

# City of Portsmouth, New Hampshire

## FOR CONSTRUCTION

### ISLINGTON STREET CORRIDOR IMPROVEMENTS

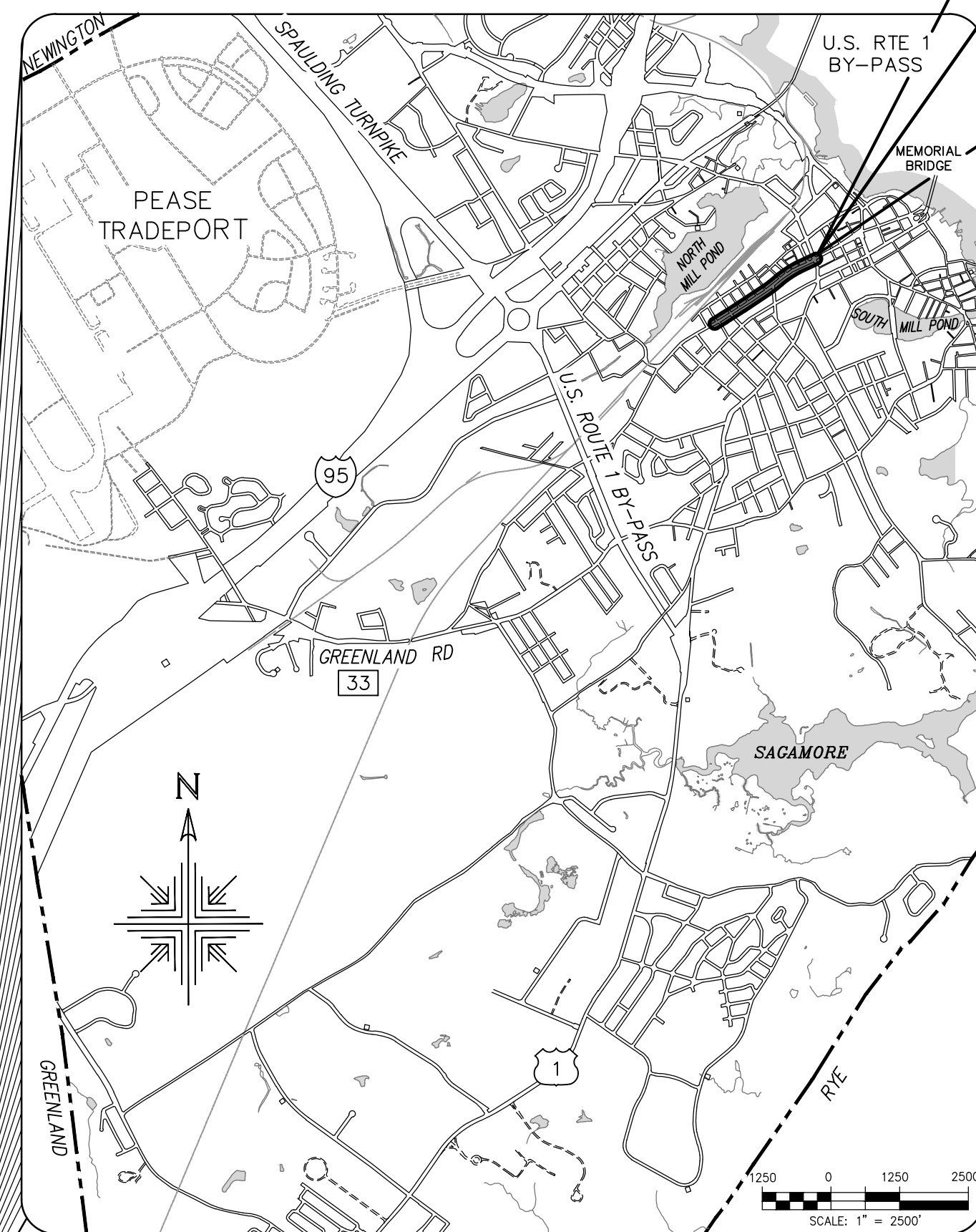
### PHASE 2



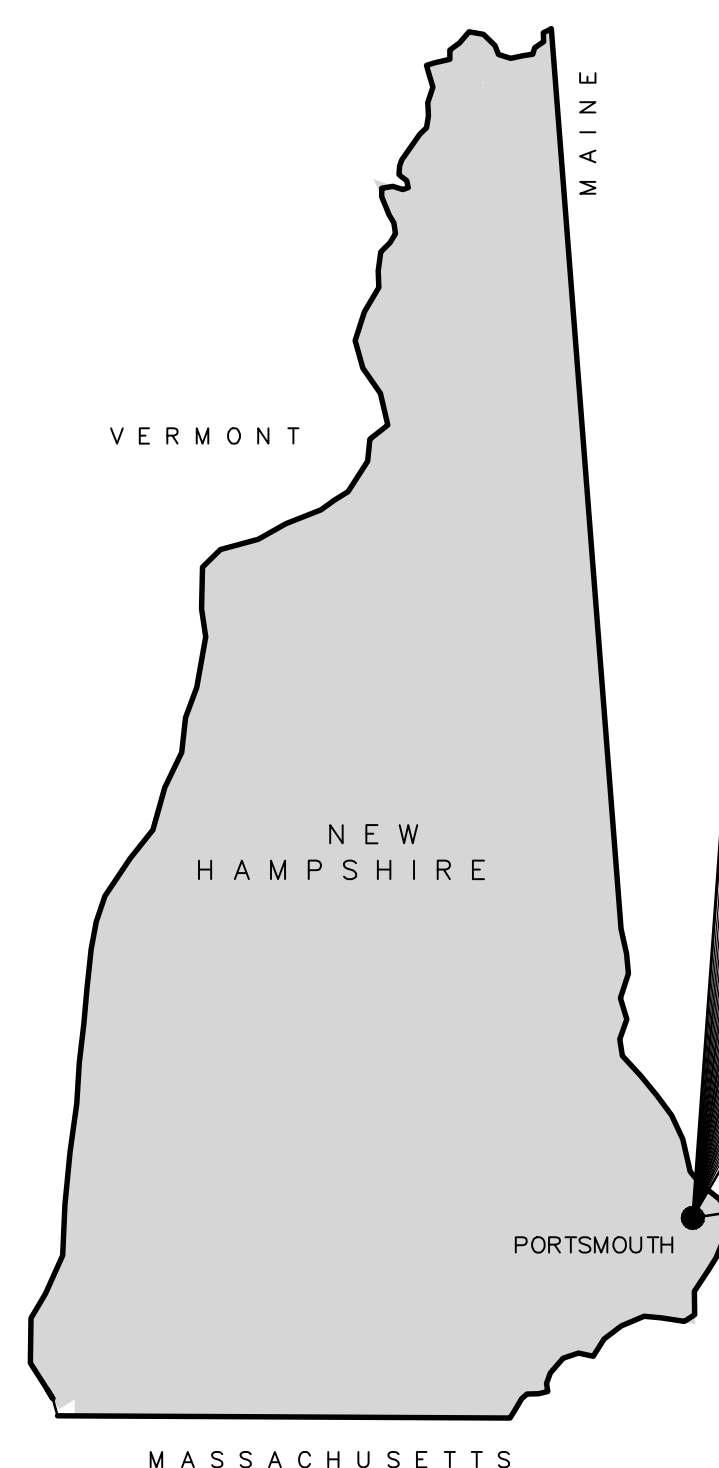
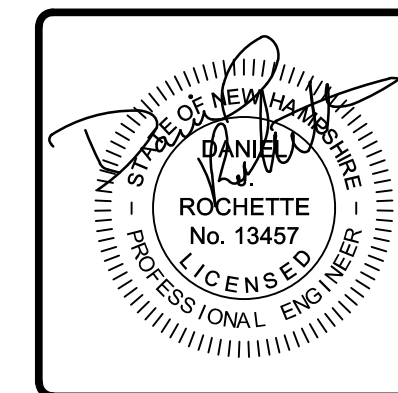
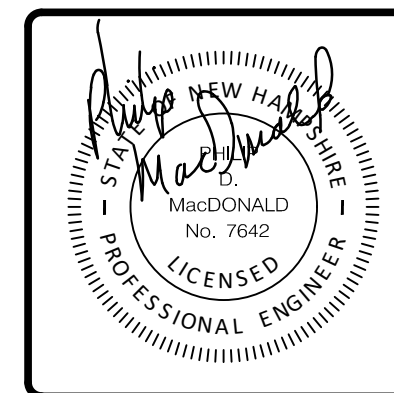
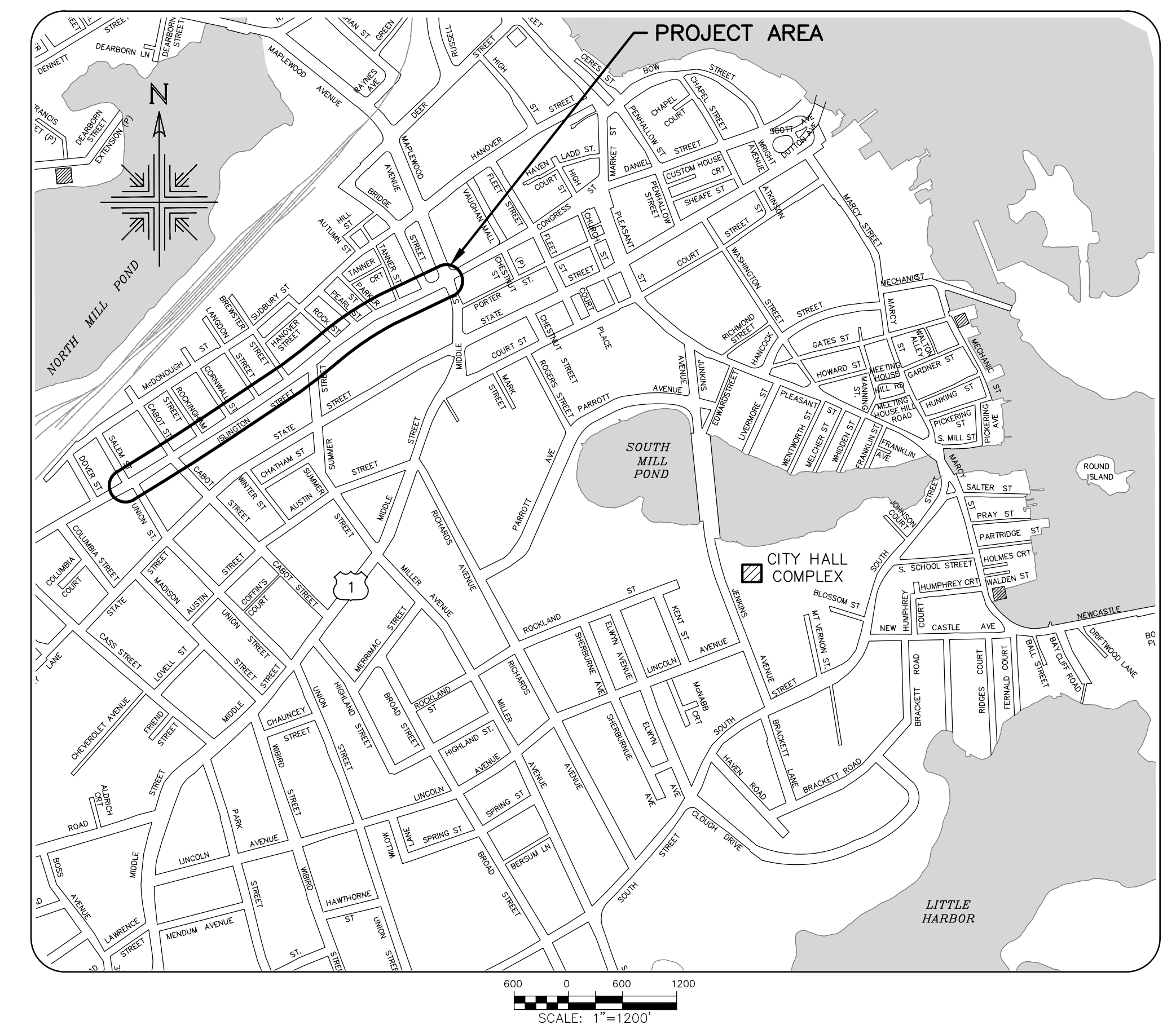
PREPARED BY  
 UNDERWOOD ENGINEERS, INC.  
 PORTSMOUTH, NEW HAMPSHIRE  
 AUGUST 15, 2022

LOCATION PLAN

PROJECT AREA



VICINITY MAP



UE #2705



**LEGEND:**

EXISTING	PROPOSED	
		BUILDING/STRUCTURE
		GIS BUILDING OUTLINE
		BLDG ENTRANCE/FINISH FLOOR ELEV.
		APPROX. PROPERTY LINE
		IRON PIPE OR REBAR
		DRILL HOLE
		GRANITE OR CONCRETE BOUND
		FENCE
		VERTICAL GRANITE CURB
		SLOPE GRANITE EDGING
		CONCRETE CURB
		BITUMINOUS CURB
		BITUMINOUS BERM
		BRICK
		CONCRETE
		SEWER LINE
		DRAIN LINE
		WATER LINE
		WATER GATE
		WATER SHUTOFF
		METER PIT
		DRAIN MANHOLE
		CATCH BASIN
		DROP INLET
		SEWER MANHOLE
		CLEANOUT
		SEWER/DRAIN LINE
		WATER LATERAL APPROX. LOC
		SEWER LATERAL APPROX. LOC
		DRAIN LATERAL
		HYDRANT
		GAS VALVE/GAS SHUTOFF
		GAS METER
		GAS LINE
		RECORD GAS LINE (UNITIL JAN 2018)
		REDUCER
		TEE
		COUPLING
		CAP
		TELEPHONE MANHOLE
		UNDERGROUND TELEPHONE LINE
		OVERHEAD WIRE
		UTILITY POLE
		UTILITY POLE W/LIGHT
		GUY WIRE & ANCHOR
		GUY POLE
		TRAFFIC MAST POLE
		TRAFFIC SIGNAL
		SIGNAL BOX
		HAND HOLE
		PEDESTRIAN BOX
		LIGHT POLE
		POLE WITH SIGNAL
		ELECTRIC METER

EXISTING	PROPOSED	
		MINOR CONTOUR
		MAJOR CONTOUR
		SINGLE WHITE LINE
		DOUBLE YELLOW LINE
		STOP LINE
		PAINTED TRAFFIC ARROW
		PAINTED HANDICAP
		BROKEN WHITE LINE
		PIPE LABEL
		ROOF DRAIN
		TREE
		SHRUB
		SHRUB/HEDGE LINE
		SIGN
		BOLLARD
		MONITORING WELL
		MAILBOX
		TREE BOX

**ABBREVIATIONS**

GENERAL		UTILITY	
ABAN	ABANDON	CB	CATCH BASIN
ACR	ACCESSIBLE CURB RAMP	CMP	CORRUGATED METAL PIPE
AD	ALGEBRAIC DIFFERENCE IN GRADE	CO	CLEANOUT
ADJ	ADJUST	DCB	DOUBLE CATCH BASIN
APPROX	APPROXIMATE	DI	DROP INLET
BIT	BITUMINOUS	DMH	DRAIN MANHOLE
BOW	BACK OF WALK	CIP	CAST IRON PIPE
CONC	CONCRETE	COND	CONDUIT
DYL	DOUBLE YELLOW LINE	DIP	DUCTILE IRON PIPE
EL	ELEVATION	FES	FLARED END SECTION
ELEV	ELEVATION	FM	FORCE MAIN
EXIST	EXISTING	F&G	FRAME AND GRATE
FEE	FINISHED FLOOR ELEVATION	F&C	FRAME AND COVER
GRAN	GRANITE	G	GUTTER INLET
GTD	GRADE TO DRAIN	GT	GREASE TRAP
HP	HIGH POINT	HDPE	HIGH DENSITY POLYETHYLENE PIPE
K	RATE OF VERTICAL CURVATURE	HH	HANDHOLE
L	LEFT	HW	HEADWALL
LSA	LANDSCAPE AREA	HYD	HYDRANT
LOD	LIMIT OF DISTURBANCE	INV	INVERT ELEVATION
LP	LOW POINT	I=	INVERT ELEVATION
MAX	MAXIMUM	LP	LIGHT POLE
MIN	MINIMUM	MES	METAL END SECTION
NO	NUMBER	PWW	PAVED WATER WAY
NTS	NOT TO SCALE	PVC	POLYVINYLCHLORIDE PIPE
OC	ON CENTER	RCP	REINFORCED CONCRETE PIPE
PC	POINT OF CURVATURE	R=	RIM ELEVATION
PCC	POINT OF COMPOUND CURVATURE	SMH	SEWER MANHOLE
PERF	PERFORATED	TSV	TAPPING SLEEVE, VALVE AND BOX
PGL	PROPOSED GRADE LINE	UG	UNDERGROUND
PI	POINT OF INTERSECTION	UP	UTILITY POLE
PL	PROPERTY LINE		
PRC	POINT OF REVERSE CURVATURE		
PROP	PROPOSED		
PT	POINT OF TANGENCY		
PVC	POINT OF VERTICAL CURVATURE		
PVI	POINT OF VERTICAL INTERSECTION		
PVT	POINT OF VERTICAL TANGENCY		
R	REMOVE/RIGHT		
RET	RETAIN		
R&D	REMOVE AND DISPOSE		
ROW	RIGHT OF WAY		
R&R	REMOVE AND RESET		
SL	STOP LINE		
SSD	STOPPING SIGHT DISTANCE		
STA	STATION		
SWL	SINGLE WHITE LINE		
T	THERMOPLASTIC/TON		
TS	TOP OF SLOPE		
TW	TRAVEL WAY		
TYP	TYPICAL		
VAR	VARIES		
VC	VERTICAL CURVE		
XW	CROSSWALK		

**SIGNING**

	LEAVE
	REMOVE

**CROSS SECTIONS**

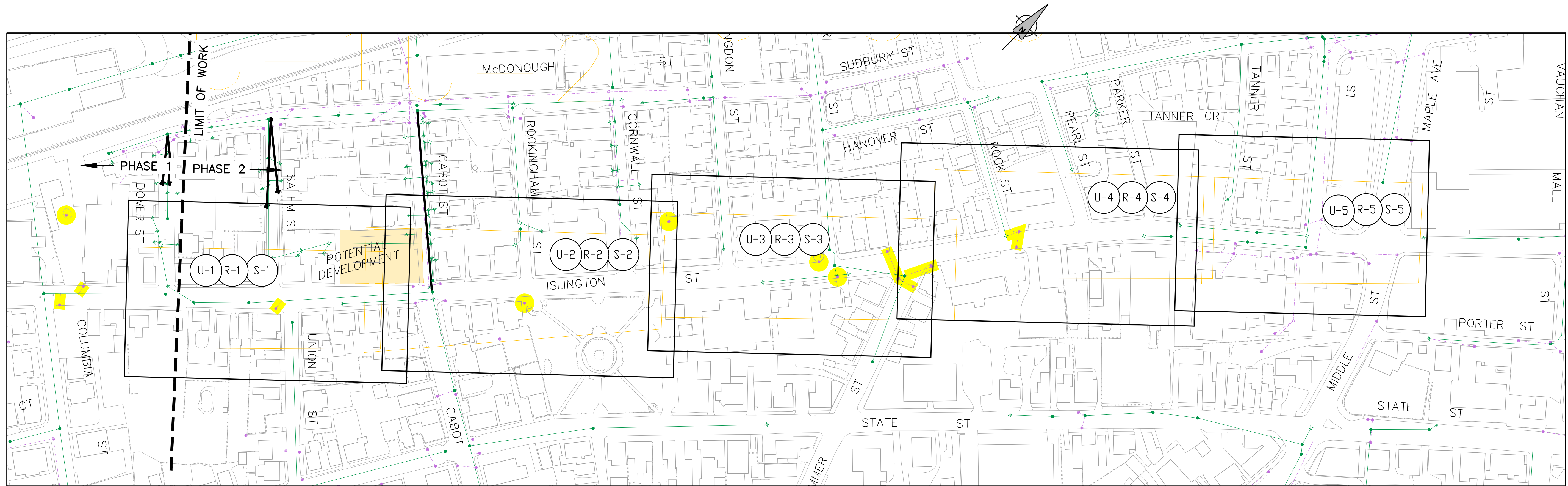
EXIST XXXX

ISSUE FOR APPROVAL	6/29/22	By DLR
CONSTRUCTION		By
RECORD DWG		By
NO. REVISIONS		
Drawn/Chk	RMG	
Designed	DLR	
Checked	PDM	
Approved		
Date	6/29/22	
Book No.		
Project No.	2705	
Dwg. ID	2705_Index	
Scale	AS SHOWN	
25 Vaughan Mall, Portsmouth, N.H. 03801 Tel. 603-436-6192 Fax. 603-431-4733		
LEGEND & ABBREVIATION SHEET ISLINGTON STREET CORRIDOR IMPROVEMENTS PHASE 2 CITY OF PORTSMOUTH PORTSMOUTH, NEW HAMPSHIRE		
DWG NO	G-1	SHEET
		1 OF 56

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# UTILITY PLAN INDEX

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PLAN INDEX MAP

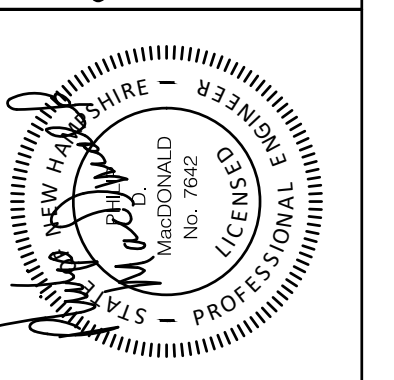
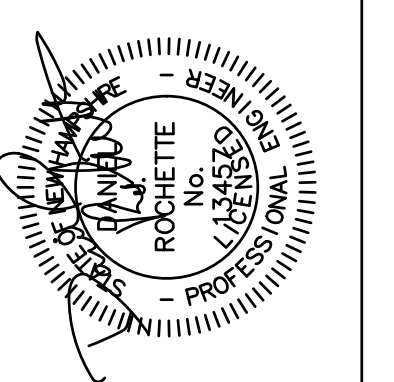


LEGEND:

- CB/STRUCTURE & DRAIN LINE
- MH/CONNECTION & SEWER LINE
- SUSPECTED DRAINAGE CONNECTION TO SEWER

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APPROVAL	6/29/22	DR
CONSTRUCTION		
RECORD DWG		

Drawn/Chk	RMG	DR
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Checked		
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INDEX SHEET  
ISLINGTON STREET CORRIDOR IMPROVEMENTS  
PHASE 2  
CITY OF PORTSMOUTH  
PORTSMOUTH, NEW HAMPSHIRE

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ROADWAY QUANTITY SCHEDULE

Full Depth Reconstruction
Binder Course = 4.50 in 0.38 ft
Wearing Course = 1.50 in 0.13 ft
Crushed = 24.00 in 2.00 ft
TOTAL Rb: 2.50 ft

Table with columns: Sheet, Station, Length, Paved Width, Excavation width, Existing Centerline Grade, Proposed Centerline Grade, Centerline A (EG-FG), Depth of Excavation (A+Rb), ITEM No. (203.1, 304.3, 403.11), Common Excavation, Crushed Gravel, Hot Bituminous Pavement Machine Method (6" Nominal Thickness). Includes sections for ISLINGTON STREET BASE BID and ADD ALT #1.

SIDEWALK QUANTITY SCHEDULE

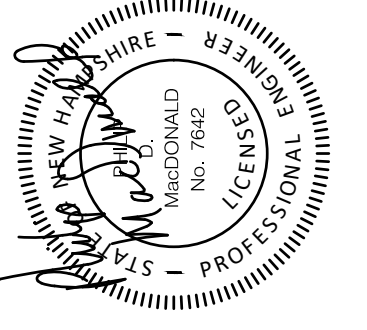
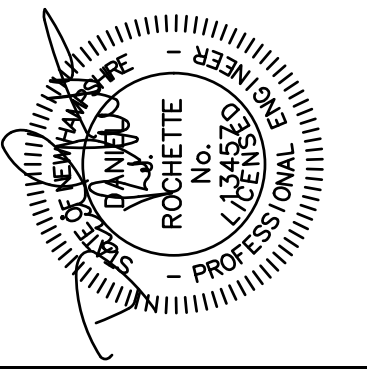
Table with columns: Sheet, Location (To, From), ITEM No. (203.1, 304.3, 608.35, 608.36, 608.249, 608.54, 646.51, 403.12), Common Excavation (CY), Crushed Gravel (CY), 5" Reinforced Concrete Sidewalk (SY), 6" Reinforced Concrete Sidewalk (SY), Brick Accent (SY), Detectable Warning Devices, Cast Iron (SY), Turf Establishment (SY), Hot Bituminous Pavement Hand Method (Below Brick Strip). Includes sections for R-1, R-2, R-3, R-4, R-5.

HAND PAVING SCHEDULE (Driveways)

Table with columns: Address, Avg Depth, Avg Width, Pavement Depth (In.), ITEM No. (403.12, 304.3, 203.1), Hot Bituminous Hand Method (Tons), Crushed Gravel (CY), Common Excavation (CY). Includes section for Islington Street BASE BID.

Table with columns: Address, Avg Depth, Avg Width, Pavement Depth (In.), ITEM No. (403.12, 304.3, 203.1), Hot Bituminous Hand Method (Tons), Crushed Gravel (CY), Common Excavation (CY). Includes section for ADD ALT #1.

Vertical table with columns: ISSUE FOR APPROVAL, DATE, BY, CONSTRUCTION, RECORD DWG. Includes a revision table with columns: No., Description, Date, By.

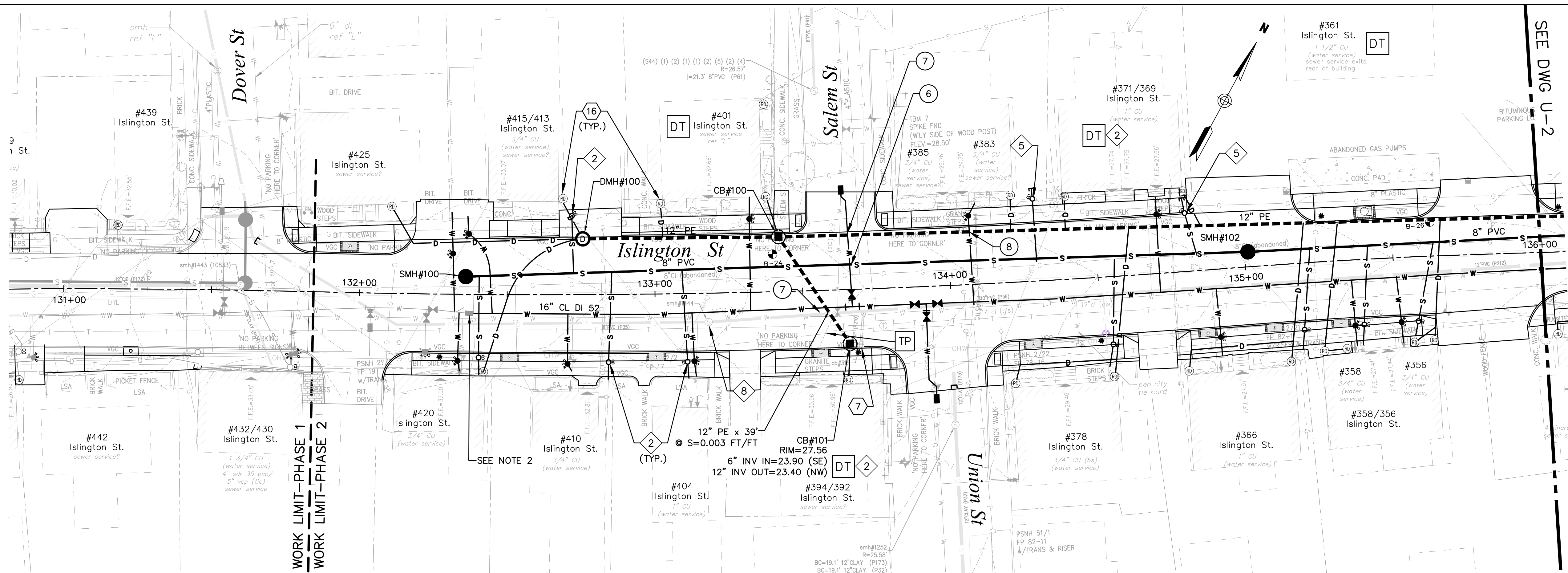


UNDERWOOD engineers logo and address: 25 Vaughan, Portsmouth, NH, 03801. Tel. 603-436-6192. Fax. 603-431-4733.

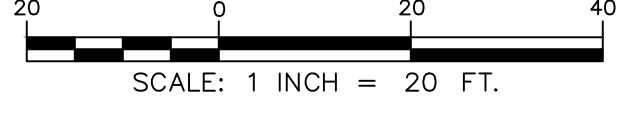
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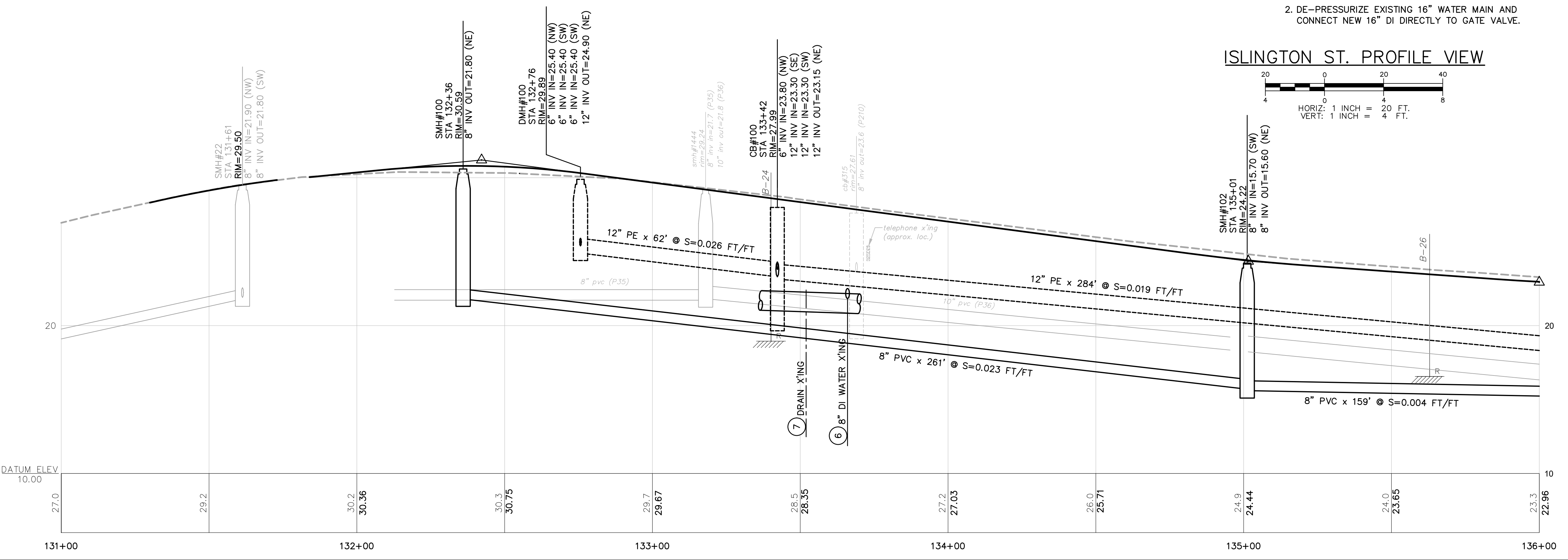
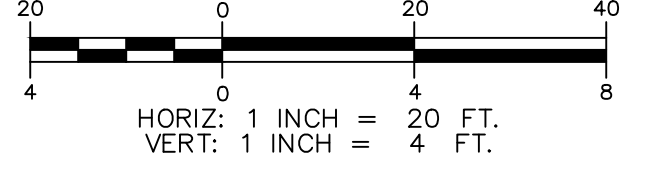
**ISLINGTON ST. PLAN VIEW**



**NOTES:**

1. CONSTRUCT 2" WATER SERVICE. PROVIDE REDUCTION COUPLING AFTER 2" CUB STOP TO REDUCE TO EXISTING WATER SERVICE SIZE.
2. DE-PRESSURIZE EXISTING 16" WATER MAIN AND CONNECT NEW 16" DI DIRECTLY TO GATE VALVE.

**ISLINGTON ST. PROFILE VIEW**



ISSUE FOR APPROVAL	Date	By
CONSTRUCTION	6/29/22	DJR
RECORD DWG		
DATE		

Drawn/Chk	RMG
Designed	DJR
Checked	FDH
Approved	6/29/22
Date	
Book No.	2705
Project No.	ID2705bas_Sht.2
Dwg.	
Scale	AS SHOWN

NO.	REVISIONS
	APPD

**UTILITIES PLAN & PROFILE**

**ISLINGTON STREET CORRIDOR IMPROVEMENTS**

**PHASE 2**

**CITY OF PORTSMOUTH**

**PORTSMOUTH, NEW HAMPSHIRE**

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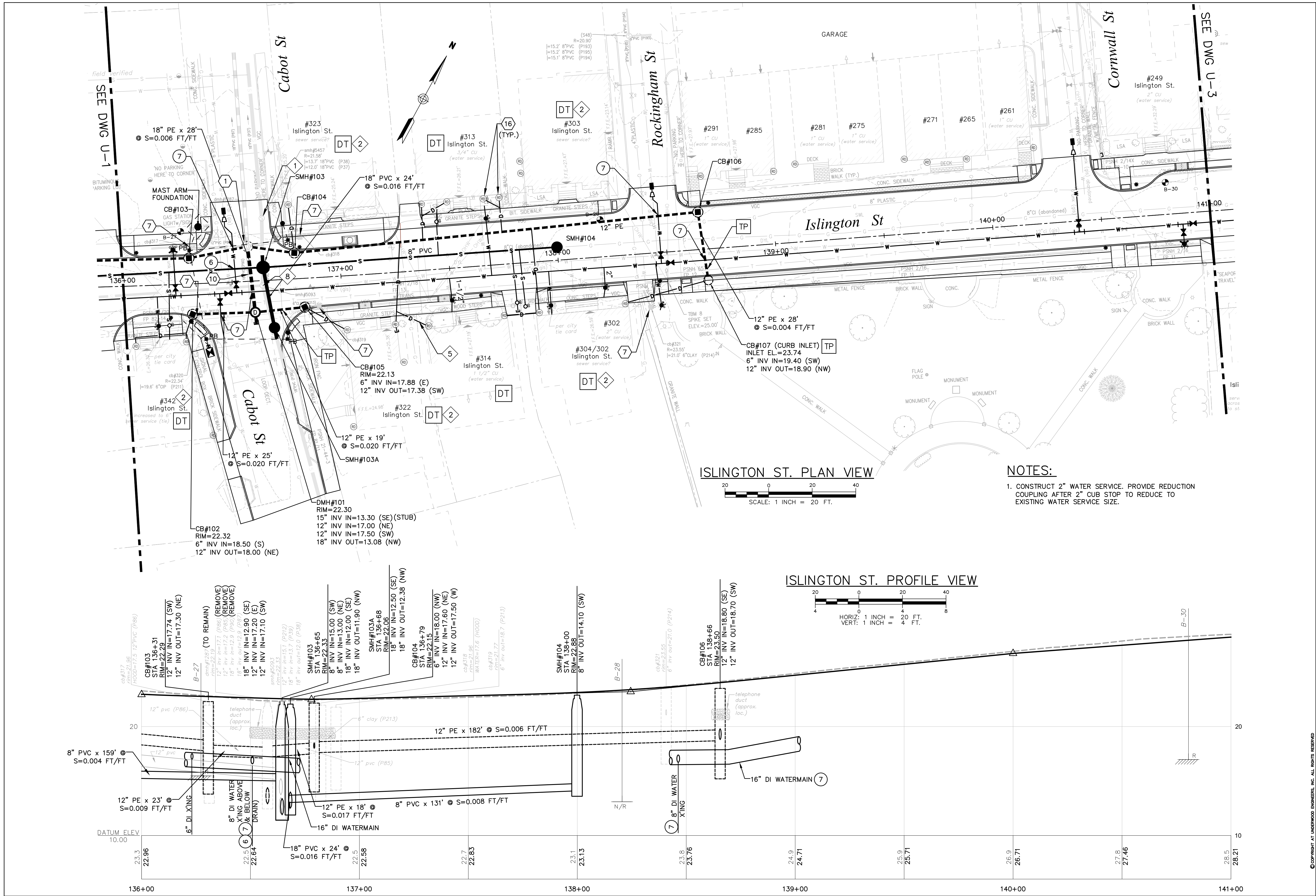
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Tel. 603-436-6192 Fax. 603-431-4733

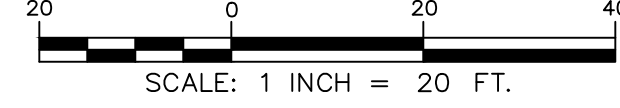
DWG NO	SHEET
U-1	7 OF 56

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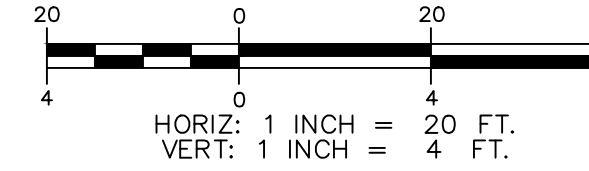
ISLINGTON ST. PLAN VIEW



NOTES:

1. CONSTRUCT 2" WATER SERVICE. PROVIDE REDUCTION COUPLING AFTER 2" CUB STOP TO REDUCE TO EXISTING WATER SERVICE SIZE.

ISLINGTON ST. PROFILE VIEW



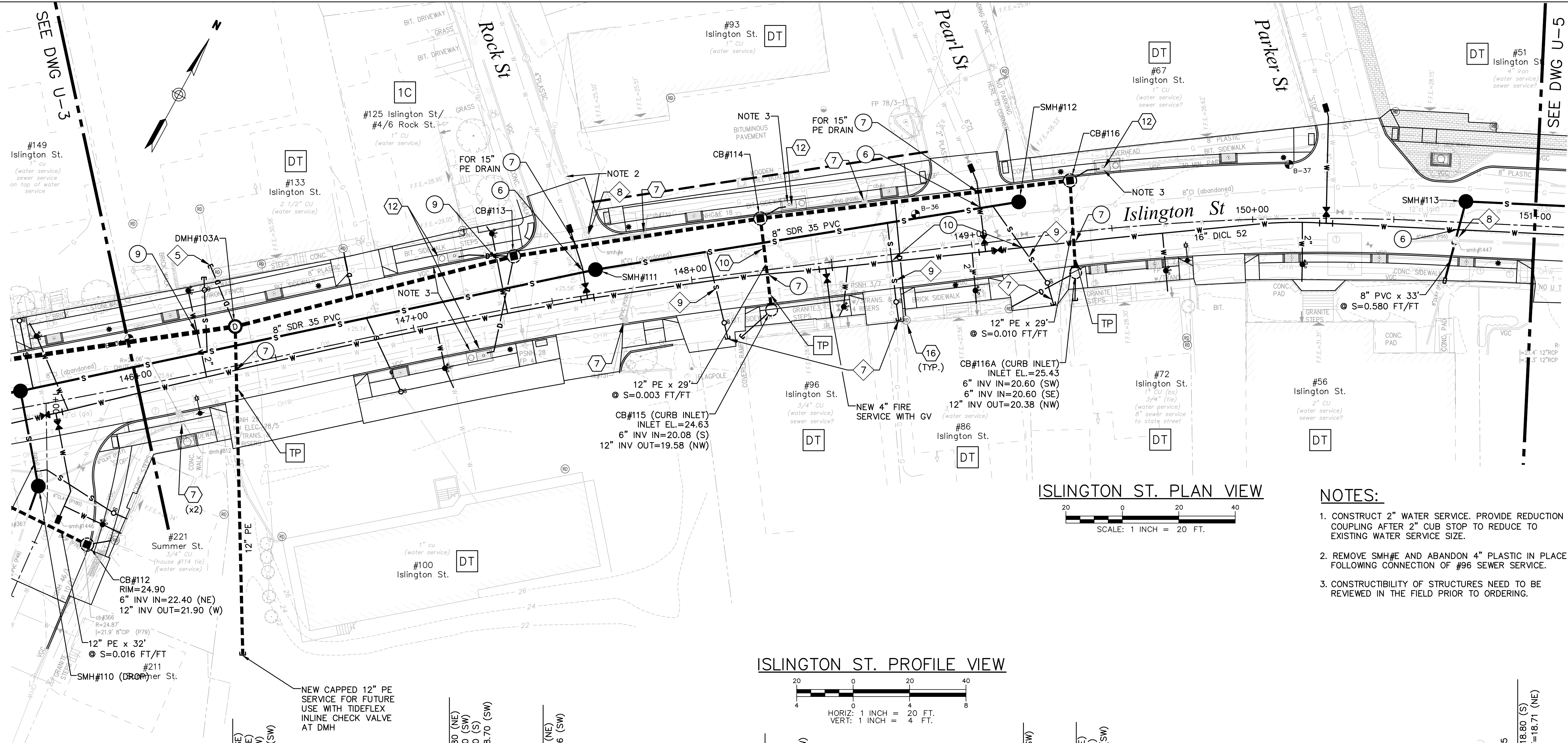
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CONSTRUCTION					
RECORD DWG					
APPROVAL					
REVISIONS					
NO.					
Drawn/Chk	RMG	DJR			
Designed					
Checked	FDM				
Approved					
Date	6/29/22				
Book No.					
Project No.	2705				
Dwg. ID	ID2705bas_Sht.2				
Scale	AS SHOWN				

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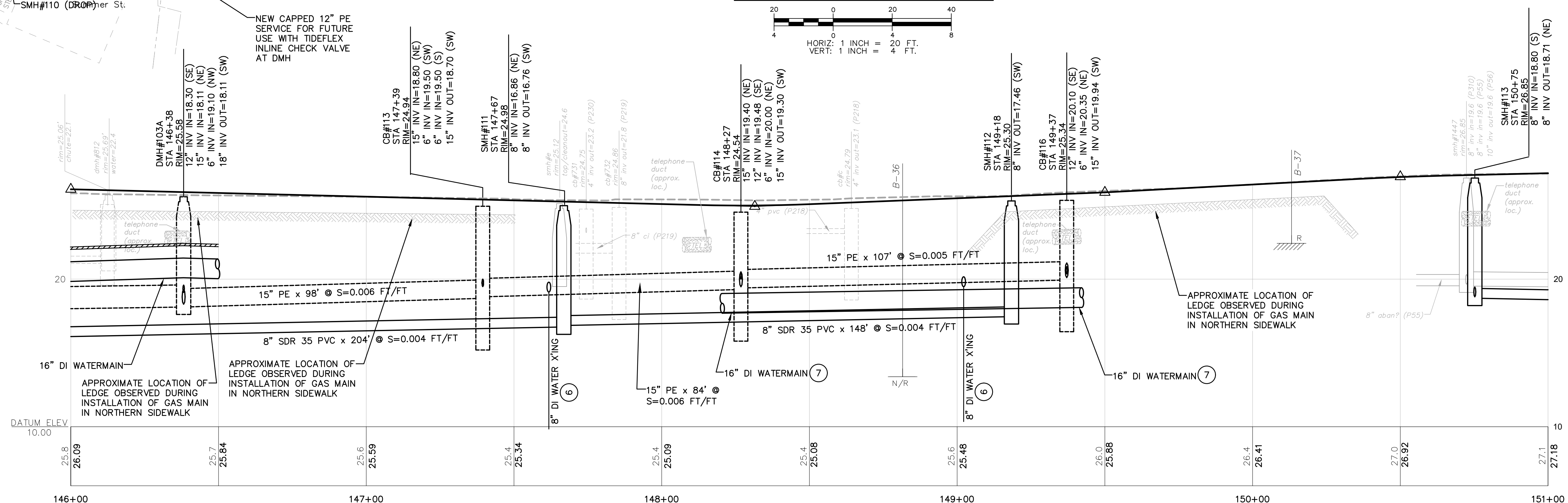
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ISLINGTON STREET CORRIDOR IMPROVEMENTS	U-2
PHASE 2	SHEET
CITY OF PORTSMOUTH	8 OF 56
PORTSMOUTH, NEW HAMPSHIRE	





ISLINGTON ST. PROFILE VIEW

HORIZ: 1 INCH = 20 FT.  
VERT: 1 INCH = 4 FT.



ISLINGTON ST. PLAN VIEW

SCALE: 1 INCH = 20 FT.

- NOTES:**
1. CONSTRUCT 2" WATER SERVICE. PROVIDE REDUCTION COUPLING AFTER 2" CUB STOP TO REDUCE TO EXISTING WATER SERVICE SIZE.
  2. REMOVE SMH#E AND ABANDON 4" PLASTIC IN PLACE FOLLOWING CONNECTION OF #96 SEWER SERVICE.
  3. CONSTRUCTIBILITY OF STRUCTURES NEED TO BE REVIEWED IN THE FIELD PRIOR TO ORDERING.

ISSUE FOR		REVISIONS
APPROVAL		
By		
Date	6/29/22	DJR
CONSTRUCTION		
Date		
BY		
RECORD DWG		
BY		
Date		
		APPD
NO.		
Drawn/Chk.	RJM	
Designed.	DJR	
Checked.	PDM	
Approved.	7/25/22	
Date		
Book No.	2705	
Project No.	ID2705bas-Sht.-2	
Dwg.	AS SHOWN	
Scale		



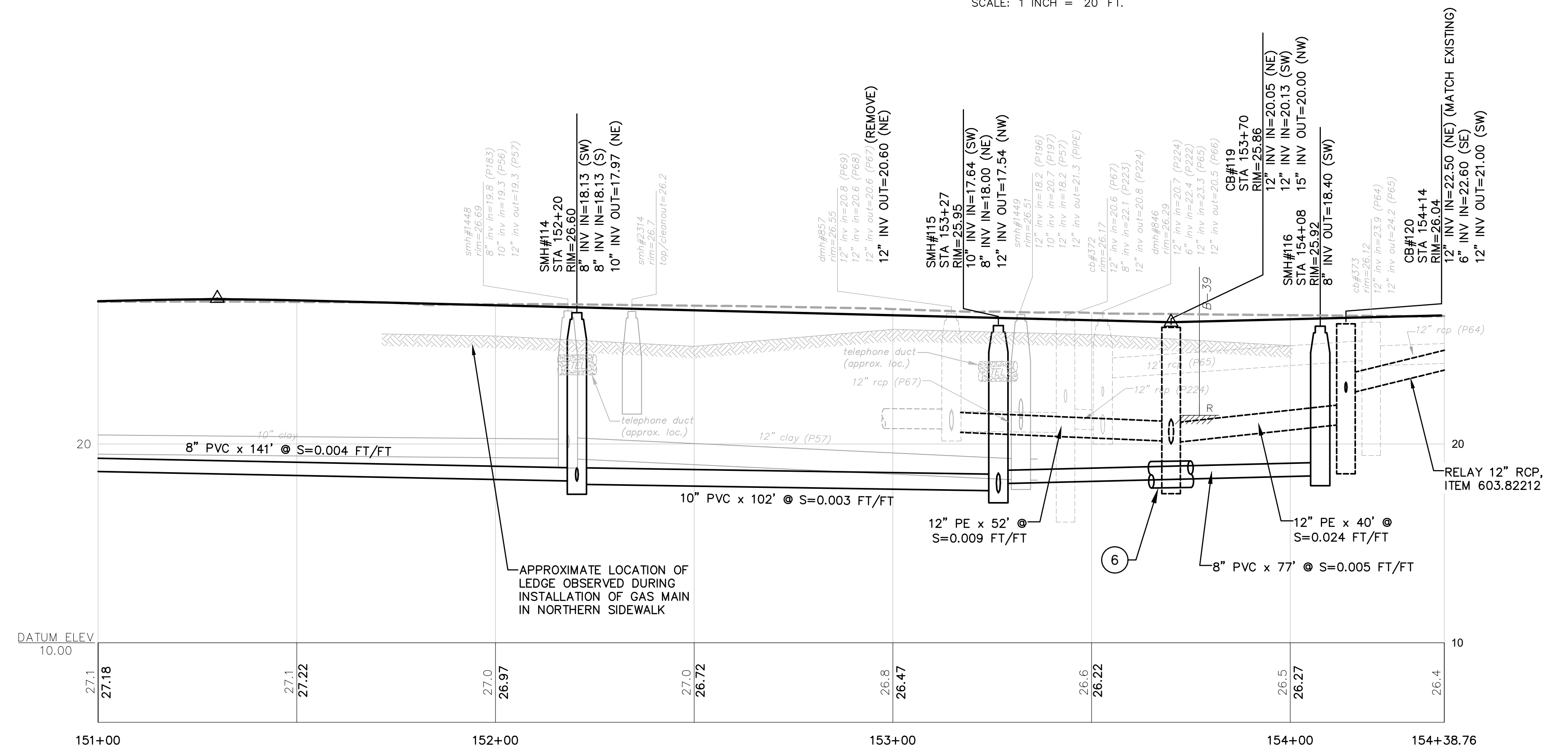
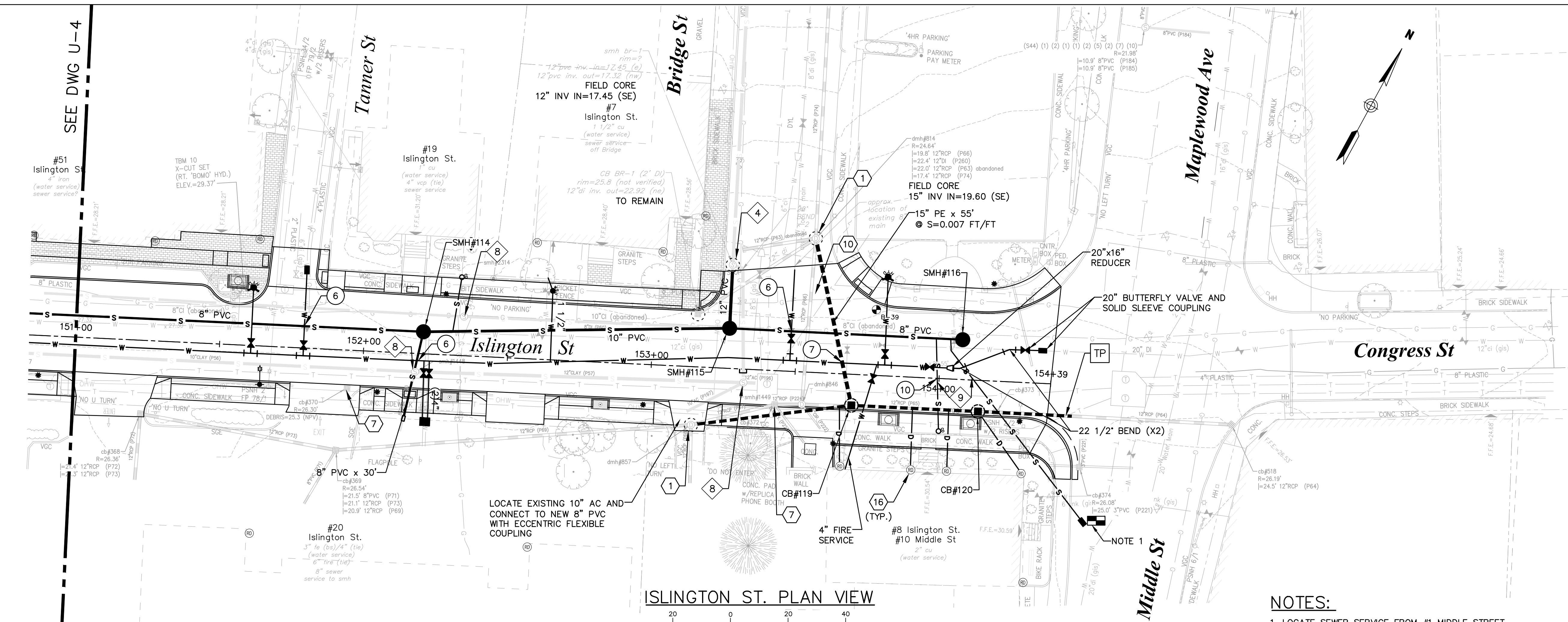
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UTILITIES PLAN & PROFILE  
ISLINGTON STREET CORRIDOR IMPROVEMENTS  
PHASE 2  
CITY OF PORTSMOUTH  
PORTSMOUTH, NEW HAMPSHIRE

DWG NO: U-4  
SHEET: 10 OF 56

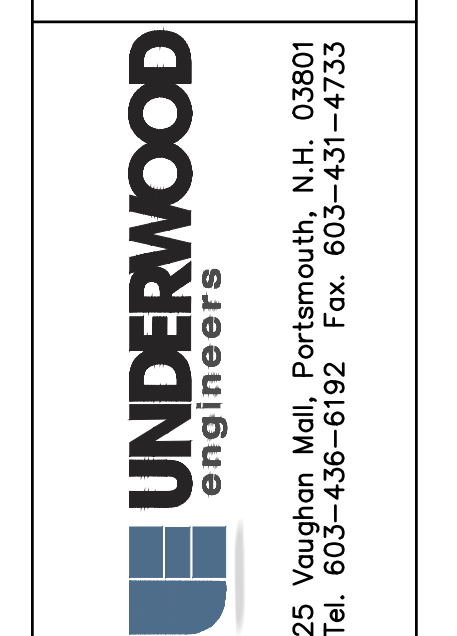
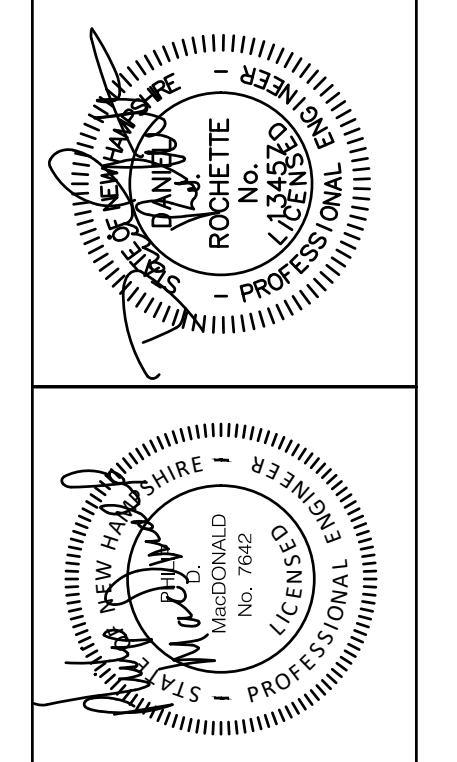
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**NOTES:**

- LOCATE SEWER SERVICE FROM #1 MIDDLE STREET. CONNECT TO NEW 6" PVC TO EXISTING SERVICE WITH FLEXIBLE COUPLING.

ISSUE FOR	APPROVAL	DATE	BY
		6/29/22	DJR
CONSTRUCTION	DATE		
RECORD DWG	DATE		
REVISIONS	NO.	DESCRIPTION	DATE
Drawn/Chk	DJR	Checked	FDH
Approved	6/29/22	Book No.	2705
Project No.	ID2705bas-Sht.2	Dwg.	AS SHOWN
Scale			



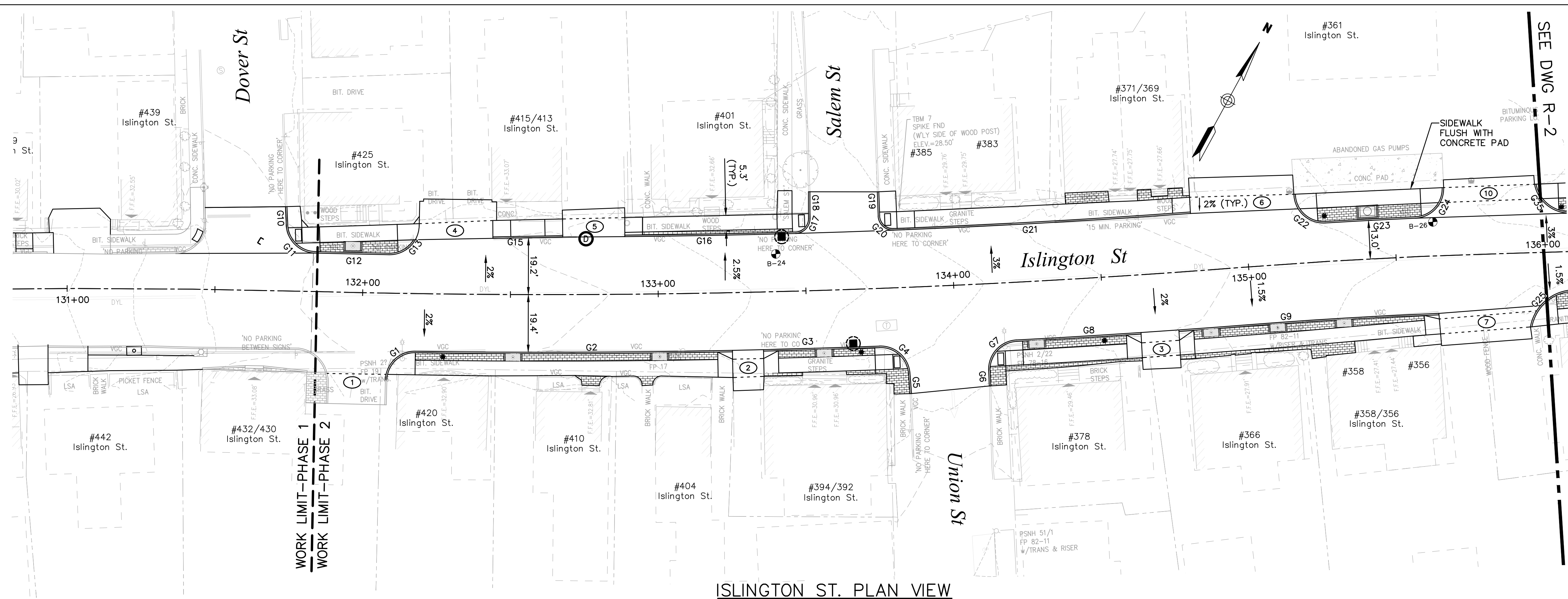
**UTILITIES PLAN & PROFILE**

**ISLINGTON STREET CORRIDOR IMPROVEMENTS**

**PHASE 2**

**CITY OF PORTSMOUTH**

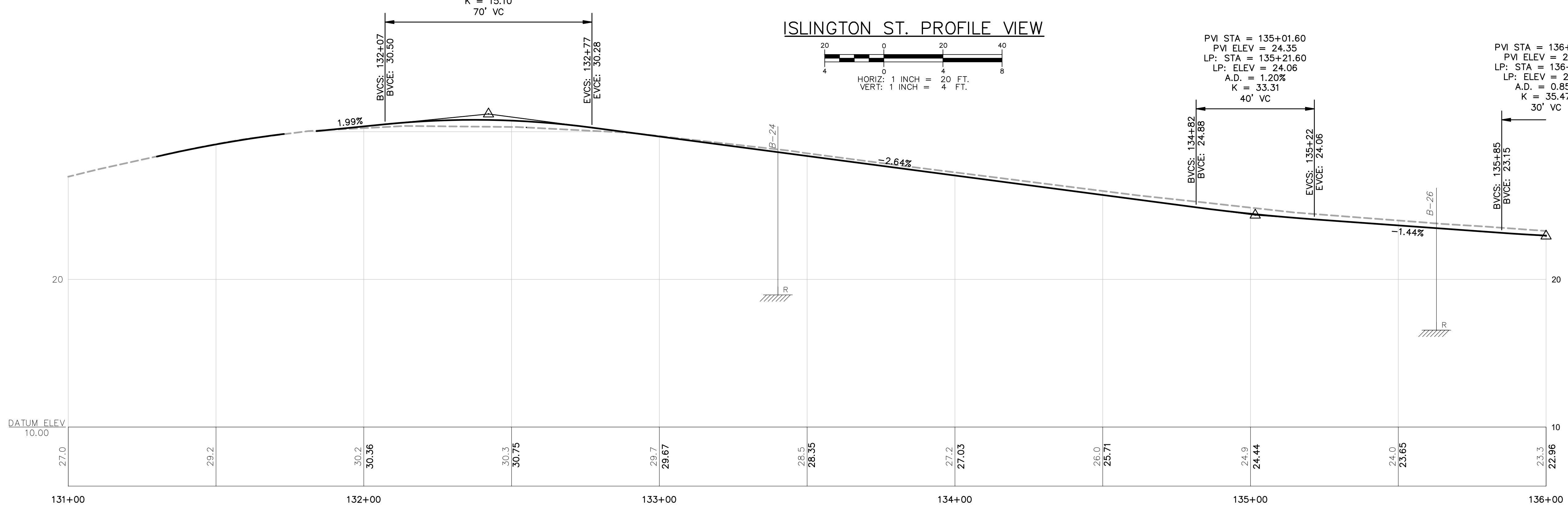
**PORTSMOUTH, NEW HAMPSHIRE**



ISLINGTON ST. PLAN VIEW  
SCALE: 1 INCH = 20 FT.

PVI STA = 132+42.20  
PVI ELEV = 31.20  
HP: STA = 132+37.32  
HP: ELEV = 30.80  
A.D. = -4.64%  
K = 15.10  
70' VC

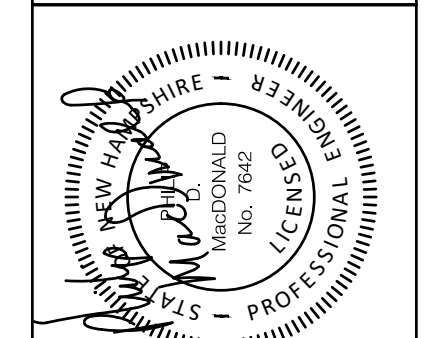
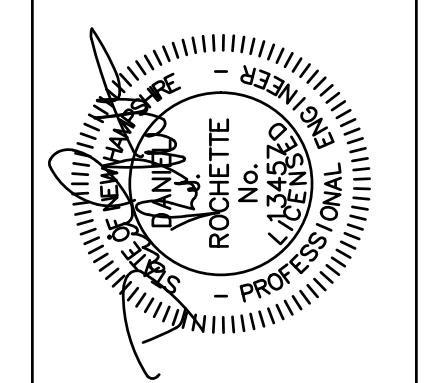
ISLINGTON ST. PROFILE VIEW  
HORIZ: 1 INCH = 20 FT.  
VERT: 1 INCH = 4 FT.



PVI STA = 135+01.60  
PVI ELEV = 24.35  
LP: STA = 135+21.60  
LP: ELEV = 24.06  
A.D. = 1.20%  
K = 33.31  
40' VC

PVI STA = 136+00.00  
PVI ELEV = 22.93  
LP: STA = 136+15.00  
LP: ELEV = 22.84  
A.D. = 0.85%  
K = 35.47  
30' VC

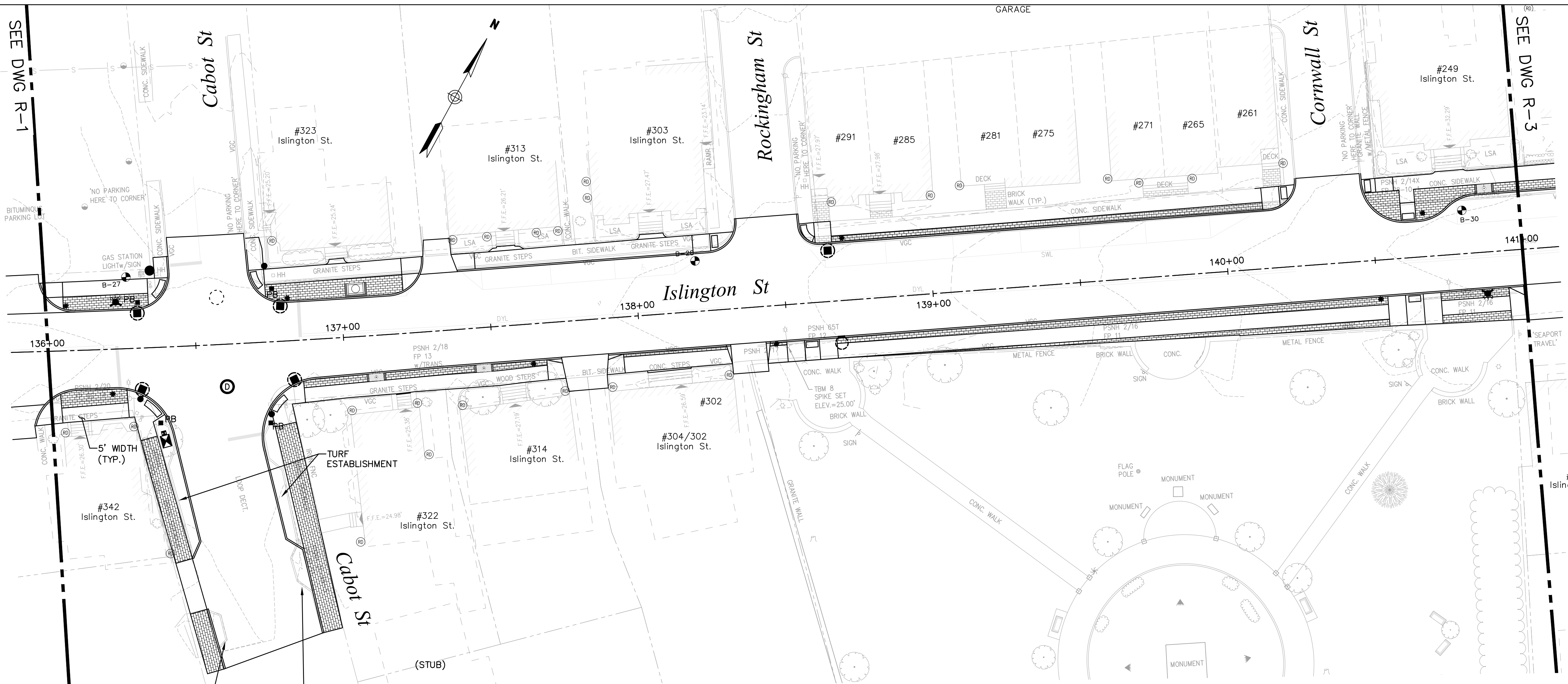
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CONSTRUCTION	By Date		
RECORD DWG	By Date		
APPROVAL	By Date		
REVISIONS	NO.		
Drawn/Chk	RMG		
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Dwg.	ID2705bas_Sht.-2		
Scale	AS SHOWN		



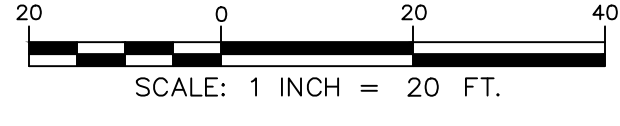
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ROADWAY PLAN & PROFILE  
ISLINGTON STREET CORRIDOR IMPROVEMENTS  
PHASE 2  
CITY OF PORTSMOUTH  
PORTSMOUTH, NEW HAMPSHIRE



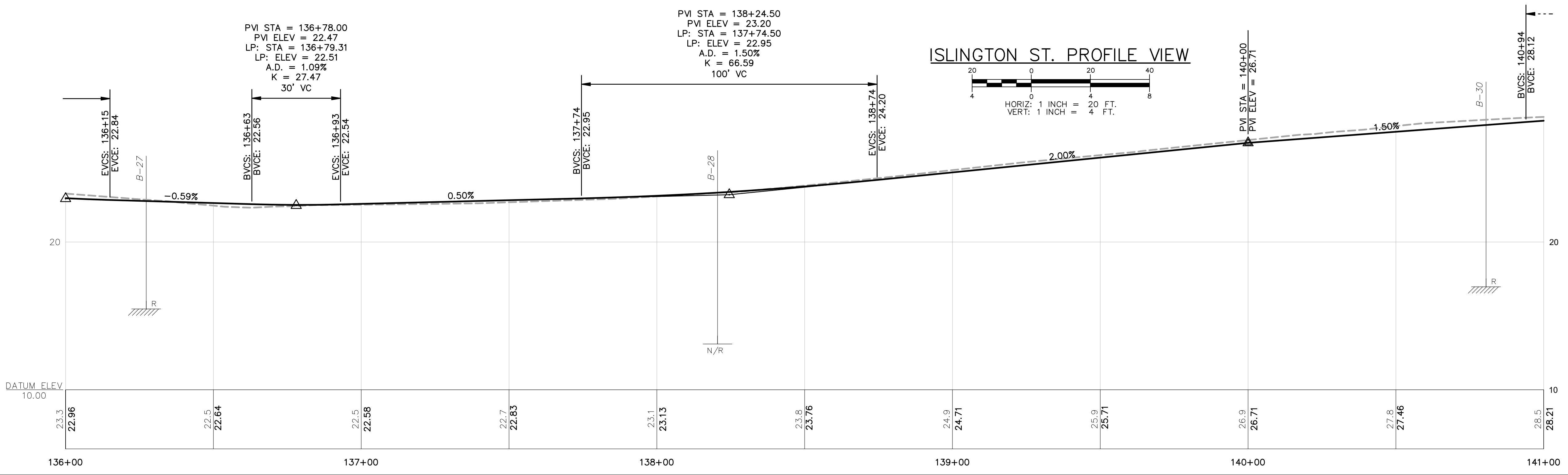
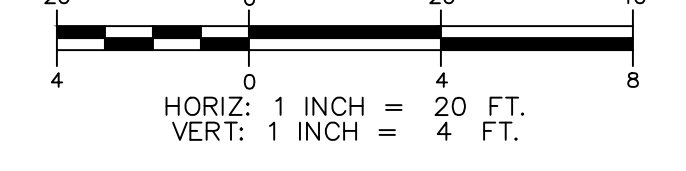
ISLINGTON ST. PLAN VIEW



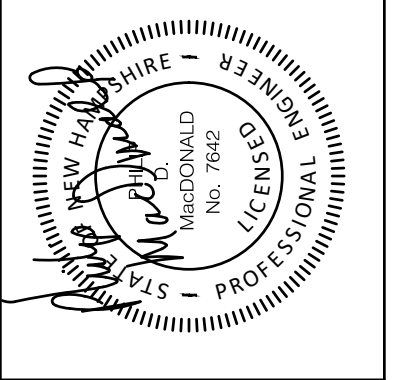
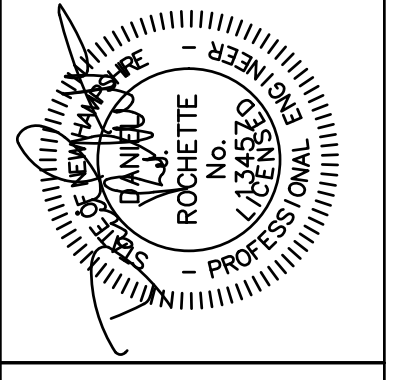
PVI STA = 136+78.00  
 PVI ELEV = 22.47  
 LP: STA = 136+79.31  
 LP: ELEV = 22.51  
 A.D. = 1.09%  
 K = 27.47  
 30' VC

PVI STA = 138+24.50  
 PVI ELEV = 23.20  
 LP: STA = 137+74.50  
 LP: ELEV = 22.95  
 A.D. = 1.50%  
 K = 66.59  
 100' VC

ISLINGTON ST. PROFILE VIEW



ISSUE FOR		APPROVAL	
By	Date	By	Date
CONSTRUCTION	6/29/22	DJR	6/29/22
REVISIONS	NO		
NO.	DATE	BY	DESCRIPTION
1	AS SHOWN	AS SHOWN	AS SHOWN
DRAWN/CHK		RMR	
DESIGNED	DJR	CHECKED	FDH
APPROVED	6/29/22	DATE	6/29/22
BOOK NO.	2705	PROJECT NO.	ID2705bas_Sht.2
DWG.	ID2705bas_Sht.2	SCALE	AS SHOWN
REVISIONS		APPD	
DWG NO		SHEET	
R-2		13 OF 56	

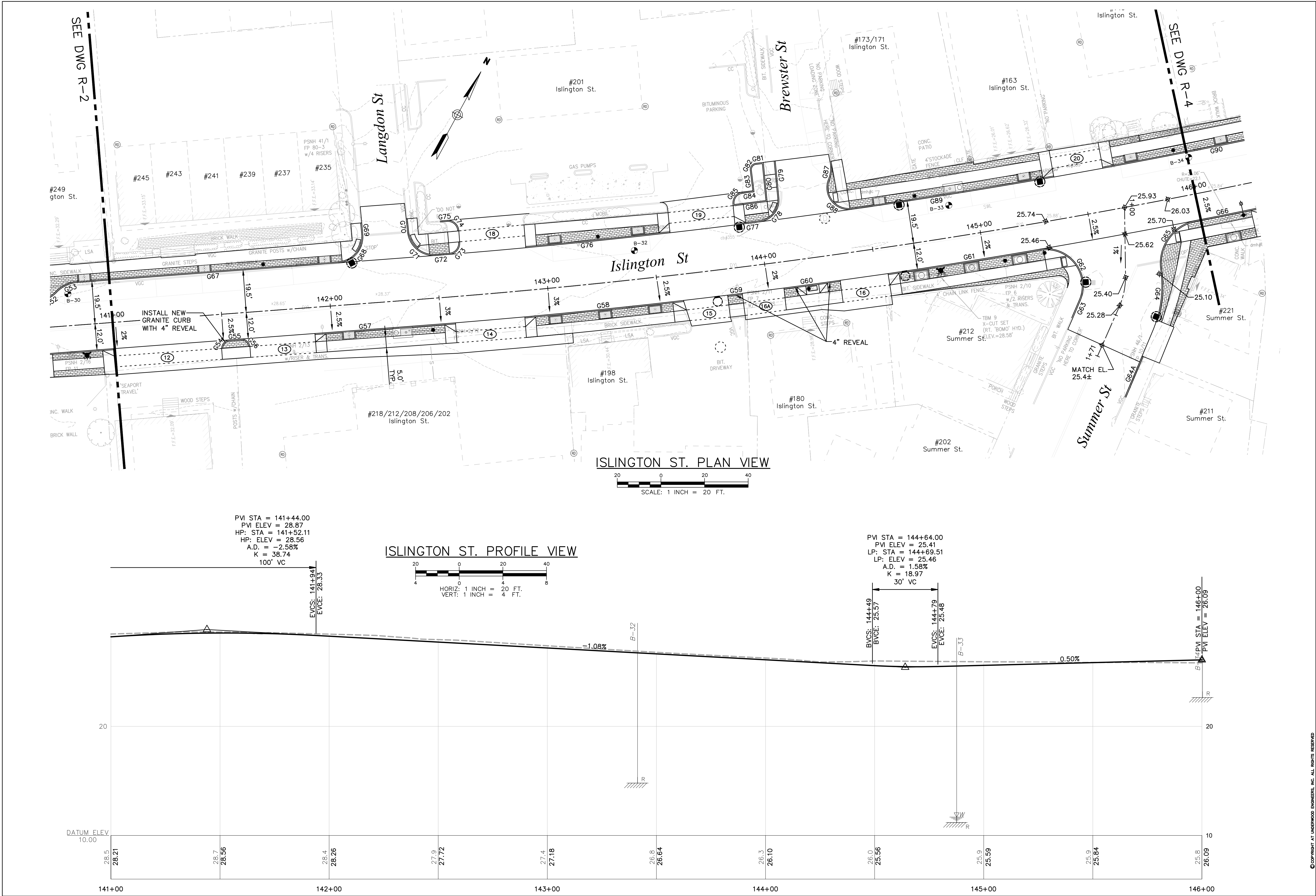


**UNDERWOOD**  
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 Tel. 603-436-6192 Fax. 603-431-4733

**ROADWAY PLAN & PROFILE**  
**ISLINGTON STREET CORRIDOR IMPROVEMENTS**  
**PHASE 2**  
**CITY OF PORTSMOUTH**  
**PORTSMOUTH, NEW HAMPSHIRE**

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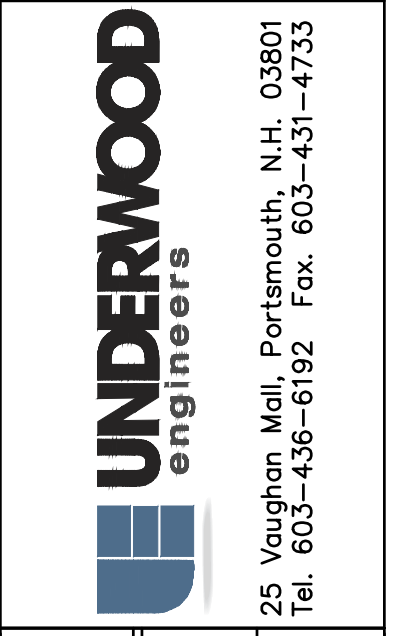
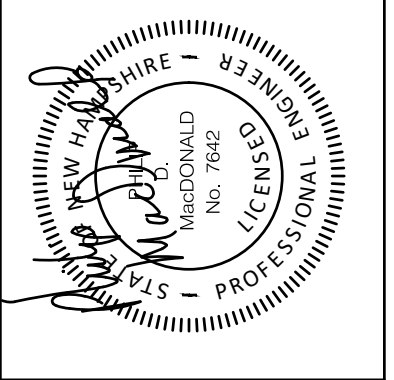
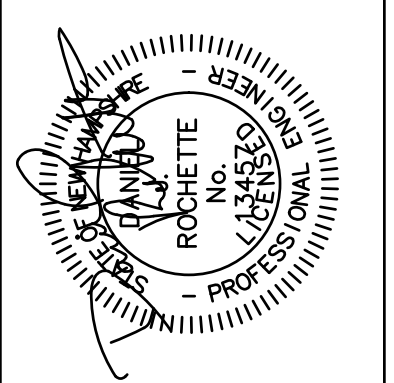


ISSUE FOR APPROVAL	By Date	APPROVAL	By Date
CONSTRUCTION	By Date	REVISIONS	NO.
RECORD DWG	By Date	APPD	
Drawn/Chk	RMG	Drawn/Chk	RMG
Designed	DJR	Checked	FDM
Approved	6/28/22	Scale	AS SHOWN
Book No.	2705	Project No.	ID2705bas_Sht.2
Dwg.	ID2705bas_Sht.2		

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25 Vaughan Mall, Portsmouth, N.H. 03801 Tel. 603-436-6192 Fax. 603-431-4733	
<b>ROADWAY PLAN &amp; PROFILE</b>	<b>ISLINGTON STREET CORRIDOR IMPROVEMENTS</b>
	<b>PHASE 2</b>
	<b>CITY OF PORTSMOUTH</b>
	<b>PORTSMOUTH, NEW HAMPSHIRE</b>
DWG NO R-3	SHEET 14 OF 56

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**ROADWAY PLAN & PROFILE**

**ISLINGTON STREET CORRIDOR IMPROVEMENTS**

**PHASE 2**

**CITY OF PORTSMOUTH**

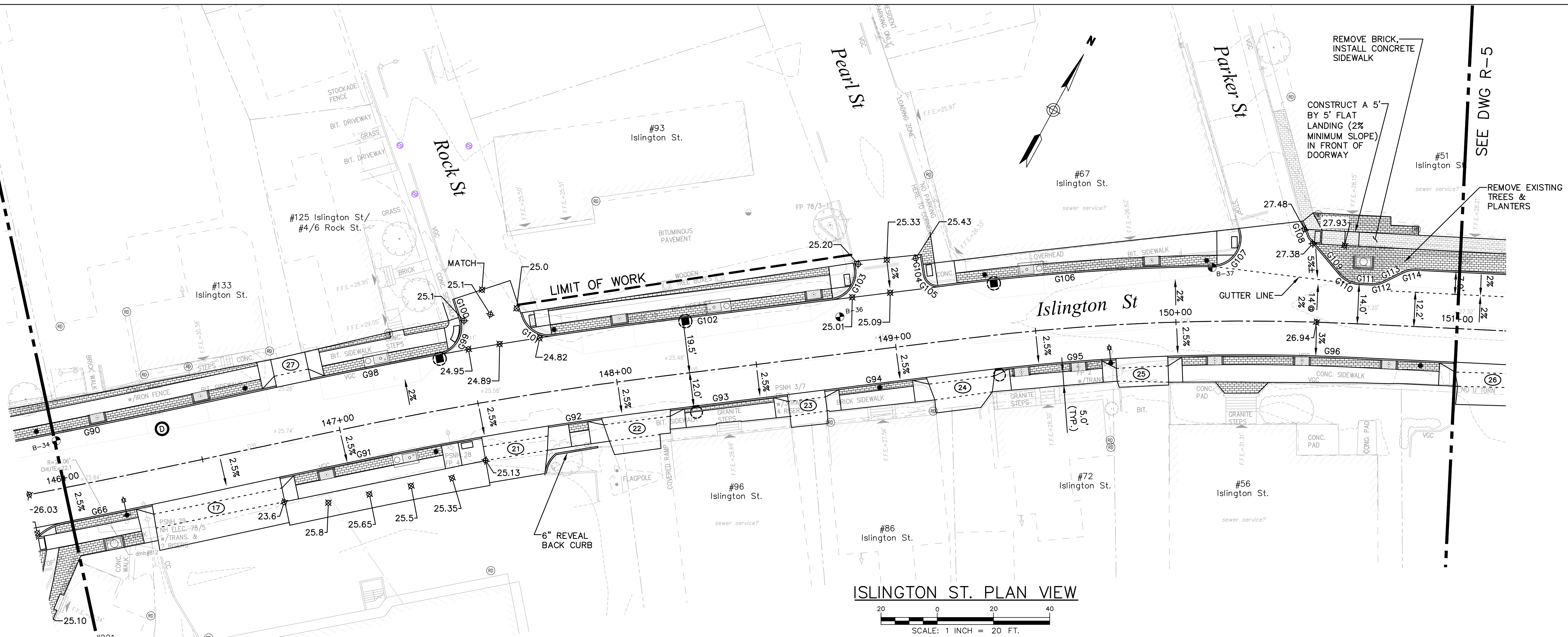
**PORTSMOUTH, NEW HAMPSHIRE**

DWG NO  
R-3

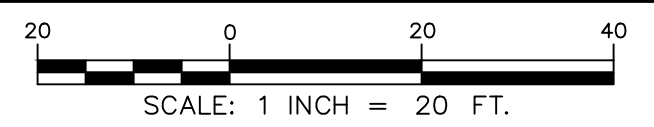
SHEET  
14 OF 56

SEE DWG R-3

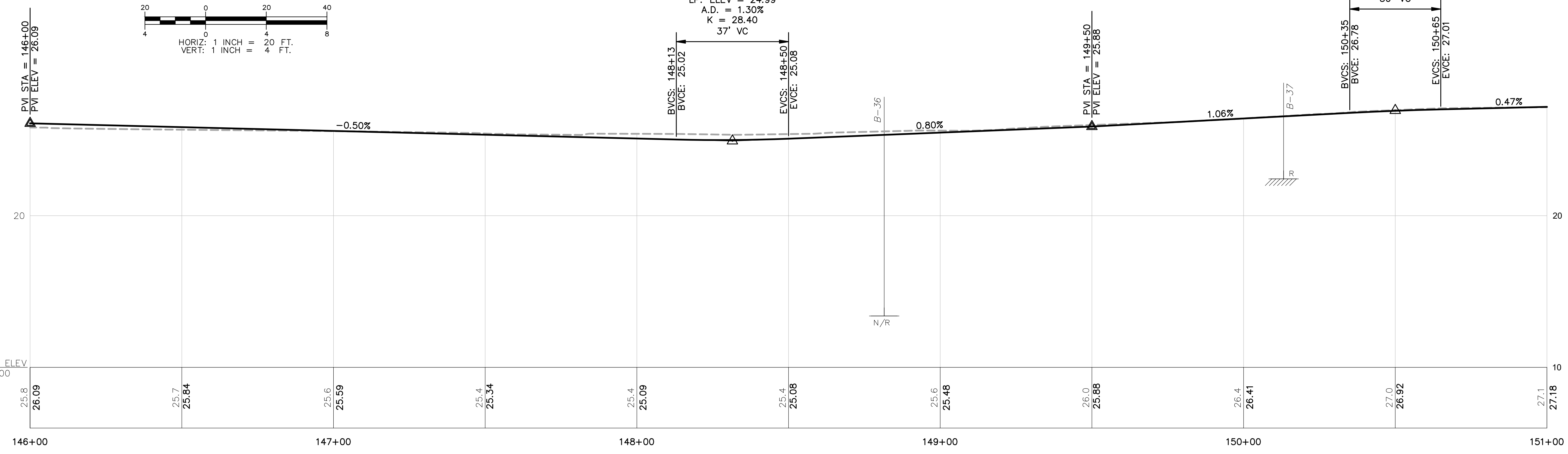
SEE DWG R-5



ISLINGTON ST. PLAN VIEW



ISLINGTON ST. PROFILE VIEW

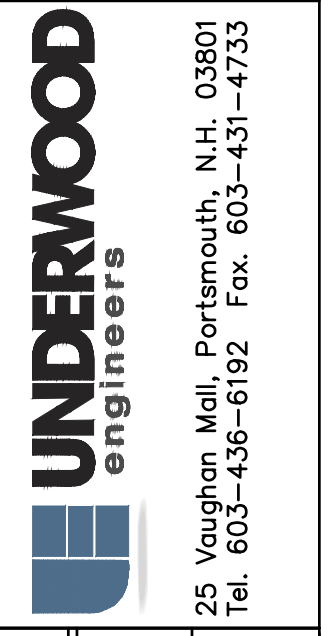
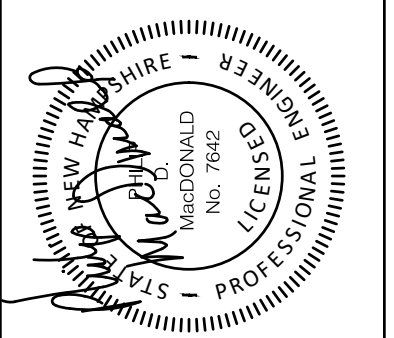
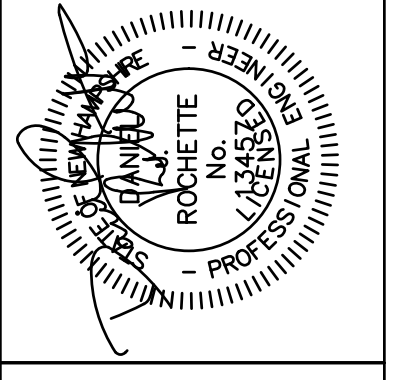


HORIZ: 1 INCH = 20 FT.  
VERT: 1 INCH = 4 FT.

