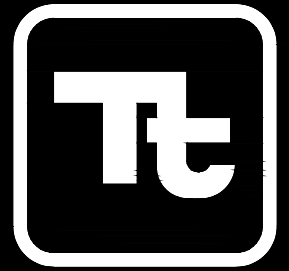


# CITY OF ANN ARBOR, MICHIGAN SOUTH INDUSTRIAL TANK COATING

710 AVIS DRIVE, SUITE 100  
ANN ARBOR, MI 48108  
Tel. 734.665.6000 Fax. 734.213.3003



**TETRA TECH**



www.tetrattech.com

**PROJECT LOCATION:**  
2000 SOUTH INDUSTRIAL HWY  
ANN ARBOR, MI 48104

**CLIENT INFORMATION:**  
CITY OF ANN ARBOR  
WATER TREATMENT SERVICES UNIT

**Tt PROJECT No.:**  
200-31537-17001

**CLIENT PROJECT No.:**  
ITB #: 4498, FILE #: 17003

**PROJECT DESCRIPTION / NOTES:**  
TANK COATING, METAL REPAIRS AND MISCELLANEOUS WORK

**ISSUED:**

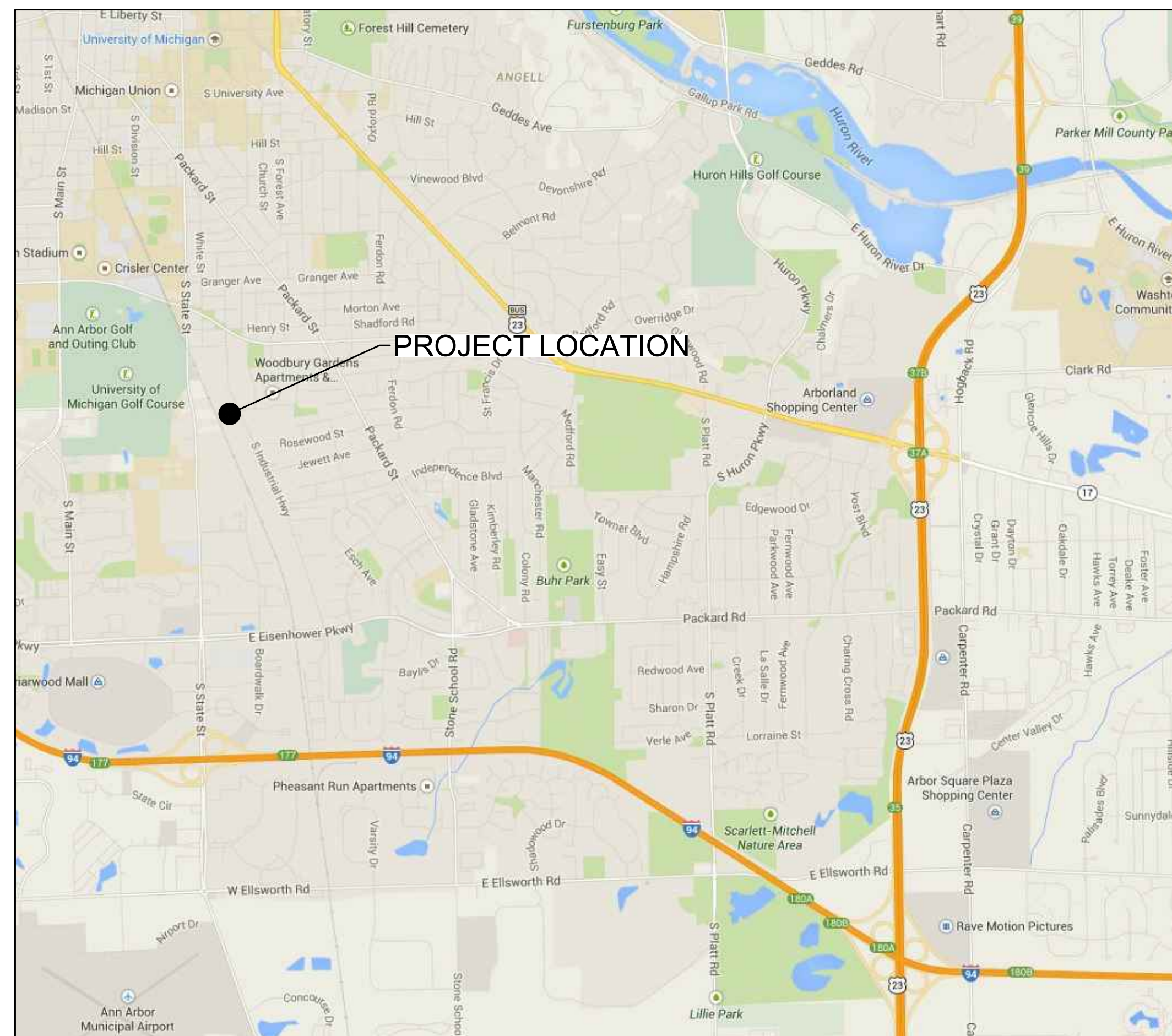
4/28/2017 ISSUED FOR BIDS

**VICINITY MAP:**



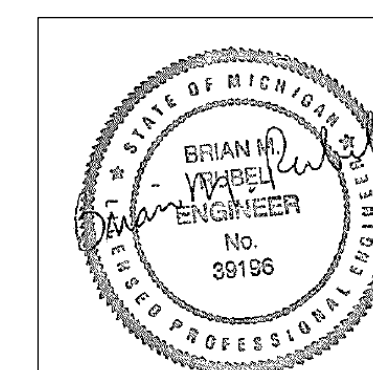
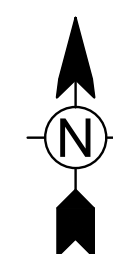
ANN ARBOR, MICHIGAN

SHEET INDEX	
SHEET NO.	SHEET TITLE
GENERAL	
G-000	COVER
G-001	GENERAL NOTES AND LEGEND
CIVIL	
C-101	SITE PLAN
C-102	TANK ELEVATION PROPOSED IMPROVEMENTS
C-103	MISCELLANEOUS STEEL REPAIRS
C-501	DETAILS
C-502	DETAILS



PROJECT LOCATION

**LOCATION MAP**  
SCALE: NONE



SITE LEGEND (NOTE: NOT ALL SYMBOLS MAY BE USED)

GENERAL NOTES

1. PRIOR TO ANY WORK ON SITE, CONTRACTOR SHALL COORDINATE THE BYPASS AND DRAINING OF THE TANK. CITY REQUIRES 14-DAY NOTICE PRIOR TO ANY FACILITY SHUTDOWN.
2. CONTRACTOR SHALL PROVIDE OVERALL PROJECT SCHEDULE INCLUDING ALL PROPOSED WORK AT THE BEGINNING OF THE PROJECT AND PROVIDE WEEKLY UPDATES ON THE SCHEDULE.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH THE EXISTING CITY WATER DEPARTMENT OPERATIONS ON SITE.

**SITE SYMBOLS**

FEATURES

- EXISTING SIGN
- PROPOSED SIGN
- TRASH RECEPTACLE
- PICNIC TABLE
- POST
- MAIL BOX
- POWER METER
- FLAG POLE
- ROCK
- GUY WIRE
- UTILITY POLE
- DECIDUOUS TREE
- EVERGREEN TREE
- PALM TREE
- BUSH
- STUMP
- STORM / DRAINAGE
- EXISTING MANHOLE
- PROPOSED MANHOLE
- EXISTING CULVERT
- PROPOSED CULVERT
- EXISTING INLET BASIN
- PROPOSED INLET BASIN
- PROPOSED INLET BASIN
- MISCELLANEOUS
- MONITORING WELL
- SOIL BORING
- MANHOLE W/ ID
- SPOT ELEVATION
- SLOPE ARROW
- SLOPE ARROW
- HANDICAP MARKING
- FUTURE IMPROVEMENTS
- SURVEY
- FOUND PROPERTY CORNER
- SET PROPERTY CORNER
- FOUND MONUMENT
- SET MONUMENT
- OWNERSHIP TIE
- SECTION CORNER
- BENCHMARK
- KEY NOTE
- SOIL EROSION AND SEDIMENTATION CONTROL NOTE

**UTILITY SYMBOLS**

WATER

- DRINKING FOUNTAIN
- EXISTING VALVE IN BOX
- PROPOSED VALVE IN BOX
- EXISTING CURB STOP
- PROPOSED CURB STOP
- METER
- EXISTING VALVE MANHOLE
- PROPOSED VALVE MANHOLE
- EXISTING WELL
- PROPOSED WELL
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- SPRINKLER HEAD
- IRRIGATION BOX
- SPIGOT
- LOCATION FLAG

SANITARY SEWER

- EXISTING MANHOLE
- PROPOSED MANHOLE
- EXISTING AIR RELEASE STRUCTURE
- PROPOSED AIR RELEASE STRUCTURE
- EXISTING IN-LINE FLUSH CONNECTION
- PROPOSED IN-LINE FLUSH CONNECTION
- EXISTING IN-LINE FLUSH CONNECTION
- PROPOSED IN-LINE FLUSH CONNECTION
- EXISTING CLEAN OUT
- PROPOSED CLEAN OUT
- EXISTING SEWER VALVE
- PROPOSED SEWER VALVE
- EXISTING CURB STOP
- PROPOSED CURB STOP
- PUMP STATION (SIMPLEX)
- PUMP STATION (DUPLIX)
- SEWER LATERAL
- LOCATION FLAG

