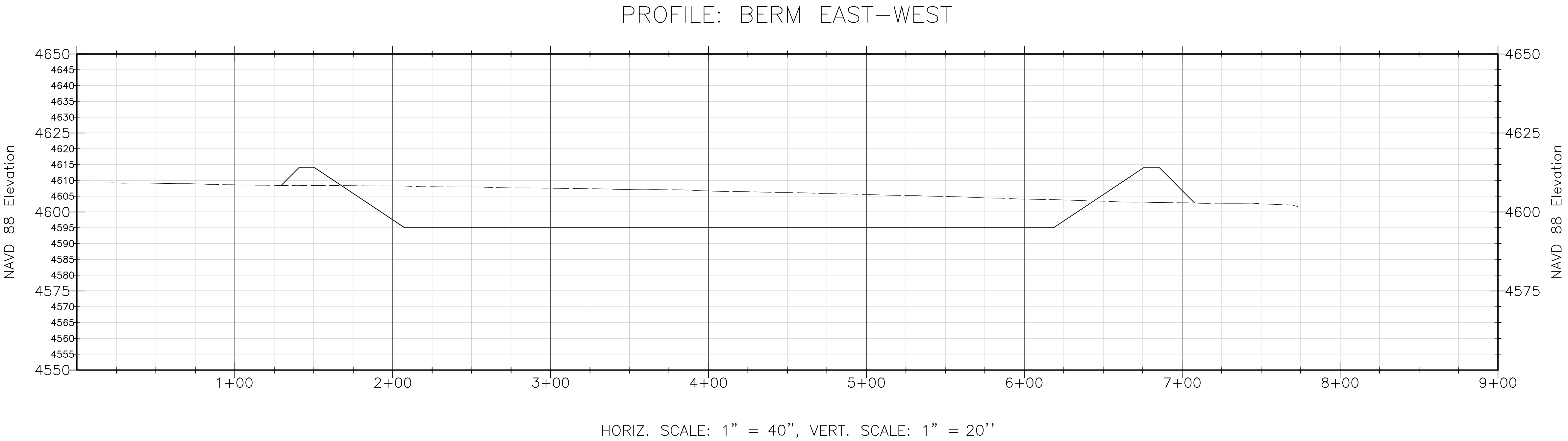
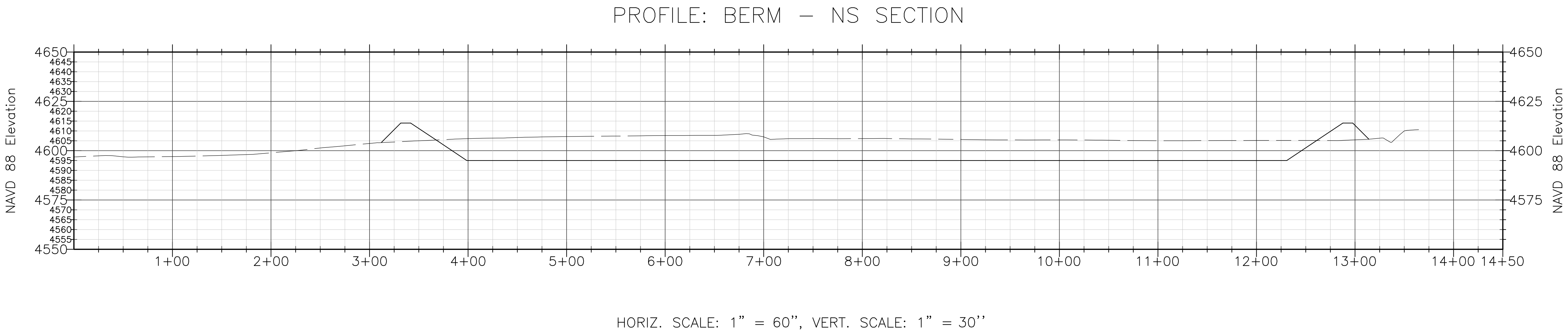




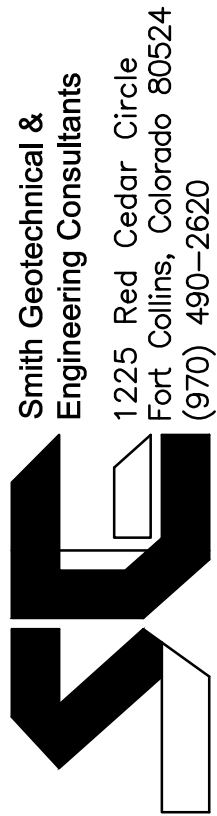
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No	Revisions	Date	By
1	ISSUE FOR CONSTRUCTION	06-08-15	DHS
2	OUTLET DRAIN REVISION	09-29-15	DHS
3	AS-CONSTRUCTED	05-02-2016	DHS

NEW CACHE AGRICULTURAL POND 1
THE NEW CACHE LA POUDRE IRRIGATING COMPANY

POND SECTIONS



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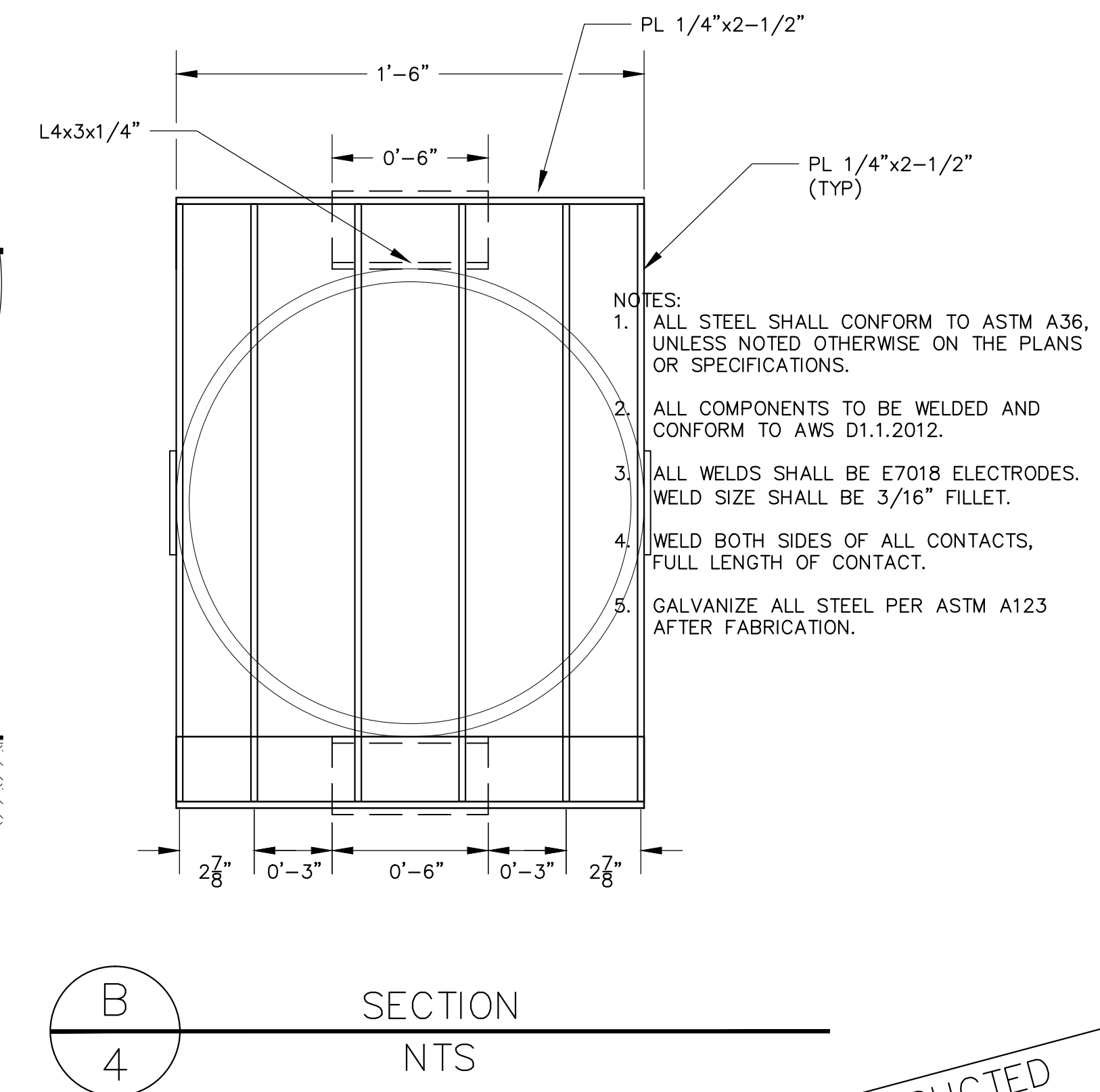
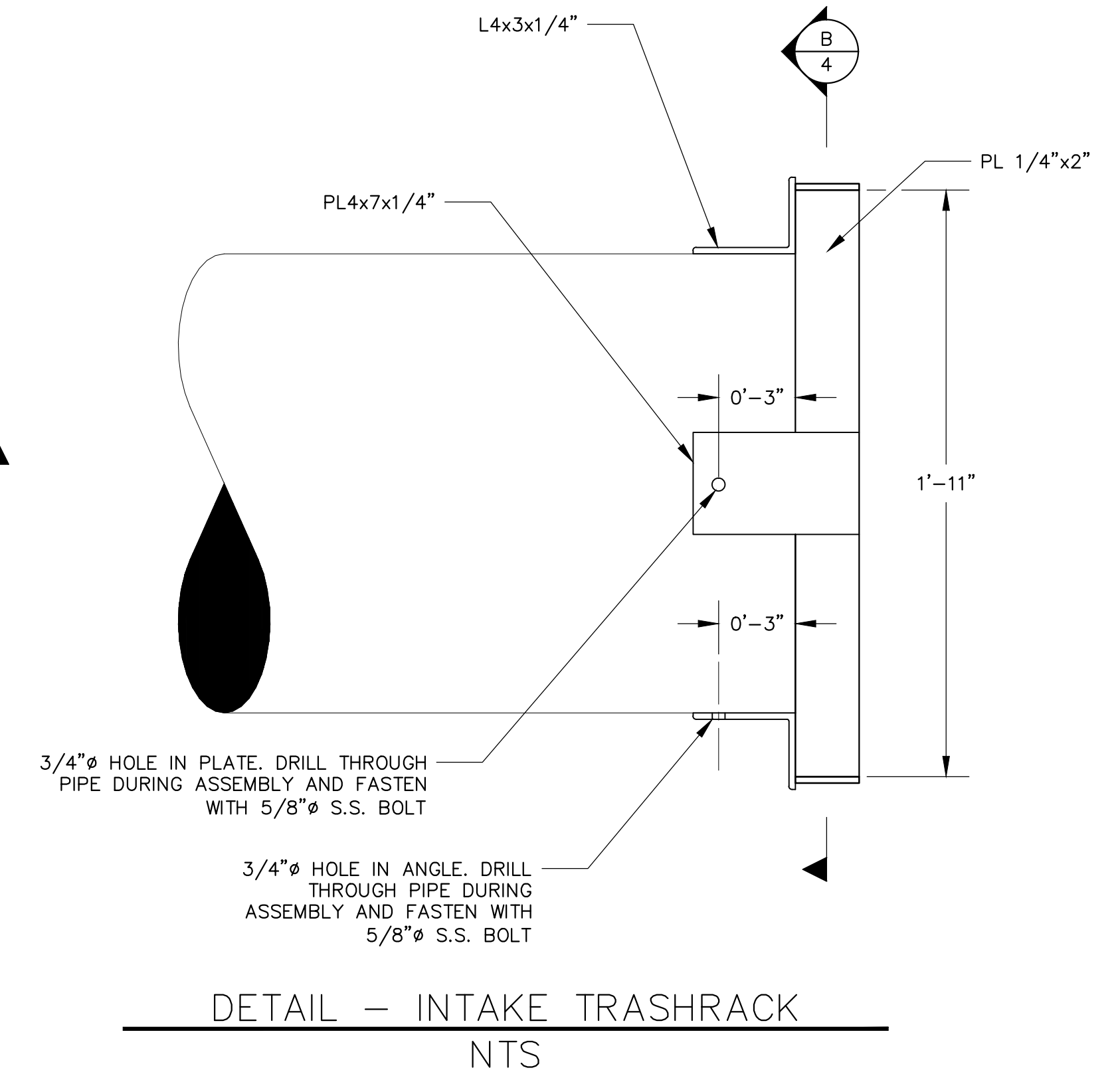
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Drawing No.

