Contract Plans

for

SAFETY RAILING AROUND TANKS CALUMET WATER RECLAMATION PLANT

Chicago, Illinois

Contract 15-265-3D



Room 508, 100 East Erie Street

Chicago, Illinois 60611

Board of Commissioners

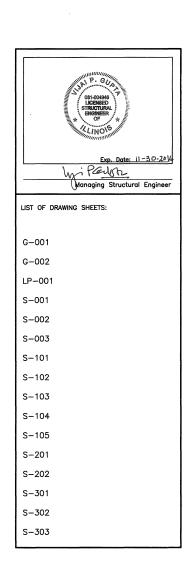
Volume 3 of 3

JUL 2016

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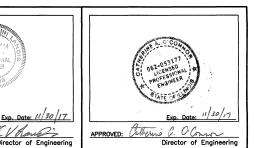


THE PLANS LISTED AND BOUND HEREIN ARE PART OF THE CONTRACT FOR:

SAFETY RAILING AROUND TANKS CALUMET WATER RECLAMATION PLANT

CHICAGO, ILLINOIS
JUL 2016





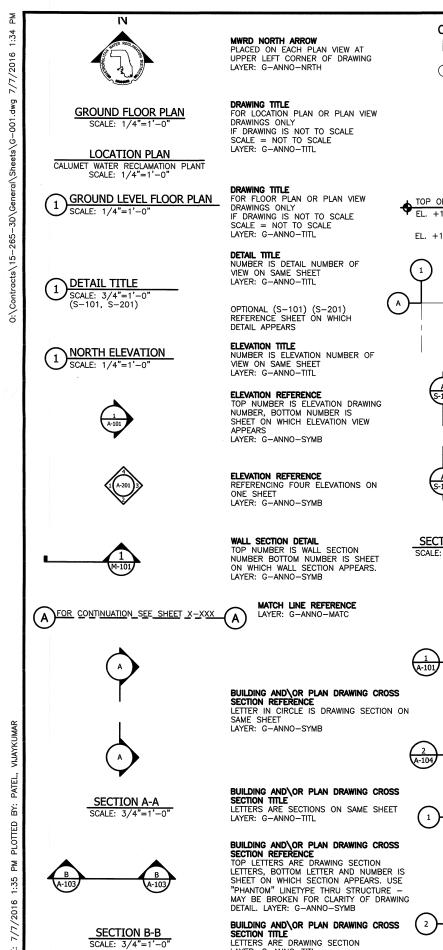
NOTE:
THE SCALES WHICH MAY APPEAR ON SOME OF THE CONTRACT PLANS ARE THOSE TO WHICH THE ORIGINAL, FULL SIZE PLANS WERE DRAWN. THEY ARE NOT CORRECT FOR REDUCED—SIZE PLANS. REDUCED CONTRACT PLANS SHOULD NOT BE SCALED FOR DIMENSIONS. TO SCALE DIMENSIONS USE GRAPHIC SCALES WHERE THEY APPEAR ON THE PLANS.

Contract 15-265-3D LIST OF CONTRACT PLANS

Description	Appr.	Date

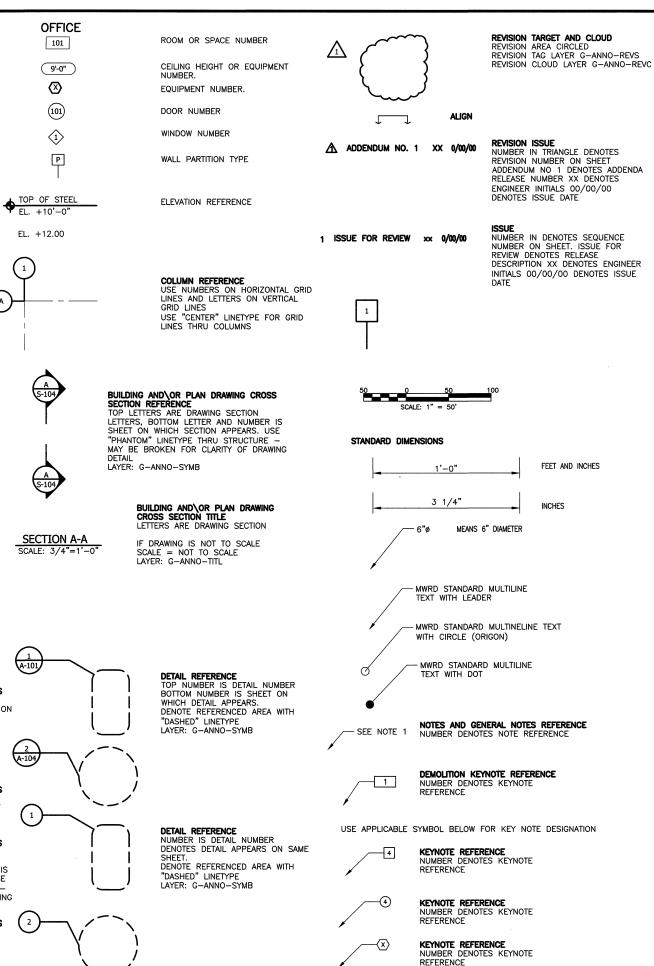
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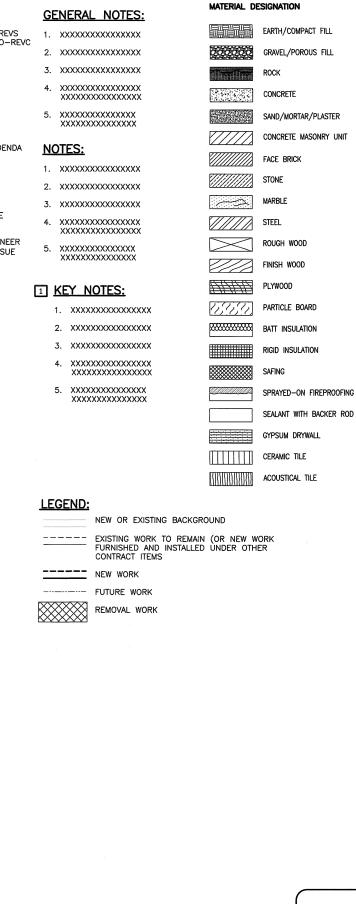
PAGE NO.	SHEET NO.	ADDENDUM NO.	SHEET TITLE
		GENE	RAL DRAWINGS
_	TC-001	_	COVER SHEET
_	TS-001	_	SIGNATURE AND ENGINEER SEALS
-	TL-001	_	LIST OF CONTRACT PLANS
1	G-001	_	GENERAL REFERENCE SYMBOLS
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3	LP-001	_	LOCATION PLAN
		STRUC	TURAL DRAWINGS
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5	S-002	_	ENLARGED SITE PLAN
6	S-003	-	STAGING AND HAUL ROAD PLAN
7	S-101	_	BATTERY 'A' AERATION TANKS - SAFETY RAILING PLAN & SECTIONS
8	S-102	· _	BATTERY 'B' AERATION TANKS - SAFETY RAILING PLAN & SECTIONS
9	S-103	=	BATTERY 'C' AERATION TANKS - SAFETY RAILING PLAN & SECTIONS
10	S-104	_	PRELIMINARY SETTLING TANKS - SAFETY RAILING PLAN
11	S-105	-	BATTERY 'A' AERATION TANKS - PARTIAL PLAN & DETAILS
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14	S-301	_	PHOTOGRAPHS
15	S-302	_	PHOTOGRAPHS
16	S-303	_	PHOTOGRAPHS



LAYER: G-ANNO-TITL

IF DRAWING IS NOT TO SCALE SCALE = NOT TO SCALE





TER RECLAMATION DISTRIC

ATER CHICAGO

Correct: Nav. P. CANA

Engineer of Structural - Architectural Design WAT GRE METROPOLITAN OF PLANT SYMBOL 15-265-3 G AROUND TANKS RECLAMATION PLA

Sheet Number

WATER

SAFETY

CONTRACT SAFETY RAILIN

REFERENCE

Page Number:

