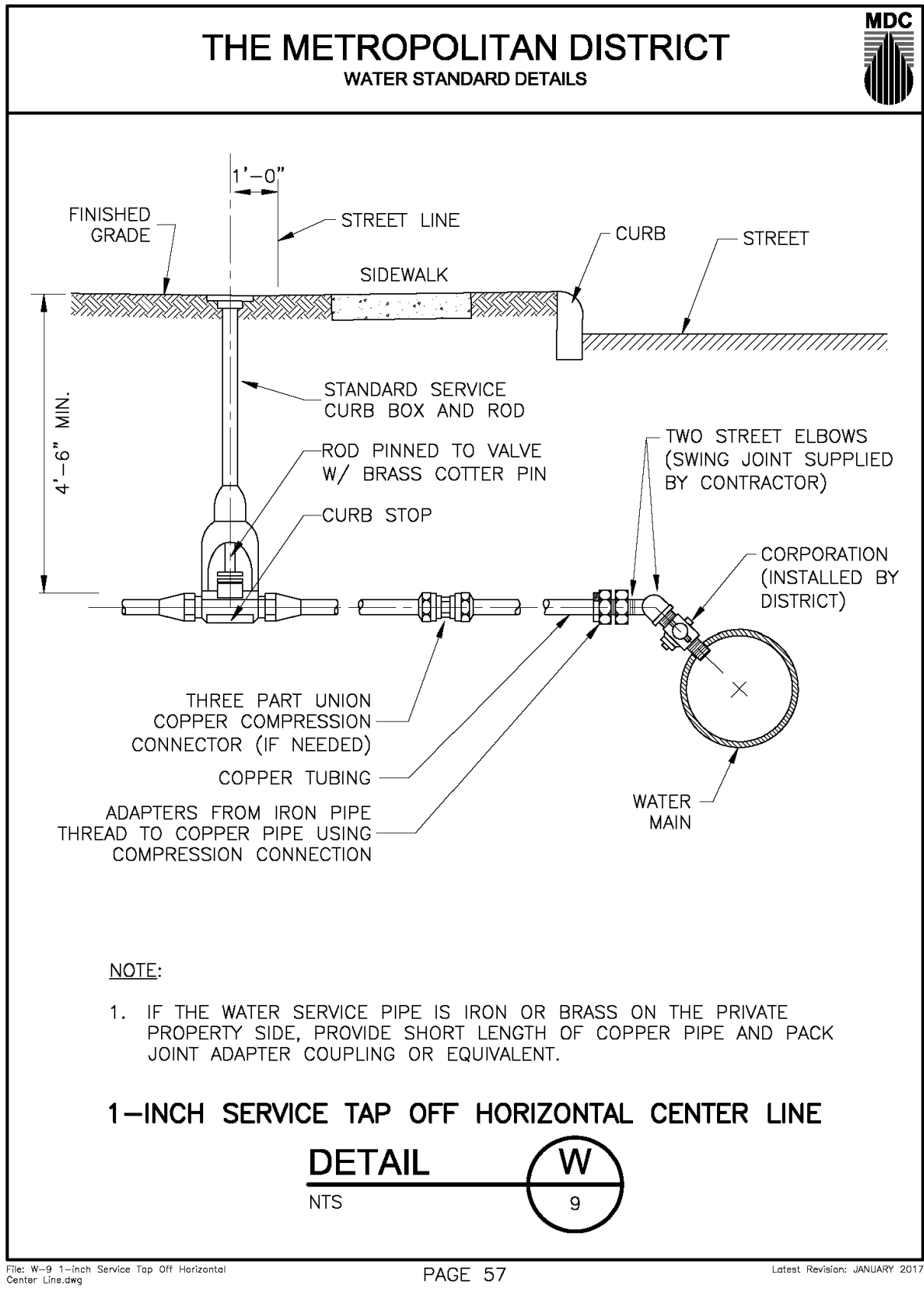
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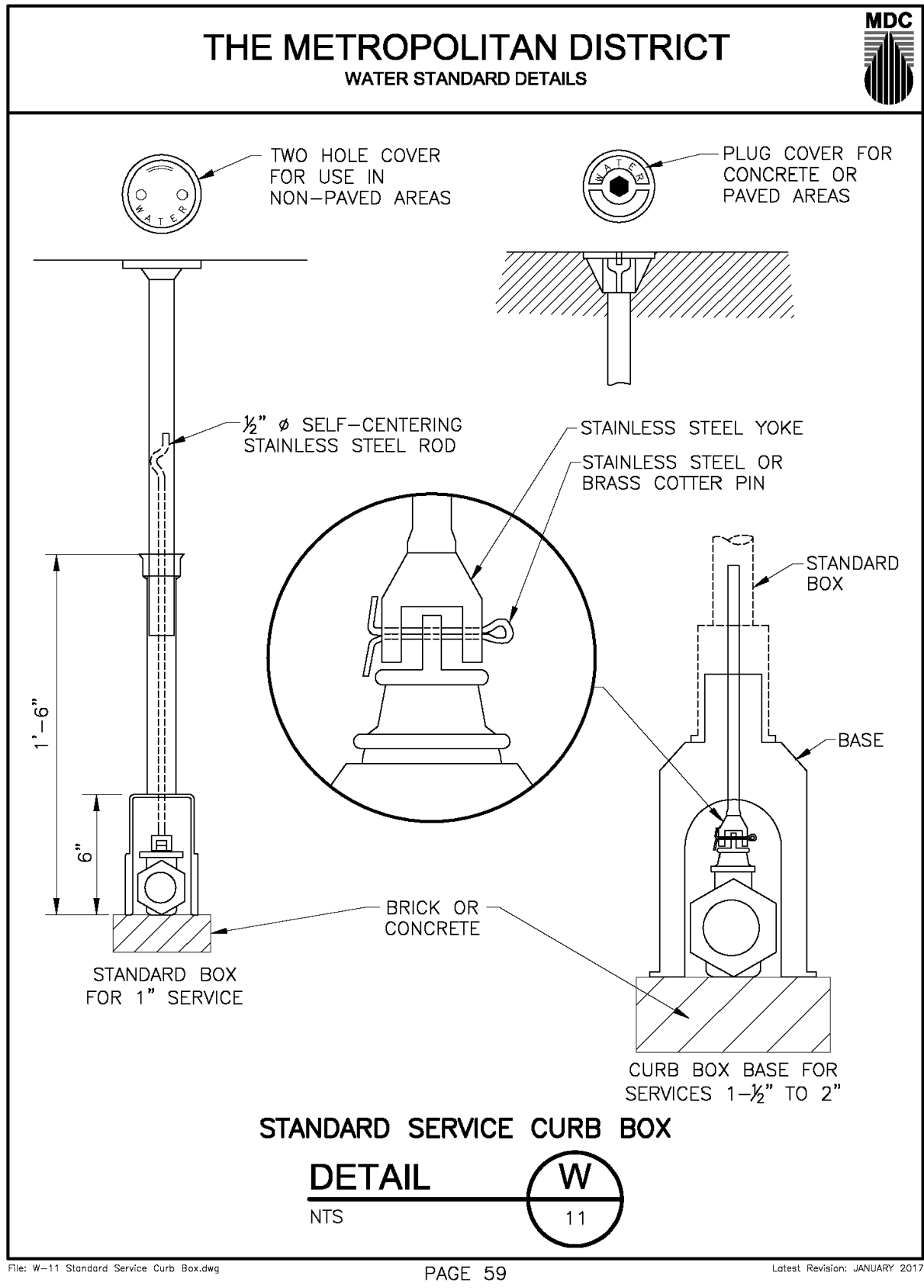
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PAGE 51
Latest Revision: JANUARY 2017



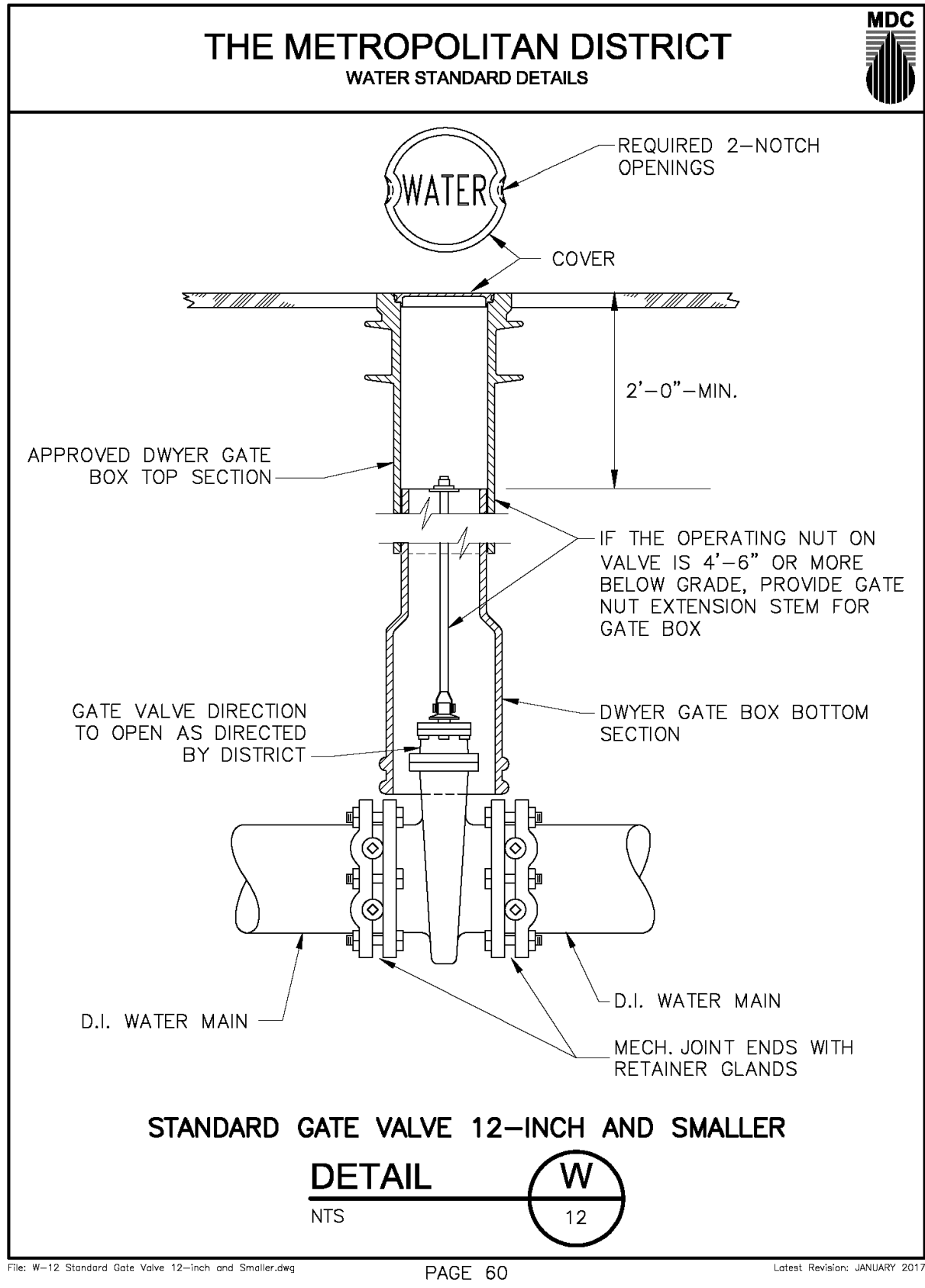
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PAGE 53
Latest Revision: JANUARY 2017



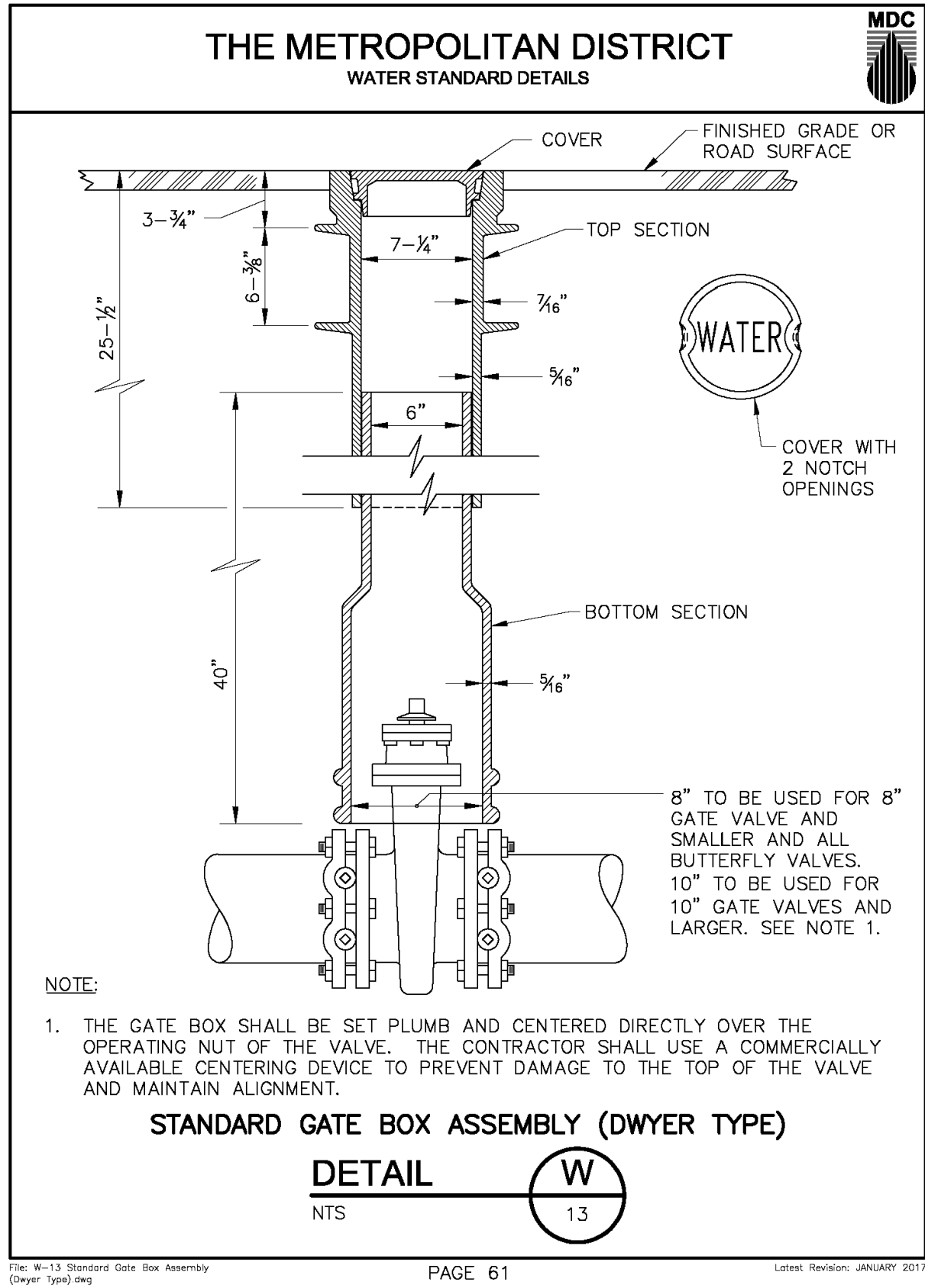
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PAGE 57
Latest Revision: JANUARY 2017



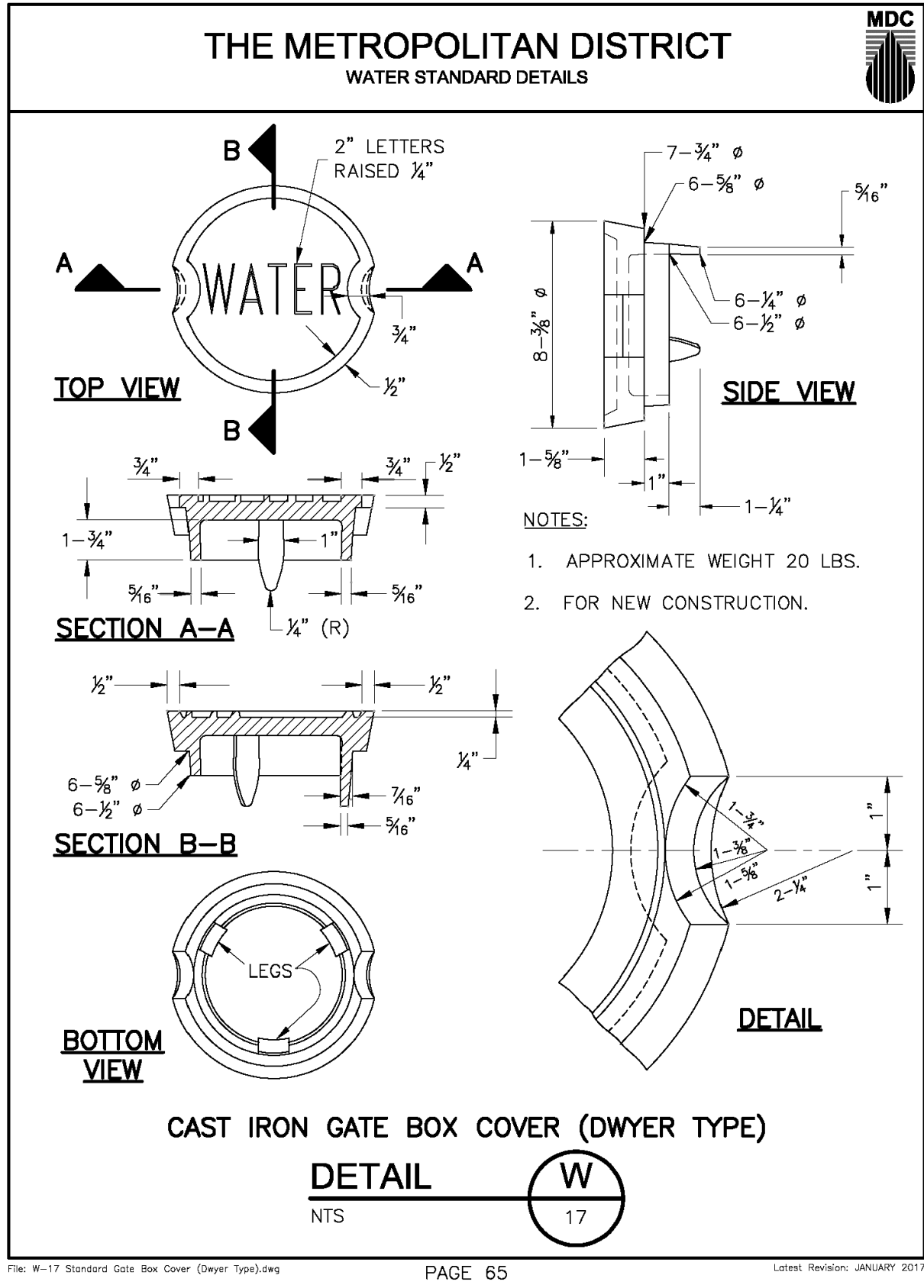
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PAGE 59
Latest Revision: JANUARY 2017



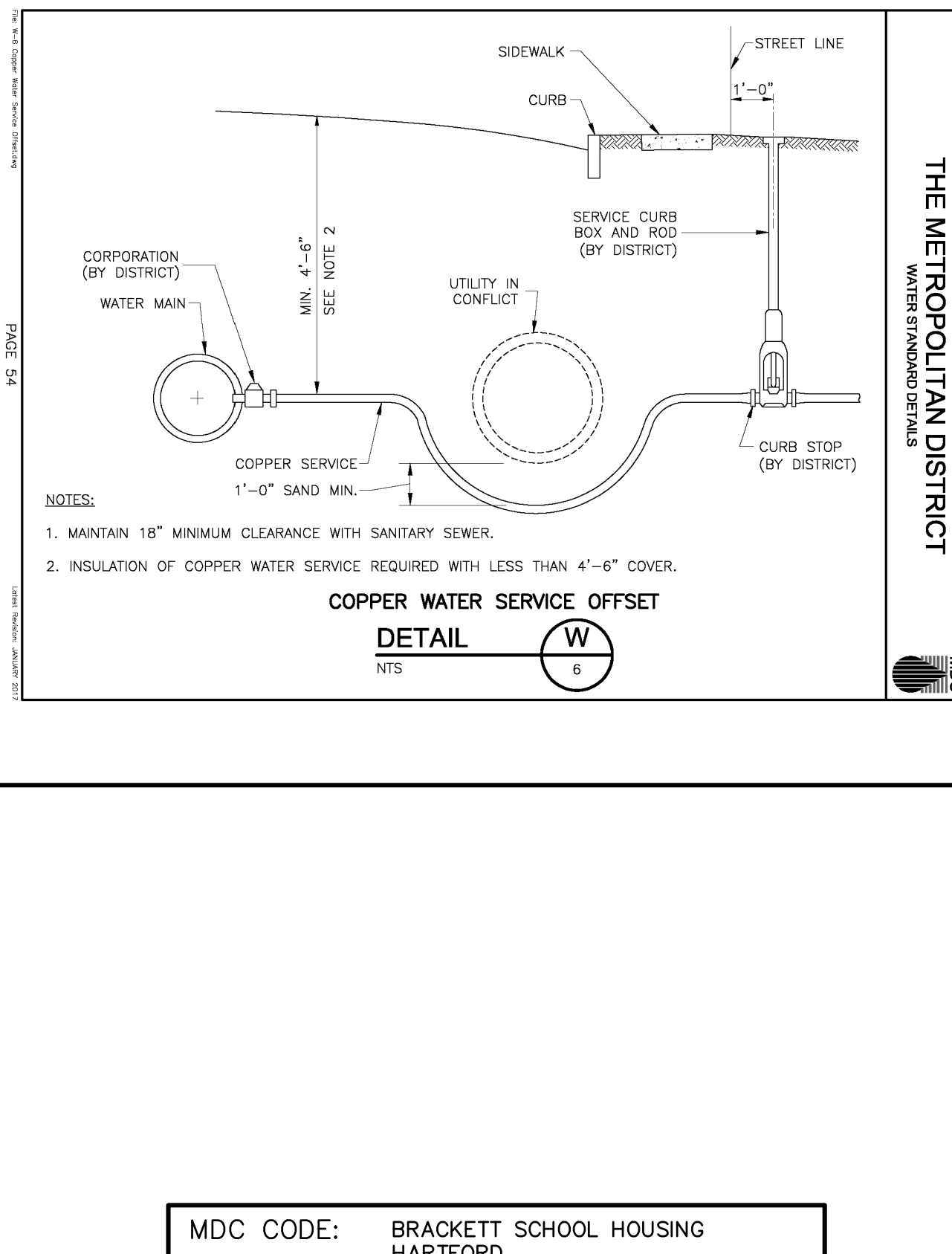
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PAGE 60
Latest Revision: JANUARY 2017



