

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION

LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	1	128
PROJECT FILE NO.		609054	

TITLE SHEET & INDEX

PLAN AND PROFILE OF
FOSTER STREET
(BRIDGE NO. L-13-017)
IN THE TOWN OF
LITTLETON
MIDDLESEX COUNTY

FEDERAL AID PROJECT NO. STP/CMQ/TAP-0033(037)X

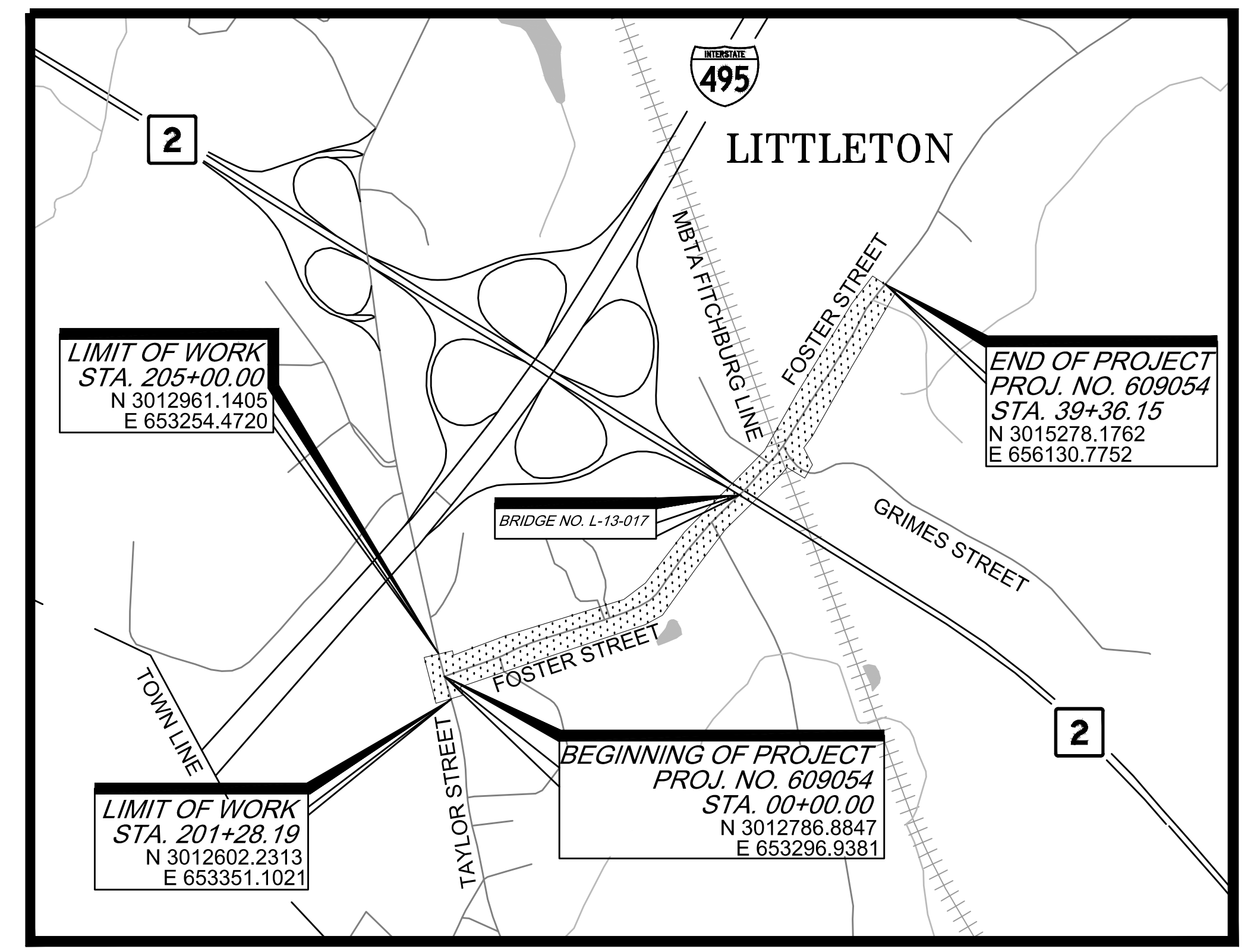
THESE PLANS ARE SUPPLEMENTED BY THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK.

INDEX

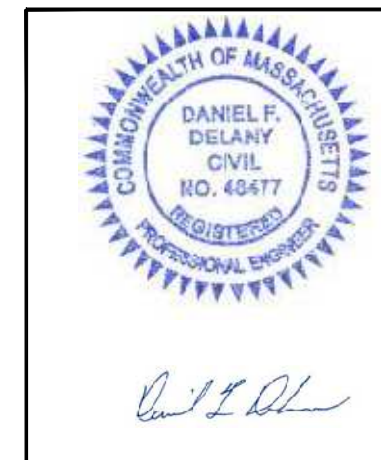
SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
2	LEGEND & ABBREVIATIONS
3	KEY PLAN & BORING LOCATIONS
4-8	TYPICAL SECTIONS
9-16	CONSTRUCTION PLANS
17-23	PROFILE - FOSTER STREET
24	PROFILE - GRIMES LANE
25-32	CURB & BASELINE TIE PLANS
33-40	GRADING PLANS
41-48	PAVEMENT MARKING & SIGNING PLANS
49-50	TRAFFIC SIGN SUMMARY SHEET
51-56	TEMPORARY TRAFFIC CONTROL PLANS
57-64	DRAINAGE & UTILITY PLANS
65-72	LANDSCAPING PLANS
73-74	DRAINAGE & UTILITY DETAILS
75-78	CONSTRUCTION DETAILS
79-82	PEDESTRIAN CURB RAMP & DRIVEWAY DETAILS
83-128	CROSS SECTIONS

DESIGN DESIGNATION (FOSTER STREET)

DESIGN SPEED	35 MPH
ADT (2017)	2,100
ADT (2037)	2,562
K	12%
D	69% (NB)
T (PEAK HOUR)	0.9%
T (AVERAGE DAY)	5.5%
DHV	252
DDHV	174 (NB)
FUNCTIONAL CLASSIFICATION	URBAN COLLECTOR



LENGTH OF PROJECT = 3936.15 FEET = 0.745 MILES
(FOSTER STREET)



DATE	DESCRIPTION	REV #



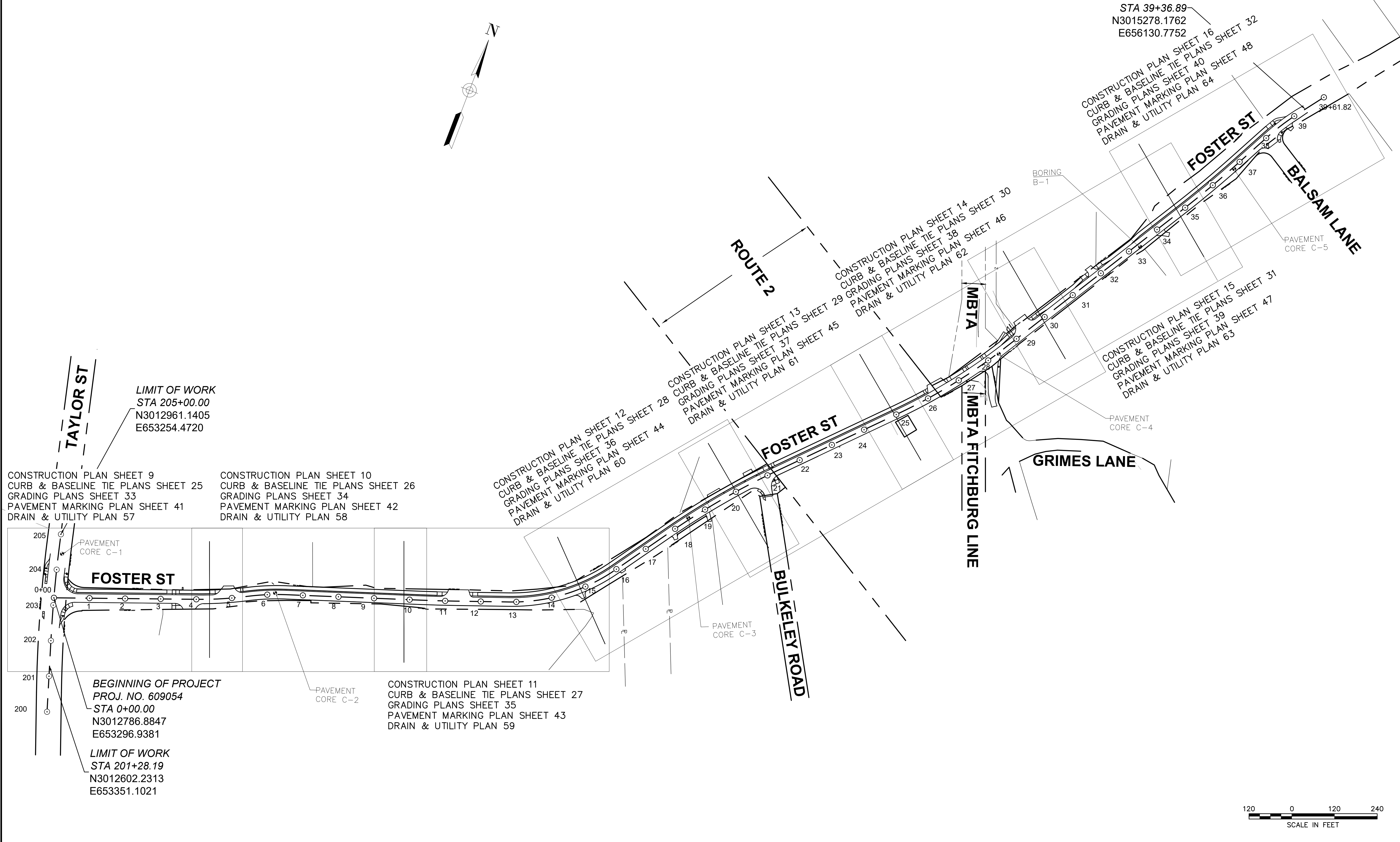
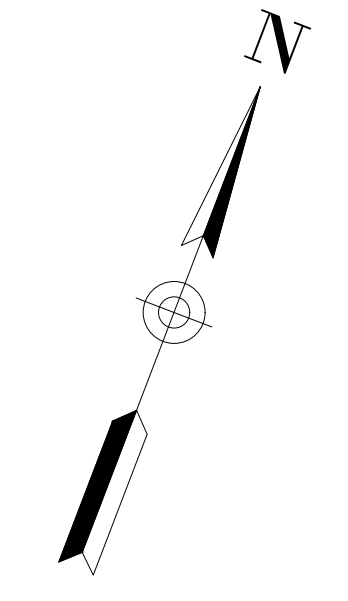
APPROVED
Carrie Lavallee, P.E. Digitally signed by Carrie Lavallee, P.E.
Date: 2024.04.09 10:02:23 -0400
CHIEF ENGINEER DATE 04/09/2024

LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	3	128
PROJECT FILE NO.		609054	

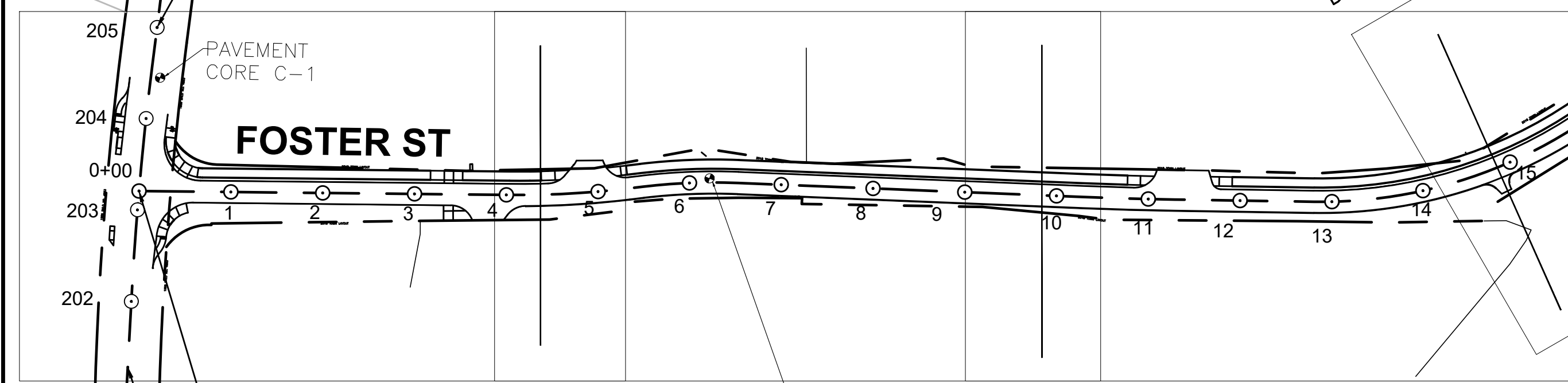
KEY PLAN & BORING LOCATIONS

END OF PROJECT
PROJ. NO. 609054
STA 39+36.89
N3015278.1762
E656130.7752



CONSTRUCTION PLAN SHEET 9
CURB & BASELINE TIE PLANS SHEET 25
GRADING PLANS SHEET 33
PAVEMENT MARKING PLAN SHEET 41
DRAIN & UTILITY PLAN 57

CONSTRUCTION PLAN SHEET 10
CURB & BASELINE TIE PLANS SHEET 26
GRADING PLANS SHEET 34
PAVEMENT MARKING PLAN SHEET 42
DRAIN & UTILITY PLAN 58



BEGINNING OF PROJECT
PROJ. NO. 609054
STA 0+00.00
N3012786.8847
E653296.9381

LIMIT OF WORK
STA 201+28.19
N3012602.2313
E653351.1021

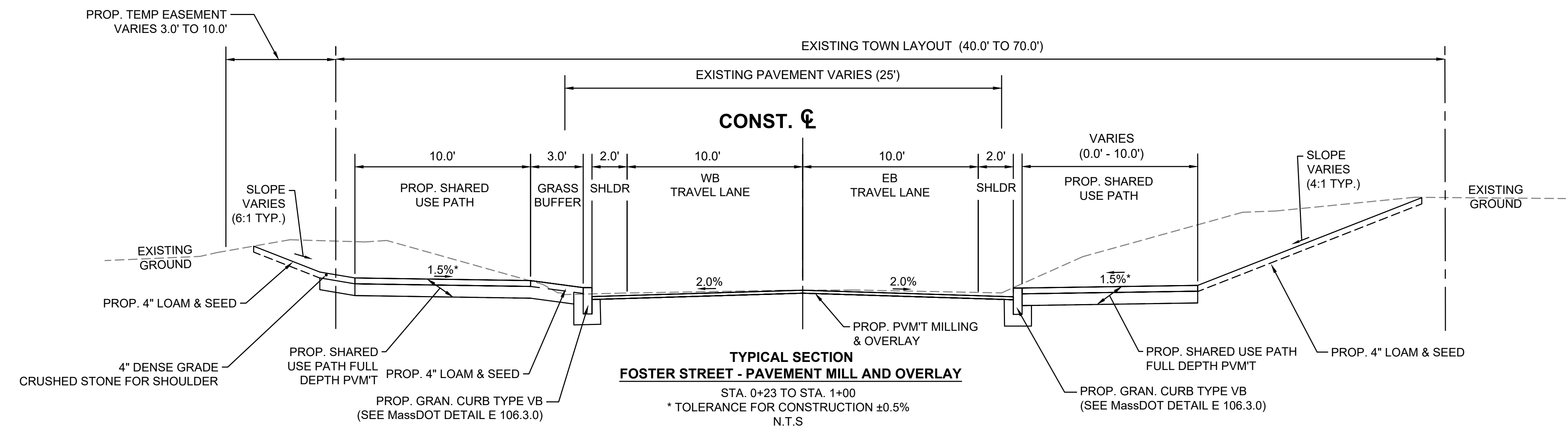
CONSTRUCTION PLAN SHEET 11
CURB & BASELINE TIE PLANS SHEET 27
GRADING PLANS SHEET 35
PAVEMENT MARKING PLAN SHEET 43
DRAIN & UTILITY PLAN 59



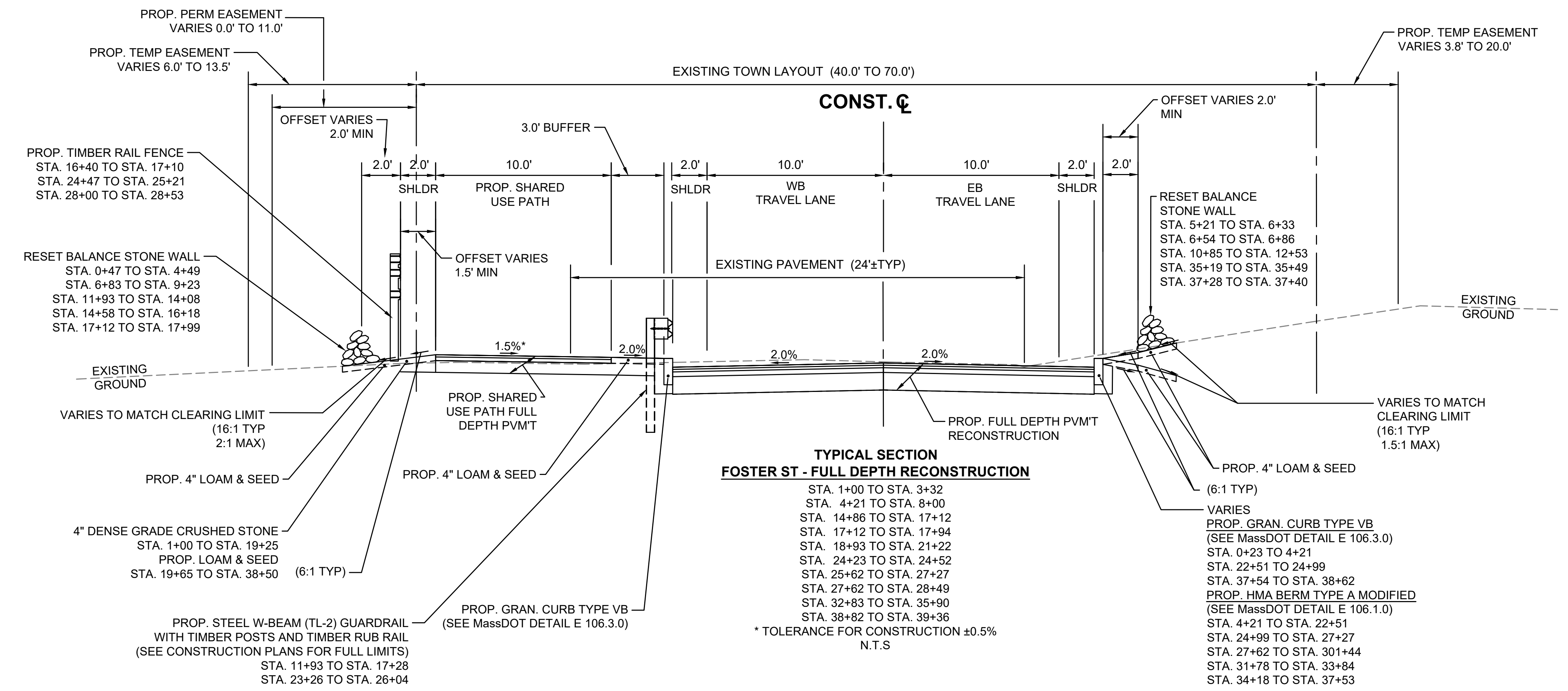
LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	4	128
PROJECT FILE NO.		609054	

TYPICAL SECTIONS - FOSTER ST



**TYPICAL SECTION
FOSTER STREET - PAVEMENT MILL AND OVERLAY**
STA. 0+23 TO STA. 1+00
* TOLERANCE FOR CONSTRUCTION ±0.5%
N.T.S



**TYPICAL SECTION
FOSTER ST - FULL DEPTH RECONSTRUCTION**
STA. 1+00 TO STA. 3+32
STA. 4+21 TO STA. 8+00
STA. 14+86 TO STA. 17+12
STA. 17+12 TO STA. 17+94
STA. 18+93 TO STA. 21+22
STA. 24+23 TO STA. 24+52
STA. 25+62 TO STA. 27+27
STA. 27+62 TO STA. 28+49
STA. 32+83 TO STA. 35+90
STA. 38+82 TO STA. 39+36
* TOLERANCE FOR CONSTRUCTION ±0.5%
N.T.S

PAVEMENT NOTES:

PROPOSED PAVEMENT MILLING AND OVERLAY - FOSTER STREET

- 1-1/2" PAVEMENT FINE MILLING
- 1-1/2" SUPERPAVE SURFACE COURSE - 9.5
- MILLING TO BE VARIABLE DEPTH (INCREASING) AT PROJECT LIMITS TO MEET EXISTING GRADE ON TAYLOR ST
- MILLING TO BE VARIABLE DEPTH (DECREASING) AT SAWCUT TRANSITION ON FOSTER ST EAST OF BALSAM LN

PROPOSED FULL DEPTH PAVEMENT RECONSTRUCTION

- SURFACE: 1-1/2" SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5) OVER
- INTERMEDIATE: 1-3/4" SUPERPAVE INTERMEDIATE COURSE - 12.5 OVER
- 3-1/2" SUPERPAVE INTERMEDIATE COURSE - 19.0 OVER
- SUBBASE: 4" DENSE GRADED CRUSHED STONE
- 8" GRAVEL BORROW, TYPE b

PROPOSED SHARED-USE PATH FULL DEPTH PAVEMENT

- SURFACE: 1-1/2" SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5) OVER
- INTERMEDIATE: 2-1/2" SUPERPAVE INTERMEDIATE COURSE - 19.0 OVER
- SUBBASE: 8" GRAVEL BORROW, TYPE b

PROPOSED HOT MIX ASPHALT SIDEWALK OR DRIVEWAY

- SURFACE: 1-1/2" SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5) OVER
- 2-1/2" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC - 12.5)
- FOUNDATION: 8" GRAVEL BORROW, TYPE b.

PROPOSED CEMENT CONCRETE SIDEWALK

- SURFACE: 4" CEMENT CONCRETE
- AIR ENTRAINED 4000psi, 3/4", 610
- FOUNDATION: 8" GRAVEL BORROW, TYPE b.

PROPOSED CEMENT CONCRETE PEDESTRIAN CURB RAMP

- SURFACE: 6" CEMENT CONCRETE
- AIR ENTRAINED 4000psi, 3/4", 610
- FOUNDATION: 8" GRAVEL BORROW, TYPE b.

NOTES: ASPHALT EMULSION FOR TACK COAT AND HMA JOINT SEALANT SHALL BE APPLIED PER SECTION 450 QA OF THE SPECIAL PROVISIONS.

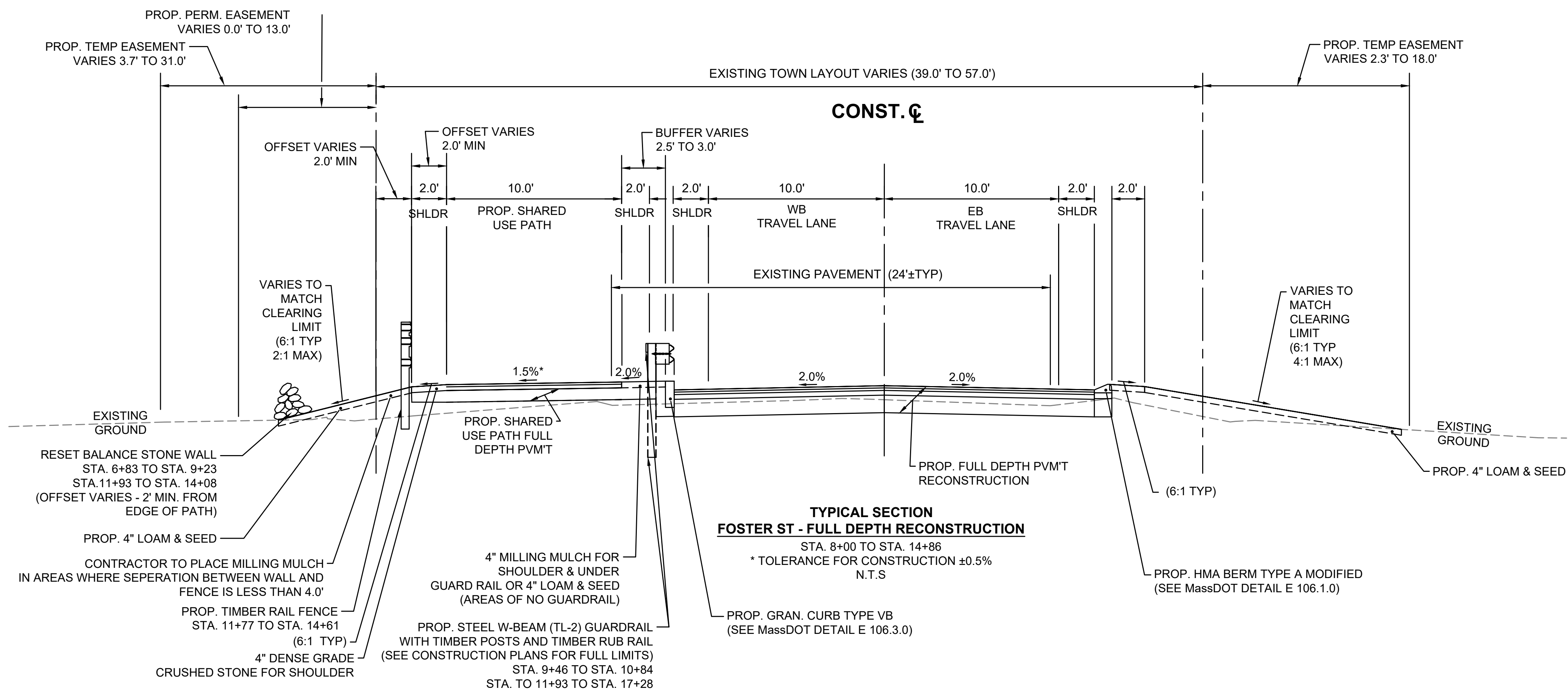
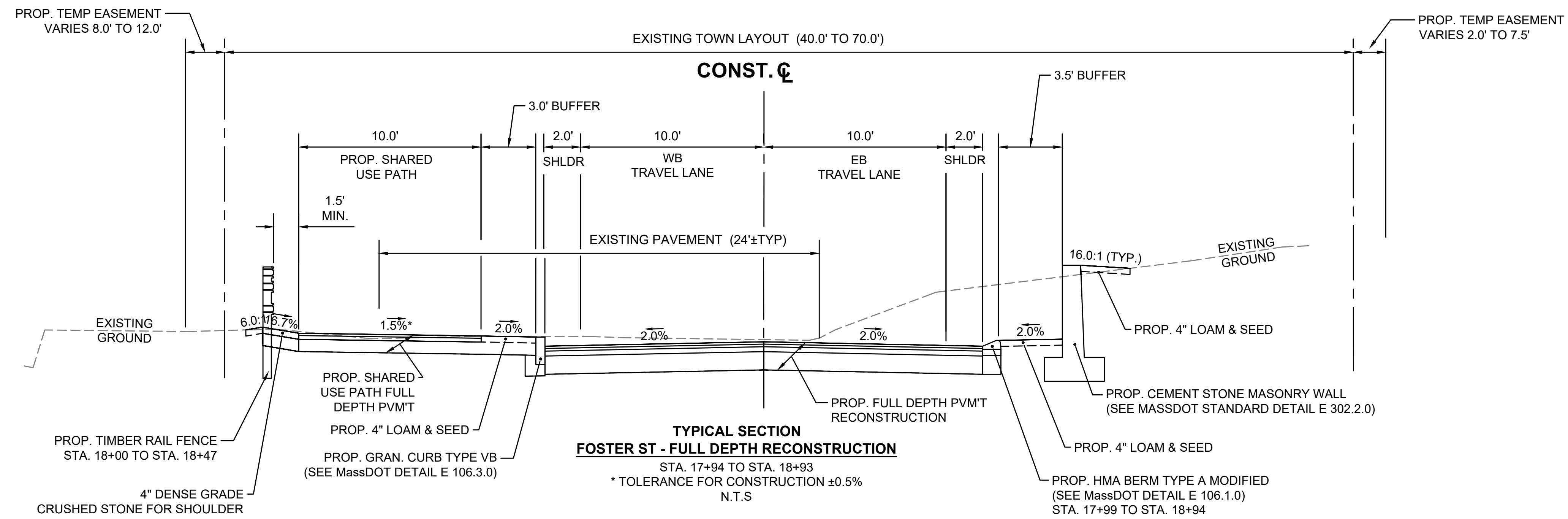
HMA FOR PATCHING SHALL BE USED FOR ALL PERMANENT, PARTIAL, AND FULL DEPTH PAVEMENT REPAIRS OF UNSOUND PAVEMENT PER SECTION 450 IN AREAS OUTSIDE OF PROPOSED FULL DEPTH RECLAMATION OR RECONSTRUCTION ROADWAY AREAS.

HMA FOR MISCELLANEOUS WORK SHALL BE USED FOR ALL TEMPORARY CONSTRUCTION, TAPER RAMPS, CURB CUT RAMPS, TEMPORARY TRENCH REPAIR, ETC.

LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	5	128
PROJECT FILE NO.		609054	

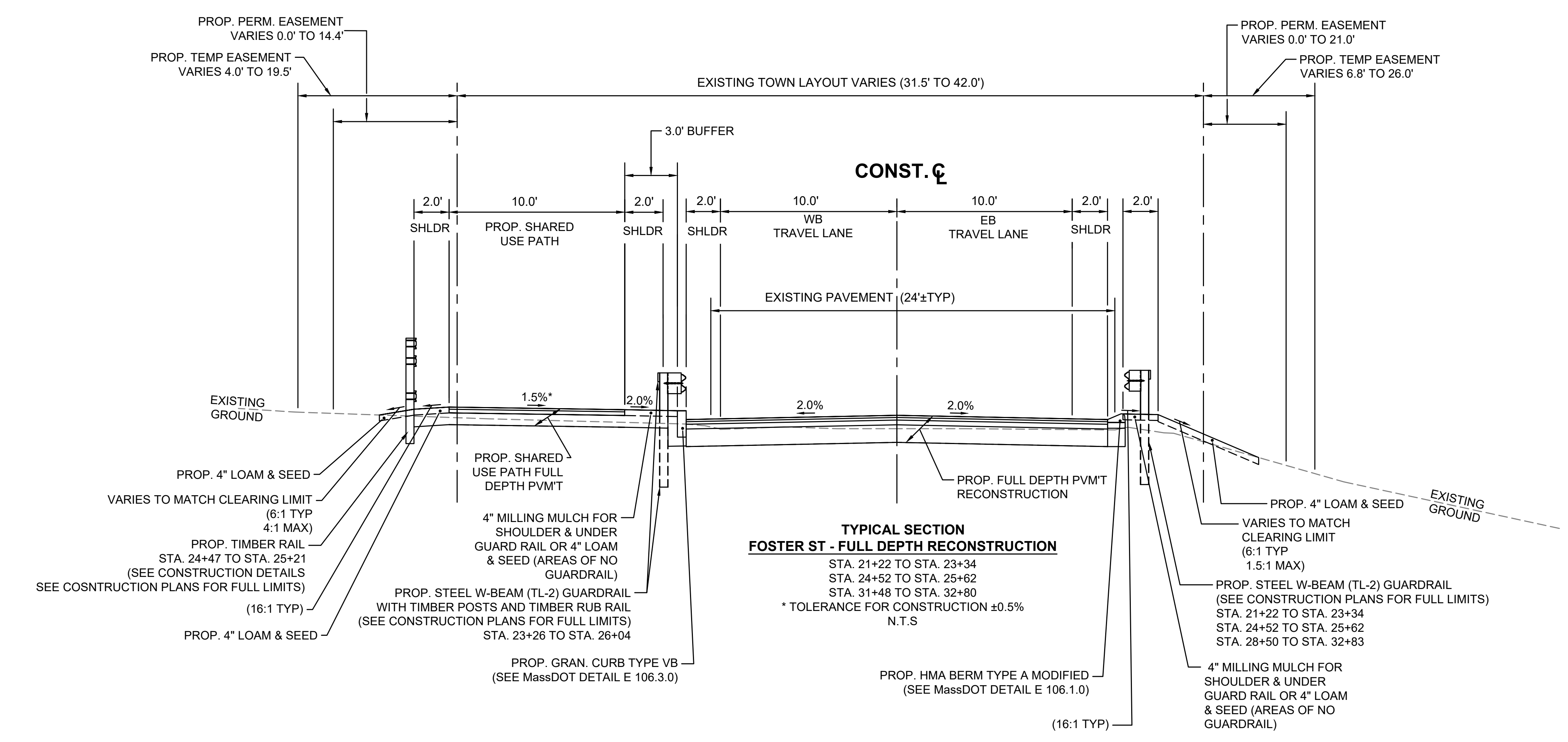
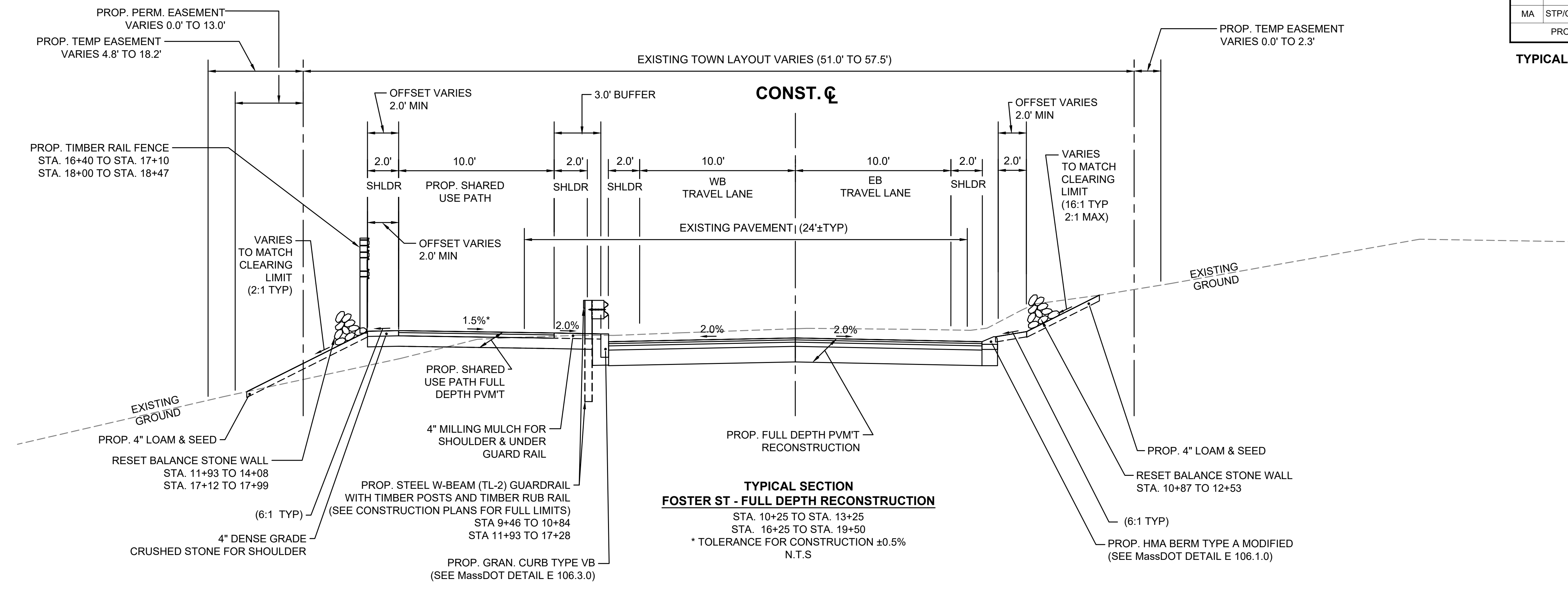
TYPICAL SECTIONS - FOSTER ST



LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	6	128
PROJECT FILE NO. 609054			

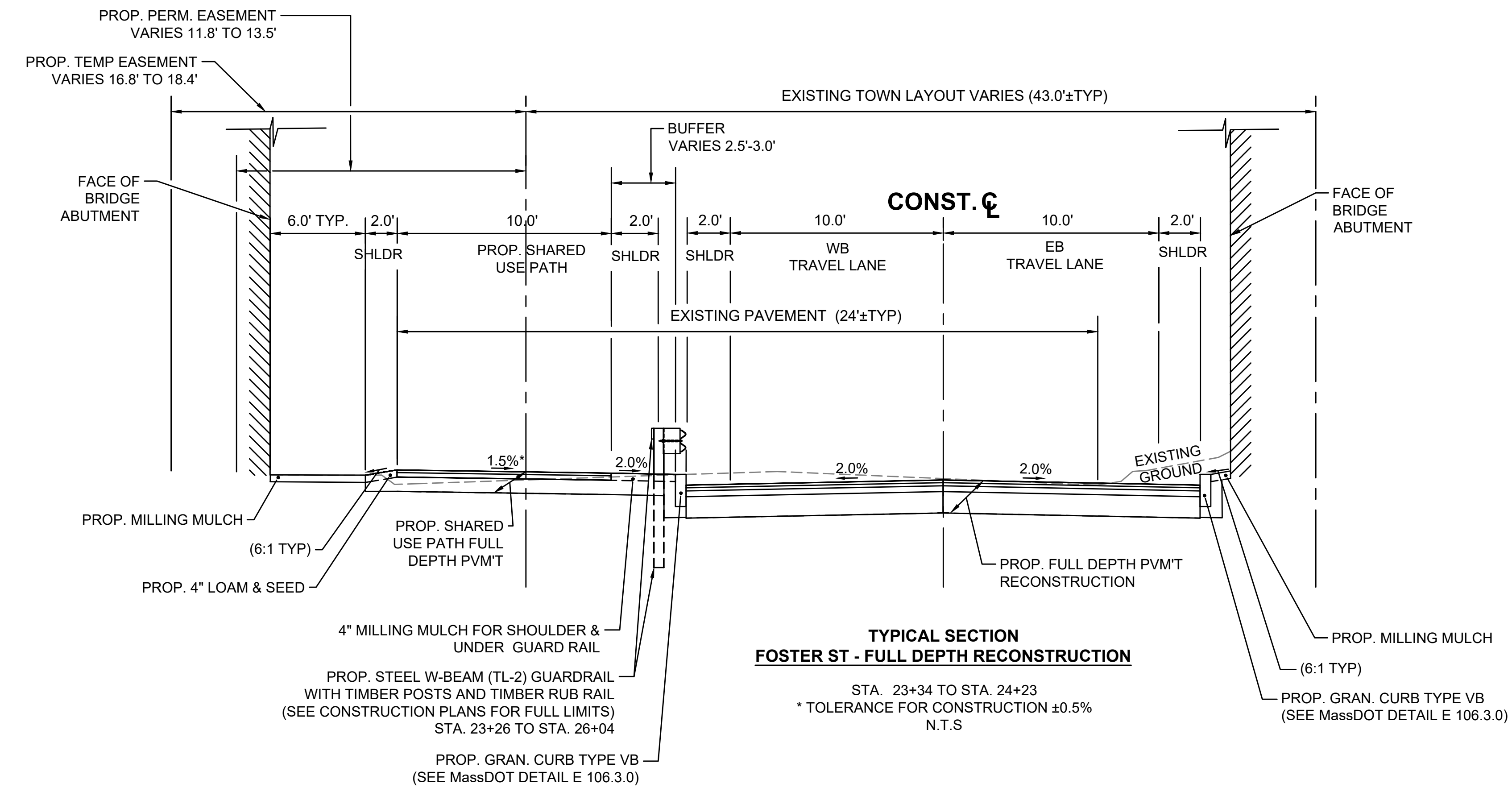
TYPICAL SECTIONS - FOSTER ST



LITTLETON
RECONSTRUCTION OF FOSTER STREET

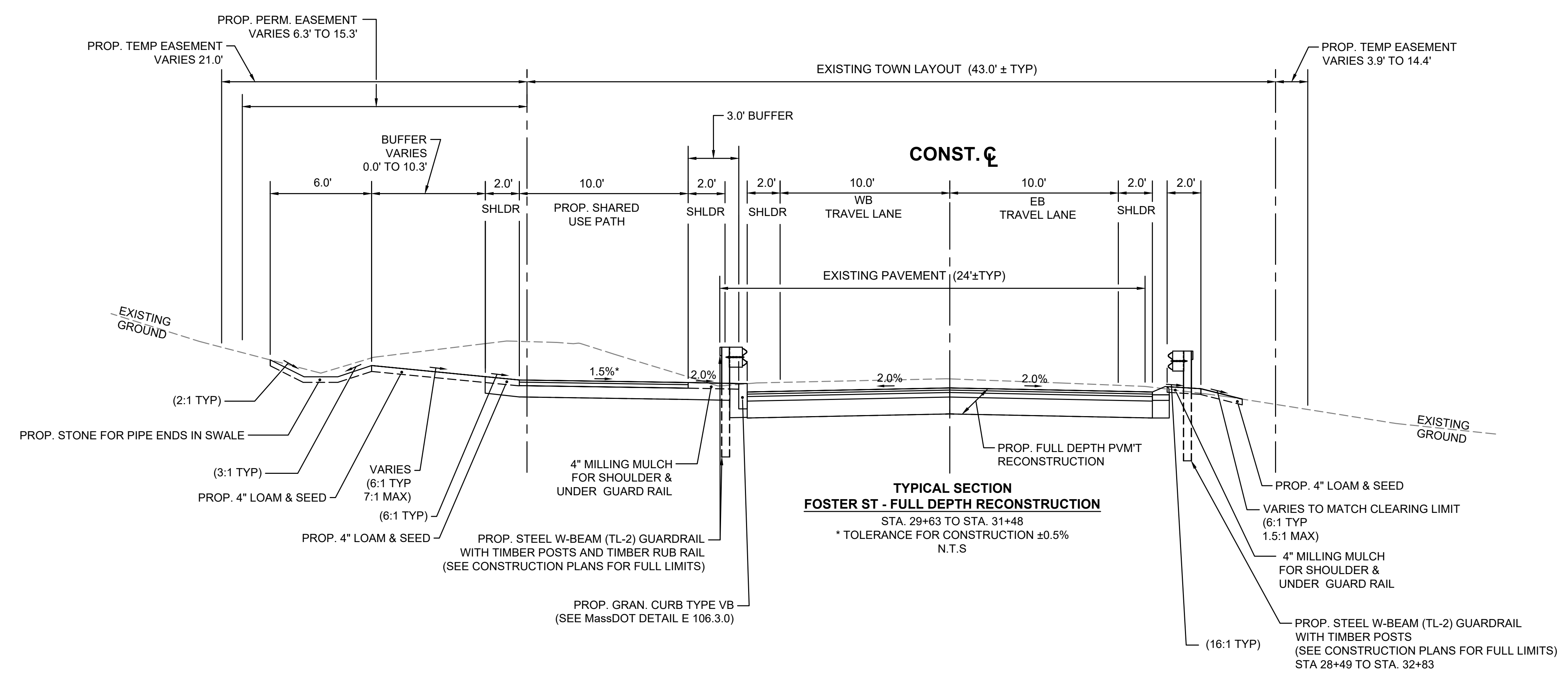
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	7	128
PROJECT FILE NO.		609054	

TYPICAL SECTIONS - FOSTER ST



TYPICAL SECTION
FOSTER ST - FULL DEPTH RECONSTRUCTION

STA. 23+34 TO STA. 24+23
* TOLERANCE FOR CONSTRUCTION ±0.5%
N.T.S.



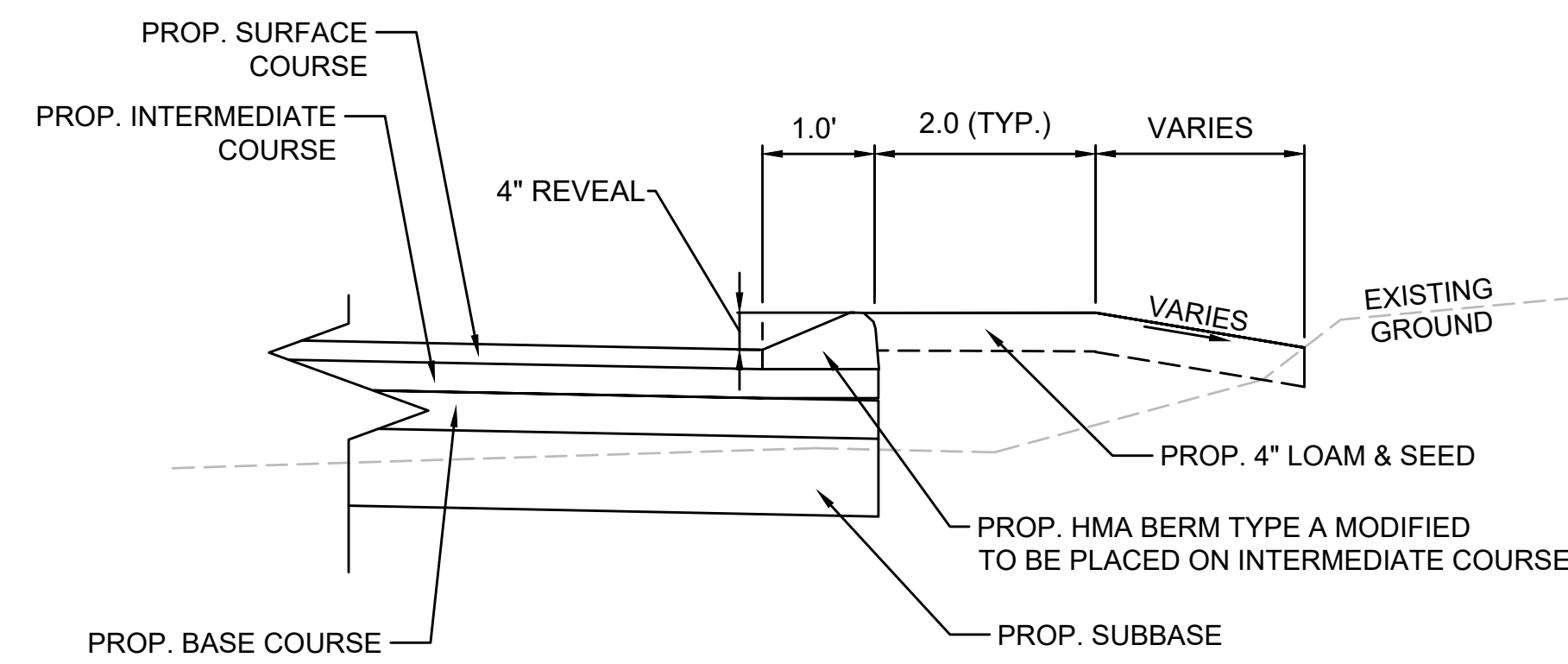
TYPICAL SECTION
FOSTER ST - FULL DEPTH RECONSTRUCTION

STA. 29+63 TO STA. 31+48
* TOLERANCE FOR CONSTRUCTION ±0.5%
N.T.S.

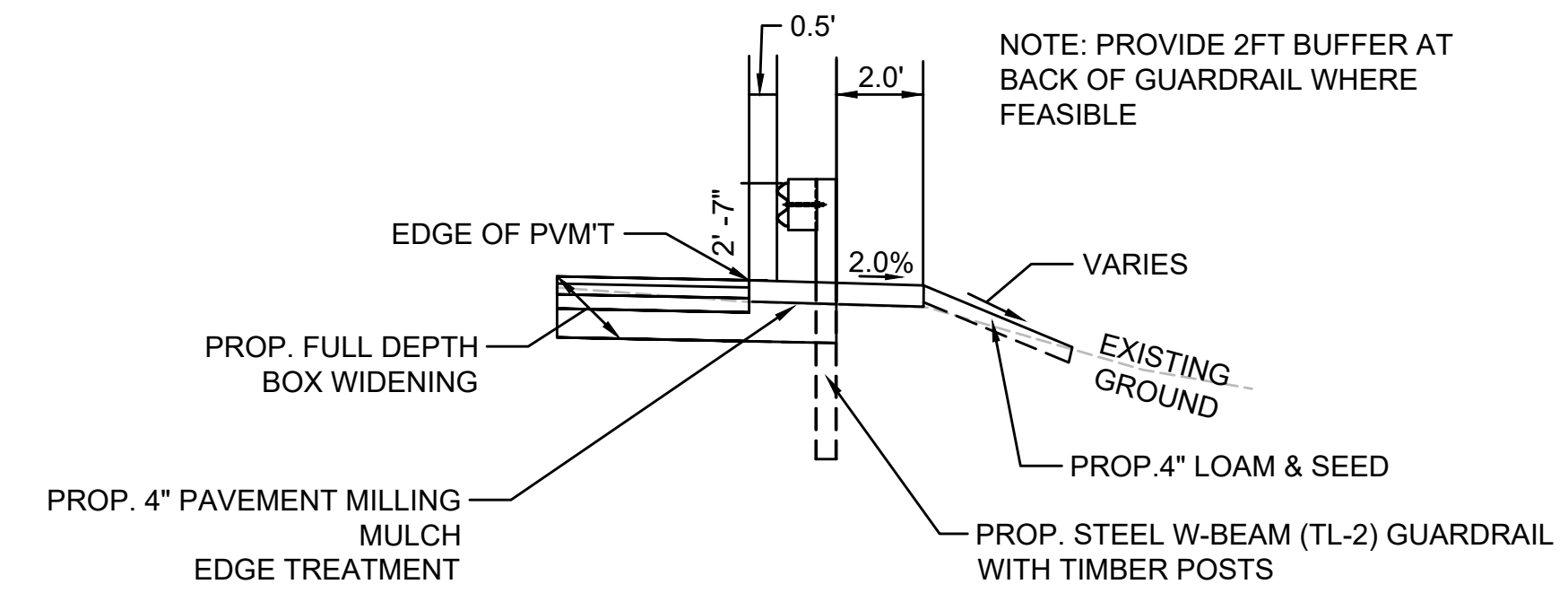
LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	8	128
PROJECT FILE NO.		609054	

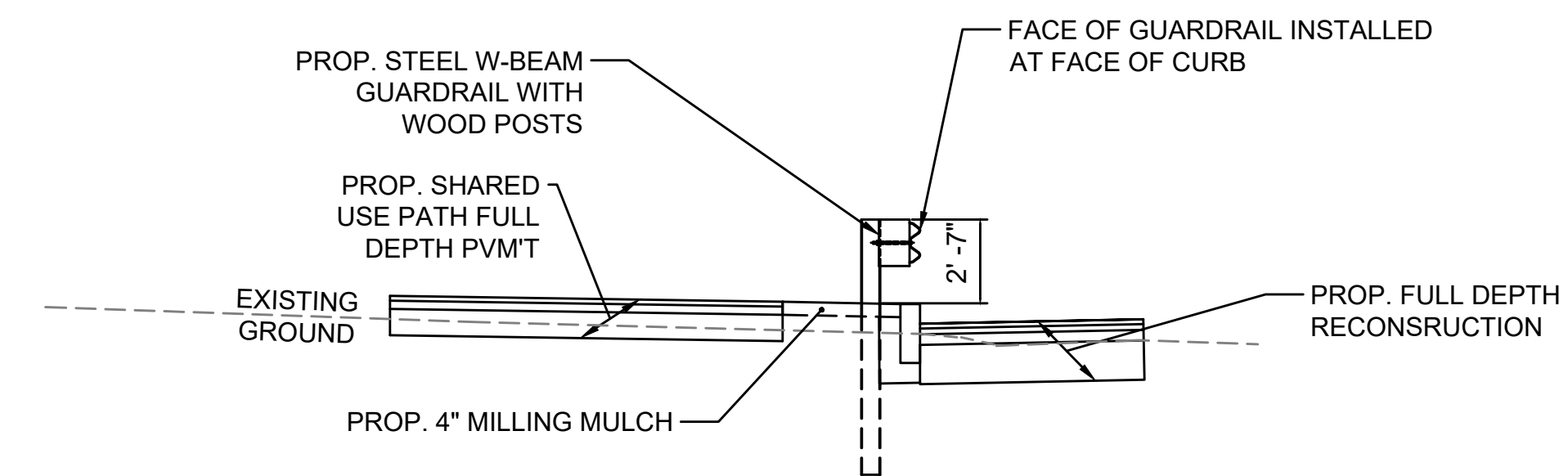
TYPICAL SECTIONS - FOSTER ST



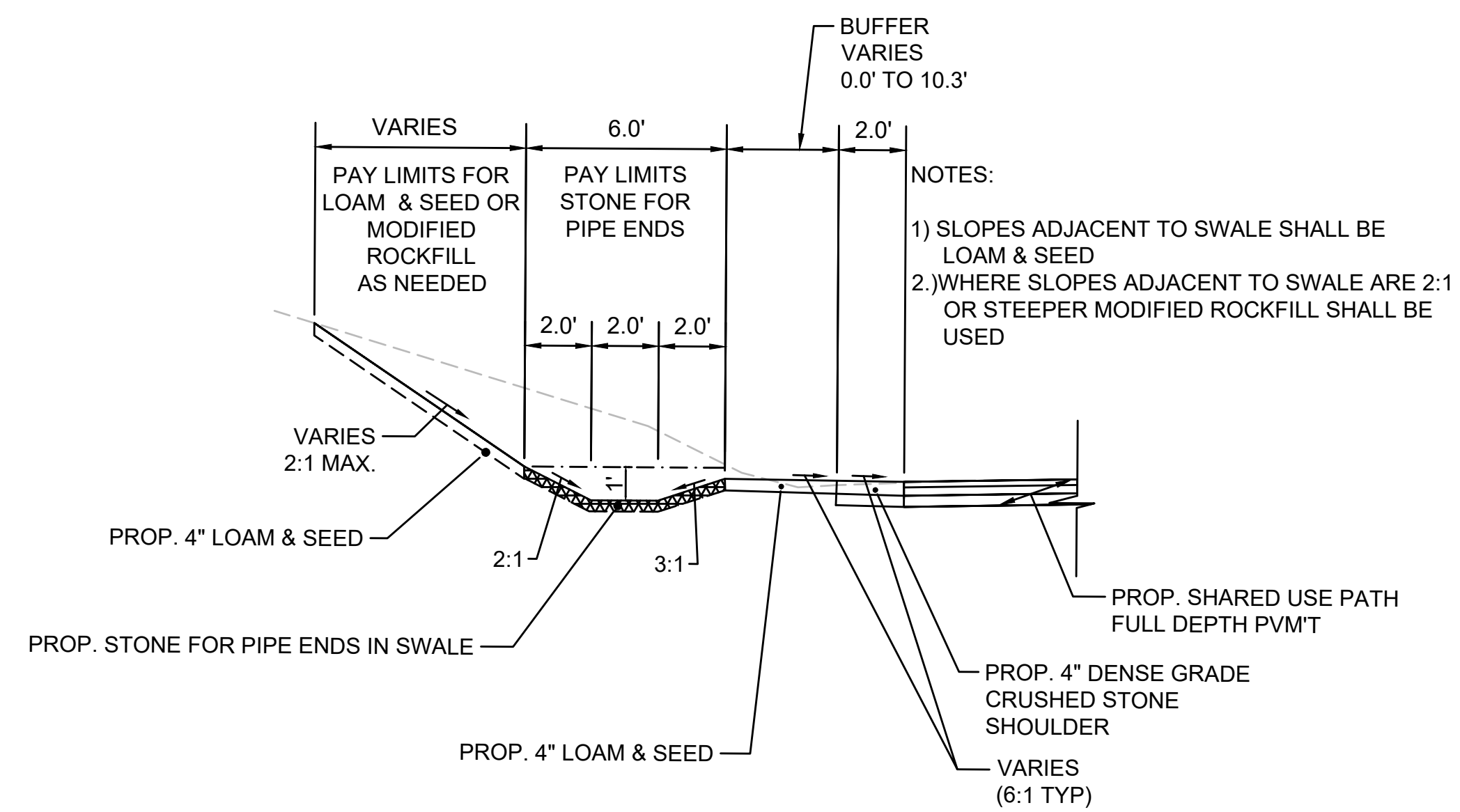
PROP. HMA BERM TYPE A MODIFIED PLACEMENT
SCALE: NTS



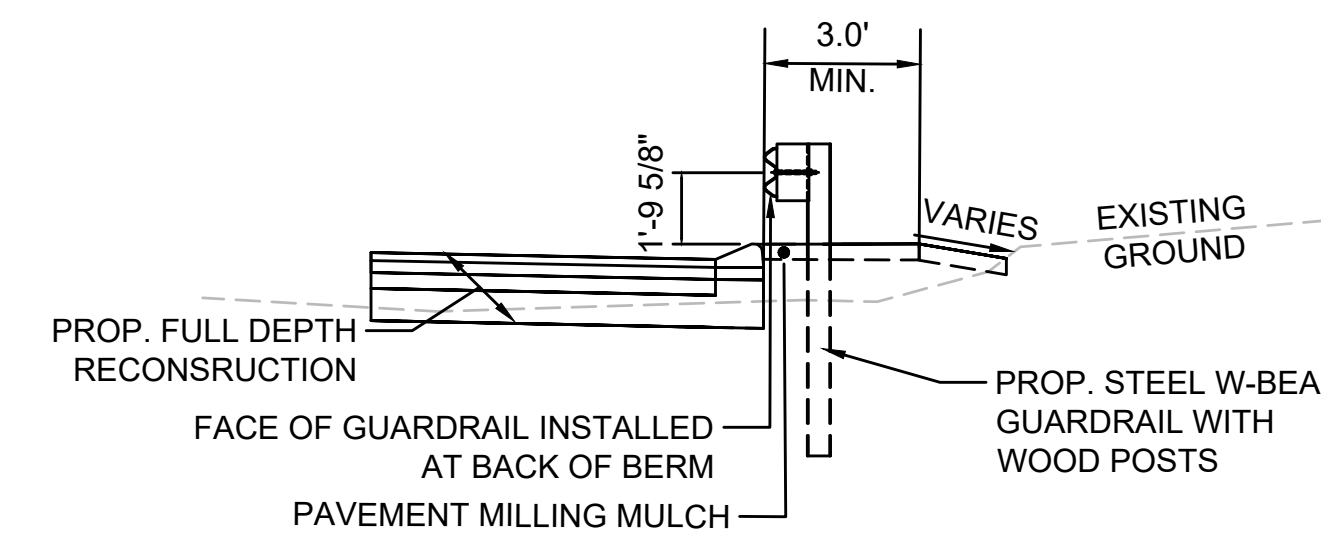
TYPICAL GUARDRAIL PLACEMENT
SCALE: NTS



TYPICAL GAURDRAIL PLACEMENT AT GRANITE CURB TYPE VB
SCALE: NTS



GRASS SWALE WITH MODIFIED ROCK FILL
SCALE: NTS



TYPICAL GAURDRAIL PLACEMENT AT HMA BERM TYPE A MODIFIED
SCALE: NTS

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE SHEET 57-64

DRAINAGE DETAILS

SEE SHEET NOS. 65-67

LEGEND:

PROPOSED PEDESTRIAN CURB RAMP DETAIL # X#

PROPOSED DRIVEWAY TYPE # DR#-#

NOTES:

- ALL EXISTING GRANITE CURB WITHIN PROJECT LIMITS SHALL BE REMOVED & DISCARDED UNLESS OTHERWISE NOTED ON THE PLAN.
- FOR GUARDRAIL DETAILS REFER TO STANDARD DETAILS 400.1.2, 400.1.3, 400.1.4, 400.1.5, 400.1.6, AND 400.5.1
- ALL PROPOSED GRANITE CURB SHALL BE TYPE VB.
- PRIOR TO CONSTRUCTION ACTIVITIES, A SITE WALK SHALL BE CONDUCTED WITH CONTRACTOR, ENGINEER, AND LANDSCAPE ARCHITECT TO DETERMINE SELECTIVE CLEARING AND THINNING OF TREES.
- ALL PROPOSED CLEARING AND GRUBBING IS SHOWN WITH THE PROPOSED SLOPE LINE UNLESS OTHERWISE SHOWN.
- LOCATIONS WHERE CLASS A ROCK EXCAVATION IS ENCOUNTERED NEAR GAS LINES, CONTRACTOR MUST ALSO PROVIDE VIBRATION MONITORING. (ITEM 757.)

LITTLETON RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	9	128
PROJECT FILE NO.		609054	

CONSTRUCTION PLANS

DANIEL SWEENEY (CLASS A TRUSTEE)
ARTURO J. GUTIERREZ, JOHN A.
CATALDO (CLASS B TRUSTEES)
TAYLOR STREET, LITTLETON TRUST
BK/PG 32096/213
PARCEL #R10 6 0
TAYLOR STREET

- PROP. EDGE OF PVM'T
- BEGIN PROP. GRAN. CURB (FLUSH TRANSITION AT BIKE RAMP)
- PROP. 6" HMA BIKE RAMP (PAID FOR UNDER ITEM 702.)
- PROP. LOAM & SEED
- PROP. CONC. BIKE RAMP (DIRECTIONAL BAR TILE OPTION)
- PROP. TEMP. EASEMENT
- PROP. CEM. CONC. PCR
- PROP. RECTANGULAR RAPID FLASHING BEACON (RRFB)
- PROP. CEM. CONC. PCR
- END PROP. GRAN. CURB

BEGINNING OF PROJECT
PROJ. NO. 609054
STA 0+00.00
N3012786.8847
E653296.9381

STA 203+20.63 ALIGN_TAYLOR =
STA 0+00.00 ALIGN_FOSTER
IN 3012786.8847 E 653296.9381

- PROP. TEMP. EASEMENT
- PROP. PERM. UTL. EASEMENT
- PROP. LIMIT OF CLEARING AND GRUBBING BEHIND SLOPE LIMIT
- PROP. CEM. CONC. PCR
- LIMIT OF PVM'T MILL & OVERLAY SAWCUT PVM'T MATCH EXISTING

DANIEL SWEENEY (CLASS A TRUSTEE)
ARTURO J. GUTIERREZ, JOHN A.
CATALDO (CLASS B TRUSTEES)
TAYLOR STREET, LITTLETON TRUST
BK/PG 32096/215
PLAN 1268 OF 1987
PARCEL #R10 7 0
225 TAYLOR STREET

- PROP. CEM. CONC. PCR
- LIMIT OF PVM'T MILL & OVERLAY SAWCUT PVM'T MATCH EXISTING

TAYLOR STREET (PUBLIC)
N 16° 52' 43" W 208.14'

TAYLOR STREET (PUBLIC)
N 12° 51' 04" W 96.62'
PT +57.68
L=249.54' R=3550.00'
Δ=4° 01' 39"

1959 SHILO NO. 4853
RET. MHB SB FD W/DH
E653254.4720
N3012961.1405

LIMIT OF WORK
STA 205+00.00
N3012961.1405
E653254.4720

- RET. EXISTING FENCE
- BEGIN PROP. GRAN. CURB
- PROP. RECTANGULAR RAPID FLASHING BEACON (RRFB)
- PROP. CEM. CONC. PCR
- PROP. CEM. CONC. SIDEWALK
- PROP. TREE PROTECTION (TYP.)
- RET. TREES (2)
- PROP. TREE PROTECTION & CARE INCLUDING AIR EXCAVATION, ROOT PRUNING & WATERING
- RETAIN BALANCE STONE WALL
- PROP. LOAM & SEED
- BEGIN REMOVE AND REBUILD BALANCE STONE WALL STA. 0+47
- PROP. CEM. CONC. PCR
- REM. TREE
- R&R STONE BOUND (AS NEEDED)
- PROP. LOAM & SEED

- PROP. LIMIT OF CLEARING AND GRUBBING BEHIND SLOPE LIMIT
- PROP. CLASS A ROCK EXCAVATION IN ADVANCE OF U.P. INSTALLATION (AS ENCOUNTERED)
- OVERHEAD TREE TRIMMING 10' FROM PROP. OHW (TYP.)
- PROP. PERM. UTL. EASEMENT
- PROP. 10' SHARED-USE PATH
- APPROX. SLOPE LIMIT
- PROP. LOAM & SEED
- R&R STONE WALL
- PROP. TEMP. EASEMENT
- PROP. TREE (SEE LANDSCAPING PLAN) - TYP.
- PROP. PERM. UTL. EASEMENT

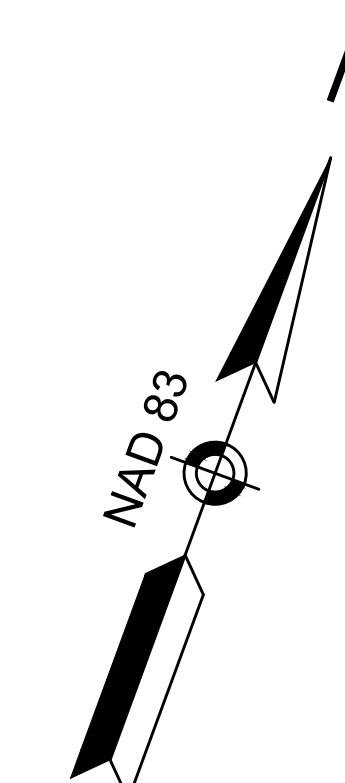
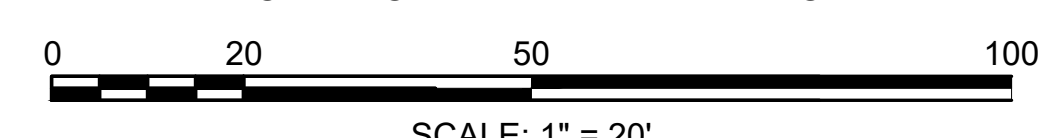
2641-2651 SANTA ANNA AVENUE, LLC
BK/PG 68756/572
PLAN NO 1425 OF 1981
PARCEL #R10 2 1
305 FOSTER STREET

FOSTER STREET (PUBLIC)
N 70° 36' 10" E 403.30'

JOHN K. GRADY, TRUSTEE OF THE FOSTER/TAYLOR REALTY TRUST
BK/PG 25198/143
PLAN NO 228 OF 1992
PARCEL #R09 32 0
230 TAYLOR STREET

JOHN K. GRADY & DAVID B. RICE, TRUSTEES OF CONCORD ASSOCIATES FOSTER STREET TRUST
BK/PG 14680/362
PLAN NO 1314 OF 1981
PARCEL #R09 33 0
300 FOSTER STREET

FOR PROFILE: SEE SHEET NO. 17



CONTINUED ON SHEET NO. 10

HIGHWAY GUARD DETAILS

STEEL W-BEAM GUARDRAIL (TL-2) W/ WOOD POST & TANGENT END STA. 9+46 LT TO TANGENT END STA 10+84 LT

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE SHEET 57-64

DRAINAGE DETAILS

SEE SHEET NOS. 65-67

LEGEND:

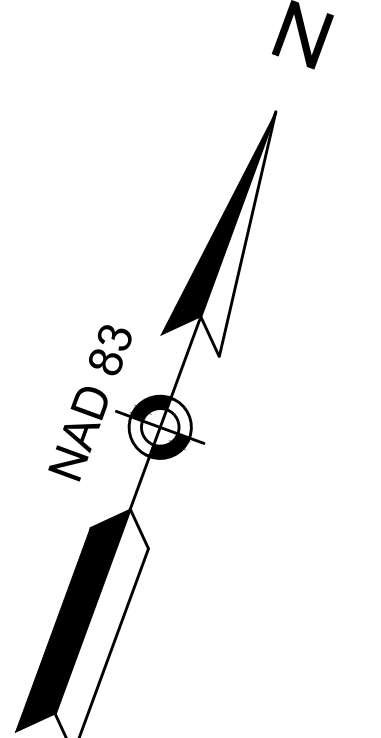
PROPOSED PEDESTRIAN CURB RAMP DETAIL # [X#]

PROPOSED DRIVEWAY TYPE # [DR#]

LITTLETON RECONSTRUCTION OF FOSTER STREET

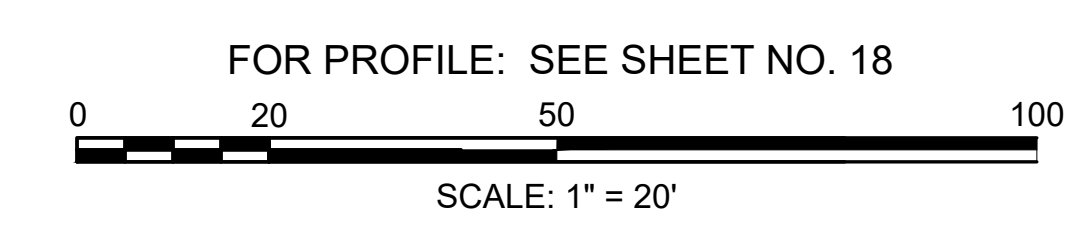
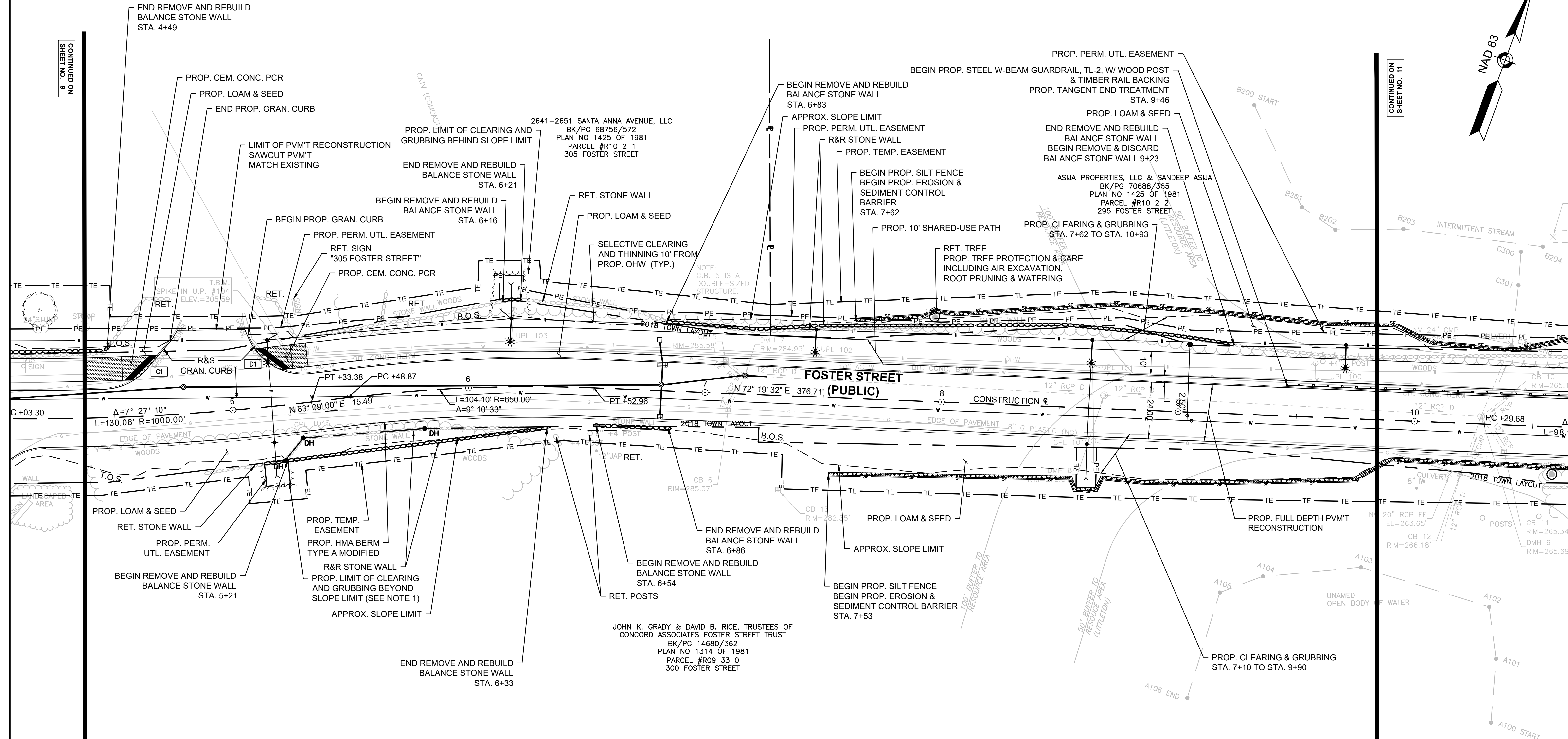
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	10	128
PROJECT FILE NO.		609054	

CONSTRUCTION PLANS



CONTINUED ON SHEET NO. 9

CONTINUED ON SHEET NO. 11



HIGHWAY GUARD DETAILS

STEEL W-BEAM GUARDRAIL (TL-2) W/ WOOD POST & TANGENT END STA. 9+46 LT TO TANGENT END STA 10+84 LT

STEEL W-BEAM GUARDRAIL (TL-2) W/ WOOD POST & TANGENT END STA. 11+83 LT TO TANGENT END STA 17+28 LT

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE SHEET 57-64

DRAINAGE DETAILS

SEE SHEET NOS. 65-67

LEGEND:

PROPOSED PEDESTRIAN CURB RAMP DETAIL # X#

PROPOSED DRIVEWAY TYPE # DR#

LITTLETON RECONSTRUCTION OF FOSTER STREET

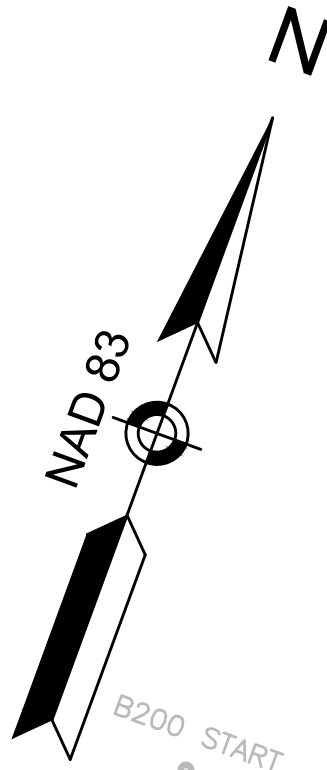
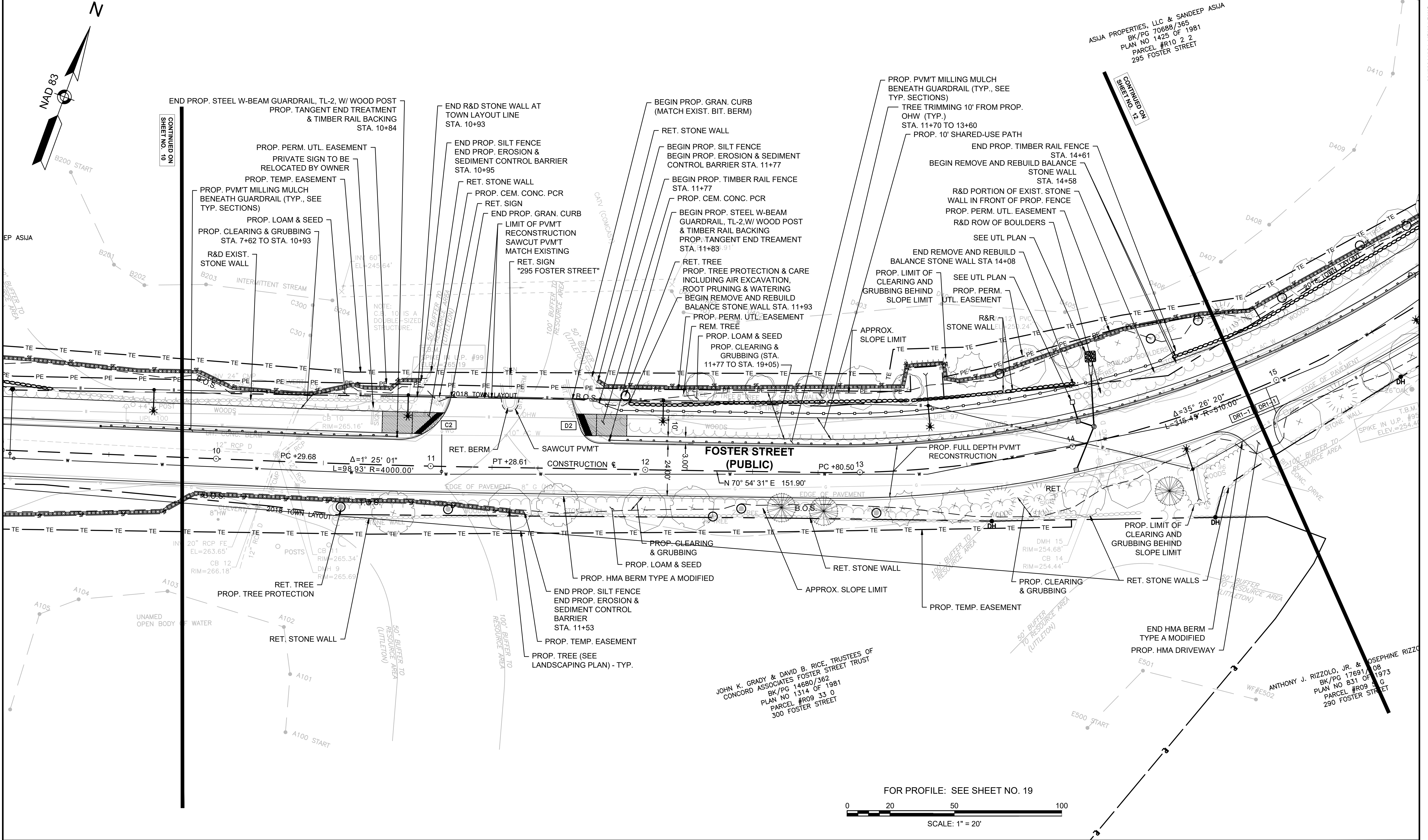
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	11	128
PROJECT FILE NO.		609054	

CONSTRUCTION PLANS

ASJIA PROPERTIES, LLC & SANDEEP ASJIA
BK/PG 70688/365
PLAN NO 1425 OF 1981
PARCEL #R10 2 2
295 FOSTER STREET

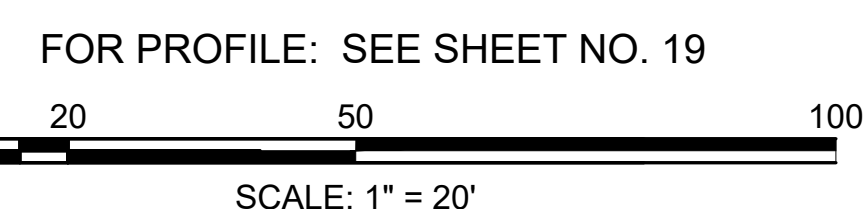
JOHN K. GRADY & DAVID B. RICE, TRUSTEES OF
CONCORD ASSOCIATES FOSTER STREET TRUST
BK/PG 14680/362
PLAN NO 1314 OF 1981
PARCEL #R09 33 0
300 FOSTER STREET

ANTHONY J. RIZZOLO, JR. & JOSEPHINE RIZZOLO
BK/PG 17691/08
PLAN NO 831 OF 1973
PARCEL #R09 3 3
290 FOSTER STREET



CONTINUED ON SHEET NO. 10

CONTINUED ON SHEET NO. 12



HIGHWAY GUARD DETAILS

STEEL W-BEAM GUARDRAIL (TL-2) W/ WOOD POST & TANGENT END STA. 11+94 TO TANGENT END STA 17+28

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE SHEET 57-64

DRAINAGE DETAILS

SEE SHEET NOS. 65-67

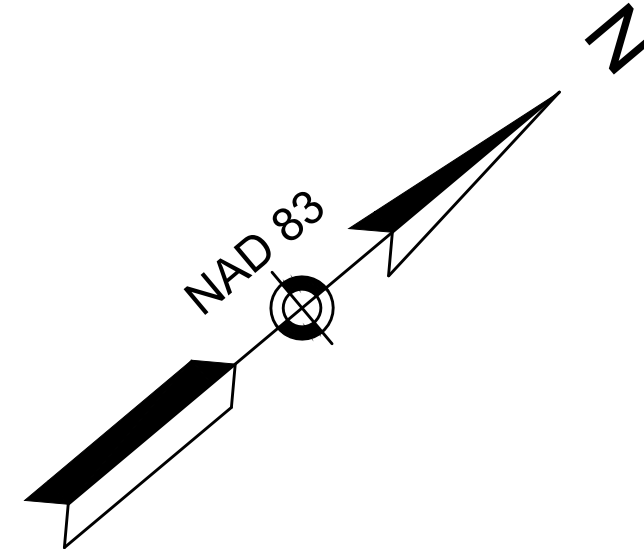
LEGEND:

PROPOSED PEDESTRIAN CURB RAMP DETAIL # X#
PROPOSED DRIVEWAY TYPE # DR#

LITTLETON RECONSTRUCTION OF FOSTER STREET

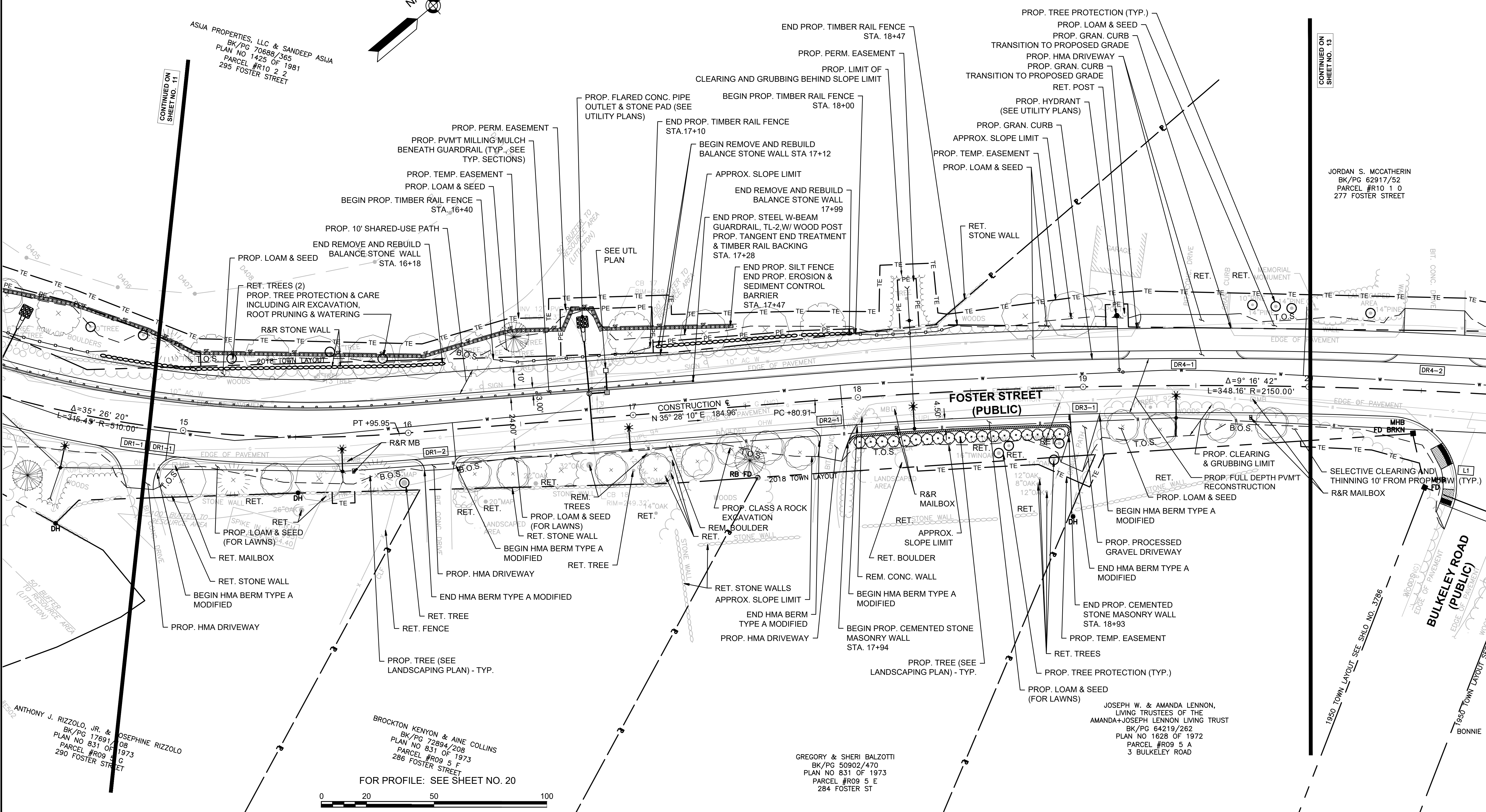
Table with 4 columns: STATE, FED. AID PROJ. NO., SHEET NO., TOTAL SHEETS. Row 1: MA, STP/CMQ/TAP-0033(037)X, 12, 128. Row 2: PROJECT FILE NO., 609054.

CONSTRUCTION PLANS



ASJA PROPERTIES, LLC & SANDEEP ASJA
BK/PG 70688/365
PLAN NO 1425 OF 1981
PARCEL #R10 2 2
295 FOSTER STREET

JORDAN S. MCCATHERIN
BK/PG 62917/52
PARCEL #R10 1 0
277 FOSTER STREET



CONTINUED ON SHEET NO. 11

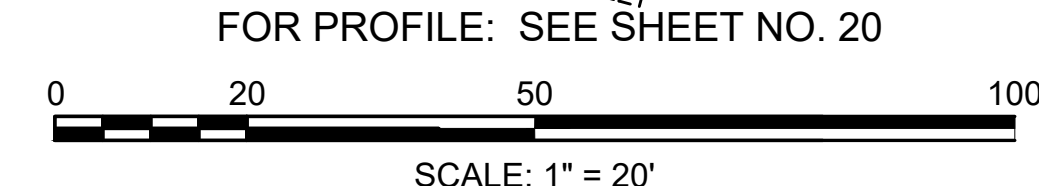
CONTINUED ON SHEET NO. 13

ANTHONY J. RIZZOLO, JR. & JOSEPHINE RIZZOLO
BK/PG 17691/08
PLAN NO 831 OF 1973
PARCEL #R09 3 G
290 FOSTER STREET

BROCKTON KENYON & AINE COLLINS
BK/PG 72894/208
PLAN NO 831 OF 1973
PARCEL #R09 5 F
286 FOSTER STREET

GREGORY & SHERI BALZOTTI
BK/PG 50902/470
PLAN NO 831 OF 1973
PARCEL #R09 5 E
284 FOSTER ST

JOSEPH W. & AMANDA LENNON,
LIVING TRUSTEES OF THE
AMANDA+JOSEPH LENNON LIVING TRUST
BK/PG 64219/262
PLAN NO 1628 OF 1972
PARCEL #R09 5 A
3 BULKELEY ROAD



HIGHWAY GUARD DETAILS

STEEL W-BEAM GUARDRAIL (TL-2) W/ WOOD POST & TANGENT END STA. 21+22 RT TO CONCRETE ABUTMENT STA 23+34 RT

STEEL W-BEAM GUARDRAIL (TL-2) W/ WOOD POST & TANGENT END STA. 23+26 LT TO TANGENT END STA 26+04 LT

STEEL W-BEAM GUARDRAIL (TL-2) W/ WOOD POST & TANGENT END STA. 24+52 RT TO TANGENT END STA 25+62 RT

WATER SUPPLY ALTERATIONS

SEE SHEET 57-64

DRAINAGE DETAILS

SEE SHEET NOS. 65-67

LEGEND:

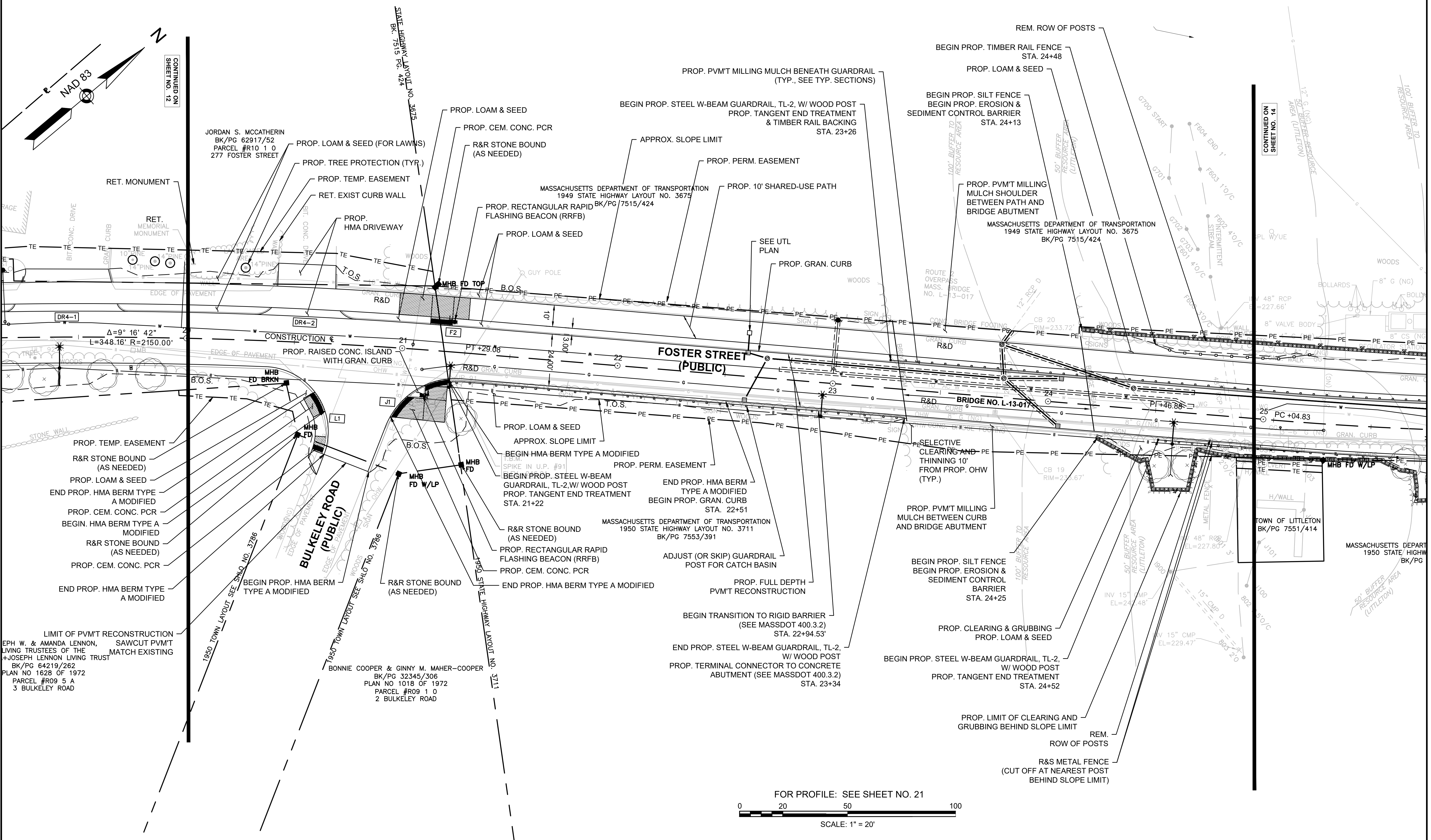
PROPOSED PEDESTRIAN CURB RAMP DETAIL # **X#**

PROPOSED DRIVEWAY TYPE # **DR#**

LITTLETON RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	13	128
PROJECT FILE NO.		609054	

CONSTRUCTION PLANS



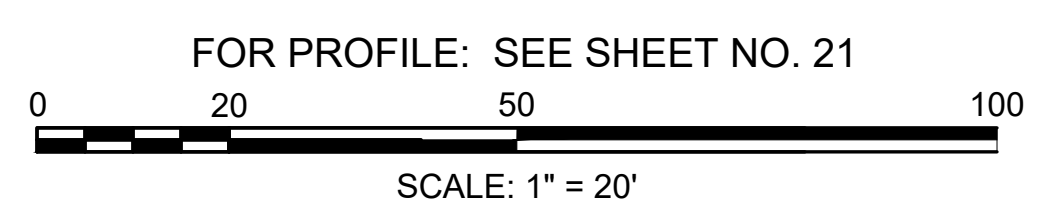
LIMIT OF PVM'T RECONSTRUCTION
 EPH W. & AMANDA LENNON, SAWCUT PVM'T
 LIVING TRUSTEES OF THE MATCH EXISTING
 + JOSEPH LENNON LIVING TRUST
 BK/PG 64219/262
 PLAN NO 1628 OF 1972
 PARCEL #R09 5 A
 3 BULKELEY ROAD

BONNIE COOPER & GINNY M. MAHER-COOPER
 BK/PG 32345/306
 PLAN NO 1018 OF 1972
 PARCEL #R09 1 0
 2 BULKELEY ROAD

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
 1950 STATE HIGHWAY LAYOUT NO. 3711
 BK/PG 7553/391

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
 1949 STATE HIGHWAY LAYOUT NO. 3675
 BK/PG 7515/424

TOWN OF LITTLETON
 BK/PG 7551/414



CONTINUED ON SHEET NO. 12

CONTINUED ON SHEET NO. 14

HIGHWAY GUARD DETAILS

STEEL W-BEAM GUARDRAIL (TL-2) W/ WOOD POST & TANGENT END STA. 23+26 LT TO TANGENT END STA 26+04 LT
 STEEL W-BEAM GUARDRAIL (TL-2) W/ WOOD POST & TANGENT END STA. 24+52 RT TO TANGENT END STA 25+62 RT
 STEEL W-BEAM GUARDRAIL (TL-2) W/ WOOD POST & TANGENT END STA. 28+49 RT TO FLARED END STA 32+83 RT
 STEEL W-BEAM GUARDRAIL (TL-2) W/ WOOD POST & TANGENT END STA. 301+41 LT TO TANGENT END STA 300+48 LT

WATER SUPPLY ALTERATIONS DRAINAGE DETAILS

SEE SHEET 57-64 SEE SHEET NOS. 65-67

TRAFFIC SIGNAL CONDUIT

NONE

LEGEND:

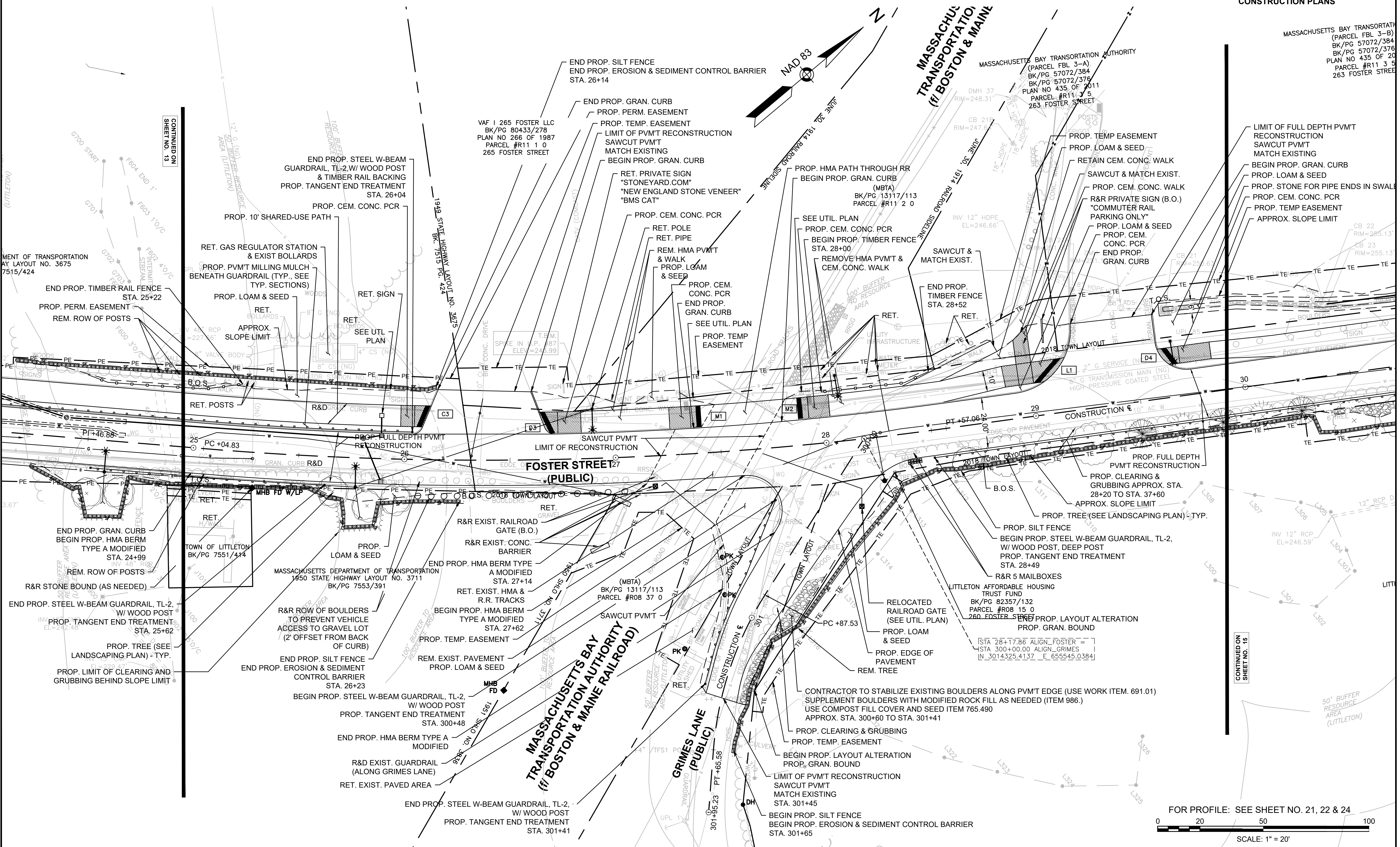
PROPOSED PEDESTRIAN CURB RAMP DETAIL # **X#**
 PROPOSED DRIVEWAY TYPE # **DR#**

LITTLETON RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	14	128
PROJECT FILE NO.		609054	

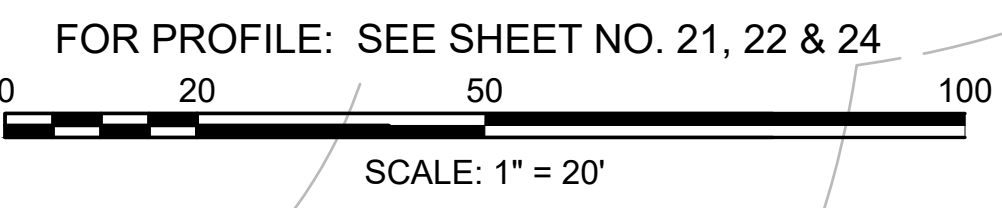
CONSTRUCTION PLANS

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY (PARCEL FBL 3-B) BK/PG 57072/384 BK/PG 57072/376 PLAN NO 435 OF 20 PARCEL #R11 3 5 263 FOSTER STREET



CONTINUED ON SHEET NO. 13

CONTINUED ON SHEET NO. 15



HIGHWAY GUARD DETAILS

STEEL W-BEAM GUARDRAIL (TL-2) W/ WOOD POST & TANGENT END STA. 28+49 RT TO FLARED END STA 32+83 RT

WATER SUPPLY ALTERATIONS

SEE SHEET 57-64

TRAFFIC SIGNAL CONDUIT

NONE

DRAINAGE DETAILS

SEE SHEET NOS. 65-67

LEGEND:

PROPOSED PEDESTRIAN CURB RAMP DETAIL #

X#

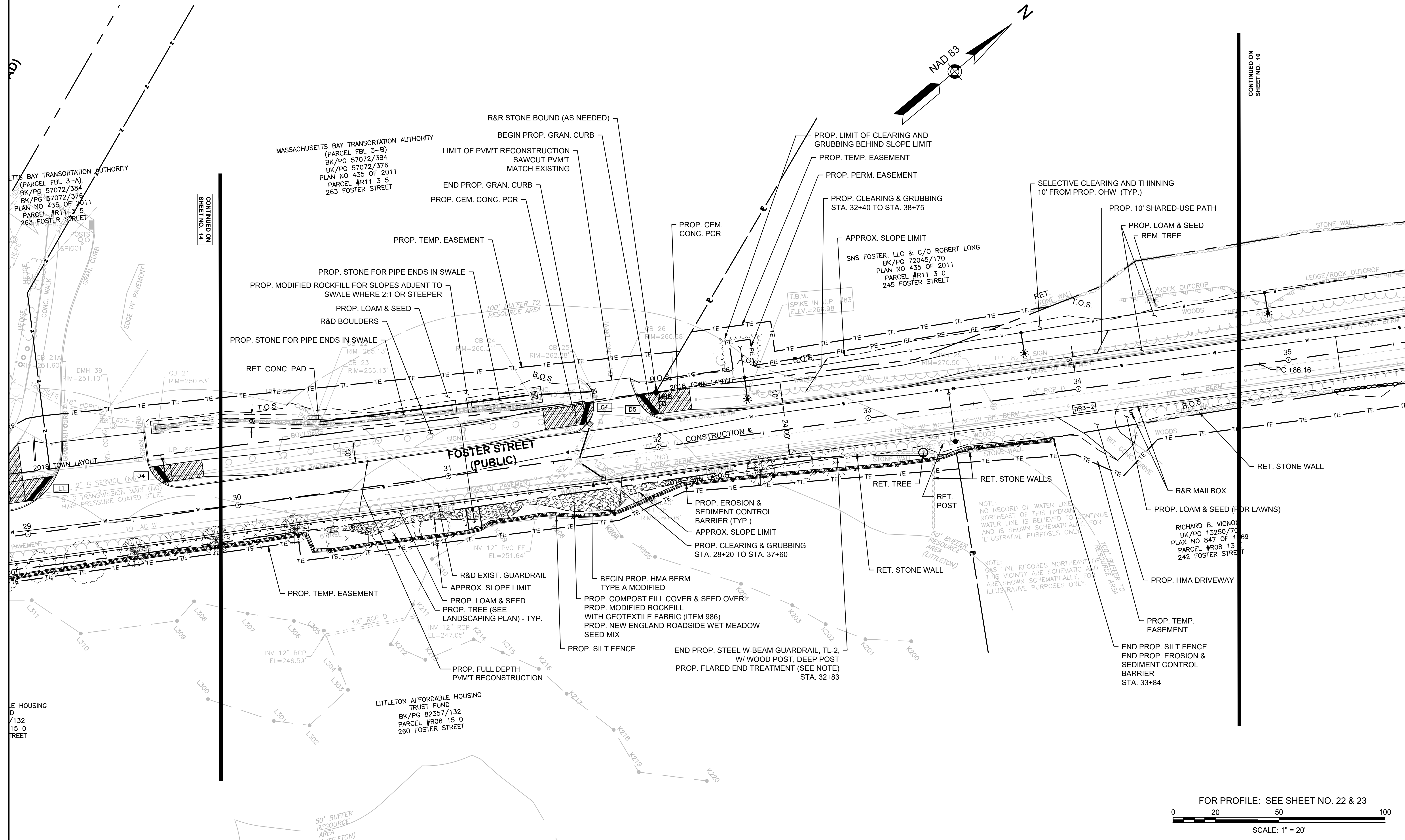
PROPOSED DRIVEWAY TYPE #

DR#

LITTLETON RECONSTRUCTION OF FOSTER STREET CONSTRUCTION PLANS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	15	128
PROJECT FILE NO.		609054	

CONSTRUCTION PLANS



CONTINUED ON SHEET NO. 14

CONTINUED ON SHEET NO. 16

FOR PROFILE: SEE SHEET NO. 22 & 23
SCALE: 1" = 20'

HIGHWAY GUARD DETAILS

STEEL W-BEAM GUARDRAIL (TL-2) W/ WOOD POST & TANGENT END STA. 35+90 RT

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE SHEET 57-64

DRAINAGE DETAILS

SEE SHEET NOS. 65-67

LEGEND:

PROPOSED PEDESTRIAN CURB RAMP DETAIL #

X#

PROPOSED DRIVEWAY TYPE #

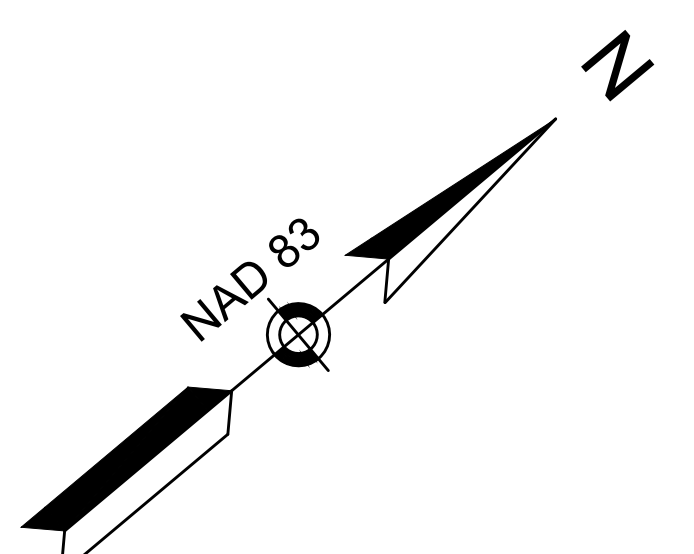
DR#

LITTLETON RECONSTRUCTION OF FOSTER STREET

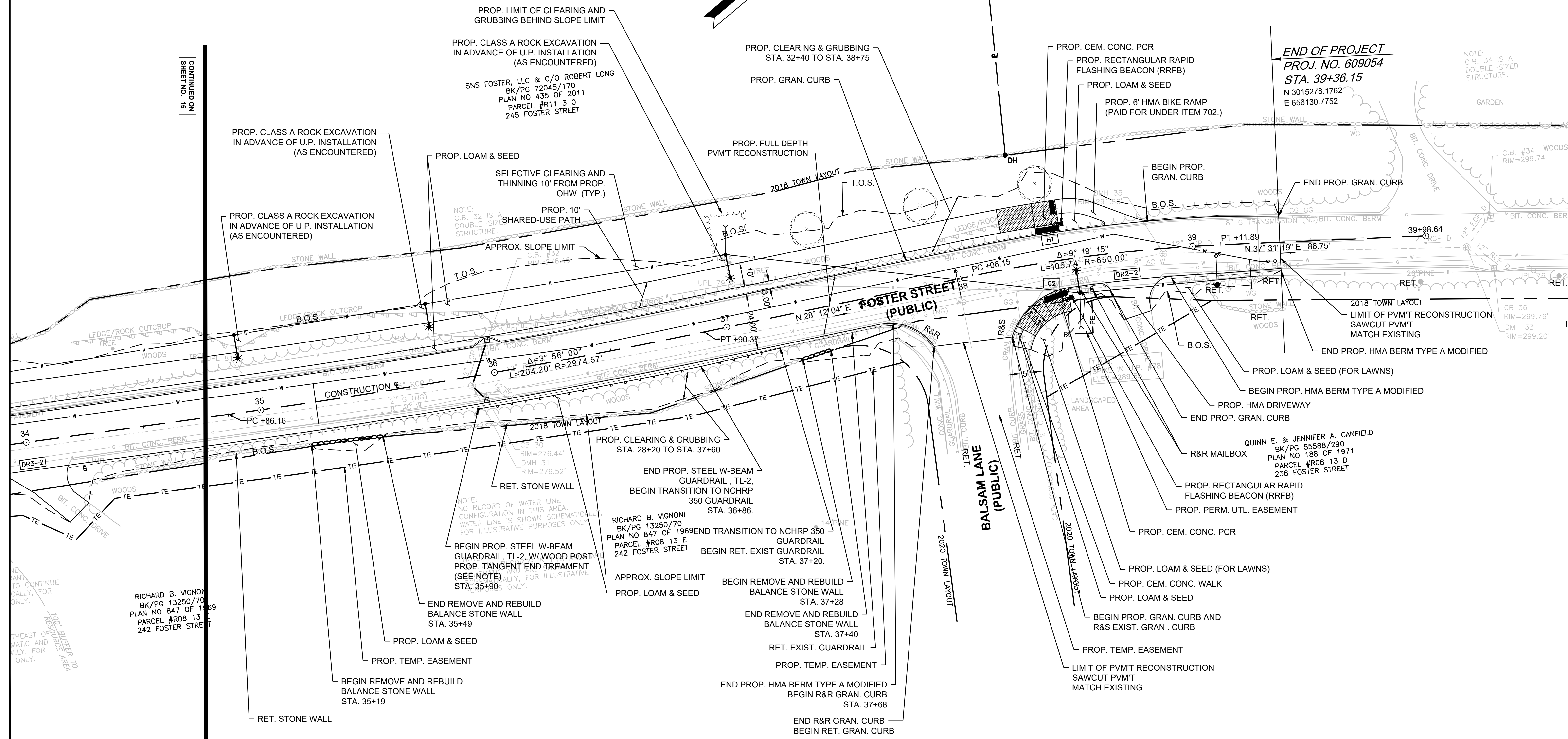
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	16	128
PROJECT FILE NO.		609054	

CONSTRUCTION PLANS

PATRICIA A. NARGIZIAN
BK/PG 70735/467
PARCEL #R11 5 4
237 FOSTER STREET



CONTINUED ON SHEET NO. 15



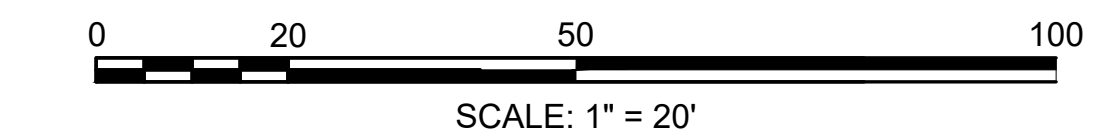
NOTE:
C.B. 34 IS A
DOUBLE-SIZED
STRUCTURE.

END OF PROJECT
PROJ. NO. 609054
STA. 39+36.15
N 3015278.1762
E 656130.7752

QUINN E. & JENNIFER A. CANFIELD
BK/PG 55588/290
PLAN NO 188 OF 1971
PARCEL #R08 13 D
238 FOSTER STREET

RICHARD B. VIGNONI
BK/PG 13250/70
PLAN NO 847 OF 1969
PARCEL #R08 13 E
242 FOSTER STREET

FOR PROFILE: SEE SHEET NO. 23

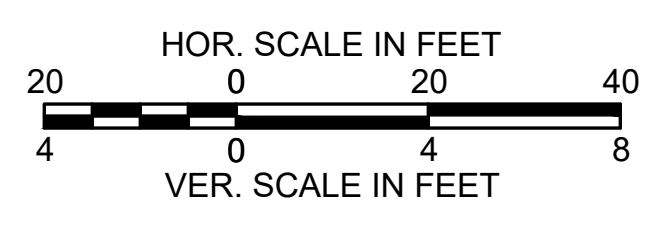
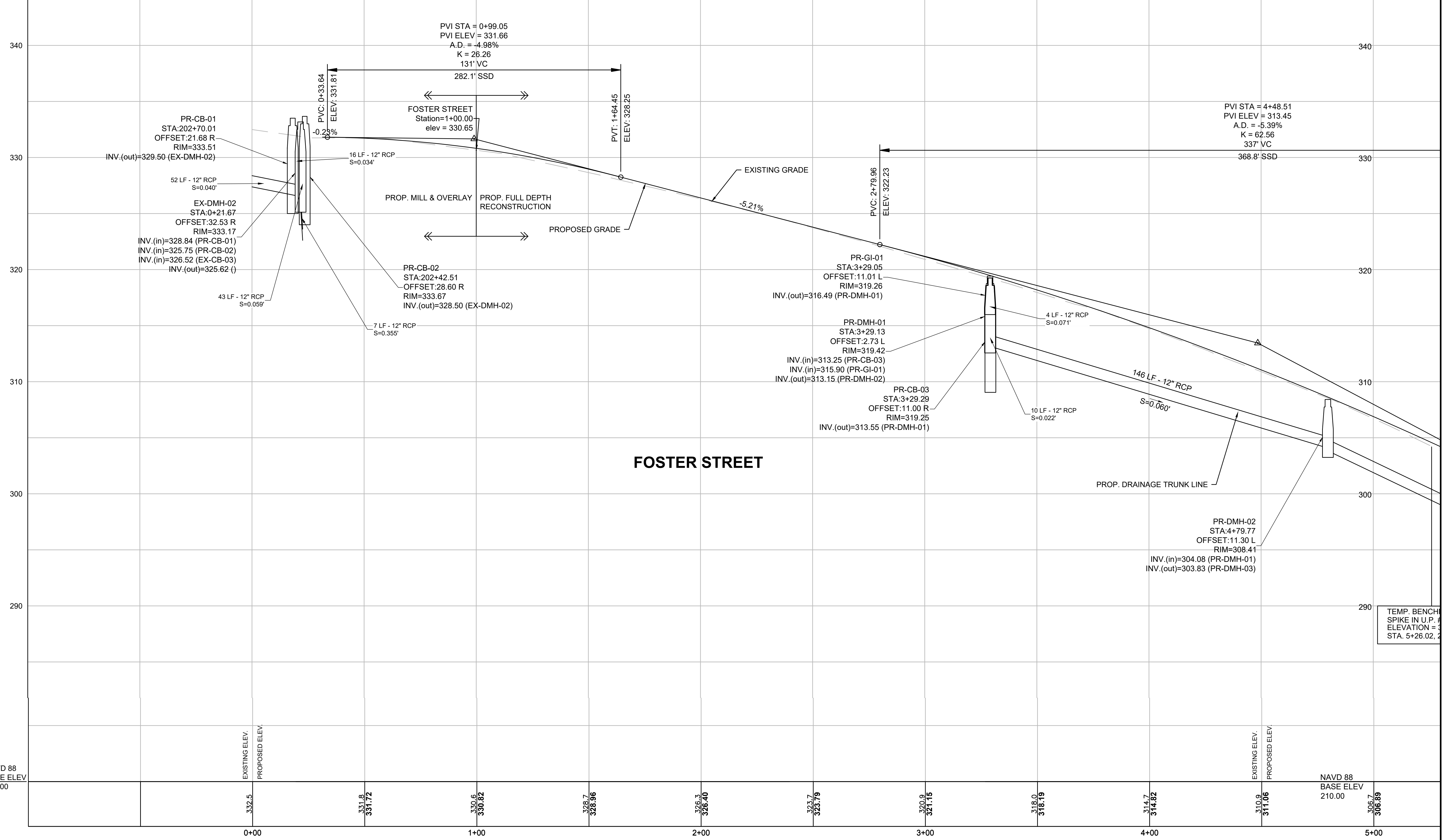


LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	17	128
PROJECT FILE NO. 609054			

PROFILE - FOSTER STREET

FOR CONSTRUCTION PLANS:
SEE SHEET NOS. 9-16

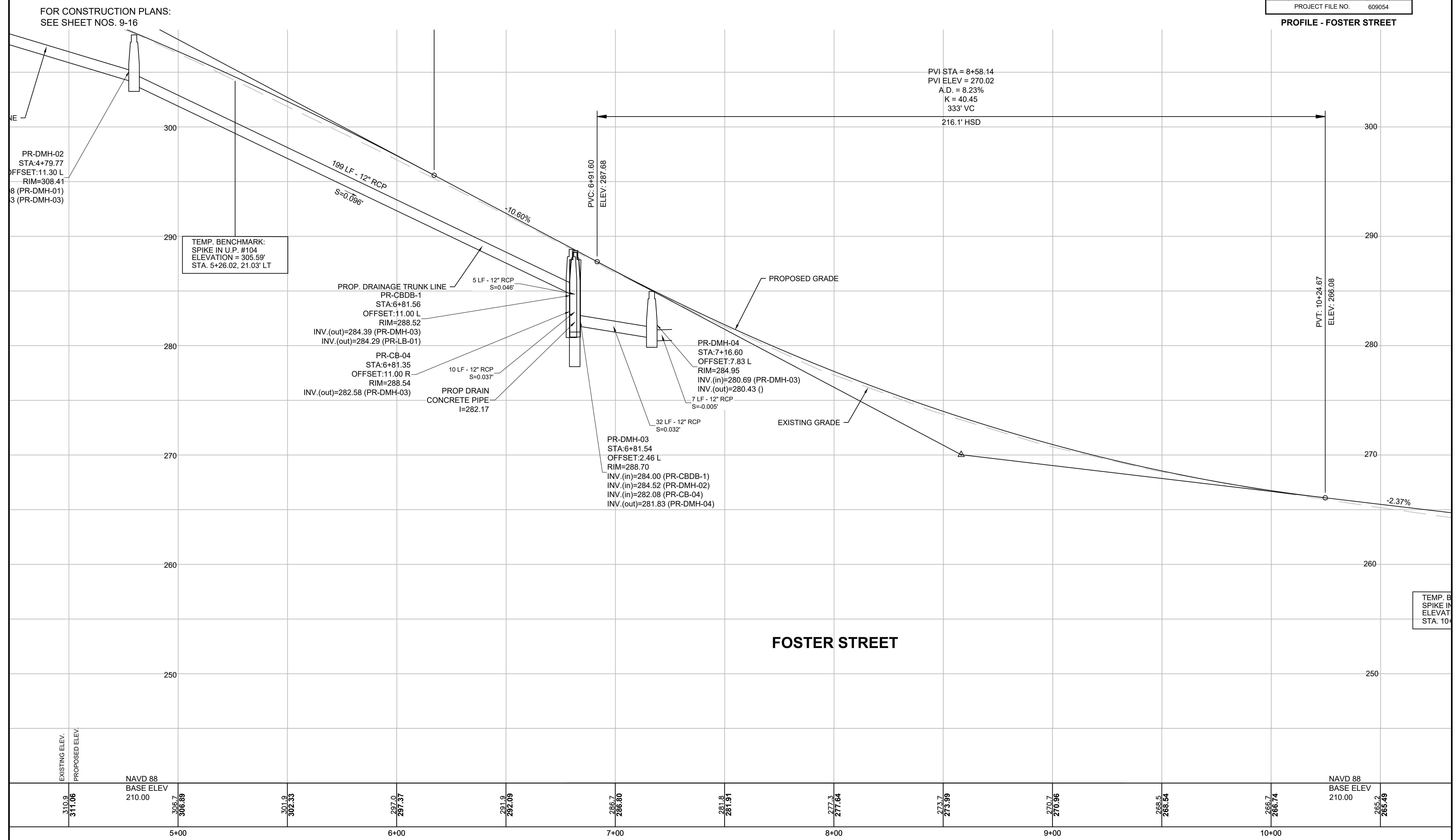


TEMP. BENCH
SPIKE IN U.P. #
ELEVATION = 3
STA. 5+26.02, 2

LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	18	128
PROJECT FILE NO.		609054	

PROFILE - FOSTER STREET



FOR CONSTRUCTION PLANS:
SEE SHEET NOS. 9-16

PR-DMH-02
STA:4+79.77
OFFSET:11.30 L
RIM=308.41
8 (PR-DMH-01)
3 (PR-DMH-03)

TEMP. BENCHMARK:
SPIKE IN U.P. #104
ELEVATION = 305.59'
STA. 5+26.02, 21.03' LT

PROP. DRAINAGE TRUNK LINE
PR-CBDB-1
STA:6+81.56
OFFSET:11.00 L
RIM=288.52
INV.(out)=284.39 (PR-DMH-03)
INV.(out)=284.29 (PR-LB-01)

PR-CB-04
STA:6+81.35
OFFSET:11.00 R
RIM=288.54
INV.(out)=282.58 (PR-DMH-03)

PROP DRAIN
CONCRETE PIPE
I=282.17

PR-DMH-03
STA:6+81.54
OFFSET:2.46 L
RIM=288.70
INV.(in)=284.00 (PR-CBDB-1)
INV.(in)=284.52 (PR-DMH-02)
INV.(in)=282.08 (PR-CB-04)
INV.(out)=281.83 (PR-DMH-04)

PR-DMH-04
STA:7+16.60
OFFSET:7.83 L
RIM=284.95
INV.(in)=280.69 (PR-DMH-03)
INV.(out)=280.43 ()

PVI STA = 8+58.14
PVI ELEV = 270.02
A.D. = 8.23%
K = 40.45
333' VC

216.1' HSD

PVT: 10+24.67
ELEV: 266.08

FOSTER STREET

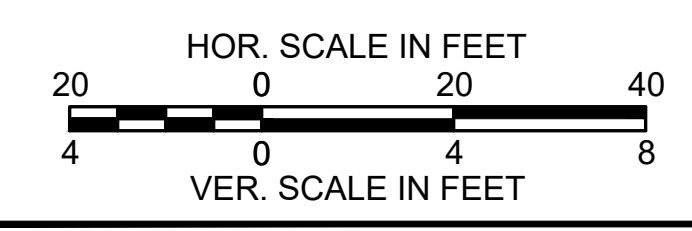
TEMP. B
SPIKE IN
ELEVAT
STA. 10+

EXISTING ELEV.
PROPOSED ELEV.