Sea

I	
100	ABBREVIATIONS
ABD ABV	Above
ABV	Acre
ADJ	Adjust
AS	Aerial Surveys
AGG	Aggregate
A	Air
AL	Alum
AM	Ammonia
L=	Arc Length
ARCH	Architect
ASSM	Assembly
ASPH	Asphalt
BB	Back to Back
BC	Back of Curb
BW	Back of Walk
N45° 34'22'	Bearings
BGN	Begin
BM	Benchmark
BIND	Binder
BIT	Bituminous
BO	Blow Off Bottom
BTM B/	Bottom of
BOW	Bottom of Wall
BRS	Brass
BRK	Brick
BBOX	Buffalo Box
BLDG	Building
CATV	Cable Television
CD	Carbon Dioxide
CIP	Cast Iron Pipe
СВ	Catch Basin
CC	Center to Center
CL	Centerline
CLE	Centerline to Edge
CLF	Centerline to Face
C	Centrate
Δ	Central Angle
CF	Chemical Feed
OUIOLD	0
CHSLD	Chiseled
СН	Chord Bearing
CH CE	Chord Bearing City Electric
CH CE CS	Chord Bearing City Electric City Street
CH CE CS CLY	Chord Bearing City Electric City Street Clay
CH CE CS CLY CP	Chord Bearing City Electric City Street Clay Clay Pipe
CH CE CS CLY CP	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out
CH CE CS CLY CP CO CLSD	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed
CH CE CS CLY CP CO CLSD CLID	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid
CH CE CS CLY CP CO CLSD CLID	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid Coat
CH CE CS CLY CP CO CLSD CLID	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid
CH CE CS CLY CP CO CLSD CLID CT COL	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid Coat Column
CH CE CS CLY CP CO CLSD CLID CT COL COMB	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid Coat Column Combination Concrete
CH CE CS CLY CP CO CLSD CLID CT COL COMB	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid Coat Column Combination
CH CE CS CLY CP CO CLSD CLID CT COL COMB CONC CBK	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid Coat Column Combination Concrete Concrete (block)
CH CE CS CLY CP CO CLSD CLID CT COL COMB CONC CBK CONN	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid Coat Column Combination Concrete Concrete (block) Construction
CH CE CS CLY CP CO CLSD CLID CT COL COMB CONC CBK CONN CONST	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid Coat Column Combination Concrete Concrete (block) Construction
CH CE CS CLY CP CO CLSD CLID CT COL COMB CONC CBK CONN CONST CONTD	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid Coat Column Combination Concrete Concrete (block) Connection Construction Continued
CH CE CS CLY CP CO CLSD CLID CT COMB CONC CONC CONST CONTD CONT CONTR COR	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid Coat Column Combination Concrete Concrete (block) Connection Construction Continued Continuous Contractor Corner
CH CE CS CLY CP CO CLSD CLID CT COL COMB CONC CBK CONST CONTD CONT CONT CONT COR	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid Coat Column Combination Concrete Concrete (block) Connection Construction Continued Contractor Corrugated
CH CE CS CLY CP CO CLSD CLID CT COMB CONC CBK CONST CONTD CONT CONT COR	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid Coat Column Combination Concrete Concrete (block) Connection Construction Continued Contractor Corrugated Corrugated Metal Pipe
CH CE CS CLY CP CO CLSD CLID CT COL COMB CONC CBK CONN CONST CONTD CONT COR	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid Coat Column Combination Concrete Concrete (block) Connection Construction Continued Contractor Corrugated Corrugated Metal Pipe Course
CH CE CS CLY CP CO CLSD CLID CT COL COMB CONC CBK CONN CONST CONTC CONT CONTC COR COR COR COR COR COR COR COR COR CO	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid Coat Column Combination Concrete Concrete (block) Connection Construction Continued Contractor Corrugated Corrugated Metal Pipe Course Cross Section
CH CE CS CLY CP CO CLSD CLID CT COL COMB CONC CBK CONN CONST CONTD CONT COR	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid Coat Column Combination Concrete Concrete (block) Connection Construction Continued Continuous Contractor Corrugated Corrugated Metal Pipe Course Cross Section Cuty Street City Street Clay Clay Clay Clay Clay Contactor Contractor Corrugated Corrugated Corruse Cross Section Cubic Yard
CH CE CS CLY CP CO CLSD CLID CT COL COMB CONC CBK CONN CONST CONTD CONT COR	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid Coat Column Combination Concrete Concrete (block) Connection Construction Continued Continuous Contractor Corregated Corrugated Corrugated Course Cross Section Cubic Yard Cuty Street City Street Clay Clay Clay Clay Contactor Corrugated Corrugated Course Cross Section Cubic Yard Culvert
CH CE CS CLY CP CO CLSD CLID CT COL COMB CONC CBK CONN CONST CONTD CONT COR	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid Coat Column Combination Concrete Concrete (block) Connection Construction Continued Continuous Contractor Corrugated Corrugated Metal Pipe Course Cross Section Cuty Street City Street Clay Clay Clay Clay Clay Contactor Contractor Corrugated Corrugated Corruse Cross Section Cubic Yard
CH CE CS CLY CP CO CLSD CLID CT COL COMB CONC CBK CONN CONST CONTD CONT COR	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid Coat Column Combination Concrete Concrete (block) Connection Construction Continued Continuous Contractor Corrugated Corrugated Metal Pipe Course Cross Section Culvert Curb & Gutter
CH CE CS CLY CP CO CLSD CLID CT COL COMB CONC CBK CONN CONST CONTD CONTC CONT CONT COR	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid Coat Column Combination Concrete Concrete (block) Connection Construction Continued Continuous Contractor Correy Corrugated Metal Pipe Course Cross Section Culvert Curb & Gutter Curb & Gutter
CH CE CS CLY CP CO CLSD CLID CT COL COMB CONC CBK CONN CONST CONTD CONT COR	Chord Bearing City Electric City Street Clay Clay Pipe Clean Out Closed Closed Lid Coat Column Combination Concrete Concrete (block) Connection Construction Continued Continuous Contractor Corrugated Corrugated Metal Pipe Course Cross Section Culvert Curb & Gutter

	ABBREVIATIONS
DETR	Detector
DIA	Diameter
DIFF	Diffuser
DIM	Dimension
DIST	District
DBL	Double
DN	Down
DR	Drainage
DI	Drainage Inlet or Drop Inlet
DRV	Driveway
DWG	Drawing
DIP	Duct
DIP	Ductile Iron Pipe
ESMT	Easement
EA	Each
E	East
EB	Eastbound
EOP	Edge of Pavement
ECL	Edge to Centerline
EE	Edge to Edge
ELEC	Electric
ELEC	Elevation
ENG	Engineer
ENTR	Engineer
EXC	Excavation
EXIST	Existing
LAIST	LAIGHING
FF	Face to Face
FP	Fence Post
FC	Ferric Chloride
FF	Finished Floor
FO	Fiber Optics
FFL	Finished Floor
FH	Fire Hydrant
FL	Flow Line
- FL	Foot
FB	Foot Bridge
FDN	Foundation
FLR	Floor
FR	Frame
FG	Frame & Grate
	Traine & Grate
GAL	Gallon
GLV	Galvanized
G	Gas Line
GD	Gas-Digester
GN	Gas-Natural
GV	Gas Valve
GVLT	Gas Vault
GB	Grade Break
GRT	Grate
GRVL	Gravel
GR	Grit
GND	Ground
GUT	Gutter
НН	Handhole
HD	Head
HDW	Headwall
HDUTY	Heavy Duty
HDPE	High Density Polyethylene
HPA	High Pressure Air
HWY	Highway
HORIZ	Horizontal
HC	Hypochlorite
INL	Inlet
INST	Installation
INV	Invert
IP	Iron Pipe
IR	Iron Rod

	ADDDEVIATIONS
JT	ABBREVIATIONS Joint
JB	Junction Box
LS	Landscaping
LT	Left
LP	Light Pole
LGT	Lighting
LF	Lineal Feet or Linear Feet
L	Liter
LNG	Longitudinal
LPA	Low Pressure Air
LO	Lubrication Oil
MACH MB	Machine Mail Box
MH	Manhole
MKR	Marker
MAX	Maximum
MAT	Material
MECH	Mechanical
MED	Median
M	Meter
MV	Meter Vault
MIN	Minimum
ML	Mixed Liquor
MIX	Mixture
MOD	Modified
N	North
NE	Northeast
NW	Northwest
NIC	Not in Contract
OLID	Open Lid
UNK	Other (Unknown)
ОН	Overhead
PAT	Pattern
PVD	Paved
PVMT	Pavement
PM	Pavement Marking
PED	Pedestal
PETRO	Petroleum
CLP	Pipe-Centerline
CRN	Pipe-Crown
INV	Pipe-Invert
PNT	Point
PC	Point of Curvature
PI	Point of Intersection
PRC	Point of Reverse Curvature
PT	Point of Tangency
POT	Point On Tangent
PLE	Pole
POLYETH	Polyethylene
L	Polymer Polymer
PVC PCC	Polyvinyl Chloride Portland Cement Concrete
PWR	Power
PP	Power Pole
PE	Private Entrance
PCR	Property Corner
PL	Property Line
PROP	Proposed
R	Radius
RR	Railroad
RRS	Railroad Spike
RPS	Reference Point Stake
	Treference i offic otake
RCCP	Reinforced Concrete Culvert Pipe
RCCP RCP	The state of the s
RCP REINF	Reinforced Concrete Culvert Pipe Reinforced Concrete Pipe Reinforcement
RCP	Reinforced Concrete Culvert Pipe Reinforced Concrete Pipe

ABBREVIATIONS RET Retaining RAS Return Activated Sludge RSL Return Sludge RT Right ROW Right-Of-Way RD Road	
RAS Return Activated Sludge RSL Return Sludge RT Right ROW Right-Of-Way RD Road	
RSL Return Sludge RT Right ROW Right-Of-Way RD Road	
RT Right ROW Right-Of-Way RD Road	
ROW Right-Of-Way RD Road	
RD Road	
DDV44 D	
RDWY Roadway	
RCK Rock	
RD Roof Drain	
TOOL Brain	
01411 0 1/4 1 1 1 1 1 1	
SMH Sanitary Manhole	
SC Scum	
SEC Section	
SEED Seeding	
SP Sewage-Primary Treated	
SR Sewage-Raw	
STT Sewage-Tertiary Treated	
COMB Sewer - Combined	
SANS Sewer - Sanitary	
STORM Sewer - Storm	
SH Sheet	
SHLD Shoulder	
SW Sidewalk	·
SIG Signal	
SL Sludge	
SWR Sludge & Waste Water Return	
SLC Sludge-Concentrated	
SLD Sludge-Digested	
SLP Sludge-Primary	
SLS Sludge-Secondary	
SB Sodium Bisulfite	
S South (or Steam)	
SE Southeast	
SW Southwest	
SPL Special	
SQFT Square Feet	
SQYD Square Yard	
STB Stabilized	
SS Stainless Steel	
SSP Stainless Steel Pipe	
STD Standard	
STA Station	
S Steam (or South)	
SCR Steam Condensate Return	
STL Steel	
SPBGR Steel Plate Beam Guardrail	
STMH Storm Manhole	
STY Story	
ST Street	
STR Structure	
SEN Subnatant	
SPN Supernatant	
SURF Surface	
SMK Survey Marker	
SIVIR Survey Iviai Rei	
T= Tangent	
TEL Telephone	
TEMP Temporary	
TBM Temporary Bench Mark	
TE Tertiray Effluent	
TD Tile Drain	
TIM Timber	
TB Thrust Block	
T/ Top of	
TOP Top (surface)	
TC Top of Curb	
TOW Top of Wall	
TOV Top of Valve	
TOV Top of Valve TS Traffic Signal	
TS Traffic Signal TSCB Traffic Signal Control Box	
TS Traffic Signal	

_	ABBREVIATIONS					
	TYP	Typical				
\dashv	USGS	U.S. Geological Survey				
1	UNDGND	Underground				
	UD	Under Drain				
-	USEL	Upstream Elevation Upstream Flowline				
\dashv	UTIL	Utility				
-	V	Valve Valve Box				
\dashv	VV	Valve Vault				
	VLT	Vault				
_	VEH VP	Vehicle Vent Pipe				
\dashv	VF	Vertical Curve				
	VCCP	Vitrified Ceramic Clay Pipe				
_	VCP	Vitrified Ceramic Pipe				
\dashv	V.I.F.	Verify in Field				
	WAS	Waste Activated Sludge				
\Box	WW	Wastewater Or Washwater				
\dashv	WP WAT	Water - Potable Water (supply)				
	wc	Water Cooling				
\Box	W	West (or With)				
\dashv	WO	With (or West) Without				
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METR	Designed by: VP	Drawn by: AJW	Drawing code:

