

THE COMMONWEALTH OF MASSACHUSETTS
HIGHWAY DEPARTMENT

RECONSTRUCTION OF
GOLDSMITH STREET
IN THE TOWN OF
LITTLETON
MIDDLESEX COUNTY

FEDERAL AID PROJECT NO. STP-001S(839)X

LITTLETON GOLDSMITH STREET					
STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-001S(839)X	2008	1	117	
PROJECT FILE NO. 603540					

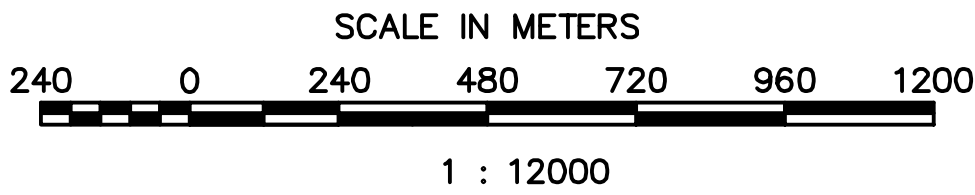
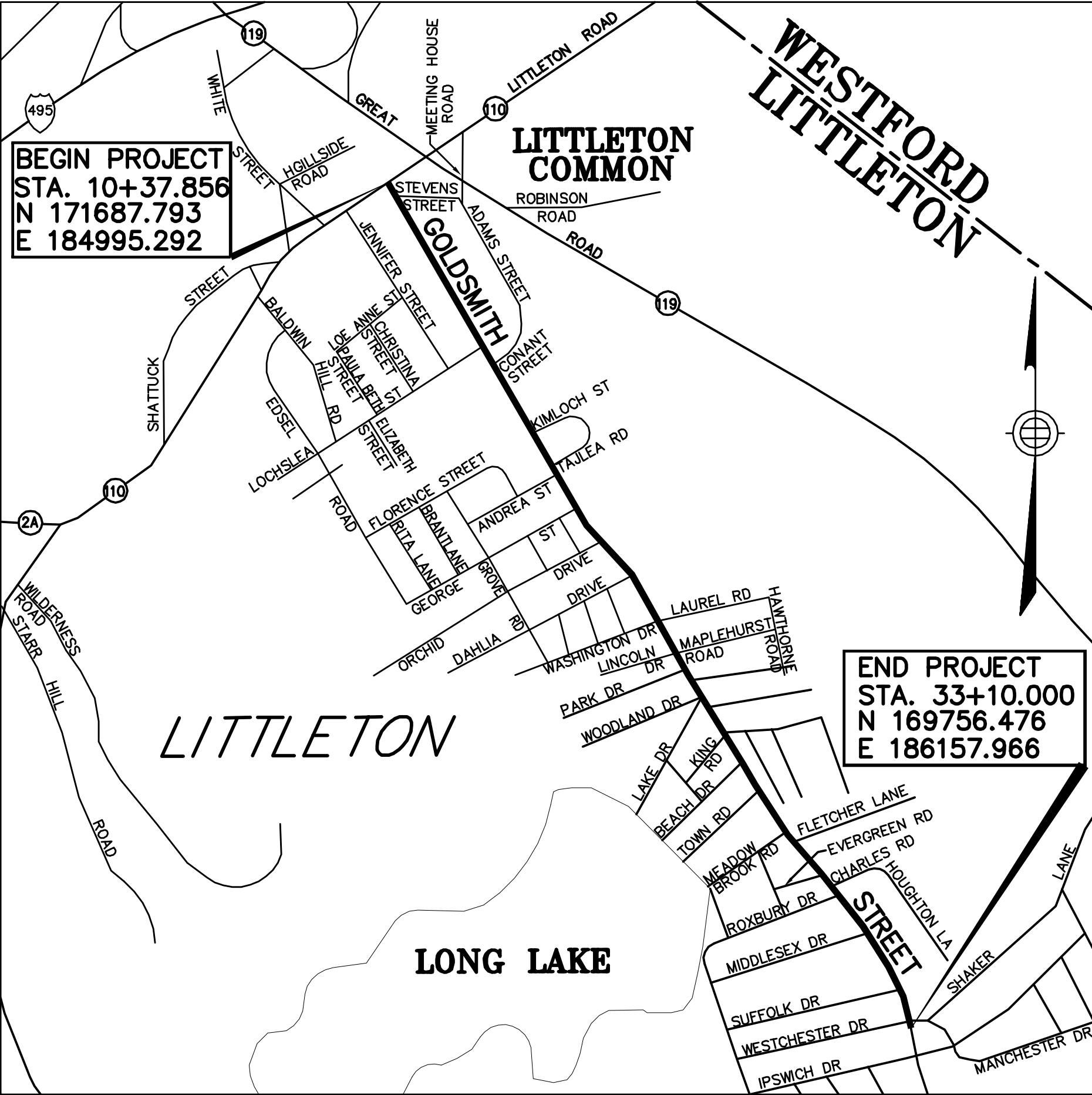
TITLE SHEET AND INDEX

THE MASSACHUSETTS HIGHWAY DEPARTMENT 1995 METRIC EDITION STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES AND THE METRIC SUPPLEMENTAL SPECIFICATIONS DATED JUNE 6, 2006; THE 1996 CONSTRUCTION AND TRAFFIC STANDARD DETAILS AND THE SUPPLEMENTAL DRAWINGS DATED APRIL 2003; THE 2003 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES WITH REVISIONS; THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS; THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING; THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z-60.1-2004), AS AMENDED, SHALL GOVERN.

INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
2	LEGEND & GENERAL NOTES
3	TYPICAL SECTIONS & PAVEMENT NOTES
4-17	CONSTRUCTION PLANS
18-31	PROFILES
32-45	ALIGNMENT & GRADING PLANS
46-49	SURVEY CONTROL PLANS
50-53	SIGNING & PAVEMENT MARKINGS
54-55	SIGN SUMMARY
56-57	TRAFFIC MANAGEMENT PLANS
58-59	CONSTRUCTION DETAILS
60-61	WHEELCHAIR RAMP DETAILS
62	DRIVEWAY RAMP DETAILS
63	LANDSCAPING DETAILS
64-117	CROSS SECTIONS

DESIGN DESIGNATION		
DESIGN YEAR	=	2022
DESIGN SPEED	=	70 Km/H
ADT (1998)	=	4800
ADT (2022)	=	6100
K	=	9.7%
D	=	51.3%
T (PEAK HOUR)	=	1%
DHV	=	593
DDHV	=	304
FUNCTIONAL CLASSIFICATION	=	RURAL MAJOR COLLECTOR

CONVENTIONAL SIGNS	
COUNTY, CITY, OR TOWN BOUNDARY	---
COUNTY, CITY, OR TOWN SIDE LINE	---
FENCE LINE	-x-x-x-x-x-
BASE LINE OR SURVEY LINE	---
RIGHT OF WAY LINE	---
CULVERT	---
ELEVATIONS	---
POLE	---

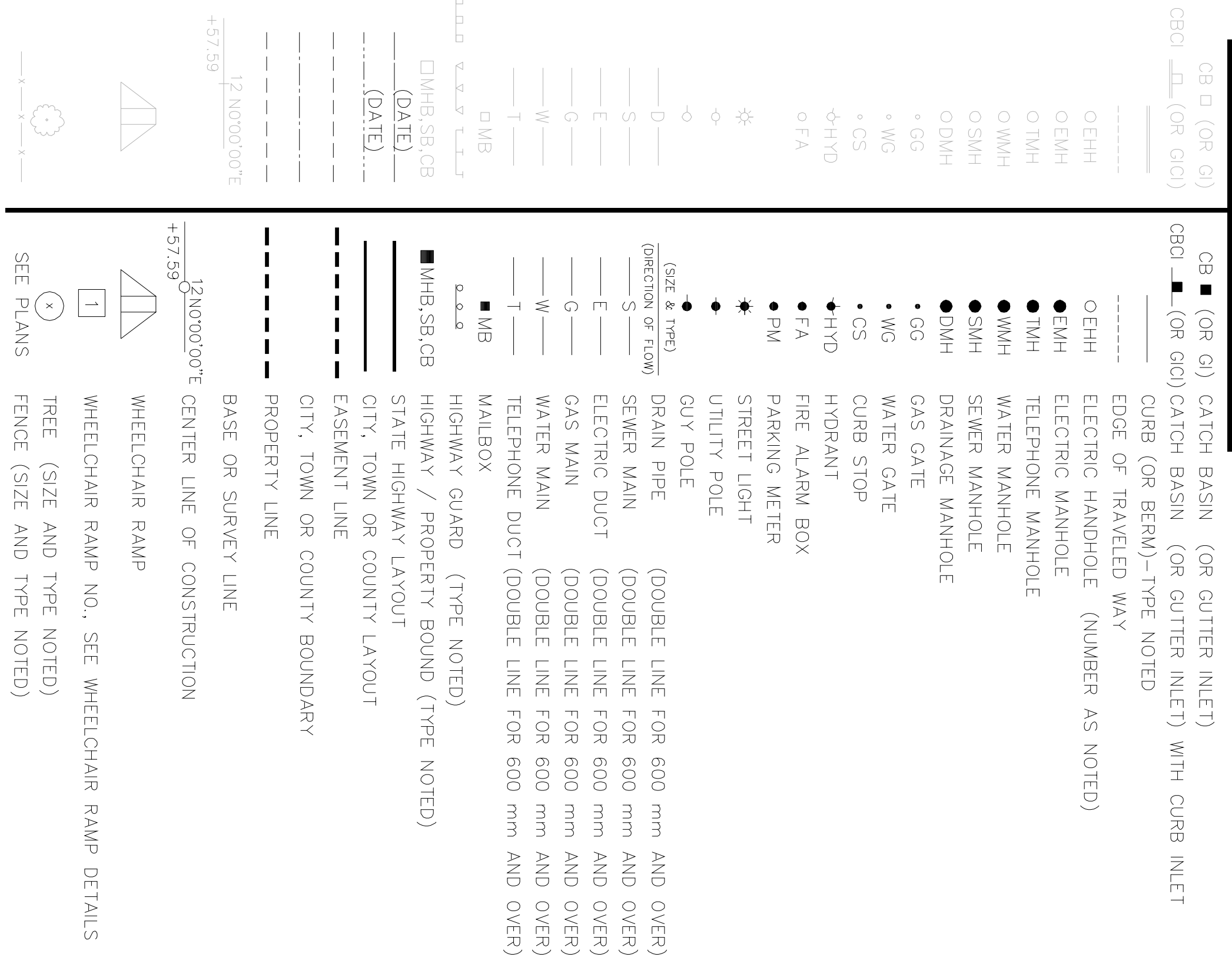


NOTE
LENGTH OF PROJECT = 2300m = 2.300km

PREPARED BY SEA SEA CONSULTANTS INC. Scientists/Engineers/Architects	MASS HIGHWAY	
	MASSACHUSETTS HIGHWAY DEPARTMENT	
	RECOMMENDED FOR APPROVAL	
	CHIEF ENGINEER	Date
DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION APPROVED	APPROVED	
	DIVISION ADMINISTRATOR	Date
		MHD COMMISSIONER Date

DESIGNED BY: KAC
DRAWN BY: JJC
CHECKED BY: EDC
QUERTIN ELKERTON & ASSOCIATES, INC.

GENERAL SYMBOLS



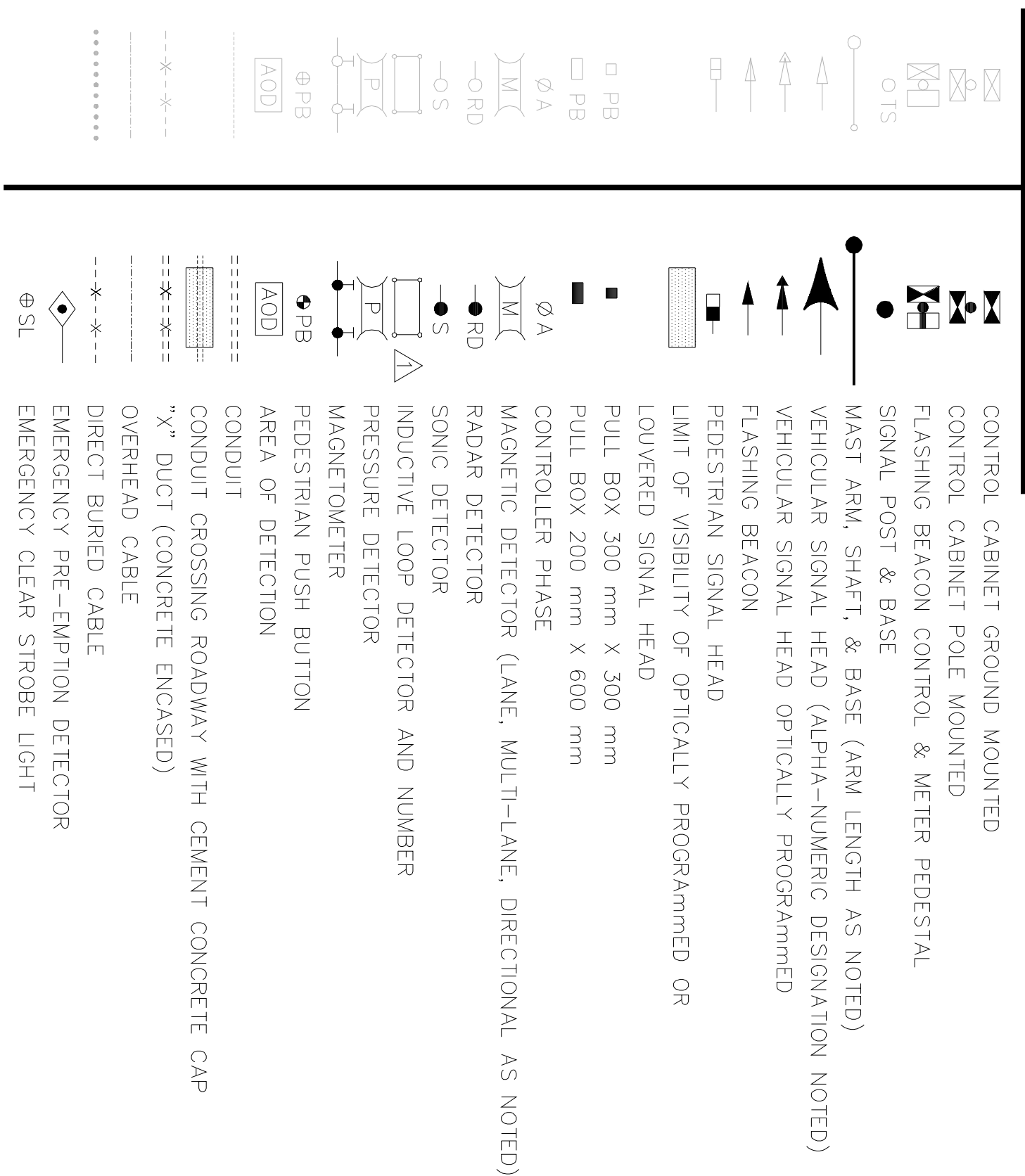
GENERAL

ABAN.	ABANDON
ADJ.	ADJUST
APPROX.	APPROXIMATE
BIT.	BITUMINOUS
B.O.	BASELINE
B.O.S.	BY OTHERS
CC	BOTTOM OF SLOPE
CEM.	CURVE CENTER
CONC.	CEMENT
CONSTR.	CENTERLINE
Δ	CONSTRUCTION
ELEV. OR EL.	CENTRAL ANGLE
EXIST.	ELEVATION
FN.	EXISTING
F&G	FOUNDATION
GRAN.	FRAME AND COVER
HMA	FRAME AND GRADE
L	GRANITE
L.O.G.	HOT MIX ASPHALT
LT.	LENGTH
MAX.	LIMIT OF GRADING
MIN.	LEFT
N.I.C.	MAXIMUM
N.T.S.	MINIMUM
PBS	NOT IN CONTRACT
PC	NOT TO SCALE
PVCC	PAINTED BOTH SIDES
PI	POINT OF CURVATURE
PL	POINT OF COMPOUND
PR	VERTICAL CURVATURE
PT	POINT OF INTERSECTION
RM	PROPERTY LINE

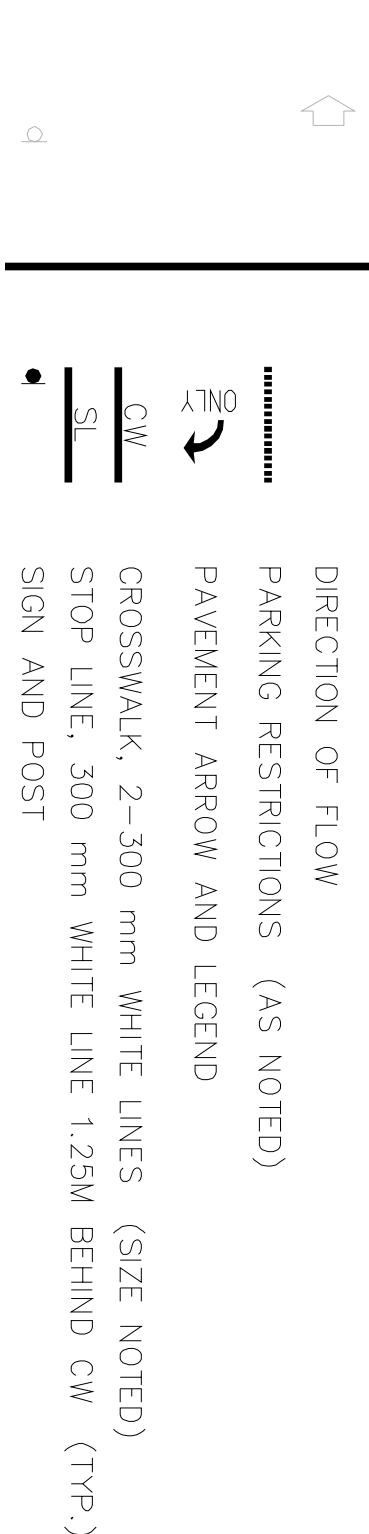
ABBREVIATIONS

ABAN.	ABANDON
ADJ.	ADJUST
APPROX.	APPROXIMATE
BIT.	BITUMINOUS
B.O.	BASELINE
B.O.S.	BY OTHERS
CC	BOTTOM OF SLOPE
CEM.	CURVE CENTER
CONC.	CEMENT
CONSTR.	CENTERLINE
Δ	CONSTRUCTION
ELEV. OR EL.	CENTRAL ANGLE
EXIST.	ELEVATION
FN.	EXISTING
F&G	FOUNDATION
GRAN.	FRAME AND COVER
HMA	FRAME AND GRADE
L	GRANITE
L.O.G.	HOT MIX ASPHALT
LT.	LENGTH
MAX.	LIMIT OF GRADING
MIN.	LEFT
N.I.C.	MAXIMUM
N.T.S.	MINIMUM
PBS	NOT IN CONTRACT
PC	NOT TO SCALE
PVCC	PAINTED BOTH SIDES
PI	POINT OF CURVATURE
PL	POINT OF COMPOUND
PR	VERTICAL CURVATURE
PT	POINT OF INTERSECTION
RM	PROPERTY LINE

TRAFFIC SIGNAL SYMBOLS



PAVEMENT MARKING AND SIGNING SYMBOLS



TRAFFIC

ADT	AVERAGE DAILY TRAFFIC
VD	VEHICLES PER DAY
K	PEAK HOUR VOLUME
D	AVERAGE DAILY TRAFFIC
T	DIRECTIONAL DISTRIBUTION
R	TRUCK TRAFFIC
Y	STEADY CIRCULAR RED
G	STEADY CIRCULAR AMBER
FR	STEADY CIRCULAR GREEN
FRA	FLASHING CIRCULAR RED
FRA	FLASHING CIRCULAR AMBER
FRA	FLASHING CIRCULAR GREEN
FRA	FLASHING RED ARROW
FRA	FLASHING AMBER ARROW
FRA	FLASHING WHITE ARROW
FRA	STEADY WALK - LUNAR WHITE

TRAFFIC (CONTINUED)

ADT	AVERAGE DAILY TRAFFIC
VD	VEHICLES PER DAY
K	PEAK HOUR VOLUME
D	AVERAGE DAILY TRAFFIC
T	DIRECTIONAL DISTRIBUTION
R	TRUCK TRAFFIC
Y	STEADY CIRCULAR RED
G	STEADY CIRCULAR AMBER
FR	STEADY CIRCULAR GREEN
FRA	FLASHING CIRCULAR RED
FRA	FLASHING CIRCULAR AMBER
FRA	FLASHING CIRCULAR GREEN
FRA	FLASHING RED ARROW
FRA	FLASHING AMBER ARROW
FRA	FLASHING WHITE ARROW
FRA	STEADY WALK - LUNAR WHITE

ENVIRONMENTAL SYMBOLS

ENVIRONMENTAL SYMBOL	DEFINITION
— — — — —	BANK
— — — — —	BORDERING VEGETATED WETLAND (BWW)
— — — — —	SILT FENCE AND HABYABLE BARRIER (SFH)
— — — — —	BORDERING LAND SUBJECT TO FLOODING (BLSF)
— — — — —	BWW BUFFER ZONE
— — — — —	RIPIARIAN ZONE (INNER & OUTER)

STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-0015(639)X	2008	2	117
PROJECT FILE NO.	603540			

LEGEND & GENERAL NOTES

GENERAL NOTES

- EXISTING SURVEY INFORMATION IS BASED UPON INFORMATION PROVIDED BY HOLDEN TRANSPORTATION ENGINEERING, INC., CONCORD, NH, JUNE 2001.
- ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
- HORIZONTAL COORDINATES ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD 83).
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ANY AND ALL EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING STATE, COUNTY, CITY AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATIONS ARE NOT GUARANTEED.
- THE TERM "PROPOSED" (PROP.) MEANS WORK TO BE CONSTRUCTED HEREIN USING NEW MATERIALS OR WHERE APPLICABLE, REUSING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R). ALL OTHER MATERIALS SHALL BE "REMOVED AND STACKED" (R&S) OR "REMOVED AND DISPOSED" (R&D) OF OFF SITE.
- THE CONTRACTOR SHALL PROVIDE FOR THE SAFE AND ORDERLY PASSAGE OF VEHICULAR AND PEDESTRIAN TRAFFIC IN ALL AREAS UNDER CONSTRUCTION AT ALL TIMES.
- ALL PROPOSED DRAINAGE PIPES, NOT USED TO REPLACE EXISTING PIPES, SHALL BE INSTALLED WITH A MINIMUM SLOPE OF 0.4%, UNLESS OTHERWISE NOTED.
- SHOULD AN EXISTING UTILITY BE FOUND TO BE IN CONFLICT WITH THE PROPOSED WORK, THE LOCATION, SIZE AND TYPE SHALL BE ACCURATELY DETERMINED WITHOUT DELAY, BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
- THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL EXISTING DRAINAGE STRUCTURES TO REMAIN IN USE AS NECESSARY FOR THE CHANGES IN ALIGNMENT, AND RESET ALL WATER, DRAINAGE AND SEWER FRAMES, GRATES AND BOXES TO THE PROPOSED FINISH GRADE. NEW MASONRY SHALL BE CLAY BRICK CONFORMING TO MHD STANDARD SPECIFICATION, SECTION M4.05.2.
- THE CONTRACTOR SHALL COORDINATE ALL ARRANGEMENTS FOR THE ALTERATION AND/OR ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER UTILITY THROUGH THE MASSACHUSETTS HIGHWAY DEPARTMENT UTILITY SECTION.
- ALL PROPOSED PAVEMENT MARKINGS SHALL MATCH EXISTING MARKINGS AT THE LIMITS OF WORK.
- SHOP DRAWINGS OF ALL CASTINGS, PRECAST CONCRETE STRUCTURES, PIPE AND MANUFACTURED COMPONENTS SHALL BE SUBMITTED FOR APPROVAL BEFORE ORDERING.
- TREES AND SHRUBS WITHIN THE LIMITS OF WORK NOT SCHEDULED FOR REMOVAL AS INDICATED ON THE PLANS SHALL ONLY BE REMOVED UPON APPROVAL OF THE ENGINEER.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED, BY THE CONTRACTOR, TO THEIR ORIGINAL CONDITION, AT THE CONTRACTOR'S EXPENSE.
- A SERIES OF PAVEMENT CORINGS AND SHALLOW BORINGS WERE TAKEN BY NEW ENGLAND BORING CONTRACTORS, INC. IN SEPTEMBER 2002. SOILS TESTING WAS PERFORMED BY GOTTSTEIN EXPRESS, INC. IN NOVEMBER 2002. BORING LOCATIONS ARE DENOTED ON THE CONSTRUCTION PLANS. BORING LOGS AND SOIL SIEVE ANALYSES ARE INCLUDED WITHIN THE CONTRACT SPECIFICATIONS.
- IT IS THE INTENT OF THE DESIGN TO PROVIDE A MINIMUM CONSTRUCTED SIDEWALK WIDTH FOR A PAIR OF TRAVEL PAST ALL OBSTRUCTIONS OF 1,000 METERS. THE CONTRACTOR SHALL VERIFY THAT ALL POTENTIAL OBSTRUCTIONS, INCLUDING BUT NOT LIMITED TO SIGNS, MAILBOXES, UTILITY POLES, HYDRANTS, AND TRAFFIC SIGNAL EQUIPMENT ARE LOCATED AS TO PROVIDE THIS MINIMUM CLEAR PATH OF TRAVEL CLEARANCE.
- DETECTABLE WARNING PANELS SHALL BE INSTALLED ON ALL WHEELCHAIR RAMPS AND SHALL COMPLY WITH CONSTRUCTION STANDARD M/E 107.6.5R. PAYMENT FOR DETECTABLE WARNING PANELS SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION OF THE WHEELCHAIR RAMPS IN WHICH THEY ARE BEING INSTALLED.
- EXISTING WATER AND DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS ARE TO BE ADJUSTED, ABANDONED, REMODELED, OR REMOVED AS INDICATED IN THE DETAIL SHEETS AND IN THE OFFICE CALCULATION BOOK OR AS DIRECTED BY THE ENGINEER.
- MAILBOXES TO BE RELOCATED AS REQUIRED BY THE ENGINEER.
- PROPOSED UTILITY POLE LOCATIONS SHOWN ARE ONLY SUGGESTED LOCATIONS. THE UTILITIES SHALL DETERMINE EXACT LOCATION.
- WHEELCHAIR RAMP AND DRIVEWAY TRANSITION CURBS SHALL BE VERTICAL GRANITE CURB. ALL OTHER PROPOSED CURBING SHALL BE HOT MIX ASPHALT CURB-TYPE 3. CONTRACTOR SHALL SHAPE HOT MIX ASPHALT TO MATCH WITH GRANITE CURB.

STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-001S(639)X	2008	3	117	
PROJECT FILE NO.					603540

TYPICAL SECTIONS & PAVEMENT NOTES

PAVEMENT NOTES

PROPOSED FULL DEPTH CONSTRUCTION
SURFACE: 45mm HOT MIX ASPHALT PAVEMENT MODIFIED TOP COURSE

BINDER: 120mm HOT MIX ASPHALT PAVEMENT
BINDER COURSE MATERIAL (45mm BINDER COURSE MATERIAL OVER 75mm BINDER COURSE MATERIAL)

SUBBASE: 200mm GRAVEL BORROW

PROPOSED FULL DEPTH PAVEMENT
SURFACE: 45mm HOT MIX ASPHALT PAVEMENT MODIFIED TOP COURSE

BINDER: 120mm HOT MIX ASPHALT PAVEMENT
BINDER COURSE MATERIAL (45mm BINDER COURSE MATERIAL OVER 75mm BINDER COURSE MATERIAL)

PROPOSED COLD PLANE AND OVERLAY
COLD PLANE: 45mm EXIST PAVEMENT
OVERLAY SURFACE: 45mm HOT MIX ASPHALT PAVEMENT MODIFIED TOP COURSE
LEVELING COURSE: VARIABLE DEPTH (25mm AVG) HOT MIX ASPHALT PAVEMENT BITUMEN FOR TACK COAT (RS-1) AT 0.2 LITERS/SQ OVER EXISTING PAVEMENT OR COLD PLANE SURFACE

PROPOSED HOT MIX ASPHALT SIDEWALK
SURFACE: 60mm HOT MIX ASPHALT (30mm TOP COURSE MATERIAL OVER 30mm BINDER COURSE MATERIAL)

FOUNDATION: 200mm GRAVEL BORROW – TYPE C

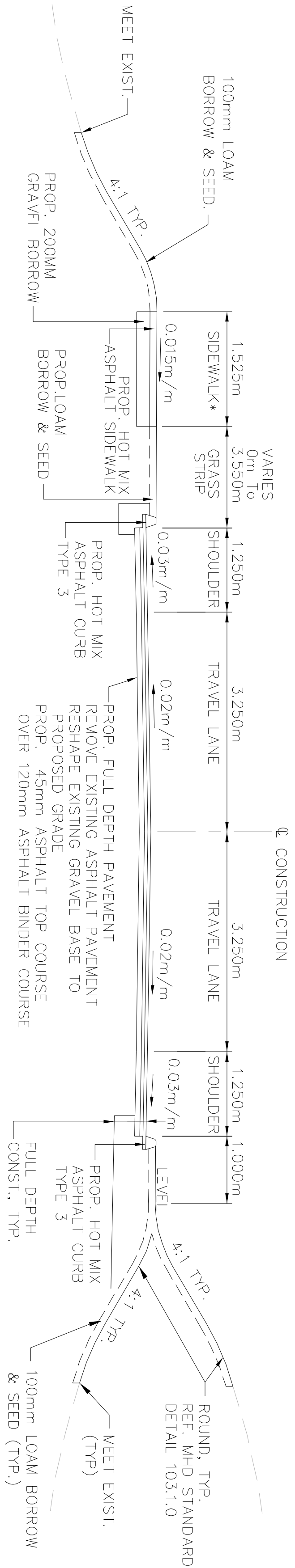
PROPOSED HOT MIX ASPHALT DRIVEWAY & SIDEWALK AT DRIVEWAY
SURFACE: 90mm HOT MIX ASPHALT PAVEMENT (40mm) (TOP COURSE MATERIAL OVER 50mm BINDER COURSE MATERIAL)

SUBBASE: 200mm GRAVEL BORROW – TYPE C

PROPOSED GRAVEL DRIVEWAY

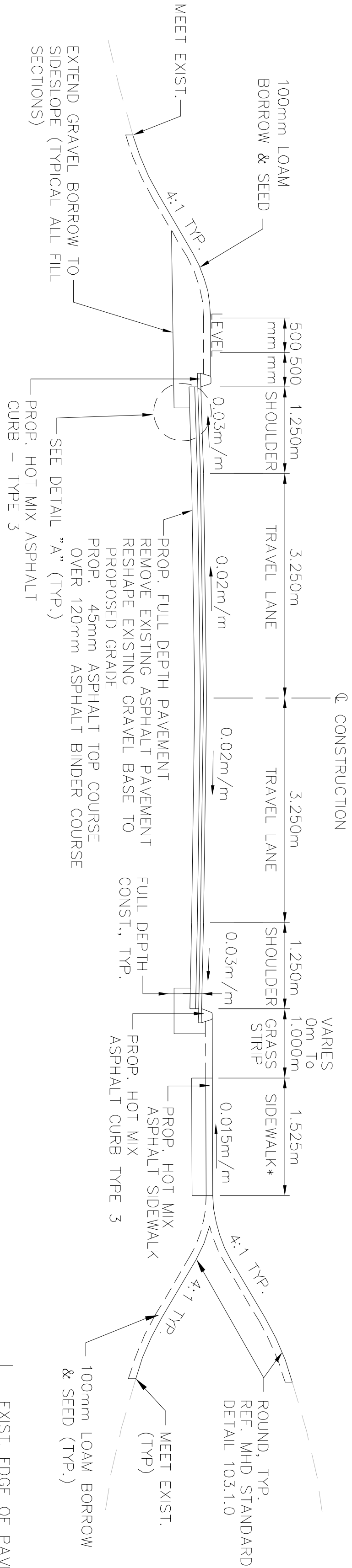
SURFACE: 100mm STONE DUST
SUBBASE: 200mm GRAVEL BORROW – TYPE C

PROPOSED CEMENT CONCRETE WHEELCHAIR RAMP
SURFACE: 100mm CEMENT CONCRETE
SUBBASE: 200mm GRAVEL BORROW – TYPE C



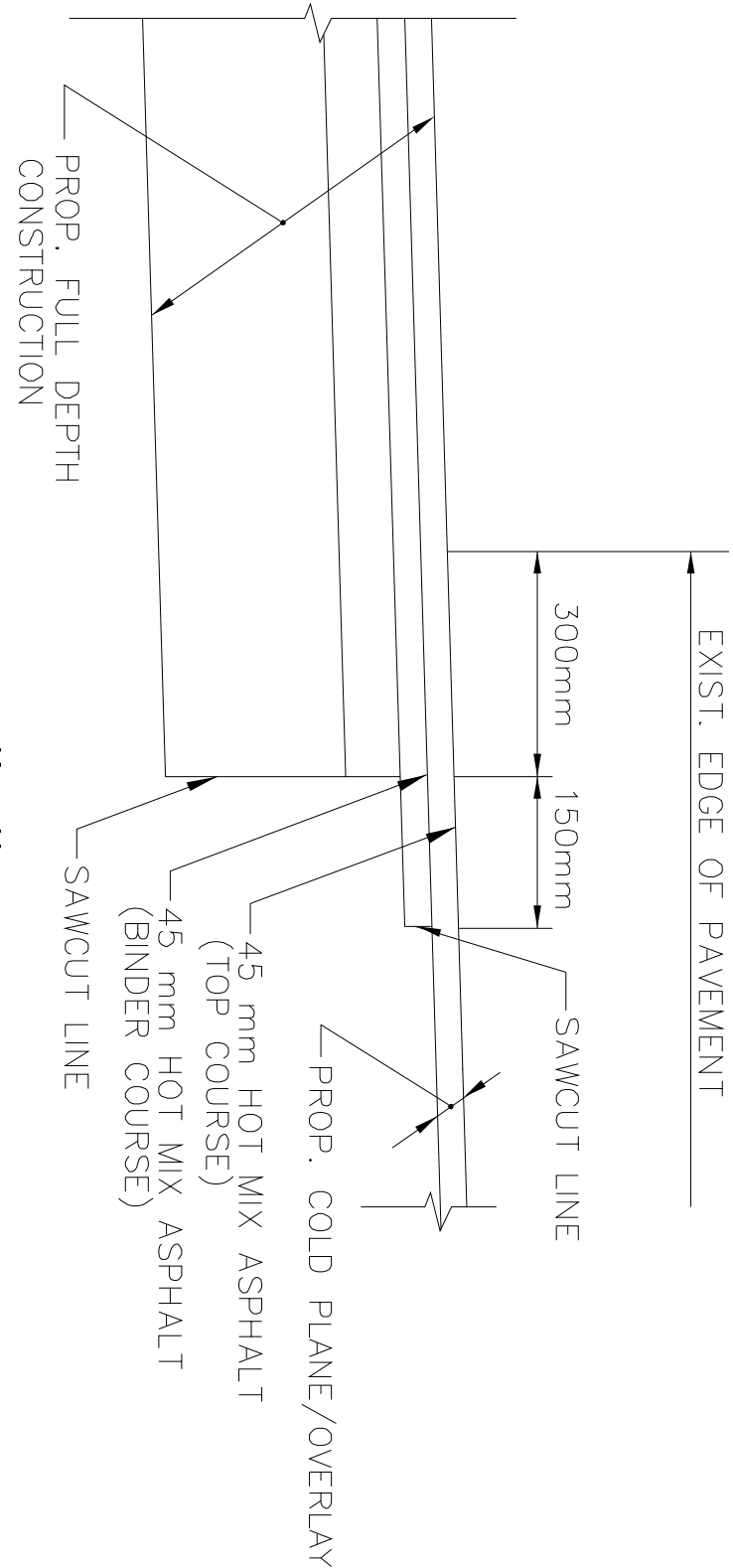
GOLDSMITH STREET

BEGIN PROJECT – 22+40±
N.T.S.



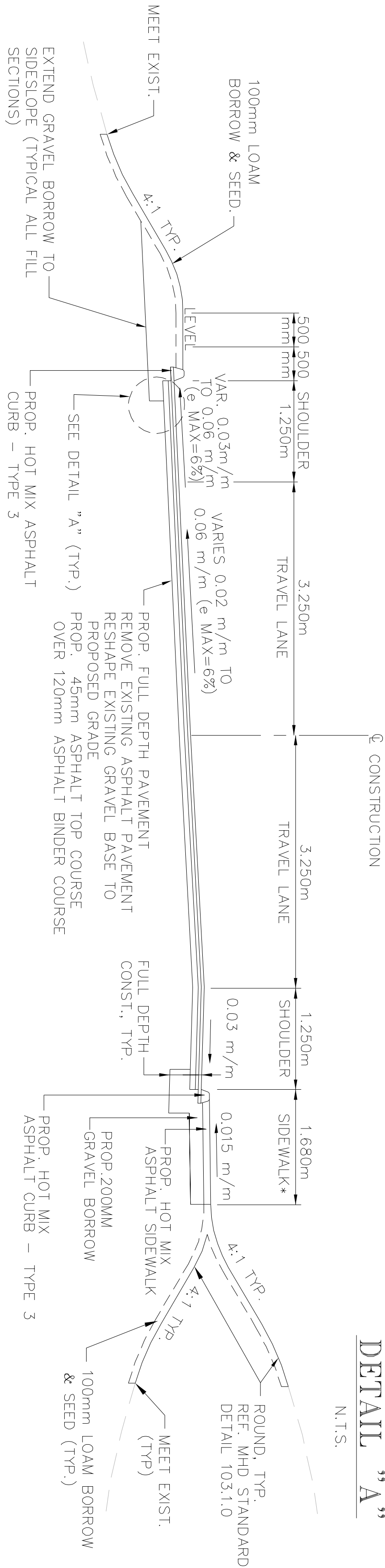
GOLDSMITH STREET

STA 22+40± TO END PROJECT
N.T.S.



DETAIL "A"

N.T.S.



SUPERELEVATED SECTION

N.T.S.

STA 17+93.202 TO 18+28.219
STA 19+54.219 TO 21+54.615
STA 25+75.432 TO 26+22.380
STA 28+02.020 TO 29+87.635
STA 31+39.639 TO 32+34.132

* TOLERANCE FOR CONSTRUCTION ±0.5%
NOTE: SLOPES ARE HORIZ : VERT

STEEL BEAM HIGHWAY GUARD DETAIL

TRAFFIC SIGNAL CONDUIT

WATER SUPPLY ALTERATIONS

DRAINAGE DETAILS

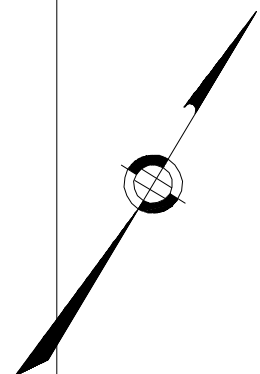
LITTLETON
GOLDSMITH STREET

NONE

NONE

SEE BELOW

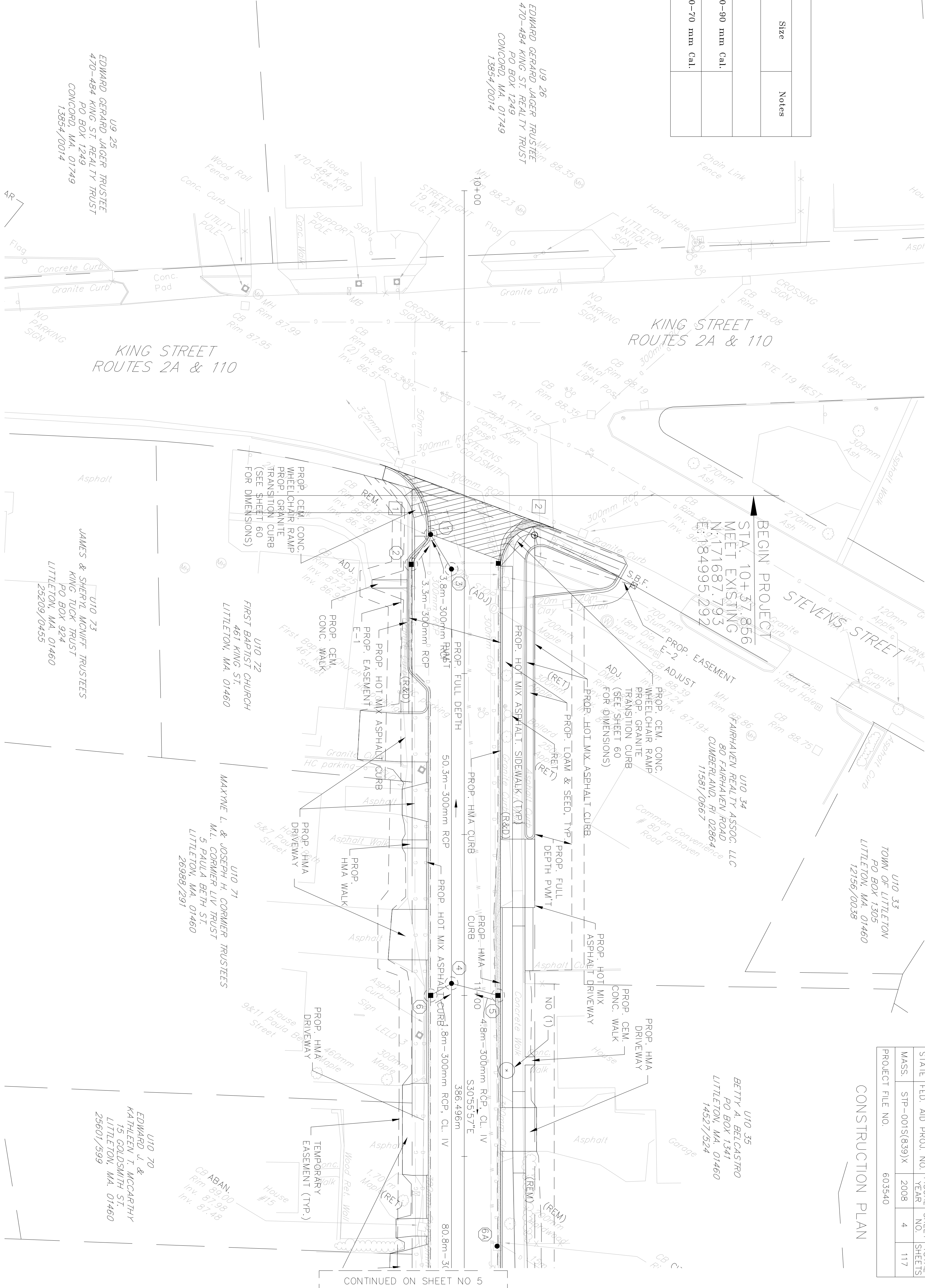
SEE BELOW



PLANT LIST (FOR THIS PAGE ONLY)			
KEY	BOTANICAL NAME COMMON NAME	QTY.	Size
TREES			
RM	Acer rubrum Red Maple 'Armstrong' (Item 776.527)	2	80-90 mm Cal.
NO	Quercus palustris Oak pin Crownright (Item 776.141)	2	60-70 mm Cal.

STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-0015(639)X	2008	4	117
PROJECT FILE NO.		603540		

CONSTRUCTION PLAN



- NOTE:
1. ALL TREES TO BE RETAINED UNLESS OTHERWISE NOTED.
 2. ALL EXISTING TREES TO REMAIN WITHIN 2 METERS OF THE PROPOSED LIMIT OF GRADING SHALL BE PROTECTED. SEE TREE PROTECTION DETAIL SHEET 63.
 3. = COLD PLANE AND OVERLAY AREA
 4. = FULL DEPTH CONSTRUCTION AREA

FOR PROFILE SEE SHEET NO. 18

CONTINUED ON SHEET NO 5

STEEL BEAM HIGHWAY GUARD DETAIL

TRAFFIC SIGNAL CONDUIT

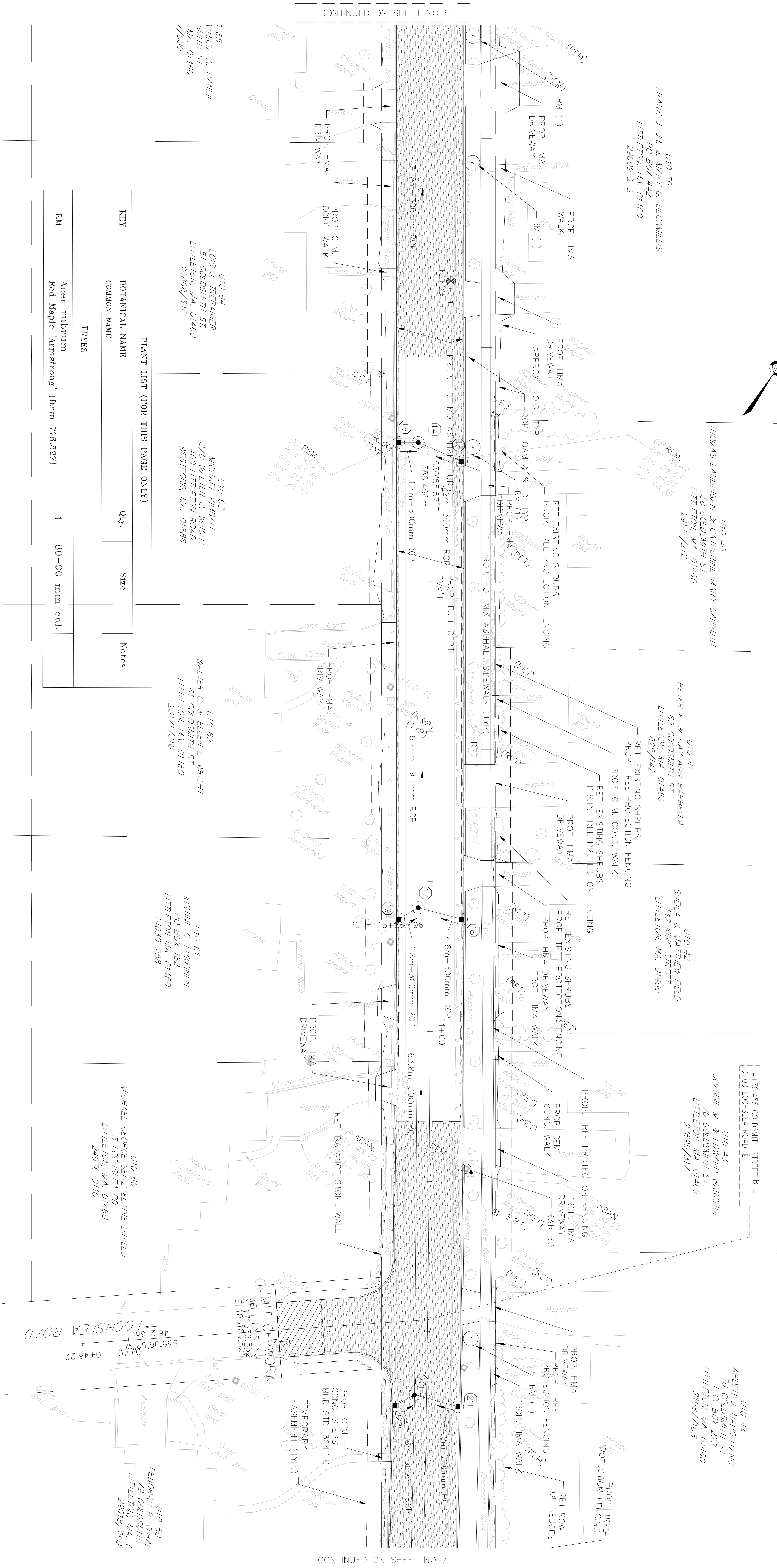
WATER SUPPLY ALTERATIONS

DRAINAGE DETAILS

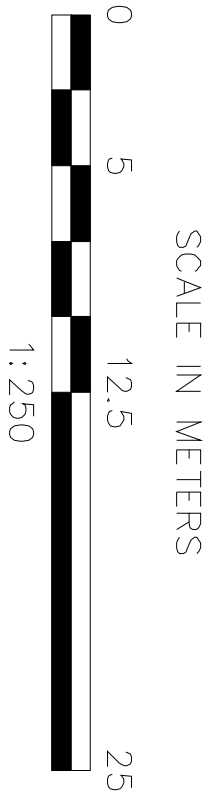
LITTLETON
GOLDSMITH STREET

STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-0015(639)X	2008	6	117
PROJECT FILE NO. 603540				

CONSTRUCTION PLAN



PLANT LIST (FOR THIS PAGE ONLY)			
KEY	BOTANICAL NAME COMMON NAME	QTY.	Size Notes
TREES			
RM	Acer rubrum Red Maple 'Armstrong' (Item 776.527)	1	80-90 mm cal.



- NOTE:
- ALL TREES TO BE RETAINED UNLESS OTHERWISE NOTED.
 - ALL EXISTING TREES TO REMAIN WITHIN 2 METERS OF THE PROPOSED LIMIT OF GRADING SHALL BE PROTECTED. SEE TREE PROTECTION DETAIL SHEET 63.
 - = COLD PLANE AND OVERLAY AREA
 - = FULL DEPTH CONSTRUCTION AREA

FOR PROFILE SEE SHEET NO. 20

STEEL BEAM HIGHWAY GUARD DETAIL

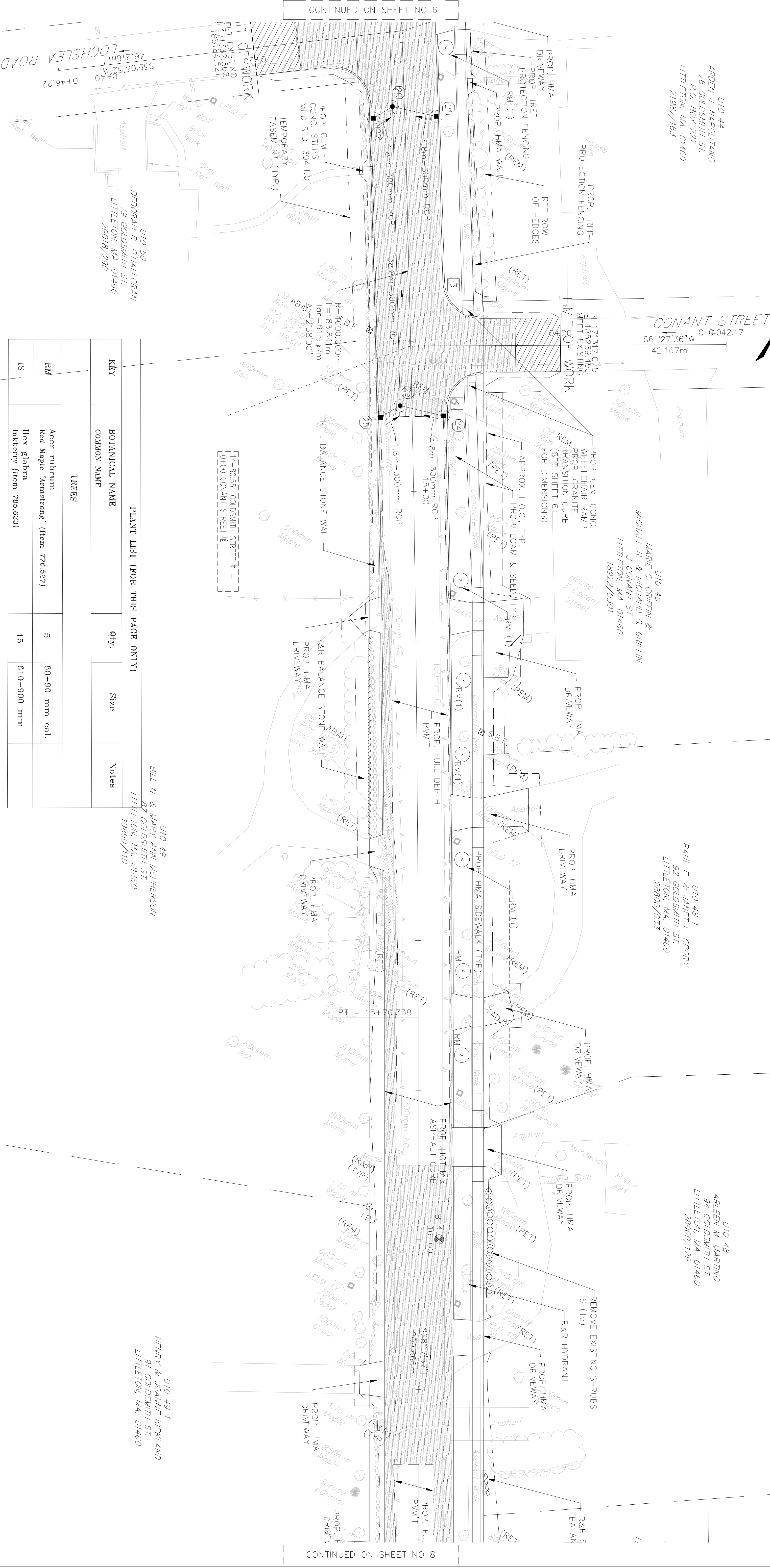
TRAFFIC SIGNAL CONDUIT

WATER SUPPLY ALTERATIONS

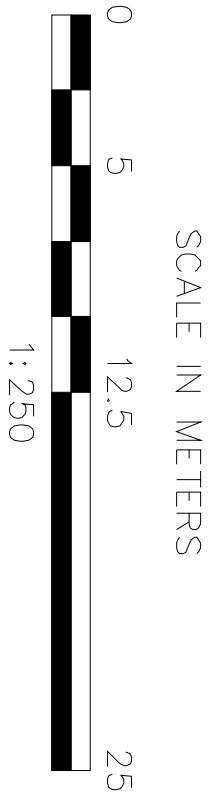
DRAINAGE DETAILS

STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-0015(639)X	2008	7	117
PROJECT FILE NO.		603540		

CONSTRUCTION PLAN



PLANT LIST (FOR THIS PAGE ONLY)			
KEY	BOTANICAL NAME COMMON NAME	Qty.	Size Notes
TREES			
RM	Acer rubrum Red Maple 'Armstrong' (Item 776.637)	5	80-90 mm cal.
IS	Ilex glabra Hollyberry (Item 786.633)	15	610-900 mm



- NOTE:
1. ALL TREES TO BE RETAINED UNLESS OTHERWISE NOTED.
 2. ALL EXISTING TREES TO REMAIN WITHIN 2 METERS OF THE PROPOSED LIMIT OF GRADING SHALL BE PROTECTED. SEE TREE PROTECTION DETAIL SHEET 63.
 3. = COLD PLANE AND OVERLAY AREA
 4. = FULL DEPTH CONSTRUCTION AREA

FOR PROFILE SEE SHEET NO. 21

STEEL BEAM HIGHWAY GUARD DETAIL

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE BELOW

DRAINAGE DETAILS

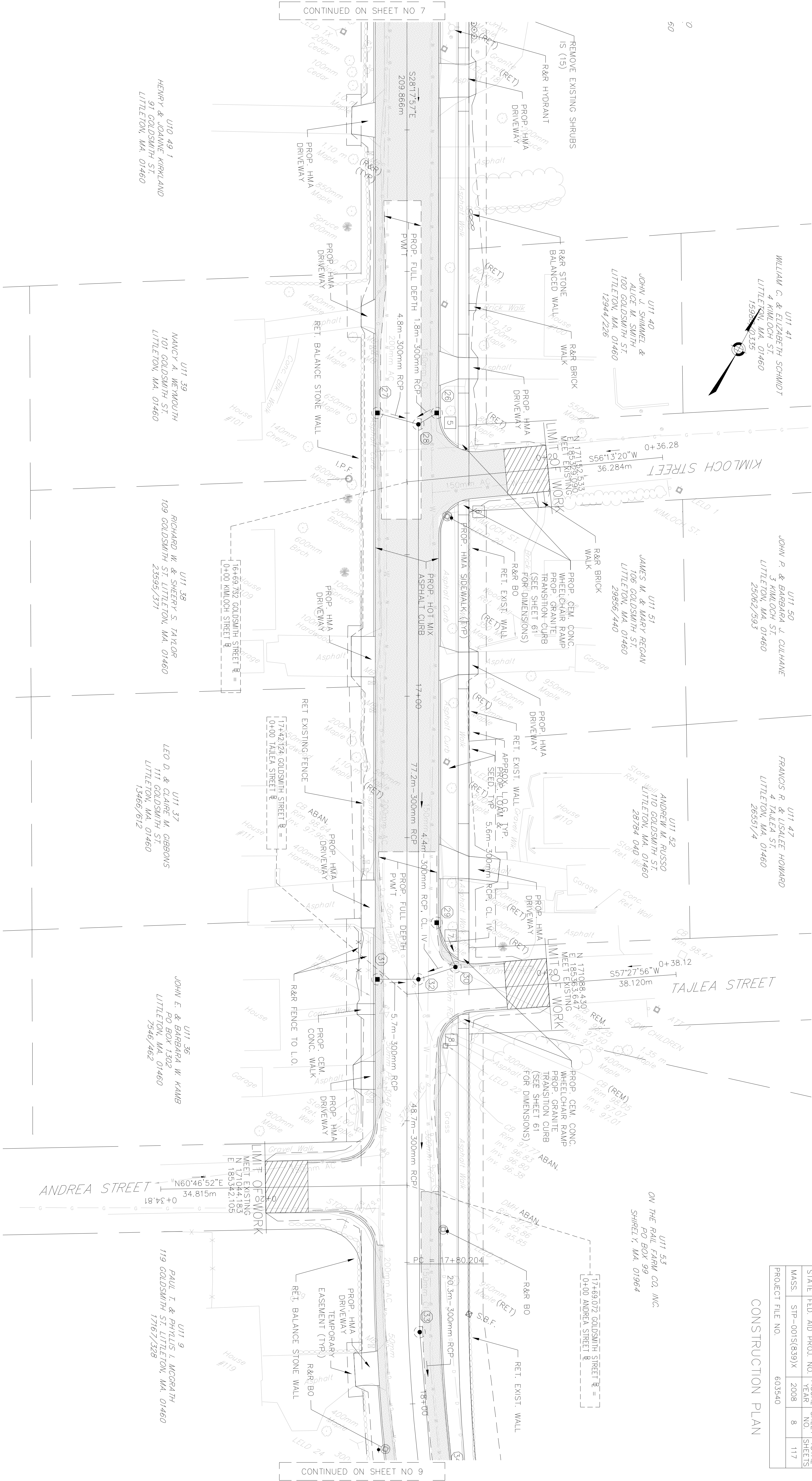
SEE BELOW

LITTLETON

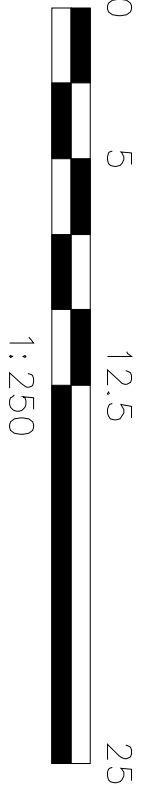
GOLDSMITH STREET

STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-0015(639)X	2008	8	117
PROJECT FILE NO. 603540				

CONSTRUCTION PLAN



SCALE IN METERS



- NOTE:
1. ALL TREES TO BE RETAINED UNLESS OTHERWISE NOTED.
 2. ALL EXISTING TREES TO REMAIN WITHIN 2 METERS OF THE PROPOSED LIMIT OF GRADING SHALL BE PROTECTED. SEE TREE PROTECTION DETAIL SHEET 63.
 3. = COLD PLANE AND OVERLAY AREA
 4. = FULL DEPTH CONSTRUCTION AREA

FOR PROFILE SEE SHEET NO. 22

STEEL BEAM HIGHWAY GUARD DETAIL

TRAFFIC SIGNAL CONDUIT

WATER SUPPLY ALTERATIONS

DRAINAGE DETAILS

LITTLETON
GOLDSMITH STREET

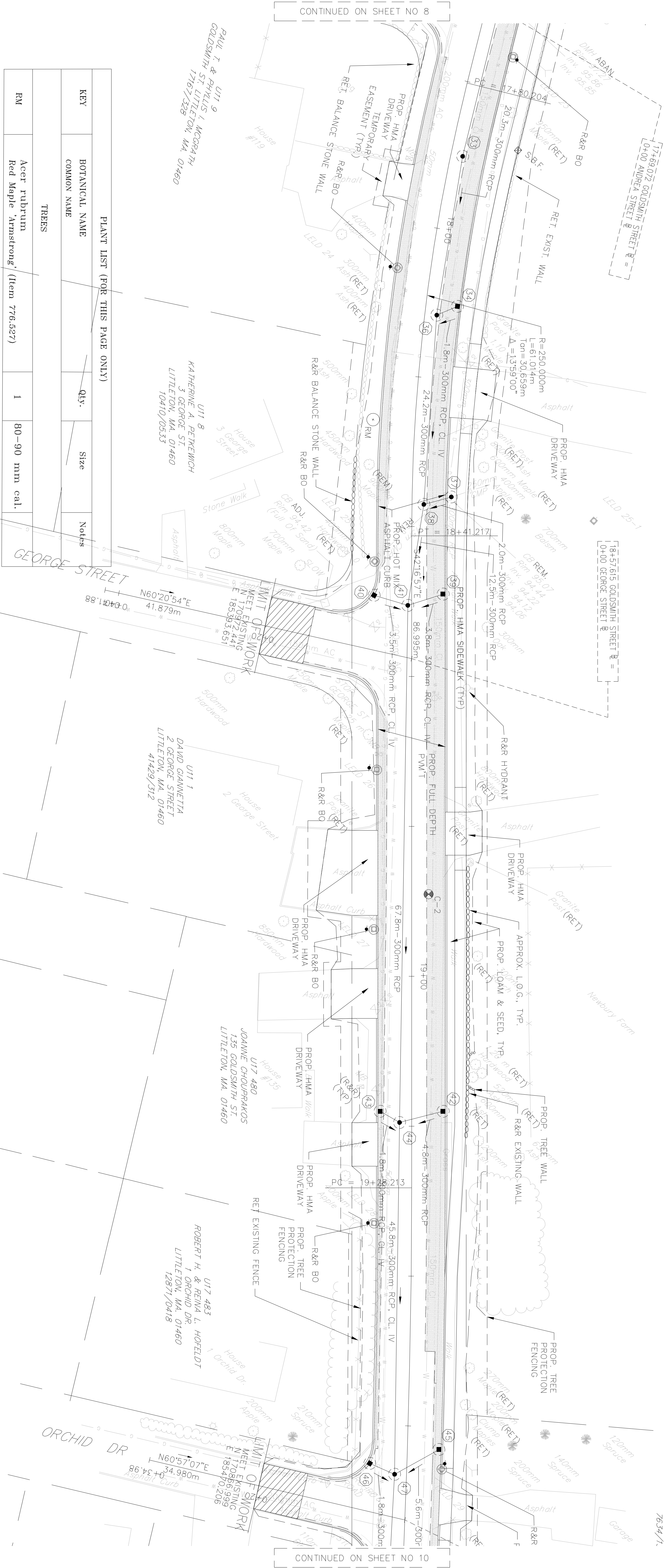
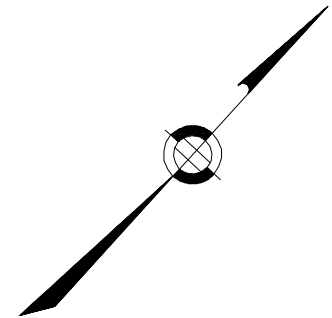
STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-0015(639)X	2008	9	117
PROJECT FILE NO.		603540		

CONSTRUCTION PLAN

UT1 53
ON THE RAIL FARM CO. INC.
PO BOX 99
SHRELY, MA. 01964

UT1 53
ON THE RAIL FARM CO. INC.
PO BOX 99
SHRELY, MA. 01964

UT1 54
JOHN A. & FRANCES
PO BOX
LITTLETON, MA
7634/1.



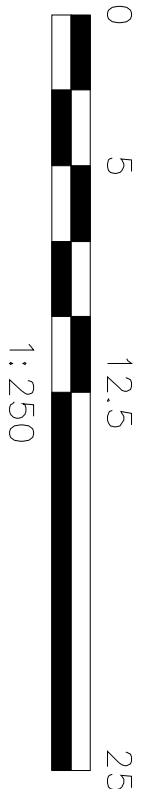
CONTINUED ON SHEET NO 8

CONTINUED ON SHEET NO 10

PLANT LIST (FOR THIS PAGE ONLY)

KEY	BOTANICAL NAME COMMON NAME	Qty.	Size	Notes
TREES				
RM	Acer rubrum Red Maple Armstrong (Item 776.627)	1	80-90 mm cal.	

SCALE IN METERS



- NOTE:
- ALL TREES TO BE RETAINED UNLESS OTHERWISE NOTED.
 - ALL EXISTING TREES TO REMAIN WITHIN 2 METERS OF THE PROPOSED LIMIT OF GRADING SHALL BE PROTECTED. SEE TREE PROTECTION DETAIL SHEET 63.
 - = COLD PLANE AND OVERLAY AREA
 - = FULL DEPTH CONSTRUCTION AREA

FOR PROFILE SEE SHEET NO. 23

STEEL BEAM HIGHWAY GUARD DETAIL
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
SEE BELOW

DRAINAGE DETAILS
SEE BELOW

LITTLETON
GOLDSMITH STREET

STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-0015(639)X	2008	10	117
PROJECT FILE NO.		603540		

PLANT LIST (FOR THIS PAGE ONLY)				
KEY	BOTANICAL NAME COMMON NAME	Qty.	Size	Notes
TREES				
RM	Acer rubrum Red Maple 'Armstrong' (Item 776.527)	3	80-90 mm cal.	
NO	Quercus palustris Oak Pin 'Crownright' (Item 776.141)	2	60-70 mm cal.	

