



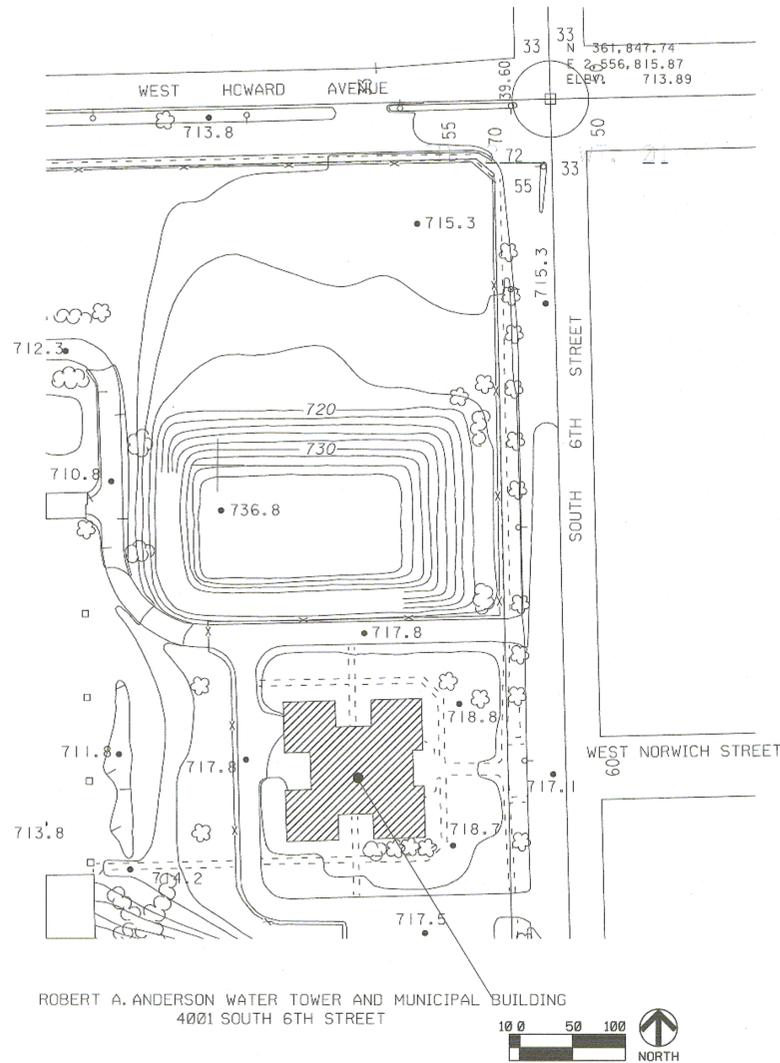
CITY OF MILWAUKEE  
DEPARTMENT OF NEIGHBORHOOD SERVICES

# ROBERT A. ANDERSON WATER TOWER AND MUNICIPAL BUILDING ANTENNA WORK, CONCRETE PARAPET AND LEDGES REPAIR

4001 SOUTH 6TH STREET  
MILWAUKEE, WISCONSIN

**City of Milwaukee**  
Department of Public Works  
Infrastructure Services Division  
Facilities Development & Management Services

## SITE PLAN



## BUILDING CODE INFORMATION

- YEAR BUILT \_\_\_\_\_ 1939
- OCCUPANCY \_\_\_\_\_ IBC BUSINESS GROUP B
- CONSTRUCTION CLASS \_TYPE 1A
- EXIT DISTANCE: \_\_\_\_\_ 150'-0" OR LESS  
BUILDING IS SPRINKLERED
- FIRE RATINGS  
FIRE RESISTANT CONSTRUCTION TYPE 1 - FIRE RESISTANT A
 

EXTERIOR WALLS	_____	EXISTING
INTERIOR COLUMNS	_____	NC-4 EXTG.
INTERIOR BEARING WALLS	_____	NC-3 EXTG.
FLOOR FRAMING	_____	NC-3 EXTG.
ROOF FRAMING	_____	NC-2 EXTG.
ROOF COVERING	_____	CLASS A, EXTG.
- BUILDING HEIGHT
 

FIRST FLOOR TO FOURTH FLOOR (STEEL PAN)	_____	52'-1"
FIRST FLOOR TO UNDERSIDE OF WATER TOWER	_____	99'-9 1/2"
FIFTH LEVEL TO TOP OF WATER TOWER	_____	106'-4"
FIRST FLOOR TO TOP OF WATER TOWER	_____	159'-5 1/2"
AVERAGE EXIT DISCHARGE GRADE	_____	EXISTING
- BUILDING AREA: GROSS
 

BASEMENT	_____	1,576 SQUARE FEET
FIRST FLOOR	_____	14,199 SQUARE FEET
SECOND FLOOR	_____	5,286 SQUARE FEET
THIRD FLOOR	_____	4,393 SQUARE FEET
FOURTH FLOOR	_____	3,549 SQUARE FEET
FIFTH LEVEL	_____	3,549 SQUARE FEET
<b>TOTAL</b>	_____	<b>32,552 SQUARE FEET</b>
- FLOOR LOAD CAPACITY 100\* PER S.F.

## ARCHITECT

CITY OF MILWAUKEE  
DEPARTMENT OF PUBLIC WORKS  
INFRASTRUCTURE SERVICES DIVISION  
841 NORTH BROADWAY, ROOM 602  
MILWAUKEE, WISCONSIN 53202-3613

## CONSULTING STRUCTURAL ENGINEERS

BLOOM COMPANIES, LLC  
10501 W. RESEARCH DRIVE  
MILWAUKEE, WI 53226  
PHONE: 414 771-3390  
FAX: 414 771-4490



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<b>ARCHITECTURAL</b> (CITY OF MILWAUKEE)	
C-1	TITLE SHEET, SITE LOCATION PLAN, CONTENTS
A100	EXISTING ANTENNAS AND PARAPET/TANK PLAN
A200	NEW ANTENNAS AND PARAPET/TANK REPAIR PLAN

## STRUCTURAL

 (BLOOM COMPANIES, LLC)

S100	WATER TANK ROOF PLAN--ANTENNA SUPPORTS AND DETAILS
S200	WATER TANK PARAPET WALL AND ROOF RESTORATION DETAILS
S201	WATER TANK PARAPET WALL DETAILS AND ROOF RESTORATION DETAILS
S300	CONCRETE LEDGE RESTORATION
S400	CONCRETE WALL RESTORATION

## ESTIMATED QUANTITIES FOR UNIT PRICES TO BE INCLUDED IN BID

UNIT PRICE A	EPOXY INJECTION GROUTING	65 LINEAL FEET
UNIT PRICE B	REPAIR OF EIGHT 6" TO 1' SECTIONS OF STEEL ON TANK	70 SQUARE FEET
UNIT PRICE C	CONCRETE LEDGE REPAIR-REMOVAL OF UNSOUND CONCRETE	18 CUBIC FEET
UNIT PRICE D	CONCRETE LEDGE REPAIR-CONCRETE AND STEEL REINFORCEMENT	30 CUBIC FEET
UNIT PRICE E	REMOVE FIVE ANGLES ON WATERTANK	UNIT COST
UNIT PRICE F	REMOVE EXISTING CABLE SLEEVES AND REPAIR STEEL IN PARAPET WHERE SLEEVES ARE REMOVED	30 S.F.

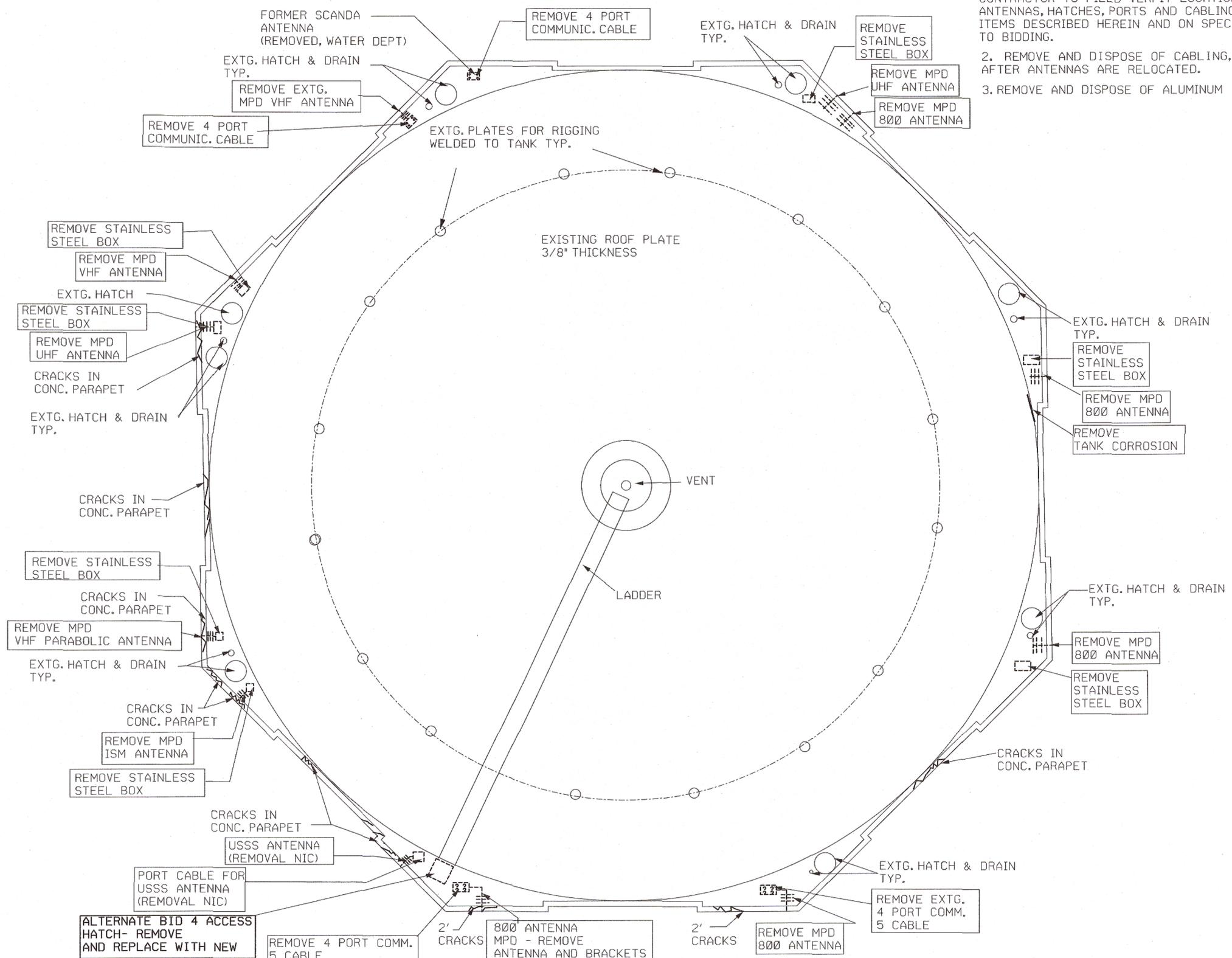
APPROVED: *[Signature]*  
 DIRECTOR  
 DATE: 5/12/12