CONTRACT 15-265-3D
SAFETY RAILING AROUND TANKS
CALUMET WATER RECLAMATION PLANT

ABBREVIATIONS

Sheet Number:
G-002

Page Number: 2

| METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO | Designed by: | Checked by: | Dote: | Dote: | Dote: | Dote: | Dote: | Down by: | Reviewed by: | Scale: | Drawn by: | Reviewed by: | Scale: | Docest | Docest

CONTRACT 15-265-3D
SAFETY RAILING AROUND TANKS
CALUMET WATER RECLAMATION PLANT

LOCATION PLAN

Sheet Number:

LP-001

Page Number: 3

STRUCTURAL ABBREVIATIONS

SIRUCIURAL	_ ADDREVIATIONS
۱'	ADDITIONAL ADDITIONAL ADJACENT ALTERNATE ARCHITECT BEAM BEARING BOTTOM BOTTOM OF BUILDING CENTER TO CENTER CENTER LINE CHICAGO CITY DATUM COLUMN CONCRETE CONTROL JOINT CLEARANCE CONCRETE MASONRY UNIT CONSTRUCTION JOINT CONSTRUCTION JOINT CONSTRUCTION JOINT CONTINUED/CONTINUOUS DETAIL DOWEL DIAMETER DRAWING EACH FACE ELEVATION EQUAL EACH WAY EXISTING EXPANSION EXPANSION FOUNDATION FOOT, FEET FOOTING GAGE, GAUGE HORIZONTAL HIGH POINT HAND RAIL INSIDE DIMENSION INSIDE FACE INCH, INCHES INTERIOR JOINT KIPS FOUND LINEAR FOOT LONG LEG HORIZONTAL LONG LEG VERTICAL
ADJ.	ADJACENT
ALT	ALTERNATE
ARCH.	ARCHITECT
BRG.	BEARING
BOT	ВОТТОМ
B/	BOTTOM OF
BLDG: ······	CENTER TO CENTER
Ç	CENTER LINE
Č.C.D.	CHICAGO CITY DATUM
COL:	COLUMN
CONC.	CONTROL JOINT
CLR.	CLEARANCE
CMU	CONCRETE MASONRY UNIT
CONSI. JI.	CONTINUED/CONTINUOUS
DET.	DETAIL
DWL.:	DOWEL
DIA. DWG	DRAWING
E.F.	EACH FACE
EL	ELEVATION
EQ. F.W	EQUAL
EXIST.	EXISTING
EXP.:	EXPANSION
EXP. JT.	EXPANSION JOINT
FDN.	FOUNDATION
FT	FOOT, FEET
FTG.	FOOTING
HOR	HORIZONTAL
HP	HIGH POINT
HR.	HAND RAIL
ID.·····	INSIDE DIMENSION
iN.:	INCH, INCHES
INT.	INTERIOR
JI	NIDO
KSF	KIPS PER SQ. FT.
KSI	KIPS PER SQ. IN.
LB	POUND LINEAR FOOT
LLH	LONG LEG HORIZONTAL
LLV.	LINEAR FOOT LONG LEG HORIZONTAL LONG LEG VERTICAL LOW POINT MAXIMUM MECHANICAL MEZZANINE MANUFACTURER MINIMUM MISCELLANIFOLIS
LP	LOW POINT
MECH:·····	MECHANICAL
MEZ.	MEZZANINE
MFR	MANUFACTURER
MISC: ······	MISCELLANEOUS
MIN. MISC: NO., # NTS	MISCELLANEUUS NUMBER NOT TO SCALE OUTSIDE DIAMETER OPPOSITE POUNDS PER CUBIC FOOT POUNDS PER CUBIC INCH
NTS	NOT TO SCALE
OD. OPP	OUTSIDE DIAMETER
PCF.	POUNDS PER CUBIC FOOT
	PLATE
PSF.	POUNDS PER LINEAR FOOT POUNDS PER SQAURE FOOT
QTY	QUANTITY
R	RADIUS REINFORCE, (D), (ING)
REINF	REINFORCE, (D), (ING)
REQ'D. SCH	SCHEDULE
SECT. SHT.	SECTION
SHT.:	SHEET
SIM. SPEC.	SPSECIFICATION
SQ. INSQ FT SSQ. FT S.S	SQAURE
SQ IN	SQUARE INCH
SQ FI S S	SUAURE FEET STAINLESS STEFT
STL. STR.·····	STAINLESS
STR.:	STRUCTURAL
SYM. STD.	STANDARD
T/	TOP OF
T/CONC	TOP OF CONCRETE TOP OF FOOTING TOP OF STEEL
T/FTG.	TOP OF FOOTING
T/STL. · · · · · · · · · · · · · · · · · · ·	TOP OF STEEL
I/WALL	TOP OF WALL TOP AND BOTTOM THROUGH TYPICAL
THRU	THROUGH
TYP	TYPICAL
U.N.O. VERT	UNLESS NOTED OTHERWISE VERTICAL
۷.I.F.	VERTICAL VERIFY IN FIELD
V.I.F. W/	WITH
w /o	WITHOUT
W.W.F.·································	WELDED WIRE FABRIC WORK POINT
**1 .	WONA FORM

GENERAL NOTES

- 1. THESE NOTES SHALL APPLY TO ALL DRAWINGS AND THEY ARE SUPPLEMENTED BY ADDITIONAL NOTES ON INDIVIDUAL SHEETS AS
- 2. THE CONTRACTOR SHALL VISIT AND INSPECT THE SITE TO ASSESS THE EXTENT OF WORK.
- 3. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING STRUCTURES, UTILITIES, AND EQUIPMENT, AND TO MAINTAIN UNINTERRUPTED PLANT OPERATION. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY SUPPORTS, BRACING, SHEETING, AND SHORING AS NECESSARY TO PROTECT AND MAINTAIN ALL STRUCTURES, PIPING, EQUIPMENT AND APPURTENANCES. ANY DAMAGE TO THE EXISTING FACILITIES RESULTING FROM THE ACTIONS OR LACK OF ACTION BY THE CONTRACTOR SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT HIS EXPENSE.
- 4. WHERE WORK APPEARS TO BE VAGUE ON THE CONTRACT DOCUMENTS OR IN CONFLICT BETWEEN CONTRACT DOCUMENTS (DRAWINGS & SPECIFICATIONS), THE CONTRACTOR IS TO REQUEST CLARIFICATION AND OBTAIN WRITTEN EXPLANATION AND/OR INTERPRETATION FROM THE ENGINEER PRIOR TO THE START OF WORK. CONTINUED CONSTRUCTION OF THE AREA IN VAGUENESS OR CONFLICT SHALL BE AT THE CONTRACTOR'S OWN RISK.
- 5. INSTALL SAFETY RAILING AT LOCATIONS SHOWN ON THE DRAWINGS IN ACCORDANCE WITH THE NOTES ON THE DRAWINGS, THESE GENERAL NOTES AND THE SPECIFICATIONS.
- 6. INSTALL SWING GATES AND DAVIT BASES AT LOCATIONS SHOWN ON THE DRAWINGS.
- 7. SAFETY RAILING LENGTHS INDICATED ON DRAWINGS AND IN SPECIFICATIONS FOR THE FABRICATION, INSTALLATION, COATING, PAINTING, DEMOLITION AND/OR UNIT PRICE PAYMENT ARE LINEAR FEET OF A COMPLETE STEEL SAFETY RAILING SYSTEM INCLUDING A TOP HORIZONTAL RAIL, AN INTERMEDIATE HORIZONTAL RAIL, POSTS, POST BASES, POST ANCHORS, SPECIAL CONDITIONS, END RAIL EXTENSIONS AND ALL RELATED SAFETY RAILING APPURTENANCES.
- 8. ALL DIMENSIONS, LOCATIONS AND ARRANGEMENTS OF SAFETY RAILING SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED WHERE NEEDED FOR LAY OUT OF THE SAFETY RAILING.
- 9. DIMENSIONS SHALL NOT BE SCALED OFF OF THE DRAWINGS.
- 10. ALL EXISTING CONDITIONS SHALL BE FIELD VERIFIED BEFORE FABRICATION OF SAFETY RAILING, INCLUDING BUT NOT LIMITED TO RELEVANT DIMENSIONS, ELEVATIONS AND ARRANGEMENT OF THE STRUCTURES, WALKWAYS, STEPS, EXISTING SAFETY RAILING, EXPANSION JOINTS, EQUIPMENT, OBSTRUCTIONS AND TYPICAL AND NON-TYPICAL CONDITIONS.
- 11. ALL CONDITIONS ARE NOT SHOWN ON THE DRAWINGS OR PHOTOGRAPHS. CONTRACTOR SHALL PREPARE LAYOUT FOR THESE CONDITIONS FOR APPROVAL BY ENGINEER.
- 12. ALL CONCRETE ANCHOR BOLTS ARE TO BE INSTALLED IN SOUND CONCRETE. REPAIR CONCRETE PER DRAWING S-202 AS REQUIRED OR DIRECTED FOR THE INSTALLATION OF SAFETY RAILING AND AS DIRECTED BY THE DISTRICT ENGINEER ON A UNIT
- 13. SAFETY RAILING SHALL BE PROVIDED ALONG ALL OPEN SIDES OF WALKWAYS, ROADWAYS, PLATFORMS, AND STEPS SHOWN ON
- 14. EXISTING SAFETY RAILING SHALL NOT BE MODIFIED UNDER THIS CONTRACT, UNLESS NOTED OTHERWISE.
- 15. EXISTING SAFETY RAILING SHALL REMAIN IN PLACE UNLESS NOTED OTHERWISE.
- 16. SHOP DRAWINGS SHALL BE FIELD VERIFIED FOR COMPLETENESS AND ACCURACY BEFORE FABRICATION OF THE SAFETY RAILING.
- 17. PROVIDE SMOOTH TRANSITIONS BETWEEN SAFETY RAILING SECTIONS.
- 18. DO NOT EXTEND SAFETY RAILING ENDS INTO WALKWAYS WHERE PROJECTION WOULD CREATE A HAZARD.
- 19. TERMINATE SAFETY RAILING WHERE THE SAFETY RAILING WOULD PREVENT OPERATION OF EQUIPMENT, UNLESS DIRECTED
- 20. TERMINATE SAFETY RAILINGS AT EQUIPMENT WHERE THE EQUIPMENT PROVIDES AN EFFECTIVE FALL PROTECTION BARRIER, OR AS
- 21. SAFETY RAILING SECTIONS SHALL BE FULLY WELDED CONSTRUCTION AND FABRICATED OF 1-1/2 INCH DIAMETER SCHEDULE 40 STEEL PIPE (1.9" O.D.).
- 22. SAFETY RAILING SHALL BE HOT-DIP-GALVANIZED AFTER FABRICATION.
- 23. DISCONTINUE SAFETY RAILING SECTIONS AT EXPANSION JOINTS IN THE CONCRETE STRUCTURE AND CONTINUE THE SAFETY RAILING AFTER THE EXPANSION JOINTS.
- 24. PROVIDE MAXIMUM OF 4 INCH GAP BETWEEN THE ENDS OF SAFETY RAILING SECTIONS.
- 25. DO NOT USE EXPANSION SLEEVES BETWEEN SECTIONS.
- 26. SHOP ASSEMBLE SAFETY RAILING SECTIONS IN LARGEST PRACTICAL SIZES FOR DELIVERY TO SITE.
- 27. REMOVE PLANTS AND VEGETATION AS REQUIRED FOR INSTALLATION OF SAFETY RAILING.
- 28. THE SITE SHALL BE RESTORED AS FOUND.
- 29. THE SUM OF THE SAFETY RAILING LENGTHS ON THE PLAN DRAWINGS ADD UP TO APPROXIMATELY 18,455 LINEAR FEET. THE LUMP SUM BID SHALL BE FOR 18,455 LINEAR FEET OF SAFETY RAILING, ANY SAFETY RAILING REQUIRED BEYOND THAT LENGTH WILL BE PAID ON A UNIT PRICE BASIS.