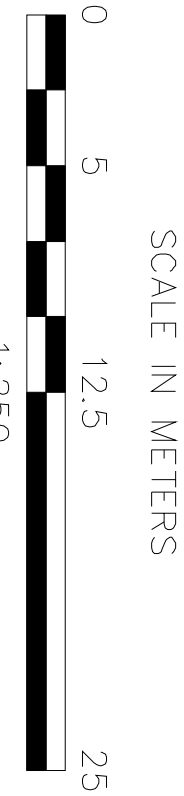
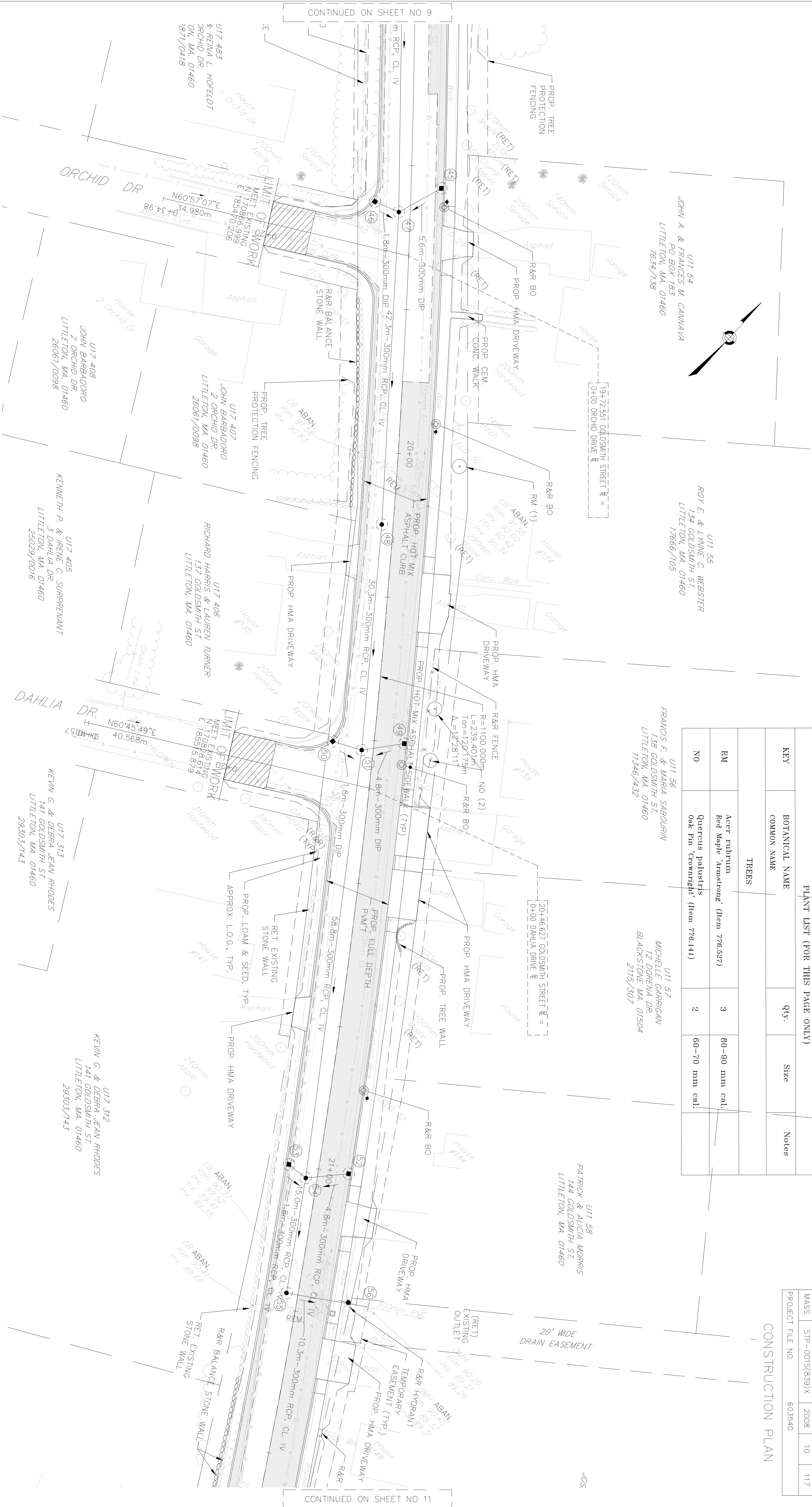
UT1 54
JOHN A. & FRANCES M. CANNAVA
PO BOX 183
LITTLETON, MA 01460
7634/138

UT1 55
ROY E. & LYNN C. WEBSTER
134 GOLDSMITH ST.
LITTLETON, MA 01460
17666/105

UT1 56
FRANCIS F. & MARIA SABOURIN
138 GOLDSMITH ST.
LITTLETON, MA 01460
11346/432

UT1 57
MICHELLE GARRIGAN
12 DORENA DR.
BLACKSTONE, MA 01504
2115/307

UT1 58
PATRICK & ALICIA MORRIS
144 GOLDSMITH ST.
LITTLETON, MA 01460



- NOTE:
- 1. ALL TREES TO BE RETAINED UNLESS OTHERWISE NOTED.
 - 2. ALL EXISTING TREES TO REMAIN WITHIN 2 METERS OF THE PROPOSED LIMIT OF GRADING SHALL BE PROTECTED. SEE TREE PROTECTION DETAIL SHEET 65.
 - 3. = COLD PLANE AND OVERLAY AREA
 - 4. = FULL DEPTH CONSTRUCTION AREA

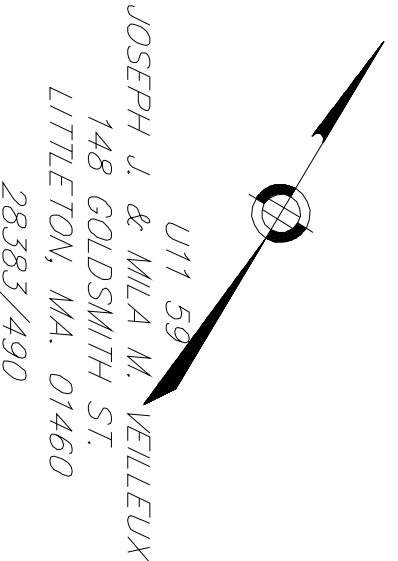
FOR PROFILE SEE SHEET NO. 24

STEEL BEAM HIGHWAY GUARD DETAIL

TRAFFIC SIGNAL CONDUIT

WATER SUPPLY ALTERATIONS

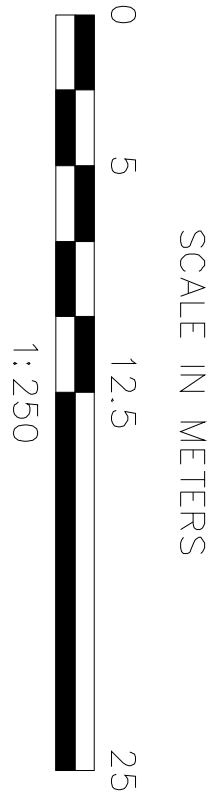
DRAINAGE DETAILS



PLANT LIST (FOR THIS PAGE ONLY)				
KEY	BOTANICAL NAME	Qty.	Size	Notes
	COMMON NAME			
	TREES			
LAUREL RD.	Quercus palustris Oak Pin Crownright (Item 777.141)	2	60-70 mm cal.	

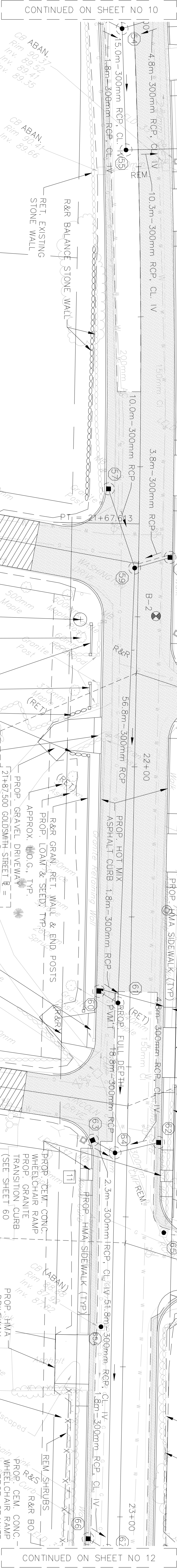
STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-0015(639)X	2008	11	117
PROJECT FILE NO. 603540				

CONSTRUCTION PLAN



- NOTE:
1. ALL TREES TO BE RETAINED UNLESS OTHERWISE NOTED.
 2. ALL EXISTING TREES TO REMAIN WITHIN 2 METERS OF THE PROPOSED LIMIT OF GRADING SHALL BE PROTECTED. SEE TREE PROTECTION DETAIL SHEET 63.
 3. = COLD PLANE AND OVERLAY AREA
 4. = FULL DEPTH CONSTRUCTION AREA

FOR PROFILE SEE SHEET NO. 25



CONTINUED ON SHEET NO 10

CONTINUED ON SHEET NO 12

STEEL BEAM HIGHWAY GUARD DETAIL

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE BELOW

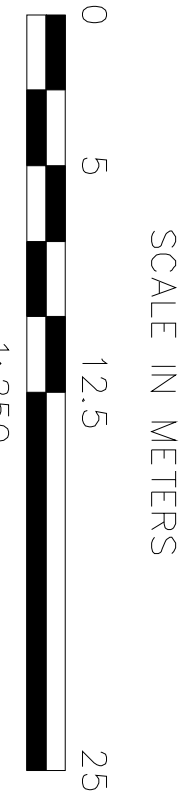
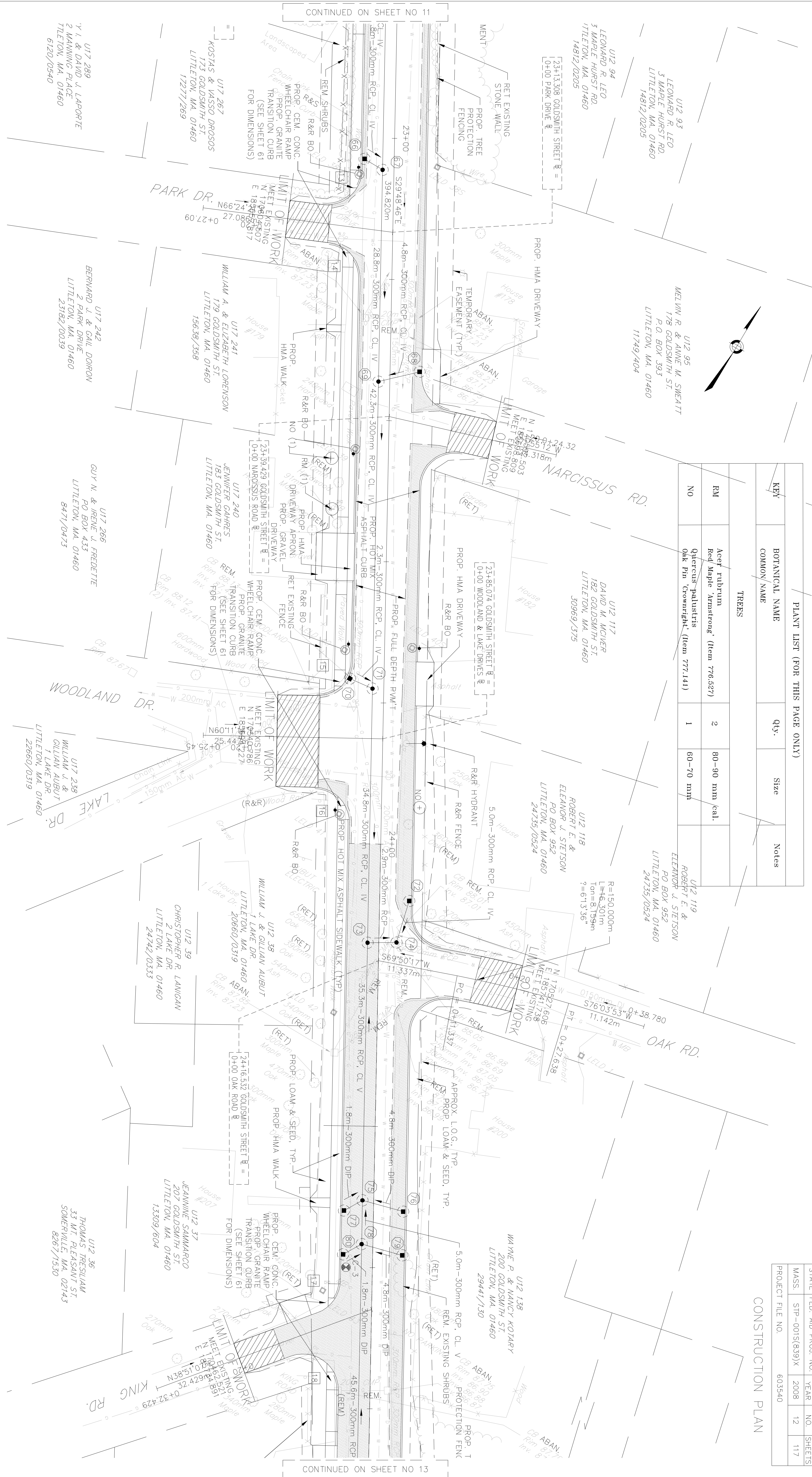
DRAINAGE DETAILS

SEE BELOW

STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-0015(639)X	2008	12	117
PROJECT FILE NO.		603540		

CONSTRUCTION PLAN

LITTLETON
GOLDSMITH STREET



- NOTE:
1. ALL TREES TO BE RETAINED UNLESS OTHERWISE NOTED.
 2. ALL EXISTING TREES TO REMAIN WITHIN 2 METERS OF THE PROPOSED LIMIT OF GRADING SHALL BE PROTECTED. SEE TREE PROTECTION DETAIL SHEET 63.
 3. = COLD PLANE AND OVERLAY AREA
 4. = FULL DEPTH CONSTRUCTION AREA

FOR PROFILE SEE SHEET NO. 26

NOTE:
1. ALL TREES TO BE RETAINED UNLESS OTHERWISE NOTED.
2. ALL EXISTING TREES TO REMAIN WITHIN 2 METERS OF THE PROPOSED LIMIT OF GRADING SHALL BE PROTECTED. SEE TREE PROTECTION DETAIL SHEET 63.

3.  = COLD PLANE AND OVERLAY AREA

4.  = FULL DEPTH CONSTRUCTION AREA

FOR PROFILE SEE SHEET NO. 29

STEEL BEAM HIGHWAY GUARD DETAIL

TRAFFIC SIGNAL CONDUIT

WATER SUPPLY ALTERATIONS

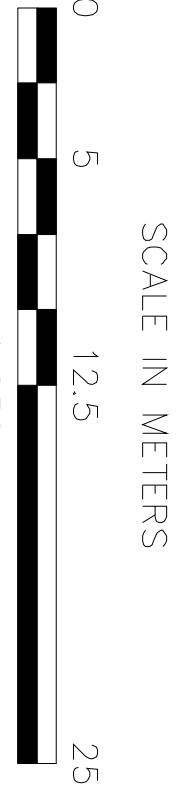
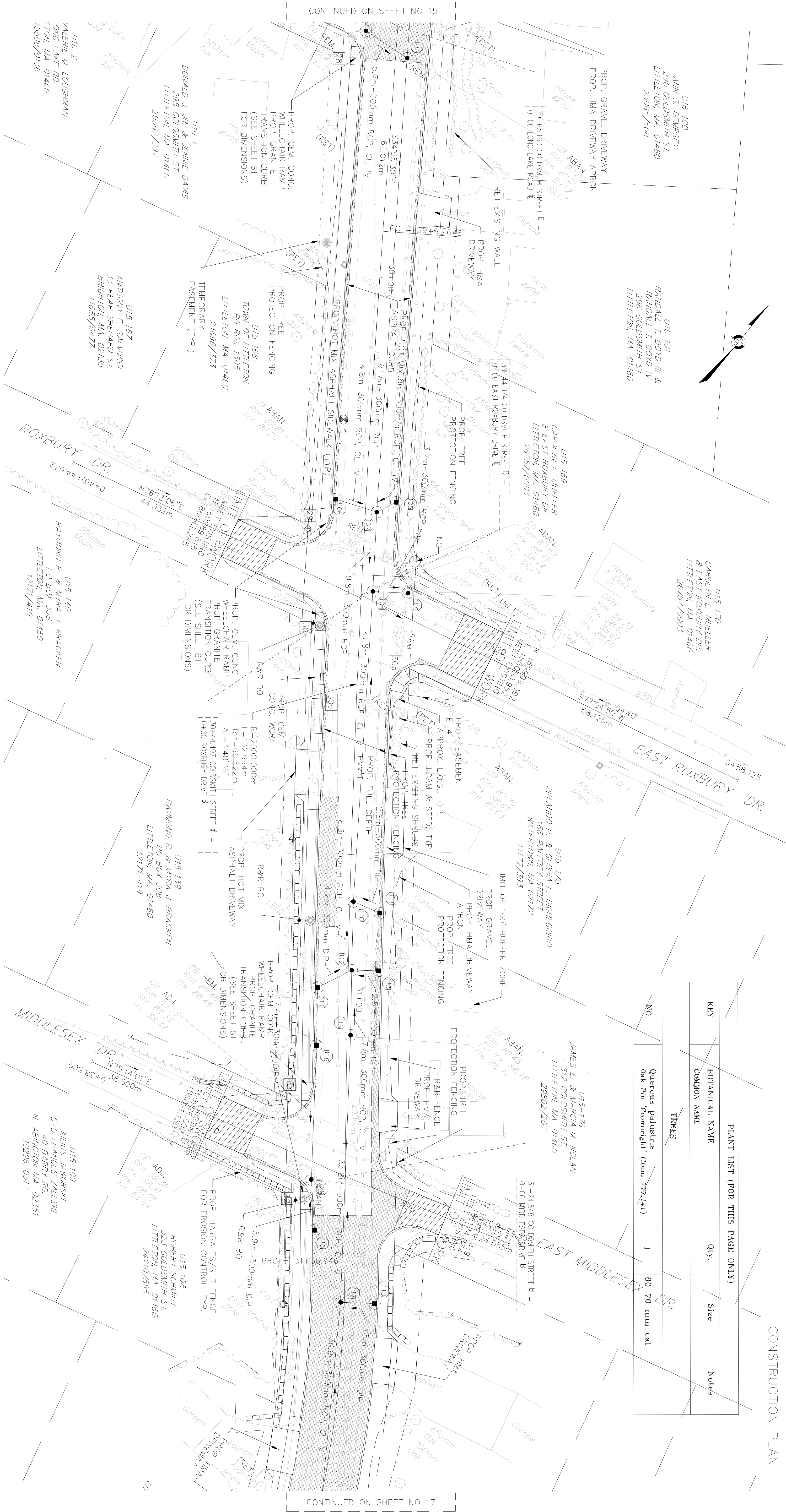
DRAINAGE DETAILS

LITTLETON
GOLDSMITH STREET

STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-0015	(639)X	2008	16	117
PROJECT FILE NO. 603540					

CONSTRUCTION PLAN

PLANT LIST (FOR THIS PAGE ONLY)				
KEY	BOTANICAL NAME COMMON NAME	Qty.	Size	Notes
TREES				
NO	Quercus palustris Oak Pin Crownright (Item 774-141)	1	60-70 mm cal	



- NOTE:
1. ALL TREES TO BE RETAINED UNLESS OTHERWISE NOTED.
 2. ALL EXISTING TREES TO REMAIN WITHIN 2 METERS OF THE PROPOSED LIMIT OF GRADING SHALL BE PROTECTED. SEE TREE PROTECTION DETAIL SHEET 63.
 3. = COLD PLANE AND OVERLAY AREA
 4. = FULL DEPTH CONSTRUCTION AREA

FOR PROFILE SEE SHEET NO. 30

STEEL BEAM HIGHWAY GUARD DETAIL
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
SEE BELOW

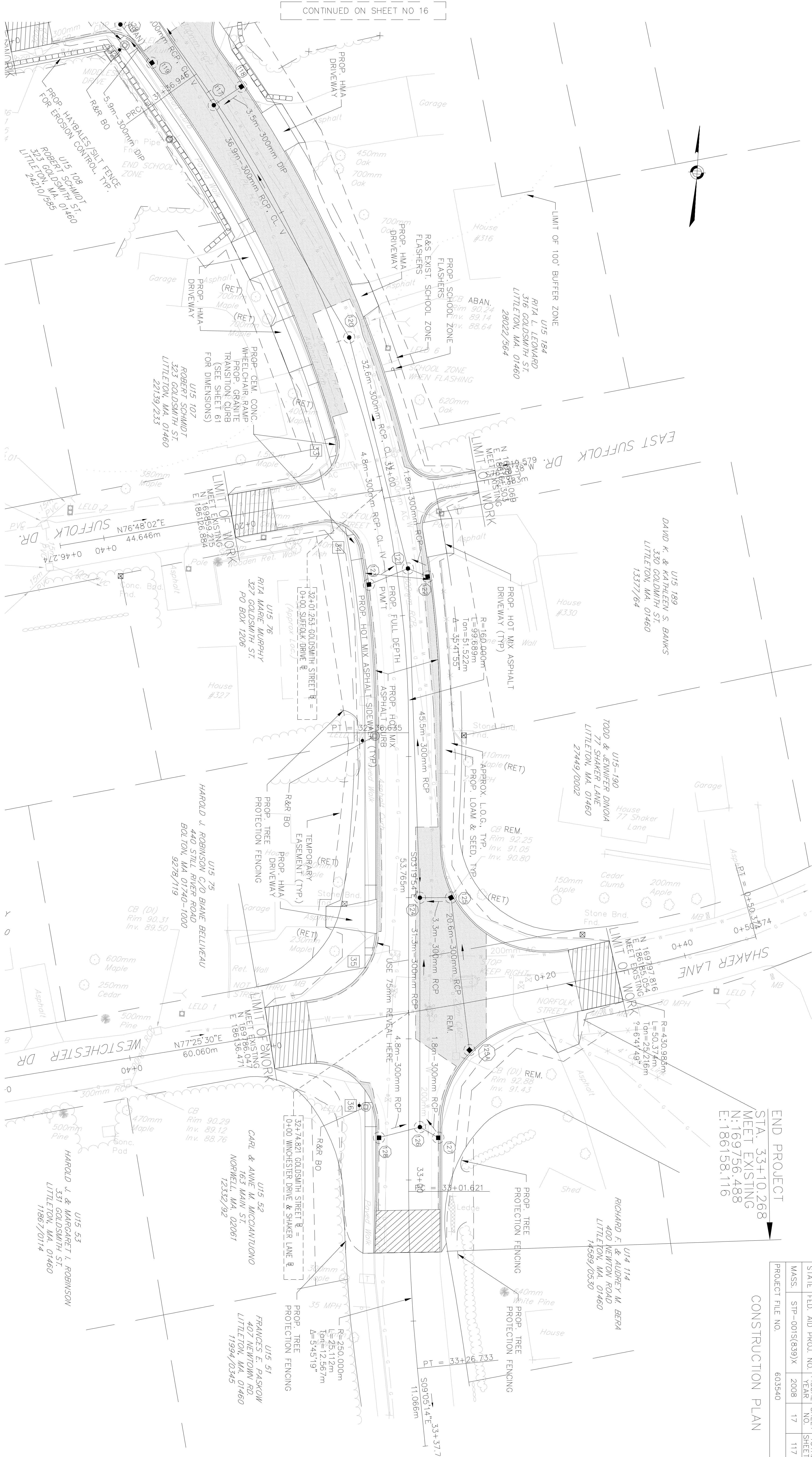
DRAINAGE DETAILS
SEE BELOW

LITTLETON
GOLDSMITH STREET

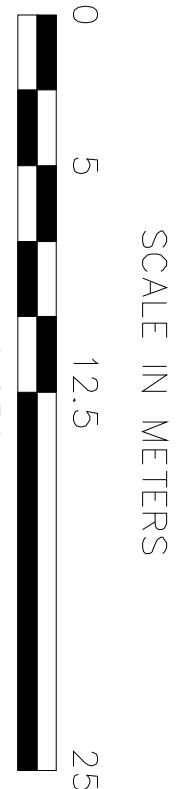
STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-0015(639)X	2008	17	117
PROJECT FILE NO. 603540				

CONSTRUCTION PLAN

END PROJECT
STA. 33+10.268
MEET EXISTING
N:169756.488
E:186158.116



CONTINUED ON SHEET NO 16



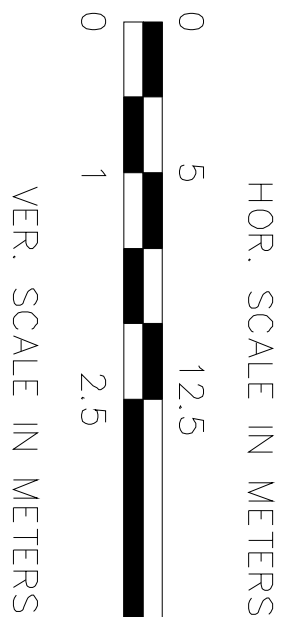
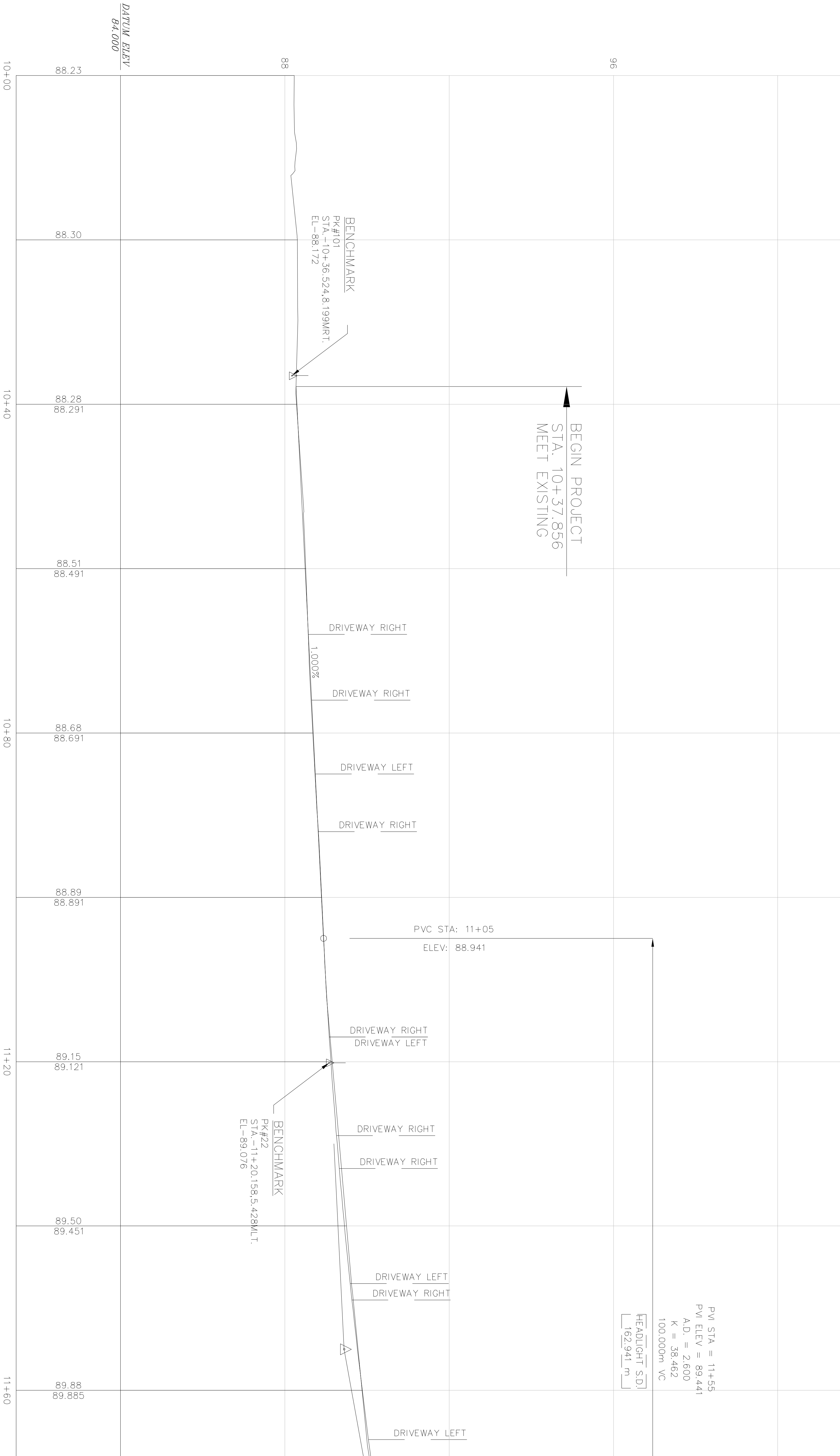
- NOTE:
1. ALL TREES TO BE RETAINED UNLESS OTHERWISE NOTED.
 2. ALL EXISTING TREES TO REMAIN WITHIN 2 METERS OF THE PROPOSED LIMIT OF GRADING SHALL BE PROTECTED. SEE TREE PROTECTION DETAIL SHEET 63.
 3. = COLD PLANE AND OVERLAY AREA
 4. = FULL DEPTH CONSTRUCTION AREA

FOR PROFILE SEE SHEET NO. 31

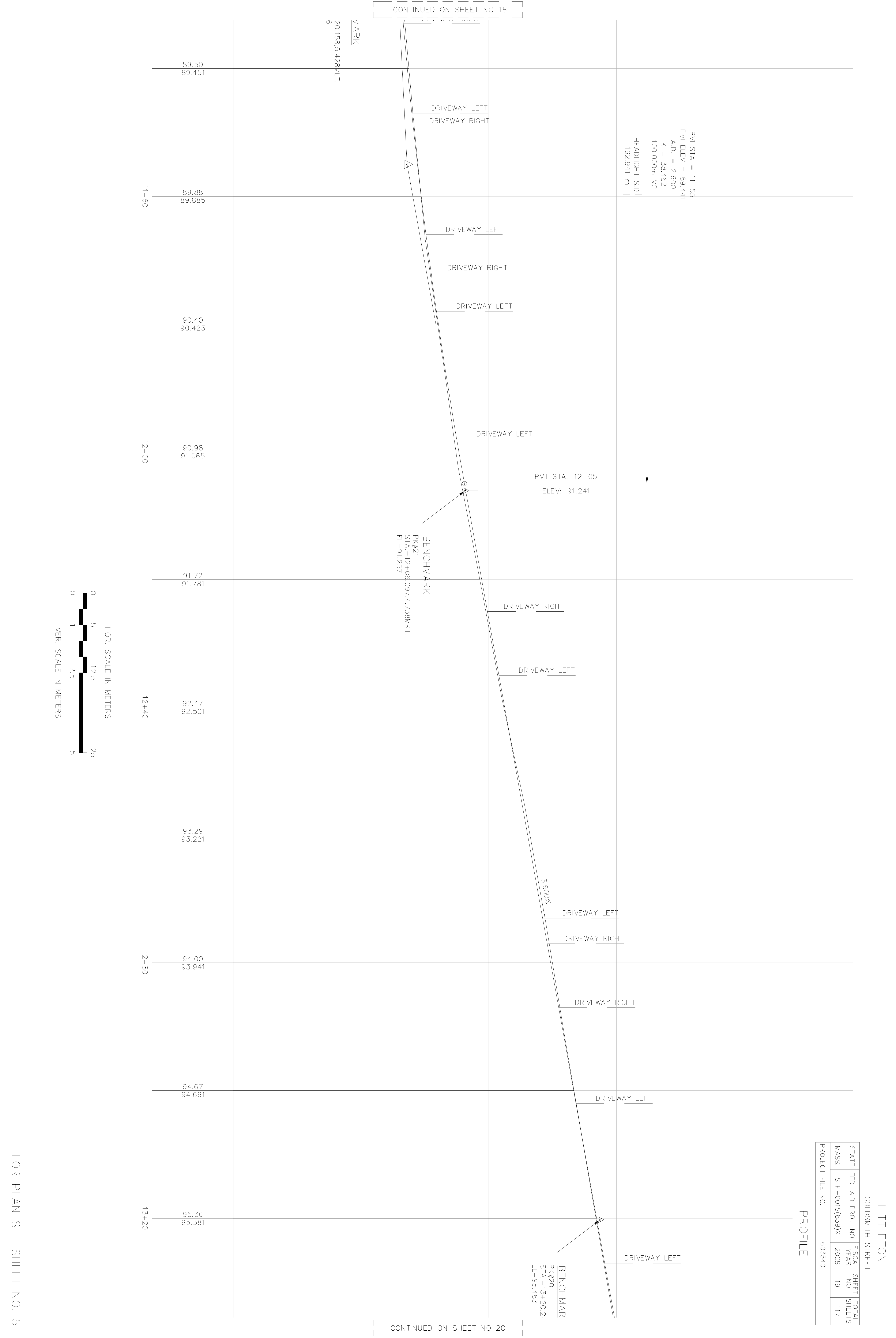
STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-001S(639)X	2008	18	117	
PROJECT FILE NO.					603540

LITTLETON
GOLDSMITH STREET

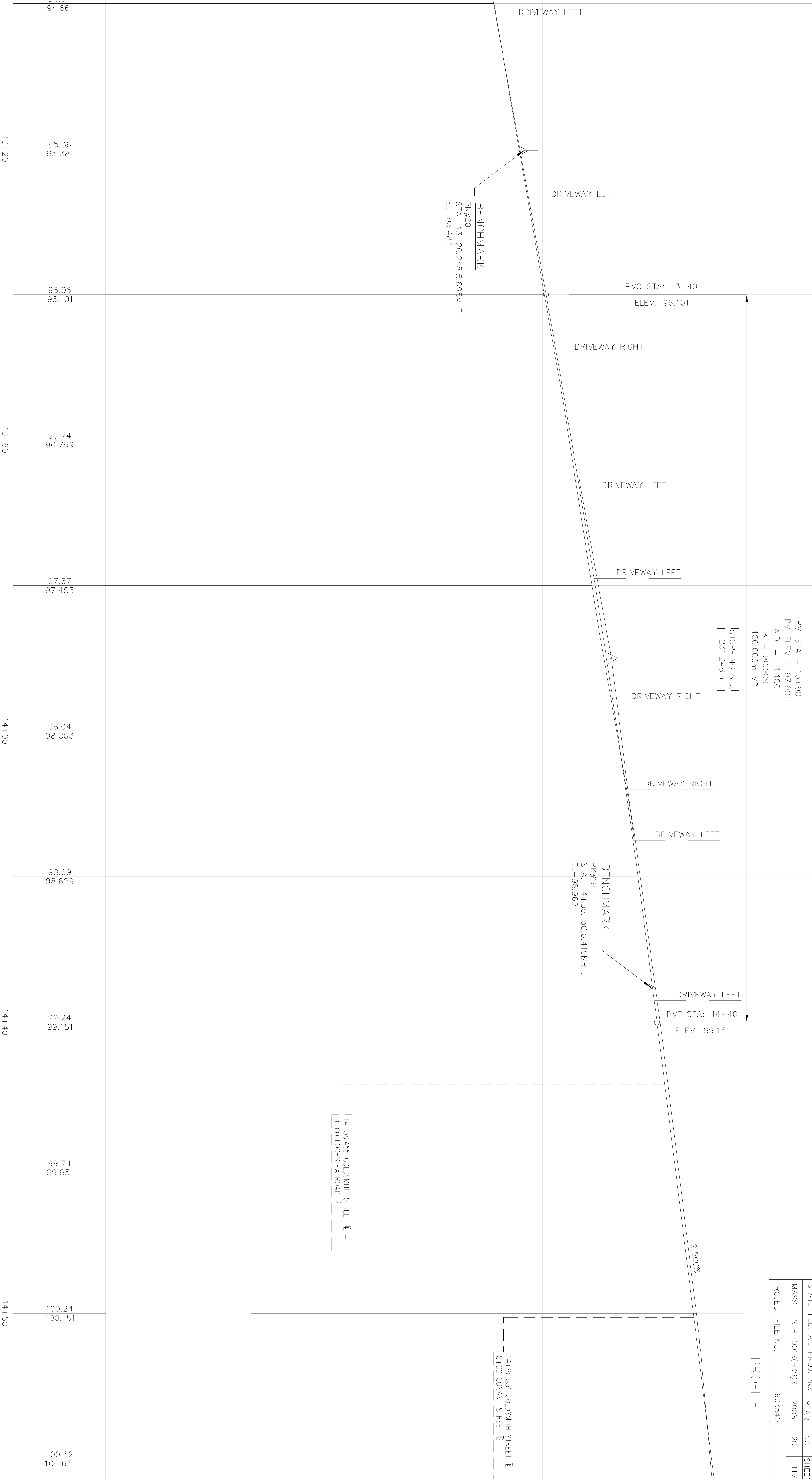
PROFILE



FOR PLAN SEE SHEET NO. 4



CONTINUED ON SHEET NO 19



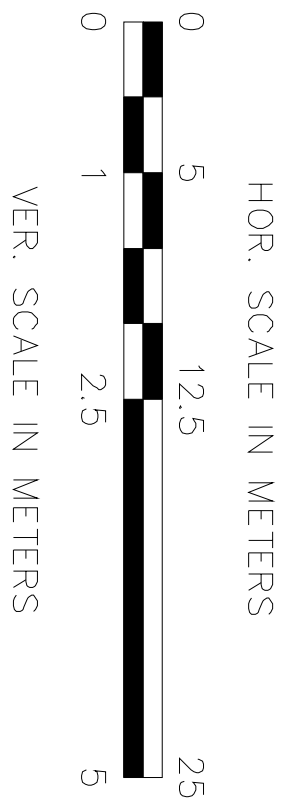
LITTLETON				
GOLDSMITH STREET				
STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET TOTAL
MASS.	STP-0015(639)X	2008	20	117
PROJECT FILE NO. 603540				

PROFILE

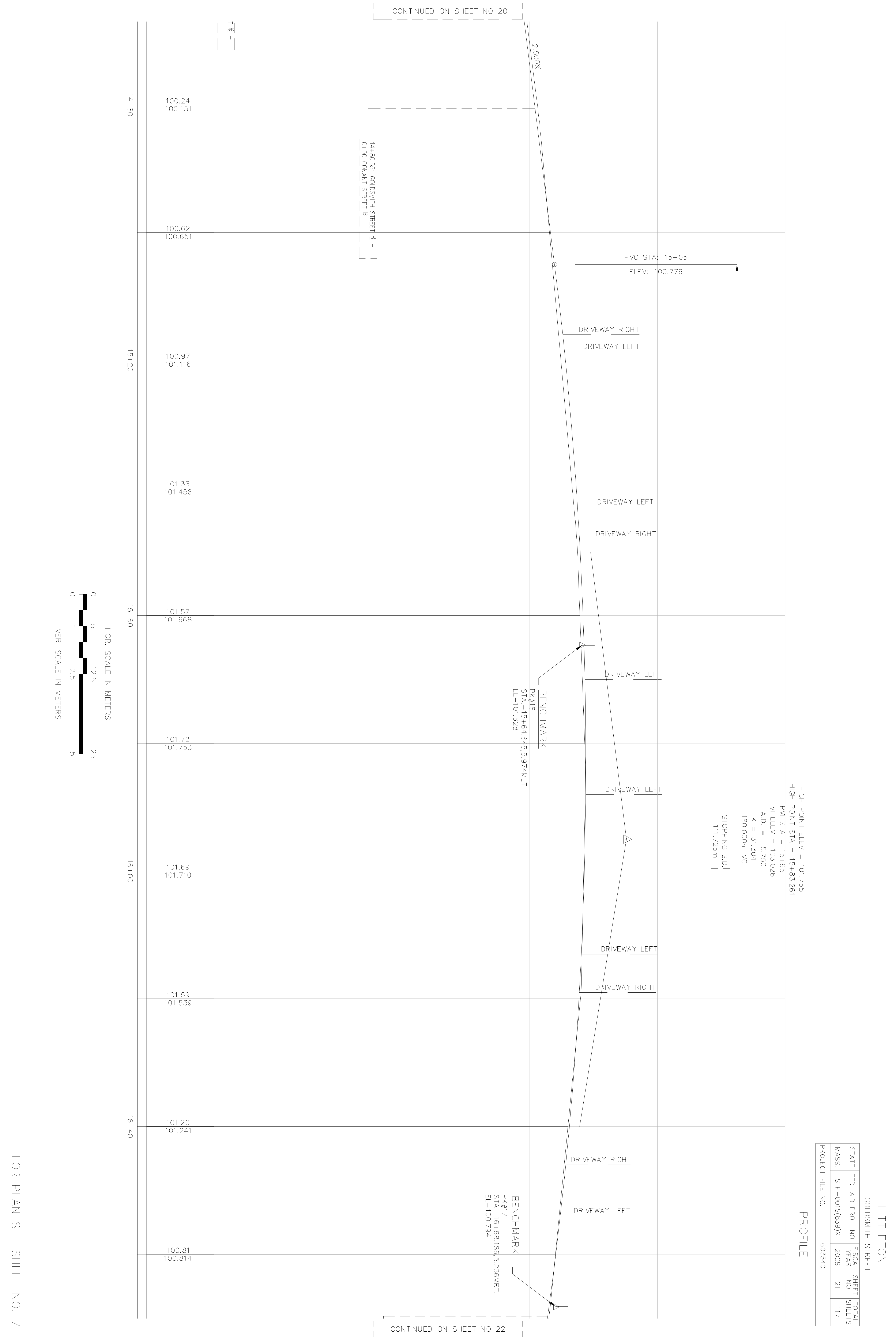
[14+38.455 GOLDSMITH STREET R = 10+00 LOCHSLEA ROAD R =]

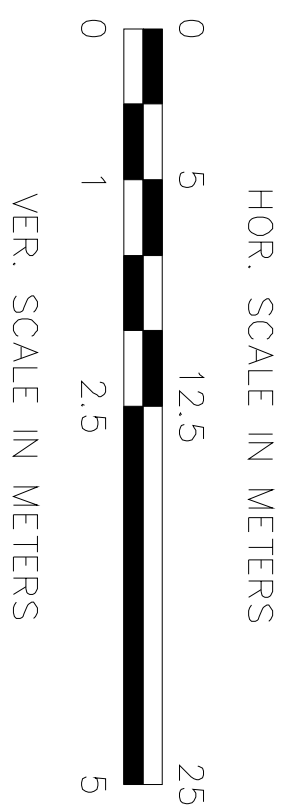
[14+80.551 GOLDSMITH STREET R = 10+00 CONANT STREET R =]

CONTINUED ON SHEET NO 21



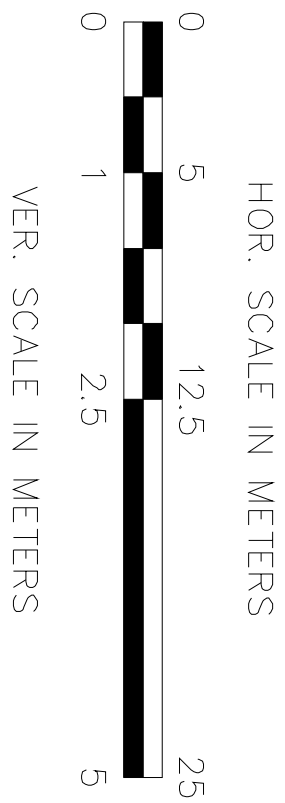
FOR PLAN SEE SHEET NO. 6



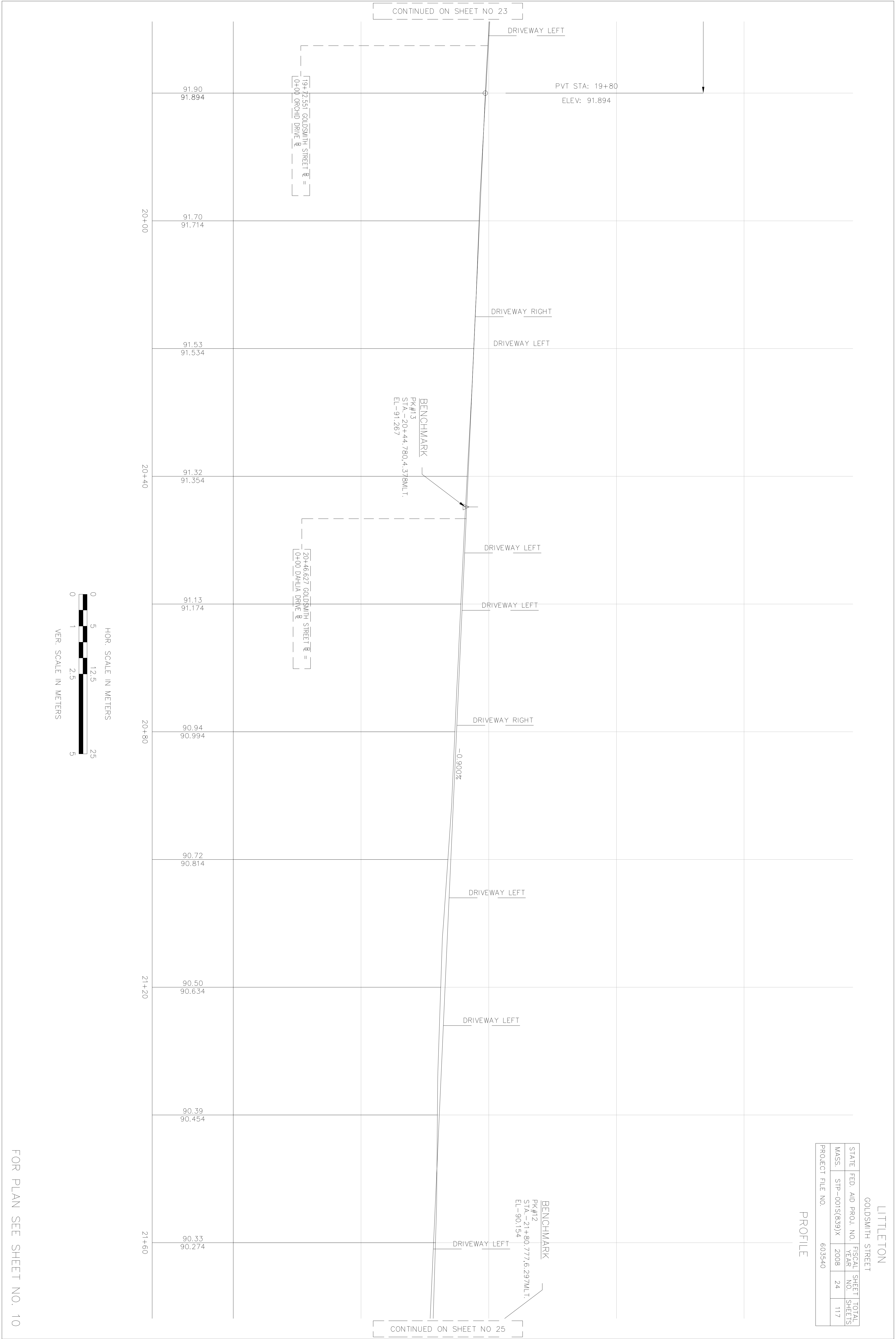


FOR PLAN SEE SHEET NO. 8

PROFILE

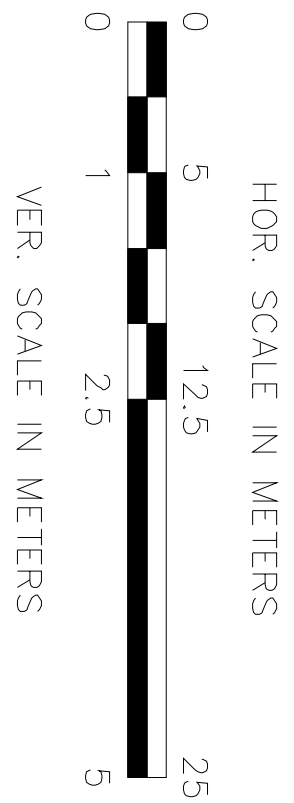
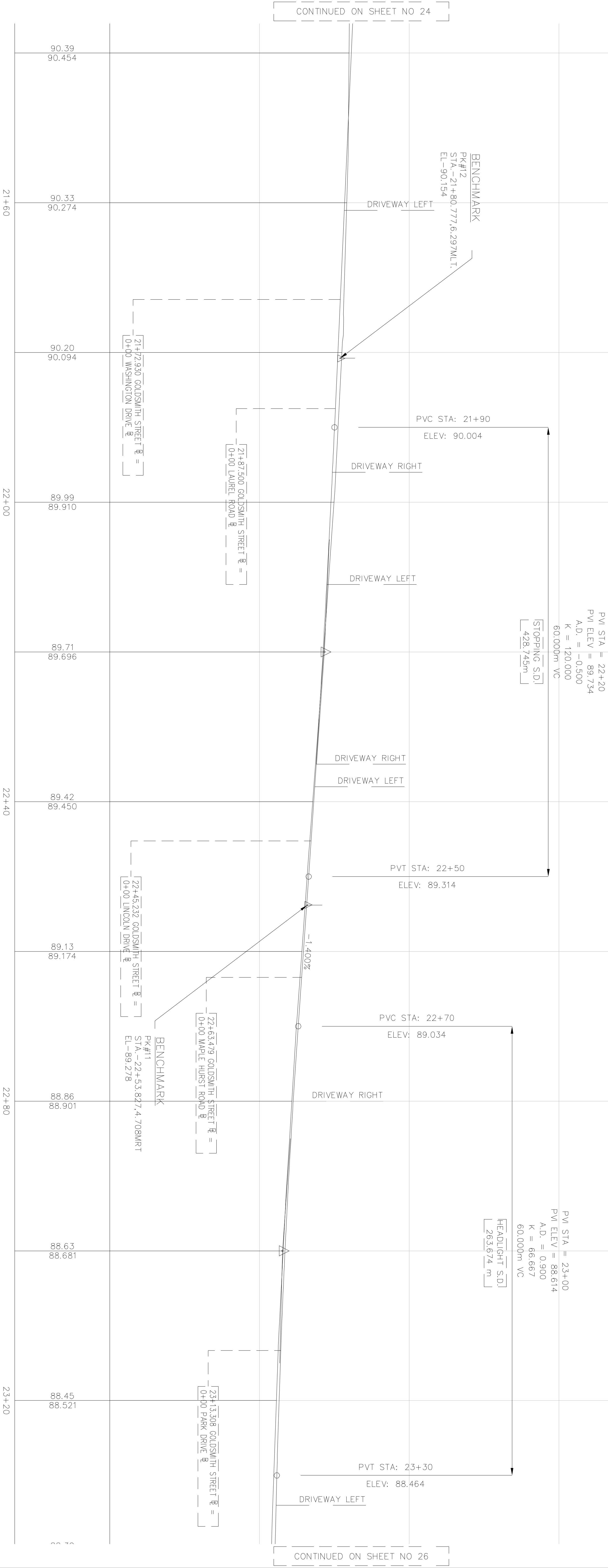


FOR PLAN SEE SHEET NO. 9



LITTLETON GOLDSMITH STREET				
STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET TOTAL
MASS.	STP-0015(639)X	2008	25	117
PROJECT FILE NO.			603540	

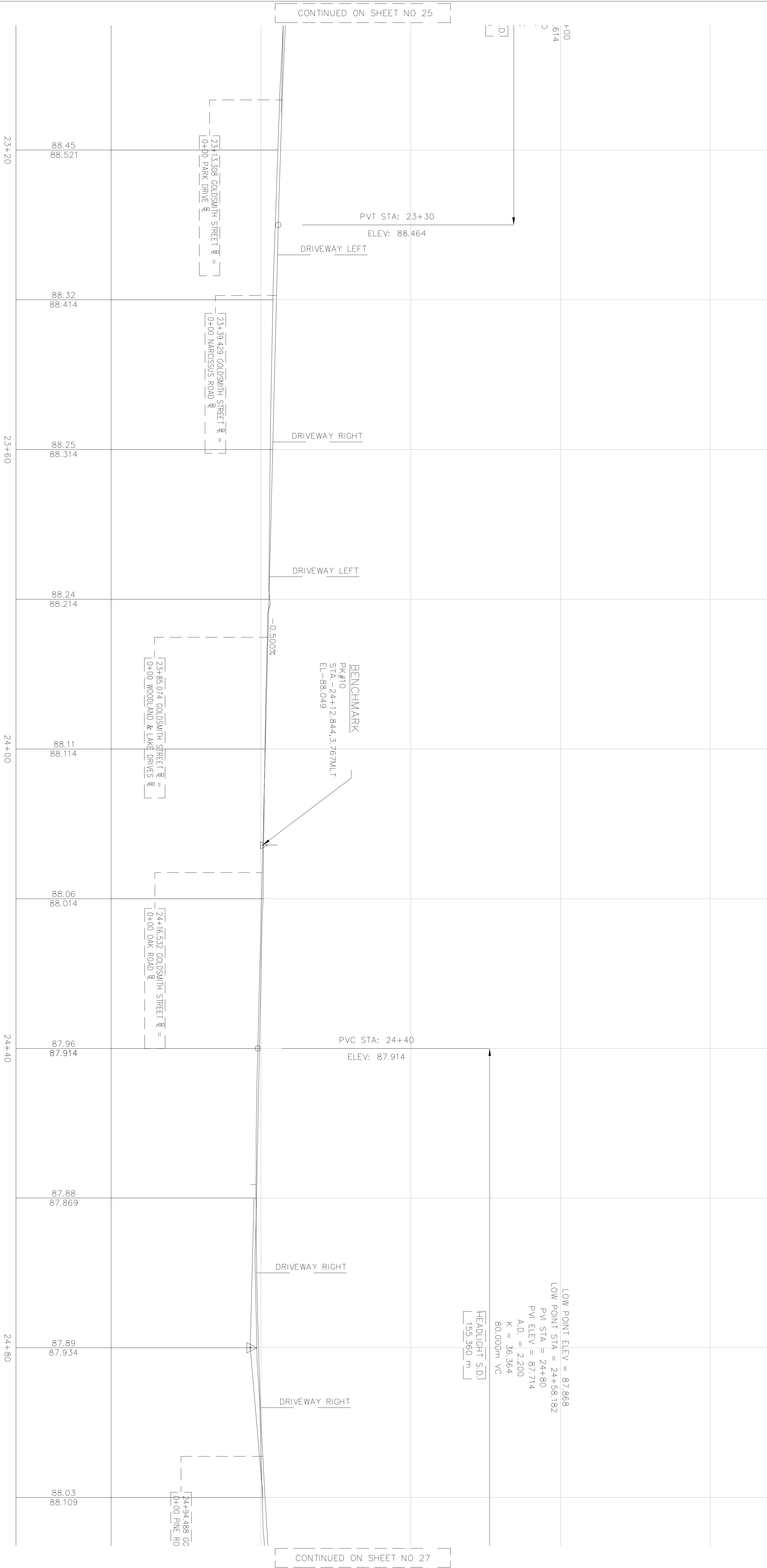
PROFILE



FOR PLAN SEE SHEET NO. 11

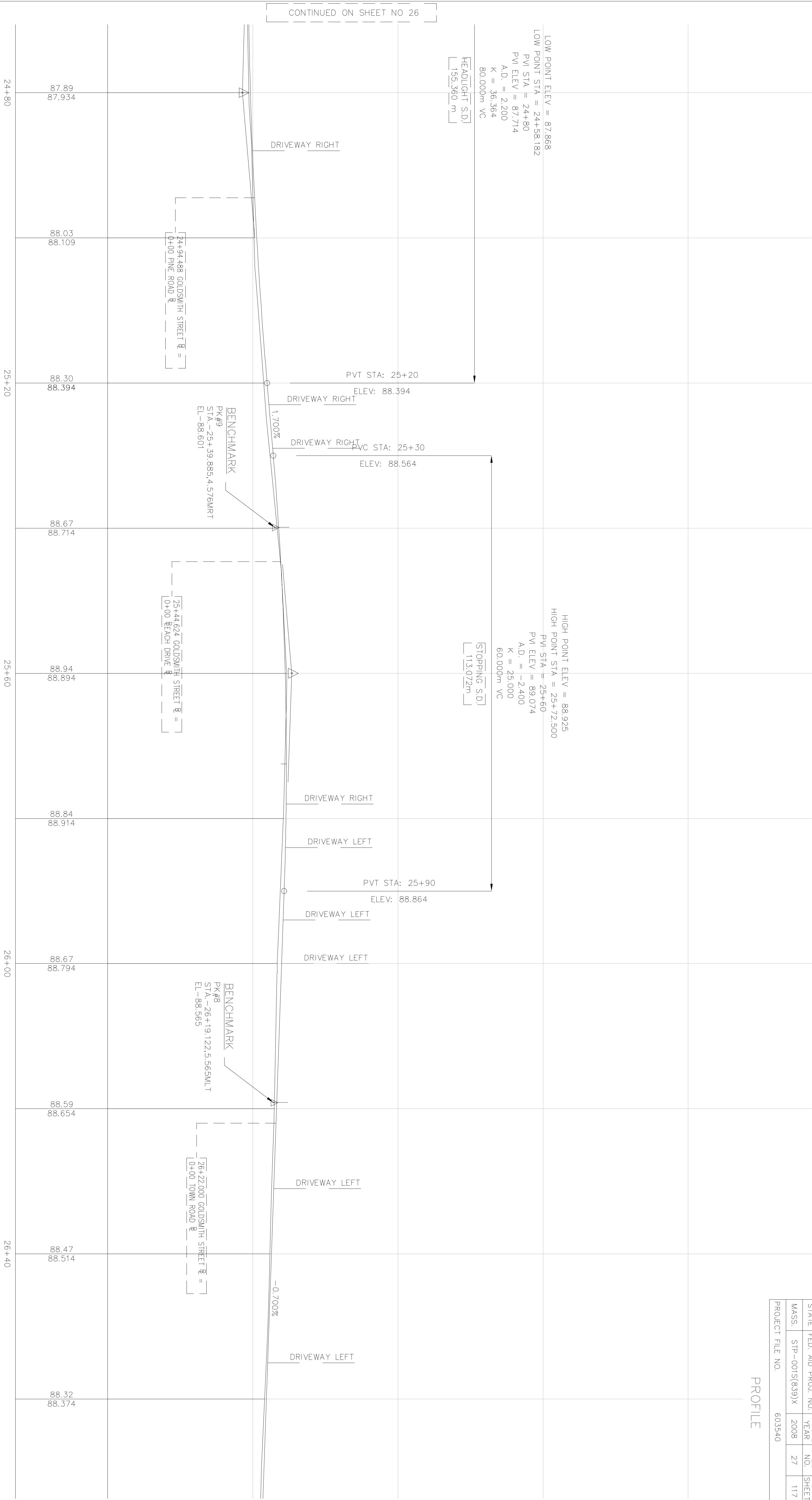
STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-001S(839)X	2008	26	117
PROJECT FILE NO.		603540		

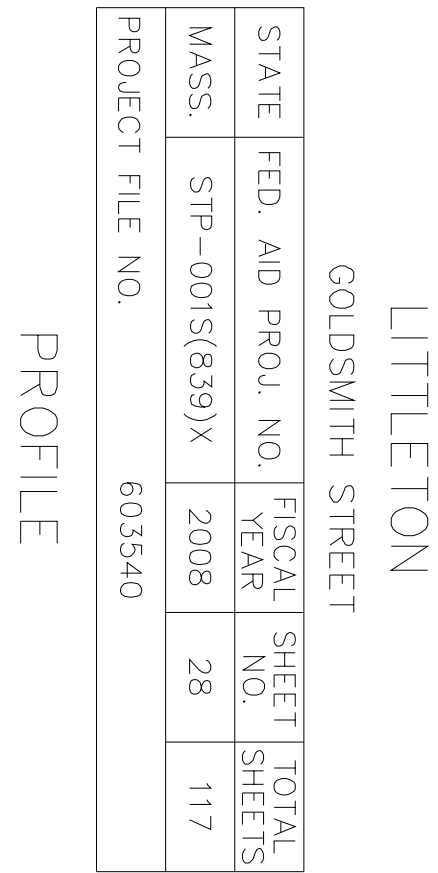
PROFILE

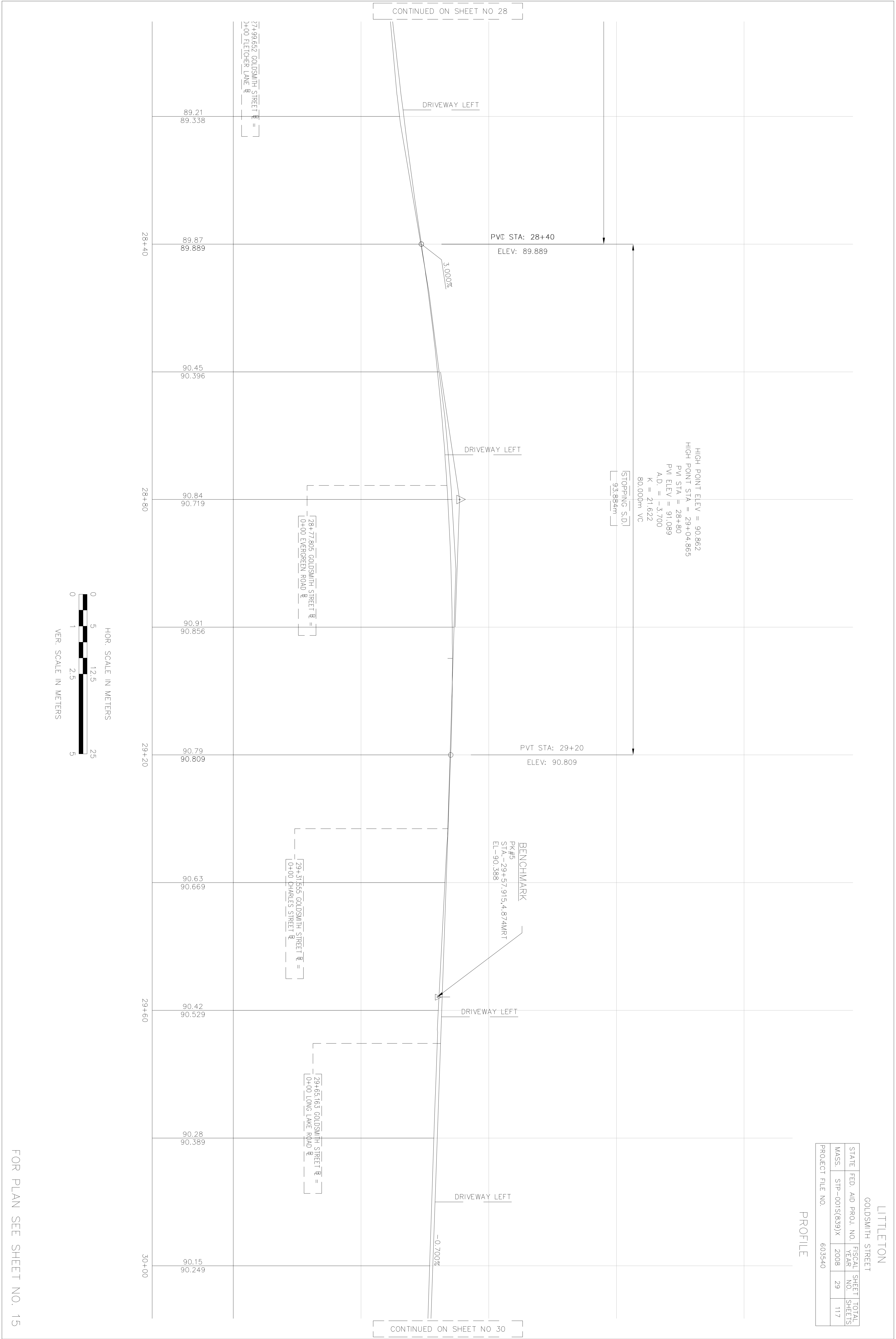


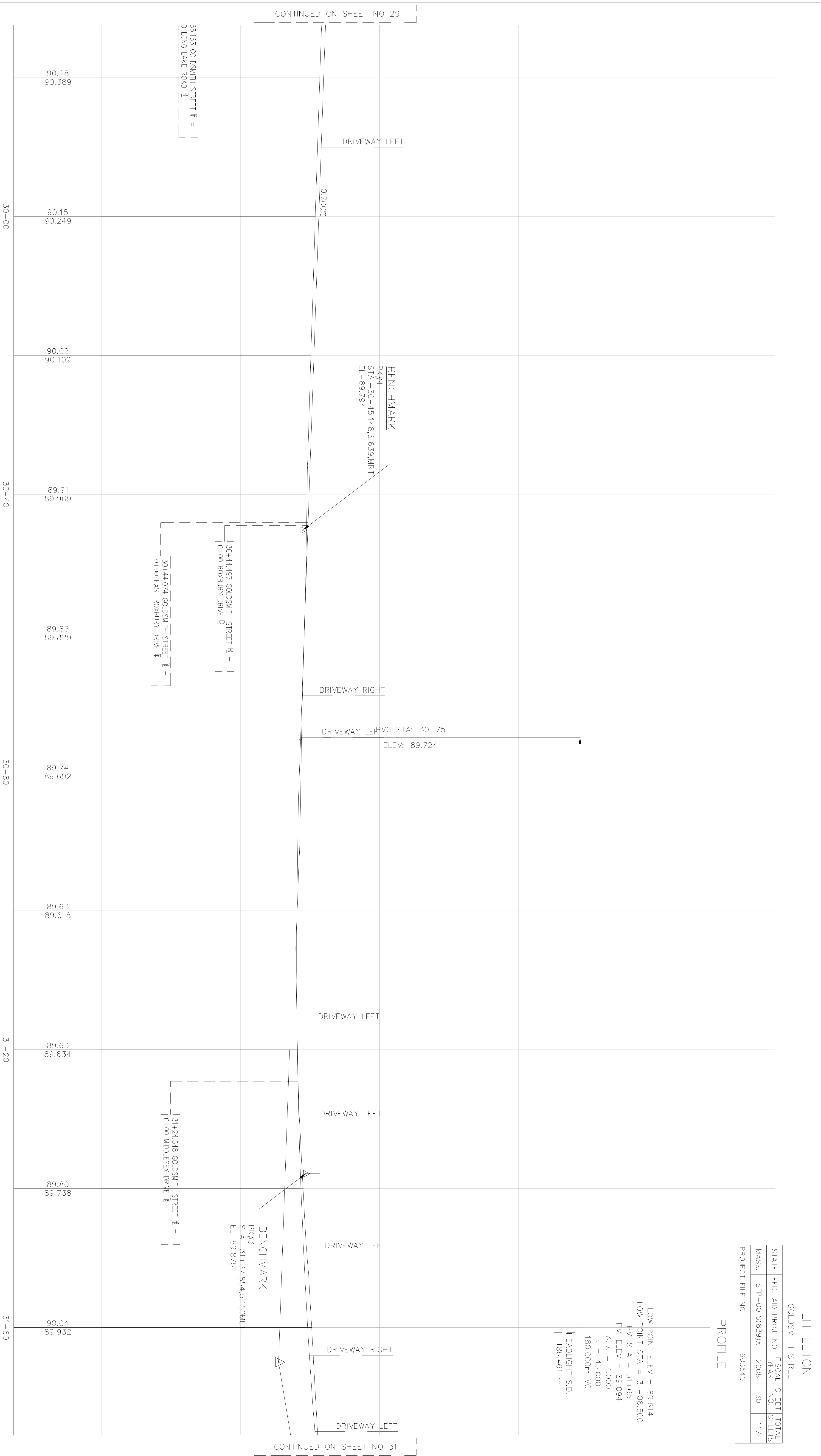
STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-001S(839)X	2008	27	117
PROJECT FILE NO.		603540		

PROFILE









PROFILE

END PROJECT	
STA. 33+10.000	
MEET EXISTING	

HEADLIGHT S.D.
186.461 m

STOPPING S.D.
160.280m

PVT STA: 32+55
ELEV: 92.064
PVC STA: 32+60

DRIVEWAY RIGHT ELEV: 92.229

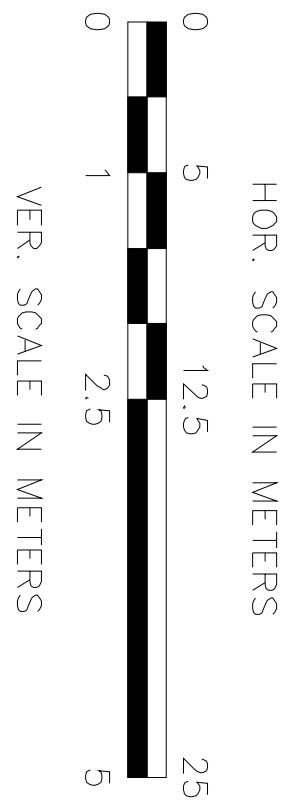
BENCHMARK
PK #2
STA. -32+72.900, 6.566MRT
EL-92.829

BENCHMARK
PK #3
STA.=31+37.854,5.150MLT
EL=89.876

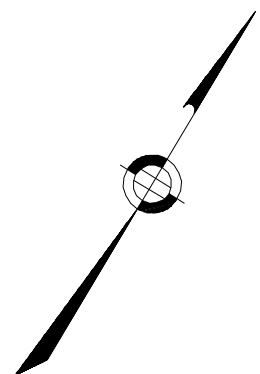
STREET # = _____
NE # _____

32+01.253 GOLDSMITH STREET R =
0+00 SUFFOLK DRIVE R

32+74.821 GOLDSMITH STREET R =
10+00 WINCHESTER DRIVE & SHAKER LANE R



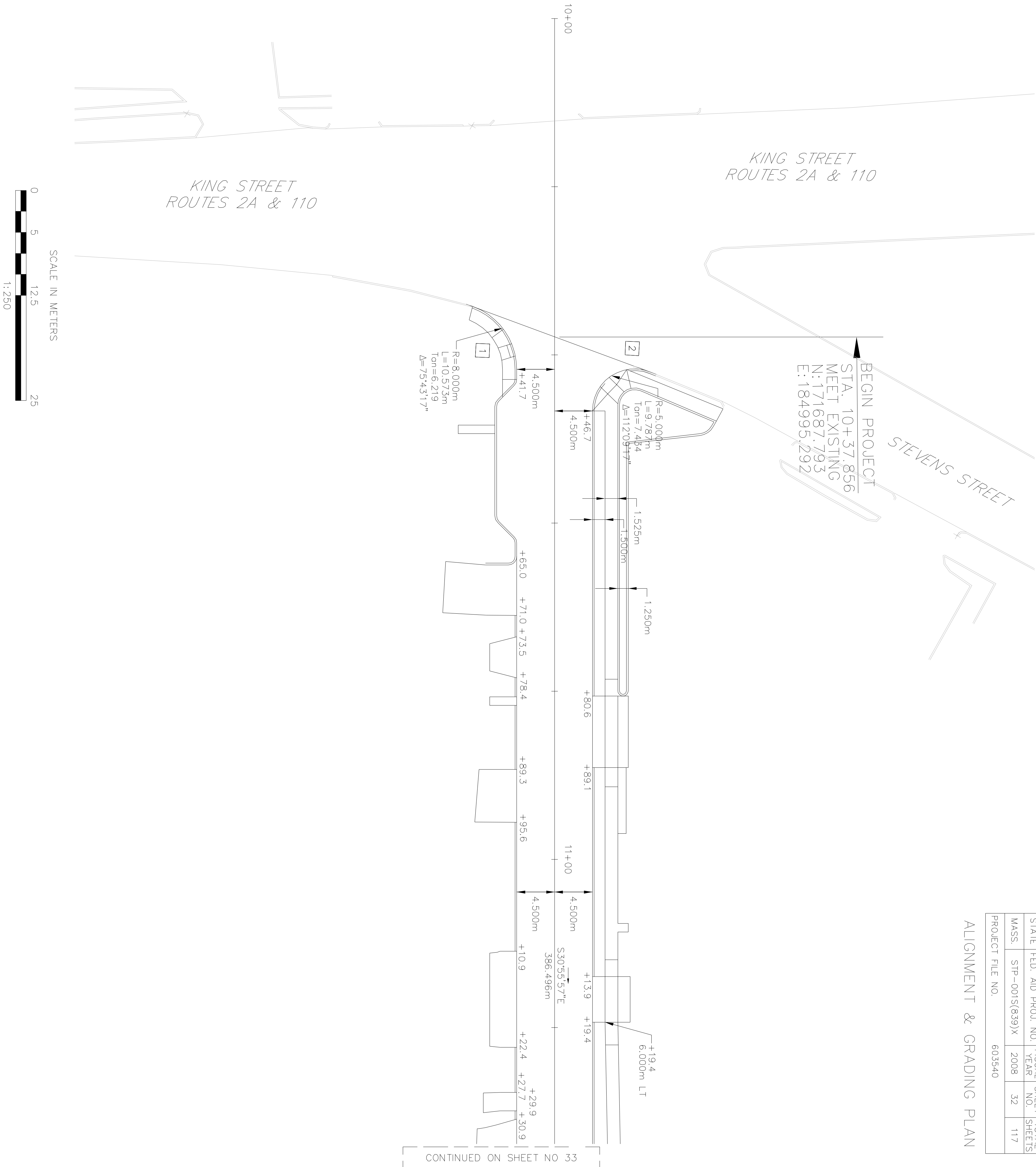
FOR PLAN SEE SHEET NO. 17



STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-0015(639)	X	2008	32	117
PROJECT FILE NO.		603540			