FILE: W-13 Standard Gate Box Assembly (Dwyer Type).dwg
PAGE 61
Latest Revision: JANUARY 2017



FILE: W-17 Standard Gate Box Cover (Dwyer Type).dwg
PAGE 65
Latest Revision: JANUARY 2017



FILE: W-6 Copper Water Service Offset.dwg
PAGE 64
Latest Revision: JANUARY 2017

Revisions:			
No.	Date	Description	
1	05-31-06	City Comments	
2	04-06-08	Town Comments	
3	08-02-18	MDC Comments	

SITE DETAILS			
PREPARED FOR			
CITY OF HARTFORD			
NAUGATUCK STREET EXTENSION			
HARTFORD, CONNECTICUT			
Date: 05-19-06	Drawn by: CAD	Job no: 04193	Sheet no: 5 OF 7
Scale: AS NOTED	Checked by: DSZ	Street no: 5 OF 7	

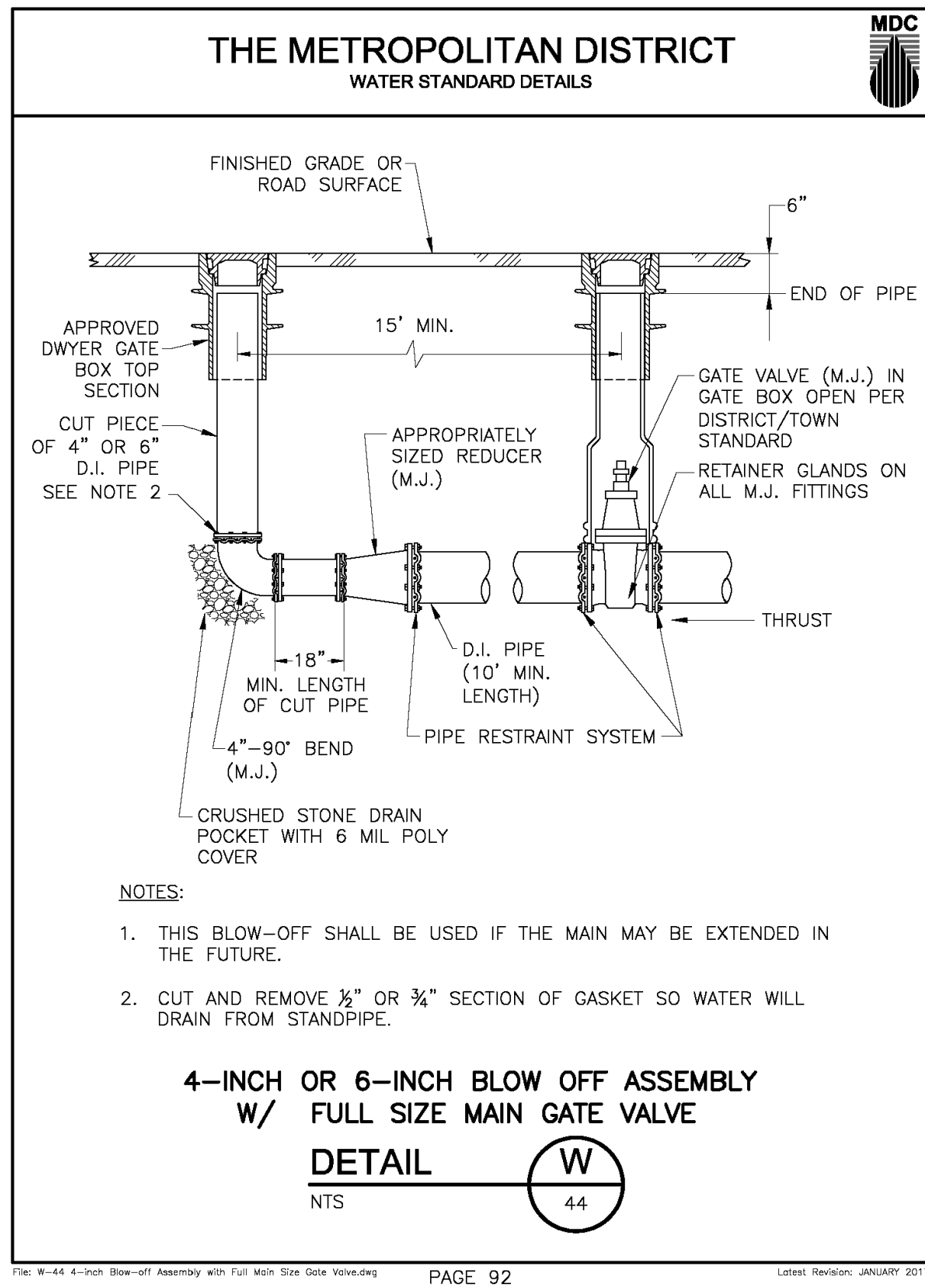
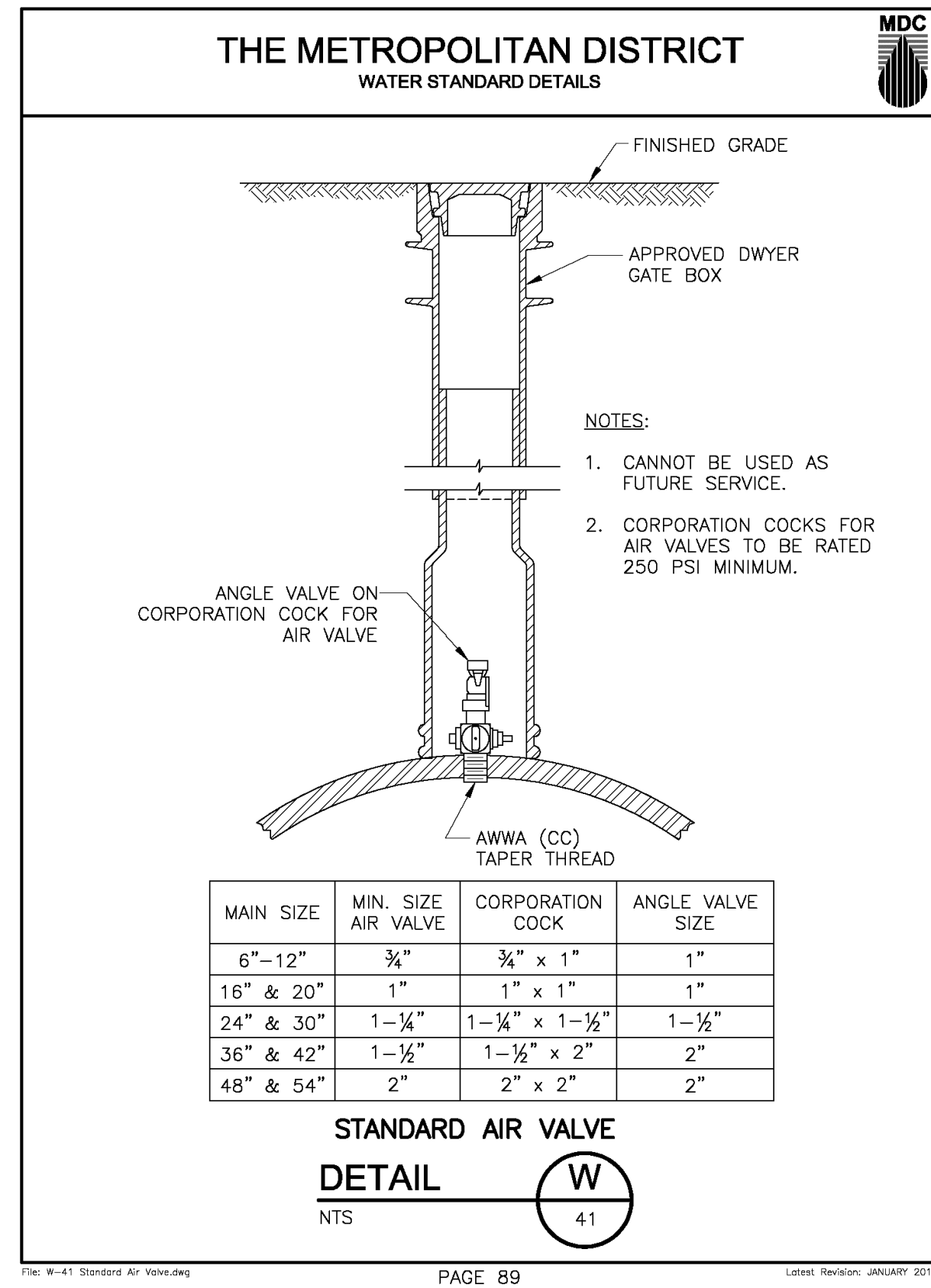
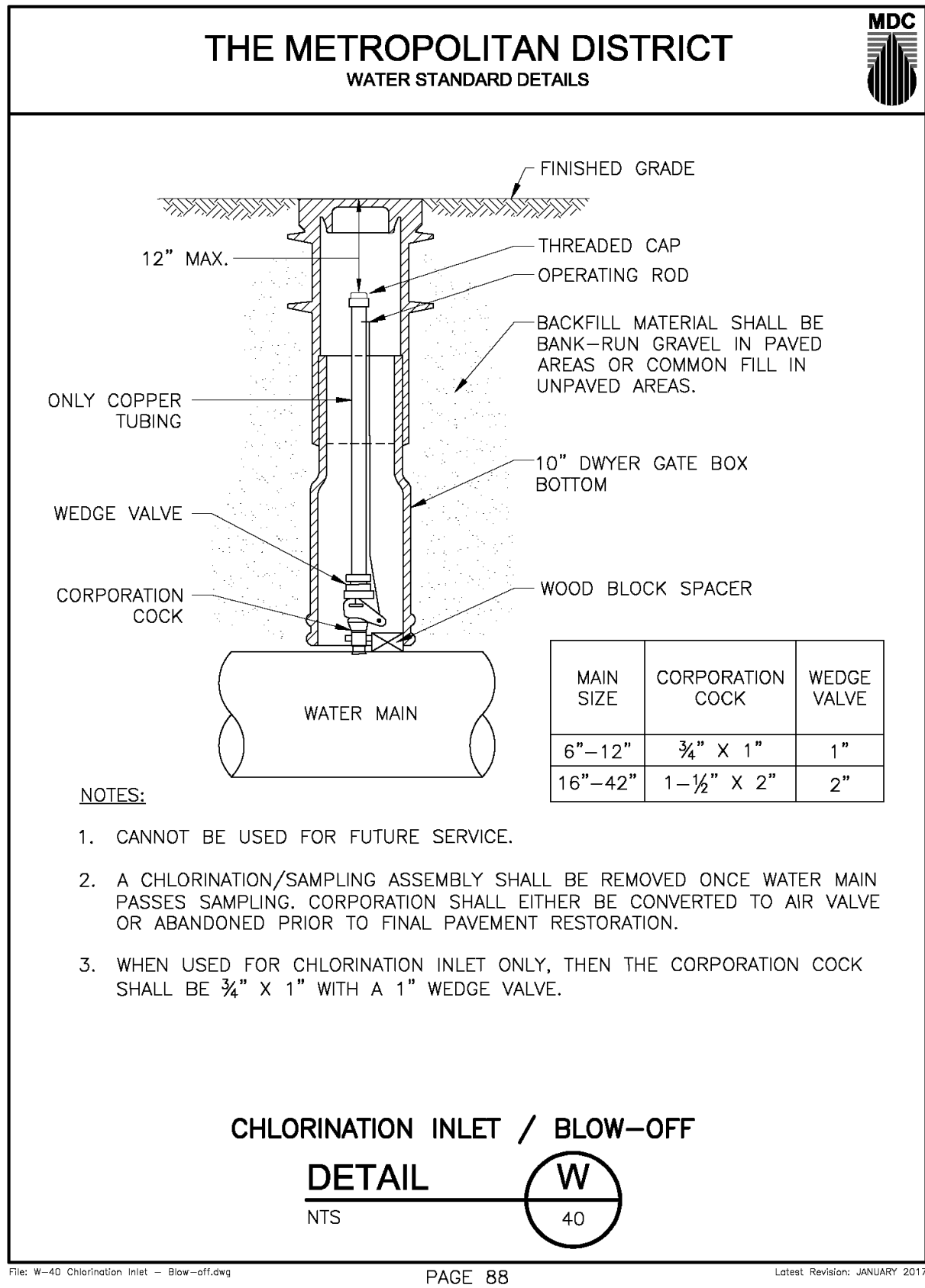
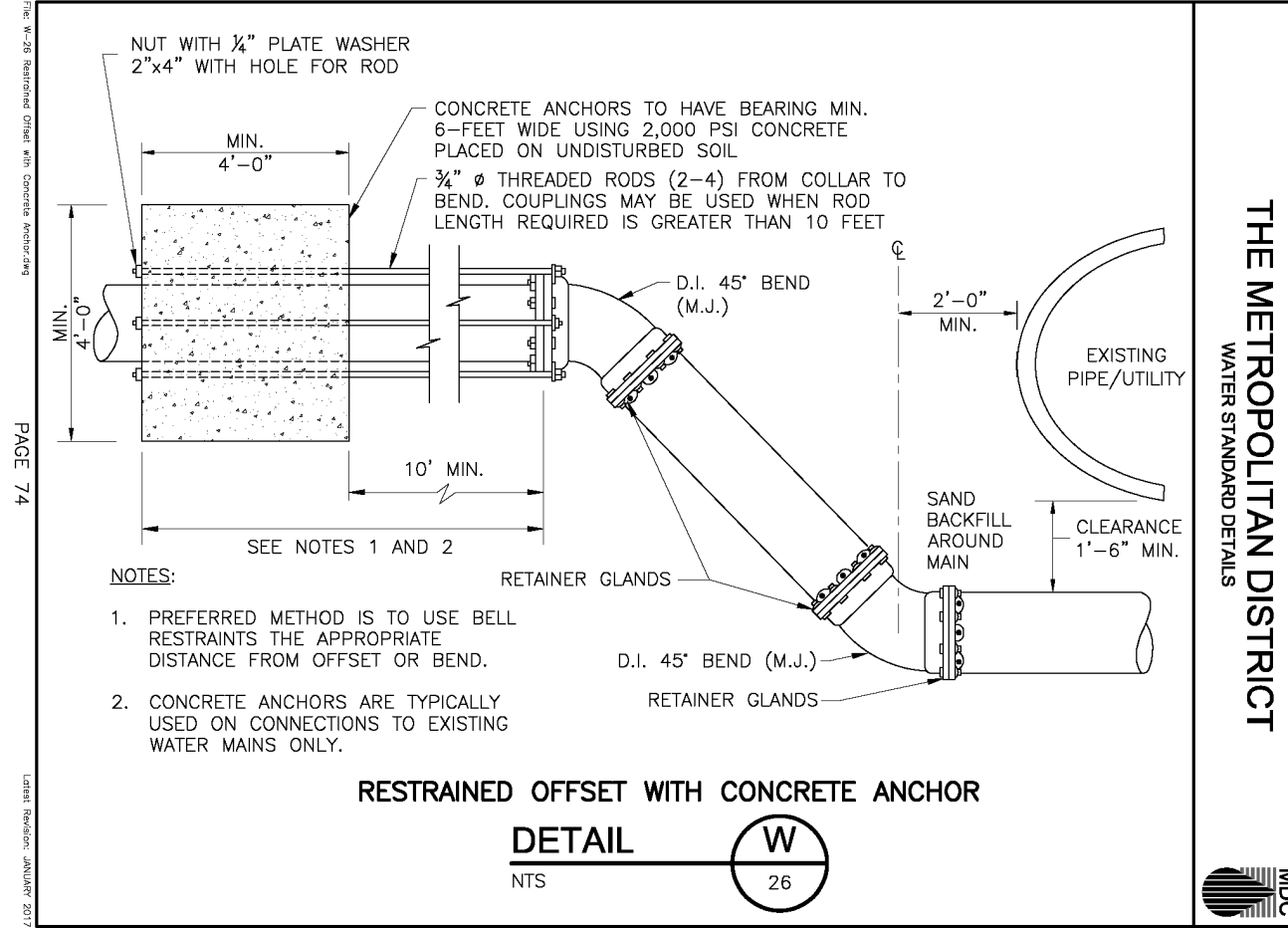
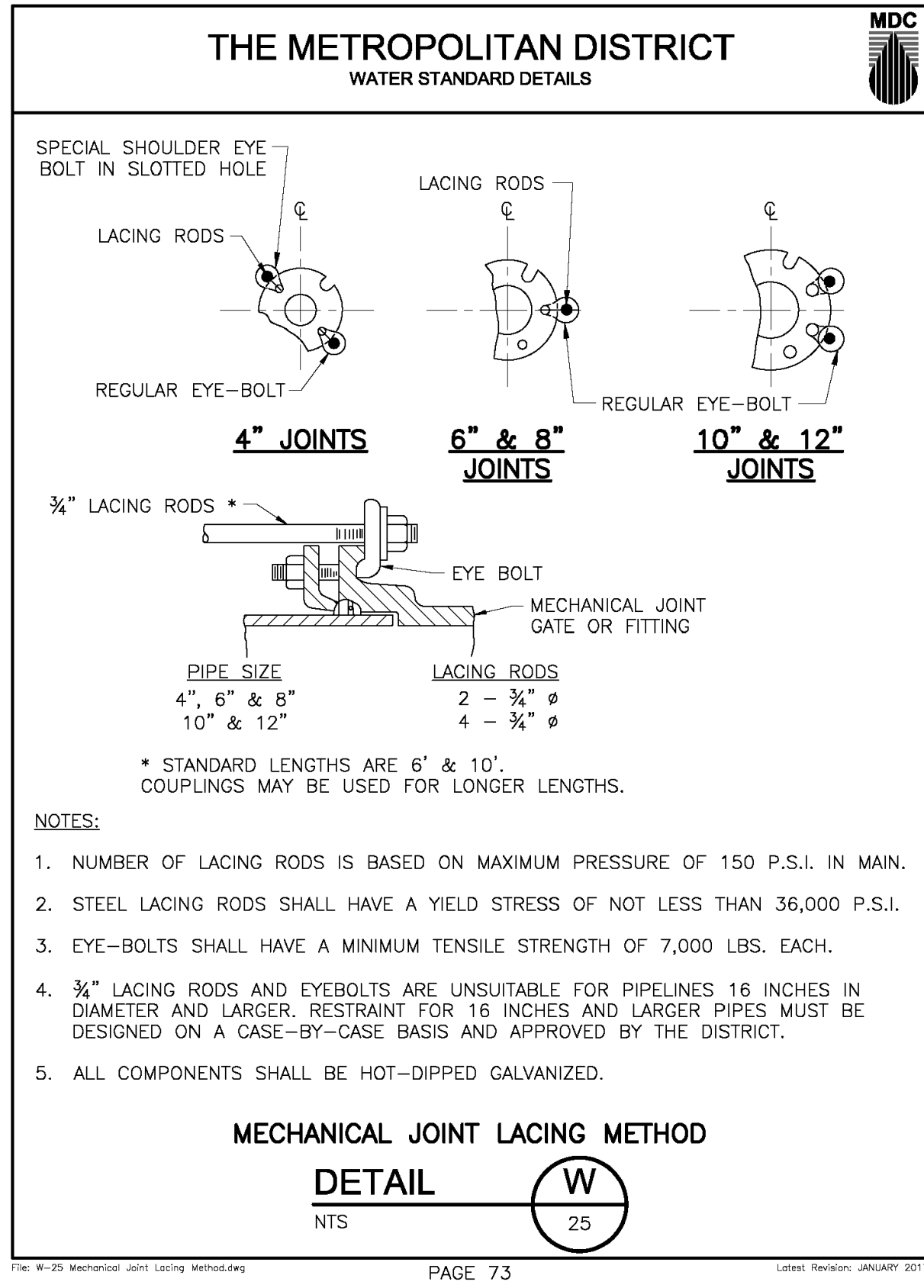
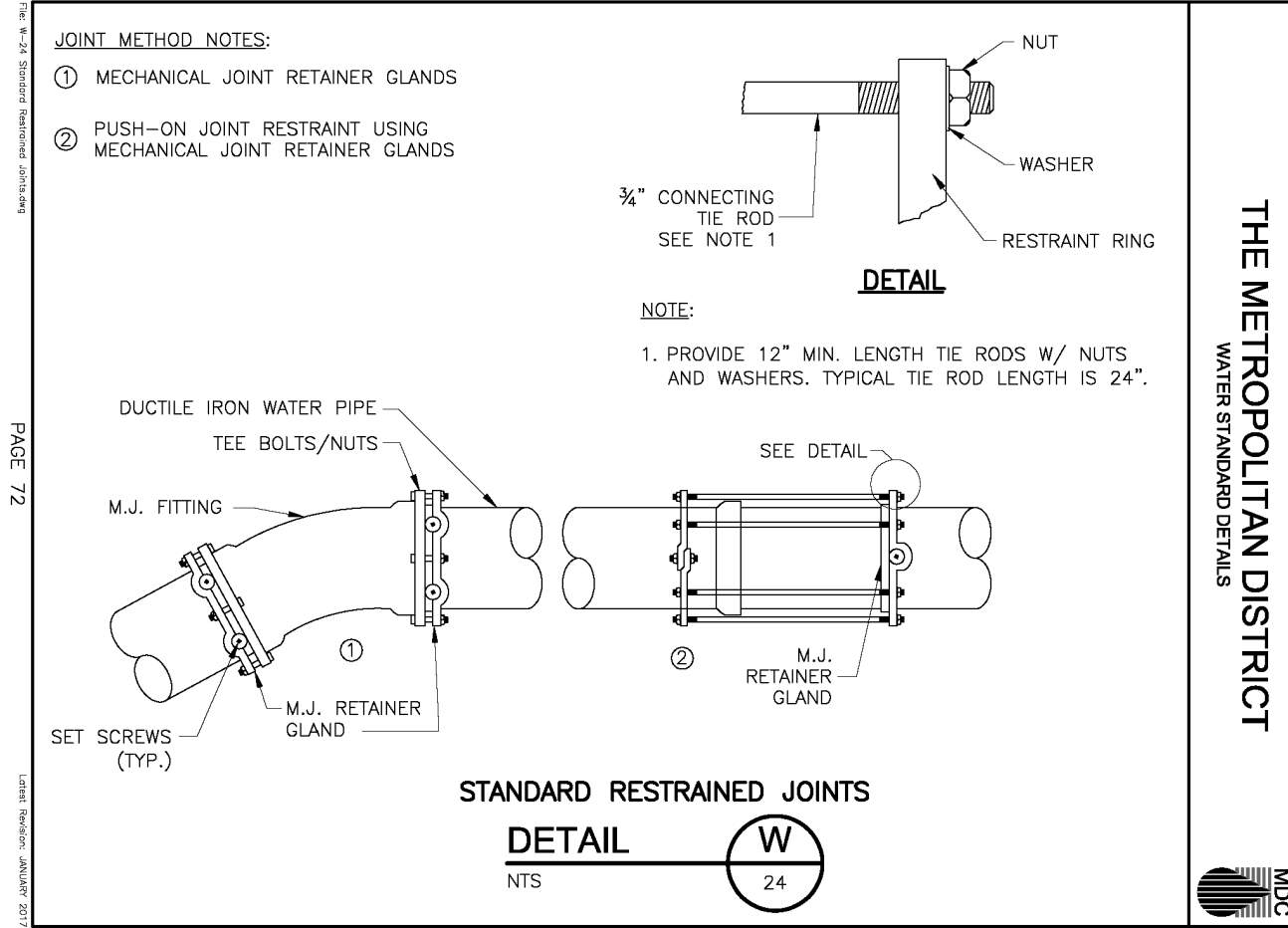
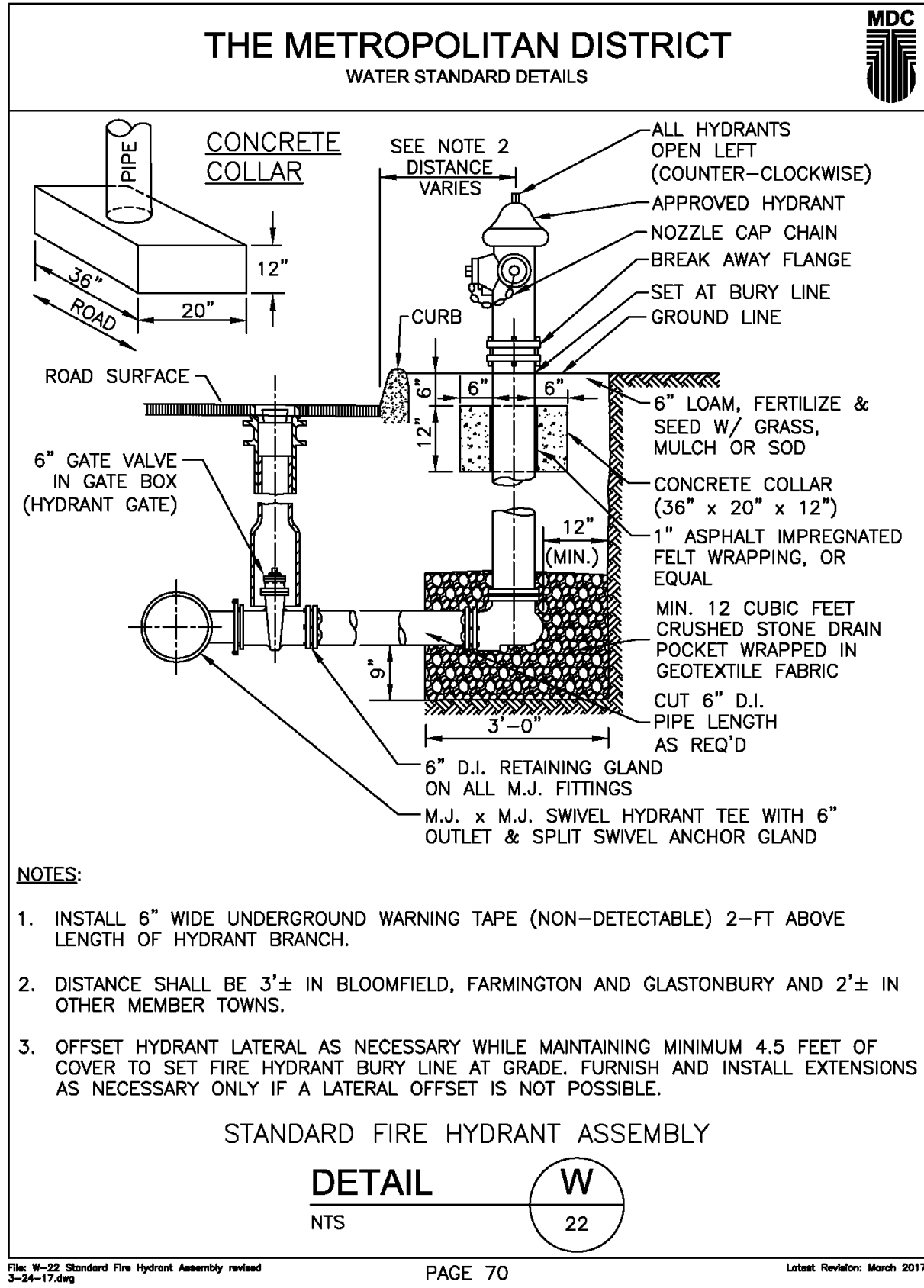
SD-5

