EAST TO BOSTON

WEST TO FITCHBURG

TOWN OF ACTON

MAPLE STREET

MAIN STREET

RAILROAD STREET

GRAVEL ACCESS ROAD

MATCH LINE STA. 1327+55 SEE BELOW

MATCH LINE STA. 1333+75 SEE SHEET C-12

MATCH LINE STA. 1327+55 SEE ABOVE

PROP DMH
STA 1327+60, 6.5' LT
RIM EL=198.0
INV IN=195.23 (RCP)
INV IN=195.00 (UD)
INV OUT=194.96 (UD)

GRADE AND COMPACT SURPLUS EXCAVATED SOIL (SEE CROSS SECTIONS)

PROPOSED ℄ TRACK 2 & CONST. BASELINE (SEE TRACK PLANS FOR GEOMETRY)

PROPOSED ℄ TRACK 1

PROP 6' CLF, 12' OFF ℄ TRACK

UNDERDRAIN CLEANOUT STA 1330+50, (TYP)

EXIST RIGHT OF WAY

RIPRAP REINF SPILLWAY

DRAIN OUTLET EL=197.5

16'-12"Ø PIPE

6" CONC PAD

20'-12"Ø PIPE

PROP DMH, STA 1332+39, 53' LEFT
RIM EL=201.5
INV IN=198.25 (12")
INV IN=198.00 (12")
INV IN=198.00 (12")
INV OUT=197.75

LANDSCAPED AREA

3:1 SIDE SLOPES, LOAM & SEED

BIT CONC WALKWAY

ELEC TRANSFORMER

PROP CB, STA. 1332+44
59' LT
RIM EL=200.5,
INV OUT=198.25

32'-12"Ø DRAIN PIPE

PROP CB
STA. 1332+64, 81' RT.
RIM EL=200.75
INV OUT=198.5

PROP CB
STA. 1332+31,
87' LT
RIM EL=200.5
INV OUT=198.5

SLOPE SIDEWALK DOWN TO CROSSWALK

CLEAN EXISTING CB AND 50 FT. OF DOWNSTREAM PIPE

BIT CONC BERM @ DRIVEWAY EDGE

BIT CONC APRON TO MEET EXISTING

PROP BIT CONC TO MEET EXISTING EDGE OF PVMT

VERT GC

SMH
RIM 201.64
INV 186.94

800' LONG, HIGH LEVEL SIDE PLATFORMS

ST N 88° 38' 18.10" W

24'-12" CL V RCP

PROP CB W/BEEHIVE GRATE
STA 1327+70, 19.7' RT
RIM EL=198.25
INV IN=195.3
INV OUT=198.25

LOCKED M.O.W. ACCESS GATE

MILL & PAVE W/ 2" OVERLAY

CONC PAD W/ (3) 6"Ø BOLLARDS (SEE STRUCT PLANS)

LIMIT OF OVERLAY

6'-12"Ø DRAIN PIPE

PROP DMH
STA 1331+72, 33' RT.
RIM EL=201.0
12" INV IN EL=198.0
12" INV OUT EL=197.8

SMH
RIM 201.59
INV 184.24

PROP VERT GC ISLAND

PROP CB
STA. 1331+88, 33' RT.
RIM EL=200.9
INV OUT EL=198.5

CONNECT 2" WATER LINE TO MAIN, RUN TO YARD HYDRANT INCLUDE SHUT OFF & METER

EXIST RIGHT OF WAY

290'-12"Ø DRAIN PIPE

FULL DEPTH BIT CONC PAVEMENT

6'-12"Ø DRAIN PIPE

OVERLAY TO MEET EXIST PAVEMENT

EXISTING RIGHT OF WAY

PROP FLARED END SECTION OUTLET W/RIPRAP
STA 1326+65, 11' RT
INV EL=194.43

22.5° BEND
STA 1326+72, 6.5' RT

LIMIT OF WORK
STA. 1326±50

7 RAILROAD STREET

9 RAILROAD STREET

11 RAILROAD STREET

PLAN

NOTES:

1. FOR HEADHOUSE PLANS AND DETAILS SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
2. FOR TRACK 2 CONSTRUCTION BASELINE DATA SEE 'T' DRAWINGS.

