STANDLEY LAKE FACILITIES

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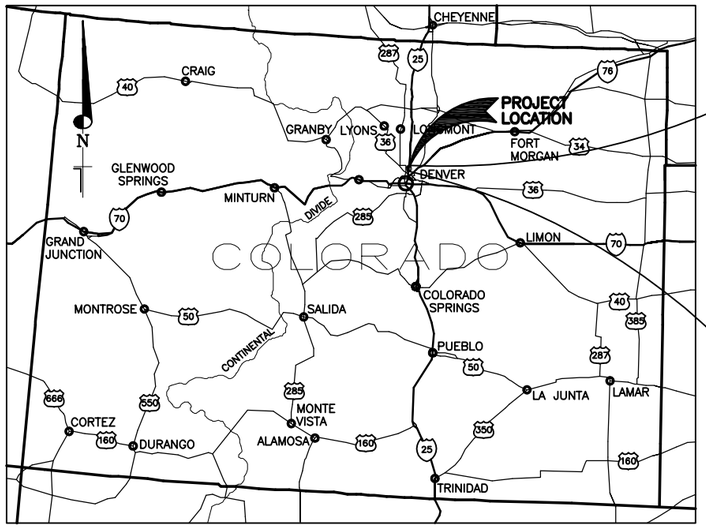
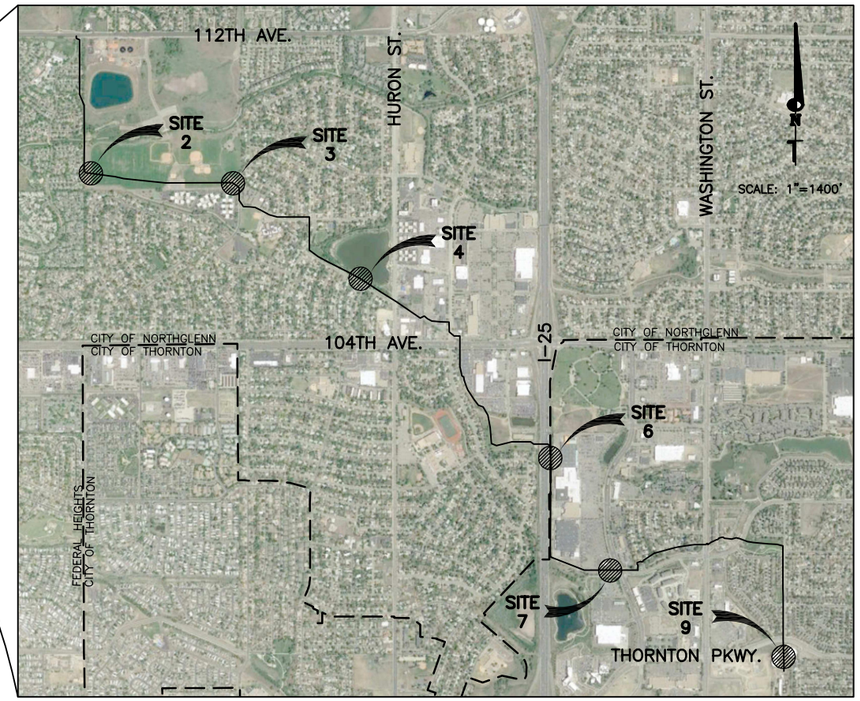


VICINITY MAP



LOCATION MAP

NOTE:
NO CONSTRUCTION OF ANY KIND, INCLUDING GRADING, IS ALLOWED IN AREAS THAT DO NOT HAVE DEDICATED RIGHT–OF–WAY OR EASEMENTS FOR THIS PROJECT.

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JASON PIERCE, P.E., INFRASTRUCTURE ENGINEERING DIRECTOR — DATE

JOSH REDMAN, UTILITIES OPERATION MANAGER — DATE

PREPARED FOR
City of Thornton

PROJECT NUMBER 10-410
CIP 19-225

RECORD DRAWINGS
JUNE 2022

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LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"–SCALE ACCORDINGLY)

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DRAWN DPB
DESIGNED SES
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APPROVED:
PRINCIPAL
DATE:

REVISIONS				
REV.	DESCRIPTION	BY	DATE	APP.
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CITY OF THORNTON, COLORADO

STANDLEY LAKE FACILITIES

COMMON

COVER SHEET

DATE: 01/14/20
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER G–1

GENERAL NOTES:

1. THE LOCATION OF UNDERGROUND UTILITIES AS SHOWN ON THE DRAWINGS HAVE BEEN DETERMINED FROM FIELD INVESTIGATION AND THE AVAILABLE UTILITY RECORDS. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE PROTECTION OF UTILITIES AFFECTED BY THE EXECUTION OF THIS CONTRACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES AND AGENCIES AND FOR THE COORDINATION OF ALL WORK IN THE PROXIMITY OF THE UTILITIES. CONTRACTOR SHALL CONTACT UTILITY NOTIFICATION CENTER OF COLORADO (WWW.COLORADO811.ORG) AT LEAST TWO (2) BUSINESS DAYS PRIOR TO ANY AND ALL EXCAVATION.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS, ELEVATIONS, DIMENSIONS, TYPE AND CONDITION OF ADJACENT AND/OR CONFLICTING UTILITIES IN ADVANCE OF CONSTRUCTION IN ORDER THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCES AND/OR ALTERNATE CONNECTIONS, IF REQUIRED. THE CONTRACTOR SHALL PRESERVE AND PROTECT PUBLIC AND PRIVATE UTILITIES AT ALL TIMES DURING CONSTRUCTION. ANY DAMAGE TO UTILITIES RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AND/OR RESTORED IN SUCH A MANNER AND CONDITION THAT IS ACCEPTABLE TO THE ENGINEER, CITY AND AFFECTED UTILITY OWNER. THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER WHEN PROPOSED IMPROVEMENTS, GRADES, STRUCTURES OR UTILITIES CONFLICT WITH EXISTING STRUCTURES, GRADES OR UTILITIES.
3. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE OWNER OR ENGINEER. THE OWNER OR ENGINEER RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO THE STANDARDS AND SPECIFICATIONS SHOWN IN THE CONTRACT DOCUMENTS.
4. THE CONTRACTOR SHALL HAVE ONE SIGNED COPY OF THE APPROVED PLANS AND SPECIFICATIONS AND ANY ADDITIONAL REQUIRED CITY OF THORNTON COLORADO DEPARTMENT OF TRANSPORTATION, OR ADAMS COUNTY DESIGN STANDARDS AT THE JOB SITE AT ALL TIMES.
5. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER PREPARATION OF THESE DRAWINGS, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT OR ACCURATE. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES AFFECTING THE WORK. SHOULD THE CONTRACTOR IDENTIFY ANY UTILITIES, STRUCTURES OR FEATURES NOT SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE OWNER OR ENGINEER IMMEDIATELY.
6. THE CONTRACTOR SHALL CONTACT ALL UTILITY OWNERS FOR INSPECTION WHEN WORK IS SCHEDULED ADJACENT TO THE UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING AFFECTED UTILITIES IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS, AND THE REQUIREMENTS OF THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE AND COSTS ASSOCIATED WITH INTERRUPTED OR LOST SERVICE DUE TO DAMAGE TO THESE UTILITIES.
7. THE CONTRACTOR SHALL REFER TO THE CONTRACT SPECIFICATIONS FOR DESCRIPTION OF MATERIALS REFERRED TO BY SIZE, CLASS, TYPE, DESCRIPTION, OR OTHERWISE SPECIFIED ON THE DRAWINGS.
8. THE CONTRACTOR IS RESPONSIBLE FOR SAVING AND PROTECTING ALL EXISTING TREES AND VEGETATION WHERE REMOVAL FOR CONSTRUCTION IS NOT SPECIFIED ON THE DRAWINGS.
9. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY FIELD CONDITION NOT CONSISTENT WITH THE CONSTRUCTION DOCUMENTS.
10. THE CONTRACTOR SHALL PERFORM ALL WORK WITHIN THE LIMITS OF CONSTRUCTION AS SHOWN ON THE DRAWINGS AND DISCUSSED IN THE CONTRACT DOCUMENTS. IF THE CONTRACTOR DAMAGES ANY EXISTING SITE OR PUBLIC AMENITIES (PAVEMENTS, CURBS, CURB AND GUTTER, SOD, TREES, FENCES, ETC.) OUTSIDE OR WITHIN EASEMENTS OR CONSTRUCTION LIMITS, THE CONTRACTOR SHALL REMOVE AND REPAIR SUCH TO THE SATISFACTION OF THE INDIVIDUAL PROPERTY OWNERS AND THE ENGINEER.
11. ITEMS REMOVED AS PART OF THE CONSTRUCTION ARE THE PROPERTY OF THE SALVAGE ITEMS WILL BE IDENTIFIED BY THE OWNER AND BE TAKEN TO OWNER'S YARD AT THE INFRASTRUCTURE MAINTENANCE CENTER (IMC) LOCATED AT 12450 WASHINGTON STREET, THORNTON, CO 80241.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY EROSION CONTROL THROUGHOUT THE CONSTRUCTION DURATION AND SHALL INSTALL ALL REQUIRED EROSION CONTROL MEASURES AS NECESSARY.
13. THE CONTRACTOR SHALL UTILIZE SPACE WITHIN THE LIMITS OF CONSTRUCTION FOR STAGING AND TEMPORARY STORING OF MATERIALS. THE CONTRACTOR SHALL NOT ENCROACH UPON ANY PUBLIC, PRIVATE OR RIGHT-OF-WAY PROPERTY OUTSIDE THE LIMITS OF CONSTRUCTION.
14. ALL REQUIRED UTILITIES FOR THE CONTRACTOR'S USE DURING CONSTRUCTION SHALL BE ARRANGED BY THE CONTRACTOR DIRECTLY WITH THE APPROPRIATE UTILITY AGENCY.
15. WASTE MATERIAL PRODUCED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF THE PROJECT SITE AT THE CONTRACTOR'S EXPENSE.
16. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS THAT ARE PERTINENT TO THIS WORK.
17. PRIOR TO BEGINNING ANY WORK, THE CONTRACTOR SHALL OBTAIN A TRAFFIC CONTROL PERMIT AND RIGHT-OF-WAY PERMIT. SHOULD ADAMS COUNTY OR THE COLORADO DEPARTMENT OF TRANSPORTATION HAVE JURISDICTION OVER ROADWAYS, CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL PLANS AND OBTAIN PERMITS THROUGH THESE ENTITIES.
18. ANY CONSTRUCTION DEBRIS OR MUD TRACKING ONTO THE PUBLIC RIGHT-OF-WAY, RESULTING FROM THE PROJECT, SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY FIX ANY EXCAVATION, OR PAVEMENT FAILURE CAUSED BY THE PROJECT, AND SHALL PROPERLY BARRICADE ANY OPEN UTILITY TRENCHES OR CONSTRUCTION AREAS.
19. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS AT AND ADJACENT TO THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, DURING THE PERFORMANCE OF THE WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY, AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE OWNERS TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN OR NEAR THE CONSTRUCTION SITE.
20. EXCAVATION AND BACKFILL FOR STRUCTURES SHALL CONFORM TO THE SPECIFICATIONS.
21. SITE SURVEY WAS PERFORMED BY PRECISION SURVEYING AND MAPPING (303-753-9799) IN NOVEMBER 2019.
22. CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITIES AND CONNECTIONS TO EXISTING FACILITIES PRIOR TO STARTING CONSTRUCTION.
23. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
24. THESE PLANS DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS, SUBCONTRACTORS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE REGISTERED PROFESSIONAL ENGINEER(S) HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT NOW OR HEREAFTER MAY BE INCORPORATED IN THE WORK.
25. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS FROM LOCAL, CITY, COUNTY AND STATE JURISDICTIONS FOR ALL ASPECTS OF THE WORK (UNLESS OTHERWISE DESIGNATED IN THE SPECIFICATIONS).
26. THE CONTRACTOR SHALL MAINTAIN ACCESS TO PUBLIC AND PRIVATE FACILITIES DURING CONSTRUCTION. ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE OWNER.
27. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB SITE; INCLUDING, SAFETY OF PERSONS AND PROPERTY DURING THE PERFORMANCE OF WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CITY CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON, OR NEAR THE CONSTRUCTION SITE.
28. THE TYPE, SIZE, LOCATION, AND NUMBER OF ALL KNOWN UNDERGROUND UTILITIES ARE APPROXIMATE WHEN SHOWN ON THE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY CONTRACTOR PRIOR TO DATE OF CONSTRUCTION. FOR INFORMATION CONTACT: UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) 1-800-922-1987. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY SIZE AND HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING FACILITIES PRIOR TO CONSTRUCTION AND NOTIFY THE CITY OF ANY DISCREPANCIES.
29. MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS AND WORK SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY AUTHORIZED CITY OF THORNTON PERSONNEL.
30. MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS AND WORK SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY AUTHORIZED CITY OF THORNTON PERSONNEL.
31. ALL TRENCHES SHALL BE ADEQUATELY SUPPORTED AND THE SAFETY OF WORKERS PROVIDED FOR AS REQUIRED BY THE MOST RECENT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION". THESE REGULATIONS ARE DESCRIBED IN SUBPART P, PART 192 6 OF THE CODE OF FEDERAL REGULATIONS. SHEETING AND SHORING SHALL BE UTILIZED WHERE NECESSARY TO PREVENT ANY EXCESSIVE WIDENING OR SLOUGHING OF THE TRENCH WHICH MAY BE DETRIMENTAL TO HUMAN SAFETY, TO THE PIPE BEING PLACED, TO TREES, OR TO ANY EXISTING STRUCTURE WHERE EXCAVATIONS ARE MADE UNDER SEVERE WATER CONDITIONS. THE CONTRACTOR MAY BE REQUIRED TO USE AN APPROVED PILING INSTEAD OF SHEETING AND SHORING.
32. THE CONTRACTOR SHALL FURNISH THE ENGINEER THE "AS CONSTRUCTED" LOCATIONS OF FACILITIES INSTALLED AND, THIS IN TURN, SHALL BE SUBMITTED TO THE CITY OF THORNTON ON AS-BUILT ELECTRONIC FILES PREPARED BY THE ENGINEER.
33. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING NEARBY PUBLIC STREETS OF MUD OR DEBRIS DUE TO CONSTRUCTION ACTIVITY INITIATED BY SAID CONTRACTOR ON A DAILY BASIS OR AS OTHERWISE DIRECTED BY AUTHORIZED CITY PERSONNEL.
34. PRIOR TO THE BEGINNING OF WORK, A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD BETWEEN THE CITY, THE RESPONSIBLE PARTY WHO IS SCHEDULED TO PERFORM THE WORK, THE DESIGNATED ON SITE FIELD REPRESENTATIVE, LANDSCAPE CONSTRUCTION COORDINATOR, THE CONSULTING ENGINEER OR LANDSCAPE PROFESSIONAL, AND ANY OTHER ENTITIES INVOLVED IN THE CONSTRUCTION.
35. INFRASTRUCTURE PHASING OF ANY PROJECT MUST BE SHOWN ON THE CONSTRUCTION PLANS AND MADE A PART OF THE APPLICATION PROCEDURE. NO PHASING SHALL BE PERMITTED UNLESS THIS REQUIREMENT HAS BEEN ADHERED TO.
36. NO WORK SHALL BEHIN UNTIL THE INSTALLING RESPONSIBLE PARTY IS IN POSSESSION OF AN APPROVED SET OF PLANS AND THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS, AND ALL NECESSARY PERMITS FOR THE IMPROVEMENTS HAS BEEN ISSUED BY THE CITY. INFRASTRUCTURE ENGINEERING'S APPROVAL SHALL BE FOR GENERAL CONFORMITY TO THE UTILITY SPECIFICATIONS AND SHALL NOT CONSTITUTE BLANKET APPROVAL OF ALL DIMENSIONS, QUANTITIES AND DETAILS OF THE MATERIAL OR EQUIPMENT SHOWN. NOR SHALL SUCH APPROVAL RELIEVE THE RESPONSIBLE PARTY, CONSULTING ENGINEER, OR LANDSCAPE ARCHITECT OF THEIR RESPONSIBILITY FOR ERRORS CONTAINED IN THE DRAWINGS. A COPY OF THE APPROVED PLANS AND ALL PERMITS SHALL BE ONSITE AT ALL TIMES.
37. THE RESPONSIBLE PARTY SHALL FURNISH REASONABLE AID AND ASSISTANCE REQUIRED BY INFRASTRUCTURE ENGINEERING FOR THE PROPER EXAMINATION OF THE MATERIALS AND WORK. WORK SHALL BE PERFORMED IN ACCORDANCE WITH ACCEPTED WORKMANSHIP PRACTICES AND THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS. ANY WORK NOT ACCEPTED BY INFRASTRUCTURE ENGINEERING SHALL BE REDONE UNTIL COMPLIANCE WITH THESE STANDARDS IS ACHIEVED. INSTRUCTIONS GIVEN BY INFRASTRUCTURE ENGINEERING RELATING TO QUALITY OF MATERIALS AND WORKMANSHIP MUST BE OBEYED AT ONCE BY THE RESPONSIBLE PARTY. INFRASTRUCTURE ENGINEERING SHALL NOT SUPERVISE, SET OUT WORK, OR GIVE LINE AND GRADE STAKES.
38. THE MATERIALS USED IN PROJECTS SHALL BE NEW AND SUBJECT TO THE INSPECTION AND APPROVAL OF THE INSPECTOR AT ALL TIMES. THE INSPECTOR HAS THE RIGHT TO PERFORM ANY TESTING DEEMED NECESSARY TO ENSURE COMPLIANCE OF THE MATERIAL WITH THESE STANDARDS. NO MATERIAL SHALL BE USED BEFORE BEING INSPECTED AND APPROVED BY THE INSPECTOR. FAILURE OR NEGLECT ON THE PART OF THE INSPECTOR TO CONDEMN OR REJECT INFERIOR MATERIALS OR WORK SHALL NOT BE CONSTRUED TO IMPLY THEIR ACCEPTANCE SHOULD THEIR INFERIORITY BECOME EVIDENT AT ANY TIME PRIOR TO FINAL ACCEPTANCE OF THE WORK. INSPECTORS HAVE THE AUTHORITY TO REJECT DEFECTIVE OR INFERIOR MATERIALS AND/OR DEFECTIVE WORKMANSHIP AND TO SUSPEND WORK UNTIL SUCH TIME AS THE RESPONSIBLE PARTY SHALL CORRECT THE DISCREPANCIES QUESTION.
39. WHENEVER DEFECTIVE MATERIALS AND WORK ARE REJECTED, THE RESPONSIBLE PARTY SHALL PROMTLY REMOVE SUCH DEFECTIVE MATERIALS AND THE CONSTRUCTION FROM THE JOB SITE AND REPLACE ALL DEFECTIVE PORTIONS TO THE SATISFACTION OF INFRASTRUCTURE ENGINEERING. IN THE EVENT THE RESPONSIBLE PARTY FAILS TO REMOVE REJECTED ITEMS FROM THE JOB SITE WITHIN A REASONABLE LENGTH OF TIME, INFRASTRUCTURE ENGINEERING MAY ARRANGE FOR SUCH REMOVAL AT THE EXPENSE OF THE RESPONSIBLE PARTY.
40. INSPECTION SHALL NOT RELIEVE THE RESPONSIBLE PARTY FROM ANY OBLIGATION TO PERFORM THE WORK STRICTLY IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS OR ANY MODIFICATIONS THEREOF. WORK NOT SO CONSTRUCTED SHALL BE REMOVED AND CORRECTED BY THE RESPONSIBLE PARTY AT THEIR SOLE EXPENSE, WHENEVER SO ORDERED BY INFRASTRUCTURE ENGINEERING, WITHOUT REFERENCE TO ANY PREVIOUS ERROR OR OVERSIGHT IN INSPECTION.
41. EXCEPT IN CASES OF EMERGENCY, MAINTENANCE, OR PROTECTION OF WORK ALREADY COMPLETED, NO WORK SHALL BE ALLOWED BETWEEN THE HOURS OF 7 P.M. AND 7 A.M.; NOR ON SATURDAY, SUNDAY, OR LEGAL HOLIDAYS UNLESS APPROVED BY INFRASTRUCTURE DEPARTMENT IN EACH CASE. WHEN ANY INSPECTOR IS REQUIRED TO WORK OUTSIDE THE HOURS OF 7 A.M. TO 4 P.M. ON REGULAR CITY BUSINESS DAYS, OVERTIME SHALL BE CHARGED TO THE RESPONSIBLE PARTY. HOWEVER, SUCH INSPECTORS SHALL REMAIN EMPLOYEES OF THE CITY FOR ALL PURPOSES. REQUESTS FOR OVERTIME SHALL BE MADE TO INFRASTRUCTURE ENGINEERING AT LEAST 48 HOURS IN ADVANCE. PAYMENT FOR SUCH OVERTIME WORK SHALL BE MADE TO THE CITY PRIOR TO FINAL ACCEPTANCE.
42. IN THE EVENT ONE OR MORE INSPECTORS REPRESENTING PRIVATE CONSULTING ENGINEERING FIRMS ARE ALSO INSPECTING A PROJECT ALONG WITH INFRASTRUCTURE ENGINEERING, THE INSTRUCTIONS GIVEN BY INFRASTRUCTURE ENGINEERING SHALL PREVAIL IN THE EVENT OF CONFLICTING INSTRUCTIONS.
43. THE WORK SHALL BE SURVEYED AND STAKED UNDER THE SUPERVISION OF A LICENSED LAND SURVEYOR IN ACCORDANCE WITH THE APPROVED PLANS.
44. CONSTRUCTION SHALL ADHERE TO THE FOLLOWING SEQUENCE UNLESS OTHERWISE SPECIFIED BY THE INFRASTRUCTURE ENGINEERING MANAGER: SANITARY SEWER INSTALLATION, WATER MAIN INSTALLATION, CURB AND GUTTER INSTALLATION, WATER SERVICE INSTALLATION.
45. COMPACTION OF ALL TRENCHES MUST BE ATTAINED AND COMPACTION TEST RESULTS SUBMITTED TO THE ENGINEER AND THE CITY OF THORNTON PRIOR TO FINAL ACCEPTANCE.
46. ALL WORK, INCLUDING CORRECTION WORK, SHALL BE INSPECTED BY A CITY REPRESENTATIVE WHO SHALL HAVE THE AUTHORITY TO HALT CONSTRUCTION WHEN STANDARD CONSTRUCTION PRACTICES ARE NOT BEING ADHERED TO.
47. CONTRACTOR AND BUILDER SHALL REGULARLY PATROL THE PUBLIC LANDS ADJACENT TO THE INFRASTRUCTURE TO REMOVE CONSTRUCTION DEBRIS AND KEEP THE SITE CLEAN AND SAFE.
48. ALL SITE GRADING (EXCAVATION, EMBANKMENT, AND COMPACTOIN) SHALL CONFORM TO THE RECOMMENDATIONS OF THE LATEST SOILS INVESTIGATION FOR THIS PROPERTY AND SHALL FURTHER BE IN CONFORMANCE WITH THE CITY OF THORNTON "STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS", LATEST EDITION. A CDPS GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES SHALL BE OBTAINED PRIOR TO ANY GRADING BEING PERFORMED ON SITES (1) ACRE OR LARGER IN SIZE. THESE PERMITS CAN BE OBTAINED FROM THE STATE WATER QUALITY CONTROL DIVISION.
49. NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED WHEREVER POSSIBLE. EXPOSURE OF SOIL TO EROSION BY REMOVAL OR DISTURBANCE OF VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATION AND FOR THE SHORTEST PRACTICAL PERIOD OF TIME.
50. TOPSOIL SHALL BE STOCKPILED TO THE EXTENT PRACTICABLE ON THE SITE FOR USE ON AREAS TO BE RE-VEGETATED. ANY AND ALL STOCKPILES SHALL BE LOCATED AND PROPER MEASURES TAKEN TO CONTROL EROSION AND SEDIMENT MOVEMENT.
51. AT ALL TIMES, THE PROPERTY SHALL BE MAINTAINED AND/OR WATERED TO PREVENT WIND-CAUSED EROSION. EARTHWORK OPERATIONS SHALL BE DISCONTINUED WHEN DUST SIGNIFICANTLY IMPACTS ADJACENT PROPERTY. IF EARTHWORK IS COMPLETE OR DISCONTINUED AND DUST FROM THE SITE CONTINUES TO CREATE PROBLEMS, THE OWNER/CONTRACTOR SHALL IMMEDIATELY INSTITUTE IMITATIVE MEASURES AND SHALL CORRECT DAMAGE TO ADJACENT PROPERTY.
52. WATER MAINS SHALL BE LAID IN CONFORMANCE WITH THE LATEST EDITION OF THE CITY OF THORNTON "STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS" AND SHALL BE SUBJECT TO CITY INSPECTION AND APPROVAL.
53. BEDDING AND BACKFILL MATERIALS FOR BOTH WATER AND SEWER SHALL CONFORM TO THE LATEST EDITION OF THE CITY OF THORNTON "STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS".
54. RIM ELEVATIONS OF MANHOLE SHOWN ON THE PLAN AND PROFILE SHEETS ARE APPROXIMATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATIONS. THE PIPELINE CONTRACTOR SHOULD ALLOW APPROXIMATELY THE TOP ONE (1) FOOT OF RIM ELEVATION TO BE ADJUSTED EITHER UP OR DOWN IN ORDER TO MATCH FINAL PAVEMENT ELEVATION. THE MAXIMUM ADJUSTMENT TO FINAL GRADE IS 12 INCHES WITH CONCRETE RINGS.
55. DURING CONSTRUCTION, CARE MUST BE TAKEN TO AVOID ANY GROUND WATER, STORM WATER, CONSTRUCTION DEBRIS, SOIL, OR ANY OTHER FOREIGN MATERIALS FROM ENTERING ANY ACTIVE CITY OF THORNTON SEWER. THE USE OF THE SANITARY SEWER SYSTEM FOR THE PURPOSES OF DEWATERING IS STRICTLY PROHIBITED.
56. ALL DEWATERING ACTIVITIES MUST COMPLY WITH THE STATE OF COLORADO PERMITTING PROCESS FOR "STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY". FOR INFORMATION, PLEASE CONTACT COLORADO DEPARTMENT OF HEALTH, WATER QUALITY CONTROL DIVISION.
57. ALL DAMAGED EXISTING CURB, GUTTER, AND SIDEWALK SHALL BE REPAIRED PRIOR TO ACCEPTANCE OF COMPLETED IMPROVEMENTS.
58. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN PROPER TRAFFIC CONTROL DEVICES UNTIL THE SITE IS OPEN TO TRAFFIC.
59. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE CITY OF THORNTON FOR APPROVAL PRIOR TO CONSTRUCTION.
60. REPAIR OF ANY DAMAGE TO EXISTING IMPROVEMENTS OR LANDSCAPING IS THE RESPONSIBILITY OF THE CONTRACTOR.