Phone (860) 683-8000
Fax (860) 844-8600
e-mail: mha@fah.com

F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Civil & Traffic Engineers • Planners • Landscape Architects

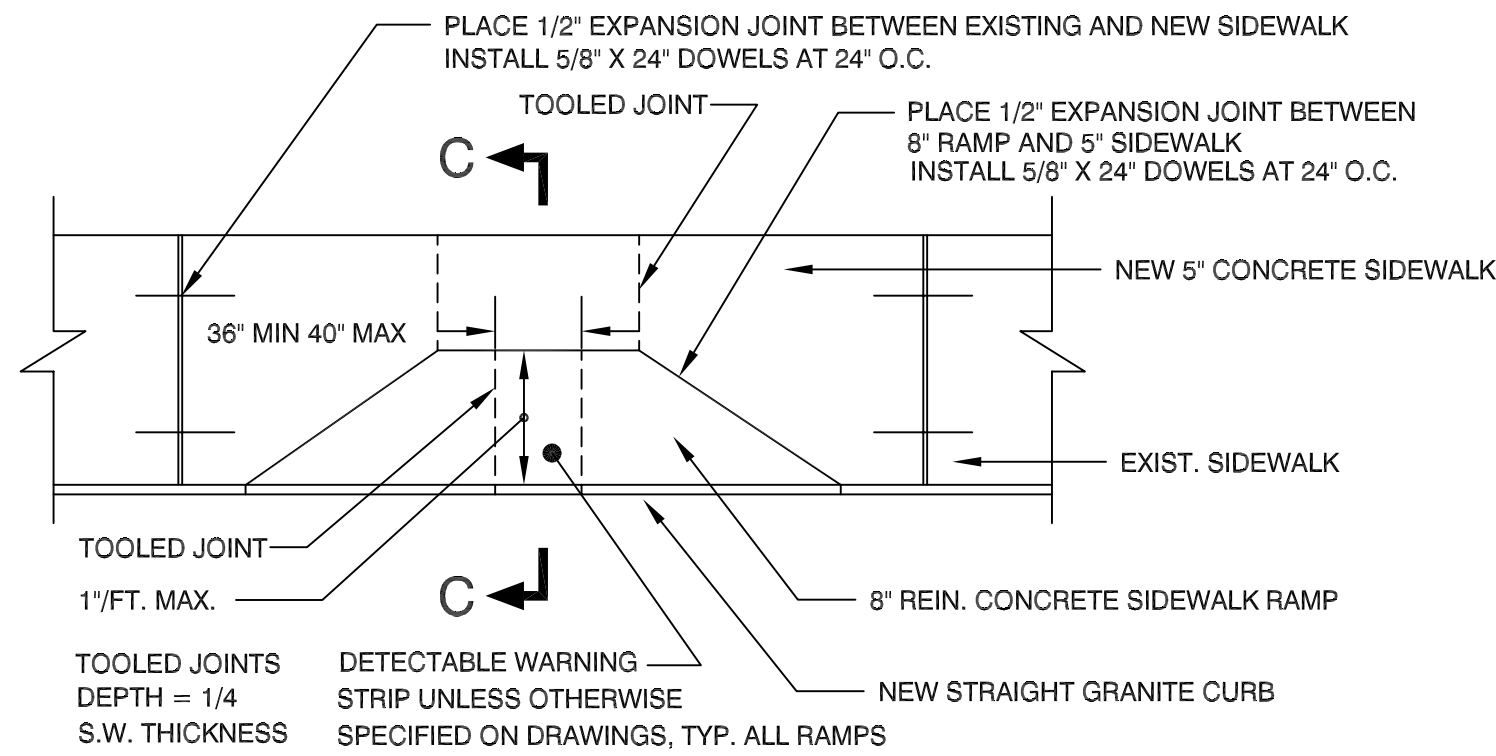
F. A. Hesketh & Associates, Inc.

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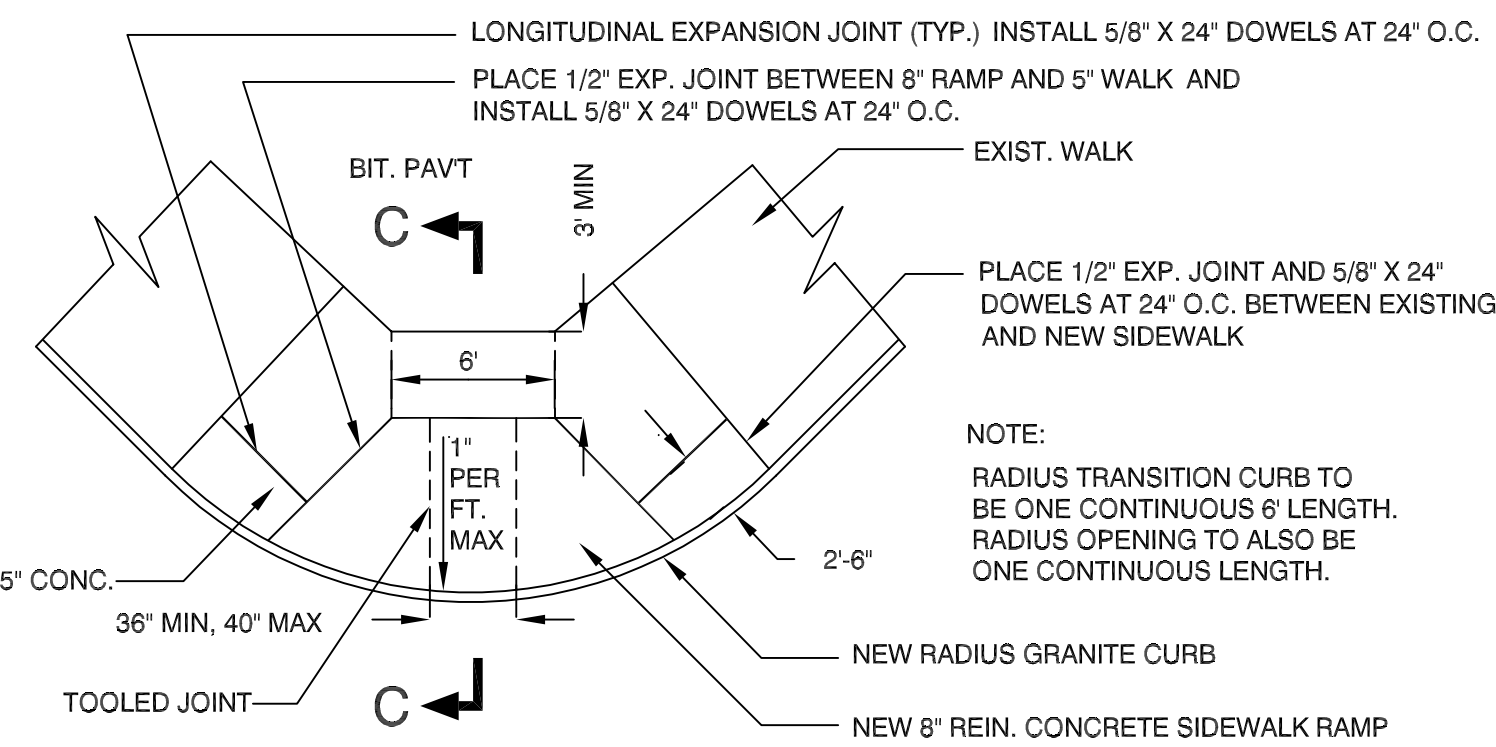


MDC CODE:	BRACKETT SCHOOL HOUSING HARTFORD
WATER:	BILDVWHAR 10
SANITARY:	BILDVWHAR 18
STORM:	BILDVWHAR XX

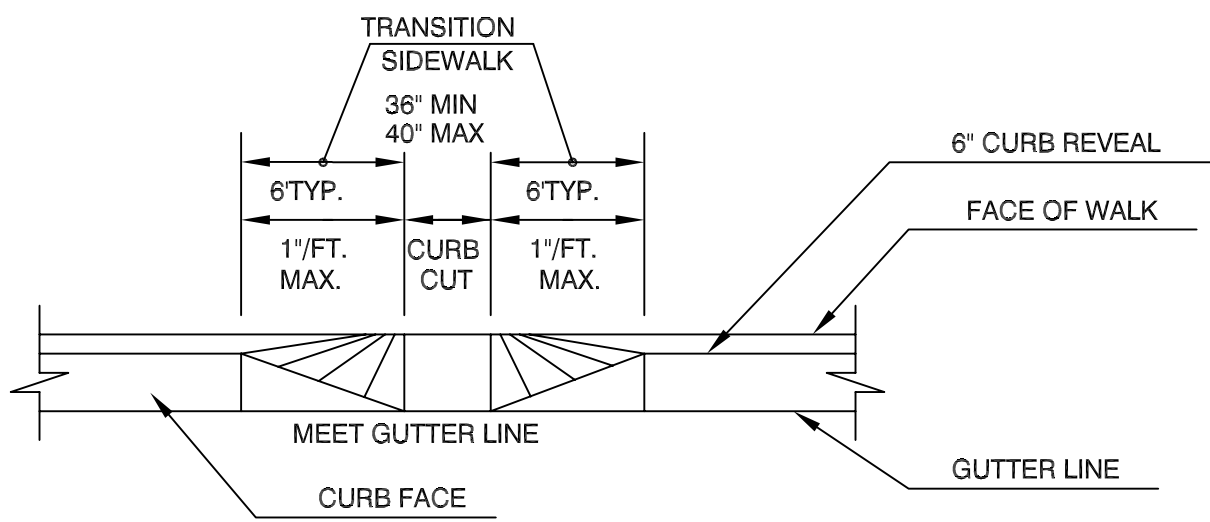
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					2	04-06-08	Town Comments	
					3	08-02-18	MDC Comments	



SIDEWALK RAMP TYPE I

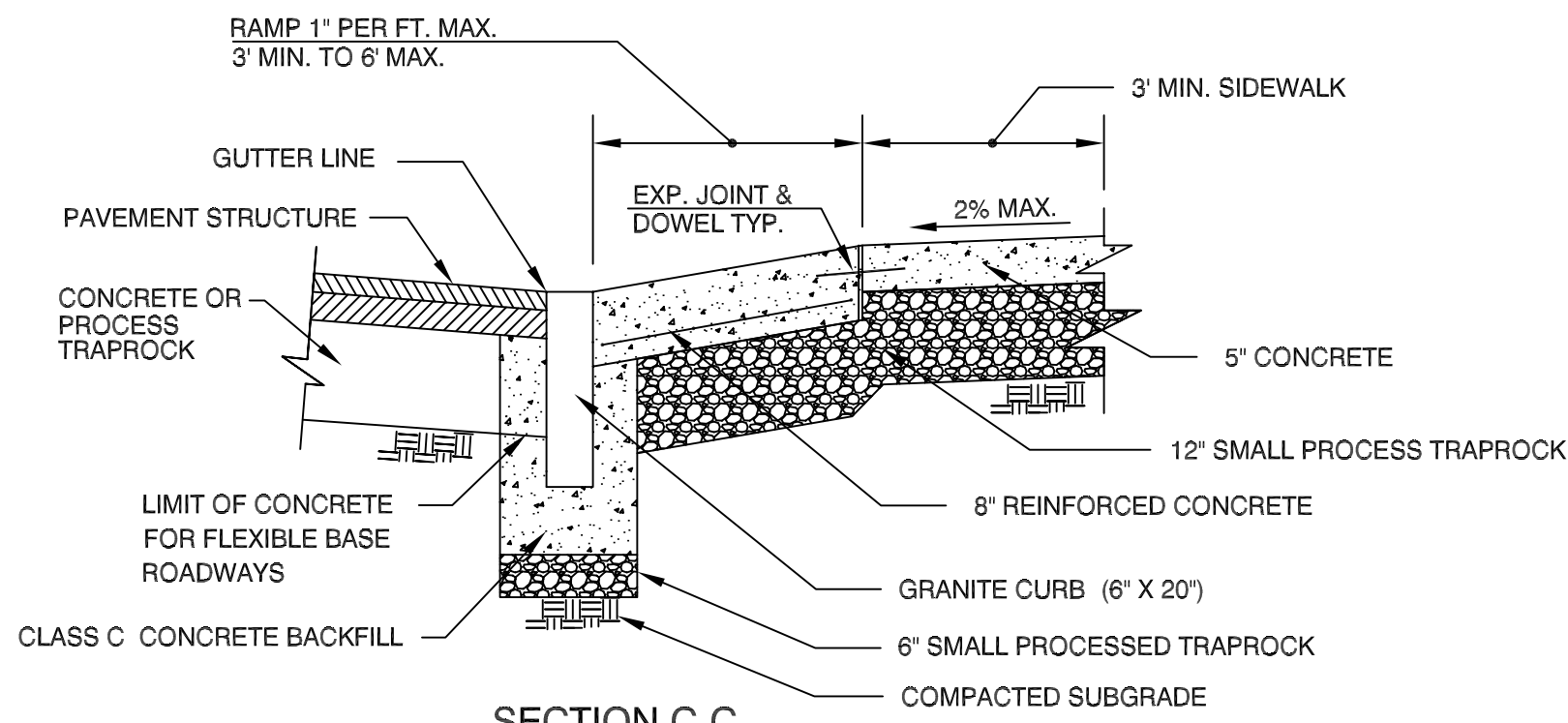


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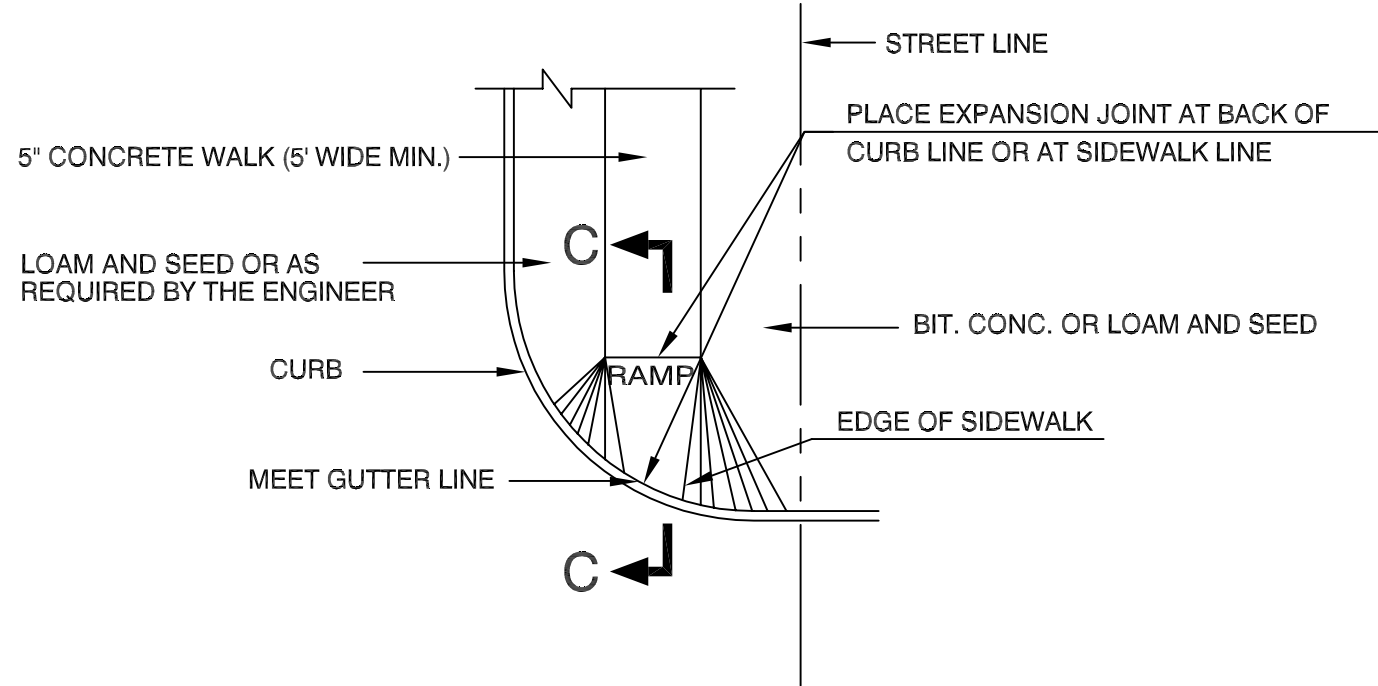