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No	Revisions	By	Date
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2	OUTLET DRAIN REVISION		09-29-15 DHS
3	AS-CONSTRUCTED		05-02-20 DHS

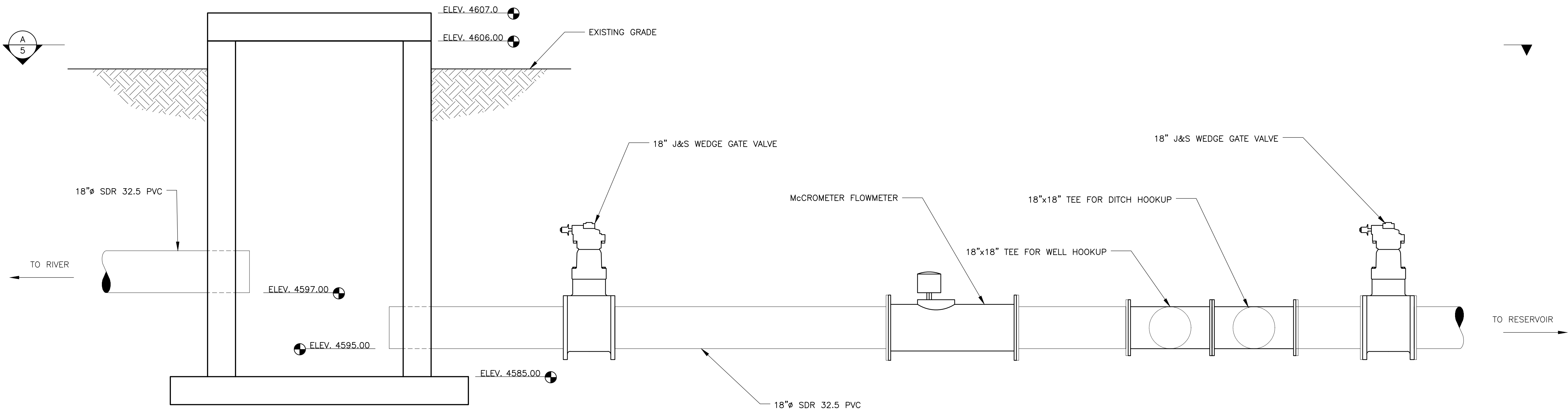
NEW CACHE AGRICULTURAL POND 1
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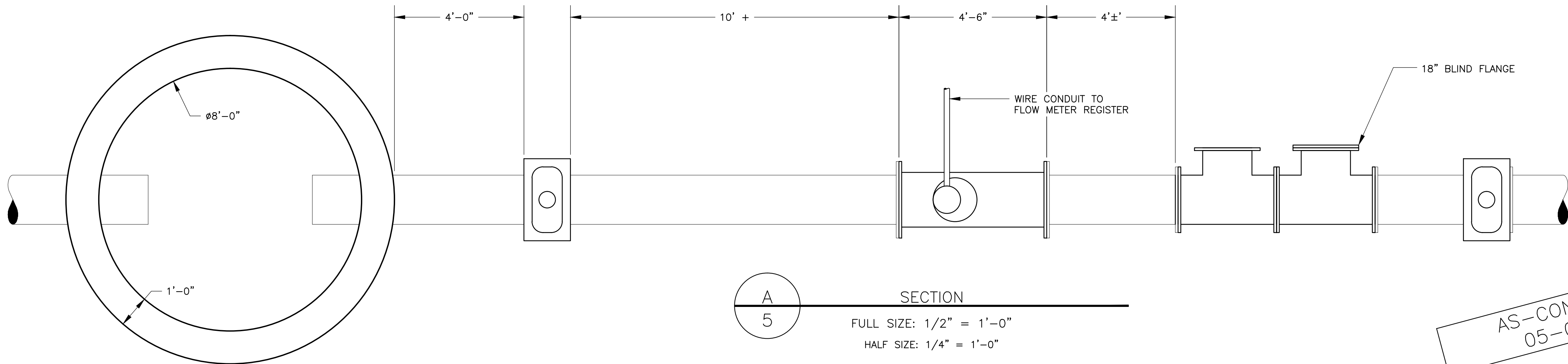
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No. of Sheets 10
Drawing No. 4



PLAN
FULL SIZE: 1/2" = 1'-0"
HALF SIZE: 1/4" = 1'-0"



SECTION
FULL SIZE: 1/2" = 1'-0"
HALF SIZE: 1/4" = 1'-0"