LEGEND:

- PROPOSED PROPERTY LINE
- RAILROAD R.O.W.
- WETLAND EDGE
- UD 12"Ø UNDER DRAIN (SUBDRAIN)
- 250 PROPOSED CONTOUR

SCALE IN FEET: 20 0 20 40

COMMONWEALTH OF MASSACHUSETTS
JONATHAN P. BRUNEAU
CIVIL
No. 45135
REGISTERED PROFESSIONAL ENGINEER
5/21/12

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

FITCHBURG COMMUTER RAIL LINE
IMPROVEMENT PROJECT
CONTRACT NO. G67CN01

SOUTH ACTON STATION
DRAINAGE AND GRADING PLAN–EAST END
SHEET 1 OF 2

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.

HNTB
300 APOLLO DRIVE
CHELMSFORD, MA 01824
(978) 905-4000
PROJECT MANAGER 5/10/12 Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
APPROVED BY:
PROJECT MANAGER 6/30/12 Date

JACOBS
343 CONGRESS STREET
BOSTON, MA 02210
(617) 242-9222

HORIZ: AS SHOWN	DES. BY	DR. BY	CHK. BY
VERT: NONE	JPB	KMB	JM
DATE: 5/17/12			

PLAN NO. 168521

SHEET C-11

ISSUE

FILE NAME: P:\MBTA\2008\E2X37800\CAD\700CADD\702STATIONS\South Acton\Civil\PS&E\ C-11 & C-12 Drainage and Grading Plan.dwg
PLOT DATE: May 21, 2012 - 9:05am

EAST TO BOSTON

WEST TO FITCHBURG

TOWN OF ACTON

MAPLE STREET

MATCH LINE STA. 1333+75 SEE SHEET C-11

21 MAPLE STREET

21 MAPLE STREET

41 MAPLE STREET

43 MAPLE STREET

WETLAND AREA

PROPOSED ℄ TRACK 2 & CONST. BASELINE (SEE TRACK PLANS FOR GEOMETRY)

PROPOSED ℄ TRACK 1

EXISTING RIGHT OF WAY

STAIRWAY AND ELEVATOR TO OVERHEAD PEDESTRIAN BRIDGE

AREA TO BE REGRADED AND LANDSCAPED (SEE ARCH DWGS)

STEEL CANOPY (STORAGE AREA)

PEDESTRIAN BRIDGE OVER TRACKS

BEGIN UNDERDRAIN W/ CLEANOUT (TYP) STA 1338+70, 6.5' LT & 19.5' RT

4.8% RAMP TO GRADE (SEE STRUCTURAL DWGS)

1334+00 1335+00 1336+00 1337+00 1338+00 1339+00

800' LONG, HIGH LEVEL SIDE PLATFORMS (SEE STRUCTURAL DWGS)

N 88° 38' 18.10" W

TRENCH DRAIN AT ENTRANCE, USE 3"ø DRAIN TO TRACKWAY

TRENCH DRAIN AT ENTRANCE, USE 3"ø DRAIN TO TRACKWAY

PROVIDE 18" GAPS IN VGC EVERY 23'± ALONG BACK OF PLAZA CONC. (SEE STRUCT DWGS DETAIL)

EXTEND TRACKSIDE FENCING 200 FT. FROM END OF PLATFORM WEST TOWARD MARTIN STREET END @ STA.1340+60

PROP 2" PE WATER LINE TO YARD HYDRANT

REMOVE EXIST DMH AND EXTEND EXIST 15" DRAIN LINE TO NEW DMH

290'-12"ø DRAIN PIPE

PROP DMH. STA. 1334+65, 38'RT. RIM EL= 201.75 INV IN=196.25 (12") INV IN=196.65 (8") INV OUT=196.0 (15")