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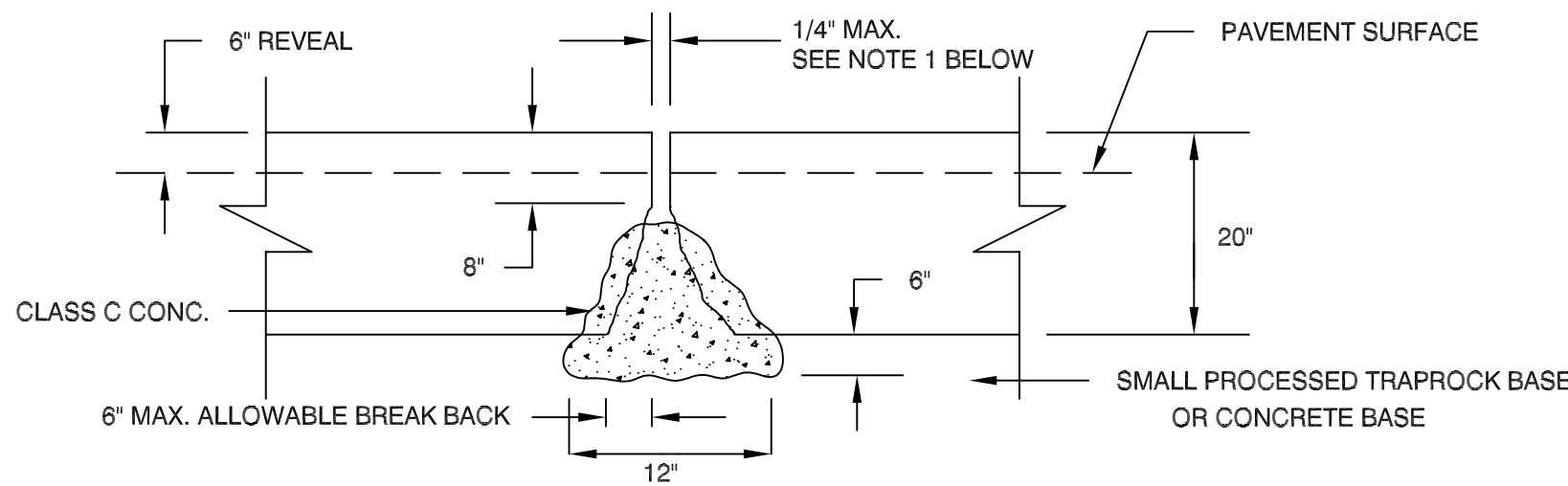
SIDEWALK RAMP TYPE II



SIDEWALK RAMP TYPE I, II, III

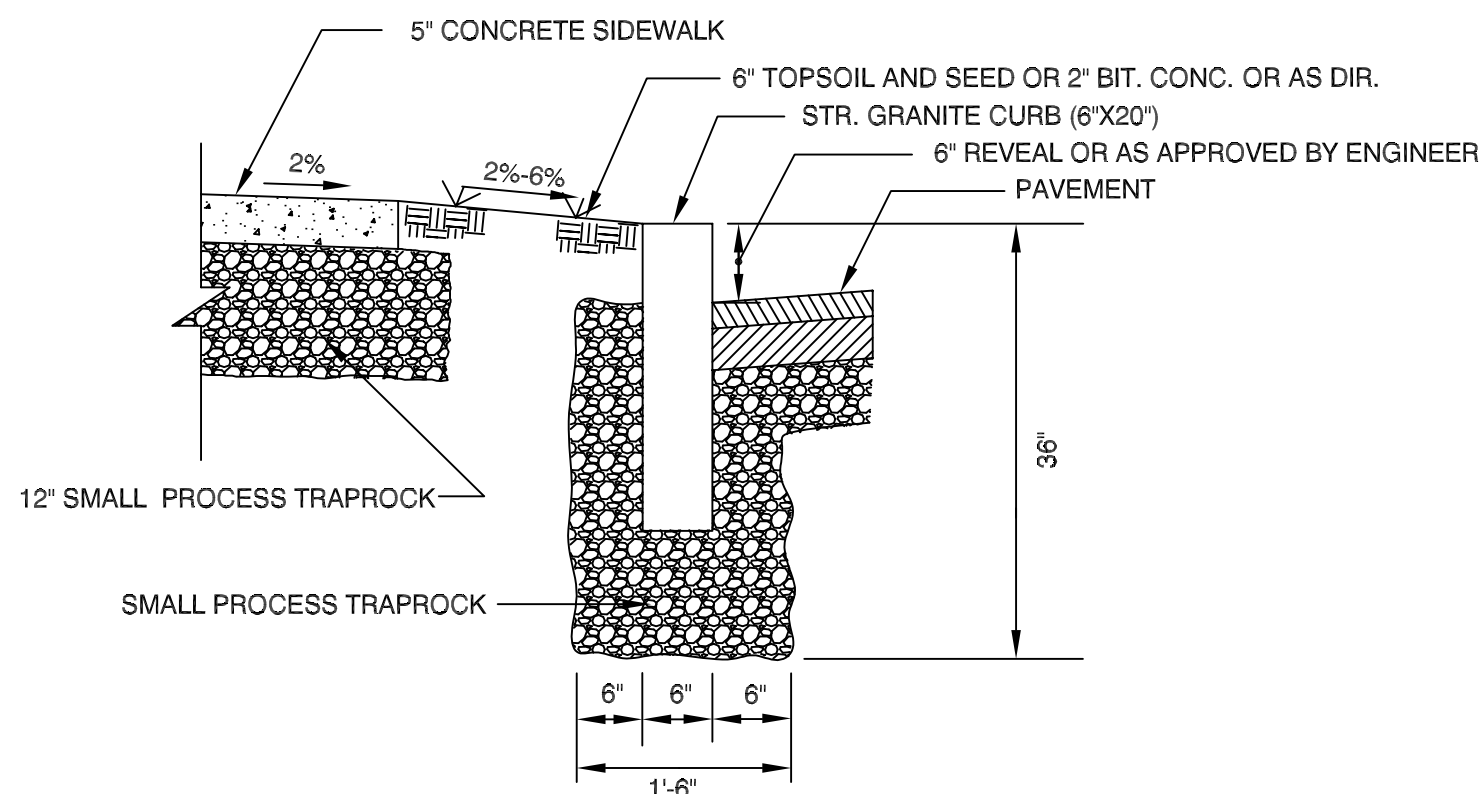


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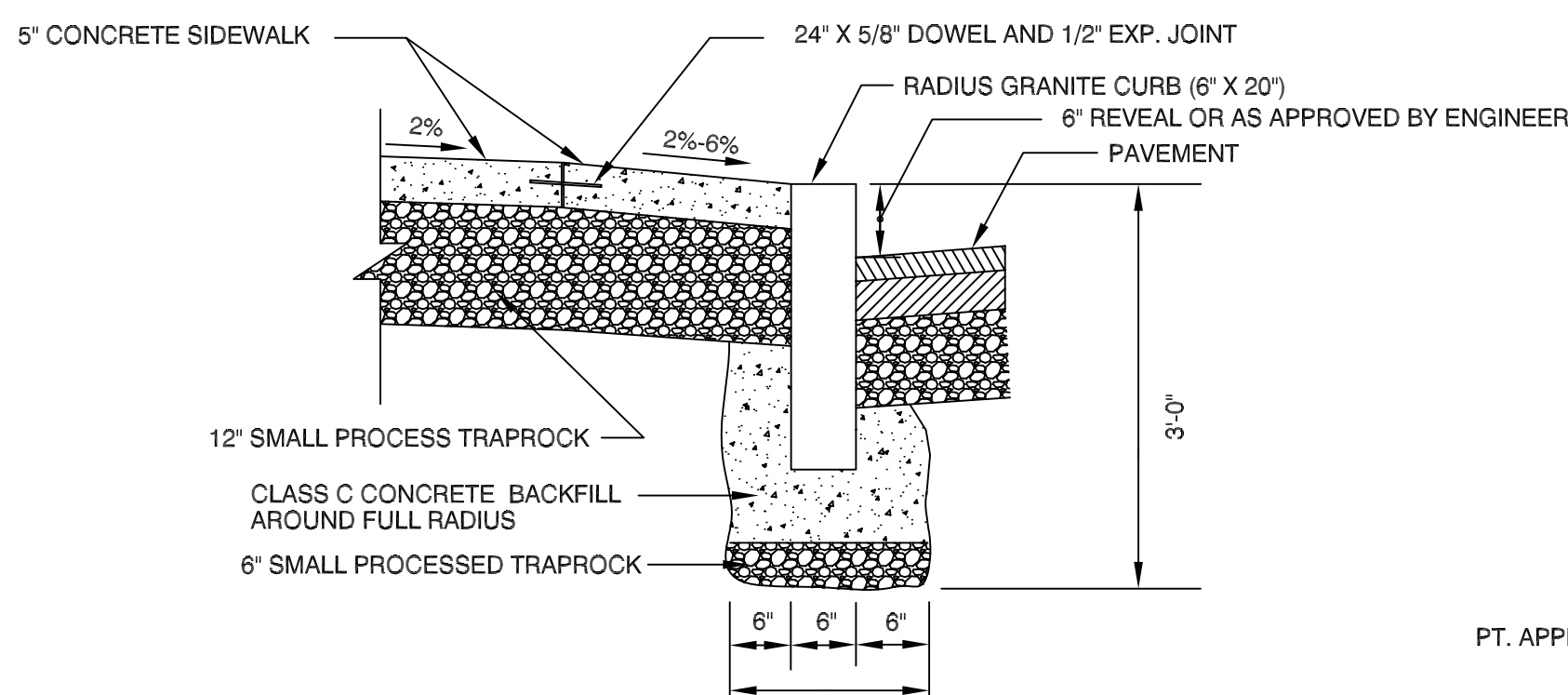


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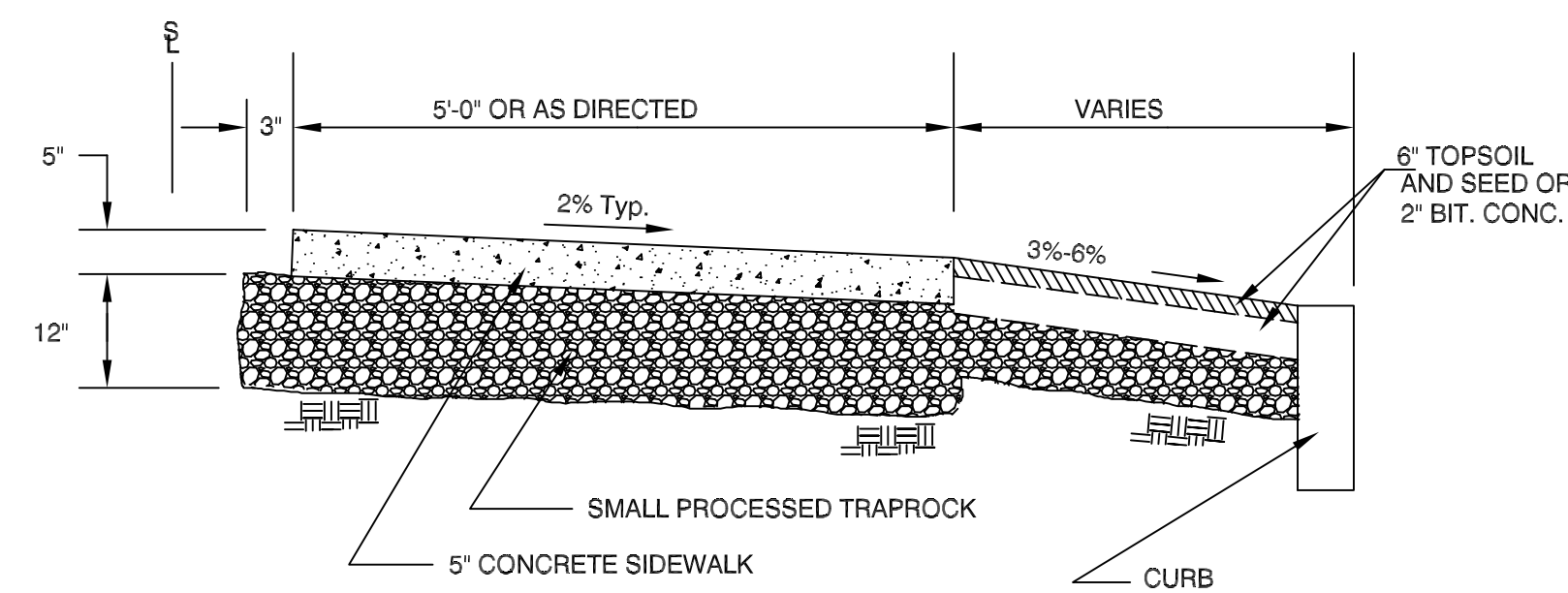
TYPICAL JOINT DETAIL FOR STRAIGHT GRANITE CURB



