

**APPROVED
Plan Review**

06/05/2018 9:28:00 AM

dsdrangel

**EPC Planning & Community
Development Department**

DEPARTMENT OF PUBLIC WORKS EL PASO COUNTY

CONSTRUCTION BID PLANS OF PROPOSED

**Brine Tanks Secondary Containment
& Vactor Pit**

EL PASO COUNTY

PROJECT NO. Brine Tanks 420879 & Vactor 419895

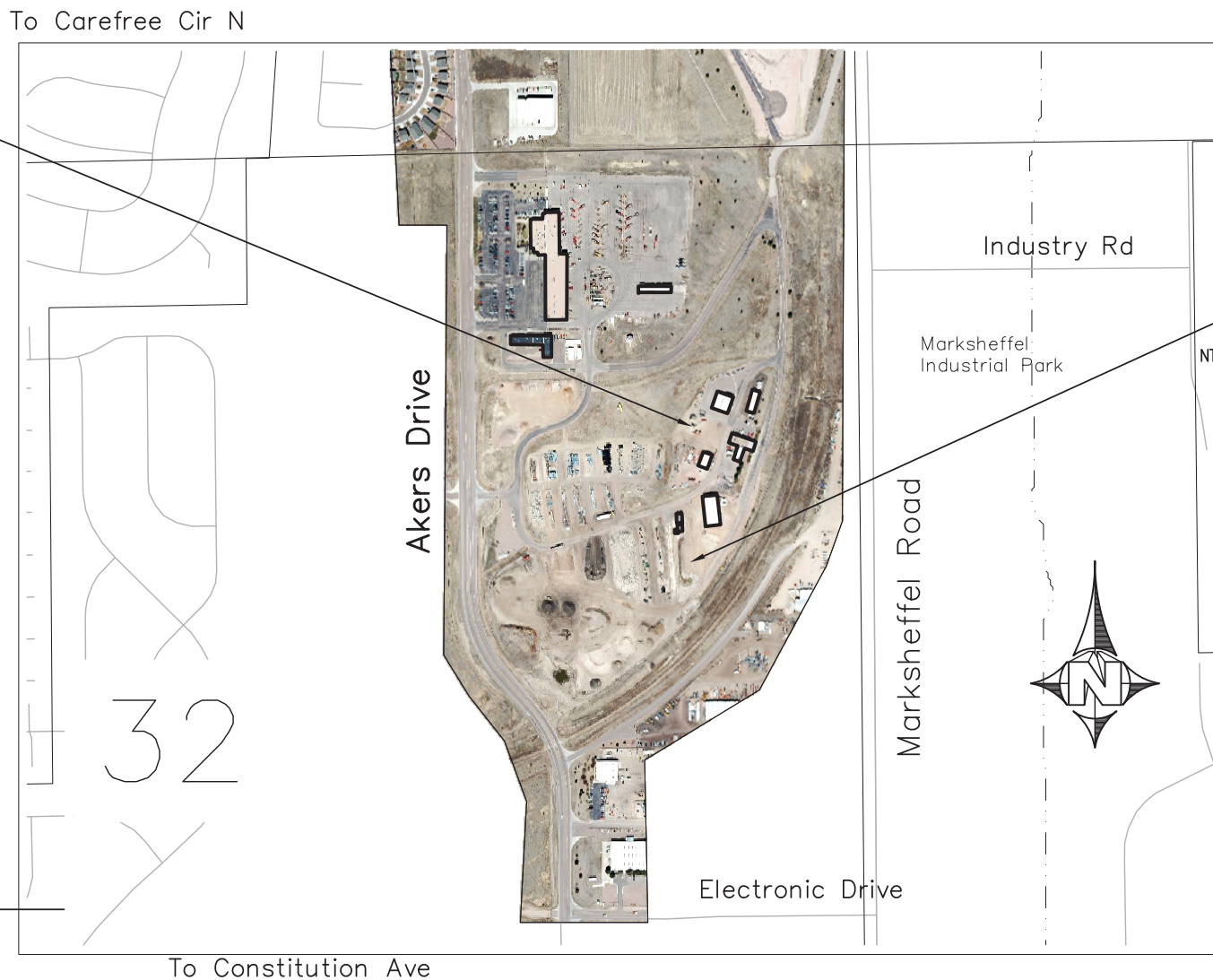
Sheet List Index	
Sheet No.	Sheet Name
1	Cover Sheet
2	General Notes & Legend
3	Summary of Approx. Qtys.
4	Plan & Profile
5	Concrete & Rebar Details
6	Plan & Elevations

APPROX. LOCATION OF VACTOR PIT 419895

UTILITIES CONTACTS

WATER - CHEROKEE METROPOLITAN
 WATER - CITY OF COLORADO SPRINGS UTILITIES
 SANITARY SEWER - CITY OF COLORADO SPRINGS UTILITIES
 SANITARY SEWER - CHEROKEE METROPOLITAN
 TELEPHONE - QWEST
 NATURAL GAS - CITY OF COLORADO SPRINGS UTILITIES
 CABLE TV - ADELPHIA