EXISTING RIGHT OF WAY

BIT CONC PVMT BTWN EX & PROP

CONC SW LIMIT (MEET EX BIT CONC SW W/ FLUSH GC)

WETLAND AREA

50'-8"ø DRAIN PIPE W/ 45° ELBOW INLET EL=197.50

END VERT GC

PROP YARD HYDRANT

8"ø DOWNSPOUT DRAIN PIPE, OUTLET UNDER PLATFORM & PROVIDE DI INLET 6" ABOVE GRADE AT DOWNSPOUT LOCATIONS

7.5% SLOPED COVERED RAMP TO PLATFORM

SLOPE PLAZA CONC 1/8"/FT. AWAY FROM BUILDING (TYP)

19 RAILROAD STREET

MAIN STATION ENTRANCE

FLUSH GC AT ACCESSIBLE RAMP

2" BIT CONC OVERLAY

VERT GC

ACTON COMMUTER PARKING AREA

8"ø DOWNSPOUT DRAIN PIPE, OUTLET UNDER PLATFORM & PROVIDE DI INLET 6" ABOVE GRADE AT DOWNSPOUT LOCATIONS

FLUSH VERT GC AT DROP OFF (SEE SITE DETAILS)

VERT GC

REPLACE PAVERS W/ BIT CONC PAVEMENT

M.O.W. STORAGE BOX

EXISTING R.O.W.

FULL DEPTH BIT CONC DRIVEWAY TO M.O.W. BOX

RAMP TO PLATFORM (SEE STRUCTURAL DWGS)

SLOPE PLAZA CONC 1/8"/FT.

RELOCATED BICYCLE STORAGE BOXES

WETLAND AREA

PLAN

NOTES:

1. FOR HEADHOUSE PLANS AND DETAILS SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
2. FOR TRACK 2 CONSTRUCTION BASELINE DATA SEE 'T' PLANS.

LEGEND:

- PROPOSED PROPERTY LINE
- RAILROAD R.O.W.
- WETLAND EDGE
- UD 12"ø UNDER DRAIN (SUBDRAIN)
- 250 PROPOSED CONTOUR

SCALE IN FEET: 20 0 20 40

COMMONWEALTH OF MASSACHUSETTS — JONATHAN P. BRUNEAU — CIVIL — No. 48035 — REGISTERED PROFESSIONAL ENGINEER — 5-21-12

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.

JACOBS 343 CONGRESS STREET BOSTON, MA 02110 (617) 242-9222

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

FITCHBURG COMMUTER RAIL LINE IMPROVEMENT PROJECT CONTRACT NO. G67CN01

SOUTH ACTON STATION DRAINAGE AND GRADING PLAN—WEST END SHEET 2 OF 2

HNTB 300 APOLLO DRIVE CHELMSFORD, MA 01824 (978) 905-4000

PROJECT MANAGER 5/16/12 Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

APPROVED BY: PROJECT MANAGER 05/30/12 Date

HORIZ: AS SHOWN	DES. BY	DR. BY	CHK. BY
VERT: NONE	JPB	KMB	JM
DATE: 5/17/12			

PLAN NO. 168522 — SHEET C-12 — ISSUE

FILE NAME: P:\MBTA\2008\E2X3780\CAD\700CADD\702STATIONS\South Acton\Civil\PS&E\ C-11 & C-12 Drainage and Grading Plan.dwg
PLOT DATE: May 21, 2012 - 10:23am

EAST TO BOSTON

WEST TO FITCHBURG

TOWN OF ACTON

8'W CROSSWALK

SIDEWALK TO MEET EXISTING EDGE OF PVMT AT CROSSWALK

REMOVE EX VGC

MAPLE STREET

SINGLE 14'-0 LANE, ONE WAY DROP OFF AREA

YELLOW STRIPED PVMT MARKING (TYP)