NAVD 88
BASE ELEV
210.00

NAVD 88
BASE ELEV
210.00

Station	Existing Elev.	Proposed Elev.
5+00	310.9	311.06
5+00	306.7	306.89
6+00	301.9	302.33
6+00	297.0	297.37
7+00	291.0	292.09
7+00	286.7	286.80
8+00	281.8	281.91
8+00	277.3	277.64
9+00	273.7	273.99
9+00	270.7	270.96
10+00	266.5	266.54
10+00	266.7	266.74
10+00	265.2	265.49

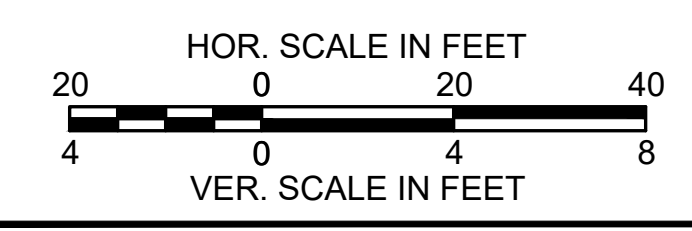
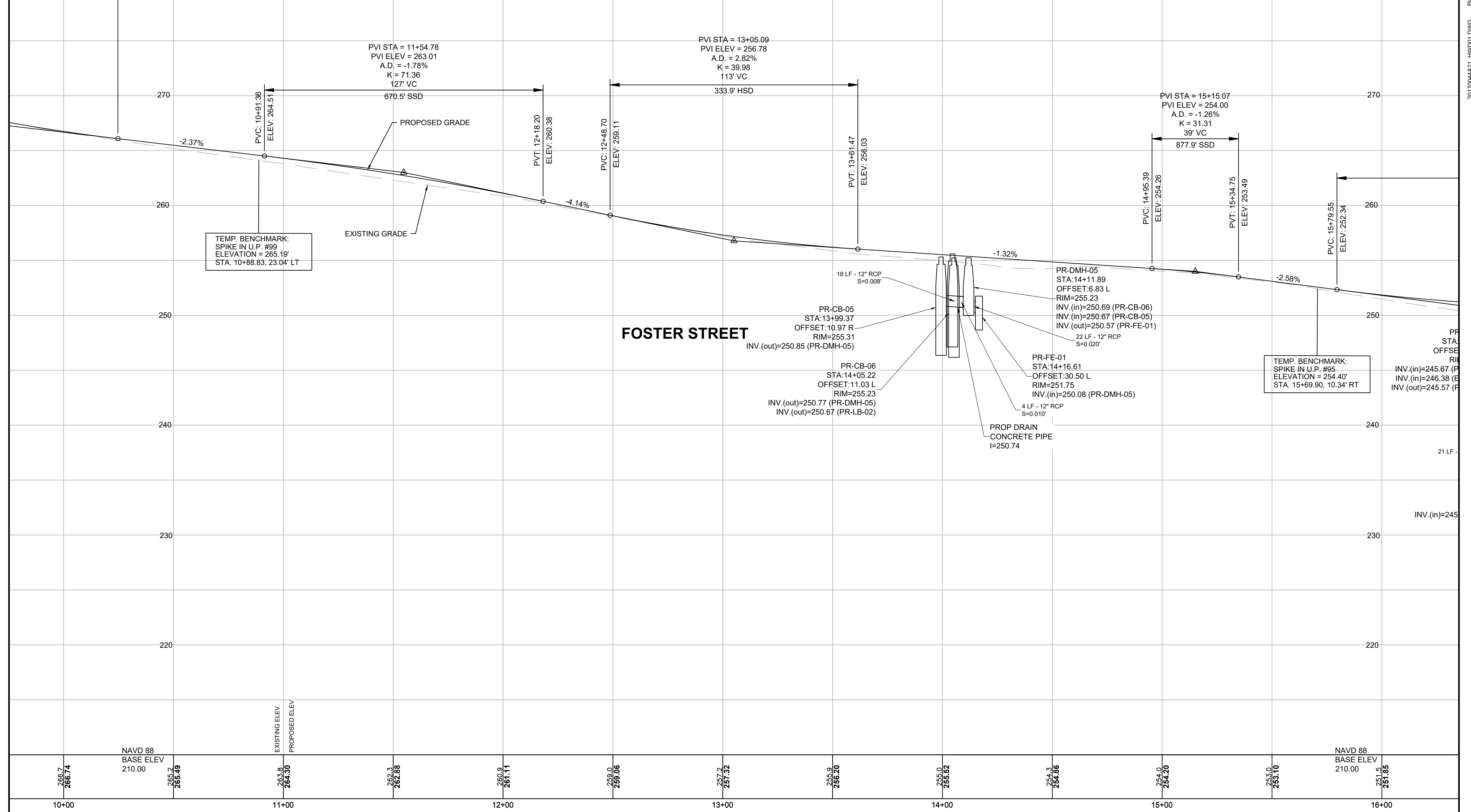


**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	19	128
PROJECT FILE NO.		609054	

PROFILE - FOSTER STREET

FOR CONSTRUCTION PLANS:
SEE SHEET NOS. 9-16

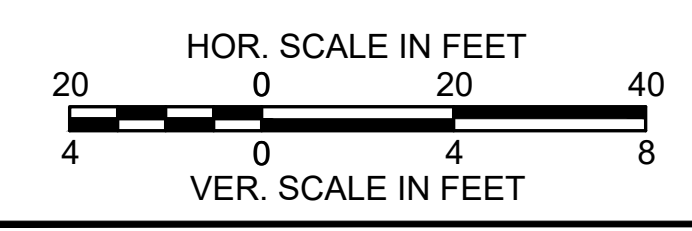
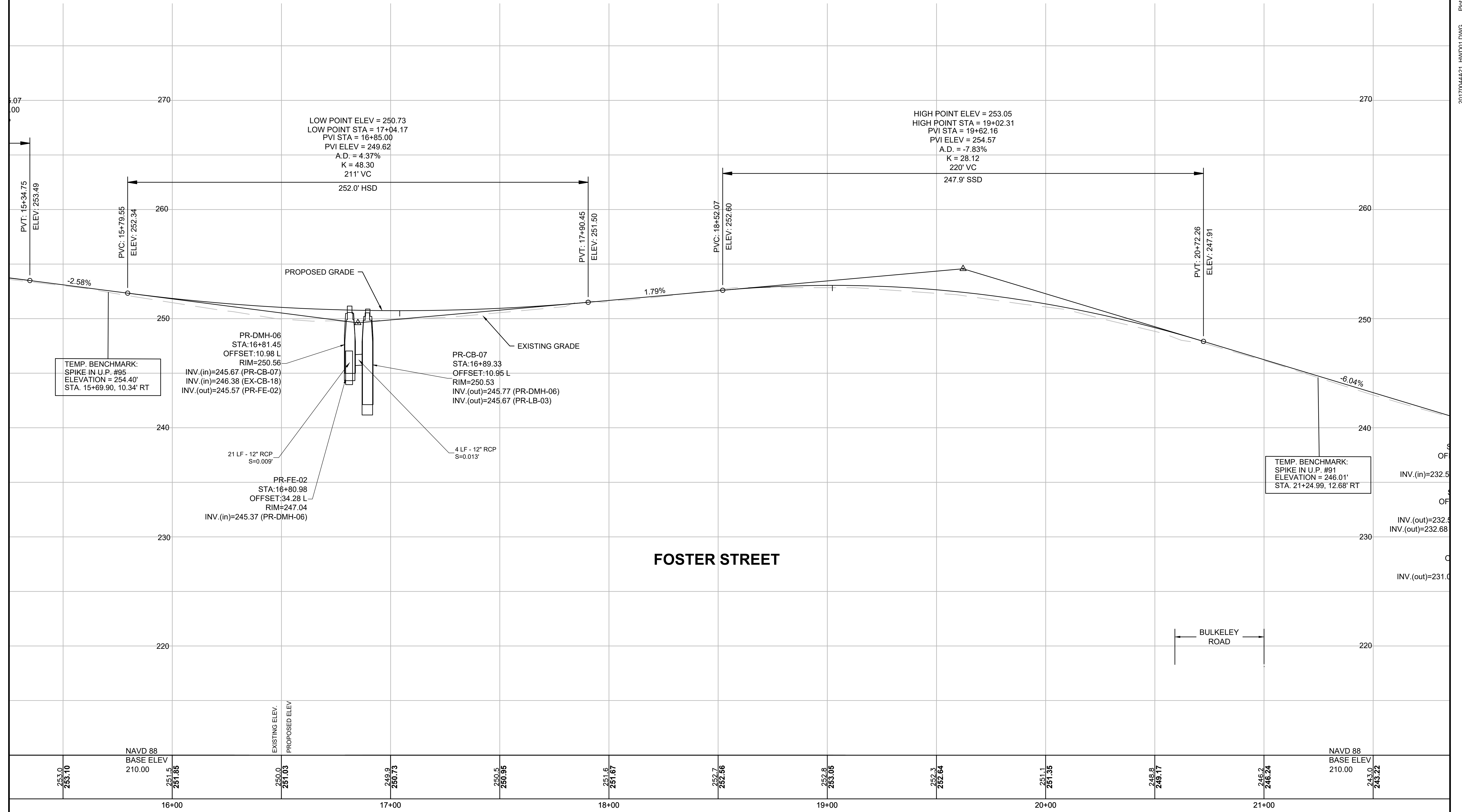


LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	20	128
PROJECT FILE NO.		609054	

PROFILE - FOSTER STREET

FOR CONSTRUCTION PLANS:
SEE SHEET NOS. 9-16

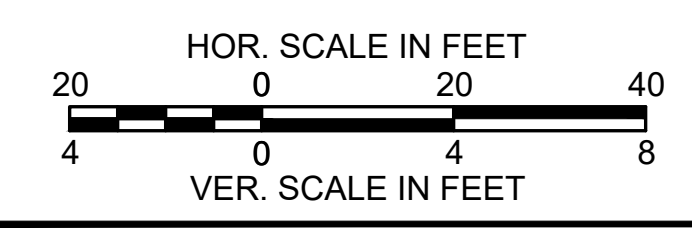
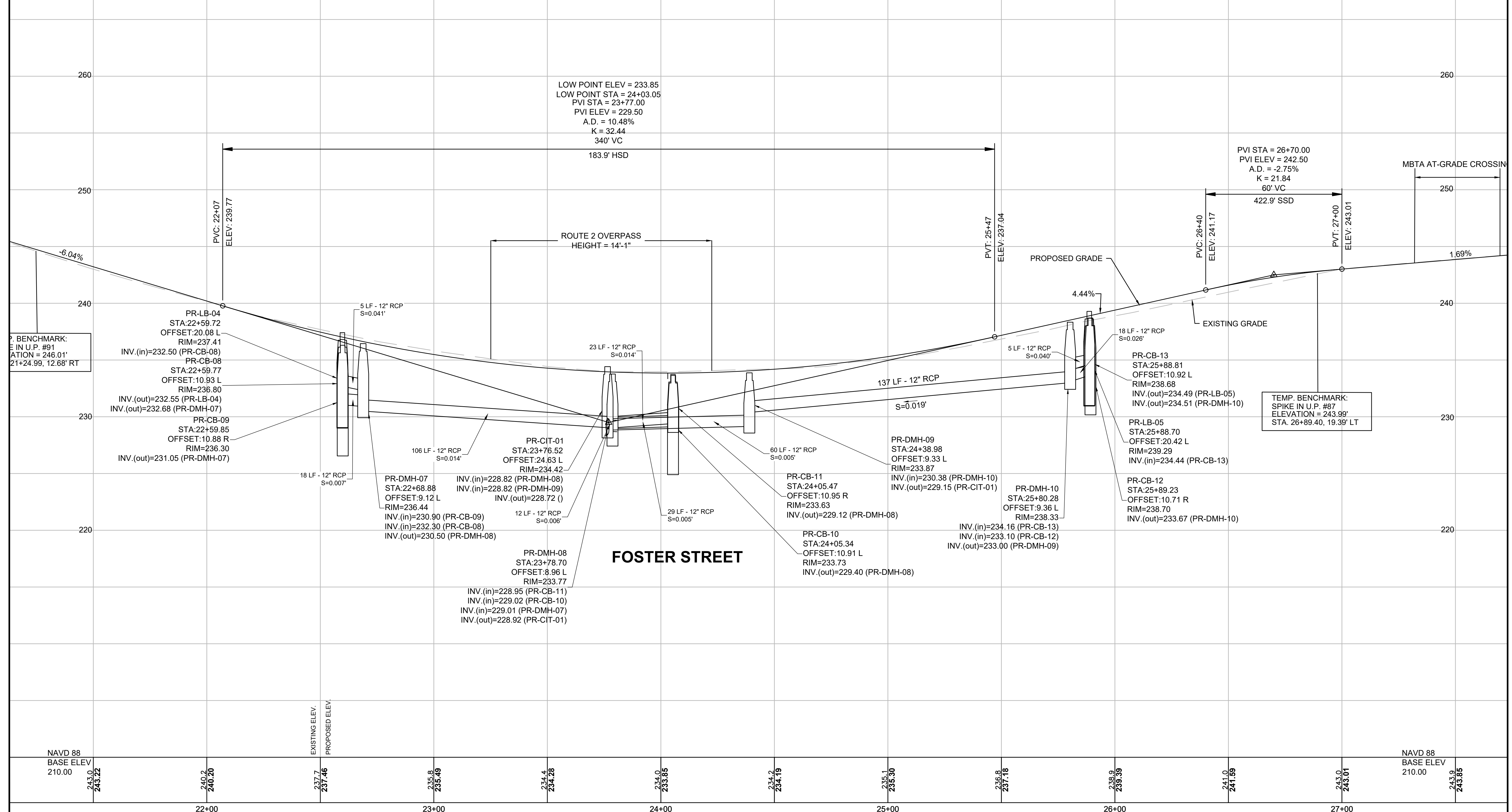


LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	21	128
PROJECT FILE NO.		609054	

PROFILE - FOSTER STREET

FOR CONSTRUCTION PLANS:
SEE SHEET NOS. 9-16



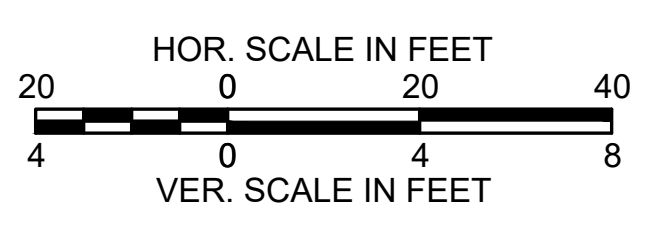
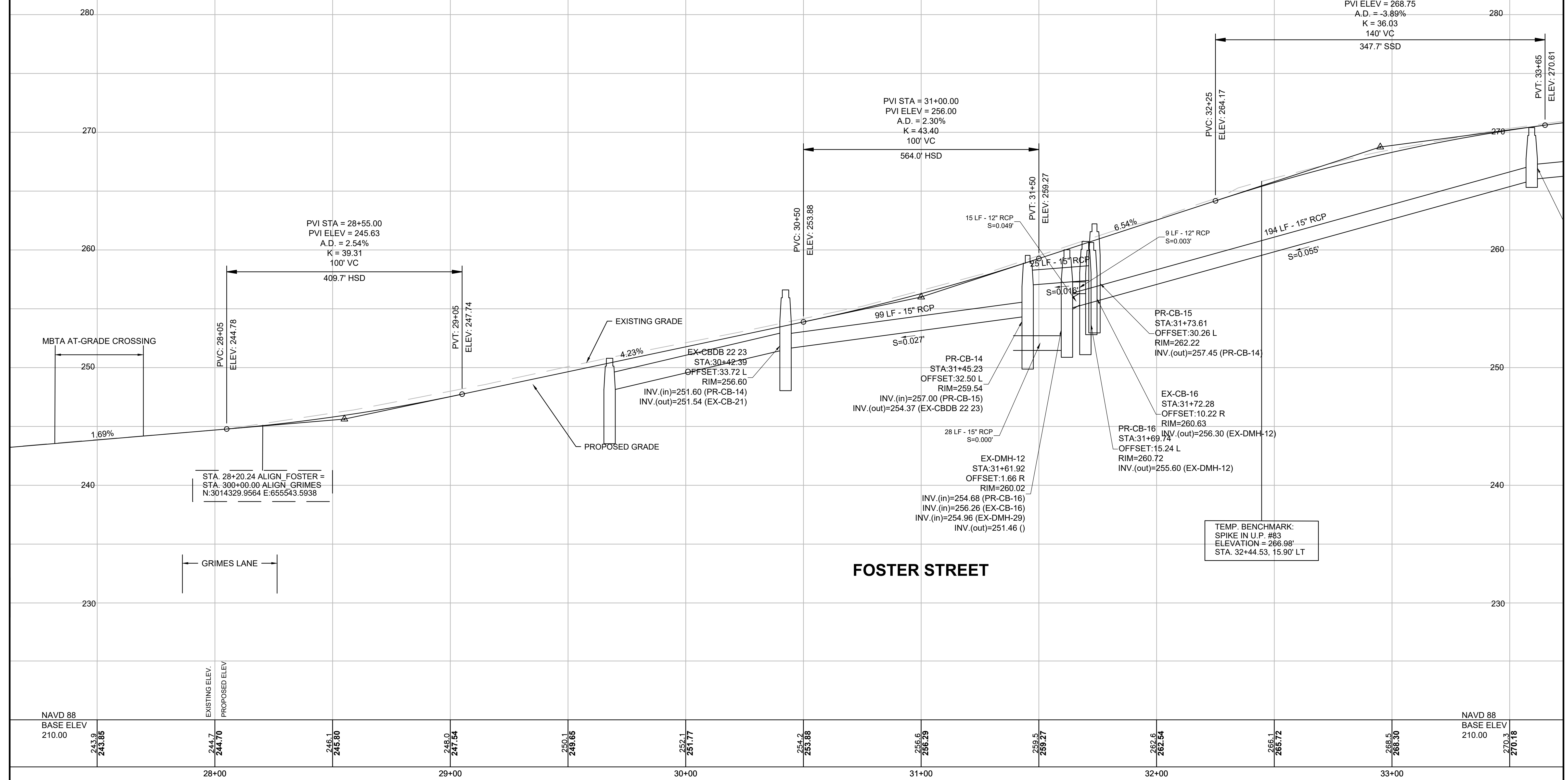
LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	22	128
PROJECT FILE NO.		609054	

PROFILE - FOSTER STREET

PVI ELEV = 268.75
A.D. = -3.89%
K = 36.03
140' VC
347.7' SSD

FOR CONSTRUCTION PLANS:
SEE SHEET NOS. 9-16

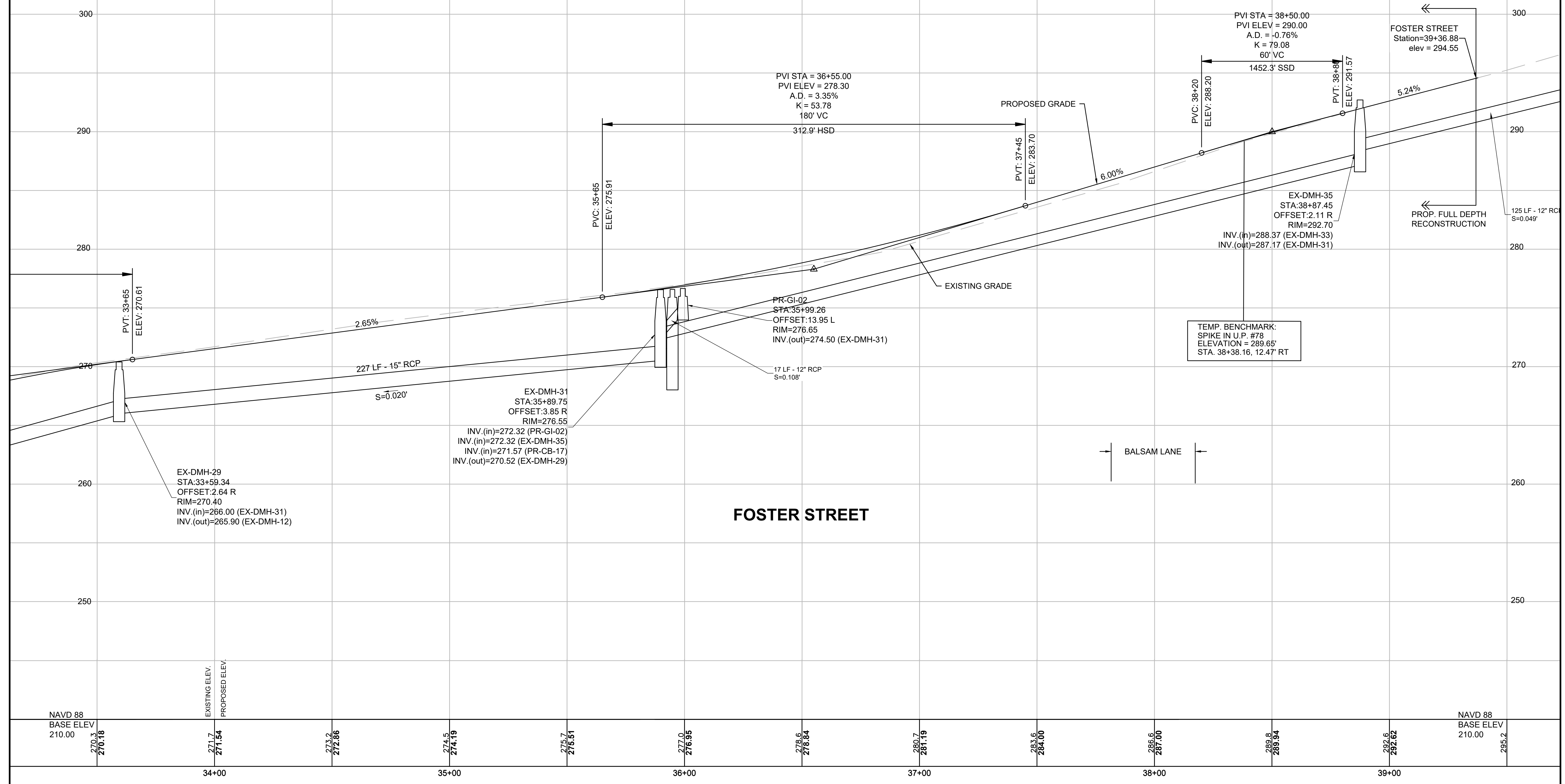


LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	23	128
PROJECT FILE NO. 609054			

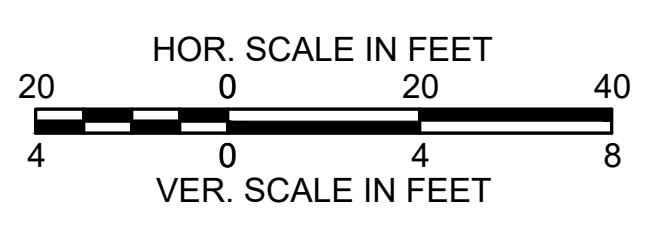
PROFILE - FOSTER STREET

FOR CONSTRUCTION PLANS:
SEE SHEET NOS. 9-16



FOSTER STREET

BALSAM LANE

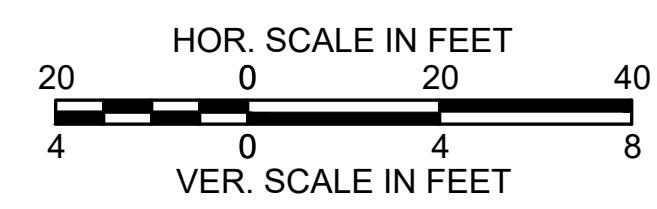
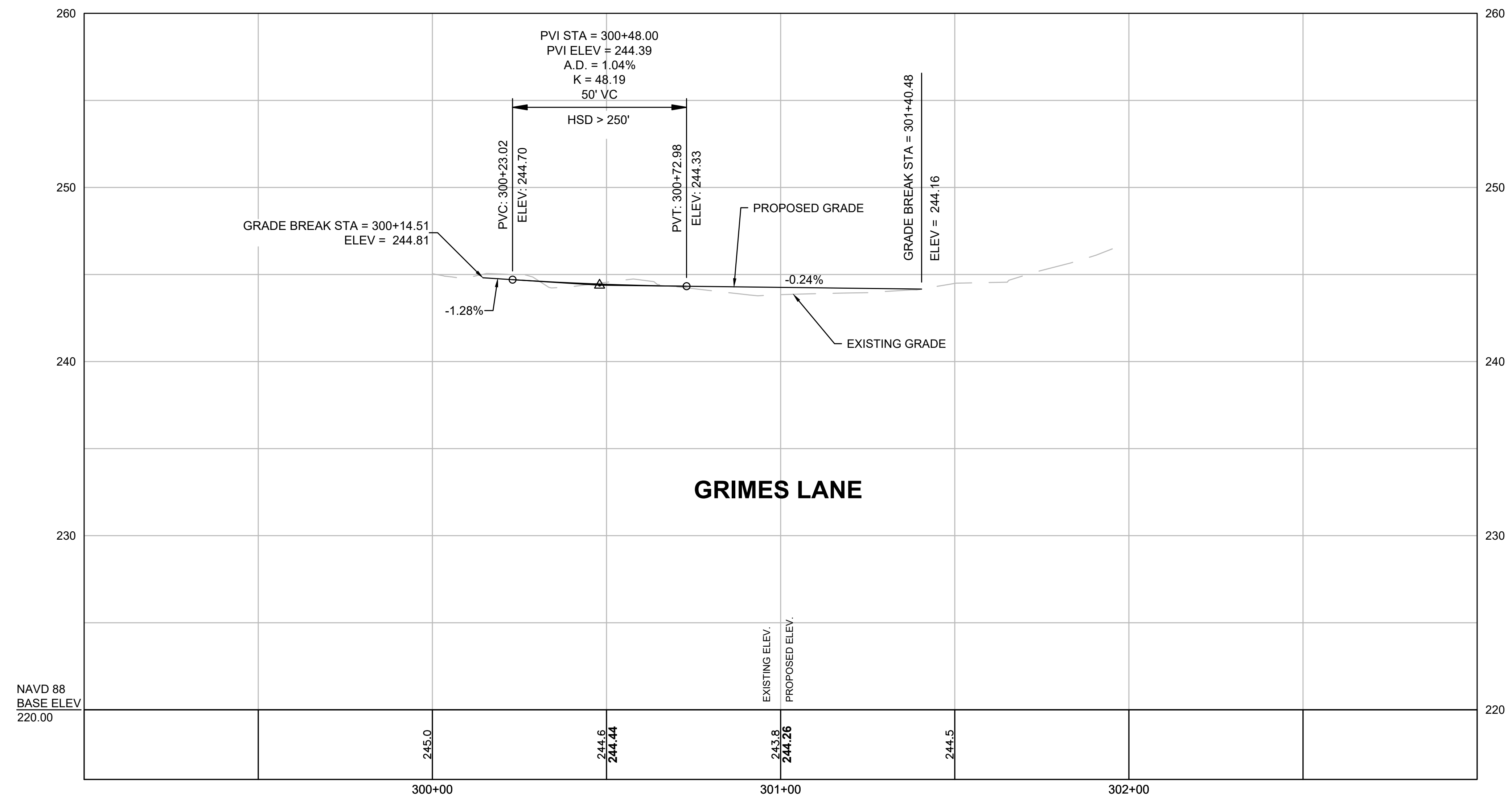


LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	24	128
PROJECT FILE NO.		609054	

PROFILE - GRIMES LANE

FOR CONSTRUCTION PLANS:
SEE SHEET NOS. 9-16



THIS PLAN IS BASED ON FIELD SURVEY CONDUCTED BY:
 SHERMAN & FRYDRYK, LLC.
 FIELD DATA WAS COLLECTED BETWEEN 8/14/18 & 9/17/18

HORIZONTAL CONTROL IS BASED ON VALUES PROVIDED BY MEANS OF GLOBAL POSITION SYSTEM METHODS, AND IS BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD-1983) MASSACHUSETTS STATE PLANE COORDINATE SYSTEM MAINLAND ZONE. OR PER SURVEY NOTE: HORIZONTAL DATUM IS BASED ON THE 1983 N.A.D. SYSTEM USING SURVEY GPS CONTROL POINTS SET BY THE CITY OF LITTLETON ENGINEERING DEPARTMENT. GPS CONTROL STATION CORN_IS-HAMP, PID-DE9093

VERTICAL CONTROL IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD-1988). OR VERTICAL DATUM IS BASED ON THE 1988 N.G.V.D. SYSTEM USING SURVEY GPS CONTROL POINTS SET BY THE CITY OF LITTLETON ENGINEERING DEPARTMENT. GPS CONTROL STATION: CORN_IS-HAMP, PID-DE8093

CURVE TABLE				
CURVE NO.	LENGTH	RADIUS	DELTA	TANGENT
C101	59.74	40.00	85°34'14.45"	37.02
C102	67.01	40.00	95°59'18.11"	44.42
C103	30.28	25.31	68°33'34.95"	17.25
C104	22.65	25.00	51°54'03.97"	12.17

FOSTER ST CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L11	0+00.00	3012786.885	653296.938		N70°36'10"E 403.30'	4+03.30	3012920.828	653677.350
L201	200+00.00	3012479.567	653388.320		N16°52'43"W 208.14'	202+08.14	3012678.737	653327.889
C201	202+08.14	3012678.737	653327.889	R=3550.00' Δ=4°01'39" L=249.54' T=124.82'		204+57.68	3012919.876	653263.886
L202	204+57.68	3012919.876	653263.886		N12°51'04"W 96.62'	205+54.29	3013014.072	653242.397

LITTLETON
RECONSTRUCTION OF FOSTER STREET

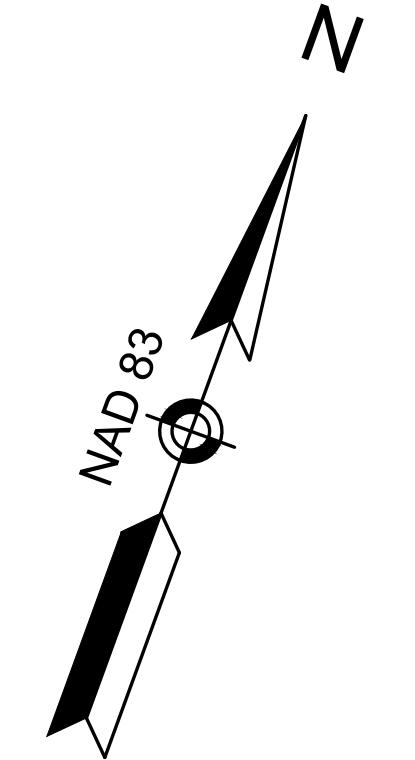
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	25	128
PROJECT FILE NO.		609054	

CURB AND BASELINE TIE PLAN

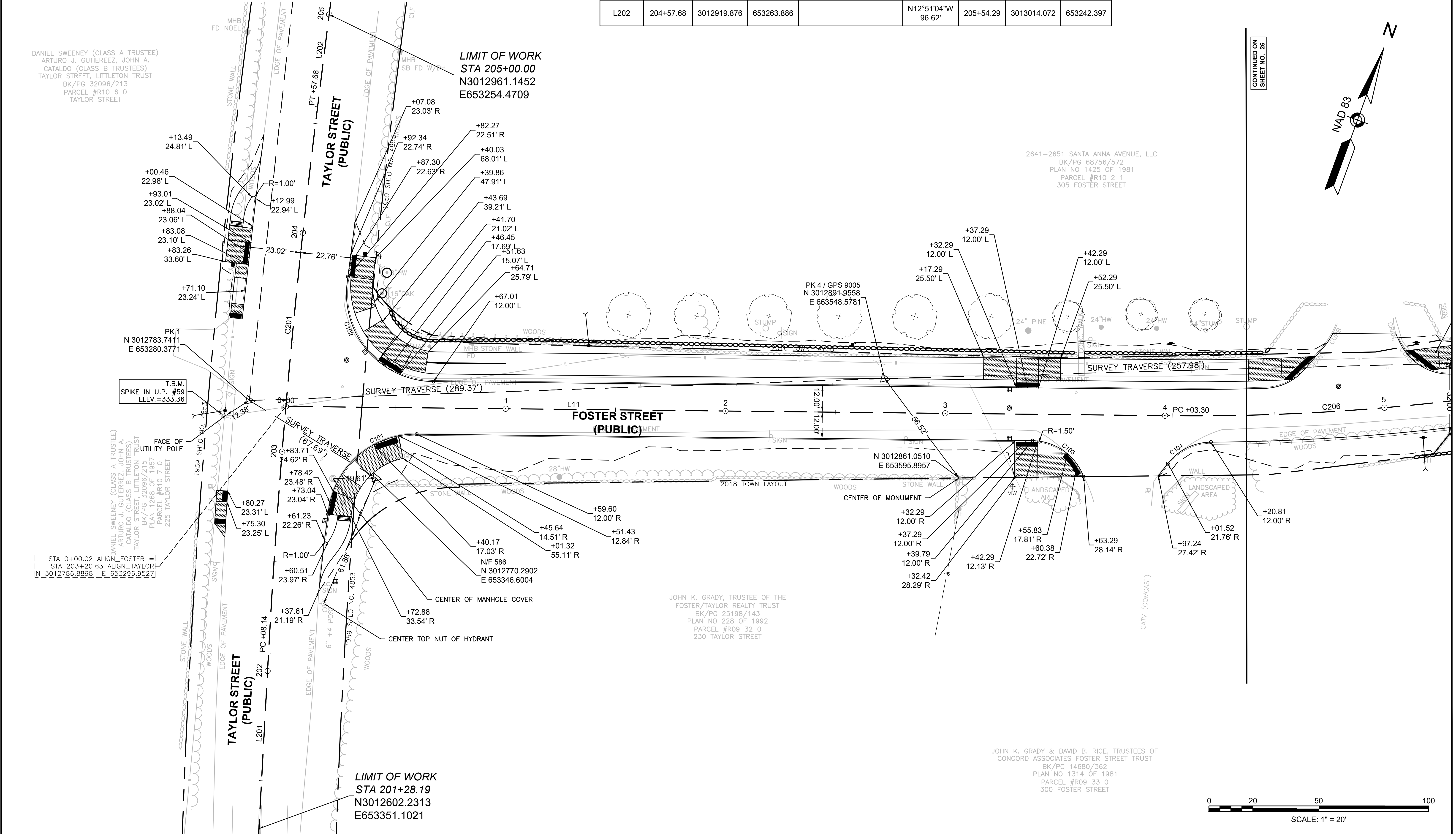
DANIEL SWEENEY (CLASS A TRUSTEE)
 ARTURO J. GUTIERREZ, JOHN A. CATALDO (CLASS B TRUSTEES)
 TAYLOR STREET, LITTLETON TRUST
 BK/PG 32096/213
 PARCEL #R10 6 0
 TAYLOR STREET

LIMIT OF WORK
 STA 205+00.00
 N3012961.1452
 E653254.4709

2641-2651 SANTA ANNA AVENUE, LLC
 BK/PG 68756/572
 PLAN NO 1425 OF 1981
 PARCEL #R10 2 1
 305 FOSTER STREET

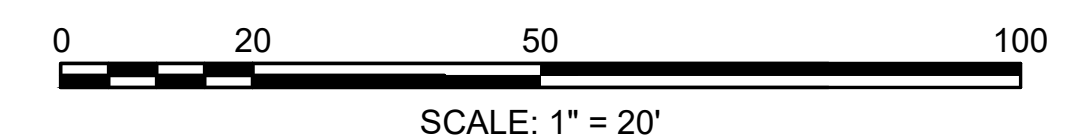


CONTINUED ON SHEET NO. 26



LIMIT OF WORK
 STA 201+28.19
 N3012602.2313
 E653351.1021

JOHN K. GRADY & DAVID B. RICE, TRUSTEES OF
 CONCORD ASSOCIATES FOSTER STREET TRUST
 BK/PG 14680/362
 PLAN NO 1314 OF 1981
 PARCEL #R09 33 0
 300 FOSTER STREET



Plotted on 27-Mar-2024 10:04 AM

FOSTER ST CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C206	4+03.30	3012920.828	653677.350	R=1000.00' Δ=7°27'10" L=130.08' T=65.13'		5+33.38	3012971.876	653796.893
L12	5+33.38	3012971.876	653796.893		N63°09'00"E 15.49'	5+48.87	3012978.870	653810.709
C207	5+48.87	3012978.870	653810.709	R=650.00' Δ=9°10'33" L=104.10' T=52.16'		6+52.96	3013018.264	653906.942
L13	6+52.96	3013018.264	653906.942		N72°19'32"E 376.71'	10+29.68	3013132.637	654265.874

CURVE TABLE

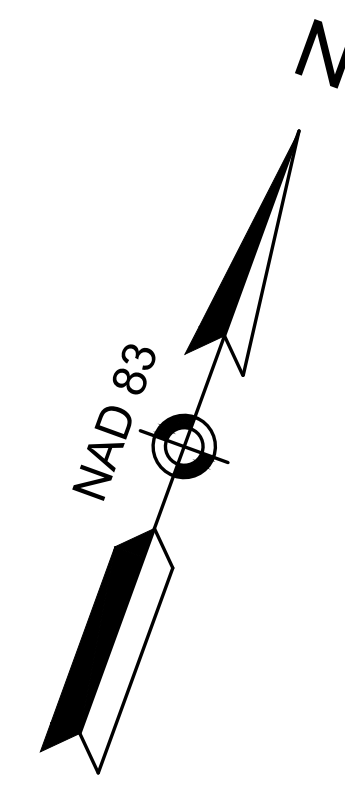
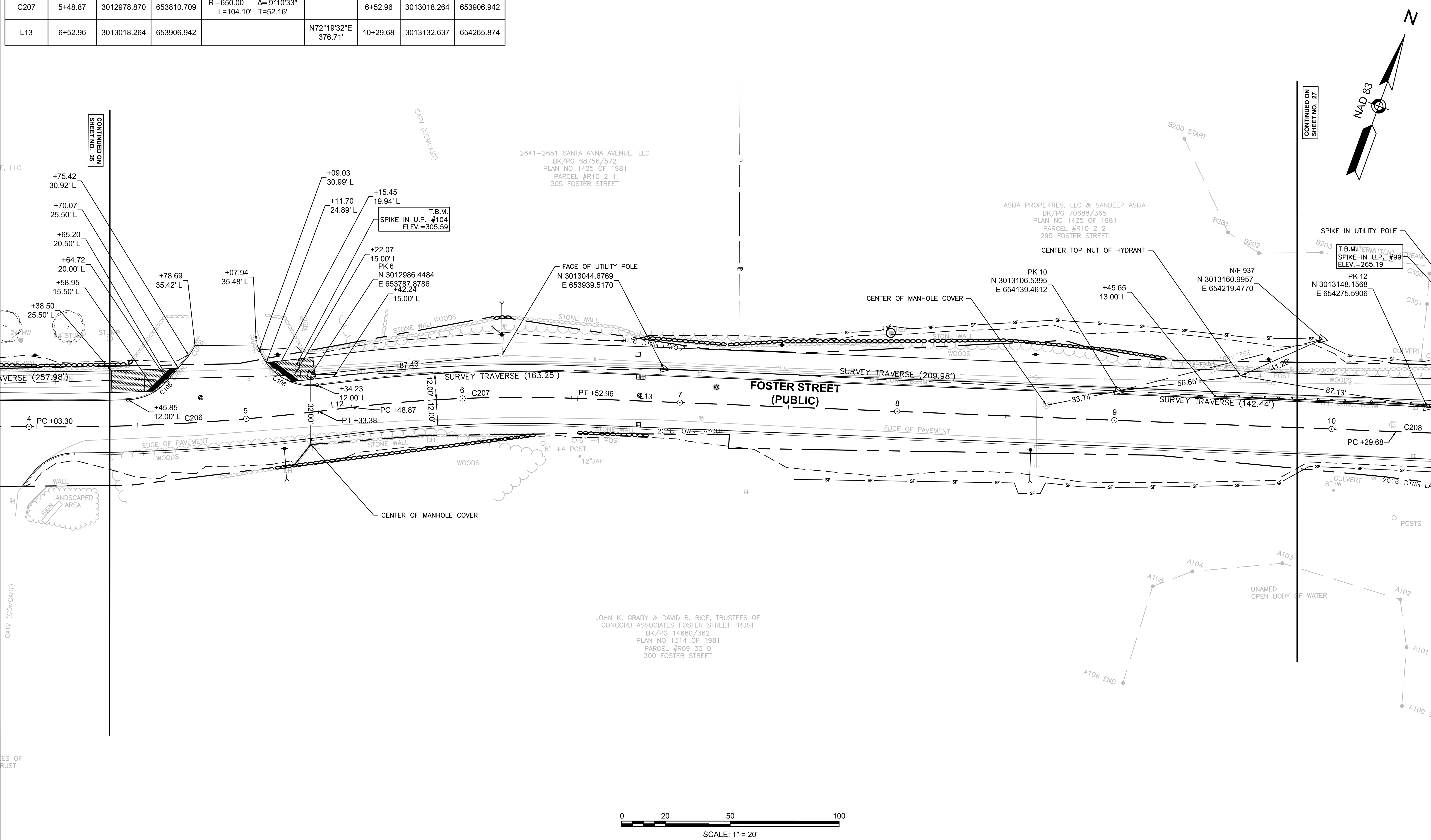
CURVE NO.	LENGTH	RADIUS	DELTA	TANGENT
C105	20.81	25.00	47°42'10.96"	11.05
C106	31.21	25.00	71°31'00.09"	18.00

LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	26	128

PROJECT FILE NO. 609054

CURB AND BASELINE TIE PLAN



CONTINUED ON
SHEET NO. 25

CONTINUED ON
SHEET NO. 27

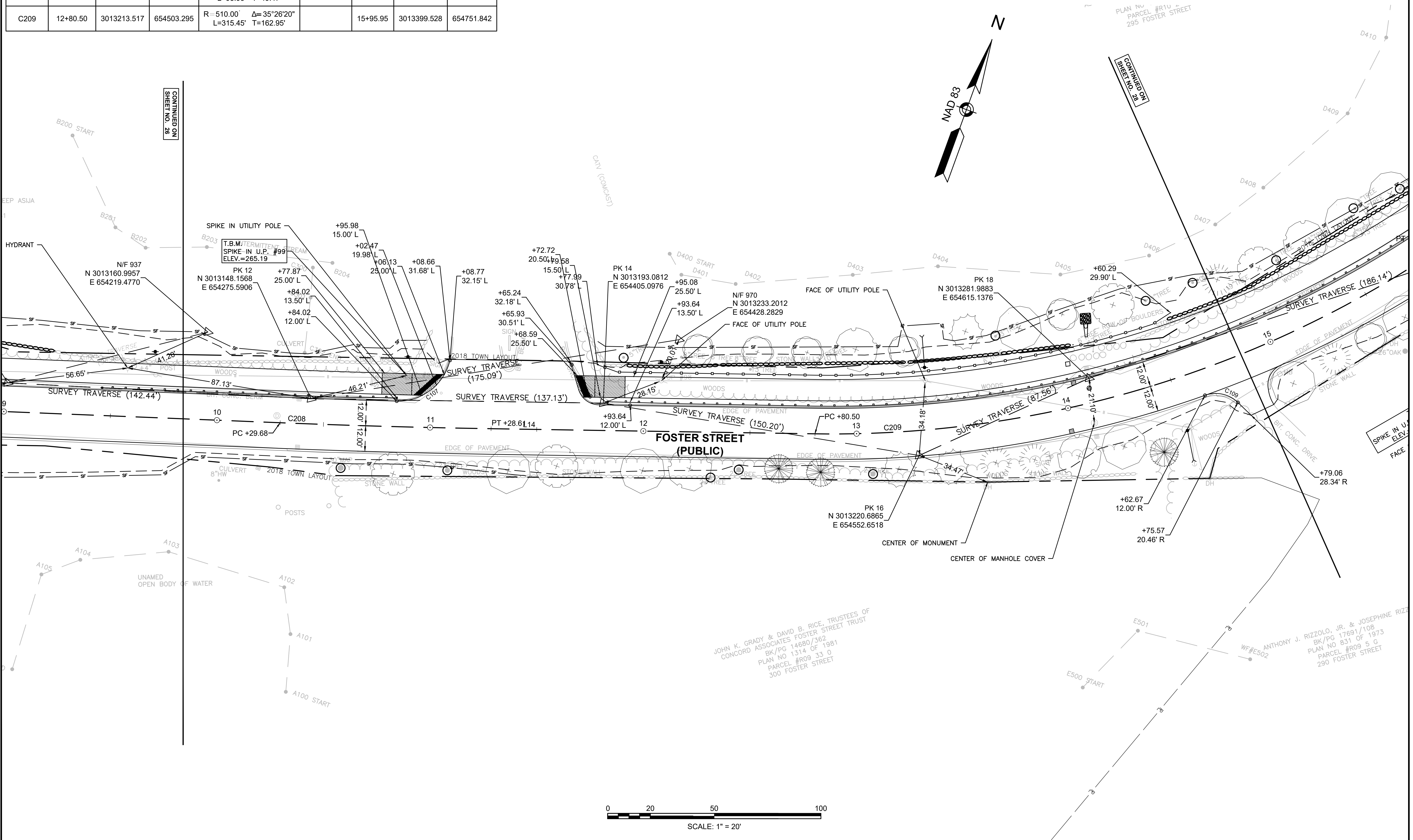
Plotted on: 27-Mar-2024 10:04 AM

2017004421_ALI01.DWG

FOSTER ST CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L14	11+28.61	3013163.835	654359.752		N70°54'31"E 151.90'	12+80.50	3013213.517	654503.295
C208	10+29.68	3013132.637	654265.874	R=4000.00' Δ=1°25'01" L=98.93' T=49.47'		11+28.61	3013163.835	654359.752
C209	12+80.50	3013213.517	654503.295	R=510.00' Δ=35°26'20" L=315.45' T=162.95'		15+95.95	3013399.528	654751.842

CURVE TABLE				
CURVE NO.	LENGTH	RADIUS	DELTA	TANGENT
C107	33.99	25.00	77°54'00.86"	20.21
C108	35.33	30.00	67°28'58.53"	20.04
C109	16.60	15.00	63°25'13.74"	9.27

LITTLETON RECONSTRUCTION OF FOSTER STREET			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	27	128
PROJECT FILE NO.		609054	
CURB AND BASELINE TIE PLAN			



JOHN K. GRADY & DAVID B. RICE, TRUSTEES OF
CONCORD ASSOCIATES' FOSTER STREET TRUST
BK/PG 14680/362
PLAN NO 1314 OF 1981
PARCEL #R09 33 0
300 FOSTER STREET

ANTHONY J. RIZZOLO, JR. & JOSEPHINE RIZZO
BK/PG 17691/108
PLAN NO 831 OF 1973
PARCEL #R09 5 G
290 FOSTER STREET

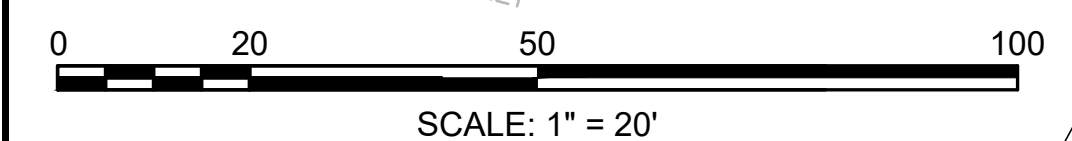
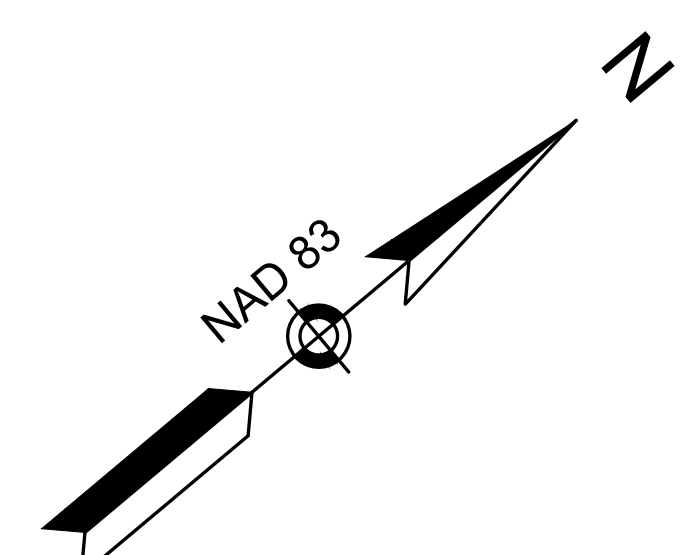
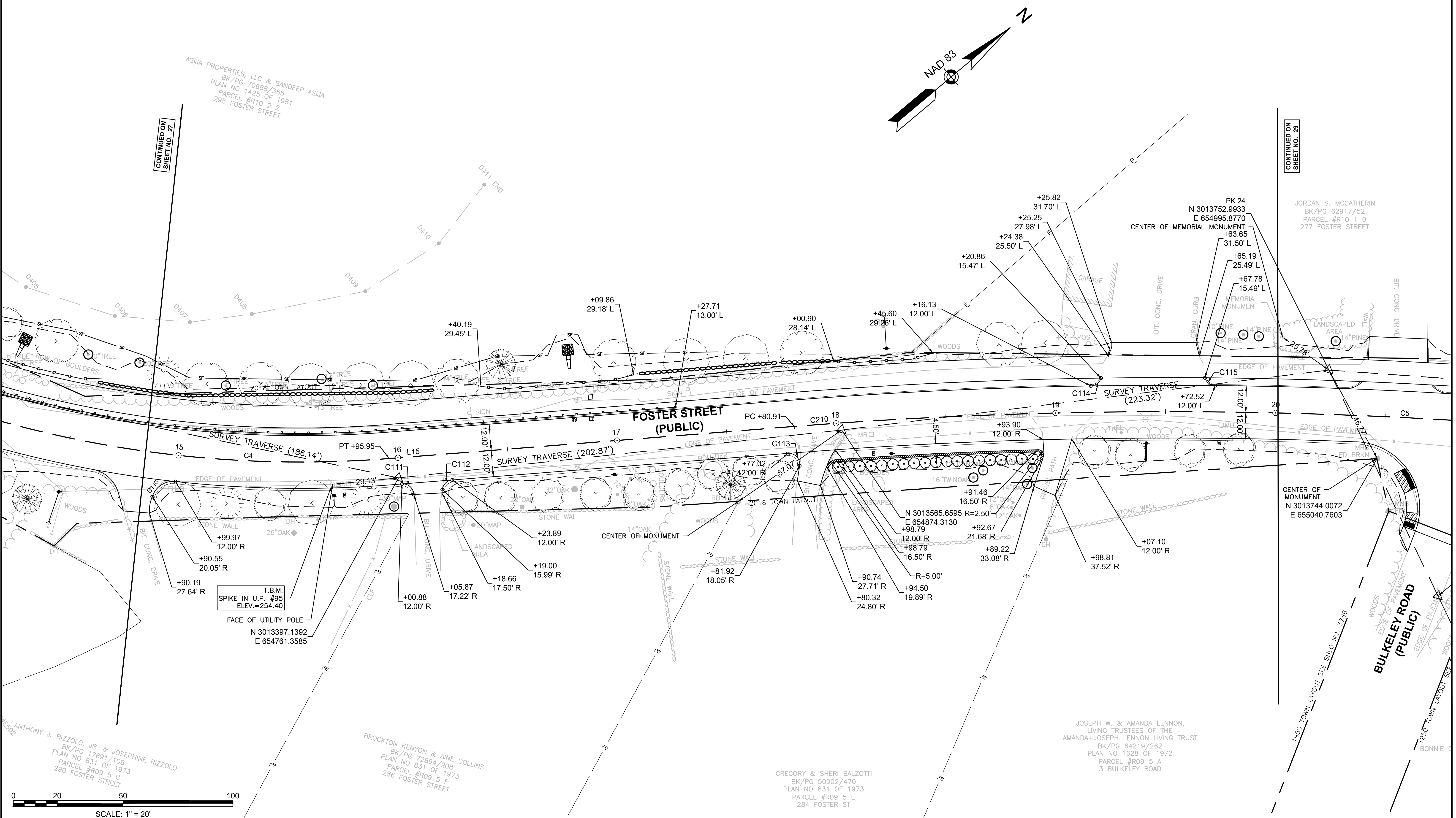
FOSTER ST CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L15	15+95.95	3013399.528	654751.842		N35°28'10"E 184.96'	17+80.91	3013550.166	654859.170
C210	17+80.91	3013550.166	654859.170	R=2150.00' Δ=9°16'42" L=348.16' T=174.46'		21+29.08	3013816.158	655083.225

CURVE TABLE				
CURVE NO.	LENGTH	RADIUS	DELTA	TANGENT
C110	13.65	10.00	78°13'52.92"	8.13
C111	8.07	5.00	92°31'23.65"	5.23
C112	6.84	5.00	78°21'56.47"	4.08
C113	8.91	5.00	102°06'07.13"	6.19
C114	6.30	5.00	72°09'02.07"	3.64
C115	6.31	5.00	72°21'40.59"	3.66

LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	28	128
PROJECT FILE NO.		609054	

CURB AND BASELINE TIE PLAN

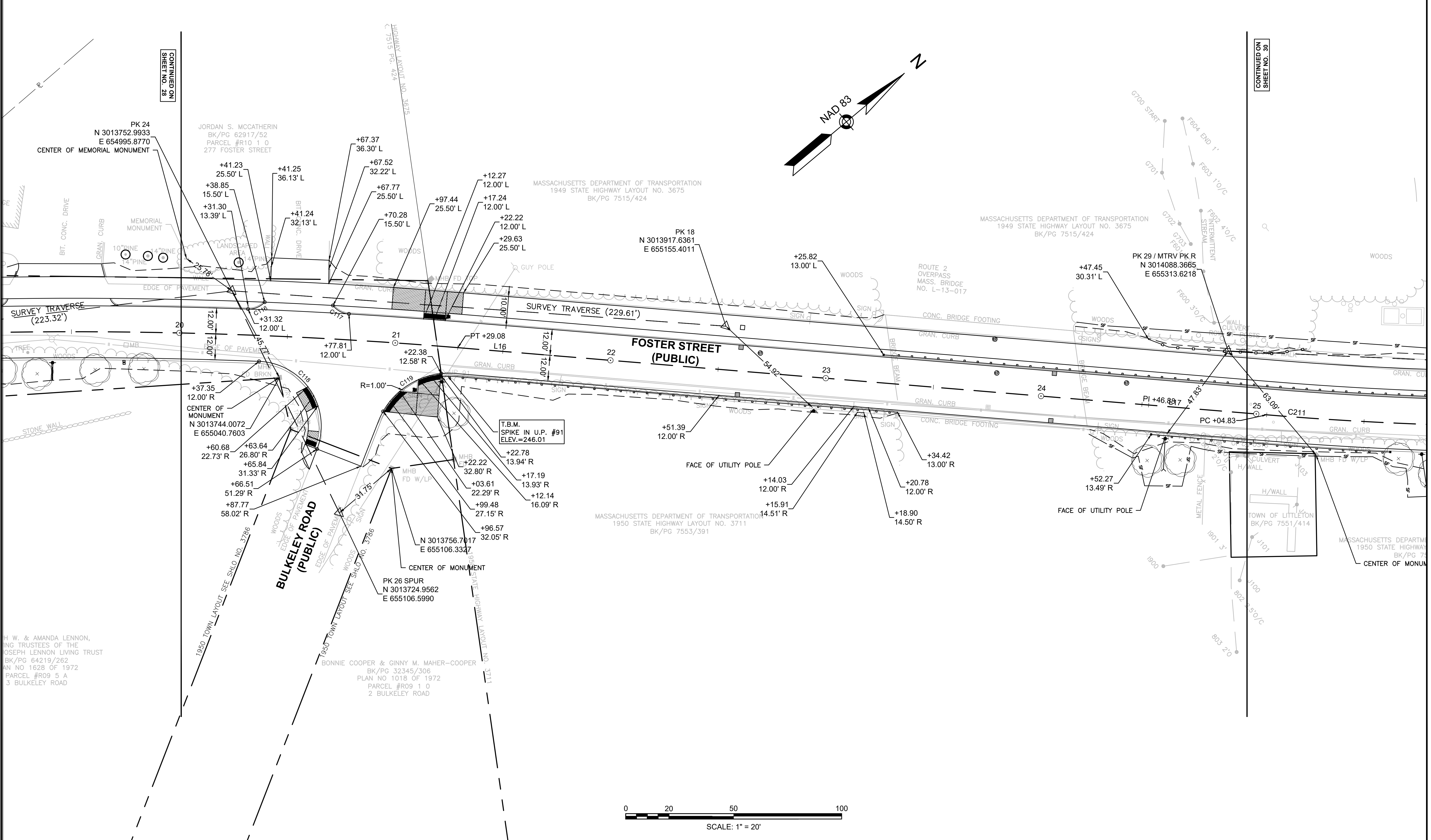


FOSTER ST CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L16	21+29.08	3013816.158	655083.225		N44°44'52"E 317.81'	24+46.88	3014041.869	655306.958
L17	24+46.88	3014041.869	655306.958		N44°44'52"E 57.95'	25+04.83	3014083.023	655347.750

CURVE TABLE				
CURVE NO.	LENGTH	RADIUS	DELTA	TANGENT
C116	8.61	10.00	49°21'29.13"	4.60
C117	8.61	10.00	49°21'29.13"	4.60
C118	56.77	30.00	108°25'26.86"	41.61
C119	33.36	35.00	54°37'08.05"	18.07

LITTLETON RECONSTRUCTION OF FOSTER STREET			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	29	128
PROJECT FILE NO.		609054	

CURB AND BASELINE TIE PLAN



2017004421_ALI01.DWG Plotted on 27-Mar-2024 10:05 AM

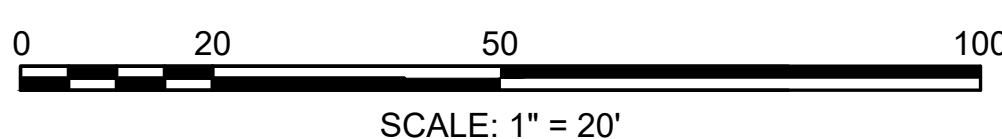
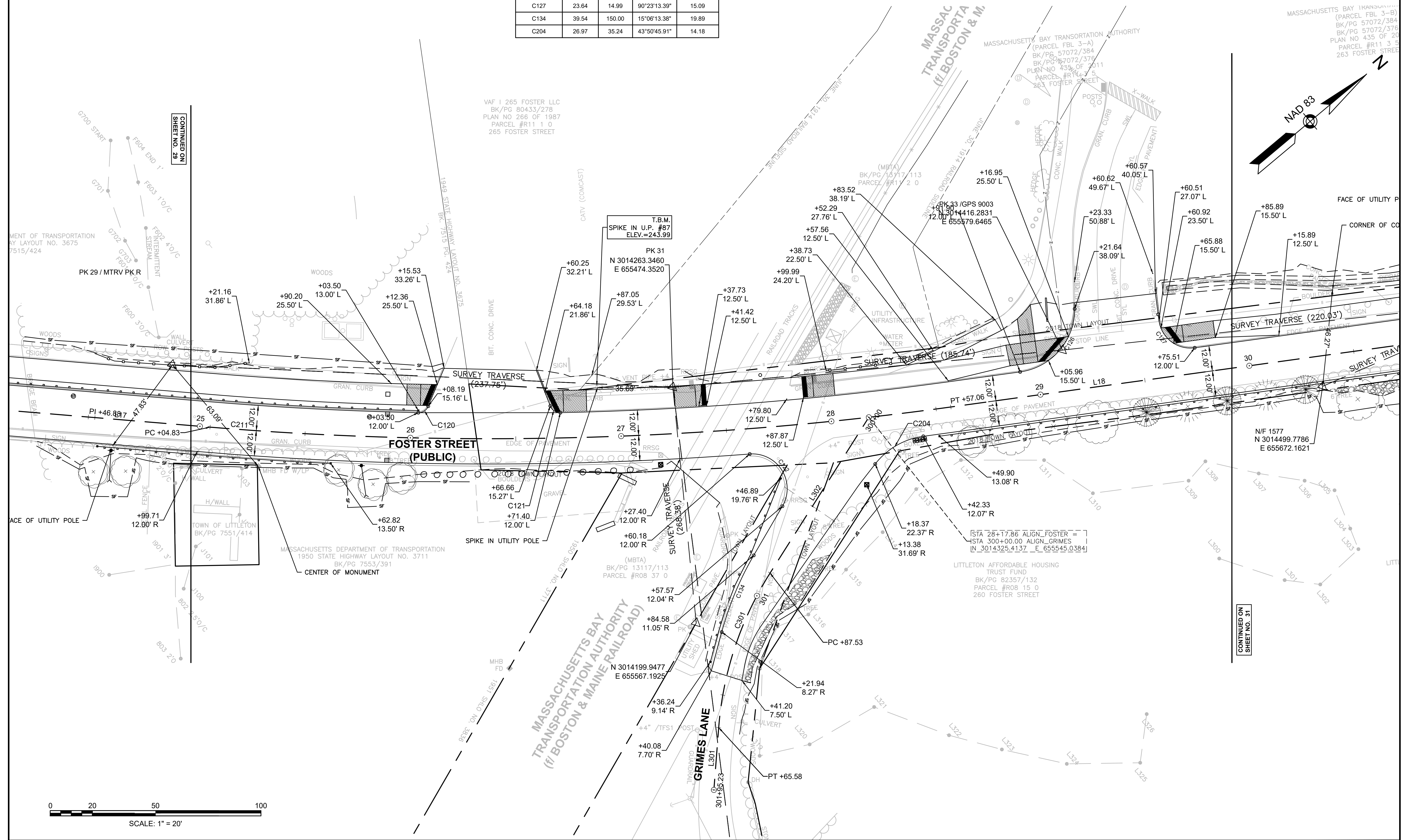
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING
C211	25+04.83	3014083.023	655347.750	R=1600.00' Δ=12°36'48" L=352.23' T=176.83'		28+57.06	3014358.3
L18	28+57.06	3014358.348	655566.293		N32°08'04"E 629.10'	34+86.16	3014891.0

CURVE TABLE				
CURVE NO.	LENGTH	RADIUS	DELTA	TANGENT
C120	5.98	5.00	68°30'50.93"	3.41
C121	6.10	5.00	69°50'48.72"	3.49
C122	35.90	16.50	124°39'23.97"	31.47
C126	43.20	30.00	82°30'26.40"	26.31
C127	23.64	14.99	90°23'13.39"	15.09
C134	39.54	150.00	15°06'13.38"	19.89
C204	26.97	35.24	43°50'45.91"	14.18

**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	30	128
PROJECT FILE NO.		609054	

CURB AND BASELINE TIE PLAN



CONTINUED ON
SHEET NO. 29

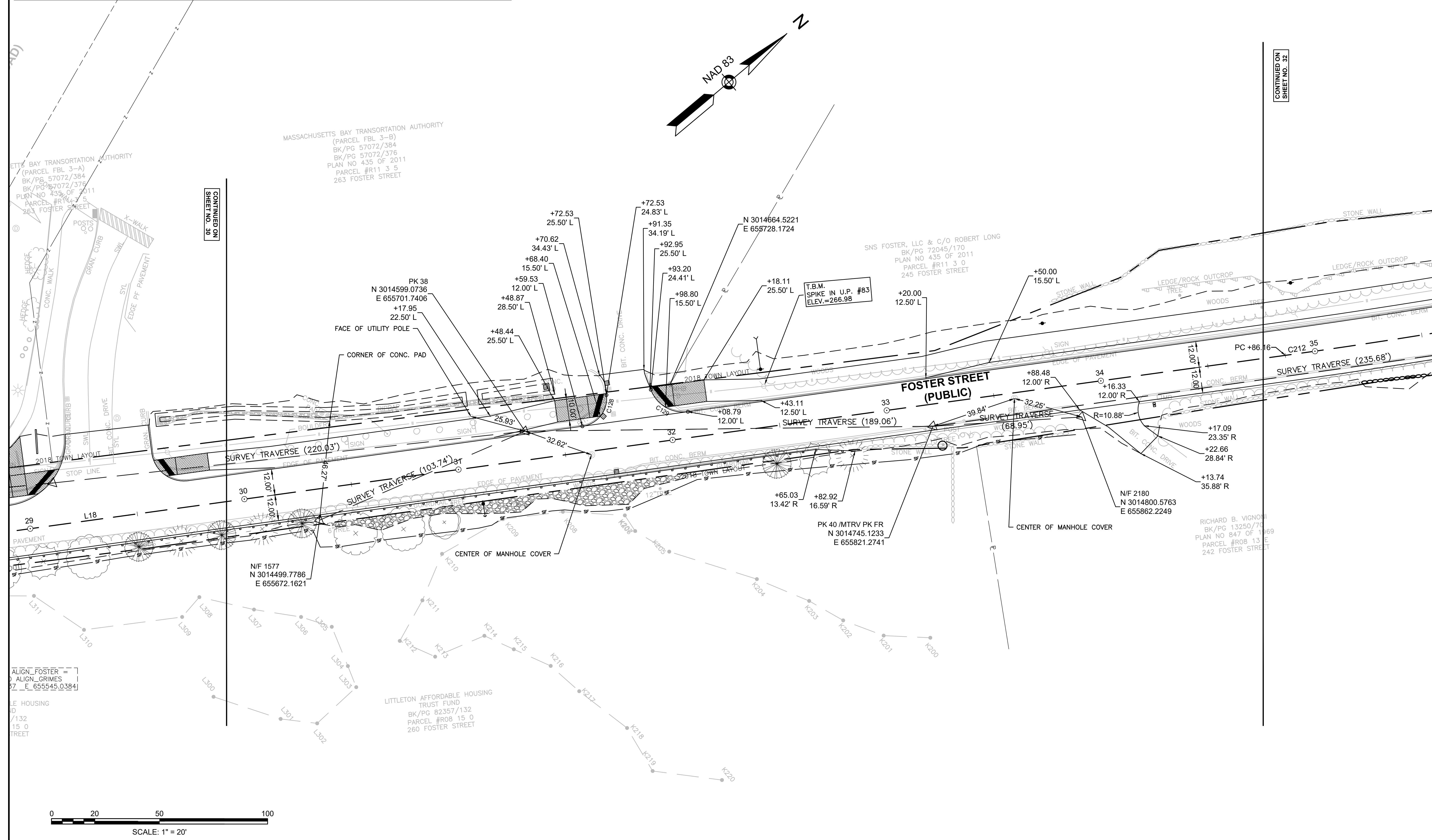
CONTINUED ON
SHEET NO. 31

FOSTER ST CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L18	28+57.06	3014358.348	655566.293		N32°08'04"E 629.10'	34+86.16	3014891.074	655900.919
C212	34+86.16	3014891.074	655900.919	R=2974.57' Δ=3°56'00" L=204.20' T=102.14'		36+90.37	3015067.585	656003.518

CURVE TABLE				
CURVE NO.	LENGTH	RADIUS	DELTA	TANGENT
C128	20.26	12.98	89°25'17.84"	12.85
C129	21.51	16.00	77°01'47.82"	12.73

LITTLETON RECONSTRUCTION OF FOSTER STREET			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	31	128
PROJECT FILE NO.		609054	

CURB AND BASELINE TIE PLAN



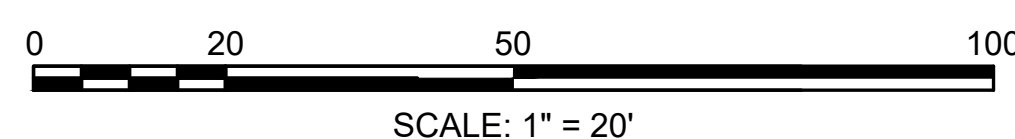
CONTINUED ON
SHEET NO. 30

CONTINUED ON
SHEET NO. 32

ALIGN_FOSTER =
ALIGN_GRIMES
E_655545.0384

LITTLE AFFORDABLE HOUSING
TRUST FUND
BK/PG 82357/132
PARCEL #R08 15 0
260 FOSTER STREET

RICHARD B. VIGNONI
BK/PG 13250/70
PLAN NO 847 OF 1969
PARCEL #R08 13 E
242 FOSTER STREET

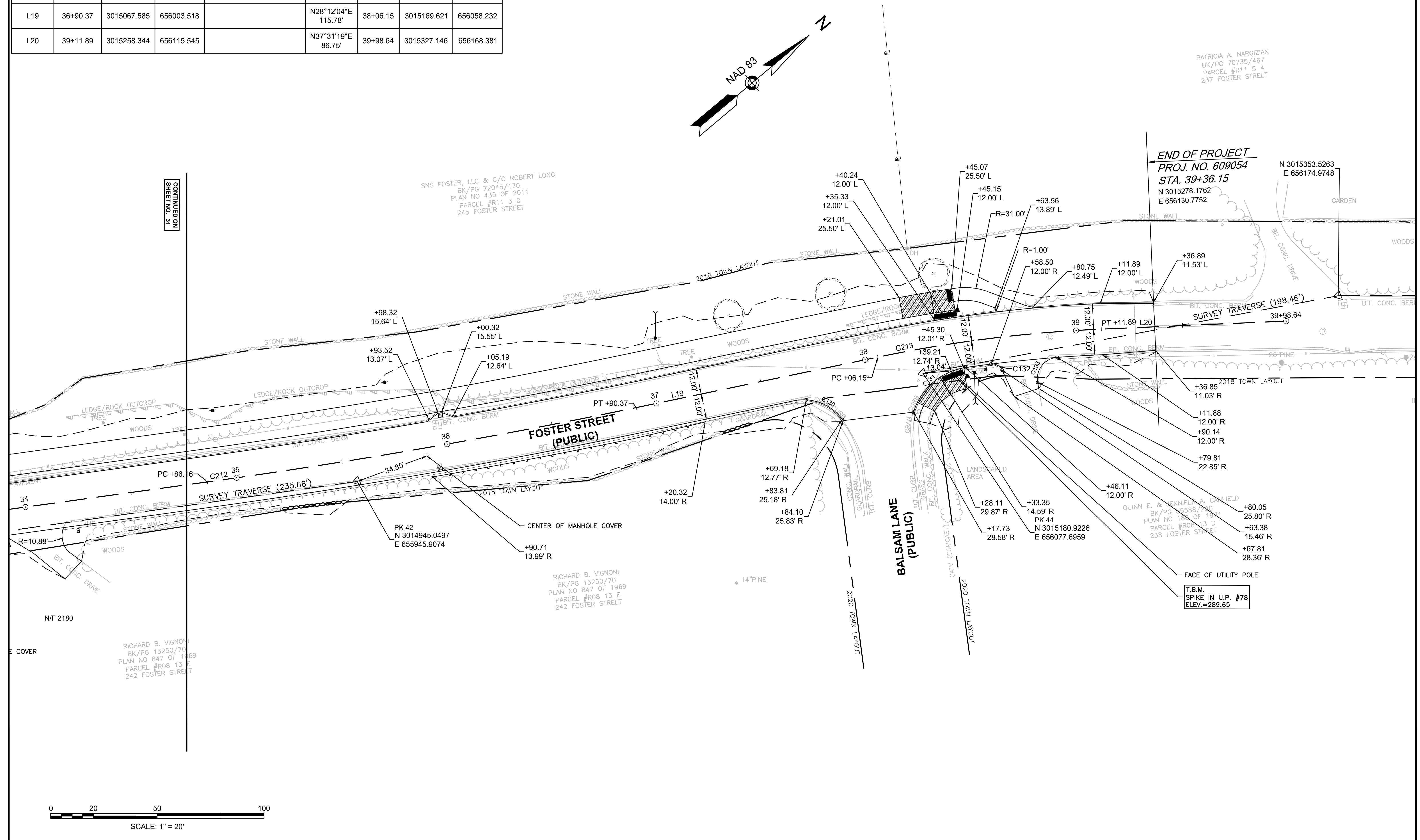


FOSTER ST CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C212	34+86.16	3014891.074	655900.919	R=2974.57' Δ=3°56'00" L=204.20' T=102.14'		36+90.37	3015067.585	656003.518
C213	38+06.15	3015169.621	656058.232	R=650.00' Δ=9°19'15" L=105.74' T=52.99'		39+11.89	3015258.344	656115.545
L19	36+90.37	3015067.585	656003.518		N28°12'04"E 115.78'	38+06.15	3015169.621	656058.232
L20	39+11.89	3015258.344	656115.545		N37°31'19"E 86.75'	39+98.64	3015327.146	656168.381

CURVE TABLE				
CURVE NO.	LENGTH	RADIUS	DELTA	TANGENT
C130	19.81	22.50	50°26'43.70"	10.60
C131	33.87	30.00	64°41'21.83"	19.00
C132	6.31	5.00	72°17'07.85"	3.65
C133	16.63	10.00	95°18'24.47"	10.97

LITTLETON RECONSTRUCTION OF FOSTER STREET			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	32	128
PROJECT FILE NO.		609054	

CURB AND BASELINE TIE PLAN



2017004421_ALN01.DWG Plotted on 27-Mar-2024 10:06 AM

THIS PLAN IS BASED ON FIELD SURVEY CONDUCTED BY:
SHERMAN & FRYDRYK, LLC.
FIELD DATA WAS COLLECTED BETWEEN 8/14/18 & 9/17/18

HORIZONTAL CONTROL IS BASED ON VALUES PROVIDED BY MEANS OF GLOBAL POSITION SYSTEM METHODS, AND IS BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD-1983) MASSACHUSETTS STATE PLANE COORDINATE SYSTEM MAINLAND ZONE. OR PER SURVEY NOTE: HORIZONTAL DATUM IS BASED ON THE 1983 N.A.D. SYSTEM USING SURVEY GPS CONTROL POINTS SET BY THE CITY OF LITTLETON ENGINEERING DEPARTMENT. GPS CONTROL STATION: CORS_IS-HAMP, PID-DE9093

VERTICAL CONTROL IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD-1988), OR VERTICAL DATUM IS BASED ON THE 1988 N.G.V.D. SYSTEM USING SURVEY GPS CONTROL POINTS SET BY THE CITY OF LITTLETON ENGINEERING DEPARTMENT. GPS CONTROL STATION: CORS_ID-HAMP, PID-DE8093

LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	33	128
PROJECT FILE NO.		609054	

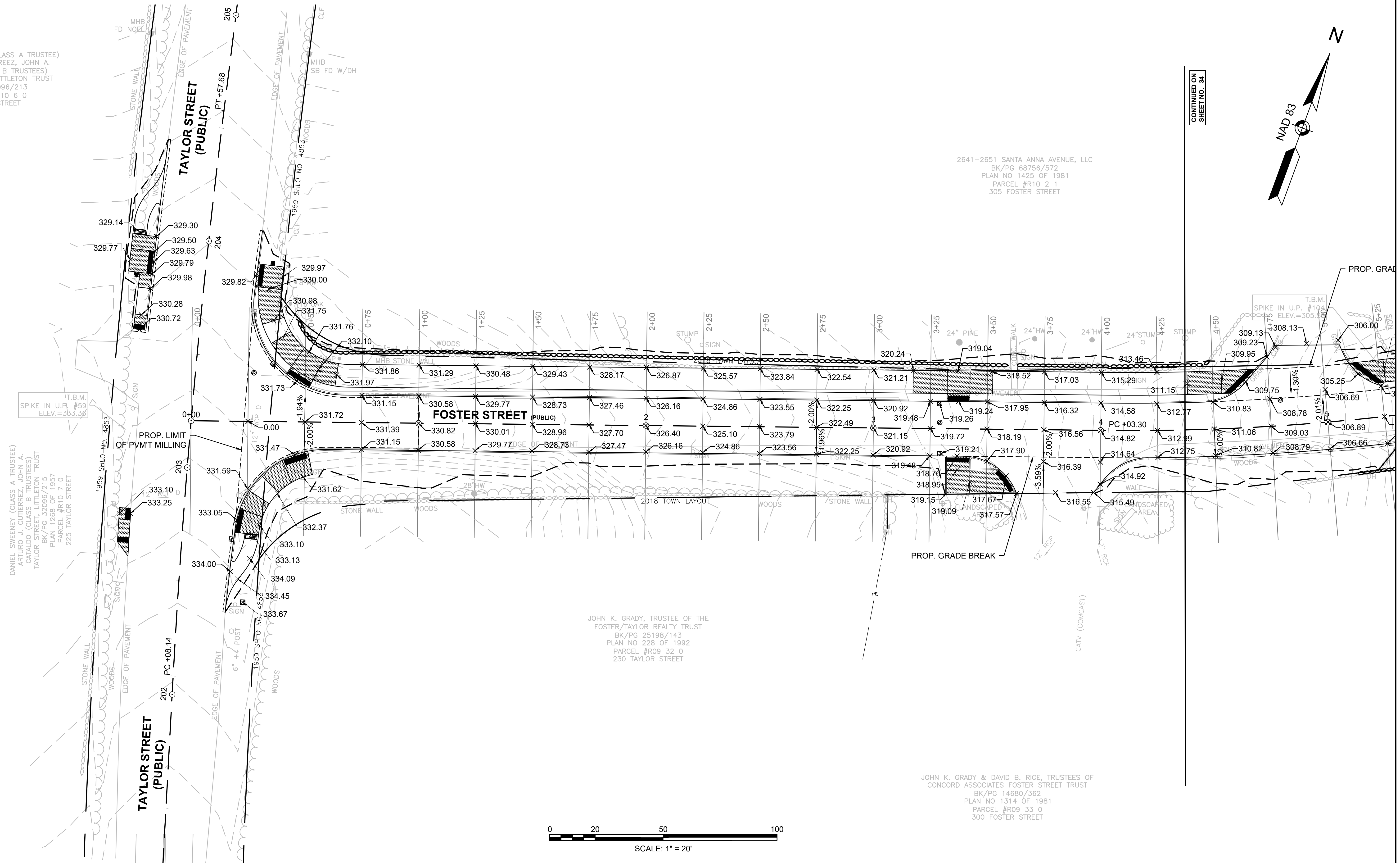
GRADING PLAN

DANIEL SWEENEY (CLASS A TRUSTEE)
ARTURO J. GUTIERREZ, JOHN A. CATALDO (CLASS B TRUSTEES)
TAYLOR STREET, LITTLETON TRUST
BK/PG 32096/213
PARCEL #R10 6 0
TAYLOR STREET

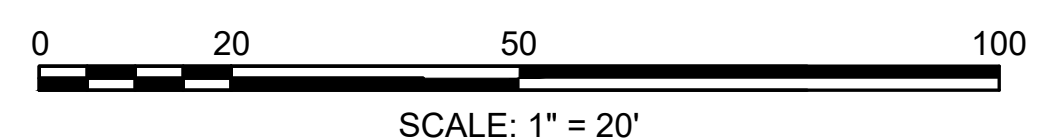
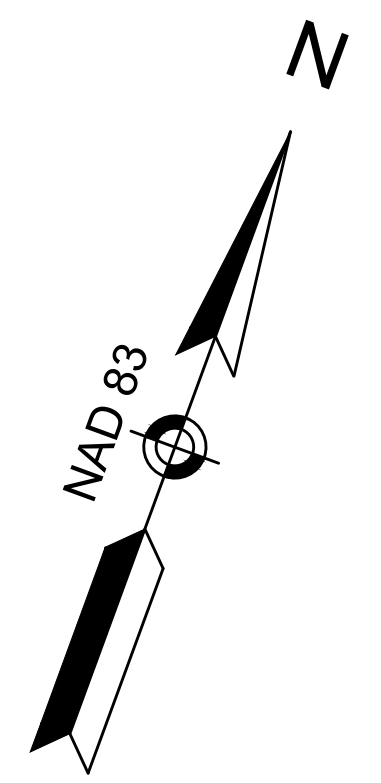
DANIEL SWEENEY (CLASS A TRUSTEE)
ARTURO J. GUTIERREZ, JOHN A. CATALDO (CLASS B TRUSTEES)
TAYLOR STREET, LITTLETON TRUST
BK/PG 32096/215
PLAN 1268 OF 1957
PARCEL #R10 7 0
225 TAYLOR STREET

JOHN K. GRADY, TRUSTEE OF THE FOSTER/TAYLOR REALTY TRUST
BK/PG 25198/143
PLAN NO 228 OF 1992
PARCEL #R09 32 0
230 TAYLOR STREET

JOHN K. GRADY & DAVID B. RICE, TRUSTEES OF CONCORD ASSOCIATES FOSTER STREET TRUST
BK/PG 14680/362
PLAN NO 1314 OF 1981
PARCEL #R09 33 0
300 FOSTER STREET



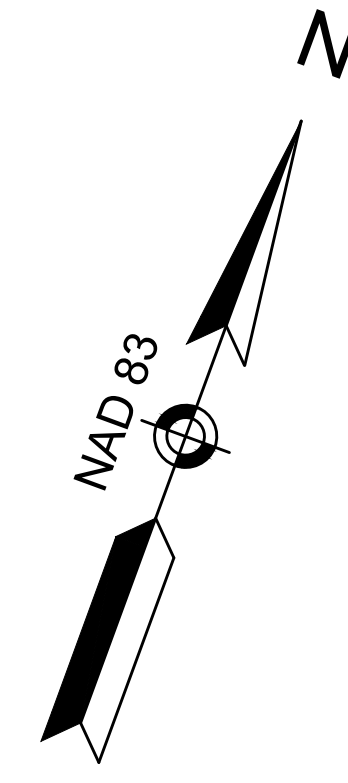
CONTINUED ON SHEET NO. 34



LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	34	128
PROJECT FILE NO.		609054	

GRADING PLAN



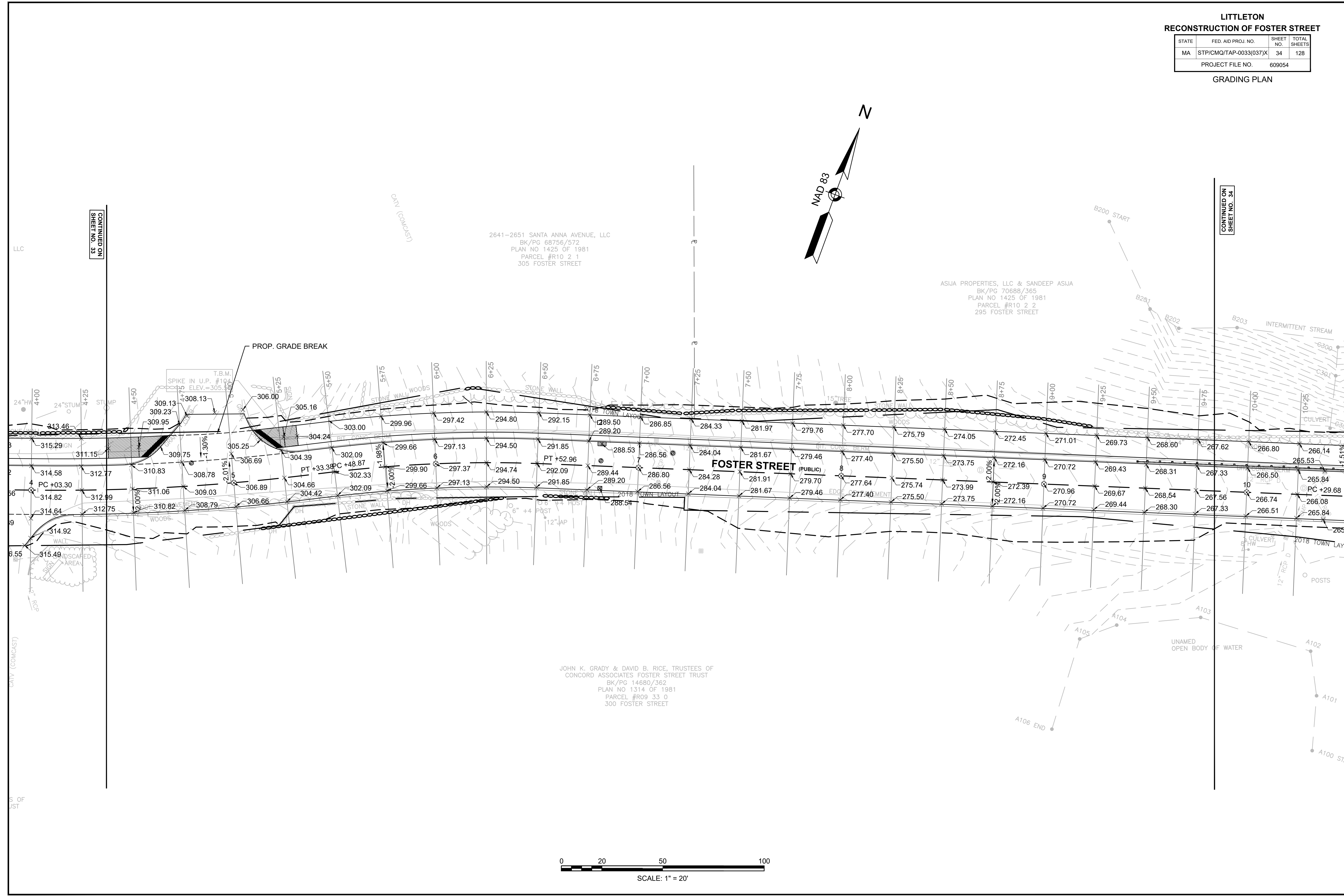
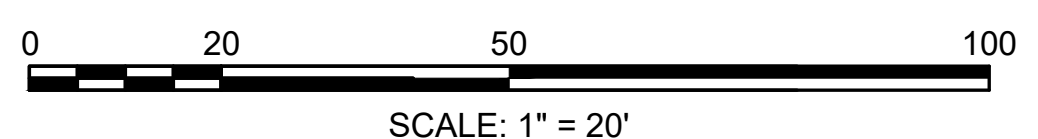
CONTINUED ON SHEET NO. 33

CONTINUED ON SHEET NO. 34

2641-2651 SANTA ANNA AVENUE, LLC
BK/PG 68756/572
PLAN NO 1425 OF 1981
PARCEL #R10 2 1
305 FOSTER STREET

ASJIA PROPERTIES, LLC & SANDEEP ASJIA
BK/PG 70688/365
PLAN NO 1425 OF 1981
PARCEL #R10 2 2
295 FOSTER STREET

JOHN K. GRADY & DAVID B. RICE, TRUSTEES OF
CONCORD ASSOCIATES FOSTER STREET TRUST
BK/PG 14680/362
PLAN NO 1314 OF 1981
PARCEL #R09 33 0
300 FOSTER STREET



LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	35	128
PROJECT FILE NO. 609054			

GRADING PLAN



CONTINUED ON SHEET NO. 34

CONTINUED ON SHEET NO. 36

BW = FINISHED GRADE AT BOTTOM OF WALL
 TW = FINISHED GRADE AT TOP OF WALL
 SEE CONSTRUCTION DETAILS FOR WALL SPECIFICATIONS

**LITTLETON
 RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	36	128
PROJECT FILE NO.		609054	

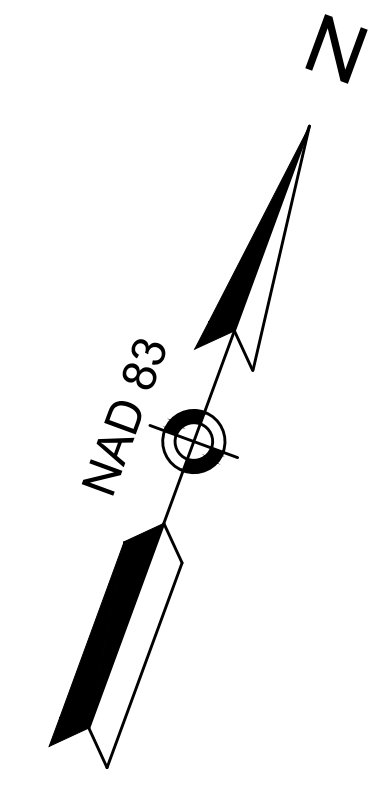
GRADING PLAN

CONTINUED ON
 SHEET NO. 35

CONTINUED ON
 SHEET NO. 37

ASJIA PROPERTIES, LLC & SANDEEP ASJIA
 BK/PG 70688/365
 PLAN NO 1425 OF 1981
 PARCEL #R10 2 2
 295 FOSTER STREET

JORDAN S. MCCATHERIN
 BK/PG 62917/52
 PARCEL #R10 1 0
 277 FOSTER STREET



ANTHONY J. RIZZOLO, JR. & JOSEPHINE RIZZOLO
 BK/PG 17691/108
 PLAN NO 831 OF 1973
 PARCEL #R09 5 G
 290 FOSTER STREET

BROCKTON KENYON & AINE COLLINS
 BK/PG 72894/208
 PLAN NO 831 OF 1973
 PARCEL #R09 5 F
 286 FOSTER STREET

GREGORY & SHERI BALZOTTI
 BK/PG 50902/470
 PLAN NO 831 OF 1973
 PARCEL #R09 5 E
 284 FOSTER ST

JOSEPH W. & AMANDA LENNON,
 LIVING TRUSTEES OF THE
 AMANDA+JOSEPH LENNON LIVING TRUST
 BK/PG 64219/262
 PLAN NO 1628 OF 1972
 PARCEL #R09 5 A
 3 BULKELEY ROAD



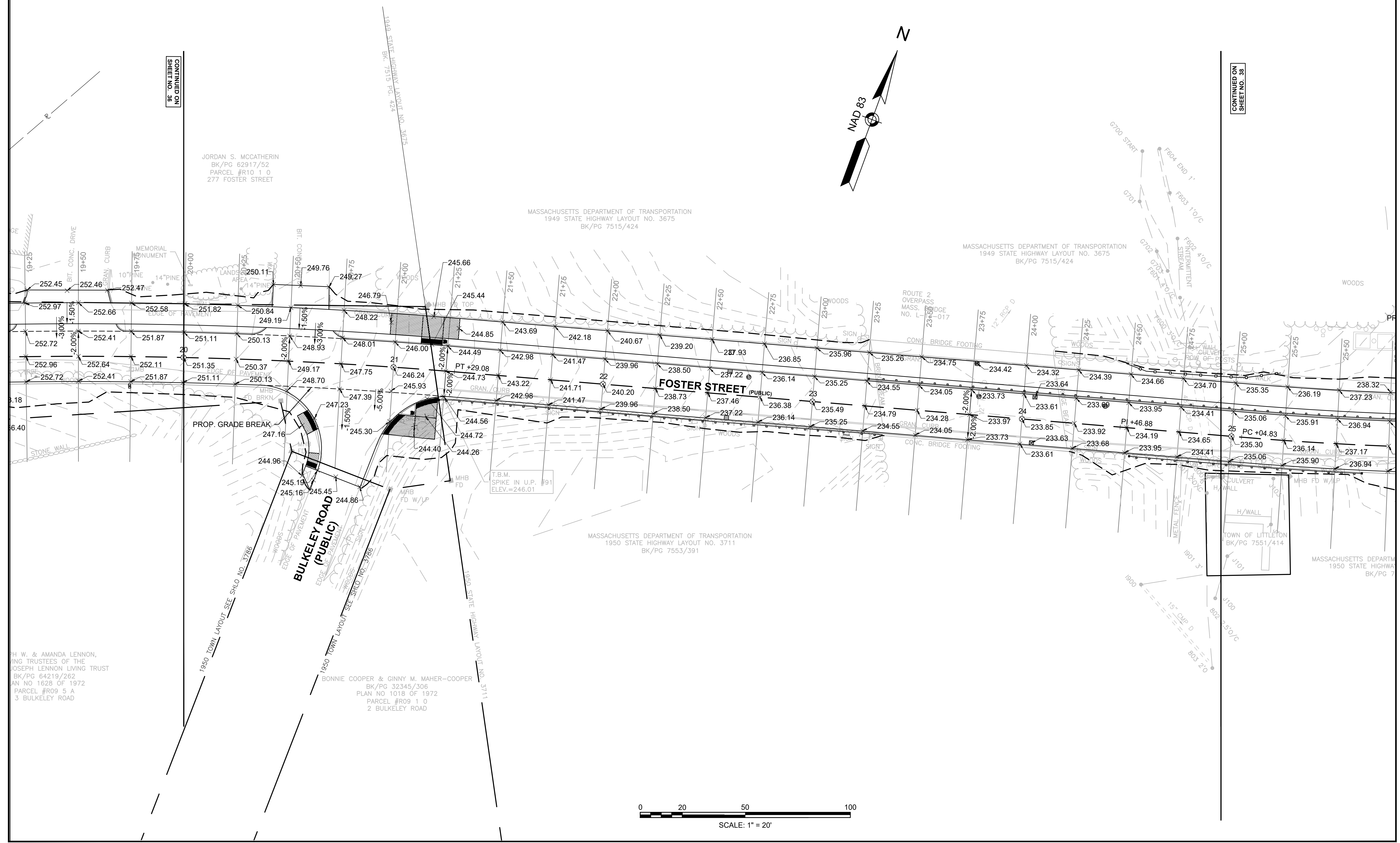
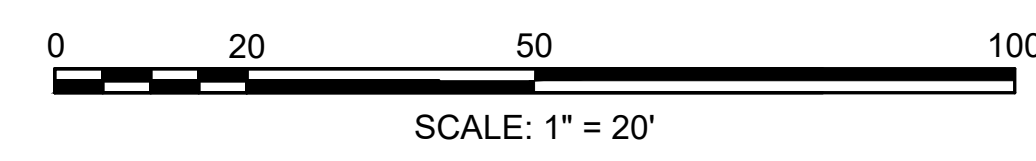
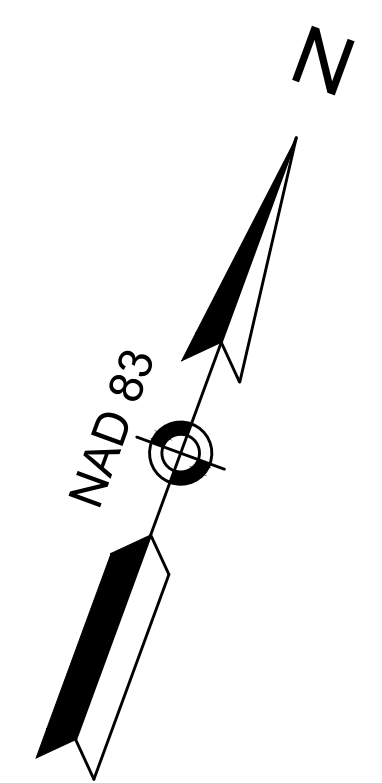
LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	37	128
PROJECT FILE NO.		609054	

GRADING PLAN

CONTINUED ON
SHEET NO. 36

CONTINUED ON
SHEET NO. 38



JORDAN S. MCCATHERIN
BK/PG 62917/52
PARCEL #R10 1 0
277 FOSTER STREET

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
1949 STATE HIGHWAY LAYOUT NO. 3675
BK/PG 7515/424

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
1949 STATE HIGHWAY LAYOUT NO. 3675
BK/PG 7515/424

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
1950 STATE HIGHWAY LAYOUT NO. 3711
BK/PG 7553/391

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
1950 STATE HIGHWAY LAYOUT NO. 3711
BK/PG 7553/391

H. W. & AMANDA LENNON,
SING TRUSTEES OF THE
JOSEPH LENNON LIVING TRUST
BK/PG 64219/262
PLAN NO 1628 OF 1972
PARCEL #R09 5 A
3 BULKELEY ROAD

BONNIE COOPER & GINNY M. MAHER-COOPER
BK/PG 32345/306
PLAN NO 1018 OF 1972
PARCEL #R09 1 0
2 BULKELEY ROAD

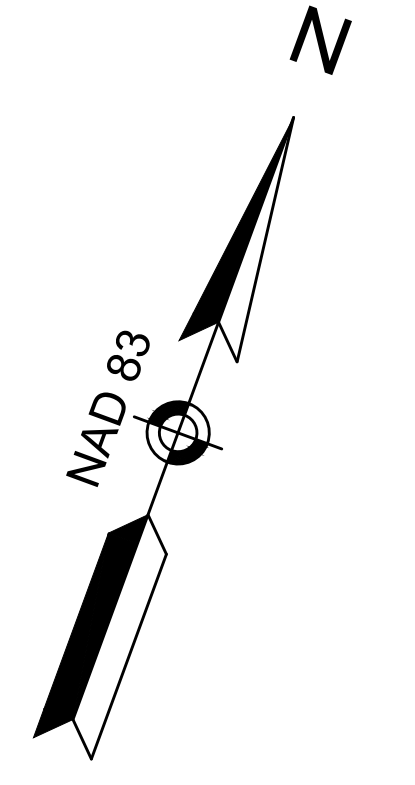
TOWN OF LITTLETON
BK/PG 7551/414

**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	38	128
PROJECT FILE NO.		609054	

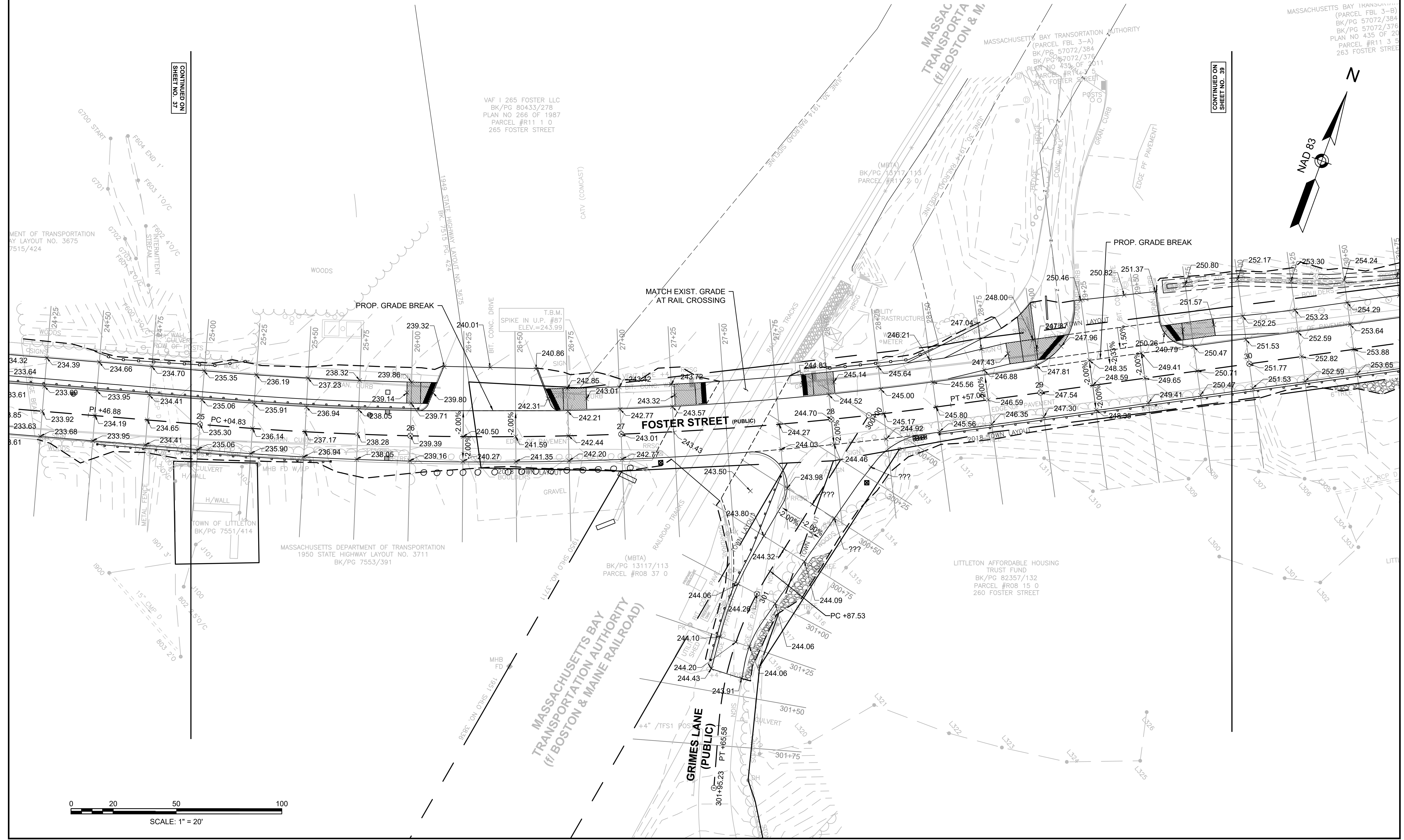
GRADING PLAN

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
(PARCEL FBL 3-B)
BK/PG 57072/384
BK/PG 57072/376
PLAN NO 435 OF 20
PARCEL #R11 3 5
263 FOSTER STREET



CONTINUED ON
SHEET NO. 37

CONTINUED ON
SHEET NO. 39



VAF I 265 FOSTER LLC
BK/PG 80433/278
PLAN NO 266 OF 1987
PARCEL #R11 1 0
265 FOSTER STREET

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
1950 STATE HIGHWAY LAYOUT NO. 3711
BK/PG 7553/391

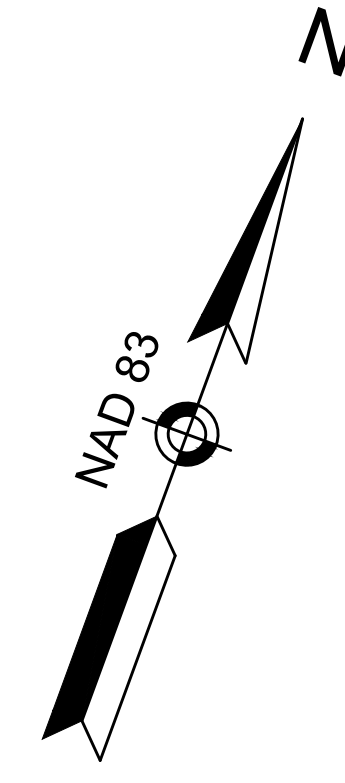
LITTLETON AFFORDABLE HOUSING
TRUST FUND
BK/PG 82357/132
PARCEL #R08 15 0
260 FOSTER STREET



LITTLETON
RECONSTRUCTION OF FOSTER STREET

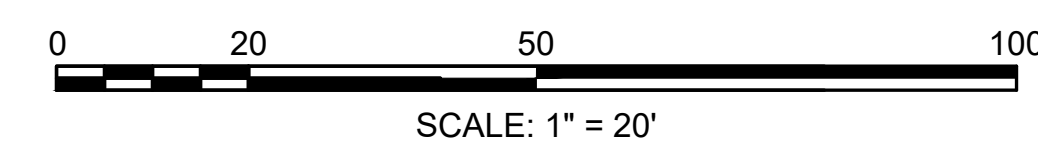
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	39	128
PROJECT FILE NO.		609054	

GRADING PLAN



CONTINUED ON
SHEET NO. 38

CONTINUED ON
SHEET NO. 40



LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	40	128
PROJECT FILE NO.		609054	

GRADING PLAN

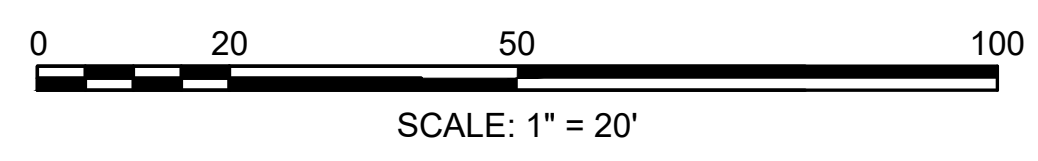
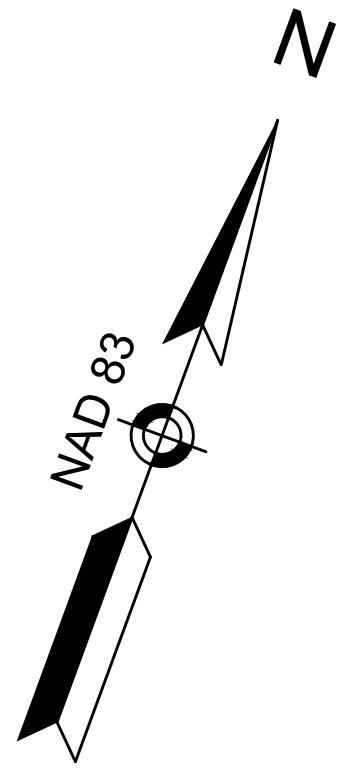
PATRICIA A. NARGIZIAN
BK/PG 70735/467
PARCEL #R11 5 4
237 FOSTER STREET

END OF PROJECT
PROJ. NO. 609054
STA. 39+36.15
N 3015278.1762
E 656130.7752

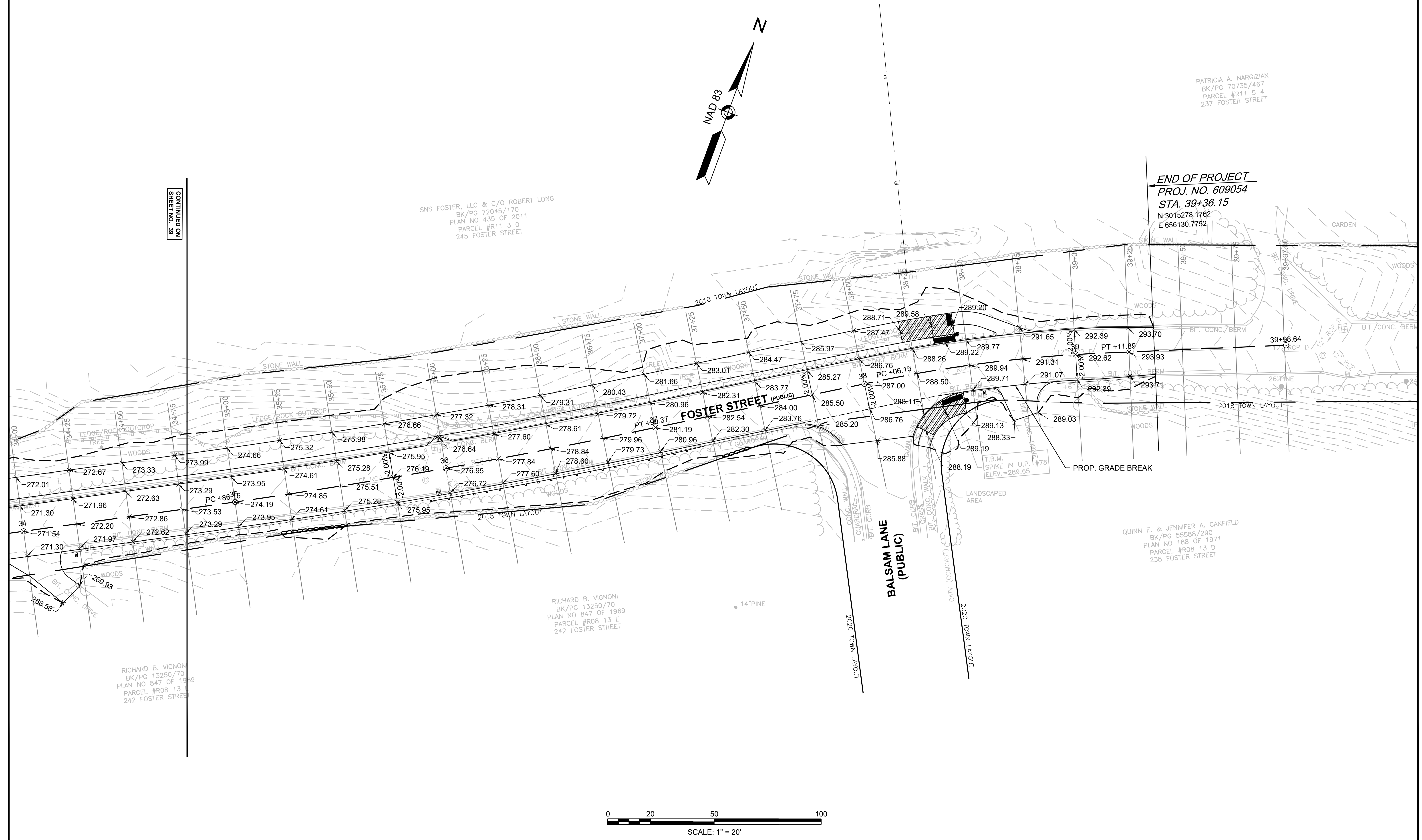
QUINN E. & JENNIFER A. CANFIELD
BK/PG 55588/290
PLAN NO 188 OF 1971
PARCEL #R08 13 D
238 FOSTER STREET

RICHARD B. VIGNONI
BK/PG 13250/70
PLAN NO 847 OF 1969
PARCEL #R08 13 E
242 FOSTER STREET

RICHARD B. VIGNON
BK/PG 13250/70
PLAN NO 847 OF 1969
PARCEL #R08 13 E
242 FOSTER STREET



CONTINUED ON
SHEET NO. 39



**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	41	128
PROJECT FILE NO.		609054	

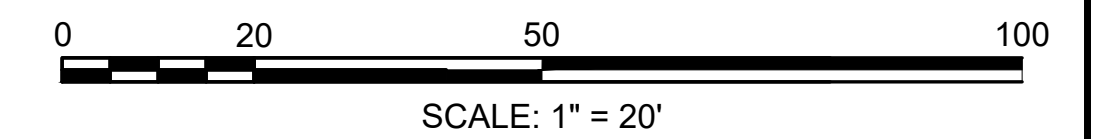
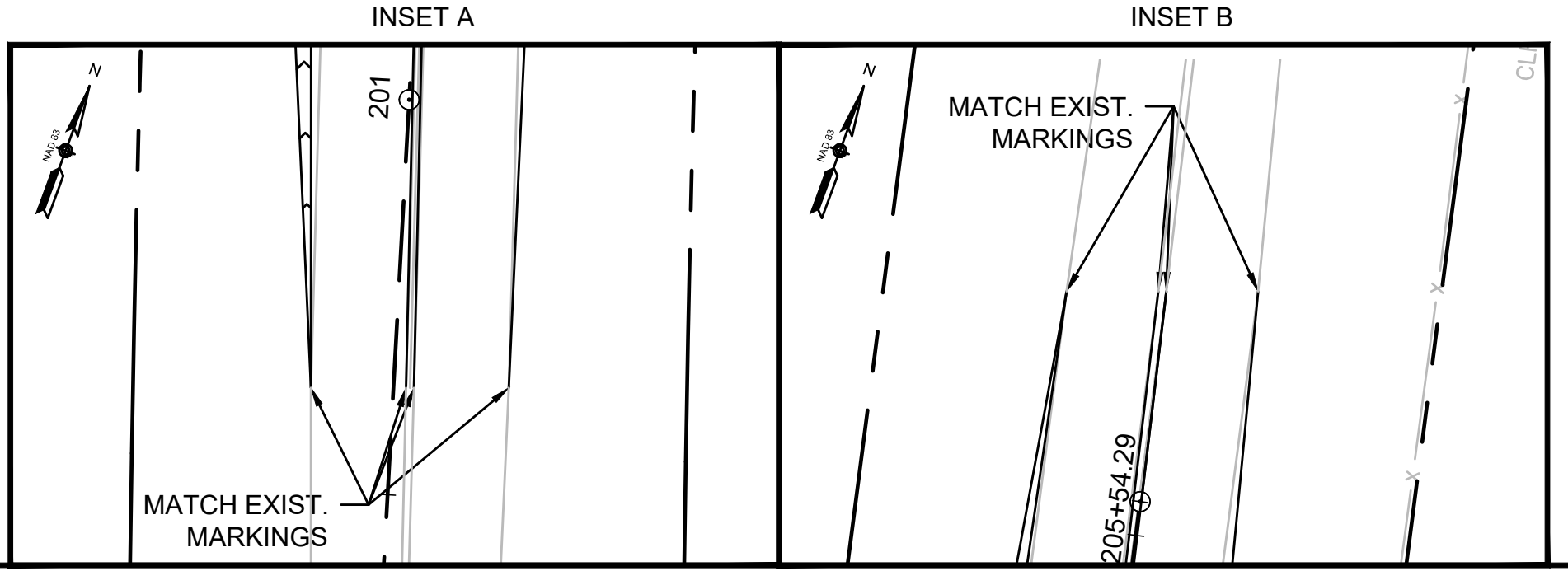
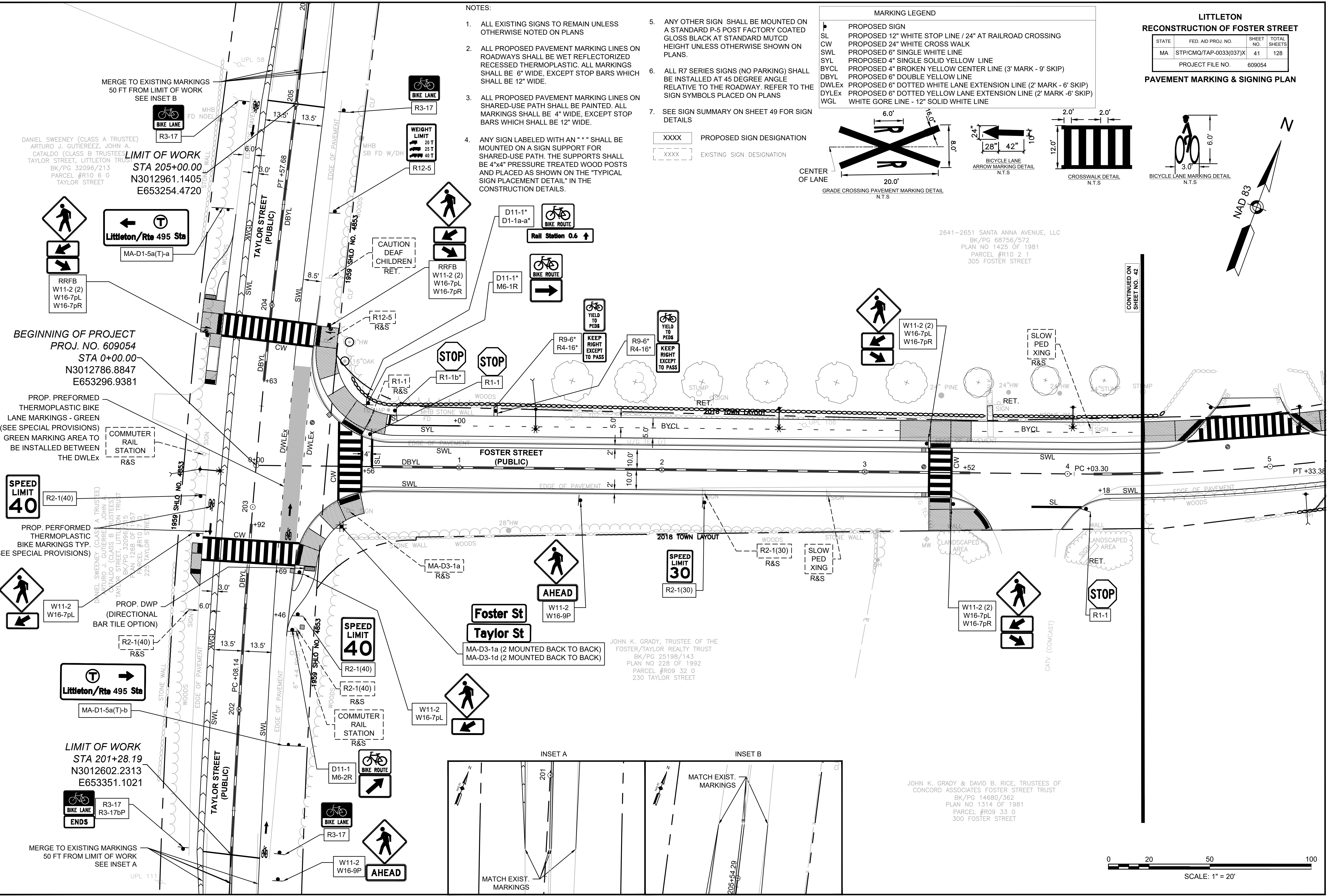
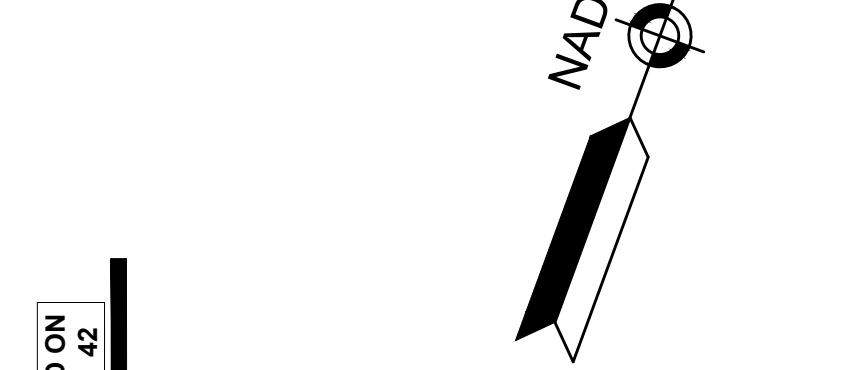
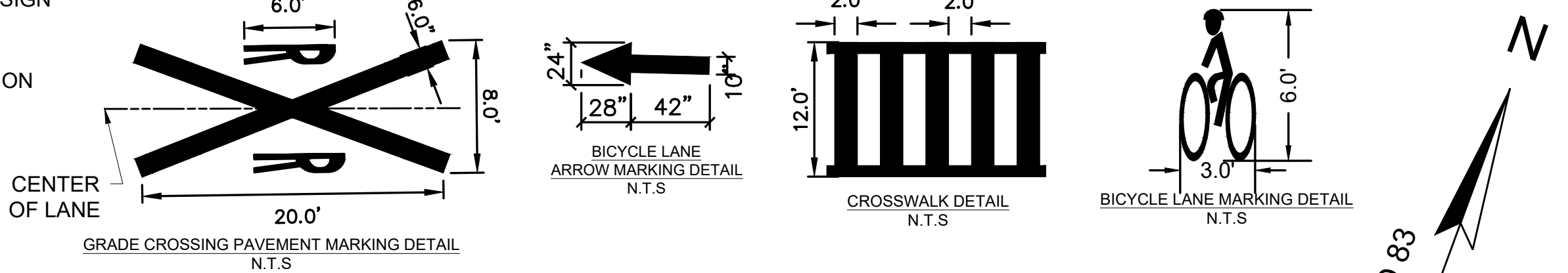
PAVEMENT MARKING & SIGNING PLAN

NOTES:

- ALL EXISTING SIGNS TO REMAIN UNLESS OTHERWISE NOTED ON PLANS
- ALL PROPOSED PAVEMENT MARKING LINES ON ROADWAYS SHALL BE WET REFLECTORIZED RECESSED THERMOPLASTIC. ALL MARKINGS SHALL BE 6" WIDE, EXCEPT STOP BARS WHICH SHALL BE 12" WIDE.
- ALL PROPOSED PAVEMENT MARKING LINES ON SHARED-USE PATH SHALL BE PAINTED. ALL MARKINGS SHALL BE 4" WIDE, EXCEPT STOP BARS WHICH SHALL BE 12" WIDE.
- ANY SIGN LABELED WITH AN "*" SHALL BE MOUNTED ON A SIGN SUPPORT FOR SHARED-USE PATH. THE SUPPORTS SHALL BE 4"x4" PRESSURE TREATED WOOD POSTS AND PLACED AS SHOWN ON THE "TYPICAL SIGN PLACEMENT DETAIL" IN THE CONSTRUCTION DETAILS.
- ANY OTHER SIGN SHALL BE MOUNTED ON A STANDARD P-5 POST FACTORY COATED GLOSS BLACK AT STANDARD MUTCD HEIGHT UNLESS OTHERWISE SHOWN ON PLANS.
- ALL R7 SERIES SIGNS (NO PARKING) SHALL BE INSTALLED AT 45 DEGREE ANGLE RELATIVE TO THE ROADWAY. REFER TO THE SIGN SYMBOLS PLACED ON PLANS
- SEE SIGN SUMMARY ON SHEET 49 FOR SIGN DETAILS

MARKING LEGEND

PROPOSED SIGN	PROPOSED SIGN
SL PROPOSED 12" WHITE STOP LINE / 24" AT RAILROAD CROSSING	PROPOSED 12" WHITE STOP LINE / 24" AT RAILROAD CROSSING
CW PROPOSED 24" WHITE CROSS WALK	PROPOSED 24" WHITE CROSS WALK
SWL PROPOSED 6" SINGLE WHITE LINE	PROPOSED 6" SINGLE WHITE LINE
SYL PROPOSED 4" SINGLE SOLID YELLOW LINE	PROPOSED 4" SINGLE SOLID YELLOW LINE
BYCL PROPOSED 4" BROKEN YELLOW CENTER LINE (3' MARK - 9' SKIP)	PROPOSED 4" BROKEN YELLOW CENTER LINE (3' MARK - 9' SKIP)
DBYL PROPOSED 6" DOUBLE YELLOW LINE	PROPOSED 6" DOUBLE YELLOW LINE
DWLX PROPOSED 6" DOTTED WHITE LANE EXTENSION LINE (2' MARK - 6' SKIP)	PROPOSED 6" DOTTED WHITE LANE EXTENSION LINE (2' MARK - 6' SKIP)
DYLEX PROPOSED 6" DOTTED YELLOW LANE EXTENSION LINE (2' MARK - 6' SKIP)	PROPOSED 6" DOTTED YELLOW LANE EXTENSION LINE (2' MARK - 6' SKIP)
WGL WHITE GORE LINE - 12" SOLID WHITE LINE	WHITE GORE LINE - 12" SOLID WHITE LINE



CONTINUED ON SHEET NO. 42

2641-2651 SANTA ANNA AVENUE, LLC
BK/PG 68756/572
PLAN NO 1425 OF 1981
PARCEL #R10 2 1
305 FOSTER STREET

JOHN K. GRADY, TRUSTEE OF THE FOSTER/TAYLOR REALTY TRUST
BK/PG 25198/143
PLAN NO 228 OF 1992
PARCEL #R09 32 0
230 TAYLOR STREET

JOHN K. GRADY & DAVID B. RICE, TRUSTEES OF CONCORD ASSOCIATES FOSTER STREET TRUST
BK/PG 14680/362
PLAN NO 1314 OF 1981
PARCEL #R09 33 0
300 FOSTER STREET

DANIEL SWEENEY (CLASS A TRUSTEE)
ARTURO J. GUTIERREZ, JOHN A. CATALDO (CLASS B TRUSTEES)
TAYLOR STREET, LITTLETON TRUST
BK/PG 32096/213
PARCEL #R10 6 0
TAYLOR STREET

COMMUTER RAIL STATION
R&S

PROP. DWP (DIRECTIONAL BAR TILE OPTION)

Littletton/Rte 495 Sta
MA-D1-5a(T)-b

LIMIT OF WORK
STA 201+28.19
N3012602.2313
E653351.1021

SPEED LIMIT 40
R2-1(40)

SPEED LIMIT 40
R2-1(40)

SPEED LIMIT 30
R2-1(30)

Foster St Taylor St
MA-D3-1a (2 MOUNTED BACK TO BACK)
MA-D3-1d (2 MOUNTED BACK TO BACK)

Littletton/Rte 495 Sta
MA-D1-5a(T)-a

BEGINNING OF PROJECT
PROJ. NO. 609054
STA 0+00.00
N3012786.8847
E653296.9381

LIMIT OF WORK
STA 205+00.00
N3012961.1405
E653254.4720

PROP. PERFORMED THERMOPLASTIC BIKE LANE MARKINGS - GREEN (SEE SPECIAL PROVISIONS)
GREEN MARKING AREA TO BE INSTALLED BETWEEN THE DWLX

PROP. PERFORMED THERMOPLASTIC BIKE MARKINGS TYP (SEE SPECIAL PROVISIONS)

MERGE TO EXISTING MARKINGS 50 FT FROM LIMIT OF WORK
SEE INSET A

MERGE TO EXISTING MARKINGS 50 FT FROM LIMIT OF WORK
SEE INSET B

CAUTION DEAF CHILDREN
RET.