NATURAL GAS

- MARKER
- LOCATION FLAG
- VALVE

CABLE TV

- RISER
- LOCATION FLAG
- JUNCTION BOX

COMMUNICATIONS

- TELEPHONE
- BOX OR RISER
- JUNCTION BOX
- FIBER OPTIC BOX
- LOCATION FLAG
- FIBER OPTIC FLAG
- MANHOLE
- VAULT
- SATELLITE DISH

**UTILITY SYMBOLS (CONT'D.)**

ELECTRICAL

- METER
- TRANSFORMER
- BOX OR RISER
- LOCATION FLAG
- LIGHT POLE
- EXTERIOR BUILDING LIGHT
- TRAFFIC SIGNAL POLE
- TRAFFIC SIGNAL CONTROL (BOX)
- RAIL ROAD SIGNAL
- MANHOLE
- JUNCTION BOX

**FEATURE HATCHING**

- EXISTING ASPHALT TO BE DEMOLISHED
- EXISTING CONCRETE TO BE DEMOLISHED
- PROPOSED PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED LIGHT DUTY ASPHALT PAVEMENT
- PROPOSED HEAVY DUTY ASPHALT PAVEMENT
- PROPOSED GRAVEL
- WETLAND AREA
- PROPOSED SOD

FEATURES & FEATURE LINES

- GRADING LIMITS
- RIGHT OF WAY LINE
- SECTION LINE
- UTILITY EASEMENTS
- EXISTING CONTOUR - MAJOR
- EXISTING CONTOUR - MINOR
- PROPOSED CONTOUR - MAJOR
- PROPOSED CONTOUR - MINOR
- EROSION SILT FENCE
- EROSION SUPER SILT FENCE
- FENCE (WOOD)
- FENCE (STEEL)
- FLOOD HAZARD AREA
- FLOW ARROW
- GUARD RAILING
- GRAVEL ROAD OR DRIVE
- RAIL ROAD TRACKS
- ROCK RETAINING WALL
- TREE / BRUSH LINES
- CLEARING & GRUBBING LIMITS
- WATER EDGES
- DITCH CENTER LINE
- WETLAND BOUNDARY
- PROPOSED SUPERSTRUCTURE
- EXISTING SUPERSTRUCTURE
- STRUCTURE (TANKS, ETC.)
- EXISTING UNDERGROUND STRUCTURE
- FUTURE STRUCTURE

UTILITY LINES

- CABLE TV OVERHEAD
- CABLE TV UNDERGROUND
- COMMUNICATION FIBER OPTIC
- COMMUNICATION OVERHEAD
- COMMUNICATION UNDERGROUND
- ELECTRIC OVERHEAD
- ELECTRIC UNDERGROUND
- NATURAL GAS
- NATURAL GAS HIGH PRESSURE
- JET FUEL
- SANITARY FORCEMAIN
- SANITARY SEWER LINE
- STORM DRAIN
- STORM ROOF DRAIN
- STEAM
- FIRE PROTECTION
- WATER MAIN
- UTILITY LINE 36" AND LARGER

NOTE: HEAVIER LINE WEIGHTS INDICATE PROPOSED WORK.

**TETRA TECH**  
www.tetra-tech.com  
710 AVIS DRIVE, SUITE 100  
ANN ARBOR, MI 48108  
PH: 734-665-6000

**811**  
Know what's below.  
Call before you dig.

CITY OF ANN ARBOR  
WATER TREATMENT SERVICES UNIT  
ANN ARBOR, MI 48108  
www.a2gov.org

MARK	DATE	DESCRIPTION
	4/28/17	ISSUED FOR BID

CITY OF ANN ARBOR, MICHIGAN  
SOUTH INDUSTRIAL TANK COATING  
**GENERAL NOTES AND LEGEND**

Project No.:	200-31537-17001
Designed By:	J. SIWEK
Drawn By:	S. GOTHA
Checked By:	B. RUBEL

**G-001**

4/25/2017 10:46:40 AM - P:\N\1537200-31537-17001\CAD\SH\FILES\G-001-NOTES-LEGEND.DWG - MOORE, JOSH

4/25/2017 12:50:41 PM - P:\PIER\31537\200-31537-17001\CAD\SHEETFILES\C-101-SITE PLAN.DWG - MOORE, JOSH



**TETRA TECH**  
www.tetra-tech.com  
710 AVIS DRIVE, SUITE 100  
ANN ARBOR, MI 48108  
PH: 734-665-6000



CITY OF ANN ARBOR  
WATER TREATMENT SERVICES UNIT  
ANN ARBOR, MI 48108  
www.a2gov.org

MARK	DATE	DESCRIPTION	BY
	4/28/17	ISSUED FOR BID	

CITY OF ANN ARBOR, MICHIGAN  
**SITE PLAN**  
SOUTH INDUSTRIAL TANK COATING

Project No.: 200-31537-17001  
Designed By: J. SIWEK  
Drawn By: S. GOTHA  
Checked By: B. RUBEL

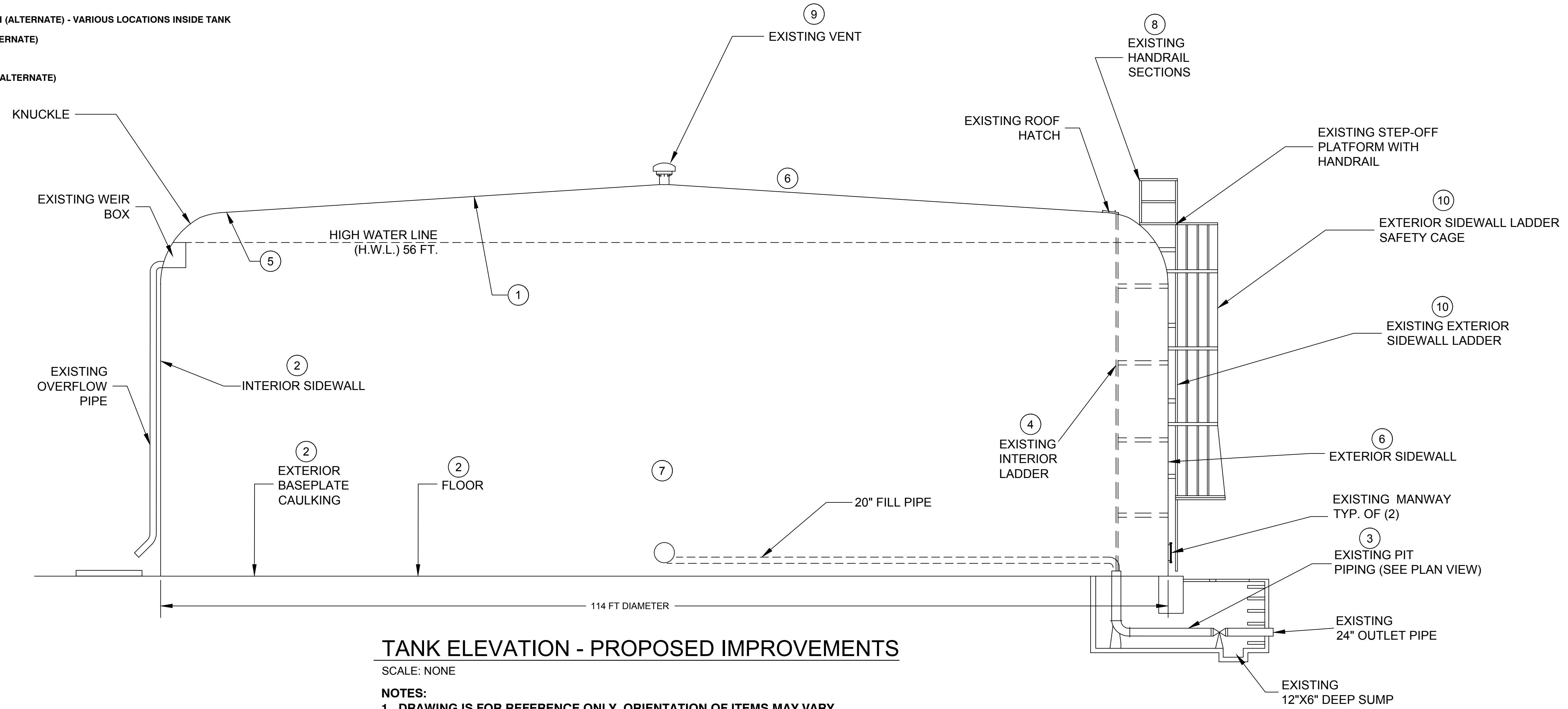
**C-101**

Bar Measures 1 inch

Copyright Tetra Tech

**PROPOSED WORK SCHEDULE**

- ① WET INTERIOR ROOF COATING
- ② WET INTERIOR SIDEWALL AND FLOOR COATING
- ③ PIT PIPING COATING
- ④ WET INTERIOR LADDER RUNG REPLACEMENT (TOP FOUR RUNGS) AND PAINTING
- ⑤ WIND GIRDER SECTION REPLACEMENT
- ⑥ EXTERIOR OVERCOATING (ALTERNATE)
- ⑦ CATHODIC CLIP AND COUPLING INSTALLATION (ALTERNATE) - VARIOUS LOCATIONS INSIDE TANK
- ⑧ ROOF HANDRAIL SECTION INSTALLATION (ALTERNATE)
- ⑨ ROOF VENT REPLACEMENT (ALTERNATE)
- ⑩ EXTERIOR SIDEWALL LADDER REPLACEMENT (ALTERNATE)