PVI STA = 148+31.50  
PVI ELEV = 24.93  
LP: STA = 148+27.23  
LP: ELEV = 24.99  
A.D. = 1.30%  
K = 28.40  
37' VC

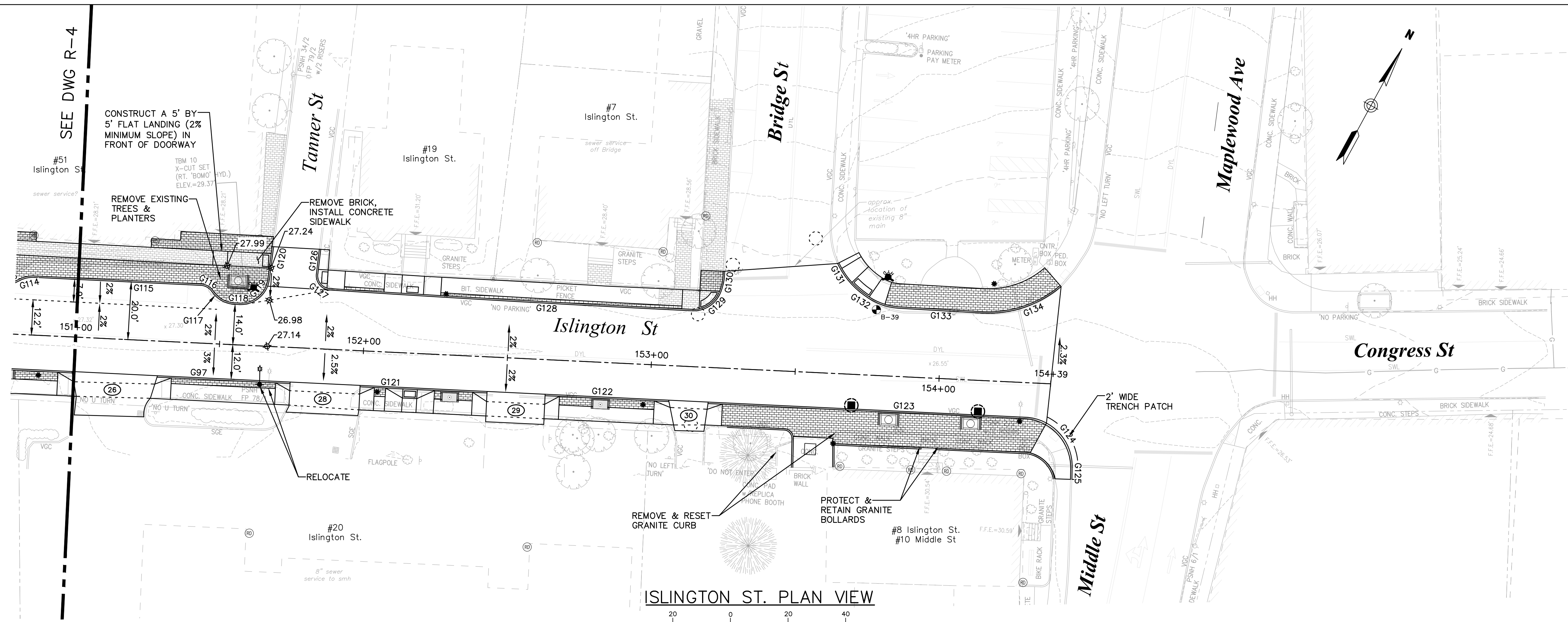
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PVI ELEV = 26.94  
HP: STA = 150+65.00  
HP: ELEV = 27.01  
A.D. = -0.58%  
K = 51.28  
30' VC

ISSUE FOR APPROVAL	DATE	BY	REVISIONS
Drawn/Chk	RMG	DJR	NO
Designed	DJR		
Checked	FDH		
Approved			
Date	6/28/22	DJR	
Book No.			
Project No.	2705		
Dwg. ID	ID2705bas_Sht.2		
Scale	AS SHOWN		
UNDERWOOD ENGINEERS, INC.			APPD
ROADWAY PLAN & PROFILE			
ISLINGTON STREET CORRIDOR IMPROVEMENTS PHASE 2			
CITY OF PORTSMOUTH			
PORTSMOUTH, NEW HAMPSHIRE			
DWG NO	R-4	SHEET	15 OF 56



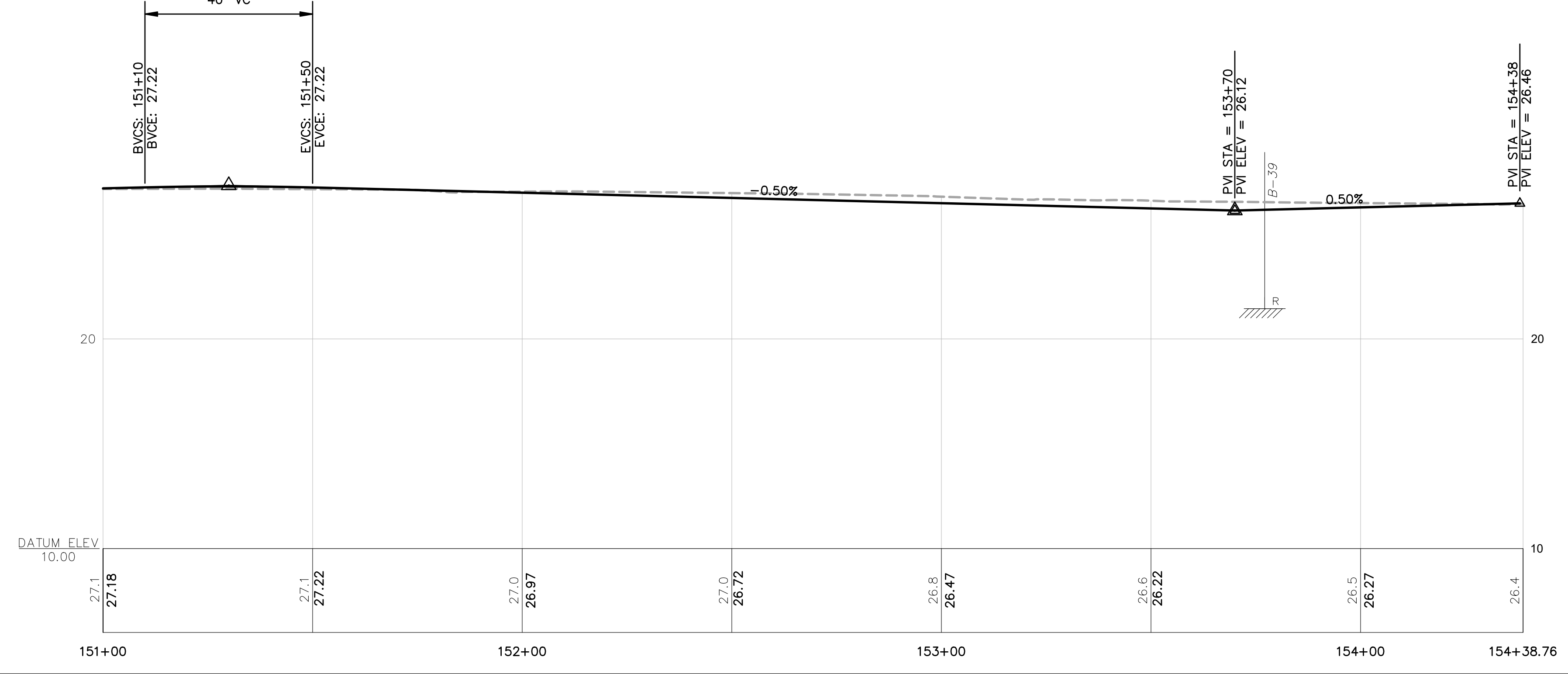
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ISLINGTON ST. PLAN VIEW  
SCALE: 1 INCH = 20 FT.

PVI STA = 151+30.00  
PVI ELEV = 27.32  
HP: STA = 151+29.49  
HP: ELEV = 27.27  
A.D. = -0.98%  
K = 41.03  
40' VC

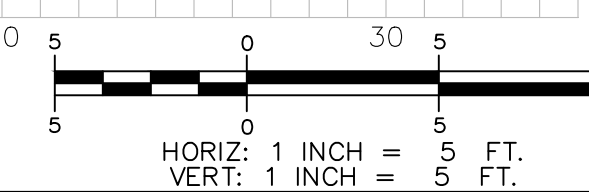
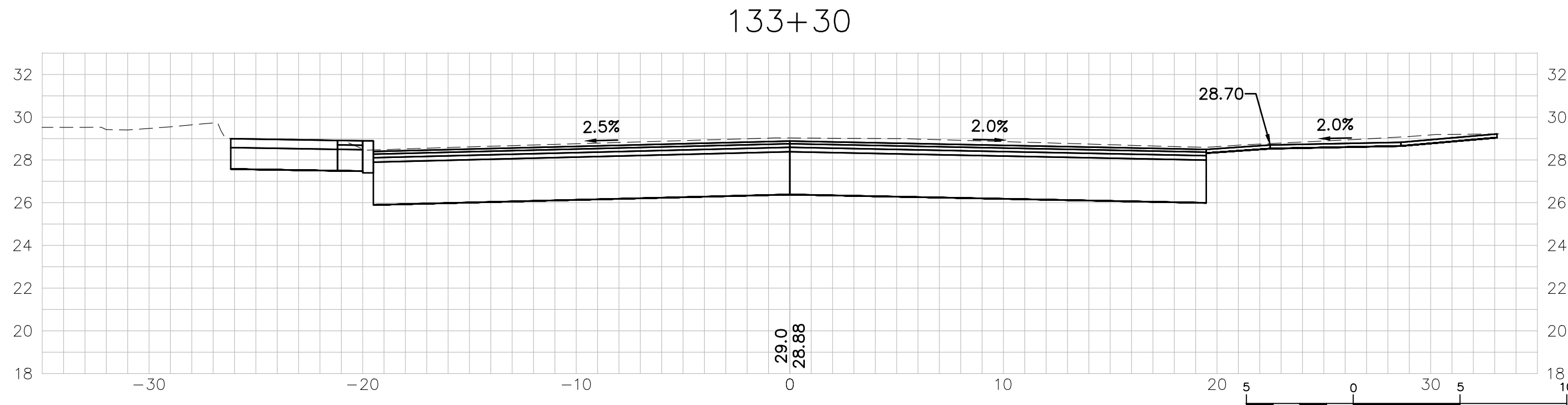
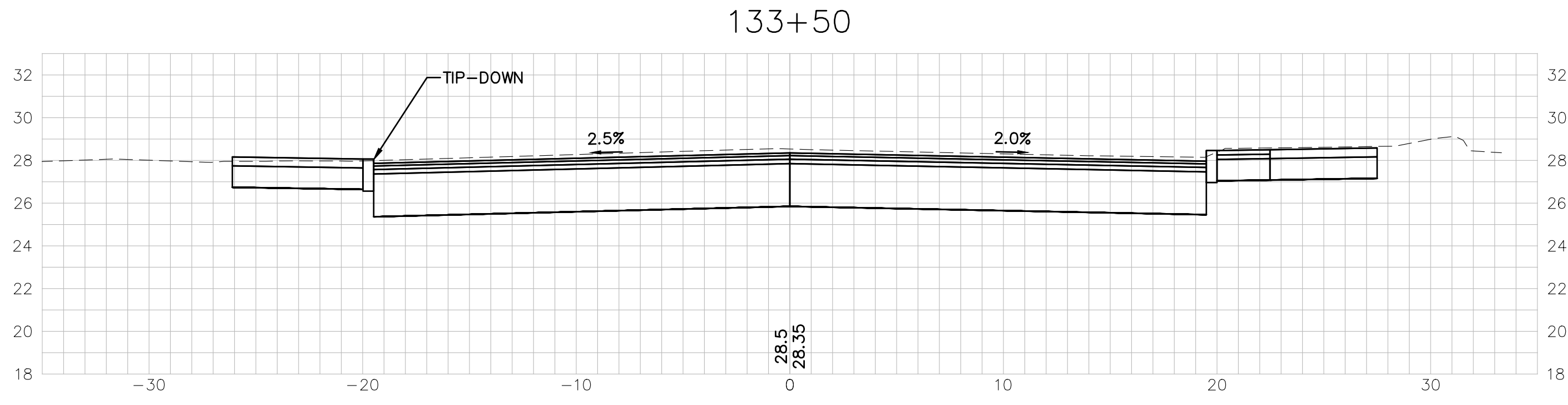
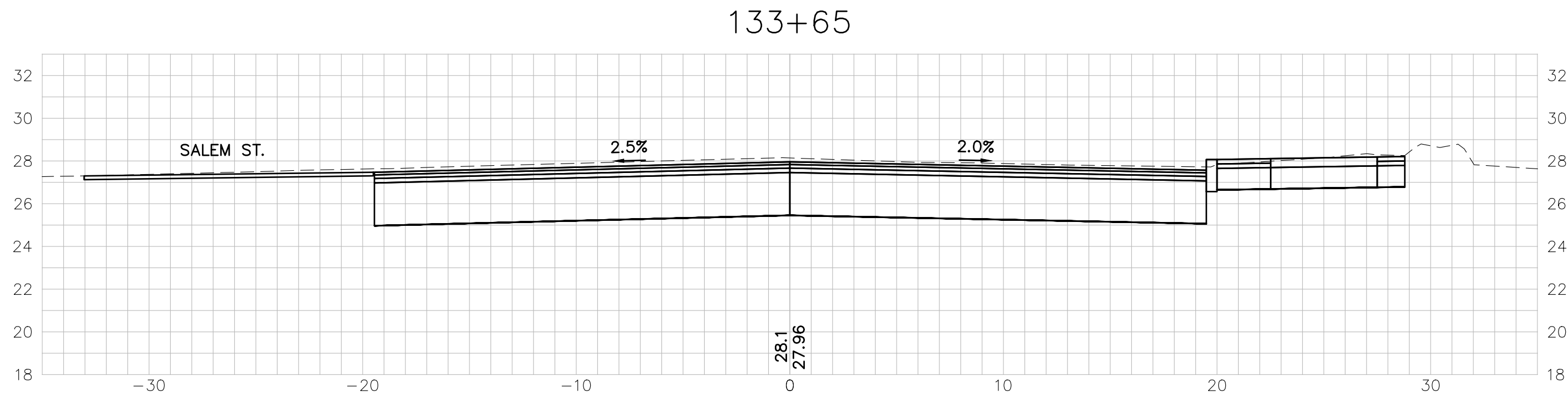
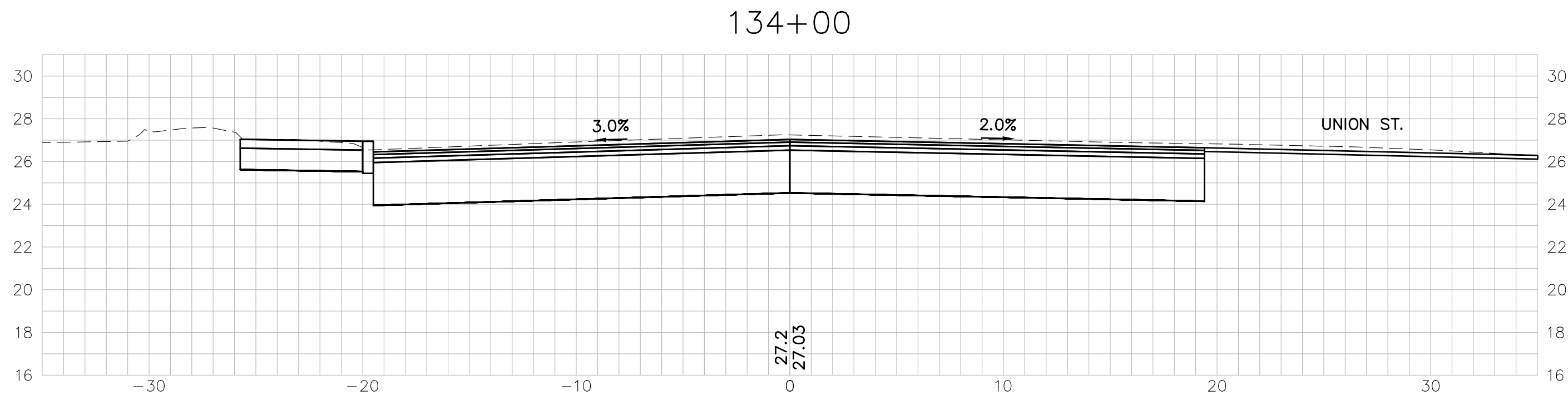
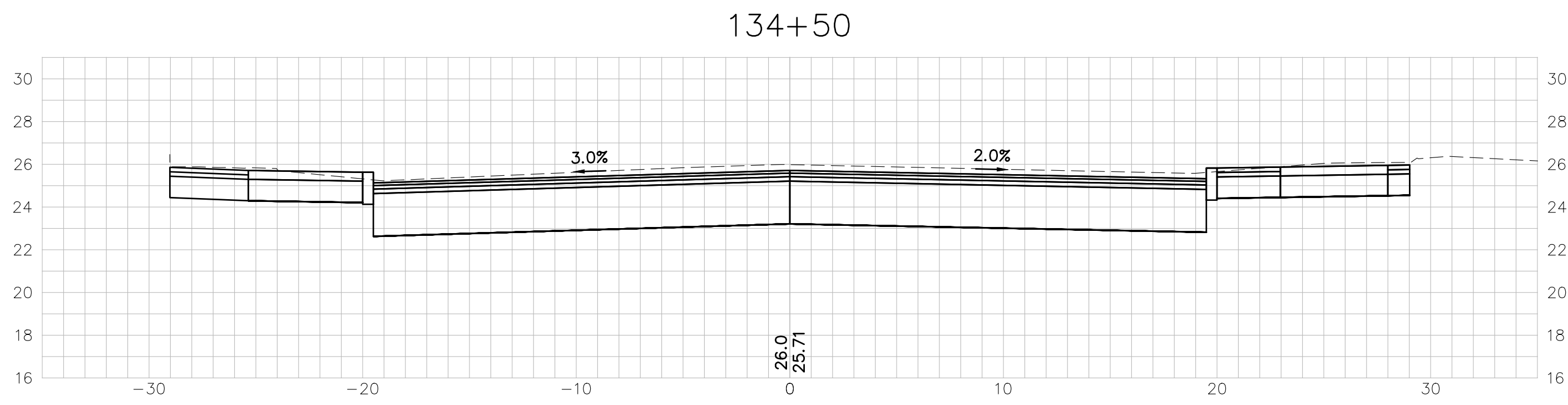
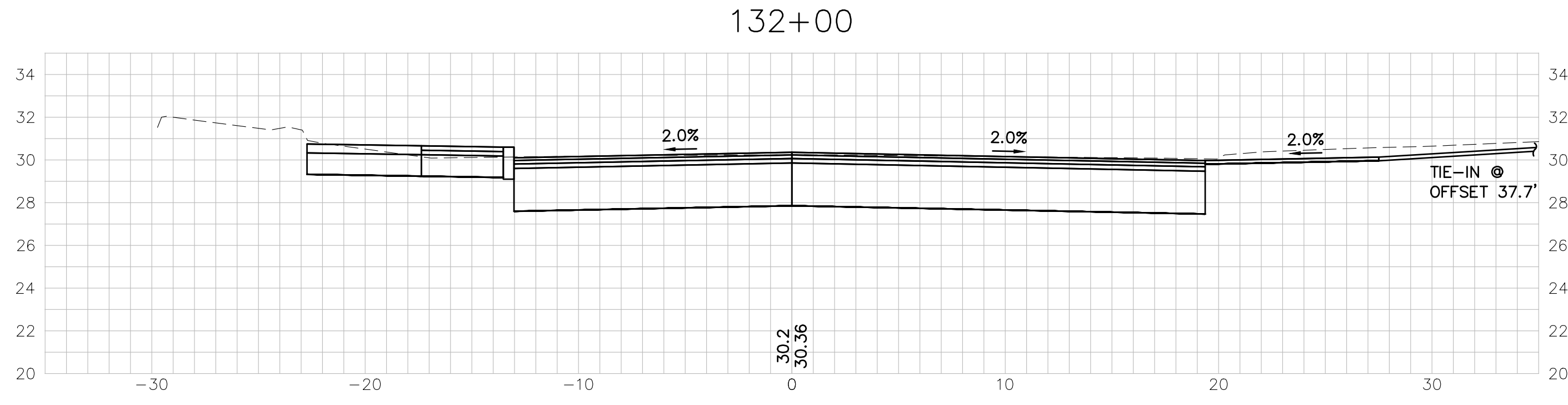
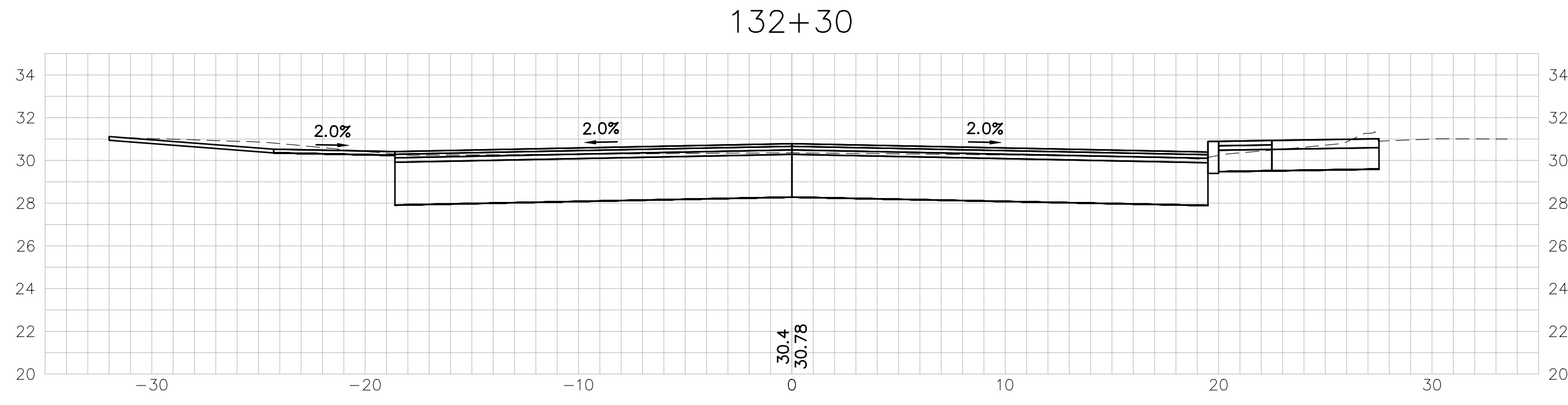
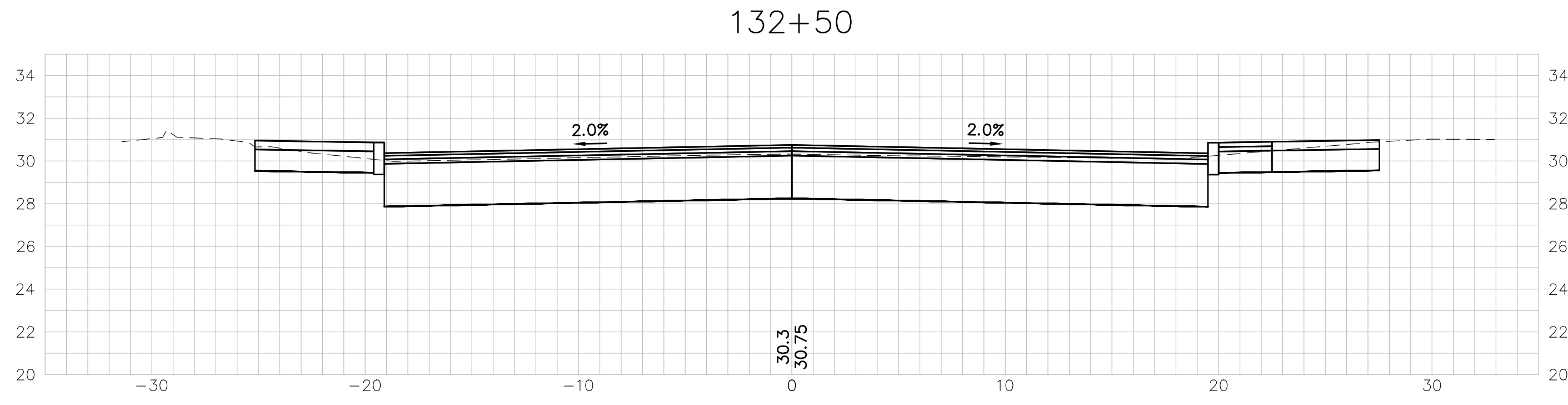
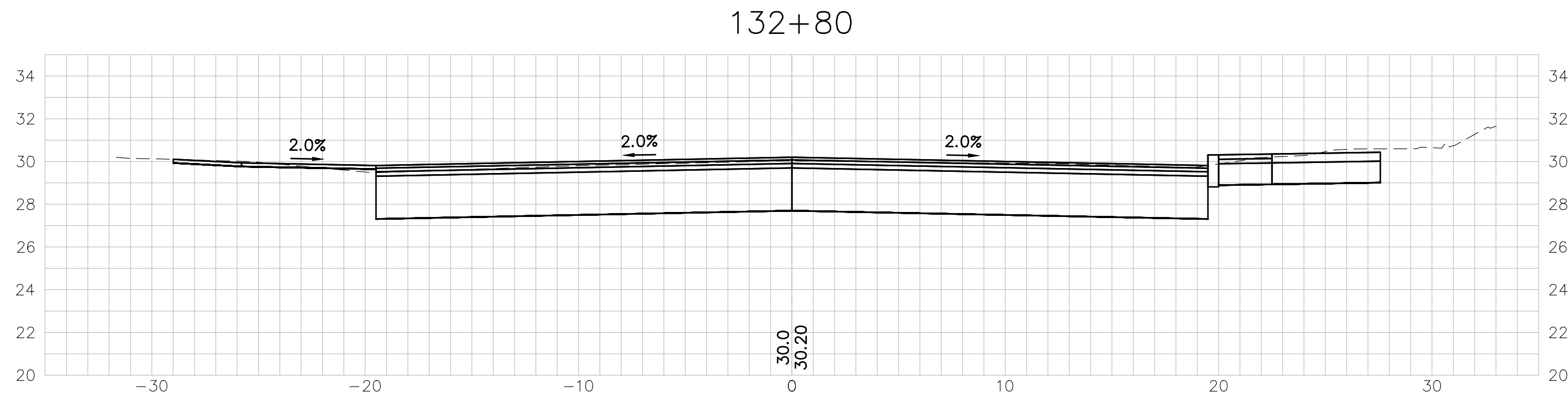
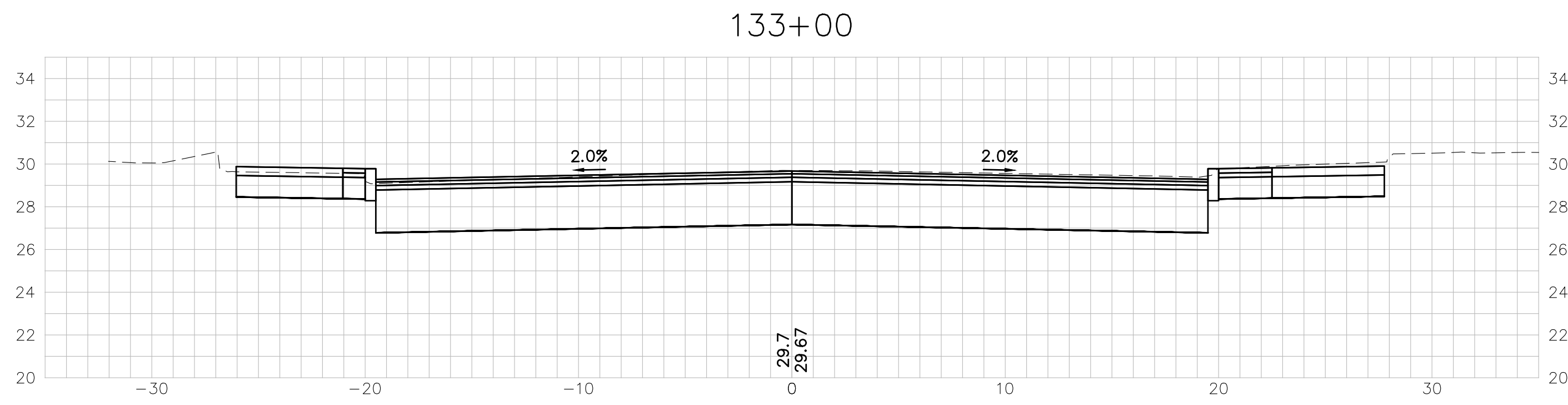


ISLINGTON ST. PROFILE VIEW  
HORIZ: 1 INCH = 20 FT.  
VERT: 1 INCH = 4 FT.

ISSUE FOR APPROVAL	By Date	6/29/22	DJR
CONSTRUCTION	By Date		
RECORD DWG	By Date		
REVISIONS	NO.		
Drawn/Chk	RMG		
Designed	DJR		
Checked	FDM		
Approved	Date	6/29/22	
Book No.	Project No.	2705	
Dwg. ID	2705bas_Sht.2		
Scale	AS SHOWN		
Professional Engineer Seal			
Professional Engineer Seal			
<b>UNDERWOOD</b> engineers 25 Vaughan Mall, Portsmouth, N.H. 03801 Tel. 603-436-6192 Fax. 603-431-4733			
<b>ROADWAY PLAN &amp; PROFILE</b> <b>ISLINGTON STREET CORRIDOR IMPROVEMENTS</b> <b>PHASE 2</b> <b>CITY OF PORTSMOUTH</b> <b>PORTSMOUTH, NEW HAMPSHIRE</b>			
DWG NO	R-5	SHEET	16 OF 56

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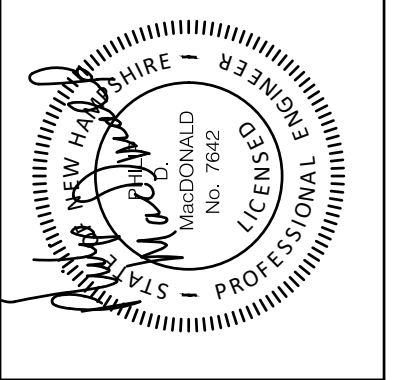
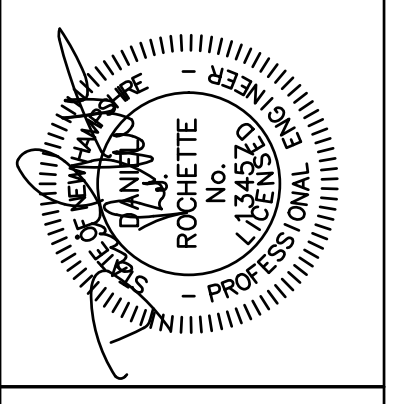
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ISSUE FOR	APPROVAL	By	Date
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CONSTRUCTION			
RECORD DWG			

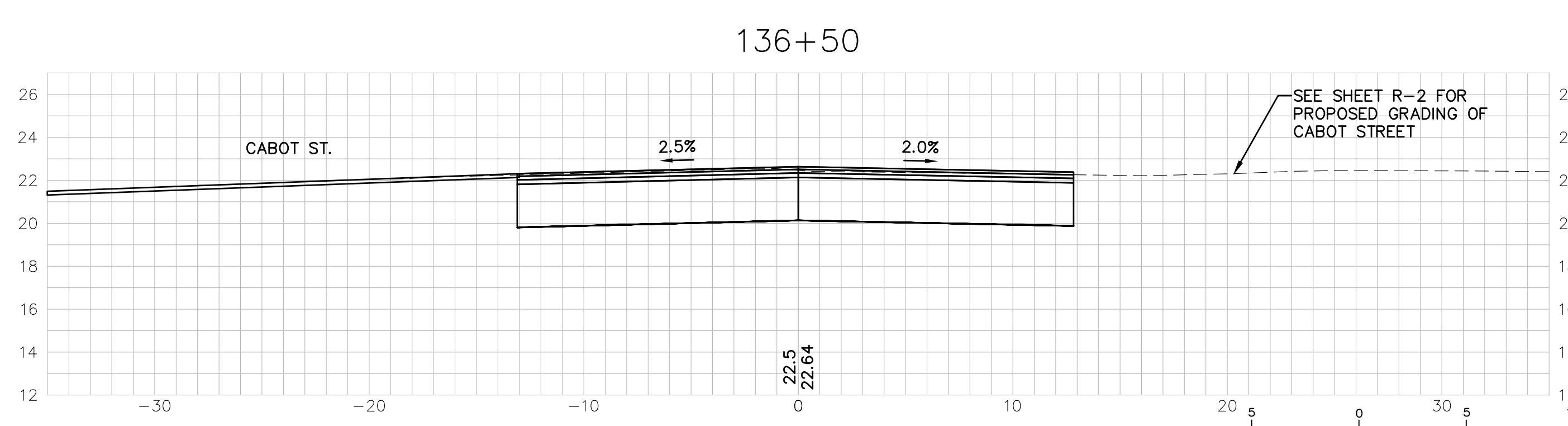
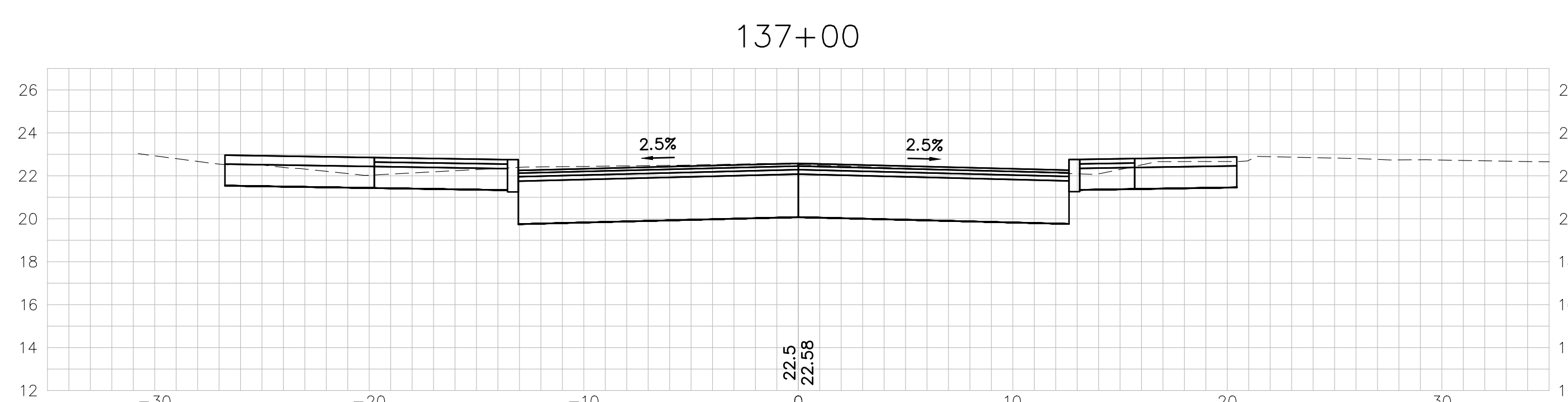
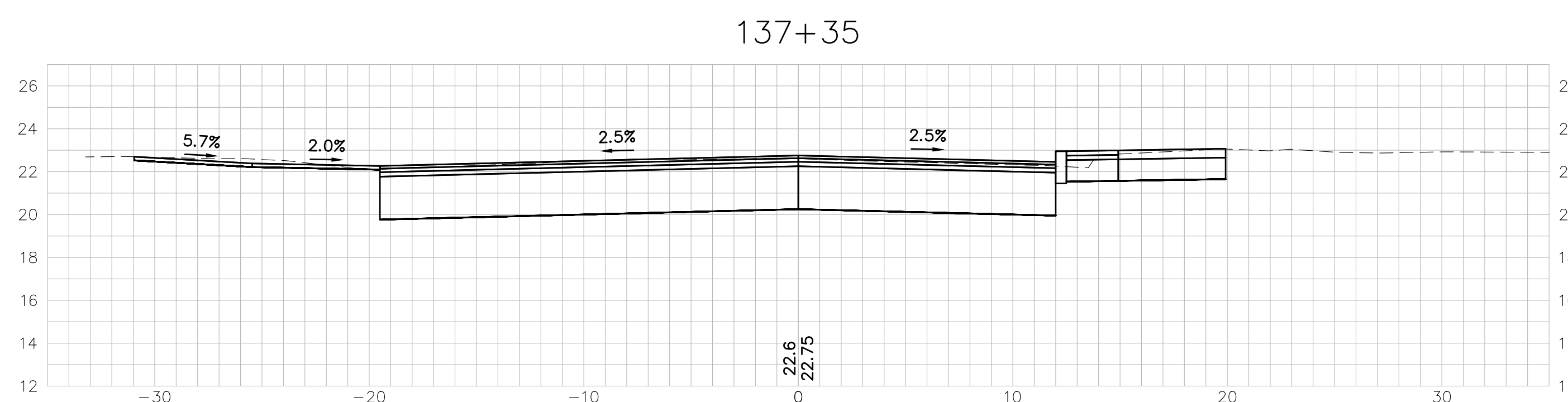
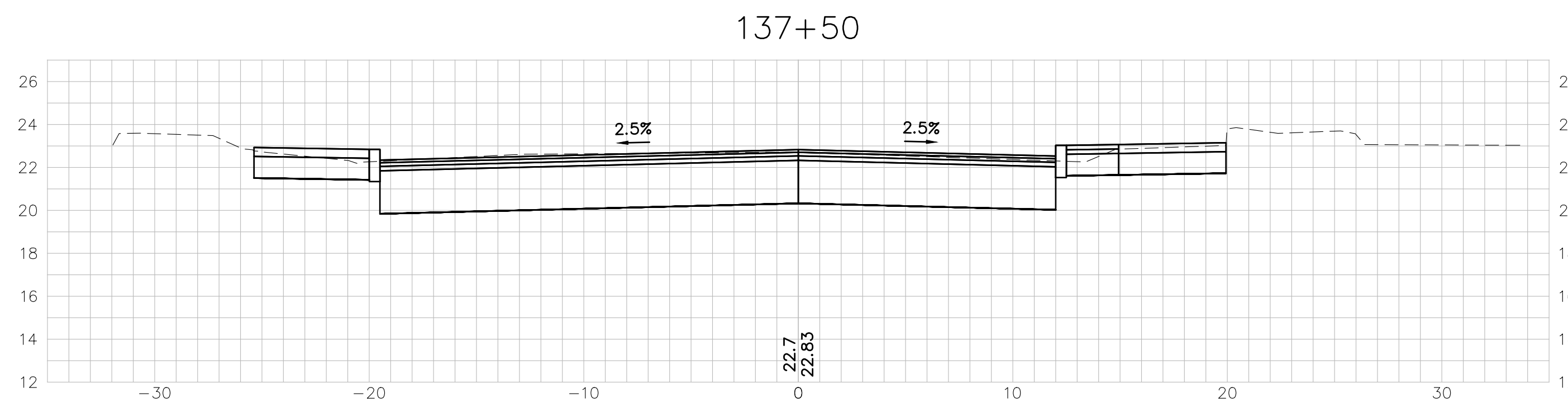
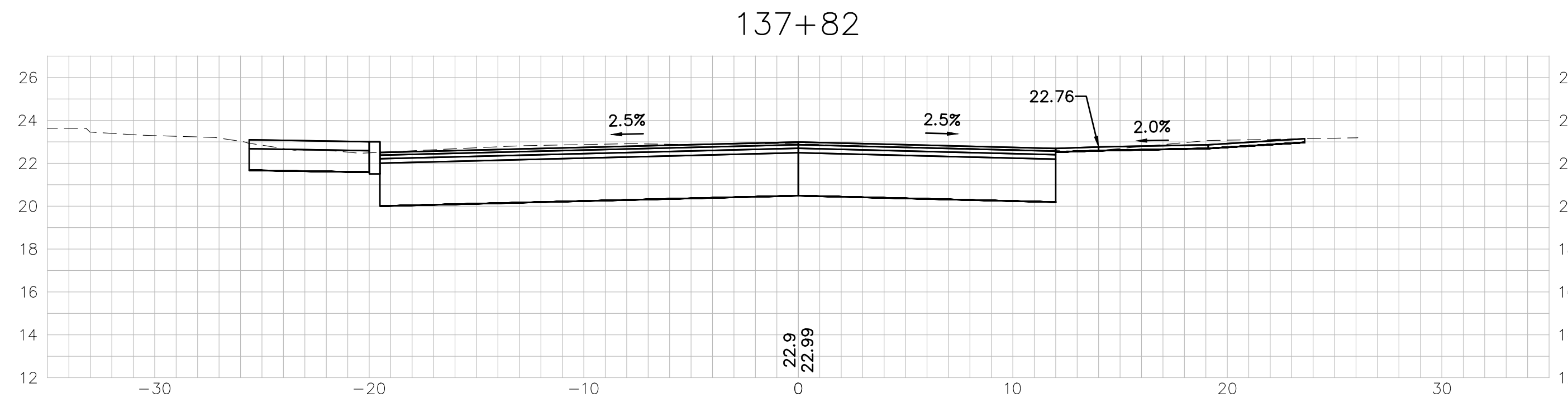
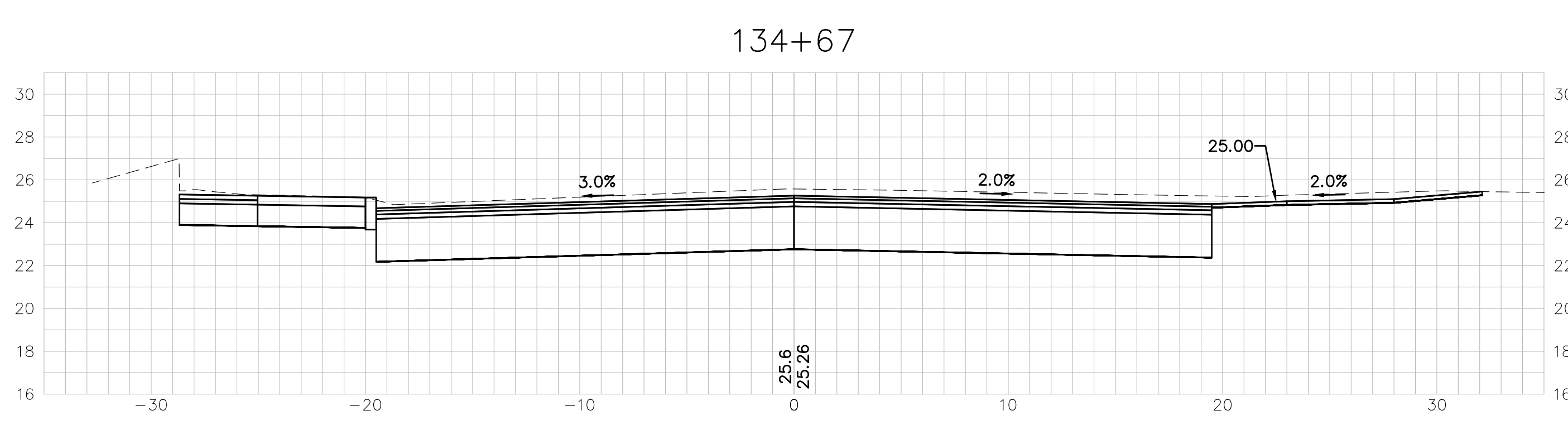
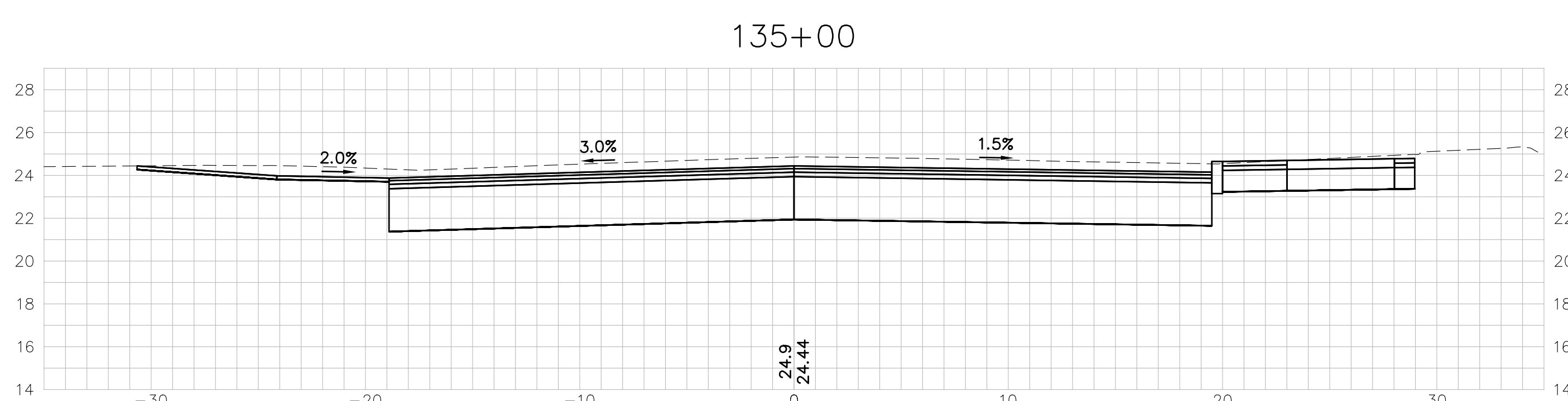
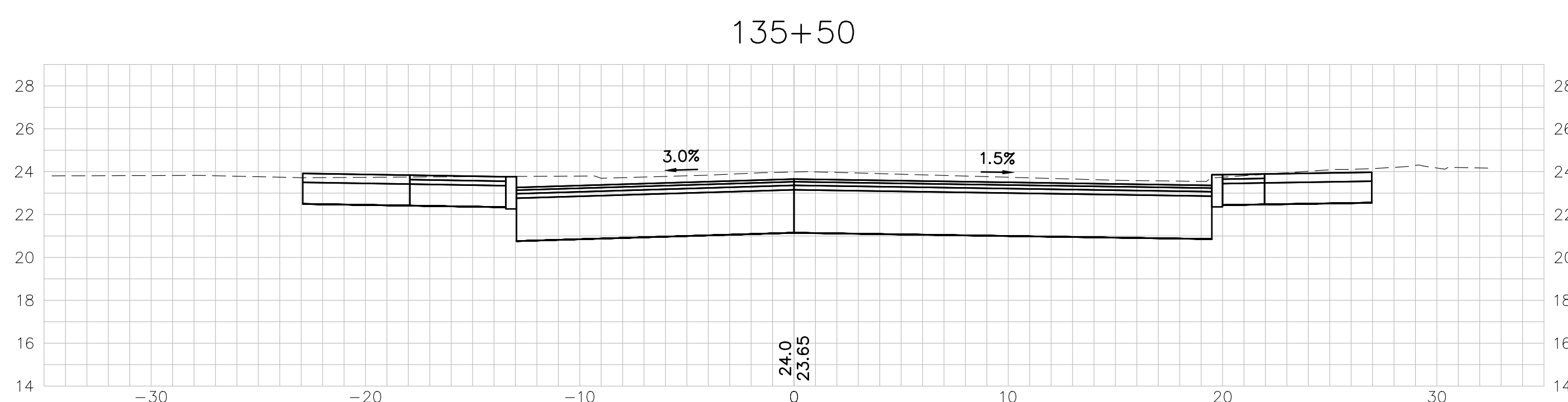
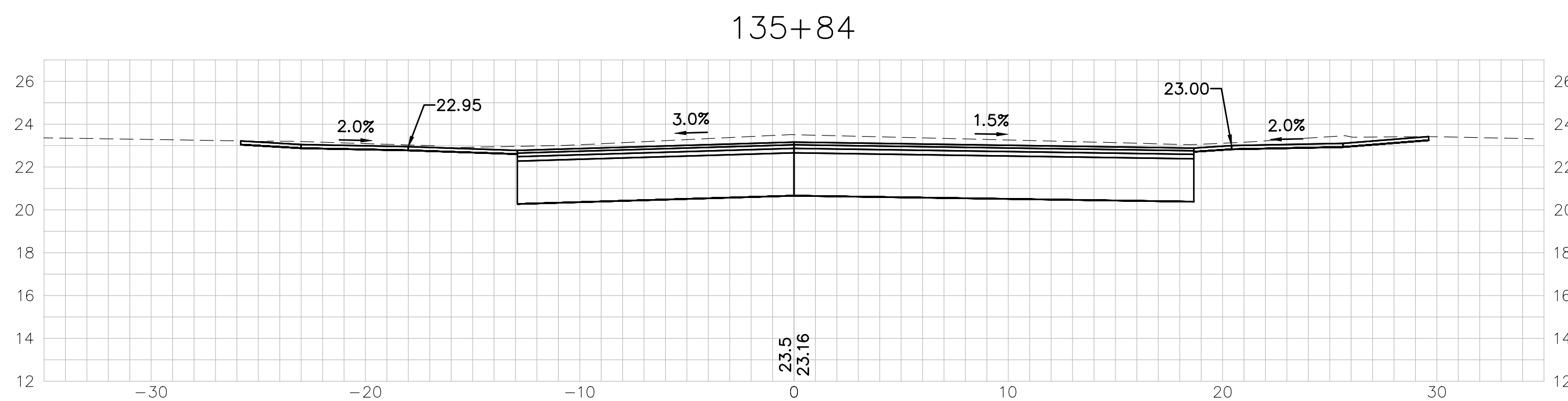
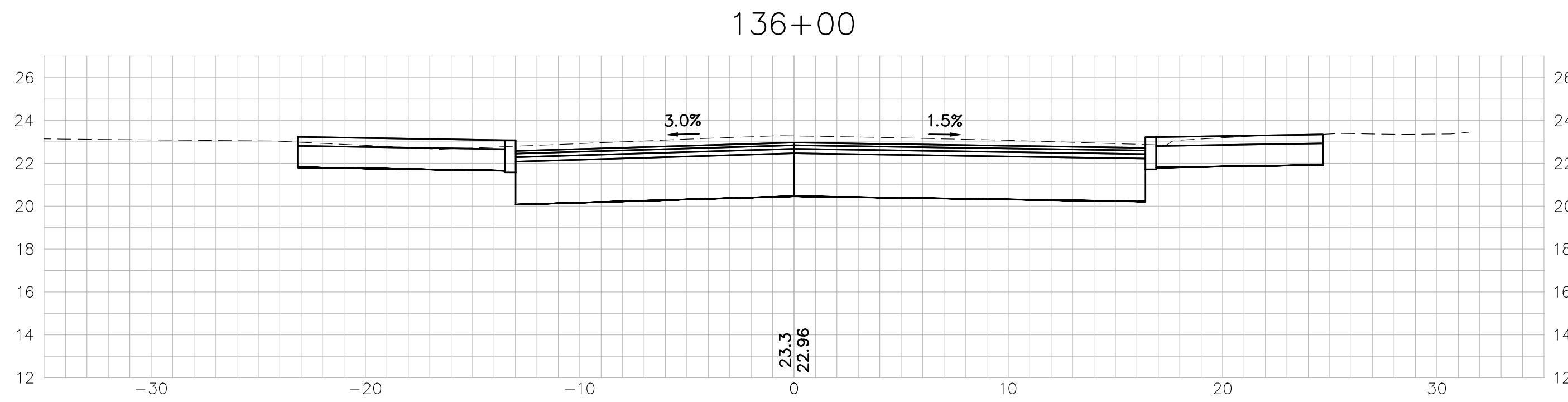
Drawn/Chk	RMG	DJR	FDM
Designed			
Checked			
Approved		6/28/22	
Book No.	Project No. 2705		
Scale	Dwg. ID2705bas.xs.sh.		
	AS SHOWN		



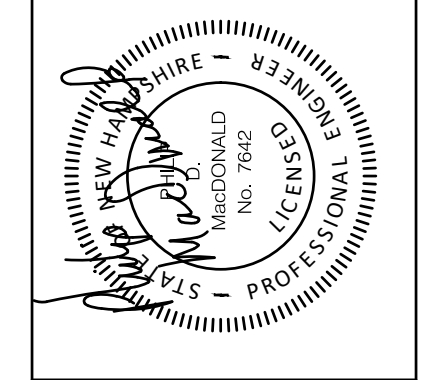
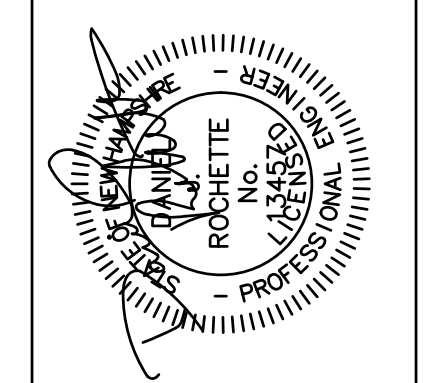
**UNDERWOOD**  
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Tel. 603-436-6192 Fax. 603-431-4733

**CROSS SECTIONS**  
ISLINGTON STREET CORRIDOR IMPROVEMENTS  
PHASE 2  
CITY OF PORTSMOUTH  
PORTSMOUTH, NEW HAMPSHIRE

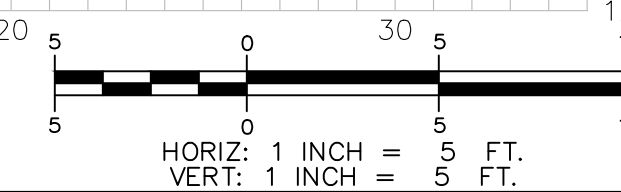


ISSUE FOR	APPROVAL	By	By
Date	Date	Date	Date
6/29/22	6/29/22		
CONSTRUCTION	CONSTRUCTION	CONSTRUCTION	CONSTRUCTION
Date	Date	Date	Date
REVISIONS	NO.	DATE	DESCRIPTION
Drawn/Chk	RMG	DJR	
Designed			
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Date			
Book No.		2705	
Project No.			
Dwg.	ID2705bas.xs.sh.		
Scale	AS SHOWN		

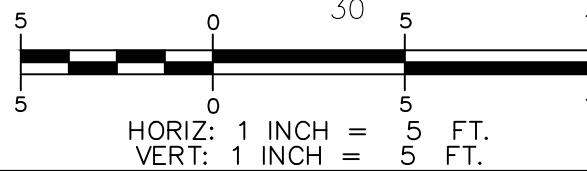
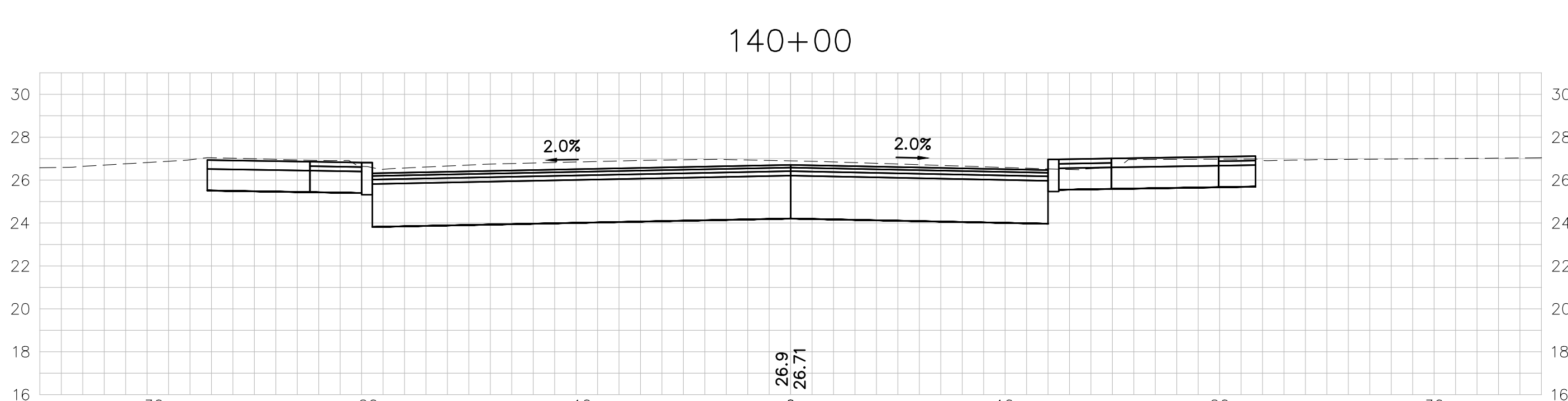
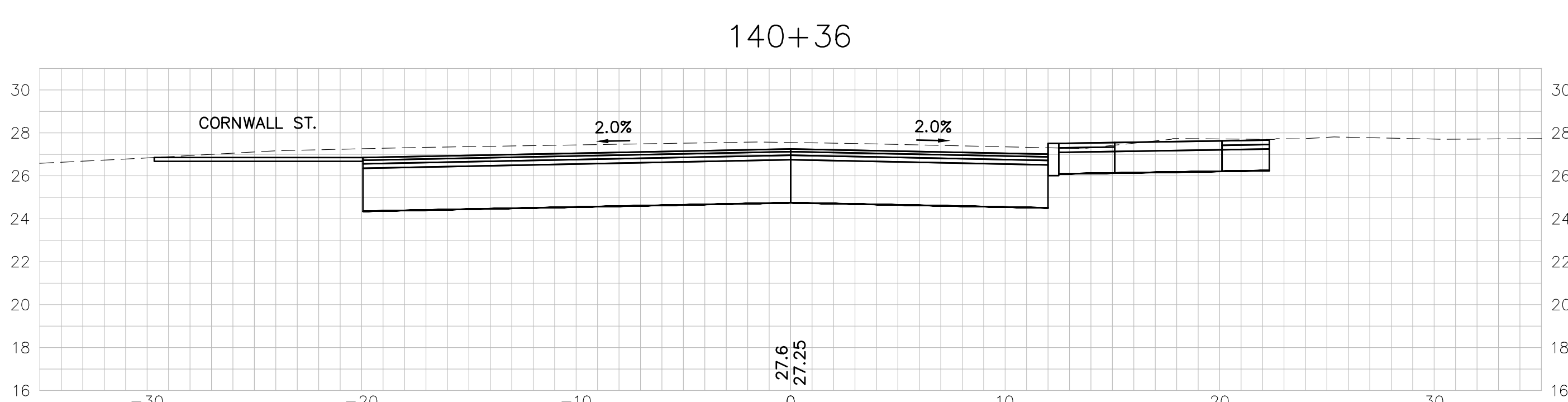
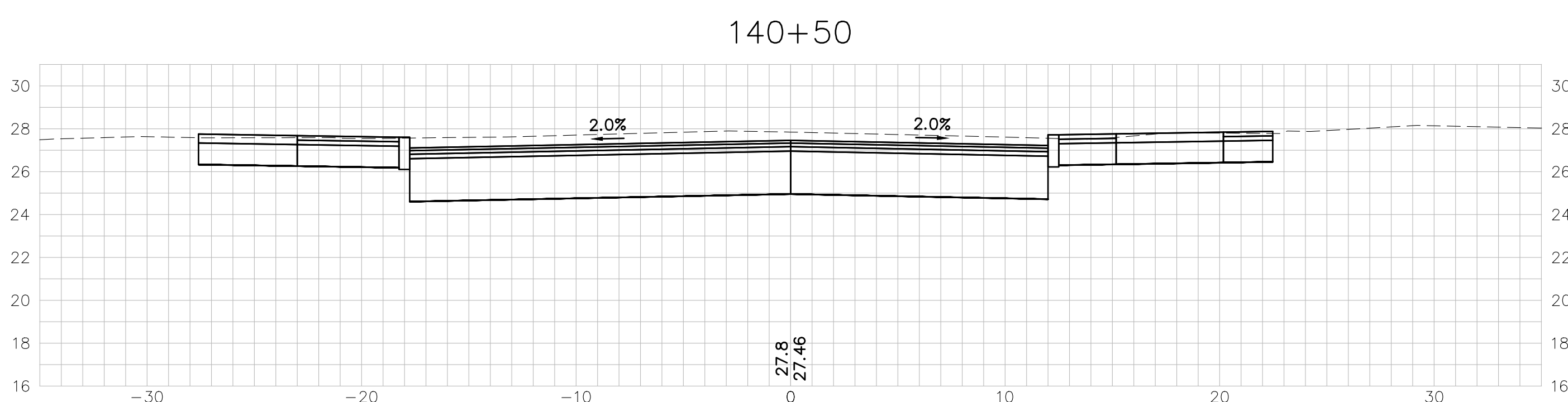
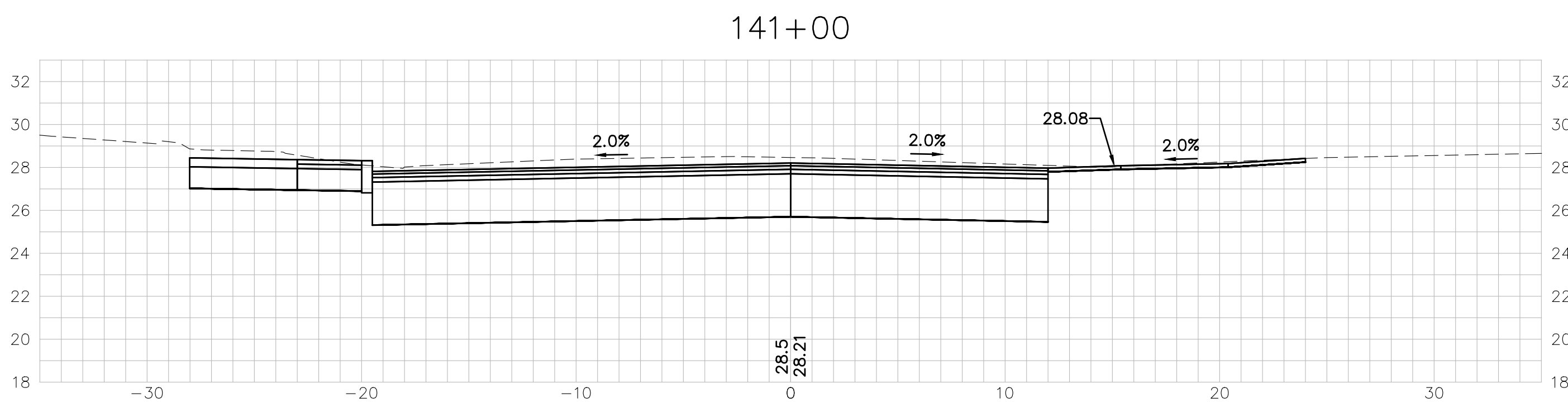
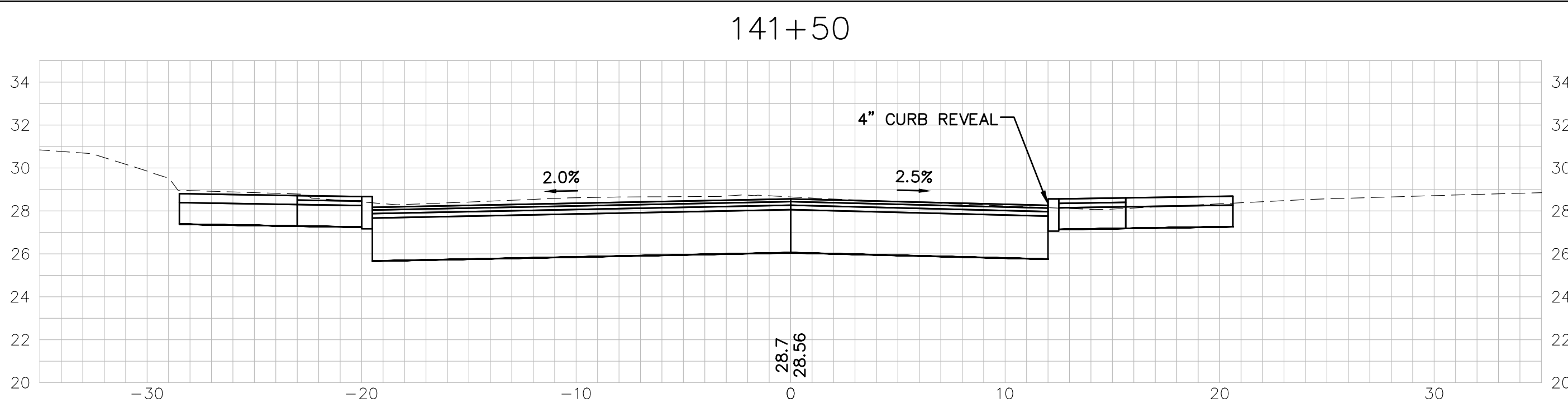
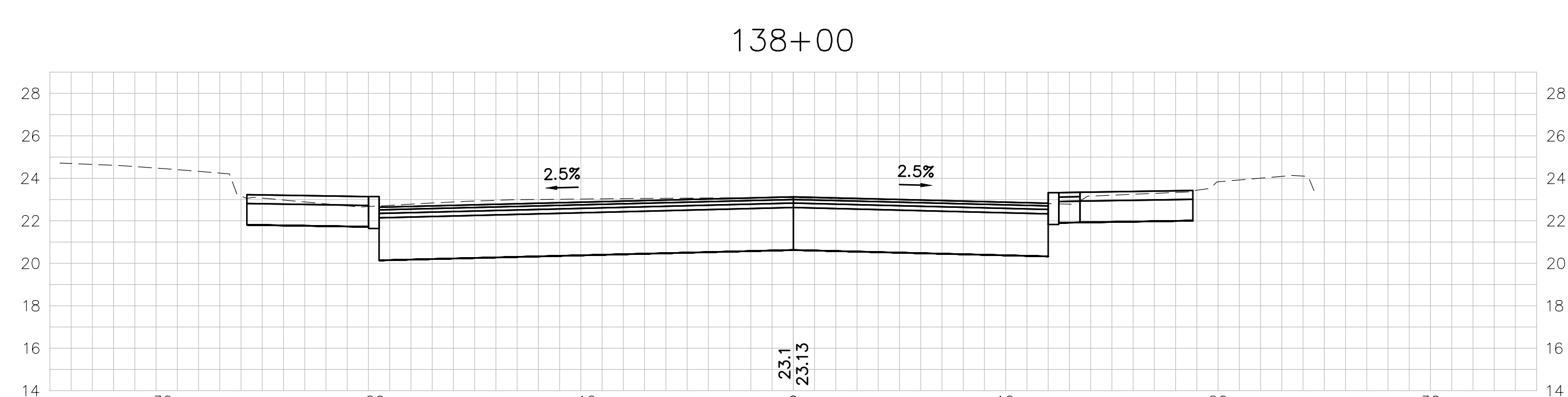
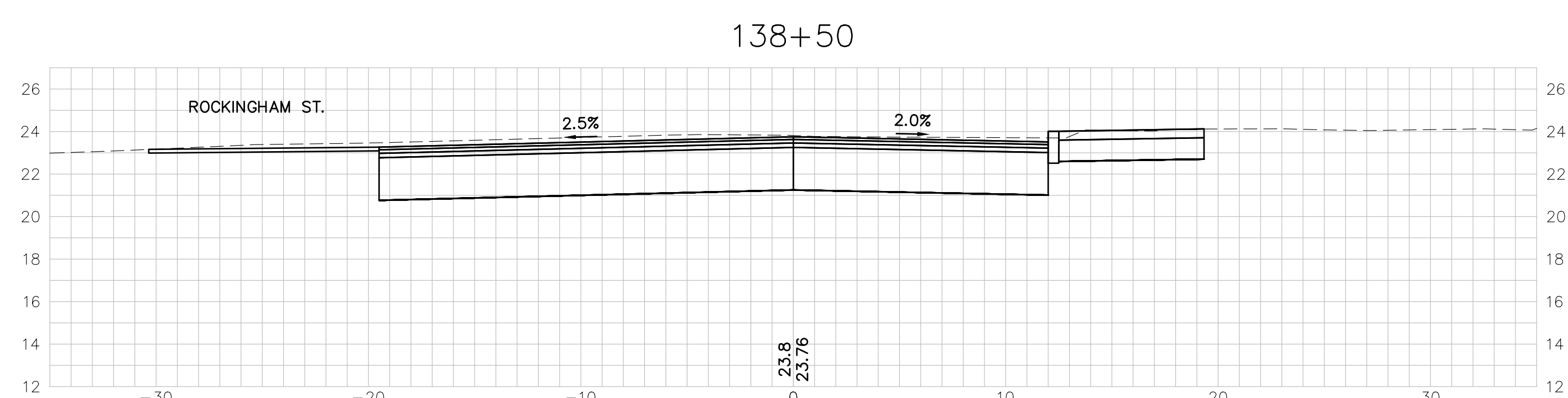
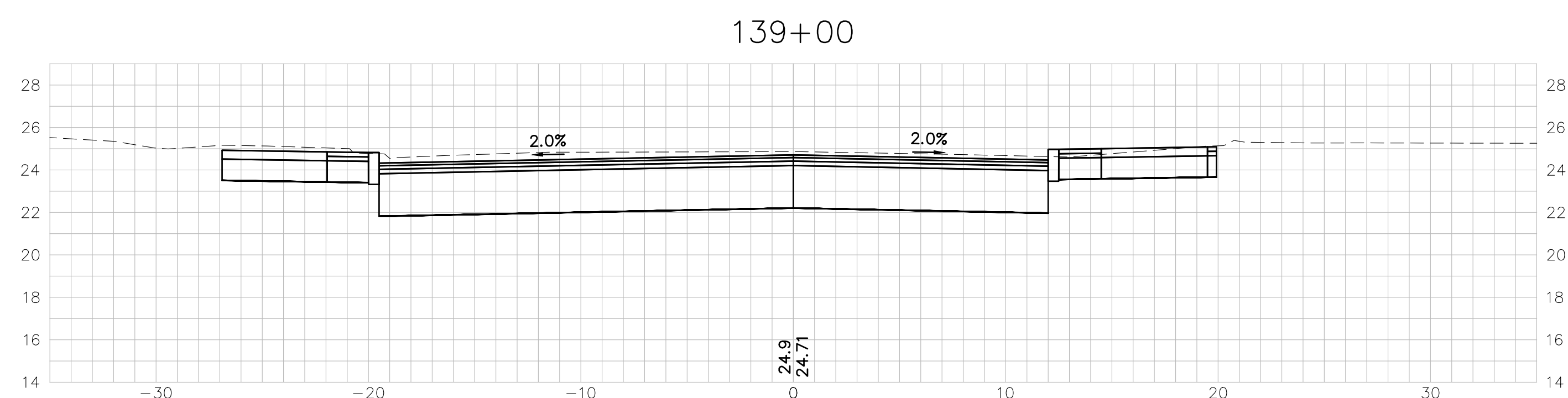
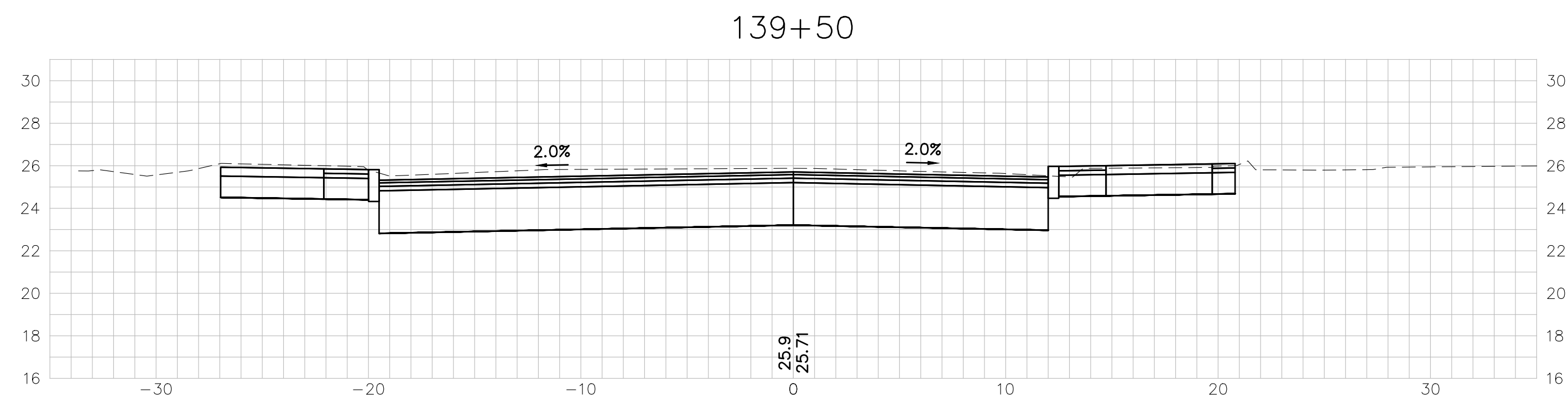
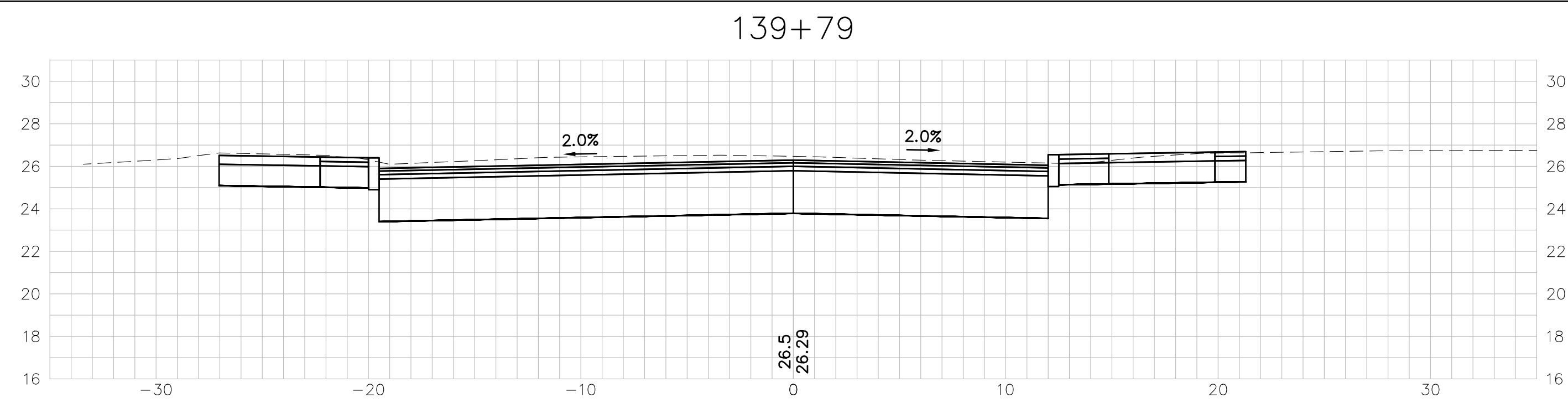


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**CROSS SECTIONS**  
**ISLINGTON STREET CORRIDOR IMPROVEMENTS**  
**PHASE 2**  
**CITY OF PORTSMOUTH**  
**PORTSMOUTH, NEW HAMPSHIRE**



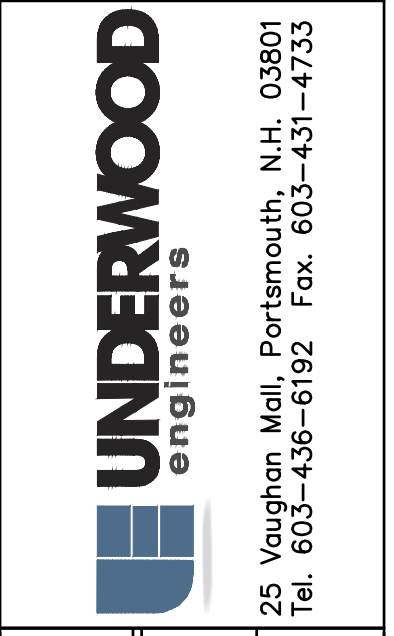
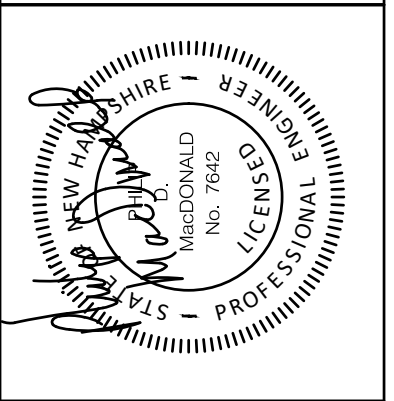
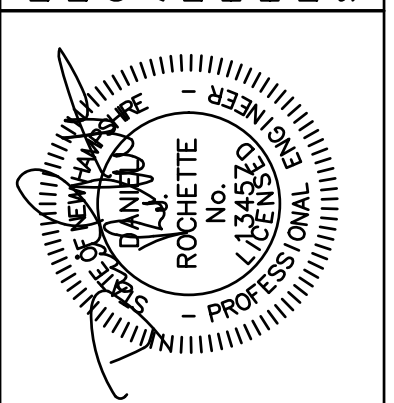
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APPROVAL	Date	DJR
CONSTRUCTION	Date	
RECORD DWG	Date	

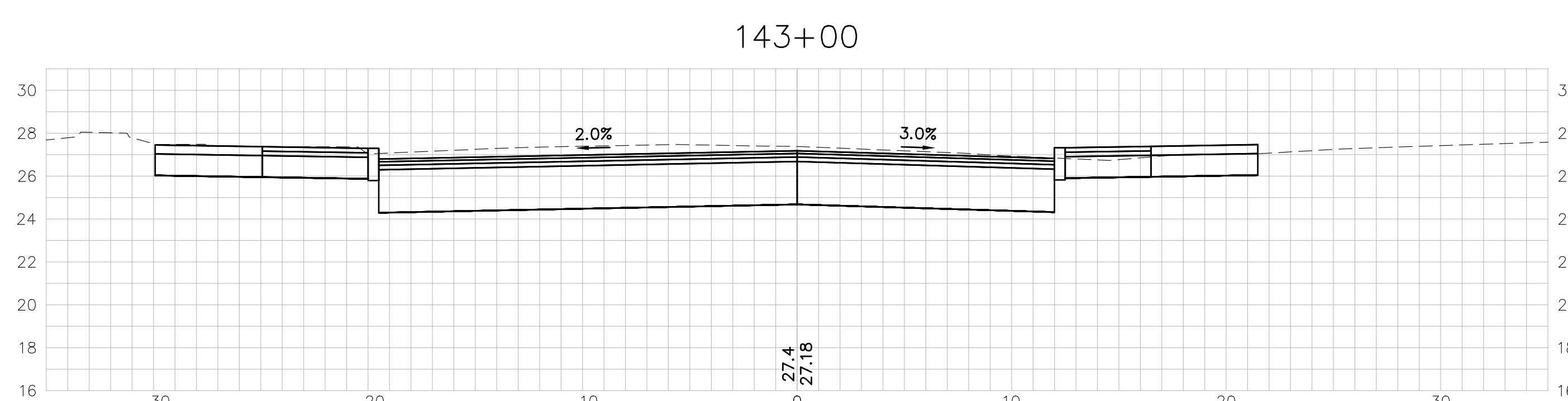
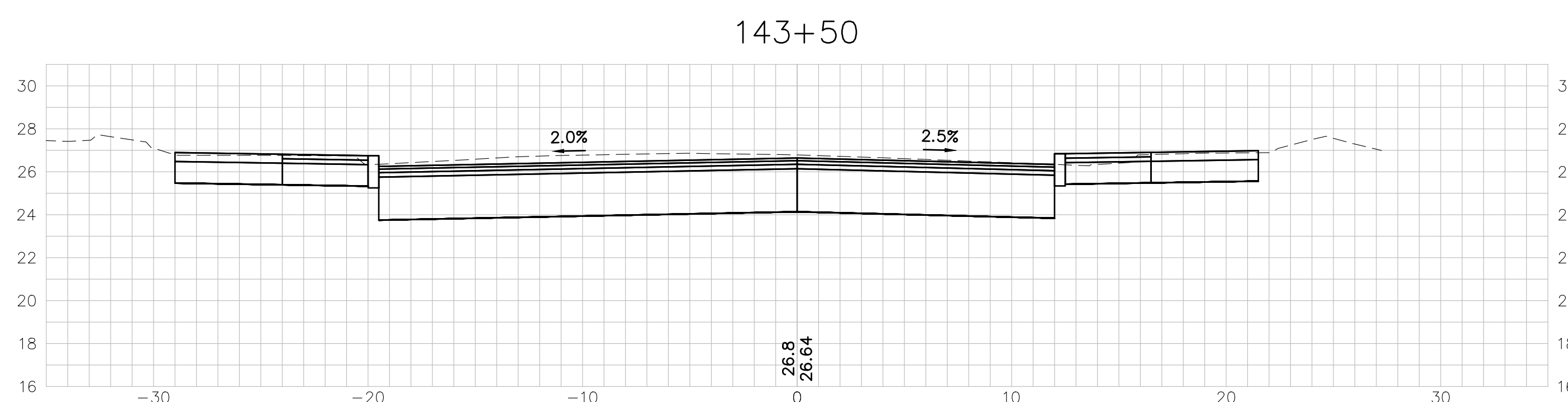
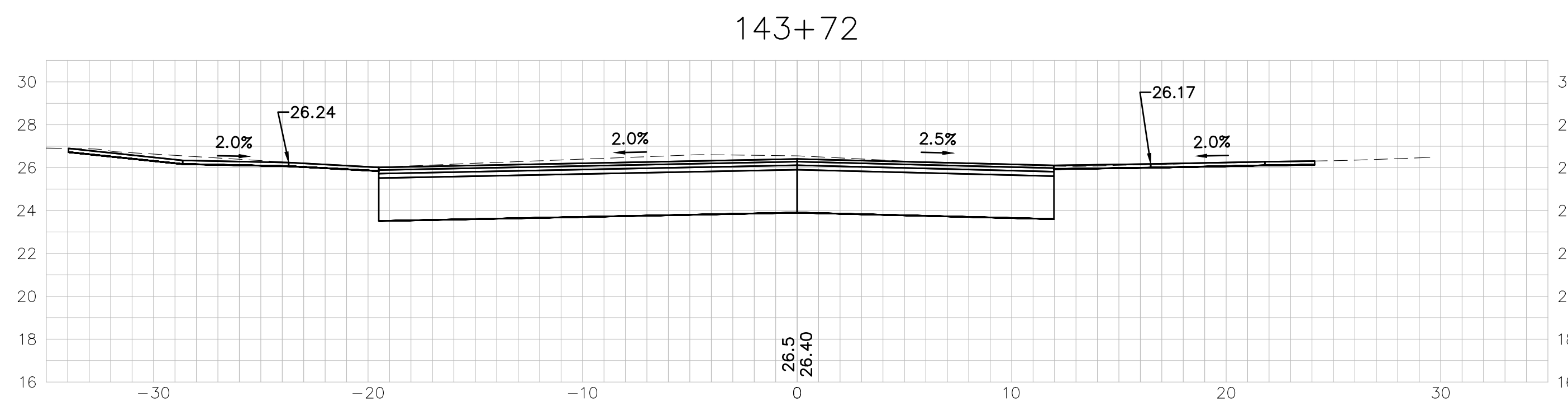
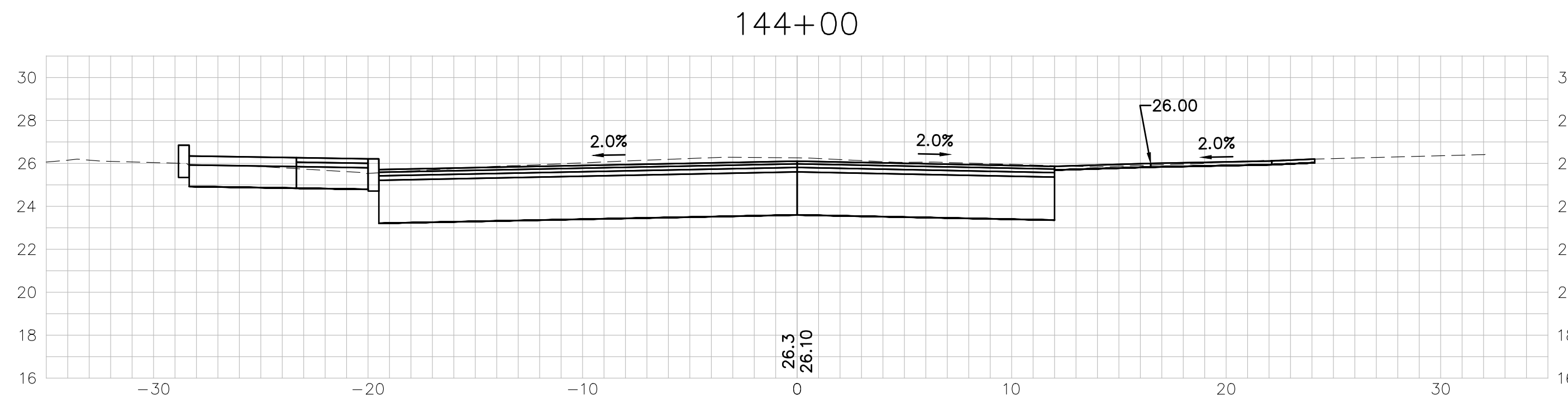
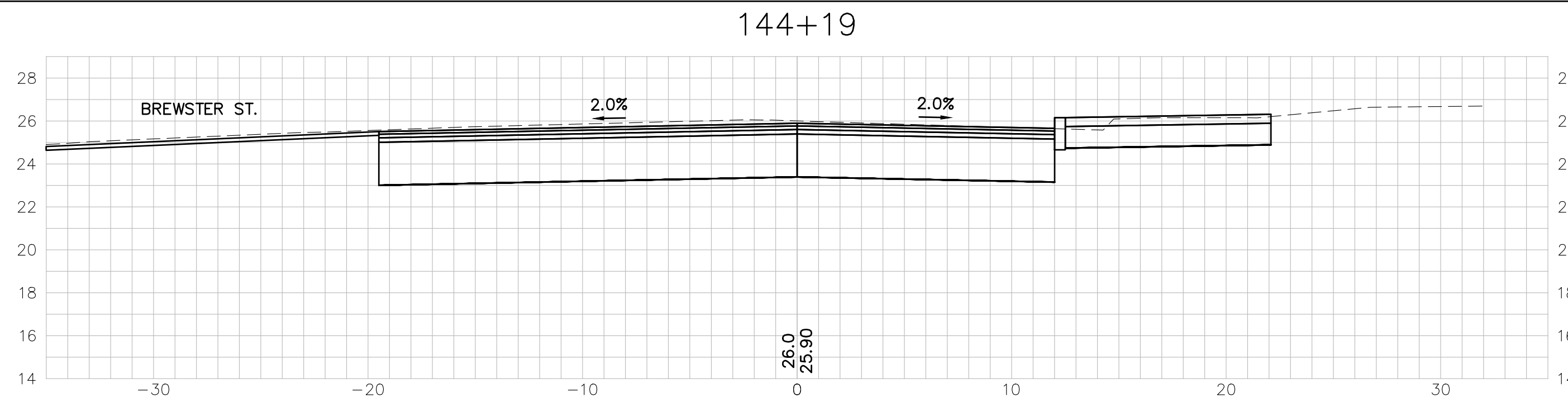
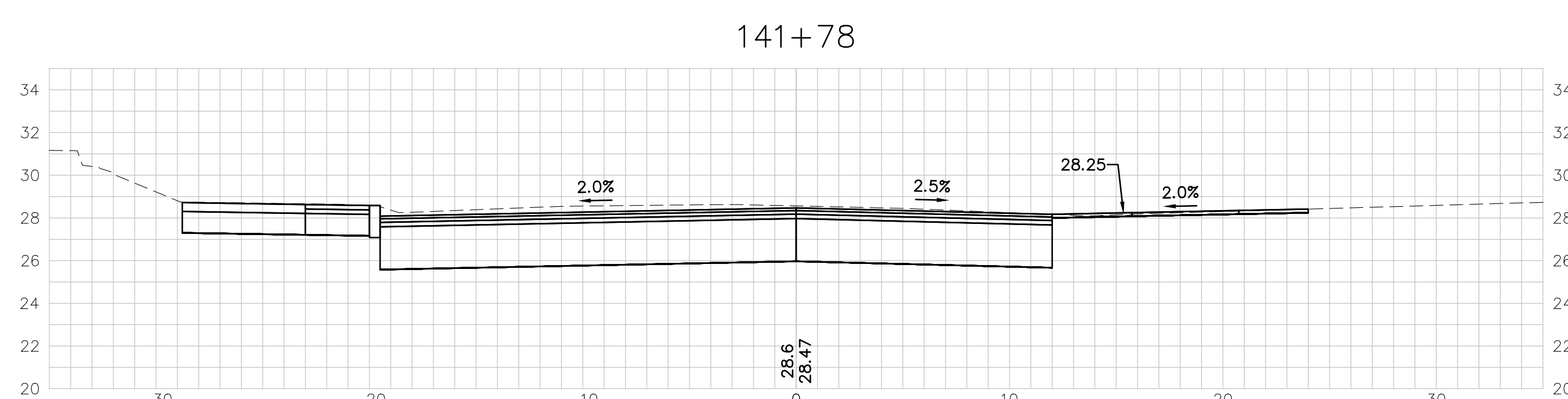
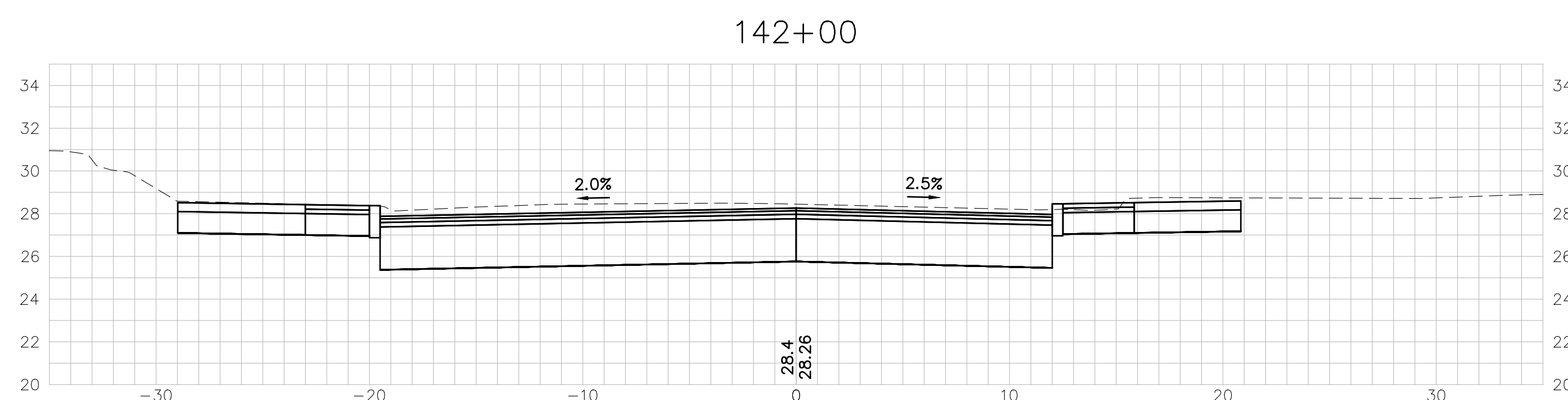
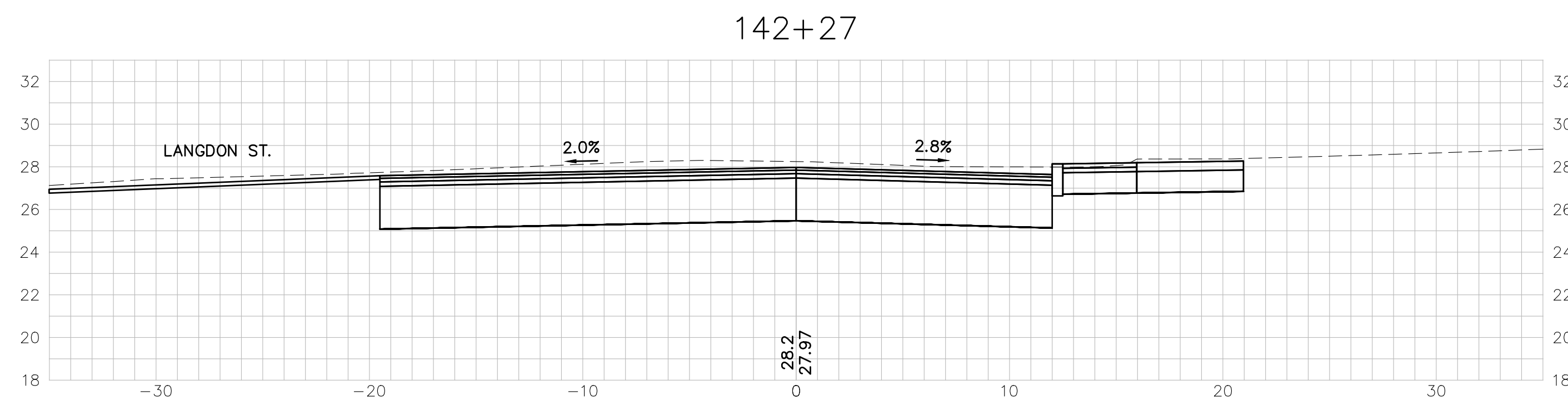
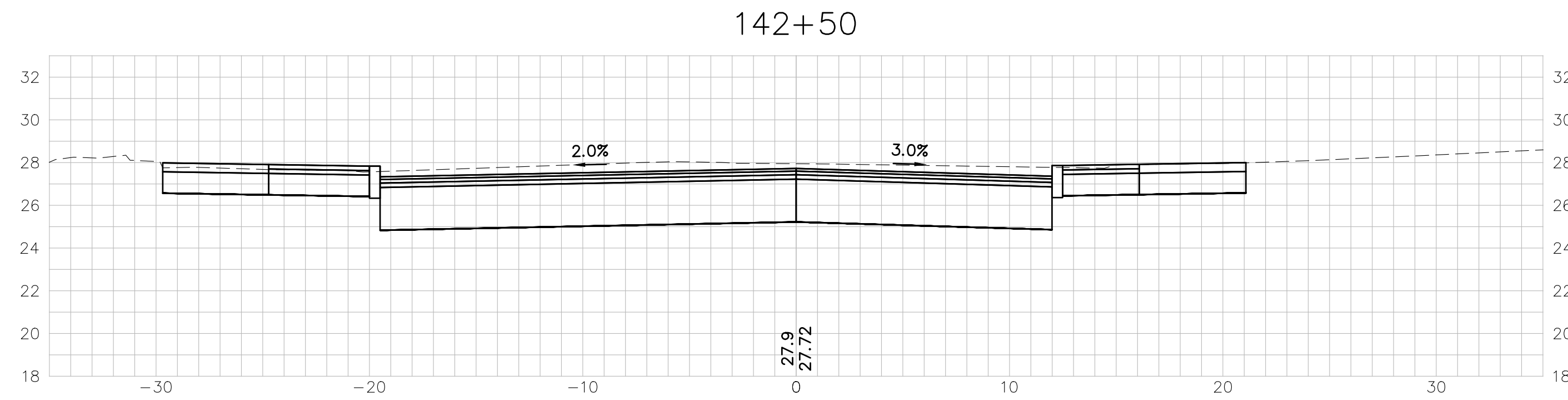
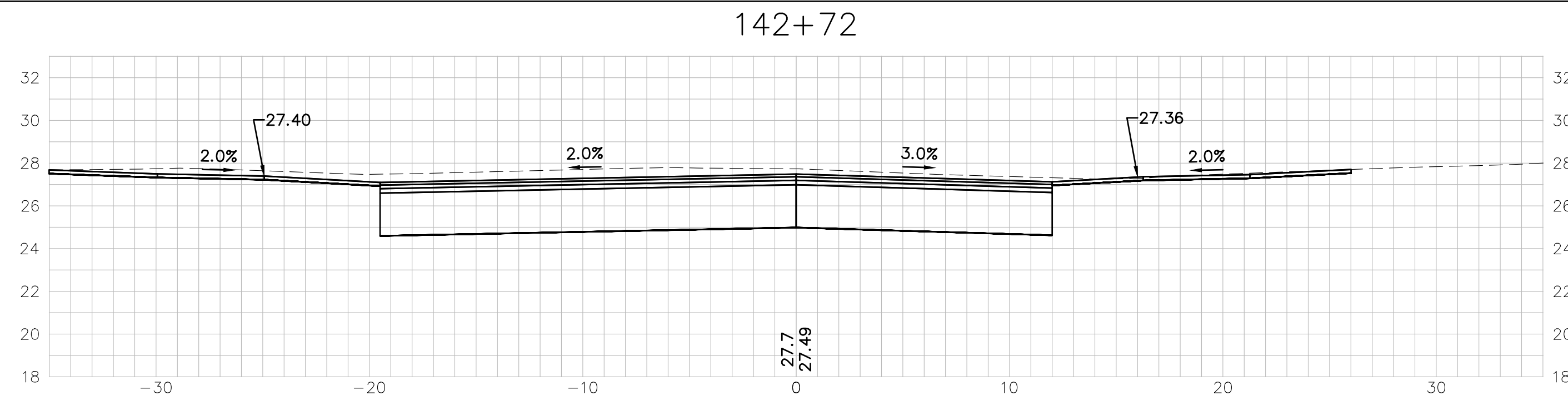
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Approved	6/28/22	
Date		
Book No.	2705	
Project No.		
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Scale	AS SHOWN	



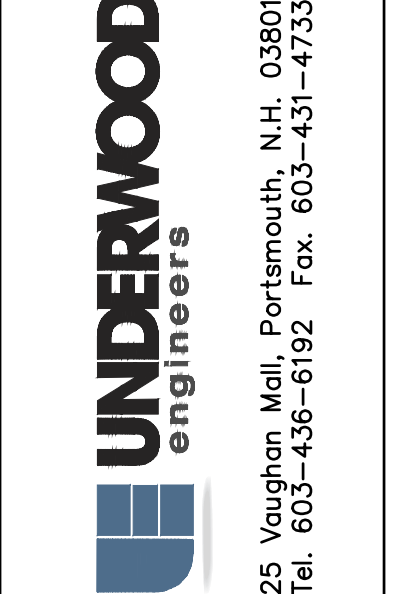
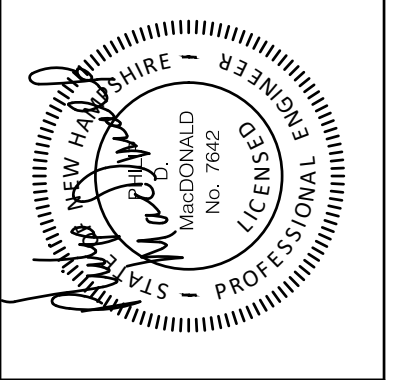
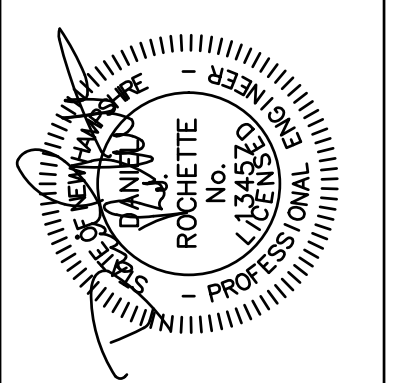
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**ISLINGTON STREET CORRIDOR IMPROVEMENTS**  
**PHASE 2**  
**CITY OF PORTSMOUTH**  
**PORTSMOUTH, NEW HAMPSHIRE**

DWG NO	SHEET
X-3	19 OF 56

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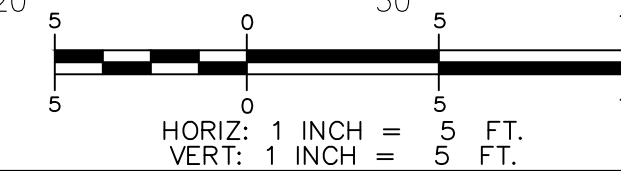


ISSUE FOR	APPROVAL	By	Date
APPROVAL	Date	6/29/22	DJR
CONSTRUCTION	Date		
REVISIONS	NO.		