STRAIGHT GRANITE CURB SECTION

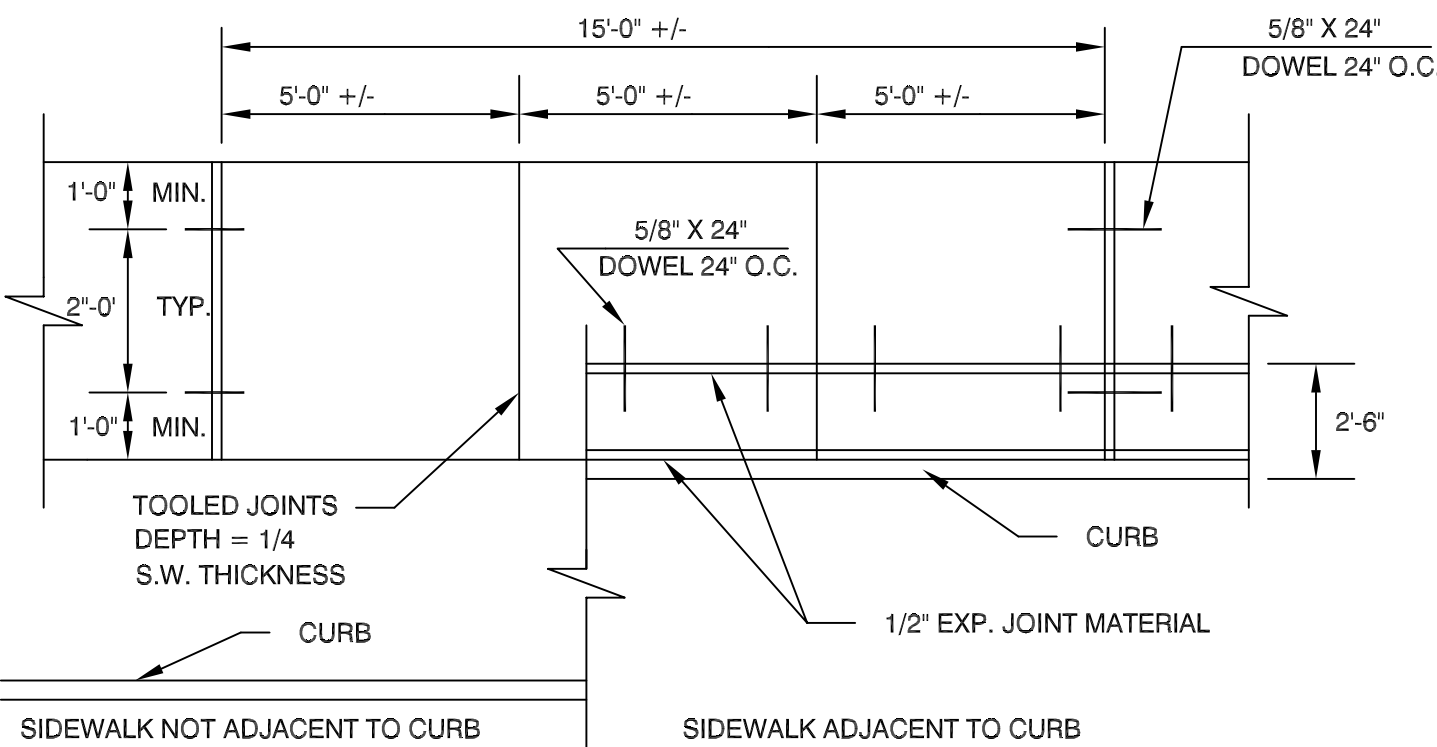


RADIUS GRANITE CURB SECTION



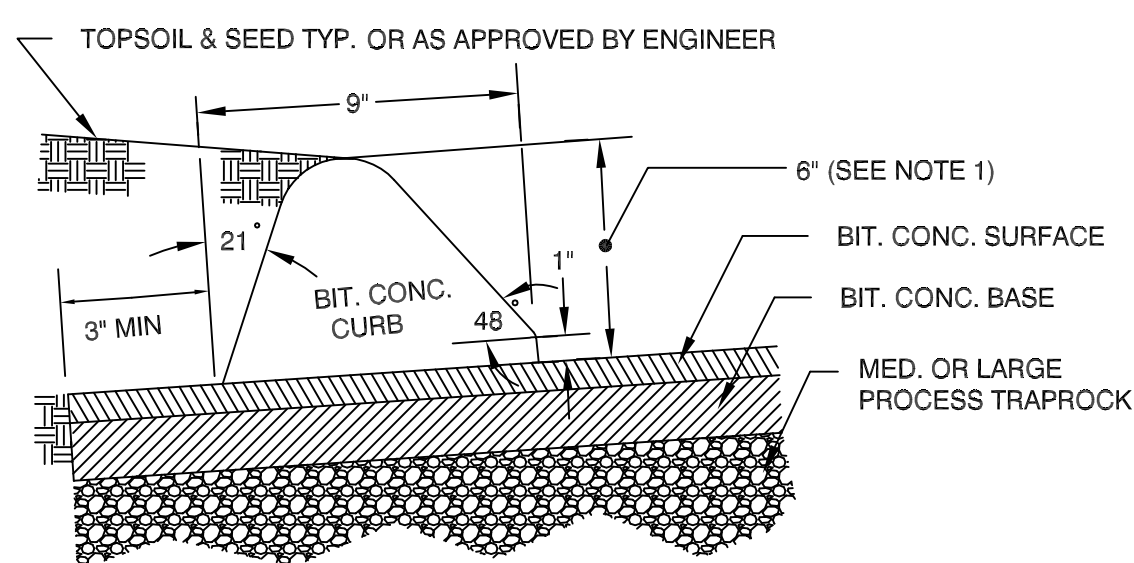
SECTION

5' CONCRETE SIDEWALK



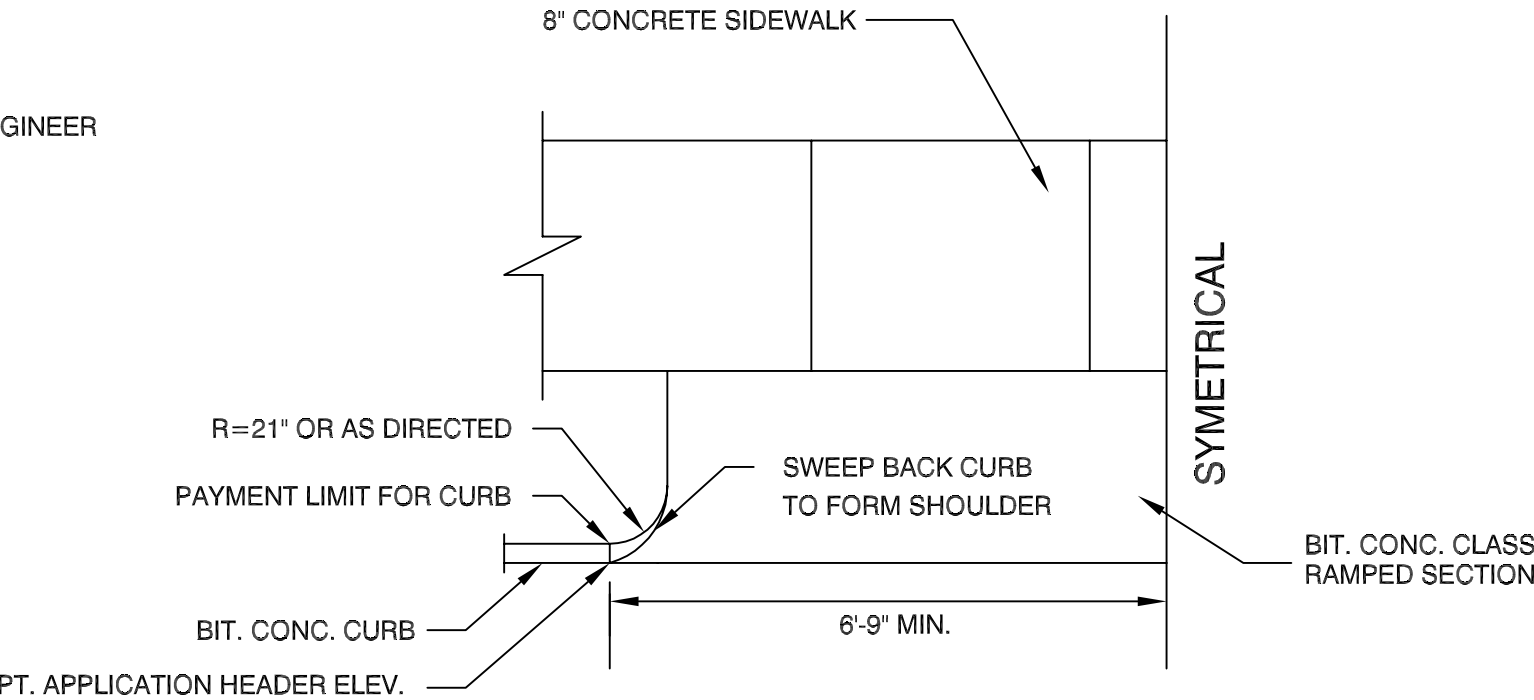
PLAN

5' CONCRETE SIDEWALK

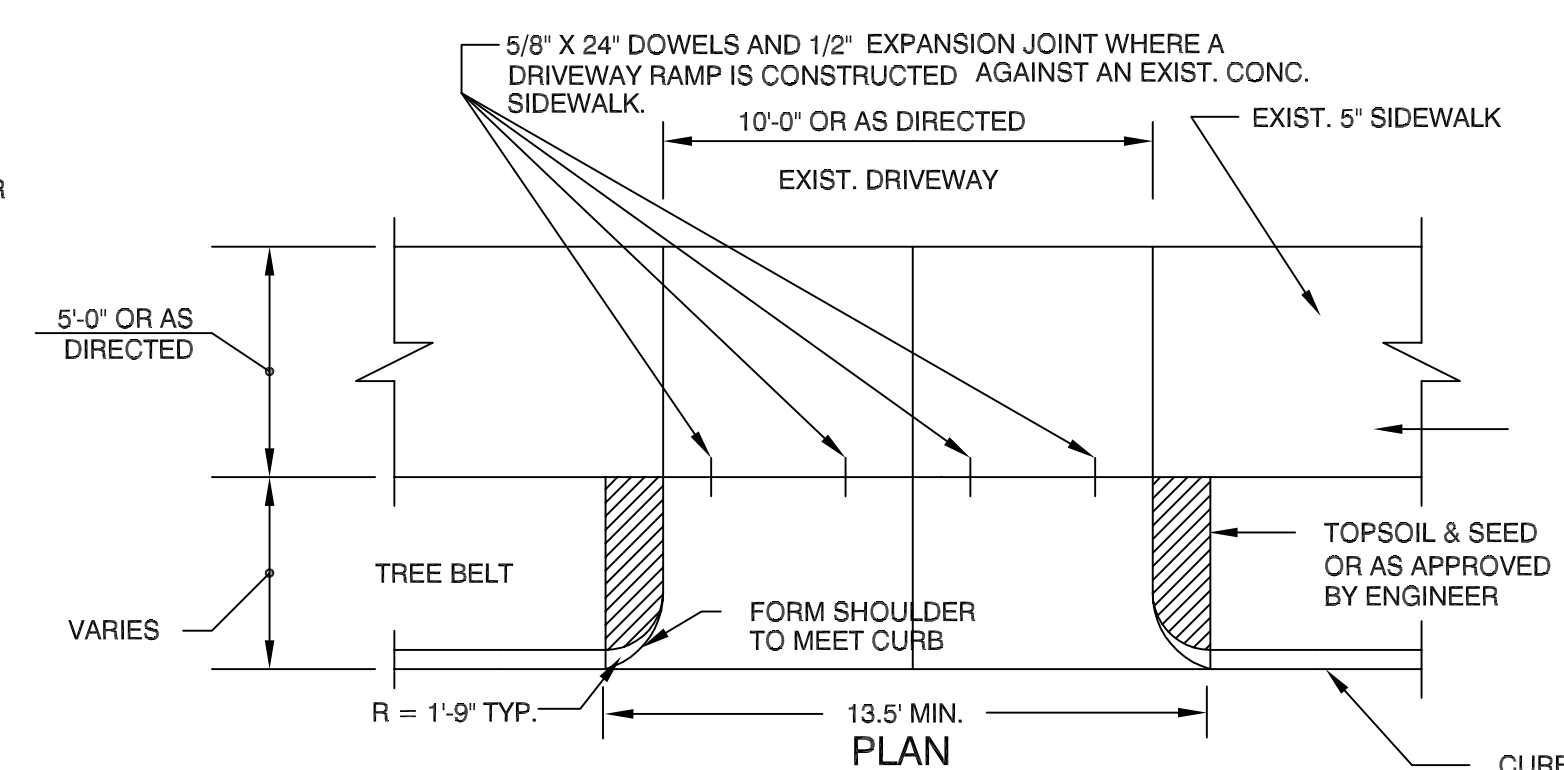


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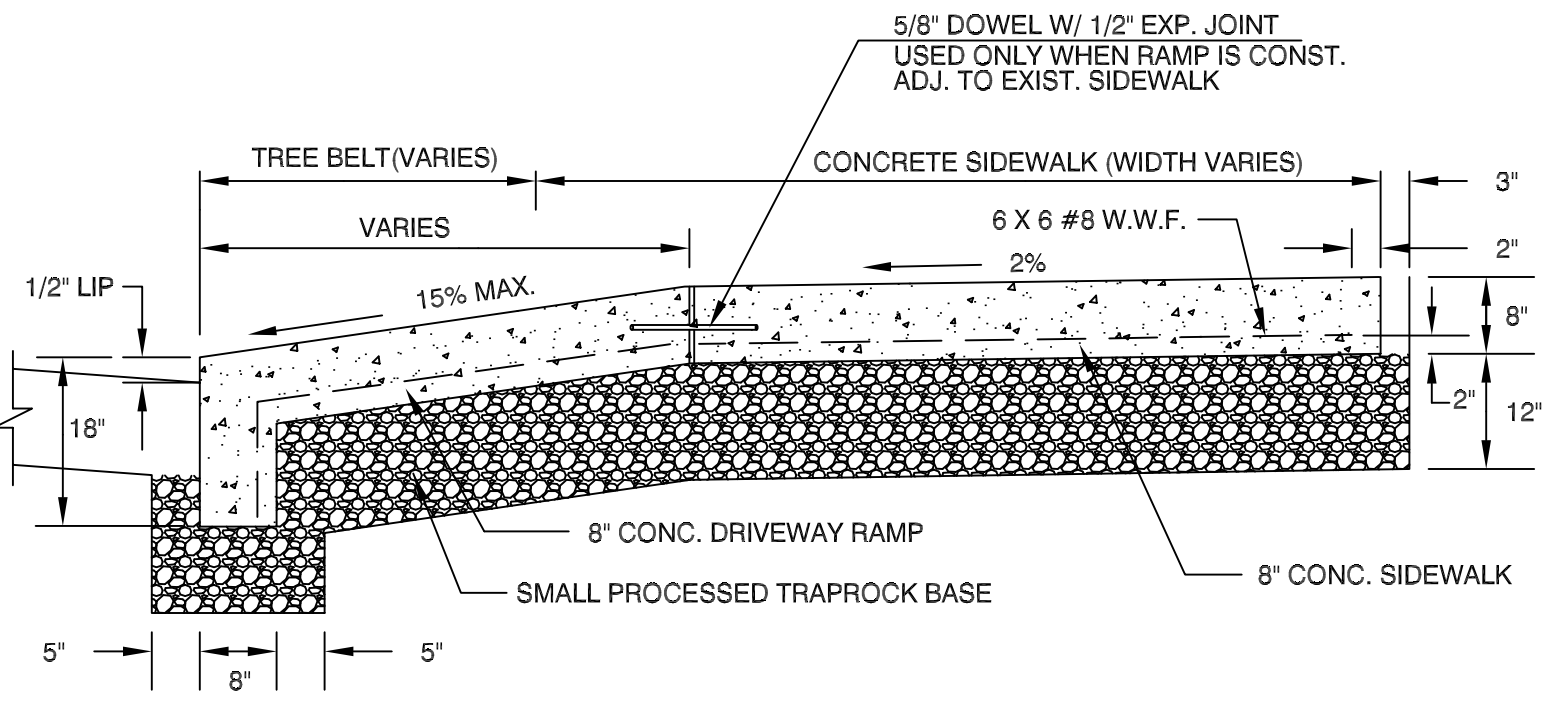
BITUMINOUS CONCRETE LIP CURB



BITUMINOUS DRIVEWAY RAMP (HALF PLAN)

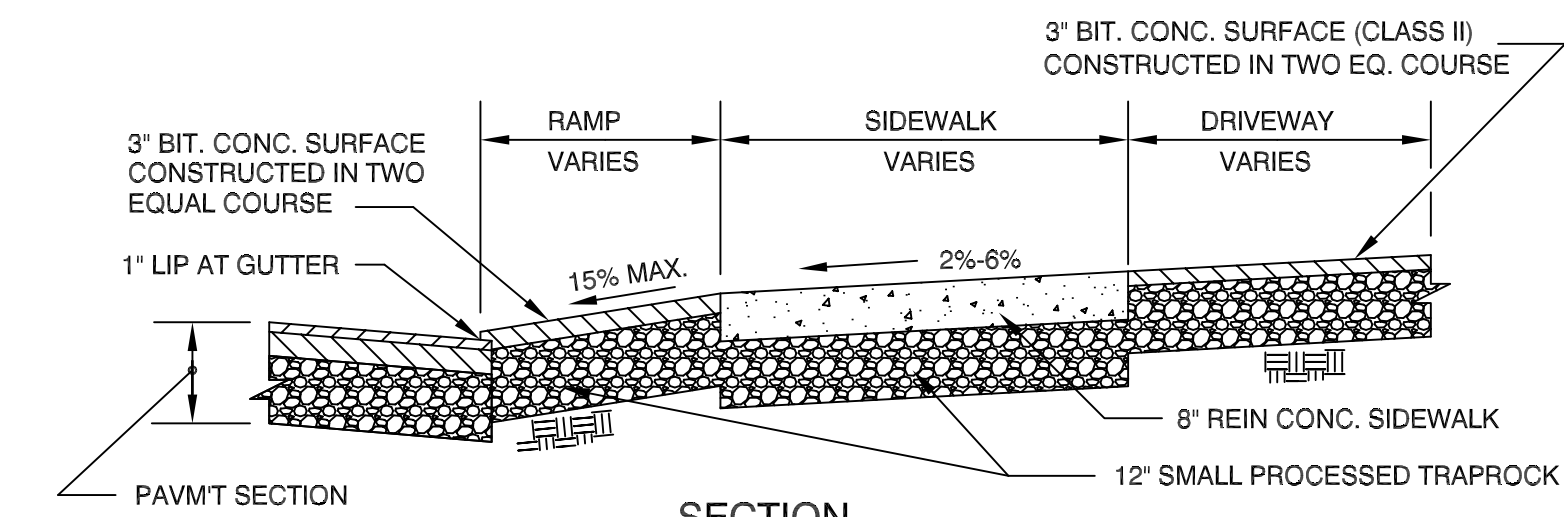


8' REINFORCED CONCRETE DRIVEWAY



SECTION

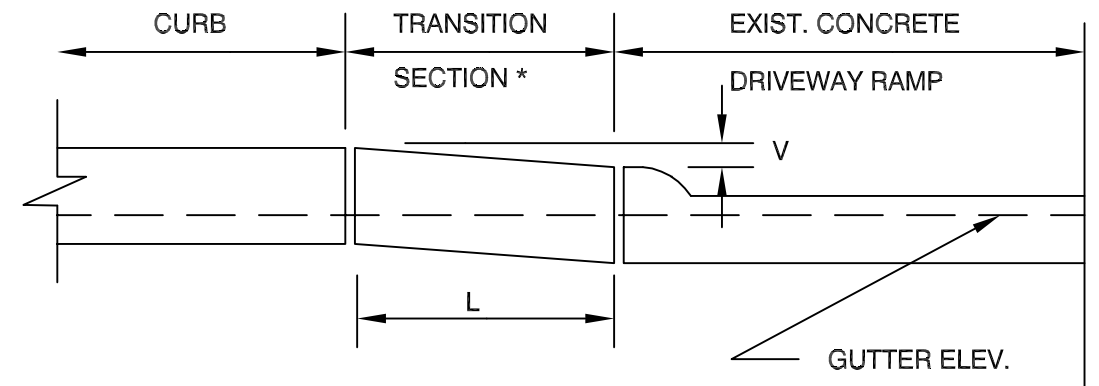
8' REINFORCED CONCRETE DRIVEWAY



SECTION

NOTE:
BITUMINOUS CONCRETE LIP CURBING AND BITUMINOUS CONCRETE
INSTALLED AS PART OF THE DRIVEWAY BEYOND THE PAYMENT
LIMIT SHALL BE INCLUDED IN THE COST FOR 'BITUMINOUS
CONCRETE DRIVEWAY'.



BITUMINOUS RAMP AND DRIVEWAY



NOTE: * FOR GRANITE CURB SET THE
LAST SECTION TO MATCH EXIST.
DRIVE SHOULDER ELEV. MIN. CLOSURE
SECTION TO BE 4'. FOR BIT. CONC.
DEPRESS CURB TO MEET EXIST DRIVE
SHOULDER MIN. SECTION TO BE 10'.
SEE TRANSITION TABLE.

TRANSITION TABLE		
VERTICAL (V)	CURB	LENGTH (L)
1"		4'-0" MIN.
2"		5'-0" MIN.
3"		6'-0" MIN.

CURBING TRANSITION AT EXISTING DRIVEWAY RAMP

Revisions	By	Date	Notice Manual revisions to this drawing are prohibited. The use of this drawing by any corporation, or by any person, for any reason, without written authorized consent of The City of Hartford is prohibited.	Sign-Offs	By	Date			City of Hartford, Connecticut Department of Public Works				Sheet No.
				Drawn					Standard Roadway and Street Details Curbing Sidewalk and Driveways				File Name
				Checked									SR-1.DWG
				Recommended			Standard Drawing No. SR-1	Job No.	Date	January 2005			
				Approved									
				Recorded									