LITTLETON
GOLDSMITH STREET

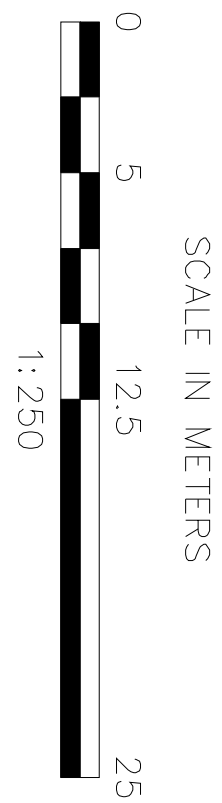
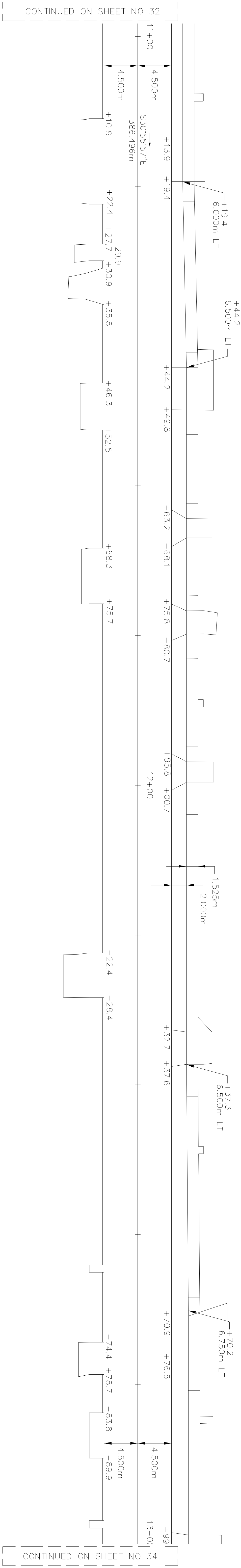
ALIGNMENT & GRADING PLAN

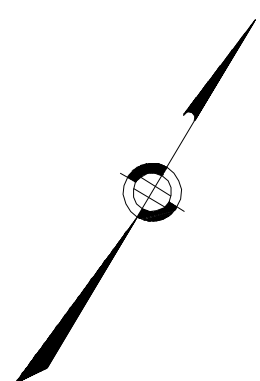


CONTINUED ON SHEET NO 33

STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-001S(B39)X	2008	33	117
PROJECT FILE NO.		603540		

ALIGNMENT & GRADING PLAN

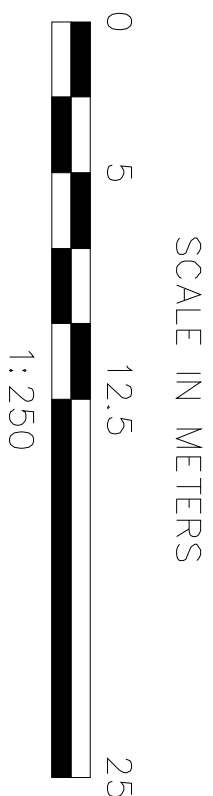
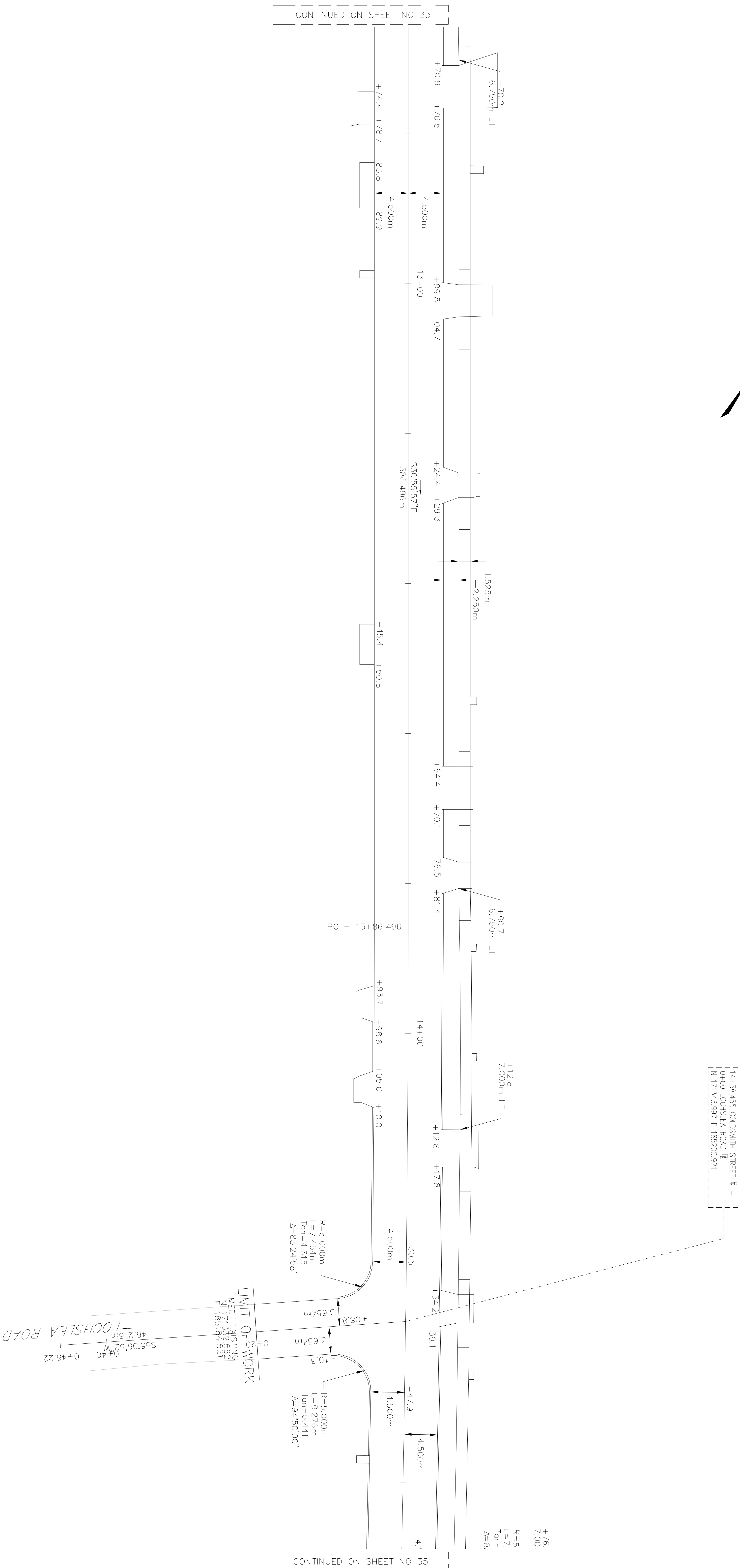




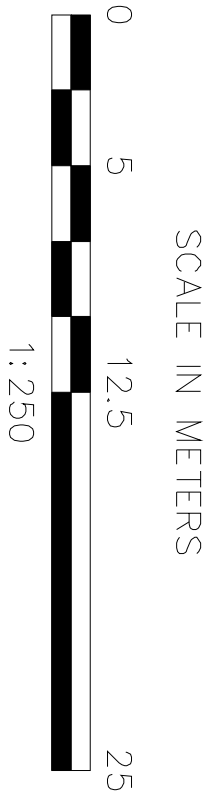
STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-001S(B39)X	2008	34	117
PROJECT FILE NO.		603540		

LITTLETON
GOLDSMITH STREET

ALIGNMENT & GRADING PLAN

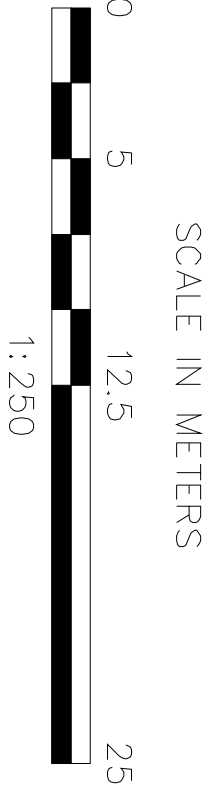
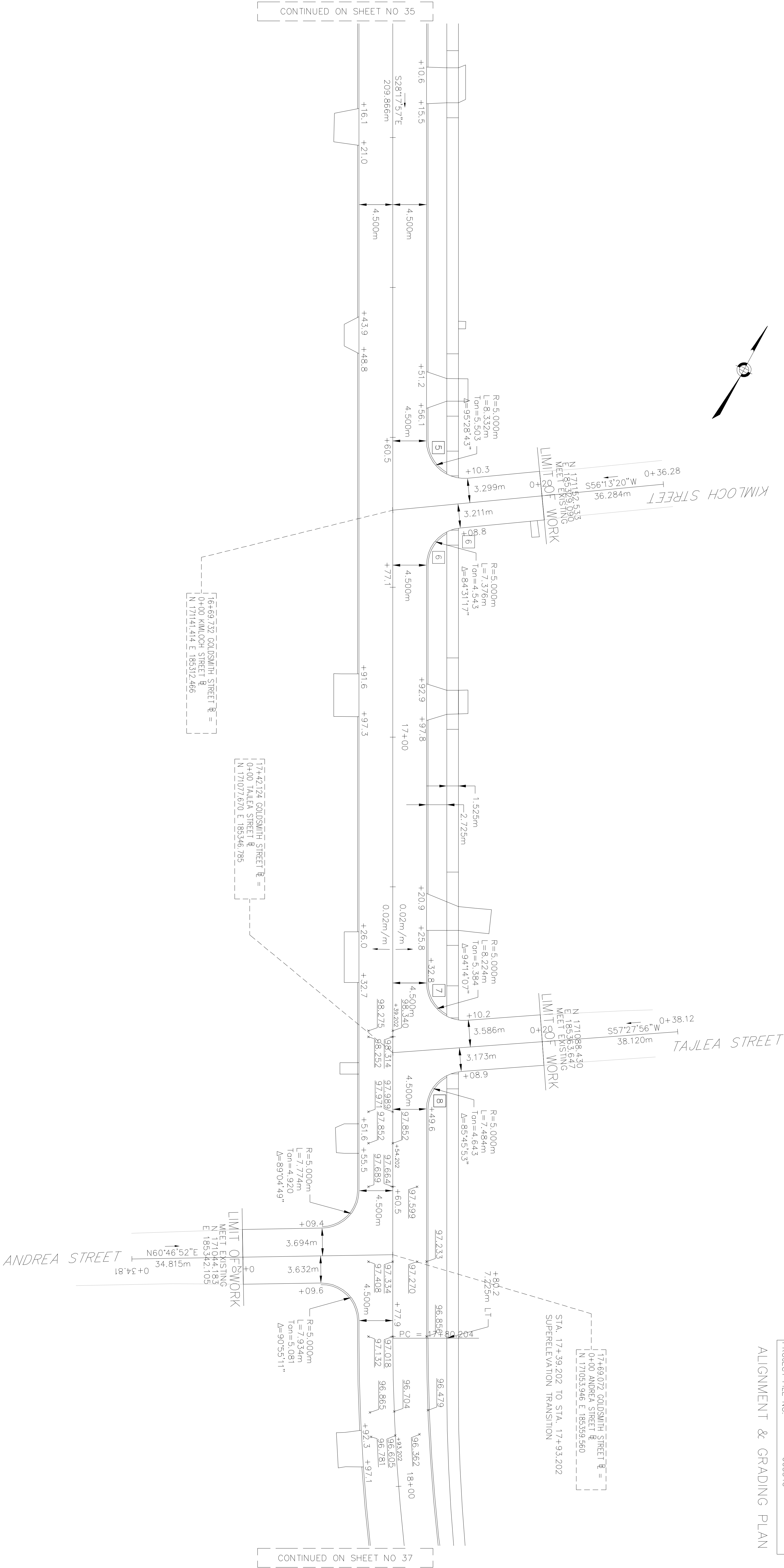


ALIGNMENT & GRADING PLAN



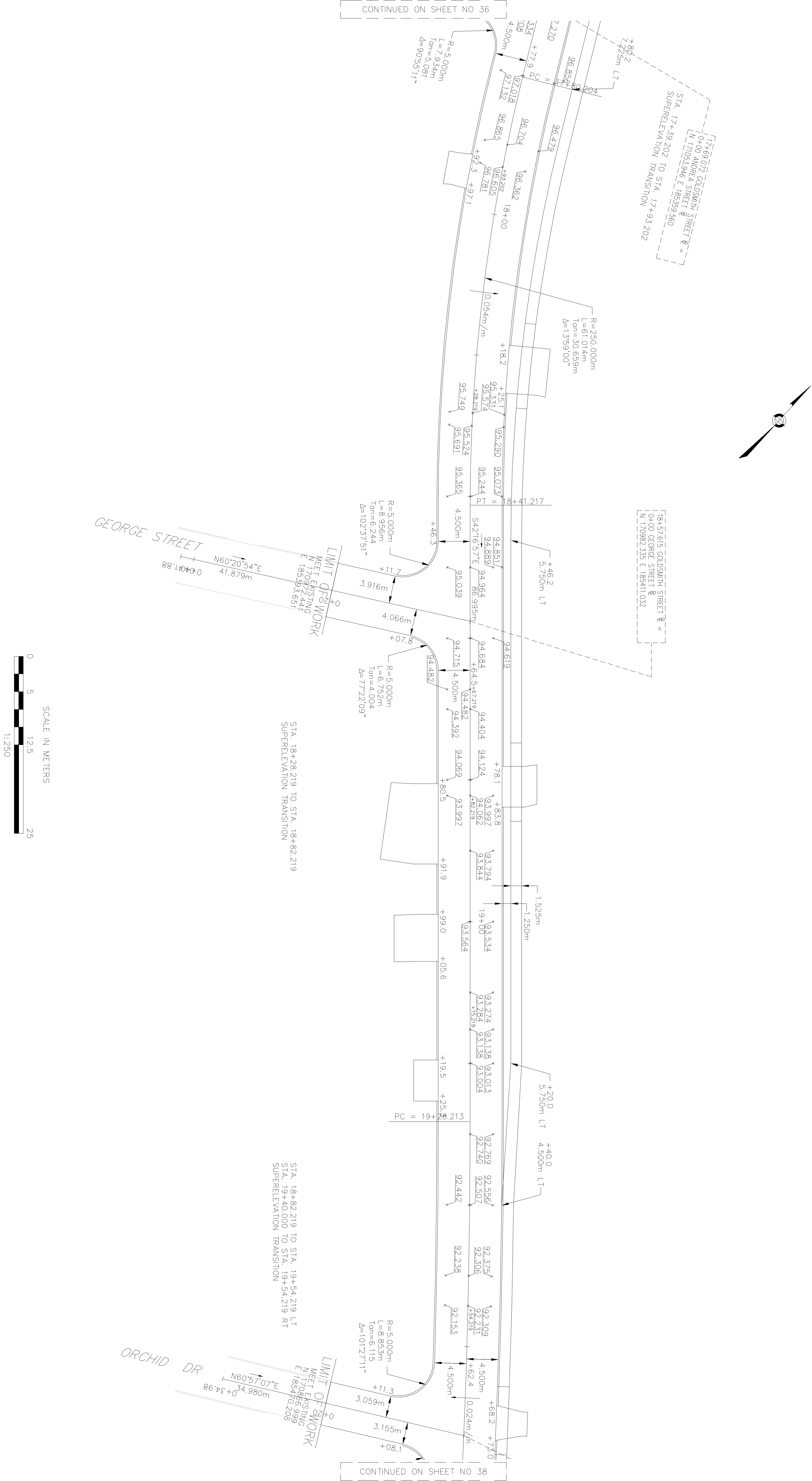
LITTLETON			
GOLDSMITH STREET			
STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET TOTAL
MASS.	STP-001S(639)X	2008	36 117
PROJECT FILE NO. 603540			

ALIGNMENT & GRADING PLAN

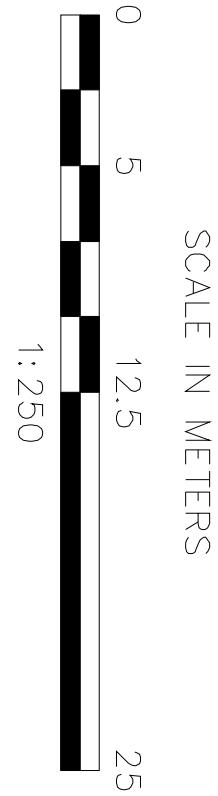


STATE		FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.		STP-001S(639)X	2008	37	117
PROJECT FILE NO.			603540		

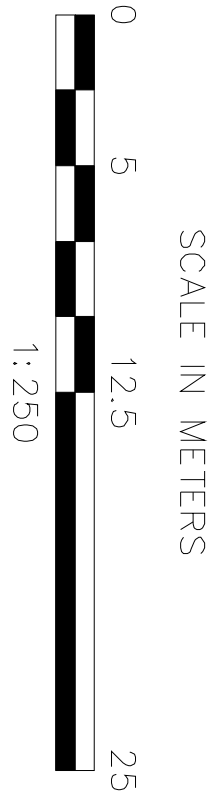
ALIGNMENT & GRADING PLAN



ALIGNMENT & GRADING PLAN

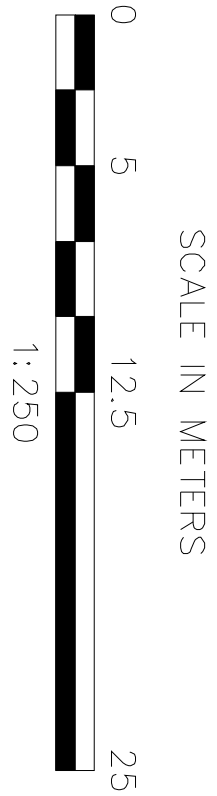
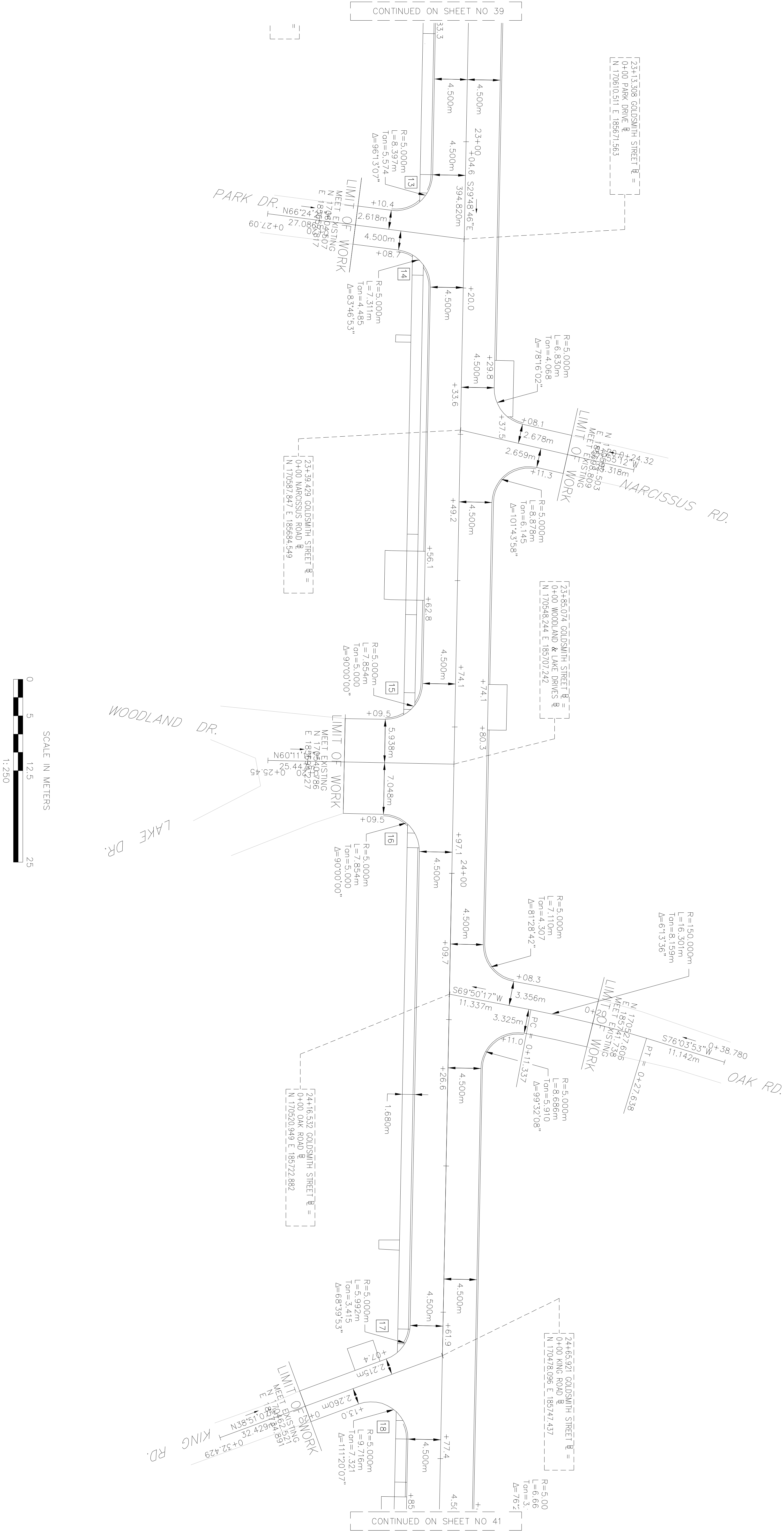


ALIGNMENT & GRADING PLAN



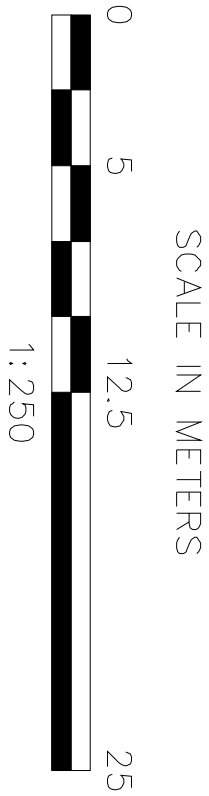
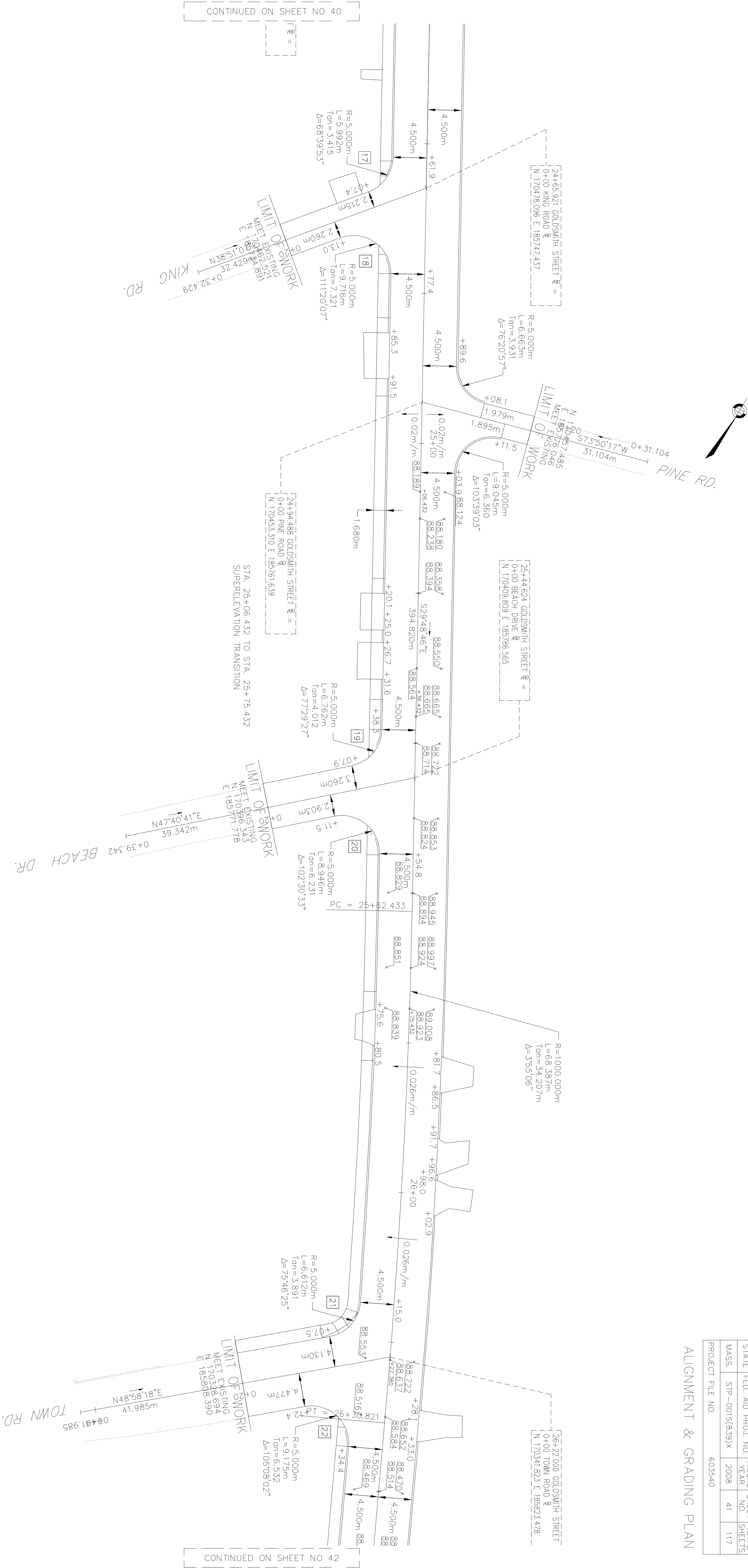
STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-001S(639)X	2008	40	117
PROJECT FILE NO. 603540				

ALIGNMENT & GRADING PLAN



LITTLETON GOLDSMITH STREET				
STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-0015(639)X	2008	41	117
PROJECT FILE NO.			603640	

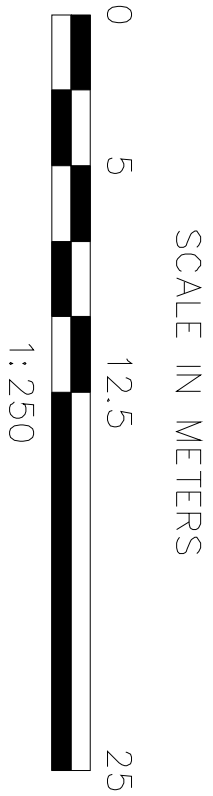
ALIGNMENT & GRADING PLAN



CONTINUED ON SHEET NO 40

CONTINUED ON SHEET NO 42

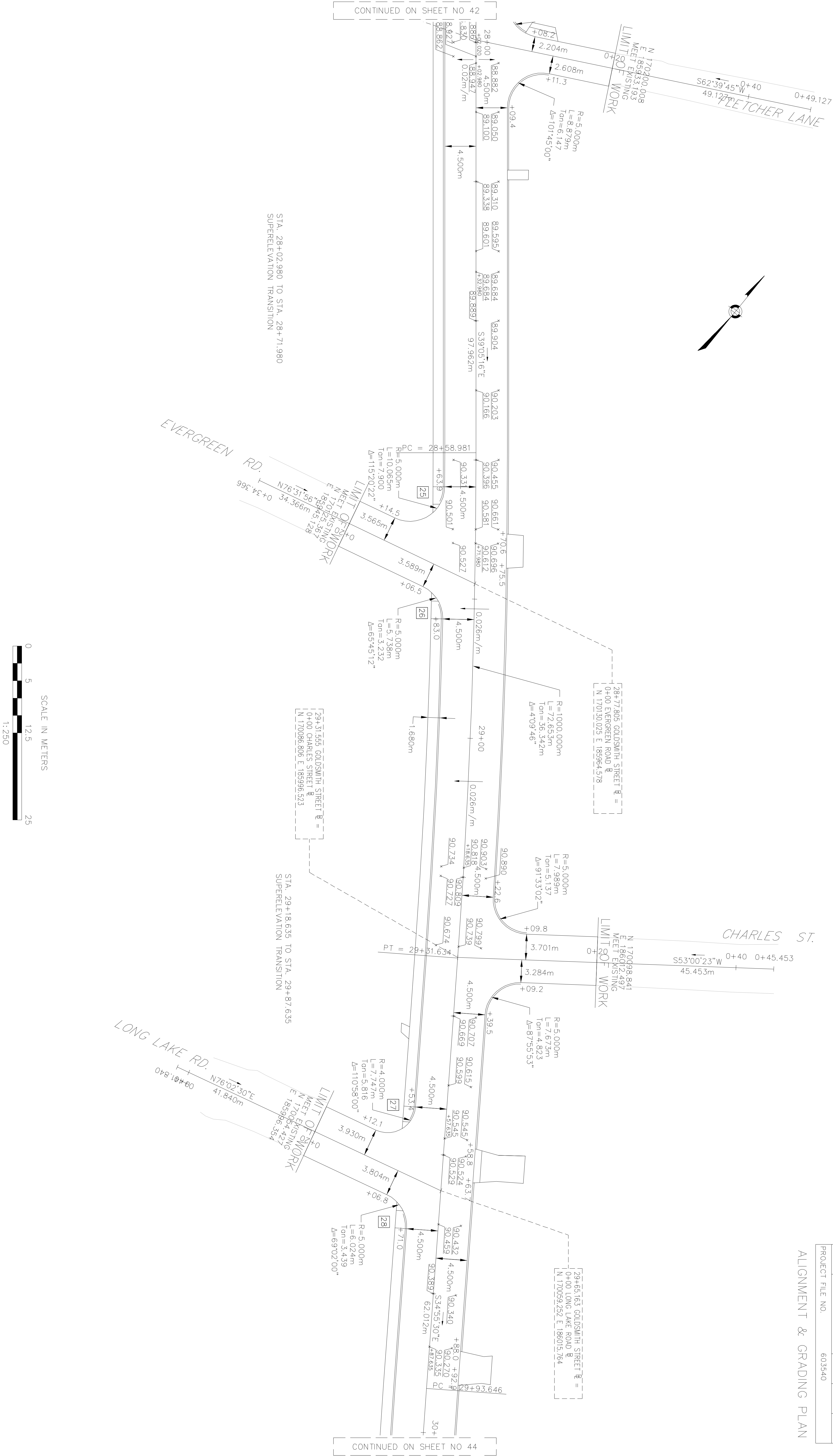
ALIGNMENT & GRADING PLAN



STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-0015	(639)X	2008	43	117
PROJECT FILE NO. 603540					

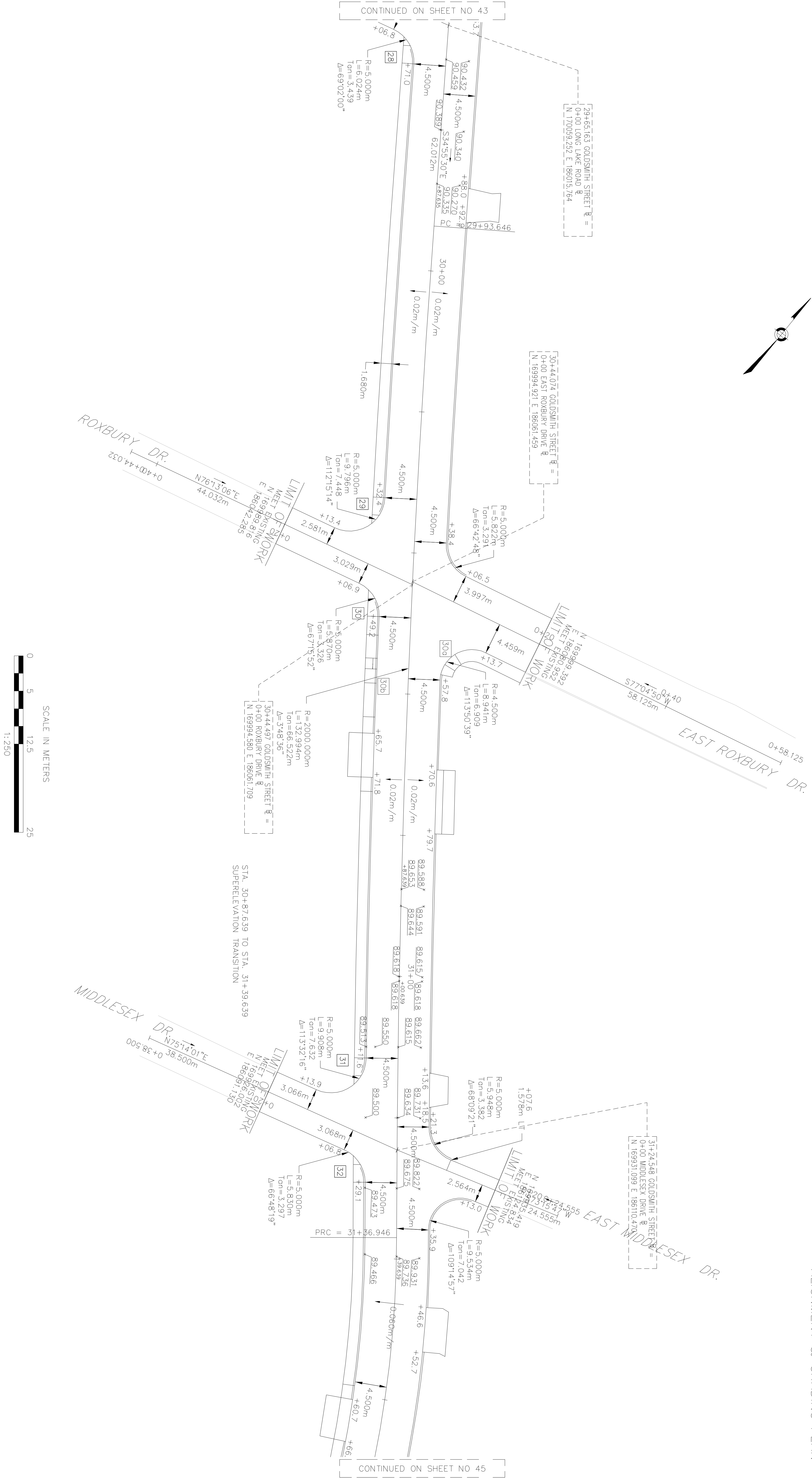
ALIGNMENT & GRADING PLAN

LITTLETON
GOLDSMITH STREET



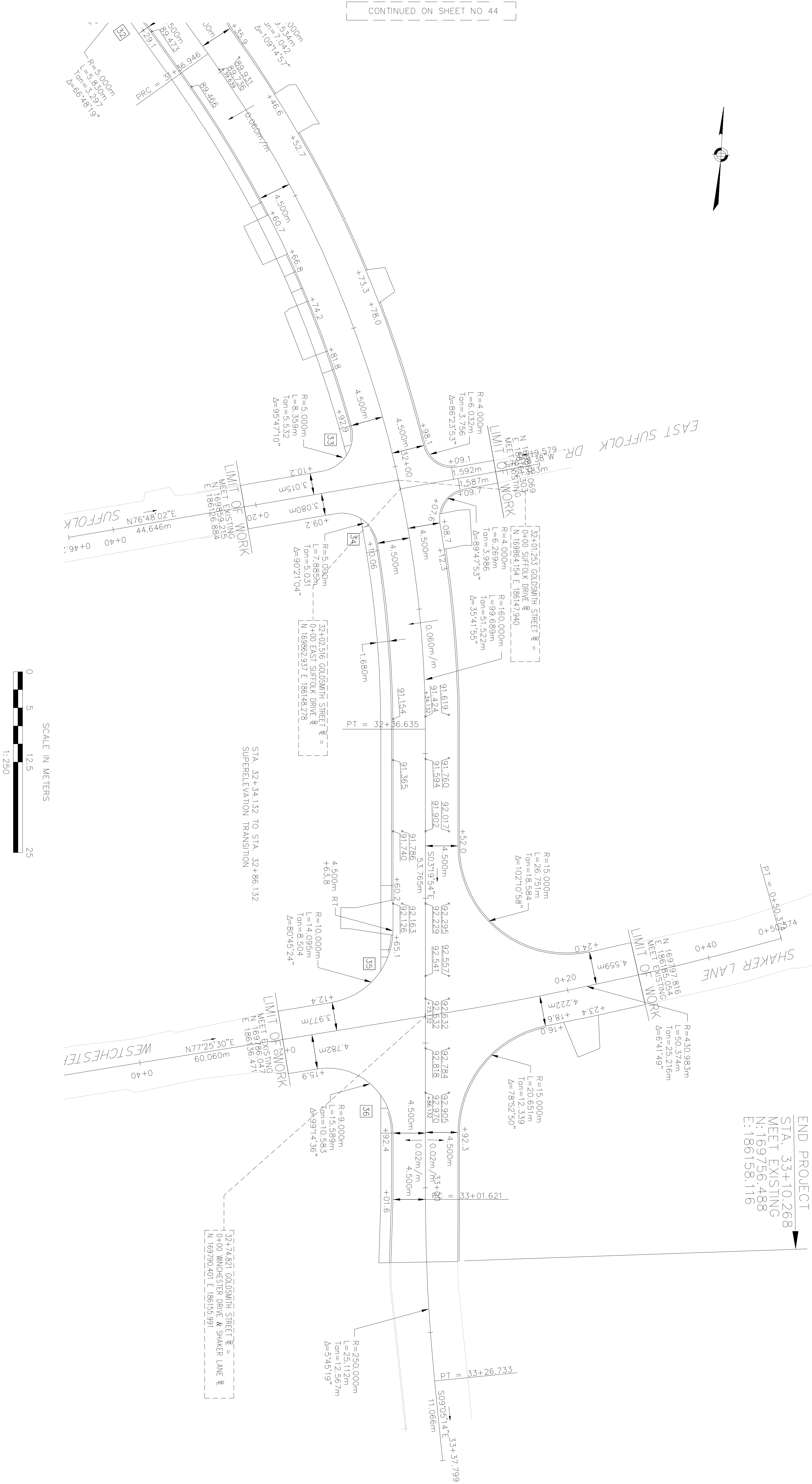
LITTLETON			
GOLDSMITH STREET			
STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET TOTAL
MASS	STP-0015(639)X	2008	44
PROJECT FILE NO.		603540	117

ALIGNMENT & GRADING PLAN



STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-001S(639)X	2008	45	117
PROJECT FILE NO.		603540		

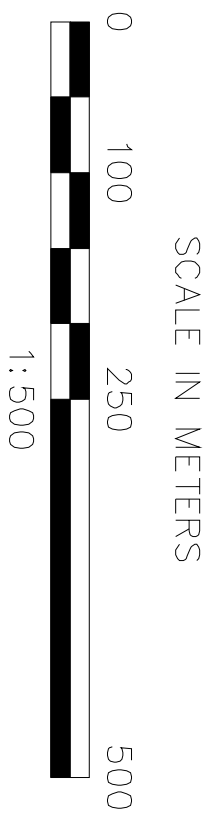
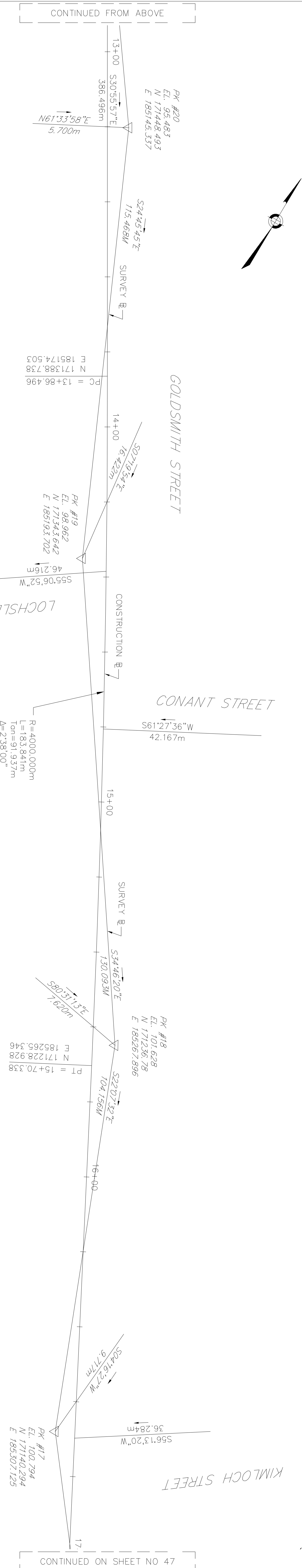
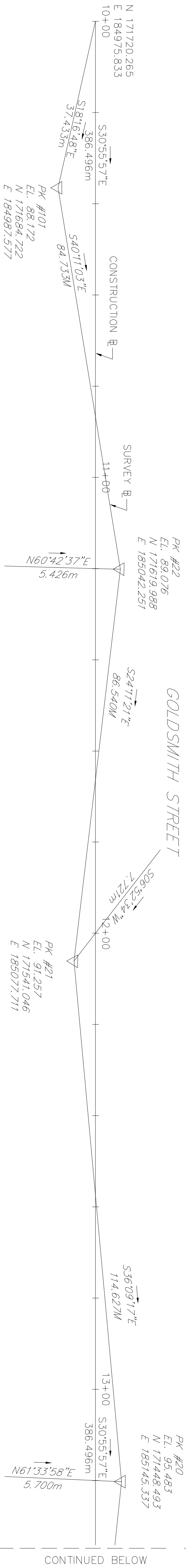
ALIGNMENT & GRADING PLAN

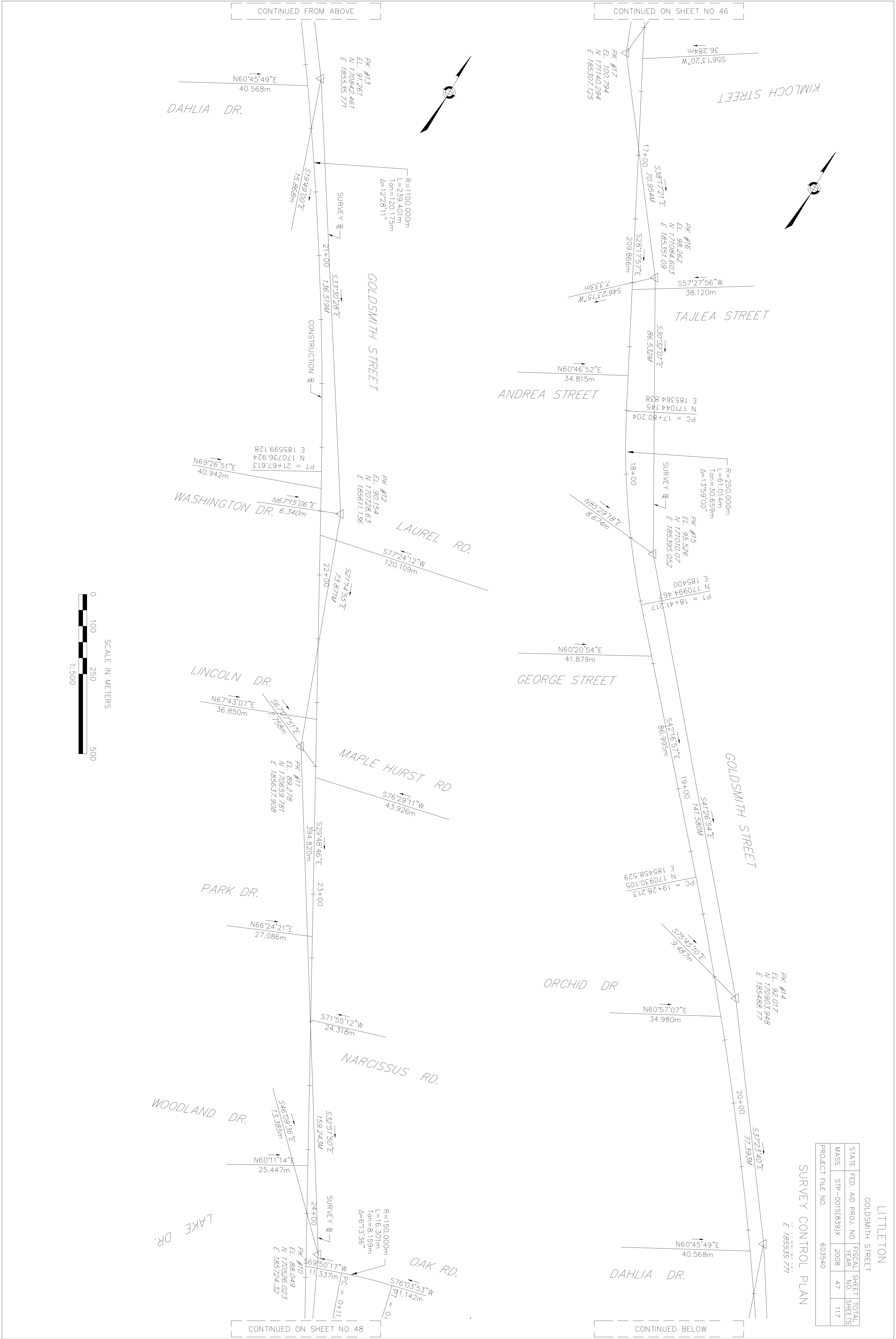


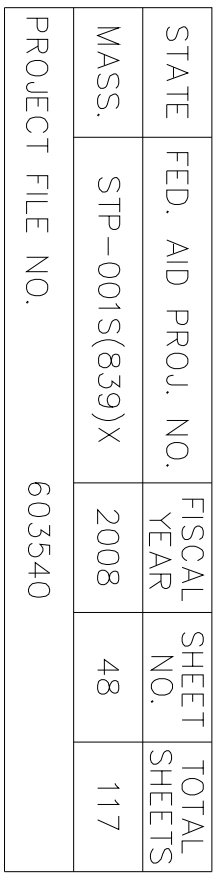
CONTINUED ON SHEET NO 44

GOLDSMITH STREET

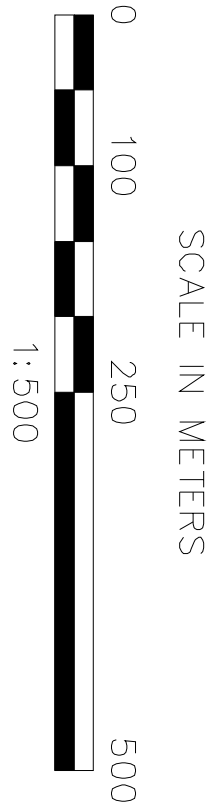
SURVEY CONTROL PLAN

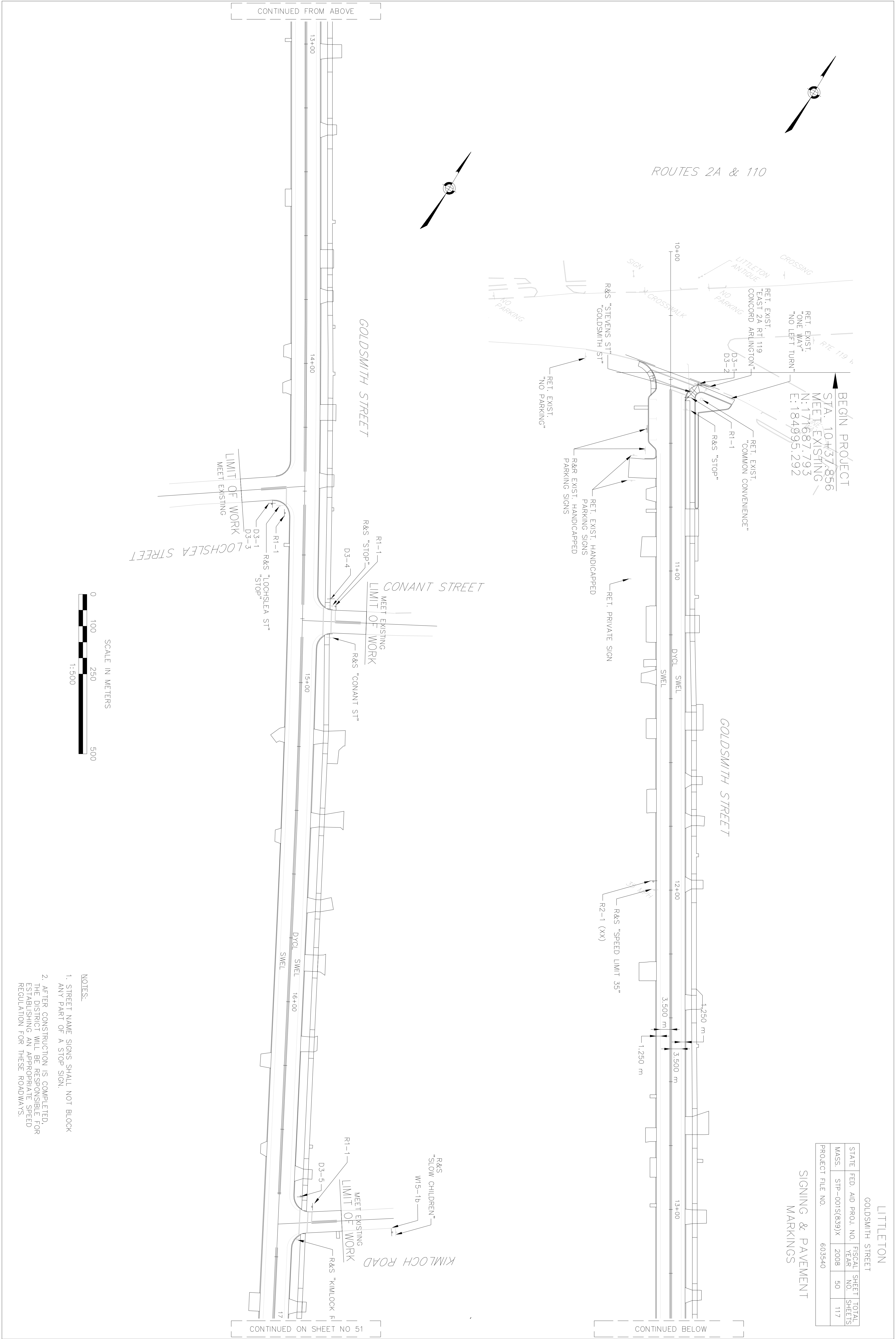


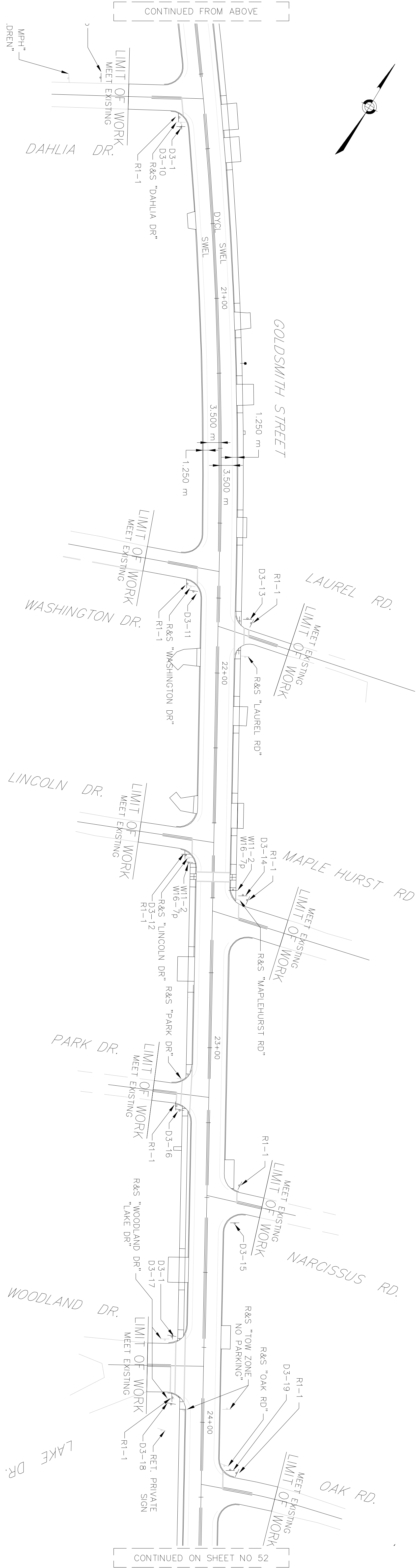
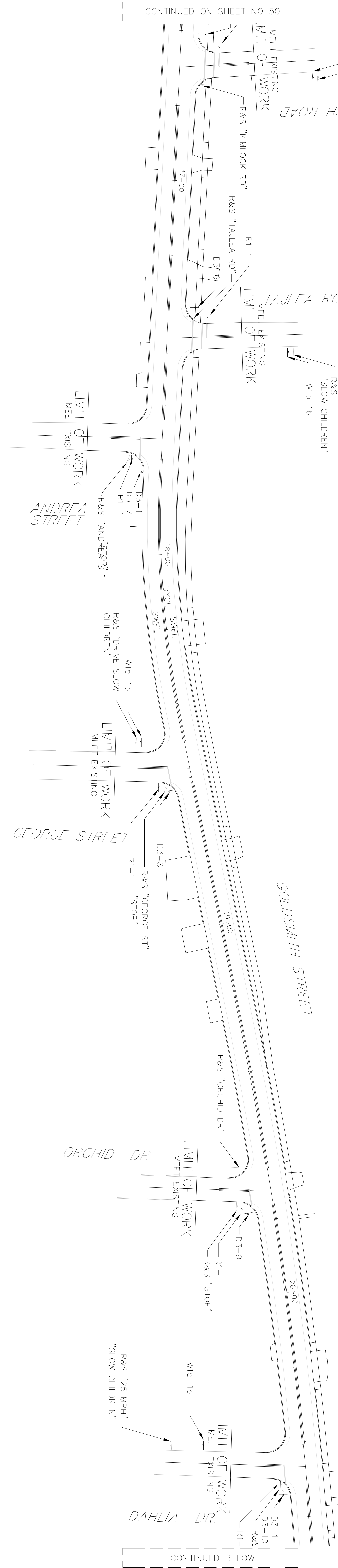




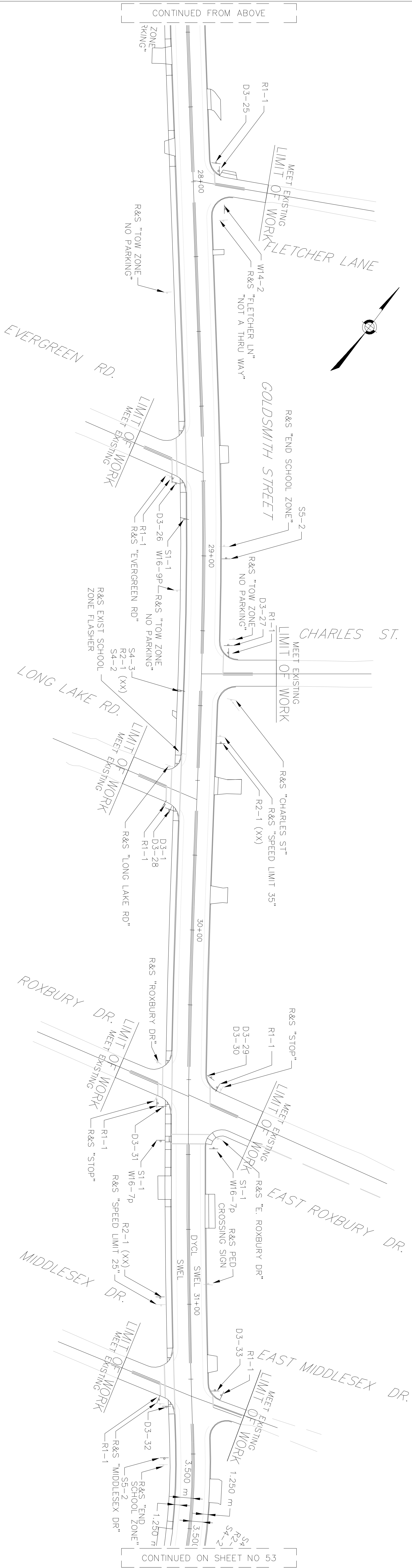
CONTINUED ON SHEET NO 48



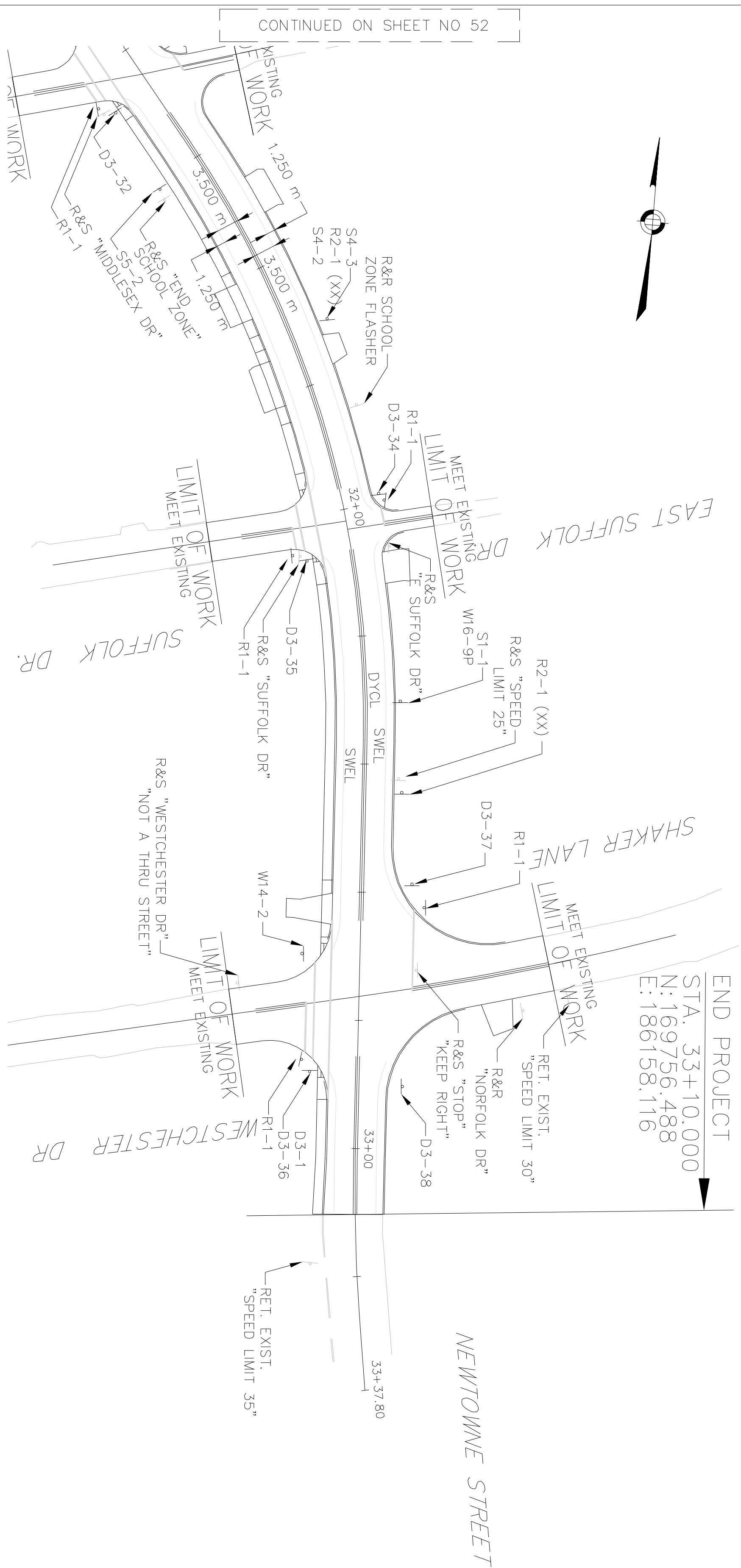




- NOTES:
1. STREET NAME SIGNS SHALL NOT BLOCK ANY PART OF A STOP SIGN.
 2. AFTER CONSTRUCTION IS COMPLETED, THE DISTRICT WILL BE RESPONSIBLE FOR ESTABLISHING AN APPROPRIATE SPEED REGULATION FOR THESE ROADWAYS.

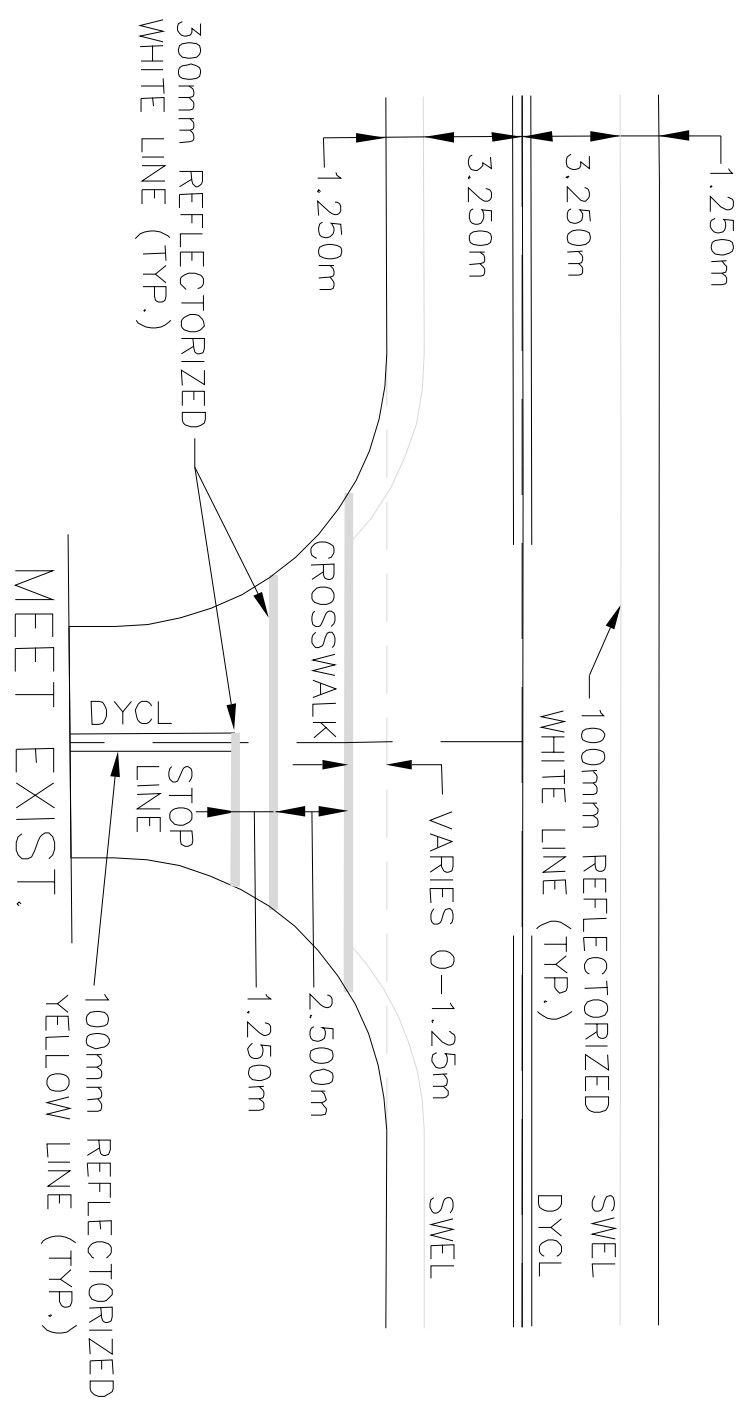
[illegible]

- NOTES:
1. STREET NAME SIGNS SHALL NOT BLOCK ANY PART OF A STOP SIGN.
 2. AFTER CONSTRUCTION IS COMPLETED, THE DISTRICT WILL BE RESPONSIBLE FOR ESTABLISHING AN APPROPRIATE SPEED REGULATION FOR THESE ROADWAYS.



STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-001S(839)X	2008	53	117
PROJECT FILE NO.		603540		

SIGNING & PAVEMENT MARKINGS



TYPICAL PAVEMENT MARKINGS

NOT TO SCALE

- NOTES:
1. STREET NAME SIGNS SHALL NOT BLOCK ANY PART OF A STOP SIGN.
 2. AFTER CONSTRUCTION IS COMPLETED, THE DISTRICT WILL BE RESPONSIBLE FOR ESTABLISHING AN APPROPRIATE SPEED REGULATION FOR THESE ROADWAYS.

STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-001S(639)X	2008	54	117
PROJECT FILE NO.				603640

SIGN SUMMARY

LITTLETON
 GOLDSMITH STREET

PERMANENT SIGNING

IDENTIFICATION NUMBER	SIZE OF SIGN (mm)	TEXT	TEXT DIMENSIONS			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.M.)	TOTAL AREA (S.M.)
			LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
D3-1	VAR.	300										
D3-1	VAR.	300				10	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 10)	-	EACH
D3-2	VAR.	300				1	GREEN	WHITE	WHITE	MOUNTED UNDER D3-1	-	EACH
D3-3	VAR.	300				1	GREEN	WHITE	WHITE	MOUNTED UNDER D3-1	-	EACH
D3-4	VAR.	300				1	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-5	VAR.	300				1	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-6	VAR.	300				1	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-7	VAR.	300				1	GREEN	WHITE	WHITE	MOUNTED UNDER D3-1	-	EACH
D3-8	VAR.	300				1	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-9	VAR.	300				1	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-10	VAR.	300				1	GREEN	WHITE	WHITE	MOUNTED UNDER D3-1	-	EACH
D3-11	VAR.	300				1	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-12	VAR.	300				1	GREEN	WHITE	WHITE	MOUNTED UNDER D3-1	-	EACH
D3-13	VAR.	300				1	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-14	VAR.	300				1	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH

- 1
- SEE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS" BY FEDERAL HIGHWAY ADMINISTRATION (LATEST EDITIONS) FOR SPECIFICATIONS ON TEXT DIMENSION AND COLOR (SEE ALSO THE "MASSACHUSETTS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", AND "GUIDE SIGN POLICY FOR SECONDARY STATE HIGHWAYS" (LATEST EDITIONS) BY THE MASSACHUSETTS HIGHWAY DEPARTMENT).

NOTES:

- HIGH INTENSITY ENCAPSULATED LENS REFLECTIVE SHEETING CONFORMING TO SECTION M9-30.0 TYPE III OR IV, OF THE MHD STANDARD SPECIFICATIONS, SHALL BE USED FOR ALL SIGNS.
- ALL P5 POSTS SHALL BE TELESCOPIC, RECTANGULAR TYPE POSTS, CONFORMING TO THE DIMENSIONS AND REQUIREMENTS OF THE MHD "STANDARD DRAWINGS FOR SIGNS AND SUPPORTS" (LATEST EDITIONS).
- TRAFFIC MANAGEMENT SIGNS SHALL BE REUSED ACCORDING TO CONSTRUCTION SCHEDULE IN ORDER TO MINIMIZE THE TOTAL NUMBER OF SIGNS NEEDED.
- THE NUMBER OF TEMPORARY CONSTRUCTION SIGNS SHOWN ABOVE IS A BARE MINIMUM AND MORE MAY BE REQUIRED DEPENDING ON CONSTRUCTION SEQUENCING.
- D6 AND D8 SERIES SIGNS SHALL USE LETTER TYPE C.