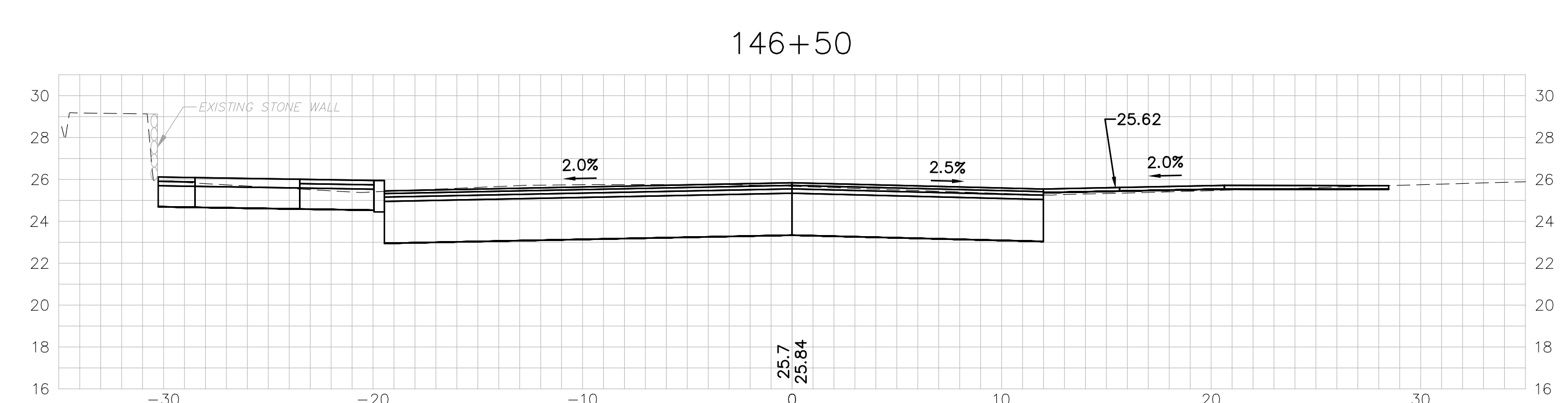
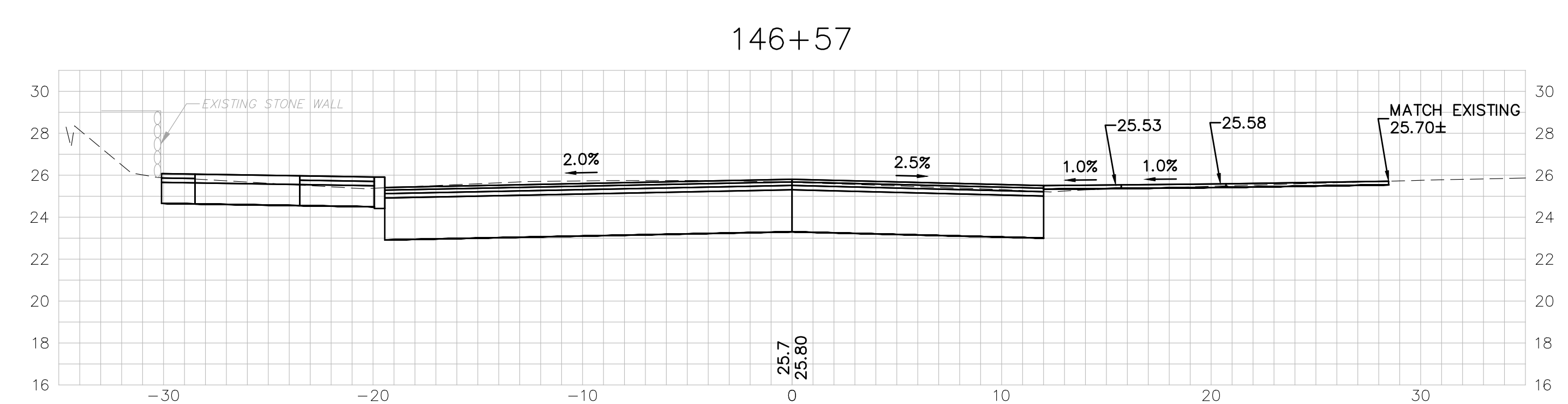
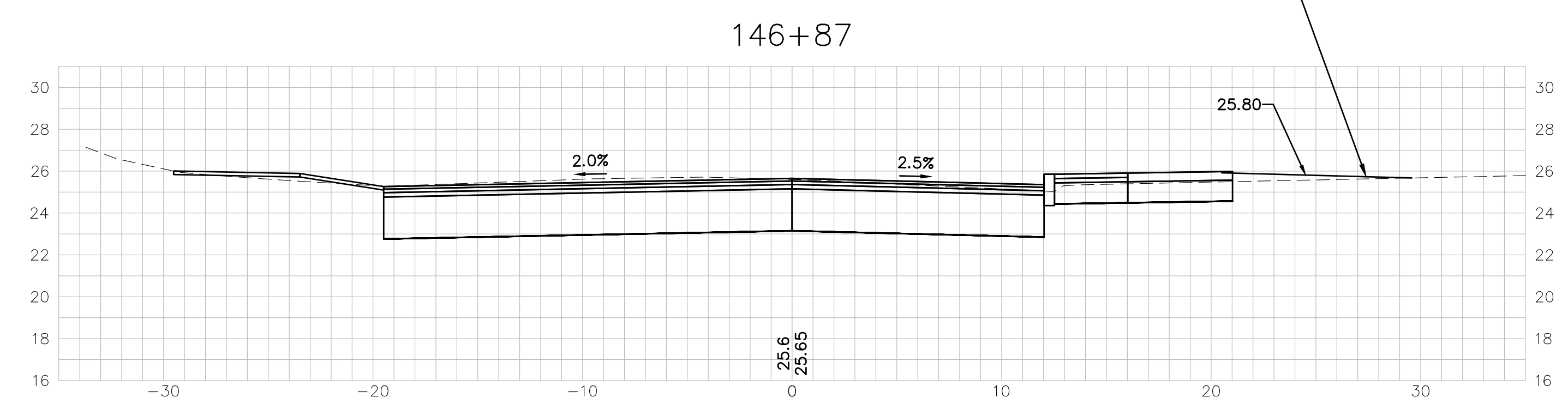
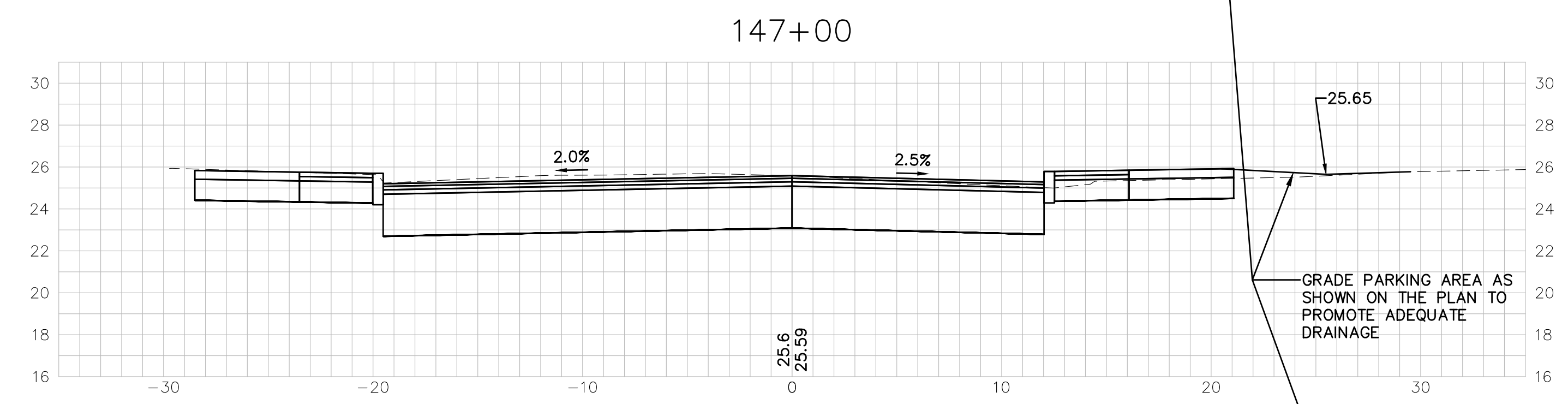
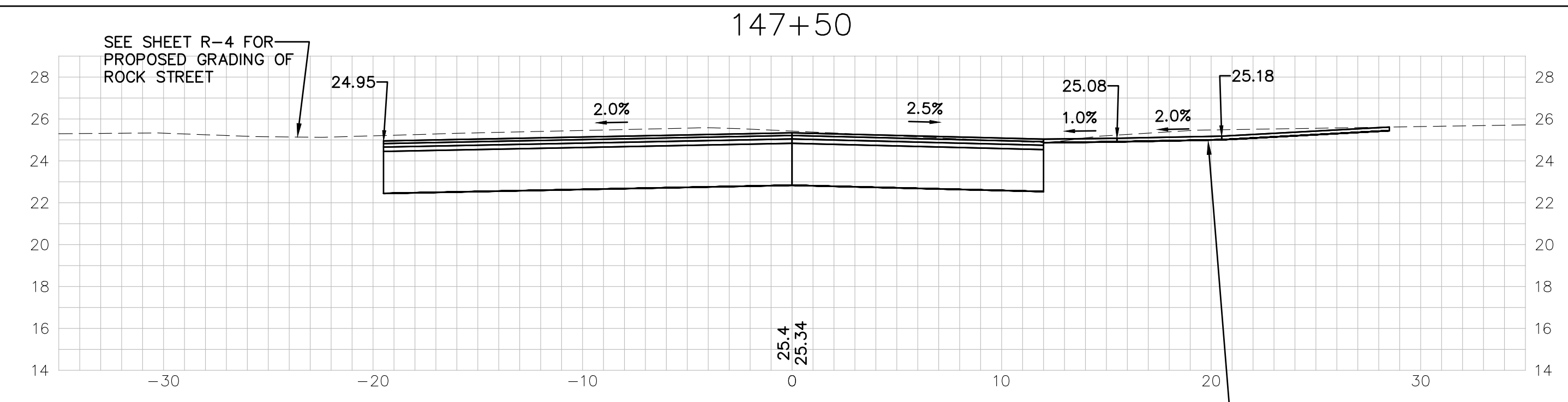
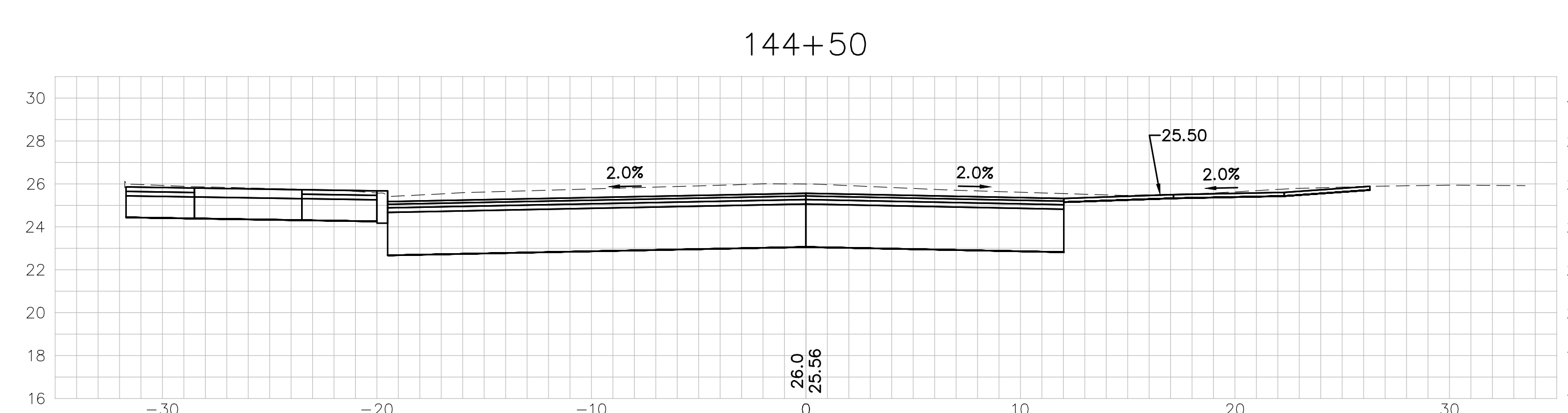
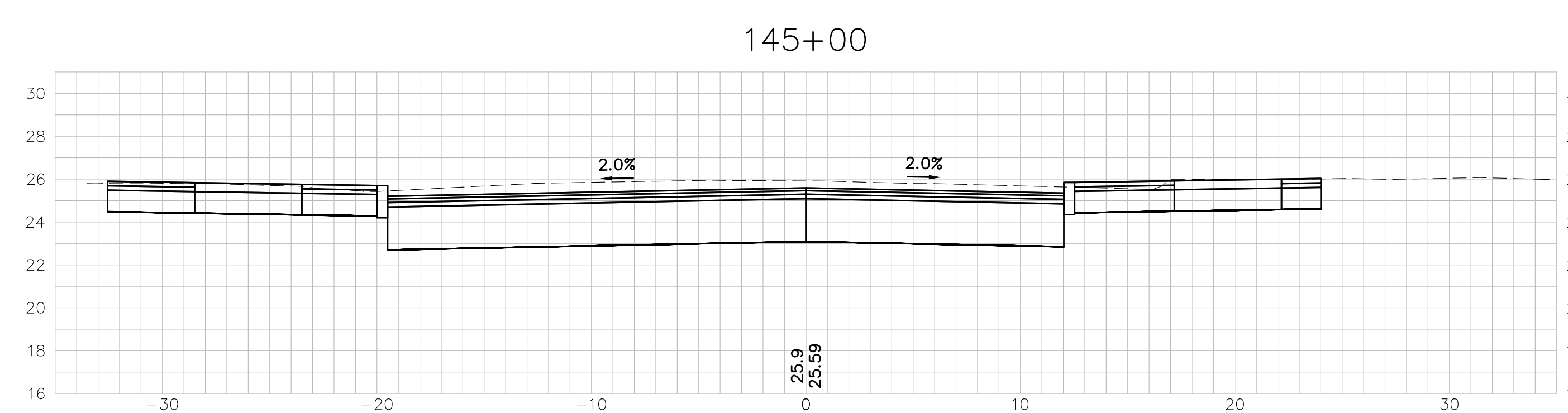
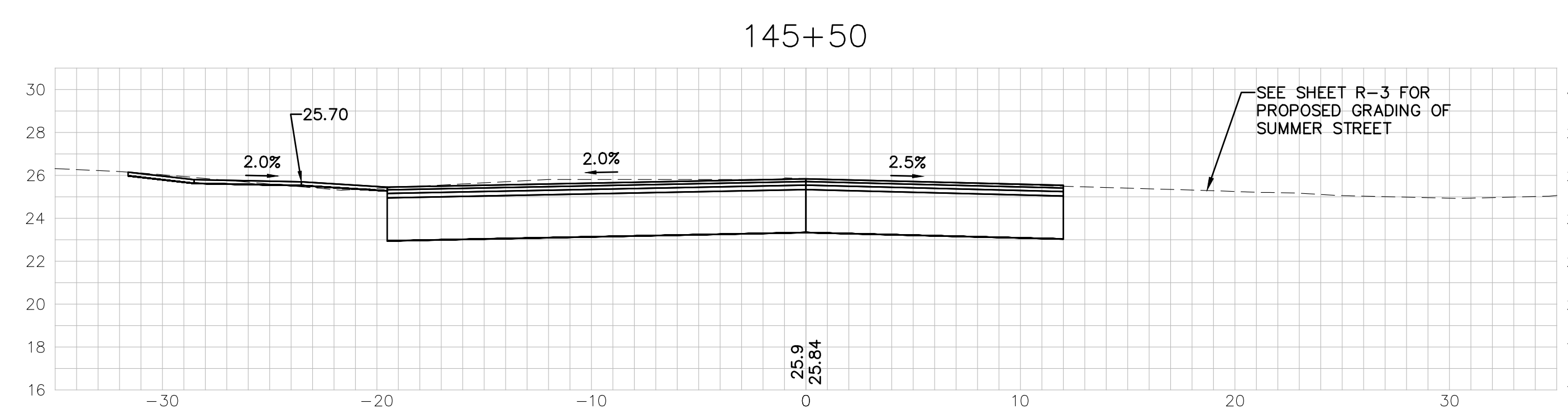
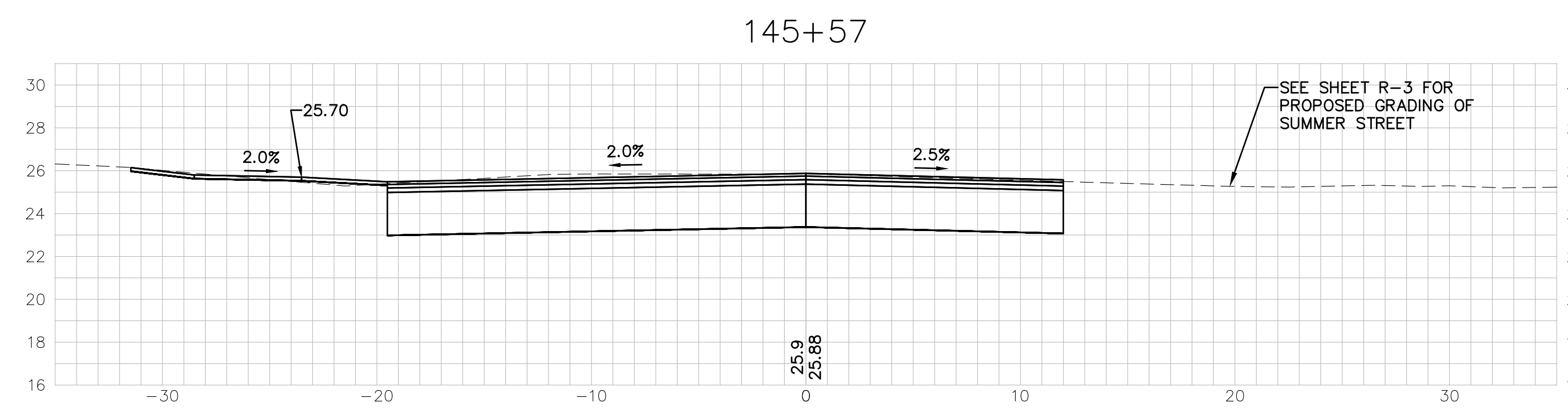
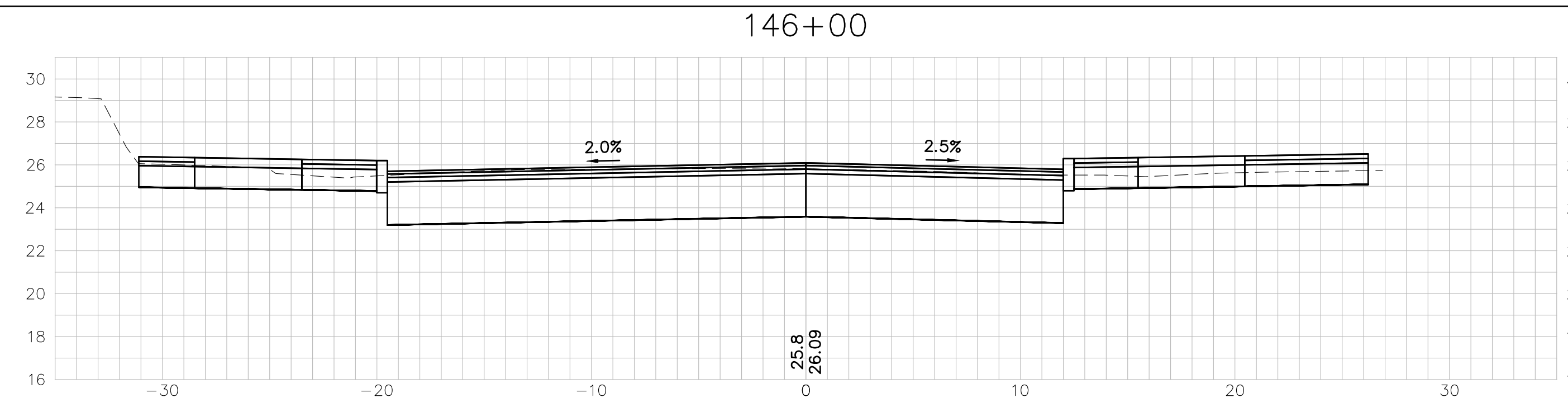


**CROSS SECTIONS**  
**ISLINGTON STREET CORRIDOR IMPROVEMENTS**  
**PHASE 2**  
**CITY OF PORTSMOUTH**  
**PORTSMOUTH, NEW HAMPSHIRE**

DWG NO	SHEET
X-4	20 OF 56



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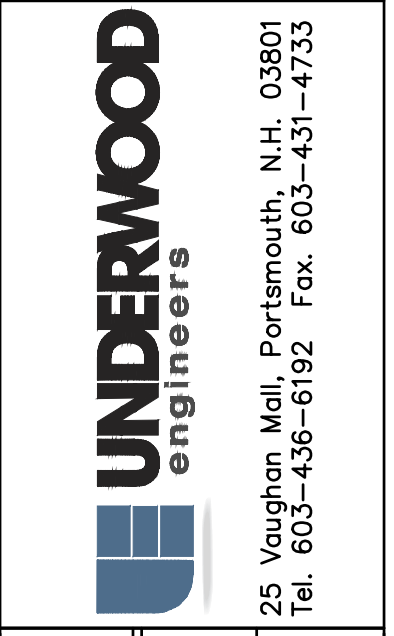
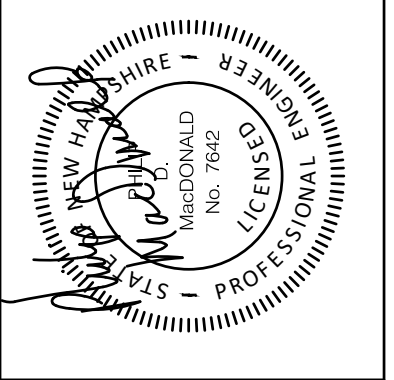
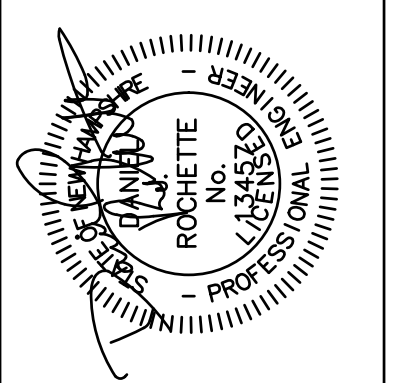
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	Date	6/29/22	DJR
	CONSTRUCTION	Date	By
	RECORD DWG	Date	By

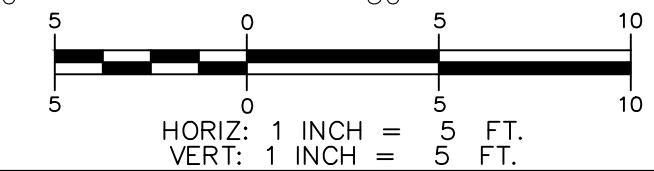
NO.	REVISIONS

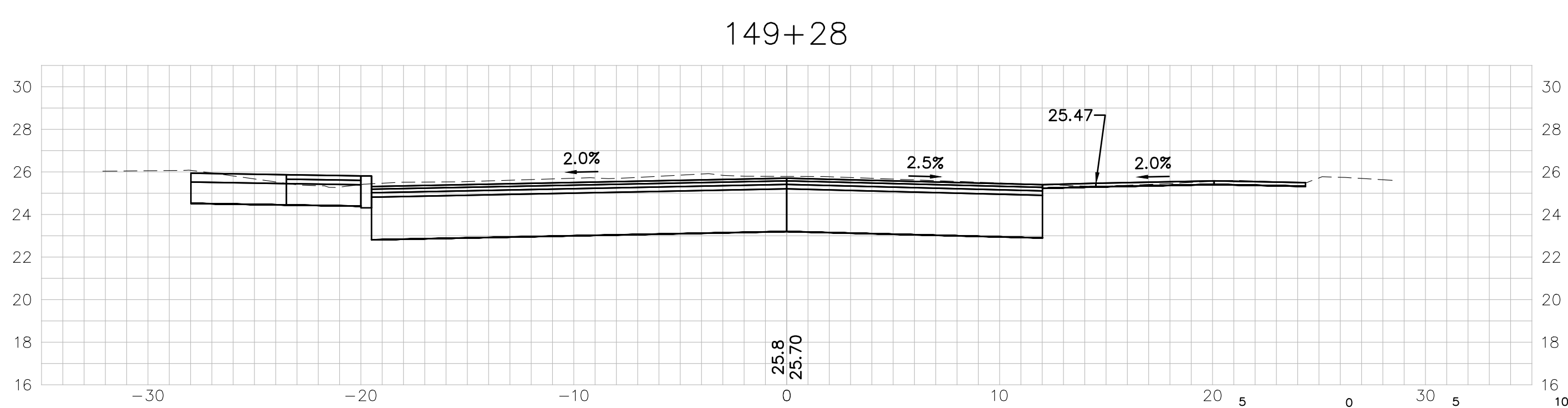
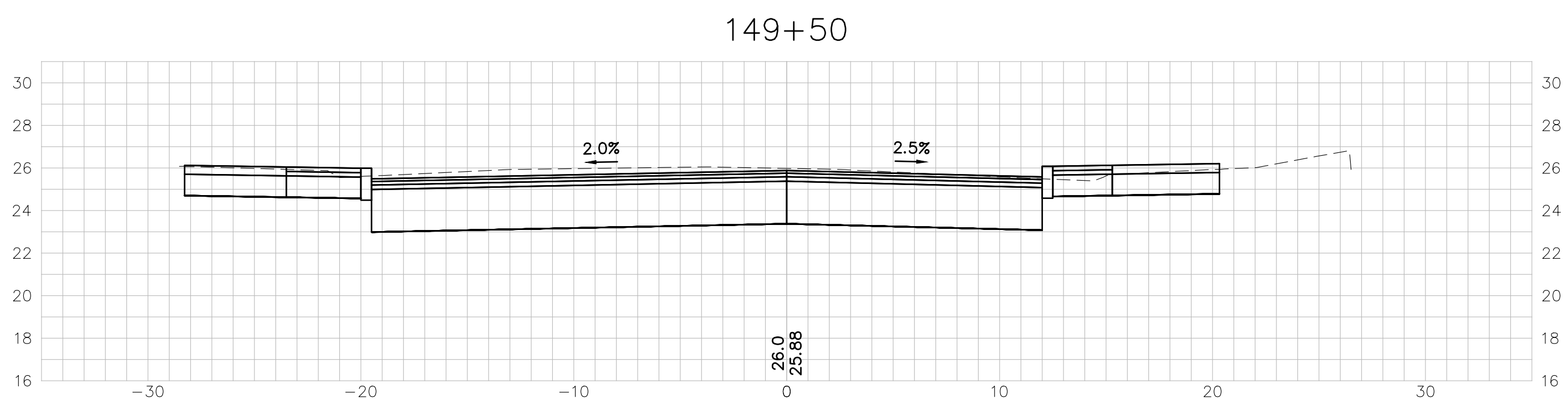
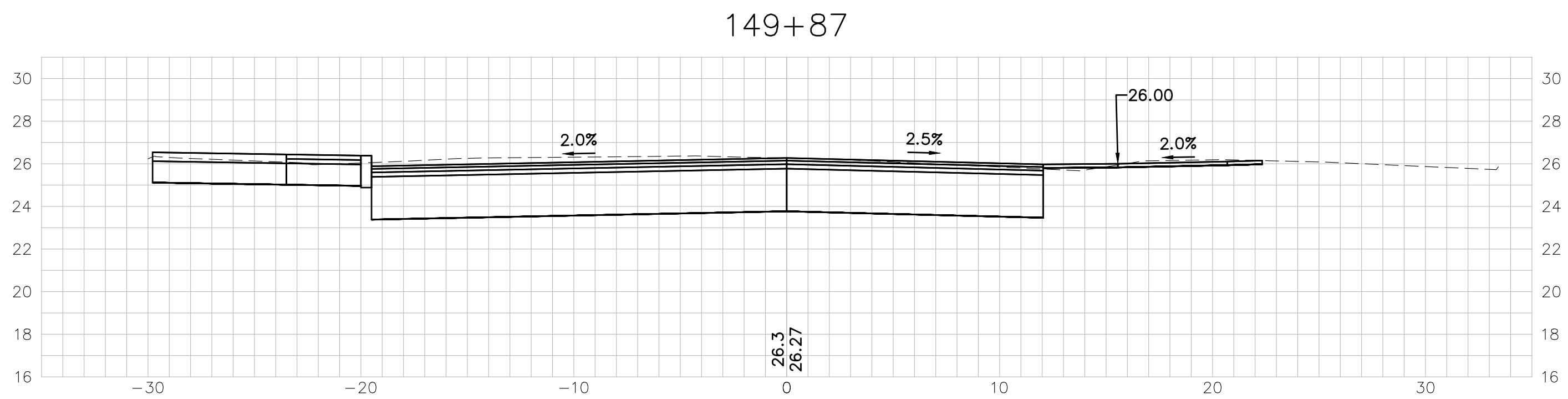
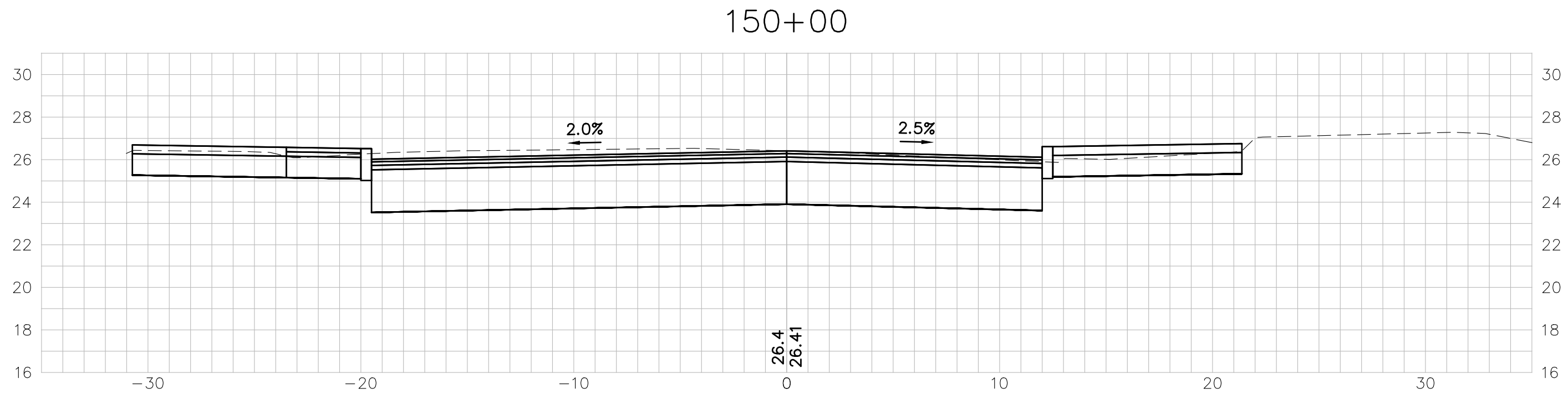
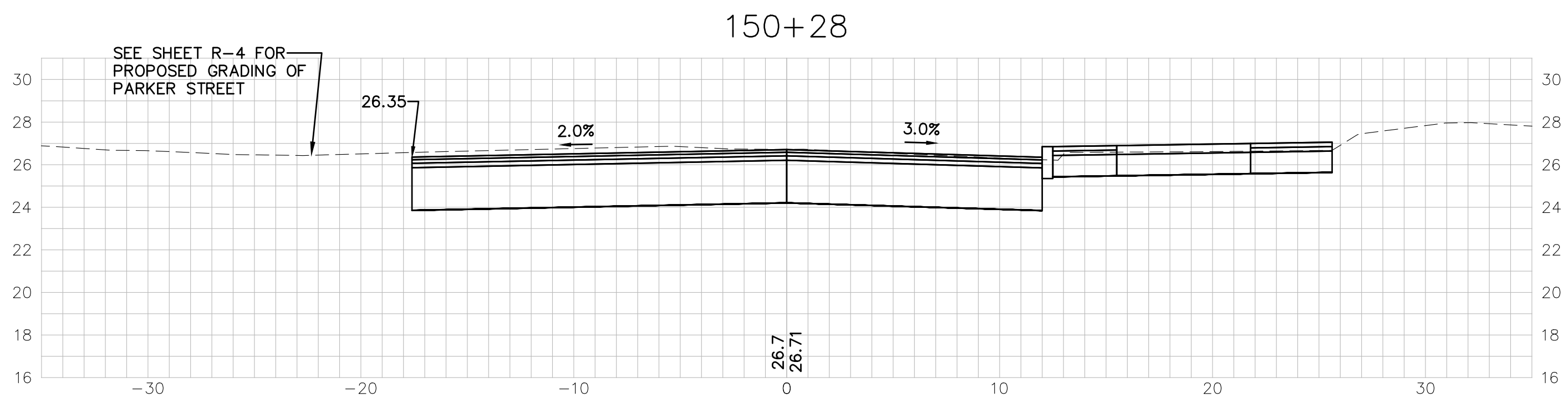
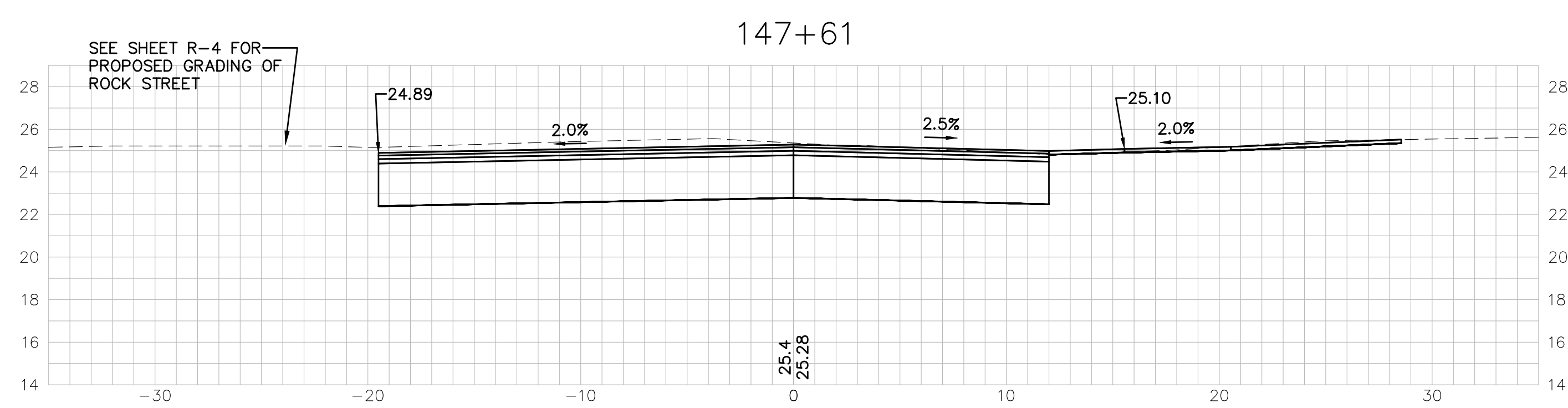
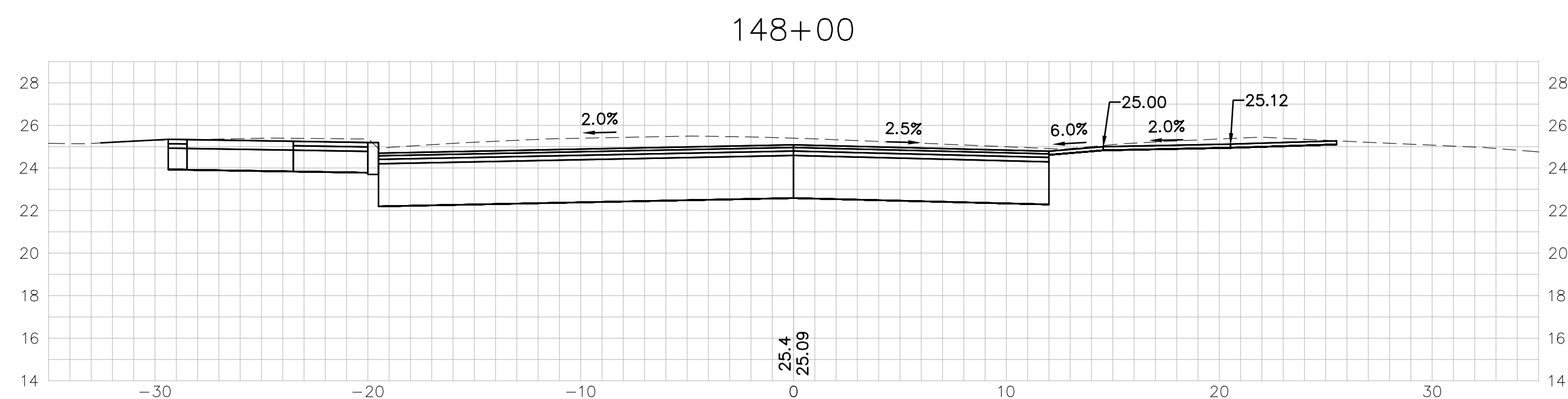
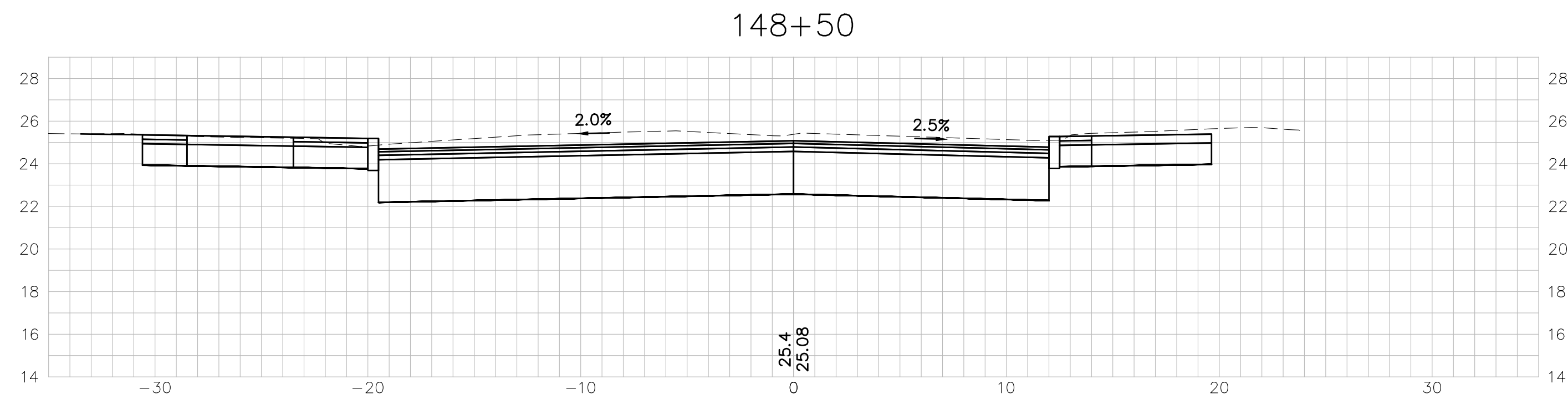
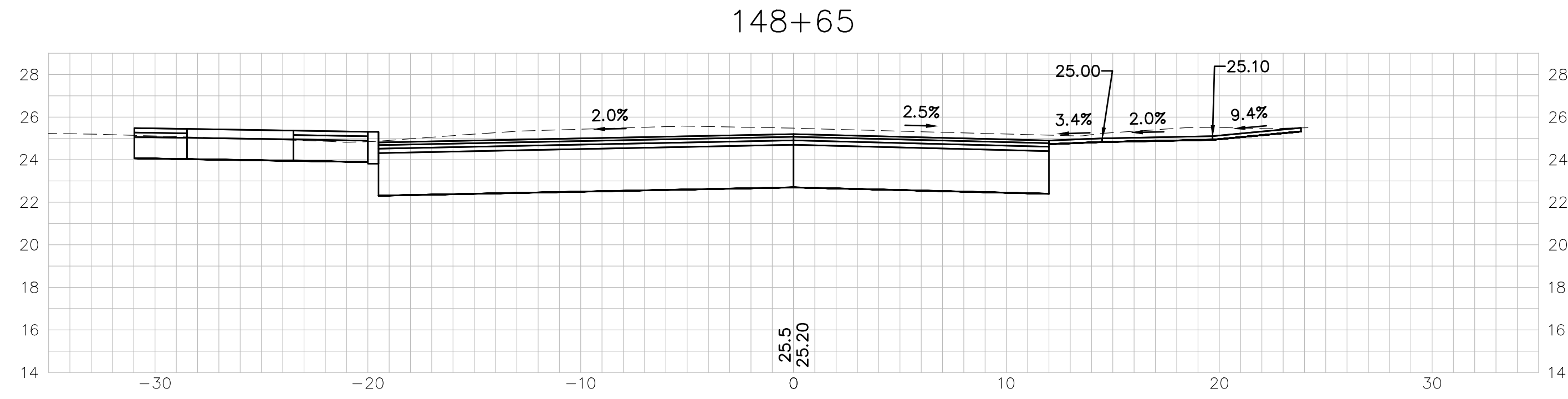
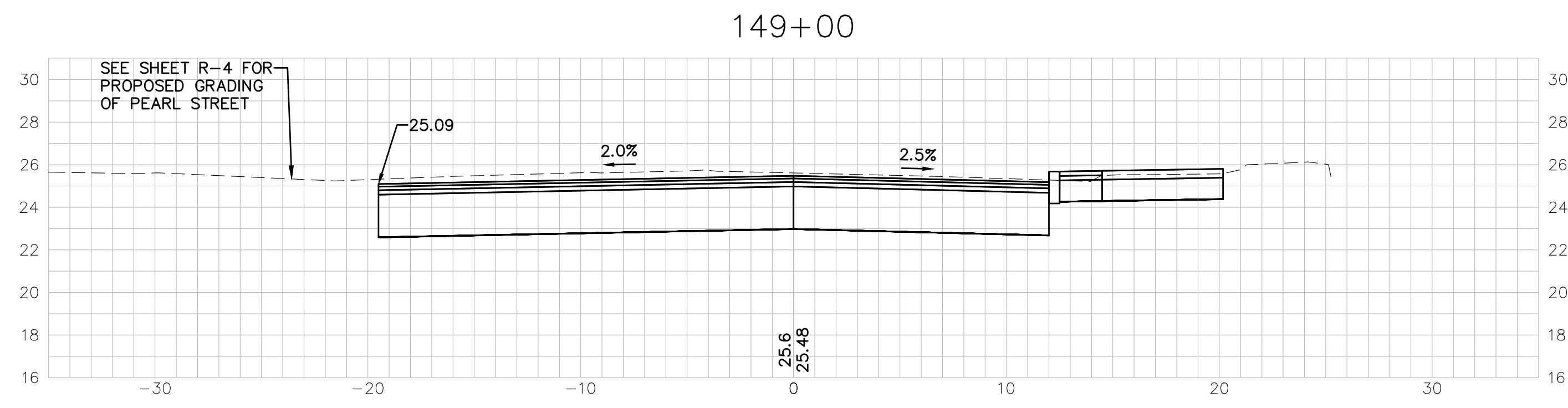
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Designed	DJR
Checked	FDM
Approved	6/29/22
Date	6/29/22
Book No.	2705
Project No.	ID2705bas.xd.sh.
Dwg.	AS SHOWN
Scale	AS SHOWN



**CROSS SECTIONS**  
**ISLINGTON STREET CORRIDOR IMPROVEMENTS**  
**PHASE 2**  
**CITY OF PORTSMOUTH**  
**PORTSMOUTH, NEW HAMPSHIRE**



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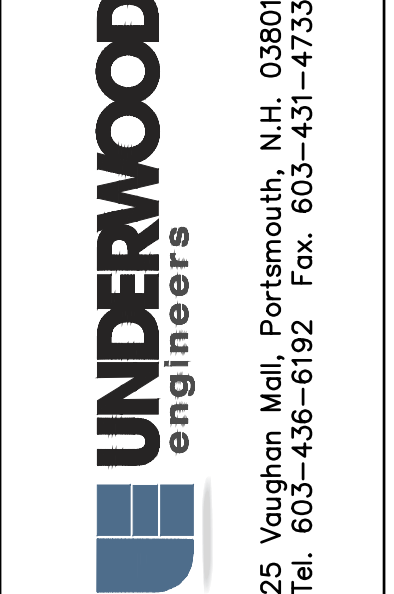
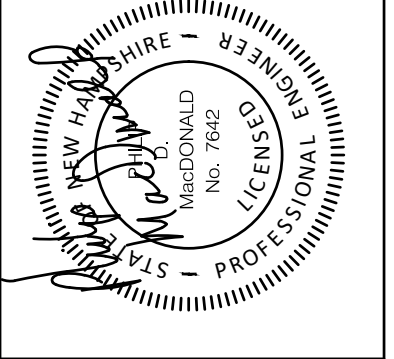
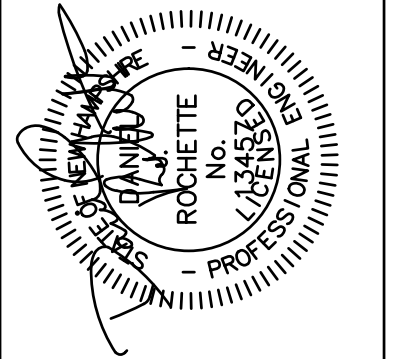
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	APPROVAL	DJR	6/29/22
	CONSTRUCTION	DJR	
	RECORD DWG		

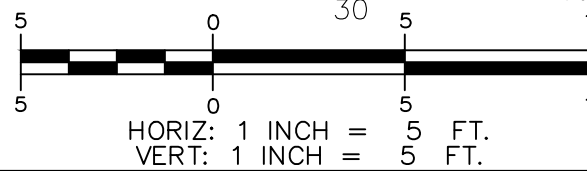
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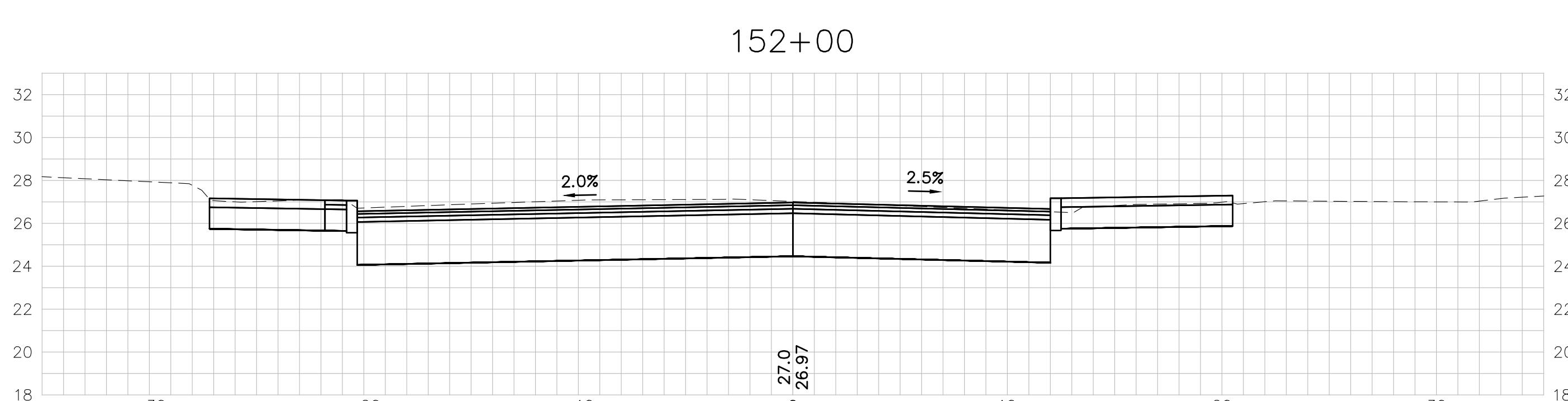
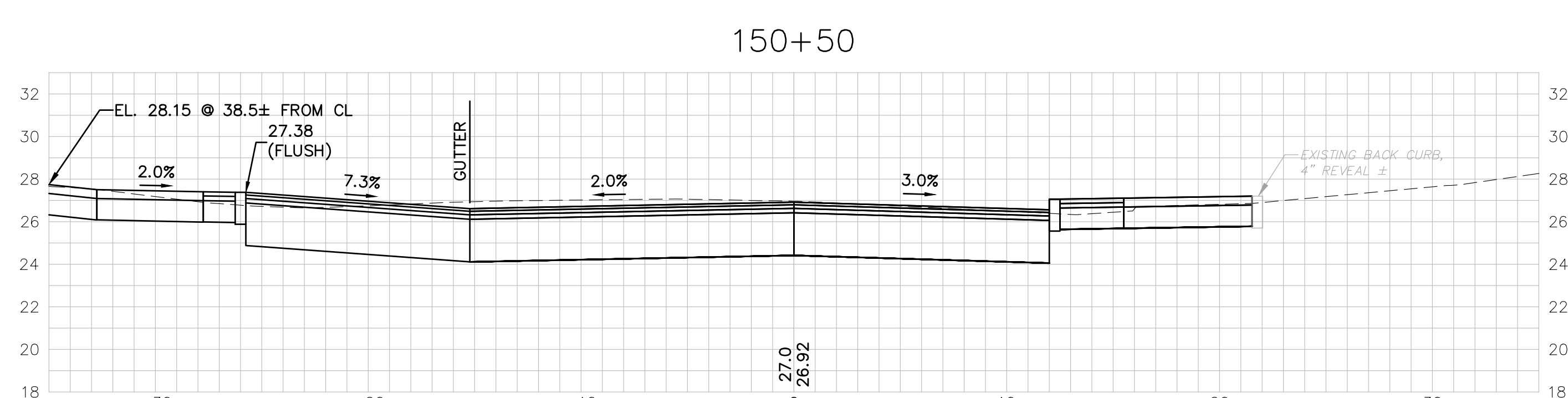
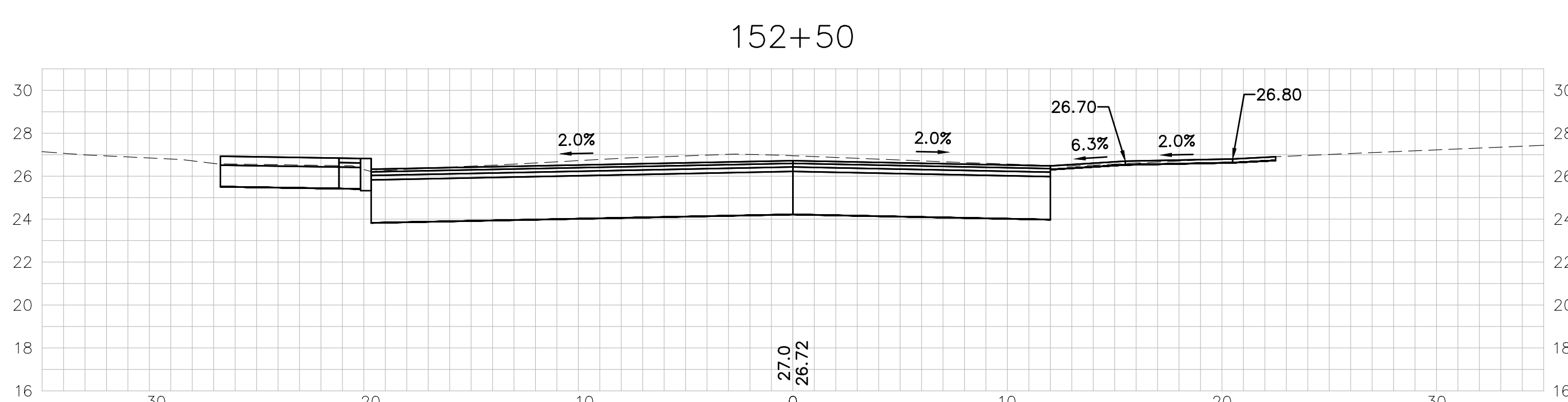
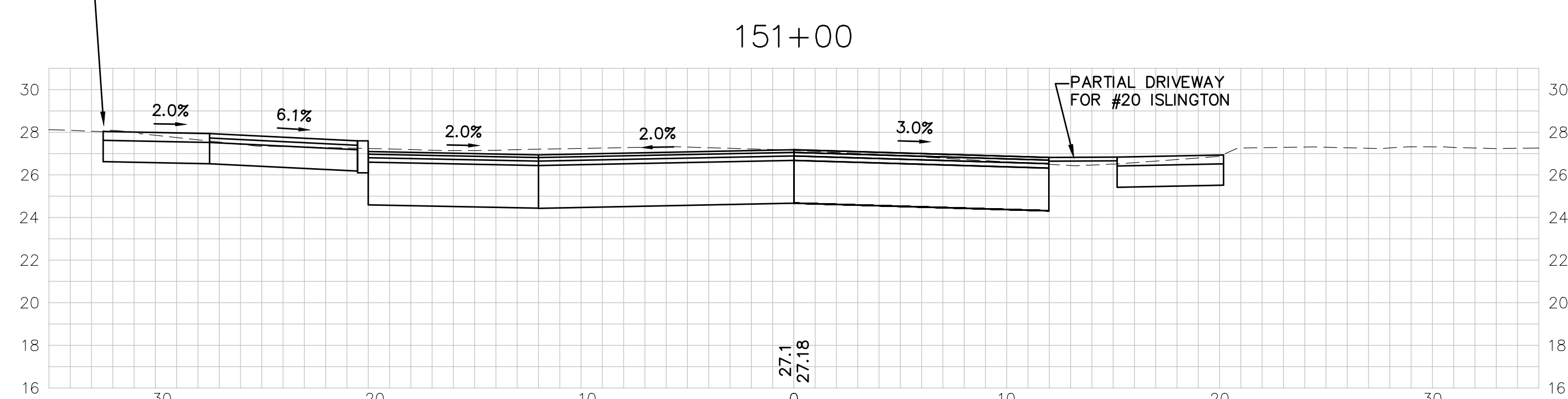
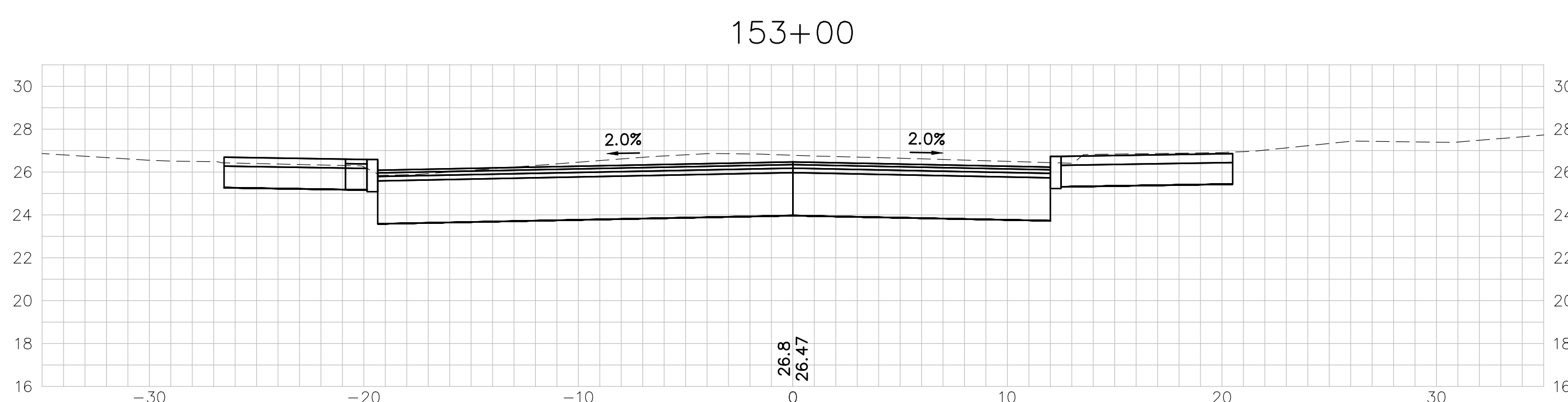
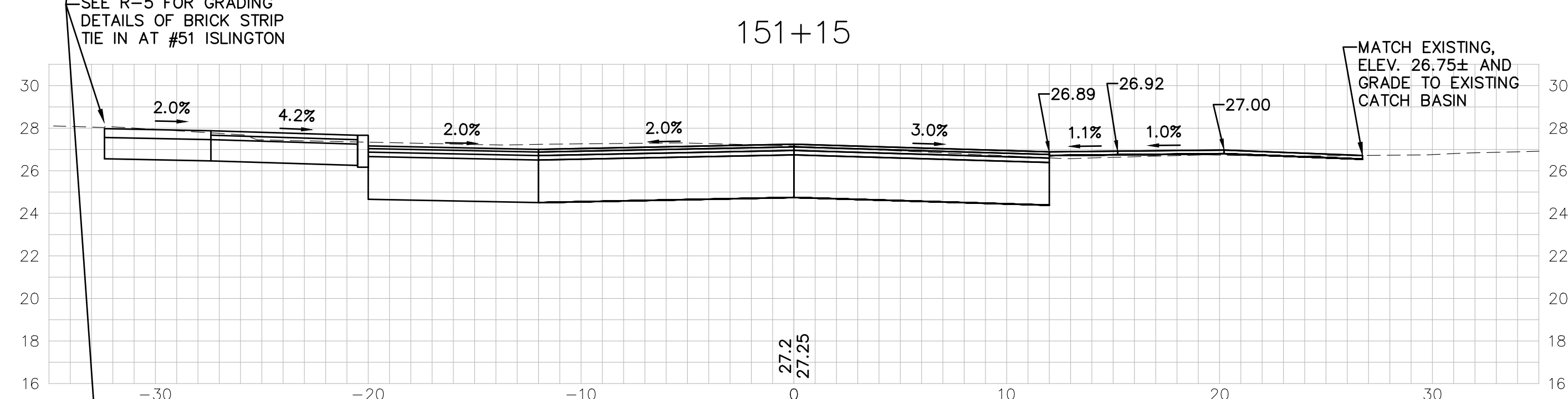
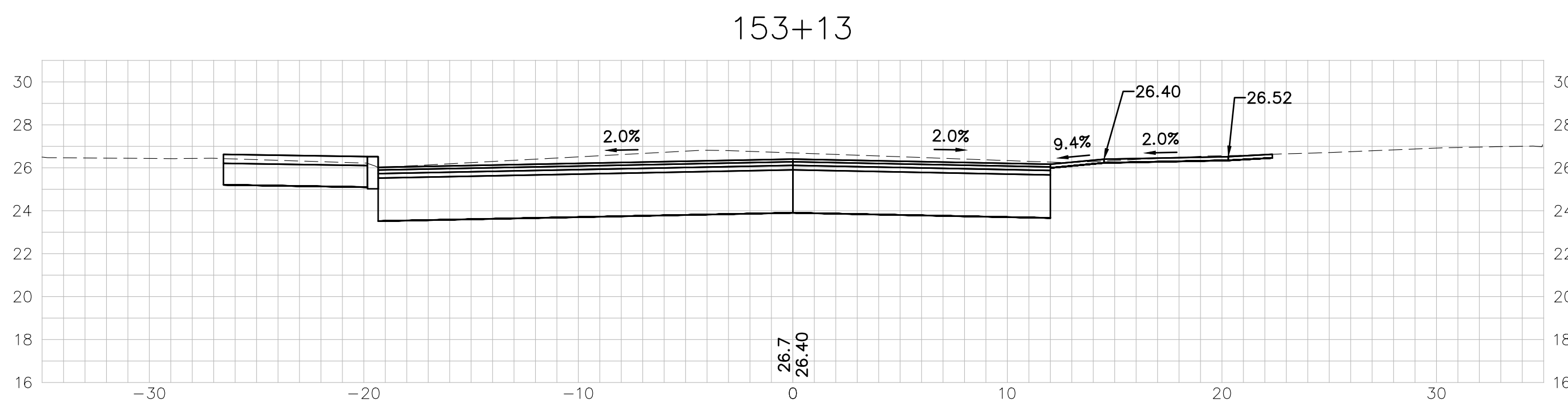
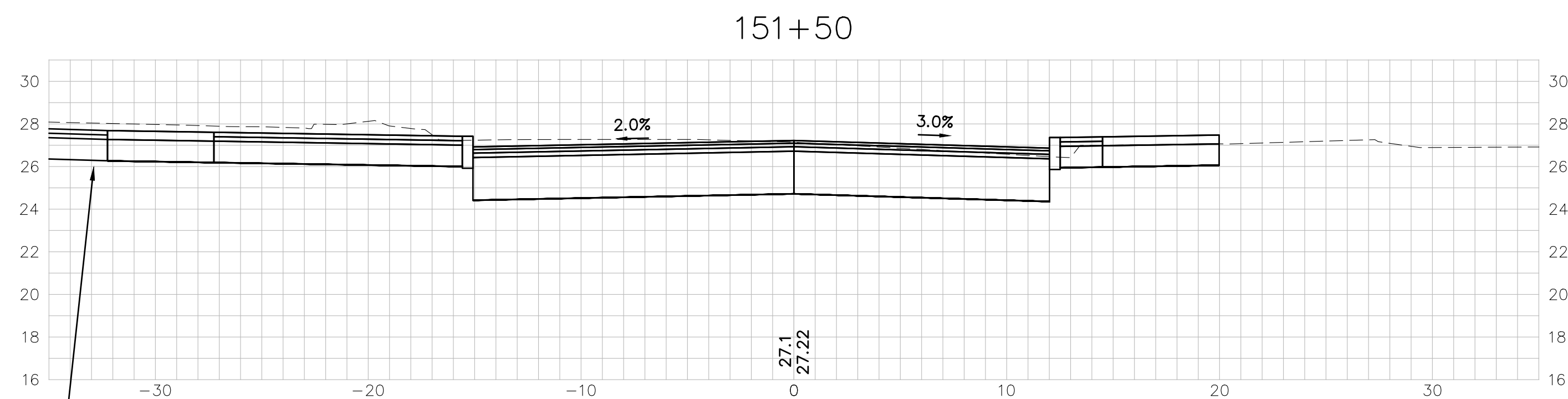
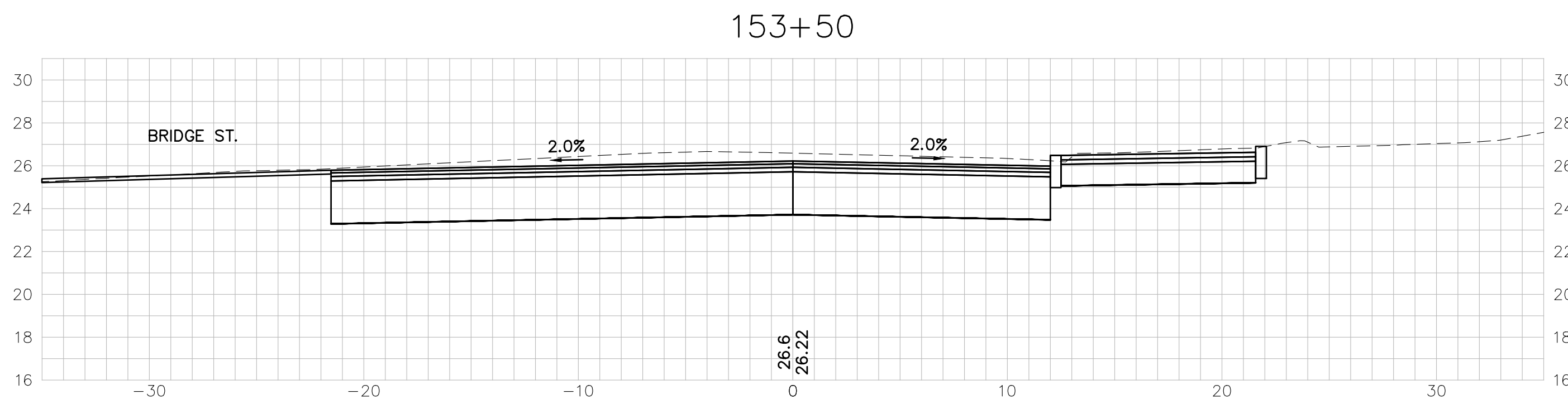
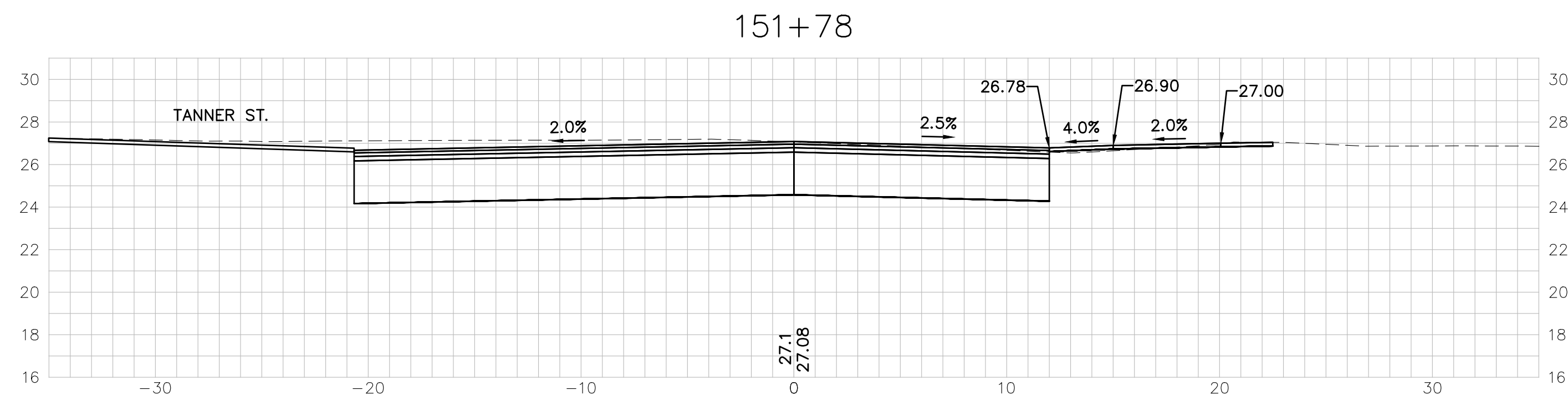
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Designed		
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Date	6/28/22	
Book No.	2705	
Project No.	ID2705bas.xs.sh.	
Dwg.	AS SHOWN	
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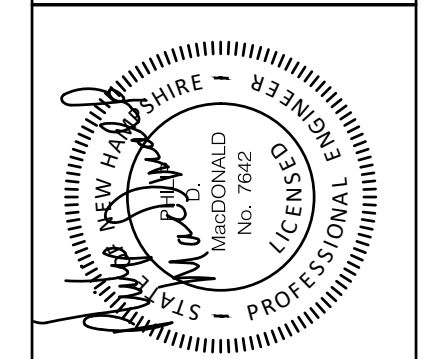
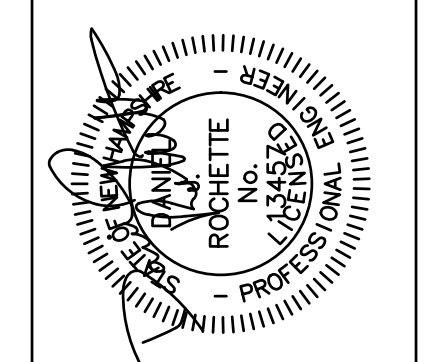
**CROSS SECTIONS**  
**ISLINGTON STREET CORRIDOR IMPROVEMENTS**  
**PHASE 2**  
**CITY OF PORTSMOUTH**  
**PORTSMOUTH, NEW HAMPSHIRE**



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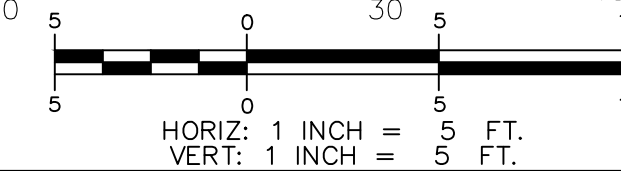
ISSUE FOR	APPROVAL	By
DATE	Date	DJR
6/29/22		
CONSTRUCTION	By	Date
REVISIONS	NO.	DATE
		APPD



**UNDERWOOD**  
engineers

25 Vaughan Mall, Portsmouth, N.H. 03801  
Tel. 603-436-6192 Fax. 603-431-4733

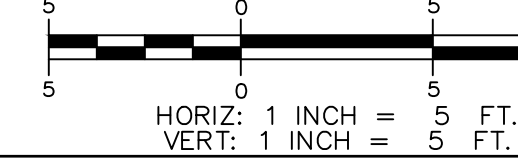
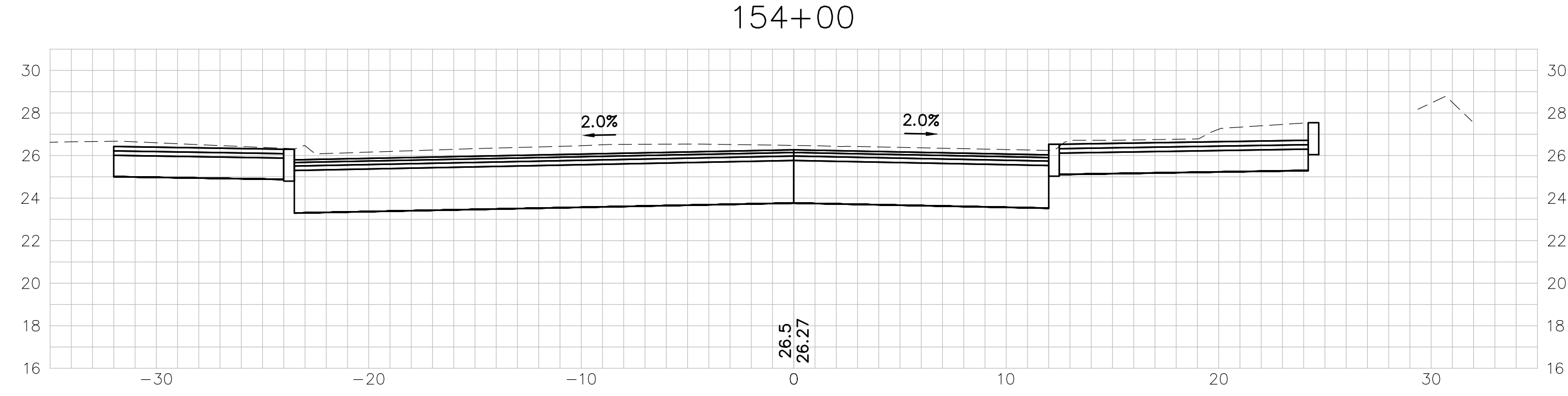
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PHASE 2  
CITY OF PORTSMOUTH  
PORTSMOUTH, NEW HAMPSHIRE



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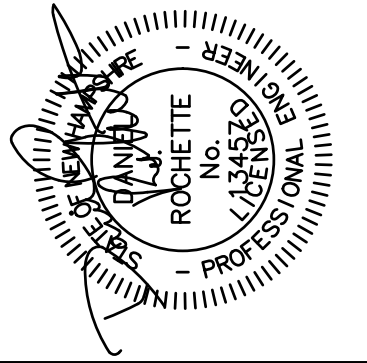
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DWG NO  
X-8

SHEET  
24 OF 56

**UNDERWOOD**  
engineers

25 Vaughan Mall, Portsmouth, N.H. 03801  
 Tel. 603-436-6192 Fax. 603-431-4733

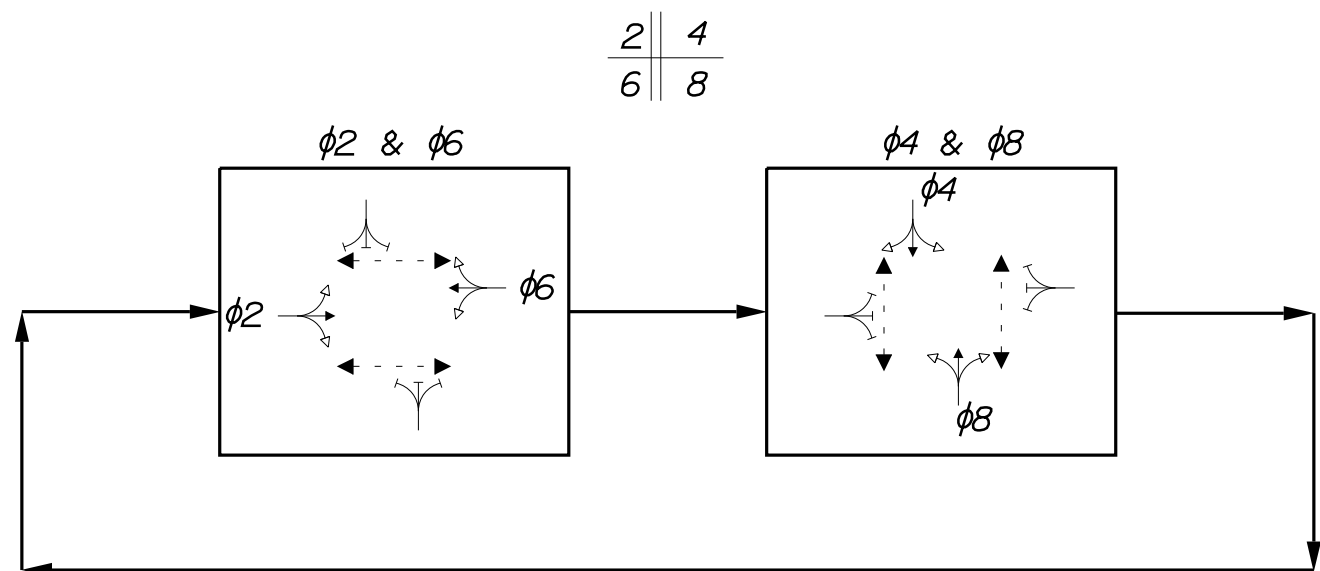


Drawn/Chk	RMG	NO.	REVISIONS
Designed	DJR		
Checked	FDM		
Approved	6/28/22		
Date			
Book No.	2705		
Project No.	2705		
Dwg.	ID2705bas.xs.sm.		
Scale	AS SHOWN		

ISSUE FOR			
APPROVAL			
Date	6/28/22	By	DJR
CONSTRUCTION		Date	
RECORD DWG		Date	

**PREFERENTIAL PHASE SEQUENCE**

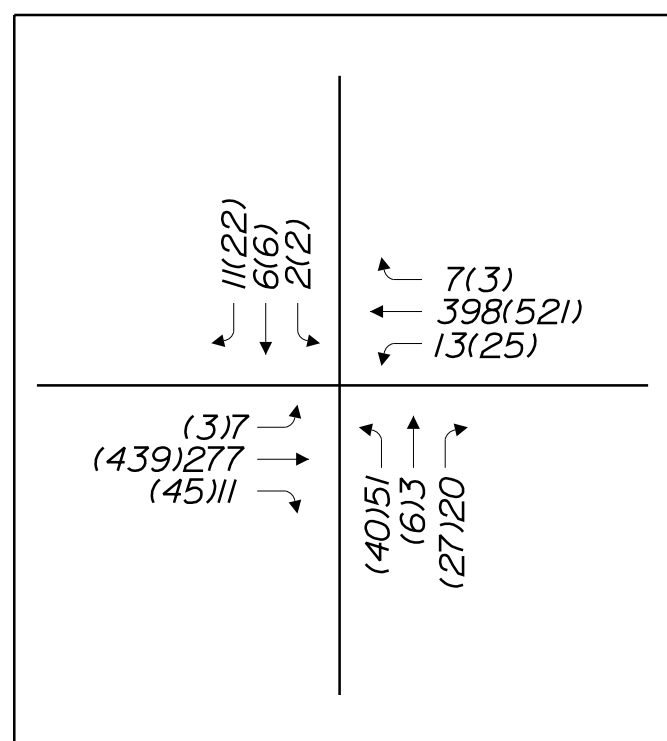
NEMA RING AND BARRIER DIAGRAM



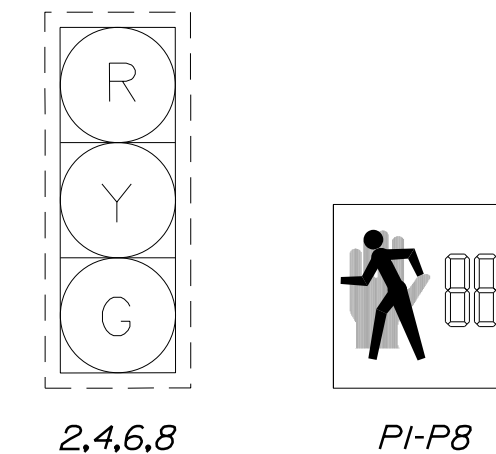
**PHASING NOTES:**

- I. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY

**2032 SYSTEM DESIGN VOLUMES AM(PM)**



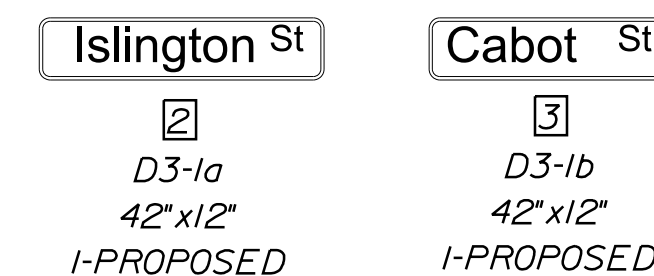
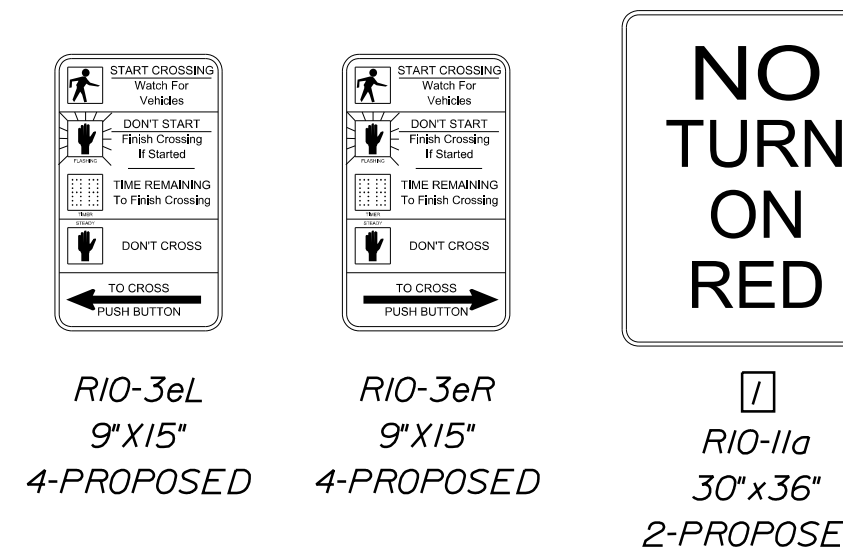
**PROPOSED SIGNAL INDICATIONS**



NOTE:  
ALL VEHICULAR INDICATIONS SHALL BE 12" LED'S WITH 5" LOUVERED BACKPLATES & 2" RETROREFLECTIVE BORDERS

PEDESTRIAN INDICATIONS SHALL BE 16"X18"W/ LED MODULE

**PROPOSED SIGNS**

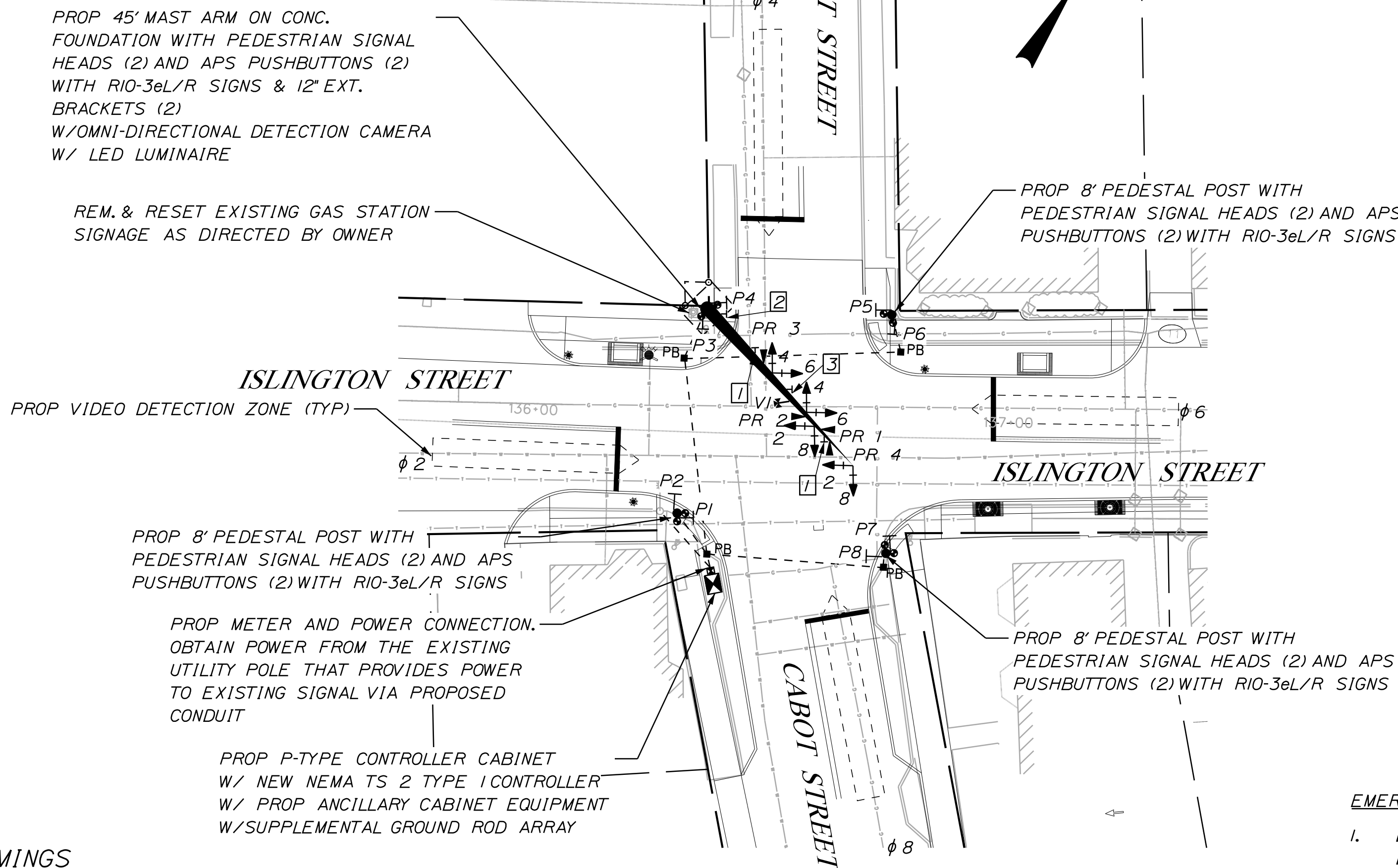


**PREEMPTION SCHEDULE**

I.D.	RECEIVER PRIORITY	PRIORITY PHASE
PR1	1	6
PR2	2	2
PR3	3	4
PR4	4	8

**EMERGENCY PREEMPTION NOTES**

1. LOCATION OF EMERGENCY VEHICLE PREEMPTION RECEIVERS SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR, THE ENGINEER, AND THE CITY OF PORTSMOUTH FIRE DEPARTMENT.
2. EMERGENCY VEHICLE PREEMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
3. PREEMPTION SIGNALS SHALL BE SERVICED ON A FIRST COME - FIRST SERVED BASIS.
4. IN RESPONSE TO A PREEMPTION SIGNAL RECEIVED AT THE INTERSECTION BY AN OPTICAL DETECTOR, THE CONTROLLER SHALL HOLD OR ADVANCE TO HOLD THE EMERGENCY ACTIVE PHASE GREEN FOR A MIN. OF 10 SECONDS OR UNTIL THE PREEMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME PREEMPTION CLEARANCE PHASE (4 SEC. YELLOW AND 2 SEC. ALL RED) AND SERVE SUBSEQUENT EMERGENCY ACTIVE PHASES AS NECESSARY. AT THE COMPLETION OF THE PREEMPTION CYCLE THE CONTROLLER SHALL TIME THE PREEMPTION CLEARANCE AND RESUME NORMAL SIGNAL OPERATIONS.
5. MIN. GREEN AND NORMAL VEHICLE AND PEDESTRIAN CLEARANCE TIMES SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PREEMPTION DEMAND.
6. CONFIRMATION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PREEMPTION GREEN IS ON.



