



at&t

**AT&T Modifications to Existing Wireless Facility
144 - 158 Charles Street
Presentation to the Beacon Hill Architectural Commission
APP # 19.873 BH
April 18, 2019 @ 5:00 p.m.
Boston City Hall – Piemonte Room**

Edward D. Pare, Esq.



**Prepared For:
AT&T Mobility
Site Name:
BOSTON - CHARLES ST. GARAGE
Site No. MA2079
142-158 Charles Street
Boston, MA 02114**



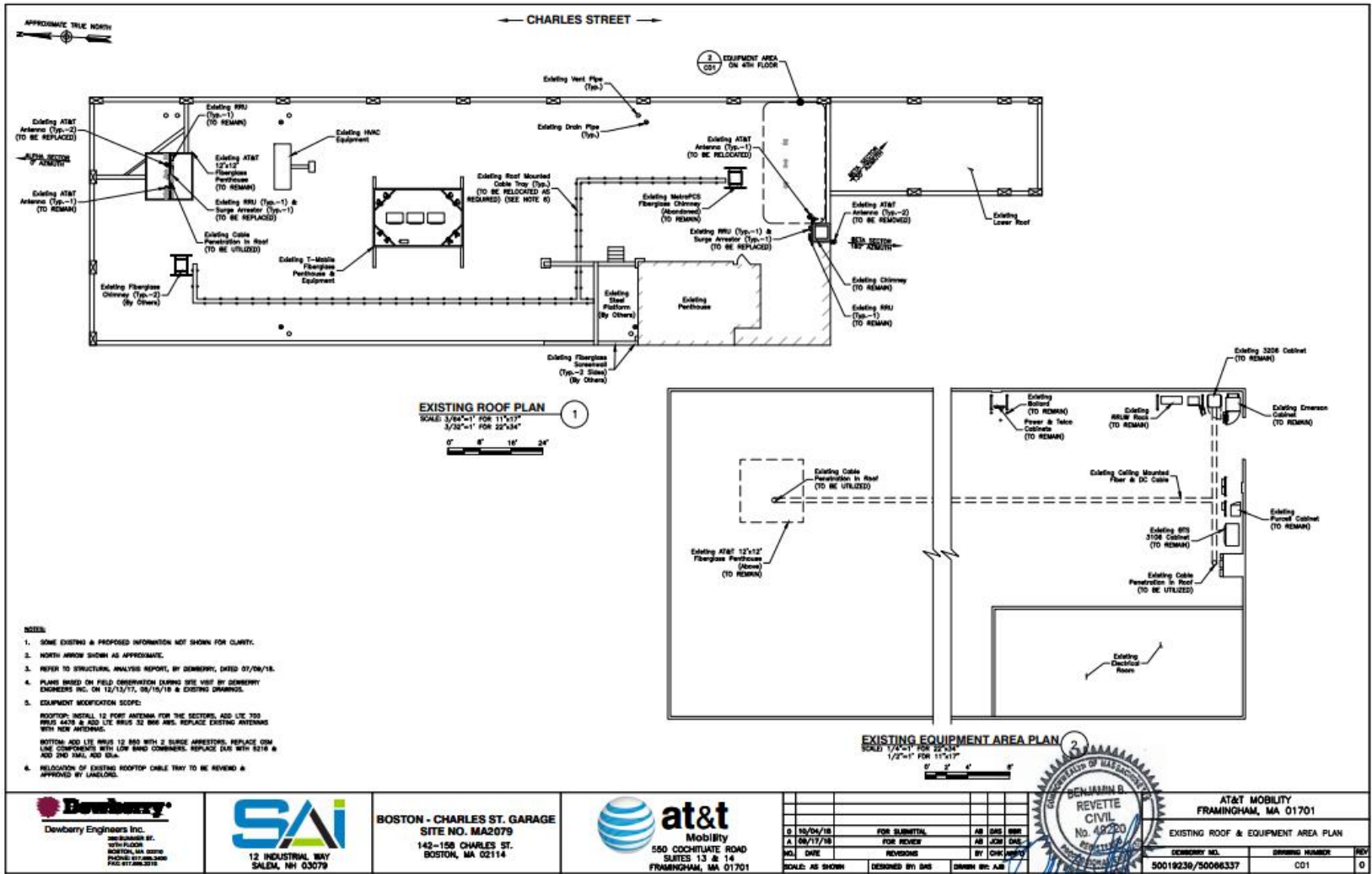
Photos taken on: 04/22/18 & 08/15/18

For visual reference only. Actual visibility is dependent upon weather conditions, season, sunlight, and viewer location.



**BOSTON - CHARLES ST. GARAGE
SITE NO. MA2079
DEWBERRY NO. 50083749
(Page 1 of 18)**





BOSTON - CHARLES ST. GARAGE
SITE NO. MA2079
142-150 CHARLES ST.
BOSTON, MA 02114



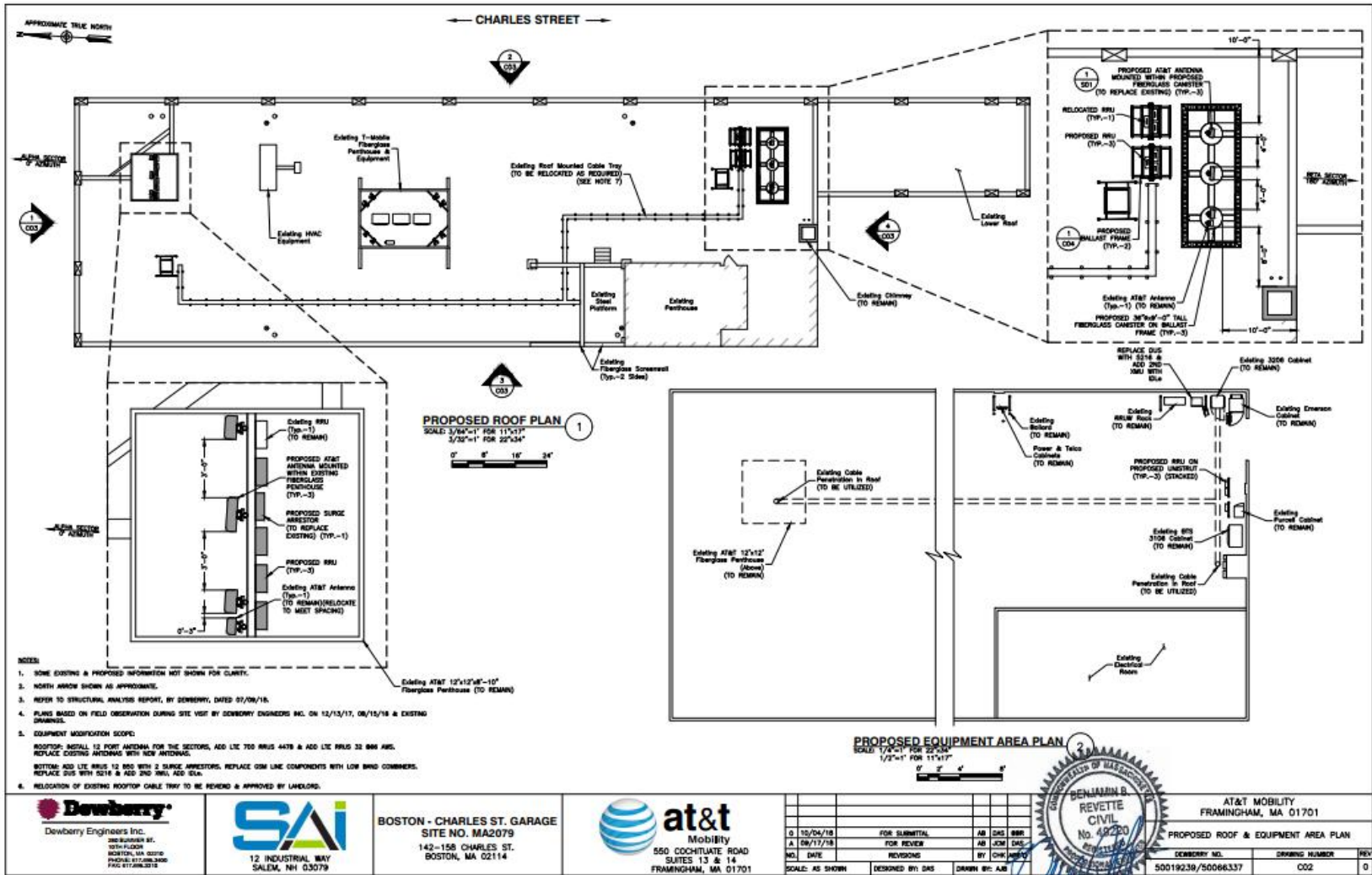
NO.	DATE	REVISIONS	BY	CHK	APP
0	10/24/18	FOR SUBMITTAL	AS	DBS	DBS
1	02/17/19	FOR REVIEW	AS	JCB	DBS