APPROX. LOCATION OF BRINE TANKS 420879



JENNIFER IRVINE, P.E.
COUNTY ENGINEER

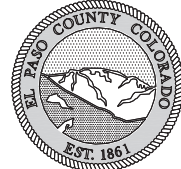
DATE

NOTE: ALL SCALES IN DRAWINGS ARE FOR FULL SIZE (11" x 17") PRINTS

PROJECT LOCATION
 Department of Public Works Facility,
 3275 Akers Drive 0.75 MI. North of Constitution Avenue
 Section 32, T13S, R65W

BID SET 6/4/18

P:\Proj-Cv3D-2016\Akers Vactor Pit\BrineTankCover.dwg, Sht00, 6/4/2018 3:09:51 PM, Supersedes All Previously Dated Sets

Computer File Information		Index of Revisions		 El Paso County Department of Public Works 3275 Akers Drive Colorado Springs, Colorado 80922-1547 Ph: 719-520-6460 Fax: 719-520-6878 Division of Transportation	As Constructed		EPCDOT Construction Project		Project No./Code	
Creation Date:	4/24/18 Initials: DAN	(R-)			No Revisions:	mm/dd/yy	contractor		420879	
Last Modification Date:	5/29/18 Initials: DAN	(R-)			Revised:	mm/dd/yy	Project Manager JI		419895	
Full Path:	P:\Proj-Cv3D-2016\Akers Vactor Pit	(R-)			Void:	mm/dd/yy	Project Engineer OAL		Sheet Number 1	
Drawing File Name:	BnRnchCrkTitle - Sht01	(R-)				PROJECT STARTED mm/dd/yy ACCEPTED mm/dd/yy				
Acad. Ver. Civ3D 2016 Scale:	n/a Units: Feet	(R-)				Comments:				

BID SET 6/4/18

GENERAL NOTES

- 1 THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (2017) (REFERRED TO AS THE STANDARD SPECIFICATIONS), EXCEPT WHERE OTHERWISE NOTED ON THE PROJECT PLANS AND/OR THE PROJECT SPECIAL PROVISIONS.
- 2 THE CONTRACTOR SHALL HAVE A COPY OF ALL APPLICABLE STANDARDS ON SITE FOR THE DURATION OF THE PROJECT.
- 3 THE CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERMITS AND INSPECTIONS REQUIRED TO COMPLETE THE SCOPE OF WORK PRESENTED HEREIN.
- 4 THE ENGINEER SHALL BE NOTIFIED 48 HOURS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.

UTILITY NOTES

- 5 THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 811 THREE BUSINESS DAYS IN ADVANCE OF ANY EXCAVATING OR GRADING.
- 6 THE LOCATIONS OF EXISTING STRUCTURES, PIPELINES, UTILITIES, ETC., SHOWN ON THE DRAWINGS HAVE BEEN DERIVED FROM THE BEST AVAILABLE INFORMATION. THERE MAY BE OTHER STRUCTURES, PIPELINES, UTILITIES, ETC., NOT SHOWN ON THE DRAWINGS WHICH PRESENTLY EXIST IN THE AREA OF CONSTRUCTION. THE ENGINEER AND/OR OWNER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL IMPACTED EXISTING STRUCTURES, PIPELINES, UTILITIES, ETC., IN THE PROJECT SITE, AND SHALL BE RESPONSIBLE FOR ANY DAMAGES THERETO.
- 7 THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL UTILITIES AND STRUCTURES AFFECTED BY THE WORK AND ANY DAMAGE SHALL BE REPAIRED AND RESTORED TO THE SATISFACTION OF THE ENGINEER OR APPLICABLE ENTITY AT THE CONTRACTOR'S EXPENSE.
- 8 THE CONTRACTOR SHALL NOTIFY THE ENGINEER WHERE UTILITIES CONFLICT WITH THE NEW WORK IN CONFORMANCE WITH THE SPECIFICATIONS. CONFLICT IS DEFINED WHERE THE NEW WORK CANNOT BE COMPLETED WITHOUT PROPER CLEARANCES AROUND THE UTILITY. WHERE FIELD VERIFICATION IS NOTED ON THE PLANS, THIS SHALL REQUIRE THE CONTRACTOR TO DETERMINE THE LOCATION OF THE FACILITY IN QUESTION PRIOR TO THE NEW CONSTRUCTION. A DETERMINATION SHALL BE MADE BY THE CONTRACTOR IF THE CURRENT DESIGN WILL MATCH THE EXISTING FACILITY AND NOTIFY THE ENGINEER IN WRITING IF IT DOES NOT.

SURVEY NOTES

- 9 SURVEY/STAKING WILL BE PROVIDED BY EL PASO COUNTY.
- 10 STATIONS AND OFFSETS SHOWN REFERENCE THE HORIZONTAL CONTROL LINE ALIGNMENT AND ARE TO PROPOSED FINISH GRADE AKERS LOWER YARD UNLESS OTHERWISE NOTED. ELEVATIONS SHOWN ARE TO THE SAME CENTERLINE LINE UNLESS OTHERWISE NOTED.
- 11 THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL CONSTRUCTION EASEMENTS WITH THE COUNTY.
- 12 THE CONTRACTOR SHALL CAREFULLY PRESERVE ALL MONUMENTS, BENCH MARKS, PROPERTY MARKERS, AND REFERENCE POINTS. IN CASE OF HIS DESTRUCTION OF THESE, THE CONTRACTOR WILL BE RESPONSIBLE FOR RESETTING SAME, AT HIS SOLE EXPENSE, AND SHALL BE RESPONSIBLE FOR ANY LOSS OF TIME THAT MAY BE CAUSED.

