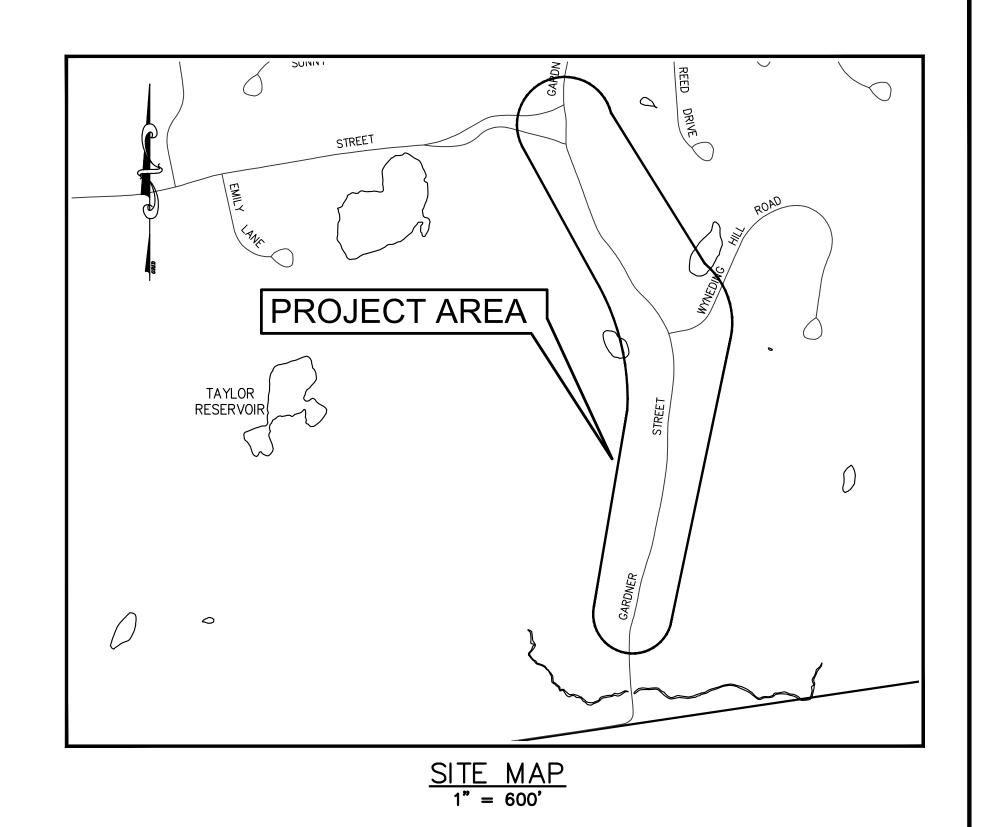


TOWN OF MANCHESTER

PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION





GARDNER STREET RECONSTRUCTION LINE STREET TO FERN STREET

MAY 2022

DESIGN STANDARD:

TOWN OF MANCHESTER PUBLIC IMPROVEMENT STANDARDS, EFFECTIVE DATE OCTOBER 31, 2020,

AS AMENDED

DATUMS:

ALL ELEVATIONS ON THIS PROJECT BASED ON THE TOWN OF MANCHESTER CONTROL NETWORK.

HORIZONTAL CONTROL BASED ON THE TOWN OF MANCHESTER CONTROL NETWORK.

STANDARD

SPECIFICATIONS: SEE CONTRACT DOCUMENTS

DESIGN SCALES:

PLAN: 1" = 20'OTHER SCALES AS NOTED

OF DRAWINGS SHEET NO. DESCRIPTION COVER SHEET NOTES AND TYPICAL SECTIONS 3-6 EXISTING CONDITIONS PLANS 7-10 | LAYOUT PLANS 11-14 PROFILES RETAINING WALL PLAN 16-19 | PAVEMENT MARKINGS AND SIGNING PLANS 20-23 GRADING AND TURF ESTABLISHMENT PLANS 24-27 DETAILS USDOT STEEL BACKED TIMBER RAIL DETAILS

DESIGNED BY: TOWN OF MANCHESTER ENGINEERING DIVISION

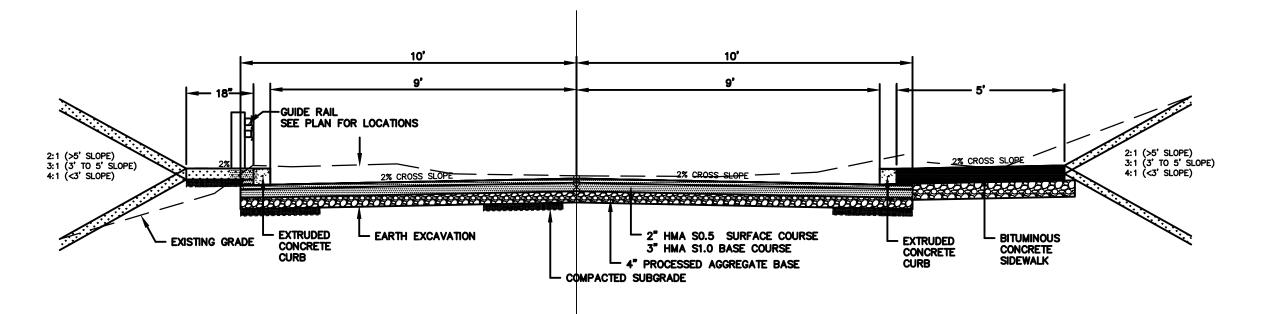
JEFF LAMALVA TOWN ENGINEER P.E. NO. 20967

ADDENDUM NO. 1 PLAN SET - 5/23/22

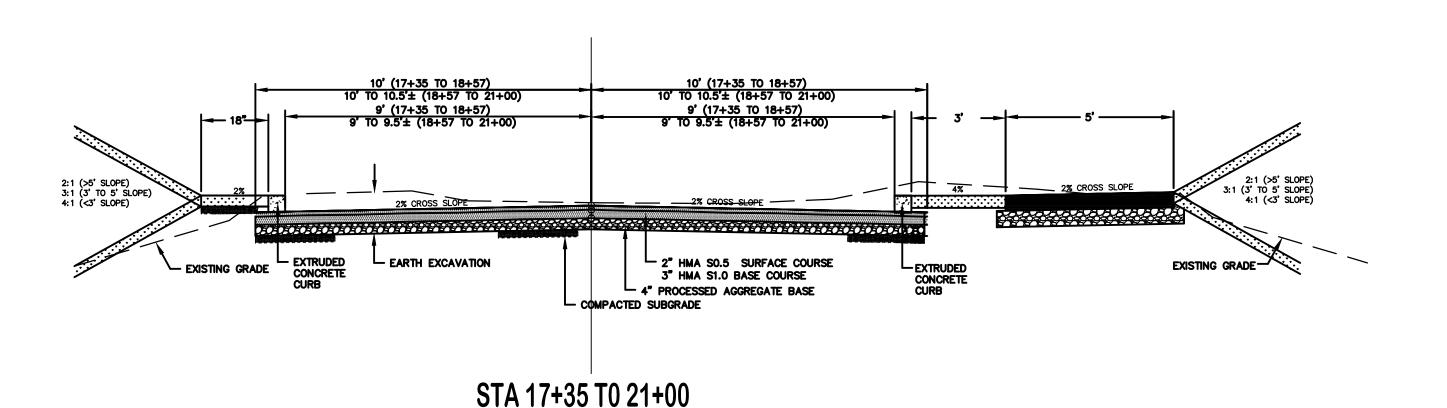
GENERAL NOTES:

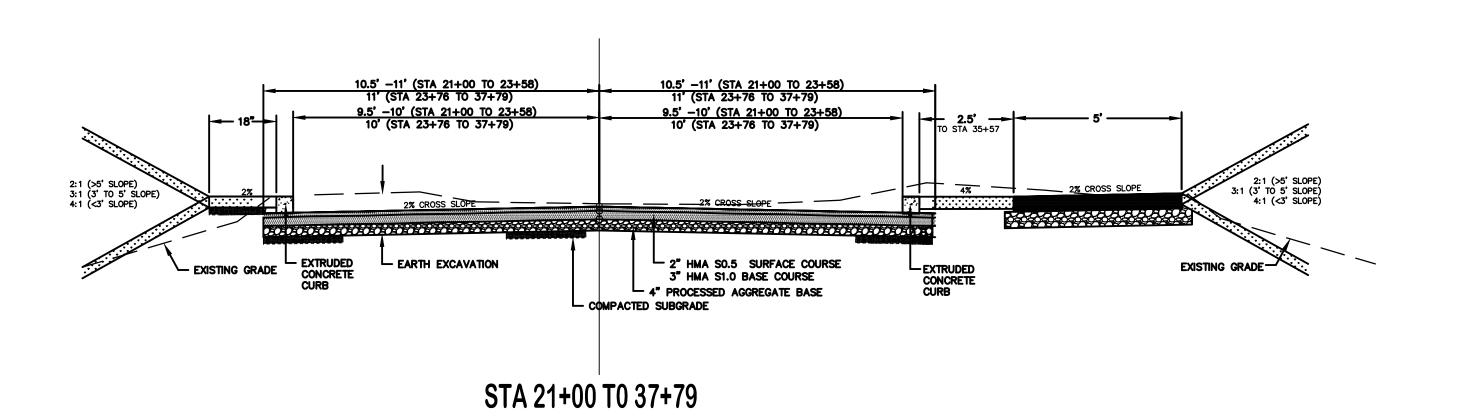
- 1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE "MANCHESTER PUBLIC IMPROVEMENT STANDARDS", EFFECTIVE OCTOBER 31, 2020, AS AMENDED AND THE STATE OF CONN. DEPT. OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, FACILITIES AND INCIDENTAL CONSTRUCTION, FORM 818, DATED 2020, INCLUDING ANY SUPPLEMENTS.
- 2. ALL ELEVATIONS ARE BASED ON THE TOWN OF MANCHESTER CONTROL
- IMPLEMENTING WORKER SAFETY AND HEALTH PROTOCOLS THAT ADDRESS COMPLIANCE WITH ALL RULES, LAWS AND REGULATIONS REGARDING SAFETY AND RISK OF EXPOSURE TO PHYSICAL AND CHEMICAL HAZARDS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ALL EMPLOYEES OF THE CONTRACTOR AND SUBCONTRACTORS ARE TO WEAR REFLECTIVE VESTS AND HARD HATS AT ALL TIMES WHEN ON THE PROJECT SITE.
- 4. A PRECONSTRUCTION MEETING WITH TOWN STAFF IS REQUIRED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.
- THE CONTRACTOR SHALL PHASE CONSTRUCTION OPERATIONS TO MINIMIZE THE SIZE OF DISTURBED AREAS AND PERIOD OF TIME THESE AREAS ARE LEFT UNSTABILIZED AND SUBJECT TO EROSION. THIS INCLUDES, BUT IS NOT LIMITED TO, INSTALLATION OF DRAINAGE SYSTEMS DURING THE EARLY STAGES OF CONSTRUCTION AND LIMITING LENGTHS OF RECLAMATION AND FULL-DEPTH ROAD RECONSTRUCTION AREAS TO ALSO LESSEN IMPACTS TO VEHICLE AND PEDESTRIAN TRAVEL THROUGH THE PROJECT AREA.
- 6. THE CONTRACTOR SHALL TAKE CARE NOT TO DISTURB EXISTING MONUMENTATION THAT MAY BE PRESENT NEAR THE PROJECT AREA.
- THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL REQUIRED PERMITS AND PAY ASSOCIATED FEES PRIOR TO ANY CONSTRUCTION ACTIVITY.
- THE CONTRACTOR SHALL CONFINE ALL OPERATIONS AND ACTIVITIES FOR CONSTRUCTION PURPOSES WITHIN THE STREET LINE AND LIMITS OF UTILITY EASEMENTS UNLESS SHOWN OTHERWISE ON THE PLANS.
- THE CONTRACTOR SHALL RESTORE TWO LANES OF TRAFFIC ON GARDNER STREET AT THE END OF EACH WORK DAY. IT IS ANTICIPATED THAT THE ROAD WILL REMAIN OPEN AT ALL TIMES WITH ALTERNATING ONE LANE TRAFFIC DURING CONSTRUCTION.
- 10. THE CONTRACTOR SHALL COMMIT SUFFICIENT RESOURCES TO THE PROJECT TO ENSURE THE PROJECT IS COMPLETED WITHIN THE ALLOTTED CONTRACT TIME. ONCE MOBILIZED, THE CONTRACTOR SHALL WORK CONTINUOUSLY ON THE PROJECT UNTIL COMPLETION. ANY UNAUTHORIZED VACATING OF THE JOBSITE IS SUBJECT TO PENALTIES DESCRIBED UNDER THE "LIQUIDATED DAMAGES" SECTION OF THE CONTRACT SPECIFICATIONS.
- 11. THE CONTRACTOR SHALL NOT STORE CONSTRUCTION EQUIPMENT OR MATERIALS WITHIN THE PUBLIC RIGHT-OF-WAY.
- 12. CONSTRUCTION ENTRANCES ARE NOT SHOWN ON THE PLAN; HOWEVER, THEY SHALL BE INSTALLED WHERE DIRECTED BY THE ENGINEER DURING CONSTRUCTION FOR EGRESS FROM TEMPORARY STOCKPILE AREAS. THE PROPOSED LOCATION OF STOCKPILE AREAS SHALL BE IDENTIFIED BY THE CONTRACTOR.
- 13. NO WORK SHALL COMMENCE UNTIL ALL CONSTRUCTION AREA SIGNS ARE IN PLACE.
- 14. THE CONTRACTOR SHALL PROVIDE TEMPORARY ACCESS TO ALL DRIVEWAYS AT ALL TIMES.
- 15. ALL GRASSED AREAS DISTURBED BY THE CONTRACTOR SHALL BE REPLACED WITH TOPSOIL, FERTILIZED AND SEEDED AS PER THE SPECIFICATIONS. CONTRACTOR SHALL MAKE ALL EFFORTS TO MINIMIZE THE LIMITS OF DISTURBANCE AND ASSOCIATED RESTORATION THAT IS REQUIRED.
- 16. ANY DRIVEWAYS, SIDEWALKS, CURB AND LAWN AREAS LOCATED ON PRIVATE PROPERTY OR WITHIN THE RIGHT-OF-WAY THAT ARE IMPACTED DURING CONSTRUCTION SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS AS IDENTIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE REQUIRED LIMITS OF SUCH RESTORATION SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. RESTORATION ON PRIVATE PROPERTY SHALL BE COMPLETED AS PROMPTLY AS PRACTICAL WITHIN THIRTY (30) CALENDAR DAYS OF COMPLETING WORK ON THE PROPERTY.
- 17. ACTUAL LIMITS OF DRIVEWAY RECONSTRUCTION SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER. THE CONTRACTOR SHALL AVOID IMPACTS TO EXISTING DRIVEWAYS WHEREVER POSSIBLE TO MINIMIZE REQUIRED RECONSTRUCTION LIMITS.
- 18. ALL SEDIMENT CONTROL SYSTEMS SHALL MEET THE "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" AS PREPARED BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION, LATEST REVISION. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION, MAINTENANCE AND REPAIR OF EROSION CONTROLS REQUIRED FOR THE PROJECT. ADDITIONAL EROSION CONTROLS SHALL BE INSTALLED BY THE CONTRACTOR FOR TEMPORARY STOCKPILING OF EXCAVATED MATERIAL AND WHERE DEEMED NECESSARY BY THE ENGINEER. EROSION CONTROLS SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL THE SITE IS STABILIZED AND THE ENGINEER APPROVES THEIR REMOVAL.
- 19. SILT SACKS SHALL BE INSTALLED IN ALL EXISTING AND PROPOSED CATCH BASINS WITHIN THE PROJECT AREA AND WHERE DIRECTED BY THE ENGINEER. SILT SACKS SHALL BE THE APPROPRIATE TYPE FOR CATCH BASINS WITH AND WITHOUT CURB INLETS.
- 20. HORIZONTAL AND VERTICAL LOCATIONS OF PROPOSED WORK MAY BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS WITH THE APPROVAL OF THE ENGINEER.
- 21. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER IF CONDITIONS ENCOUNTERED IN THE FIELD ARE DIFFERENT THAN INFORMATION SHOWN ON THE PLANS.
- 22. THE EXISTENCE OF UTILITIES AND APPURTENANCES AS SHOWN ON THESE DRAWINGS ARE FOR REFERENCE ONLY. THE EXACT SIZE, LOCATION, TYPE, AND ELEVATION OF ALL UTILITIES WITHIN ALL WORK AREAS SHALL BE THOROUGHLY INVESTIGATED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "CALL-BEFORE-YOU-DIG" AT 1-800-922-4455 AND MUST HAVE ALL UTILITIES MARKED ON THE GROUND PRIOR TO THE START OF CONSTRUCTION.
- 23. THE QUANTITIES AS INDICATED IN THE CONTRACT DOCUMENTS ARE APPROXIMATE AND MAY NOT INDICATE THE ACTUAL QUANTITIES OF WORK REQUIRED. THE CONTRACTOR MUST VERIFY ALL QUANTITIES.
- 24. SURPLUS EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE

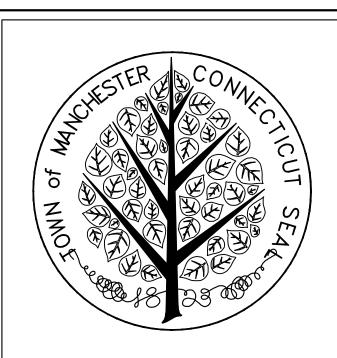
- CONTRACTOR. THE CONTRACTOR SHALL DISPOSE OF SURPLUS EXCAVATED MATERIAL IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS.
- 25. PROPOSED STRUCTURE FRAME ELEVATIONS IDENTIFIED ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL SET FRAME ELEVATIONS AS REQUIRED BASED ON EXISTING FEATURES AND GRADES IN THE VICINITY AS DIRECTED BY THE ENGINEER.
- 26. THE CONTRACTOR SHALL SUBMIT A PLAN TO THE ENGINEER FOR PROPOSED METHODS TO DEWATER THE SITE (WHERE REQUIRED). SUCH PLAN SHALL INCLUDE THE INSTALLATION OF SILT BAGS AT PUMP DISCHARGES WITH SILT FENCE/HAYBALES FOR EROSION CONTROL. PROPOSED DISCHARGE LOCATIONS AND ALL EROSION CONTROLS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
- 27. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY HANDLING OF ALL STORMWATER RUNOFF DURING CONSTRUCTION. METHODS OF HANDLING RUNOFF SHALL BE APPROVED BY THE ENGINEER.
- 28. AT THE END OF EACH WORKING DAY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTING NEW DRAINAGE SYSTEMS TO EXISTING. ALL DRAINAGE SYSTEMS WITHIN THE CONSTRUCTION LIMITS SHALL BE MAINTAINED BY THE CONTRACTOR.
- 29. ALL NEW CATCH BASINS SHALL HAVE 2 FT SUMP DEPTHS UNLESS OTHERWISE NOTED.
- 30. FOR CONNECTIONS TO EXISTING DRAINAGE STRUCTURES, THE CONTRACTOR SHALL VERIFY THE EXISTING STRUCTURE INVERTS, NOTIFY THE ENGINEER IF A DISCREPANCY EXISTS, AND ADJUST THE PIPE SLOPES AS DIRECTED.
- 31. THE CONTRACTOR SHALL NOT ABANDON ANY EXISTING DRAINAGE PIPES UNLESS CALLED FOR ON THE PLANS OR DIRECTED BY THE ENGINEER. PIPES THAT ARE TO BE ABANDONED SHALL BE BULKHEADED AT EACH END AND COMPLETELY FILLED WITH FLOWABLE CONCRETE AS DIRECTED BY THE ENGINEER (PAY ITEM: ABANDON PIPE). IF PIPE HAS A BLIND TIE-IN TO THE EXISTING MAIN, THEN PIPE SHALL BE BULKHEADED AT THE UPSTREAM END ONLY (PAY ITEM: PLUG PIPE).
- 32. ALL SIDEWALKS, DRIVEWAY APRONS AND SIDEWALK RAMPS SHALL BE CONSTRUCTED TO PROVIDE HANDICAPPED ACCESSIBILITY IN ACCORDANCE WITH THE CONNECTICUT BUILDING CODE.
- 33. CONCRETE SIDEWALK RAMPS ARE TO MATCH EXISTING CURB RADII AND HAVE A 5' MINIMUM RADIUS UNLESS NOTED OTHERWISE. THE ENGINEER WILL PROVIDE STAKES AS REQUIRED DURING CONSTRUCTION FOR LOCATIONS WITH RADII THAT VARY FROM EXISTING.
- 34. ALL CONCRETE SIDEWALK RAMPS SHALL BE INSTALLED WITH DETECTABLE WARNING TILES.
- 35. DUE TO THE DENSITY OF GROWTH, THE PLANS DO NOT IDENTIFY THE LOCATION OF ALL TREES IMPACTED BY CONSTRUCTION. IT IS RECOMMENDED THE CONTRACTOR VISIT THE SITE TO IDENTIFY THE EXTENT OF TREE CLEARING REQUIRED WITHIN THE PROPOSED LIMITS OF DISTURBANCE PRIOR TO BIDDING ON THE PROJECT. TREES LOCATED WITHIN THE LIMITS OF CLEARING WILL BE REMOVED AS DIRECTED BY THE ENGINEER.
- 36. RECORD DRAWINGS SHALL BE SUBMITTED TO THE ENGINEERING DIVISION UPON COMPLETION OF THE WORK IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROCURING ALL INFORMATION NECESSARY TO GENERATE THE DRAWINGS. A REDLINED PROGRESS SET OF DRAWINGS SHALL BE MAINTAINED DAILY AND BE AVAILABLE TO THE ENGINEER AT ALL TIMES.
- 37. IT IS ANTICIPATED THAT SUITABLE, EXCESS EXCAVATED MATERIAL FROM THE PROJECT WILL BE USED AS FILL MATERIAL OUTSIDE OF ROAD LIMITS WHERE DIRECTED BY THE ENGINEER. EXCAVATED MATERIAL MAY BE USED WITHIN THE ROAD LIMITS ONLY WHEN APPROVED BY THE ENGINEER: OTHERWISE, GRANULAR FILL MUST BE PROVIDED. THERE WILL BE NO SEPARATE PAYMENT FOR PLACEMENT OF EXCAVATED MATERIAL.