**DETECTOR SCHEDULE**

	STREET	DIRECTION	LANE	φ	TYPE
CAMERA VI	ISLINGTON STREET	NORTHBOUND	LEFT-THRU-RIGHT	2	VIDEO
	ISLINGTON STREET	SOUTHBOUND	LEFT-THRU-RIGHT	6	VIDEO
	CABOT STREET	EASTBOUND	LEFT-THRU-RIGHT	4	VIDEO
	CABOT STREET	WESTBOUND	LEFT-THRU-RIGHT	8	VIDEO

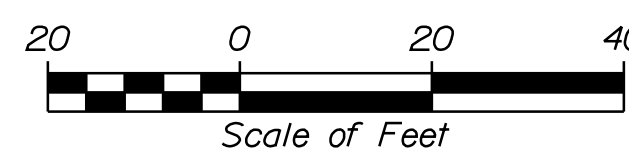
**PROPOSED SIGNAL TIMINGS**

	φ 1	φ 2	φ 3	φ 4	φ 5	φ 6	φ 7	φ 8
	NOT USED		NOT USED		NOT USED		NOT USED	
MINIMUM INITIAL PASSAGE TIME	--	10.0	--	5.0	--	10.0	--	5.0
PASSAGE TIME	--	2.0	--	2.0	--	2.0	--	2.0
MAXIMUM 1	--	30.0	--	20.0	--	30.0	--	20.0
MAXIMUM 2	--	30.0	--	20.0	--	30.0	--	20.0
YELLOW	--	4.0	--	4.0	--	4.0	--	4.0
ALL RED	--	2.0	--	2.0	--	2.0	--	2.0
PED WALK	--	7	--	7	--	7	--	7
PED CLEAR	--	9	--	9	--	5	--	9
RECALL	--	SOFT	--	OFF	--	SOFT	--	OFF
DETECTOR	--	NL	--	NL	--	NL	--	NL
PREEMPT PRIORITY	--	2	--	3	--	1	--	4
FLASH	--	Y	--	R	--	Y	--	R
DUAL ENTRY	--	ON	--	ON	--	ON	--	ON

**I. DEFINITIONS**

- Y = YELLOW
- NL = NONLOCK
- R = RED
- D = DARK

**PLAN**



ITEM 616.191

PLS OR PE

PLS OR PE

DESIGNED: DHC  
CHECKED: BRL

1 DHC 6/30/22 ISSUED FOR CONSTRUCTION  
REV. BY: DATE: STATUS:

WWW.SEBAGOENGINEERS.COM  
75 John Roberts Rd.  
Suite 4A  
South Portland, ME 04106  
Tel. 207-200-2100

TRAFFIC SIGNAL PLAN (1 OF 2)  
OF: ISLINGTON STREET AT CABOT STREET  
FOR: CITY OF PORTSMOUTH, NH  
1 JUNKINS AVE  
PORTSMOUTH, NH 03081

PROJECT NO. 21386  
SCALE 1" = 20'

DWG NO T-1  
SHEET 25 OF 56

ITEM 616.191

**STRUCTURES/FOUNDATION SCHEDULE**

STRUCTURE	DESCRIPTION	FOUNDATION	LOCATION
1	CONTROLLER CABINET	CCFND	Sta 136+38.6 31.9' RT
2	PULL BOX	PB	Sta 136+37.0 25.6' RT
3	8' PEDESTAL POLE	TSFND	Sta 136+30.5 17.8' RT
4	PULL BOX	PB	Sta 136+30.9 15.5' LT
5	45' MAST ARM	TYPE IC	Sta 136+35.4 26.1' LT
6	8' PEDESTAL POLE	TSFND	Sta 136+74.6 25.7' LT
7	PULL BOX	PB	Sta 136+76.7 17.9' LT
8	8' PEDESTAL POLE	TSFND	Sta 136+74.3 24.4' RT
9	PULL BOX	PB	Sta 136+73.9 27.4' RT
10	EXISTING POWER POLE	--	--

**CONDUIT SCHEDULE**

FROM	TO	TYPE	LENGTH (FT)
1	10	3" PVC SCH. 80	16
1	2	3" PVC SCH. 40	3
2	3	3" PVC SCH. 40	11
2	4	3" PVC SCH. 80	42
2	9	3" PVC SCH. 80	37
4	5	3" PVC SCH. 40	10
4	7	3" PVC SCH. 80	45
7	6	3" PVC SCH. 40	8
9	8	3" PVC SCH. 40	4
TOTAL		3" PVC. SCH. 40	36'
		3" PVC. SCH. 80	140'

**FOUNDATION NOTES:**

TSFND= CONCRETE FOUNDATION FOR PEDESTALS CONSTRUCTED IN ACCORDANCE WITH NHDOT SIGNAL AND LIGHTING STANDARDS SL-2

PB= 14-INCH CONCRETE PULL BOX CONSTRUCTED IN ACCORDANCE WITH NHDOT SIGNAL AND LIGHTING STANDARDS SL-1

CCFND= CONCRETE FOUNDATION FOR CONTROLLER CABINET CONSTRUCTED IN ACCORDANCE WITH NHDOT SIGNAL AND LIGHTING STANDARDS SL-2

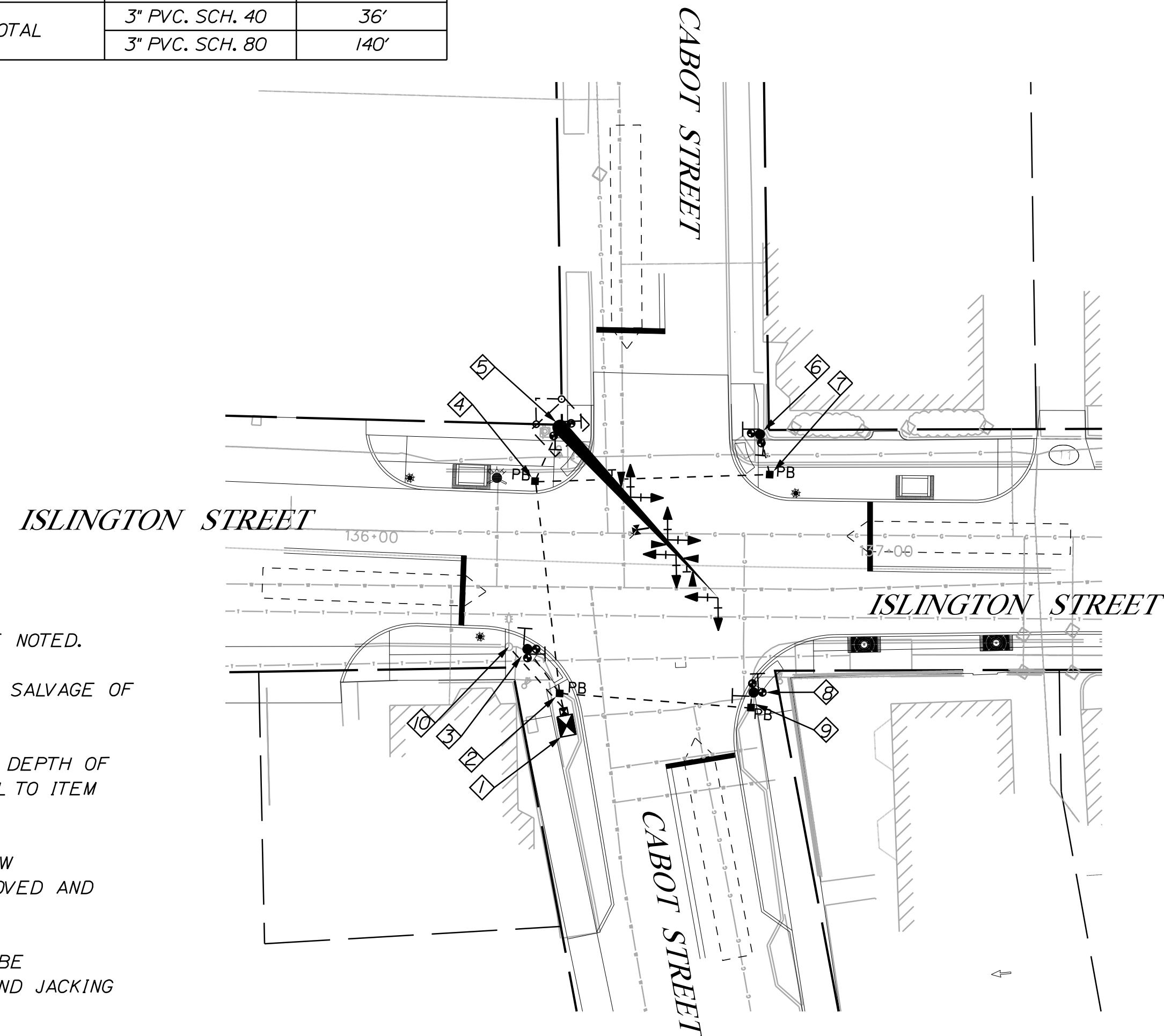
TYPE \*- TRAFFIC SIGNAL MAST ARM FOUNDATION CONSTRUCTED IN ACCORDANCE WITH NHDOT TRAFFIC SIGNAL STANDARD TS-1, TS-2, OR TS-3 AS APPLICABLE.

**CONSTRUCTION NOTES**

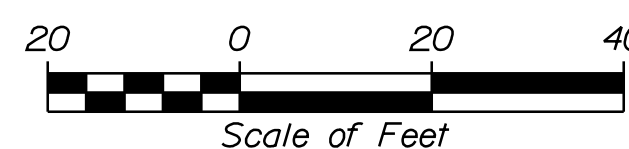
- ALL CONSTRUCTION SHALL CONFORM WITH THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, BUREAU OF HIGHWAY DESIGN SPECIFICATIONS UNLESS OTHERWISE NOTED.
- ALL EXISTING SIGNAL EQUIPMENT SHALL BE REMOVED AND SALVAGED. REMOVAL AND SALVAGE OF THE EQUIPMENT SHALL BE INCIDENTAL TO ITEM 616.191.
- EXISTING TRAFFIC SIGNAL STRUCTURE FOUNDATIONS SHALL BE REMOVED TO A MIN. DEPTH OF 12" BELOW THE EXISTING SURFACE. REMOVAL OF FOUNDATIONS SHALL BE INCIDENTAL TO ITEM 616.191.
- THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED HEREIN USING NEW MATERIALS. THE TERM "REMOVE AND SALVAGE" (R-S) MEANS EQUIPMENT TO BE REMOVED AND DELIVERED TO THE CITY OF PORTSMOUTH.
- PAVEMENT SAWCUTTING FOR CONDUITS AND JACKING PITS (WHEN REQUIRED) SHALL BE SUBSIDIARY TO ITEM 616.191. REPLACEMENT OF PAVEMENT FOR CONDUIT TRENCHES AND JACKING PITS WILL BE PAID UNDER ITEM 403.12 OR 403.99.
- ALL MAST ARM FOUNDATIONS SHALL INCLUDE A 12 INCH LAYER OF STRUCTURAL FILL BELOW THE BOTTOM OF THE FOOTING GRADE.
- ALL MAST ARM FOUNDATIONS SHALL BE CONSTRUCTED FOLLOWING NHDOT STANDARD SPECIFICATIONS AND DETAILS.
- ANY BEARING SURFACE MATERIAL DISTURBED BY EXCAVATION AND/OR BY DEWATERING METHODS SHALL BE REMOVED TO A DEPTH OF 12 INCHES AND REPLACED WITH STRUCTURAL FILL.
- PLACEMENT OF STRUCTURAL FILL SHALL BE SUBSIDIARY TO ITEM 616.191
- SEE PAVEMENT MARKING AND SIGNING PLANS FOR ALL PROPOSED AND EXISTING SIGNS.
- PEDESTRIAN PUSHBUTTONS SHALL BE MOUNTED 42" ABOVE THE SIDEWALK. PUSHBUTTONS SHALL HAVE A MAXIMUM ALLOWABLE REACH DISTANCE OF 10 INCHES FROM THE ADJACENT WALK SURFACE. EXTENSION BRACKETS TO BE INSTALLED IF DEEMED NECESSARY.
- THE AUDIBLE WALK INDICATION SHALL BE A SPEECH MESSAGE AT ALL LOCATIONS WHERE TWO-PUSHBUTTONS ARE MOUNTED ON ONE POLE OR LOCATED LESS THAN 10' APART. THE SPEECH MESSAGE SHALL BE:

"(CROSSING STREET), WALK SIGN IS ON TO CROSS (CROSSING STREET)"

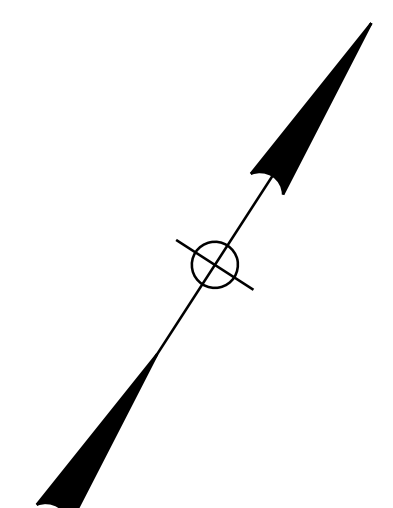
- ALL EQUIPMENT SHALL BE PAINTED BLACK.



PLAN



ITEM 616.191



DESIGNED	CHECKED
DHC	BRL
1 DHC 6/30/22 ISSUED FOR CONSTRUCTION REV: BY: DATE: STATUS:	

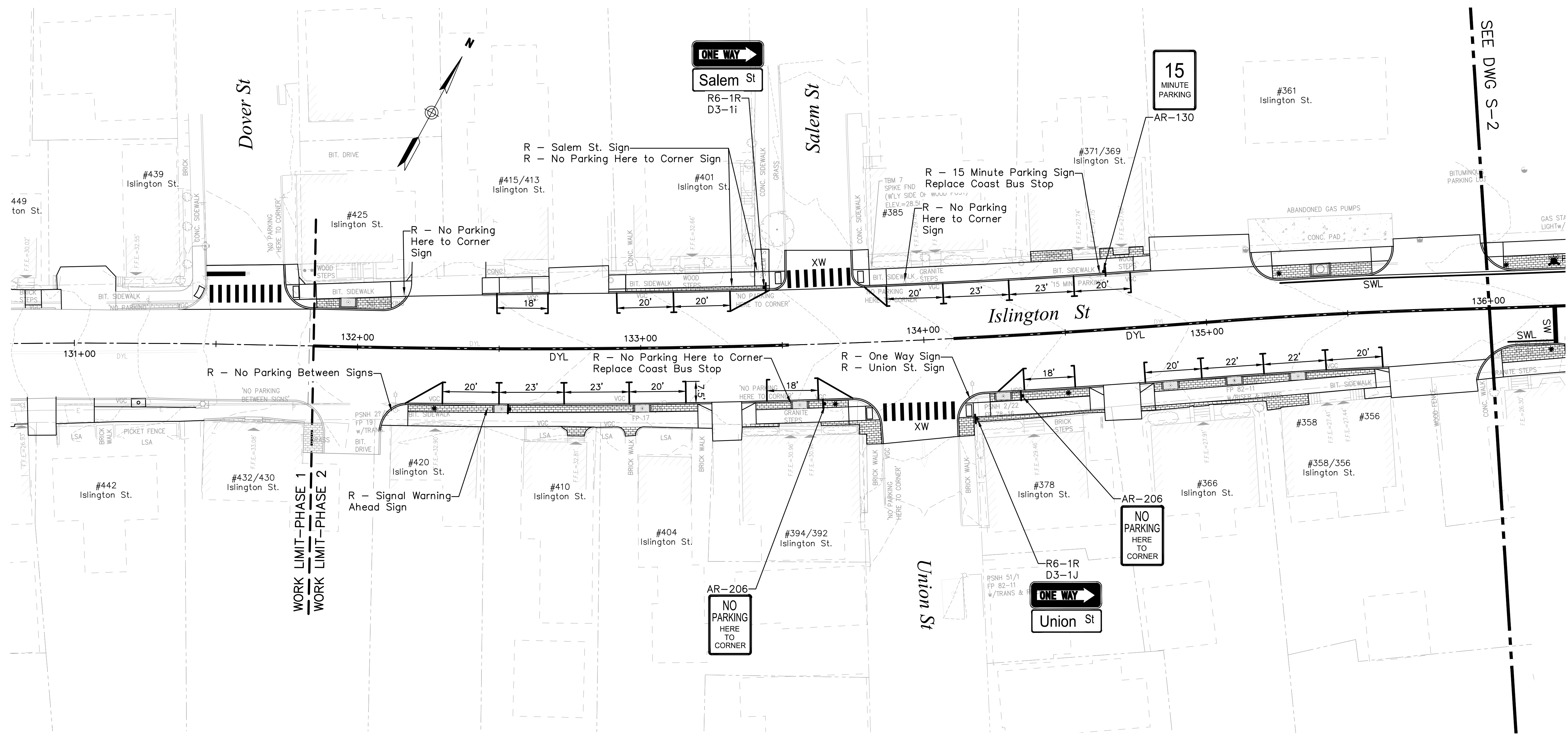
**SEBAGO**  
TECHNICS  
www.sebagotechnics.com  
75 John Roberts Rd.  
Suite 4A  
South Portland, ME 04106  
Tel: 207-200-2100

TRAFFIC SIGNAL PLAN (2 of 2)  
OF: ISLINGTON STREET AT CABOT STREET  
FOR: CITY OF PORTSMOUTH, NH  
1 JUNKINS AVE  
PORTSMOUTH, NH 03081

PROJECT NO. 21386	SCALE 1" = 20'
DWG NO. T-2	SHEET 26 OF 56

PLS OR PE  
PLS OR PE

STATE OF NEW HAMPSHIRE  
REGISTERED PROFESSIONAL ENGINEER  
Derek H. Caldwell  
No. 15874  
06/30/2022



ISLINGTON ST. PLAN VIEW

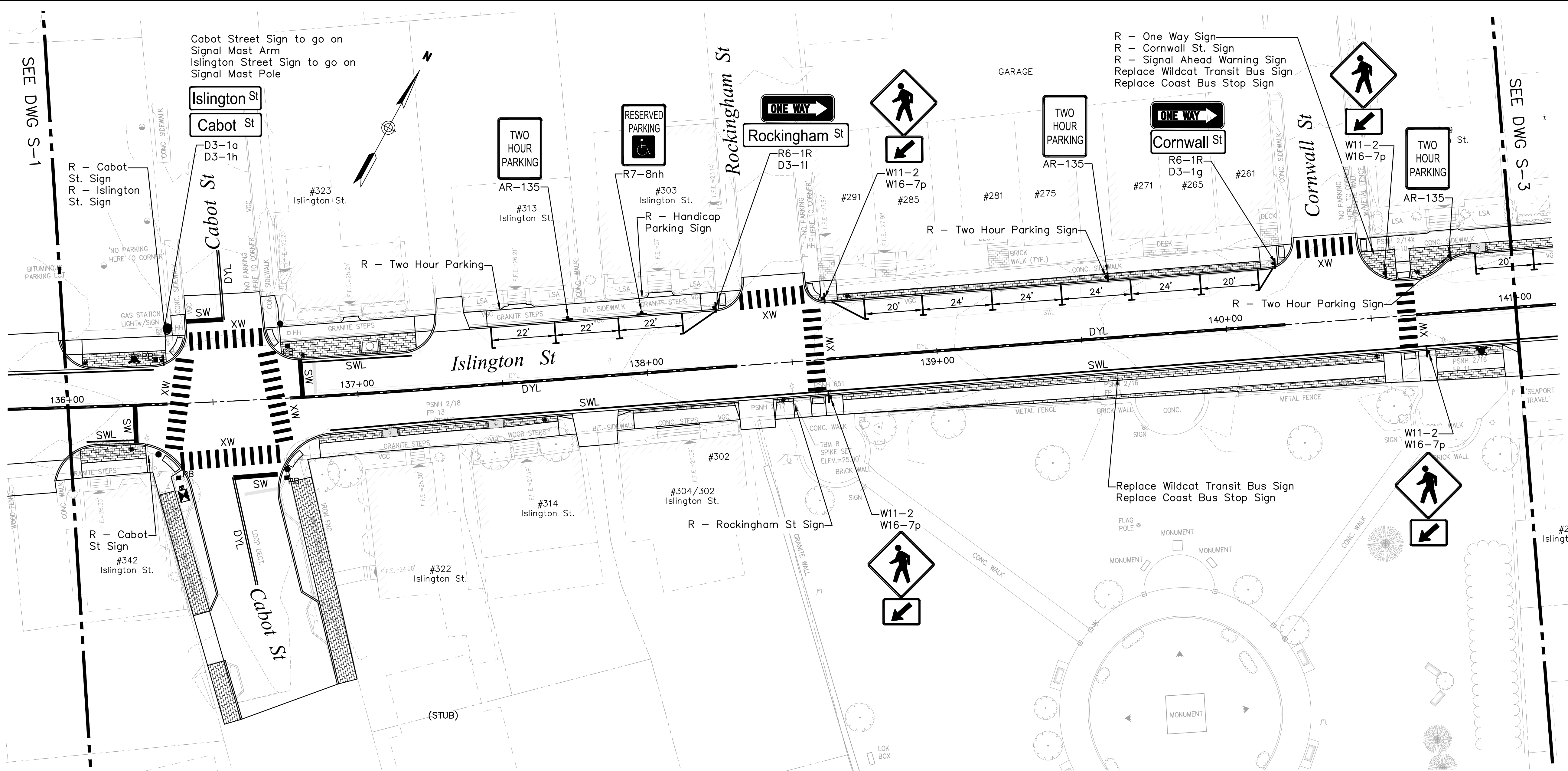


SIGN/PVMT. MARKING LEGEND

SYMBOL	DESCRIPTION
SWL	4" SINGLE WHITE LINE
DYL	4" DOUBLE YELLOW LINE
SL	18" WHITE STOP LINE
XW	12" CROSSWALK (SEE DETAILS)
R	REMOVE SIGN
L	LEAVE SIGN
R+R	REMOVE & RELOCATE SIGN
R+S	REMOVE & SALVAGE SIGN

<p>ISSUE FOR APPROVAL</p> <p>Date: 6/29/22</p> <p>By: DJR</p>	<p>CONSTRUCTION</p> <p>Date:</p> <p>By:</p>	<p>REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	NO.	DESCRIPTION											<p>APPD</p> <p>Date:</p>	<p>RECORD DWG</p> <p>Date:</p>	<p>BY</p> <p>Date:</p>
NO.	DESCRIPTION																
<p><b>SIGNS &amp; STRIPING</b></p> <p><b>ISLINGTON STREET CORRIDOR IMPROVEMENTS</b></p> <p><b>PHASE 2</b></p> <p><b>CITY OF PORTSMOUTH</b></p> <p><b>PORTSMOUTH, NEW HAMPSHIRE</b></p>																	
<p>DWG NO S-1</p>		<p>SHEET 27 OF 56</p>															

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**SIGN/PVMT. MARKING LEGEND**

SYMBOL	DESCRIPTION
SWL	4" SINGLE WHITE LINE
DYL	4" DOUBLE YELLOW LINE
SL	18" WHITE STOP LINE
XW	12" CROSSWALK (SEE DETAILS)
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R+R	REMOVE & RELOCATE SIGN
R+S	REMOVE & SALVAGE SIGN

**ISLINGTON ST. PLAN VIEW**



- R - One Way Sign
- R - Cornwall St. Sign
- R - Signal Ahead Warning Sign
- Replace Wildcat Transit Bus Sign
- Replace Coast Bus Stop Sign

- R - Cabot St. Sign
- R - Islington St. Sign

- RESERVED PARKING
- R7-8nh
- R - Handicap Parking Sign

- TWO HOUR PARKING
- AR-135
- R - Two Hour Parking Sign

- ONE WAY
- Cornwall St
- R6-1R D3-1g

- W11-2
- W16-7p
- TWO HOUR PARKING
- AR-135

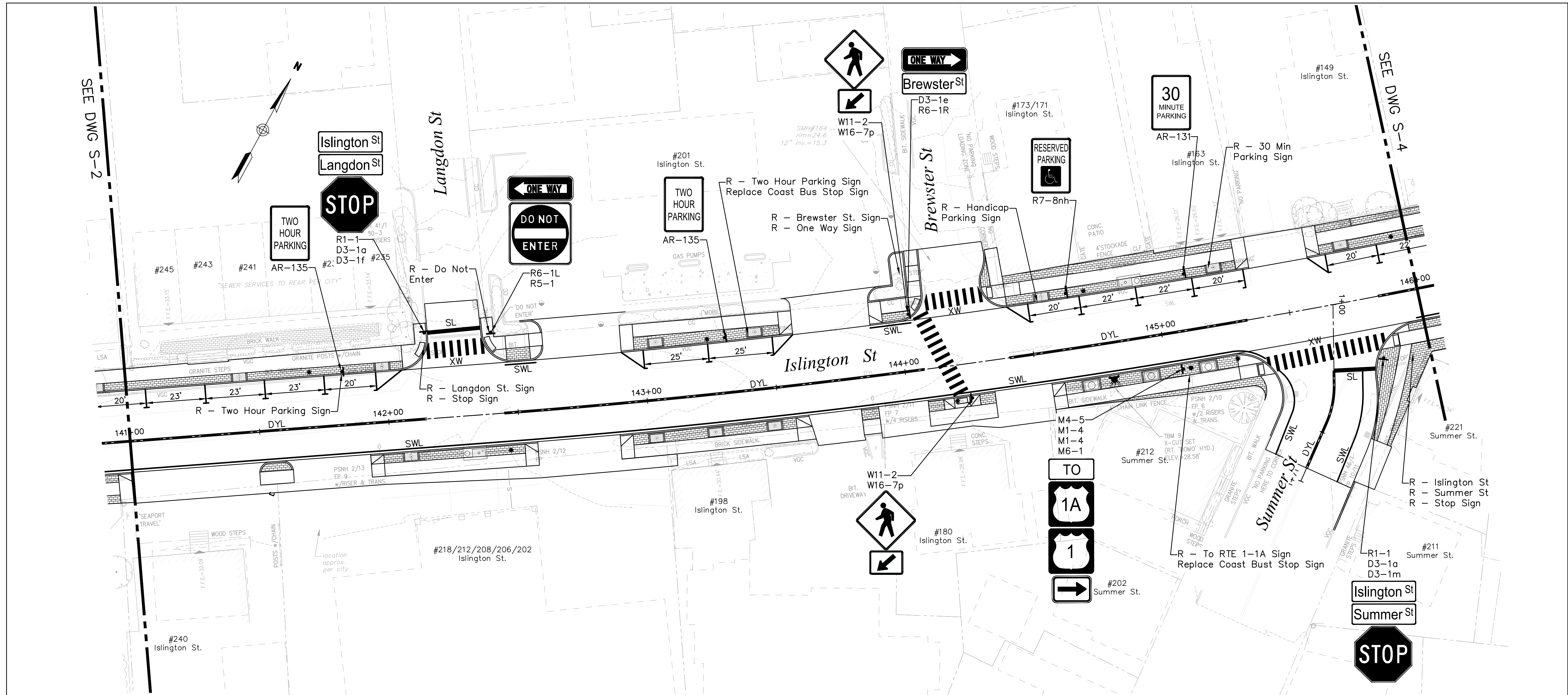
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			6/28/22					

Drawn/Chk	RMG	DJR	FDM	Date	6/28/22	Book No.	2705	Project No.	ID2705kes_S.Sh.	Scale	AS SHOWN
<p><b>SIGNS &amp; STRIPING</b></p> <p><b>ISLINGTON STREET CORRIDOR IMPROVEMENTS PHASE 2</b></p> <p><b>CITY OF PORTSMOUTH</b></p> <p><b>PORTSMOUTH, NEW HAMPSHIRE</b></p>											
DWG NO					SHEET						
S-2					28 OF 56						

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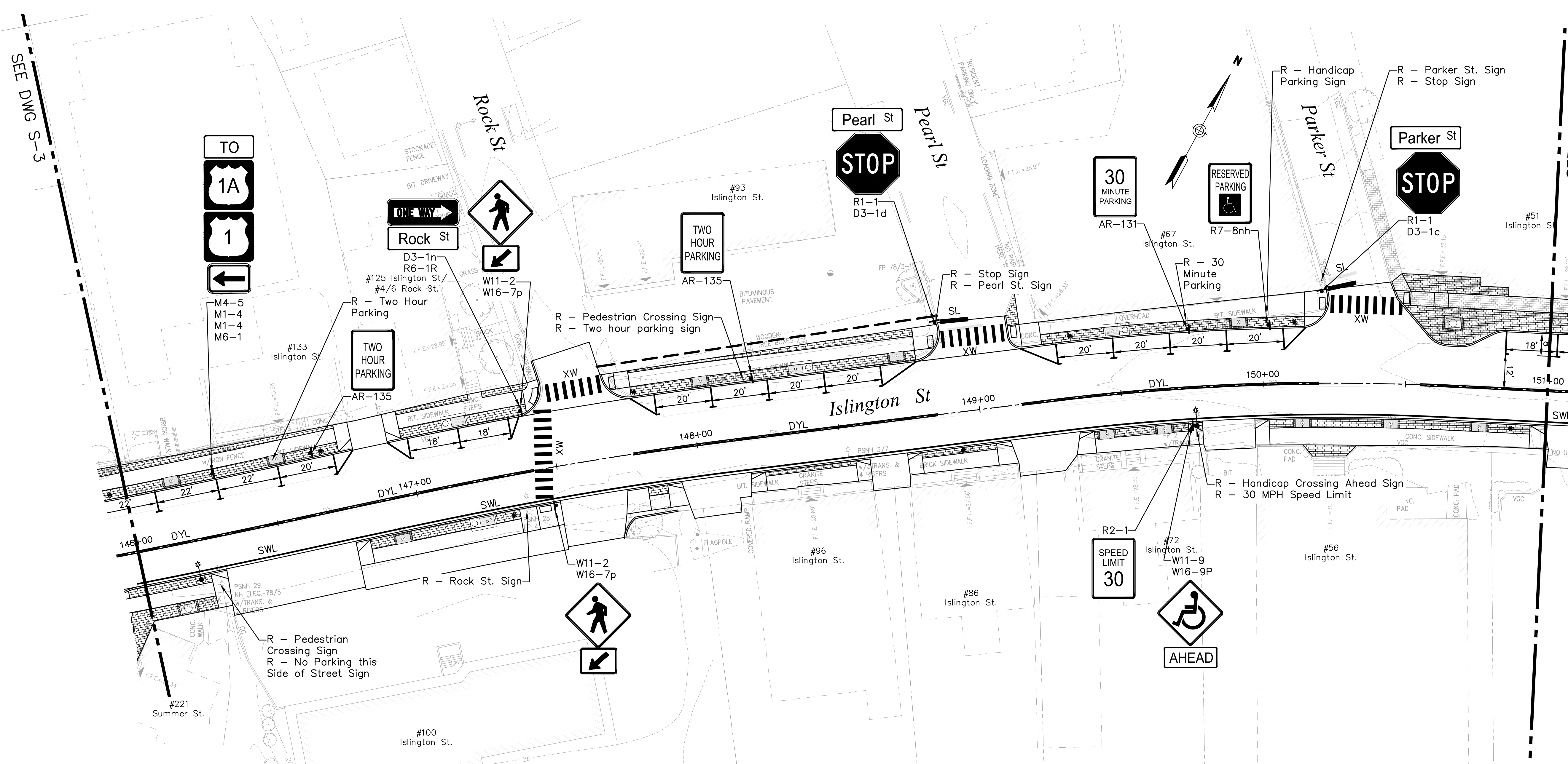
ISLINGTON ST. PLAN VIEW  
SCALE: 1 INCH = 20 FT.

SIGN/PVMT. MARKING LEGEND

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SWL	4" SINGLE WHITE LINE
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ISSUE FOR APPROVAL Date 6/29/22 By DJR CONSTRUCTION Date By Date RECORD DWG Date By Date	REVISIONS NO.	Drawn/Chk DJR Designed DJR Checked FDM Approved 6/29/22 Date Book No. 2705 Project No. ID2705kas.S.Sh. Scale AS SHOWN	APFD
25 Vaughan Mall, Portsmouth, N.H. 03801 Tel. 603-436-6192 Fax. 603-431-4733			
<b>SIGNS &amp; STRIPING</b>		<b>ISLINGTON STREET CORRIDOR IMPROVEMENTS PHASE 2 CITY OF PORTSMOUTH PORTSMOUTH, NEW HAMPSHIRE</b>	
DWG NO S-3	SHEET 29 OF 56		

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**SIGN/PVMT. MARKING LEGEND**

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**ISLINGTON ST. PLAN VIEW**



ISSUE FOR APPROVAL	By Date	By Date	By Date	By Date	By Date
APPROVAL	Date	Date	Date	Date	Date
6/29/22	DJR	6/29/22	DJR	6/29/22	DJR
CONSTRUCTION	Date	Date	Date	Date	Date
REVISIONS	NO.	NO.	NO.	NO.	NO.
APPD	APPD	APPD	APPD	APPD	APPD

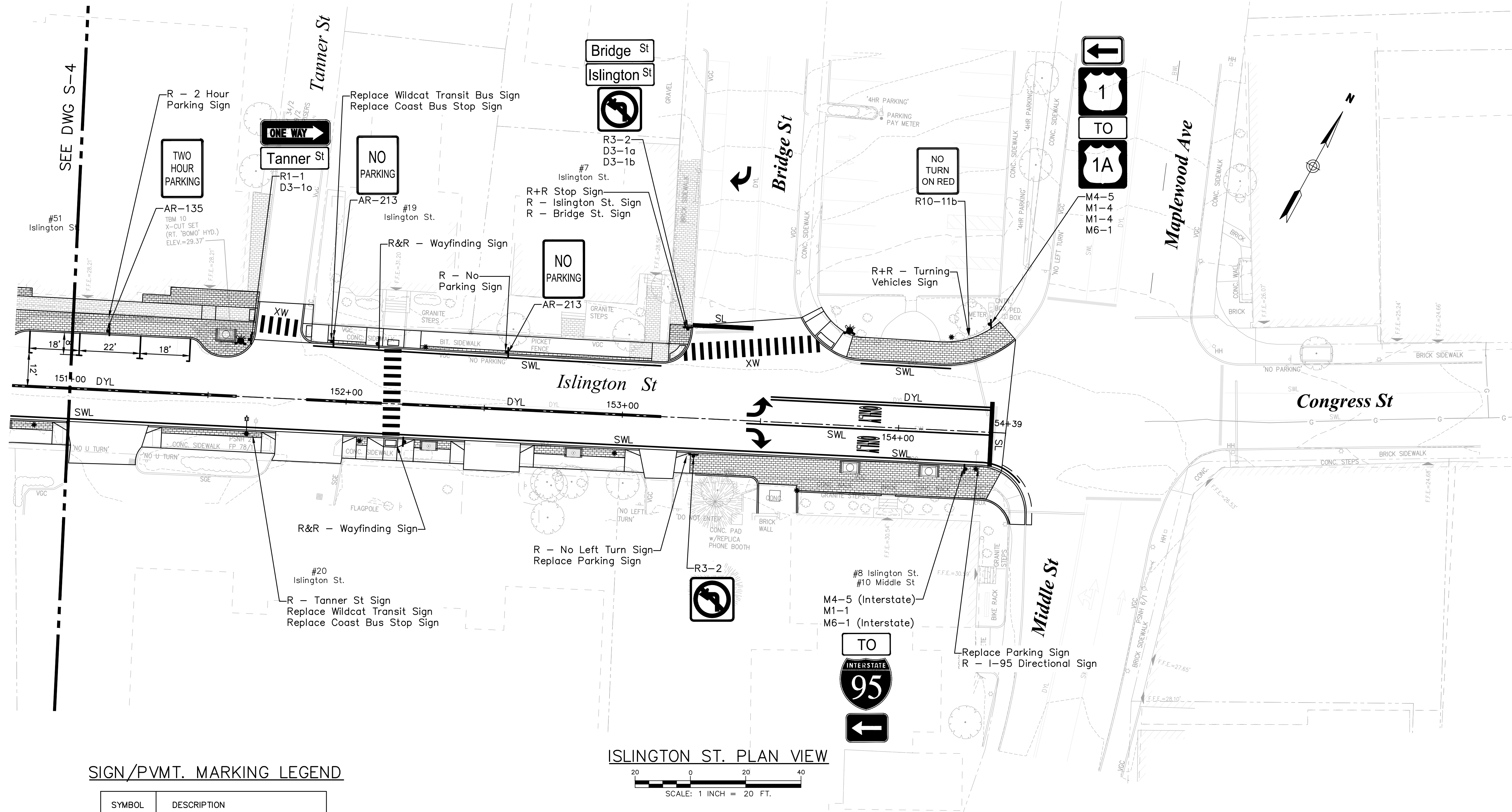
**UNDERWOOD**  
engineers

25 Vaughan Mall, Portsmouth, N.H. 03801  
Tel. 603-436-6192 Fax. 603-431-4733

<b>SIGNS &amp; STRIPING</b> <b>ISLINGTON STREET CORRIDOR IMPROVEMENTS</b> <b>PHASE 2</b>	<b>CITY OF PORTSMOUTH</b> <b>PORTSMOUTH, NEW HAMPSHIRE</b>
DWG NO S-4	SHEET 30 OF 56

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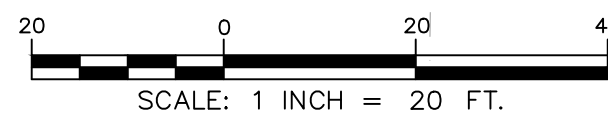
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**SIGN/PVMT. MARKING LEGEND**

SYMBOL	DESCRIPTION
SWL	4" SINGLE WHITE LINE
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**ISLINGTON ST. PLAN VIEW**



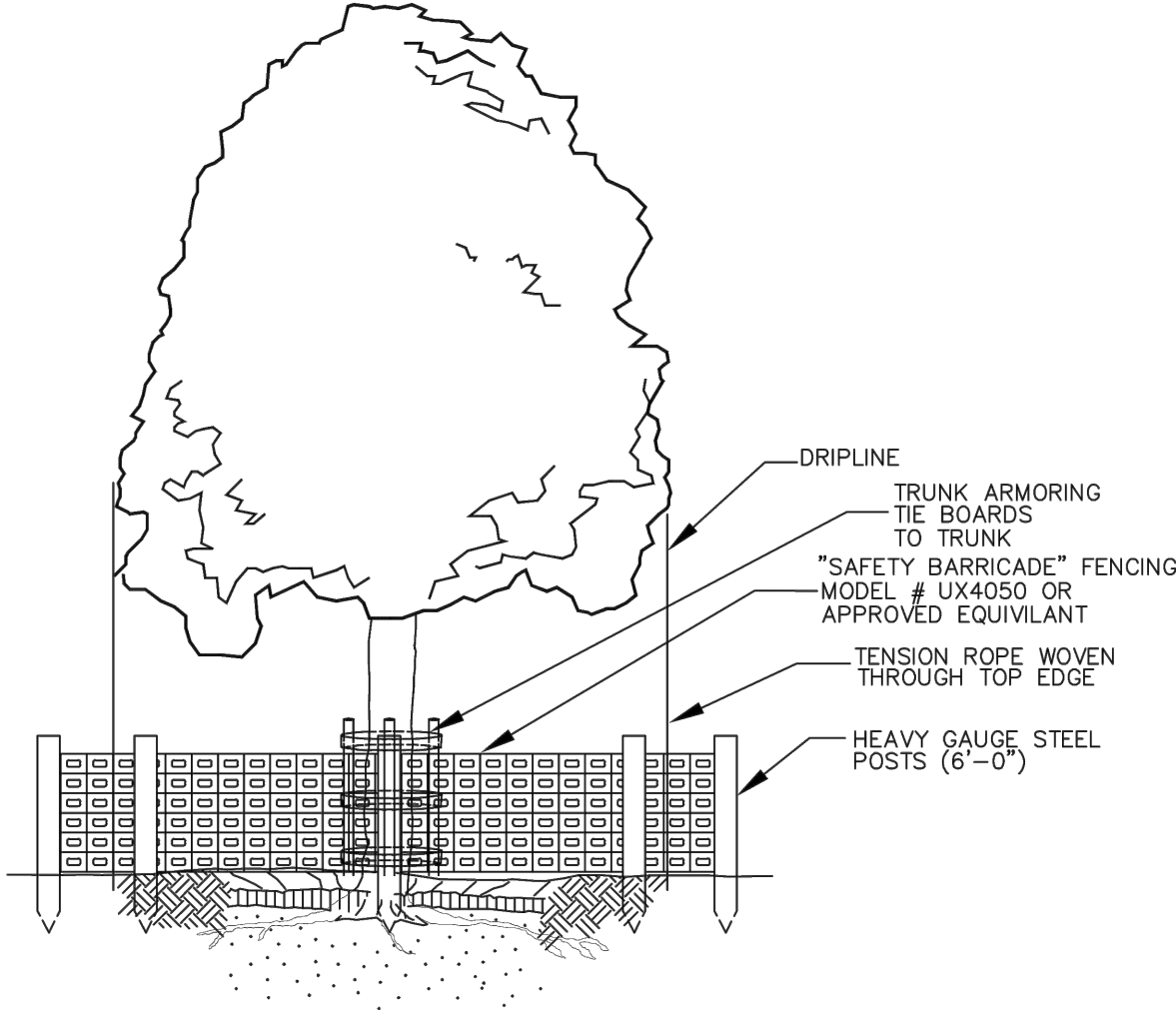
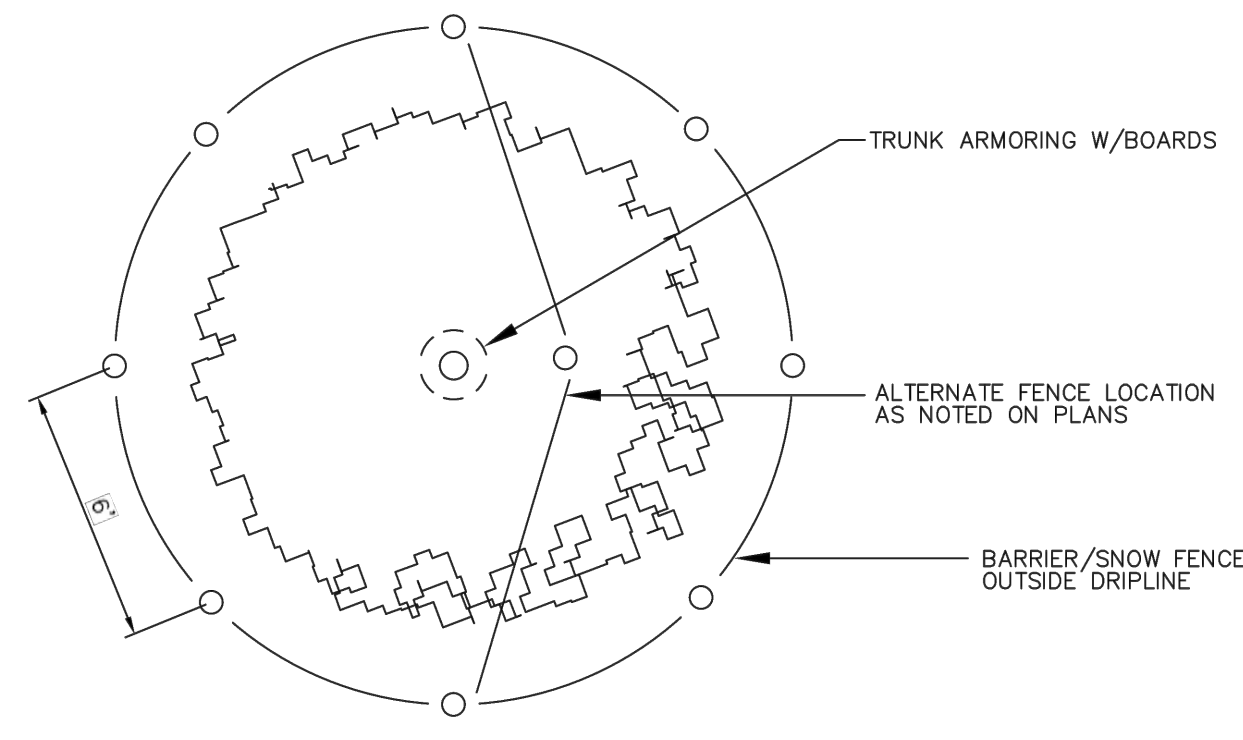
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				APPD
Drawn/Chk DJR	Designed DJR	Checked PDM	Approved 6/29/22	Book No. 2705
				Dwg. ID2705bas_S.Sh.
				Scale AS SHOWN
				NO.
25 Vaughan Mall, Portsmouth, N.H. 03801 Tel. 603-436-6192 Fax. 603-431-4733				
<b>SIGNS &amp; STRIPING</b>		<b>ISLINGTON STREET CORRIDOR IMPROVEMENTS PHASE 2</b>		
<b>CITY OF PORTSMOUTH</b>		<b>PORTSMOUTH, NEW HAMPSHIRE</b>		
DWG NO S-5			SHEET 31 OF 56	

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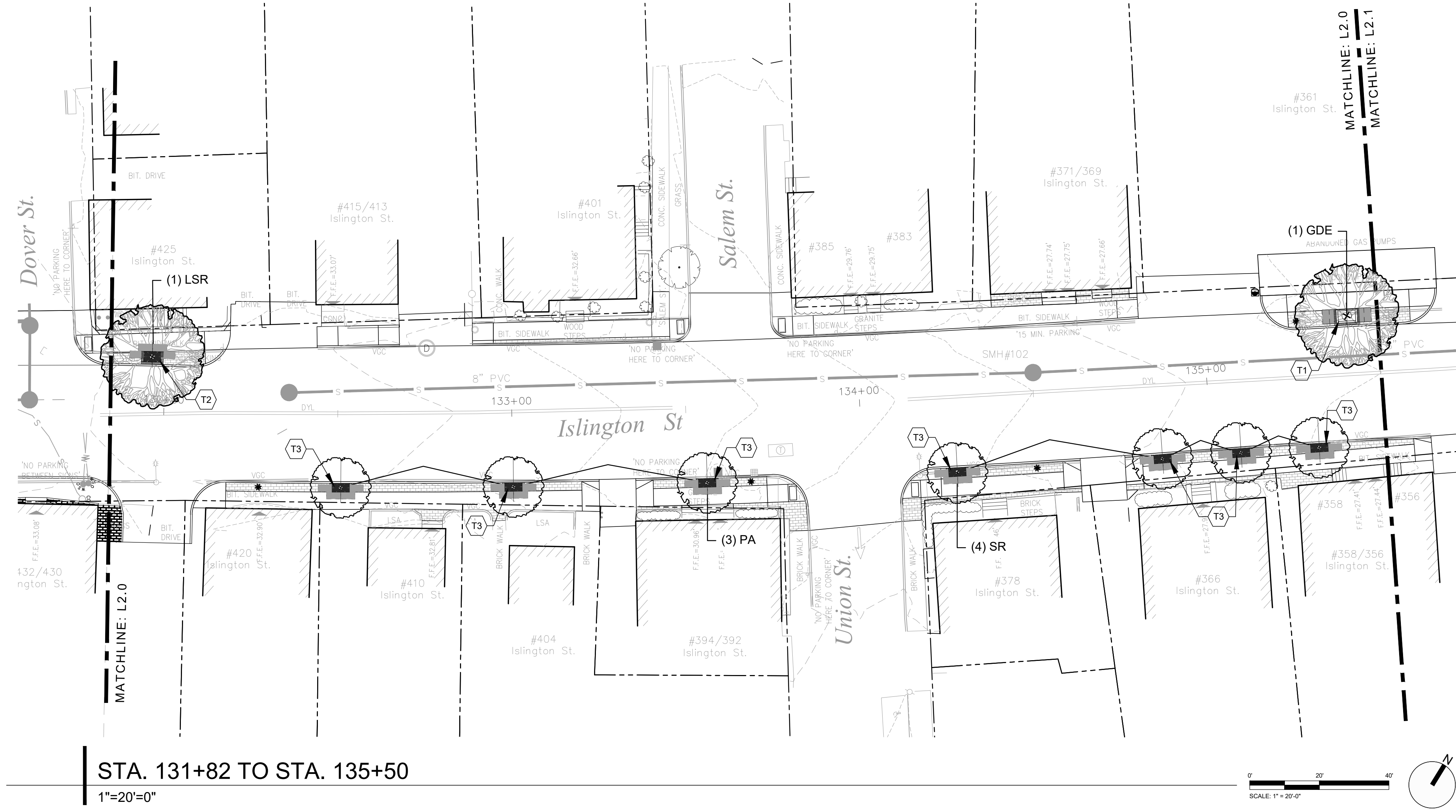




**Tree Protection**

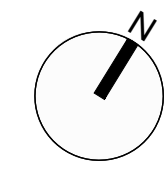
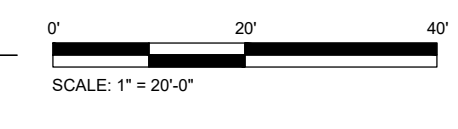
Not to Scale

©IRONWOOD 2022 **1** L2.0



**STA. 131+82 TO STA. 135+50**

1"=20'=0"



**Legend**

HARDSCAPE TO BE REMOVED		ARCHITECTURAL AREA LIGHT		6 (L4.0)
TREE PROTECTION (EXISTING TREES)		BOLLARD LIGHT		3 (L4.0)
T1-STREET TREE PLANTING (CURBED PLANTER)		ELECTRICAL CONDUIT TRENCH		4/3 (L4.0)
T2-STREET TREE PLANTING (3'X5' TREE GRATE)		DECIDUOUS SINGLE STEMMED TREE PLANTING (LARGE SHADE TREE)		3 (L4.2)
T3-STREET TREE PLANTING (2.5'X5' TREE GRATE) SOUTH SIDE OF ROAD STA. 132+50 THRU STA. 137+50		DECIDUOUS SINGLE STEMMED TREE PLANTING (SMALL UNDERSTORY TREE)		3 (L4.2)
T4-STREET TREE PLANTING (TREE BOX FILTER)-SEE CIVIL DRAWINGS FOR DETAILS				
CONCRETE PAVEMENT-SEE CIVIL DRAWINGS FOR DETAILS				

- GENERAL NOTES:**
1. CONSTRUCTION ACTIVITIES SHALL NOT UNNECESSARILY IMPACT FUNCTIONALITY WITHIN THE CORRIDOR.
  2. SEE CIVIL DRAWINGS FOR INFORMATION NOT DEPICTED ON THE LANDSCAPE DRAWINGS.
  3. SEE ELECTRICAL DRAWINGS FOR CONDUCTOR AND CONDUIT SIZING, CONTROL CIRCUIT CONFIGURATION, ETC.
  4. SEE L1.0 FOR LANDSCAPE RELATED NOTES.
  5. SEE L4.0-L4.3 FOR LANDSCAPE DETAILS.
  6. WITHIN THE LIMIT OF WORK INVASIVE PLANT SPECIES SHALL BE REMOVED FOLLOWING NHDES AND NHDOT BEST MANAGEMENT PRACTICES.
  7. CONTACT DIGSAFE PRIOR TO BEGINNING WORK.

ISSUE FOR

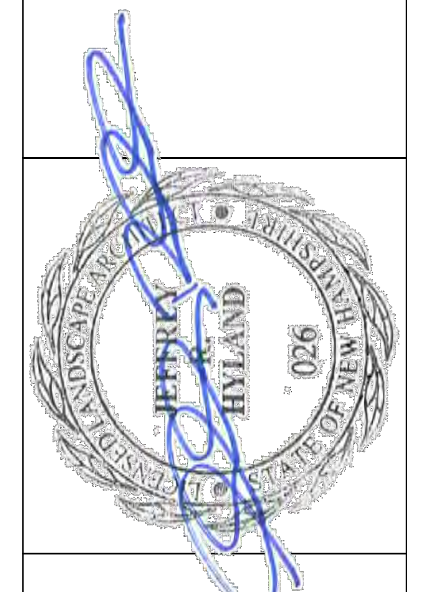
APPROVAL	By
Date	
CONSTRUCTION	By
Date	
RECORD DWG	By
Date	

6/27/2022 - ISSUED FOR CONTRACTOR BIDDING

NO	REVISIONS

Drawn/Chk: KOSW, JRH  
 Designed: JRH, KO  
 Checked: JRH  
 Approved: JRH  
 Date: 6/27/22

Project No.: 21070.0  
 Dwg. ID: 2105bbs\_sht.2  
 Scale: AS SHOWN

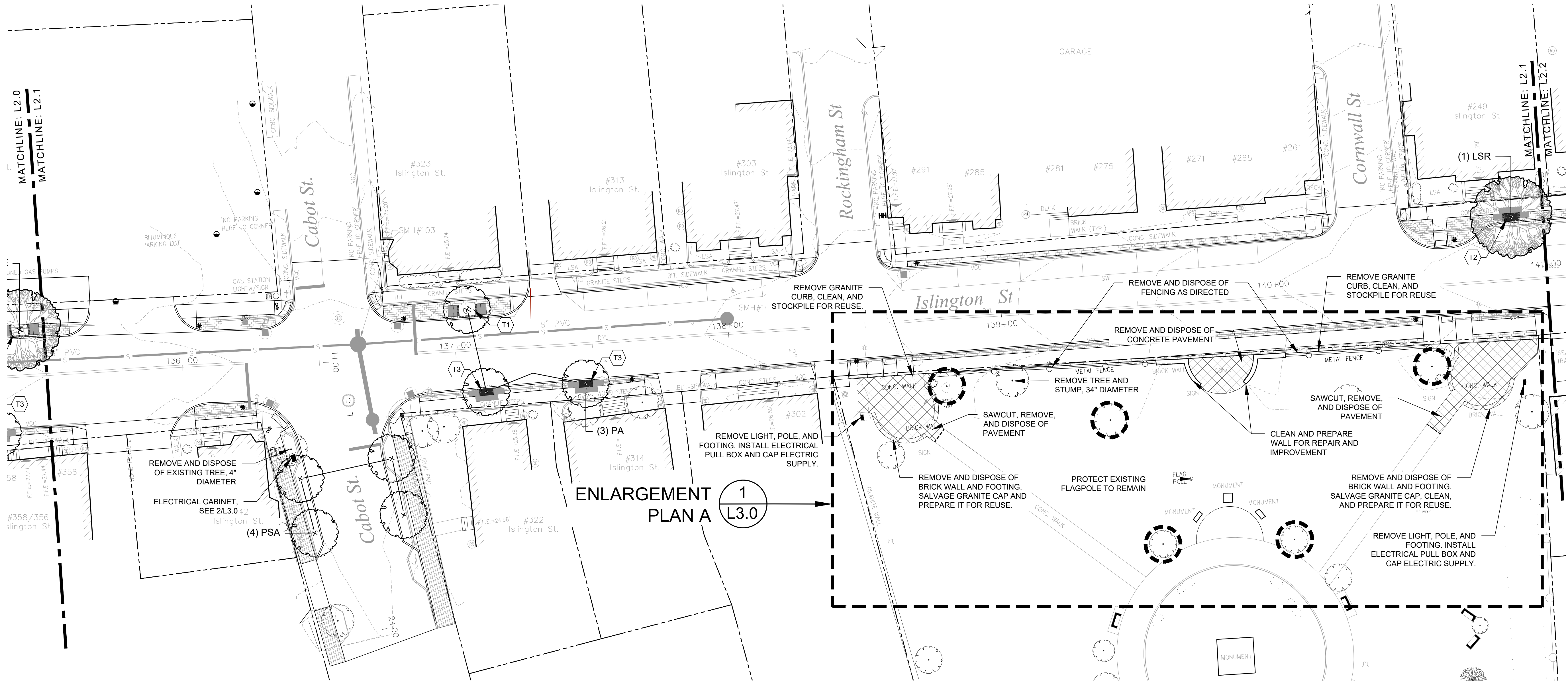


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**LANDSCAPE PLAN**

ISLINGTON STREET CORRIDOR IMPROVEMENTS  
 PHASE 2

CITY OF PORTSMOUTH  
 PORTSMOUTH, NEW HAMPSHIRE



STA. 135+50 TO STA. 141+00

1"=20'=0"



**ENLARGEMENT  
PLAN A**

1  
L3.0

**Legend**

HARDSCAPE TO BE REMOVED		
TREE PROTECTION (EXISTING TREES)		1 L2.0
T1—STREET TREE PLANTING (CURBED PLANTER)		5 L4.1
T2—STREET TREE PLANTING (3'X5' TREE GRATE)		5 L4.2
T3—STREET TREE PLANTING (2.5'X5' TREE GRATE) SOUTH SIDE OF ROAD STA. 132+50 THRU STA. 137+50		5 L4.2
T4—STREET TREE PLANTING (TREE BOX FILTER)— SEE CIVIL DRAWINGS FOR DETAILS		
CONCRETE PAVEMENT—SEE CIVIL DRAWINGS FOR DETAILS		

ARCHITECTURAL AREA LIGHT		6 L4.0
BOLLARD LIGHT		3 L4.0
ELECTRICAL CONDUIT TRENCH		4/5 L4.0
DECIDUOUS SINGLE STEMMED TREE PLANTING (LARGE SHADE TREE)		3 L4.2
DECIDUOUS SINGLE STEMMED TREE PLANTING (SMALL UNDERSTORY TREE)		3 L4.2

**GENERAL NOTES:**

- CONSTRUCTION ACTIVITIES SHALL NOT UNNECESSARILY IMPACT FUNCTIONALITY WITHIN THE CORRIDOR.
- SEE CIVIL DRAWINGS FOR INFORMATION NOT DEPICTED ON THE LANDSCAPE DRAWINGS.
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- SEE L4.0-L4.3 FOR LANDSCAPE DETAILS.
- WITHIN THE LIMIT OF WORK INVASIVE PLANT SPECIES SHALL BE REMOVED FOLLOWING NHDES AND NHDOT BEST MANAGEMENT PRACTICES.
- CONTACT DIGSAFE PRIOR TO BEGINNING WORK.

**WALL PREPARATION NOTES:**

- ASSESS THE CONDITION OF THE EXISTING WALL(S) TO REMAIN AND BRING ANY CONCERNS TO THE ATTENTION OF THE CITY REPRESENTATIVE.
- PROTECT SURROUNDING VEGETATION AND MATERIALS TO REMAIN.
- THOROUGHLY CLEAN ALL MASONRY AND REMOVE ALL LOOSE MORTAR.

**WALL REHABILITATION NOTES:**

REPAIR ALL MORTAR JOINTS AND FULL RESTORE THE BRICK WALL

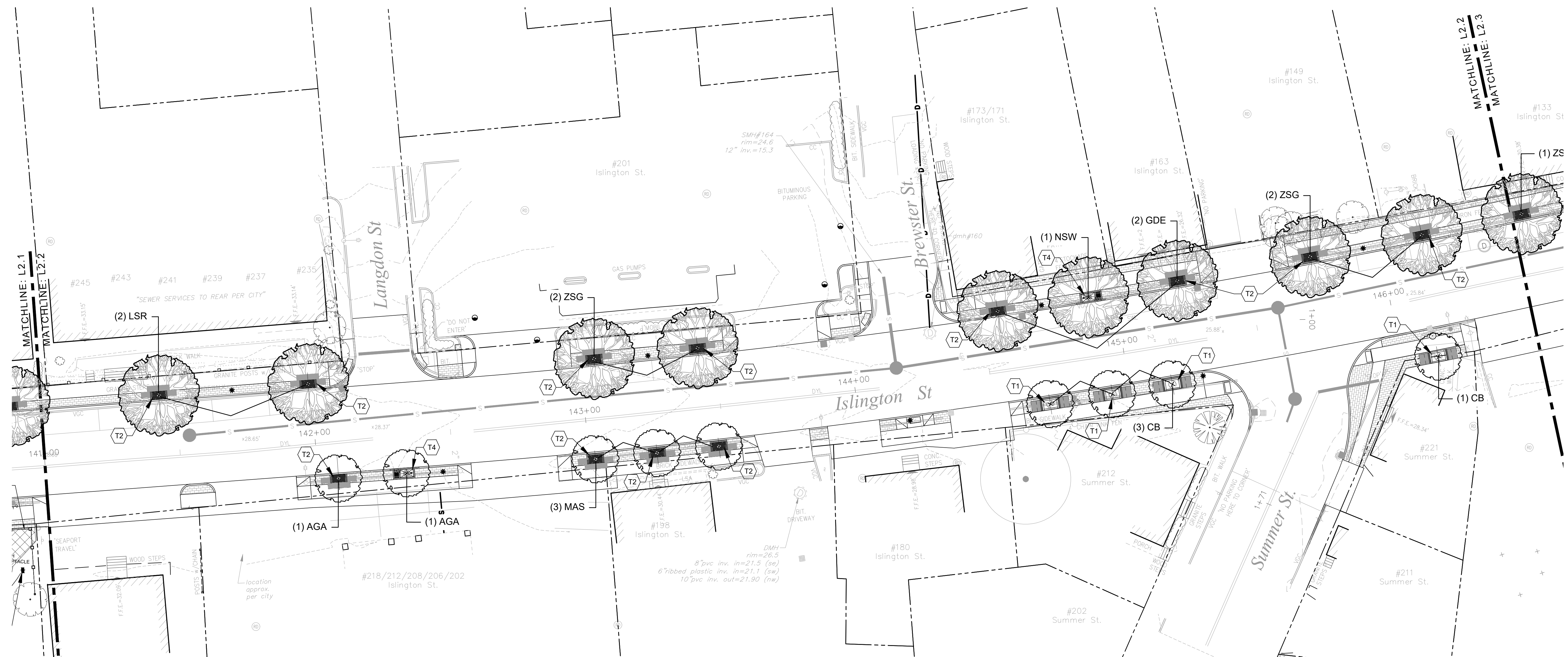
6/27/2022 - ISSUED FOR CONTRACTOR BIDDING	
ISSUE FOR	APPROVAL
Designed By	Date
Checked By	Date
Approved By	Date
Book No.	Project No.
Dwg. ID	Scale
NO	REVISIONS
NO	APPD

Drawn/Chk: KOSW, JRH  
 Designed: JRH, KO  
 Checked: JRH  
 Approved: JRH  
 Date: 6/27/22

Project No.: 210700  
 Dwg. ID: 210550-01-L2  
 Scale: AS SHOWN

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**LANDSCAPE PLAN**  
 ISLINGTON STREET CORRIDOR IMPROVEMENTS  
 PHASE 2  
 CITY OF PORTSMOUTH  
 PORTSMOUTH, NEW HAMPSHIRE



STA. 141+00 TO STA. 146+50  
1"=20'=0"

### Legend

HARDSCAPE TO BE REMOVED		ARCHITECTURAL AREA LIGHT		6 L4.0
TREE PROTECTION (EXISTING TREES)		BOLLARD LIGHT		3 L4.0
T1-STREET TREE PLANTING (CURBED PLANTER)		ELECTRICAL CONDUIT TRENCH		4/5 L4.0
T2-STREET TREE PLANTING (3'X5' TREE GRATE)				
T3-STREET TREE PLANTING (2.5'X5' TREE GRATE) SOUTH SIDE OF ROAD STA. 132+50 THRU STA. 137+50		DECIDUOUS SINGLE STEMMED TREE PLANTING (LARGE SHADE TREE)		3 L4.2
T4-STREET TREE PLANTING (TREE BOX FILTER)- SEE CIVIL DRAWINGS FOR DETAILS		DECIDUOUS SINGLE STEMMED TREE PLANTING (SMALL UNDERSTORY TREE)		3 L4.2
CONCRETE PAVEMENT-SEE CIVIL DRAWINGS FOR DETAILS				

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ISSUE FOR		APPROVAL	By
6/27/2022 - ISSUED FOR CONTRACTOR BIDDING		Date	
DESIGNED		CONSTRUCTION	By
DATE		Date	
6/27/22		RECORD DWG	By
PROJECT NO. 210700		Date	
DWG. ID: Z05bbs_sht.2		REVISIONS	
SCALE AS SHOWN		NO	APPD

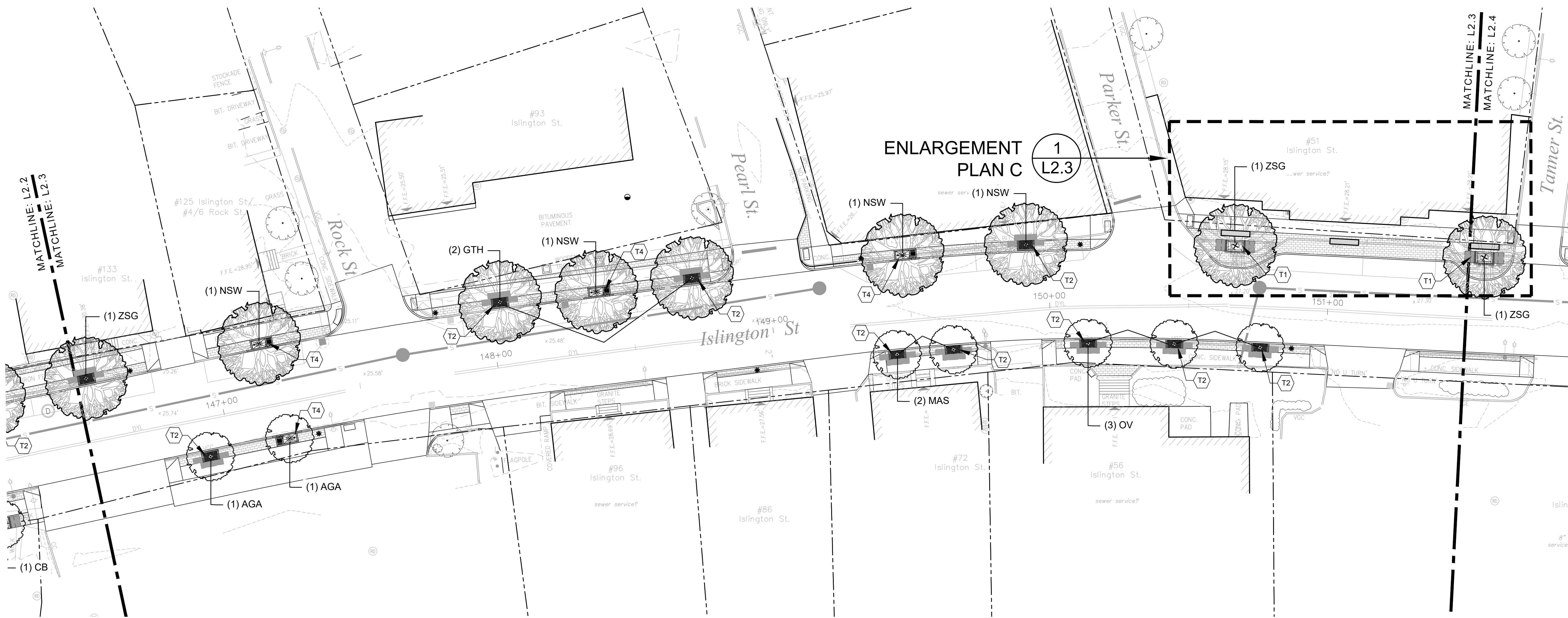
Drawn/Chk	JRH/KO
Designed	JRH/KO
Checked	JRH
Approved	JRH
Date	6/27/22
Book No.	210700
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Dwg. ID	Z05bbs_sht.2
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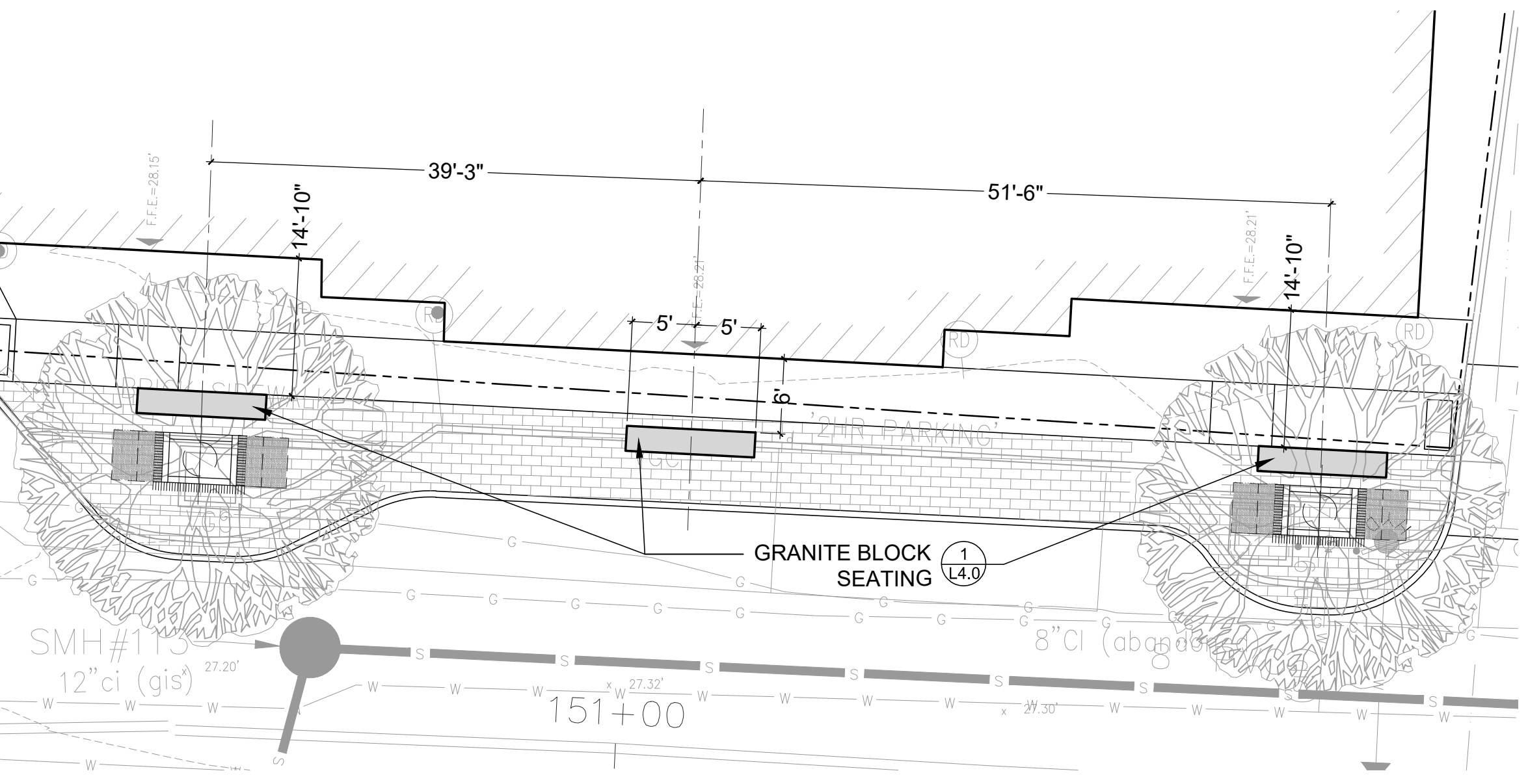
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LANDSCAPE PLAN  
ISLINGTON STREET CORRIDOR IMPROVEMENTS  
PHASE 2  
CITY OF PORTSMOUTH  
PORTSMOUTH, NEW HAMPSHIRE

DWG NO	SHEET
L2.2	35 OF 56



STA. 146+50 TO STA. 151+50  
1"=20'=0"



**1** ENLARGEMENT PLAN C  
1"=10'=0"

**Legend**

HARDSCAPE TO BE REMOVED		ARCHITECTURAL AREA LIGHT		6 L4.0
TREE PROTECTION (EXISTING TREES)		BOLLARD LIGHT		3 L4.0
T1—STREET TREE PLANTING (CURBED PLANTER)		ELECTRICAL CONDUIT TRENCH		4/5 L4.0
T2—STREET TREE PLANTING (3'X5' TREE GRATE)		DECIDUOUS SINGLE STEMMED TREE PLANTING (LARGE SHADE TREE)		3 L4.2
T3—STREET TREE PLANTING (2.5'X5' TREE GRATE) SOUTH SIDE OF ROAD STA. 132+50 THRU STA. 137+50		DECIDUOUS SINGLE STEMMED TREE PLANTING (SMALL UNDERSTORY TREE)		3 L4.2
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  - SEE ELECTRICAL DRAWINGS FOR CONDUCTOR AND CONDUIT SIZING, CONTROL, CIRCUIT CONFIGURATION, ETC.
  - SEE L1.0 FOR LANDSCAPE RELATED NOTES.
  - SEE L4.0-L4.3 FOR LANDSCAPE DETAILS.
  - WITHIN THE LIMIT OF WORK INVASIVE PLANT SPECIES SHALL BE REMOVED FOLLOWING NHDES AND NHDOT BEST MANAGEMENT PRACTICES.
  - CONTACT DIGSAFE PRIOR TO BEGINNING WORK.

ISSUE FOR		APPROVAL	By
6/27/2022 — ISSUED FOR CONTRACTOR BIDDING		Date	
Drawn/Chk	KD/SW/JRH	CONSTRUCTION	By
Designed	JRH/KO	Date	
Checked	JRH	RECORD DWG	By
Approved		Date	
Date	6/27/22	NO	REVISIONS
Book No.	210700	AS SHOWN	
Project No.	210700		
Dwg.	ID21055bbs_sht.L2		
Scale			

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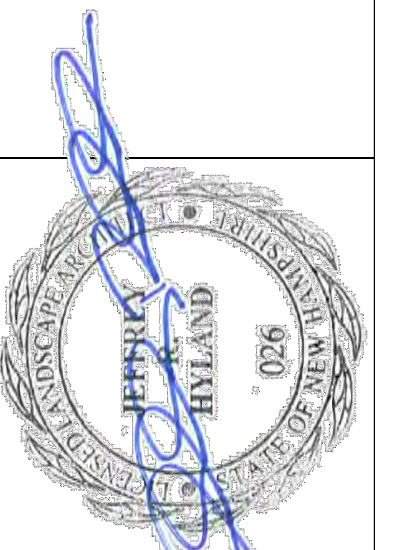
**LANDSCAPE PLAN**

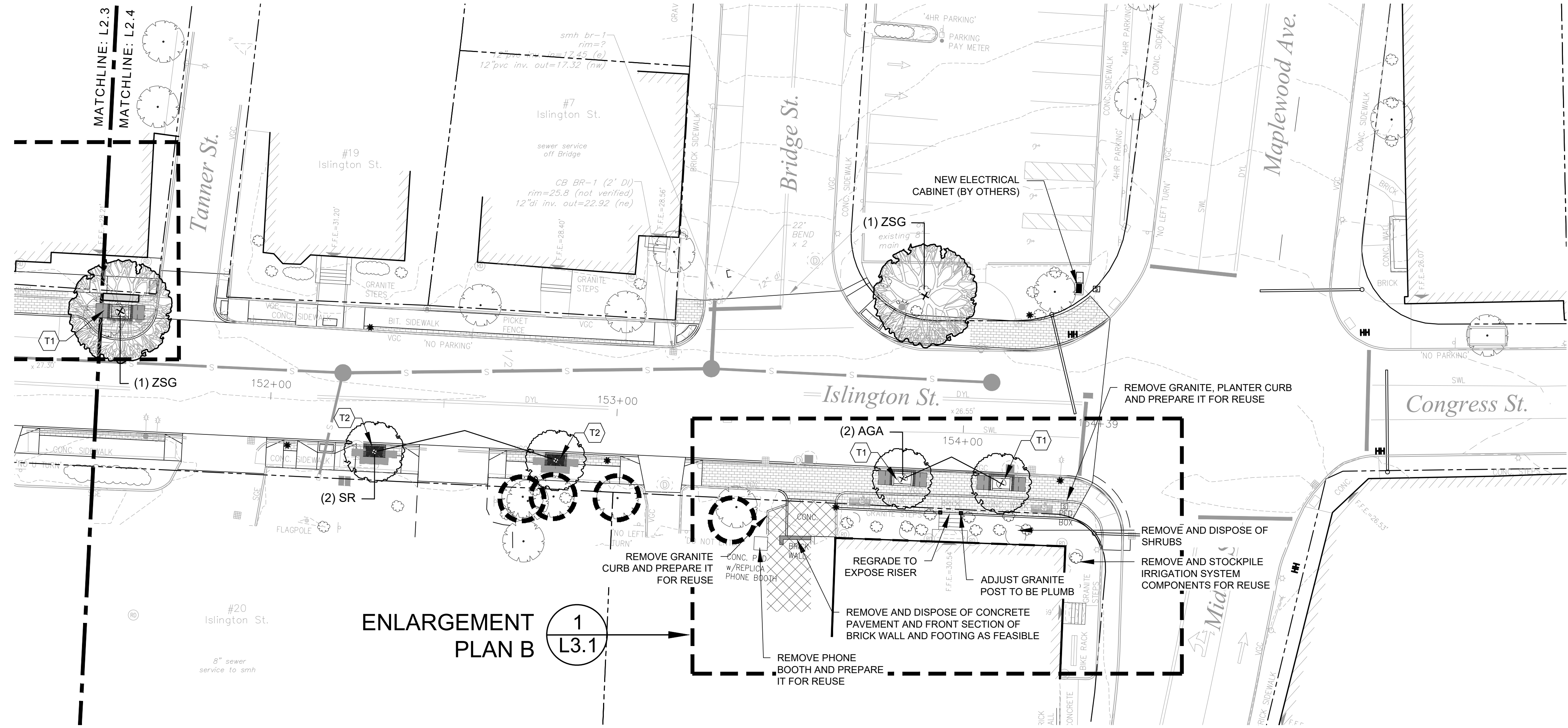
ISLINGTON STREET CORRIDOR IMPROVEMENTS  
PHASE 2

CITY OF PORTSMOUTH  
PORTSMOUTH, NEW HAMPSHIRE

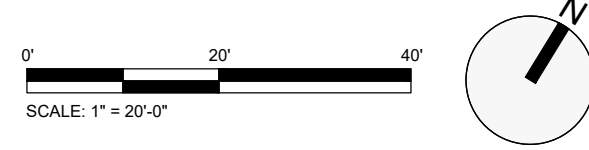
DWG NO  
L2.3

SHEET  
36 OF 56





STA. 151+50 TO STA. 154+49  
1"=20'-0"



ENLARGEMENT PLAN B  
1 L3.1

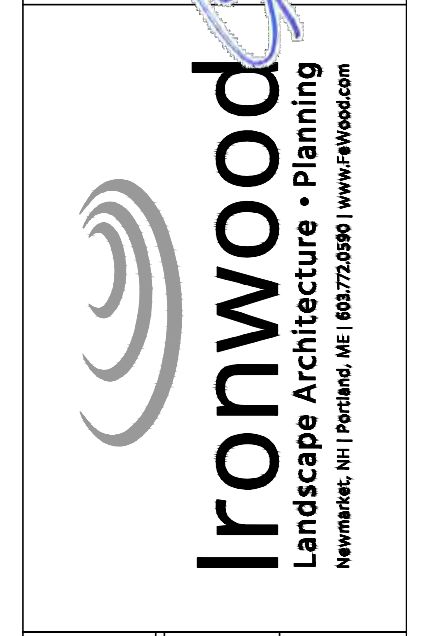
Legend

HARDSCAPE TO BE REMOVED		ARCHITECTURAL AREA LIGHT		6 L4.0
TREE PROTECTION (EXISTING TREES)		BOLLARD LIGHT		3 L4.0
T1-STREET TREE PLANTING (CURBED PLANTER)		ELECTRICAL CONDUIT TRENCH		4/2 L4.0
T2-STREET TREE PLANTING (3'X5' TREE GRATE)				
T3-STREET TREE PLANTING (2.5'X5' TREE GRATE) SOUTH SIDE OF ROAD STA. 132+50 THRU STA. 137+50		DECIDUOUS SINGLE STEMMED TREE PLANTING (LARGE SHADE TREE)		3 L4.2
T4-STREET TREE PLANTING (TREE BOX FILTER)-SEE CIVIL DRAWINGS FOR DETAILS		DECIDUOUS SINGLE STEMMED TREE PLANTING (SMALL UNDERSTORY TREE)		1 L4.2
CONCRETE PAVEMENT-SEE CIVIL DRAWINGS FOR DETAILS				

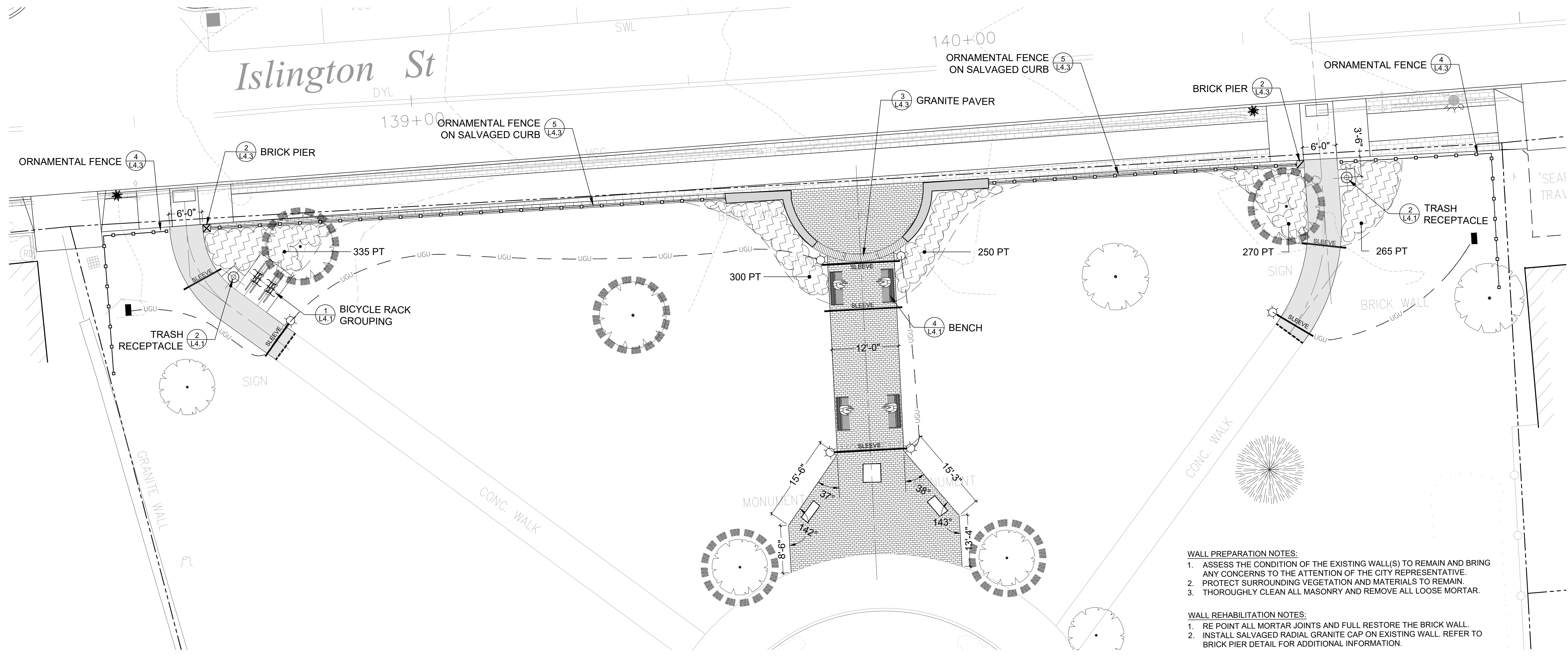
- GENERAL NOTES:
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6/27/2022	ISSUED FOR CONTRACTOR BIDDING
APPROVAL	DATE
CONSTRUCTION	DATE
RECORD DWG	DATE
APPD	REVISIONS

Drawn/Chk	JD/SW/JRH
Designed	JRH/KO
Checked	JRH
Approved	JRH
Date	6/27/22
Book No.	210700
Project No.	210700
Dwg. ID	210556b_Sht.L2
Scale	AS SHOWN



LANDSCAPE PLAN  
ISLINGTON STREET CORRIDOR IMPROVEMENTS  
PHASE 2  
CITY OF PORTSMOUTH  
PORTSMOUTH, NEW HAMPSHIRE



- WALL PREPARATION NOTES:**
- ASSESS THE CONDITION OF THE EXISTING WALL(S) TO REMAIN AND BRING ANY CONCERNS TO THE ATTENTION OF THE CITY REPRESENTATIVE.
  - PROTECT SURROUNDING VEGETATION AND MATERIALS TO REMAIN.
  - THOROUGHLY CLEAN ALL MASONRY AND REMOVE ALL LOOSE MORTAR.
- WALL REHABILITATION NOTES:**
- RE POINT ALL MORTAR JOINTS AND FULL RESTORE THE BRICK WALL.
  - INSTALL SALVAGED RADIAL GRANITE CAP ON EXISTING WALL. REFER TO BRICK PIER DETAIL FOR ADDITIONAL INFORMATION.