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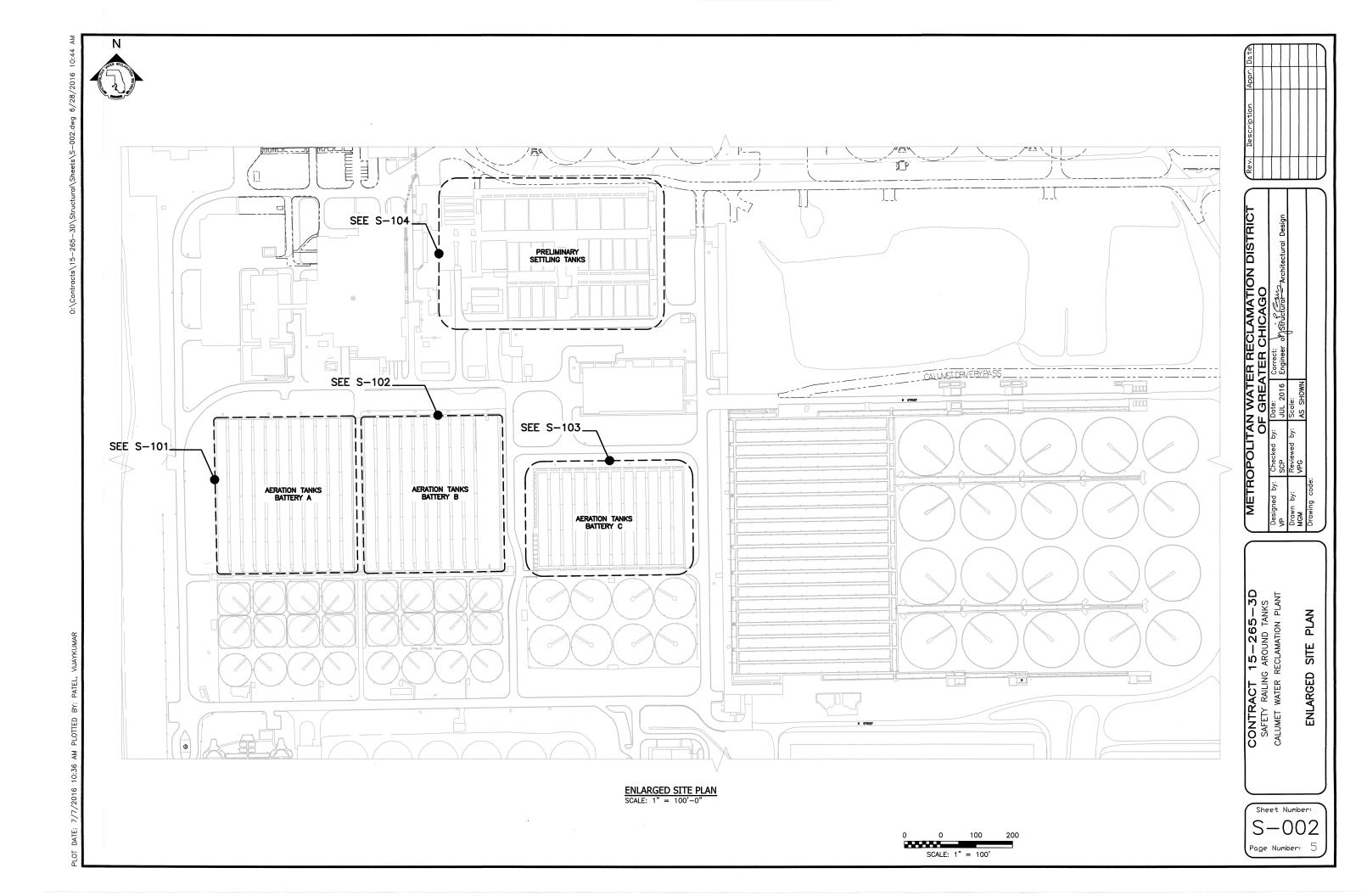
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NOTES

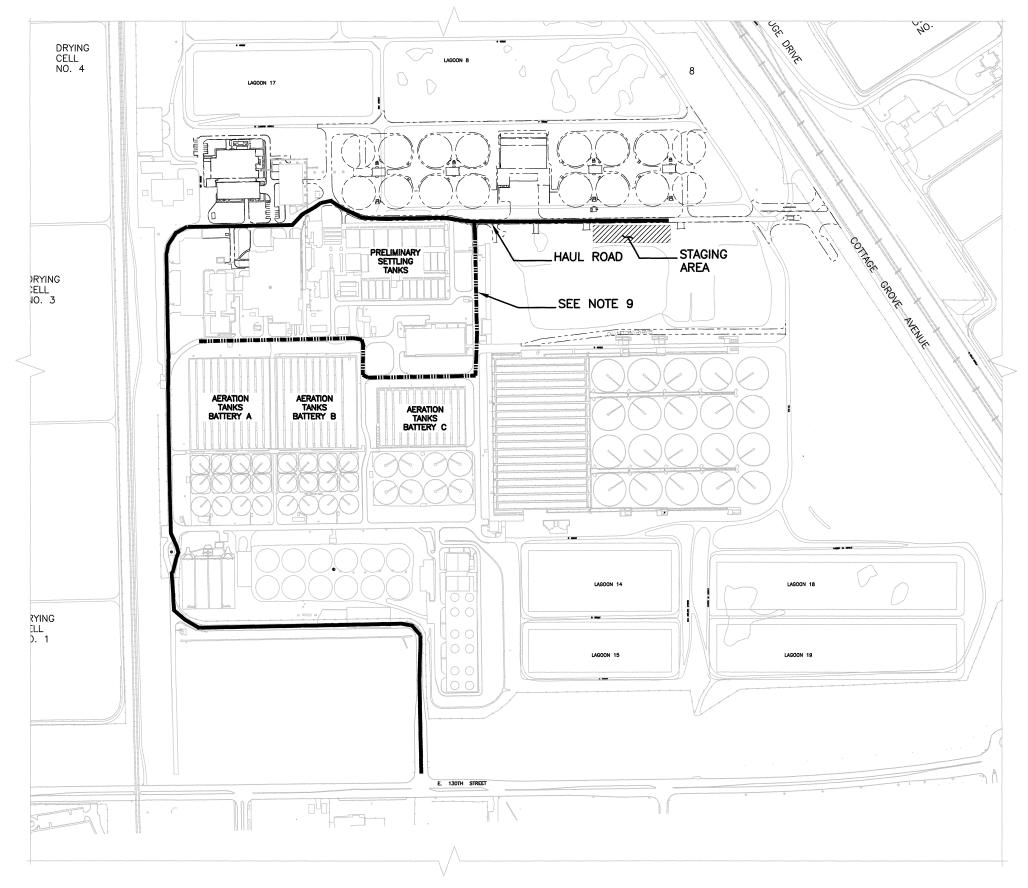
STRUCTURAL

Sheet Number -00 Page Number:

CONTRACT 15-265-SAFETY RAILING AROUND TANI CALUMET WATER RECLAMATION P







NOTES

- THE CONTRACTOR MUST PLAN HIS CONSTRUCTION OPERATION SO THAT MATERIAL, EQUIPMENT, SUPPLIES AND WORKING PERSONNEL NECESSARY TO DO THE WORK MUST ENTER AND LEAVE THE SITE VIA GATE AND ROUTES AS DIRECTED BY THE DISTRICT.
- 2. CONSTRUCTION OF HAUL ROADS AND USE OF EXISTING ROADS REQUIRE APPROVAL OF THE DISTRICT.
- 3. STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED IF NEEDED AT POINTS OF CONSTRUCTION INGRESS.
- PRIOR TO CONSTRUCTION OF HAUL ROADS IF REQUIRED CONTRACTOR SHALL PROVIDE EROSION CONTROL MEASURE PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL KEEP ALL ACCESS ROADWAYS FREE OF OBSTRUCTIONS AND DEBRIS AT ALL TIMES, DUST CONTROL SHALL BE PROVIDED AT ALL TIMES.
- 6. MAINTENANCE OF HAUL ROADS IS INCIDENTAL TO THE CONTRACT.
- 7. HEAVY EQUIPMENT SHALL NOT BE OPERATED WITHIN 20 FEET OF THE AERATION TANKS AND CHANNELS.
- 8. THE CONTRACTOR'S FIELD OFFICES, FACILITIES, AND STAGING AREA SHALL BE LOCATED ONLY AS APPROVED BY THE ENGINEER.
- 9. ONLY USE DASHED ROUTE AS SHOWN FOR MATERIAL AND/OR LABORER TRANSPORT BETWEEN STAGING AREA AND AERATION TANKS. ALL OTHER TRANSPORT SHALL USE HAUL ROAD AS SHOWN UNLESS NOTED OTHERWISE.