STOP

STOP

STOP

STOP

AHEAD

AHEAD

AHEAD

BIKE LANE ENDS
R3-17
R3-17bP

UPL 111

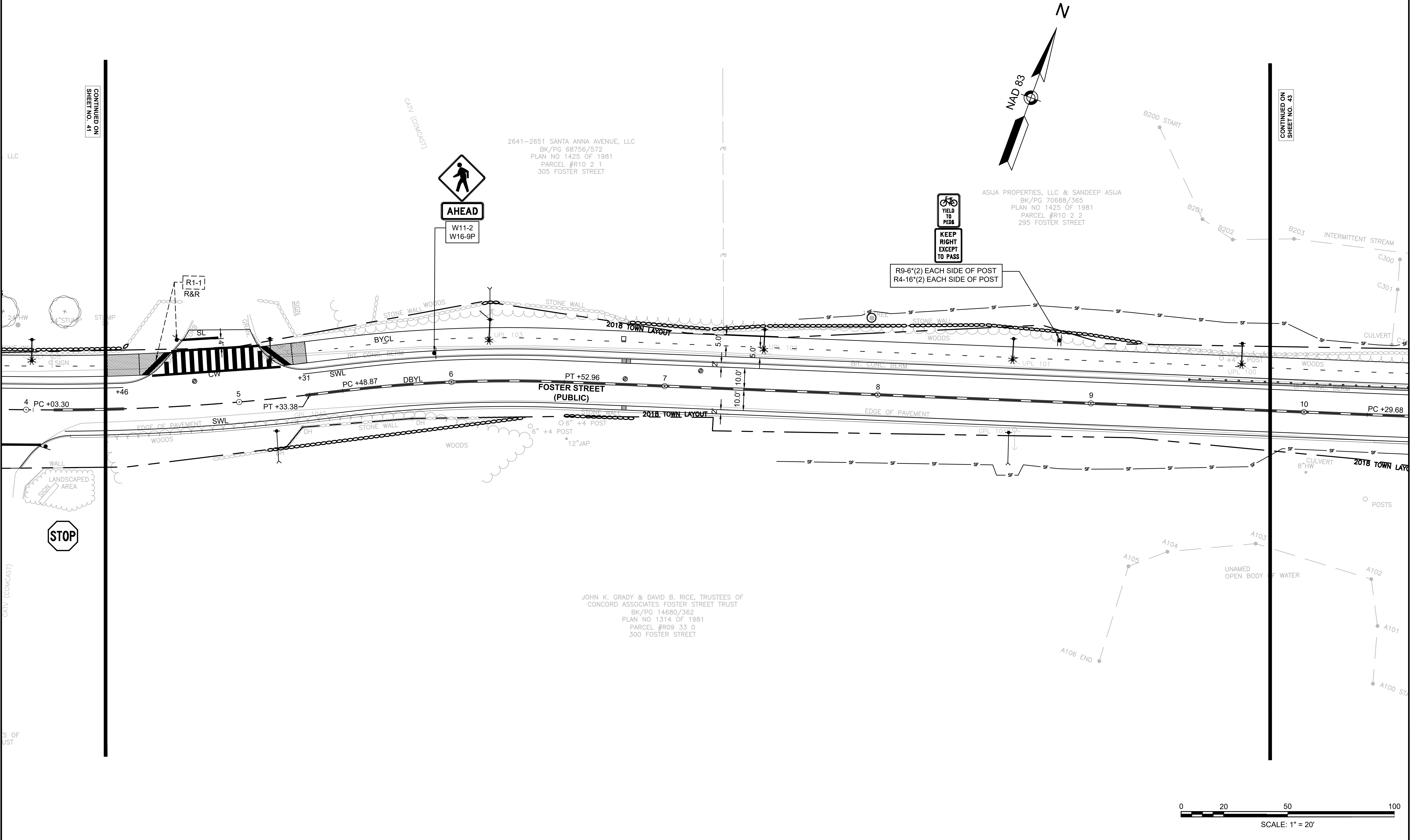
NAD 83

SEE SHEET 41 FOR MARKING & SIGNING NOTES

LITTLETON RECONSTRUCTION OF FOSTER STREET

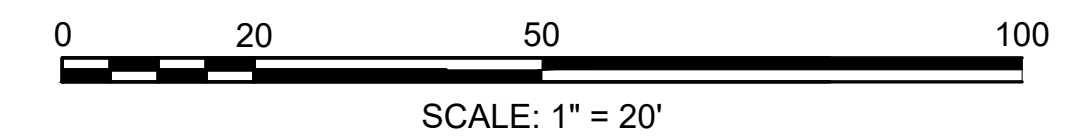
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	42	128
PROJECT FILE NO.		609054	

PAVEMENT MARKING & SIGNING PLAN



CONTINUED ON SHEET NO. 41

CONTINUED ON SHEET NO. 43

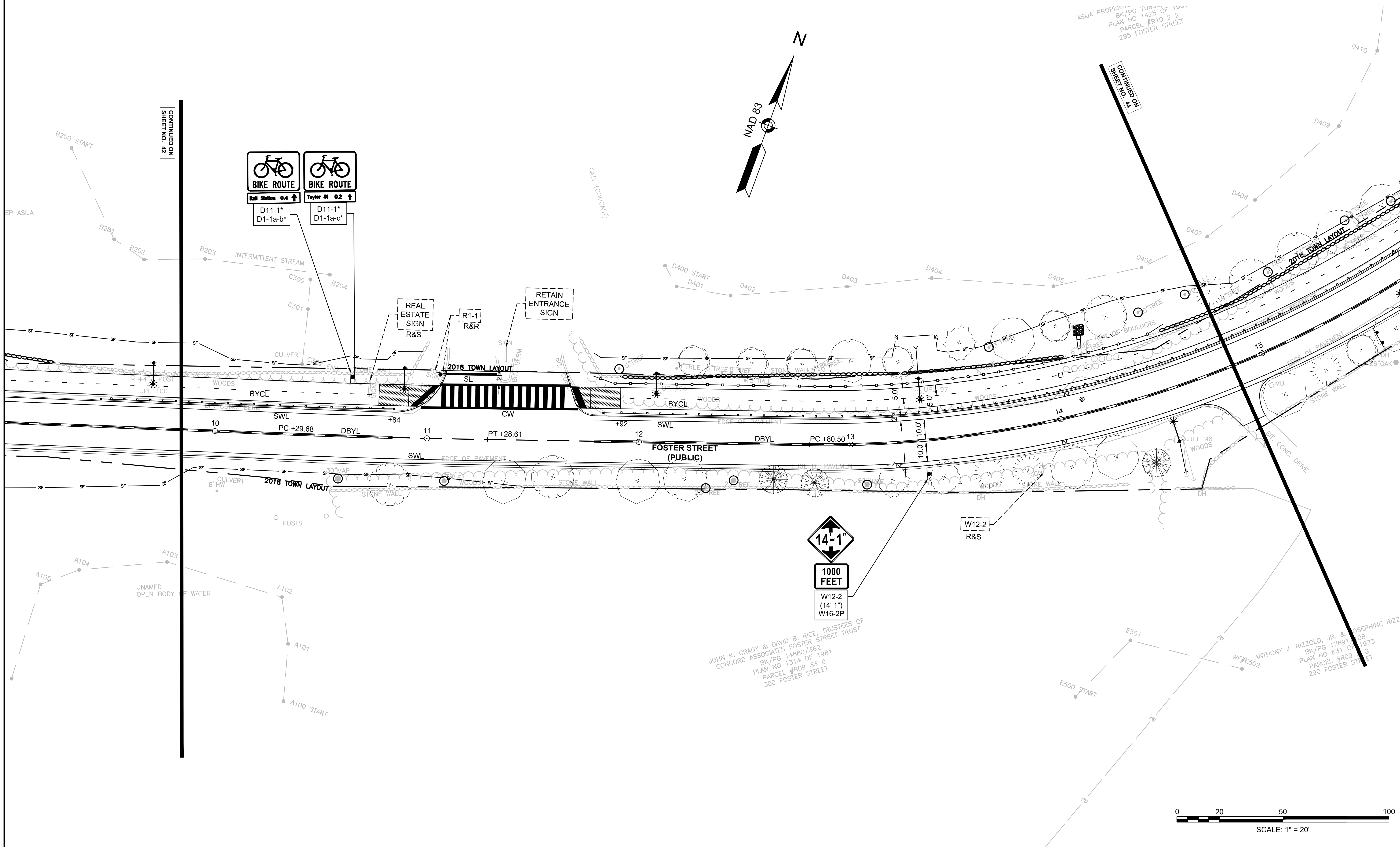


SEE SHEET 41 FOR MARKING & SIGNING NOTES

LITTLETON RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	43	128
PROJECT FILE NO.		609054	

PAVEMENT MARKING & SIGNING PLAN



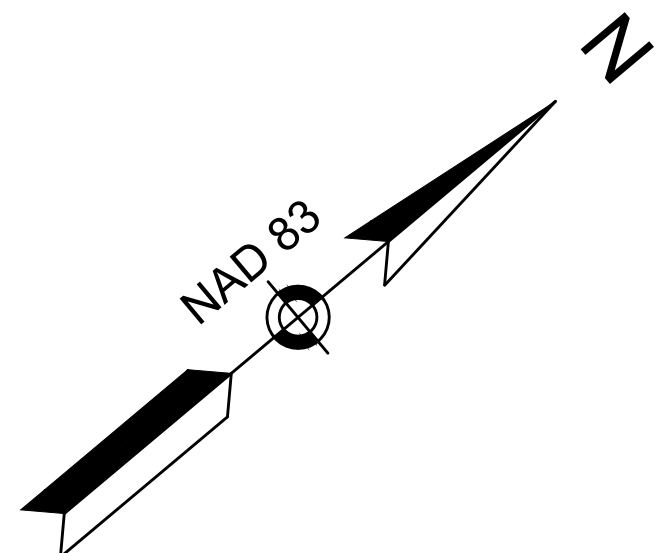
2017004421_PV701.DWG
Plotted on: 27-Mar-2024 10:07 AM

SEE SHEET 41 FOR MARKING & SIGNING NOTES

LITTLETON RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	44	128
PROJECT FILE NO.		609054	

PAVEMENT MARKING & SIGNING PLAN

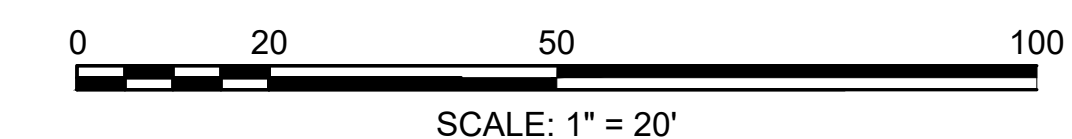
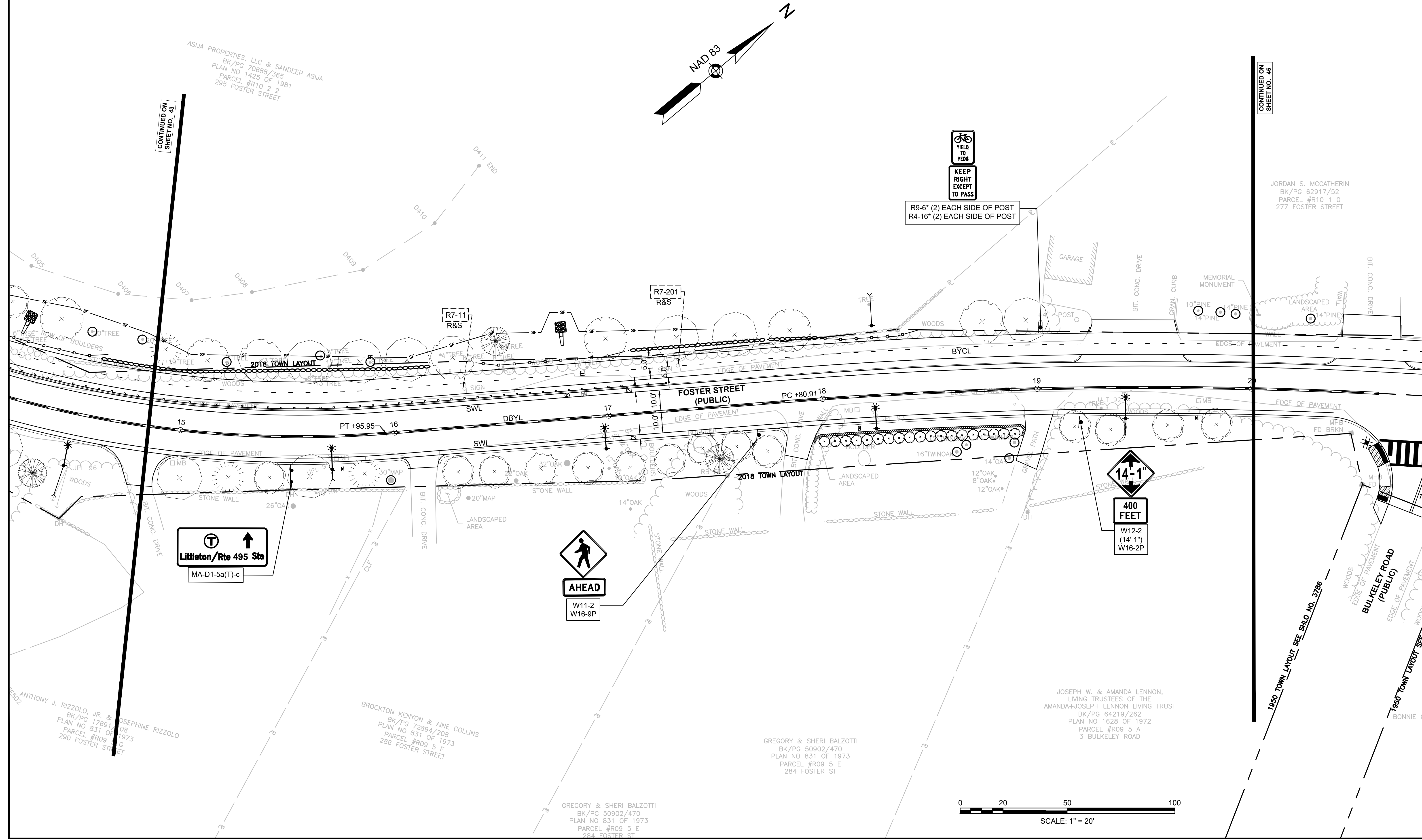


ASIA PROPERTIES, LLC & SANDEEP ASIA
BK/PG 70688/365
PLAN NO 1425 OF 1981
PARCEL #R10 2 2
295 FOSTER STREET

JORDAN S. MCCATHERIN
BK/PG 62917/52
PARCEL #R10 1 0
277 FOSTER STREET

CONTINUED ON
SHEET NO. 43

CONTINUED ON
SHEET NO. 45

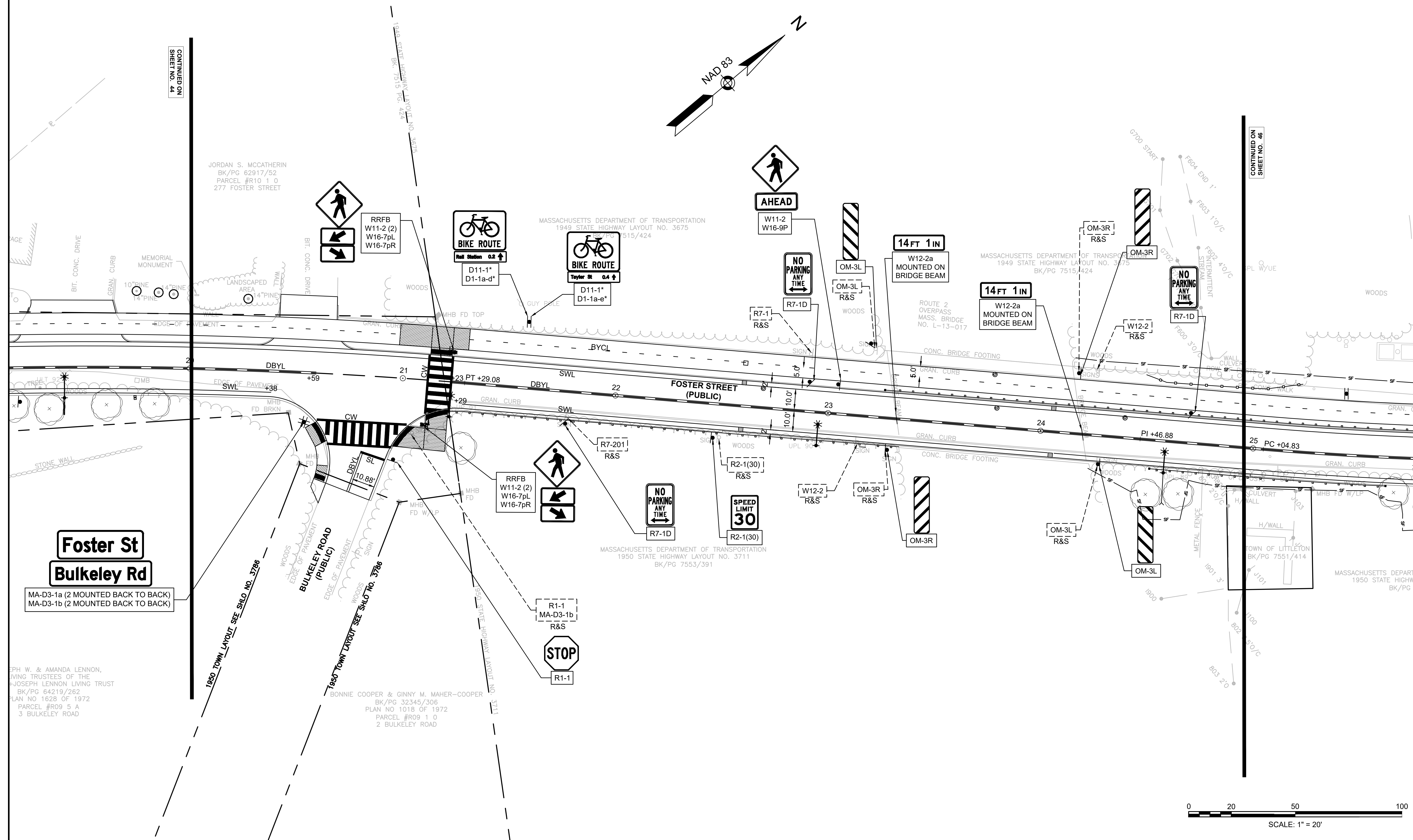


LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	45	128
PROJECT FILE NO.		609054	

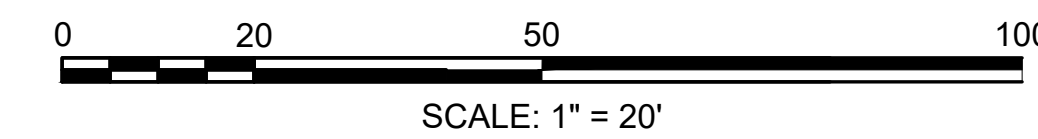
PAVEMENT MARKING & SIGNING PLAN

2017004421_PV701.DWG
Plotted on: 27-Mar-2024 10:08 AM



CONTINUED ON
SHEET NO. 44

CONTINUED ON
SHEET NO. 46

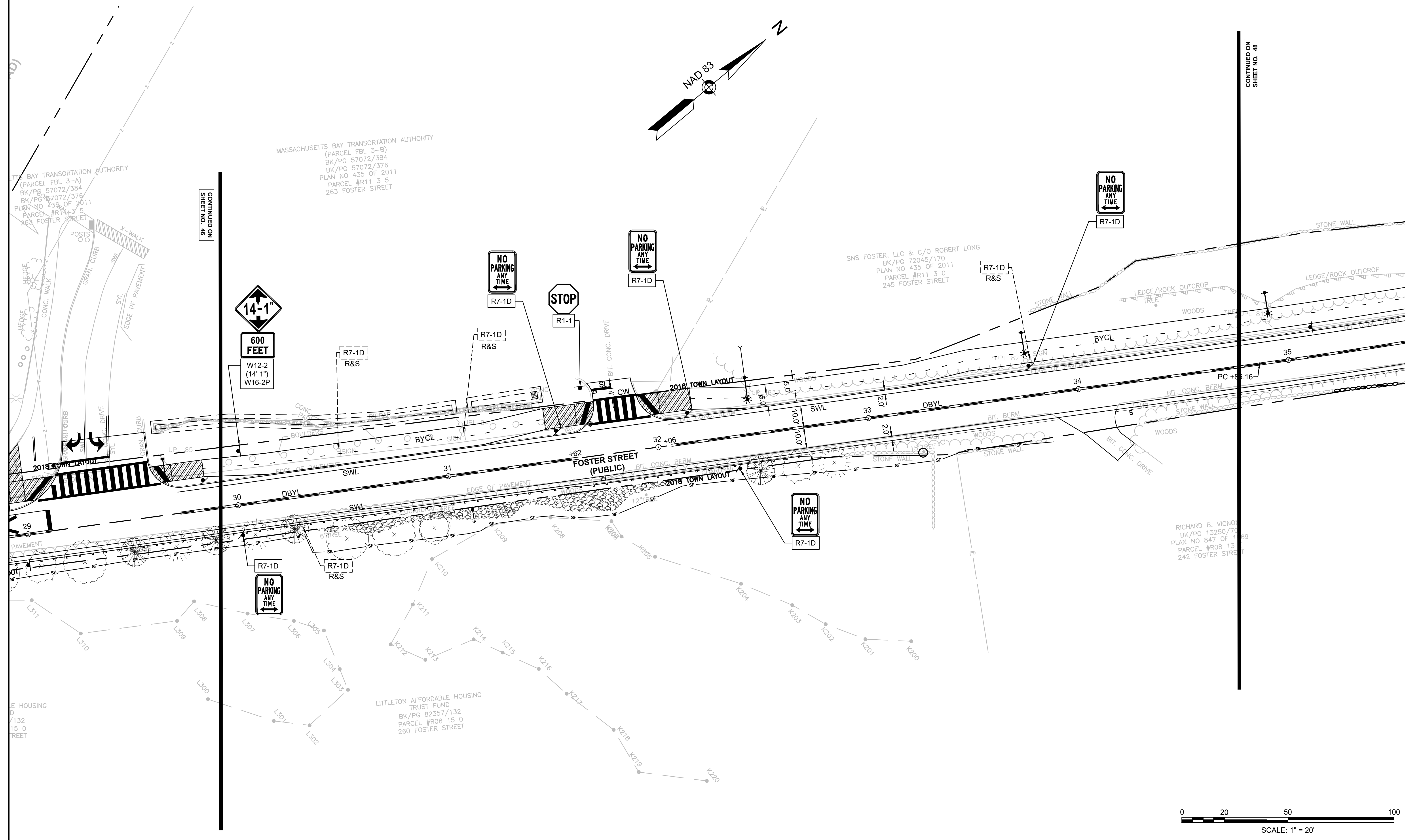


SEE SHEET 41 FOR MARKING & SIGNING NOTES

LITTLETON RECONSTRUCTION OF FOSTER STREET

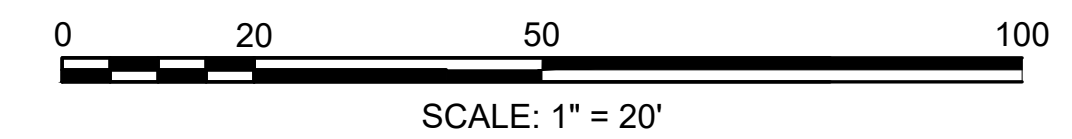
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	47	128
PROJECT FILE NO.		609054	

PAVEMENT MARKING & SIGNING PLAN



CONTINUED ON SHEET NO. 46

CONTINUED ON SHEET NO. 48

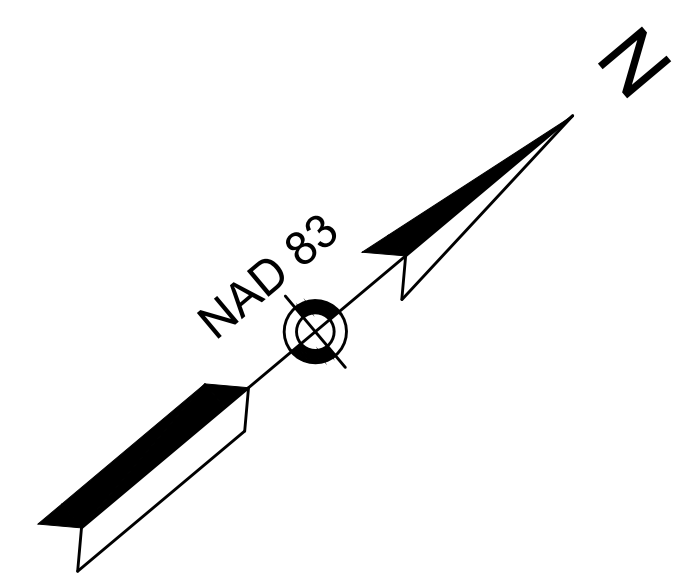


SEE SHEET 41 FOR MARKING & SIGNING NOTES

LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	48	128
PROJECT FILE NO.		609054	

PAVEMENT MARKING & SIGNING PLAN



CONTINUED ON SHEET NO. 47

SNS FOSTER, LLC & C/O ROBERT LONG
BK/PG 72045/170
PLAN NO 435 OF 2011
PARCEL #R11 3 0
245 FOSTER STREET

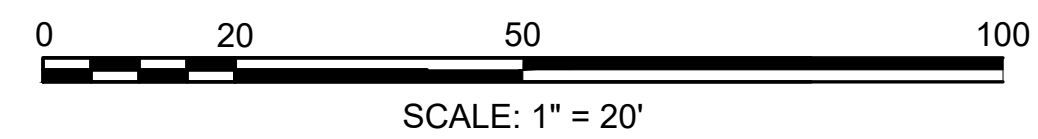
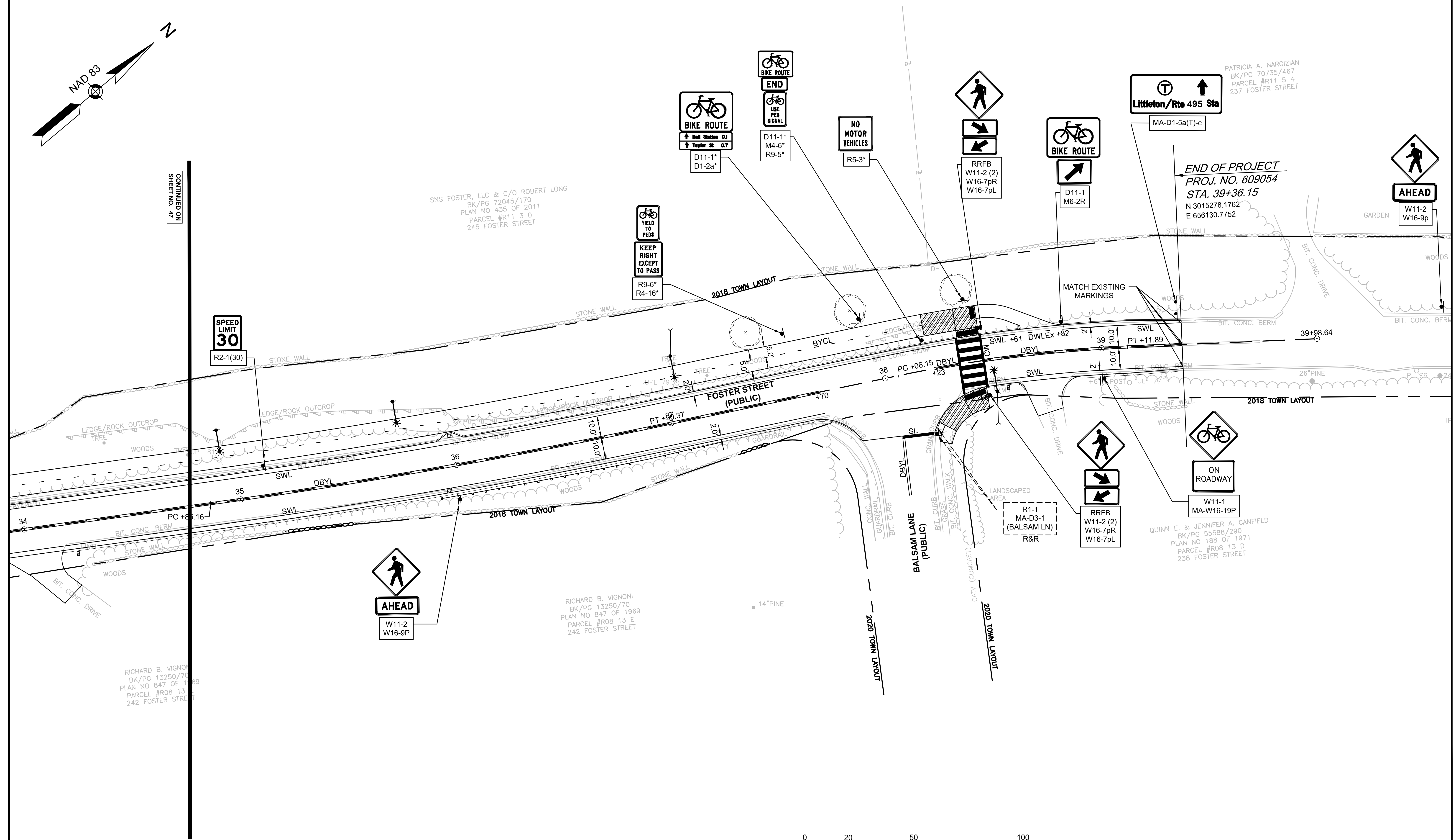
PATRICIA A. NARGIZIAN
BK/PG 70735/467
PARCEL #R11 5 4
237 FOSTER STREET

END OF PROJECT
PROJ. NO. 609054
STA. 39+36.15
N 3015278.1762
E 656130.7752

QUINN E. & JENNIFER A. CANFIELD
BK/PG 55588/290
PLAN NO 188 OF 1971
PARCEL #R08 13 D
238 FOSTER STREET

RICHARD B. VIGNONI
BK/PG 13250/70
PLAN NO 847 OF 1969
PARCEL #R08 13 E
242 FOSTER STREET

RICHARD B. VIGNONI
BK/PG 13250/70
PLAN NO 847 OF 1969
PARCEL #R08 13 E
242 FOSTER STREET



NOTES:
 HIGH INTENSITY ENCAPSULATED LENS REFLECTIVE SHEETING SHALL BE USED FOR ALL SIGNS. THE 2009 "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE 1990 MDPW "STANDARD DRAWINGS FOR SIGNS AND SUPPORTS", AND ALL ADMENDMENTS WILL GOVERN.

ALL P5 SIGN POSTS SHALL BE 2" SQUARE POSTS FACTORY COATED STEEL (BLACK) UNLESS OTHERWISE NOTED (PBS) = PAINTED BOTH SIDES

ANY SIGN LABELED WITH AN "*" SHALL BE MOUNTED ON A SIGN SUPPORT FOR SHARED-USE PATH. THE SUPPORTS SHALL BE 4"x4" PRESSURE TREATED WOOD POSTS AND PLACED AS SHOWN ON THE "TYPICAL SIGN PLACEMENT DETAIL" IN THE CONSTRUCTION DETAILS.

LITTLETON
 RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	49	128
PROJECT FILE NO.		609054	

TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	SIGN FACE AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
R1-1	30	30		SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (INCLUDING LATEST REVISION)			6	RED	WHITE	WHITE	P-5 6 REQ'D	6.25	37.5
R1-1b*	18	18					1	RED	WHITE	WHITE	4X4 PRESSURE TREATED WOOD 1 REQ'D	2.25	2.25
R2-1 (30)	30	36					3	WHITE	BLACK	BLACK	P-5 3 REQ'D	7.50	22.50
R2-1 (40)	30	36					2	WHITE	BLACK	BLACK	P-5 2 REQ'D	7.50	15.00
R3-17	30	24					4	WHITE	BLACK	BLACK	P-5 4 REQ'D	5.00	20.00
M4-6	12	6					1	WHITE	BLACK	BLACK	MOUNTED WITH D11-1	0.50	0.50
R3-17bP	24	8					1	WHITE	BLACK	BLACK	MOUNTED WITH R3-17	1.33	1.33
R4-16*	18	24					9	WHITE	BLACK	BLACK	4X4 PRESSURE TREATED WOOD 9 REQ'D	3.00	27.00
R5-3*	24	24					1	WHITE	BLACK	BLACK	4X4 PRESSURE TREATED WOOD 1 REQ'D	4.00	4.00
R7-1D	12	18					12	WHITE	RED	RED	P-5 12 REQ'D	1.50	18.00
R7-201aP	12	6					1	WHITE	RED	RED	MOUNTED WITH R7-1D	0.50	0.50
R8-8	24	30					2	WHITE	BLACK	BLACK	P-5 2 REQ'D	3.00	6.00
R9-5*	12	18					1	WHITE	BLACK	BLACK	MOUNTED WITH D11-1	1.50	1.50
R9-6*	12	18					9	WHITE	BLACK	BLACK	MOUNTED WITH R4-16*	1.50	13.50
R12-5	36	24					1	WHITE	BLACK	BLACK	P-5 1 REQ'D	6.00	6.00

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	SIGN FACE AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
R15-1	36	36		SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (INCLUDING LATEST REVISION)			1	WHITE	BLACK	BLACK	MOUNTED ON GATE POST	5.10	5.10
R15-2P	27	18					1	WHITE	BLACK	BLACK	MOUNTED ON GATE POST	2.25	2.25
OM-3L	12	36					2	YELLOW	BLACK	BLACK	P-5 2 REQ'D	3.00	6.00
OM-3R	12	36					2	YELLOW	BLACK	BLACK	P-5 2 REQ'D	3.00	6.00
W10-1	36	36					3	YELLOW	BLACK	BLACK	P-5 3 REQ'D	7.10	21.30
W10-4L	36	36					1	YELLOW	BLACK	BLACK	P-5 1 REQ'D	9.00	9.00
W10-1b*	24	24					2	YELLOW	BLACK	BLACK	4X4 PRESSURE TREATED WOOD 2 REQ'D	4.00	8.00
W11-1	24	24					1	FLOUR. YELLOW/GREEN	BLACK	BLACK	P-5 1 REQ'D	4.00	4.00
W11-2	36	36					9	FLOUR. YELLOW/GREEN	BLACK	BLACK	P-5 9 REQ'D	9.00	81.00
W12-2	36	36					3	YELLOW	BLACK	BLACK	P-5 3 REQ'D	9.00	27.00
W12-2a	84	24					2	YELLOW	BLACK	BLACK	MOUNTED ON BRIDGE BEAM	14.00	28.00
MA-W16-19P	24	18		4C	3.5 3 3.5	N/A	1	YELLOW	BLACK	BLACK	MOUNTED WITH W11-1	3.00	3.00
W16-2P-400	24	18					1	YELLOW	BLACK	BLACK	MOUNTED W/ W12-2	3.00	3.00
W16-2P-600	24	18					1	YELLOW	BLACK	BLACK	MOUNTED W/ W12-2	3.00	3.00
W16-2P-1000	24	18					1	YELLOW	BLACK	BLACK	MOUNTED W/ W12-2	3.00	3.00

NOTES:
 HIGH INTENSITY ENCAPSULATED LENS REFLECTIVE SHEETING SHALL BE USED FOR ALL SIGNS. THE 2009 "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE 1990 MDPW "STANDARD DRAWINGS FOR SIGNS AND SUPPORTS", AND ALL ADMENDMENTS WILL GOVERN.

ALL P5 SIGN POSTS SHALL BE 2" SQUARE POSTS FACTORY COATED GLOSS BLACK UNLESS OTHERWISE NOTED (PBS) = PAINTED BOTH SIDES

ANY SIGN LABELED WITH AN " * " SHALL BE MOUNTED ON A SIGN SUPPORT FOR SHARED-USE PATH. THE SUPPORTS SHALL BE 4"x4" PRESSURE TREATED WOOD POSTS AND PLACED AS SHOWN ON THE "TYPICAL SIGN PLACEMENT DETAIL" IN THE CONSTRUCTION DETAILS.

LITTLETON
 RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	50	128
PROJECT FILE NO.		609054	

TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	SIGN FACE AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
W16-7pL	24	12		SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (INCLUDING LATEST REVISION)			4	FLOUR. YELLOW/GREEN	BLACK	BLACK	MOUNTED W/ W11-2	2.00	8.00
W16-7pR	24	12					2	FLOUR. YELLOW/GREEN	BLACK	BLACK	MOUNTED W/ W11-2	2.00	4.00
W16-9p	24	12	AHEAD				6	FLOUR. YELLOW/GREEN	BLACK	BLACK	MOUNTED W/ W11-12	2.00	12.00
D1-1a-a*	24	8	Rail Station 0.6 ↑				1	GREEN	WHITE	WHITE	MOUNTED WITH D-11	1.33	1.33
D1-1a-b*	24	8	Rail Station 0.4 ↑				1	GREEN	WHITE	WHITE	MOUNTED WITH D-11	1.33	1.33
D1-1a-c*	24	8	Taylor St 0.2 ↑				1	GREEN	WHITE	WHITE	MOUNTED WITH D-11	1.33	1.33
D1-1a-d*	24	8	Rail Station 0.2 ↑				1	GREEN	WHITE	WHITE	MOUNTED WITH D-11	1.33	1.33
D1-1a-e*	24	8	Taylor St 0.4 ↑				1	GREEN	WHITE	WHITE	MOUNTED WITH D-11	1.33	1.33
D1-2a*	24	16	↑ Rail Station 0.1 ↑ Taylor St 0.7				1	GREEN	WHITE	WHITE	MOUNTED WITH D-11	2.67	2.67
D11-1*	24	18					9	GREEN	WHITE	WHITE	4X4 PRESSURE TREATED WOOD 7 REQ'D P-5 2 REQ'D	3.00	27.00
M6-1R	12	9					2	WHITE	BLACK	BLACK	MOUNTED WITH D11-1	0.75	1.50
MA-D1-5a(T)-a	42	18	 Littleton/Rte 495 Sta	SEE 2016 MASSDOT STANDARD SIGNS BOOK			1	GREEN	WHITE	WHITE	P-5 2 REQ'D	5.25	5.25
MA-D1-5a(T)-b	42	18	 Littleton/Rte 495 Sta				1	GREEN	WHITE	WHITE	P-5 2 REQ'D	5.25	5.25
MA-D1-5a(T)-c	42	18	 Littleton/Rte 495 Sta				2	GREEN	WHITE	WHITE	P-5 4 REQ'D	5.25	10.50
MA-D3-1a	36	12	Foster St	6D/4D	3/3	N/A	6	GREEN	WHITE	WHITE	P-5 7 REQ'D	-	EACH
MA-D3-1b	40	12	Bulkeley Rd	6D/4D	2.75/3.25	N/A	2	GREEN	WHITE	WHITE	MOUNTED WITH MA-D3-1a	-	EACH
MA-D3-1c	36	12	Grimes Ln	6D/4D	3/3	N/A	2	GREEN	WHITE	WHITE	MOUNTED WITH MA-D3-1a	-	EACH
MA-D3-1d	36	12	Taylor St	6D/4D	2.75/3.25	N/A	2	GREEN	WHITE	WHITE	MOUNTED WITH MA-D3-1a	-	EACH

LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	51	128
PROJECT FILE NO.		609054	

TEMPORARY TRAFFIC CONTROL PLANS

NOTES:

- ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, UNLESS SUPERSEDED BY THESE PLANS.
- ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
- TEMPORARY CONSTRUCTION SIGNING, BARRICADES, AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
- SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HANDICAPS" (MASH).
- CONTRACTORS SHALL NOTIFY EACH ADJUTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT, AND SIMILAR OPERATIONS.
- THE FIRST FIVE PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH TYPE A LIGHTS.
- THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
- DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
- MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
- MINIMUM LANE WIDTH IS TO BE 11 FEET (3.3m) UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
- ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.

LEGEND:

REFLECTORIZED PLASTIC DRUM OR 36" CONE	WORK ZONE	WORK VEHICLE
P/F POLICE/FLAGGER DETAIL	DIRECTION OF TRAFFIC	TRUCK MOUNTED ATTENUATOR
TYPE II BARRICADE	IMPACT ATTENUATOR	TRAFFIC OR PEDESTRIAN SIGNAL
CHANGEABLE MESSAGE SIGN	MEDIAN BARRIER	SIGN
ARROW BOARD	MEDIAN BARRIER WITH WARNING LIGHTS	

THE IDEAL CAPACITY OF A MAJOR HIGHWAY IS GENERALLY CONSIDERED TO BE 1900 PASSENGER CARS PER HOUR PER LANE (PCPHPL). IN WORK ZONES ON A MULTI-LANE DIVIDED HIGHWAY, THE FOLLOWING VOLUME GUIDELINES HAVE BEEN SUGGESTED:

MEASURED AVERAGE WORK ZONE CAPACITIES

NUMBER OF LANES (EXISTING)	NUMBER OF LANES (TO TRAFFIC)	NUMBER OF STUDIES	AVERAGE CAPACITY	
			VPH	VPHPL
3	1	7	1,170	1,170
3	1	8	1,340	1,340
5	2	4	2,740	1,370
5	2	4	2,840	1,480
3	2	9	2,980	1,490
4	3	4	4,560	1,520

Source: Dudek, C., *Notes on Work Zone Capacity and Level of Service*, Texas Transportation Institute, Texas A&M University, College Station, Texas (1984)

BY OBTAINING HOURLY TRAFFIC COUNTS FOR A PARTICULAR ROADWAY (WITH A MINIMUM OF A 48-HOUR AUTOMATIC TRAFFIC RECORDER (ATR) COUNT), THIS WILL HELP TO DETERMINE AT WHAT TIMES OF THE DAY OR NIGHT A CERTAIN NUMBER OF LANES MAY BE CLOSED.

	Standard Details and Drawings for the Development of Temporary Traffic Control Plans	FIGURE Gen-1 GENERAL GUIDELINES
--	--------------------------------------------------------------------------------------	------------------------------------

SUGGESTED WORK ZONE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS **		
	A	B	C
LOCAL OR LOW VOLUME ROADWAYS*	350 (100)	350 (100)	350 (100)
MOST OTHER ROADWAYS*	500 (150)	500 (150)	500 (150)
FREeways AND EXPRESSWAYS*	1,000 (300)	1,500 (450)	2,840 (800)

* ROAD TYPE TO BE DETERMINED BY MASSDOT OFFICE OF TRANSPORTATION PLANNING.

** DISTANCES ARE SHOWN IN FEET (METERS). THE COLUMN HEADINGS A, B, AND C ARE THE DIMENSIONS SHOWN IN THE DETAIL/TYPICAL SETUP FIGURES. THE A DIMENSION IS THE DISTANCE FROM THE TRANSITION OR POINT OF RESTRICTION TO THE FIRST SIGN. THE B DIMENSION IS THE DISTANCE BETWEEN THE FIRST AND SECOND SIGNS. THE C DIMENSION IS THE DISTANCE BETWEEN THE SECOND AND THIRD SIGNS. (THE "THIRD" SIGN IS THE FIRST ONE TYPICALLY ENCOUNTERED BY A DRIVER APPROACHING A TEMPORARY TRAFFIC CONTROL (TTC) ZONE.)

THE "THIRD" SIGN ABOVE IS TYPICALLY REFERRED TO AS AN "ADVANCE WARNING" SIGN ON THE TTCZ SETUPS. THESE ADVANCE WARNING SIGNS ARE LOCATED PRIOR TO THE PROJECT LIMITS ON ALL APPROACHES (I.e. THE W20-1 SERIES (ROAD WORK XX FT) SIGNS), AND USUALLY REMAIN FOR THE DURATION OF THE PROJECT. ADDITIONAL SIGNS (I.e. "RIGHT LANE CLOSED 1 MILE" AND "LEFT LANE CLOSED 1 MILE") HAVE BEEN SHOWN IN SOME FIGURES AS EXAMPLES OF REINFORCEMENT SIGN PLACEMENT BUT ARE USED IN RARE OCCASIONS.

THE FIRST AND SECOND WARNING SIGNS ABOVE ARE REFERRED TO AS THE OPERATIONAL (DAY-TO-DAY) WORK ZONE SIGNS AND MAY BE MOVED DEPENDING ON WHERE THE SPECIFIC ROADWAY WORK FOR THAT DAY IS LOCATED.

R2-10a SIGNS SHALL BE PLACED BETWEEN THE SECOND AND THIRD SIGNS AS DESCRIBED ABOVE.

R2-10a, R2-10b, AND W20-1 SERIES SIGNS ARE TO BE INCLUDED ON ALL DETAILS/TYPICAL SETUPS.

Based on: Table 6C-1 MUTCD LATEST EDITION

STOPPING SIGHT DISTANCE AS A FUNCTION OF SPEED

SPEED (km/h)	DISTANCE (m)	SPEED (mph)	DISTANCE (ft)
30	35	20	115
40	50	25	165
50	65	30	200
60	85	35	250
70	105	40	305
80	130	45	380
90	160	50	425
100	195	55	485
110	220	60	570
120	250	65	645
		70	730
		75	820

*POSTED SPEED, OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED.

THESE VALUES MAY BE USED TO DETERMINE THE LENGTH OF LONGITUDINAL BUFFER SPACES.

THE DISTANCES IN THE ABOVE CHART REPRESENT THE MINIMAL VALUES FOR BUFFER SPACING.

Source: Table 6C-2 MUTCD LATEST EDITION

	Notes for Temporary Traffic Control Plans	FIGURE Gen-2 NOTES ON WORK ZONE DISTANCES
--	-------------------------------------------	----------------------------------------------

CONVENTIONAL ROADWAY— A STREET OR HIGHWAY OTHER THAN A LOW-VOLUME ROAD, EXPRESSWAY, OR FREEWAY.
EXPRESSWAY— A DIVIDED HIGHWAY WITH PARTIAL CONTROL OF ACCESS.
FREEWAY— A DIVIDED HIGHWAY WITH FULL CONTROL OF ACCESS.

LOW-VOLUME ROAD— A FACILITY LYING OUTSIDE OF BUILT-UP AREAS OF CITIES, TOWNS, AND COMMUNITIES, AND IT SHALL HAVE A TRAFFIC VOLUME OF LESS THAN 400 ADT. IT SHALL NOT BE A FREEWAY, EXPRESSWAY, INTERCHANGE RAMP, FREEWAY SERVICE ROAD OR A ROAD ON A DESIGNATED STATE HIGHWAY SYSTEM.

Source: MUTCD LATEST EDITION

TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES

TYPE OF TAPER	TAPER LENGTH (L)*
MERGING TAPER	AT LEAST L
SHIFTING TAPER	AT LEAST 0.5L
SHOULDER TAPER	AT LEAST 0.33L
ONE-LANE, TWO-WAY TRAFFIC TAPER	50 FT MIN.(15 m) 100 FT MAX.(30 m) MAX.
DOWNSTREAM TAPER	50 FT MIN.(15 m) 100 FT MAX.(30 m) PER LANE

Source: Table 6C-3 MUTCD LATEST EDITION

FORMULAS FOR DETERMINING TAPER LENGTHS

SPEED LIMIT (S)	TAPER LENGTH (L) FEET	SPEED LIMIT (S)	TAPER LENGTH (L) METERS
40 MPH OR LESS	L = WS ² / 60	80 KM/H OR LESS	L = WS ² / 155
45 MPH OR MORE	L = WS	70 KM/H OR MORE	L = WS / 1.6

WHERE: L = TAPER LENGTH IN FEET (METERS)
W = WIDTH OF OFFSET IN FEET (METERS)
S = POSTED SPEED LIMIT, OR OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED IN MPH (KM/H)

Source: Table 6C-4 MUTCD LATEST EDITION

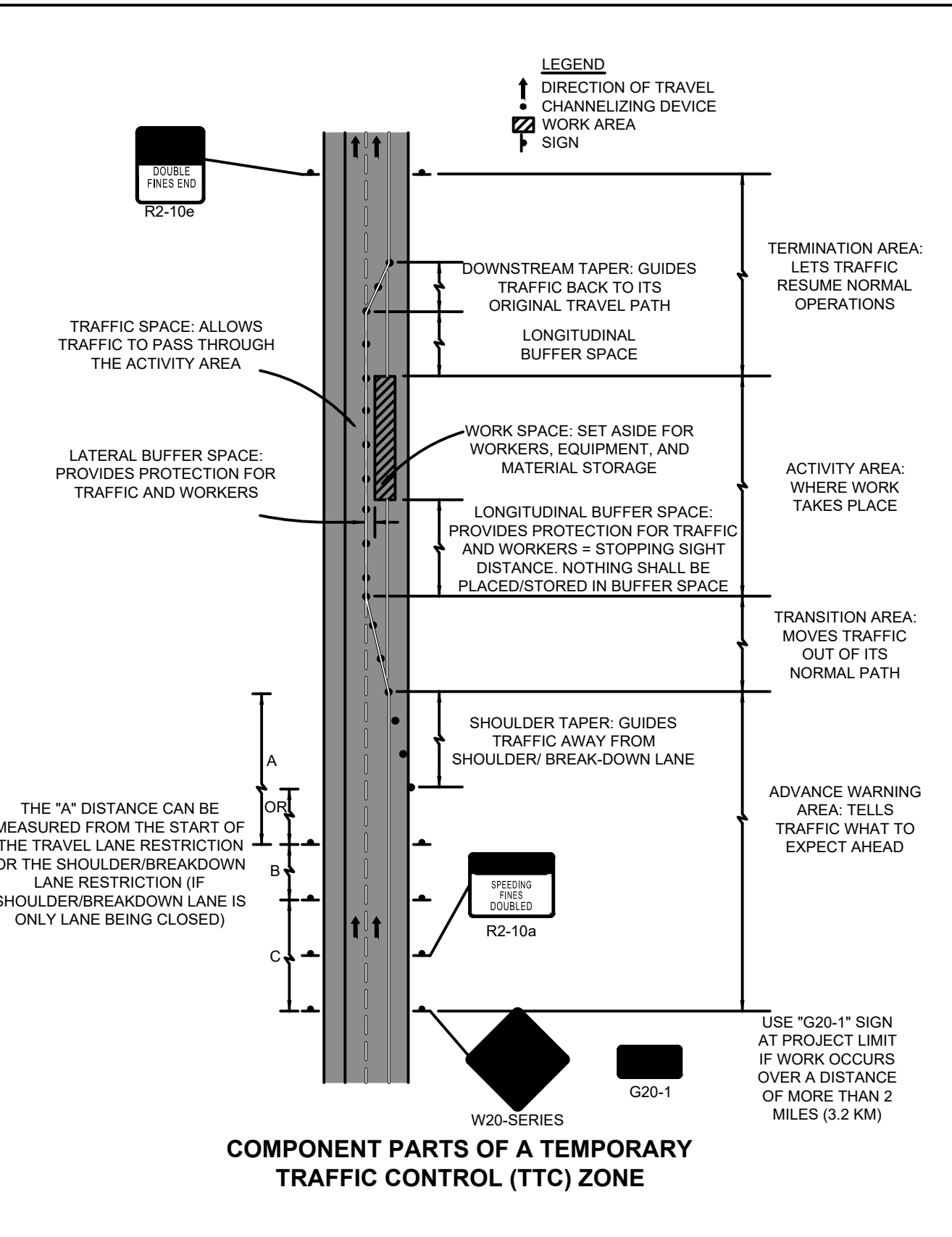
	Notes for Temporary Traffic Control Plans	FIGURE Gen-3 NOTES ON WORK ZONE DISTANCES
--	-------------------------------------------	----------------------------------------------

GENERAL NOTES:

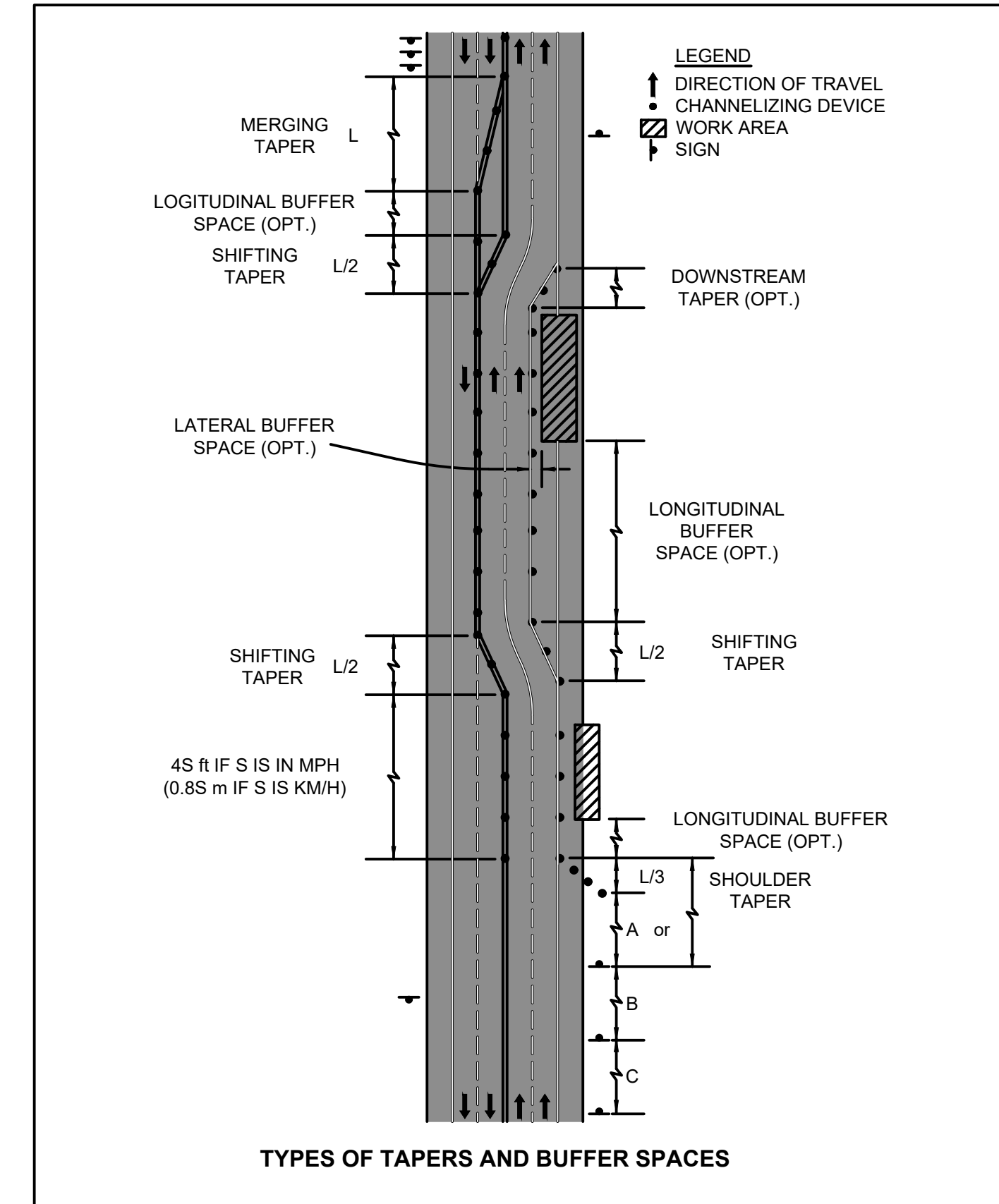
- IF ANY STAGE REQUIRES MODIFICATION OF THE TRAFFIC SIGNAL OPERATION, THE CONTRACTOR SHALL SUBMIT A REVISED SIGNAL TIMING AND PHASING PLAN TO THE TOWN OF LITTLETON FOR APPROVAL BEFORE MODIFYING THE TRAFFIC SIGNAL.
- CONTRACTOR SHALL CONSTRUCT SIDEWALK IN SMALLER SECTIONS THAN SHOWN ON STAGING PLANS OR PEDESTRIAN MANAGEMENT PLANS IN ORDER TO MAINTAIN ACCESS TO BUILDINGS. THE CONTRACTOR SHALL COORDINATE WITH BUSINESS OWNERS ON ALL WORK IN FRONT OF THEIR BUILDINGS.
- ALL TRAFFIC MANAGEMENT CONFIGURATIONS SHALL CONFORM TO THE STANDARD MassDOT DETAILS ON THE FOLLOWING SHEETS AND APPLY TO ALL LOCATIONS INCLUDED IN THE CONTRACT.

THE CONTRACTOR SHALL BE PERMITTED TO PERFORM TEMPORARY ROADWAY OR LANE CLOSURES FROM 8:00 A.M. TO 3:00 P.M. CHANGES TO THESE TIMES REQUIRE APPROVAL FROM THE TOWN OF LITTLETON

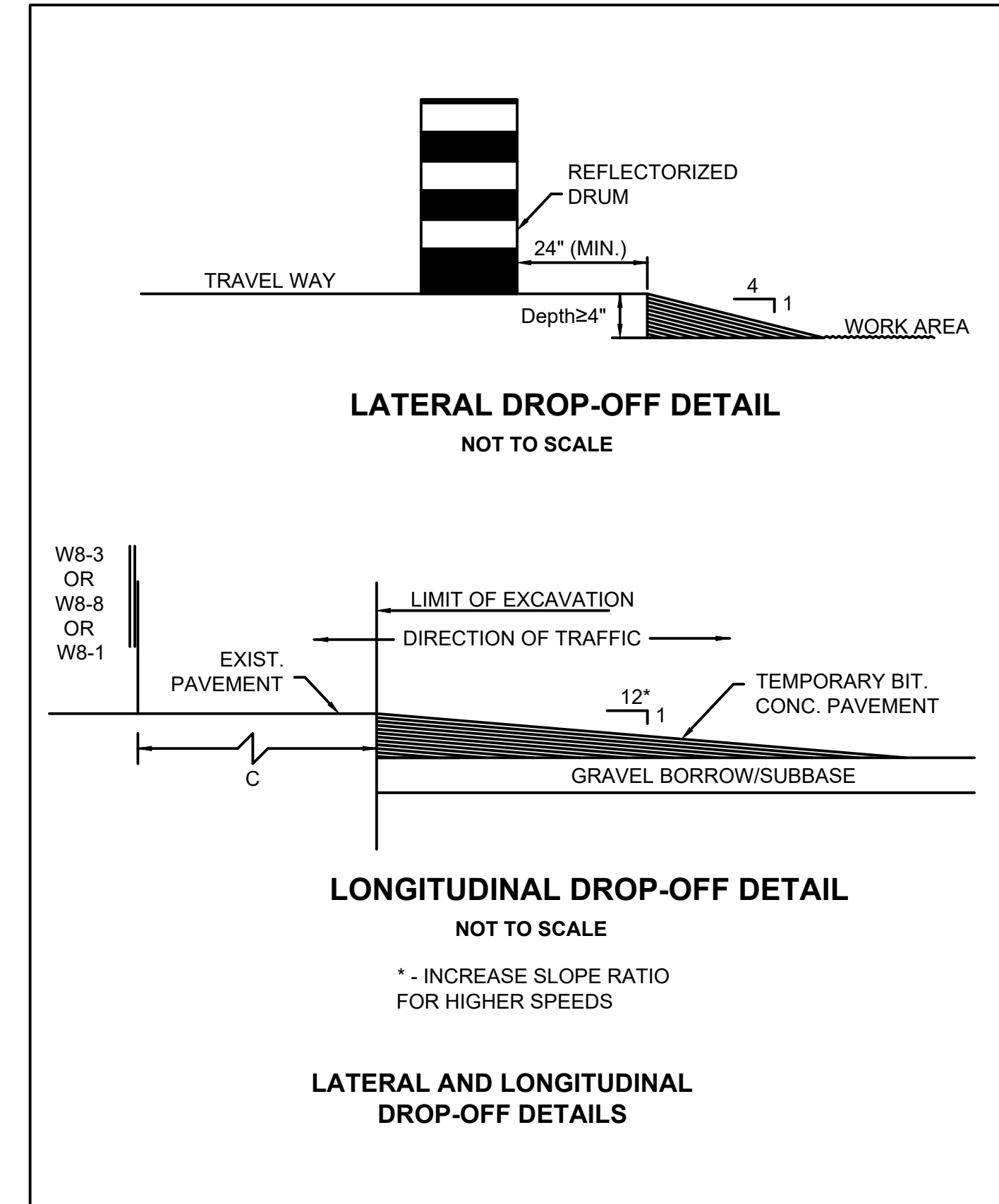
- ALL TRENCHES IN THE ROADWAY SHALL EITHER BE BACKFILLED AND PATCHED WITH HOT MIX ASPHALT, COVERED WITH BEVELED EDGES STEEL PLATES, OR HOT MIX ASPHALT AROUND STEEL PLATES BEFORE REOPENING THE ROADWAY TO TRAFFIC. UNBEVELED STEEL PLATE MAY BE USED IF HMA WEDGES ARE PLACED IN ACCORDANCE WITH THE LONGITUDINAL DROP OFF DETAIL.
- COVER ALL EXISTING SIGNAGE THAT CONFLICTS WITH THE TRAFFIC MANAGEMENT SETUP IN PLACE.
- PORTABLE CHANGEABLE MESSAGE BOARDS (PCMB) SHALL BE USED ON THE PROJECT SITE; THESE SIGNS SHALL ADVISE MOTORISTS TO EXPECT DELAYS, AND ADVISE TRAILER TRUCKS OF RESTRICTED LANE WIDTHS (AND POSSIBLE DETOUR ROUTES) ON SPECIFIC APPROACHES DURING CERTAIN STAGES OF CONSTRUCTION.
- THE CONTRACTOR SHALL PLACE TWO PORTABLE CHANGEABLE MESSAGE BOARDS (PCMB) ON THE PROJECT SITE, FOR SEVEN DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- ALL ADVANCED SIGNAGE SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT.



	Standard Details and Drawings for the Development of Temporary Traffic Control Plans	FIGURE Gen-4 COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL (TTC) ZONE NOT TO SCALE
--	--------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------



	Standard Details and Drawings for the Development of Temporary Traffic Control Plans	FIGURE Gen-5 TYPES OF TAPERS AND BUFFER SPACES NOT TO SCALE
--	--------------------------------------------------------------------------------------	----------------------------------------------------------------



	Standard Details and Drawings for the Development of Temporary Traffic Control Plans	FIGURE Gen-6 LATERAL AND LONGITUDINAL DROP-OFF DETAILS NOT TO SCALE
--	--------------------------------------------------------------------------------------	------------------------------------------------------------------------

FOSTER STREET

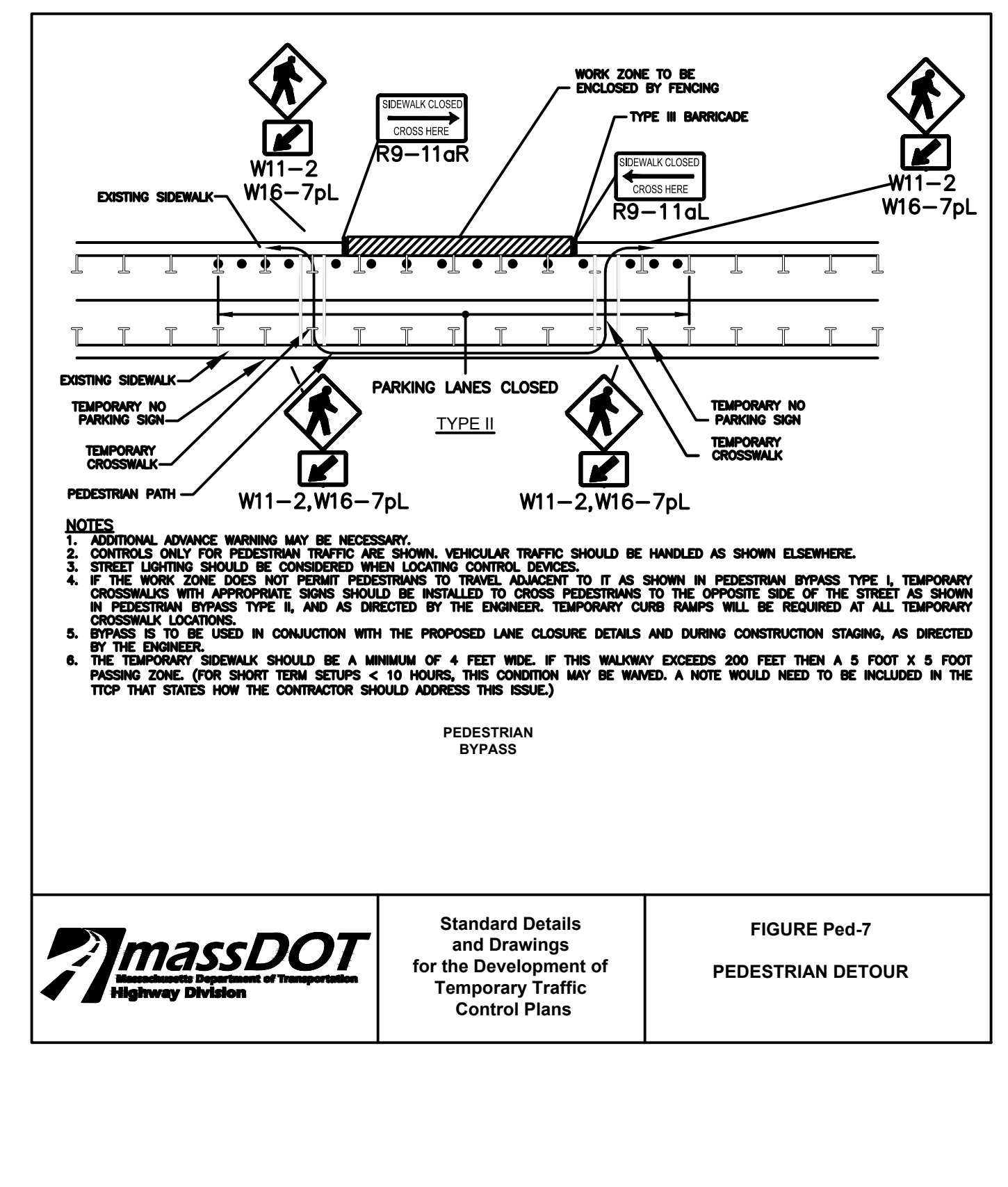
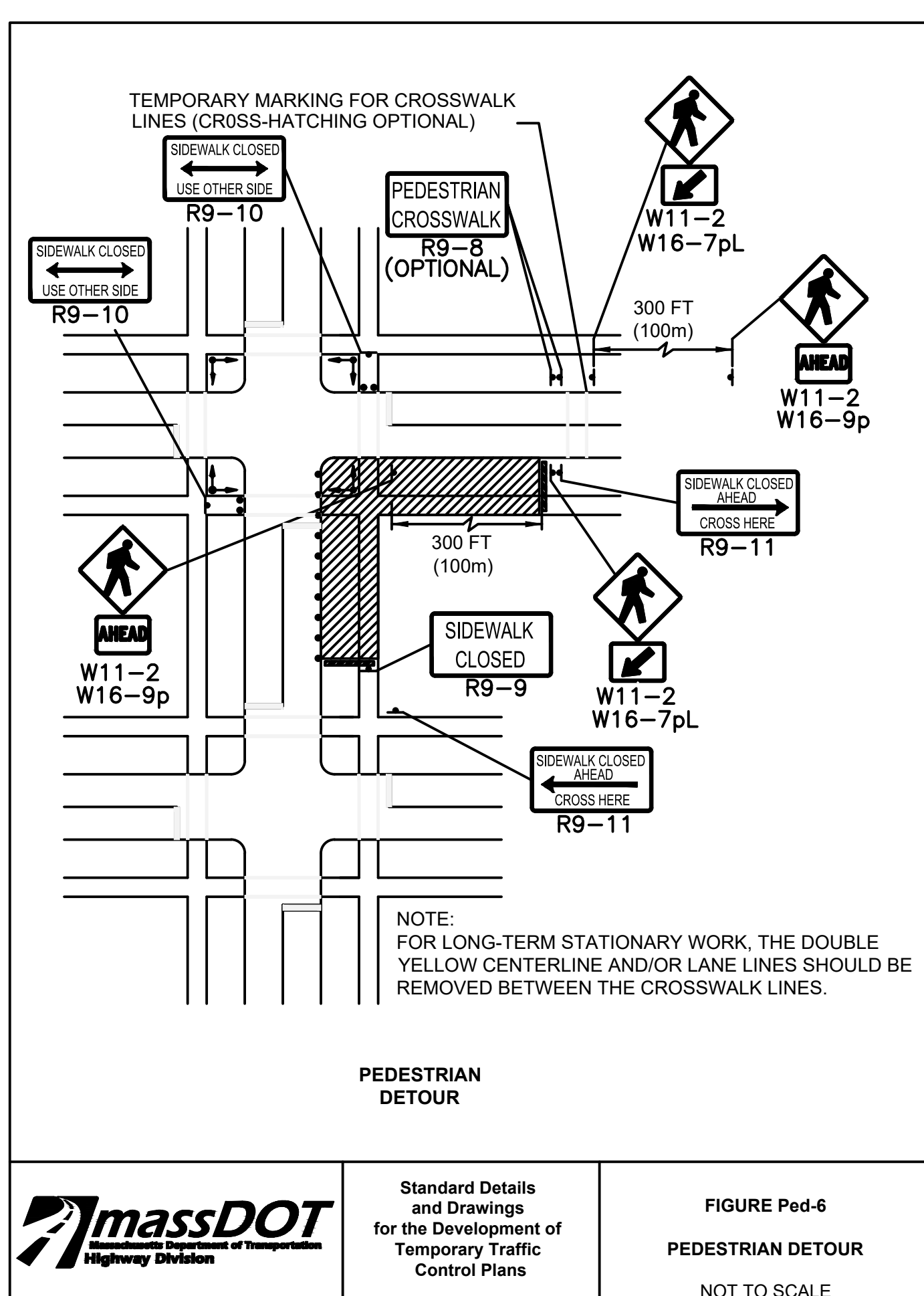
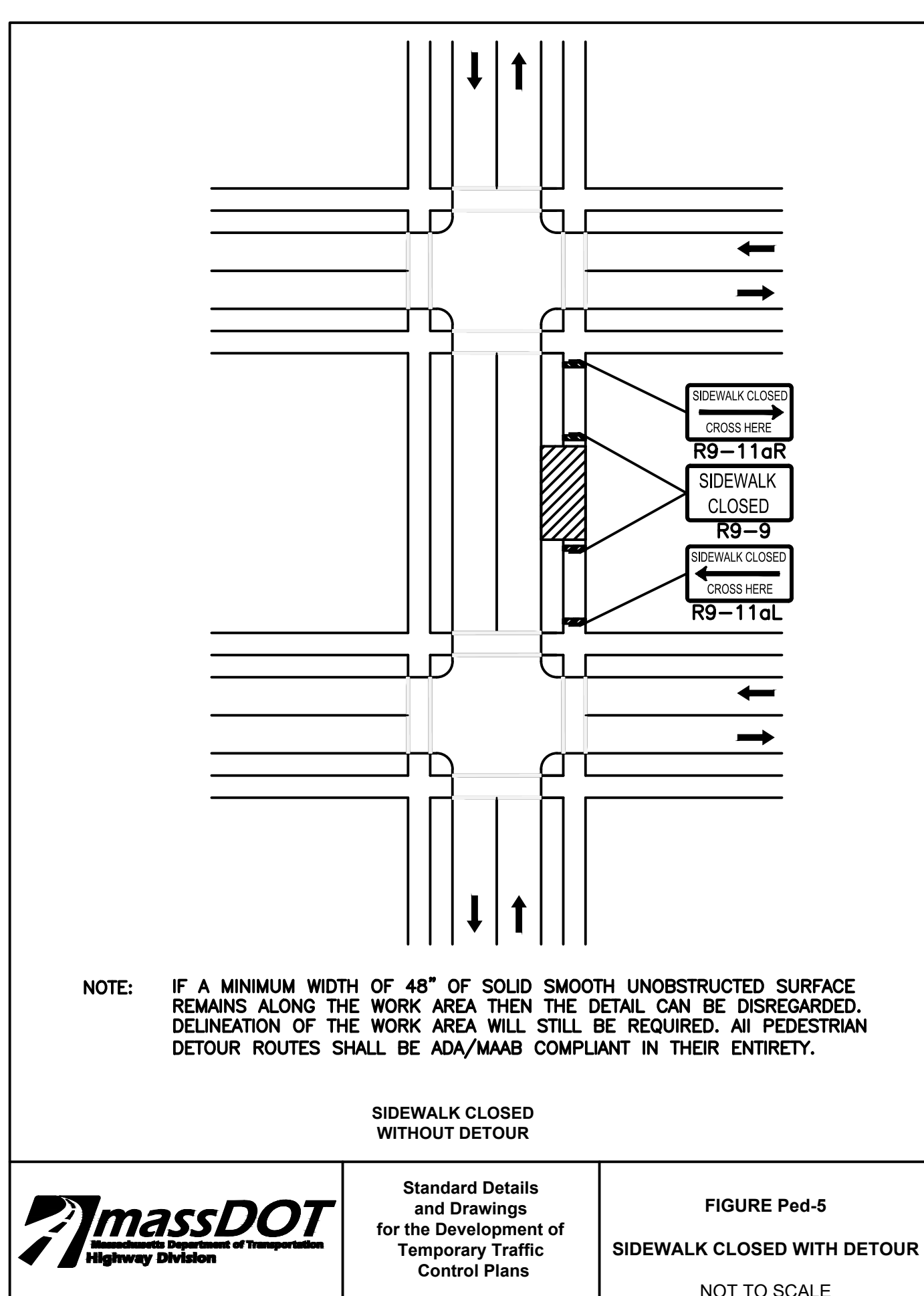
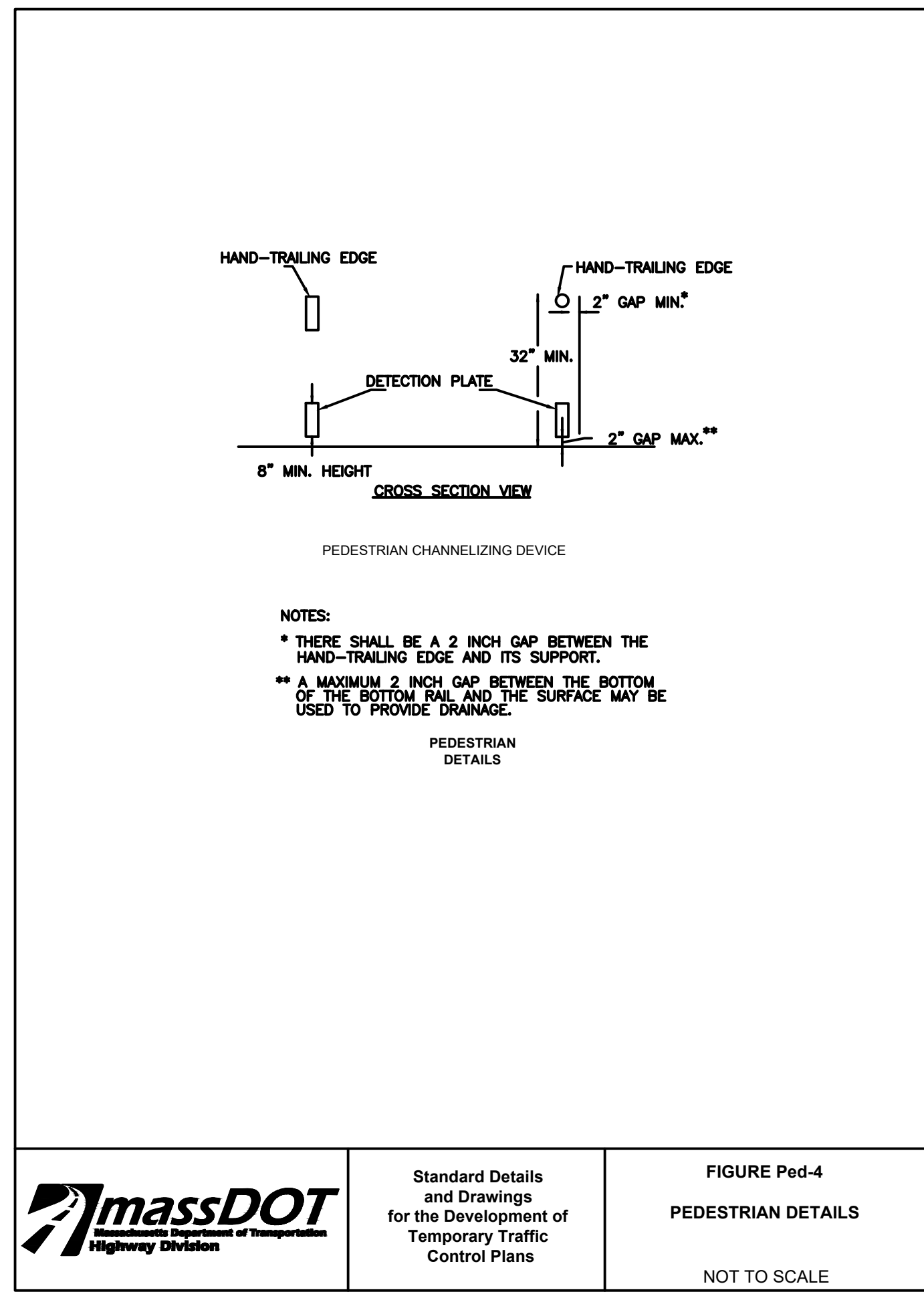
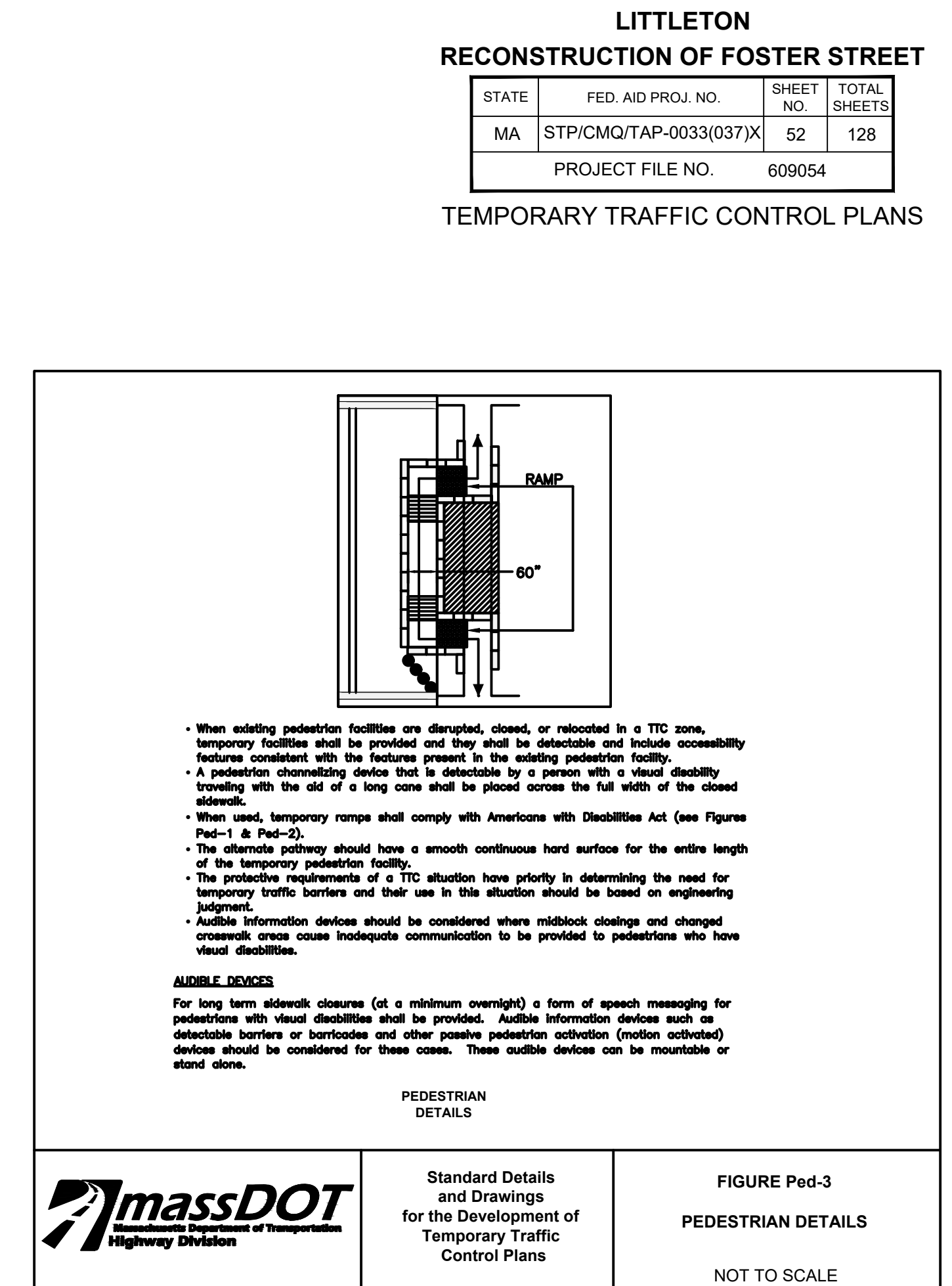
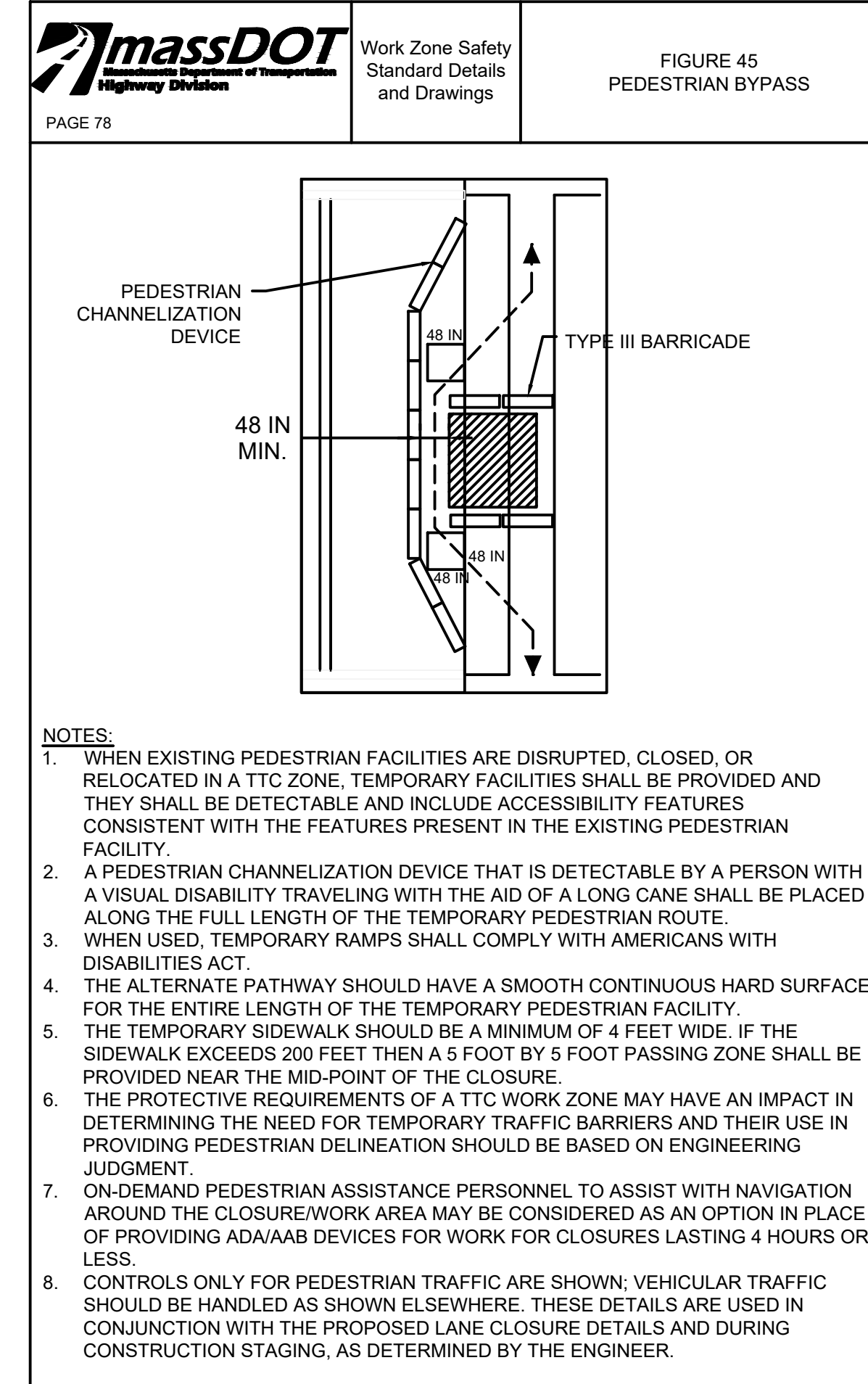
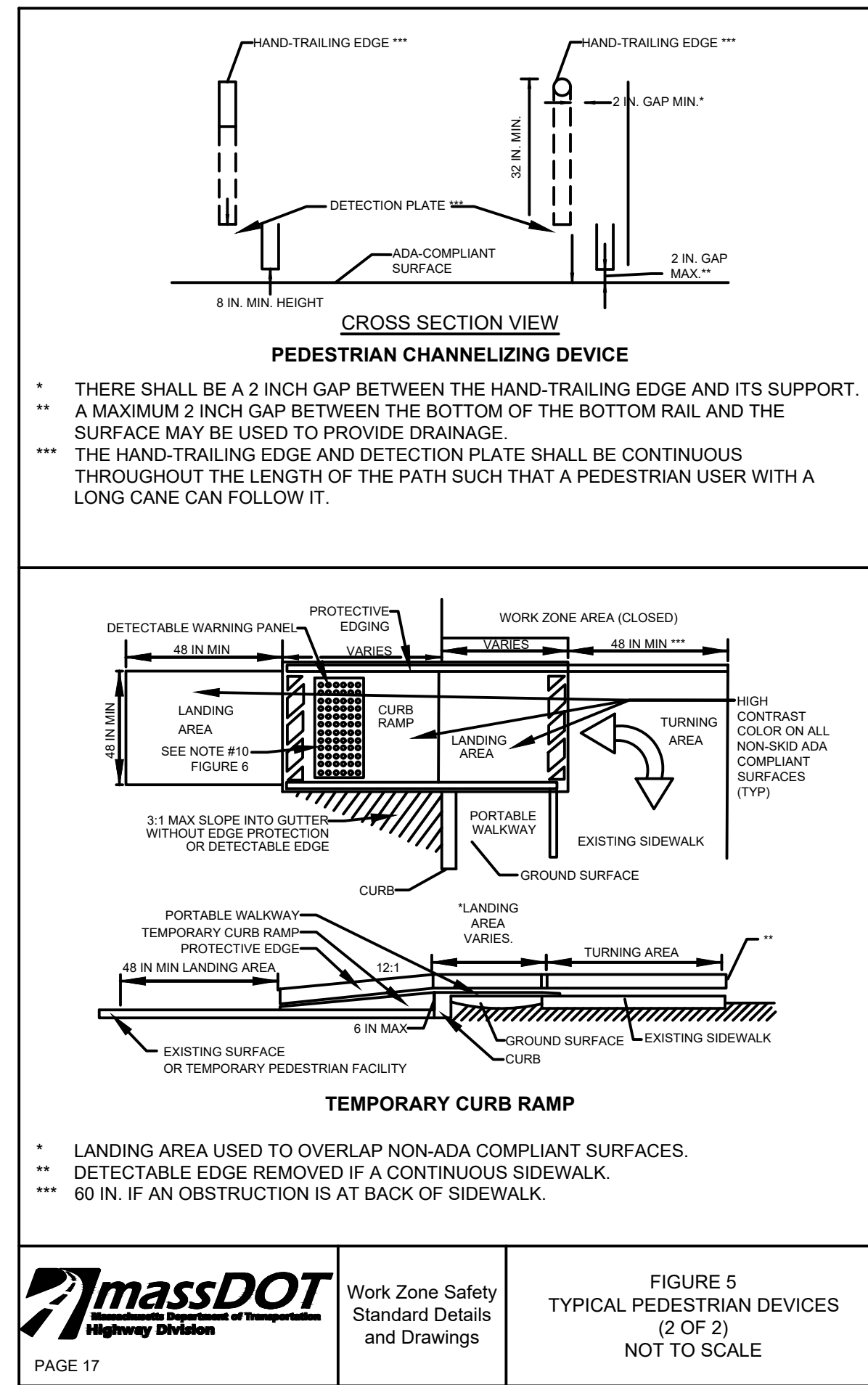
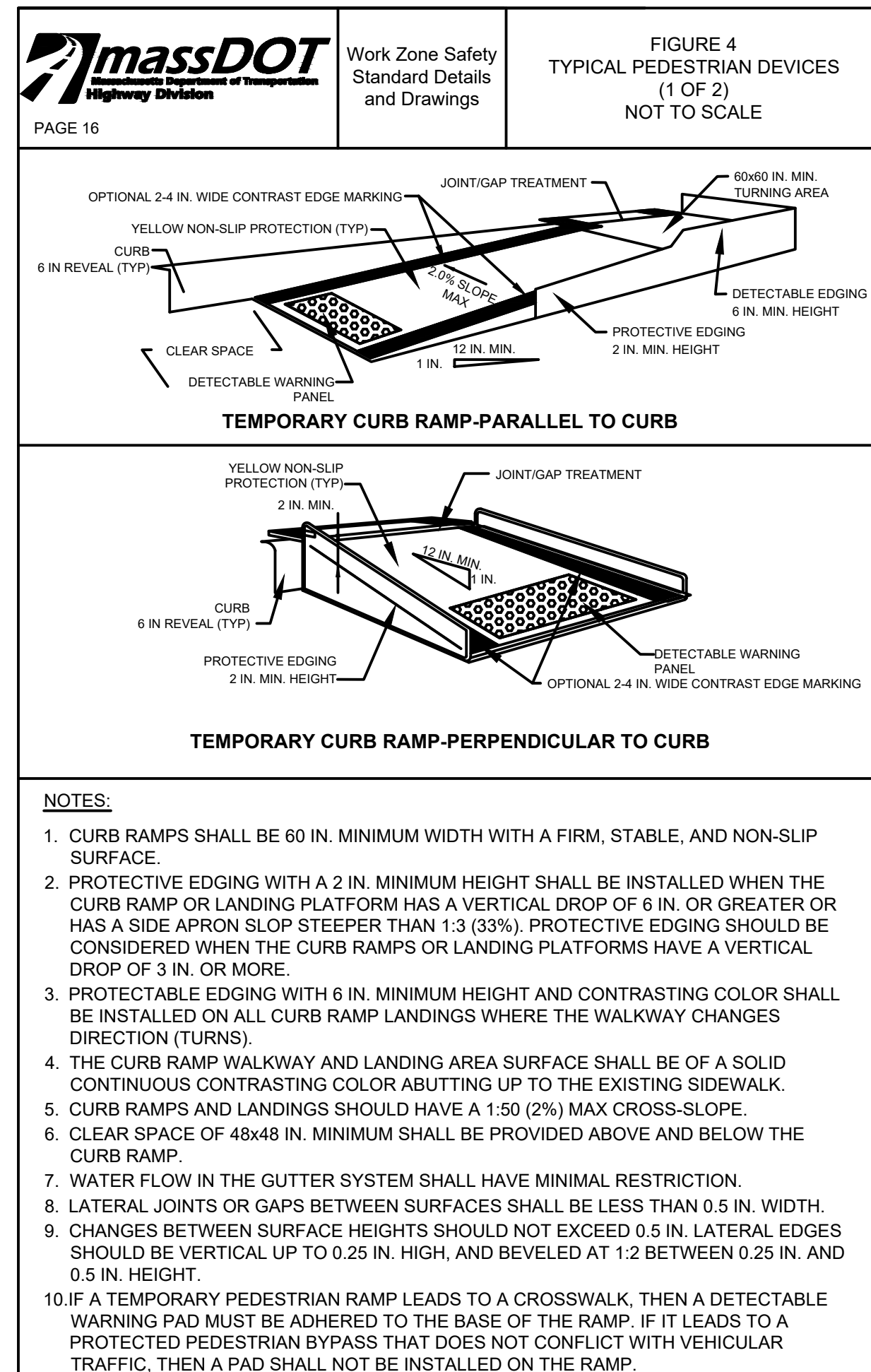
ROADWAY TYPE	URBAN COLLECTOR
ADT	2,100
DISTANCE "A"	350 FT
DISTANCE "B"	350 FT
DISTANCE "C"	350 FT
ANTICIPATED SPEED	30 MPH

TAYLOR STREET

ROADWAY TYPE	URBAN COLLECTOR
ADT	3,500
DISTANCE "A"	500 FT
DISTANCE "B"	500 FT
DISTANCE "C"	500 FT
ANTICIPATED SPEED	40 MPH

THE DIMENSIONS FOR A* & B* MAY REQUIRE FIELD ADJUSTMENTS DUE TO THE URBAN NATURE OF THE PROJECT AREA.

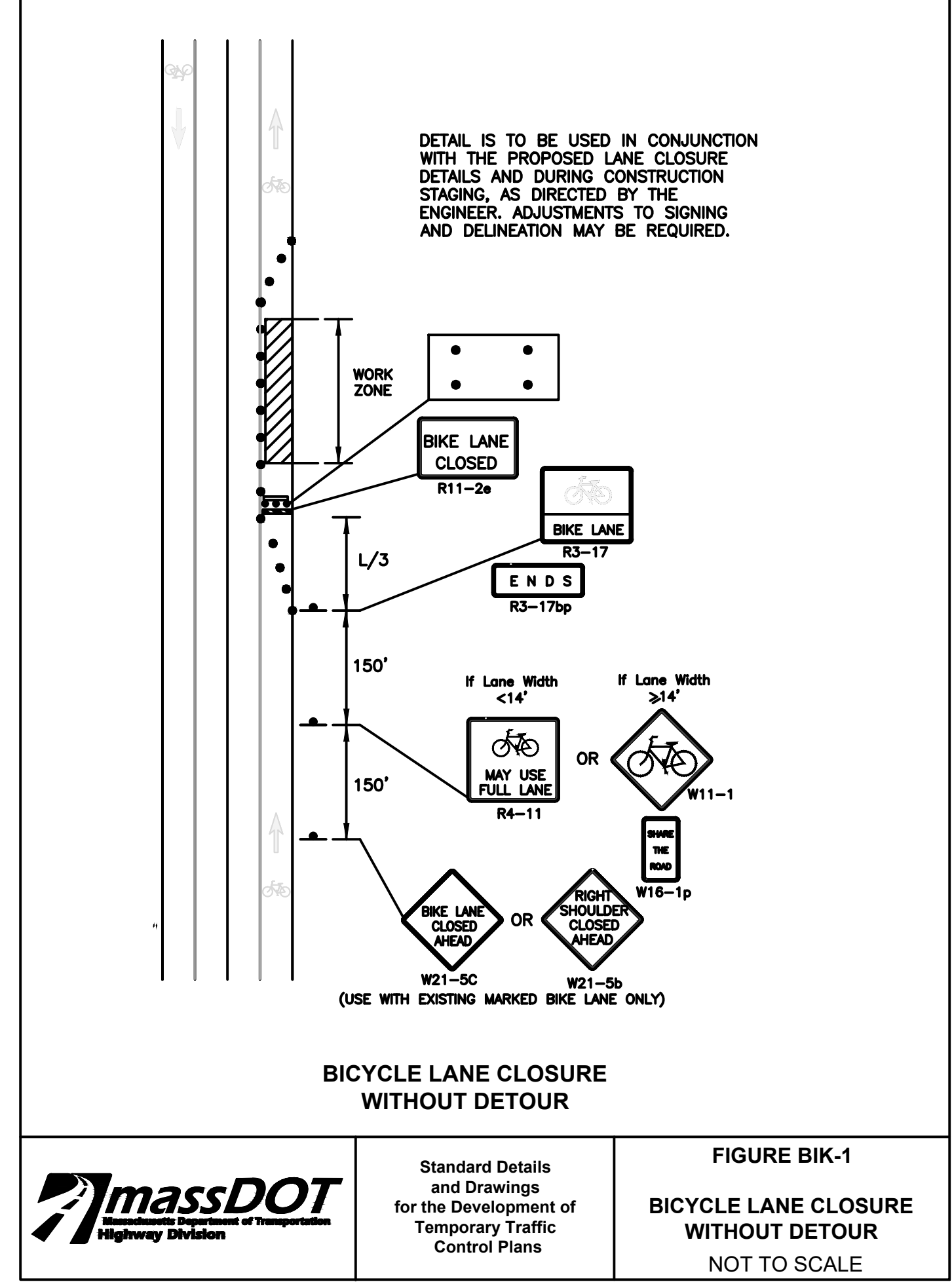
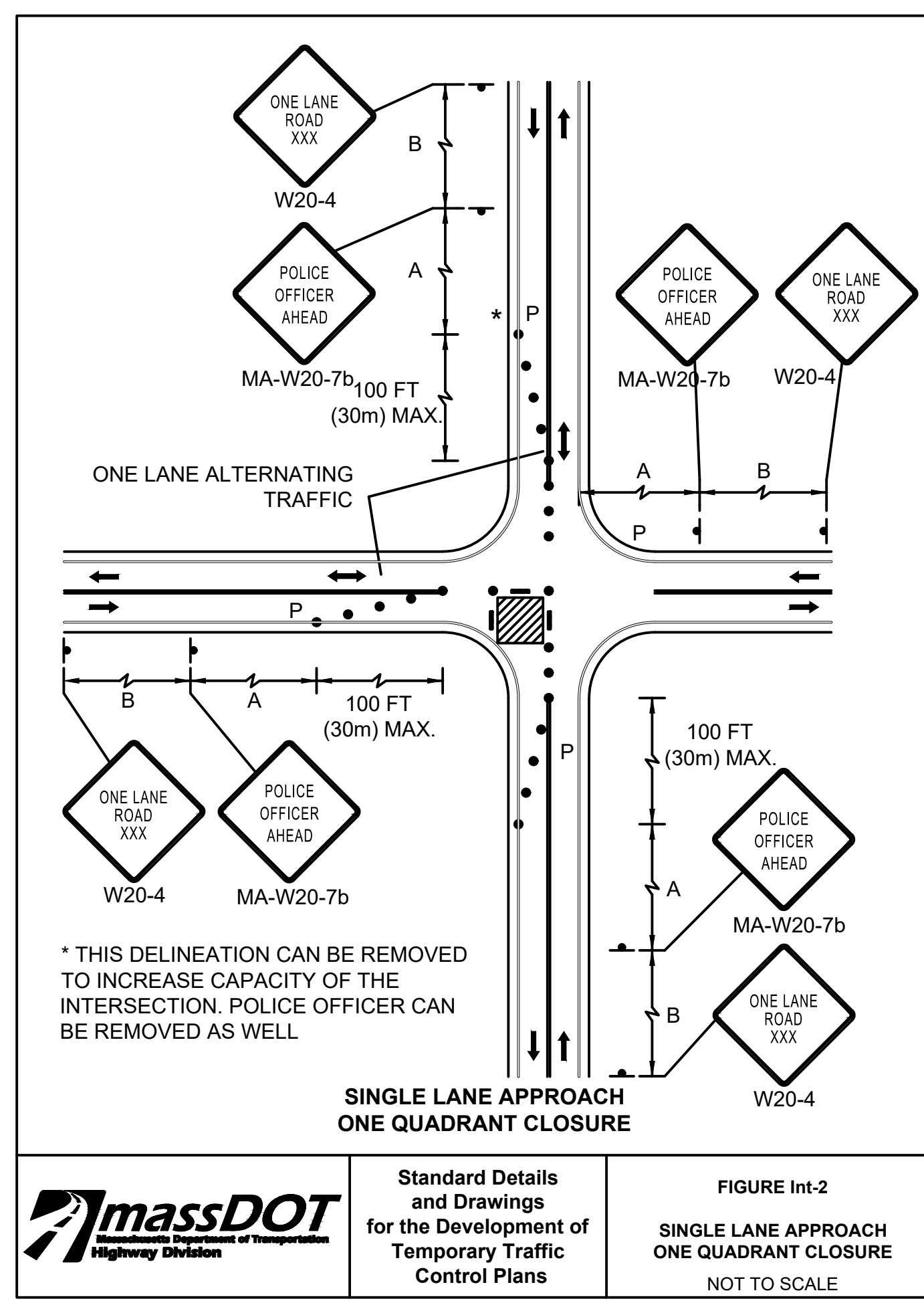
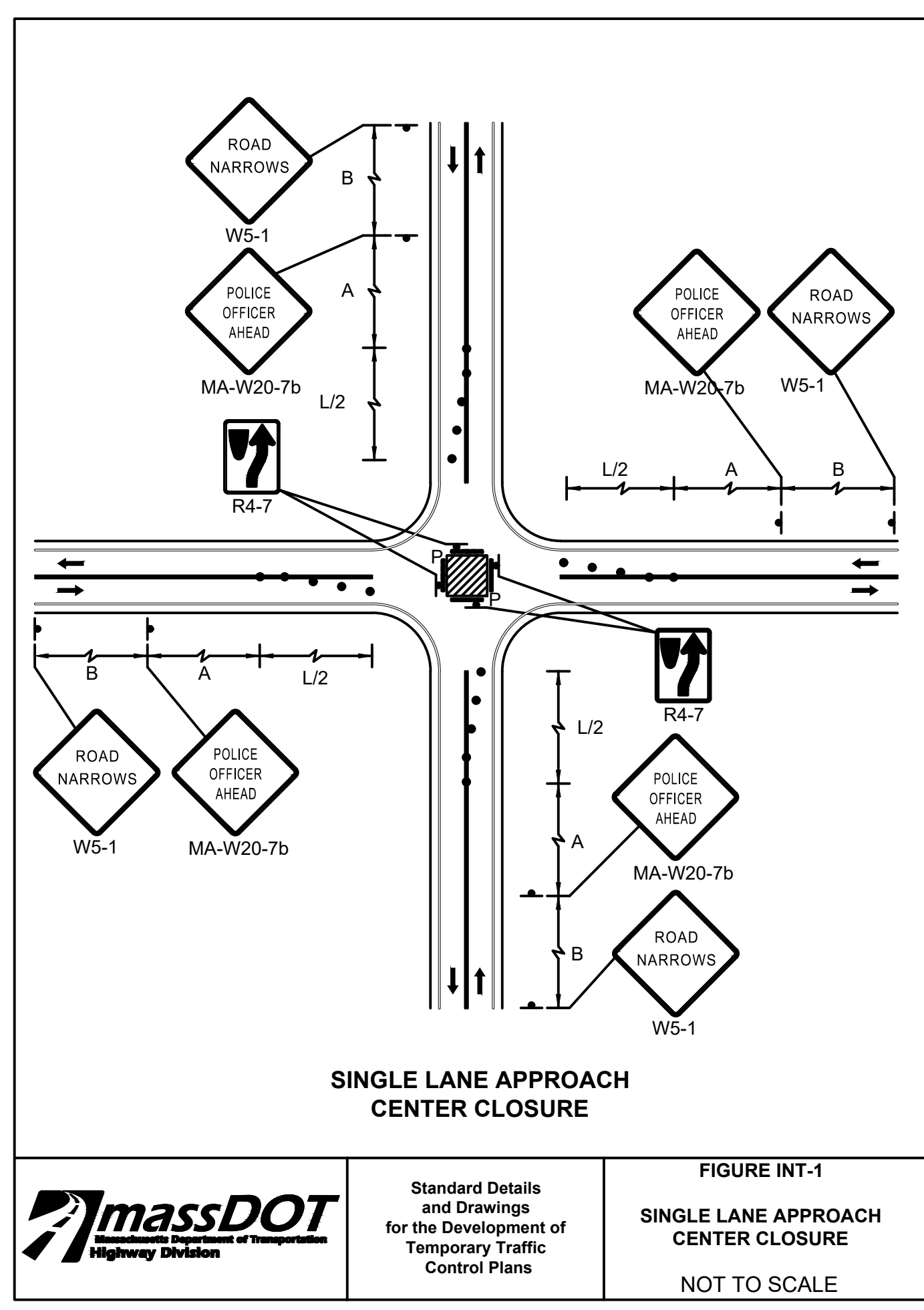
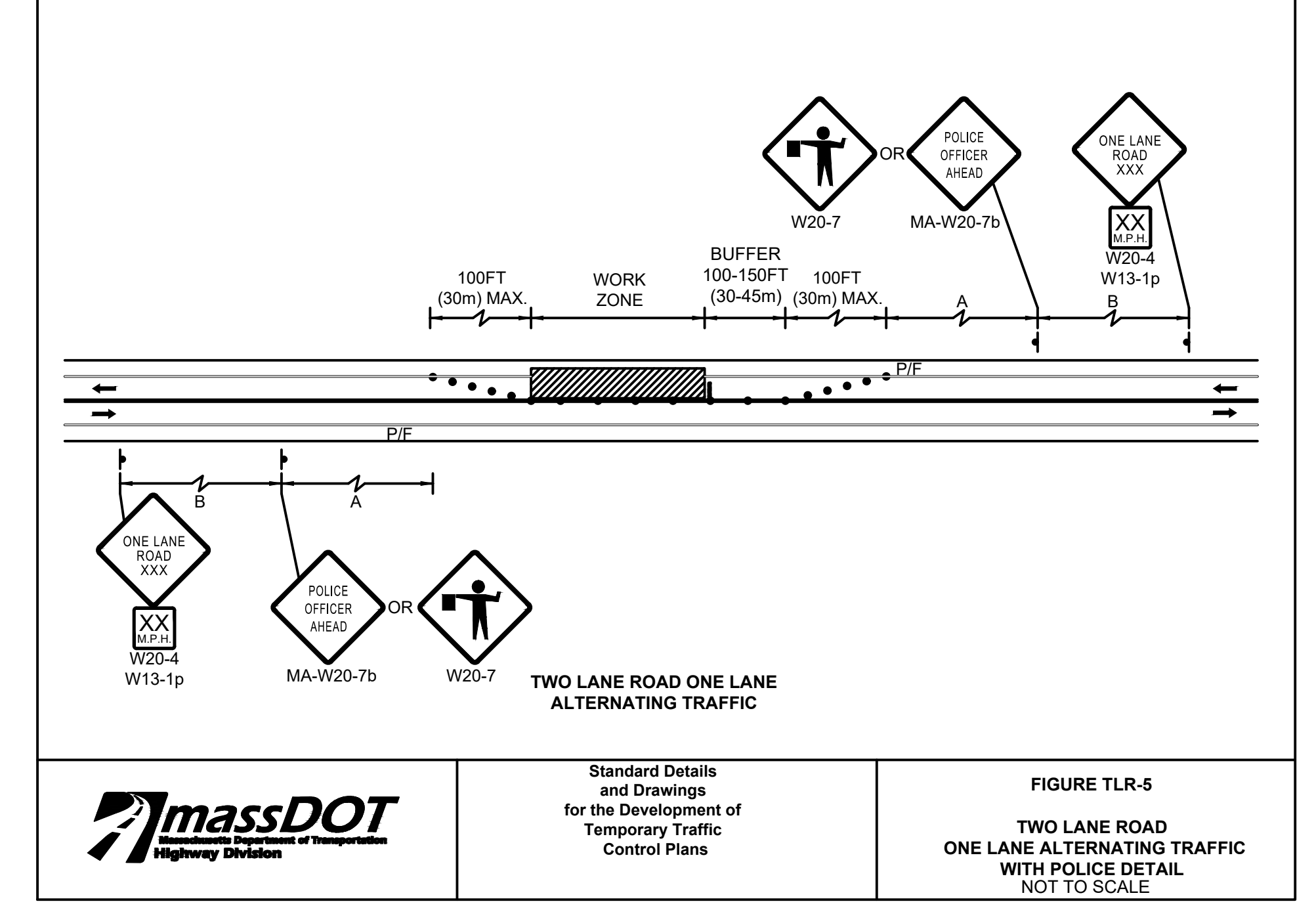
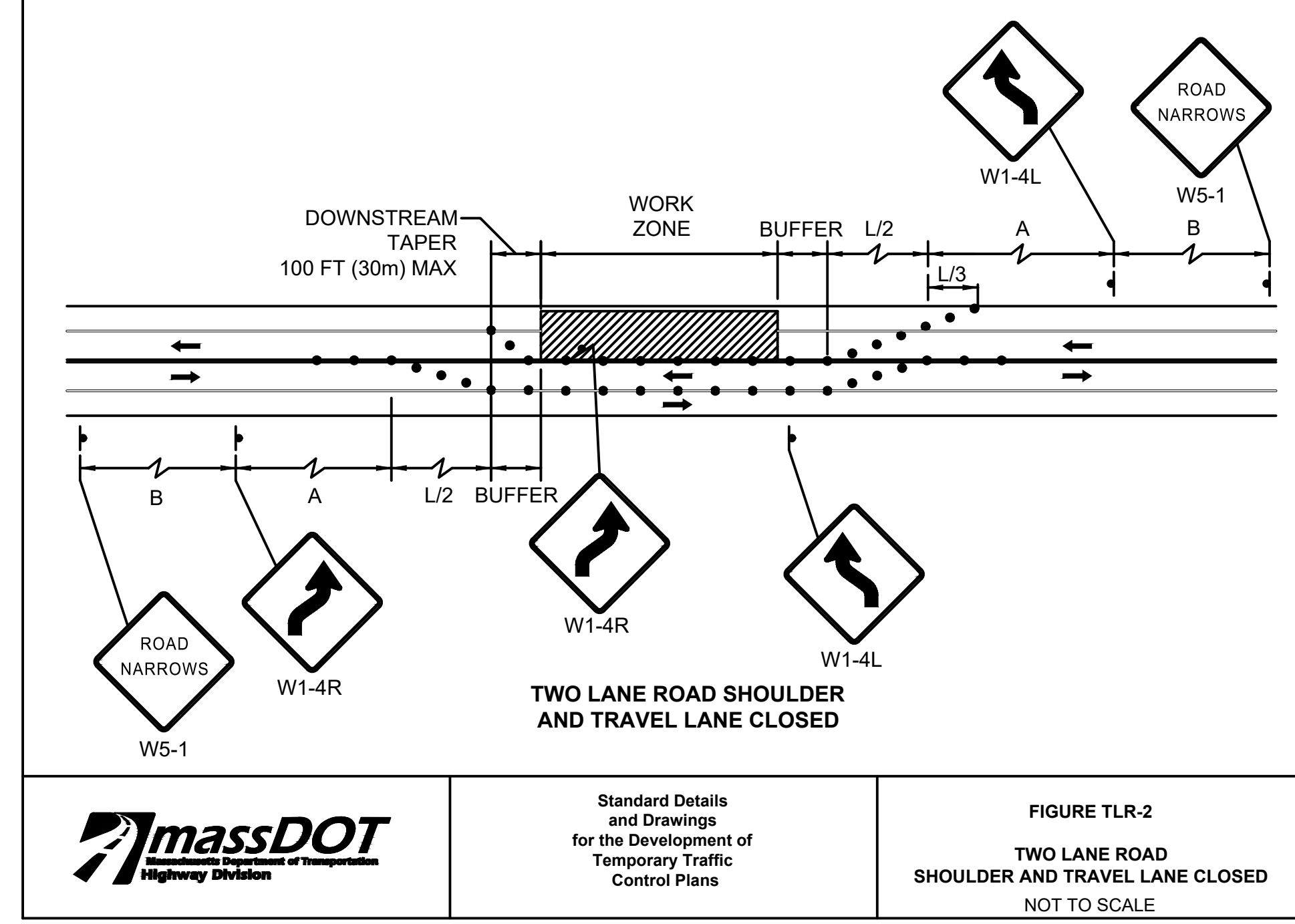
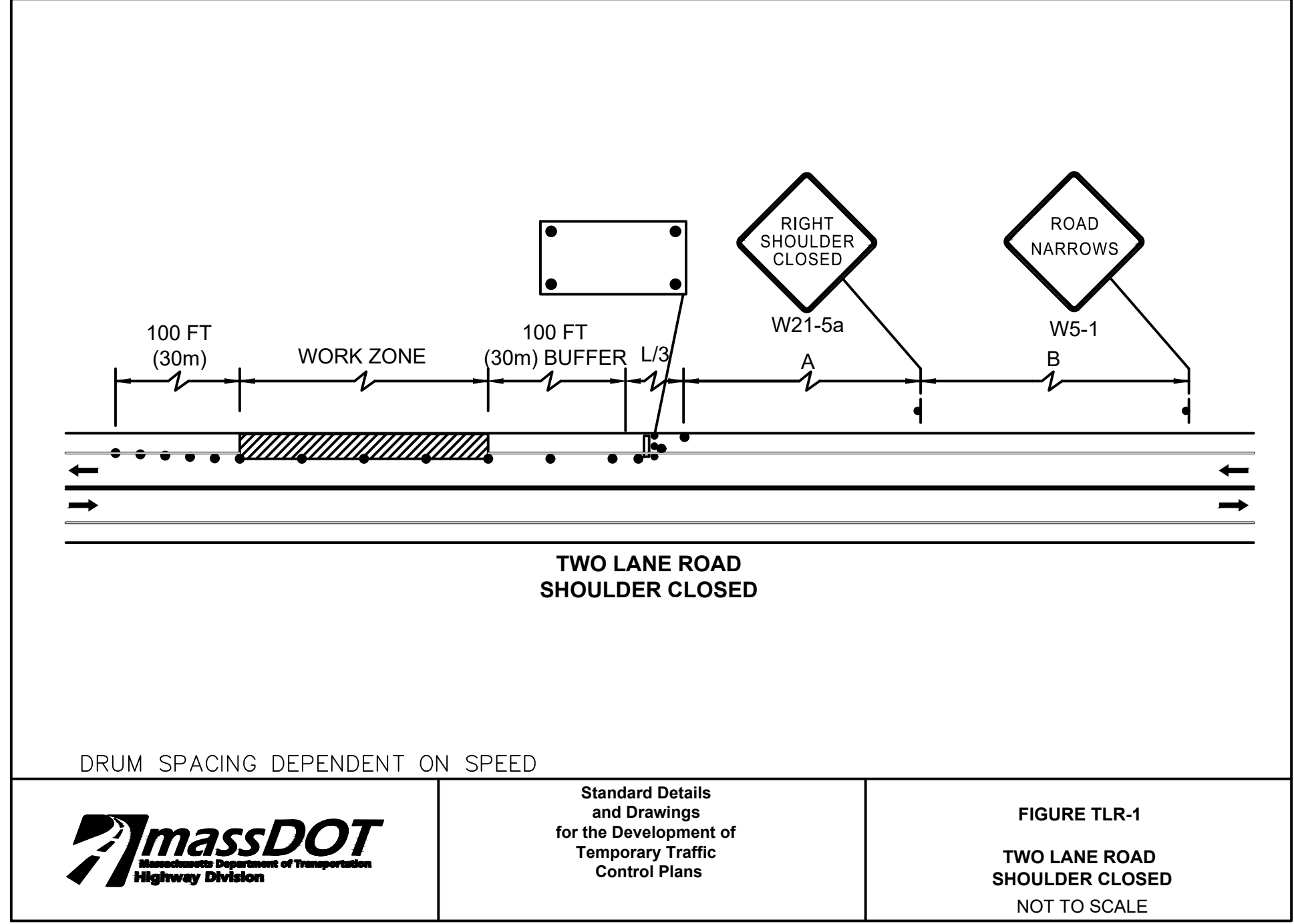
- IF FLAGGERS ARE USED FOR TRAFFIC CONTROL, THE FLAGGER SIGN (W20-7a) SHALL BE SUBSTITUTED FOR THE POLICE OFFICER AHEAD (MA-W20-7b) SIGN.
- FOR EXISTING OR TEMPORARY CROSSWALKS IN A PEDESTRIAN BYPASS AREA (E.G. FIGURE PED-3 STANDARD DETAILS) THERE SHALL BE A PEDESTRIAN WARNING SIGN WITH PLACARD (W11-2 AND W16-7P) ON EACH APPROACH (TRAVEL DIRECTION) AT THE CROSSWALK.



LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	53	128
PROJECT FILE NO.		609054	

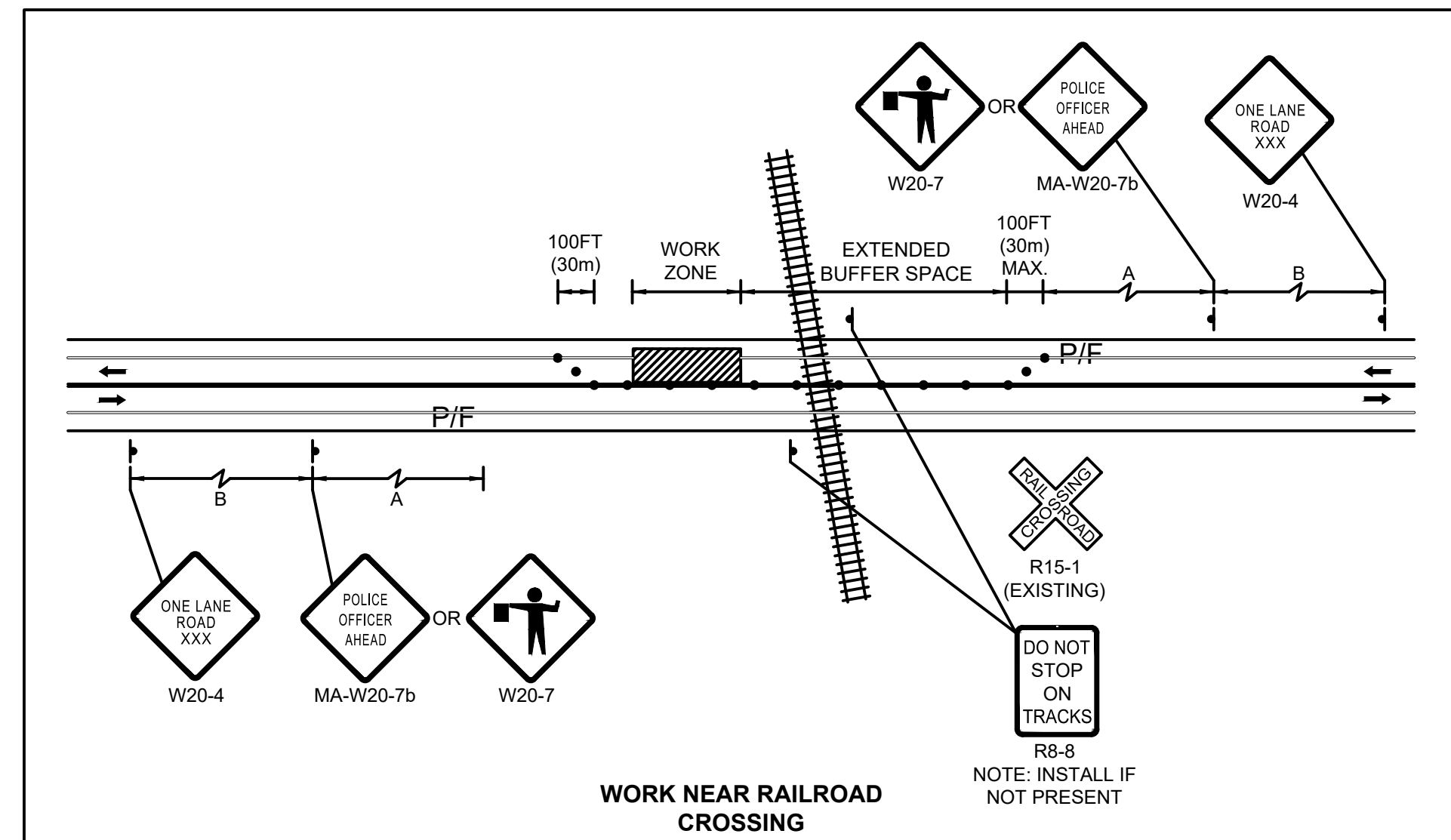
TEMPORARY TRAFFIC CONTROL PLANS



LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	54	128
PROJECT FILE NO.		609054	

TEMPORARY TRAFFIC CONTROL PLANS



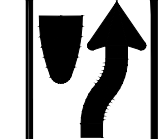


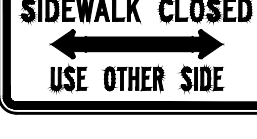


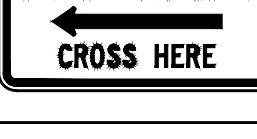




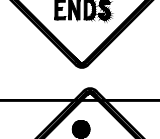












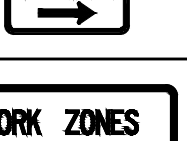
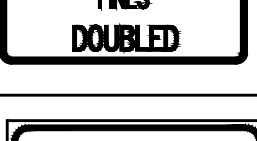
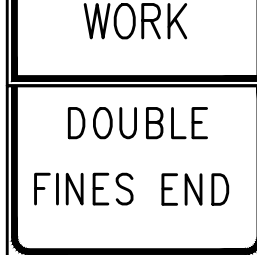

Standard Details
and Drawings
for the Development of
Temporary Traffic
Control Plans

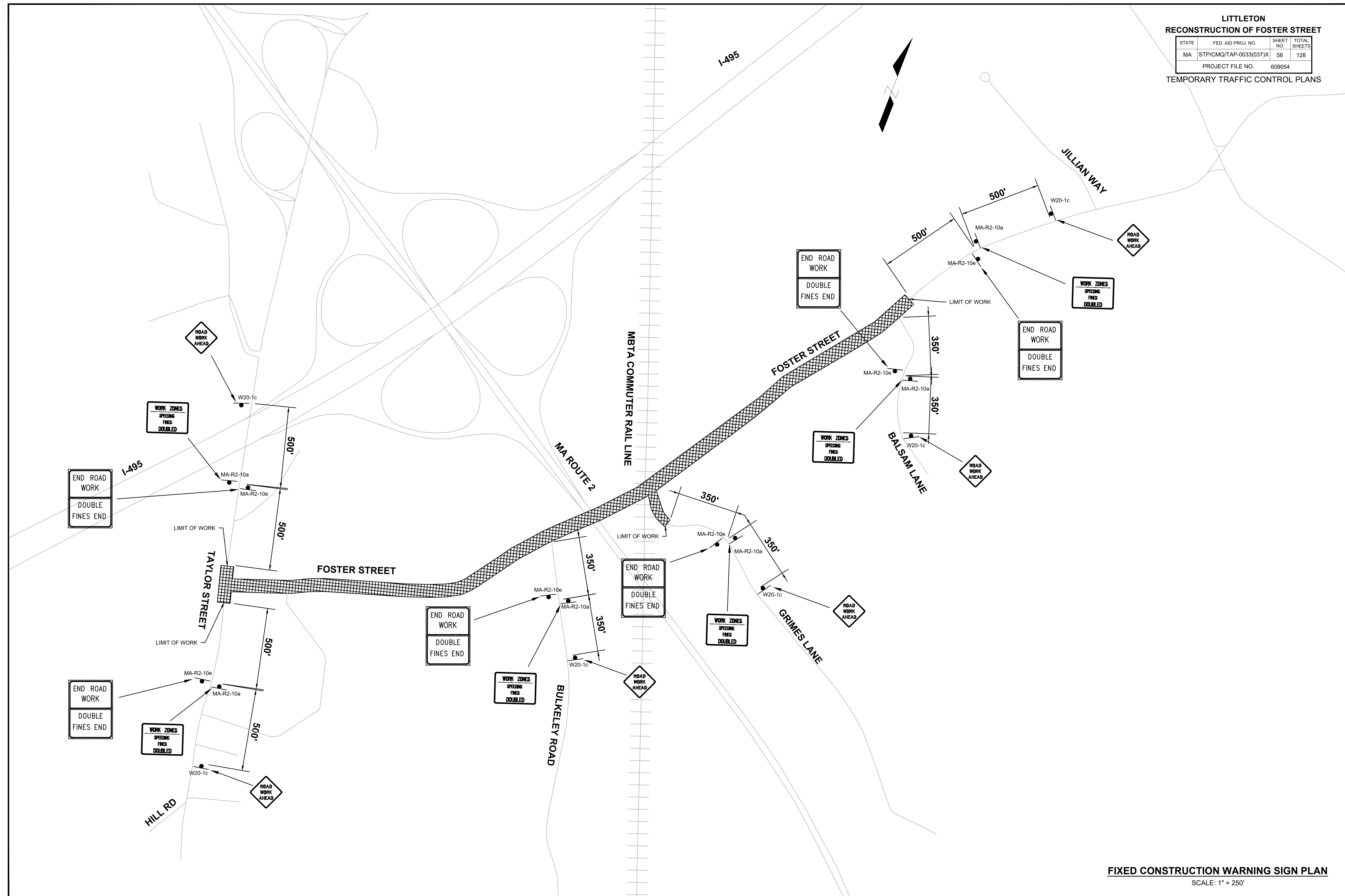
FIGURE RR-1
WORK NEAR RAILROAD CROSSING
NOT TO SCALE

TYPICAL CONSTRUCTION SIGNING

N.T.S.