**1 | ENLARGEMENT PLAN A**  
1"=10'-0"



**Goodwin Park Plant Schedule**

GROUNDCOVERS / PERENNIALS				
PLANT	FLAT OF 100	PLANT	FLAT OF 100	
1420 PT PACHYSANDRA TERMINALIS	JAPANESE SPURGE	PLANT	FLAT OF 100	
1420				

**Legend**

EXISTING TREE PROTECTION		1 L4.0	ARCHITECTURAL AREA LIGHT		6 L4.0
T1-STREET TREE PLANTING (CURBED PLANTER)		5 L4.1	BOLLARD LIGHT		3 L4.0
CONCRETE PAVEMENT-SEE CIVIL DRAWINGS FOR DETAILS			ELECTRICAL CONDUIT TRENCH		4/5 L4.0
BRICK PAVEMENT-SEE CIVIL DRAWINGS FOR DETAILS			DECIDUOUS SINGLE STEMMED TREE PLANTING (LARGE SHADE TREE)		3 L4.2
GRANITE BLOCK SEATING		1 L4.0	DECIDUOUS SINGLE STEMMED TREE PLANTING (SMALL UNDERSTORY TREE)		3 L4.2
REFURBISHED BRICK WALL (SEE NOTES)			SHRUB PLANTING		1 L3.1
6' BENCH		4 L4.1	PERENNIAL AND GROUNDCOVER PLANTING		2 L3.1
TRASH RECEPTACLE		2 L4.1	LOAM AND LAWN SEEDING (ALL DISTURBED AREAS)		3 L3.1
BICYCLE RACK GROUPING		1 L4.1			

- GENERAL NOTES:**
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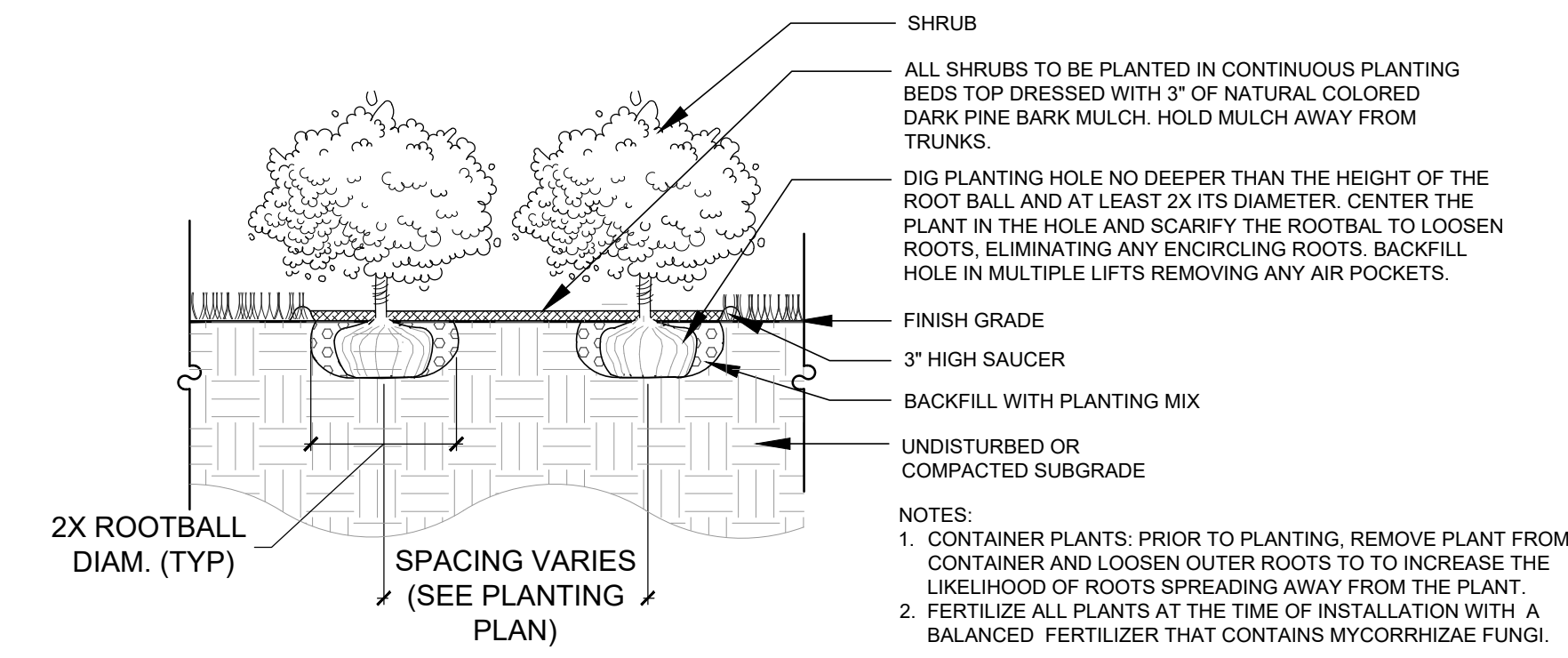
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6/27/2022 - ISSUED FOR CONTRACTOR BIDDING									
Drawn/Chk	JR/KO	Checked	JRH	Approved	JRH	Date	6/27/22	Scale	AS SHOWN
Book No.	210700	Project No.	210700	Dwg. ID	Z05Bbb_Sht.2	Scale	AS SHOWN	NO REVISIONS	APPD

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ISLINGTON STREET CORRIDOR IMPROVEMENTS  
PHASE 2  
CITY OF PORTSMOUTH  
PORTSMOUTH, NEW HAMPSHIRE

DWG NO  
L3.0  
SHEET  
38 OF 56

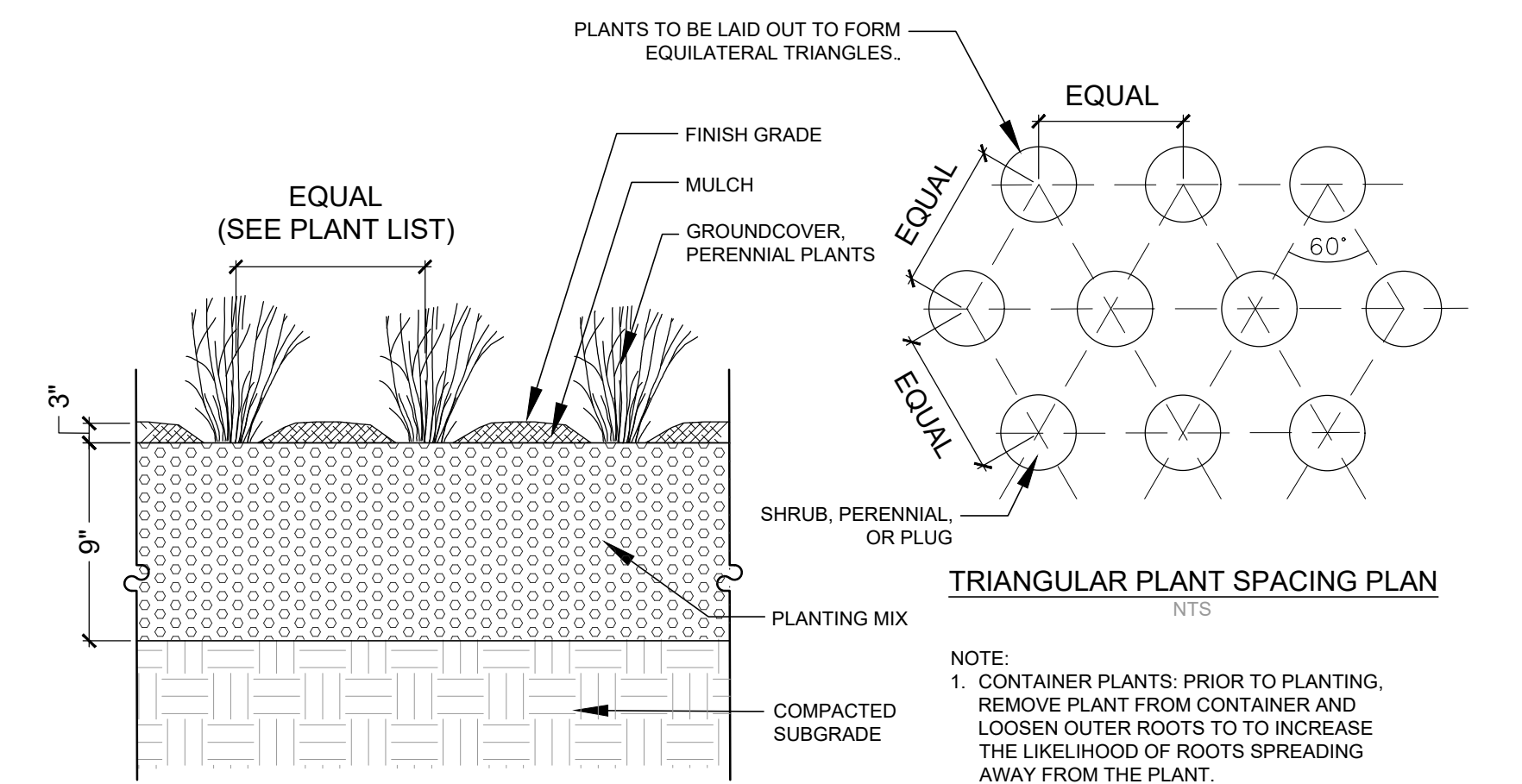
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### Shrub Planting

Not to Scale

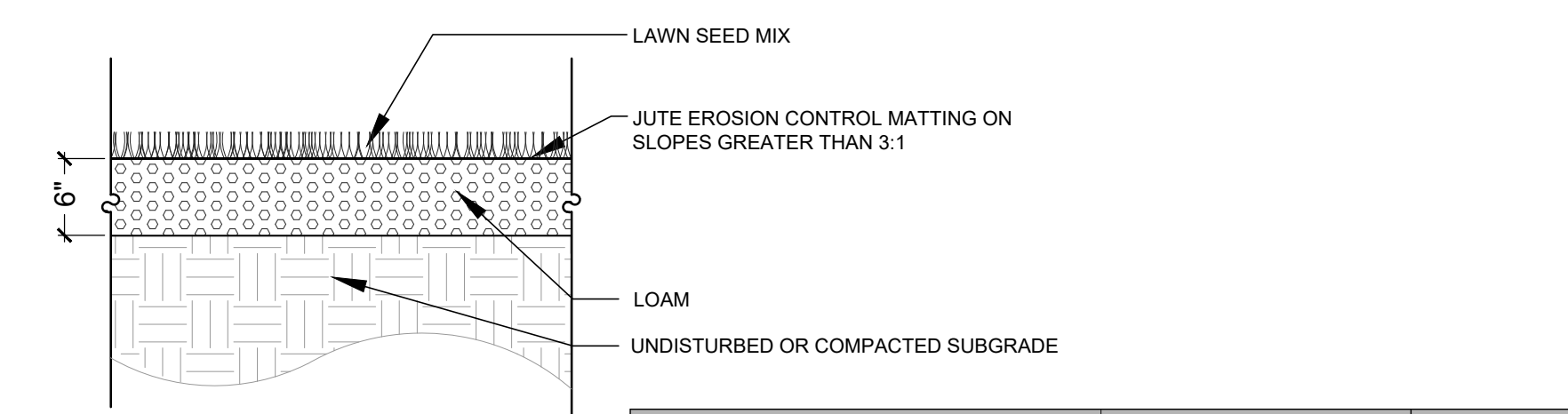
©IRONWOOD 2022 **1**  
L3.1



### Perennial and Groundcover Planting

Not to Scale

©IRONWOOD 2022 **2**  
L3.1



NOTES:  
1. REFER TO NOTES AND SPECIFICATIONS FOR LOAM AND SEEDING REQUIREMENTS AND MAINTENANCE.  
2. AREAS TO BE SEEDED SHALL HAVE A UNIFORM DEPTH OF 1" AFTER COMPACTION (SEE LANDSCAPE PLANS AND CIVIL DETAILS FOR ADDITIONAL INFORMATION).  
3. DEPRESSIONS OR UNDESIRED UNDULATIONS SHALL BE ELIMINATED PRIOR TO SEEDING.  
4. SEED BED SHALL BE PROPERLY PREPARED TO PROMOTE MAXIMUM GERMINATION.

Common Name	Scientific Name	Percent by weight
Celmfine, Rebel II or Tribute Tall Fescue		40%
Palmer II Perennial Ryegrass		15%
Jamestown Chewings Fescue		10%
Reliant Hard Fescue		10%
Bridsfoot Trefoil	<i>Arvensis</i> variety	10%
Switchgrass		5%
White Clover		5%
Redtop	<i>Streaker</i> variety	5%

Apply at a rate of 265 lbs/acre

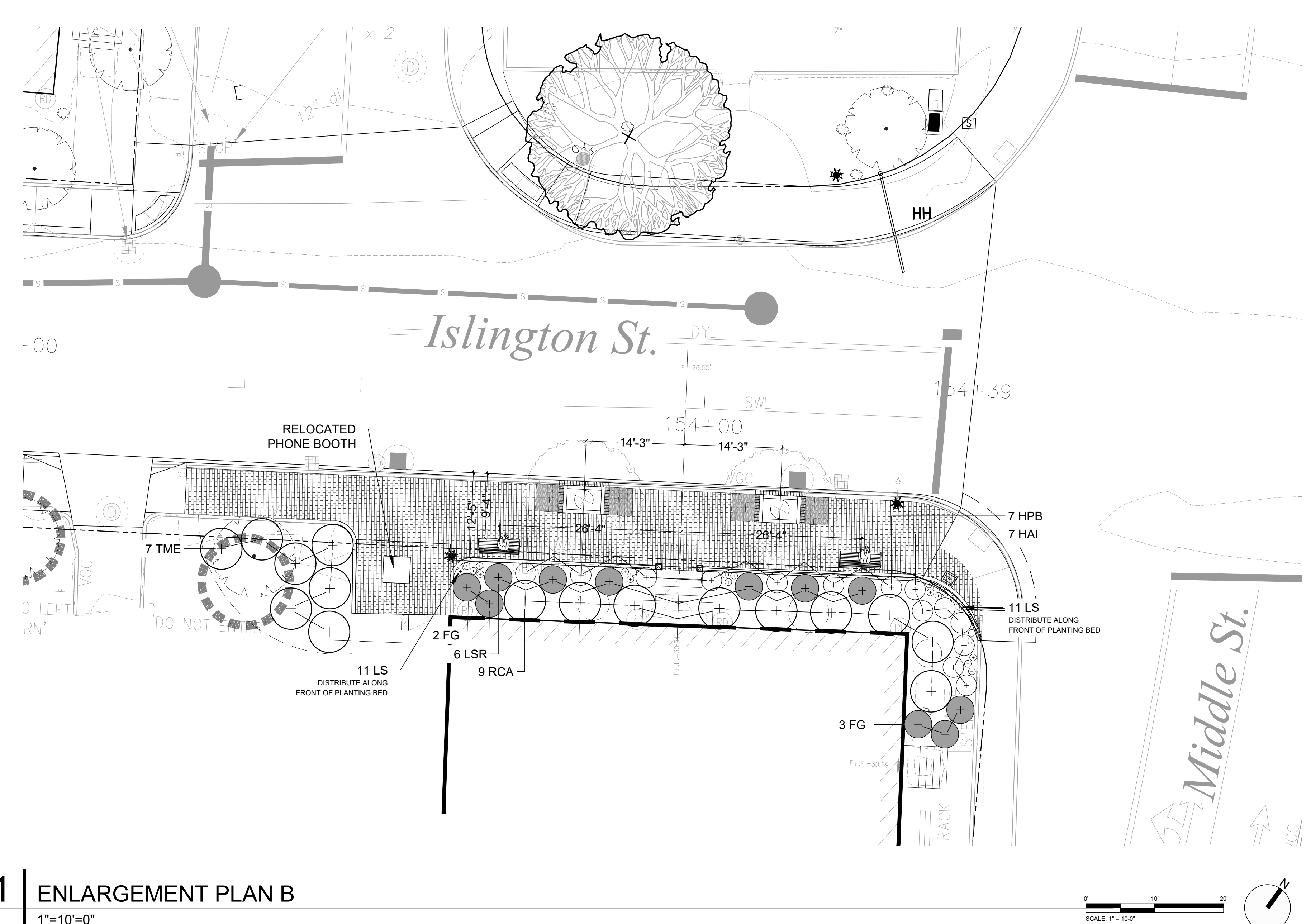
### Loam and Lawn Seeding

Not to Scale

©IRONWOOD 2022 **3**  
L3.1

### #8 Islington St. Plant Schedule

SHRUBS						
QTY.	ABRV.	SCIENTIFIC NAME	COMMON NAME	INSTALLED SIZE	MATURE SIZE	REMARKS
7	AAG	AZALEA 'ARNESON GEM'	ARNESON GEM AZALEA	#2	2' HT x 3' SPD	CONTAINER
5	FG	FOTHERGILLA GARDENII	DWARF FOTHERGILLA	#5	4' HT x 4' SPD	CONTAINER
7	HAI	HYDRANGEA A. 'INVINCIBELLE WEE WHITE'	WEE WHITE HYDRANGEA	#5	2' HT x 3' SPD	CONTAINER
7	HPB	HYDRANGEA PANICULATA 'BOBO'	BOBO PANICLE HYDRANGEA	#5	2' HT x 3' SPD	CONTAINER
6	LSR	LEUCOTHOE FONTANESIANA 'SILVER RUN'	SILVER RUN LEUCOTHOE	#3	2' HT x 4' SPD	CONTAINER
9	RCA	RHODODENDRON CATAWBIENSE 'ALBUM'	WHITE CATAWBA RHODODENDRON	2 1/2' - 3' HT	5' HT x 5' SPD	B&B
7	TME	TAXUS MEDIA 'EVER LOW'	EVER LOW YEW	18"-24" HT	1' HT x 5' SPD	B&B
48						
GROUNDCOVERS / PERENNIALS						
22	LS	LIRIOPE SPICATA	CREAPING LILY TURF	#1	18" HT	CONTAINER
22						



## 1 ENLARGEMENT PLAN B

1"=10'-0"



### Legend

EXISTING TREE PROTECTION		1 (L2.0)
T1-STREET TREE PLANTING (CURBED PLANTER)		5 (L4.1)
CONCRETE PAVEMENT-SEE CIVIL DRAWINGS FOR DETAILS		
BRICK PAVEMENT-SEE CIVIL DRAWINGS FOR DETAILS		
GRANITE BLOCK SEATING		1 (L4.0)
REFURBISHED BRICK WALL (SEE NOTES)		
6" BENCH		4 (L4.1)
TRASH RECEPTACLE		2 (L3.1)
BICYCLE RACK GROUPING		1 (L4.1)
ARCHITECTURAL AREA LIGHT		6 (L4.0)
BOLLARD LIGHT		3 (L4.0)
ELECTRICAL CONDUIT TRENCH		4/5 (L4.0)
DECIDUOUS SINGLE STEMMED TREE PLANTING (LARGE SHADE TREE)		3 (L4.2)
DECIDUOUS SINGLE STEMMED TREE PLANTING (SMALL UNDERSTORY TREE)		3 (L4.2)
SHRUB PLANTING		1 (L3.1)
PERENNIAL AND GROUNDCOVER PLANTING		2 (L3.1)
LOAM AND LAWN SEEDING (ALL DISTURBED AREAS)		3 (L3.1)

- GENERAL NOTES:  
1. CONSTRUCTION ACTIVITIES SHALL NOT UNNECESSARILY IMPACT FUNCTIONALITY WITHIN THE CORRIDOR.  
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3. SEE ELECTRICAL DRAWINGS FOR CONDUCTOR AND CONDUIT SIZING, CONTROL, CIRCUIT CONFIGURATION, ETC.  
4. SEE L4.0-L4.3 FOR LANDSCAPE RELATED NOTES.  
5. SEE L4.0-L4.3 FOR LANDSCAPE DETAILS.  
6. WITHIN THE LIMIT OF WORK INVASIVE PLANT SPECIES SHALL BE REMOVED FOLLOWING NHDES AND NHDOT BEST MANAGEMENT PRACTICES.  
7. CONTACT DIGSAFE PRIOR TO BEGINNING WORK.

ISSUE FOR APPROVAL Date By  
CONSTRUCTION Date By  
RECORD DWG Date By  
APPD

6/27/2022 - ISSUED FOR CONTRACTOR BIDDING

Drawn/Chk. KO,SW,IRH  
Designed IRH,KO  
Checked IRH  
Approved IRH  
Date 6/27/22  
Book No. 21070.0  
Project No. ID2105Bbs\_Sht.2  
Dwg. AS SHOWN  
Scale AS SHOWN  
NO REVISIONS

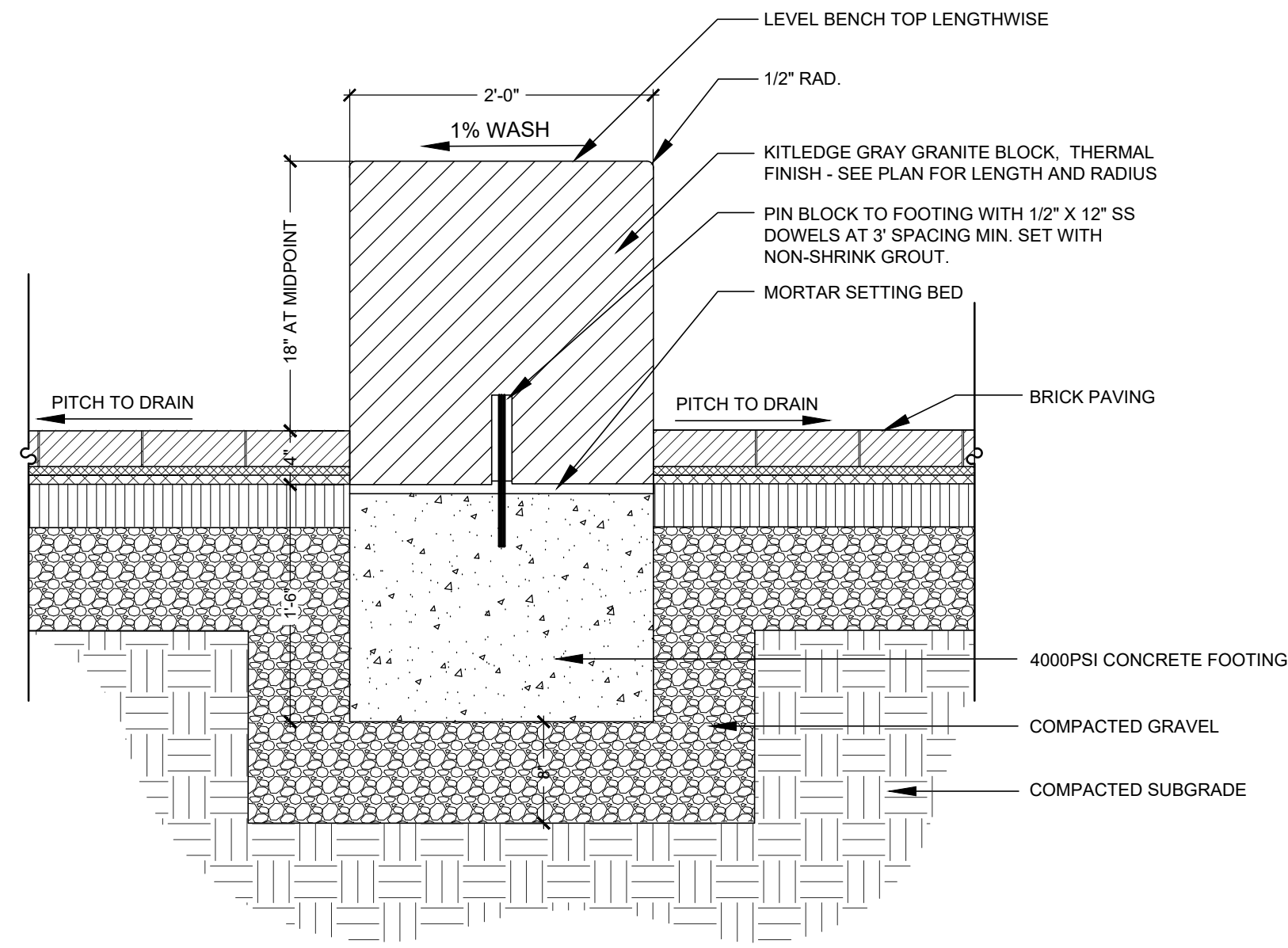
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LANDSCAPE PLAN  
ISLINGTON STREET CORRIDOR IMPROVEMENTS  
PHASE 2  
CITY OF PORTSMOUTH  
PORTSMOUTH, NEW HAMPSHIRE

DWG NO L3.1 SHEET 39 OF 56



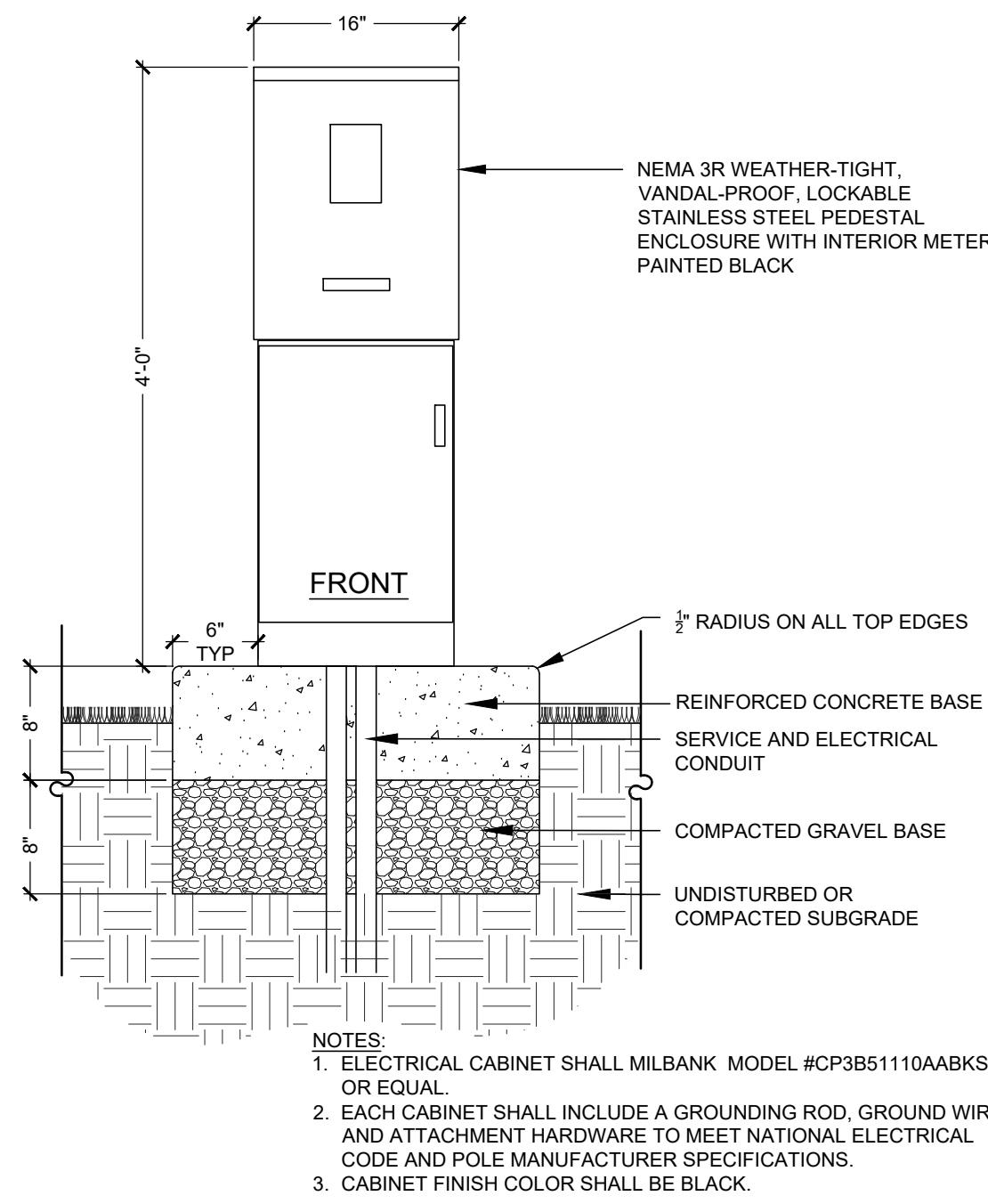


### Granite Block Seating

Not to Scale

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1  
L4.0

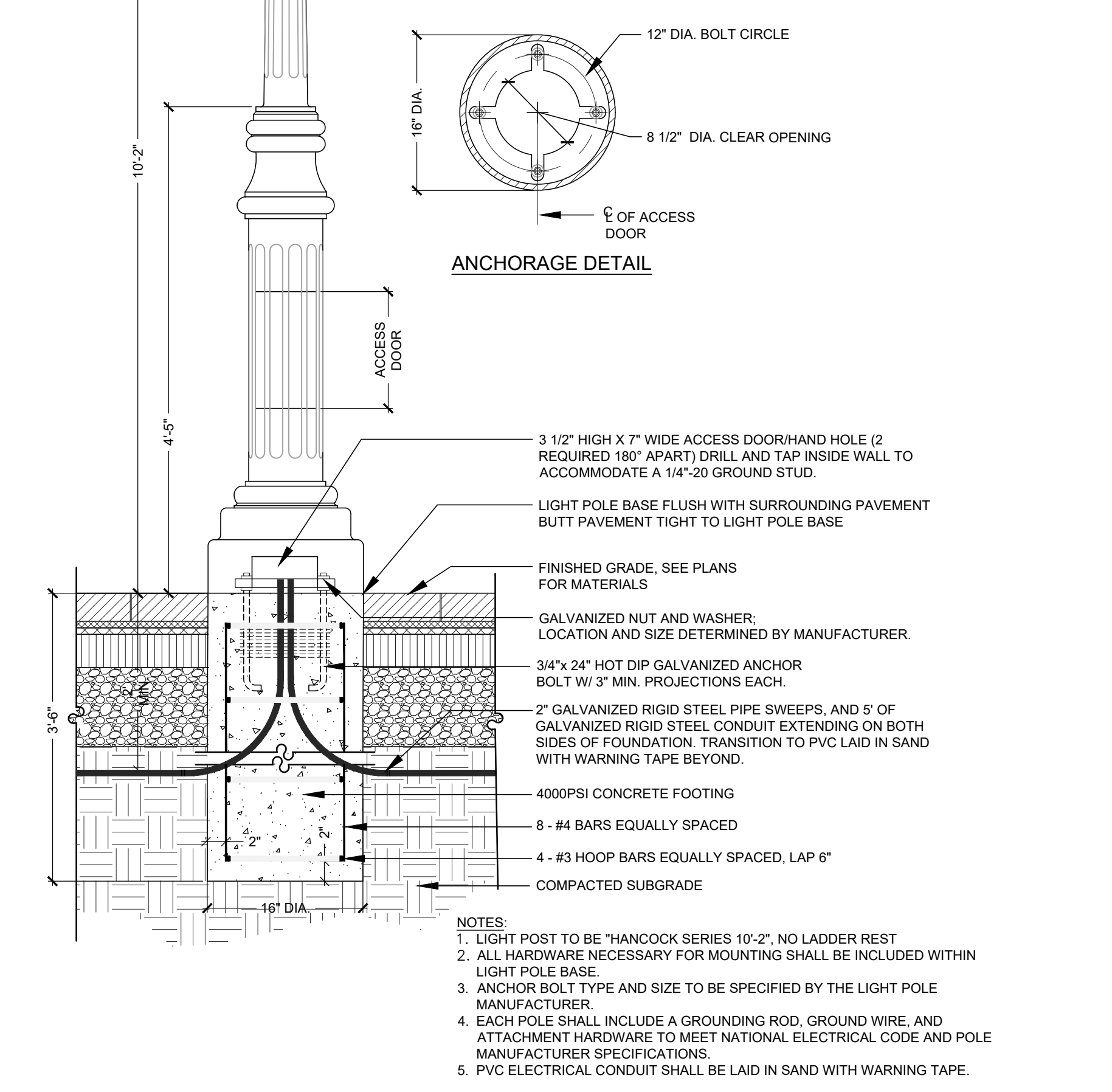
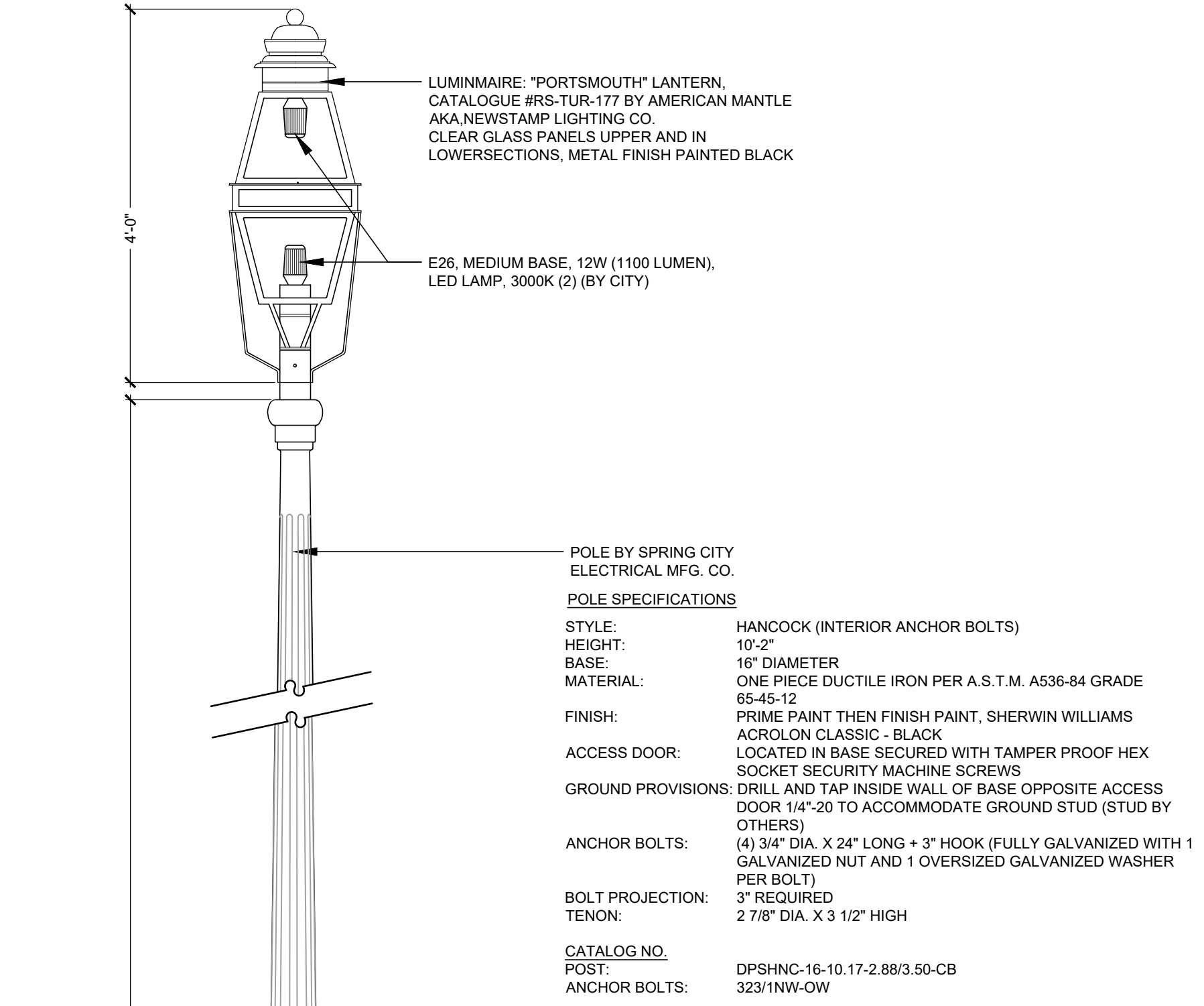


### Electrical Cabinet

Not to Scale

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2  
L4.0

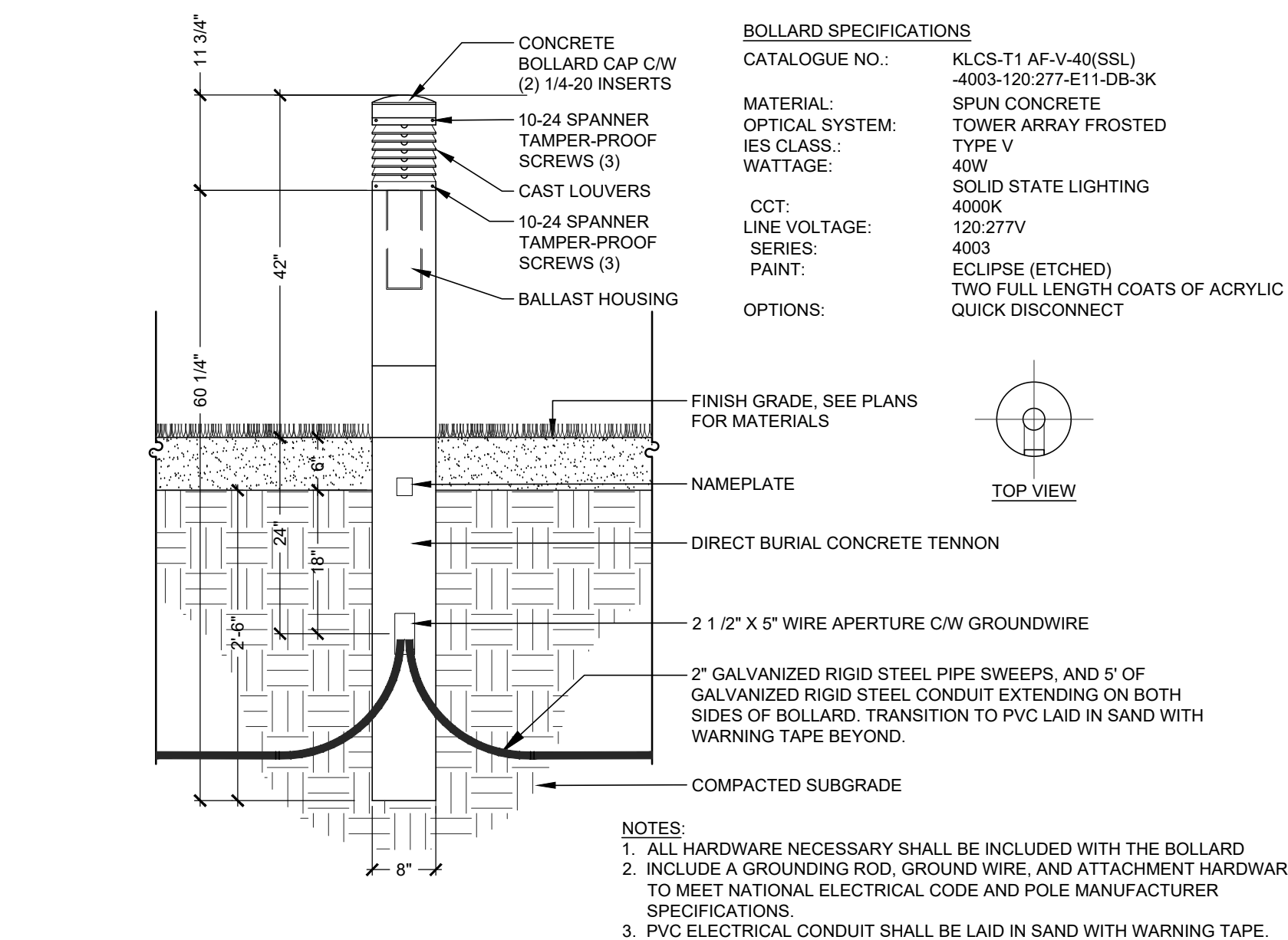


### Road Crossing Electrical Conduit Trench

Not to Scale

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4  
L4.0

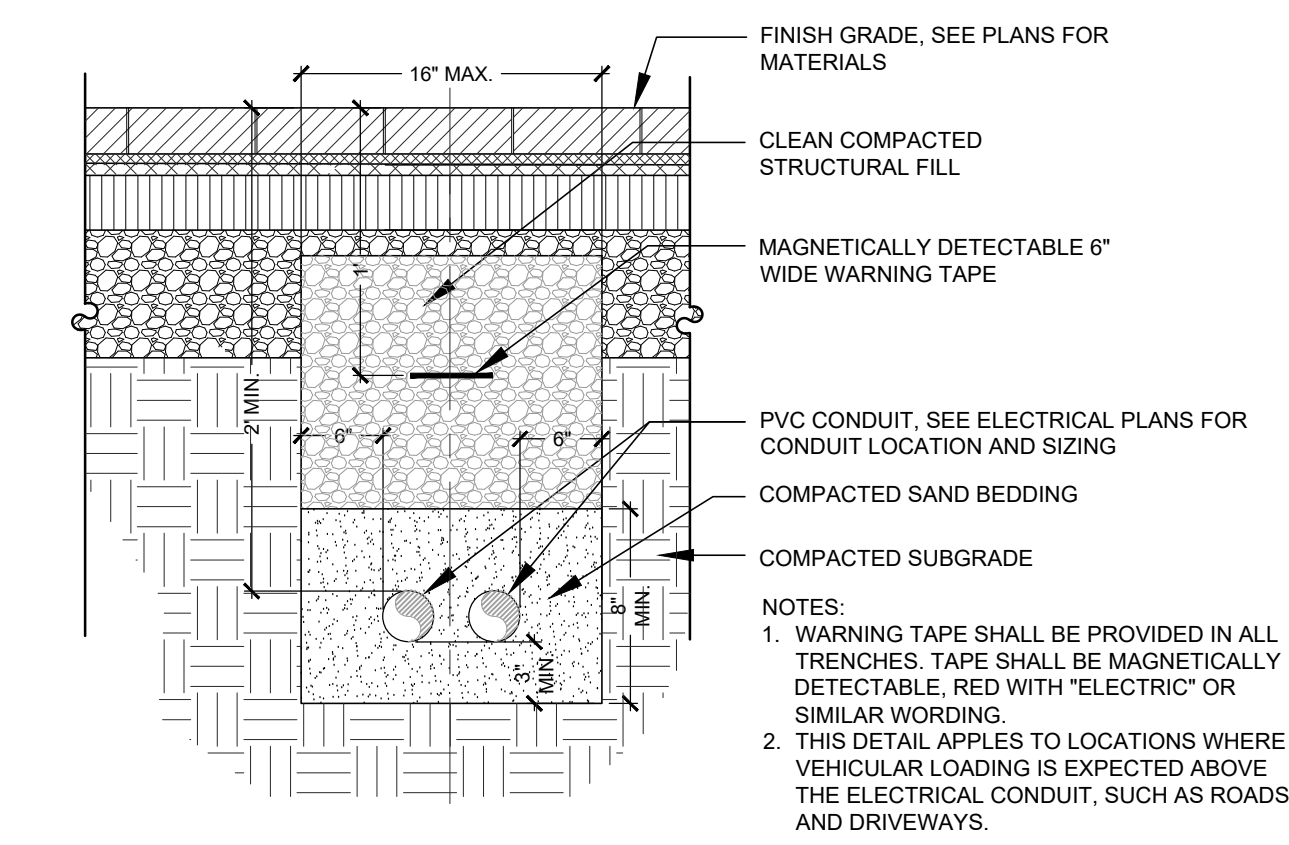


### Concrete Bollard

Not to Scale

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3  
L4.0



### Standard Electrical Conduit Trench

Not to Scale

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5  
L4.0

### Architectural Area Light

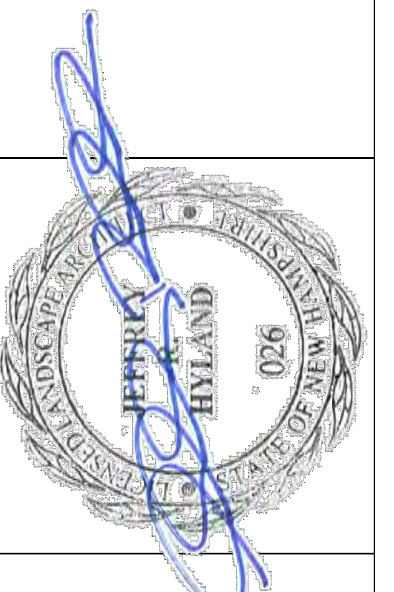
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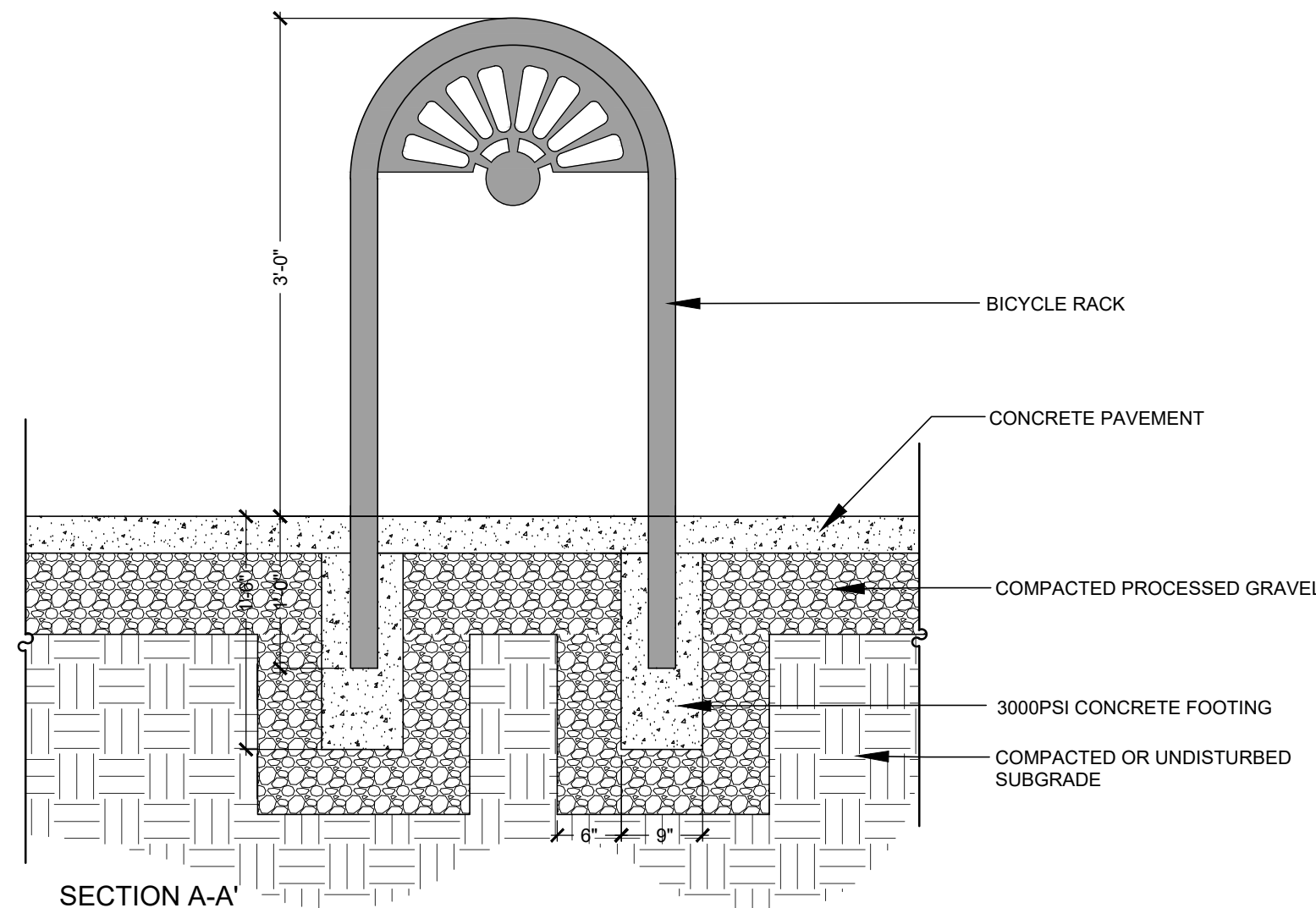
6  
L4.0

ISSUE FOR		DATE	BY
APPROVAL	Designed		JRH/KO
APPROVAL	Checked		JRH
CONSTRUCTION	Approved	6/27/22	
RECORD	Book No.	31070	
	Project No.	21070	
	Dwg. ID	21070-01	
	Scale	AS SHOWN	
REVISIONS	NO	NO	APPD

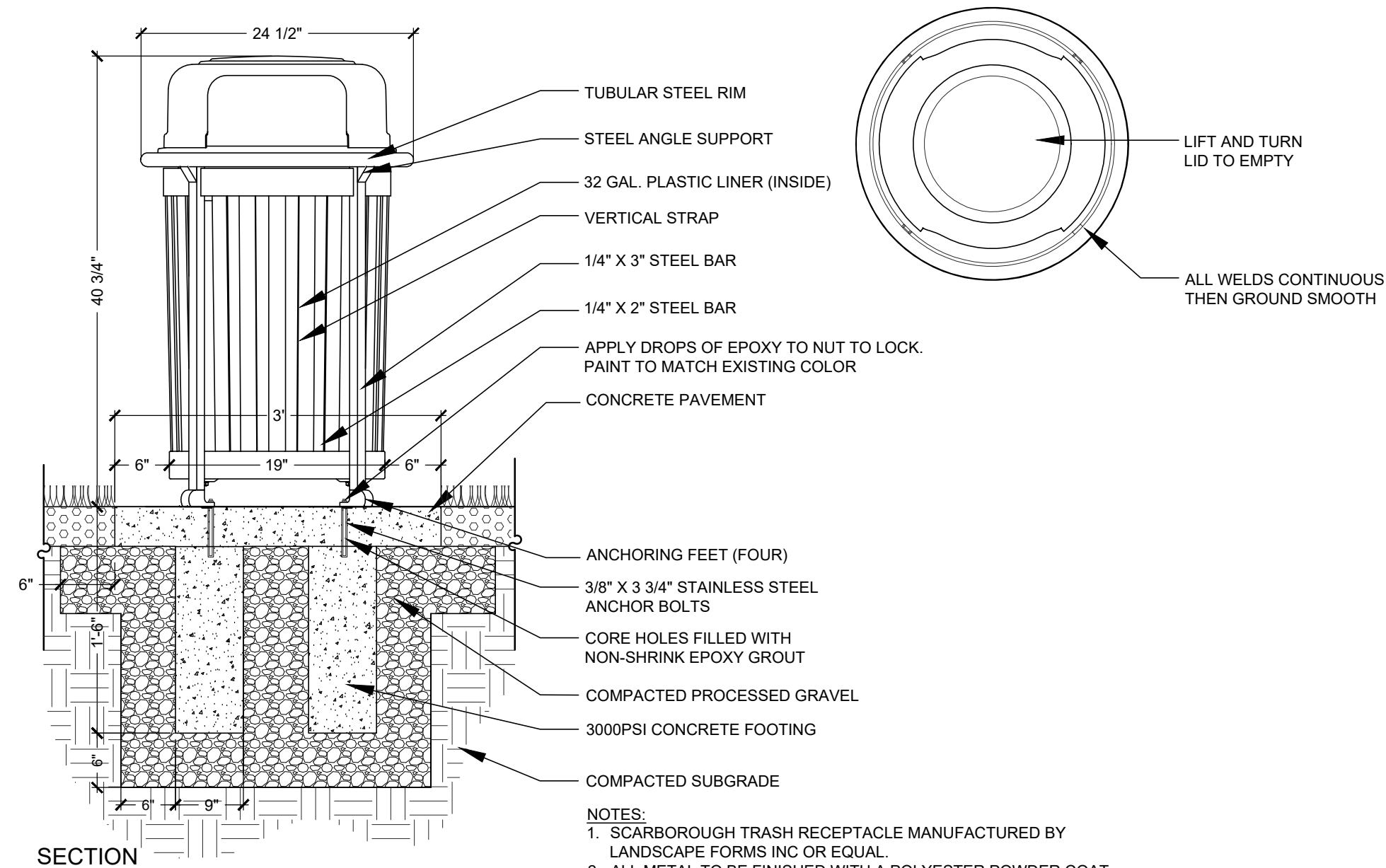
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Designed	JRH/KO
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Approved	6/27/22
Book No.	31070
Project No.	21070
Dwg. ID	21070-01
Scale	AS SHOWN



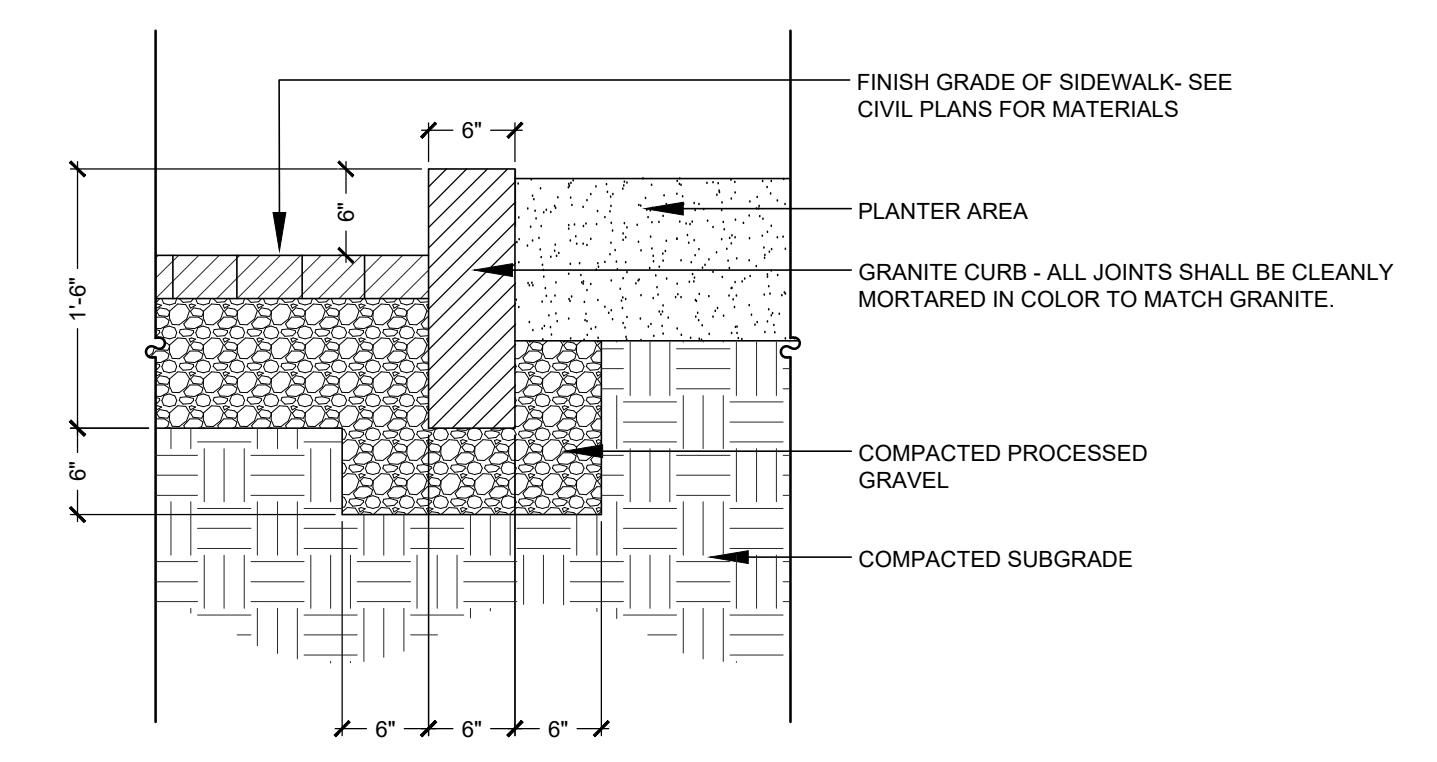
LANDSCAPE DETAILS  
 ISLINGTON STREET CORRIDOR IMPROVEMENTS  
 PHASE 2  
 CITY OF PORTSMOUTH  
 PORTSMOUTH, NEW HAMPSHIRE



**NOTES:**  
 1. CYCLE-SAFE VINTAGE BICYCLE RACKS, STYLE "THE PLYMOUTH" OR EQUAL.  
 2. ALL METAL TO BE FINISHED WITH A POLYESTER POWDER COAT-BLACK.

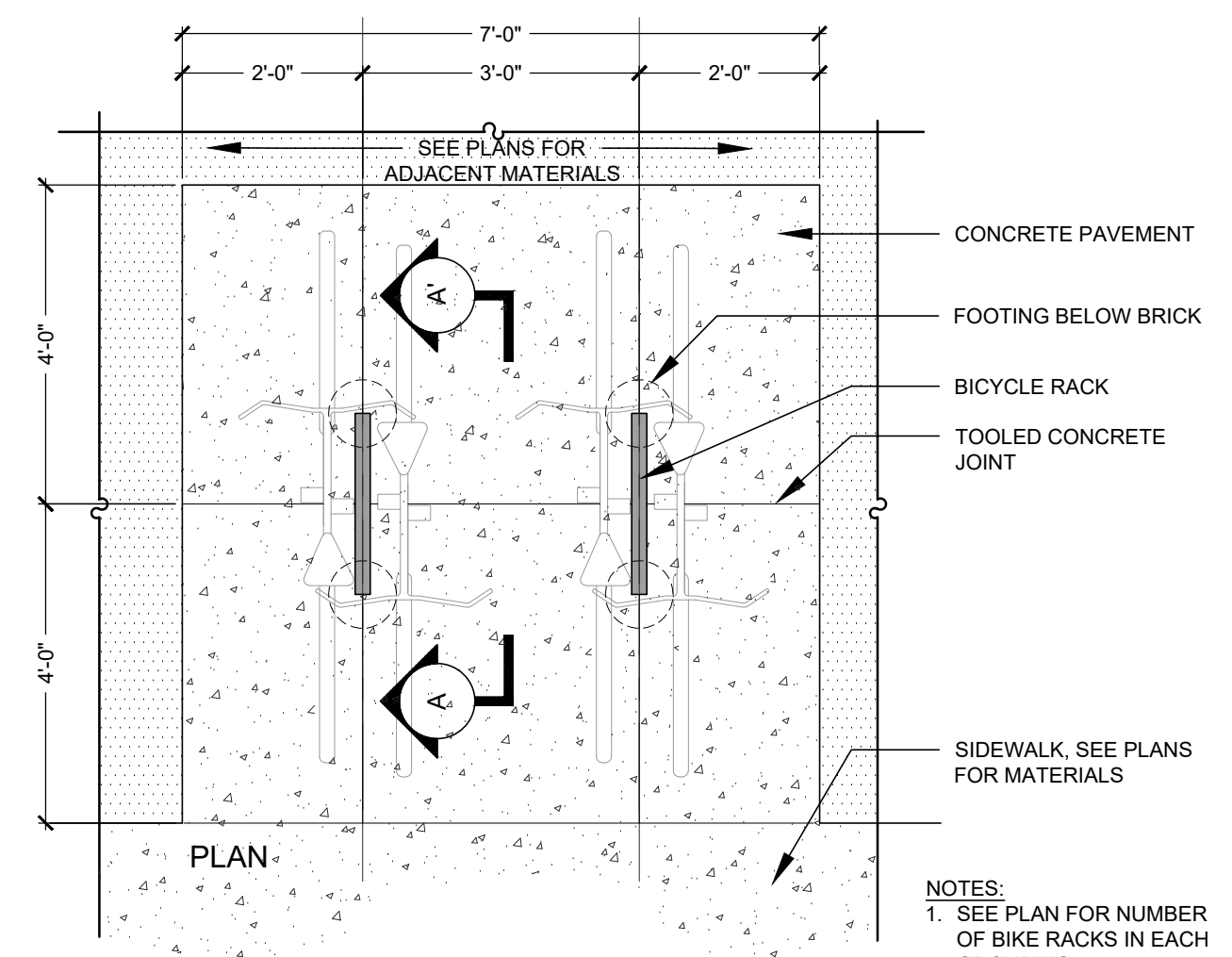


**NOTES:**  
 1. SCARBOROUGH TRASH RECEPTACLE MANUFACTURED BY LANDSCAPE FORMS INC OR EQUAL.  
 2. ALL METAL TO BE FINISHED WITH A POLYESTER POWDER COAT-BLACK.  
 3. ALL WELDS CONTINUOUS THEN GROUND SMOOTH.



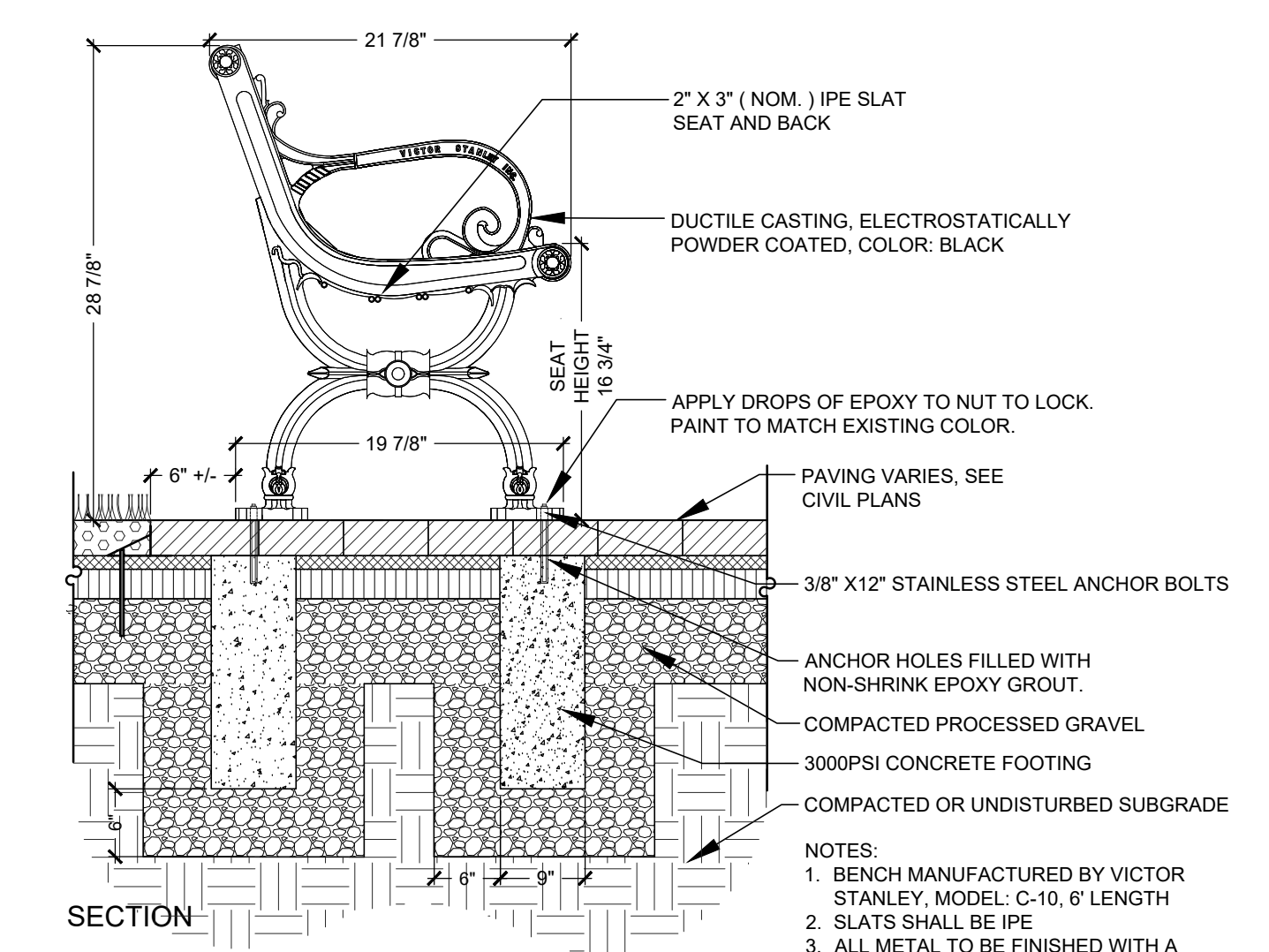
**Trash Receptacle**  
 Not to Scale

**Granite Planter Curb**  
 Not to Scale



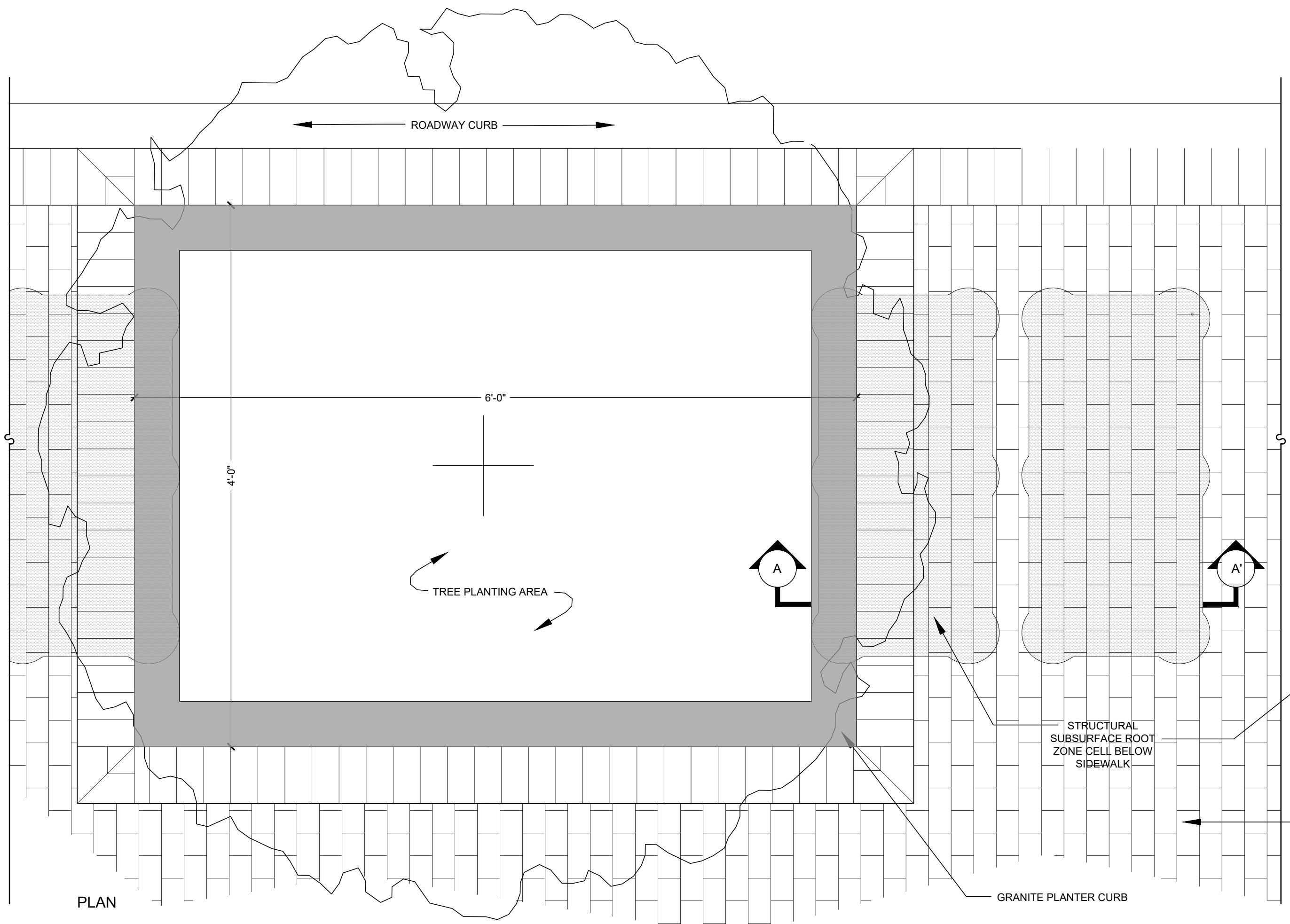
**NOTES:**  
 1. SEE PLAN FOR NUMBER OF BIKE RACKS IN EACH GROUPING.

**Bicycle Rack Grouping**  
 Not to Scale

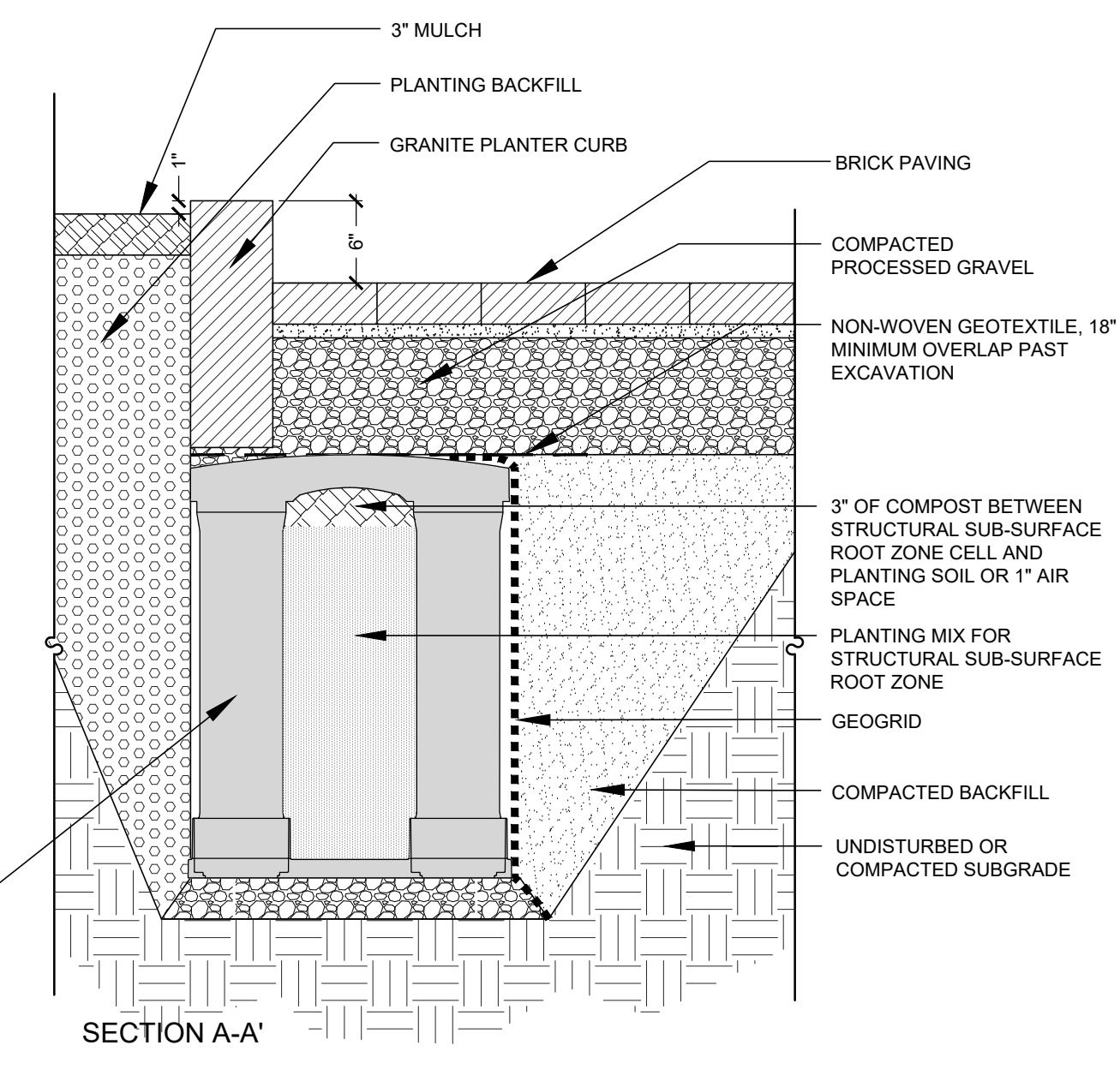


**NOTES:**  
 1. BENCH MANUFACTURED BY VICTOR STANLEY, MODEL: C-10, 6' LENGTH  
 2. SLATS SHALL BE IPE  
 3. ALL METAL TO BE FINISHED WITH A POLYESTER POWDER COAT-BLACK.  
 4. ALL WELDS CONTINUOUS THEN GROUND SMOOTH.

**Bench**  
 Not to Scale



**Street Tree Planting T1**  
 Not to Scale

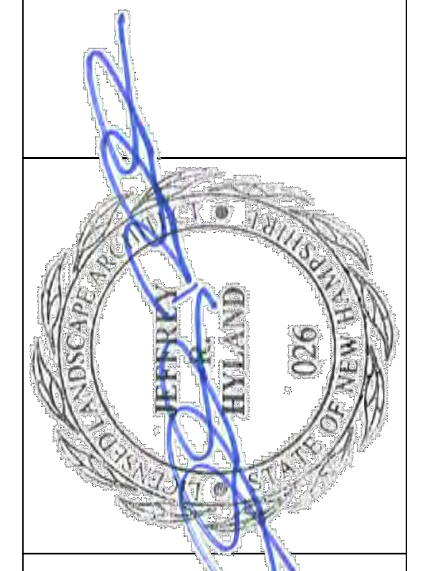


**NOTES:**  
 1. STANDARD BRICK PAVING PATTERN

**4**  
 L4.2

ISSUE FOR		APPROVAL		CONSTRUCTION		RECORD DWG	
Date	By	Date	By	Date	By	Date	By
6/27/2022	ISSUED FOR CONTRACTOR BIDDING						
	DESIGNED						
	CHECKED						
	APPROVED						
	BOOK NO.						
	PROJECT NO.						
	DWG. ID						
	SCALE						
	AS SHOWN						
	NO						
	REVISIONS						
	APPD						

**3**  
 L4.1



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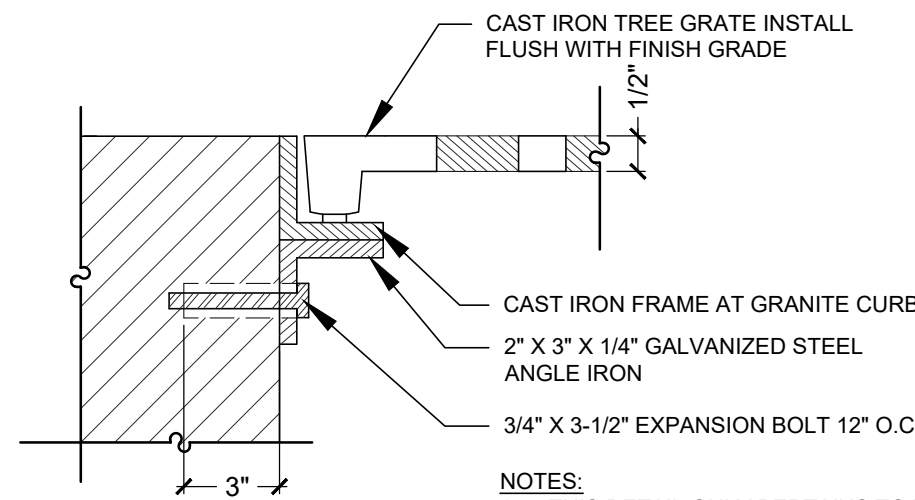
**LANDSCAPE DETAILS**  
 ISLINGTON STREET CORRIDOR IMPROVEMENTS  
 PHASE 2  
 CITY OF PORTSMOUTH  
 PORTSMOUTH, NEW HAMPSHIRE

**1**  
 L4.1

**4**  
 L4.1

**5**  
 L4.1

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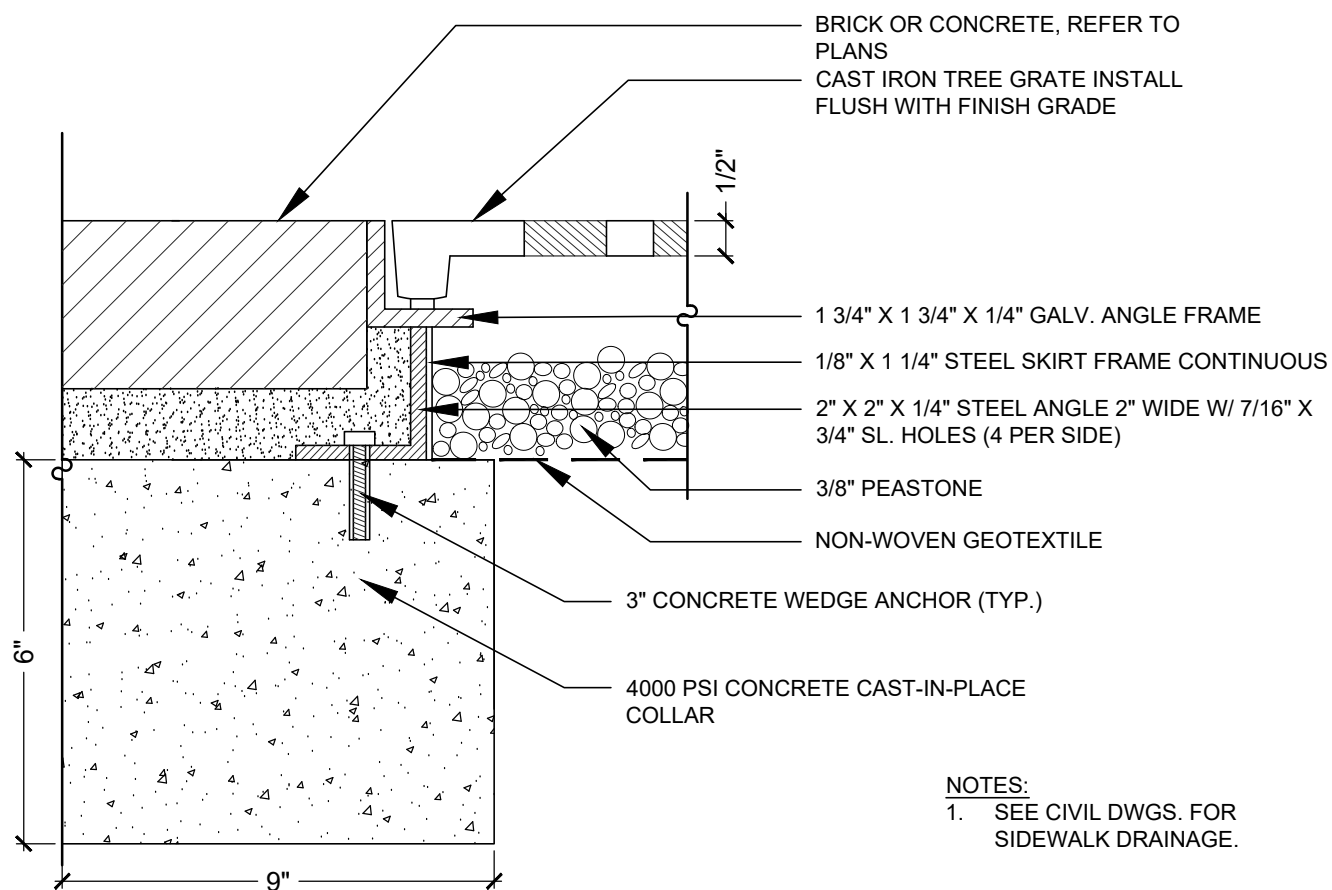
**NOTES:**  
 1. THIS DETAIL ONLY PERTAINS TO THE T3 STREET TREE PLANTING WITH NO HEADER COURSE ALONG THE ROADWAY CURB.  
 2. SEE CIVIL DRAWINGS FOR SIDEWALK CONFIGURATION.

### Tree Grate - Granite Curb Connection

1  
L4.2

Not to Scale

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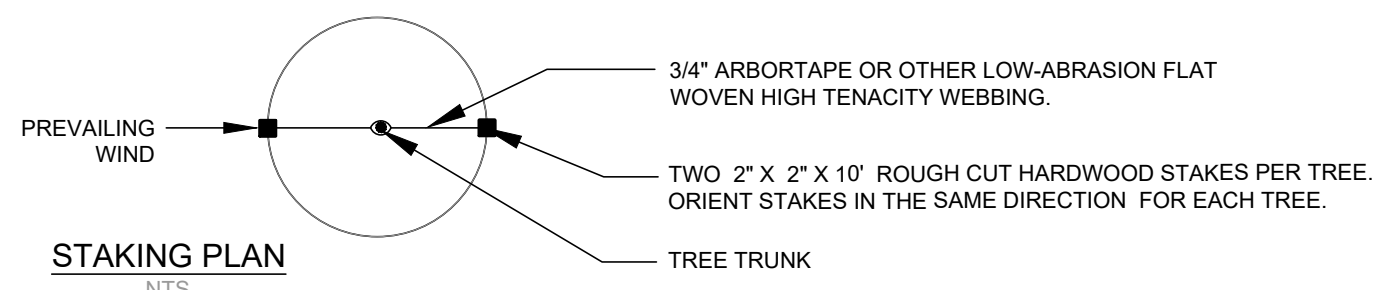
**NOTES:**  
 1. SEE CIVIL DWGS. FOR SIDEWALK DRAINAGE.

### Tree Grate Set on Concrete Grade Beam

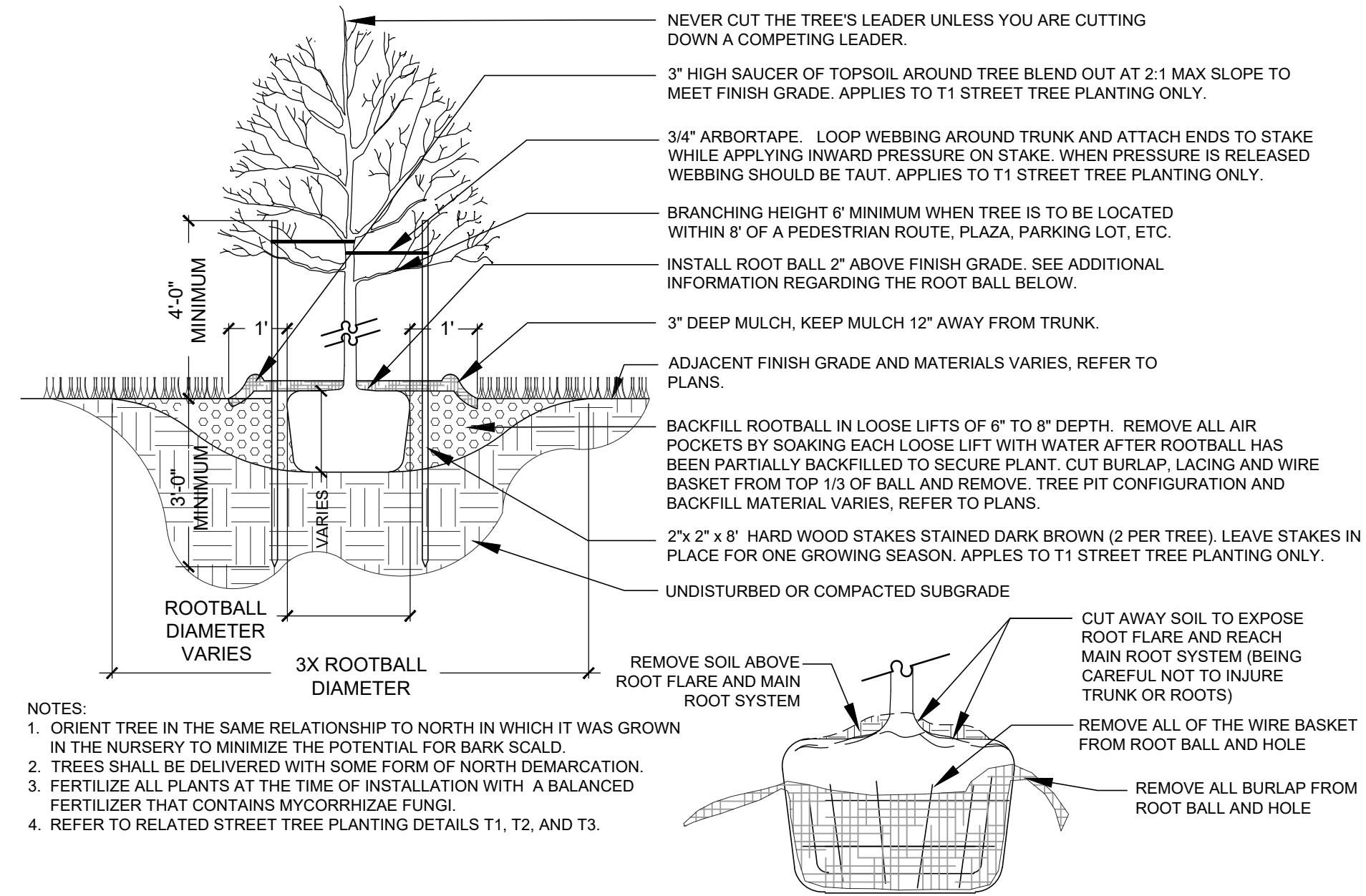
2  
L4.2

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STAKING PLAN  
NTS



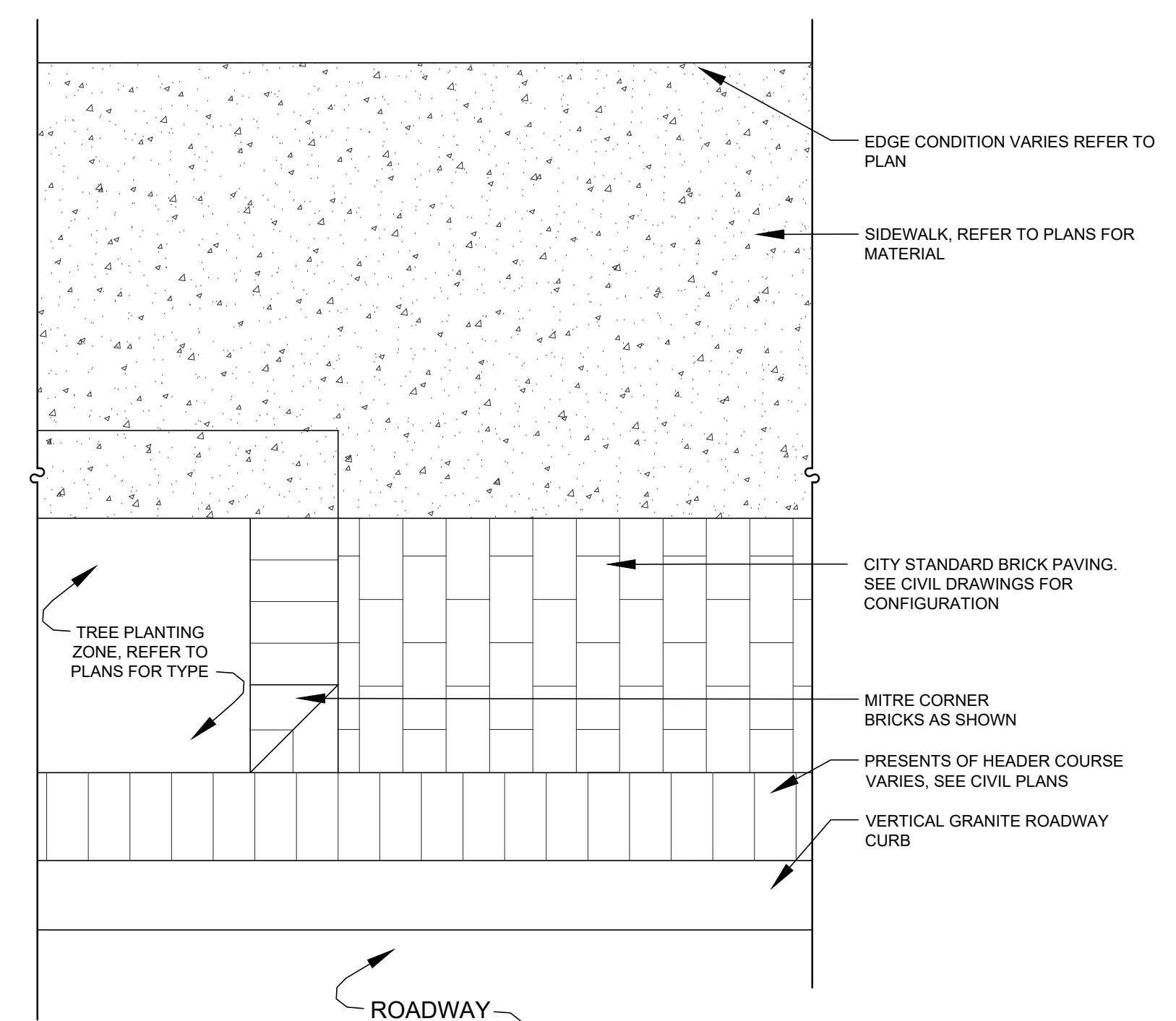
**NOTES:**  
 1. ORIENT TREE IN THE SAME RELATIONSHIP TO NORTH IN WHICH IT WAS GROWN IN THE NURSERY TO MINIMIZE THE POTENTIAL FOR BARK SCALD.  
 2. TREES SHALL BE DELIVERED WITH SOME FORM OF NORTH DEMARCATION.  
 3. FERTILIZE ALL PLANTS AT THE TIME OF INSTALLATION WITH A BALANCED FERTILIZER THAT CONTAINS MYCORRHIZAE FUNGI.  
 4. REFER TO RELATED STREET TREE PLANTING DETAILS T1, T2, AND T3.