ROBERT A. ANDERSON WATER TOWER AND MUNICIPAL BUILDING  
 4001 SOUTH 6TH STREET  
 MILWAUKEE, WI 53221  
 ANTENNA WORK, CONCRETE PARAPET AND LEDGES REPAIR  
 TITLE SHEET, SITE LOCATION PLAN, CONTENTS

DESIGNED BY BK	
DRAWN BY BK	
CHECKED BY	
DATE 4-2012	SCALE AS SHOWN
JOB NUMBER BU11091370	
SHEET NUMBER C-1	
OF 8	

NOTES

1. DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR TO FIELD VERIFY LOCATIONS OF ALL CRACKS, ANTENNAS, HATCHES, PORTS AND CABLING AND ALL OTHER ITEMS DESCRIBED HEREIN AND ON SPECIFICATIONS PRIOR TO BIDDING.
2. REMOVE AND DISPOSE OF CABLING, ANCHORS, CLIPS, ETC. AFTER ANTENNAS ARE RELOCATED.
3. REMOVE AND DISPOSE OF ALUMINUM PARAPET CAP.



EXTG. ANTENNAS AND PARAPET/TANK PLAN

SCALE: 1/8" = 1'-0"



ROBERT A. ANDERSON WATER TOWER AND MUNICIPAL BUILDING  
4001 SOUTH 6TH STREET  
MILWAUKEE, WI 53221  
ANTENNA WORK, CONCRETE PARAPET AND LEDGES REPAIR  
EXTG. ANTENNAS AND PARAPET/TANK PLAN

REVISIONS

DESIGNED BY BK

DRAWN BY BK

CHECKED BY

DATE 4/2012 SCALE AS SHOWN

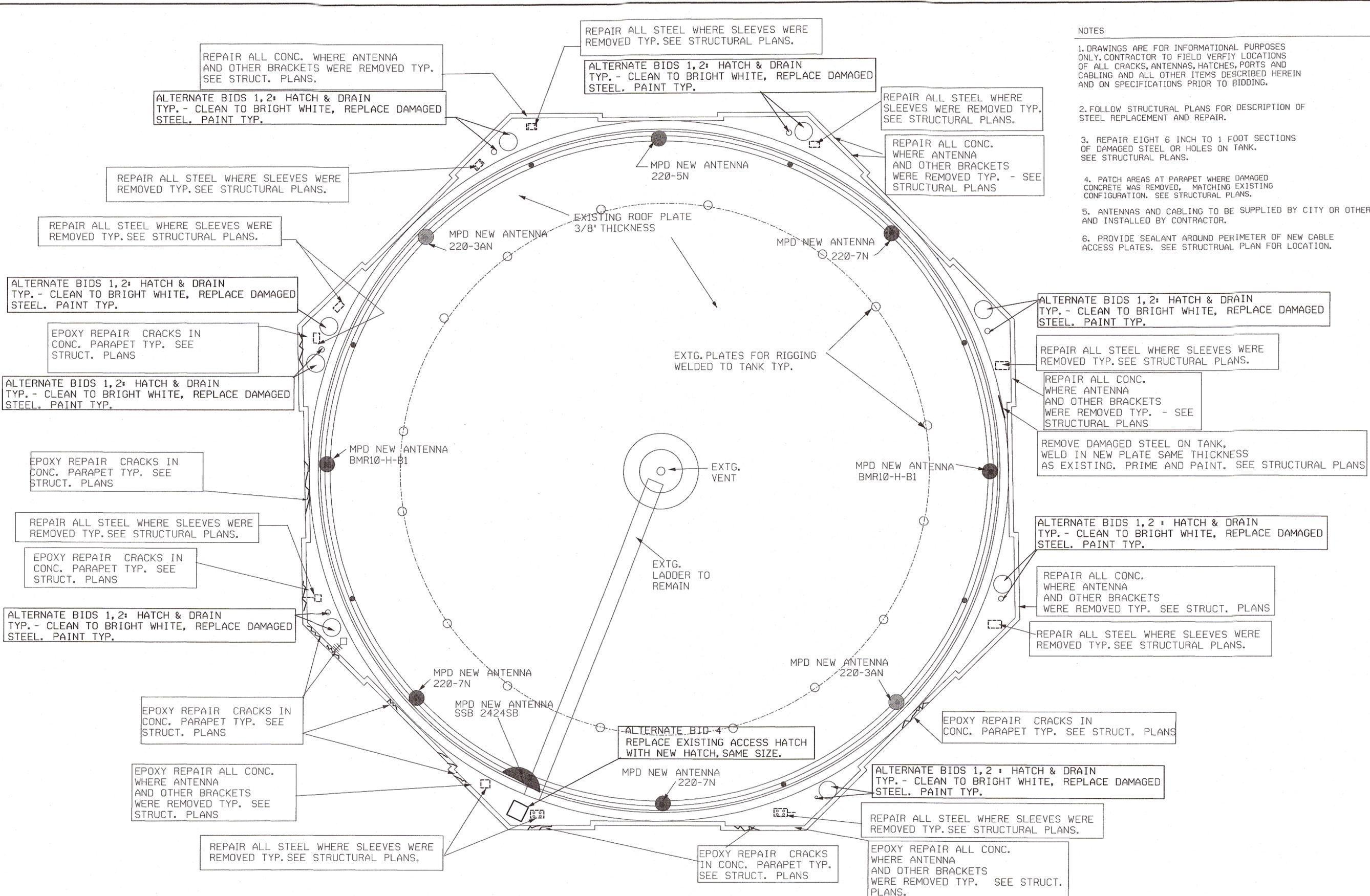
JOB NUMBER BU11091370

SHEET NUMBER A100

OF 8

NOTES

1. DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR TO FIELD VERIFY LOCATIONS OF ALL CRACKS, ANTENNAS, HATCHES, PORTS AND CABLING AND ALL OTHER ITEMS DESCRIBED HEREIN AND ON SPECIFICATIONS PRIOR TO BIDDING.
2. FOLLOW STRUCTURAL PLANS FOR DESCRIPTION OF STEEL REPLACEMENT AND REPAIR.
3. REPAIR EIGHT 6 INCH TO 1 FOOT SECTIONS OF DAMAGED STEEL OR HOLES ON TANK. SEE STRUCTURAL PLANS.
4. PATCH AREAS AT PARAPET WHERE DAMAGED CONCRETE WAS REMOVED, MATCHING EXISTING CONFIGURATION. SEE STRUCTURAL PLANS.
5. ANTENNAS AND CABLING TO BE SUPPLIED BY CITY OR OTHERS, AND INSTALLED BY CONTRACTOR.
6. PROVIDE SEALANT AROUND PERIMETER OF NEW CABLE ACCESS PLATES. SEE STRUCTURAL PLAN FOR LOCATION.



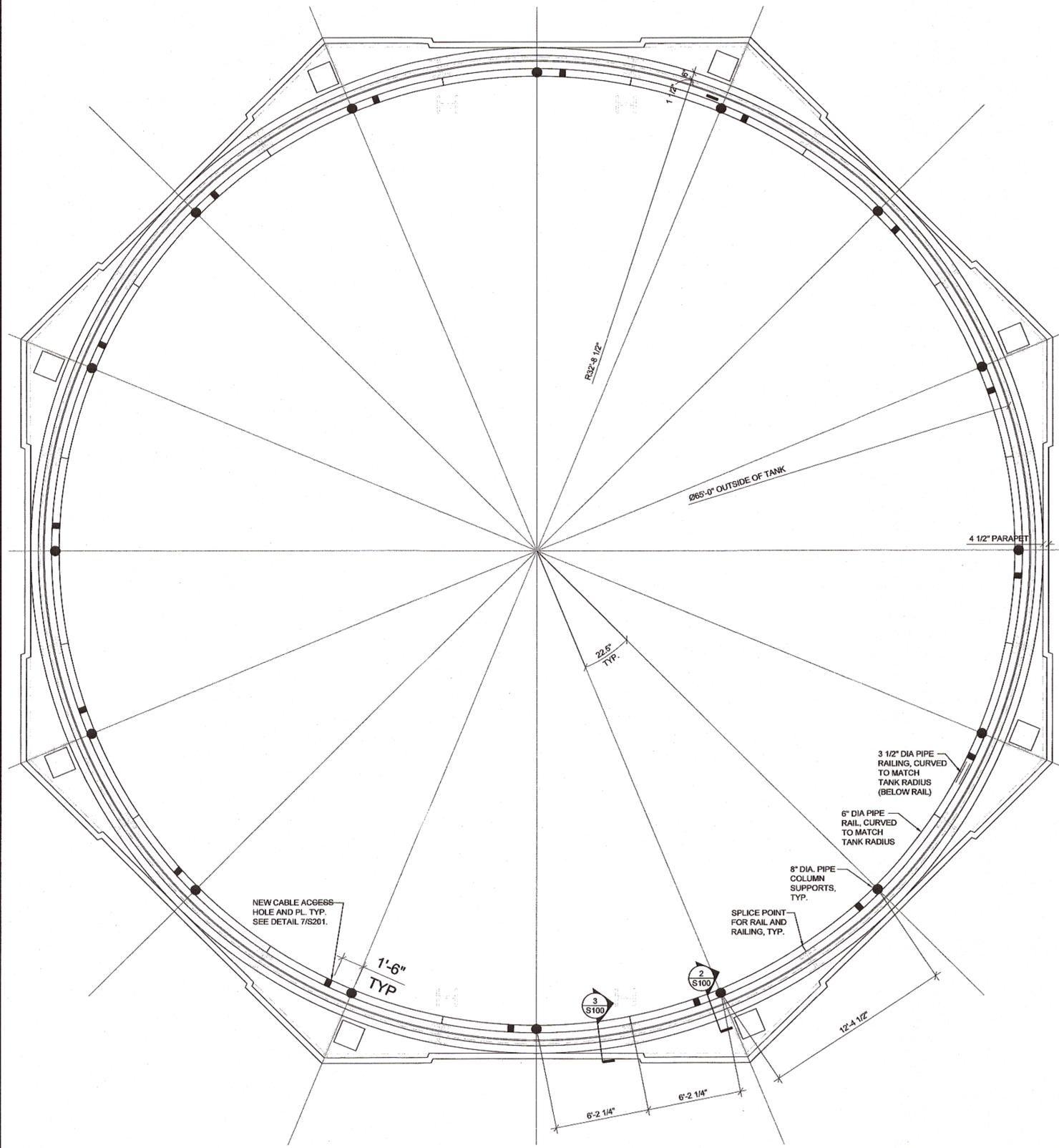
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NEW ANTENNAS AND PARAPET/TANK REPAIR PLAN