AT&T MOBILITY
FRAMINGHAM, MA 01701
EXISTING ROOF & EQUIPMENT AREA PLAN

DESIGNER NO.	DRAWING NUMBER	REV
50019236/50096337	C01	0





Dowberry
Dowberry Engineers Inc.
280 BURNHAM ST.
10TH FLOOR
BOSTON, MA 02210
PHONE: 617.288.2400
FAX: 617.288.0318

SAI
12 INDUSTRIAL WAY
SALEX, NH 03079

BOSTON - CHARLES ST. GARAGE
SITE NO. MA2079
142-158 CHARLES ST.
BOSTON, MA 02114

at&t
Mobility
550 COCHUATE ROAD
SUITES 13 & 14
FRAMINGHAM, MA 01701

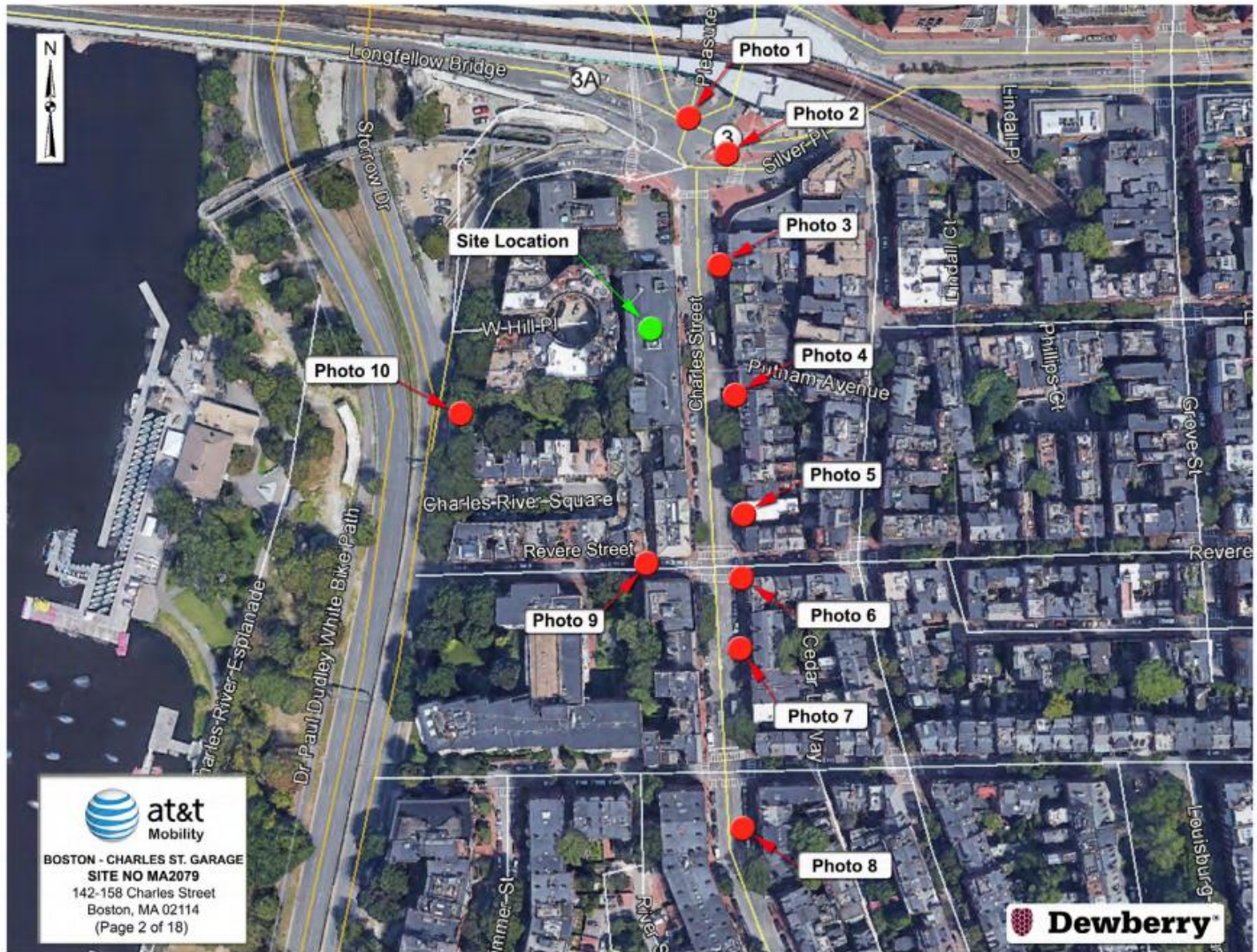
0	10/04/18	FOR SUBMITTAL	AB	DS	DB
1	09/17/18	FOR REVIEW	AB	DS	DB
2	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: DAS	DRAWN BY: ABE		

AT&T MOBILITY
FRAMINGHAM, MA 01701

PROPOSED ROOF & EQUIPMENT AREA PLAN

DOWBERRY NO.	DRAWING NUMBER	REV
50019239/50068337	CO2	0





Actual View




BOSTON - CHARLES ST. GARAGE
Photo 1A
View Facing South
From Silver Pl
(Page 3 of 18)

 **Dewberry®**

Proposed View

Proposed Antenna (Typ.-3) Mounted Within Existing Fiberglass Penthouse




BOSTON - CHARLES ST. GARAGE
Photo 1B
View Facing South
From Silver Pl
(Page 4 of 18)