### Deciduous Single-Stemmed Tree Planting

3  
L4.2

Not to Scale

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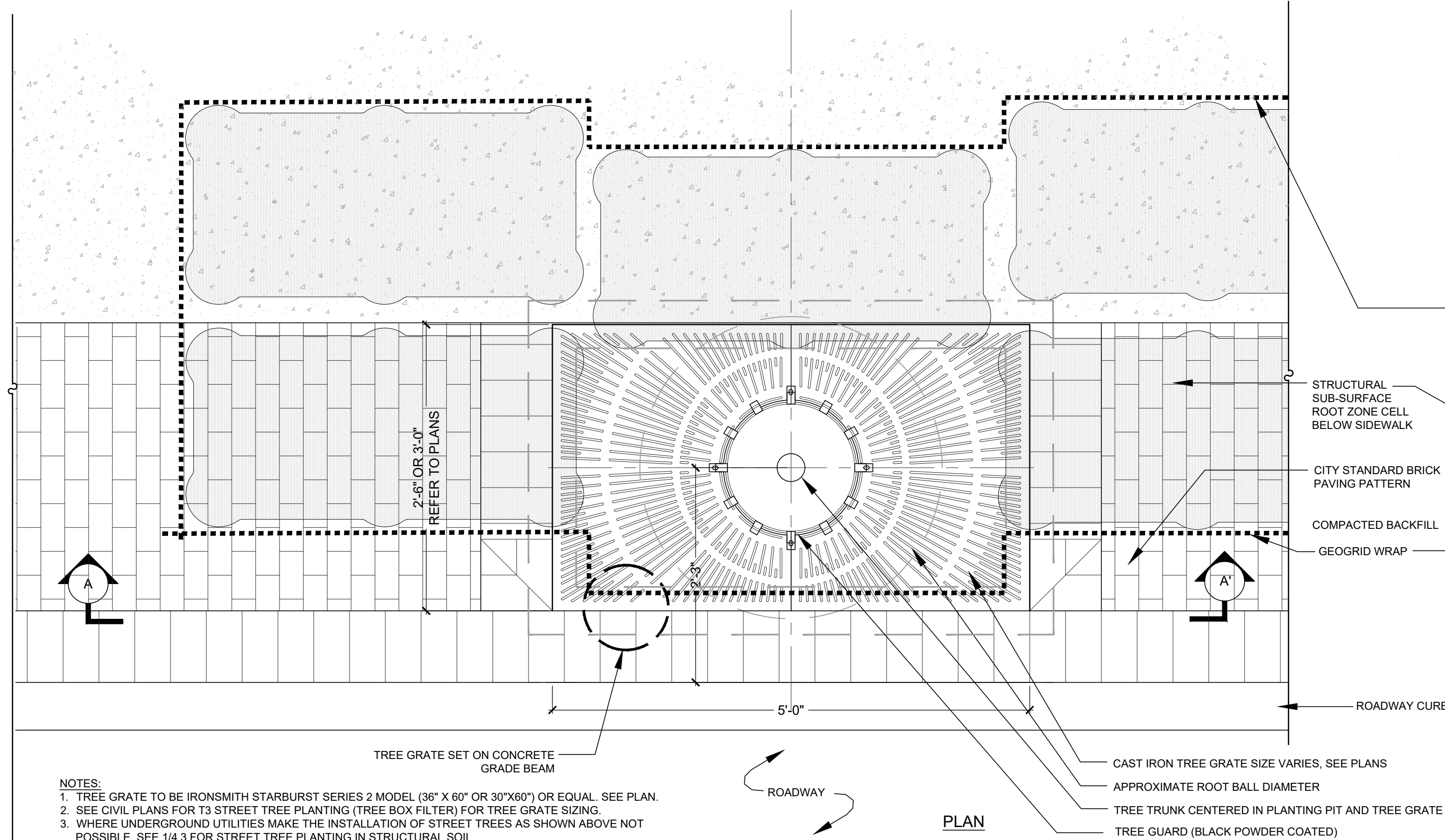


### Typical Brick Paving Pattern

Not to Scale

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4  
L4.2

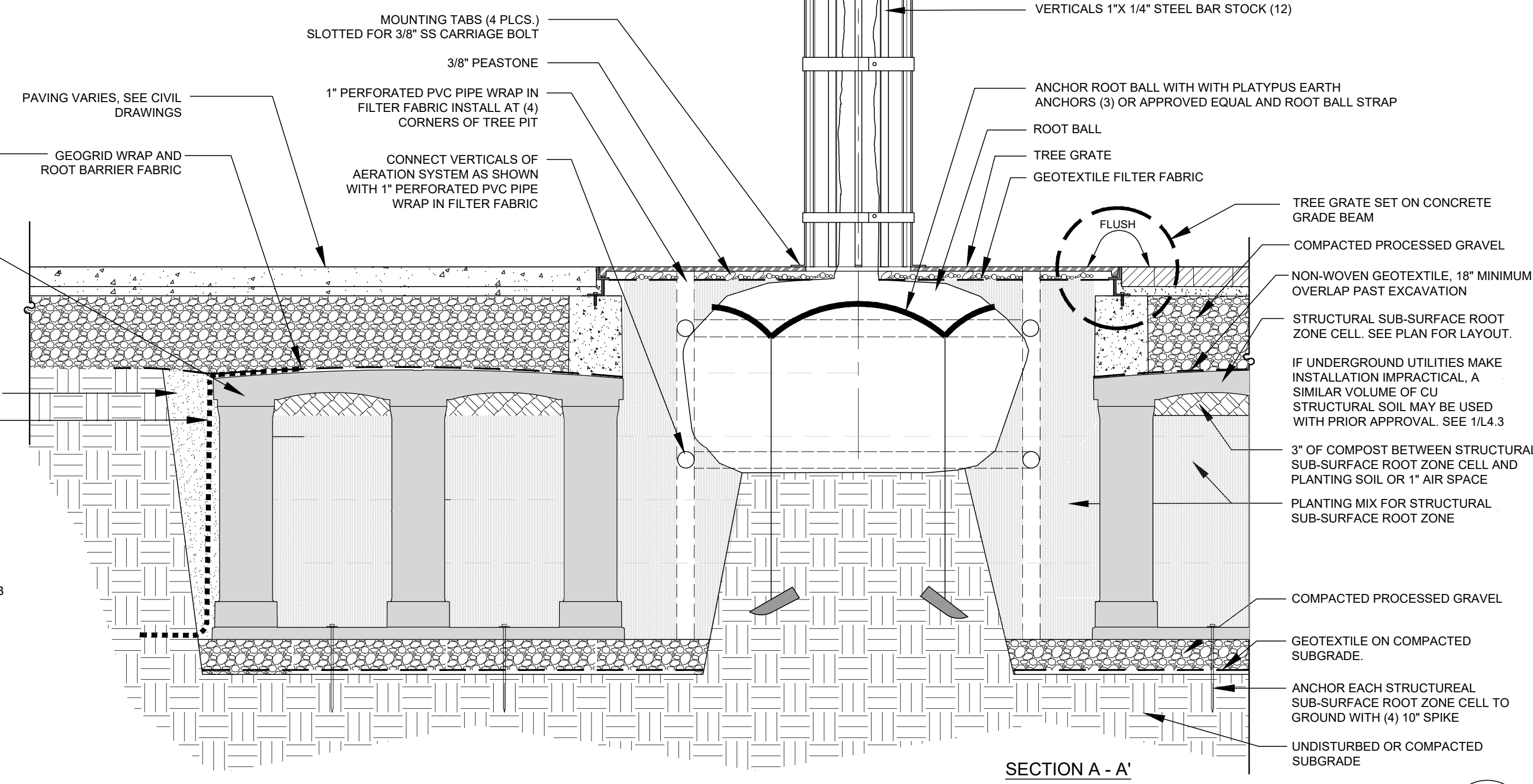


**NOTES:**  
 1. TREE GRATE TO BE IRONSMITH STARBURST SERIES 2 MODEL (36" X 60" OR 30" X 60") OR EQUAL. SEE PLAN.  
 2. SEE CIVIL PLANS FOR T3 STREET TREE PLANTING (TREE BOX FILTER) FOR TREE GRATE SIZING.  
 3. WHERE UNDERGROUND UTILITIES MAKE THE INSTALLATION OF STREET TREES AS SHOWN ABOVE NOT POSSIBLE, SEE 14.3 FOR STREET TREE PLANTING IN STRUCTURAL SOIL.

### Street Tree Planting T2 and T3

Not to Scale

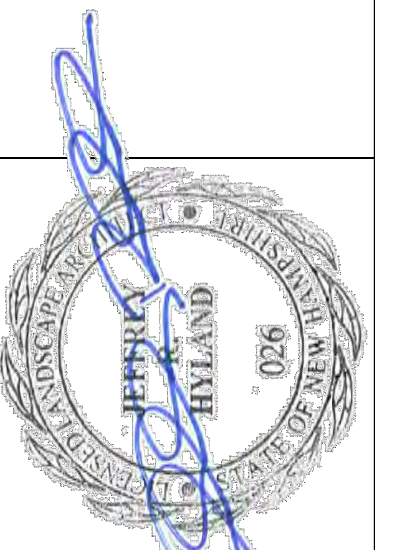
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SECTION A - A'

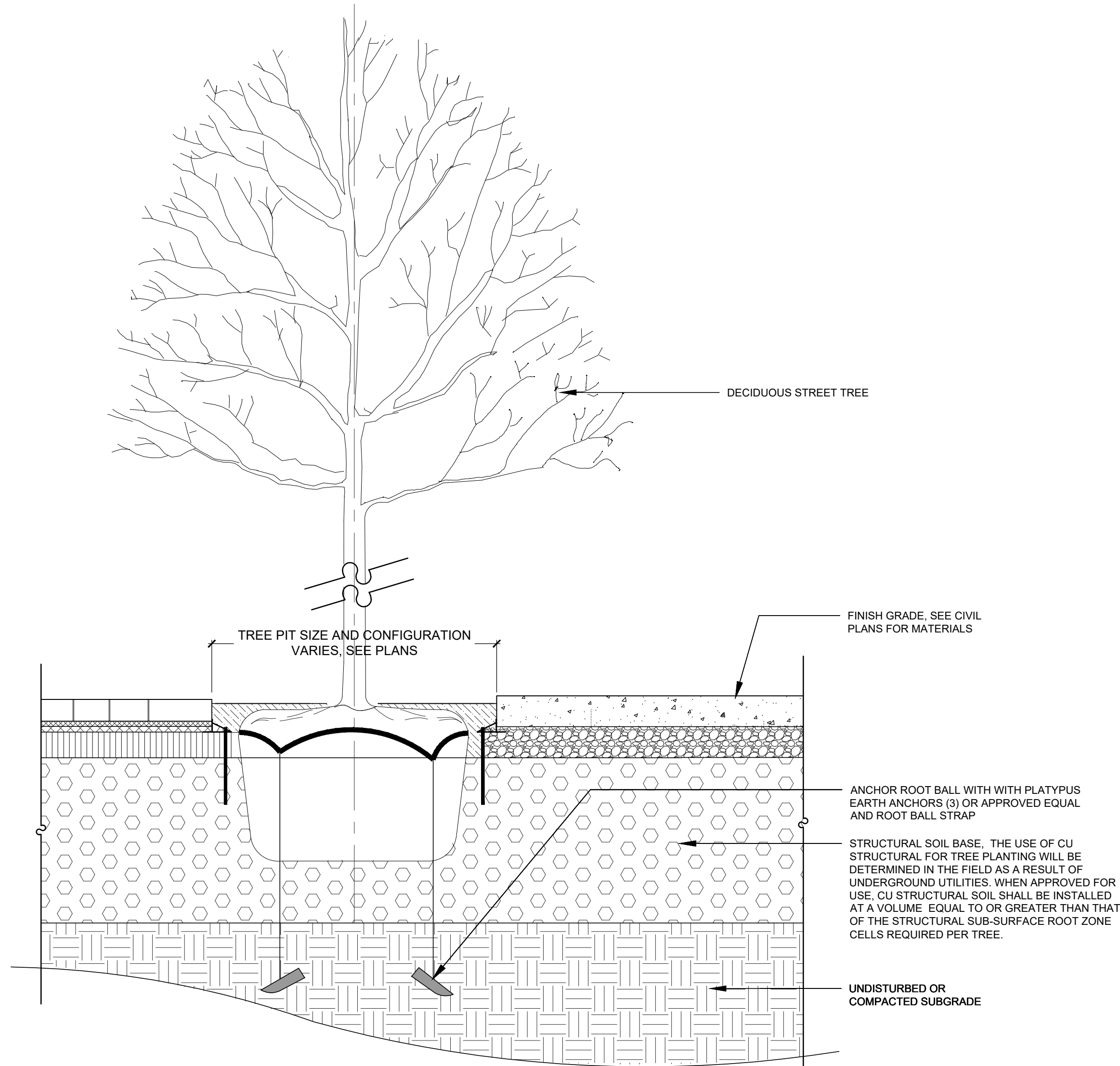
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ISSUE FOR	APPROVAL	By	Date
6/27/2022 - ISSUED FOR CONTRACTOR BIDDING			
Drawn/Chk	JKO/SW/JRH		
Designed	JRH/KO		
Checked	JRH		
Approved			6/27/22
Book No.	310700		
Project No.	ID270500a-shr.2		
Dwg. ID	AS SHOWN		
Scale	AS SHOWN		
REVISIONS			
NO			
APPD			



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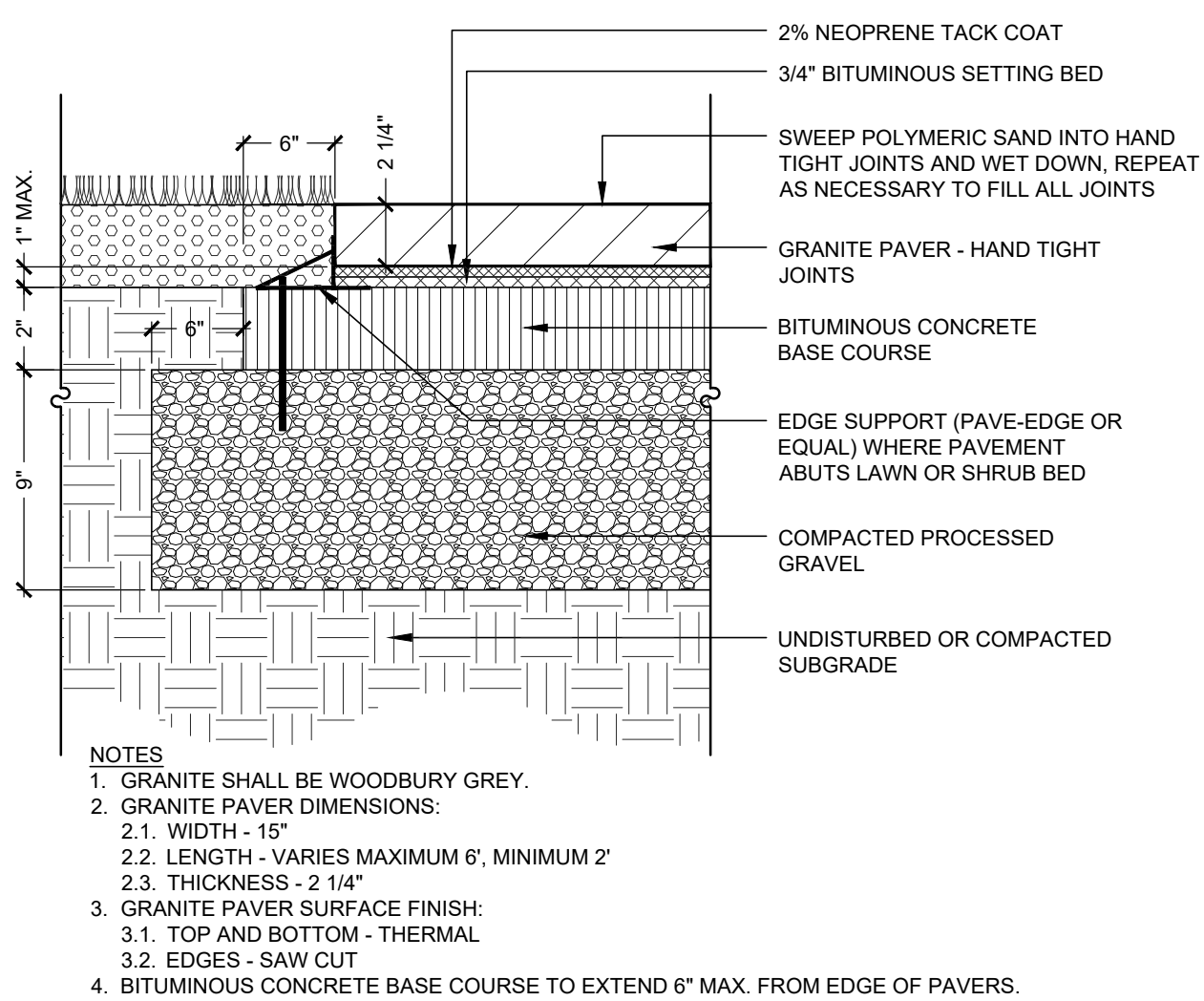
LANDSCAPE DETAILS  
 ISLINGTON STREET CORRIDOR IMPROVEMENTS  
 PHASE 2  
 CITY OF PORTSMOUTH  
 PORTSMOUTH, NEW HAMPSHIRE



### Street Tree Planted in Structural Soil

Not to Scale

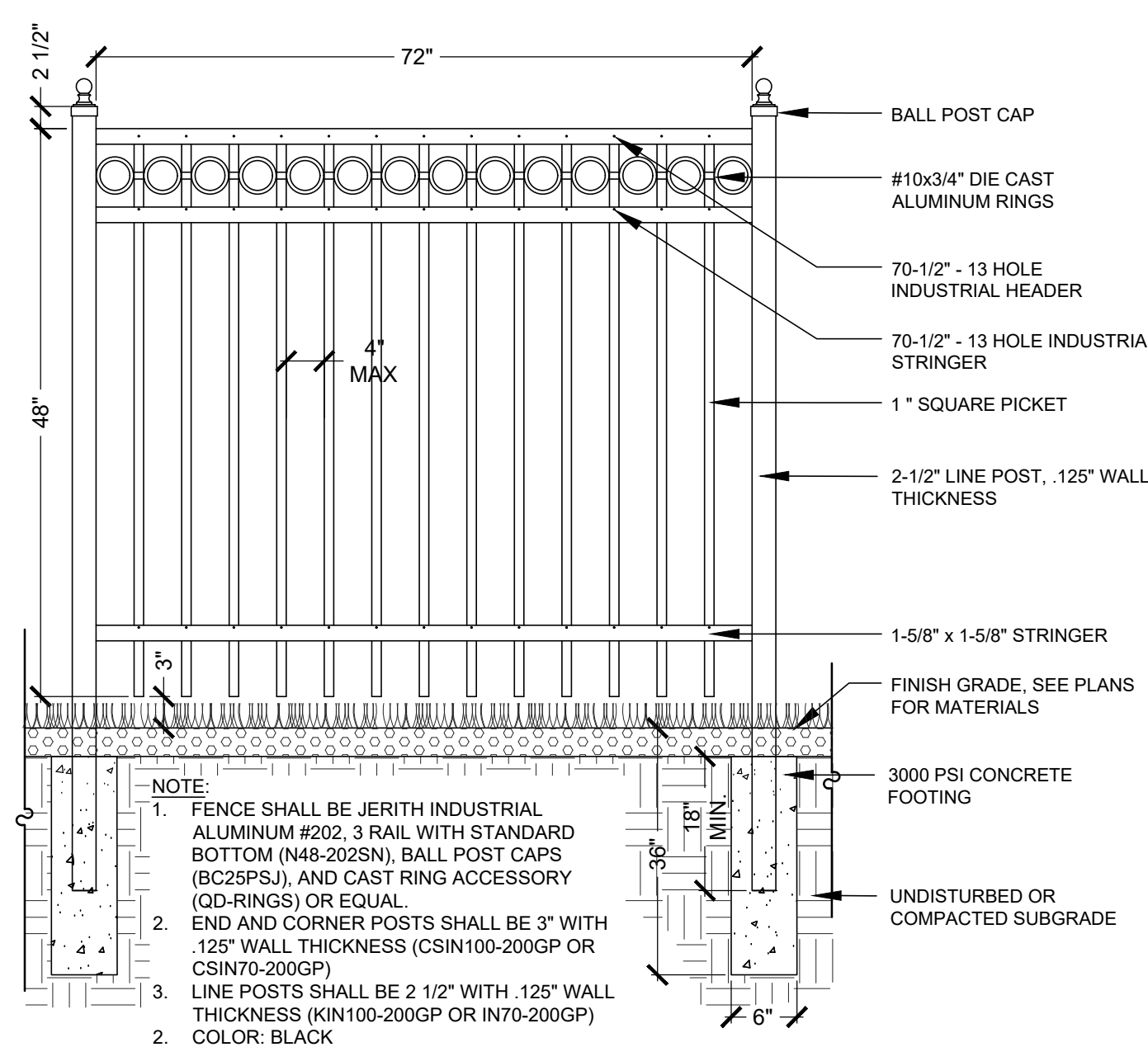
1  
L4.3  
©IRONWOOD 2022



### Granite Pavement

Not to Scale

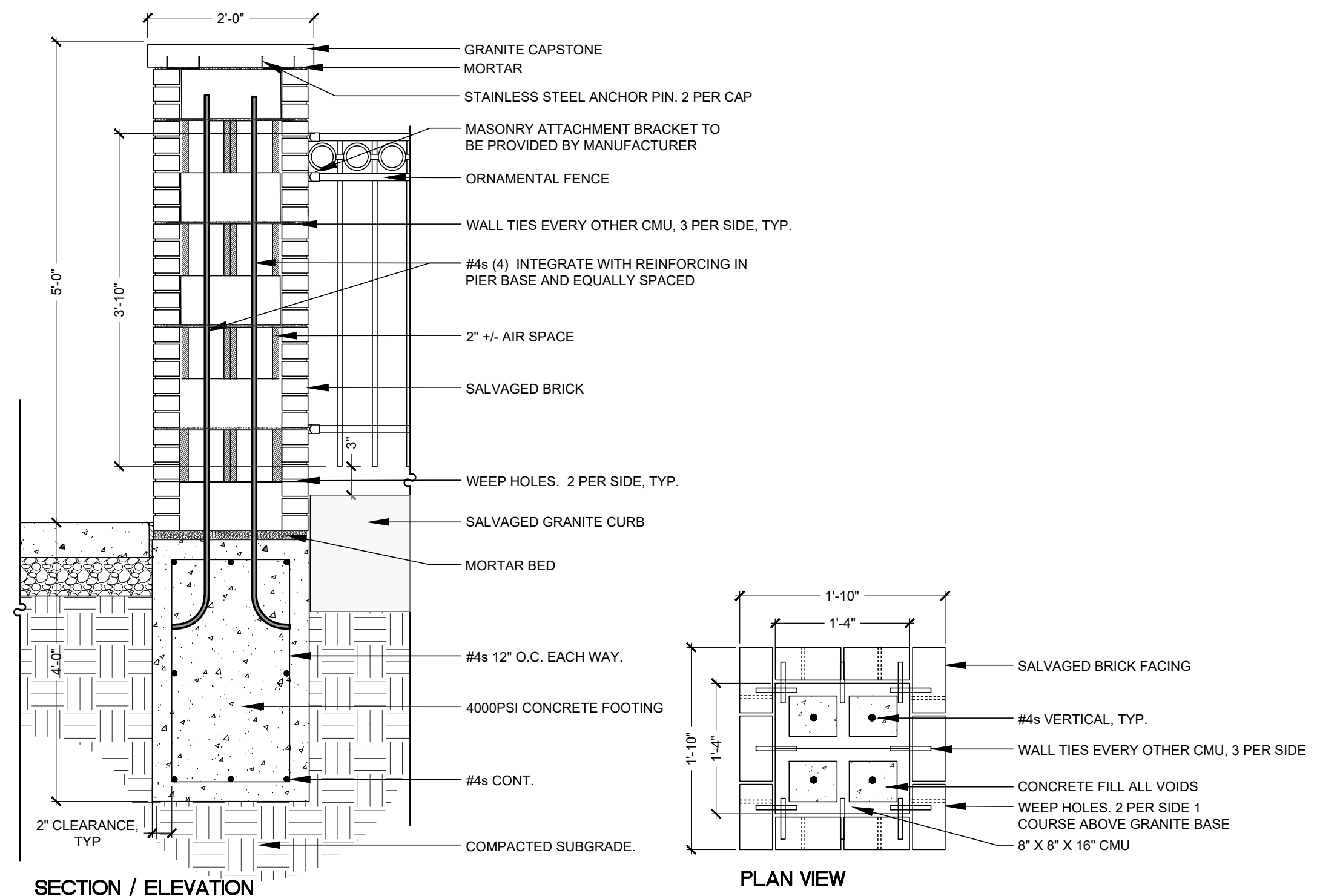
3  
L4.3  
©IRONWOOD 2022



### Ornamental Fence

Not to Scale

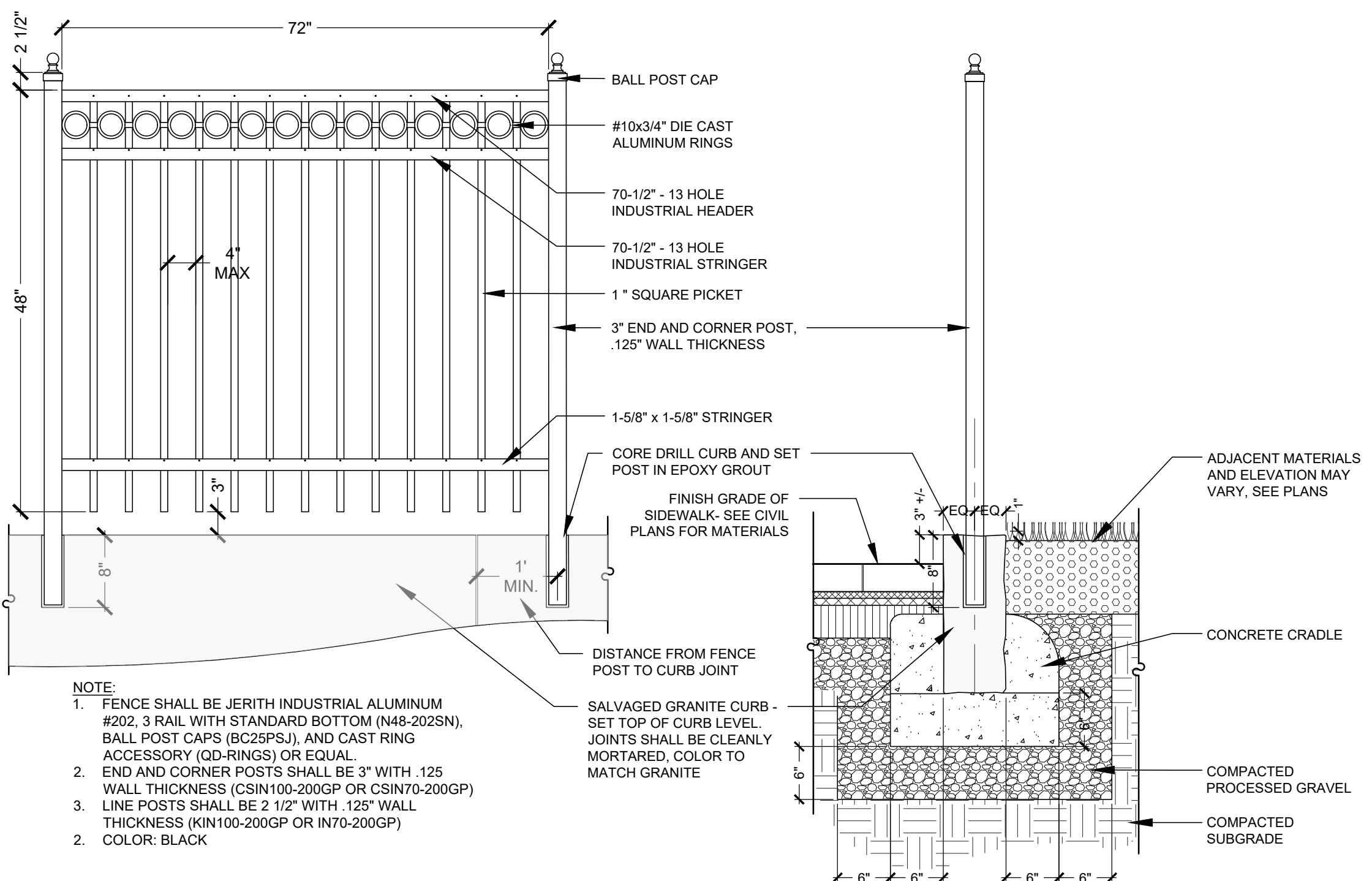
4  
L4.3  
©IRONWOOD 2022



### Brick Pier

Not to Scale

2  
L4.3  
©IRONWOOD 2022



### Ornamental Fence on Salvaged Curb

Not to Scale

5  
L4.3  
©IRONWOOD 2022

ISSUE FOR APPROVAL	By	Date
CONSTRUCTION	By	Date
RECORD DWG	By	Date

6/27/2022 - ISSUED FOR CONTRACTOR BIDDING

Drawn/Chk: KOSW, JRH  
Designed: JRH, KO  
Checked: JRH  
Approved: JRH  
Date: 6/27/22

Project No.: 210700  
Dwg. ID: Z05566\_Sht.2  
Scale: AS SHOWN

NO REVISIONS

APPD

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PHASE 2  
CITY OF PORTSMOUTH  
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DWG NO: L4.3  
SHEET: 43 OF 56

**CABOT STREET PANELBOARD SCHEDULE**

PANEL 0 - SURFACE MOUNTED			
100 AMP MCB, 240/120 VOLT, 1 PHASE, 3 WIRE, 60 HERTZ			
CKT. NO.	NO. POLES	RATING	DESCRIPTION
1,3	2	**	SPD
2	1	10*	CONTROLS
4	1	30*	TRAFFIC SIGNAL FEEDER
5	1	20*	STREET LIGHTS
6-10	1	20	SPARE
11-16	1		SPACE

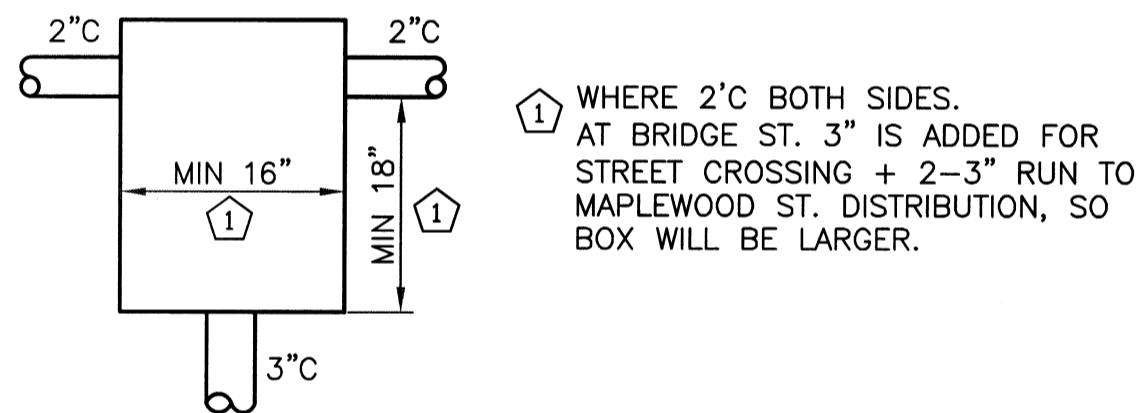
\* PROVIDE HANDLE LOCK ON CIRCUITS  
\*\* PROVIDE BREAKER RATED PER SPD MANUFACTURER'S RECOMMENDATIONS

**Legend**

ARCHITECTURAL AREA LIGHT	•	(L3.0)
BOLLARD LIGHT	☆	(L3.0)
ELECTRICAL CONDUIT TRENCH	— UGE —	(L3.0)

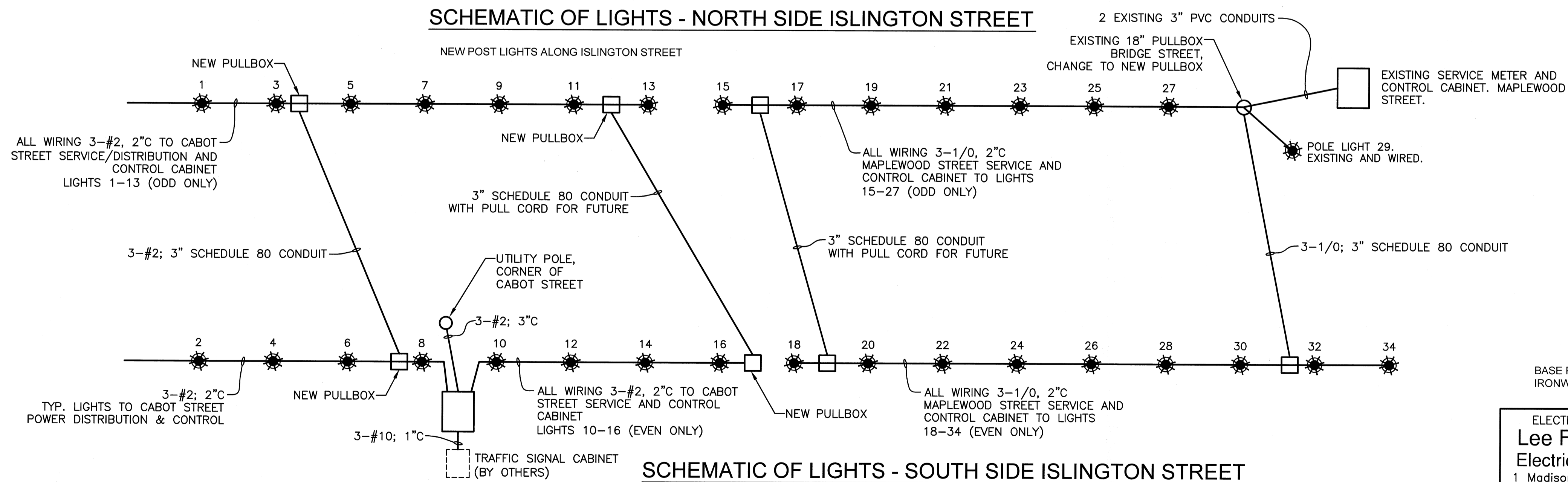
**GENERAL NOTES:**

- CONSTRUCTION ACTIVITIES SHALL NOT UNNECESSARILY IMPACT FUNCTIONALITY WITHIN THE CORRIDOR.
- CONTACT DIGSAFE PRIOR TO BEGINNING WORK.
- SEE CIVIL AND LANDSCAPE DRAWINGS FOR INFORMATION NOT DEPICTED ON THE ELECTRICAL DRAWINGS.
- ANY CHANGE IN SPEC: BASE BID vs. ALT. (CABOT END vs. MAPLEWOOD END) WHAT IS IN ALT. (NO WORK AT ALL OR ONLY ELECTRICAL DELETED-? CONDUITS RFORMED?)
- FIELD COORDINATE ALL CONDUIT ROUTING WITH PLANTINGS TO BE ADEQUATELY CLEAR OF PLANT ROOT SYSTEM.



**TYPICAL NEW PULL BOXES (8) FOR 3" CROSSING ISLINGTON STREET**

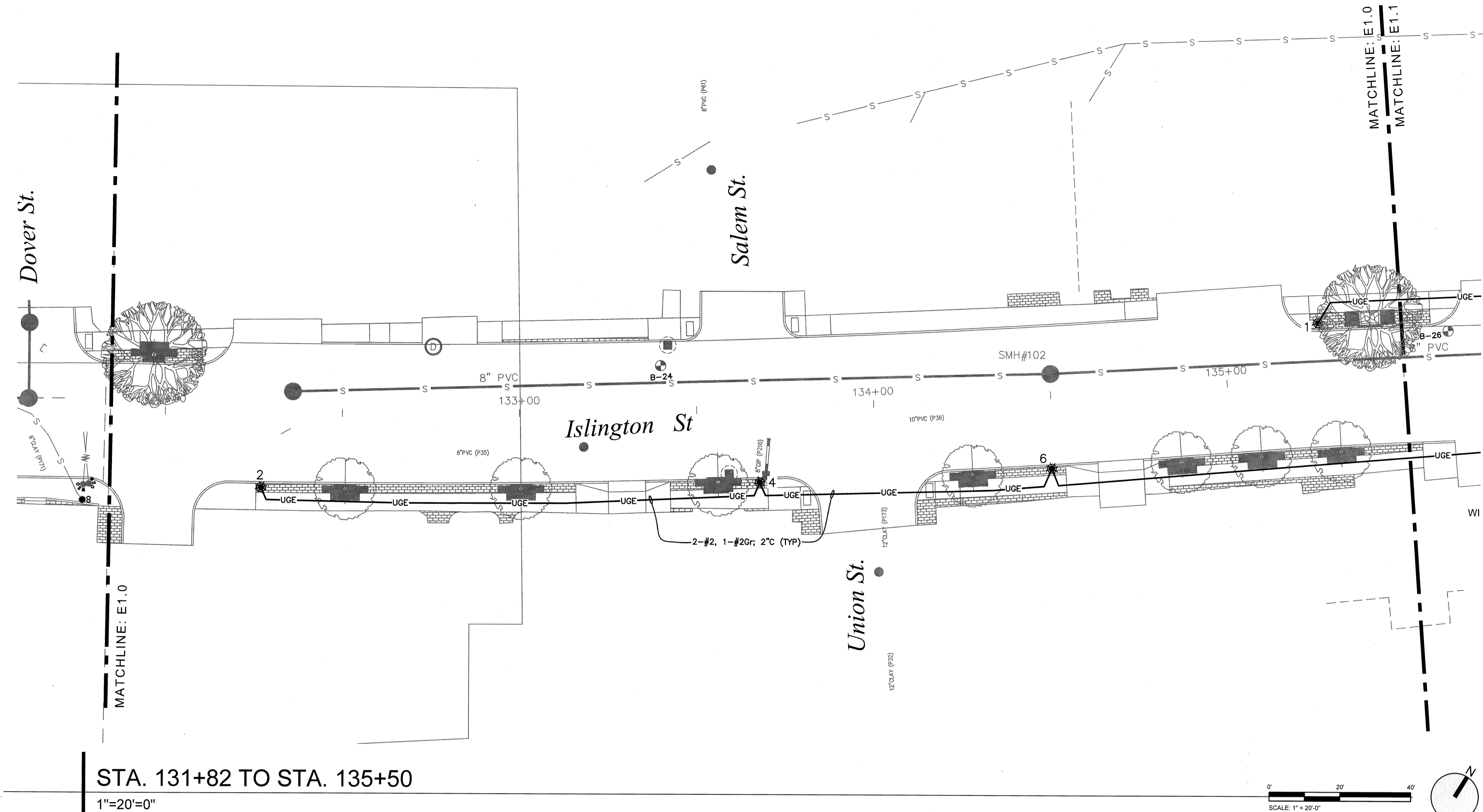
BOXES NOT TO BE INSTALLED IN AREAS SUBJECT TO VEHICLE TRAVEL. BOXES APPROVED EQUAL TO QUAZITE BY HUBBELL WITH BOX VERTICAL DESIGN TEST LOAD NOT LESS THAN 22,500# AND COVER DESIGN TEST LOAD NOT LESS THAN 12,000#. CONTRACTOR RESPONSIBLE FOR SELECTING BOXES PROPERLY SIZED BY NATIONAL ELECTRICAL CODE. INSTALL WITH COVERS FLUSH TO ADJACENT SURFACES. COVER TO BE PERMANENTLY MARKED "ELECTRIC".  
REPLACE EXISTING 18" PULL BOX AT BRIDGE STREET WITH NEW. PULL EXISTING CONDUCTORS BACK AND REINSTALL, DO NOT CUT AND SPLICE IN NEW PULL BOX.



NOTE: SEE DRAWING E1.0 TO E1.4 FOR PLANNED LOCATIONS OF LIGHTS, ETC.

ELECTRICAL DESIGN BY:  
**Lee F. Carroll, PE**  
Electrical Consultants  
1 Madison Ave P.O. Box 357  
Gorham, NH 03581-0357  
603-466-5065  
lcarroll@ne.rr.com

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ISSUE FOR	APPROVAL	By	Date	CONSTRUCTION	By	Date	RECORD DWG	By	Date

Drawn/Chk. IGT	LFC	Checked	LFC	Approved	Date	Book No.	Project No.	Dwg. ID	AS SHOWN	NO.	REVISIONS
					8/10/22		210703	ID220806_SHTL2			

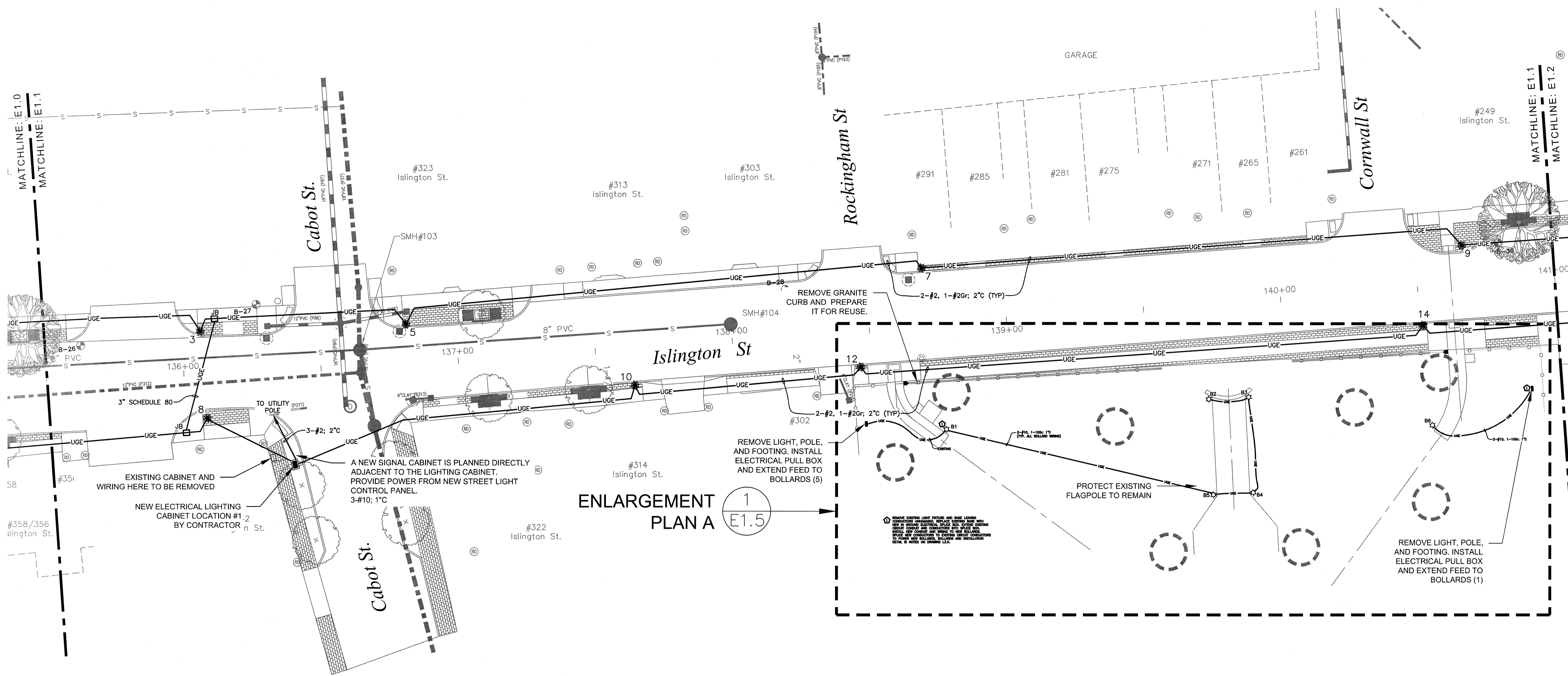
  

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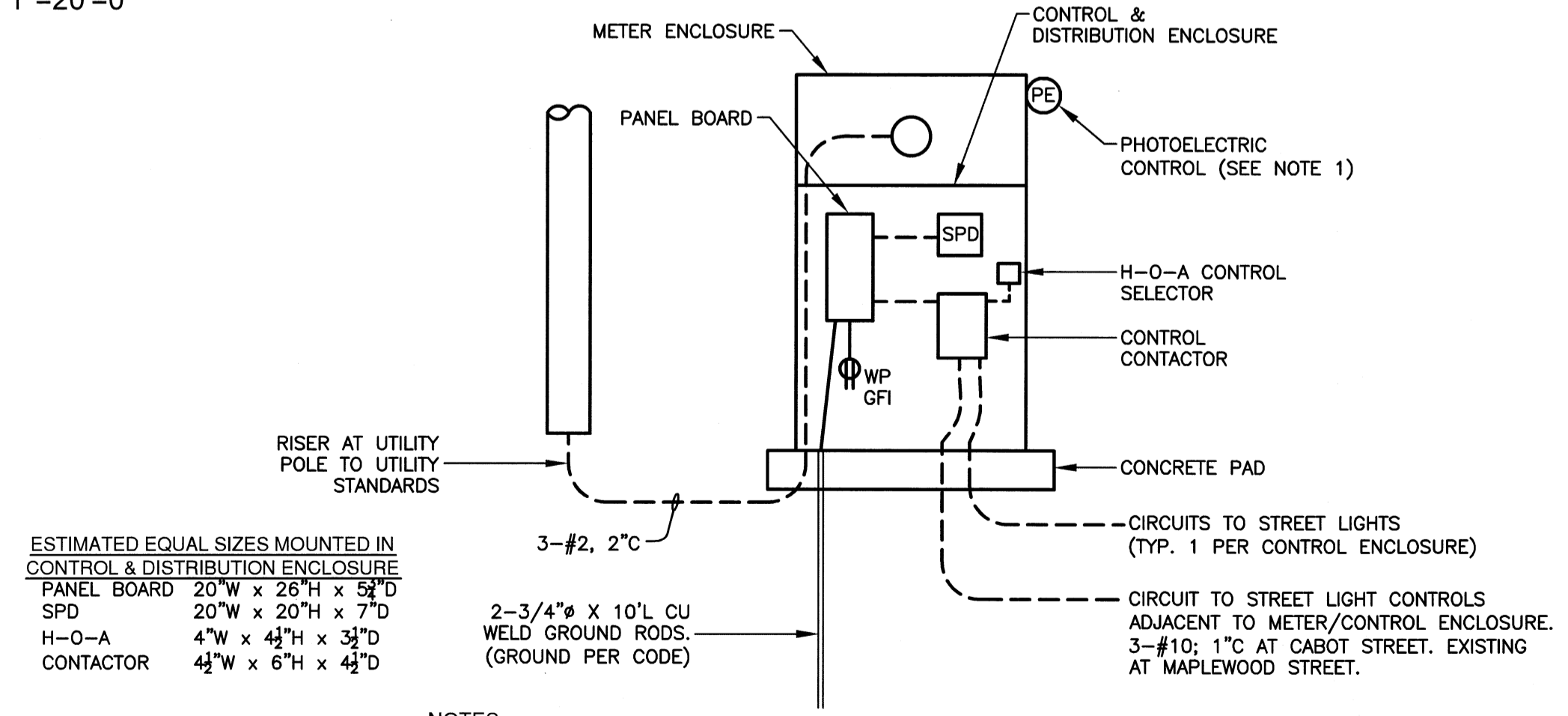
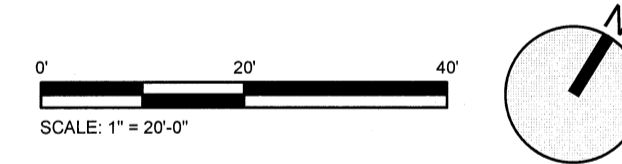
LIGHTING PLAN STA. 131+82 TO STA. 135+50  
ISLINGTON STREET CORRIDOR IMPROVEMENTS  
PHASE 2  
CITY OF PORTSMOUTH  
PORTSMOUTH, NEW HAMPSHIRE

DWG NO. E1.0 SHEET 44 OF 56



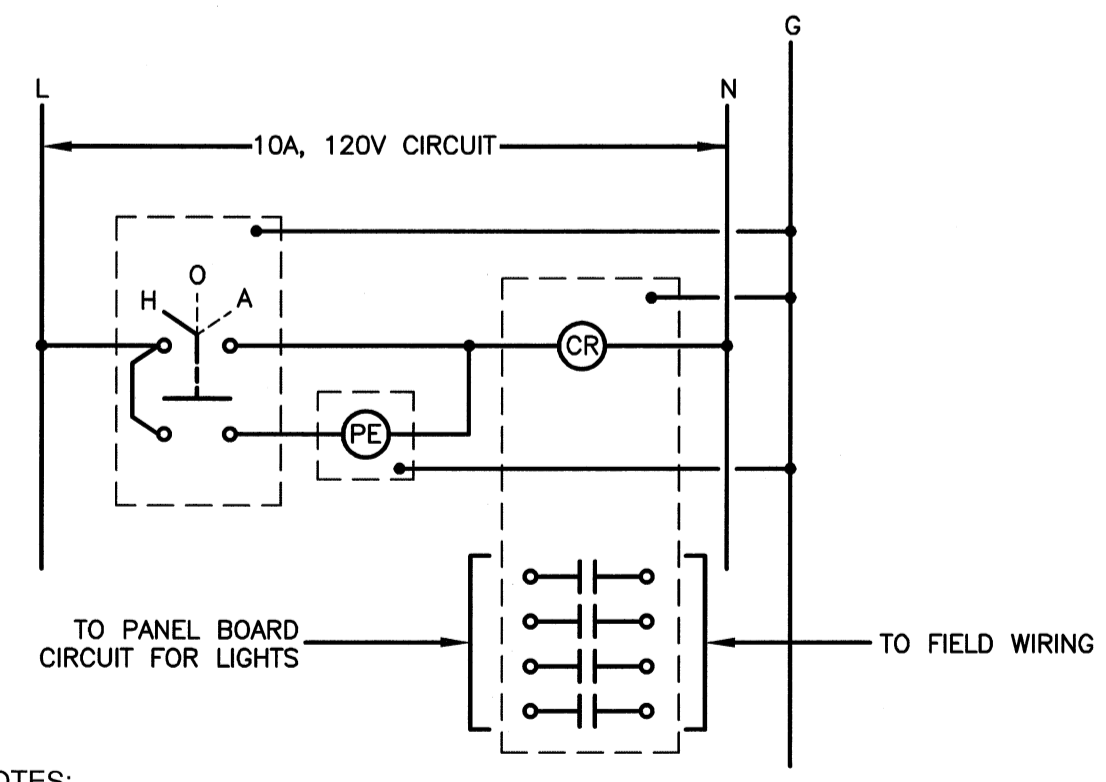
STA. 135+50 TO STA. 141+00

1"=20'=0"



**TYPICAL SERVICE ONE LINE DIAGRAM**

N.T.S. 1 REQUIRED AT CABOT STREET  
1 EXISTING AT MAPLEWOOD STREET (SEE NOTE 2)



**TYPICAL CONTROL W/D**

N.T.S.

**Legend**

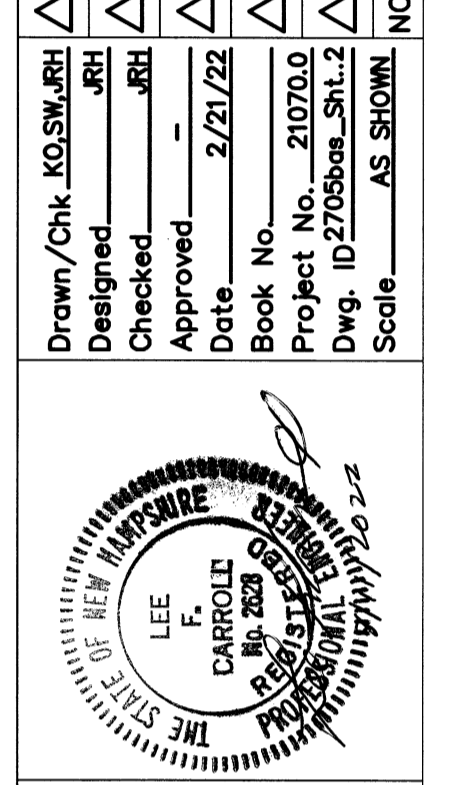
ARCHITECTURAL AREA LIGHT	•	(7) L3.0
BOLLARD LIGHT	⊙	(3) L3.0
ELECTRICAL CONDUIT TRENCH	— UGE —	(6) L3.0

- GENERAL NOTES:**
- CONSTRUCTION ACTIVITIES SHALL NOT UNNECESSARILY IMPACT FUNCTIONALITY WITHIN THE CORRIDOR.
  - CONTACT DIGSAFE PRIOR TO BEGINNING WORK.
  - SEE CIVIL AND LANDSCAPE DRAWINGS FOR INFORMATION NOT DEPICTED ON THE ELECTRICAL DRAWINGS.
  - ANY CHANGE IN SPEC: BASE BID vs. ALT. (CABOT END vs. MAPLEWOOD END) WHAT IS IN ALT. (NO WORK AT ALL OR ONLY ELECTRICAL DELETED? CONDUITS RFORMED?)
  - FIELD COORDINATE ALL CONDUIT ROUTING WITH PLANTINGS TO BE ADEQUATELY CLEAR OF PLANT ROOT SYSTEM.

**NOTE:**  
SEE IRONWOOD DRAWING L3.0 FOR CONDUIT TRENCH DETAILS, FIXTURE DETAILS, AND ELECTRICAL SERVICE METERING AND CONTROL CABINET DETAILS.

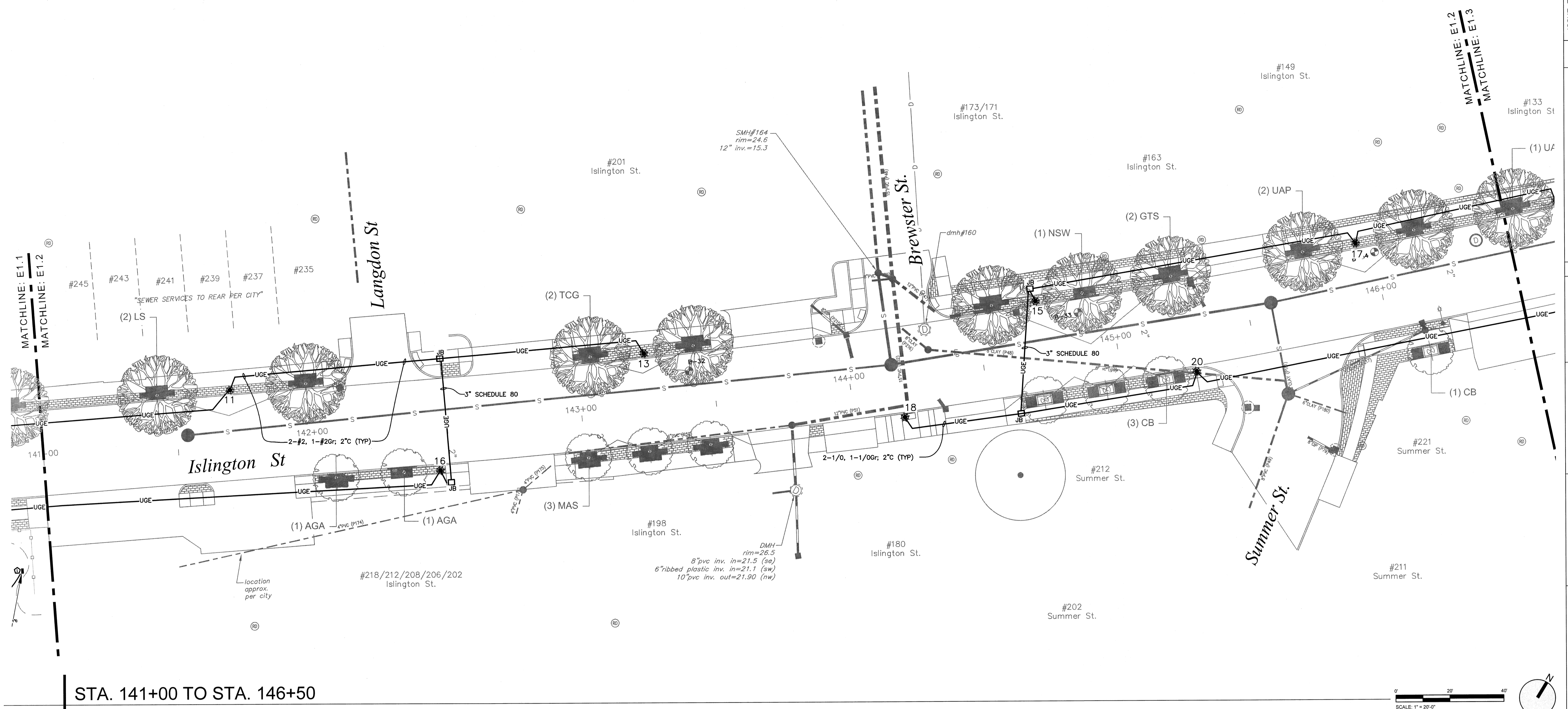
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APPROVAL	
CONSTRUCTION	
RECORD DWG	

Drawn/Chk.	NO.	DATE
Designed	ARH	
Checked	ARH	
Approved		2/21/22
Date		
Book No.		21070.0
Project No.		21070.0
Dwg. ID		21070.0_SHT-1.2
Scale		AS SHOWN



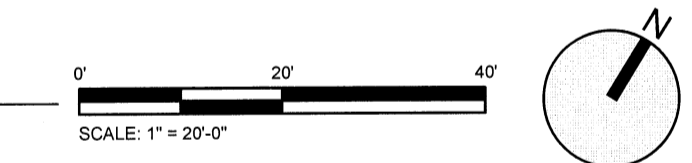
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LIGHTING PLAN STA. 135+50 TO STA. 141+00  
**ISLINGTON STREET CORRIDOR IMPROVEMENTS**  
**PHASE 2**  
**CITY OF PORTSMOUTH**  
**PORTSMOUTH, NEW HAMPSHIRE**



STA. 141+00 TO STA. 146+50

1"=20'=0"



### Legend

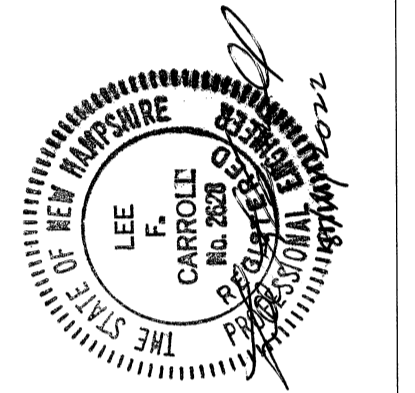
ARCHITECTURAL AREA LIGHT		(7) (1.3.0)
BOLLARD LIGHT		(3) (1.3.0)
ELECTRICAL CONDUIT TRENCH		(8) (1.3.0)

- GENERAL NOTES:
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  2. CONTACT DIGSAFE PRIOR TO BEGINNING WORK.
  3. SEE CIVIL AND LANDSCAPE DRAWINGS FOR INFORMATION NOT DEPICTED ON THE ELECTRICAL DRAWINGS.
  4. ANY CHANGE IN SPEC: BASE BID vs. ALT. (CABOT END vs. MAPLEWOOD END) WHAT IS IN ALT. (NO WORK AT ALL OR ONLY ELECTRICAL DELETED? CONDUITS RFORMED?)
  5. FIELD COORDINATE ALL CONDUIT ROUTING WITH PLANTINGS TO BE ADEQUATELY CLEAR OF PLANT ROOT SYSTEM.

ISSUE FOR	APPROVAL	By
	Date	
	Date	
	Date	

Drawn/Chk. KO.SW. JRH	DESIGNED	JRH
Checked	CHKD.	JRH
Approved	APPR.	JRH
Date	DATE	2/21/24
Book No.	PROJECT NO.	21070.0
Project No.	DWG. ID	7080a-SHT.2
Dwg. ID	SCALE	AS SHOWN
	NO.	REVISIONS

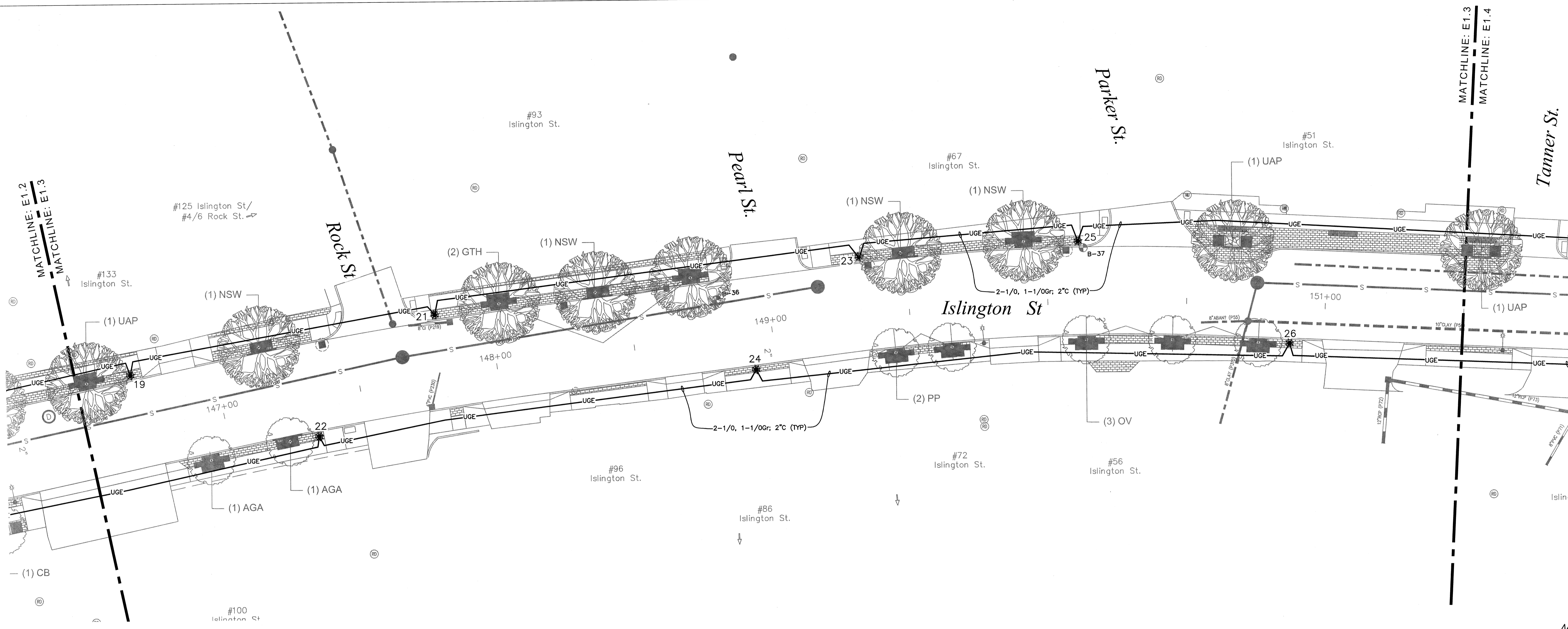
LEE  
CAPROLT  
No. 208  
Professional Seal



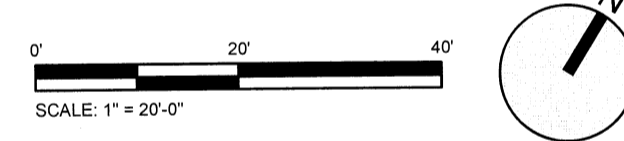
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LIGHTING PLAN STA. 141+00 TO STA. 146+50  
ISLINGTON STREET CORRIDOR IMPROVEMENTS  
PHASE 2  
CITY OF PORTSMOUTH  
PORTSMOUTH, NEW HAMPSHIRE



STA. 146+50 TO STA. 151+50  
1"=20'=0"



### Legend

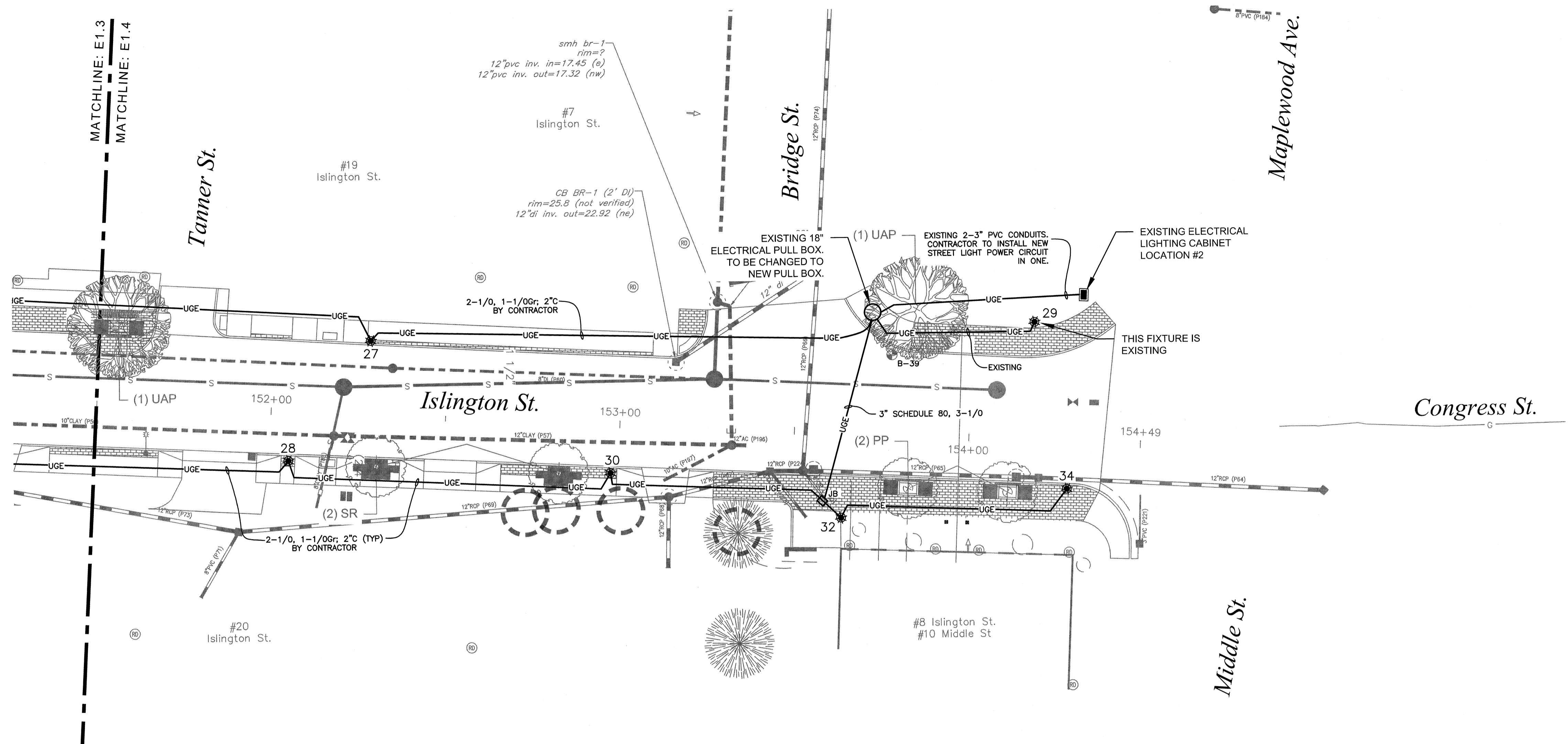
ARCHITECTURAL AREA LIGHT	●	7 L3.0
BOLLARD LIGHT	☆	3 L3.0
ELECTRICAL CONDUIT TRENCH	— UGE —	6 L3.0

- GENERAL NOTES:**
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  - FIELD COORDINATE ALL CONDUIT ROUTING WITH PLANTINGS TO BE ADEQUATELY CLEAR OF PLANT ROOT SYSTEM.

BASE PLAN TAKEN FROM IRONWOOD DRAWING L1.3

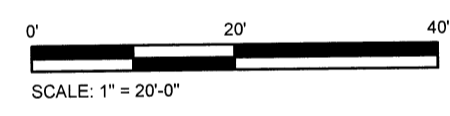
<b>Ironwood</b> Landscape Architecture • Planning <small>Newmarket, NH   Portland, ME   603.772.6599   www.ironwood.com</small>		LIGHTING PLAN STA. 146+50 TO STA. 151+50 ISLINGTON STREET CORRIDOR IMPROVEMENTS PHASE 2 CITY OF PORTSMOUTH PORTSMOUTH, NEW HAMPSHIRE
Drawn/Chk. <b>KO.SM/ARH</b> Designed <b>ARH</b> Checked <b>ARH</b> Date <b>2/21/22</b> Book No. <b>210703</b> Project No. <b>210703</b> Dwg. ID <b>Z7358ba_ShtL2</b> Scale <b>AS SHOWN</b>	ISSUE FOR APPROVAL Date By CONSTRUCTION Date By RECORD DWG Date By	REVISIONS NO.
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SHEET 47 OF 56		APPD





STA. 151+50 TO STA. 154+49

1"=20'0"



**Legend**

ARCHITECTURAL AREA LIGHT	•	(1) L3.0
BOLLARD LIGHT	☆	(3) L3.0
ELECTRICAL CONDUIT TRENCH	— UGE —	(6) L3.0

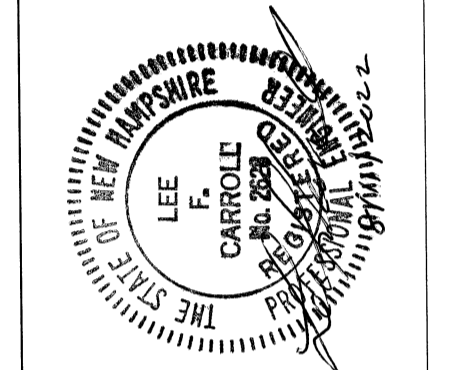
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BASE PLAN TAKEN FROM  
IRONWOOD DRAWING L1.4

ISSUE FOR APPROVAL	By	Date
CONSTRUCTION		
RECORD DWG		

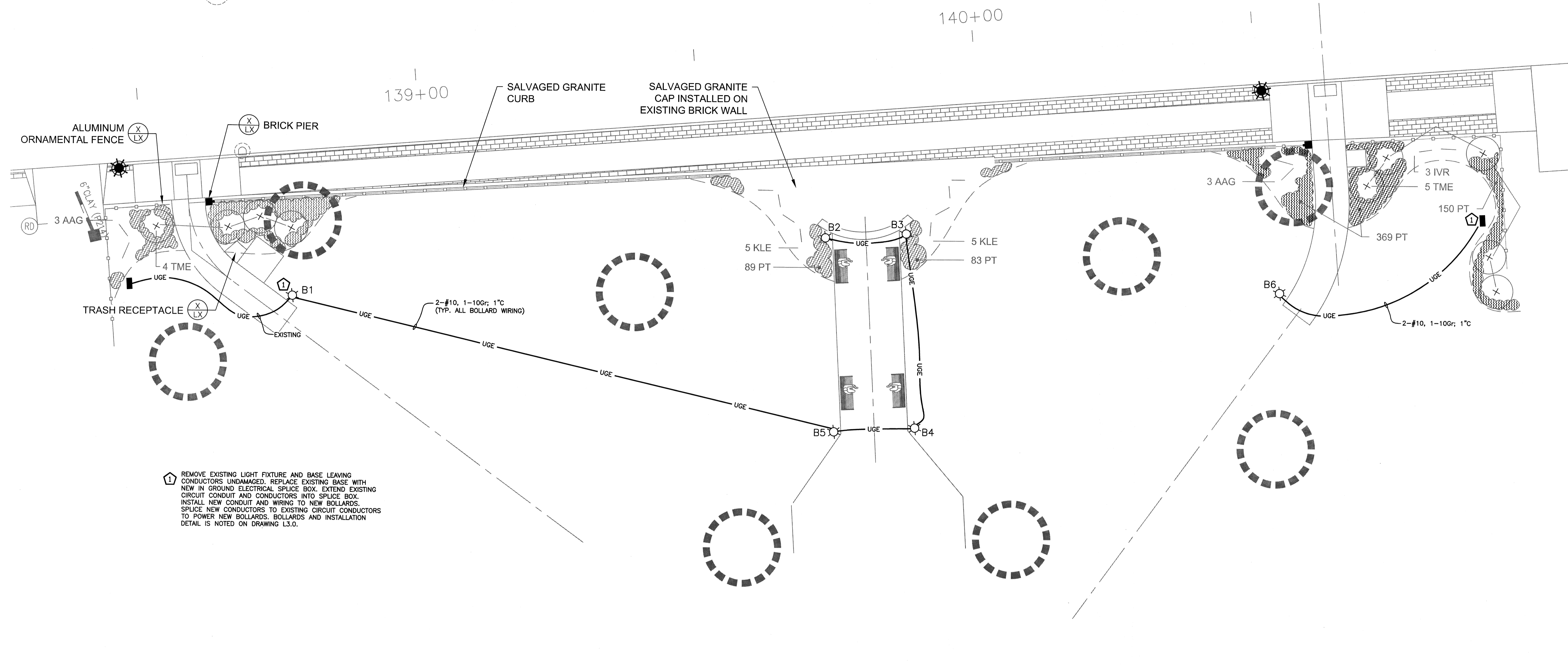
NO.	REVISIONS

Drawn/Chk.	KO,SW,JRH
Designed	JRH
Checked	JRH
Approved	JRH
Date	2/21/22
Book No.	21070.0
Project No.	10270000-SH02.2
Dwg. No.	AS SHOWN
Scale	AS SHOWN

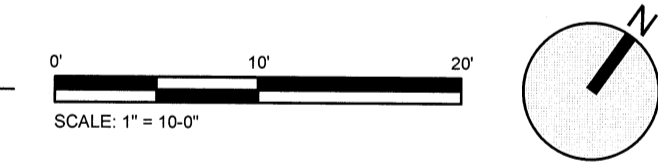


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 LIGHTING PLAN STA. 151+50 TO STA. 154+49  
 ISLINGTON STREET CORRIDOR IMPROVEMENTS  
 PHASE 2  
 CITY OF PORTSMOUTH  
 PORTSMOUTH, NEW HAMPSHIRE

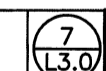

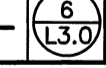
DWG NO E1.4	SHEET 48 OF 56
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1 | ENLARGEMENT PLAN A - SEE DRAWING E1.1  
1"=10'=0"



### Legend

ARCHITECTURAL AREA LIGHT	*	
BOLLARD LIGHT	☆	
ELECTRICAL CONDUIT TRENCH	— UGE —	

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BASE PLAN TAKEN FROM  
IRONWOOD DRAWING L2.0

ELECTRICAL DESIGN BY:  
**Lee F. Carroll, PE**  
Electrical Consultants  
1 Madison Ave P.O. Box 357  
Gorham, NH 03581-0357  
603-466-5065  
lcarroll@ne.rr.com

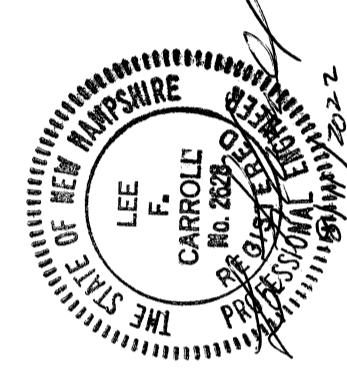
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ISSUE FOR	APPROVAL	By	Date	By	Date
CONSTRUCTION	RECORD DWG	By	Date	By	Date
NO.	NO.	NO.	NO.	NO.	NO.
REVISIONS	REVISIONS	REVISIONS	REVISIONS	REVISIONS	REVISIONS
APPD	APPD	APPD	APPD	APPD	APPD


  

Drawn/Chk. LST	LFC	LFC	8/10/22	21070.0	AS SHOWN
Designed	Checked	Approved	Date	Book No.	Scale
			Project No. 21070.0		
			Dwg. ID 2107000-SHT.1.2		





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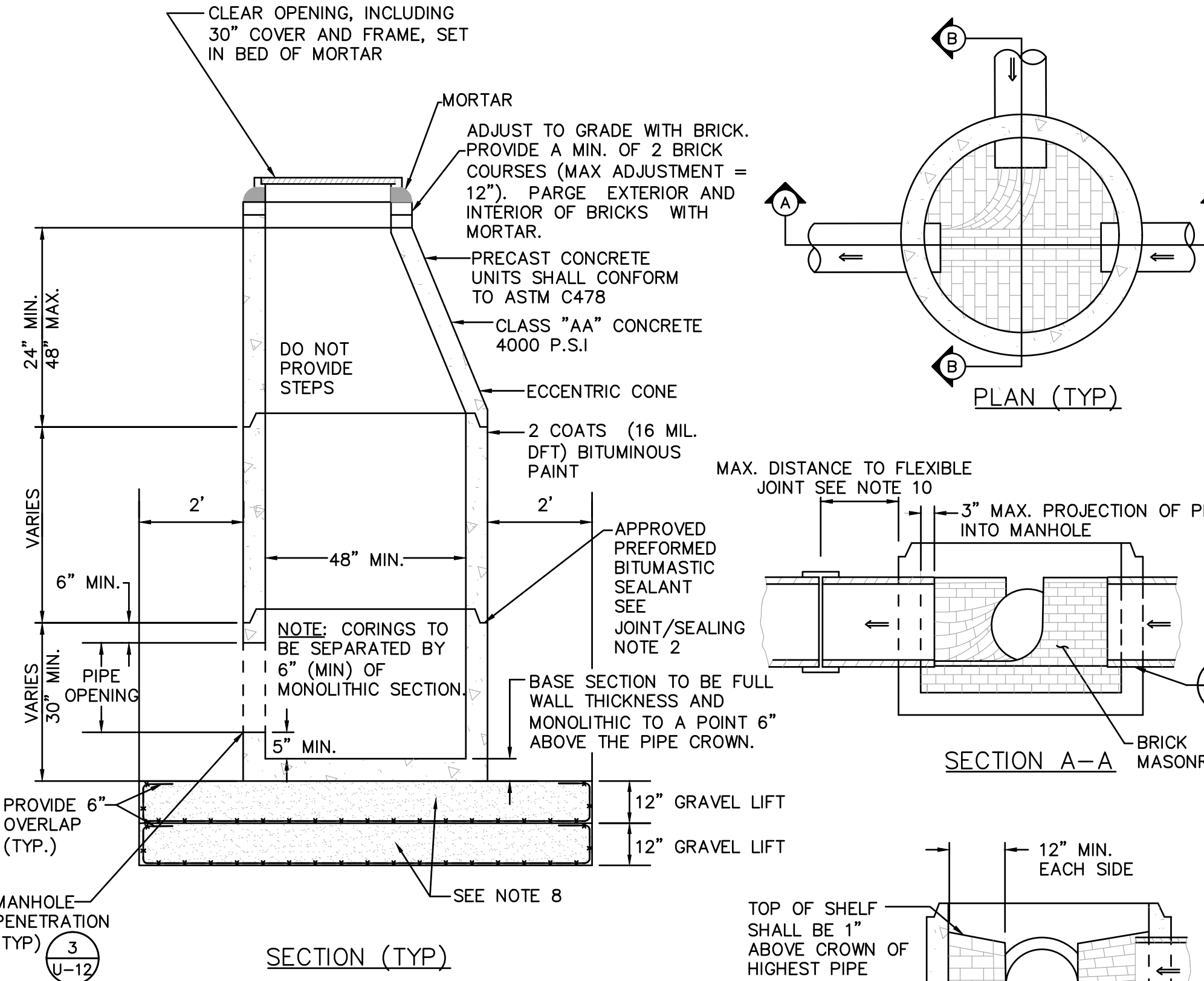
LIGHTING PLAN - LIGHTING ENLARGEMENT PLAN A	ISLINGTON STREET CORRIDOR IMPROVEMENTS PHASE 2
CITY OF PORTSMOUTH PORTSMOUTH, NEW HAMPSHIRE	

DWG NO E1.5	SHEET 49 OF 56
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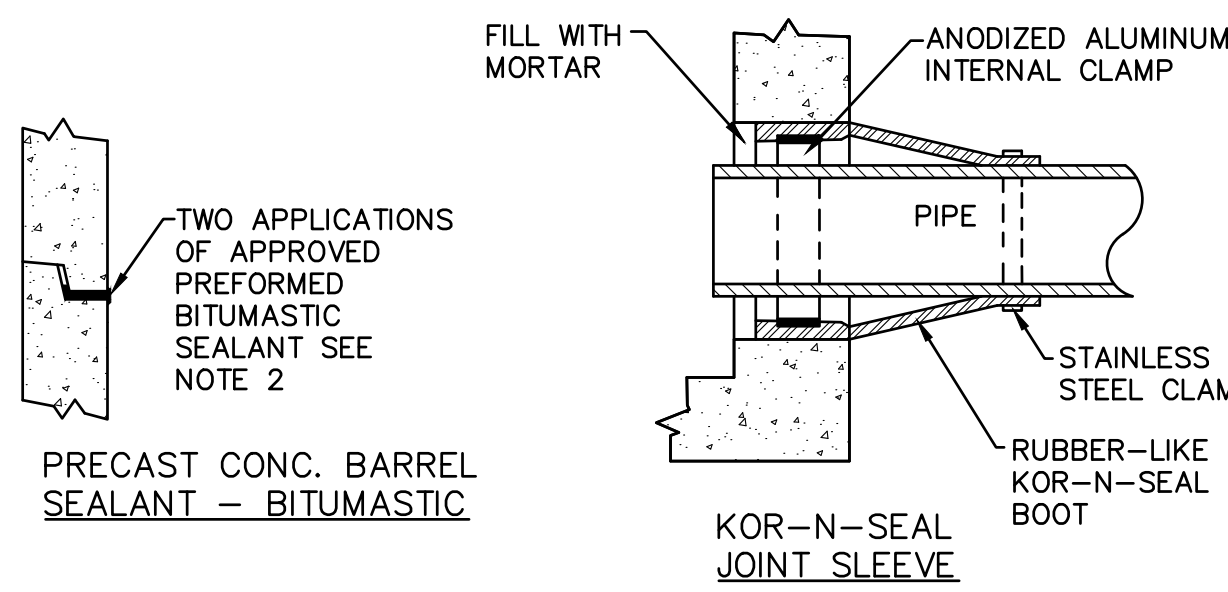
**STANDARD MANHOLE NOTES:**

- GENERAL:** SEWER MANHOLES, INCLUDING ALL COMPONENT PARTS, SHALL BE ASSEMBLED FROM PRECAST SECTIONS, WITH STEEL REINFORCEMENT, IN ANY APPROVED MANHOLE. THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (H2O LOADING) WITHOUT FAILURE, AND TO PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MANHOLE, CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE. A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.
- BARRELS AND CONE SECTIONS:** SHALL BE PRECAST REINFORCED CONCRETE.
- PRECAST CONCRETE:** BARREL SECTIONS, CONES, AND BASES SHALL CONFORM TO ASTM C478.
- LEAKAGE TEST:** SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS. INVERT AND SHELF TO BE PRIOR TO BACKFILL PLACED AFTER TESTING.
- INVERTS AND SHELVES:** MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT. INVERT BRICKS SHALL BE LAID ON EDGE. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO AN ELEVATION OF 1" ABOVE THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY.
- FRAMES AND COVERS:** MANHOLE FRAMES AND COVERS SHALL BE CITY OF PORTSMOUTH STANDARD AND SHALL BE PICKED UP BY THE CONTRACTOR AT PORTSMOUTH DPW.
- BEDDING:** SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33. STONE SIZE NO. 67:  
100% PASSING 1 INCH SCREEN  
90-100% PASSING 3/4 INCH SCREEN  
20-55% PASSING 3/8 INCH SCREEN  
0-10% PASSING #4 SIEVE  
0-5% PASSING #8 SIEVE
- WHERE THE MATERIAL BELOW MANHOLE STRUCTURE IS SOFT OR YIELDING, AND WHERE DIRECTED BY THE ENGINEER, INSTALL DOUBLE LAYER OF GEOGRID (TENSAR TX160 OR EQUAL). PAY AS ITEM 1.8B (LFx2).**
- SHALLOW MANHOLE:** IN LIEU OF A CONE SECTION, WHEN MANHOLE IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER HAVING AN ECCENTRIC ENTRANCE AND CAPABLE OF SUPPORTING H-20 LOADS MAY BE USED.
- FLEXIBLE JOINT:** A FLEXIBLE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES:  
RCP AND CI PIPE - ALL SIZES - 48"  
AC AND VC PIPE - UP THROUGH 12" DIA. - 18"  
AC AND VC PIPE - LARGER THAN 12" DIA. - 36"  
DI PIPE - NONE REQUIRED  
PVC - UP THROUGH 15" DIA. - NONE REQUIRED  
PVC - LARGER THAN 15" DIA. - 48"/60"  
ABS (ASTM D2680) - ALL SIZES - SAME AS VC ABOVE.
- SPECIFICATIONS:** ADDITIONAL CONSTRUCTION SPECIFICATIONS ARE INCLUDED IN THE CONTRACT DOCUMENTS. THESE STANDARD MANHOLE DRAWINGS ARE NOT COMPLETE WITHOUT THESE SPECIFICATIONS.



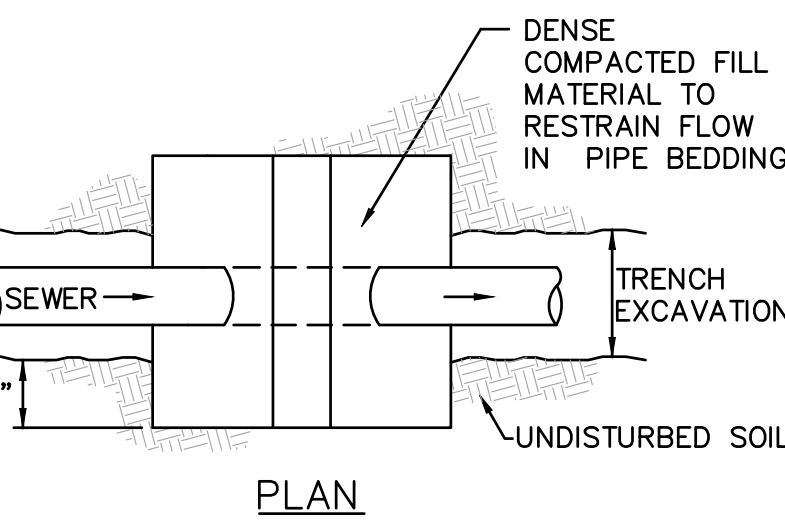
**JOINTING AND SEALING NOTES**

- PIPE TO MANHOLE JOINTS SHALL BE ONLY AS APPROVED BY THE ENGINEER AND IN GENERAL, WILL DEPEND UPON AN ELASTOMERIC SEALANT FOR WATERTIGHTNESS.
- FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY. APPROVED BITUMASTIC SEALANTS: RAM-NEK E Z KENT SEAL NO.2
- ALL GASKETS, SEALANTS, MORTAR, ETC., SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.



**MANHOLE PENETRATIONS NOT TO SCALE**

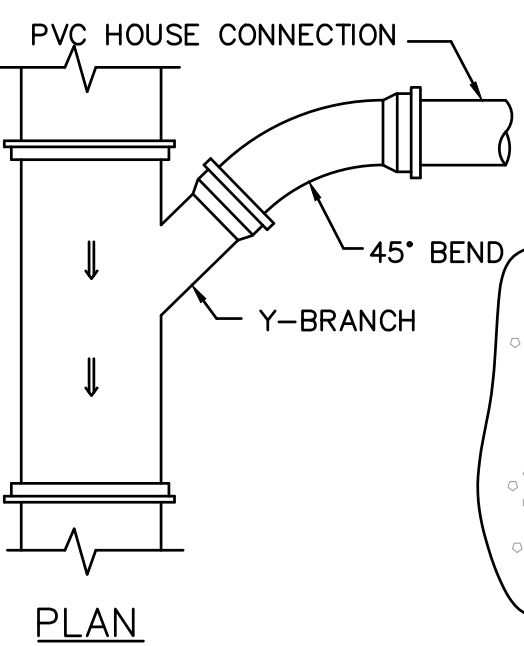
**SEWER MANHOLE NOT TO SCALE**



**TRENCH DAM NOT TO SCALE**

**SERVICE CONNECTION NOTES:**

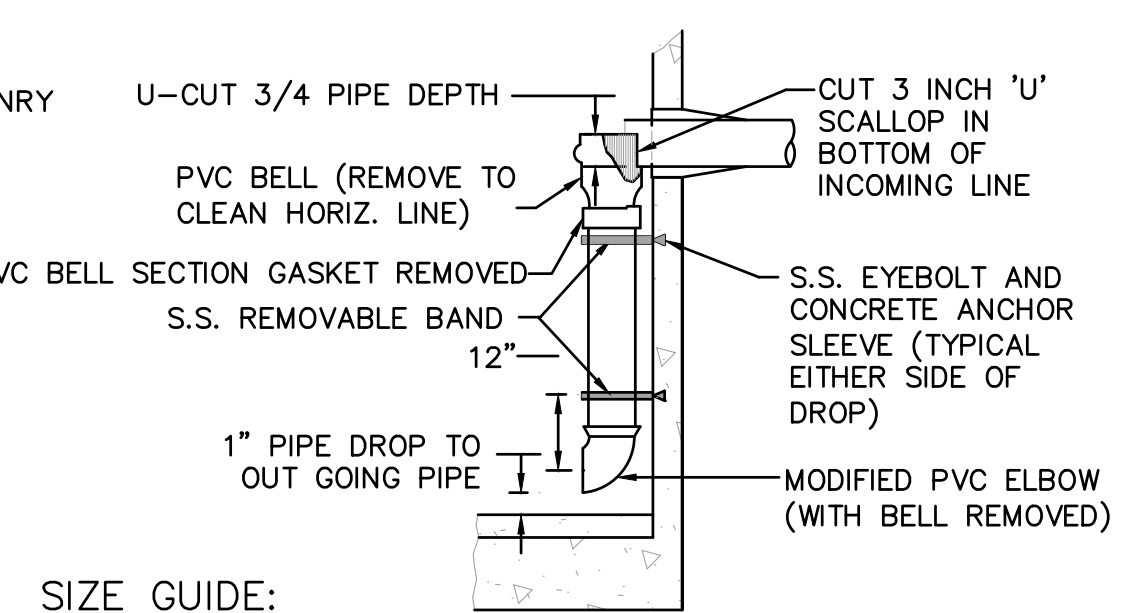
- SEE DETAILS FOR SERVICE CONNECTION REQUIREMENTS.
- SERVICE CONNECTION SHALL BE INSTALLED BELOW WATER MAIN WHERE POSSIBLE.
- CLEANOUTS SHALL BE INSTALLED AT EACH SERVICE CONNECTION.
- REBAR SHALL BE PLACED AT SIDE OF CLEANOUT.
- CLEANOUT SHALL BE USED TO PLUG AND TEST ALL NEW LATERALS WITH MINIMAL INTERRUPTION TO OPERATION OF HOMEOWNER SANITARY SYSTEM.
- CLEANOUT RISER PIPE AND FITTINGS SHALL BE INCIDENTAL AND SHALL NOT BE CONSIDERED FOR PAYMENT.
- IN LOCATIONS WHERE THERE IS LESS THAN 18" OF SEPARATION BETWEEN THE WATER MAIN AND SEWER SERVICE PIPE, A MAXIMUM OF SDR 26 PVC PIPE SHALL BE INSTALLED.
- IN CASES WHERE TRANSITIONS FROM SDR 26 TO SDR 35 ARE REQUIRED (I.E. AT TEES), A COUPLING/FITTING SPECIFICALLY MANUFACTURED FOR SAID TRANSITION SHALL BE USED. NO OTHER COUPLING SYSTEM (I.E. FLEXIBLE FERRO) WILL BE ACCEPTED.