SCALE: 1/8" = 1'-0"

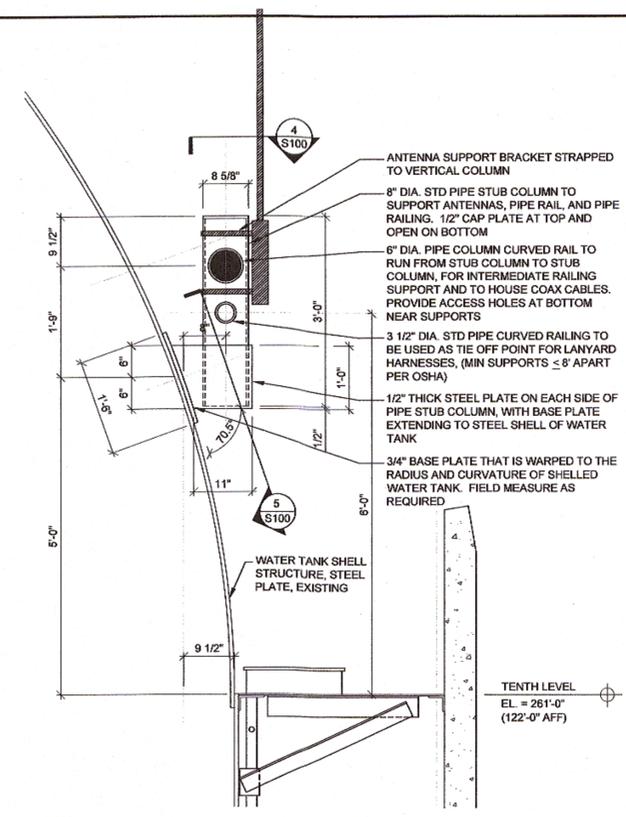


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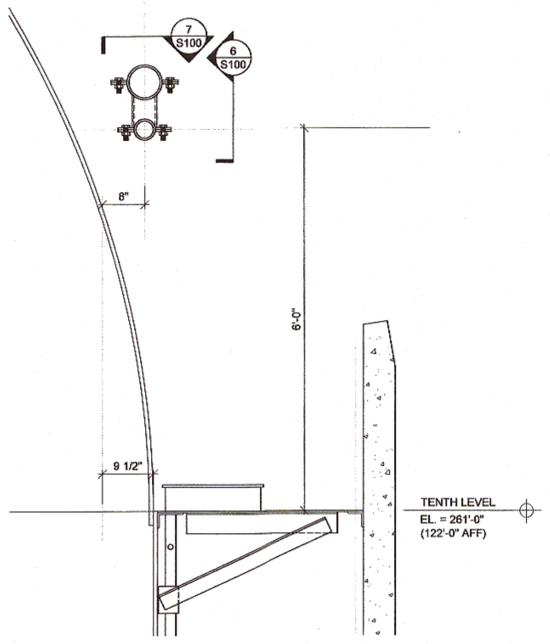


**1 WATER TANK ROOF PLAN - ANTENNA SUPPORTS**  
 S100 REF. SCALE: 1/4" = 1'-0"

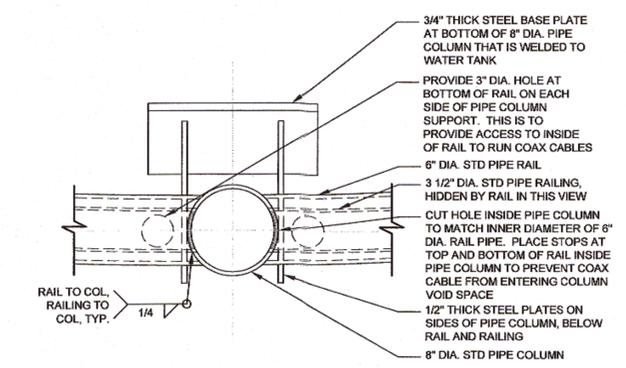
- NOTES:
1. REMOVE ALL EXISTING ANTENNA MOUNTS ATTACHED TO PARAPET WALLS.
  2. ALL STEEL COMPONENTS SHALL MEET FOLLOWING CRITERIA UNLESS NOTED OTHERWISE:  
 ROUND HOLLOW STRUCTURAL SECTION: ASTM A500 GRADE B  
 PLATES, ANGLES, & ALL OTHERS: ASTM A36  
 WELDS: AWS D1.1
  3. ALL NEW STRUCTURAL STEEL COMPONENTS SHOWN ON THIS PLAN SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123. BOLTS, NUTS, & WASHERS SHALL BE HOT DIPPED GALVANIZED PER ASTM F2329. TOUCH UP ALL WELDS WITH ZINC RICH PAINT.



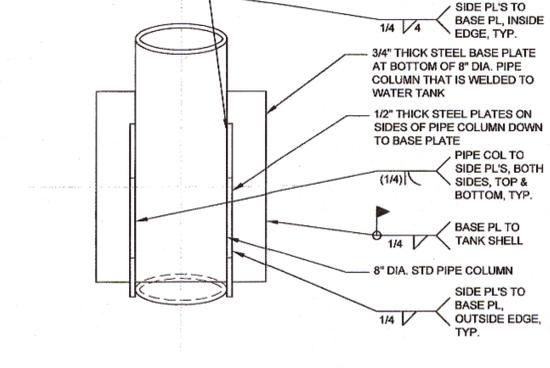
**2 SECTION- PIPE COLUMN SUPPORT**  
 S100 REF. SCALE: 3/4" = 1'-0"



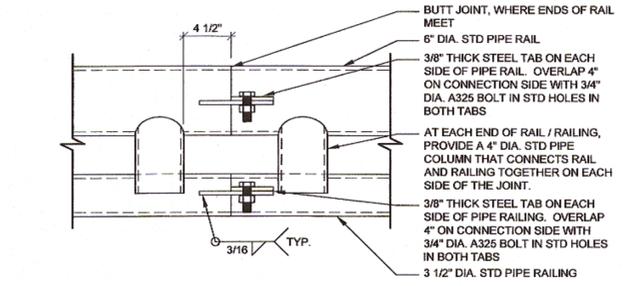
**3 SECTION- RAILING SUPPORT**  
 S100 REF. SCALE: 3/4" = 1'-0"



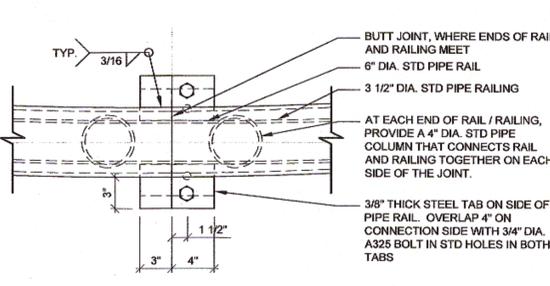
**4 TOP VIEW - PIPE SUPPORT**  
 S100 REF. SCALE: 1 1/2" = 1'-0"



**5 SIDE VIEW - PIPE TO TANK**  
 S100 REF. SCALE: 1 1/2" = 1'-0"



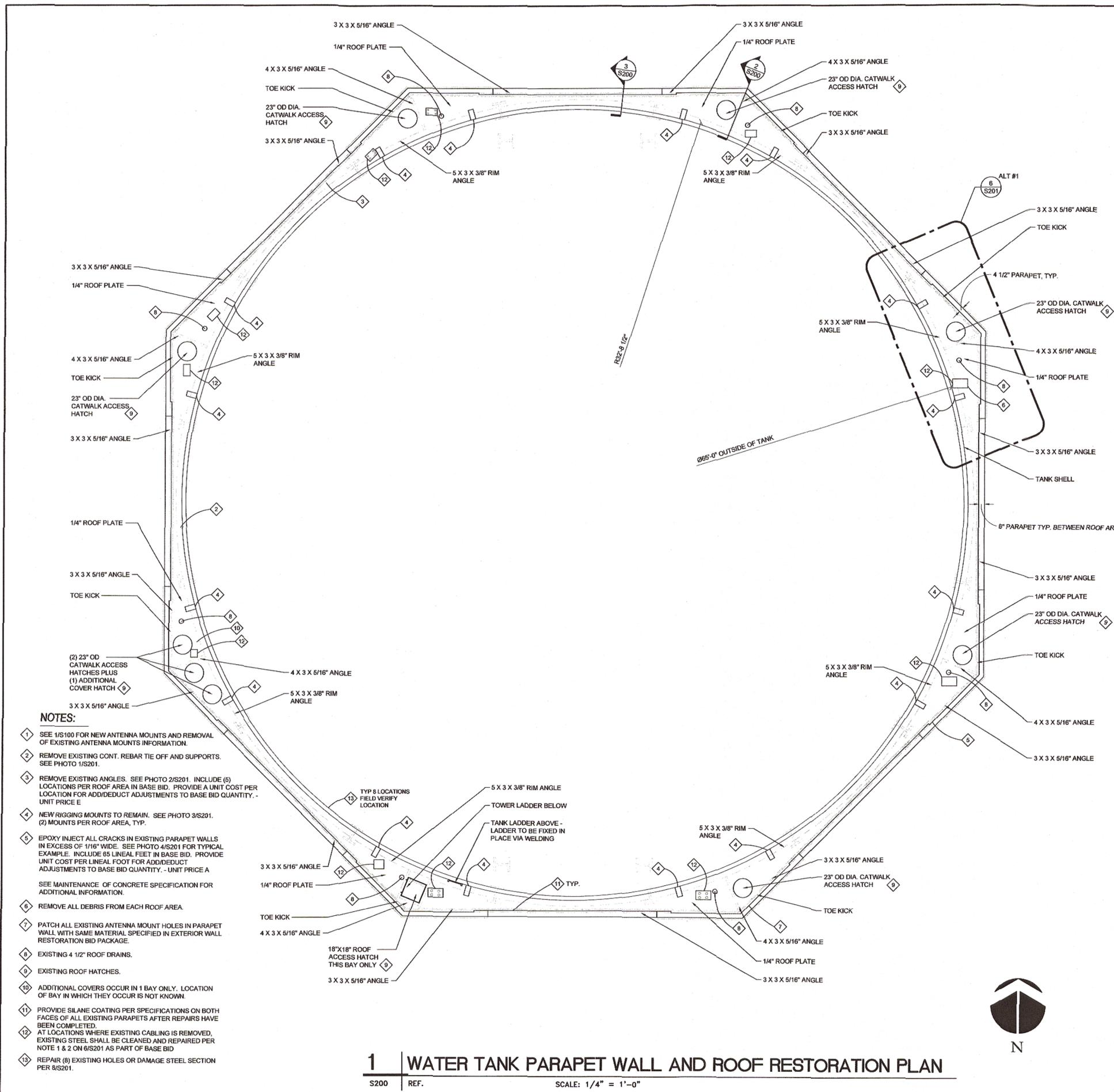
**6 SIDE VIEW - RAIL CONNECTION**  
 S100 REF. SCALE: 1 1/2" = 1'-0"