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (in)			ESTIMATED NUMBER OF SIGNS REQUIRED	COLOR			SIGN FACE AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER		
R3-7L	30	30		SEE FHWA 2004 STANDARD HIGHWAY SIGNS MANUAL & 2012 SUPPLEMENT (ENGLISH VERSION)			2	WHITE	BLACK	BLACK	6.25	12.50
R3-7R	30	30					2	WHITE	BLACK	BLACK	6.25	12.50
R4-7	24	30					2	WHITE	BLACK	BLACK	6.25	12.50
R9-8	36	18					1	WHITE	BLACK	BLACK	4.50	4.50
R9-9	24	12					2	WHITE	BLACK	BLACK	2.00	4.00
R9-10	24	12					2	WHITE	BLACK	BLACK	2.00	4.00
R9-11L	24	18					1	WHITE	BLACK	BLACK	3.00	3.00
R9-11R	24	18					1	WHITE	BLACK	BLACK	3.00	3.00
R9-11aL	24	18					2	WHITE	BLACK	BLACK	3.00	6.00
R9-11aR	24	18					2	WHITE	BLACK	BLACK	3.00	6.00
W1-4L	36	36					2	FLRSCNT. ORANGE	BLACK	BLACK	9.00	18.00
W1-4R	36	36					2	FLRSCNT. ORANGE	BLACK	BLACK	9.00	18.00
W5-1	36	36		SEE FHWA 2004 STANDARD HIGHWAY SIGNS MANUAL & 2012 SUPPLEMENT (ENGLISH VERSION)			7	FLRSCNT. ORANGE	BLACK	BLACK	9.00	63.00
W8-3	36	36					2	FLRSCNT. ORANGE	BLACK	BLACK	9.00	18.00
W11-2	30	30					8	FLRSCNT. ORANGE	BLACK	BLACK	6.25	50

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (in)			ESTIMATED NUMBER OF SIGNS REQUIRED	COLOR			SIGN FACE AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER		
W13-1	24	24		SEE FHWA 2004 STANDARD HIGHWAY SIGNS MANUAL & 2012 SUPPLEMENT (ENGLISH VERSION)			2	FLRSCNT. ORANGE	BLACK	BLACK	4.00	8.00
W16-7PL	24	12					6	FLRSCNT. ORANGE	BLACK	BLACK	2.00	12.00
W16-9P	24	12					2	FLRSCNT. ORANGE	BLACK	BLACK	2.00	4.00
W20-4	36	36					8	FLRSCNT. ORANGE	BLACK	BLACK	9.00	72.00
W20-7a	36	36					4	FLRSCNT. ORANGE	BLACK	BLACK	9.00	36.00
MA-W20-7b	36	36		SEE MASSDOT 2016 STANDARD SIGNS BOOK			8	FLRSCNT. ORANGE	BLACK	BLACK	9.00	72.00
W21-5aR	36	36		SEE FHWA 2004 STANDARD HIGHWAY SIGNS MANUAL & 2012 SUPPLEMENT (ENGLISH VERSION)			1	FLRSCNT. ORANGE	BLACK	BLACK	9.00	9.00
MA-W21-5c	36	36		SEE MASSDOT 2016 STANDARD SIGNS BOOK			4	FLRSCNT. ORANGE	BLACK	BLACK	9.00	36.00
MA-M4-9cL	30	24					2	FLRSCNT. ORANGE	BLACK	BLACK	5.00	10.00
MA-M4-9cR	30	24					2	FLRSCNT. ORANGE	BLACK	BLACK	5.00	10.00
MA-R2-10a	48	36		SEE MASSDOT 2016 STANDARD SIGNS BOOK			5	FLRSCNT. ORANGE WHITE	BLACK	BLACK	12.00	60.00
MA-R2-10e	36	48		SEE MASSDOT 2016 STANDARD SIGNS BOOK			5	FLRSCNT. ORANGE/ WHITE	BLACK	BLACK	12.00	60.00
W20-1c	36	36		5C	3	N/A	5	FLRSCNT. ORANGE	BLACK	BLACK	9.00	45.00



GENERAL NOTES:

- IF EXISTING PIPES SHOWN TO BE REMOVED ARE WITHIN THE LIMITS OF NEW PIPE TRENCH EXCAVATION, THEN THE REMOVAL COST OF THE OLD PIPES SHALL BE INCLUDED IN THE UNIT COST FOR THE NEW PIPE THAT IS BEING INSTALLED. IF PIPES SHOWN TO BE REMOVED ARE OUTSIDE THE LIMITS OF NEW PIPE TRENCH (AS DETERMINED BY THE ENGINEER), THEN REMOVAL COST SHALL BE PAID UNDER ITEM 141. CLASS A TRENCH EXCAVATION.
- ALL PROPOSED (NEW) CATCH BASINS SHALL HAVE 4' SUMPS.
- ALL CATCH BASINS WITHIN THE PAVED ROADWAY SHALL HAVE CASCADE STYLE/BICYCLE SAFE GRATES UNLESS OTHERWISE NOTED ON THE PLANS.
- ALL ELEVATIONS, STATIONS, AND OFFSETS FOR ALL CATCH BASINS AND DRAINAGE MANHOLES COME FROM CENTER OF COVER OR GRATE.
- CONTRACTOR SHALL USE APPROPRIATELY SIZED RCP TO MATCH INTO EXISTING PIPES AS SHOWN.

TEST PIT NOTES:

- ALL TEST PITS RELATED TO THE PROPOSED DRAINAGE SYSTEM INSTALLATIONS SHALL BE COMPLETED BY THE CONTRACTOR BEFORE DRAINAGE STRUCTURES ARE ORDERED.

ELECTRICAL NOTES:

- CONTRACTOR SHALL COORDINATE WITH LITTLETON LIGHT AND ELECTRIC DEPT. (LELD) ON THE TIMING OF TRANSFER FOR PRIMARY RISER AT UTILITY POLES #78, #99, #104, AND #105. DISRUPTION TO COMMERCIAL PROPERTIES SHALL BE MINIMIZED BY WEEKEND WORK OR THE USE OF GENERATORS.

TREE TRIMMING NOTES:

- LIMITS OF SELECTIVE CLEARING AND THINNING SHALL BE 10FT OFFSET BACK FROM ANY RESET OHW OR AS SHOWN ON CONSTRUCTION PLANS.

GAS NOTES:

- NOTIFY NATIONAL GRID DAMAGE PREVENTION, MEGHAN KELLEY, AT (339) 203-0490 TWO WEEKS PRIOR TO EXCAVATING NEAR REGULATOR STATION OR GAS MAIN. HIGH PRESSURE GAS MAINS ARE PRESENT IN PROJECT AREA.
- TO REPORT ANY DAMAGE TO A GAS LINE CALL NATIONAL GRID'S EMERGENCY GAS LEAKS NUMBER AT 1-800-233-5325 IMMEDIATELY.
- ALL TEST PITS PERFORMED NEAR GAS MAIN SHALL BE PERFORMED WITH A VACUUM TRUCK SEE SPECIAL PROVISION FOR ITEM 141.101

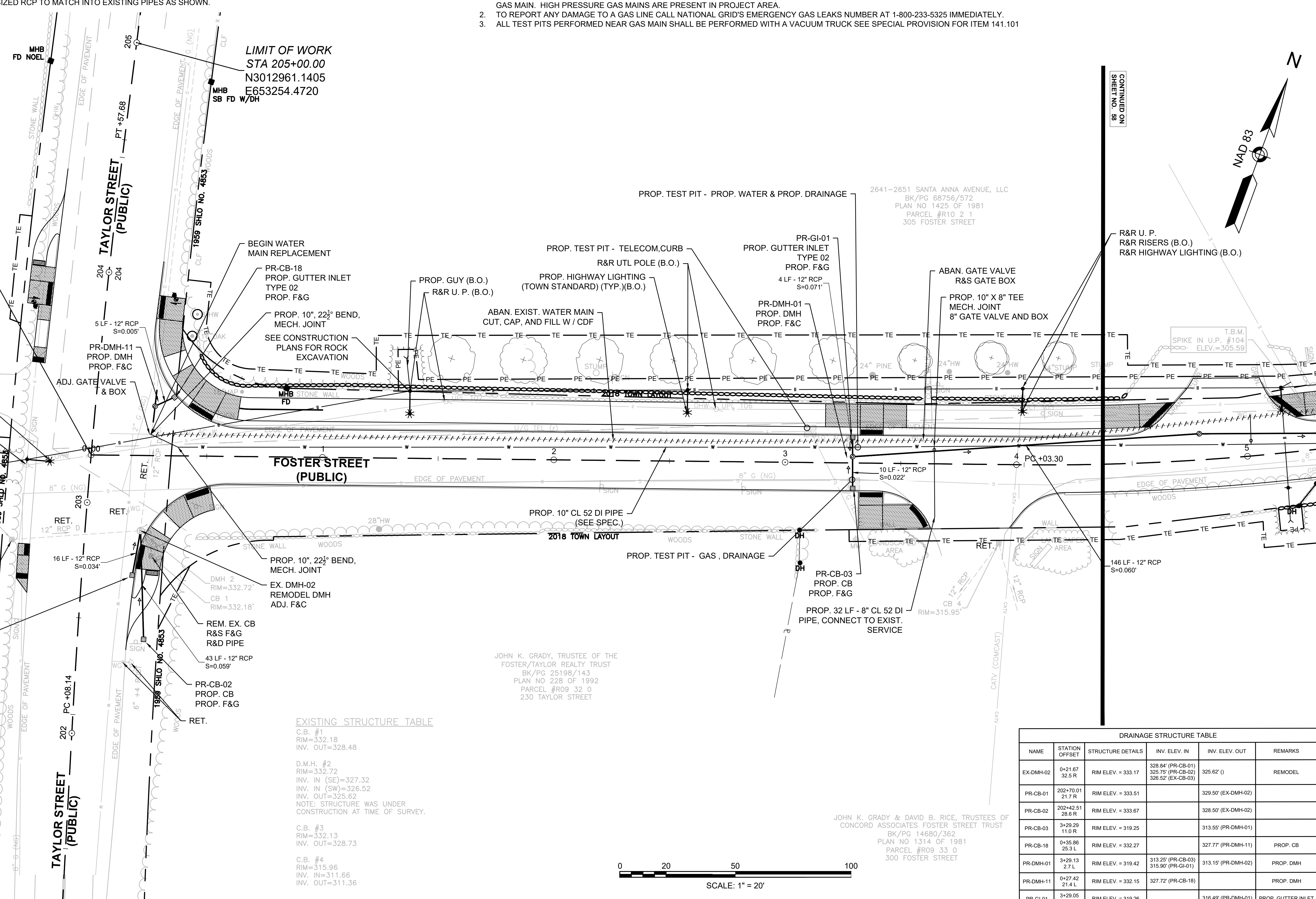
**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	57	128
PROJECT FILE NO.		609054	

DRAINAGE & UTILITY PLANS

DANIEL SWEENEY (CLASS A TRUSTEE)
ARTURO J. GUTIERREZ, JOHN A. CATALDO (CLASS B TRUSTEES)
TAYLOR STREET, LITTLETON TRUST
BK/PG 32096/213
PARCEL #R10 6 0
TAYLOR STREET

BEGINNING OF PROJECT
PROJ. NO. 609054
STA 0+00.00
N3012786.8847
E653296.9381



DANIEL SWEENEY (CLASS A TRUSTEE)
ARTURO J. GUTIERREZ, JOHN A. CATALDO (CLASS B TRUSTEES)
TAYLOR STREET, LITTLETON TRUST
BK/PG 32096/215
PARCEL #R10 7 0
TAYLOR STREET

PR-CB-01
PROP. CB
PROP. F&G

PR-CB-02
PROP. CB
PROP. F&G

PR-CB-03
PROP. CB
PROP. F&G

PR-CB-04
PROP. CB
PROP. F&G

PR-CB-05
PROP. CB
PROP. F&G

PR-CB-06
PROP. CB
PROP. F&G

PR-CB-07
PROP. CB
PROP. F&G

PR-CB-08
PROP. CB
PROP. F&G

EXISTING STRUCTURE TABLE

C.B. #	RIM	INV. OUT
#1	332.18	328.48
#2	332.72	327.32
#3	332.13	328.73
#4	315.96	311.66

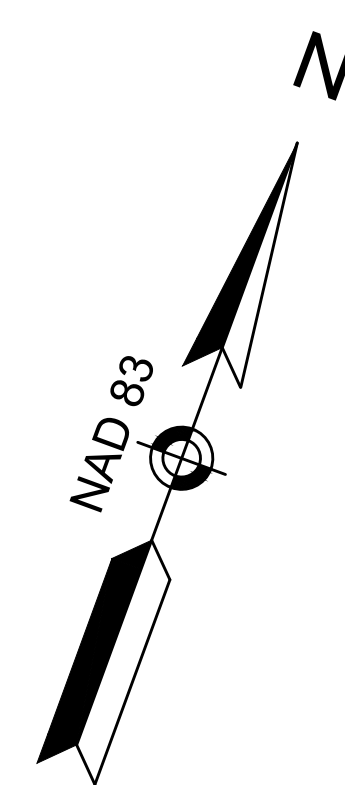
NOTE: STRUCTURE WAS UNDER CONSTRUCTION AT TIME OF SURVEY.

JOHN K. GRADY, TRUSTEE OF THE FOSTER/TAYLOR REALTY TRUST
BK/PG 25198/143
PLAN NO 228 OF 1992
PARCEL #R09 32 0
230 TAYLOR STREET

JOHN K. GRADY & DAVID B. RICE, TRUSTEES OF CONCORD ASSOCIATES FOSTER STREET TRUST
BK/PG 14680/362
PLAN NO 1314 OF 1981
PARCEL #R09 33 0
300 FOSTER STREET

DRAINAGE STRUCTURE TABLE

NAME	STATION OFFSET	STRUCTURE DETAILS	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
EX-DMH-02	0+21.67 32.5 R	RIM ELEV. = 333.17	328.84 (PR-CB-01) 325.75 (PR-CB-02) 326.52 (EX-CB-03)	325.62 (I)	REMODEL
PR-CB-01	202+70.01 21.7 R	RIM ELEV. = 333.51		329.50 (EX-DMH-02)	
PR-CB-02	202+42.51 28.6 R	RIM ELEV. = 333.67		328.50 (EX-DMH-02)	
PR-CB-03	3+29.29 11.0 R	RIM ELEV. = 319.25		313.55 (PR-DMH-01)	
PR-CB-18	0+35.86 25.3 L	RIM ELEV. = 332.27		327.77 (PR-DMH-11)	PROP. CB
PR-DMH-01	3+29.13 2.7 L	RIM ELEV. = 319.42	313.25 (PR-CB-03) 315.90 (PR-GI-01)	313.15 (PR-DMH-02)	PROP. DMH
PR-DMH-11	0+27.42 21.4 L	RIM ELEV. = 332.15	327.72 (PR-CB-18)		PROP. DMH
PR-GI-01	3+29.05 11.0 L	RIM ELEV. = 319.26		316.49 (PR-DMH-01)	PROP. GUTTER INLET



CONTINUED ON
SHEET NO. 88

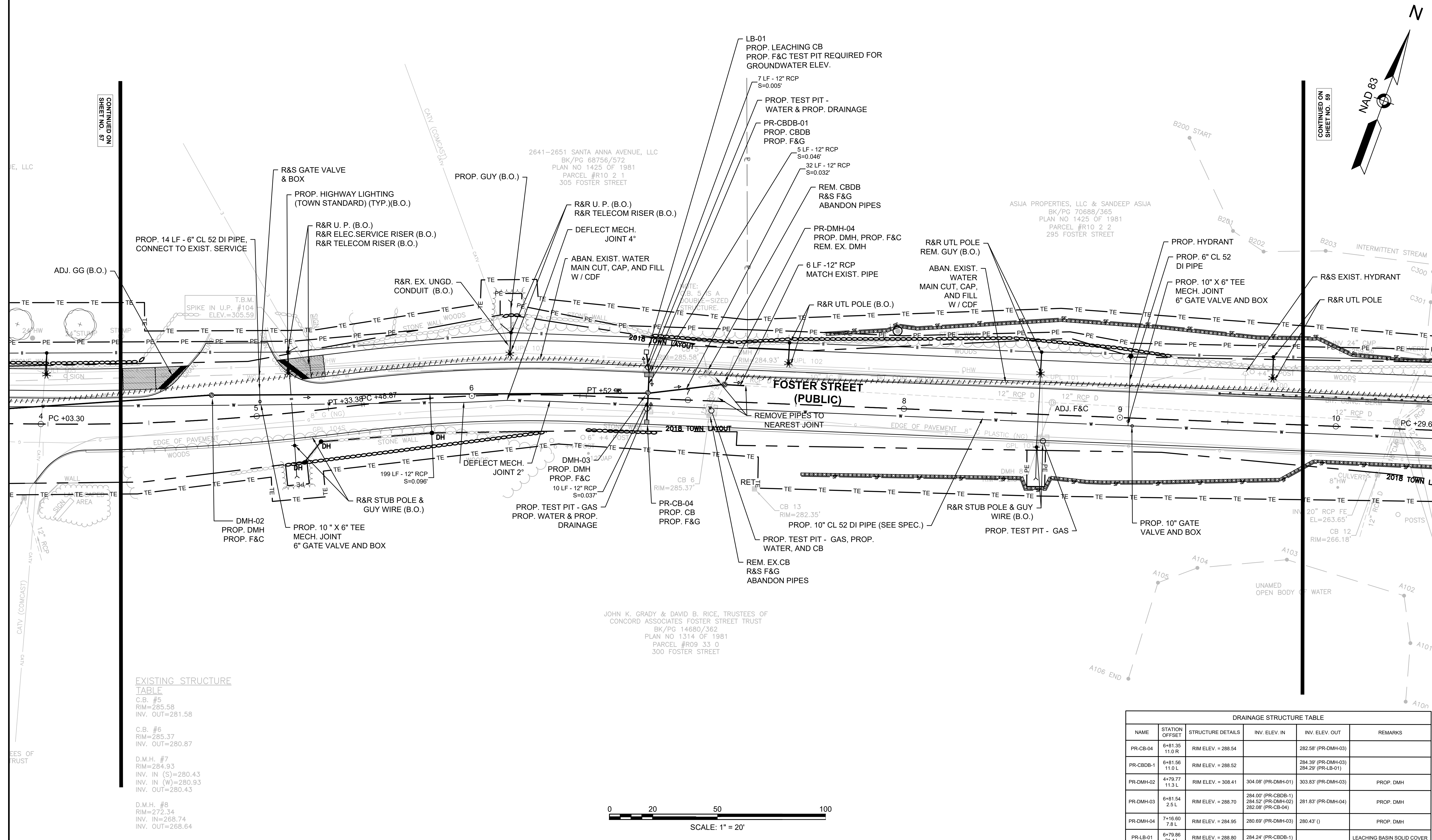
NOTES:
 1. SEE SHEET 57 FOR GENERAL UTILITY, ELECTRICAL AND TREE TRIMMING NOTES
 2. * - CONTRACTOR TO MATCH EXISTING PIPE INVERT. INVERT GIVEN IS APPROXIMATE

GAS NOTES:
 1. NOTIFY NATIONAL GRID DAMAGE PREVENTION, MEGHAN KELLEY, AT(339) 203-0490 TWO WEEKS PRIOR TO EXCAVATING NEAR REGULATOR STATION OR GAS MAIN. HIGH PRESSURE GAS MAINS ARE PRESENT IN PROJECT AREA.
 2. TO REPORT ANY DAMAGE TO A GAS LINE CALL NATIONAL GRID'S EMERGENCY GAS LEAKS NUMBER AT 1-800-233-5325 IMMEDIATELY.
 3. ALL TEST PITS PERFORMED NEAR GAS MAIN SHALL BE PERFORMED WITH A VACUUM TRUCK SEE SPECIAL PROVISION FOR ITEM 141.101

LITTLETON
 RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	58	128
PROJECT FILE NO.		609054	

DRAINAGE & UTILITY PLANS



EXISTING STRUCTURE TABLE

C.B. #5	RIM=285.58	INV. OUT=281.58
C.B. #6	RIM=285.37	INV. OUT=280.87
D.M.H. #7	RIM=284.93	INV. IN (S)=280.43 INV. IN (W)=280.93 INV. OUT=280.43
D.M.H. #8	RIM=272.34	INV. IN=268.74 INV. OUT=268.64

DRAINAGE STRUCTURE TABLE					
NAME	STATION OFFSET	STRUCTURE DETAILS	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PR-CB-04	6+81.35 11.0 R	RIM ELEV. = 288.54		282.58 (PR-DMH-03)	
PR-CBDB-1	6+81.56 11.0 L	RIM ELEV. = 288.52		284.39 (PR-DMH-03) 284.29 (PR-LB-01)	
PR-DMH-02	4+79.77 11.3 L	RIM ELEV. = 308.41	304.08 (PR-DMH-01)	303.83 (PR-DMH-03)	PROP. DMH
PR-DMH-03	6+81.54 2.5 L	RIM ELEV. = 288.70	284.00 (PR-CBDB-1) 284.52 (PR-DMH-02) 282.08 (PR-CB-04)	281.83 (PR-DMH-04)	PROP. DMH
PR-DMH-04	7+16.80 7.8 L	RIM ELEV. = 284.95	280.69 (PR-DMH-03)	280.43 ()	PROP. DMH
PR-LB-01	6+79.86 21.4 L	RIM ELEV. = 288.80	284.24 (PR-CBDB-1)		LEACHING BASIN SOLID COVER

NOTES:

- SEE SHEET 57 FOR GENERAL UTILITY, ELECTRICAL AND TREE TRIMMING NOTES
- * - CONTRACTOR TO MATCH EXISTING PIPE INVERT. INVERT GIVEN IS APPROXIMATE

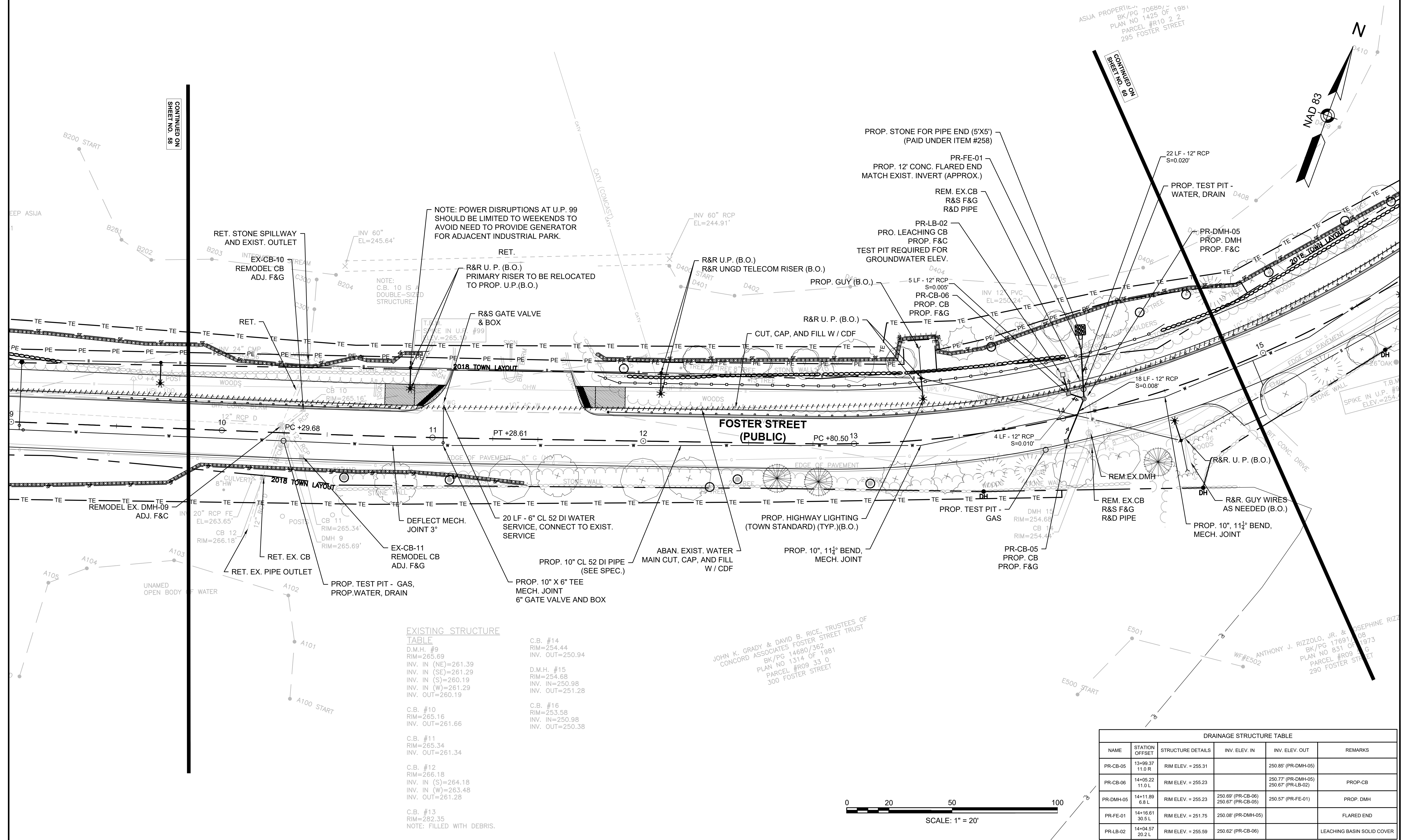
GAS NOTES:

- NOTIFY NATIONAL GRID DAMAGE PREVENTION, MEGHAN KELLEY, AT(339) 203-0490 TWO WEEKS PRIOR TO EXCAVATING NEAR REGULATOR STATION OR GAS MAIN. HIGH PRESSURE GAS MAINS ARE PRESENT IN PROJECT AREA
- TO REPORT ANY DAMAGE TO A GAS LINE CALL NATIONAL GRID'S EMERGENCY GAS LEAKS NUMBER AT 1-800-233-5325 IMMEDIATELY.
- ALL TEST PITS PERFORMED NEAR GAS MAIN SHALL BE PERFORMED WITH A VACUUM TRUCK SEE SPECIAL PROVISION FOR ITEM 141.101

LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	59	128
PROJECT FILE NO.		609054	

DRAINAGE & UTILITY PLANS

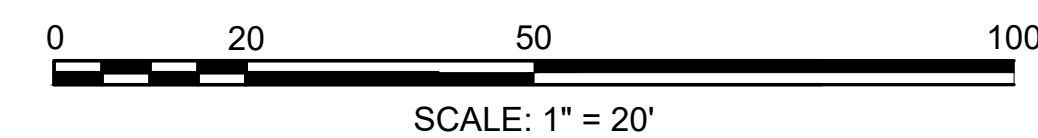


EXISTING STRUCTURE TABLE

D.M.H. #9 RIM=265.69 INV. IN (NE)=261.39 INV. IN (SE)=261.29 INV. IN (S)=260.19 INV. IN (W)=261.29 INV. OUT=260.19	C.B. #14 RIM=254.44 INV. OUT=250.94
C.B. #10 RIM=265.16 INV. OUT=261.66	D.M.H. #15 RIM=254.68 INV. IN=250.98 INV. OUT=251.28
C.B. #11 RIM=265.34 INV. OUT=261.34	C.B. #16 RIM=253.58 INV. IN=250.98 INV. OUT=250.38
C.B. #12 RIM=266.18 INV. IN (S)=264.18 INV. IN (W)=263.48 INV. OUT=261.28	
C.B. #13 RIM=282.35 NOTE: FILLED WITH DEBRIS.	

DRAINAGE STRUCTURE TABLE

NAME	STATION OFFSET	STRUCTURE DETAILS	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PR-CB-05	13+99.37 11.0 R	RIM ELEV. = 255.31		250.85' (PR-DMH-05)	
PR-CB-06	14+05.22 11.0 L	RIM ELEV. = 255.23		250.77' (PR-DMH-05) 250.67' (PR-LB-02)	PROP. CB
PR-DMH-05	14+11.89 6.8 L	RIM ELEV. = 255.23	250.69' (PR-CB-06) 250.67' (PR-CB-05)	250.57' (PR-FE-01)	PROP. DMH
PR-FE-01	14+16.61 30.5 L	RIM ELEV. = 251.75	250.08' (PR-DMH-05)		FLARED END
PR-LB-02	14+04.57 20.2 L	RIM ELEV. = 255.59	250.62' (PR-CB-06)		LEACHING BASIN SOLID COVER



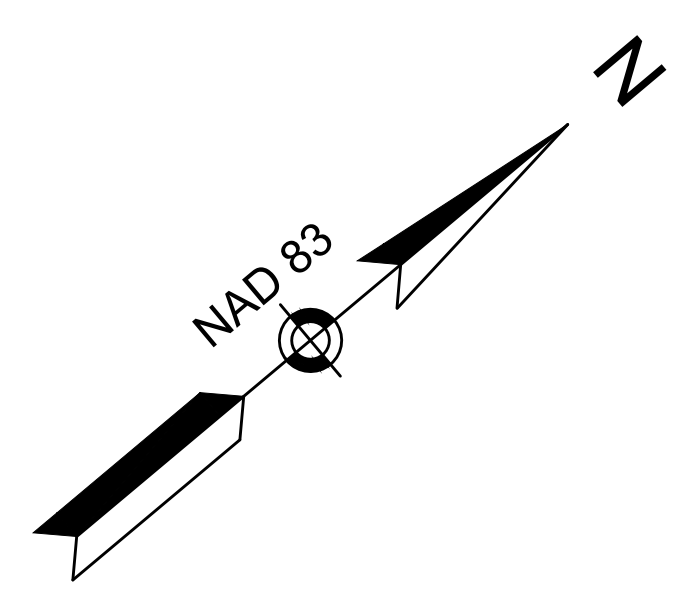
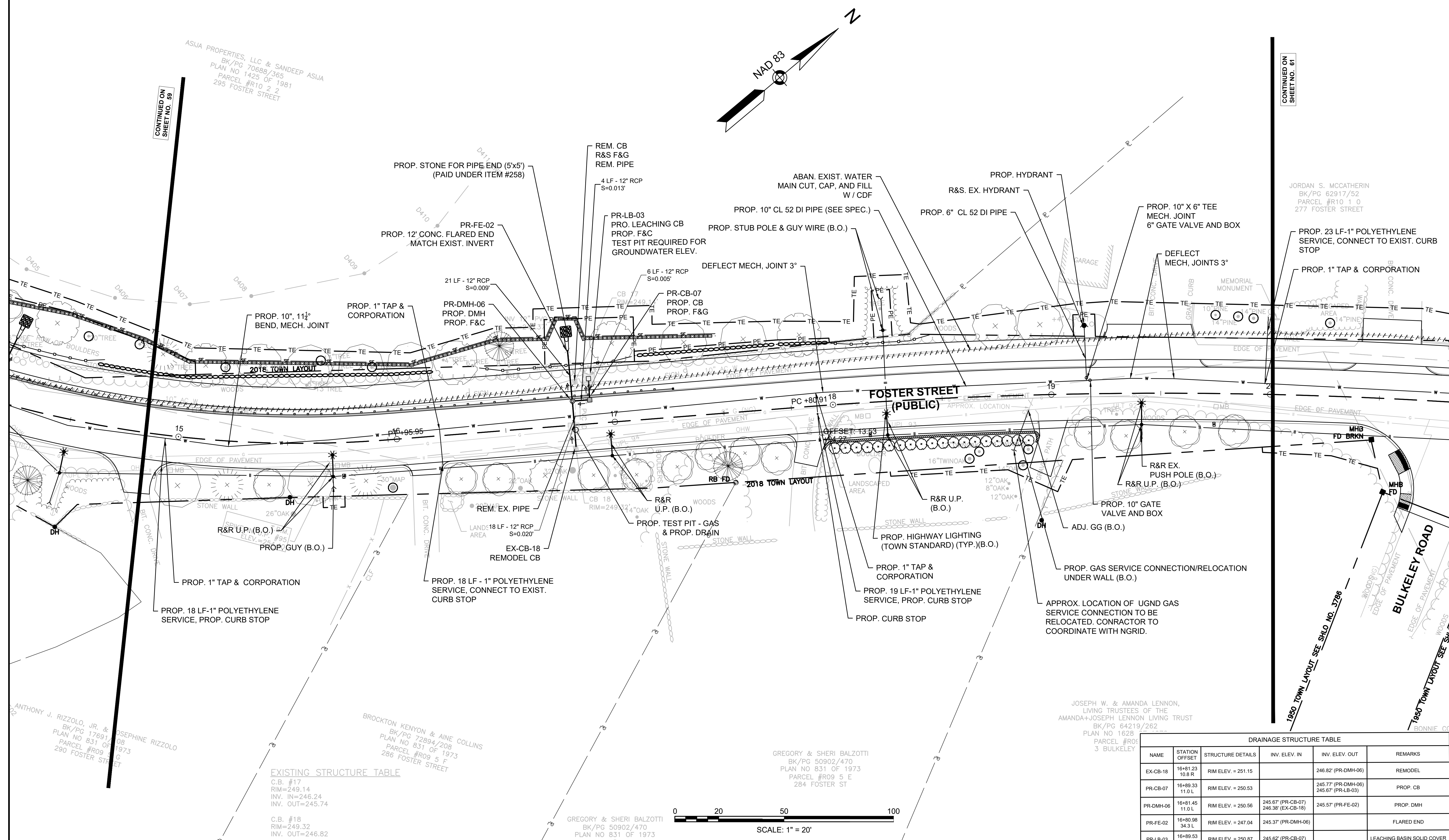
- NOTES:
- SEE SHEET 57 FOR GENERAL UTILITY, ELECTRICAL AND TREE TRIMMING NOTES
 - * - CONTRACTOR TO MATCH EXISTING PIPE INVERT. INVERT GIVEN IS APPROXIMATE

- GAS NOTES:
- NOTIFY NATIONAL GRID DAMAGE PREVENTION, MEGHAN KELLEY, AT(339) 203-0490 TWO WEEKS PRIOR TO EXCAVATING NEAR REGULATOR STATION OR GAS MAIN. HIGH PRESSURE GAS MAINS ARE PRESENT IN PROJECT AREA.
 - TO REPORT ANY DAMAGE TO A GAS LINE CALL NATIONAL GRID'S EMERGENCY GAS LEAKS NUMBER AT 1-800-233-5325 IMMEDIATELY.
 - ALL TEST PITS PERFORMED NEAR GAS MAIN SHALL BE PERFORMED WITH A VACUUM TRUCK SEE SPECIAL PROVISION FOR ITEM 141.101

LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	60	128
PROJECT FILE NO.		609054	

DRAINAGE & UTILITY PLANS



CONTINUED ON SHEET NO. 59

CONTINUED ON SHEET NO. 61

ASJA PROPERTIES, LLC & SANDEEP ASJA
BK/PG 70688/365
PLAN NO 1425 OF 1981
PARCEL #R10 2 2
295 FOSTER STREET

JORDAN S. MCCATHERIN
BK/PG 62917/52
PARCEL #R10 1 0
277 FOSTER STREET

PROP. 18 LF-1" POLYETHYLENE SERVICE, PROP. CURB STOP

PROP. 18 LF - 1" POLYETHYLENE SERVICE, CONNECT TO EXIST. CURB STOP

PROP. 1" TAP & CORPORATION
PROP. 19 LF-1" POLYETHYLENE SERVICE, PROP. CURB STOP
PROP. CURB STOP

APPROX. LOCATION OF UGND GAS SERVICE CONNECTION TO BE RELOCATED. CONTRACTOR TO COORDINATE WITH NGRID.

ANTHONY J. RIZZOLO, JR. & JOSEPHINE RIZZOLO
BK/PG 17691/108
PLAN NO 831 OF 1973
PARCEL #R09 5 E
290 FOSTER STREET

BROCKTON KENYON & AINE COLLINS
BK/PG 72894/208
PLAN NO 831 OF 1973
PARCEL #R09 5 F
286 FOSTER STREET

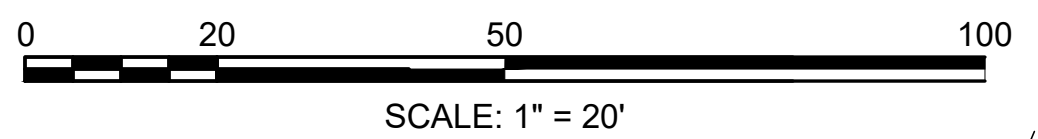
GREGORY & SHERI BALZOTTI
BK/PG 50902/470
PLAN NO 831 OF 1973
PARCEL #R09 5 E
284 FOSTER ST

JOSEPH W. & AMANDA LENNON,
LIVING TRUSTEES OF THE
AMANDA+JOSEPH LENNON LIVING TRUST
BK/PG 64219/262
PLAN NO 1628
PARCEL #R09 5 F
3 BULKELEY

EXISTING STRUCTURE TABLE

C.B. #	RIM	INV. IN	INV. OUT
#17	249.14	246.24	245.74
#18	249.32	246.82	

GREGORY & SHERI BALZOTTI
BK/PG 50902/470
PLAN NO 831 OF 1973
PARCEL #R09 5 E



DRAINAGE STRUCTURE TABLE

NAME	STATION OFFSET	STRUCTURE DETAILS	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
EX-CB-18	16+81.23 10.8 R	RIM ELEV. = 251.15		246.82' (PR-DMH-06)	REMODEL
PR-CB-07	16+89.33 11.0 L	RIM ELEV. = 250.53		245.77' (PR-DMH-06) 245.67' (PR-LB-03)	PROP. CB
PR-DMH-06	16+81.45 11.0 L	RIM ELEV. = 250.56	245.67' (PR-CB-07) 246.38' (EX-CB-18)	245.57' (PR-FE-02)	PROP. DMH
PR-FE-02	16+88.98 34.3 L	RIM ELEV. = 247.04	245.37' (PR-DMH-06)		FLARED END
PR-LB-03	16+88.53 20.7 L	RIM ELEV. = 250.87	245.62' (PR-CB-07)		LEACHING BASIN SOLID COVER

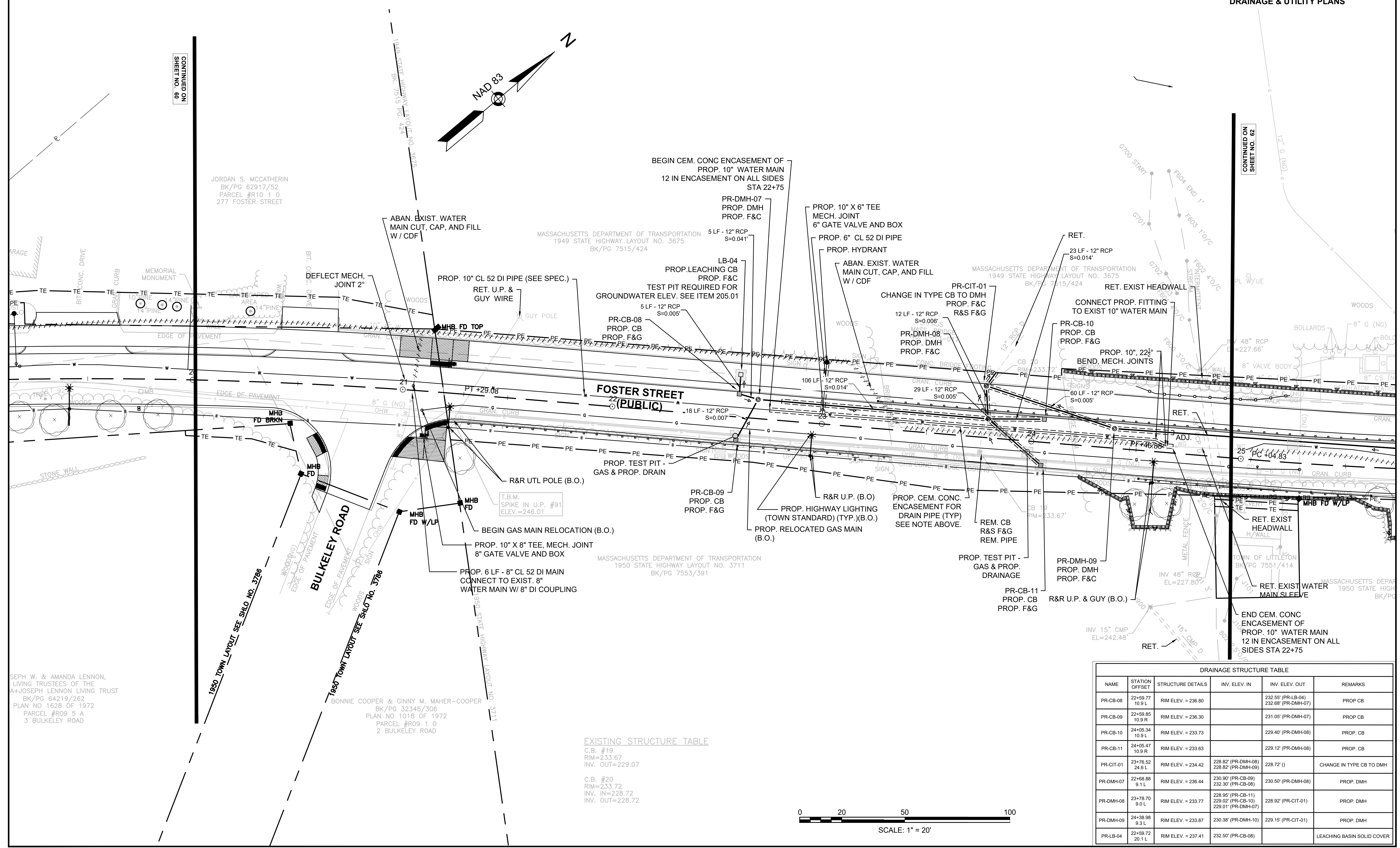
**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	61	128
PROJECT FILE NO.		609054	

DRAINAGE & UTILITY PLANS

- NOTES:**
- SEE SHEET 57 FOR GENERAL UTILITY, ELECTRICAL AND TREE TRIMMING NOTES
 - *- CONTRACTOR TO MATCH EXISTING PIPE INVERT. INVERT GIVEN IS APPROXIMATE

- GAS NOTES:**
- NOTIFY NATIONAL GRID DAMAGE PREVENTION, MEGHAN KELLEY, AT(339) 203-0490 TWO WEEKS PRIOR TO EXCAVATING NEAR REGULATOR STATION OR GAS MAIN. HIGH PRESSURE GAS MAINS ARE PRESENT IN PROJECT AREA.
 - TO REPORT ANY DAMAGE TO A GAS LINE CALL NATIONAL GRID'S EMERGENCY GAS LEAKS NUMBER AT 1-800-233-5325 IMMEDIATELY.
 - ALL TEST PITS PERFORMED NEAR GAS MAIN SHALL BE PERFORMED WITH A VACUUM TRUCK SEE SPECIAL PROVISION FOR ITEM 141.101

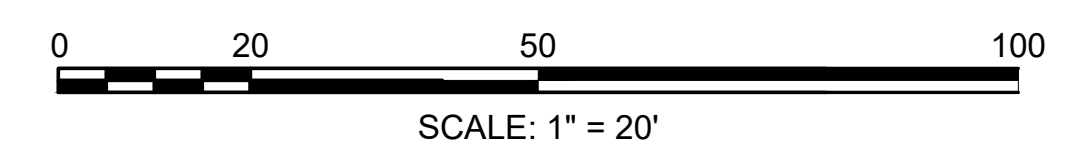


EXISTING STRUCTURE TABLE

C.B. #19	RIM=233.67	INV. OUT=229.07
C.B. #20	RIM=233.72	INV. IN=228.72
	INV. OUT=228.72	

DRAINAGE STRUCTURE TABLE

NAME	STATION OFFSET	STRUCTURE DETAILS	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PR-CB-08	22+59.77 10.9 L	RIM ELEV. = 236.80	232.55' (PR-LB-04)	232.68' (PR-DMH-07)	PROP. CB
PR-CB-09	22+59.85 10.9 R	RIM ELEV. = 236.30	231.05' (PR-DMH-07)		PROP. CB
PR-CB-10	24+05.34 10.9 L	RIM ELEV. = 233.73	229.40' (PR-DMH-08)		PROP. CB
PR-CB-11	24+05.47 10.9 R	RIM ELEV. = 233.63	229.12' (PR-DMH-08)		PROP. CB
PR-CIT-01	23+76.52 24.6 L	RIM ELEV. = 234.42	228.82' (PR-DMH-08)	228.72' ()	CHANGE IN TYPE CB TO DMH
PR-DMH-07	22+68.88 9.1 L	RIM ELEV. = 236.44	230.90' (PR-CB-09)	230.50' (PR-DMH-08)	PROP. DMH
PR-DMH-08	23+78.70 9.0 L	RIM ELEV. = 233.77	228.95' (PR-CB-11)	228.92' (PR-CIT-01)	PROP. DMH
PR-DMH-09	24+38.98 9.3 L	RIM ELEV. = 233.87	230.38' (PR-DMH-10)	229.15' (PR-CIT-01)	PROP. DMH
PR-LB-04	22+59.72 20.1 L	RIM ELEV. = 237.41	232.50' (PR-CB-08)		LEACHING BASIN SOLID COVER



SEPH W. & AMANDA LENNON,
LIVING TRUSTEES OF THE
A+JOSEPH LENNON LIVING TRUST
BK/PG 64219/262
PLAN NO 1628 OF 1972
PARCEL #R09 5 A
3 BULKELEY ROAD

BONNIE COOPER & GINNY M. MAHER-COOPER
BK/PG 32345/306
PLAN NO 1018 OF 1972
PARCEL #R09 1 0
2 BULKELEY ROAD

JORDAN S. MCCATHERIN
BK/PG 62917/52
PARCEL #R10 1 0
277 FOSTER STREET

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
1949 STATE HIGHWAY LAYOUT NO. 3675
BK/PG 7515/424

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
1950 STATE HIGHWAY LAYOUT NO. 3711
BK/PG 7553/391

CONTINUED ON
SHEET NO. 60

CONTINUED ON
SHEET NO. 62

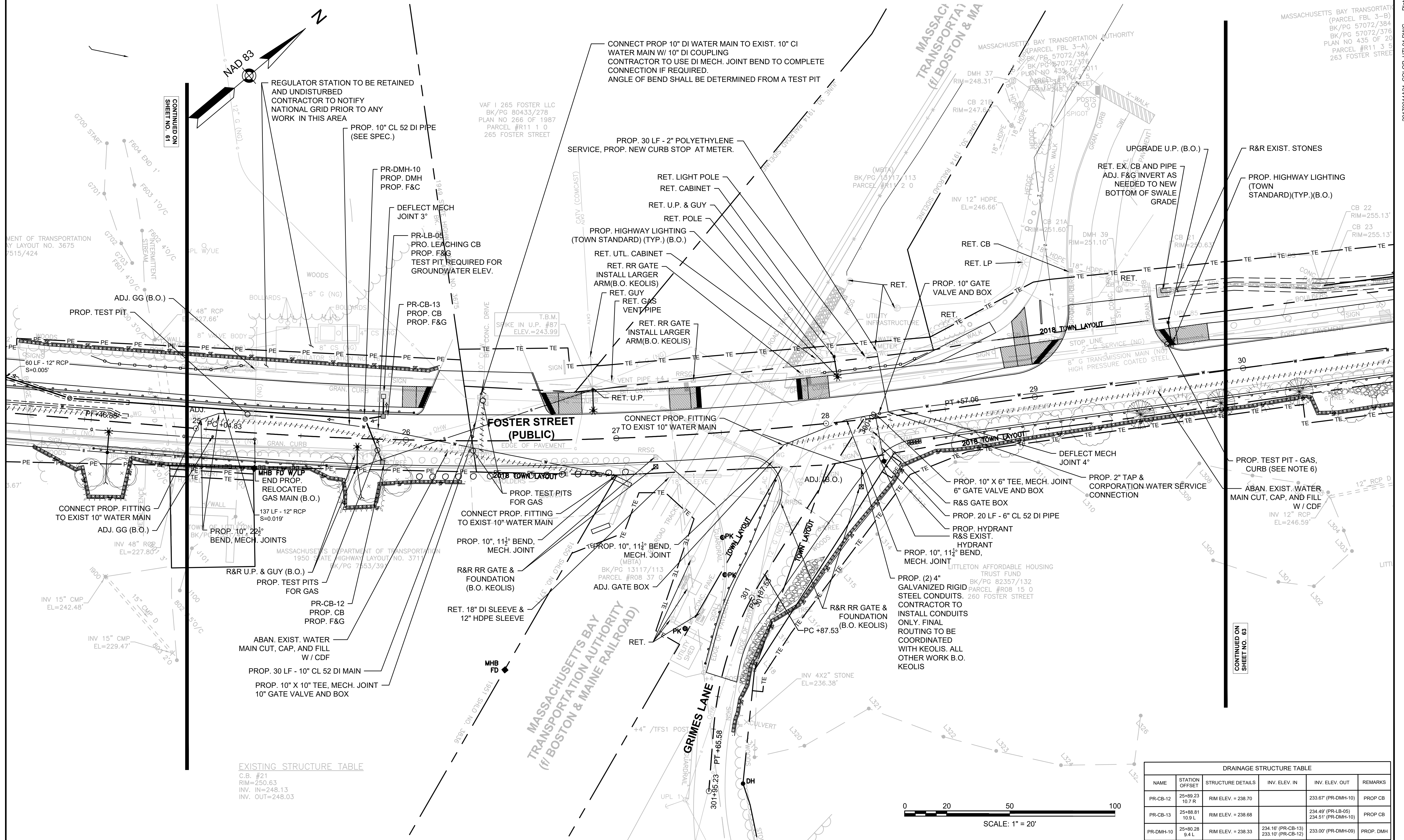
- NOTES:
- SEE SHEET 57 FOR GENERAL UTILITY, ELECTRICAL AND TREE TRIMMING NOTES
 - * - CONTRACTOR TO MATCH EXISTING PIPE INVERT. INVERT GIVEN IS APPROXIMATE

- GAS NOTES:
- NOTIFY NATIONAL GRID DAMAGE PREVENTION, MEGHAN KELLEY, AT(339) 203-0490 TWO WEEKS PRIOR TO EXCAVATING NEAR REGULATOR STATION OR GAS MAIN. HIGH PRESSURE GAS MAINS ARE PRESENT IN PROJECT AREA.
 - TO REPORT ANY DAMAGE TO A GAS LINE CALL NATIONAL GRID'S EMERGENCY GAS LEAKS NUMBER AT 1-800-233-5325 IMMEDIATELY.
 - ALL TEST PITS PERFORMED NEAR GAS MAIN SHALL BE PERFORMED WITH A VACUUM TRUCK SEE SPECIAL PROVISION FOR ITEM 141.101

LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	602	128
PROJECT FILE NO.		609054	

DRAINAGE & UTILITY PLANS



EXISTING STRUCTURE TABLE

NAME	STATION	INVERT	REMARKS
C.B. #21	25+89.23	250.63	
	10.7 R		
	25+98.81	248.13	
	10.9 L		
	25+90.28	248.03	
	9.4 L		

DRAINAGE STRUCTURE TABLE

NAME	STATION	STRUCTURE DETAILS	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PR-CB-12	25+89.23	RIM ELEV. = 238.70		233.67 (PR-DMH-10)	PROP. CB
	10.7 R				
PR-CB-13	25+98.81	RIM ELEV. = 238.68		234.49 (PR-LB-05)	PROP. CB
	10.9 L			234.51 (PR-DMH-10)	
PR-DMH-10	25+90.28	RIM ELEV. = 238.33	234.16 (PR-CB-13)	233.00 (PR-DMH-09)	PROP. DMH
	9.4 L		233.10 (PR-CB-12)		

Plotted on 27-Mar-2024 10:12 AM
2017004421_COLOR_UTL01.DWG

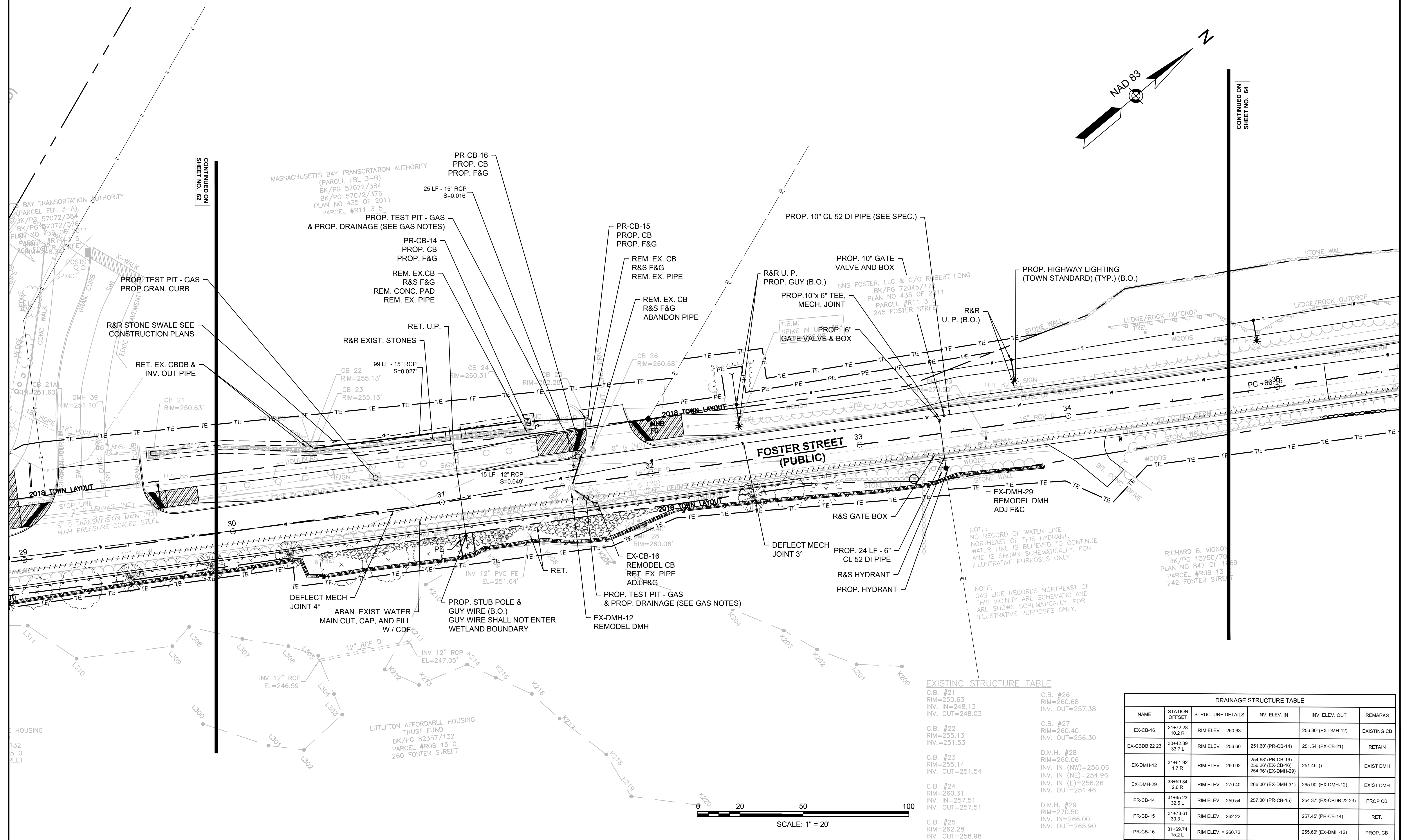
- NOTES:
- SEE SHEET 57 FOR GENERAL UTILITY, ELECTRICAL AND TREE TRIMMING NOTES
 - * - CONTRACTOR TO MATCH EXISTING PIPE INVERT. INVERT GIVEN IS APPROXIMATE

- GAS NOTES:
- NOTIFY NATIONAL GRID DAMAGE PREVENTION, MEGHAN KELLEY, AT(339) 203-0490 TWO WEEKS PRIOR TO EXCAVATING NEAR REGULATOR STATION OR GAS MAIN. HIGH PRESSURE GAS MAINS ARE PRESENT IN PROJECT AREA.
 - TO REPORT ANY DAMAGE TO A GAS LINE CALL NATIONAL GRID'S EMERGENCY GAS LEAKS NUMBER AT 1-800-233-5325 IMMEDIATELY.
 - ALL TEST PITS PERFORMED NEAR GAS MAIN SHALL BE PERFORMED WITH A VACUUM TRUCK SEE SPECIAL PROVISION FOR ITEM 141.101

LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	63	128
PROJECT FILE NO.		609054	

DRAINAGE & UTILITY PLANS



EXISTING STRUCTURE TABLE

C.B. #21 RIM=250.63 INV. IN=248.13 INV. OUT=248.03	C.B. #26 RIM=260.68 INV. OUT=257.38
C.B. #22 RIM=255.13 INV.=251.53	C.B. #27 RIM=260.40 INV. OUT=256.30
C.B. #23 RIM=255.14 INV. OUT=251.54	D.M.H. #28 RIM=260.06 INV. IN (NW)=256.06 INV. IN (NE)=254.96 INV. IN (E)=256.26 INV. OUT=251.46
C.B. #24 RIM=260.31 INV. IN=257.51 INV. OUT=257.51	D.M.H. #29 RIM=270.50 INV. IN=266.00 INV. OUT=265.90
C.B. #25 RIM=262.28 INV. OUT=258.98	

DRAINAGE STRUCTURE TABLE

NAME	STATION OFFSET	STRUCTURE DETAILS	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
EX-CB-16	31+72.28 10.2 R	RIM ELEV. = 260.63	256.30'	256.30' (EX-DMH-12)	EXISTING CB
EX-CBDB 22 23	30+42.39 33.7 L	RIM ELEV. = 256.60	251.60' (PR-CB-14)	251.54' (EX-CB-21)	RETAIN
EX-DMH-12	31+61.92 1.7 R	RIM ELEV. = 260.02	254.68' (PR-CB-16) 256.26' (EX-CB-16) 254.96' (EX-DMH-29)	251.46' (I)	EXIST DMH
EX-DMH-29	33+59.34 2.6 R	RIM ELEV. = 270.40	266.00' (EX-DMH-31)	265.90' (EX-DMH-12)	EXIST DMH
PR-CB-14	31+45.23 32.5 L	RIM ELEV. = 259.54	257.00' (PR-CB-15)	254.37' (EX-CBDB 22 23)	PROP CB
PR-CB-15	31+73.61 30.3 L	RIM ELEV. = 262.22		257.45' (PR-CB-14)	RET.
PR-CB-16	31+69.74 15.2 L	RIM ELEV. = 260.72		255.60' (EX-DMH-12)	PROP. CB

CONTINUED ON
SHEET NO. 64

CONTINUED ON
SHEET NO. 62

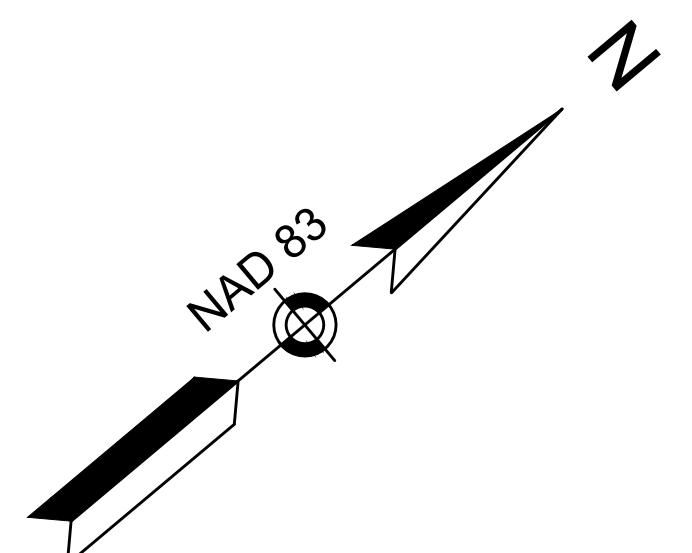
- NOTES:
- SEE SHEET 57 FOR GENERAL UTILITY, ELECTRICAL AND TREE TRIMMING NOTES
 - * - CONTRACTOR TO MATCH EXISTING PIPE INVERT. INVERT GIVEN IS APPROXIMATE

- GAS NOTES:
- NOTIFY NATIONAL GRID DAMAGE PREVENTION, MEGHAN KELLEY, AT(339) 203-0490 TWO WEEKS PRIOR TO EXCAVATING NEAR REGULATOR STATION OR GAS MAIN. HIGH PRESSURE GAS MAINS ARE PRESENT IN PROJECT AREA
 - TO REPORT ANY DAMAGE TO A GAS LINE CALL NATIONAL GRID'S EMERGENCY GAS LEAKS NUMBER AT 1-800-233-5325 IMMEDIATELY.
 - ALL TEST PITS PERFORMED NEAR GAS MAIN SHALL BE PERFORMED WITH A VACUUM TRUCK SEE SPECIAL PROVISION FOR ITEM 141.101

LITTLETON
RECONSTRUCTION OF FOSTER STREET

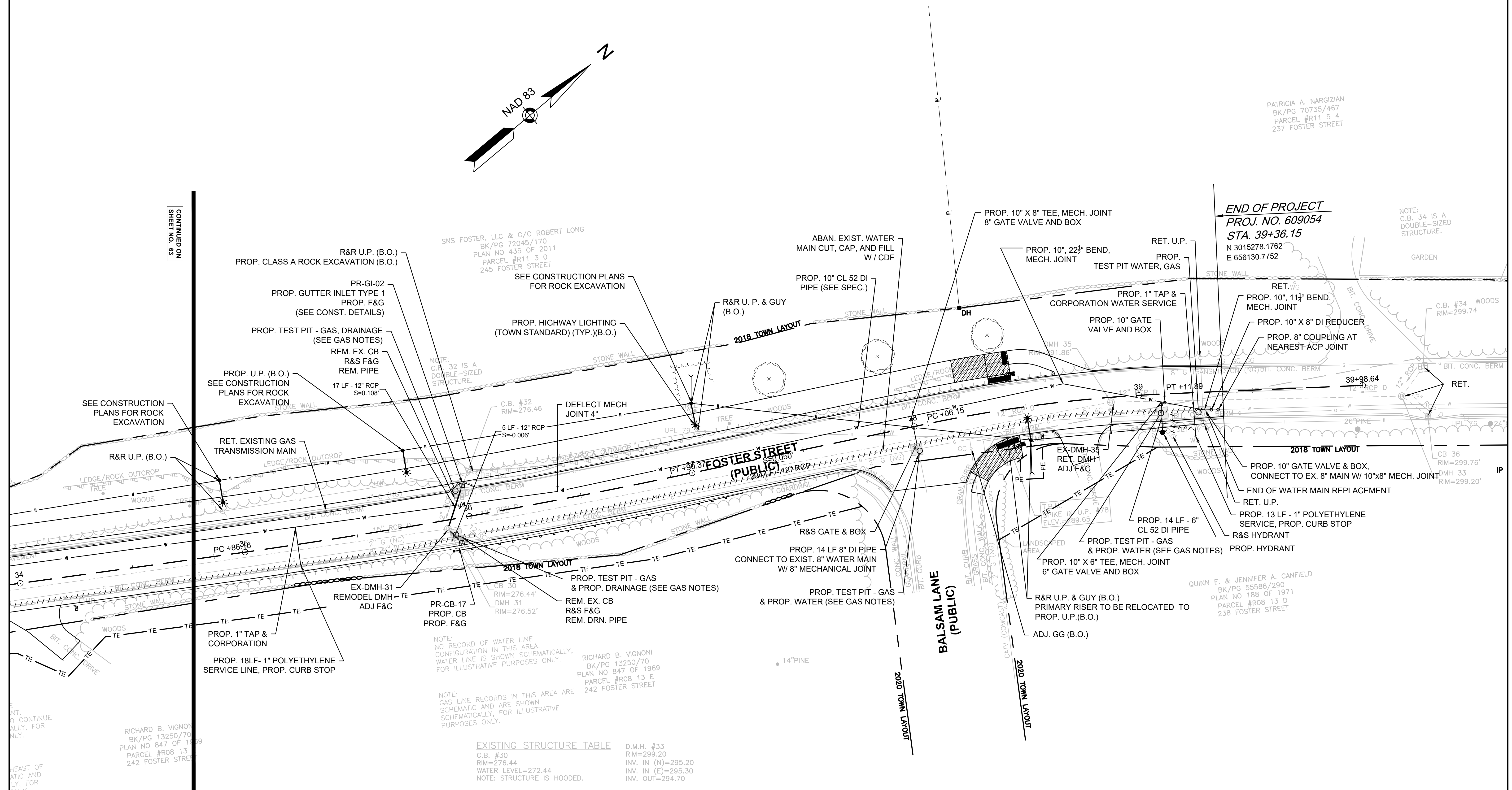
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	64	128
PROJECT FILE NO.		609054	

DRAINAGE & UTILITY PLANS



PATRICIA A. NARGIZIAN
BK/PG 70735/467
PARCEL #R11 5 4
237 FOSTER STREET

CONTINUED ON SHEET NO. 69



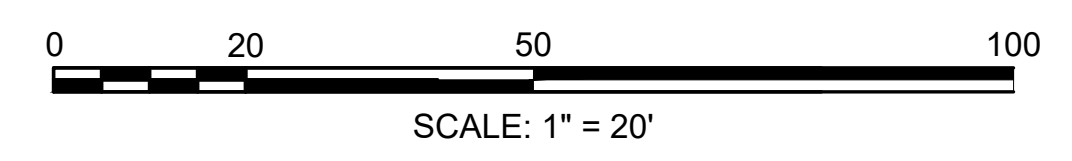
NOTE: NO RECORD OF WATER LINE CONFIGURATION IN THIS AREA. WATER LINE IS SHOWN SCHEMATICALLY, FOR ILLUSTRATIVE PURPOSES ONLY.

NOTE: GAS LINE RECORDS IN THIS AREA ARE SCHEMATIC AND ARE SHOWN SCHEMATICALLY, FOR ILLUSTRATIVE PURPOSES ONLY.

EXISTING STRUCTURE TABLE

C.B. #30 RIM=276.44 WATER LEVEL=272.44 NOTE: STRUCTURE IS HOODED.	D.M.H. #33 RIM=299.20 INV. IN (N)=295.20 INV. IN (E)=295.30 INV. OUT=294.70
D.M.H. #31 RIM=276.52 INV. IN (NW)=272.32 INV. IN (NE)=270.72 INV. IN (E)=272.32 INV. OUT=270.52	C.B. #34 RIM=299.74 NOTE: FILLED WITH DEBRIS.
C.B. #32 RIM=276.46 WATER LEVEL=272.56 NOTE: STRUCTURE IS HOODED.	D.M.H. #35 RIM=291.87 INV. IN=288.37 INV. OUT=287.17
	C.B. #36 RIM=299.76 WATER LEVEL=295.76 NOTE: STRUCTURE IS HOODED.

DRAINAGE STRUCTURE TABLE					
NAME	STATION OFFSET	STRUCTURE DETAILS	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
EX-DMH-31	35+89.75 3.8 R	RIM ELEV. = 276.55 272.32' (PR-GI-02) 272.32' (EX-DMH-35) 271.57' (PR-CB-17)	270.52' (EX-DMH-29)		REMODEL
EX-DMH-35	38+87.45 2.1 R	RIM ELEV. = 292.70 288.37' (EX-DMH-33)	287.17' (EX-DMH-31)		RET.
PR-CB-17	35+94.81 10.9 R	RIM ELEV. = 276.57		271.52' (EX-DMH-31)	PROP. CB
PR-GI-02	35+99.26 13.9 L	RIM ELEV. = 276.65		274.50' (EX-DMH-31)	PROP. GUTTER INLET



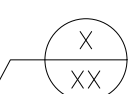
NOTES:
 1. PROPOSED PLANTINGS MAY REQUIRE FIELD ADJUSTMENT DUE TO FINAL FIELD CONDITIONS. MASSDOT LANDSCAPE ARCHITECT AND/OR TOWN OF LITTLETON SHALL APPROVE ALL LOCATIONS PRIOR TO PLANTING.

PROJECT SUMMARY PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	HT.	QTY.	SIZE
TREES					
AR	ACER RUBRUM 'KARPICK'	KARPICK RED MAPLE	40'-50'	12	2"-2.5" CAL.
AG	AMELANCHIER X GRANDIFLORA 'ROBIN HILL'	ROBIN HILL SERVICEBERRY	15'-30'	28	1.5"-2" CAL. (SINGLE STEM)
NS	NYSSA SYLVATICA	BLACK GUM	30'-60'	8	2"-2.5" CAL.
QP	QUERCUS PALUSTRIS	PIN OAK	50'-75'	12	2"-2.5" CAL.
QC	QUERCUS COCCINEA	SCARLET OAK	50'-70'	5	2"-2.5" CAL.
CC	CERCIS CANADENSIS	EASTERN REDBUD	20'-30'	10	1.5" CAL.
CG	CRATAEGUS CRUS-GALLI 'INFERMIS'	COCKSPUR HAWTHORN	20'-30'	7	1.5"-2" CAL.
PV	PRUNUS VIRGINIANA	CHOKE CHERRY	20'-30'	6	1.5"-2" CAL.
SHRUBS					
RC	RHODODENDRON CATAWBIENSE 'ALBUM'	WHITE CATAWBA RHODODENDRON		19	3 GAL.

LEGEND:

PLANT QUANTITY AND SPECIES



LITTLETON
 RECONSTRUCTION OF FOSTER STREET
 LANDSCAPING PLANS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	65	128
PROJECT FILE NO.		609054	

DANIEL SWEENEY (CLASS A TRUSTEE)
 ARTURO J. GUTIERREZ, JOHN A. CATALDO (CLASS B TRUSTEES)
 TAYLOR STREET, LITTLETON TRUST
 BK/PG 32096/213
 PARCEL #R10 6 0
 TAYLOR STREET

MIT OF WORK
 STA 205+00.00
 N3012961.1405
 E653254.4720

BEGINNING OF PROJECT
 PROJ. NO. 609054
 STA 0+00.00
 N3012786.8847
 E653296.9381

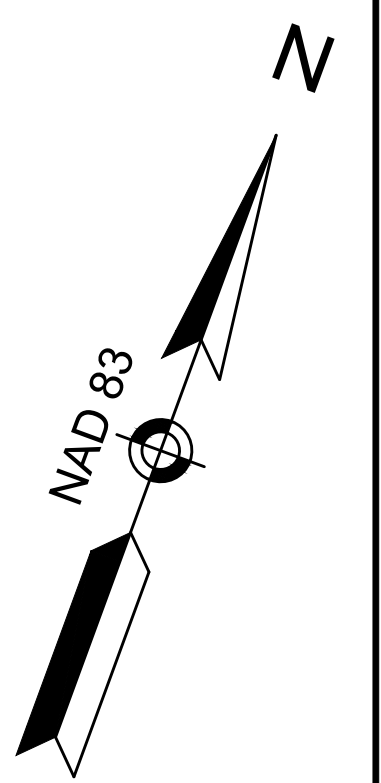
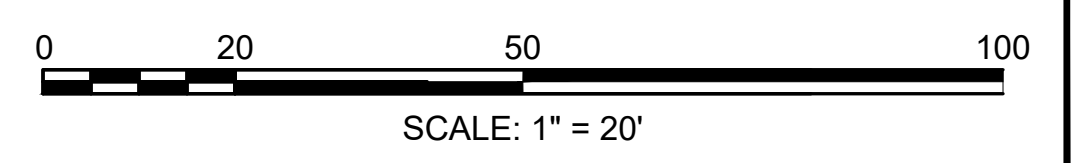
DANIEL SWEENEY (CLASS A TRUSTEE)
 ARTURO J. GUTIERREZ, JOHN A. CATALDO (CLASS B TRUSTEES)
 TAYLOR STREET, LITTLETON TRUST
 BK/PG 1268/197
 PLAN 1268 OF 197
 PARCEL #R10 7 0
 225 TAYLOR STREET

JOHN K. GRADY, TRUSTEE OF THE
 FOSTER/TAYLOR REALTY TRUST
 BK/PG 25198/143
 PLAN NO 228 OF 1992
 PARCEL #R09 32 0
 230 TAYLOR STREET

JOHN K. GRADY & DAVID B. RICE, TRUSTEES OF
 CONCORD ASSOCIATES FOSTER STREET TRUST
 BK/PG 14680/362
 PLAN NO 1314 OF 1981
 PARCEL #R09 33 0
 300 FOSTER STREET

PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	HT.	QTY.	SIZE
TREES					
AR	ACER RUBRUM 'KARPICK'	KARPICK RED MAPLE	40'-50'	3	2"-2.5" CAL.
AG	AMELANCHIER X GRANDIFLORA 'ROBIN HILL'	ROBIN HILL SERVICEBERRY	15'-30'	3	1.5"-2" CAL. (SINGLE STEM)
QC	QUERCUS COCCINEA	SCARLET OAK	50'-70'	3	2"-2.5" CAL.

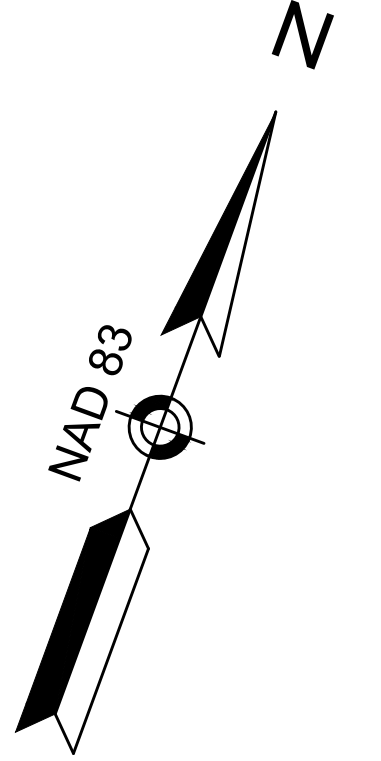


CONTINUED ON
 SHEET NO. 66

LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	66	128
PROJECT FILE NO.		609054	

LANDSCAPING PLANS



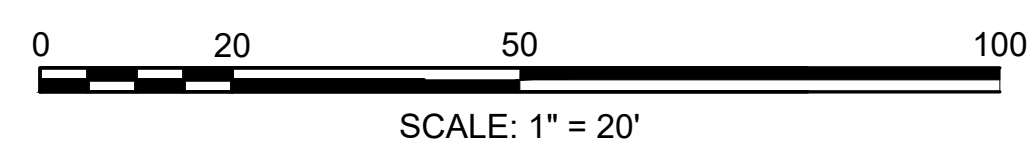
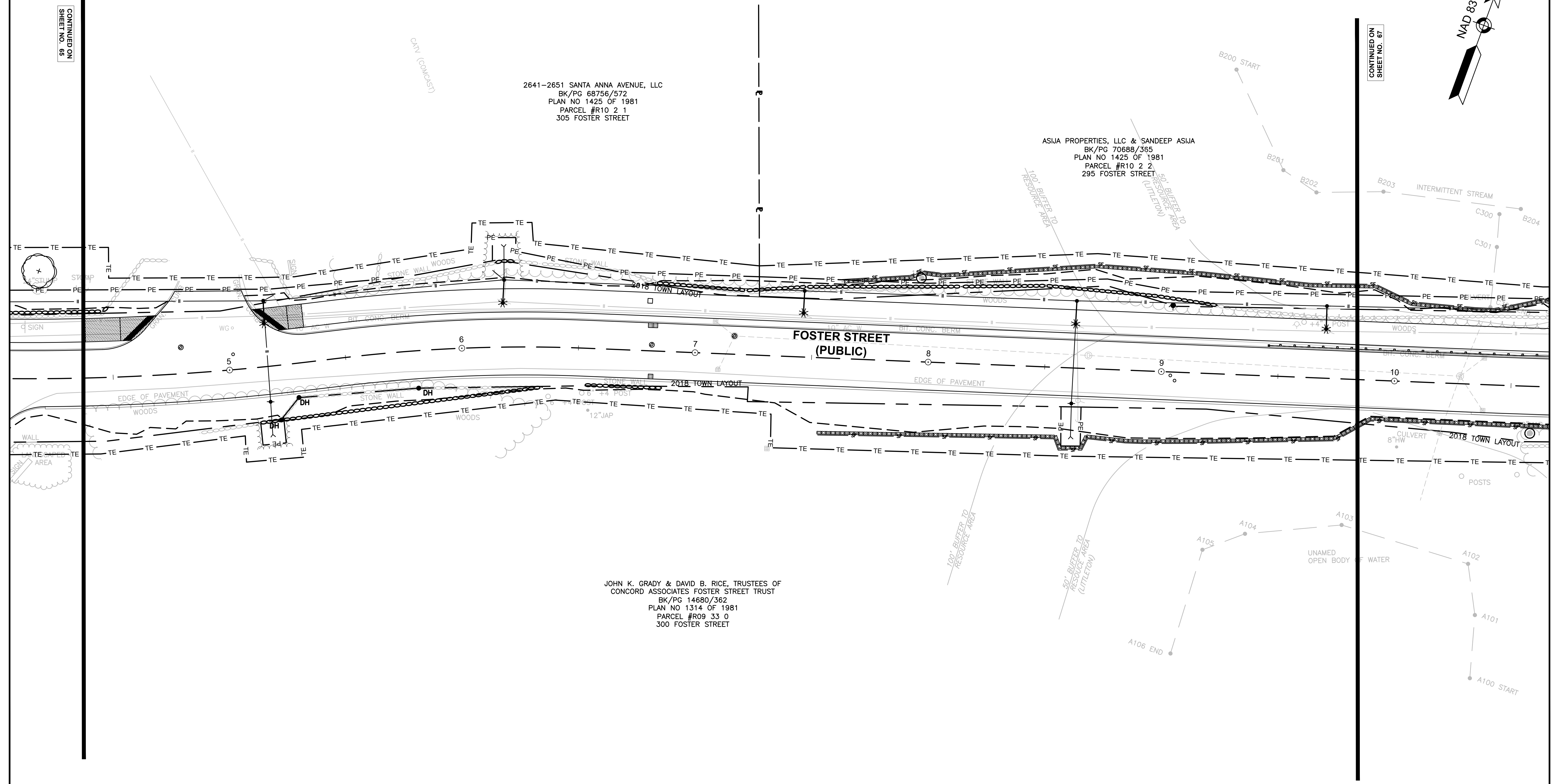
CONTINUED ON
SHEET NO. 65

CONTINUED ON
SHEET NO. 67

2641-2651 SANTA ANNA AVENUE, LLC
BK/PG 68756/572
PLAN NO 1425 OF 1981
PARCEL #R10 2 1
305 FOSTER STREET

ASJIA PROPERTIES, LLC & SANDEEP ASJIA
BK/PG 70688/365
PLAN NO 1425 OF 1981
PARCEL #R10 2 2
295 FOSTER STREET

JOHN K. GRADY & DAVID B. RICE, TRUSTEES OF
CONCORD ASSOCIATES FOSTER STREET TRUST
BK/PG 14680/362
PLAN NO 1314 OF 1981
PARCEL #R09 33 0
300 FOSTER STREET

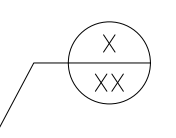


PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	HT.	QTY.	SIZE
TREES					
AR	ACER RUBRUM 'KARPICK'	KARPICK RED MAPLE	40'-50'	3	2"-2.5" CAL.
AG	AMELANCHIER X GRANDIFLORA 'ROBIN HILL'	ROBIN HILL SERVICEBERRY	15'-30'	5	1.5"-2" CAL. (SINGLE STEM)
NS	NYSSA SYLVATICA	BLACK GUM	30'-60'	3	2"-2.5" CAL.
QP	QUERCUS PALUSTRIS	PIN OAK	50'-75'	4	2"-2.5" CAL.
CC	CERCIS CANADENSIS	EASTERN REDBUD	20'-30'	3	1.5" CAL.
CG	CRATAEGUS CRUS-GALLI 'INFERMIS'	COCKSPUR HAWTHORN	20'-30'	2	1.5"-2" CAL.
PV	PRUNUS VIRGINIANA	CHOKE CHERRY	20'-30'	3	1.5"-2" CAL.

LEGEND:

PLANT QUANTITY AND SPECIES

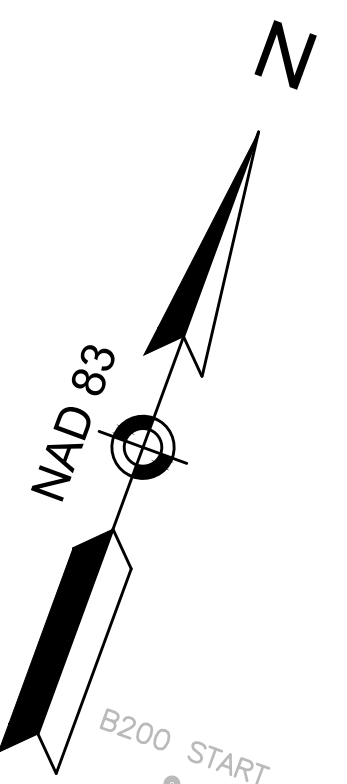
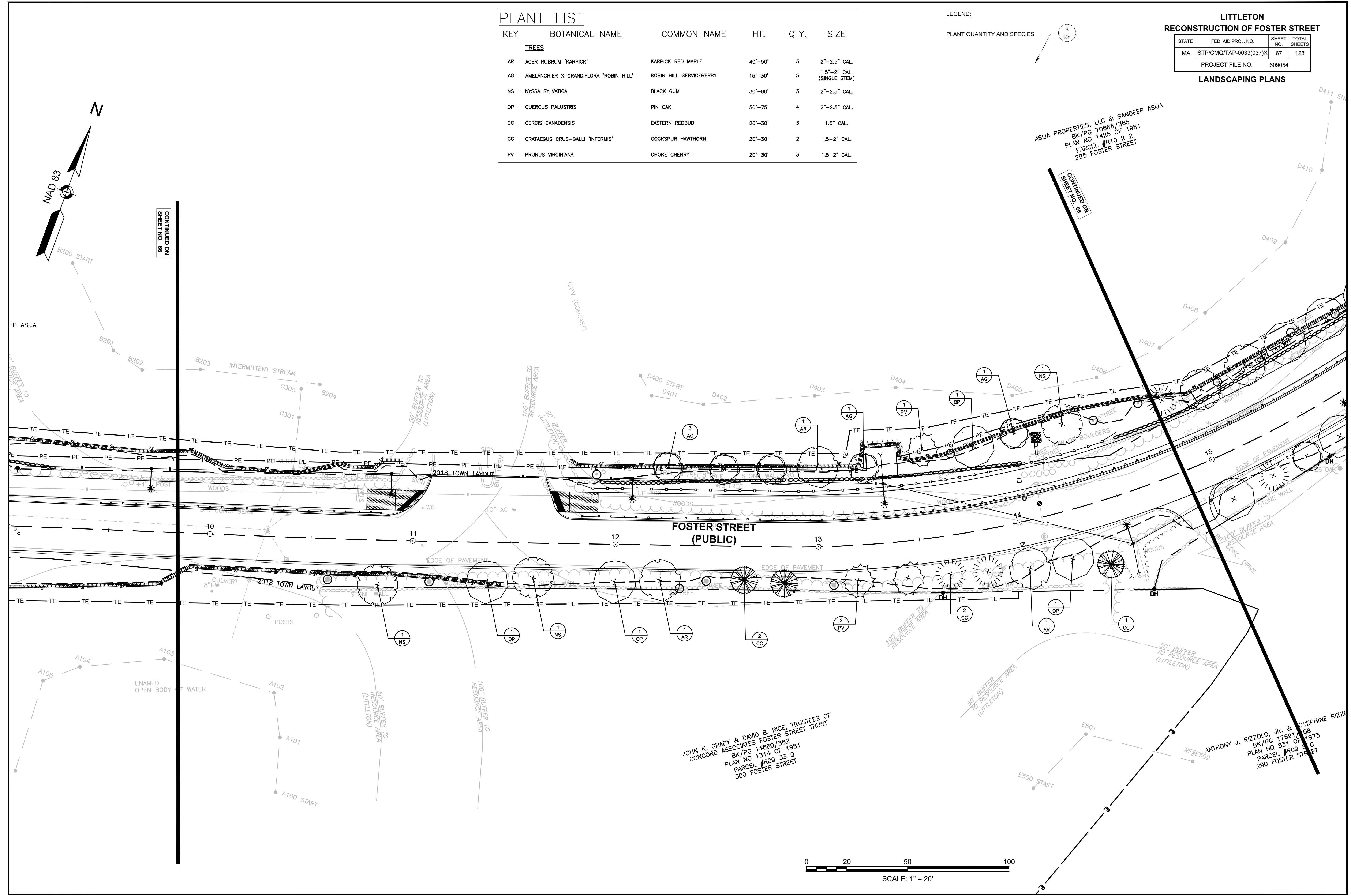


**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	67	128

PROJECT FILE NO. 609054

LANDSCAPING PLANS

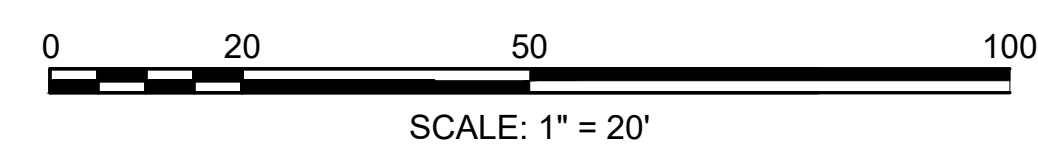


CONTINUED ON
SHEET NO. 68

CONTINUED ON
SHEET NO. 68

JOHN K. GRADY & DAVID B. RICE, TRUSTEES OF
CONCORD ASSOCIATES FOSTER STREET TRUST
BK/PG 14680/362
PLAN NO 1314 OF 1981
PARCEL #R09 33 0
300 FOSTER STREET

ANTHONY J. RIZZOLO, JR. & JOSEPHINE RIZZO
BK/PG 17691/08
PLAN NO 831 OF 1973
PARCEL #R09 33 0
290 FOSTER STREET



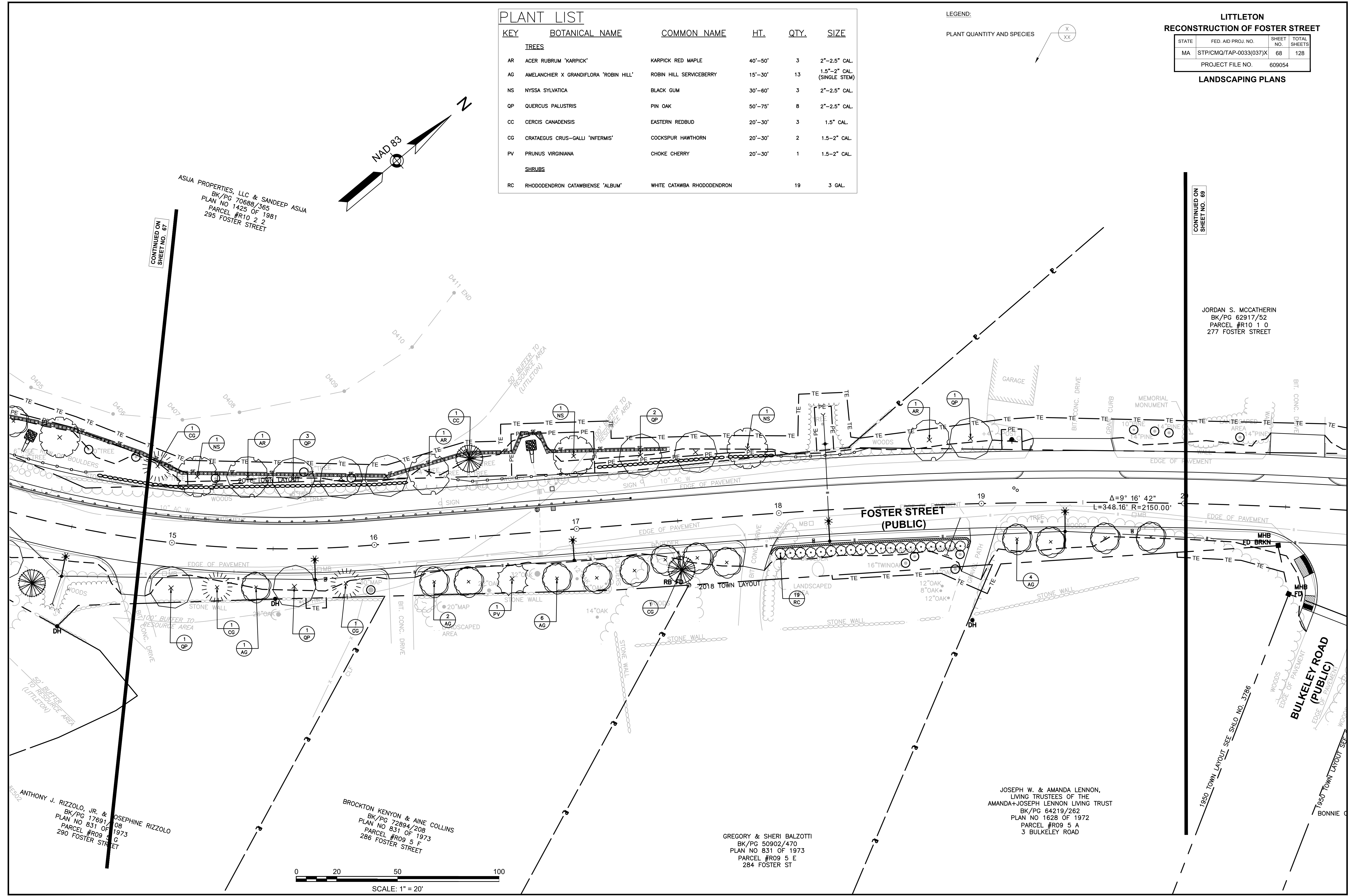
KEY	BOTANICAL NAME	COMMON NAME	HT.	QTY.	SIZE
TREES					
AR	ACER RUBRUM 'KARPICK'	KARPICK RED MAPLE	40'-50'	3	2"-2.5" CAL.
AG	AMELANCHIER X GRANDIFLORA 'ROBIN HILL'	ROBIN HILL SERVICEBERRY	15'-30'	13	1.5"-2" CAL. (SINGLE STEM)
NS	NYSSA SYLVATICA	BLACK GUM	30'-60'	3	2"-2.5" CAL.
QP	QUERCUS PALUSTRIS	PIN OAK	50'-75'	8	2"-2.5" CAL.
CC	CERCIS CANADENSIS	EASTERN REDBUD	20'-30'	3	1.5" CAL.
CG	CRATAEGUS CRUS-GALLI 'INFERMIS'	COCKSPUR HAWTHORN	20'-30'	2	1.5-2" CAL.
PV	PRUNUS VIRGINIANA	CHOKE CHERRY	20'-30'	1	1.5-2" CAL.
SHRUBS					
RC	RHODODENDRON CATAWBIENSE 'ALBUM'	WHITE CATAWBA RHODODENDRON		19	3 GAL.



LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	68	128
PROJECT FILE NO.		609054	

LANDSCAPING PLANS



ASIA PROPERTIES, LLC & SANDEEP ASIA
 BK/PG 70688/365
 PLAN NO 1425 OF 1981
 PARCEL #R10 2 2
 295 FOSTER STREET

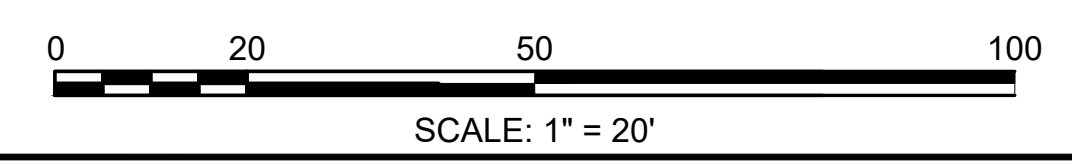
JORDAN S. MCCATHERIN
 BK/PG 62917/52
 PARCEL #R10 1 0
 277 FOSTER STREET

ANTHONY J. RIZZOLO, JR. & JOSEPHINE RIZZOLO
 BK/PG 17691/08
 PLAN NO 831 OF 1973
 PARCEL #R09 5 G
 290 FOSTER STREET

BROCKTON KENYON & AINE COLLINS
 BK/PG 72894/208
 PLAN NO 831 OF 1973
 PARCEL #R09 5 F
 286 FOSTER STREET

GREGORY & SHERI BALZOTTI
 BK/PG 50902/470
 PLAN NO 831 OF 1973
 PARCEL #R09 5 E
 284 FOSTER ST

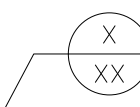
JOSEPH W. & AMANDA LENNON,
 LIVING TRUSTEES OF THE
 AMANDA+JOSEPH LENNON LIVING TRUST
 BK/PG 64219/262
 PLAN NO 1628 OF 1972
 PARCEL #R09 5 A
 3 BULKELEY ROAD



PLANT LIST					
KEY	BOTANICAL NAME	COMMON NAME	HT.	QTY.	SIZE
TREES					
AG	AMELANCHIER X GRANDIFLORA 'ROBIN HILL'	ROBIN HILL SERVICEBERRY	15'	3	1.5"-2" CAL. (SINGLE STEM)

LEGEND:

PLANT QUANTITY AND SPECIES

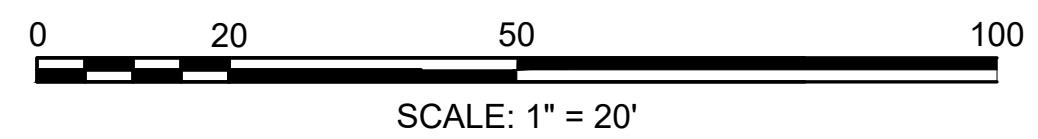
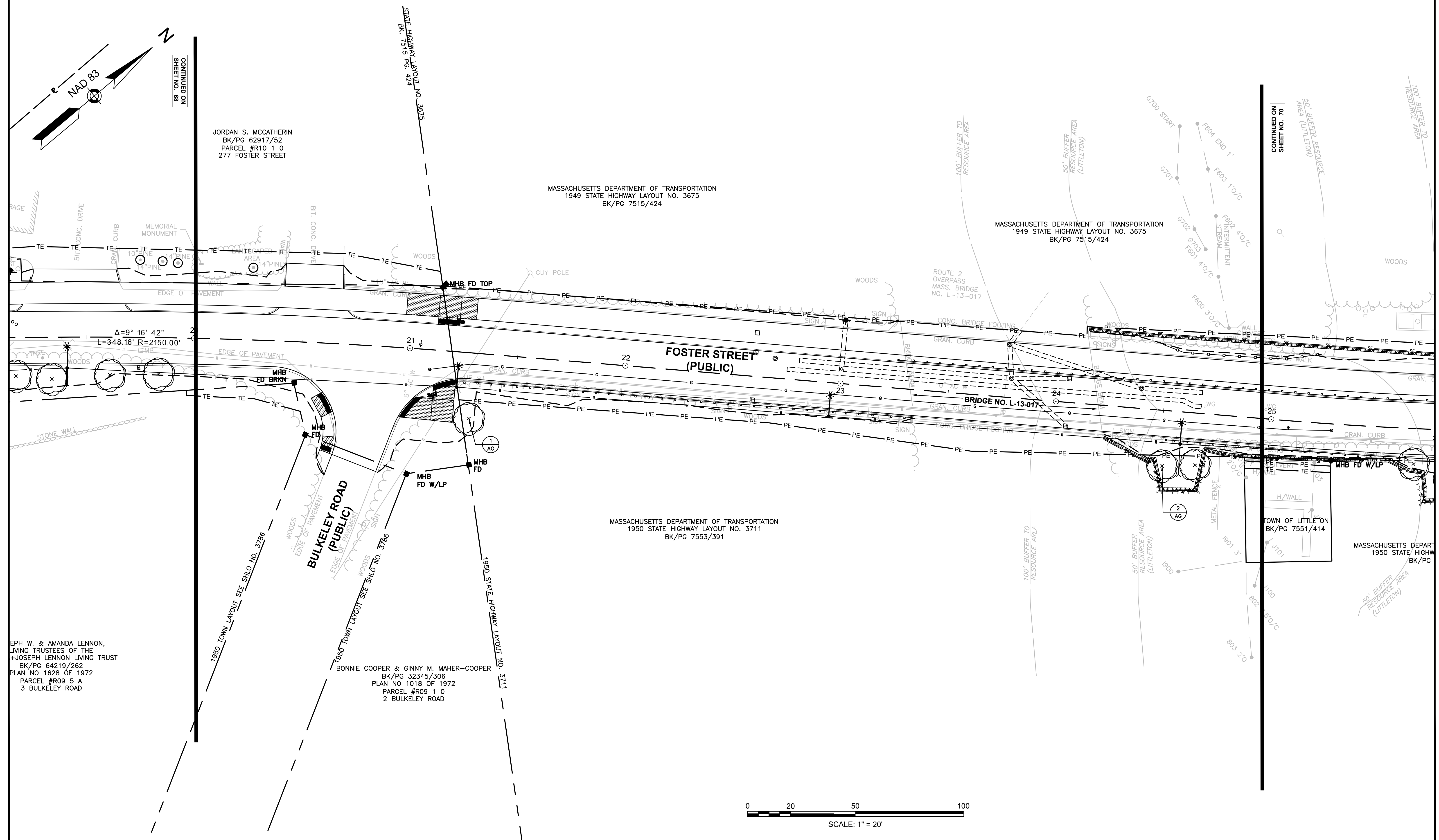


**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	69	128

PROJECT FILE NO. 609054

LANDSCAPING PLANS



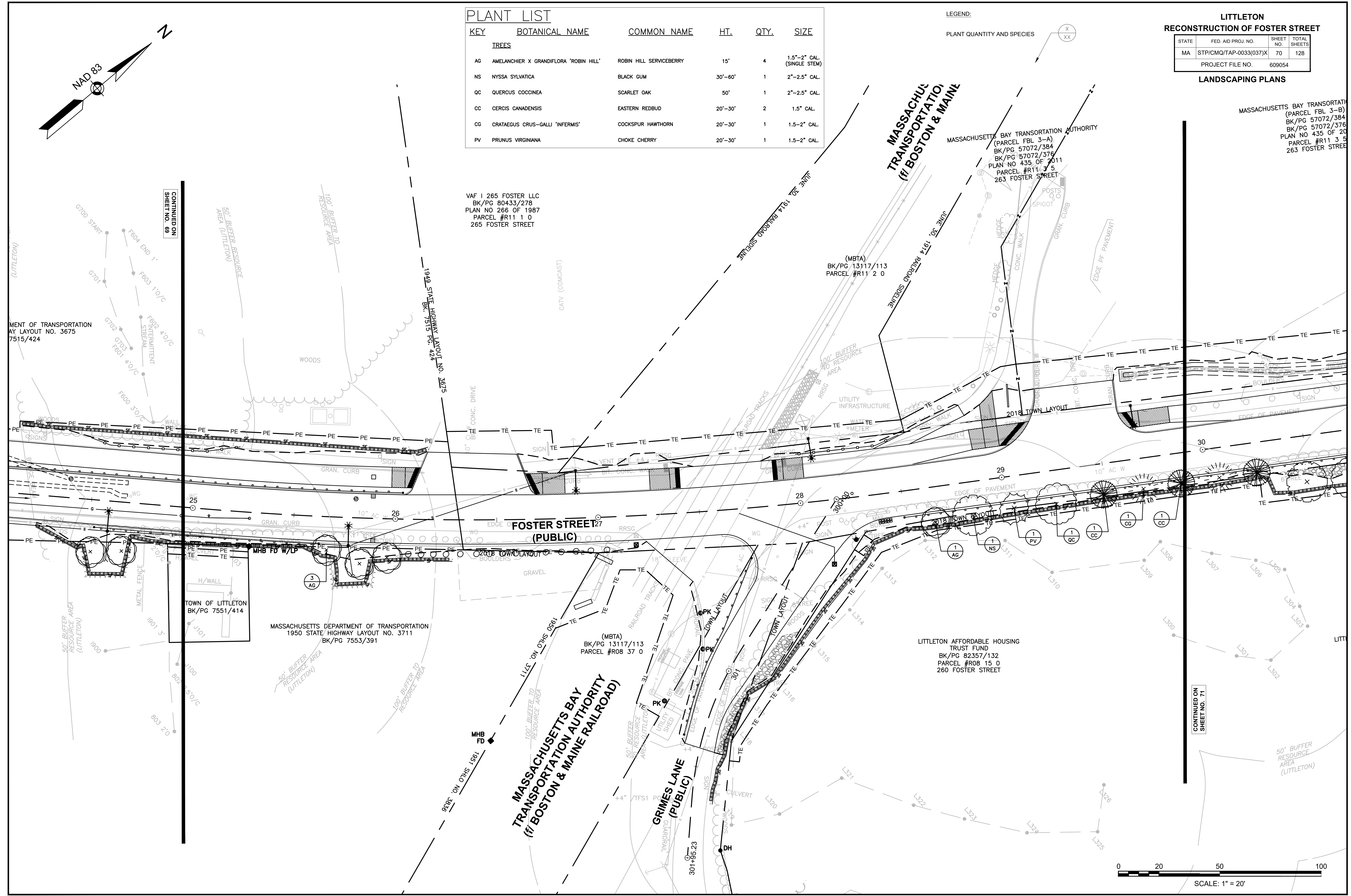
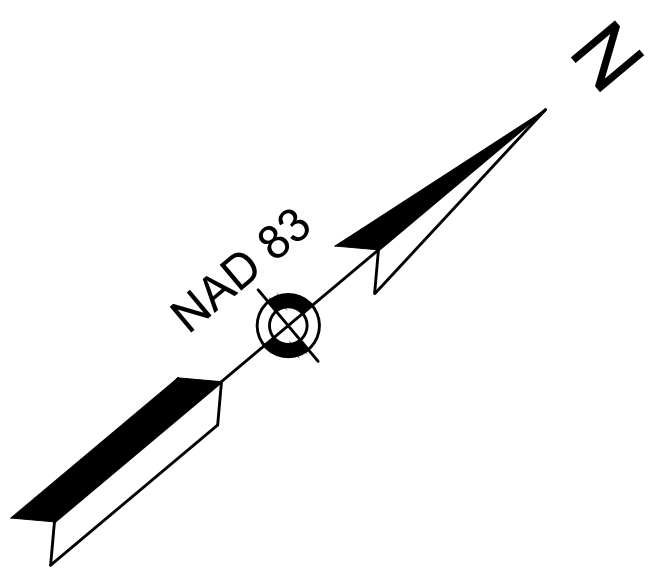
**LITTLETON
 RECONSTRUCTION OF FOSTER STREET
 LANDSCAPING PLANS**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	70	128
PROJECT FILE NO.		609054	

PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	HT.	QTY.	SIZE
TREES					
AG	AMELANCHIER X GRANDIFLORA 'ROBIN HILL'	ROBIN HILL SERVICEBERRY	15'	4	1.5"-2" CAL (SINGLE STEM)
NS	NYSSA SYLVATICA	BLACK GUM	30'-60'	1	2"-2.5" CAL
QC	QUERCUS COCCINEA	SCARLET OAK	50'	1	2"-2.5" CAL
CC	CERCIS CANADENSIS	EASTERN REDBUD	20'-30'	2	1.5" CAL.
CG	CRATAEGUS CRUS-GALLI 'INFERMIS'	COCKSPUR HAWTHORN	20'-30'	1	1.5-2" CAL.
PV	PRUNUS VIRGINIANA	CHOKE CHERRY	20'-30'	1	1.5-2" CAL.

LEGEND:
 PLANT QUANTITY AND SPECIES



VAF I 265 FOSTER LLC
 BK/PG 80433/278
 PLAN NO 266 OF 1987
 PARCEL #R11 1 0
 265 FOSTER STREET

(MBTA)
 BK/PG 13117/113
 PARCEL #R11 2 0

(MBTA)
 BK/PG 13117/113
 PARCEL #R08 37 0

LITTLETON AFFORDABLE HOUSING
 TRUST FUND
 BK/PG 82357/132
 PARCEL #R08 15 0
 260 FOSTER STREET

CONTINUED ON
 SHEET NO. 71

CONTINUED ON
 SHEET NO. 69

SCALE: 1" = 20'

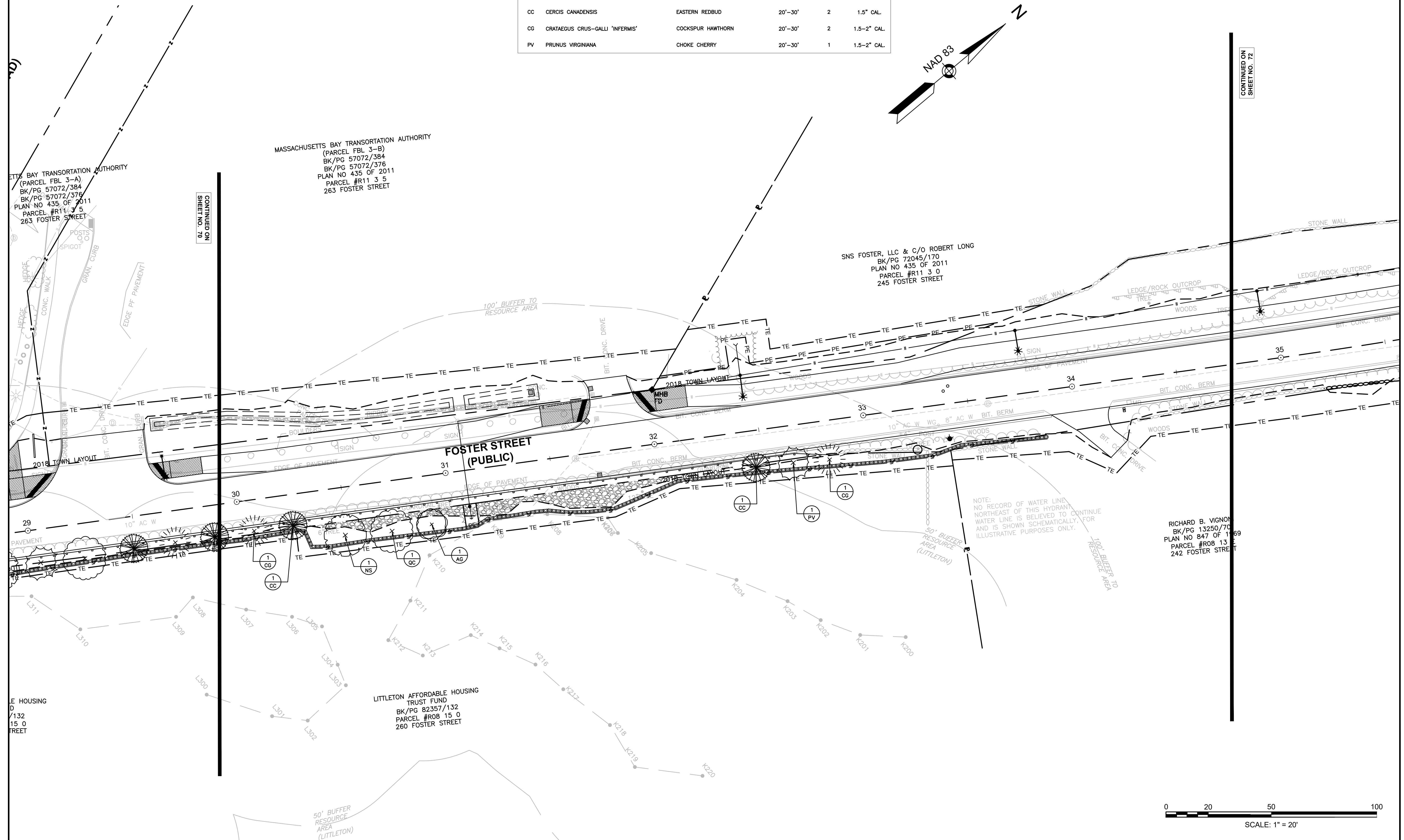
KEY	BOTANICAL NAME	COMMON NAME	HT.	QTY.	SIZE
TREES					
NS	NYSSA SYLVATICA	BLACK GUM	30'-60'	1	2"-2.5" CAL.
QC	QUERCUS COCCINEA	SCARLET OAK	50'-70'	1	2"-2.5" CAL.
CC	CERCIS CANADENSIS	EASTERN REDBUD	20'-30'	2	1.5" CAL.
CG	CRATAEGUS CRUS-GALLI 'INFERMIS'	COCKSPUR HAWTHORN	20'-30'	2	1.5-2" CAL.
PV	PRUNUS VIRGINIANA	CHOKE CHERRY	20'-30'	1	1.5-2" CAL.

LEGEND:
PLANT QUANTITY AND SPECIES

**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

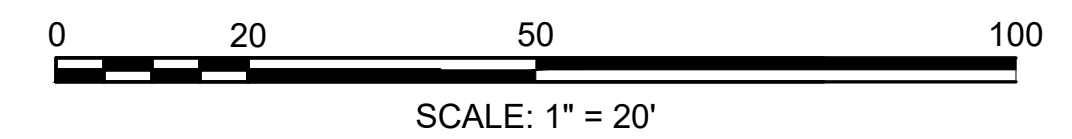
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	71	128
PROJECT FILE NO.		609054	

LANDSCAPING PLANS



CONTINUED ON
SHEET NO. 70

CONTINUED ON
SHEET NO. 72



PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	HT.	QTY.	SIZE
TREES					
AG	AMELANCHIER X GRANDIFLORA 'ROBIN HILL'	ROBIN HILL SERVICEBERRY	15'	3	1.5"-2" CAL. (SINGLE STEM)

LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	72	128
PROJECT FILE NO.		609054	

LANDSCAPING PLANS

PATRICIA A. NARGIZIAN
BK/PG 70735/467
PARCEL #R11 5 4
237 FOSTER STREET

SNS FOSTER, LLC & C/O ROBERT LONG
BK/PG 72045/170
PLAN NO 435 OF 2011
PARCEL #R11 3 0
245 FOSTER STREET

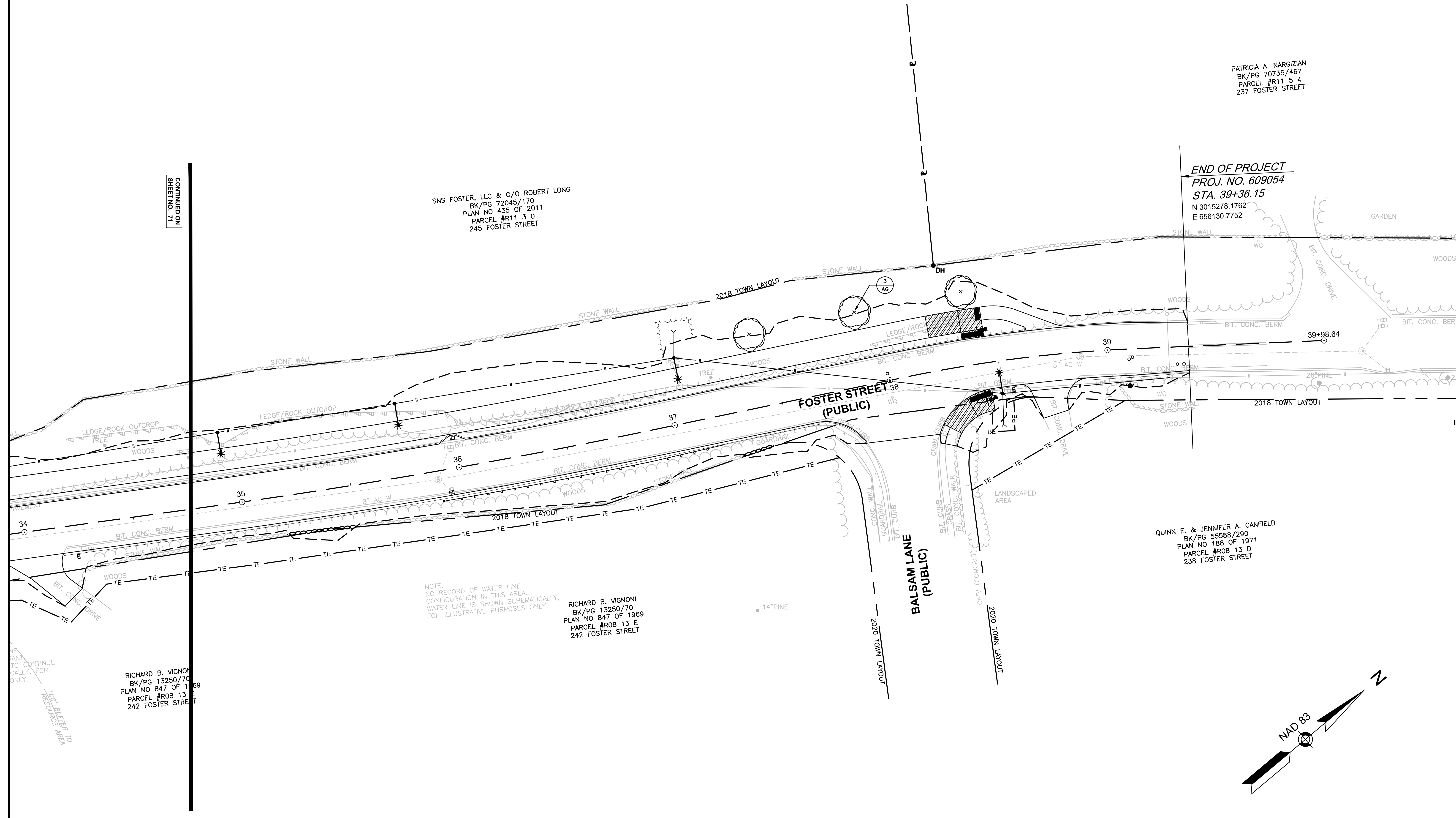
END OF PROJECT
PROJ. NO. 609054
STA. 39+36.15
N 3015278.1762
E 656130.7752

QUINN E. & JENNIFER A. CANFIELD
BK/PG 55588/290
PLAN NO 188 OF 1971
PARCEL #R08 13 D
238 FOSTER STREET

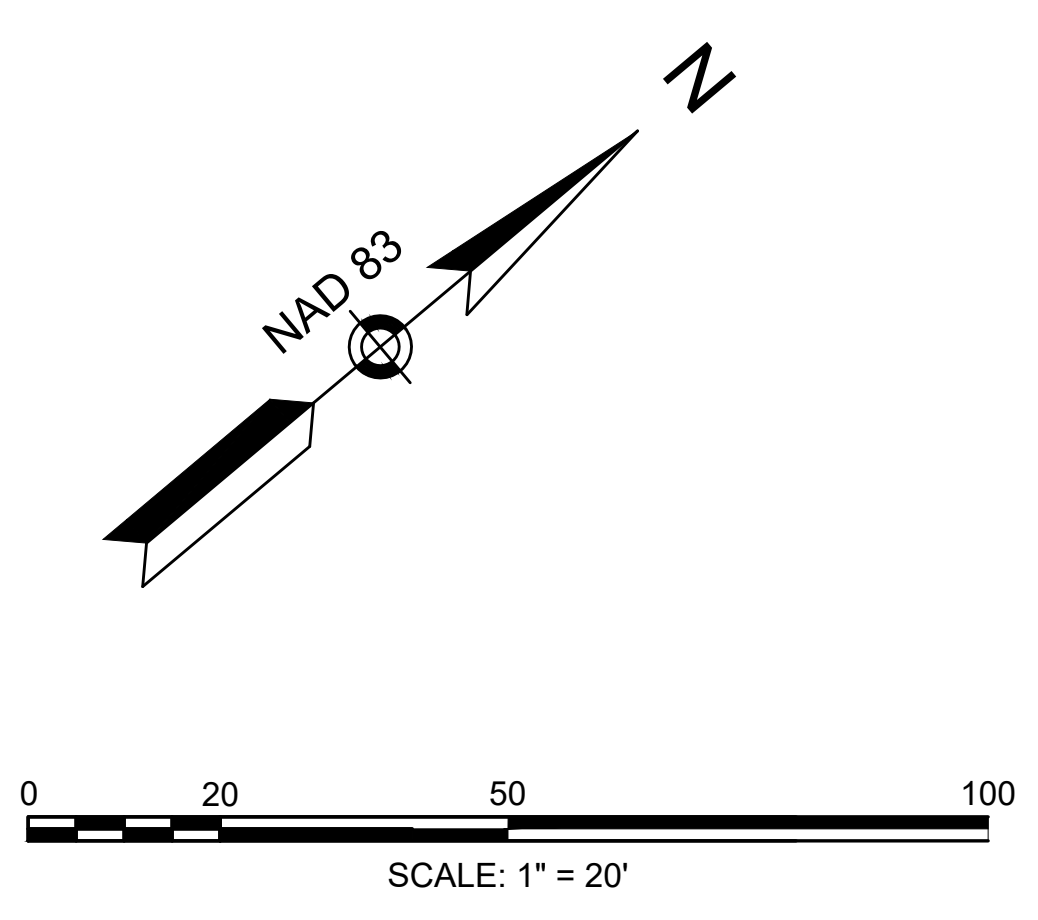
RICHARD B. VIGNONI
BK/PG 13250/70
PLAN NO 847 OF 1969
PARCEL #R08 13 E
242 FOSTER STREET

NOTE:
NO RECORD OF WATER LINE
CONFIGURATION IN THIS AREA.
WATER LINE IS SHOWN SCHEMATICALLY
FOR ILLUSTRATIVE PURPOSES ONLY.

RICHARD B. VIGNONI
BK/PG 13250/70
PLAN NO 847 OF 1969
PARCEL #R08 13 E
242 FOSTER STREET



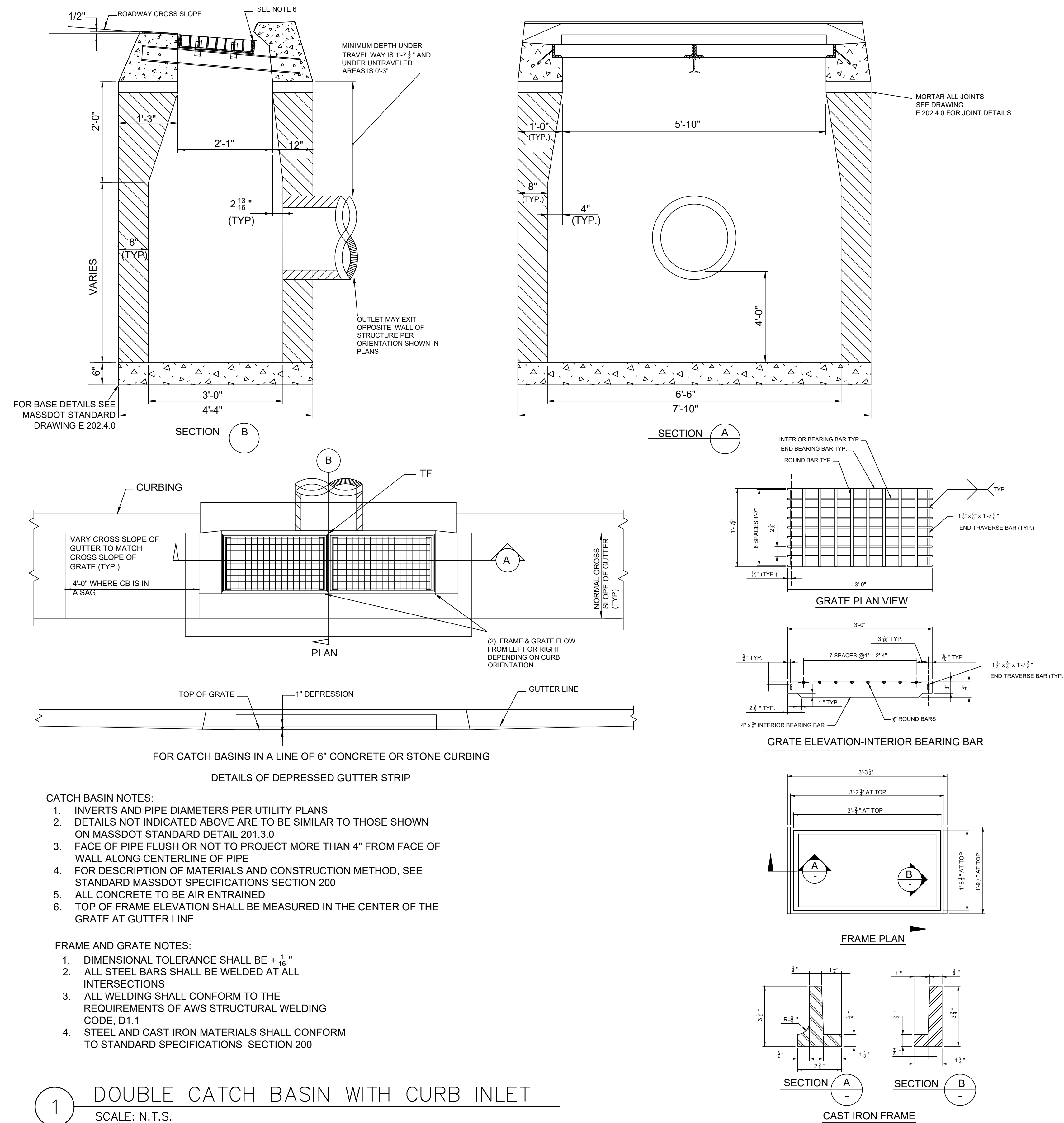
CONTINUED ON
SHEET NO. 71



LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	73	128
PROJECT FILE NO.		609054	

DRAINAGE & UTILITY DETAILS

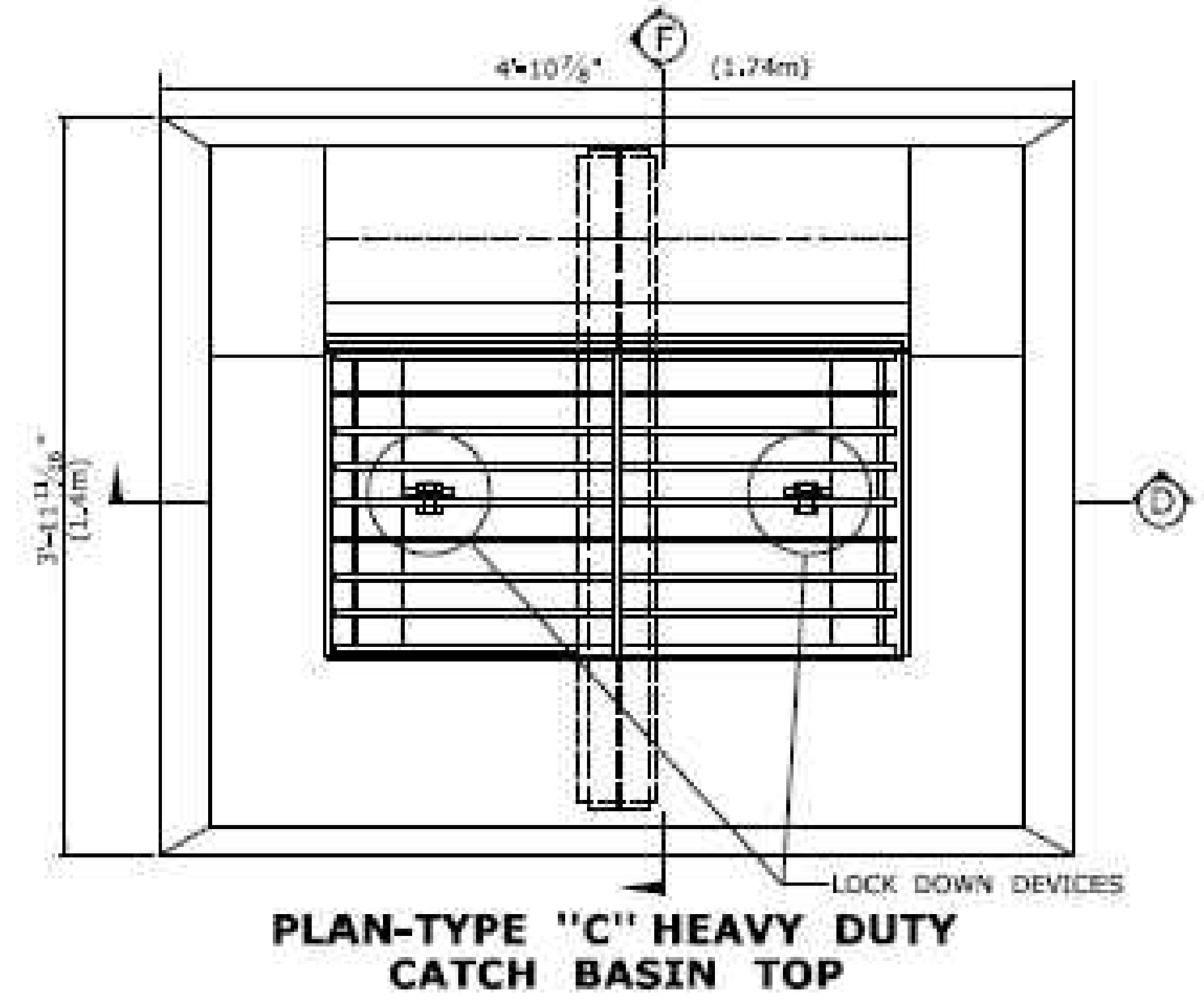


- CATCH BASIN NOTES:**
1. INVERTS AND PIPE DIAMETERS PER UTILITY PLANS
 2. DETAILS NOT INDICATED ABOVE ARE TO BE SIMILAR TO THOSE SHOWN ON MASSDOT STANDARD DETAIL 201.3.0
 3. FACE OF PIPE FLUSH OR NOT TO PROJECT MORE THAN 4" FROM FACE OF WALL ALONG CENTERLINE OF PIPE
 4. FOR DESCRIPTION OF MATERIALS AND CONSTRUCTION METHOD, SEE STANDARD MASSDOT SPECIFICATIONS SECTION 200
 5. ALL CONCRETE TO BE AIR ENTRAINED
 6. TOP OF FRAME ELEVATION SHALL BE MEASURED IN THE CENTER OF THE GRATE AT GUTTER LINE
- FRAME AND GRATE NOTES:**
1. DIMENSIONAL TOLERANCE SHALL BE + 1/16"
 2. ALL STEEL BARS SHALL BE WELDED AT ALL INTERSECTIONS
 3. ALL WELDING SHALL CONFORM TO THE REQUIREMENTS OF AWS STRUCTURAL WELDING CODE, D1.1
 4. STEEL AND CAST IRON MATERIALS SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 200

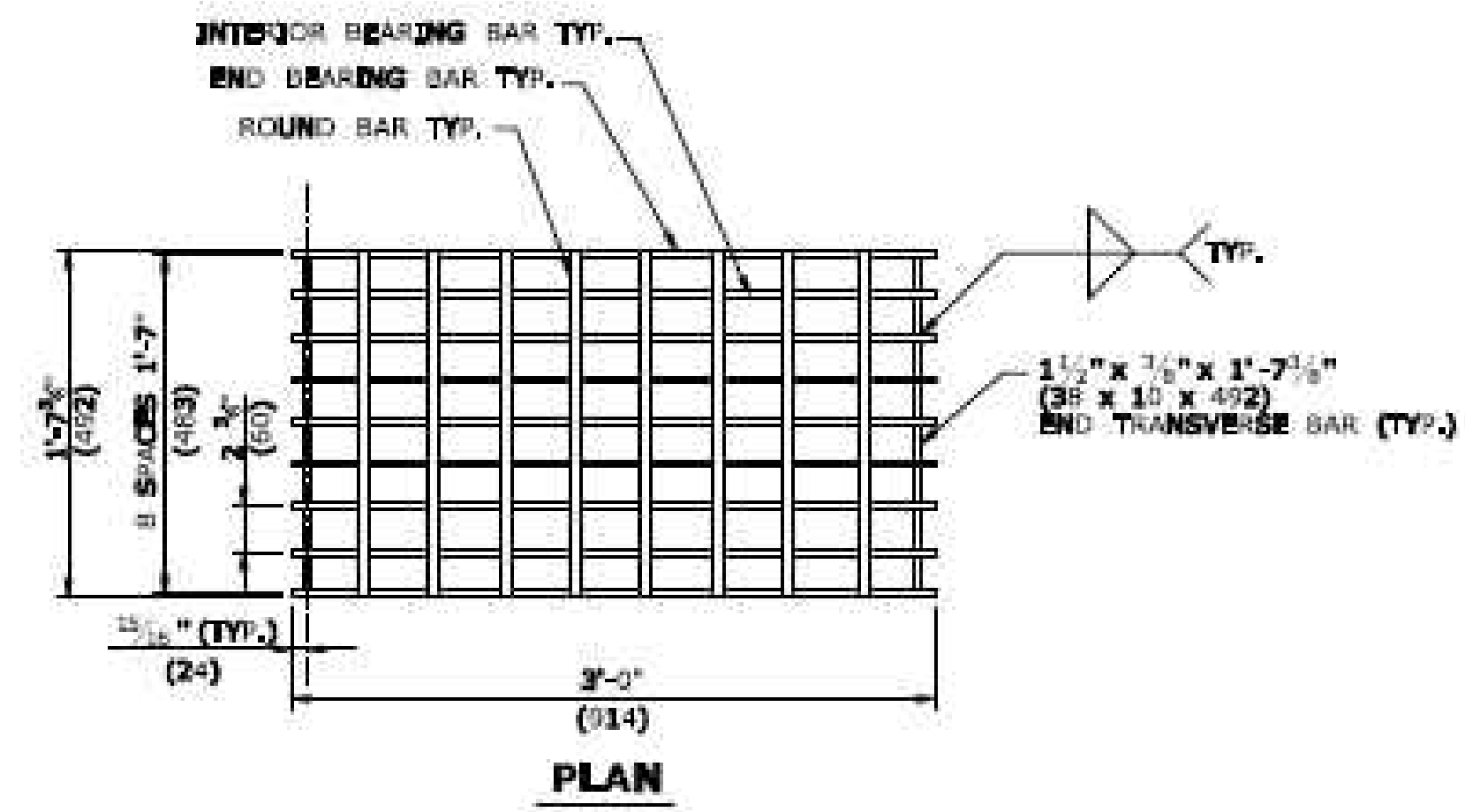
1 DOUBLE CATCH BASIN WITH CURB INLET
SCALE: N.T.S.