PROJECT ACTIVITY NOTES

- 13 ALL EARTHWORK WILL BE PROVIDED BY EPC. FINE GRADING COMPACTION AND BACKFILL WILL BE PROVIDED BY CONTRACTOR.
- 14 ALL QUANTITIES ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK NECESSARY TO COMPLETE THE CONSTRUCTION SHOWN IN THESE PLANS.
- 15 ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY EL PASO COUNTY.
- 16 ALL WORK SHALL BE DONE TO THE LINES, GRADES, SECTIONS, AND ELEVATIONS SHOWN ON THE PLANS UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER IN WRITING.
- 17 CONSTRUCTION ACTIVITY SHALL BE SCHEDULED WITH MINIMUM IMPACT TO VEHICULAR TRAFFIC. ALLOWABLE WORK HOURS ARE 7:00 AM-7:00 PM MONDAY-FRIDAY.

- 18 LIMITS OF REMOVAL ITEMS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THEIR REMOVAL. IF DISCREPANCIES ARISE BETWEEN THE DEMOLITION AND THE NEW WORK, THEN THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO DISTURBANCE.
- 19 SLOPES ARE AS SHOWN ON PLANS AND TYPICAL SECTIONS. WHERE FIELD CONDITIONS DIFFER FROM THE PLAN SET AND SLOPES WILL BE GREATER THAN THOSE SHOWN, THE CONTRACTOR SHALL CONTACT THE ENGINEER.
- 20 IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ANY TEMPORARY EXCAVATION SUPPORT AS REQUIRED. THIS SUPPORT WILL BE INCIDENTAL TO THE WORK AND WILL NOT BE PAID FOR SEPARATELY.
- 21 ALL EXCAVATED HOLES SHALL BE COVERED WITH STEEL PLATES ANY TIME CONSTRUCTION WORK IS NOT IN PROGRESS (OVERNIGHT, WEEKENDS, HOLIDAYS). EXCAVATION SHORING SHALL COMPLY WITH OSHA STANDARDS. COST FOR SHORING AND STEEL PLATES WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.
- 22 STRUCTURAL BACKFILL FILL SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY AT ±2 OMC PER AASHTO T-180.
- 23 THE ELEVATION OF THE OIL/SAND SEPARATOR INLET SHALL BE DETERMINED BY THE ELEVATION OF THE VACTOR PIT OUTLET. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF THE OIL/SAND SEPARATOR TO THE COUNTY FOR APPROVAL PRIOR TO INSTALLATION.

STORMWATER/BMP NOTES

- 24 AT ALL TIMES DURING THE CONSTRUCTION OF THE PROJECT, EROSION AND SEDIMENT CONTROL SYSTEMS SHALL BE MAINTAINED TO PREVENT DAMAGING FLOWS ON THE SITE AND IN THE RECEIVING WATERS BELOW THE SITE. CONTROL SYSTEMS SHALL BE INSTALLED PRIOR TO THE STRIPPING OF NATIVE VEGETATIVE COVER.
- 25 THE CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES TO THOSE AREAS WITHIN THE LIMITS OF DISTURBANCE AND/OR TOES OF SLOPE AS SHOWN ON THE PLANS AND CROSS SECTIONS. ANY DISTURBANCE BEYOND THESE LIMITS SHALL BE RESTORED TO ORIGINAL CONDITIONS AT THE CONTRACTORS EXPENSE. CONSTRUCTION ACTIVITIES, IN ADDITION TO NORMAL CONSTRUCTION PROCEDURES, SHALL INCLUDE PARKING OF VEHICLES OR EQUIPMENT, DISPOSAL OF LITTER AND ANY OTHER ACTION WHICH WOULD ALTER EXISTING CONDITIONS.
- 26 TRACKING OF SOILS AND CONSTRUCTION DEBRIS FROM THE PROJECT SITE SHALL BE MINIMIZED. MATERIALS TRACKED BEYOND THE PROJECT AREA AND ONTO THE ROADWAY SHALL BE CLEANED UP DAILY AND DISPOSED OF PROPERLY. CLEANUP EFFORTS SHALL BE INCLUDED IN THE COST OF THE WORK.
- 27 IF CONCRETE TRUCKS ARE TO BE WASHED ONSITE, A TEMPORARY CONCRETE WASHOUT FACILITY SHALL BE CONSTRUCTED AND MAINTAINED WITH SUFFICIENT SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS. CONCRETE WASHOUT AREAS SHALL BE LOCATED AT LEAST 50 HORIZONTAL FEET FROM STORM DRAINS AND WATERWAYS.