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TOWN OF MANCHESTER PUBLIC WORKS DEPARTMENT **ENGINEERING DIVISION** 494 MAIN STREET - P.O. BOX 191

MANCHESTER, CT 06045-0191

LEGEND = WETLANDS BOUNDARY = CONIFEROUS TREE F = DECIDUOUS TREE D = DRAINAGE MANHOLE = RAILROAD TRACKS = CONCRETE MONUMENT BV = BUTTERFLY VALVI ■ = GRANITE MONUMENT O = IRON PIPE = IRON ROD

o o = DOUBLE POST SIGN = CONTROL POINT M = MAIL BOX O = BOLLARD UTILITY POLE = CONTROLLER CABINET = UTILITY POLE WITH LIGH GG = GAS GATE T = TELEPHONE BOX E = ELECTRIC BOX = WETLAND FLAG ⊕ CATV TUBE

= CATCH BASIN

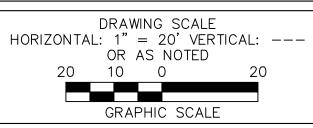
₩ = WATER VALVE

PROJECT NUMBER 2020086

FILENAME 2020086-PLAN.DWG

NO.	DATE	FILE
_	02/01/22	
	05/23/22	ADDENDUM NO. 1

DRAWN BY: JED CHECKED BY: JL RELEASED BY: JL



DATUM HORIZONTAL: NAD83 VERTICAL: NAVD88

GARDNER STREET

MANCHESTER, CT

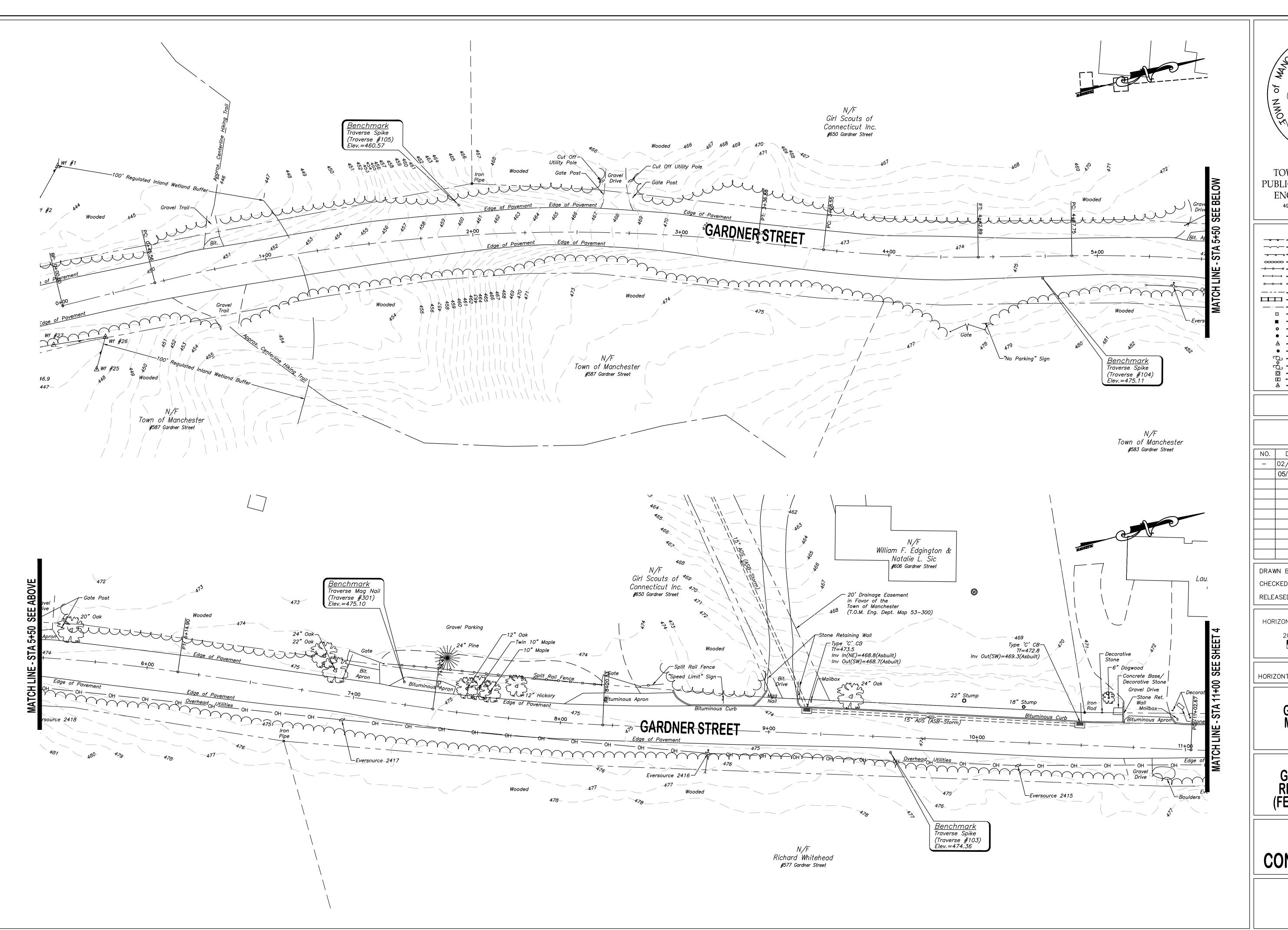
PROJECT LOCATION

PROJECT TITLE

GARDNER STREET RECONSTRUCTION (FERN ST TO LINE ST)

SHEET TITLE **NOTES AND** TYPICAL SECTIONS

SHEET NUMBER





	Ų.	= LIGHT POLE
= RETAINING WALL	*	= CONIFEROUS
= GUIDE RAIL	83	= DECIDUOUS
= STONE WALL	S	= SANITARY M
= STOCKADE FENCE	0	= DRAINAGE M
= WIRE FENCE	<u> </u>	= CATCH BASI
= CHAIN LINK FENCE	Δ	= CULVERT EN
= PROPERTY LINE	敠	= HYDRANT
= RAILROAD TRACKS	~	= CURB STOP
= SILT FENCE	•	= WATER VALV
= CONCRETE MONUMENT	•	
= GRANITE MONUMENT	₽¥	= BUTTERFLY
= IRON PIPF	B0 O	= BLOW OFF

LEGEND

O = TRAFFIC SPAN POLE
E = ELECTRIC BOX

△ = WETLAND FLAG

PROJECT NUMBER

2020086

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110		
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DRAWING SCALE
HORIZONTAL: 1" = 20' VERTICAL: --OR AS NOTED
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GRAPHIC SCALE

DATUM HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION

GARDNER STREET MANCHESTER, CT

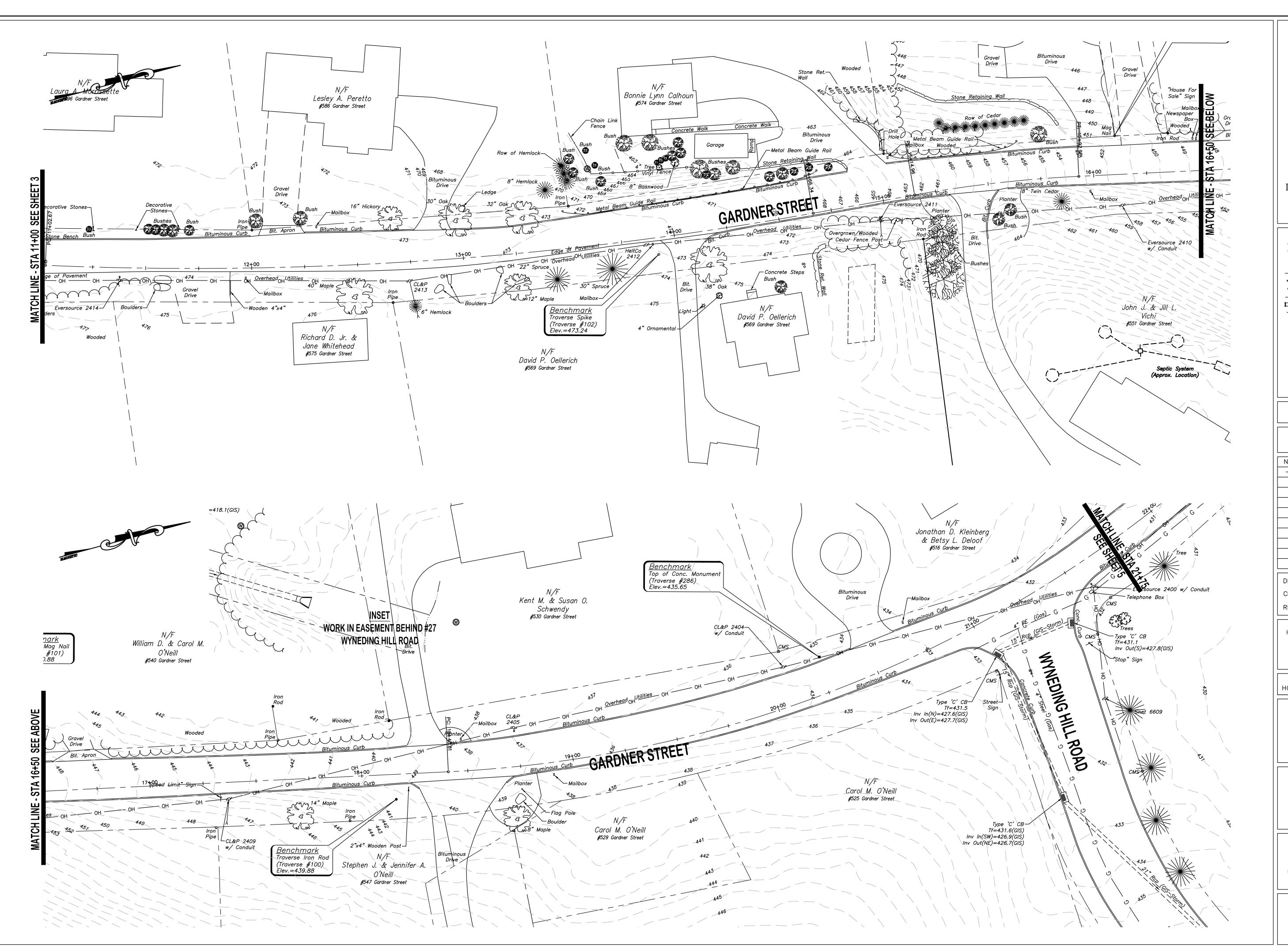
PROJECT TITLE

GARDNER STREET RECONSTRUCTION (FERN ST TO LINE ST)

SHEET TITLE

EXISTING CONDITIONS PLAN

SHEET NUMBER





LEGEND

= WETLANDS BOUNDARY

= RETAINING WALL

= CONIFEROUS TR

COMMITTER

= CONIFEROUS TR

COMMITTER

= DECIDUOUS TRE

COMMITTER

= CATCH BASIN

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S

☐ = CONCRETE MONUMENT

☐ = GRANITE MONUMENT

☐ = IRON PIPE

☐ = IRON ROD

☐ = CONTROL POINT

☐ = DRILL HOLE

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BV

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☐ BLOW OFF

☐ = SIGN

☐ O O O DUBLE POST SIGN

☐ M = MAIL BOX

○ = BOLLARD

● = DRILL HOLE

□ = UTILITY POLE

□ = UTILITY POLE WITH LIGHT

□ = TRAFFIC SPAN POLE

□ = ELECTRIC BOX

△ = WETLAND FLAG

■ MM = MAIL BOX

□ = BOLLARD

□ = CONTROLLER CABINE

□ = GG
□ = GAS GATE

□ = TELEPHONE BOX

② = CATV TUBE

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GARDNER STREET MANCHESTER, CT

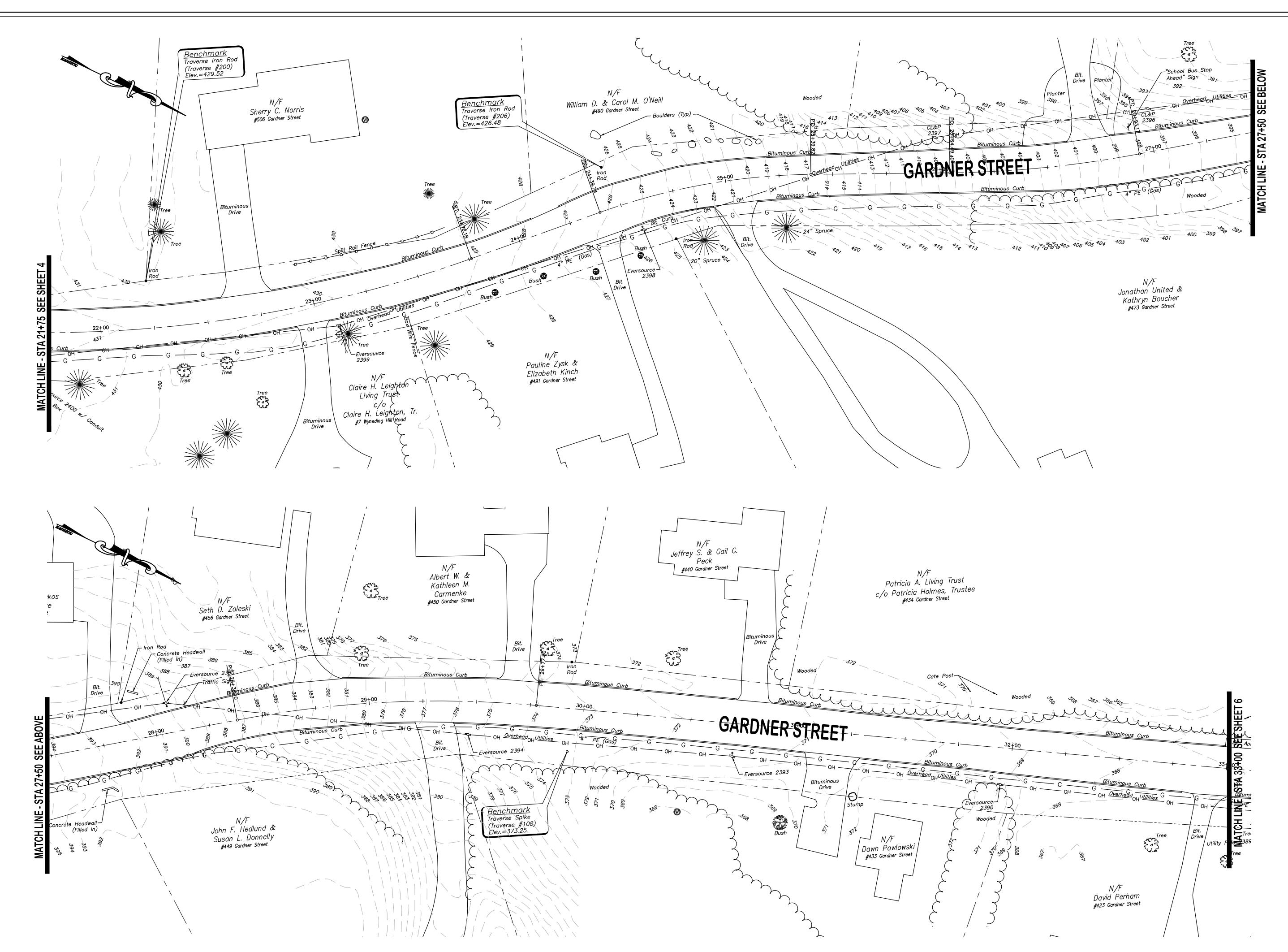
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LEGEND

= WETLANDS BOUNDARY

= RETAINING WALL

= CONIFEROUS

= CONIFEROUS

= DECIDUOUS 1

S = SANITARY M

D = STOCKADE FENCE

X = X = WIRE FENCE

C = CATCH BASIN

C = CULVERT ENI

C = CULVERT

= RAILROAD TRACKS

S = CURB STOP

S = CONCRETE MONUMENT

S = GRANITE MONUMENT

S = GRANITE MONUMENT

S = BUTTERFLY VALVE

B = BLOW OFF

S = SIGN

D = DOUBLE POST SIGN

● = DRILL HOLE

□ = UTILITY POLE WITH LIGHT

□ = TRAFFIC SPAN POLE

□ = ELECTRIC BOX

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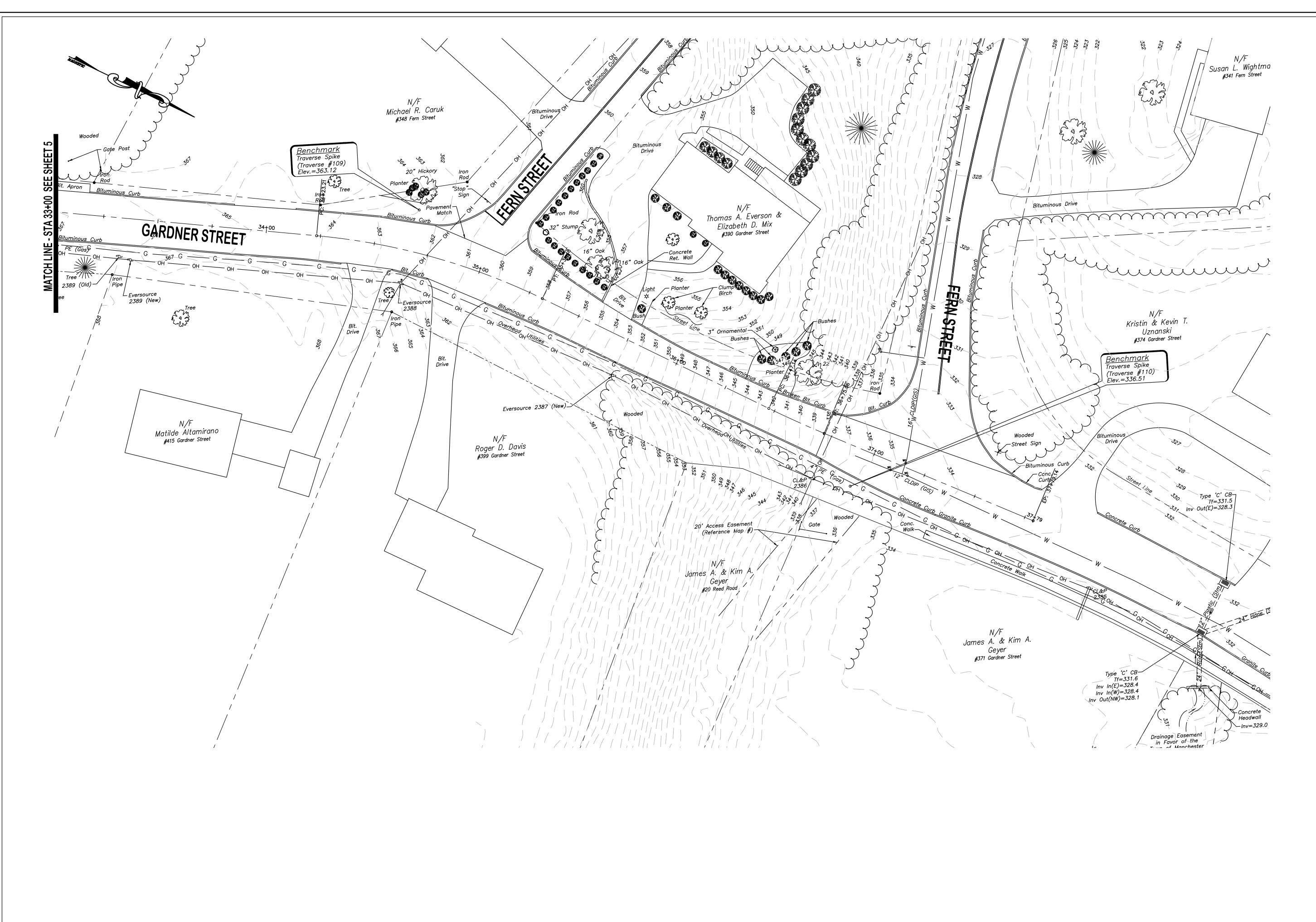
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LEGEND

= WETLANDS BOUNDARY	
= RETAINING WALL	= CONIFEROUS TREE
-o-o-o = GUIDE RAIL	= DECIDUOUS TREE
STONE WALL	S = SANITARY MANHOLE
= STOCKADE FENCE	DRAINAGE MANHOLE
xx = WIRE FENCE	= CATCH BASIN
oo = CHAIN LINK FENCE	
= PROPERTY LINE	Y = HYDRANT
= RAILROAD TRACKS	CS = CURB STOP
	WY = WATER VALVE
	· ·
■ = GRANITE MONUMENT	BV = BUTTERFLY VALVE
= IRON PIPE	O = BLOW OFF
● = IRON ROD	—o— = SIGN
	BOURLE BOOT COM