Actual View



 **at&t**
Mobility
BOSTON - CHARLES ST. GARAGE
Photo 2A
View Facing Southwest
From Silver Pl
(Page 5 of 18)

 **Dewberry**

Proposed View

Proposed Antenna (Typ.-3) Mounted Within Existing Fiberglass Penthouse




BOSTON - CHARLES ST. GARAGE
Photo 2B
View Facing Southwest
From Silver Pl
(Page 6 of 18)

 Dewberry

Actual View

Proposed Equipment Is Not Visible From This Location




at&t
Mobility
BOSTON - CHARLES ST. GARAGE
Photo 3
View Facing Southwest
From Charles Street
(Page 7 of 18)

 Dewberry®

SAVENOR'S

SLOW



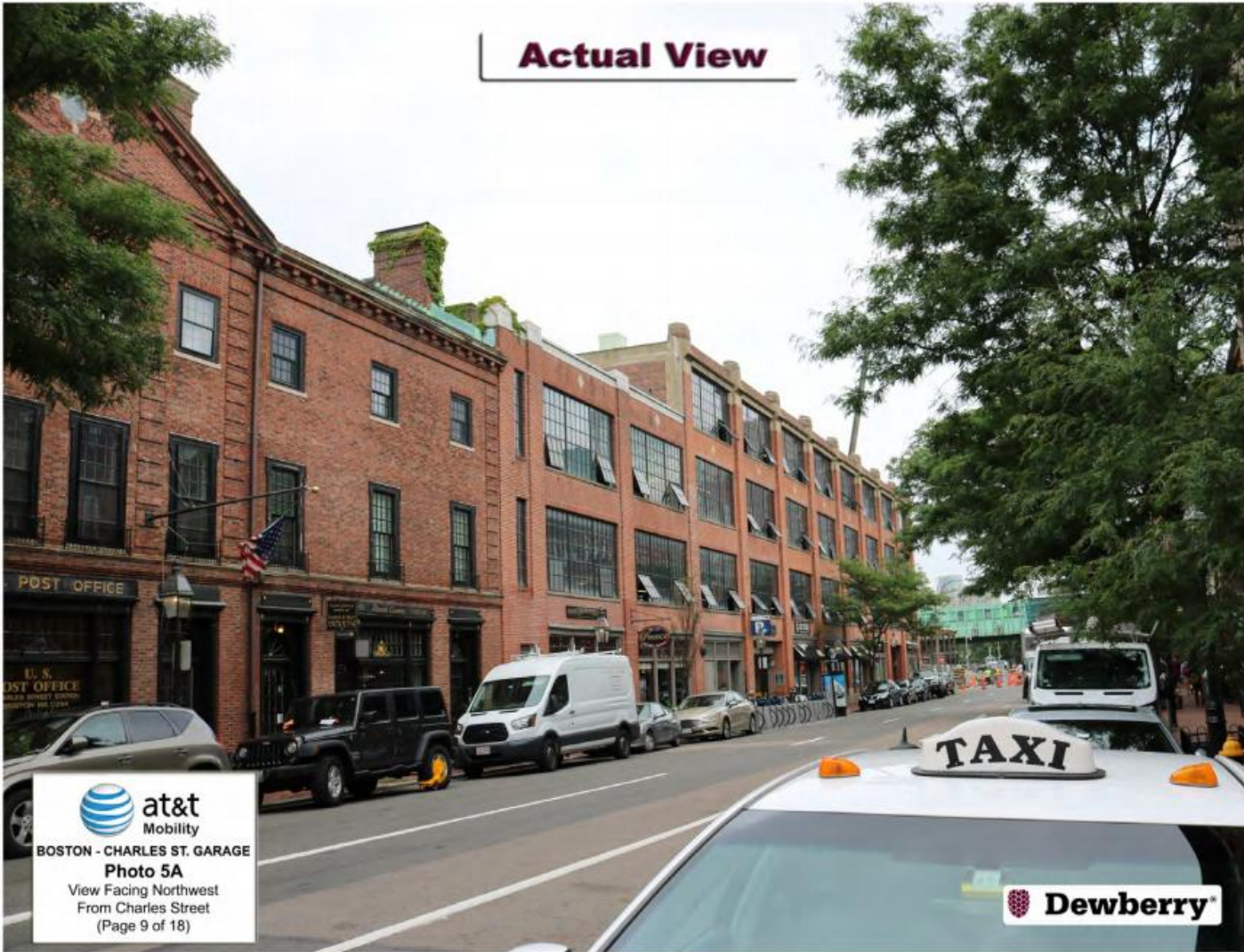
Actual View

Proposed Equipment Is Not Visible From This Location


BOSTON - CHARLES ST. GARAGE
Photo 4
View Facing Southwest
From Charles Street
(Page 8 of 18)

 **Dewberry**

Actual View



 **at&t**
Mobility
BOSTON - CHARLES ST. GARAGE
Photo 5A
View Facing Northwest
From Charles Street
(Page 9 of 18)

Proposed View

Proposed Fiberglass Canister
On Ballast Frame (Typ.-3)




BOSTON - CHARLES ST. GARAGE
Photo 5B
View Facing Northwest
From Charles Street
(Page 10 of 18)

Actual View





BOSTON - CHARLES ST. GARAGE
Photo 6A
View Facing Northwest
From John F. Kennedy Street
(Page 11 of 18)

 **Dewberry**

Proposed View

Proposed Fiberglass Canister
On Ballast Frame (Typ.-3)




BOSTON - CHARLES ST. GARAGE
Photo 6B
View Facing Northwest
From John F. Kennedy Street
(Page 12 of 18)



Actual View




at&t
Mobility
BOSTON - CHARLES ST. GARAGE
Photo 7A
View Facing Northwest
From Charles Street
(Page 13 of 18)

 Dewberry

Proposed View

Proposed Fiberglass Canister
On Ballast Frame (Typ.-3)




at&t
Mobility
BOSTON - CHARLES ST. GARAGE
Photo 7B
View Facing Northwest
From Charles Street
(Page 14 of 18)