PERMANENT SIGNING

IDENTIFICATION NUMBER	SIZE OF SIGN (mm)	TEXT	TEXT DIMENSIONS			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.M.)	TOTAL AREA (S.M.)
			LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
D3-15	VAR.	300				1	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-16	VAR.	300				1	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-17	VAR.	300				1	GREEN	WHITE	WHITE	MOUNTED UNDER D3-1	-	EACH
D3-18	VAR.	300				1	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-19	VAR.	300				1	GREEN	WHITE	WHITE	MOUNTED UNDER D3-1	-	EACH
D3-20	VAR.	300				1	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-21	VAR.	300				1	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-22	VAR.	300				1	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-23	VAR.	300				1	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-24	VAR.	300				1	GREEN	WHITE	WHITE	MOUNTED UNDER D3-1	-	EACH
D3-25	VAR.	300				1	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-26	VAR.	300				1	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-27	VAR.	300				1	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-28	VAR.	300				1	GREEN	WHITE	WHITE	MOUNTED UNDER D3-1	-	EACH
D3-29	VAR.	300				1	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-30	VAR.	300				1	GREEN	WHITE	WHITE	MOUNTED UNDER D3-29	-	EACH
D3-31	VAR.	300				1	GREEN	WHITE	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH

STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-001S(639)X	2008	55	117

PROJECT FILE NO. 603540

SIGN SUMMARY

LITTLETON
GOLDSMITH STREET

P E R M A N E N T S I G N I N G

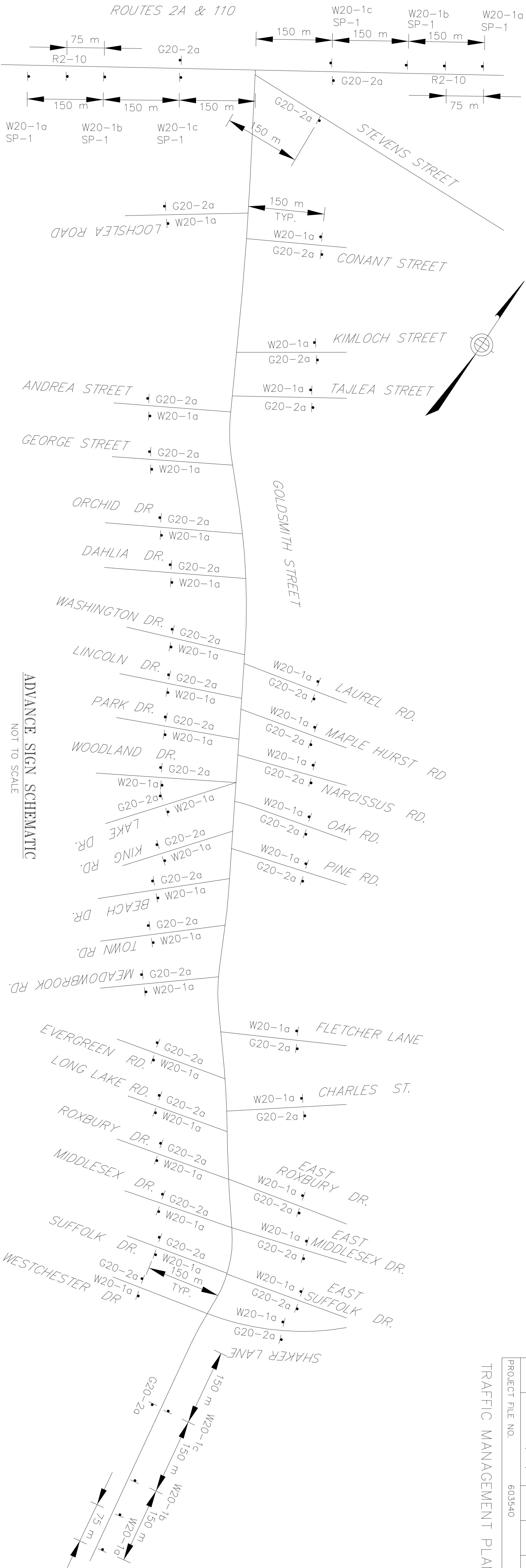
IDENTIFI- CATION NUMBER	SIZE OF SIGN (mm)		TEXT	TEXT DIMENSIONS			NUMBER OF SIGNS REQUIRED	COLOR		POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.M.)	TOTAL AREA (S.M.)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW REL. MKR.		BACK- GROUND	LEGEND			
D3-32	VAR.	300		150/ 100 C	75	-	1	GREEN	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-33	VAR.	300		150/ 100 C	75	-	1	GREEN	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-34	VAR.	300		150/ 100 C	75	-	1	GREEN	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-35	VAR.	300		150/ 100 C	75	-	1	GREEN	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-36	VAR.	300		150/ 100 C	75	-	1	GREEN	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-37	VAR.	300		150/ 100 C	75	-	1	GREEN	WHITE	1-50mm x 50mm P5 SQUARE TUBE POST (TOTAL = 1)	-	EACH
D3-38	VAR.	300		150/ 100 C	75	-	1	GREEN	WHITE	1, P5 POST (TOTAL = 34)	-	EACH
R1-1	750	750		(1)	(1)	(1)	34	RED	WHITE	1, P5 POST (TOTAL = 34)	0.563	3.375
R2-1(XX)	600	750		(1)	(1)	(1)	6	WHITE	BLACK	1, P5 POST (TOTAL = 6)	0.450	3.600
R2-10	1200	900		MHD STANDARD			3	MHD STANDARD		1, P7 POST (TOTAL = 7)	1.080	3.240
S5-2	600	750		(1)	(1)	(1)	2	WHITE	BLACK	1, P5 POST (TOTAL = 2)	0.270	0.540
S1-1	750	750		(1)	(1)	(1)	4	YELLOW	BLACK	1, P5 POST (TOTAL = 4)	0.563	2.252
W14-2P	750	750		(1)	(1)	(1)	2	YELLOW	BLACK	1, P5 POST (TOTAL = 2)	0.563	1.126
W16-7PL	600	300		(1)	(1)	(1)	4	YELLOW	BLACK	2, MOUNTED UNDER S1-1 2, MOUNTED UNDER W11-2	0.150	0.600
W16-9P	600	300		(1)	(1)	(1)	2	YELLOW	BLACK	2, MOUNTED UNDER S1-1	0.150	0.300
S4-2	600	250		(1)	(1)	(1)	2	WHITE	BLACK	2, MOUNTED UNDER R2-1	0.150	0.300
S4-3	600	200		(1)	(1)	(1)	2	YELLOW	BLACK	2, MOUNTED ABOVE R2-1	0.150	0.300
W15-1B	750	750		MHD STANDARD			1	YELLOW	BLACK	1, P5 POST (TOTAL = 1)	0.563	0.563
W11-2	750	750		(1)	(1)	(1)	2	YELLOW	BLACK	1, P5 POST (TOTAL = 2)	0.563	1.126

C O N S T R U C T I O N S I G N I N G

IDENTIFI- CATION NUMBER	SIZE OF SIGN (mm)		TEXT	TEXT DIMENSIONS			NUMBER OF SIGNS REQUIRED	COLOR		POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.M.)	TOTAL AREA (S.M.)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW REL. MKR.		BACK- GROUND	LEGEND			
G20-2a	1200	600		(1)	(1)	(1)	8	ORANGE	BLACK	1-100 mm x 100 mm WOOD POST (TOTAL=8)	0.720	5.760
W1-4L	750	750		(1)	(1)	(1)	1	ORANGE	BLACK	TRIPOD	0.563	0.563
W1-4R	750	750		(1)	(1)	(1)	2	ORANGE	BLACK	TRIPOD	0.563	1.126
W5-1	900	900		(1)	(1)	(1)	2	ORANGE	BLACK	TRIPOD	0.810	1.620
W8-1	750	750		(1)	(1)	(1)	3	ORANGE	BLACK	TRIPOD	0.563	1.689
W8-3	750	750		(1)	(1)	(1)	3	ORANGE	BLACK	TRIPOD	0.563	1.689
W8-8	750	750		(1)	(1)	(1)	3	ORANGE	BLACK	TRIPOD	0.563	1.689
W13-1	600	600		(1)	(1)	(1)	5	ORANGE	BLACK	MOUNT WITH OTHER SIGNS	0.360	1.800
W20-1a	1200	1200		(1)	(1)	(1)	8	ORANGE	BLACK	1-100 mm x 100 mm WOOD POST (TOTAL=8)	1.440	11.520
W20-1b	1200	1200		(1)	(1)	(1)	7	ORANGE	BLACK	1-100 mm x 100 mm WOOD POST (TOTAL=7)	1.440	10.080
W20-1c	1200	1200		(1)	(1)	(1)	9	ORANGE	BLACK	1-100 mm x 100 mm WOOD POST (TOTAL=9)	1.440	12.960
W20-4	1200	1200		(1)	(1)	(1)	6	ORANGE	BLACK	TRIPOD	1.440	8.640
W20-8	900	900		MHD STANDARD			6	ORANGE	BLACK	TRIPOD	0.810	4.860
W21-5	750	750		(1)	(1)	(1)	1	ORANGE	BLACK	TRIPOD	0.563	0.563
R9-9	750	450		(1)	(1)	(1)	2	WHITE	BLACK	MOUNT ON BARRICADE	0.338	0.675
R9-11A	1200	600		(1)	(1)	(1)	2	WHITE	BLACK	MOUNT ON BARRICADE	0.720	1.440
SP-1	1140	300		150/ 100B	75	-	6	ORANGE	BLACK	MOUNT WITH OTHER SIGNS	0.855	5.130

LITTLETON			
GOLDSMITH STREET			
STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET TOTAL
MASS	STP-0015(639)X	2008	56
PROJECT FILE NO.			603540
			117

TRAFFIC MANAGEMENT PLANS



ADVANCE SIGN SCHEMATIC

NOT TO SCALE

TRAFFIC MANAGEMENT NOTES:

- SEE SPECIAL PROVISIONS FOR ROADWAY WORK RESTRICTIONS.
- THE FINAL LOCATION OF SIGNS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- THE CONTRACTOR SHALL REMOVE ALL EXISTING PAVEMENT MARKINGS THAT ARE IN CONFLICT WITH THE PROPOSED PAVEMENT MARKINGS OF THE TRAFFIC MANAGEMENT SCHEME CHOSEN.
- TEMPORARY PAVEMENT MARKINGS SHALL BE USED AS REQUIRED BY THE PLANS OR THE ENGINEER, AND SHALL BE IN PLACE BEFORE WORK IS COMPLETE EACH NIGHT.
- ALL CONSTRUCTION TRAFFIC CONTROLS SHALL BE IN PLACE PRIOR TO THE START OF WORK.
- ALL TRENCHES SHALL BE BACKFILLED OR COVERED WITH BEVELLED STEEL PLATES DURING NON-WORKING HOURS.
- THE FIRST THREE PLASTIC DRUMS OF EVERY TAPER IN EACH DIRECTION SHALL BE MOUNTED WITH TYPE A LIGHTS.
- THE RESIDENT ENGINEER SHALL DETERMINE ADVISORY SPEED LIMITS THROUGH WORK ZONES.
- ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS.
- ALL SIGN LEGENDS, BORDERS AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
- SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, AND REFLECTORIZED PLASTIC DRUMS WITH LIGHTING DEVICES MOUNTED ON THEM, MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES."
- CONTRACTORS SHALL NOTIFY EACH ABUTTER 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.
- 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.
- WHEN CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED TO THE EXTENT THAT TRAFFIC MAINTENANCE IS NO LONGER NEEDED, THE CONTRACTOR SHALL REMOVE ALL SIGN AND SUPPORT SYSTEMS IN THEIR ENTIRETY AND PATCH ALL DISTURBED PAVEMENTS.
- ALL DRUMS SHALL BE APPROXIMATELY PLACED AND MOVED AS NECESSARY TO MAINTAIN ADEQUATE ABUTTER ACCESS AT ALL POSSIBLE TIMES. WORK MAY REQUIRE ADDITIONAL SIGNS, DRUMS AND OTHER TRAFFIC CONTROL DEVICES, GRADING AND TEMPORARY PAVEMENT FOR PASSAGE OF PEDESTRIAN, VEHICULAR AND EMERGENCY TRAFFIC THROUGH THE WORK AREAS, BOTH DURING AND AFTER WORKING HOURS, TO MAINTAIN SUCH ACCESS.
- SIGN LOCATIONS CAN BE ADJUSTED AS NECESSARY BY THE ENGINEER.
- TAPER DISTANCE, $L = WS$ IF $S \leq 60$
155
- WHERE: W = WIDTH OF CLOSURE, METERS
 S = POSTED SPEED LIMIT, KILOMETERS PER HOUR
 L = MINIMUM LENGTH OF TAPER, METERS
- TRAFFIC CONTROL DEVICES REQUIRED ONLY DURING WORKING HOUR OPERATIONS SHALL BE REMOVED AT THE END OF EACH DAY.²
- SIGNS HAVING MESSAGES THAT ARE IRRELEVANT TO TRAFFIC CONDITIONS SHALL BE REMOVED OR PROPERLY COVERED.
- SIGNS SHALL BE KEPT CLEAN AT ALL TIMES AND LEGENDS SHALL BE DISTINCTIVE AND UNMARRIED.
- NO SIGNS SHALL BE ATTACHED TO DRUMS OR CONES. ALL SIGNS SHALL BE ATTACHED TO THEIR OWN INDEPENDENT SUPPORTS.

ADVANCE WARNING

CONSTRUCTION SIGNS

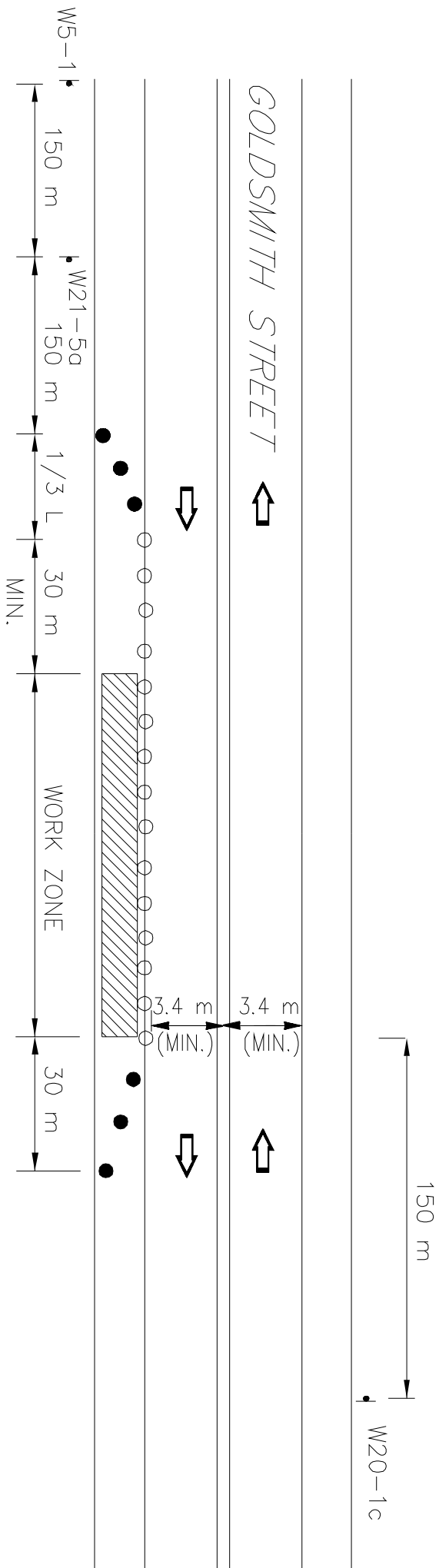
SIGN DESIGNATION	LEGEND
W20-1a	ROAD WORK AHEAD
W20-1b	ROAD WORK 1000 FT
W20-1c	ROAD WORK 500 FT
G20-2a	END ROAD WORK

NOTES:

- ALL ADVANCE SIGNS TO BE IN PLACE FOR THE DURATION OF THE PROJECT.
- W20-1 SIGNS SHALL BE EQUIPPED WITH STANDARD ORANGE FLAGS.
- W20-1 SIGNS SHALL NOT BLOCK THE SIGN FACE.

SHOULDER WORK WITH MINOR ENCROACHMENT

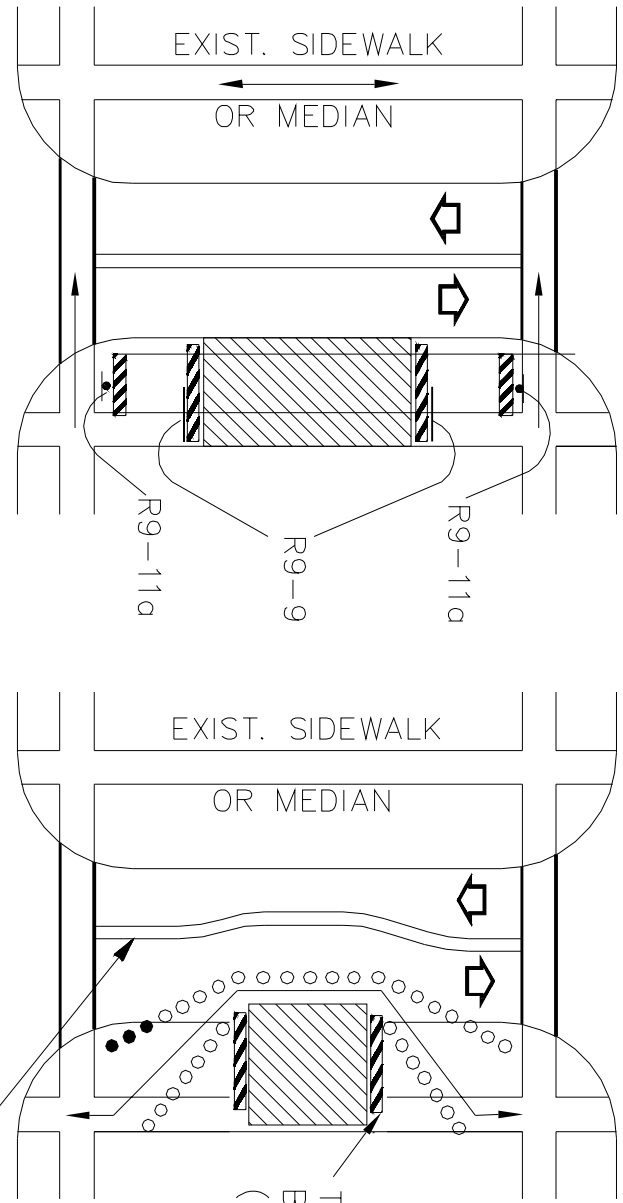
NOT TO SCALE



STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-001S(639)X	2008	57	117
PROJECT FILE NO.		603540		

TRAFFIC MANAGEMENT PLANS

LITTLETON
GOLDSMITH STREET



PEDESTRIAN DETOUR
(TEMPORARY CROSSWALK MAY NEED
TO BE PROVIDED IF NONE EXIST
WITHIN 60 m OF CLOSURE.)

WALKWAY PROVIDED
TEMPORARY PAVEMENT MARKINGS

SIDEWALK CLOSURES AND
BYPASS WALKWAY

NOT TO SCALE

- NOTES
1. TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE SHIFTING AND CLOSURE DETAILS, DURING CONSTRUCTION STAGING, AND AS REQUIRED BY THE ENGINEER.
 2. EXISTING SIDEWALK SHALL BE EQUIPPED WITH TEMPORARY PEDESTRIAN RAMPS AT CROSSINGS.
 3. ADDITIONAL ADVANCE WARNING MY BE NECESSARY.
 4. CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN.
 5. IF THE WORK ZONE DOES NOT PERMIT PEDESTRIANS TO TRAVEL ADJACENT TO IT, APPROPRIATE SIGNS SHALL BE INSTALLED AS SHOWN IN PEDESTRIAN DETOUR DETAIL, AND AS REQUIRED BY THE ENGINEER.

LEGEND

- REFLECTORIZED DRUM
SPACED 9 m ON CENTER
- REFLECTORIZED DRUM W/TYPE A
FLASHER, SPACED 7.5 m ON CENTER
- Ⓢ TRAFFIC OFFICER
- ➡ DIRECTION OF TRAVEL
- ▨ WORK AREA
- Ⓢ SIGN WITH POST
- ➡ TYPE III BARRICADE
- ➡ DIRECTION OF PEDESTRIAN TRAVEL

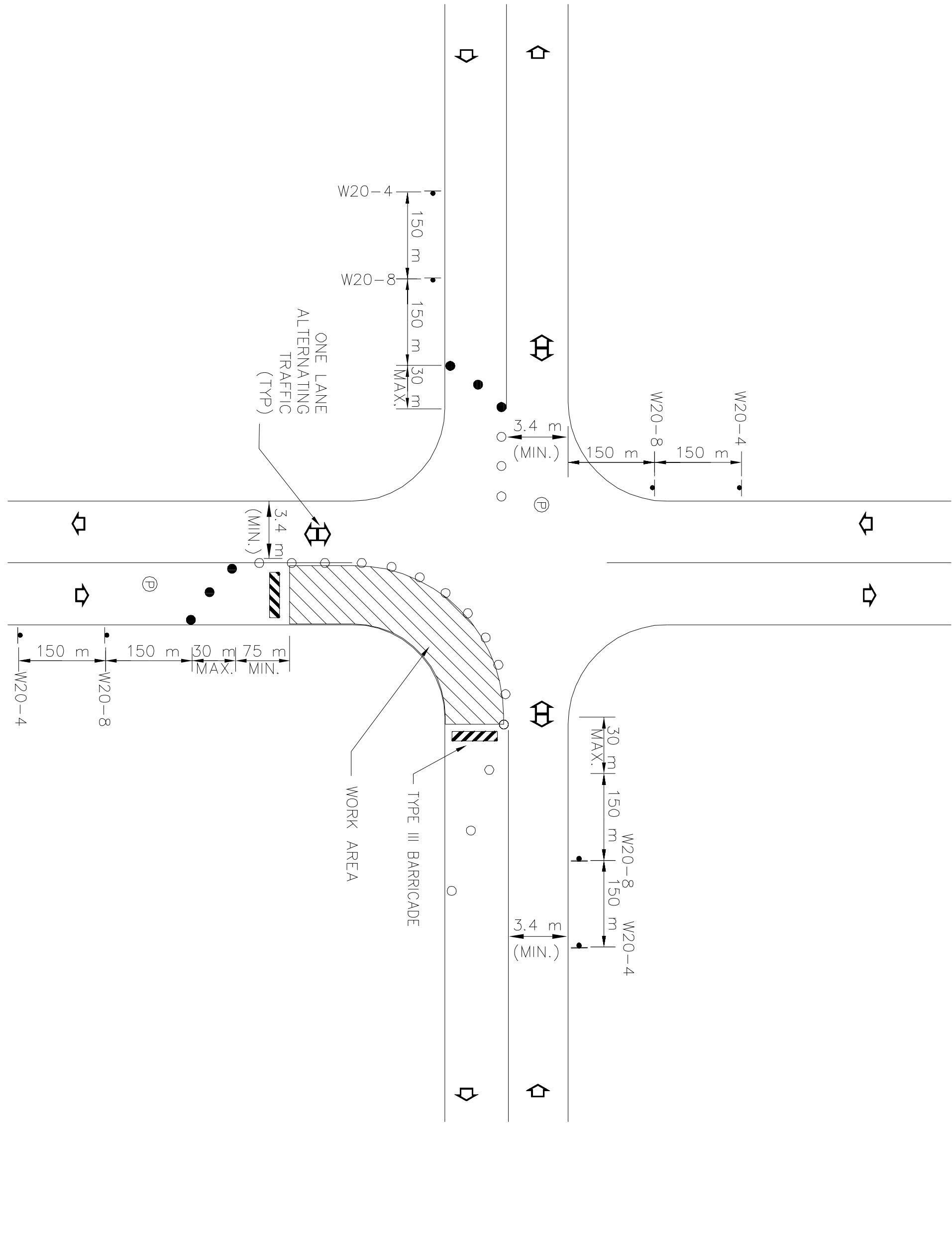
ADVANCE WARNING

CONSTRUCTION SIGNS

- SIGN DESIGNATION
- LEGEND
- W1-4L/R ROAD NARROWS
 - W5-1 BUMP
 - W8-1 PAVEMENT ENDS
 - W8-3 ROUGH ROAD
 - W8-8 XX
 - W13-1 M.P.H.
 - W20-4 ONE LANE ROAD 1000 FT
 - W20-8 POLICE OFFICER AHEAD
 - W21-5 SHOULDER WORK
 - R9-9 SIDEWALK CLOSED
 - R9-11a SIDEWALK CLOSED CROSS HERE
 - W21-5a RIGHT SHOULDER CLOSED

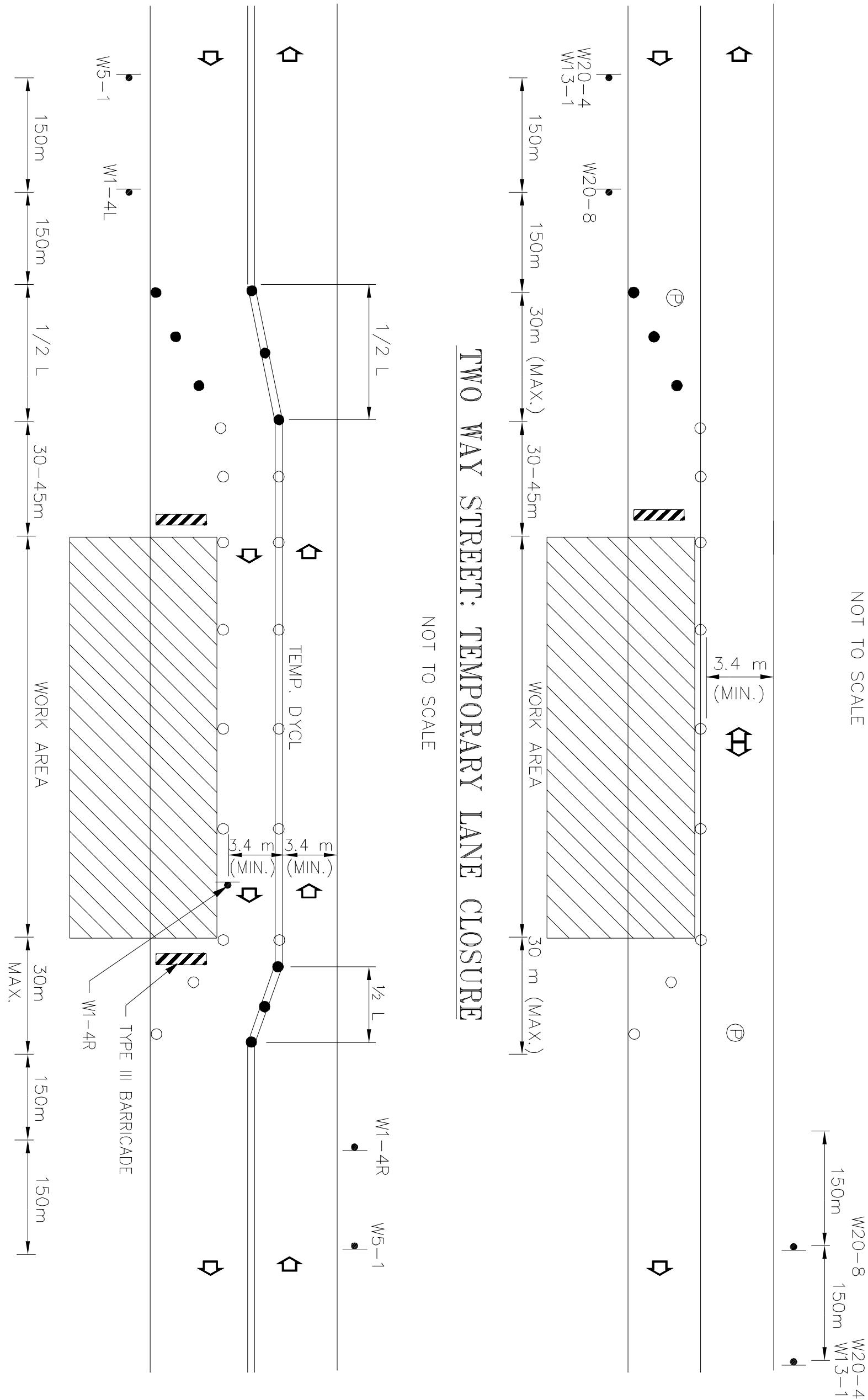
TYPICAL TEMPORARY LANE
CLOSURE AT INTERSECTIONS

NOT TO SCALE



TWO WAY STREET: TEMPORARY LANE CLOSURE

NOT TO SCALE

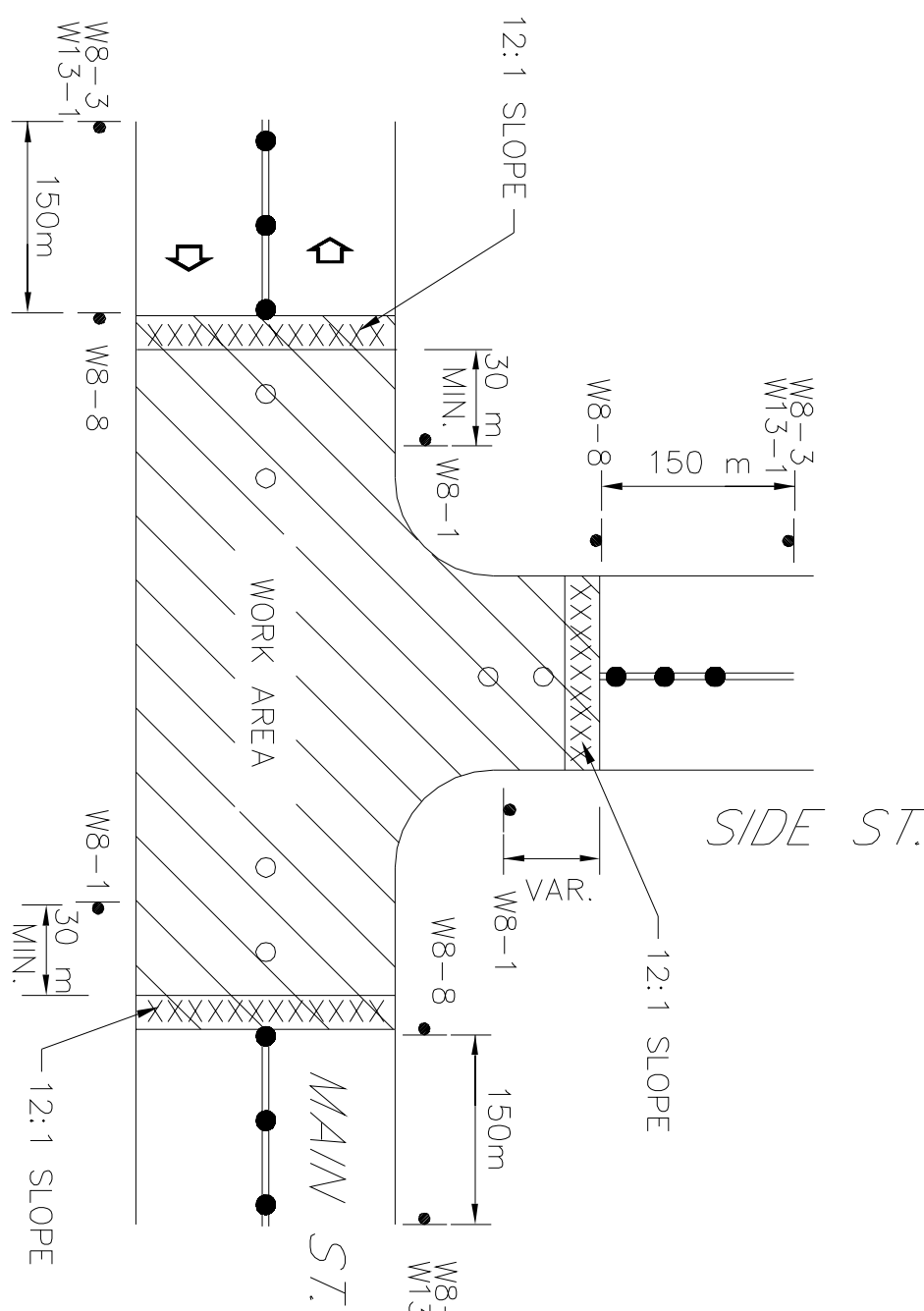


TWO WAY STREET LANE SHIFT

NOT TO SCALE

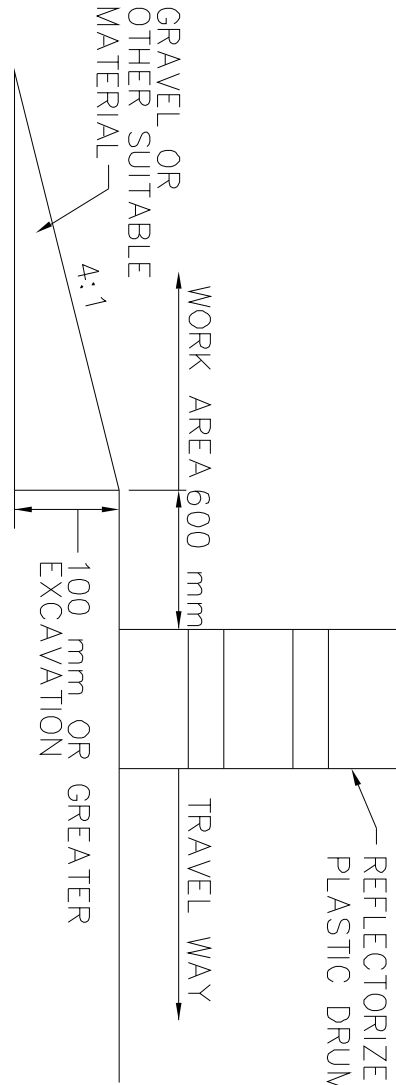
TRAFFIC CONTROL NON-WORK HOURS
(WHEN PAVEMENT HAS BEEN REMOVED)

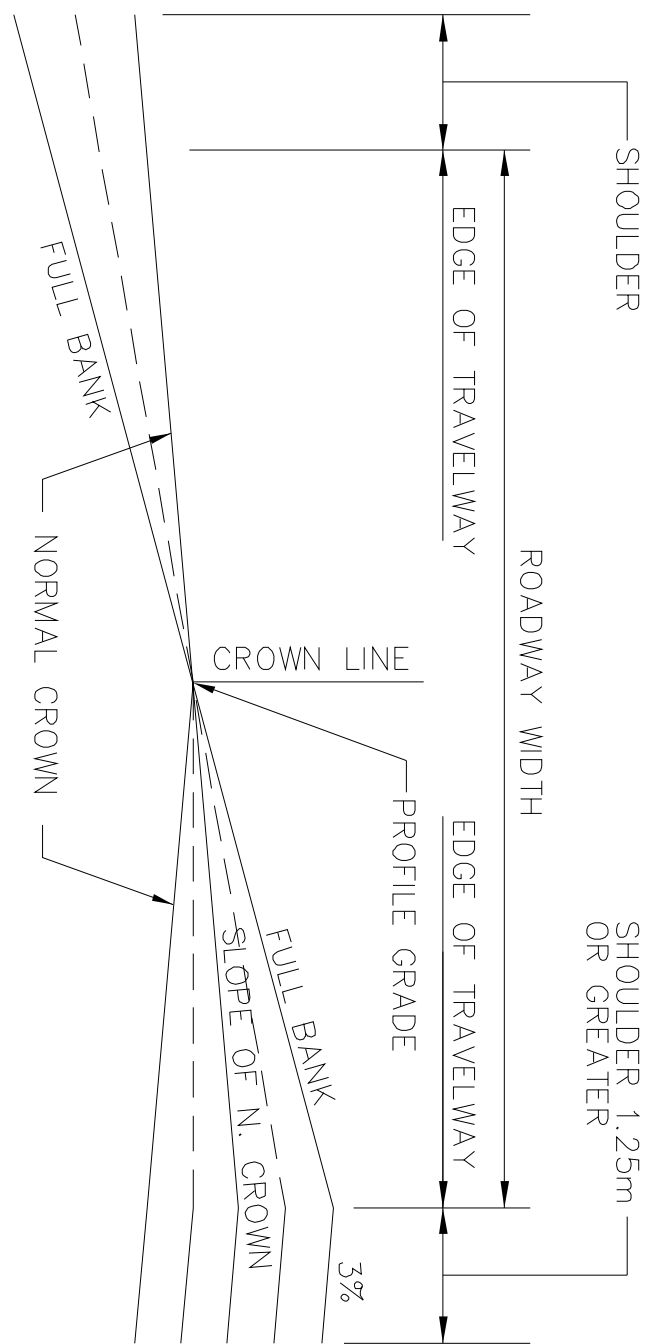
NOT TO SCALE



LATERAL DROP-OFF DETAIL

NOT TO SCALE

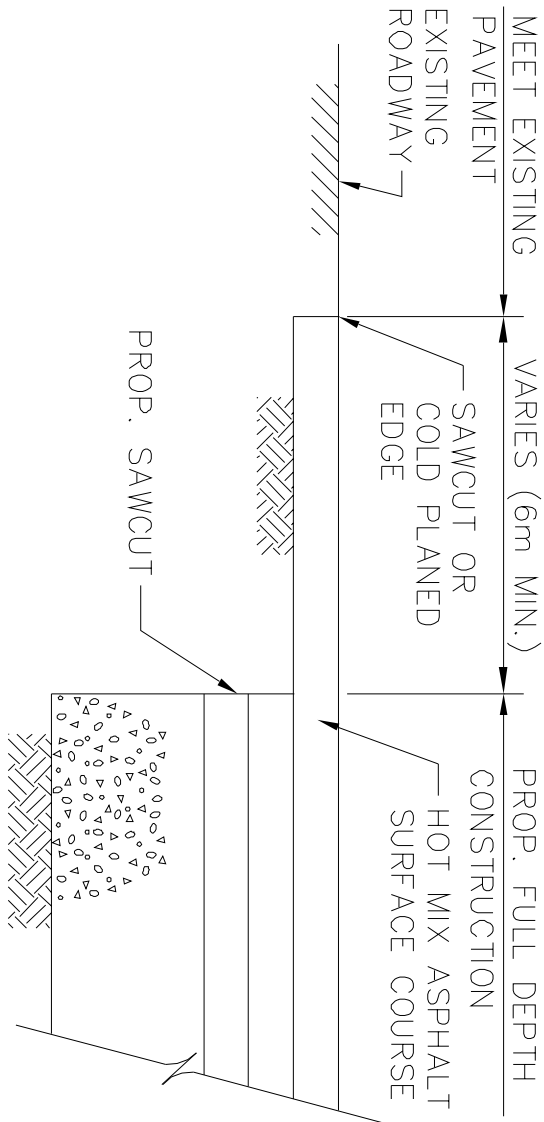




NOTE: ROTATION ABOUT CENTERLINE OF TRAVEL WAY.

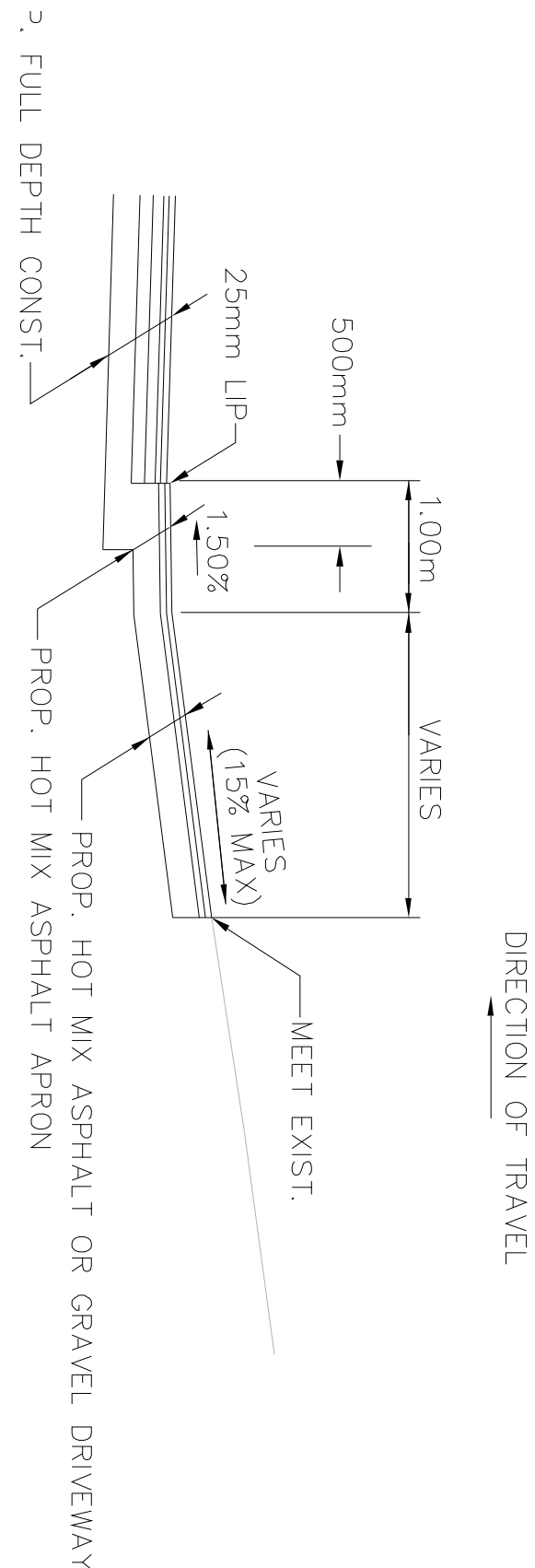
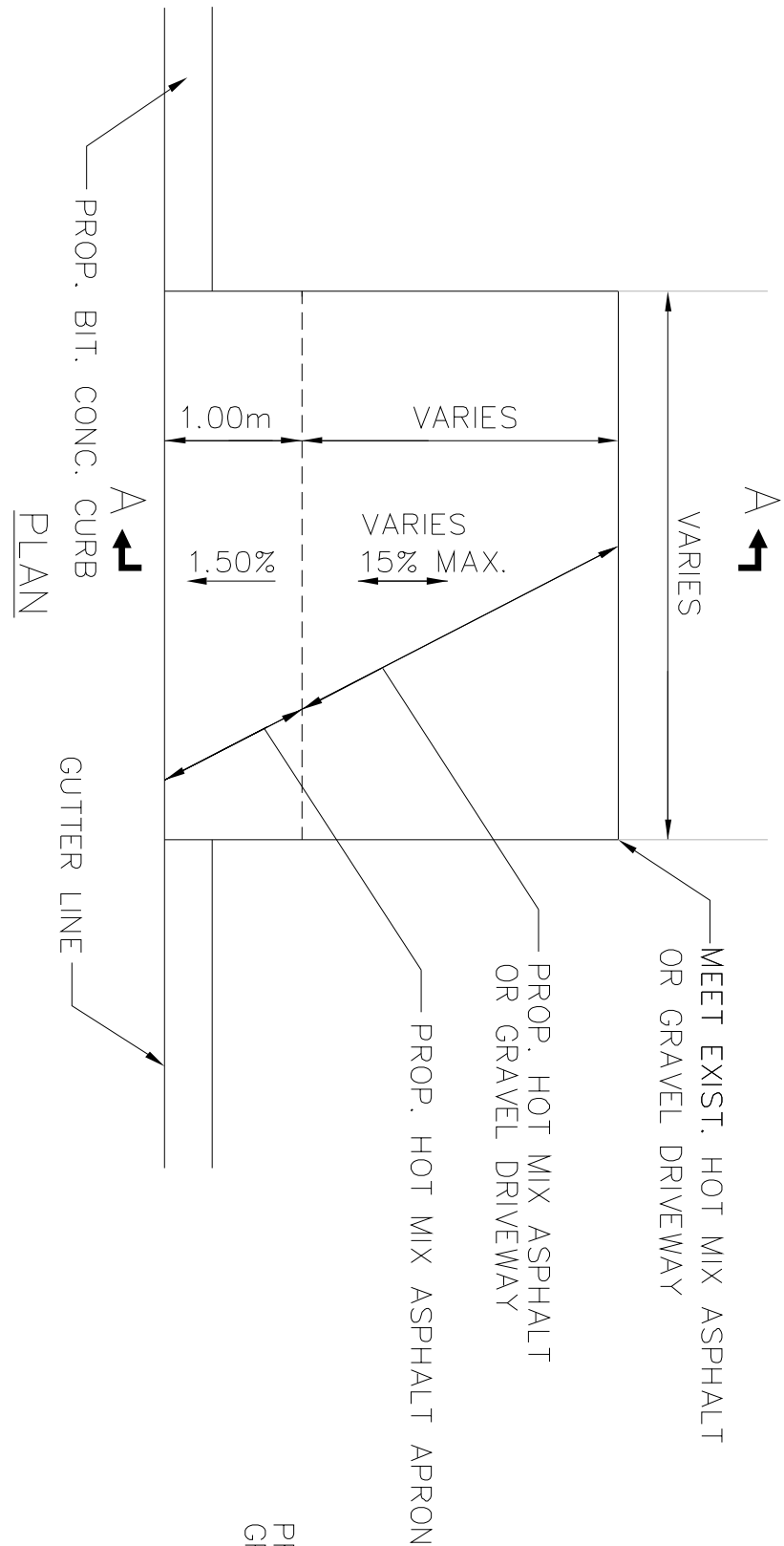
METHOD OF BANKING

NOT TO SCALE



FULL DEPTH PAVEMENT TRANSITION

NOT TO SCALE

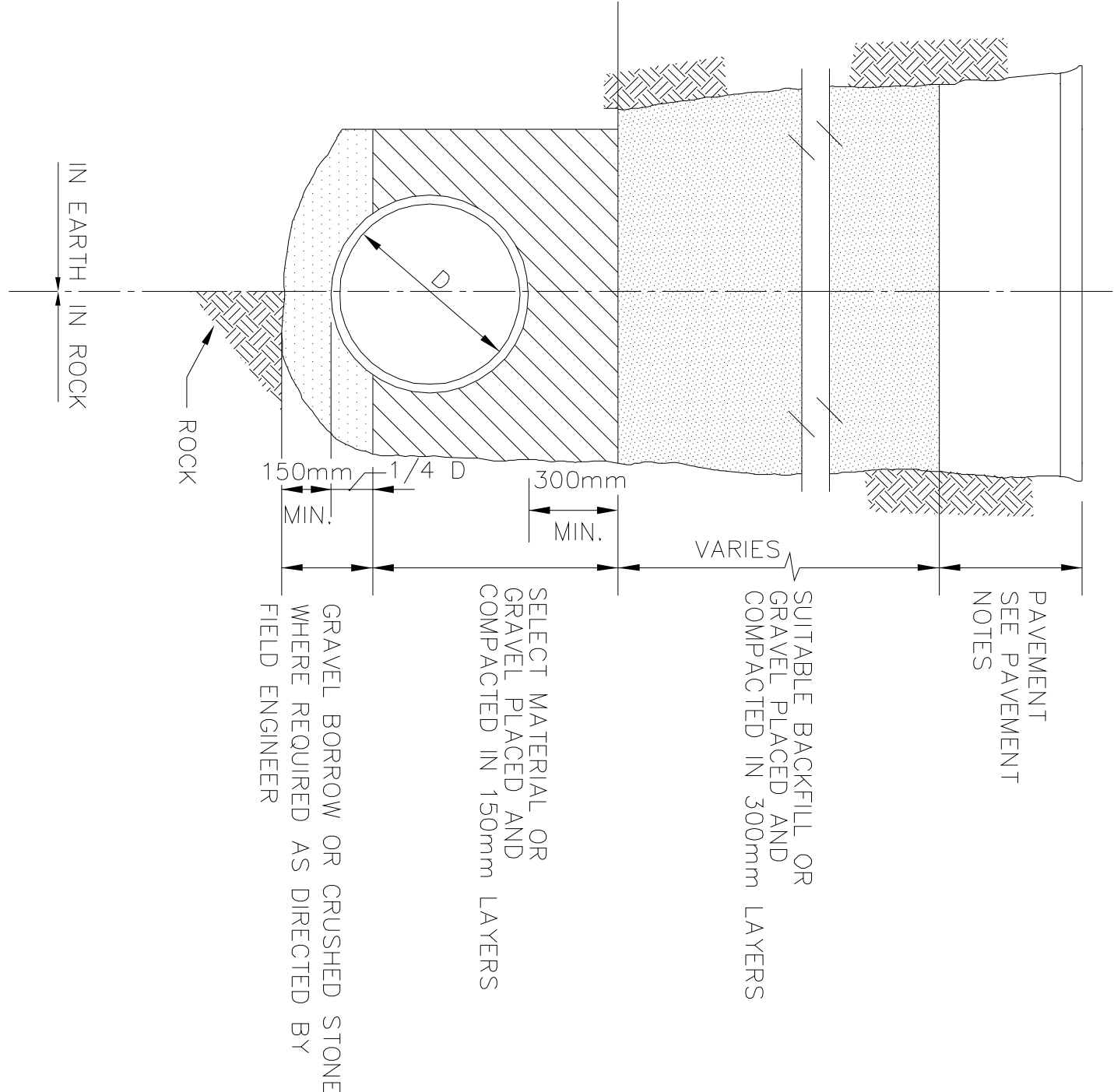


DRIVEWAY

(NO SIDEWALK)

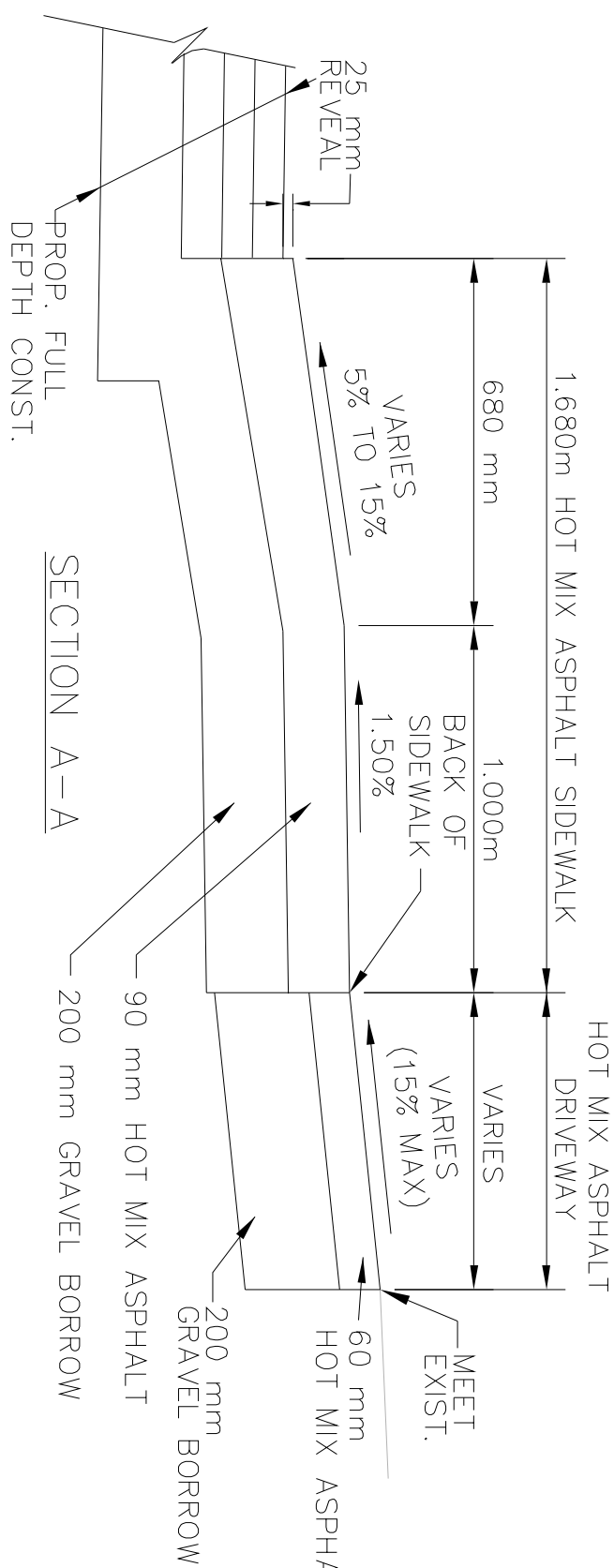
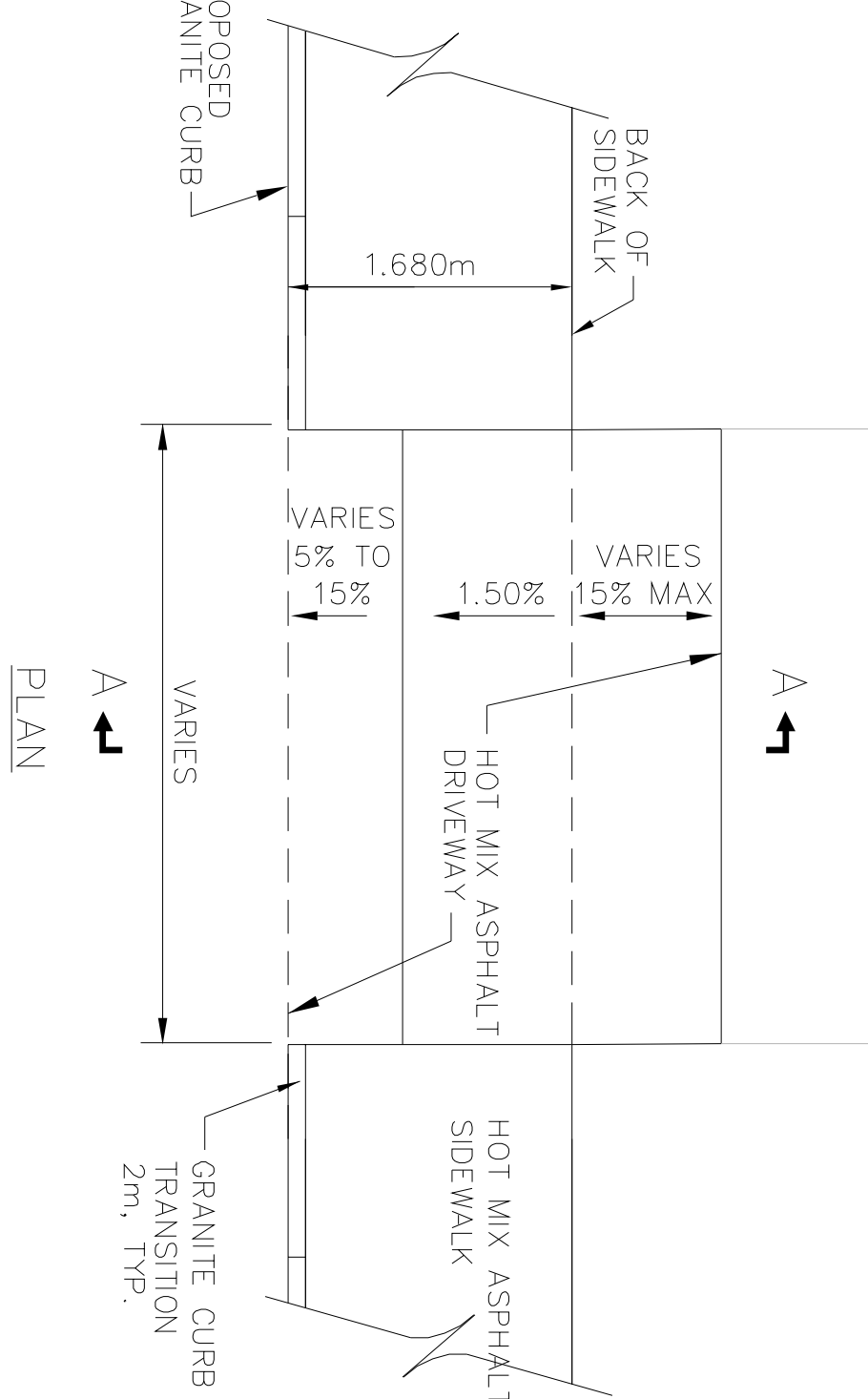
AT HOT MIX ASPHALT CURB

NOT TO SCALE



PIPE TRENCH DETAIL

NOT TO SCALE



SUMMARY PLANT LIST

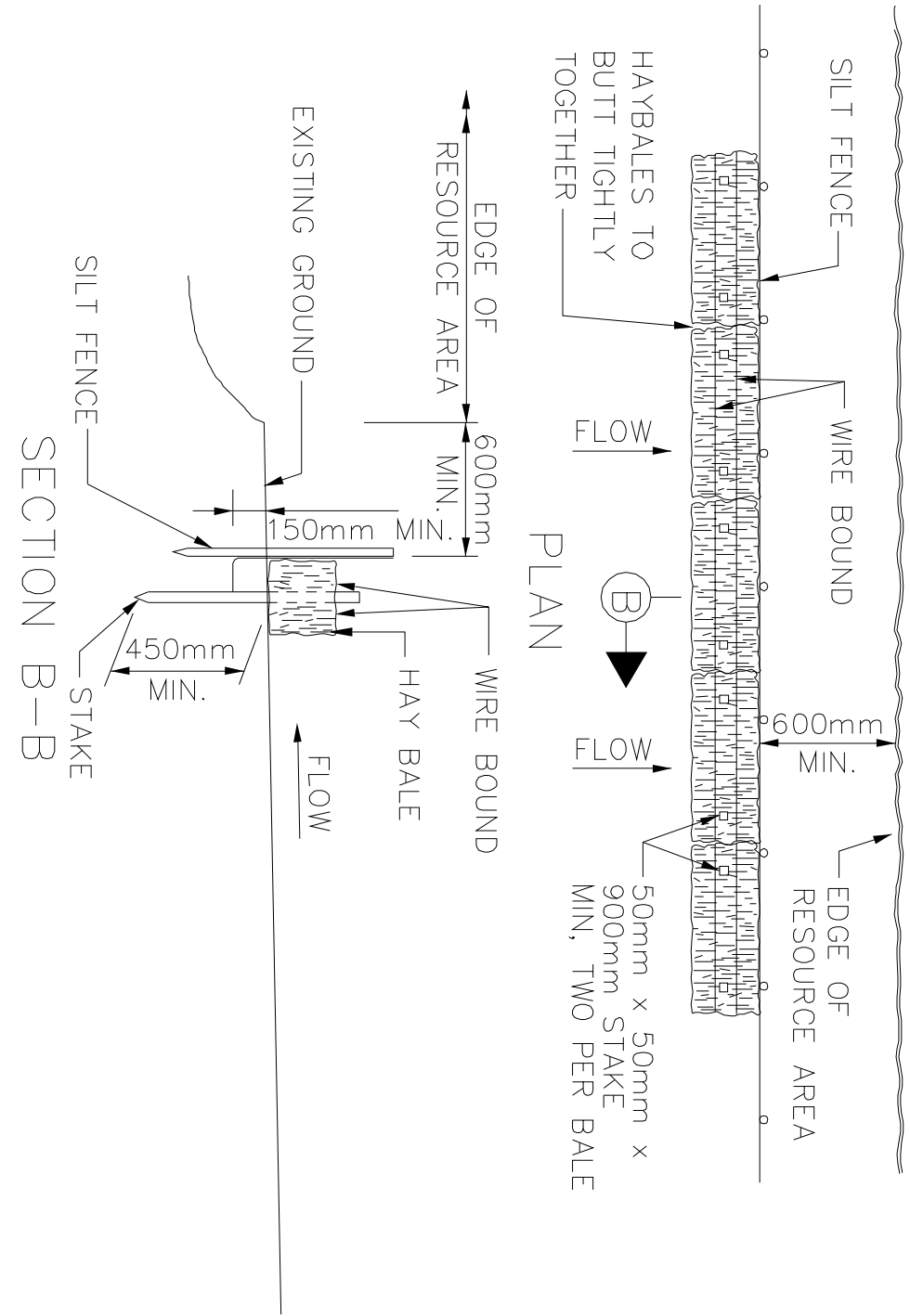
NOT TO SCALE

PLANT LIST – SEE CONSTRUCTION PLANS FOR INDIVIDUAL TREE LOCATIONS						
#	Item No.	KEY	BOTANICAL NAME COMMON NAME	Qty.	Size	Notes
			TREES			
1	776.527	RM	Acer rubrum Red Maple 'Armstrong'	18	80–90 mm Cal.	
2	777.141	NO	Quercus palustris Oak Pin 'Crownright'	10	60–70 mm Cal.	
3	773.439	WP	Pinus strobus White Pine	1	3.05–3.66 m	
4	785.633	IS	Ilex glabra Inkberry	42	610–900 mm	Space 1m OC
5	785.547	HS	Ilex meserveae Holly—"Blue Princess"	44	610–900 mm	Space 900mm to 1.22m OC

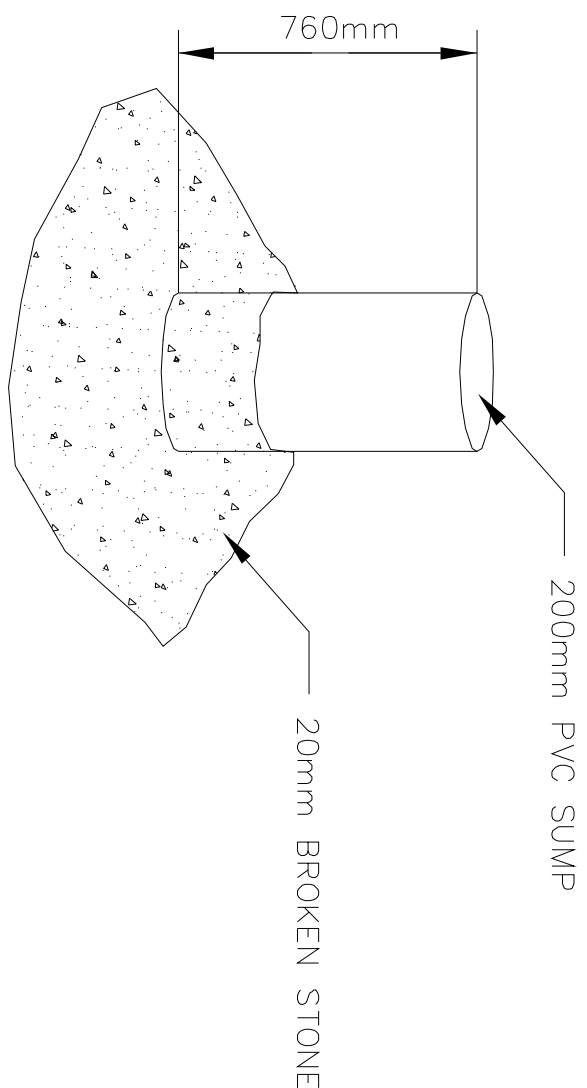
EROSION CONTROL

HAYBALE AND SILT FENCE

NOT TO SCALE

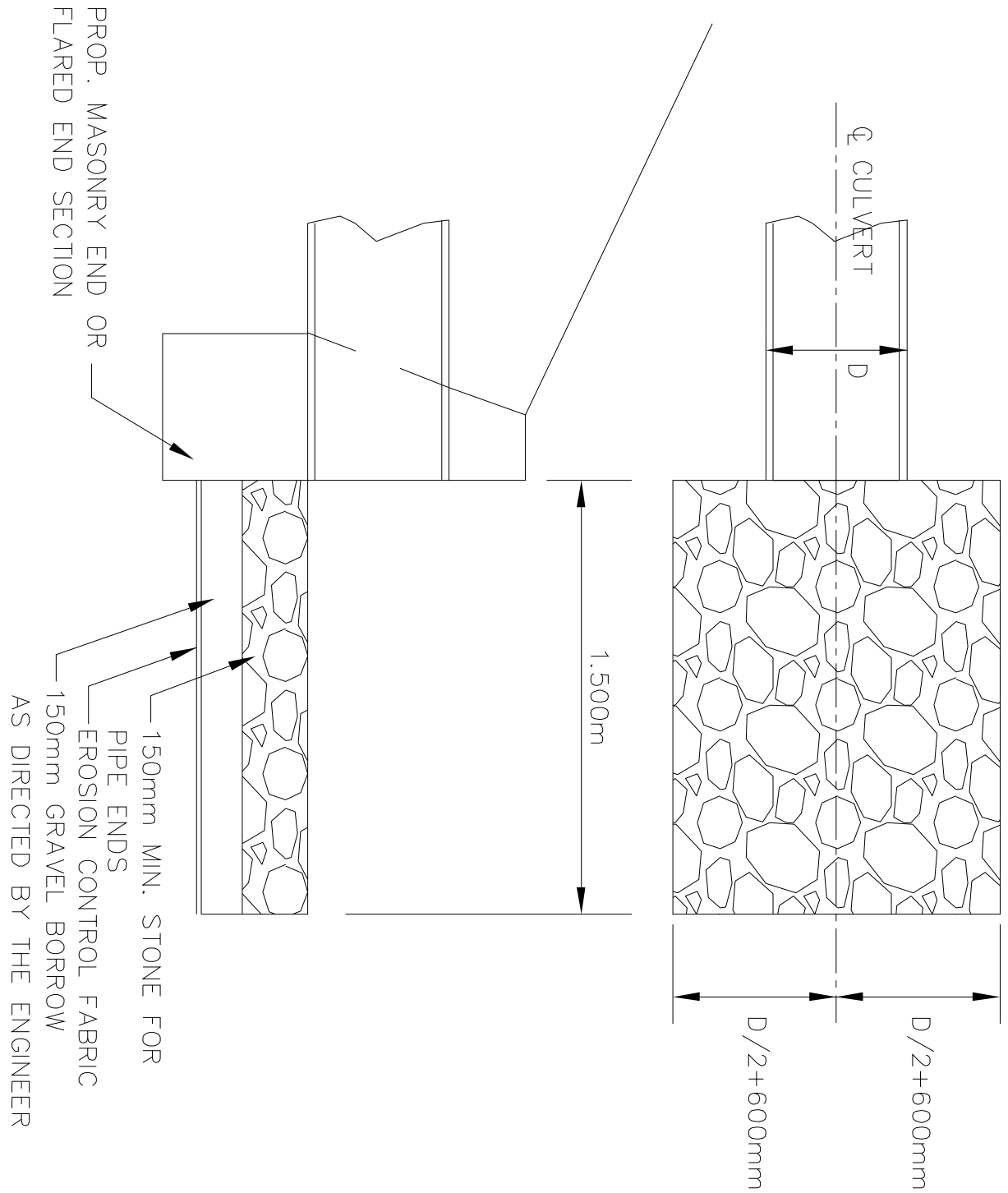


CONSTRUCTION DETAILS



N.T.S.