CROSSWALK CONNECTION TO FUTURE SIDEWALK

R&R EX SIGN

6"Ø BOLLARD, 5'O.C. (TYPICAL)

ACCESSIBLE RAMP (SEE SITE DETAILS)

BIT CONC. BERM

SAWCUT EX PVMT EDGE

LEVEL PASSENGER LOADING ZONE

GRAVEL DRIVEWAY TO M.O.W. BOX

PROP CB

FULL DEPTH BIT. CONC. DRIVEWAY APRON FOR M.O.W. ACCESS

PROP CB

LANDSCAPED AREA

M.O.W. STORAGE BOX ON CONC. PAD

CRUSHED STONE MAT (SEE SITE DETAILS)

20 X 40 CEM CONC PAD

NEW UTILITY POLE (SEE ELEC PLANS)

EX SEWER MH TO REMAIN

BIT CONC WALKWAY TO PLATFORM

12" DRAIN (TYP)

PROP CB

RIP RAP SPILLWAY

NEW UTILITY POLE (SEE ELEC PLANS)

STORMWATER BIORETENTION AREA

PROP DMH

ELEC SERVICE DUCTBANK (SEE ELEC PLANS)

BICYCLE RACKS, BIKE LOCKERS BY TOWN

CONC RAMP TO PLATFORM (SEE STRUCTURAL DWGS)

DUCTBANK TO HEADHOUSE (SEE ELEC PLANS)

6x6 CONCRETE TRANSFORMER PAD

EMERGENCY EGRESS STAIRWAY (SEE ARCH DWGS)

INBOUND PLATFORM

1331+00

1332+00

1333+00

N 88° 38'18.10" W

PROPOSED ℄ TRACK 2 AND CONST BASELINE (SEE TRACK DWGS)

PROPOSED ℄ TRACK 1

ST

UNDERDRAIN CLEANOUT (TYP) (SEE SITE DETAILS)

800' LONG HIGH LEVEL PLATFORMS (SEE STRUCT DWGS)

12" UNDERDRAINS (SEE TYP SECTIONS AND SITE DETAILS)

FULL DEPTH

PLAN

NOTES:

1. SEE SHEET G-3 FOR GENERAL NOTES.

LEGEND:

PLATFORM, STAIRS AND ELEVATORS

10 0 10 20

SCALE IN FEET

COMMONWEALTH OF MASSACHUSETTS
JONATHAN P. BRUNEAU
CIVIL
No. 46035
REGISTERED PROFESSIONAL ENGINEER
5-21-12

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

FITCHBURG COMMUTER RAIL LINE IMPROVEMENT PROJECT
CONTRACT NO. G67CN01

SOUTH ACTON STATION
SITE PLAN DETAIL
MAPLE ST. DROP OFF

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.

HNTB
300 APOLLO DRIVE
CHELMSFORD, MA 01824
(978) 905-4000

PROJECT MANAGER Date 5/20/12

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
APPROVED BY:
PROJECT MANAGER Date 6/20/12

JACOBS
343 CONGRESS STREET
BOSTON, MA 02110
(617) 242-9222

	DES. BY	DR. BY	CHK. BY
HORIZ: AS SHOWN	JPB	KMB	JM
VERT: NONE			
DATE: 5/17/12			

PLAN NO. 168523

SHEET C-13

ISSUE

FILE NAME: P:\MBTA\2008\E2X37800\CAD\700CADD\702STATIONS\South Acton\Civil\PS&E\ C-13 ~ C-15 Detailed Site Plans.dwg
PLOT DATE: May 21, 2012 - 12:06pm

EAST TO BOSTON

WEST TO FITCHBURG

TOWN OF ACTON

N 88° 38'18.10" W

1331+00

1332+00

1333+00

UNDERDRAIN CLEANOUT (TYP) (SEE SITE DETAILS)

PROPOSED ℄ TRACK 1

PROPOSED ℄ TRACK 2 AND CONST BASELINE (SEE TRACK DWGS)

800' LONG HIGH LEVEL PLATFORMS (SEE STRUCT DWGS)

12" UNDERDRAINS (SEE TYP SECTIONS AND SITE DETAILS)

FULL DEPTH BIT CONC PAVEMENT

(3) 6' BIKE RACKS

PROP CB

RELOCATE GUY WIRE

SLOPED RAMP TO PLATFORM

RELOCATE GUY WIRE

EXIST R.O.W.