 Dewberry®

Actual View

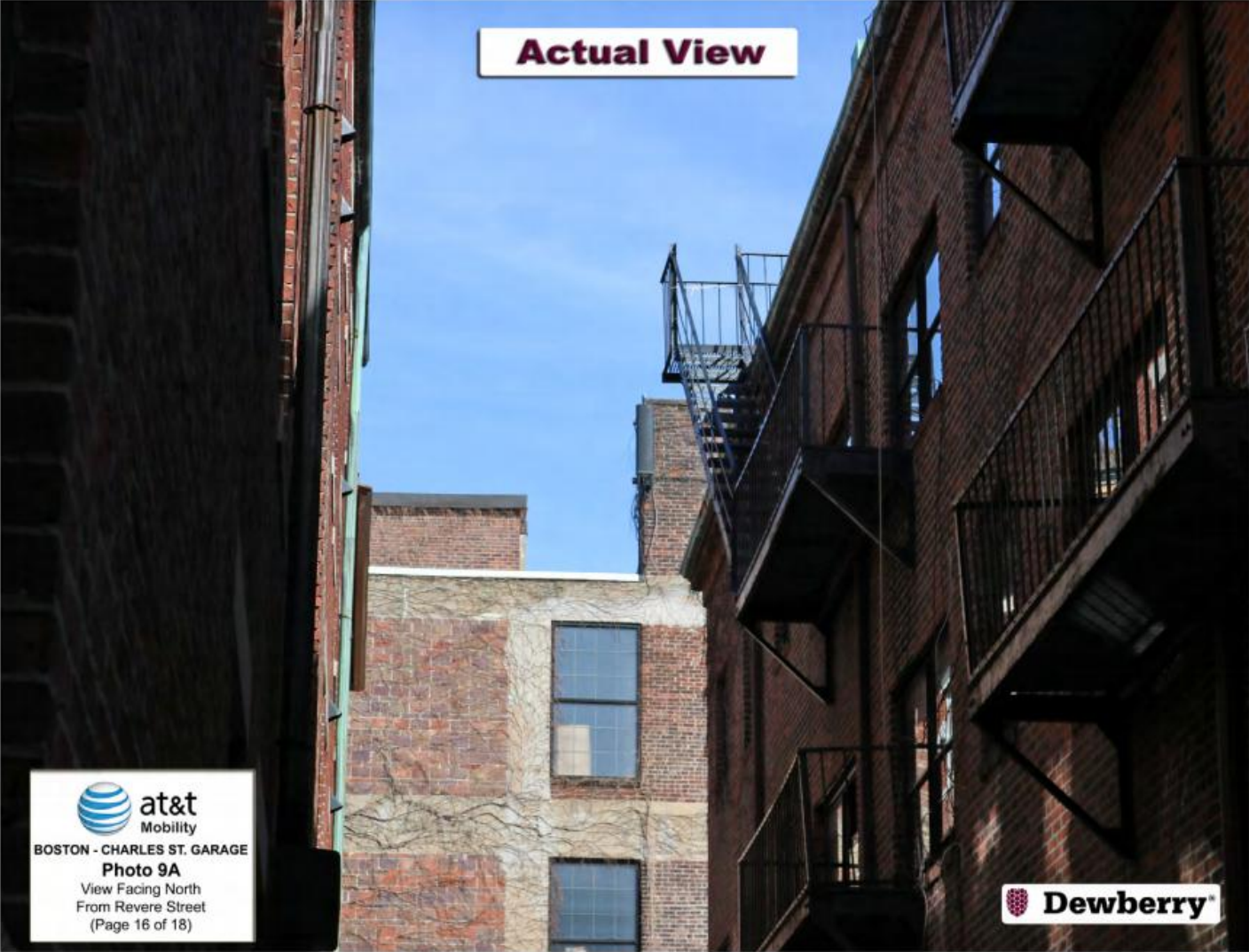
Proposed Equipment Is Not Visible From This Location




BOSTON - CHARLES ST. GARAGE
Photo 8
View Facing North
From Charles Street
(Page 15 of 18)

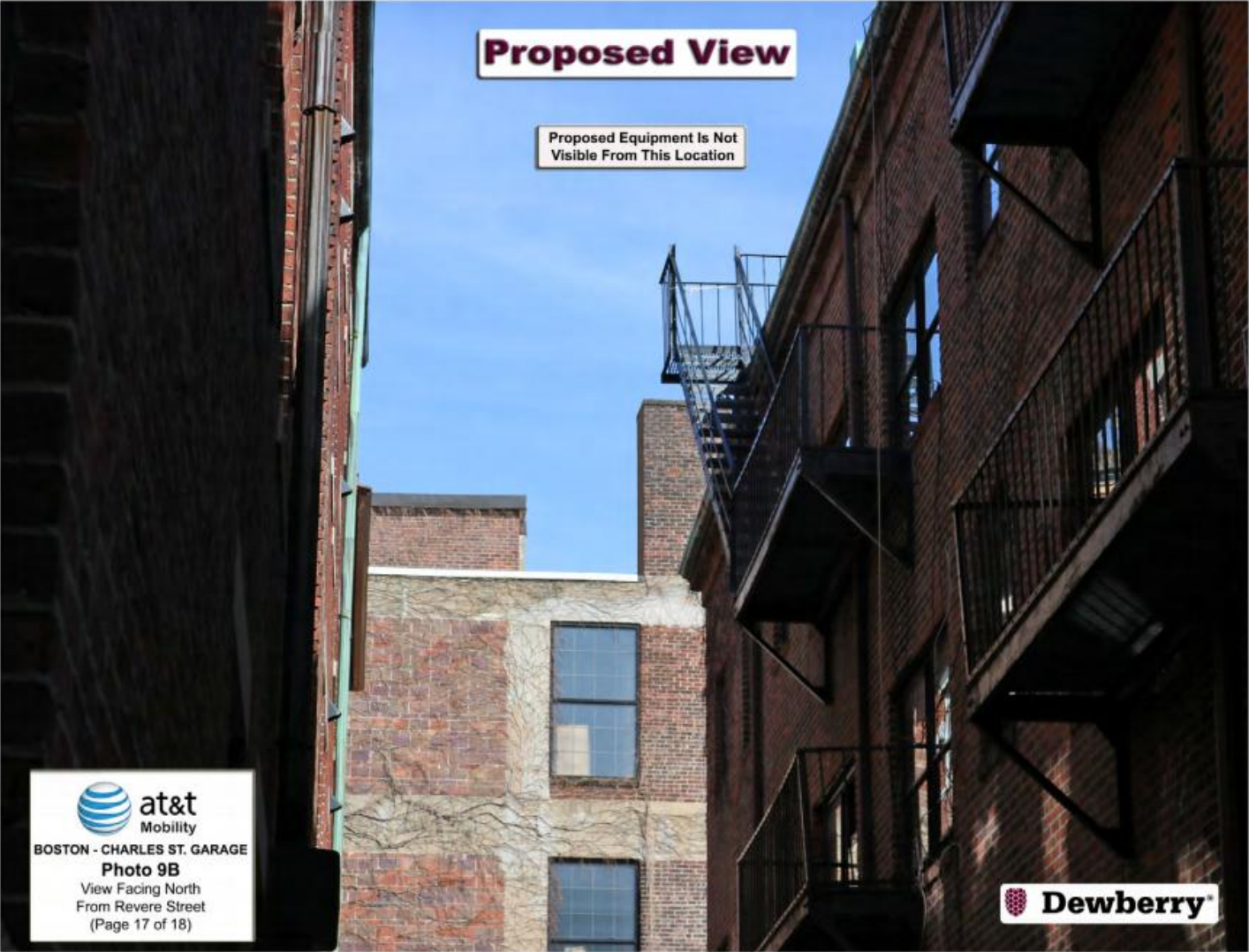
 Dewberry®

Actual View




BOSTON - CHARLES ST. GARAGE
Photo 9A
View Facing North
From Revere Street
(Page 16 of 18)