**SERVICE CONNECTION NOT TO SCALE**

**GRAVITY SEWER TRENCH NOTES:**

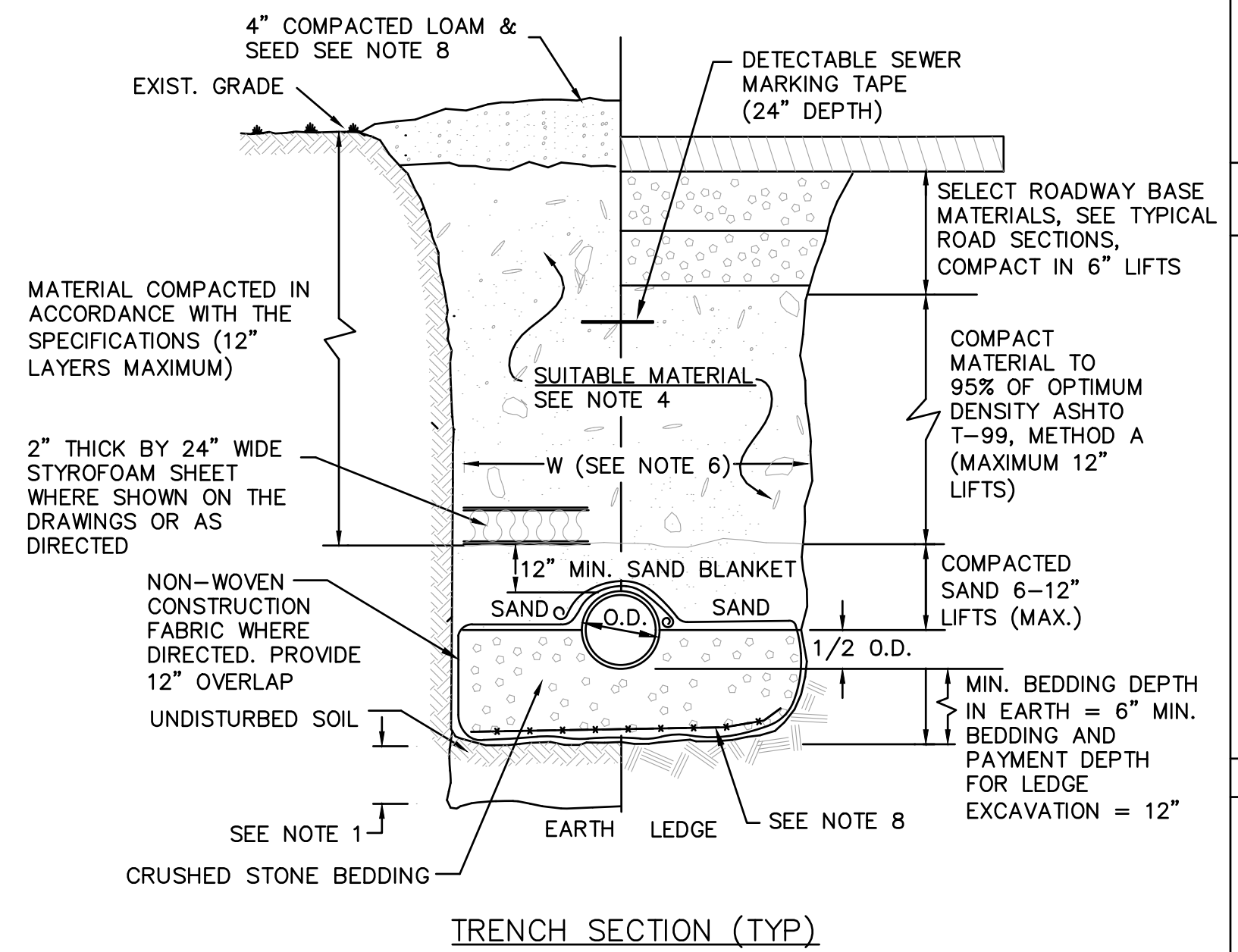
- ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE:** BACKFILL AS STATED IN THE TECHNICAL SPECIFICATIONS OR AS SHOWN ON THE DRAWINGS.
- BEDDING:** SEE NOTE 7 OF STANDARD MANHOLE NOTES. WHERE ORDERED BY THE ENGINEER TO STABILIZE THE TRENCH BASE, GRADED SCREENED GRAVEL OR CRUSHED STONE 1/2 INCH TO 1-1/2 INCH AND/OR THE USE OF GEOGRID FABRIC (ITEM 1.8B) MAY BE REQUIRED.
- SAND BLANKET:** CLEAN SAND FREE FROM ORGANIC MATTER, SO GRADED THAT 90-100% PASSES A 1/2 INCH SIEVE AND NOT MORE THAN 15% WILL PASS A #200 SIEVE. BLANKET MAY BE OMITTED FOR CAST-IRON, DUCTILE IRON, AND REINFORCED CONCRETE PIPE PROVIDED HOWEVER, THAT NO STONE LARGER THAN 2" IS IN CONTACT WITH THE PIPE.
- SUITABLE MATERIAL:** IN ROADS, ROAD SHOULDERS, WALKWAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS; PIECES OF PAVEMENT; ORGANIC MATTER; TOP SOIL; ALL WET OR SOFT MUCK, PEAT, OR SOFT CLAY; ALL EXCAVATED LEDGE MATERIAL; ALL ROCKS OVER 6 INCHES IN LARGEST DIMENSION; AND ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION. IN CROSS-COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAM, MUCK, OR PEAT, IF HE IS SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE SEWER, FOR MAINTENANCE AND POSSIBLY RECONSTRUCTION, WILL BE PRESERVED.
- BASE COURSE AND PAVEMENT SHALL MEET THE REQUIREMENTS OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES - DIVISIONS 300 AND 400 RESPECTIVELY.**
- W = MAXIMUM ALLOWABLE TRENCH PAYMENT WIDTH** FOR ROCK EXCAVATION, FOR ORDERED EXCAVATION BELOW GRADE AND HANDLING OF EXCAVATED CONTAMINATED SOILS. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 36 INCHES. FOR PIPES GREATER THAN 15 INCHES IN NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE OUTSIDE DIAMETER (O.D.).
- FOR CROSS COUNTRY CONSTRUCTION,** BACKFILL OR FILL SHALL BE MOUND TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
- WHERE TRENCH BOTTOM IS SOFT OR YIELDING, AND WHERE DIRECTED BY THE ENGINEER, INSTALL SINGLE LAYER OF GEOGRID (TX160 OR EQUAL) ACROSS THE ENTIRE WIDTH OF TRENCH BOTTOM. PAY AS ITEM 1.8A (L.F.).**



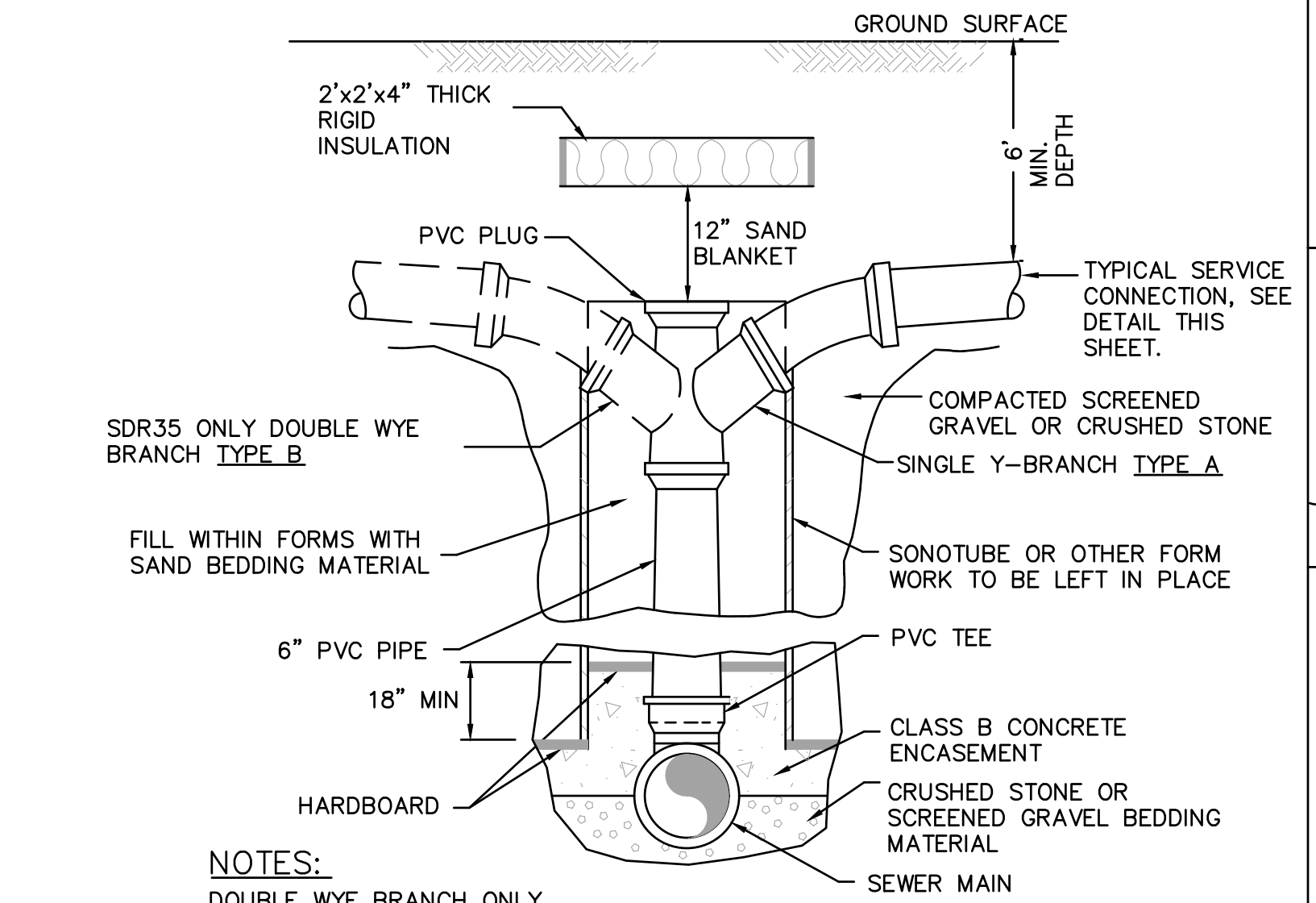
**SIZE GUIDE:**

- 1-8" OR 10" DROP: 4'-0" DIA. M.H.
- 2-8" OR 10" DROP: 5'-0" DIA. M.H.
- 1-12" DROP: 5'-0" DIA. M.H.
- 1-15" DROP: 5'-0" DIA. M.H.

**DROP MANHOLE NOT TO SCALE**



**TRENCH SECTION (TYP)**  
**TRENCH - GRAVITY SEWER NOT TO SCALE**



**NOTES:**

- DOUBLE WYE BRANCH ONLY TO BE USED WHERE APPROVED BY ENGINEER

**PVC SEWER SERVICE CHIMNEY WITH WYE NOT TO SCALE**

ISSUE FOR	APPROVAL	DATE	BY	REVISIONS
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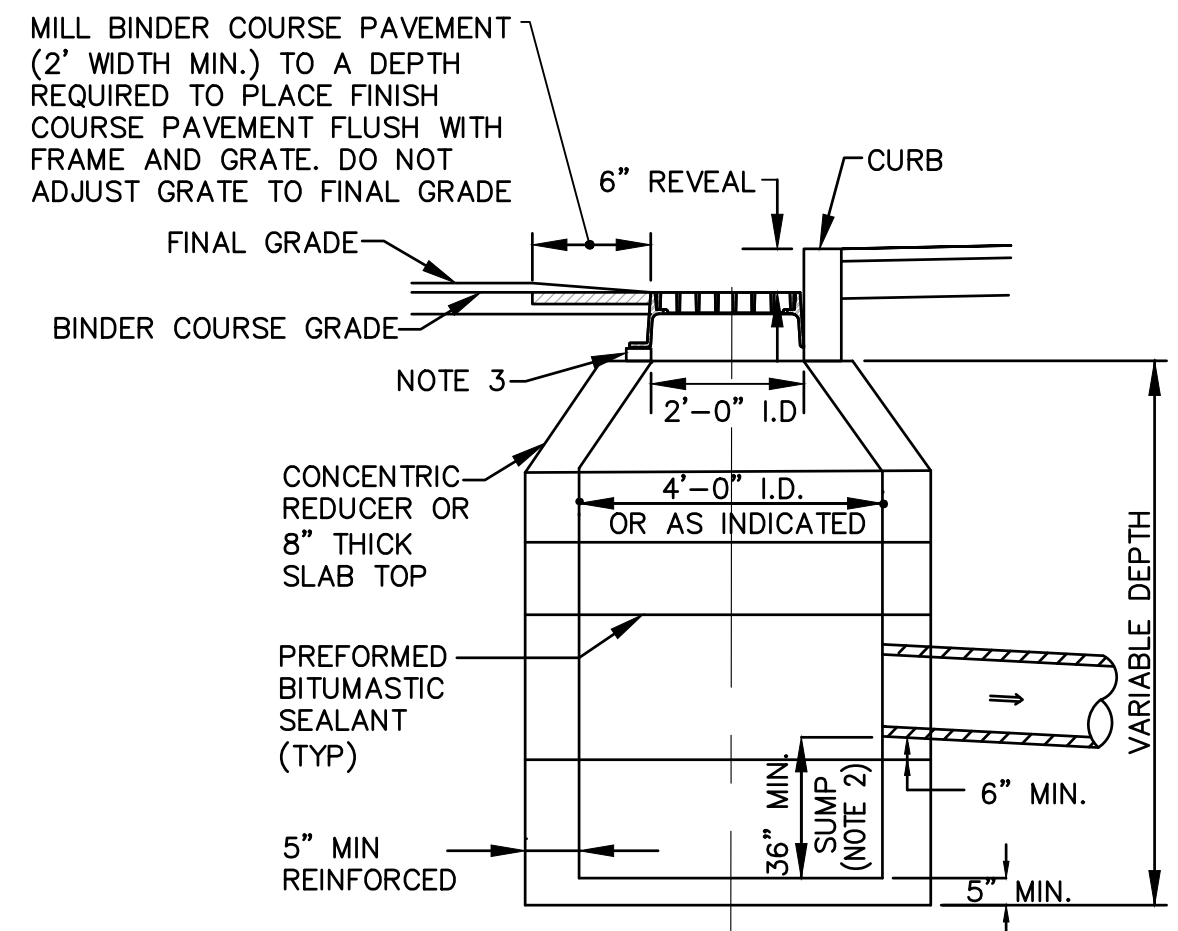
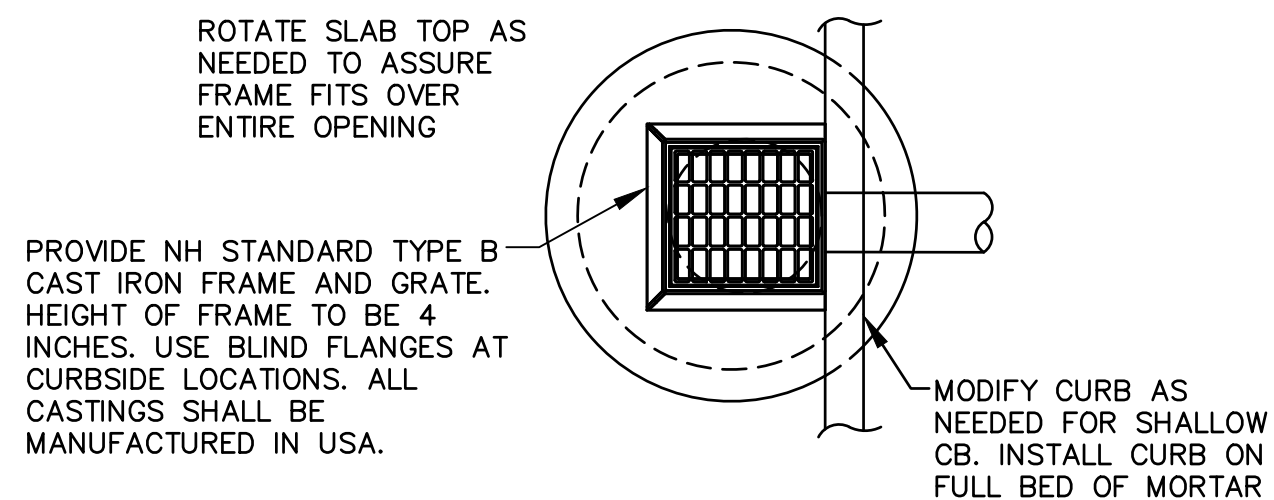
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					6/29/22	2705	2705	AS SHOWN	

<p>Donald Macdonald Professional Engineer No. 7042 State of New Hampshire</p>	<p><b>UNDERWOOD</b> engineers</p> <p>25 Vaughan Mall, Portsmouth, N.H. 03801 Tel. 603-436-6192 Fax. 603-431-4733</p>
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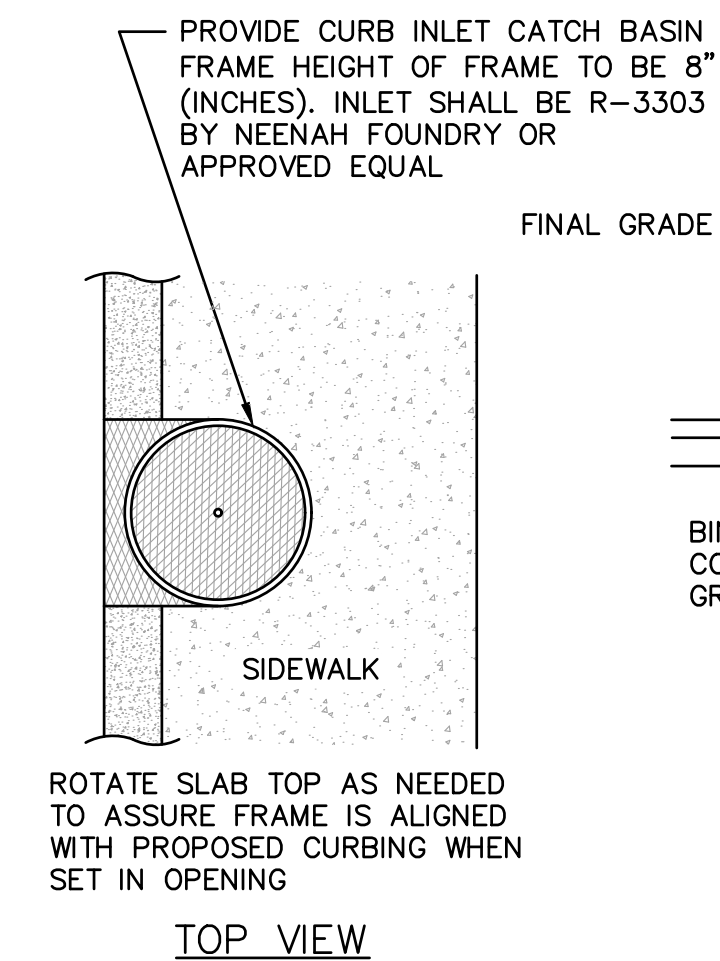
<p><b>STANDARD SEWER DETAILS</b></p> <p><b>ISLINGTON STREET CORRIDOR IMPROVEMENTS</b></p> <p><b>PHASE 2</b></p> <p><b>CITY OF PORTSMOUTH</b></p> <p><b>PORTSMOUTH, NEW HAMPSHIRE</b></p>	<p>DWG NO D-1</p> <p>SHEET 50 OF 56</p>
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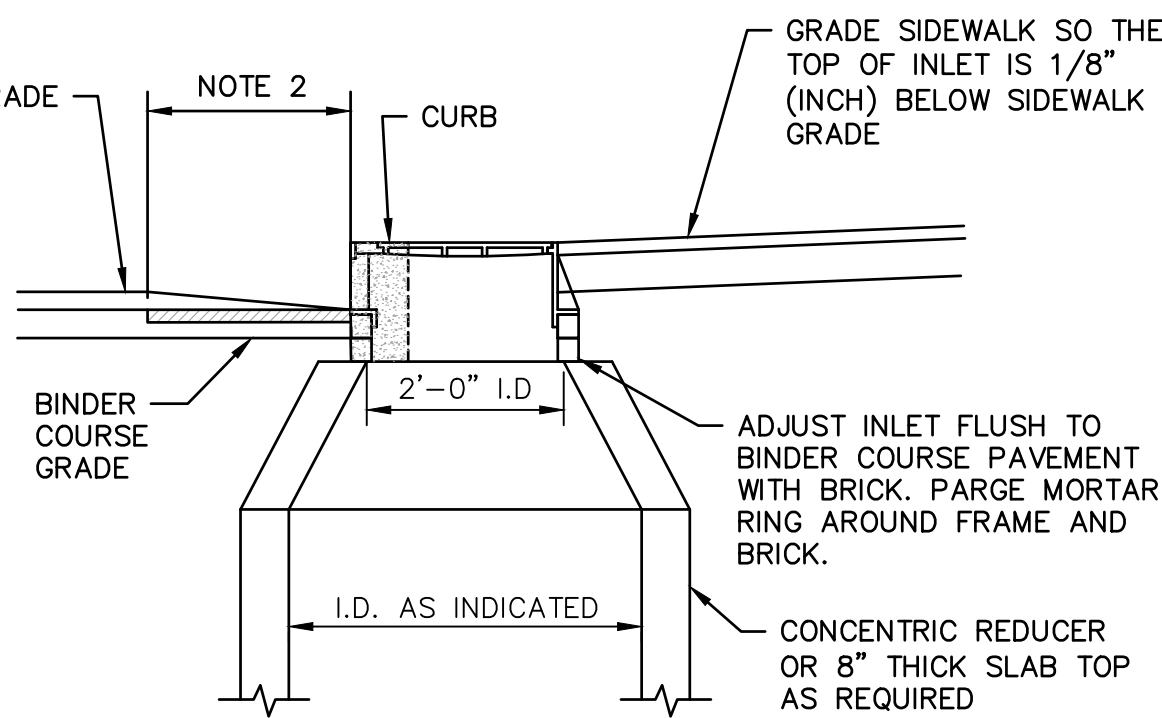
**CATCH BASIN DETAIL**  
NOT TO SCALE

**CATCH BASIN NOTES:**

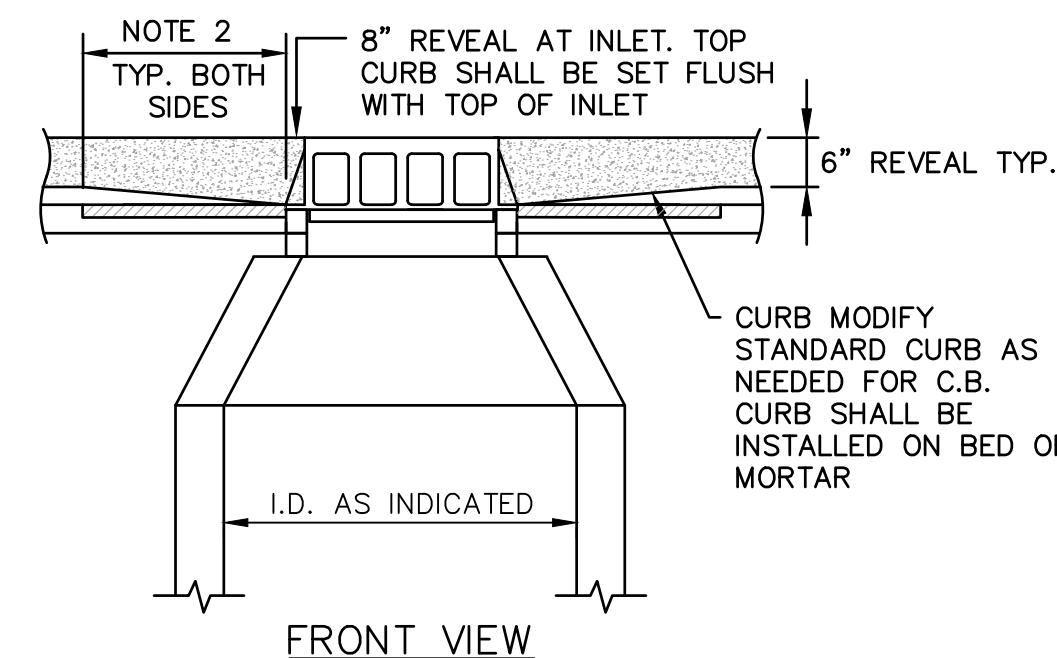
- ENTIRE STRUCTURE SHALL BE CAPABLE OF WITHSTANDING AN H-20 LOAD DETAILS OF REINFORCEMENT TO BE FURNISHED BY MANUFACTURER.
- WHERE SUMP IS OMITTED PROVIDE MASONRY INVERT PER DETAIL  $\frac{2}{U-13}$
- ADJUST FRAME AND GRATE TO BINDER COURSE PAVEMENT WITH BRICK MASONRY (SUBSIDIARY TO STRUCTURE ITEMS). PRIOR TO FINAL WEARING COURSE PAVING RE-ADJUST FRAME AND GRATE TO 1/2" BELOW FINAL PAVEMENT GRADE (ITEM 604.4).



TOP VIEW



SIDE VIEW

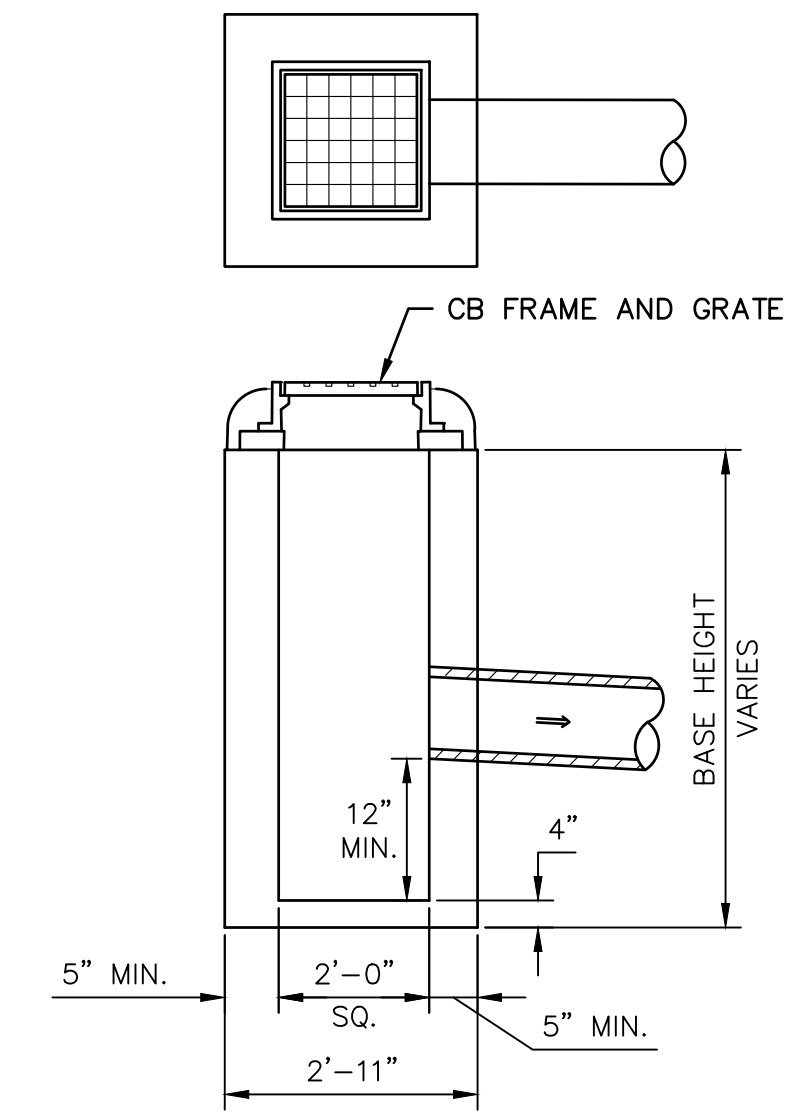


FRONT VIEW

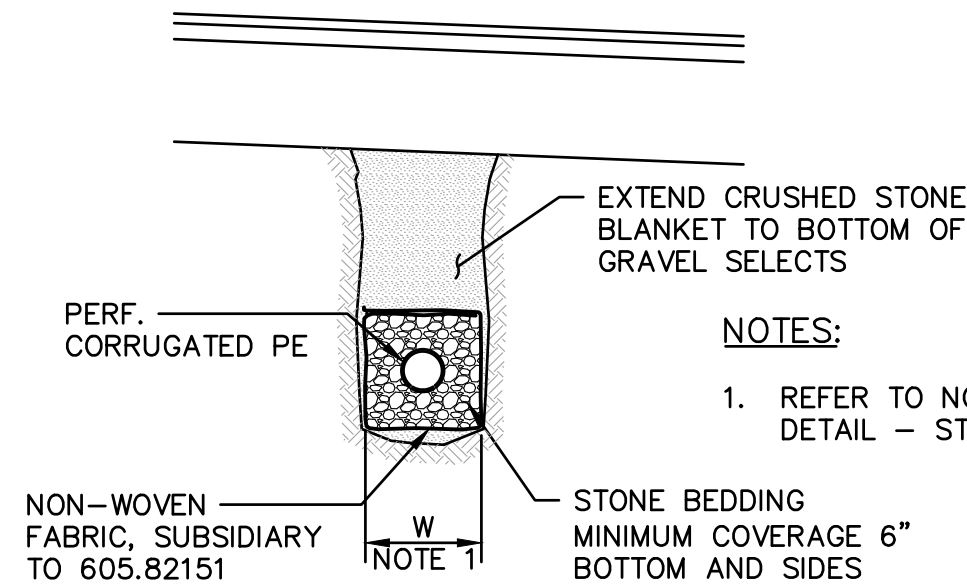
**NOTES:**

- ENTIRE STRUCTURE SHALL BE CAPABLE OF WITHSTANDING AN H-20 LOAD DETAILS OF REINFORCEMENT TO BE FURNISHED BY MANUFACTURER.
- MILL BINDER COURSE PAVEMENT IN FRONT AND TO EACH SIDE OF INLET (2' WIDTH MIN.) TO A DEPTH REQUIRED TO PLACE FINISH COURSE PAVEMENT SO THAT CURB INLET AND CURBING (AT THE INLET) HAS AN 8" REVEAL.

**INLET CATCH BASIN FRAME DETAIL**  
NOT TO SCALE



**DROP INLET DETAIL**  
NOT TO SCALE



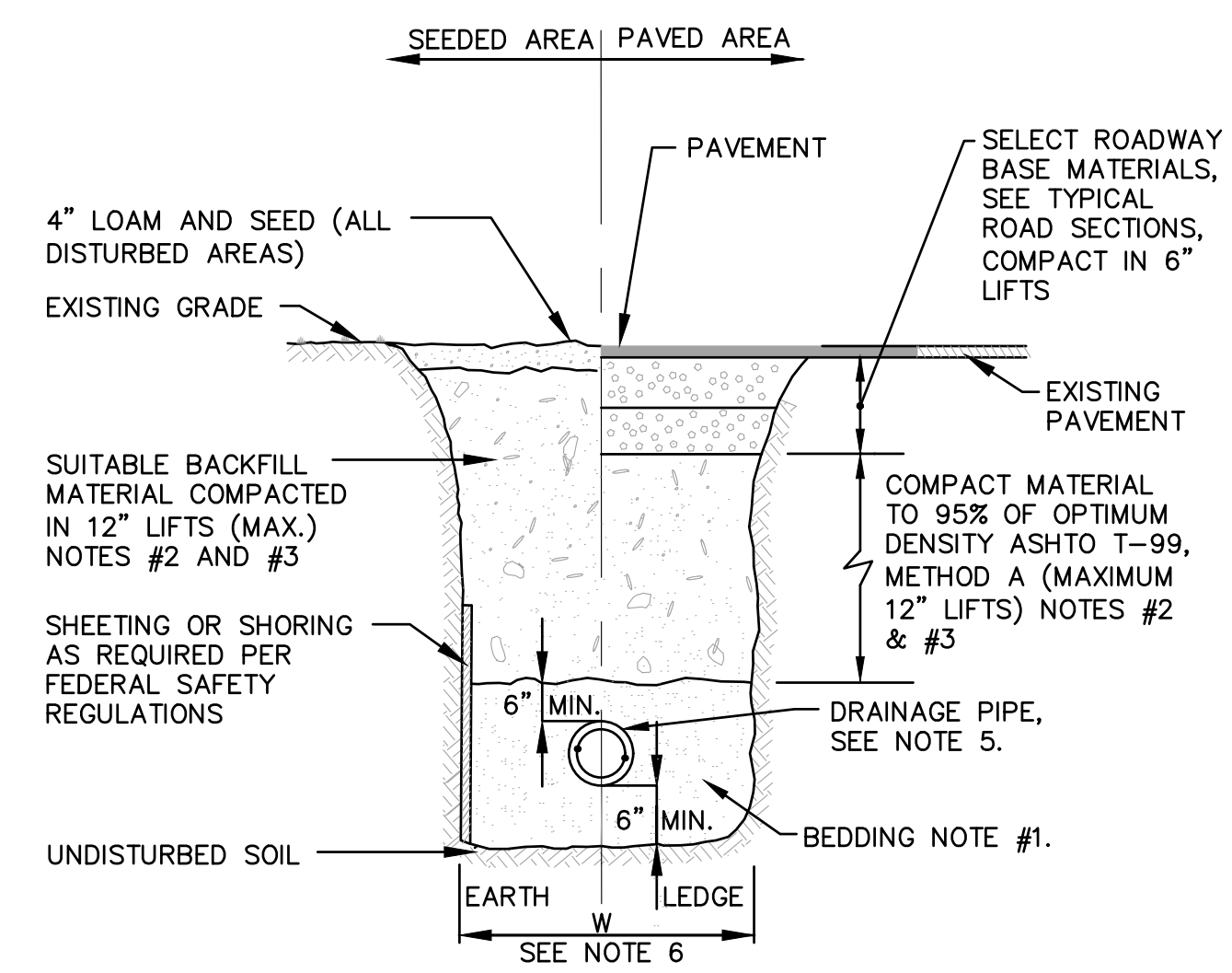
**AGGREGATE UNDERDRAIN**  
NOT TO SCALE

**NOTES:**

- REFER TO NOTE #6 FOR TRENCH DETAIL - STORM DRAIN.

**NOTES:**

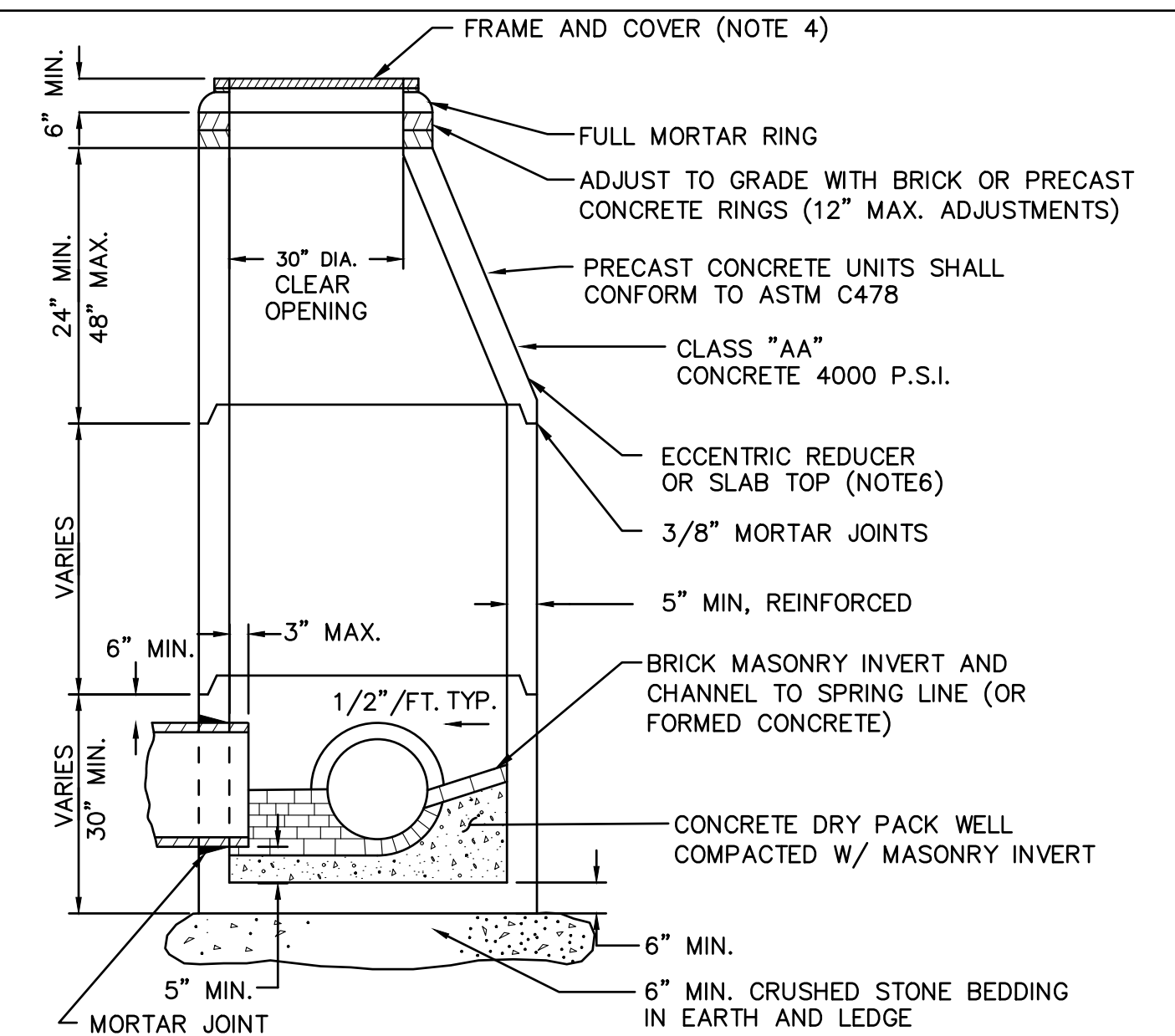
- CONCRETE: 5,000 PSI AT 28 DAYS.
- REINFORCING: 1 LAYER OF 4x4/4/4 W.W.M.
- TO ACCOMMODATE A 24" SQ. C.I. FRAME AND GRATE.



**TRENCH DETAIL - STORM DRAIN**  
NOT TO SCALE

**TRENCH NOTES - STORM DRAIN**

- BEDDING:** BEDDING FOR PIPES SHALL CONSIST OF PREPARING THE BOTTOM OF THE TRENCH TO SUPPORT THE ENTIRE LENGTH OF THE PIPE AT A UNIFORM SLOPE AND ALIGNMENT. CRUSHED GRAVEL (NHDOT ITEM 304.3) OR CRUSHED STONE SHALL BE USED TO BED THE PIPE TO THE ELEVATION SHOWN ON THE DRAWINGS.
- COMPACTION:** ALL BACKFILL SHALL BE COMPACTED AT OR NEAR OPTIMUM MOISTURE CONTENT BY PNEUMATIC TAMPERS, VIBRATORY COMPACTORS OR OTHER APPROVED MEANS. BACKFILL BENEATH PAVED SURFACES SHALL BE COMPACTED TO NOT LESS THAN 95 PERCENT OF AASHTO T99, METHOD C.
- SUITABLE MATERIAL:** IN ROADS, ROAD SHOULDERS, WALKWAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS; PIECES OF PAVEMENT; ORGANIC MATTER; TOP SOIL; ALL WET OR SOFT MUCK, PEAT, OR CLAY; ALL EXCAVATED LEDGE MATERIAL; ROCKS OVER 6 INCHES IN LARGEST DIMENSION; FROZEN EARTH AND ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION. IN SEEDED AREAS, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAM, ROCKS UNDER 12", FROZEN EARTH OR CLAY, IF HE/SHE IS SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE PIPE WILL BE PRESERVED.
- BASE COURSE AND PAVEMENT:** SHALL MEET THE REQUIREMENTS OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES - DIVISIONS 300 AND 400 RESPECTIVELY.
- DRAINAGE PIPE:** PIPE MATERIALS SHALL BE EITHER PVC SDR 35 OR POLYETHYLENE (PE).
- W=MAXIMUM ALLOWABLE TRENCH WIDTH:** FOR ROCK EXCAVATION, FOR ORDERED EXCAVATION BELOW GRADE AND HANDLING OF EXCAVATED CONTAMINATED SOILS. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 36 INCHES. FOR PIPES GREATER THAN 15 INCHES IN NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE OUTSIDE DIAMETER (O.D.)

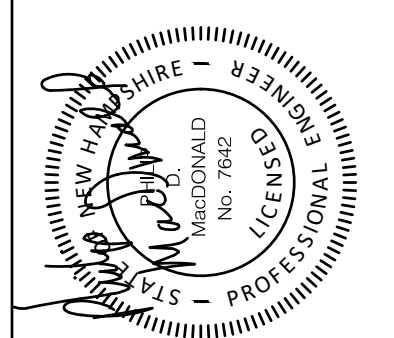
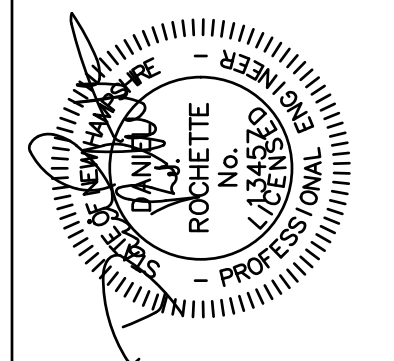


**TYPICAL DRAINAGE MANHOLE**  
NOT TO SCALE

**DRAIN MANHOLE NOTES:**

- BARRELS AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE.
  - PRECAST CONCRETE BARREL SECTIONS, CONES, AND BASES SHALL CONFORM TO ASTM C478.
  - INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT (OR FORMED CONCRETE), CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE INVERT. INVERT BRICKS SHALL BE LAID ON EDGE. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST POSSIBLE TANGENT TO THE CENTER LINE OF THE PIPES. SHELVES SHALL BE CONSTRUCTED TO AN ELEVATION OF 1/2 THE PIPE DIA. AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL.
  - FRAMES AND COVERS: MANHOLE FRAMES AND COVERS SHALL BE HINGED, ERGO XL BY EAST JORDON IRON WORKS, AND PROVIDE A 30-INCH (MIN.) CLEAR OPENING. THE WORD "DRAIN", IN 3-INCH LETTERS SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER.
  - BEDDING:** SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33. STONE SIZE NO. 67.  
100% PASSING 1 INCH SCREEN  
90-100% PASSING 3/4 INCH SCREEN  
20- 55% PASSING 3/8 INCH SCREEN  
0-10% PASSING #4 SIEVE  
0- 5% PASSING #8 SIEVE
- WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, SCREENED GRAVEL OR CRUSHED STONE 1-1/2 INCH TO 1/2 INCH OR USE OF GEOGRID FABRIC (ITEM 1.8B) MAY BE REQUIRED.
- SLAB TOP COVERS: MAY BE APPROVED IN LIEU OF A CONE SECTION, WHEN MANHOLE IS LESS THAN 5 FEET AND FOR LARGE DIAMETER MANHOLES. SLAB TOP COVERS SHALL BE REINFORCED CONCRETE HAVING AN ECCENTRIC ENTRANCE AND CAPABLE OF SUPPORTING H-20 LOADS.

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Checked	EDM		
Approved			
Date	6/29/22		
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Project No.	2705		
Dwg. ID	2705-details		
AS SHOWN			



**UNDERWOOD**  
engineers

25 Vaughan Mall, Portsmouth, N.H. 03801  
Tel. 603-436-6192 Fax. 603-431-4733

**DRAINAGE DETAILS**

ISLINGTON STREET CORRIDOR IMPROVEMENTS  
PHASE 2

CITY OF PORTSMOUTH  
PORTSMOUTH, NEW HAMPSHIRE

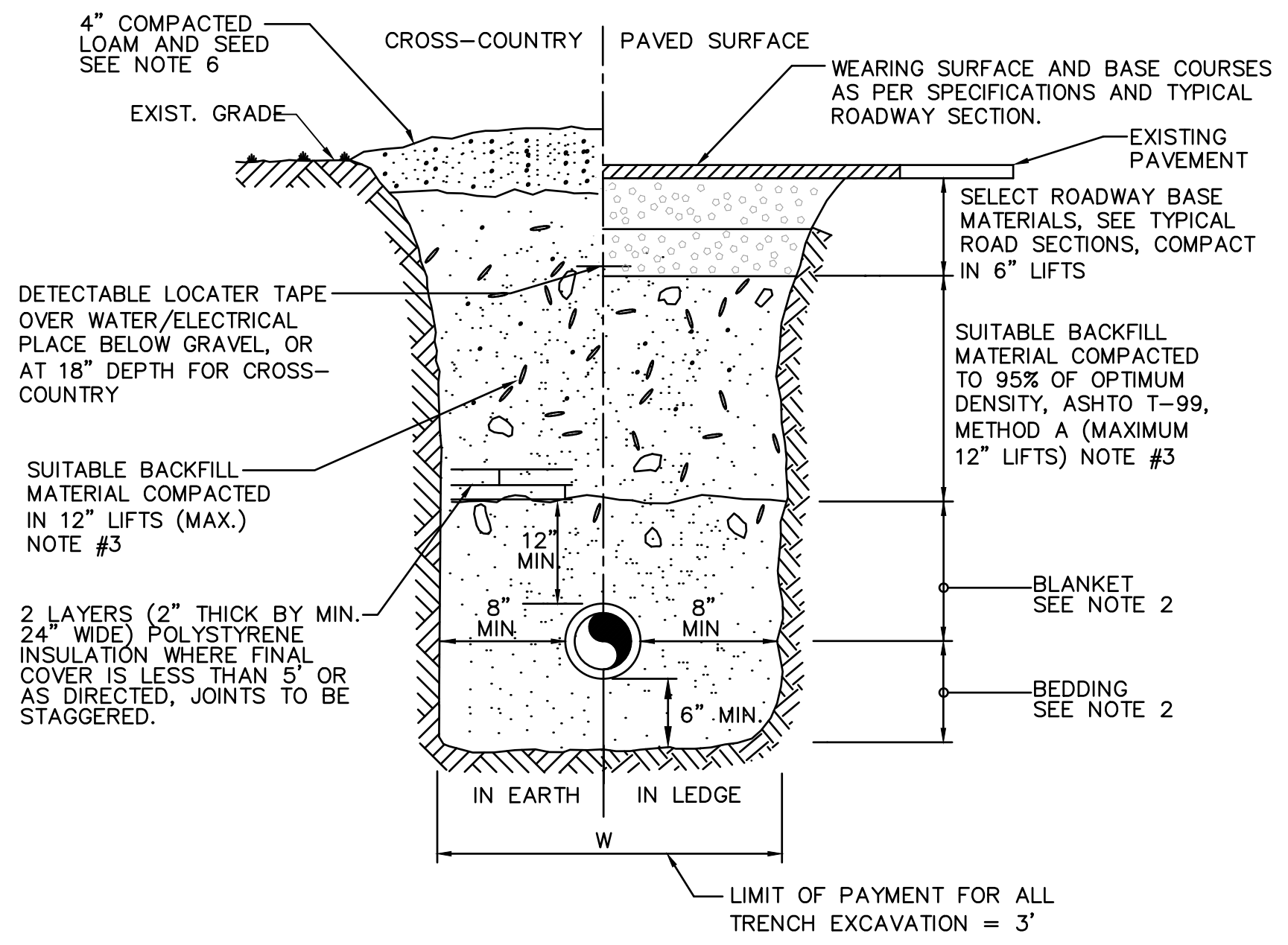
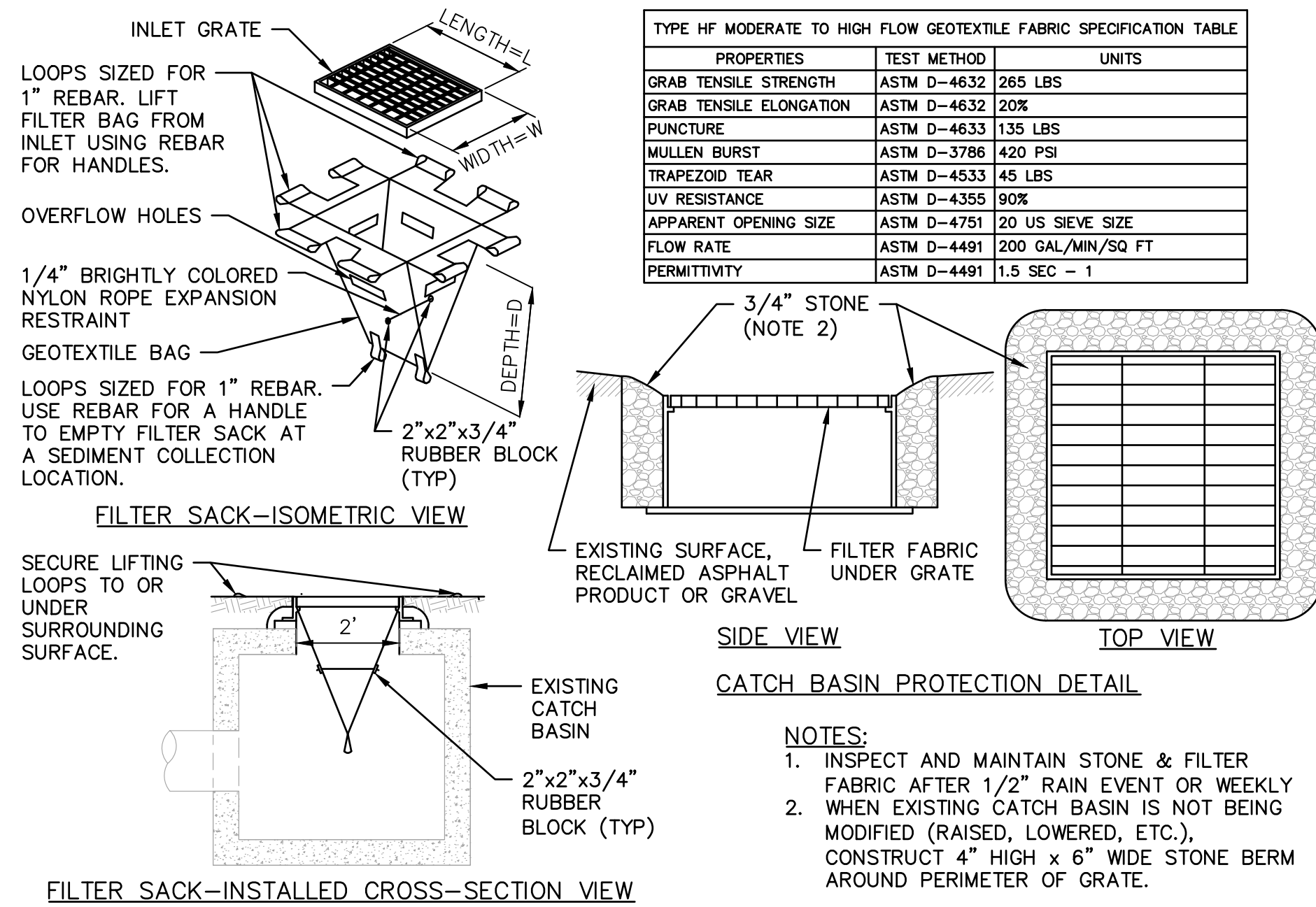
DWG NO	SHEET
D-2	51 OF 56

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**NOTES:**

- ACCEPTED MANUFACTURERS:
  - "SILT SACK" INLET SEDIMENT CONTROL DEVICE BY "ACF ENVIRONMENTAL, INC" 2831 CARDWELL RD., RICHMOND VA 23234, (800)448-3636
  - "DANDY SACK" BY "DANDY PRODUCTS, INC.", P.O. BOX 1980, WESTERVILLE, OH 43086, (800) 591-2284.
- ALTERNATIVE CATCH BASIN INLET PROTECTION MEASURES MAY INCLUDE THE NHDES "BLOCK AND GRAVEL METHOD" PER THE NH STORMWATER MANUAL (VOL. 3).
- EMPTY FILTER SACK WHEN BRIGHTLY COLORED EXPANSION RESTRAINT CAN NO LONGER BE SEEN.
- GEOTEXTILE WILL BE A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS REQUIREMENTS IN THE SPECIFICATIONS TABLE.
- AN OIL ADSORBENT PAD OR PILLOW CAN BE USED WHEN OIL SPILLS ARE A CONCERN.
- INSPECT PER REGULATORY REQUIREMENTS.
- THE WIDTH, "W", OF THE FILTER SACK WILL MATCH THE INSIDE WIDTH OF THE CATCH BASIN FRAME.
- THE DEPTH, "D", OF THE FILTER SACK WILL BE BETWEEN 18 INCHES AND 36 INCHES.
- THE LENGTH, "L", OF THE FILTER SACK WILL MATCH THE INSIDE LENGTH OF THE CATCH BASIN FRAME.

**CATCH BASIN INLET FILTER**  
NOT TO SCALE



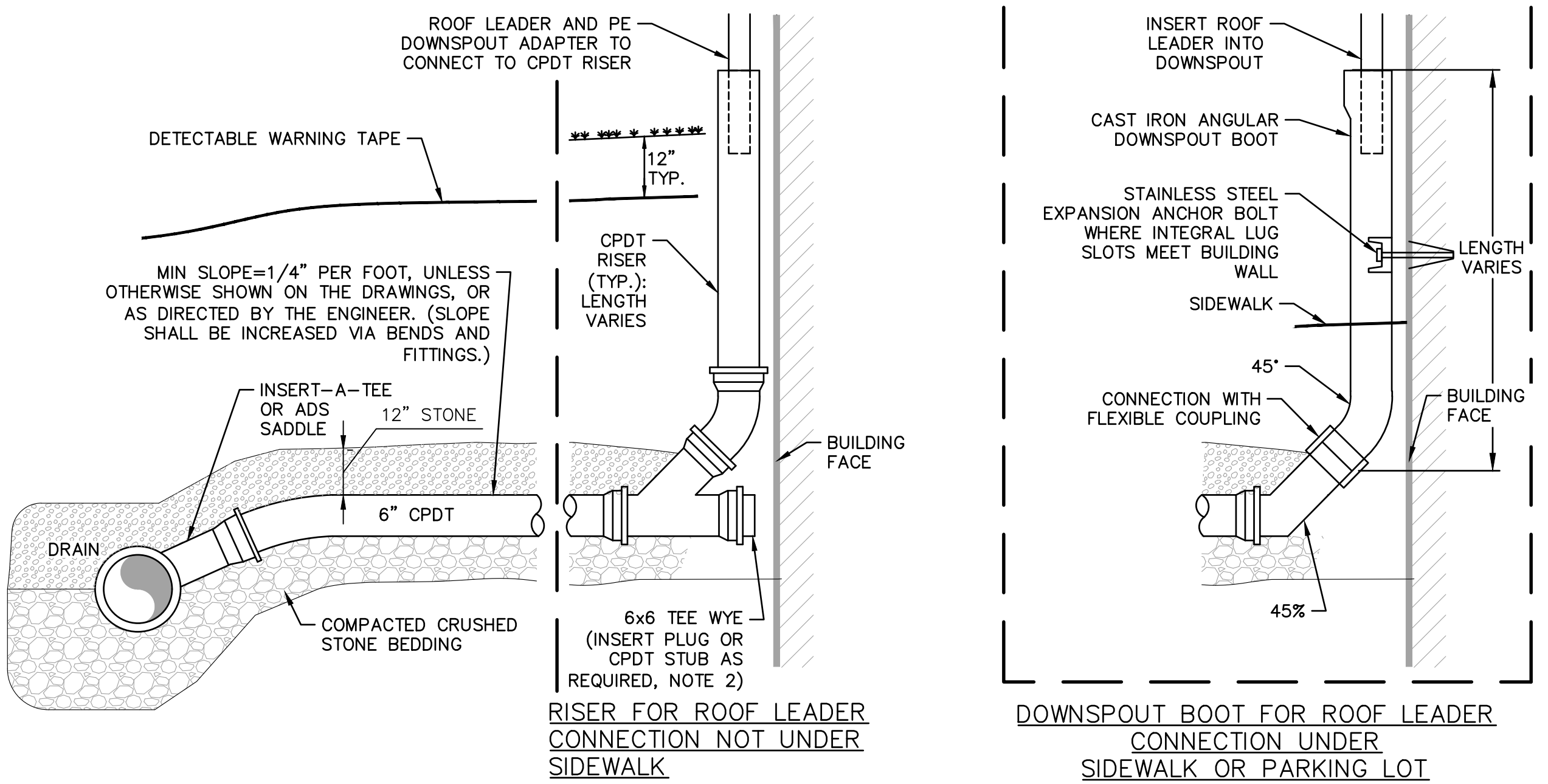
**TYPICAL WATER TRENCH DETAIL**  
NOT TO SCALE

**STANDARD TRENCH NOTES**

- ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE:** BACKFILL AS STATED IN THE TECHNICAL SPECIFICATIONS OR AS SHOWN ON THE DRAWINGS.
  - BEDDING AND BLANKET:** CLEAN SAND FREE FROM ORGANIC MATTER (SECTION 02228). BLANKET MAY BE OMITTED FOR DUCTILE IRON AND REINFORCED CONCRETE PIPE, PROVIDED HOWEVER, THAT NO STONE LARGER THAN 2" IS IN CONTACT WITH THE PIPE.
  - BACKFILL MATERIAL:** IN ROADS, ROAD SHOULDERS, WALKWAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS; PIECES OF PAVEMENT; ORGANIC MATTER; TOP SOIL; ALL WET OR SOFT MUCK, PEAT, OR CLAY; ALL EXCAVATED LEDGE MATERIAL; ALL ROCKS OVER 6 INCHES IN LARGEST DIMENSION; AND ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION.
- IN CROSS-COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAM, MUCK, OR PEAT, IF ENGINEER IS SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE PIPE LINE, FOR MAINTENANCE AND POSSIBLY RECONSTRUCTION, WILL BE PRESERVED.
- COVER DEPTH:** MINIMUM COVER DEPTH OF WATER PIPE SHALL BE 5 FEET UNLESS OTHERWISE SHOWN OR DIRECTED. PIPE COVER VARIES WHERE UTILITY CROSSINGS EXIST. (SEE PROFILE DWGS P-1 TO P-5 FOR PLANNED UTILITY CROSSINGS).
- FOR CROSS COUNTRY CONSTRUCTION,** BACKFILL OR FILL SHALL BE MOUND TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
  - DRIVEWAYS:** CRUSHED GRAVEL IN DRIVEWAYS SHALL MATCH EXISTING WITH A MINIMUM OF 6". EXISTING GRAVEL SHALL BE REMOVED AND REPLACED AND SHALL NOT BE MEASURED FOR PAYMENT.

**NOTES:**

- PROVIDE ROOF LEADER CONNECTIONS AT EXISTING DOWNSPOUTS. AT ADJACENT BUILDING CORNERS, TWO DOWNSPOUTS MAY BE CONNECTED TO ONE LATERAL USING APPROPRIATE WYE (AND OTHER) FITTING(S).
- EACH PROPERTY SHALL BE PROVIDED A DRAIN LATERAL TO FACILITATE PRIVATE SUMP CONNECTIONS WHERE ROOF LEADER CONNECTIONS ARE PROVIDED, ONE PER PROPERTY WILL INCLUDE A 6" CPDT STUB FROM THE TEE-WYE FOR THE PURPOSED OF SUMP PUMP CONNECTIONS.
- DRAIN SERVICE LATERALS WILL BE PROVIDED AT EACH DOWNSPOUT OR AS DIRECTED BY THE ENGINEER. ONE SERVICE PROVIDED FOR DOWNSPOUTS WILL INCLUDE A 6" STUB FOR EACH PROPERTY TO FACILITATE PRIVATE SUMP PUMP/DRAIN SERVICE CONNECTIONS.
- CPDT DOWNSPOUT RISER PIPE AND FITTINGS ARE INCIDENTAL TO ITEM 603.82206 AND WILL NOT BE CONSIDERED FOR PAYMENT.
- SERVICE TEES SHALL BE ORIENTED @ 10:30 OR 1:30 (TYP). UNDER NO CIRCUMSTANCES SHALL SERVICES BE LOCATED BETWEEN 3:00 AND 9:00.



**DRAIN LATERAL & ROOF LEADER CONNECTION**  
NOT TO SCALE

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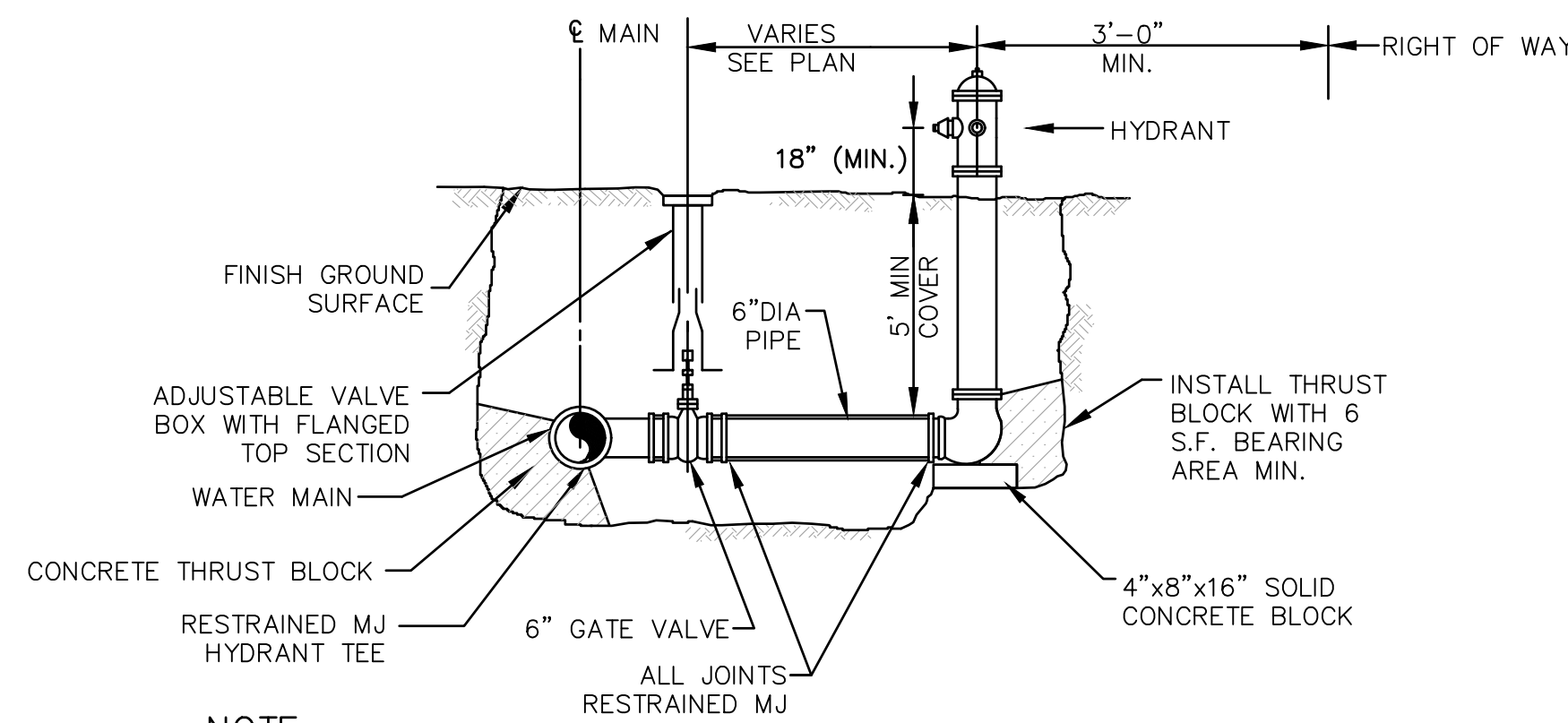
Drawn/Chk	RMG	DR	Checked	EDM	Approved	6/29/22	Book No.	2705	Project No.	2705-detailed	Dwg. ID	AS SHOWN	Scale	
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**UNDERWOOD engineers**  
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DRAINAGE DETAILS & WATER TRENCH  
ISLINGTON STREET CORRIDOR IMPROVEMENTS PHASE 2  
CITY OF PORTSMOUTH  
PORTSMOUTH, NEW HAMPSHIRE

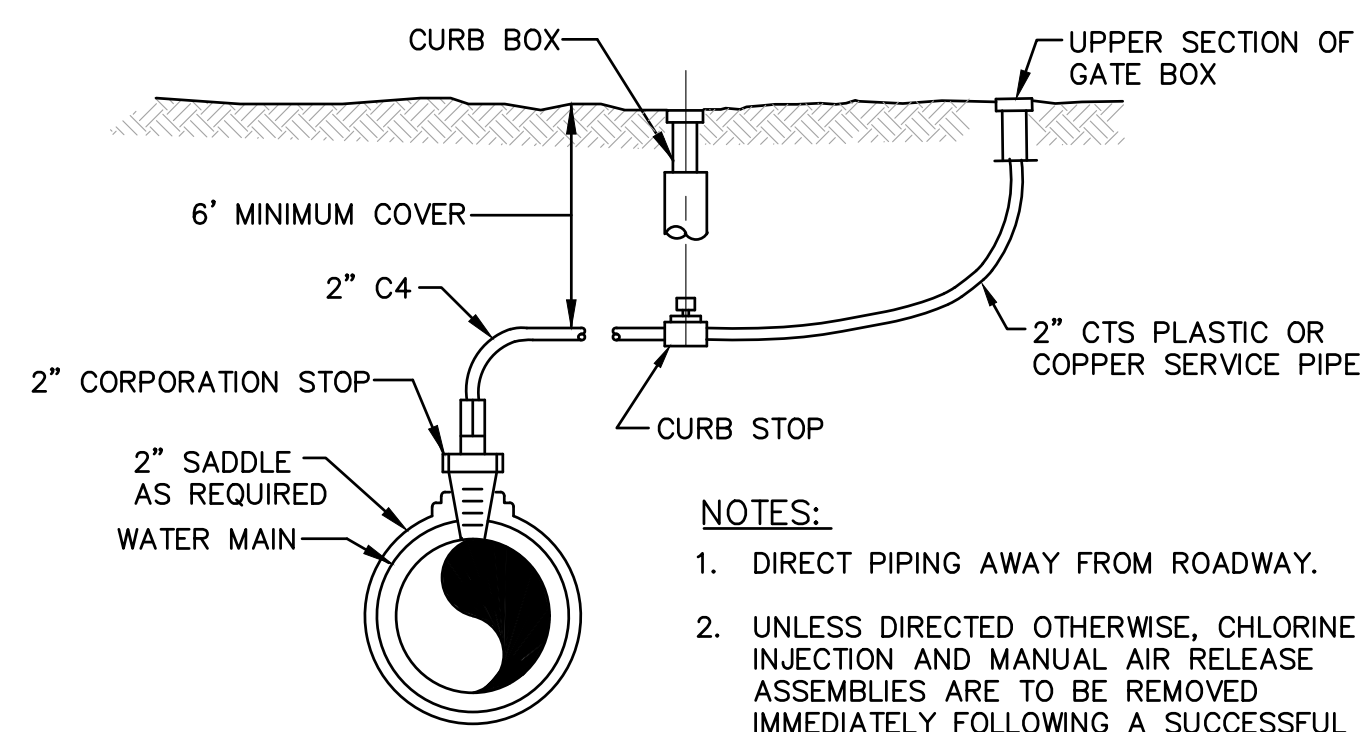
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**NOTE:**

- HYDRANTS SHALL BE DELIVERED FROM FACTORY W/O DRAIN HOLES.
- HYDRANT ASSEMBLY INCLUDES MJ HYDRANT TEE.
- HYDRANT SHALL BE KENNEDY K-81A GUARDIAN, PER CITY OF PORTSMOUTH STANDARDS.
- LOCATE HYDRANTS A MINIMUM OF 18" BEHIND CURBING UNLESS OTHERWISE DIRECTED. REVIEW HYDRANT LOCATIONS WITH PROJECT REPRESENTATIVE PRIOR TO WATER MAIN INSTALLATIONS.

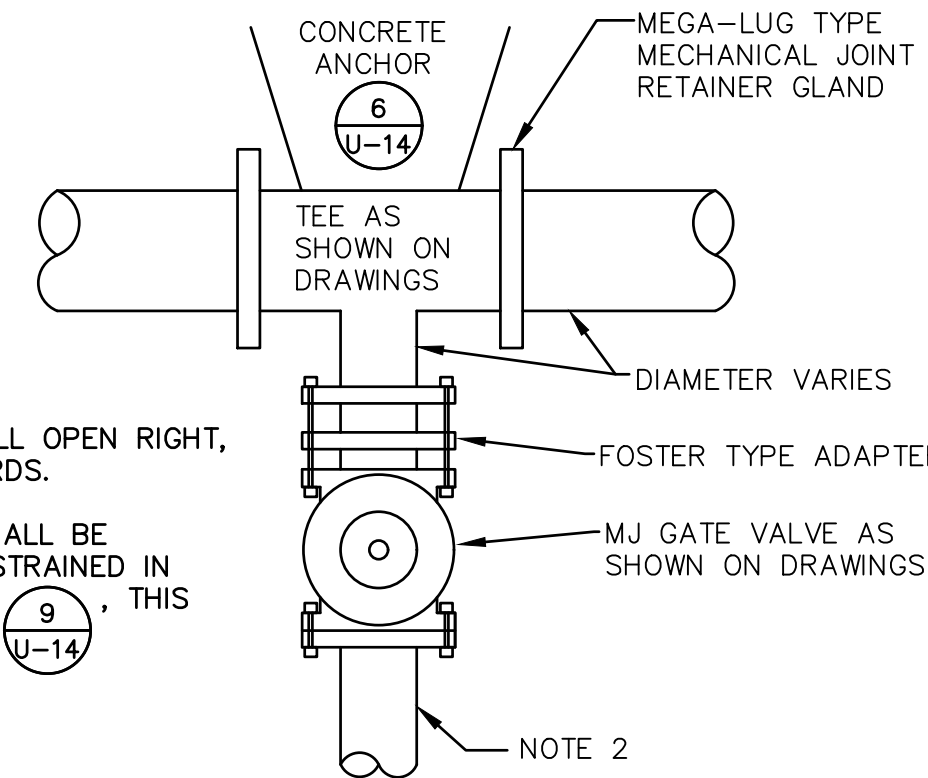
**TYPICAL HYDRANT ASSEMBLY SECTION**  
NOT TO SCALE



**NOTES:**

- DIRECT PIPING AWAY FROM ROADWAY.
- UNLESS DIRECTED OTHERWISE, CHLORINE INJECTION AND MANUAL AIR RELEASE ASSEMBLIES ARE TO BE REMOVED IMMEDIATELY FOLLOWING A SUCCESSFUL BACTERIA TEST. LEAVE THE CORPORATION STOP AND 12" LENGTH OF TUBING (WITH A CRIMPED END) IN PLACE.

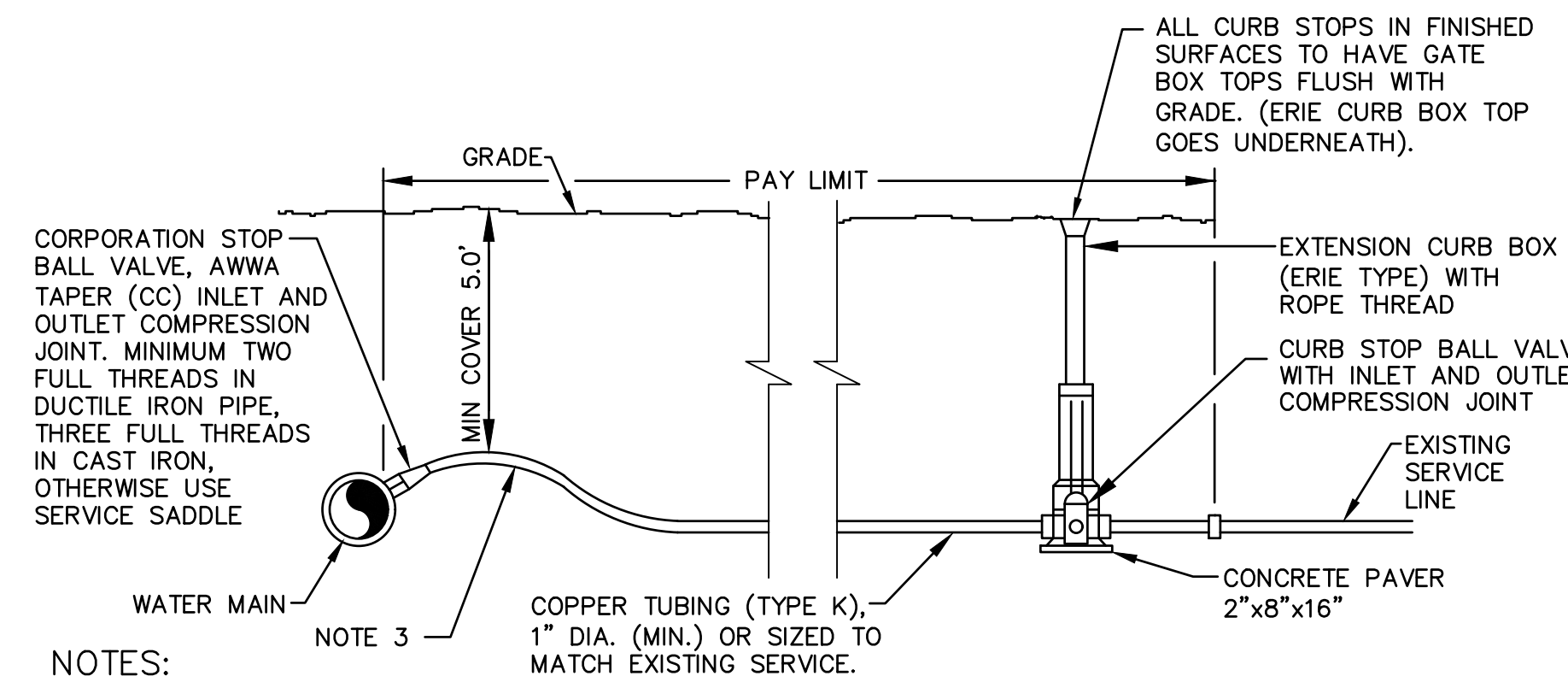
**TEMPORARY BLOW-OFF TAP ASSEMBLY**  
NOT TO SCALE



**NOTE:**

- GATE VALVES SHALL OPEN RIGHT, PER CITY STANDARDS.
- BRANCH PIPING SHALL BE MECHANICALLY RESTRAINED IN ACCORDANCE WITH THIS SHEET

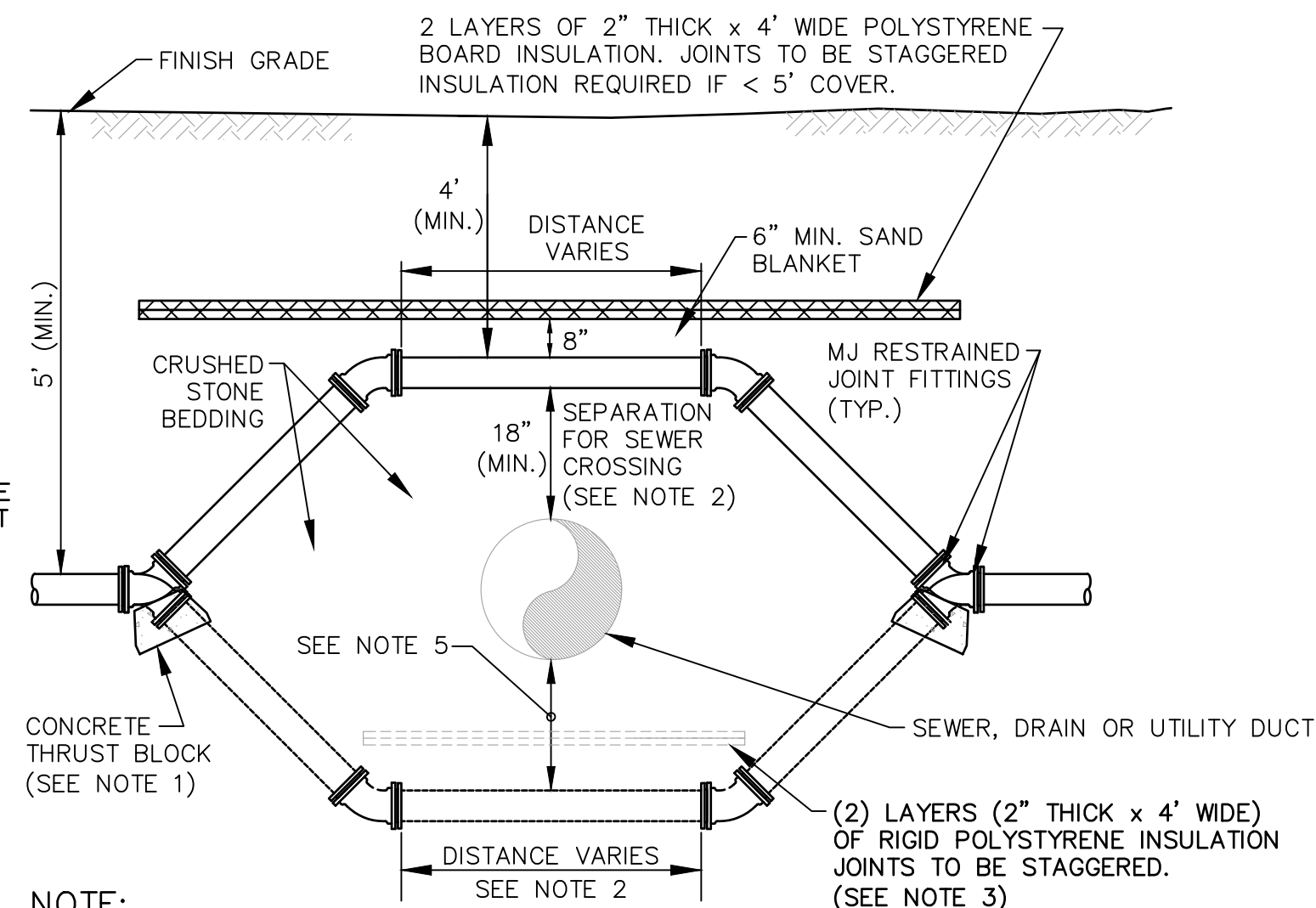
**TEE & GATE VALVE ASSEMBLY DETAIL (TYP.)**  
NOT TO SCALE



**NOTES:**

- PROVIDE NEW LINE USING CONTINUOUS LENGTHS OF COPPER. NO COUPLING ALLOWED IN ROADWAY WITHOUT APPROVAL OF ENGINEER.
- TAPS FOR CORPORATION STOPS TO BE MADE AT APPROX. 2:00 AND 10:00.
- PROVIDE FOR SERVICE LINE CONTRACTION AND EXPANSION BY INSTALLING "S" IN SERVICE LINE NEAR MAIN.
- IF SERVICE IS INSTALLED WITH LESS THAN 5' COVER, INSULATE OVER LINE.
- REMOVE EXISTING CURB STOP (SALVAGE AS IDENTIFIED IN SECT. 01611).
- CONNECT CURB STOP TO EXISTING SERVICE LINE AT PROPERTY LINE OR AT LOCATION APPROVED BY THE ENGINEER (NO COUPLING WITHOUT APPROVAL OF ENGINEER) AFTER PRESSURE TESTING AND DISINFECTION.
- SHUT OFF EXISTING CORPORATION AND REMOVE OR ABANDON EXISTING SERVICE LINE.
- CURB BOX SHALL BE SET IN THE GRASS AREA BETWEEN CURB AND SIDEWALK UNLESS DIRECTED OTHERWISE.
- SEE SECTION 02642 OF THE PROJECT MANUAL TO IDENTIFY WHERE SERVICE SADDLES ARE REQUIRED.
- MAINTAIN 18" SEPARATION BETWEEN THE NEW WATER SERVICE AND THE NEW OR EXISTING SEWER MAIN (WATER SHALL BE OVER SEWER).

**TYPICAL SERVICE CONNECTION**  
NOT TO SCALE

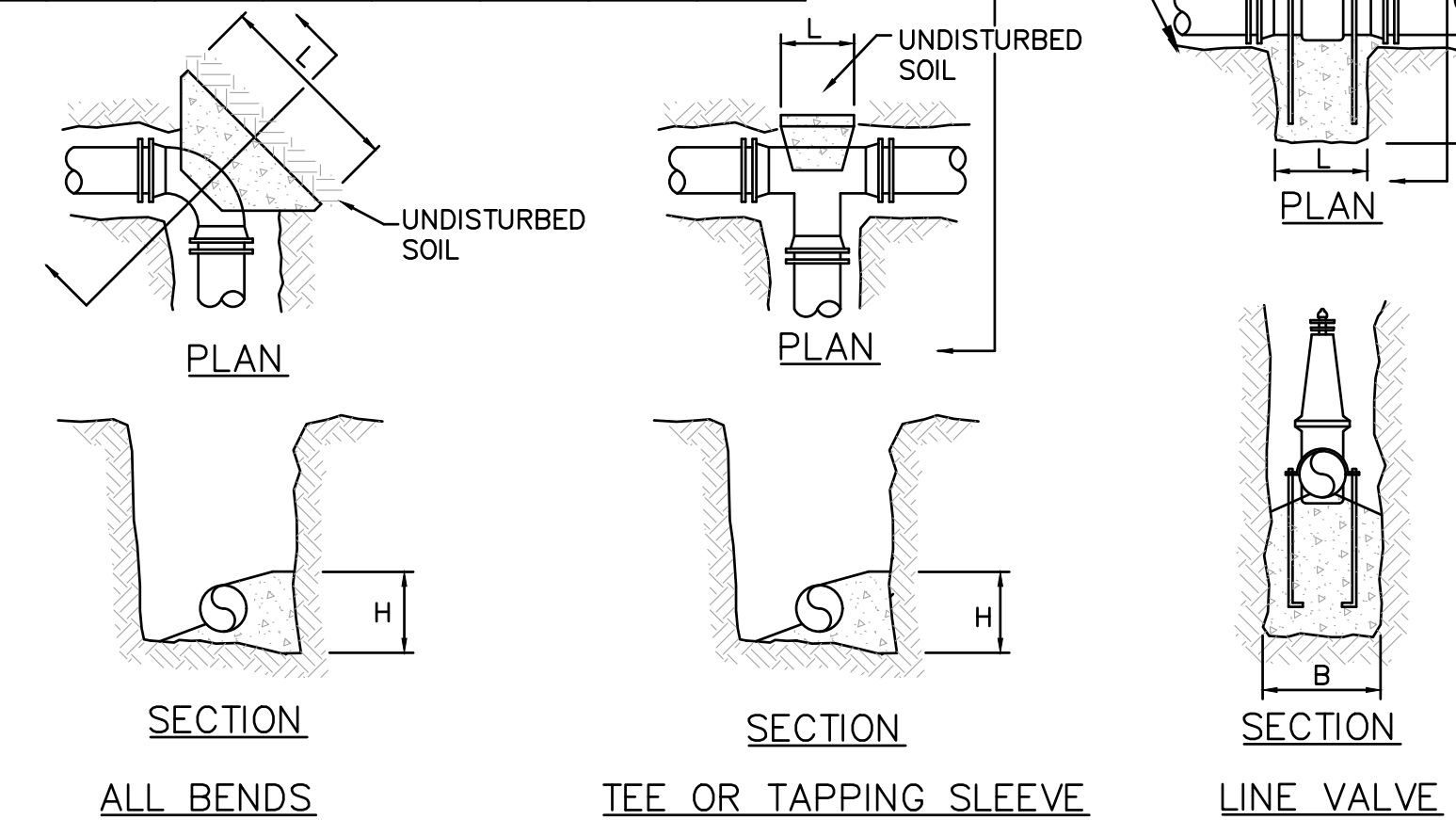


**NOTE:**

- INSTALL (4) FOUR 45° MJ BENDS WITH RESTRAINED JOINT FITTINGS.
- VERTICAL SEPARATION DEPTH BETWEEN WATER AND SEWER SHALL BE AT LEAST 18", WITH WATER ABOVE SEWER, PER NHDES ENV-Wq 704.12. VERTICAL SEPARATION OF LESS THAN 18" ALLOWED ONLY WITH WAIVER FROM NHDES. CENTER CROSSING PIPE BETWEEN BELLS. SEWER PIPE JOINT SHALL BE A MINIMUM OF 6 FT. HORIZONTALLY FROM THE WATER MAIN.
- PROVIDE A MINIMUM OF 8" SEPARATION FOR DRAIN CROSSINGS. PROVIDE INSULATION IF DRAIN CROSSES OVER WATER MAIN.
- PROVIDE 6" MINIMUM SEPARATION FOR OTHER UTILITY CROSSINGS. IF ADDITIONAL DEPTH IS 1' OR LESS FROM NORMAL DEPTH, ADDITIONAL DEPTH MAY BE ACHIEVED BY USING PIPE JOINT DEFLECTIONS PER CONTRACTOR RECOMMENDATION. IF ADDITIONAL DEPTH FROM NORMAL EXCEEDS 1', ADDITIONAL DEPTH WILL BE ACHIEVED USING BENDS AS SHOWN.
- IF CONSTRUCTION OF WATER MAIN UNDER SEWER MAIN IS UNAVOIDABLE, SEWER MAIN SHALL BE CONSTRUCTED OF C900 PVC PIPE FROM MANHOLE TO MANHOLE.

**WATER MAIN CONFLICT - CROSSING DETAIL**  
NOT TO SCALE

PIPE SIZE INCHES	MINIMUM CONCRETE ANCHOR DIMENSIONS							
	BENDS, TEES AND LINE VALVES AT 250 PSI							
	TEE OR PLUG FT.		ALL BENDS FT.		ALL LINE VALVES FT.			PIPE SIZE INCHES
H	L	H	L	H	L	B		
6	1.5	3.0	2.0	3.5	1.5	3.0	2.5	6
8	2.0	4.0	2.5	5.0	2.0	4.0	3.0	8
10	2.5	5.0	3.0	6.0	3.0	4.0	3.0	10
12	3.0	6.0	3.0	8.0	3.0	5.0	4.0	12
16	3.0	6.5	3.0	10.0	3.0	4.5	4.0	16



**CONCRETE ANCHORS**  
NOT TO SCALE

**HORIZONTAL BENDS:**

Nominal Pipe Diameter	Bend Angle			
	90°	45°	22.5°	11.25°
4"	6'	3'	2'	1'
6"	9'	4'	2'	2'
8"	11'	5'	3'	2'
10"	13'	6'	3'	2'
12"	16'	7'	3'	2'
16"	20'	9'	4'	2'

**REDUCERS:**

Nom. Diameter of Large Pipe	Nominal Diameter of Small Pipe (Note 4)			
	4"	6"	8"	10"
8"	17'	10'	-	-
10"	23'	17'	10'	-
12"	29'	24'	18'	10'
16"	39'	36'	31'	28'

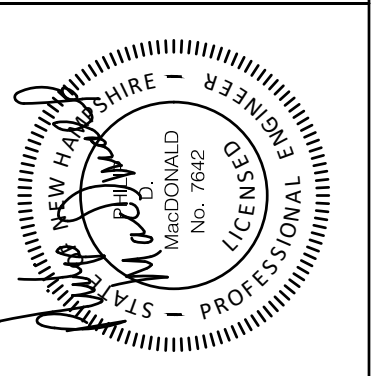
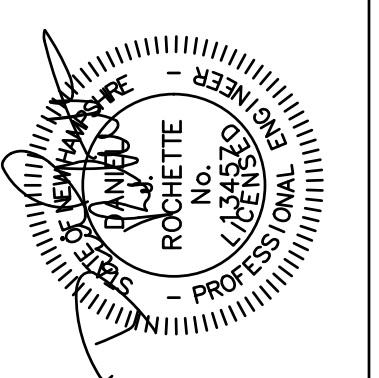
**DEAD ENDS:**

Nom. Pipe Diameter	Restrained Length (ft)
4"	13'
6"	18'
8"	23'
10"	28'
12"	33'
16"	43'

**MECHANICAL JOINT RESTRAINT**  
NOT TO SCALE

BASIS: SOIL BEARING CAPACITY OF 2000 PSF AND 5 FEET COVER IN GRANULAR SOIL. HEIGHT OF BLOCK MUST BE LESS THAN 1/2 DEPTH OF TRENCH. 6 MIL THICK POLYETHYLENE SHALL BE PLACED AROUND FITTINGS PRIOR TO CONCRETE PLACEMENT. USE FOR HORIZONTAL OR DOWNWARD THRUST ONLY.