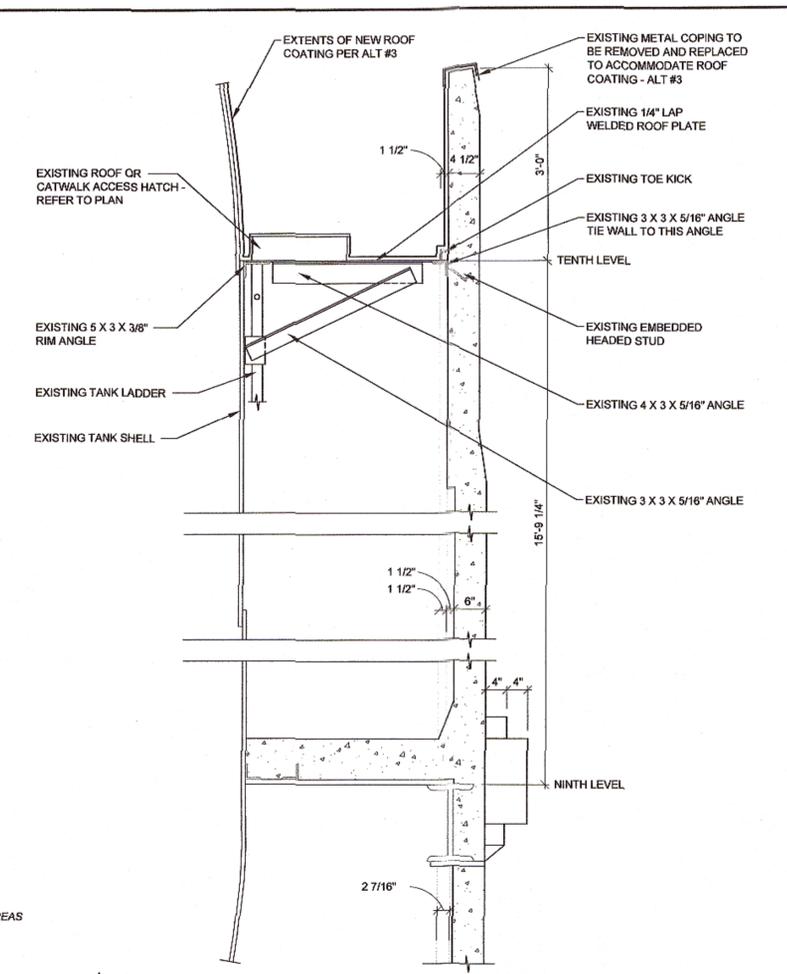
**7 TOP VIEW - RAIL CONNECTION**  
 S100 REF. SCALE: 1 1/2" = 1'-0"

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OF 8	

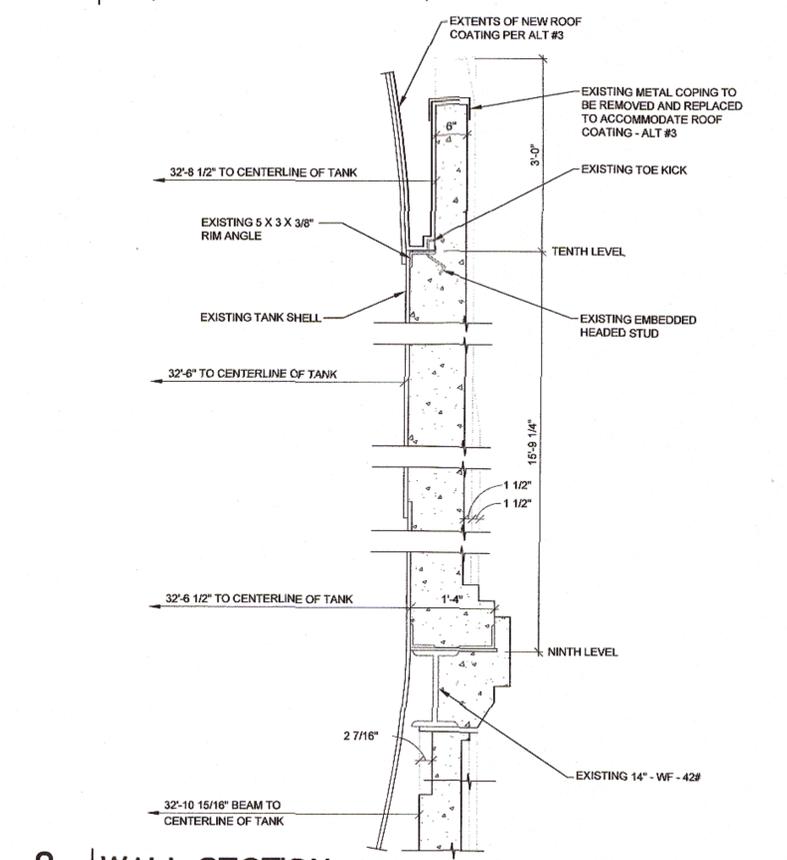
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**1 WATER TANK PARAPET WALL AND ROOF RESTORATION PLAN**  
 S200 REF. SCALE: 1/4" = 1'-0"



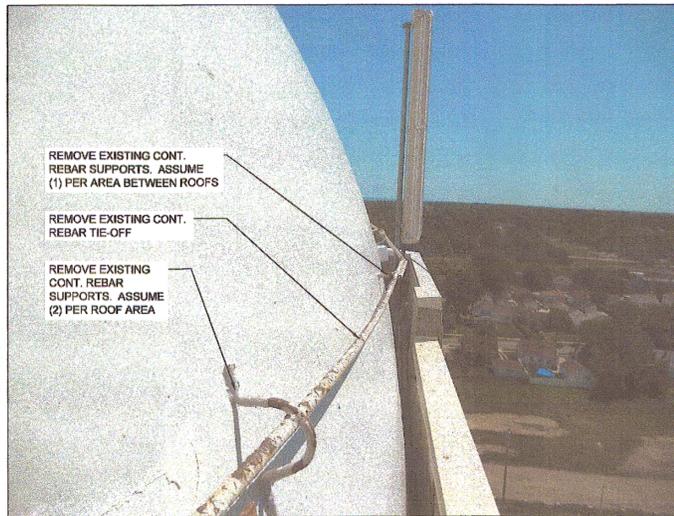
**2 WALL SECTION**  
 S200 REF. 1/S200 SCALE: 3/4" = 1'-0"



**3 WALL SECTION**  
 S200 REF. 1/S200 SCALE: 3/4" = 1'-0"

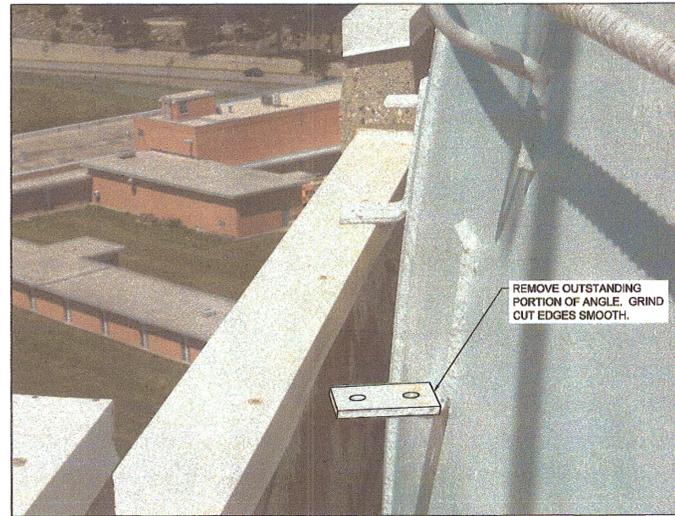
- NOTES:**
- 1 SEE 1/S100 FOR NEW ANTENNA MOUNTS AND REMOVAL OF EXISTING ANTENNA MOUNTS INFORMATION.
  - 2 REMOVE EXISTING CONT. REBAR TIE OFF AND SUPPORTS. SEE PHOTO 1/S201.
  - 3 REMOVE EXISTING ANGLES. SEE PHOTO 2/S201. INCLUDE (6) LOCATIONS PER ROOF AREA IN BASE BID. PROVIDE A UNIT COST PER LOCATION FOR ADD/DEDUCT ADJUSTMENTS TO BASE BID QUANTITY. - UNIT PRICE
  - 4 NEW RIGGING MOUNTS TO REMAIN. SEE PHOTO 3/S201. (2) MOUNTS PER ROOF AREA, TYP.
  - 5 EPOXY INJECT ALL CRACKS IN EXISTING PARAPET WALLS IN EXCESS OF 1/16" WIDE. SEE PHOTO 4/S201 FOR TYPICAL EXAMPLE. INCLUDE 65 LINEAL FEET IN BASE BID. PROVIDE UNIT COST PER LINEAL FOOT FOR ADD/DEDUCT ADJUSTMENTS TO BASE BID QUANTITY. - UNIT PRICE A
  - SEE MAINTENANCE OF CONCRETE SPECIFICATION FOR ADDITIONAL INFORMATION.
  - 6 REMOVE ALL DEBRIS FROM EACH ROOF AREA.
  - 7 PATCH ALL EXISTING ANTENNA MOUNT HOLES IN PARAPET WALL WITH SAME MATERIAL SPECIFIED IN EXTERIOR WALL RESTORATION BID PACKAGE.
  - 8 EXISTING 4 1/2" ROOF DRAINS.
  - 9 EXISTING ROOF HATCHES.
  - 10 ADDITIONAL COVERS OCCUR IN 1 BAY ONLY. LOCATION OF BAY IN WHICH THEY OCCUR IS NOT KNOWN.
  - 11 PROVIDE SILANE COATING PER SPECIFICATIONS ON BOTH FACES OF ALL EXISTING PARAPETS AFTER REPAIRS HAVE BEEN COMPLETED.
  - 12 AT LOCATIONS WHERE EXISTING CABLING IS REMOVED, EXISTING STEEL SHALL BE CLEANED AND REPAIRED PER NOTE 1 & 2 ON 6/S201 AS PART OF BASE BID
  - 13 REPAIR (8) EXISTING HOLES OR DAMAGE STEEL SECTION PER 8/S201.