 **Dewberry**

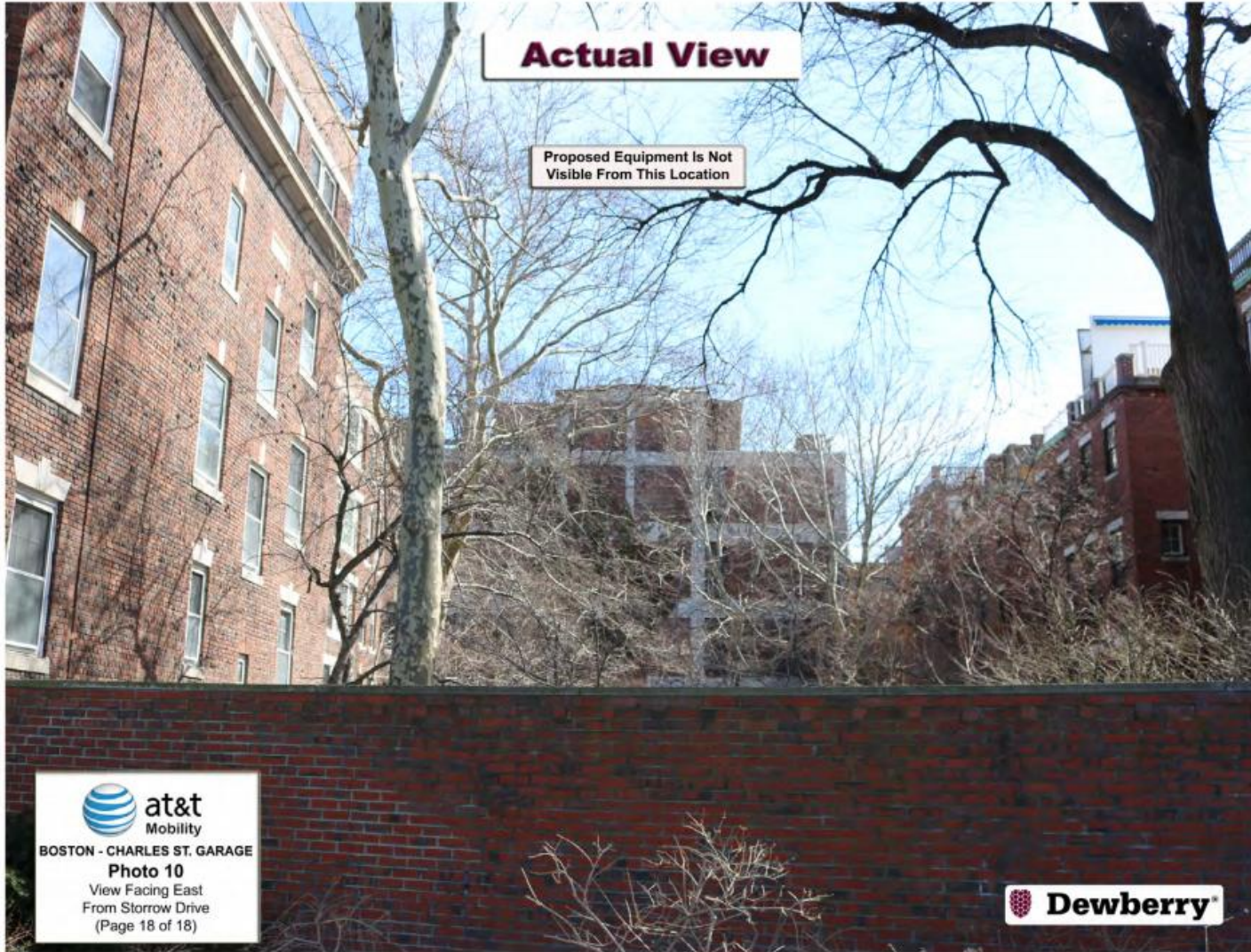


Proposed View

Proposed Equipment is Not Visible From This Location


BOSTON - CHARLES ST. GARAGE
Photo 9B
View Facing North
From Revere Street
(Page 17 of 18)

 **Dewberry**

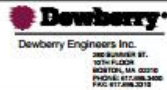
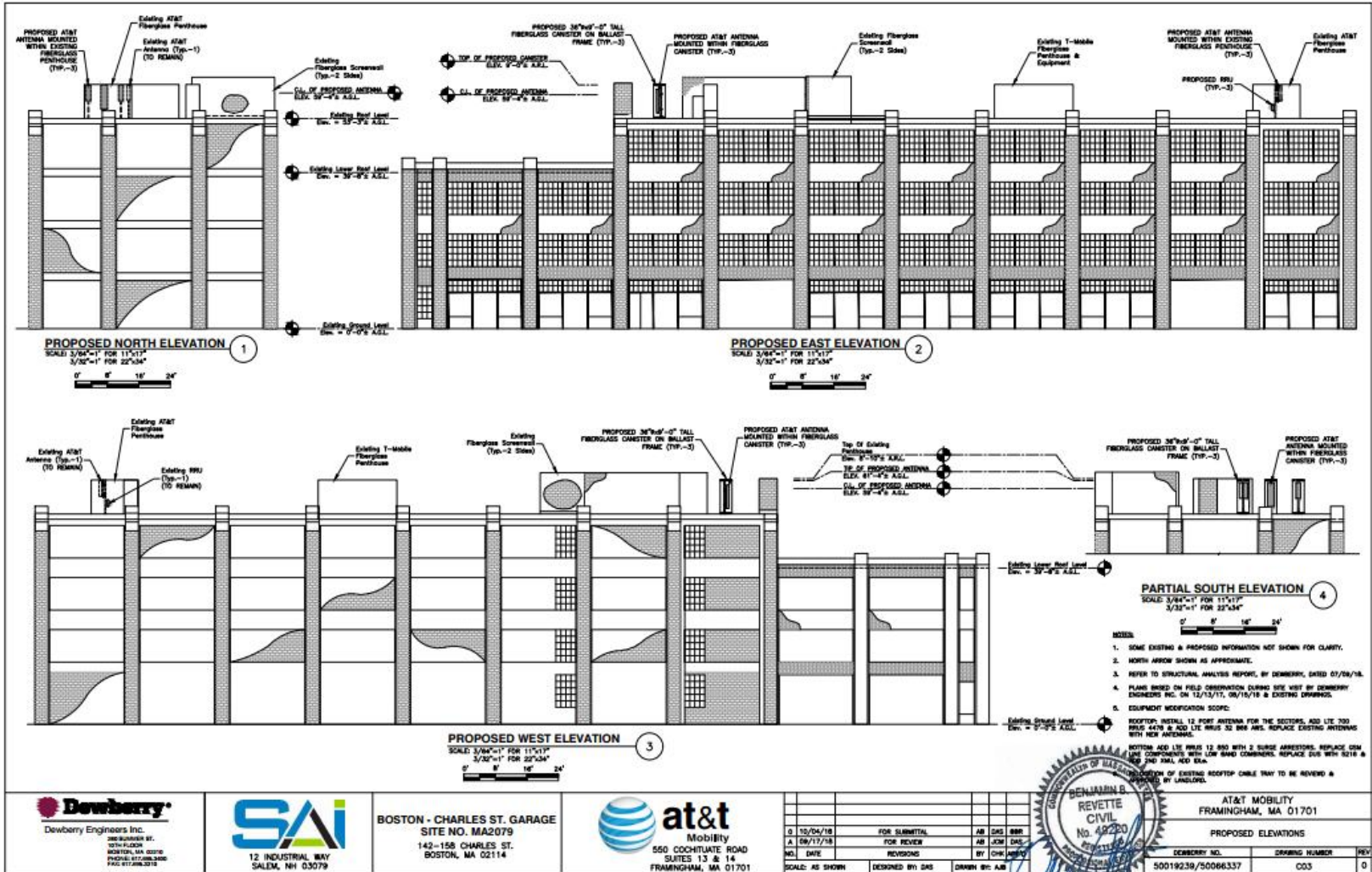