NOT TO SCALE



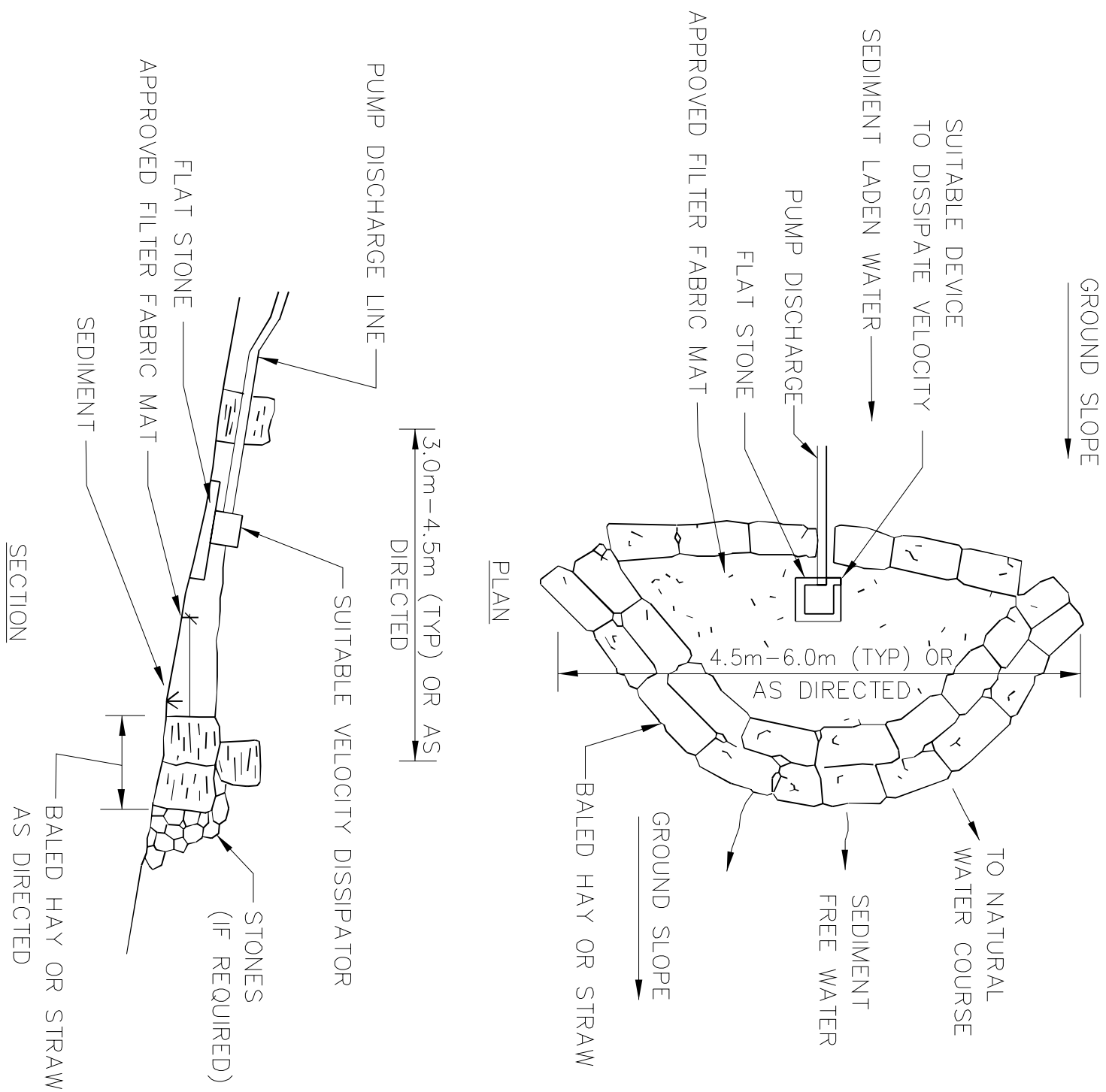
WITH SEDIMENTATION CONTROL

NOT TO SCALE

FLARED ENDS

NOT TO SCALE

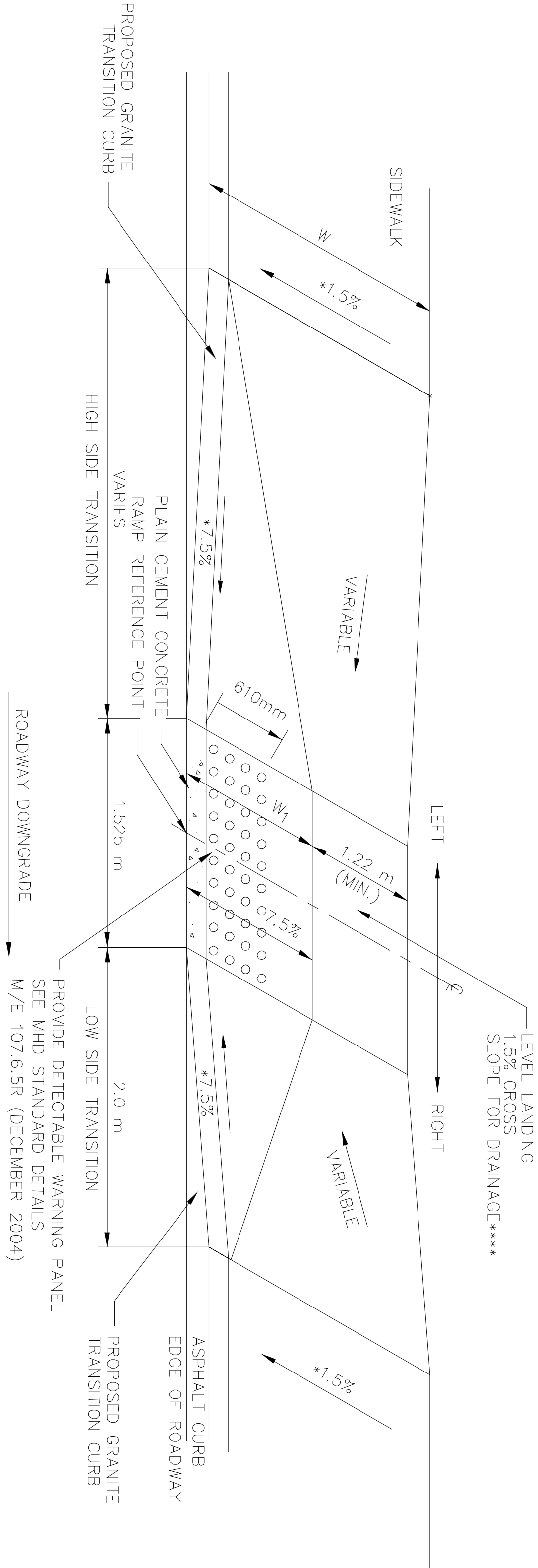
NOT TO SCALE



STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-001S(639)X	2008	60	117	
PROJECT FILE NO.					603640

WHEELCHAIR RAMP DETAILS

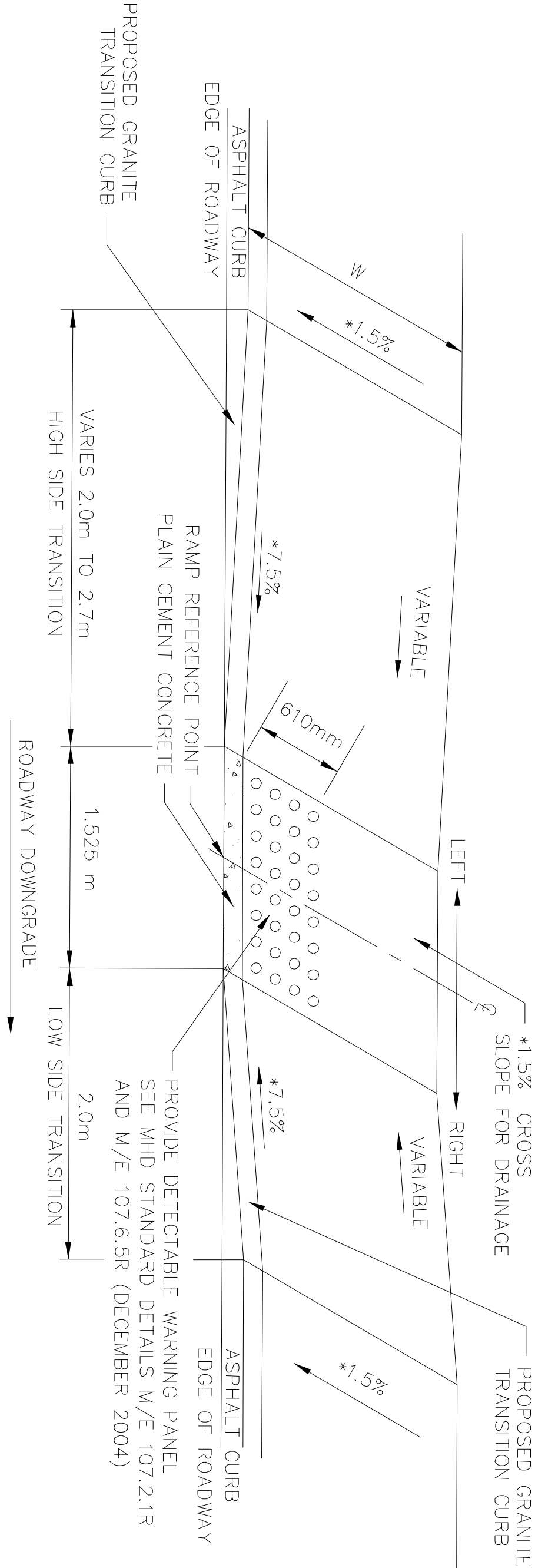
LITTLETON
GOLDSMITH STREET



WHEELCHAIR RAMP
AT SIDEWALK WIDTH > 1.830m
NOT TO SCALE

LEGEND

HSL = HIGH SIDE TRANSITION LENGTH
W = SIDEWALK WIDTH
W₁ = PERPENDICULAR RAMP LENGTH



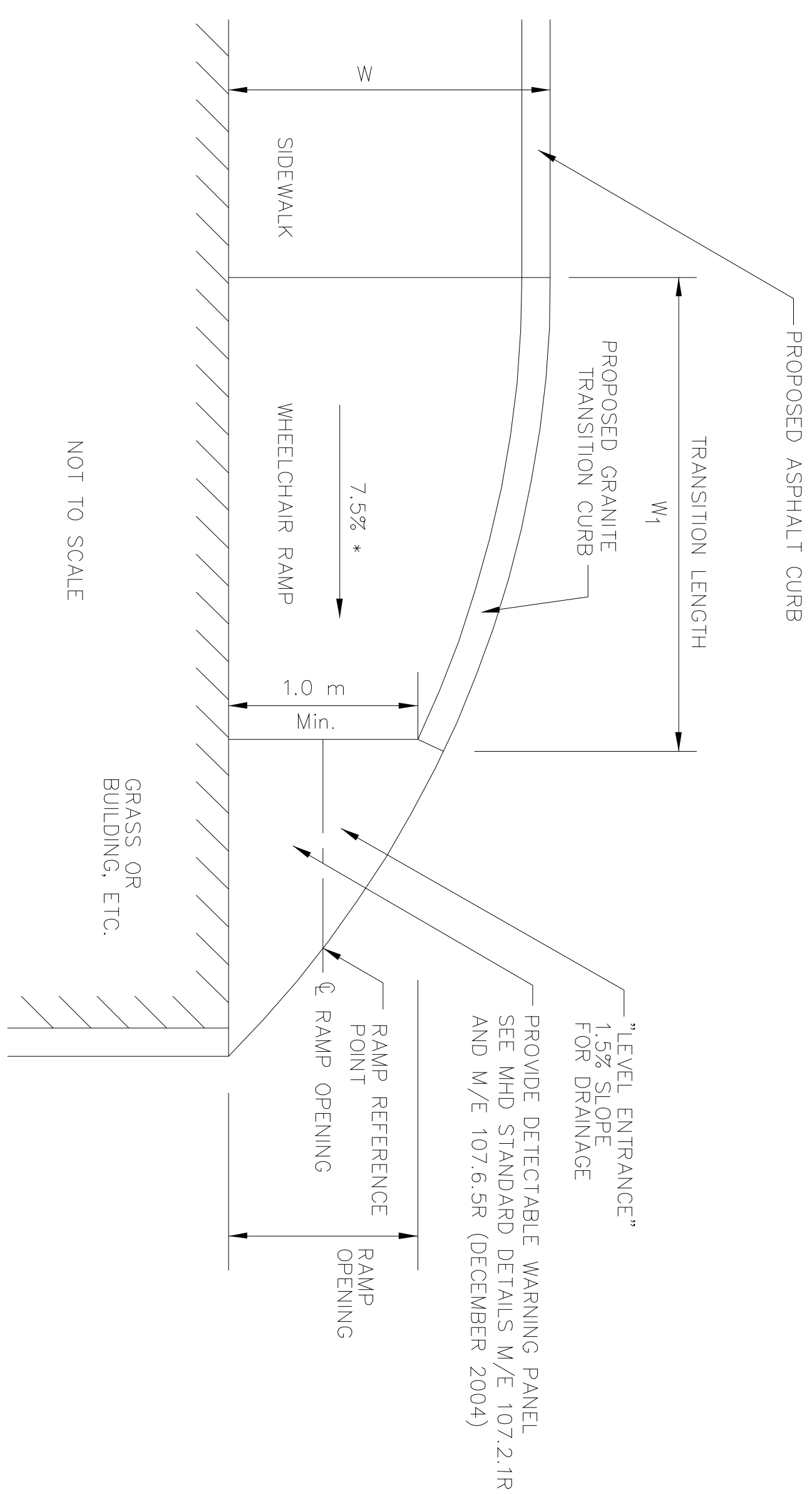
WHEELCHAIR RAMP
AT SIDEWALK WIDTH < 1.830m
NOT TO SCALE

WCR #	RAMP REFERENCE POINT		SIDEWALK WIDTH (M)	RAMP WIDTH (M)	MIN. 1.525 M	ROADWAY GUTTER SLOPE (%)	TRANSITION LENGTH	
	STATION	OFFSET (M)					LEFT SIDE	RIGHT SIDE
1	10+39.329	4.842 RT	1.680	1.525		+1.0	2.8***	2.0
11	22+54.441	4.500 RT	1.680	1.525		-1.4	2.0	2.7
12	22+54.441	4.500 LT	1.680	1.525		-1.4	2.7	2.0
21	26+18.936	6.399 RT	1.680	1.525		-0.7	2.3	2.3
30a	30+56.451	4.713 LT	1.680	1.525		-0.7	2.3	2.0
30b	30+55.890	4.500 RT	1.680	1.525		-2.8	2.0	3.3

WCR #	RAMP REFERENCE POINT		PRIMARY RAMP LENGTH (M)	SIDEWALK WIDTH (M)	RAMP WIDTH (M)	MIN. 1.525 M	LEVEL LANDING DEPTH (M)	MIN. 1.22 m	ROADWAY GUTTER SLOPE (%)	TRANSITION LENGTH	
	STATION	OFFSET (M)								LEFT SIDE	RIGHT SIDE
2	10+43.178	5.913 LT	1.362	2.582	1.525		1.220		+0.5	2.0	3.1

NOTES:

"LEFT" AND "RIGHT" ARE DETERMINED BY VIEWING THE RAMP FROM THE STREET
* TOLERANCE FOR CONSTRUCTION ±0.5%
** TRANSITION TO 75mm REVEAL
*** BEGIN/END TRANSITION CURB @ PC/PT/PCC/PRC



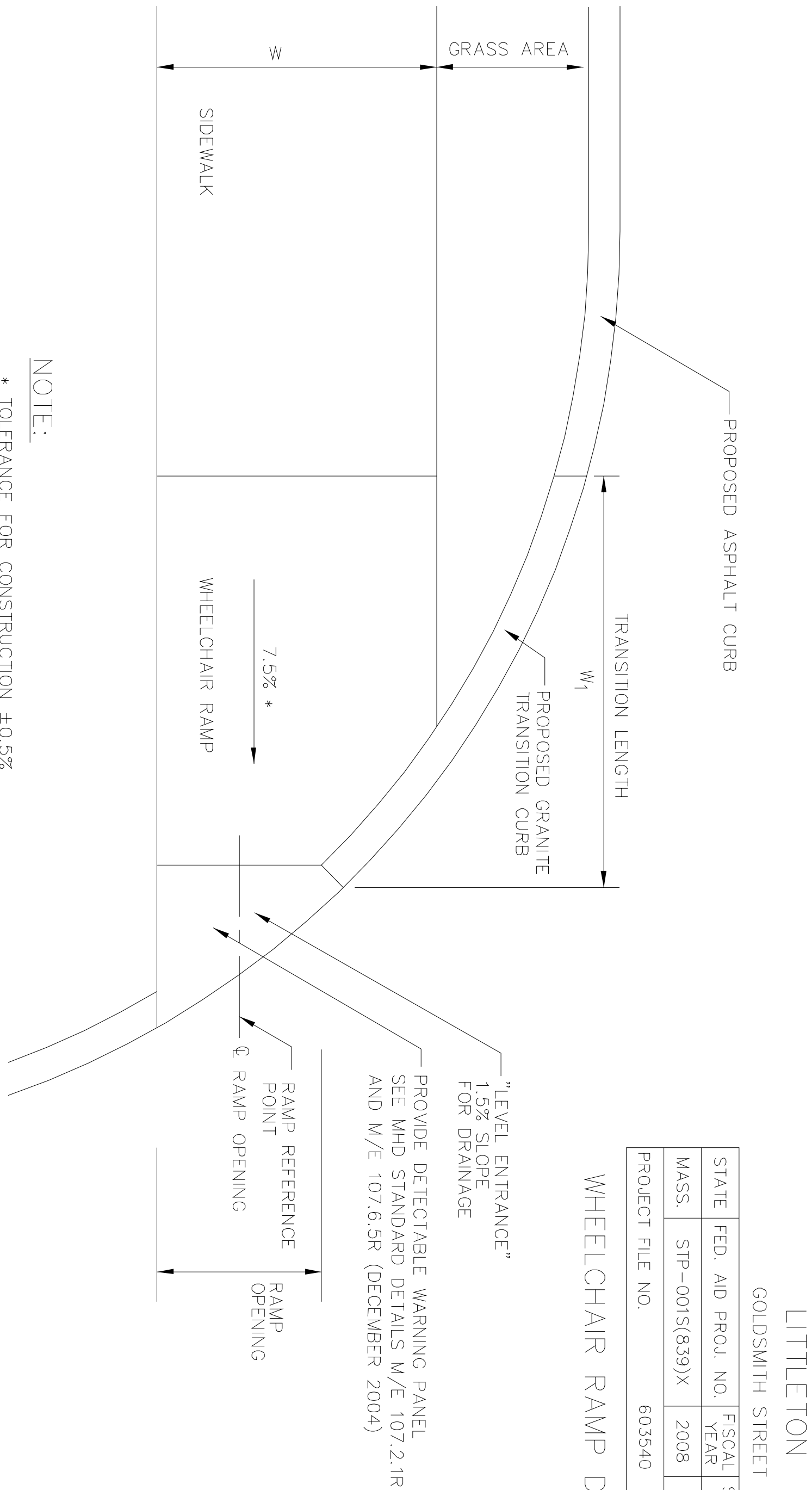
NOTE:

* TOLERANCE FOR CONSTRUCTION ±0.5%

** CONSTRUCT WITH 75mm REVEAL

*** BEGIN/END TRANSITION CURB @ PC/PT/PCC/PRC

WCR #	RAMP REFERENCE POINT		SIDEWALK WIDTH (M)	WIDTH OF OPENING (M)	ROADWAY GUTTER SLOPE (%)	RAMP LENGTH(M) (W1)
	STATION	OFFSET (M)				
3	14+76.883	8.025 LT	1.525	1.000	+2.50	2.0
4	14+84.480	8.016 LT	1.525	1.000	+2.50	3.3
5	16+65.325	8.250 LT	1.525	1.000	-2.60	3.3
6	16+72.228	8.250 LT	1.525	1.000	-2.80	2.0
7	17+37.652	8.250 LT	1.525	1.000	-3.25	4.3
8	17+44.775	8.250 LT	1.525	1.000	-3.25	2.0
15	23+78.154	6.525 RT	1.525	1.000	+0.50	2.3
16	23+93.103	6.525 RT	1.525	1.000	+0.50	2.0
17	24+65.904	6.525 RT	1.525	1.000	-0.20	2.0



NOTE:

* TOLERANCE FOR CONSTRUCTION ±0.5%

** CONSTRUCT WITH 75mm REVEAL

*** BEGIN/END TRANSITION CURB @ PC/PT/PCC/PRC

WCR #	RAMP REFERENCE POINT		SIDEWALK WIDTH (M)	WIDTH OF OPENING (M)	ROADWAY GUTTER SLOPE (%)	RAMP LENGTH(M) (W1)
	STATION	OFFSET				
9	21+86.686	5.680 LT	1.680	1.000	-0.90	2.5
10	21+93.272	5.680 LT	1.680	1.000	-0.90	2.2
13	23+07.836	5.680 RT	1.680	1.000	+0.80	2.5
14	23+15.943	6.525 RT	1.525	1.000	+0.70	2.0
18	24+74.199	5.680 RT	1.680	1.000	-0.40	2.5
19	24+41.497	5.680 RT	1.680	1.000	-1.20	2.5
20	25+51.601	5.680 RT	1.680	1.000	-1.7	2.5
22	26+31.150	5.680 RT	1.680	1.000	+0.7	2.5
23	27+04.189	5.680 RT	1.680	1.000	+0.3	2.5
24	27+15.264	5.680 RT	1.680	1.000	+0.1	2.5
25	28+67.126	5.680 RT	1.680	1.000	-1.8	2.5
26	28+79.701	5.680 RT	1.680	1.000	-1.2	2.5
27	29+56.250	5.680 RT	1.680	1.000	+0.7	2.5
28	29+67.724	5.680 RT	1.680	1.000	+0.7	2.5
29	30+35.617	5.680 RT	1.680	1.000	+0.7	2.5
30	30+46.005	5.680 RT	1.680	1.000	+0.7	2.5
31	31+14.808	5.680 RT	1.680	1.000	-0.2	2.5
32	31+25.928	5.680 RT	1.680	1.000	-0.4	2.5
33	31+96.309	5.680 RT	1.680	1.000	-2.0	2.6
34	32+06.673	5.680 RT	1.680	1.000	-2.2	3.6
35	32+69.199	5.680 RT	1.680	1.000	-3.0	1.0
36	32+87.992	5.680 RT	1.680	1.000	-2.3	3.4

STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-001S(639)X	2008	61	117

PROJECT FILE NO.	603640
------------------	--------

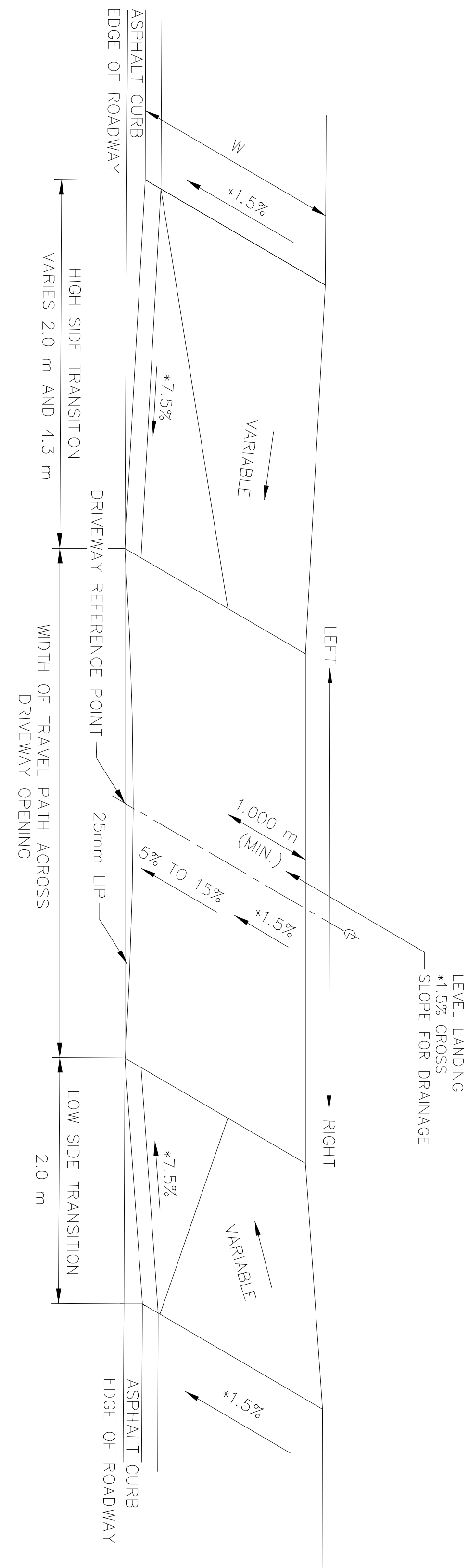
WHEELCHAIR RAMP DETAILS

LITTLETON
GOLDSMITH STREET

STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS			2008	62	117
PROJECT FILE NO.			603640		

DRIVEWAY RAMP DETAILS

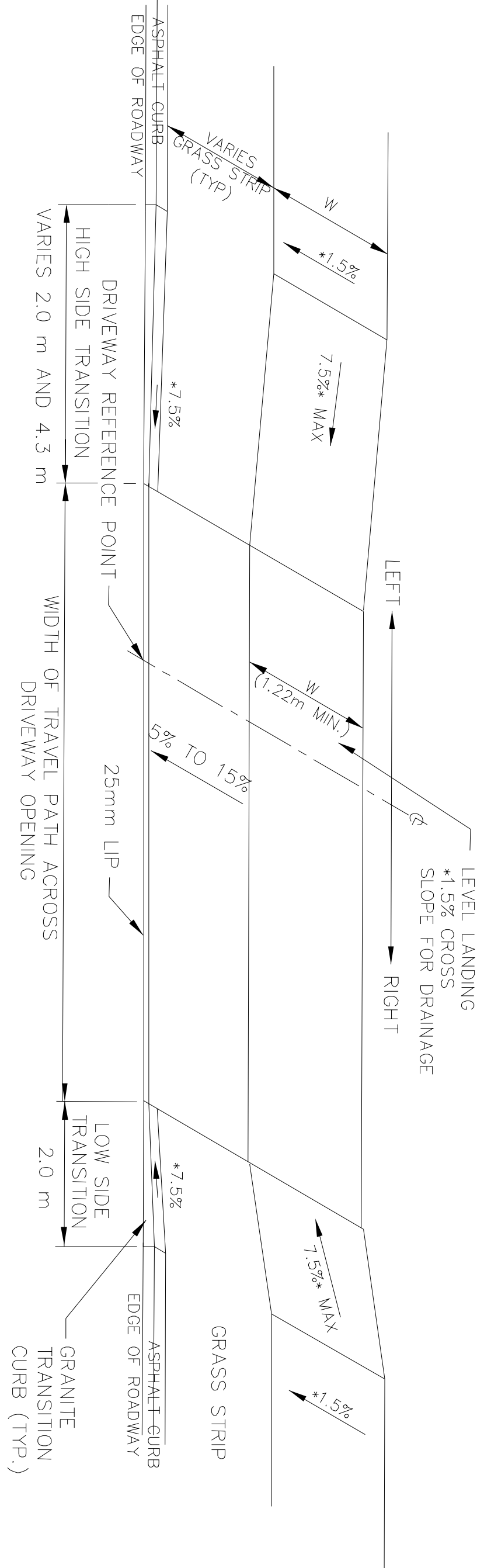
LITTLETON
GOLDSMITH STREET



DRIVEWAY DETAIL - TYPE A

NOT TO SCALE

* TOLERANCE FOR CONSTRUCTION ±0.5%



DRIVEWAY DETAIL - TYPE B

NOT TO SCALE

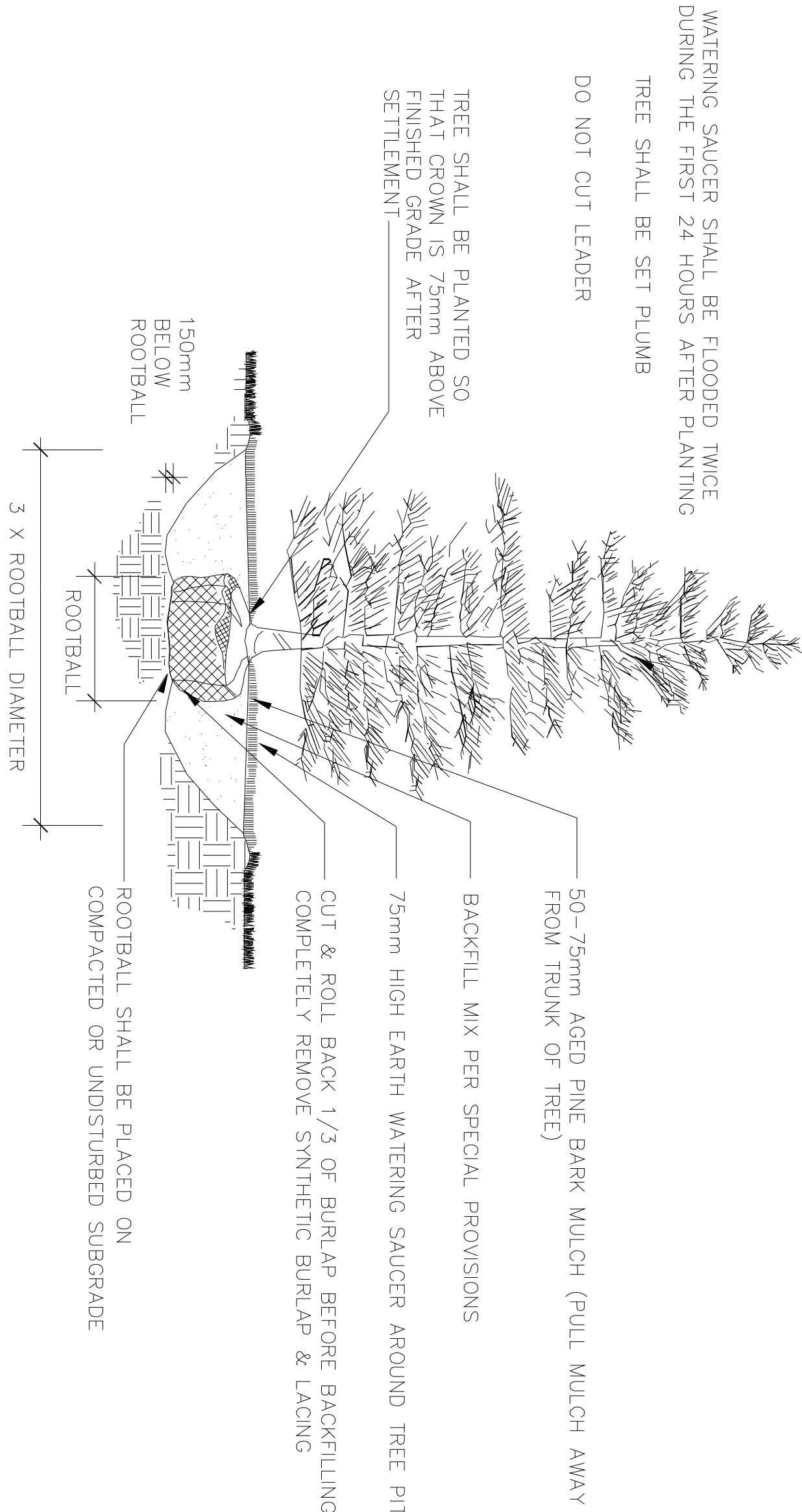
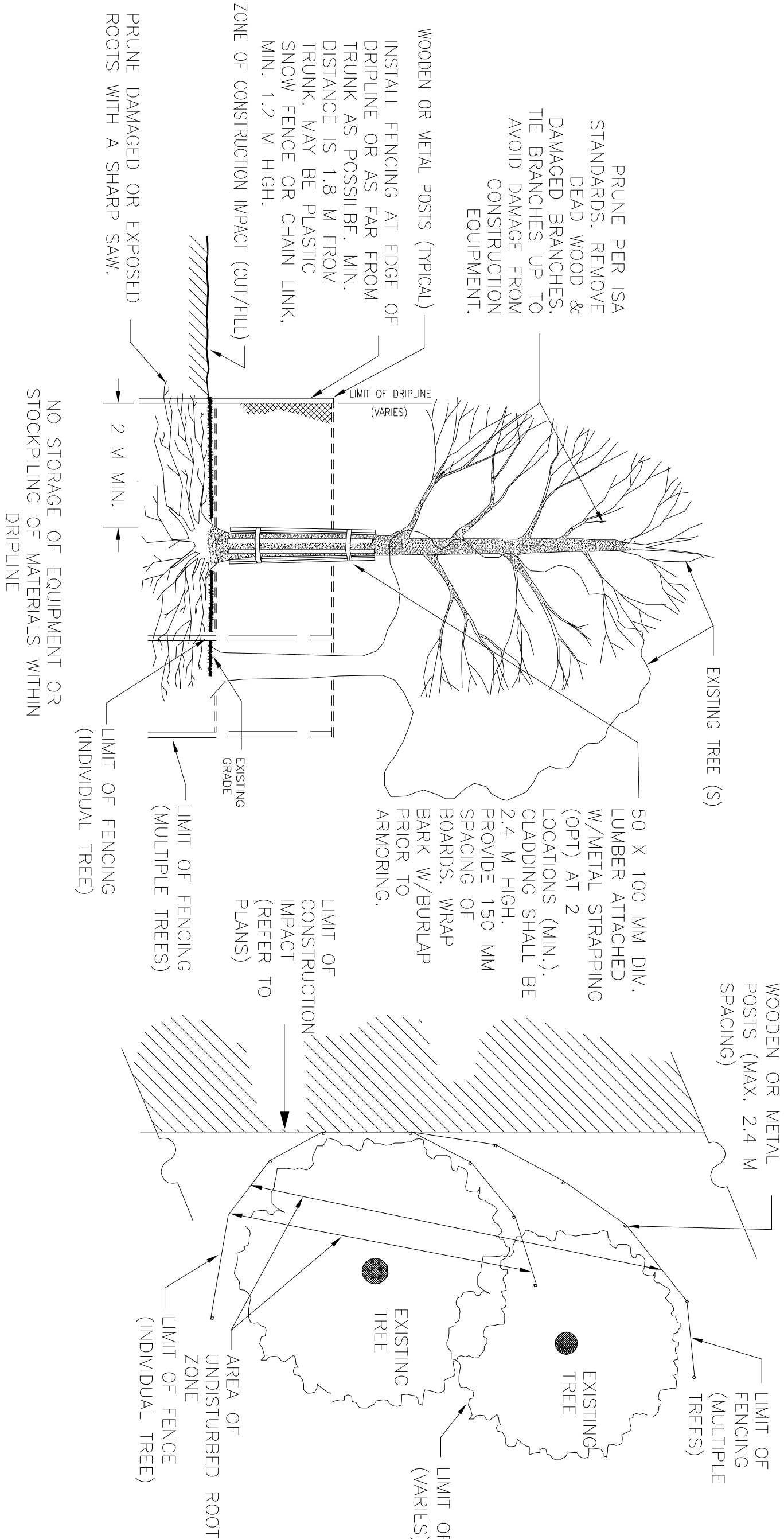
DW #	TYPE	RAMP REFERENCE POINT		WIDTH OF SIDEWALK (W)	WIDTH OF CUTTER SLOPE	LENGTH OF RAMP LEFT	LENGTH OF RAMP RIGHT
		STATION	OFFSET				
1	B	10+84.821	4.500m LT	1.525m	+1.0%	2.0m	2.3m
2	B	11+16.650	4.500m LT	1.525m	+1.3%	2.0m	2.7m
3	B	11+47.023	4.500m LT	1.525m	+2.1%	2.0m	3.3m
4	B	11+66.669	4.500m LT	1.525m	+2.6%	2.0m	3.3m
5	B	11+78.241	4.500m LT	1.525m	+2.9%	2.0m	3.3m
6	B	11+98.231	4.500m LT	1.525m	+3.4%	2.0m	4.3m
7	B	12+36.118	4.500m LT	1.525m	+3.6%	2.0m	4.3m
8	B	12+73.706	4.500m LT	1.525m	+3.6%	2.0m	4.3m
9	B	13+02.280	4.500m LT	1.525m	+3.6%	2.0m	4.3m
10	B	13+26.872	4.500m LT	1.525m	+3.6%	2.0m	4.3m
11	B	13+67.256	4.500m LT	1.525m	+3.3%	2.0m	4.3m
12	B	13+78.929	4.500m LT	1.525m	+3.2%	2.0m	4.3m
13	B	14+16.314	4.500m LT	1.525m	+2.8%	2.0m	3.3m
14	B	14+36.668	4.500m LT	1.525m	+2.5%	2.0m	3.3m
15	B	15+16.828	4.500m LT	1.525m	+2.1%	2.0m	3.3m
16	B	15+42.973	4.500m LT	1.525m	+1.3%	2.0m	2.7m
17	B	15+69.551	4.500m LT	1.525m	+0.4%	2.0m	2.3m
18	B	15+87.607	4.500m LT	1.525m	-0.1%	2.3m	2.0m
19	B	16+13.050	4.500m LT	1.525m	-1.0%	2.3m	2.0m
20	B	16+53.683	4.500m LT	1.525m	-2.2%	3.3m	2.0m
21	B	16+96.353	4.500m LT	1.525m	-3.3%	4.3m	2.0m
22	B	17+23.341	4.500m LT	1.525m	-3.3%	4.3m	2.0m
23	B	18+21.670	4.500m LT	1.525m	-2.9%	3.3m	2.0m

DW #	TYPE	RAMP REFERENCE POINT		WIDTH OF SIDEWALK (W)	WIDTH OF CUTTER SLOPE	LENGTH OF RAMP LEFT	LENGTH OF RAMP RIGHT
		STATION	OFFSET				
24	B	18+80.964	4.500m LT	1.525m	-1.3%	3.3m	2.0m
25	A	19+70.590	4.500m LT	1.680m	-1.2%	2.7m	2.0m
26	A	20+20.376	4.500m LT	1.680m	-0.9%	2.3m	2.0m
27	A	20+52.010	4.500m LT	1.680m	-0.9%	2.3m	0.0m
28	A	20+60.670	4.500m LT	1.680m	-0.9%	0.0m	2.0m
29	A	21+06.262	4.500m LT	1.680m	-0.9%	2.3m	2.0m
30	A	21+25.858	4.500m LT	1.680m	-0.9%	2.3m	2.0m
31	A	21+61.096	4.500m LT	1.680m	-0.9%	2.3m	2.0m
32	A	22+11.382	4.500m LT	1.680m	-1.1%	2.7m	2.0m
33	A	23+39.998	4.500m LT	1.680m	-1.3%	2.7m	2.0m
34	A	22+79.583	4.500m LT	1.680m	+1.3%	2.0m	2.7m
35	B	23+59.425	4.500m RT	1.525m	+0.5%	2.0m	2.3m
36	A	24+88.400	4.500m RT	1.680m	-0.8%	2.3m	2.0m
37	A	25+22.553	4.500m RT	1.680m	-1.7%	0.0m	2.0m
38	A	25+29.105	4.500m RT	1.680m	-1.7%	2.7m	0.0m
39	A	25+78.084	4.500m RT	1.680m	-0.2%	2.0m	2.3m
40	A	26+88.551	4.500m RT	1.680m	+0.7%	2.0m	2.3m
41	A	27+66.067	4.500m RT	1.680m	-1.2%	2.7m	2.0m
42	A	27+90.534	4.500m RT	1.680m	-1.8%	2.7m	2.0m
43	A	30+68.842	4.500m RT	1.680m	+0.7%	2.0m	2.3m
44	A	31+63.743	4.500m RT	1.680m	-1.3%	2.7m	2.0m
45	A	31+77.983	4.500m RT	1.680m	-1.6%	2.7m	2.0m
46	A	32+62.661	4.500m RT	1.680m	-3.2%	0.0m	2.0m

STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-001S(639)X	2008	63	117
PROJECT FILE NO.	603640			

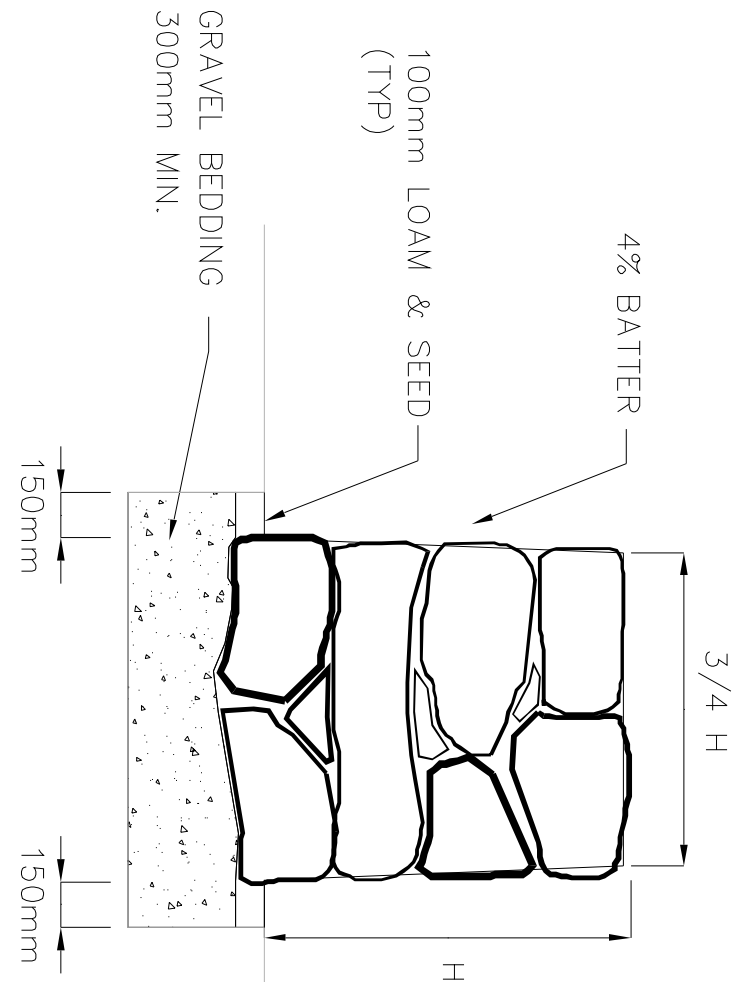
LITTLETON
GOLDSMITH STREET

LANDSCAPING DETAILS



TREE PROTECTION DETAIL

NOT TO SCALE

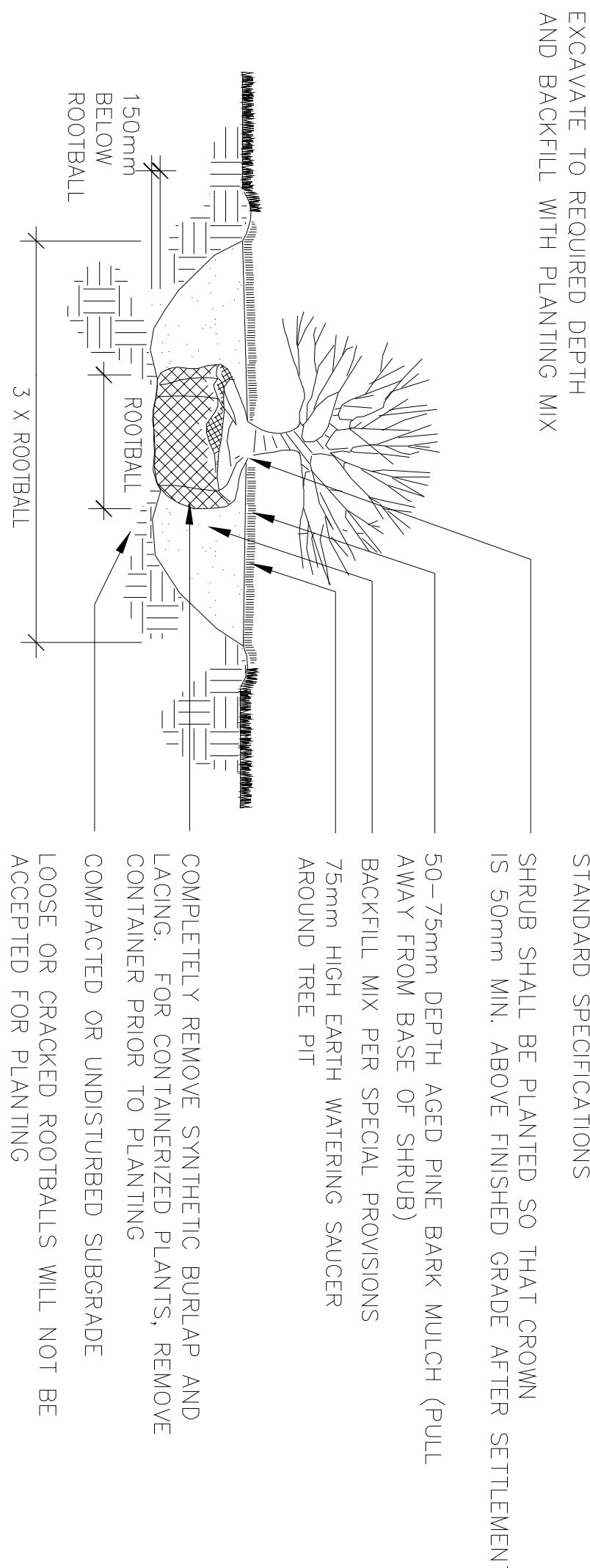
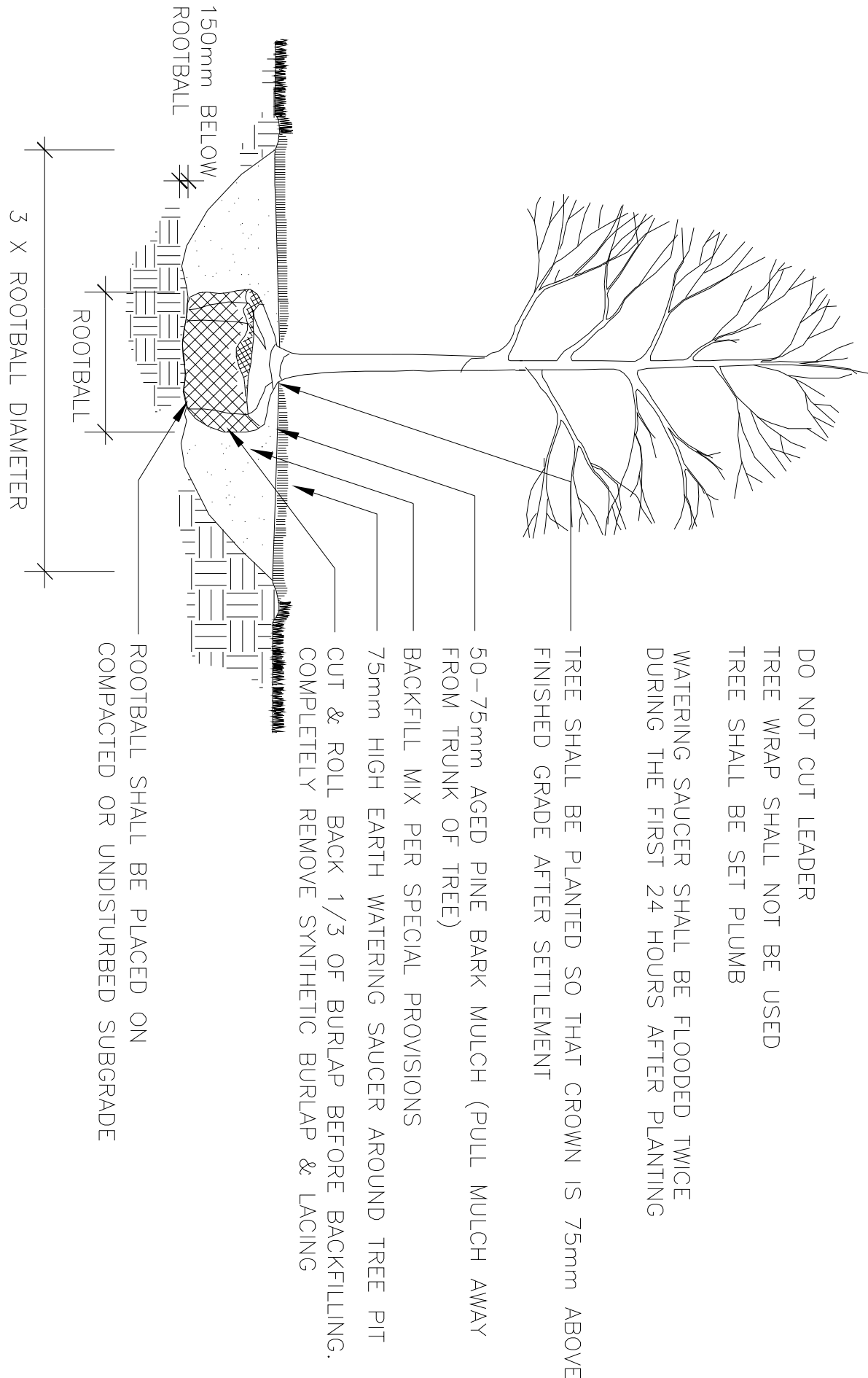


BALANCE STONE WALL

NEW AND

REMOVED AND REBUILT

NOT TO SCALE



EVERGREEN TREE PLANTING

NOT TO SCALE

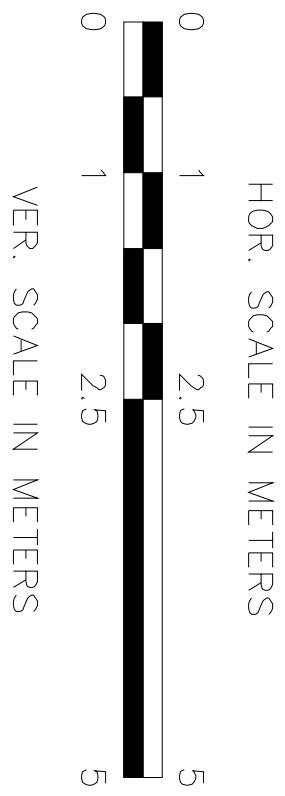
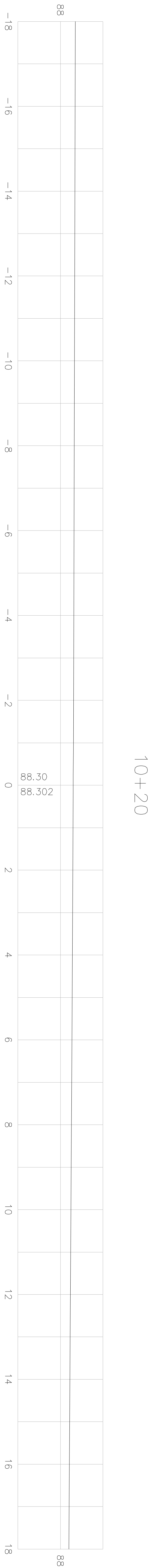
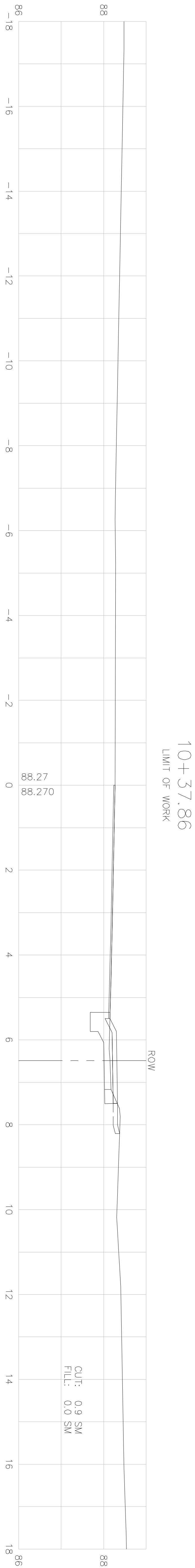
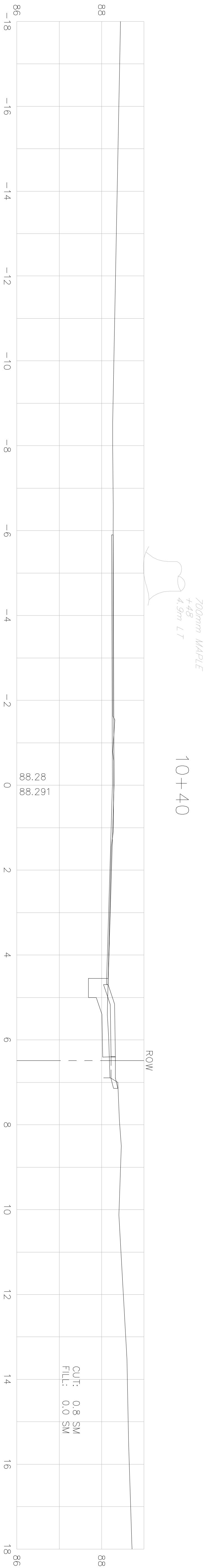
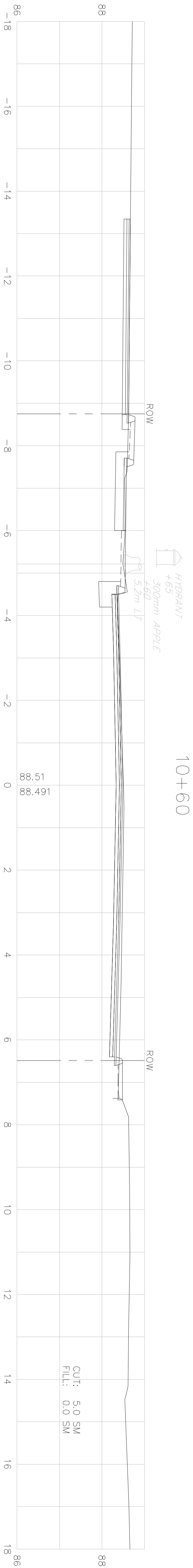
SHRUB PLANTING

NOT TO SCALE

STATE	FED. AID	PROJ. NO.	FISCAL	SHEET	TOTAL
MASS.	STP-0015(639)X	2008	64	117	
PROJECT FILE NO.		603540			

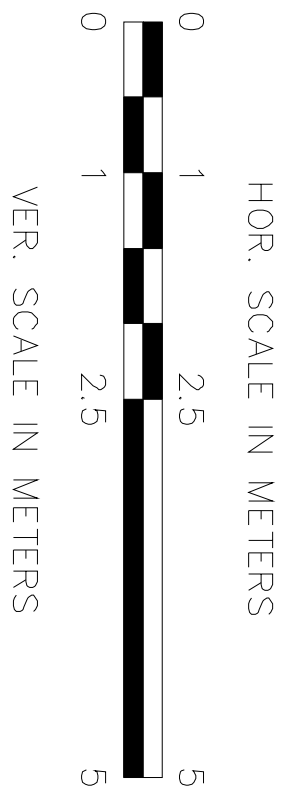
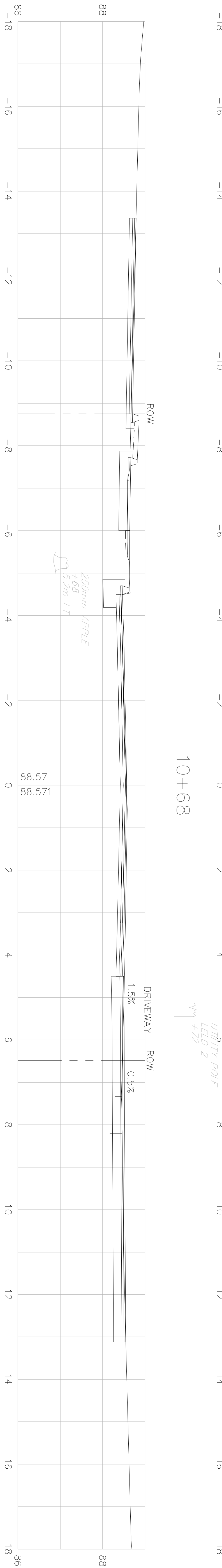
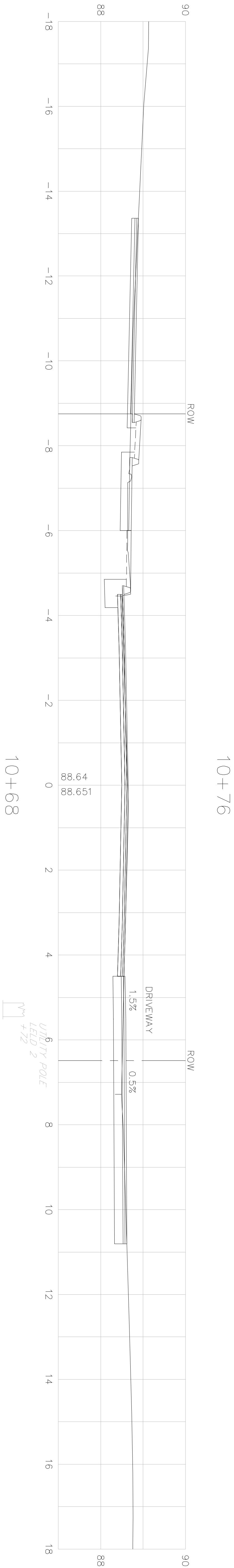
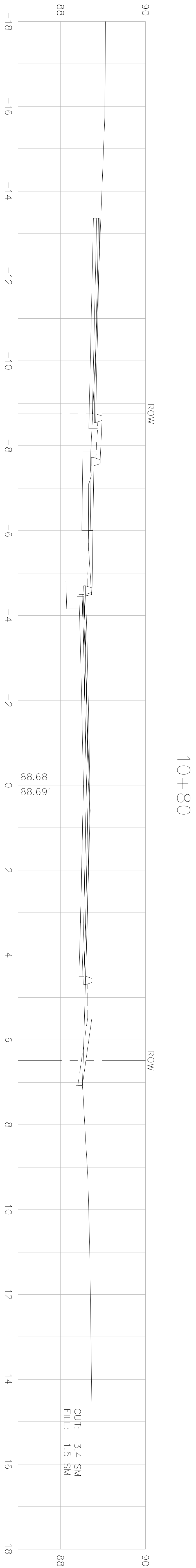
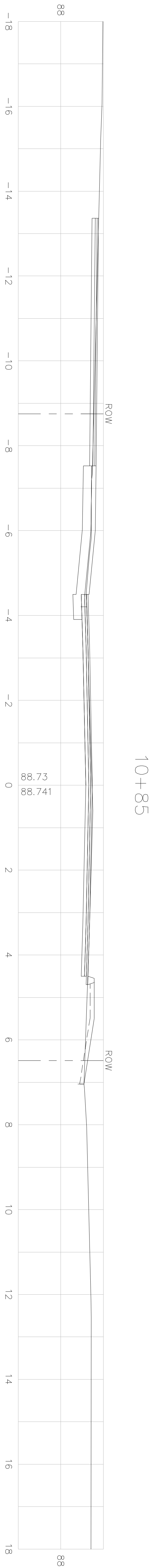
LITTLETON
GOLDSMITH STREET

CROSS SECTIONS



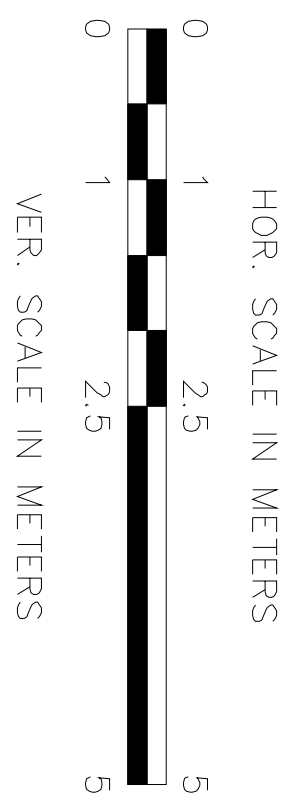
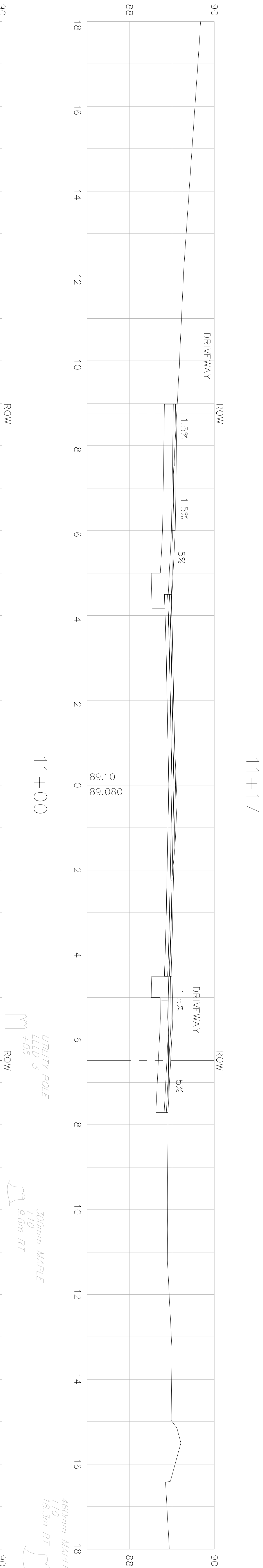
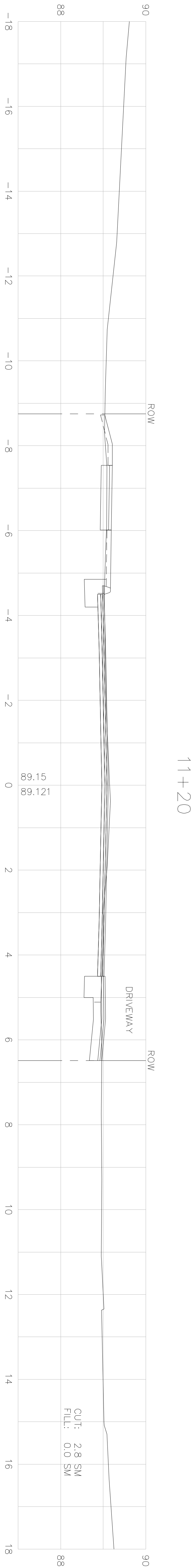
STATE	FED. AID	PROJ. NO.	FISCAL	SHEET	TOTAL
MASS.	STP-0015(639)X	2008	65	117	
PROJECT FILE NO.		603540			

CROSS SECTIONS



STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-001S(B39)X	2008	66	117
PROJECT FILE NO.		603540		

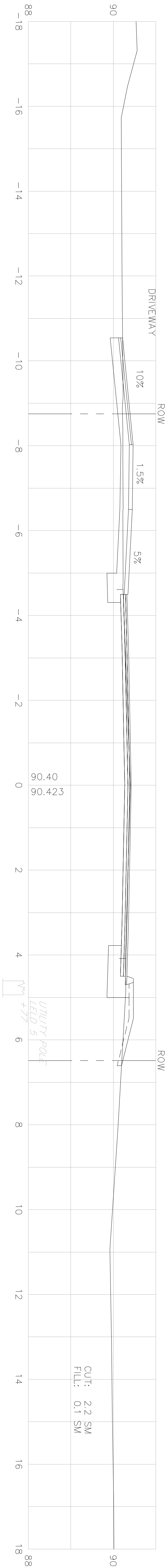
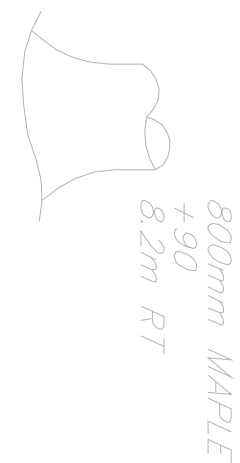
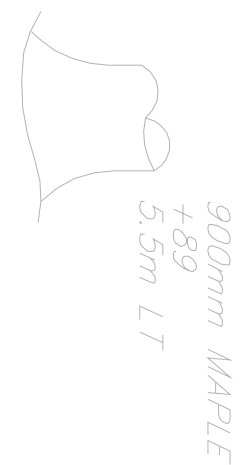
CROSS SECTIONS



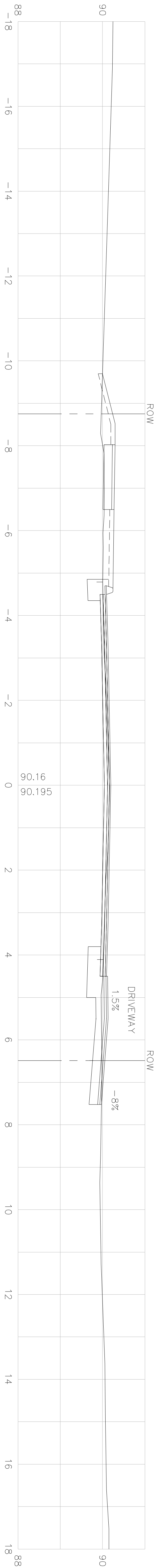
STATE	FED. AID	PROJ. NO.	FISCAL	SHEET	TOTAL
MASS.	STP-0015(639)X	2008	68	117	

PROJECT FILE NO.	603540
------------------	--------

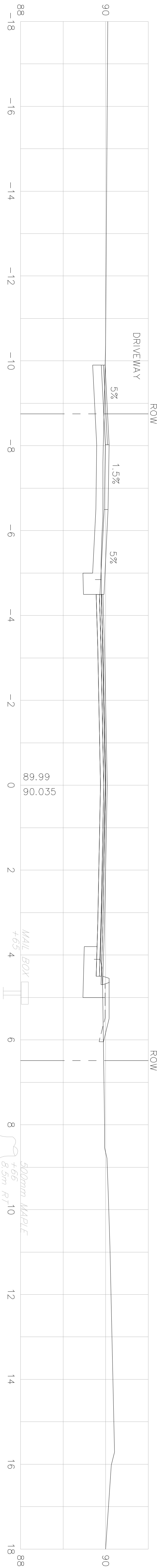
CROSS SECTIONS



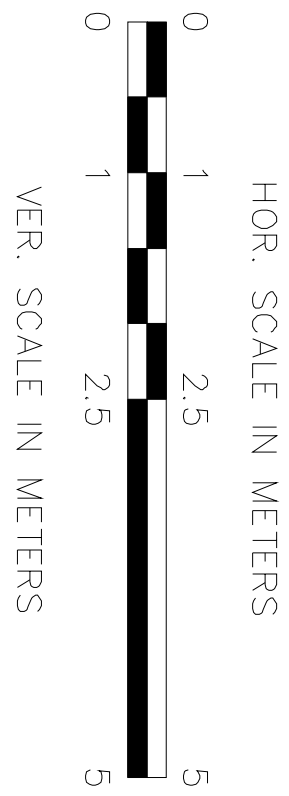
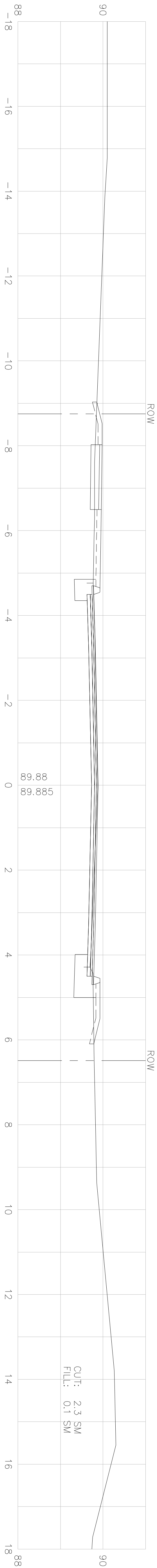
11+72



11+60

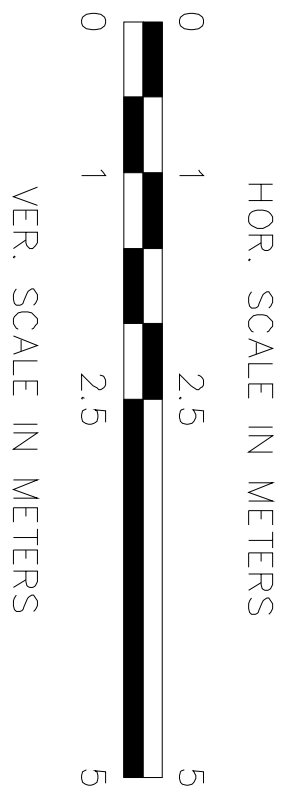
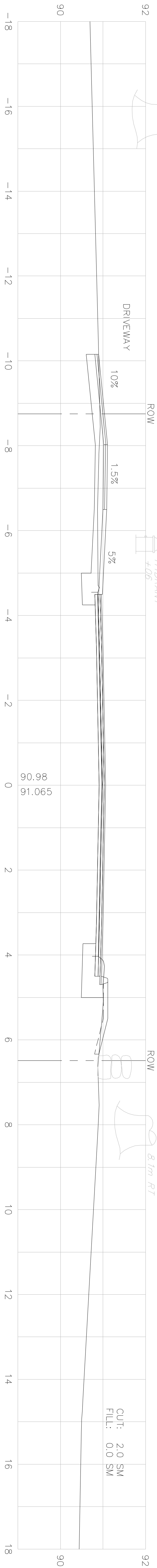
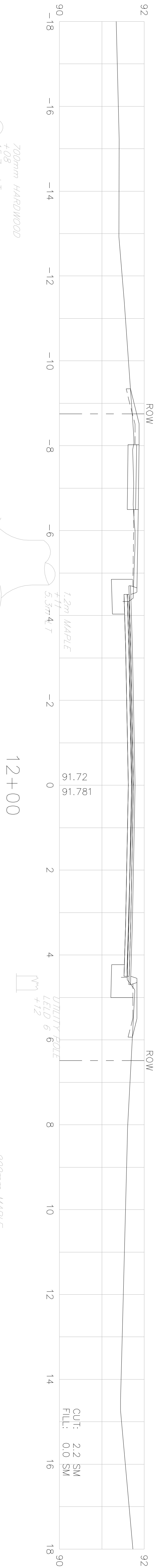
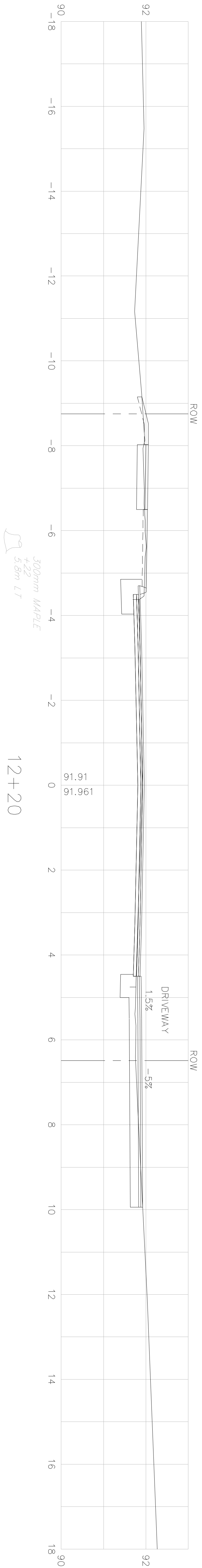
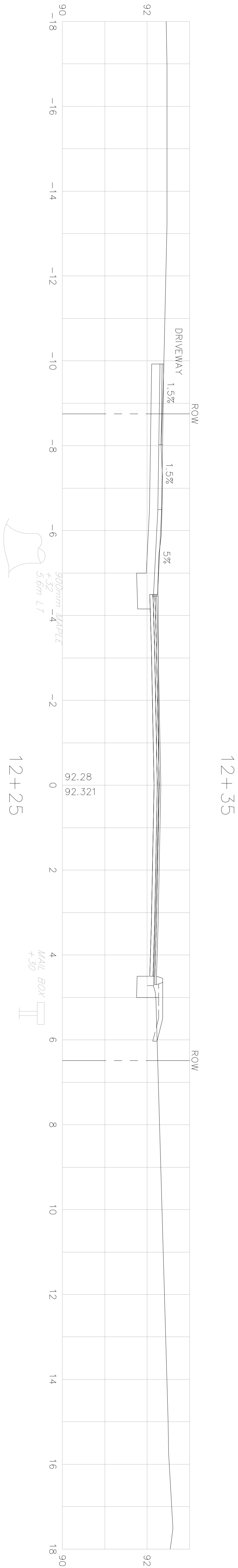


11+60



STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-0015(639)X	2008	69	117	
PROJECT FILE NO.					603540

CROSS SECTIONS



The image displays three cross-section diagrams of a road project, showing the profile of the road and surrounding features at different stationing points: 12+75, 12+60, and 12+40. The diagrams are plotted on a grid with elevation (90 to 94) and stationing (-18 to 18).