R1 - SERIES										R2 - SERIES										R3 - SERIES										R4 - SERIES										R5 - SERIES										R6 - SERIES																																																																																																																																																																																																																																																																																																																																																																																																																																								
<div>R1-1</div> <div>✱</div> <div></div> <div>BACKGROUND - RED LEGEND - SILVER</div> <table><tr><th>AREA SQ. FT.</th><th>SIZE (INCHES)</th><th>CONN. D.D.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>3.31</td><td>24</td><td>31-0536</td><td>1</td><td>.080</td></tr><tr><td>5.19</td><td>30</td><td>31-0552</td><td>1</td><td>.080</td></tr><tr><td>13.3</td><td>48</td><td>31-0557</td><td>2</td><td>.100</td></tr></table>										AREA SQ. FT.	SIZE (INCHES)	CONN. D.D.T. #	POSTS	ALUM. THK.	3.31	24	31-0536	1	.080	5.19	30	31-0552	1	.080	13.3	48	31-0557	2	.100	<div>R2-1</div> <div></div> <div>SPEED LIMIT 00</div> <table><tr><th>AREA SQ. FT.</th><th>SIZE (INCHES)</th><th>CONN. D.D.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>5.00</td><td>24X30</td><td>31-5505</td><td>1</td><td>.080</td></tr><tr><td>12.0</td><td>36X48</td><td>31-5506</td><td>2</td><td>.100</td></tr><tr><td>20.0</td><td>48X60</td><td>31-5507</td><td>2</td><td>.100</td></tr></table> <div>R2-4a</div> <div></div> <div>SPEED LIMIT 00 MINIMUM 00</div> <table><tr><th>AREA SQ. FT.</th><th>SIZE (INCHES)</th><th>CONN. D.D.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>3.9</td><td>36</td><td>31-0523</td><td>1</td><td>.080</td></tr><tr><td>10.83</td><td>60</td><td>31-0528</td><td>2</td><td>.125</td></tr></table>										AREA SQ. FT.	SIZE (INCHES)	CONN. D.D.T. #	POSTS	ALUM. THK.	5.00	24X30	31-5505	1	.080	12.0	36X48	31-5506	2	.100	20.0	48X60	31-5507	2	.100	AREA SQ. FT.	SIZE (INCHES)	CONN. D.D.T. #	POSTS	ALUM. THK.	3.9	36	31-0523	1	.080	10.83	60	31-0528	2	.125	<div>R3-1</div> <div></div> <div>BACKGROUND - SILVER LEGEND - BLACK CIRCLE & DIAGONAL - RED</div> <div>31-1604 OVERHEAD MTD.</div> <table><tr><th>AREA SQ. FT.</th><th>SIZE (INCHES)</th><th>CONN. D.D.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>4.00</td><td>24X24</td><td>31-1604</td><td></td><td>.080</td></tr><tr><td>6.25</td><td>30X30</td><td>31-1617</td><td>1</td><td>.080</td></tr><tr><td>5.00</td><td>30X24</td><td>31-1618</td><td></td><td></td></tr><tr><td>9.00</td><td>36X36</td><td>31-1627</td><td>2</td><td>.080</td></tr><tr><td>7.50</td><td>36X30</td><td>31-1628</td><td></td><td></td></tr></table> <div>R3-2</div> <div></div> <div>BACKGROUND - SILVER LEGEND - BLACK CIRCLE & DIAGONAL - RED</div> <div>31-1603 OVERHEAD MTD.</div> <table><tr><th>AREA SQ. FT.</th><th>SIZE (INCHES)</th><th>CONN. D.D.T. #</th><th>POSTS</th><th>ALUM. 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THK.</th></tr><tr><td>7.50</td><td>30X36</td><td>31-0183L</td><td>1</td><td>.080</td></tr><tr><td>7.50</td><td>30X36</td><td>31-0184R</td><td>1</td><td>.080</td></tr><tr><td>6.25</td><td>30</td><td>31-0262L</td><td>1</td><td>.080</td></tr><tr><td>6.25</td><td>30</td><td>31-0261R</td><td>1</td><td>.080</td></tr><tr><td>4.00</td><td>24X24</td><td>31-0138R</td><td>1</td><td>.080</td></tr></table> <div>R3-6</div> <div>OVERHEAD MOUNTED</div> <table><tr><th>AREA SQ. FT.</th><th>SIZE (INCHES)</th><th>CONN. D.D.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>7.50</td><td>30X36</td><td>31-0157L</td><td>1</td><td>.080</td></tr><tr><td>7.50</td><td>30X36</td><td>31-0158R</td><td>1</td><td>.080</td></tr><tr><td>5.00</td><td>32X24</td><td>31-0290</td><td>1</td><td>.080</td></tr><tr><td>7.50</td><td>36X30</td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>										AREA SQ. FT.	SIZE (INCHES)	CONN. D.D.T. #	POSTS	ALUM. THK.	7.50	30X36	31-0183L	1	.080	7.50	30X36	31-0184R	1	.080	6.25	30	31-0262L	1	.080	6.25	30	31-0261R	1	.080	4.00	24X24	31-0138R	1	.080	AREA SQ. FT.	SIZE (INCHES)	CONN. D.D.T. #	POSTS	ALUM. THK.	7.50	30X36	31-0157L	1	.080	7.50	30X36	31-0158R	1	.080	5.00	32X24	31-0290	1	.080	7.50	36X30																			<div>R3-8</div> <table><tr><th>AREA SQ. FT.</th><th>SIZE (INCHES)</th><th>CONN. D.D.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>31-0222</td><td></td><td></td><td></td><td></td></tr><tr><td>31-0223</td><td></td><td></td><td></td><td></td></tr><tr><td>31-0370</td><td></td><td></td><td></td><td></td></tr><tr><td>31-0371</td><td></td><td></td><td></td><td></td></tr><tr><td>31-0282</td><td></td><td></td><td></td><td></td></tr><tr><td>31-0283</td><td></td><td></td><td></td><td></td></tr><tr><td>31-0307</td><td></td><td></td><td></td><td></td></tr><tr><td>31-0372</td><td></td><td></td><td></td><td></td></tr><tr><td>31-0295</td><td></td><td></td><td></td><td></td></tr><tr><td>31-0219</td><td></td><td></td><td></td><td></td></tr><tr><td>31-0334</td><td></td><td></td><td></td><td></td></tr><tr><td>31-0279</td><td></td><td></td><td></td><td></td></tr><tr><td>31-0124</td><td></td><td></td><td></td><td></td></tr><tr><td>31-1546</td><td></td><td></td><td></td><td></td></tr></table>										AREA SQ. FT.	SIZE (INCHES)	CONN. D.D.T. #	POSTS	ALUM. THK.	31-0222					31-0223					31-0370					31-0371					31-0282					31-0283					31-0307					31-0372					31-0295					31-0219					31-0334					31-0279					31-0124					31-1546					<div>R4-1</div> <div></div> <div>DO NOT PASS</div> <table><tr><th>AREA SQ. FT.</th><th>SIZE (INCHES)</th><th>CONN. D.D.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>5.00</td><td>24X30</td><td>31-1502</td><td>1</td><td>.080</td></tr><tr><td>10.0</td><td>48X30</td><td>31-0302</td><td>2</td><td>1.00</td></tr></table> <div>R4-3</div> <div></div> <div>SLOWER TRAFFIC KEEP RIGHT</div> <table><tr><th>AREA SQ. FT.</th><th>SIZE (INCHES)</th><th>CONN. D.D.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>5.00</td><td>24X30</td><td>31-1562</td><td>1</td><td>.080</td></tr><tr><td>20.0</td><td>48X60</td><td>31-1564</td><td>2</td><td>1.00</td></tr></table> <div>R4-7</div> <div></div> <div>LEFT LANE MUST TURN LEFT AHEAD</div> <table><tr><th>AREA SQ. FT.</th><th>SIZE (INCHES)</th><th>CONN. D.D.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>5.00</td><td>24X30</td><td>31-1526</td><td>1</td><td>.080</td></tr><tr><td>12.0</td><td>36X48</td><td>31-1536</td><td>2</td><td>1.00</td></tr><tr><td>20.0</td><td>48X60</td><td>31-1546</td><td>2</td><td>1.00</td></tr></table>										AREA SQ. FT.	SIZE (INCHES)	CONN. D.D.T. #	POSTS	ALUM. THK.	5.00	24X30	31-1502	1	.080	10.0	48X30	31-0302	2	1.00	AREA SQ. FT.	SIZE (INCHES)	CONN. D.D.T. #	POSTS	ALUM. THK.	5.00	24X30	31-1562	1	.080	20.0	48X60	31-1564	2	1.00	AREA SQ. FT.	SIZE (INCHES)	CONN. D.D.T. #	POSTS	ALUM. THK.	5.00	24X30	31-1526	1	.080	12.0	36X48	31-1536	2	1.00	20.0	48X60	31-1546	2	1.00	<div>R5-1</div> <div></div> <div>BACKGROUND - SILVER LEGEND - SILVER SIGN FACE - RED</div> <div>31-1109</div> <div>31-1111</div> <div>31-1119</div> <div>31-1121</div> <table><tr><th>AREA SQ. FT.</th><th>SIZE (INCHES)</th><th>CONN. D.D.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>6.25</td><td>30</td><td>31-1109</td><td>1</td><td>.080</td></tr><tr><td>16.0</td><td>48</td><td>31-1111</td><td>2</td><td>1.00</td></tr><tr><td>6.25</td><td>30</td><td>31-1119<td>1</td><td>.080</td></td></tr><tr><td>16.0</td><td>48</td><td>31-1121<td>2</td><td>1.00</td></td></tr></table> <div>R5-1a</div> <div></div> <div>BACKGROUND - RED LEGEND - SILVER</div> <div>31-1112</div> <div>31-1113</div> <div>31-1122</div> <div>31-1123</div> <table><tr><th>AREA SQ. FT.</th><th>SIZE (INCHES)</th><th>CONN. D.D.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>6.00</td><td>36X24</td><td>31-1112</td><td>2</td><td>.080</td></tr><tr><td>8.75</td><td>42X30</td><td>31-1113</td><td>2</td><td>1.00</td></tr><tr><td>6.00</td><td>36X24</td><td>31-1122<td>2</td><td>.080</td></td></tr><tr><td>8.75</td><td>42X30</td><td>31-1123<td>2</td><td>1.00</td></td></tr></table> <div>R5-10c</div> <div></div> <div>PEDESTRIANS PROHIBITED</div> <table><tr><th>AREA SQ. FT.</th><th>SIZE (INCHES)</th><th>CONN. D.D.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>2.00</td><td>24X12</td><td>31-1776</td><td>1</td><td>.080</td></tr></table>										AREA SQ. FT.	SIZE (INCHES)	CONN. D.D.T. #	POSTS	ALUM. THK.	6.25	30	31-1109	1	.080	16.0	48	31-1111	2	1.00	6.25	30	31-1119 <td>1</td> <td>.080</td>	1	.080	16.0	48	31-1121 <td>2</td> <td>1.00</td>	2	1.00	AREA SQ. FT.	SIZE (INCHES)	CONN. D.D.T. #	POSTS	ALUM. THK.	6.00	36X24	31-1112	2	.080	8.75	42X30	31-1113	2	1.00	6.00	36X24	31-1122 <td>2</td> <td>.080</td>	2	.080	8.75	42X30	31-1123 <td>2</td> <td>1.00</td>	2	1.00	AREA SQ. FT.	SIZE (INCHES)	CONN. D.D.T. #	POSTS	ALUM. THK.	2.00	24X12	31-1776	1	.080	<div>R6-1</div> <div></div> <div>(L) ONE WAY</div> <div>(R) ONE WAY</div> <table><tr><th>AREA SQ. FT.</th><th>SIZE (INCHES)</th><th>CONN. D.D.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>3.00</td><td>36X12</td><td>31-1188<td>1</td><td>.080</td></td></tr><tr><td>3.00</td><td>36X12</td><td>31-1177<td>1</td><td>.080</td></td></tr><tr><td>6.75</td><td>54X18</td><td>31-1189<td>1</td><td>1.00</td></td></tr><tr><td>6.75</td><td>54X18</td><td>31-1178<td>1</td><td>1.00</td></td></tr></table>										AREA SQ. FT.	SIZE (INCHES)	CONN. D.D.T. #	POSTS	ALUM. THK.	3.00	36X12	31-1188 <td>1</td> <td>.080</td>	1	.080	3.00	36X12	31-1177 <td>1</td> <td>.080</td>	1	.080	6.75	54X18	31-1189 <td>1</td> <td>1.00</td>	1	1.00	6.75	54X18	31-1178 <td>1</td> <td>1.00</td>	1	1.00
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1. SQUARE TUBULAR SIGN POSTS SHALL BE FORMED OF 10 GAUGE (.135 USS GAUGE) OR 12 GAUGE (.105 USS GAUGE) HOT ROLLED CARBON STEEL, STRUCTURAL QUALITY, ASTM DESIGNATION A570, GRADE 50. AVERAGE MINIMUM YIELD STRENGTH AFTER COLD FORMING IS 60,000 PSI.
2. SQUARE TUBULAR SIGN POSTS SHALL BE ROLLED TO SIZE & CORNER WELDED BY HIGH FREQUENCY RESISTANCE WELDING AND EXTERNALLY SCARFED TO AGREE WITH CORNER RADIUS.
3. SQUARE TUBULAR SIGN POSTS SHALL BE HOT DIPPED GALVANIZED CONFORMING TO ASTM A 653, G90, STRUCTURAL QUALITY, GRADE 50, CLASS 1. THE CORNER WELD IS ZINC COATED AFTER SCARFING OPERATION. THE STEEL IS ALSO COATED WITH A CHROMATE CONVERSION COATING AND A CLEAR ORGANIC POLYMER TOPCOAT, BOTH THE INTERIOR AND THE EXTERIOR OF THE SIGN POST SHALL BE GALVANIZED.
4. FINISHED SQUARE TUBULAR SIGN POSTS SHALL BE SMOOTH AND STRAIGHT TO PROVIDE THE TELESCOPE OF CONSECUTIVE SIZES OF SQUARE POST FREELY AND FOR NOT LESS 10 FEET OF THEIR LENGTH.
5. HOLES SHALL BE 7/16" DIA. ON 1" CENTERS ON ALL SIDES FOR ENTIRE LENGTH OF THE POST.
6. "TYPE C" SIGN POSTS FORMED OF 2 3/16" SQUARE TUBULAR SIGN POSTS TELESKOPED INSIDE 2 1/2" SQUARE TUBULAR SIGN POSTS. 2 3/16" SQUARE TUBULAR SIGN POSTS TO BE TELESKOPED AT LEAST ONE HALF THE LENGTH OF THE SIGN POST ASSEMBLY.

1. STEEL FOR POSTS SHALL CONFORM TO THE MECHANICAL REQUIREMENTS OF ASTM A499-81 GRADE 60 AND TO THE CHEMICAL REQUIREMENTS OF ASTM A1-76 CARBON STEEL. THE RAIL HAVING NOMINAL WEIGHT OF 91 LBS. OR GREATER PER LINEAR YARD. STEEL FOR DELINEATOR POSTS SHALL BE ASTM A36 STEEL.
2. AFTER FABRICATION, ALL STEEL POSTS SHALL BE GALVANIZED TO MEET THE REQUIREMENTS OF ASTM A123.
3. ALL SIGN POSTS SHALL HAVE "BREAKAWAY" FEATURES THAT MEET AASHTO REQUIREMENTS CONTAINED IN "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORT FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNAL S-1985". THE "BREAKAWAY" FEATURES SHALL BE STRUCTURALLY DESIGNED TO CARRY THE SIGNS SHOWN IN THE PLANS AT 60 MPH WIND LOADINGS. INSTALLATIONS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
4. TYPE A POSTS - 3 LB/FT TYPE B POSTS - 4 LB/FT.



Revisions	By	Date	<div>Notice</div> <div>Manual revisions to this drawing are prohibited. The use of this drawing by any corporation, or by any person, for any reason, without written authorized consent of The City of Hartford is prohibited.</div>	Sign-Offs	By	Date	<div></div>	City of Hartford, Connecticut		<div></div>	Sheet No.			
				Drawn				Standard Drawing No. ST-6	Job No.		Date January 2005	Standard Traffic/Equipment Details	Typical Metal Sign-Posts	File Name
				Checked										ST-6.DWG
				Recommended										
				Approved										
				Recorded										

PROJECT DESCRIPTION:

The proposed project extends the length of Naugatuck Street by approximately 580 linear feet and connects to Hampton Street. This includes the construction of the bituminous concrete road; curbing; driveway ramps; sidewalk; storm drainage; sanitary sewer; water; gas; overhead electric, telephone and CATV, utility services; and restoration of disturbed areas with loam & seed.

CONSTRUCTION SEQUENCE:

In general, the overall project will follow the sequence below:

1. Contact "call before you dig" at 1-800-922-4455 at least 48 hours prior to the start of construction to have existing utilities marked.
2. Attend a reconstruction meeting with the City of Hartford staff, including the Wetlands Agent, Director of Public Works and Utility Companies.
3. The contractor shall obtain all necessary permits from City, M.D.C., and custodial utility companies prior to start of construction.
4. Place sediment fence as shown on the plan prior to the start of any excavation.
5. Install and maintain protection of traffic including installation of warning signs, flashers & barricades.
6. Dig test pits and relay the information to the engineer and custodial utility company of any potential conflicts.
7. Sawcut & remove pavement, curb, sidewalk & amenities, within construction area or where shown on the plans.
8. Rough grade road for roadway construction.
9. Install Storm drainage, sanitary sewer and utilities.
10. Install curbing.
11. Prepare subgrade and install roadway gravel subbase and processed aggregate base course.
12. Install driveway aprons.
13. Install pavement binder course and wearing course.
14. Install concrete sidewalks and ramps.
15. Place topsoil, loam and seed.
16. Remove erosion controls after new lawn areas are stabilized.
17. Complete final cleaning of storm sewer system.
18. The approximate date for start of construction is spring 2019. The estimated completion date is fall 2019.

GENERAL NOTES:

1. Elevations depicted hereon (if any) refer to Hartford MDC Station #HH-115 Elevation = 79.46 purported to refer to 1929 National Geodetic Vertical Datum (NGVD 29).
2. Bearings and coordinates depicted hereon refer to the 1927 North American Datum (NAD 27). MDC Mon #77184 N = 346,434.23 and E = 621,305.12 & MDC Mon # 77185 N = 347,910.62 and E = 620,917.27 were used for reference.
3. All work and materials to conform to City of Hartford Standard Specifications, D.O.T. Form 817, or the details shown on these plans as applicable.
4. All work on this project shall be completed in conformance with the requirements of the various Federal, State, and local permits issued for this project.
5. All work on this project shall be completed in conformance with the requirements of the various zoning and inland wetland permits issued for this project.
6. A pre-construction meeting and authorization to proceed will be required prior to start of any construction, including removal of trees or stripping of land. Procedures for such pre-construction meeting and authorization to proceed shall be in accordance with City and State requirements. The contractor is responsible for arranging this meeting with City and State officials and the City Director of Public Works, as applicable.
7. Prior to any excavation the contractor shall verify all underground utilities by calling 1-800-922-4455 at least 48 hours in advance.
8. The location of all utilities shown is approximate and are based on available as-built information from utility company records, the property owner, and limited survey data. All existing utilities may not be shown. The contractor is responsible for determining the exact location of all utilities on the site prior to the start of any construction activity and notifying the design site engineer of any adjustments to the plans which are necessary. Test pits will be required at all proposed utility crossings in order to determine underground utility locations and to identify potential conflicts with vertical and horizontal alignments shown on the plans. Test pits shall be completed by the contractor at his expense.
9. All utilities to be installed in accordance with utility company applicable requirements. Final location of utility connections is subject to revision by individual utility companies prior to the installation. The contractor is responsible for coordinating the work with the applicable utility companies.
10. Erosion and sedimentation control measures shall be installed and maintained in accordance with the plan, specifications, and the erosion and sedimentation control notes.
11. Trees shall be flagged and approved, prior to removal.
12. No stumps are to be buried on site.
13. All debris shall be removed from the site by the contractor.
14. Utility service shall be maintained at all times.
15. Drainage shall be maintained throughout the project so as not to cause flooding of roadways or damage to private property.
16. Water service installation is to be coordinated with The Metropolitan District staff prior to the start of work by the contractor.
17. All new site utilities are to be installed underground.
18. Trees and vegetation identified to be saved shall be protected from construction equipment by suitable means approved by City staff.
19. Removal of trees or other vegetation, or re-grading substantially different from that shown on the approved site plan, will not be permitted without prior authorization by the City or State, as applicable.
20. All work and materials for water main and service shall conform to The Metropolitan District.
21. All water main and service piping shall be ANSI/AWWA C151, Class 54, Tyton/MJ D.I.P. unless otherwise specified. All water service shall have a minimum cover of 4 1/2 feet.

EROSION CONTROL DEVICES:

Refer to the "Connecticut Guidelines For Soil Erosion And Sediment Control – 2002" (see Erosion and Sediment Control Note 3) when constructing erosion control devices shown on this plan.

HBEC – HAYBALE EROSION CHECKS shall be staked a minimum of five (5) feet from the base of disturbed slopes exceeding eight (8) feet in height, or at locations shown on the plans. Place haybales before starting a fill slope and after digging a cut slope. Heel haybales 4' into the soil. Stake haybales around the perimeter of all catch basins. Remove all sediment when deposits reach 1/2 bale height. Haybales must be replaced periodically.

SPEC – SEDIMENT FENCE EROSION CHECK: a synthetic textile barrier designed to filter sediment from surface water runoff. Placement shall be similar to HBEC and installation requires anchoring the fence bottom to prevent bypass. All sediment shall be removed if deposits reach one (1) foot in depth. Additional support (such as snow fence or wire fence) on the downhill face may be required to strengthen sediment fence in high flow locations.

CE – CONSTRUCTION EXIT: a broken stone pad providing a hard surface points where vehicles will leave the site. The construction exits reduce tracking of sediment into adjacent pavement. Excess sediment should be periodically removed from the stone surface.

EROSION AND SEDIMENT CONTROL NOTES

1. Disturbance of soil surfaces is regulated by State Law. All work shall comply with an approved "Erosion and Sediment Control Plan" to prevent or minimize soil erosion.
2. The installation and maintenance of erosion control devices is the responsibility of the land owner, developer, and the excavation contractor. Town officials shall be notified in writing of the name, address and telephone number of the individual responsible for this work (including any changes) at the required pre-construction conference.
3. The contractor shall use the "Connecticut Guidelines for Soil Erosion and Sediment Control" (2002), as amended as a guide in constructing the erosion and sediment controls indicated on these plans. The guidelines may be obtained from the Connecticut Department of Environmental Protection store, 79 Elm Street, Hartford, CT 06106-5127.
4. The contractor shall schedule operations to limit disturbance to the smallest practical area for the shortest possible time. Overall site disturbance shall be confined to those limits delineated on the plans.
5. The contractor is responsible for the timely installation, inspection, repair or replacement of erosion control devices to insure proper operation.
6. The contractor shall notify the design engineer of unsatisfactory erosion conditions not controlled by the erosion and sediment control plan and shall install additional measures as required.
7. All disturbed areas not covered by buildings, pavement, mulch or ground cover plantings shall be planted with grass.
8. Accumulated sediment removed from erosion control devices is to be spread and stabilized in level, erosion resistant locations as general fill.
9. Special attention shall be given to the construction sequence outlined on the erosion and sediment control plan.
10. The developer shall be responsible for cleaning any construction debris or sediment from existing roads as ordered by the Town and/or State, if any debris or sediment from construction activities enter onto these roadways.
11. Limit work within wetland areas to the least disturbance necessary for construction. Restore disturbed areas as closely as possible to their original natural state.
12. Additional dust control measures as specified in D.O.T. 816 Section 9.39, Section 9.42 and Section 9.43 shall be furnished by the contractor as site conditions warrant or as directed by Town or State officials.
13. The contractor is responsible for cleaning and removal of sediment and/or debris from the storm drainage system throughout the duration of the project (i.e. sumps, plunge pools, etc.)

STANDARD SANITARY SEWER NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH METROPOLITAN DISTRICT STANDARDS AND SPECIFICATIONS.
2. THE SANITARY SEWER SHALL BE CONSTRUCTED UNDER A DEVELOPER'S PERMIT AGREEMENT BETWEEN (NAME AS APPEARS ON CERTIFICATE OF TITLE) AND THE METROPOLITAN DISTRICT, AND SHALL BE BUILT BY A LICENSED DRAIN LAYER UNDER PERMIT BY AND UNDER THE SUPERVISION OF THE DIRECTOR OF ENGINEERING AND PLANNING.
3. SANITARY SEWERS ARE FOR SANITARY SEWAGE ONLY. ALL STORM WATER, COOLING WATER, SUBSOIL DRAINAGE AND OBJECTIONABLE INDUSTRIAL WASTES ARE EXCLUDED FROM SANITARY SEWERS BY DISTRICT ORDINANCES.
4. SUBSOIL AND SURFACE DRAINAGE SHALL BE CONNECTED TO THE NEAREST STORM DRAIN OR WATERCOURSE, AS APPROVED BY THE APPROPRIATE AUTHORITY.
5. ROADS SHALL BE FILLED TO AT LEAST THREE FEET ABOVE THE TOP OF THE PIPE OR TO ESTABLISHED GRADE BEFORE INSTALLATION OF THE SANITARY SEWER.
6. ANY PROPOSED WATER MAINS SHALL BE INSTALLED AFTER THE SANITARY SEWER.
7. ANY CONFLICT BETWEEN THE PROPOSED SANITARY SEWER, EXISTING UTILITIES AND DRAINS WILL BE RESOLVED AT THE EXPENSE OF THE DEVELOPER.
8. "CALL BEFORE YOU DIG" – THE CONTRACTOR IS HEREBY REMINDED THAT TITLE 16, CHAPTER 293, OF THE CONNECTICUT GENERAL STATUTES REQUIRES NOTIFICATION OF THE UTILITY COMPANIES OF PENDING EXCAVATION AT OR NEAR PUBLIC UTILITIES. THE CONTRACTOR SHALL CALL 1-800-922-4455 AT LEAST 48 HOURS PRIOR TO BEGINNING THE EXCAVATION.
9. ALL LATERALS SHALL BE A MINIMUM OF SIX INCHES IN DIAMETER AND SHALL BE INSTALLED AT NOT LESS THAN ONE PERCENT GRADE. LATERALS TO THE EDGE OF R.O.W. LINE SHALL BE BUILT IN CONJUNCTION WITH THE MAIN SEWER CONSTRUCTION. CONNECTIONS FROM THE LATERALS AT EDGE OF R.O.W. TO THE BUILDINGS SHALL BE CONSTRUCTED UNDER INDIVIDUAL HOUSE CONNECTION PERMITS FROM THE METROPOLITAN DISTRICT FOR EACH HOUSE CONNECTION.
10. BACKFILL IN TRENCHES IN TRAVELED WAY, UNDER AREAS TO BE PAVED, OR UNDER WALKS, SHALL BE BANK RUN GRAVEL, SAND, OR ACCEPTABLE NATURAL SOIL, SATISFACTORY TO THE TOWN, CITY AND/OR STATE AUTHORITY HAVING JURISDICTION. PRIOR TO PLACING BACKFILL, THE CRUSHED STONE FOUNDATION AND THE STONE HAUNCHING ALONG THE MAIN SEWER PIPES AND LATERALS SHALL BE WRAPPED IN A DISTRICT APPROVED FILTER FABRIC AND SHALL BE LAPPED CLOSED AT THE TOP A MINIMUM OF ONE FOOT. THE FILTER FABRIC SHALL BE PLACED UNDER THE CRUSHED STONE FOUNDATION FOR MANHOLES AND EXTENDED ABOVE THE PIPE.
11. AFTER PLACING APPROXIMATELY TWO FEET OF BACKFILL OVER ALL UTILITY PIPING, THE CONTRACTOR SHALL PLACE A SIX INCH WIDE STRIP OF DURABLE COLOR CODED (GREEN FOR SANITARY AND STORM SEWER) UNDERGROUND UTILITY LOCATION TAPE IMPRINTED WITH AN APPROPRIATE WARNING INDICATING THE PRESENCE OF THE BURIED UTILITY CONDUIT.
12. WHENEVER POSSIBLE THE SANITARY SEWER SHALL BE LOCATED A MINIMUM OF TEN FEET HORIZONTALLY FROM ANY EXISTING (OR PROPOSED) WATER MAIN. WHEN LOCAL CONDITIONS PREVENT THIS A LESSER DISTANCE IS ALLOWED IF (A) THE WATER MAIN IS IN A SEPARATE TRENCH OR (B) IT IS LOCATED IN THE SAME TRENCH TO ONE SIDE ON A BENCH OF UNDISTURBED EARTH AT LEAST TWELVE INCHES (AND PREFERABLY EIGHTEEN INCHES) FROM THE SIDE OF THE SEWER TRENCH. IN EITHER CASE, THE BOTTOM OF THE WATER MAIN SHALL BE EIGHTEEN INCHES ABOVE THE TOP OF THE SEWER PIPE.
13. TEMPORARY AND PERMANENT PAVING RESTORATION SHALL BE IN ACCORDANCE WITH DISTRICT AND/OR TOWN AND/OR STATE SPECIFICATIONS.
14. THE SEWER LINE SHALL BE TESTED FOR LEAKAGE USING LOW PRESSURE AIR IN ACCORDANCE WITH SPECIFICATIONS FURNISHED BY THE METROPOLITAN DISTRICT. ANY SECTION OF PIPELINE FAILING THE TEST SHALL BE REPAIRED OR REPLACED AND RETESTED BEFORE CONNECTIONS WILL BE PERMITTED.
15. ELEVATIONS ARE BASED ON (MUST BE NGVD 1929 OR NAVD 1988 – NOT MDC) DATUM.
16. THE DEVELOPER IS RESPONSIBLE, AT HIS OWN EXPENSE, FOR VERIFYING FIELD COMPACTION OF BACKFILL UTILIZING AASHTO T180 METHOD D. TEST RESULTS MAY BE REQUIRED BY THE ENGINEER.
17. CCTV INSPECTION TO BE DONE BY CONTRACTOR UPON COMPLETION OF SEWER AND AGAIN AT THE END OF THE ONE YEAR MAINTENANCE PERIOD AT THE DEVELOPERS EXPENSE.
18. PIPE DESIGNATIONS:

D-3034: ASTM D-3034 TYPE PSM POLY VINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, DESIGNATION SDR-35 (6", 8", 10", 12" AND 15")

F-789: ASTM F-789 TYPE PS-46 POLY VINYL CHLORIDE (PVC) PLASTIC GRAVITY FLOW SEWER PIPE AND FITTINGS (6", 8", 10", 12" AND 15")

A-746: DUCTILE IRON GRAVITY FLOW SEWER PIPE, CLASS 52

- ★ POSSIBLE CONNECTION CHARGE OR OTHER MONETARY CHARGE IS DUE IN AN AMOUNT BASED UPON PREVAILING RATES IN EFFECT AT THE TIME OF ISSUANCE OF THE HOUSE CONNECTION PERMIT.
- ★ DEFERRED DEVELOPER'S OUTLET CHARGE IS DUE IN AN AMOUNT BASED UPON PREVAILING RATES IN EFFECT AT THE TIME OF ISSUANCE OF THE HOUSE CONNECTION PERMIT.