Actual View

Proposed Equipment Is Not Visible From This Location


BOSTON - CHARLES ST. GARAGE
Photo 10
View Facing East
From Storrow Drive
(Page 18 of 18)





BOSTON - CHARLES ST. GARAGE
SITE NO. MA2079
142-158 CHARLES ST.
BOSTON, MA 02114



NO.	DATE	REVISIONS	BY	CHK	APP
0	10/04/16	FOR SUBMITTAL	AB	DAS	BBR
1	09/17/18	FOR REVIEW	AB	JCM	DAS

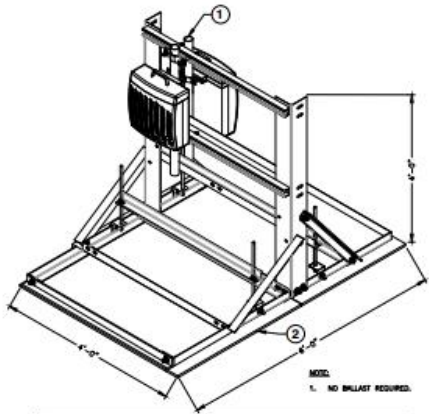
SCALE: AS SHOWN DESIGNED BY: DAS DRAWN BY: AB



AT&T MOBILITY
FRAMINGHAM, MA 01701

PROPOSED ELEVATIONS

DEMBERRY NO.	DRAWING NUMBER	REV
50019239/50066337	CO3	0



BALLAST FRAME BILL OF MATERIALS			
NUMBER	ITEM	MANUFACTURER/ MODEL #	COMMENTS/NOTES
1	2 1/2" SCH40 PFC	N/A	GALVANIZED
2	RUBBER MAT 27"X18"X3/4"	CONNECTE/ M1-F1837	

VERIFY QUANTITIES OF ALL PROPOSED EQUIPMENT PRIOR TO ORDERING AND ASSEMBLY.

ROOFTOP BALLAST MOUNT ISOMETRIC
SCALE: N.T.S.

FINAL EQUIPMENT CONFIGURATION												
SECTOR	BAND	ANTENNA	SIZE (INCHES) (LxWxH)	PKG. CENTER	AZIMUTH	TILT	COMBINER	PSU	SIZE (INCHES) (LxWxH)	COAX JAMBERS	POWER AMPERS	
ALPHA	UMTS 850/LTE 1900	(1) KYTREN 742-284	51.8x10.3x5.5	59.5'	0°	--	PMW LSP21401 PMW LSP21401	--	--	(0) 2	--	
	LTE 800/WCS	(2) CO OPA-858-L200-H4	48x14.6x7.3	59.5'	0°	--	--	DBCT10BF1902-1 DBCT10BF1902-1	(1) RRUS-12 (900) (2) RRUS-12 (1900) *ET EQUIPMENT LEVEL*	20.4 x 18.5 x 7.5 27.2 x 12.1 x 7.0	(0) 2	--
	LTE 700/WCS	(1) 988 EPNO-66488H-L3	73x25x6.3	59.5'	0°	--	--	--	(1) 814 4478 (700) (1) RRUS-22 888 (988)	18.1 x 13.4 x 8.3 27.2 x 12.1 x 7.0	--	--
	LTE 700/1900/1900	(2) CO OPA-858-L200-H4	48x14.6x7.3	59.5'	0°	--	--	--	(0) RRUS-11 (700) (2) RRUS-12 (1900) (2) RRUS-12 (1900)	18.7 x 17.0 x 7.2 20.4 x 18.5 x 7.5 20.4 x 18.5 x 7.5	--	--
BETA	LTE 800/WCS	(2) CO OPA-858-L200-H4	48x14.6x7.3	59.5'	180°	--	--	DBCT10BF1902-1 DBCT10BF1902-1	(1) RRUS-12 (900) (1) RRUS-12 (900) *ET EQUIPMENT LEVEL*	20.4 x 18.5 x 7.5 27.2 x 12.1 x 7.0	(0) 2	--
	LTE 700/WCS	(1) 988 EPNO-66488H-L3	73x25x6.3	59.5'	180°	--	--	--	(1) 814 4478 (700) (1) RRUS-22 888 (988)	18.1 x 13.4 x 8.3 27.2 x 12.1 x 7.0	--	--
	LTE 700/1900/1900	(2) CO OPA-858-L200-H4	48x14.6x7.3	59.5'	180°	--	--	--	(0) RRUS-11 (700) (2) RRUS-12 (1900) (2) RRUS-12 (1900)	18.7 x 17.0 x 7.2 20.4 x 18.5 x 7.5 20.4 x 18.5 x 7.5	--	--
	UMTS 850	(1) KYTREN 742-284	51.8x10.3x5.5	59.5'	180°	--	PMW LSP21401 PMW LSP21401	--	(1) DBCT10BF1902-1	--	(0) 2	--

SEE RFDS VERSION 1 DATED 12/06/17 FOR AZIMUTH & ANTENNA POSITIONING CONFIRMATION

FINAL EQUIPMENT CONFIGURATION
SCALE: N.T.S.

NOTES:

1. SOME EXISTING & PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
2. NORTH ARROW SHOWN AS APPROXIMATE.
3. REFER TO STRUCTURAL ANALYSIS REPORT, BY DEWBERRY, DATED 07/09/18.
4. PLANS BASED ON FIELD OBSERVATION DURING SITE VISIT BY DEWBERRY ENGINEERS INC. ON 12/13/17, 06/15/18 & EXISTING DRAWINGS.
5. PLANS BASED ON FIELD OBSERVATION DURING SITE VISIT BY DEWBERRY ENGINEERS INC. ON 12/13/17 & EXISTING DRAWINGS.
6. EQUIPMENT MODIFICATION SCOPE:
ROOFTOP MOUNT 12 FEET ANTENNA FOR THE SECTORAL, ADD LTE 700 BRUTE 4478 & ADD LTE 700 32 888 AND REPLACE EXISTING ANTENNA WITH NEW ANTENNA.
ROOFTOP ADD LTE 700 13 888 WITH 2 SURGE ARRESTORS, REPLACE GSM AND COMPONENTS WITH LOW BAND COMPONENTS, REPLACE DUS WITH 5014 & 5015 PER ADD 04.
REVISIONS OF EXISTING ROOFTOP CABLE TRAY TO BE REVIEWED & REDESIGNED BY LANDLORD.