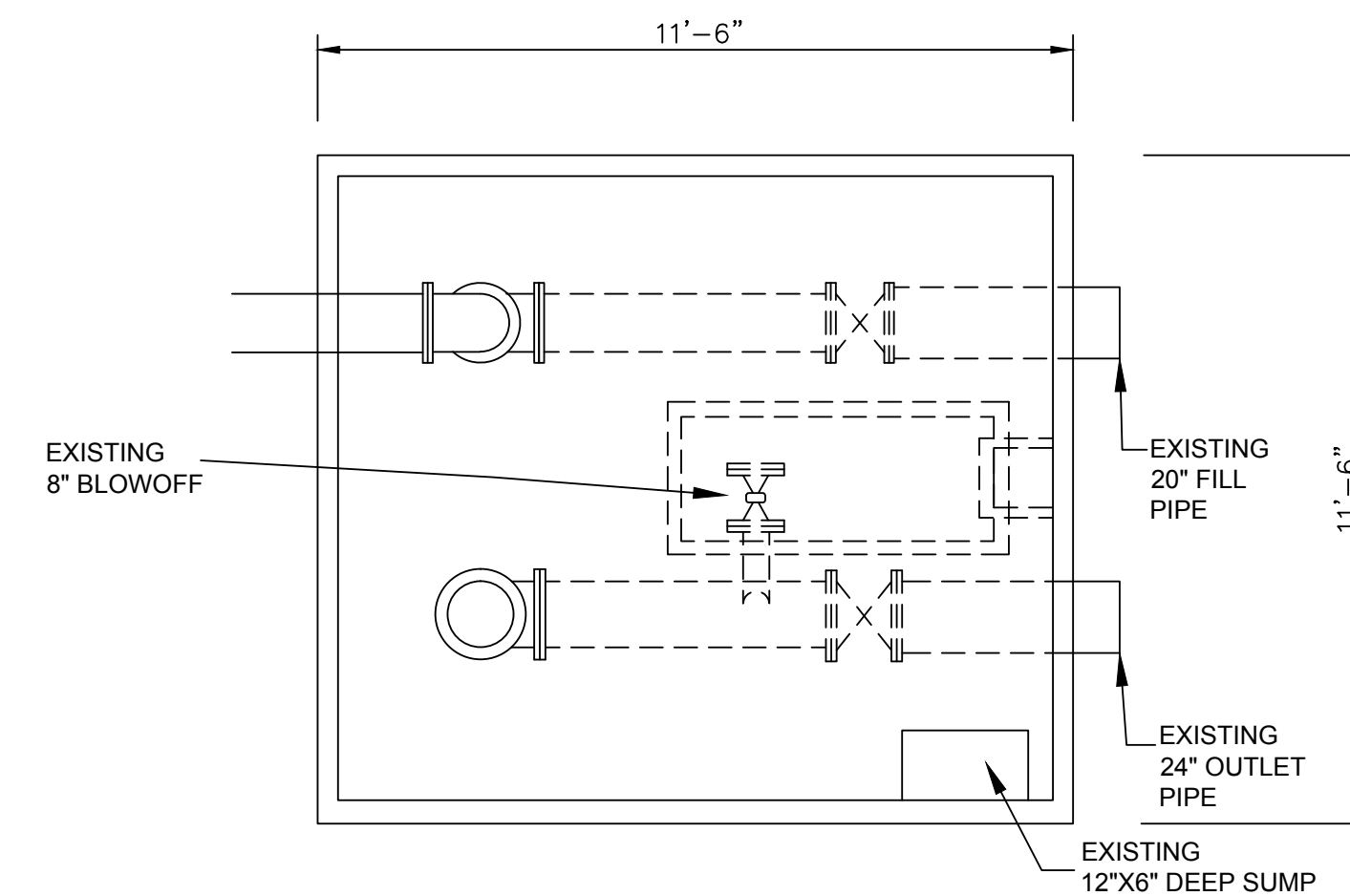


**TANK ELEVATION - PROPOSED IMPROVEMENTS**

SCALE: NONE

**NOTES:**

- 1. DRAWING IS FOR REFERENCE ONLY. ORIENTATION OF ITEMS MAY VARY.
- 2. EXTERIOR OVERCOAT (ALTERNATE) APPLIES TO ALL EXTERIOR SURFACES



**PIT PIPING PLAN VIEW**

SCALE: NONE

4/25/2017 10:52:05 AM - P:\IER\31537\200-31537-17001\CAD\SHEETFILES\C-102-TANK ELEVATION.DWG - MOORE, JOSH



www.tetra-tech.com  
710 AVIS DRIVE, SUITE 100  
ANN ARBOR, MI 48108  
PH: 734-665-6000



CITY OF ANN ARBOR  
WATER TREATMENT & SEWER SERVICES UNIT  
ANN ARBOR, MI 48108  
www.a2gov.org



MARK	DATE	DESCRIPTION	BY
	4/28/17	ISSUED FOR BID	

CITY OF ANN ARBOR, MICHIGAN  
SOUTH INDUSTRIAL TANK COATING  
**TANK ELEVATION  
PROPOSED IMPROVEMENTS**

Project No.: 200-31537-17001  
Designed By: J. SIWEK  
Drawn By: S. GOTHA  
Checked By: B. RUBEL

**C-102**

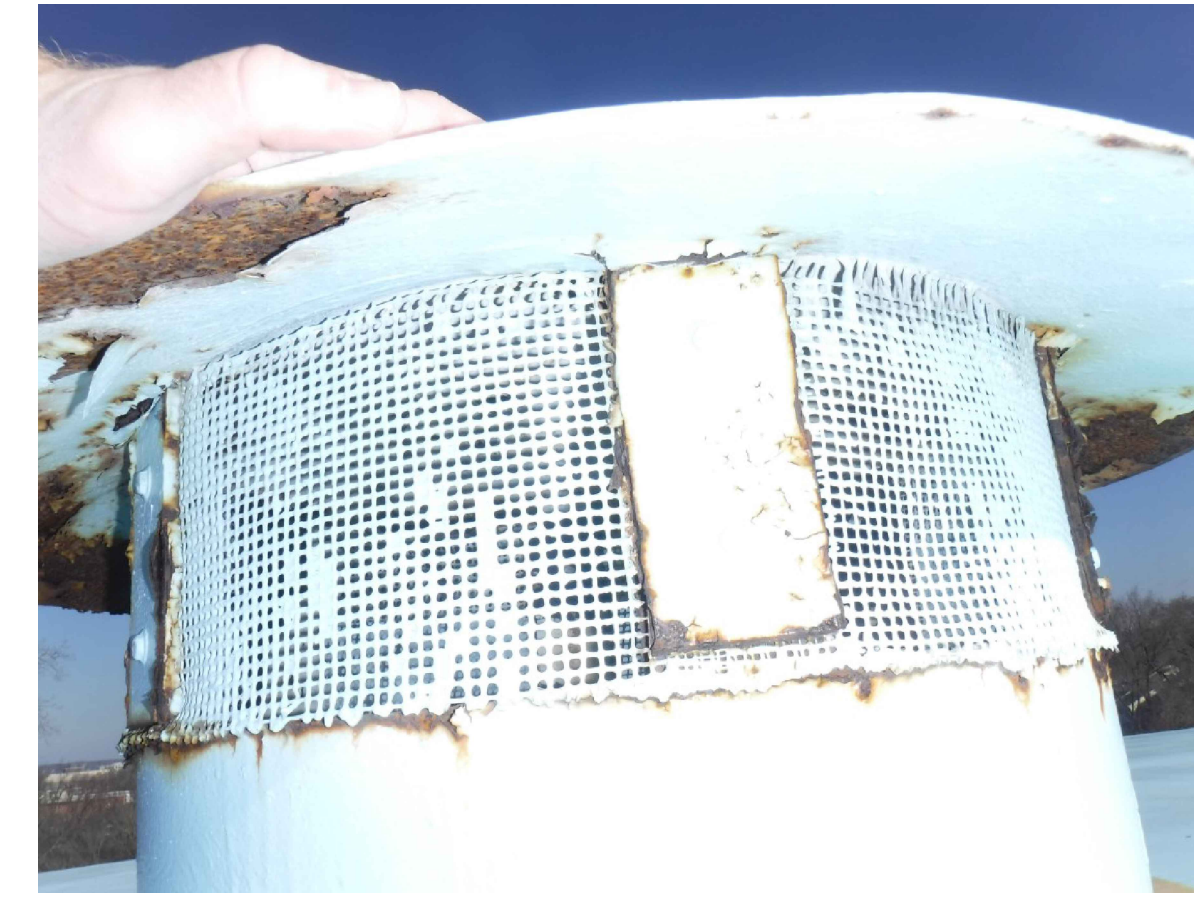
Copyright: Tetra Tech  
Bar Measures 1 inch