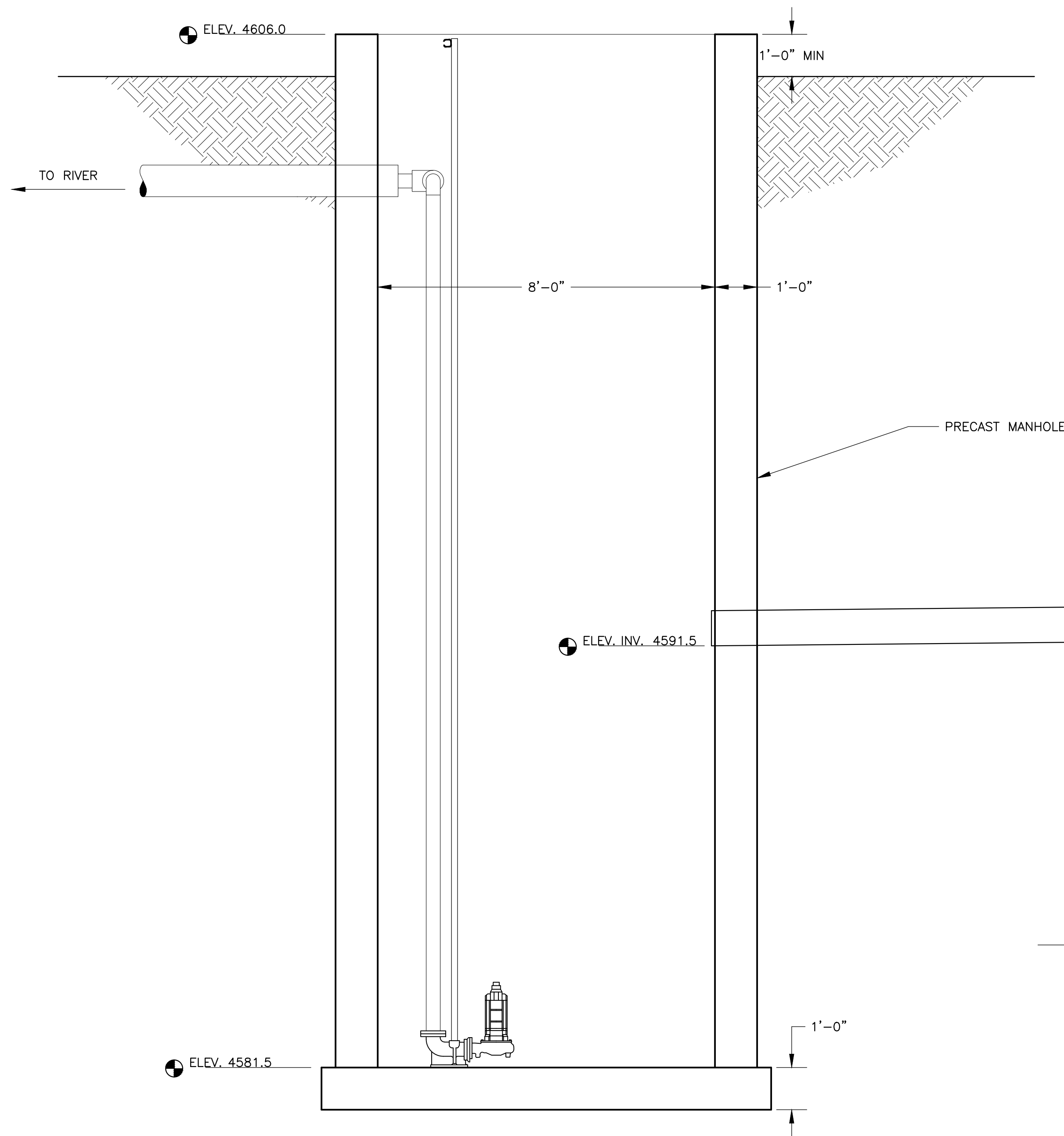
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THE NEW CACHE LA POUDRE IRRIGATING COMPANY
OUTLET MANHOLE DETAILS

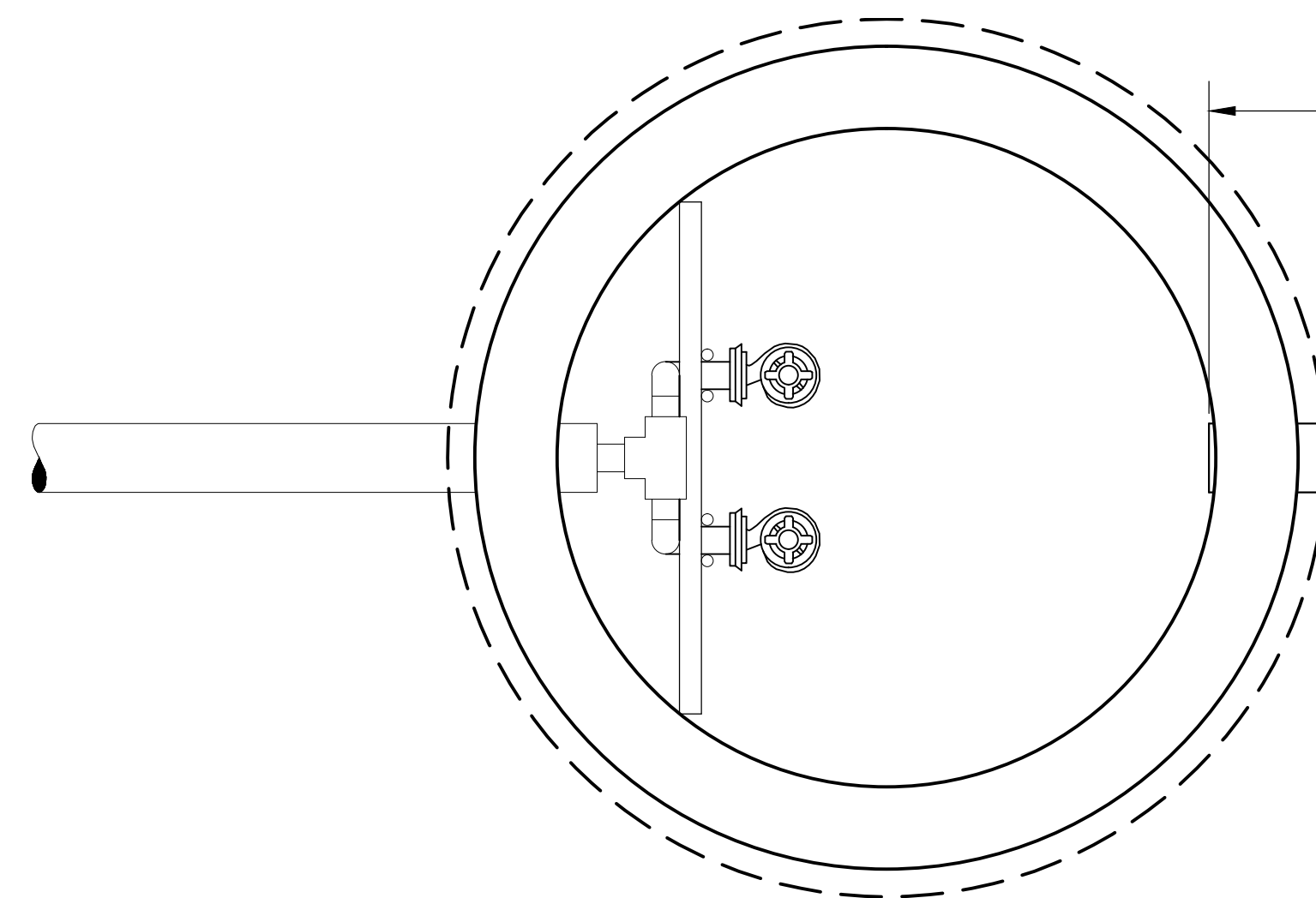
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Approved	DHS
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11x17	1/4" = 1'
22x34	1/2" = 1'
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DRAIN PIPE OUTLET
ELEVATION VIEW