CONSTRUCTION NOTES:

1. EXCAVATION CANNOT OCCUR ON ACTIVE WATERLINE. COORDINATE WATERLINE SHUTDOWN WITH CITY PRIOR TO BEGINNING CONSTRUCTION.
2. MAINTAIN SAFETY STANDARDS RELATING TO THE SHORING AND STABILIZATION OF TRENCH SIDEWALLS AS PRESCRIBED BY APPROPRIATE SAFETY REGULATORY AGENCIES (OSHA, STATE OF COLORADO). ALL EXCAVATIONS TO BE LEFT OVER NIGHT WILL BE BACKFILLED IF NOT PROPERLY BARRICADED. TYPE IV BARRICADES WILL BE REQUIRED IF CONSTRUCTION AREA IS IN OR WITHIN 10 FEET OF THE ROADWAY.
3. CONFINE THE TRENCH WIDTH TO THOSE MINIMUM DIMENSIONS, WHICH WILL PERMIT PROPER INSTALLATION AND ACCEPTABLE PIPE LOADING, AS ESTABLISHED BY CURRENT ACCEPTABLE ENGINEERING PRACTICES AND ALL OSHA REQUIREMENTS.
4. WARNING SIGNS, BARRICADES AND FLASHING LIGHTS, ALL IN CONFORMANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), SHALL BE USED IN AREAS WHERE TRENCHING OPERATIONS ARE IN PUBLIC ROADWAYS.
5. TOTAL STREET CLOSURE WILL NOT BE PERMITTED UNLESS APPROVED BY THE ADAMS COUNTY PUBLIC WORKS DEPARTMENT.
6. ACCESS TO PRIVATE PROPERTY WILL BE MAINTAINED AT ALL TIMES. PROVIDE FREE ACCESS AT ALL TIMES TO FIRE HYDRANTS. ALL EXCAVATION WITHIN ADAMS COUNTY ROW WILL REQUIRE AN APPROVED PERMIT PRIOR TO INITIATING CONSTRUCTION.
7. THE PERMITTEE SHALL SIMULTANEOUSLY NOTIFY ADAMS COUNTY OF THE TRENCH BACKFILL AND CONSTRUCTION DATES. A MINIMUM OF 24 HOURS ADVANCE NOTIFICATION IS REQUIRED.
8. BACKFILL WILL TAKE PLACE ON THE SAME DAY OF TRENCHING; IF THIS IS NOT THE CASE, ADAMS COUNTY MUST BE GIVEN THE SAME PRIOR NOTICE AS REQUIRED FOR THE INITIAL TRENCHING. REFER TO SPECIFICATION SECTION 31 23 43 FOR TRENCHING, BACKFILLING, AND COMPACTING REQUIREMENTS.
9. COMPACTION TEST REPORTS SHALL BE REQUIRED DAILY AND ALL FILL OVER ONE FOOT IN ELEVATION SHALL REQUIRE A TESTER ON SITE DURING BACKFILL OPERATION.
10. IF THE EXCAVATED MATERIAL IS UNSUITABLE FOR BACKFILL IT SHALL BE HAULED AWAY AND SATISFACTORY GRANULAR BACKFILL MATERIAL SHALL BE USED.

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LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"-SCALE ACCORDINGLY)

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APPROVED:

PRINCIPAL

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REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

CITY OF THORNTON, COLORADO

STANDLEY LAKE FACILITIES

COMMON

GENERAL NOTES

DATE: 09/03/20
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER G-2

STANDARD STATEMENT AND NOTES FOR EROSION CONTROL DESIGN DRAWINGS:

THE CONTRACTOR SHALL LOCATE, INSTALL, AND MAINTAIN ALL BEST MANAGEMENT PRACTICES, INCLUDING, BUT NOT LIMITED TO, EROSION CONTROLS, SEDIMENT CONTROLS, DRAINAGE CONTROLS, AND WATER QUALITY BMPS AS INDICATED IN THESE DESIGN DRAWINGS. THE FOLLOWING NOTES ARE A REQUIREMENT. BMP INSTALLATIONS SHALL BE INSTALLED PER THE CITY OF THORNTON AND CITY OF NORTHGLENN STANDARDS IN EFFECT AT THE TIME OF INSTALLATION.

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO STORM DRAINS, ADJACENT WATERWAYS, WETLANDS, STORM SEWERS, STORM SEWER APPURTENANCES, OTHER PROPERTIES, ETC., RESULTING FROM WORK DONE AS PART OF THIS PROJECT.
2. ADDITIONAL ENVIRONMENTAL, EROSION AND SEDIMENT CONTROL BMPS MAY BE REQUIRED DURING AND AFTER CONSTRUCTION AND SHALL BE EXECUTED AND COMPLETED BY THE CONTRACTOR. THE CONTRACTOR SHALL PLAN, INSTALL, AND MAINTAIN ALL EROSION, AND SEDIMENT CONTROL MEASURES, INCLUDING DRAINAGE AND WATER QUALITY BMPS AS INDICATED ON THIS PLAN AND AS NECESSARY TO REDUCE THE DISCHARGE OF POLLUTANTS TO THE MAXIMUM EXTENT PRACTICABLE ADVERSE IMPACTS, EROSION AND SEDIMENT DEPOSITION ONTO PAVED SECTION, INTO STORM SEWERS, STORM SEWER APPURTENANCES, RECEIVING WATERS, OR OFF THE PROJECT SITE.
3. THE CONTRACTOR SHALL TAKE APPROPRIATE PREVENTIVE MEASURES TO MINIMIZE TO THE MAXIMUM EXTENT PRACTICABLE DIRT AND MUD FROM BEING TRACKED OR DEPOSITED ONTO PAVED SECTIONS VIA MULTIPLE BMPS. SEDIMENT, MUD, AND CONSTRUCTION DEBRIS THAT MAY BE TRACKED, DEPOSITED, OR ACCUMULATED ON PAVED SECTIONS, IN THE FLOW LINES, PRIVATE PROPERTY, AND/OR PUBLIC RIGHTS-OF-WAY OF THE CITY AS A RESULT OF THIS CONSTRUCTION PROJECT SHALL BE CLEANED UP.
4. AREAS REACHING SUBSTANTIAL COMPLETION OF GRADING AND TOPSOIL PLACEMENT OPERATIONS MUST BE DRILL SEEDED AND CRIMP MULCHED WITHIN 14 DAYS OF SUBSTANTIAL COMPLETION OF GRADING AND TOPSOIL OPERATIONS. IF AN INCOMPLETE AREA IS TO REMAIN INACTIVE FOR LONGER THAN 30 DAYS, IT MUST BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE LANDSCAPED WITHIN 14 DAYS FROM THE SUSPENSION OR COMPLETION OF LAND DISTURBANCE ACTIVITIES.
5. ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED FROM A BMP (MAINTENANCE) WHEN THE SEDIMENT LEVEL OF DEBRIS ADVERSELY IMPACTS THE FUNCTIONING OF THE BMP. IF MAINTENANCE OF THE BMP DOES NOT RESTORE THE INTENDED FUNCTION, THEN THE BMP MUST BE REPLACED.
6. THE DISCHARGING OF CEMENT, CONCRETE, OR MORTAR FROM READY MIX DELIVERY TRUCKS, PUMP TRUCKS, BATCH PLANTS OR SMALL MECHANICAL MIXERS DIRECTLY ONTO PAVED SURFACES OR DISTURBED GROUND HAVING NO CONTAINMENT IS PROHIBITED. THE DISPOSAL OF ANY LIQUID WASTES OR WASH WATER FROM ANY OPERATIONS SUCH AS PAINTING, DRYWALL, OR TILE INSTALLATIONS DIRECTLY ONTO PAVED SURFACES OR THE GROUND WITHOUT CONTAINMENT IS PROHIBITED. THE CONTRACTOR SHALL PROTECT ALL CURB FLOW LINES, ADJACENT WATERWAYS, WETLANDS, STORM SEWERS, STORM SEWER APPURTENANCES, OTHER PROPERTIES, ETC., ADJACENT TO ANY LOCATION WHERE PAVEMENT CUTTING OPERATIONS INVOLVING WHEEL CUTTING, SAW CUTTING OR ABRASIVE WATER JET CUTTING ARE TO TAKE PLACE.
7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESOLVE CONSTRUCTION PROBLEMS DUE TO CHANGING CONDITIONS OR DESIGN ERRORS THEY MAY ENCOUNTER DURING THE PROGRESS OF ANY PORTION OF THE WORK. IF CONDITIONS IN THE FIELD REQUIRE CHANGES AND THE PROPOSED MODIFICATIONS TO THE APPROVED PLANS INVOLVE SIGNIFICANT CHANGES TO THE CHARACTER OF THE WORK OR TO FUTURE CONTIGUOUS PUBLIC OR PRIVATE IMPROVEMENTS, THE CONTRACTOR, THROUGH THE ENGINEER OF RECORD, SHALL BE RESPONSIBLE TO REVISE PLANS AND SUBMIT THEM TO THE CITY OF THORNTON FOR APPROVAL PRIOR TO ANY FURTHER CONSTRUCTION RELATED TO THAT PORTION OF THE WORK. ANY CONTROLS, FEATURES OR IMPROVEMENTS NOT CONSTRUCTED IN ACCORDANCE WITH CITY OF THORNTON STANDARDS, CITY OF NORTHGLENN STANDARDS, OR AN APPROVED DESIGN DRAWING AMENDMENT SHALL BE REMOVED AND THE CONTROLS, FEATURES AND/OR IMPROVEMENTS SHALL BE RECONSTRUCTED.
8. SECONDARY CONTAINMENT FEATURES SHALL BE IN PLACE FOR ANY BULK FUEL STORAGE, MIXERS, GENERATORS, OR ANY OTHER SPILL OR LEAK SOURCE THAT REMAINS ONSITE FOR A PERIOD LONGER THAN 7 CALENDAR DAYS. A RECOVERY OR SALVAGE DRUM SHALL BE KEPT ON-SITE FOR STORAGE OF CONTAMINATED SOILS.
9. STRAW BALES AND RECYCLED ASPHALT OR CONCRETE ARE NOT ACCEPTABLE FOR THE CONSTRUCTION OF BMPS AND MAY NOT BE USED.

ADDITIONAL EROSION CONTROL NOTES:

1. ALL BMPS MUST BE MAINTAINED THROUGH COMPLETION OF THE PROJECT.
2. SEDIMENTATION CONTROL SHALL BE PER CDOT SPECIFICATIONS.
3. CONSTRUCTION GROUNDWATER SHALL BE DISCHARGED ONTO TARPS FIRMLY ANCHORED TO THE GROUND. GROUNDWATER SAMPLING SHALL BE PERFORMED ON TARPS.

LEGEND

EXISTING INDEX CONTOUR	5050	SURVEYED BENCHMARK	
EXISTING INTERMEDIATE CONTOUR	47	EXISTING SANITARY SEWER MANHOLE	S
EXISTING BUILDING/STRUCTURE		EXISTING STORM DRAIN	D
* EXISTING WATERLINE	WAT-*	EXISTING WATER MANHOLE	W
* EXISTING CABLE TV	CTV-*	EXISTING ELECTRIC MANHOLE	E
* EXISTING GAS	GAS-*	EXISTING TELEPHONE MANHOLE	T
* UNDERGROUND ELECTRIC	ELE-*	EXISTING FIRE HYDRANT	
* EXISTING TELEPHONE CABLE	TEL-*	EXISTING TREE	
* EXISTING SANITARY SEWER	SAN-*	EXISTING SIGN	
* EXISTING STORM SEWER	STM-*	POTHOLED UTILITY (SHOWN IN PROFILE)	PH
* EXISTING FIBER OPTIC	FIB-*	POTHOLED UTILITY (PLAN)	PH XX
* EXISTING WATER SERVICE	WS-*	TEST STATION	TS
* EXISTING SANITARY SEWER SERVICE	SS-*	EXISTING GUARDRAIL	
EXISTING OVERHEAD POWERLINE		EXISTING CULVERT	
EXISTING TRAFFIC SIGINAL WIRE		EXISTING EDGE OF PAVED ROAD	
EXISTING WATER VALVE	WV	EXISTING DIRT ROAD/DRIVE	
EXISTING WATER METER	M	EXISTING CURB AND GUTTER	TOP BACK CURB(TBC) FLOWLINE LIP
EXISTING ELECTRIC BOX	ELE	EXISTING CHAINLINK/WIRE FENCE	
EXISTING ELECTRIC METER	EM	EXISTING DITCH, RIVER, CANAL, ETC.	
EXISTING GAS VALVE/MARKER	GAS	EXISTING RIGHT-OF-WAY	
EXISTING TELEPHONE BOX	TEL	EXISTING EASEMENTS	
EXISTING CABLE TV BOX	CATV	EXISTING PARCELS	
EXISTING POWERPOLE		EX-CONC	
EXISTING GUY POLE		PROPOSED EASEMENT (PERMANENT)	
EXISTING LIGHTPOLE		PROPOSED EASEMENT (TEMPORARY)	
SECTION CORNER		PROPOSED WATERLINE ALIGNMENT	
BOREHOLE (GEOTECH-DRILLED)	BH#		

SUE-SUBSURFACE UTILITY ENGINEERING LEGEND NOTE:

* SUE QUALITY LEVEL LOCATES OF EXISTING UTILITIES ARE DEPICTED WITH A SUFFIX ON EXISTING UTILITY LINETYPES FROM B TO D DEPICTING THE ACCURACY, "QUALITY LEVEL" OF THE EXISTING UTILITY SHOWN ON THE DRAWINGS. (EXAMPLE WAT-B OR STM-C)
  - -QUALITY LEVEL A (PRECISE HORIZONTAL & VERTICAL LOCATION OF UTILITIES OBTAINED BY THE ACTUAL EXPOSURE OR POTHOLING).
  - -QUALITY LEVEL B (INFORMATION FROM ABOVE GROUND, HORIZONTAL SURVEY AND UTILITY LOCATES)
  - -QUALITY LEVEL C (ABOVE GROUND SURVEY & PROFESSIONAL JUDGEMENT TO LOCATE UTILITIES)
  - -QUALITY LEVEL D (RECORDS RESEARCH/DATA COLLECTION)

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LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"-SCALE ACCORDINGLY)

DRAWING GGL15397-3
DRAWN DPB
DESIGNED SES
CHECKED MAB

APPROVED:

PRINCIPAL

DATE:

REVISIONS

REV.	DESCRIPTION	BY	DATE	APP.
-	RECORD DRAWINGS	DPB	06/08/22	SES

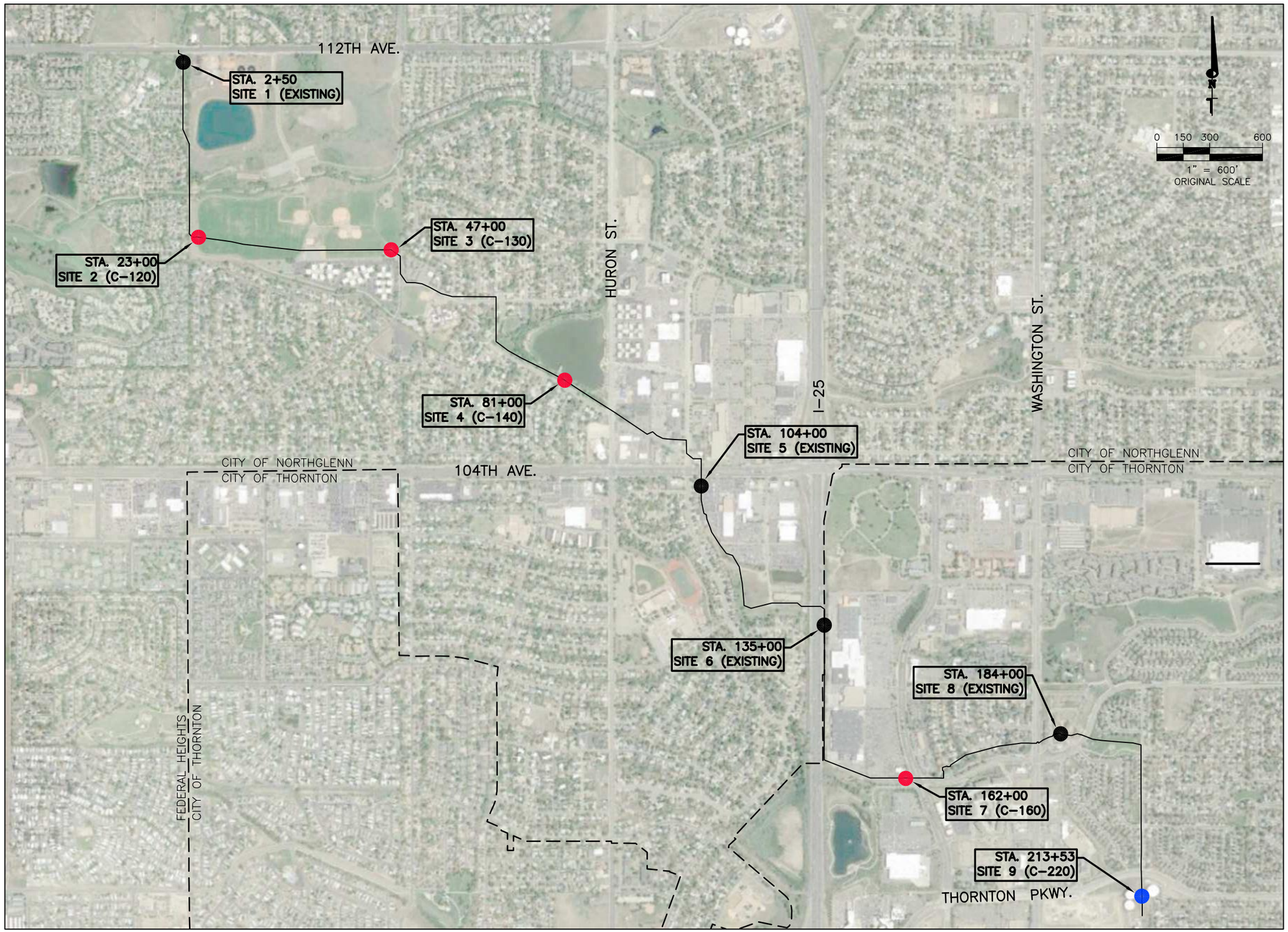
CITY OF THORNTON, COLORADO

STANDLEY LAKE FACILITIES

COMMON

EROSION CONTROL NOTES, AND LEGEND

DATE: 01/14/20
PROJECT NUMBER: 50115397
REVISION NO. -
DRAWING NUMBER G-3



LEGEND

- STEEL SPECIAL DRAWING SERIES 100
- OUTLET TAP DRAWING SERIES 200
- EXISTING MANWAY

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DRAWN DPB
DESIGNED SES
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APPROVED:

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DATE:

REVISIONS

REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

CITY OF THORNTON, COLORADO

STANDLEY LAKE FACILITIES

COMMON

OVERALL PROJECT PLAN

DATE: 01/14/20
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER **G-4**

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DRAWING GGL15397-5
DRAWN DPB
DESIGNED SES
CHECKED MAB

APPROVED:

PRINCIPAL

DATE:

REVISIONS

REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

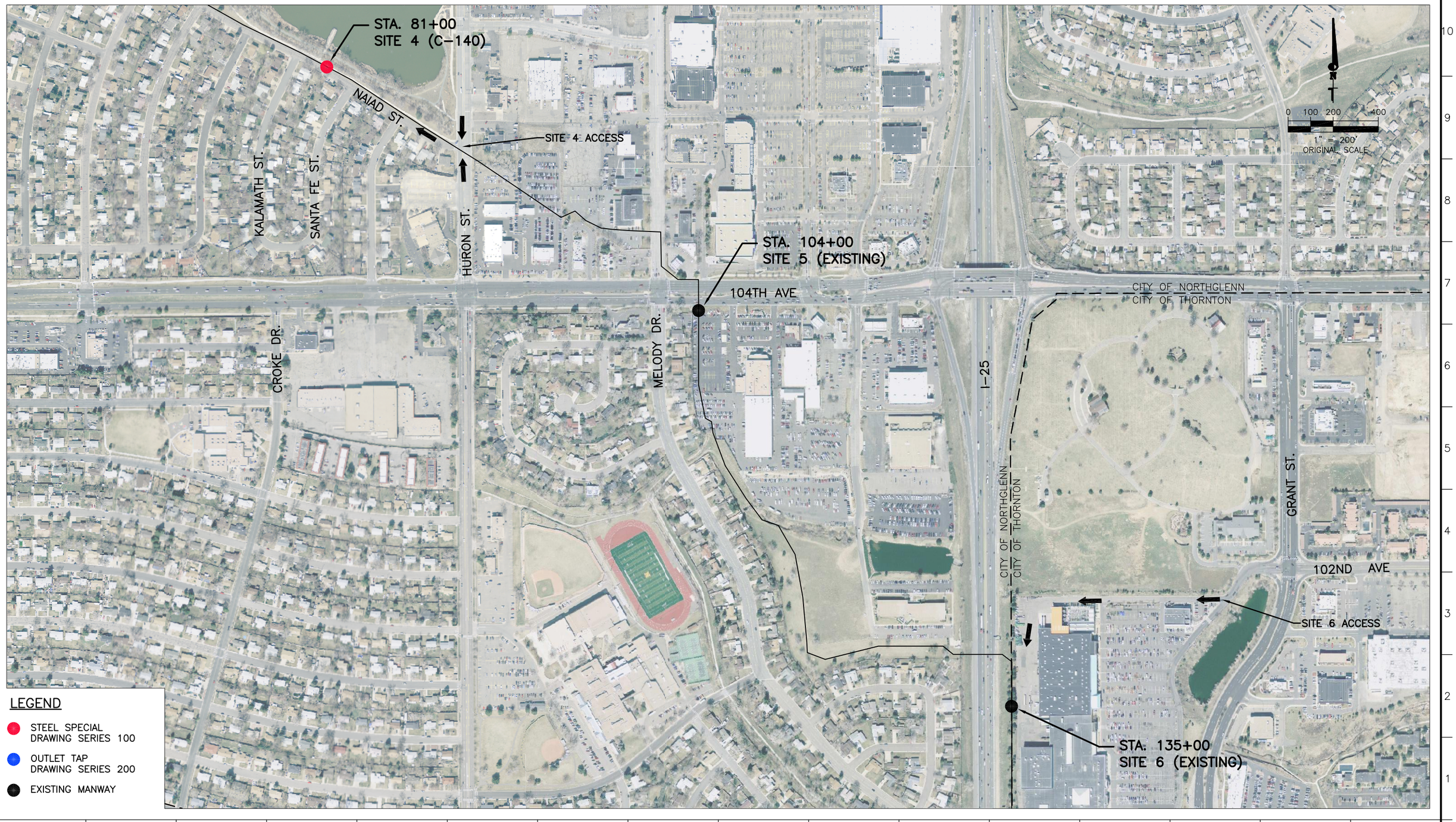
CITY OF THORNTON, COLORADO

STANDLEY LAKE FACILITIES

COMMON

SITE 2 AND SITE 3 LOCATION AND ACCESS PLAN

DATE: 01/14/20
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER
G-5



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DRAWING GGL15397-6
DRAWN DPB
DESIGNED SES
CHECKED MAB

APPROVED:

PRINCIPAL

09/04/2020
DATE:

REVISIONS

REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

CITY OF THORNTON, COLORADO

STANDLEY LAKE FACILITIES

COMMON

SITE 4 LOCATION AND ACCESS PLAN

DATE: 01/14/20
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER
G-6

LEGEND

- STEEL SPECIAL DRAWING SERIES 100
- OUTLET TAP DRAWING SERIES 200
- EXISTING MANWAY

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DRAWING GGL15397-7
DRAWN DPB
DESIGNED SES
CHECKED MAB

APPROVED:

PRINCIPAL

09/04/2020
DATE:

REVISIONS

REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

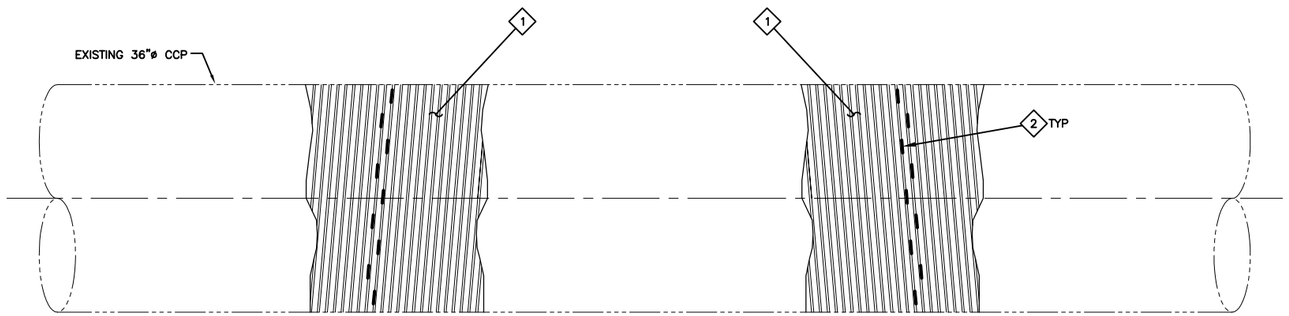
CITY OF THORNTON, COLORADO

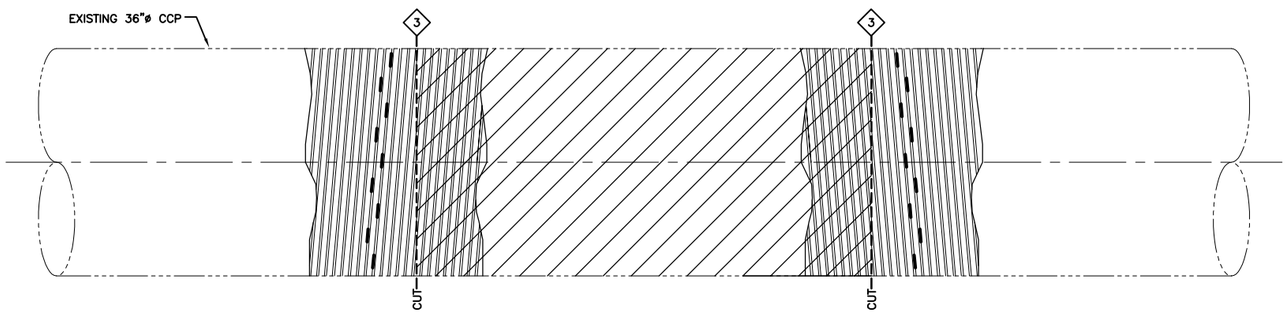
STANDLEY LAKE FACILITIES

COMMON

SITE 7 AND SITE 9 LOCATION AND ACCESS PLAN

DATE: 01/14/20
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER G-7





GENERAL NOTES:

1. EXCAVATION CANNOT OCCUR ON ACTIVE WATERLINE. COORDINATE WATERLINE SHUTDOWN WITH CITY PRIOR TO BEGINNING CONSTRUCTION.
2. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS AND DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION.
3. ITEMS NOT IDENTIFIED SPECIFICALLY TO BE DEMOLISHED SHALL REMAIN IN PLACE.
4. PROTECT EXISTING PIPE, OUTLETS, AND APPURTENANCES. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING FACILITIES.
5. CONTRACTOR SHALL RETAIN AND PROTECT EXISTING CATHODIC PROTECTION WIRES.

KEY NOTES:

1. CHIP AWAY MORTAR COATING FROM EXISTING CCP PIPE. RETAIN & PROTECT EXISTING 3/8" REINFORCEMENT BARS.
2. WELD EXISTING REINFORCEMENT BARS TO STEEL CYLINDER.
3. REMOVE 6'–0" SECTION OF CCP PIPE.

STEEL SPECIAL LOCATIONS INFORMATION			
LOCATION	STATION	EXISTING DEPTH TO TOP OF PIPE	MAINLINE PIPE MATERIAL
SITE #2	23+00	7'-0"	BARWRAP PIPE
SITE #3	47+00	7'-0"	BARWRAP PIPE
SITE #4	81+00	5'-0"	BARWRAP PIPE
SITE #7	162+00	4'-6"	BARWRAP PIPE

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DRAWING CPL15397–100
DRAWN DPB
DESIGNED SES
CHECKED MAB

APPROVED:

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09/04/2020
DATE:

REVISIONS

REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

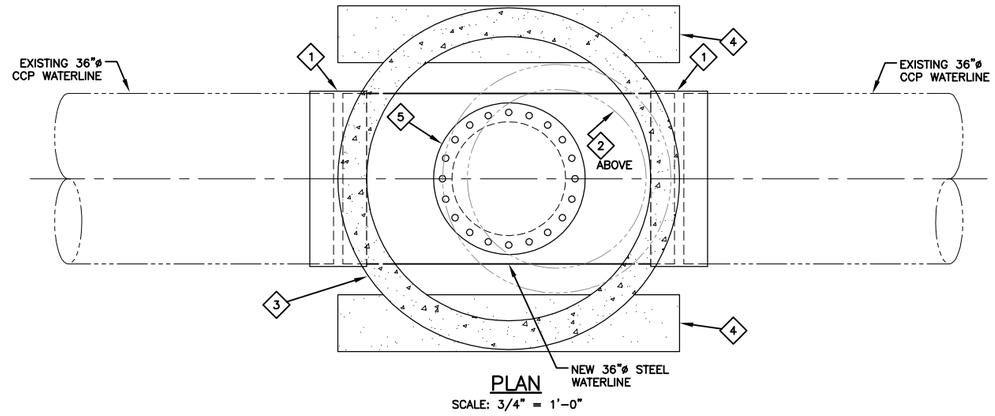
CITY OF THORNTON, COLORADO

STANDLEY LAKE FACILITIES

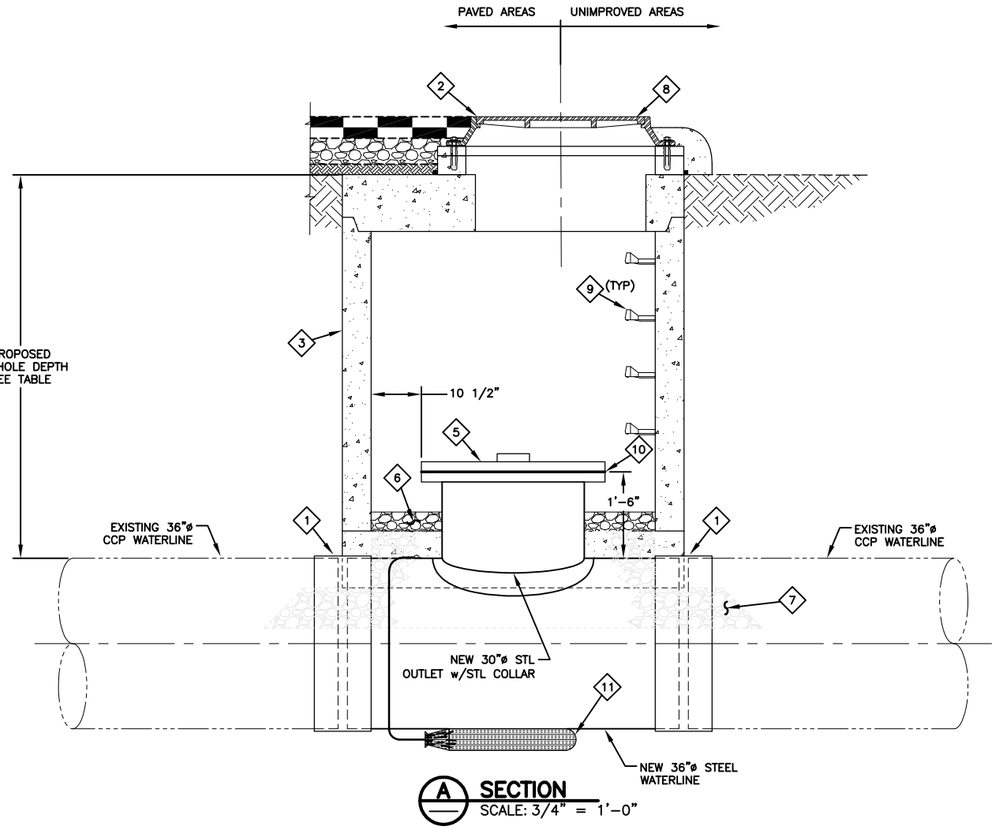
DRAWING SERIES 100

STEEL SPECIAL DEMOLITION

DATE: 01/14/20
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER
C–100



PLAN
SCALE: 3/4" = 1'-0"



A SECTION
SCALE: 3/4" = 1'-0"

GENERAL NOTES:

1. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS AND DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION.
2. ITEMS NOT IDENTIFIED SPECIFICALLY TO BE DEMOLISHED SHALL REMAIN IN PLACE.
3. PROTECT EXISTING PIPE, OUTLETS, AND APPURTENANCES. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING FACILITIES.
4. CONTRACTOR SHALL RETAIN AND PROTECT EXISTING CATHODIC PROTECTION WIRES.

KEY NOTES:

1. CONNECT 6'-0", 36" NEW STEEL PIPE TO EXISTING CCP WATERLINE w/NEW BUTTSTRAP. TRIM BARS AS REQUIRED FOR BUTTSTRAP CONNECTION. SEE DETAIL 2/D-2.
2. NEW 36"ø RING AND COVER. MCGUARD INTIMIDATOR MANLOCKS MODEL NUMBER 127003.077
3. NEW 60"ø PRECAST CONCRETE MANHOLE.
4. CONCRETE MANHOLE GRADE BEAMS. SEE DETAIL 4/D-MH1.
5. NEW 30"ø MANWAY OPENING BLIND FLANGE
6. PROVIDE 4" DEEP CRUSHED AGGREGATE INSIDE MANHOLE
7. PROVIDE 12" DEEP CRUSHED AGGREGATE UNDER GRADE BEAMS. SEE DETAIL 4/D-MH1
8. MCGUARD STYLE LOCKING DEVICE FOR MANHOLES ABOVE GRADE AND OUTSIDE OF TRAFFIC AREAS.
9. MANHOLE STEPS AT 12" ON CENTER. SEE DETAIL 2/D-MH1.
10. INSTALL INSULATING FLANGE KIT BETWEEN MANWAY FLANGE AND BLIND FLANGE. SEE DETAIL 3/D-CP1.
11. INSTALL (1) 48LB ANODE TO NEW STEEL PIPE. SEE DETAIL 2/D-CP1.

MANHOLE INFORMATION			
LOCATION	STATION	ORIGINAL DEPTH TO TOP OF PIPE	PROPOSED MANHOLE DEPTH
SITE #2	23+00	7'-0"	6'-11"
SITE #3	47+00	7'-0"	7'-3"
SITE #4	81+00	5'-0"	3'-5"
SITE #7	162+00	4'-6"	4'-1"

* MANHOLE INFORMATION FROM RECORD DRAWINGS. CONTRACTOR TO POTHOLE ALL LOCATIONS TO VERIFY DEPTH FROM RECORD DRAWINGS.

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DRAWING CPL15397-110
DRAWN DPB
DESIGNED SES
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APPROVED:

PRINCIPAL

09/04/2020
DATE:

REVISIONS

REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

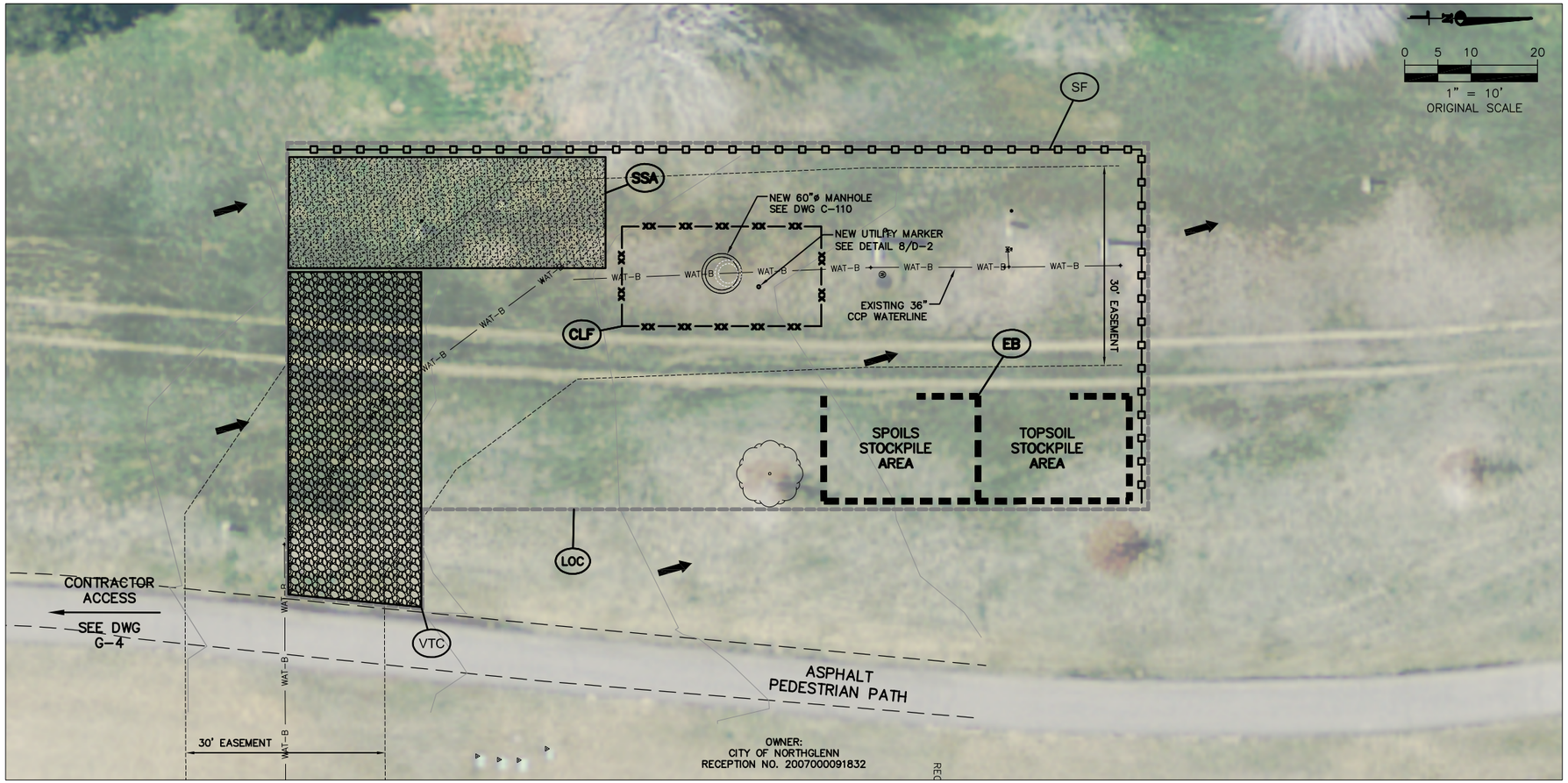
CITY OF THORNTON, COLORADO

STANDLEY LAKE FACILITIES

DRAWING SERIES 100

STEEL SPECIAL MODIFICATION

DATE: 01/14/20
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER C-110



PLAN
36"ø STEEL SPECIAL MODIFICATION
STA. 23+00

NOTE:
NO CONSTRUCTION OF ANY KIND, INCLUDING GRADING, PARKING, STAGING, ETC. IS ALLOWED IN AREAS THAT DO NOT HAVE DEDICATED RIGHT-OF-WAY OR EASEMENTS FOR THIS PROJECT.

JURISDICTION:
ADAMS COUNTY / CITY OF NORTHGLENN
EROSION & SEDIMENT CONTROL PER MILE HIGH FLOOD DISTRICT CONSTRUCTION BMP PROCEDURES.

GENERAL NOTES:
1. PLACE INITIAL BMPS PRIOR TO THE START OF THE WORK. FOLLOW CITY OF THORNTON STORM WATER INSPECTION PROCEDURES.
2. WHEN CONCRETE WILL BE POURED ON SITE, A WASH OUT AREA IS REQUIRED. A TEMPORARY CONCRETE WASH OUT, SUCH AS AN "ECO-PAN" IS ACCEPTABLE.
3. SPOILS FROM TRENCH MUST BE STOCKPILED ON THE UPSLOPE SIDE OF THE TRENCH.
4. 20' CITY OF THORNTON WATER UTILITY EASEMENT SHOWN IN APPROXIMATE LOCATION.
5. PROTECT EXISTING PIPE & APPURTENANCES. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING FACILITIES.
6. TOPSOIL/SPOILS SHALL BE STOCKPILED ON SITE. PROVIDE COMPACTED 18" HIGH BERM AROUND STOCKPILE AREA PERIMETER 6 FOOT MINIMUM FROM TOE OF STOCKPILE SLOPE.
7. VEHICLE TRACKING CONTROL TO BE LOCATED NEAR SITE. COORDINATE WITH INSPECTOR. VEHICLE TRACKING CONTROL SHALL BE RIP-RAP.
8. STABILIZED STAGING AREA SHALL BE HIGH STRENGTH GEO-GRID WITH A GEOTEXTILE UNDERLAYMENT.
9. HOURS OF OPERATION SHALL BE FROM 7 AM TO 5 PM MONDAY THROUGH FRIDAY.
10. ALL ASPHALT, CONCRETE, SIDEWALK, CURB AND GUTTER, MEDIAN, LANDSCAPING AND IRRIGATION DAMAGED OR AFFECTED BY CONSTRUCTION SHALL BE REPLACED PER CITY STANDARDS TO EXISTING CONDITIONS OR BETTER.