Station 12+75: The diagram shows a road with a driveway on the left side. The driveway has a 10% grade. The road has a 7% grade. The road is flanked by trees, including 450mm maple trees and 250mm maple trees. A utility pole is located on the right side of the road. The elevation at the road centerline is 93.83, and the elevation at the driveway edge is 93.761.

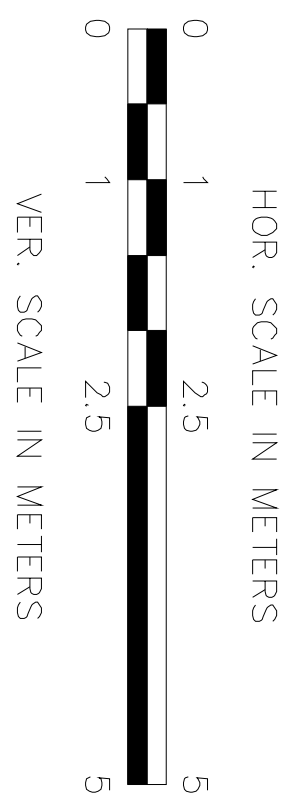
Station 12+60: The diagram shows a road with a driveway on the left side. The driveway has a 1.5% grade. The road has a 5% grade. The road is flanked by trees, including 400mm maple trees and 150mm maple trees. A utility pole is located on the right side of the road. The elevation at the road centerline is 93.29, and the elevation at the driveway edge is 93.221.

Station 12+40: The diagram shows a road with a driveway on the left side. The driveway has a 1.5% grade. The road has a 5% grade. The road is flanked by trees, including 300mm maple trees and 150mm maple trees. A utility pole is located on the right side of the road. The elevation at the road centerline is 92.47, and the elevation at the driveway edge is 92.501.



Three vertical cross-section diagrams of a road profile, oriented vertically with stationing on the right side. The diagrams show the road surface, existing ground, and proposed grade with various percentages. Key features include a driveway, ROW (Right of Way), mail box, utility hole, and trees.

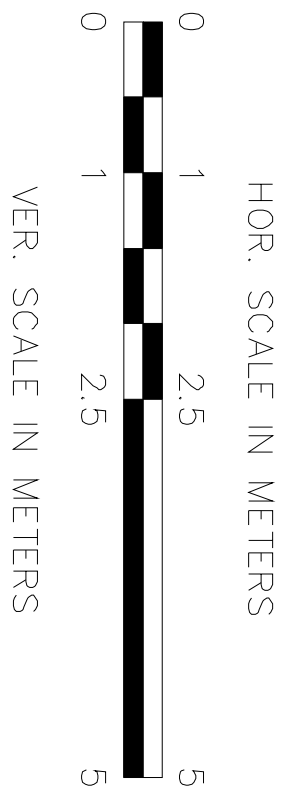
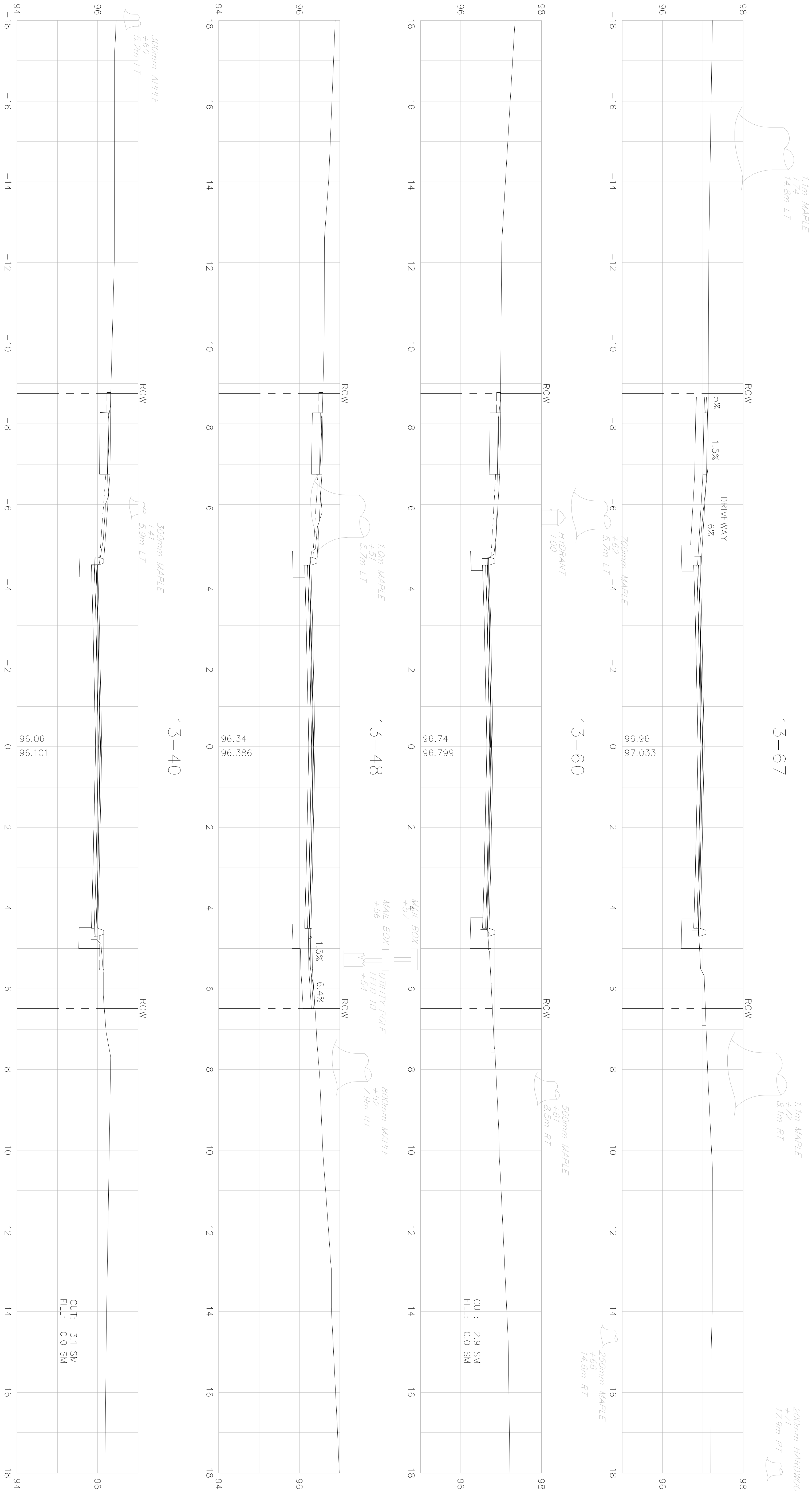
- Top Diagram (Station 13+27):** Shows a driveway on the left, a 7% ROW, 1.5% grade, and a 10% grade. A tree is shown on the right with a 5.6m LT. The stationing on the right ranges from -18 to 18.
- Middle Diagram (Station 13+00):** Shows a driveway on the left, a 7% grade, 1.5% grade, and a 7% grade. A tree is shown on the right with a 5.6m LT. The stationing on the right ranges from -18 to 18.
- Bottom Diagram (Station 12+87):** Shows a driveway on the left, a 1.5% grade, 8.9% grade, and a 1.5% grade. A tree is shown on the right with a 5.6m LT. The stationing on the right ranges from -18 to 18.

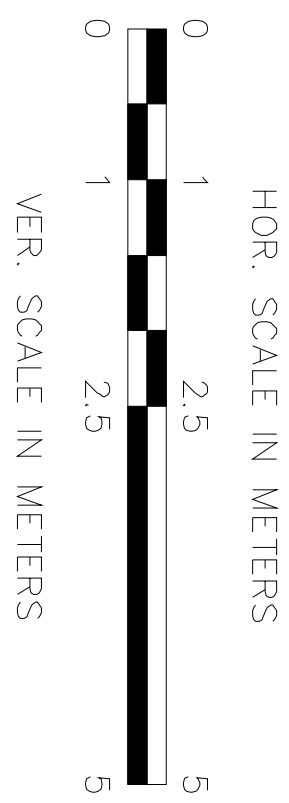


STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-001S(639)X	2008	72	117	

PROJECT FILE NO.	603540
------------------	--------

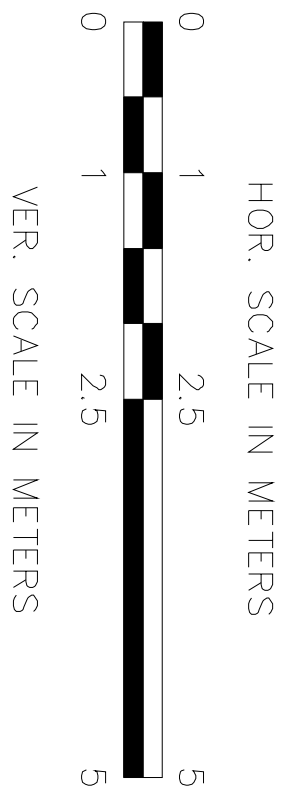
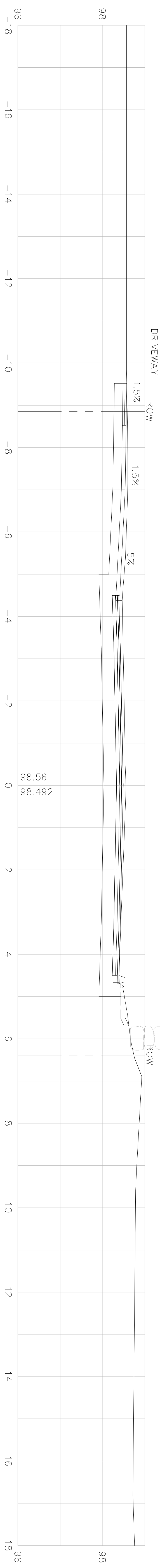
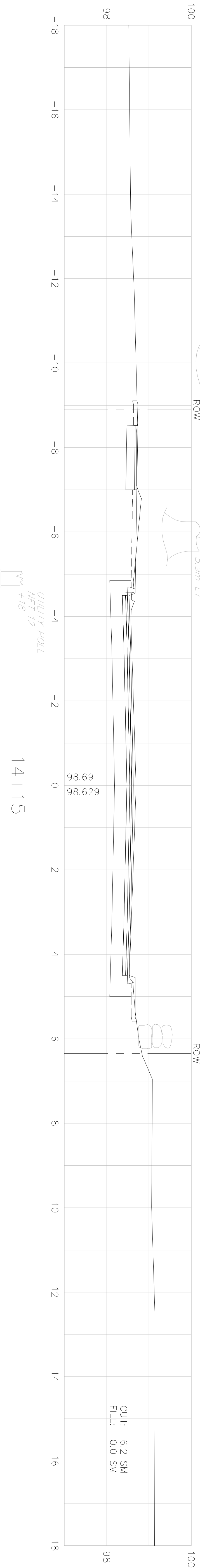
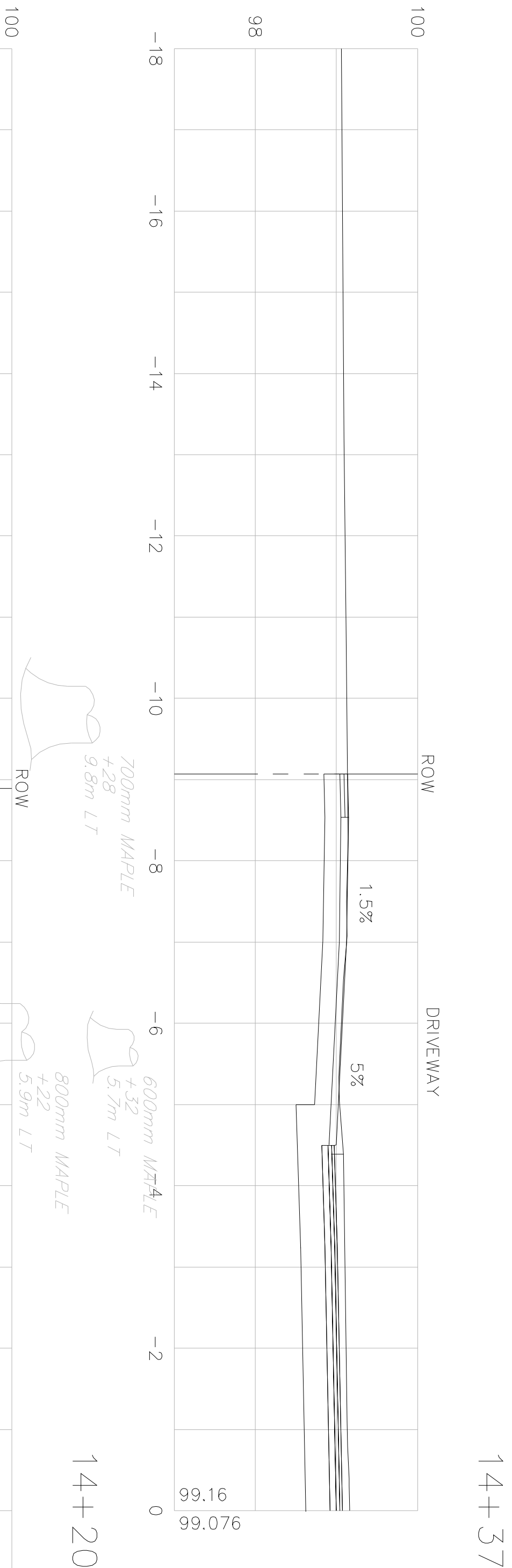
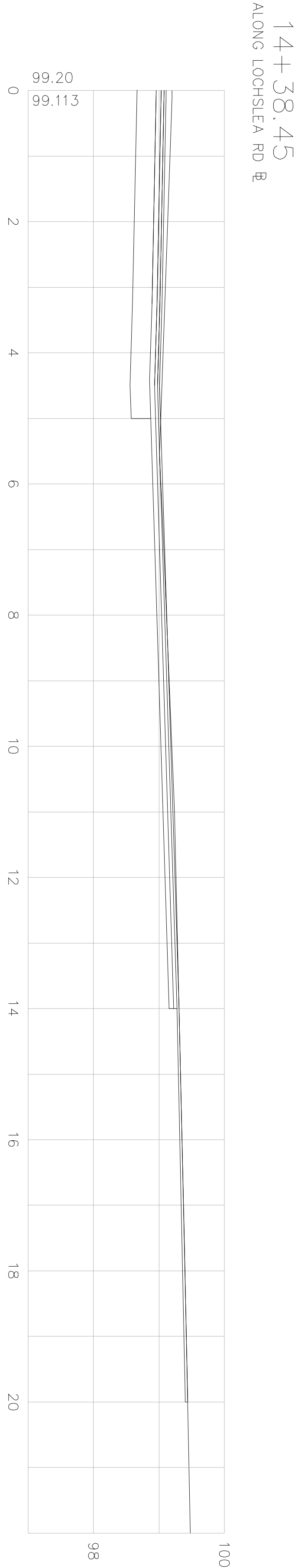
CROSS SECTIONS



[illegible]

LITTLETON				
GOLDSMITH STREET				
STATE	FED. AID	PROJ. NO.	FISCAL	SHEET TOTAL
MASS.	STP-0015(639)X	2008	74	117
PROJECT FILE NO.			603540	

CROSS SECTIONS



STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-0015(639)X	2008	75	117	

PROJECT FILE NO.	603540
------------------	--------

CROSS SECTIONS

LITTLETON
GOLDSMITH STREET

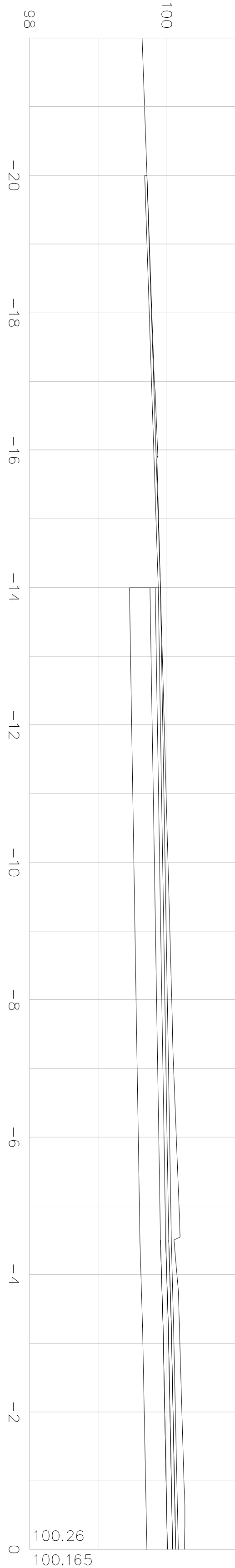
750mm MAPLE
+93
6.1m LT
UTILITY POLE
FIELD 15
+88

150mm MAPLE
+97
7.4m RT
700mm MAPLE
+93
7.4m RT

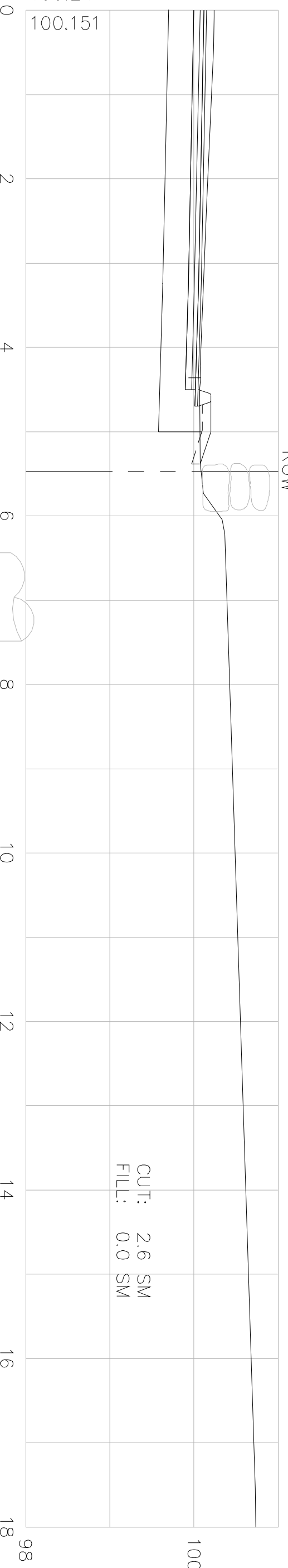
300mm MAPLE
+87
15.1m LT

100mm MAPLE
+86
6.8m RT

14+80.55
ALONG CONANT ST



14+80

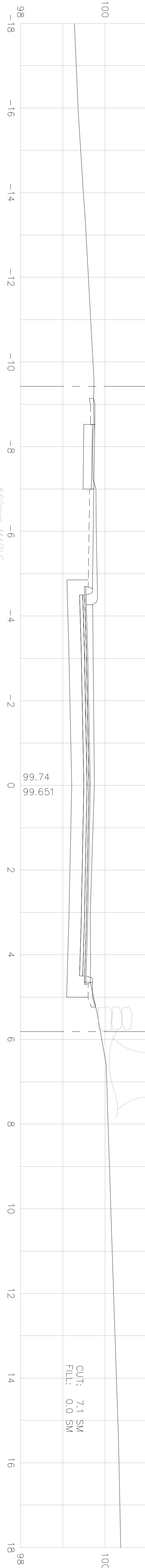


CUT: 2.6 SM
FILL: 0.0 SM

640mm MAPLE
+72
5.9m LT

1.10m MAPLE
+70m RT
1.25m MAPLE
+72
6.8m RT

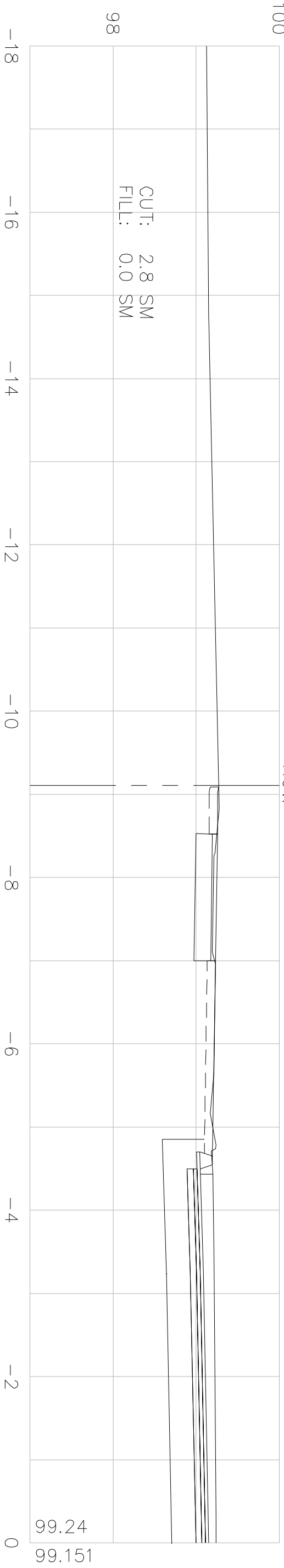
14+60



CUT: 7.1 SM
FILL: 0.0 SM

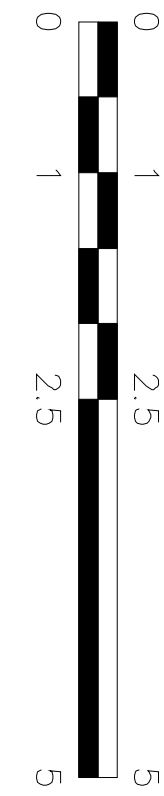
550mm MAPLE
+52
5.8m LT
UTILITY POLE
FIELD 14
+45

14+40



CUT: 2.8 SM
FILL: 0.0 SM

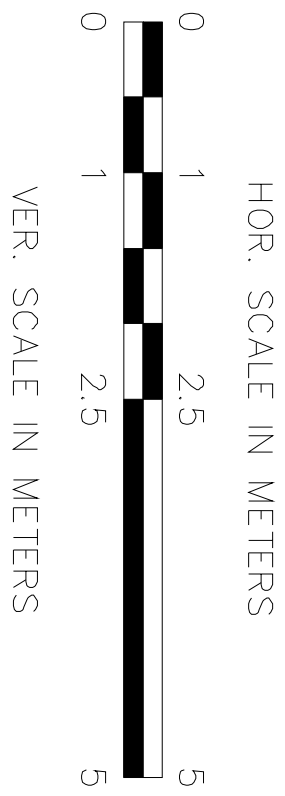
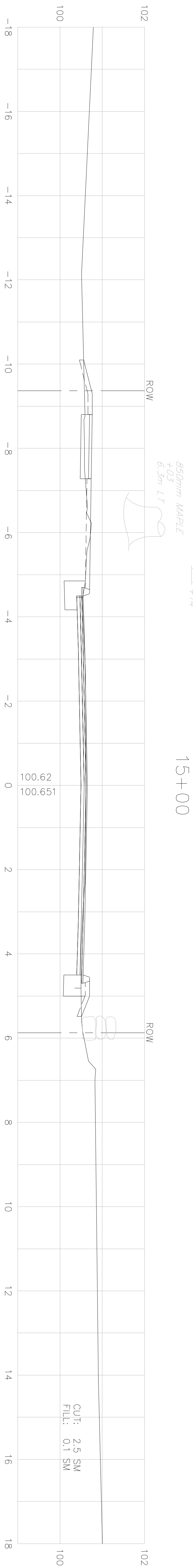
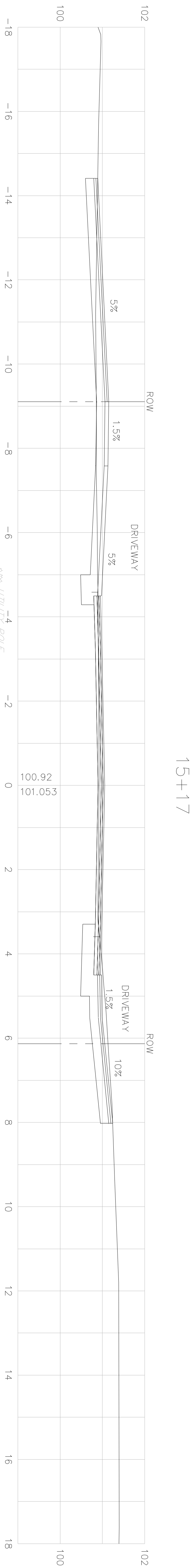
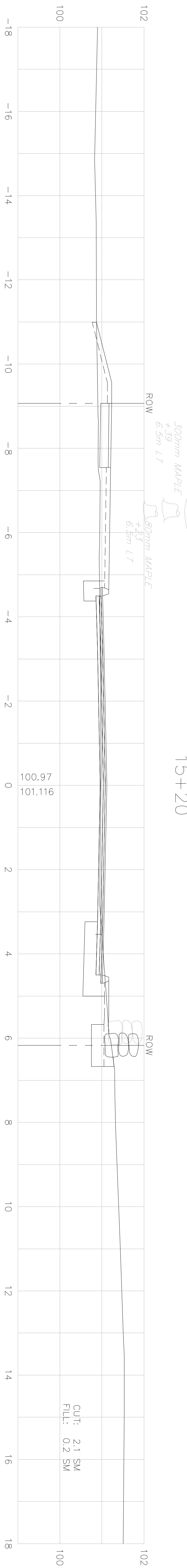
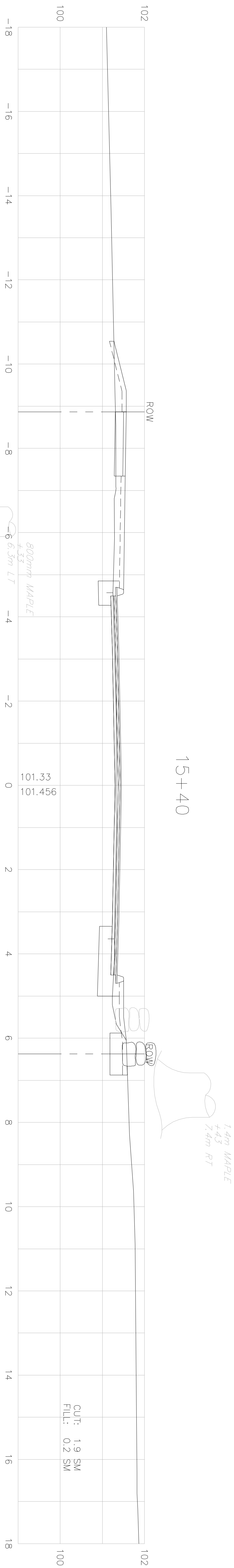
HOR. SCALE IN METERS



VER. SCALE IN METERS

STATE	FED. AID	PROJ. NO.	FISCAL	SHEET	TOTAL
MASS.	STP-0015(639)X	2008	76	117	
PROJECT FILE NO.			603540		

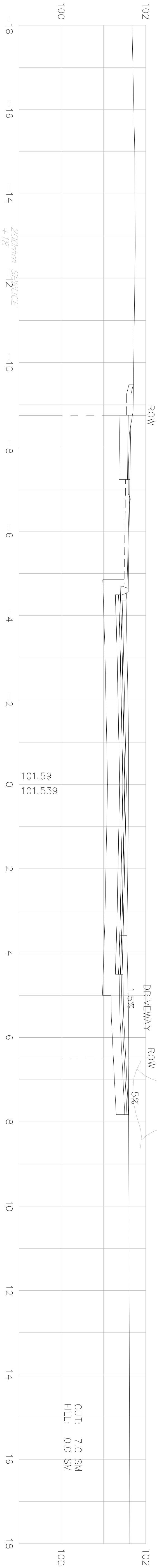
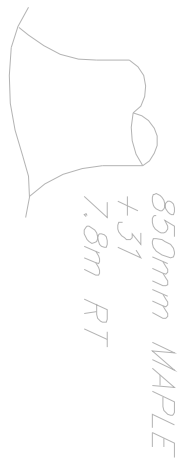
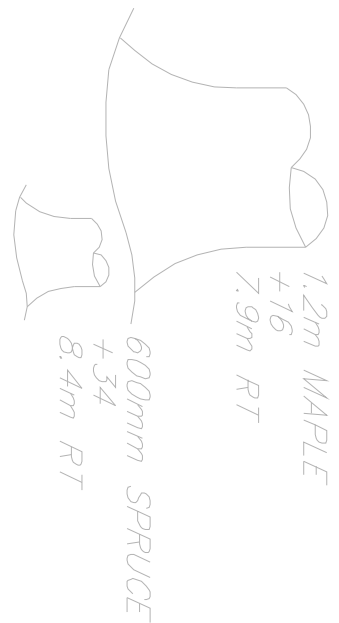
CROSS SECTIONS



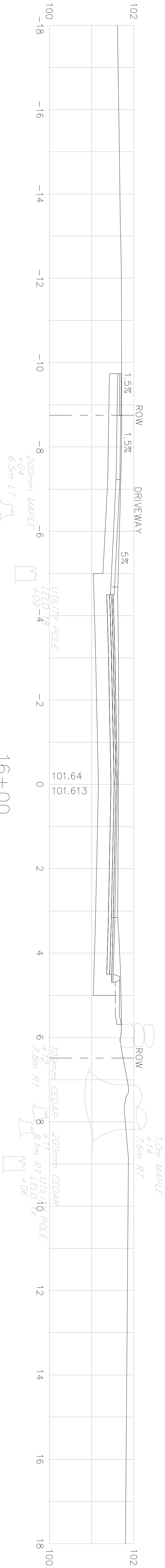
LITTLETON
GOLDSMITH STREET

STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-0015(639)X	2008	78	117	
PROJECT FILE NO.					603540

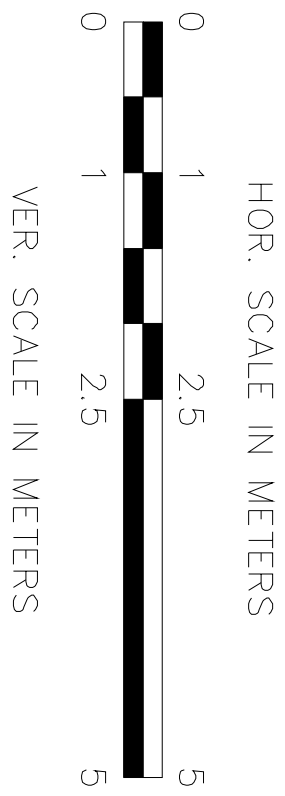
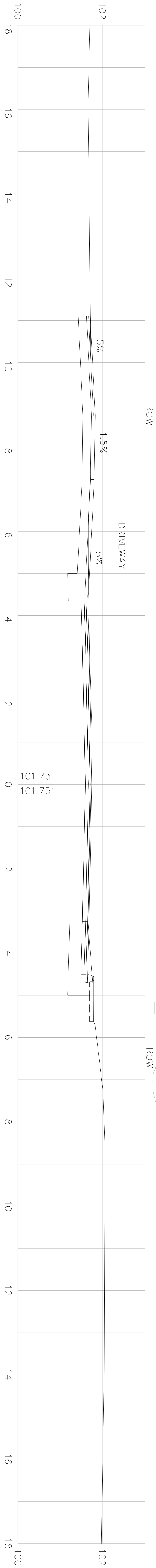
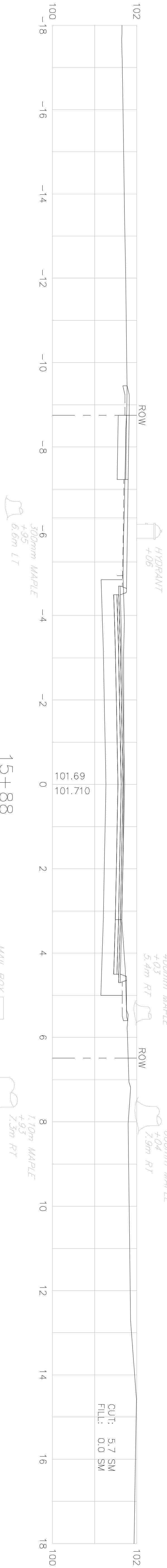
CROSS SECTIONS



16+13

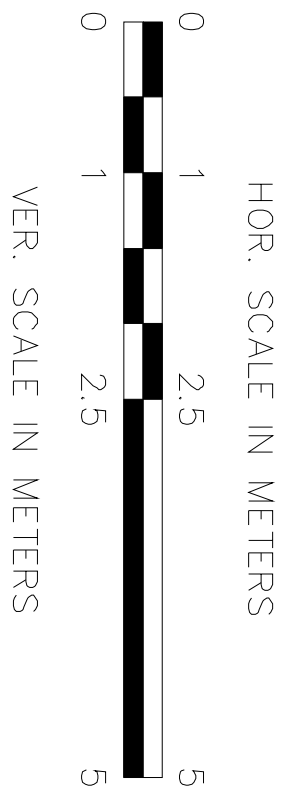
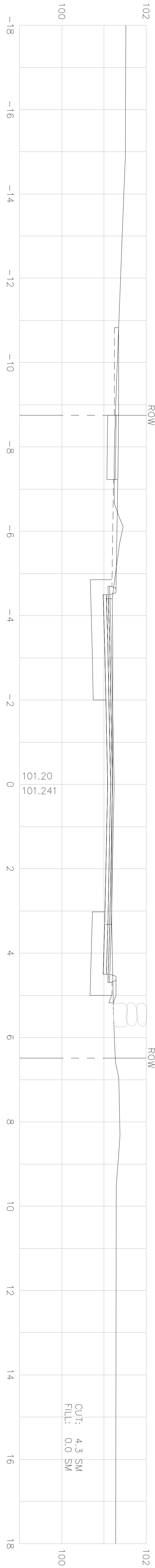
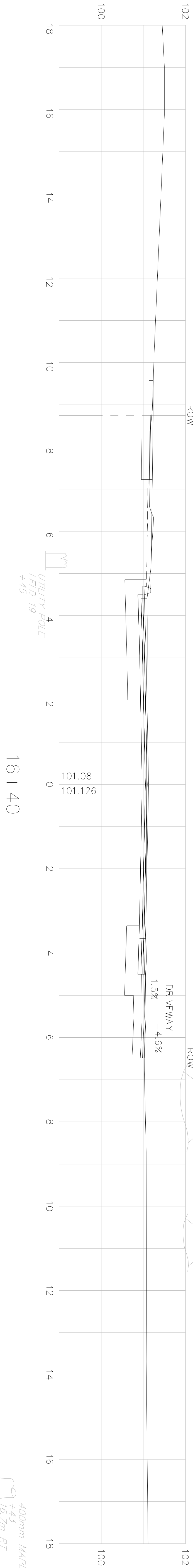
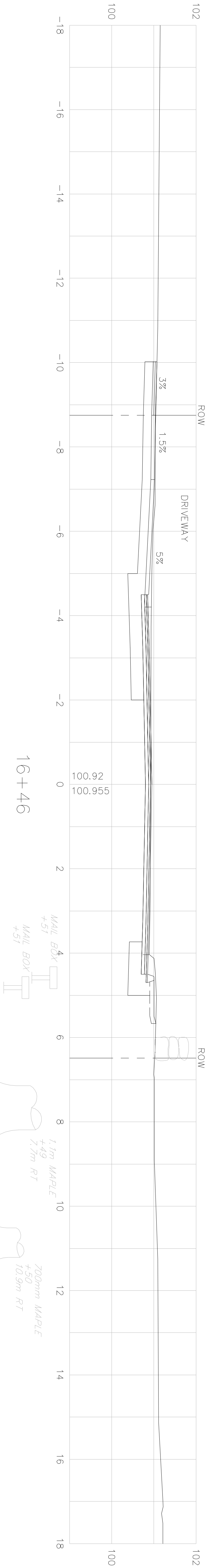
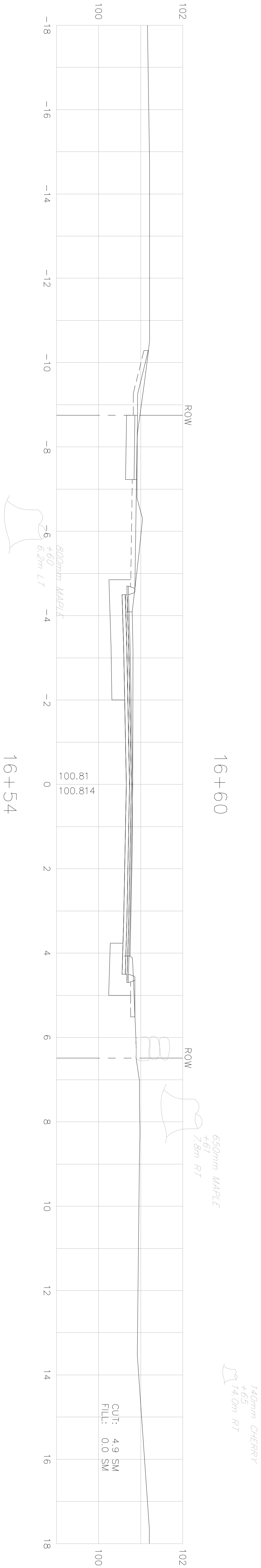


15+88



LITTLETON				GOLDSMITH STREET			
STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS			
MASS.	STP-0015(639)X	2008	79	117			
PROJECT FILE NO.				603540			

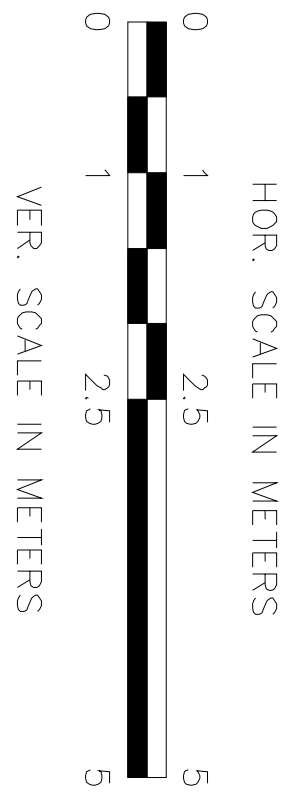
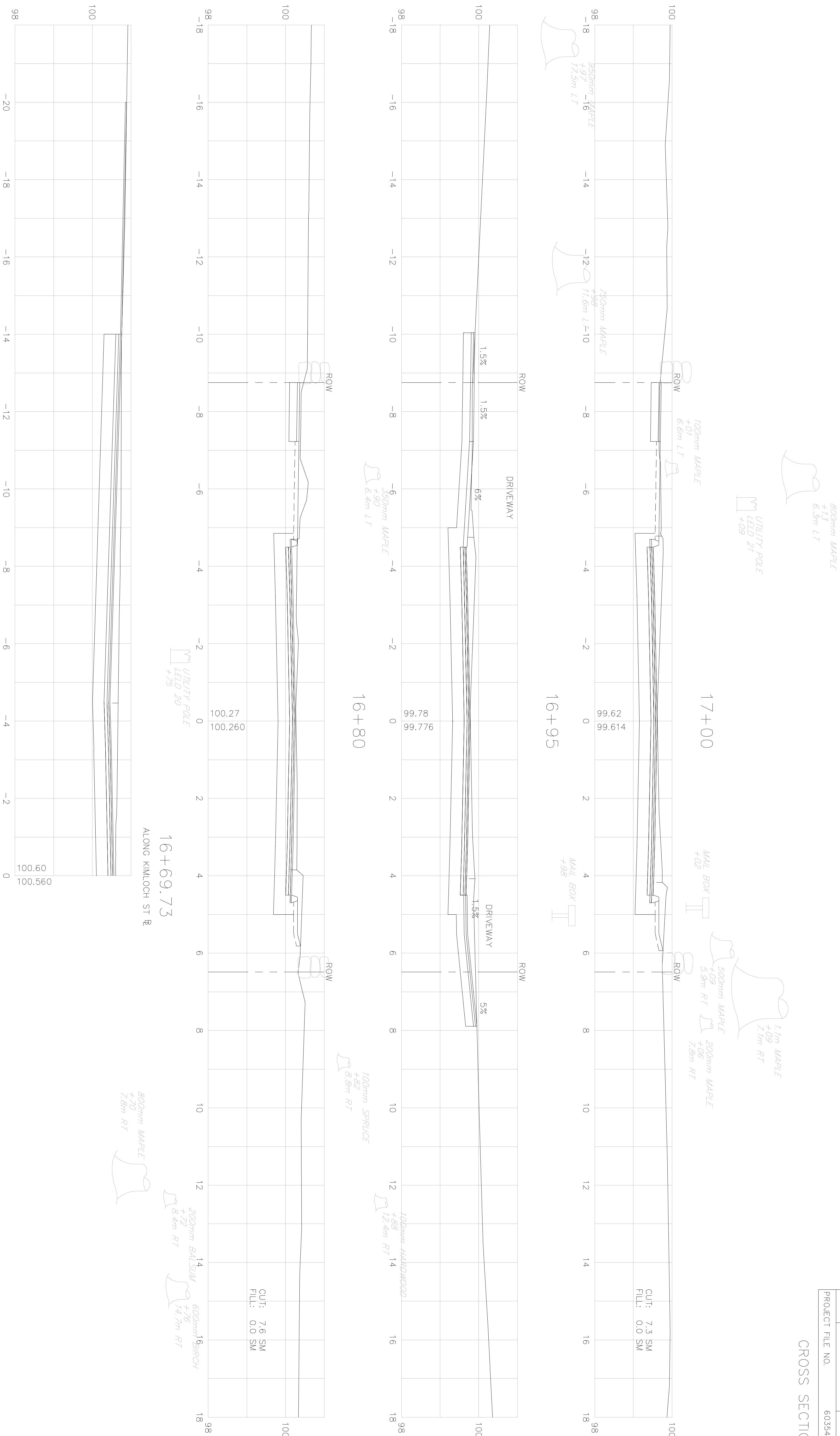
CROSS SECTIONS



LITTLETON
GOLDSMITH STREET

STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-001S(639)X	2008	80	117	
PROJECT FILE NO.					603540

CROSS SECTIONS



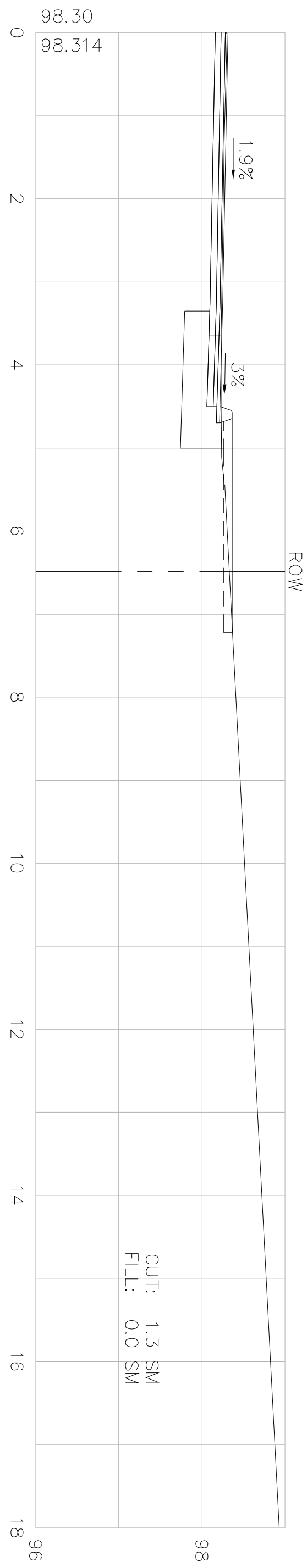
LITTLETON
GOLDSMITH STREET

STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS	STP-0015(639)X	2008	81	117	

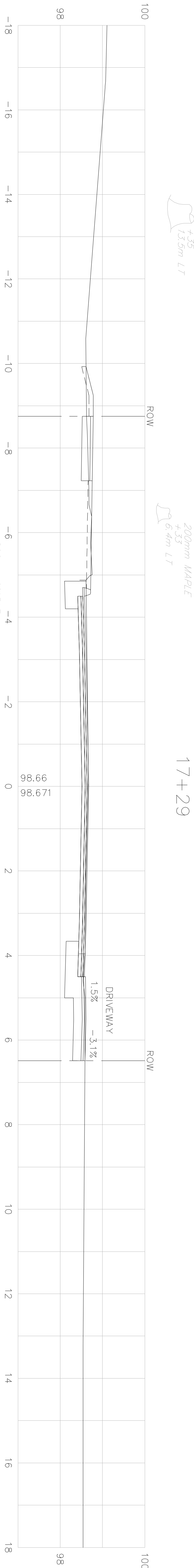
PROJECT FILE NO. 603540

CROSS SECTIONS

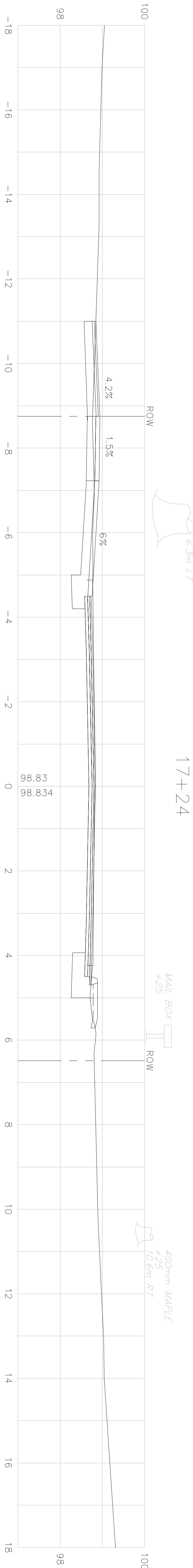
17+40
STA 17+39.202 TO STA 17+35.202
SUPERELEVATION TRANSITION



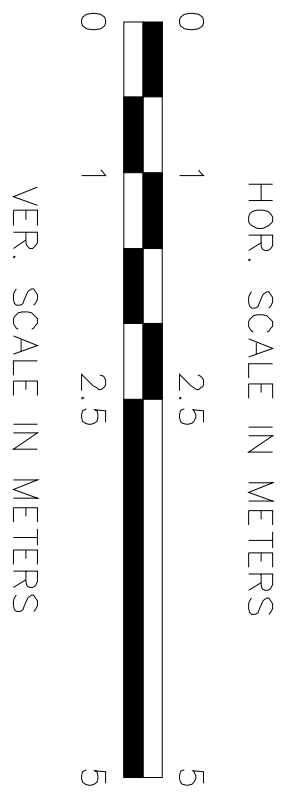
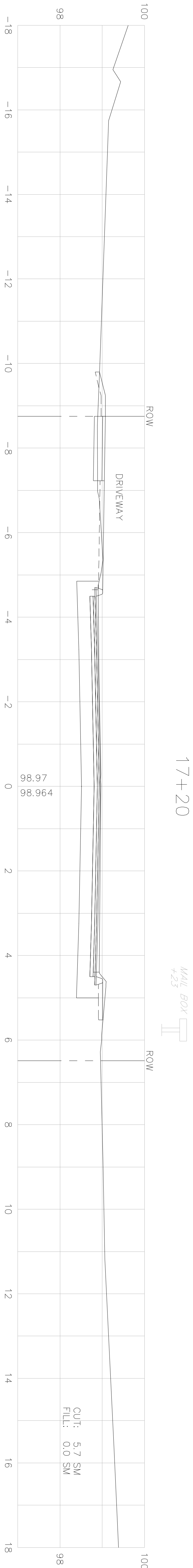
17+29



17+24



17+20



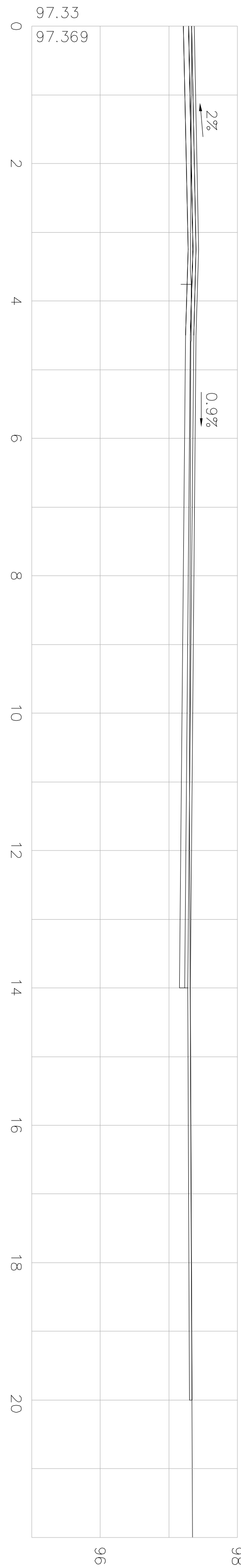
STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-0015(639)X	2008	82	117	

PROJECT FILE NO.	603540
------------------	--------

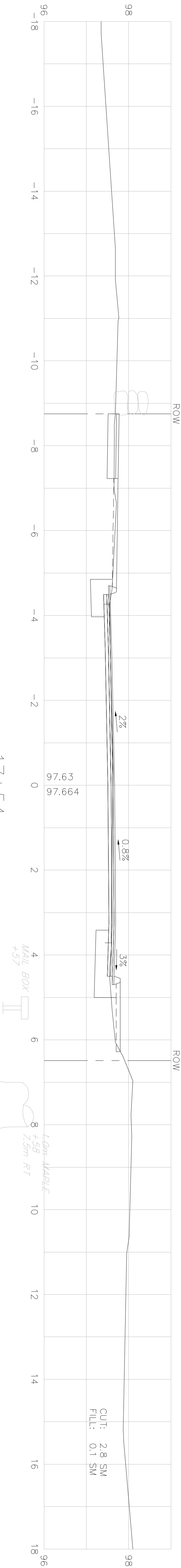
CROSS SECTIONS

UTILITY POLE
LEAD 23
W +75

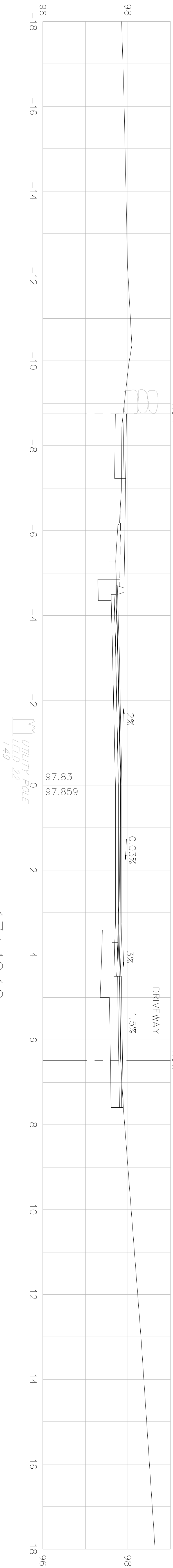
17+69.07
ALONG ANDREA ST R



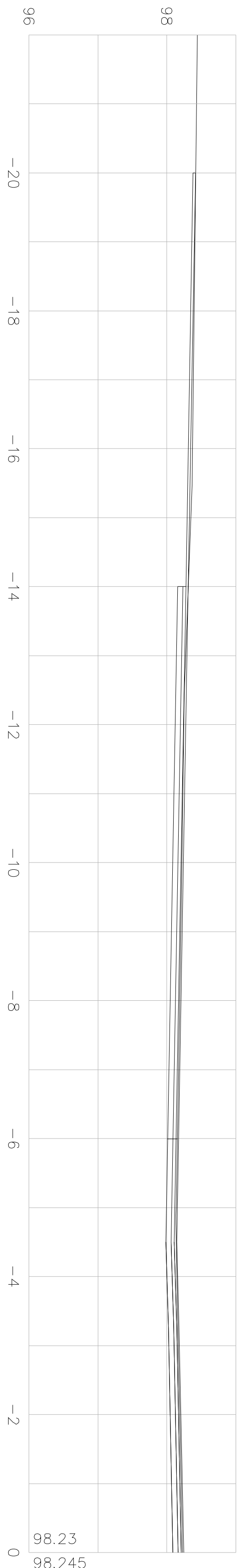
17+60



17+54

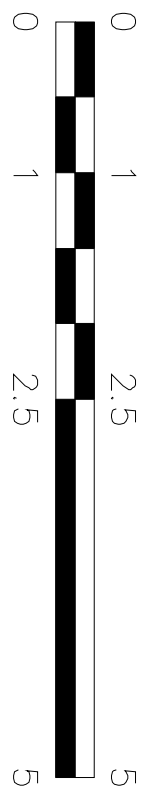


17+42.12
ALONG TALEA ST R



STA 17+39.202 TO STA 17+93.202
SUPERELEVATION TRANSITION

HOR. SCALE IN METERS



VER. SCALE IN METERS

The image displays three vertical cross-sections of a road project, labeled 17+80, 17+95, and 18+00. Each diagram shows the road profile, existing ground, and proposed construction. Key features include a driveway, ROW (Right of Way), and various vegetation markers like 950mm Maple and 400mm Ash. The diagrams also show the transition from STA 17+39.202 to STA 17+93.202.

17+80: This section shows a road profile with a driveway on the right. The existing ground is shown as a solid line, and the proposed road profile is a dashed line. The road has a 3.5% grade. A 950mm Maple tree is marked with a 6.7m LT. The elevation at the end of the section is 96.018.

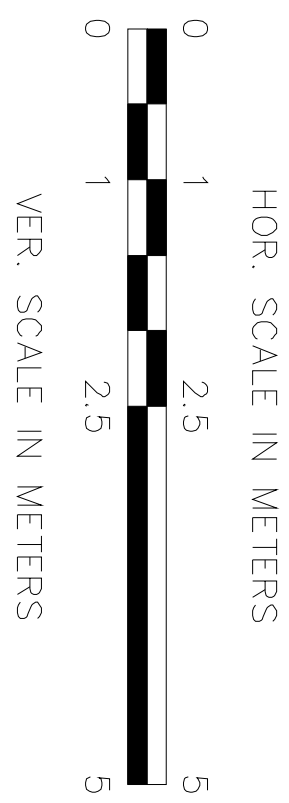
17+95: This section shows a road profile with a driveway on the right. The existing ground is shown as a solid line, and the proposed road profile is a dashed line. The road has a 3.5% grade. A 950mm Maple tree is marked with a 6.7m LT. The elevation at the end of the section is 96.018.

18+00: This section shows a road profile with a driveway on the right. The existing ground is shown as a solid line, and the proposed road profile is a dashed line. The road has a 3.5% grade. A 950mm Maple tree is marked with a 6.7m LT. The elevation at the end of the section is 96.018.

17+80: This section shows a road profile with a driveway on the right. The existing ground is shown as a solid line, and the proposed road profile is a dashed line. The road has a 3.5% grade. A 950mm Maple tree is marked with a 6.7m LT. The elevation at the end of the section is 96.018.

17+95: This section shows a road profile with a driveway on the right. The existing ground is shown as a solid line, and the proposed road profile is a dashed line. The road has a 3.5% grade. A 950mm Maple tree is marked with a 6.7m LT. The elevation at the end of the section is 96.018.

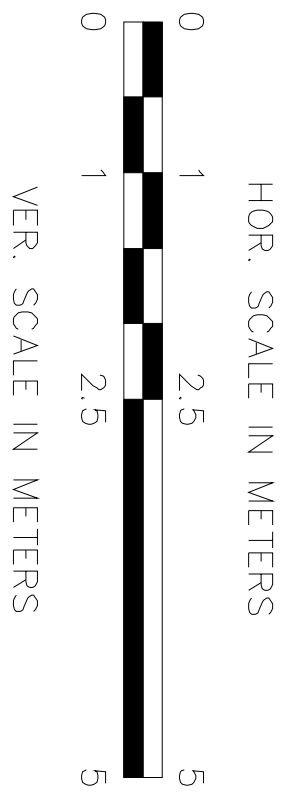
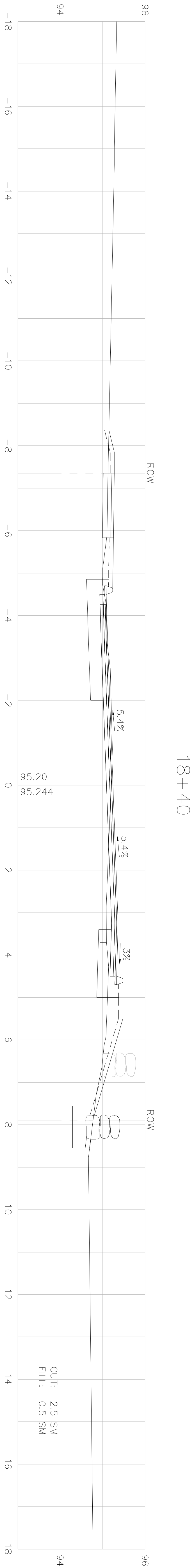
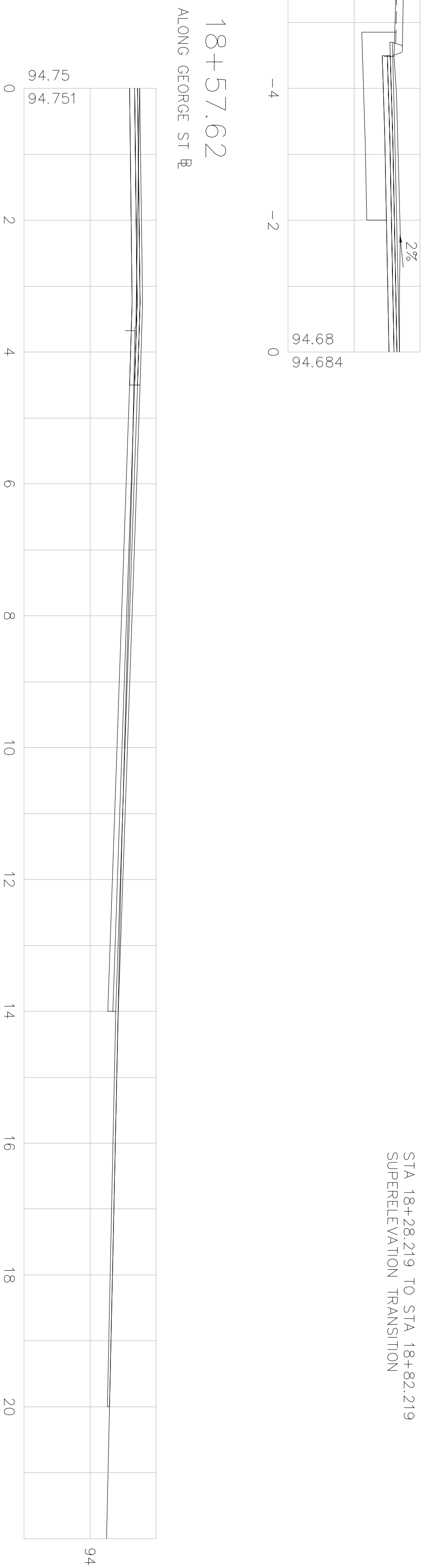
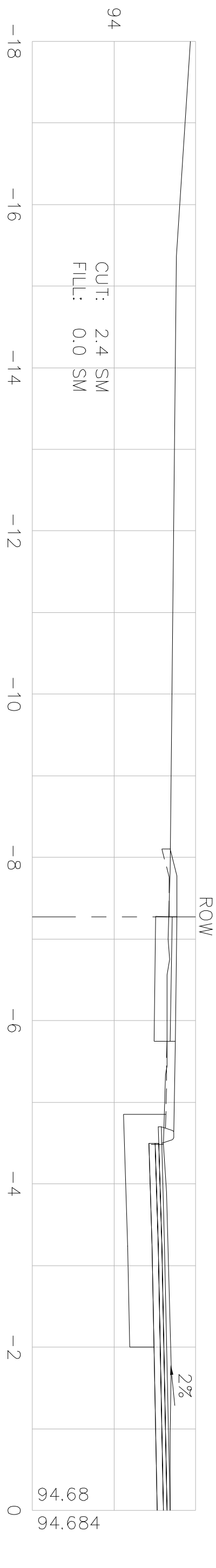
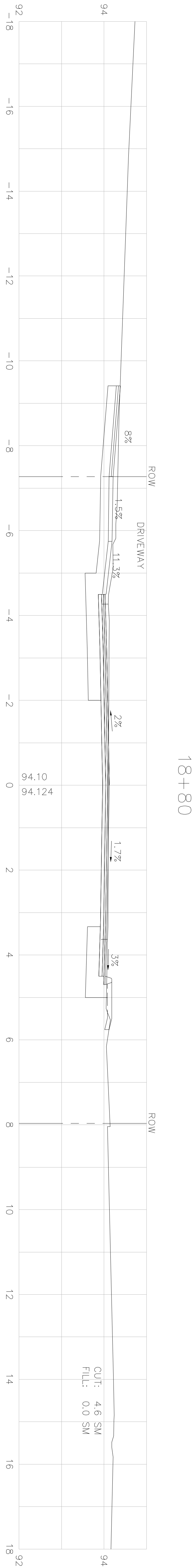
18+00: This section shows a road profile with a driveway on the right. The existing ground is shown as a solid line, and the proposed road profile is a dashed line. The road has a 3.5% grade. A 950mm Maple tree is marked with a 6.7m LT. The elevation at the end of the section is 96.018.