WOOD GUARD RAIL

MILL & OVERLAY RAILROAD STREET COMMUTER PARKING LOT

TWO (2) ACCESSIBLE PARKING SPACES

R&R BIT CONC WALKWAY W/ LOAM & SEED

WATER LINE TO YARD HYDRANT

NEW 12" DRAIN LINE

PLATFORM GATE TO EMERGENCY EGRESS STAIRWAY (SEE ARCH DWGS)

LIMITS OF PAVEMENT OVERLAY

EXISTING R.O.W.

RELOCATE SIGN

EXISTING UTILITY POLE TO REMAIN

BIT CONC CURB TO MEET EXIST

RAILROAD STREET

WATER LINE CONNECTION TO METER PIT

PROP VGC ISLAND

TREE TO REMAIN

R1-1 SIGN

PVMT MARKING

SAWCUT & REMOVE BIT CONC CURBING

PROPOSED DMH

SMH
RIM 201.59
INV 184.24

RAILROAD STREET

PLAN

NOTES:

1. SEE SHEET G-3 FOR GENERAL NOTES.

LEGEND:

PLATFORM, STAIRS AND ELEVATORS

10 0 10 20

SCALE IN FEET

COMMONWEALTH OF MASSACHUSETTS
JONATHAN P. BRUNEAU
CIVIL
No. 46035
REGISTERED PROFESSIONAL ENGINEER
5.21.12

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

FITCHBURG COMMUTER RAIL LINE
IMPROVEMENT PROJECT
CONTRACT NO. G67CN01

SOUTH ACTON STATION
SITE PLAN DETAIL
RAILROAD ST. ENTRANCE

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.

HNTB
300 APOLLO DRIVE
CHELMSFORD, MA 01824
(978) 905-4000

PROJECT MANAGER Date 5/30/12

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

APPROVED BY:

PROJECT MANAGER Date 6/30/12

JACOBS
343 CONGRESS STREET
BOSTON, MA 02110
(617) 242-9222

	DES. BY	DR. BY	CHK. BY
HORIZ: AS SHOWN	JPB	KMB	JM
VERT: NONE			
DATE: 5/17/12			

PLAN NO. 168524

SHEET C-14

ISSUE

FILE NAME: P:\MBTA\2008\E2X37800\CAD\700CADD\702STATIONS\South Acton\Civil\PS&E\ C-13 ~ C-15 Detailed Site Plans.dwg
PLOT DATE: May 21, 2012 - 12:16pm

EAST TO BOSTON

WEST TO FITCHBURG

TOWN OF ACTON

ELEC DUCTBANK TO HEADHOUSE (SEE ELEC DWGS)

FOR HEADHOUSE DETAILS SEE STRUCT AND ARCH DWGS

WETLAND BOUNDARY

RIGHT OF WAY

EGRESS RAMP (SEE STRUCT DWGS)

LENGTH OF CONC. WALL

SWITCH

WOOD TIE WALL

1336+00

1337+00

1338+00

N 88° 38'18.10" W

PROPOSED ℄ TRACK 1

PROPOSED ℄ TRACK 2 AND CONST BASELINE (FOR GEOMETRY SEE TRACK DWGS)

TRENCH DRAINS AT ENTRANCE, DRAIN TO TRACKWAY (SEE SITE DETAILS)

TRENCH DRAINS AT ENTRANCES (SEE SITE DETAILS)

800' LONG HIGH LEVEL PLATFORMS (SEE STRUCT DWGS)

PROVIDE 18" FLUSH VGC EVERY 23'± ALONG BACK OF PLAZA CONC. BTWN RAMP & HH (SEE STRUCT DWGS DETAIL)

12" UNDERDRAINS (SEE TYP SECTIONS AND SITE DETAILS)

BIT. CONC. PLATFO

BENCHES

BENCH

BENCHES (TYP)

RELOCATED EX BICYCLE STORAGE UNITS

BIKE STORAGE

R.O.W.