### 1 EXISTING REBAR TIE-OFF

S201 REF. S200 SCALE: NTS



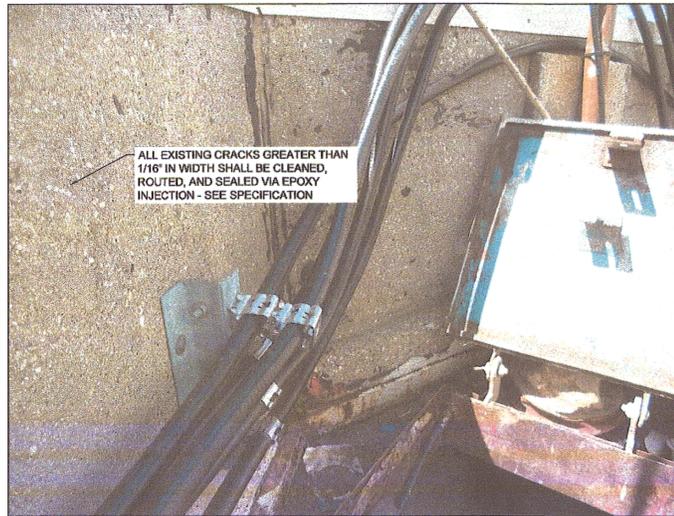
### 2 EXISTING ANGLES TO BE REMOVED

S201 REF. S200 SCALE: NTS



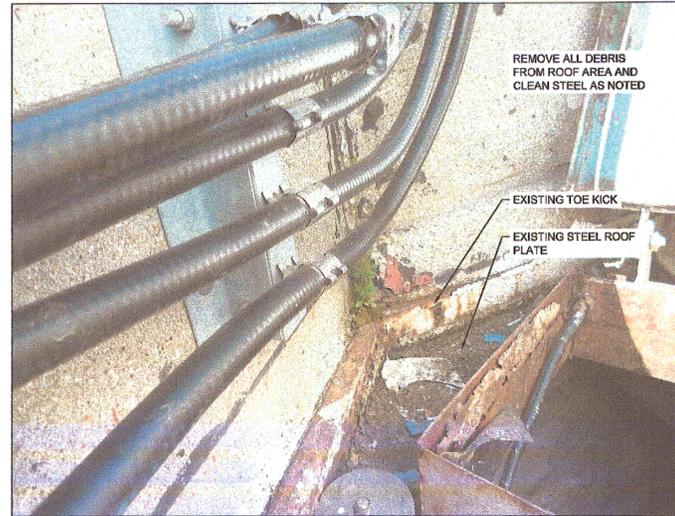
### 3 NEW RIGGING MOUNT

S201 REF. S200 SCALE: NTS



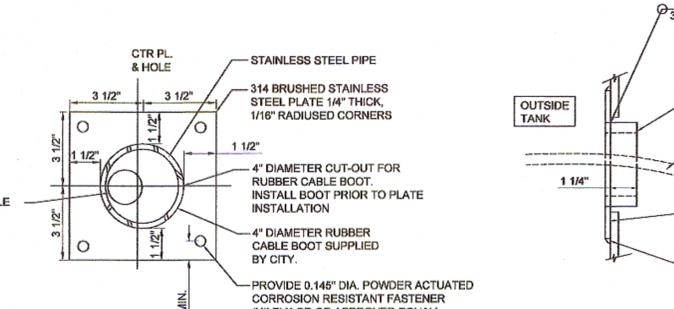
### 4

S201 REF. S200 SCALE: NTS



### 5 EXISTING STEEL PLATE AND TOE KICK

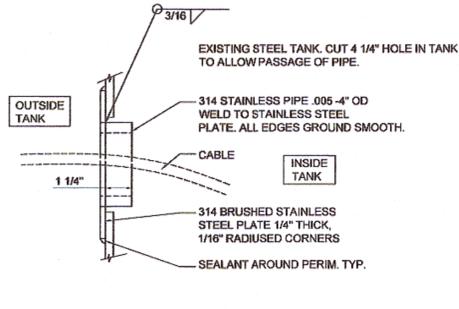
S201 REF. S200 SCALE: NTS



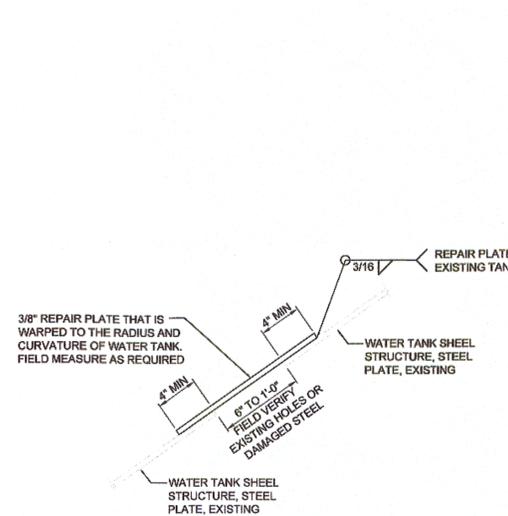
- NOTES:
- CUT 4" HOLE IN EXTG. 3/8" THICK WATERTANK BELOW 4" DIAM. PLATE CUT OUT FOR BOOT TO BE INSERTED.
  - FURNISH AND INSTALL ONE PLATE AT EACH NEW AND PROPOSED ANTENNA LOCATION. CENTER OF PL. TO BE 4'-3" ABOVE CATWALK. SEE 1/8100 FOR HORIZONTAL SPACING REQUIREMENTS FROM ANTENNA MOUNT.
  - SEALANT TO BE APPLIED AROUND PERIMETER OF PLATE.

### 7 CABLE ACCESS PLATE

S201 REF. SCALE: 3" = 1'-0"

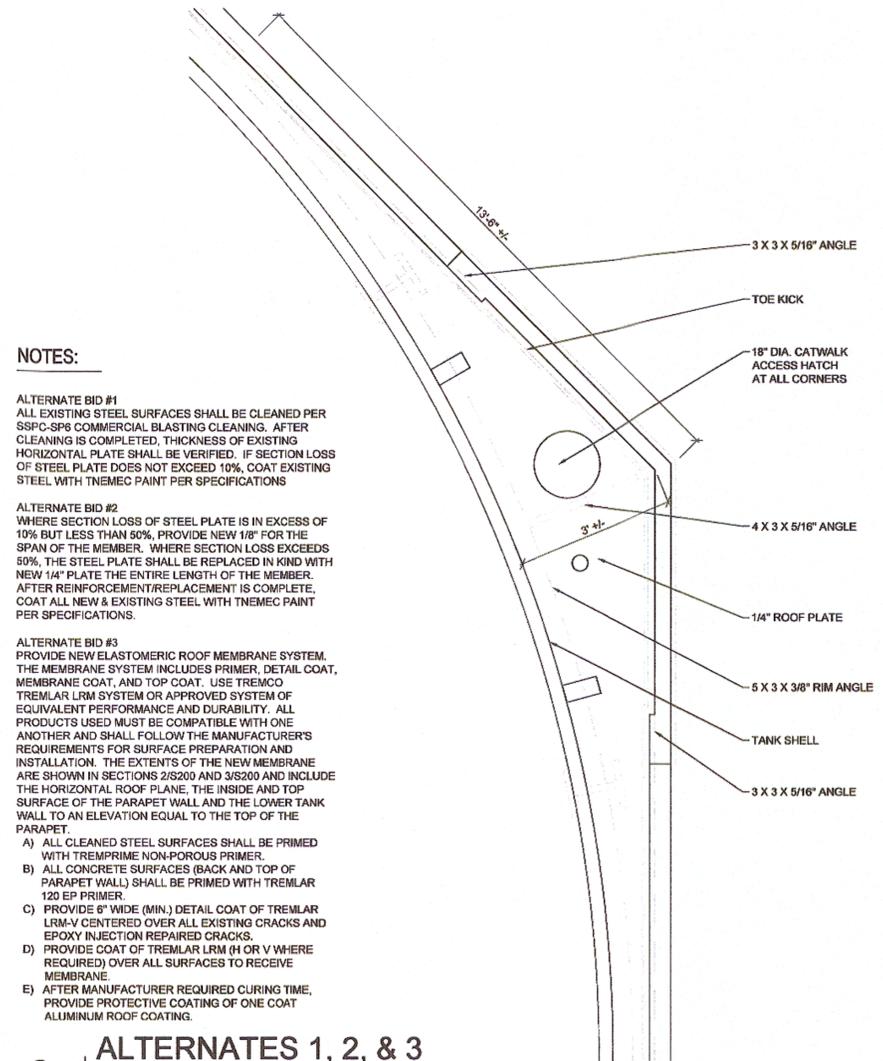


NOTE:  
CUT HOLE INSIDE OF TANK TO ALLOW CABLE TO BE BROUGHT INTO BUILDING.