AT&T MOBILITY
FRAMINGHAM, MA 01701

EQUIPMENT CONFIGURATION

DEWBERRY NO. 50019239/50066337
DRAWING NUMBER: C04
REV: 0



BOSTON - CHARLES ST. GARAGE
SITE NO. MA2079
142-158 CHARLES ST.
BOSTON, MA 02114



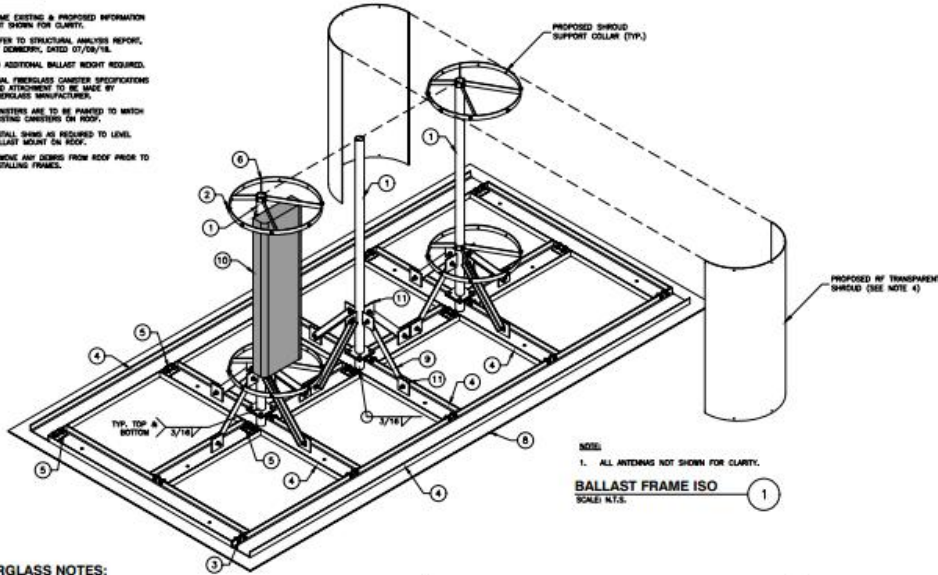
NO.	DATE	REVISIONS	BY	CHK	APP
0	12/04/18	FOR SUBMITTAL	AB	CHS	BBR
A	09/17/18	FOR REVIEW	AB	JOH	DAL

SCALE: AS SHOWN | DESIGNED BY: DRS | DRAWN BY: ABE

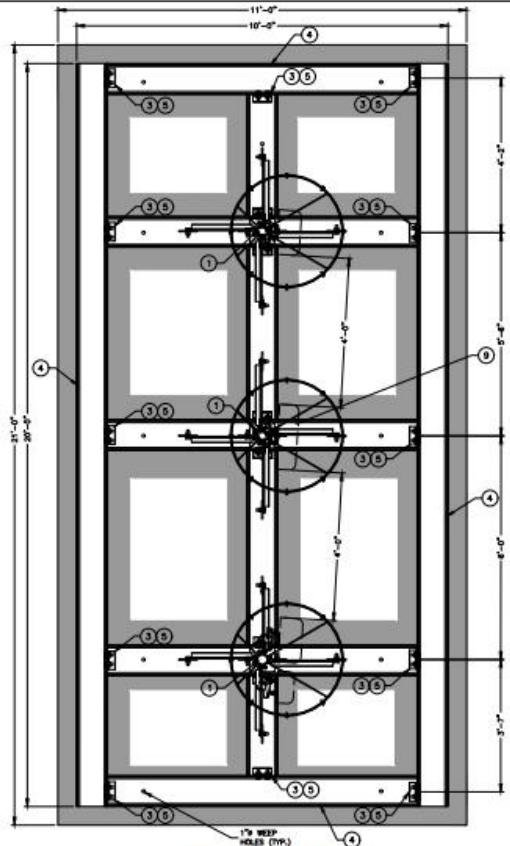


STRUCTURAL NOTES:

1. SOME EXISTING & PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
2. REFER TO STRUCTURAL ANALYSIS REPORT, BY DOWBERRY, DATED 07/08/18.
3. NO ADDITIONAL BALLAST WEIGHT REQUIRED.
4. FINAL FIBERGLASS CASSETTE SPECIFICATIONS AND ATTACHMENT TO BE MADE BY FIBERGLASS MANUFACTURER.
5. CASSETTES ARE TO BE FASTENED TO MATCH EXISTING CONDITIONS ON ROOF.
6. METALL SHIMS AS REQUIRED TO LEVEL BALLAST MOUNT ON ROOF.
7. REMOVE ANY DEBRIS FROM ROOF PRIOR TO INSTALLING FRAME.



BALLAST FRAME ISO
SCALE: N.T.S.



BALLAST FRAME PLAN
SCALE: 3/8"=1' FOR 11'-0"
3/4"=1' FOR 16'-0"

FIBERGLASS NOTES:

1. FRP (FIBERGLASS REINFORCED POLYMER) STRUCTURAL SHEDS SHALL BE MANUFACTURED USING THE PULTRUSION PROCESS.
2. IF PRE-FABRICATED MEMBERS DO NOT ASSEMBLE ACCORDING TO PLAN, CONTACT THE FIBERGLASS MANUFACTURER BEFORE CUTTING OR ALTERING FABRICATED MEMBERS.
3. FRP MEMBERS SHALL BE FABRICATED AND ASSEMBLED AS INDICATED ON THE DRAWINGS.
4. THE CONTRACTOR SHALL PROTECT THE FRP STRUCTURAL MEMBERS FROM ABUSE TO PREVENT BROWNING, SCRATCHES, SCALDES, ETC. DURING FABRICATION, HANDLING, AND INSTALLATION.
5. FRP BOLTS SHOULD BE TIGHTENED 1/2 TURN PAST SEAL AND LOCKED WITH EPOXY.
6. FIBERGLASS TO MEET ALL ASTM STANDARDS FOR BY PRODUCTION. PROVIDE TEST REPORTS TO AEA FOR REVIEW & APPROVAL.
7. STRUCTURAL FRP SHALL HAVE THE MINIMUM MECHANICAL PROPERTIES:
TENSILE STRENGTH(MPa): 3300
COMPRESSIVE STRENGTH(MPa): 33 AS
FLORAL STRENGTH(MPa): 3300
LENGTH: 10400"
8. FIBERGLASS PANEL DESIGN & CONNECTION DESIGN TO BE BY CH2M.
9. PROVIDE FRP SHOP DRAWINGS TO DOWBERRY FOR REVIEW & APPROVAL PRIOR TO FRP FABRICATION.