A = CONTROL POINT

■ DRILL HOLE

□ UTILITY POLE WITH LIGHT

□ TRAFFIC SPAN POLE

□ ELECTRIC BOX

A = WETLAND FLAG

□ DUBLE POST SIGN

M = MAIL BOX

□ BOLLARD

□ BOLLARD

□ GAS GATE

□ GAS GATE

□ TELEPHONE BOX

□ CATV TUBE

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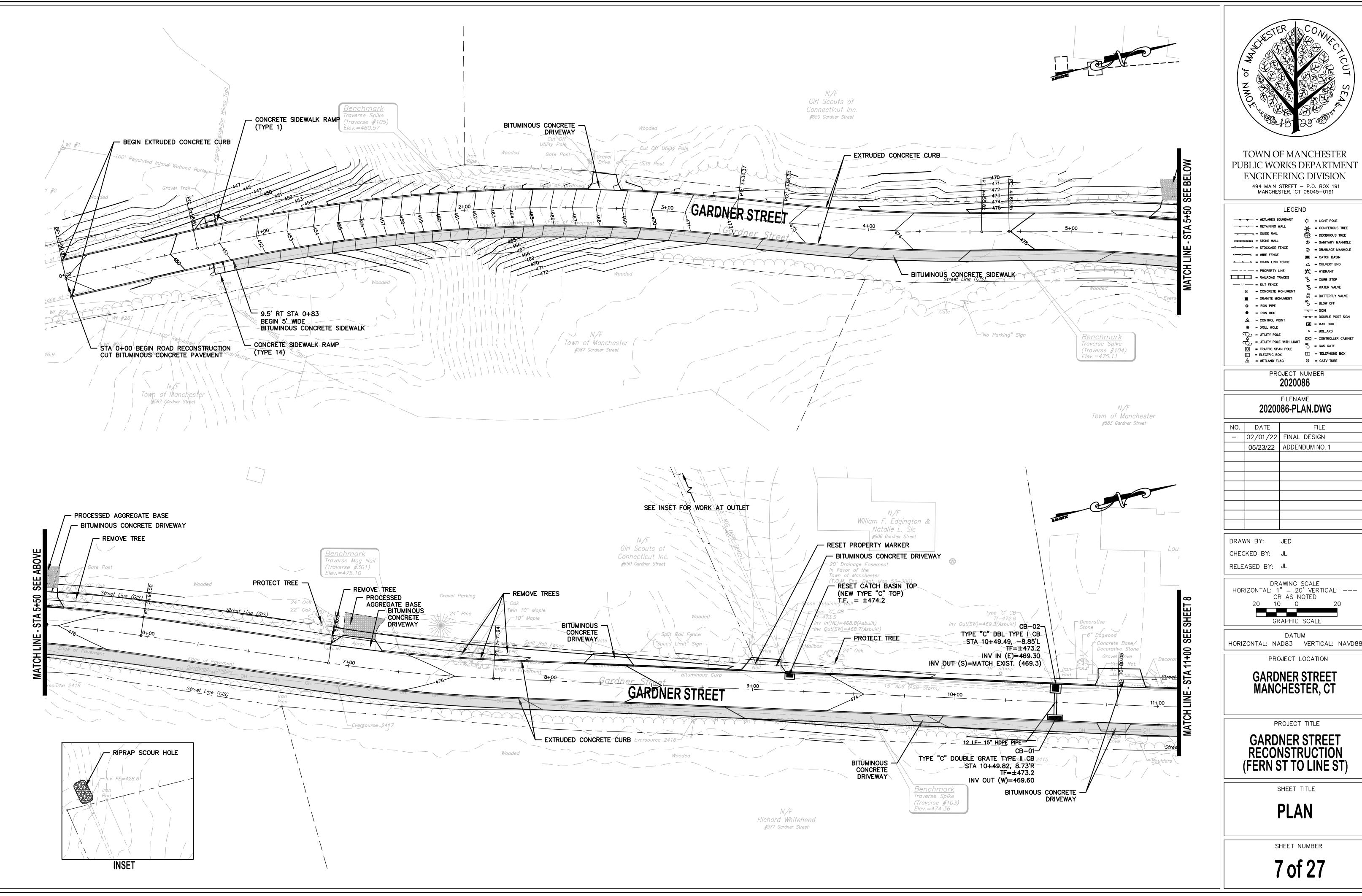
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TOWN OF MANCHESTER PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION

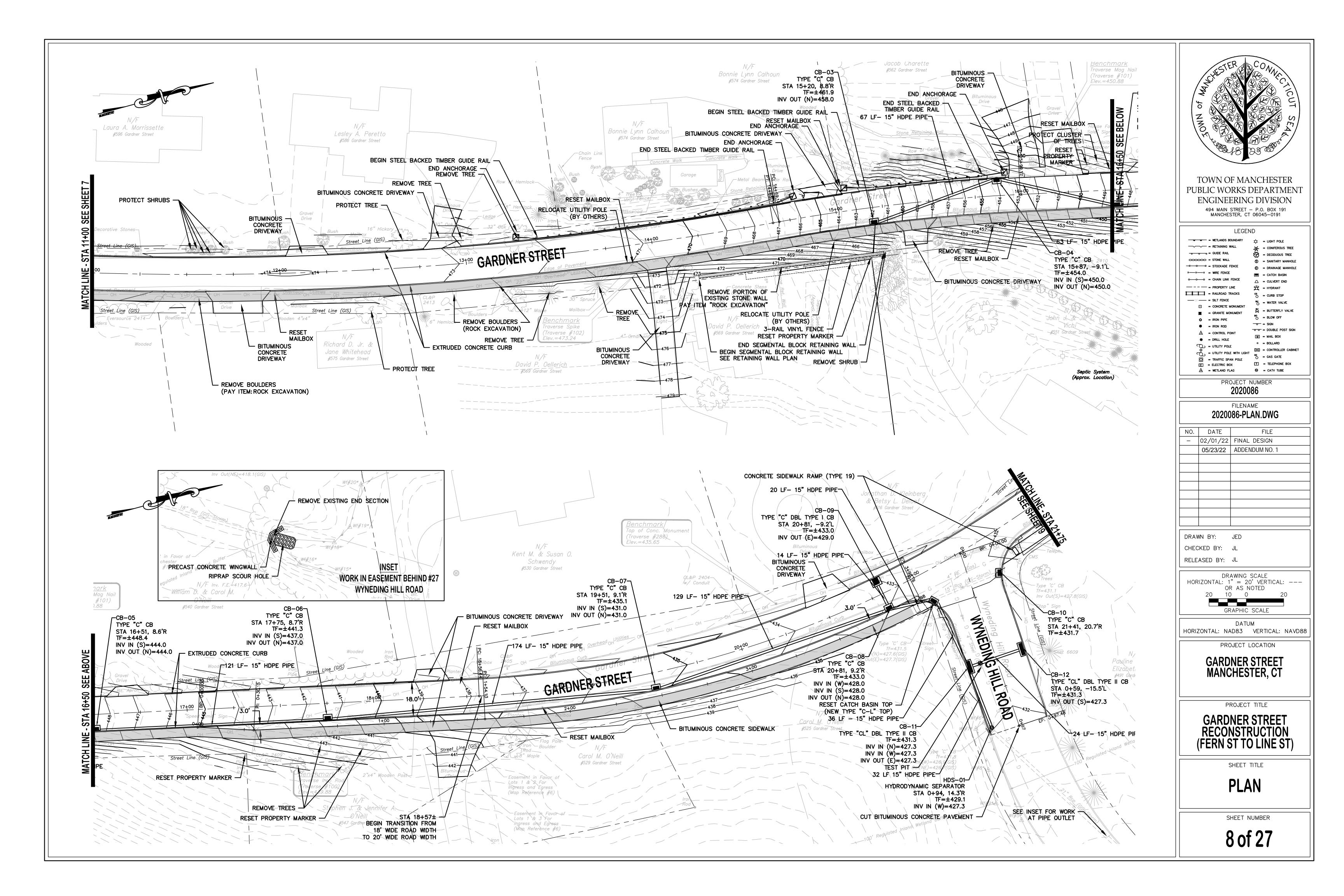
= DECIDUOUS TREE

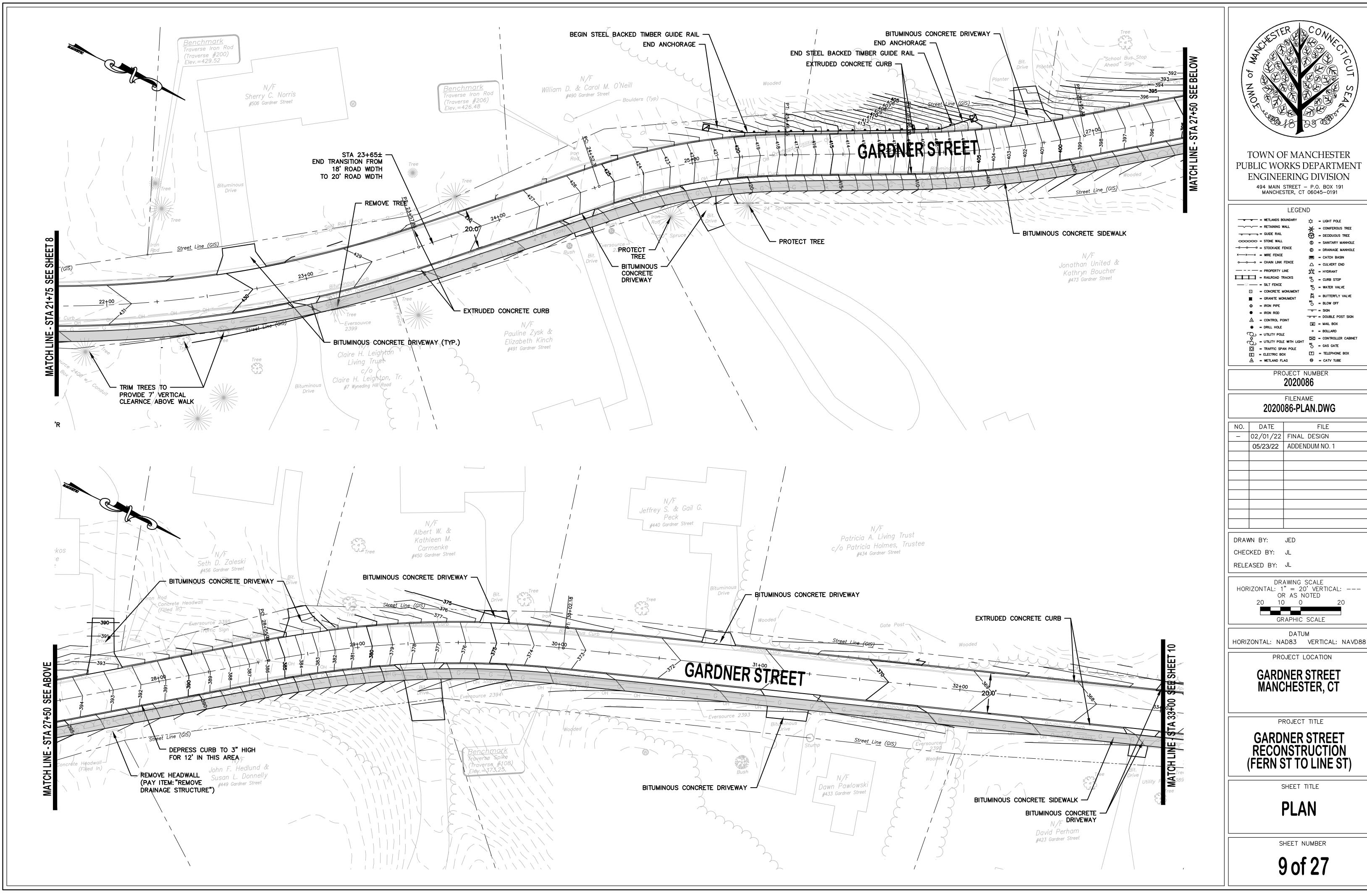
O = BLOW OFF o = SIGN o o = DOUBLE POST SIGN M = MAIL BOX

FILE 02/01/22 FINAL DESIGN 05/23/22 | ADDENDUM NO. 1

DRAWING SCALE
HORIZONTAL: 1" = 20' VERTICAL: --OR AS NOTED

GARDNER STREET RECONSTRUCTION (FERN ST TO LINE ST)





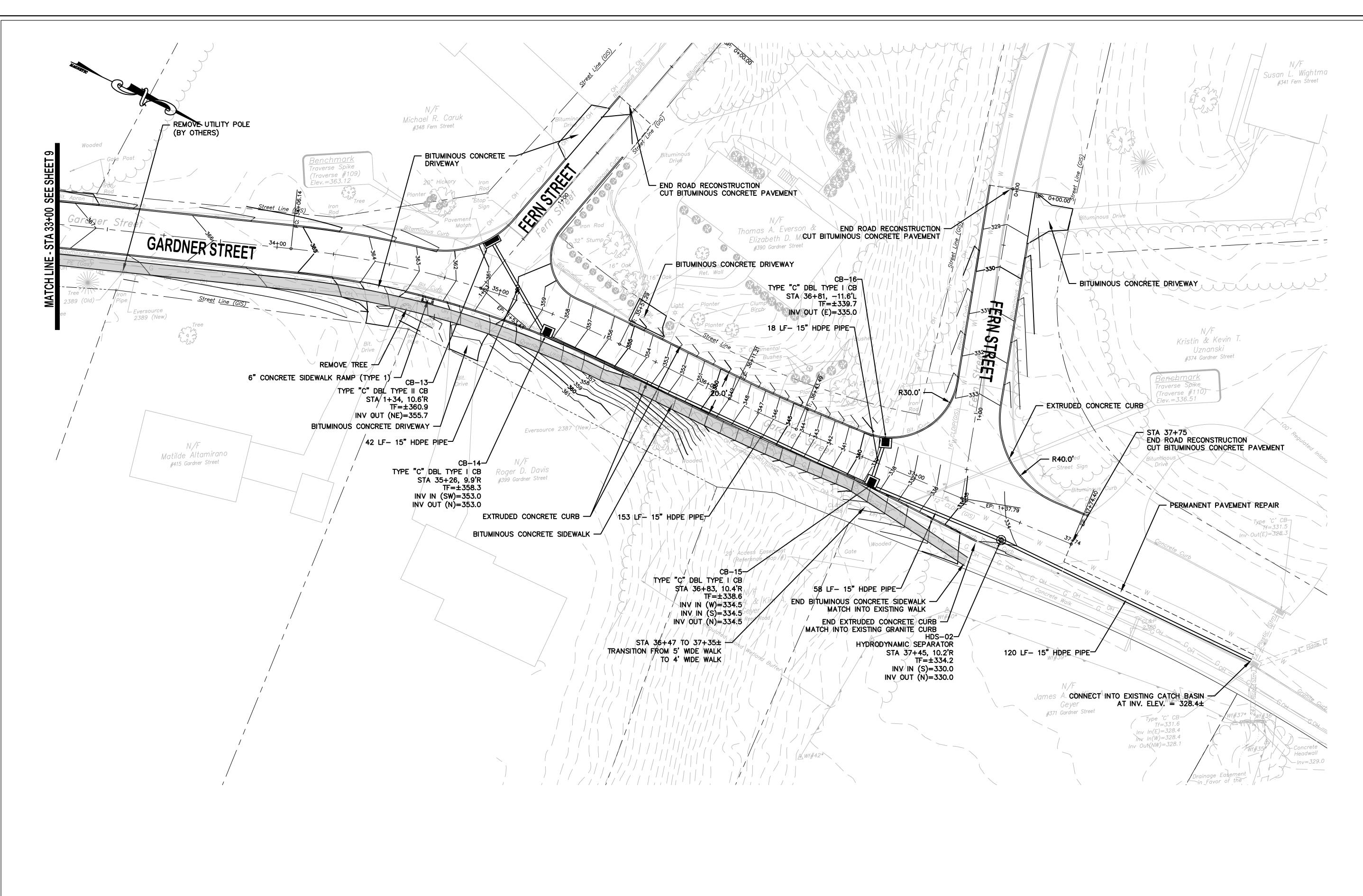


TOWN OF MANCHESTER PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION

M = MAIL BOX

	2020000-PLAN.DWG					
NO.	DATE	FILE				
_	02/01/22	FINAL DESIGN				
	05/23/22	ADDENDUM NO. 1				

HORIZONTAL: NAD83 VERTICAL: NAVD88





LEGEND

= CONIFEROUS TREE = DECIDUOUS TREE ■ = GRANITE MONUMENT

O = IRON PIPE = IRON ROD

 = CONTROL POINT = DRILL HOLE

= UTILITY POLE T = TELEPHONE BOX E = ELECTRIC BOX = WETLAND FLAG ⊕ CATV TUBE

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> GARDNER STREET MANCHESTER, CT

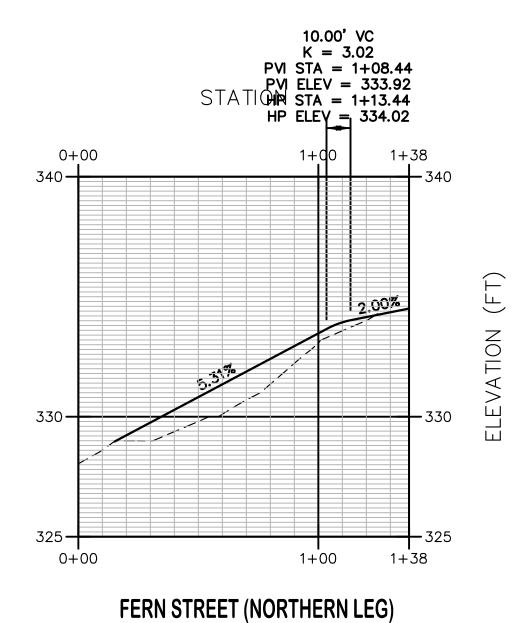
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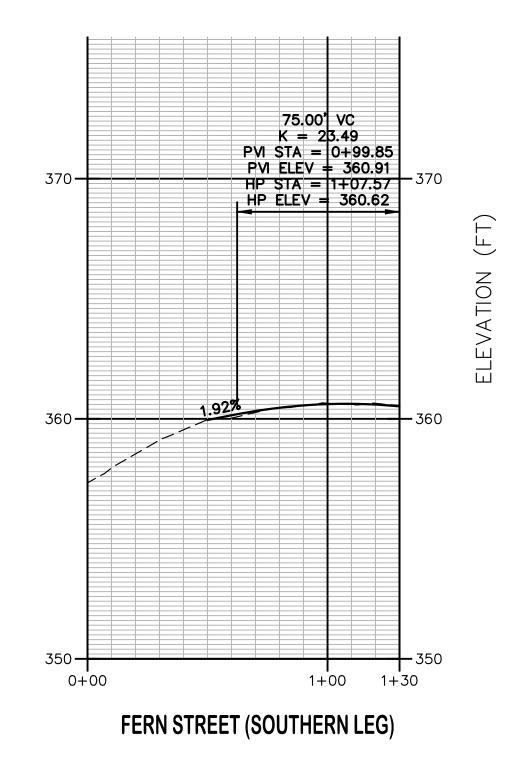
GARDNER STREET RECONSTRUCTION (FERN ST TO LINE ST)