### 8 TANK REPAIR DETAIL

S201 REF. SCALE: 1 1/2" = 1'-0"



- NOTES:
- ALTERNATE BID #1  
ALL EXISTING STEEL SURFACES SHALL BE CLEANED PER SSPC-SP8 COMMERCIAL BLASTING CLEANING. AFTER CLEANING IS COMPLETED, THICKNESS OF EXISTING HORIZONTAL PLATE SHALL BE VERIFIED. IF SECTION LOSS OF STEEL PLATE DOES NOT EXCEED 10%, COAT EXISTING STEEL WITH TNEPEC PAINT PER SPECIFICATIONS.
  - ALTERNATE BID #2  
WHERE SECTION LOSS OF STEEL PLATE IS IN EXCESS OF 10% BUT LESS THAN 50%, PROVIDE NEW 1/8" FOR THE SPAN OF THE MEMBER. WHERE SECTION LOSS EXCEEDS 50%, THE STEEL PLATE SHALL BE REPLACED IN KIND WITH NEW 1/4" PLATE THE ENTIRE LENGTH OF THE MEMBER. AFTER REINFORCEMENT REPLACEMENT IS COMPLETE, COAT ALL NEW & EXISTING STEEL WITH TNEPEC PAINT PER SPECIFICATIONS.
  - ALTERNATE BID #3  
PROVIDE NEW ELASTOMERIC ROOF MEMBRANE SYSTEM. THE MEMBRANE SYSTEM INCLUDES PRIMER, DETAIL COAT, MEMBRANE COAT, AND TOP COAT. USE TREMCO TREMLAR LRM SYSTEM OR APPROVED SYSTEM OF EQUIVALENT PERFORMANCE AND DURABILITY. ALL PRODUCTS USED MUST BE COMPATIBLE WITH ONE ANOTHER AND SHALL FOLLOW THE MANUFACTURER'S REQUIREMENTS FOR SURFACE PREPARATION AND INSTALLATION. THE EXTENTS OF THE NEW MEMBRANE ARE SHOWN IN SECTIONS 2/8200 AND 3/8200 AND INCLUDE THE HORIZONTAL ROOF PLANE, THE INSIDE AND TOP SURFACE OF THE PARAPET WALL AND THE LOWER TANK WALL TO AN ELEVATION EQUAL TO THE TOP OF THE PARAPET.  
 A) ALL CLEANED STEEL SURFACES SHALL BE PRIMED WITH TREMPRIME NON-POROUS PRIMER.  
 B) ALL CONCRETE SURFACES (BACK AND TOP OF PARAPET WALL) SHALL BE PRIMED WITH TREMLAR 120 EP PRIMER.  
 C) PROVIDE 6" WIDE (MIN.) DETAIL COAT OF TREMLAR LRM-V CENTERED OVER ALL EXISTING CRACKS AND EPOXY INJECTION REPAIRED CRACKS.  
 D) PROVIDE COAT OF TREMLAR LRM (H OR V WHERE REQUIRED) OVER ALL SURFACES TO RECEIVE MEMBRANE.  
 E) AFTER MANUFACTURER REQUIRED CURING TIME, PROVIDE PROTECTIVE COATING OF ONE COAT ALUMINUM ROOF COATING.

### 6 ALTERNATES 1, 2, & 3 ENLARGED PLAN

S201 REF. 1/S200 SCALE: 1/2" = 1'-0"

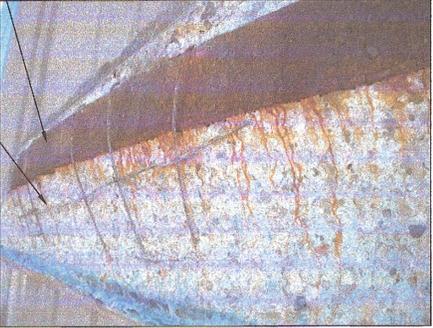
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**EXISTING STRUCTURAL STEEL**  
 1. ALL EXISTING EXPOSED STRUCTURAL STEEL SURFACES SHALL BE CLEANED PER SSPC-SP6 COMMERCIAL BLAST CLEANING.  
 2. AFTER CLEANING, PAINT WITH THE FOLLOWING OR APPROVED EQUALS.  
 - ONE COAT PRIMER - 90-912 PITT-TECH PLUS BY PITTSBURGH PAINTS  
 - TWO COAT TOP COAT 90-1110/1210/1310 PITT-TECH PLUS BY PITTSBURGH PAINTS  
 SHALL BE APPLIED AT A DRY FILM THICKNESS OF NOT LESS THAN 4.0 MILS PER COAT

**CONCRETE REMOVAL**  
 1. REMOVE ALL UNSOUND CONCRETE. REMOVE MINIMUM OF 3/4" BEYOND ALL EXPOSED REINFORCEMENT

**REBUILD**  
 1. REBUILD LEDGE PER DETAIL 10/S300  
 2. PROVIDE WATER REPELLANT ON ALL NEW AND EXISTING LEDGE SURFACES.

**EXISTING STEEL REINFORCEMENT**  
 1. ALL EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED PER SPECIFICATION.  
 2. AFTER CLEANING IS COMPLETE MEASURE AREA OF REINFORCEMENT, WHERE SECTION IS LOSS IS IN EXCESS OF 10%, PROVIDE REBAR OF SAME DIAMETER AS ORIGINAL ATTACHED TO CONCRETE WITH ADHESIVE ANCHOR (HILTI HIT-HY150 MAX OR APPROVED EQUAL) WITH 3 5/8" MINIMUM EMBEDMENT INTO CONCRETE. COAT ALL EXPOSED STEEL WITH ZINC RICH PRIMER PER SPECIFICATIONS



**REPAIR**  
 1. REPAIR ANY SPALLS IN LEDGE PER PARTIAL DEPTH REPAIR DETAIL 9/S300  
 2. PROVIDE WATER REPELLANT ON ALL EXISTING LEDGE SURFACES.



**CONCRETE REMOVAL**  
 1. REMOVE ALL UNSOUND CONCRETE. REMOVE MINIMUM OF 3/4" BEYOND ALL EXPOSED REINFORCEMENT  
 2. FULL LEDGE REMOVAL IS ANTICIPATED

**REBUILD**  
 1. REBUILD LEDGE PER DETAIL 10/S300  
 2. PROVIDE WATER REPELLANT ON ALL NEW AND EXISTING LEDGE SURFACES.

**EXISTING STEEL REINFORCEMENT**  
 1. SEE 1/S300 FOR REQUIREMENTS

**EXISTING STRUCTURAL STEEL**  
 1. SEE 1/S300 FOR REQUIREMENTS



**CONCRETE REMOVAL**  
 1. REMOVE ALL UNSOUND CONCRETE. REMOVE MINIMUM OF 3/4" BEYOND ALL EXPOSED REINFORCEMENT  
 2. FULL LEDGE REMOVAL IS ANTICIPATED

**REBUILD**  
 1. REBUILD LEDGE PER DETAIL 10/S300  
 2. PROVIDE WATER REPELLANT ON ALL NEW AND EXISTING LEDGE SURFACES.

**EXISTING STEEL REINFORCEMENT**  
 1. SEE 1/S300 FOR REQUIREMENTS

**EXISTING STRUCTURAL STEEL**  
 1. SEE 1/S300 FOR REQUIREMENTS



**1 | W LEDGE**

S300 REF. SCALE: NTS

**2 | SW LEDGE**

S300 REF. SCALE: NTS

**3 | S LEDGE**

S300 REF. SCALE: NTS

**4 | SE LEDGE**

S300 REF. SCALE: NTS

**REPAIR**  
 1. REPAIR ANY SPALLS IN LEDGE PER PARTIAL DEPTH REPAIR DETAIL 9/S300  
 2. PROVIDE WATER REPELLANT ON ALL EXISTING LEDGE SURFACES.



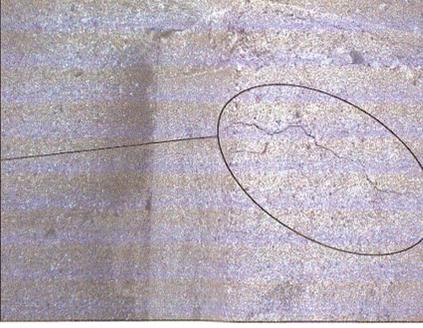
**REPAIR**  
 1. REPAIR ANY SPALLS IN LEDGE PER PARTIAL DEPTH REPAIR DETAIL 9/S300  
 2. NOTE CRACKED AREA AT LEFT END - SEE 7/S300 FOR ADDITIONAL INFORMATION.  
 3. NOTE CRACK ON UNDERSIDE - SEE 8/S300  
 4. PROVIDE WATER REPELLANT ON ALL EXISTING LEDGE SURFACES.

EXISTING SEALANT TO REMAIN



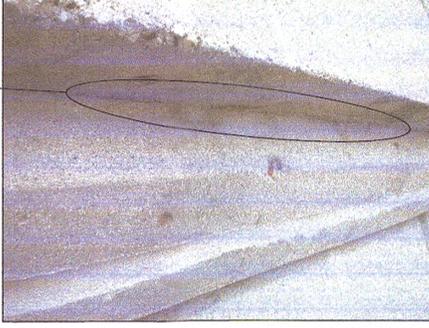
**REPAIR**  
 1. PARTIAL DEPTH REPAIR PER 9/S300 OR FULL DEPTH REPLACEMENT PER 10/S300 MAY BE REQUIRED.  
 2. ALL EXISTING CRACKS GREATER THAN 1/16" IN WIDTH SHALL BE CLEANED, ROUTED AND SEALED VIA EPOXY INJECTION. SEE SPECIFICATIONS.