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	74	128
PROJECT FILE NO.		609054	

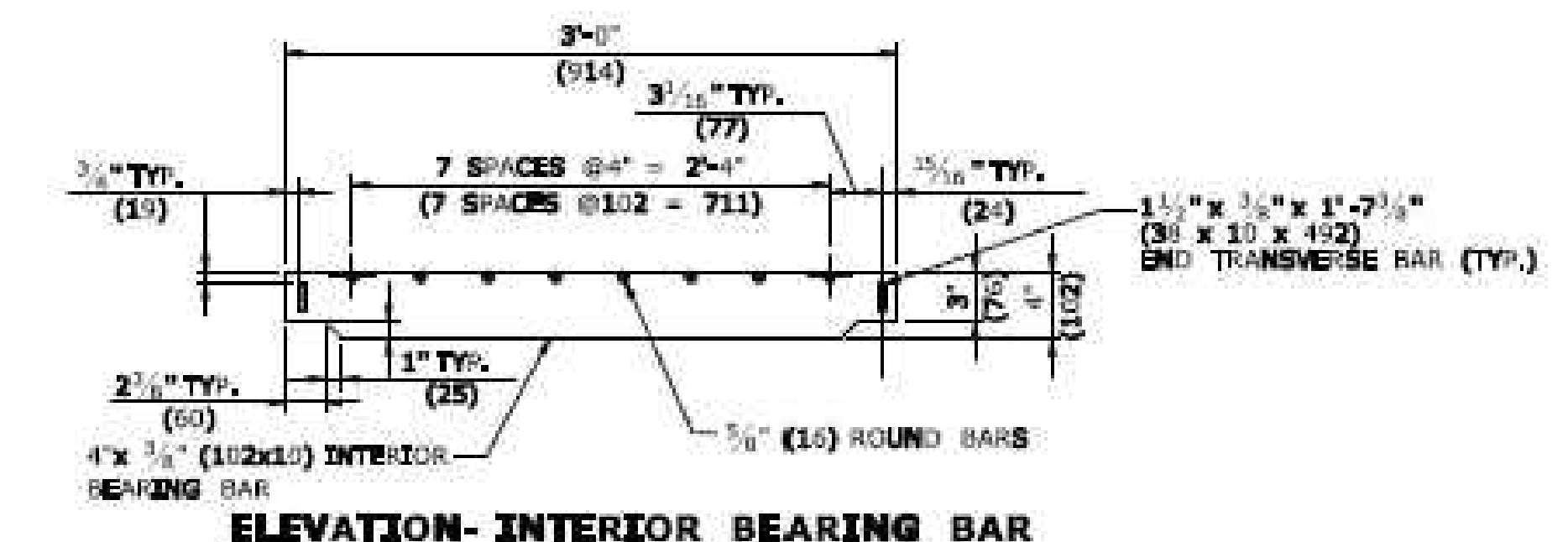
DRAINAGE & UTILITY DETAILS



PLAN-TYPE "C" HEAVY DUTY CATCH BASIN TOP

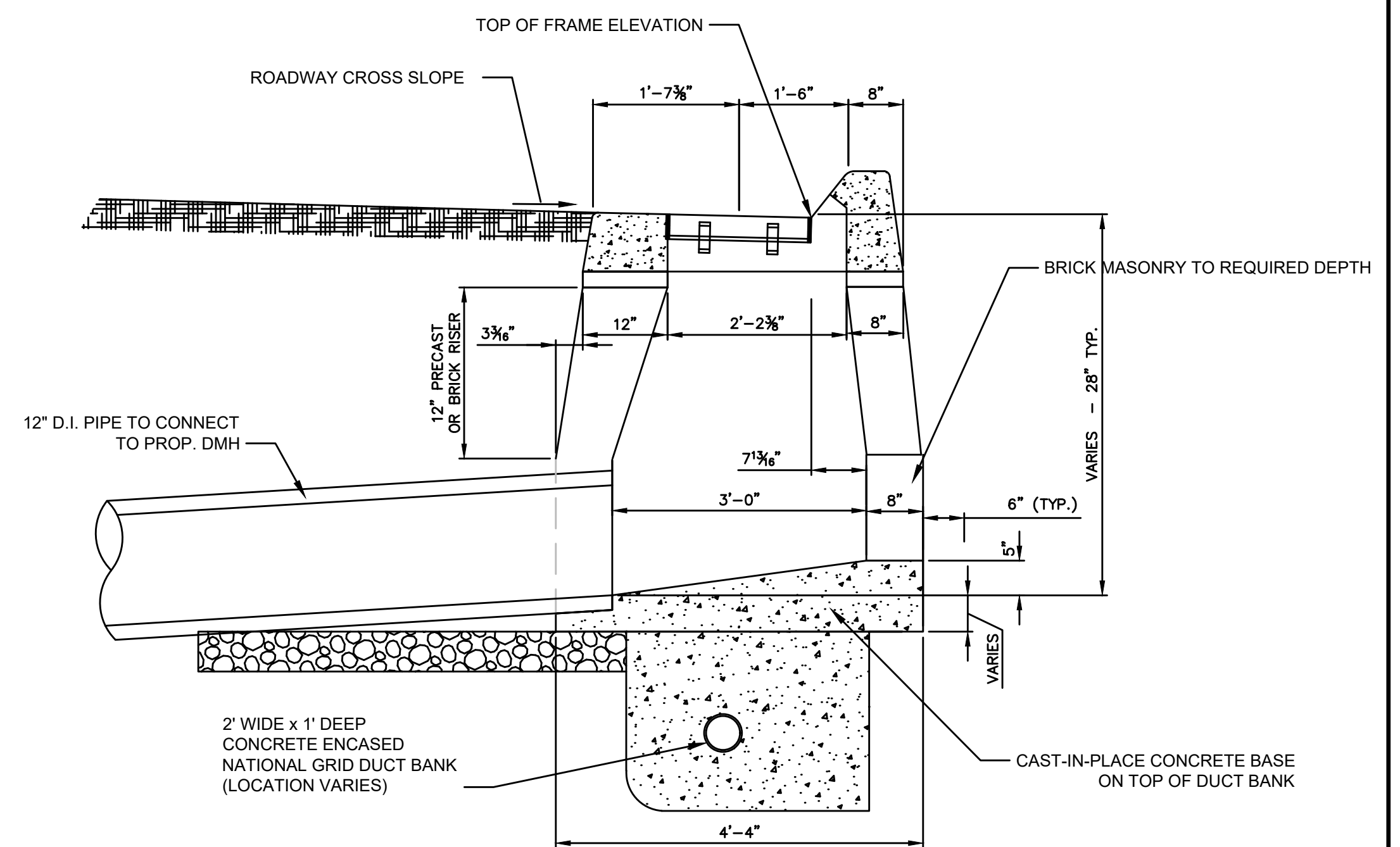


ELEVATION-INTERIOR BEARING BAR



ELEVATION-END BEARING BAR CATCH BASIN GRATE TYPE A

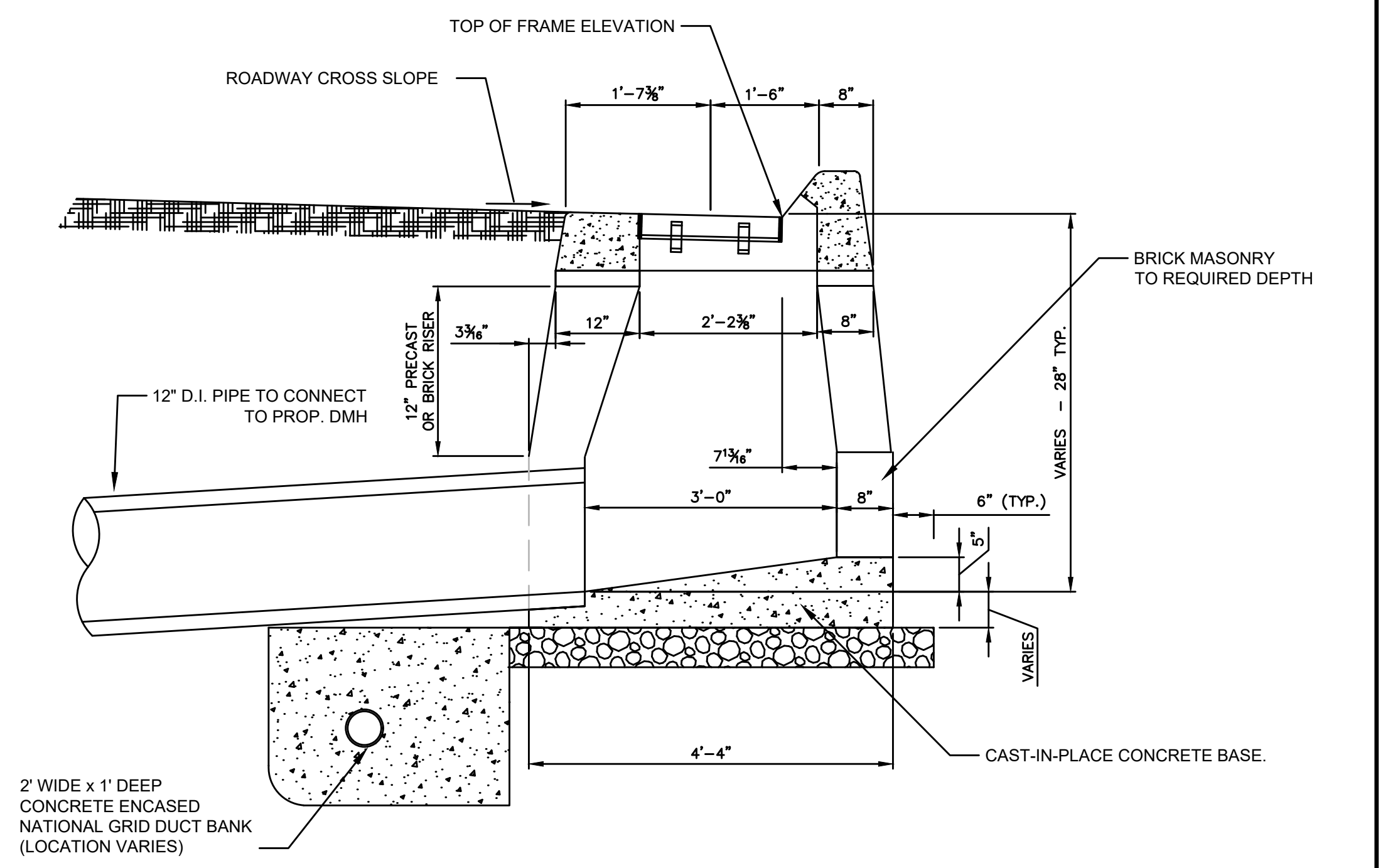
3 DOUBLE CATCH BASIN GRATE SCALE: N.T.S.



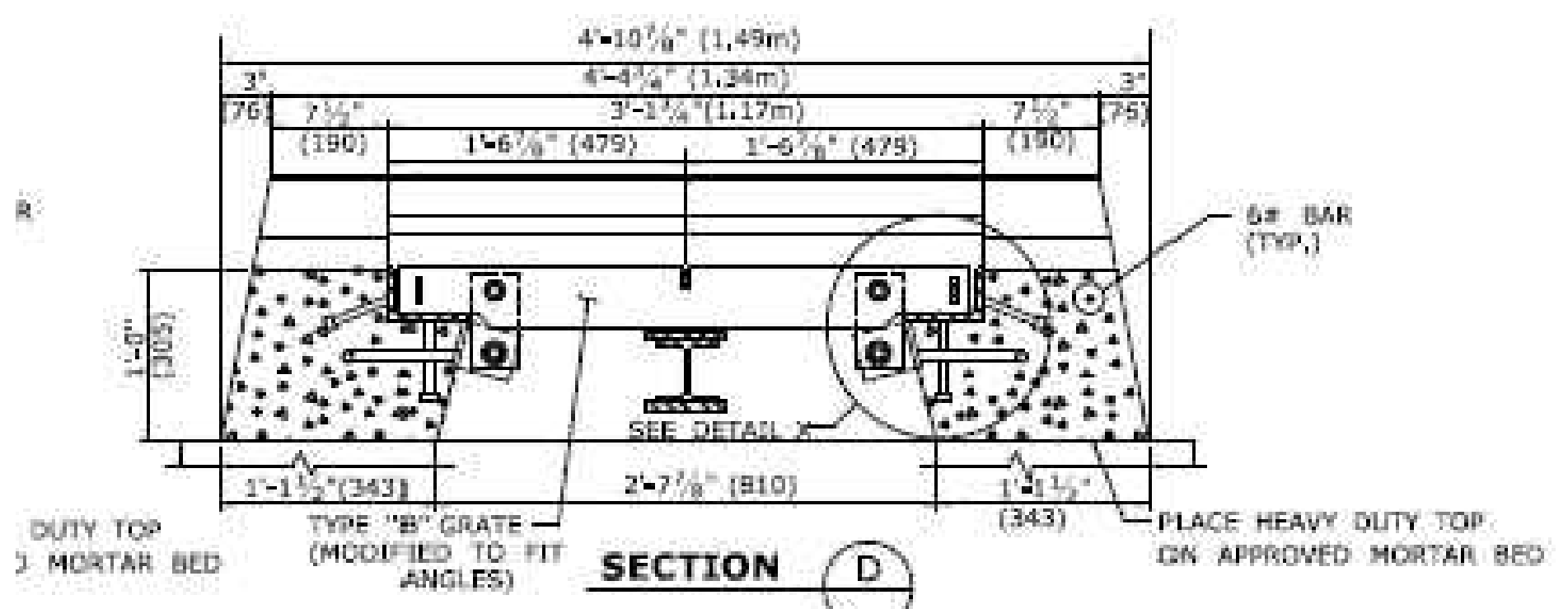
GUTTER INLET - SPECIAL TYPE 1 GENERAL NOTES

- IF CONCRETE MASONRY UNITS ARE REQUIRED, THE BASIN SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE OVER ALL DIMENSIONS SHOWN HERE. CORBELLING WILL BE ALLOWED AT A MAXIMUM OF 1" PER BLOCK, TURN TOP COURSE 90° TO FRONT AND SIDE WALLS ONLY. RED BRICK IS NOT TO BE USED.
- END OF PIPE SHALL EXTEND TO AND BE CUT FLUSH WITH INSIDE FACE OF FACE OF GUTTER INLET WALL.
- MINIMUM CONCRETE COMPRESSIVE STRENGTH OF F_c = 4000 PSI SHALL BE OBTAINED PRIOR TO SHIPPING.
- ALL KNOCKOUTS IN PRECAST UNITS SHALL BE MADE FLUSH WITH EXTERIOR / INTERIOR OF UNITS USING CONCRETE, BRICKS AND MORTAR.
- LATEST MASSDOT STANDARD SPECIFICATIONS AND SUPPLEMENTALS SHALL GOVERN.

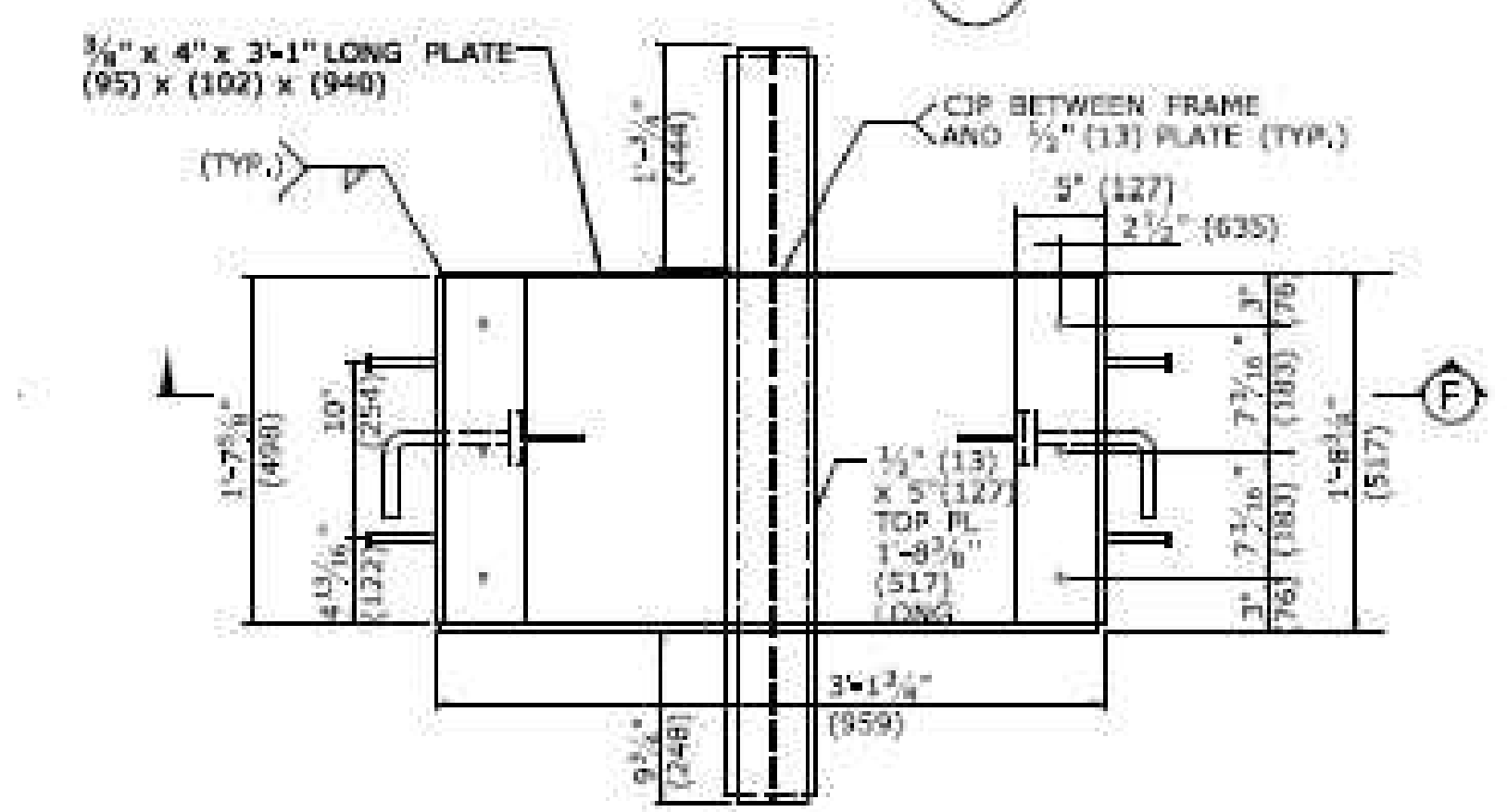
4 GUTTER INLET - SPECIAL TYPE 1 SCALE: N.T.S.



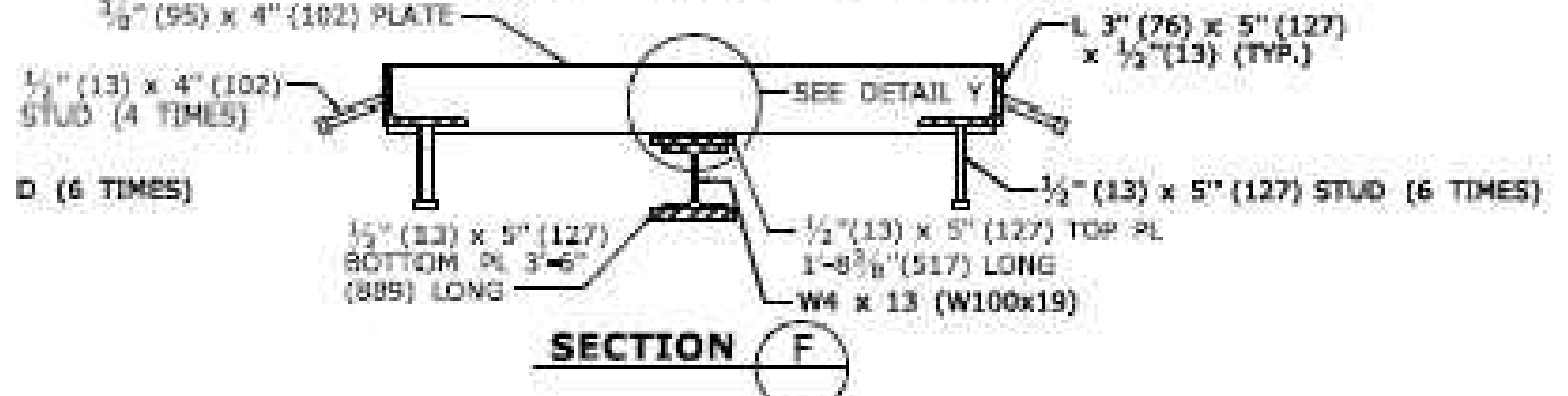
5 GUTTER INLET - SPECIAL TYPE 2 SCALE: N.T.S.



SECTION D



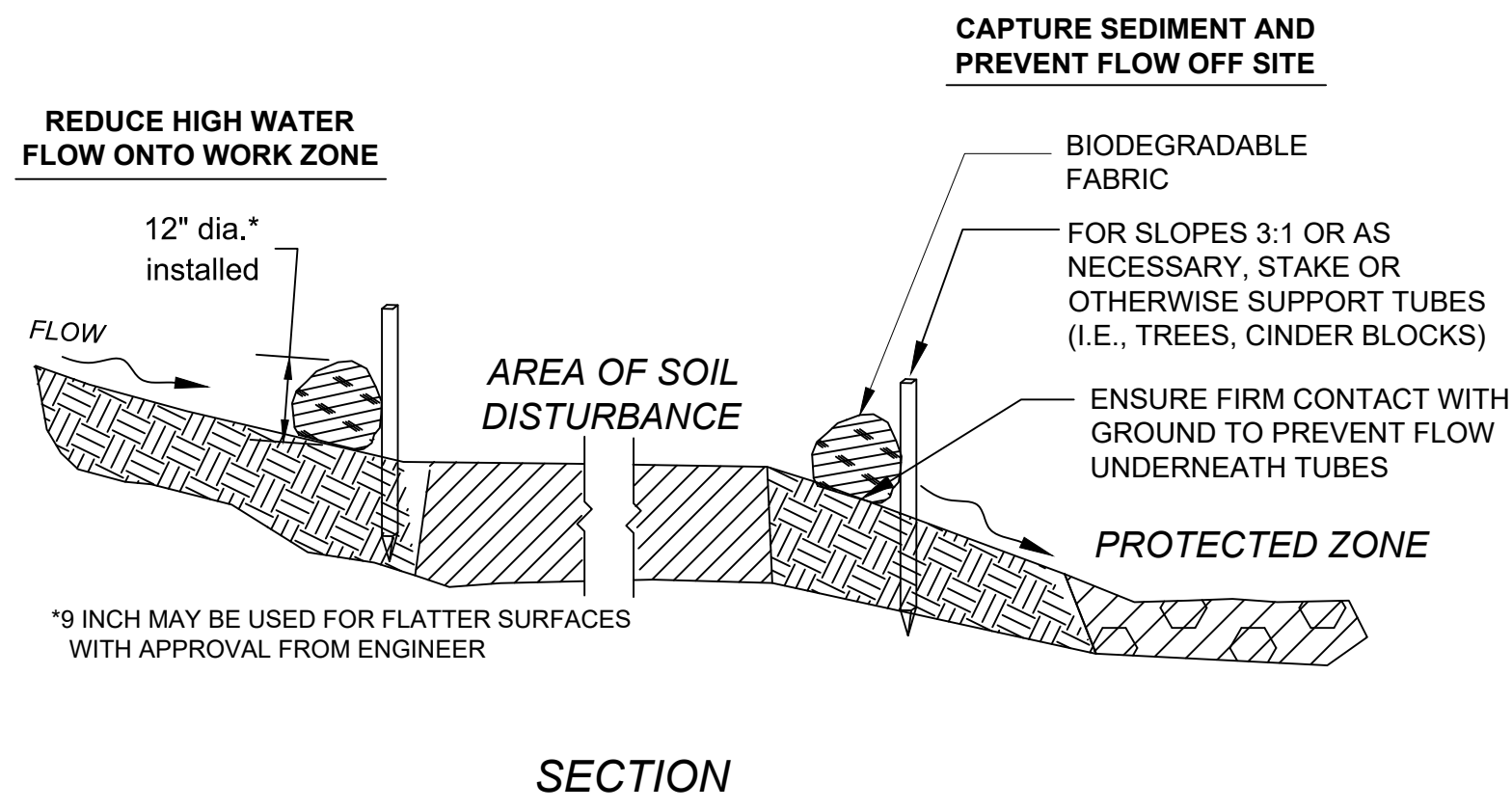
PLAN - TYPE "C" FRAME



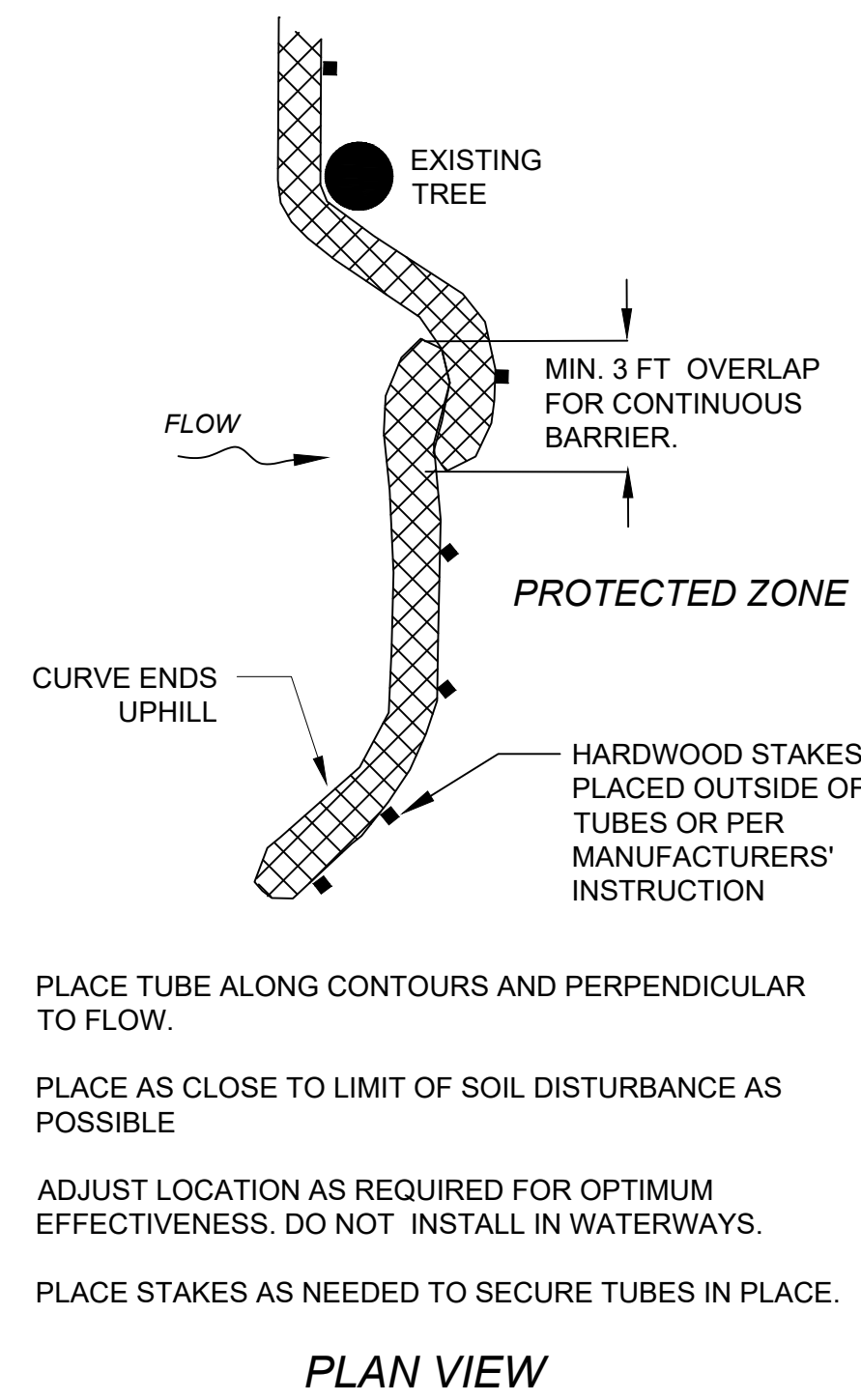
SECTION F

TYPE "C" HEAVY DUTY CATCH BASIN FRAME

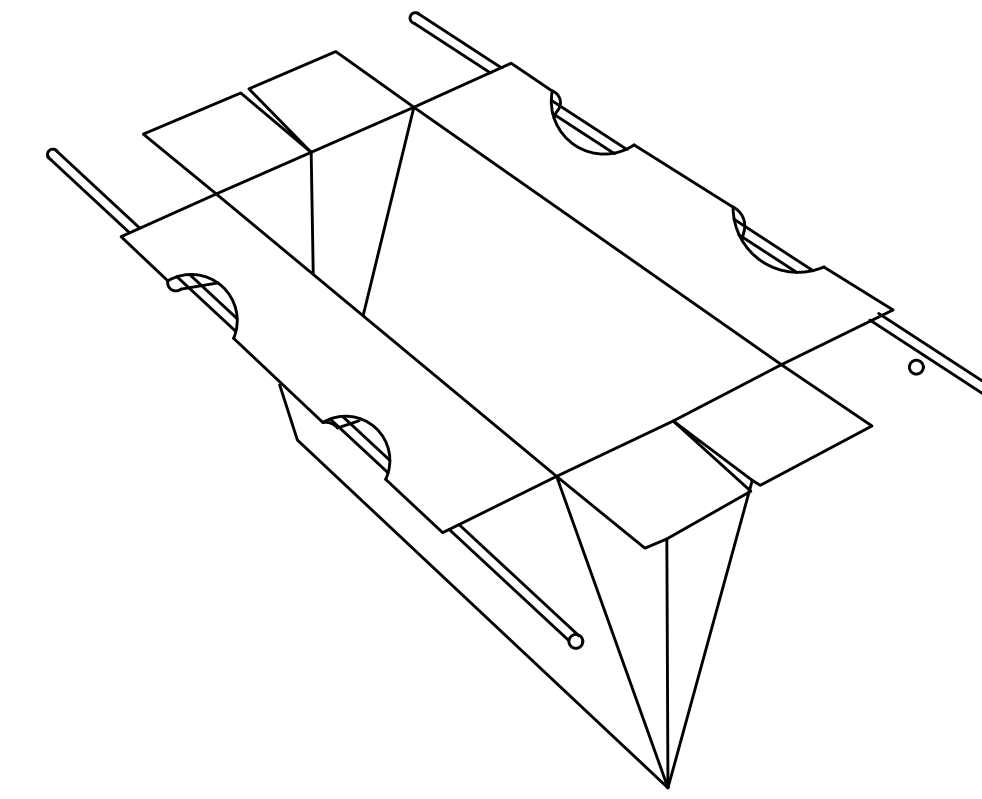
2 DOUBLE CATCH BASIN FRAME SCALE: N.T.S.



SEDIMENT BARRIER - COMPOST FILTER TUBES
NOT TO SCALE

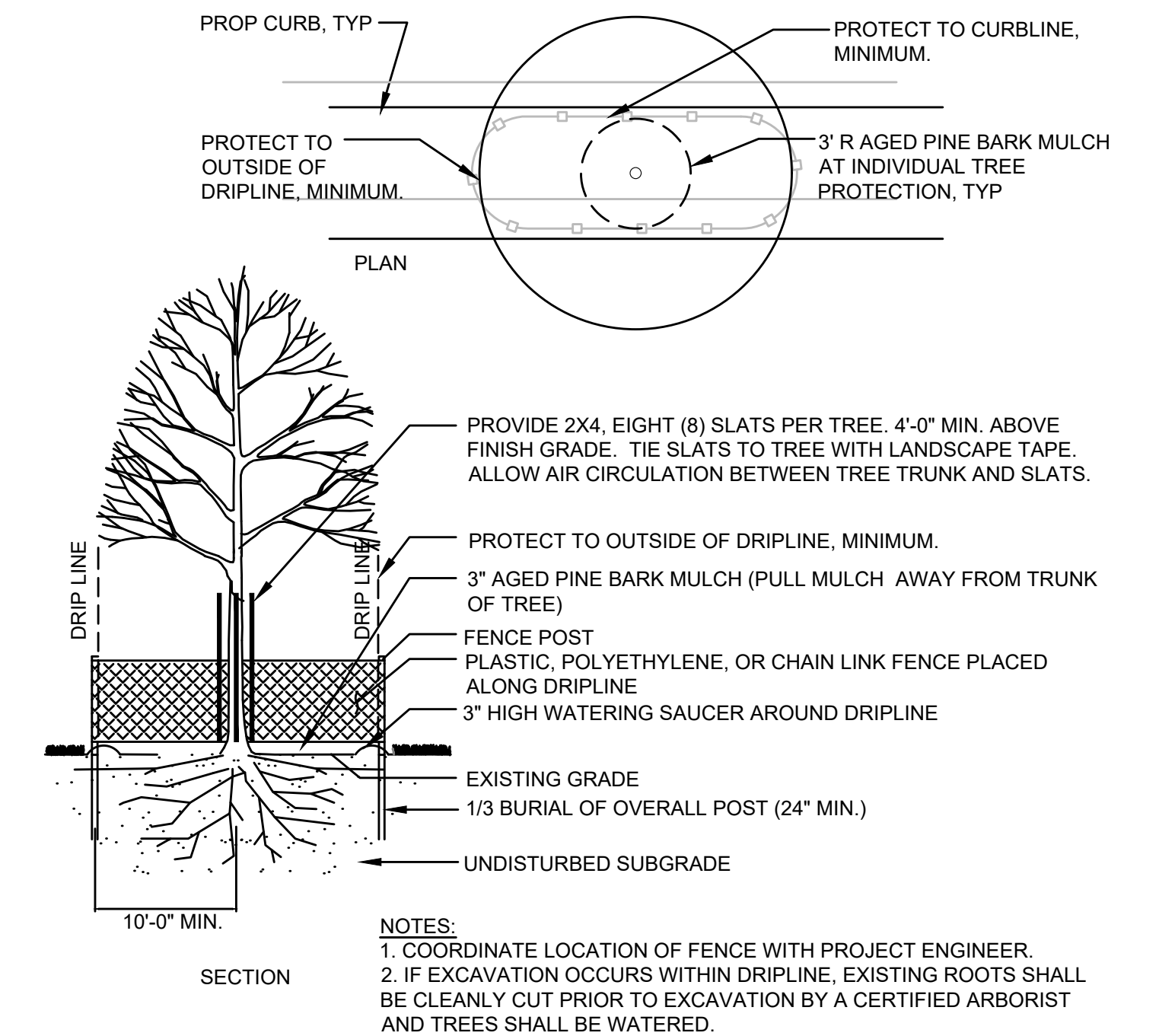


COMPOST FILTER TUBE
NOT TO SCALE

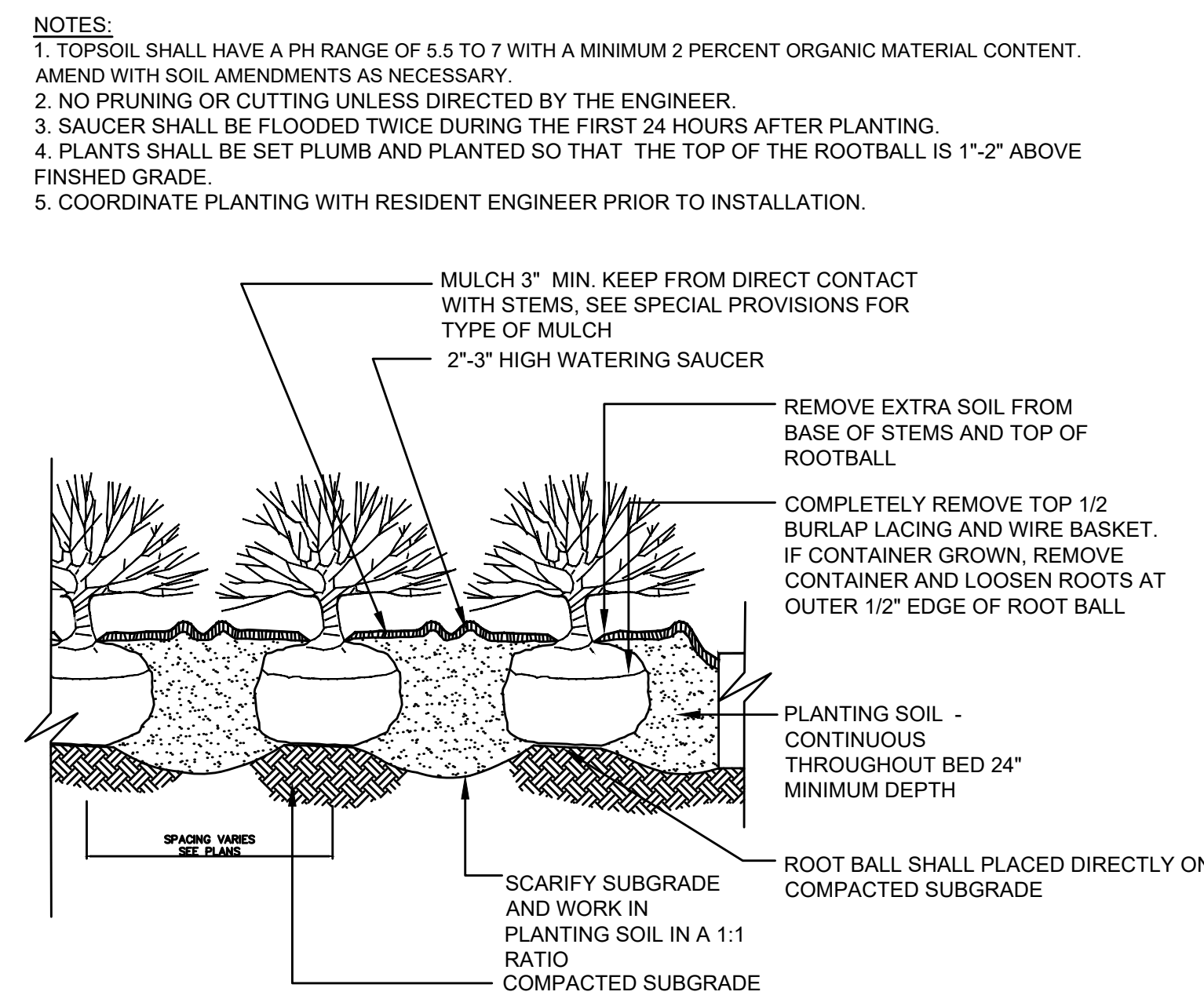


- NOTES:
1. SIZED TO FIT ANY SIZE OR SHAPE CATCH BASIN.
 2. ALL SEAMS DOUBLE STITCHED.
 3. PERMEABILITY - REGULAR FLOW SILTSACK - 40 gal./min./sq. ft.
HI - FLOW SILTSACK - 200 gal./min./sq. ft.

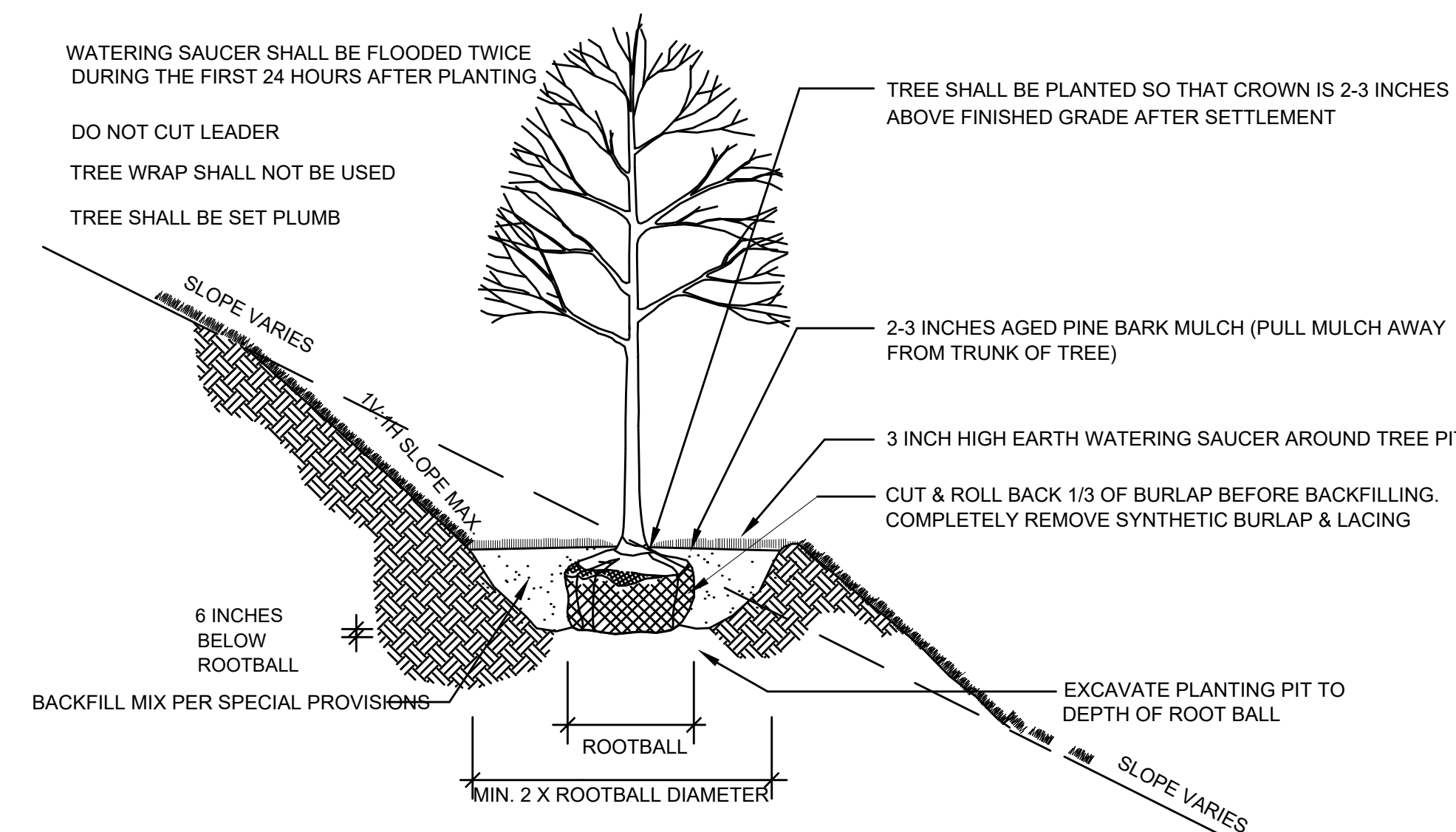
7 CATCH BASIN SILT SACK
SCALE: N.T.S.



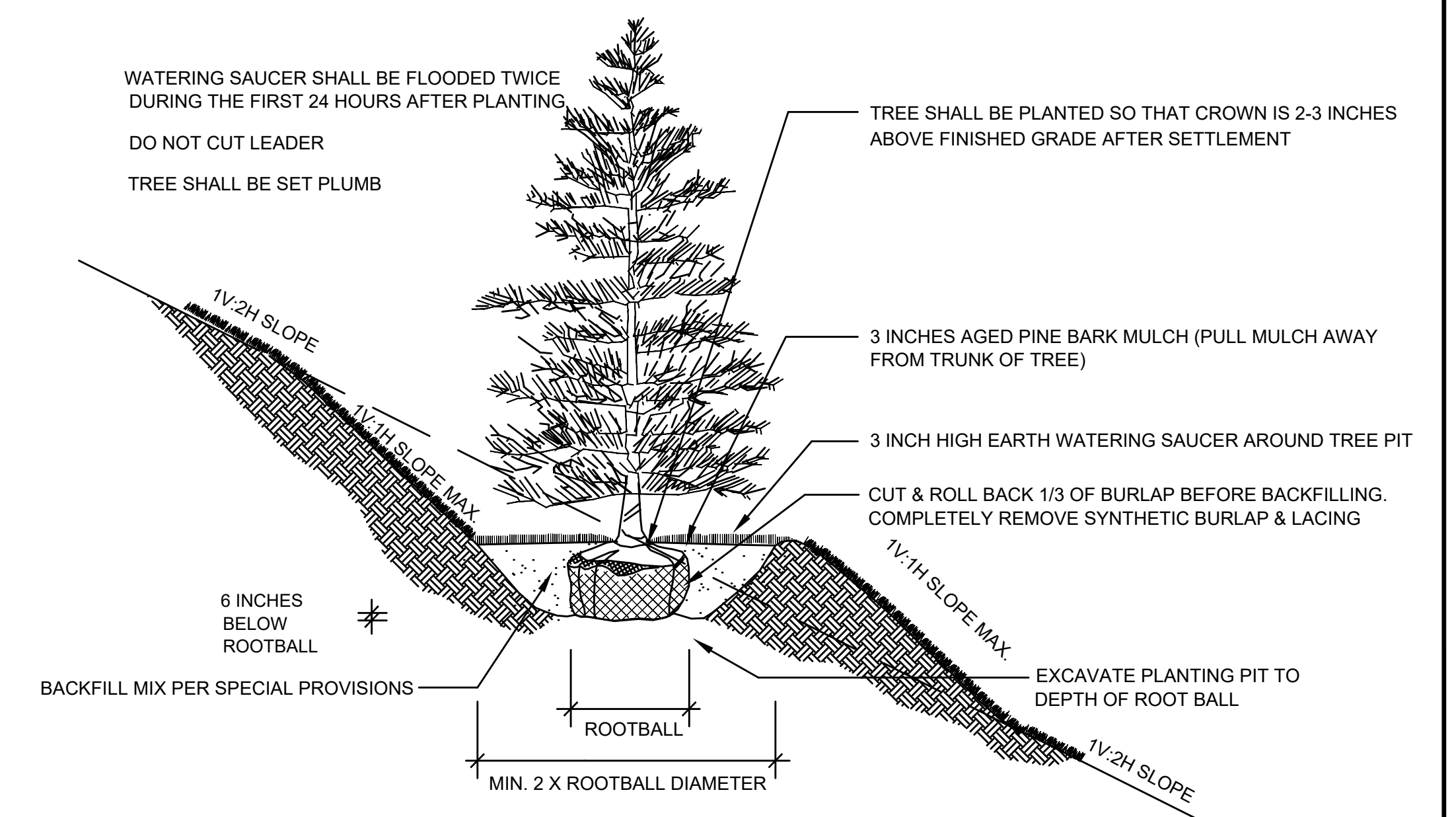
8 INDIVIDUAL TREE PROTECTION
SCALE: N.T.S.



9 SHRUB AND PERENNIAL PLANTING
SCALE: N.T.S.



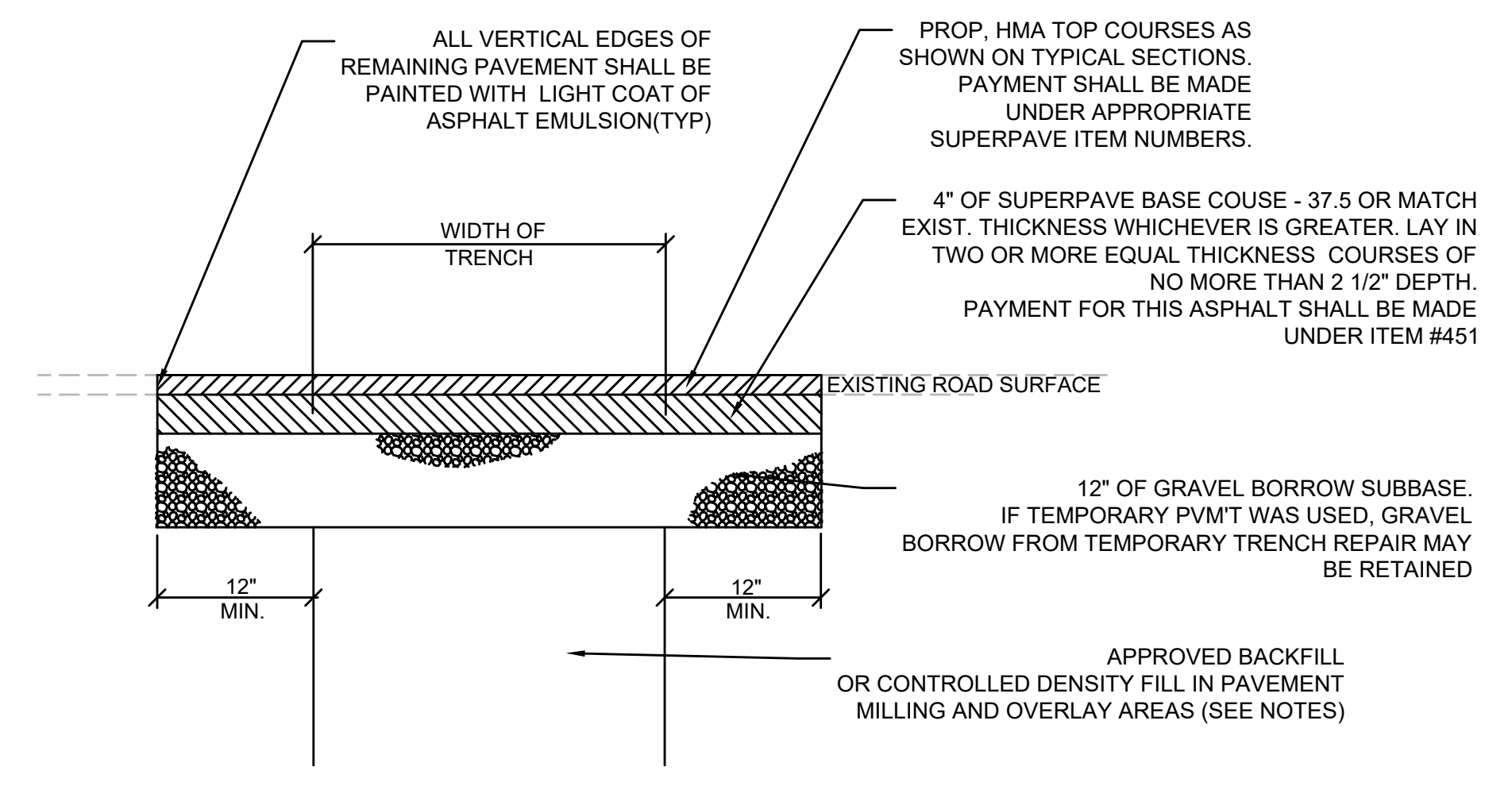
10 DECIDUOUS TREE PLANTING (SLOPE)
SCALE: N.T.S.



11 EVERGREEN TREE PLANTING (SLOPE)
SCALE: N.T.S.

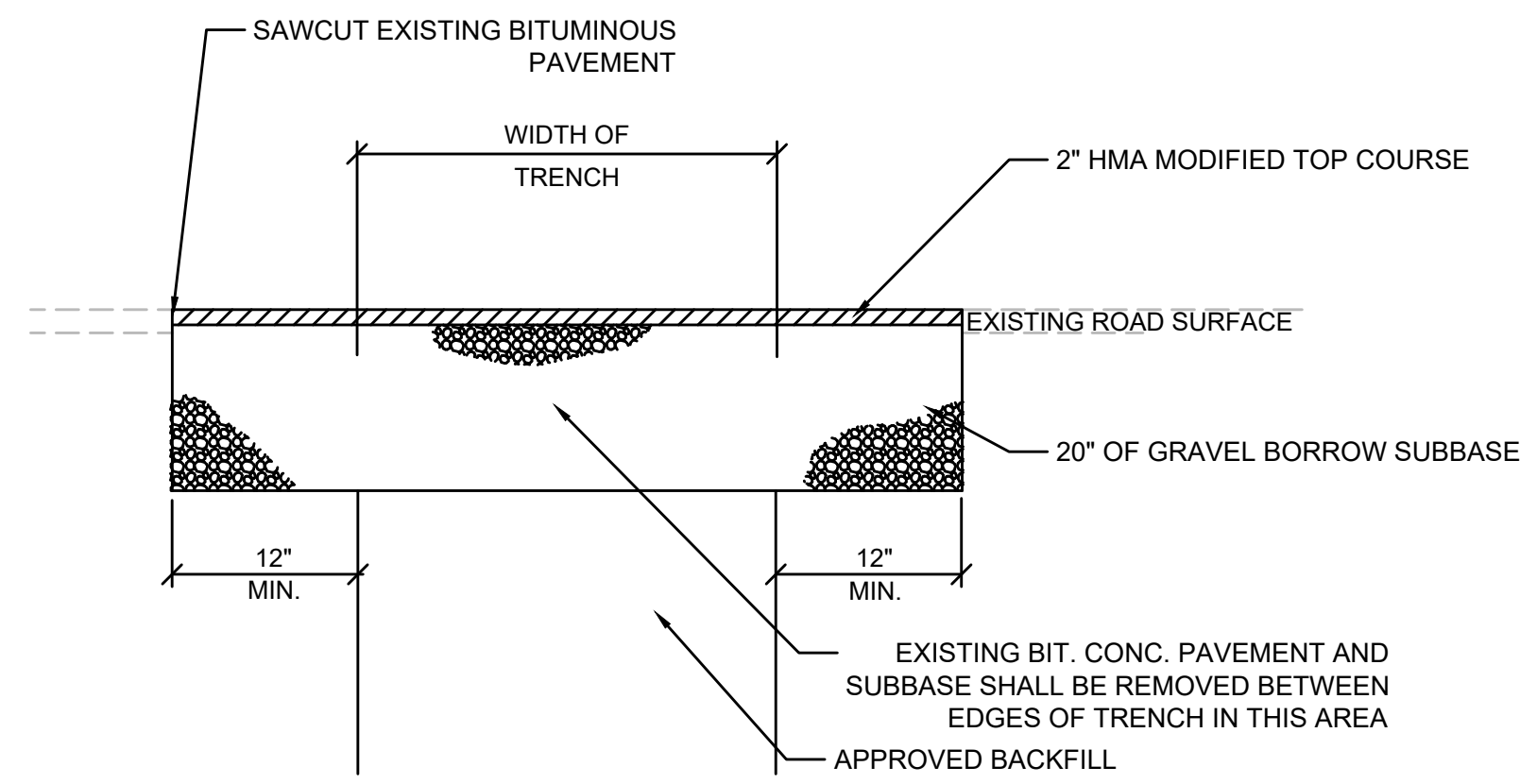
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	76	128
PROJECT FILE NO. 609054			

CONSTRUCTION DETAILS



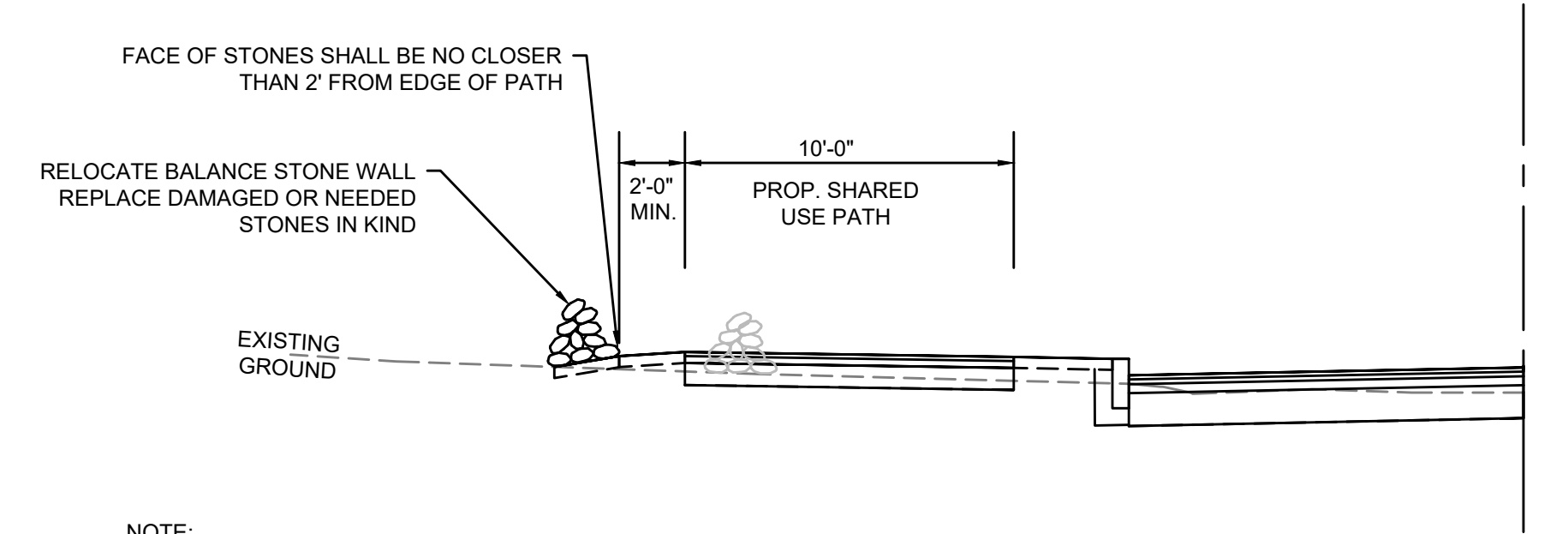
NOTES:
OVERLAY AREAS: THE TRENCH SHALL BE REPAIRED TO THE TOP OF THE BASE COURSE. THE TOP COURSES SHALL BE PLACED WITH OVERLAY OF THE ROADWAY
ROADWAY TRENCHING OUTSIDE OF FULL DEPTH AND OVERLAY: THE TRENCH SHALL BE REPAIRED WITH TOP COURSES INSTALLED WITH THE BASE COURSE.
CONTROLLED DENSITY FILL MAY BE USED IN LIEU OF APPROVED BACKFILL IN PAVEMENT MILLING AND OVERLAY AREAS WHERE NORMAL BACKFILL CANNOT BE PLACED OR TO REDUCE AMOUNT OF TIME NEEDED TO BACKFILL THE TRENCH. USE OF CONTROLLED DENSITY FILL TO BACKFILL TRENCHES SHALL BE APPROVED BY ENGINEER.
PERMANENT ASPHALT SHALL BE PAID FOR UNDER ITEM #451.

12 PERMANENT PAVEMENT TRENCH REPAIR IN ROADWAYS
SCALE: N.T.S.



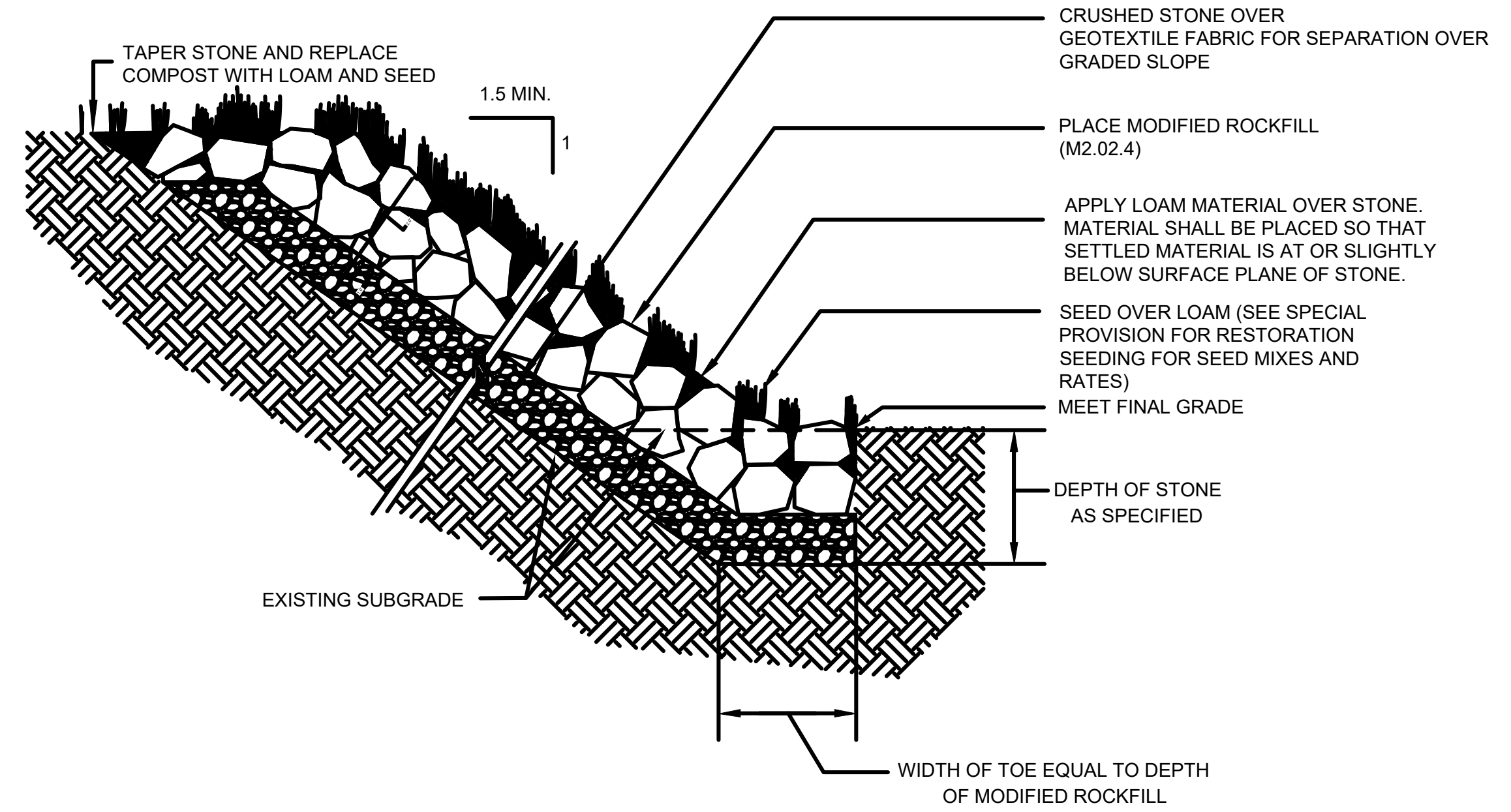
NOTES:
THE TEMPORARY PAVEMENT TRENCH REPAIR SHALL BE USED DURING THE TIME BETWEEN COMPLETION OF THE UTILITY CONSTRUCTION AND CONSTRUCTION OF THE PROPOSED ROADWAY PAVEMENT STRUCTURE OR PERMANENT PAVEMENT TRENCH REPAIR.
TEMPORARY ASPHALT SHALL BE PAID FOR UNDER ITEM #472

13 TEMPORARY PAVEMENT TRENCH REPAIR
SCALE: N.T.S.

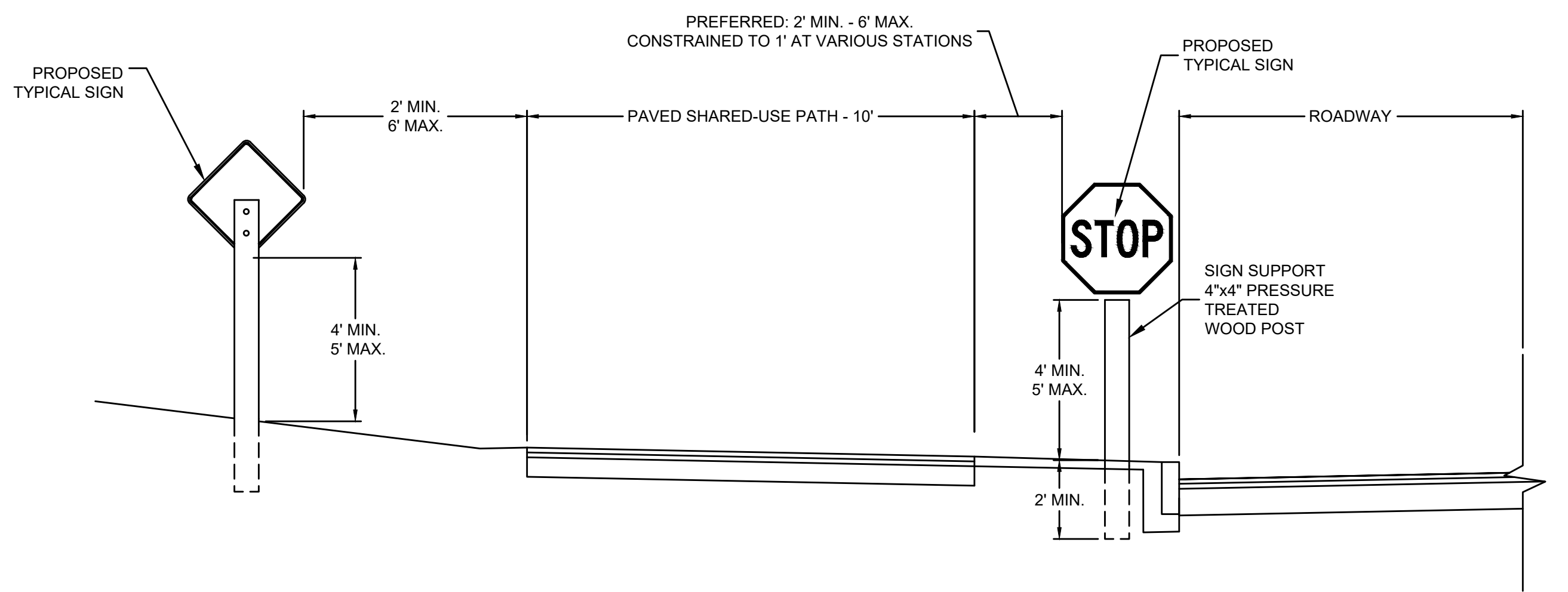


NOTE:
STONE WALL WIDTH AND HEIGHT ARE VARIABLE IN WALL REPLACEMENT AREAS. REPLACE IN KIND AT LOCATIONS SHOWN ON THE CONSTRUCTION PLANS.

14 BALANCE STONE WALL REMOVED AND REBUILT, DRY
SCALE: N.T.S.



15 MODIFIED ROCKFILL WITH COMPOST AND SEED COVER
SCALE: N.T.S.



16 SHARED-USE PATH TYPICAL SIGN PLACEMENT
SCALE: N.T.S.

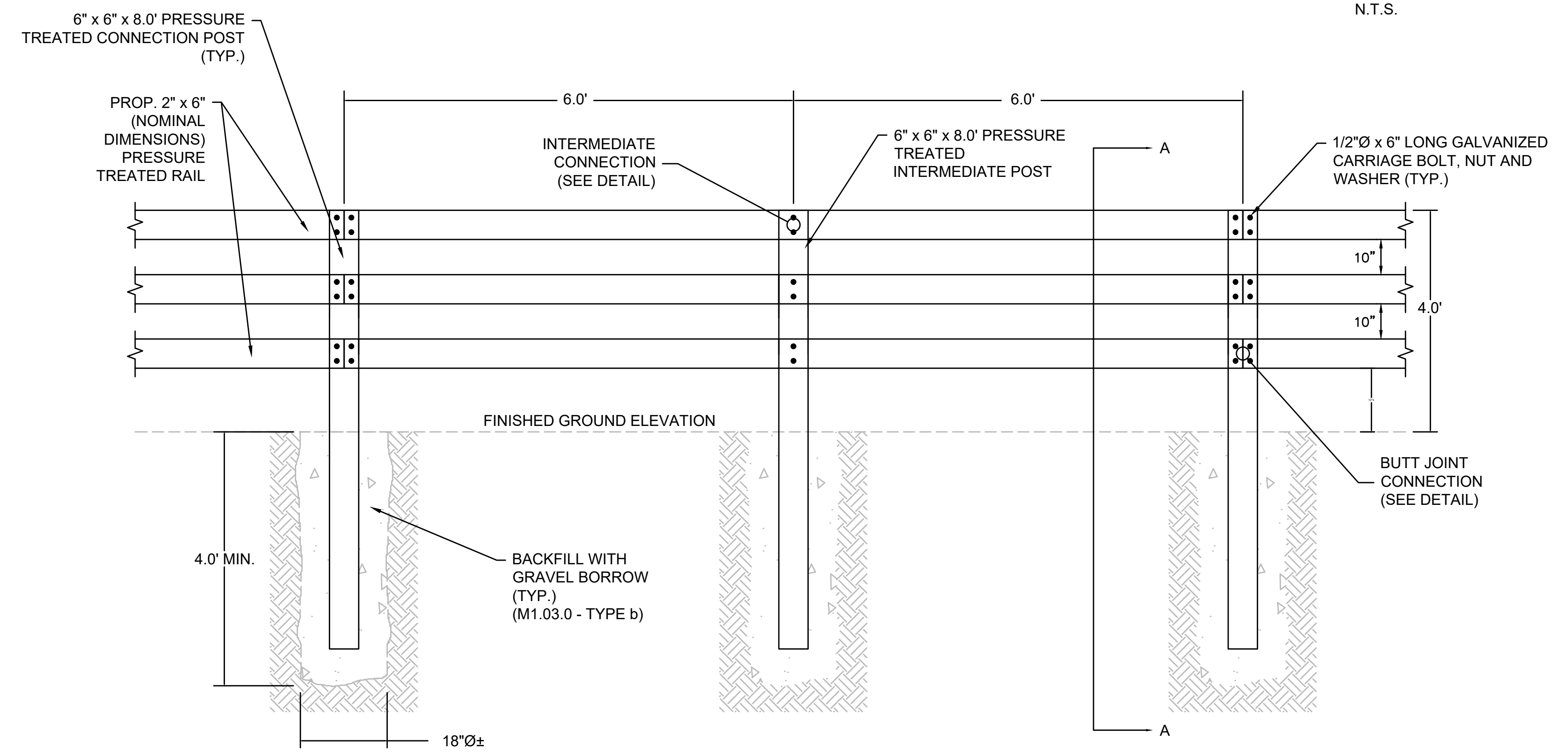
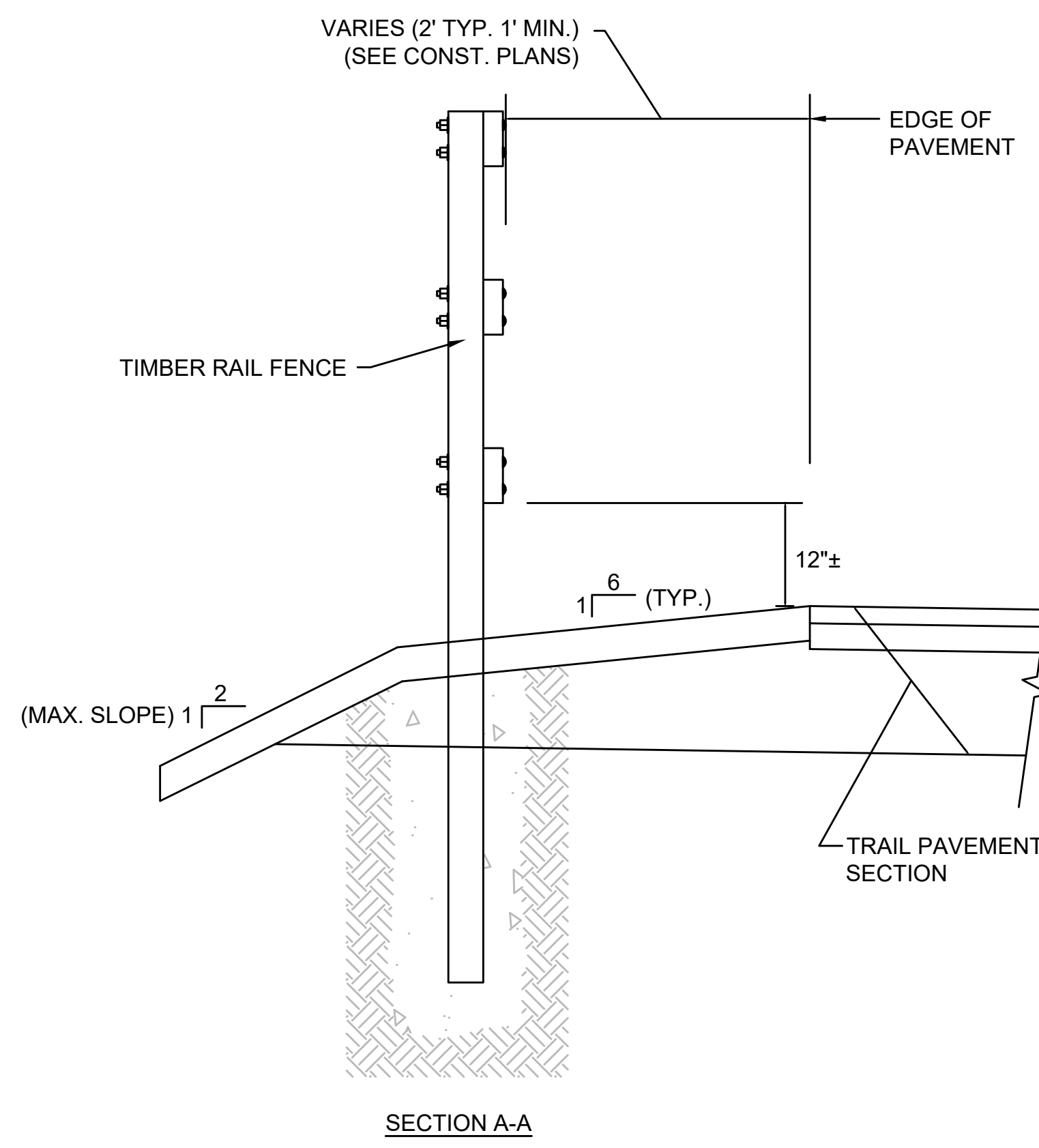
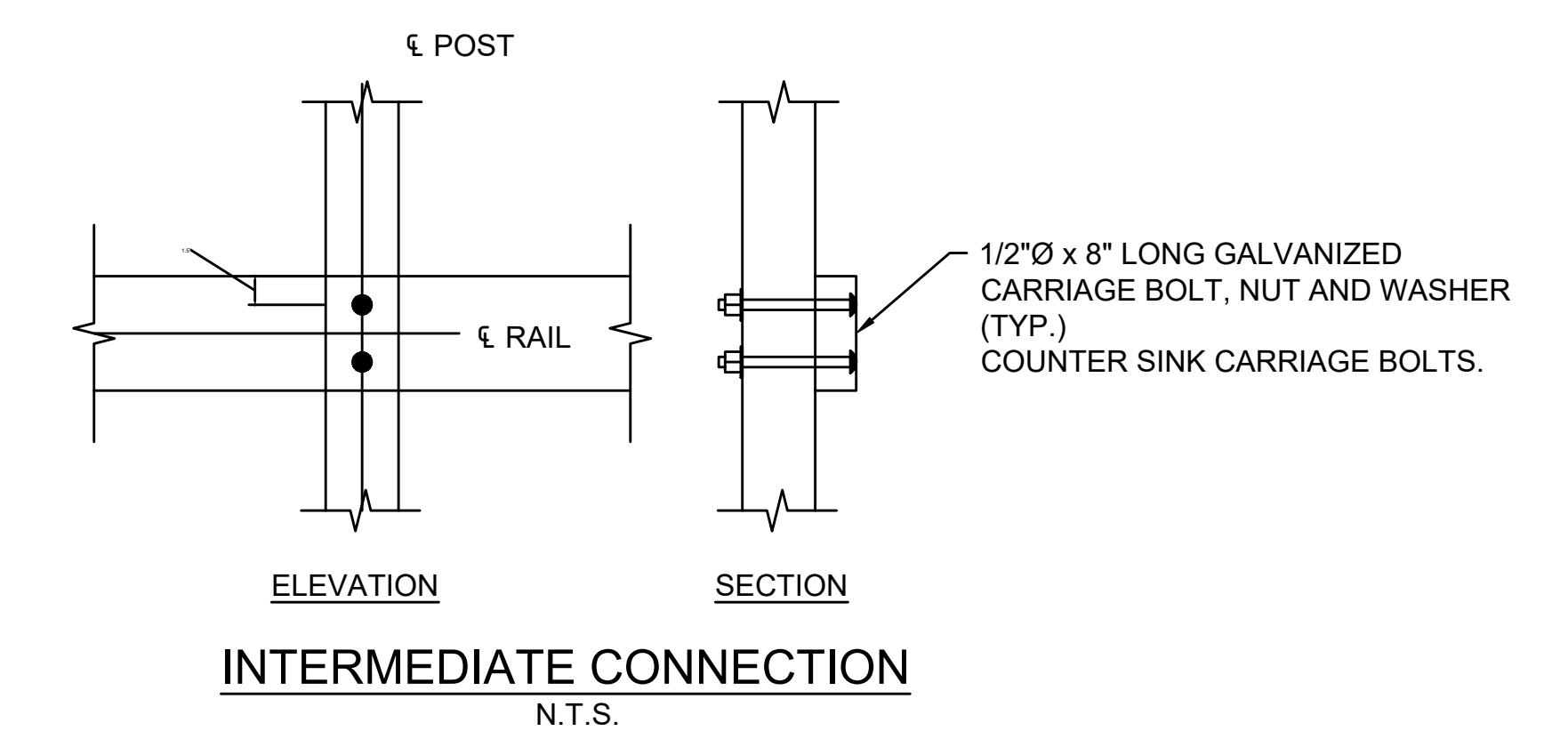
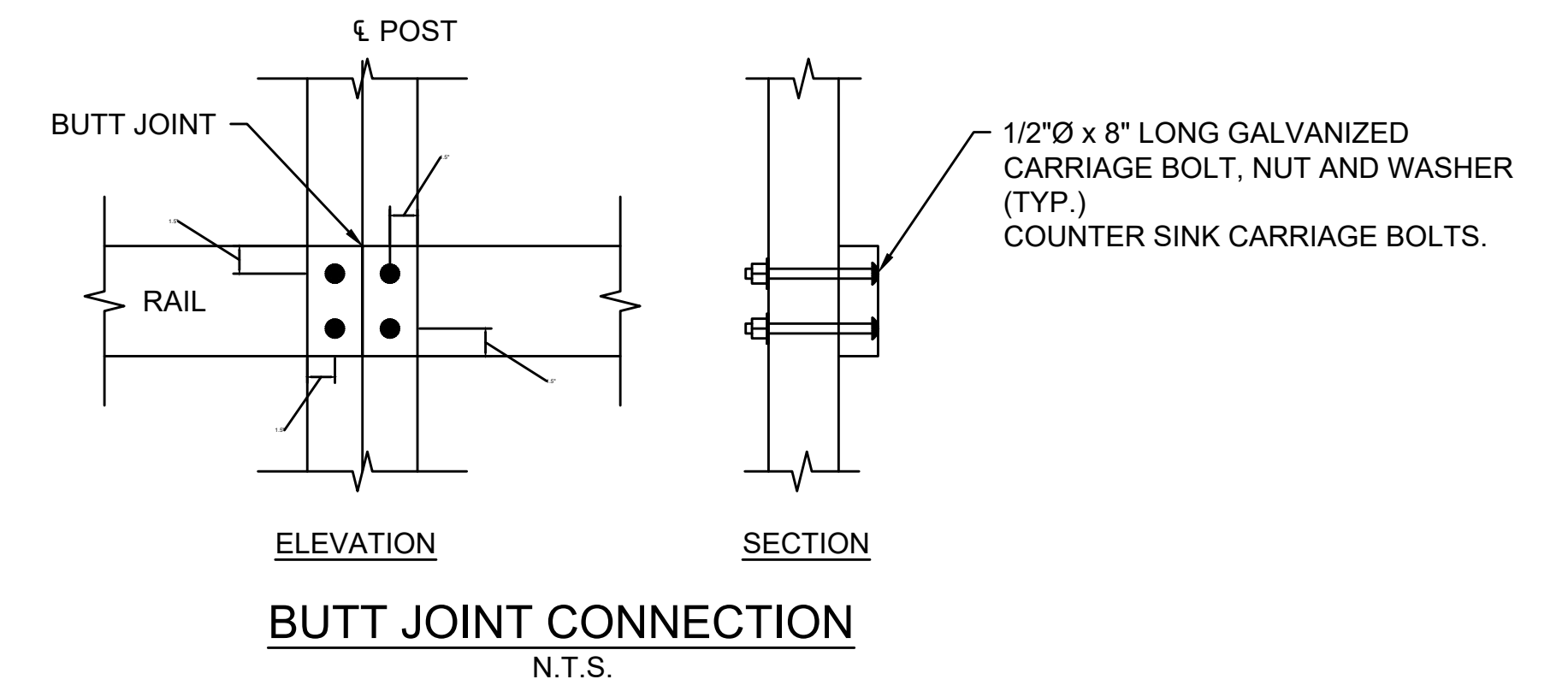
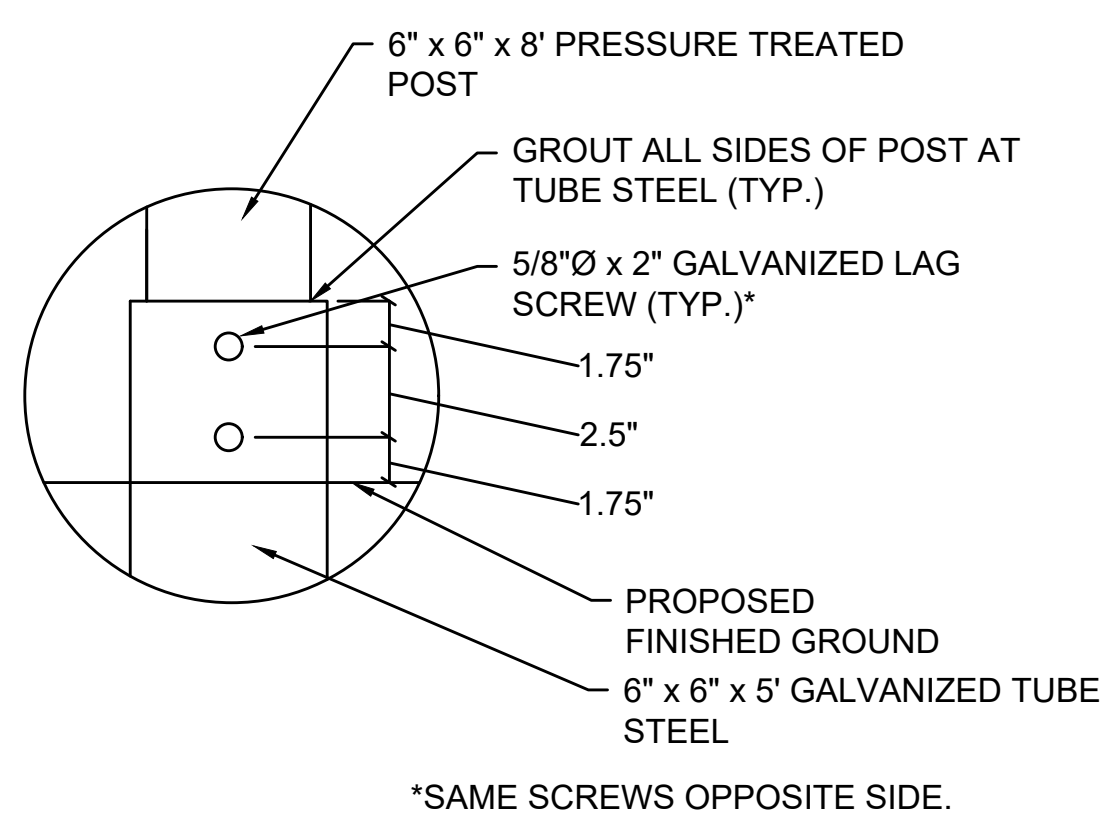
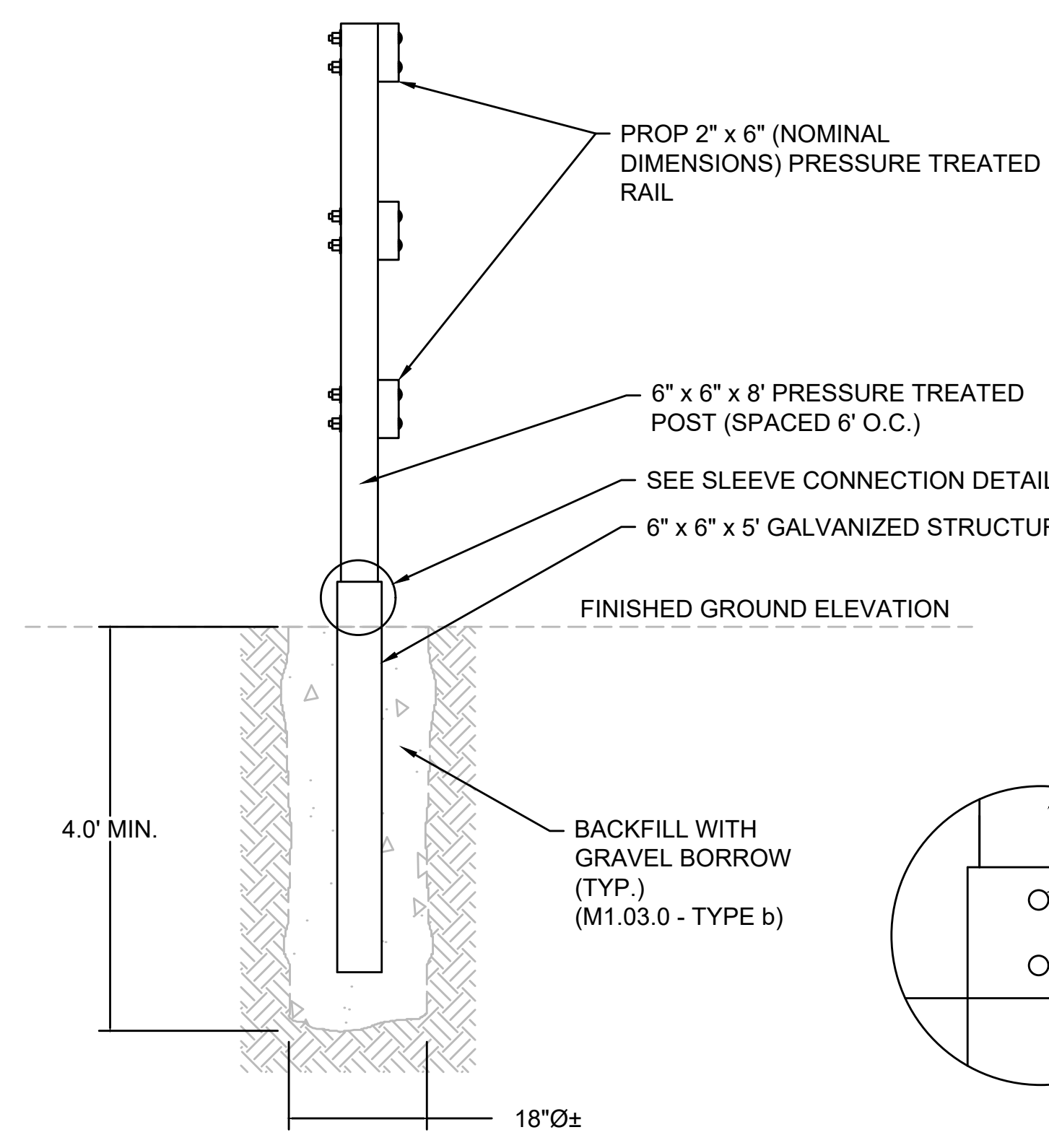
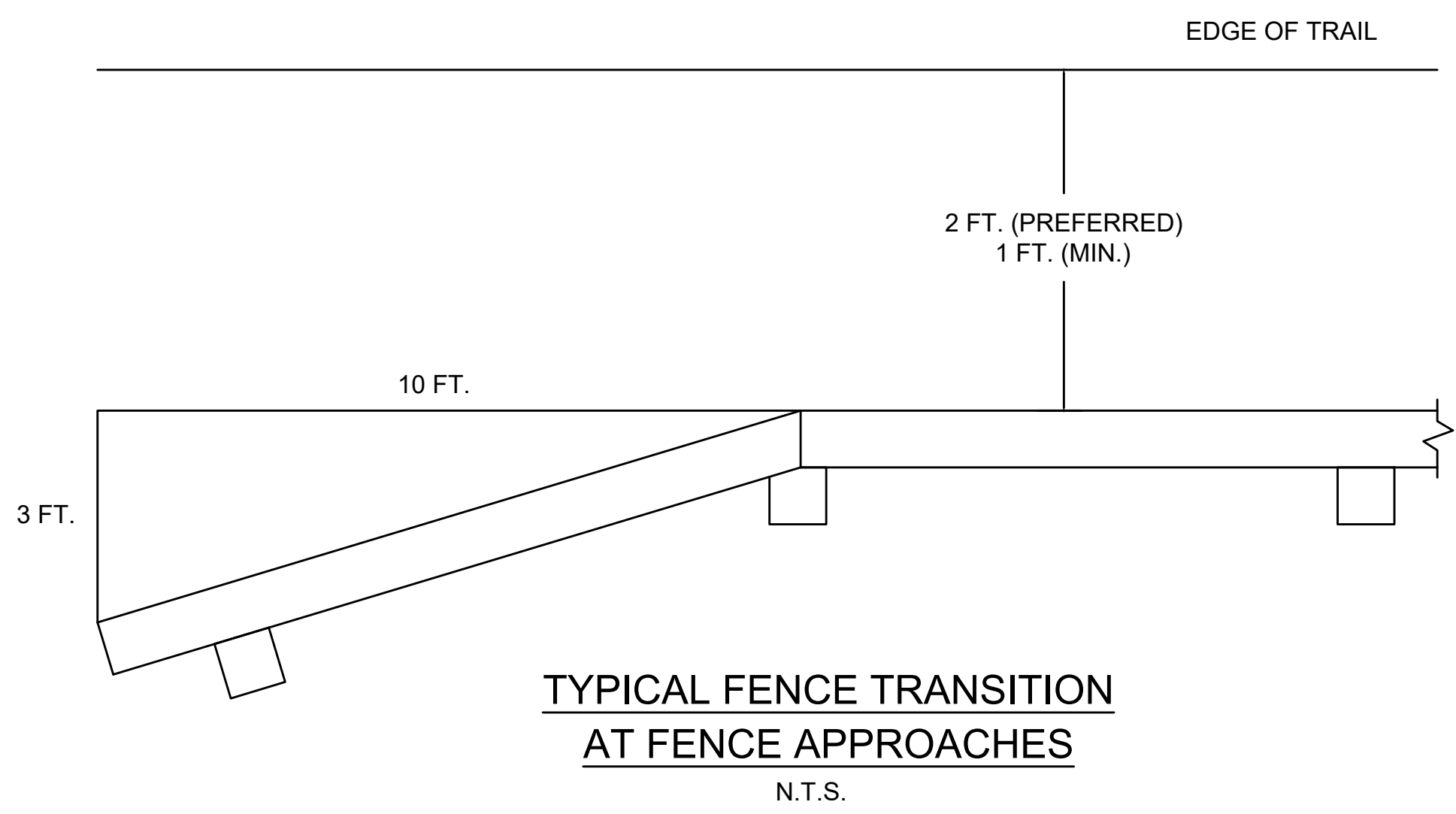
NOTES:
1. ALL HARDWARE SHALL BE GALVANIZED.
2. WOOD POSTS SHALL BE PAID FOR UNDER ITEM 847.11*.

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	77	128
PROJECT FILE NO.		609054	

CONSTRUCTION DETAILS

NOTES:

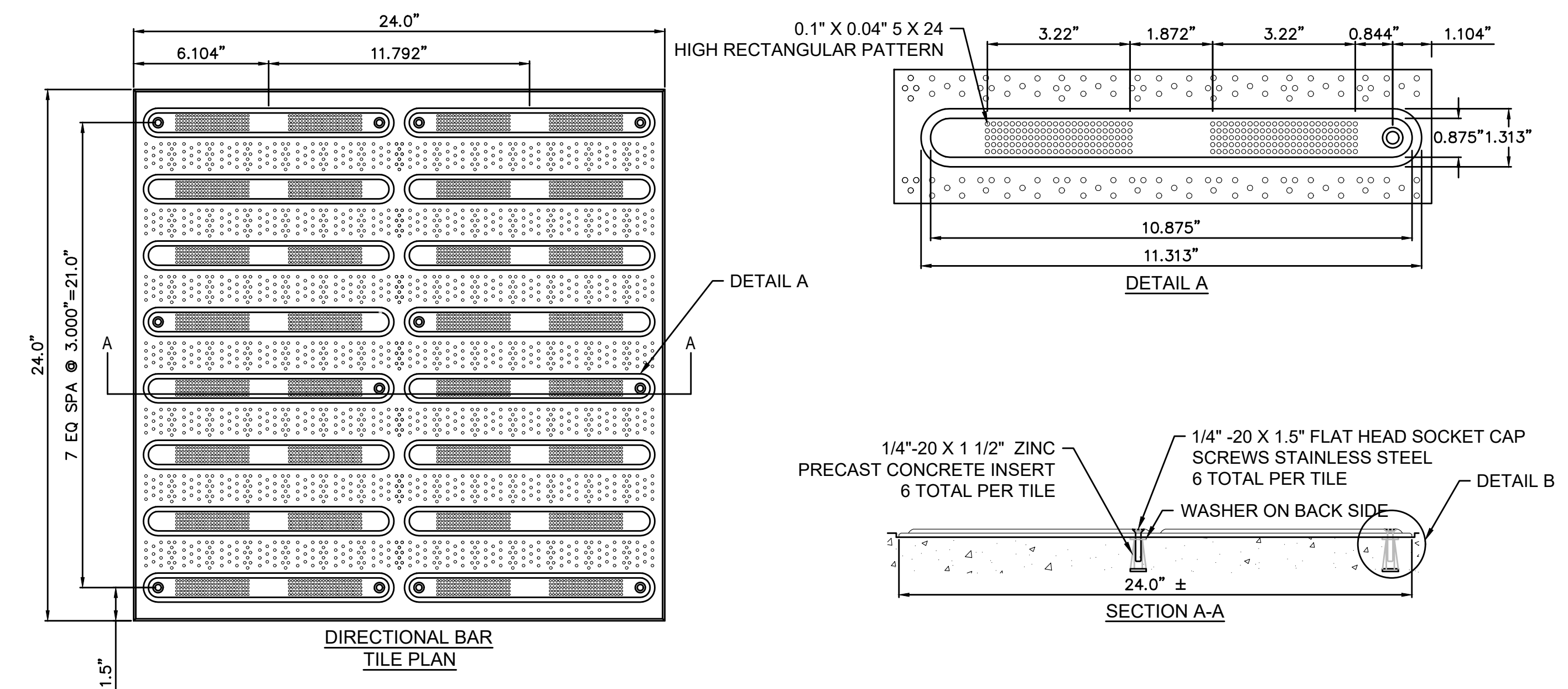
- TIMBER PRESERVATIVES SHALL BE USED ON ALL WOOD TIMBER.
- ALL CUT ENDS SHALL BE PAINTED WITH PRESERVATIVE IN THE FIELD PER MANUFACTURERS DIRECTION.



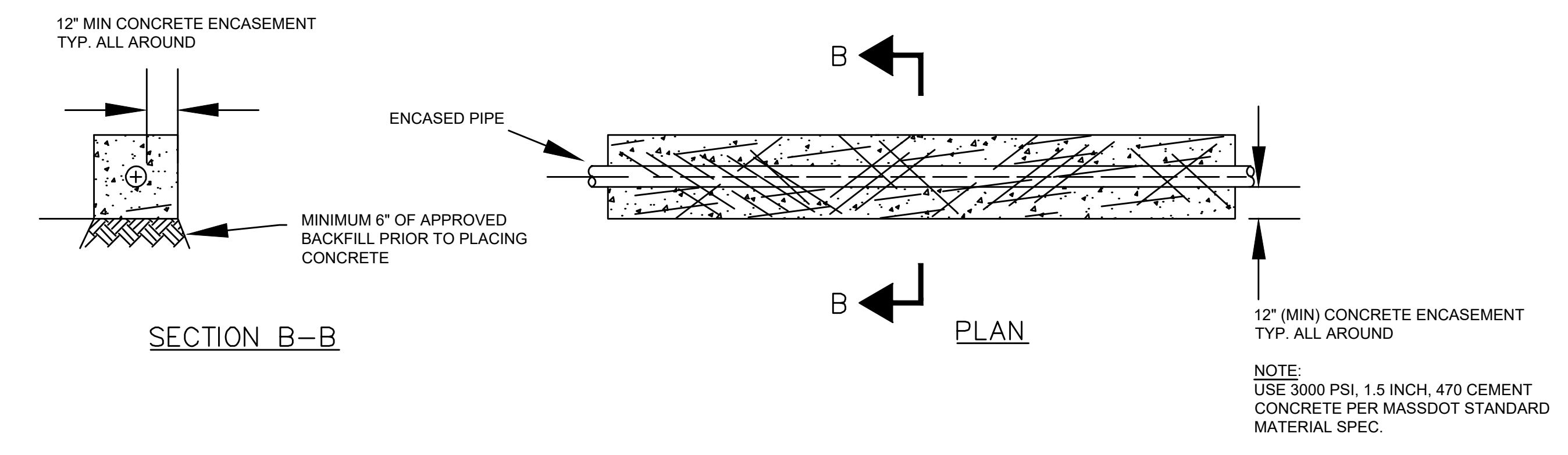
SUGGESTED TIMBER RAIL FENCE CONSTRUCTION SEQUENCE

- AUGER OR DIG POST HOLE TO REQUIRED DIMENSIONS.
- IF GROUND IS SATURATED, USE TUBE STEEL SLEEVE. SEE DETAIL ON THIS SHEET.
- BACKFILL BOTTOM 6"± OF HOLE WITH GRAVEL AND COMPACT THOROUGHLY.
- SET POST AND HOLD PLUMB DURING BACKFILLING.
- BACKFILL WITH GRAVEL IN 12" LIFTS. COMPACT EACH LIFT THOROUGHLY.
- CLAMP RAILS TO POSTS AND FIELD DRILL BOLT HOLES.
- SET BOLTS, WASHERS AND NUTS.

- NOTES:
- FOR RADIUS LESS THAN 165', USE CONNECTION POSTS SET AT 6.0' O.C. AND SHORTEN RAILS ACCORDINGLY.

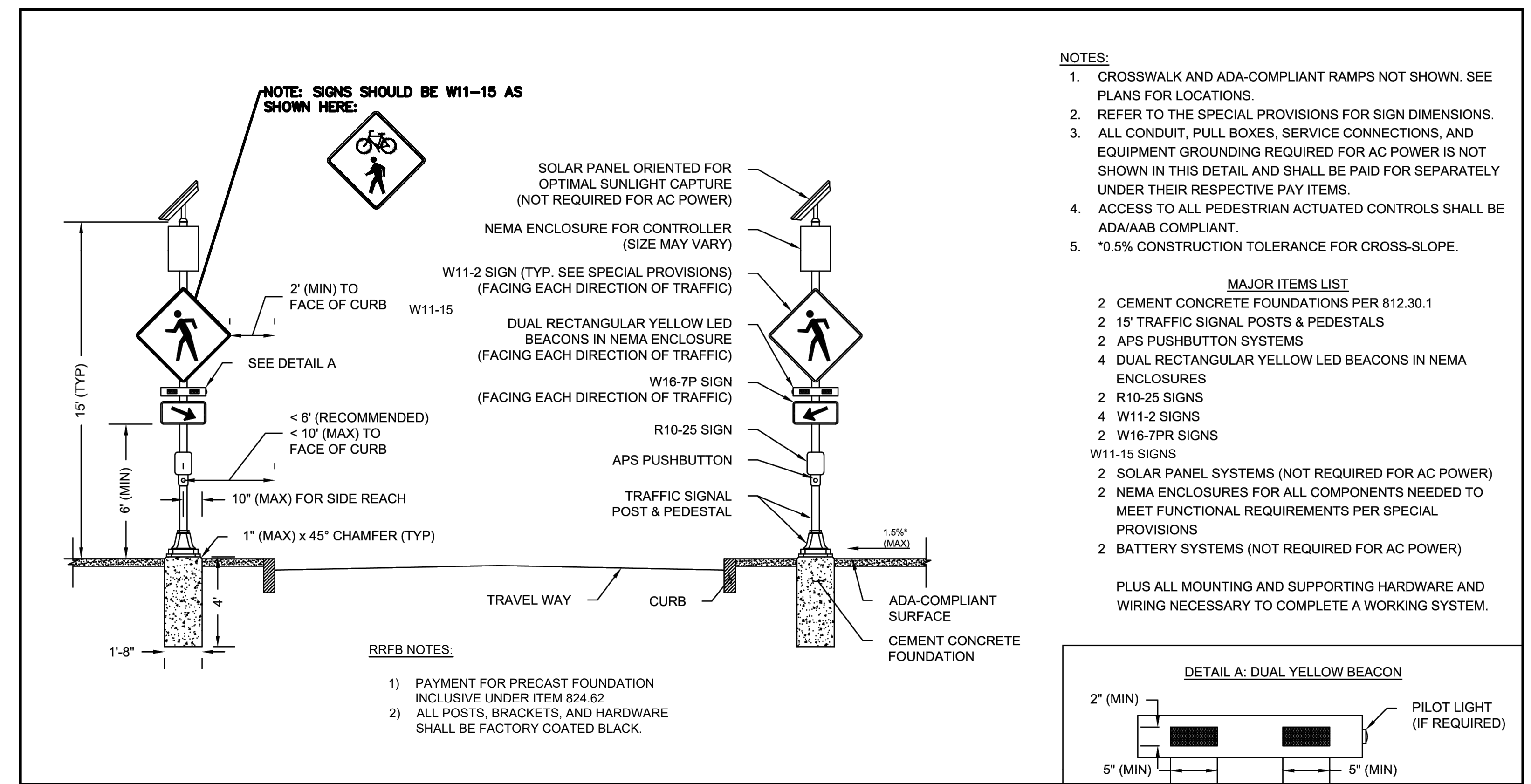


18 DIRECTIONAL BAR TILE
SCALE: N.T.S.



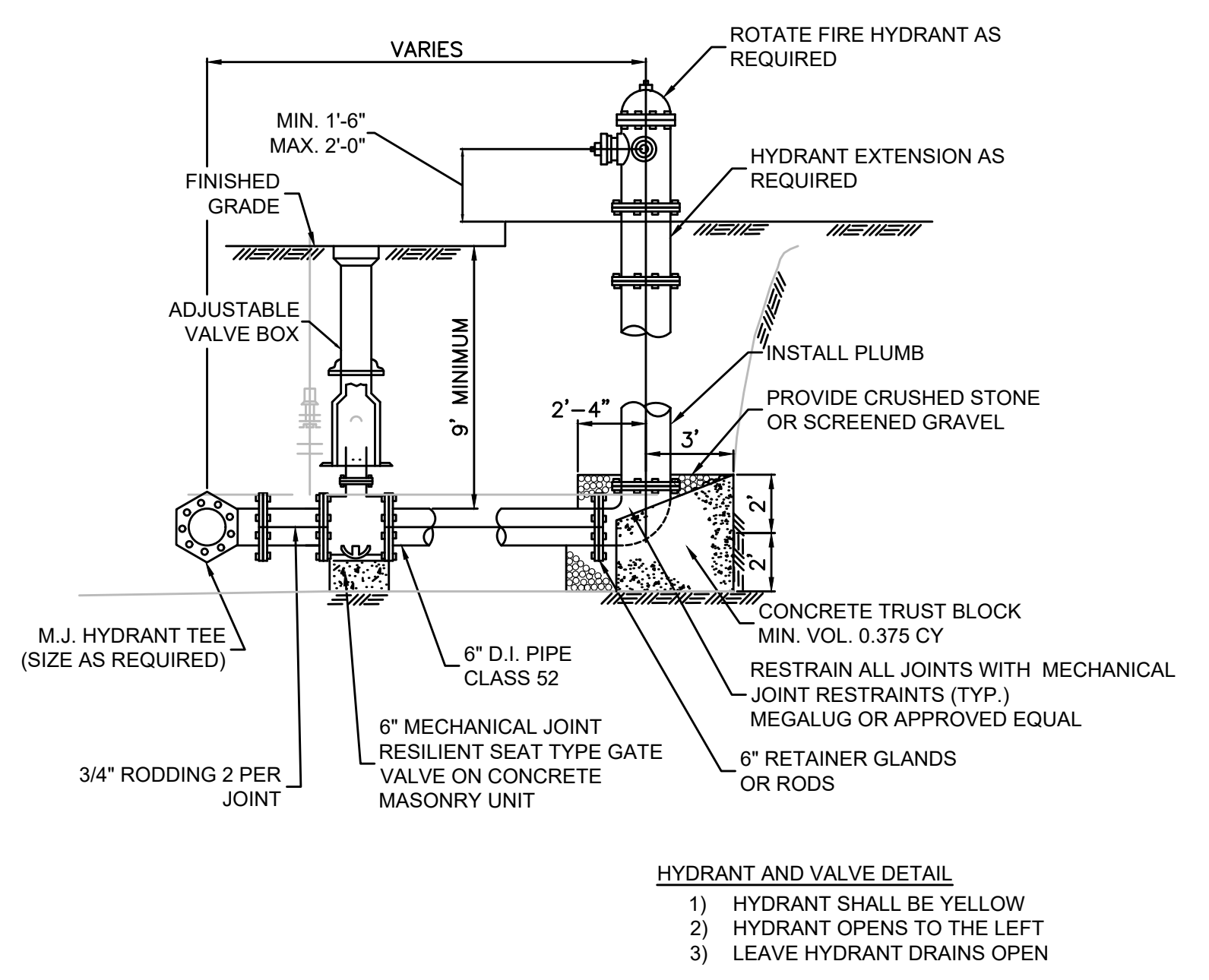
19 CEM. CONCRETE PIPE ENCASEMENT
SCALE: N.T.S.

LOCATION #	STATION/ROADWAY	MINIMUM ALLOWABLE TIME BETWEEN ACTIVATION
1	203+87 TAYLOR ST	18s
2	39+45 FOSTER ST	12s
3	21+15 FOSTER ST	12s



20 RECTANGULAR RAPID FLASHING BEACON (RRFB)
SCALE: N.T.S.

- NOTES:**
- CROSSWALK AND ADA-COMPLIANT RAMPS NOT SHOWN. SEE PLANS FOR LOCATIONS.
 - REFER TO THE SPECIAL PROVISIONS FOR SIGN DIMENSIONS.
 - ALL CONDUIT, PULL BOXES, SERVICE CONNECTIONS, AND EQUIPMENT GROUNDING REQUIRED FOR AC POWER IS NOT SHOWN IN THIS DETAIL AND SHALL BE PAID FOR SEPARATELY UNDER THEIR RESPECTIVE PAY ITEMS.
 - ACCESS TO ALL PEDESTRIAN ACTUATED CONTROLS SHALL BE ADA/AAB COMPLIANT.
 - *0.5% CONSTRUCTION TOLERANCE FOR CROSS-SLOPE.
- MAJOR ITEMS LIST**
- 2 CEMENT CONCRETE FOUNDATIONS PER 812.30.1
 - 2 15' TRAFFIC SIGNAL POSTS & PEDESTALS
 - 2 APS PUSHBUTTON SYSTEMS
 - 4 DUAL RECTANGULAR YELLOW LED BEACONS IN NEMA ENCLOSURES
 - 2 R10-25 SIGNS
 - 4 W11-2 SIGNS
 - 2 W16-7P SIGNS
 - W11-15 SIGNS
 - 2 SOLAR PANEL SYSTEMS (NOT REQUIRED FOR AC POWER)
 - 2 NEMA ENCLOSURES FOR ALL COMPONENTS NEEDED TO MEET FUNCTIONAL REQUIREMENTS PER SPECIAL PROVISIONS
 - 2 BATTERY SYSTEMS (NOT REQUIRED FOR AC POWER)
- PLUS ALL MOUNTING AND SUPPORTING HARDWARE AND WIRING NECESSARY TO COMPLETE A WORKING SYSTEM.