Utility Symbols	
	CATV RISER
	ELECTRIC VAULT
	FIRE HYDRANT
	GAS BLOW-OFF VALVE
	GAS MARKER
	GAS METER
	GAS VALVE
	GUY WIRE
	LIGHT POLE
	SANITARY SEWER MANHOLE
	TELEPHONE MANHOLE
	TELEPHONE MARKER
	TELEPHONE RISER
	UNDERGROUND FIBER OPTIC MARKER
	UNDERGROUND FIBER OPTIC VAULT
	UTILITY POLE
	WATER VALVE
	WATER MANHOLE
	WATER METER

Line Legend	
	Ext'g Edge of Asphalt
	Prop. Edge of Asphalt
	Daylight
	Water
	Telephone
	Sewer
	UGT
	UFO
	OHE
	OH
	Silt Fence
	Existing Contours
	Proposed Contours
	Fence
	Storm Sewer
	Gas
	Electric

Computer File Information		Index of Revisions		<p>El Paso County Department of Public Works 3275 Akers Drive Colorado Springs, Colorado 80922-1547 Ph: 719-520-6460 Fax: 719-520-6878 Capital Programs Division</p>	As Constructed	Brine Tanks & Vactor Pit General Notes & Legend		Project No./Code	
Creation Date: 4/24/2018	Initials: DAN	<input type="checkbox"/>	<input type="checkbox"/>		No Revisions:			420879	
Last Modification Date: 5/29/2018	Initials: DAN	<input type="checkbox"/>	<input type="checkbox"/>		Revised:	Designer: OAL	Structure	Sheet Number	
Full Path: P:\Proj-Cv3D-2016\Akers Vactor Pit		<input type="checkbox"/>	<input type="checkbox"/>		Void:	Detailer: DAN	Numbers	2	
Drawing File Name: BrineTankCover - GenNote Legend		<input type="checkbox"/>	<input type="checkbox"/>		Sheet Subset:	Subset Sheets:	of		
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BID SET 6/4/18

SUMMARY OF APPROXIMATE QUANTITIES- SECONDARY CONTAINMENT

NO.	ITEM	UNIT	PLAN QTY.	PLAN QTY.
208-00007	EROSION LOG TYPE 2 (8 IN.)	LF	25	
208-00045	CONCRETE WASHOUT STRUCTURE	EA	1	
304-06007	AGGREGATE BASE COURSE CLASS 6	CY	45	
412-19000	JOINT SEALANT	LF	275	
412-19001	JOINT SEALANT BACKER ROD	LF	65	
518-00100	FLEXIBLE WATERSTOP (6 IN.)	LF	210	
601-01000	CONCRETE CLASS B	CY	140	
602-00000	REINFORCING STEEL	LBS	3,910	
619-75555	STAINLESS 4 INCH BALL VALVE W/ 4 INCH PVC PIPE	EA	1	
620-00020	SANITARY FACILITY	EA	1	
626-00000	MOBILIZATION	EA	1	

SUMMARY OF APPROXIMATE QUANTITIES - VACTOR PIT

NO.	ITEM	UNIT	PLAN QTY.	PLAN QTY.
208-00007	EROSION LOG TYPE 2 (8 IN.)	LFE	25	
208-00045	CONCRETE WASHOUT STRUCTURE	EA	1	
304-06007	1,500 GALLON OIL/SAND SEPARATOR	EA	1	
518-00100	4 IN PVC PIPE	LF	7	
601-01000	CONCRETE CLASS B	CY	127	
616-00000	OUTLET DEBRIS SCREEN	EA	1	
602-00000	REINFORCING STEEL	LBS	3,000	
620-00020	SANITARY FACILITY	EA	1	
626-00000	MOBILIZATION	EA	1	

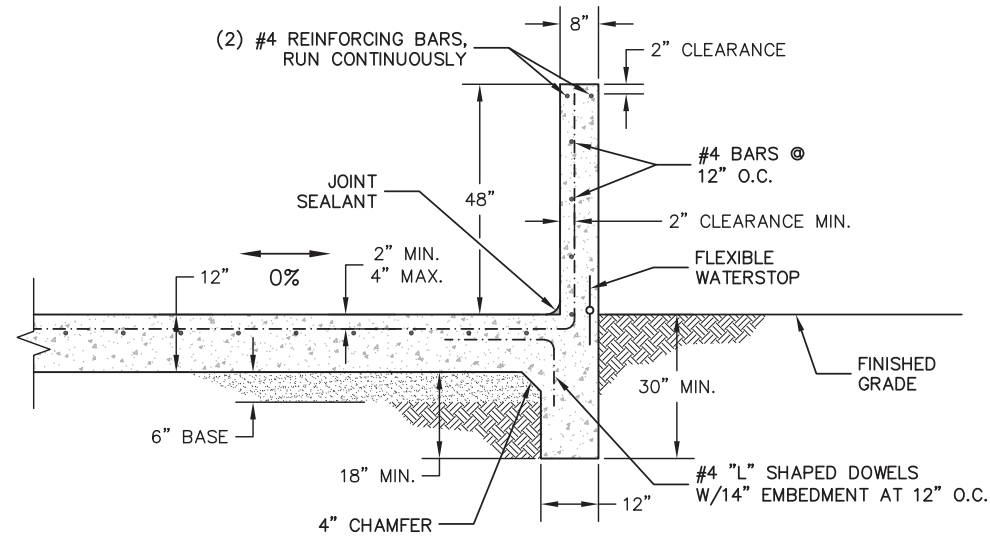
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Creation Date: 4/24/2018	Initials: DAN	(R-)			No Revisions:			420879
Last Modification Date: 5/29/2018	Initials: DAN	(R-)			Revised:	Designer: OAL	Structure	
Full Path: P:\Proj-Cv3D-2016\Akers Vactor Pit		(R-)			Void:	Detailer: DAN	Numbers	
Drawing File Name: BrineTankCover - SumQuan		(R-)				Sheet Subset:	Subset Sheets:	of
Acad. Ver. Civ3D 2016 Scale: n/a	Units: n/a	(R-)						Sheet Number 3