LEGEND

CONSTRUCTION FENCE	CF
SILT FENCE	SF
CHAIN LINK SECURITY FENCE	CLF
CURB SOCK	RS
CONCRETE WASHOUT AREA	CWA
INLET PROTECTION	IP
CULVERT INLET PROTECTION	CIP
VEHICLE TRACKING CONTROL	VTC
STABILIZED STAGING AREA/PARKING/PORTABLE RESTROOM	SSA
SEEDING AND MULCHING / SODDING	SM
EROSION CONTROL BLANKET	ECB
SEDIMENT CONTROL LOG (WATTLES) OR APPROPRIATE BMP APPROVED BY CITY	SCL
EARTHEN BERM	EB
STRAW BALE SEDIMENT CONTROL	SBSC
STOCK PILE MANAGEMENT	SP
FLOW ARROW	
LIMITS OF CONSTRUCTION	LOC
CITY OF THORNTON EASEMENT	

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LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"-SCALE ACCORDINGLY)
DRAWING CEC15397-120
DRAWN DPB
DESIGNED SES
CHECKED MAB

APPROVED:
PRINCIPAL
09/04/2020
DATE:

REVISIONS				
REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

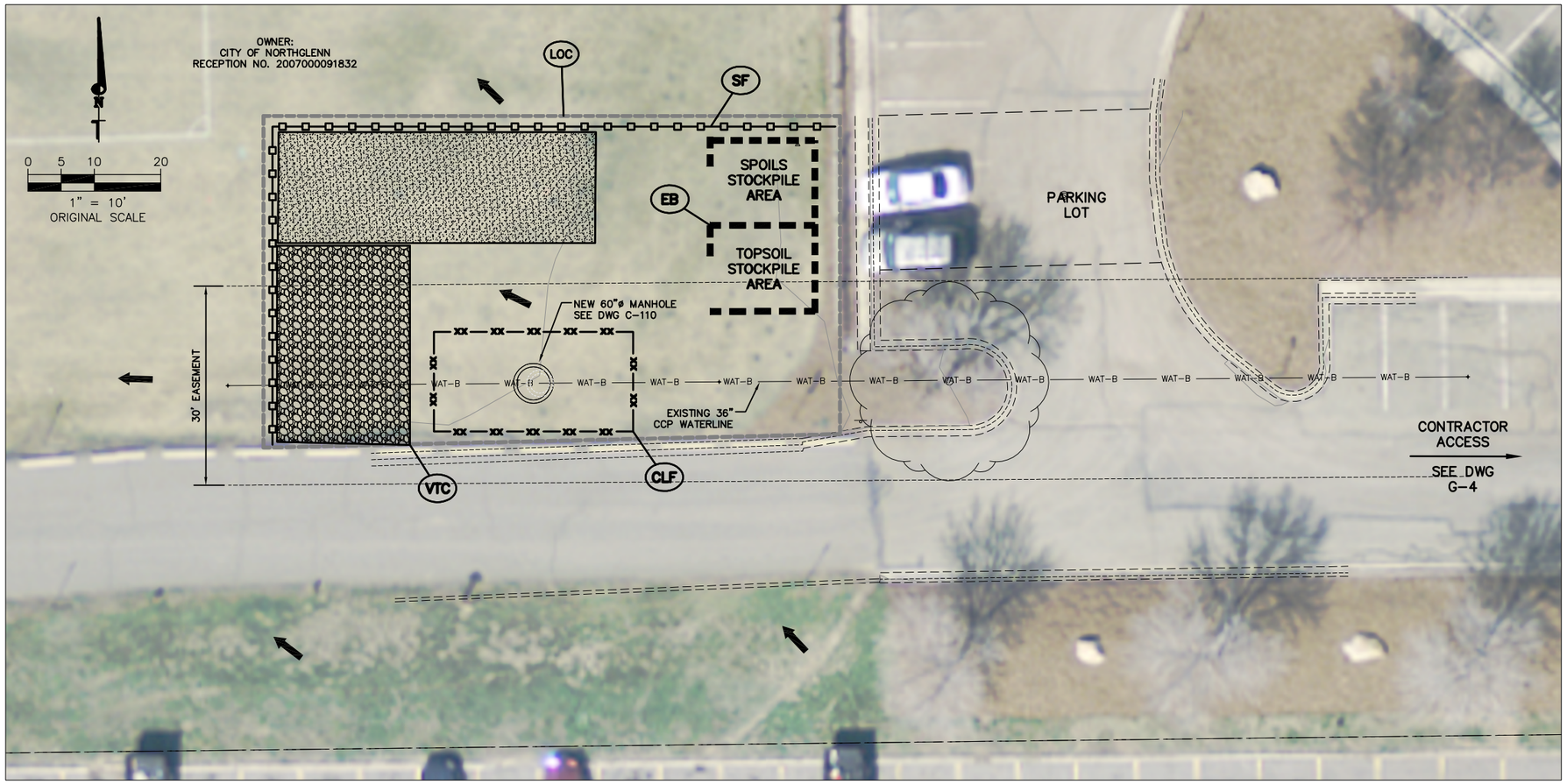
CITY OF THORNTON, COLORADO

STANDLEY LAKE FACILITIES

CIVIL

STA. 23+00
EROSION CONTROL PLAN
SITE 2

DATE: 01/14/20
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER **C-120**
SHEET NUMBER



36"ø STEEL SPECIAL MODIFICATION
STA. 47+00

PLAN
36"ø STEEL SPECIAL MODIFICATION
STA. 47+00

NOTE:
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JURISDICTION:
ADAMS COUNTY / CITY OF NORTHGLENN
EROSION & SEDIMENT CONTROL PER MILE HIGH FLOOD DISTRICT CONSTRUCTION BMP PROCEDURES.

GENERAL NOTES:
1. PLACE INITIAL BMPS PRIOR TO THE START OF THE WORK. FOLLOW CITY OF THORNTON STORM WATER INSPECTION PROCEDURES.
2. WHEN CONCRETE WILL BE POURED ON SITE, A WASH OUT AREA IS REQUIRED. A TEMPORARY CONCRETE WASH OUT, SUCH AS AN "ECO-PAN" IS ACCEPTABLE.
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6. TOPSOIL/SPOILS SHALL BE STOCKPILED ON SITE. PROVIDE COMPACTED 18" HIGH BERM AROUND STOCKPILE AREA PERIMETER 6 FOOT MINIMUM FROM TOE OF STOCKPILE SLOPE.
7. VEHICLE TRACKING CONTROL TO BE LOCATED NEAR SITE. COORDINATE WITH INSPECTOR. VEHICLE TRACKING CONTROL SHALL RIP-RAP.
8. STABILIZED STAGING AREA SHALL BE HIGH STRENGTH GEO-GRID WITH A GEOTEXTILE UNDERLAYMENT.
9. HOURS OF OPERATION SHALL BE FROM 7 AM TO 5 PM MONDAY THROUGH FRIDAY.
10. ALL ASPHALT, CONCRETE, SIDEWALK, CURB AND GUTTER, MEDIAN, LANDSCAPING AND IRRIGATION DAMAGED OR AFFECTED BY CONSTRUCTION SHALL BE REPLACED PER CITY STANDARDS TO EXISTING CONDITIONS OR BETTER. SOD SHALL BE USED TO REPLACE EXISTING LANDSCAPE WHERE NECESSARY.

LEGEND

CONSTRUCTION FENCE	CF
SILT FENCE	SF
CHAIN LINK SECURITY FENCE	CLF
ROCK SOCK	RS
CONCRETE WASHOUT AREA	CWA
INLET PROTECTION	IP
CULVERT INLET PROTECTION	CIP
VEHICLE TRACKING CONTROL	VTC
STABILIZED STAGING AREA/PARKING/PORTABLE RESTROOM	SSA
SEEDING AND MULCHING / SODDING	SM
EROSION CONTROL BLANKET	ECB
SEDIMENT CONTROL LOG (WATTLES) OR APPROPRIATE BMP APPROVED BY CITY	SCL
EARTHEN BERM	EB
STRAW BALE SEDIMENT CONTROL	SBSC
STOCK PILE MANAGEMENT	SP
FLOW ARROW	
LIMITS OF CONSTRUCTION	LOC
CITY OF THORNTON EASEMENT	

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LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"-SCALE ACCORDINGLY)
DRAWING CEC15397-130
DRAWN DPB
DESIGNED SES
CHECKED MAB

APPROVED:
PRINCIPAL
09/04/2020
DATE:

REVISIONS				
REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

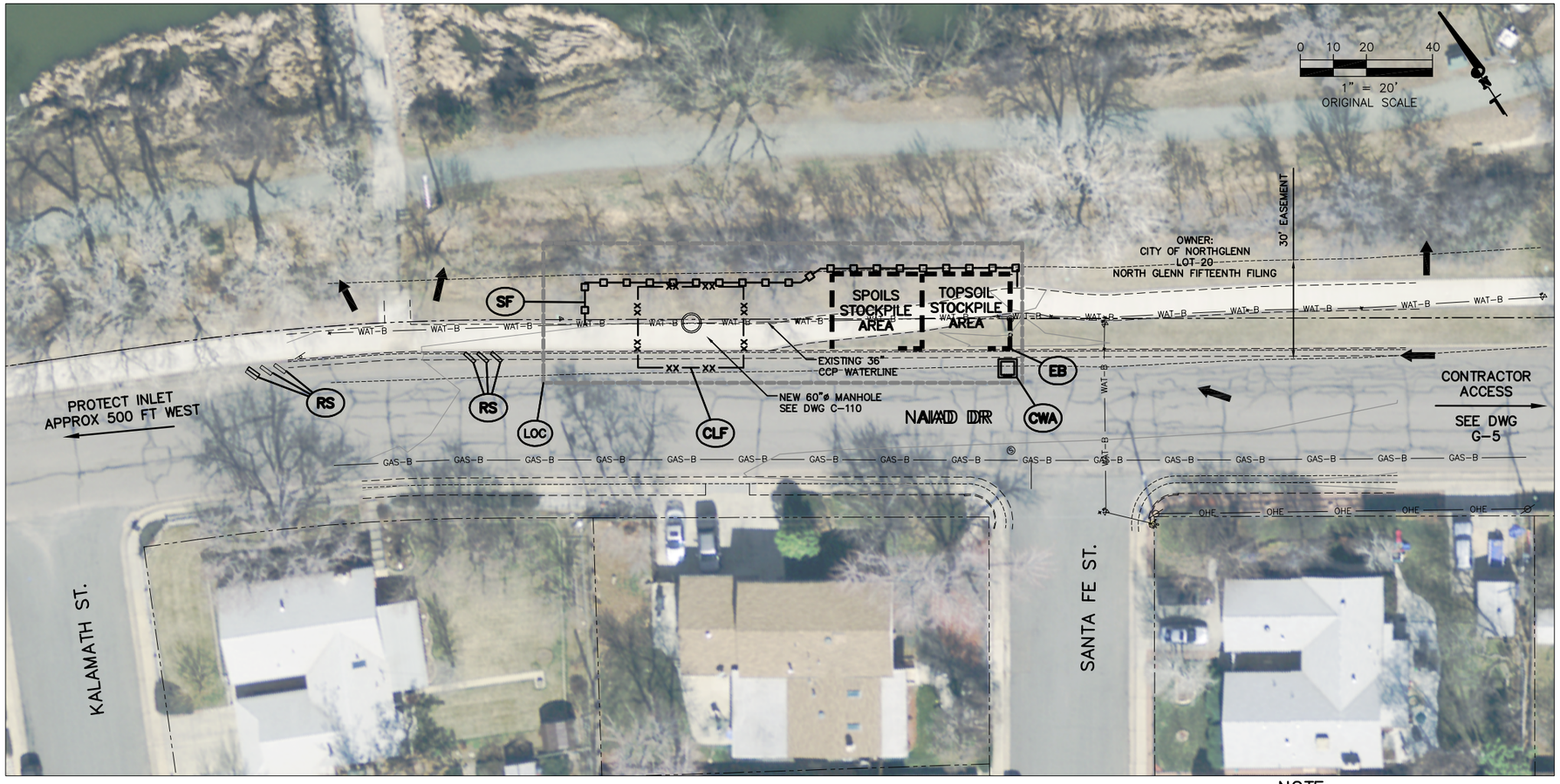
CITY OF THORNTON, COLORADO

STANDLEY LAKE FACILITIES

CIVIL

STA. 47+00
EROSION CONTROL PLAN
SITE 3

DATE: 01/14/20
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER
C-130
SHEET NUMBER



36"ø STEEL SPECIAL MODIFICATION
STA. 81+00

PLAN
36"ø STEEL SPECIAL MODIFICATION
STA. 81+00

NOTE:
NO CONSTRUCTION OF ANY KIND, INCLUDING GRADING, PARKING, STAGING, ETC. IS ALLOWED IN AREAS THAT DO NOT HAVE DEDICATED RIGHT-OF-WAY OR EASEMENTS FOR THIS PROJECT.

JURISDICTION:
ADAMS COUNTY / CITY OF NORTHGLENN
EROSION & SEDIMENT CONTROL PER MILE HIGH FLOOD DISTRICT CONSTRUCTION BMP PROCEDURES.

GENERAL NOTES:
1. PLACE INITIAL BMPS PRIOR TO THE START OF THE WORK. FOLLOW CITY OF THORNTON STORM WATER INSPECTION PROCEDURES.
2. WHEN CONCRETE WILL BE POURED ON SITE, A WASH OUT AREA IS REQUIRED. A TEMPORARY CONCRETE WASH OUT, SUCH AS AN "ECO-PAN" IS ACCEPTABLE.
3. SPOILS FROM TRENCH MUST BE STOCKPILED ON THE UPSLOPE SIDE OF THE TRENCH.
4. 20' CITY OF THORNTON WATER UTILITY EASEMENT SHOWN IN APPROXIMATE LOCATION.
5. PROTECT EXISTING PIPE & APPURTENANCES. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING FACILITIES.
6. TOPSOIL/SPOILS SHALL BE STOCKPILED ON SITE. PROVIDE COMPACTED 18" HIGH BERM AROUND STOCKPILE AREA PERIMETER 6 FOOT MINIMUM FROM TOE OF STOCKPILE SLOPE.
7. VEHICLE TRACKING CONTROL TO BE LOCATED NEAR SITE. COORDINATE WITH INSPECTOR. VEHICLE TRACKING CONTROL SHALL BE RIP-RAP.
8. STABILIZED STAGING AREA SHALL BE HIGH STRENGTH GEO-GRID WITH A GEOTEXTILE UNDERLAYMENT.
9. HOURS OF OPERATION SHALL BE FROM 7 AM TO 5 PM MONDAY THROUGH FRIDAY.
10. ALL ASPHALT, CONCRETE, SIDEWALK, CURB AND GUTTER, MEDIAN, LANDSCAPING AND IRRIGATION DAMAGED OR AFFECTED BY CONSTRUCTION SHALL BE REPLACED PER CITY STANDARDS TO EXISTING CONDITIONS OR BETTER.
11. PROTECT EXISTING TREES AND VEGETATION IN PLACE.

LEGEND

CONSTRUCTION FENCE	CF
SILT FENCE	SF
CHAIN LINK SECURITY FENCE	CLF
ROCK SOCK	RS
CONCRETE WASHOUT AREA	CWA
INLET PROTECTION	IP
CULVERT INLET PROTECTION	CIP
VEHICLE TRACKING CONTROL	VTC
STABILIZED STAGING AREA/PARKING/PORTABLE RESTROOM	SSA
SEEDING AND MULCHING / SODDING	SM
EROSION CONTROL BLANKET	ECB
SEDIMENT CONTROL LOG (WATTLES) OR APPROPRIATE BMP APPROVED BY CITY	SCL
EARTHEN BERM	EB
STRAW BALE SEDIMENT CONTROL	SBSC
STOCK PILE MANAGEMENT	SP
FLOW ARROW	
LIMITS OF CONSTRUCTION	LOC
CITY OF THORNTON EASEMENT	

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CHECKED MAB

APPROVED:

PRINCIPAL

09/04/2020
DATE:

REVISIONS

REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

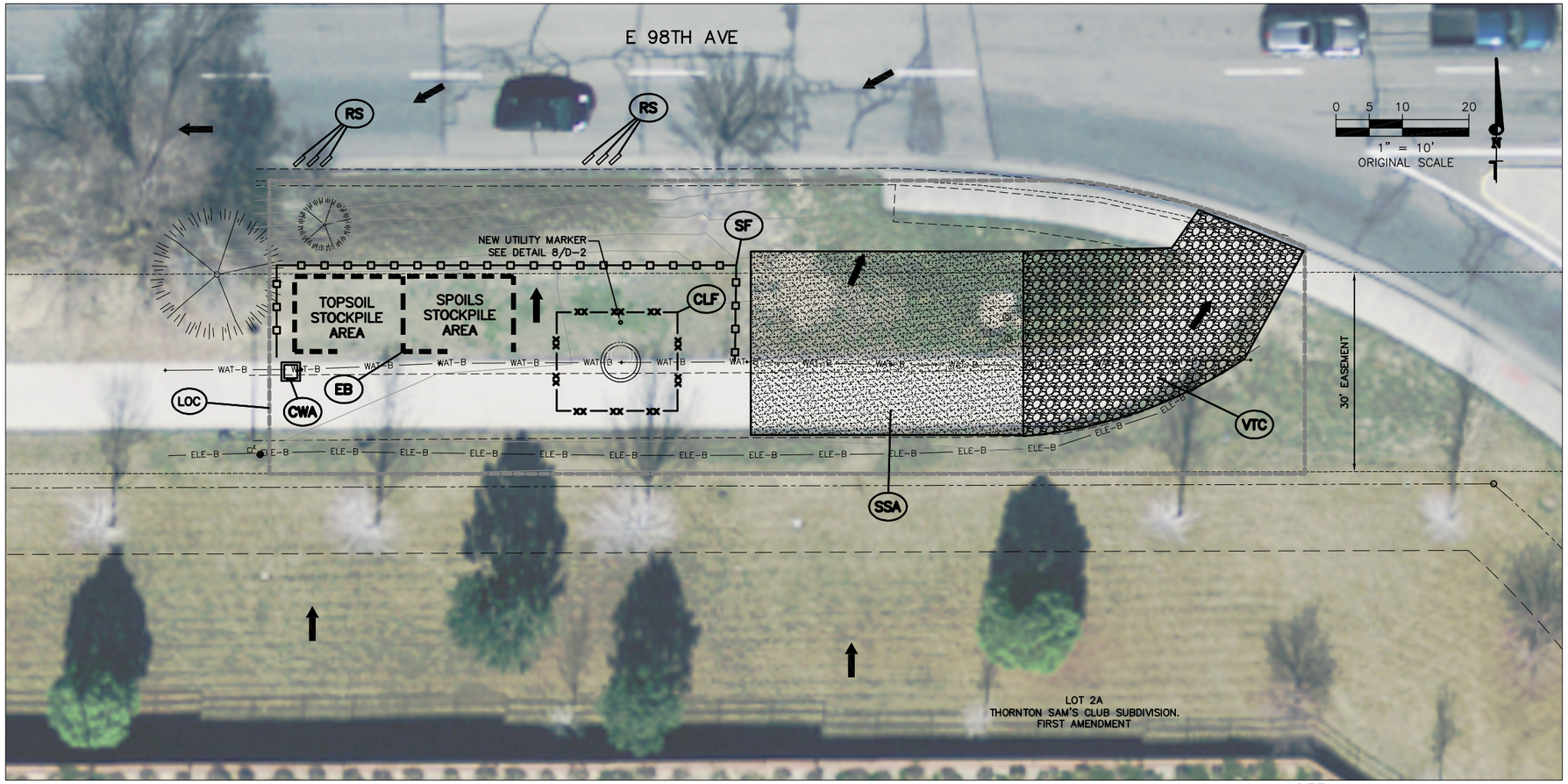
CITY OF THORNTON, COLORADO

STANDLEY LAKE FACILITIES

CIVIL

STA. 81+00
EROSION CONTROL PLAN
SITE 4

DATE: 01/14/20
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER
C-140
SHEET NUMBER



PLAN
36"ø STEEL SPECIAL MODIFICATION
STA. 161+94

NOTE:
NO CONSTRUCTION OF ANY KIND, INCLUDING GRADING, PARKING, STAGING, ETC. IS ALLOWED IN AREAS THAT DO NOT HAVE DEDICATED RIGHT-OF-WAY OR EASEMENTS FOR THIS PROJECT.

JURISDICTION:
ADAMS COUNTY / CITY OF THORNTON
EROSION & SEDIMENT CONTROL PER MILE HIGH FLOOD DISTRICT CONSTRUCTION BMP PROCEDURES.

GENERAL NOTES:
1. PLACE INITIAL BMPS PRIOR TO THE START OF THE WORK. FOLLOW CITY OF THORNTON STORM WATER INSPECTION PROCEDURES.
2. WHEN CONCRETE WILL BE POURED ON SITE, A WASH OUT AREA IS REQUIRED. A TEMPORARY CONCRETE WASH OUT, SUCH AS AN "ECO-PAN" IS ACCEPTABLE.
3. SPOILS FROM TRENCH MUST BE STOCKPILED ON THE UPSLOPE SIDE OF THE TRENCH.
4. 20' CITY OF THORNTON WATER UTILITY EASEMENT SHOWN IN APPROXIMATE LOCATION.
5. PROTECT EXISTING PIPE & APPURTENANCES. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING FACILITIES.
6. TOPSOIL/SPOILS SHALL BE STOCKPILED ON SITE. PROVIDE COMPACTED 18" HIGH BERM AROUND STOCKPILE AREA PERIMETER 6 FOOT MINIMUM FROM TOE OF STOCKPILE SLOPE.
7. VEHICLE TRACKING CONTROL TO BE LOCATED NEAR SITE. COORDINATE WITH INSPECTOR. VEHICLE TRACKING CONTROL SHALL RIP-RAP.
8. STABILIZED STAGING AREA SHALL BE HIGH STRENGTH GEO-GRID WITH A GEOTEXTILE UNDERLAYMENT.
9. HOURS OF OPERATION SHALL BE FROM 7 AM TO 5 PM MONDAY THROUGH FRIDAY.
10. ALL ASPHALT, CONCRETE, SIDEWALK, CURB AND GUTTER, MEDIAN, LANDSCAPING AND IRRIGATION DAMAGED OR AFFECTED BY CONSTRUCTION SHALL BE REPLACED PER CITY STANDARDS TO EXISTING CONDITIONS OR BETTER.