STANDARD WATER MAIN NOTES FOR DEVELOPER'S PERMIT-AGREEMENT PROJECTS:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH METROPOLITAN DISTRICT STANDARDS AND SPECIFICATIONS.
2. WATER MAIN TO BE INSTALLED IN ACCORDANCE WITH THE METROPOLITAN DISTRICT'S "DEVELOPERS MANUAL FOR WATER MAIN DESIGN AND INSTALLATION STANDARDS."
3. THE WATER MAIN SHALL BE CONSTRUCTED UNDER A DEVELOPER'S PERMIT AGREEMENT BETWEEN (NAME AS APPEARS ON CERTIFICATE OF TITLE) AND THE METROPOLITAN DISTRICT AND SHALL BE BUILT BY A LICENSED PLUMBER UNDER PERMIT BY AND UNDER THE SUPERVISION OF THE DIRECTOR OF ENGINEERING AND PLANNING OR THEIR DESIGNEE.
4. "CALL BEFORE YOU DIG" – THE CONTRACTOR IS HEREBY REMINDED THAT TITLE 16, CHAPTER 293 OF THE CONNECTICUT GENERAL STATUTES REQUIRES NOTIFICATION OF THE UTILITY COMPANIES OF PENDING EXCAVATION AT OR NEAR PUBLIC UTILITIES. THE CONTRACTOR SHALL CALL 1-800-922-4455 AT LEAST 48 HOURS PRIOR TO BEGINNING THE EXCAVATION.
5. ALL FEDERAL AND STATE OSHA SAFETY STANDARDS MUST BE FOLLOWED DURING WATER MAIN INSTALLATIONS AND TESTING, INCLUDING 29 CFR 1926.650 – 1926.652, THAT ADDRESSES EXCAVATION WORK AND REQUIREMENTS FOR PROTECTIVE SYSTEMS.
6. TEST PITS SHALL BE DUG WELL IN ADVANCE OF THE WATER MAIN INSTALLATION TO DETERMINE POSSIBLE OFFSETS ABOVE OR BELOW OTHER UTILITIES, STRUCTURES OR OBSTACLES.
7. EXTREME CARE MUST BE EXERCISED BY THE CONTRACTOR TO PROTECT EXISTING SANITARY SEWERS, SANITARY SEWER LATERALS, STORM DRAINS AS WELL AS OTHER UTILITIES DURING CONSTRUCTION.
8. THE CONTRACTOR SHALL FURNISH TO THE ENGINEER A MATERIALS LIST, FOR APPROVAL, PRIOR TO THE INSTALLATION OF THE PROPOSED WATER MAIN.
9. ELEVATIONS ARE BASED ON NGVD 1929 DATUM. NAVD 1988 DATUM CAN BE UTILIZED, WITH THE NAVD 1988 DATUM HIGHLIGHTED FOR SURVEY. MDC DATUM IS NOT ALLOWED.
10. ALL WATER MAIN AND APPURTENANCES SHALL BE STAKED (SURVEYED) OUT BY A PROFESSIONAL SURVEYOR LICENSED IN THE STATE OF CONNECTICUT. THE SURVEY SHALL INCLUDE AN OFFSET LINE OR STREET LINE EVERY FIFTY FEET (50'0"), FINAL ROAD OR SURFACE ELEVATION.
11. TEST PRESSURE SHALL BE 150 PSI, OR AS DETERMINED BY THE METROPOLITAN DISTRICT.
12. GATE OPERATIONS FOR THIS PROJECT SHALL BE "OPEN RIGHT".
13. THE WATER MAIN LINE ASSIGNMENT IS GENERALLY TAKEN TO BE FIVE FEET (5'0") OFF THE PROPOSED OR EXISTING CURBLINE (STREET SIDE), UNLESS OTHERWISE NOTED.
14. HYDRANT LOCATIONS ARE SUBJECT TO THE APPROVAL OF THE TOWN FIRE MARSHAL.
15. MINIMUM DEPTH OF COVER OVER PROPOSED WATER MAIN SHALL BE 4.5 FEET AS MEASURED FROM THE UNDERSIDE OF THE PAVEMENT TO THE TOP OF THE PIPE.
16. ALL WATER MAINS SHALL BE CLASS 54 ANSI/AWWA C151/A21.51-81 DUCTILE IRON PIPE CENTRIFUGALLY CAST IN METAL MOLDS OR SAND LINED MOLDS FOR WATER OR OTHER LIQUIDS.
17. WHERE ROCK IS ENCOUNTERED DURING THE INSTALLATION OF THE PROPOSED WATER MAIN, THE PROPOSED MAIN SHALL BE LAID ON A PRE-COMPACTED BED OF APPROVED MATERIAL A MINIMUM SIX INCHES (6") IN DEPTH.
18. ALL FITTINGS, UNLESS OTHERWISE SPECIFIED, SHALL BE MECHANICAL JOINT AND SHALL BE INSTALLED WITH RESTRAINT IN EACH DIRECTION.
19. WHERE RESTRAINT IS INDICATED, APPROVED RETAINER GLANDS OR RODDING MAY BE UTILIZED.
20. WHERE "PULLING" OR DEFLECTING PIPE IS INDICATED, SUCH DEFLECTION SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF "THE DIPRA HANDBOOK." IN NO CASE SHOULD THE DEFLECTION BE GREATER THAN FIVE DEGREES.
21. ALL GATE VALVES, AIR VALVES AND BLOWOFFS SHALL BE INSTALLED COMPLETE WITH DISTRICT APPROVED GATE BOXES AND APPURTENANCES UNLESS OTHERWISE NOTED.
22. GATE NUT EXTENSION STEMS REQUIRED WHERE GATE VALVE NUTS ARE PLACED AT A DEPTH GREATER THAN 4.5 FEET BELOW FINAL GRADE.
23. CONCRETE COLLARS FOR FIRE HYDRANTS SHALL BE INSTALLED PRIOR TO THE METROPOLITAN DISTRICT PLACING THE WATER MAIN INTO SERVICE.
24. MAINTAIN A MINIMUM DISTANCE OF 10 FEET (10'0") HORIZONTAL BETWEEN THE WATER MAIN AND ANY EXISTING OR PROPOSED SANITARY SEWER. WHEN LOCAL CONDITIONS PREVENT THIS A LESSER DISTANCE IS ALLOWED IF (A) THE WATER MAIN IS IN A SEPARATE TRENCH, OR (B) IT IS LOCATED IN THE SAME TRENCH TO ONE SIDE ON A BENCH OF UNDISTURBED EARTH WITH AT LEAST TWELVE INCHES (12"), AND PREFERABLY EIGHTEEN INCHES (18"), HORIZONTAL SEPARATION BETWEEN THE EDGES OF THE SEWER PIPE AND THE WATER MAIN. IN EITHER CASE, THE BOTTOM OF THE WATER MAIN SHALL BE EIGHTEEN INCHES ABOVE THE CROWN OF THE SEWER PIPE.
25. WHERE THE WATER MAIN IS TO BE INSTALLED BELOW DRAIN PIPE, MAINTAIN A MINIMUM OF 18 INCHES BETWEEN THE BOTTOM OF STORM DRAIN AND THE CROWN OF THE WATER MAIN.
26. ANY CONFLICT BETWEEN THE PROPOSED WATER MAIN, EXISTING OR PROPOSED UTILITIES AND/OR STORM DRAINS SHALL BE RESOLVED AT THE EXPENSE OF THE DEVELOPER.
27. AFTER PLACING APPROXIMATELY TWO FEET (2'0") OF BACKFILL MATERIAL OVER THE WATER MAIN, THE CONTRACTOR SHALL PLACE A SIX-INCH WIDE STRIP OF DURABLE, NON-DETECTABLE, COLOR CODED (BLUE FOR WATER) UNDERGROUND UTILITY DETECTION TAPE IMPRINTED WITH THE APPROPRIATE WARNING INDICATING THE PRESENCE OF A BURIED UTILITY CONDUIT.
28. TRENCH BACKFILL UNDER ROADWAYS AND WALKWAYS SHALL BE BANK RUN GRAVEL, SAND, OR ACCEPTABLE NATIVE SOIL SATISFACTORY TO THE TOWN, CITY OR AND/OR STATE AUTHORITY HAVING JURISDICTION.
29. ROADWAYS REQUIRING FILL SHALL HAVE A MINIMUM OF THREE FEET (3'0") OF ACCEPTABLE FILL PLACED ABOVE THE TOP OF THE PROPOSED PIPE ELEVATION OR TO ESTABLISHED GRADE, AND COMPACTED TO 95% DENSITY PRIOR TO INSTALLATION OF THE SANITARY SEWER.
30. TEMPORARY AND PERMANENT PAVING RESTORATION SHALL BE MADE IN ACCORDANCE WITH DISTRICT AND/OR TOWN AND/OR STATE SPECIFICATIONS.
31. CONTRACTOR SHALL ASSIST THE DISTRICT STAFF WITH THE FILLING, FLUSHING AND TESTING OF THE WATER MAIN. THE CONTRACTOR SHALL ABIDE BY THE DISTRICT'S STANDARDS FOR DISINFECTING WATER MAINS, INCLUDING PROPERLY NEUTRALIZING THE CHLORINATED WATER AND DISCHARGING THE WATER ACCORDINGLY.
32. SHOULD THE WATER MAIN FAIL TO PASS THE REQUIRED PHYSICAL, CHEMICAL AND BIOLOGICAL PARAMETERS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INJECTING THE WATER MAIN WITH THE PROPER QUANTITY OF LIQUID HYDROCHLORIDE SOLUTION, AT NO EXPENSE TO THE DISTRICT.
33. APPROVAL FOR THE WATER IS FOR THE MAIN LINE ONLY. INDIVIDUAL PERMITS FOR DOMESTIC AND FIRE SERVICES SHALL BE OBTAINED AT THE UTILITY SERVICES OFFICE, 60 MURPHY ROAD, HARTFORD, CONNECTICUT.

★ POSSIBLE MONETARY CHARGE IS DUE IN AN AMOUNT BASED UPON PREVAILING RATES IN EFFECT AT THE TIME OF ISSUANCE OF THE WATER SERVICE PERMIT.

NT-1

TORAAI DEVELOPMENT LLC
NAUGATUCK STREET EXTENSION
HARTFORD, CONNECTICUT

NOTES

Revisions:	
No.	Description
1	05-31-06 City Comments
2	03-14-08 City Comments
3	10-16-18 Roadway Bid Set
4	03-08-19 Revised Bid Set

Date: 05-19-06 Drawn by: CAD Job no: 04193
Scale: NONE Checked by: DSZ Sheet no: 1 OF 1
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F. A. Hesketh & Associates, Inc.
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COLUMBIA ENVIRONMENTAL DRILLING, INC. 136 Route 66 Columbia, CT 06237 Phone: (860)228-0052 Fax (860)228-8115 Email: ced@cdrill.com				Client: EnviroSeence Project: Westland Street Location: North Hartford, CT Project Number: Inspector: Abdul Naveen		Sheet 1 of 3 Boring Number: GP-1, GP-2, GP-3 CED Draft: Tom Canyar Date Start: 3/21/2006 Date Finish: 3/21/2006		
Core	Depth Range	Blows per 6" on Sampler				Soil Change	Field Classification And Remarks (Color, Grain Size, Moisture, etc.)	
		0-6"	6-12"	12-18"	18-24"			
S-1	0.0-4.0'	From Geoprobe				sand	brown, fine sand, dry	GP-1
S-2	4.0-8.0'	From Geoprobe				gray, fine sand w/ little silt; mottling; 7-8" sil w/ little fine sand, wet		
S-3	8.0-12.0'	From Geoprobe				silt	medium-gray, sil w/ trace fine sand, wet	
							End of exploration 12.0'.	
							Set 1" PVC neutron pizometer at 15.0'.	
							Groundwater at 5.5'.	
								GP-2
S-1	0.0-4.0'	From Geoprobe				fill sand	2.5' fill (brick, sand, little asphalt) 1.5" soil (fine sand; some silt) moist	
S-2	4.0-8.0'	From Geoprobe				silt	gray-brown layers, fine sand & silt, wet	
S-3	8.0-12.0'	From Geoprobe				gray silt & some fine sand, wet		
S-4	12.0-16.0'	From Geoprobe				gray silt & some fine sand, wet		
							End of exploration 16.0'.	
							Groundwater at 5.0'.	
								GP-3
S-1	0.0-4.0'	From Geoprobe				sand	brown, fine sand & silt w. some brick, concrete, & rock;	
S-2	4.0-8.0'	From Geoprobe				very sand	trace med gravel, moist	
S-3	8.0-12.0'	From Geoprobe				silt	gray, fine sand & silt, wet	
S-4	12.0-16.0'	From Geoprobe				gray silt, wet		
							End of exploration 16.0'.	
							Groundwater at 4.0'.	

PENETRATION RESISTANCE 1/4" Spring Loaded UC-20.0.0.0. SAMPLER CUMULATIVE RESISTANCE POINT RESISTANCE POINT CONSISTENCY			
10-15 Very Loose	1-2	Very Soft	1
15-20 Soft	2-3	Soft	2
20-30 Medium Dense	3-4	Medium Dense	3
30-40 Dense	4-5	Dense	4
40-50 Very Dense	5-6	Very Hard	5
	6-10	Hard	6

PROPORTIONS USED	
Time	6 10.0%
Leak	6 10.0%
Seal	20 100.0%
Asst	36 120.0%

Equipment Used: Geoprobe

COLUMBIA ENVIRONMENTAL DRILLING, INC. 134 Route 66 Columbia, CT 06237 Phone (860)228-0952 Fax (860)228-8115 Email: ced@cedllc.com			Client: Envisys/Science Project: Westland Street Location: North Hartford, CT		Sheet 2 of 3 Boring Number: GP-4, GP-5, GP-6 CD Driller: Tom Conner Date Start: 3/21/2006 Date Finish: 3/21/2006	
			Project Number: Inspector: Abdan Nayeem			

Source	Depth Range	Items per 6" or Sampler	Strata	Lithology	Field Classification And Remarks (Color, Grain Size, Moisture, Etc.)	
S-1	0.0-4.0'	From Geoprobe		sand silt	Brown-gray, fine sand & silt, dry.	GP-4
S-2	4.0-8.0'	From Geoprobe		clay	Gray clay with some silt, wet.	
S-3	8.0-12.0'	From Geoprobe		clay	Gray clay, wet.	
S-4	12.0-16.0'	From Geoprobe		clay	Gray clay, wet.	
					End of exploration 16.0'	
					Groundwater at 5.5'	
S-1	0.0-4.0'	From Geoprobe		silt sand	Brown silt & fine sand, moist.	GP-5
S-2	4.0-8.0'	From Geoprobe		clay	Brown-gray silt & some fine sand, wet.	
S-3	8.0-12.0'	From Geoprobe		silt sand	Gray clay with some silt & fine sand, wet.	
S-4	12.0-16.0'	From Geoprobe		clay	No recovery.	
					End of exploration 16.0'	
					Groundwater at 6.0'	
S-1	0.0-4.0'	From Geoprobe		silt sand	1' Silt & sand, 1' Building debris (bricks & concrete).	GP-6
S-2	4.0-8.0'	From Geoprobe		clay	2' Building debris; 2' Brown fine sand, wet at 6.0'.	
S-3	8.0-12.0'	From Geoprobe		clay	2' Brown, fine sand; 2' Brown clay, wet.	
S-4	12.0-16.0'	From Geoprobe		clay	Brown clay, wet.	
					End of exploration 16.0'	
					Groundwater at 6.0'	

PERMEATION RESISTANCE (100% Moisture, 100% Wet or 7.0% Sat. Sample Size) COEFFICIENT OF PERMEABILITY 0-4 Very Low 5-9 Low 10-29 Med-Low 30-99 Med 100-299 High 300-999 Very High	PROPORTIONS (USED) Time 0 To 100% 100% 100% 100% 100% 100% 100% 100%
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Equipment Used Geoprobe	Equipment Used Geoprobe
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COLUMBIA ENVIRONMENTAL DRILLING, INC. 136 Route 66 Columbia, CT 06237 Phone (860)228-0252 Fax (860)228-8115 e-mail: ced@cedrill.com				Client: Enyo/Science Project: Westland Street Location: North Hartford, CT Project Number: Inspector: Nasreen Nayeem		Sheet 3 of 3 Boring Number: GP-7, GP-8, GP-9 CED Driller: Joan Conzot Date Start: 3/21/2009 Date Finish: 3/21/2009	
--	--	--	--	---	--	---	--

Access	Depth Range	Blogs per 6" on Sampler	Strata Change	Field Classification And Remarks (Color, Grain Size, Moisture, Etc.)	
				in	ft
S-1	0.0-4.0'	From Geoprobe	sand silt		Brown, fine sand, little silt, some brick, dry.
S-2	4.0-8.0'	From Geoprobe	Orange clay		Orange-brown clay with little silt, wet
S-3	8.0-12.0'	From Geoprobe	clay		Brown-gray clay, wet.
S-4	12.0-16.0'	From Geoprobe	clay		Gray clay, wet.
				End of exploration 16.0'	
				Groundwater at 8.0'	
S-1	0.0-4.0'	From Geoprobe	silt brick ash concrete		1' silt, 2' brick, ash, concrete.
S-2	4.0-8.0'	From Geoprobe			Ash & concrete; Offset Refusal at 5.5'
				Refused at 5.5'	
S-1	0.0-4.0'	From Geoprobe	silt sand silt sand debris		Dark brown silt & fine sand, dry.
S-2	4.0-8.0'	From Geoprobe			2' Dark brown silt & fine sand; 2' building debris, wet at 8.0'
S-3	8.0-12.0'	From Geoprobe	clay		Brown clay, wet.
				End of exploration 12.0'	
				Groundwater at 8.0'.	