STAGING AND HAUL ROAD PLAN SCALE: 1" = 200'-0"



Sheet Number:
S-003
Page Number: 6

15-265-3 NG AROUND TANKS RECLAMATION PLA

CONTRACT 1
SAFETY RAILING ,
CALUMET WATER RE

PLAN

ROAD

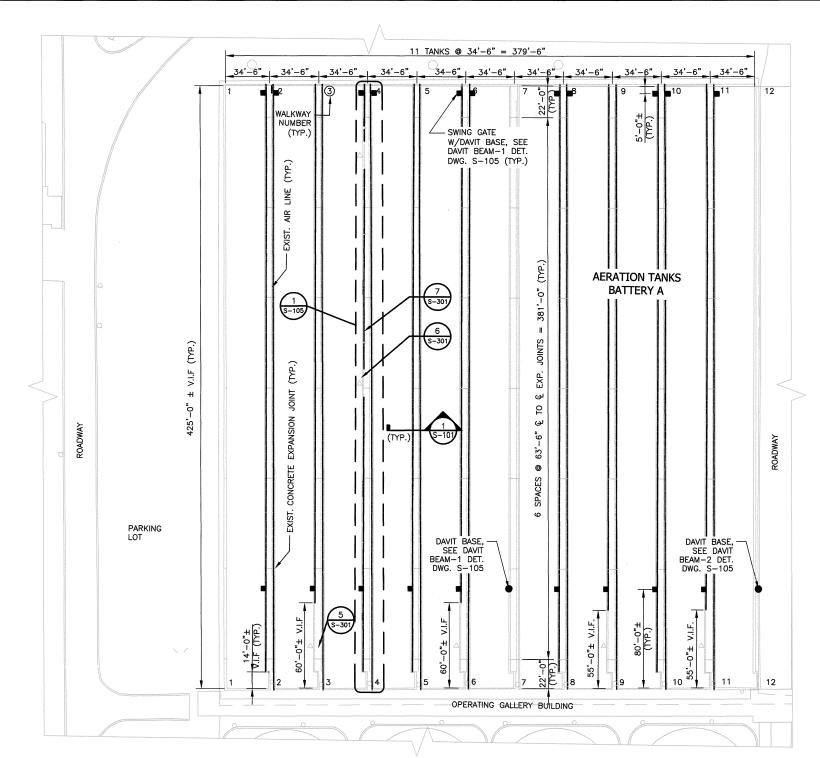
HAUL

AND

STAGING

RECLAMATION DISTRICT R CHICAGO

METROPOLITAN WAT OF GRE/



SAFETY RAILING PLAN - BATTERY "A" AERATION TANKS SCALE: NOT TO SCALE

LEGEND:

NEW OR EXISTING BACKGROUND

EXISTING WORK TO REMAIN (OR NEW WORK FURNISHED AND INSTALLED UNDER OTHER CONTRACT ITEMS

- ___ NEW WORK

---- FUTURE WORK

REMOVAL WORK

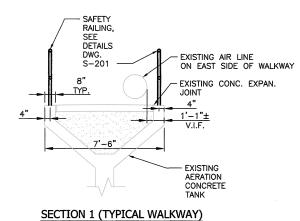
EXISTING SAFETY RAILING NEW SAFETY RAILING

EXISTING METER STATION TO REMAIN

EXISTING POWER RECEPTACLE TO REMAIN

NEW SWING GATE WITH DAVIT BASE ON WALKWAY

NEW DAVIT BASE



BATTERY "A" NOTES:

- TOTAL LENGTH OF SAFETY RAILING, INCLUDING SWING GATES, TO BE FABRICATED & INSTALLED AT BATTERY "A" IS 7,310 LINEAR FEET.
- TOTAL LENGTH OF EXISTING ANGLE RAILING TO BE REMOVED AT BATTERY "A" IS 31 LINEAR FEET.
- 3. TOTAL NUMBER OF SWING GATE WITH DAVIT BASE LOCATIONS IS 20.
- 4. TOTAL NUMBER OF DAVIT BASE WITHOUT SWING GATE LOCATIONS IS 2.
- 5. ALL DAVIT BASES SHALL BE FLUSH MOUNTED TYPE.
- 6. FLUSH MOUNTED DAVIT BASES ARE TO BE CAST IN NEW CONCRETE DAVIT BEAMS PER DETAILS ON DRAWING S-105.
- 7. TOTAL NUMBER OF NEW CONCRETE DAVIT BEAMS TO BE INSTALLED IS 17 CONSISTING OF 16 BEAM-1 AND 1 BEAM-2.
- 8. EXISTING ELECTRICAL OUTLETS, ELECTRICAL CONDUITS AND METER STATIONS SHALL REMAIN UNLESS NOTED OTHERWISE.
- 9. SEE GENERAL SAFETY RAIL NOTES ON DRAWING S-001.
- 10. SEE TYPICAL SAFETY RAIL AND SWING GATE DETAILS ON DRAWING S-201.
- 11. SEE DRAWING S-301 FOR PHOTOGRAPHS OF EXISTING CONDITIONS.

SCALE: 3/8" = 1'-0"

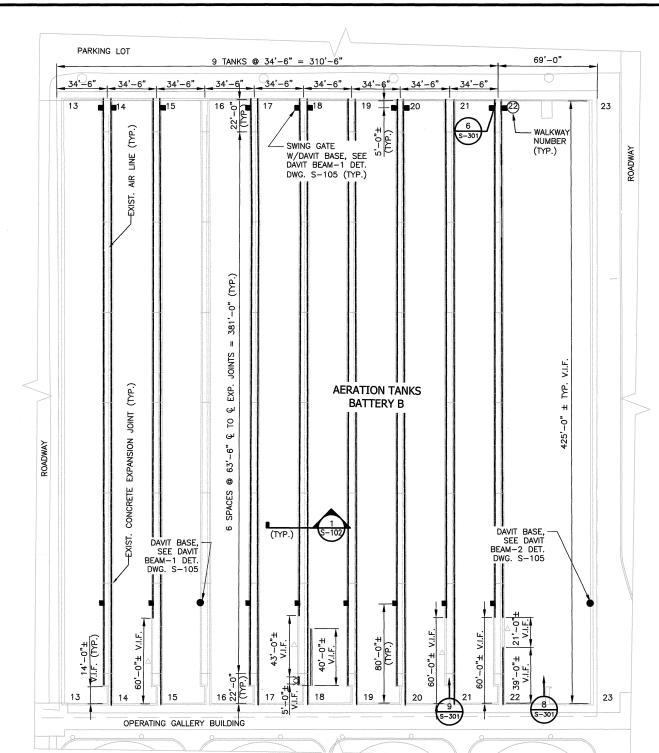
METROPOLITAN WATER RECLAMATION DISTRIC
OF GREATER CHICAGO

2016

TANKS – CONTRACT 15-265-3D
SAFETY RAILING AROUND TANKS
CALUMET WATER RECLAMATION PLANT BATTERY 'A' AERATION T SAFETY RAILING PLAN &

Sheet Number:

Page Number:



LEGEND:

NEW OR EXISTING BACKGROUND

EXISTING WORK TO REMAIN (OR NEW WORK FURNISHED AND INSTALLED UNDER OTHER CONTRACT ITEMS

____ NEW WORK

FUTURE WORK

REMOVAL WORK

EXISTING SAFETY RAILING

NEW SAFETY RAILING

 $\frac{\times \times \times \times \times}{}$ POST & CHAIN RAILING REMOVAL WORK ______ (2) EXISTING CONDUITS ON TOP OF 8" WIDE

CONCRETE TANK WALL - RELOCATE TO NEW SAFETY RAILING

SAFETY RAILING PLAN - BATTERY "B" AERATION TANKS SCALE: NOT TO SCALE

 \triangle EXISTING METER STATION TO REMAIN

EXISTING POWER RECEPTACLE TO REMAIN

NEW SWING GATE WITH DAVIT BASE ON WALKWAY

NEW DAVIT BASE

SAFETY
RAILING,
SEE
DETAILS
DWG.
S-201
ON EAST SIDE OF WALKWAY

BY
TYP.

4"

1'-1"±
V.I.F.

7'-6"

EXISTING
AERATION
CONCRETE
TANK

SECTION 1 (TYPICAL WALKWAY)
SCALE: 3/8"=1'-0"

BATTERY "B" NOTES:

- TOTAL LENGTH OF SAFETY RAILING, INCLUDING SWING GATES, TO BE FABRICATED & INSTALLED AT BATTERY "B" IS 6,481 LINEAR FEET.
- 2. TOTAL NUMBER OF SWING GATE WITH DAVIT BASE LOCATIONS IS 18.
- 3. TOTAL NUMBER OF DAVIT BASE WITHOUT SWING GATE LOCATIONS IS 2.
- 4. ALL DAVIT BASES SHALL BE FLUSH MOUNTED TYPE.
- 5. FLUSH MOUNTED DAVIT BASES ARE TO BE CAST IN NEW CONCRETE DAVIT BEAMS PER DETAILS ON DRAWING S-105.
- 6. TOTAL NUMBER OF NEW CONCRETE DAVIT BEAMS TO BE INSTALLED IS 16 CONSISTING OF 15 BEAM-1 AND 1 BEAM-2.
- 7. SEE GENERAL SAFETY RAIL NOTES ON DRAWING S-001.
- 8. EXISTING ELECTRICAL OUTLETS, ELECTRICAL CONDUITS AND METER STATIONS SHALL REMAIN UNLESS NOTED OTHERWISE.
- PROVIDE TEMPORARY SUPPORTS FOR ELECTRICAL OUTLETS, ELECTRICAL CONDUITS AND METER STATIONS SUPPORTED BY RAILING TO BE REMOVED AND REPLACED. ATTACH TO REPLACEMENT SAFETY RAILING.
- 10. SEE TYPICAL SAFETY RAILING DETAILS ON DRAWING S-201.
- 11. SEE DRAWING S-301 FOR PHOTOGRAPHS OF EXISTING CONDITIONS.