CALL UTILITY NOTIFICATION CENTER OF COLORADO 811

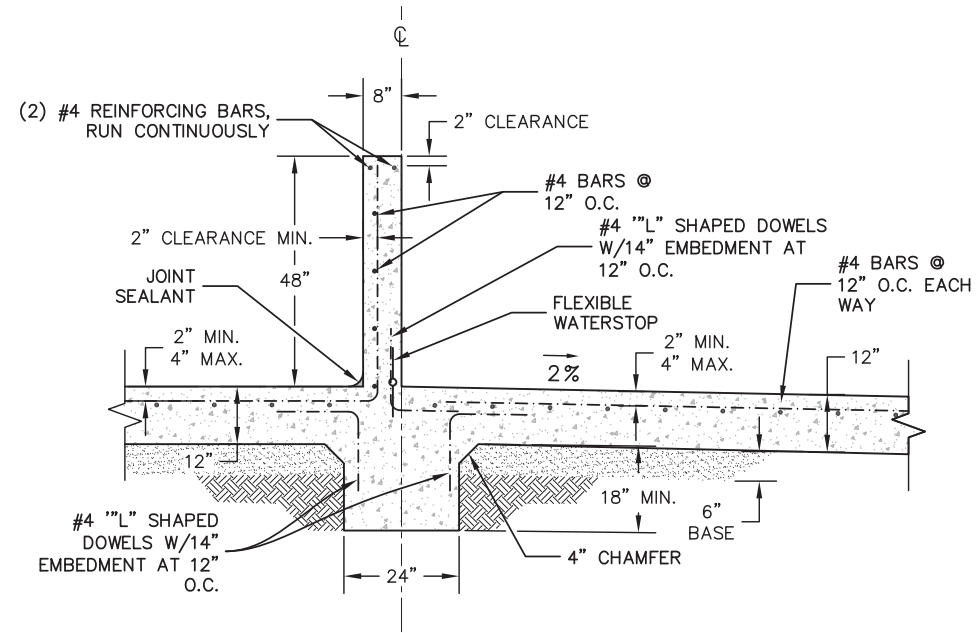
CALL 3 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.



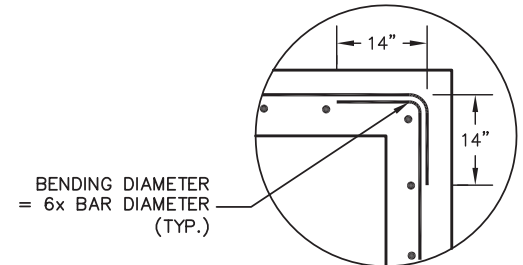
Know what's below. Call before you dig.



1. TYPICAL WALL AND FOOTING DETAIL
VIEW A-A

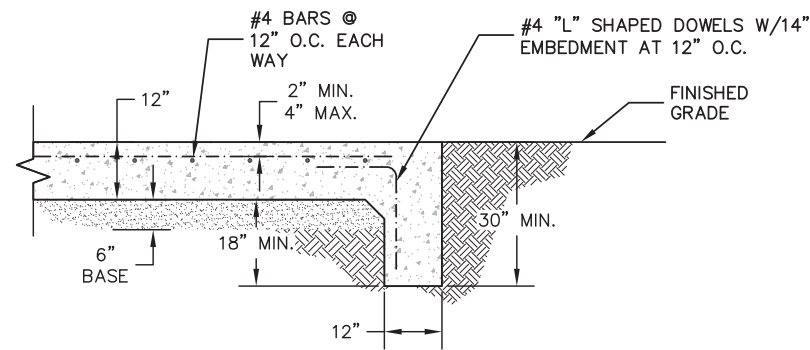


2. CONTINUOUS SLAB DETAIL
VIEW B-B

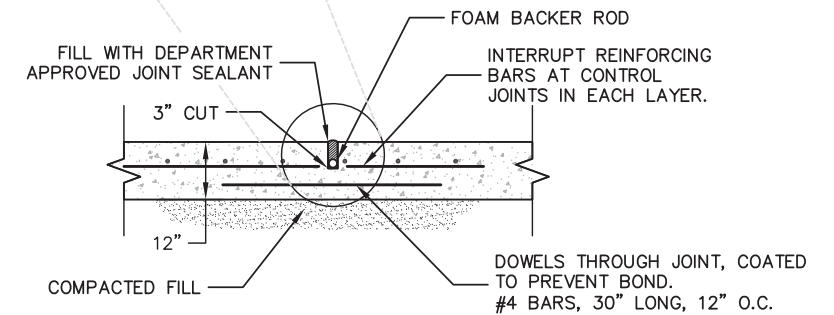
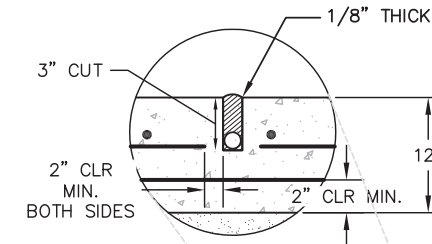