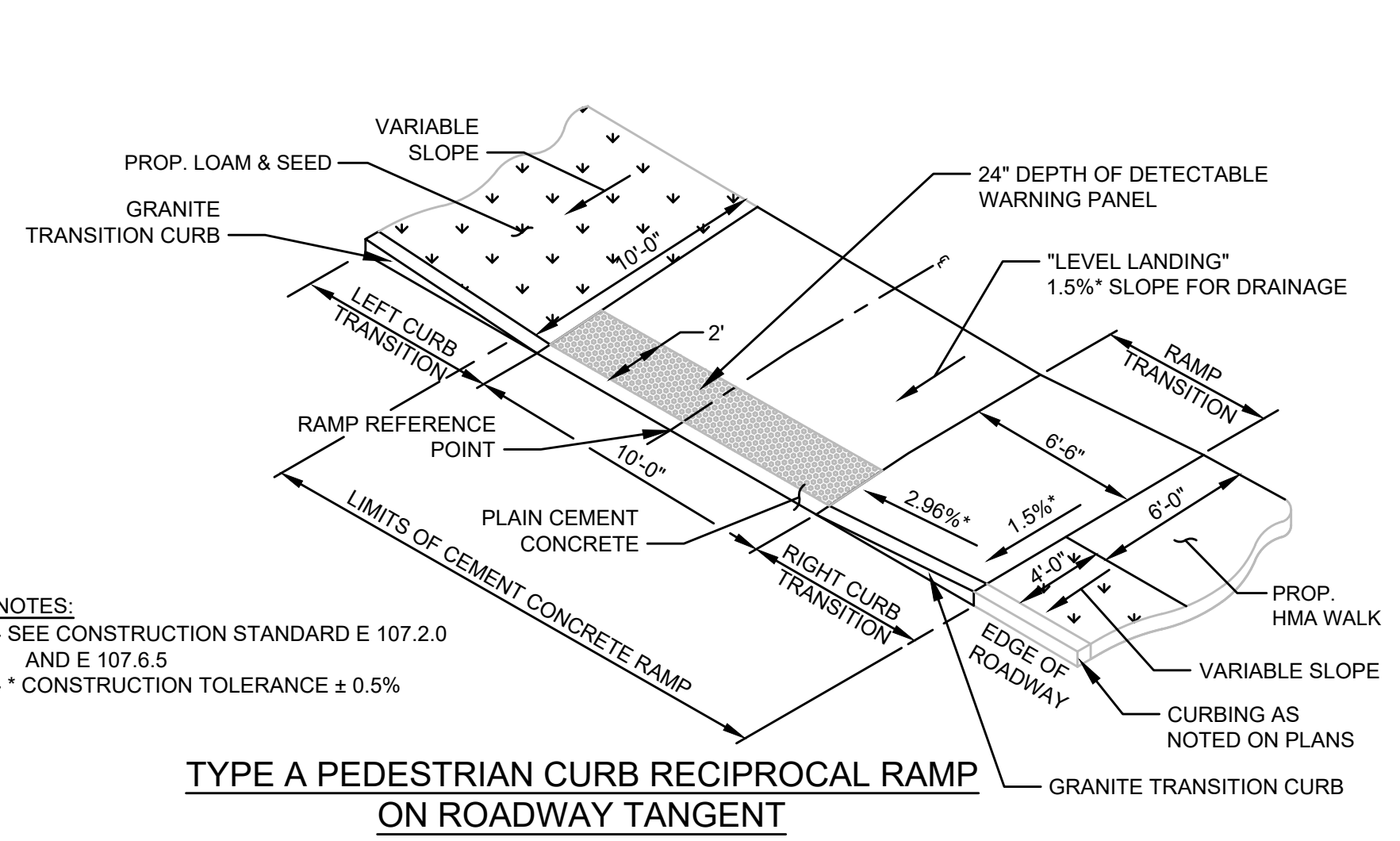


21 HYDRANT AND VALVE DETAIL
SCALE: N.T.S.

**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

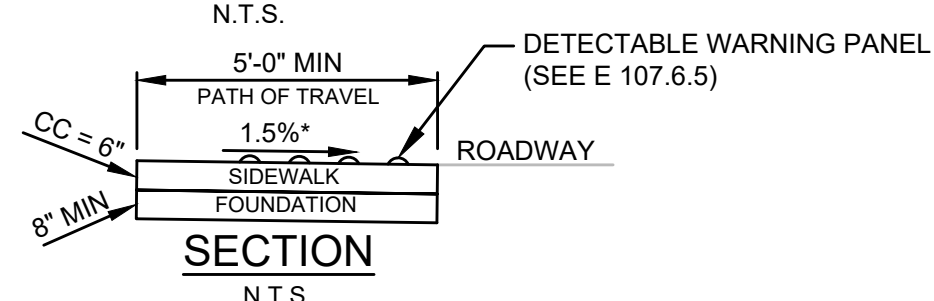
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	79	128
PROJECT FILE NO.		609054	

PEDESTRIAN CURB RAMP DETAILS



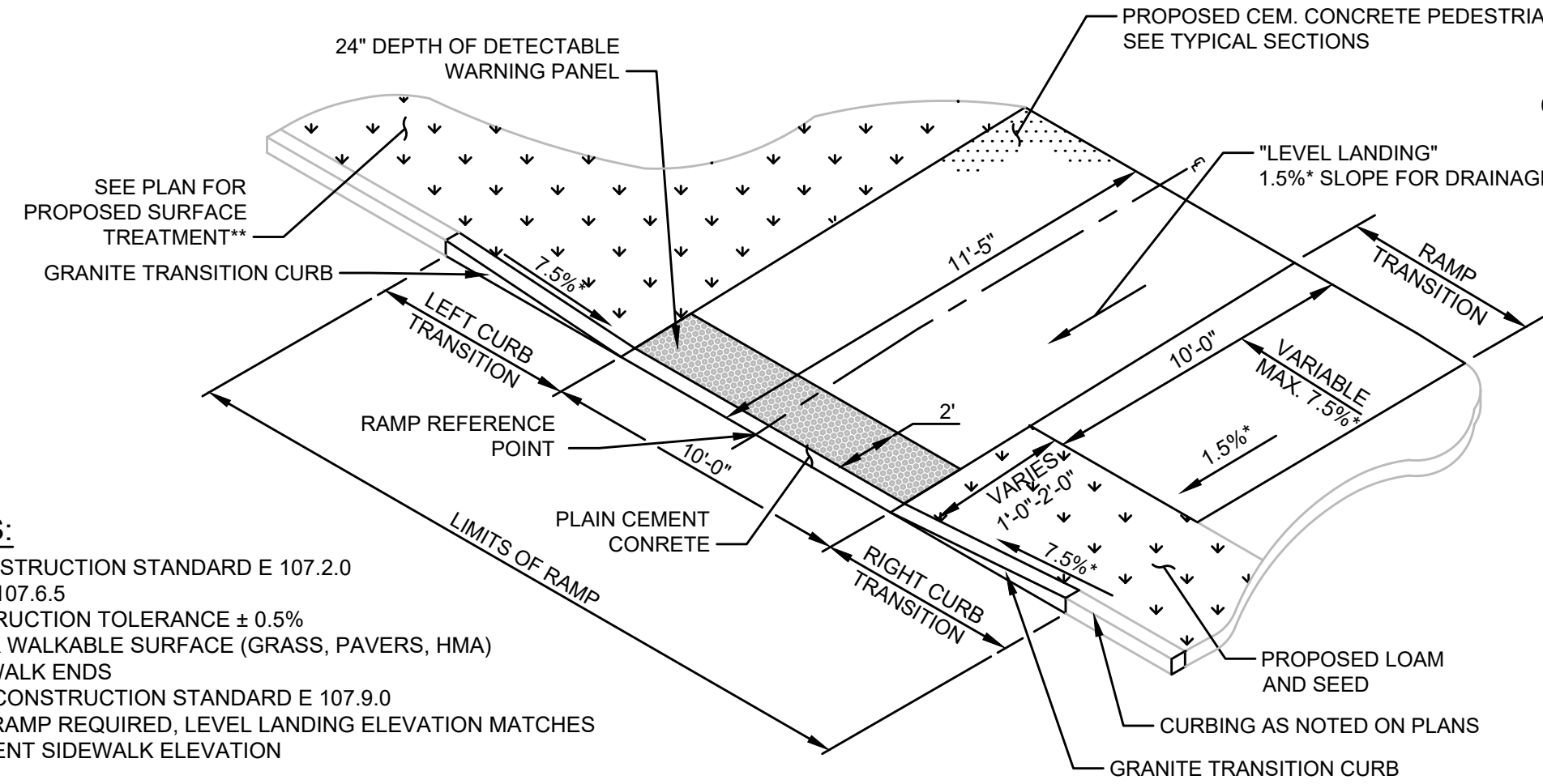
NOTES:
- SEE CONSTRUCTION STANDARD E 107.2.0 AND E 107.6.5
- * CONSTRUCTION TOLERANCE ± 0.5%

TYPE A PEDESTRIAN CURB RECIPROCAL RAMP ON ROADWAY TANGENT



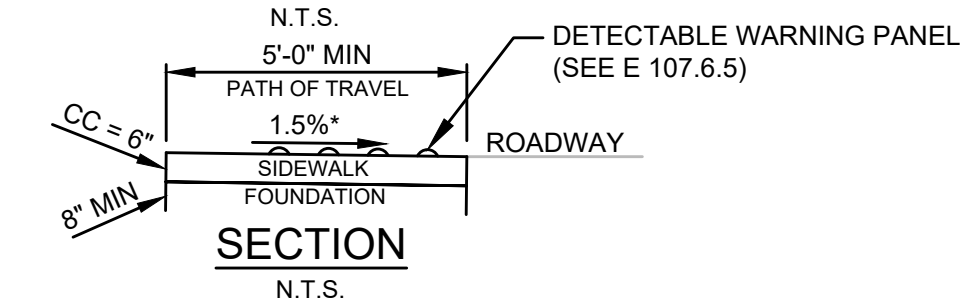
PCRW	RAMP REFERENCE POINT		LEFT SIDE TRANSITION		RIGHT SIDE TRANSITION	
	STATION/ROADWAY	OFFSET	CURB LENGTH	ROADWAY GRADE	CURB REVEAL	RAMP LENGTH
A1	203+88.54 TAYLOR ST	23.24 LT	6'-6"	-2.95%	6'-6"	6'-6"

(-) REPRESENTS THE LOW SIDE TRANSITION



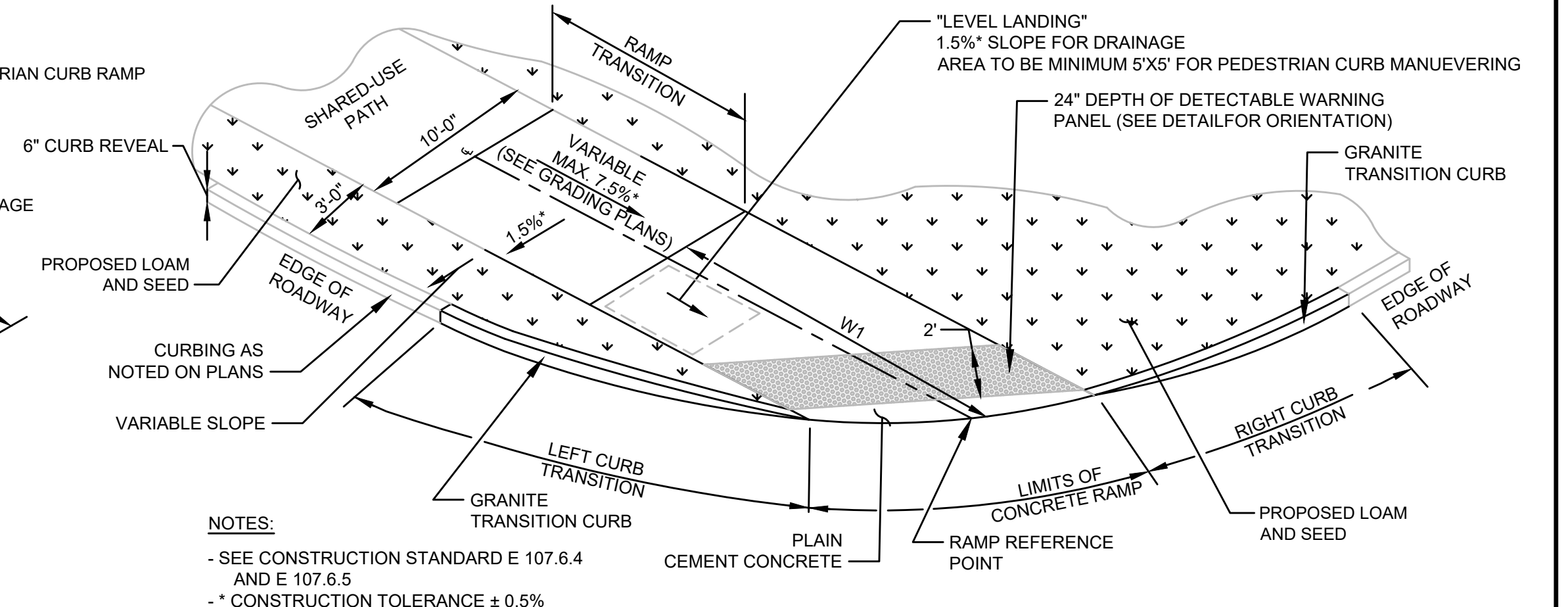
NOTES:
- SEE CONSTRUCTION STANDARD E 107.2.0 AND E 107.6.5
- * CONSTRUCTION TOLERANCE ± 0.5%
- ** OTHER WALKABLE SURFACE (GRASS, PAVERS, HMA)
- *** SIDEWALK ENDS
- **** SEE CONSTRUCTION STANDARD E 107.9.0
- ***** NO RAMP REQUIRED. LEVEL LANDING ELEVATION MATCHES ADJACENT SIDEWALK ELEVATION

TYPE B PEDESTRIAN CURB RAMP



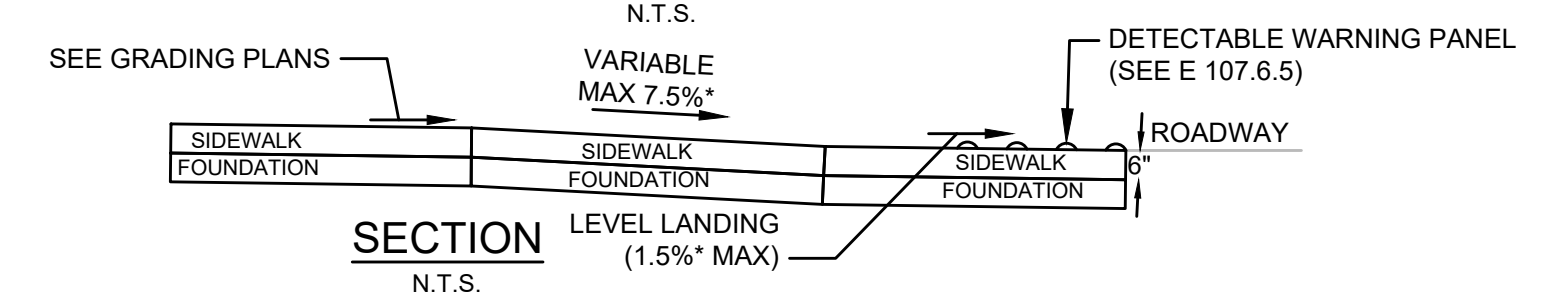
PCRW	RAMP REFERENCE POINT		LEFT SIDE TRANSITION		RIGHT SIDE TRANSITION	
	STATION/ROADWAY	OFFSET	CURB LENGTH	ROADWAY GRADE	CURB REVEAL	RAMP LENGTH
B1	203+88.11 TAYLOR ST	22.95 RT	5'-6"	3.13%	6"	14'-0"

(-) REPRESENTS THE LOW SIDE TRANSITION

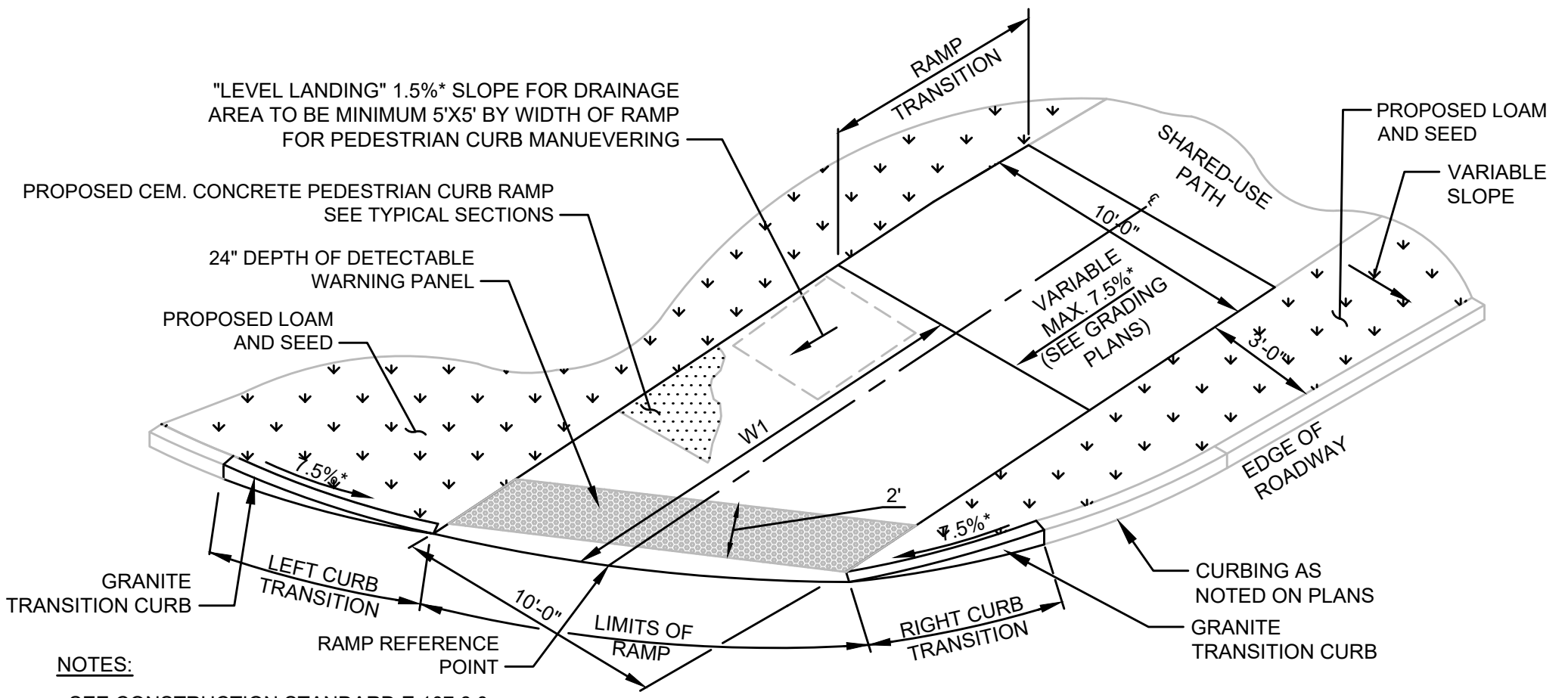


NOTES:
- SEE CONSTRUCTION STANDARD E 107.6.4 AND E 107.6.5
- * CONSTRUCTION TOLERANCE ± 0.5%

TYPE C PEDESTRIAN CURB RAMP SHARED-USE PATH ENTRANCE/EXIT

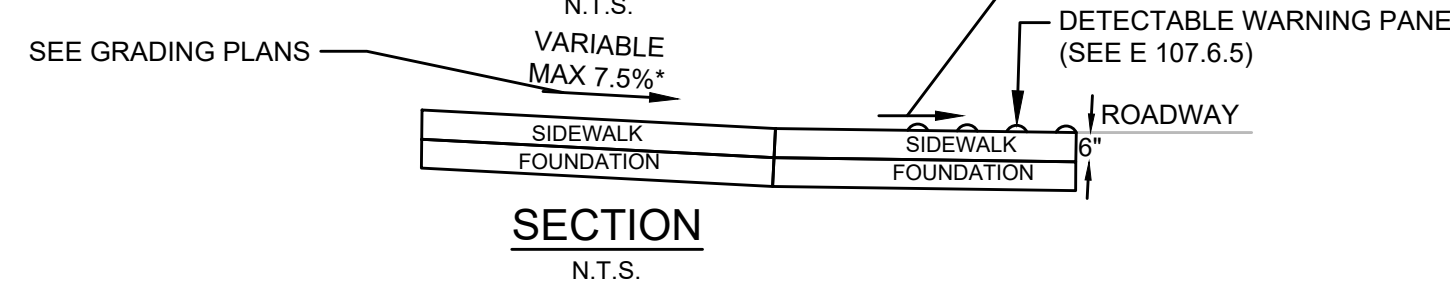


PCRW	RAMP REFERENCE POINT		LENGTH OF RAMP (W)	CORNER RADIUS	RAMP TRANSITION	LEFT SIDE CURB TRANSITION		RIGHT SIDE CURB TRANSITION	
	STATION/ROADWAY	OFFSET				CURB LENGTH	ROADWAY GRADE	CURB REVEAL	CURB LENGTH
C1	4+64.35 FOSTER ST	20.50 LT	10'-7"	25'	15'-0"	13'-6"	7'-3"	2.51%	6"
C2	11+02.50 FOSTER ST	20.00 LT	11'-7"	25'	14'-0"	12'-5"	7'-0"	2.17%	6"
C3	26+11.33 FOSTER ST	20.50 LT	5'-9"	-	6'-6"	6'-0"	5'-7"	-4.34%	6"
C4	31+71.08 FOSTER ST	20.50 LT	8'-4"	13'	15'-0"	9'-9"	11'-0"	-5.83%	6"

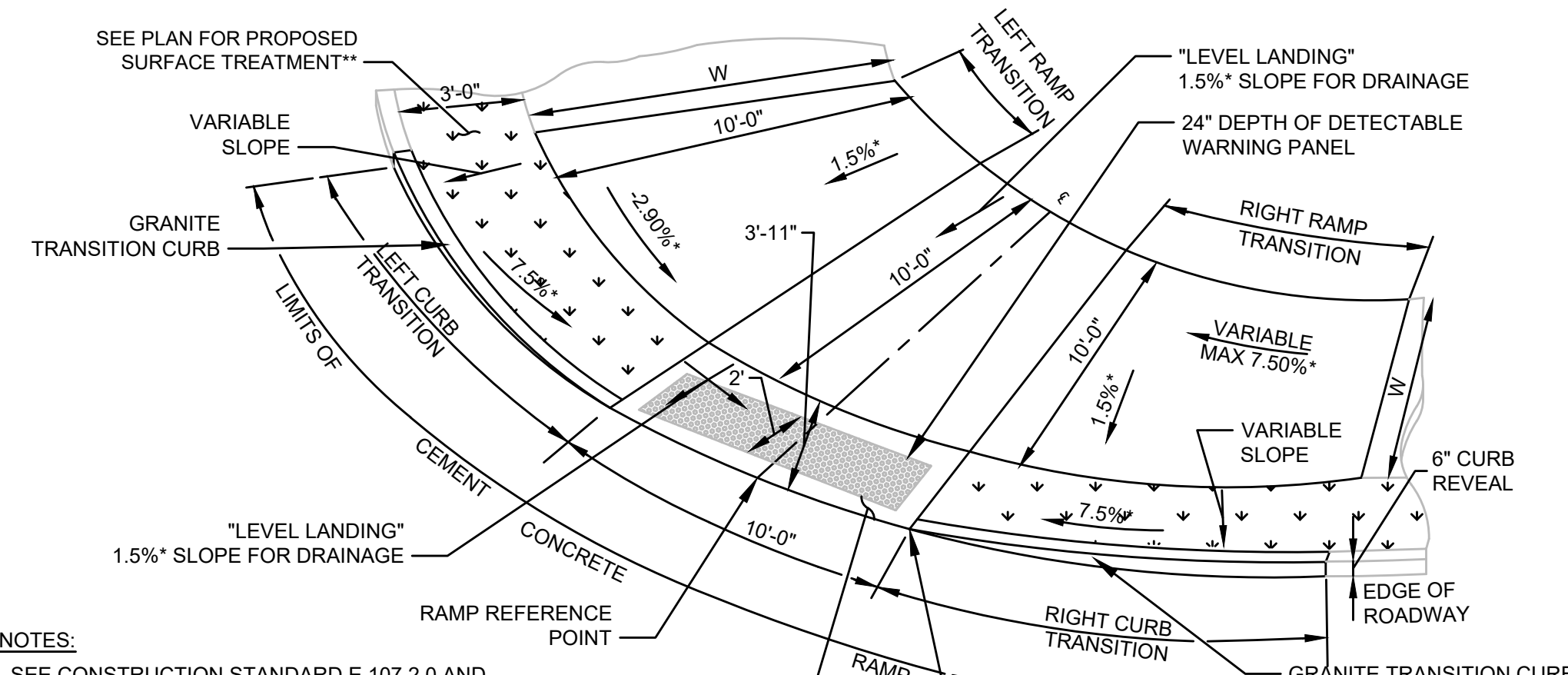


NOTES:
- SEE CONSTRUCTION STANDARD E 107.6.0 AND E 107.6.5
- * CONSTRUCTION TOLERANCE ± 0.5%
- ** SEE CONSTRUCTION STANDARD E 107.9.0

TYPE D PEDESTRIAN CURB RAMP SHARED-USE PATH ENTRANCE/EXIT

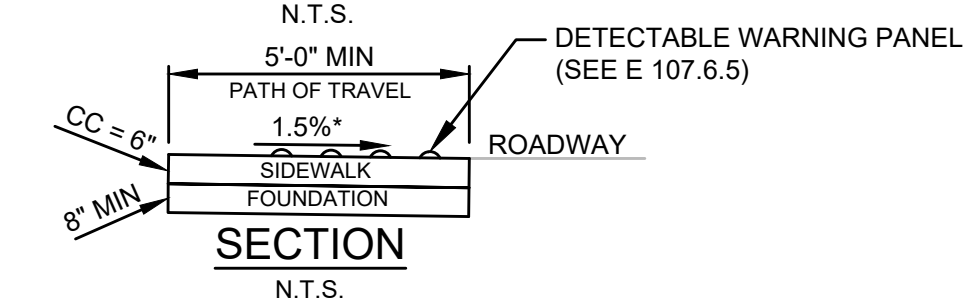


PCRW	RAMP REFERENCE POINT		LENGTH OF RAMP (W)	CORNER RADIUS	RAMP TRANSITION	LEFT SIDE CURB TRANSITION		RIGHT SIDE CURB TRANSITION	
	STATION/ROADWAY	OFFSET				CURB LENGTH	ROADWAY GRADE	CURB REVEAL	CURB LENGTH
D1	5+16.31 FOSTER ST	20.00 LT	11'-8"	25'	6'-6"	4'-4"	2'-4"	10.92%	6"
D2	11+72.67 FOSTER ST	20.00 LT	12'-0"	30'	6'-6"	5'-8"	1'-10"	-0.09%	6"
D3	26+62.34 FOSTER ST	17.50 LT	7'-0"	-	11'-0"	-	6'-6"	9.30%	6"
D4	29+61.28 FOSTER ST	20.50 LT	8'-11"	15'	15'-0"	1'-7"	6'-6"	-10.63%	6"
D5	31+93.14 FOSTER ST	20.50 LT	8'-8"	16'	15'-0"	-	-	-17.25%	6"



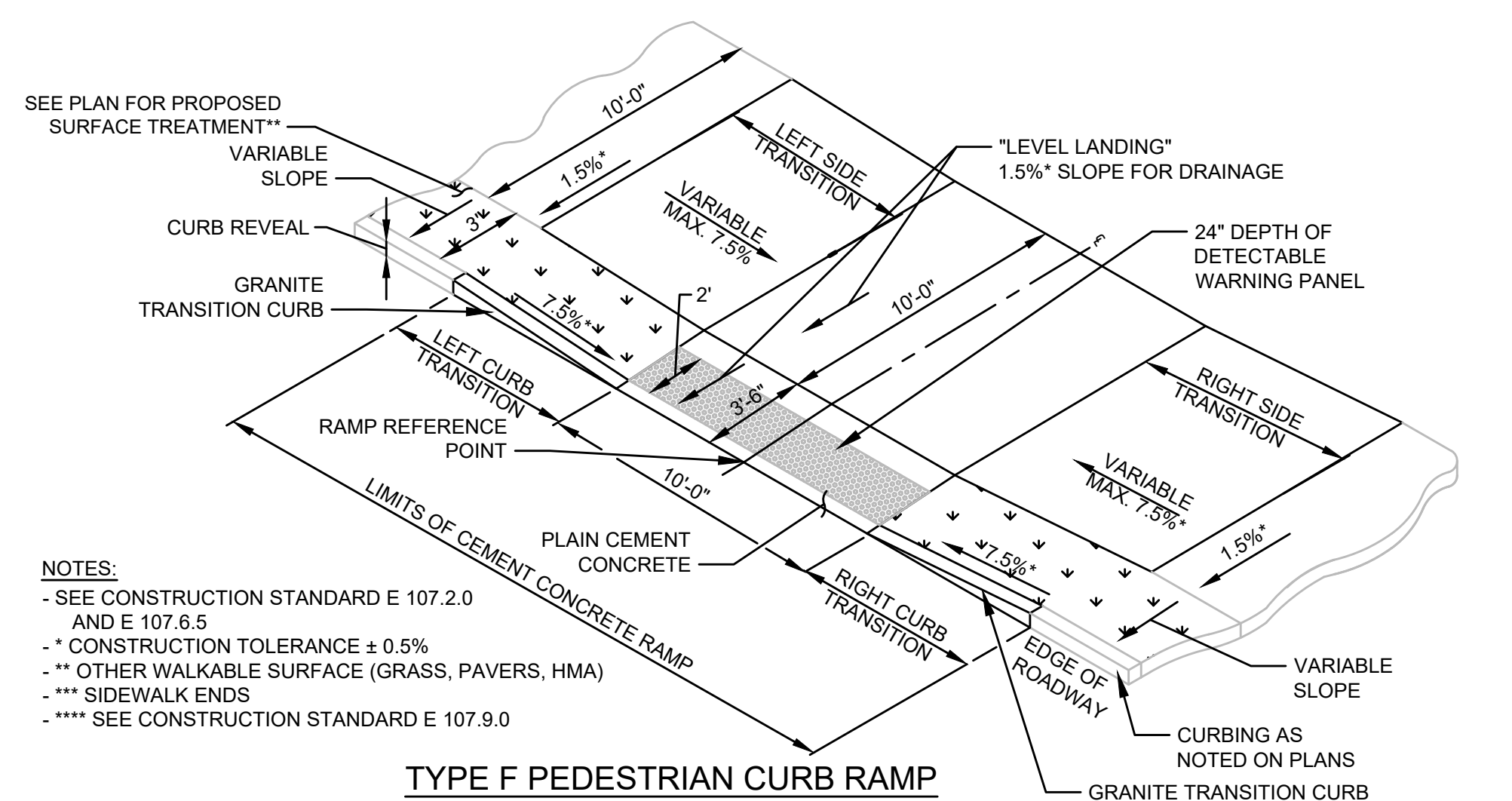
NOTES:
- SEE CONSTRUCTION STANDARD E 107.2.0 AND E 107.6.5
- * CONSTRUCTION TOLERANCE ± 0.5%
- ** OTHER WALKABLE SURFACE (GRASS, PAVERS, HMA)
- *** SIDEWALK ENDS
- **** SEE CONSTRUCTION STANDARD E 107.9.0
- ***** POINT OUTSIDE RAMP LIMITS

TYPE E PEDESTRIAN CURB RAMP ON CORNER RADIUS WITH BUFFER STRIP



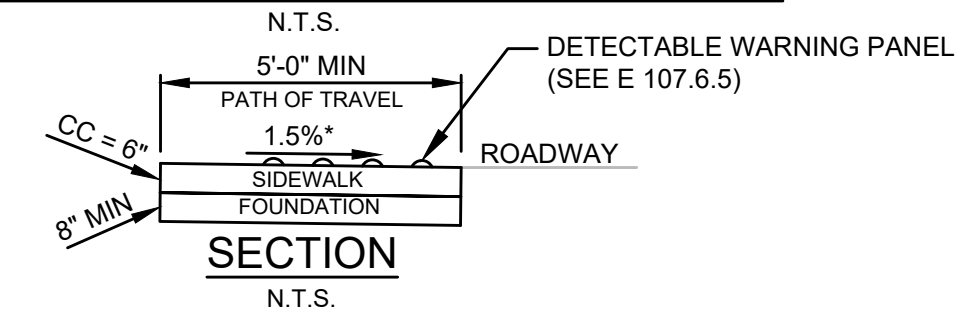
PCRW	RAMP REFERENCE POINT		WIDTH OF SIDEWALK (W)	WIDTH OF BUFFER STRIP (G)	WIDTH OF RAMP ENTRANCE (E)	LENGTH OF RAMP (W)	CORNER RADIUS	LEFT SIDE TRANSITION		RIGHT SIDE TRANSITION	
	STATION/ROADWAY	OFFSET						CURB LENGTH	ROADWAY GRADE	CURB REVEAL	RAMP LENGTH
E1	0+48.14 FOSTER ST	18.04 LT	10'-0"	3'-0"	10'-0"	4'-9"	40'	14'-7"	0.75%	6"	7'-8"

(-) REPRESENTS THE LOW SIDE TRANSITION



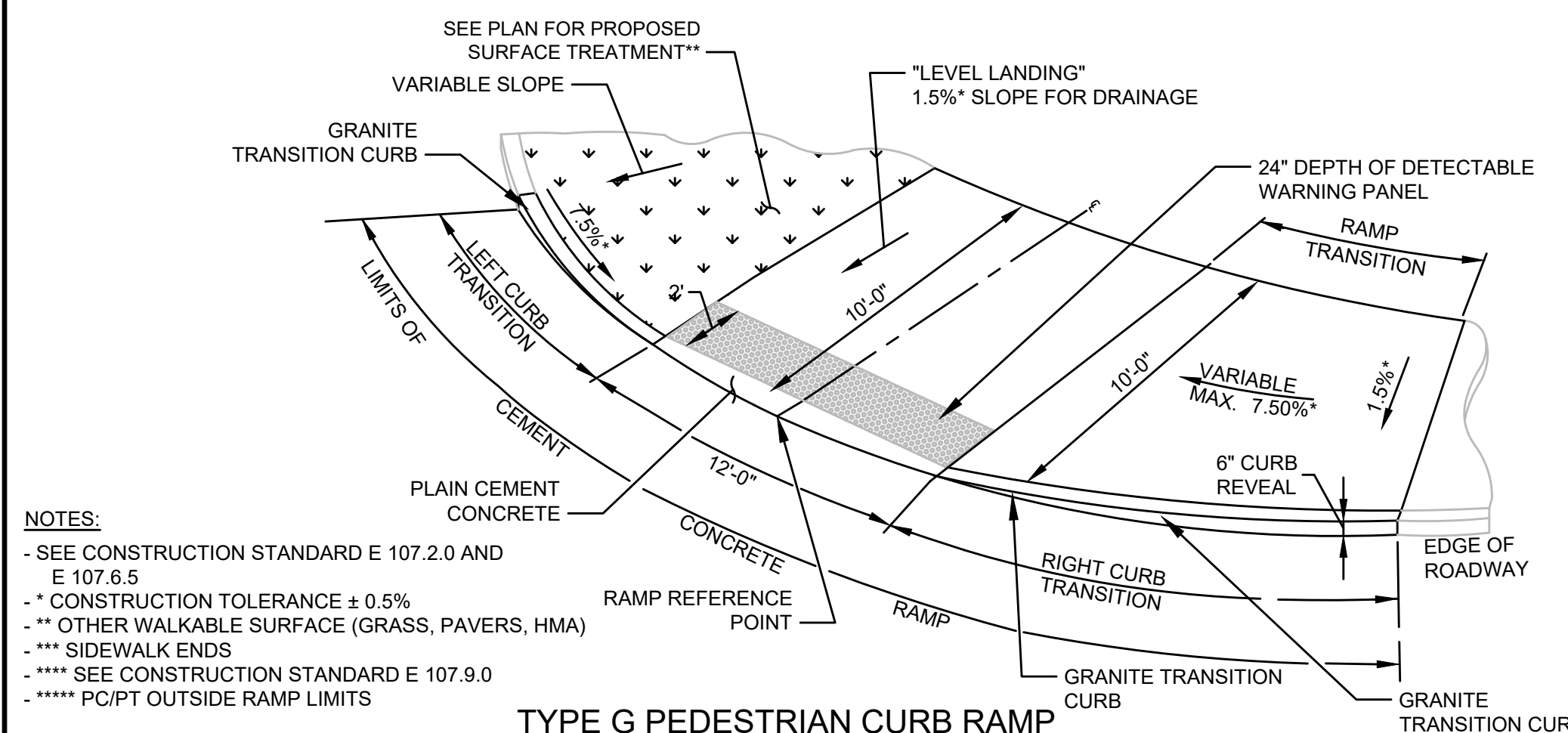
NOTES:
- SEE CONSTRUCTION STANDARD E 107.2.0 AND E 107.6.5
- * CONSTRUCTION TOLERANCE ± 0.5%
- ** OTHER WALKABLE SURFACE (GRASS, PAVERS, HMA)
- *** SIDEWALK ENDS
- **** SEE CONSTRUCTION STANDARD E 107.9.0

TYPE F PEDESTRIAN CURB RAMP ON ROADWAY TANGENT WITH BUFFER STRIP



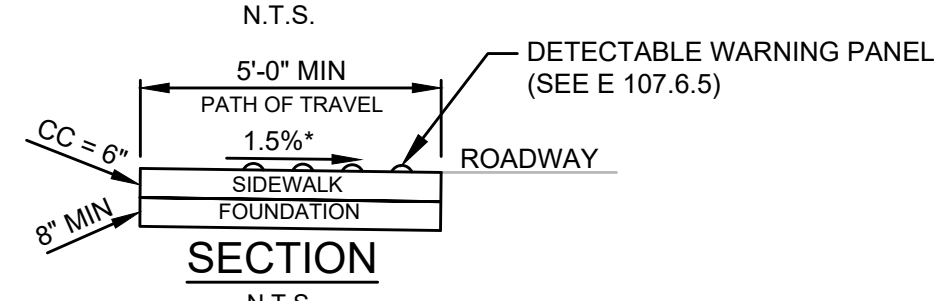
PCRW	RAMP REFERENCE POINT		LEFT SIDE TRANSITION		RIGHT SIDE TRANSITION	
	STATION/ROADWAY	OFFSET	CURB LENGTH	ROADWAY GRADE	CURB REVEAL	RAMP LENGTH
F1	3+37.50 FOSTER ST	12.00 LT	15'-0"	5.71%	6"	15'-0"
F2	21+17.29 FOSTER ST	12.00 LT	15'-0"	6.53%	6"	15'-0"

(-) REPRESENTS THE LOW SIDE TRANSITION



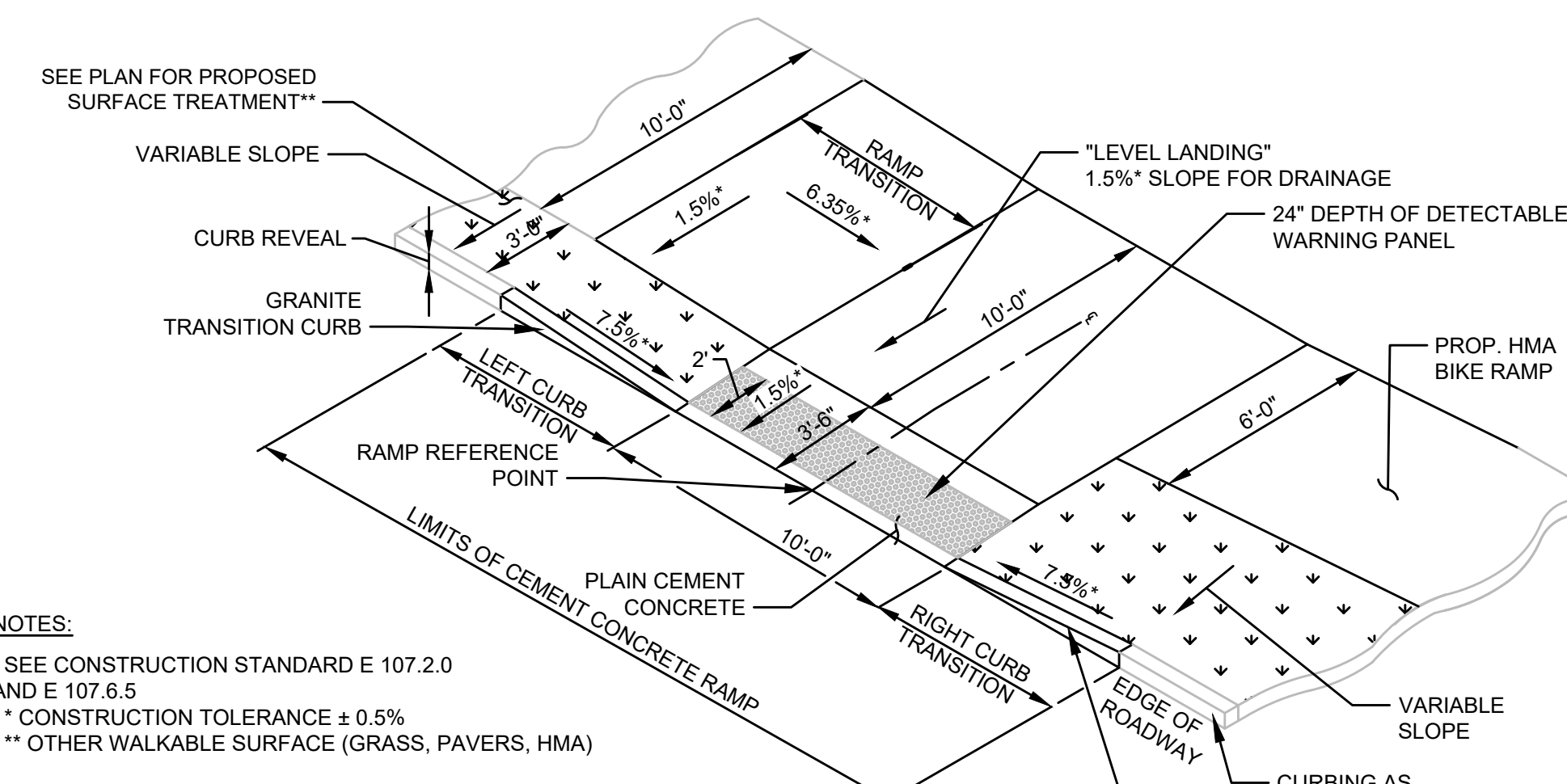
- NOTES:**
- SEE CONSTRUCTION STANDARD E 107.2.0 AND E 107.6.5
 - * CONSTRUCTION TOLERANCE ± 0.5%
 - ** OTHER WALKABLE SURFACE (GRASS, PAVERS, HMA)
 - *** SIDEWALK ENDS
 - **** SEE CONSTRUCTION STANDARD E 107.9.0
 - ***** PC/PT OUTSIDE RAMP LIMITS

TYPE G PEDESTRIAN CURB RAMP ON CORNER RADIUS



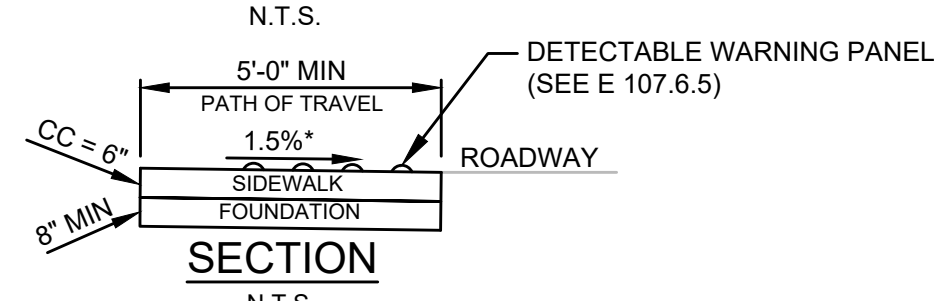
PCR#	RAMP REFERENCE POINT		WIDTH OF SIDEWALK (W)	WIDTH OF RAMP ENTRANCE (5'-0" MIN.)	LENGTH OF PRIMARY RAMP (W)	CORNER RADIUS	LEFT SIDE TRANSITION			RIGHT SIDE TRANSITION			
	STATION/ROADWAY	OFFSET					CURB LENGTH	ROADWAY GUTTER GRADE	CURB REVEAL	CURB LENGTH	ROADWAY GUTTER GRADE	CURB REVEAL	RAMP LENGTH
G1	0+48.14 FOSTER ST	14.29 RT	10'-0"	12'-0"	10'-6"	40'	7'-2"	-1.86%	6"	11'-4"	1.49%	6"	9'-0"
G2	38+38.59 FOSTER ST	12.69 RT	10'-0"	12'-0"	10'-6"	30'	5'-6"	6.86%	6"	11'-9"	-9.01%	6"	10'-8"

(-) REPRESENTS THE LOW SIDE TRANSITION



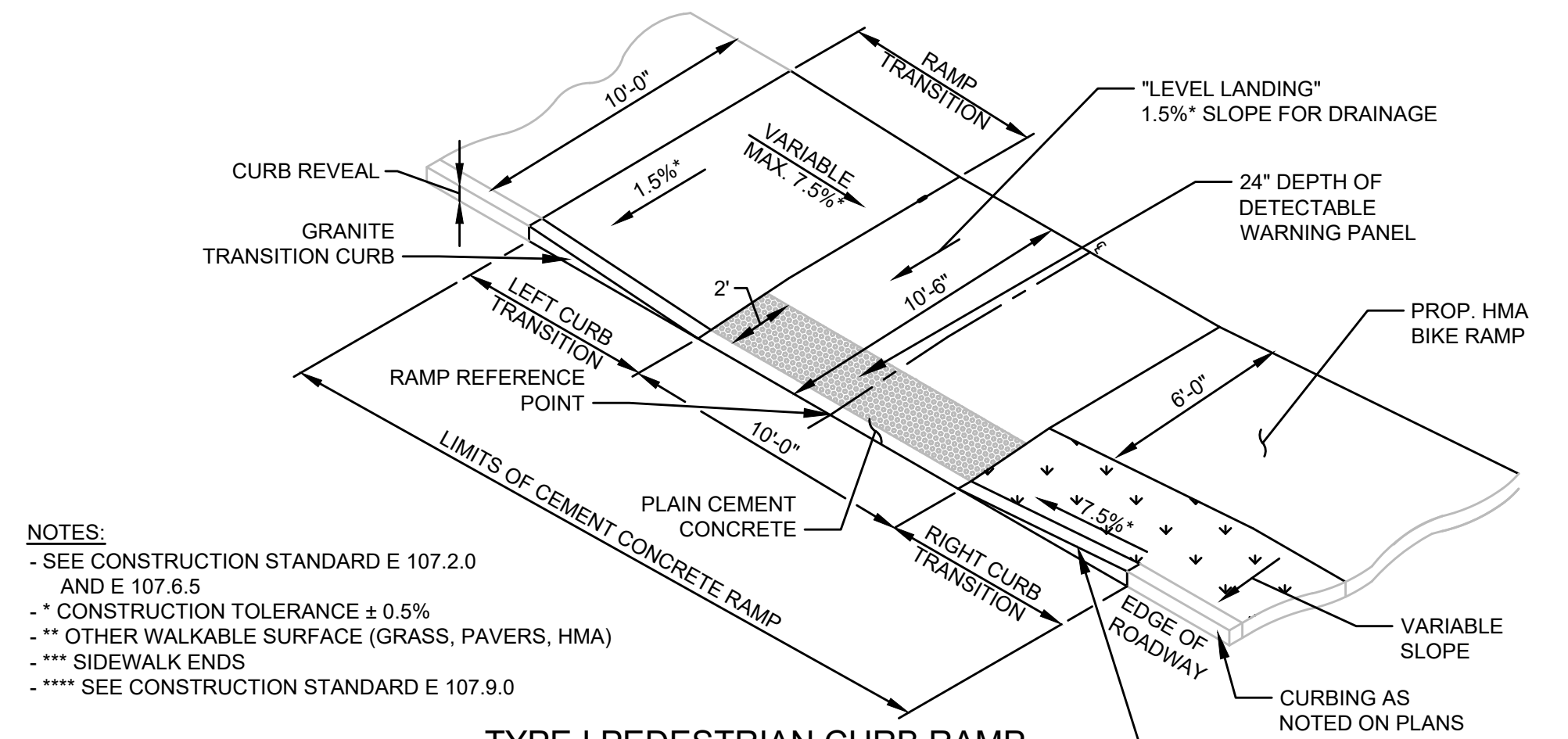
- NOTES:**
- SEE CONSTRUCTION STANDARD E 107.2.0 AND E 107.6.5
 - * CONSTRUCTION TOLERANCE ± 0.5%
 - ** OTHER WALKABLE SURFACE (GRASS, PAVERS, HMA)

TYPE H PEDESTRIAN CURB RAMP ON ROADWAY TANGENT WITH BUFFER STRIP



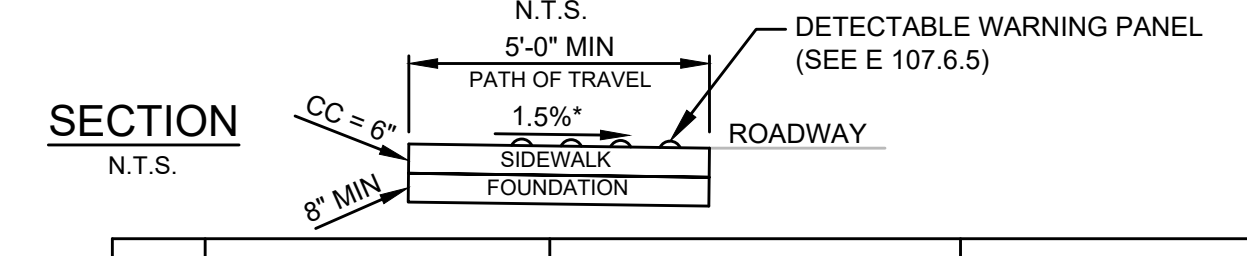
PCR#	RAMP REFERENCE POINT		WIDTH OF RAMP ENTRANCE (5'-0" MIN.)	LEFT SIDE TRANSITION			RIGHT SIDE TRANSITION				
	STATION/ROADWAY	OFFSET		CURB LENGTH	ROADWAY GUTTER GRADE	CURB REVEAL	RAMP LENGTH	CURB LENGTH	ROADWAY GUTTER GRADE	CURB REVEAL	RAMP LENGTH
H1	38+39.60 FOSTER ST	12.00 LT	10'-0"	15'-0"	-5.71%	6"	15'-0"	6'-6"	5.71%	6"	-

(-) REPRESENTS THE LOW SIDE TRANSITION



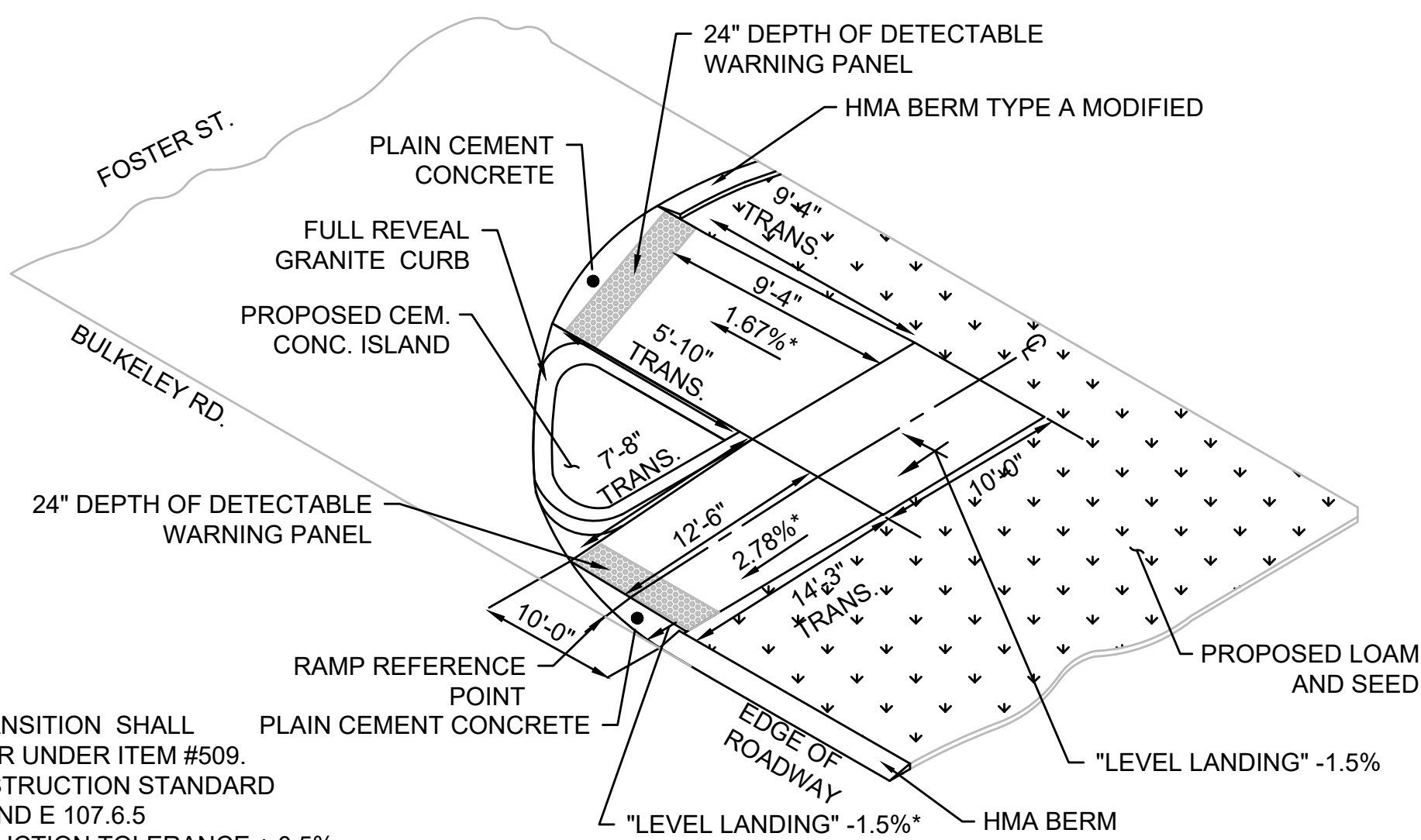
- NOTES:**
- SEE CONSTRUCTION STANDARD E 107.2.0 AND E 107.6.5
 - * CONSTRUCTION TOLERANCE ± 0.5%
 - ** OTHER WALKABLE SURFACE (GRASS, PAVERS, HMA)
 - *** SIDEWALK ENDS
 - ***** SEE CONSTRUCTION STANDARD E 107.9.0

TYPE I PEDESTRIAN CURB RAMP ON ROADWAY TANGENT WITH BUFFER STRIP



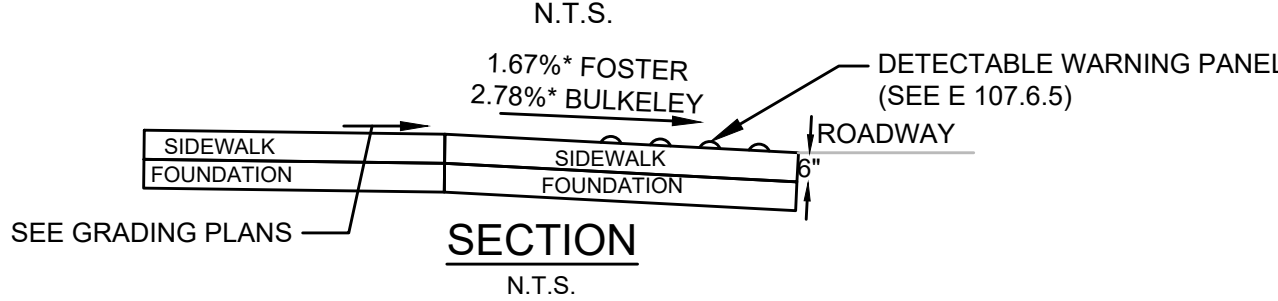
PCR#	RAMP REFERENCE POINT		LEFT SIDE TRANSITION			RIGHT SIDE TRANSITION			
	STATION/ROADWAY	OFFSET	CURB LENGTH	ROADWAY GUTTER GRADE	CURB REVEAL	RAMP LENGTH	CURB LENGTH	ROADWAY GUTTER GRADE	CURB REVEAL
I1	202+78.73	23.72 RT	12'-10"	-3.57%	6"	6'-6"	6'-6"	3.11%	6"

(-) REPRESENTS THE LOW SIDE TRANSITION

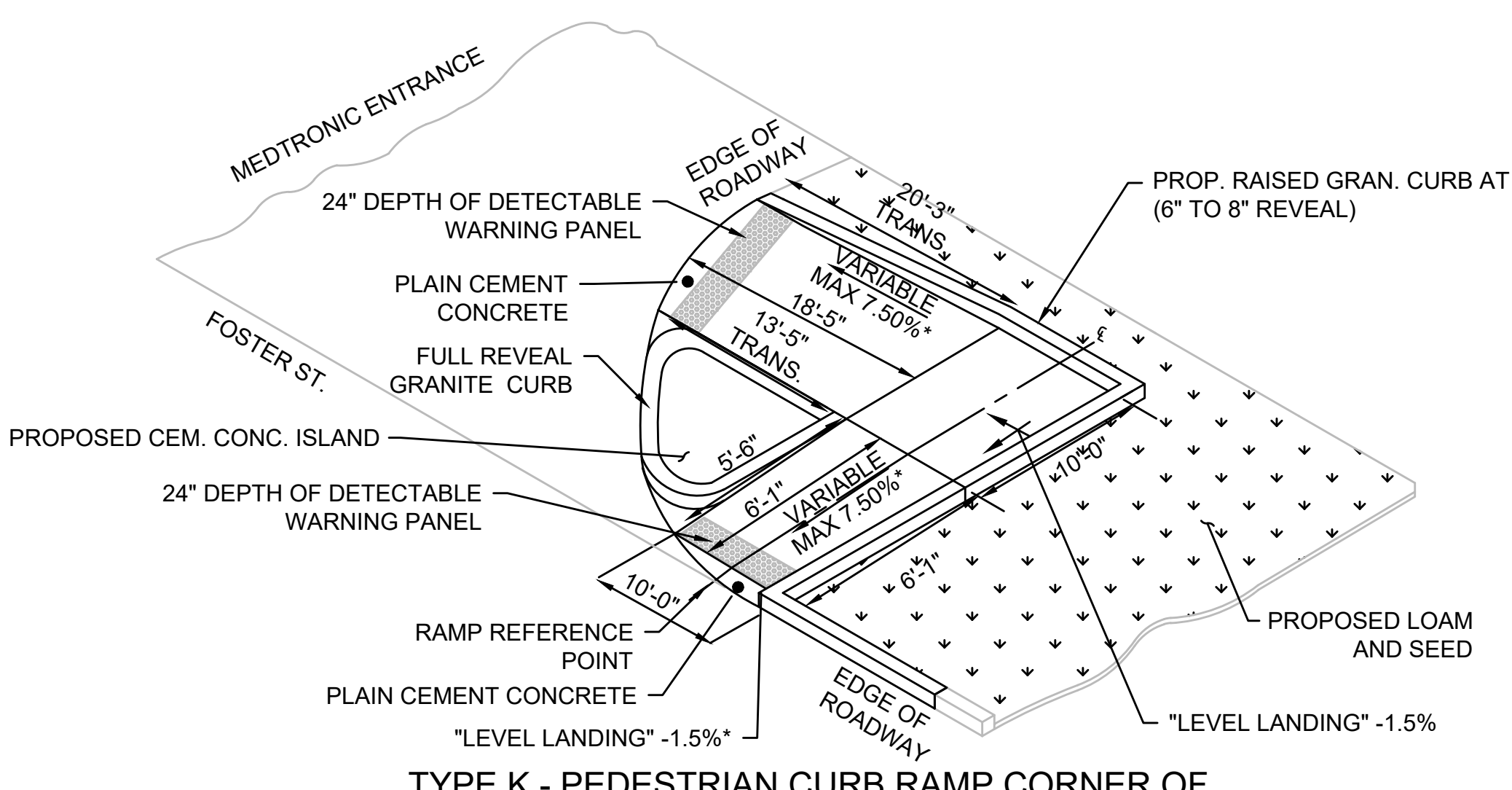


- NOTES:**
- CURB TRANSITION SHALL BE PAID FOR UNDER ITEM #509.
 - SEE CONSTRUCTION STANDARD E 107.6.9 AND E 107.6.5
 - * CONSTRUCTION TOLERANCE ± 0.5%
 - ** NON-WALKING SURFACE

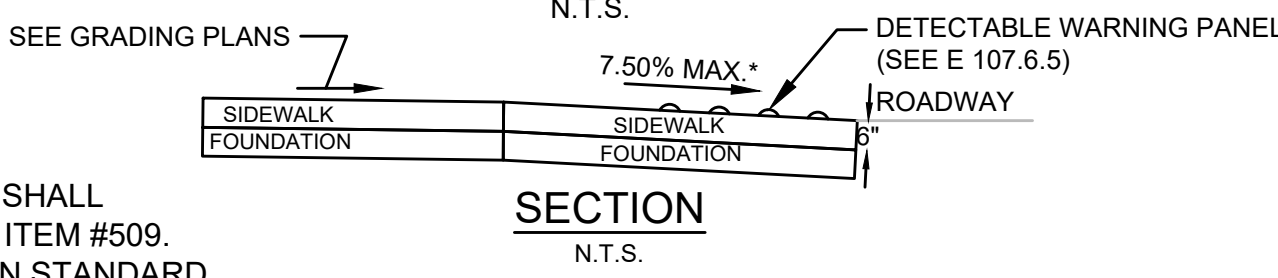
TYPE J - PEDESTRIAN CURB RAMP CORNER OF FOSTER STREET & BULKELEY ROAD



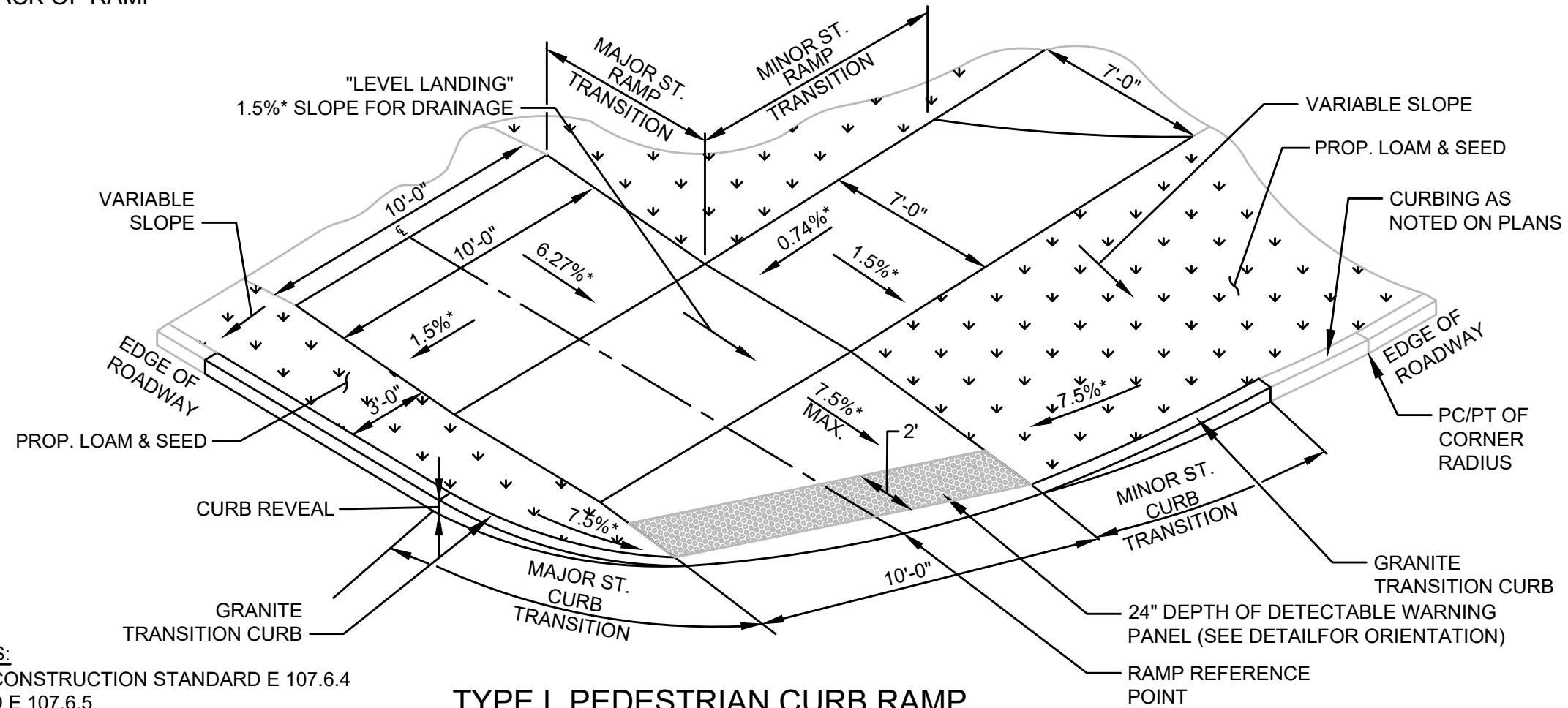
PCR#	RAMP REFERENCE POINT	
	STATION/ROADWAY	OFFSET
J1	20+99.25 FOSTER ST	27.48 RT



- NOTES:**
- CURB TRANSITION SHALL BE PAID FOR UNDER ITEM #509.
 - SEE CONSTRUCTION STANDARD E 107.6.9 AND E 107.6.5
 - * CONSTRUCTION TOLERANCE ± 0.5%
 - ** NON-WALKING SURFACE



PCR#	RAMP REFERENCE POINT	
	STATION/ROADWAY	OFFSET
K	3+37.29 FOSTER ST	12.00 RT



- NOTES:**
- SEE CONSTRUCTION STANDARD E 107.6.4 AND E 107.6.5
 - * CONSTRUCTION TOLERANCE ± 0.5%

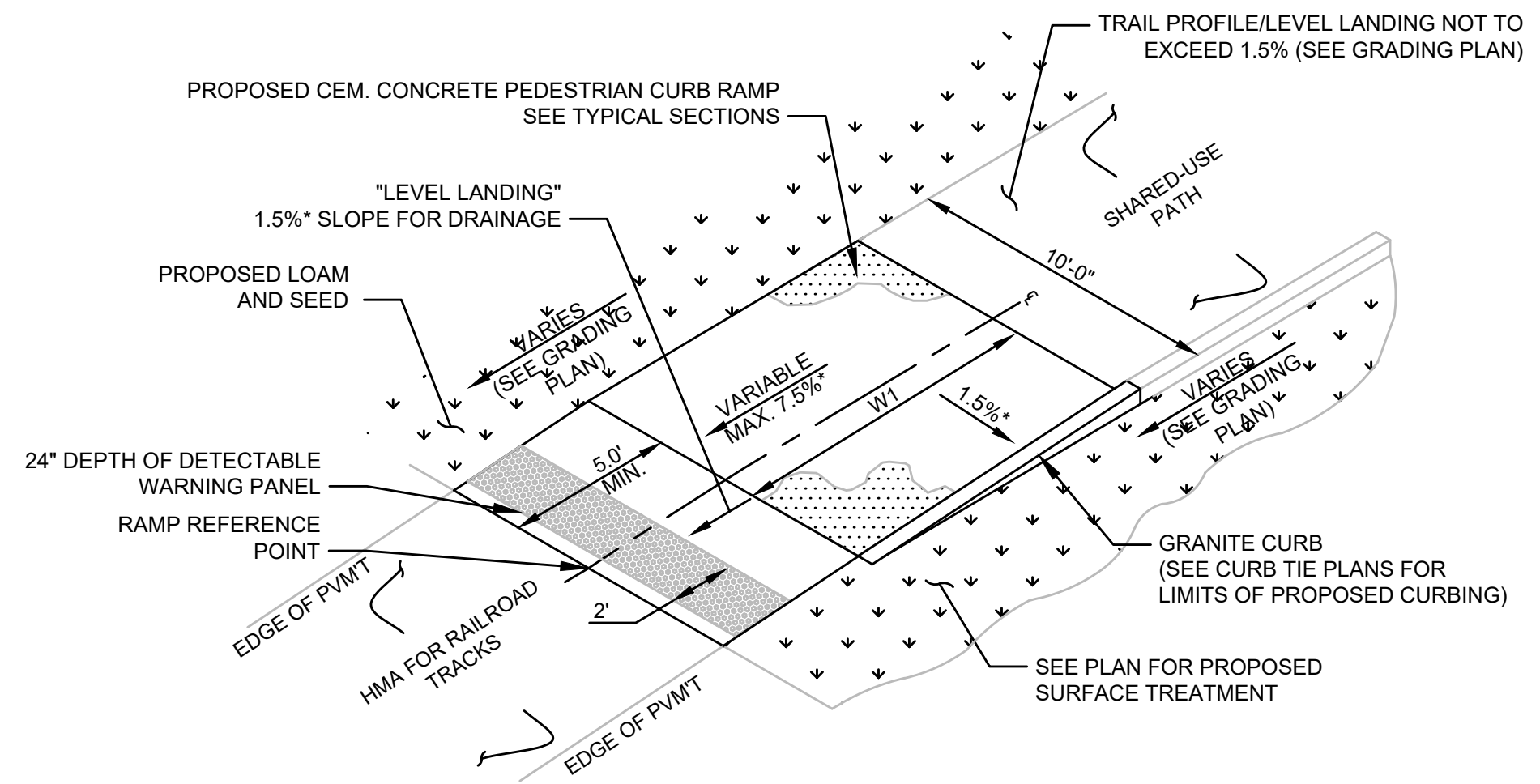
TYPE L PEDESTRIAN CURB RAMP SINGLE STREET CROSSING SERVING TWO SIDEWALK DIRECTIONS WITH BUFFER STRIP

PCR#	RAMP REFERENCE POINT		WIDTH OF RAMP ENTRANCE (5'-0" MIN.)	CORNER RADIUS	MAJOR ST. TRANSITION			MINOR ST. TRANSITION					
	STATION/ROADWAY	OFFSET			CURB LENGTH	ROADWAY GUTTER GRADE	CURB REVEAL	RAMP LENGTH	CURB LENGTH	ROADWAY GUTTER GRADE	CURB REVEAL	RAMP LENGTH	
L1	29+12.64 FOSTER ST	20.50 LT	10'-0"	30'	14'-7"	-3.28%	6"	6'-6"	13'-3"	6"	-13.16%	6"	7'-8"

LITTLETON
RECONSTRUCTION OF FOSTER STREET

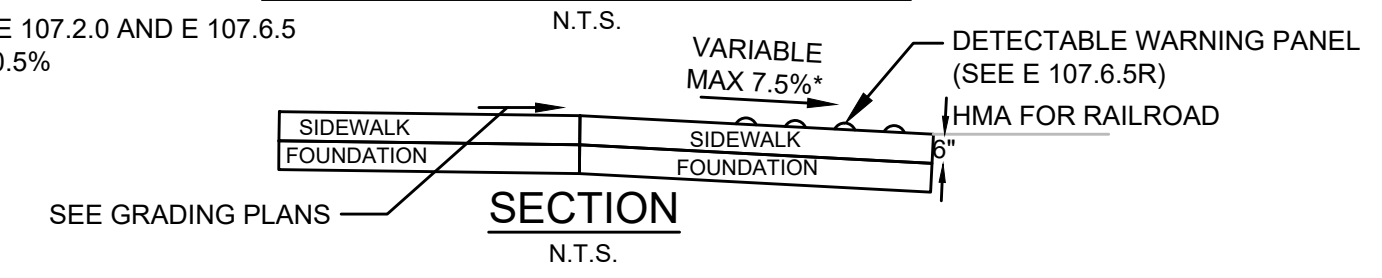
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	81	128
PROJECT FILE NO. 609054		609054	

PEDESTRIAN CURB RAMP DETAILS



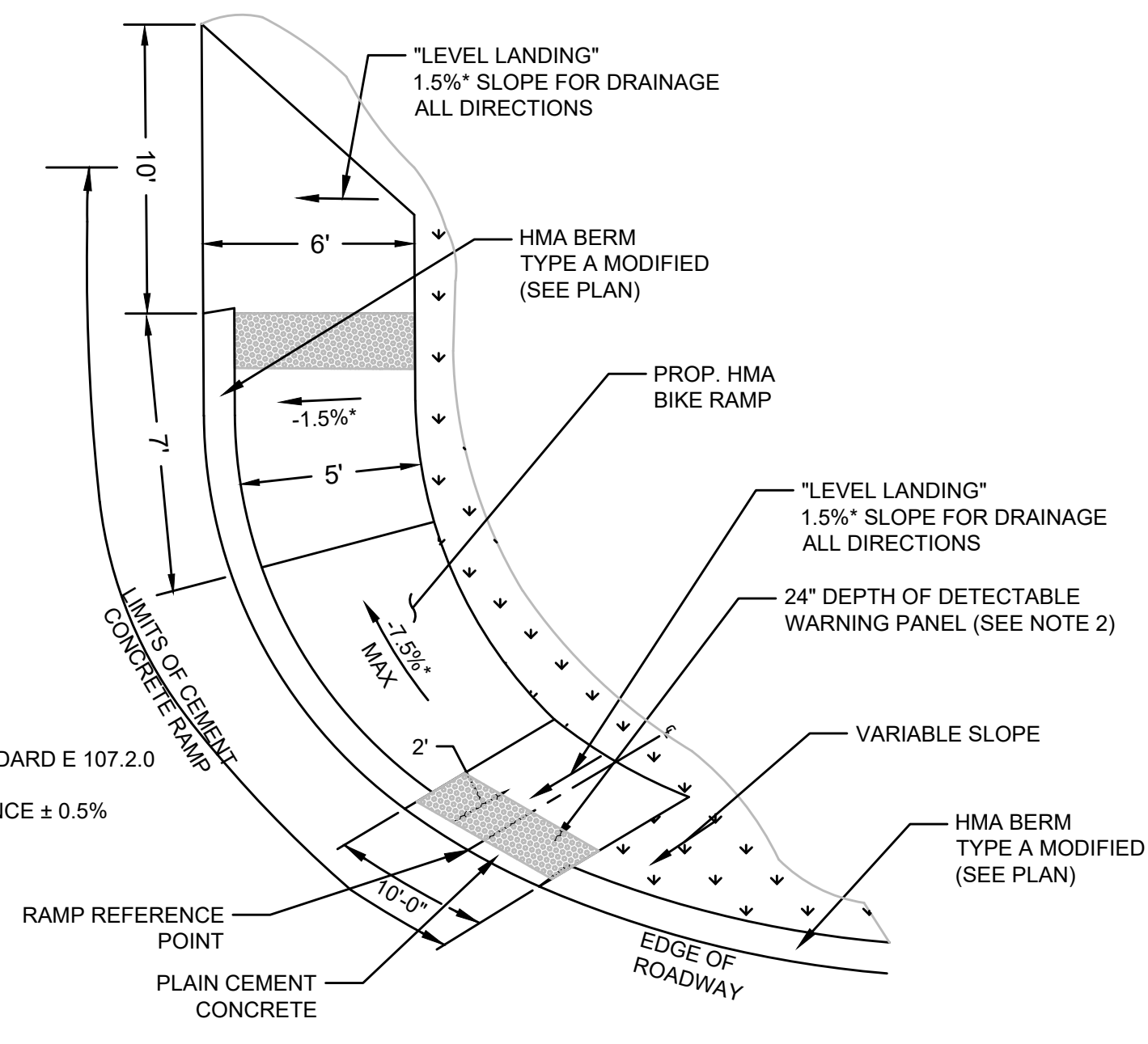
**TYPE M SHARED USE-PATH PEDESTRIAN CURB RAMP
RAILROAD CROSSING ACCESS**

NOTES:
- SEE CONSTRUCTION STANDARD E 107.2.0 AND E 107.6.5
- * CONSTRUCTION TOLERANCE ± 0.5%



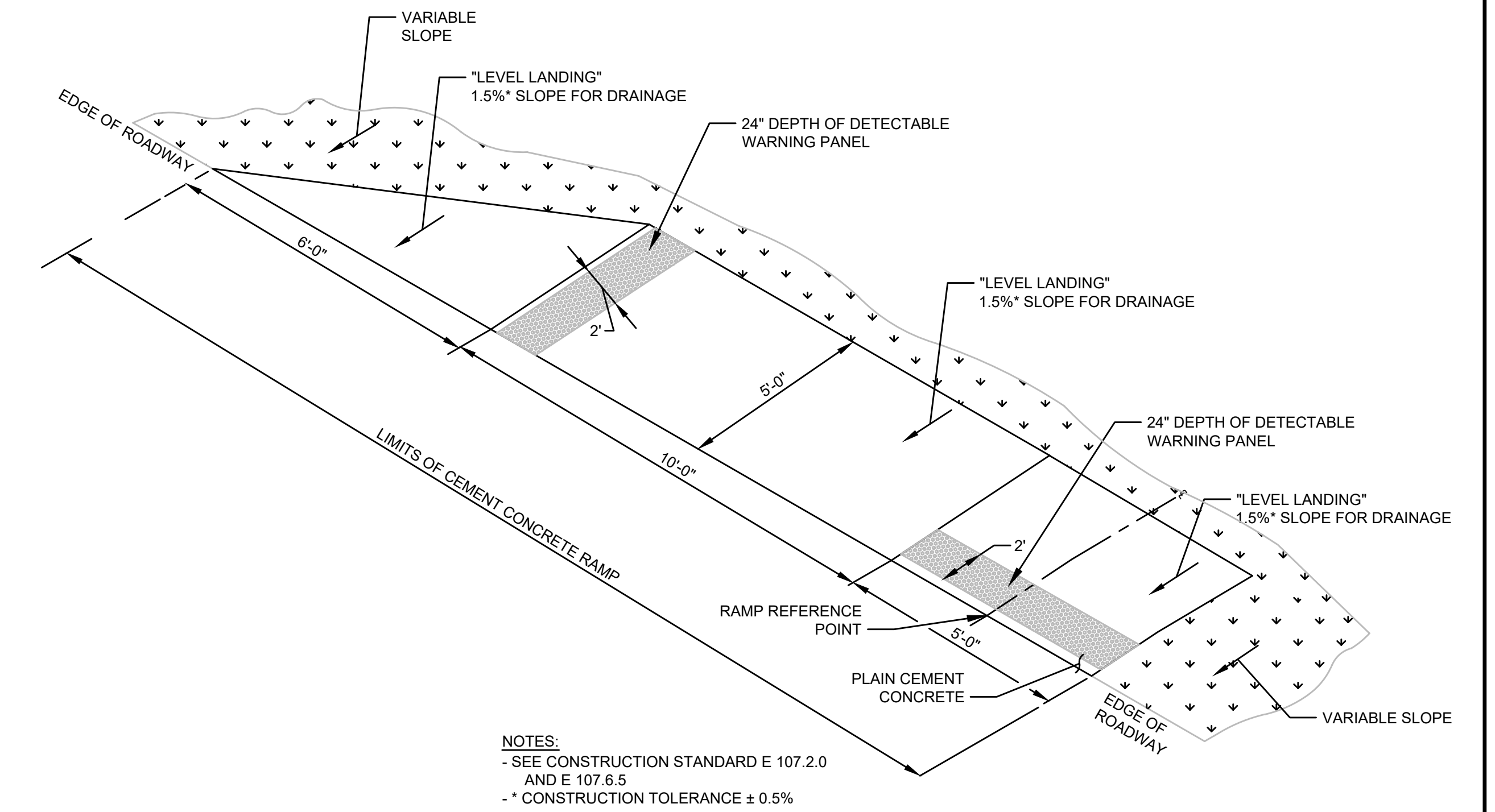
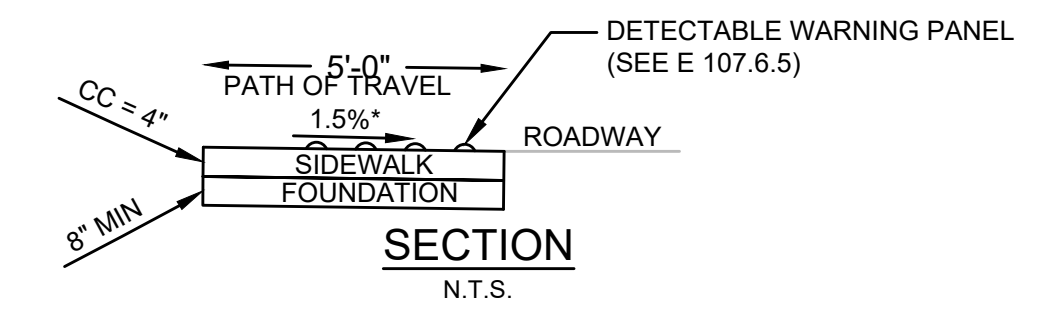
SECTION
N.T.S.

PCRB	RAMP REFERENCE POINT		WIDTH OF RAMP ENTRANCE (5'-0" MIN.)	RAMP TRANSITION (WT)
	STATION/ROADWAY	OFFSET		
M1	27+41.42 FOSTER ST	17.50 LT	10'-0"	10'-0"
M2	27+87.91 FOSTER ST	17.50 LT	10'-0"	10'-0"
M3	203+58 TAYLOR ST	17.50 LT	5'-0"	6'-6"



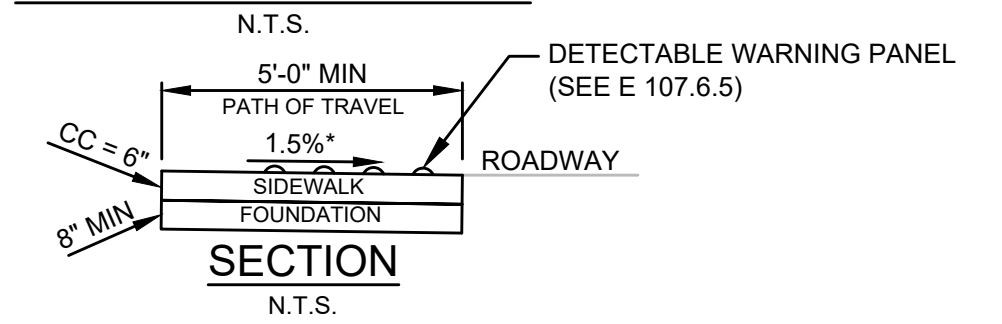
**TYPE L - PEDESTRIAN CURB RAMP
CORNER OF FOSTER STREET & BULKELEY ROAD**

NOTES:
- SEE CONSTRUCTION STANDARD E 107.2.0
AND E 107.6.5
- * CONSTRUCTION TOLERANCE ± 0.5%



**TYPE N PEDESTRIAN CURB RECIPROCAL RAMP
ON ROADWAY TANGENT**

NOTES:
- SEE CONSTRUCTION STANDARD E 107.2.0
AND E 107.6.5
- * CONSTRUCTION TOLERANCE ± 0.5%



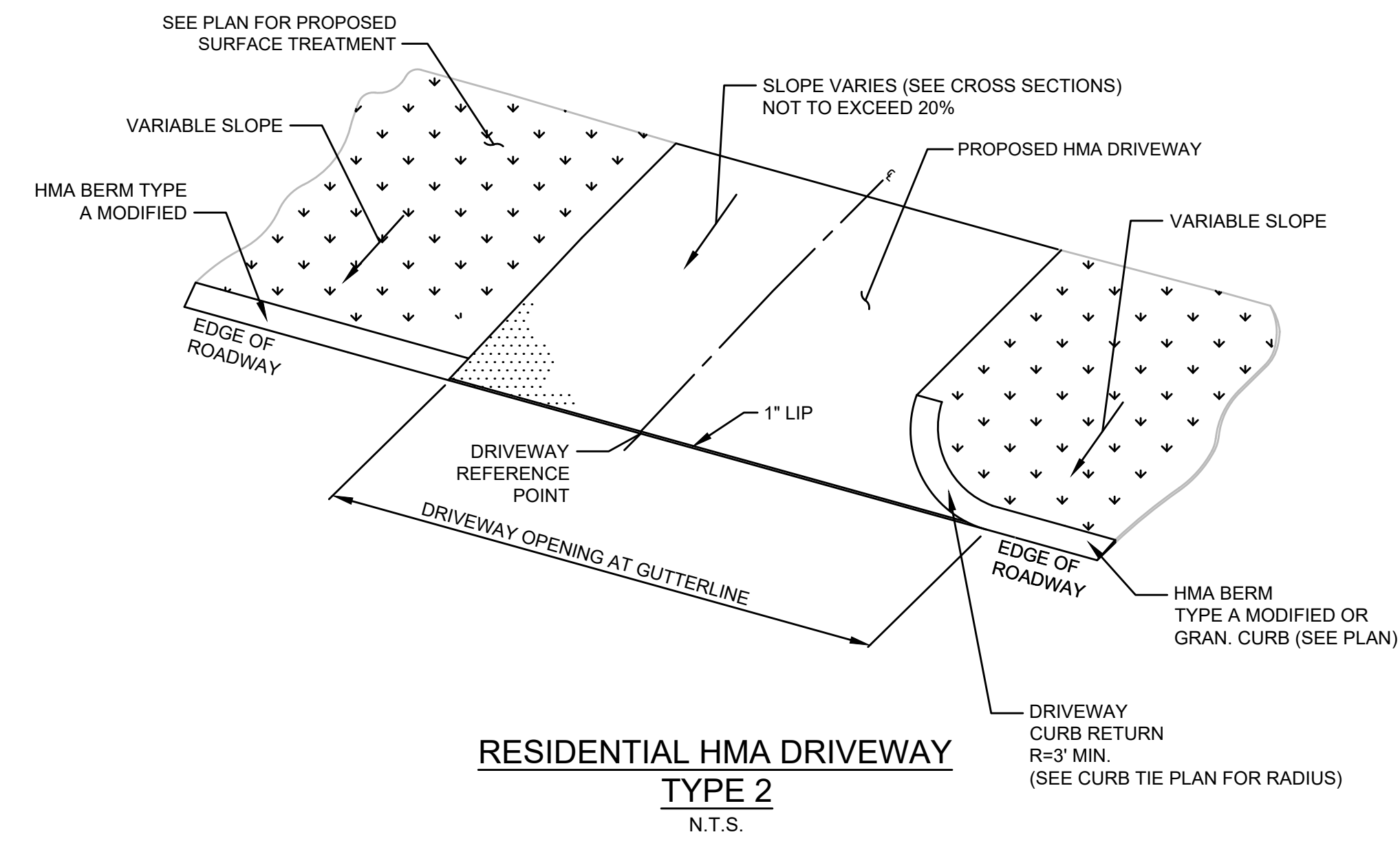
SECTION
N.T.S.

PCRB	RAMP REFERENCE POINT	
	STATION/ROADWAY	OFFSET
M1	202+77.78 TAYLOR ST	23.28 LT

LITTLETON
RECONSTRUCTION OF FOSTER STREET

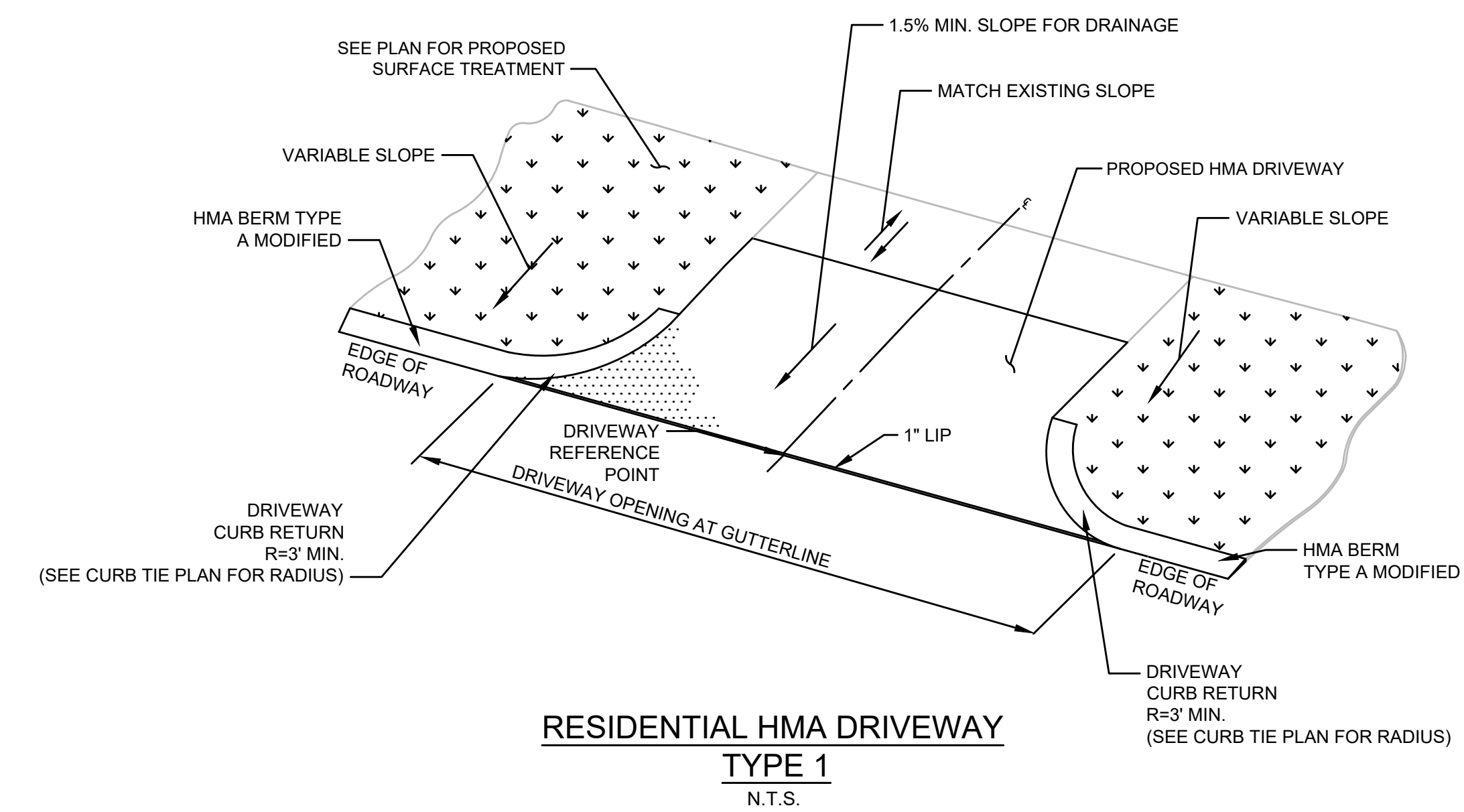
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	82	128
PROJECT FILE NO.		609054	

DRIVEWAY DETAILS



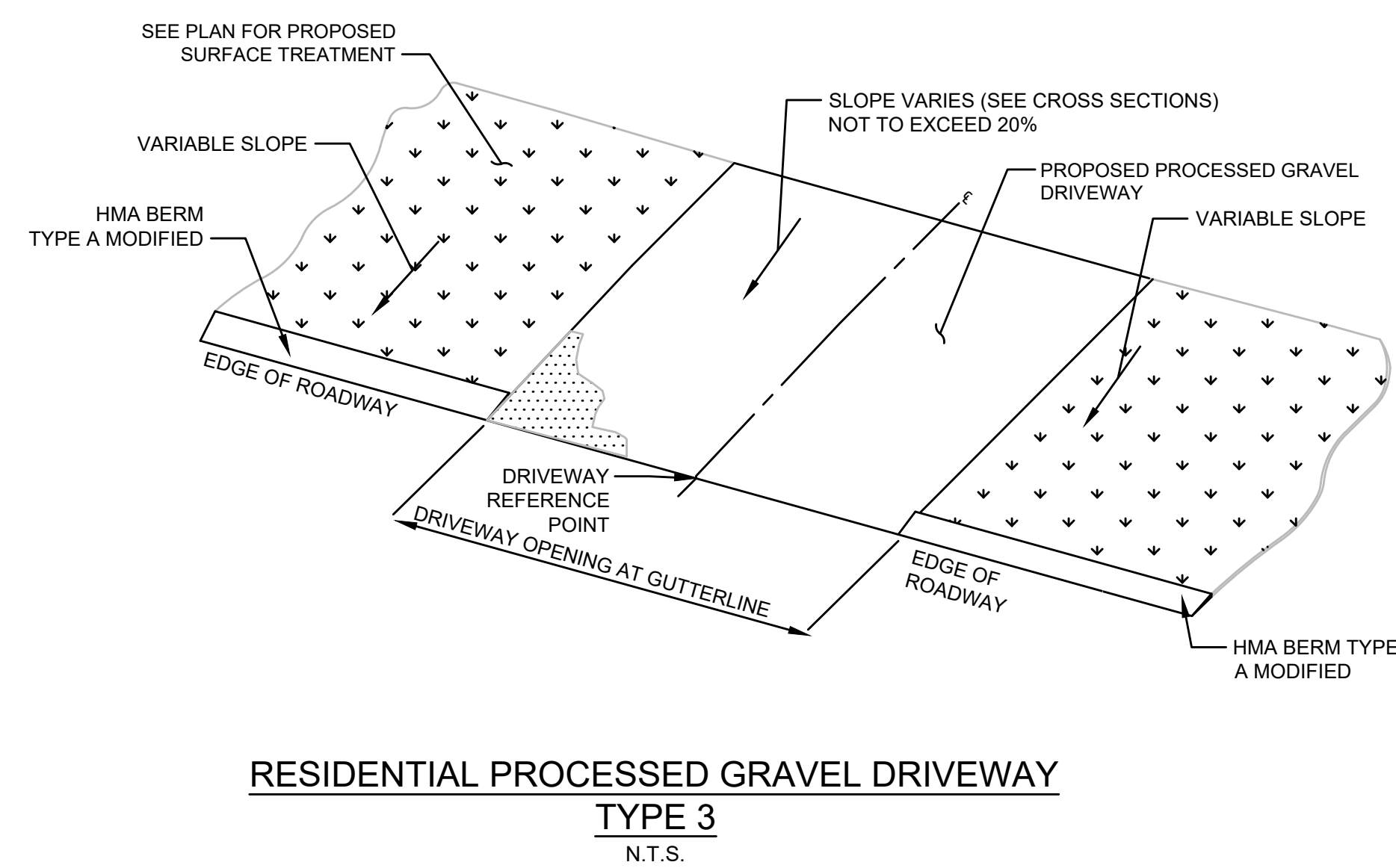
**RESIDENTIAL HMA DRIVEWAY
TYPE 2**
N.T.S.

PCR#	RAMP REFERENCE POINT		WIDTH OF DRIVEWAY OPENING AT GUTTERLINE	PROFILE GUTTER SLOPE
	STATION/ROADWAY	OFFSET		
DR2-1	17+88 FOSTER ST	12.00' RT	21'-8"	2.15%
DR2-2	38+74 FOSTER ST	12.00' RT	31'-0"	5.71%



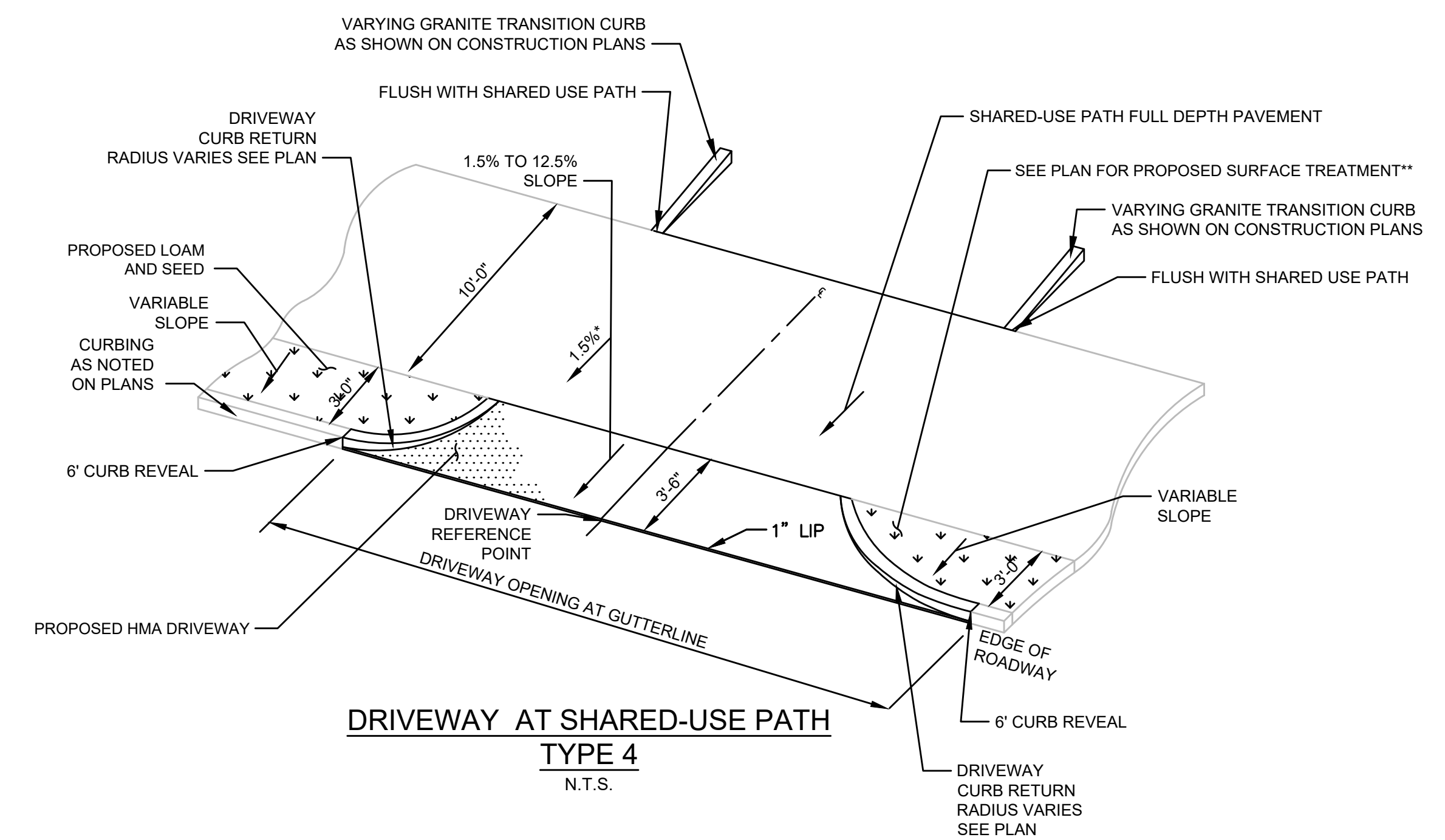
**RESIDENTIAL HMA DRIVEWAY
TYPE 1**
N.T.S.

PCR#	RAMP REFERENCE POINT		WIDTH OF DRIVEWAY OPENING AT GUTTERLINE	PROFILE GUTTER SLOPE
	STATION/ROADWAY	OFFSET		
DR1-1	14+82 FOSTER ST	12.00' RT	36'-3"	2.35%
DR1-2	16+12 FOSTER ST	12.00' LT	23'-0"	1.83%



**RESIDENTIAL PROCESSED GRAVEL DRIVEWAY
TYPE 3**
N.T.S.

PCR#	RAMP REFERENCE POINT		WIDTH OF DRIVEWAY OPENING AT GUTTERLINE	PROFILE GUTTER SLOPE
	STATION/ROADWAY	OFFSET		
DR3-1	19+00 FOSTER ST	12.00' RT	13'-2"	0.26%
DR3-2	34+02 FOSTER ST	12.00' RT	27'-10"	3.05%



**DRIVEWAY AT SHARED-USE PATH
TYPE 4**
N.T.S.

PCR#	RAMP REFERENCE POINT		WIDTH OF DRIVEWAY OPENING AT GUTTERLINE	PROFILE GUTTER SLOPE	LEFT SIDE CURB TRANSITION LENGTH	RIGHT SIDE CURB TRANSITION LENGTH
	STATION/ROADWAY	OFFSET				
DR4-1	19+45 FOSTER ST	12.00' LT	56'-9"	1.75%	6'-0"	6'-4"
DR4-2	20+54 FOSTER ST	12.00' LT	46'-9"	5.53%	8'-7"	8'-7"

**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	83	128
PROJECT FILE NO.		609054	

CROSS SECTIONS

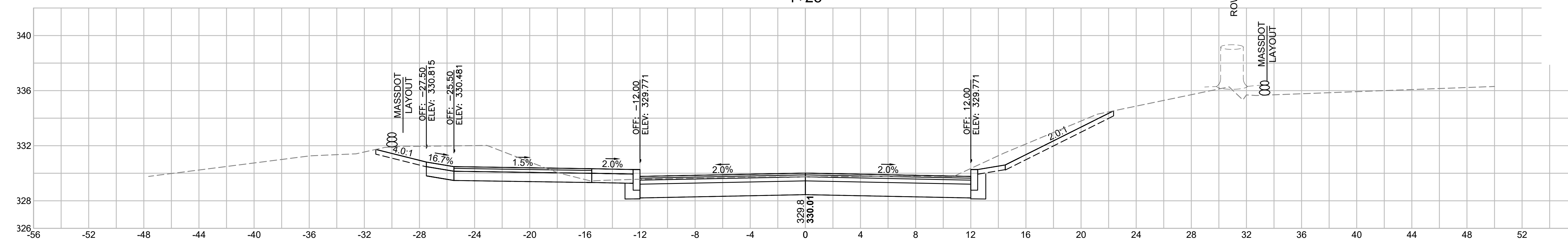
Total Volume at Station 1+25.00	
Cut Area	70.739
Fill Area	0.000
Cut Vol	62.1
Fill Vol	0.2
Cum Cut Vol	185.0
Cum Fill Vol	0.4
Net Vol	184.7

Total Volume at Station 1+00.00	
Cut Area	63.298
Fill Area	0.372
Cut Vol	56.0
Fill Vol	0.2
Cum Cut Vol	123.0
Cum Fill Vol	0.2
Net Vol	122.8

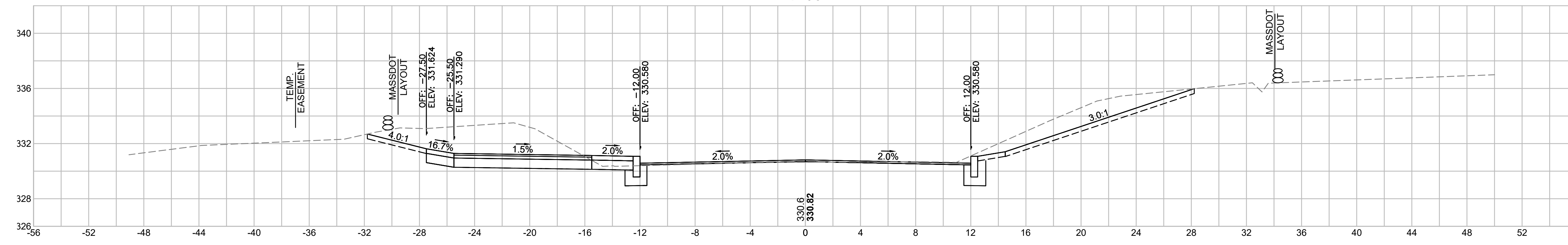
Total Volume at Station 0+75.00	
Cut Area	57.615
Fill Area	0.000
Cut Vol	67.0
Fill Vol	0.0
Cum Cut Vol	67.0
Cum Fill Vol	0.0
Net Vol	67.0

Total Volume at Station 0+50.00	
Cut Area	87.049
Fill Area	0.024
Cut Vol	0.0
Fill Vol	0.0
Cum Cut Vol	0.0
Cum Fill Vol	0.0
Net Vol	0.0

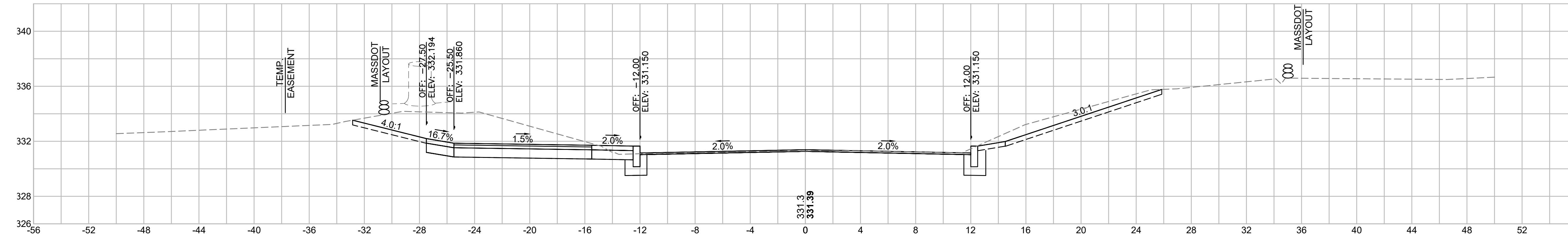
1+25



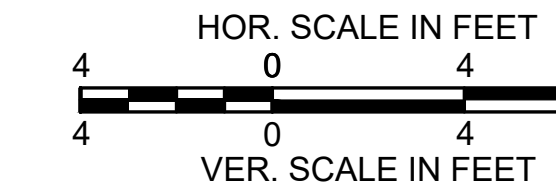
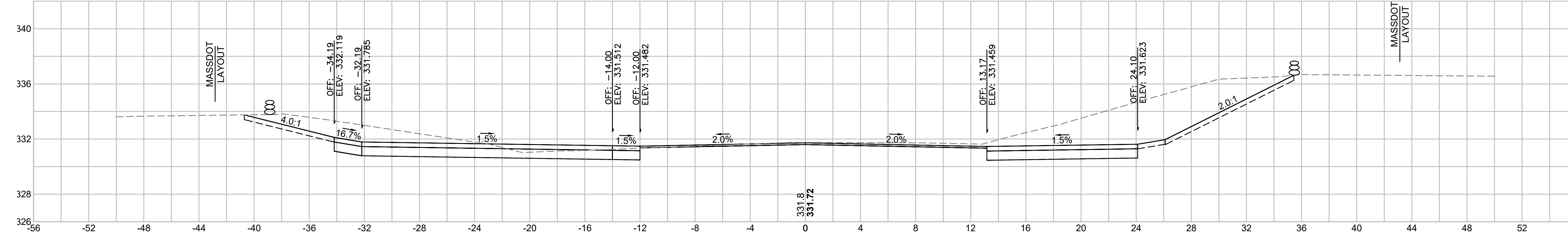
1+00



0+75



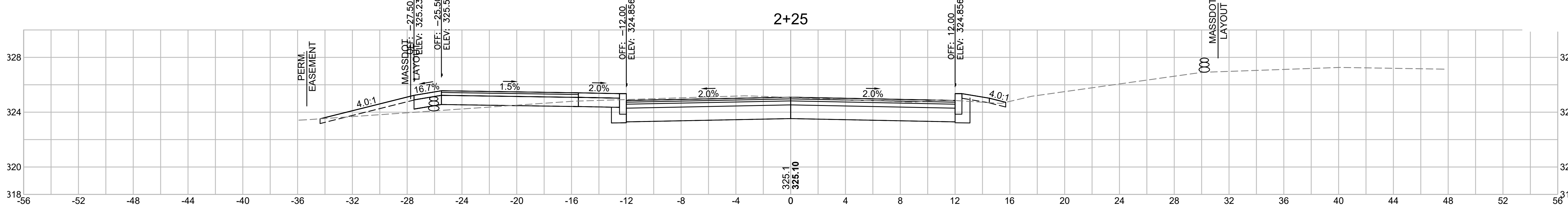
0+50



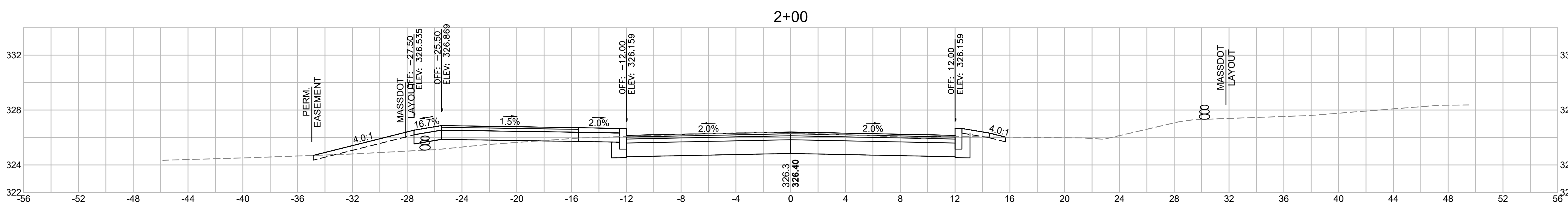
**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	84	128
PROJECT FILE NO.		609054	

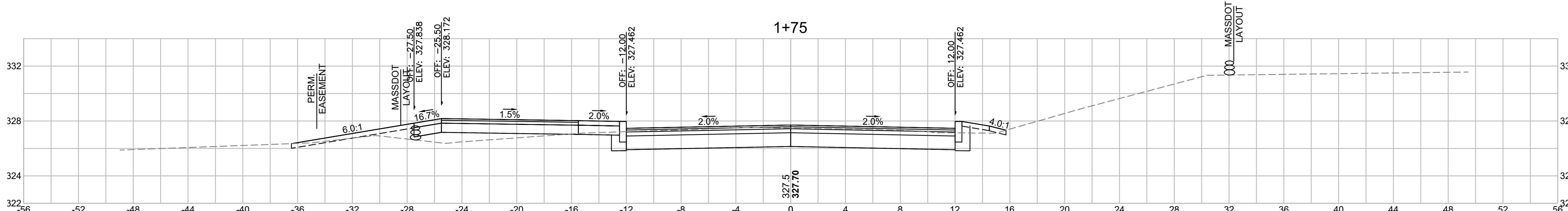
CROSS SECTIONS



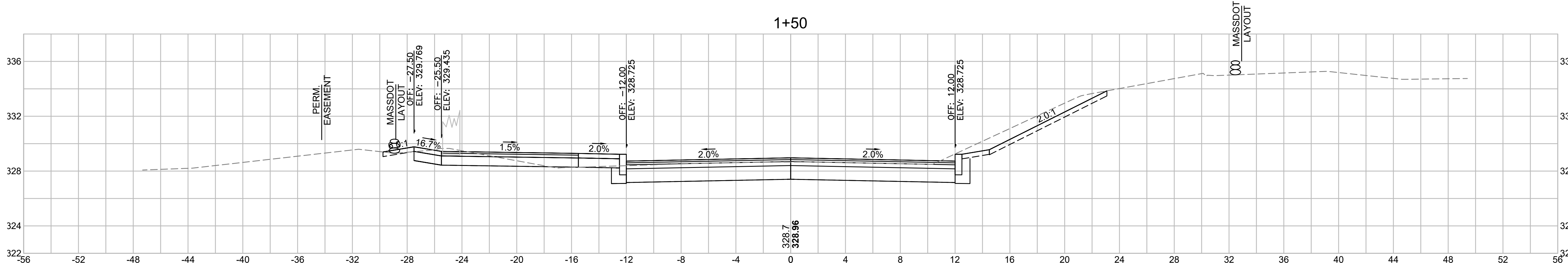
Total Volume at Station 2+25.00	
Cut Area	43.868
Fill Area	4.065
Cut Vol	38.9
Fill Vol	3.6
Cum Cut Vol	357.4
Cum Fill Vol	12.1
Net Vol	345.4



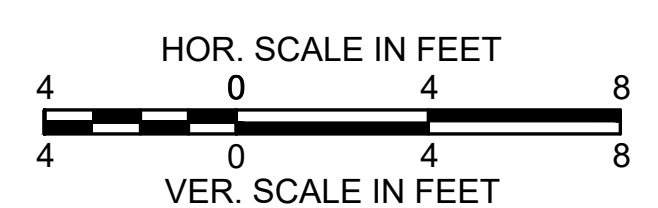
Total Volume at Station 2+00.00	
Cut Area	40.158
Fill Area	3.669
Cut Vol	35.3
Fill Vol	4.9
Cum Cut Vol	318.5
Cum Fill Vol	8.5
Net Vol	310.0



Total Volume at Station 1+75.00	
Cut Area	35.995
Fill Area	6.870
Cut Vol	41.1
Fill Vol	3.2
Cum Cut Vol	283.3
Cum Fill Vol	3.6
Net Vol	279.7



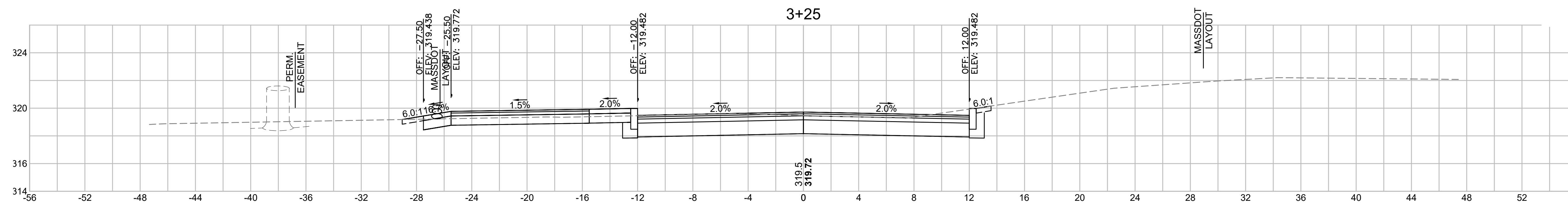
Total Volume at Station 1+50.00	
Cut Area	52.770
Fill Area	0.085
Cut Vol	57.2
Fill Vol	0.0
Cum Cut Vol	242.2
Cum Fill Vol	0.4
Net Vol	241.8



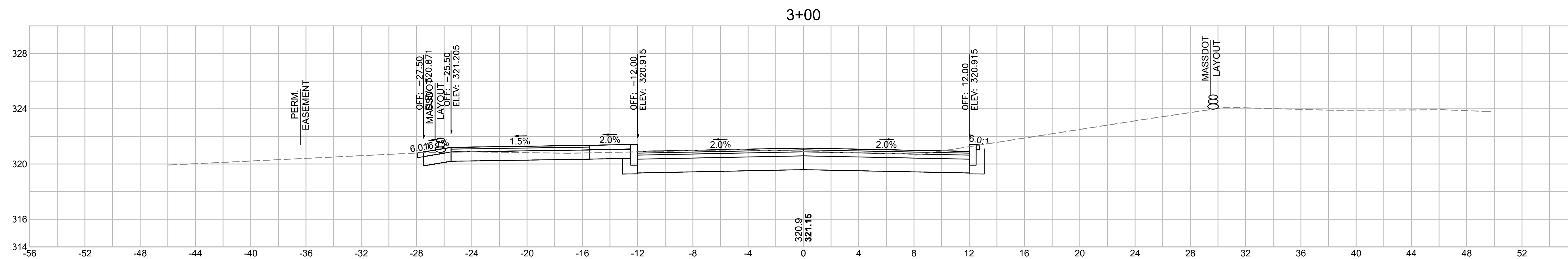
**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	85	128
PROJECT FILE NO.		609054	

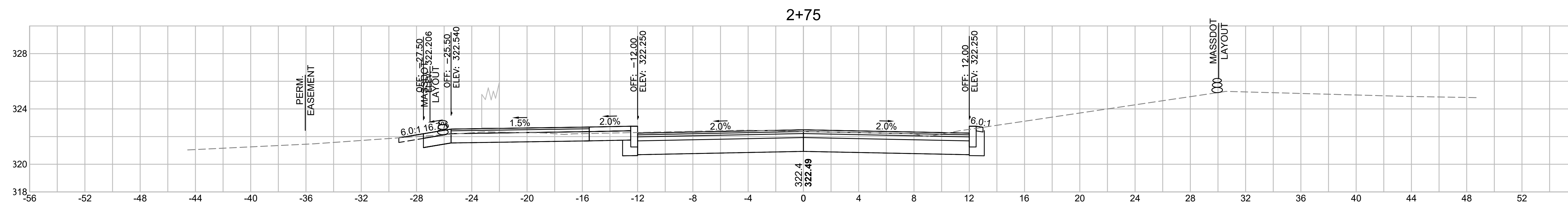
CROSS SECTIONS



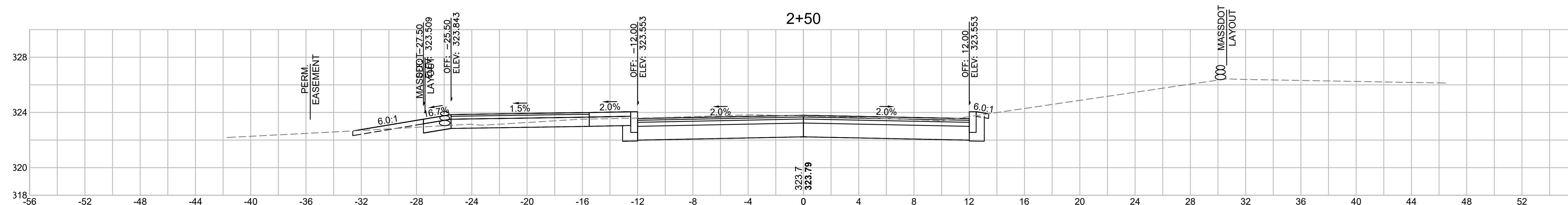
Total Volume at Station 3+25.00	
Cut Area	46.744
Fill Area	0.000
Cut Vol	43.4
Fill Vol	0.0
Cum Cut Vol	532.7
Cum Fill Vol	14.2
Net Vol	518.5



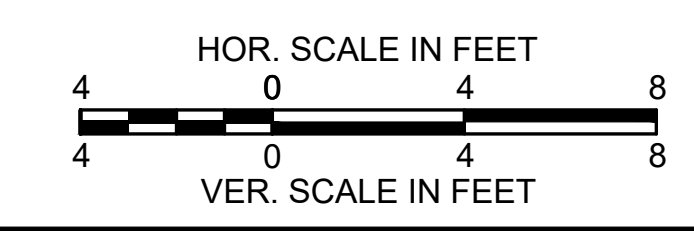
Total Volume at Station 3+00.00	
Cut Area	46.915
Fill Area	0.000
Cut Vol	44.9
Fill Vol	0.0
Cum Cut Vol	489.3
Cum Fill Vol	14.2
Net Vol	475.2



Total Volume at Station 2+75.00	
Cut Area	50.144
Fill Area	0.000
Cut Vol	44.9
Fill Vol	0.1
Cum Cut Vol	444.4
Cum Fill Vol	14.2
Net Vol	430.2



Total Volume at Station 2+50.00	
Cut Area	46.890
Fill Area	0.220
Cut Vol	42.0
Fill Vol	2.0
Cum Cut Vol	399.5
Cum Fill Vol	14.1
Net Vol	385.4



**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	86	128
PROJECT FILE NO.		609054	

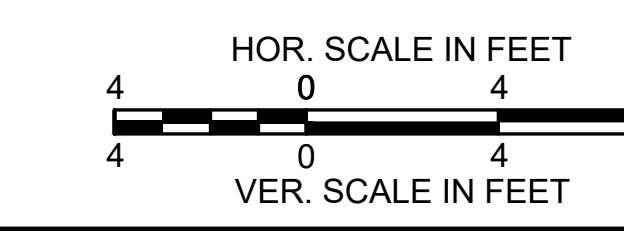
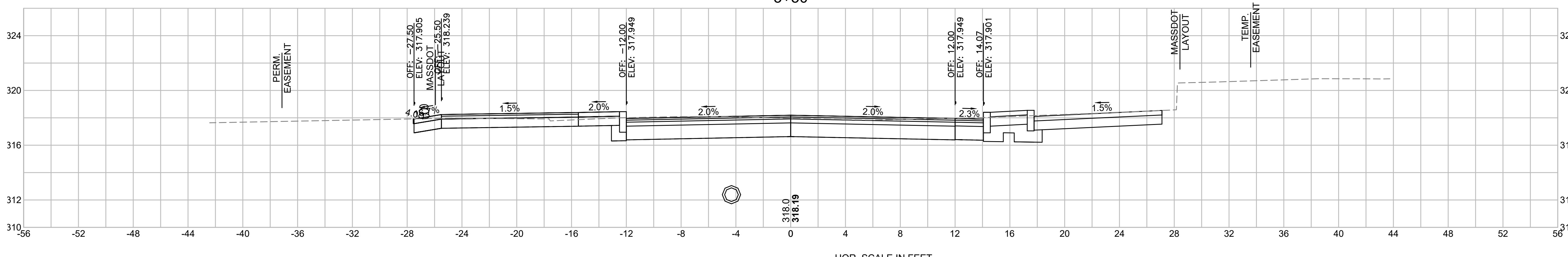
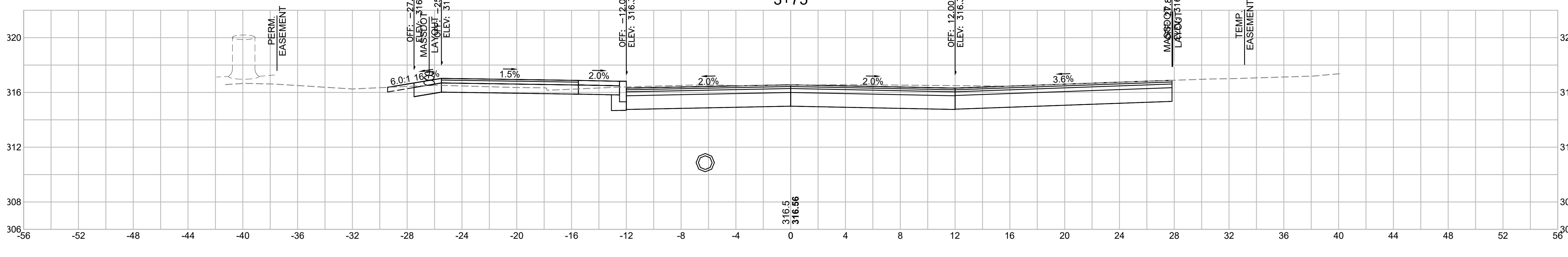
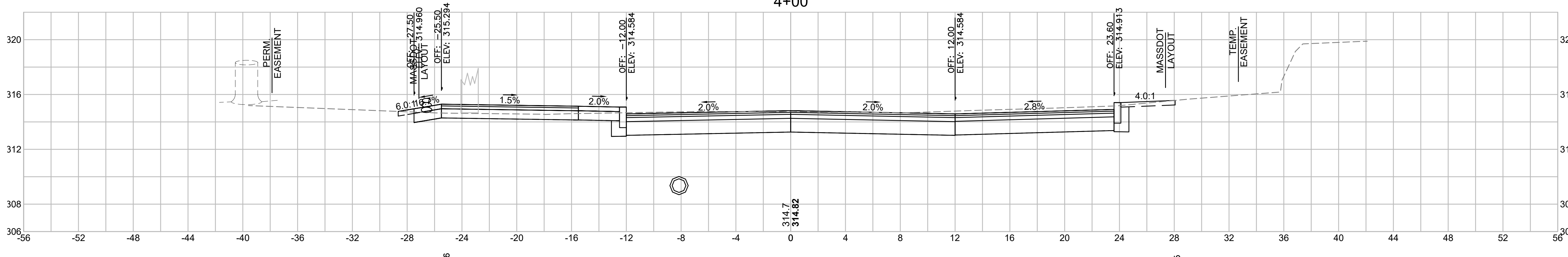
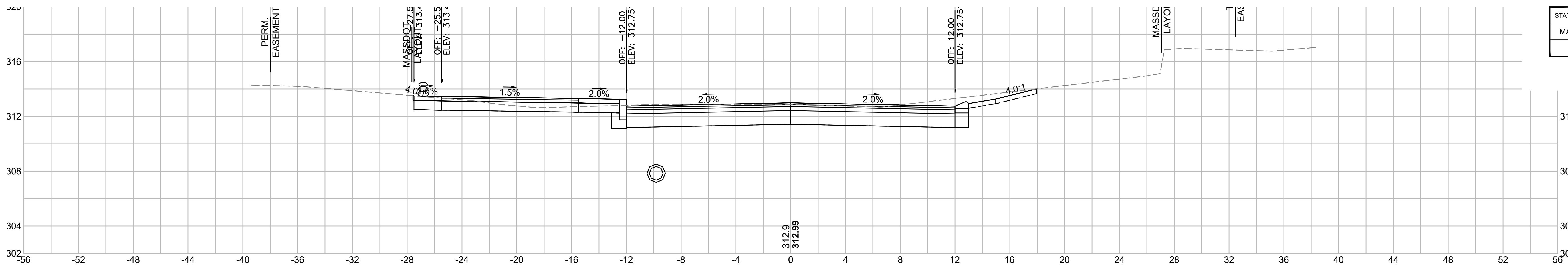
CROSS SECTIONS

Total Volume at Station 4+25.00	
Cut Area	52.825
Fill Area	0.000
Cut Vol	55.4
Fill Vol	0.0
Cum Cut Vol	754.0
Cum Fill Vol	14.2
Net Vol	739.8

Total Volume at Station 4+00.00	
Cut Area	66.816
Fill Area	0.000
Cut Vol	64.7
Fill Vol	0.0
Cum Cut Vol	698.6
Cum Fill Vol	14.2
Net Vol	684.4

Total Volume at Station 3+75.00	
Cut Area	73.013
Fill Area	0.000
Cut Vol	56.7
Fill Vol	0.0
Cum Cut Vol	633.8
Cum Fill Vol	14.2
Net Vol	619.7

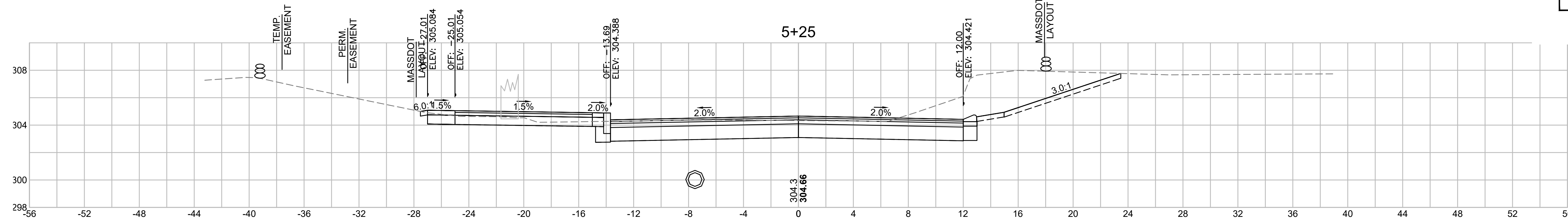
Total Volume at Station 3+50.00	
Cut Area	49.390
Fill Area	0.000
Cut Vol	44.5
Fill Vol	0.0
Cum Cut Vol	577.2
Cum Fill Vol	14.2
Net Vol	563.0



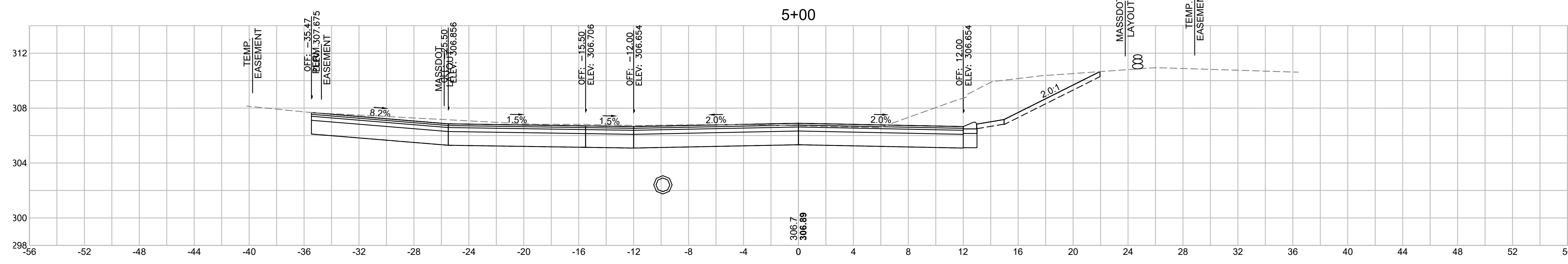
**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	87	128
PROJECT FILE NO.		609054	

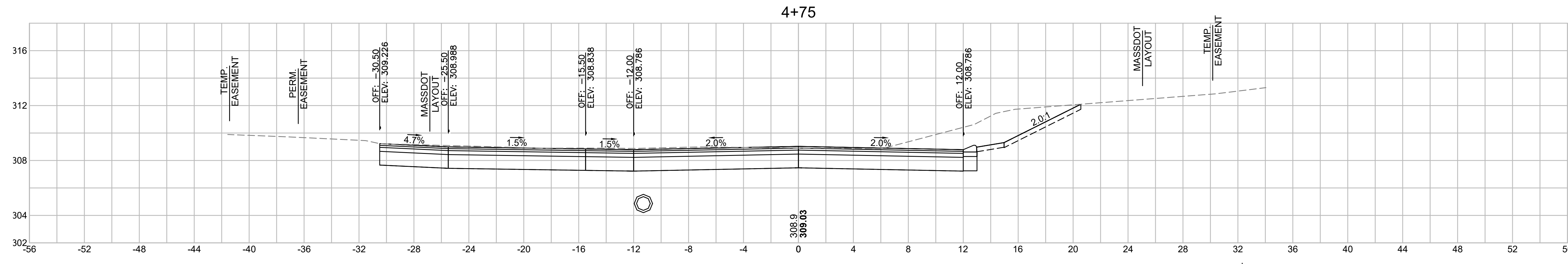
CROSS SECTIONS



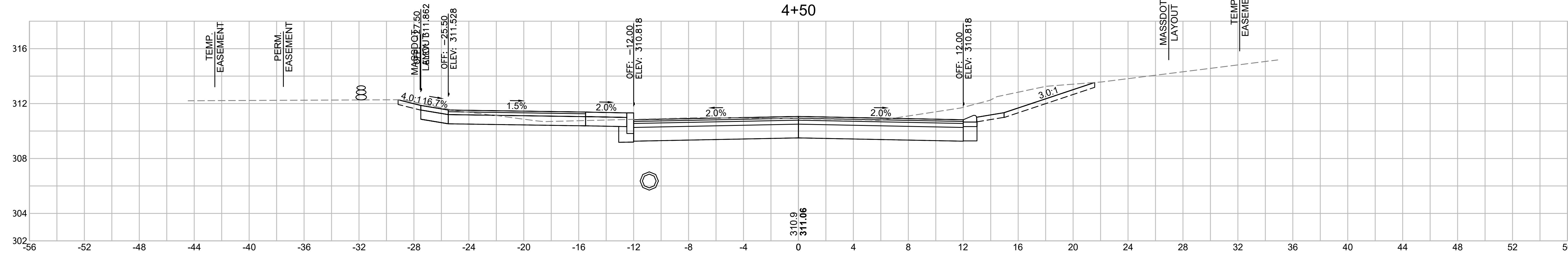
Total Volume at Station 5+25.00	
Cut Area	74.319
Fill Area	0.000
Cut Vol	82.9
Fill Vol	0.0
Cum Cut Vol	1049.4
Cum Fill Vol	14.2
Net Vol	1035.2



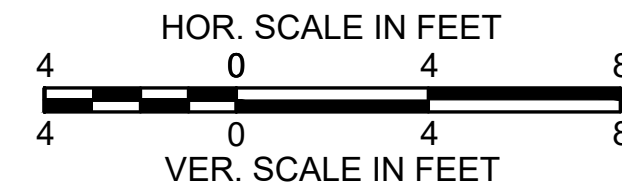
Total Volume at Station 5+00.00	
Cut Area	104.982
Fill Area	0.000
Cut Vol	89.2
Fill Vol	0.0
Cum Cut Vol	966.5
Cum Fill Vol	14.2
Net Vol	952.3



Total Volume at Station 4+75.00	
Cut Area	88.649
Fill Area	0.000
Cut Vol	69.9
Fill Vol	0.0
Cum Cut Vol	877.2
Cum Fill Vol	14.2
Net Vol	863.1