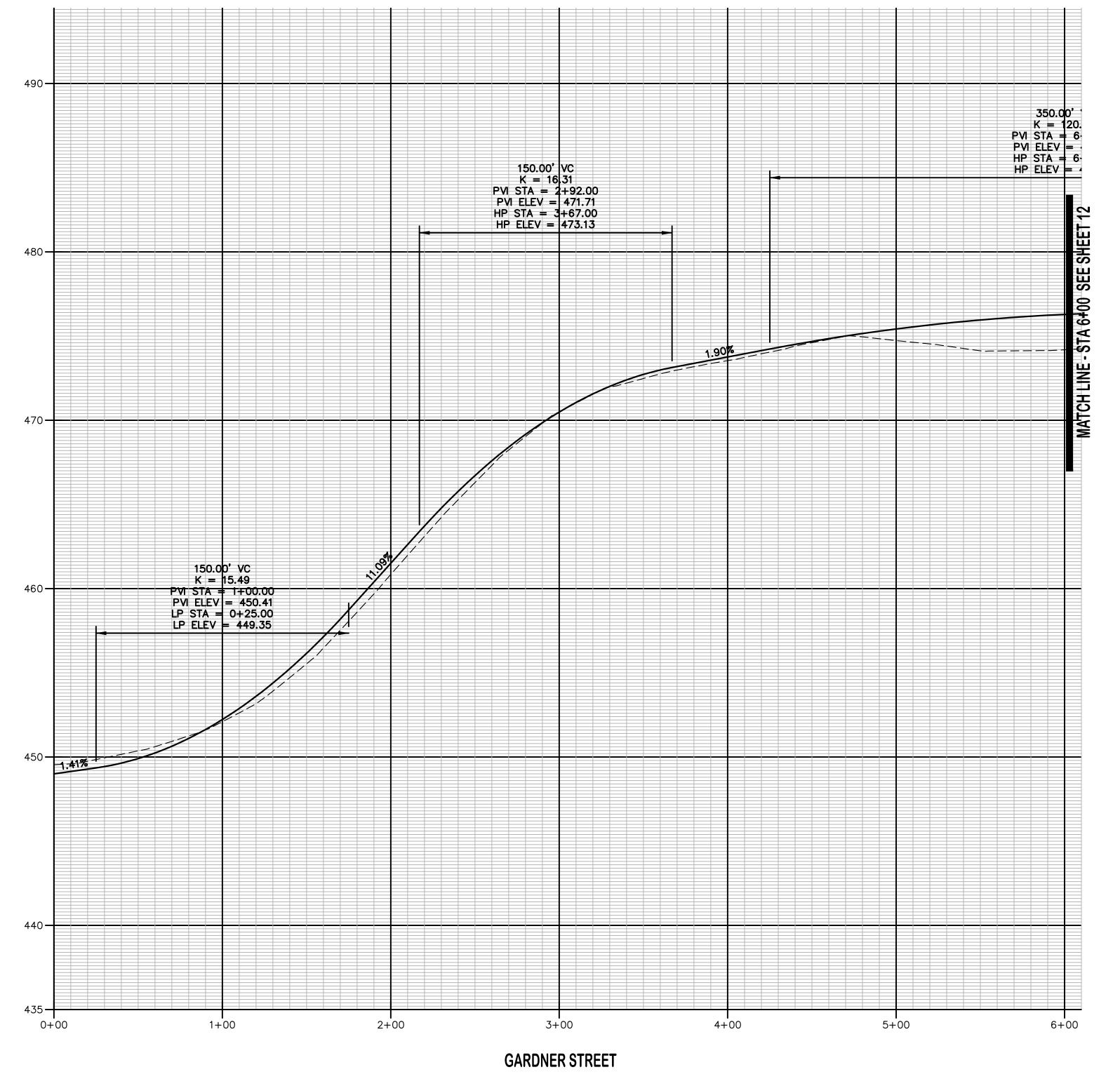
SHEET TITLE

PLAN

SHEET NUMBER









LEGEND

= WETLANDS BOUNDARY

= RETAINING WALL

= CONIFEROUS TREE

= DECIDUOUS TREE

= DECIDUOUS TREE

= SANITARY MANHOL

= DECIDUOUS TREE

= CATCLE DESINA

x x x = wire fence

□ = CAT

□ = CAT

□ = CAT

□ = CUL

□ = RAILROAD TRACKS

□ = CUL

□ = CAT

□ = CUL

□ = CAT

□ = CUL

□ = CU

■ SILT FENCE
■ CONCRETE MONUMENT
■ GRANITE MONUMENT
■ IRON PIPE
■ IRON ROD
■ CURB STOP

WY WATER VALVE

BU = BUTTERFLY VALVE

BU = BLOW OFF

■ SIGN
■ DOUBLE POST SIGN

△ = CONTROL POINT

■ DRILL HOLE

□ UTILITY POLE

□ UTILITY POLE WITH LIGHT

□ = TRAFFIC SPAN POLE

□ = ELECTRIC BOX

△ = WETLAND FLAG

□ = DOUBLE POST SIG

■ MAIL BOX

□ = BOLLARD

□ = CONTROLLER CABI

□ = GAS GATE

□ = TELEPHONE BOX

△ = WETLAND FLAG

□ = CATV TUBE

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HORIZONTAL: 1" = 40' VERTICAL: --
OR AS NOTED

40 20 0 40

GRAPHIC SCALE

DATUM
HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION

GARDNER STREET MANCHESTER, CT

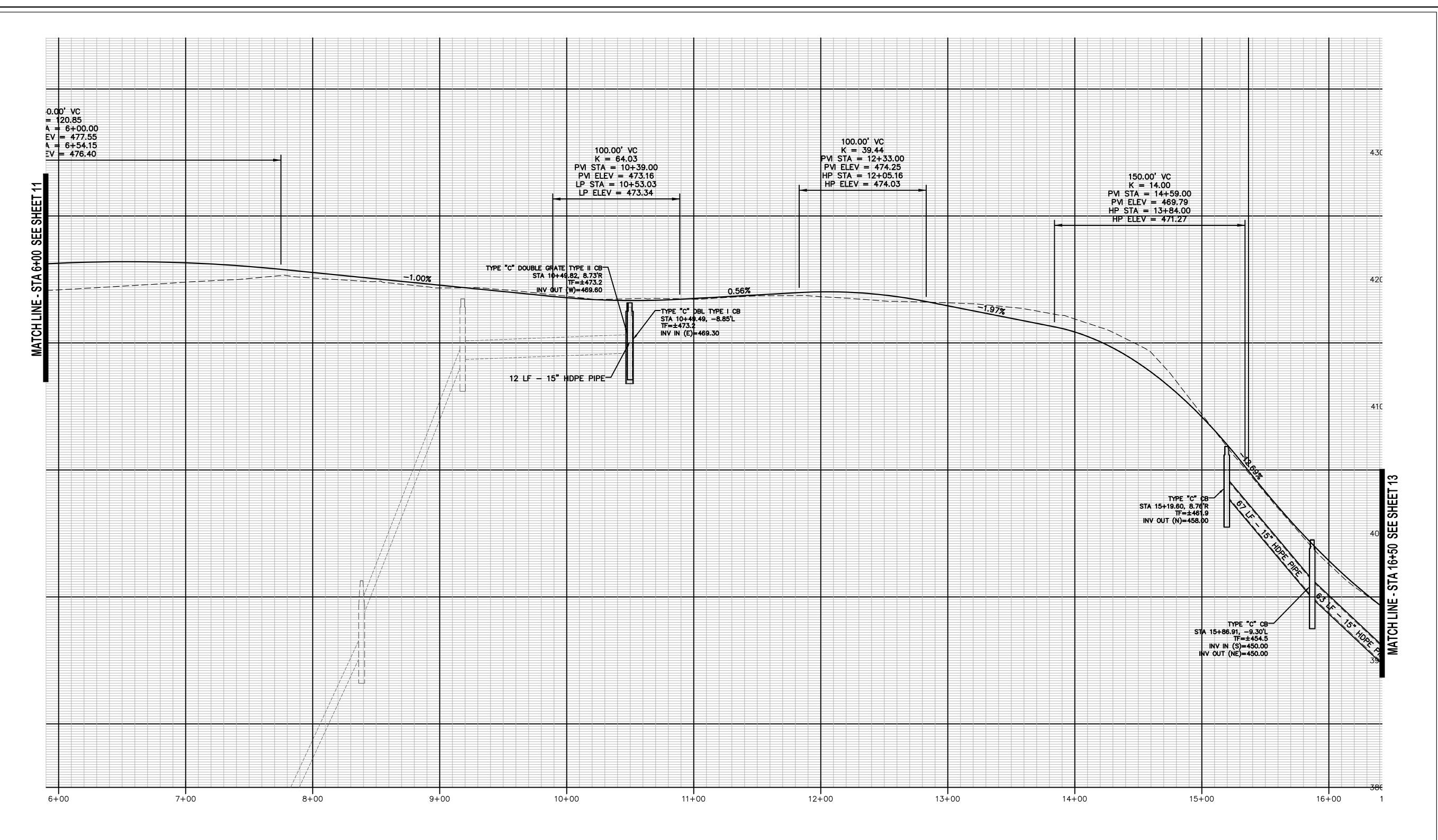
PROJECT TITLE

GARDNER STREET RECONSTRUCTION (FERN ST TO LINE ST)

SHEET TITLE

PROFILE

SHEET NUMBER





LEGEND

= WETLANDS BOUNDARY = CONIFEROUS TREE = DECIDUOUS TREE DRAINAGE MANHOLE = CATCH BASIN = RAILROAD TRACKS WV = WATER VALVE BV = BUTTERFLY VALVE ■ = GRANITE MONUMENT

O = IRON PIPE = IRON ROD

o = SIGN o o = DOUBLE POST SIGN \triangle = control point M = MAIL BOX = DRILL HOLE O = BOLLARD = UTILITY POLE = CONTROLLER CABINET

PROJECT NUMBER

= UTILITY POLE WITH LIGHT O = GAS GATE = TRAFFIC SPAN POLE E = ELECTRIC BOX T = TELEPHONE BOX = WETLAND FLAG ⊕ CATV TUBE

2020086 FILENAME

	2020086-PLAN.DWG				
NO.	DATE	FILE			
_	02/01/22	FINAL DESIGN			
	05/23/22	ADDENDUM NO. 1			

DRAWN BY: JED CHECKED BY: JL RELEASED BY: JL

DRAWING SCALE
HORIZONTAL: 1" = 40' VERTICAL: --OR AS NOTED
40 20 0 40 GRAPHIC SCALE

DATUM HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION

GARDNER STREET MANCHESTER, CT

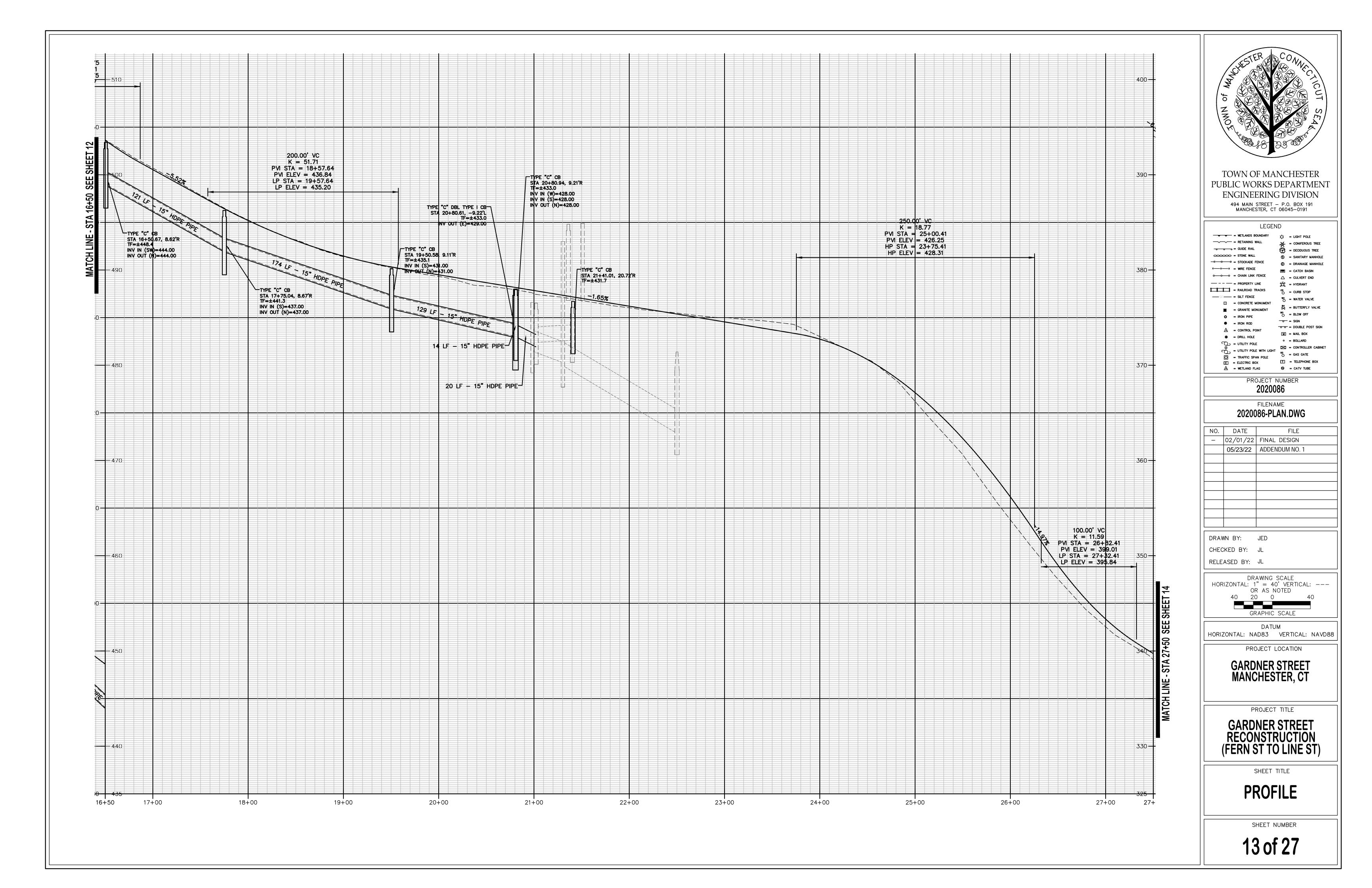
PROJECT TITLE

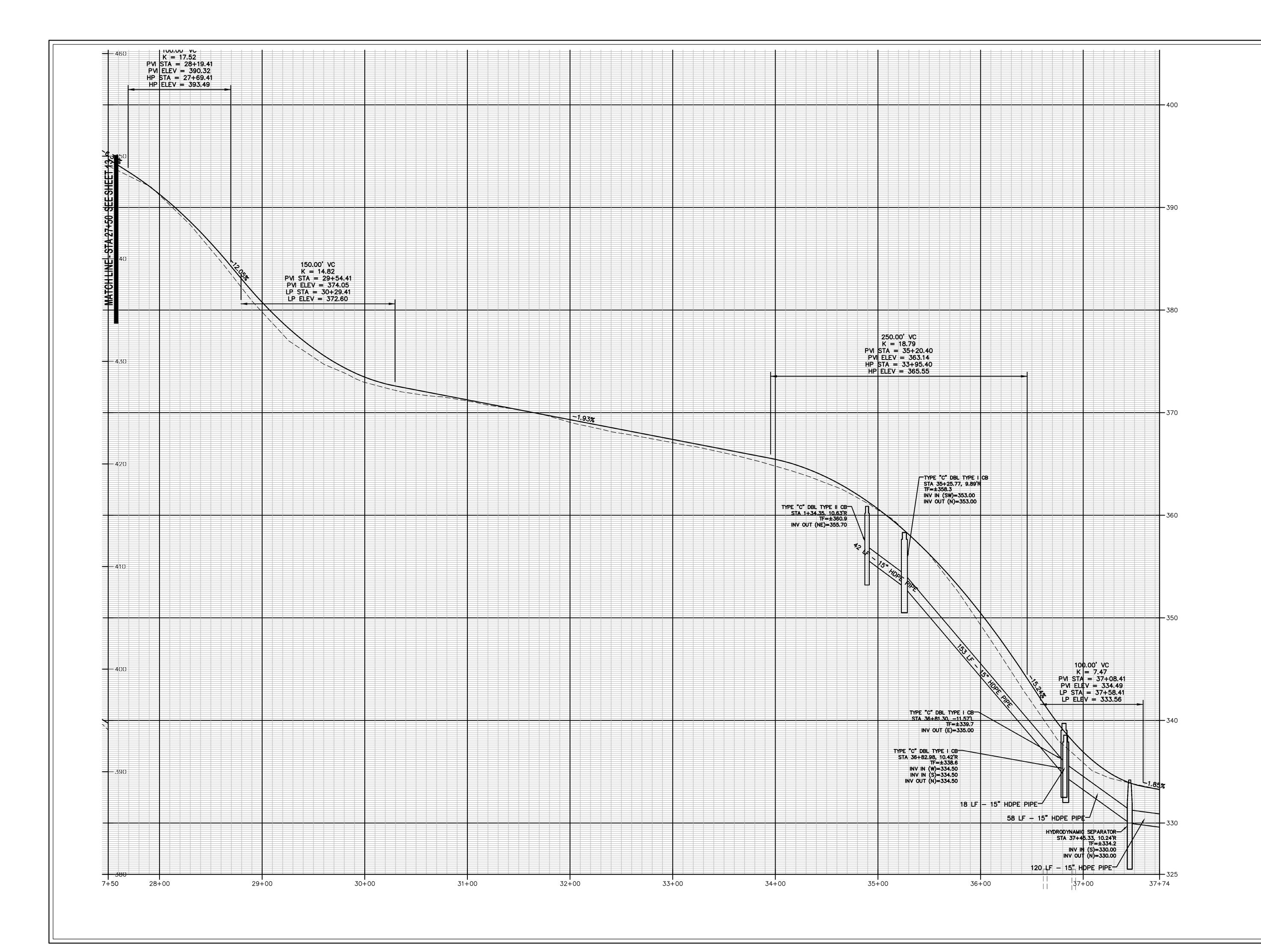
GARDNER STREET RECONSTRUCTION (FERN ST TO LINE ST)

SHEET TITLE

PROFILE

SHEET NUMBER







= CONIFEROUS TREE

= DECIDUOUS TREE

DRAINAGE MANHOLE

= CATCH BASIN

WV = WATER VALVE

BV = BUTTERFLY VALVE

LEGEND = WETLANDS BOUNDARY = RAILROAD TRACKS ■ = GRANITE MONUMENT O = IRON PIPE = IRON ROD

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PROJECT LOCATION

GARDNER STREET MANCHESTER, CT

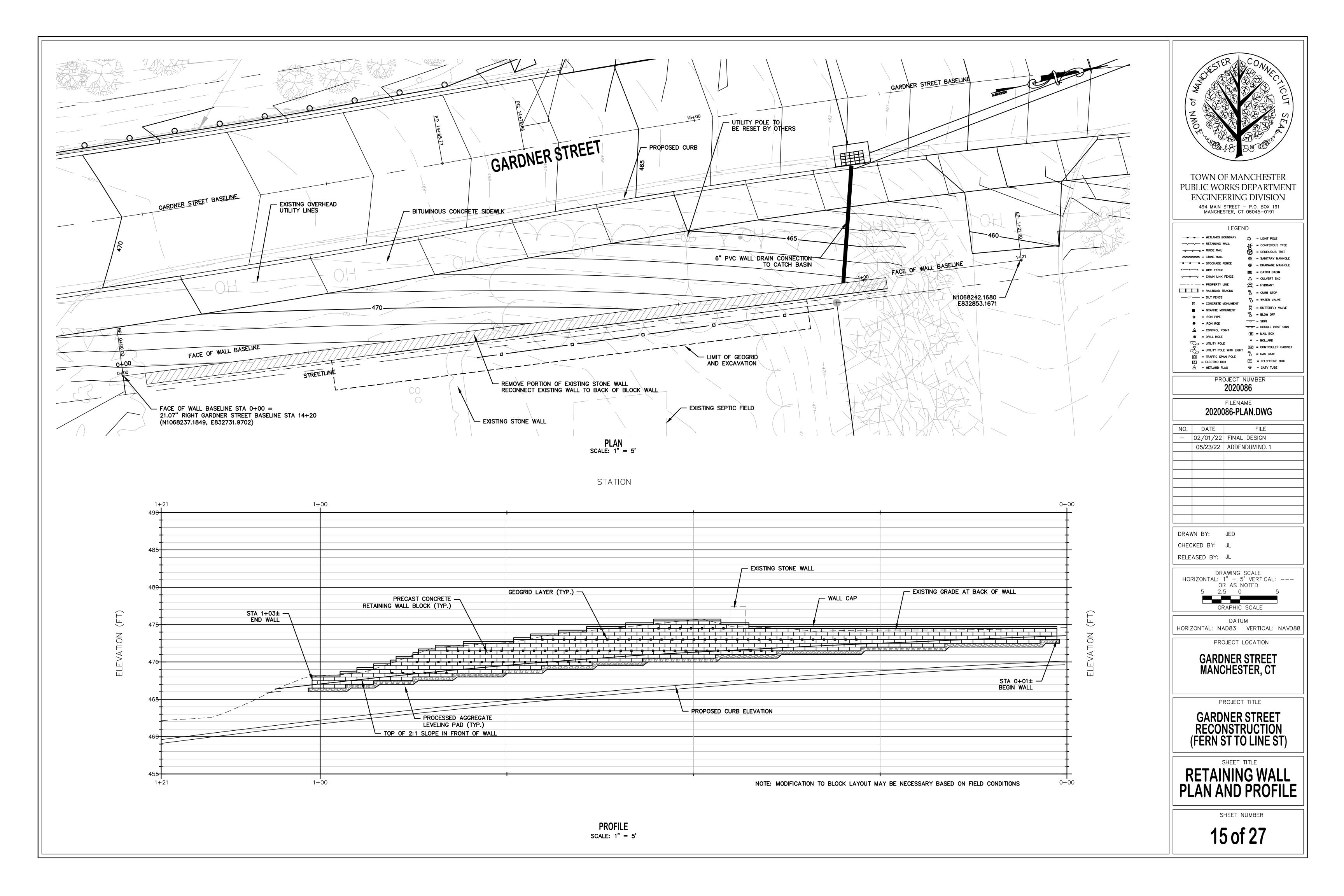
PROJECT TITLE

GARDNER STREET RECONSTRUCTION (FERN ST TO LINE ST)