WINDLOAD DESIGN CRITERIA:

IN ACCORDANCE WITH TBD CH2M MECHANICALS/STRUCTURE TO THE INTERNATIONAL BUILDING CODE (IBC)

- ULTIMATE WIND SPEED 128 MPH
- RISK CATEGORY II
- EXPOSURE CATEGORY B
- VELOCITY PRESSURE 30.4 PSF



BOSTON - CHARLES ST. GARAGE
SITE NO. MA2079
142-158 CHARLES ST.
BOSTON, MA 02114



NO.	DATE	REVISIONS	BY	CHK	APPV
0	10/04/18	FOR SUBMITTAL	AB	DAS	BBR
A	09/17/18	FOR REVIEW	AB	JCM	DAS

SCALE: AS SHOWN
DESIGNED BY: DAS
DRAWN BY: AB

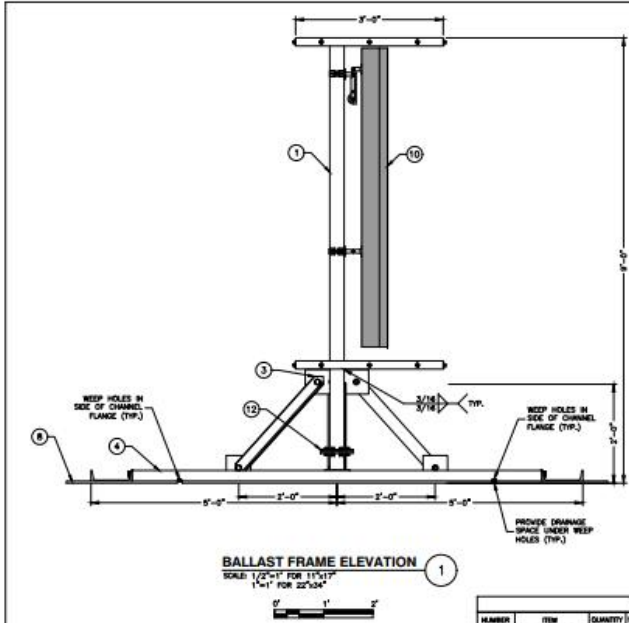


AT&T MOBILITY
FRAMINGHAM, MA 01701

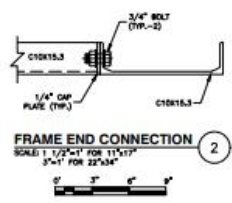
BALLAST FRAME CONFIGURATION

DESBERRY NO.	DRAWING NUMBER	REV
50019239/50066337	501	0

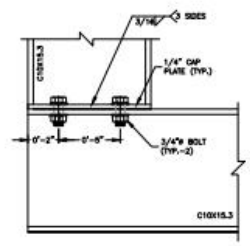




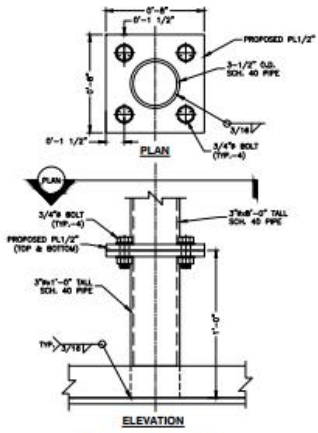
BALLAST FRAME ELEVATION 1
SCALE: 1/2"=1' FOR 11"x17"
3/4"=1' FOR 22"x34"



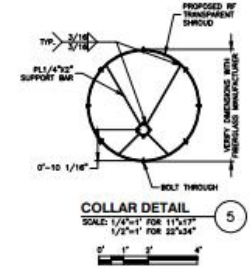
FRAME END CONNECTION 2
SCALE: 1/2"=1' FOR 11"x17"
3/4"=1' FOR 22"x34"



FRAME CORNER CONNECTION 3
SCALE: 1/2"=1' FOR 11"x17"
3/4"=1' FOR 22"x34"



SPLICE PLATE DETAIL 4
SCALE: 1/2"=1' FOR 11"x17"
3/4"=1' FOR 22"x34"



COLLAR DETAIL 5
SCALE: 1/4"=1' FOR 11"x17"
1/2"=1' FOR 22"x34"

B.O.M.				
NUMBER	ITEM	QUANTITY	MANUF./MODEL #	COMMENTS/NOTES
1	3/8" (1.5" O.D.) SOL. 40 BALL PIPE	6	N/A	LENGTH VARIES, WELD TO ITEM 12.
2	SELF TAPPING SCREW OR BOLT	160	N/A	FIBERGLASS ATTACHMENT SPECIFICATION BY MANUFACTURER.
3	1/4" NEW ALUM BOLT	72	N/A	SEE DETAILS 2 & 3 SHEET SO2 FOR CONNECTION DETAILS.
4	SALVAGED C10x15.3	11	N/A	SEE DETAILS 2 & 3 SHEET SO2 FOR CONNECTION DETAILS. DRILL WEEP HOLES AS NEEDED.
5	SALVAGED 1.25x1/4x5'-8"	18	N/A	BOLT TO ADJACENT ITEM 4.
6	1/2" x 2" TALL 1 1/2" x 8" COLLAR	6	N/A	SEE DETAIL 5 SHEET SO2.
7	1" TALL STD PIPE HUBER-DUKL	8	N/A	SEE DETAIL 3, DRILL & TAP (4) 3/4" BOLTS TO MOUNT TO ITEM 1.
8	HUBER HOOPING BAR	160	COMPAGNE WF-FIBER	DETAIL FOR MANUFACTURER'S RECOMMENDATIONS.
9	1.25x1/4"	12	N/A	ANEMOMETER MOUNT RICHERS.
10	PHEN. ANEMOM	4	N/A	INSTALL FOR MANUFACTURER'S RECOMMENDATIONS.
11	PL 1/4x2'-0"	24	N/A	WELD TO ITEM 1 OR 4.
12	PL 1.25x2'-0"	6	N/A	BOLT TOGETHER WITH 3/4" AFM ASS3 BOLTS, WELD TO ITEM 1.

STRUCTURAL NOTES:

- SOME EXISTING & PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
- REFER TO STRUCTURAL ANALYSIS REPORT, BY CONCRETE, DATED 07/26/18.
- NO ADDITIONAL BALLAST BEHOLD REQUIRED.
- FINAL FIBERGLASS CASSETT SPECIFICATIONS AND ATTACHMENT TO BE MADE BY FIBERGLASS MANUFACTURER.
- CONCRETE ARE TO BE FINISHED TO MATCH EXISTING CONCRETE ON ROOF.
- INSTALL DIMS AS REQUIRED TO LEVEL BALLAST MOUNT ON ROOF.
- REMOVE ANY DEBRIS FROM ROOF PRIOR TO INSTALLING FRAMES.

Dewberry
Dewberry Engineers Inc.
300-20000 ST.
10TH FLOOR
BOSTON, MA 02108
PHONE: 617.286.2400
FAX: 617.286.0318

SAI
12 INDUSTRIAL WAY
SALEM, NH 03079

BOSTON - CHARLES ST. GARAGE
SITE NO. MA2079
142-158 CHARLES ST.
BOSTON, MA 02114

at&t
Mobility
550 COORDINATE ROAD
SUITES 13 & 14
FRAMINGHAM, MA 01701

0	15/04/18	FOR SUBMITTAL	AB	DAS	BBR
A	08/17/18	FOR REVIEW	AB	LOM	DAS
MD	DATE	REVISIONS	BY	CHK	APP
SCALE: AS SHOWN		DESIGNED BY: DAS	DRAWN BY: ALE		



AT&T MOBILITY
FRAMINGHAM, MA 01701

STRUCTURAL DETAILS

DESBERRY NO.	DRAWING NUMBER	REV
50019239/50066337	SO2	0