**MISCELLANEOUS STEEL REPAIR-WIND GIRDER REPLACEMENT**  
LOCATION 5 ON C-102



**WET INTERIOR LADDER-CORRODED RUNG REPLACEMENT**  
LOCATION 4 ON C-102



**ROOF VENT REPLACEMENT**  
LOCATION 9 ON C-102



**EXTERIOR OVERCOATING-ROOF**  
LOCATION 6 ON C-102



**EXTERIOR OVERCOATING-LOWER SIDEWALL**  
LOCATION 6 ON C-102



**WET INTERIOR COATING-SIDEWALL**  
LOCATION 2 ON C-102

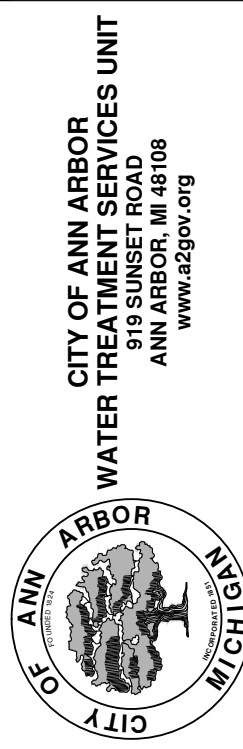


**WET INTERIOR COATING-ROOF**  
LOCATION 1 ON C-102

4/25/2017 10:53:26 AM - P:\IER\91537\200-31537-17001\CAD\SHEETFILES\C-103-MISC STEEL REPAIRS.DWG - MOORE, JOSH



www.tetra.tech.com  
710 AVIS DRIVE, SUITE 100  
ANN ARBOR, MI 48108  
PH: 734-665-6000



MARK	DATE	DESCRIPTION	BY
	4/28/17	ISSUED FOR BID	

CITY OF ANN ARBOR, MICHIGAN  
SOUTH INDUSTRIAL TANK COATING  
**MISCELLANEOUS STEEL REPAIRS**

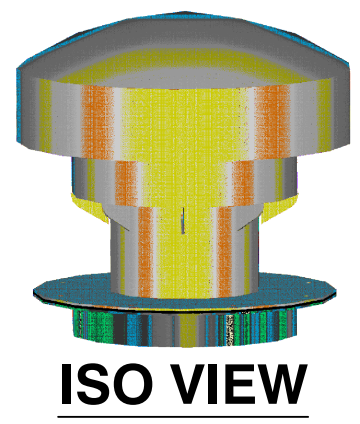
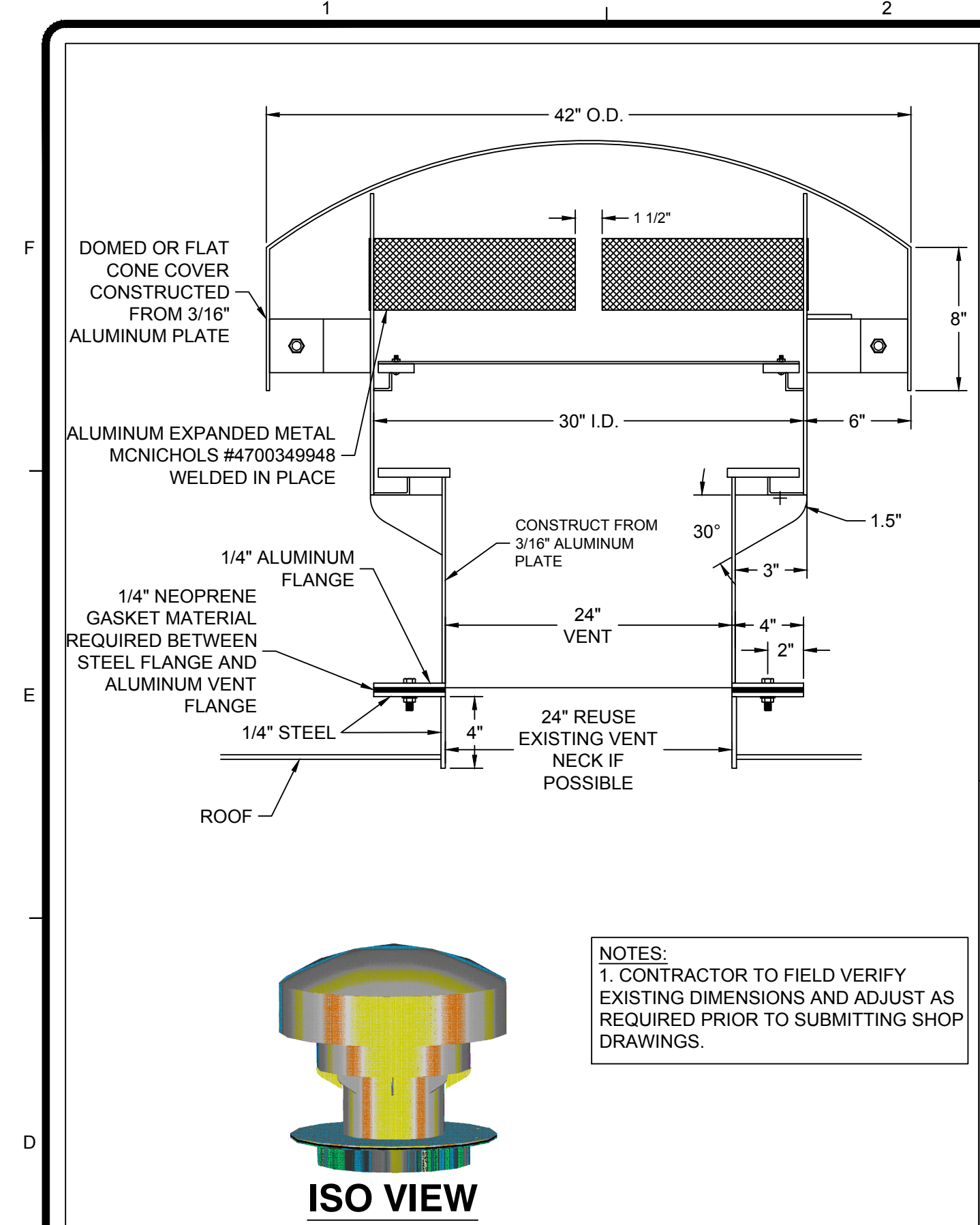
Project No.: 200-31537-17001  
Designed By: J. SIWEK  
Drawn By: S. GOTHA  
Checked By: B. RUBEL

**C-103**

Bar Measures 1 inch

Copyright: Tetra Tech

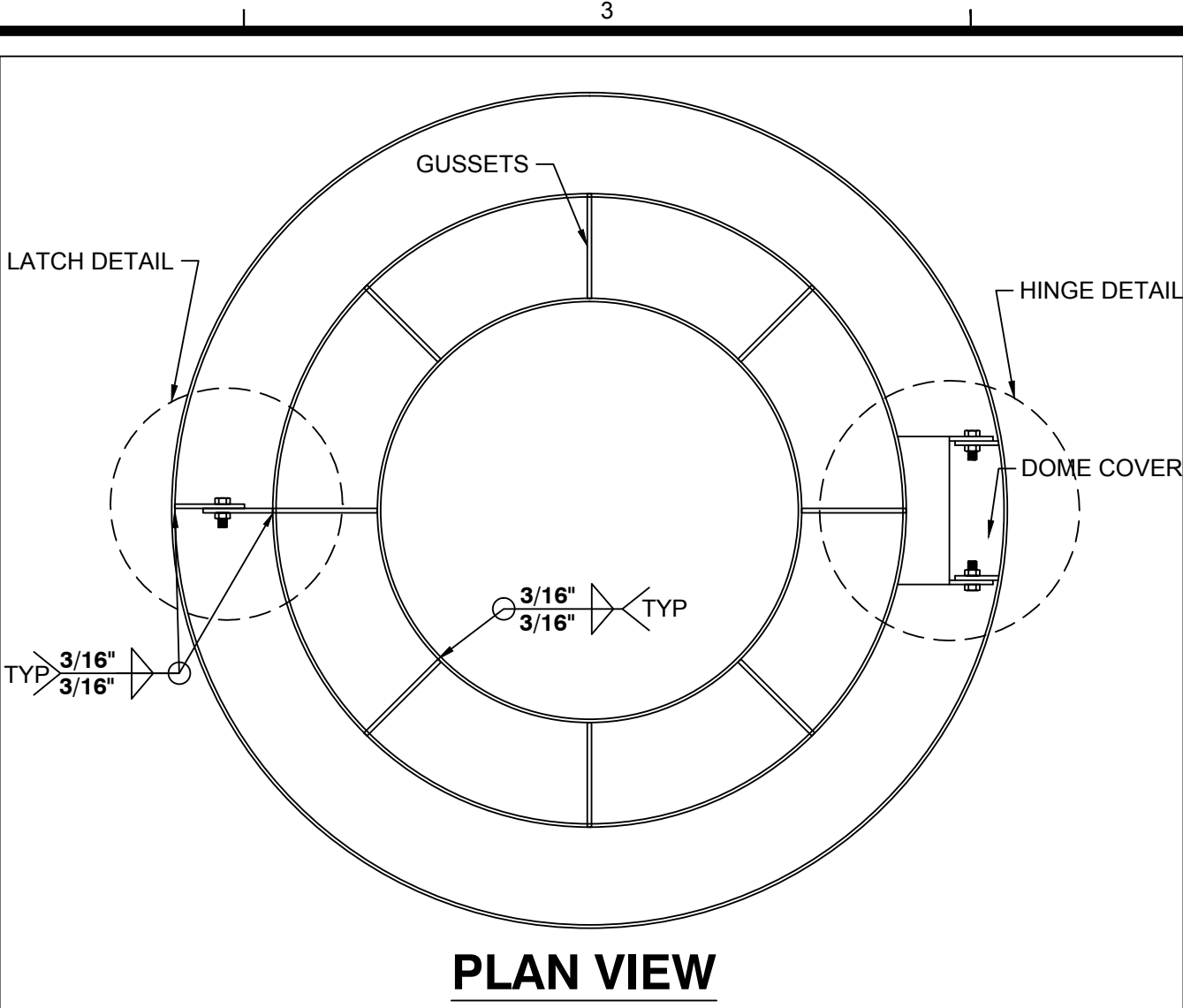
4/25/2017 10:55:12 AM - P:\MER31537\200-31537-17001\CAD\SHSHEETFILES\C-501-DETAILS.DWG - MOORE, JOSH