PENETRATION RESISTANCE 100 Weight Fall at 30" = 150 LBS. HAMMER		PROBING/CONES USED		Equipment Used: Geoprobe
CORRELATION CHART	CORRELATION CHART	Time	0 TO 10%	
1-2 Very Loose	1-2 Very Soft	Left	10 TO 30%	
3-20 Loose	3-4 Soft	Right	30 TO 50%	
20-25 Medium	5-8 Stiff	Avg	50 TO 75%	

Client:	Envirosource Consultants						SEABOARD DRILLING, INC.	Test Boring/ Monitor Well ID:	GP-10	
Location:	Hawkinsville, CT						P.O. BOX 902 NEWID, MA 01901			
Project:	Brewster School Housing						DRILLING/SOIL LOG			
Contractor:	Seaboard Drilling, Inc.						Hammer (Weight-to-Fall 30")	Sheet No.:	1 of 1	
Type	Casing	Bangsal	Core Barrel							
	HSA	SS	N/A							
D.B. Inch	8-1/2"			Rig Type:	B-53		Start:	3/28/2008		
I.D. Inch	4-1/4"			Finish:	3/28/2008		Driller:	Jeff Nitch		
Depth (ft.)	Below Range	Sample Per G	Recovery	FIELD CLASSIFICATIONS AND REMARKS						
0-1'	No Data	S-1	No Core	Traceoil.						
1-3'	No Data	S-2	No Data	Cinders and Wet @ 2.0'						
3-7'	No Data	S-3	No Data	Wet. Brown Silt and Fine SAND.						
7-8'	No Data	S-4	No Data	Wet. Gray/Brown Silt and Fine SAND. Trace Clay						
8-19'	No Data	S-5	No Data	Wet. Grey/Tan Clay and Silt						
SAMPLE PENETRATION RESISTANCE - 140 LB. Vial Falling 30" on 2" O.D. sampler										
Density					PROPORTIONS					
# of Hammer Blows	very loose	# of Hammer Blows			very soft / loose	suff	stiff	dense	0 % to 10%	
0-4	loose	0-2	3-4	medium stiff / coarse	suff	hard	some and	10 to 20%		
5-9	moderate	5-8	9-13	very stiff / dense	hard			20 to 30%		
10-29	dense	16-30	31+					30 to 50%		
30-49	very dense									

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Envirotech Consultants Location: Hartford, CT				SEABOARD DRILLING, INC. P.O. BOX 3609 BPTD, MA 01911 DRILLING/ROSL LOG				Test Boring/ Monitor Well ID: GP-12	
Project: Buxton School Heating Contractor: Seaboard Drilling, Inc.				Casing: Hammer (Weight 3.0, Fall 30") 14070 36034				Sheet No. 1 of 1	
Type: HSA		BS		N/A		Core Barrel		Start: 3/28/2006	
O.D. Inch: 6-1/2"						Rig Type: B-33		Finish: 3/28/2006	
I.D. Inch: 4-1/4"								Driller: Jeff Nilsch	
Depth (ft):				Blows Per ft:				Sample No:	
Range:				No Data				Recovery	
0 - 1"				No Data				S-1	
				No Data				Topsoil	
1-4"				No Data				S-2	
				No Data				S-3	
4-8"				No Data				S-4	
				No Data				S-5	
8-16"				No Data				S-6	
				No Data				S-7	
				No Data				S-8	
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				No Data				S-90	
				No Data				S-91	

Client: <u>Envisioned Barrels</u>				SEABOARD DRILLING, INC.		Test Boring/ Monitor Well ID:		GP-13	
Location: <u>Hartford, CT</u>				P.O. BOX 3028 SPTLD, MA 01101		Sheet No.		1 of 1	
Project: <u>Brackett School Housing</u>				DRILLING/SOIL LOGS		Start:		3/28/2006	
Contractor: <u>Seaboard Drilling, Inc.</u>				Hammer (Weight-40, Ret-30")		Finish:		3/28/2006	
Casing		Sampler		Core Barrel		Driller:		Jeff Nilach	
Type	HSA	BS		N/A		Rig Type:		B-63	
O.D. Inch	4-1/2"	4-1/2"							
I.D. Inch	4-1/4"								
Depth (ft. Range)		Blows Per Foot	Sample No.	Recovery		FIELD CLASSIFICATIONS AND REMARKS			
0-1'		No Data	0-1	No Data		Topsoil.			
1-4'		No Data	1-2	No Data		Med. Grey/Brown Silt, Very Fine SAND			
4-6.5'		No Data	0-3	No Data		Wet, Grey/Brown Silt and Very Fine SAND. View @ 4'			
5.5-8'		No Data	3-4	No Data		Wet, Grey Silt, Trace Very Fine SAND.			
8-12'		No Data	5-6	No Data		Wet, Grey Silt and Very Fine SAND, Trace Clay			
12-16'		No Data	5-6	No Data		Wet, Grey Silt and Very Fine SAND, Trace Clay.			

SAMPLE PENETRATION RESISTANCE: 140 LB. Wt. Falling 30" on 2" D.D. sampler									
Desirey		Consistence						PROPORTIONS	
# of Hammer Blows	Very loose	# of Hammer Blows		very soft	soft	firm	hard	Trace	0 to 15%
0-4	loose	0-2	3-4	very soft	soft	firm	hard	little	15 to 20%
5-9	medium dense	5-8	9-15	very stiff					20 to 35%
10-23	very dense	16-30	31+						35 to 50%

Client: Enbridge Comstock Location: Hartford, CT			SEABOARD DRILLING, INC. P.O. BOX 328 SPTD, LA 01101 DRILLING/SCOPE LOG			Test Boring/ Monitor Well ID: GP-14		
Project: Bracket School Housing Contractor: Seaboard Drilling, Inc.			Hammer (Weight 9.5/20-30") 14028 30024			Sheet No. 3/282006		
Casing Sampler Core Barrel			Rig Type: S-53			Start: 3/28/2006		
Type NSA BS N/A						Finish: 3/28/2006		
O.D. inch 8-11/2" ID inch 4-11/4"						Driller: Jeff Nitsch		
FIELD CLASSIFICATIONS AND REMARKS								
Depth (ft.) Range		Blows per ft.	Sample No.	Recovery No.	Notes:			
0-1'		No Data	S-1	No Data	Trace:			
1-4'		No Data	S-2	No Data	Moist, Grey/Brown SIL, Trace Very Fine SAND			
4-8'		No Data	S-3	No Data	Wet, Grey/Brown GR, Trace Very Fine SAND Wet @ 4.5'			
9-12'		No Data	S-4	No Data	Wet, Grey SIL, Trace Clay			
12-16'		No Data	S-5	No Data	Wet, Grey SIL, Trace Clay			
SAMPLE PENETRATION RESISTANCE 140 LB. Wt. Falling 30" O.D. sampler								
Density			Compressive Consistency			PROPORTIONS		
# of Hammer Blows	pen blow cone	5-10	0-2	3-4	very soft/ mec. stiff	soft	trace	0 to 10%
10-20	medium dense	5-10	0-15	very stiff/	hard	some	20 to 35%	
30-49	very dense	15-30	31+			and	20 to 50%	

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BORING PLAN		Revisions:	
PREPARED FOR		No.	Date
<i>CITY OF HARTFORD</i> BRACKETT KNOLL – PHASE II HARTFORD, CONNECTICUT		1	01-15-19
			Sheet added
Date: 01-26-18	Drawn by: CAD	Job no: 04193	
Scale: N/A	Checked by: DSZ	Sheet no: 2 OF 3	

BO-2

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MDC CODE:	BRACKETT SCHOOL HOUSING HARTFORD
WATER:	BILDVWHAR 10
SANITARY:	BILDVSHAR 18
STORM:	BILDVSHAR XX

Sheet 7 of 16 10-16-2018
Rev. 01-15-2019

BO-1

BORING PLAN

PREPARED FOR

CITY OF HARTFORD
BRACKETT KNOLL - PHASE II
HARTFORD, CONNECTICUT

Revisions:

No.	Date	Description
1	01-15-19	Sheet added

Date: 01-26-18

Scale: 1" = 30'

Drawn by: CAD

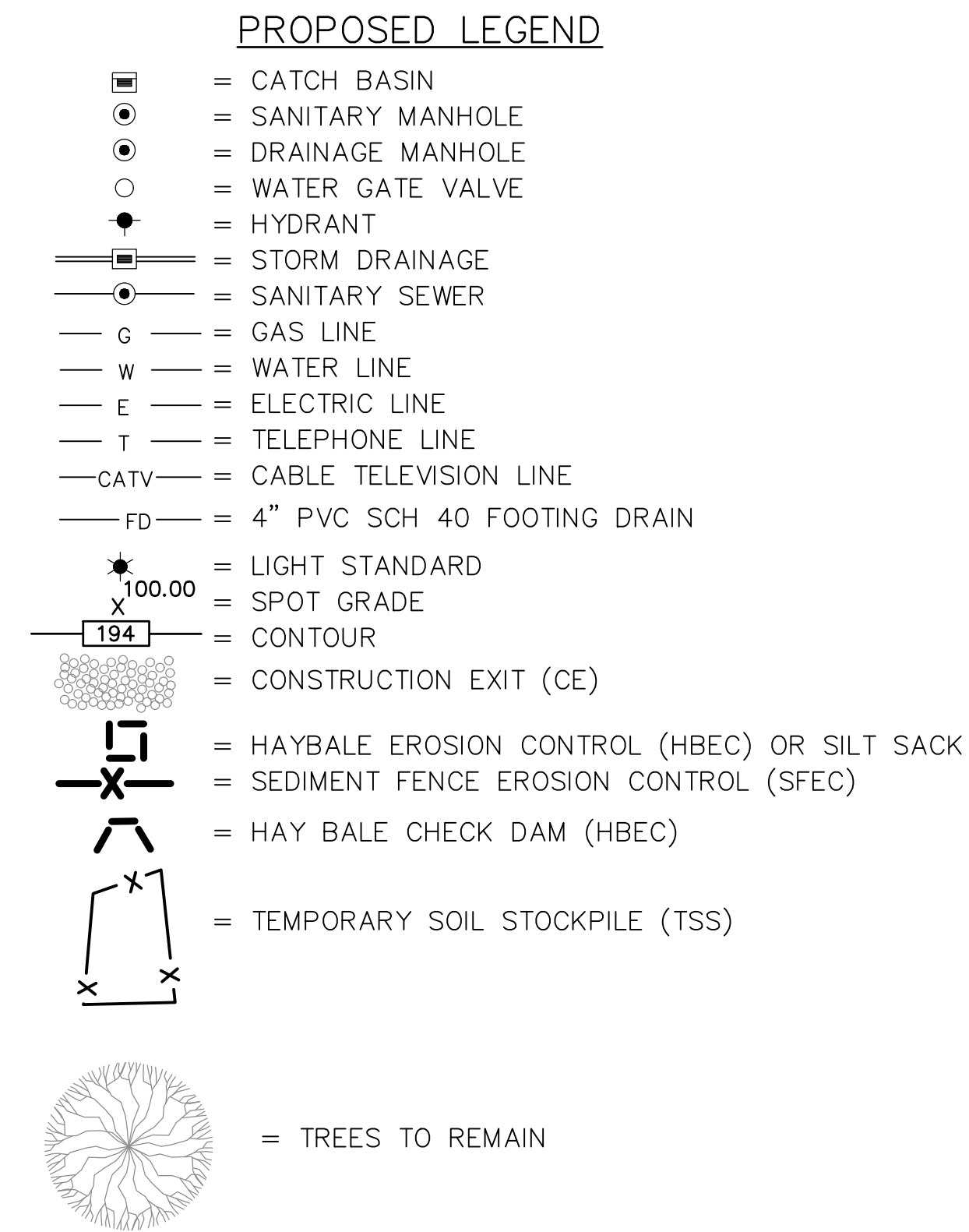
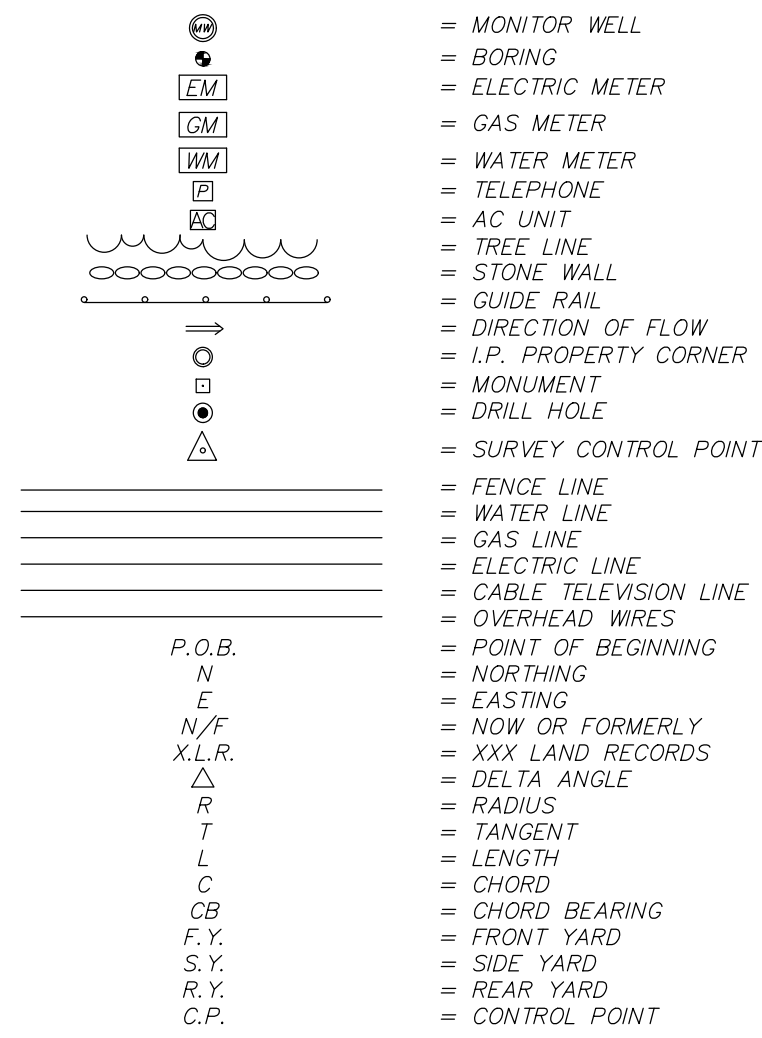
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Job no: 04193

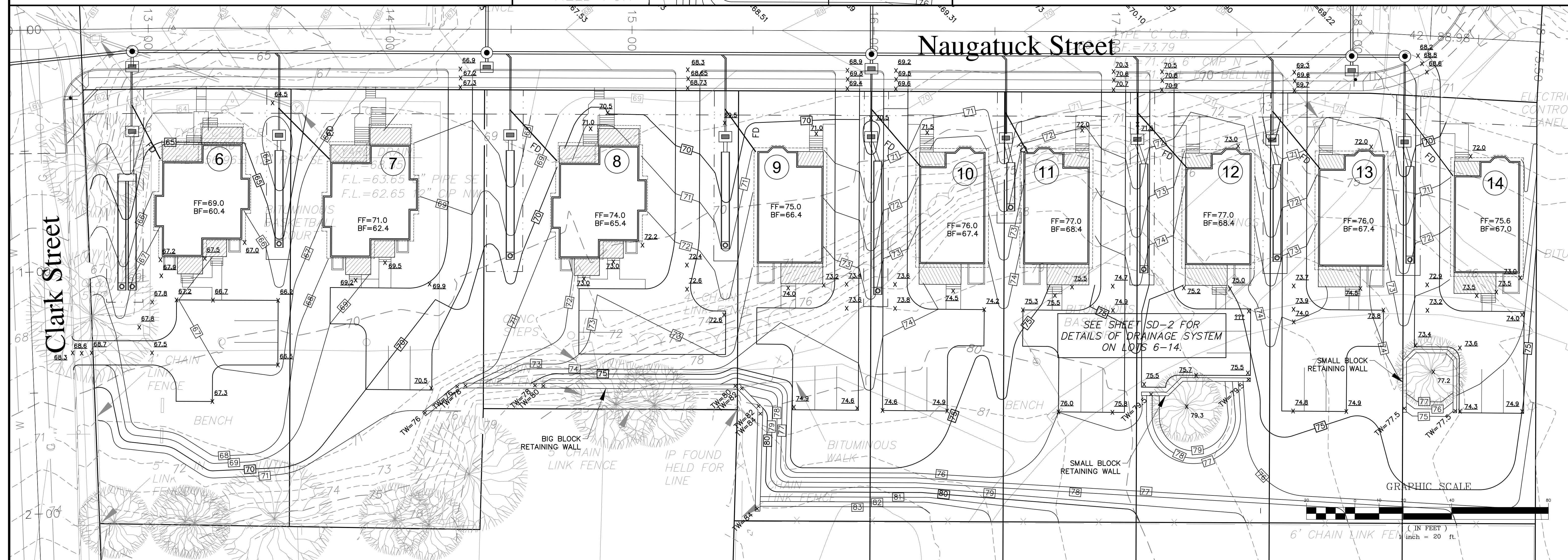
Sheet no: 3 OF 3

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MDC CODE:	BRACKETT SCHOOL HOUSING HARTFORD
WATER:	BILDVWHAR 10
SANITARY:	BILDVSHAR 18
STORM:	BILDVSHAR XX



Revisions:		
No.	Date	Description
1	02-17-18	Bid Set
2	03-16-18	Retaining Wall & Grading
3	08-02-18	MDC Comments
4	09-01-18	Lot Development Bid Set
5	02-01-19	Revised Bid Set

GRADING, DRAINAGE AND
SEDIMENTATION & EROSION CONTROL
PREPARED FOR
TORAAAL DEVELOPMENT LLC
BRACKETT KNOLL – PHASE II

Date: 01-26-18	Drawn by: CAD	Job no: 04193
Scale: 1" = 20'	Checked by: DSZ	Sheet no: 1 OF 3

GR-2

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- LEGEND
(SYMBOLS NOT TO SCALE)
- CATCH BASIN
 - SANITARY MANHOLE
 - DRAINAGE MANHOLE
 - WATER MANHOLE
 - TELEPHONE MANHOLE
 - ELECTRIC MANHOLE
 - UNKNOWN MANHOLE
 - YARD DRAIN
 - CABLE MANHOLE
 - FLARED END SECTION
 - FIRE HYDRANT
 - WATER GATE VALVE
 - GAS GATE VALVE
 - MISC. GATE VALVE
 - VENT PIPE
 - FILLCAP
 - WELL
 - MAIL BOX
 - HAND HOLE
 - CONTROLLER CABINET
 - ELECTRIC TRANSFORMER
 - UTILITY POLE
 - GUY WIRE
 - CROSSWALK POLE
 - LIGHT POLE
 - POST
 - TRAFFIC LIGHT SUPPORT POLE
 - STREET SIGN
 - TREE (TYP.)

- MONITOR WELL
- BORING
- ELECTRIC METER
- GAS METER
- WATER METER
- TELEPHONE
- AC UNIT
- TREE LINE
- STONE WALL
- GUIDE RAIL
- DIRECTION OF FLOW
- I.P. PROPERTY CORNER
- MONUMENT
- DRILL HOLE
- SURVEY CONTROL POINT
- FENCE LINE
- WATER LINE
- GAS LINE
- ELECTRIC LINE
- CABLE TELEVISION LINE
- OVERHEAD WIRES
- POINT OF BEGINNING
- NORTHING
- EASTING
- NOW OR FORMERLY
- XXX LAND RECORDS
- DELTA ANGLE
- RADIUS
- TANGENT
- CHORD
- CHORD BEARING
- FRONT YARD
- SIDE YARD
- REAR YARD
- CONTROL POINT

PROPOSED LEGEND

- CATCH BASIN
- SANITARY MANHOLE
- DRAINAGE MANHOLE
- WATER GATE VALVE
- HYDRANT
- STORM DRAINAGE
- SANITARY SEWER
- GAS LINE
- WATER LINE
- ELECTRIC LINE
- TELEPHONE LINE
- CABLE TELEVISION LINE
- 4" PVC SCH 40 FOOTING DRAIN
- LIGHT STANDARD
- SPOT GRADE
- CONTOUR
- CONSTRUCTION EXIT (CE)
- HAYBALE EROSION CONTROL (HBEC) OR SILT SACK
- SEDIMENT FENCE EROSION CONTROL (SFEC)

MDC CODE:	BRACKETT SCHOOL HOUSING HARTFORD
WATER:	BILDVWHAR 10
SANITARY:	BILDVSHAR 18
STORM:	BILDVSHAR XX

SEE INDIVIDUAL LOT PLOT
PLANS FOR SPECIFIC LAYOUT
AND GRADING DETAILS.

CB#19
TYPE "C-L"
T.F.=63.96
F.L.=58.50-24" CPE

CB#20
TYPE "C-L"
T.F.=65.36
F.L.=58.50-24" CPE

CB#21
TYPE "C-L"
T.F.=65.81
F.L.=58.50-24" CPE

CB#22
TYPE "C-L"
T.F.=66.41
F.L.=58.50-24" CPE

F.L.=47.85 8" PVC NE

INSPECT AND CLEAN
EXISTING 12" RCP

SAN M.H.
T.F.=51.21
INV.44.31

EXISTING HOUSE

REPLACE C.B. WITH
SHALLOW MANHOLE
T.F.=59.86
F.L.=56.16-12" CPE (2)

CB#23
SPECIAL OUTLET STRUCTURE
(SEE SD-1)
T.F.=66.16
F.L.=58.50-6" ORIFICE
F.L.=58.50-24" CPE IN
F.L.=56.72-12" CPE OUT

24" CPE
110 L.F.
S=0.00

12" CPE
28 L.F.
S=0.02

Hampton Street

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

Naugatuck Street

No.	Date	Description
1	02-17-18	Bid Set
2	08-02-18	MDC Comments
3	09-01-18	Lot Development Bid Set
4	02-01-19	Revised Bid Set

GRADING, DRAINAGE AND SEDIMENTATION & EROSION CONTROL PREPARED FOR TORAL DEVELOPMENT LLC BRACKETT KNOLL - PHASE II HARTFORD, CONNECTICUT	Date: 01-26-18 Drawn by: CAD Checked by: DSZ Job no: 04193 Street no: 2 OF 3
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GR-3

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