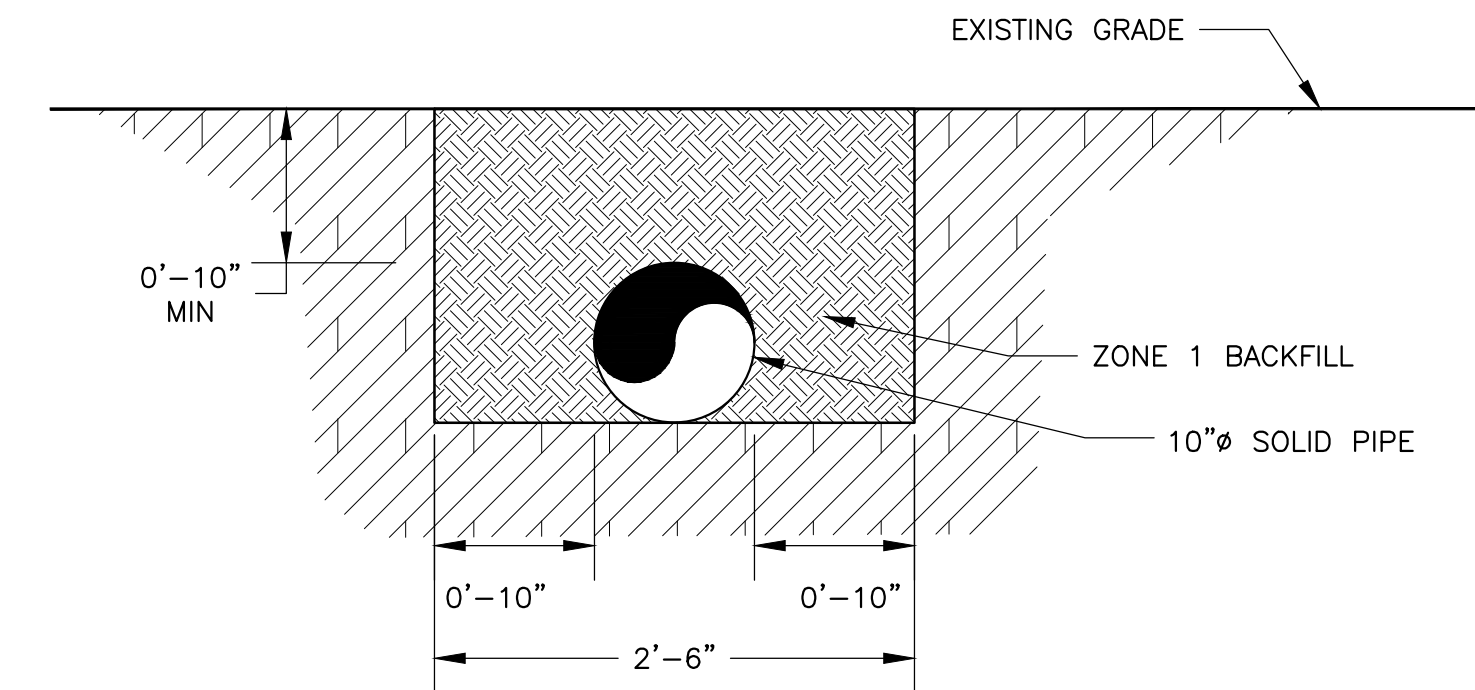
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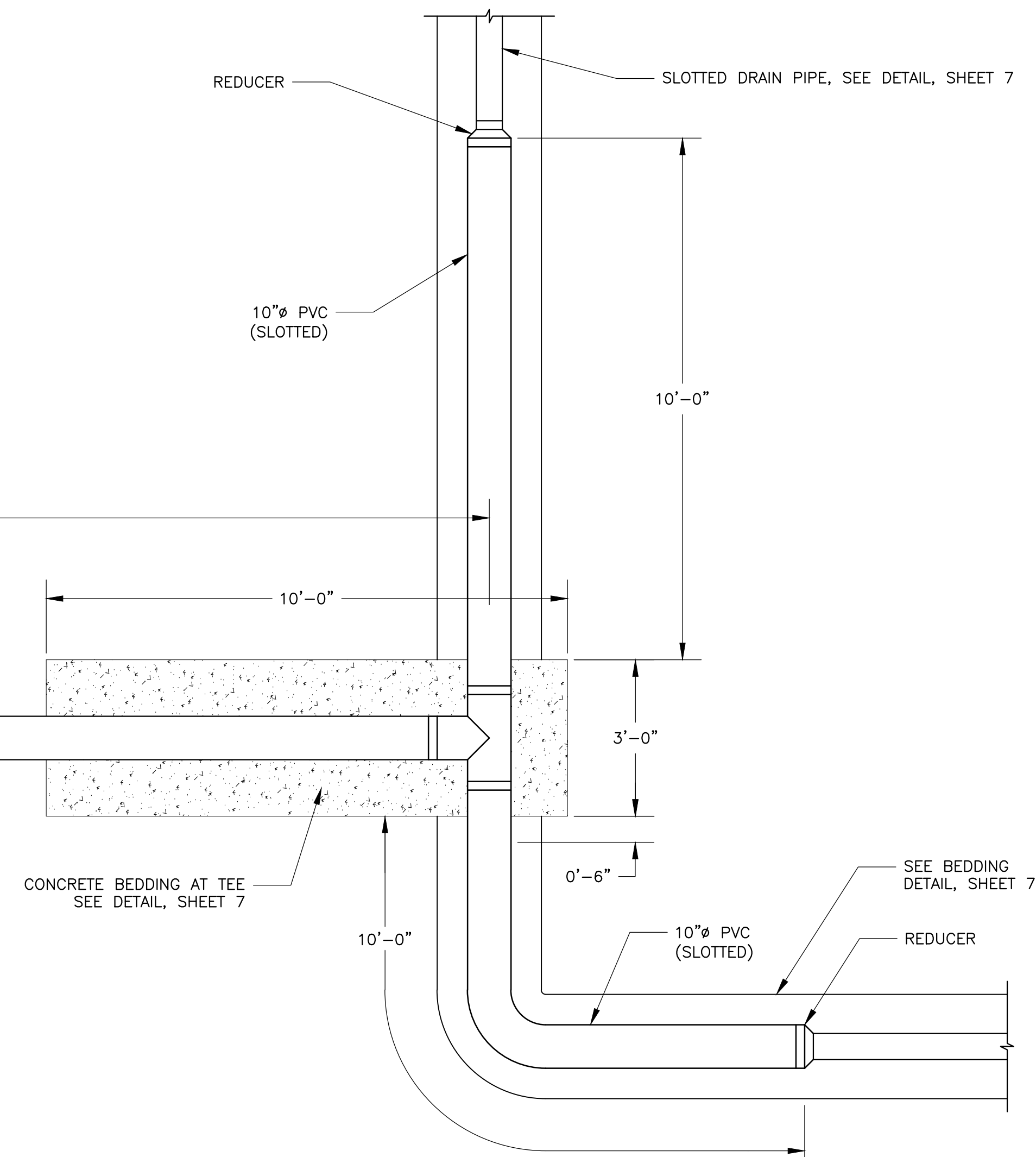
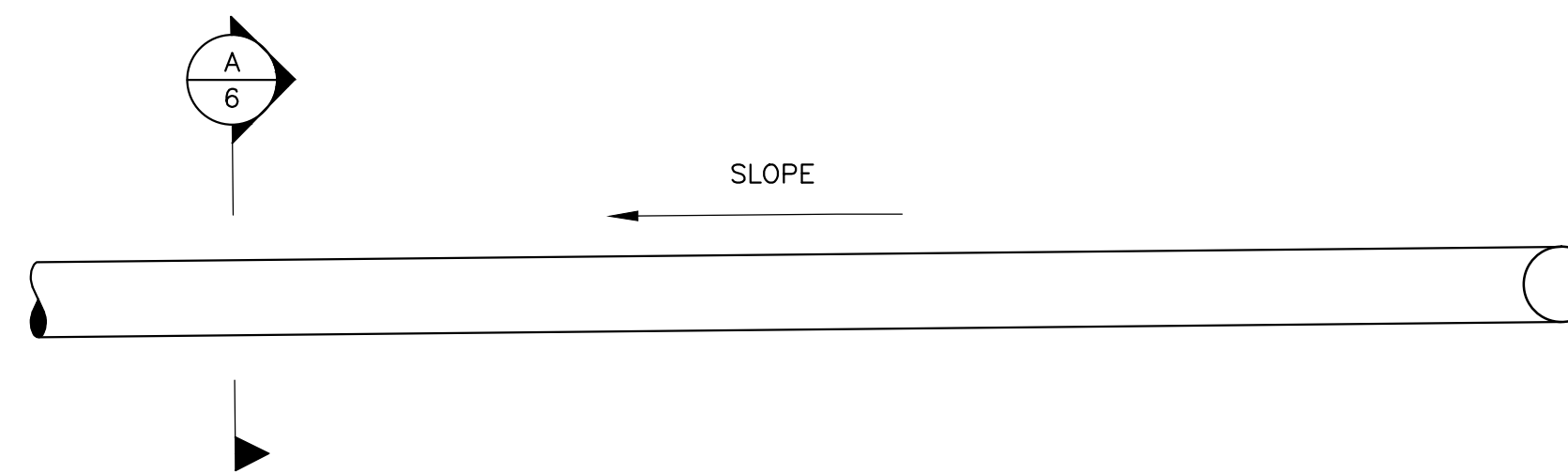
DRAIN PIPE OUTLET
PLAN VIEW

FULL SIZE: 1" = 2'-0"
HALF SIZE: 1" = 4'-0"

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05-02-2016



A
6 TYPICAL DRAIN PIPE SECTION
FULL SIZE: 1" = 1'-0"
HALF SIZE: 1" = 2'-0"