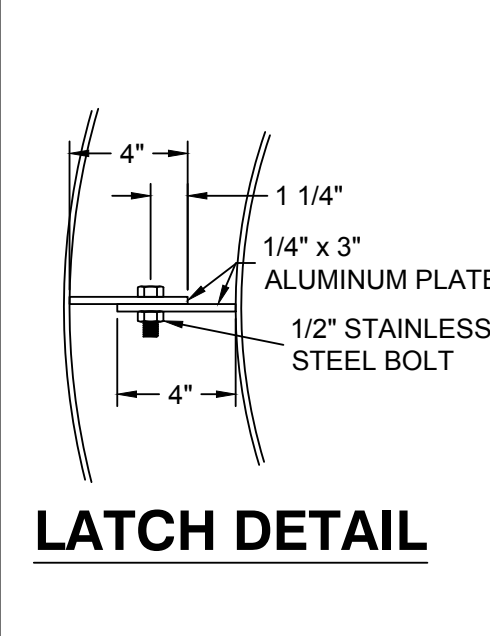
**ISO VIEW**

**ROOF VENT (ALTERNATE)**  
SCALE: NONE

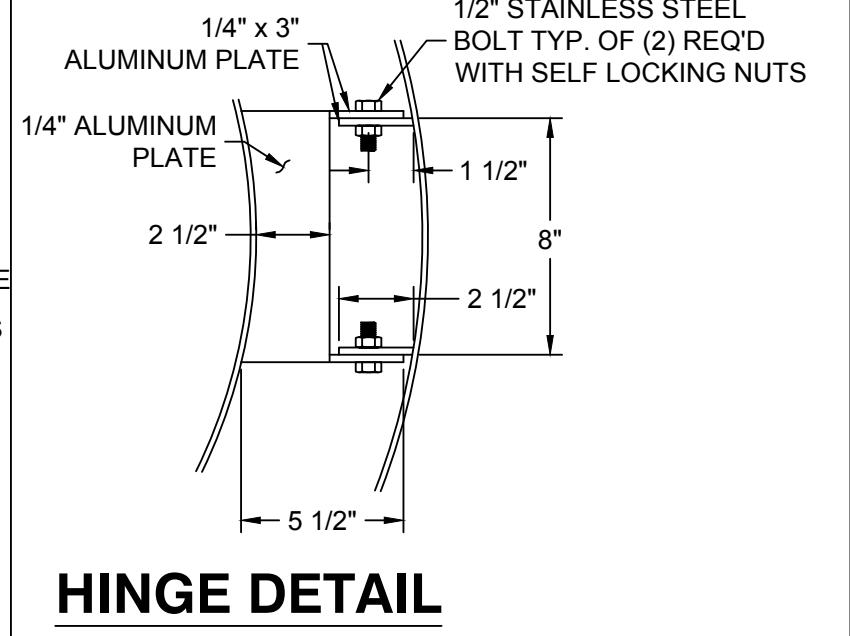
**NOTES:**  
1. CONTRACTOR TO FIELD VERIFY EXISTING DIMENSIONS AND ADJUST AS REQUIRED PRIOR TO SUBMITTING SHOP DRAWINGS.