3. WALL CORNER REINFORCING

BRINE TANK SECONDARY CONTAINMENT DETAILS



4. THICKENED EDGE DETAIL
VIEW C-C



5. TYPICAL CONTROL JOINT DETAIL
VIEW C-C

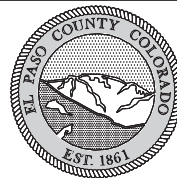
BID SET 6/4/18

Computer File Information

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Drawing File Name:	BrineTanks_Conc_Rebar - Sht02		
Acad. Ver. Civ3D 2016 Scale:	1" = 40'	Units:	Feet

Index of Revisions

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El Paso County
Department of Public Works
3275 Akers Drive
Colorado Springs, Colorado 80922-1547
Ph: 719-520-6460 Fax: 719-520-6878
Division of Transportation

As Constructed

No Revisions:	
Revised:	
Void:	

Secondary Containment Concrete & Rebar Details

Designer:	OAL	Structure Numbers	
Detailer:	DAN	Numbers	
SheetSubset:		Subset Sheets:	2 of 2

Project No./Code

420879	
Sheet Number	5

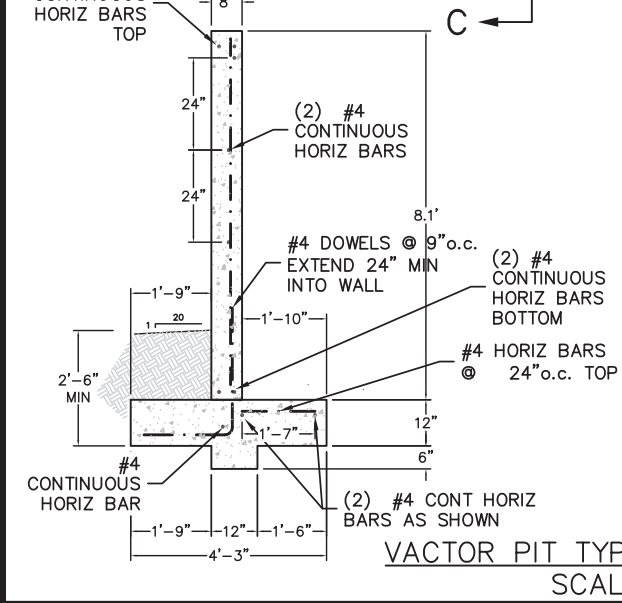
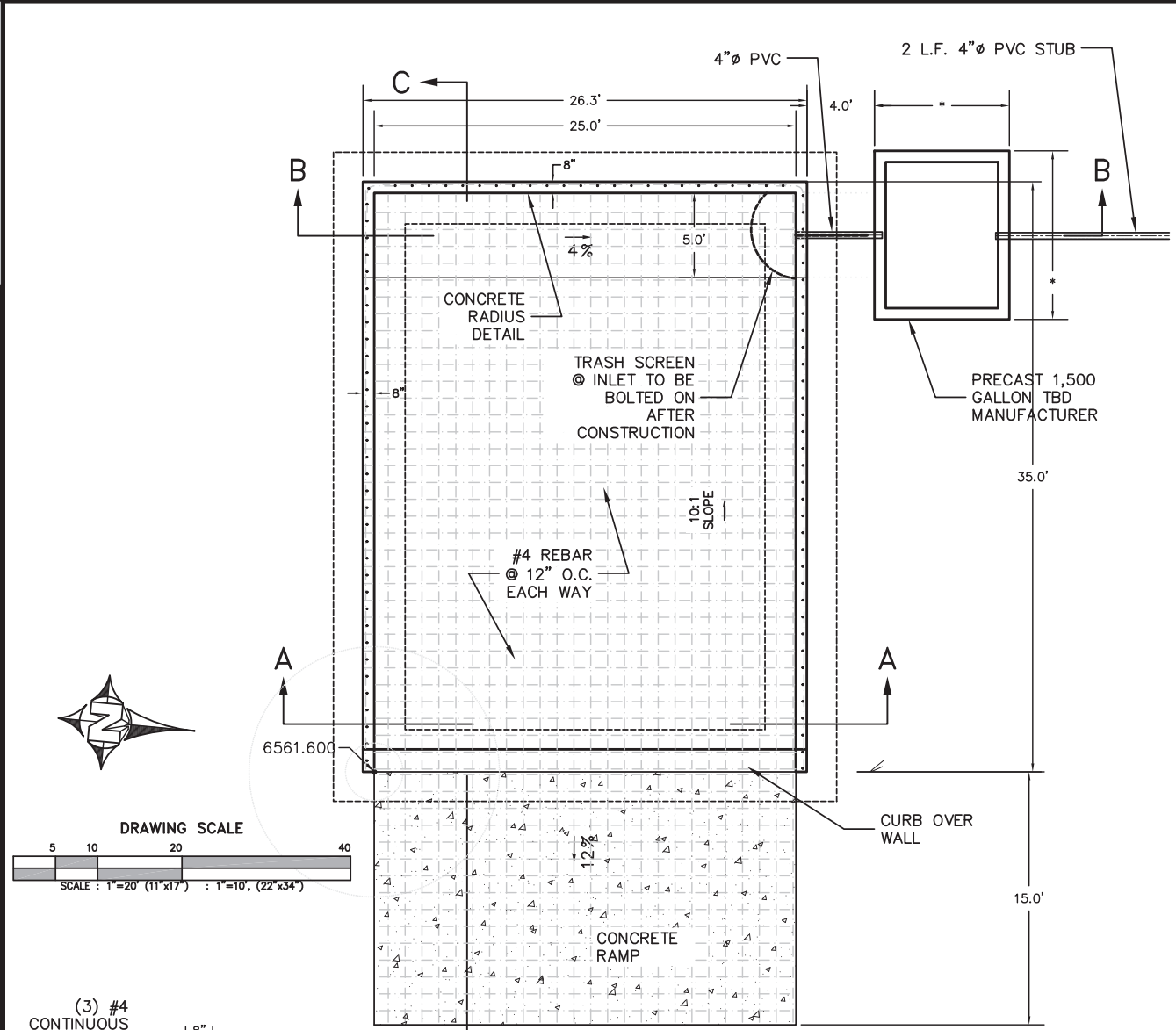
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CALL UTILITY NOTIFICATION CENTER OF COLORADO 811
 CALL 3 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.