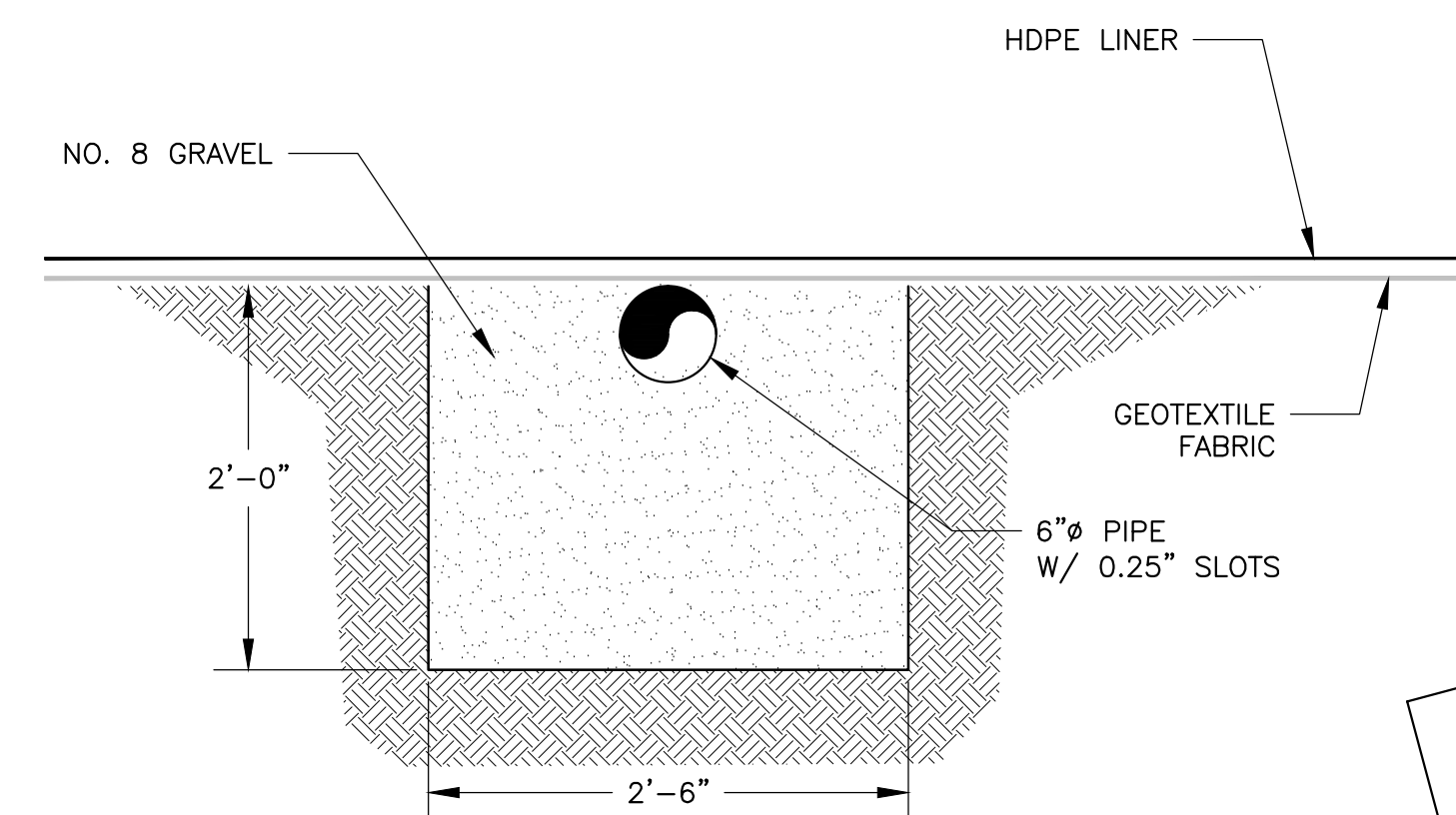
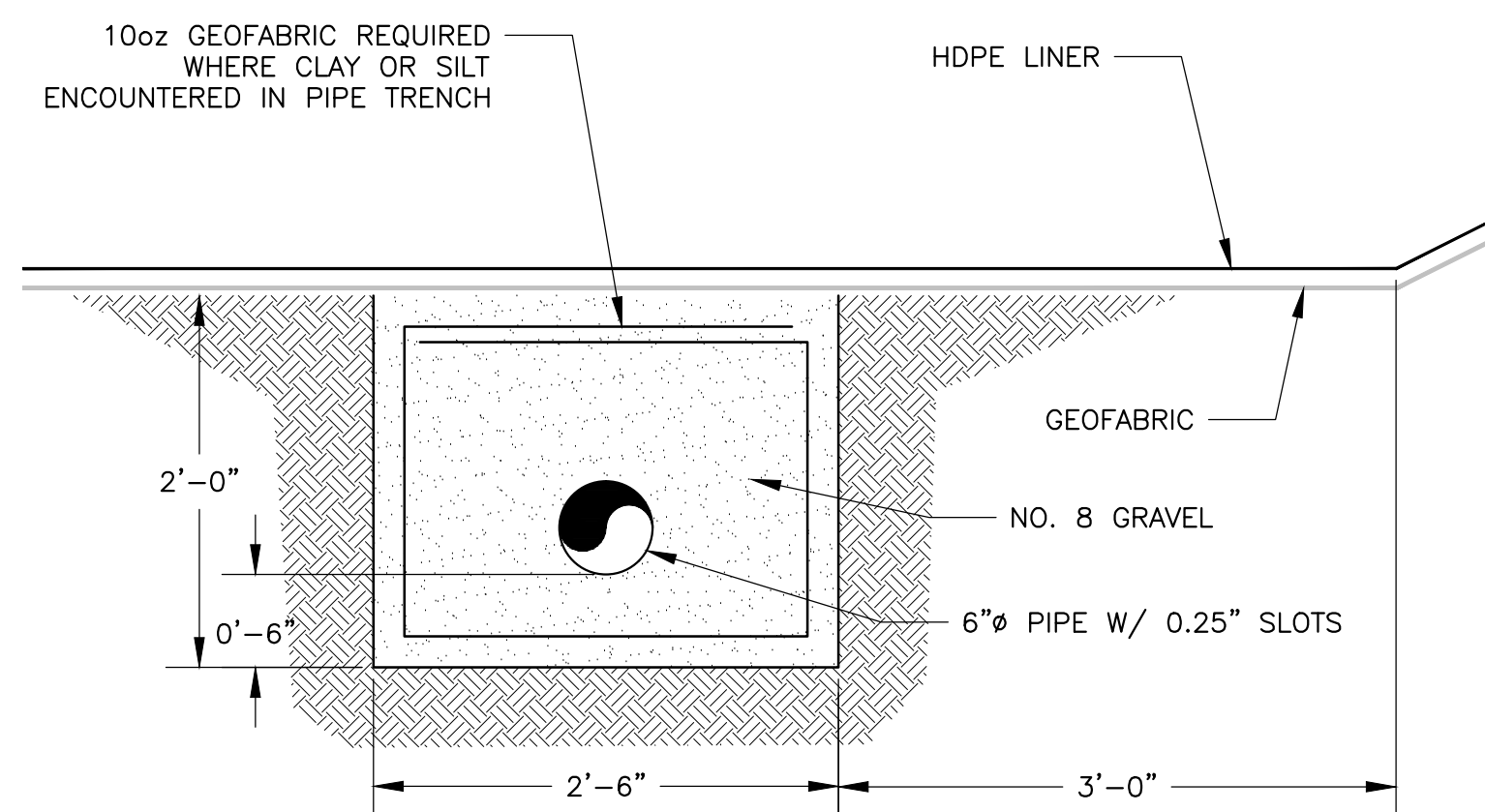
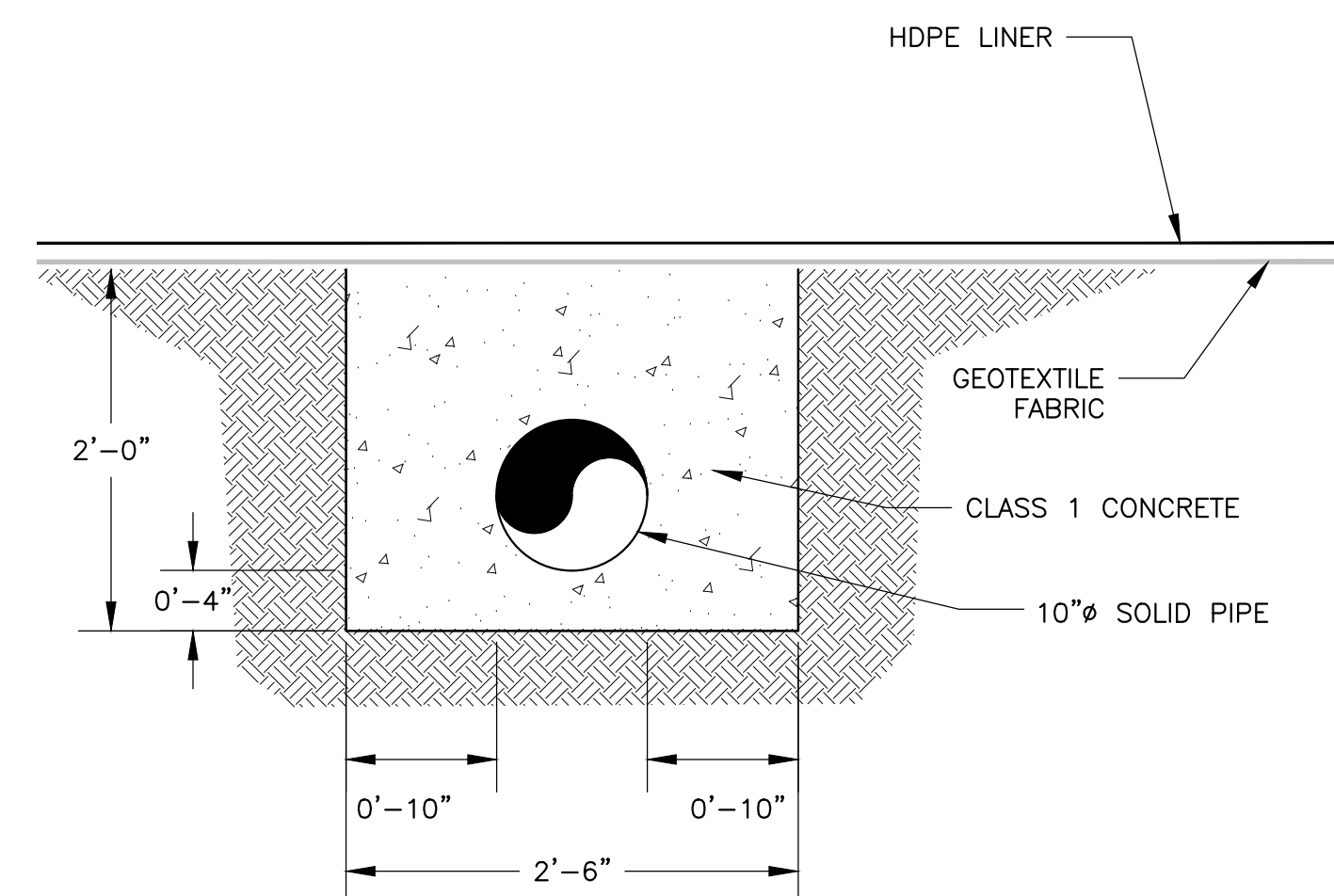
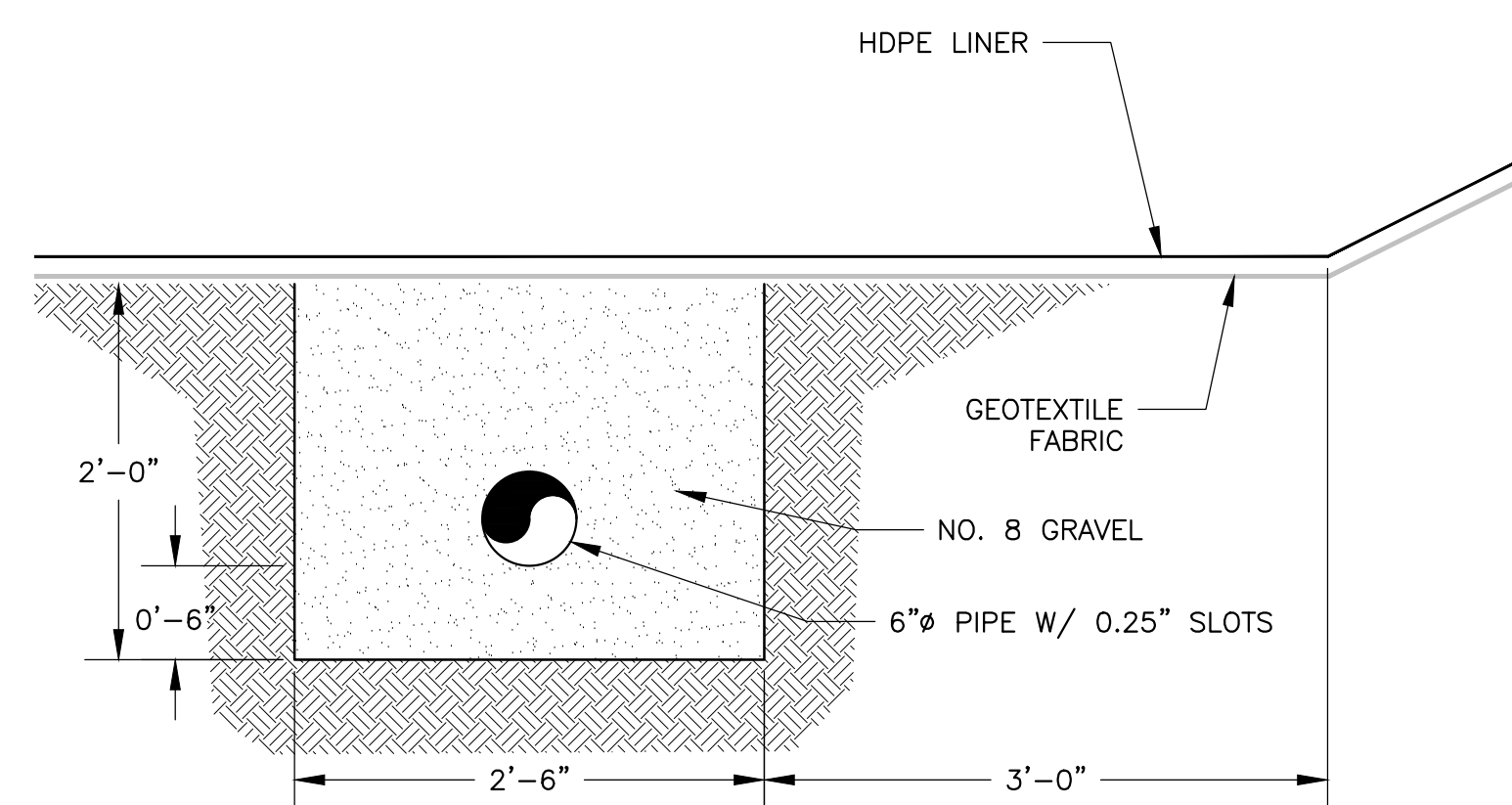
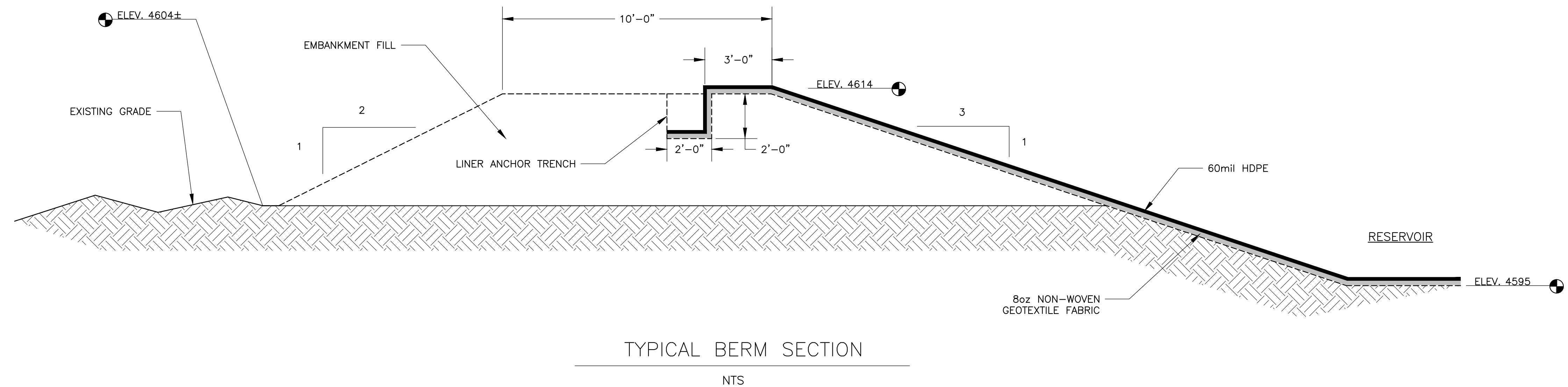
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3	AS-CONSTRUCTED	05-02-2016	DHS