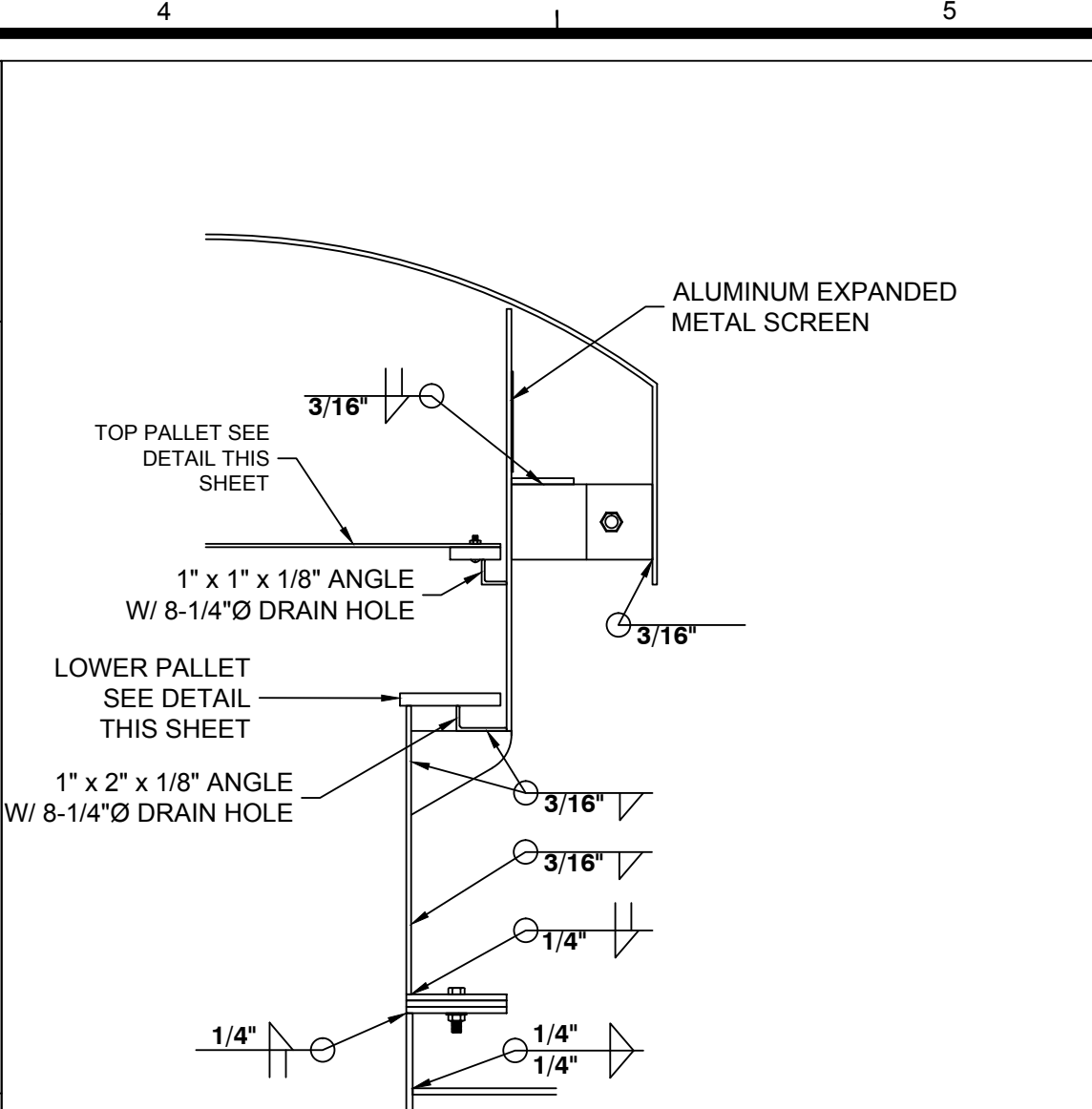
**PLAN VIEW**



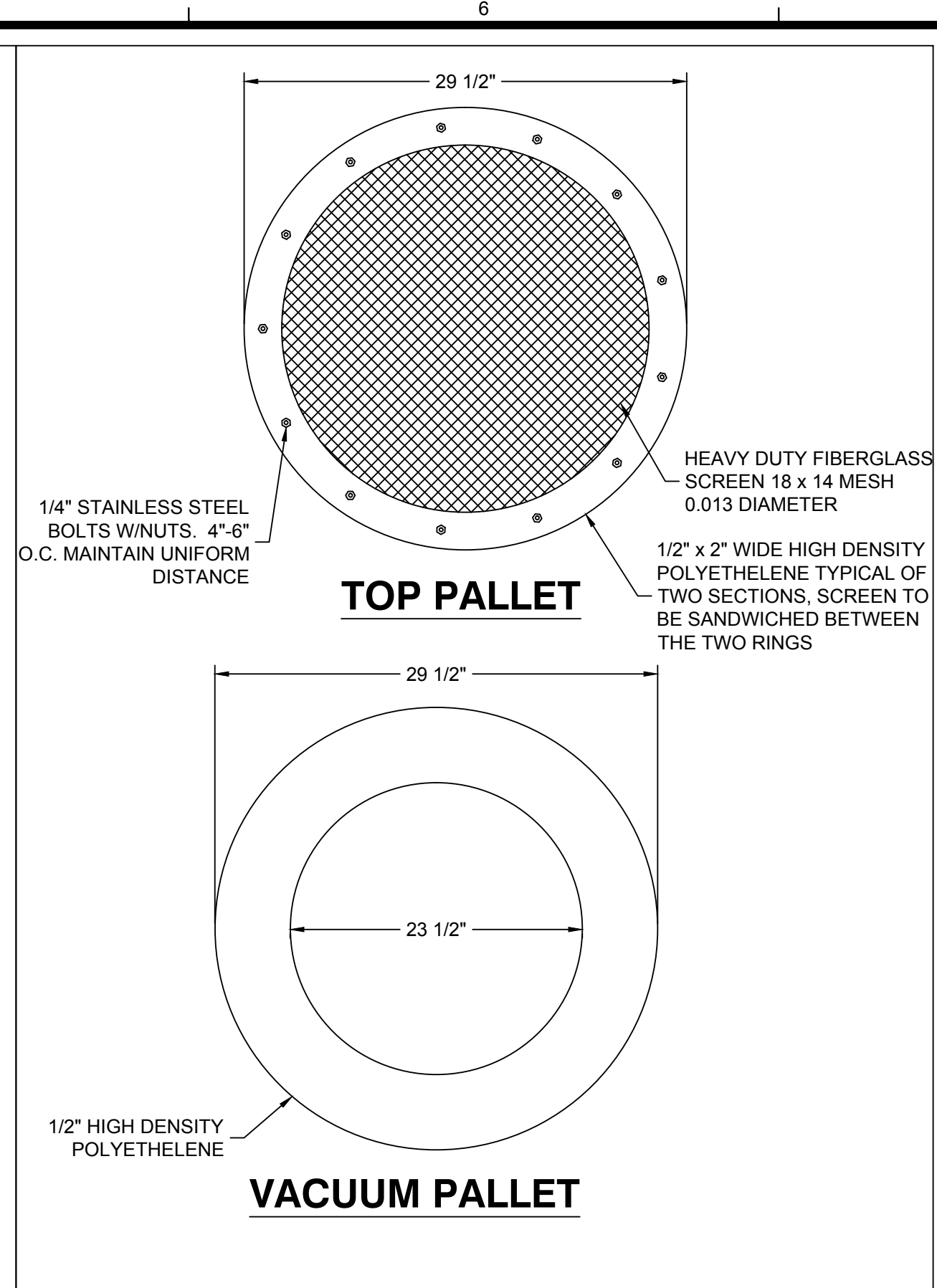
**LATCH DETAIL**



**HINGE DETAIL**

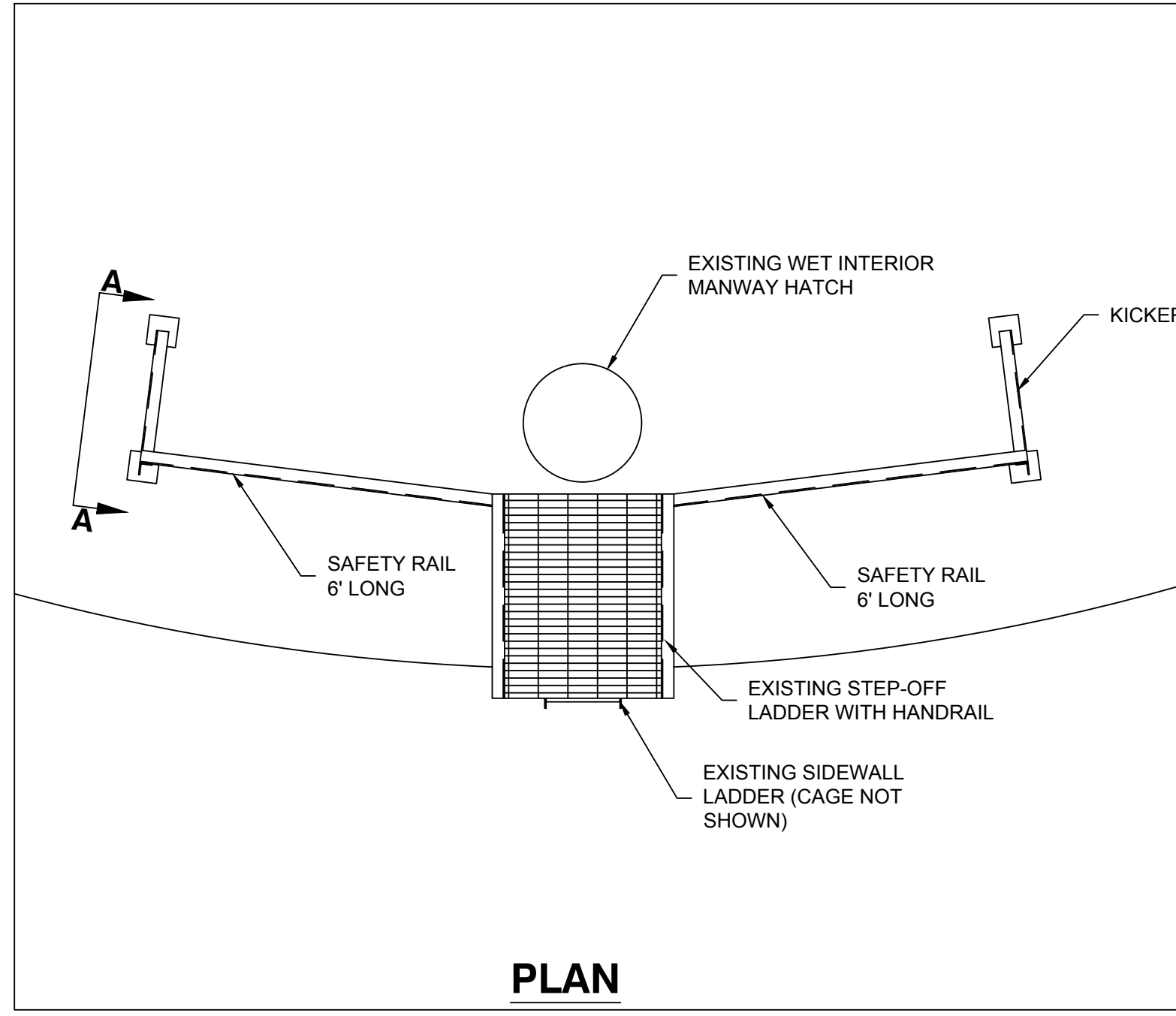


**WELDING DETAIL**



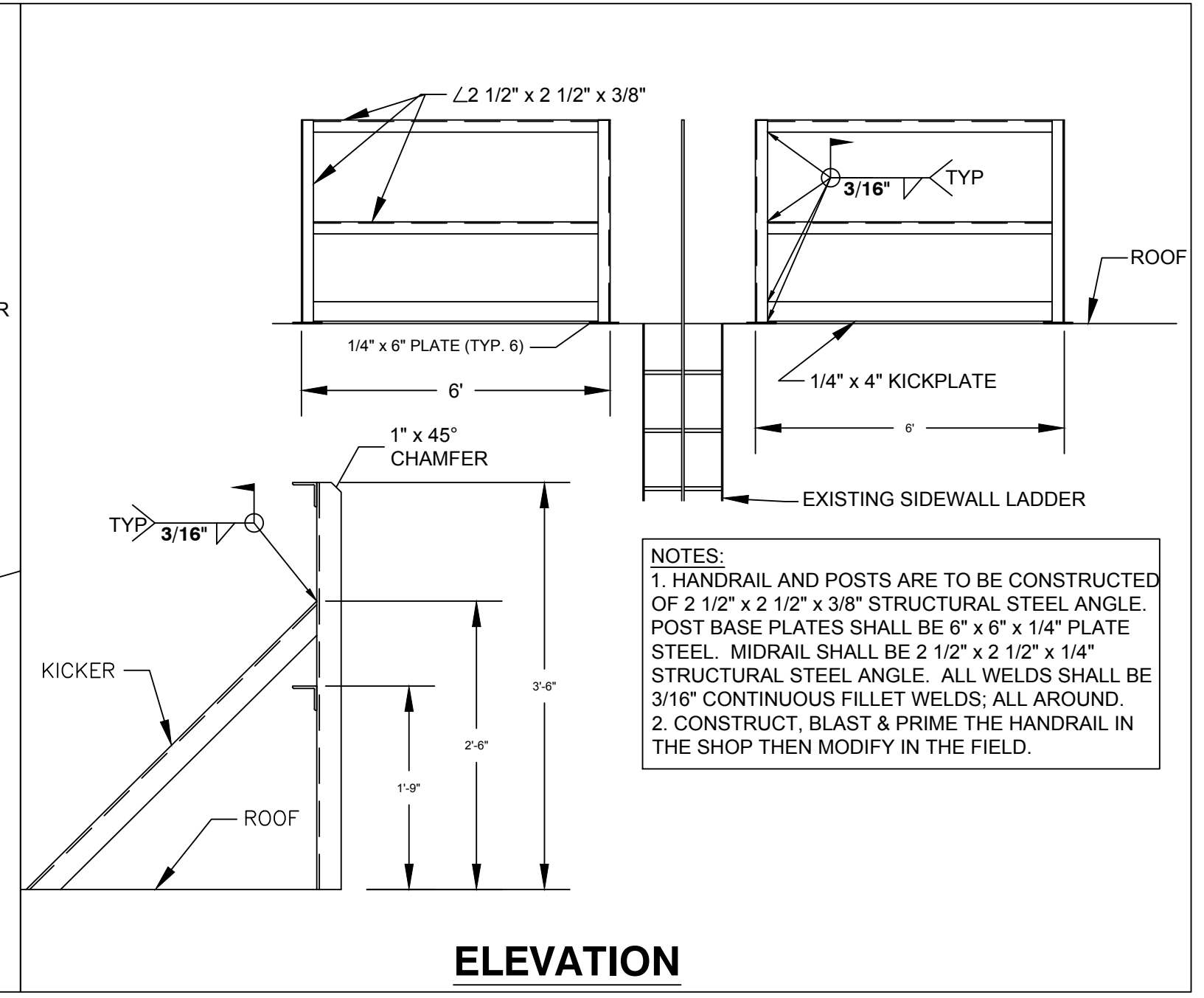
**TOP PALLET**

**VACUUM PALLET**



**PLAN**

**ROOF HANDRAIL SECTIONS (ALTERNATE)**  
SCALE: NONE



**ELEVATION**

**NOTES:**  
1. HANDRAIL AND POSTS ARE TO BE CONSTRUCTED OF 2 1/2" x 2 1/2" x 3/8" STRUCTURAL STEEL ANGLE. POST BASE PLATES SHALL BE 6" x 6" x 1/4" PLATE STEEL. MIDRAIL SHALL BE 2 1/2" x 2 1/2" x 1/4" STRUCTURAL STEEL ANGLE. ALL WELDS SHALL BE 3/16" CONTINUOUS FILLET WELDS; ALL AROUND.  
2. CONSTRUCT, BLAST & PRIME THE HANDRAIL IN THE SHOP THEN MODIFY IN THE FIELD.