CONTRACT 15—265—3D
SAFETY RAILING AROUND TANKS
CALUMET WATER RECLAMATION PLANT
ATTERY 'B' AERATION TANKS —
ETY RAILING PLAN & SECTIONS

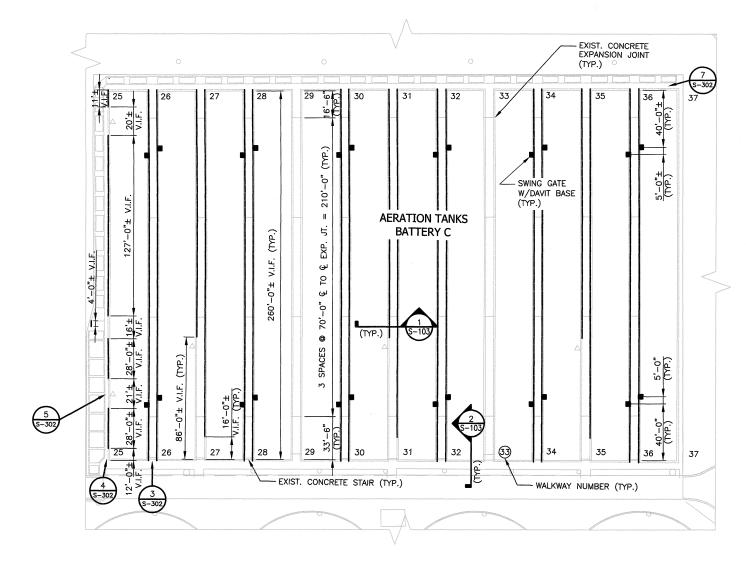
METROPOLITAN WATER RECLAMATION DISTRICTOR OF GREATER CHICAGO

2016

Sheet Number: S-102

2 1 0 2 4 6 SCALE: 3/8" = 1'-0"





SAFETY RAILING PLAN - BATTERY "C" AERATION TANKS SCALE: NOT TO SCALE

LEGEND:

NEW OR EXISTING BACKGROUND

EXISTING WORK TO REMAIN (OR NEW WORK FURNISHED AND INSTALLED UNDER OTHER CONTRACT ITEMS

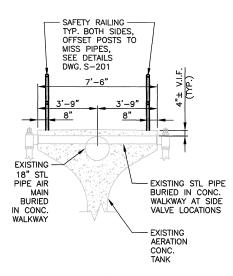
NEW WORK

----- FUTURE WORK REMOVAL WORK

EXISTING SAFETY RAILING NEW SAFETY RAILING

EXISTING POWER RECEPTACLE TO REMAIN

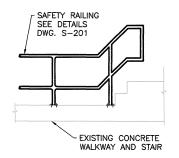
■ NEW SWING GATE WITH DAVIT BASE ON WALKWAY



SECTION 1 (TYPICAL WALKWAY)

SCALE: 3/8"=1'-0"

WALKWAY NUMBERS: 26, 27, 28, 30, 31, 32,

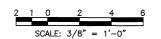


SECTION 2 (TYPICAL STAIR AT SOUTH END)

WALKWAY NUMBERS: 26, 28, 30, 32, 34, 36

BATTERY "C" NOTES:

- 1. TOTAL LENGTH OF SAFETY RAILING, INCLUDING SWING GATES, TO BE FABRICATED & INSTALLED AT BATTERY "C" IS 4,568 LINEAR FEET.
- 2. TOTAL NUMBER OF SWING GATE WITH DAVIT BASE LOCATIONS IS 24.
- 3. ALL DAVIT BASES SHALL BE TOP MOUNTED TYPE.
- 4. TOP MOUNTED DAVIT BASES ARE TO BE ANCHORED ON TOP OF EXISTING CONCRETE WALKWAY AS SHOWN ON DWG. S-201.
- 5. EXISTING ELECTRICAL OUTLETS, ELECTRICAL CONDUITS AND METER STATIONS SHALL REMAIN UNLESS NOTED OTHERWISE.
- 6. EXISTING PIPING, VALVES, PLATES, GRATES, FLANGES SHALL REMAIN, UNLESS
- 7. SEE GENERAL SAFETY RAIL NOTES ON DRAWING S-001.
- 8. SEE TYPICAL SAFETY RAIL AND SWING GATE DETAILS ON DRAWING S-201.
- 9. SEE DRAWING S-302 FOR PHOTOGRAPHS OF EXISTING CONDITIONS.



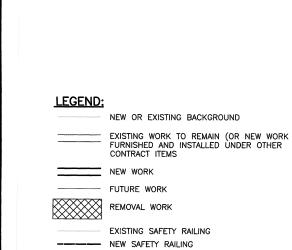


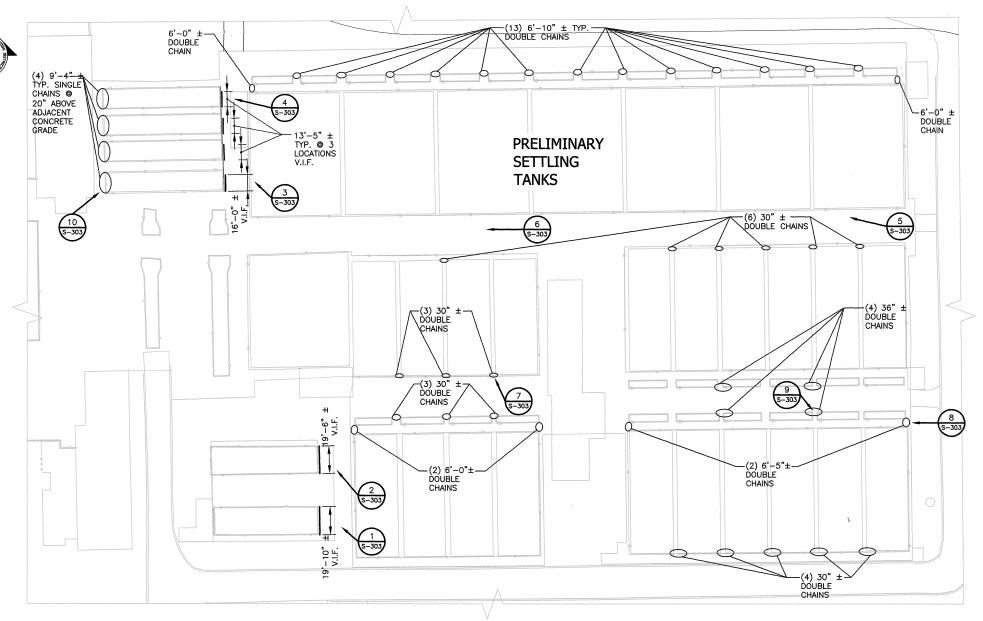
CONTRACT 15-265-3D SAFETY RAILING AROUND TANKS CALUMET WATER RECLAMATION PLANT BATTERY 'C' AERATION 'S SAFETY RAILING PLAN &

Sheet Number:

Page Number:







<u>SAFETY RAILING PLAN - PRELIMINARY SETTLING TANKS</u>
SCALE: NOT TO SCALE

PRELIMINARY SETTLING TANKS NOTES:

- 1. TOTAL LENGTH OF HANDRAILS TO BE FABRICATED & INSTALLED AT PRELIMINARY SETTLING TANKS IS 96 LINEAR FEET.
- 2. TOTAL LENGTH OF CHAINS TO BE FABRICATED & INSTALLED AT PRELIMINARY SETTLING TANKS IS 400 LINEAR FEET.
- 3. SEE GENERAL SAFETY RAIL NOTES ON DRAWING S-001.
- 4. INSTALL DOUBLE CHAIN ACROSS OPENING UNLESS NOTED OTHERWISE.
- 5. DIMENSIONS NEXT TO INDICATED CHAIN LOCATIONS ARE APPROXIMATE
- 6. SEE TYPICAL SAFETY RAIL AND CHAIN DETAILS ON DRAWING S-201.
- 7. SEE DRAWING S-303 FOR PHOTOGRAPHS OF EXISTING CONDITIONS.