LEGEND

CONSTRUCTION FENCE	CF
SILT FENCE	SF
CHAIN LINK SECURITY FENCE	CLF
ROCK SOCK	RS
CONCRETE WASHOUT AREA	CWA
INLET PROTECTION	IP
CULVERT INLET PROTECTION	CIP
VEHICLE TRACKING CONTROL	VTC
STABILIZED STAGING AREA/PARKING/PORTABLE RESTROOM	SSA
SEEDING AND MULCHING / SODDING	SM
EROSION CONTROL BLANKET	ECB
SEDIMENT CONTROL LOG (WATTLES) OR APPROPRIATE BMP APPROVED BY CITY	SCL
EARTHEN BERM	EB
STRAW BALE SEDIMENT CONTROL	SBSC
STOCK PILE MANAGEMENT	SP
FLOW ARROW	
LIMITS OF CONSTRUCTION	LOC
CITY OF THORNTON EASEMENT	

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DRAWN DPB
DESIGNED SES
CHECKED MAB

APPROVED:
PRINCIPAL
09/04/2020
DATE:

REVISIONS

REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

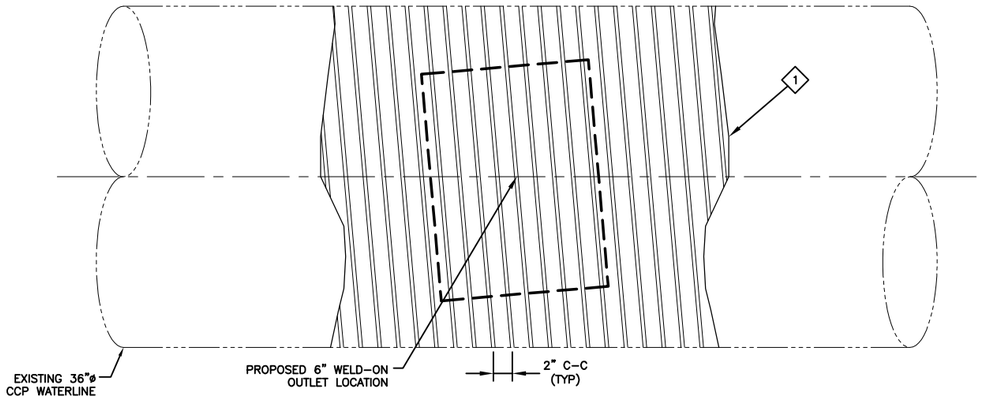
CITY OF THORNTON, COLORADO

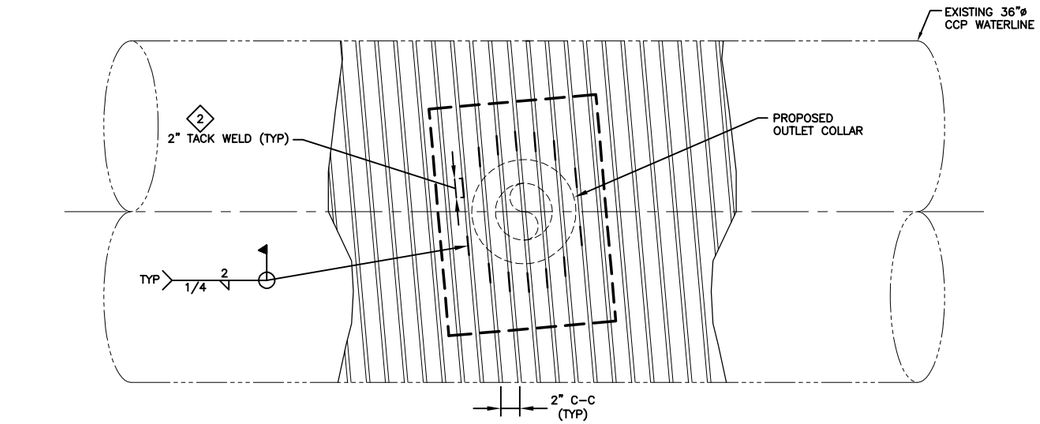
STANDLEY LAKE FACILITIES

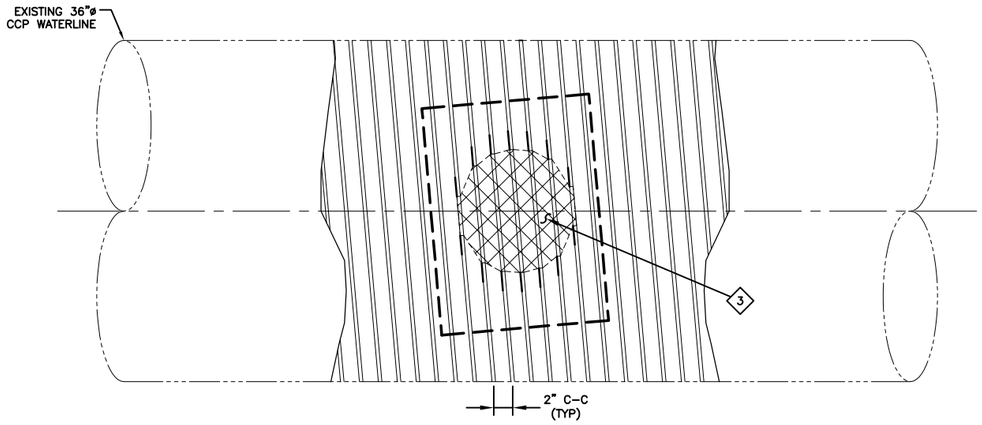
CIVIL

STA. 162+00
EROSION CONTROL PLAN
SITE 7

DATE: 01/14/20
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER
C-150
SHEET NUMBER







GENERAL NOTES:

1. EXCAVATION CANNOT OCCUR ON ACTIVE WATERLINE. COORDINATE WATERLINE SHUTDOWN WITH CITY PRIOR TO BEGINNING CONSTRUCTION.
1. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS AND DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION.
2. ITEMS NOT IDENTIFIED SPECIFICALLY TO BE DEMOLISHED SHALL REMAIN IN PLACE.
3. PROTECT EXISTING PIPE, OUTLETS, AND APPURTENANCES. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING FACILITIES.
4. CONTRACTOR SHALL RETAIN AND PROTECT EXISTING CATHODIC PROTECTION WIRES.

KEY NOTES:

1. REMOVE/CHIP AWAY ANY EXISTING 3/4" CEMENT MORTAR COATING. RETAIN & PROTECT EXISTING 3/8" REINFORCEMENT BARS.
2. TACK WELD BARS TO STEEL PIPE CYLINDER (STAGER WELDS IF DESIRED). TACK WELD SHALL BE 2" IN LENGTH.
3. CUT AND REMOVE BARS THAT INTERFERE WITH PROPOSES OUTLET COLLAR.

OUTLET TAP LOCATIONS INFORMATION			
LOCATION	STATION	EXISTING DEPTH TO TOP OF PIPE	MAINLINE PIPE MATERIAL
9	213+53	7'-0"	BARWRAP PIPE

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LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"-SCALE ACCORDINGLY)

DRAWING CPL15397-200
DRAWN DPB
DESIGNED SES
CHECKED MAB

APPROVED:

PRINCIPAL

09/04/2020
DATE:

REVISIONS

REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

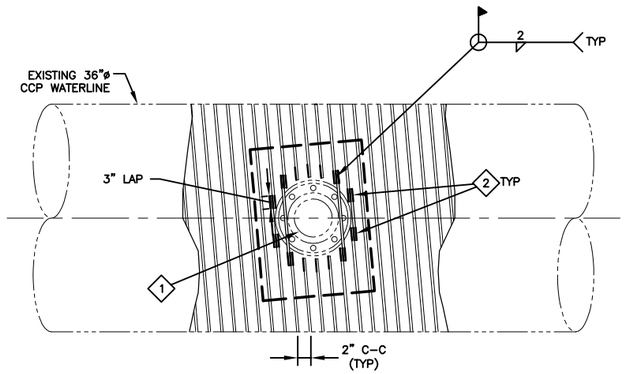
CITY OF THORNTON, COLORADO

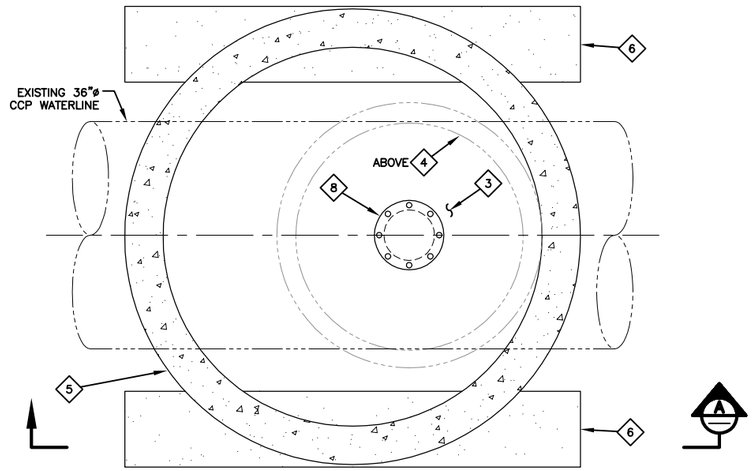
STANDLEY LAKE FACILITIES

DRAWING SERIES 200

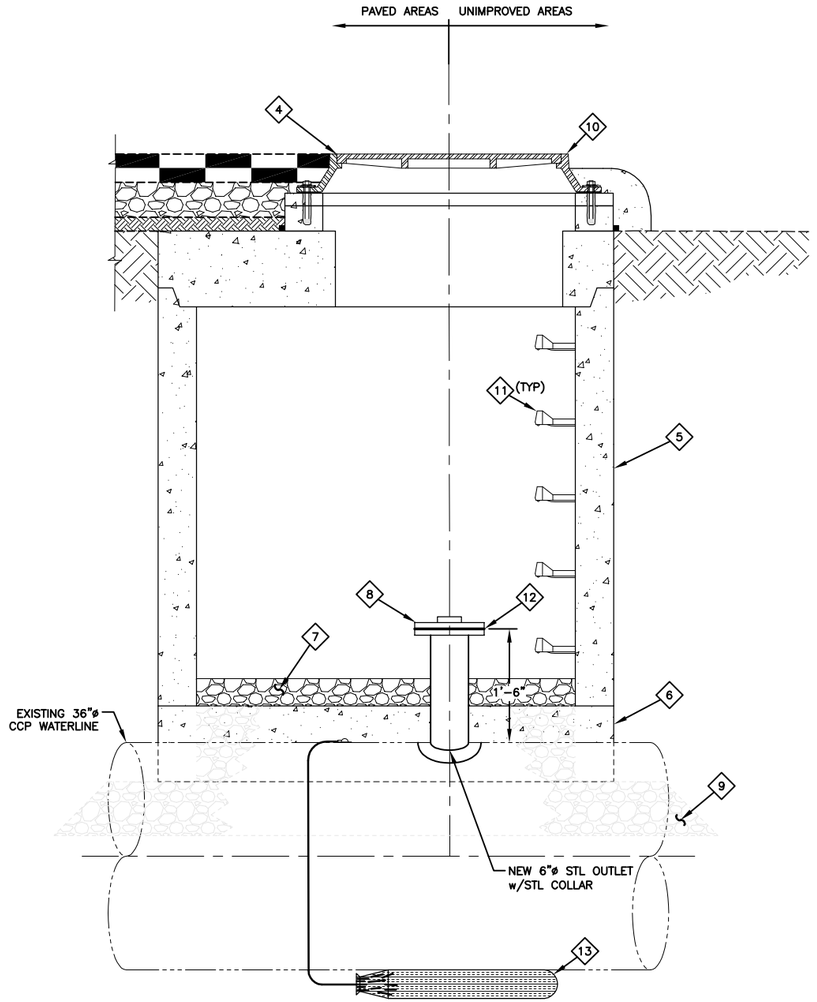
OULET TAP DEMOLITION

DATE: 01/14/20
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER
C-200





PLAN
SCALE: 1" = 1'-0"



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

GENERAL NOTES:

1. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS AND DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION.
2. ITEMS NOT IDENTIFIED SPECIFICALLY TO BE DEMOLISHED SHALL REMAIN IN PLACE.
3. PROTECT EXISTING PIPE, OUTLETS, AND APPURTENANCES. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING FACILITIES.
4. CONTRACTOR SHALL RETAIN AND PROTECT EXISTING CATHODIC PROTECTION WIRES.

KEY NOTES:

1. WELD ON SMITH-BLAIR FABRICATED WELD-ON 6" OUTLET STTYLE626 TYPE II
2. WELD A 'SISTER' BAR TO CUT BARS ON EACH SIDE OF OUTLET. #4 GRADE 40 REBAR MAY BE USED.
3. CEMENT MORTAR-PATCH COVER ALL EXPOSED STEEL TO A MIN. 1" COVER FOR CORROSION PROTECTION
4. NEW 36"ø RING AND COVER. MCGUARD INTIMIDATOR MANLOCKS MODEL NUMBER 127003.077
5. 60"ø CONCRETE MANHOLE
6. CONCRETE MANHOLE GRADE BEAMS. SEE DETAIL 4/D-MH1.
7. PROVIDE 4" DEEP CRUSHED AGGREGATE INSIDE MANHOLE.
8. NEW 6"ø BLIND FLANGE.
9. PROVIDE 12" DEEP CRUSHED AGGREGATE UNDER GRADE BEAMS. SEE DETAIL 4/D-MH1.
10. MCGUARD STYLE LOCKING DEVICE FOR MANHOLES ABOVE GRADE AND OUTSIDE OF TRAFFIC AREAS.
11. MANHOLE STEPS AT 12" ON CENTER. SEE DETAIL 2/D-MH1.
12. INSTALL INSULATING FLANGE KIT BETWEEN MANWAY FLANGE AND BLIND FLANGE. SEE DETAIL 3/D-CP1.
13. INSTALL (1) 48LB ANODE TO NEW STEEL PIPE. SEE DETAIL 2/D-CP1.

MANHOLE INFORMATION		
STATION	ORIGINAL DEPTH TO TOP OF PIPE	PROPPOSED MANHOLE DEPTH
213+53	7'-0"	7'-0"

* MANHOLE INFORMATION FROM RECORD DRAWINGS. CONTRACTOR TO POTHOLE ALL LOCATIONS TO VERIFY DEPTH FROM RECORD DRAWINGS.

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DRAWING CPL15397-210
DRAWN DPB
DESIGNED SES
CHECKED MAB

APPROVED:

PRINCIPAL

09/04/2020
DATE:

REVISIONS				
REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

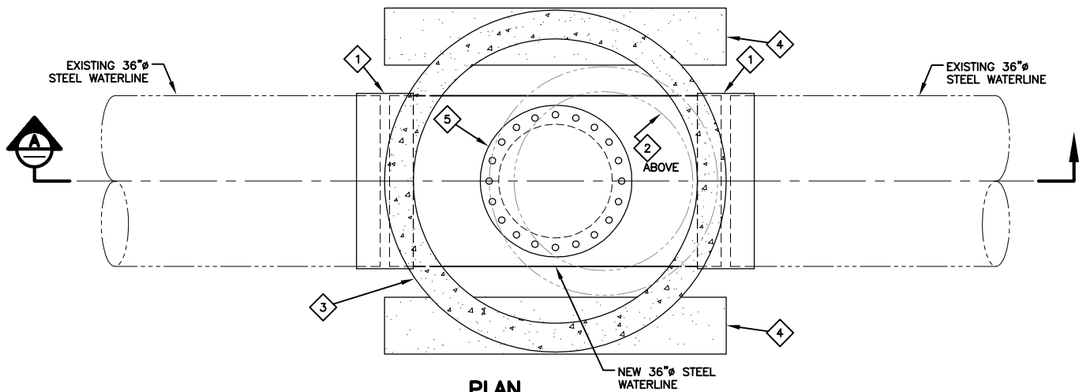
CITY OF THORNTON, COLORADO

STANDLEY LAKE FACILITIES

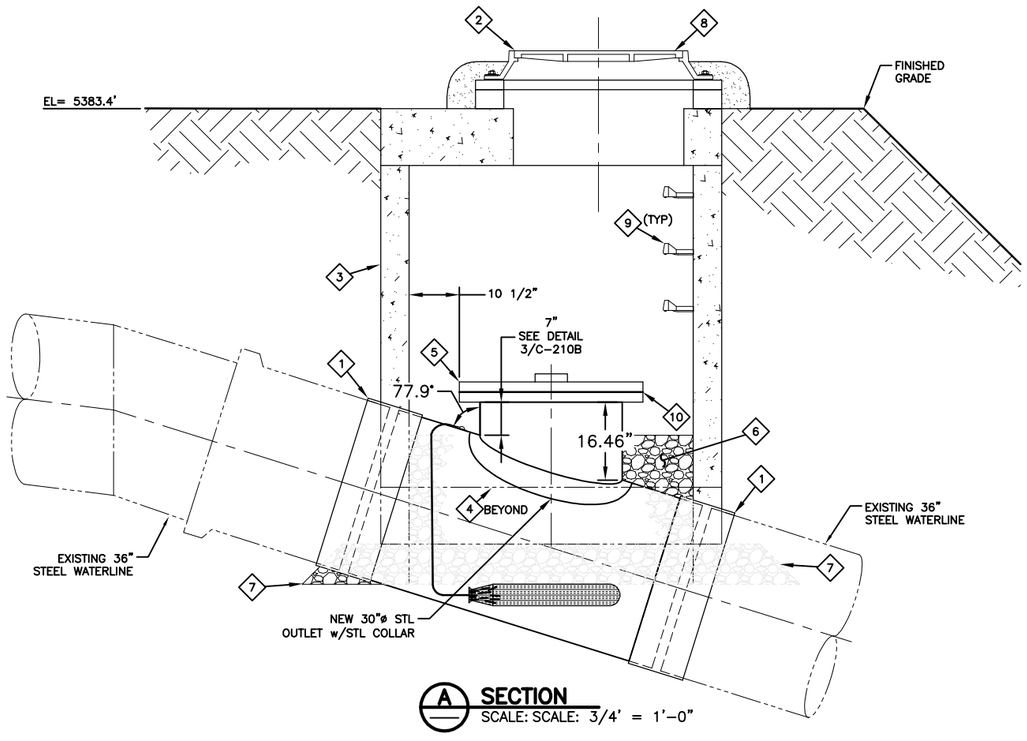
DRAWING SERIES 200

OULET TAP MODIFICATION

DATE: 01/14/20
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER
C-210



PLAN
36" STEEL MODIFICATION
SCALE: 3/4" = 1'-0"



A SECTION
SCALE: SCALE: 3/4' = 1'-0"

GENERAL NOTES:

1. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS AND DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION.
2. ITEMS NOT IDENTIFIED SPECIFICALLY TO BE DEMOLISHED SHALL REMAIN IN PLACE.
3. PROTECT EXISTING PIPE, OUTLETS, AND APPURTENANCES. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING FACILITIES.
4. CONTRACTOR SHALL RETAIN AND PROTECT EXISTING CATHODIC PROTECTION WIRES.

KEY NOTES:

1. CONNECT 6'-0", 36" NEW STEEL PIPE TO EXISTING STEEL WATERLINE w/NEW BUTTSTRAP. SEE DETAIL 5/D-1.
2. NEW 36"ø RING AND COVER. MCGUARD INTIMIDATOR MANLOCKS MODEL NUMBER 127003.077
3. NEW 60"ø PRECAST CONCRETE MANHOLE.
4. CONCRETE MANHOLE GRADE BEAMS. SEE DETAIL 4/D-MH1.
5. NEW 30"ø MANWAY OPENING BLIND FLANGE
6. PROVIDE CRUSHED AGGREGATE INSIDE MANHOLE. COORDINATE IN FIELD WITH CITY AND ENGINEER FOR EXTENTS.
7. PROVIDE 12" DEEP CRUSHED AGGREGATE UNDER GRADE BEAMS. SEE DETAIL 4/D-MH1
8. MCGUARD STYLE LOCKING DEVICE FOR MANHOLES ABOVE GRADE AND OUTSIDE OF TRAFFIC AREAS.
9. MANHOLE STEPS AT 12" ON CENTER. SEE DETAIL 2/D-MH1.
10. INSTALL INSULATING FLANGE KIT BETWEEN MANWAY FLANGE AND BLIND FLANGE. SEE DETAIL 3/D-CP1.
11. INSTALL (1) 48LB ANODE TO NEW STEEL PIPE. SEE DETAIL 2/D-CP1.

MANHOLE INFORMATION		
STATION	ORIGINAL DEPTH TO TOP OF PIPE	PROPPOSED MANHOLE DEPTH
210+53	6'-2"	6'-2"

* MANHOLE INFORMATION FROM RECORD DRAWINGS. CONTRACTOR TO POTHOLE ALL LOCATIONS TO VERIFY DEPTH FROM RECORD DRAWINGS.

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DRAWING CPL15397-210A
DRAWN DPB
DESIGNED SES
CHECKED MAB

APPROVED:

PRINCIPAL

09/04/2020
DATE:

REVISIONS

REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	ETH

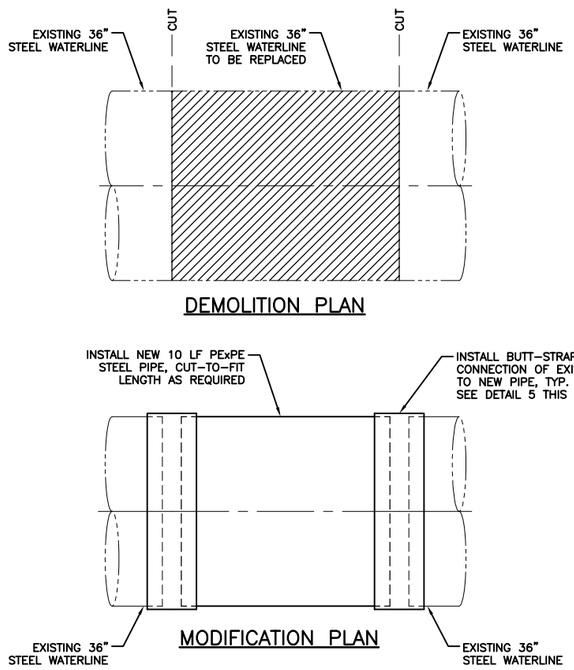
CITY OF THORNTON, COLORADO

STANDLEY LAKE FACILITIES

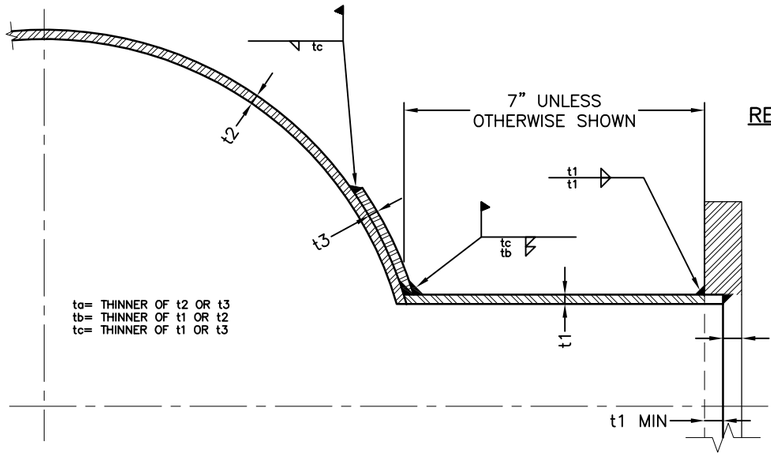
DRAWING SERIES 200

SITE 9
STEEL SPECIAL MODIFICATION

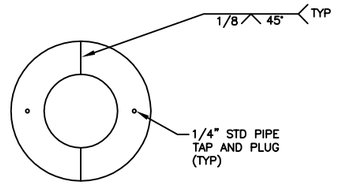
DATE: 12/28/21
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER
C-210A



1 DETAIL
36"ø STEEL SPECIAL MODIFICATION
SCALE: 3/4"=1'-0"

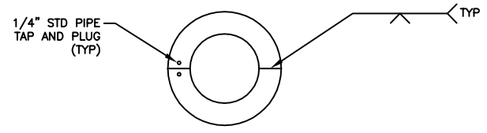


2 DETAIL
FIELD ATTCAHED FLANGED OUTLET
SCALE: N.T.S

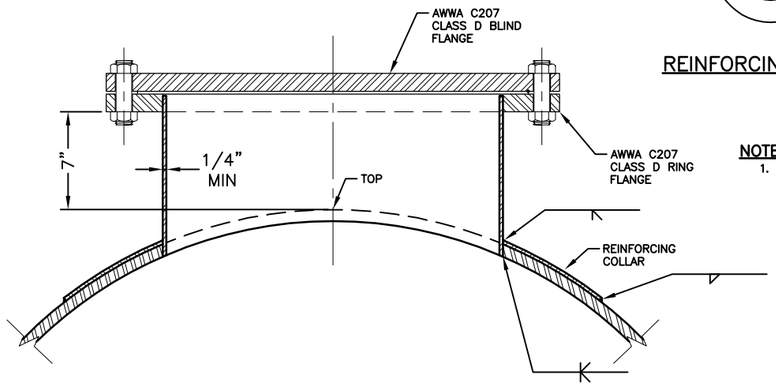


REINFORCING PLATE

NOTES:
1. LINING AND COATING NOT SHOWN FOR CLARITY.
2. REPAIR LINING AND COATING.
3. REINFORCING PLATE WIDTH AND THICKNESS AND OUTLET NOZZLE THICKNESS SHALL BE DESIGNED IN ACCORDANCE WITH AWWA C200.