LITTLETON
GOLDSMITH STREET

STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-0015(639)X	2008	84	117	
PROJECT FILE NO.					603540

CROSS SECTIONS



SUPERELEVATION:
PT STA 18+41.217
R = 250m
BANK = 5.4%

18+86

19+00

19+20

19+28

SUPERELEVATION:
PC STA 19+28.000
R = 11000'
BANK = 2.4%

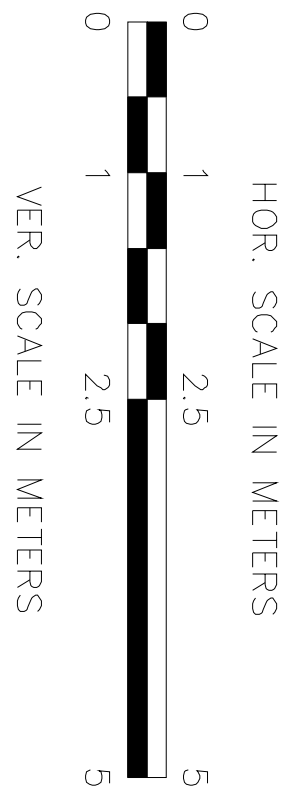
CUT: 0.5 SM
FILL: 0.0 SM

CUT: 2.6 SM
FILL: 0.0 SM

CUT: 2.5 SM
FILL: 0.2 SM

CUT: 2.0 SM
FILL: 0.1 SM

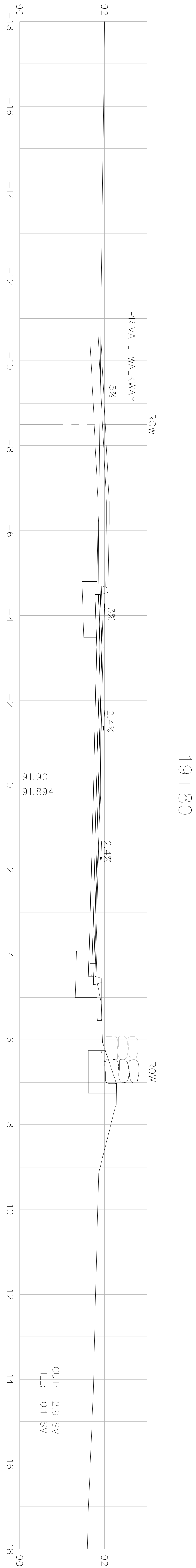
STA 18+28.219 TO STA 19+54.219 LT
STA 19+40.000 TO STA 19+54.219 RT
SUPERELEVATION TRANSITION



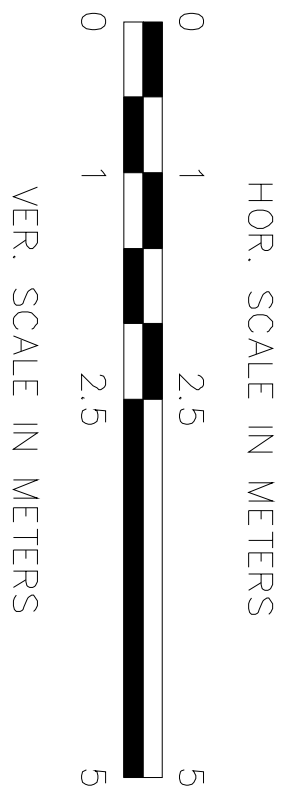
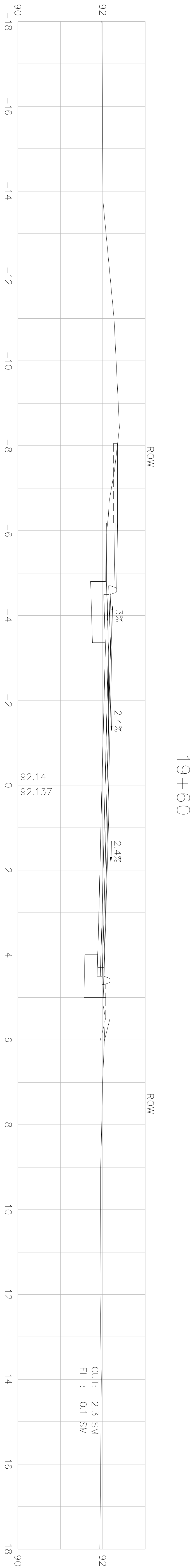
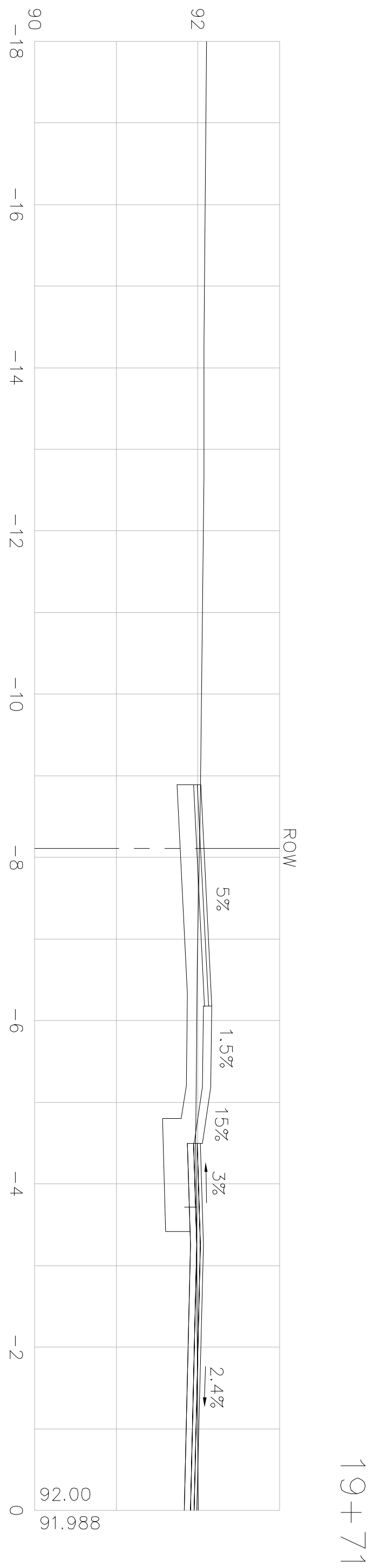
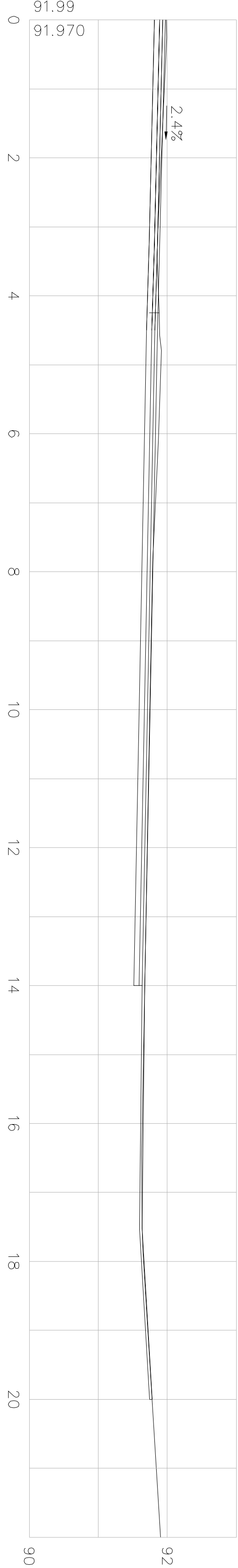
STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-0015(639)X	2008	86	117	

PROJECT FILE NO. 603540

CROSS SECTIONS

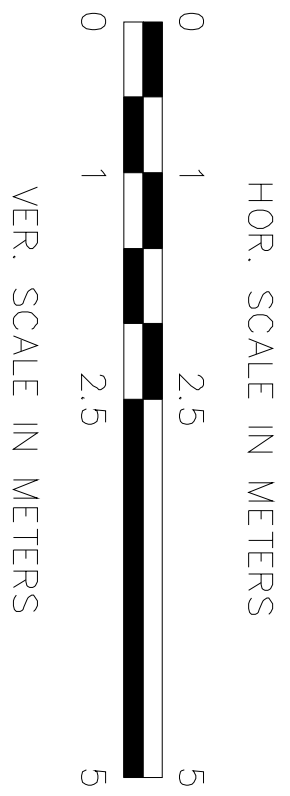
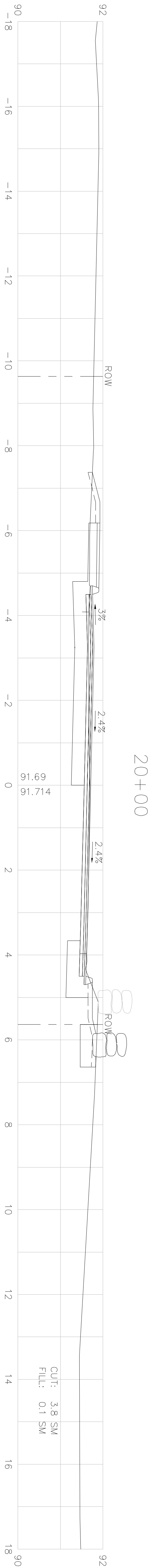
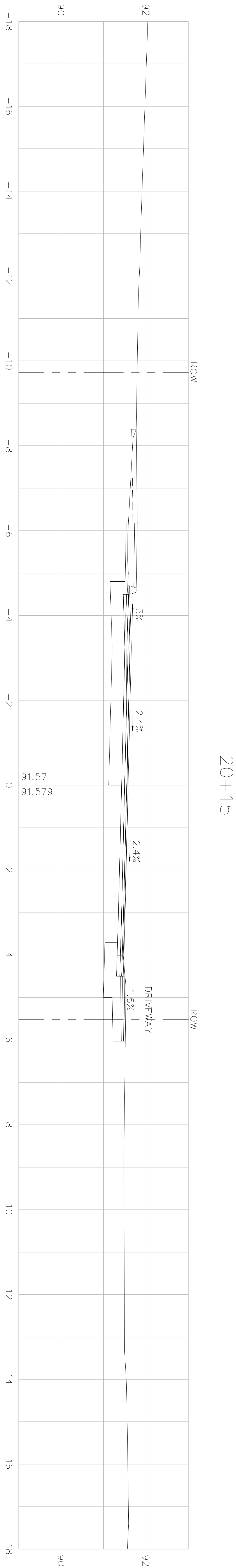
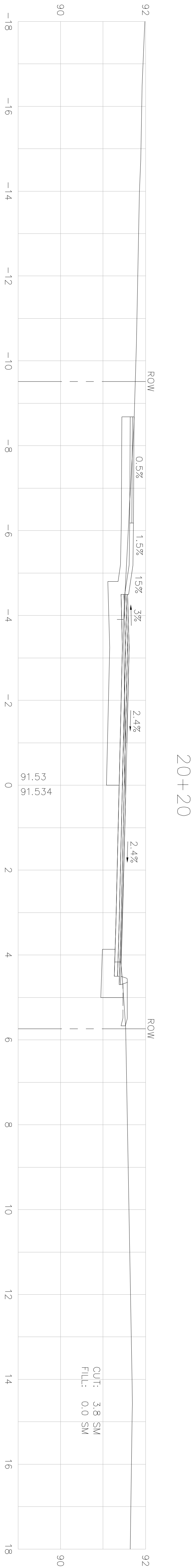
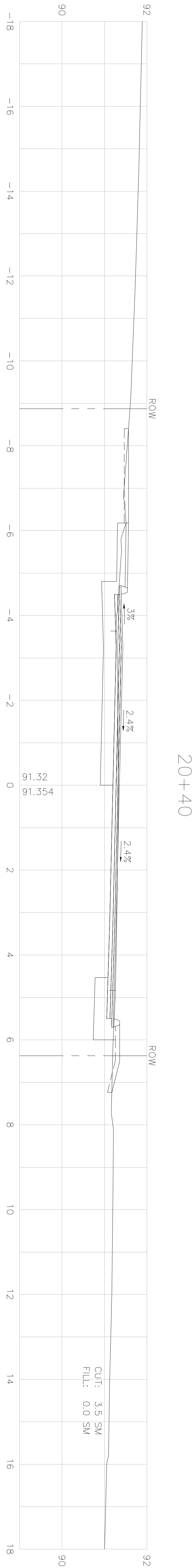


19+72.55
ALONG ORCHID DR



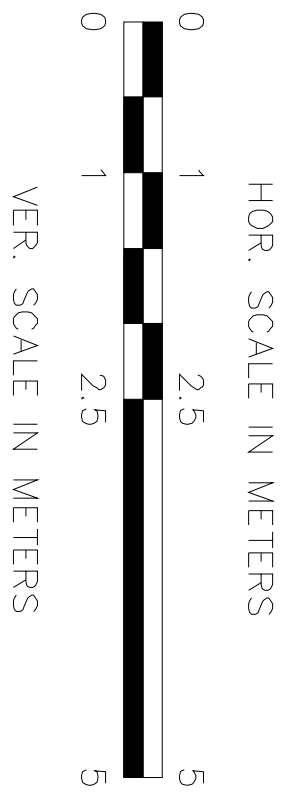
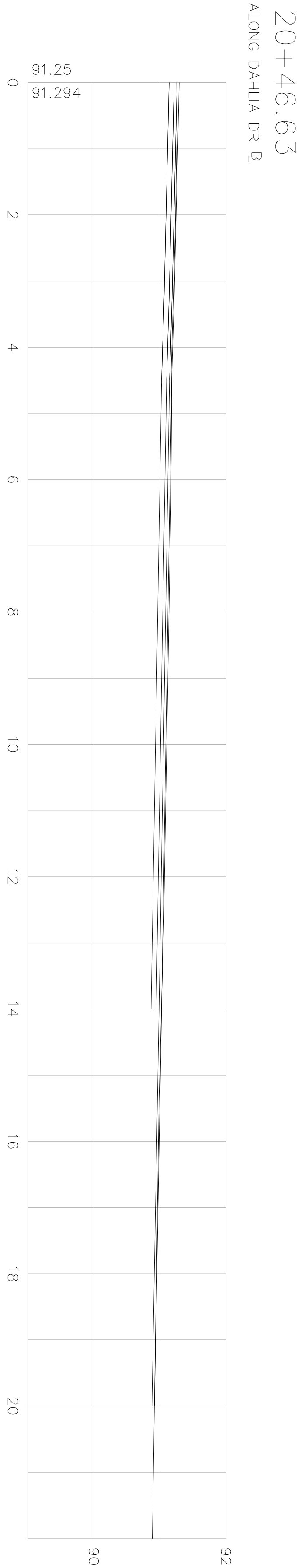
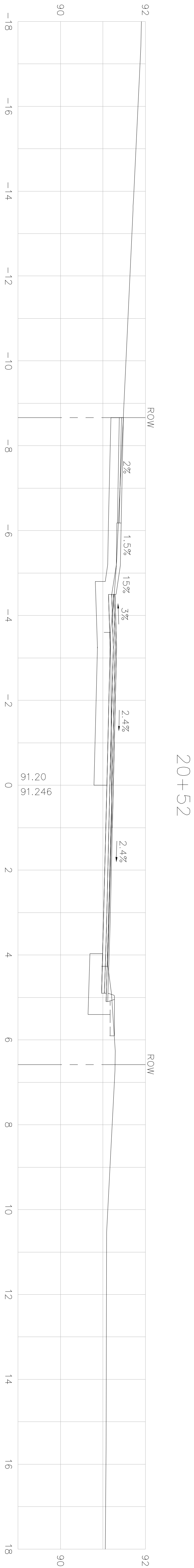
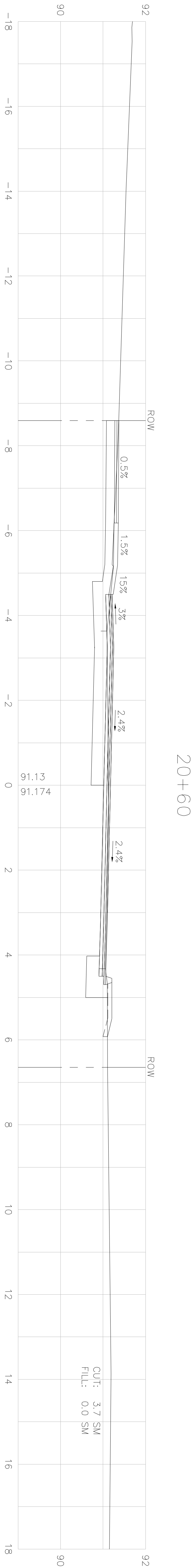
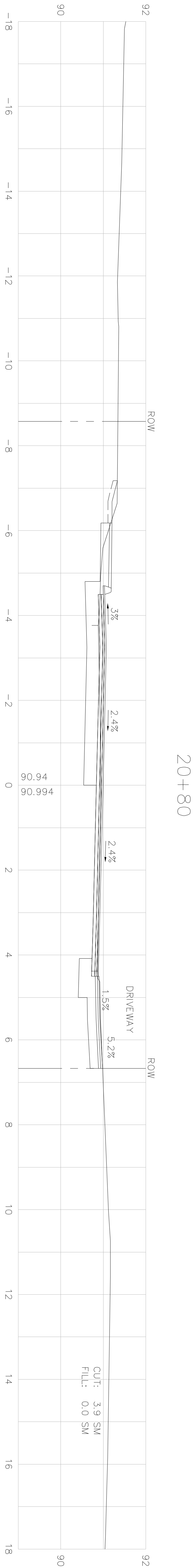
STATE	FED. AID	PROJ. NO.	FISCAL	SHEET	TOTAL
MASS.	STP-0015(639)X	2008	87	117	
PROJECT FILE NO.		603540			

CROSS SECTIONS



STATE	FED. AID	PROJ. NO.	FISCAL	SHEET	TOTAL
MASS.	STP-0015(639)X	2008	88	117	
PROJECT FILE NO.		603540			

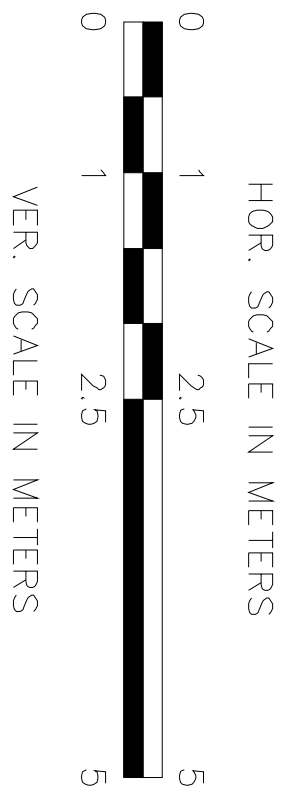
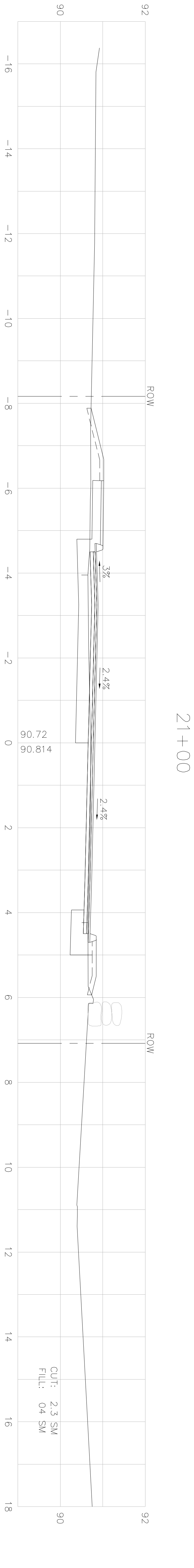
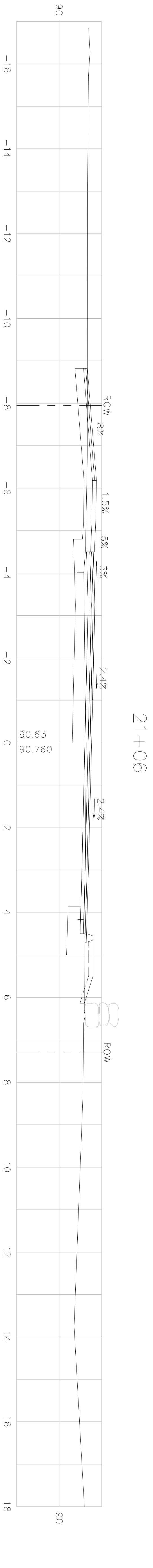
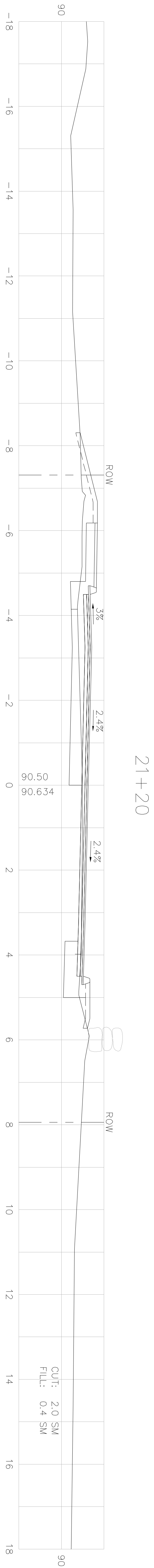
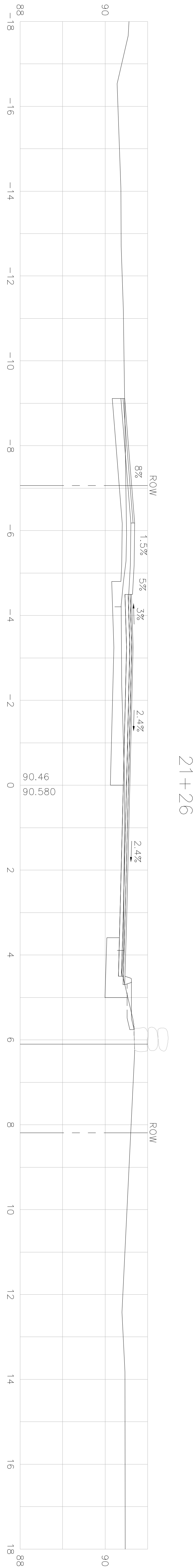
CROSS SECTIONS



LITTLETON
GOLDSMITH STREET

STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-0015(639)X	2008	89	117	
PROJECT FILE NO.					603540

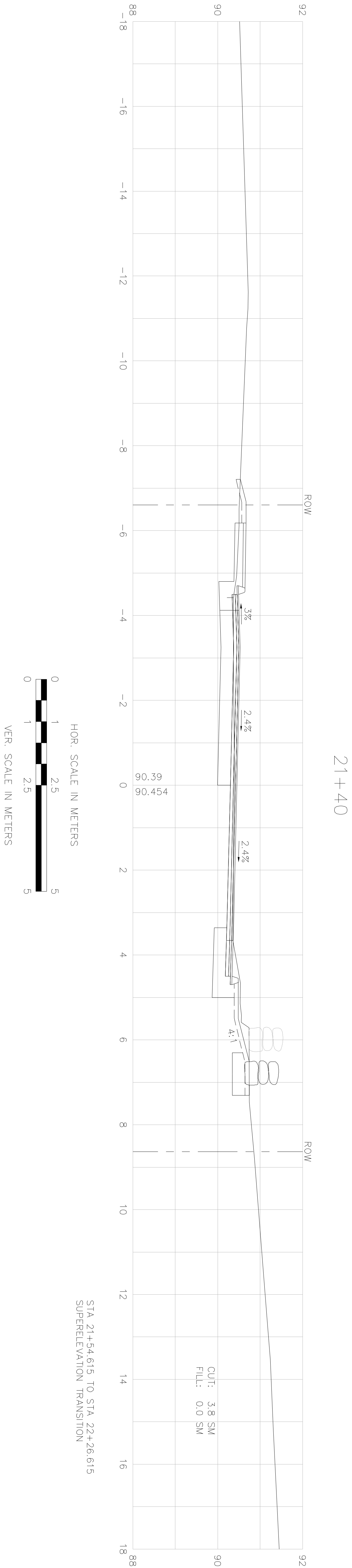
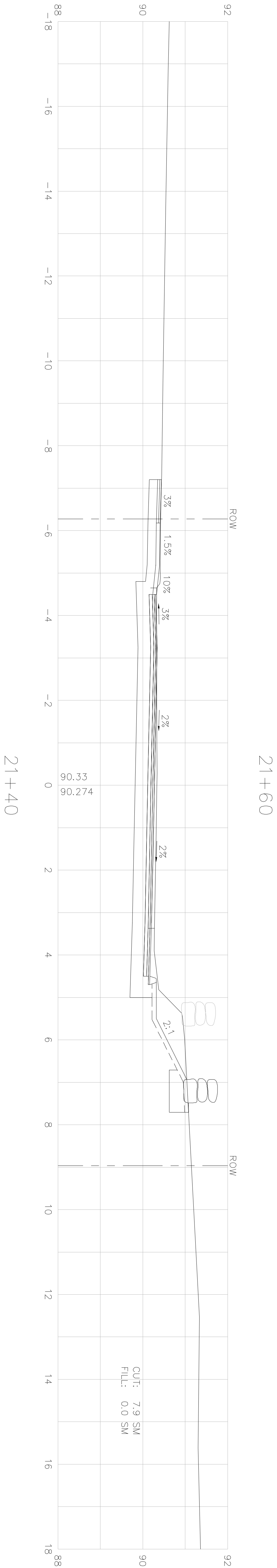
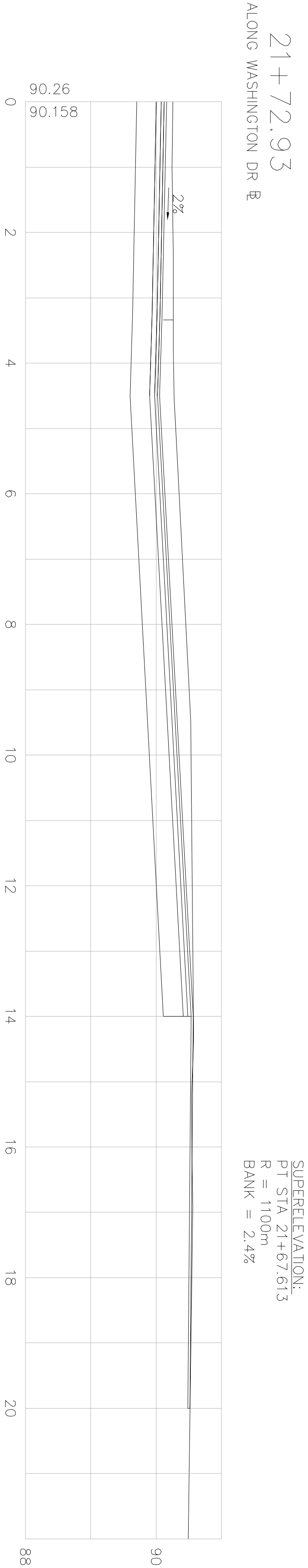
CROSS SECTIONS



STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-0015(639)	X	2008	90	117
PROJECT FILE NO.		603540			

LITTLETON
GOLDSMITH STREET

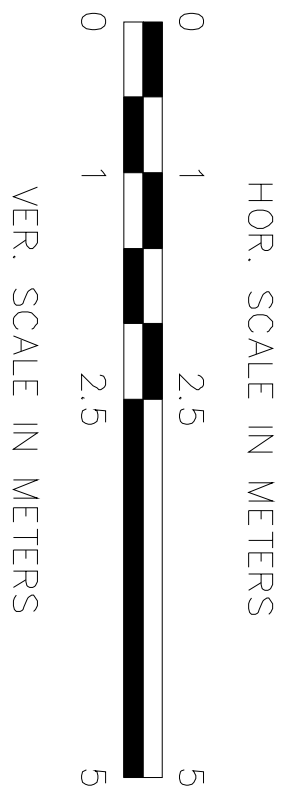
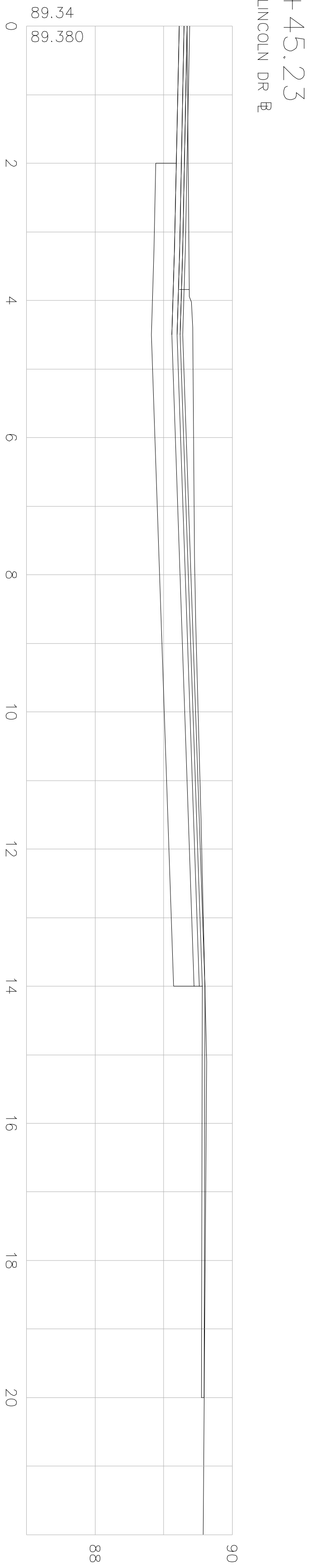
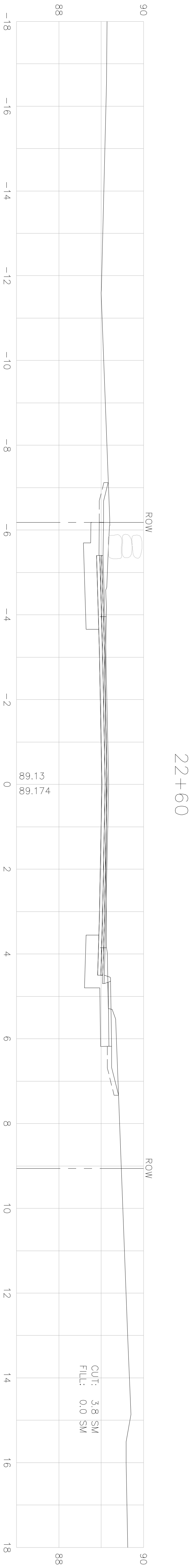
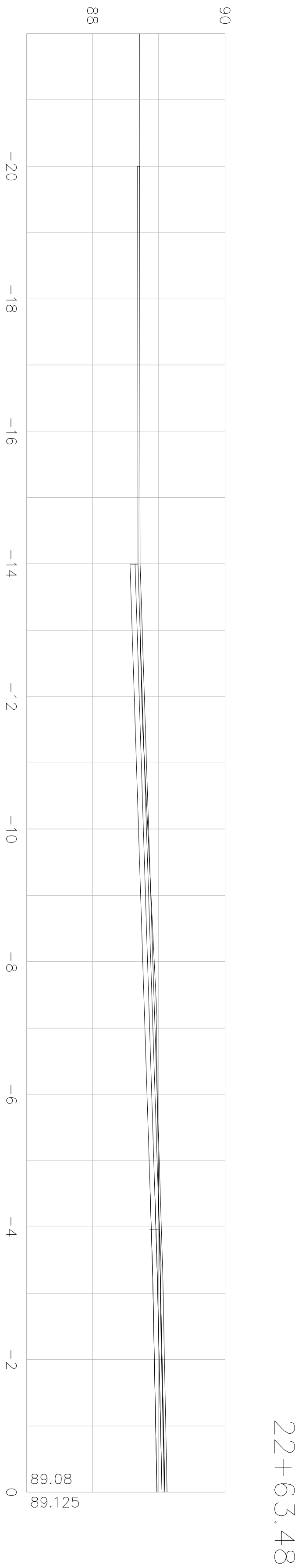
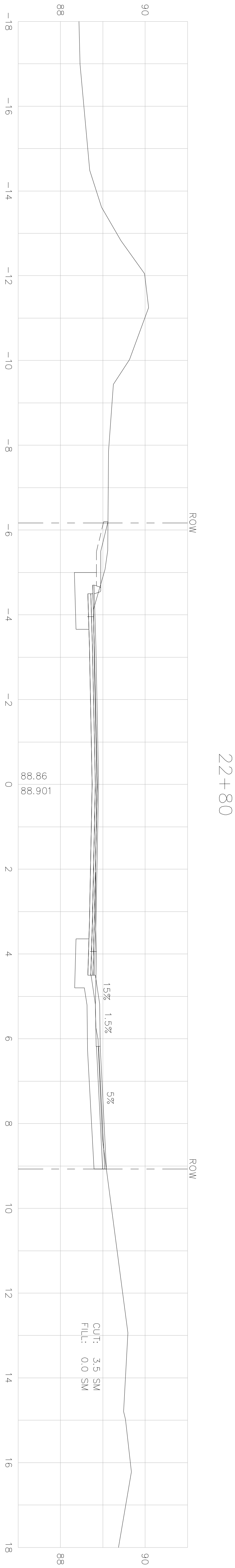
CROSS SECTIONS



STATE	FED. AID	PROJ. NO.	FISCAL	SHEET	TOTAL
MASS.	STP-0015(639)X	2008	93	117	
PROJECT FILE NO.		603540			

LITTLETON
GOLDSMITH STREET

CROSS SECTIONS

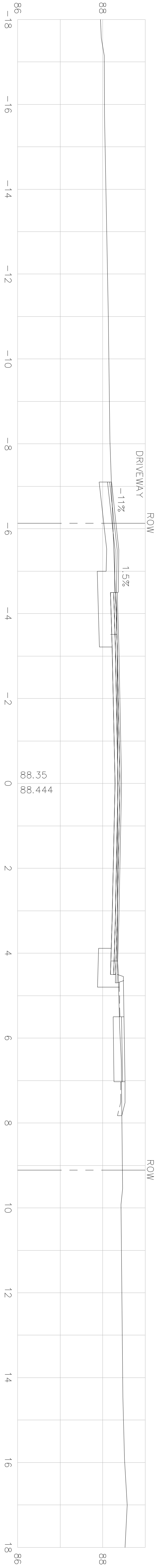


LITTLETON
GOLDSMITH STREET

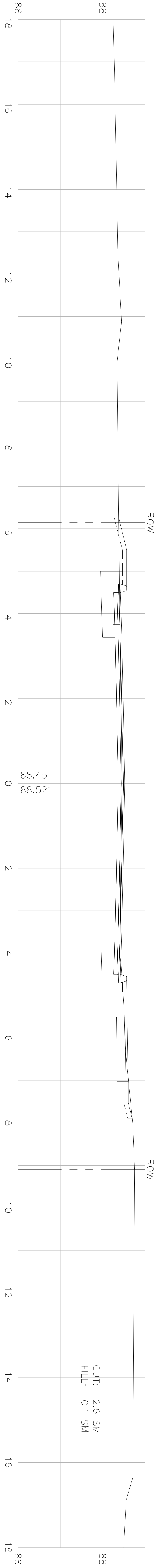
STATE	FED. AID	PROJ. NO.	FISCAL	SHEET	TOTAL
MASS.	STP-0015(639)X	2008	94	117	
PROJECT FILE NO.			603540		

CROSS SECTIONS

23+34

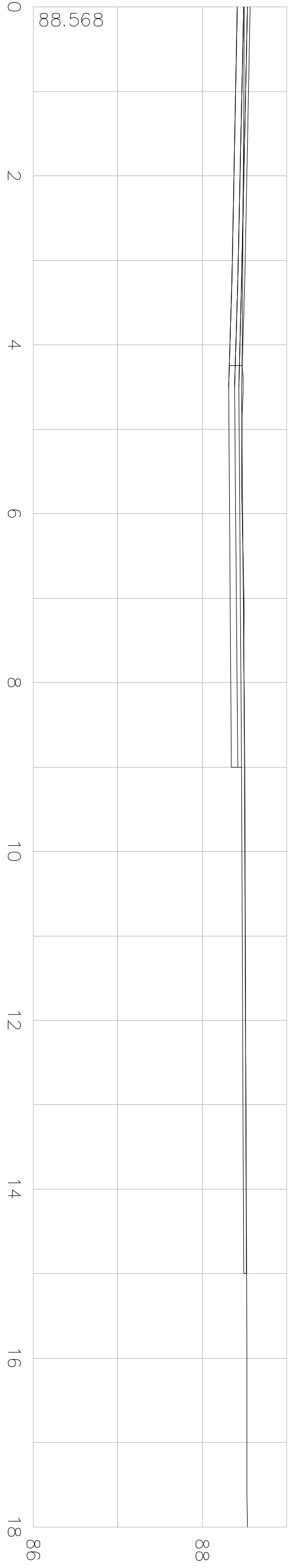


23+20

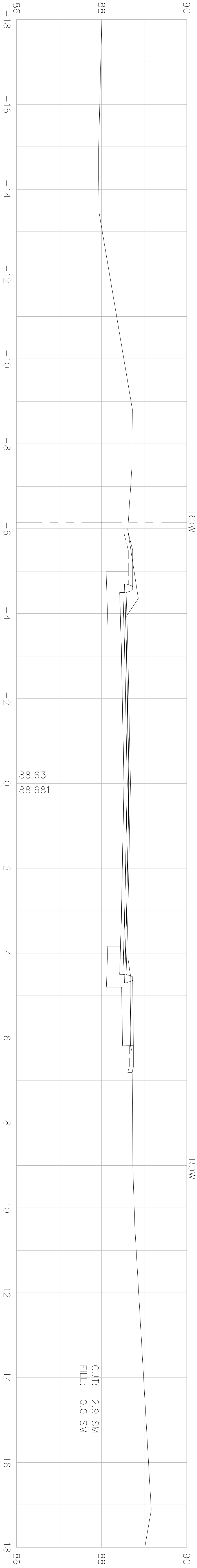


23+13.31

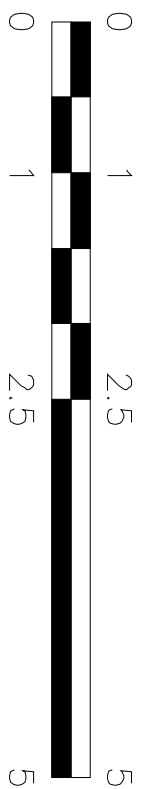
ALONG PARK DRIVE



23+00



HOR. SCALE IN METERS

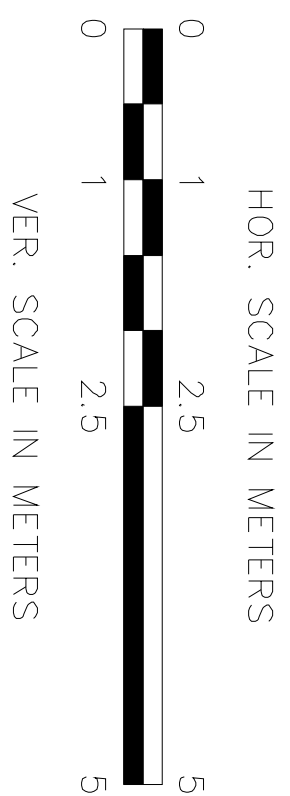
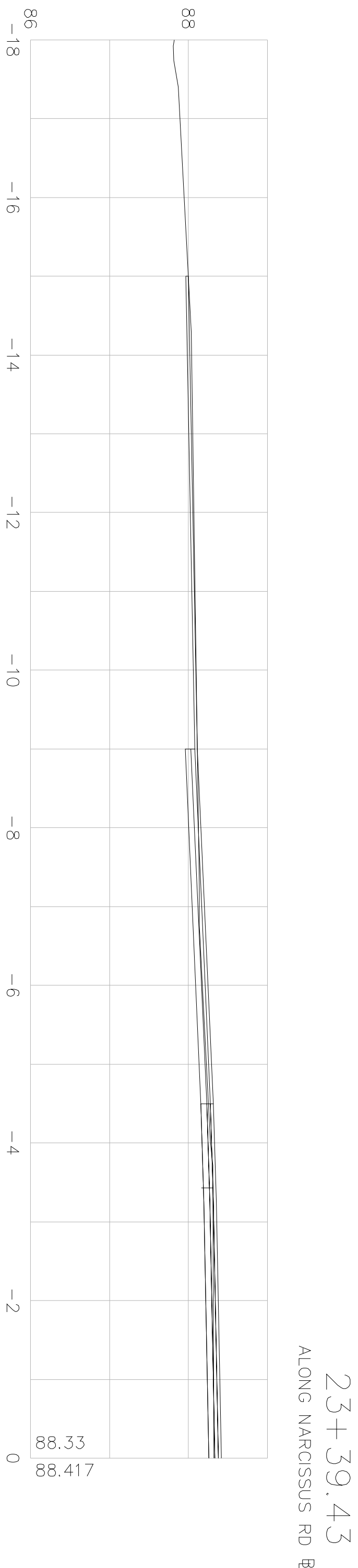
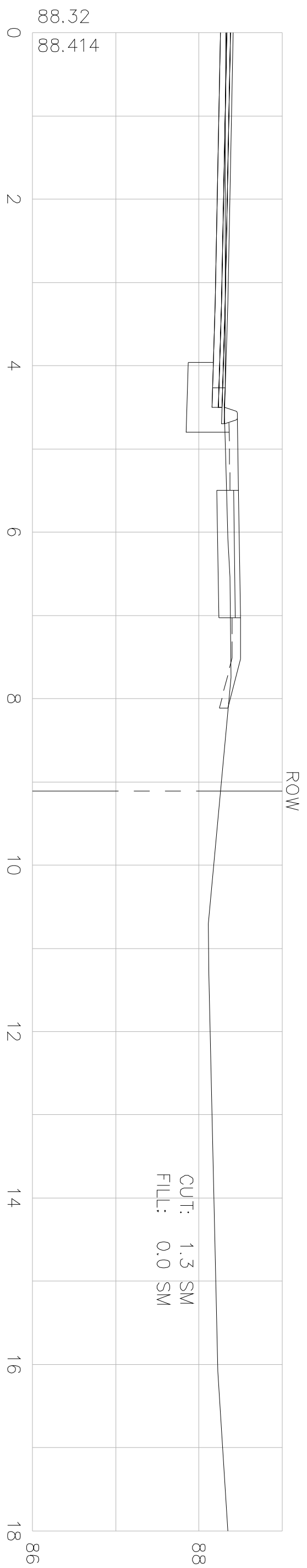
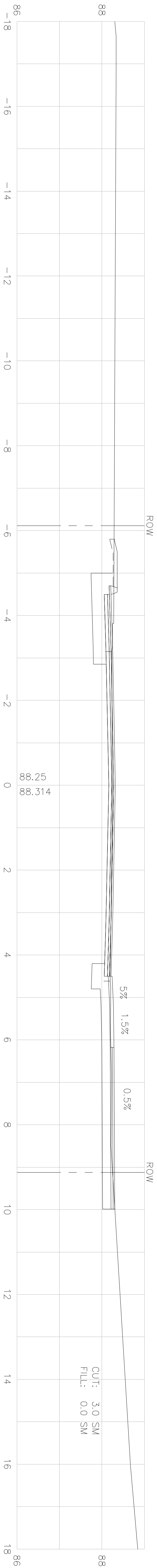
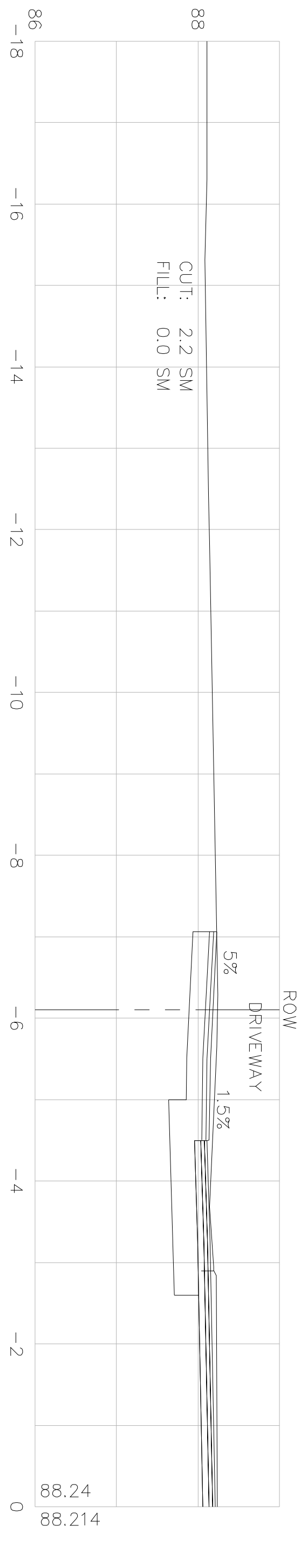


VER. SCALE IN METERS

LITTLETON
GOLDSMITH STREET

STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-0015(639)X	2008	95	117	
PROJECT FILE NO.					603540

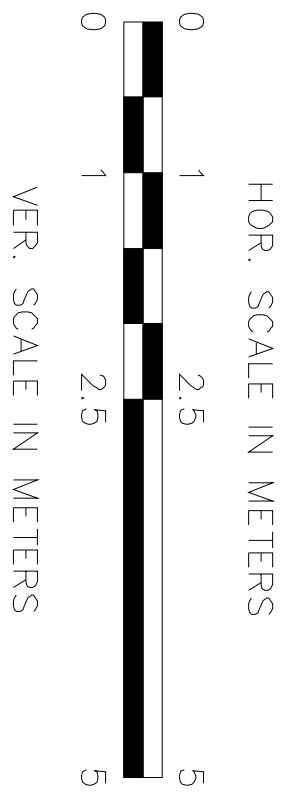
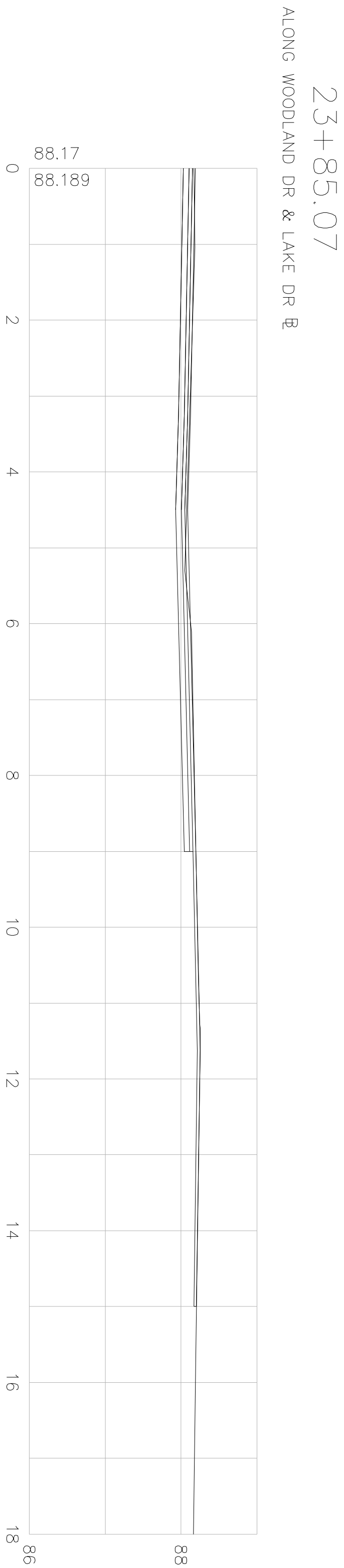
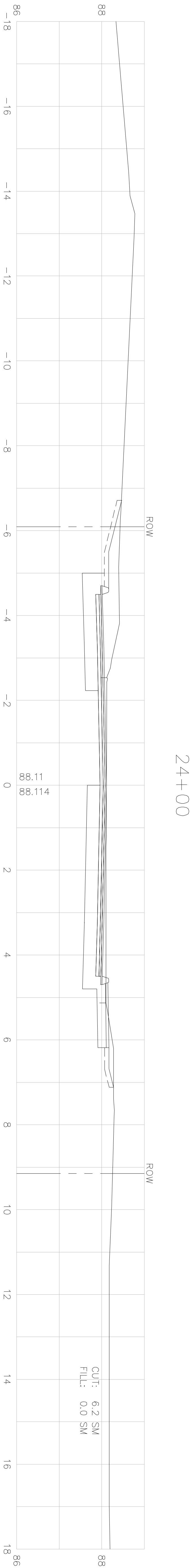
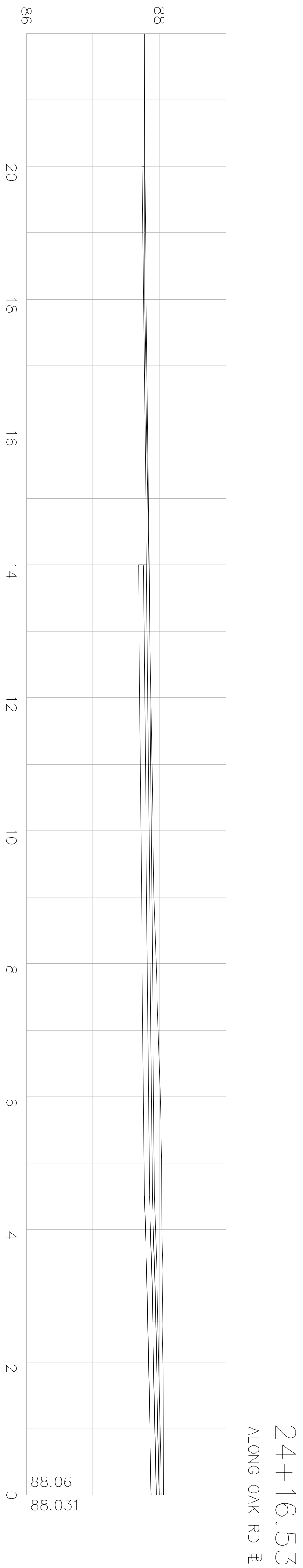
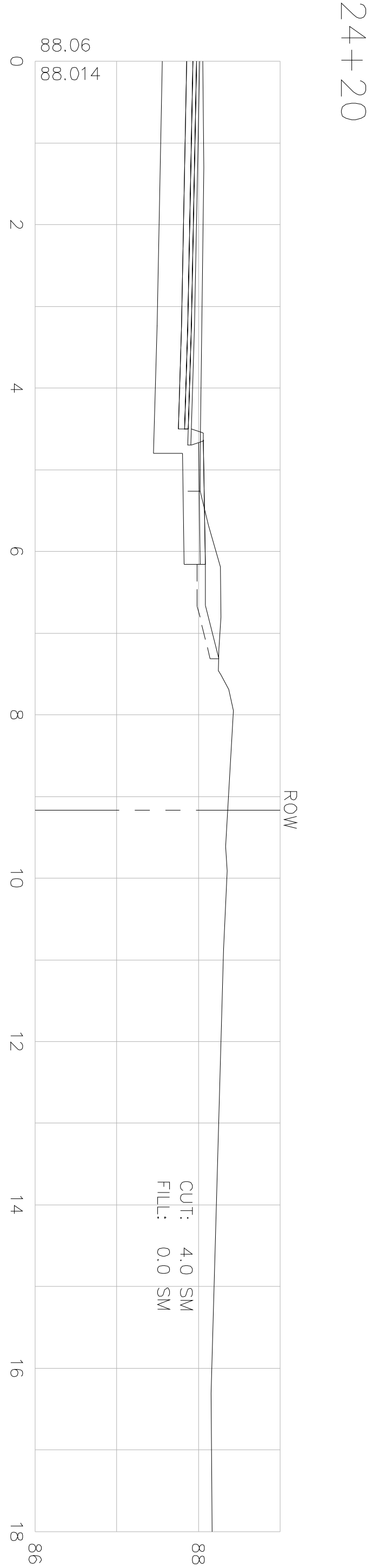
CROSS SECTIONS



STATE	FED. AID	PROJ. NO.	FISCAL	SHEET	TOTAL
MASS.	STP-0015(639)X	2008	96	117	
PROJECT FILE NO.		603540			

LITTLETON
GOLDSMITH STREET

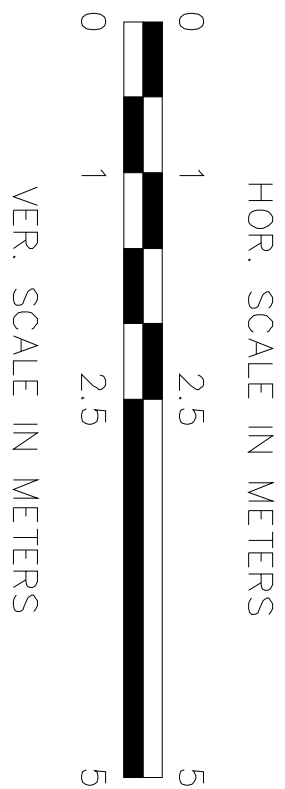
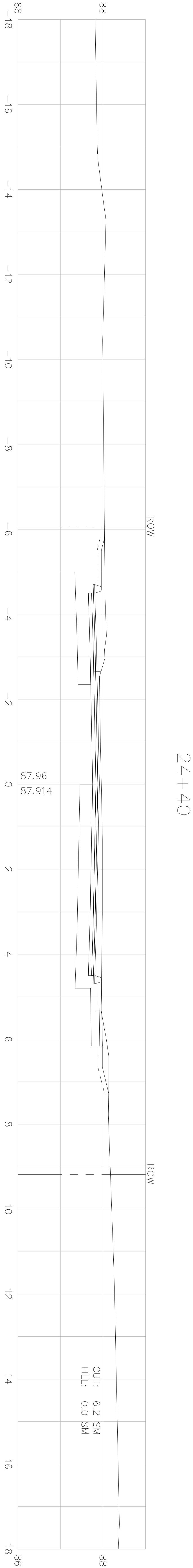
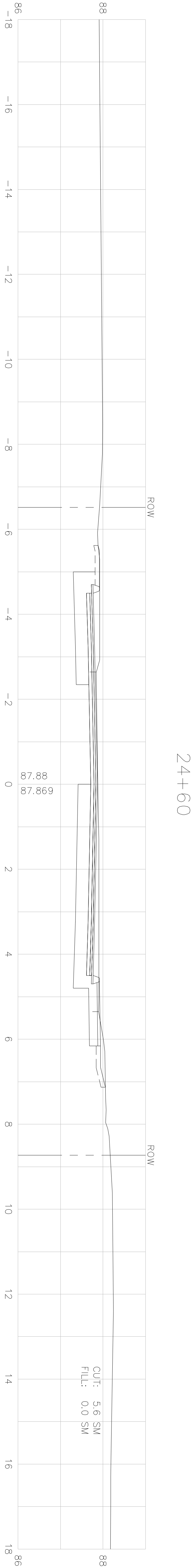
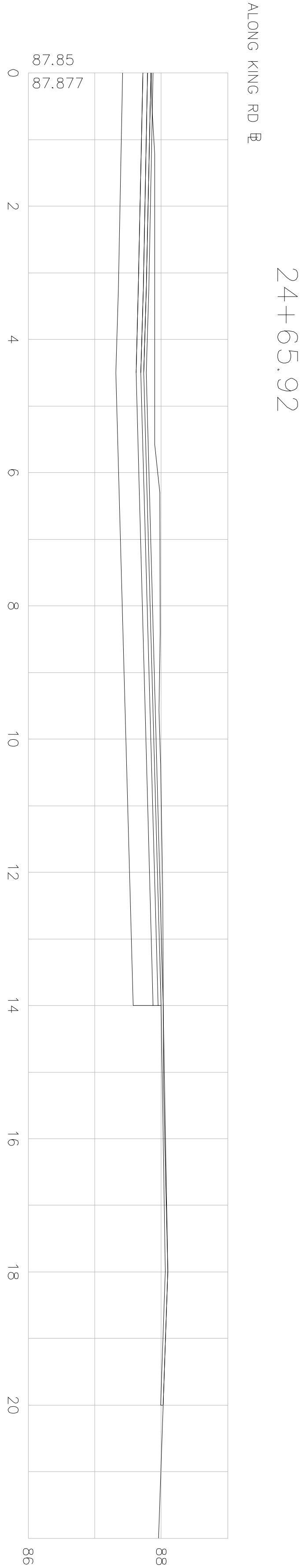
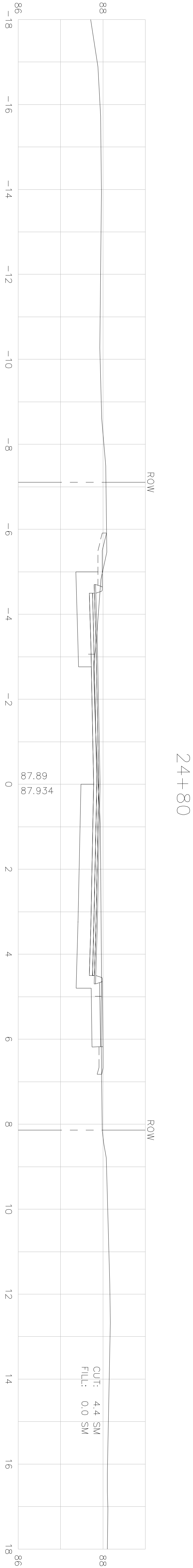
CROSS SECTIONS



STATE	FED. AID	PROJ. NO.	FISCAL	SHEET	TOTAL
MASS.	STP-0015(639)X	2008	97	117	
PROJECT FILE NO.		603540			

LITTLETON
GOLDSMITH STREET

CROSS SECTIONS



The image displays three vertical profile views of a road section along Pine Road, showing elevations, stationing, and cross-sections. The top view is for station 25+00, the middle for 24+94.49, and the bottom for 24+88. Each view includes a longitudinal profile, a cross-section, and a data table.

Top View (Station 25+00):

- Longitudinal Profile: Shows elevation (86 to 88) vs. stationing (-18 to 18). Key elevations: 88.30, 88.394.
- Cross-section: Shows a 1.1% slope, 2% slope, 5% slope, 1.5% slope, and 0.5% slope.
- Data Table:

Station	Elevation	Width	Depth	Area	Volume
25+00	88.30	1.1	2.0	2.2	0.0
25+01	88.394	1.1	2.0	2.2	0.0

Middle View (Station 24+94.49):

- Longitudinal Profile: Shows elevation (86 to 88) vs. stationing (-18 to 18). Key elevations: 88.03, 88.109.
- Cross-section: Shows a 1.1% slope, 2% slope, 5% slope, 1.5% slope, and 0.5% slope.
- Data Table:

Station	Elevation	Width	Depth	Area	Volume
24+94.49	88.03	1.1	2.0	2.2	0.0
24+95.49	88.109	1.1	2.0	2.2	0.0

Bottom View (Station 24+88):

- Longitudinal Profile: Shows elevation (86 to 88) vs. stationing (-18 to 18). Key elevations: 87.97, 87.991.
- Cross-section: Shows a 1.1% slope, 2% slope, 5% slope, 1.5% slope, and 0.5% slope.
- Data Table:

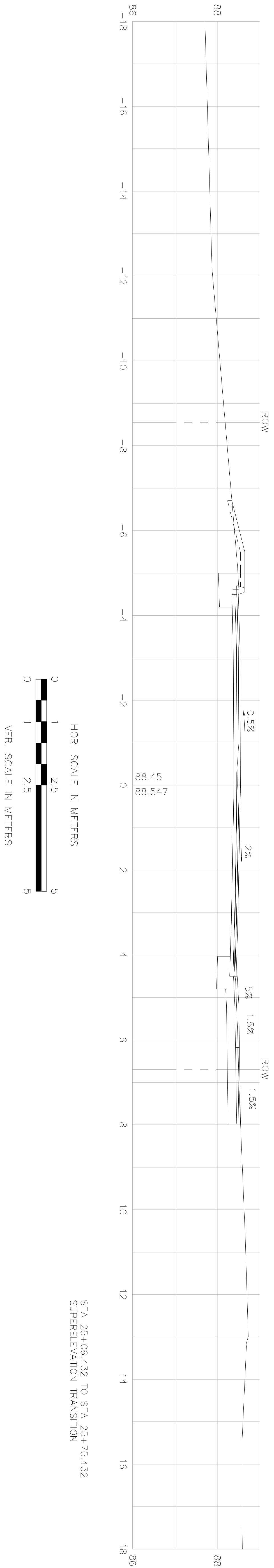
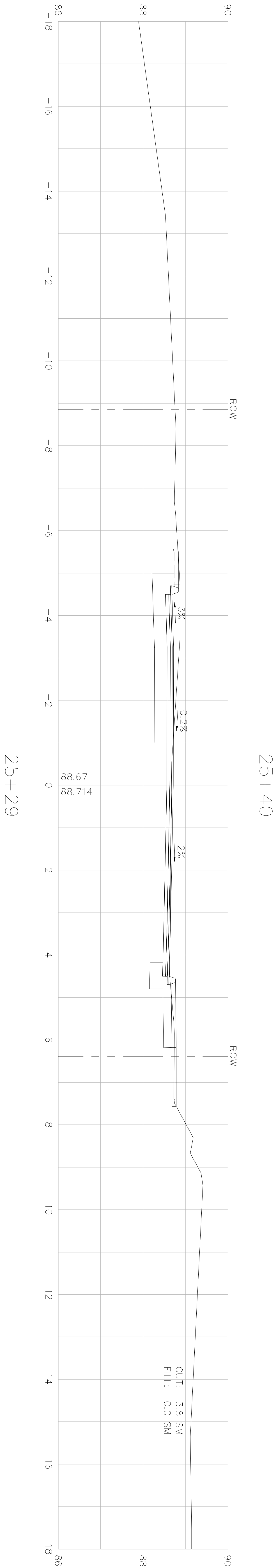
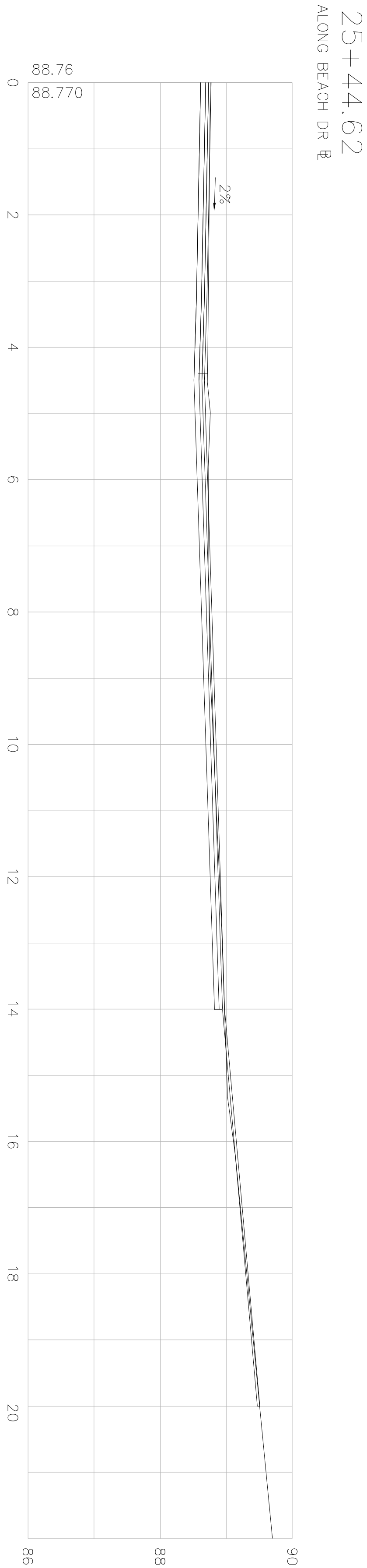
Station	Elevation	Width	Depth	Area	Volume
24+88	87.97	1.1	2.0	2.2	0.0
24+89	87.991	1.1	2.0	2.2	0.0



LITTLETON
GOLDSMITH STREET

STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-0015(639)X	2008	99	117	
PROJECT FILE NO.					603540

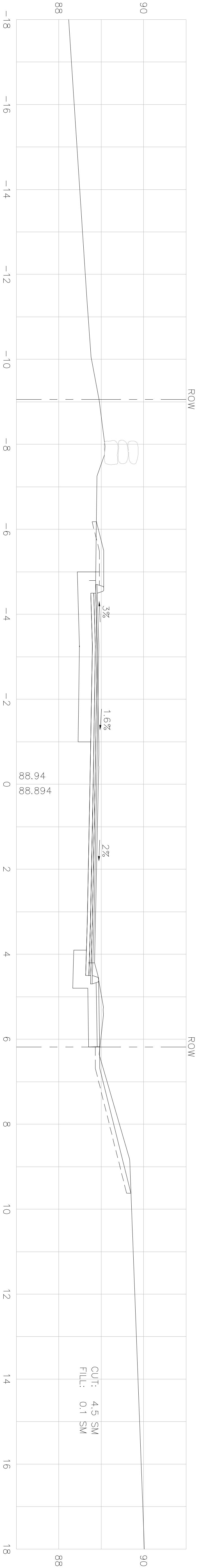
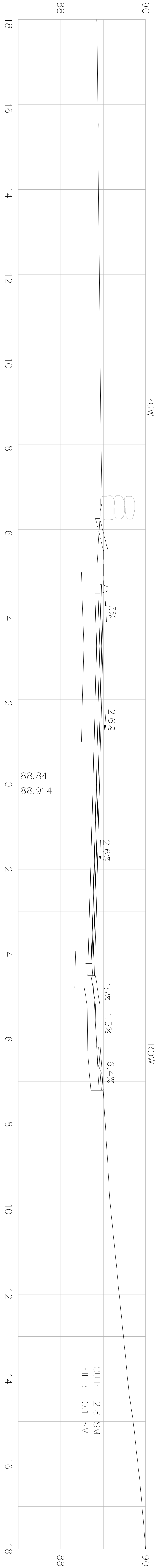
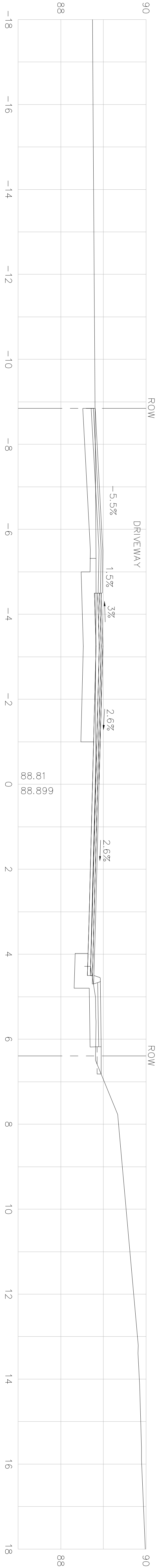
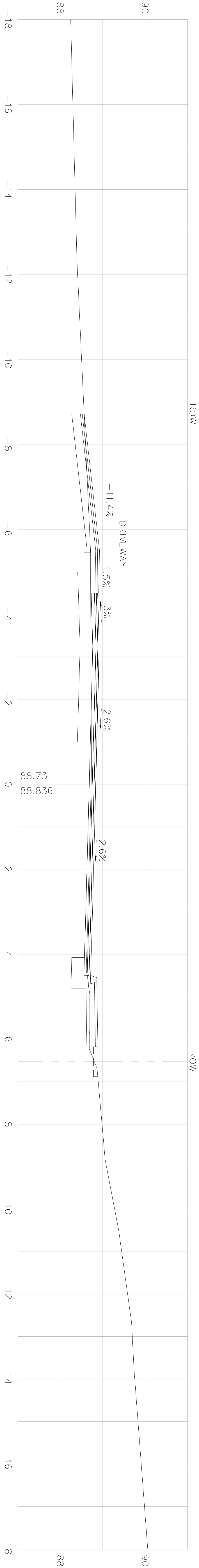
CROSS SECTIONS



LITTLETON
GOLDSMITH STREET

STATE	FED. AID	PROJ. NO.	FISCAL	SHEET	TOTAL
MASS.	STP-0015(639)X	2008	100	117	
PROJECT FILE NO.			603540		

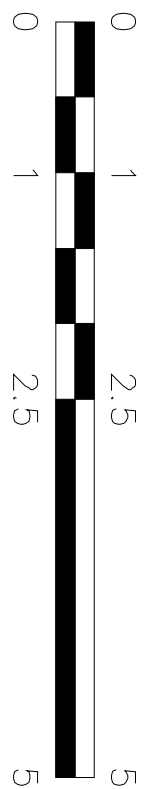
CROSS SECTIONS



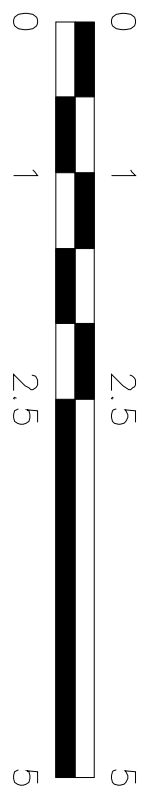
SUPERELEVATION:
PC STA 25+62.433
R = 1000m
BANK = 2.0%

STA 25+06.432 TO STA 25+75.432
SUPERELEVATION TRANSITION

HOR. SCALE IN METERS



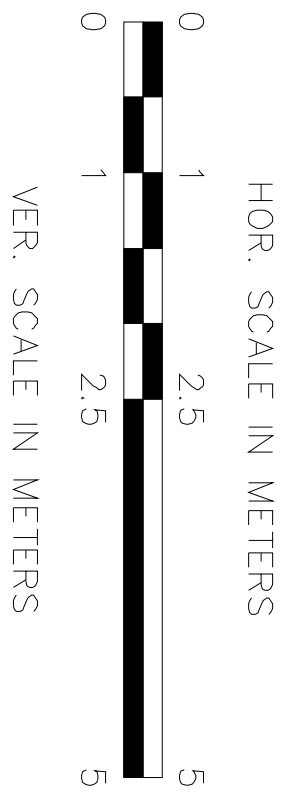
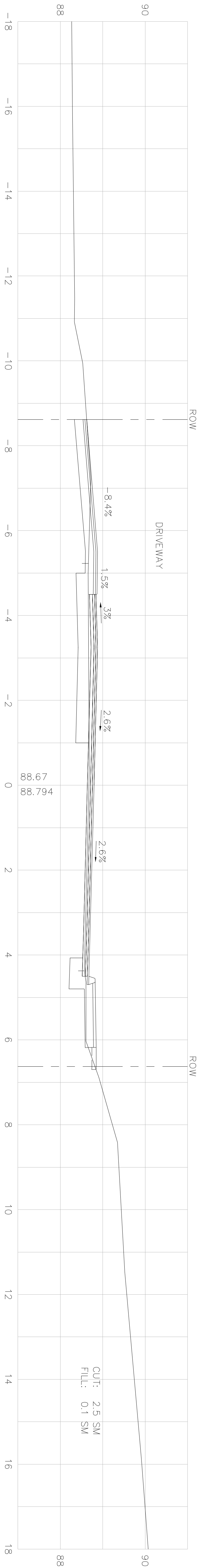
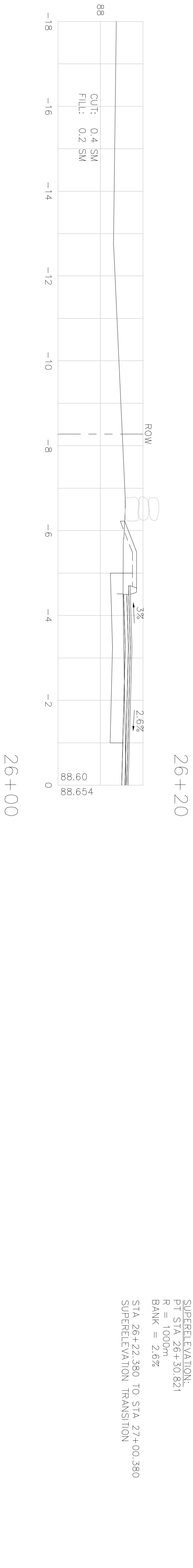
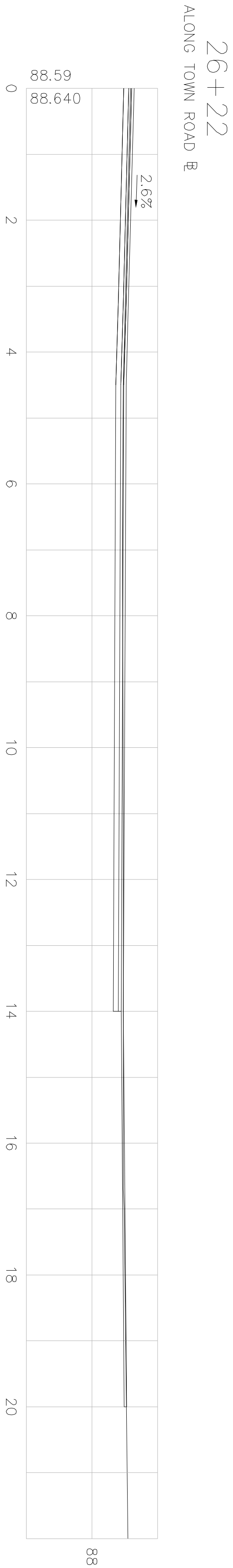
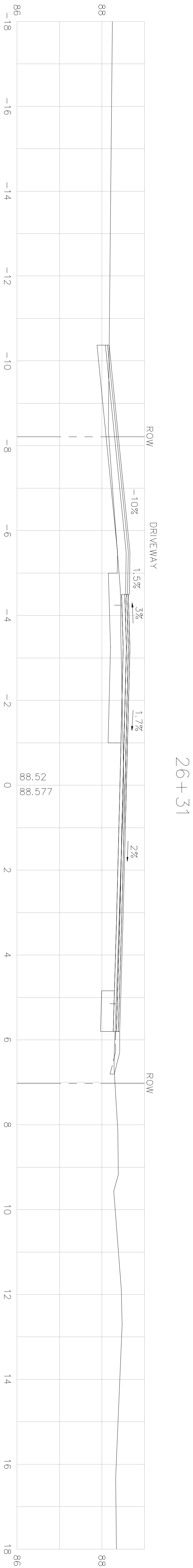
VER. SCALE IN METERS



LITTLETON
GOLDSMITH STREET

STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-0015(639)X	2008	101	117	
PROJECT FILE NO.					603540

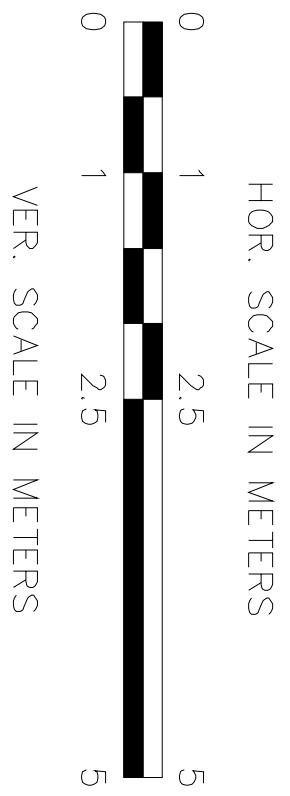
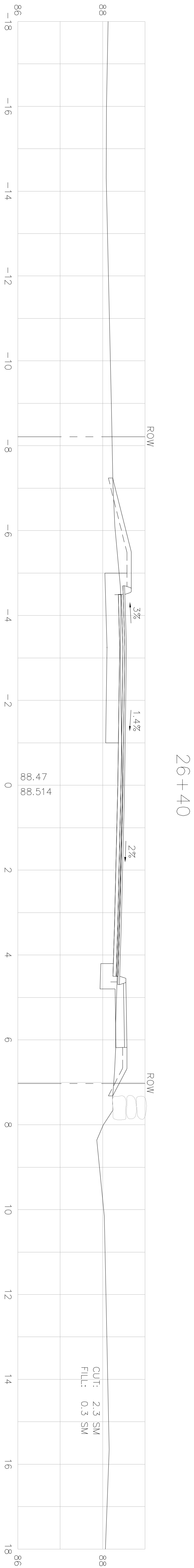
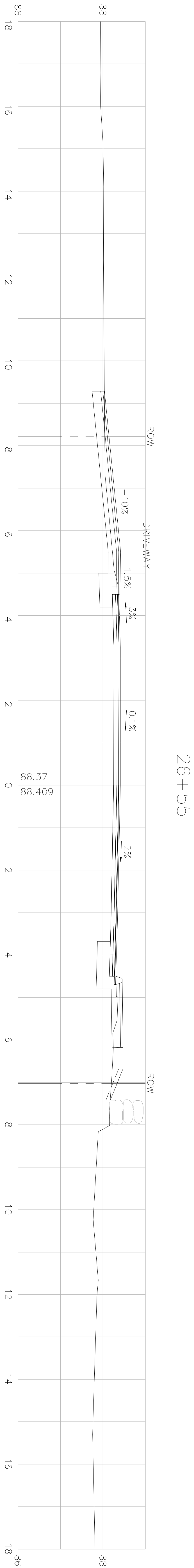
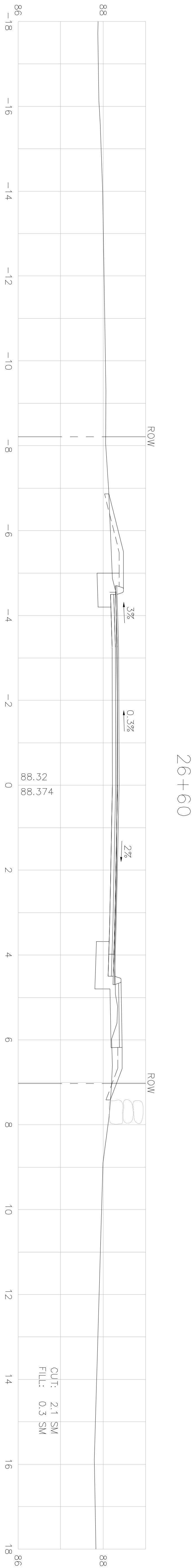
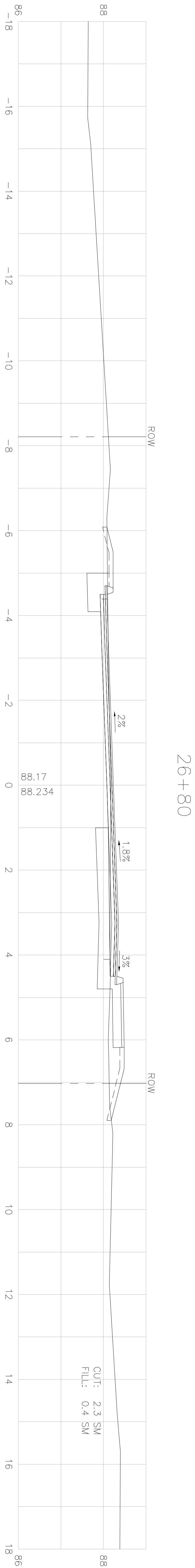
CROSS SECTIONS



LITTLETON
GOLDSMITH STREET

STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-0015(639)X	2008	102	117	
PROJECT FILE NO.		603540			

CROSS SECTIONS

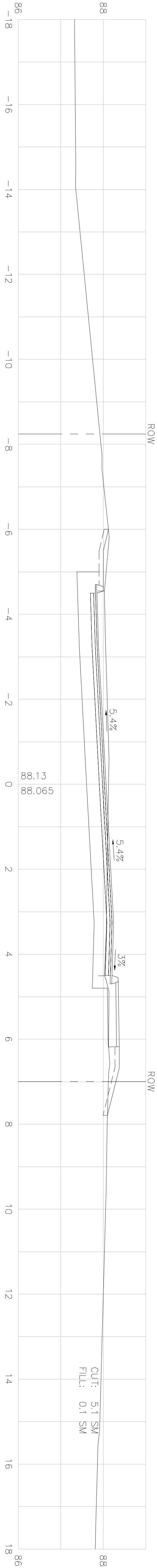


STA 26+22.380 TO STA 27+00.380
SUPERELEVATION TRANSITION

STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-0015(639)X	2008	103	117	
PROJECT FILE NO.		603540			

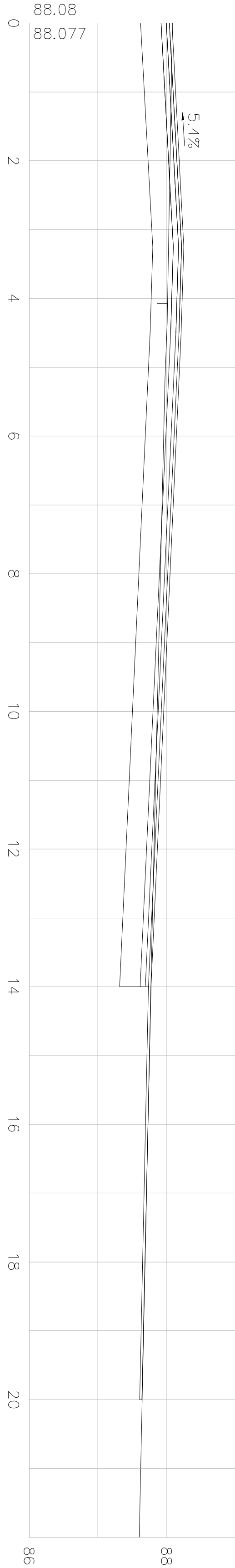
LITTLETON
GOLDSMITH STREET

CROSS SECTIONS

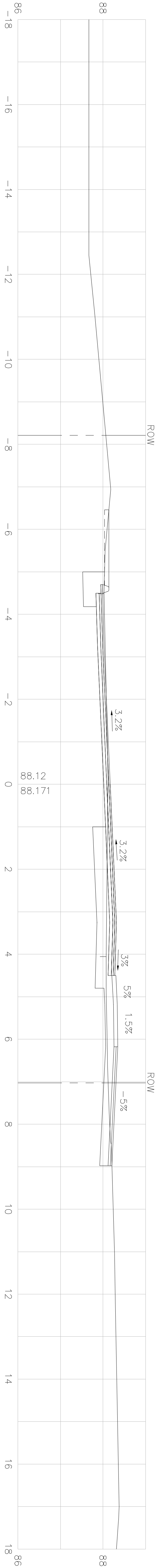
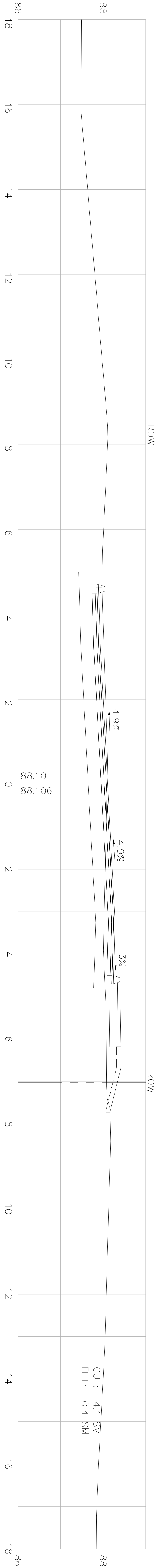


27+08.39

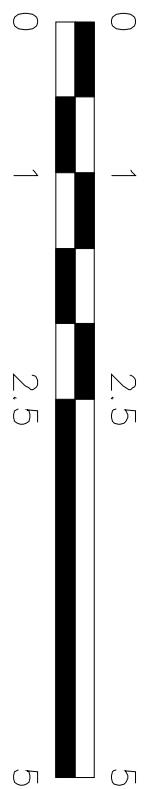
ALONG MEADOWBROOK RD



SUPERELEVATION:
PC STA 26+91.959
R = 300m
BANK = 5.4%



HOR. SCALE IN METERS



VER. SCALE IN METERS

Three cross-section diagrams of a road at stations 27+40, 27+60, and 27+66. Each diagram shows the road profile, existing ground, and proposed construction. Station 27+40 shows a 5.4% cut and 0.2 SM fill. Station 27+60 shows a 5.4% cut and 0.0 SM fill. Station 27+66 shows a 3.1% cut and 0.0 SM fill. The diagrams include labels for ROW, DRIVEWAY, and various percentages.