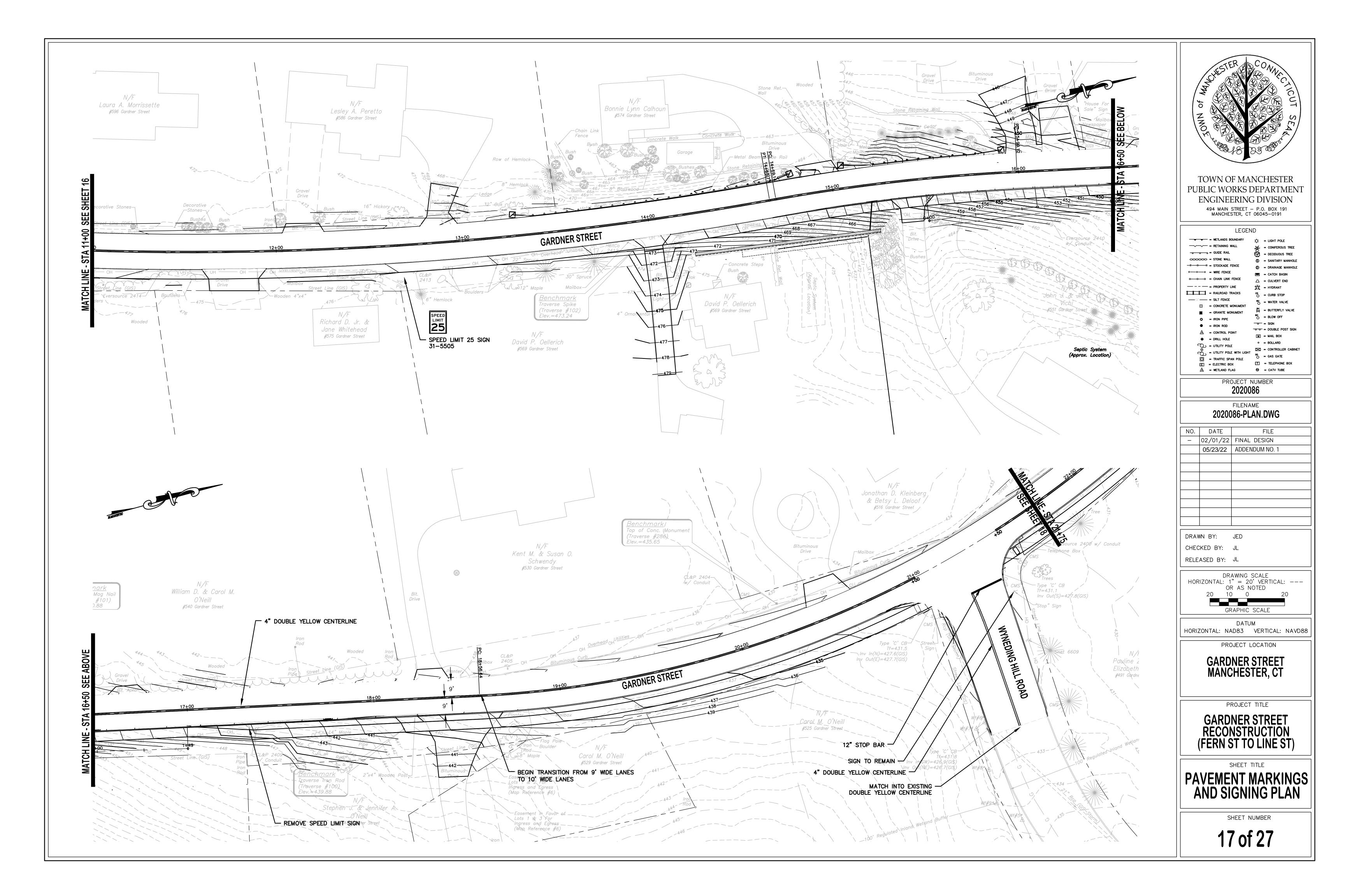
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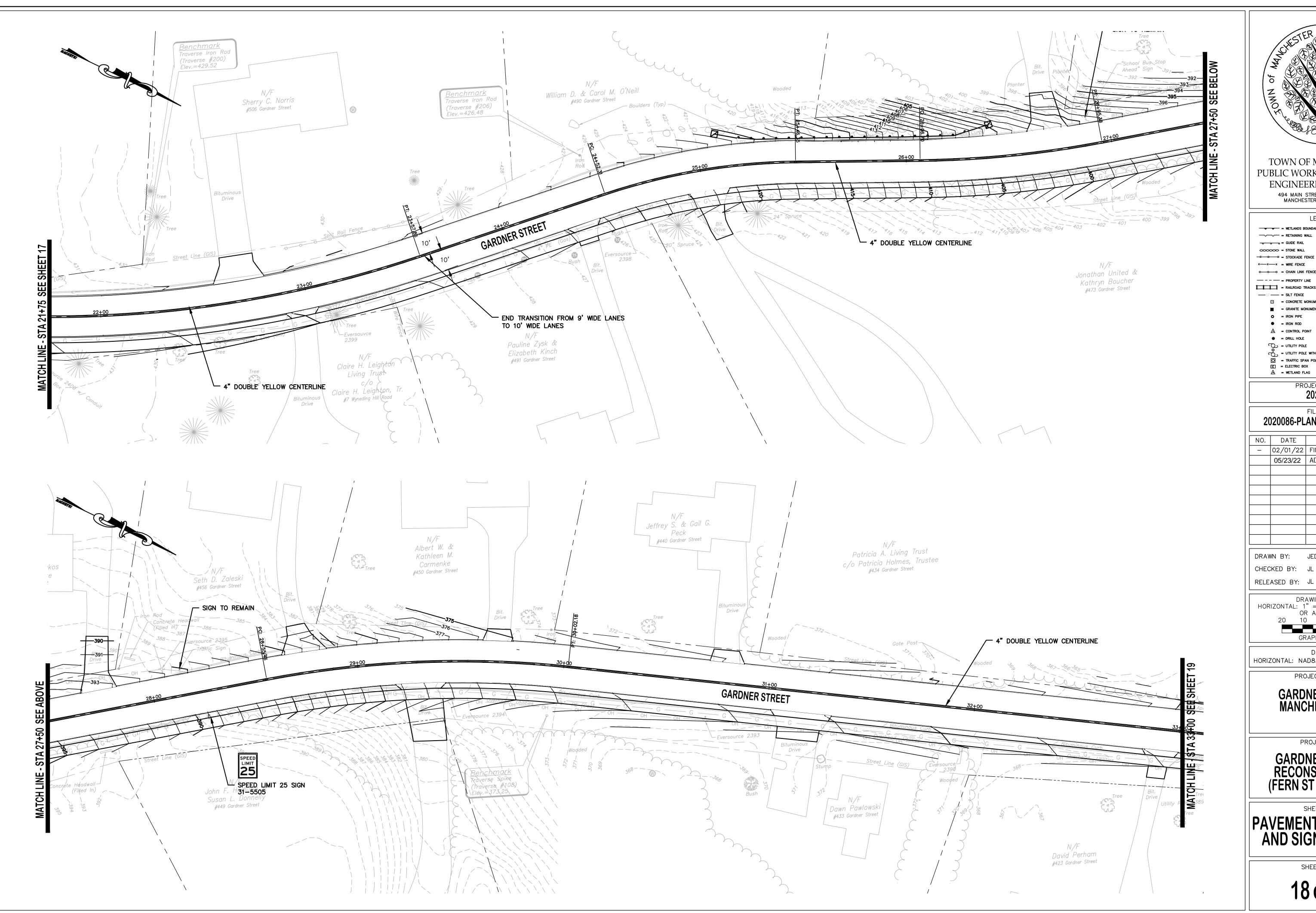
PROFILE

SHEET NUMBER











LEGEND

= CONIFEROUS TREE

= DECIDUOUS TREE

WV = WATER VALVE

= WETLANDS BOUNDARY ■ = GRANITE MONUMENT

O = IRON PIPE = IRON ROD = CONTROL POINT

o = SIGN = DRILL HOLE

= UTILITY POLE = UTILITY POLE WITH LIGHT = TRAFFIC SPAN POLE E = ELECTRIC BOX T = TELEPHONE BOX = WETLAND FLAG ⊕ CATV TUBE

PROJECT NUMBER 2020086

FILENAME 2020086-PLAN-MARKINGS.DWG

NO.	DATE	FILE
_	02/01/22	FINAL DESIGN
	05/23/22	ADDENDUM NO. 1

DRAWN BY: JED CHECKED BY: JL

DRAWING SCALE
HORIZONTAL: 1" = 20' VERTICAL: --OR AS NOTED
20 10 0 20

DATUM HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION

GARDNER STREET MANCHESTER, CT

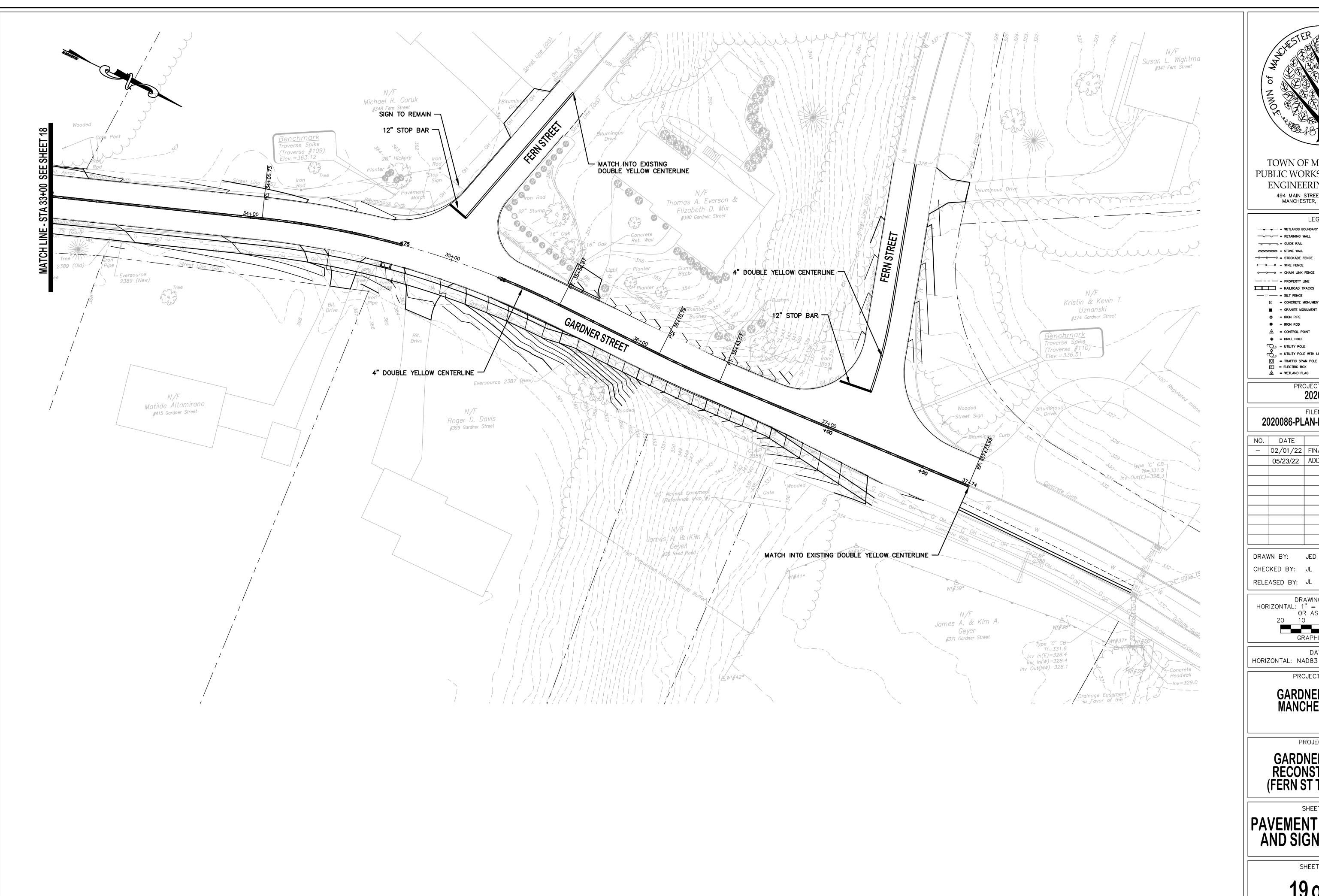
PROJECT TITLE

GARDNER STREET RECONSTRUCTION (FERN ST TO LINE ST)

SHEET TITLE

PAVEMENT MARKINGS AND SIGNING PLAN

SHEET NUMBER





LEGE	ND
= WETLANDS BOUNDARY = RETAINING WALL = GUIDE RAIL	
= STOCKADE FENCE	S = SANITARY MANHOLED = DRAINAGE MANHOLE
xx = WIRE FENCE OO = CHAIN LINK FENCE	= CATCH BASIN
= PROPERTY LINE	
= RAILROAD TRACKS	O = CURB STOP W = WATER VALVE
	W = WATER VALVE BV = BUTTERFLY VALVE
= IRON PIPE	BO = BLOW OFF
■ = IRON ROD▲ = CONTROL POINT	o o = DOUBLE POST SIGN
= DRILL HOLE	M = MAIL BOX • = BOLLARD

PROJECT NUMBER 2020086

FILENAME

E = ELECTRIC BOX

= WETLAND FLAG

2020086-PLAN-MARKINGS.DWG

NO.	DATE	FILE
-	02/01/22	FINAL DESIGN
	05/23/22	ADDENDUM NO. 1
DRA۱	WN BY:	JED

DRAWING SCALE HORIZONTAL: 1" = 20' VERTICAL: OR AS NOTED	
20 10 0 20	

DATUM
HORIZONTAL: NAD83 VERTICAL: NAVD88 PROJECT LOCATION

GARDNER STREET MANCHESTER, CT

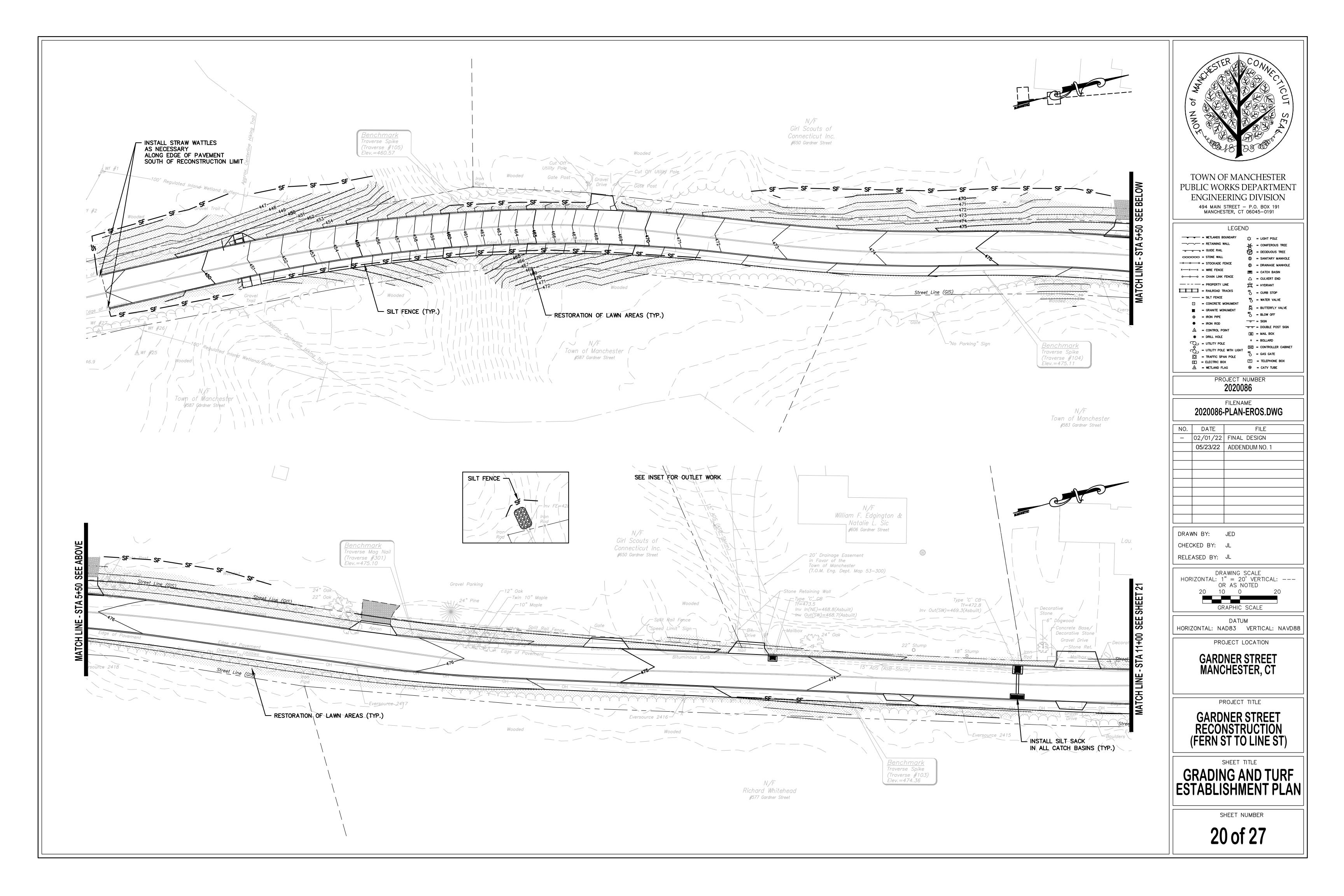
PROJECT TITLE

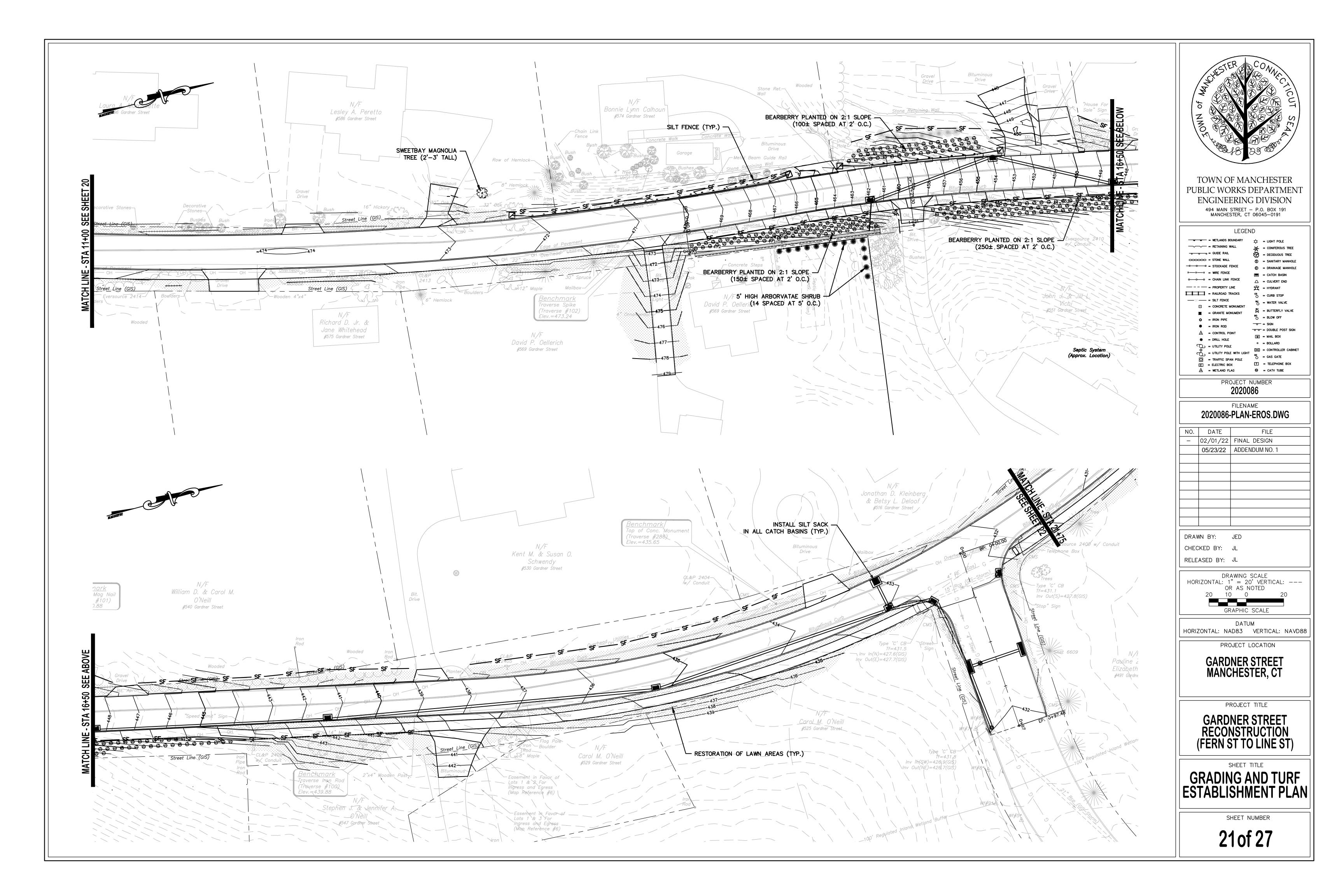
GARDNER STREET RECONSTRUCTION (FERN ST TO LINE ST)