REINFORCING COLLAR



NOTES:
1. LINING AND COATING NOT SHOWN FOR CLARITY.

3 DETAIL
24" ACCESS MANHOLE (STEEL PIPE)
SCALE: N.T.S

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DRAWING CPL15397-210B
DRAWN DPB
DESIGNED MAB
CHECKED ETH

APPROVED:

PRINCIPAL

09/04/2020
DATE:

REVISIONS

REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	ETH

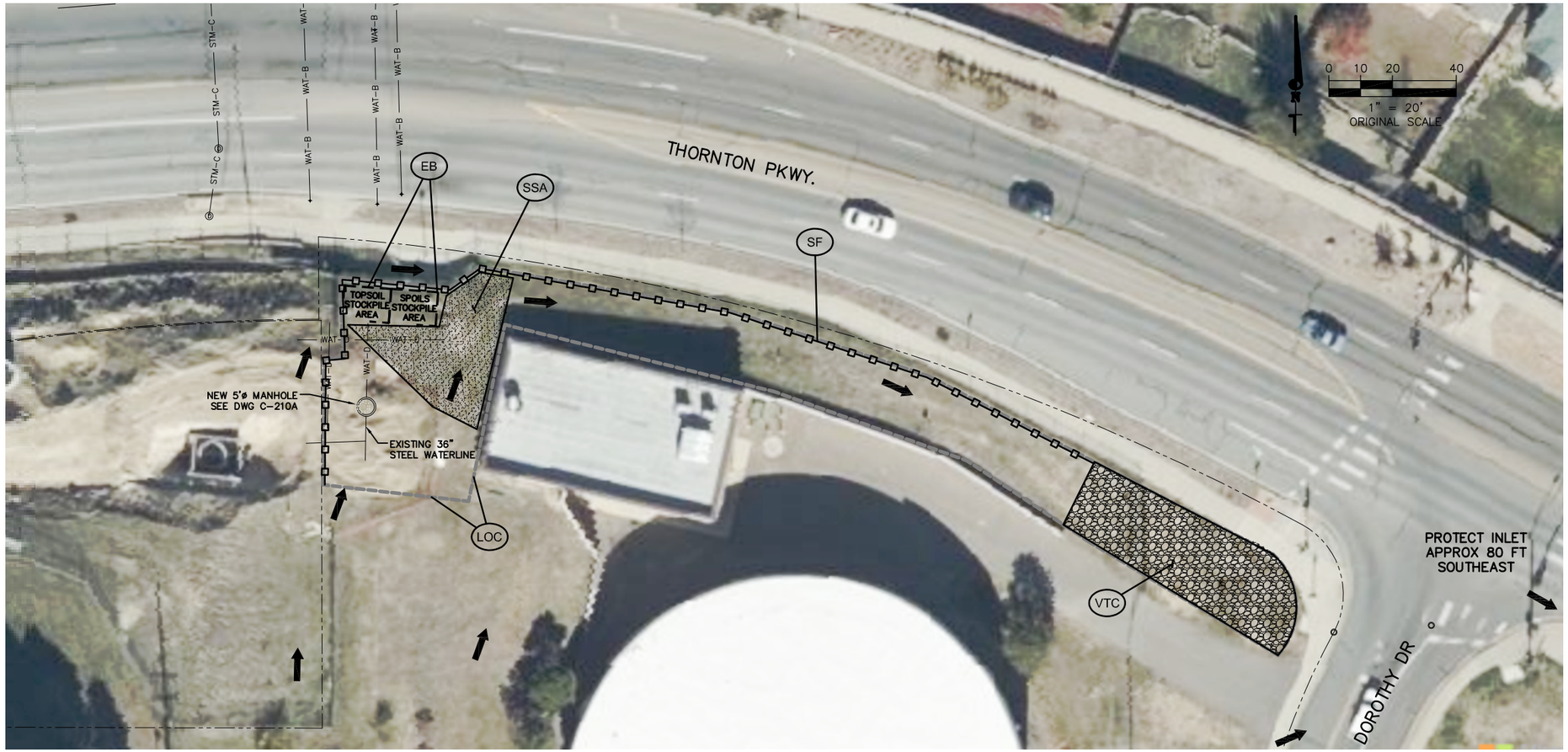
CITY OF THORNTON, COLORADO

STANDLEY LAKE FACILITIES

DRAWING SERIES 200

SITE 9 STEEL SPECIAL MODIFICATION DETAILS

DATE: 01/20/22
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER C-210B



PLAN
36"ø OUTLET TAP MODIFICATION
STA. 210+23

NOTE:
NO CONSTRUCTION OF ANY KIND, INCLUDING GRADING, PARKING, STAGING, ETC. IS ALLOWED IN AREAS THAT DO NOT HAVE DEDICATED RIGHT-OF-WAY OR EASEMENTS FOR THIS PROJECT.

JURISDICTION:
ADAMS COUNTY / CITY OF THORNTON
EROSION & SEDIMENT CONTROL PER MILE HIGH FLOOD DISTRICT CONSTRUCTION BMP PROCEDURES.

GENERAL NOTES:
1. PLACE INITIAL BMPS PRIOR TO THE START OF THE WORK. FOLLOW CITY OF THORNTON STORM WATER INSPECTION PROCEDURES.
2. WHEN CONCRETE WILL BE POURED ON SITE, A WASH OUT AREA IS REQUIRED. A TEMPORARY CONCRETE WASH OUT, SUCH AS AN "ECO-PAN" IS ACCEPTABLE.
3. SPOILS FROM TRENCH MUST BE STOCKPILED ON THE UPSLOPE SIDE OF THE TRENCH.
4. PROTECT EXISTING PIPE & APPURTENANCES. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING FACILITIES.
5. TOPSOIL/SPOILS SHALL BE STOCKPILED ON SITE. PROVIDE COMPACTED 18" HIGH BERM AROUND STOCKPILE AREA PERIMETER 6 FOOT MINIMUM FROM TOE OF STOCKPILE SLOPE.
6. VEHICLE TRACKING CONTROL TO BE LOCATED NEAR SITE. COORDINATE WITH INSPECTOR.
7. STABILIZED STAGING AREA SHALL BE HIGH STRENGTH GEO-GRID WITH A GEOTEXTILE UNDERLAYMENT.
8. HOURS OF OPERATION SHALL BE FROM 7 AM TO 5 PM MONDAY THROUGH FRIDAY.
9. ALL ASPHALT, CONCRETE, SIDEWALK, CURB AND GUTTER, MEDIAN, LANDSCAPING AND IRRIGATION DAMAGED OR AFFECTED BY CONSTRUCTION SHALL BE REPLACED PER CITY STANDARDS TO EXISTING CONDITIONS OR BETTER. LANDSCAPING SHALL BE REPLACED WITH SOD WHERE REQUIRED.

LEGEND

CONSTRUCTION FENCE	CF
SILT FENCE	SF
CHAIN LINK SECURITY FENCE	CLF
ROCK SOCK	RS
CONCRETE WASHOUT AREA	CWA
INLET PROTECTION	IP
CULVERT INLET PROTECTION	CIP
VEHICLE TRACKING CONTROL	VTC
STABILIZED STAGING AREA/PARKING/PORTABLE RESTROOM	SSA
SEEDING AND MULCHING / SODDING	SM
EROSION CONTROL BLANKET	ECB
SEDIMENT CONTROL LOG (WATTLES) OR APPROPRIATE BMP APPROVED BY CITY	SCL
EARTHEN BERM	EB
STRAW BALE SEDIMENT CONTROL	SBSC
STOCK PILE MANAGEMENT	SP
FLOW ARROW	
LIMITS OF CONSTRUCTION	LOC
CITY OF THORNTON EASEMENT	

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DRAWING CEC15397-220
DRAWN DPB
DESIGNED SES
CHECKED MAB

APPROVED:
PRINCIPAL
09/04/2020
DATE:

REVISIONS				
REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

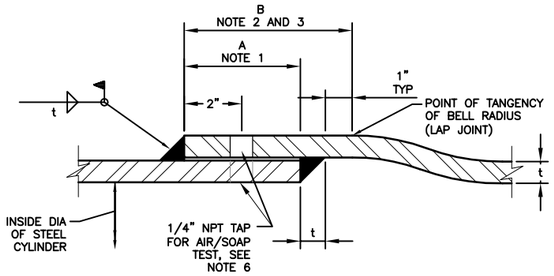
CITY OF THORNTON, COLORADO

STANDLEY LAKE FACILITIES

CIVIL

STA. 210+23
EROSION CONTROL PLAN
SITE 9

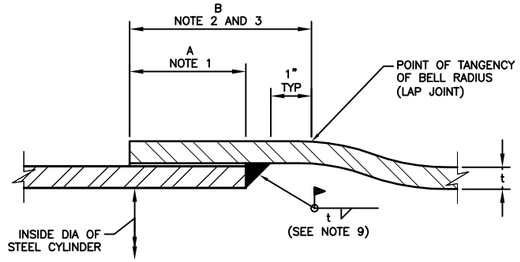
DATE: 01/14/20
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER
C-220
SHEET NUMBER



NOTES:

1. DIMENSION "A" CORRESPONDS TO THE COMPLETED JOINT OVERLAP AFTER WELDING. DIMENSION "A" IS THE GREATER OF 4" OR 5t, MINIMUM, FOR STANDARD JOINTS. INCREASE DIMENSION "A" FOR SPECIAL TEMPERATURE CONTROL JOINTS AS FURTHER DISCUSSED IN NOTE 3.
2. PROVIDE THE MINIMUM OVERLAP DIMENSION "A" AND MAINTAIN THE INDICATED HOLDBACK FOR THE WELD AS REQUIRED FOR THE MINIMUM DIMENSION "B" FOR STANDARD JOINTS.
3. INCREASE DIMENSION "B" BY 3 INCHES FOR SPECIAL TEMPERATURE CONTROL JOINTS. AT THE TIME OF INSTALLATION AND PRIOR TO WELDING, INSERT THE SPIGOT INTO THE LENGTHENED BELL TO PROVIDE "A" +3 INCHES MINIMUM OVERLAP. SEE SPECIFICATIONS FOR SPECIAL TEMPERATURE CONTROL JOINT WELDING REQUIREMENTS.
4. CONFIGURATION OF FILLET WELDS FOR BELL AND SPIGOT LAP JOINTS ARE SHOWN. FILLET WELDS ON OTHER JOINTS ARE SIMILAR.
5. TEST ALL WELDS IN ACCORDANCE WITH SPECIFICATIONS.
6. INSTALL TAP ON TOP HALF OF BELL FOR ACCESSIBILITY. PLUG TAP WITH WELDED PLUG AFTER COMPLETION OF AIR/SOAP TEST. ALTERNATIVELY, LOCATION OF AIR TEST HOLE MAY BE MOVED TO PIPE JOINT INTERIOR FOR WELD AFTER BACKFILL APPLICATION.
7. FABRICATE AND INSTALL JOINTS WITHIN THE TOLERANCES INDICATED. TOLERANCE REQUIREMENTS APPLY TO BOTH WELDS AND TO BOTH STRAIGHT AND DEFLECTED JOINTS.
8. "t" INDICATES THE THICKNESS OF STEEL PIPE AT THE PIPELINE STATION WHERE USED.
9. FIELD LINING & COATING AS SHOWN IN LAP WELDED SLIP JOINT LINING AND COATING DETAIL.

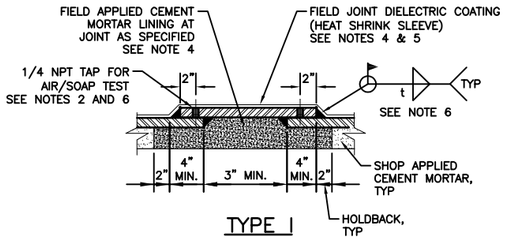
1 DETAIL DOUBLE LAP–WELDED JOINT
N.T.S.



NOTES:

1. DIMENSION "A" CORRESPONDS TO THE COMPLETED JOINT OVERLAP AFTER WELDING. DIMENSION "A" IS THE GREATER OF 2" OR 5t, MINIMUM, FOR STANDARD JOINTS. INCREASE DIMENSION "A" FOR SPECIAL TEMPERATURE CONTROL JOINTS AS FURTHER DISCUSSED IN NOTE 3.
2. PROVIDE THE MINIMUM OVERLAP DIMENSION "A" AND MAINTAIN THE INDICATED HOLDBACK FOR THE WELD AS REQUIRED FOR THE MINIMUM DIMENSION "B" FOR STANDARD JOINTS.
3. INCREASE DIMENSION "B" BY 3 INCHES FOR SPECIAL TEMPERATURE CONTROL JOINTS. AT THE TIME OF INSTALLATION AND PRIOR TO WELDING, INSERT THE SPIGOT INTO THE LENGTHENED BELL TO PROVIDE "A" +3 INCHES MINIMUM OVERLAP. SEE SPECIFICATIONS FOR SPECIAL TEMPERATURE CONTROL JOINT WELDING REQUIREMENTS.
4. CONFIGURATION OF FILLET WELDS FOR BELL AND SPIGOT LAP JOINTS ARE SHOWN. FILLET WELDS ON OTHER JOINTS ARE SIMILAR.
5. TEST ALL WELDS IN ACCORDANCE WITH SPECIFICATIONS.
6. FABRICATE AND INSTALL JOINTS WITHIN THE TOLERANCES INDICATED. TOLERANCE REQUIREMENTS APPLY TO BOTH WELDS AND TO BOTH STRAIGHT AND DEFLECTED JOINTS.
7. "t" INDICATES THE THICKNESS OF STEEL PIPE AT THE PIPELINE STATION WHERE USED.
8. FIELD LINING & COATING AS SHOWN IN LAP WELDED SLIP JOINT LINING AND COATING DETAIL, SEE THIS SHEET.
9. OPTIONAL EXTERIOR WELD MAY BE USED IN LIEU OF INTERIOR WELD.

2 DETAIL SINGLE LAP–WELDED JOINT
N.T.S.



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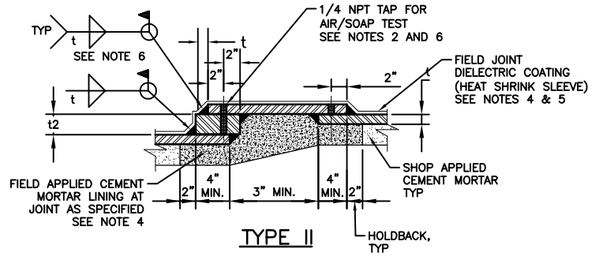

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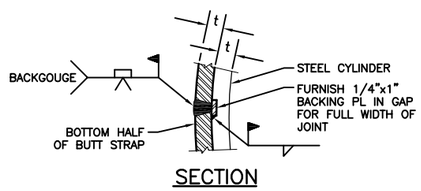
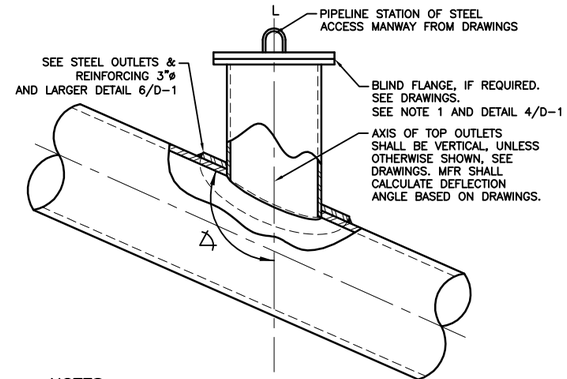


SECTION

NOTES:

1. TEST ALL WELDS IN ACCORDANCE WITH SPECIFICATIONS.
2. INSTALL TAP ON TOP HALF OF BELL FOR ACCESSIBILITY. PLUG TAP WITH WELDED PLUG AFTER COMPLETION OF AIR/SOAP TEST.
3. "t" INDICATES THE THICKNESS OF STEEL PIPE AT THE PIPELINE STATION WHERE USED.
4. FIELD LINING & COATING AS SHOWN IN LAP WELDED SLIP JOINT LINING AND COATING DETAIL.
5. HOLIDAY TEST AFTER INSTALLATION PER SPECIFICATIONS.
6. DOUBLE LAP WELDED BUTTSTRAP CONNECTION AS SHOWN. SEE SINGLE LAP WELDED JOINT DETAIL FOR SIMILAR SINGLE LAP WELDED BUTTSTRAP CONNECTION. TAP FOR AIR/SOAP TEST NOT REQUIRED FOR SINGLE LAP WELDS. OPTIONAL INTERIOR WELD MAY BE USED FOR SINGLE WELDS.

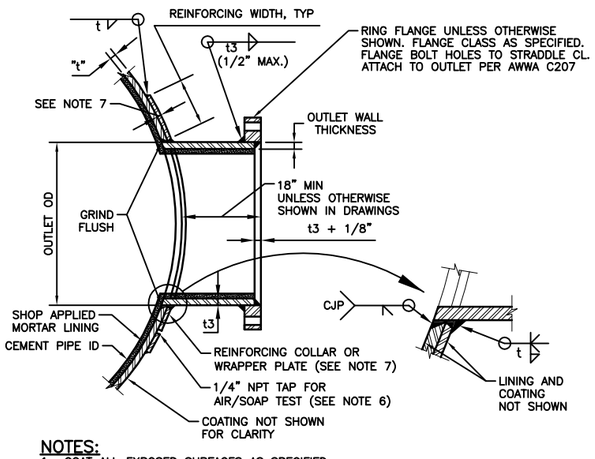
5 DETAIL BUTT STRAP CONNECTION
N.T.S.



NOTES:

1. COAT BURIED MANWAY CARBON STEEL BOLTS, NUTS, AND FLANGES WITH WAX–TAPE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS.
2. MANWAY MINIMUM DIAMETER TO BE 24 INCHES WHERE BURIED. MANWAY MINIMUM DIAMETER TO BE 30 INCHES WHERE EXPOSED IN MANHOLES OF VAULTS.

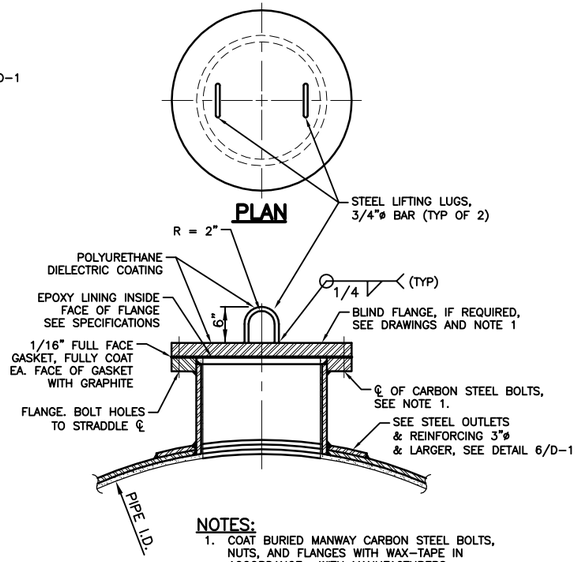
3 DETAIL STEEL OUTLET VERTICAL ORIENTATION
N.T.S.



NOTES:

1. COAT ALL EXPOSED SURFACES AS SPECIFIED.
2. "t" INDICATES THE THICKNESS OF THE STEEL PIPE AT THE STATION WHERE USED. "t3" INDICATES THICKNESS OF OUTLET.
3. TEST WELDS IN ACCORDANCE WITH SPECIFICATIONS.
4. MATERIAL FOR CONSTRUCTION OF REINFORCING SHALL BE PER SPECIFICATIONS.
5. BLOW–OFF OUTLETS SHALL BE DESIGNED AS TANGENTIAL OUTLETS IN ACCORDANCE WITH LATEST AWWA M–11.
6. PLUG TAP WITH WELDED PLUG AFTER COMPLETION OF AIR/SOAP TEST. APPLICABLE FOR WRAPPER OR COLLAR REINFORCING.
7. TYPE, WIDTH, AND THICKNESS OF OUTLET REINFORCING TO BE DETERMINED PER SPECIFICATIONS AND LATEST AWWA M–11. DETAIL SHOWN FOR WRAPPER & COLLAR REINFORCING.

6 DETAIL STEEL OUTLETS AND REINFORCING 3" DIAMETER AND LARGER
N.T.S.



NOTES:

1. COAT BURIED MANWAY CARBON STEEL BOLTS, NUTS, AND FLANGES WITH WAX–TAPE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS.
2. MANWAY MINIMUM DIAMETER TO BE 24 INCHES WHERE BURIED. MANWAY MINIMUM DIAMETER TO BE 24 OR 30 INCHES WHERE EXPOSED IN MANHOLES OF VAULTS.