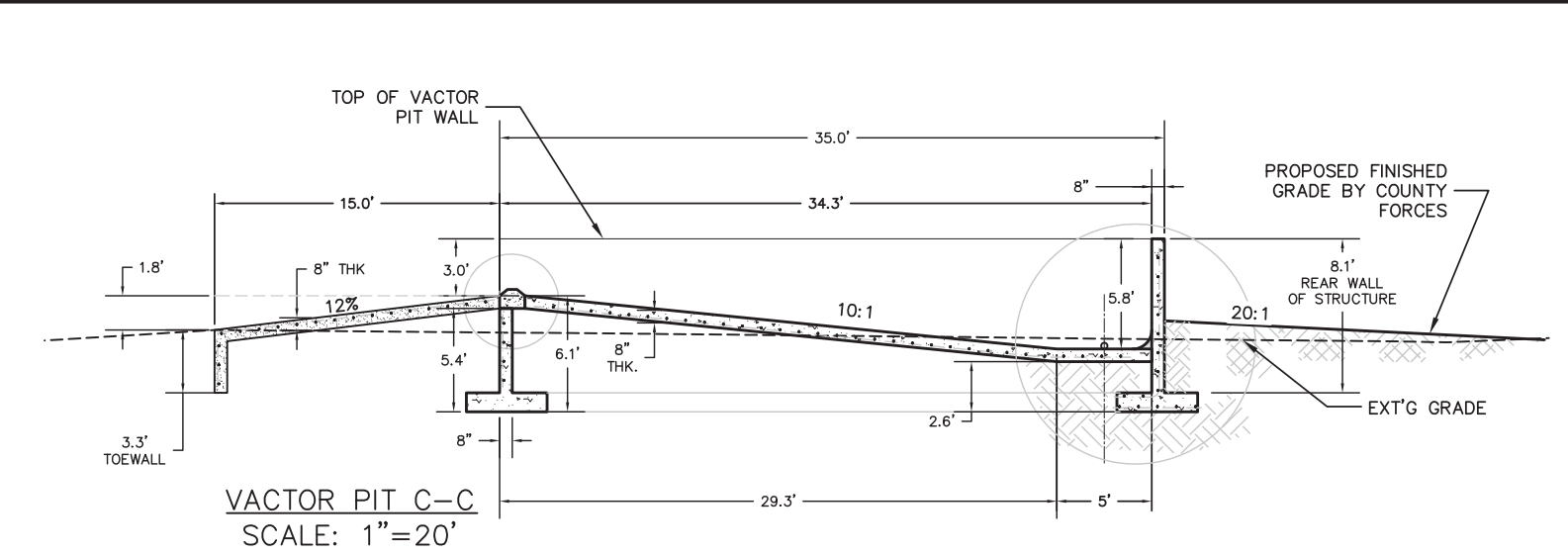
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BID SET 6/4/18

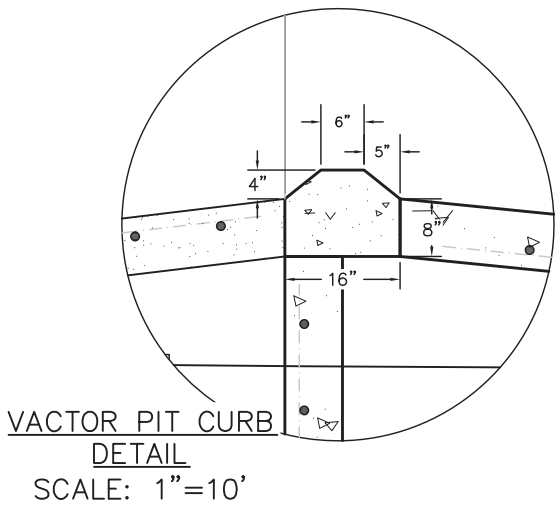


VECTOR PIT LAYOUT
SCALE: 1"=10'