NEW CACHE AGRICULTURAL POND 1
THE NEW CACHE LA Poudre IRRIGATING COMPANY
OUTLET DRAIN PLAN & PROFILE

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1225 Red Cedar Circle
Fort Collins, Colorado 80524
(970) 490-2620

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NEW CACHE AGRICULTURAL POND 1

THE NEW CACHE LA POUDRE IRRIGATING COMPANY

TYPICAL SECTIONS

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No. of Sheets	10
Drawing No.	7

EARTHWORK NOTES

PROTECTION

1. FREEZING
- 1.1. BACKFILL SHALL NOT BE PERFORMED DURING FREEZING WEATHER EXCEPT BY WRITTEN PERMISSION OF THE ENGINEER.

1.2. NO FILL MATERIALS SHALL BE PLACED ON FROZEN SURFACES.

1.3. FROZEN MATERIALS, SNOW, OR ICE SHALL NOT BE PLACED IN THE FILL.
2. DEWATERING
- 2.1. THE CONTRACTOR SHALL PROVIDE FOR AND MAINTAIN ADEQUATE DEWATERING TO REMOVE AND DISPOSE OF ALL WATER ENTERING EXCAVATIONS OR OTHER PARTS OF THE WORK.

2.2. EACH CONSTRUCTION AREA SHALL BE KEPT DRY DURING SUBGRADE PREPARATION AND CONTINUALLY THEREAFTER UNTIL THE CONSTRUCTION REQUIRED THEREIN IS COMPLETED TO THE EXTENT THAT NO DAMAGE FROM HYDROSTATIC PRESSURE, FLOTATION, OR OTHER CAUSE WILL RESULT.

2.3. ALL EXCAVATIONS WHICH EXTEND DOWN TO OR BELOW STATIC GROUND WATER ELEVATIONS SHALL BE DEWATERED BY LOWERING AND MAINTAINING THE GROUND WATER SURFACE BENEATH SUCH EXCAVATIONS.

2.4. SURFACE WATER SHALL BE DIVERTED OR OTHERWISE PREVENTED FROM ENTERING EXCAVATED AREAS TO THE GREATEST EXTENT PRACTICABLE.

2.5. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL NECESSARY WATER DIVERSION AND PROTECTIVE WORKS AND FURNISH ALL MATERIALS REQUIRED TO COMPLETE THE CONSTRUCTION IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.