28+20

STA 28+02.980 TO STA 28+71.980
SUPERELEVATION TRANSITION

ROW

3%

0.9%

2%

3%

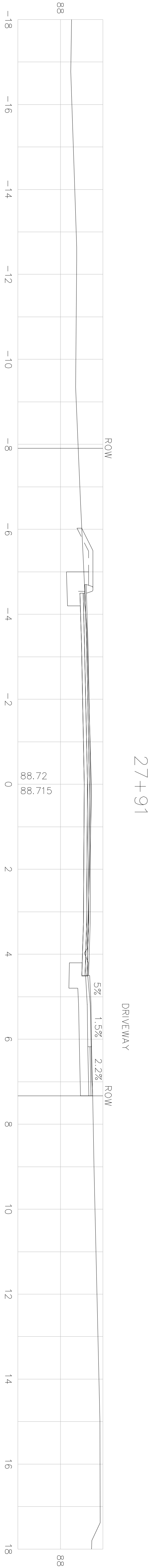
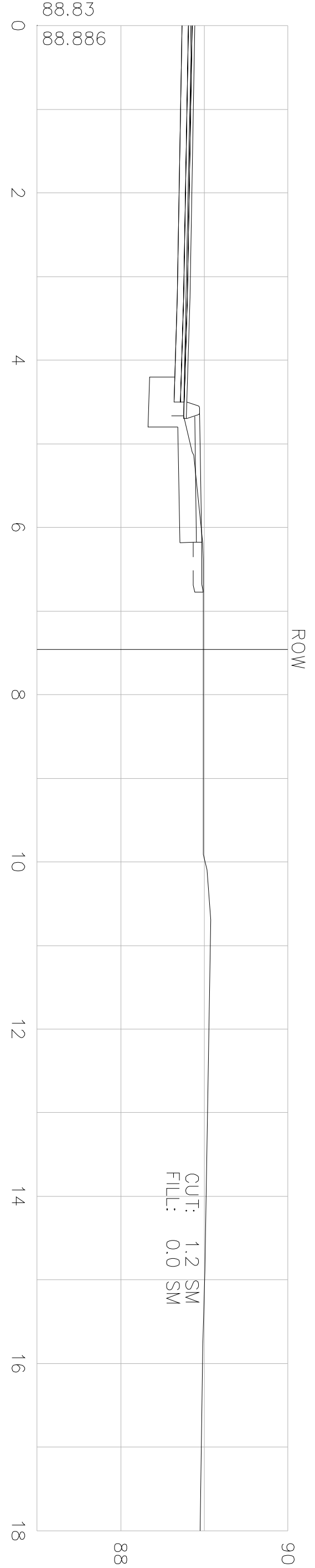
ROW

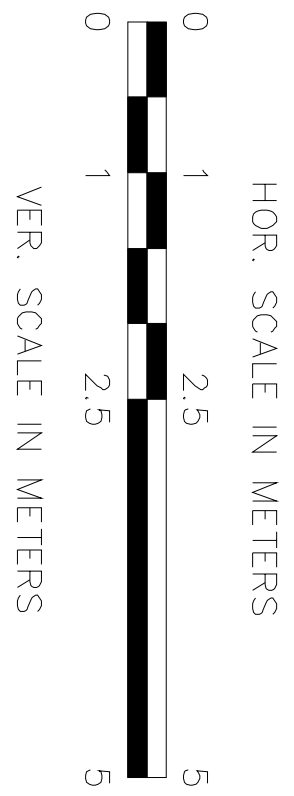
89.21

89.338

CUT: 1.3 SM

FILL: 0.1 SM

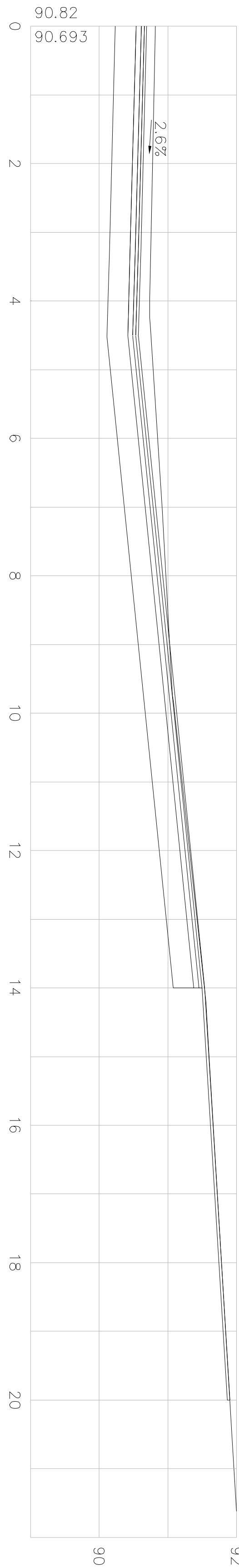




STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-0015(639)X	2008	106	117	

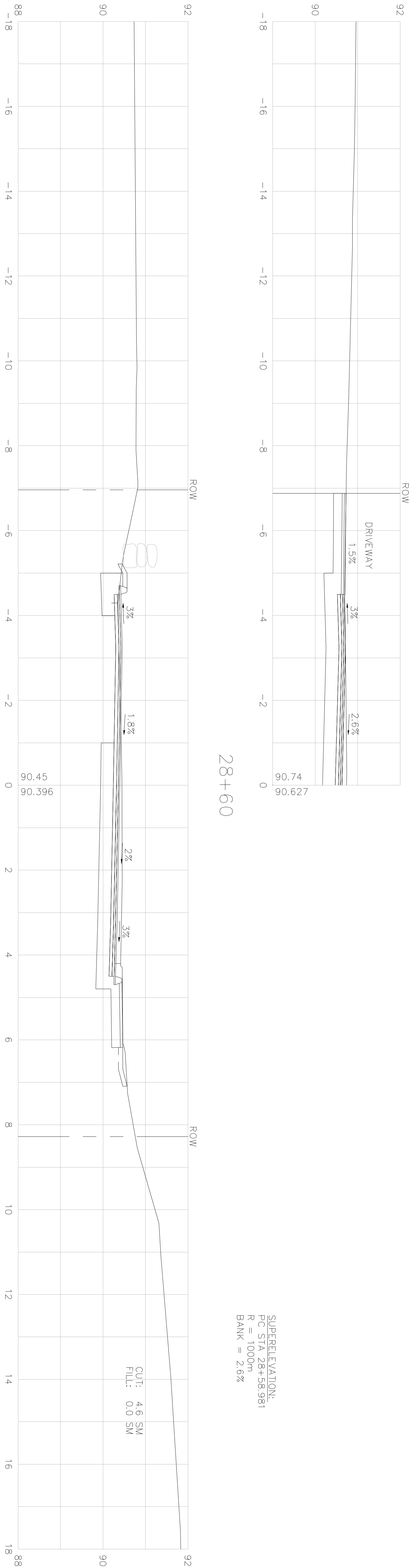
PROJECT FILE NO. 603540

CROSS SECTIONS

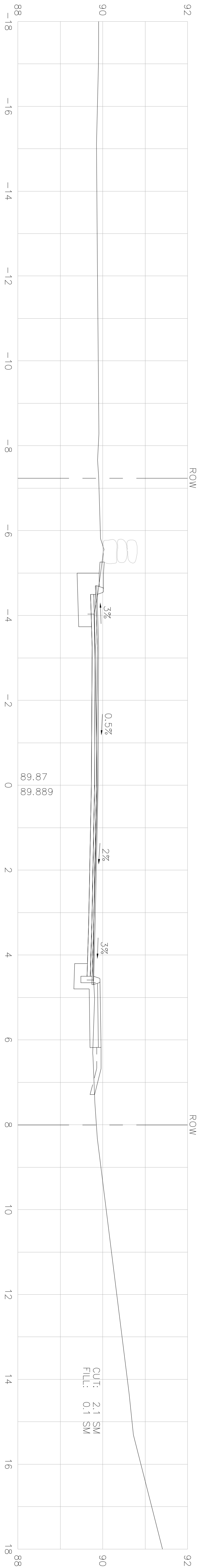


SUPERELEVATION:
PC STA 28+58.981
R = 1000m
BANK = 2.6%

28+60



28+40

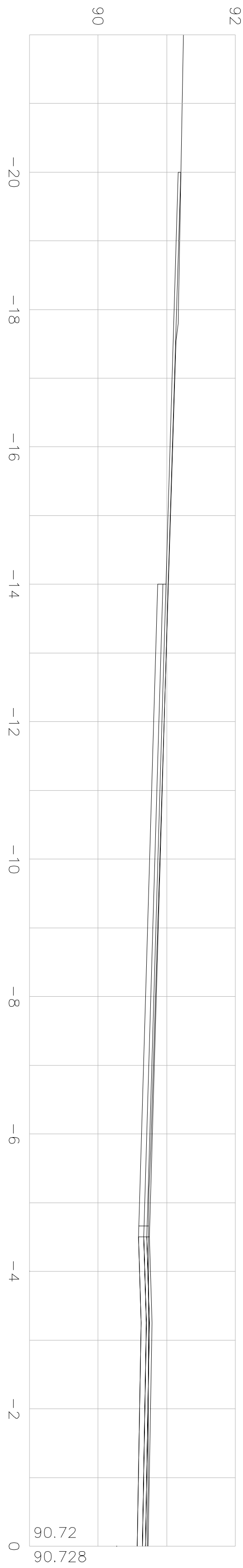


STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-0015	(639)X	2008	107	117

PROJECT FILE NO.	603540
------------------	--------

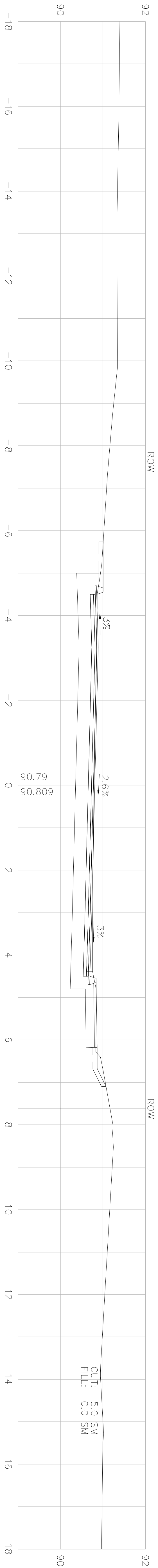
CROSS SECTIONS

29+31.55
ALONG CHARLES ST R/L



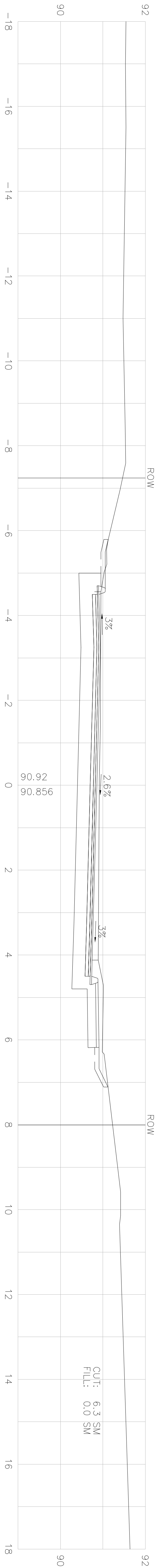
STA 29+18.635 TO STA 29+87.635
SUPERELEVATION TRANSITION
SUPERELEVATION:
PT STA 29+31.634
R = 1000m
BANK = 2.6%

29+20



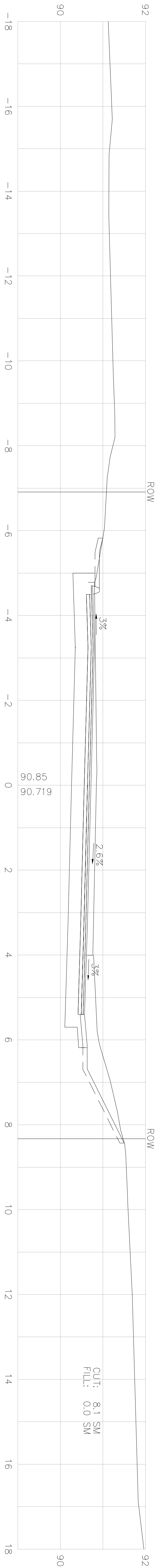
CUT: 5.0 SM
FILL: 0.0 SM

29+00



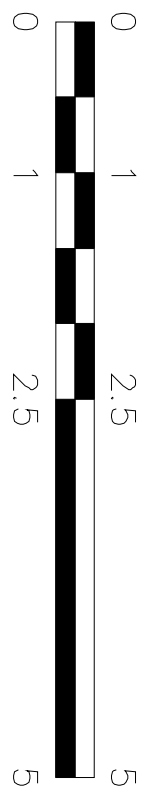
CUT: 6.3 SM
FILL: 0.0 SM

28+80



CUT: 8.1 SM
FILL: 0.0 SM

HOR. SCALE IN METERS

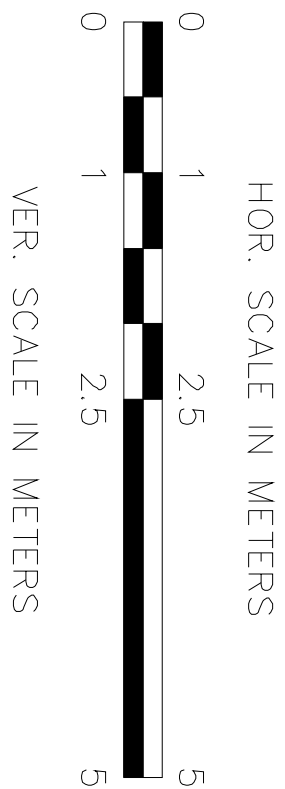
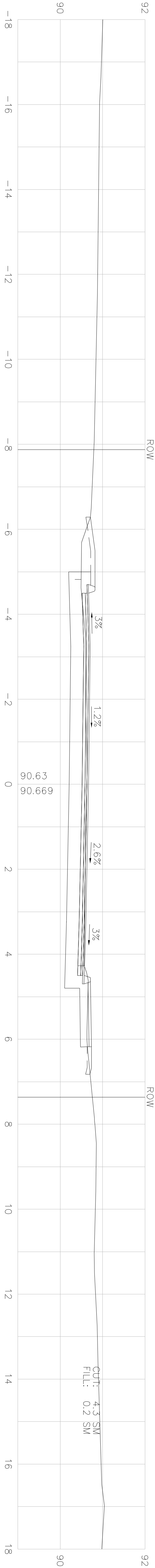
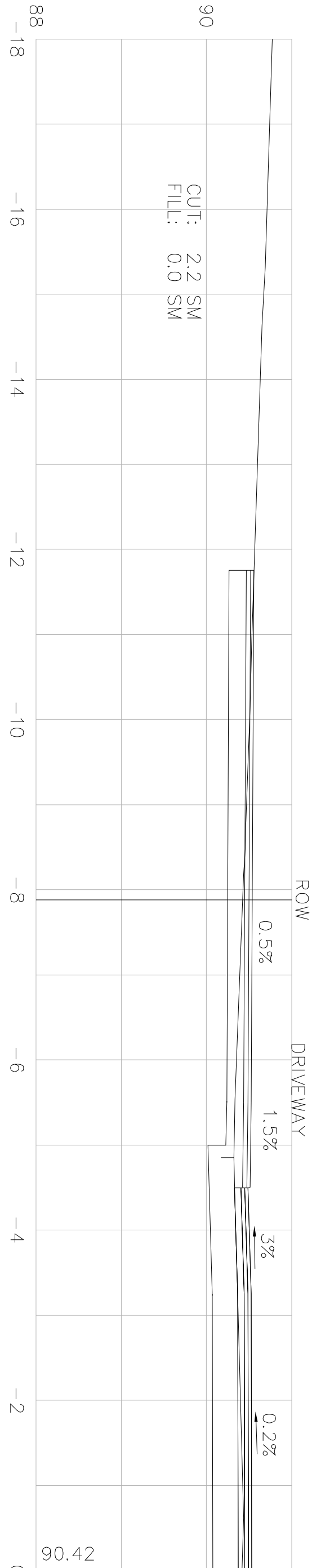
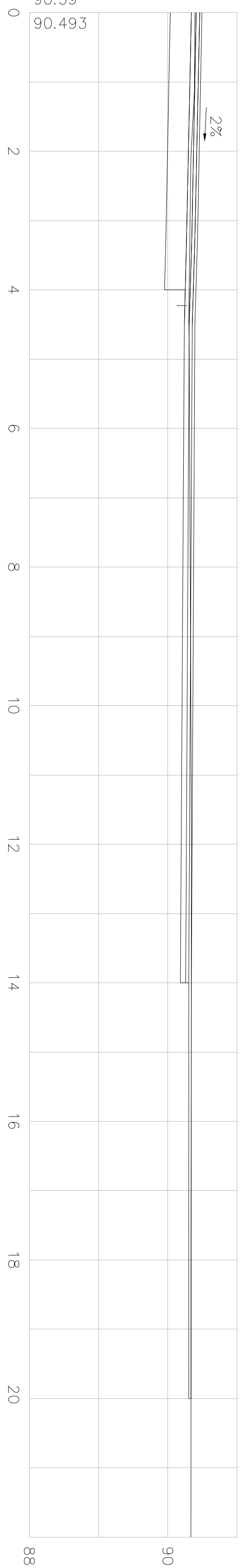
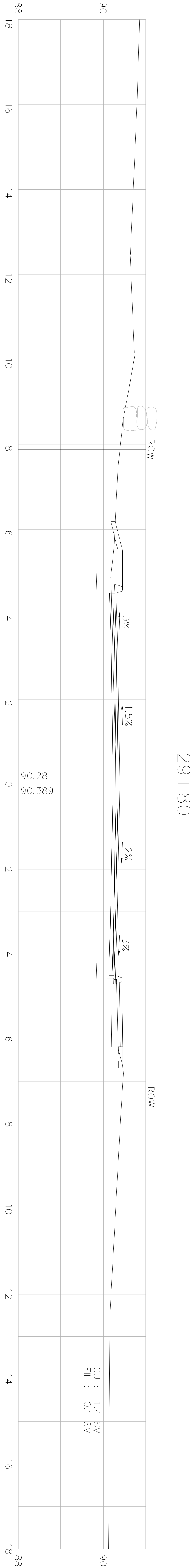


VER. SCALE IN METERS

LITTLETON
GOLDSMITH STREET

STATE	FED. AID	PROJ. NO.	FISCAL	SHEET	TOTAL
MASS.	STP-0015(639)X	2008	108	SHEETS	117
PROJECT FILE NO.			603540		

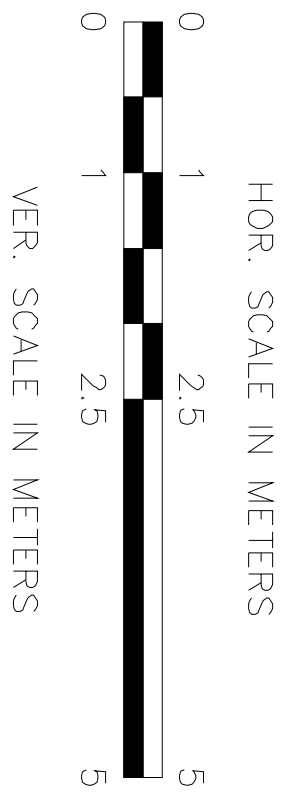
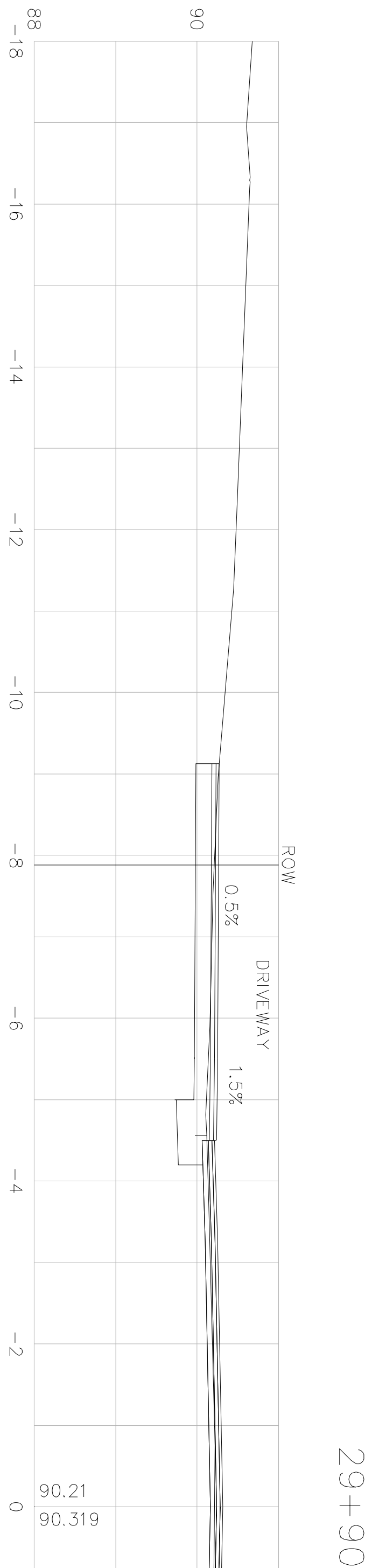
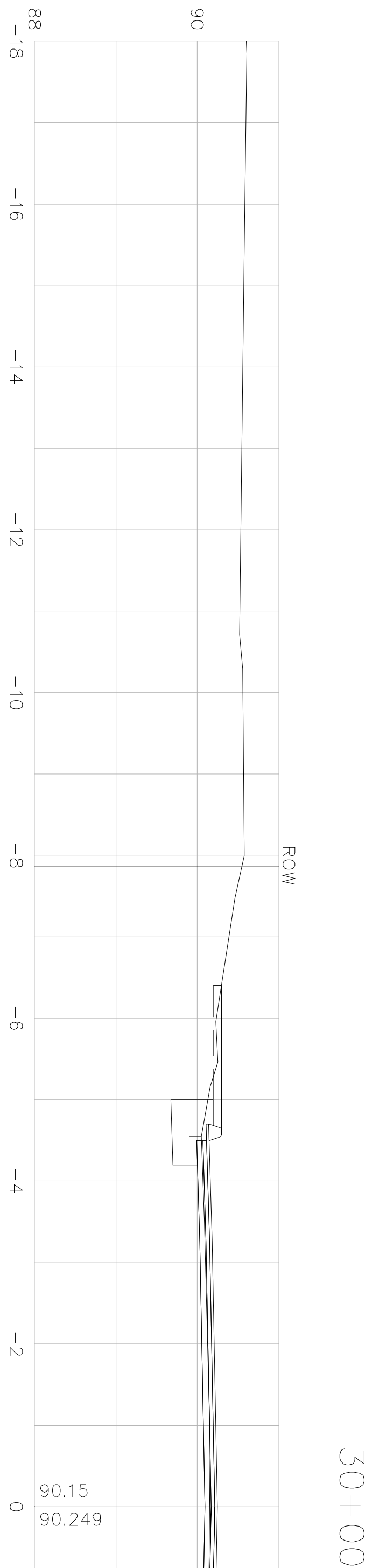
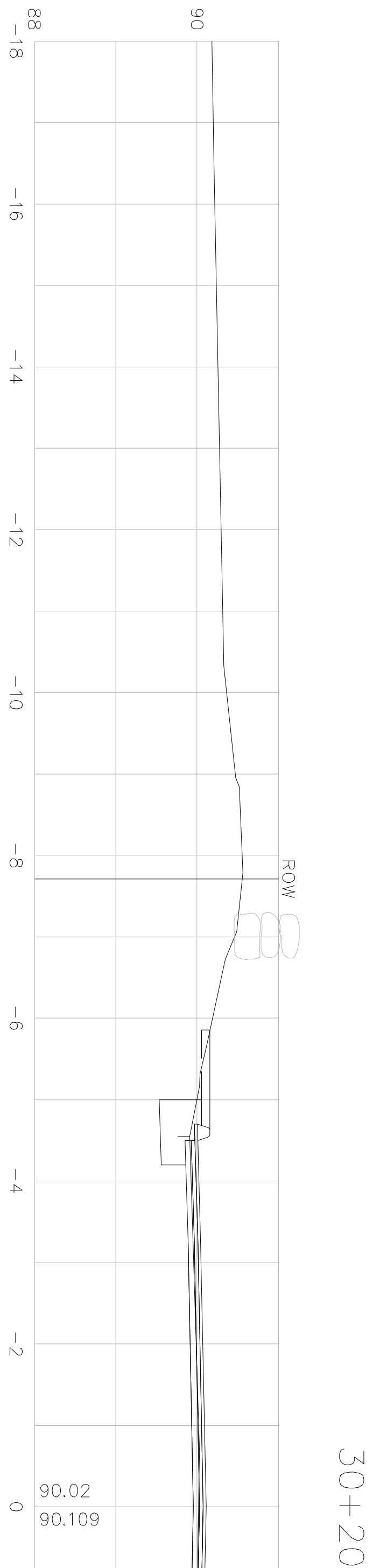
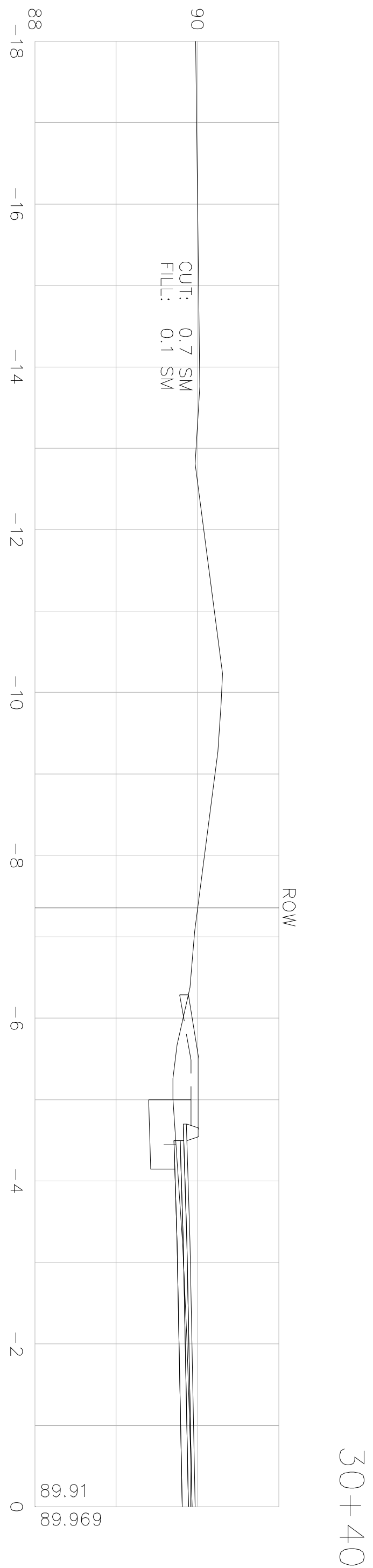
CROSS SECTIONS



LITTLETON
GOLDSMITH STREET

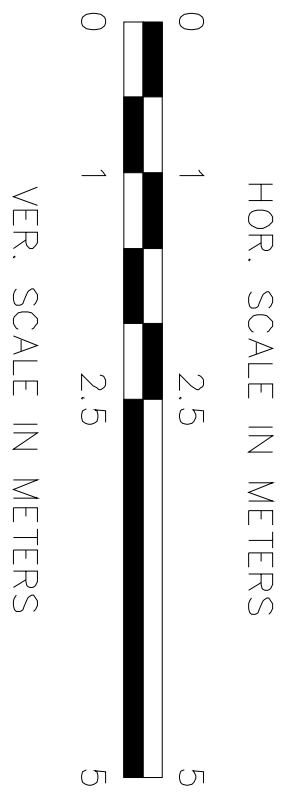
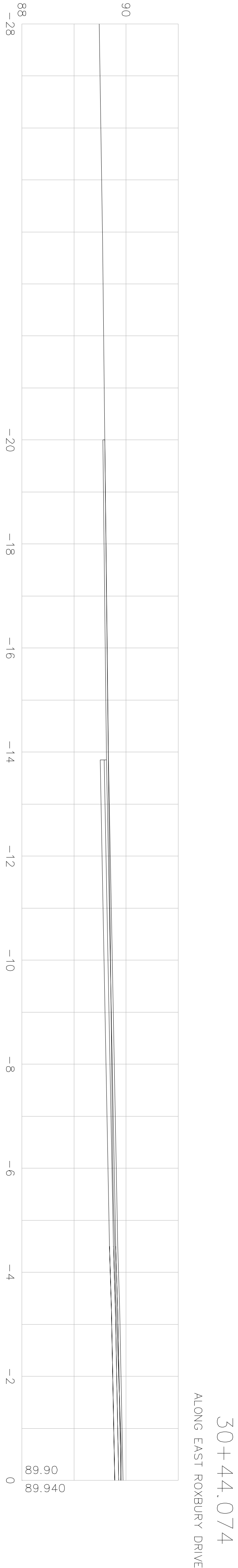
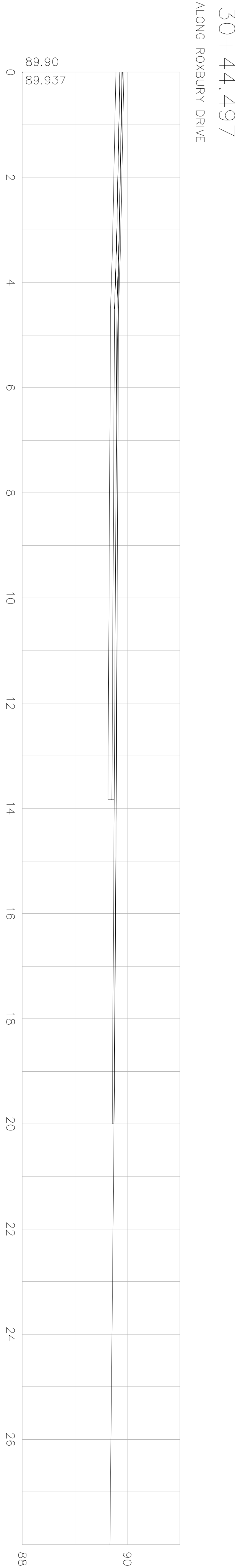
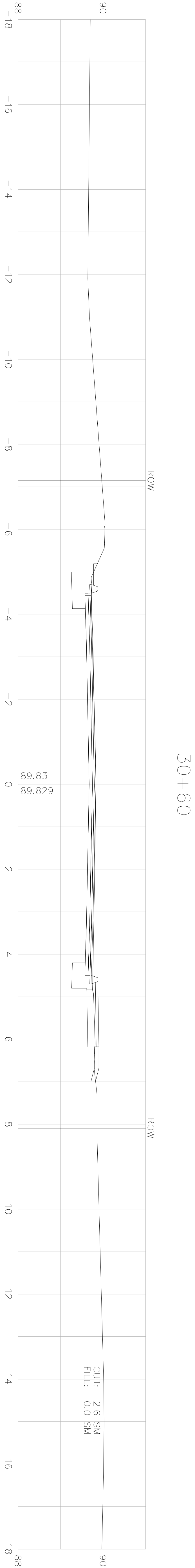
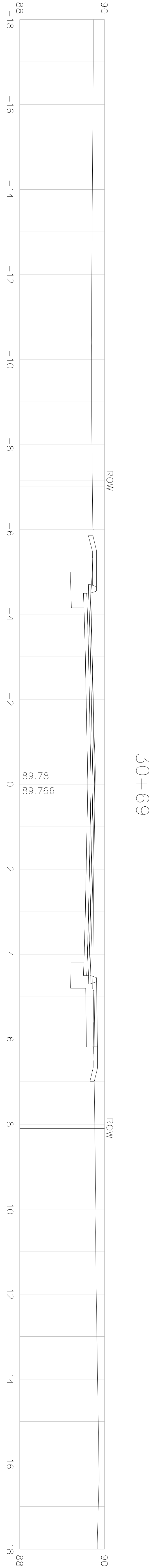
STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-0015(639)X	2008	109	117	
PROJECT FILE NO.			603540		

CROSS SECTIONS



STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-0015(639)	X	2008	110	117
PROJECT FILE NO.		603540			

CROSS SECTIONS

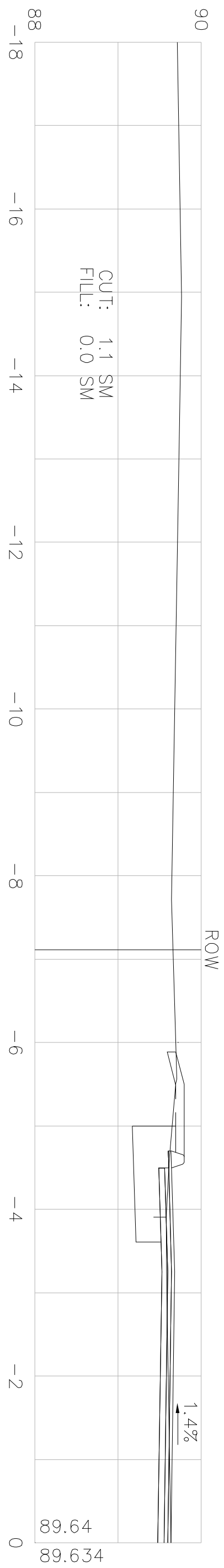


LITTLETON
GOLDSMITH STREET

STATE	FED. AID	PROJ. NO.	FISCAL	SHEET	TOTAL
MASS.	STP-0015(639)X	YEAR	NO.	SHEETS	
		2008	111	117	
PROJECT FILE NO.		603540			

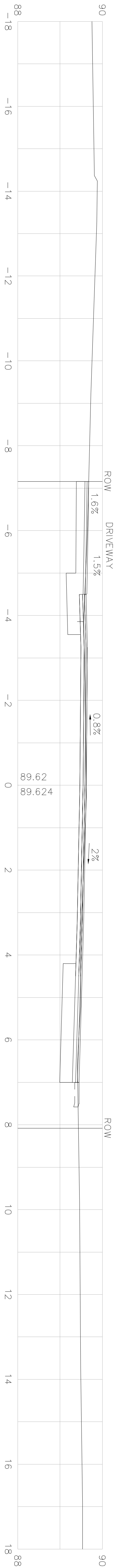
CROSS SECTIONS

31+20

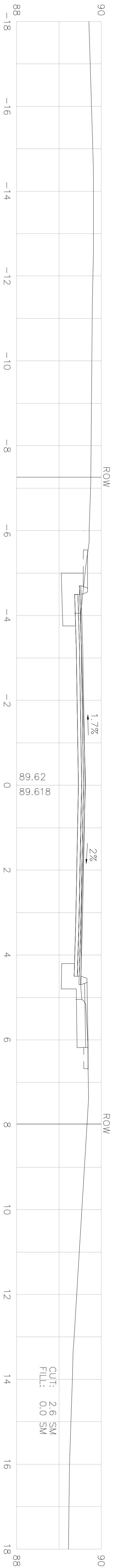


STA 30+87.639 TO STA 31+39.639
SUPERELEVATION TRANSITION

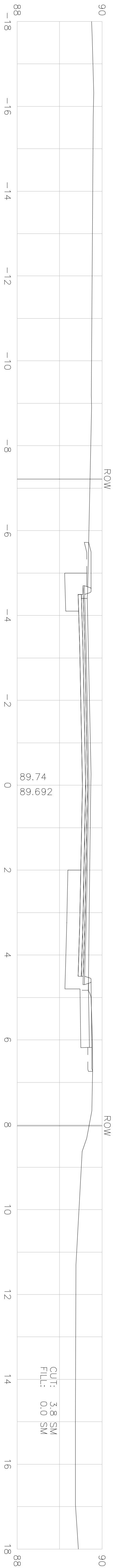
31+16



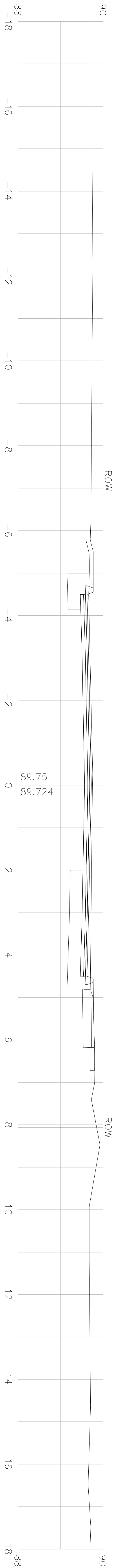
31+00



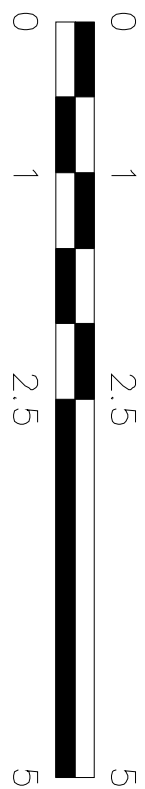
30+80



30+75



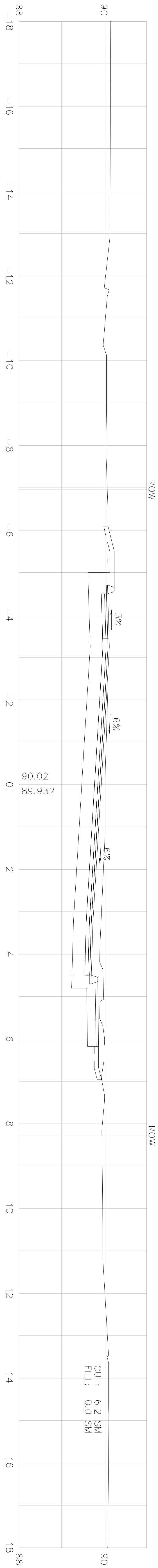
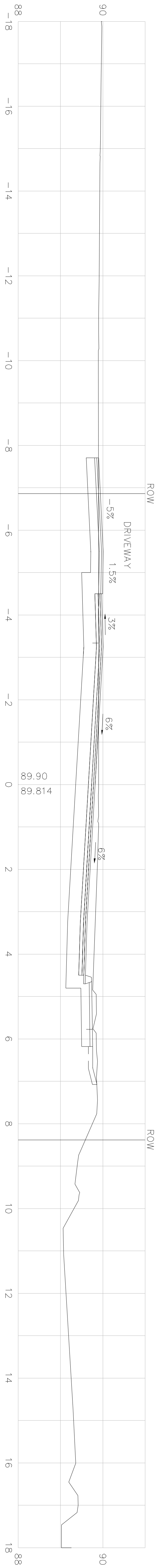
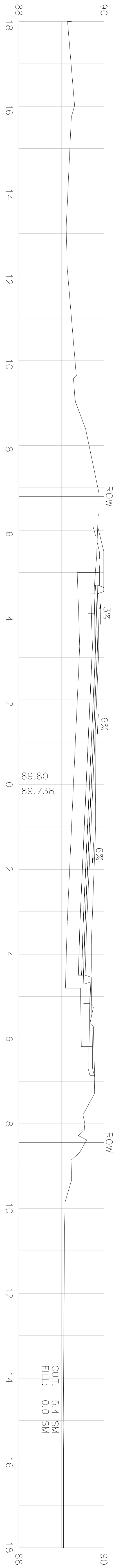
HOR. SCALE IN METERS



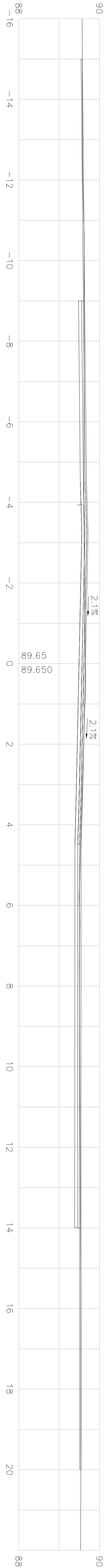
VER. SCALE IN METERS

STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-001S(539)X	2008	112	117
PROJECT FILE NO.		603540		

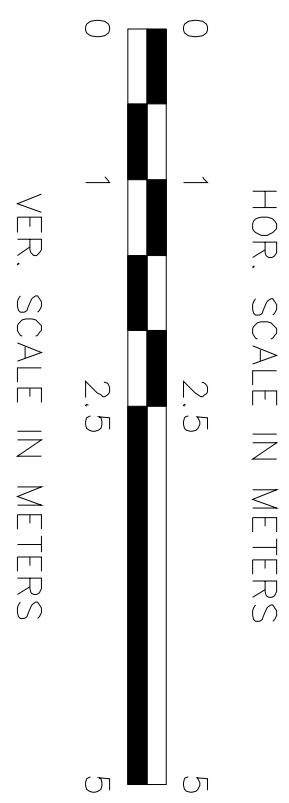
CROSS SECTIONS


$$31 + 49$$

$$31 + 40$$


31 + 24.55



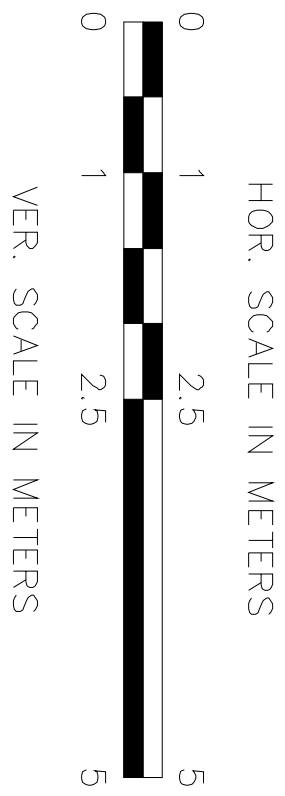
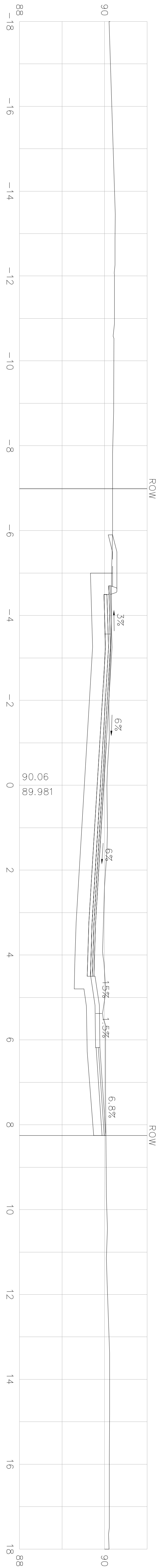
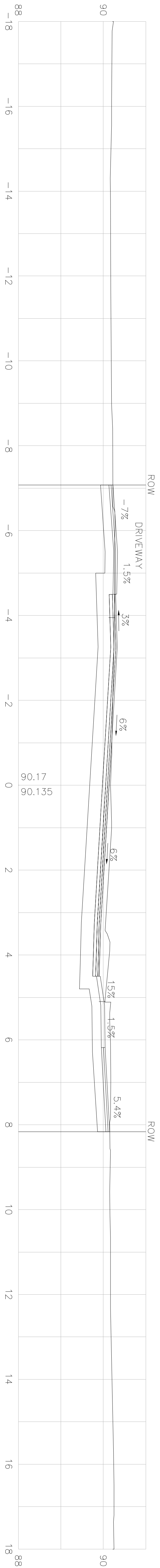
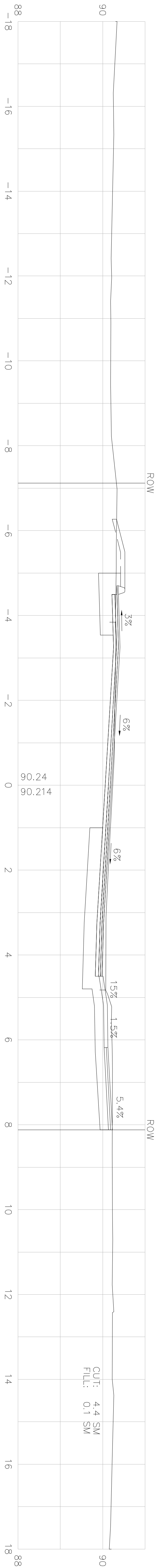
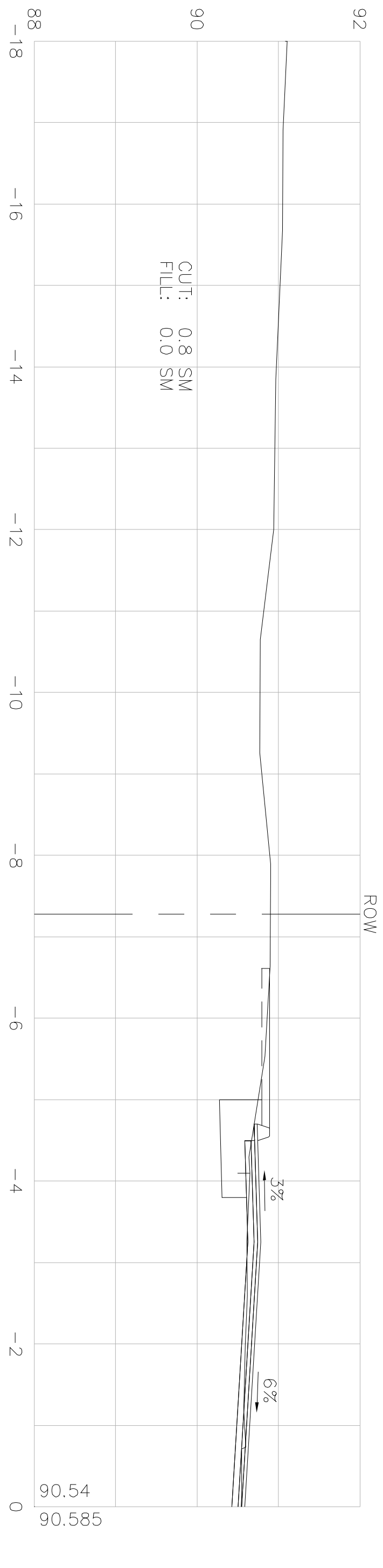
SUPERELEVATION:
 PRC STA 31+36.946
 R = 160m
 BANK = 6%



LITTLETON
GOLDSMITH STREET

STATE	FED. AID	PROJ. NO.	FISCAL	SHEET	TOTAL
MASS.	STP-0015(639)X	2008	113	117	
PROJECT FILE NO.		603540			

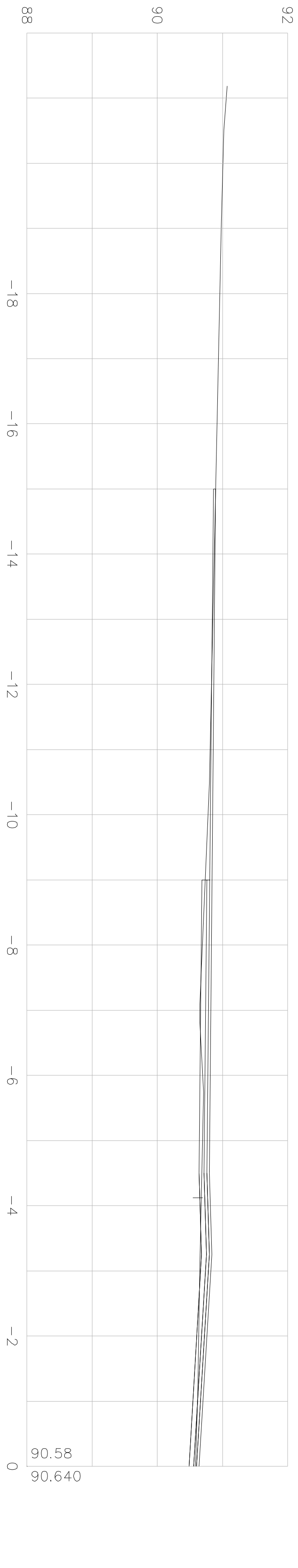
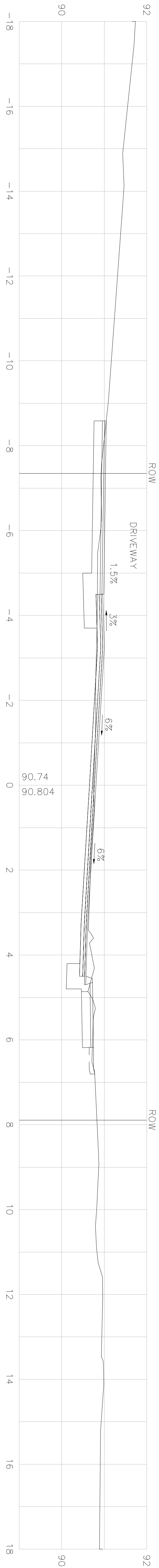
CROSS SECTIONS



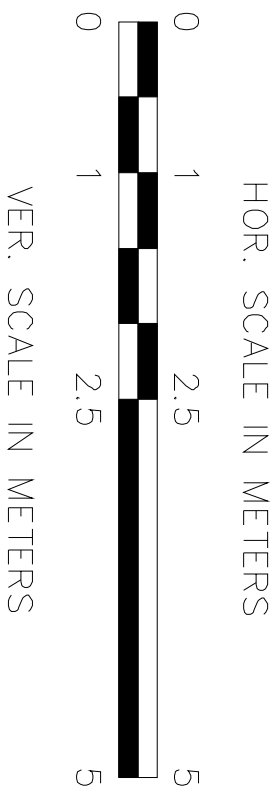
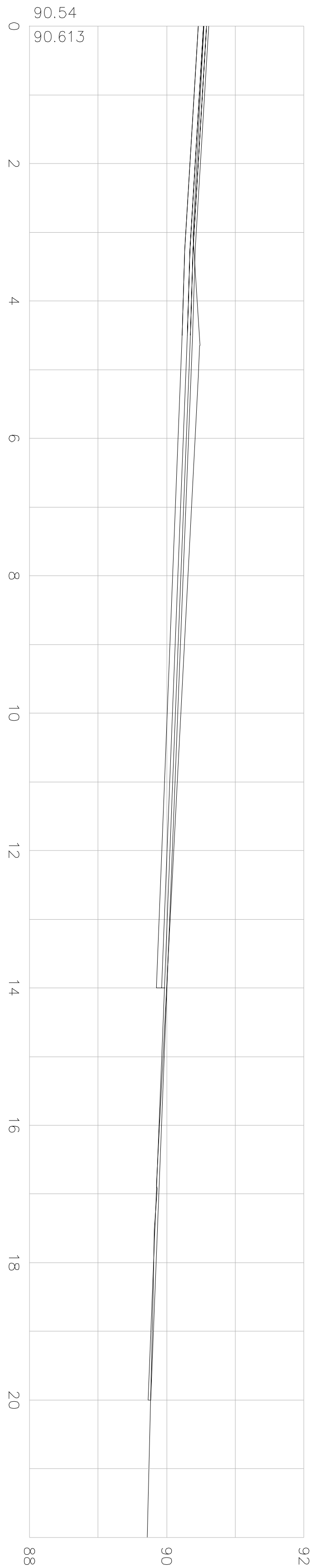
STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-0015(639)X	2008	114	117	
PROJECT FILE NO.		603540			

LITTLETON
GOLDSMITH STREET

CROSS SECTIONS



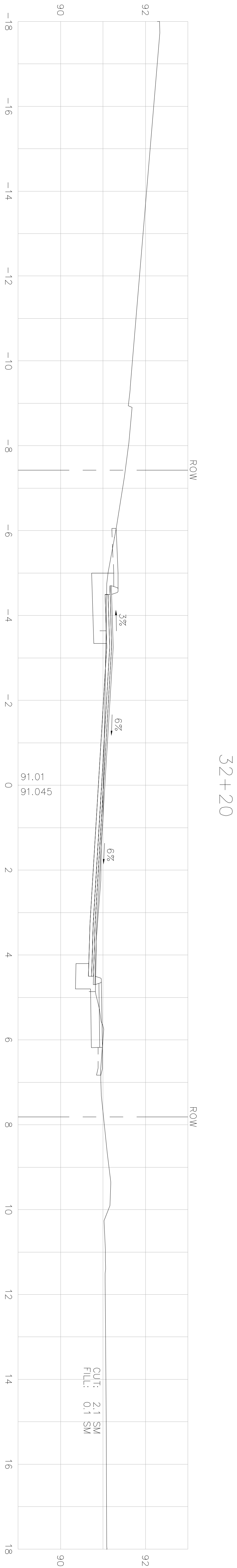
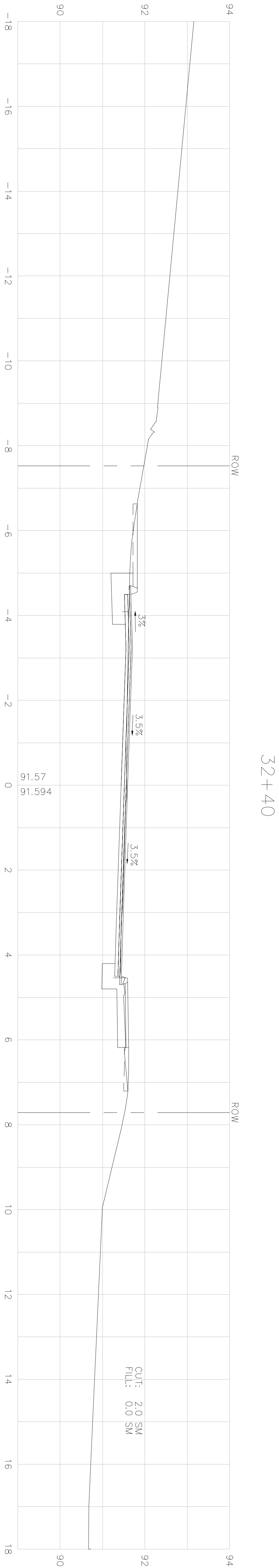
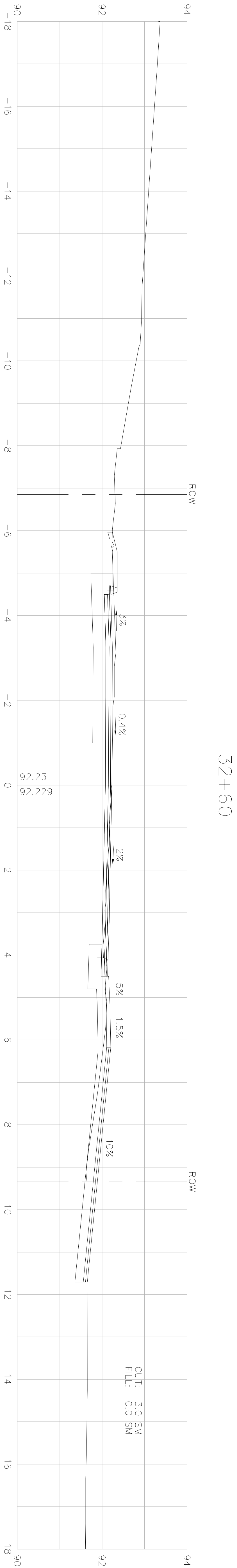
32+01.33
ALONG SUFFOLK DR.



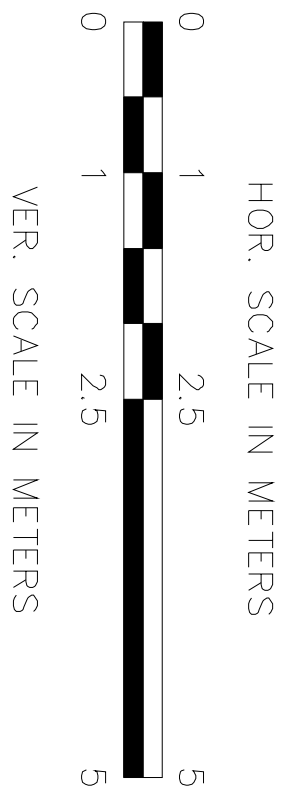
LITTLETON
GOLDSMITH STREET

STATE	FED. AID	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.	STP-0015(639)X	2008	115	117	
PROJECT FILE NO.			603540		

CROSS SECTIONS

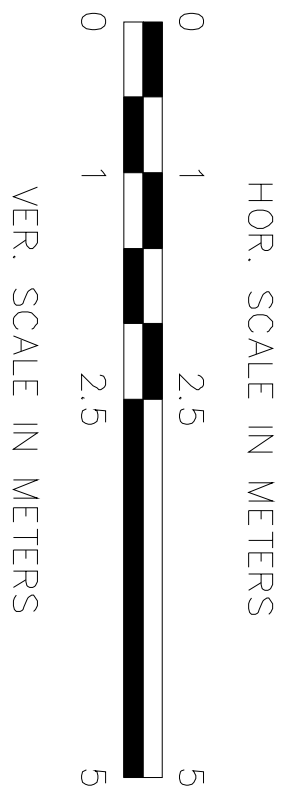
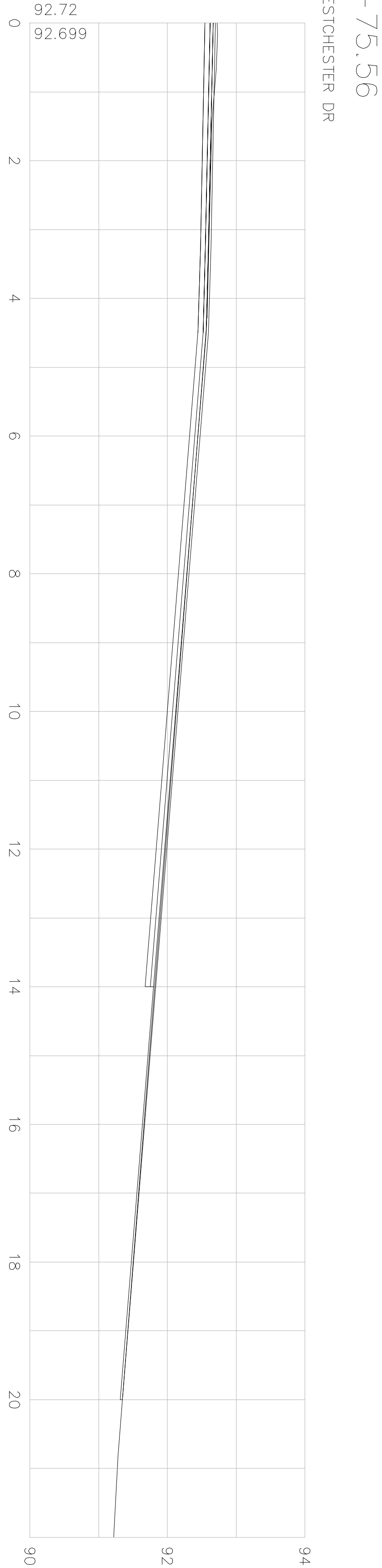
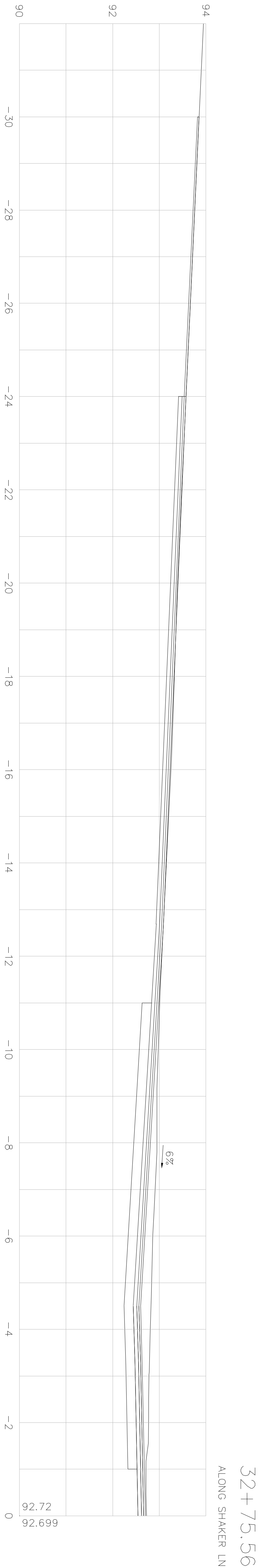
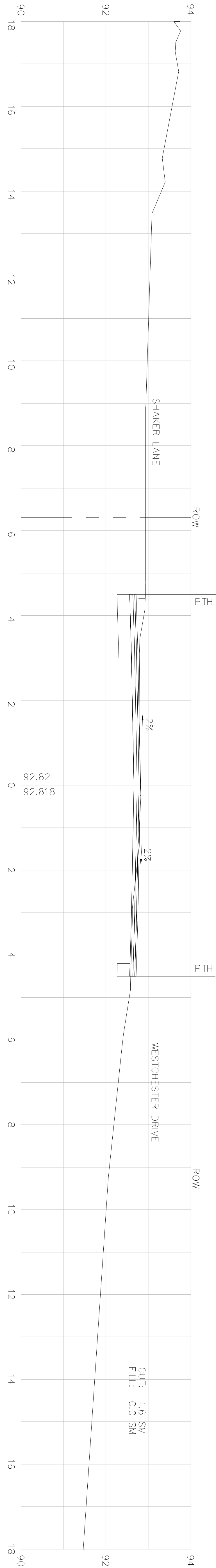


STA. 32+34.132 TO STA. 32+86.132
SUPERELEVATION TRANSITION
SUPERELEVATION:
PT. STA 32+36.635
R = 160m
BANK = 6%



LITTLETON				
GOLDSMITH STREET				
STATE	FED. AID	PROJ. NO.	FISCAL	SHEET TOTAL
MASS.	STP-0015(639)X	2008	116	117
PROJECT FILE NO.			603540	

CROSS SECTIONS



STA 32+34.132 TO STA 32+86.132
SUPERELEVATION TRANSITION

STATE		FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MASS.		STP-0015(839)X	2008	117	117
PROJECT FILE NO.			603540		

CROSS SECTIONS