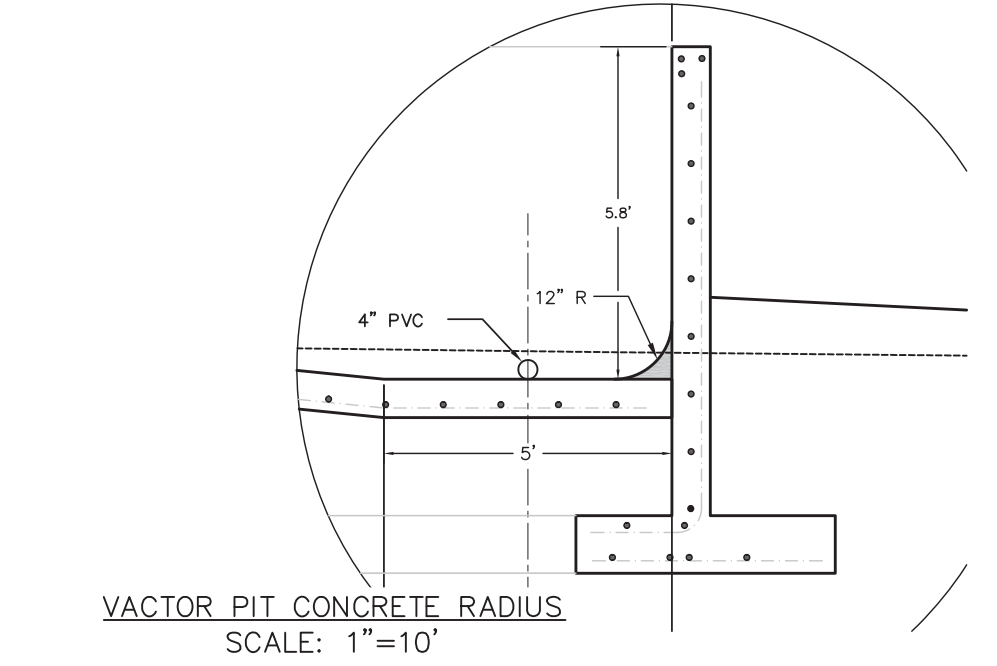
VECTOR PIT TYPICAL WALL DETAIL
SCALE: NTS



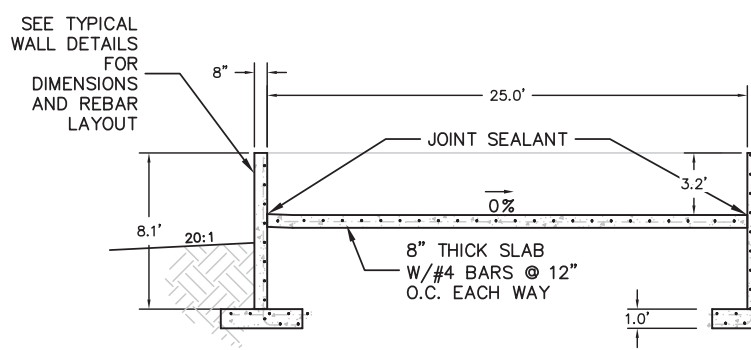
VECTOR PIT C-C
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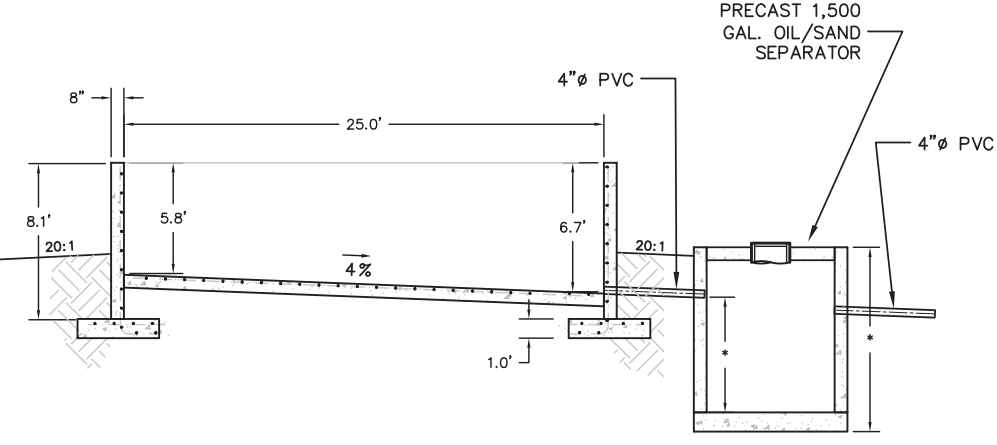
VECTOR PIT CURB DETAIL
SCALE: 1"=10'



VECTOR PIT CONCRETE RADIUS
SCALE: 1"=10'



A-A



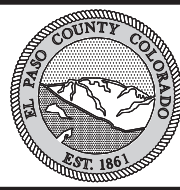
VECTOR PIT SECTIONS
SCALE: 1"=10'

B-B

*ACTUAL DIMENSIONS TBD BY MANUFACTURER

Computer File Information	
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Last Modification Date:	6/4/2018 Initials: DAN
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Drawing File Name:	VectorStructure02 - Sht01
Acad. Ver. Civ3D 2016 Scale:	na Units: Feet

Index of Revisions	
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El Paso County
 Department of Public Works
 3275 Akers Drive
 Colorado Springs, Colorado 80922-1547
 Ph: 719-520-6460 Fax: 719-520-6878
 Division of Transportation

As Constructed	
No Revisions:	
Revised:	
Void:	

Vector Pit Plan & Elevations		
Designer:	OAL	Structure
Detailer:	DAN	Numbers
SheetSubset:		Subset Sheets:

Project No./Code	
419895	
Sheet Number	6