2.6. ALL TEMPORARY DIVERSION OR DEWATERING WORKS SHALL BE FILLED, LEVELED, GRADED, OR OTHERWISE REMOVED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER PRIOR TO COMPLETION OF WORK.
3. SHORING
- 3.1. THE CONTRACTOR SHALL LOCATE, PROTECT, SHORE, BRACE, SUPPORT, AND MAINTAIN ALL EXISTING UNDERGROUND PIPES, CONDUITS, DRAINS, AND OTHER UNDERGROUND CONSTRUCTION WHICH MAY BE UNCOVERED OR OTHERWISE AFFECTED BY THE WORK.

3.2. HAZARDOUS AND DANGEROUS CONDITIONS SHALL BE PREVENTED AND THE SAFETY OF PERSONNEL SHALL BE MAINTAINED.

EXCAVATION

1. HAUL ROADS, ACCESS ROADS, AND RAMPS
- 1.1. HAUL ROADS AND ACCESS ROADS SHALL NOT BLOCK OR OBSTRUCT NATURAL DRAINAGE CHANNELS.

1.2. DITCHES AND CULVERTS SHALL BE INSTALLED WHERE NECESSARY TO ALLOW PASSAGE OF STREAM FLOW OR FLOW FROM STORM RUN-OF, AND TO PREVENT PONDING OF WATER. WHERE WATER IS PONDED FOR CONSTRUCTION USE, ADEQUATE OVERFLOW PIPES SHALL BE INSTALLED.

1.3. THE CONTRACTOR SHALL SPRAY HAUL ROADS, ACCESS ROADS, AND RAMPS WITH CONSTRUCTION WATER AT REGULAR INTERVALS DURING CONSTRUCTION TO MINIMIZE DUST.
2. STABILIZATION
- 2.1. SUBGRADES FOR FILLS AND BACKFILLS SHALL BE FIRM, DENSE, AND THOROUGHLY COMPACTED AND CONSOLIDATED, AND SHALL BE FREE FROM MUD AND MUCK.
3. UNAUTHORIZED EXCAVATION
- 3.1. ANY MATERIAL EXCAVATED BELOW THE ELEVATION OR OTHERWISE BEYOND THE LIMITS INDICATED ON THE DRAWINGS, UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER, SHALL BE REPLACED AND COMPACTED TO THE DENSITY INDICATED IN THE EMBANKMENT FILL SPECIFICATIONS
4. EXCAVATION
- 4.1. EXCAVATION SHALL BE DONE TO THE LINES AND GRADES INDICATED ON THE DRAWINGS AND TO THE LIMITS REQUIRED TO PERFORM THE CONSTRUCTION WORK.

4.2. MACHINE EXCAVATION SHALL BE CONTROLLED TO PREVENT UNDERCUTTING THE PROPER SUBGRADE ELEVATION.

4.3. SOFT OR OTHERWISE UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SUBGRADE AND REPLACED WITH MATERIAL SPECIFIED HEREINAFTER FOR STRUCTURAL FOUNDATION FILL.

4.4. NO FILL MATERIAL SHALL BE PLACED UNTIL THE SUBGRADE HAS BEEN PROPERLY PREPARED AND ACCEPTABLE TO THE ENGINEER.
5. SPOILS
- 5.1. EXCESS MATERIALS FROM THE REQUIRED EXCAVATIONS, OR THOSE MATERIALS THAT DO NOT MEET THE SPECIFICATIONS FOR MATERIAL TYPE, OR MATERIALS TOO HARD TO BREAK DOWN SHALL BE SPOILES, OR MATERIALS TOO SATURATED TO WORK INTO THE FILLS SHALL BE SPOILED.

5.2. NO MATERIALS SHALL BE SPOILED WITHOUT THE CONCURRENCE OF THE ENGINEER.

EMBANKMENT FILL

1. MATERIALS
- 1.1. TO THE MAXIMUM EXTENT AVAILABLE, SUITABLE EARTH MATERIALS OBTAINED FROM REQUIRED EXCAVATIONS SHALL BE USED FOR CONSTRUCTION OF EMBANKMENT.

1.2. ALL MATERIAL PLACED IN EMBANKMENT FILL SHALL BE FREE FROM ROCKS OR STONES IN EXCESS OF 8-INCHES IN SIZE AND FROM BRUSH, STUMPS, LOGS, ROOTS, ORGANICS, AND OTHER OBJECTIONABLE MATERIALS.

1.3. EMBANKMENT FILL MATERIALS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
2. PLACEMENT AND COMPACTION
- 2.1. THE DESIGNATED EMBANKMENT FILL MATERIAL SHALL BE PLACED IN LAYERS NOT TO EXCEED TWELVE INCHES (12") IN UNCOMPACTED THICKNESS.

2.2. MATERIAL DEPOSITED IN WINDROWS OR PILES BY EXCAVATING OR HAULING EQUIPMENT SHALL BE SPREAD AND LEVELED BEFORE COMPACTION.

2.3. EACH SOIL LAYER SHALL BE MECHANICALLY COMPACTED, USING SUITABLE COMPACTION EQUIPMENT FOR THE TYPE OF SOIL BEING COMPACTED, AS DESCRIBED IN SECTION 3.

2.4. EACH LAYER IS TO BE COMPACTED TO 95% MAXIMUM DENSITY AND BE WITHIN ±2% OPTIMUM MOISTURE CONTENT AS DEFINED BY THE STANDARD PROCTOR TEST (ASTM D 698).

2.5. IF THE MOISTURE AND DENSITY REQUIREMENTS ARE NOT MET, THE LIFT SHALL BE BROKEN UP AND RECOMPACTED UNTIL THE SPECIFIED REQUIREMENTS ARE MET.

2.3. SURFACES THAT BECOME SMOOTH AND/OR HARD FROM COMPACTION OR FROM DRYING OUT SHALL BE SCARIFIED AND MOISTURE-CONDITIONED PRIOR TO PLACING ADDITIONAL FILL.
3. EQUIPMENT
- 3.1. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE THE SIZE AND TYPE OF EQUIPMENT BEST SUITED TO PERFORM THE VARIOUS TASKS REQUIRED FOR THE PROJECT.

3.2. ONLY SHEEPSFOOT TYPE OR SEGMENTED PAD ROLLERS WILL BE ALLOWED FOR COMPACTION OF CLAY TYPE MATERIALS. SMOOTH DRUM ROLLERS WILL NOT BE ALLOWED FOR COMPACTING THE CLAY TYPE MATERIALS.

3.3. FOR COMPACTION OF GRANULAR MATERIALS, VIBRATORY STEEL DRUM OR PLATE TYPE VIBRATORY COMPACTORS WILL BE ALLOWED. NO SEGMENTED PAD, SHEEPSFOOT ROLLERS, OR OTHER ROLLERS THAT WOULD CREATE HIGH CONTACT STRESSES ON THE GRANULAR PARTICLES WILL BE ALLOWED.

3.4. THE USE OF RUBBER-TIRED VEHICLES TO PROVIDE COMPACTION WILL NOT BE ALLOWED.

3.5. DISKS USED ON THE PROJECT SHALL BE OF SUFFICIENT SIZE AND WEIGHT TO FULLY PENETRATE THE LIFT.
4. MAINTENANCE
- 4.1. FILLS, EMBANKMENTS, AND BACKFILLS THAT SETTLE OR ERODE BEFORE FINAL ACCEPTANCE OF THE WORK UNDER THESE SPECIFICATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

4.2. ANY SETTLED OR ERODED AREAS SHALL BE REFILLED, COMPACTED, AND GRADED TO CONFORM TO THE ELEVATIONS INDICATED ON THE DRAWINGS OR TO THE ELEVATION OF THE ADJACENT GROUND SURFACE.
5. FINAL GRADING
- 5.1. AFTER ALL CONSTRUCTION WORK UNDER THESE SPECIFICATIONS HAS BEEN COMPLETED, ALL GROUND SURFACE AREAS DISTURBED BY THE CONSTRUCTION OPERATIONS SHALL BE GRADED.

5.2. GRADING SHALL BE FINISHED TO THE CONTOURS AND ELEVATIONS INDICATED ON TE DRAWINGS OR, KF NOT INDICATED, TO THE MATCHING CONTOURS AND ELEVATIONS OF THE ORIGINAL, UNDISTURBED GROUND SURFACE.