**DIXON ENGINEERING, INC.**  
Ann Arbor, MI 4,000,000 Reservoir

**TETRA TECH**  
www.tetrattech.com  
710 AVIS DRIVE, SUITE 100  
ANN ARBOR, MI 48108  
PH: 734-665-6000

**811**  
Know what's below.  
Call before you dig.

**CITY OF ANN ARBOR WATER TREATMENT SERVICES UNIT**  
ANN ARBOR, MI 48108  
www.a2gov.org

MARK	DATE	DESCRIPTION	BY
	4/28/17	ISSUED FOR BID	

CITY OF ANN ARBOR, MICHIGAN  
**SOUTH INDUSTRIAL TANK COATING DETAILS**

Project No.: 200-31537-17001  
Designed By: **J. SIWEK**  
Drawn By: **S. GOTHA**  
Checked By: **B. RUBEL**

**C-501**

Bar Measures 1 inch

Copyright: Tetra Tech

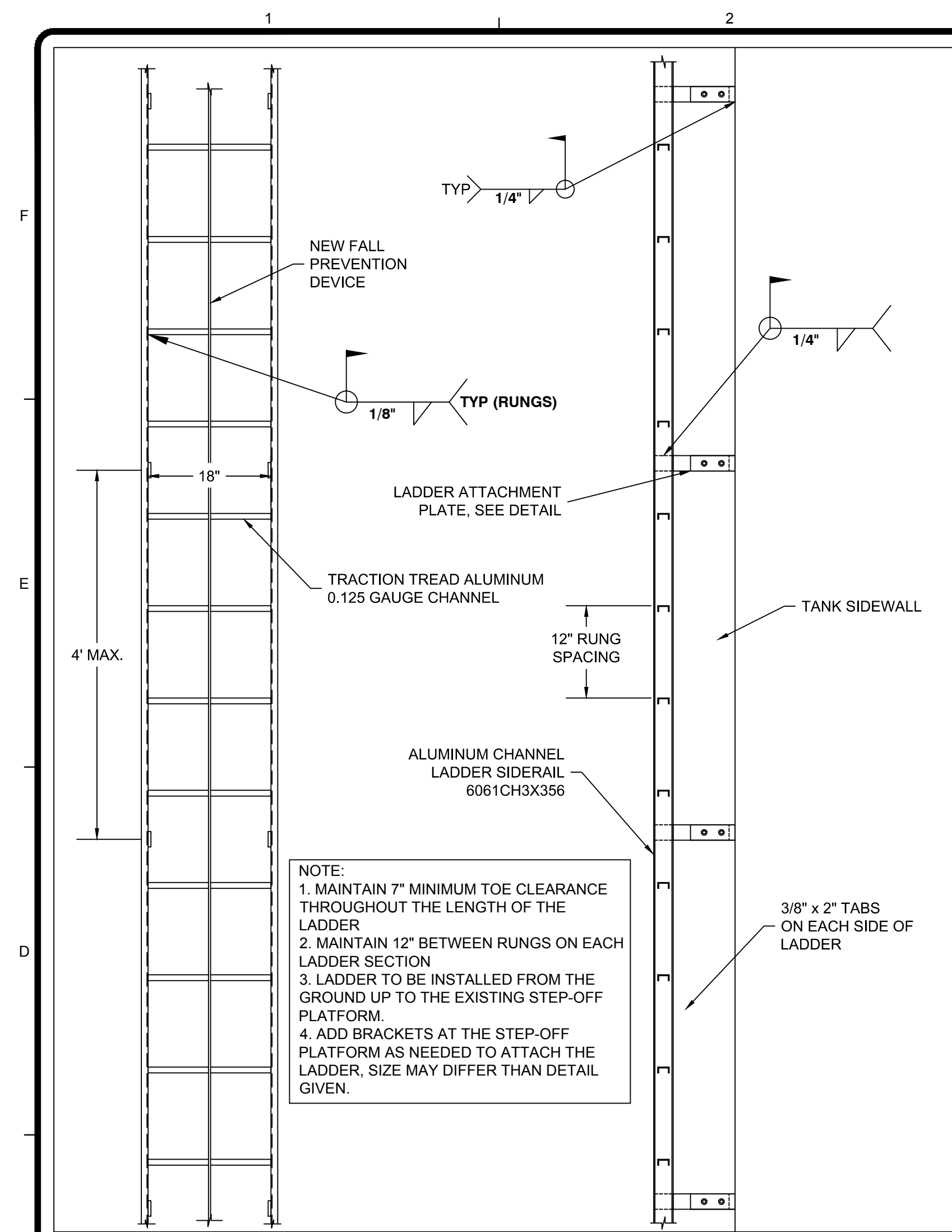
MARK	DATE	DESCRIPTION
	4/28/17	ISSUED FOR BID

CITY OF ANN ARBOR, MICHIGAN  
SOUTH INDUSTRIAL TANK COATING  
**DETAILS**

Project No.: 200-31537-17001  
Designed By: J. SIWEK  
Drawn By: S. GOTHA  
Checked By: B. RUBEL