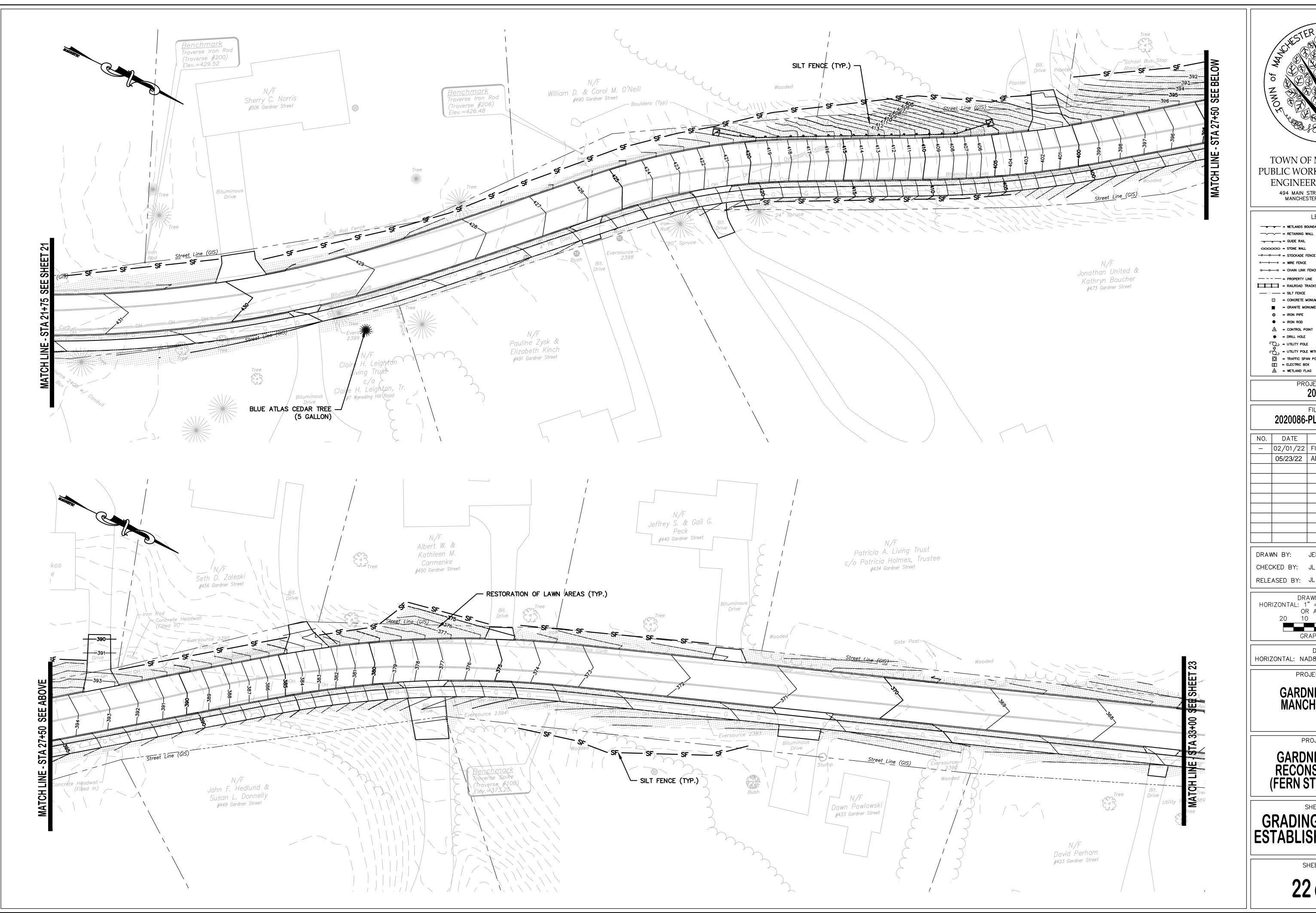
SHEET TITLE

PAVEMENT MARKINGS AND SIGNING PLAN

SHEET NUMBER









= WETLANDS BOUNDARY

■ = GRANITE MONUMENT O = IRON PIPE = IRON ROD

 \triangle = control point

= DECIDUOUS TREE

= DRILL HOLE = UTILITY POLE = UTILITY POLE WITH LIGHT = TRAFFIC SPAN POLE E = ELECTRIC BOX T = TELEPHONE BOX

⊕ CATV TUBE

PROJECT NUMBER 2020086

FILENAME 2020086-PLAN-EROS.DWG

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	02/01/22	
	05/23/22	ADDENDUM NO. 1

CHECKED BY: JL RELEASED BY: JL

DRAWING SCALE
HORIZONTAL: 1" = 20' VERTICAL: --OR AS NOTED
20 10 0 20

GRAPHIC SCALE

DATUM HORIZONTAL: NAD83 VERTICAL: NAVD88

GARDNER STREET MANCHESTER, CT

PROJECT LOCATION

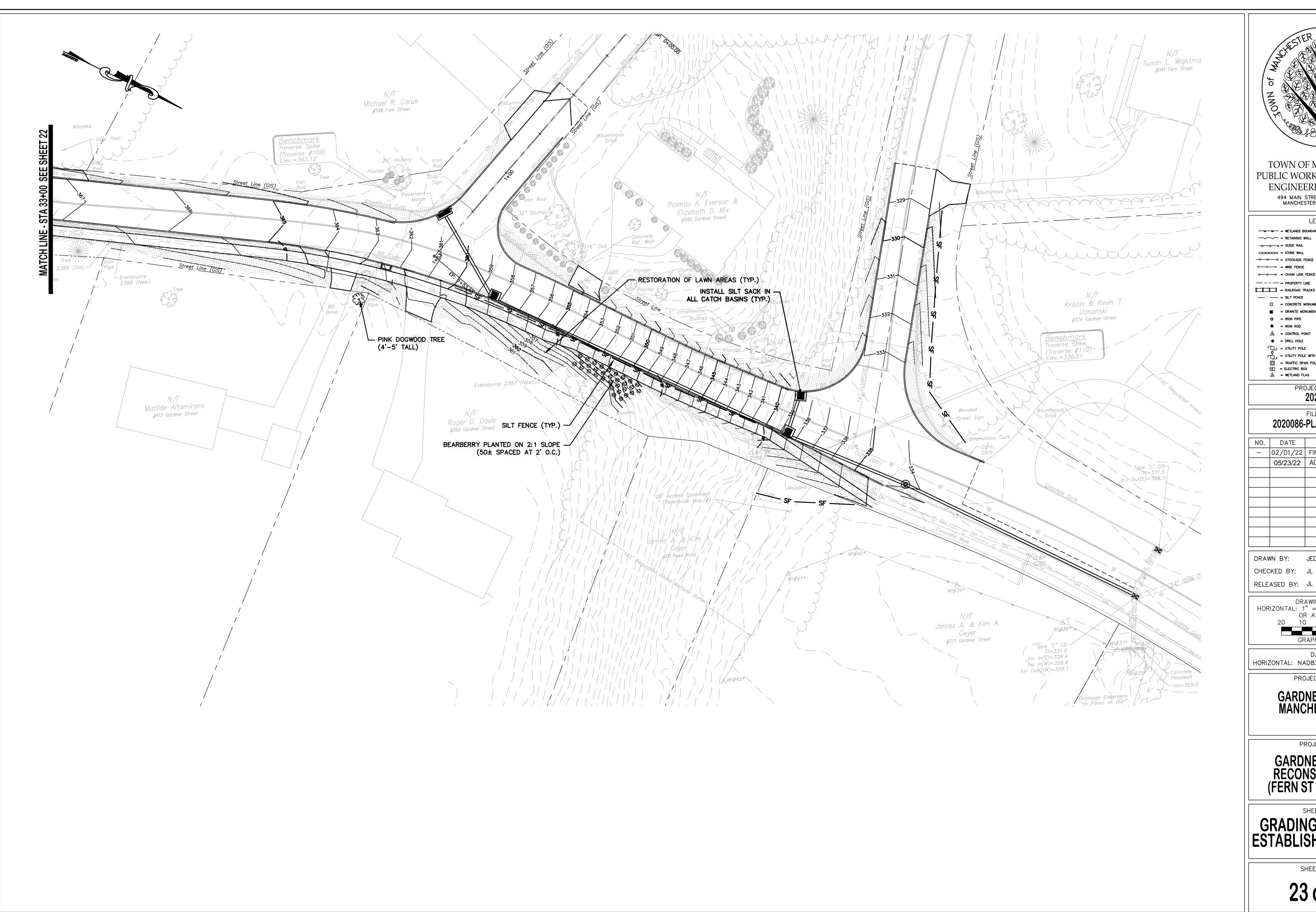
PROJECT TITLE

GARDNER STREET RECONSTRUCTION (FERN ST TO LINE ST)

SHEET TITLE

GRADING AND TURF ESTABLISHMENT PLAN

SHEET NUMBER





LEGEND = DECIDUOUS TREE x---x = WRE FENCE ---- = PROPERTY LINE = RAILROAD TRACKS BV = BUTTERFLY VALVE O = BLOW OFF - sign o o = DOUBLE POST SIGN M = MAIL BOX • = BOLLARD

PROJECT NUMBER

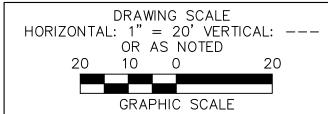
O = GAS GATE

⊕ CATV TUBE

FILENAME 2020086-PLAN-EROS.DWG

NO.	DATE	FILE
_	02/01/22	FINAL DESIGN
	05/23/22	ADDENDUM NO. 1

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HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION

GARDNER STREET MANCHESTER, CT

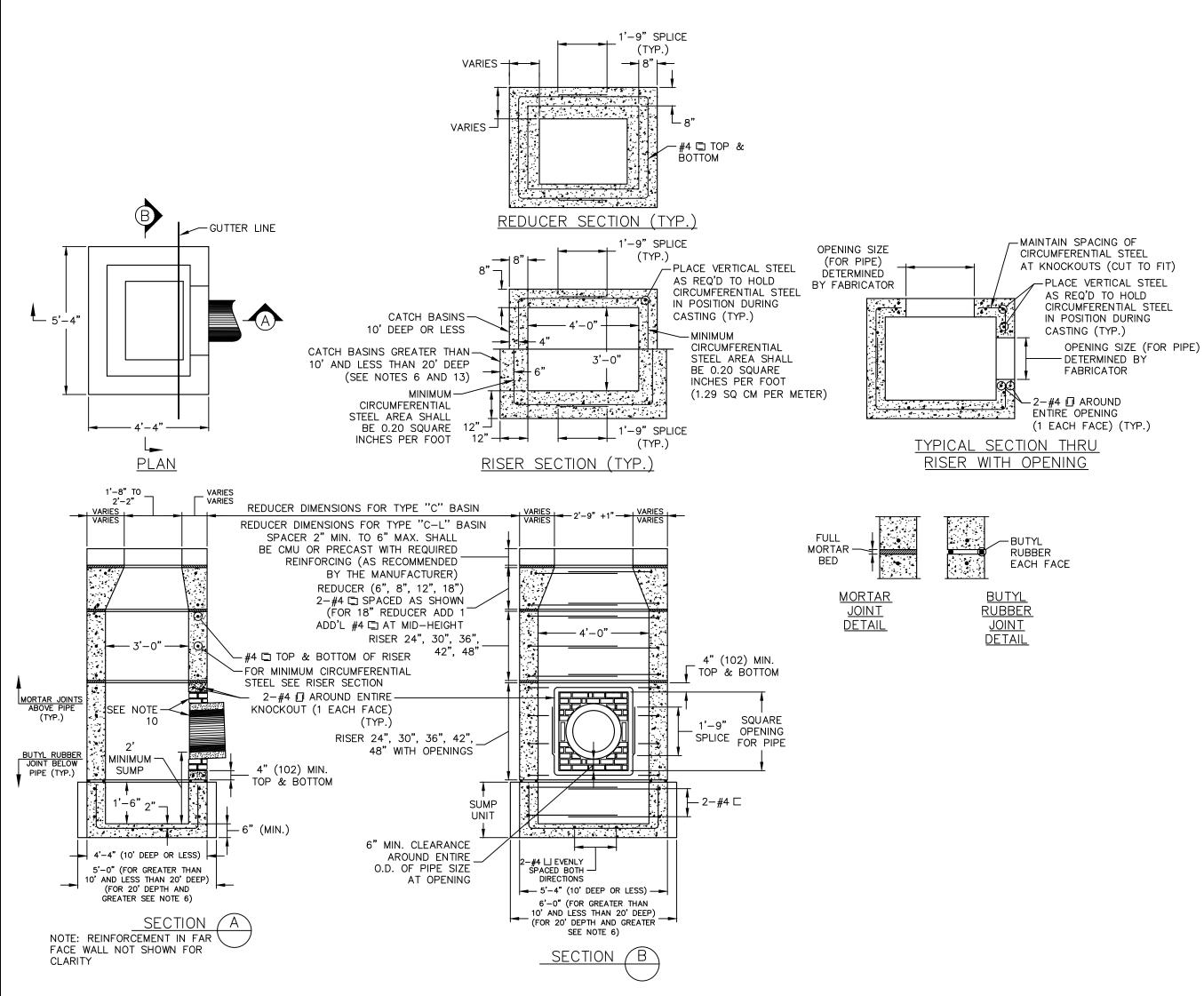
PROJECT TITLE

GARDNER STREET RECONSTRUCTION (FERN ST TO LINE ST)

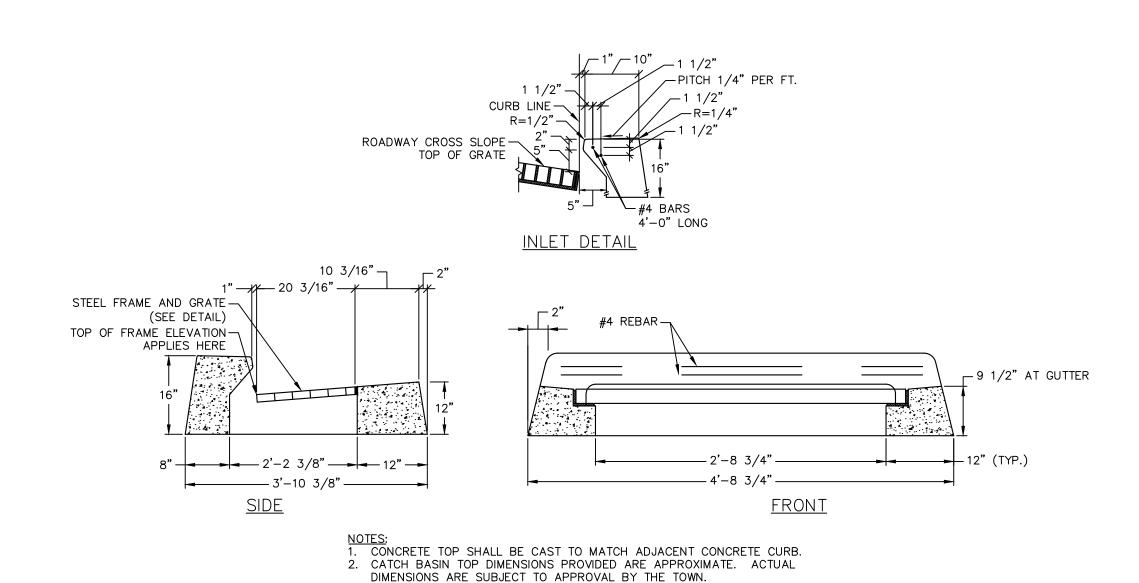
SHEET TITLE

GRADING AND TURF ESTABLISHMENT PLAN

SHEET NUMBER

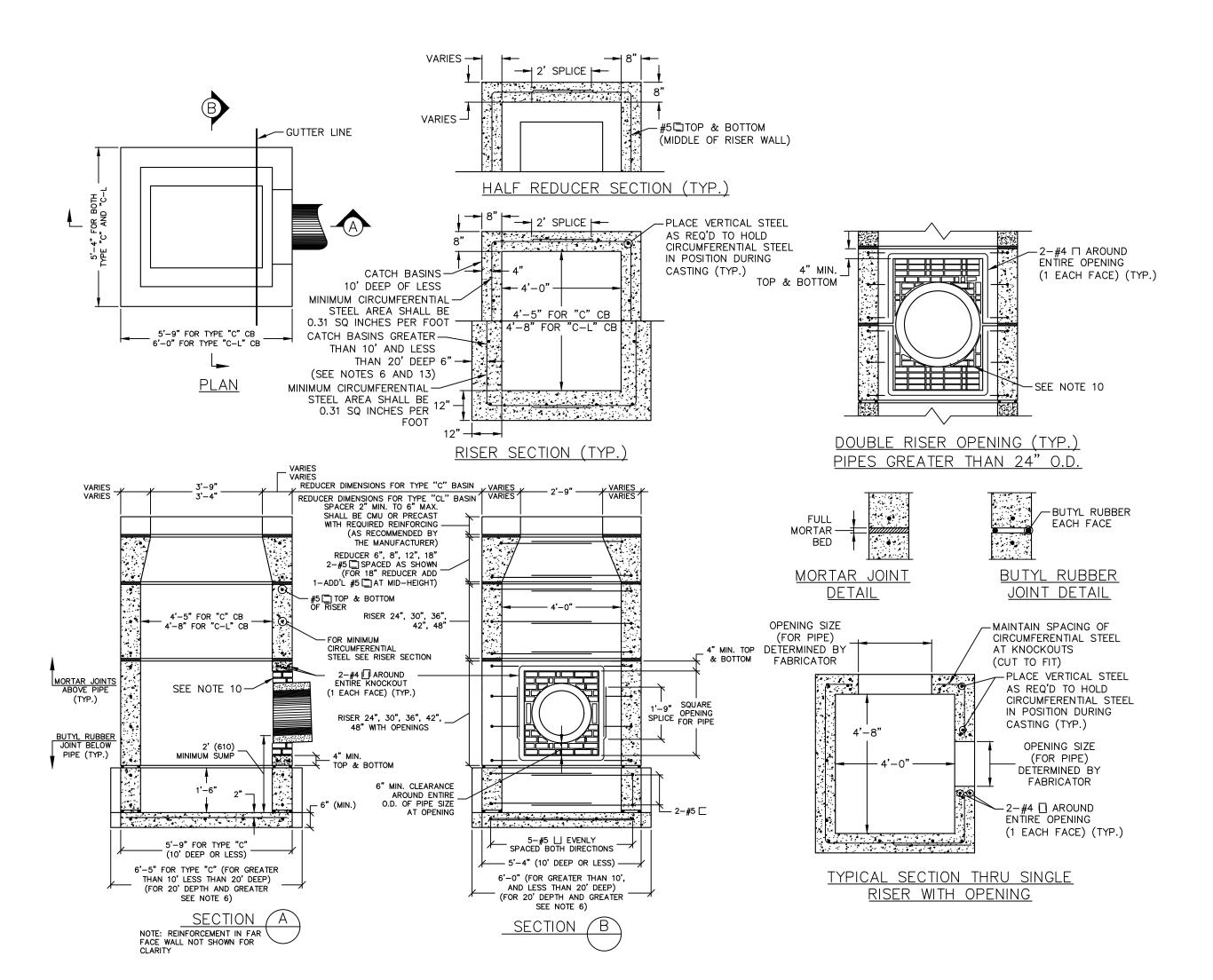


TYPE "C" AND TYPE "C-L" CATCH BASIN



TYPE "C" CATCH BASIN TOP

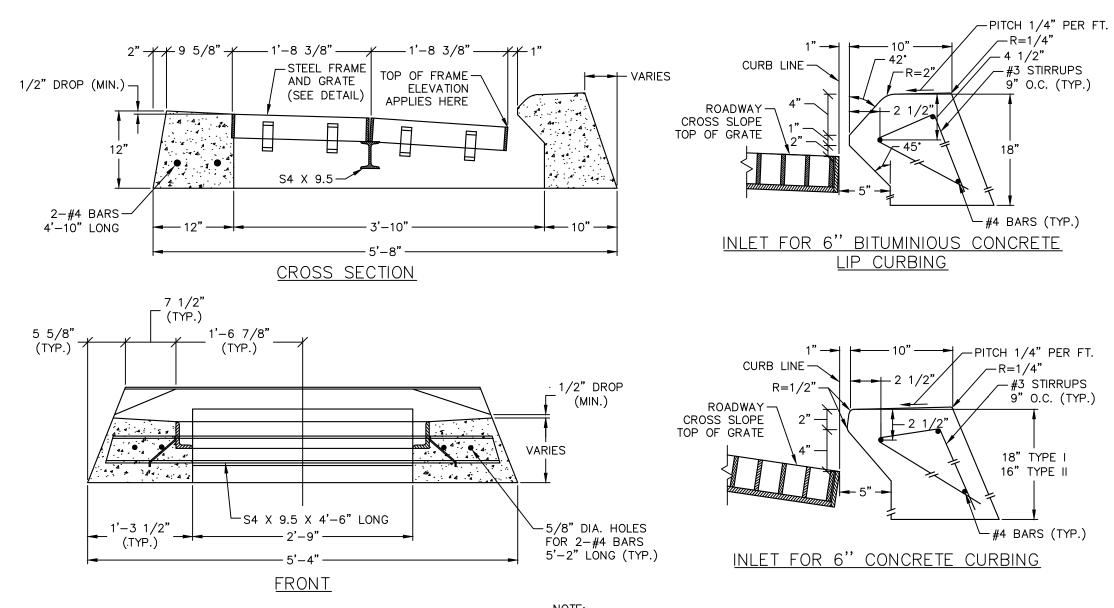
(FOR CONCRETE CURB)



TYPE "C" AND TYPE "C-L" DOUBLE GRATE TYPE I CATCH BASIN

(STRUCTURE UNDER 10' DEEP SHOWN)

NOT TO SCALE



NOTE:

1. CATCH BASIN TOP DIMENSIONS PROVIDED ARE APPROXIMATE. ACTUAL DIMENSIONS ARE SUBJECT

TYPE "C" DOUBLE GRATE TYPE I CATCH BASIN TOP

(FOR CONCRETE CURB AND BITUMINOUS CONCRETE LIP CURB)

NOT TO SCALE



TOWN OF MANCHESTER PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION 494 MAIN STREET - P.O. BOX 191 MANCHESTER, CT 06045-0191

LEGEN	ID
= WETLANDS BOUNDARY	☆ = LIGHT POLE
= RETAINING WALL	= CONIFEROUS TREE
-o-o-o = GUIDE RAIL	= DECIDUOUS TREE
∞ = STONE WALL	S = SANITARY MANHOLE
= STOCKADE FENCE	DRAINAGE MANHOLE
xx = WIRE FENCE	= CATCH BASIN
oo = CHAIN LINK FENCE	
	Y = HYDRANT
= RAILROAD TRACKS	CS = CURB STOP
SF = SILT FENCE	WV = WATER VALVE
	BV = BUTTERFLY VALVE
■ = GRANITE MONUMENT	BO = BLOW OFF
O = IRON PIPE	- = SIGN
● = IRON ROD	o o = DOUBLE POST SIGN
△ = CONTROL POINT	M = MAIL BOX
● = DRILL HOLE	• = BOLLARD
UTILITY POLE	= CONTROLLER CABINET
= UTILITY POLE WITH LIGHT O = TRAFFIC SPAN POLE	O = GAS GATE
E = ELECTRIC BOX	T = TELEPHONE BOX
▲ = WETLAND FLAG	⊕ CATV TUBE