4 DETAIL STEEL ACCESS MANWAY CLOSURE
N.T.S.

GENERAL NOTES FOR STEEL PIPE DETAILS

1. ALL STEEL PIPE AND FABRICATED SPECIALS SHALL CONFORM TO SPECIFICATIONS, UNLESS NOTED OTHERWISE.
2. ALL PIPE WELDING SHALL CONFORM TO THE APPLICABLE PROVISIONS OF THE LATEST EDITION OF THE ANSI/AWS D1.1 OR THE A.S.M.E. BOILER AND PRESSURE VESSEL CODE, SECTION VIII, DIVISION 1 FOR UNFIRED PRESSURE VESSELS, AS SPECIFIED.
3. FOR PLATE THICKNESS REQUIREMENTS FOR STEEL PIPE, SEE SPECIFICATION SECTIONS 33 11 01.01.
4. "t" INDICATES THE THICKNESS OF STEEL PIPE AT THE PIPELINE STATION WHERE USED. "t2" INDICATES OFFSET OF O.D. OF STEEL CYLINDER.
5. DRILL AND TAP BEFORE WELDING, A 1/4" HOLE FOR AIR–SOAP TESTS. PLUG WELD HOLE ON SUCCESSFUL COMPLETION OF THE JOINT TESTS. PERFORM JOINT TESTS AS SPECIFIED.
6. WELDING SYMBOLS PER AISC.
7. FOR COATING DETAILS SEE DETAIL 3, SIMILAR.
8. WIDTH AND THICKNESS OF OUTLET REINFORCING TO BE DETERMINED PER SPECIFICATION SECTION 33 11 01.01.

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DRAWN DPB
DESIGNED SES
CHECKED MAB

APPROVED:

PRINCIPAL

09/04/2020
DATE:

REVISIONS				
REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

CITY OF THORNTON, COLORADO

STANDLEY LAKE FACILITIES

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GENERAL DETAILS

DATE: 01/14/20
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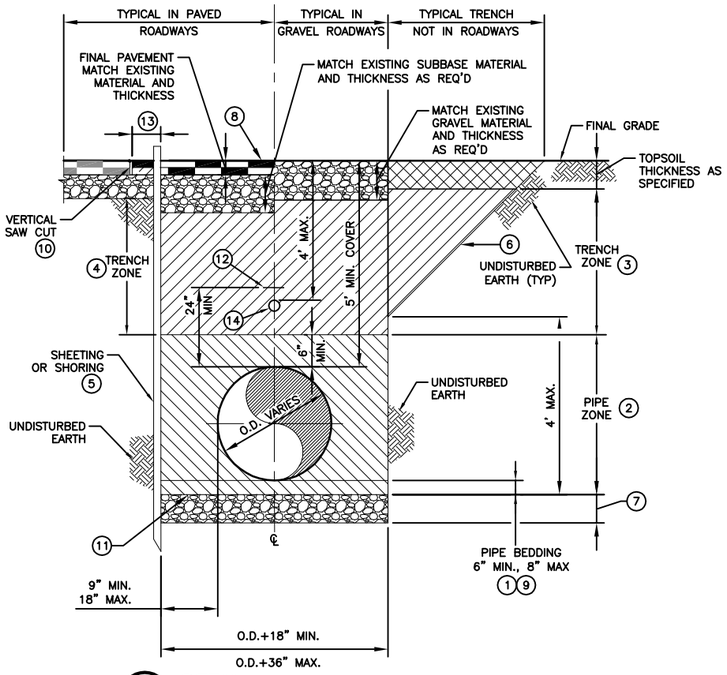
REVISION NO. –
DRAWING NUMBER
D–1

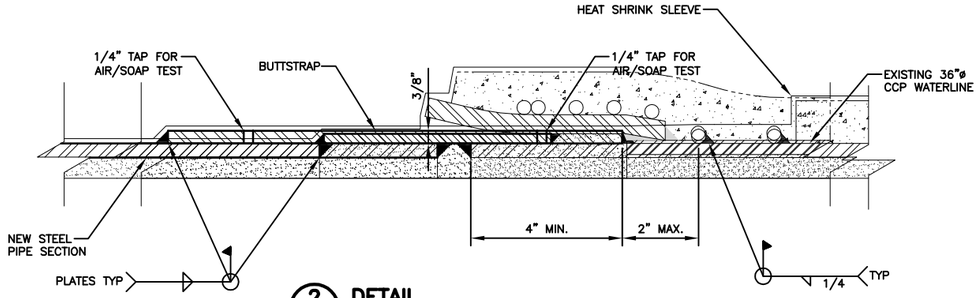


1 DETAIL TRENCHING AND BEDDING

SCALE: N.T.S.

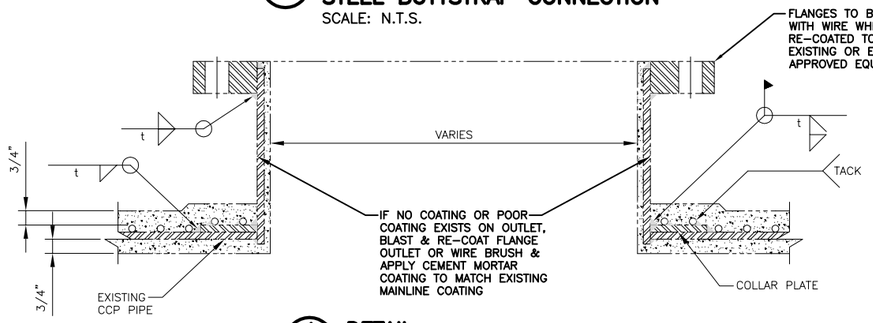
NOTES:

1. PIPE BEDDING, SEE SPECIFICATIONS.
2. PIPE ZONE, SEE SPECIFICATIONS.
3. TRENCH ZONE (NOT IN ROADWAYS) SUITABLE MATERIAL, SEE SPECIFICATIONS.
4. TRENCH ZONE IN ROAD RIGHT OF WAYS, SUITABLE MATERIAL, SEE SPECIFICATIONS.
5. WHEN REQUIRED, TRENCH BOXES OR SHORING SHALL BE USED.
6. ALTERNATE SLOPED TRENCH SIDEWALLS MAY BE USED IN UNIMPROVED OPEN AREAS. TRENCH SIDEWALL CUT SLOPES MAY BE USED AT THE CONTRACTOR'S DISCRETION IN UNIMPROVED AREAS AS REQUIRED BY OSHA REGULATIONS, SOIL TYPE, NEARBY GROUND TOPO, AND OTHER FACTORS.
7. TRENCH OVER EXCAVATION AND FOUNDATION STABILIZATION MATERIAL SHALL ONLY BE USED AS APPROVED BY THE ENGINEER, WHEN UNSUITABLE, UNEXPECTED TRENCH CONDITIONS ARE FOUND DURING CONSTRUCTION, SEE SPECIFICATIONS.
8. REPLACE ROADWAY SECTION OR PAVEMENT, SEE SPECIFICATIONS.
9. IF DURING CONSTRUCTION, THE WATER TABLE IS DISCOVERED TO BE ABOVE THE TRENCH BOTTOM, APPROPRIATE DEWATERING SHALL BE IMPLEMENTED TO LOWER THE WATER LEVEL AS REQUIRED. SEE SPECIFICATIONS.
10. SAW CUTS OF EXISTING PAVEMENT SHALL BE STRAIGHT, SQUARE AND PARALLEL TO THE TRENCH.
11. GEOTEXTILE MAY BE REQUIRED WITH FOUNDATION STABILIZATION, SEE SPECIFICATIONS.
12. MARKER TAPE ABOVE PIPE ZONE, SEE SPECIFICATIONS.
13. AT COMPLETION OF TRENCH BACKFILL BUT PRIOR TO FINAL ASPHALT PATCHING, EXISTING ASPHALT SHALL BE SAW CUT TO PROVIDE A STRAIGHT, SQUARE EDGE PARALLEL TO THE TRENCH. THE DISTANCE FROM THE EDGE OF TRENCH TO THE VERTICAL SAW CUT MAY VARY, BUT SHALL NOT BE LESS THAN 12".
14. MARKER PLATE:
    A. INSTALL 4' BELOW FINISHED GRADE. SEE SPECIFICATIONS.
    B. INSTALL 3 MARKER PLATES AT HORIZONTAL BENDS. LOCATE ONE ABOVE CENTER OF HORIZONTAL ELBOW AND THE OTHER TWO 10' AFTER EACH SIDE OF ELBOW.
    C. INSTALL 1 MARKER PLATE ABOVE VERTICAL ELBOWS.
    D. INSTALL 1 MARKER PLATE AT EVERY OTHER STEEL PIPE JOINT, OR APPROXIMATELY EVERY 80 FEET.



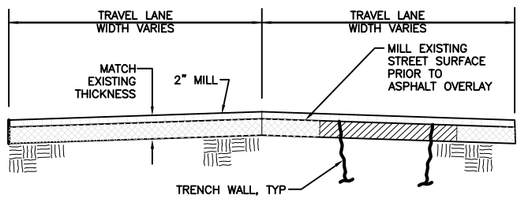
2 DETAIL STEEL BUTTSTRAP CONNECTION

SCALE: N.T.S.



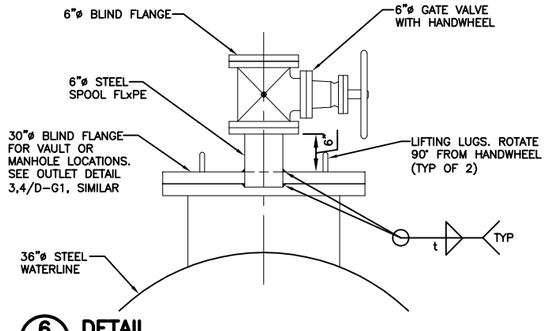
4 DETAIL REPAIR & RE-COAT FLANGED OUTLET

N.T.S.



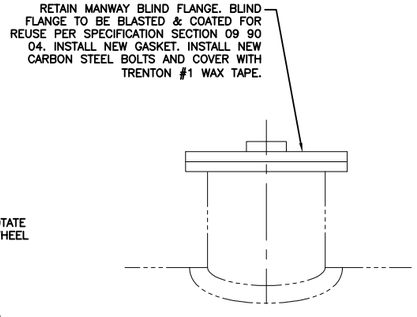
5 DETAIL ASPHALT PATCH & OVERLAY

N.T.S.



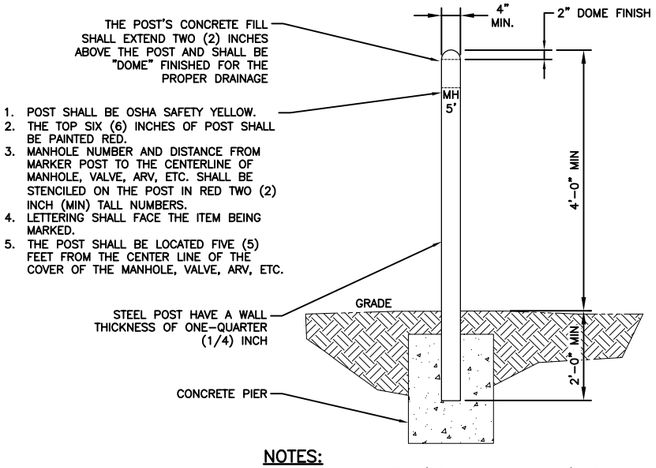
6 DETAIL SMARTBALL LAUNCH/RETRIEVAL MANWAY

N.T.S.



7 DETAIL REFURBISH MANWAY COATINGS & HARDWARE

N.T.S.



NOTES:

PIPE SHALL BE BLASTED (OR OTHERWISE CLEANED) PRIOR TO PRIMING AND PAINTING. THE PIPE SHALL BE COATED WITH TWO (2) LAYERS OF PRIME COAT AND ONE (1) OIL BASE SEMI-GLOSS FINISHING COAT IN THE COLORS SPECIFIED ABOVE. THE TOTAL PRIME AND PAINT THICKNESS SHALL BE A MIN. OF 4.5 MIL. THICKNESS OR 1.5 MIL. OF EACH LAYER.

8 DETAIL MARKER POST

N.T.S.

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DRAWN DPB
DESIGNED SES
CHECKED MAB

APPROVED:

PRINCIPAL

09/04/2020
DATE:

REVISIONS				
REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

CITY OF THORNTON, COLORADO

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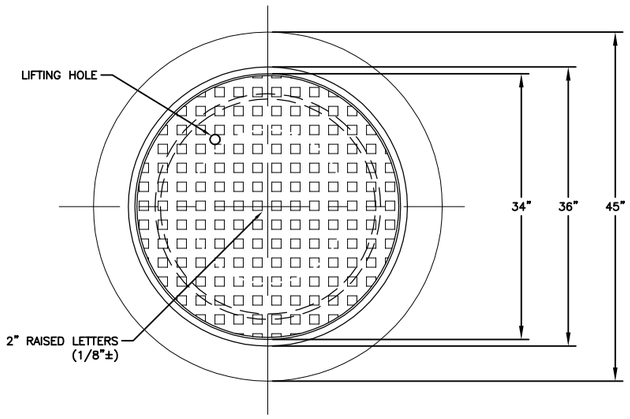
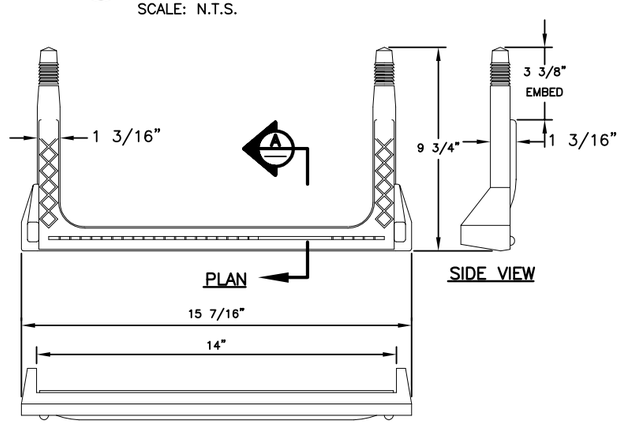
GENERAL DETAILS

DATE: 01/14/20
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER D-2



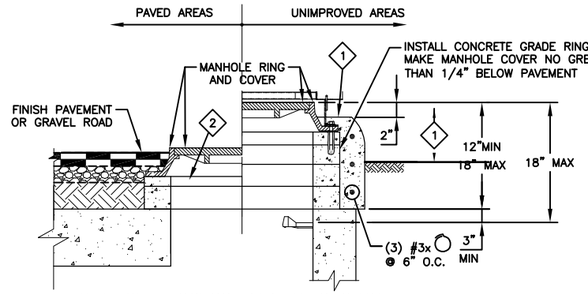
PLAN

1 DETAIL
36"ø MANHOLE COVER
SCALE: N.T.S.



COPOLYMER POLYPROPYLENE PLASTIC STEP

2 DETAIL
MANHOLE STEPS
N.T.S.



MANHOLE ACCESS PARTIAL SECTION

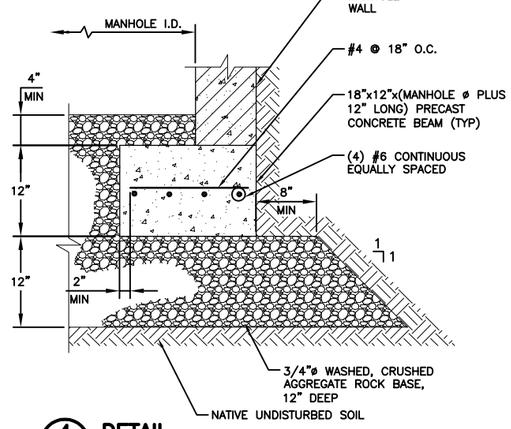
KEY NOTE:

1 IN FIELDS AND OPEN AREAS RAISE FRAME 12" ABOVE FINAL TRENCH GRADE AND TROWEL FINISH CONCRETE COLLAR.

NOTES:

1. 36"ø RING AND COVER (NEENAH R–1557 COVER OR DEETER 1196 RING & 1296 COVER) WITH HOOKING RING. PROVIDE CONCRETE COLLAR. DRILL MANHOLE FRAME AND ATTACH MANHOLE FRAME TO PRE–CAST CONCRETE GRADE RINGS WITH FOUR EQUALLY SPACED 5/8"ø STAINLESS STEEL ADHESIVE–SET ANCHORS WITH 4" EMBED. PROVIDE BITUMASTIC SEALANT ALL ROUND AT JOINT OF FRAME AND PRE–CAST GRADE RINGS.
2. LIFTING NOTCH SHALL NOT EXTEND PAST INSIDE FACE OF RING SEAT.

3 DETAIL
MANHOLE CONCRETE COLLAR
SCALE: N.T.S.



4 DETAIL
CONCRETE MANHOLE GRADE BEAM
N.T.S.

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DRAWING CDT15397–MH1
DRAWN DPB
DESIGNED SES
CHECKED MAB

APPROVED:

PRINCIPAL

09/04/2020
DATE:

REVISIONS

REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

CITY OF THORNTON, COLORADO

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MANHOLE DETAILS

DATE: 01/14/20
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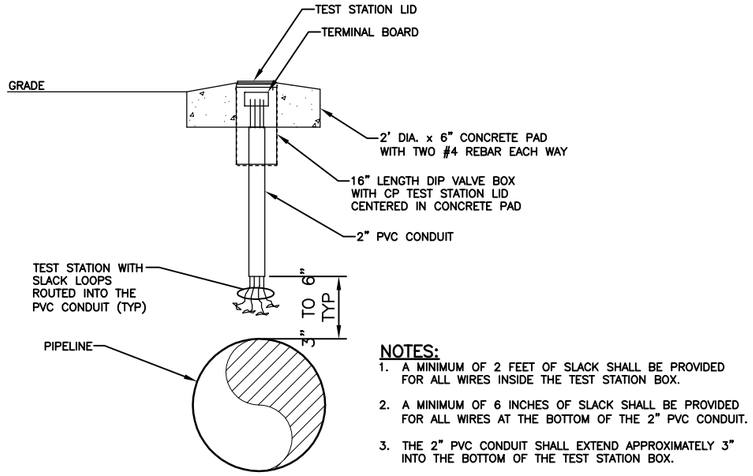
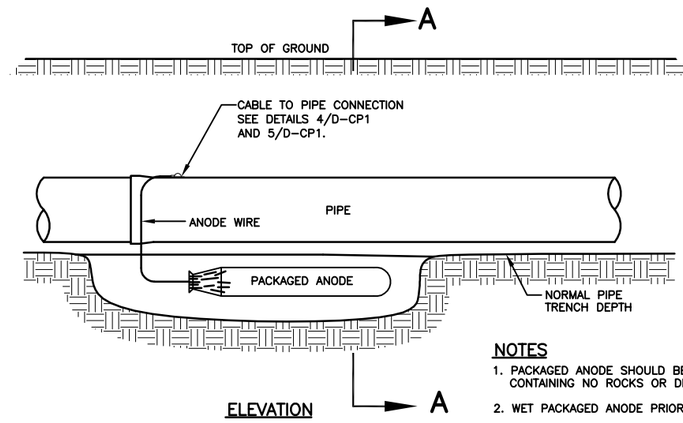
DRAWING NUMBER
D–MH1



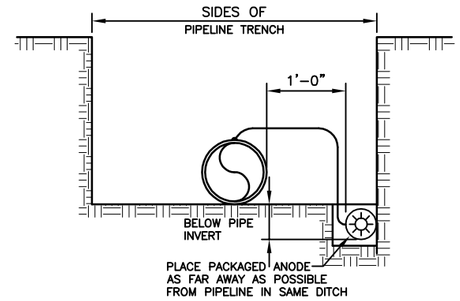
NOTES:
1. A MINIMUM OF 2 FEET OF SLACK SHALL BE PROVIDED FOR ALL WIRES INSIDE THE TEST STATION BOX.
2. A MINIMUM OF 6 INCHES OF SLACK SHALL BE PROVIDED FOR ALL WIRES AT THE BOTTOM OF THE 2" PVC CONDUIT.
3. THE 2" PVC CONDUIT SHALL EXTEND APPROXIMATELY 3" INTO THE BOTTOM OF THE TEST STATION BOX.

1 DETAIL
TYPICAL FLUSH MOUNT TEST STATION BOX
N.T.S.



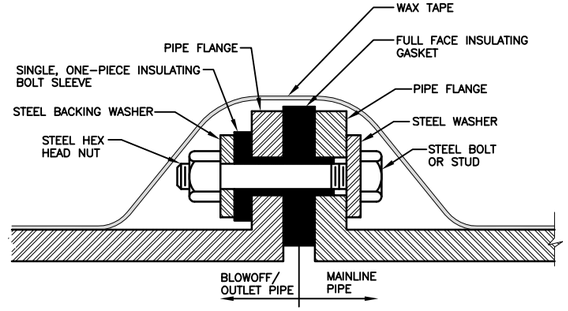
ELEVATION

NOTES
1. PACKAGED ANODE SHOULD BE COVERED WITH FINE SOIL CONTAINING NO ROCKS OR DIRT CLUMPS, HAND TAMPED.
2. WET PACKAGED ANODE PRIOR TO BACKFILLING.
3. DO NOT BED ANODE IN CLSM.
4. BACKFILL ANODE IN NATIVE EXCAVATED SOIL.
5. ANODE WEIGHT ON CORRESPONDING MODIFICATION DRAWING.



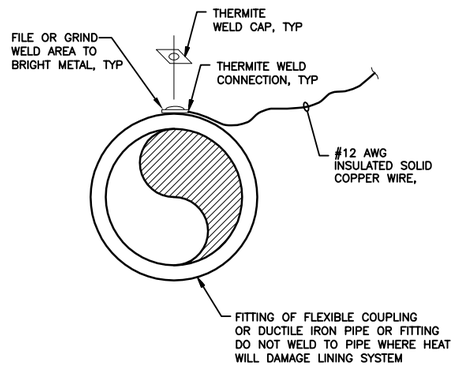
SECTION A-A

2 DETAIL
ANODE INSTALLATION
N.T.S.

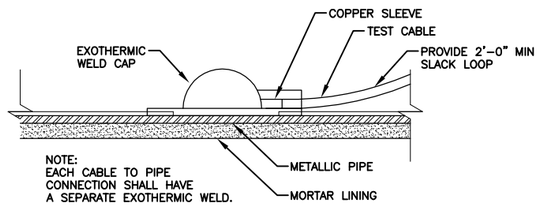


NOTES:
1. INSULATING GASKET SHALL BE A FULL FACED PHENOLIC RING GASKET WITH BUNA-N SEALING ELEMENT.
2. INSULATING BOLT SLEEVES SHALL BE THE SINGLE ONE-PIECE TYPE-SEPARATE INSULATING SLEEVES AND INSULATING WASHERS ARE NOT ACCEPTABLE.
3. INSTALL PER MANUFACTURERS DIRECTIONS.
4. ALL EXPOSED STEEL PORTIONS OF THE FLANGE, BOLTS, AND PIPE SHALL BE PRIMED AND WRAPPED WITH TRENTON #1 WAX TAPE AFTER FLANGE KIT INSTALLATION.
5. FLANGE FASTENING HARDWARE TO BE ELECTRICALLY CONTINUOUS TO MAINLINE PIPE & INSULATED FROM SMALLER BLOWOFF/OUTLET PIPE.