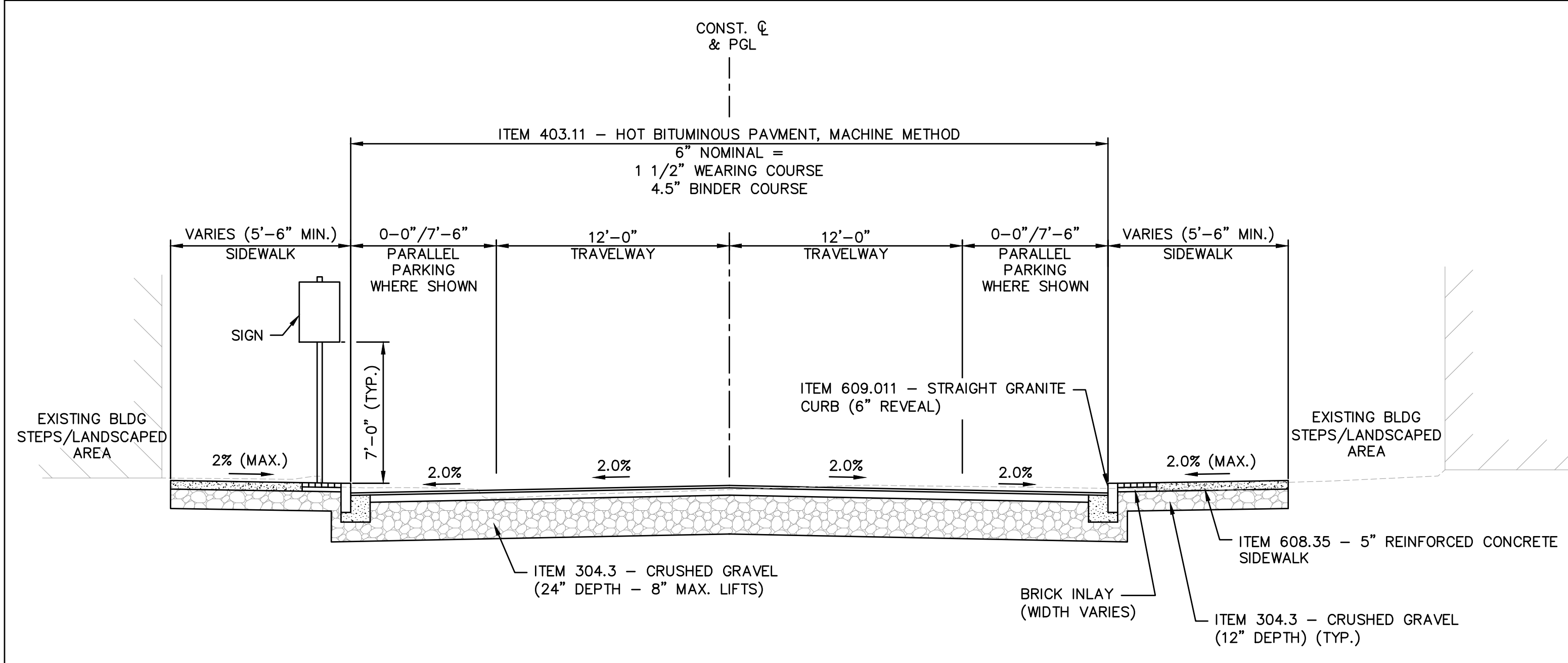
ISSUE FOR	APPROVAL	DATE	BY
REVISIONS <td></td> <td></td> <td></td>			
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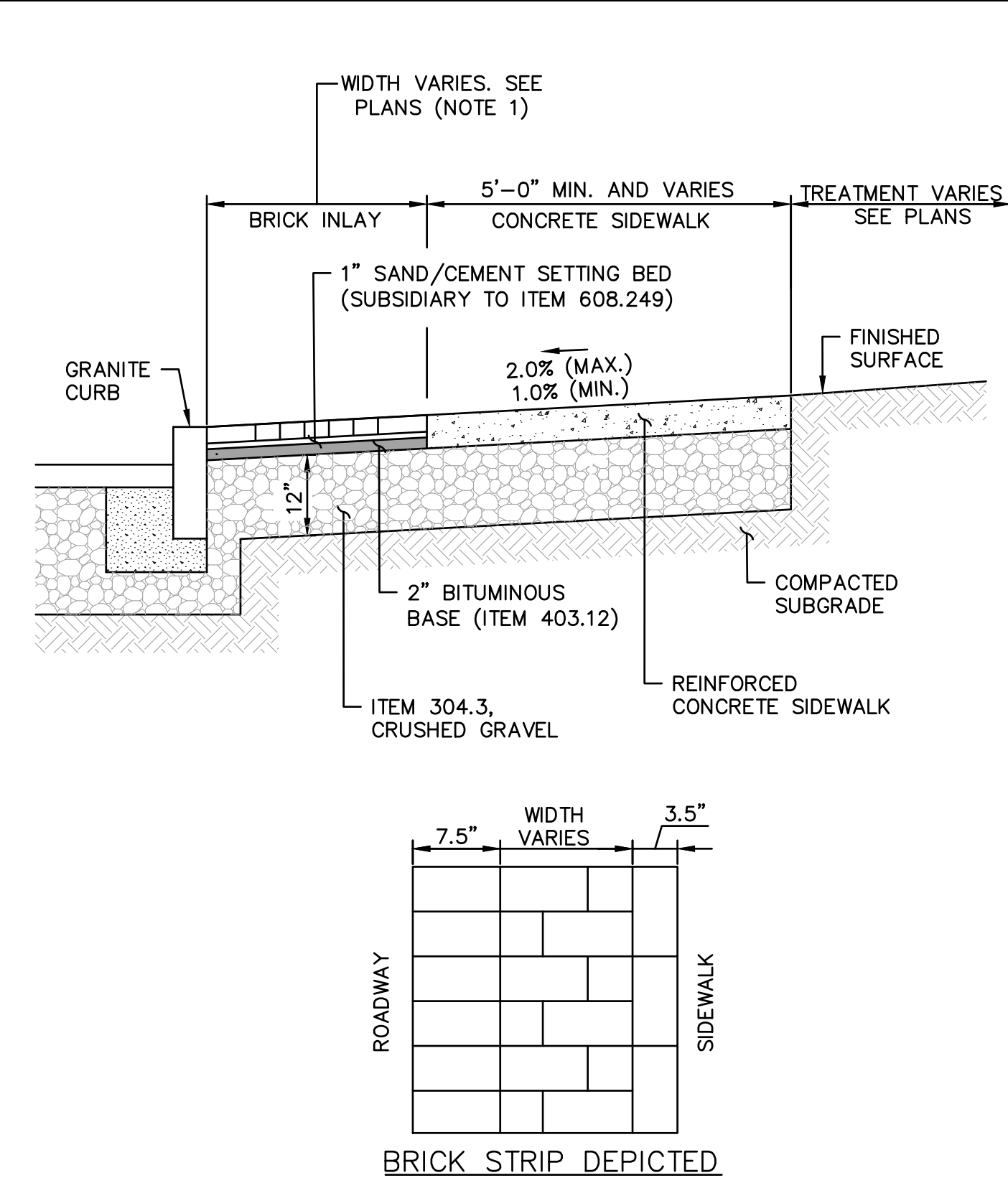
**UNDERWOOD**  
engineers

25 Vaughan Mall, Portsmouth, N.H. 03801  
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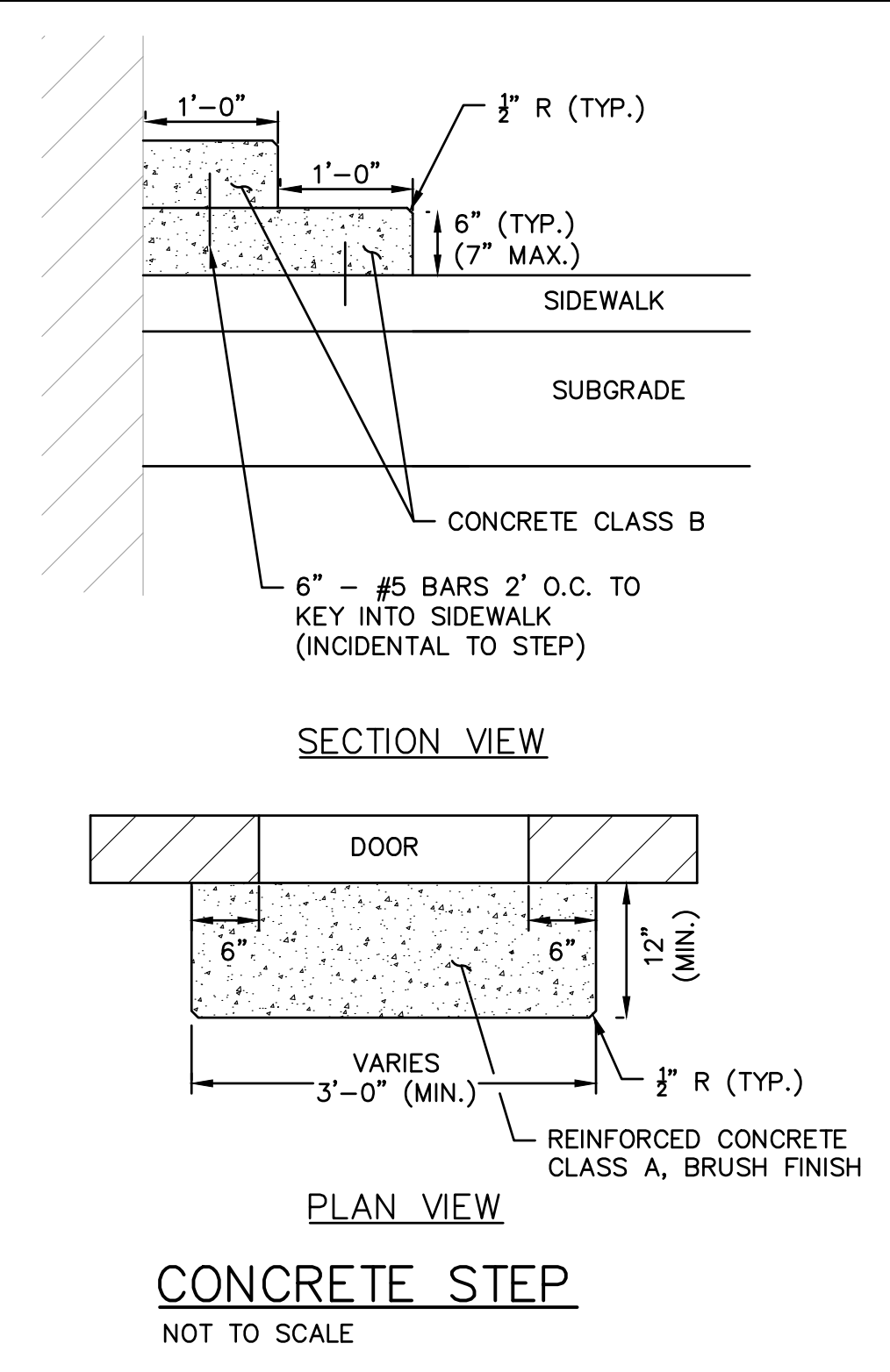
STANDARD WATER DETAILS  
ISLINGTON STREET CORRIDOR IMPROVEMENTS  
PHASE 2  
CITY OF PORTSMOUTH  
PORTSMOUTH, NEW HAMPSHIRE



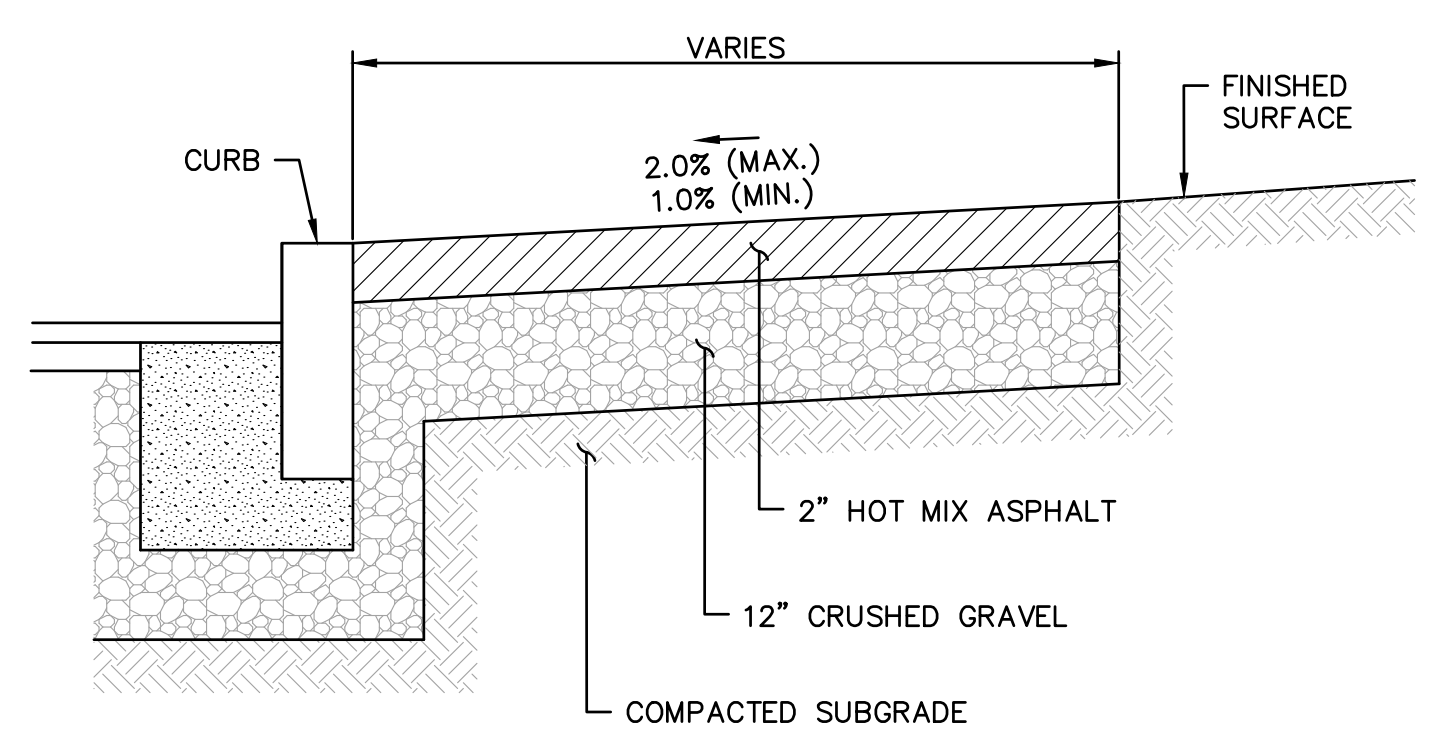
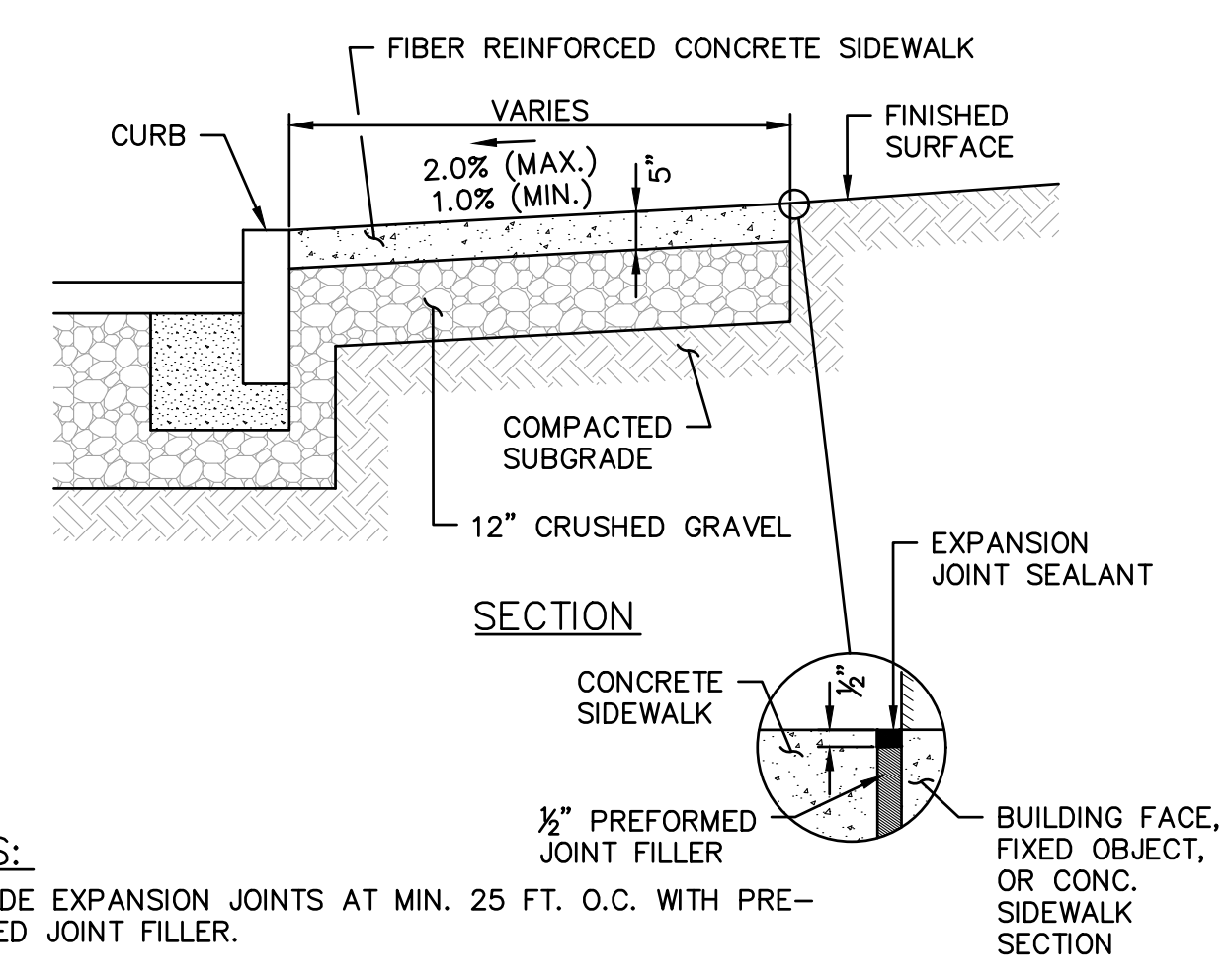
**ISLINGTON STREET TYPICAL SECTION WITH PARKING**  
NOT TO SCALE



**TYPICAL CONCRETE SIDEWALK WITH BRICK INLAY**  
NOT TO SCALE



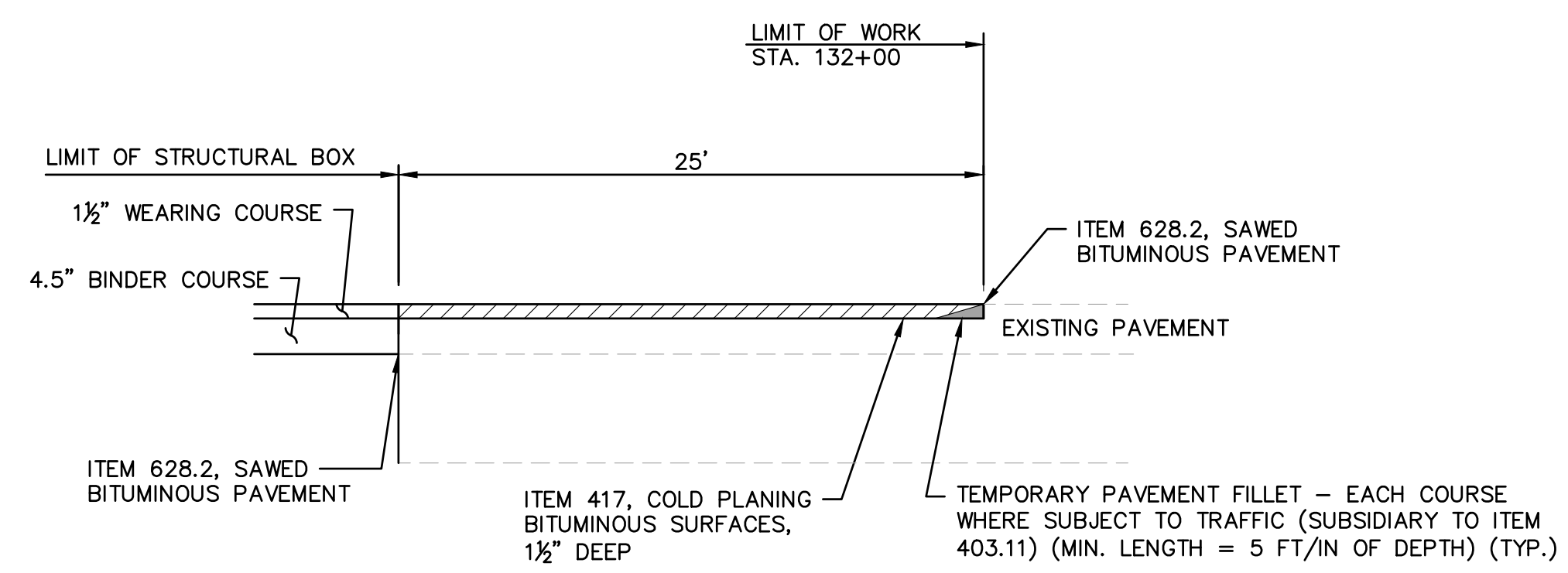
**CONCRETE STEP**  
NOT TO SCALE



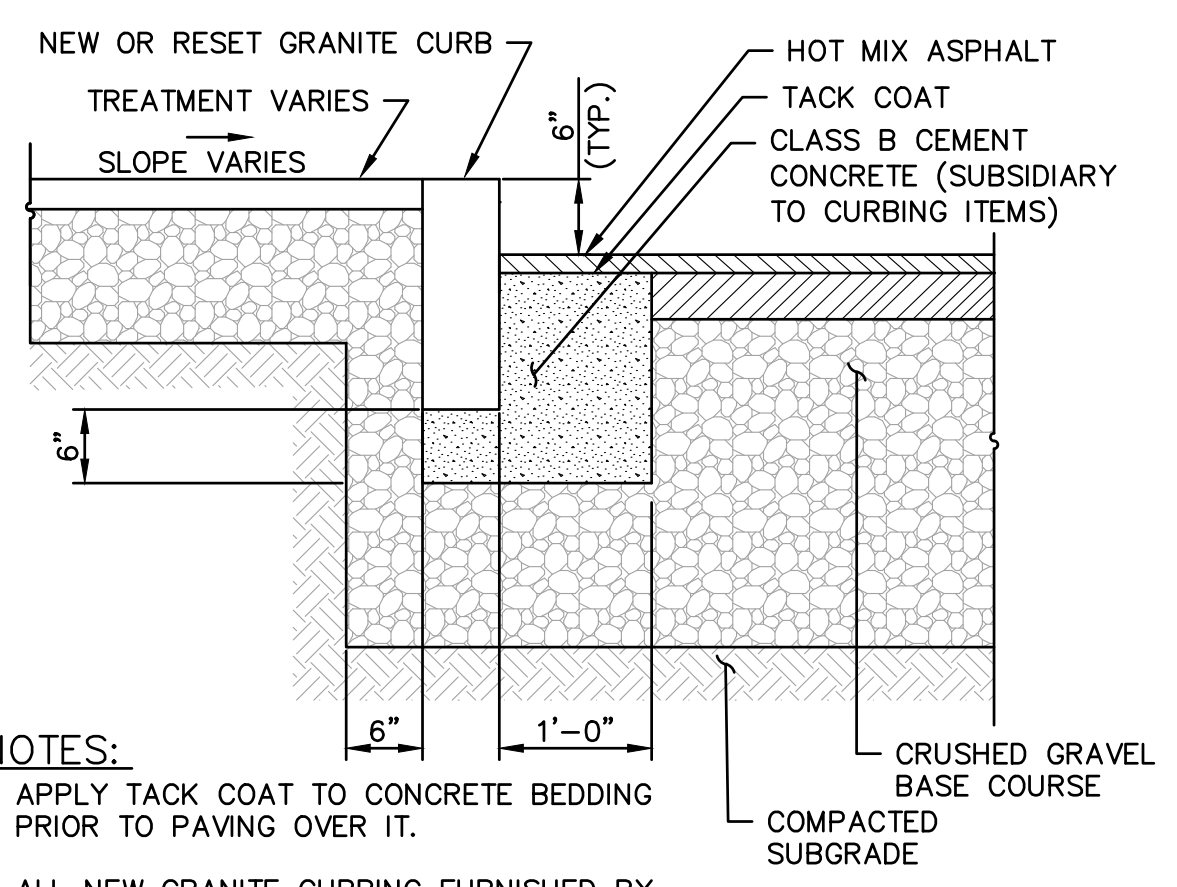
- NOTES:**
1. PROVIDE EXPANSION JOINTS AT MIN. 25 FT. O.C. WITH PREFORMED JOINT FILLER.
  2. PROVIDE TOOLED CONTROL JOINTS AT 5' O.C.
  3. PROVIDE BROOM FINISH IN DIRECTION PERPENDICULAR TO CURB.
  4. INSTALL 2-FOOT LONG #5 SMOOTH STEEL REBARS, GREASED, SPACED 2' APART AT ALL CONCRETE SIDEWALK CONSTRUCTION JOINTS (SUBSIDIARY TO SIDEWALK ITEM). SET BARS MID DEPTH IN CONCRETE.

**REINFORCED CONCRETE SIDEWALK**  
NOT TO SCALE (ITEM 608.35)

**2\"/>**

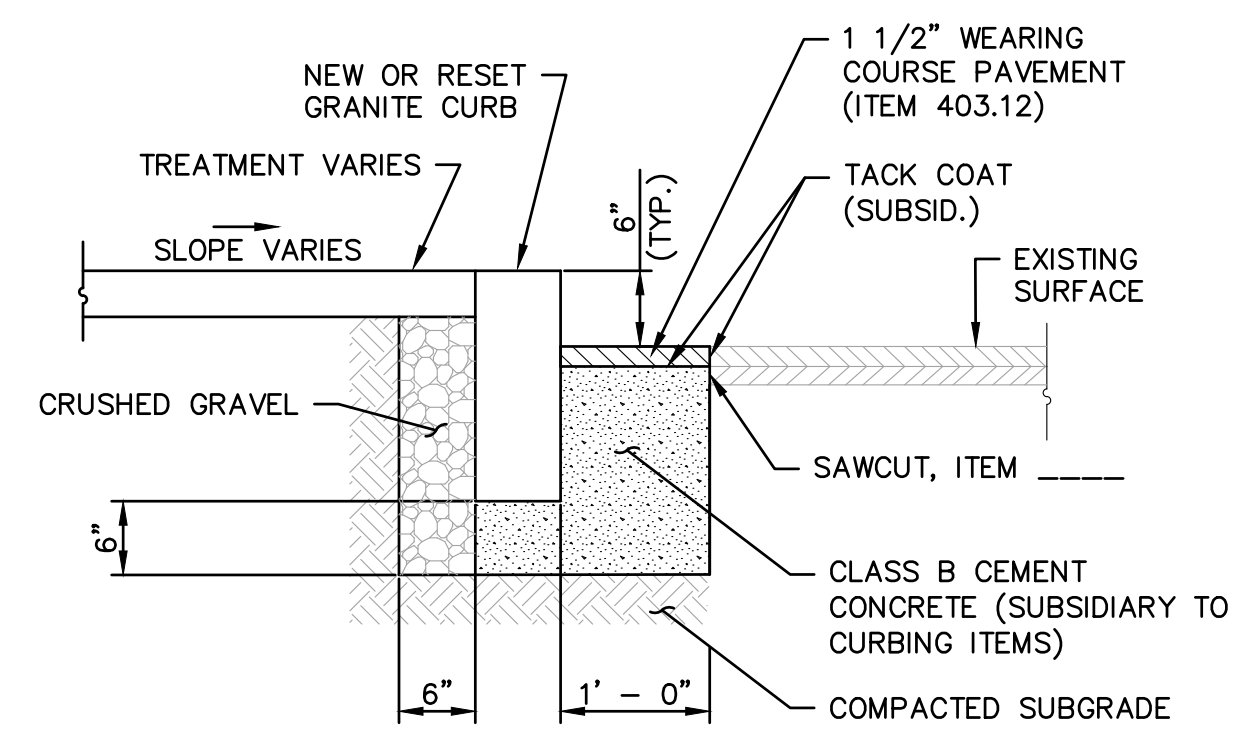


**OVERLAY PAVEMENT MATCH**  
NOT TO SCALE



- NOTES:**
1. APPLY TACK COAT TO CONCRETE BEDDING PRIOR TO PAVING OVER IT.
  2. ALL NEW GRANITE CURBING FURNISHED BY CONTRACTOR SHALL BE 6\"/>

**VERTICAL GRANITE CURB**  
NOT TO SCALE (ITEM 609.01, 609.02, & 609.5)



- NOTES:**
1. APPLY TACK COAT TO CONCRETE BEDDING PRIOR TO PAVING OVER IT.
  2. ALL NEW GRANITE CURBING FURNISHED BY CONTRACTOR SHALL BE 6\"/>

**VERTICAL GRANITE CURB SET IN EXISTING PAVEMENT**  
NOT TO SCALE (ITEM 609.01, 609.02, & 609.5)

ISSUE FOR	APPROVAL	DATE	BY	REVISIONS
APPROVAL	By D.A.R.	6/29/22	D.A.R.	
CONSTRUCTION	By			
RECORD	By			
DWG	By			

DWG NO	SHEET
D-5	54 OF 56

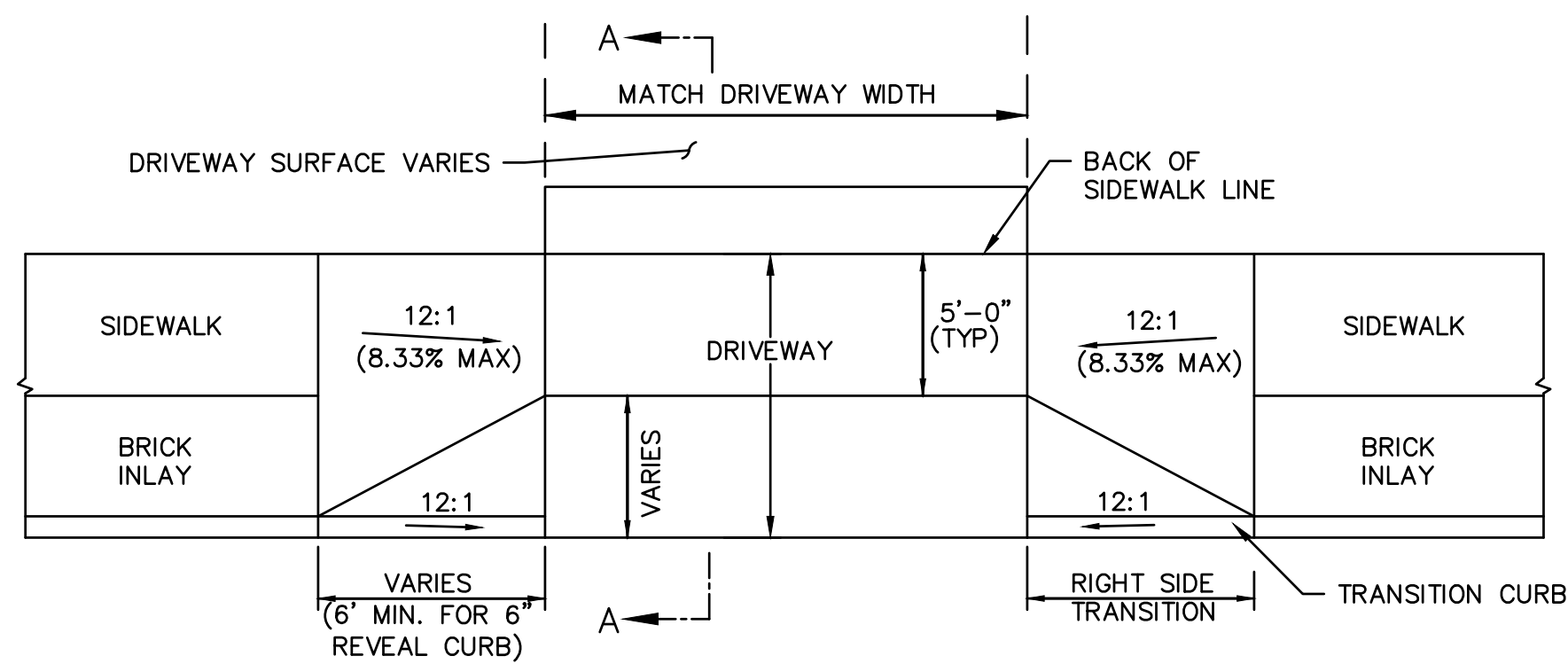
  

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	D.A.R.			6/29/22	2705					

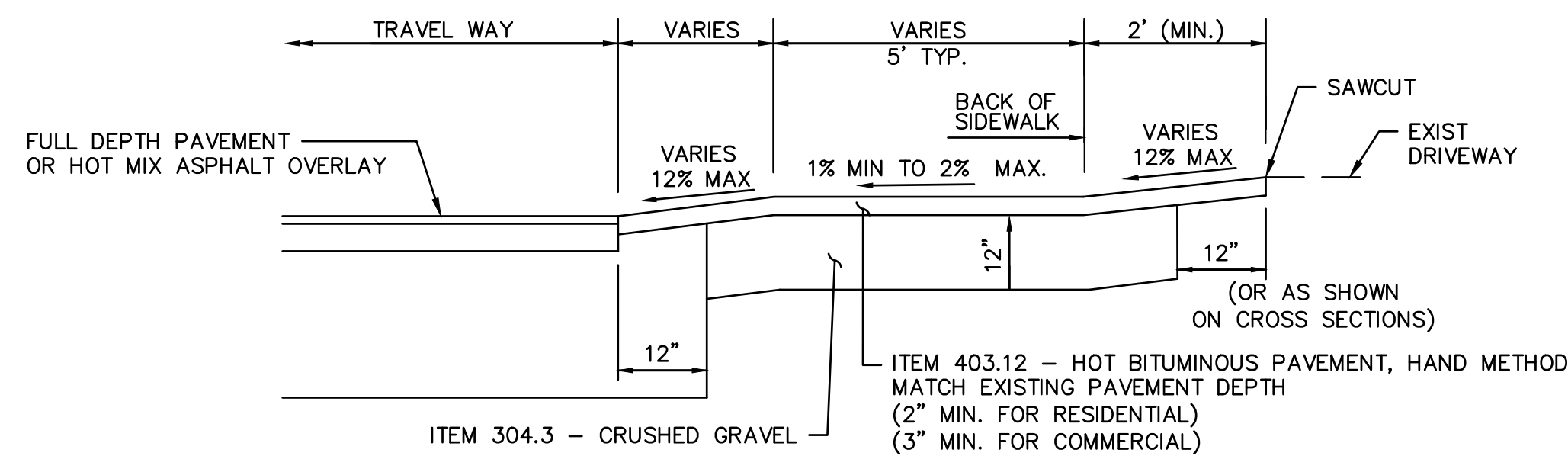
  

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**ISLINGTON STREET CORRIDOR IMPROVEMENTS PHASE 2**  
**CITY OF PORTSMOUTH**  
**PORTSMOUTH, NEW HAMPSHIRE**

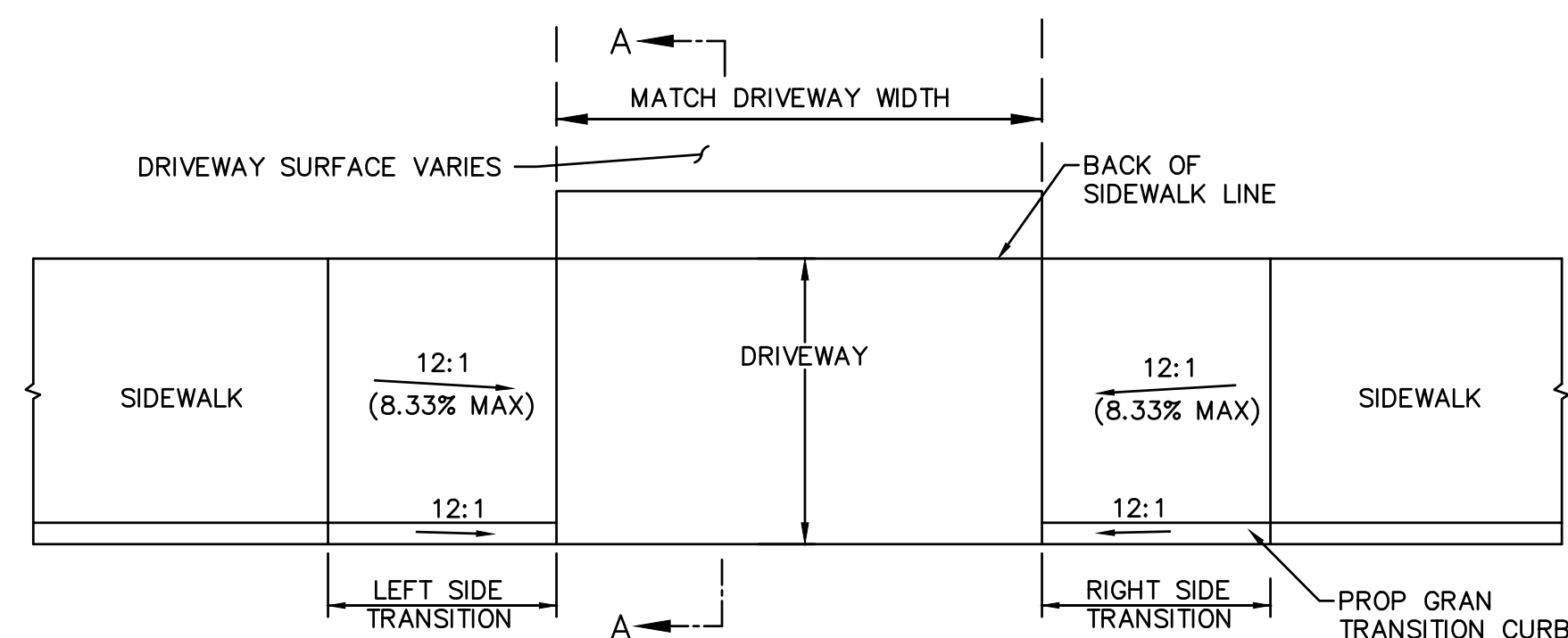


PLAN

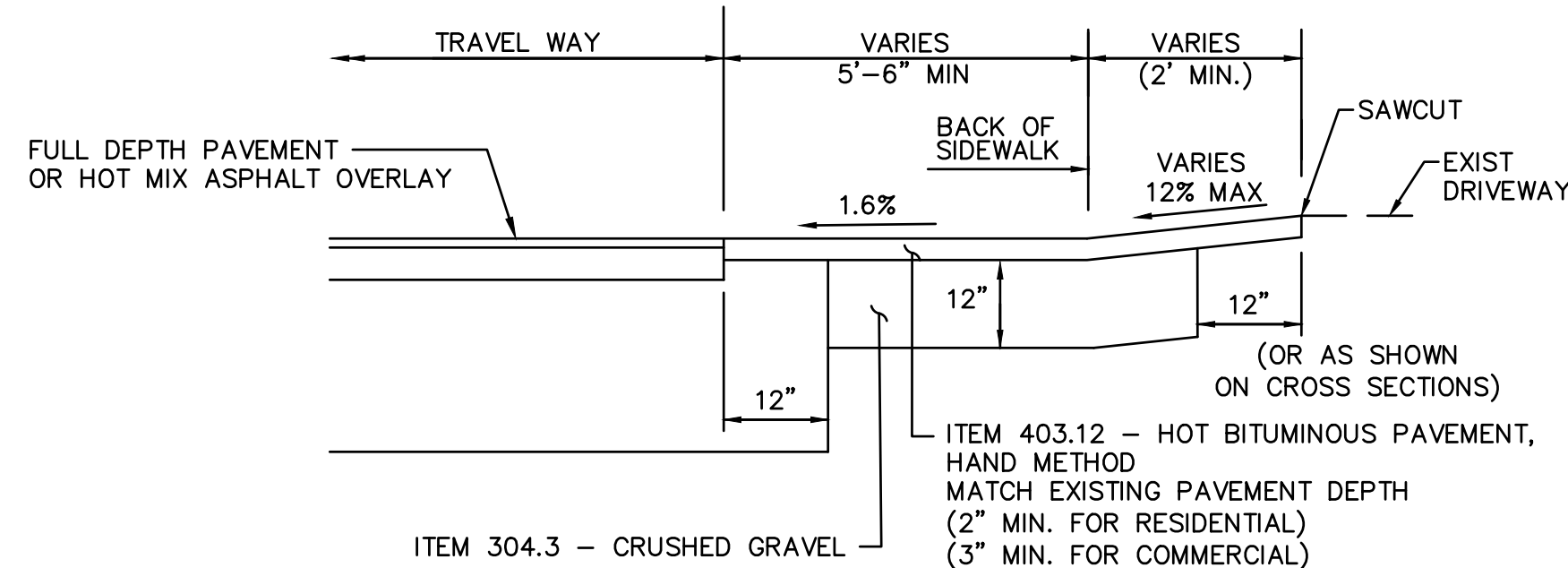


SECTION A-A

TYPICAL BITUMINOUS DRIVEWAY W/  
SIDEWALK & GRANITE TRANSITION CURB - DETAIL A  
NOT TO SCALE

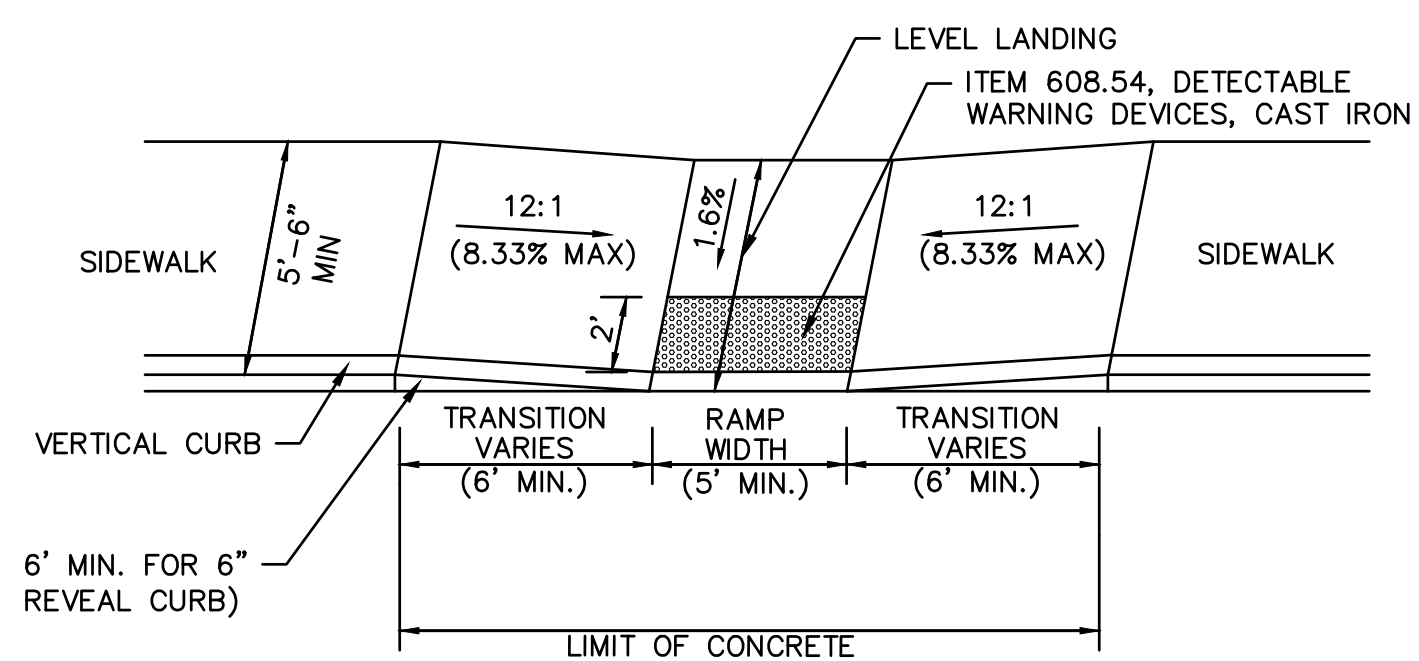


PLAN



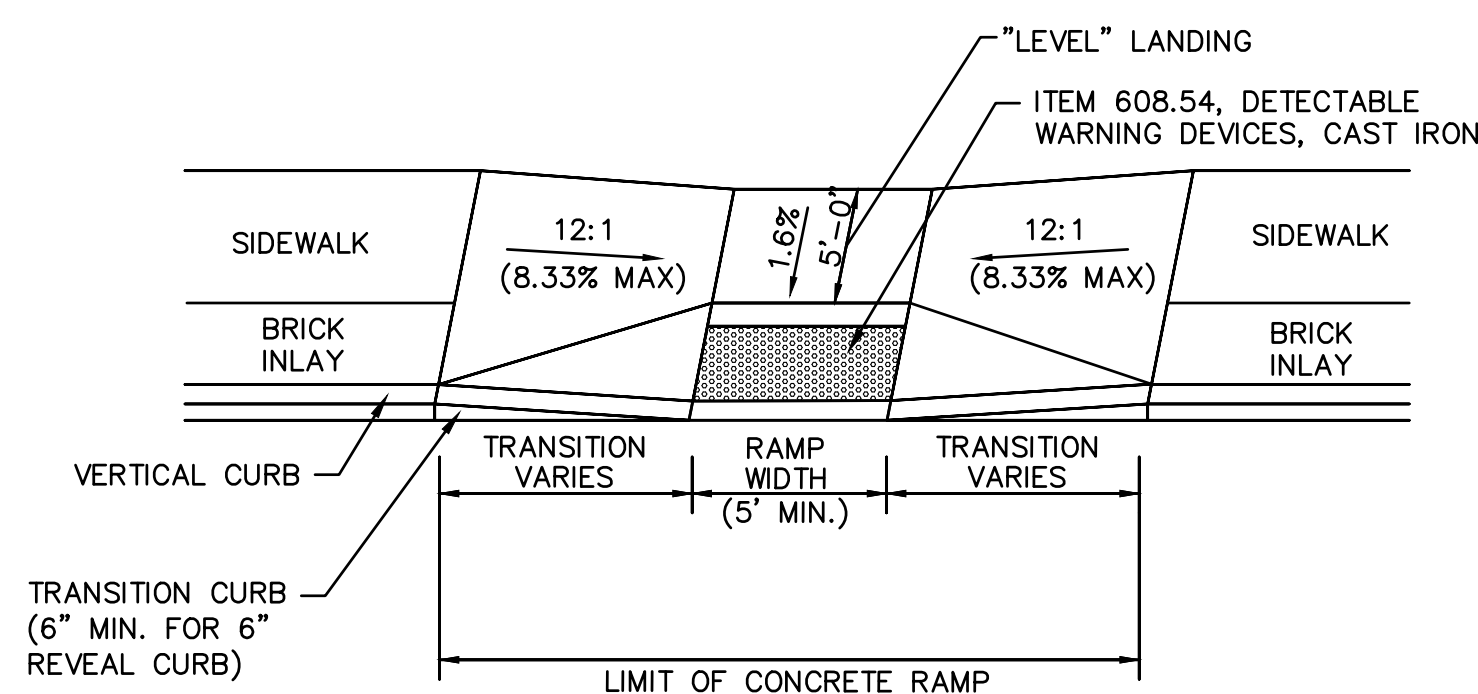
SECTION A-A

TYPICAL BITUMINOUS DRIVEWAY W/  
SIDEWALK & GRANITE TRANSITION CURB - DETAIL D  
NOT TO SCALE



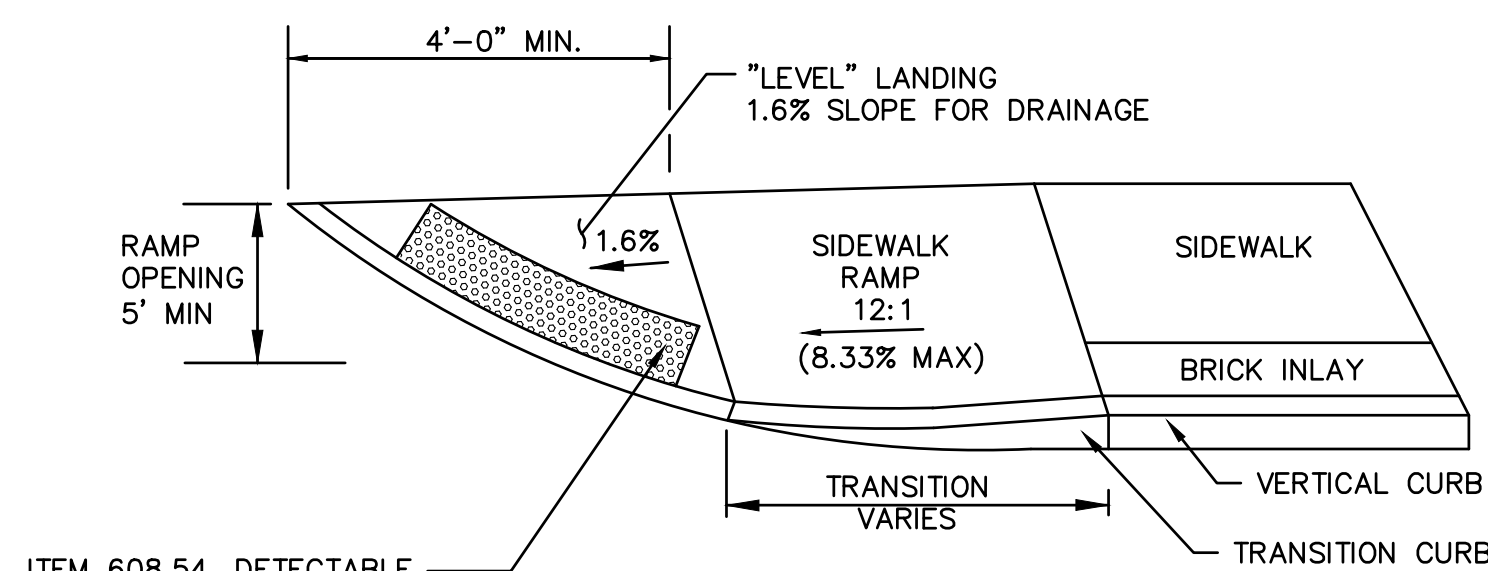
TYPICAL SIDEWALK RAMP - DETAIL A

NOT TO SCALE



TYPICAL SIDEWALK RAMP - DETAIL B

NOT TO SCALE



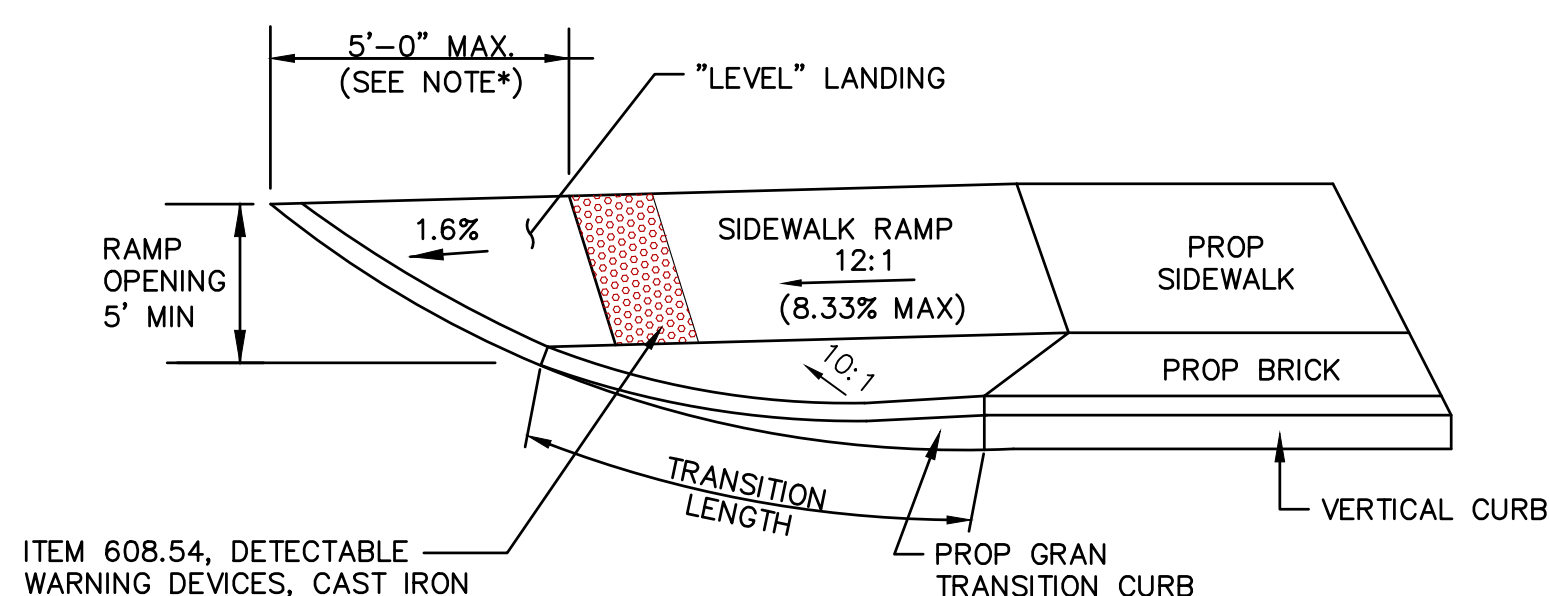
ITEM 608.54, DETECTABLE WARNING DEVICES, CAST IRON

NOTE:

USE CURVED DETECTABLE WARNING DEVICES TO PROVIDE BEST FIT AT CURVED RAMPS. (TYPICAL)

TYPICAL SIDEWALK RAMP - DETAIL C

NOT TO SCALE

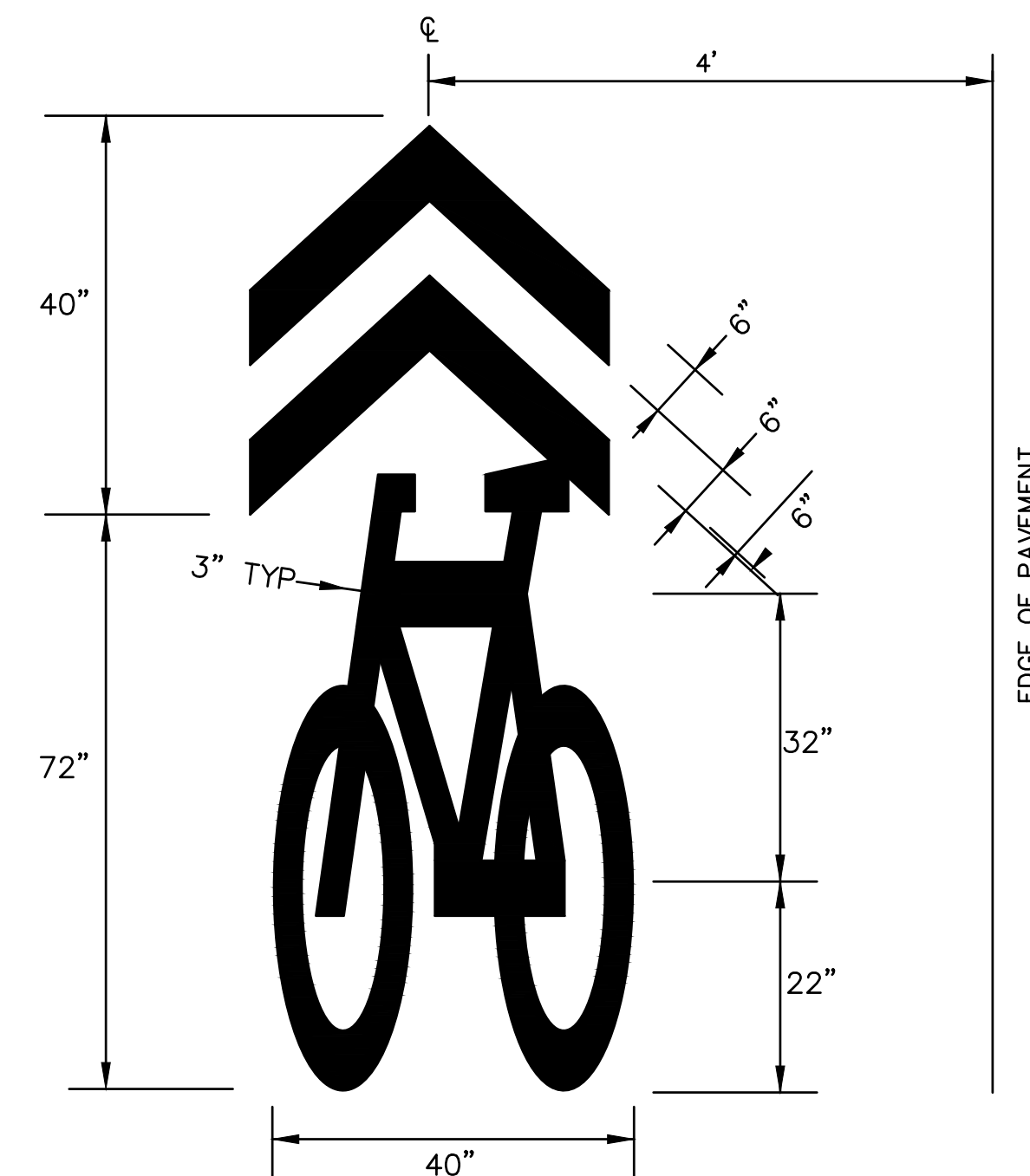


\*NOTE:

IF GREATER THAN 5'-0", DETECTABLE WARNING SURFACE SHALL BE PLACED ON LEVEL LANDING AT BACK OF CURB

TYPICAL SIDEWALK RAMP - DETAIL D

NOT TO SCALE

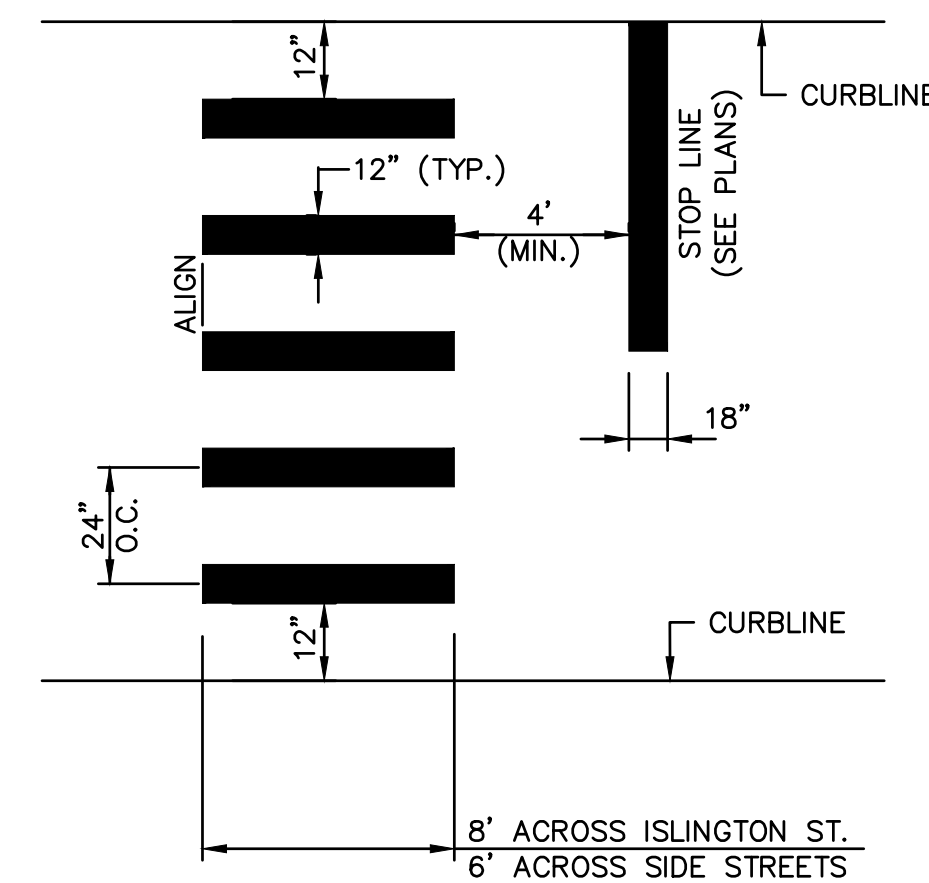


NOTES:

- SEE MUTCD FIGURE 9C-9 FOR MORE INFORMATION.
- SHARED LANE MARKINGS SHALL BE REFLECTORIZED PAINT.

BICYCLE SHARROWS

NOT TO SCALE



NOTES:

- TWELVE INCH (12") LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (TWO - 6 INCH LINES) WILL BE ACCEPTED.
- LONGITUDINAL CROSSWALK LINES TO BE PARALLEL TO CURBLINE.
- ALL LONGITUDINAL CROSSWALK LINES TO BE THE SAME LENGTH AND PROPERLY ALIGNED.

CROSSWALK

NOT TO SCALE

ISSUE FOR	APPROVAL	By	Date	REVISIONS
CONSTRUCTION	By	DAR	6/29/22	
RECORD DWG	By			
				APPD
Drawn/Chk.	RMG			
Designed	DAR			
Checked	EDM			
Approved				
Date	6/29/22			
Book No.	2705			
Project No.	2705			
Dwg. ID	2705_details			
Scale	AS SHOWN			

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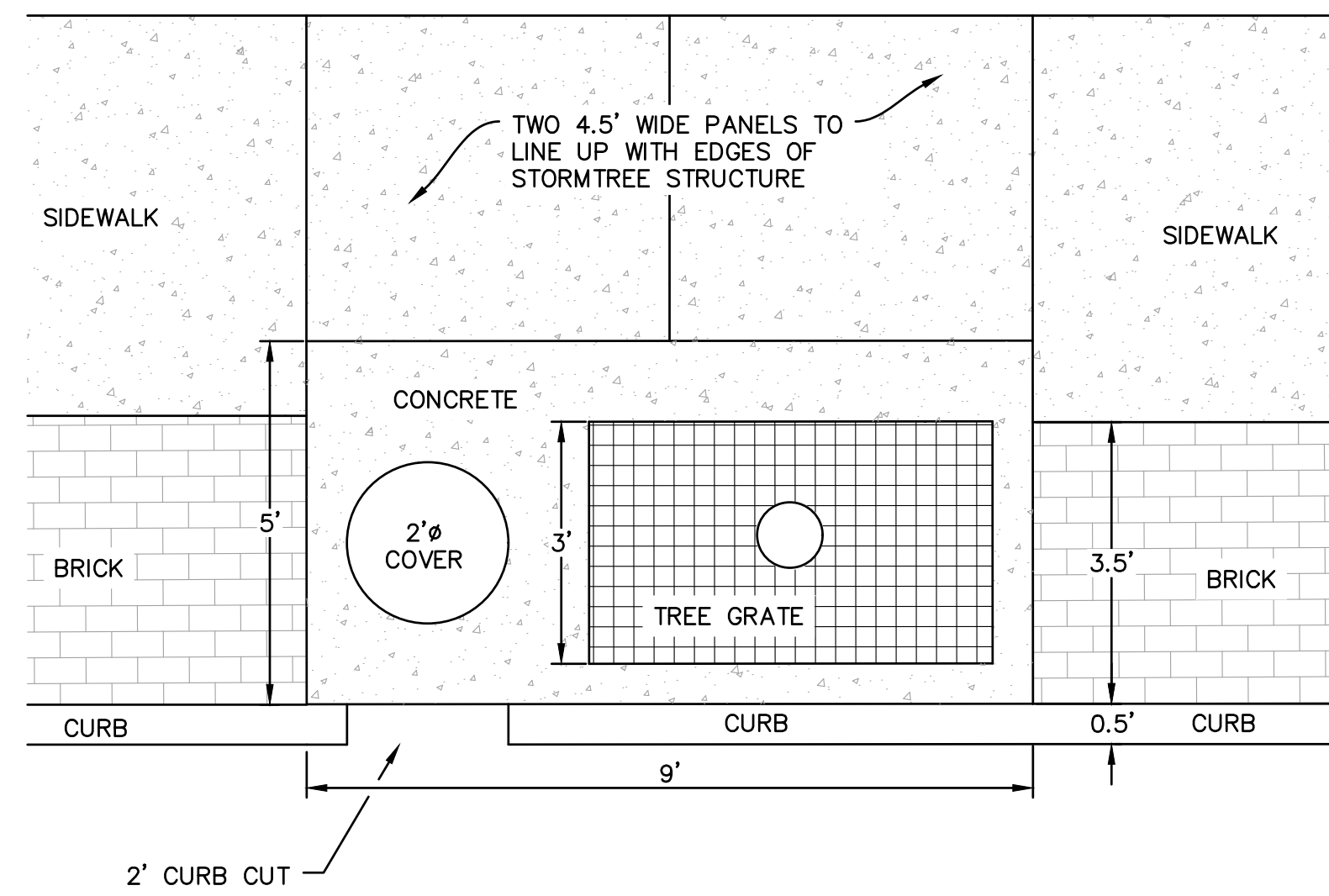
ROAD, CURB & SIDEWALK DETAILS ISLINGTON STREET CORRIDOR IMPROVEMENTS PHASE 2 CITY OF PORTSMOUTH PORTSMOUTH, NEW HAMPSHIRE
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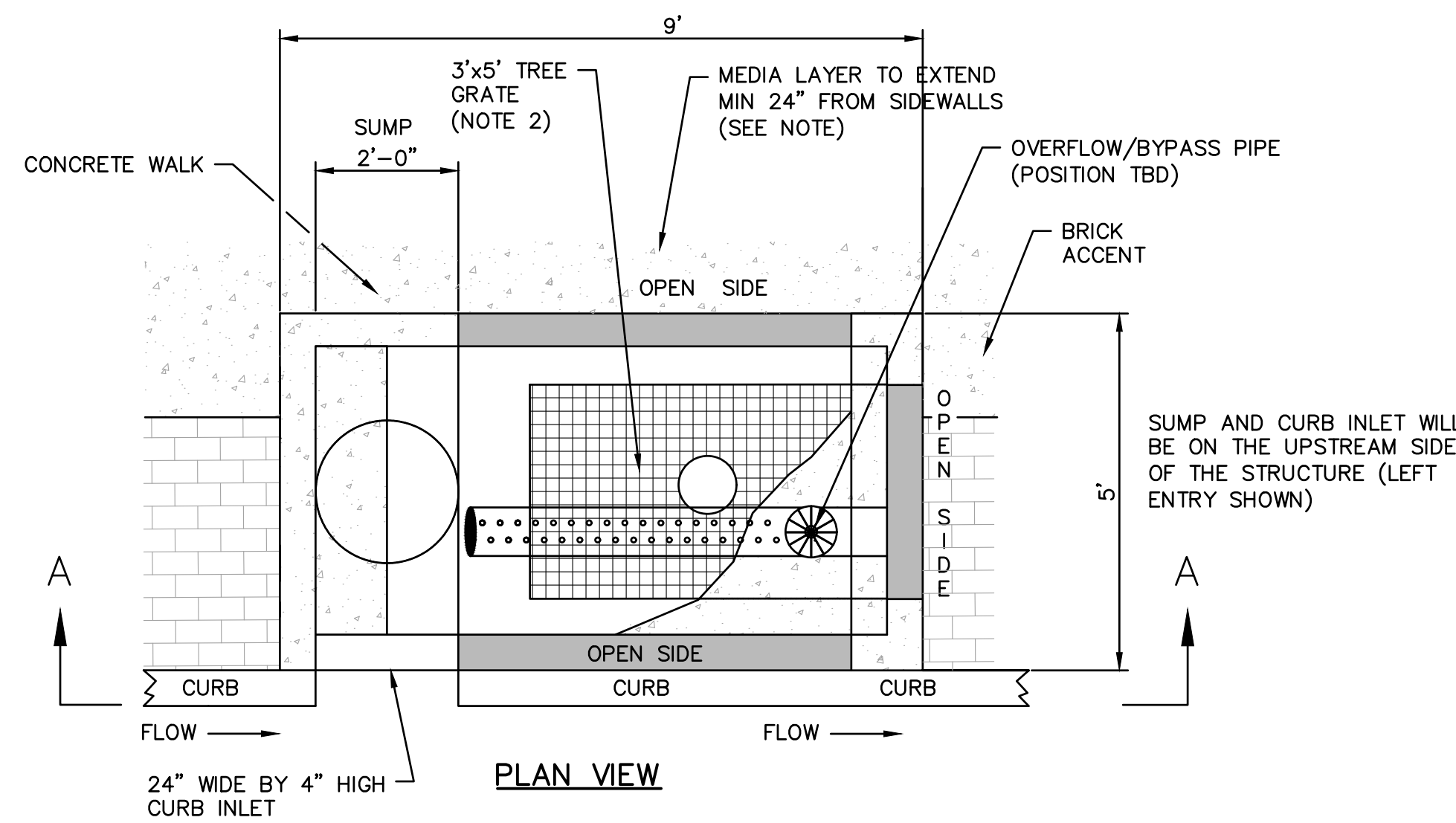
DWG NO	SHEET
D-6	55 OF 56

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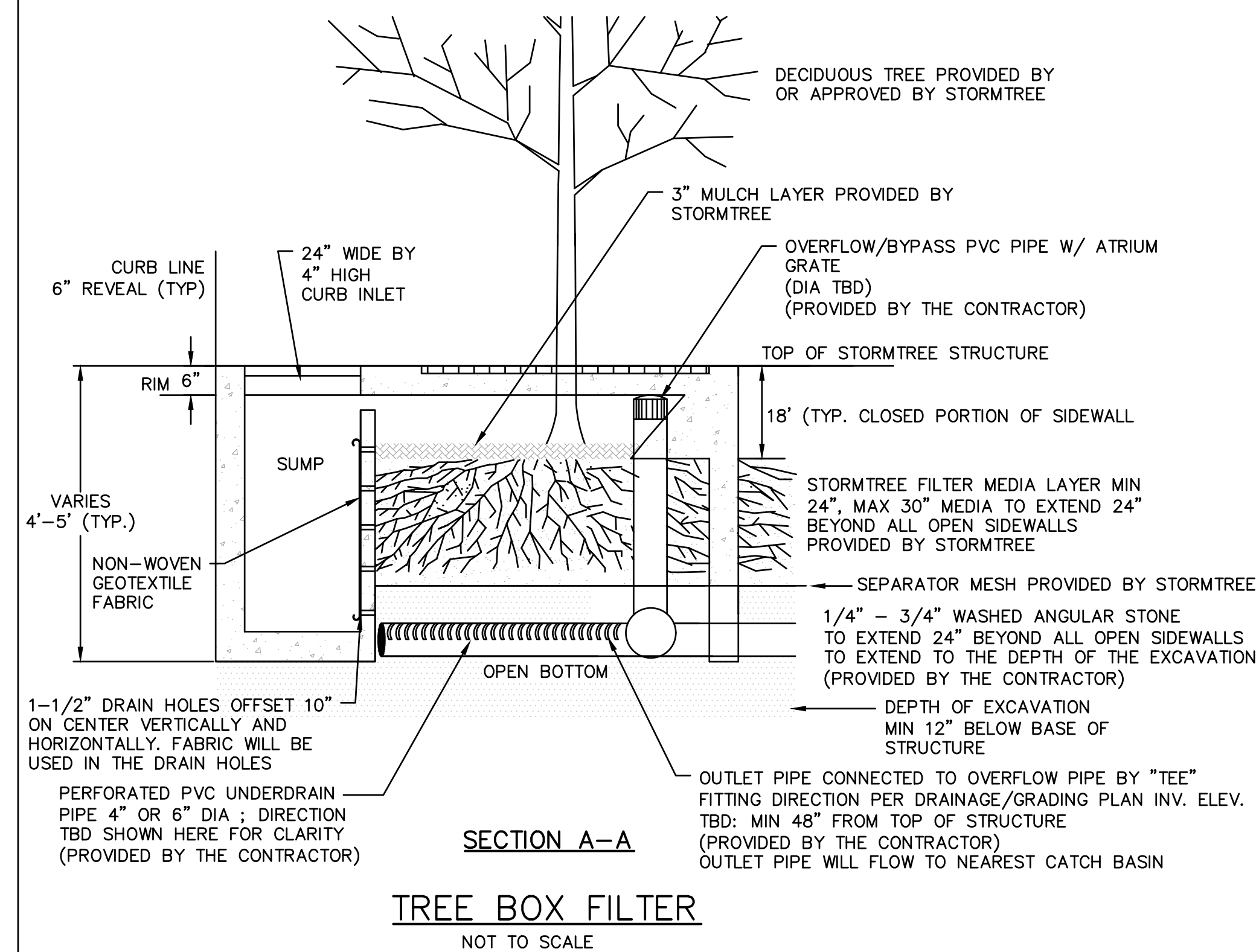




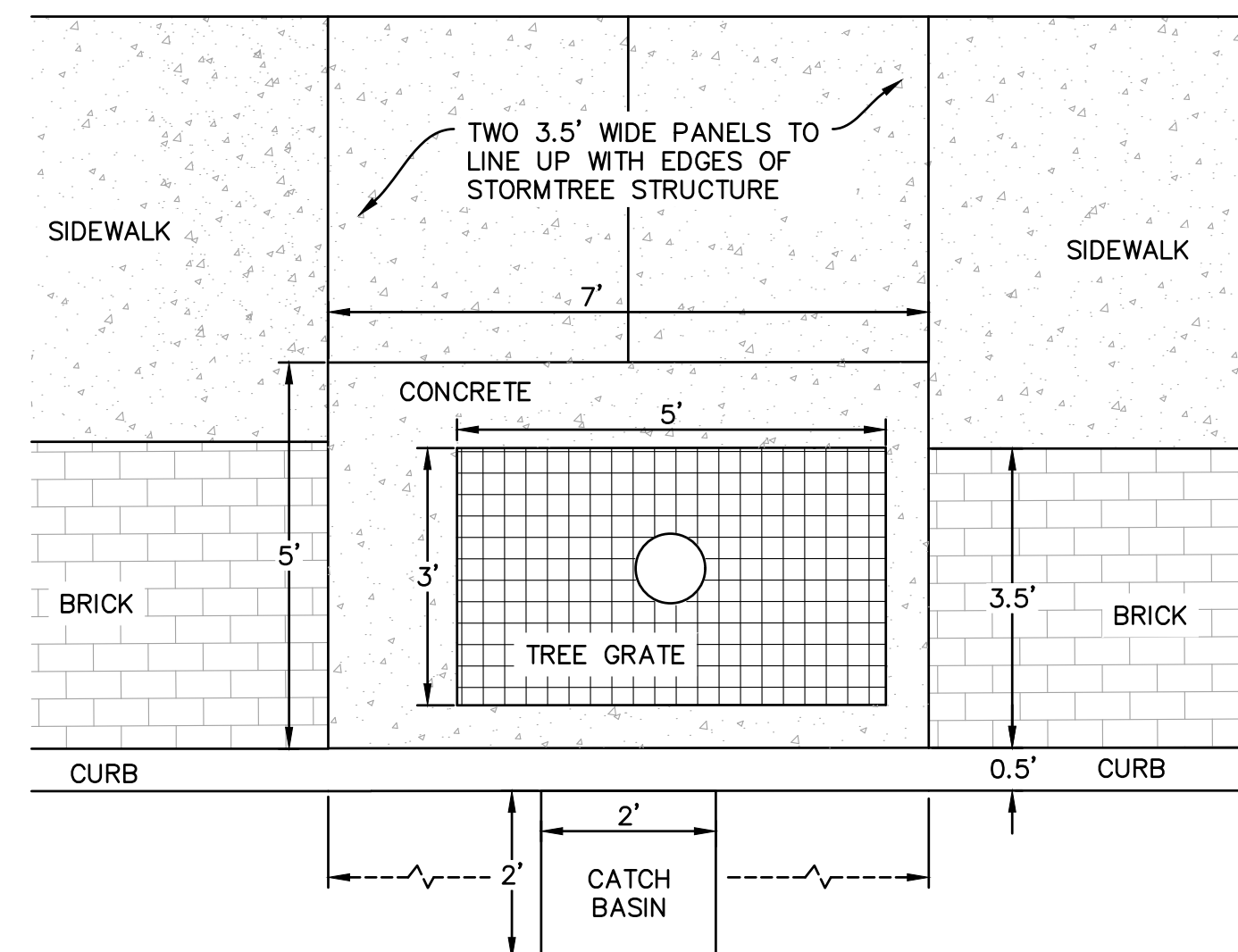
**STORMTREE SURFACE VIEW**



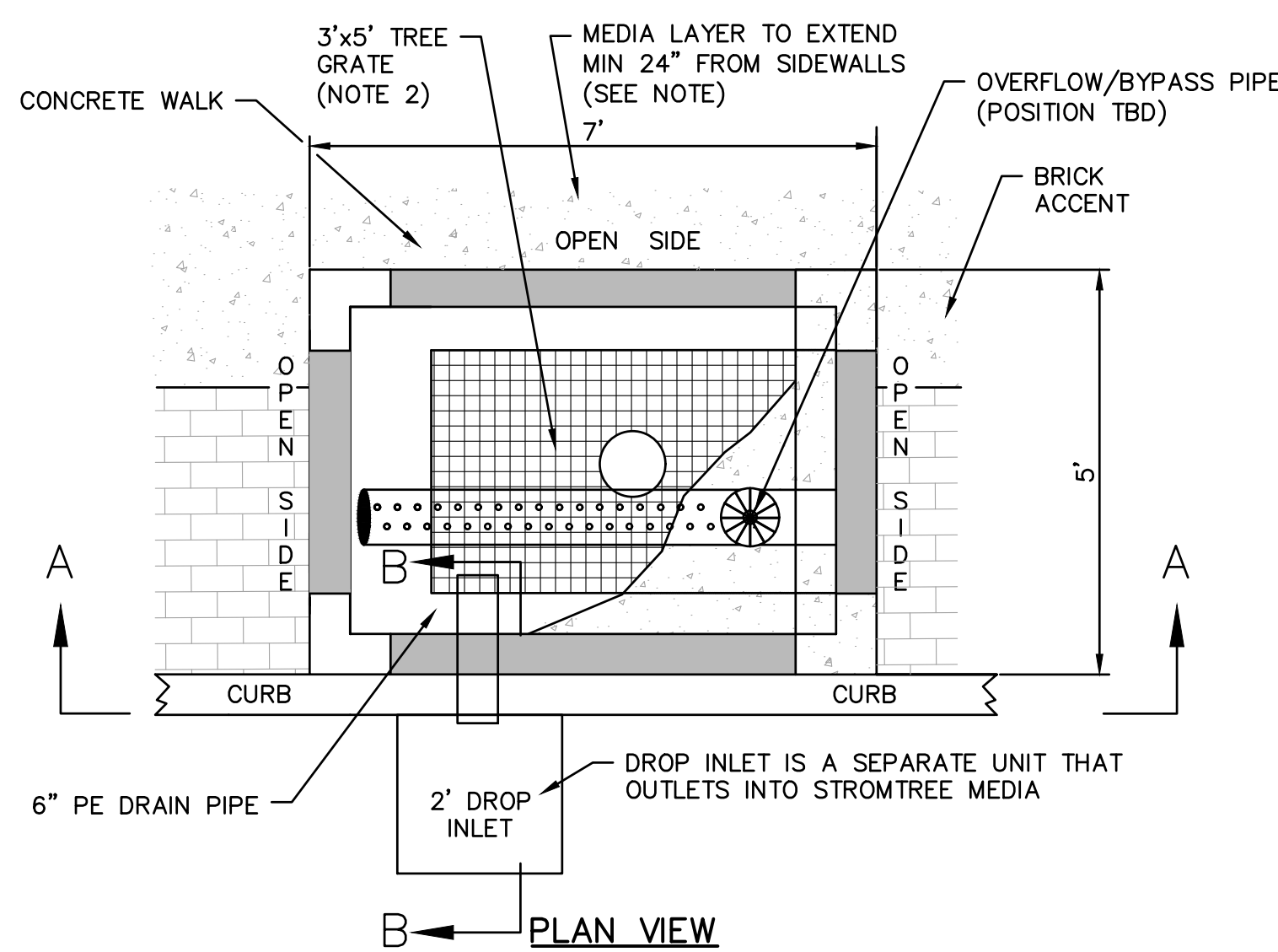
**PLAN VIEW**



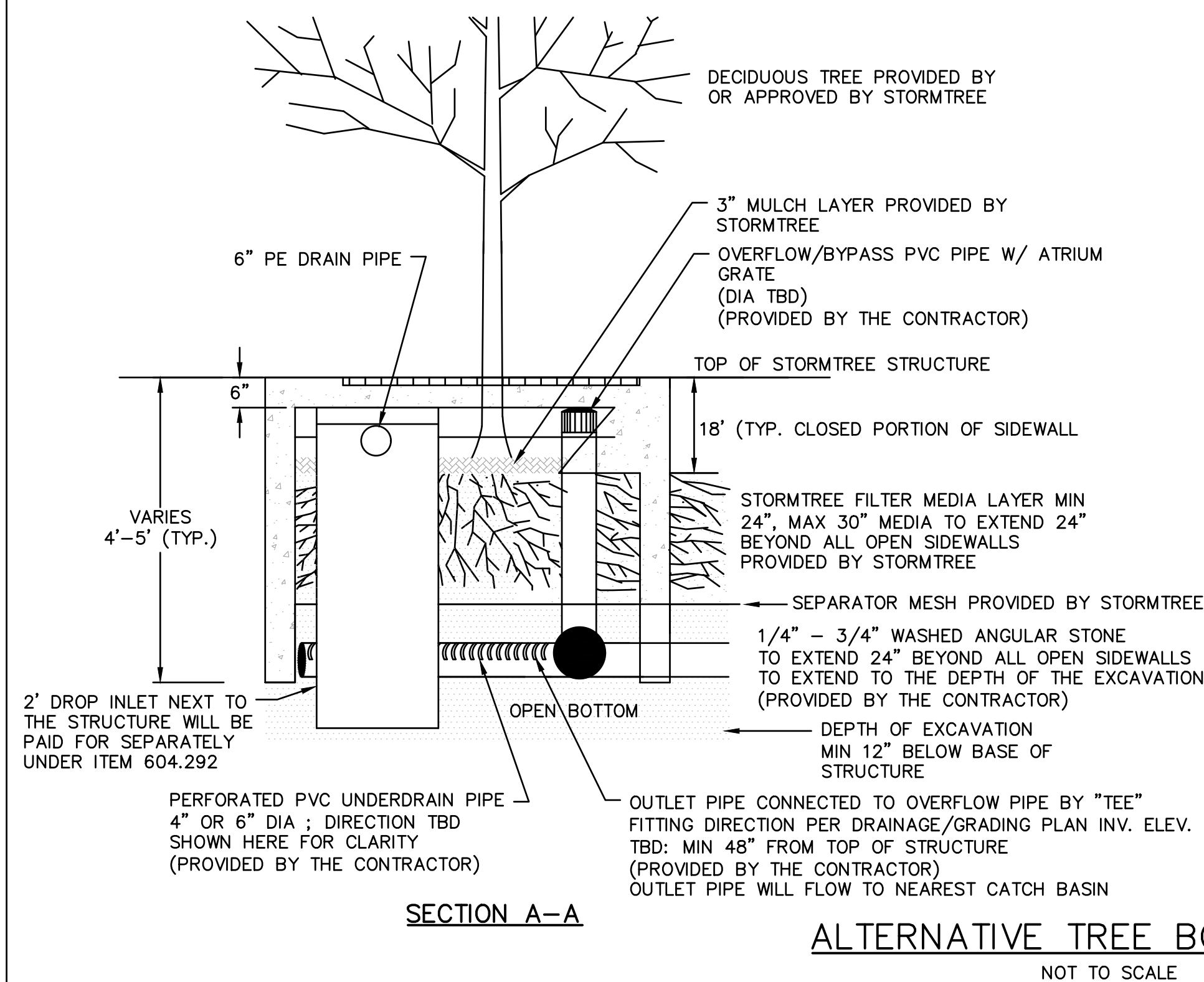
**SECTION A-A**  
**TREE BOX FILTER**  
NOT TO SCALE



**STORMTREE SURFACE VIEW**

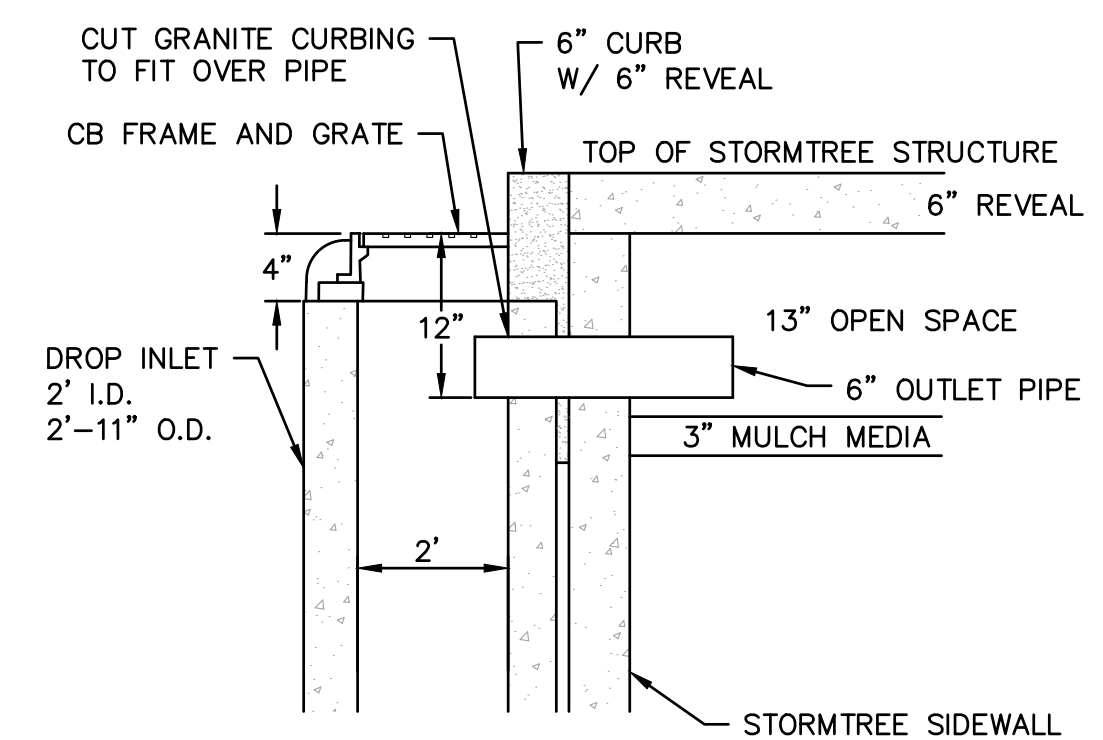


**PLAN VIEW**



**SECTION A-A**

**ALTERNATIVE TREE BOX FILTER**  
NOT TO SCALE



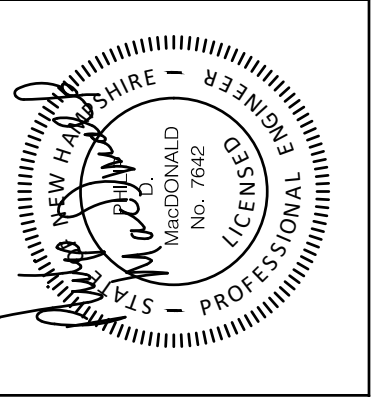
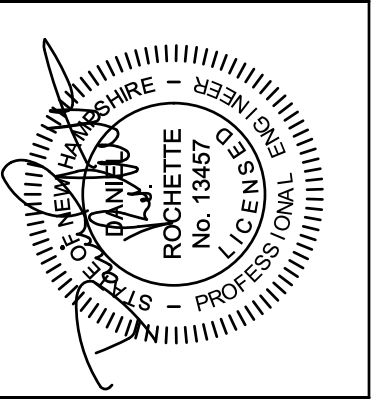
**SECTION B-B**

**NOTES:**

1. USE THE ALTERNATIVE STORMTREE UNIT WHERE EXISTING UTILITIES INTERFERE WITH THE PROPOSED LOCATION OF THE STORMTREE UNIT WITH INTEGRATED SUMP. A 2' DROP INLET (ITEM 604.292) WILL BE LOCATED WHERE DIRECTED BY THE ENGINEER OR WHERE SPACE PERMITS WITH AN OUTLET TO THE ALTERNATE UNIT (SEE SECTION B-B OF THE ALTERNATE UNIT).
2. TREE GRATES SHALL MEET THE REQUIREMENTS OF SPECIAL PROVISION SECTION 661.

ISSUE FOR	APPROVAL	By	Date
RECORD DWG	By		
CONSTRUCTION	By		
DATE			
6/29/22	DAR		

RMG	Drawn/Chk	DAR	Checked	PDM	Approved	Date	Project No.	Book No.	Dwg. ID	Scale
						7/25/22	2705	2705	2705	AS SHOWN



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DWG NO	SHEET
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TREE BOX FILTER DETAILS  
ISLINGTON STREET CORRIDOR IMPROVEMENTS  
PHASE 2  
CITY OF PORTSMOUTH  
PORTSMOUTH, NEW HAMPSHIRE