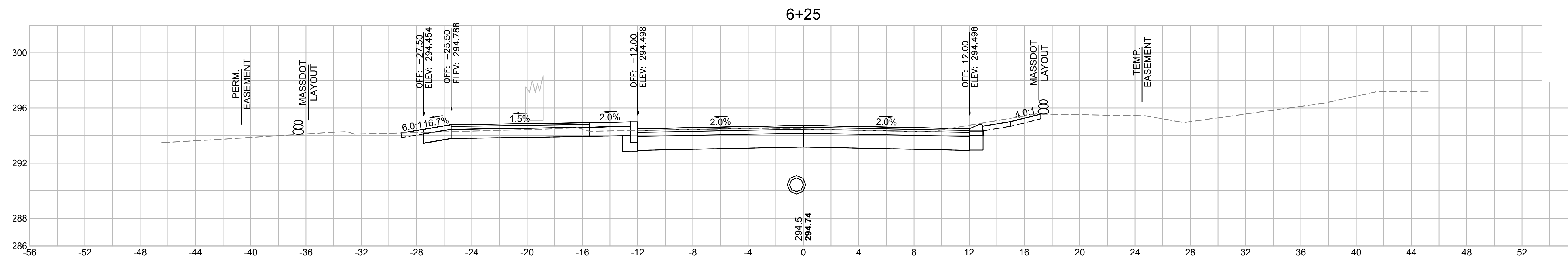
Total Volume at Station 4+50.00	
Cut Area	62.594
Fill Area	0.000
Cut Vol	53.4
Fill Vol	0.0
Cum Cut Vol	807.4
Cum Fill Vol	14.2
Net Vol	793.2



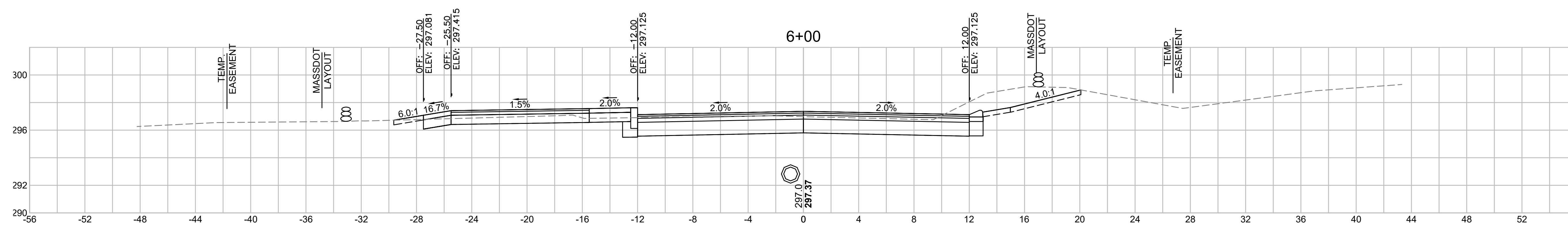
**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	88	128
PROJECT FILE NO.		609054	

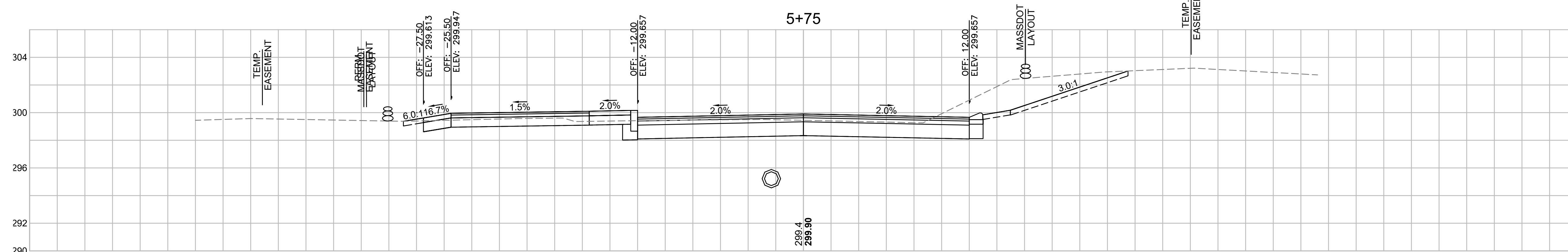
CROSS SECTIONS



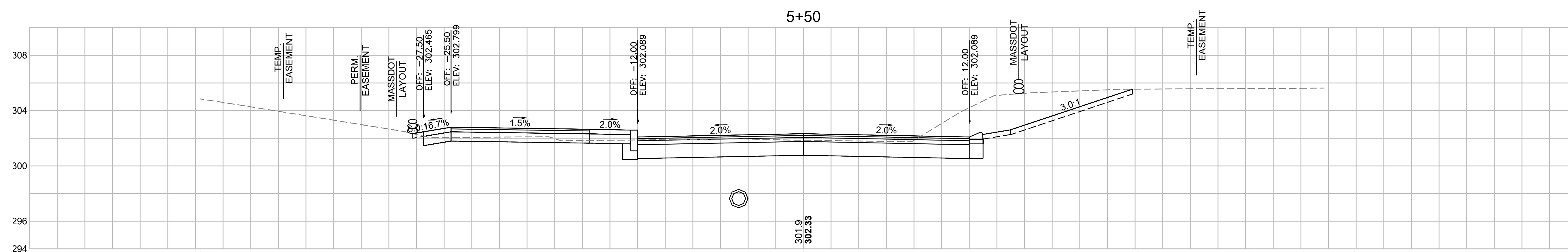
Total Volume at Station 6+25.00	
Cut Area	46.941
Fill Area	0.000
Cut Vol	45.7
Fill Vol	0.0
Cum Cut Vol	1268.1
Cum Fill Vol	14.2
Net Vol	1253.9



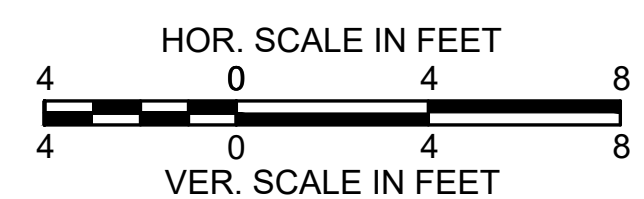
Total Volume at Station 6+00.00	
Cut Area	51.600
Fill Area	0.000
Cut Vol	51.5
Fill Vol	0.0
Cum Cut Vol	1222.4
Cum Fill Vol	14.2
Net Vol	1208.2



Total Volume at Station 5+75.00	
Cut Area	59.826
Fill Area	0.000
Cut Vol	57.2
Fill Vol	0.0
Cum Cut Vol	1170.9
Cum Fill Vol	14.2
Net Vol	1156.8



Total Volume at Station 5+50.00	
Cut Area	64.574
Fill Area	0.000
Cut Vol	64.3
Fill Vol	0.0
Cum Cut Vol	1113.7
Cum Fill Vol	14.2
Net Vol	1099.5

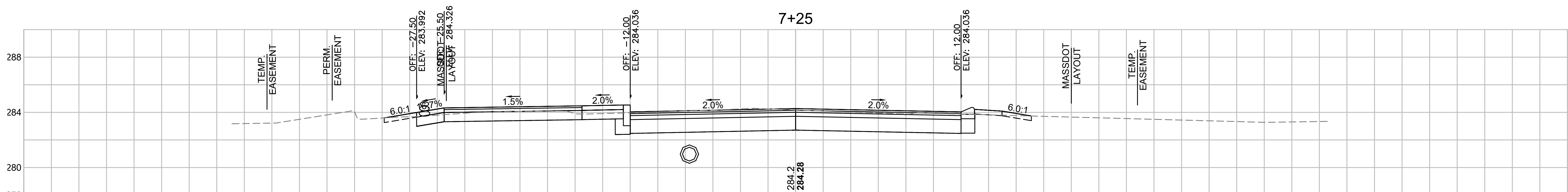
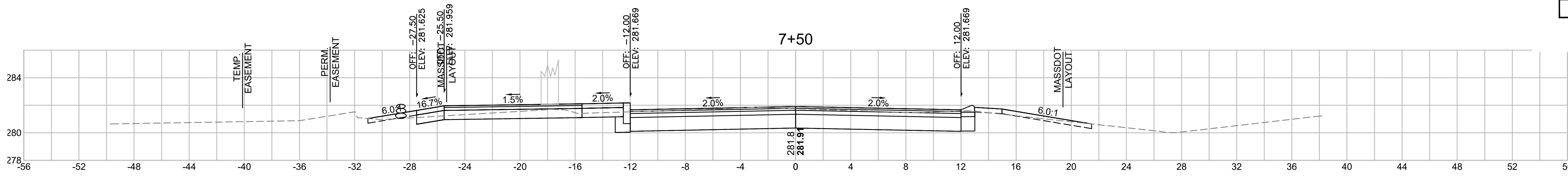


**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

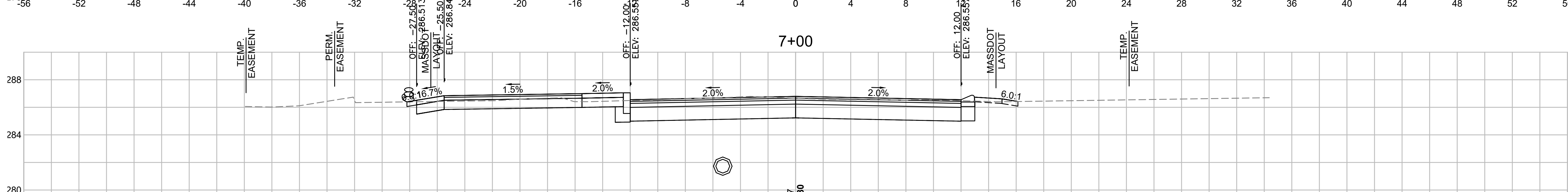
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	89	128
PROJECT FILE NO.		609054	

CROSS SECTIONS

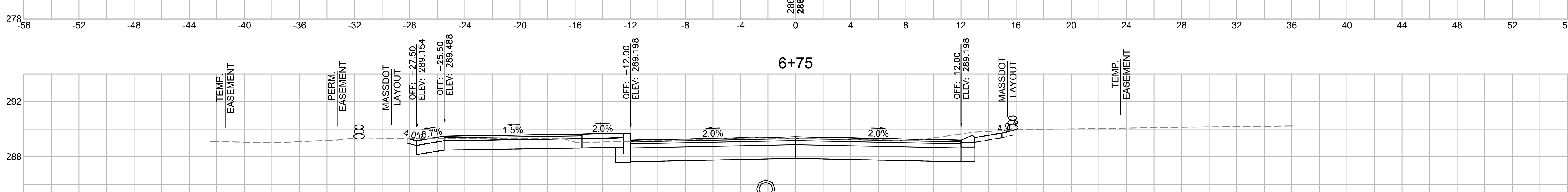
Cut Area	44.465
Fill Area	0.177
Cut Vol	42.7
Fill Vol	0.1
Cum Cut Vol	1495.4
Cum Fill Vol	14.3
Net Vol	1481.1



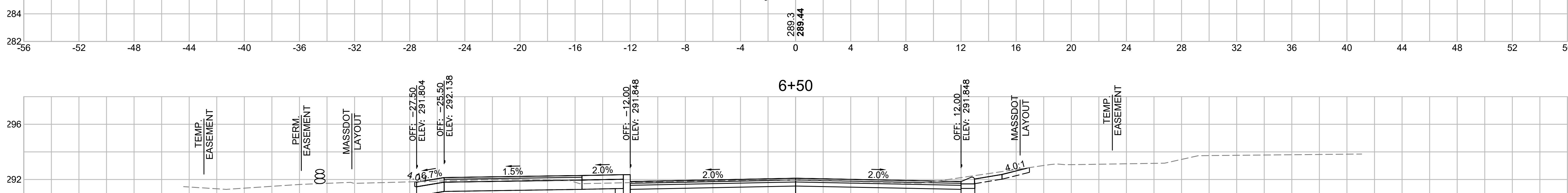
Total Volume at Station 7+25.00	
Cut Area	47.827
Fill Area	0.016
Cut Vol	44.5
Fill Vol	0.0
Cum Cut Vol	1452.6
Cum Fill Vol	14.2
Net Vol	1438.5



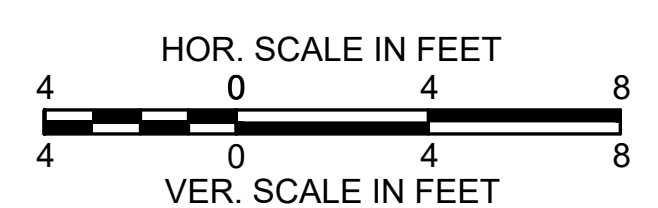
Total Volume at Station 7+00.00	
Cut Area	48.231
Fill Area	0.000
Cut Vol	46.6
Fill Vol	0.0
Cum Cut Vol	1408.1
Cum Fill Vol	14.2
Net Vol	1394.0



Total Volume at Station 6+75.00	
Cut Area	52.374
Fill Area	0.000
Cut Vol	47.9
Fill Vol	0.0
Cum Cut Vol	1361.6
Cum Fill Vol	14.2
Net Vol	1347.4



Total Volume at Station 6+50.00	
Cut Area	51.082
Fill Area	0.000
Cut Vol	45.6
Fill Vol	0.0
Cum Cut Vol	1313.7
Cum Fill Vol	14.2
Net Vol	1299.5

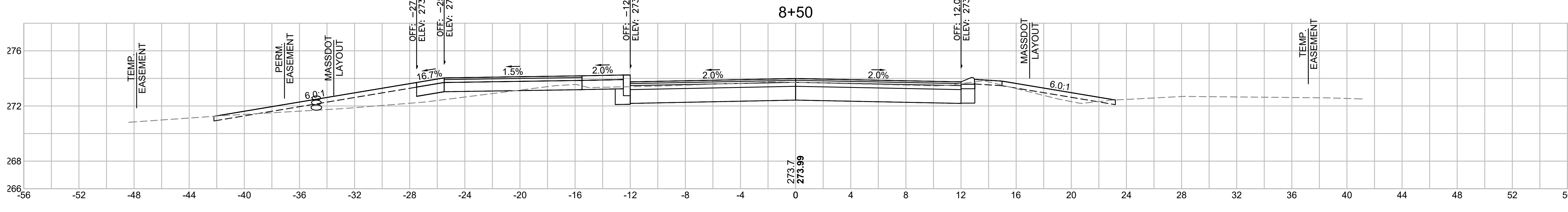
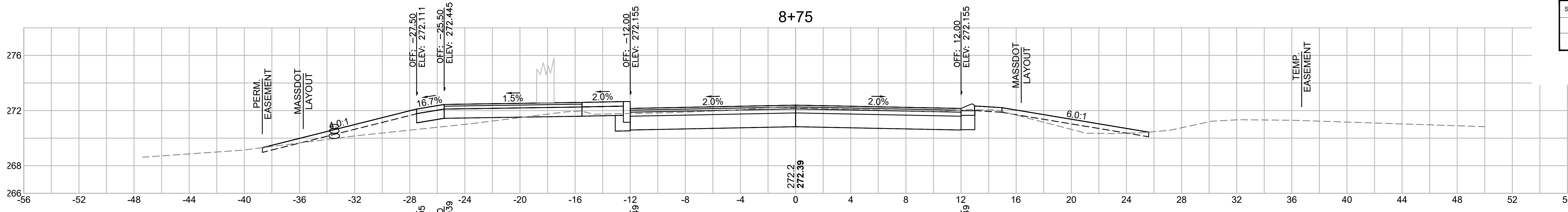


**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	90	128
PROJECT FILE NO. 609054			

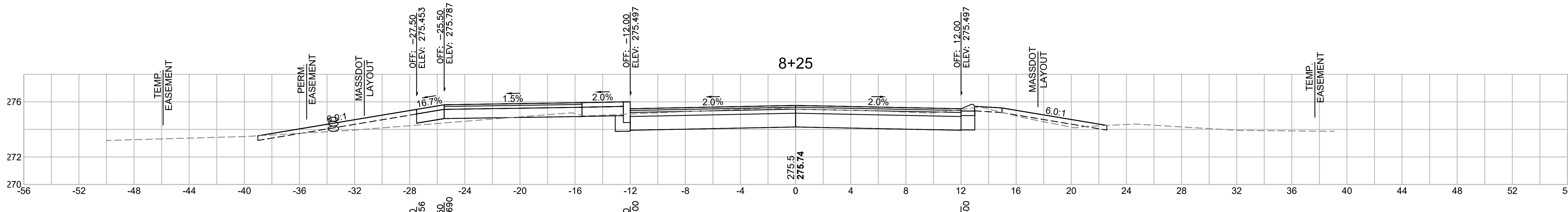
CROSS SECTIONS

Item	Value
Cut Area	36.557
Fill Area	9.580
Cut Vol	33.6
Fill Vol	9.3
Cum Cut Vol	1667.1
Cum Fill Vol	38.3
Net Vol	1628.8



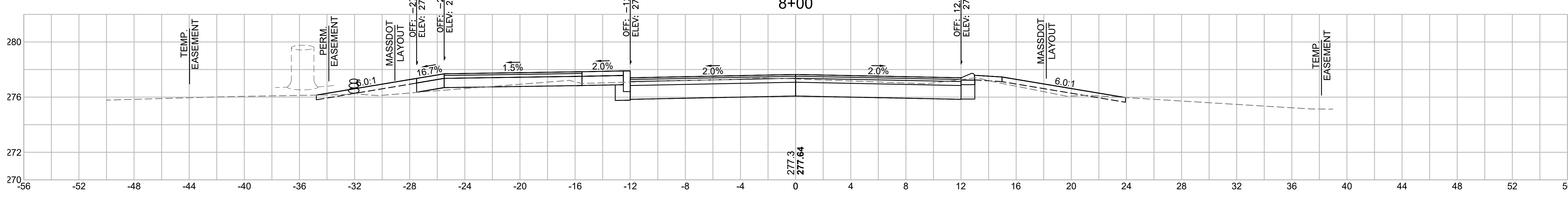
Total Volume at Station 8+50.00

Cut Area	36.004
Fill Area	10.565
Cut Vol	33.4
Fill Vol	7.5
Cum Cut Vol	1633.6
Cum Fill Vol	29.0
Net Vol	1604.6



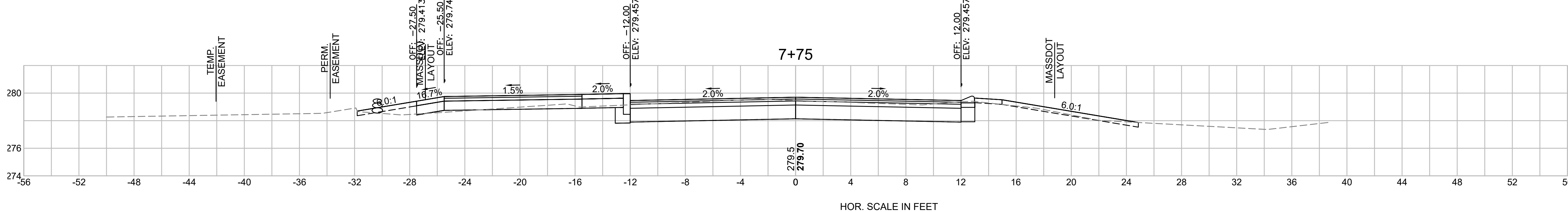
Total Volume at Station 8+25.00

Cut Area	36.059
Fill Area	5.575
Cut Vol	33.1
Fill Vol	4.3
Cum Cut Vol	1600.2
Cum Fill Vol	21.5
Net Vol	1578.7



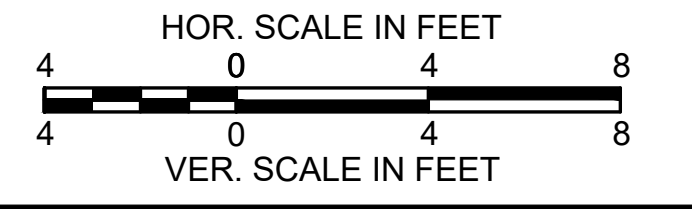
Total Volume at Station 8+00.00

Cut Area	35.343
Fill Area	3.631
Cut Vol	33.8
Fill Vol	2.3
Cum Cut Vol	1567.1
Cum Fill Vol	17.3
Net Vol	1549.9



Total Volume at Station 7+75.00

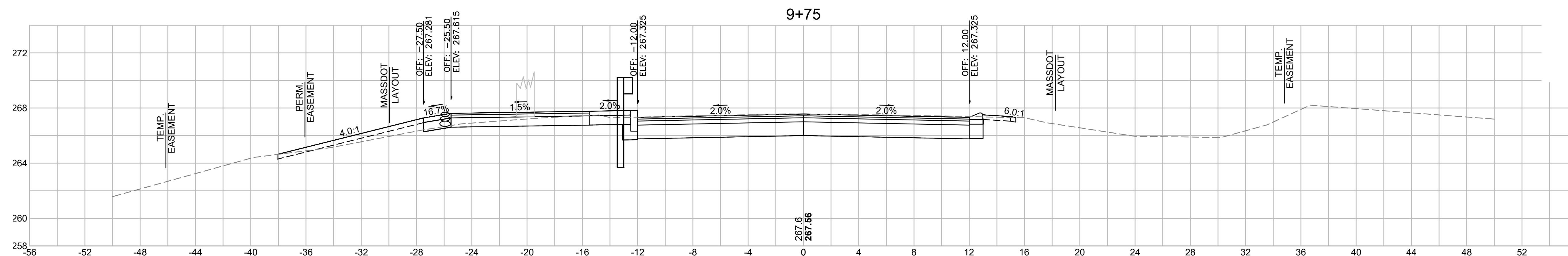
Cut Area	37.603
Fill Area	1.337
Cut Vol	38.0
Fill Vol	0.7
Cum Cut Vol	1533.4
Cum Fill Vol	15.0
Net Vol	1518.4



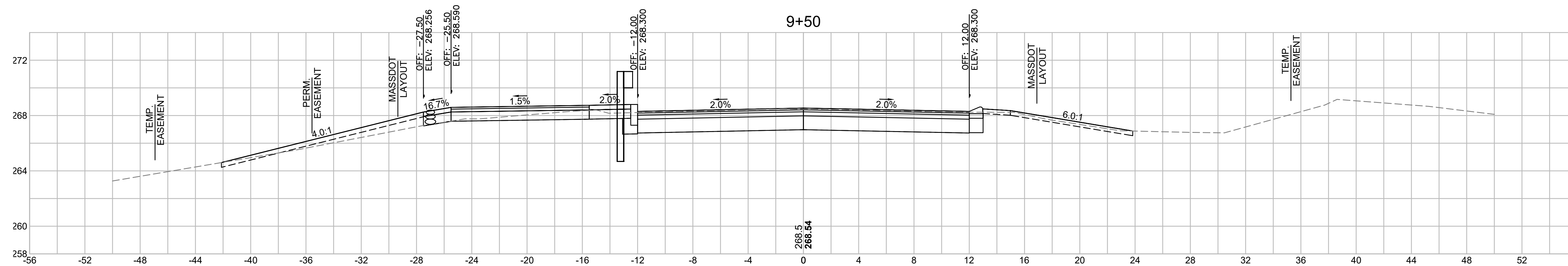
**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	91	128
PROJECT FILE NO.		609054	

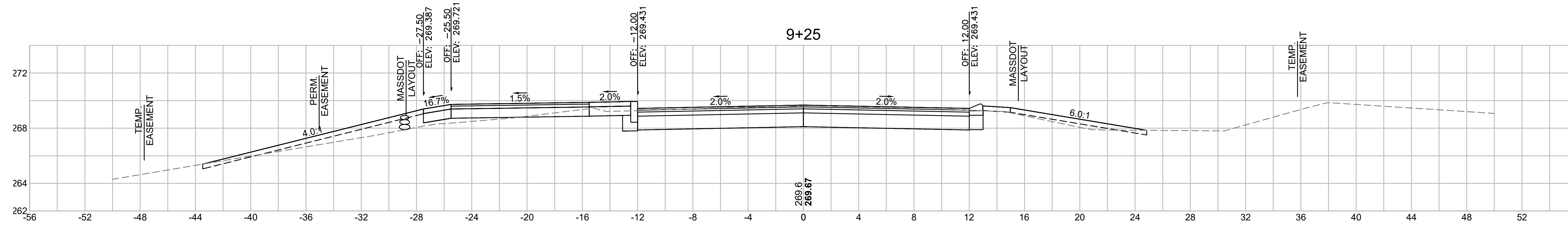
CROSS SECTIONS



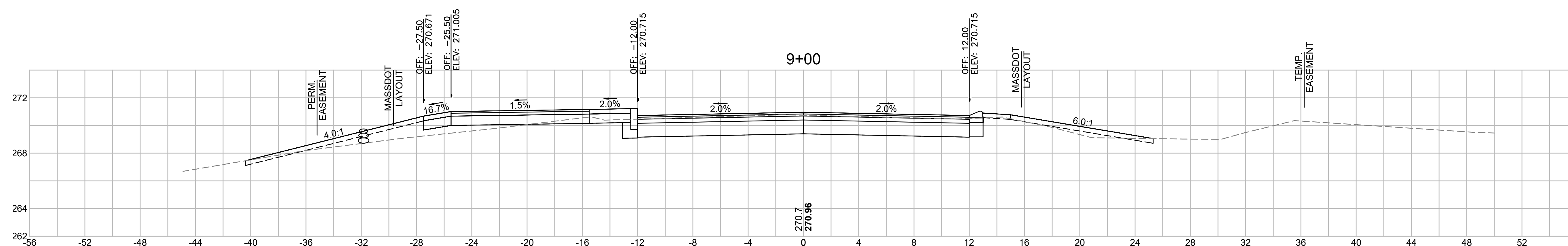
Total Volume at Station 9+75.00	
Cut Area	49.016
Fill Area	2.251
Cut Vol	44.3
Fill Vol	2.6
Cum Cut Vol	1823.7
Cum Fill Vol	62.3
Net Vol	1761.3



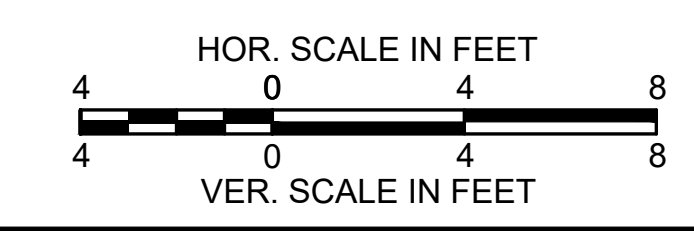
Total Volume at Station 9+50.00	
Cut Area	46.655
Fill Area	3.409
Cut Vol	40.9
Fill Vol	5.4
Cum Cut Vol	1779.4
Cum Fill Vol	59.7
Net Vol	1719.7



Total Volume at Station 9+25.00	
Cut Area	41.666
Fill Area	8.336
Cut Vol	36.8
Fill Vol	7.7
Cum Cut Vol	1738.5
Cum Fill Vol	54.3
Net Vol	1684.2



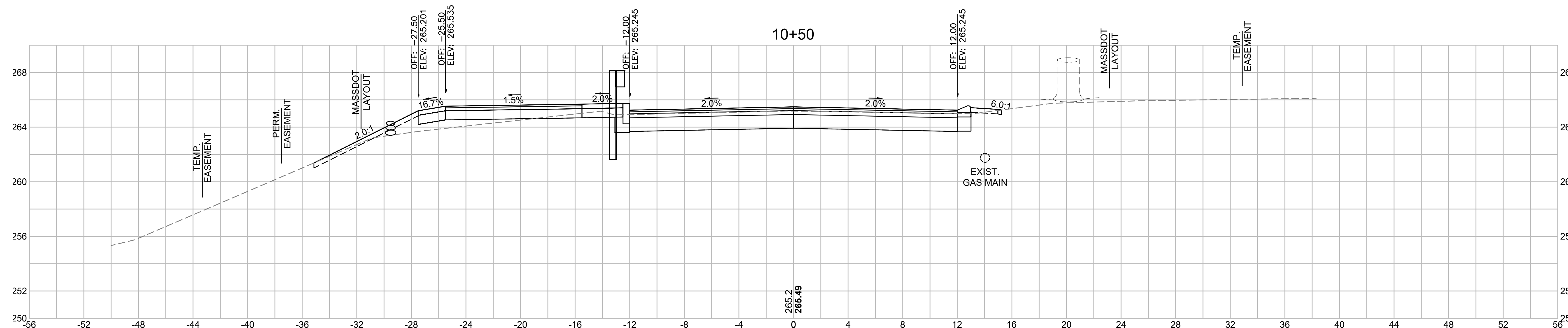
Total Volume at Station 9+00.00	
Cut Area	37.928
Fill Area	8.261
Cut Vol	34.5
Fill Vol	8.3
Cum Cut Vol	1701.6
Cum Fill Vol	46.6
Net Vol	1655.1



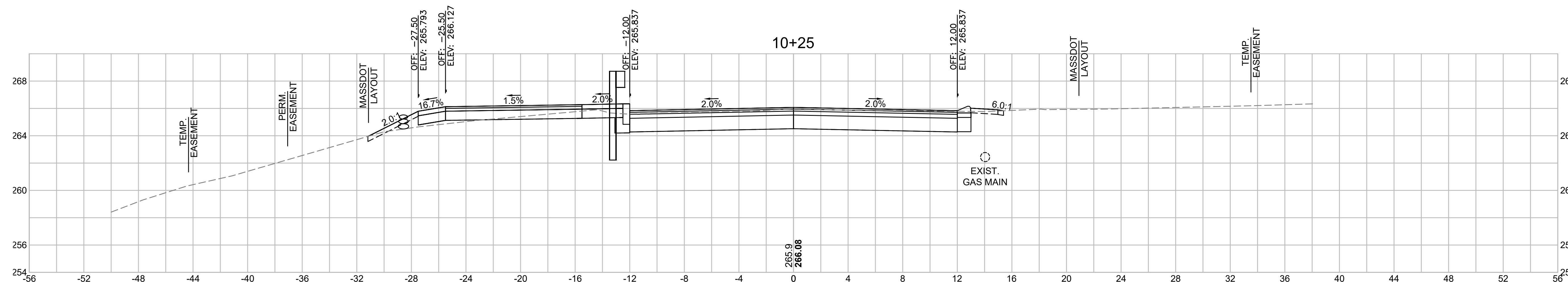
LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	92	128
PROJECT FILE NO.		609054	

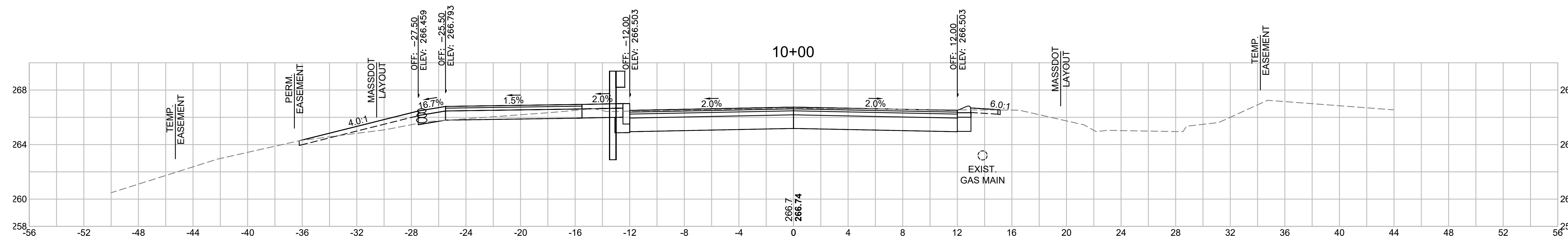
CROSS SECTIONS



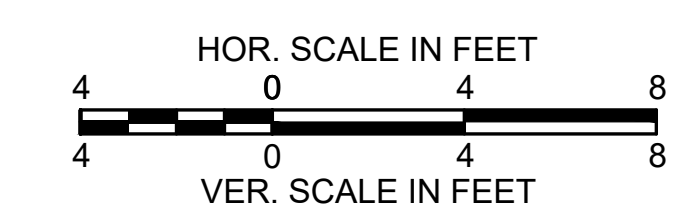
Total Volume at Station 10+50.00	
Cut Area	35.773
Fill Area	4.990
Cut Vol	35.4
Fill Vol	3.0
Cum Cut Vol	1942.6
Cum Fill Vol	68.9
Net Vol	1873.6



Total Volume at Station 10+25.00	
Cut Area	40.655
Fill Area	1.596
Cut Vol	39.8
Fill Vol	1.6
Cum Cut Vol	1907.2
Cum Fill Vol	65.9
Net Vol	1841.3



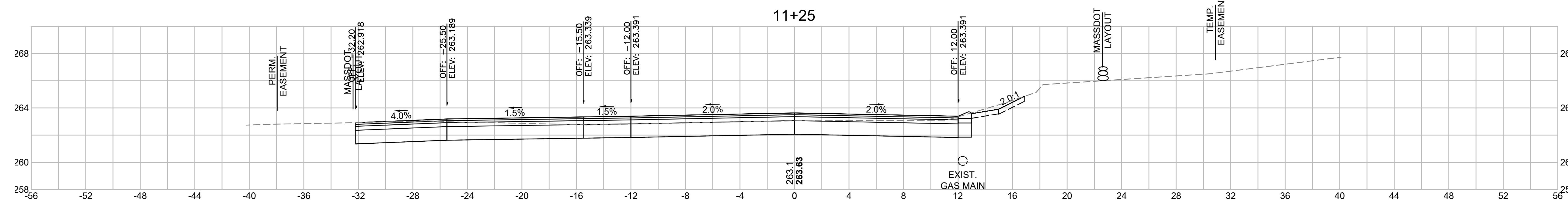
Total Volume at Station 10+00.00	
Cut Area	45.365
Fill Area	1.922
Cut Vol	43.7
Fill Vol	1.9
Cum Cut Vol	1867.4
Cum Fill Vol	64.2
Net Vol	1803.1



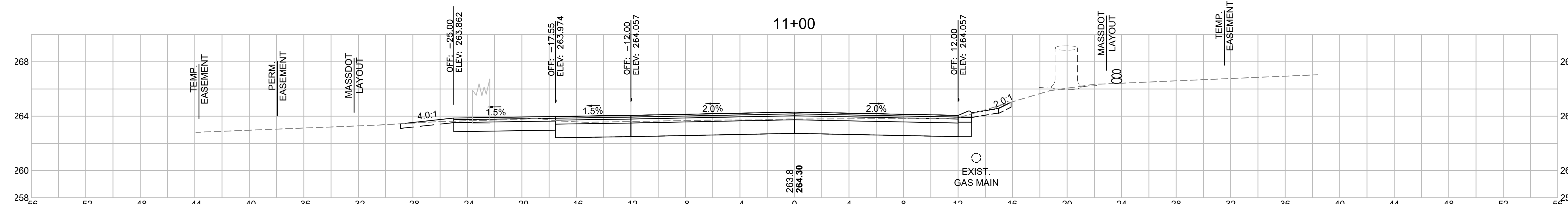
LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	93	128
PROJECT FILE NO.		609054	

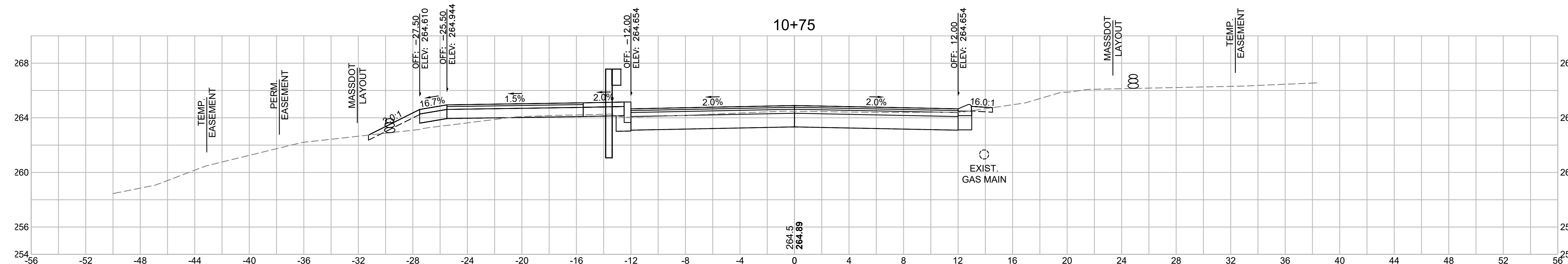
CROSS SECTIONS



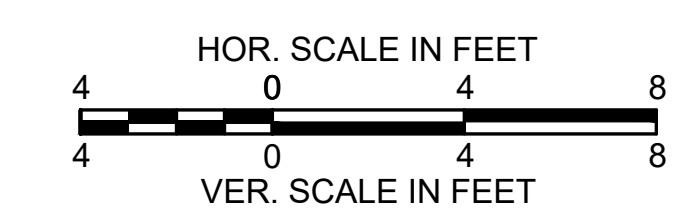
Total Volume at Station 11+25.00	
Cut Area	54.303
Fill Area	0.000
Cut Vol	42.0
Fill Vol	0.0
Cum Cut Vol	2046.6
Cum Fill Vol	76.7
Net Vol	1969.9



Total Volume at Station 11+00.00	
Cut Area	36.388
Fill Area	0.000
Cut Vol	31.1
Fill Vol	2.7
Cum Cut Vol	2004.6
Cum Fill Vol	76.7
Net Vol	1927.9



Total Volume at Station 10+75.00	
Cut Area	30.885
Fill Area	5.881
Cut Vol	30.9
Fill Vol	5.0
Cum Cut Vol	1973.4
Cum Fill Vol	74.0
Net Vol	1899.5

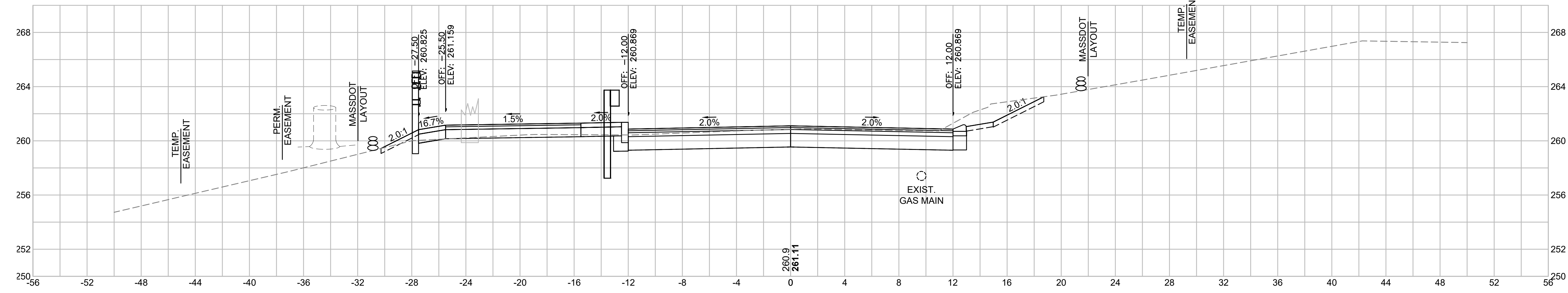


**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	94	128
PROJECT FILE NO.		609054	

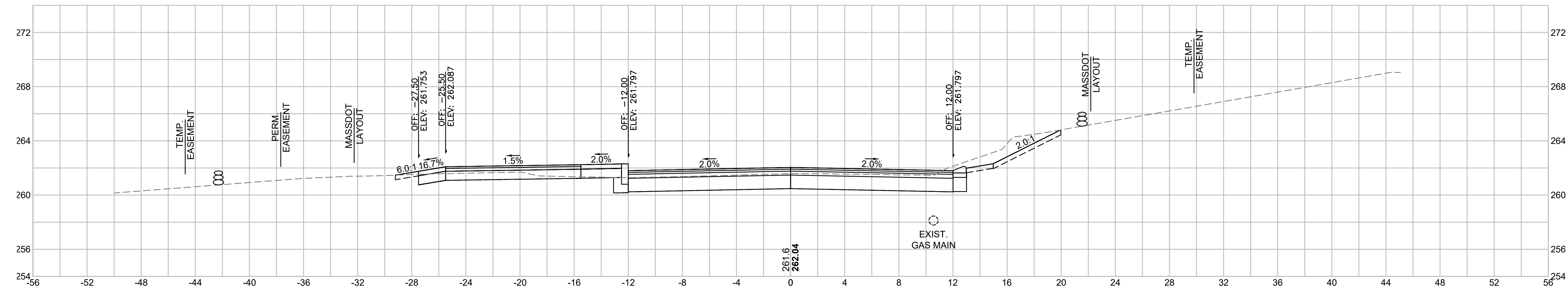
CROSS SECTIONS

12+00



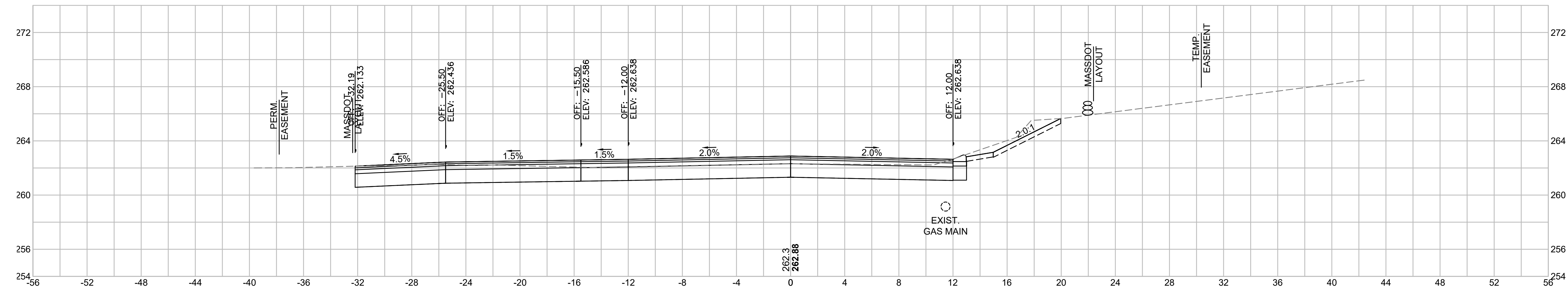
Total Volume at Station 12+00.00	
Cut Area	43.791
Fill Area	0.236
Cut Vol	40.4
Fill Vol	0.1
Cum Cut Vol	2185.5
Cum Fill Vol	76.8
Net Vol	2108.7

11+75

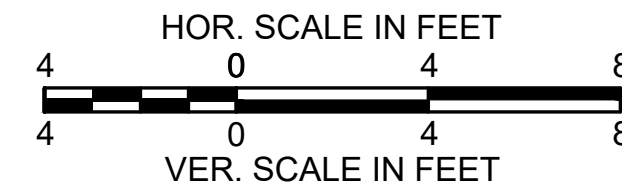


Total Volume at Station 11+75.00	
Cut Area	43.456
Fill Area	0.000
Cut Vol	46.8
Fill Vol	0.0
Cum Cut Vol	2145.1
Cum Fill Vol	76.7
Net Vol	2068.4

11+50



Total Volume at Station 11+50.00	
Cut Area	57.583
Fill Area	0.000
Cut Vol	51.8
Fill Vol	0.0
Cum Cut Vol	2098.4
Cum Fill Vol	76.7
Net Vol	2021.7

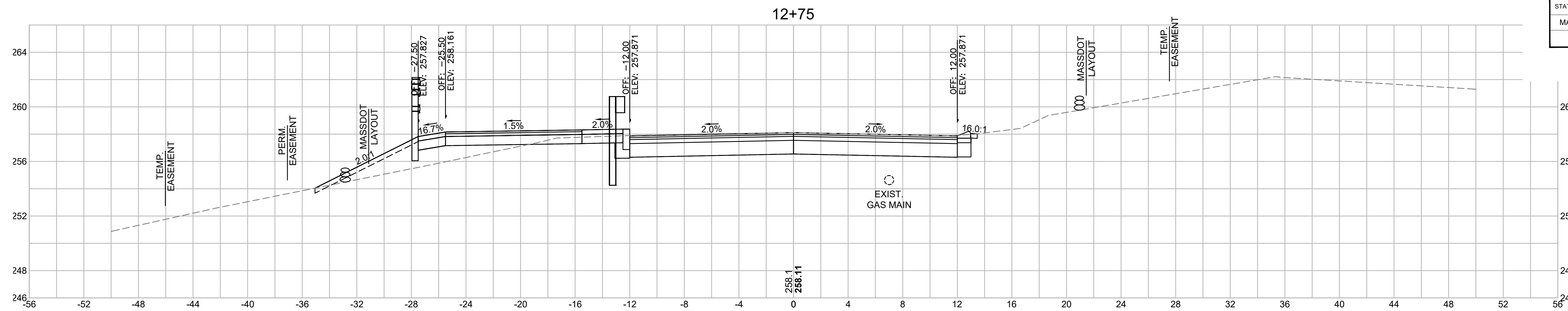


**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

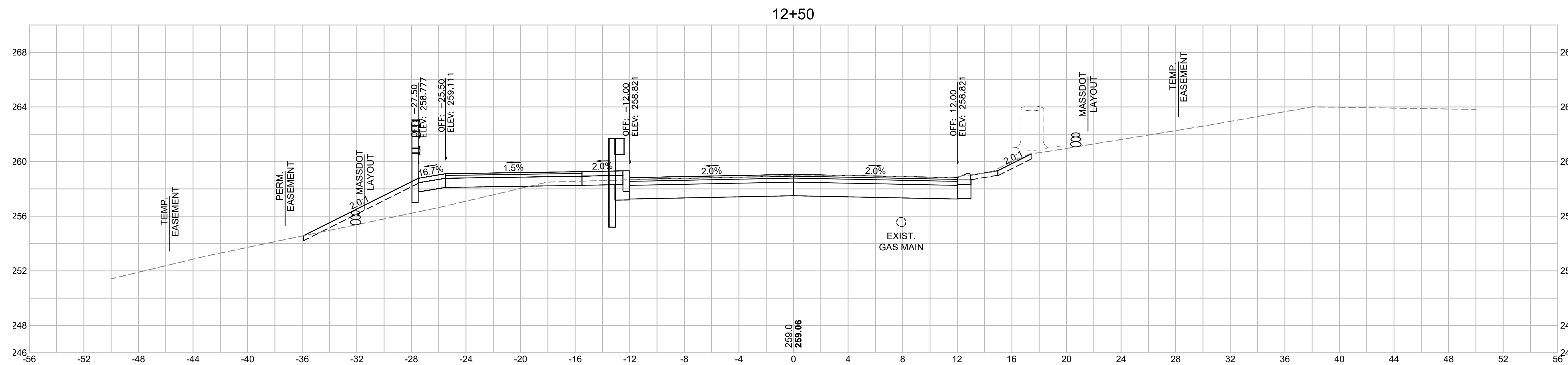
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	95	128
PROJECT FILE NO.		609054	

CROSS SECTIONS

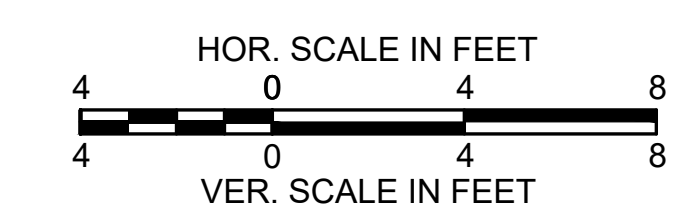
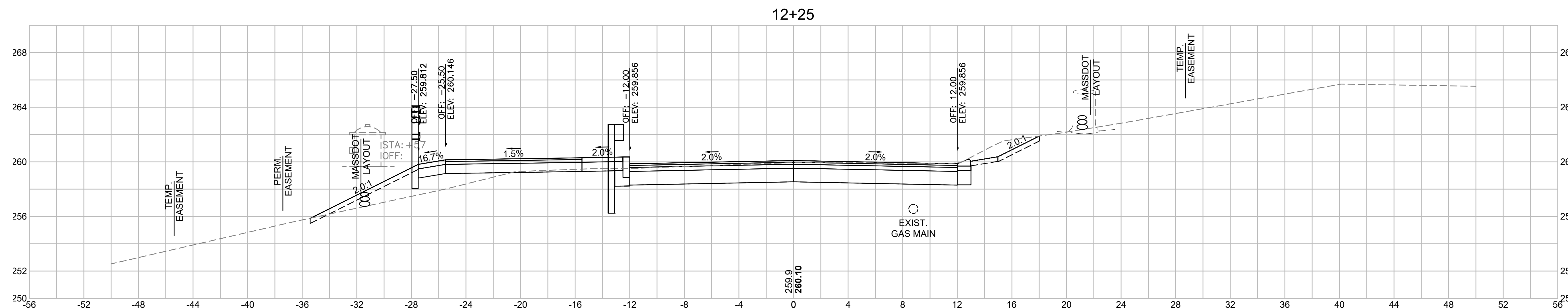
Total Volume at Station 12+75.00	
Cut Area	44.069
Fill Area	12.017
Cut Vol	40.3
Fill Vol	12.3
Cum Cut Vol	2305.8
Cum Fill Vol	106.3
Net Vol	2199.5



Total Volume at Station 12+50.00	
Cut Area	42.976
Fill Area	14.495
Cut Vol	39.8
Fill Vol	11.9
Cum Cut Vol	2265.5
Cum Fill Vol	94.0
Net Vol	2171.5



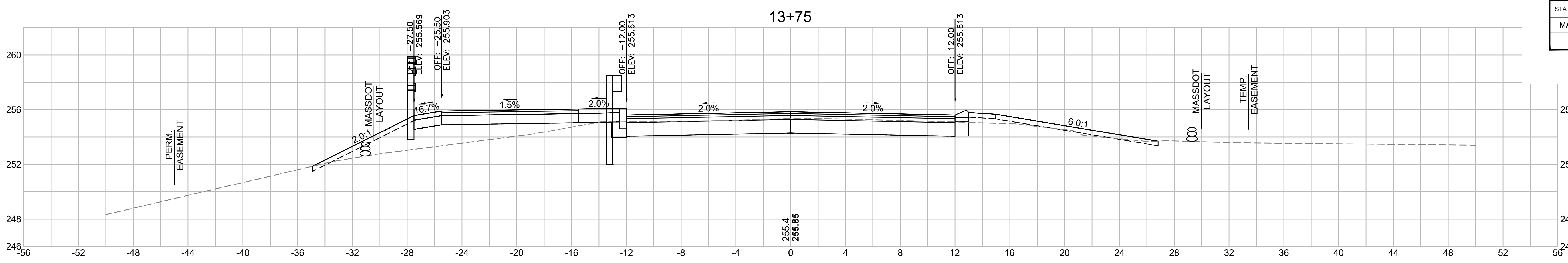
Total Volume at Station 12+25.00	
Cut Area	43.001
Fill Area	11.256
Cut Vol	40.2
Fill Vol	5.3
Cum Cut Vol	2225.7
Cum Fill Vol	82.1
Net Vol	2143.6



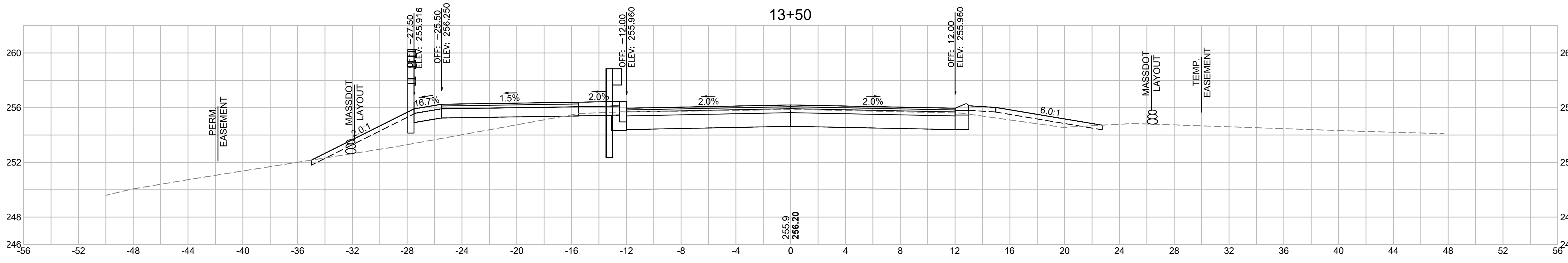
**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	96	128
PROJECT FILE NO.		609054	

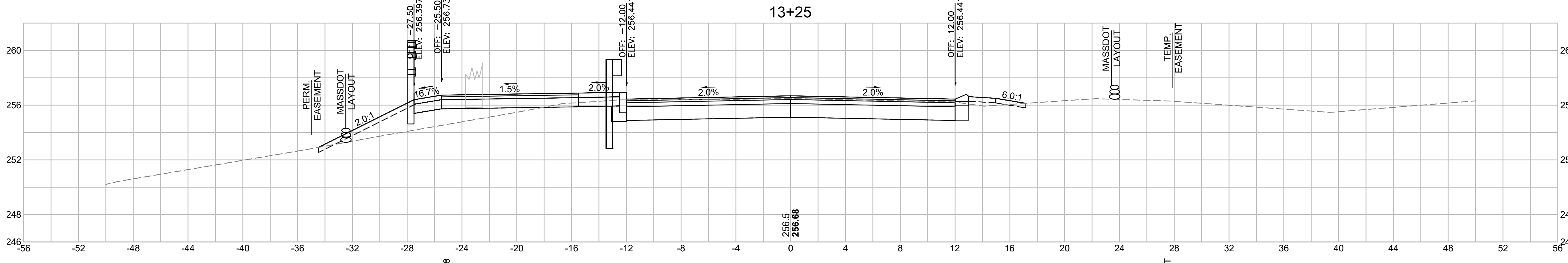
CROSS SECTIONS



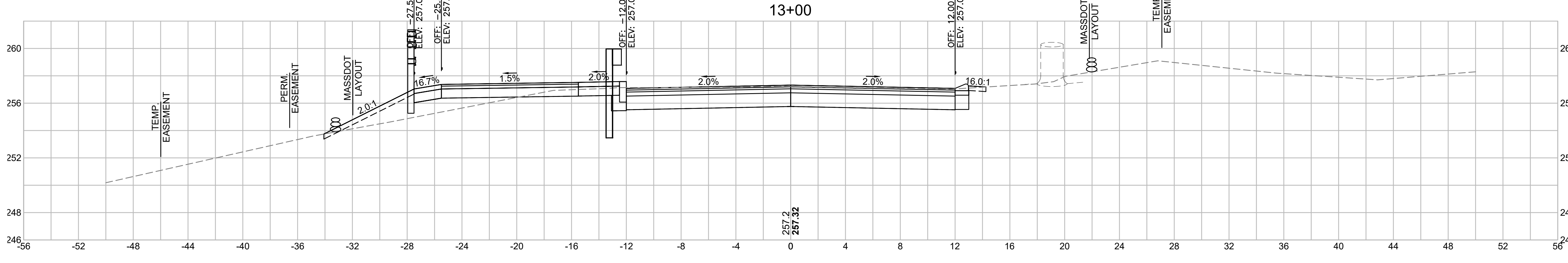
Total Volume at Station 13+75.00	
Cut Area	29.186
Fill Area	19.677
Cut Vol	29.0
Fill Vol	17.3
Cum Cut Vol	2445.3
Cum Fill Vol	157.4
Net Vol	2287.9



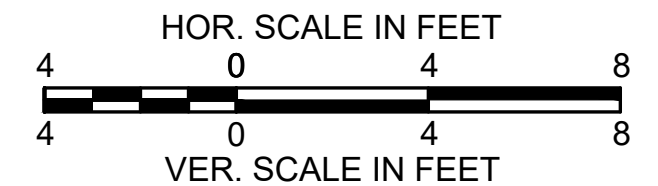
Total Volume at Station 13+50.00	
Cut Area	33.521
Fill Area	19.411
Cut Vol	33.1
Fill Vol	14.3
Cum Cut Vol	2416.3
Cum Fill Vol	140.1
Net Vol	2276.2



Total Volume at Station 13+25.00	
Cut Area	38.109
Fill Area	12.903
Cut Vol	37.3
Fill Vol	9.9
Cum Cut Vol	2383.2
Cum Fill Vol	125.8
Net Vol	2257.4



Total Volume at Station 13+00.00	
Cut Area	42.642
Fill Area	9.603
Cut Vol	40.1
Fill Vol	9.6
Cum Cut Vol	2345.9
Cum Fill Vol	115.9
Net Vol	2230.0



**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	97	128
PROJECT FILE NO.		609054	

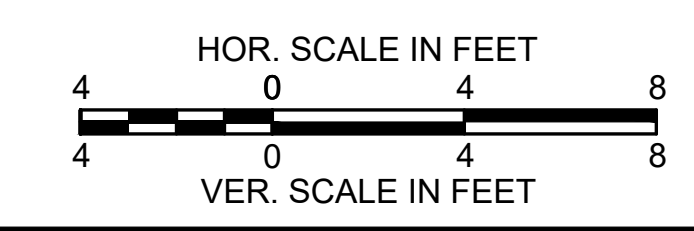
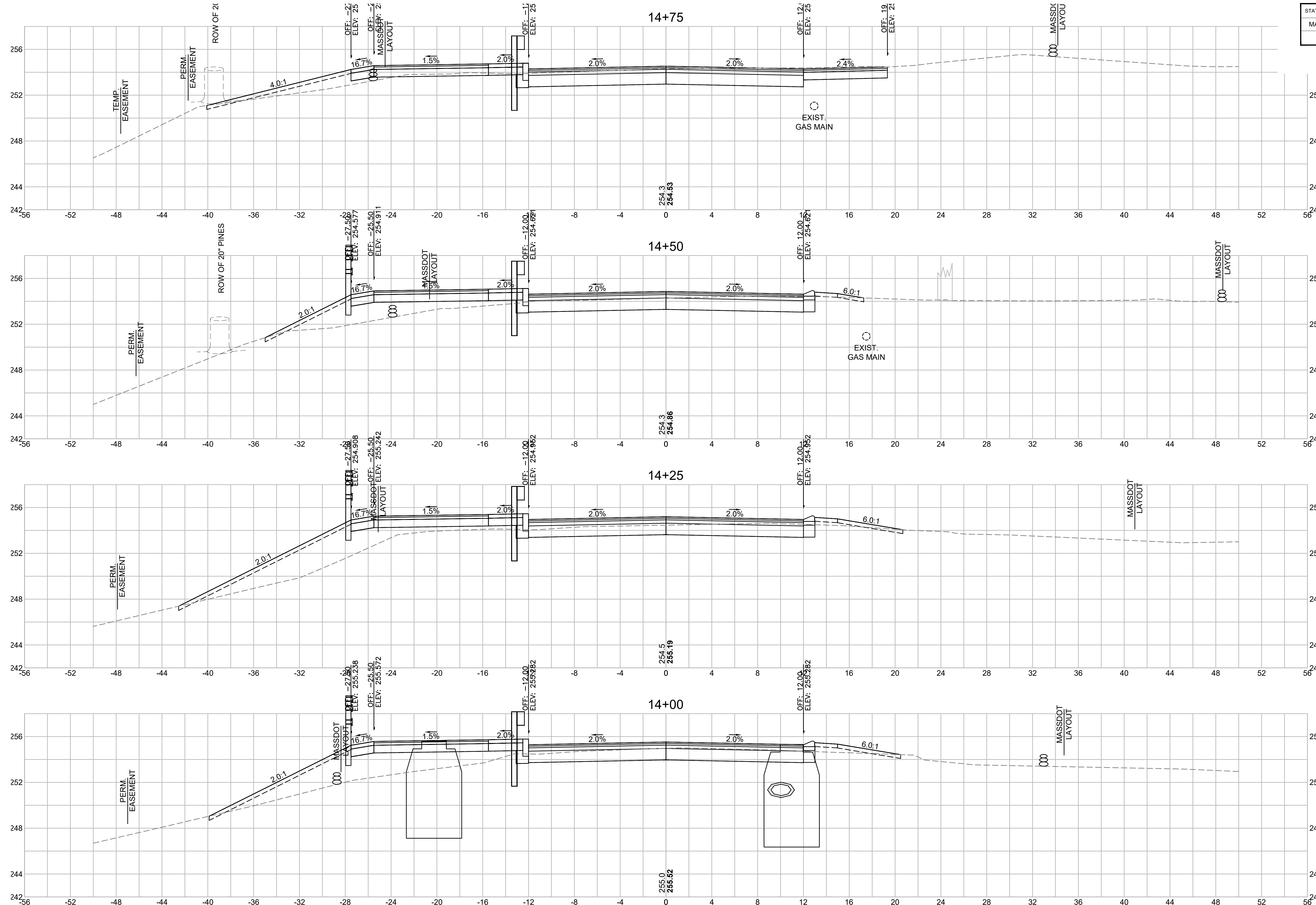
CROSS SECTIONS

Total Volume at Station 14+75.00	
Cut Area	46.175
Fill Area	2.526
Cut Vol	35.0
Fill Vol	9.7
Cum Cut Vol	2554.4
Cum Fill Vol	246.8
Net Vol	2307.6

Total Volume at Station 14+50.00	
Cut Area	29.199
Fill Area	19.509
Cut Vol	25.0
Fill Vol	23.3
Cum Cut Vol	2519.4
Cum Fill Vol	237.1
Net Vol	2282.3

Total Volume at Station 14+25.00	
Cut Area	24.700
Fill Area	33.568
Cut Vol	23.5
Fill Vol	31.2
Cum Cut Vol	2494.4
Cum Fill Vol	213.8
Net Vol	2280.6

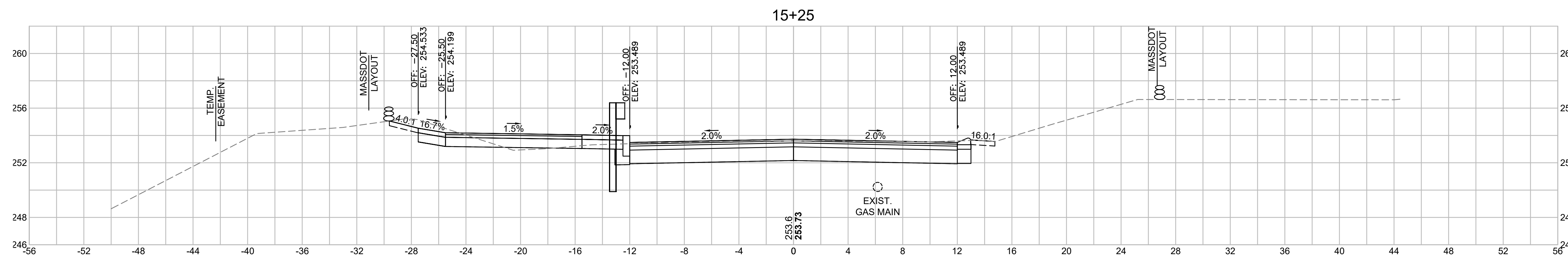
Total Volume at Station 14+00.00	
Cut Area	26.012
Fill Area	37.464
Cut Vol	25.6
Fill Vol	25.2
Cum Cut Vol	2470.9
Cum Fill Vol	182.6
Net Vol	2288.2



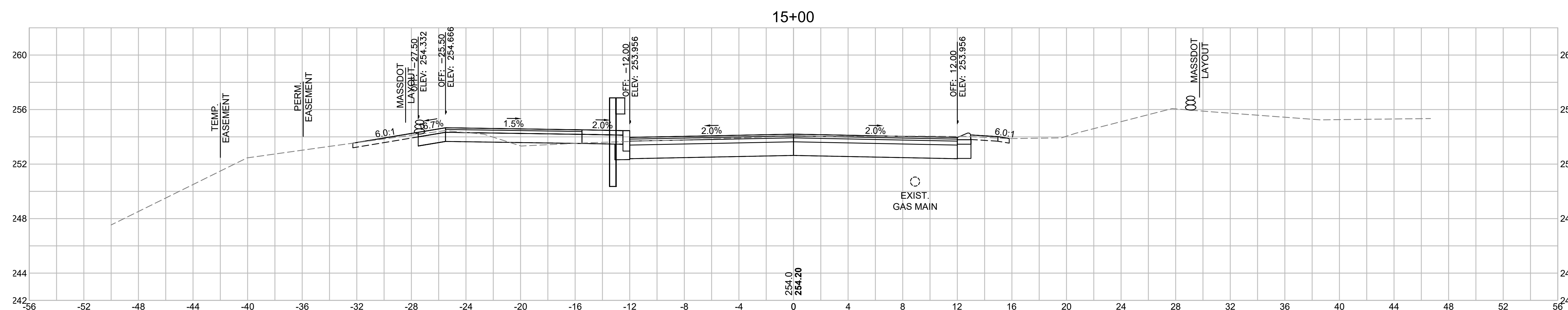
**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	98	128
PROJECT FILE NO.		609054	

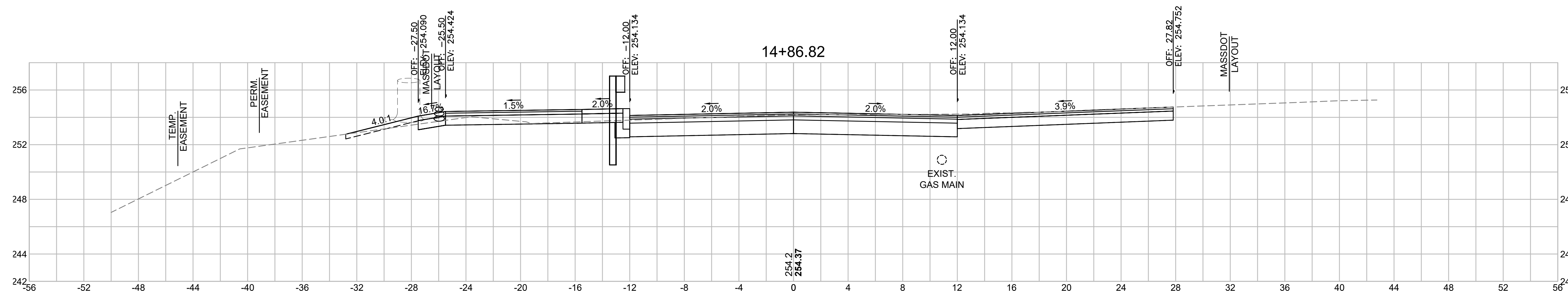
CROSS SECTIONS



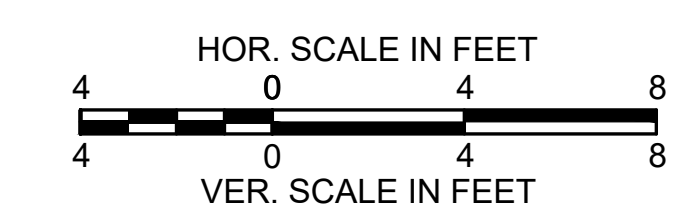
Total Volume at Station 15+25.00	
Cut Area	48.130
Fill Area	0.395
Cut Vol	42.2
Fill Vol	0.4
Cum Cut Vol	2641.9
Cum Fill Vol	248.5
Net Vol	2393.3



Total Volume at Station 15+00.00	
Cut Area	43.659
Fill Area	0.613
Cut Vol	23.5
Fill Vol	0.5
Cum Cut Vol	2599.6
Cum Fill Vol	248.1
Net Vol	2351.6



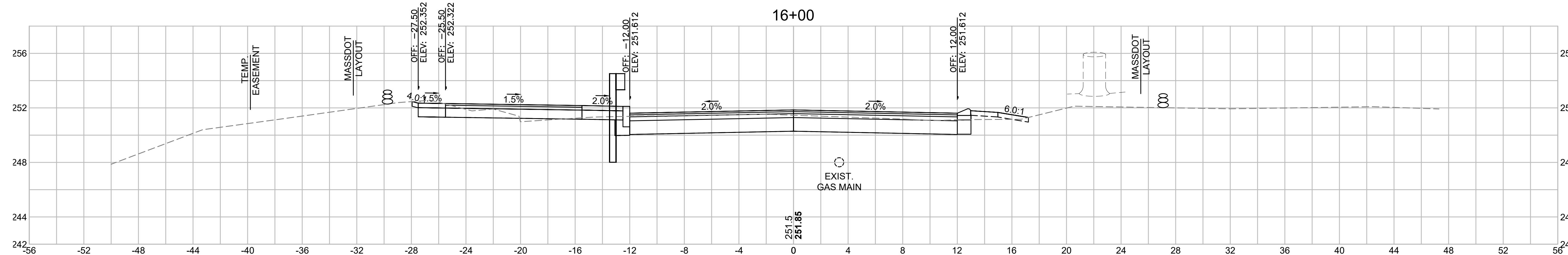
Total Volume at Station 14+86.82	
Cut Area	52.393
Fill Area	1.363
Cut Vol	21.7
Fill Vol	0.8
Cum Cut Vol	2576.1
Cum Fill Vol	247.6
Net Vol	2328.5



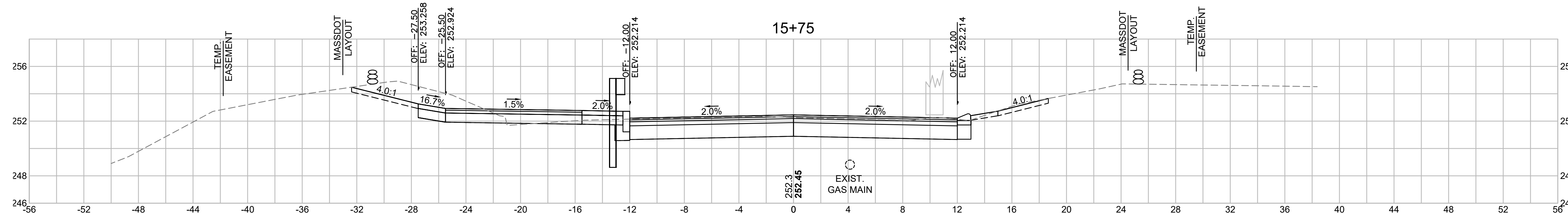
LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	99	128
PROJECT FILE NO.		609054	

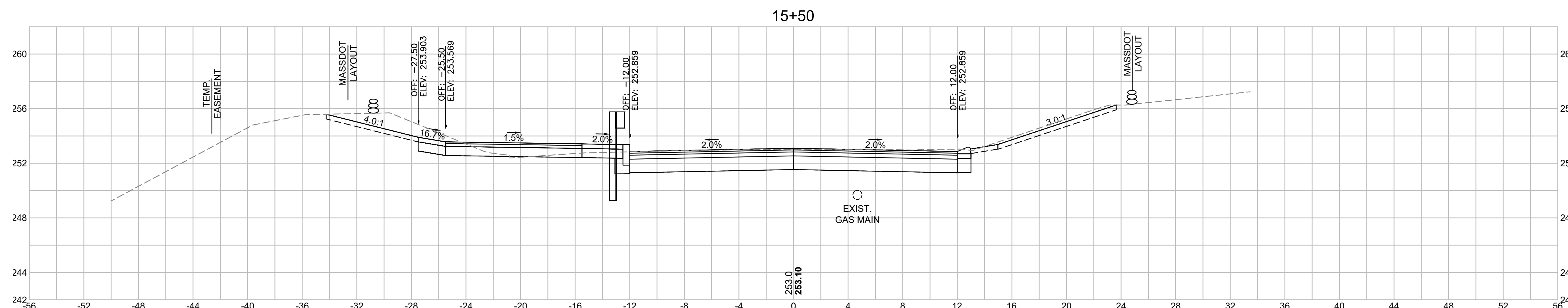
CROSS SECTIONS



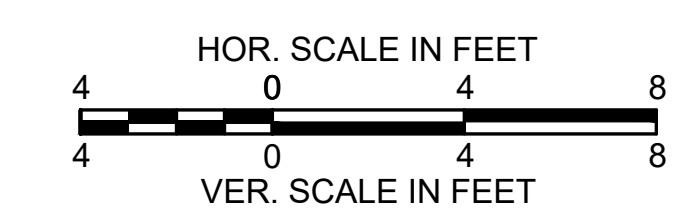
Total Volume at Station 16+00.00	
Cut Area	37.385
Fill Area	0.981
Cut Vol	43.3
Fill Vol	0.5
Cum Cut Vol	2790.0
Cum Fill Vol	249.4
Net Vol	2540.6



Total Volume at Station 15+75.00	
Cut Area	57.147
Fill Area	0.166
Cut Vol	54.4
Fill Vol	0.1
Cum Cut Vol	2746.6
Cum Fill Vol	248.8
Net Vol	2497.8



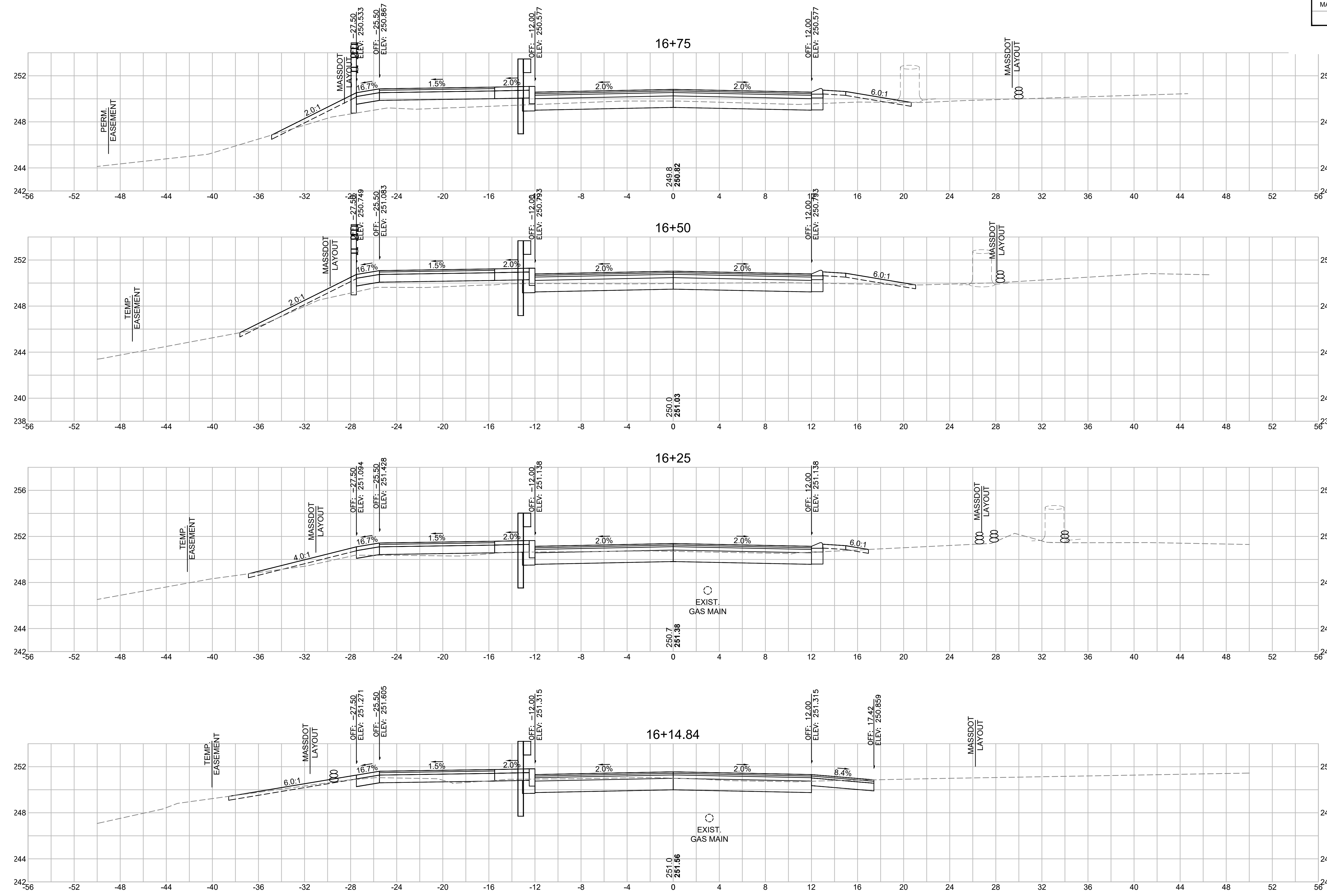
Total Volume at Station 15+50.00	
Cut Area	61.723
Fill Area	0.075
Cut Vol	50.4
Fill Vol	0.2
Cum Cut Vol	2692.3
Cum Fill Vol	248.7
Net Vol	2443.5



**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	100	128
PROJECT FILE NO.		609054	

CROSS SECTIONS



Total Volume at Station 16+75.00

Cut Area	14.978
Fill Area	16.149
Cut Vol	15.0
Fill Vol	12.7
Cum Cut Vol	2854.7
Cum Fill Vol	270.2
Net Vol	2584.5

Total Volume at Station 16+50.00

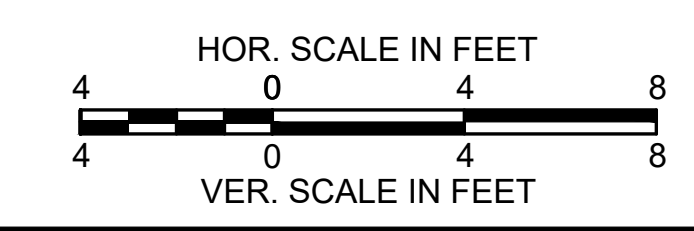
Cut Area	17.376
Fill Area	11.268
Cut Vol	20.1
Fill Vol	6.8
Cum Cut Vol	2839.7
Cum Fill Vol	257.5
Net Vol	2582.2

Total Volume at Station 16+25.00

Cut Area	26.143
Fill Area	3.437
Cut Vol	10.8
Fill Vol	0.8
Cum Cut Vol	2819.6
Cum Fill Vol	250.7
Net Vol	2568.8

Total Volume at Station 16+14.84

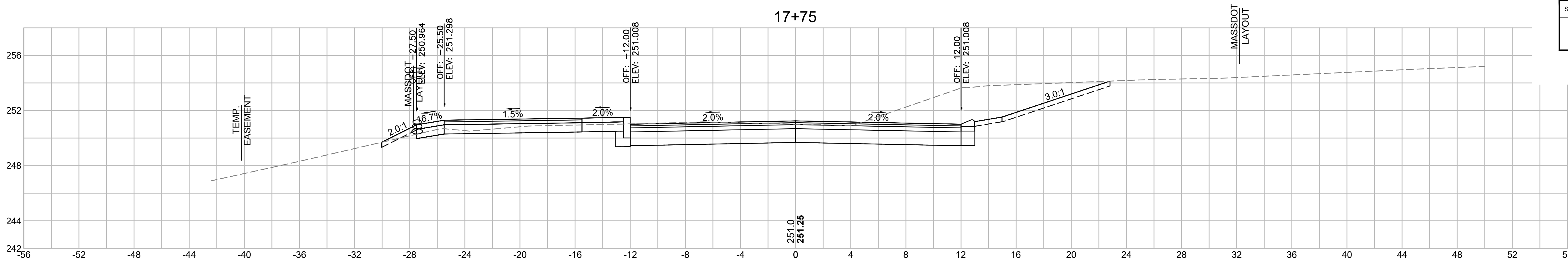
Cut Area	31.127
Fill Area	0.958
Cut Vol	18.8
Fill Vol	0.5
Cum Cut Vol	2808.8
Cum Fill Vol	249.9
Net Vol	2558.9



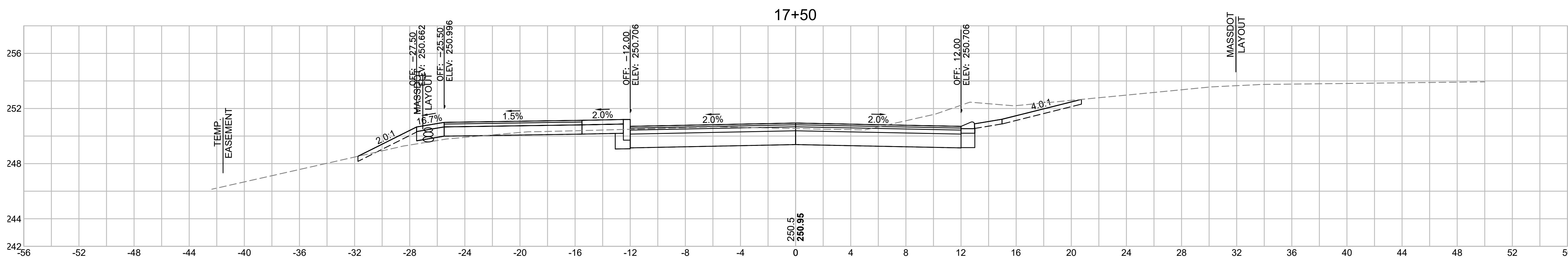
**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	101	128
PROJECT FILE NO.		609054	

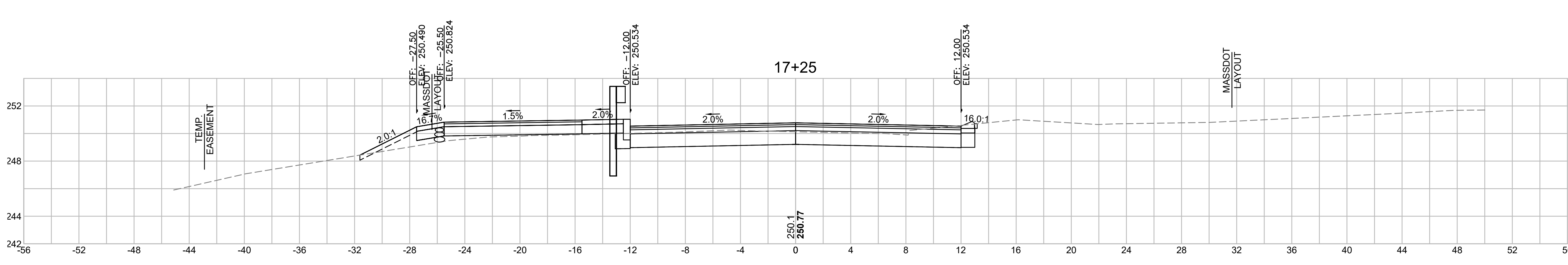
CROSS SECTIONS



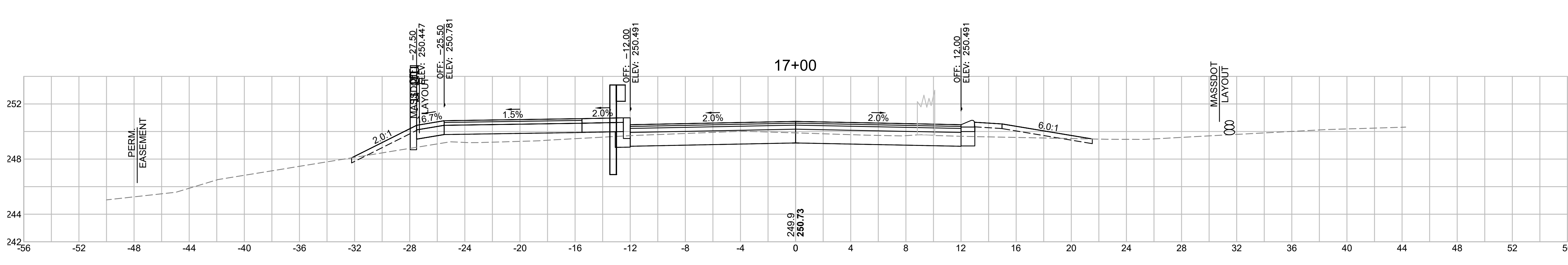
Total Volume at Station 17+75.00	
Cut Area	74.850
Fill Area	0.181
Cut Vol	58.2
Fill Vol	1.0
Cum Cut Vol	2988.8
Cum Fill Vol	294.6
Net Vol	2694.2



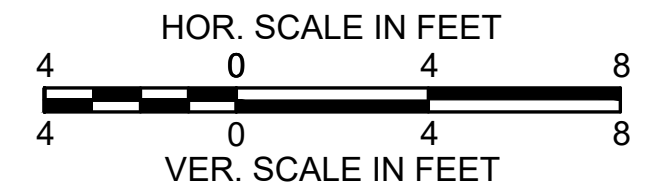
Total Volume at Station 17+50.00	
Cut Area	50.841
Fill Area	1.975
Cut Vol	36.7
Fill Vol	2.6
Cum Cut Vol	2930.6
Cum Fill Vol	293.6
Net Vol	2637.0



Total Volume at Station 17+25.00	
Cut Area	28.376
Fill Area	3.735
Cut Vol	22.7
Fill Vol	7.5
Cum Cut Vol	2894.0
Cum Fill Vol	291.0
Net Vol	2603.0



Total Volume at Station 17+00.00	
Cut Area	20.749
Fill Area	12.499
Cut Vol	16.5
Fill Vol	13.3
Cum Cut Vol	2871.2
Cum Fill Vol	283.5
Net Vol	2587.7

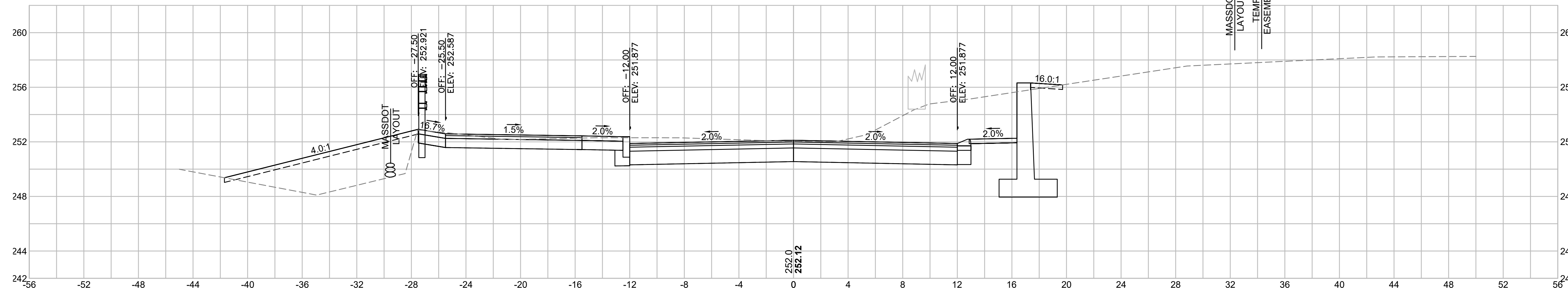


**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	102	128
PROJECT FILE NO.		609054	

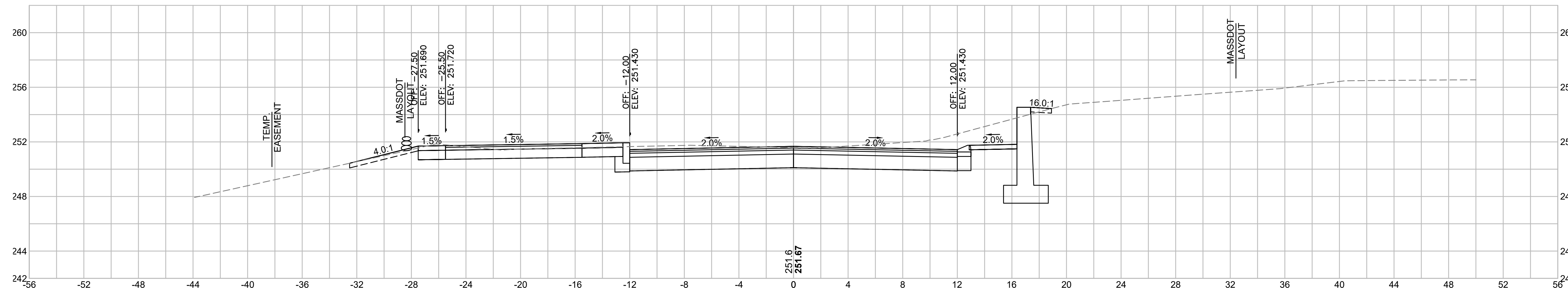
CROSS SECTIONS

18+25



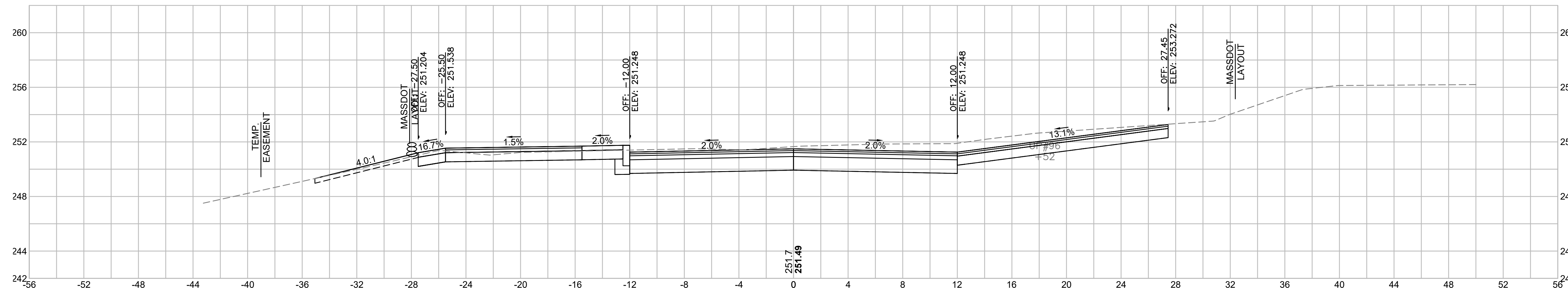
Total Volume at Station 18+25.00	
Cut Area	88.912
Fill Area	0.000
Cut Vol	72.6
Fill Vol	0.0
Cum Cut Vol	3128.3
Cum Fill Vol	294.7
Net Vol	2833.6

18+00

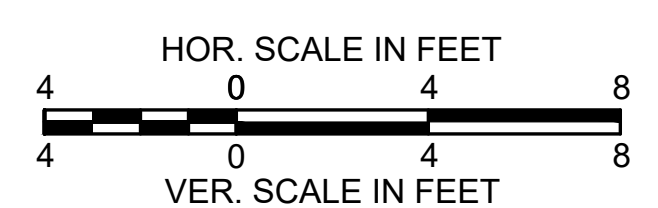


Total Volume at Station 18+00.00	
Cut Area	67.826
Fill Area	0.044
Cut Vol	26.5
Fill Vol	0.0
Cum Cut Vol	3055.8
Cum Fill Vol	294.7
Net Vol	2761.1

17+89.80



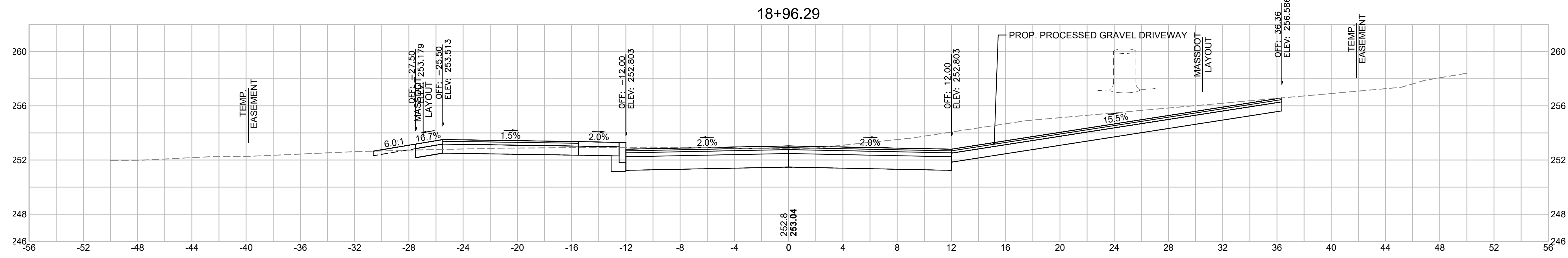
Total Volume at Station 17+89.80	
Cut Area	72.611
Fill Area	0.000
Cut Vol	40.4
Fill Vol	0.0
Cum Cut Vol	3029.2
Cum Fill Vol	294.7
Net Vol	2734.5



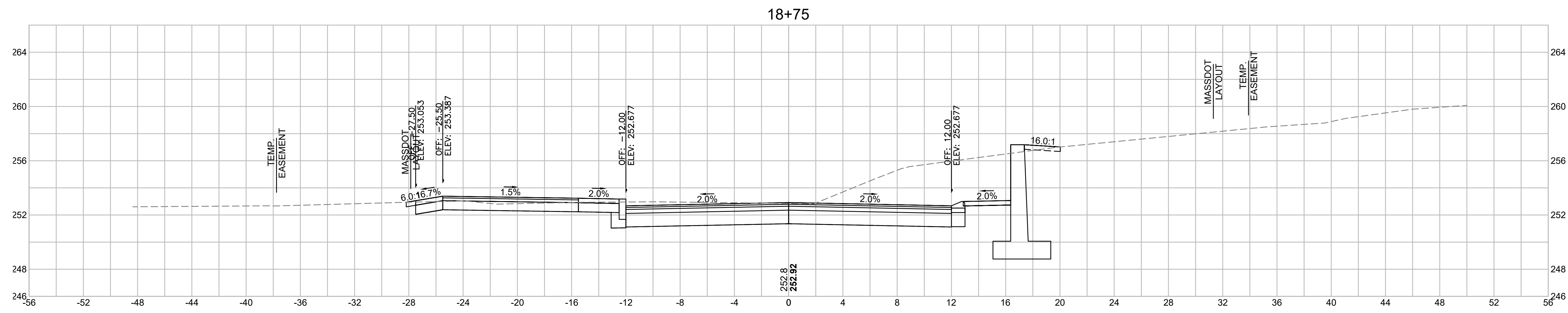
**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	103	128
PROJECT FILE NO.		609054	

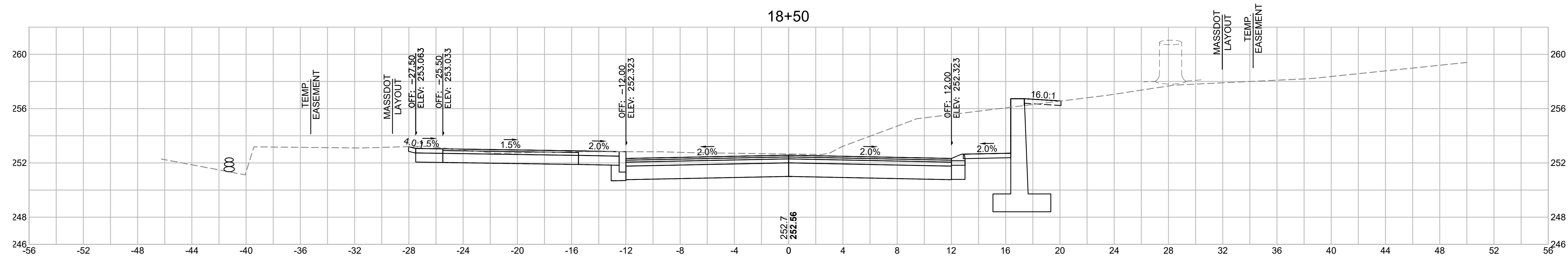
CROSS SECTIONS



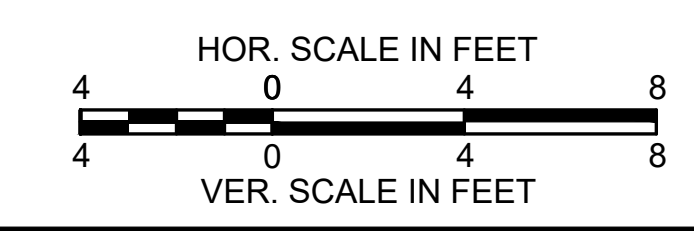
Total Volume at Station 18+96.29	
Cut Area	74.412
Fill Area	0.034
Cut Vol	64.5
Fill Vol	0.0
Cum Cut Vol	3362.7
Cum Fill Vol	294.9
Net Vol	3067.8



Total Volume at Station 18+75.00	
Cut Area	89.304
Fill Area	0.073
Cut Vol	85.0
Fill Vol	0.1
Cum Cut Vol	3298.2
Cum Fill Vol	294.8
Net Vol	3003.3



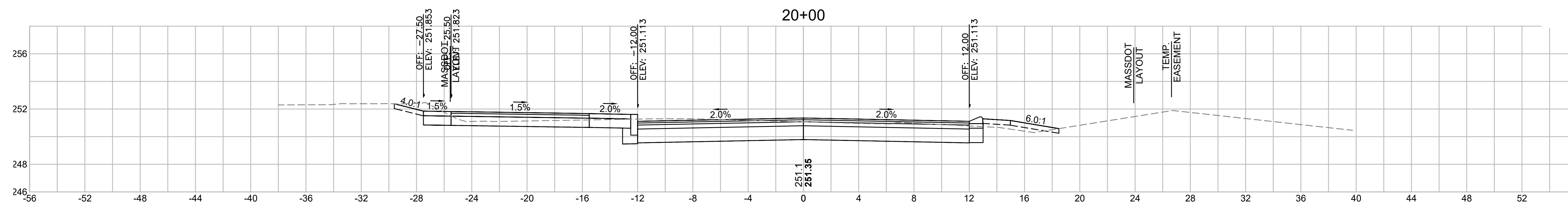
Total Volume at Station 18+50.00	
Cut Area	94.314
Fill Area	0.076
Cut Vol	84.8
Fill Vol	0.0
Cum Cut Vol	3213.2
Cum Fill Vol	294.8
Net Vol	2918.4



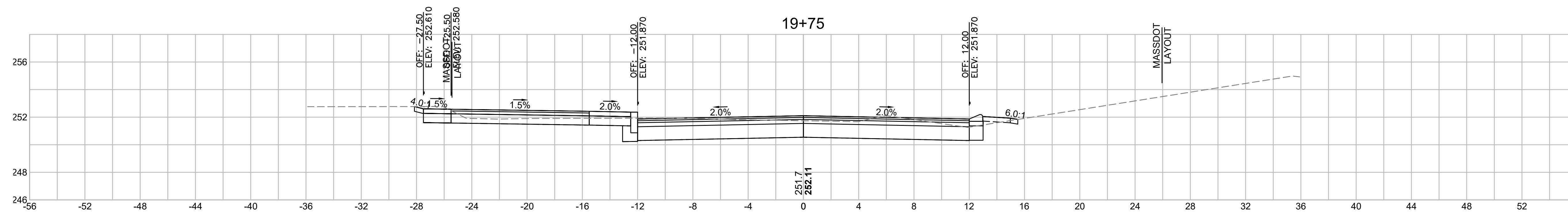
**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	104	128
PROJECT FILE NO.		609054	

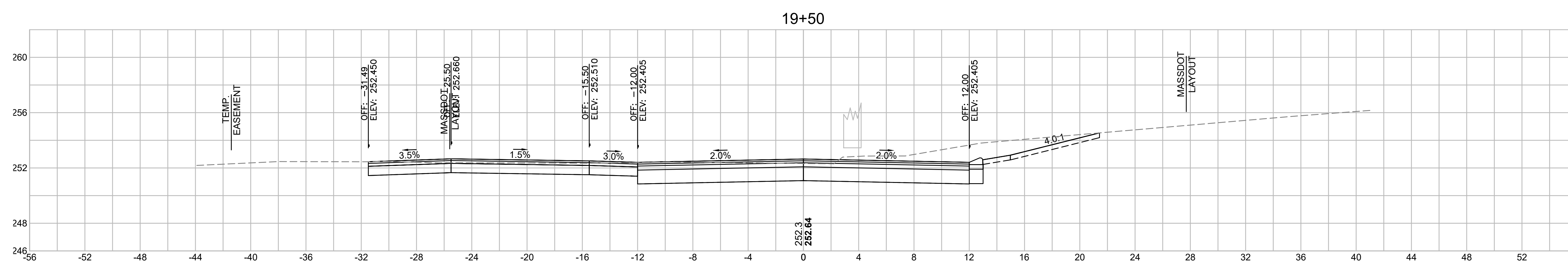
CROSS SECTIONS



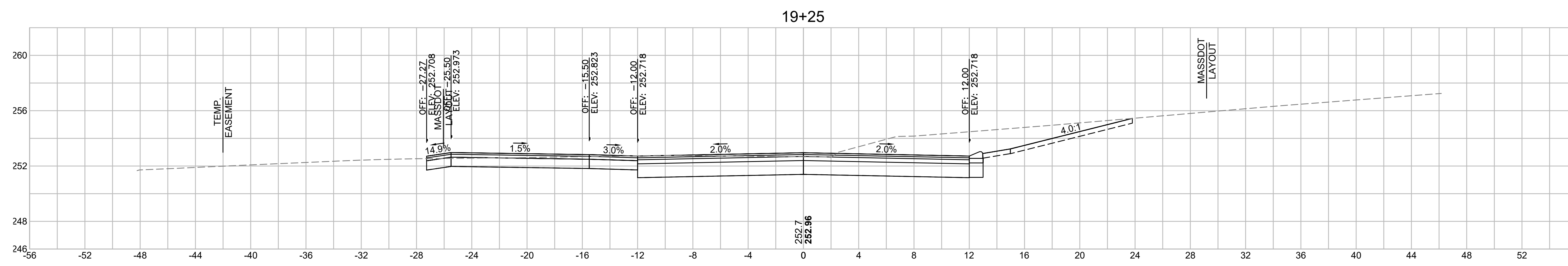
Total Volume at Station 20+00.00	
Cut Area	46.504
Fill Area	1.025
Cut Vol	41.9
Fill Vol	0.6
Cum Cut Vol	3601.4
Cum Fill Vol	295.5
Net Vol	3305.9



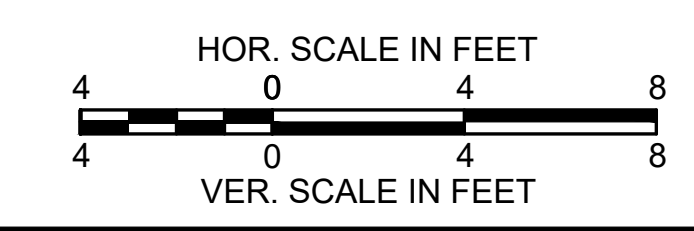
Total Volume at Station 19+75.00	
Cut Area	43.933
Fill Area	0.174
Cut Vol	51.7
Fill Vol	0.1
Cum Cut Vol	3559.5
Cum Fill Vol	295.0
Net Vol	3264.6



Total Volume at Station 19+50.00	
Cut Area	67.725
Fill Area	0.000
Cut Vol	65.9
Fill Vol	0.0
Cum Cut Vol	3507.8
Cum Fill Vol	294.9
Net Vol	3213.0



Total Volume at Station 19+25.00	
Cut Area	74.615
Fill Area	0.000
Cut Vol	79.2
Fill Vol	0.0
Cum Cut Vol	3442.0
Cum Fill Vol	294.9
Net Vol	3147.1



**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	105	128
PROJECT FILE NO. 609054			

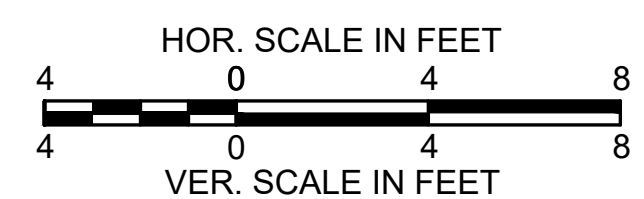
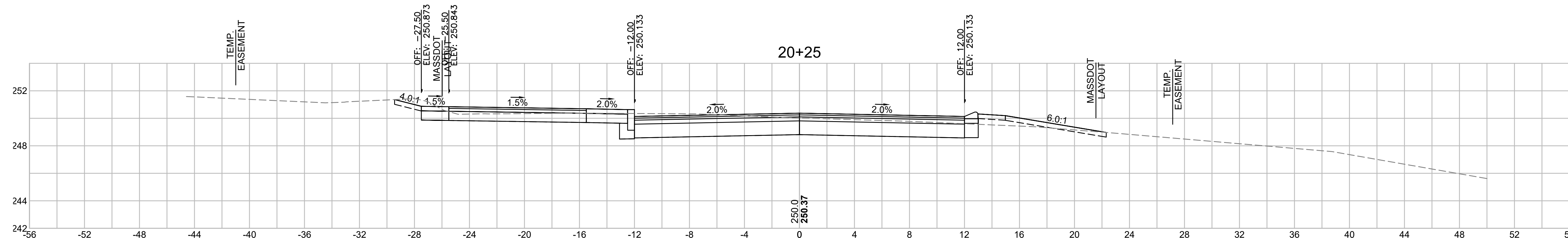
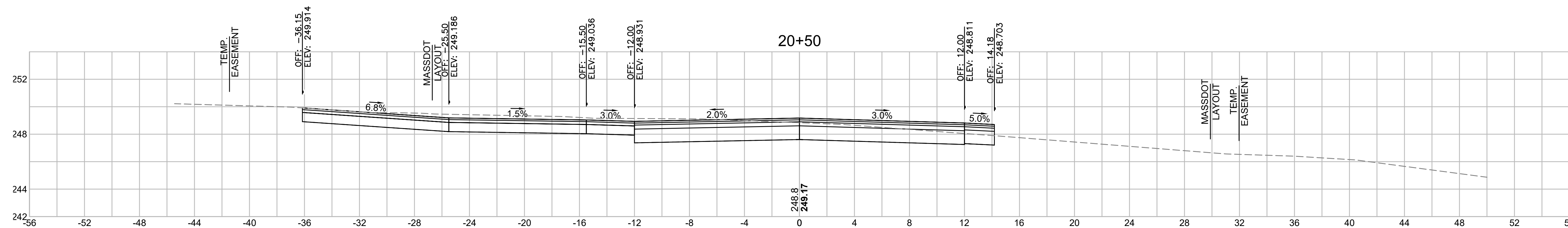
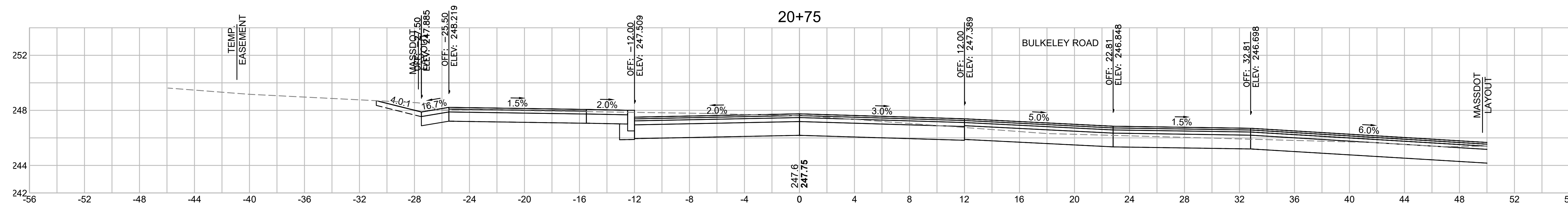
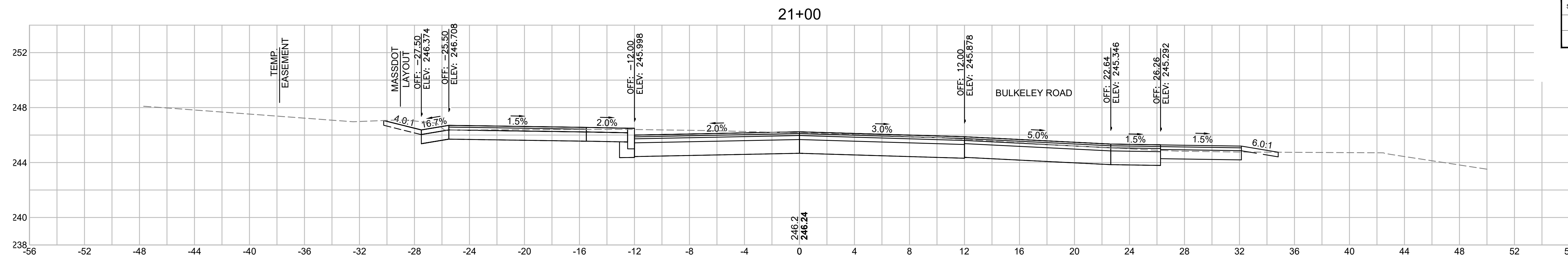
CROSS SECTIONS

Total Volume at Station 21+00.00	
Cut Area	71.247
Fill Area	0.000
Cut Vol	73.1
Fill Vol	0.0
Cum Cut Vol	3835.0
Cum Fill Vol	296.7
Net Vol	3538.2

Total Volume at Station 20+75.00	
Cut Area	86.730
Fill Area	0.000
Cut Vol	68.3
Fill Vol	0.0
Cum Cut Vol	3761.8
Cum Fill Vol	296.7
Net Vol	3465.1

Total Volume at Station 20+50.00	
Cut Area	60.700
Fill Area	0.000
Cut Vol	49.4
Fill Vol	0.4
Cum Cut Vol	3693.6
Cum Fill Vol	296.7
Net Vol	3396.8

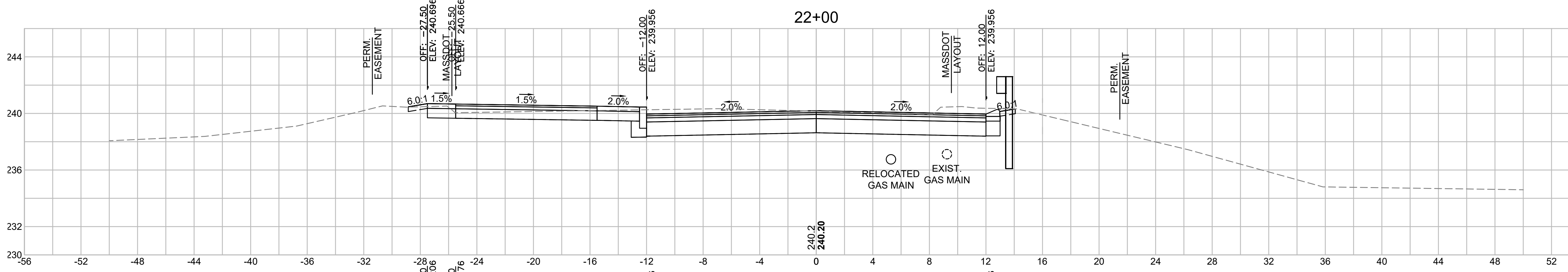
Total Volume at Station 20+25.00	
Cut Area	45.921
Fill Area	0.789
Cut Vol	42.8
Fill Vol	0.8
Cum Cut Vol	3644.2
Cum Fill Vol	296.4
Net Vol	3347.8



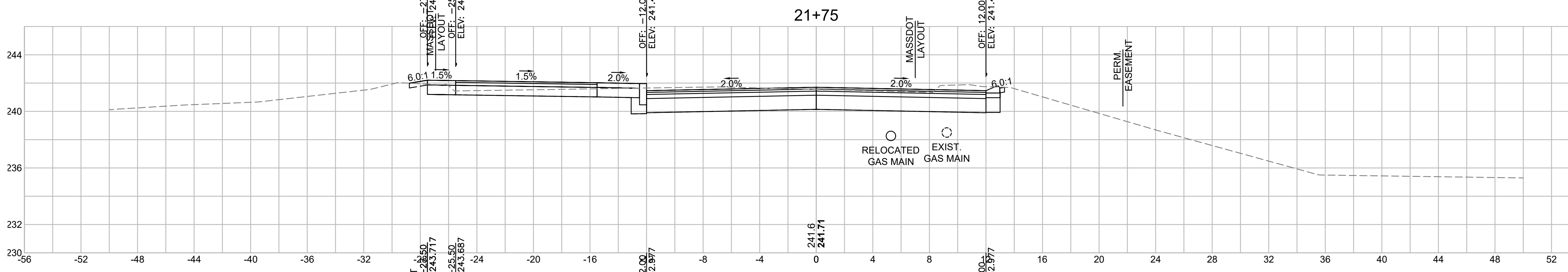
**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	106	128
PROJECT FILE NO. 609054			

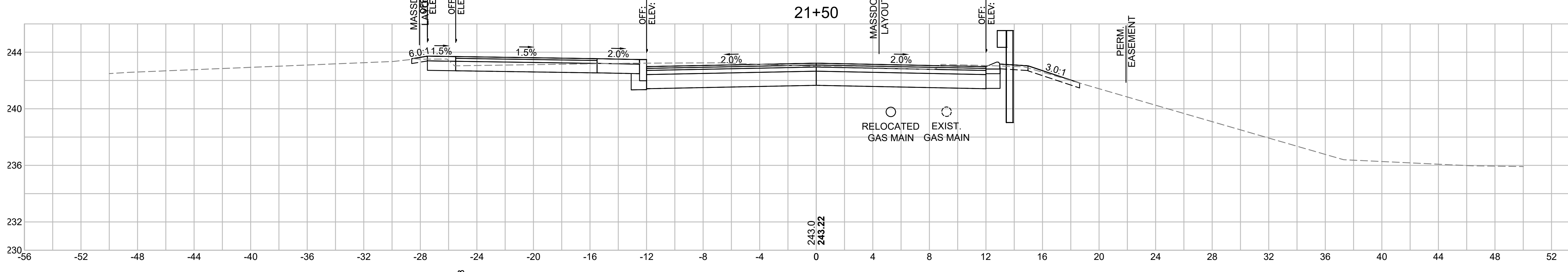
CROSS SECTIONS



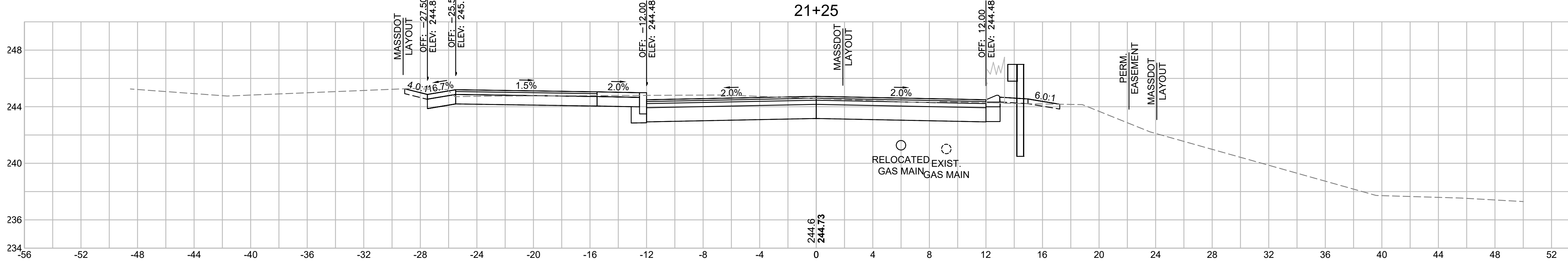
Total Volume at Station 22+00.00	
Cut Area	54.313
Fill Area	0.000
Cut Vol	48.0
Fill Vol	0.0
Cum Cut Vol	4032.9
Cum Fill Vol	296.8
Net Vol	3736.1



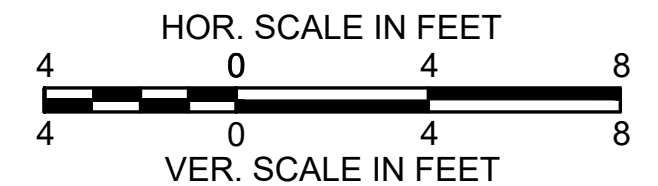
Total Volume at Station 21+75.00	
Cut Area	49.288
Fill Area	0.000
Cut Vol	46.0
Fill Vol	0.0
Cum Cut Vol	3985.0
Cum Fill Vol	296.8
Net Vol	3688.2



Total Volume at Station 21+50.00	
Cut Area	50.060
Fill Area	0.000
Cut Vol	47.1
Fill Vol	0.0
Cum Cut Vol	3939.0
Cum Fill Vol	296.8
Net Vol	3642.2



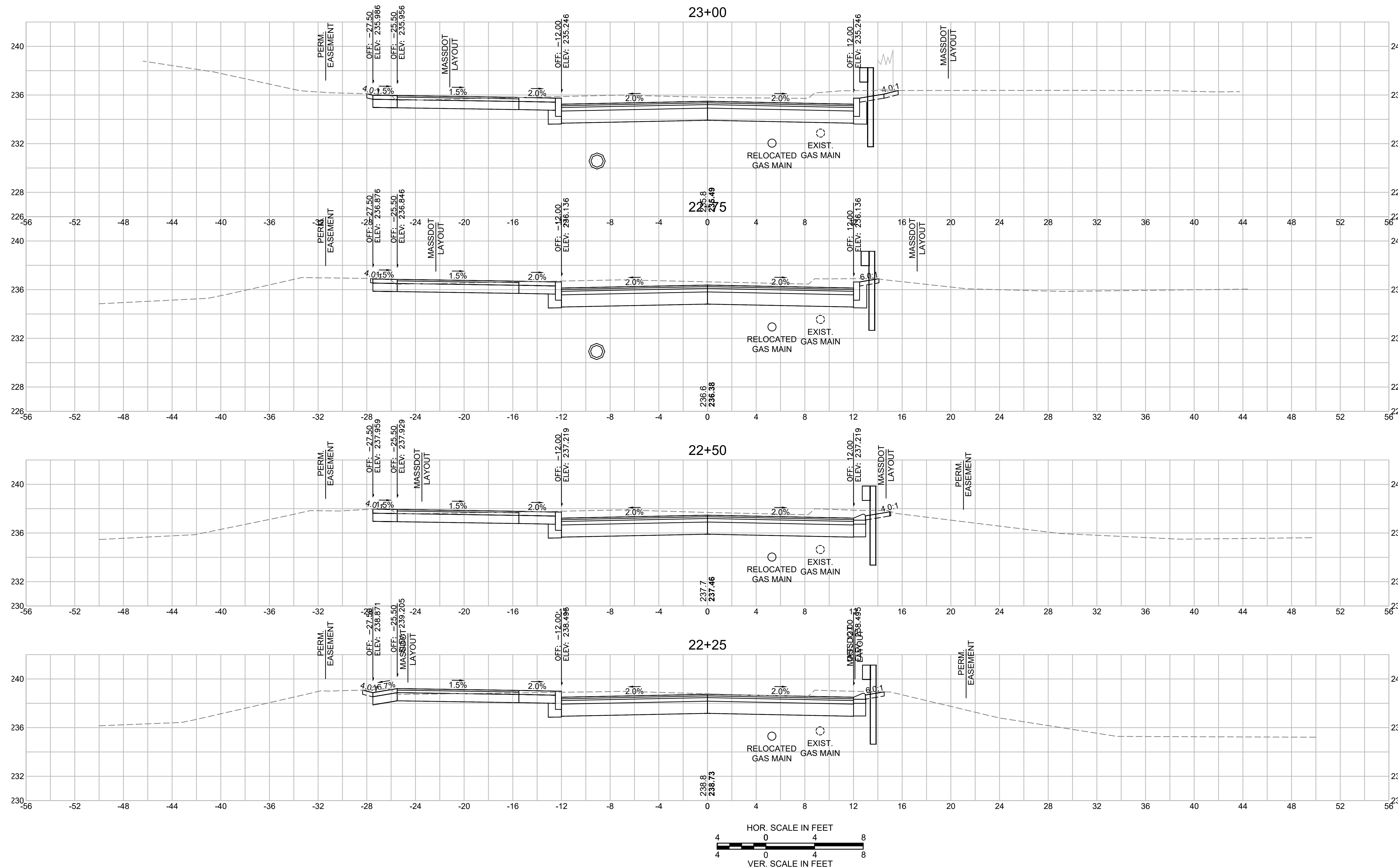
Total Volume at Station 21+25.00	
Cut Area	51.694
Fill Area	0.086
Cut Vol	56.9
Fill Vol	0.0
Cum Cut Vol	3891.9
Cum Fill Vol	296.8
Net Vol	3595.1



LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	107	128
PROJECT FILE NO.		609054	

CROSS SECTIONS

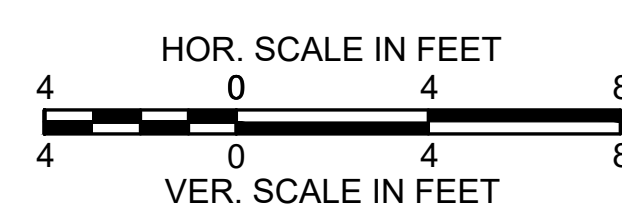


Total Volume at Station 23+00.00	
Cut Area	70.443
Fill Area	0.000
Cut Vol	63.0
Fill Vol	0.0
Cum Cut Vol	4266.4
Cum Fill Vol	296.8
Net Vol	3969.6

Total Volume at Station 22+75.00	
Cut Area	65.544
Fill Area	0.000
Cut Vol	60.6
Fill Vol	0.0
Cum Cut Vol	4203.4
Cum Fill Vol	296.8
Net Vol	3906.6

Total Volume at Station 22+50.00	
Cut Area	65.371
Fill Area	0.000
Cut Vol	57.5
Fill Vol	0.0
Cum Cut Vol	4142.8
Cum Fill Vol	296.8
Net Vol	3846.0

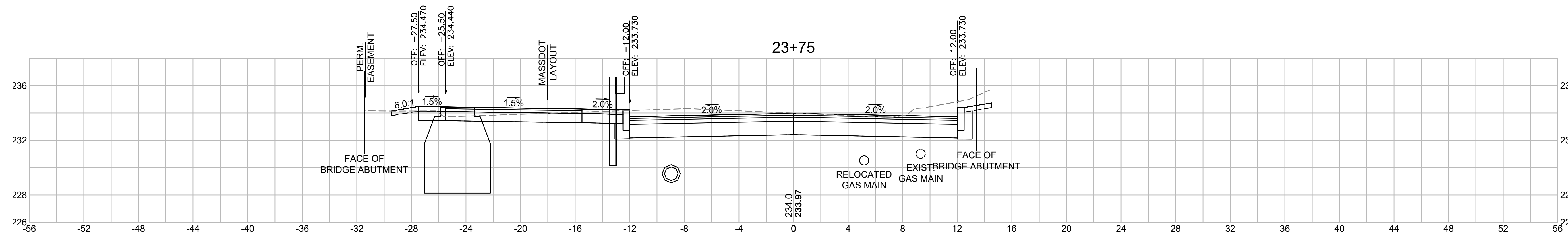
Total Volume at Station 22+25.00	
Cut Area	58.847
Fill Area	0.000
Cut Vol	52.4
Fill Vol	0.0
Cum Cut Vol	4085.3
Cum Fill Vol	296.8
Net Vol	3788.5



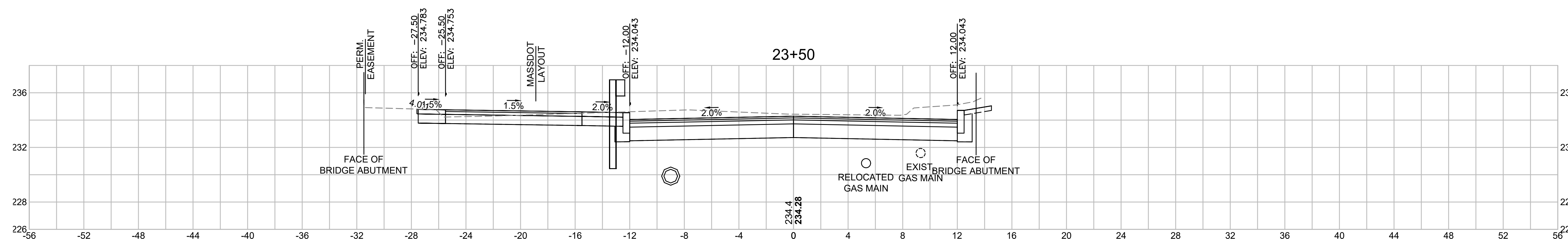
LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	108	128
PROJECT FILE NO.		609054	