3 DETAIL
INSULATING FLANGE KIT
N.T.S.

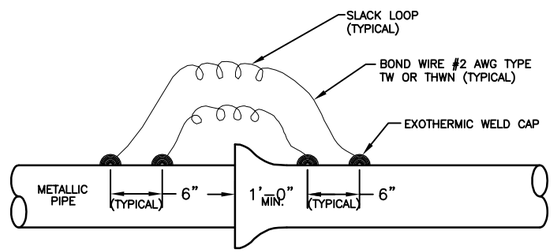


4 DETAIL
PIPELINE WIRE CONNECTION
N.T.S.



NOTE:
EACH CABLE TO PIPE CONNECTION SHALL HAVE A SEPARATE EXOTHERMIC WELD.

5 DETAIL
CABLE TO PIPE CONNECTION DIELECTRIC COATED PIPE
N.T.S.



NOTE:
BOND WIRES SHALL BE ATTACHED TO THE PIPE, VALVE OR FITTING TOP CENTERLINE.

6 DETAIL
JOINT BOND WIRE INSTALLATION (ALTERNATE TO BONDING CLIPS)
N.T.S.

Dewberry®
Dewberry Engineers Inc.
990 S. BROADWAY, SUITE 400
Denver, Colorado 80209
(303) 825-1802

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"-SCALE ACCORDINGLY)

DRAWING CDT15397-CP1
DRAWN DPB
DESIGNED SES
CHECKED MAB

APPROVED:

PRINCIPAL

09/04/2020
DATE:

REVISIONS

REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

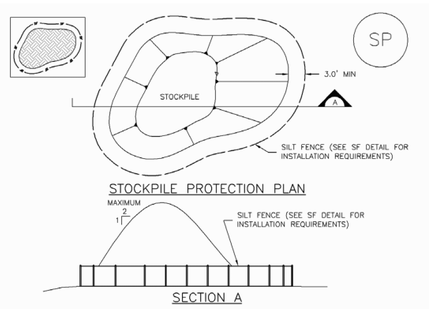
CITY OF THORNTON, COLORADO

STANDLEY LAKE FACILITIES

CIVIL

CATHODIC PROTECTION DETAILS

DATE: 01/14/20
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER
D-CP1



STOCKPILE PROTECTION PLAN

SECTION A

SP–1. STOCKPILE PROTECTION

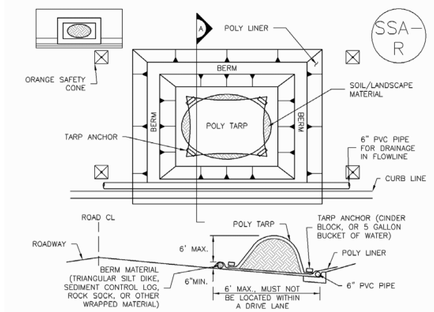
STOCKPILE PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION OF STOCKPILES.
   –TYPE OF STOCKPILE PROTECTION.

2. INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPERVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.

3. STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS, OR SOIL BINDERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30–60 DAYS).

4. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.



SP–2. MATERIALS STAGING IN ROADWAY

MATERIALS STAGING IN ROADWAYS INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   –LOCATION OF MATERIAL STAGING AREA(S).
   –CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.

2. FEATURE MUST BE INSTALLED PRIOR TO EXCAVATION, EARTHWORK OR DELIVERY OF MATERIALS.

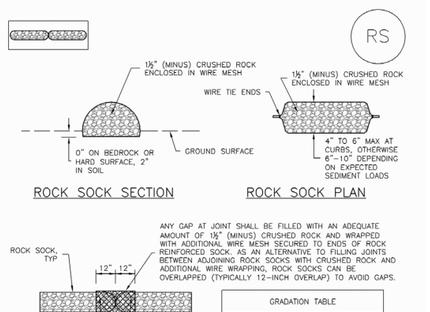
3. MATERIALS MUST BE STATIONED ON THE POLY LINER. ANY INCIDENTAL MATERIALS DEPOSITED ON PAVED SECTION OR ALONG CURB LINE MUST BE CLEANED UP PROMPTLY.

4. POLY LINER AND TARP COVER SHOULD BE OF SIGNIFICANT THICKNESS TO PREVENT DAMAGE OR LOSS OF INTEGRITY.

5. SAND BAGS MAY BE SUBSTITUTED TO ANCHOR THE COVER TARP OR PROVIDE BERMING UNDER THE BASE LINER.

6. FEATURE IS NOT INTENDED FOR USE WITH WET MATERIAL THAT WILL BE DRAINING AND/OR SPREADING OUT ON THE POLY LINER OR FOR DEMOLITION MATERIALS.

7. THIS FEATURE CAN BE USED FOR:
   –UTILITY REPAIRS.
   –WHEN OTHER STAGING LOCATIONS AND OPTIONS ARE LIMITED.
   –OTHER LIMITED APPLICATION AND SHORT DURATION STAGING.



ROCK SOCK SECTION ROCK SOCK PLAN

ROCK SOCK JOINTING

GRADATION TABLE	
SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
	NO. 4
2"	100
1½"	90 – 100
1"	20 – 55
¾"	0 – 15
⅜"	0 – 5
MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.	

ROCK SOCK INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION(S) OF ROCK SOCKS.

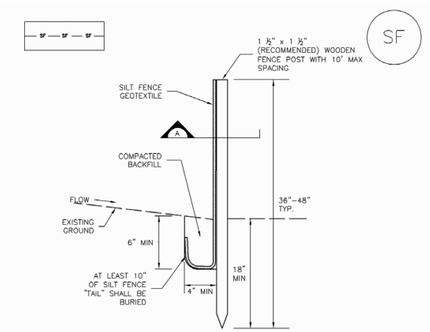
2. CRUSHED ROCK SHALL BE ½" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (½" MINUS).

3. WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF ½". RECOMMENDED MINIMUM ROLL WIDTH OF 48".

4. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2" CENTERS ON ENDS OF SOCKS.

5. SOME MUNICIPALITIES MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE MESH FOR THE ROCK ENCLOSURE.

RS–1. ROCK SOCK PERIMETER CONTROL



SILT FENCE

SECTION A

SF–1. SILT FENCE

STOCKPILE PROTECTION MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

STOCKPILE PROTECTION MAINTENANCE NOTES

4. IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.

5. STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.

(DETAILS ADAPTED FROM PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

MATERIALS STAGING IN ROADWAY MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. INSPECT PVC PIPE ALONG CURB LINE FOR CLOGGING AND DEBRIS. REMOVE OBSTRUCTIONS PROMPTLY.

5. CLEAN MATERIAL FROM PAVED SURFACES BY SWEEPING OR VACUUMING.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM AURORA, COLORADO)

ROCK SOCK MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, OR DAMAGED BEYOND REPAIR.

5. SEDIMENT ACCUMULATED UPSTREAM OF ROCK SOCKS SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY ½ OF THE HEIGHT OF THE ROCK SOCK.

6. ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

7. WHEN ROCK SOCKS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF ROCK SOCK INSTALLATION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY OTHER SIMILAR PROPRIETARY PRODUCTS ON THE MARKET. UDFCD NEITHER NDORSES NOR DISCOURAGES USE OF PROPRIETARY PROTECTION PRODUCTS; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

SILT FENCE INSTALLATION NOTES

1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2–5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.

2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.

3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.

4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.

5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.

6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J–HOOK." THE "J–HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' – 20').

7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".

5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.

6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.

7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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Denver, Colorado 80209
(303) 825–1802

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"–SCALE ACCORDINGLY)

DRAWING CEC15397–EC1
DRAWN DPB
DESIGNED SES
CHECKED MAB

APPROVED:

PRINCIPAL

09/04/2020
DATE:

REVISIONS

REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

CITY OF THORNTON, COLORADO

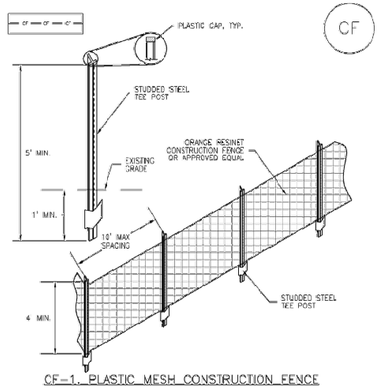
STANDLEY LAKE FACILITIES

CIVIL

EROSION CONTROL DETAILS

DATE: 09/03/20
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER D–EC1

SM-3 Construction Fence (CF)



CF-1. PLASTIC MESH CONSTRUCTION FENCE

CONSTRUCTION FENCE INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   -LOCATION OF CONSTRUCTION FENCE.

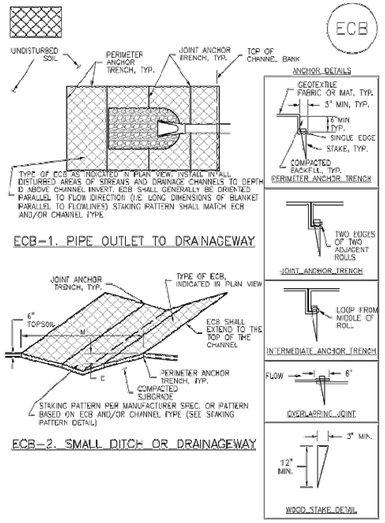
2. CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

3. CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE, CONTRACTOR-GRADE MATERIAL THAT IS AT LEAST 4' HIGH. METAL POSTS SHOULD HAVE A PLASTIC CAP FOR SAFETY.

4. STUDDED STEEL TEE POSTS SHALL BE UTILIZED TO SUPPORT THE CONSTRUCTION FENCE. MAXIMUM SPACING FOR STEEL TEE POSTS SHALL BE 10'.

5. CONSTRUCTION FENCE SHALL BE SECURELY FASTENED TO THE TOP, MIDDLE, AND BOTTOM OF EACH POST.

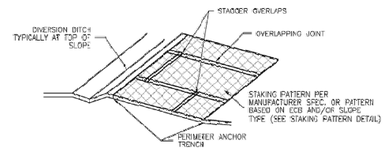
EC-6 Rolled Erosion Control Products (RECP)



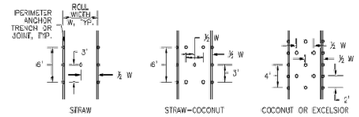
ECB-1. PIPE OUTLET TO DRAINAGEWAY

ECB-2. SMALL DITCH OR DRAINAGEWAY

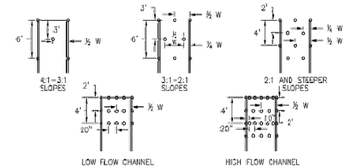
Rolled Erosion Control Products (RECP) EC-6



ECB-3. OUTSIDE OF DRAINAGEWAY

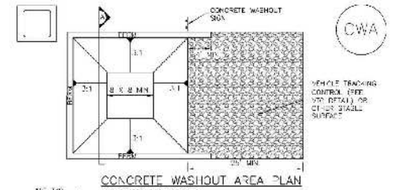


STAKING PATTERNS BY ECB TYPE



STAKING PATTERNS BY SLOPE OR CHANNEL TYPE

Concrete Washout Area (CWA) MM-1



CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   -CWA INSTALLATION LOCATION.

2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE FEATURE OR WATERBODY OR WITHIN 1000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE LINED WITH AN IMPERVIOUS LINER OF MIN. 10-GAUGE OR HEAVIER PLASTIC. ALTERNATIVELY, IN PLACE PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE AREA SHOULD BE USED.

3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.

4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 2' DEEP.

5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.

6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.

7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.

8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

Construction Fence (CF) SM-3

CONSTRUCTION FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

5. WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

EC-6 Rolled Erosion Control Products (RECP)

EROSION CONTROL BLANKET INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   -LOCATION OF ECB.
   -TYPE OF ECB (STRAW, STRAW-COCONUT, COCONUT, OR EXCELSIOR).
   -AREA, IN SQUARE YARDS OF EACH TYPE OF ECB.

2. 100% NATURAL AND BIODEGRADABLE MATERIALS ARE PREFERRED FOR RECPs, ALTHOUGH SOME JURISDICTIONS MAY ALLOW OTHER MATERIALS IN SOME APPLICATIONS.

3. IN AREAS WHERE ECBs ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO ECB INSTALLATION AND THE ECB SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.

4. PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.

5. JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL ECBs EXCEPT STRAW WHICH MAY USE AN OVERLAPPING JOINT.

6. INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE-HALF ROLL LENGTH FOR COCONUT AND EXCELSIOR ECBs.

7. OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER FOR ECBs ON SLOPES.

8. MATERIAL SPECIFICATIONS OF ECBs SHALL CONFORM TO TABLE ECB-1.

9. ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING ECBS SHALL BE RESEEDED AND MULCHED

10. DETAILS ON DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION WILL GOVERN IF DIFFERENT FROM THOSE SHOWN HERE.

TABLE ECB-1. ECB MATERIAL SPECIFICATIONS

TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	RECOMMENDED NETTING**
STRAW*	–	100%	–	DOUBLE/ NATURAL
STRAW-COCONUT	30% MIN	70% MAX	–	DOUBLE/ NATURAL
COCONUT	100%	–	–	DOUBLE/ NATURAL
EXCELSIOR	–	–	100%	DOUBLE/ NATURAL

*STRAW ECBs MAY ONLY BE USED OUTSIDE OF STREAMS AND DRAINAGE CHANNELS.
**ALTERNATE NETTING MAY BE ACCEPTABLE IN SOME JURISDICTIONS

Rolled Erosion Control Products (RECP) EC-6

EROSION CONTROL BLANKET MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ECBs SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE, UNLESS REQUESTED TO BE REMOVED BY THE LOCAL JURISDICTION.

5. ANY ECB DAMAGED OR TORN, OR OTHERWISE DAMAGED) SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE GEOTEXTILE THAT HAVE ERODED TO CREATED A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE ECB REINSTALLED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO AND TOWN OF PARKER COLORADO, NOT AVAILABLE IN AUTOCAD)

MM-1 Concrete Washout Area (CWA)

CWA MAINTENANCE NOTES

1. INSPECT CWAs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. THE CWA SHALL BE MONITORED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIAL ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 9".

5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSFERRED FROM THE CWA SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.

6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.

7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOPSOIL, SEED AND MULCH OR OTHERWISE STABILIZE IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(CWA ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"-SCALE ACCORDINGLY)

DRAWING CEC15397-EC2
DRAWN DPB
DESIGNED SES
CHECKED MAB

APPROVED:

PRINCIPAL

09/04/2020
DATE:

REVISIONS

REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

CITY OF THORNTON, COLORADO

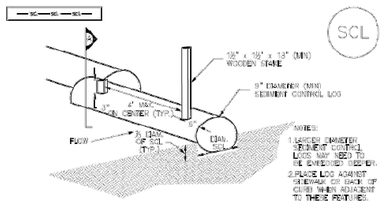
STANDLEY LAKE FACILITIES

CIVIL

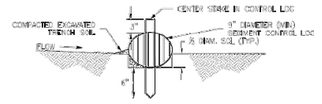
EROSION CONTROL DETAILS

DATE: 09/03/20
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER D-EC2

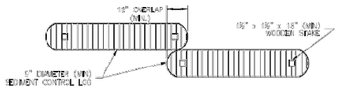
Sediment Control Log (SCL) SC-2



TRENCHED SEDIMENT CONTROL LOG

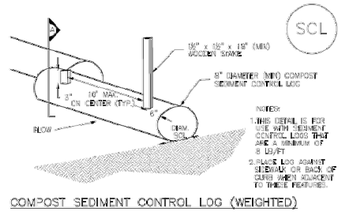


SECTION (A)
TRENCHED SEDIMENT CONTROL LOG

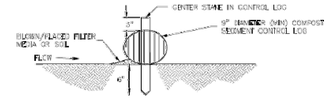


LOG JOINTS

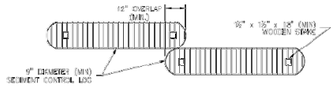
SCL-1. TRENCHED SEDIMENT CONTROL LOG



COMPOST SEDIMENT CONTROL LOG (WEIGHTED)



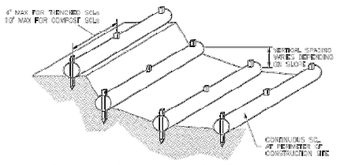
SECTION (A)
COMPOST SEDIMENT CONTROL LOG



LOG JOINTS

SCL-2. COMPOST SEDIMENT CONTROL LOG (WEIGHTED)

Sediment Control Log (SCL) SC-2



SCL-3. SEDIMENT CONTROL LOGS TO CONTROL SLOPE LENGTH

SEDIMENT CONTROL LOG INSTALLATION NOTES:

1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.

2. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.

3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.

4. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.

5. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY ⅓ OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT OR NOT NEED TO BE TRENCHED.

6. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR TRENCHED LAWN ROLLER OR BLOWN IN PLACE.

7. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER.

SEDIMENT CONTROL LOG MAINTENANCE NOTES:

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY ½ OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.

5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION.COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS SWDS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

[DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD]

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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DRAWING CEC15397-EC4
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REV.	DESCRIPTION	BY	DATE	APP.
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CITY OF THORNTON, COLORADO

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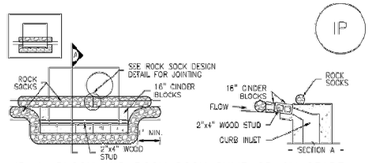


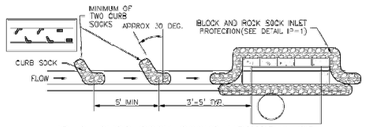
IP-1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION

BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

2. CONCRETE "CINDER" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB.

3. GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINTED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.



IP-2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

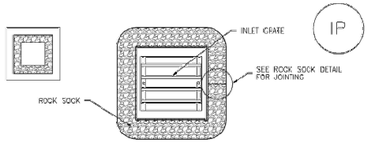
CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL INSTALLATION REQUIREMENTS.

2. PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.

3. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5 FEET APART.

4. AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLETS.

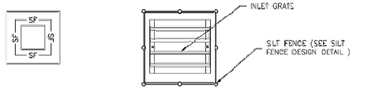


IP-3. ROCK SOCK SUMP/AREA INLET PROTECTION

ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

2. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



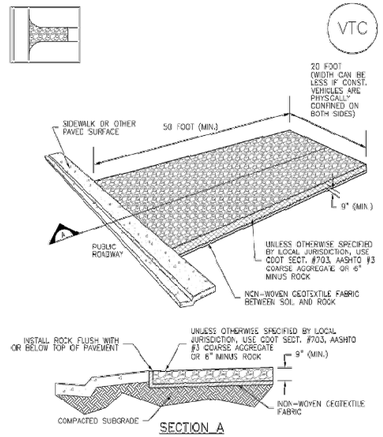
IP-4. SILT FENCE FOR SUMP INLET PROTECTION

SILT FENCE INLET PROTECTION INSTALLATION NOTES

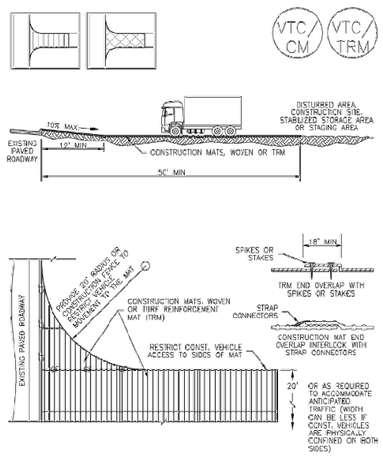
1. SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 3 FEET.

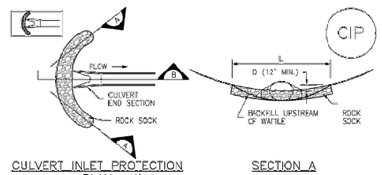
3. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCE FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL



VTC-3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)



CIP-1. CULVERT INLET PROTECTION

CULVERT INLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR
—LOCATION OF CULVERT INLET PROTECTION.

2. SEE ROCK SOCK DESIGN DETAIL FOR ROCK GRADATION REQUIREMENTS AND JOINTING DETAIL.

CULVERT INLET PROTECTION MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS ½ THE HEIGHT OF THE ROCK SOCK.

5. CULVERT INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM AURORA COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

GENERAL INLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
—LOCATION OF INLET PROTECTION.
—TYPE OF INLET PROTECTION (IP-1, IP-2, IP-3 IP-4, IP-5, IP-6)

2. INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). IF A RAINFALL/RUNOFF EVENT IS FORECAST, INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.

3. MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

INLET PROTECTION MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED AS NECESSARY TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR ¼ OF THE HEIGHT FOR STRAW BALES.

5. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED, UNLESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.

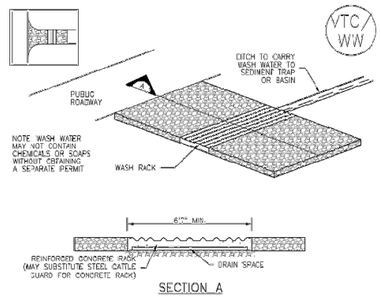
6. WHEN INLET PROTECTION AT AREA INLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF INLET PROTECTION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY PROPRIETARY INLET PROTECTION METHODS ON THE MARKET. UDFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY INLET PROTECTION. HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THIS SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

NOTE: SOME MUNICIPALITIES DISCOURAGE OR PROHIBIT THE USE OF STRAW BALES FOR INLET PROTECTION. CHECK WITH LOCAL JURISDICTION TO DETERMINE IF STRAW BALE INLET PROTECTION IS ACCEPTABLE.



VTC-2. AGGREGATE VEHICLE TRACKING CONTROL WITH WASH RACK

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR
—LOCATION OF CONSTRUCTION ENTRANCE(S)/EXITS(S).
—TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).

2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.

3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.

4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.

6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.

5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

Dewberry®
Dewberry Engineers Inc.
990 S. BROADWAY, SUITE 400
Denver, Colorado 80209
(303) 825-1802

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"-SCALE ACCORDINGLY)

DRAWING CEC15397-EC3
DRAWN DPB
DESIGNED SES
CHECKED MAB

APPROVED:

PRINCIPAL

09/04/2020
DATE:

REVISIONS

REV.	DESCRIPTION	BY	DATE	APP.
–	RECORD DRAWINGS	DPB	06/08/22	SES

CITY OF THORNTON, COLORADO

STANDLEY LAKE FACILITIES

CIVIL

EROSION CONTROL DETAILS

DATE: 09/03/20
PROJECT NUMBER: 50115397
REVISION NO. –
DRAWING NUMBER D-EC3