PROJECT NUMBER 2020086

FILENAME
2020086-DETAILS.DWG

NO.	DATE	FILE
_	02/01/22	FINAL DESIGN
	05/23/22	ADDENDUM NO. 1

DRAWN BY: JEI
CHECKED BY: JL
RELEASED BY: JL

DATUM
HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION

GARDNER STREET MANCHESTER, CT

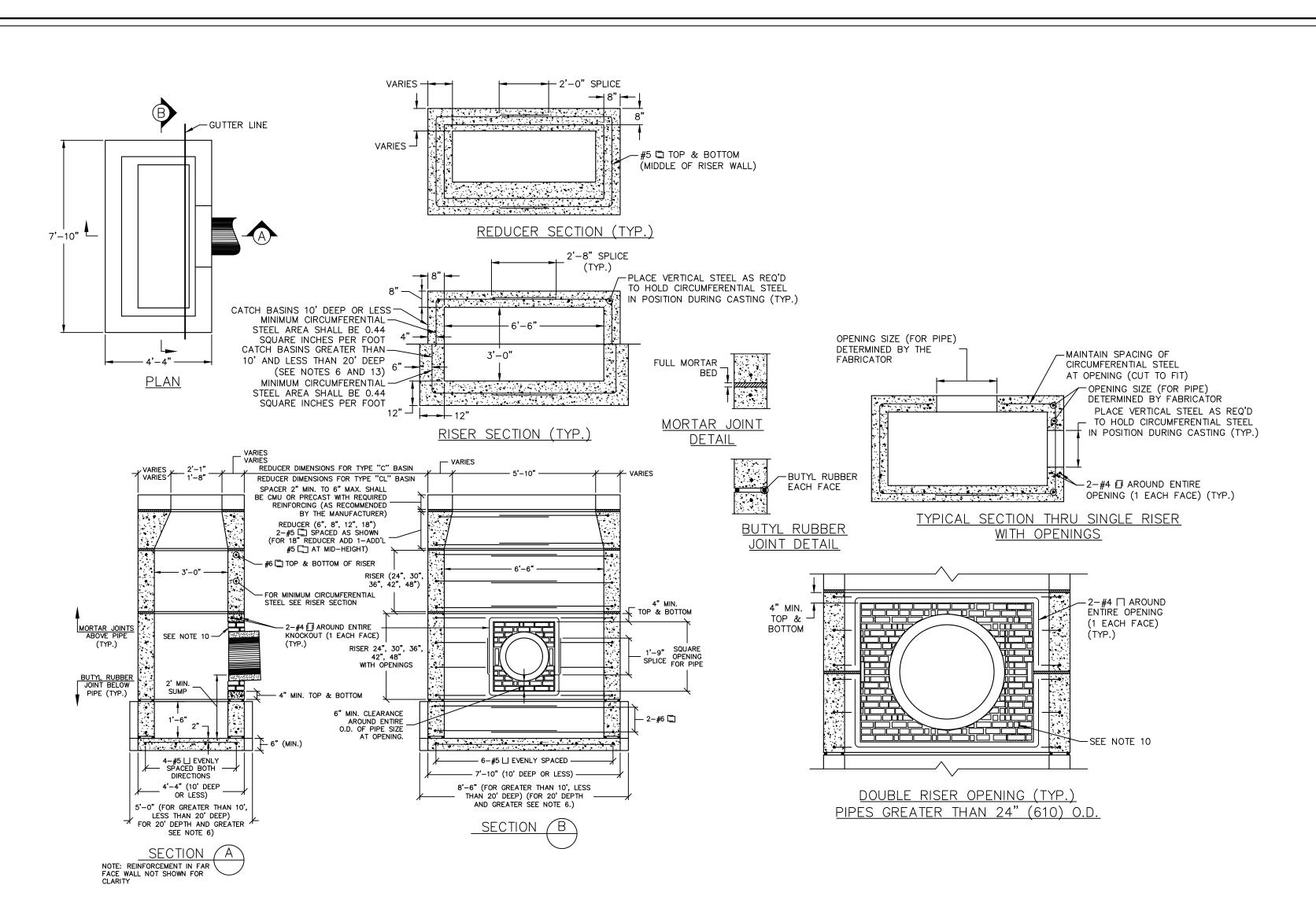
PROJECT TITLE

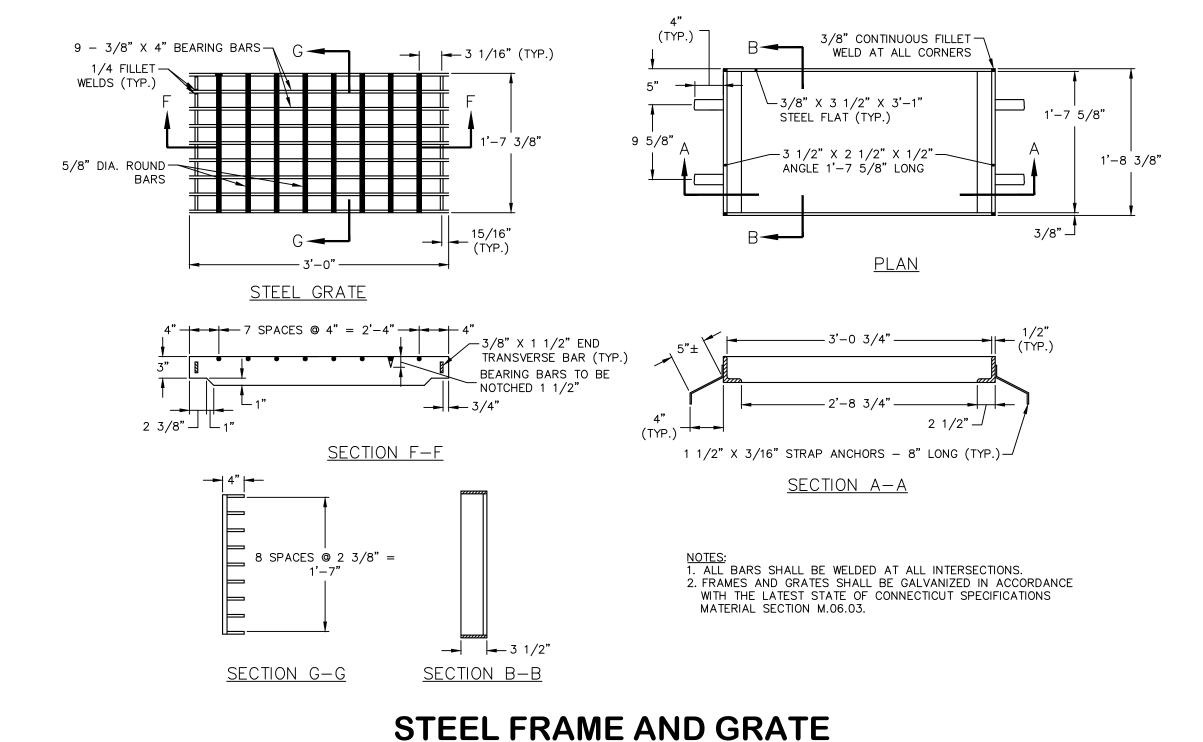
GARDNER STREET RECONSTRUCTION (FERN ST TO LINE ST)