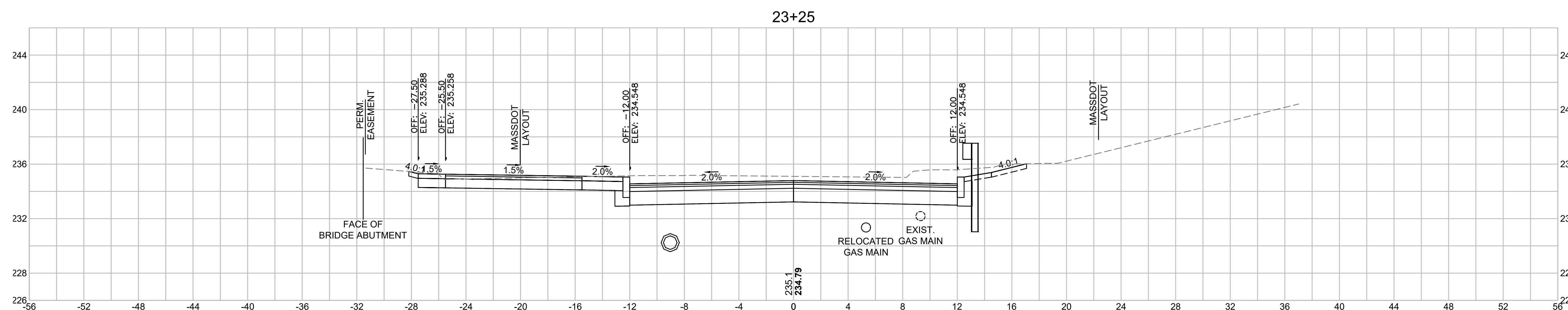
CROSS SECTIONS



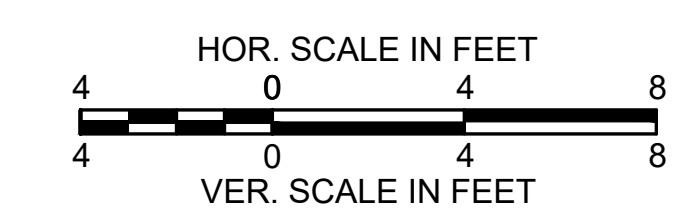
Total Volume at Station 23+75.00	
Cut Area	59.327
Fill Area	0.000
Cut Vol	57.4
Fill Vol	0.0
Cum Cut Vol	4451.4
Cum Fill Vol	296.8
Net Vol	4154.6



Total Volume at Station 23+50.00	
Cut Area	64.638
Fill Area	0.000
Cut Vol	62.5
Fill Vol	0.0
Cum Cut Vol	4394.0
Cum Fill Vol	296.8
Net Vol	4097.2



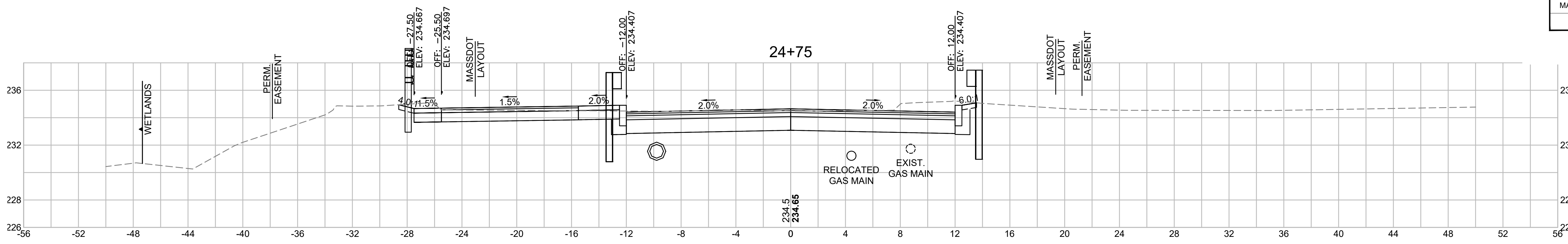
Total Volume at Station 23+25.00	
Cut Area	70.273
Fill Area	0.000
Cut Vol	65.1
Fill Vol	0.0
Cum Cut Vol	4331.5
Cum Fill Vol	296.8
Net Vol	4034.7



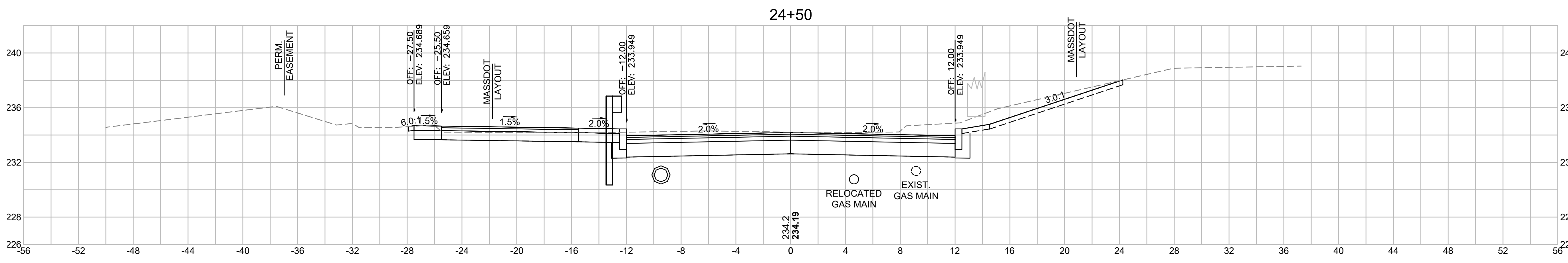
**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	109	128
PROJECT FILE NO.		609054	

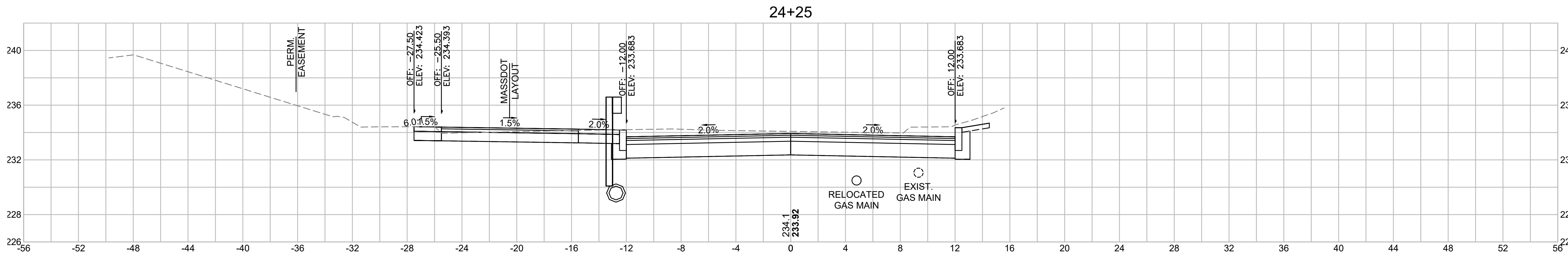
CROSS SECTIONS



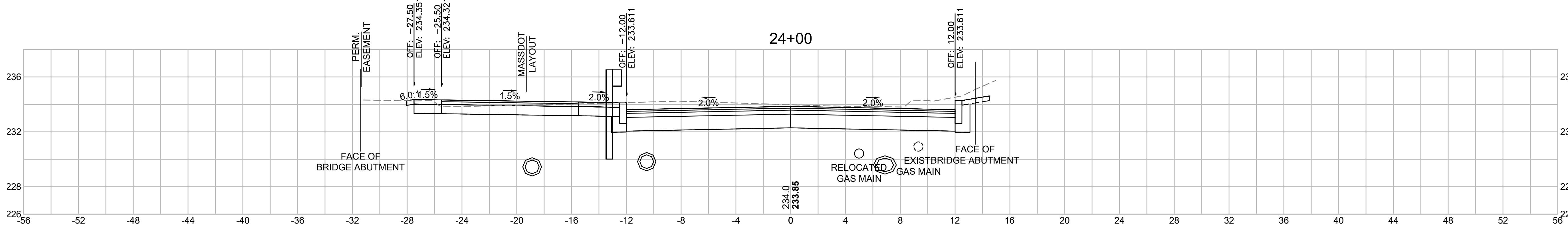
Total Volume at Station 24+75.00	
Cut Area	56.812
Fill Area	0.000
Cut Vol	54.0
Fill Vol	0.0
Cum Cut Vol	4678.0
Cum Fill Vol	296.8
Net Vol	4381.2



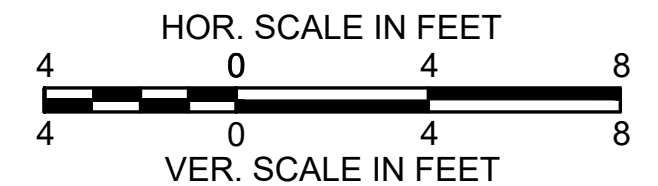
Total Volume at Station 24+50.00	
Cut Area	59.751
Fill Area	0.000
Cut Vol	57.3
Fill Vol	0.0
Cum Cut Vol	4624.1
Cum Fill Vol	296.8
Net Vol	4327.3



Total Volume at Station 24+25.00	
Cut Area	63.921
Fill Area	0.000
Cut Vol	58.8
Fill Vol	0.0
Cum Cut Vol	4566.8
Cum Fill Vol	296.8
Net Vol	4270.0



Total Volume at Station 24+00.00	
Cut Area	63.034
Fill Area	0.000
Cut Vol	56.6
Fill Vol	0.0
Cum Cut Vol	4508.0
Cum Fill Vol	296.8
Net Vol	4211.2



**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	110	128
PROJECT FILE NO.		609054	

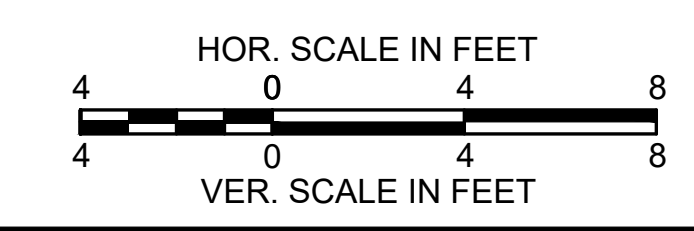
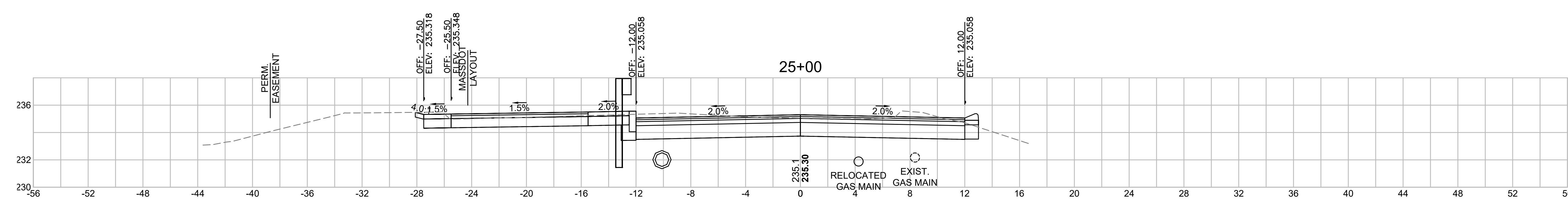
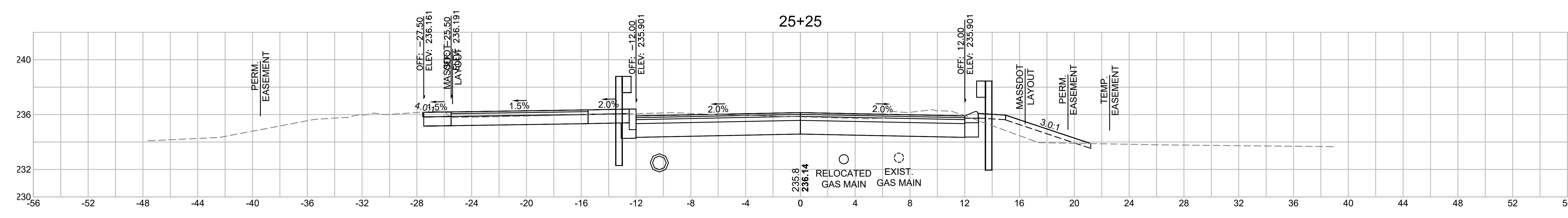
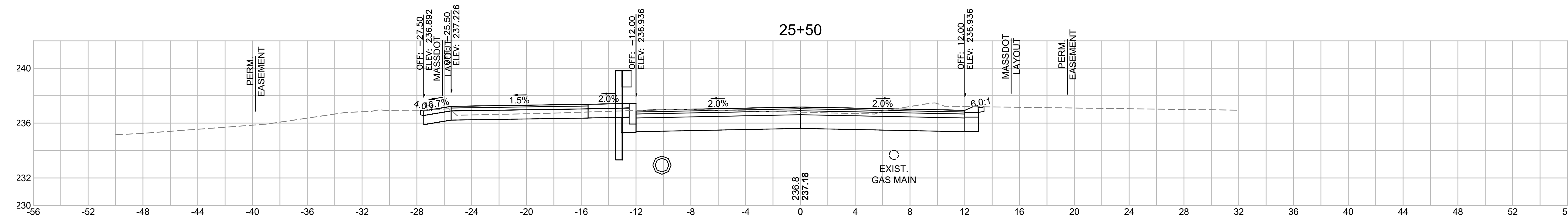
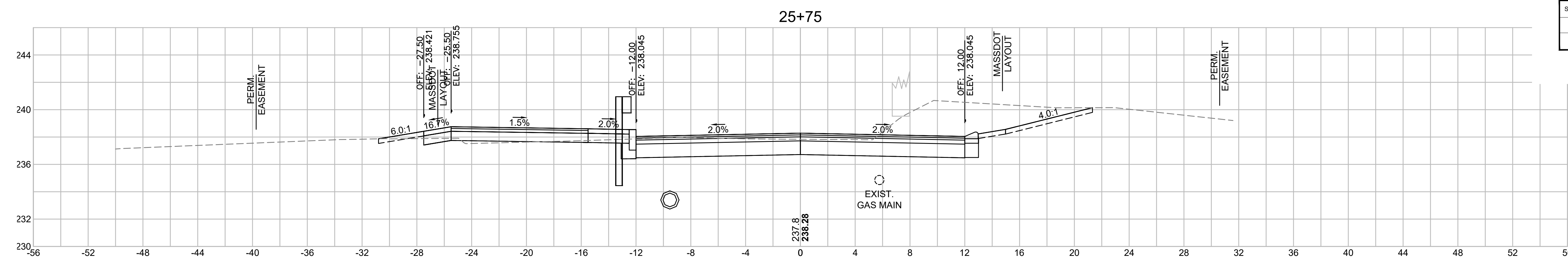
CROSS SECTIONS

Total Volume at Station 25+75.00	
Cut Area	63.794
Fill Area	0.646
Cut Vol	50.6
Fill Vol	0.3
Cum Cut Vol	4869.7
Cum Fill Vol	298.0
Net Vol	4571.7

Total Volume at Station 25+50.00	
Cut Area	45.606
Fill Area	0.000
Cut Vol	44.1
Fill Vol	0.4
Cum Cut Vol	4819.1
Cum Fill Vol	297.7
Net Vol	4521.4

Total Volume at Station 25+25.00	
Cut Area	49.642
Fill Area	0.970
Cut Vol	46.8
Fill Vol	0.4
Cum Cut Vol	4775.0
Cum Fill Vol	297.3
Net Vol	4477.7

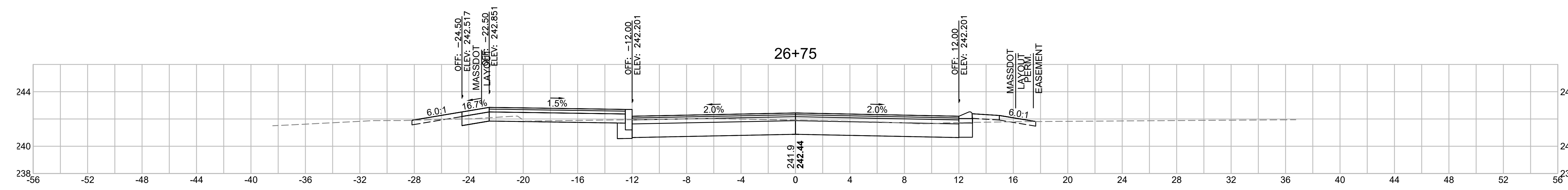
Total Volume at Station 25+00.00	
Cut Area	51.493
Fill Area	0.001
Cut Vol	50.1
Fill Vol	0.0
Cum Cut Vol	4728.2
Cum Fill Vol	296.8
Net Vol	4431.4



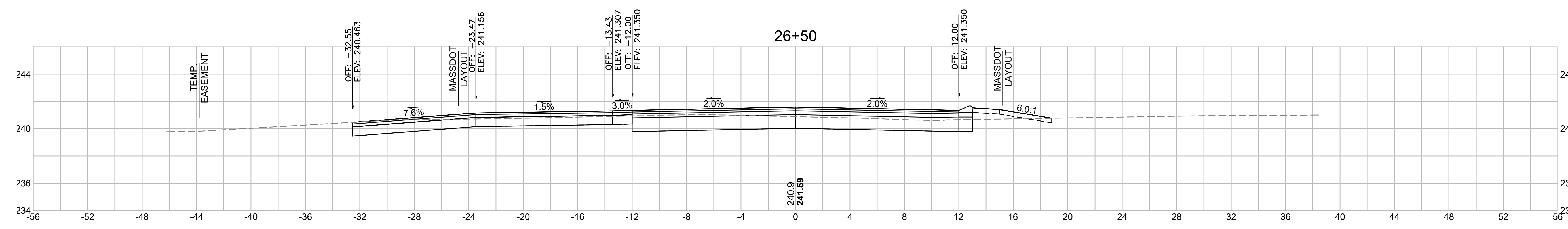
**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	111	128
PROJECT FILE NO.		609054	

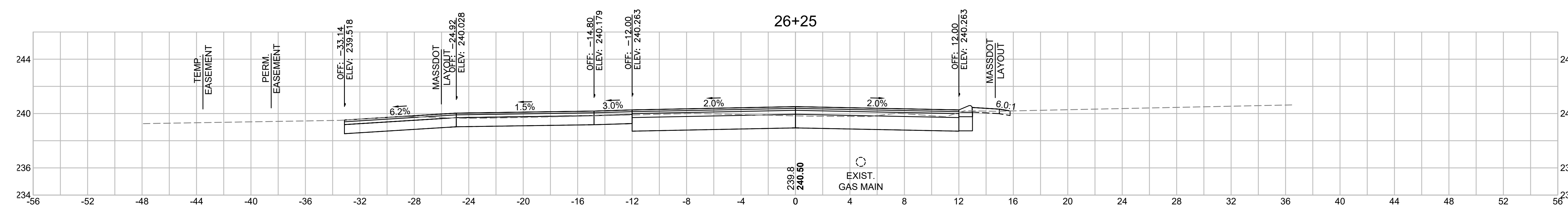
CROSS SECTIONS



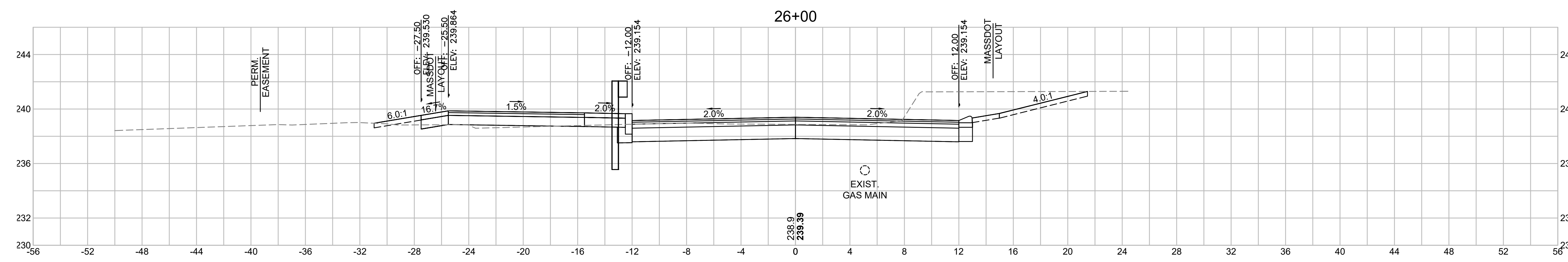
Total Volume at Station 26+75.00	
Cut Area	32.618
Fill Area	0.595
Cut Vol	32.7
Fill Vol	0.9
Cum Cut Vol	5039.9
Cum Fill Vol	300.8
Net Vol	4739.1



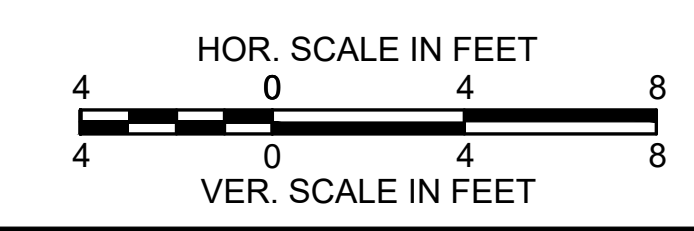
Total Volume at Station 26+50.00	
Cut Area	37.927
Fill Area	1.249
Cut Vol	37.5
Fill Vol	0.6
Cum Cut Vol	5007.2
Cum Fill Vol	300.0
Net Vol	4707.3



Total Volume at Station 26+25.00	
Cut Area	43.073
Fill Area	0.000
Cut Vol	45.2
Fill Vol	0.5
Cum Cut Vol	4969.7
Cum Fill Vol	299.4
Net Vol	4670.3



Total Volume at Station 26+00.00	
Cut Area	54.556
Fill Area	1.180
Cut Vol	54.8
Fill Vol	0.8
Cum Cut Vol	4924.5
Cum Fill Vol	298.9
Net Vol	4625.7

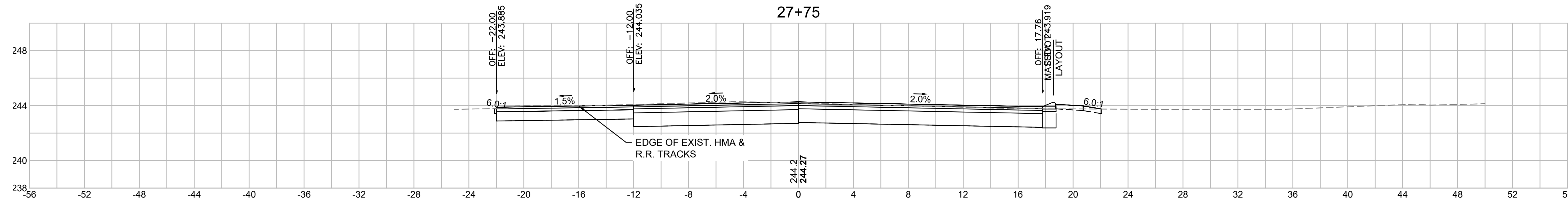
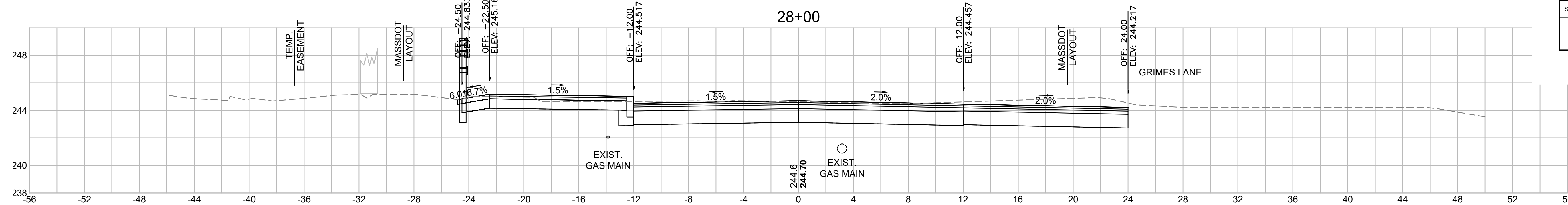


**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	112	128
PROJECT FILE NO.		609054	

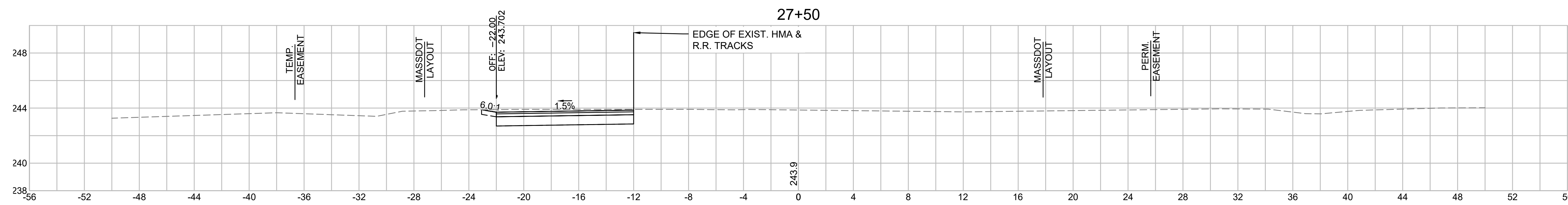
CROSS SECTIONS

CUT AREA	1.313
Fill Area	0.000
Cut Vol	58.8
Fill Vol	0.0
Cum Cut Vol	5229.4
Cum Fill Vol	301.1
Net Vol	4928.3



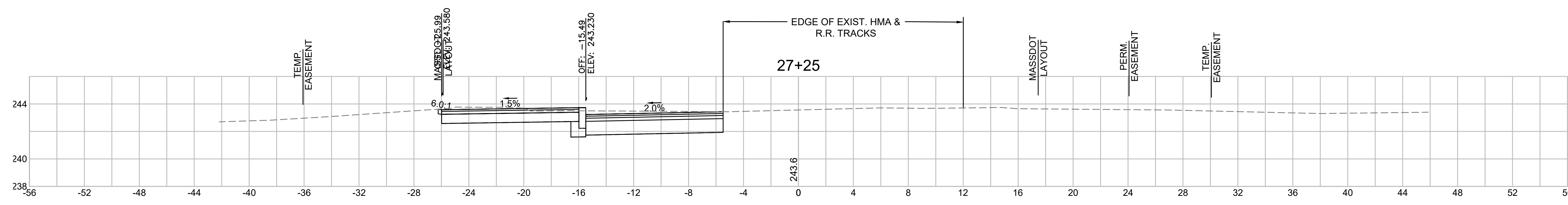
Total Volume at Station 27+75.00

Cut Area	55.713
Fill Area	0.000
Cut Vol	33.0
Fill Vol	0.0
Cum Cut Vol	5170.6
Cum Fill Vol	301.1
Net Vol	4869.5



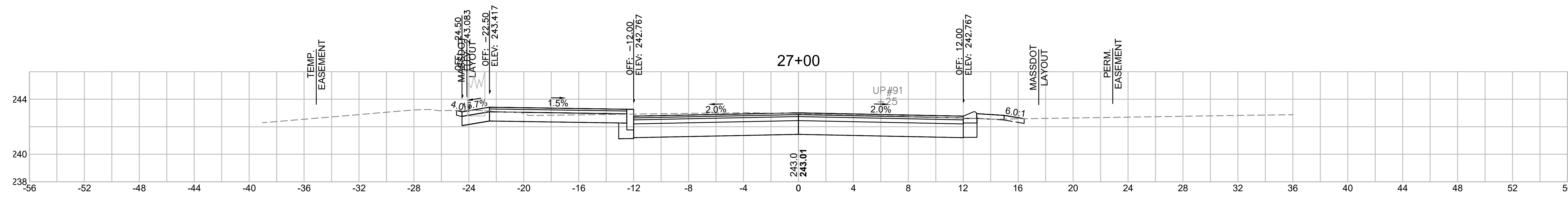
Total Volume at Station 27+50.00

Cut Area	15.596
Fill Area	0.000
Cut Vol	22.4
Fill Vol	0.0
Cum Cut Vol	5137.6
Cum Fill Vol	301.1
Net Vol	4836.5



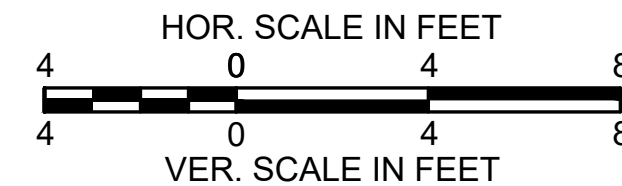
Total Volume at Station 27+25.00

Cut Area	32.687
Fill Area	0.000
Cut Vol	37.7
Fill Vol	0.0
Cum Cut Vol	5115.3
Cum Fill Vol	301.1
Net Vol	4814.1



Total Volume at Station 27+00.00

Cut Area	48.732
Fill Area	0.013
Cut Vol	37.7
Fill Vol	0.3
Cum Cut Vol	5077.6
Cum Fill Vol	301.1
Net Vol	4776.4



**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	113	128
PROJECT FILE NO.		609054	

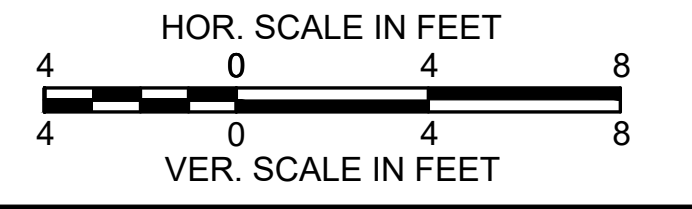
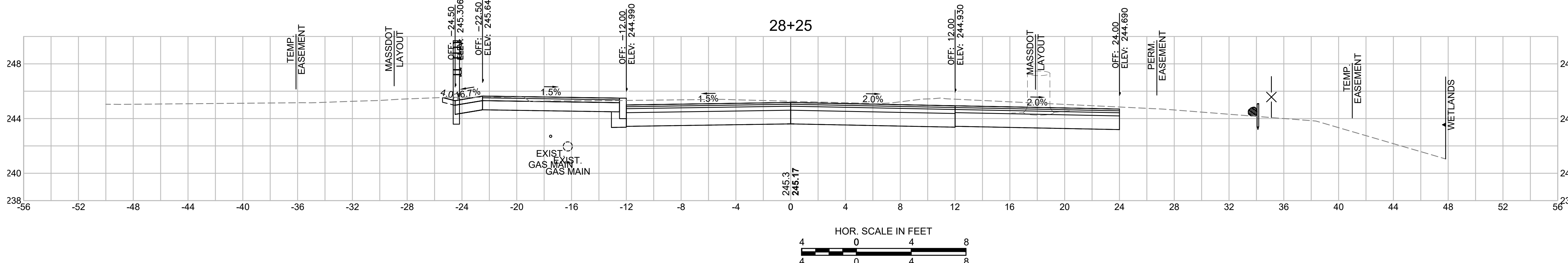
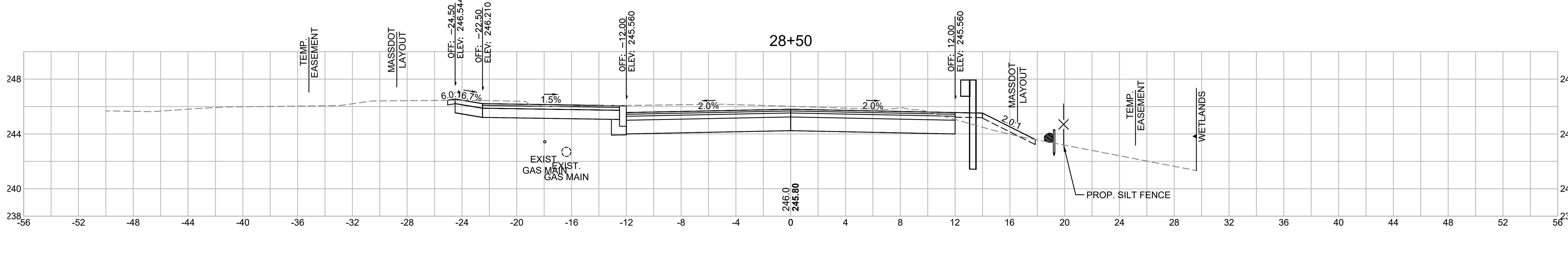
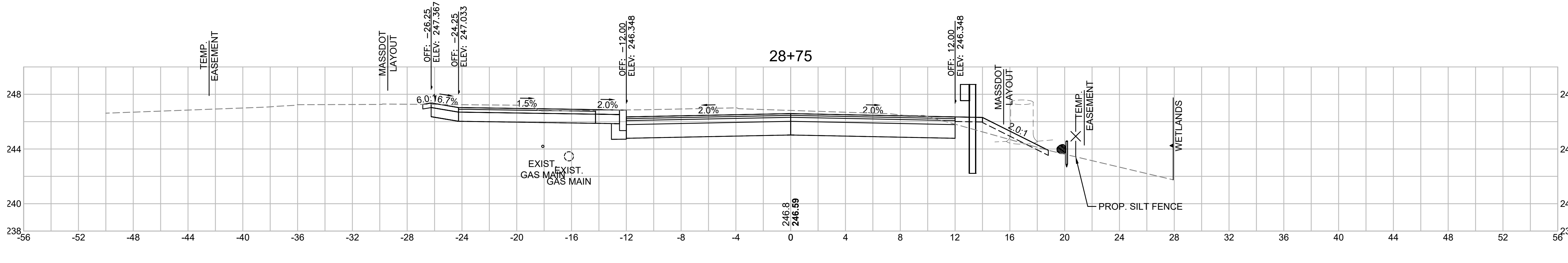
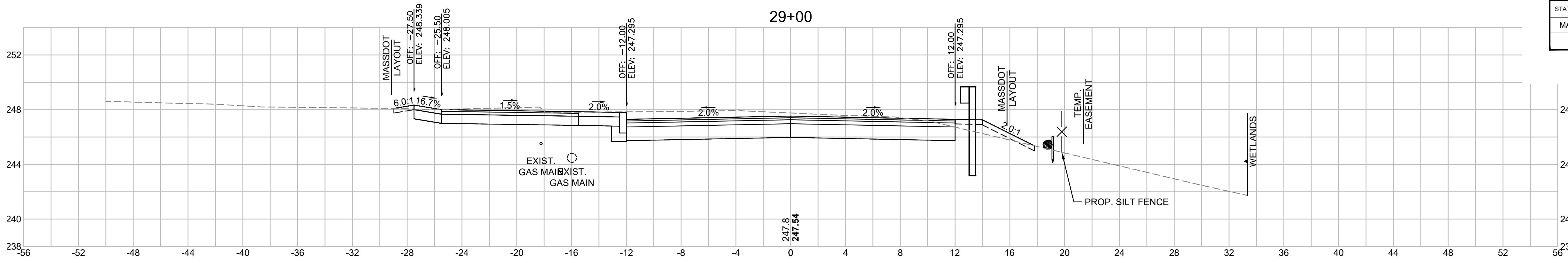
CROSS SECTIONS

Total Volume at Station 29+00.00	
Cut Area	61.311
Fill Area	1.656
Cut Vol	56.3
Fill Vol	1.2
Cum Cut Vol	5472.3
Cum Fill Vol	304.4
Net Vol	5167.9

Total Volume at Station 28+75.00	
Cut Area	60.347
Fill Area	0.919
Cut Vol	55.0
Fill Vol	1.2
Cum Cut Vol	5416.0
Cum Fill Vol	303.2
Net Vol	5112.8

Total Volume at Station 28+50.00	
Cut Area	58.354
Fill Area	1.770
Cut Vol	62.8
Fill Vol	0.8
Cum Cut Vol	5361.0
Cum Fill Vol	301.9
Net Vol	5059.1

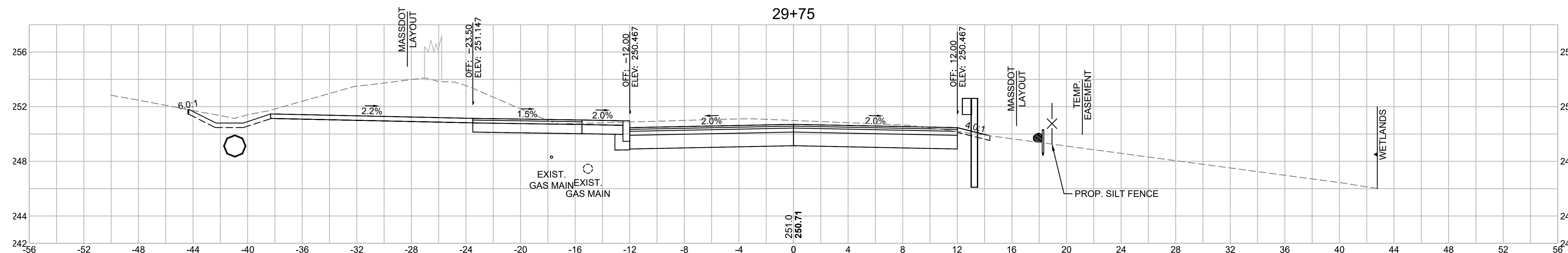
Total Volume at Station 28+25.00	
Cut Area	77.262
Fill Area	0.000
Cut Vol	68.8
Fill Vol	0.0
Cum Cut Vol	5298.2
Cum Fill Vol	301.1
Net Vol	4997.1



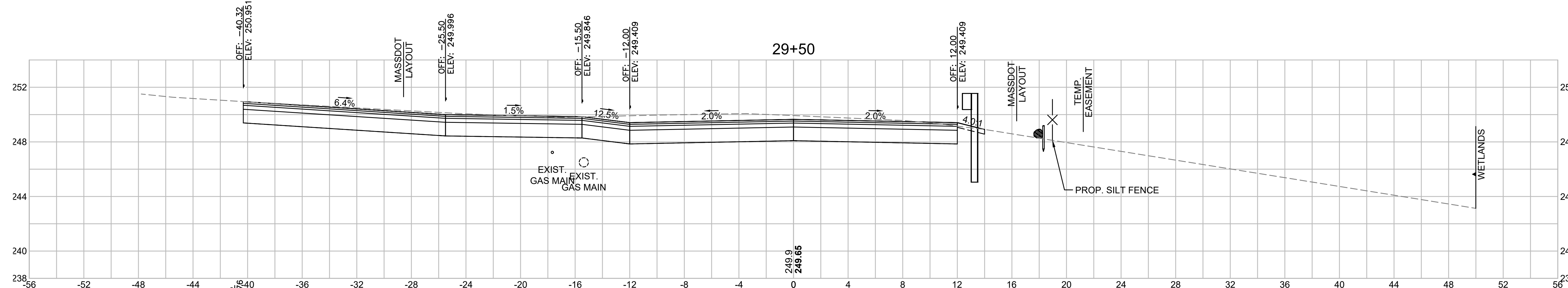
**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	114	128
PROJECT FILE NO.		609054	

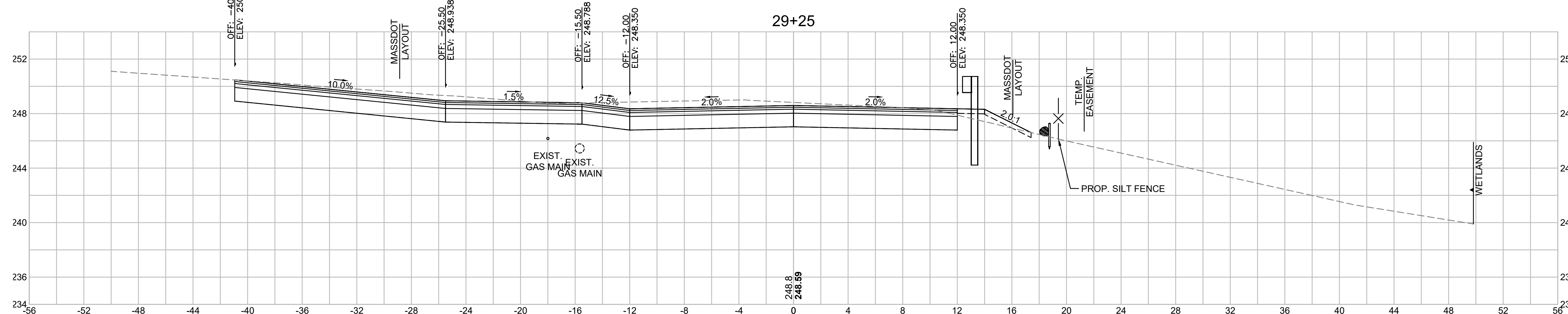
CROSS SECTIONS



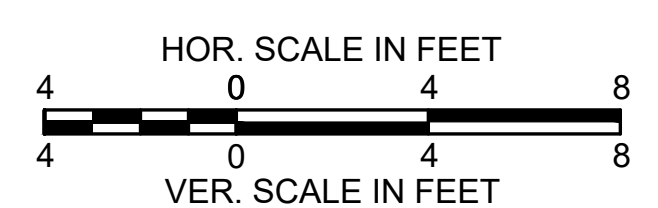
Total Volume at Station 29+75.00	
Cut Area	100.711
Fill Area	0.000
Cut Vol	88.7
Fill Vol	0.0
Cum Cut Vol	5719.3
Cum Fill Vol	306.3
Net Vol	5413.0



Total Volume at Station 29+50.00	
Cut Area	90.870
Fill Area	0.000
Cut Vol	86.0
Fill Vol	0.6
Cum Cut Vol	5630.6
Cum Fill Vol	306.3
Net Vol	5324.3



Total Volume at Station 29+25.00	
Cut Area	94.886
Fill Area	1.233
Cut Vol	72.3
Fill Vol	1.3
Cum Cut Vol	5544.6
Cum Fill Vol	305.7
Net Vol	5238.9

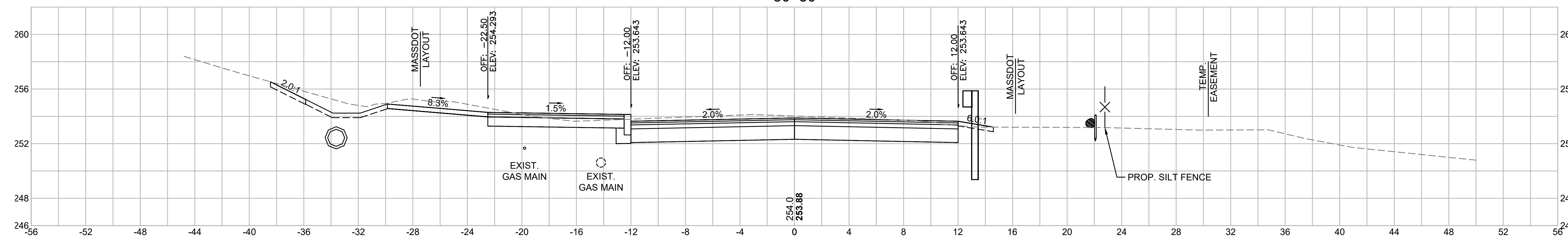


LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	115	128
PROJECT FILE NO.		609054	

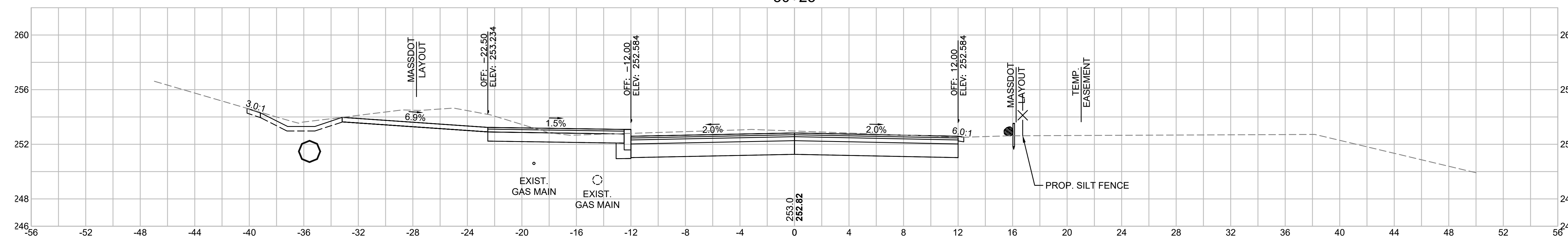
CROSS SECTIONS

30+50



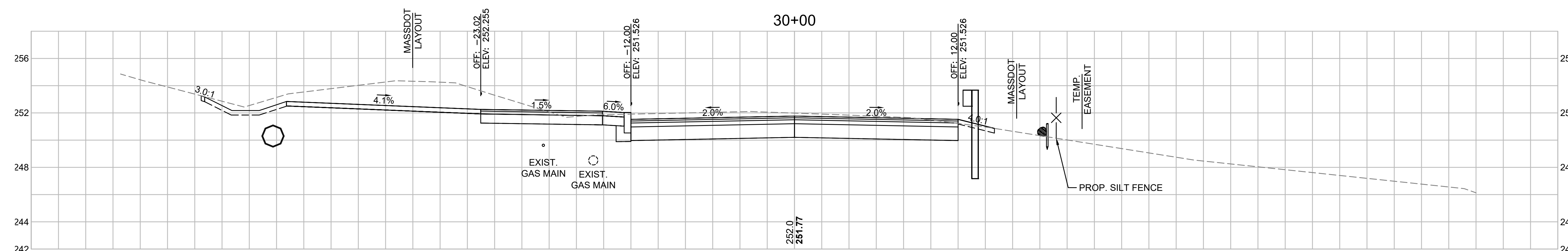
Total Volume at Station 30+50.00	
Cut Area	62.419
Fill Area	0.000
Cut Vol	60.4
Fill Vol	0.0
Cum Cut Vol	5938.3
Cum Fill Vol	306.3
Net Vol	5632.0

30+25

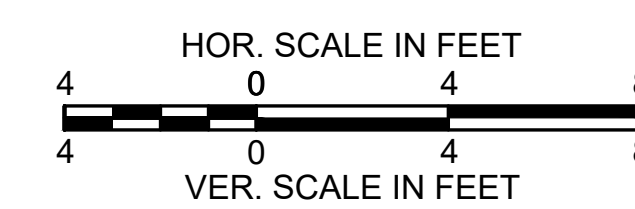


Total Volume at Station 30+25.00	
Cut Area	68.011
Fill Area	0.000
Cut Vol	71.7
Fill Vol	0.0
Cum Cut Vol	5877.9
Cum Fill Vol	306.3
Net Vol	5571.6

30+00



Total Volume at Station 30+00.00	
Cut Area	86.963
Fill Area	0.000
Cut Vol	86.9
Fill Vol	0.0
Cum Cut Vol	5806.2
Cum Fill Vol	306.3
Net Vol	5499.9

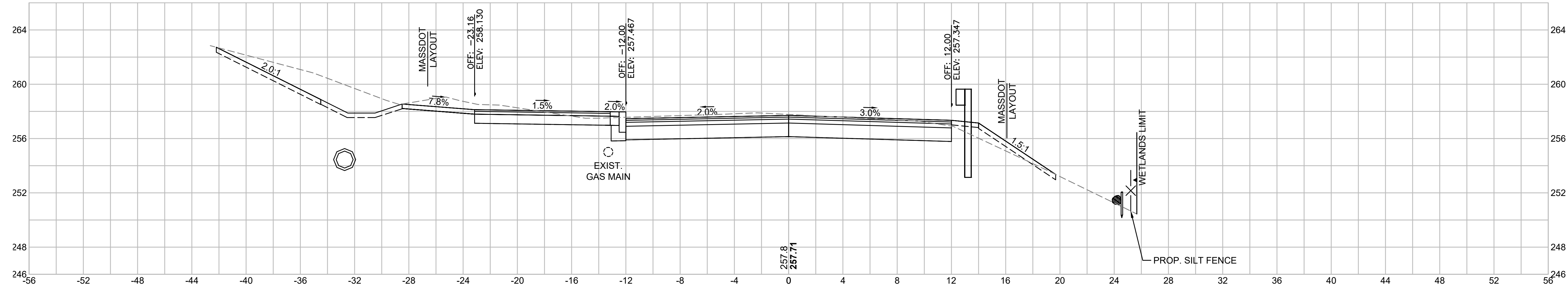


**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	116	128
PROJECT FILE NO.		609054	

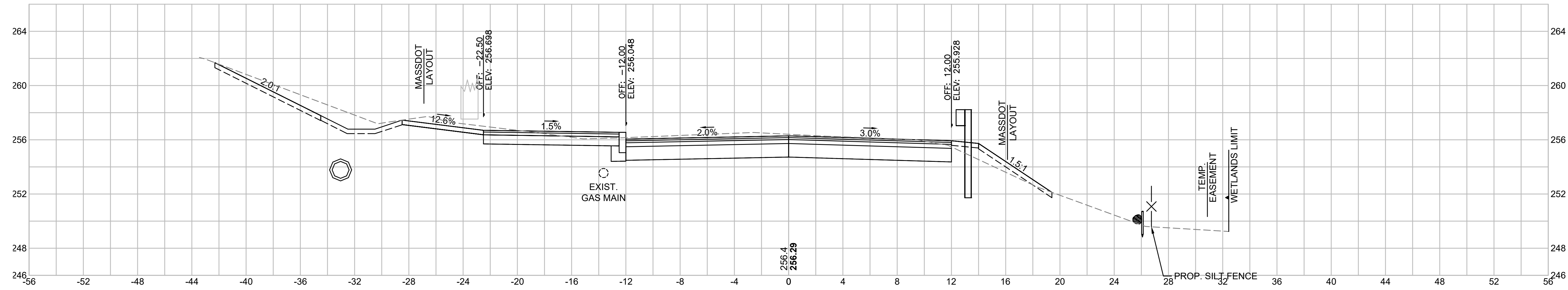
CROSS SECTIONS

31+25



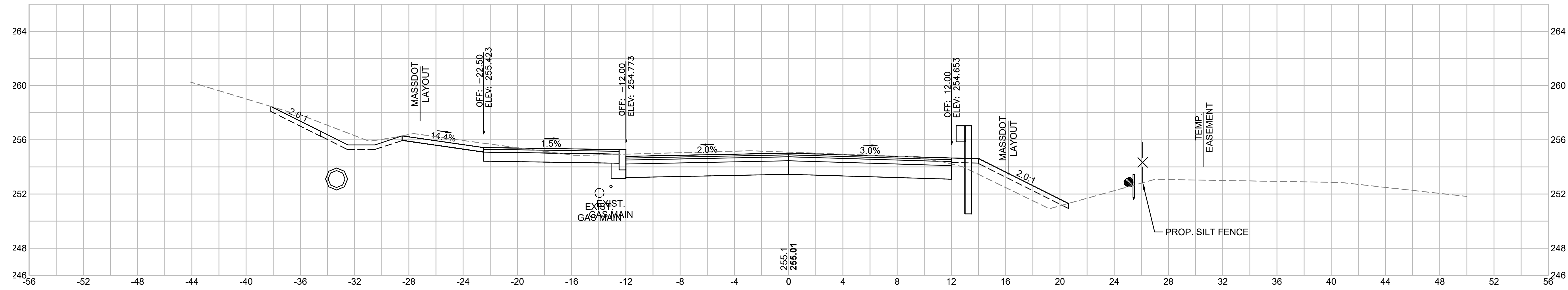
Total Volume at Station 31+25.00	
Cut Area	74.350
Fill Area	2.149
Cut Vol	65.3
Fill Vol	2.2
Cum Cut Vol	6119.4
Cum Fill Vol	314.4
Net Vol	5805.0

31+00

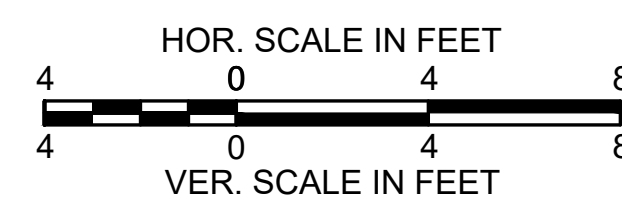


Total Volume at Station 31+00.00	
Cut Area	66.640
Fill Area	2.543
Cut Vol	58.9
Fill Vol	3.6
Cum Cut Vol	6054.1
Cum Fill Vol	312.2
Net Vol	5741.9

30+75



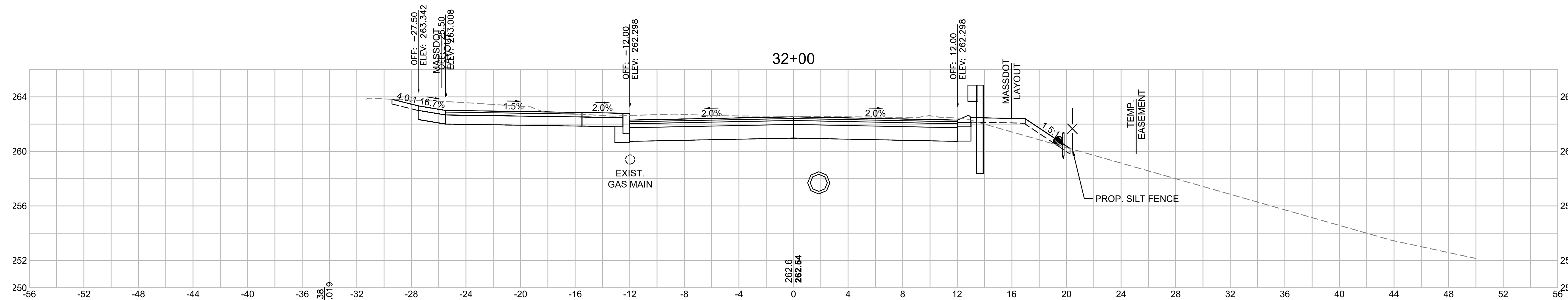
Total Volume at Station 30+75.00	
Cut Area	60.551
Fill Area	5.145
Cut Vol	56.9
Fill Vol	2.4
Cum Cut Vol	5995.2
Cum Fill Vol	308.7
Net Vol	5686.6



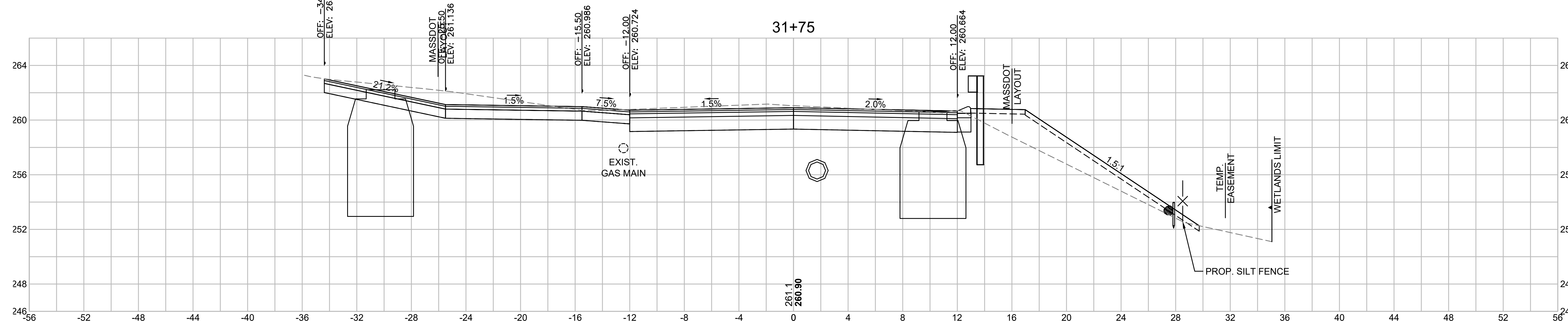
LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	117	128
PROJECT FILE NO.		609054	

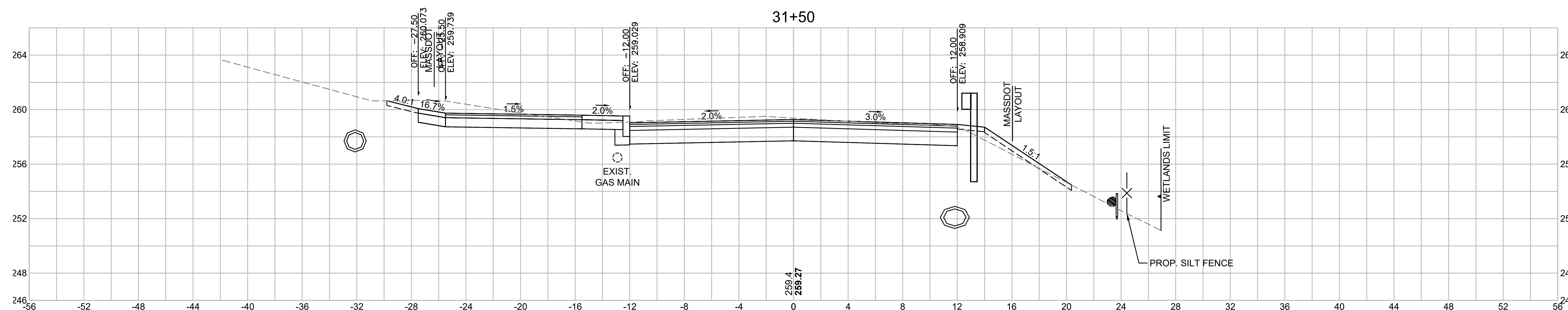
CROSS SECTIONS



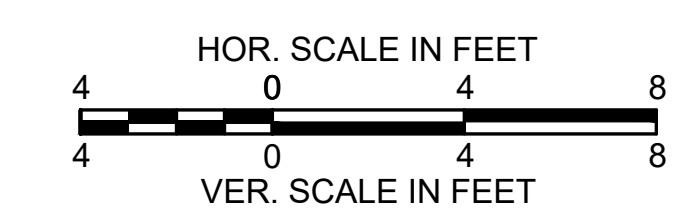
Total Volume at Station 32+00.00	
Cut Area	64.705
Fill Area	2.547
Cut Vol	63.1
Fill Vol	9.3
Cum Cut Vol	6305.1
Cum Fill Vol	334.1
Net Vol	5971.0



Total Volume at Station 31+75.00	
Cut Area	71.494
Fill Area	17.497
Cut Vol	60.7
Fill Vol	8.8
Cum Cut Vol	6242.1
Cum Fill Vol	324.9
Net Vol	5917.2



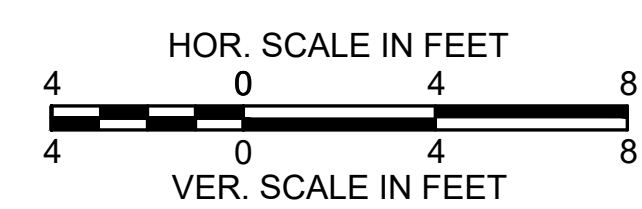
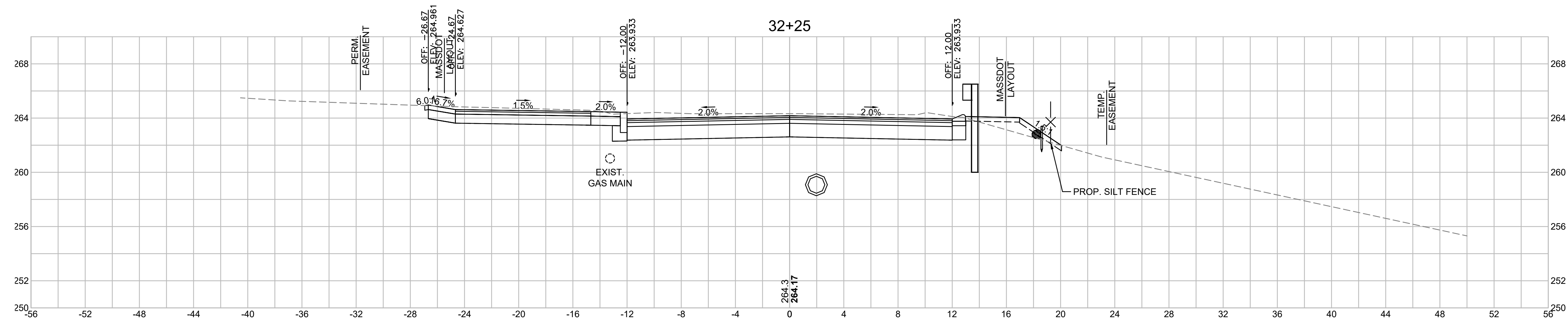
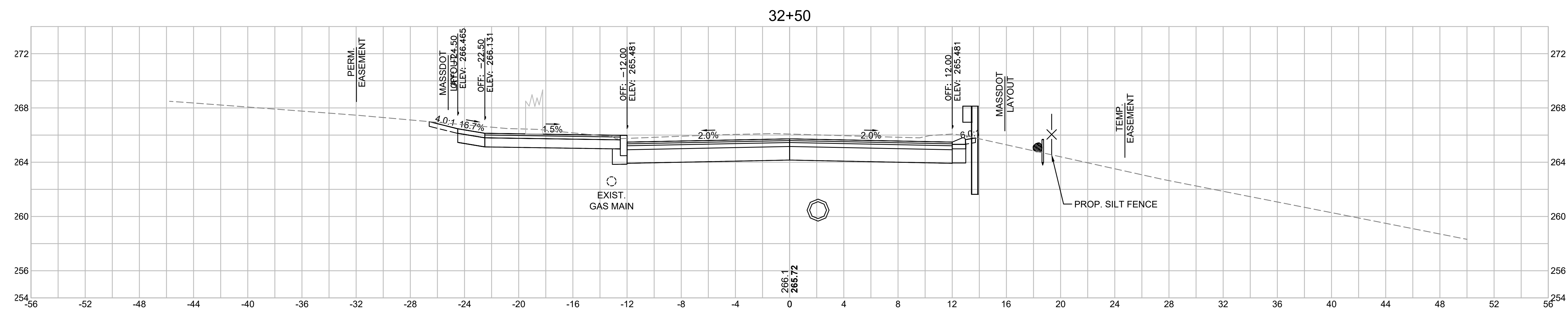
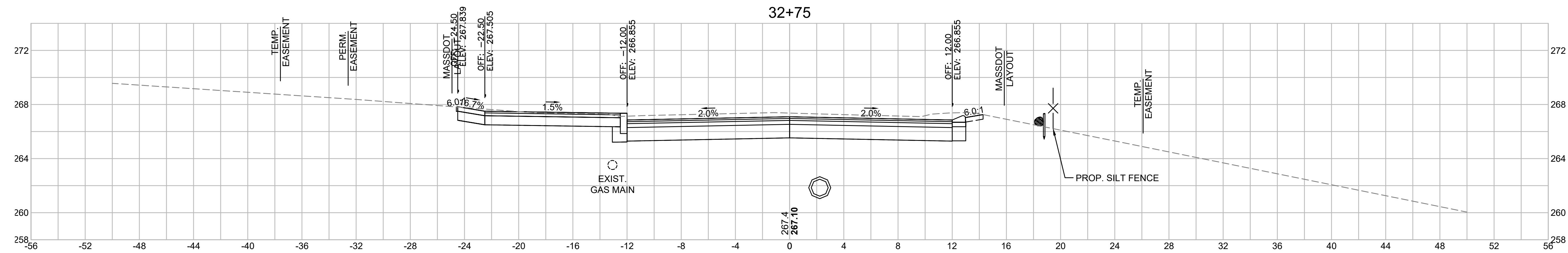
Total Volume at Station 31+50.00	
Cut Area	59.583
Fill Area	1.484
Cut Vol	62.0
Fill Vol	1.7
Cum Cut Vol	6181.4
Cum Fill Vol	316.1
Net Vol	5865.3



LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	118	128
PROJECT FILE NO.		609054	

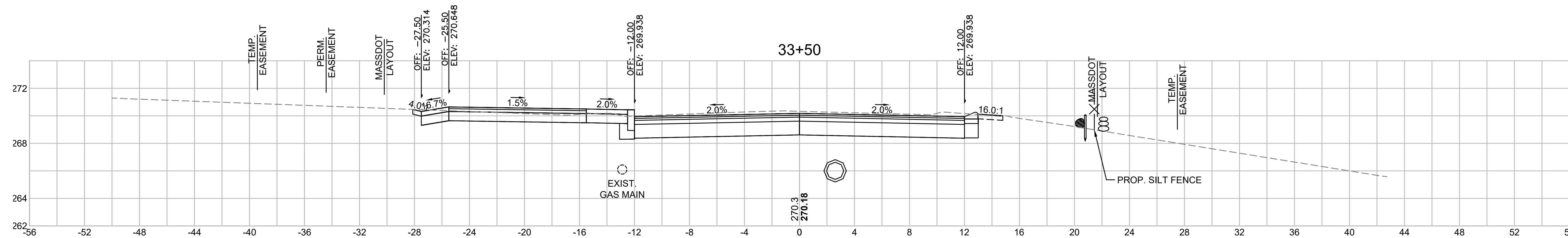
CROSS SECTIONS



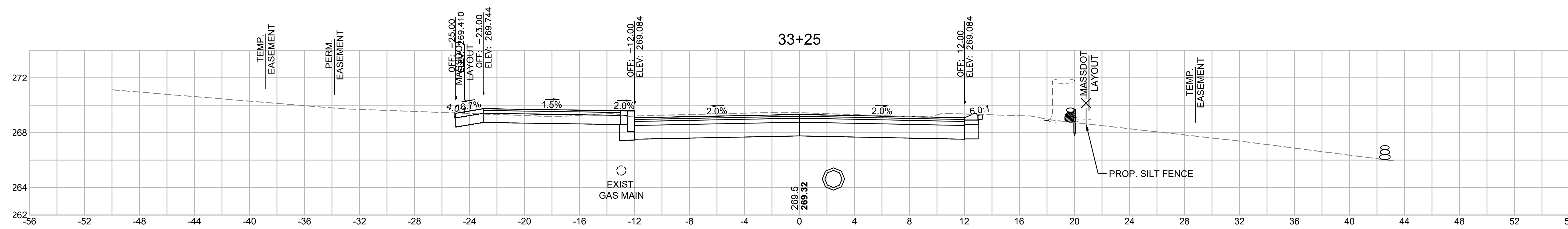
LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	119	128
PROJECT FILE NO.		609054	

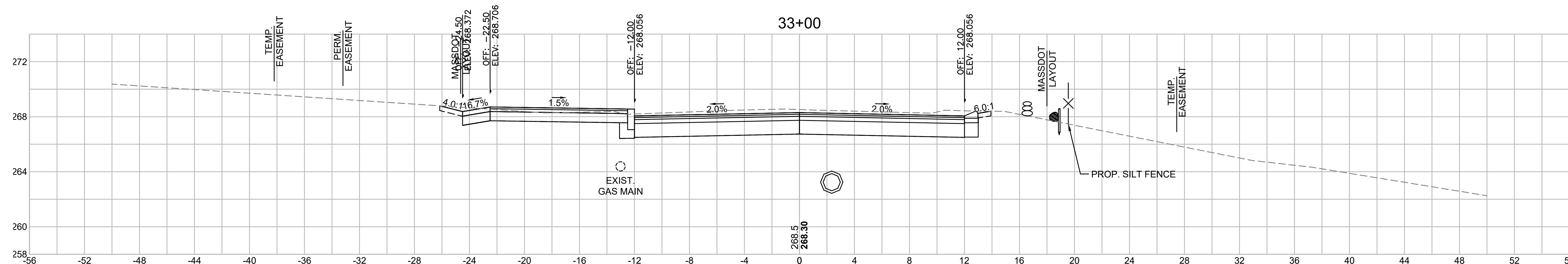
CROSS SECTIONS



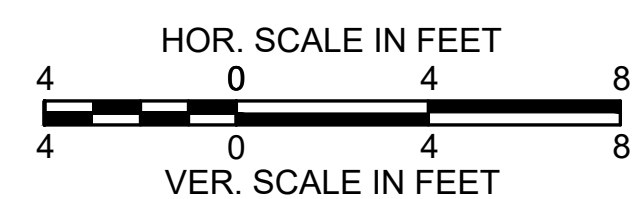
Total Volume at Station 33+50.00	
Cut Area	55.027
Fill Area	0.000
Cut Vol	49.6
Fill Vol	0.0
Cum Cut Vol	6637.5
Cum Fill Vol	337.3
Net Vol	6300.1



Total Volume at Station 33+25.00	
Cut Area	52.181
Fill Area	0.000
Cut Vol	50.5
Fill Vol	0.0
Cum Cut Vol	6587.8
Cum Fill Vol	337.3
Net Vol	6250.5



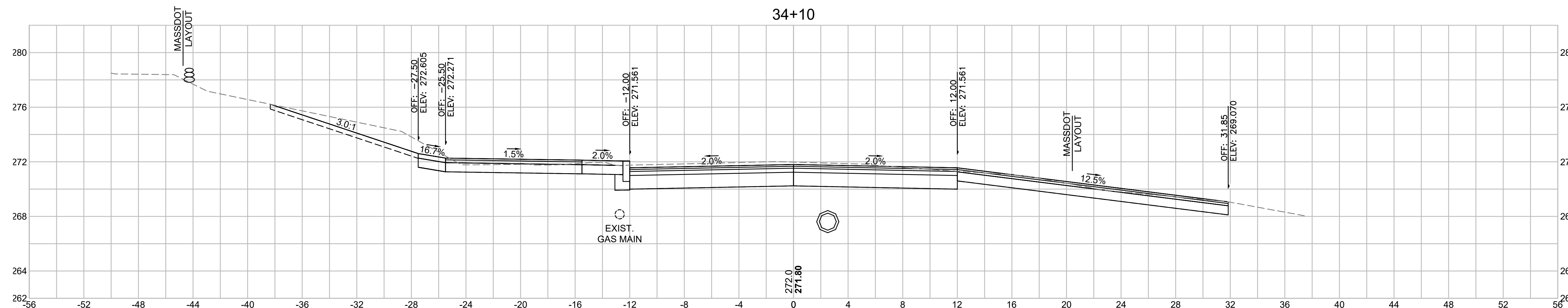
Total Volume at Station 33+00.00	
Cut Area	56.797
Fill Area	0.000
Cut Vol	54.4
Fill Vol	0.0
Cum Cut Vol	6537.4
Cum Fill Vol	337.3
Net Vol	6200.0



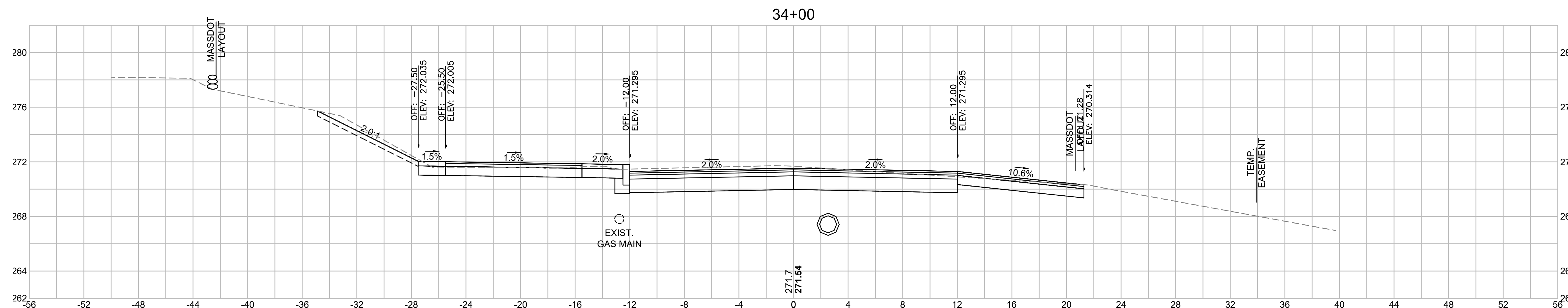
**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	120	128
PROJECT FILE NO.		609054	

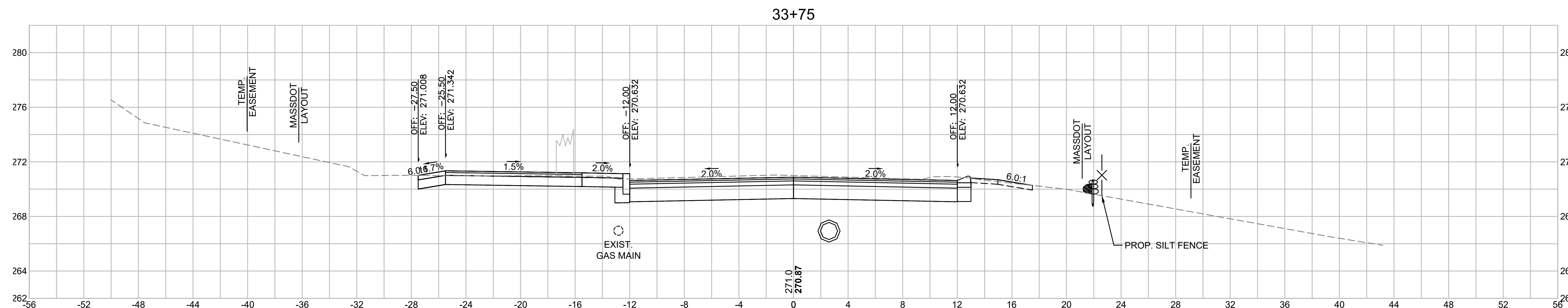
CROSS SECTIONS



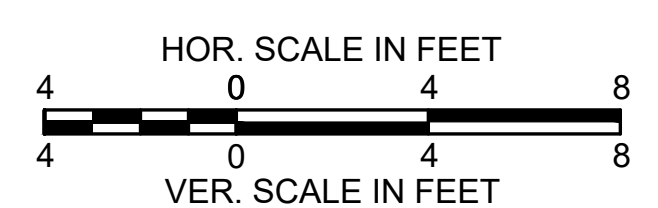
Total Volume at Station 34+10.00	
Cut Area	79.237
Fill Area	0.000
Cut Vol	26.1
Fill Vol	0.0
Cum Cut Vol	6769.6
Cum Fill Vol	337.3
Net Vol	6432.3



Total Volume at Station 34+00.00	
Cut Area	62.001
Fill Area	0.000
Cut Vol	54.6
Fill Vol	0.0
Cum Cut Vol	6743.5
Cum Fill Vol	337.3
Net Vol	6406.2



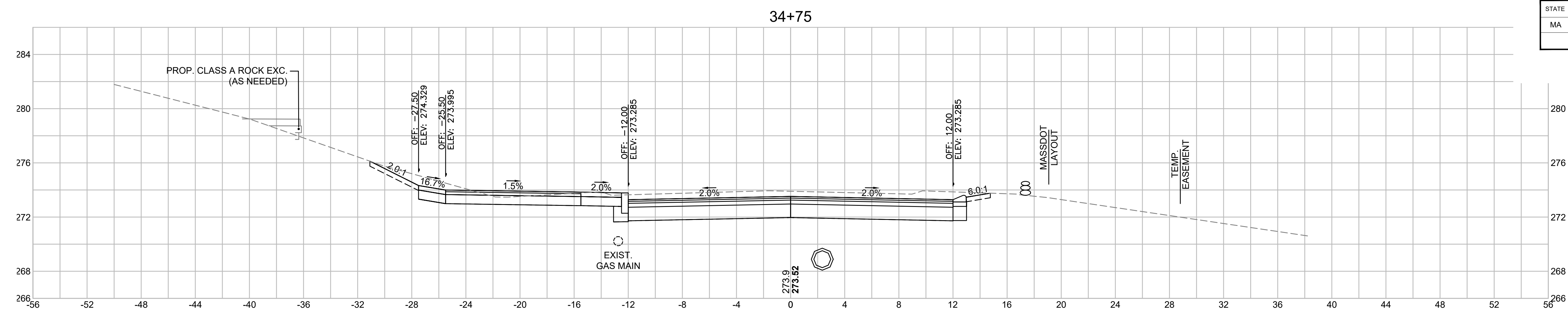
Total Volume at Station 33+75.00	
Cut Area	56.024
Fill Area	0.000
Cut Vol	51.4
Fill Vol	0.0
Cum Cut Vol	6688.9
Cum Fill Vol	337.3
Net Vol	6351.5



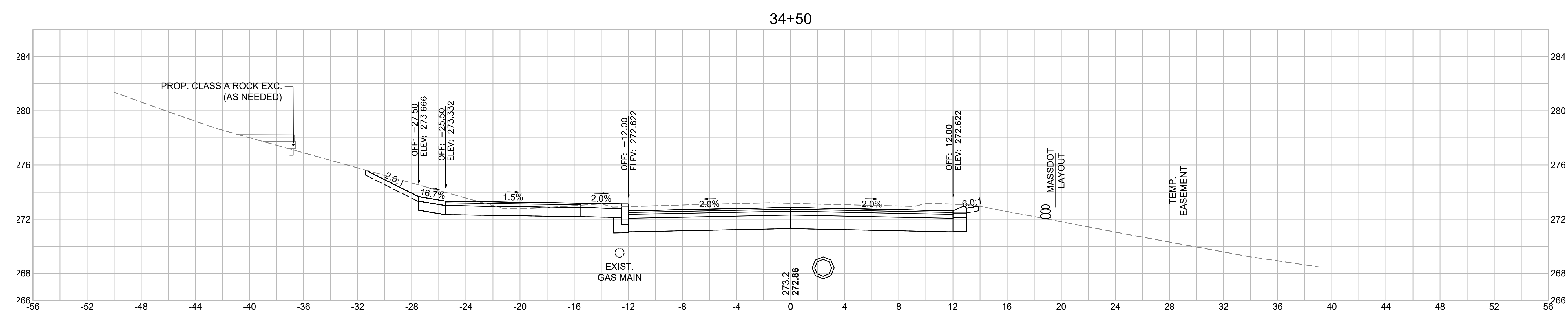
**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	121	128
PROJECT FILE NO.		609054	

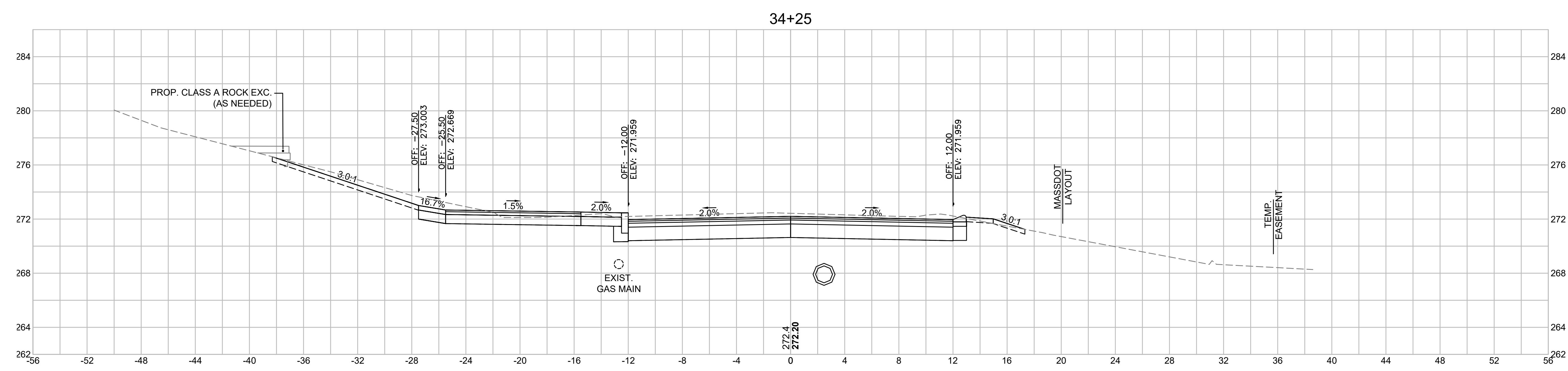
CROSS SECTIONS



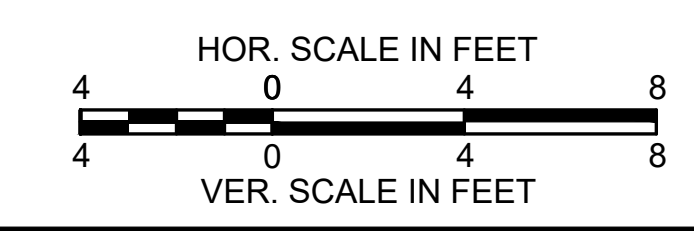
Total Volume at Station 34+75.00	
Cut Area	68.933
Fill Area	0.000
Cut Vol	63.0
Fill Vol	0.0
Cum Cut Vol	6935.3
Cum Fill Vol	337.3
Net Vol	6598.0



Total Volume at Station 34+50.00	
Cut Area	67.132
Fill Area	0.000
Cut Vol	62.1
Fill Vol	0.0
Cum Cut Vol	6872.3
Cum Fill Vol	337.3
Net Vol	6535.0



Total Volume at Station 34+25.00	
Cut Area	66.905
Fill Area	0.001
Cut Vol	40.6
Fill Vol	0.0
Cum Cut Vol	6810.3
Cum Fill Vol	337.3
Net Vol	6472.9

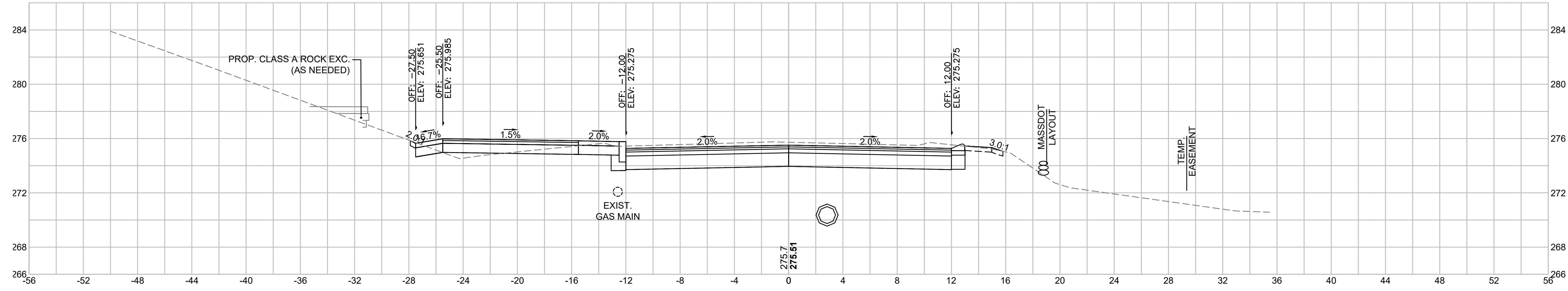


**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	122	128
PROJECT FILE NO.		609054	

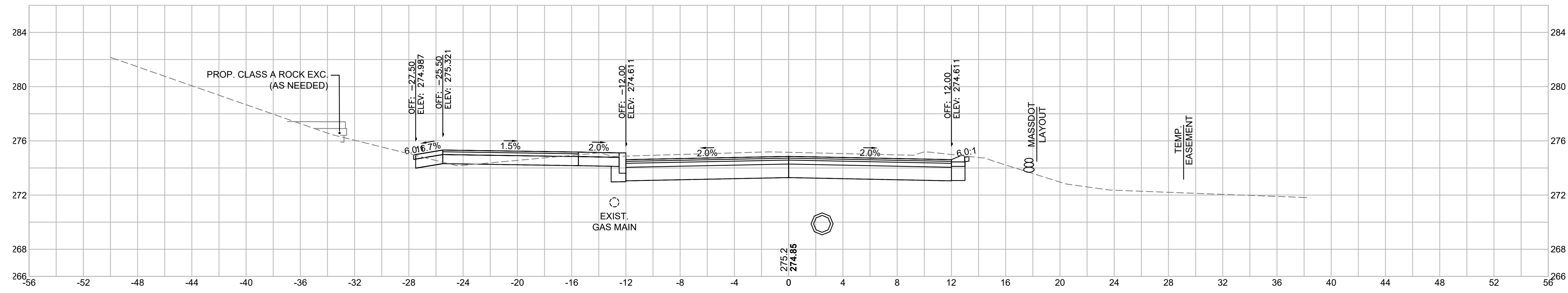
CROSS SECTIONS

35+50



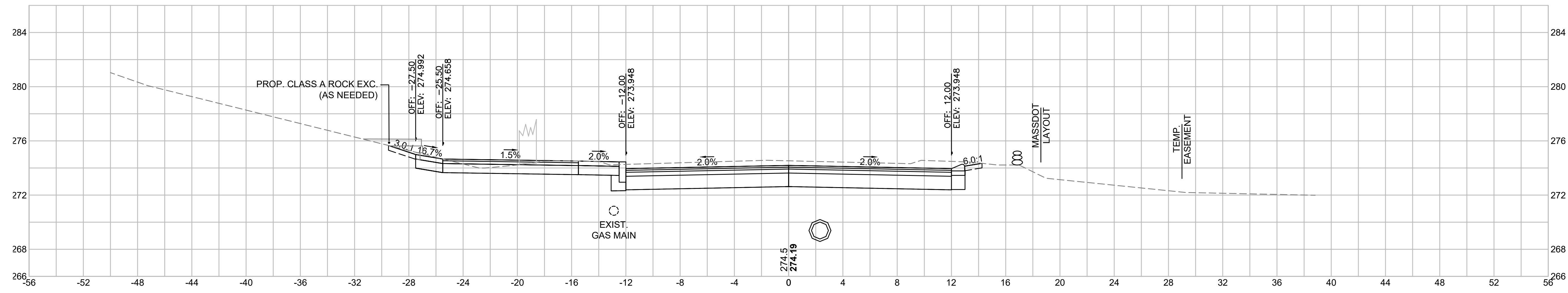
Total Volume at Station 35+50.00	
Cut Area	52.062
Fill Area	0.952
Cut Vol	49.8
Fill Vol	0.5
Cum Cut Vol	7101.8
Cum Fill Vol	337.9
Net Vol	6763.9

35+25

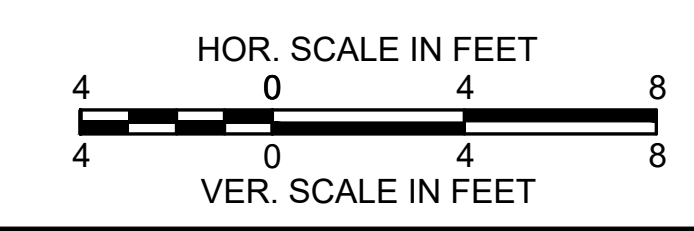


Total Volume at Station 35+25.00	
Cut Area	55.495
Fill Area	0.142
Cut Vol	55.2
Fill Vol	0.1
Cum Cut Vol	7052.0
Cum Fill Vol	337.4
Net Vol	6714.6

35+00



Total Volume at Station 35+00.00	
Cut Area	63.835
Fill Area	0.000
Cut Vol	61.5
Fill Vol	0.0
Cum Cut Vol	6996.8
Cum Fill Vol	337.3
Net Vol	6659.4

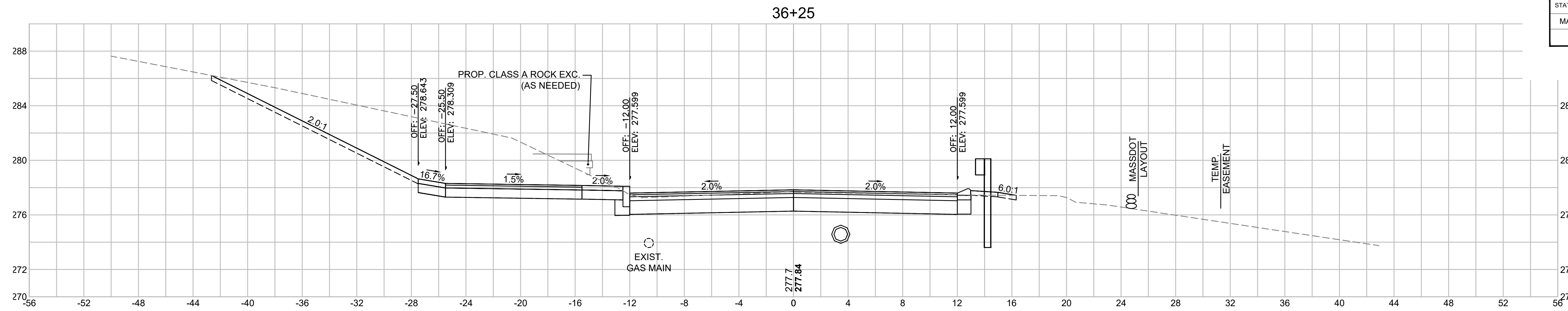


LITTLETON
RECONSTRUCTION OF FOSTER STREET

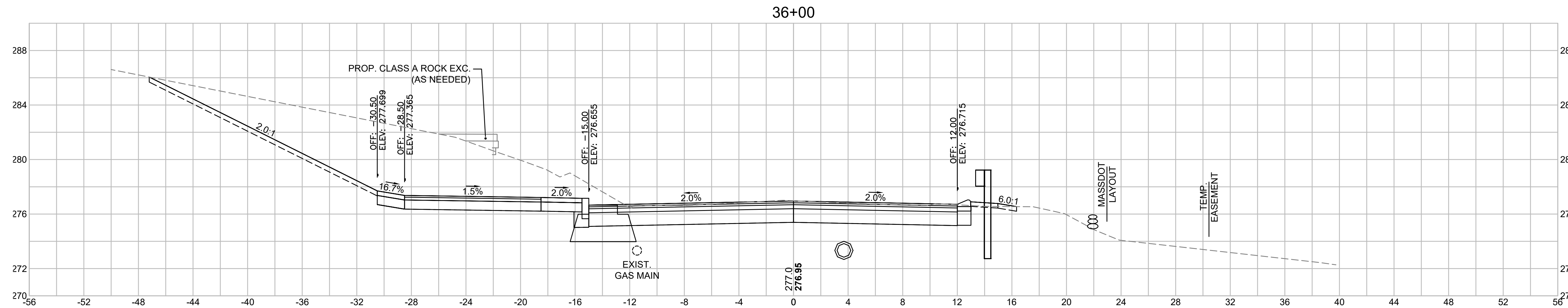
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	123	128
PROJECT FILE NO.		609054	

CROSS SECTIONS

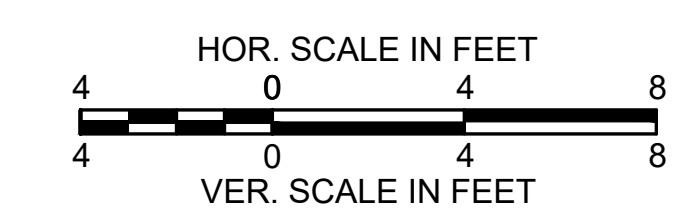
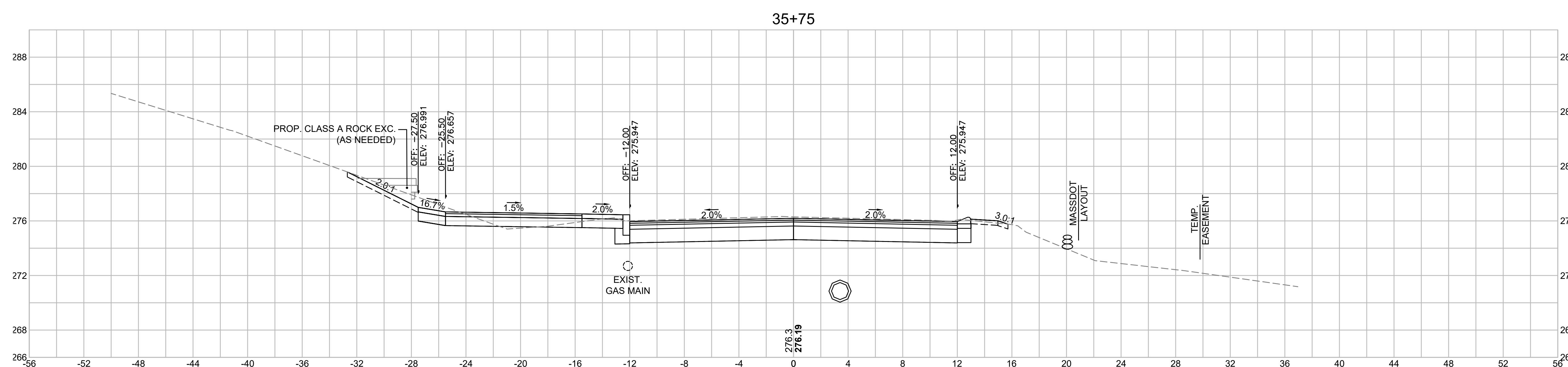
Total Volume at Station 36+25.00	
Cut Area	130.835
Fill Area	0.000
Cut Vol	130.1
Fill Vol	0.0
Cum Cut Vol	7377.0
Cum Fill Vol	338.6
Net Vol	7038.4



Total Volume at Station 36+00.00	
Cut Area	150.181
Fill Area	0.000
Cut Vol	95.3
Fill Vol	0.1
Cum Cut Vol	7246.9
Cum Fill Vol	338.6
Net Vol	6908.3



Total Volume at Station 35+75.00	
Cut Area	55.587
Fill Area	0.252
Cut Vol	49.8
Fill Vol	0.6
Cum Cut Vol	7151.6
Cum Fill Vol	338.5
Net Vol	6813.2

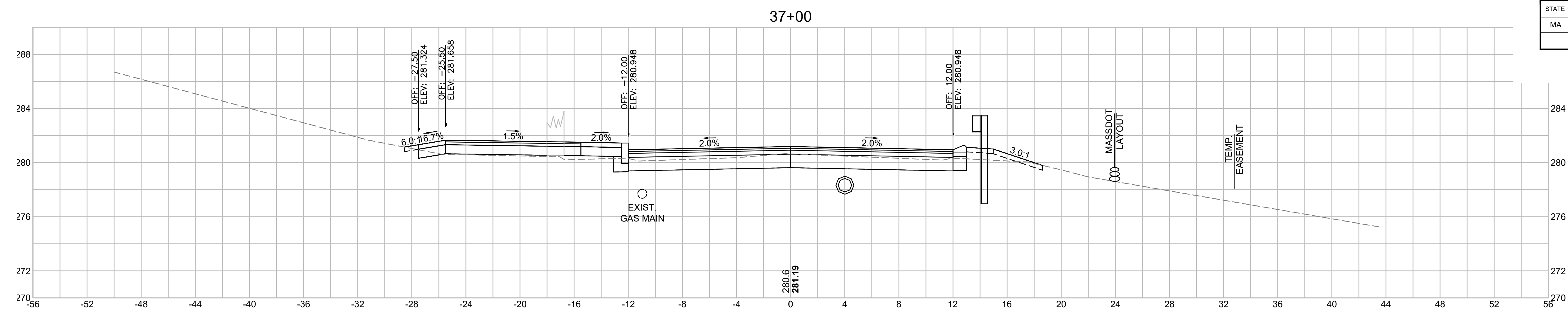


**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

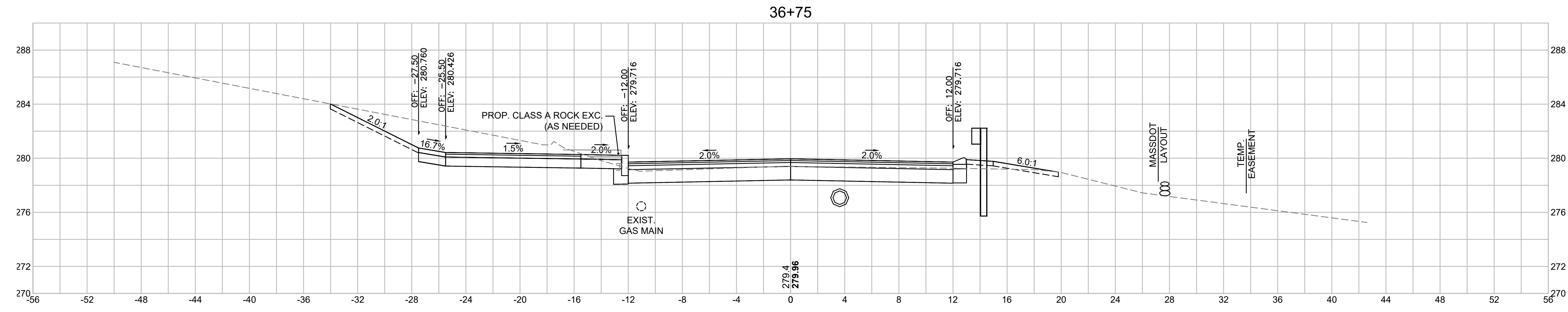
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	124	128
PROJECT FILE NO.		609054	

CROSS SECTIONS

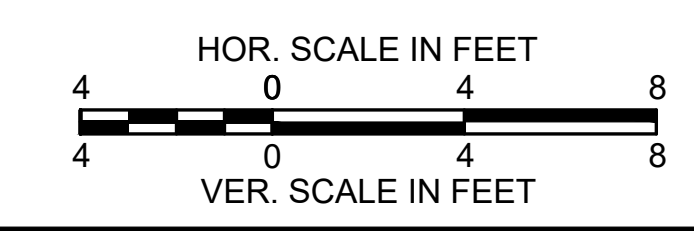
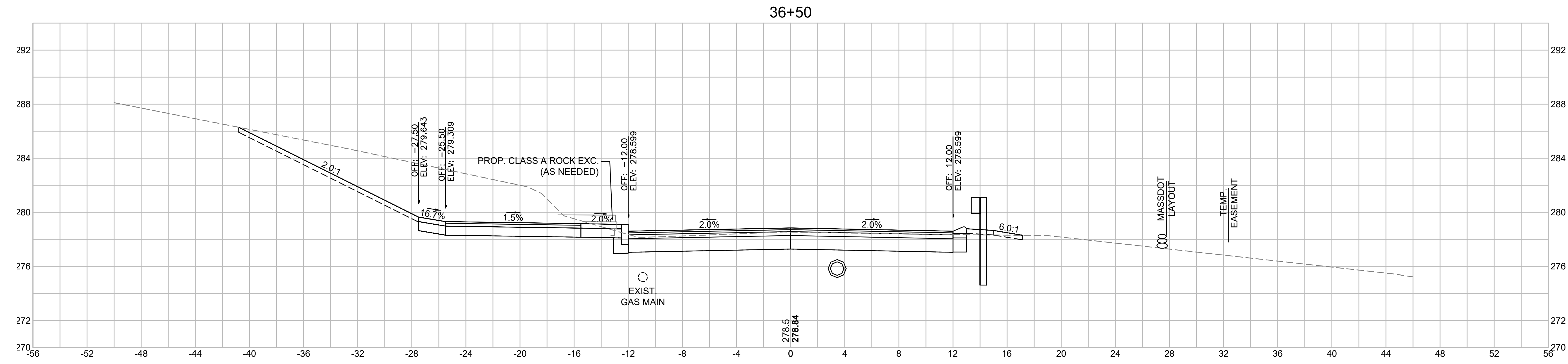
Total Volume at Station 37+00.00	
Cut Area	23.870
Fill Area	2.905
Cut Vol	41.0
Fill Vol	1.7
Cum Cut Vol	7611.7
Cum Fill Vol	340.7
Net Vol	7271.0



Total Volume at Station 36+75.00	
Cut Area	64.791
Fill Area	0.710
Cut Vol	81.5
Fill Vol	0.4
Cum Cut Vol	7570.6
Cum Fill Vol	339.0
Net Vol	7231.6



Total Volume at Station 36+50.00	
Cut Area	111.284
Fill Area	0.119
Cut Vol	112.1
Fill Vol	0.1
Cum Cut Vol	7489.1
Cum Fill Vol	338.6
Net Vol	7150.5

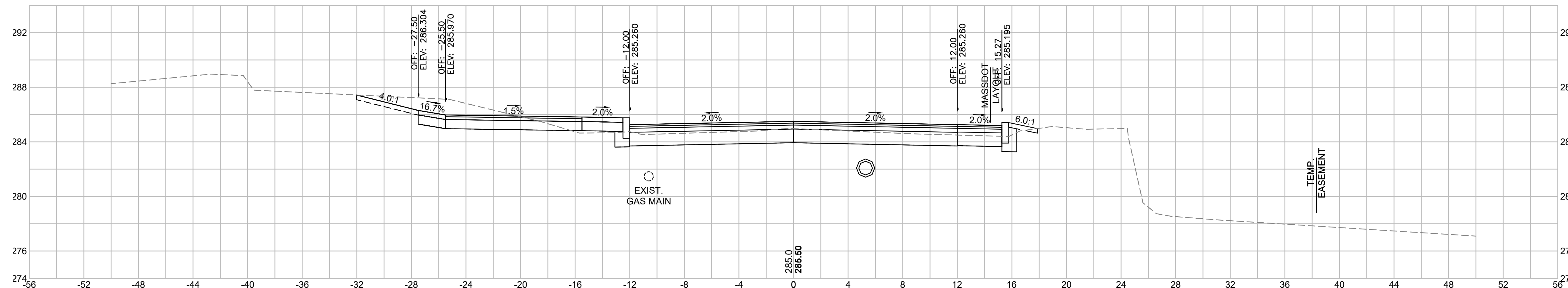


LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	125	128
PROJECT FILE NO.		609054	

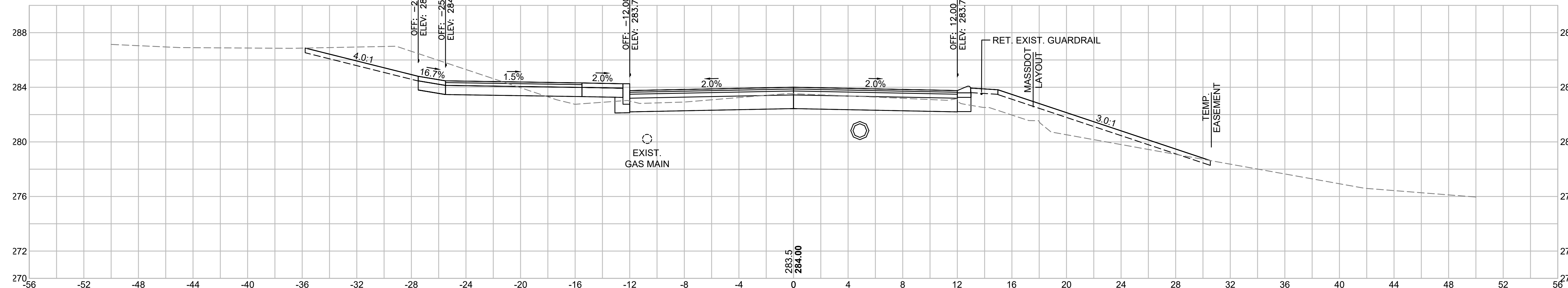
CROSS SECTIONS

37+75



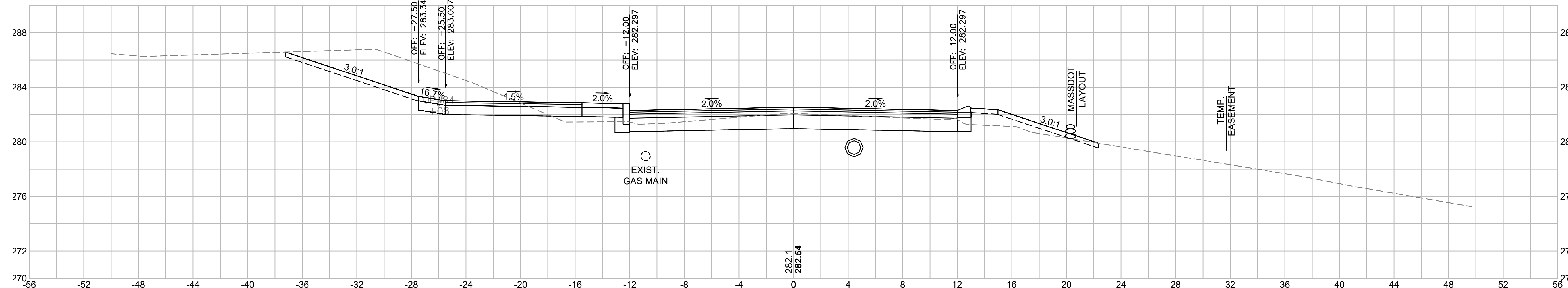
Total Volume at Station 37+75.00	
Cut Area	44.281
Fill Area	0.425
Cut Vol	37.5
Fill Vol	7.2
Cum Cut Vol	7733.1
Cum Fill Vol	359.4
Net Vol	7373.7

37+50

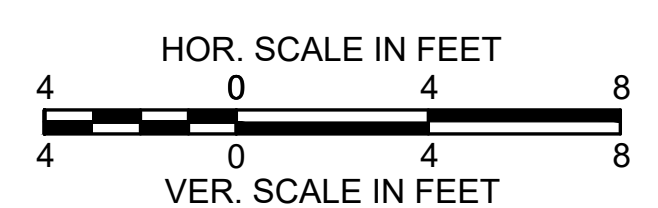


Total Volume at Station 37+50.00	
Cut Area	36.667
Fill Area	15.223
Cut Vol	44.9
Fill Vol	8.6
Cum Cut Vol	7695.6
Cum Fill Vol	352.1
Net Vol	7343.5

37+25



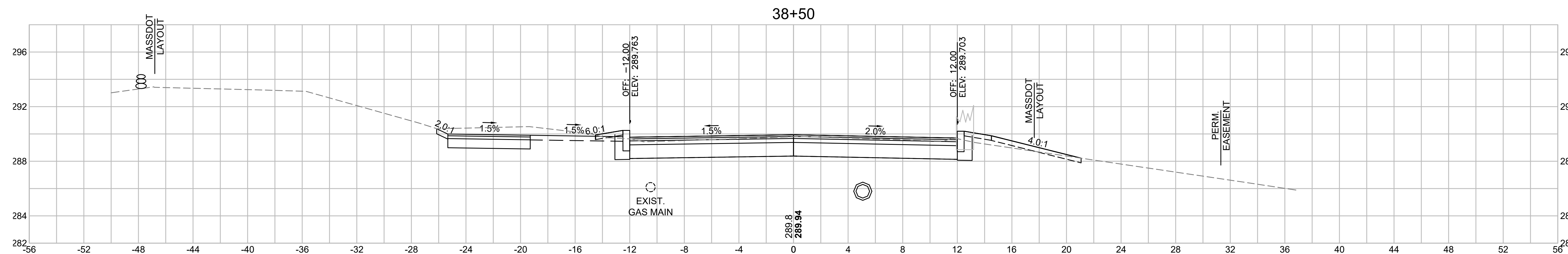
Total Volume at Station 37+25.00	
Cut Area	60.361
Fill Area	3.288
Cut Vol	39.0
Fill Vol	2.9
Cum Cut Vol	7650.7
Cum Fill Vol	343.6
Net Vol	7307.1



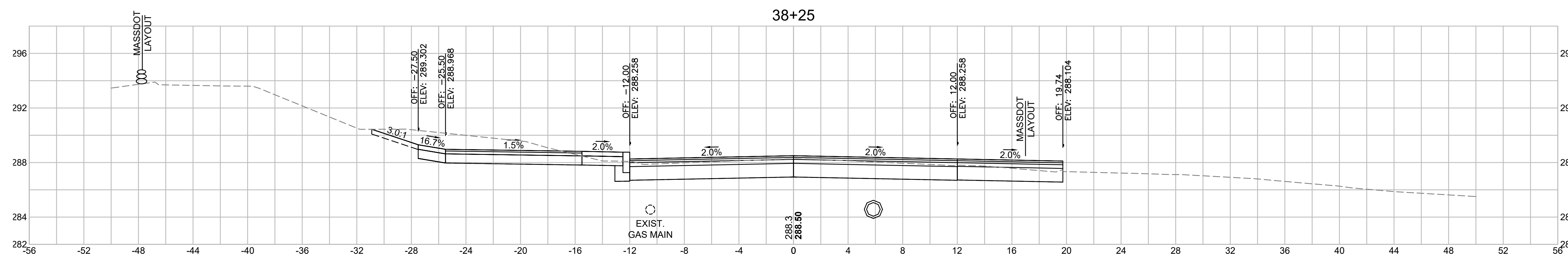
LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	126	128
PROJECT FILE NO.		609054	

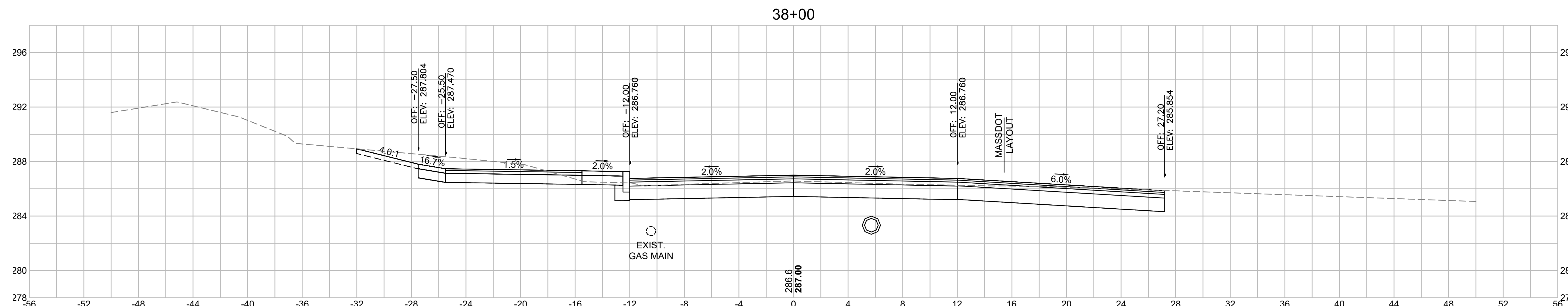
CROSS SECTIONS



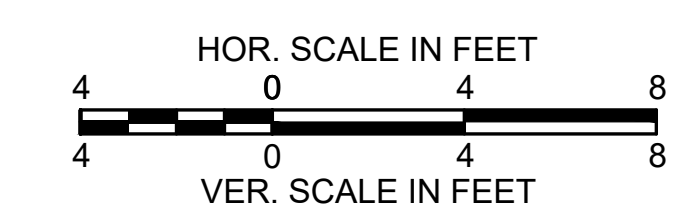
Total Volume at Station 38+50.00	
Cut Area	36.333
Fill Area	1.069
Cut Vol	46.2
Fill Vol	0.5
Cum Cut Vol	7892.0
Cum Fill Vol	360.0
Net Vol	7531.9



Total Volume at Station 38+25.00	
Cut Area	62.822
Fill Area	0.000
Cut Vol	60.8
Fill Vol	0.0
Cum Cut Vol	7845.8
Cum Fill Vol	359.6
Net Vol	7486.2



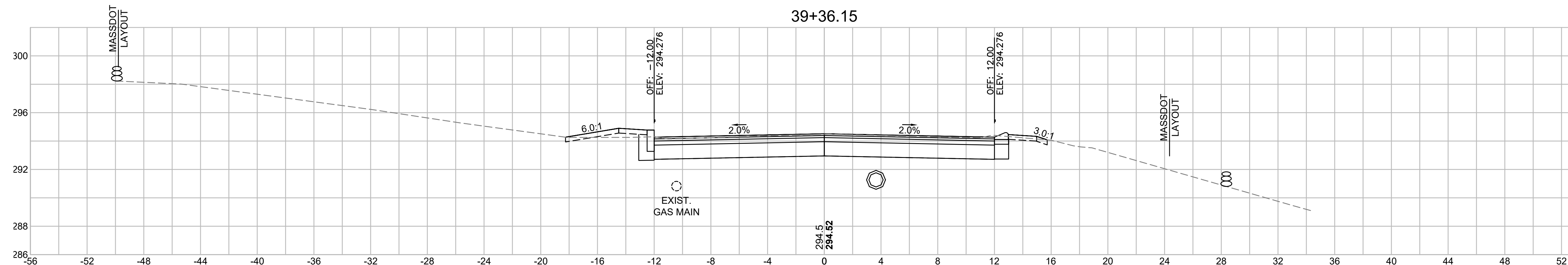
Total Volume at Station 38+00.00	
Cut Area	67.855
Fill Area	0.000
Cut Vol	51.9
Fill Vol	0.2
Cum Cut Vol	7785.0
Cum Fill Vol	359.6
Net Vol	7425.4



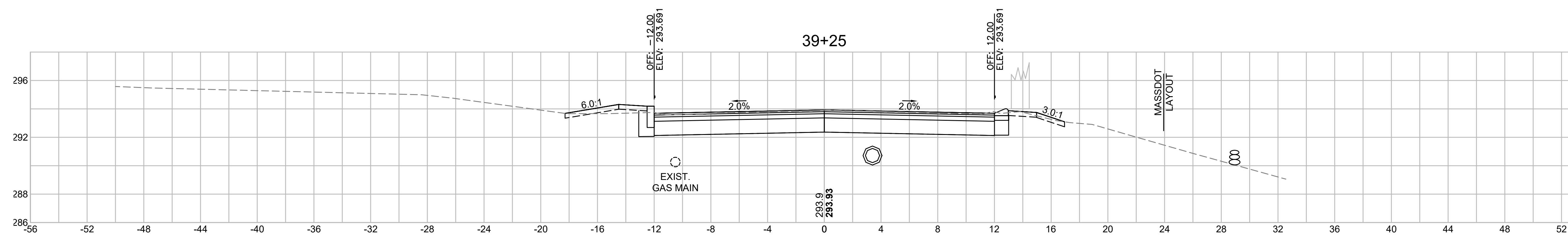
**LITTLETON
RECONSTRUCTION OF FOSTER STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	127	128
PROJECT FILE NO.		609054	

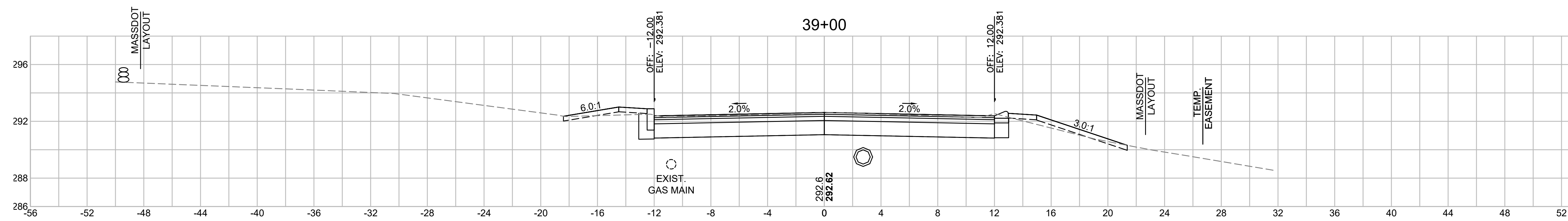
CROSS SECTIONS



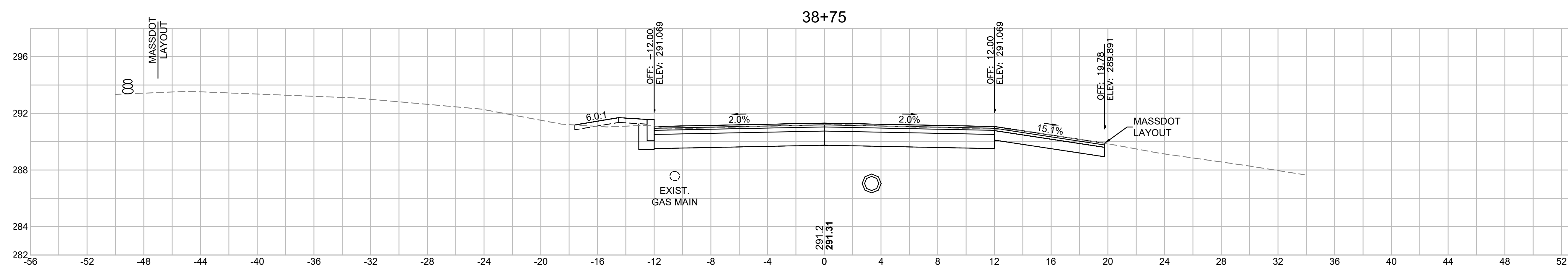
Total Volume at Station 39+36.15	
Cut Area	40.088
Fill Area	0.643
Cut Vol	16.7
Fill Vol	0.3
Cum Cut Vol	8021.6
Cum Fill Vol	362.3
Net Vol	7659.3



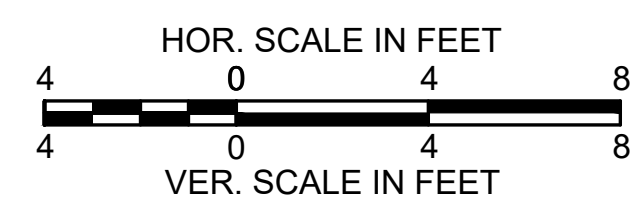
Total Volume at Station 39+25.00	
Cut Area	40.754
Fill Area	0.610
Cut Vol	37.4
Fill Vol	0.6
Cum Cut Vol	8004.9
Cum Fill Vol	362.0
Net Vol	7642.9



Total Volume at Station 39+00.00	
Cut Area	39.977
Fill Area	0.698
Cut Vol	38.6
Fill Vol	0.6
Cum Cut Vol	7967.5
Cum Fill Vol	361.4
Net Vol	7606.1



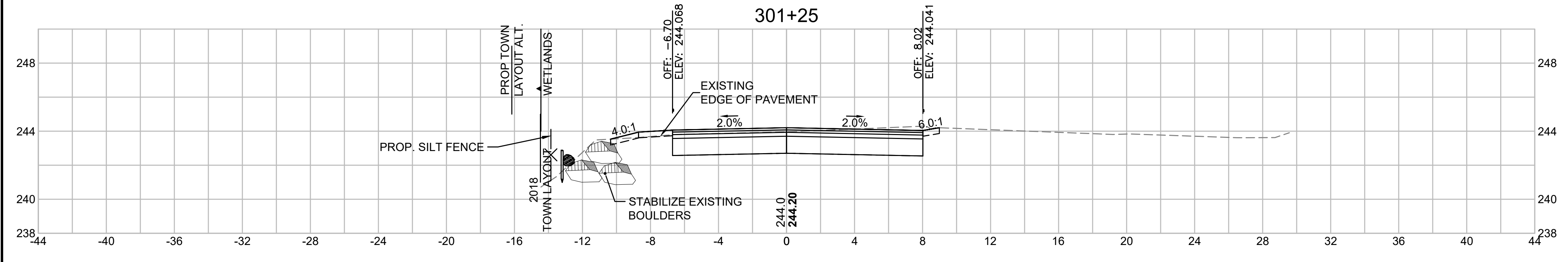
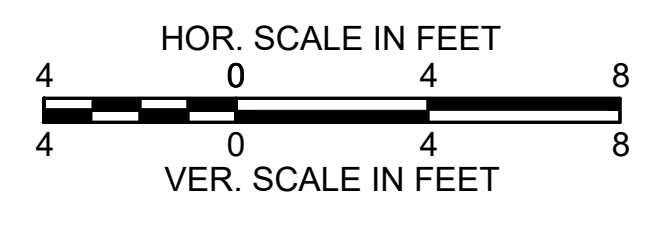
Total Volume at Station 38+75.00	
Cut Area	43.562
Fill Area	0.560
Cut Vol	36.9
Fill Vol	0.7
Cum Cut Vol	7928.9
Cum Fill Vol	360.8
Net Vol	7568.1



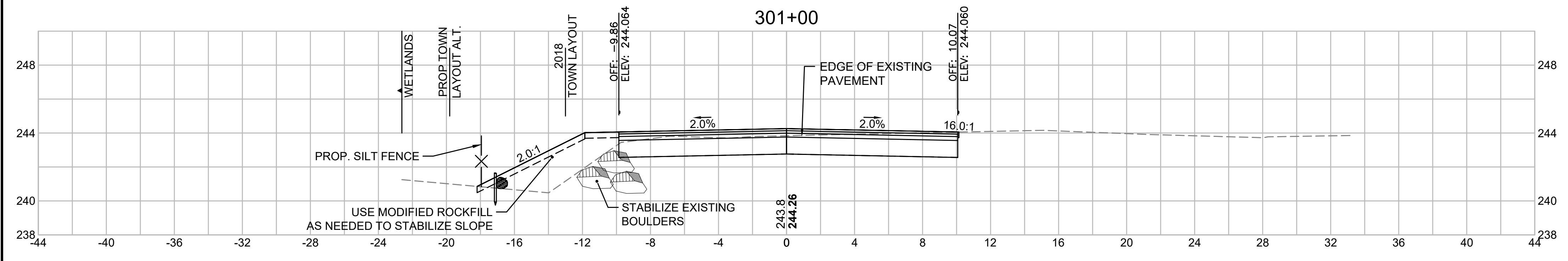
LITTLETON
RECONSTRUCTION OF FOSTER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/CMQ/TAP-0033(037)X	128	128
PROJECT FILE NO.		609054	

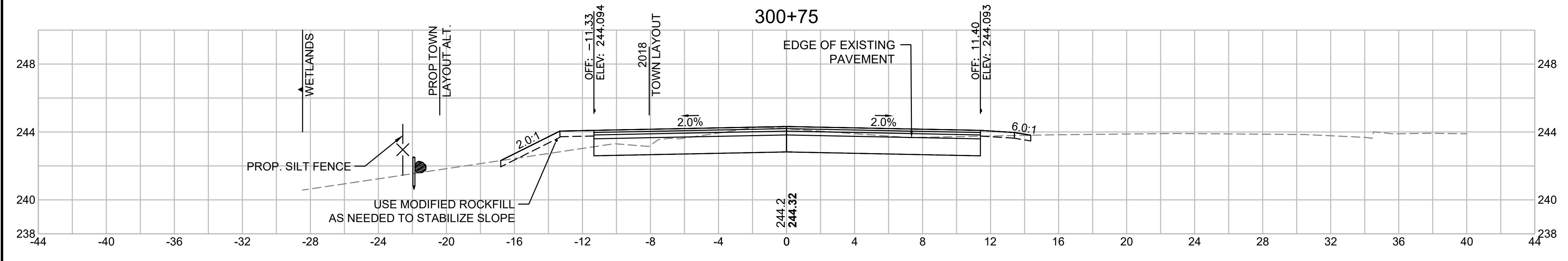
GRIMES LANE - CROSS SECTIONS



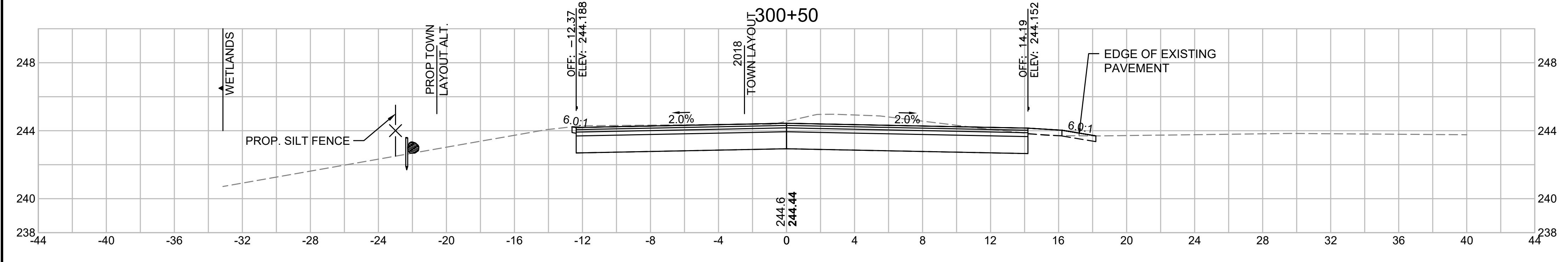
Total Volume at Station 301+25.00	
Cut Area	21.177
Fill Area	0.000
Cut Vol	20.7
Fill Vol	4.6
Cum Cut Vol	75.3
Cum Fill Vol	11.6
Net Vol	63.7



Total Volume at Station 301+00.00	
Cut Area	23.582
Fill Area	9.938
Cut Vol	22.5
Fill Vol	5.8
Cum Cut Vol	54.6
Cum Fill Vol	7.0
Net Vol	47.6



Total Volume at Station 300+75.00	
Cut Area	24.982
Fill Area	2.560
Cut Vol	32.1
Fill Vol	1.2
Cum Cut Vol	32.1
Cum Fill Vol	1.2
Net Vol	30.9



Total Volume at Station 300+50.00	
Cut Area	44.293
Fill Area	0.018
Cut Vol	0.0
Fill Vol	0.0
Cum Cut Vol	0.0
Cum Fill Vol	0.0
Net Vol	0.0