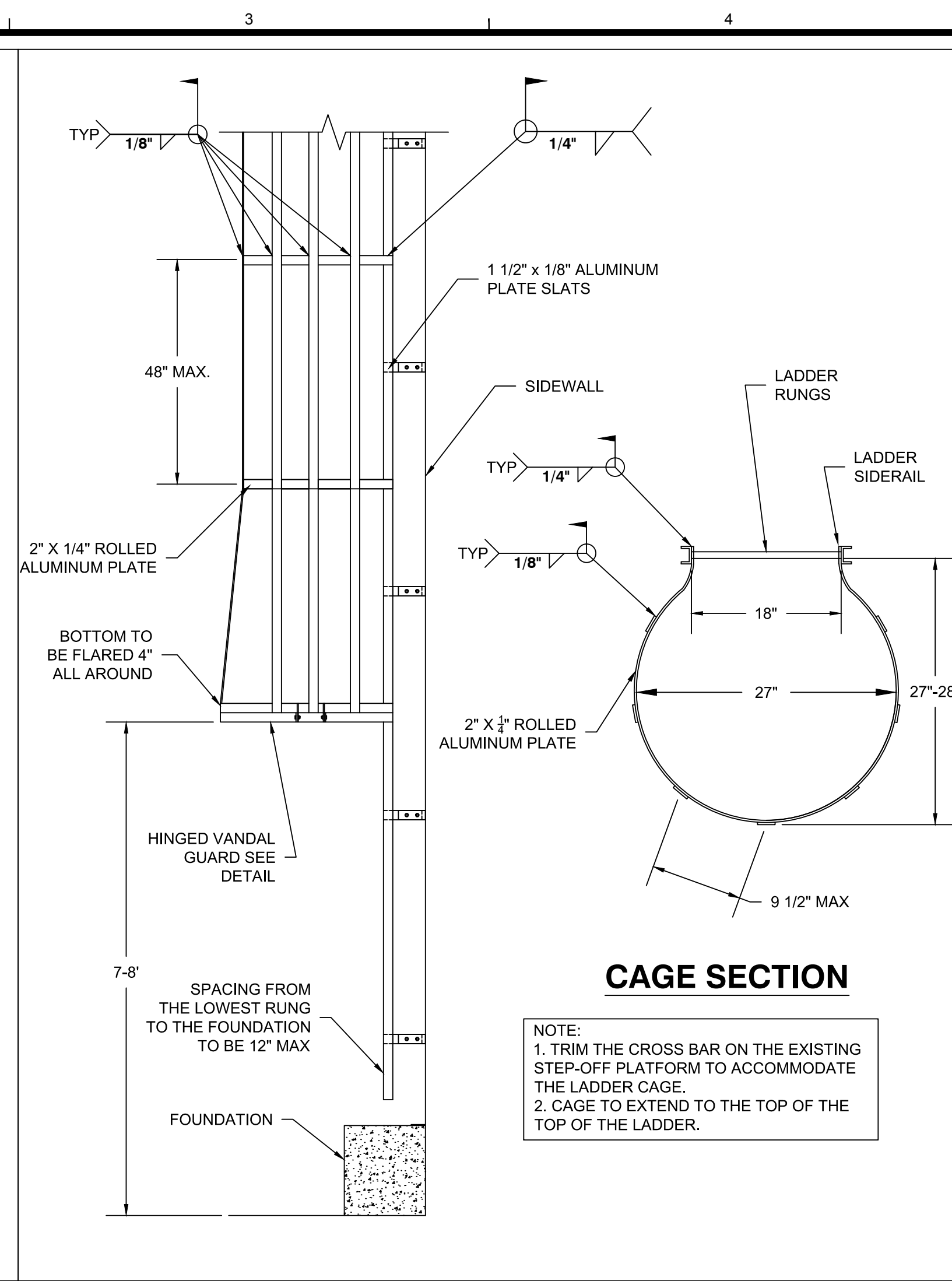
**C-502**

Copyright: Tetra Tech



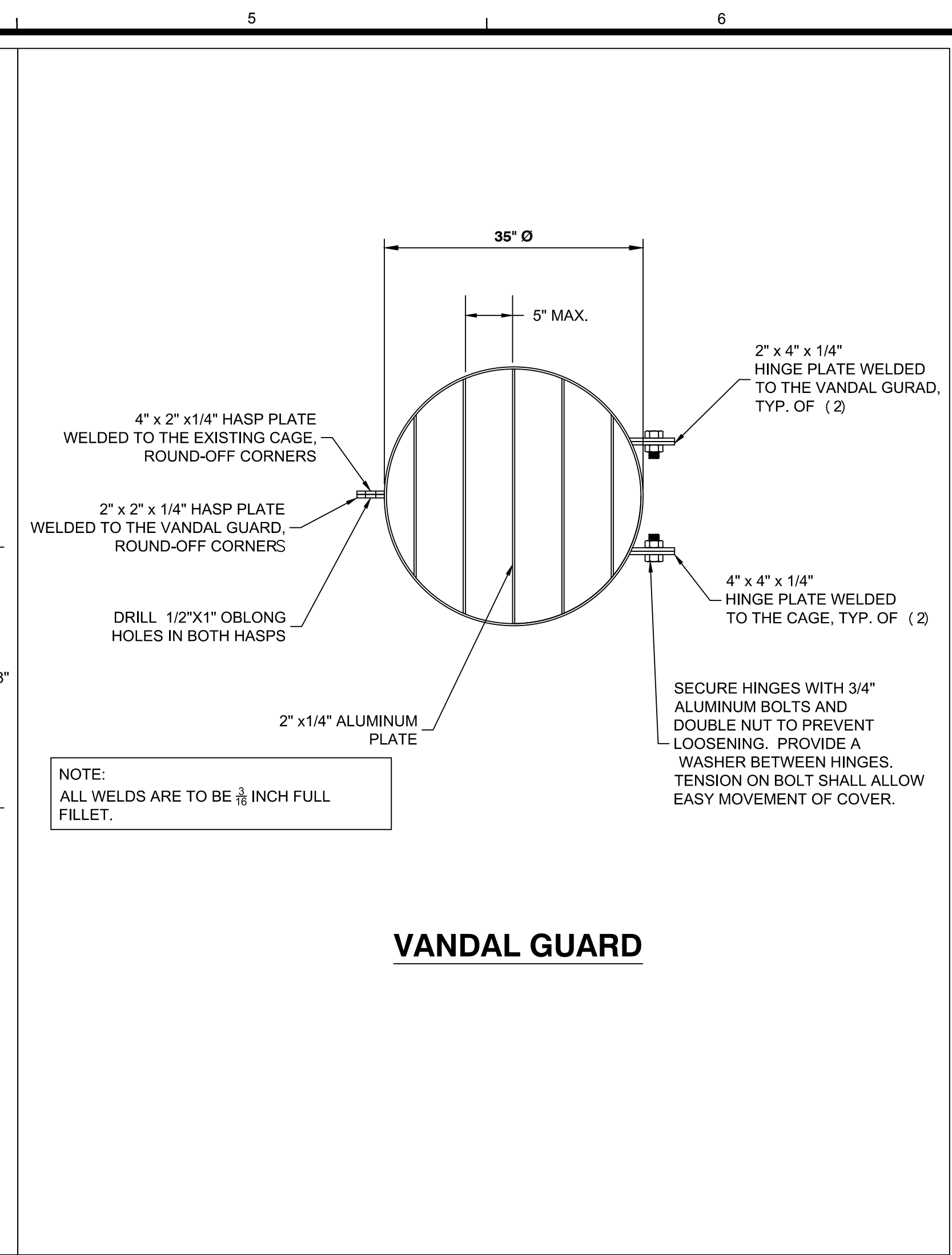
NOTE:  
1. MAINTAIN 7" MINIMUM TOE CLEARANCE THROUGHOUT THE LENGTH OF THE LADDER  
2. MAINTAIN 12" BETWEEN RUNGS ON EACH LADDER SECTION  
3. LADDER TO BE INSTALLED FROM THE GROUND UP TO THE EXISTING STEP-OFF PLATFORM.  
4. ADD BRACKETS AT THE STEP-OFF PLATFORM AS NEEDED TO ATTACH THE LADDER. SIZE MAY DIFFER THAN DETAIL GIVEN.

**EXTERIOR SIDEWALL LADDER (ALTERNATE)**  
SCALE: NONE



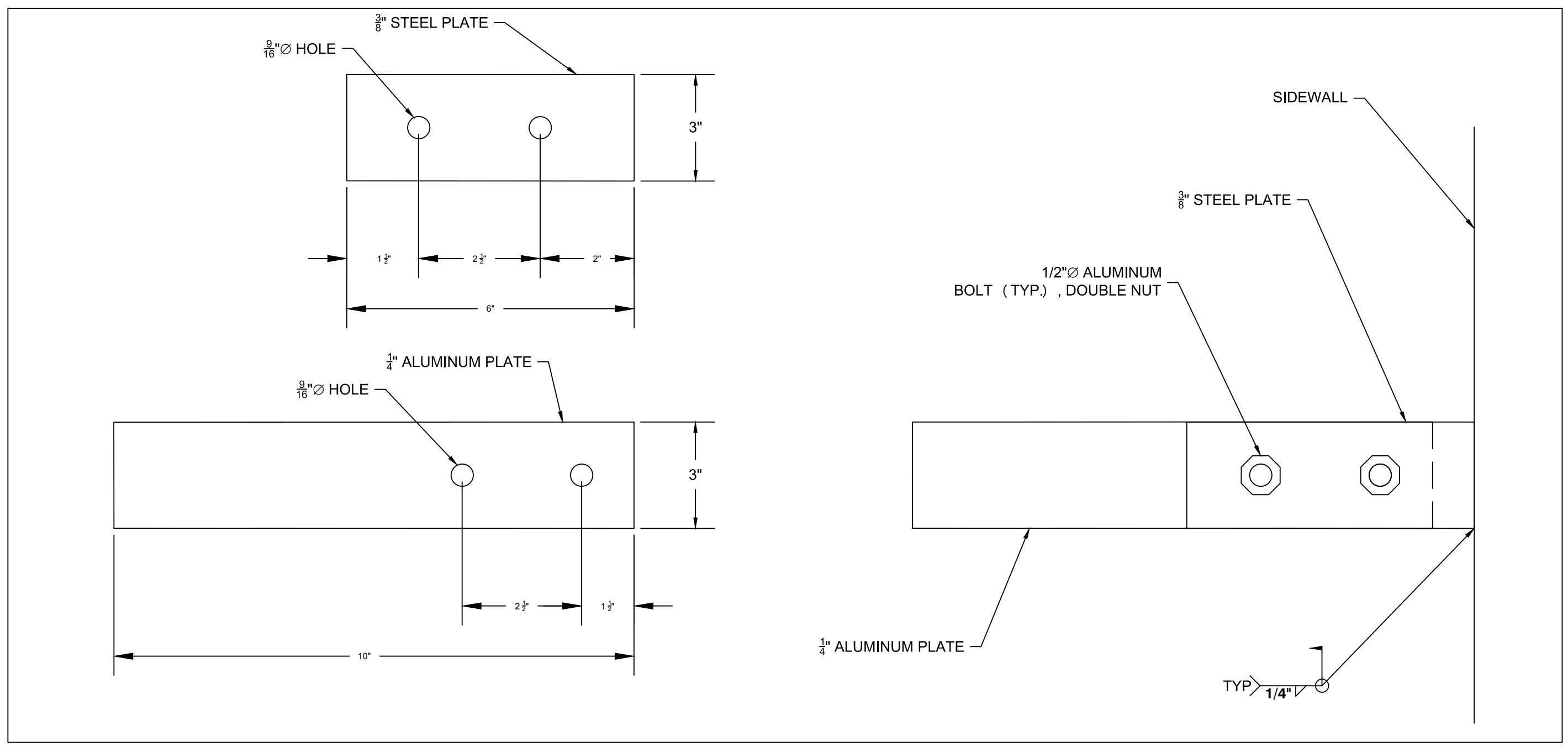
NOTE:  
1. TRIM THE CROSS BAR ON THE EXISTING STEP-OFF PLATFORM TO ACCOMMODATE THE LADDER CAGE.  
2. CAGE TO EXTEND TO THE TOP OF THE LADDER.

**CAGE SECTION**



NOTE:  
ALL WELDS ARE TO BE 3/8 INCH FULL FILLET.

**VANDAL GUARD**



**EXTERIOR SIDEWALL LADDER MOUNTING PLATE**  
SCALE: NONE

4/25/2017 10:56:09 AM - P:\MER\31537\200-31537-17001\CAD\SHETFILES\C-50+DETAILS.DWG - MOORE, JOSH