CONC MOW RAMP TO PLATFORM (SEE STRUCT DWGS)

BIT CONC MOW DRIVEWAY

M.O.W. STORAGE BOX ON CONC PAD

R5-11 SIGN

LOAM & SEED DISTURBED AREAS

CONC SW/PLAZA AREA (SEE SITE DETAILS)

(2) 16' BIKE RACKS (TYP)

BUS DROP OFF LANE TO REMAIN

2" OVERLAY LIMITS

YARD HYDRANT

8"Ø DOWNSPOUT DRAIN INLET, OUTLET UNDER PLAT

OUTBOUND HEADHOUSE (SEE ARCH. DRAWINGS)

ACCESSIBLE RAMP (SEE SITE DETAILS)

8"Ø DOWNSPOUT DRAIN INLET, OUTLET UNDER PLATFORM

FOR HEADHOUSE DETAILS SEE STRUCT AND ARCH DWGS

FLUSH GRAN CURB AT ACCESSIBLE RAMP

FLUSH GRAN CURB AT DROP OFF AREA

CONSTRUCT LEVEL PASSENGER LOADING ZONE

DROP BOX

REPLACE PAVERS W/ BIT CONC PVMT

REMOVE EX BICYCLE RACKS, GROUT HOLES & REPLACE W/ EX BICYCLE STORAGE UNITS (CONC PADS TO REMAIN)

PVMT MARK (TYP)

VENDOR PARKING

12' W CROSSWALK

LIGHT POLE TO REMAIN

ACCESSIBLE PATH OF TRAVEL

TREE TO BE REMOVED

PVMT MARK (TYP)

BOLLARD (TYP)

REMOVE PORTION OF RAISED ISLAND

REMOVE TREE

CONVERT TO (8) REGULAR 8.5'x16' PARKING SPACES

62'-5¼"

REMOVE EX SLOPED GC & REPLACE W/ VGC

BIKE RACKS

OHW

UPL

BOL

TEL

CP

SCH

WB

EB

PLAN

NOTES:

1. SEE SHEET G-3 FOR GENERAL NOTES.
2. FOR HEADHOUSE PLANS AND DETAILS SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS.

LEGEND:

PLATFORM, STAIRS AND ELEVATORS

10 0 10 20

SCALE IN FEET

COMMONWEALTH OF MASSACHUSETTS
JONATHAN P. BRUNEAU
CIVIL
No. 48035
REGISTERED PROFESSIONAL ENGINEER
5.21.12

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

FITCHBURG COMMUTER RAIL LINE
IMPROVEMENT PROJECT
CONTRACT NO. G67CN01

SOUTH ACTON STATION
SITE PLAN DETAIL
CENTRAL STREET DROP OFF

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.

HNTB
300 APOLLO DRIVE
CHELMSFORD, MA 01824
(978) 905-4000

PROJECT MANAGER 5/30/12 Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

APPROVED BY: PROJECT MANAGER 6/30/12 Date

JACOBS
343 CONGRESS STREET
BOSTON, MA 02110
(617) 242-9222

HORIZ: AS SHOWN	DES. BY: JPB	DR. BY: KMB	CHK. BY: JM
VERT: NONE			
DATE: 5/17/12			

PLAN NO. 168525

SHEET C-15

ISSUE

FILE NAME: P:\MBTA\2008\E2X37800\CAD\700CADD\702STATIONS\South Acton\Civil\PS&E\ C-13 ~ C-15 Detailed Site Plans.dwg
PLOT DATE: May 21, 2012 - 12:24pm