SHEET TITLE

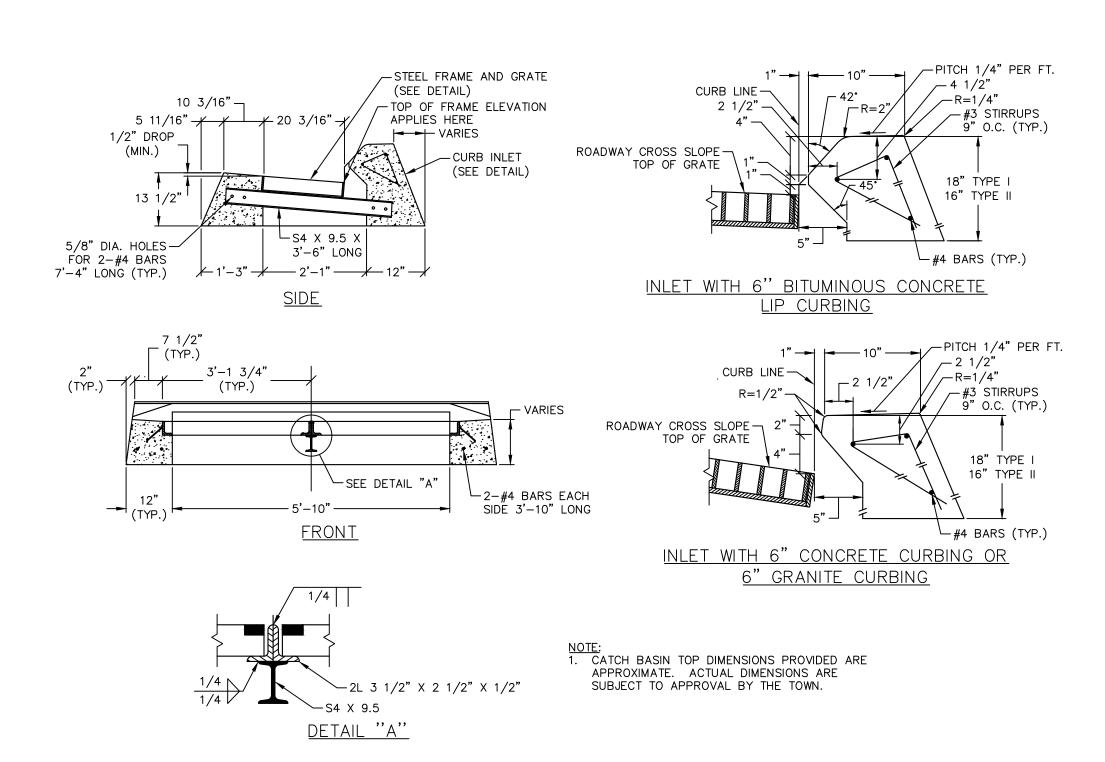
DETAILS

SHEET NUMBER

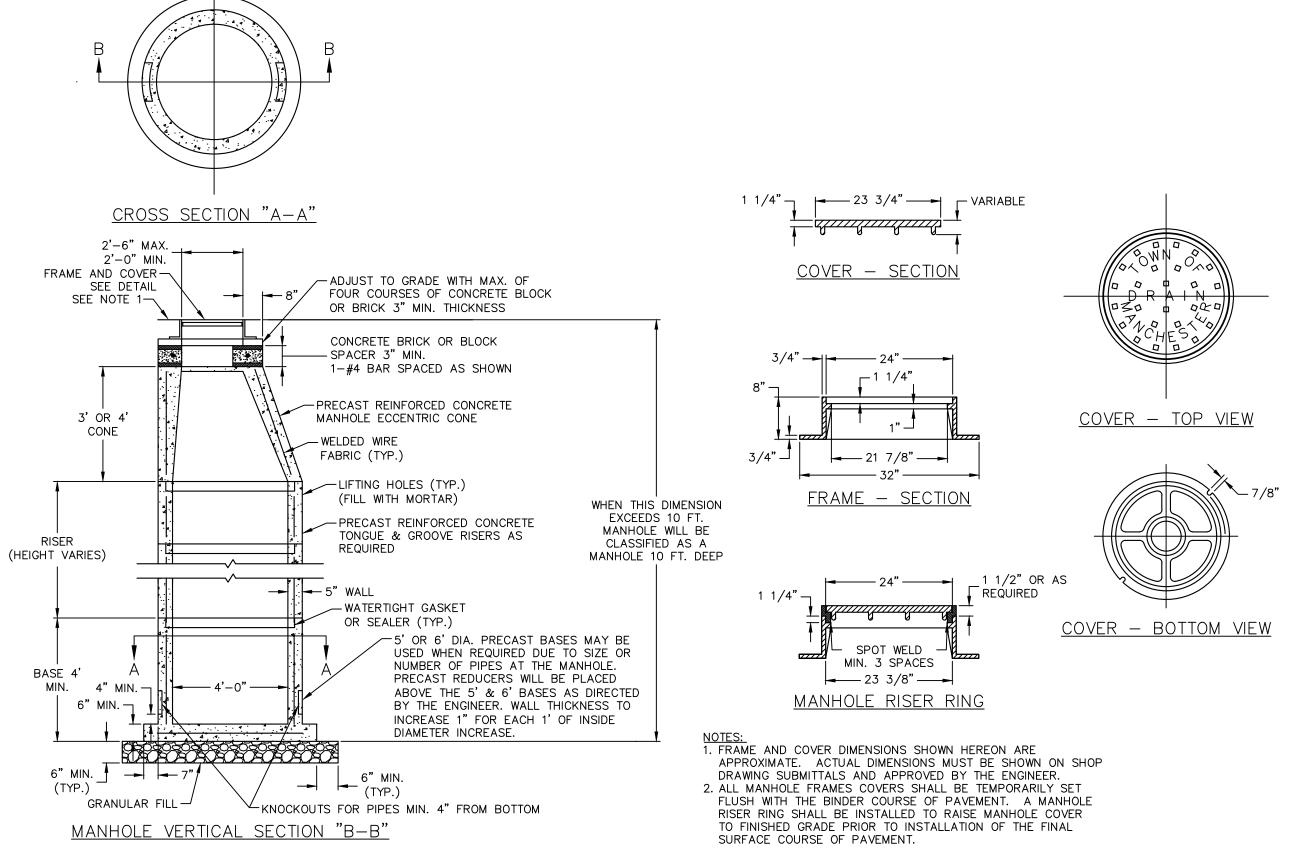




TYPE "C" AND "C-L" DOUBLE GRATE TYPE II CATCH BASIN







STORM MANHOLE

NOT TO SCALE

CONNECTICUT SEA

TOWN OF MANCHESTER
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

494 MAIN STREET - P.O. BOX 191
MANCHESTER, CT 06045-0191

	LEGEI	עע	
	= WETLANDS BOUNDARY	\$	= LIGHT POLE
~~~	= RETAINING WALL	₹	= CONIFEROUS TREE
• • •	o = GUIDE RAIL	8	= DECIDUOUS TREE
	= STONE WALL	<u>s</u>	= SANITARY MANHOLE
-0-0-0	= STOCKADE FENCE	0	= DRAINAGE MANHOLE
xx	= WIRE FENCE		= CATCH BASIN
ooo	= CHAIN LINK FENCE	Δ	= CULVERT END
	- = PROPERTY LINE	쐧	= HYDRANT
	= RAILROAD TRACKS	cs O	= CURB STOP
<del></del> SF	= SILT FENCE	w _o	= WATER VALVE
⊡	= CONCRETE MONUMENT	_	
	= GRANITE MONUMENT	BV	= BUTTERFLY VALVE
0	= IRON PIPE	B0 O	= BLOW OFF
•	= IRON ROD	-	= SIGN
A	= CONTROL POINT	00	= DOUBLE POST SIGN
_		M	= MAIL BOX
•	= DRILL HOLE	۰	= BOLLARD
Ĝ	= UTILITY POLE	$\bowtie$	= CONTROLLER CABINE
$\varphi$	= UTILITY POLE WITH LIGHT		= GAS GATE
0	= TRAFFIC SPAN POLE	_	
E	= ELECTRIC BOX	T	= TELEPHONE BOX
A	= WETLAND FLAG	60	= CATV TUBE

### PROJECT NUMBER 2020086

# NO. DATE FILE - 02/01/22 FINAL DESIGN 05/23/22 ADDENDUM NO. 1

	DRAWN BY:	JED
	CHECKED BY:	JL
	RELEASED BY:	JL
П		

DATUM HORIZONTAL: NAD83 VERTICAL: NAVD88

PROJECT LOCATION

GARDNER STREET MANCHESTER, CT

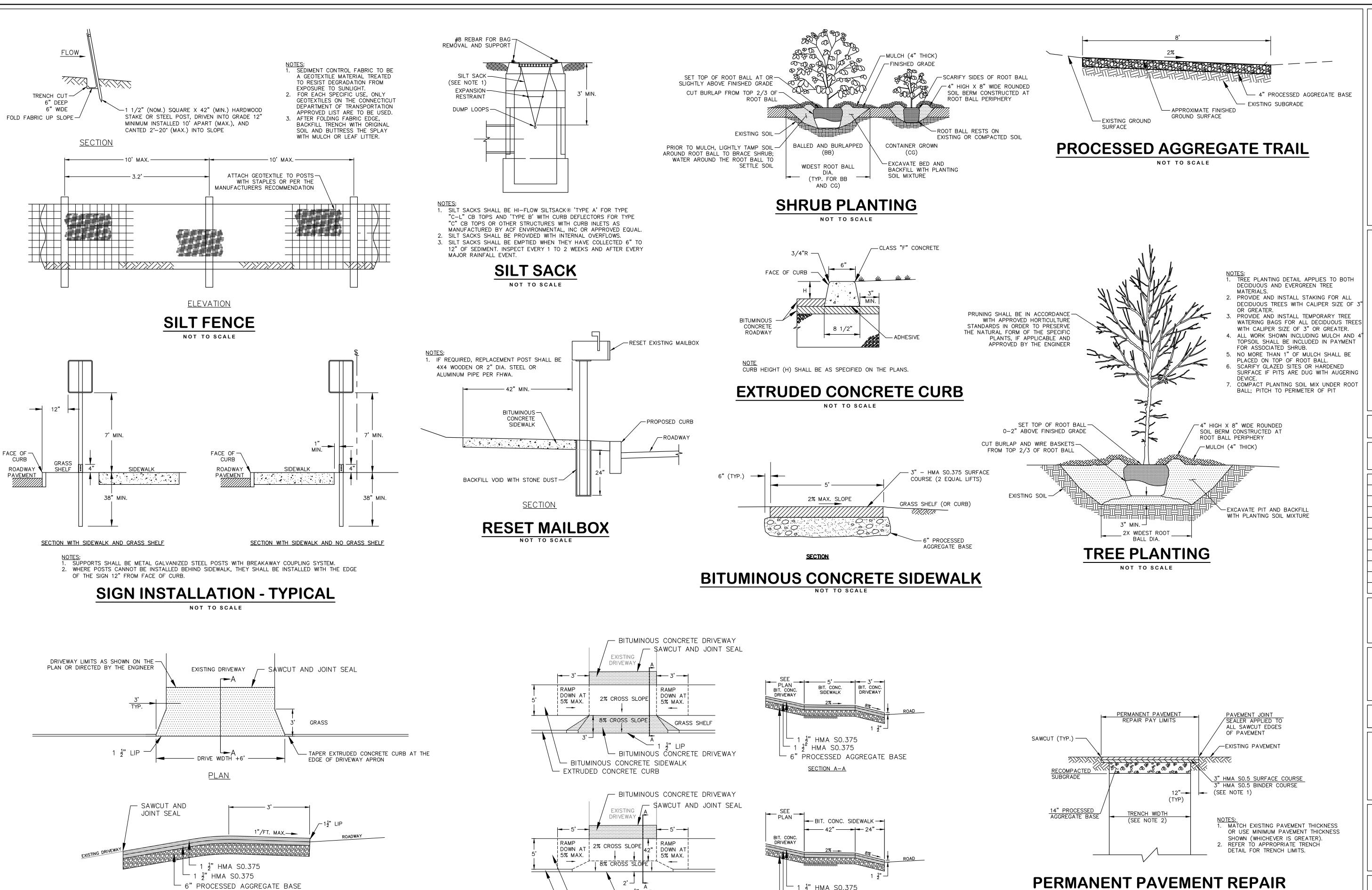
PROJECT TITLE

GARDNER STREET RECONSTRUCTION (FERN ST TO LINE ST)

SHEET TITLE

**DETAILS** 

SHEET NUMBER



└─ BITUMINOUS CONCRETE SIDEWALK

BITUMINOUS CONCRETE DRIVEWAY (WITH SIDEWALK)

- EXTRUDED CONCRETE CURB

1 ½" HMA S0.375 ½" HMA S0.375

SECTION A-A

6" PROCESSED AGGREGATE BASE

" PROCESSED AGGREGATE BASE

BITUMINOUS CONCRETE DRIVEWAY (NO SIDEWALK)

NOT TO SCALE

SECTION A-A

TOWN OF MANCHESTER PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION 494 MAIN STREET - P.O. BOX 191 MANCHESTER, CT 06045-0191

LEGEND = CONIFEROUS TREE = DECIDUOUS TREE ---- = STOCKADE FENC x---x = WIRE FENCE 

₩ = HYDRANT

CS = CURB STOP

WV = WATER VALVE

---- = PROPERTY LINE = RAILROAD TRACKS ■ = GRANITE MONUMENT

BV = BUTTERFLY VALVE O = BLOW OFF O = IRON PIPE O = SIGN o o = DOUBLE POST SIGN

M = MAIL BOX O = BOLLARD = UTILITY POLE = CONTROLLER CABINE = UTILITY POLE WITH LIGH G = GAS GATE T = TELEPHONE BOX E = ELECTRIC BOX = WETLAND FLAG

> PROJECT NUMBER 2020086

FILENAME

**2020086-DETAILS.DWG** NO. DATE FILE 02/01/22 | FINAL DESIGN 05/23/22 | ADDENDUM NO. 1

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PROJECT LOCATION

**GARDNER STREET** MANCHESTER, CT

PROJECT TITLE

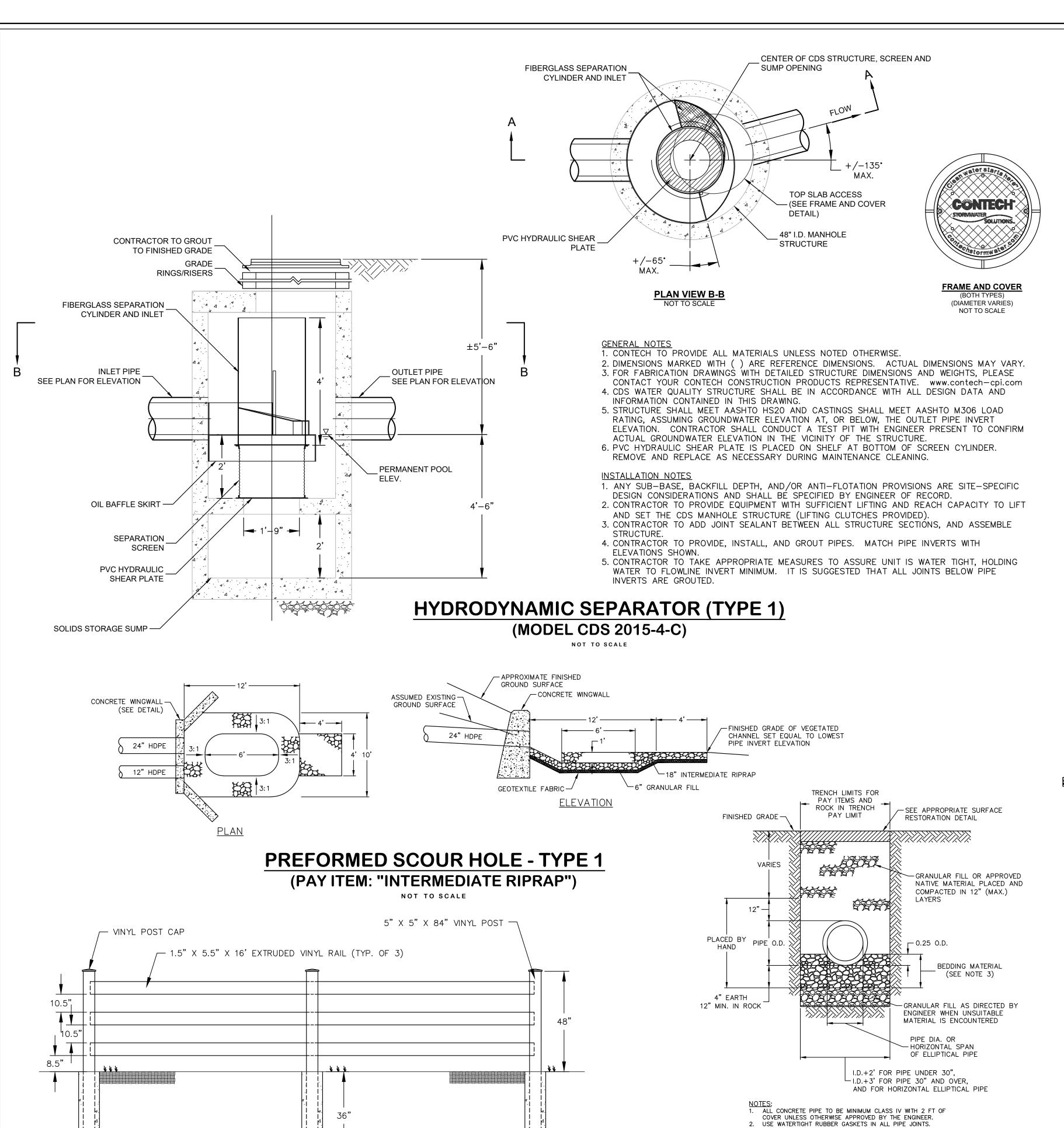
**GARDNER STREET** RECONSTRUCTION (FERN ST TO LINE ST)

(COLLECTOR ROAD)

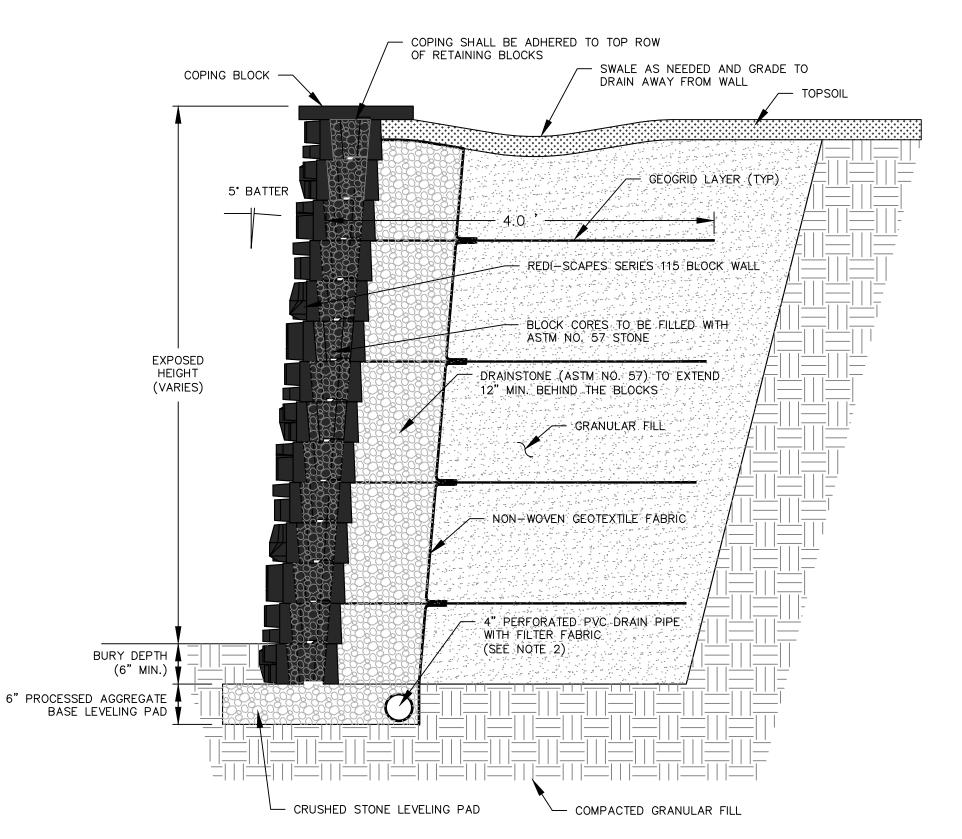
NOT TO SCALE

**DETAILS** 

SHEET NUMBER



THREE RAIL VINYL FENCE

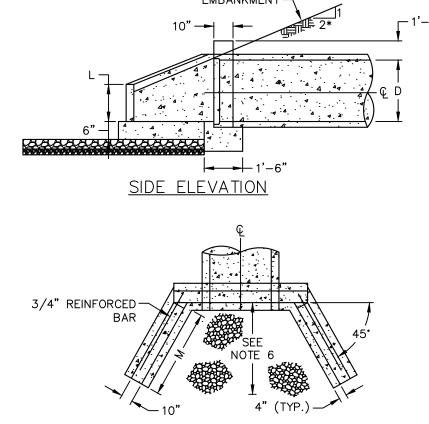


NOTES:

1. SEGMENTAL BLOCK WALLS AND ALL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS DIRECTED BY THE ENGINEER.

### SEGMENTAL BLOCK RETAINING WALL

NOT TO SCALE



2. USE WATERTIGHT RUBBER GASKETS IN ALL PIPE JOINTS. 3. BEDDING MATERIAL SHALL BE INSTALLED A MINIMUM OF 12"

DIAMETER AND LARGER.

ABOVE THE TOP OF ALL PLASTIC PIPES AND PIPES 48" IN

4. EXCAVATION, BEDDING MATERIAL AND BACKFILL ARE INCLUDED IN CONTRACT UNIT PRICE BID FOR "CULVERT" OF THE TYPE

TYPICAL TRENCH DETAIL

(STORM SEWER)

NOT TO SCALE

DIMENSIONS AND QUANTITIES						
D	H**	G	L	М	F	VOL.
INS.	FT. & INS.	FT. & INS.	FT. & INS.	FT. & INS.	FT. & INS.	CU.YD.
15"*	2'-3"	3'-7"	1'-0"	3'-3"	1'-6"	0.7
18"*	2'-6"	3'-10"	1'-2"	3'-6"	1'-6"	0.8
24"*	3'-0"	4'-4"	1'-5"	4'-0"	2'-0"	1.2
30"	3'-6"	4'-10"	1'-9"	4'-6"	2'-0"	1.5

* FOR EMBANKMENT SLOPES 4:1 OR LESS, PRECAST FLARED END SECTION MAY BE INSTALLED IN PLACE OF CONCRETE WINGWALLS FOR ALL PIPES 24" IN DIA. OR LESS WITH THE APPROVAL OF THE ENGINEER. ** MINIMUM DIMENSION PROVIDED, ACTUAL HEIGHT WILL BE BASED ON FIELD

3/4" DIAMETER-BAR (TYP.) 6" PROCESSED → AGGREGATE BASE

FRONT ELEVATION

NOTES:

1. ALL CONSTRUCTION DIMENSIONS ARE NOMINAL.

- ALL EDGES OF EXPOSED SURFACES SHALL HAVE 1" CHAMFERS. WHEN ONE WINGWALL IS TO BE USED FOR TWO PIPES, THE DIMENSIONS OF THAT WINGWALL SHALL CONFORM TO THAT REQUIRED FOR THE LARGER PIPE, EXCEPT THE DIMENSION "L" SHALL BE INCREASED BY THE OUTSIDE DIAMETER OF THE SMALLER
- 4. THESE ENDWALLS WILL BE USED ONLY AT LOCATIONS WHERE THEY WILL NOT BE A HAZARD TO VEHICLES THAT RUN OFF THE ROAD. IN NO CASE WILL THE LOCATION OF THESE ENDWALLS BE LESS THAN 30' FROM THE EDGE OF THE TRAVELED WAY.
- 5. VINYL COATED CHAIN LINK FENCE IS REQUIRED AT TOP OF WALL WHEN H>48". DIMENSIONS OF RIPRAP AT OUTLET IS DEPENDENT ON THE DISCHARGE FLOW AND PIPE SIZE. REFER TO CTDOT STANDARDS FOR SIZING REQUIREMENTS.

### **CONCRETE WINGWALLS**

(FOR PIPES LESS THAN OR **EQUAL TO 30" DIAMETER)** 

NOT TO SCALE



TOWN OF MANCHESTER PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION 494 MAIN STREET - P.O. BOX 191 MANCHESTER, CT 06045-0191

LEGE1	۷D	
= WETLANDS BOUNDARY	ф	= LIGHT POLE
= RETAINING WALL	茶	= CONIFEROUS TREE
GUIDE RAIL	<b>(3)</b>	= DECIDUOUS TREE
⇒⇒⇒ = STONE WALL	<b>S</b>	= SANITARY MANHOL
————— = STOCKADE FENCE	0	= DRAINAGE MANHOL
xx = WIRE FENCE		= CATCH BASIN
oo = CHAIN LINK FENCE	Δ	= CULVERT END
= PROPERTY LINE	쐧	= HYDRANT
= RAILROAD TRACKS	es O	= CURB STOP
	₩ <u>v</u>	- WATER VALVE

BV = BUTTERFLY VALVE O = BLOW OFF ____ = SIGN o o = DOUBLE POST SIGN M = MAIL BOX • = BOLLARD 

GG = GAS GATE O = TRAFFIC SPAN POLE E = ELECTRIC BOX = WETLAND FLAG ⊕ CATV TUBE

PROJECT NUMBER

2020086-DETAILS.DWG

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PROJECT LOCATION

**GARDNER STREET** 

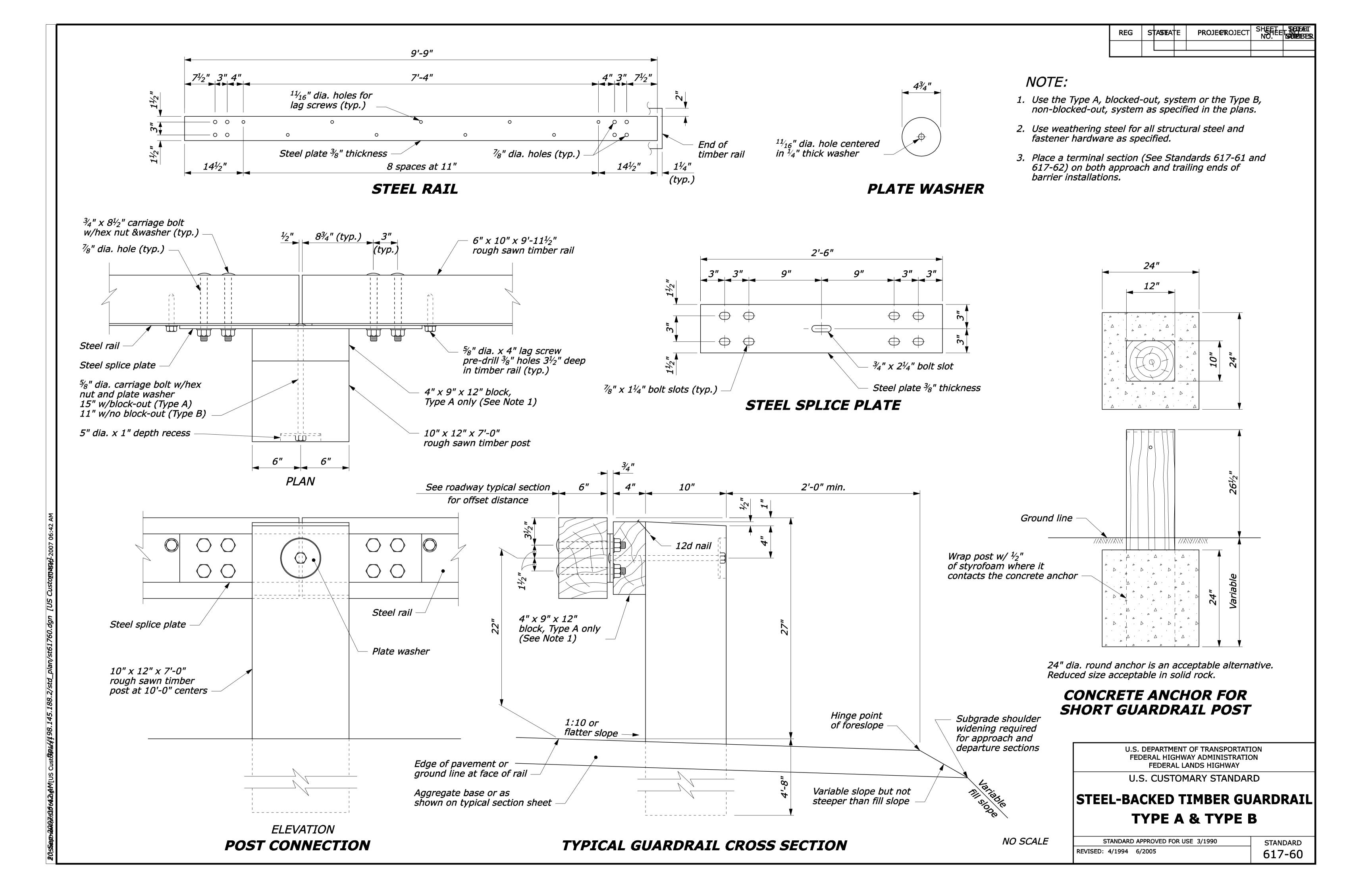
PROJECT TITLE

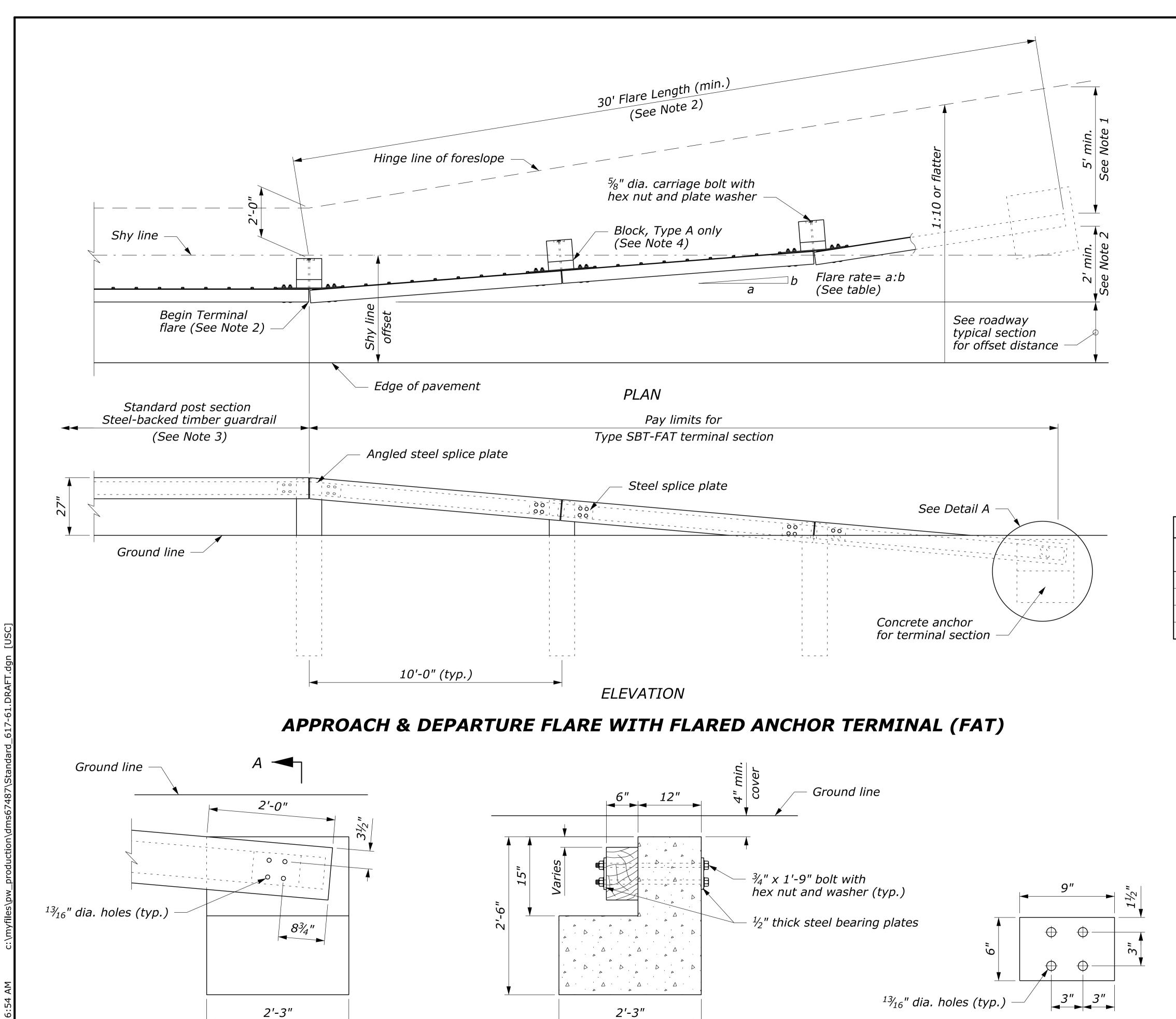
**GARDNER STREET** 

SHEET TITLE

**DETAILS** 

SHEET NUMBER





SECTION A-A

**CONCRETE ANCHOR** 

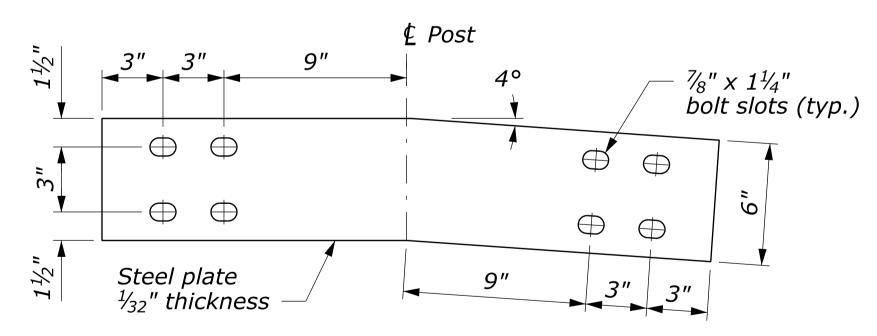
DETAIL A

REG STATER OJE PROJE PROJE SHEET SHE

#### *NOTE:*

- 1. Extend the fill widening a minimum of 5 feet behind the guardrail, unless otherwise directed by the CO.
- 2. The guardrail flare shown in the plan view is the minimum length and rate required. As directed by the CO, flare the guardrail so that the terminal section is outside the clear zone. If the terminal section cannot be located outside the clear zone, it should be flared as far as practical from the road at the maximum rate indicated on the Guardrail Flare Rates table.
- 3. See Standard 617-60, Steel-Backed Timber Guardrail, Type SBTA and SBTB, for timber, structural steel, and hardware details.
- 4. On the Type A, blocked-out guardrail, include the blocks in terminal section, except on the concrete anchor. For the Type B, non-blocked-out guardrail, no blocks are included.

GUARDRAIL FLARE RATE TABLE			
Design Speed (mph)	Shy line offset (ft)	Flare rate inside shy line (a:b)	Flare rate outside shy line (a:b)
60	8.0	26:1	14:1
50	6.5	21:1	11:1
40	5.0	16:1	8:1
30 and less	3.5	13:1	7:1



#### ANGLED STEEL SPLICE PLATE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY STANDARD

### STEEL-BACKED TIMBER GUARDRAIL TERMINAL SECTION TYPE SBT-FAT

NO SCALE REVISE

STEEL BEARING PLATE

STANDARD APPROVED FOR USE 1/1990 STANDARD

REVISED: 4/1994 6/2005
DRAFT: 12/2013 617-61