5.3. IN ANY EVENT, THE FINAL GRADING SHALL PROVIDE SMOOTH UNIFORM SURFACING AND EFFETIVE DRAINAGE OF THE GROUND AREAS.

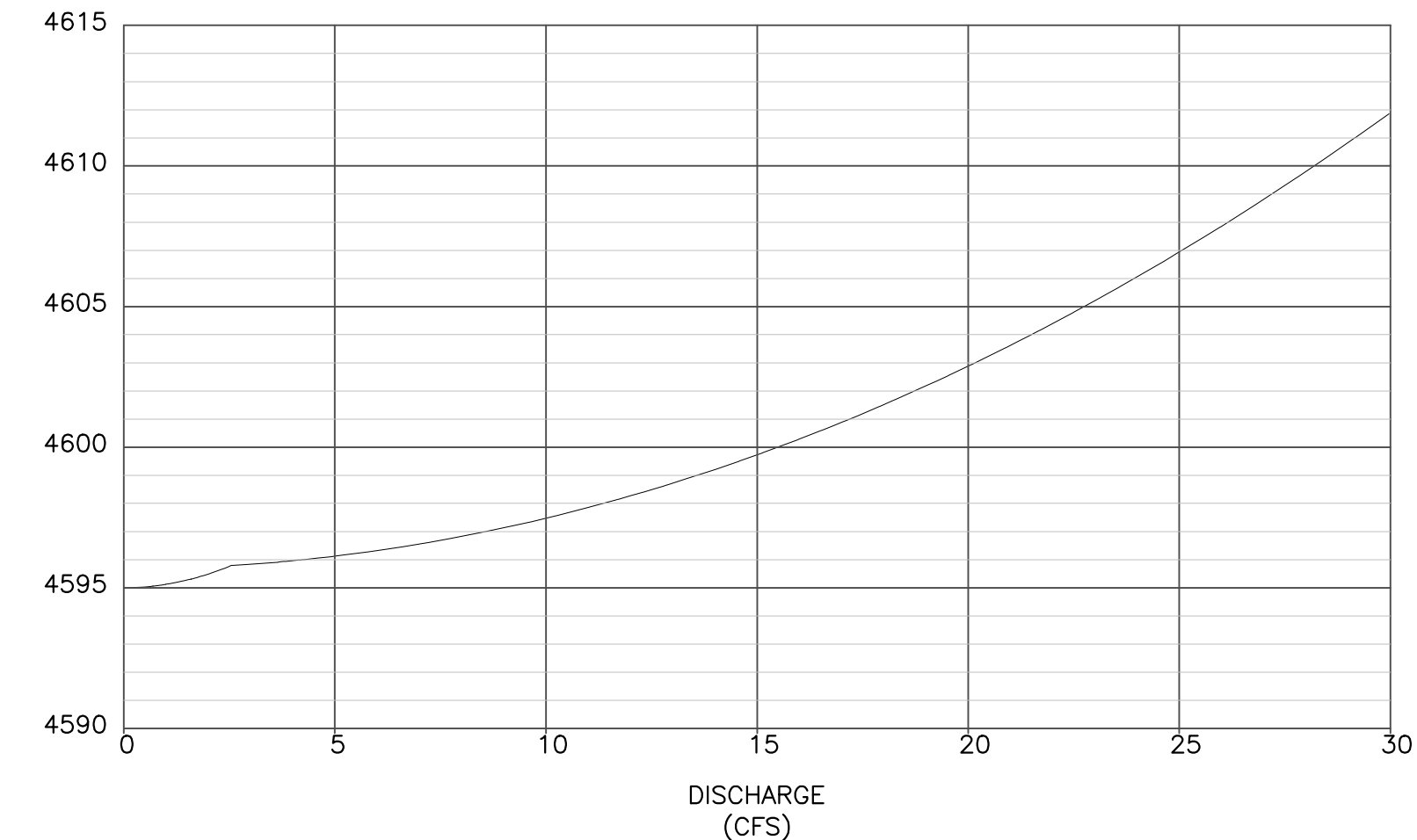
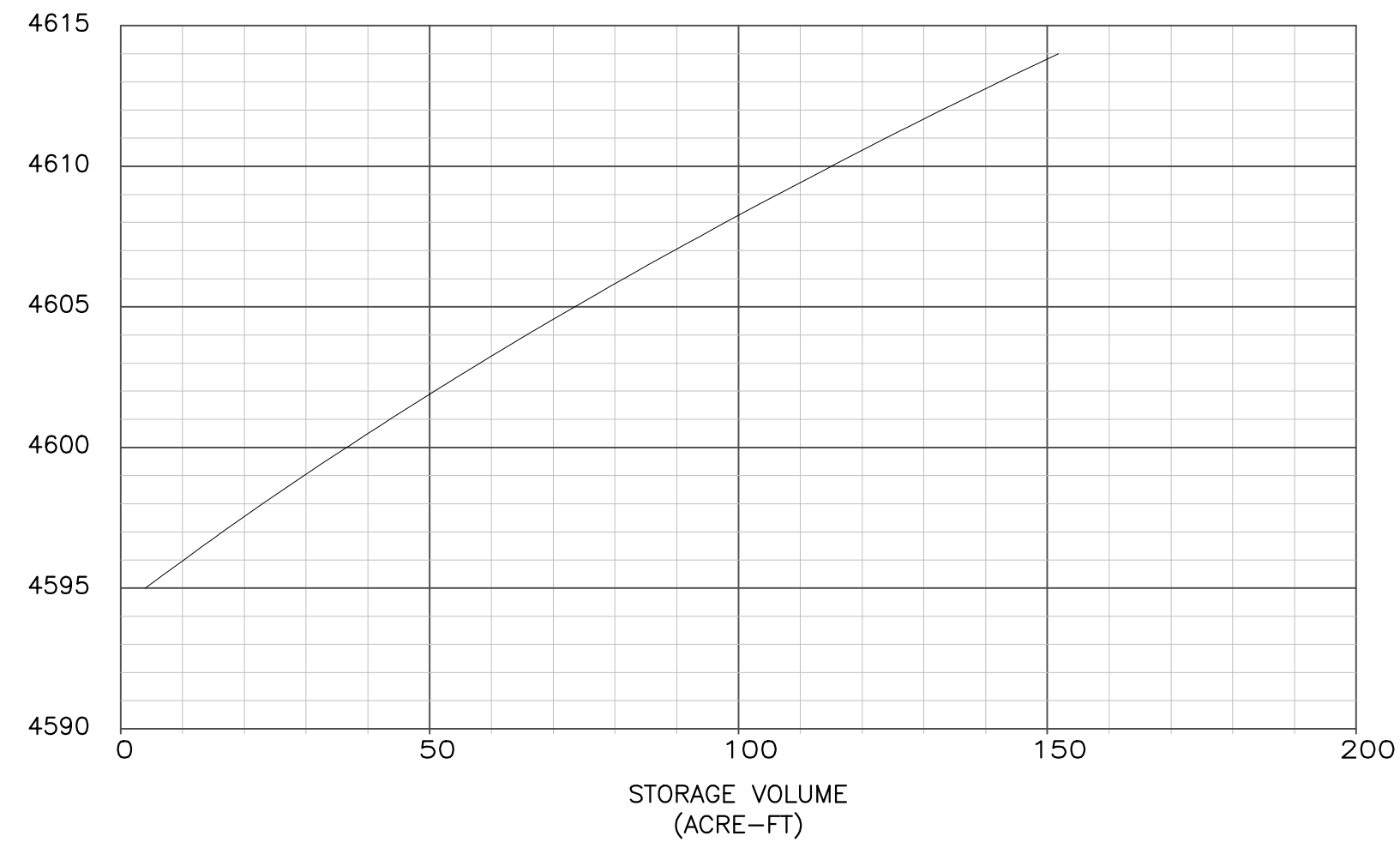
5.4. UPON COMPLETION OF THE WORK ASSOCIATED WITH THIS CONTRACT, THE CONTRACTOR SHALL PERFORM A CLEANUP OF THE TEMPORARY FACILITIES.

AREA-STORAGE RATING TABLE

WSE (USGS)	AREA (acre-ft.)	CUM. VOL. (acre-ft.)
4595	6.1	4.0
4596	6.2	10.2
4597	6.4	16.5
4598	6.6	23.0
4599	6.8	29.7
4600	6.9	36.6
4601	7.1	43.6
4602	7.3	50.8
4603	7.5	58.2
4604	7.7	65.7
4605	7.8	73.5
4606	8.0	81.4
4607	8.2	89.6
4608	8.4	97.9
4609	8.6	106.4
4610	8.8	115.1
4611	9.0	123.9
4612	9.2	133.0
4613	9.4	142.3
4614	9.6	151.8

DISCHARGE RATING TABLE

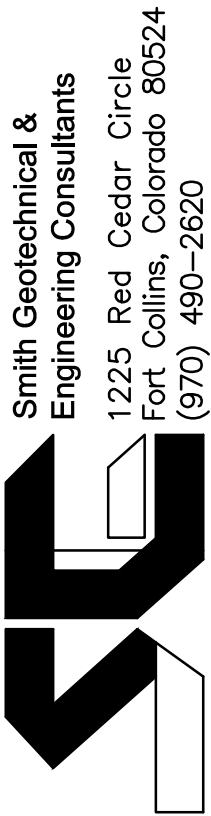
WSE (USGS)	DISCHARGE (CFS)	CONTROL
4595	0.00	OUTLET
4596	2.87	OUTLET
4597	4.06	OUTLET
4598	4.98	OUTLET
4599	5.75	OUTLET
4600	6.43	OUTLET
4601	7.04	OUTLET
4602	7.61	OUTLET
4603	8.13	OUTLET
4604	8.62	OUTLET
4605	9.09	OUTLET
4606	9.53	OUTLET
4607	9.96	OUTLET
4608	10.36	OUTLET
4609	10.76	OUTLET
4610	11.13	OUTLET
4611	11.50	OUTLET
4612	11.85	OUTLET
4613	12.20	OUTLET
4614	12.53	OUTLET



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NEW CACHE AGRICULTURAL POND 1
THE NEW CACHE LA POUDRE IRRIGATING COMPANY

NOTES



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