**CONCRETE REMOVAL**  
 1. REMOVE ALL UNSOUND CONCRETE PRIOR TO ANY CRACK REPAIR ON THIS LEDGE



**REPAIR**  
 1. PARTIAL DEPTH REPAIR PER 9/S300 OR FULL DEPTH REPLACEMENT PER 10/S300 MAY BE REQUIRED

**CONCRETE REMOVAL**  
 1. REMOVE ALL UNSOUND CONCRETE PRIOR TO ANY CRACK REPAIR ON THIS LEDGE



**5 | E LEDGE**

S300 REF. SCALE: NTS

**6 | NE LEDGE**

S300 REF. SCALE: NTS

**7 | LEFT END OF NE LEDGE**

S300 REF. SCALE: NTS

**8 | UNDERSIDE ON NE LEDGE**

S300 REF. SCALE: NTS

REMOVE BEYOND DELAMINATION TO SOLID CONCRETE. IF REMOVALS INCLUDE 2 OR MORE ADJACENT BARS AND BAR SPACING IS LESS THAN 6" APART. REMOVE ALL HORIZONTAL CONCRETE TO REQUIRED DEPTH BETWEEN BARS.

SAW CUT PERIMETER FOR TROWEL APPLIED REPAIR MORTAR

TROWEL APPLIED REPAIR MORTAR. SEE NOTES FOR ADDITIONAL INFORMATION.

1/2" MINIMUM DEPTH OF REMOVAL

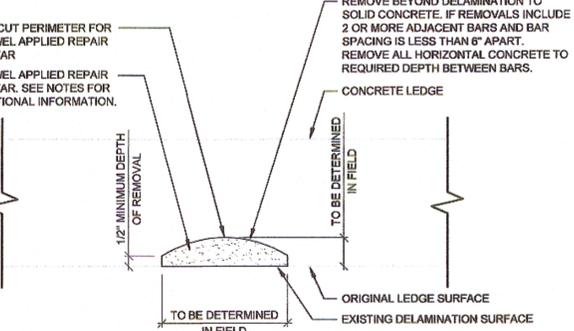
TO BE DETERMINED IN FIELD

CONCRETE LEDGE

ORIGINAL LEDGE SURFACE

EXISTING DELAMINATION SURFACE

**NOTES:**  
 1. REMOVE ALL AND REPLACE ALL SOUND AND UNSOUND CONCRETE WITHIN SECTION SHOWN HATCHED. REMOVE MINIMUM 3/4" BEYOND ALL REINFORCEMENT.  
 2. ALL EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED. AFTER CLEANING IS COMPLETE, MEASURE AREA OF REINFORCEMENT, WHERE SECTION LOSS IN REINFORCEMENT IS IN EXCESS OF 10% PROVIDE NEW REBAR OF SAME DIAMETER AS ORIGINAL. COAT ALL EXPOSED STEEL WITH ZINC RICH PRIMER PER SPECIFICATIONS.  
 3. SEE SPECIFICATIONS FOR TROWEL APPLIED REPAIR MORTAR. COMPLY WITH ALL MANUFACTURERS RECOMMENDATIONS FOR SURFACE. PREPARATION AND MIN & MAX LIFT THICKNESS OF SELECTED PRODUCT.  
 4. SEE 11/S300 AND 12/S300 FOR LEDGE FINISH DIMENSIONS.



**NOTES:**  
 1. EXTENTS OF REMOVAL REQUIRE AT ALL LEDGES EXCEPT FOR W LEDGE SHALL BE DETERMINED IN FIELD  
 2. REPLACE ALL CONCRETE WITHIN SECTION SHOWN HATCHED. SEE SPECIFICATIONS FOR PRODUCT INFORMATION. SEE 11/S300 AND 12/S300 FOR FINISHED DIMENSIONS  
 3. FORMS SHALL REMAIN IN PLACE UNTIL CONCRETE HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI

3/4" MINIMUM REMOVALS TYPICAL ALL LEDGES

EXISTING DELAMINATION SURFACE, NOTE 1

EXISTING 5/16" DIAMETER HORIZONTALS AT 4" TO 5" OC

EXISTING ANGLE, ESTIMATED SIZE L6X6X7/16"

EXISTING 3/4" +/- PLATE

EXISTING 14WF42

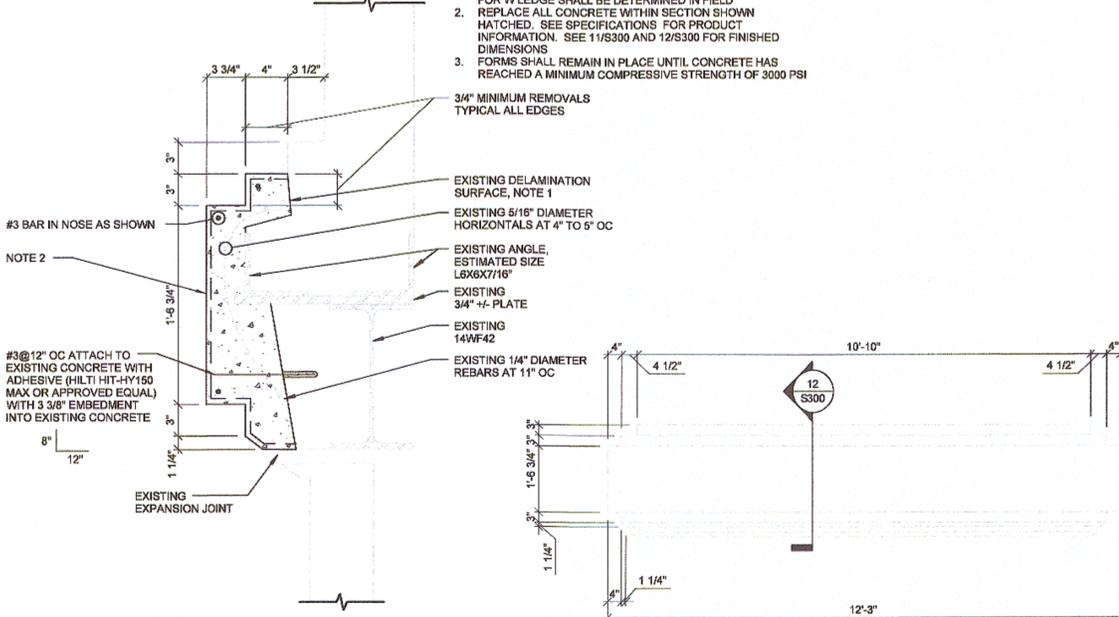
EXISTING 1/4" DIAMETER REBARS AT 11" OC

#3 BAR IN NOSE AS SHOWN

NOTE 2

#3 @ 12" OC ATTACH TO EXISTING CONCRETE WITH ADHESIVE (HILTI HIT-HY150 MAX OR APPROVED EQUAL) WITH 3 3/8" EMBEDMENT INTO EXISTING CONCRETE

EXISTING EXPANSION JOINT

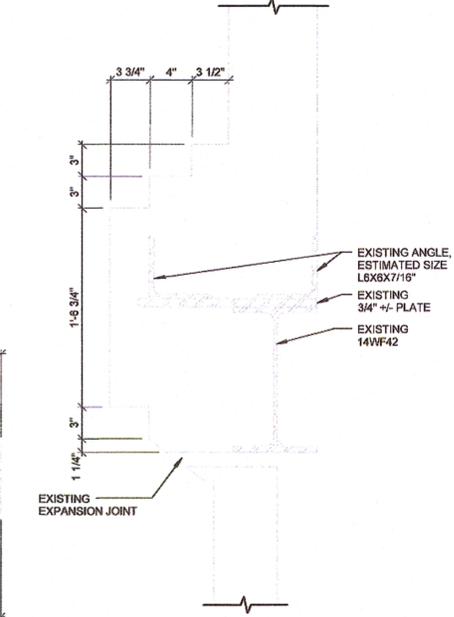
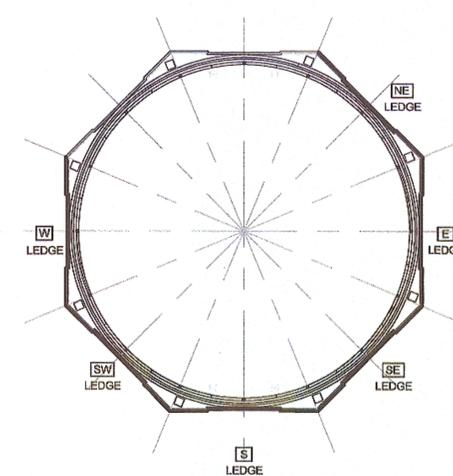


EXISTING ANGLE, ESTIMATED SIZE L6X6X7/16"

EXISTING 3/4" +/- PLATE

EXISTING 14WF42

EXISTING EXPANSION JOINT

**9 | PARTIAL DEPTH REPAIR**

S300 REF. SCALE: 3"=1'-0"

**10 | EXISTING LEDGE SECTION**

S300 REF. SCALE: 1 1/2"=1'-0"

**11 | EXISTING LEDGE ELEVATION**

S300 REF. SCALE: 1/2"=1'-0"

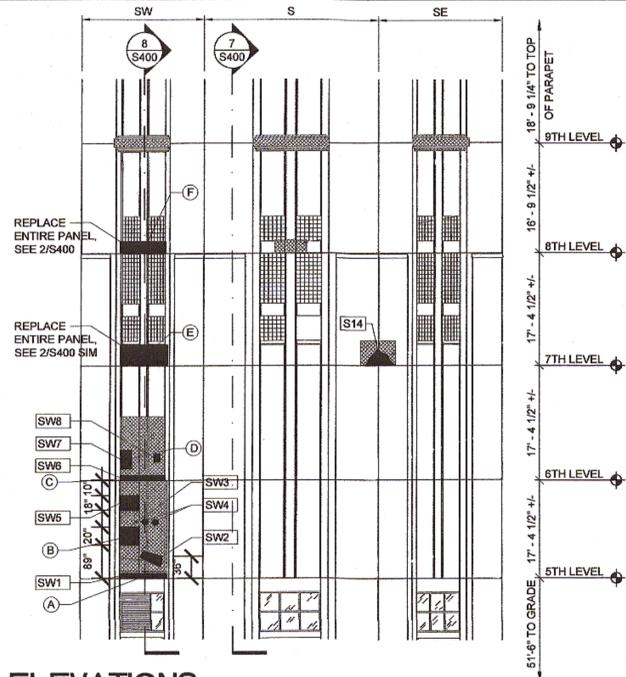
**12 | EXISTING LEDGE SECTION**

S300 REF. SCALE: 1 1/2"=1'-0"