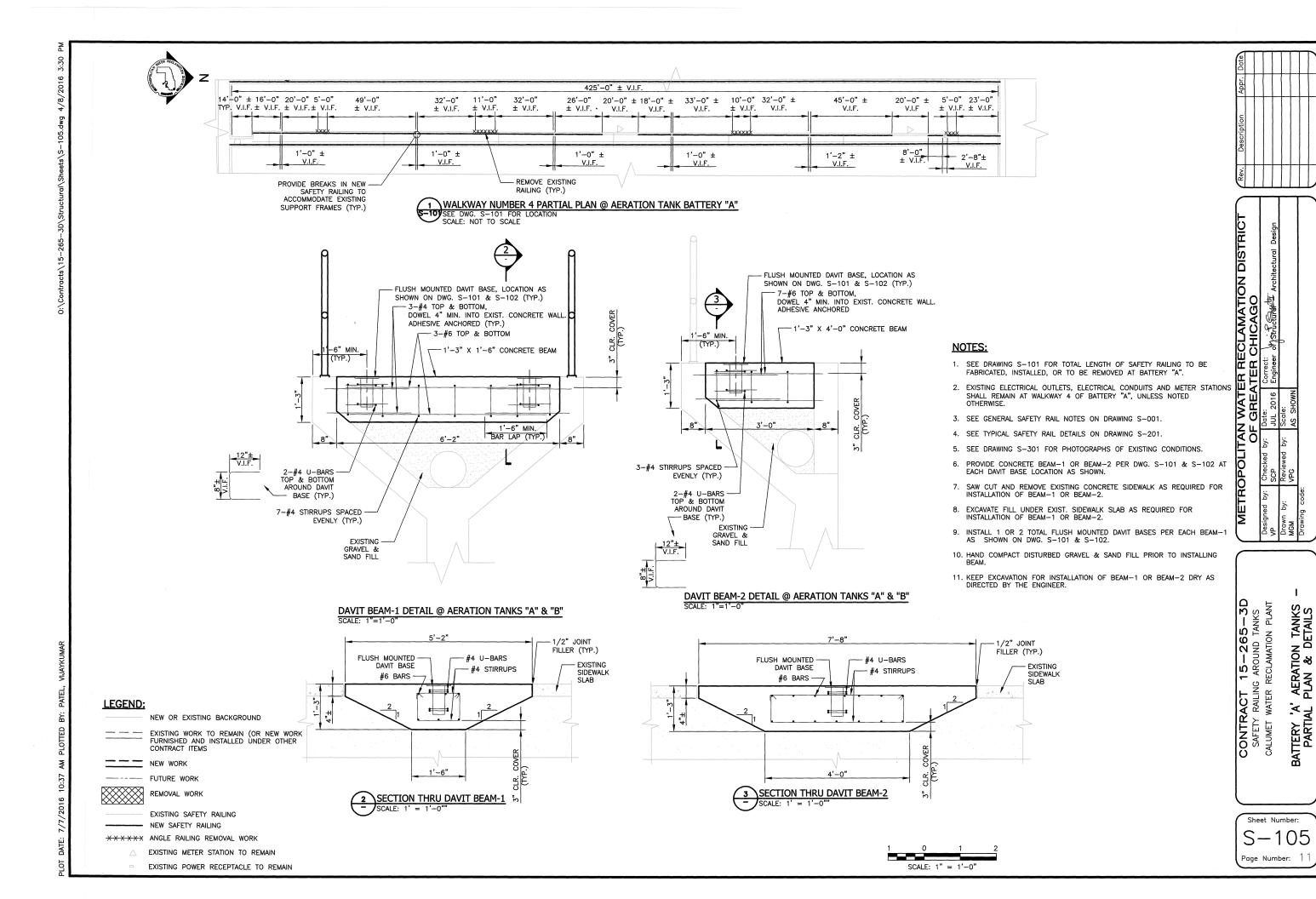
METROPOLITAN WATER RECLAMATION DISTRIC
OF GREATER CHICAGO

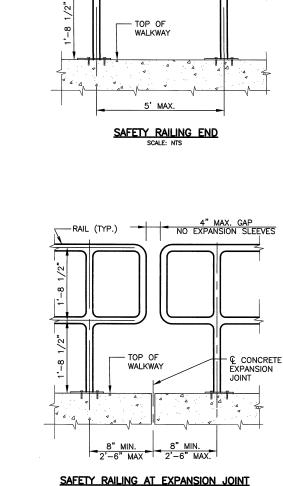
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SETTLING TANKS RAILING PLAN PRELIMINARY SAFETY

S - 104

CONTRACT 15-265-3D SAFETY RAILING AROUND TANKS CALUMET WATER RECLAMATION PLANT





-RAIL (TYP.)

TOP MOUNTED SAFETY RAILING (TYPICAL UNLESS NOTED)

-RAIL (TYP.)

MITER, COPE, AND

WELD ALL AROUND

MAX. SPACING

4" MAX. GAP
NO EXPANSION SLEEVES

POSTS AT 5'-0" C/C

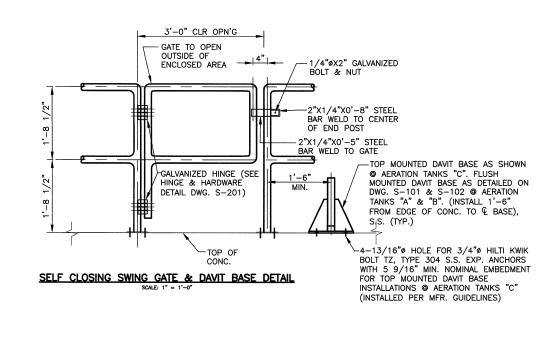
ROUND CORNER

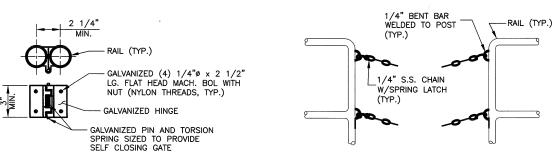
R=2" MAX, OR

(TYP. FOR ALL BENDS)

END POST

MITER JOINT



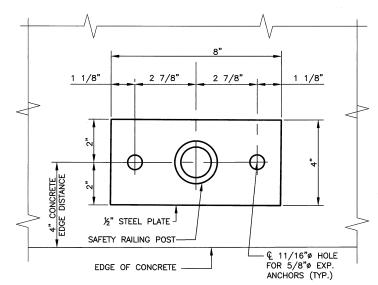


HINGE & HARDWARE DETAILS

SCALE: 3"=1'-0"

CHAIN GATE DETAIL (TYP.)

SCALE: 1"=1'-0"



SECTION A SCALE: 6"=1'-0"

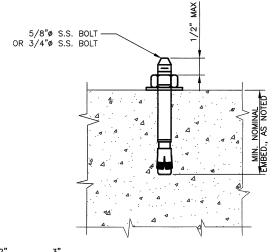
NOTES:

- ALL RAILS AND POSTS SHALL BE 1 1/2" NOMINAL DIAMETER PIPE SCHEDULE 40 STEEL PIPE, 1.9" OUTSIDE DIAMETER, UNLESS NOTED OTHERWISE.
- 2. ALL PLATES AND BARS SHALL BE ASTM A36 STEEL.
- ALL SAFETY RAILING ASSEMBLIES SHALL BE HOT—DIP GALVANIZED AFTER FABRICATION.
- 4. ALL SAFETY RAILING SHALL BE UNIFORM IN APPEARANCE AND LOOK LIKE THEY COME FROM SAME MANUFACTURER.
- EXPANSION ANCHORS SHALL BE 5/8"

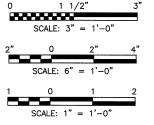
 MILTI KWIK BOLT TZ, TYPE 304 STAINLESS

 STEEL WITH 4 7/16" MINIMUM NOMINAL EMBEDMENT, INSTALLED PER

 MANUFACTURER GUIDELINES, UNLESS NOTED OTHERWISE.
- 6. MAXIMUM AMOUNT OF EXPOSED THREAD ABOVE ANCHOR BOLT NUT SHALL NOT EXCEED 1/2".
- ALL WELDING SHALL COMPLY WITH THE PROVISIONS OF CODE FOR WELDING IN BUILDING CONSTRUCTION D1.0 OF THE AMERICAN WELDING SOCIETY, LATEST EDITION. TYPE E60 WELD RODS SHALL BE USED IN THE WELDING OPERATIONS
- 8. ALL EXPOSED PIPE ENDS SHALL BE CAPPED.
- 9. WHERE POSSIBLE, THE MINIMUM SHOP FABRICATED LENGTH SHALL BE 20 FEET.
- 10. THE CONTRACTOR SHALL SUBMIT COMPLETE SHOP DETAIL AND ERECTION DRAWING FOR APPROVAL BY THE ENGINEER.
- 11. SEE PLANS AND/OR SPECIFICATIONS FOR TYPE OF MOUNTING.
- ALL RAILINGS SHALL HAVE A MINIMUM OF 3" CLEARANCE BETWEEN RAILING AND ANY OTHER OBJECT.
- 13. SAFETY RAILING ARE SHOWN ON PLANS ONLY EXCEPT SOME SECTIONS MAY ALSO SHOW HANDRAILS IN ELEVATIONS.
- 14. RAILING SHALL ALWAYS BE TOP MOUNTED UNLESS NOTED OTHERWISE.
- 15. PROVIDE CHAIN GATES AS DIRECTED BY THE ENGINEER.
- 16. SEE GENERAL NOTES ON DRAWING S-001.
- 17. 90 DEGREE MITER JOINTS MAY BE USED IN LIEU OF ROUND CORNERS AT SAFETY RAILING ENDS.
- 18. PROVIDE APPROVED GALVANIZED HINGE AND HARDWARE TO MAKE SWING GATE SELF CLOSING. GATE SHALL SWING OPEN TOWARD WALKWAY.
- 19. PROVIDE 1/16" NEOPRENE GASKET BETWEEN STAINLESS STEEL SURFACES IN CONTACT WITH OTHER DISSIMILAR METALS.



BOLTS DETAIL





Sheet Number: S-201Page Number: 12

TAN WATER RECLAMATION DISTRICT

OF GREATER CHICAGO

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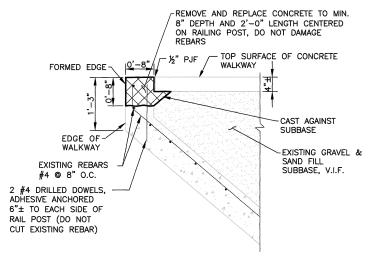
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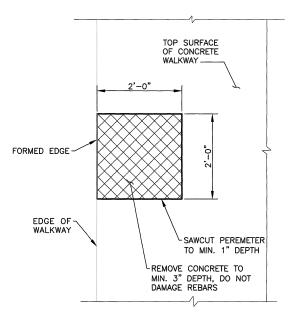
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CONTRACT 15-265-3D
SAFETY RAILING AROUND TANKS
CALUMET WATER RECLAMATION PLANT



REPAIR OF CONCRETE @ AERATION TANKS "A" & "B"

AT TYPICAL WALKWAY



REPAIR OF CONCRETE @ AERATION TANK "C"

NOTES:

- 1. CONCRETE REPAIR SHALL BE PERFORMED AS REQUIRED FOR INSTALLING SAFETY RAILING AND AS DIRECTED BY THE ENGINEER ON A UNIT PRICE BASIS.
- 2. PROTECT UTILITIES FROM DAMAGE.
- 3. ALL CONCRETE SURFACES WITHIN 12" OF SPALLED AREAS SHALL BE CLEANED WITH HIGH PRESSURE AIR.
- 4. THE CONTRACTOR SHALL REMOVE ALL LOOSE, DISINTEGRATED, SCALED AND SPALLED CONCRETE WITH LIGHTWEIGHT, HAND HELD, PNEUMATIC, CHIPPING HAMMER OF 25 LBS. OR LESS. ALL UNSOUND CONCRETE MUST BE REMOVED.
- 5. CONCRETE SHALL BE REMOVED IN GEOMETRIC PATTERN, PREFERABLY WITH SQUARE CORNERS.
- CONCRETE EDGES SHALL BE SAW CUT FOR A MINIMUM DEPTH OF 1". FEATHER EDGING WILL NOT BE PERMITTED.
- 7. REBARS SHALL NOT BE NICKED OR CUT DURING SAWING, OR VIBRATED WITH CHIPPING HAMMER. CHIPPING SHALL BE DONE SUCH THAT BOND BETWEEN THE SOUND CONCRETE AND REINFORCING BARS IS NOT BROKEN.
- 8. CONCRETE AROUND EXPOSED REBARS SHALL BE REMOVED FOR A DEPTH OF 1" OR MORE TO FACILITATE CLEAN UP OF REBARS AND FOR PLACEMENT OF FRESH CONCRETE AGAINST THE BARS.
- 9. EXPOSED REBARS AND CONCRETE SURFACES SHALL BE SAND BLASTED. STEEL SHALL BE SAND BLASTED TO WHITE METAL. COAT SURFACES OF STEEL AND CONCRETE WITH SIKATOP ARMATEC 110, OR APPROVED EQUAL.
- REBARS WHICH HAVE LOST 15 OR MORE PERCENT OF CROSS SECTION AREA BY CORROSION SHALL BE SPLICED. LAP LENGTHS WILL BE AS PER ACI 318.
- 11. SHORING AND FORMS SHALL BE PROVIDED WHEN SPECIFIED OR REQUIRED TO SUPPORT EXISTING STRUCTURES UNDER REPAIR.
- 12. 28 DAY COMPRESSIVE STRENGTH OF NEW CONCRETE SHALL BE 4000 PSI MINIMUM U.N.O.
- 13. FINISHED CONCRETE SURFACES SHALL BE EVEN AND FLUSH WITH ADJACENT CONCRETE SURFACES. ALL CORNERS AND EDGES SHALL MATCH THE EXISTING CONCRETE IN THE AREA.
- 14. APPLY CONCRETE SEALANT ON FINISHED CONCRETE.

Date				
Appr. Date				
Description			:	
Rev.				

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Checked by: Date:	Date:	Correct: , p. 62,
SCP	JUL 2016	JUL 2016 Engineer of Structurer Architectural Design
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ONCRETE REPAIRS

CONTRACT 15-265-3D
SAFETY RAILING AROUND TANKS
CALUMET WATER RECLAMATION PLANT

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PHOTOGRAPH - TYPICAL CONDITIONS

BATTERY A AND BATTERY B - NORTH END AT MIXING WELL LOOKING SOUTH TOWARD OPERATING GALLERY BUILDING



5 PHOTOGRAPH - SPECIAL CONDITIONS
BATTERY A - SOUTH END WALKWAY 3
INSTALL SAFETY RAILING TO ACCOMMODATE
EXISTING EQUIPMENT



9 PHOTOGRAPH - SPECIAL CONDITIONS
BATTERY B - SOUTH END LOOKING NORTH



2 PHOTOGRAPH - TYPICAL CONDITIONS
BATTERY A AND B - SOUTH END LOOKING SOUTH
TOWARD OPERATING GALLERY BUILDING

3 PHOTOGRAPH - TYPICAL CONDITIONS
BATTERY A AND B - SOUTH END LOOKING SOUTH
TOWARD OPERATING GALLERY BUILDING

BATTERY A & B - TYPICAL CONDITIONS



6 PHOTOGRAPH - SPECIAL CONDITIONS
BATTERY A - WALKWAY 4

PHOTOGRAPH - SPECIAL CONDITIONS
BATTERY B - NORTH END LOOKING EAST

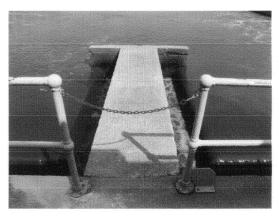


7 PHOTOGRAPH - SPECIAL CONDITIONS
BATTERY A - WALKWAY 4





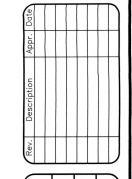
PHOTOGRAPH - TYPICAL CONDITIONS
BATTERY A AND B - NORTH END AIR
MAIN LINE AND VALVES, EXPANSION
JOINTS, CONCRETE



8 PHOTOGRAPH - SPECIAL CONDITIONS
BATTERY B - SOUTH END

NOTES:

- 1. SEE DRAWINGS S-101 & S-102 FOR LOCATIONS OF PHOTOGRAPHS.
- 2. PHOTOGRAPHS DO NOT SHOW ALL EXISTING CONDITIONS.
- 3. SEE GENERAL NOTES ON DRAWING S-001.



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CONTRACT 15-265-3D SAFETY RAILING AROUND TANKS CALUMET WATER RECLAMATION PLANT

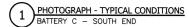
PHOTOGRAPHS

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BATTERY A & B - SPECIAL CONDITIONS

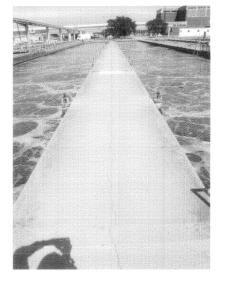
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PHOTOGRAPH - TYPICAL CONDITIONS
BATTERY C - SOUTH END



PHOTOGRAPH - TYPICAL CONDITIONS

BATTERY C - SOUTH END LOOKING NORTH

BATTERY C - TYPICAL CONDITIONS

NOT TO SCALE



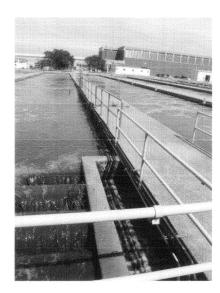
PHOTOGRAPH - SPECIAL CONDITIONS

BATTERY C - SOUTHWEST CORNER

LOOKING NORTH



5 PHOTOGRAPH - SPECIAL CONDITIONS
BATTERY C - WEST END



6 PHOTOGRAPH - SPECIAL CONDITIONS
BATTERY C - SOUTH END LOOKING NORTH

BATTERY C - SPECIAL CONDITIONS

NOT TO SCALE



PHOTOGRAPH - SPECIAL CONDITIONS

BATTERY C - NORTHEAST END
INSTALL SAFETY RAILING TO
ACCOMODATE EXISTING EQUIPMENT

NOTES:

- 1. SEE DRAWING S-103 FOR LOCATIONS OF PHOTOGRAPHS.
- 2. PHOTOGRAPHS DO NOT SHOW ALL EXISTING CONDITIONS.
- 3. SEE GENERAL NOTES ON DRAWING S-001.

Rev. Description Appr. Date

IETROPOLITAN WATER RECLAMATION DISTRIC OF GREATER CHICAGO	Date: Correct: W. P. Architectural Design	
ER RE	Correct: Engineer	
V WATE	Date: JUL 2016	Socie.
OPOLITAI OF	ned by: Checked by: Date:	by: Doviewed by: Scole.
ETR(ned by:	

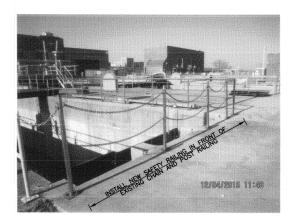
CONTRACT 15-265-3D
SAFETY RAILING AROUND TANKS
CALUMET WATER RECLAMATION PLANT

PHOTOGRAPHS

eet Number:

S-302
Page Number: 15

DATE: 7/7/2016 10:37 AM PLOTTED BY: PATEL, VIJAYKUMAR

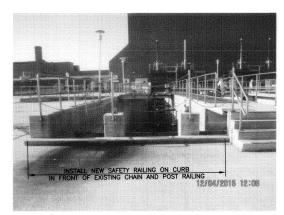


PHOTOGRAPH - TYPICAL CONDITIONS

PRELIMINARY SETTLING TANKS — INSTALL NEW SAFETY RAILING IN FRONT OF EXISTING



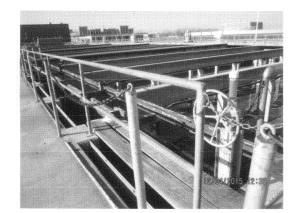
PHOTOGRAPH - TYPICAL CONDITIONS
PRELIMINARY SETTLING TANKS — INSTALL NEW SAFETY RAILING IN FRONT OF EXISTING



3 PHOTOGRAPH - TYPICAL CONDITIONS
PRELIMINARY SETTLING TANKS - INSTALL NEW
SAFETY RAILING ON CURB



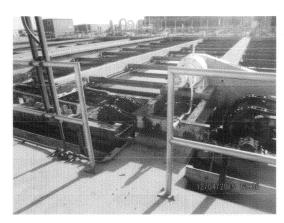
PHOTOGRAPH - TYPICAL CONDITIONS
PRELIMINARY SETTLING TANKS — INSTALL NEW
SAFETY RAILING ON CURB



5 PHOTOGRAPH - TYPICAL CONDITIONS
PRELIMINARY SETTLING TANKS - EXISTING CONDITIONS



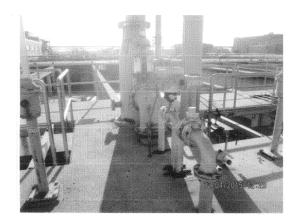
6 PHOTOGRAPH - TYPICAL CONDITIONS
PRELIMINARY SETTLING TANKS - EXISTING CONDITIONS



PHOTOGRAPH - TYPICAL CONDITIONS
PRELIMINARY SETTLING TANKS - INSTALL DOUBLE
CHAINS © OPENING



8 PHOTOGRAPH - TYPICAL CONDITIONS
PRELIMINARY SETTLING TANKS - INSTALL DOUBLE
CHAINS TO BLOCK ACCESS TO WALKWAY



9 PHOTOGRAPH - TYPICAL CONDITIONS
PRELIMINARY SETTLING TANKS - INSTALL DOUBLE
CHAINS



PHOTOGRAPH - TYPICAL CONDITIONS

PRELIMINARY SETTLING TANKS - INSTALL LOWER
CHAIN SEE DETAIL DRAWING S-201

NOTES:

- 1. SEE DRAWINGS S-104 FOR LOCATIONS OF PHOTOGRAPHS.
- 2. PHOTOGRAPHS DO NOT SHOW ALL EXISTING CONDITIONS.
- 3. SEE GENERAL NOTES ON DRAWING S-001.

CONTRACT 15-265-3D
SAFETY RAILING AROUND TANKS
CALUMET WATER RECLAMATION PLANT

PHOTOGRAPHS

WATER RECLAMATION DISTRICT GREATER CHICAGO

METROPOLITAN OF

Sheet Number: S - 303

Page Number: 16

PRELIMINARY SETTLING TANKS - TYPICAL CONDITIONS NOT TO SCALE