**ELEVATION KEY PLAN**

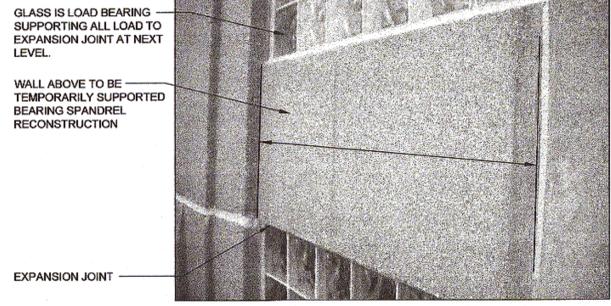
THE ELEVATIONS ARE REFERENCED AS SHOWN ABOVE (W,SW,S,SE,E,NE)

- NOTES:**
- BASE BID: AT 6 LOCATIONS NOTED ON ELEVATION BY LETTERS A-F, CONTRACTOR SHALL CORE DRILL 6" DIAMETER HOLE IN EXISTING WALL PANEL. AFTER REVIEW BY ENGINEER, CONTRACTOR SHALL PATCH HOLES TO MATCH EXISTING FINISH.
  - ALTERNATE BID 5: AREAS IDENTIFIED BELOW, INDICATE AREAS TO BE REMOVED AND REPLACED PER 5/8/S400. THE ESTIMATED AREAS OF REPLACEMENT ARE AS FOLLOWS:  
 SW1: 3.4 FT<sup>2</sup>  
 SW2: 5.0 FT<sup>2</sup>  
 SW3: 6.8 FT<sup>2</sup>  
 SW4: 1.0 FT<sup>2</sup>  
 SW5: 6.0 FT<sup>2</sup>  
 SW6: 5.0 FT<sup>2</sup>  
 SW7: 1.8 FT<sup>2</sup>  
 SW8: 1.0 FT<sup>2</sup>  
 7TH LEVEL PANEL: 50 FT<sup>2</sup>  
 8TH LEVEL PANEL: 30 FT<sup>2</sup>  
 S14: 2.0 FT<sup>2</sup>
- PROVIDE UNIT COST /FT<sup>2</sup> AS INDICATED IN SPECIFICATION



**1 SOUTH ELEVATIONS**

S400 REF. SCALE: NTS

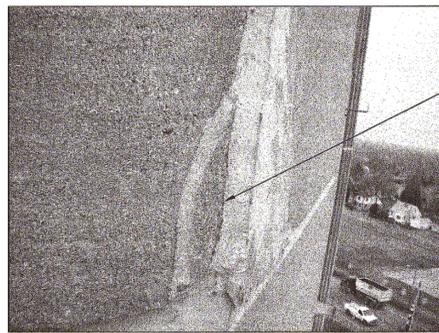


- GLASS IS LOAD BEARING SUPPORTING ALL LOAD TO EXPANSION JOINT AT NEXT LEVEL.
- WALL ABOVE TO BE TEMPORARILY SUPPORTED BEARING SPANDREL RECONSTRUCTION
- EXPANSION JOINT

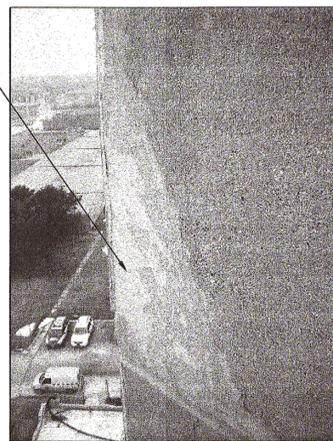
**2 8TH LEVEL SPANDREL**

S400 REF. SCALE: NTS

1.) RECONSTRUCT SPANDREL TO MATCH ORIGINAL DIMENSIONS. SEE 5/S400 FOR ADDITIONAL INFORMATION.



PREVIOUS REPAIR TO BE REPLACED

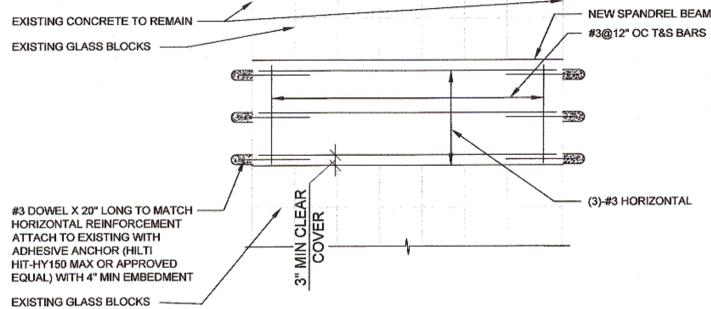


**3 S14 FROM S**

S400 REF. SCALE: NTS

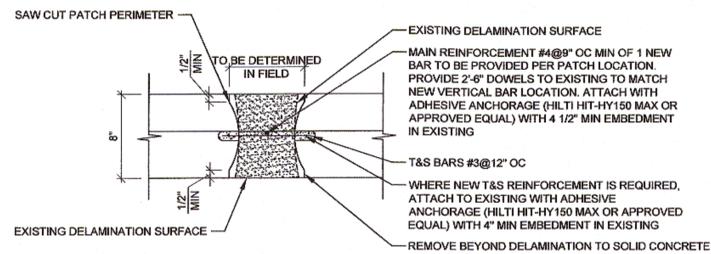
**4 S14 FROM SE**

S400 REF. SCALE: NTS



**5 SPANDREL BEAM REINFORCEMENT**

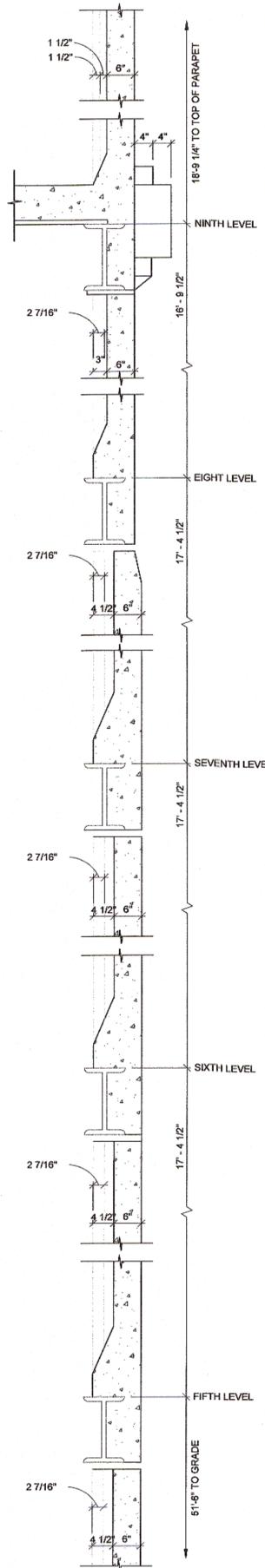
S400 REF. SCALE: NTS



- NOTES:**
- REMOVE ALL AND REPLACE ALL SOUND AND UNSOUND CONCRETE WITHIN SECTION SHOWN HATCHED.
  - ALL EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED. AFTER CLEANING IS COMPLETE, MEASURE AREA OF REINFORCEMENT. WHERE SECTION LOSS OF REINFORCEMENT IS IN EXCESS OF 10%, PROVIDE NEW REBAR OF SAME DIAMETER AS ORIGINAL FOR LENGTH OF SECTION LOSS + CLASS B SPLICE LENGTH ON EACH END BUT NOT LESS THAN AMOUNTS INDICATED ABOVE. COAT ALL EXPOSED STEEL WITH ZINC RICH PRIMER PER SPECIFICATIONS.
  - FORMS SHALL REMAIN IN PLACE UNTIL CONCRETE HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.

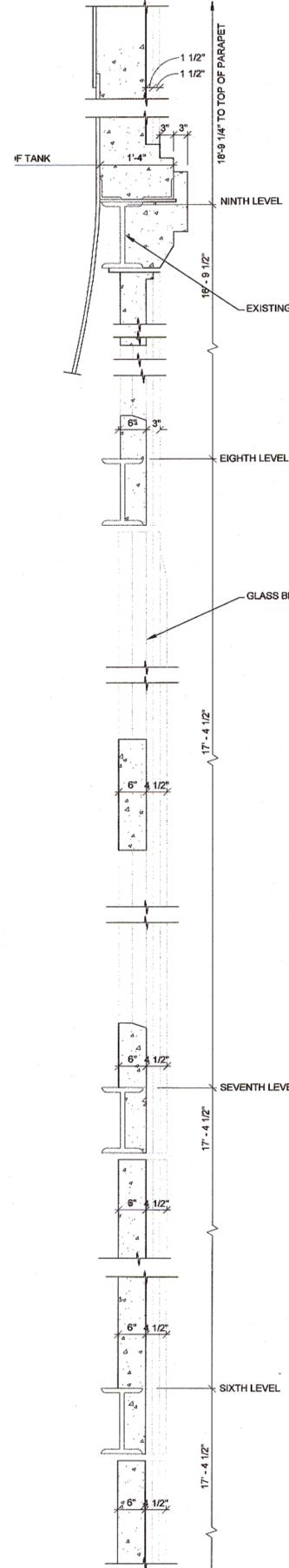
**6 FULL DEPTH WALL REPAIR**

S400 REF. SCALE: NTS



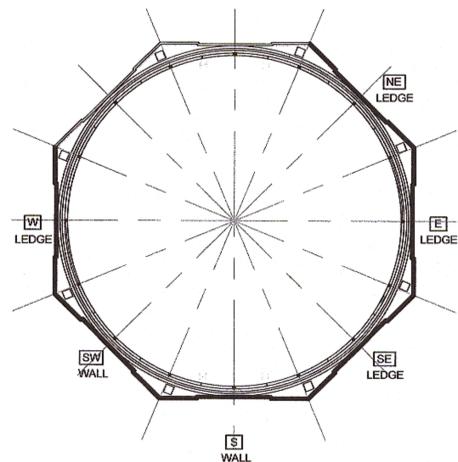
**7 SECTION - NON-WINDOW LOCATIONS**

S400 REF. SCALE: NTS



**8 SECTION - THRU WINDOWS**

S400 REF. SCALE: NTS



**ELEVATION KEY PLAN**

THE ELEVATIONS ARE REFERENCED AS SHOWN ABOVE (W,SW,S,SE,E,NE)

REVISIONS

DESIGNED BY

RAD

DRAWN BY

JAD

CHECKED BY

DATE

4-2012

SCALE

AS SHOWN

JOB NUMBER

BU11091370

SHEET NUMBER

S400

OF

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